

A Datapro Feature Report

**EUROPEAN
User Ratings of
Computer Systems**

Datapro

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European User Ratings of Computer Systems

As part of its expanded international coverage of computer systems, Datapro this year, in addition to its annual survey of U.S. users, conducted user surveys in France, Germany, and the United Kingdom. This report summarizes the results of the four surveys; detailed results appear in separate reports, one for each of the four countries.

Our goal was to gather three types of information: what users are doing now, how they subjectively rate their current systems, and what they plan for the future. Responses were summarized by individual computer model, then by vendor, and finally by country.

We believe the information contained in these survey reports can be useful in many ways, including the early stages of system selection, but we urge users not to allow these results to dictate their final decision. As shown by individual survey responses, a system highly rated by 19 users may be a nightmare for the 20th. The results can help you avoid such a disaster by pinpointing areas that need thorough investigation and careful consideration, but only you can decide if a system will fill your unique needs.

If you are interested in a particular model or vendor, and you can't find it listed in the tables for your country, look in the tables for the other countries. A model or vendor that did not receive enough ratings to be listed in one report may have received enough ratings to be listed in another report.

HOW THE SURVEYS WERE CONDUCTED

In cooperation with four computer industry weekly newspapers, Datapro mailed questionnaires to 37,500 selected users in France, Germany, the United Kingdom, and the United States. Each user was asked to summarize his experiences with computer systems (microcomputer through supercomputer) currently in use by answering 87 questions.

In Europe, each newspaper editor was asked to choose, based on his knowledge of his country, a sample size that would guarantee a usable number of responses. As shown in

This report and the three that follow it present the results of Datapro's first survey of computer systems users in France, Germany, and the United Kingdom. Country by country tables summarize the experience of more than 3,000 users of desktop, personal, microcomputer, small business computer, and general-purpose computer systems. The users' ratings pinpoint the strengths and weaknesses of each manufacturer's equipment, software, and support and provide information that should be of great value in computer acquisitions.

Figure 1, *Zero-Un Informatique* in France sent out 15,000 questionnaires in French, *Computerwoche* in Germany mailed 2,500 questionnaires in German, and *Computer Weekly* in the UK mailed 5,000 questionnaires. (The U.S. survey with *Computerworld* is discussed in a separate report.) Note that the wide range of sample sizes and the varying response percentages may make comparisons between countries statistically invalid. Also note that some computers that do not appear in the survey, especially recently announced products, may warrant evaluation.

The responses were mailed back to the individual newspapers, where they were checked for validity, and then were forwarded to Datapro for analysis. At Datapro, analysts rejected a number of responses because they were incomplete, invalid, or an exception. Responses ruled invalid were, in most cases, ratings of systems the users had not yet installed. Responses rejected as exceptions were system ratings that could not be combined with other ratings in any meaningful way.

Because each questionnaire included two survey forms, and because users were urged to photocopy the forms if they wanted to rate more systems, the total number of responses was greater than the number of users who responded. Likewise, the number of systems rated is higher than the number of responses because users were instructed to rate two or more identical systems on a single form.

FIGURE 1. GENERAL SURVEY STATISTICS

	France	Germany	UK	U.S.	Totals
Questionnaires mailed	15,000	2,500	5,000	15,000	37,500
Number of users who responded	1,495	901	1,089	4,614	8,099
Total number of responses	1,943	1,159	1,325	5,337	9,764
Number of users who rated two or more separate systems	385	197	235	324	1,141
Total of responses rejected	235	146	141	399	921
Total of responses accepted	1,708	1,013	1,184	4,614	8,519

SURVEY RESULTS

Datapro compiled the responses into three categories of computer systems: mainframes and plug-compatible mainframes (PCMs), minicomputers and small business computers (SBCs), and desktop, personal, and microcomputers. In separate reports on each country, a model by model summary is provided for each of these categories (Tables 1, 2, and 3, respectively), followed by a vendor by vendor summary for mainframes and PCMs (Table 4) and for minicomputers and SBCs (Table 5). There is no vendor summary for desktop, personal, and microcomputers because it would be identical to Table 3. Figure 2 summarizes the contents of Tables 1, 2, and 3.

FIGURE 2: SURVEY RESPONSE STATISTICS

	Table 1 Mainframes & PCMs	Table 2 Minis & SBCs	Table 3 Desktop, PCs, & Micros
France			
No. of models	52	69	4
No. of vendors	10	24	4
No. of user responses	623	1,039	46
No. of systems	672	1,333	81
Germany			
No. of models	36	46	2
No. of vendors	9	21	2
No. of user responses	574	419	20
No. of systems	642	587	44
United Kingdom			
No. of models	33	76	2
No. of vendors	7	33	2
No. of user responses	356	804	24
No. of systems	386	1,204	51
United States			
No. of models	75	114	23
No. of vendors	12	34	18
No. of user responses	2,006	2,309	299
No. of systems	3,885	3,437	549

The rest of this report presents the overall summaries of the individual surveys, discussing first the mainframe/PCM and minicomputer/SBC categories, followed by the desktop, personal, and microcomputer category.

Note that in some cases, the percentages presented do not add up to 100% because not all respondents answered the questions. In a few cases, the percentages add up to more than 100% because some respondents checked two answers.

FINANCIAL ALTERNATIVES

Tax laws, user financial strategies, and user faith in a computer's long-term value all play a part in deciding

whether to buy, rent or lease a system—but a manufacturer's pricing policies often make it difficult for a user to make his own decisions. As Figure 3 shows, purchase is the preferred method of acquisition in Germany, the UK, and the U.S., but not in France, where users show a distinct preference for renting. In general, small manufacturers often want the money provided by outright sales and often resist—or even refuse—to rent or lease their equipment. Large manufacturers often prefer the smoother cash flow and closer customer contact provided by renting or leasing. In the past few years, however, some larger manufacturers of small computers have begun to increase their emphasis on outright sales, a change brought on by two market factors: improving price performance ratios that force down prices on older equipment and the discovery that owner-users generally are happier customers. You can get a good idea of each manufacturer's preference, if any, by looking at the vendor summary tables.

FIGURE 3: METHOD OF ACQUISITION

	France	Germany	U.K.	U.S.
Purchase (%)				
Mainframes	29	41	41	52
Minis & SBCs	38	47	61	72
Rental (%)				
Mainframes	47	37	27	10
Minis & SBCs	40	38	18	6
Lease (%)				
Mainframes	22	28	34	38
Minis & SBCs	18	18	21	22

PRINCIPAL APPLICATIONS

As expected, accounting, payroll personnel, and manufacturing are the major applications of computers in all four countries, but new applications such as transaction processing and distributed processing are rising fast. In France (Figure 4), transaction processing has replaced manufacturing as the third most popular application. Word processing, which was number four on the U.S. list of applications for minicomputers and SBCs, did not make the top ten in any of the European countries.

Note that on the French and German lists, the "retail" category also includes "wholesale" and so appears higher on the lists than in the UK or the U.S.

SOURCES OF APPLICATIONS PROGRAMS

As the cost of hardware drops and salaries increase, users are looking more and more to outside sources for software as a way of containing costs. As Figure 5 shows, "ready-made" packages from the manufacturers and proprietary packages are the two most popular outside sources for mainframe/PCM users in all four countries. French, UK, and U.S. users prefer proprietary packages, while German users show a distinct preference for "ready-made" packages from the manufacturer.

FIGURE 4: USER RANKINGS OF PRINCIPAL APPLICATIONS

Mainframes & PCMs	Minicomputers & SBCs	Mainframes & PCMs	Minicomputers & SBCs
France		Germany	
1 Accounting (21%)	1 Accounting (68%)	1 Accounting (74%)	1 Accounting (69%)
2 Payroll/Personnel (64%)	2 Payroll/Personnel (51%)	2 Payroll/Personnel (69%)	2 Payroll/Personnel (54%)
3 Transaction Processing (33%)	3 Manufacturing (25%)	3 Manufacturing (41%)	3 Manufacturing (36%)
4 Manufacturing (25%)	4 Retail/Wholesale (25%)	4 Retail/Wholesale (22%)	4 Retail/Wholesale (32%)
5 Retail/Wholesale (25%)	5 Transaction Processing (24%)	5 Transaction Processing (21%)	5 Service Bureau (13%)
6 Banking/Finance (19%)	6 Engineering/Scientific (11%)	6 Banking/Finance (15%)	6 Utilities (13%)
7 Government (14%)	7 Service Bureau (10%)	7 Utilities (15%)	7 Engineering/Scientific (8%)
8 Service Bureau (11%)	8 Government (9%)	8 Service Bureau (12%)	8 Transaction Processing (8%)
9 Distributed Processing (10%)	9 Distributed Processing (8%)	9 Construction (10%)	9 Distributed Processing (7%)
10 Engineering/Scientific (8%)	10 Banking/Finance (8%)	10 Government (10%)	10 Banking/Finance (6%)
United Kingdom		United States (% N.A.)	
1 Accounting (77%)	1 Accounting (65%)	1 Accounting	1 Accounting
2 Payroll/Personnel (59%)	2 Payroll/Personnel (40%)	2 Payroll/Personnel	2 Payroll/Personnel
3 Manufacturing (31%)	3 Manufacturing (23%)	3 Manufacturing	3 Manufacturing
4 Transaction Processing (29%)	4 Transaction Processing (20%)	4 Service Bureaus	4 Word Processing
5 Engineering/Scientific (21%)	5 Engineering/Scientific (16%)	5 Banking/Finance	5 Service Bureau
6 Service Bureau (15%)	6 Distributed Processing (9%)	6 Engineering/Scientific	6 Engineering/Scientific
7 Distributed Processing (14%)	7 Education (9%)	7 Education	7 Transaction Processing
8 Banking/Finance (13%)	8 Banking/Finance (8%)	8 Transaction Processing	8 Education
9 Government (13%)	9 Service Bureau (8%)	9 Government	9 Government
10 Education (11%)	10 Retail (7%)	10 Retail	10 Distributed Processing

FIGURE 5: USER RANKINGS OF SOURCES OF APPLICATIONS PROGRAMS

Mainframes & PCMs	Minicomputers & SBCs	Mainframes & PCMs	Minicomputers & SBCs
France		Germany	
1 In-House Personnel (97%)	1 In-House Personnel (88%)	1 In-House Personnel (98%)	1 In-House Personnel (79%)
2 Proprietary Software Packages (22%)	2 "Ready-Made" Programs From Manufacturer (17%)	2 "Ready-Made" Programs From Manufacturer (51%)	2 "Ready-Made" Programs From Manufacturer (45%)
3 "Ready-Made" Programs From Manufacturer (19%)	3 Proprietary Software Packages (16%)	3 Proprietary Software Packages (40%)	3 Contract Programming (27%)
4 Contract Programming (11%)	4 Contract Programming (10%)	4 Contract Programming (26%)	4 Proprietary Software Packages (13%)
5 Manufacturer's Personnel (7%)	5 Manufacturer's Personnel (6%)	5 Manufacturer's Personnel (9%)	5 Manufacturer's Personnel (8%)
United Kingdom		United States (% N.A.)	
1 In-House Personnel (97%)	1 In-House Personnel (76%)	1 In-House Personnel	1 In-House Personnel
2 Proprietary Software Packages (47%)	2 Contract Programming (27%)	2 Proprietary Software	2 Contract Programming
3 "Ready-Made" Programs From Manufacturer (34%)	3 "Ready-Made" Programs From Manufacturer (27%)	3 "Ready-Made" Programs From manufacturer	3 "Ready-Made" Programs From manufacturer
4 Contract Programming (26%)	4 Proprietary Software Packages (26%)	4 Contract Programming	4 Proprietary Software
5 Manufacturer's Personnel (7%)	5 Manufacturer's Personnel (9%)	5 Manufacturer's Personnel	5 Manufacturer's Personnel

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Among users of minicomputers and SBCs, contract programming is most popular in the UK and the U.S. German users show a distinct preference for "ready-made" software, French users show a slight preference, and UK users show no preference.

PRIMARY PROGRAMMING LANGUAGES

In all four countries, COBOL is the most popular language for mainframe/PCM users with Assembler running a strong second. After those two, as Figure 6 shows, there is little similarity.

Minicomputer and SBC users show even less uniformity. RPG leads in France and Germany, COBOL in the UK, and BASIC in the U.S. Pascal, which ranked third in the

U.S., doesn't even appear on the French, German, and UK lists.

PLANNED ACQUISITIONS FOR 1980

Mainframe/PCM, minicomputer, and SBC users in all four countries put expanded data communications capabilities and additional software at the top of their lists of planned acquisitions for 1980. As Figure 7 shows, however, the source of the software will vary.

The other two growth areas will be distributed processing and integrated word processing, and it is interesting that although word processing did not appear among the top ten applications in any of the European countries, it is listed by the users in France, Germany, and the UK as one of the top new applications for 1980.

FIGURE 6: USER RANKINGS OF PRIMARY PROGRAMMING LANGUAGES

Mainframes & PCMs	Minicomputers & SBCs	Mainframes & PCMs	Minicomputers & SBCs
France		Germany	
1. COBOL (84%)	1. RPG (38%)	1. COBOL (53%)	1. RPG (42%)
2. Assembler (25%)	2. FORTRAN (15%)	2. Assembler (51%)	2. COBOL (27%)
3. RPG (17%)	3. COBOL (13%)	3. RPG (26%)	3. BASIC (11%)
4. FORTRAN (12%)	4. BASIC (12%)	4. PL/1 (17%)	4. Assembler (11%)
5. PL/1 (10%)	5. Assembler (11%)	5. FORTRAN (7%)	5. FORTRAN (8%)
6. APL (2%)	6. PL/1 (1%)		
United Kingdom		United States (% N.A.)	
1. COBOL (76%)	1. COBOL (28%)	1. COBOL	1. BASIC
2. Assembler (21%)	2. BASIC (19%)	2. Assembler	2. FORTRAN
3. FORTRAN (13%)	3. RPG (19%)	3. FORTRAN	3. Pascal
4. PL/1 (9%)	4. FORTRAN (16%)	4. RPG	4. COBOL
5. RPG (4%)	5. Assembler (8%)	5. APL	5. RPG
6. BASIC (4%)		6. BASIC	6. APL

FIGURE 7: USER RANKINGS OF PLANNED ACQUISITIONS FOR 1980

Mainframes & PCMs	Minicomputers & SBCs	Mainframes & PCMs	Minicomputers & SBCs
France		Germany	
1. Expanded Data Communications (57%)	1. Expanded Data Communications (30%)	1. Expanded Data Communications (34%)	1. Proprietary Software Packages (16%)
2. Proprietary Software (24%)	2. Additional Software From Manufacturer (14%)	2. Additional Software From Manufacturer (30%)	2. Expanded Data Communications (14%)
3. Additional Software From Manufacturer (22%)	3. Distributed Processing (12%)	3. Proprietary Software Packages (27%)	3. Additional Software From Manufacturer (14%)
4. Distributed Processing (21%)	4. Proprietary Software (12%)	4. Distributed Processing (13%)	4. Distributed Processing (8%)
5. Integrated Word Processing (10%)	5. Integrated Word Processing (5%)	5. Integrated Word Processing (6%)	5. Integrated Word Processing (6%)
United Kingdom		United States (% N.A.)	
1. Expanded Data Communications (52%)	1. Expanded Data Communications (27%)	1. Expanded Data Communications	1. Expanded Data Communications
2. Additional Software From Manufacturer (39%)	2. Additional Software From Manufacturer (21%)	2. Additional Proprietary Software	2. Additional Proprietary Software
3. Proprietary Software Packages (26%)	3. Proprietary Software Packages (15%)	3. Additional Software From Manufacturer	3. Additional Software From Manufacturer
4. Distributed Processing (23%)	4. Distributed Processing (10%)	4. Distributed Processing Capabilities	4. Integrated Word Processing
5. Integrated Word Processing (12%)	5. Integrated Word Processing (9%)		

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FIGURE 8: USER RANKINGS OF MOST SIGNIFICANT PROBLEMS AND MOST SIGNIFICANT ADVANTAGES

MAINFRAMES & PCMs	MINICOMPUTERS & SBCs
FRANCE	
Most Significant Problems	Most Significant Problems
1. Delivery and/or installation of equipment was late (23%)	1. Delivery and/or installation of equipment was late (24%)
2. System proposed by vendor was too small (18%)	2. System proposed by vendor was too small (23%)
3. Vendor enhancements / changes to hardware / software hard to keep up with (16%)	3. Delivery of required software was late (15%)
4. Delivery of required software was late (13%)	4. Vendor enhancements / changes to hardware / software hard to keep up with (10%)
5. Power / cooling requirements excessive (9%)	5. Equipment excessively noisy (8%)
6. System costs exceeded expected total (9%)	6. System costs exceeded expected total (8%)
Most Significant Advantages	Most Significant Advantages
1. Users happy with response time (39%)	1. System easy to expand / reconfigure (52%)
2. Programs / data compatible, as vendor promised (39%)	2. Users happy with response time (36%)
3. System easy to expand / reconfigure (33%)	3. Delivery and/or installation of equipment was ahead of schedule (31%)
4. Delivery and/or installation of equipment was ahead of schedule (24%)	4. Programs / data compatible, as vendor promised (26%)
5. Productivity aids help keep programming costs down (17%)	5. System power / energy efficient (22%)
6. Database language efficient and effective (16%)	6. Delivery of required software was ahead of schedule (16%)
GERMANY	
Most Significant Problems	Most Significant Problems
1. System proposed by vendor was too small (23%)	1. System proposed by vendor was too small (30%)
2. Vendor enhancement / changes to hardware / software hard to keep up with (16%)	2. Delivery of required software was late (16%)
3. Power / cooling requirements excessive (13%)	3. Vendor did not provide all promised software or support (12%)
4. Delivery and/or installation of equipment was late (9%)	4. Delivery and/or installation of equipment was late (11%)
5. System costs exceeded expected total (8%)	5. Equipment excessively noisy (11%)
6. Delivery of required software was late (7%)	6. Vendor enhancements / changes to hardware / software hard to keep up with (9%)
Most Significant Advantages	Most Significant Advantages
1. Users happy with response time (48%)	1. User happy with response time (50%)
2. System easy to expand / reconfigure (44%)	2. System easy to expand / reconfigure (46%)
3. Programs / data compatible, as vendor promised (28%)	3. Productivity aids help keep programming costs down (23%)
4. Productivity aids help keep programming costs down (26%)	4. Programs / data compatible, as vendor promised (17%)
5. Terminals / peripherals compatible, as vendor promised (20%)	5. Terminals / peripherals compatible, as vendor promised (11%)
6. Database language efficient and effective (11%)	6. Database language efficient and effective (8%)
UNITED KINGDOM	
Most Significant Problems	Most Significant Problems
1. System proposed by vendor was too small and had to be replaced / expanded (20%)	1. System proposed by vendor was too small and had to be replaced / expanded (28%)
2. Delivery and/or installation of equipment was late (14%)	2. Delivery and/or installation of equipment was late (20%)
3. Delivery of required software was late (13%)	3. Delivery of required software was late (20%)
4. Vendor did not provide all promised software or support (13%)	4. Vendor did not provide all promised software or support (20%)
5. Vendor enhancements / changes to hardware / software hard to keep up with (12%)	5. Vendor enhancements / changes to hardware / software hard to keep up with (10%)
6. System costs exceeded expected total (10%)	6. System costs exceeded expected total (9%)
Most Significant Advantages	Most Significant Advantages
1. Programs / data compatible, as vendor promised (53%)	1. System easy to expand / reconfigure (56%)
2. System easy to expand / reconfigure (44%)	2. Users happy with response time (47%)
3. Users happy with response time (41%)	3. Programs / data compatible, as vendor promised (29%)
4. Terminals / peripherals compatible, as vendor promised (33%)	4. Productivity aids help to keep programming costs down (17%)
5. Productivity aids help to keep programming costs down (24%)	5. System power / energy efficient (16%)
6. Database language efficient and effective (14%)	6. Terminals / peripherals compatible, as vendor promised (13%)
UNITED STATES (% N.A.)	
Most Significant Problems	Most Significant Problems
1. Vendor did not provide all promised software or support	1. Vendor did not provide all promised software or support
2. System proposed by vendor was too small and had to be replaced / expanded	2. System proposed by vendor was too small and had to be replaced / expanded
3. Power / cooling requirements excessive	3. Delivery of required software was late
4. Delivery and/or installation of equipment was late	4. Delivery and/or installation of equipment was late
5. Program / data compatibility was not what vendor promised	5. Vendor enhancements / changes to hardware / software hard to keep up with
6. Vendor enhancements / changes to hardware / software hard to keep up with	6. Equipment excessively noisy
Most Significant Advantages	Most Significant Advantages
1. Users are happy with response time	1. Users are happy with response time
2. Programs / data are compatible, as vendor promised	2. System easy to expand / reconfigure
3. System easy to expand / reconfigure	3. Programs / data compatible, as vendor promised
4. Terminals / peripherals compatible, as vendor promised	4. Productivity aids help keep programming costs down
5. System is power / energy efficient	5. System is power / energy efficient
6. Productivity aids help keep programming costs down	6. Database language is effective / efficient

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SYSTEM REPLACEMENT

In all four countries, the majority of users have no plans to replace their systems in 1980, but there will be a higher turnover in mainframes/PCMs than there will be in the U.S. Loyalty to the current mainframe/PCM manufacturer will be highest in Germany, where only 2 percent of the users expect to change vendors, and lowest in the U.K. where 10 percent plan to change.

Plans for System Replacement in 1980

	France	Germany	U.K.	U.S.
Yes, Same Manufacturer (%)				
Mainframes & PCMs	30	23	23	12
Minicomputers & SBCs	16	15	12	8
Yes, Different Manufacturer (%)				
Mainframes & PCMs	4	2	10	8
Minicomputers & SBCs	5	7	6	13
No Replacement Planned in 1980 (%)				
Mainframes & PCMs	64	71	70	80
Minicomputers & SBCs	77	72	80	62

In the minicomputer/SBC sector, from 18 to 21 percent of users expect to replace their systems, with U.S. users the least loyal to their current vendor. In fact, of the 21 percent of U.S. users who plan to replace their systems, 62 percent plan to change vendors.

SIGNIFICANT PROBLEMS/ADVANTAGES

Users in Europe and the U.S. agreed on one thing—their first or second most significant problem was that the system proposed by the vendor was too small and had to be replaced or expanded. But the number one problem in France was late delivery and/or installation of equipment, and the number one problem in the U.S. was failure of the vendor to provide all of the software or support that had been promised. One complaint (Figure 8) that made all European lists of problems did not show up on the U.S. mainframe/PCM list but was number three on the U.S. minicomputer/SBC list: late delivery of required software.

Among system advantages, good response time was the number one or two item on every list except the UK mainframe/PCM list, where it ranked number three. Not surprisingly, program/data compatibility was high on all the mainframe/PCM lists, while ease of expansion and reconfiguration was high on all the minicomputer/SBC lists.

USER SATISFACTION RATINGS

Users in the countries were asked to rate their systems on 14 factors, and the results are summarized in Figure 9. Ratings are expressed in weighted averages based on a

scale of 4 for Excellent (Fr. *Excellent, G. Ausgezeichnet*), 3 for Good (Fr. *Bon, G. Gut*), 2 for Fair (Fr. *Moyen, G. Befriedigend*), and 1 for Poor (Fr. *Mauvais, G. Schlecht*).

In general, the Germans gave the lowest ratings and the Americans the highest, but users in all four countries heaped their scorn on technical support, with the lowest rating (2.3 for documentation) coming from the Germans and the highest rating (2.7 for trouble-shooting) coming from the U.S. users.

In the key category of "overall satisfaction," the ratings show a spread of only 0.3, ranging from a low of 2.8 to a high of 3.1, indicating that manufacturers in all four countries, on average, are keeping their customers reasonably happy.

We thought it would be interesting to identify the vendors whose users rated them highest in overall satisfaction, and the top five (plus ties) in each category in each country are listed in Figure 10.

SYSTEM RECOMMENDATIONS

Our final question to the users was whether they would recommend their system to another user in their situation. Most said they would, and the percentages are shown below.

	Yes	No
France (%)		
Mainframes & PCMs	74	21
Minicomputers & SBCs	73	19
Germany (%)		
Mainframes & PCMs	80	17
Minicomputers & SBCs	75	23
United Kingdom (%)		
Mainframes & PCMs	78	19
Minicomputers & SBCs	79	18
United States (%)		
Mainframes & PCMs	80	20
Minicomputers & SBCs	74	22

PERSONAL COMPUTERS

Desktop, personal, and microcomputers represent an exciting and rapidly growing area of computing, so this year we included them in our surveys. In Europe, the response rate was not large enough to provide individual ratings of many models, but was large enough to provide some interesting summaries. France provided 46 ratings of 81 computers, Germany 20 ratings of 44 computers, and the UK 24 ratings of 51 computers, all much smaller samples than the 299 ratings of 549 computers provided by U.S. users.

As expected, most desktop, personal, and microcomputers are purchased: France, 83%; Germany, 90%; the UK, 100%; and the U.S., 95%. The availability of rental and leasing plans will probably grow, however, as more and more of the larger computer manufacturers compete for customers.

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FIGURE 9: USER SATISFACTION RATINGS BY COUNTRY

	France Mainframes & PCMs	France Minis & SBCs	Germany Mainframes & PCMs	Germany Minis & SBCs	United Kingdom Mainframes & PCMs	United Kingdom Minis & SBCs	United States Mainframes & PCMs	United States Minis & SBCs
Ease of operation	2.9	3.1	2.8	3.0	3.0	3.2	3.4	3.4
Reliability of mainframe	3.3	3.4	3.3	3.4	3.2	3.3	3.3	3.3
Reliability of peripherals	2.7	2.9	2.9	2.9	2.8	2.9	2.8	3.1
Maintenance service								
Responsiveness	2.9	3.0	2.9	2.8	3.1	3.0	3.1	3.0
Effectiveness	2.9	3.0	2.8	2.9	2.9	2.8	2.9	2.9
Technical Support								
Trouble-shooting	2.4	2.5	2.4	2.4	2.4	2.4	2.7	2.6
Education	2.4	2.5	2.5	2.5	2.4	2.4	2.6	2.4
Documentation	2.4	2.4	2.3	2.3	2.5	2.4	2.5	2.5
Manufacturer's software								
Operating system	3.0	3.1	2.8	3.0	3.1	3.0	3.2	3.3
Compilers & assemblers	3.1	3.0	3.0	3.0	3.1	3.0	3.0	2.9
Applications programs	2.7	2.7	2.6	2.6	2.6	2.6	2.7	2.8
Ease of programming	2.9	3.0	2.7	2.9	2.8	2.9	3.2	2.8
Ease of conversion	2.6	2.5	2.6	2.8	2.7	2.7	3.0	2.7
Overall satisfaction	2.8	3.0	2.8	2.8	2.9	2.9	3.1	3.1

FIGURE 10: TOP FIVE VENDORS (INCLUDING TIES)

Mainframes & PCMs	Minicomputers & SBCs
France	
Amdahl (4 0)	MAI (Basic Four) (3 6)
DEC (3 3)	Prime (3 3)
NASCO (Ite) (3 2)	DEC (3 1)
Burroughs (2 9)	Hewlett-Packard (3 1)
IBM (2 9)	IBM (3 1)
Siemens (2 9)	Philips (3 1)
Univac (2 9)	Texas Instruments (3 1)
Germany	
Ci Honeywell Bull (3 0)	Wang Laboratories (3 4)
NCR (2 9)	CGK (3 3)
IBM (2 8)	CTM (3 2)
Siemens (2 8)	MAI (Basic Four) (3 2)
Univac (2 8)	Prime (3 2)
United Kingdom	
Honeywell (3 2)	Computer Automation (3 3)
DEC (3 0)	Harris (3 3)
IBM (3 0)	Hewlett-Packard (3 2)
ICL (2 9)	DEC (3 1)
Univac (2 9)	IBM (3 1)
	Redifon (3 1)
United States	
Amdahl (3 6)	Educational Data (4 0)
Magnuson (3 5)	CGK (3 3)
DEC (3 3)	Pick & Assoc (4 0)
NASCO (Ite) (3 2)	Tandem (3 8)
Control Data (3 1)	Texas Instruments (3 5)
Univac (3 1)	Hewlett-Packard (3 4)
	Microdata (3 4)
	Qantel (3 4)

Desktop, personal and microcomputer applications cover the same range as larger computers (Figure 11) with a current emphasis on Accounting, Education, Engineering, Scientific, and Word Processing.

Most applications software is written in-house (Figure 12) with "ready-made" programs from the manufacturer the second choice everywhere except Germany, where proprietary software is the preferred second choice.

Users in all four countries listed BASIC as their primary programming language. Pascal, second on the U.S. list, was third or fourth in the other countries.

France	United Kingdom
1 BASIC (76%)	1 BASIC (71%)
2 Assembler (28%)	2 Assembler (21%)
3 Pascal (11%)	3 Pascal (21%)
4 APL (11%)	4 FORTRAN (17%)
5 COBOL (7%)	5 COBOL (4%)
Germany	United States (% N.A.)
1 BASIC (65%)	1 BASIC
2 FORTRAN (20%)	2 Pascal
3 Assembler (20%)	3 FORTRAN
4 Pascal (10%)	
5 COBOL (10%)	

European User Ratings of Computer Systems

FIGURE 11: APPLICATIONS OF PERSONAL COMPUTERS

France	United Kingdom
1 Engineering/Scientific (46%)	1 Education (54%)
2 Accounting (37%)	2 Engineering/Scientific (33%)
3 Education (26%)	3 Word Processing (21%)
4 Payroll/Personnel (13%)	4 Accounting (17%)
5 Word Processing (13%)	5 Manufacturing (17%)
6 Service Bureau (9%)	6 Distributed Processing (13%)
7 Medical/Health Care (7%)	7 Government (8%)
8 Banking/Finance (4%)	8 Payroll/Personnel (8%)
9 Government (4%)	9 Insurance (4%)
10 Manufacturing (4%)	10 Retail (4%)
Germany	United States (% N.A.)
1 Word Processing (55%)	1 Accounting
2 Education (40%)	2 Word Processing
3 Engineering/Scientific (35%)	3 Miscellaneous (most common with color graphics)
4 Accounting (25%)	4 Payroll/Personnel
5 Manufacturing (20%)	5 Engineering/Scientific
6 Payroll/Personnel (15%)	6 Education
7 Utilities-Power (15%)	7 Retail
8 Construction (10%)	8 Service Bureaus
9 Transportation (10%)	9 Manufacturing
10 Distributed Processing (10%)	10 Transaction Processing

FIGURE 12: SOFTWARE SOURCES FOR PERSONAL COMPUTERS

France
1 In-House Personnel (93%)
2 Ready-Made Programs From Manufacturer (15%)
3 Proprietary Software Packages (15%)
4 Contract Programming (7%)
5 Manufacturer's Personnel (2%)
Germany
1 In-House Personnel (95%)
2 Proprietary Software (40%)
3 Ready-Made Programs From Manufacturer (20%)
4 Contract Programming (5%)
5 Other Sources (10%)
United Kingdom
1 In-House Personnel (79%)
2 Ready-Made Programs From Manufacturer (38%)
3 Proprietary Software Packages (29%)
4 Manufacturer's Personnel (4%)
United States (% N.A.)
1 In-House Personnel
2 Ready-Made Programs From Manufacturer
3 Proprietary Software Packages
4 Contract Programming

Additional software, either proprietary or from the manufacturer, was at the head of every list of planned acquisitions implementations for 1980. Expanded data communications ranked second in Germany and the UK, but third in the U.S. and fourth in France.

France

- 1 Additional Software from Manufacturer (22%)
- 2 Proprietary Software (17%)
- 3 Integrated Word Processing (7%)
- 4 Distributed Processing (2%)
- 5 Expanded Data Communications (2%)

Germany

- 1 Proprietary Software (40%)
- 2 Expanded Data Communications (30%)
- 3 Integrated Word Processing (25%)
- 4 Additional Software From Manufacturer (10%)
- 5 Distributed Processing (10%)

United Kingdom

- 1 Additional Software From Manufacturer (25%)
- 2 Expanded Data Communications (17%)
- 3 Proprietary Software (13%)
- 4 Integrated Word Processing (13%)
- 5 Distributed Processing (8%)

United States

- 1 Proprietary Software
- 2 Additional Software From Manufacturer
- 3 Expanded Data Communications
- 4 Integrated Word Processing

Asked if they planned to replace their system in 1980, most desktop, personal and microcomputer users said no. France, 89%; Germany, 95%; the UK, 88%; and the U.S., 92%.

Late delivery or installation of equipment was listed as the most significant problem everywhere except in the UK, where late delivery of software was cited by 33% of the respondents. Terminals/peripherals compatibility appeared as one of the top five problems in both Germany and the U.K.

FRANCE

Most Significant Problems

- 1 Delivery and/or installation of equipment was late (17%)
- 2 Delivery of required software was late (11%)
- 3 Vendor did not provide all promised software or support (11%)
- 4 System proposed by vendor was too small (7%)
- 5 Equipment excessively noisy (7%)

Most Significant Advantages

- 1 System power/energy efficient (43%)
- 2 System easy to expand/reconfigure (35%)

European User Ratings of Computer Systems

- 3 Users happy with response time (33%)
- 4 Delivery and/or installation of equipment was ahead of schedule (33%)
- 5 Database language efficient and effective (22%)

GERMANY

Most Significant Problems

- 1 Delivery and/or installation of equipment was late (15%)
- 2 Terminals/peripherals compatibility not what vendor promised (10%)
- 3 Vendor enhancements/changes to hardware/software hard to keep up with (10%)
- 4 Delivery of required software was late (5%)
- 5 System costs exceeded expected total (5%)

Most Significant Advantages

- 1 System easy to expand/reconfigure (55%)
- 2 Users happy with response time (50%)
- 3 System power/energy efficient (35%)
- 4 Productivity aids help to keep programming costs down (30%)
- 5 Programs/data compatible, as vendor promised (20%)

UNITED KINGDOM

Most Significant Problems

- 1 Delivery of required software was late (33%)
- 2 Delivery and/or installation of equipment was late (13%)
- 3 Vendor did not provide all promised software or support (13%)
- 4 System proposed by vendor was too small (8%)
- 5 Terminals/peripherals compatibility not what vendor promised (8%)

Most Significant Advantages

- 1 System easy to expand/reconfigure (54%)
- 2 Users happy with response time (46%)
- 3 System power/energy efficient (33%)
- 4 Terminal/peripherals compatible, as vendor promised (29%)
- 5 System costs less than expected (17%)

UNITED STATES (% N.A.)

Most Significant Problems

- 1 Delivery and/or installation of equipment was late (Other problems received equal ranking with each other)

Most Significant Advantages

- 1 Users happy with response time
- 2 System easy to expand/reconfigure
- 3 Programs/data compatible, as vendor promised
- 4 Terminals/peripherals compatible, as vendor promised
- 5 System power/energy efficient

In rating their systems, the users were particularly unhappy with service and technical support (Figure 13), but in the overall satisfaction category, they gave their systems high average ratings in all four countries.

FIGURE 13: USER SATISFACTION RATINGS FOR DESKTOP, PERSONAL, AND MICROCOMPUTERS

	France	Germany	United Kingdom	United States
Ease of operation	3.5	3.4	3.3	3.4
Reliability of mainframe	3.5	3.2	3.3	3.5
Reliability of peripherals	2.8	2.6	2.7	3.2
Maintenance service				
Responsiveness	2.7	2.3	2.2	2.9
Effectiveness	2.6	2.6	2.6	3.0
Technical Support				
Trouble-shooting	2.5	2.0	1.9	2.8
Education	2.1	1.5	1.9	2.5
Documentation	2.4	2.1	2.8	2.6
Manufacturer's software				
Operating system	3.0	3.0	3.0	3.1
Compilers & assemblers	3.2	2.6	2.9	2.8
Applications programs	2.8	2.0	2.5	2.6
Ease of programming	3.5	3.3	3.3	3.3
Ease of conversion	2.7	2.8	2.9	2.9
Overall satisfaction	3.0	3.0	3.0	3.2

On the final question, whether they would recommend their system to another user in the same situation, the majority said yes: France, 87%; Germany, 85%; the U.K., 83%; and the U.S., 80%.

THANK YOU

Datapro extends sincere thanks to the users in France, Germany, and the UK for responding so enthusiastically to our first European survey. We hope these survey reports, which summarize the experience and opinions of hundreds of your fellow users, will be of significant value to you. □

Ratings of Computer Systems by British Users

This year, in addition to its annual survey of U.S. computer users, Datapro conducted user surveys in France, Germany and the United Kingdom. This report contains the detailed results of the survey conducted in the United Kingdom with the cooperation of *Computer Weekly*.

Table 1 presents a model by model summary of user experience with mainframes and plug-compatible mainframes.

Table 2 presents a model by model summary of user experience with minicomputers and small business systems.

Table 3 presents a model by model summary of user experience with desktop, personal, and microcomputers.

Table 4 presents a vendor by vendor summary of user experience with mainframes and plug-compatible mainframes.

Table 5 presents a vendor by vendor summary of user experience with minicomputers and small business systems.

Because Table 3 already effectively provides a vendor by vendor summary of user experience with desktop,

This report contains the detailed results of Datapro's first survey of computer systems users in the United Kingdom and includes ratings of 1,641 systems based on 1,184 user responses. For summary information and an explanation of how the survey was conducted, please see Report 70C-010-51.

personal, and microcomputers, we have not prepared a separate table for this category.

While we believe the information contained in these tables can be extremely useful in the early stages of system selection, we urge users not to allow this information to dictate their final decision. The survey results are detailed enough to advise you of *potential* strengths and warn you of *potential* weaknesses, but they are not detailed enough to tell you how a particular system would perform in your unique environment with your unique applications.

A full introduction to this survey, including country by country summary information, appears in Report 70C-010-51.□

Ratings of Computer Systems by British Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item										
	Burroughs B 1700	Burroughs B 2700	Burroughs B 3700	Burroughs B 1800	Burroughs B 2800	Burroughs (other models)	DEC DECsystem 10	Honeywell 2000	Honeywell Level 64	Honeywell Level 66	IBM 360 (all models)
No. of User Responses	9	3	5	9	3	8	6	5	15	15	4
No. of Systems Represented	9	3	6	9	3	8	6	5	15	15	4
Avg. Life of System (mos.)	38	46	39	9	8	42	41	53	22	24	36
Acquisition Method (%)											
Purchase	67	0	60	44	33	50	67	40	40	47	25
Rental	11	0	20	33	33	25	0	20	13	40	0
Lease	22	100	20	22	33	25	33	40	47	27	75
Principal Applications (%)											
Accounting	67	100	100	78	100	63	33	80	93	73	75
Construction	11	0	0	11	0	0	0	7	13	0	0
Education	0	0	0	0	0	0	83	0	0	0	0
Government	0	0	0	0	0	0	0	20	7	13	0
Manufacturing	22	0	20	22	100	25	0	33	13	50	0
Payroll/Personnel	56	0	80	44	100	63	33	40	60	73	50
Service Bureau	11	0	20	11	0	0	0	0	0	0	0
Transportation	0	0	0	0	0	25	17	20	0	20	0
Word Processing	0	0	0	0	0	0	33	0	0	7	0
Banking - Finance	22	33	40	22	0	50	0	7	13	0	0
Distributed Processing	0	0	60	11	0	25	17	0	13	53	0
Engineering - Scientific	0	0	0	11	0	13	17	0	20	47	0
Insurance	0	0	0	0	0	0	0	20	7	7	0
Medical - Health Care	0	0	0	0	0	0	0	0	0	13	25
Retail	0	0	0	33	0	13	0	20	40	20	0
Transaction Processing	0	33	20	33	0	38	0	33	67	0	0
Utilities - Power	0	0	0	0	0	0	0	7	13	0	0
Other	11	67	20	11	0	0	0	20	7	27	25
Source of Applications Programs (%)											
In-House Personnel	89	100	100	89	100	100	100	93	93	100	0
Ready-Made Programs From Manufacturer	67	0	20	56	0	13	67	20	47	58	0
Contract Programming	33	67	20	67	0	13	0	53	27	75	0
Manufacturer's Personnel	11	33	0	11	0	0	0	13	33	0	0
Proprietary Software Packages	11	33	60	33	0	25	67	40	53	50	0
Other	33	0	0	0	0	0	17	0	7	0	0
Hardware Configuration											
Nr. of CPUs	9	3	6	8	3	10	7	5	16	26	4
Nr. of Workstations (avg.)	7	1	4	8	10	5	110	0	20	49	2
Software Configuration											
Database Management Systems (%)	56	67	80	67	67	100	17	0	33	100	0
Data Communications Monitors (%)	44	0	60	78	67	100	33	0	73	93	25
Primary Programming Language (%)											
APL	0	0	0	0	0	0	0	0	0	7	0
BASIC	0	0	0	0	0	0	17	0	0	13	0
COBOL	78	100	100	100	100	100	50	80	80	87	75
FORTRAN	0	0	0	0	0	0	50	0	7	27	0
RPG	22	0	0	11	33	0	0	0	0	0	0
Other	11	0	0	0	0	0	33	0	0	20	25
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	33	33	0	67	33	50	17	0	47	53	75
Proprietary Software	11	0	20	0	0	50	17	20	7	33	0
Expanded Data Communications	22	33	60	44	67	50	83	20	80	67	50
Distributed Processing	0	0	20	0	0	38	33	0	40	27	25
Integrated Word Processing	0	0	0	0	0	0	0	0	20	27	25
Other	0	0	0	11	33	0	17	0	0	0	0
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	22	0	20	11	33	38	0	80	0	20	25
Yes, Different Manufacturer	22	33	0	11	0	0	0	0	0	0	25
No	56	67	80	78	67	63	100	20	100	80	50

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Ratings of Computer Systems by British Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item										
	Burroughs B 1700	Burroughs B 2700	Burroughs B 3700	Burroughs B 1800	Burroughs B 2800	Burroughs (other models)	DEC DECsystem 10	Honeywell 2000	Honeywell Level 64	Honeywell Level 66	IBM 360 (all models)
Significant Problems (%)											
System proposed by vendor was too small	78	33	40	56	33	13	0	20	27	33	0
Delivery and/or installation of equipment was late	67	33	20	89	67	50	17	20	0	13	25
Delivery of required software was late	22	0	0	56	33	13	17	0	0	13	0
System costs exceeded expected total	11	33	0	33	0	13	0	0	27	13	0
Vendor did not provide all promised software or support	11	33	40	56	67	25	0	20	13	13	0
Program data compatibility not what vendor promised	0	0	20	0	33	0	0	20	7	0	0
Terminals/peripherals compatibility not what vendor promised	11	0	0	22	0	0	0	0	0	13	0
Vendor enhancements/changes to hardware/software hard to keep up with	22	33	0	22	0	13	17	20	7	7	0
Equipment excessively noisy	0	33	0	0	0	13	0	0	0	20	0
Power/cooling requirements excessive	11	33	0	0	33	25	0	0	0	7	0
Other	11	33	0	0	0	0	0	40	13	7	25
Significant Advantages (%)											
Users happy with response time	22	33	40	44	67	63	33	20	27	73	0
System easy to expand/reconfigure	56	33	80	78	33	88	33	0	67	100	0
System costs less than expected	0	0	0	11	0	25	0	0	7	0	25
Programs/data compatible, as vendor promised	56	33	40	56	33	63	67	60	60	33	25
Terminals/peripherals compatible, as vendor promised	11	0	20	33	33	50	50	20	20	27	25
System power/energy efficient	22	0	20	33	67	13	0	0	7	13	0
Productivity aids help keep programming costs down	44	0	0	67	0	0	17	0	33	47	0
Database language efficient and effective	44	33	0	33	0	25	0	0	13	40	0
Delivery and/or installation of equipment was ahead of schedule	0	33	0	0	0	0	0	0	13	20	0
Delivery of required software was ahead of schedule	0	0	0	0	0	0	0	0	0	0	25
Other	0	0	0	0	0	0	0	0	0	0	0
System Ratings (4.0-1.0)											
Ease of operation	33	30	32	37	33	31	35	30	32	29	25
Reliability of mainframe	31	27	36	30	30	31	25	30	35	34	20
Reliability of peripherals	24	23	28	26	23	23	30	28	28	32	25
Maintenance service	30	27	30	29	33	29	27	32	30	34	33
Responsiveness	23	30	30	26	23	28	27	32	29	33	28
Effectiveness	19	17	18	16	20	19	23	22	25	29	25
Technical Support	18	17	13	18	20	16	25	24	23	23	18
Trouble-shooting	17	17	20	18	17	19	28	24	21	27	20
Education											
Documentation	33	30	32	38	33	36	33	28	32	35	20
Manufacturer's Software	31	37	30	34	30	33	28	30	32	34	20
Operating systems	24	30	30	23	—	23	28	—	27	26	—
Compilers & assemblers											
Applications programs	31	30	30	34	33	29	32	28	31	29	23
Ease of conversion	32	30	23	31	—	30	32	23	30	25	23
Overall satisfaction	27	27	30	27	23	30	30	30	31	34	28
Would you recommend system to another user? (%)											
Yes	56	67	100	67	67	88	50	80	100	100	50
No	44	33	0	33	33	0	50	20	0	0	50

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Ratings of Computer Systems by British Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item												
	IBM 370/115	IBM 370/125	IBM 370/135	IBM 370/138	IBM 370/145	IBM 370/148	IBM 370/158	IBM 3031	IBM 3032 & 3033	IBM 4331	ICL System 4		
No of User Responses	7	14	8	32	13	10	8	11	5	9	8		
No of Systems Represented	7	14	9	33	14	12	10	13	5	9	8		
Avg Life of System (mos.)	37	45	38	24	53	40	34	8	12	3	130		
Acquisition Method (%)													
Purchase	29	7	38	31	62	50	38	45	20	0	88		
Rental	71	43	0	22	0	10	38	18	20	44	0		
Lease	0	50	63	47	38	40	13	36	60	56	13		
Principal Applications (%)													
Accounting	43	100	88	94	54	80	75	82	100	67	50		
Construction	0	0	0	3	0	0	0	0	0	20	11		
Education	0	0	0	6	0	0	0	0	0	0	0		
Government	0	7	0	9	0	10	25	9	20	11	13		
Manufacturing	29	57	38	66	8	40	38	27	80	44	25		
Payroll/Personnel	29	64	63	72	46	60	75	64	100	33	25		
Service Bureau	0	14	13	6	0	10	0	9	0	0	0		
Transportation	0	0	25	13	8	10	25	27	20	22	25		
Word Processing	0	0	0	3	0	10	13	9	0	0	13		
Banking/Finance	14	14	13	6	31	10	0	9	20	11	25		
Distributed Processing	0	0	13	13	8	10	50	36	80	0	0		
Engineering/Scientific	0	0	0	3	23	0	0	18	20	0	0		
Insurance	0	14	13	13	8	10	50	36	80	0	0		
Medical/Health Care	0	0	0	6	0	0	0	0	11	13	0		
Retail	0	14	0	6	0	0	0	0	11	13	0		
Transaction Processing	0	43	13	38	8	40	38	27	80	11	38		
Utilities—Power	0	7	0	9	0	10	13	18	40	0	0		
Other	29	7	38	9	0	20	13	9	0	0	25		
Source of Applications Programs (%)													
In House Personnel	100	100	100	100	100	100	100	100	100	100	100		
Ready Made Programs From Manufacturer	0	21	25	34	23	10	13	36	60	44	0		
Contract Programming	29	7	0	34	15	30	13	27	60	0	0		
Manufacturer's Personnel	0	0	0	6	0	10	0	0	40	0	13		
Proprietary Software Packages	29	36	50	69	62	60	60	91	100	44	25		
Other	14	7	0	0	0	0	0	0	20	0	0		
Hardware Configuration													
No of CPUs	7	14	9	33	14	12	11	13	6	9	8		
No of Workstations (avg.)	2	12	8	24	35	33	62	42	236	9	33		
Software Configuration													
Database Management Systems (%)	14	29	50	66	54	70	75	73	80	67	13		
Data Communications Monitors (%)	57	64	75	97	85	90	75	100	100	100	50		
Primary Programming Languages (%)													
APL	0	0	0	0	0	10	13	9	0	0	0		
BASIC	0	0	0	0	0	0	0	0	0	0	0		
COBOL	71	71	63	75	54	60	75	73	60	89	63		
FORTRAN	14	0	0	3	0	13	9	20	0	13	0		
RPG	0	36	0	0	8	0	0	0	11	0	0		
Other	71	36	63	38	38	70	38	27	60	11	13		
Planned Acquisitions/Implementations for 1980 (%)													
Additional Software From Manufacturer	29	29	50	56	46	80	38	64	80	78	0		
Proprietary Software	0	43	38	50	31	40	25	36	60	33	0		
Expanded Data Communications	43	14	50	59	38	70	63	64	60	67	0		
Distributed Processing	0	14	13	41	15	20	38	55	40	33	0		
Integrated Word Processing	0	0	13	13	8	10	13	18	20	11	0		
Other	0	14	0	3	0	10	13	9	0	0	0		
Plans for System Replacement in 1980 (%)													
Yes Same Manufacturer	57	21	38	50	46	20	50	18	0	0	25		
Yes Different Manufacturer	0	0	0	0	0	20	0	9	0	0	38		
No	43	79	63	50	54	60	50	73	100	100	38		

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Ratings of Computer Systems by British Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item												
	IBM 370-115	IBM 370-125	IBM 370-135	IBM 370-138	IBM 370-145	IBM 370-148	IBM 370-158	IBM 3031	IBM 3032 & 3033	IBM 4331	ICL System 4		
Significant Problems (%)	14	14	0	16	8	20	13	9	0	0	25		
System proposed by vendor was too small	0	7	0	3	0	10	0	9	0	0	11		
Delivery and/or installation of equipment was late	0	7	0	13	8	0	25	18	20	33	13		
Delivery of required software was late	0	0	0	13	8	10	0	9	0	0	0		
System costs exceeded expected total	0	0	0	13	8	10	0	0	0	0	0		
Vendor did not provide all promised software or support	14	0	0	0	0	0	0	0	0	11	0		
Program/data compatibility not what vendor promised	0	0	0	0	0	0	13	0	20	0	0		
Terminals/peripherals compatibility not what vendor promised	29	21	13	16	15	30	13	9	40	11	0		
Vendor enhancements/changes to hardware/software hard to keep up with	0	7	13	0	23	0	0	0	0	0	0		
Equipment excessively noisy	14	7	25	0	23	10	0	20	0	13	0		
Power/cooling requirements excessive	0	0	0	3	15	10	0	18	0	11	25		
Other	29	21	38	56	38	60	63	36	60	78	50		
Significant Advantages (%)	29	14	38	34	46	30	50	45	0	44	25		
Users happy with response time	29	0	0	0	0	0	0	18	0	11	0		
System easy to expand/reconfigure	29	64	38	50	46	50	75	91	80	78	0		
System costs less than expected	14	36	25	34	31	30	63	82	80	67	0		
Programs/data compatible, as vendor promised	0	0	13	0	10	13	27	20	67	0	0		
Terminals/peripherals compatible, as vendor promised	0	14	38	41	0	60	50	27	80	67	0		
System power/energy efficient	14	7	13	25	0	20	25	9	60	0	0		
Productivity aids help keep programming costs down	0	0	13	6	0	10	13	9	20	22	0		
Database language efficient and effective	0	0	0	3	0	10	0	0	0	0	0		
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	0	10	0	0	0	0	13		
Delivery of required software was ahead of schedule	30	29	30	29	29	32	29	27	33	31	29		
Other	39	36	34	37	32	40	30	33	38	38	31		
System Ratings (4 0-1 0)	33	31	30	32	32	34	28	31	34	33	36		
Ease of operation	31	28	33	31	31	28	28	33	34	31	31		
Reliability of mainframe	31	29	30	31	31	28	28	29	30	31	28		
Reliability of peripherals	23	22	29	24	29	26	28	28	28	23	25		
Maintenance service	30	26	29	24	22	25	25	26	28	26	21		
Responsiveness	27	29	29	26	23	28	23	25	26	25	27		
Effectiveness	30	26	30	28	28	28	30	31	34	30	29		
Technical Support	31	29	31	30	29	32	31	30	32	30	30		
Trouble-shooting	28	29	26	24	23	28	28	23	30	28	23		
Education	29	27	29	27	25	27	29	27	30	28	30		
Documentation	27	26	30	28	24	24	29	26	30	29	20		
Manufacturer's Software	31	29	30	30	29	30	30	30	32	30	29		
Operating system	28	29	26	24	23	28	28	23	30	28	23		
Compilers & assemblers	29	27	29	27	25	27	29	27	30	28	30		
Applications programs	27	26	30	28	24	24	29	26	30	29	20		
Ease of programming	31	29	30	30	29	30	30	30	32	30	29		
Ease of conversion	86	79	75	97	85	90	88	91	100	89	50		
Overall satisfaction	14	21	13	3	8	10	0	9	0	0	38		
Would you recommend system to another user? (%)													
Yes													
No													

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Ratings of Computer Systems by British Users

Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item											
	ICL 1900	ICL 2950	ICL 2956	ICL 2960	ICL 2970 & 2980	NCR Century 101 thru 500	NCR 8400 Series	NCR 8500 Series	Univac 90/30	Univac 90/60 & 90/70	Univac 1100 Series	
No. of User Responses	71	16	5	14	4	9	4	6	11	3	6	
No. of Systems Represented	76	18	5	19	4	9	4	6	15	3	7	
Avg. Life of System (mos.)	66	8	8	18	31	63	14	18	34	50	41	
Acquisition Method (%)												
Purchase	59	19	20	29	75	44	50	67	9	0	33	
Rental	25	44	80	14	0	22	0	73	67	67	67	
Lease	23	38	0	57	25	33	50	33	18	33	0	
Principal Applications (%)												
Accounting	63	94	100	86	50	67	100	50	100	33	100	
Construction	7	13	0	0	0	0	0	0	0	0	17	
Education	21	13	0	7	50	11	0	0	0	0	17	
Government	31	6	0	36	25	0	0	0	0	0	17	
Manufacturing	17	44	40	64	25	56	75	17	91	33	50	
Payroll/Personnel	55	75	80	64	25	33	0	33	0	0	17	
Service Bureau	14	25	20	7	75	33	0	0	0	0	33	
Transportation	8	19	0	14	0	0	0	0	0	0	0	
Word Processing	3	13	20	7	0	0	0	0	0	0	0	
Banking/Finance	6	6	20	14	33	25	0	0	0	0	33	
Distributed Processing	8	31	0	7	25	0	0	0	0	0	50	
Engineering/Scientific	38	13	20	29	50	0	0	33	0	33	0	
Insurance	6	0	0	0	0	0	0	0	0	0	17	
Medical/Health Care	1	0	0	0	0	0	0	0	0	0	0	
Retail	4	6	20	0	25	0	25	0	27	0	0	
Transaction Processing	15	63	20	36	25	11	25	17	36	33	50	
Utilities—Power	7	0	0	0	50	0	0	0	0	0	17	
Other	10	13	20	7	25	0	25	17	0	0	0	
Source of Applications Programs (%)												
In-House Personnel	97	100	100	100	75	89	100	100	91	100	100	
Ready-Made Programs From Manufacturer	44	50	40	29	50	33	50	17	36	0	50	
Contract Programming	18	31	20	36	25	22	25	17	18	33	67	
Manufacturer's Personnel	6	6	0	0	11	25	0	18	0	0	33	
Proprietary Software Packages	42	56	20	57	75	33	25	17	64	0	0	
Other	6	6	0	7	25	0	0	0	0	0	0	
Hardware Configuration												
No. of CPUs	76	18	5	21	5	9	4	6	15	4	9	
No. of Workstations (avg.)	20	11	26	27	25	5	6	15	4	3	57	
Software Configuration												
Database Management Systems (%)	13	6	20	36	75	11	0	17	36	0	100	
Data Communications Monitors (%)	39	81	80	71	75	22	75	67	73	100	100	
Primary Programming Languages (%)												
APL	0	0	0	0	0	0	0	0	0	0	0	
BASIC	8	6	0	0	0	22	0	0	0	0	0	
COBOL	70	94	60	93	50	56	50	67	82	100	100	
FORTRAN	31	13	0	21	75	22	0	0	0	0	33	
RPG	1	0	0	0	0	0	0	0	18	0	0	
Other	41	25	20	0	25	89	50	100	36	67	17	
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	14	38	20	36	50	22	25	83	18	33	67	
Proprietary Software	17	31	20	29	50	22	0	50	27	33	17	
Expanded Data Communications	37	88	40	71	100	22	75	100	55	67	67	
Distributed Processing	14	25	0	29	100	33	25	33	9	33	33	
Integrated Word Processing	14	13	20	36	25	11	0	0	0	0	33	
Other	4	0	0	0	0	0	25	0	9	0	0	
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	23	0	0	0	0	44	0	0	0	33	17	
Yes, Different Manufacturer	24	6	20	0	0	22	0	0	9	0	0	
No	63	94	60	100	100	33	100	83	91	67	83	

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Ratings of Computer Systems by British Users

Table 1. Mainframes & Plug-Compatible Mainframes

Survey Item	Manufacturer and Model											
	ICL 1900	ICL 2950	ICL 2956	ICL 2960	ICL 2970 & 2980	NCR Century 101 thru 500	NCR 8400 Series	NCR 8500 Series	Univac 90/30	Univac 90/60 & 90/70	Univac 1100 Series	
Significant Problems (%)												
System proposed by vendor was too small	20	6	0	14	0	75	11	25	0	45	0	17
Delivery and/or installation of equipment was late	10	13	20	0	75	22	25	33	9	0	0	0
Delivery of required software was late	11	13	40	14	100	0	25	0	9	0	17	17
System costs exceeded expected total	3	6	20	7	50	0	50	0	27	33	17	17
Vendor did not provide all promised software or support	13	13	20	21	25	22	0	0	18	67	0	0
Program/data compatibility not what vendor promised	1	13	20	0	0	0	0	0	9	0	0	0
Terminals/peripherals compatibility not what vendor promised	4	6	0	7	25	0	0	17	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	6	6	0	21	50	0	25	0	18	0	0	0
Equipment excessively noisy	14	0	0	0	0	0	0	0	9	0	0	0
Power/cooling requirements excessive	13	0	0	0	25	11	0	0	9	0	33	0
Other	14	6	0	14	0	11	0	0	9	0	0	0
Significant Advantages (%)												
Users happy with response time	31	38	40	29	75	33	25	67	9	67	83	83
System easy to expand/reconfigure	28	75	40	50	75	44	100	50	27	33	50	50
System costs less than expected	6	0	20	0	0	0	0	0	0	0	0	0
Programs/data compatible, as vendor promised	38	88	80	86	75	56	100	100	27	33	33	33
Terminals/peripherals compatible, as vendor promised	20	56	60	36	25	22	100	50	18	33	60	60
System power/energy efficient	7	25	20	7	0	0	0	17	9	33	0	0
Productivity aids help keep programming costs down	4	25	0	7	50	0	0	33	36	33	50	50
Database language efficient and effective	3	6	0	21	50	0	0	0	9	0	50	50
Delivery and/or installation of equipment was ahead of schedule	15	19	20	43	0	11	0	17	9	0	50	50
Delivery of required software was ahead of schedule	6	6	0	7	0	0	0	0	0	0	17	17
Other	1	0	0	7	0	22	0	0	0	0	0	0
System Ratings (4.0-1.0)												
Ease of operation	2.9	3.1	3.2	3.2	2.8	2.8	3.3	3.5	3.0	2.7	3.0	3.0
Reliability of mainframe	3.0	3.1	2.4	2.9	1.5	3.6	3.3	3.2	2.7	3.7	3.3	3.3
Reliability of peripherals	2.5	2.8	2.8	2.8	2.5	3.1	3.0	3.3	2.4	3.7	3.0	3.0
Maintenance service	2.9	3.1	2.8	3.2	3.5	3.4	3.0	3.2	3.1	3.3	3.5	3.5
Responsiveness	2.7	2.7	2.6	2.6	2.3	3.0	3.5	2.8	2.8	3.3	3.5	3.5
Effectiveness												
Technical Support	2.4	2.3	2.2	2.8	2.0	2.0	2.3	2.0	2.7	2.2	2.2	2.2
Trouble-shooting	2.7	2.4	2.6	2.9	2.8	2.6	2.0	2.3	2.0	2.0	2.3	2.3
Education	2.6	2.1	3.0	2.8	2.5	2.6	2.3	2.8	1.8	2.3	2.3	2.3
Documentation												
Manufacturer's Software	3.2	2.8	2.8	3.2	2.5	2.9	2.8	3.5	3.0	2.7	3.2	3.2
Operating system	3.0	2.8	2.8	3.0	3.5	3.1	3.0	3.2	2.8	2.7	3.2	3.2
Compilers & assemblers	2.8	2.6	2.4	2.4	—	1.8	2.5	—	2.0	—	2.3	2.3
Applications programs												
Ease of programming	2.8	2.8	2.6	2.9	3.3	2.8	3.3	2.8	2.6	2.3	3.3	3.3
Ease of conversion	2.4	3.1	3.2	2.9	2.5	2.6	3.5	3.8	2.9	2.3	3.0	3.0
Overall satisfaction	2.9	2.9	2.6	3.1	2.3	2.7	2.8	2.8	2.8	3.0	3.0	3.0
Would you recommend system to another user? (%)												
Yes	61	75	60	93	50	56	100	83	73	33	100	100
No	35	13	40	0	50	44	0	17	27	67	0	0

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model												
	Allied Business Systems Multibus 89/40	Burroughs B700 Series	Burroughs B80	Burroughs B800	BCL Molecular Series	Computer Automation SYFA	CMC (Microdata) Reality	CTL Modular 1	CTL 8000 Series	Data General Nova 2 & 3	Data General Eclipse		
No. of User Responses	7	6	4	17	7	3	15	9	7	10	7		
No. of Systems Represented	7	7	4	23	8	12	19	10	7	25	7		
Avg. Life of System (mos.)	37	45	19	24	32	28	20	70	24	37	28		
Acquisition Method (%)													
Purchase	86	100	75	59	57	67	27	100	71	80	86		
Rental	0	0	0	6	8	0	33	0	0	0	0		
Lease	14	0	25	35	43	33	40	0	29	20	14		
Principal Applications (%)													
Accounting	100	67	50	71	100	67	100	11	57	50	43		
Construction	0	0	0	0	0	0	0	7	0	0	0		
Education	0	0	0	0	0	0	0	0	0	0	0		
Government	0	0	0	0	0	0	0	0	78	0	14		
Manufacturing	0	0	0	0	0	0	0	11	0	0	0		
Payroll/Personnel	43	0	0	6	29	0	47	11	29	10	14		
Service Bureau	0	35	25	47	43	33	47	11	29	30	14		
Transportation	14	0	25	0	0	0	27	0	0	10	29		
Word Processing	0	0	0	0	0	0	0	0	14	0	0		
Banking/Finance	0	0	0	0	0	0	0	11	0	0	14		
Distributed Processing	0	0	0	18	0	0	20	0	14	0	43		
Engineering/Scientific	0	0	0	24	14	100	13	0	0	10	14		
Insurance	0	0	0	0	0	0	0	22	0	20	14		
Medical/Health Care	14	0	0	6	0	0	33	0	0	0	0		
Retail	0	0	0	0	0	0	0	11	0	0	0		
Transaction Processing	0	0	0	6	29	0	7	0	0	10	0		
Utilities—Power	29	17	25	18	14	33	13	11	57	10	14		
Other	0	0	0	0	0	0	0	0	0	0	0		
Source of Applications Programs (%)	29	33	50	12	29	33	20	11	14	60	29		
In-House Personnel													
Ready-Made Programs From Manufacturer	43	17	50	59	29	100	60	89	57	50	71		
Contract Programming	0	67	25	41	43	0	7	33	14	10	0		
Manufacturer's Personnel	57	0	0	47	43	33	20	0	14	40	14		
Proprietary Software Packages	14	0	0	0	43	0	7	11	0	0	0		
Other	0	0	0	18	0	0	40	0	0	0	29		
Hardware Configuration													
No. of CPUs	7	7	4	24	7	12	19	13	7	26	8		
No. of Workstations (avg.)	4	50	1	5	8	10	16	9	9	20	20		
Software Configuration													
Database Management Systems (%)	29	33	0	18	0	0	20	11	29	0	43		
Data Communications Monitors (%)	0	17	2	35	0	0	27	44	71	10	29		
Primary Programming Languages (%)													
APL	0	0	0	0	0	0	0	0	0	0	0		
BASIC	0	0	0	0	0	0	73	33	14	30	29		
COBOL	0	83	75	65	14	0	0	33	100	20	43		
FORTRAN	0	0	0	0	0	0	0	22	0	50	71		
RPG	0	67	0	18	0	0	0	0	0	0	0		
Other	86	0	25	18	43	67	67	56	14	30	29		
Planned Acquisitions/Implementations for 1980 (%)													
Additional Software From Manufacturer	14	0	0	12	14	0	7	33	43	20	43		
Proprietary Software	29	17	0	6	57	0	27	0	0	0	57		
Expanded Data Communications	0	0	0	12	14	33	33	0	14	0	29		
Distributed Processing	0	0	0	12	14	33	7	11	0	0	0		
Integrated Word Processing	0	0	0	0	0	0	13	0	29	0	43		
Other	14	0	25	6	14	0	20	11	0	20	0		
Plans for System Replacement in 1980 (%)													
Yes, Same Manufacturer	0	0	50	12	0	0	0	11	14	10	0		
Yes, Different Manufacturer	14	50	25	0	14	0	7	11	0	10	14		
No	86	50	25	88	86	100	93	78	86	80	86		

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Ratings of Computer Systems by British Users

Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model												
	Allied Business Systems Multibus 89/40	Burroughs B700 Series	Burroughs B80	Burroughs B800	BCL Molecular Series	Computer Automation SYFA	CMC (Microdata) Reality	CTL Modular 1	CTL 8000 Series	Data General Nova 2 & 3	Data General Eclipse		
Significant Problems (%)	29	33	50	53	14	0	33	33	14	40	14		
System proposed by vendor was too small	29	50	50	47	0	0	7	33	11	0	10		43
Delivery and/or installation of equipment was late	57	67	50	29	14	0	27	11	29	20	14		14
Delivery of required software was late	0	0	25	18	14	0	0	11	0	10	0		14
System costs exceeded expected total	43	50	50	59	43	33	33	33	29	10	29		29
Vendor did not provide all promised software or support	14	0	0	29	29	0	0	0	29	0	0		0
Program/data compatibility not what vendor promised	14	17	0	12	14	0	20	0	0	0	0		0
Terminals/peripherals compatibility not what vendor promised	14	17	0	12	0	0	0	11	14	20	14		14
Vendor enhancements/changes to hardware/software hard to keep up with	14	0	0	6	0	0	33	0	11	0	0		14
Equipment excessively noisy	14	0	0	12	0	0	0	22	0	0	0		0
Power/cooling requirements excessive	29	17	25	18	29	0	13	22	14	10	14		14
Other													
Significant Advantages (%)	57	33	0	29	43	67	47	22	71	10	57		57
Users happy with response time	86	33	75	53	57	100	47	33	57	50	71		71
System easy to expand/reconfigure	14	0	0	0	0	0	0	0	0	0	0		0
System costs less than expected	14	0	75	24	0	33	13	0	0	30	43		43
Programs/data compatible, as vendor promised	14	0	50	18	0	33	0	11	14	30	14		14
Terminals/peripherals compatible, as vendor promised	14	0	0	12	29	33	20	0	14	0	43		43
System power/energy efficient	0	0	0	6	29	33	47	11	71	0	43		43
Productivity aids help keep programming costs down	29	0	0	12	29	0	53	0	14	0	57		57
Database language efficient and effective	14	0	0	0	14	67	13	0	0	20	0		0
Delivery and/or installation of equipment was ahead of schedule	14	0	0	0	14	0	7	0	0	0	0		0
Delivery of required software was ahead of schedule	0	0	0	6	0	0	7	22	0	0	0		0
Other													
System Ratings (4.0-1.0)	33	27	28	33	31	40	35	26	29	30	33		33
Ease of operation	34	23	30	25	33	33	31	30	30	33	36		36
Reliability of mainframe	23	22	20	23	31	30	29	25	23	30	30		30
Reliability of peripherals	29	18	18	22	31	33	27	33	31	31	30		30
Maintenance service: Responsiveness	27	22	23	19	27	30	24	24	29	29	24		24
Effectiveness													
Technical Support: Trouble-shooting	23	18	18	16	22	23	24	18	20	23	16		16
Education	12	18	—	15	22	23	25	18	30	23	17		17
Documentation	1.5	17	1.8	1.5	1.8	3.0	2.3	2.0	1.9	2.7	2.9		2.9
Manufacturer's Software: Operating system	33	30	30	29	26	33	35	23	31	29	29		29
Compilers & assemblers	33	22	27	25	33	33	35	19	30	28	28		28
Applications programs	3.4	2.5	—	2.3	2.7	—	3.1	1.3	3.0	2.8	2.7		2.7
Ease of programming	3.2	2.0	2.3	2.9	2.4	3.7	3.4	2.6	3.4	3.1	3.1		3.1
Ease of conversion	2.3	1.8	3.0	2.7	1.3	—	2.7	2.0	2.8	3.0	2.7		2.7
Overall satisfaction	2.8	1.7	1.8	2.3	2.9	3.3	2.9	2.9	2.9	2.8	2.9		2.9
Would you recommend system to another user? (%)	71	33	25	41	86	100	87	56	86	80	71		71
Yes	29	67	75	53	14	0	13	33	14	20	29		29
No													

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item										
	Data General (Other Models)	Datapoint (Ventek) 5500	Datapoint (Ventek) ARC	Datapoint (Ventek) (Other Models)	Datasaab (All Models)	Diablo (Xerox) Ranger 3200	Digico (All Models)	DEC PDP-8	DEC PDP-11/03	DEC PDP-11/04, 05	DEC PDP-11/10 thru 11/23
No. of User Responses	5	3	4	4	4	5	7	11	5	5	8
No. of Systems Represented	35	28	13	16	36	7	39	12	26	16	10
Avg. Life of System (mos.)	80	100	75	75	80	75	80	100	80	100	100
Acquisition Method (%)	20	0	0	0	25	20	0	0	20	0	0
Purchase	80	100	75	75	80	75	80	100	80	100	100
Rental	0	0	0	0	0	0	0	0	0	0	0
Lease	20	0	25	25	20	29	0	0	20	0	0
Principal Applications (%)											
Accounting	40	100	100	50	50	60	29	18	20	20	13
Construction	20	0	0	0	0	0	0	0	20	0	0
Education	20	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	40	50
Manufacturing	40	0	0	0	0	0	0	0	0	0	0
Payroll/Personnel	60	67	25	0	0	60	29	18	20	20	0
Service Bureau	20	33	0	0	0	0	29	0	0	20	0
Transportation	0	33	25	0	0	0	0	0	0	0	13
Word Processing	0	33	25	0	0	0	0	0	0	0	13
Banking/Finance	20	33	0	0	25	0	14	9	0	40	25
Distributed Processing	0	33	50	0	0	0	0	0	0	0	0
Engineering/Scientific	20	0	0	0	0	20	43	36	60	40	88
Insurance	0	0	0	0	0	0	9	20	20	0	0
Medical/Health Care	20	0	0	0	0	0	43	0	0	25	0
Retail	0	33	50	0	0	0	29	9	0	0	13
Transaction Processing	40	67	75	0	25	0	9	0	0	20	0
Utilities—Power	0	33	25	0	0	0	0	0	0	0	0
Other	20	33	25	75	50	20	29	9	20	0	0
Source of Applications Programs (%)											
In-House Personnel	60	33	50	75	50	0	100	73	80	80	63
Ready-Made Programs From Manufacturer	0	33	0	25	0	40	14	27	20	20	25
Contract Programming	20	33	75	0	25	40	0	27	20	20	13
Manufacturer's Personnel	0	0	25	0	75	20	0	0	0	0	0
Proprietary Software Packages	20	0	0	0	0	20	14	36	20	40	13
Other	20	0	0	25	0	0	0	9	0	0	13
Hardware Configuration											
No. of CPUs	6	8	18	4	5	5	7	12	26	16	10
No. of Workstations (avg.)	11	11	13	2	5	4	4	3	2	7	3
Software Configuration											
Database Management Systems (%)	20	0	0	0	0	0	0	0	0	20	13
Data Communications Monitors (%)	40	0	0	50	25	0	0	0	0	40	13
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	0
BASIC	40	0	25	0	0	0	71	18	20	20	50
COBOL	0	0	0	0	0	0	0	0	0	0	0
FORTRAN	40	0	0	0	0	0	0	18	20	40	63
RPG	0	67	25	0	0	0	0	0	0	0	0
Other	60	100	100	75	75	100	71	55	60	100	50
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	20	0	25	0	25	20	14	0	0	0	0
Proprietary Software	20	0	0	0	0	0	14	9	0	40	0
Expanded Data Communications	40	0	0	0	0	0	14	0	20	40	13
Distributed Processing	0	33	0	0	0	0	0	0	0	0	25
Integrated Word Processing	20	33	50	0	0	20	29	0	0	0	0
Other	0	0	25	0	25	0	0	18	20	0	38
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	40	0	0	0	0	0	0	27	0	20	25
Yes, Different Manufacturer	0	0	0	0	0	0	14	9	0	0	0
No	60	100	100	100	100	80	86	64	100	80	75

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Data General (Other Models)	Datapoint (Ventek) 5500	Datapoint (Ventek) ARC	Datapoint (Ventek) (Other Models)	Datasaab (All Models)	Diablo (Xerox) Ranger 3200	Digico (All Models)	DEC PDP-8	DEC PDP-11/03	DEC PDP-11/04, 05	DEC PDP-11/10 thru 11/23
Significant Problems (%)	20	0	75	0	50	0	14	27	0	0	0
System proposed by vendor was too small	20	0	25	75	50	20	14	27	40	0	25
Delivery and/or installation of equipment was late	20	0	25	75	50	40	29	18	40	0	25
Delivery of required software was late	20	0	0	0	50	0	0	0	20	0	0
System costs exceeded expected total	20	0	0	0	50	20	29	18	20	0	13
Vendor did not provide all promised software or support	0	0	0	0	0	0	0	18	0	0	0
Program/data compatibility not what vendor promised	0	33	0	0	0	0	0	0	20	0	0
Terminals/peripherals compatibility not what vendor promised	0	33	25	50	0	0	0	9	0	0	25
Vendor enhancements/changes to hardware/software hard to keep up with	0	33	0	0	0	0	14	0	0	20	25
Equipment excessively noisy	0	33	50	0	0	0	43	9	0	0	0
Power/cooling requirements excessive	0	33	50	0	0	0	43	9	0	0	0
Other	60	67	0	0	25	80	43	36	80	60	63
Significant Advantages (%)	60	67	100	50	50	40	71	18	60	80	38
Users happy with response time	0	0	0	0	0	20	29	9	0	20	0
System easy to expand/reconfigure	0	0	50	0	0	20	29	9	0	20	0
System costs less than expected	0	0	50	0	0	20	29	9	0	20	0
Programs/data compatible as vendor promised	0	0	50	0	0	0	29	18	0	60	25
Terminals/peripherals compatible as vendor promised	20	33	25	25	0	40	14	0	40	0	38
System power/energy efficient	0	33	0	0	0	0	0	0	0	20	0
Productivity aids help keep programming costs down	0	33	50	0	25	0	0	0	0	40	0
Database language efficient and effective	0	33	25	0	0	20	29	0	0	20	13
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	0	0	0	0	0	0	13
Delivery of required software was ahead of schedule	20	0	25	0	25	0	0	0	20	0	0
Other	28	37	33	23	28	34	26	34	28	30	33
System Ratings (4 0-10)	28	30	23	25	25	30	30	36	28	30	35
Ease of operation	28	30	23	25	25	30	27	32	30	32	35
Reliability of mainframe	24	30	28	30	23	33	24	28	24	23	30
Reliability of peripherals	28	27	25	25	28	33	24	30	24	30	30
Maintenance service	24	27	25	25	28	33	24	30	24	30	30
Responsiveness	24	27	25	25	28	33	24	30	24	30	30
Effectiveness	24	27	25	18	18	32	15	27	24	23	26
Technical Support	28	23	20	17	25	17	25	28	28	20	23
Trouble-shooting	18	20	23	20	18	18	13	26	28	23	24
Education	30	33	33	28	30	33	20	31	32	30	30
Documentation	30	20	30	28	23	23	27	31	32	30	30
Manufacturer's Software	30	—	—	—	23	35	27	27	30	33	26
Operating system	30	33	33	28	30	33	20	31	32	30	30
Compilers & assemblers	30	33	33	28	20	26	23	28	38	32	29
Applications programs	30	27	23	—	—	17	28	20	33	28	17
Ease of programming	28	30	28	28	27	30	24	33	32	34	30
Ease of conversion											
Overall satisfaction											
Would you recommend system to another user? (%)	60	100	75	75	75	100	43	82	100	80	75
Yes	40	0	25	25	25	0	57	18	0	20	25
No											

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item										
	DEC PDP-11/34	DEC PDP-11/40	DEC PDP-11/45	DEC PDP-11/70	DEC PDP-11 (Other Models)	DEC PDP-11 (Unspecified)	DEC VAX-11/780	General Automation (All Models)	GEC (Ellicot) 800 & 900 Series	GEC 2000 & 4000 Series	Harris (All Models)
No. of User Responses	36	19	8	30	4	4	16	9	5	7	3
No. of Systems Represented	56	22	8	47	4	17	16	11	5	7	4
Avg. Life of System (mos.)	25	58	59	13	32	34	11	48	68	33	12
Acquisition Method (%)											
Purchase	86	84	63	77	100	100	50	89	100	86	100
Rental	0	5	0	3	0	0	0	11	0	14	0
Lease	14	11	25	20	0	0	50	0	0	0	0
Principal Applications (%)											
Accounting	47	32	0	53	75	75	17	22	20	14	0
Construction	3	0	0	0	0	25	0	0	0	0	33
Education	14	21	38	0	0	0	0	0	60	29	33
Government	3	0	0	0	0	0	0	0	0	0	0
Manufacturing	17	21	13	13	0	0	33	22	20	0	0
Payroll/Personnel	31	32	0	10	50	50	13	22	20	0	0
Service Bureau	14	5	13	13	0	0	33	11	0	0	33
Transportation	8	5	13	20	0	0	17	0	0	0	0
Word Processing	6	16	0	17	0	0	17	0	0	0	0
Banking/Finance	0	0	13	17	25	0	0	0	0	14	0
Distributed Processing	17	5	0	20	0	75	17	0	0	0	0
Engineering/Scientific	31	37	38	20	25	25	83	67	40	86	67
Insurance	0	0	0	7	0	0	0	0	0	0	0
Medical/Health Care	3	0	0	0	25	0	0	0	0	0	0
Retail	6	16	0	0	0	0	0	0	0	0	0
Transaction Processing	14	37	13	37	25	25	0	0	0	0	0
Utilities—Power	0	0	0	0	0	0	0	0	0	0	0
Other	17	21	38	23	0	50	17	11	0	29	33
Source of Applications Programs (%)											
In-House Personnel	69	68	88	80	50	100	100	89	80	100	100
Ready-Made Programs From Manufacturer	11	11	0	13	50	0	67	22	40	14	67
Contract Programming	28	21	0	40	25	50	33	0	0	14	0
Manufacturer's Personnel	3	16	0	10	0	0	17	22	0	0	0
Proprietary Software Packages	28	37	25	37	75	0	67	11	0	0	33
Other	14	26	25	10	0	25	0	0	20	0	0
Hardware Configuration											
No. of CPUs	56	22	8	47	5	17	23	11	5	7	4
No. of Workstations (avg.)	6	7	8	18	12	3	42	3	1	10	18
Software Configuration											
Database Management Systems (%)	8	16	0	50	0	50	17	0	0	14	0
Data Communications Monitors (%)	3	32	0	17	25	75	33	11	0	0	0
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	33
BASIC	58	47	25	63	75	25	17	0	0	0	0
COBOL	0	5	0	20	0	0	17	0	0	0	0
FORTTRAN	36	37	50	13	0	25	67	78	60	71	100
RPG	0	0	0	0	0	0	11	0	0	0	0
Other	39	37	38	33	25	75	33	67	80	86	0
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	28	11	13	20	25	0	67	0	0	43	33
Proprietary Software	14	21	13	20	25	0	50	0	0	14	33
Expanded Data Communications	22	21	50	57	25	50	67	11	0	29	67
Distributed Processing	11	11	13	20	0	25	33	0	0	0	33
Integrated Word Processing	11	0	13	33	0	0	33	0	0	0	33
Other	3	11	38	10	0	0	17	11	20	0	33
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	22	26	25	0	25	0	0	11	0	0	0
Yes, Different Manufacturer	0	11	0	0	0	0	0	0	0	14	0
No	75	63	75	100	75	100	100	89	100	86	100

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model											Survey Item
DEC PDP-11/34	DEC PDP-11/40	DEC PDP-11/45	DEC PDP-11/70	DEC PDP-11 (Other Models)	DEC PDP-11 (Unspecified)	DEC VAX-11/780	General Automation (All Models)	GEC (Ellicot) 800 & 900 Series	GEC 2000 & 4000 Series	Harris (All Models)	
36	21	13	33	25	25	0	22	0	43	0	Significant Problems (%)
25	11	0	23	0	75	0	22	0	0	33	System proposed by vendor was too small
28	5	0	17	0	25	0	22	0	14	33	Delivery and/or installation of equipment was late
19	5	0	13	0	25	0	0	20	29	0	Delivery of required software was late
22	5	0	27	0	0	0	11	0	14	0	System costs exceeded expected total
6	0	0	0	0	0	0	0	0	0	0	Vendor did not provide all promised software or support
0	0	13	0	0	0	0	11	0	0	0	Program/data compatibility not what vendor promised
11	21	50	13	0	0	0	44	0	0	0	Terminals/peripherals compatibility not what vendor promised
6	5	0	3	0	25	17	0	0	14	0	Vendor enhancements / changes to hardware/software hard to keep up with
6	0	13	3	0	0	0	11	0	0	0	Equipment excessively noisy
6	21	25	10	25	25	17	0	20	0	33	Power/cooling requirements excessive
											Other
56	63	50	57	25	100	100	44	20	57	100	Significant Advantages (%)
64	58	50	80	25	75	67	11	20	43	67	Users happy with response time
0	5	13	0	0	0	0	11	0	14	0	System easy to expand/reconfigure
28	26	13	27	0	0	100	56	20	14	33	System costs less than expected
22	32	25	27	0	0	83	11	20	14	67	Programs/data compatible, as vendor promised
22	16	13	23	0	0	33	0	0	0	67	Terminals/peripherals compatible, as vendor promised
28	21	25	23	0	25	50	0	0	14	33	System power/energy efficient
14	21	0	13	25	50	0	0	0	14	0	Productivity aids help keep programming costs down
8	5	13	3	25	0	0	0	0	14	33	Database language efficient and effective
6	0	0	3	25	0	17	0	0	14	0	Delivery and/or installation of equipment was ahead of schedule
6	11	13	0	0	0	0	11	20	0	0	Delivery of required software was ahead of schedule
											Other
33	33	33	32	30	33	37	29	23	33	33	System Ratings (4.0-1.0)
33	31	35	33	23	37	33	28	33	33	30	Ease of operation
30	31	31	29	30	33	35	22	25	27	27	Reliability of mainframe
32	32	32	32	33	35	35	27	30	33	30	Reliability of peripherals
30	32	32	30	28	33	28	23	30	27	30	Maintenance service:
											Responsiveness
25	27	20	24	20	30	26	21	20	30	27	Effectiveness
25	25	17	22	20	30	28	17	23	20	20	Technical Support:
24	26	24	25	13	30	30	20	17	17	27	Trouble-shooting
											Education
											Documentation
30	32	29	31	30	33	33	28	23	30	37	Manufacturer's Software
30	31	31	28	—	—	—	29	30	28	37	Operating system
27	27	22	25	—	—	—	28	—	26	—	Compilers & assemblers
31	32	31	29	—	—	—	—	—	—	—	Applications programs
30	28	27	25	—	—	—	33	26	30	31	Ease of programming
30	32	30	30	33	30	35	24	28	29	33	Ease of conversion
											Overall satisfaction
94	95	50	87	75	100	100	56	40	86	100	Would you recommend system to another user? (%)
6	5	25	13	25	0	0	44	40	14	0	Yes
											No

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Hewlett-Packard 1000 Series	Hewlett-Packard 2000	Hewlett-Packard 3000 Series III	Hewlett-Packard 3000 Series 33	Hewlett-Packard 3000 (Other Models)	Honeywell Level 6	Honeywell Level 61	Honeywell Level 62	IBM Series/1	IBM S/3 Model 8	IBM S/3 Model 10
No. of User Responses	33	33	33	33	33	33	33	33	33	33	33
No. of Systems Represented	18	81	16	6	23	58	28	4	5	5	5
Avg. Life of System (mos.)	18	81	16	6	23	58	28	4	5	5	5
Acquisition Method (%)											
Purchase	67	100	50	100	60	25	75	39	75	20	40
Rental	0	0	0	0	40	0	50	36	0	60	40
Lease	33	0	50	0	0	75	0	29	25	20	20
Principal Applications (%)											
Accounting	33	0	83	100	60	0	75	100	75	100	100
Construction	33	0	0	0	0	0	0	0	0	0	0
Education	0	67	0	25	0	0	0	0	0	0	0
Government	0	0	0	0	0	60	0	4	0	0	0
Manufacturing	33	0	33	25	0	0	50	71	50	40	60
Payroll/Personnel	33	0	33	25	0	0	25	11	25	0	20
Service Bureau	0	0	0	0	0	0	4	0	0	0	0
Transportation	0	0	0	0	0	0	4	0	0	0	0
Word Processing	0	0	0	25	20	0	0	0	0	0	0
Banking/Finance	0	0	17	0	0	0	25	11	0	0	0
Distributed Processing	0	0	50	0	0	60	0	7	0	0	0
Engineering/Scientific	33	33	0	25	0	0	4	0	0	0	0
Insurance	0	0	17	0	0	0	0	25	0	0	0
Medical/Health Care	0	0	0	0	0	25	0	4	0	0	0
Retail	0	0	0	0	0	0	25	21	4	0	20
Transaction Processing	0	0	50	50	60	0	0	4	0	0	0
Utilities—Power	0	0	0	0	0	0	0	11	75	20	20
Other	0	33	17	0	60	0	0	0	0	0	0
Source of Applications Programs (%)											
In-House Personnel	67	67	83	100	100	50	75	96	100	100	80
Ready-Made Programs From Manufacturer	0	100	17	0	0	25	75	32	0	20	0
Contract Programming	0	0	50	25	20	25	50	38	0	20	0
Manufacturer's Personnel	0	0	0	0	20	75	0	18	0	0	0
Proprietary Software Packages	33	33	67	25	0	0	28	25	20	0	0
Other	0	0	0	0	0	25	0	4	0	0	0
Hardware Configuration											
No. of CPUs	3	4	6	4	23	59	5	28	5	2	5
No. of Workstations (avg.)	4	12	13	8	3	8	6	6	2	2	1
Software Configuration											
Database Management Systems (%)	67	33	100	100	40	25	0	4	25	0	0
Data Communications Monitors (%)	33	33	67	25	0	0	25	50	0	0	0
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	0
BASIC	0	67	33	25	20	0	0	0	0	0	0
COBOL	0	0	83	75	40	25	75	79	0	0	0
FORTRAN	67	0	33	0	40	0	0	18	0	80	60
RPG	0	0	0	0	0	0	0	0	0	0	0
Other	33	33	17	0	20	75	0	0	100	0	0
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	33	33	17	25	0	0	0	29	25	20	0
Proprietary Software	33	0	50	25	0	0	0	7	75	20	0
Expanded Data Communications	0	33	33	50	20	25	0	18	0	20	0
Distributed Processing	0	0	17	0	0	0	0	7	25	0	0
Integrated Word Processing	0	0	33	0	0	0	0	7	50	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Plans for System Replacement in 1980 (%)											
Yes Same Manufacturer	0	0	0	0	20	0	25	4	0	20	20
Yes Different Manufacturer	0	33	0	0	0	0	0	4	0	20	20
No	67	67	100	100	80	100	50	86	100	60	60

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Hewlett-Packard 1000 Series	Hewlett-Packard 2000	Hewlett-Packard 3000 Series III	Hewlett-Packard 3000 Series 33	Hewlett-Packard 3000 (Other Models)	Honeywell Level 6	Honeywell Level 61	Honeywell Level 62	IBM Series/1	IBM S/3 Model 8	IBM S/3 Model 10
Significant Problems (%)											
Delivery proposed by vendor was too small	0	0	0	25	0	100	75	50	0	0	0
System and/or installation of equipment was late	33	0	17	0	0	25	25	36	25	20	0
Delivery of required software was late	0	67	0	25	20	100	25	18	25	0	0
System costs exceeded expected total	33	33	0	0	0	75	50	11	0	0	0
Vendor did not provide all promised software or support	0	0	17	0	0	25	25	11	0	0	0
Program/data compatibility not what vendor promised	0	0	0	50	0	25	0	4	0	0	0
Terminals/peripherals compatibility not what vendor promised	33	33	0	0	0	25	0	14	0	0	0
Vendor enhancements/changes to hardware/ software hard to keep up with	0	0	0	0	0	0	25	0	0	0	0
Equipment excessively noisy	0	0	0	0	0	0	25	11	0	0	0
Power/cooling requirements excessive	0	0	0	0	0	0	25	4	25	0	0
Other	33	67	67	75	40	0	25	29	25	0	20
Significant Advantages (%)											
Users happy with response time	0	0	83	75	80	100	0	71	0	0	20
System easy to expand/reconfigure	0	33	0	0	0	0	0	0	100	0	20
System costs less than expected	0	0	0	40	0	0	25	54	0	0	0
Programs/data compatible, as vendor promised	0	0	0	0	20	0	0	7	0	0	0
Terminals/peripherals compatible, as vendor promised	0	33	33	50	40	25	25	21	25	20	0
System power/energy efficient	33	0	83	50	20	0	0	14	50	0	0
Productivity aids help keep programming costs down	0	0	17	25	20	0	0	4	25	0	0
Database language efficient and effective	0	0	0	0	0	0	0	0	0	0	20
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	0	0	0	0	25	0	0
Delivery of required software was ahead of schedule	0	0	0	0	0	0	0	0	0	0	20
Other	30	33	35	38	32	30	28	31	30	30	34
System Ratings (4.0-1.0)	3.3	3.7	3.3	3.8	3.6	2.5	2.8	3.2	3.5	3.2	3.5
Reliability of peripherals	3.0	3.0	3.4	3.3	3.0	3.0	2.8	2.8	3.5	2.6	2.8
Reliability of mainframe	3.0	3.3	3.3	2.6	3.4	2.8	2.8	2.9	2.8	2.8	3.2
Maintenance service:											
Responsiveness	3.0	1.3	2.8	3.3	2.8	2.3	1.8	2.4	1.8	2.8	2.8
Effectiveness	2.3	1.7	2.8	3.0	2.4	2.0	2.3	2.4	1.5	2.8	3.4
Other	2.7	2.3	2.8	3.3	3.0	2.3	2.5	2.0	2.3	3.0	3.0
Technical Support:											
Trouble-shooting	2.7	3.0	3.5	3.8	3.3	3.0	2.8	3.0	2.5	3.2	3.2
Education	2.7	3.0	3.0	3.3	3.0	2.0	3.1	2.8	3.2	3.6	3.6
Documentation	2.7	3.0	3.0	3.3	3.3	2.0	2.1	3.0	3.0	3.2	3.2
Manufacturer's Software:											
Operating system	2.3	3.0	3.3	3.3	3.3	2.3	1.8	2.6	3.0	3.3	2.7
Compilers & assemblers	2.7	3.0	3.3	3.3	3.4	2.8	2.5	2.8	3.0	3.2	3.0
Applications programs	2.7	3.0	3.3	3.3	3.4	2.8	2.5	2.8	3.0	3.2	3.0
Ease of programming	2.7	3.0	3.3	3.3	3.4	2.8	2.5	2.8	3.0	3.2	3.0
Ease of conversion	2.7	3.0	3.3	3.3	3.4	2.8	2.5	2.8	3.0	3.2	3.0
Overall satisfaction	2.7	3.0	3.3	3.3	3.4	2.8	2.5	2.8	3.0	3.2	3.0
Would you recommend system to another user? (%)											
Yes	100	67	100	100	100	100	50	79	100	80	60
No	0	33	0	0	0	0	50	21	0	20	40

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item										
	IBM S/3 Model 12	IBM S/3 Model 15	IBM S/3 (Unspecified)	IBM S/32	IBM S/34	ICL System Ten	ICL 1500	ICL 2903	ICL 2904	ICL 2904/50	MAEL Computers MAEL 4000
No. of User Responses	15	18	4	4	64	34	6	64	33	23	4
No. of Systems Represented	15	20	4	6	71	40	22	65	35	23	4
Avg. Life of System (mos.)	40	33	40	34	12	41	28	41	38	19	43
Acquisition Method (%)											
Purchase	20	39	25	50	23	47	67	52	42	35	75
Rental	67	44	50	0	61	6	17	28	24	30	0
Lease	13	17	25	25	16	47	17	22	36	30	0
Principal Applications (%)											
Accounting	93	83	75	100	84	75	50	73	94	87	100
Construction	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0
Manufacturing	40	28	50	0	47	41	0	30	42	26	0
Payroll/Personnel	27	39	50	50	47	56	0	0	15	30	0
Service Bureau	7	0	0	0	0	0	17	8	9	0	0
Transportation	0	0	0	0	0	0	0	0	0	0	0
Word Processing	0	0	0	0	3	6	17	8	9	0	0
Banking/Finance	20	11	25	0	11	6	0	11	9	13	0
Distributed Processing	7	6	0	0	9	0	0	9	9	13	0
Engineering/Scientific	0	0	0	0	0	0	0	12	4	0	0
Insurance	13	11	0	0	0	0	17	0	0	0	0
Medical/Health Care	13	11	0	25	0	0	17	0	9	13	0
Retail	13	11	0	0	5	9	17	11	9	13	0
Transaction Processing	20	33	25	0	20	26	33	13	27	48	0
Utilities—Power	0	0	0	0	0	0	0	0	0	0	0
Other	7	22	0	25	11	0	19	6	22	2	0
Source of Applications Programs (%)											
In-House Personnel	93	100	100	50	91	59	83	88	97	100	0
Ready-Made Programs From Manufacturer	20	33	0	25	25	53	17	20	30	39	50
Contract Programming	33	44	25	50	31	44	17	20	33	30	25
Manufacturer's Personnel	7	6	0	0	0	6	0	9	3	0	25
Proprietary Software Packages	20	33	25	0	20	29	0	34	36	43	25
Other	0	0	0	0	5	12	0	5	3	4	25
Hardware Configuration											
No. of CPUs	15	19	4	3	71	40	22	65	35	23	4
No. of Workstations (avg.)	4	8	1	0	7	4	1	5	9	9	2
Software Configuration											
Database Management Systems (%)	0	0	25	0	2	65	50	2	9	0	0
Data Communications Monitors (%)	27	67	50	0	0	3	0	20	42	65	0
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	0
BASIC	0	0	0	0	0	0	0	3	0	4	0
COBOL	0	11	0	0	6	0	17	66	82	78	0
FORTRAN	0	0	0	0	5	0	0	3	0	9	0
RPG	80	0	75	75	84	9	0	30	21	26	0
Other	0	94	0	0	0	94	67	11	18	17	75
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	7	6	0	0	25	18	33	25	36	39	0
Proprietary Software	0	11	0	0	16	24	0	14	15	39	0
Expanded Data Communications	13	33	0	0	36	9	33	41	45	61	0
Distributed Processing	7	11	0	0	9	15	17	20	9	9	0
Integrated Word Processing	0	6	0	0	13	6	0	11	27	13	0
Other	7	0	0	0	8	12	0	5	6	0	25
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	20	17	75	50	8	6	17	27	18	0	0
Yes, Different Manufacturer	13	6	25	0	0	12	0	3	6	0	50
No	67	78	0	50	92	82	83	67	76	87	50

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item										
	IBM S/3 Model 12	IBM S/3 Model 15	IBM S/3 (Unspecified)	IBM S/32	IBM S/34	ICL System Ten	ICL 1500	ICL 2903	ICL 2904	ICL 2904/50	MAEL Computers MAEL 4000
Significant Problems (%)	13	22	25	25	17	38	50	31	45	26	25
System proposed by vendor was too small	0	17	25	25	19	21	17	11	9	39	0
Delivery and/or installation of equipment was late	0	17	0	25	16	24	33	9	9	26	0
Delivery of required software was late	7	0	50	0	5	21	0	9	6	4	0
System costs exceeded expected total	0	11	0	0	11	24	33	9	18	22	75
Vendor did not provide all promised software or support	0	0	0	0	2	3	0	2	12	0	25
Program/data compatibility not what vendor promised	0	0	25	0	3	3	0	6	0	9	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	8	12	0	17	9	4	0
Vendor enhancements/changes to hardware/software hard to keep up with	7	11	25	0	3	9	17	3	3	4	0
Equipment excessively noisy	0	0	0	0	0	3	0	3	6	9	25
Power/cooling requirements excessive	13	17	0	0	6	6	0	8	9	35	25
Other	47	44	25	0	69	61	67	33	36	43	0
Significant Advantages (%)	27	44	0	0	70	72	33	61	73	43	0
Users happy with response time	0	0	0	0	2	6	0	3	0	0	0
System easy to expand/reconfigure	47	56	50	25	52	12	17	42	58	52	0
System costs less than expected	13	11	0	0	3	3	0	6	33	35	0
Programs/data compatible, as vendor promised	13	11	0	0	3	3	0	6	33	35	0
Terminals/peripherals compatible, as vendor promised	13	11	0	0	27	15	17	16	9	17	0
System power/energy efficient	0	22	0	0	69	9	50	0	12	13	0
Productivity aids help keep programming costs down	13	0	0	0	3	15	33	2	6	0	0
Database language efficient and effective	20	6	0	0	3	3	0	9	3	17	0
Delivery and/or installation of equipment was ahead of schedule	13	0	0	0	3	6	0	2	3	4	0
Delivery of required software was ahead of schedule	0	0	0	0	6	9	0	3	0	4	50
Other	34	30	33	33	35	34	33	31	30	30	20
System Ratings (4.0-1.0)	35	36	35	33	37	34	35	34	32	27	23
Ease of operation	30	34	28	33	33	28	34	30	27	26	23
Reliability of mainframe	28	34	33	30	30	30	28	31	28	30	25
Reliability of peripherals	27	29	33	33	30	30	25	28	25	28	23
Maintenance service	29	23	25	—	26	26	22	23	21	22	—
Responsiveness	30	27	28	25	29	28	20	26	26	24	—
Effectiveness	32	27	33	30	31	26	23	23	24	23	—
Technical Support:											
Trouble-shooting	34	29	35	37	34	29	28	28	27	24	23
Education	34	30	33	33	34	27	28	29	28	27	—
Documentation	28	26	17	—	25	25	—	25	24	24	23
Manufacturer's Software:											
Operating system	31	31	28	33	33	26	32	28	28	26	—
Compilers & assemblers	30	29	23	—	31	22	—	31	28	27	—
Applications programs	32	30	33	28	32	31	28	30	29	27	20
Ease of programming											
Ease of conversion											
Overall satisfaction											
Would you recommend system to another user? (%)											
Yes	73	67	75	75	95	91	83	89	91	83	0
No	27	33	25	25	5	9	17	11	6	17	100

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Mohawk Data Sciences MDS 2400	NCR 399	NCR Century 75 & 100	NCR 8200	Nisdorf 8870	Olivetti (All Models)	Perkin Elmer (All Models)	Phillips P350 Series	Phillips P400 Series	Prime 300	Prime 400
No. of User Responses	6	14	10	22	5	7	6	8	6	7	6
No. of Systems Represented	14	3	10	31	44	30	36	94	26	45	26
Avg. Life of System (mos.)	71	3	82	27	33	44	30	36	94	26	45
Acquisition Method (%)											
Purchase	50	100	60	73	40	86	83	88	67	86	83
Rental	67	0	30	14	20	0	0	0	0	0	0
Lease	0	0	10	14	40	14	17	13	33	14	17
Principal Applications (%)											
Accounting	50	100	100	73	100	29	50	75	83	57	17
Construction	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	43	33
Government	0	0	0	0	0	0	0	0	0	17	17
Manufacturing	0	0	0	0	0	0	0	0	0	17	14
Payroll/Personnel	17	0	20	14	20	0	0	100	83	14	17
Service Bureau	0	60	60	55	0	0	0	0	17	0	17
Transportation	0	20	0	5	0	0	0	0	0	0	0
Word Processing	0	0	0	0	20	0	0	0	0	29	17
Banking/Finance	17	0	20	14	0	29	17	0	0	14	0
Distributed Processing	17	0	0	5	0	0	0	0	86	50	0
Engineering/Scientific	0	0	10	0	0	0	83	0	13	17	0
Insurance	0	0	0	5	0	0	0	0	0	0	0
Medical/Health Care	0	0	0	0	0	0	0	0	0	0	0
Retail	0	0	10	5	0	0	0	0	17	14	0
Transaction Processing	17	0	0	18	20	14	0	0	0	0	0
Utilities—Power	0	0	0	5	0	0	0	0	0	0	0
Other	17	0	20	23	40	14	17	0	33	29	17
Source of Applications Programs (%)											
In-House Personnel	67	20	100	55	40	86	67	25	50	86	100
Ready-Made Programs From Manufacturer	33	80	30	32	80	14	33	0	0	29	50
Contract Programming	0	20	10	23	20	14	17	100	50	29	0
Manufacturer's Personnel	17	0	40	18	0	43	0	0	33	0	0
Proprietary Software Packages	0	20	40	14	0	0	33	0	0	57	83
Other	0	0	0	0	20	0	0	0	0	0	0
Hardware Configuration											
No. of CPUs	13	6	10	33	5	44	8	20	6	11	19
No. of Workstations (avg.)	3	0	1	3	4	1	7	0	2	10	6
Software Configuration											
Database Management Systems (%)	0	0	0	0	0	0	17	0	0	0	33
Data Communications Monitors (%)	17	0	10	0	0	0	17	0	0	14	33
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	0
BASIC	0	0	40	82	20	0	17	0	100	0	100
COBOL	0	0	0	0	0	0	33	0	0	0	0
FORTRAN	0	0	0	0	0	0	0	0	0	0	0
RPG	0	0	0	0	42	17	38	0	29	33	33
Other	17	0	70	18	20	42	17	38	0	29	33
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	33	0	20	18	20	0	33	38	33	0	0
Proprietary Software	0	20	0	18	0	0	50	0	0	0	33
Expanded Data Communications	33	0	20	23	20	14	17	0	17	0	0
Distributed Processing	17	0	0	5	0	0	17	0	0	14	0
Integrated Word Processing	0	0	0	0	0	0	0	0	50	14	0
Other	0	0	0	0	20	0	0	0	0	0	0
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	0	0	30	18	20	0	0	38	0	29	0
Yes, Different Manufacturer	33	40	0	0	0	0	25	0	0	0	17
No	67	60	40	77	80	86	83	38	100	71	83

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Mohawk Data Sciences MDS 2400	NCR 399	NCR Century 75 & 100	NCR 8200	Nisdorf 8870	Olivetti (All Models)	Perkin Elmer (All Models)	Phillips P350 Series	Phillips P400 Series	Prime 300	Prime 400
Significant Problems (%)											
System proposed by vendor was too small	0	17	40	20	36	0	43	17	25	50	29
Delivery and/or installation of equipment was late	33	20	10	41	20	29	0	13	67	0	50
System costs exceeded expected total	0	0	0	9	0	14	0	13	33	0	0
Vendor did not provide all promised software or support	17	20	10	23	60	29	0	13	50	29	33
Program/data compatibility not what vendor promised	0	0	0	9	0	14	0	0	0	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	5	0	0	0	25	17	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	0	20	0	0	40	14	0	0	14	33	0
Equipment excessively noisy	33	40	10	0	0	0	17	13	0	0	0
Power/cooling requirements excessive	17	0	0	0	0	0	0	0	0	0	17
Other	17	0	10	14	0	14	17	13	0	29	0
Significant Advantages (%)											
Users happy with response time	17	20	10	41	80	57	33	50	50	86	33
System easy to expand/reconfigure	50	0	30	36	100	14	83	0	33	100	83
System costs less than expected	0	0	10	0	0	0	0	13	17	0	0
Programs/data compatible, as vendor promised	33	0	40	5	20	0	33	0	0	0	17
Terminals/peripherals compatible, as vendor promised	0	0	20	0	20	0	17	0	0	0	50
System power/energy efficient	0	0	0	5	0	14	33	25	17	14	17
Productivity aids help keep programming costs down	0	0	0	5	0	0	0	38	50	14	0
Database language efficient and effective	0	20	0	0	0	0	17	0	17	0	0
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	0	0	0	0	0	0	0
Delivery of required software was ahead of schedule	17	0	0	5	0	0	0	0	0	0	0
Other	32	22	28	29	34	30	32	28	32	39	32
System Ratings (4.0-1.0)	24	23	34	30	32	32	34	26	33	33	27
Ease of operation	2.5	2.7	2.9	3.0	2.8	2.8	2.8	2.8	3.0	3.3	2.3
Reliability of mainframe	2.3	2.2	3.1	3.0	3.2	2.7	3.0	3.1	3.3	2.9	2.5
Reliability of peripherals	2.3	2.6	3.2	2.9	3.0	3.1	2.3	2.9	2.8	2.5	2.2
Maintenance service: Responsiveness	2.0	2.0	2.8	2.0	1.8	2.0	2.4	2.3	2.0	2.3	2.3
Effectiveness	1.8	1.8	2.6	2.3	1.8	1.7	2.5	2.3	2.5	2.7	2.5
Technical Support	2.3	2.0	2.7	2.2	1.8	2.4	2.2	2.3	1.8	2.0	2.6
Trouble-shooting	2.4	2.3	3.0	2.9	3.2	2.6	2.7	2.3	3.3	3.6	3.0
Education	1.7	1.7	3.0	2.8	3.2	2.6	2.7	—	3.3	3.4	2.8
Documentation	2.0	2.2	2.2	3.3	—	2.5	2.7	2.8	2.8	2.6	2.7
Manufacturer's Software	—	1.8	2.8	3.0	3.0	2.5	3.2	2.8	3.0	3.1	2.8
Operating system	—	1.5	2.6	2.6	2.5	2.0	2.3	—	2.6	2.8	2.6
Compilers & assemblers	2.3	2.0	3.0	2.8	2.8	2.6	3.0	2.8	3.0	3.4	2.8
Applications programs	—	—	—	—	—	—	—	—	—	—	—
Ease of programming	—	—	—	—	—	—	—	—	—	—	—
Ease of conversion	—	—	—	—	—	—	—	—	—	—	—
Overall satisfaction	—	—	—	—	—	—	—	—	—	—	—
Would you recommend system to another user? (%)											
Yes	67	0	60	77	60	57	100	88	50	100	100
No	33	100	30	14	40	43	0	13	50	0	0

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item											
	Prime 550	Prime (Other Models)	Redifon (All Models)	Research Machines 380Z	Systeme 5000	Systeme 6000 Series	Systeme (Other Models)	Texas Instruments 990 Series	Univac V70 and V77 Series	Wang Series	Mits & SBC's (Other Vendors)	
No. of User Responses	6	9	15	8	10	5	5	11	7	4	12	
No. of Systems Represented	8	17	16	15	11	11	6	18	22	4	44	
Avg. Life of System (mos.)	10	30	27	11	25	9	29	14	29	27	28	
Acquisition Method (%)												
Purchase	67	78	13	88	70	80	20	64	86	50	100	
Rental	17	0	53	0	0	0	0	0	0	0	0	
Lease	17	22	33	0	30	20	60	36	14	50	0	
Principal Applications (%)												
Accounting	17	0	53	13	80	60	100	73	43	50	50	
Construction	17	0	0	0	0	0	0	0	28	0	8	
Education	33	11	7	88	10	20	0	0	0	0	0	
Government	17	11	13	0	60	20	40	27	0	0	17	
Manufacturing	0	0	20	0	60	40	60	9	71	50	33	
Payroll/Personnel	17	0	27	0	60	40	0	27	0	0	8	
Service Bureau	17	0	20	13	10	0	0	27	0	0	0	
Transportation	0	0	7	0	0	20	0	0	0	0	8	
Word Processing	33	11	7	25	20	20	0	9	0	0	0	
Banking/Finance	0	0	0	13	0	0	0	9	14	0	0	
Distributed Processing	0	0	13	0	10	0	0	0	14	50	42	
Engineering/Scientific	50	67	0	38	20	0	0	9	0	0	0	
Insurance	0	0	0	0	0	0	0	0	0	25	0	
Medical/Health Care	0	0	11	0	0	0	0	0	0	0	5	
Retail	0	0	13	0	20	0	0	14	0	0	25	
Transaction Processing	0	0	13	0	40	0	0	0	29	0	0	
Utilities—Power	0	0	0	0	0	0	0	0	0	0	0	
Other	50	22	47	13	10	0	40	9	14	25	42	
Source of Applications Programs (%)												
In-House Personnel	83	89	73	88	80	40	40	64	86	50	67	
Ready-Made Programs From Manufacturer	50	33	20	63	60	40	80	9	29	50	42	
Contract Programming	17	0	7	0	50	20	0	27	43	25	17	
Manufacturer's Personnel	0	11	20	0	20	0	60	0	14	0	33	
Proprietary Software Packages	67	33	7	38	40	60	0	36	14	25	33	
Other	0	11	0	0	0	0	20	16	0	0	0	
Hardware Configuration												
No. of CPUs	8	20	16	15	11	5	6	18	22	4	44	
No. of Workstations (avg.)	13	11	12	2	11	60	4	12	2	4	5	
Software Configuration												
Database Management Systems (%)	50	78	13	0	0	40	0	9	14	50	0	
Data Communications Monitors (%)	17	11	33	0	0	20	0	0	14	50	0	
Primary Programming Languages (%)												
API	0	0	0	0	0	0	0	0	0	0	0	
BASIC	33	0	0	88	80	100	60	18	29	50	33	
COBOL	33	11	0	0	0	0	0	9	43	0	33	
FORTRAN	100	78	0	0	0	0	0	27	0	0	8	
RPG	0	0	0	0	0	0	0	0	43	25	33	
Other	50	11	67	75	20	0	40	0	0	0	0	
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	67	11	47	50	30	0	20	18	14	0	17	
Proprietary Software	50	67	0	50	0	0	0	18	29	25	8	
Expanded Data Communications	50	22	13	13	50	80	0	18	14	25	17	
Distributed Processing	0	22	27	13	10	0	0	9	0	0	0	
Integrated Word Processing	17	33	13	25	0	40	40	0	14	0	25	
Other	0	0	7	13	10	0	40	9	14	0	17	
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	0	11	7	0	0	0	0	9	0	0	17	
Yes, Different Manufacturer	0	11	0	0	10	20	20	0	0	25	0	
No	100	78	87	100	90	80	80	91	100	75	75	

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Ratings of Computer Systems by British Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item												
	Prime 550	Prime (Other Models)	Redifon (All Models)	Research Machines 380Z	Systeme 5000	Systeme 6000 Series	Systeme (Other Models)	Texas Instruments 990 Series	Univac V70 and V77 Series	Wang 2200 Series	Mits & SBC's (Other Vendors)		
Significant Problems (%)	50	33	13	0	30	60	20	27	29	25	17	System proposed by vendor was too small	
	0	33	38	0	10	20	20	27	14	0	17	Delivery and/or installation of equipment was late	
	17	22	27	3	20	40	20	0	29	0	25	Delivery of required software was late	
	17	0	0	0	0	40	0	9	0	0	9	System costs exceeded expected total	
	50	56	20	13	60	40	0	36	29	0	43	Vendor did not provide all promised software or support	
	17	0	0	0	0	20	20	18	0	0	17	Program/data compatibility not what vendor promised	
	17	11	7	0	10	20	0	0	0	0	0	Terminals/peripherals compatibility not what vendor promised	
	0	11	13	0	0	20	0	18	14	0	17	Vendor enhancements/changes to hardware/software hard to keep up with	
	0	0	13	0	0	0	0	9	0	0	0	Equipment excessively noisy	
	17	0	7	0	0	20	0	9	0	0	0	Power/cooling requirements excessive	
	17	0	33	0	10	0	0	9	0	25	17	Other	
	Significant Advantages (%)	50	44	47	63	70	40	60	55	57	50	33	Users happy with response time
		67	78	0	75	70	0	60	82	57	50	25	System easy to expand/reconfigure
		0	0	0	13	0	0	0	0	0	0	8	System costs less than expected
		0	33	27	0	30	60	20	36	14	25	8	Programs/data compatible, as vendor promised
17		11	7	25	20	40	0	0	14	0	0	Terminals/peripherals compatible, as vendor promised	
17		33	7	38	0	0	20	18	0	0	0	System power/energy efficient	
0		33	27	0	0	40	0	27	29	25	0	Productivity aids help keep programming costs down	
0		0	33	13	20	0	0	9	0	50	0	Database language efficient and effective	
17		11	7	25	0	0	40	18	0	50	0	Delivery and/or installation of equipment was ahead of schedule	
0		0	0	13	0	20	20	9	14	0	0	Delivery of required software was ahead of schedule	
17		0	0	0	0	20	0	0	0	0	0	Other	
System Ratings (4.0-1.0)		2.8	3.2	3.6	3.4	3.5	3.0	3.2	3.4	3.2	3.5	3.3	Ease of operation
		3.7	3.1	3.0	3.5	3.2	2.4	3.3	3.2	3.0	3.7	2.4	Reliability of mainframe
		3.2	2.8	3.1	3.1	2.7	2.4	2.3	3.3	2.9	2.3	2.5	Reliability of peripherals
		2.8	2.0	3.4	3.0	2.4	2.4	3.2	2.9	2.8	2.5	2.7	Maintenance service: Responsiveness
	3.0	2.3	3.1	3.0	2.5	1.6	2.8	2.9	3.0	3.0	2.4	Effectiveness	
	Technical Support:	2.3	2.2	2.4	2.4	2.7	1.8	2.5	2.5	2.8	2.0	1.9	Trouble-shooting
		2.5	1.9	2.6	1.8	2.6	1.8	3.0	2.0	2.3	2.3	1.8	Education
		2.8	1.6	2.9	1.6	2.3	1.8	1.8	2.3	2.2	2.3	1.8	Documentation
		3.2	3.1	2.9	3.0	3.5	3.0	3.2	2.9	2.8	3.0	2.9	Manufacturer's Software: Operating system
		2.7	2.7	2.9	2.9	2.9	3.2	3.0	2.7	2.8	—	2.9	Compilers & assemblers
		3.3	2.7	2.7	2.3	2.6	2.0	3.0	3.0	2.5	—	2.3	Applications programs
		2.8	3.0	3.5	2.9	3.4	3.2	3.3	3.4	3.0	3.5	2.8	Ease of programming
		2.8	2.6	2.9	3.0	2.9	2.5	3.0	3.7	2.6	—	2.3	Ease of conversion
		2.8	2.7	3.1	3.0	3.0	2.4	3.2	3.0	2.7	3.0	2.5	Overall satisfaction
		Would you recommend system to another user? (%)	67	89	80	88	90	40	80	82	71	75	75
33			11	13	13	10	60	20	18	14	25	25	No

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Ratings of Computer Systems by British Users
Table 3. Desktop, Personal, & Microcomputers

Survey Item	Manufacturer and Model		
	Commodore (All Models)	Tandy (Radio Shack) TRS-80	Other Vendors
No. of User Responses	5	3	16
No. of Systems Represented	14	8	29
Avg. Life of System (mos)	10	7	9
Acquisition Method (%)			
Purchase	100	100	100
Rental	0	0	0
Lease	0	0	0
Principal Applications (%)			
Accounting	40	0	13
Construction	0	0	0
Education	40	67	56
Government	20	33	0
Manufacturing	0	0	25
Payroll/Personnel	20	0	6
Service Bureau	0	0	0
Transportation	0	0	0
Word Processing	20	33	19
Banking/Finance	0	0	0
Distributed Processing	0	0	19
Engineering/Scientific	40	0	38
Insurance	0	0	6
Medical/Health Care	0	0	0
Retail	0	0	6
Transaction Processing	0	0	0
Utilities—Power	0	0	0
Other	20	0	13
Source of Applications Programs (%)			
In-House Personnel	100	67	69
Ready-Made Programs From Manufacturer	40	33	38
Contract Programming	0	0	0
Manufacturer's Personnel	20	0	44
Proprietary Software Packages	0	0	0
Other	0	33	0
Hardware Configuration			
No. of CPUs	14	8	29
No. of Workstations (avg)	1	1	1
Software Configuration			
Database Management Systems (%)	0	0	0
Data Communications Monitors (%)	0	0	0
Primary Programming Languages (%)			
APL	0	0	0
BASIC	80	100	63
COBOL	0	0	6
FORTRAN	0	0	25
RPG	0	0	0
Other	0	0	56
Planned Acquisitions/Implementations for 1980 (%)			
Additional Software From Manufacturer	20	33	25
Proprietary Software	0	0	19
Expanded Data Communications	0	33	19
Distributed Processing	0	0	13
Integrated Word Processing	0	0	19
Other	0	0	13
Plans for System Replacement in 1980 (%)			
Yes. Same Manufacturer	0	0	6
Yes. Different Manufacturer	0	0	6
No	100	100	81

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Ratings of Computer Systems by British Users
Table 3. Desktop, Personal, & Microcomputers

Survey Item	Commodore (All Models)	Tandy (Radio Shack) TRS-80	Other Vendors	Manufacturer and Model
Significant Problems (%)				
System proposed by vendor was too small	0	33	6	
Delivery and/or installation of equipment was late	40	33	0	
Delivery of required software was late	60	0	31	
System costs exceeded expected total	20	0	0	
Vendor did not provide all promised software or support	20	0	13	
Program/data compatibility not what vendor promised	0	0	6	
Terminals/peripherals compatibility not what vendor promised	0	0	13	
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	6	
Equipment excessively noisy	20	0	6	
Power/cooling requirements excessive	0	0	0	
Other	0	0	13	
Significant Advantages (%)				
Users happy with response time	0	67	56	
System easy to expand/reconfigure	0	100	63	
System costs less than expected	0	33	19	
Programs/data compatible, as vendor promised	0	0	13	
Terminals/peripherals compatible, as vendor promised	20	0	38	
System power/energy efficient	20	33	38	
Productivity aids help keep programming costs down	0	0	19	
Database language efficient and effective	0	0	0	
Delivery and/or installation of equipment was ahead of schedule	0	0	13	
Delivery of required software was ahead of schedule	0	0	0	
Other	0	0	0	
System Ratings (4.0-1.0)				
Ease of operation	3.2	3.3	3.4	
Reliability of mainframe	3.2	3.0	3.4	
Reliability of peripherals	2.0	—	2.9	
Maintenance service	2.3	1.7	2.4	
Responsiveness	2.5	2.3	2.7	
Effectiveness				
Technical Support				
Trouble-shooting	1.3	1.3	2.4	
Education	1.7	2.0	2.0	
Documentation	1.8	2.3	2.9	
Manufacturer's Software				
Operating system	2.0	—	3.3	
Compilers & assemblers	2.4	3.0	3.1	
Applications programs	—	—	2.5	
Ease of programming	3.2	3.3	3.3	
Ease of conversion	—	—	3.2	
Overall satisfaction	2.6	3.3	3.0	
Would you recommend system to another user? (%)				
Yes	80	100	81	
No	20	0	6	

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Ratings of Computer Systems by British Users

Table 4. Mainframes & Plug-Compatible Mainframe Vendor Summaries

Manufacturer and Model	Survey Item						
	Burroughs	DEC	Honeywell	IBM	ICL	NCR	Univac
No. of User Responses	37	6	35	121	118	19	20
No. of Systems Represented	39	7	36	130	130	19	25
Avg. Life of System (mos.)	30	41	27	30	56	39	39
Acquisition Method (%)							
Purchase	49	67	43	32	51	53	15
Rental	22	0	26	24	26	11	70
Lease	30	33	37	43	27	37	15
Principal Applications (%)							
Accounting	78	33	83	81	70	68	90
Construction	0	0	9	2	6	0	5
Education	0	83	17	5	18	5	15
Government	3	0	11	8	25	0	5
Manufacturing	27	0	20	45	23	5	40
Payroll/Personnel	57	33	63	61	57	47	70
Service Bureau	11	17	11	14	18	26	5
Transportation	0	0	9	2	5	0	0
Word Processing	30	33	9	12	8	37	5
Banking/Finance	16	17	29	14	11	0	10
Distributed Processing	5	17	29	17	32	0	20
Engineering/Scientific	3	0	9	6	5	11	5
Insurance	0	0	6	3	2	0	5
Medical/Health Care	0	0	6	10	5	5	15
Retail	11	0	29	29	26	16	40
Transaction Processing	22	0	9	9	6	0	5
Utilities—Power	0	0	17	12	12	11	0
Other	5	0	0	0	0	0	0
Source of Applications Programs (%)							
In House Personnel	95	100	94	100	97	95	95
Ready Made Programs From Manufacturer	35	67	31	28	40	32	35
Contract Programming	0	0	34	24	21	21	35
Manufacturer's Personnel	8	0	20	4	5	11	15
Proprietary Software Packages	27	67	40	60	45	26	45
Other	8	17	3	2	6	0	0
Hardware Configuration							
No. of CPUs	39	7	47	132	133	19	27
No. of Workstations (avg.)	6	110	31	35	23	8	21
Software Configuration							
Database Management Systems (%)	73	17	57	56	17	11	50
Data Communications Monitors (%)	65	33	71	84	53	47	85
Primary Programming Languages (%)							
APL	0	0	3	2	0	0	0
BASIC	0	17	6	1	7	11	0
COBOL	95	50	83	70	75	58	90
FORTRAN	0	50	14	4	26	11	10
RPG	11	0	0	6	1	0	10
Other	5	33	9	41	31	84	35
Planned Acquisitions/Implementations for 1980 (%)							
Additional Software From Manufacturer	41	17	43	55	20	42	35
Proprietary Software	16	17	20	37	20	26	25
Expanded Data Communications	43	83	66	52	47	58	60
Distributed Processing	11	33	29	29	19	32	20
Integrated Word Processing	3	0	20	11	16	5	10
Other	5	17	0	5	3	5	5
Plans for System Replacement in 1980 (%)							
Yes, Same Manufacturer	22	0	20	34	15	21	10
Yes, Different Manufacturer	11	0	0	3	19	11	5
No	68	100	80	63	71	63	85

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Ratings of Computer Systems by British Users

Table 4. Mainframes & Plug-Compatible Mainframe Vendor Summaries

Manufacturer and Model	Survey Item						
	Burroughs	DEC	Honeywell	IBM	ICL	NCR	Univac
Significant Problems (%)							
System proposed by vendor was too small	46	0	29	11	19	11	30
Delivery and/or installation of equipment was late	59	17	9	5	11	26	5
Delivery of required software was late	24	17	6	12	16	5	10
System costs exceeded expected total	18	0	17	7	6	11	25
Vendor did not provide all promised software or support	35	0	14	5	14	11	20
Program/data compatibility not what vendor promised	5	0	6	2	3	0	5
Terminals/peripherals compatibility not what vendor promised	8	0	6	2	5	5	0
Vendor enhancements/changes to hardware/software hard to keep up with	16	17	9	17	8	5	10
Power/cooling requirements excessive	5	0	9	4	8	0	5
Other	14	0	3	7	9	5	15
Significant Advantages (%)							
Users happy with response time	43	33	46	46	35	42	40
System easy to expand/reconfigure	68	33	71	33	39	58	35
System costs less than expected	8	0	3	3	4	0	0
Programs/data compatible, as vendor promised	51	67	49	57	51	79	30
Terminals/peripherals compatible, as vendor promised	27	50	23	42	27	47	30
System power/energy efficient	24	0	9	13	9	5	10
Productivity aids help keep programming costs down	27	17	34	34	8	11	40
Database language efficient and effective	0	0	23	16	7	0	20
Delivery and/or installation of equipment was ahead of schedule	3	0	14	2	5	0	5
Delivery of required software was ahead of schedule	0	0	0	2	3	11	0
System Ratings (4.0-1.0)							
Ease of operation	3.3	3.5	3.0	2.9	3.0	3.1	3.0
Reliability of mainframe	3.1	2.5	3.4	3.5	2.9	3.4	3.0
Reliability of peripherals	2.5	3.0	3.0	3.2	2.7	3.1	2.8
Maintenance service	3.0	2.7	3.2	3.1	3.0	3.3	3.3
Responsiveness	2.6	2.7	3.1	3.0	2.7	3.0	3.1
Effectiveness							
Technical Support	1.8	2.3	2.6	2.5	2.4	2.1	2.2
Trouble-shooting	1.7	2.5	2.3	2.5	2.6	2.5	2.1
Education	1.8	2.8	2.4	2.6	2.6	2.6	2.0
Documentation							
Manufacturer's Software:							
Operating system	3.4	3.3	3.3	2.9	3.1	3.1	3.0
Compilers & assemblers	3.2	2.5	3.3	3.0	3.0	3.1	2.9
Applications programs	2.5	2.8	2.6	2.6	2.7	2.2	2.2
Ease of programming	3.1	3.2	3.0	2.7	2.8	2.9	2.8
Ease of conversion	3.0	3.2	2.7	2.7	2.6	3.2	2.8
Overall satisfaction	2.8	3.0	3.2	3.0	2.9	2.6	2.9
Would you recommend system to another user? (%)							
Yes	73	50	97	88	65	74	75
No	24	50	3	9	29	26	25

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Ratings of Computer Systems by British Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Survey Item	Manufacturer and Model										
	Allied Business Systems	Burroughs	BCL	Computer Automation	CMC (Microdata)	CTL	Data General	Datapoint (Vennek)	Datsaab	Diablo (Xerox)	Digico
No. of User Responses	7	27	7	9	15	16	22	11	4	5	7
No. of Systems Represented	7	34	8	12	19	17	36	12	5	7	7
Avg. Life of System (mos.)	37	28	32	28	20	50	33	17	36	7	39
Acquisition Method (%)											
Purchase	86	70	57	67	27	88	82	82	75	80	71
Rental	0	7	0	0	33	0	0	0	0	0	0
Lease	14	26	43	33	40	13	18	18	25	20	29
Principal Applications (%)											
Accounting	100	67	100	67	100	31	45	82	50	60	29
Construction	0	0	0	0	0	0	5	0	0	0	0
Education	0	0	0	0	0	44	18	0	0	0	0
Government	0	0	0	0	0	7	0	0	0	0	0
Manufacturing	43	4	29	0	0	19	18	0	0	0	0
Payroll/Personnel	0	41	43	33	47	19	32	27	0	60	29
Service Bureau	14	4	0	0	27	0	18	9	0	0	28
Transportation	0	0	0	0	0	0	2	0	0	0	0
Word Processing	0	0	0	0	0	6	5	9	0	0	14
Banking/Finance	0	11	0	0	20	6	18	9	25	0	0
Distributed Processing	0	0	0	0	0	27	0	0	0	0	0
Engineering/Scientific	0	15	14	100	13	0	18	0	0	20	43
Insurance	14	4	0	0	33	0	0	0	0	0	0
Medical/Health Care	0	0	0	0	0	6	5	0	0	0	29
Retail	0	4	29	0	7	0	5	0	0	0	43
Transaction Processing	29	19	14	33	13	31	18	45	25	0	0
Utilities—Power	0	0	0	0	0	0	0	18	0	0	0
Other	29	22	29	33	20	13	41	45	50	20	29
Source of Applications Programs (%)											
In-House Personnel	43	48	29	100	60	75	59	55	50	0	100
Ready-Made Programs From Manufacturer	0	44	43	0	7	25	5	18	0	40	14
Contract Programming	57	41	43	33	20	6	27	36	25	40	0
Manufacturer's Personnel	14	0	43	0	7	6	0	9	75	20	0
Proprietary Software Packages	14	15	0	0	40	0	14	0	0	20	14
Other	0	11	0	0	13	25	14	9	0	0	0
Hardware Configuration											
No. of CPUs	7	35	7	12	19	20	40	30	5	5	7
No. of Workstations (avg.)	4	1	5	8	10	13	8	9	5	4	4
Software Configuration											
Database Management Systems (%)	29	19	0	0	20	19	18	0	0	0	0
Data Communications Monitors (%)	0	26	0	0	27	56	23	18	25	0	0
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	71
BASIC	0	0	0	0	73	25	32	9	0	0	0
COBOL	0	70	14	0	0	63	23	0	0	0	0
FORTRAN	0	0	0	0	0	13	55	0	0	0	0
RPG	0	26	0	0	0	0	0	27	0	0	0
Other	86	15	43	67	67	38	0	91	75	100	71
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	14	7	14	0	7	38	27	9	25	20	14
Proprietary Software	29	7	57	0	27	0	23	0	0	0	14
Expanded Data Communications	0	7	14	33	33	6	18	0	0	0	29
Distributed Processing	0	7	14	33	7	6	0	9	0	0	14
Integrated Word Processing	0	0	0	0	13	13	18	27	0	20	29
Other	14	7	14	0	20	6	9	9	25	0	0
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	0	15	0	0	0	13	14	0	0	0	0
Yes, Different Manufacturer	14	15	14	0	7	6	9	0	0	0	14
No	86	70	86	100	93	81	77	100	100	80	86

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Ratings of Computer Systems by British Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Survey Item	Manufacturer and Model										
	Allied Business Systems	Burroughs	BCL	Computer Automation	CMC (Microdata)	CTL	Data General	Datapoint (Vennek)	Datsaab	Diablo (Xerox)	Digico
Significant Problems (%)	29	48	14	33	33	25	27	27	50	0	14
System proposed by vendor was too small	29	48	0	0	33	7	6	23	36	50	14
Delivery and/or installation of equipment was late	57	41	14	0	27	19	18	36	50	40	29
Delivery of required software was late	0	15	14	0	0	25	9	0	50	0	0
System costs exceeded expected total	43	56	43	33	33	31	18	0	50	20	21
Vendor did not provide all promised software or support	14	19	29	0	0	13	0	0	0	0	0
Program/data compatibility not what vendor promised	14	11	14	0	20	0	0	9	0	0	0
Terminals/peripherals compatibility not what vendor promised	14	11	0	0	0	13	14	36	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	14	4	0	33	0	6	5	9	0	0	14
Equipment excessively noisy	14	7	0	0	0	13	0	0	0	0	14
Power/cooling requirements excessive	29	19	29	0	13	19	9	27	0	0	43
Other											
Significant Advantages (%)	57	26	43	67	47	44	36	18	25	80	43
Users happy with response time	86	52	67	100	47	44	59	73	50	40	71
System easy to expand/reconfigure	0	0	0	0	0	0	0	0	0	0	29
System costs less than expected	14	26	0	33	13	0	27	18	0	20	29
Programs/data compatible, as vendor promised	14	19	0	33	0	13	18	18	0	0	29
Terminals/peripherals compatible, as vendor promised	14	7	29	33	20	8	18	27	0	40	14
System power/energy efficient	0	4	0	33	47	38	14	9	0	0	0
Productivity aids help keep programming costs down	29	7	29	0	53	6	18	27	25	0	0
Database language efficient and effective	14	0	14	67	13	0	9	18	0	20	29
Delivery and/or installation of equipment was ahead of schedule	14	0	14	0	7	0	0	0	0	0	0
Delivery of required software was ahead of schedule	0	4	0	0	7	13	5	9	25	0	0
Other											
System Ratings (4.0-1.0)	3.3	3.1	3.1	4.0	3.5	2.7	3.0	3.0	2.8	3.4	2.6
Ease of operation	3.4	2.5	3.3	3.3	3.1	3.0	3.3	3.0	3.7	3.3	3.0
Reliability of mainframe	2.3	2.2	3.1	3.0	2.9	2.4	3.0	2.6	2.5	3.0	2.7
Reliability of peripherals	2.9	2.1	3.1	3.3	2.7	3.2	2.9	2.9	2.3	3.3	2.4
Maintenance service	2.7	2.0	2.7	3.0	2.4	2.6	2.7	2.6	2.8	3.3	2.4
Responsiveness											
Effectiveness											
Technical Support	2.3	1.7	2.2	2.3	2.4	1.9	2.1	2.3	1.8	3.2	1.5
Trouble-shooting	1.2	1.6	2.2	2.3	2.5	2.4	2.2	2.1	1.7	2.5	1.7
Education	1.5	1.6	1.8	3.0	2.3	2.0	2.6	2.1	1.8	1.8	1.3
Documentation											
Manufacturer's Software	3.3	2.9	2.6	3.3	3.5	2.7	2.9	3.1	3.0	3.3	2.0
Operating system	3.3	2.5	2.3	3.3	3.5	2.4	2.8	2.7	2.3	2.3	2.7
Compilers & assemblers	3.4	2.3	2.7	—	3.1	2.1	2.8	2.6	2.3	3.5	2.7
Applications programs	3.2	2.6	2.4	3.7	3.4	3.0	3.1	2.9	2.0	2.6	2.3
Ease of programming	2.3	2.5	1.3	—	2.7	2.5	2.8	2.3	—	1.7	2.8
Ease of conversion	2.8	2.1	2.9	3.3	2.9	2.9	2.8	2.9	2.7	3.0	2.4
Overall satisfaction											
Would you recommend system to another user? (%)	71	37	86	100	87	69	73	82	75	100	43
Yes	29	59	14	0	13	25	27	18	25	0	57
No											

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Ratings of Computer Systems by British Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Manufacturer and Model	Survey Item										
	DEC	General Automation	GEC	Harris	Hewlett-Packard	Honeywell	IBM	ICL	MAEL Computers	Mohawk Data Sciences	NCR
No. of User Responses	136	9	12	3	21	36	119	180	4	6	37
No. of Systems Represented	233	11	12	4	40	92	131	185	4	14	47
Avg. Life of System (mos.)	39	48	48	12	26	27	24	39	43	71	42
Acquisition Method (%)											
Purchase	84	89	92	100	71	42	29	47	75	50	73
Rental	1	11	8	0	10	33	64	23	0	67	16
Lease	14	0	0	0	19	31	17	31	0	0	11
Principal Applications (%)											
Accounting	38	22	17	0	62	86	87	82	100	60	84
Construction	2	0	0	33	5	0	1	5	0	0	3
Education	15	0	42	33	14	0	1	3	0	0	0
Government	1	0	0	33	0	0	0	0	0	0	0
Manufacturing	14	22	8	0	14	39	40	33	0	0	14
Payroll/Personnel	21	22	17	0	33	61	44	63	50	0	57
Service Bureau	10	11	0	33	5	11	5	9	0	0	5
Transportation	10	11	0	33	5	11	3	7	0	0	0
Word Processing	10	0	0	0	10	0	2	2	0	0	0
Banking/Finance	12	0	0	0	5	11	11	9	0	17	14
Distributed Processing	13	0	0	0	14	11	7	8	25	17	3
Engineering/Scientific	32	67	87	67	14	11	3	8	0	0	3
Insurance	4	0	0	0	5	0	2	4	0	0	0
Medical/Health Care	3	0	0	0	5	0	6	11	0	0	5
Retail	7	0	0	0	5	6	6	11	0	0	14
Transaction Processing	21	0	0	0	38	19	22	24	0	17	4
Utilities—Power	0	0	0	0	0	3	0	0	0	0	3
Other	18	11	17	33	24	8	15	15	0	17	19
Source of Applications Programs (%)											
In-House Personnel	75	89	92	100	86	89	92	85	0	67	62
Ready-Made Programs From Manufacturer	17	22	25	67	29	36	23	32	50	33	38
Contract Programming	27	0	8	0	24	36	33	29	25	0	19
Manufacturer's Personnel	6	22	0	0	5	22	3	6	25	17	22
Proprietary Software Packages	33	11	0	33	33	22	34	25	0	0	22
Other	13	0	8	0	0	6	3	6	25	0	0
Hardware Configuration											
No. of CPUs	242	11	12	4	40	92	127	185	4	13	49
No. of Workstations (avg.)	11	3	6	18	6	7	5	6	2	3	2
Software Configuration											
Database Management Systems (%)	19	0	8	0	71	6	3	18	0	0	0
Data Communications Monitors (%)	15	11	0	0	33	42	16	27	0	17	3
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	0
BASIC	47	0	25	33	29	0	0	2	0	0	59
COBOL	6	0	0	0	25	72	7	55	0	0	0
FORTRAN	32	78	67	100	29	8	3	3	0	0	0
RPG	0	11	0	0	0	14	81	22	0	0	0
Other	43	67	83	0	19	8	4	33	76	17	30
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	18	0	25	33	19	22	17	28	0	33	16
Proprietary Software	17	0	8	33	24	6	12	19	0	0	14
Expanded Data Communications	32	11	17	67	29	42	29	38	0	33	19
Distributed Processing	13	0	0	33	10	17	8	15	0	17	0
Integrated Word Processing	13	0	0	33	5	6	8	13	0	0	3
Other	12	11	8	33	10	6	7	6	25	0	0
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	16	11	0	0	5	11	15	16	0	0	19
Yes, Different Manufacturer	2	0	8	0	5	6	5	5	50	33	5
No	81	89	92	100	86	83	80	76	50	67	65

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Ratings of Computer Systems by British Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Manufacturer and Model	Survey Item										
	DEC	General Automation	GEC	Harris	Hewlett-Packard	Honeywell	IBM	ICL	MAEL Computers	Mohawk Data Sciences	NCR
Significant Problems (%)											
System proposed by vendor was too small	24	22	25	0	5	58	16	36	25	0	32
Delivery and/or installation of equipment was late	21	22	0	33	10	33	16	17	0	17	22
Delivery of required software was late	17	22	8	33	19	0	13	16	0	33	30
System costs exceeded expected total	10	0	25	0	5	19	5	10	0	0	8
Vendor did not provide all promised software or support	15	11	8	0	10	19	8	17	75	17	19
Program/data compatibility not what vendor promised	3	0	8	0	5	14	1	4	25	0	5
Terminals/peripherals compatibility not what vendor promised	1	11	0	0	10	6	3	4	0	0	3
Vendor enhancements/changes to hardware/software hard to keep up with	14	44	0	0	10	14	4	12	0	0	3
Equipment excessively noisy	7	0	8	0	0	3	0	5	0	33	8
Power/cooling requirements excessive	4	11	0	0	0	11	0	4	25	17	0
Other	11	0	8	33	0	6	8	11	25	17	11
Significant Advantages (%)											
Users happy with response time	59	44	42	100	57	25	52	44	0	17	30
System easy to expand/reconfigure	60	11	33	67	57	67	52	60	0	50	30
System costs less than expected	3	11	8	0	0	0	1	3	0	0	3
Programs/data compatible, as vendor promised	24	56	17	33	14	44	46	39	0	33	14
Terminals/peripherals compatible, as vendor promised	26	11	17	67	5	6	5	15	0	0	5
System power/energy efficient	19	0	0	67	29	22	19	14	0	0	3
Productivity aids help keep programming costs down	21	0	8	33	29	11	42	8	0	0	0
Database language efficient and effective	13	0	8	0	25	3	4	6	0	0	3
Delivery and/or installation of equipment was ahead of schedule	7	0	8	33	14	3	6	8	0	0	3
Delivery of required software was ahead of schedule	4	0	8	0	5	0	4	3	0	0	0
Other	4	11	8	0	0	0	4	4	50	17	3
System Ratings (4.0-1.0)											
Ease of operation	3.3	2.9	3.0	3.3	3.4	3.1	3.4	3.1	2.0	3.2	2.8
Reliability of mainframe	3.3	2.8	3.3	3.0	3.5	3.1	3.6	3.3	2.3	2.4	3.1
Reliability of peripherals	3.1	2.2	2.6	2.7	3.2	2.7	3.2	2.9	2.3	2.5	2.9
Maintenance service	3.1	2.7	3.2	3.0	3.2	3.1	3.1	3.0	2.5	2.3	2.9
Responsiveness	3.0	2.3	2.8	3.0	3.1	2.9	3.0	2.8	2.3	2.3	2.9
Effectiveness											
Technical Support	2.5	2.1	2.7	2.7	2.7	2.3	2.6	2.3	—	2.0	2.2
Trouble-shooting	2.4	1.7	2.1	2.0	2.5	2.3	2.8	2.6	—	1.8	2.3
Education	2.5	2.0	1.7	2.7	2.8	2.1	3.0	2.4	—	2.3	2.3
Documentation											
Manufacturer's Software	3.1	2.8	2.8	3.7	3.3	3.0	3.3	2.7	2.3	2.4	2.9
Operating system	3.0	2.9	2.9	3.7	3.0	3.0	3.3	2.8	—	—	2.8
Compilers & assemblers	2.7	2.5	2.4	—	2.8	2.5	2.5	2.3	—	—	2.2
Applications programs	3.1	2.6	3.1	3.3	3.1	2.4	3.2	2.7	—	—	2.8
Ease of programming	2.7	2.3	2.6	—	2.5	2.4	3.0	2.6	—	—	2.4
Ease of conversion	3.1	2.4	2.9	3.3	3.2	2.8	3.1	2.9	2.0	2.3	2.7
Overall satisfaction											
Would you recommend system to another user? (%)											
Yes	88	56	67	100	95	78	85	89	0	67	62
No	11	44	25	0	0	22	15	11	100	33	27

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Ratings of Computer Systems by British Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Survey Item	Manufacturer and Model												
	Nixdorf	Olivetti	Perkin Elmer	Phillips	Prime	Redifon	Research Machines	Systime	Texas Instruments	Univac	Wang Laboratories	Minis & SBC's (Other Vendors)	
No. of User Responses	5	7	6	14	28	15	8	20	11	7	4	12	
No. of Systems Represented	44	8	26	42	16	15	22	18	22	4	4	44	
Avg. Life of System (mos.)	33	30	36	65	28	27	11	22	16	29	27	28	
Acquisition Method (%)													
Purchase	40	86	83	79	79	13	88	60	64	86	50	100	
Rental	20	0	0	0	4	53	0	0	0	14	50	0	
Lease	40	14	17	21	18	33	0	35	36	14	50	0	
Principal Applications (%)													
Accounting	100	29	50	79	21	53	13	80	73	43	50	50	
Construction	0	0	0	0	4	0	0	0	0	29	0	8	
Education	0	0	50	0	29	7	88	10	0	0	0	0	
Government	0	0	17	7	11	13	0	0	9	0	0	17	
Manufacturing	20	0	0	14	4	20	0	45	27	0	0	0	
Payroll/Personnel	0	14	17	93	11	27	0	55	9	0	0	8	
Service Bureau	0	0	0	0	7	20	13	0	5	0	0	8	
Transportation	20	0	0	0	0	7	0	5	9	0	0	0	
Word Processing	0	14	17	0	21	7	0	13	5	0	0	0	
Banking/Finance	0	29	17	7	4	0	13	0	5	9	0	0	
Distributed Processing	0	0	17	0	0	13	0	0	10	14	50	42	
Engineering/Scientific	0	0	83	0	64	0	0	0	0	9	0	0	
Insurance	0	43	0	14	0	0	0	0	0	0	25	0	
Medical/Health Care	0	0	0	0	4	0	0	0	14	0	8	8	
Retail	0	0	0	0	0	13	0	10	0	29	0	25	
Transaction Processing	20	14	0	7	4	13	0	30	0	29	0	0	
Utilities—Power	0	0	0	0	0	0	0	0	0	0	0	0	
Other	40	14	17	14	29	47	13	10	9	14	25	42	
Source of Applications Programs (%)													
In-House Personnel	40	86	67	36	89	73	88	60	64	86	50	67	
Ready-Made Programs From Manufacturer	80	14	33	0	39	20	63	60	9	29	50	42	
Contract Programming	20	14	17	79	11	7	0	30	27	43	25	17	
Manufacturer's Personnel	0	0	43	0	14	4	20	0	25	0	14	0	
Proprietary Software Packages	0	0	33	0	57	7	38	35	36	14	25	33	
Other	20	0	0	0	4	0	0	5	18	0	0	0	
Hardware Configuration													
No. of CPUs	5	44	8	26	45	16	15	22	18	22	4	44	
No. of Workstations (avg.)	4	1	7	3	12	12	2	20	12	2	4	5	
Software Configuration													
Database Management Systems (%)	0	0	17	0	43	13	0	10	9	14	50	0	
Data Communications Monitors (%)	0	0	17	0	18	33	0	5	0	14	50	0	
Primary Programming Languages (%)													
APL	0	0	0	0	0	0	0	0	0	0	0	0	
BASIC	60	14	17	0	32	0	88	80	18	29	50	33	
COBOL	20	0	17	43	11	0	0	0	73	57	25	8	
FORTRAN	0	0	33	0	86	0	0	0	5	9	43	0	
RPG	0	0	0	0	0	0	0	0	27	0	0	8	
Other	20	42	17	21	29	67	75	20	0	43	25	33	
Planned Acquisitions/Implementations for 1980 (%)													
Additional Software From Manufacturer	20	0	33	36	18	47	50	20	18	14	0	17	
Proprietary Software	0	0	50	0	39	0	50	0	18	29	25	8	
Expanded Data Communications	20	14	17	7	25	13	13	50	18	14	25	17	
Distributed Processing	0	0	17	0	7	27	13	10	9	0	0	0	
Integrated Word Processing	0	0	17	0	18	13	25	20	0	14	0	25	
Other	20	0	0	21	4	7	13	15	9	14	0	17	
Plans for System Replacement in 1980 (%)													
Yes, Same Manufacturer	20	0	0	21	11	7	0	0	9	0	0	17	
Yes, Different Manufacturer	0	0	0	14	7	0	0	15	0	0	25	0	
No	80	86	83	64	82	87	100	85	91	100	75	75	

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Ratings of Computer Systems by British Users

Table 5. Minicomputers and Small Business Computer Vendor Summaries

Survey Item	Manufacturer and Model												
	Nixdorf	Olivetti	Perkin Elmer	Phillips	Prime	Redifon	Research Machines	Systime	Texas Instruments	Univac	Wang Laboratories	Minis & SBC's (Other Vendors)	
Significant Problems (%)													
System proposed by vendor was too small	0	43	17	36	39	13	0	35	27	29	25	17	
Delivery and/or installation of equipment was late	20	29	33	14	14	33	38	15	27	14	0	17	
Delivery of required software was late	20	29	0	0	21	27	13	25	0	29	0	25	
System costs exceeded expected total	60	14	0	21	4	0	0	10	9	0	0	8	
Vendor did not provide all promised software or support	0	14	0	0	4	0	0	10	18	0	0	17	
Program/data compatibility not what vendor promised	0	0	0	21	7	7	0	10	0	0	0	0	
Terminals/peripherals compatibility not what vendor promised	40	14	0	0	14	13	0	5	18	14	0	17	
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	17	7	0	13	0	0	9	0	0	0	
Equipment excessively noisy	0	0	0	0	7	7	0	1	9	0	0	0	
Power/cooling requirements excessive	0	14	17	7	11	33	0	1	9	0	0	25	
Other													
Significant Advantages (%)													
Users happy with response time	80	57	33	50	54	47	63	60	55	57	50	33	
System easy to expand/reconfigure	100	14	83	14	82	0	75	50	82	57	50	25	
System costs less than expected	20	0	33	0	14	27	0	35	36	14	25	8	
Programs/data compatible, as vendor promised	20	0	17	0	18	7	25	20	0	14	0	0	
Terminals/peripherals compatible, as vendor promised	0	14	33	21	18	7	38	5	18	0	0	0	
System power/energy efficient	20	0	0	7	14	27	0	10	27	29	25	0	
Productivity aids help keep programming costs down	0	0	0	0	4	33	13	10	9	0	50	0	
Database language efficient and effective	0	0	17	7	7	7	25	10	18	0	50	0	
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	0	0	13	10	9	14	0	0	
Delivery of required software was ahead of schedule	0	0	0	0	4	0	0	5	0	0	0	0	
Other													
System Ratings (4.0-1.0)													
Ease of operation	3.4	3.0	3.2	3.0	3.3	3.6	3.4	3.3	3.4	3.2	3.5	3.3	
Reliability of mainframe	3.2	3.2	3.4	2.9	3.2	3.0	3.5	3.0	3.2	3.0	3.7	2.4	
Reliability of peripherals	2.8	2.8	2.8	2.9	2.7	3.1	3.1	2.5	3.3	2.3	1.5	2.5	
Maintenance service	3.2	2.7	3.0	3.2	2.5	3.4	3.0	2.6	2.9	2.8	2.5	2.7	
Responsiveness	3.0	3.1	2.3	2.9	2.5	3.1	3.0	2.4	2.9	3.0	3.0	2.4	
Effectiveness													
Technical Support	1.8	2.0	2.4	2.2	2.3	2.4	2.4	2.5	2.8	2.0	1.9		
Trouble-shooting	1.8	1.7	2.5	2.4	2.3	2.6	1.8	2.5	2.0	2.3	2.3	1.8	
Education	1.8	2.4	2.2	2.0	2.2	2.9	1.6	2.1	2.3	2.2	2.3	1.8	
Documentation													
Manufacturer's Software	3.2	2.8	2.7	2.9	3.2	2.9	3.0	3.3	2.9	2.8	3.0	2.9	
Operating system	3.2	2.8	2.7	3.0	2.9	2.9	2.9	3.0	2.7	2.8	—	2.9	
Compilers & assemblers	3.3	—	2.5	2.8	2.8	2.7	2.3	2.5	3.0	2.5	—	2.3	
Applications programs													
Ease of programming	3.0	2.5	3.2	2.9	2.9	3.5	2.9	3.3	3.4	3.0	3.5	2.8	
Ease of conversion	2.5	2.0	2.3	2.3	2.7	2.9	3.0	2.8	3.7	2.6	—	2.3	
Overall satisfaction	2.8	2.6	3.0	2.9	2.9	3.1	3.0	2.9	3.0	2.7	3.0	2.5	
Would you recommend system to another user? (%)													
Yes	60	57	100	71	89	80	88	75	82	71	75	75	
No	40	43	0	29	11	13	13	25	18	14	25	25	

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Ratings of Computer Systems by French Users

This year, in addition to its annual survey of U.S. computer users, Datapro conducted user surveys in France, Germany and the United Kingdom. This report contains the detailed results of the survey conducted in France with the cooperation of *Zéro-Un Informatique*.

Table 1 presents a model by model summary of user experience with mainframes and plug-compatible mainframes.

Table 2 presents a model by model summary of user experience with minicomputers and small business systems.

Table 3 presents a model by model summary of user experience with desktop, personal, and microcomputers.

Table 4 presents a vendor by vendor summary of user experience with mainframes and plug-compatible mainframes.

Table 5 presents a vendor by vendor summary of user experience with minicomputers and small business systems.

This report contains the detailed results of Datapro's first survey of computer systems users in France and includes ratings of 2,086 systems based on 1,708 user responses. For summary information and an explanation of how the survey was conducted, please see Report 70C-010-51.

Because Table 3 already effectively provides a vendor by vendor summary of user experience with desktop, personal, and microcomputers, we have not prepared a separate table for this category.

While we believe the information contained in these tables can be extremely useful in the early stages of system selection, we urge users not to allow this information to dictate their final decision. The survey results are detailed enough to advise you of *potential* strengths and warn you of *potential* weaknesses, but they are not detailed enough to tell you how a particular system would perform in your unique environment with your unique applications.

A full introduction to this survey, including country by country summary information, appears in Report 70C-010-51.□

Ratings of Computer Systems by French Users

Table 1. Mainframes & Plug Compatible Mainframes

Survey Item	Manufacturer and Model										
	Amdahl 470	Burroughs B 1700	Burroughs B 2700	Burroughs B 3700	Burroughs B 4700	Burroughs B 1800	Burroughs B 2800	Burroughs B 4800	CII-HB 2000	CII-HB IRIS 42 & 45	CII-HB IRIS 50 & 55
No. of User Responses	4	11	11	9	4	26	7	4	8	12	7
No. of Systems Represented	4	11	12	12	7	27	7	16	70	58	48
Avg. Life of System (mos.)	11	43	40	40	91	14					
Acquisition Method (%)											
Purchase	25	45	27	11	0	19	14	25	38	42	14
Rental	25	55	55	78	75	57	29	0	13	25	29
Lease	50	0	9	11	25	8			50	33	57
Principal Applications (%)											
Accounting	100	73	73	56	77	86	75	100	83	43	0
Construction	0	0	0	0	25	4	14	0	13	0	0
Education	0	27	0	0	0	0	0	0	0	50	43
Government	50	9	0	11	23	14	0	0	38	25	43
Manufacturing	0	0	27	22	50	62	86	50	13	25	14
Payroll/Personnel	75	55	73	22	0	8	0	0	25	25	14
Service Bureau	25	9	0	0	0	0	0	0	0	0	0
Transportation	0	0	0	0	0	0	0	0	25	0	0
Word Processing	0	0	0	33	25	4	14	25	0	0	0
Banking/Finance	50	9	27	0	8	14	0	0	0	14	0
Distributed Processing	25	0	0	0	25	4	0	0	13	0	14
Engineering/Scientific	50	0	0	0	0	4	0	0	25	25	0
Insurance	25	0	0	0	0	23	57	0	13	25	0
Medical/Health Care	50	9	27	22	25	27	14	0	0	0	14
Retail	75	9	0	0	25	0	0	0	0	0	14
Transaction Processing	25	0	0	0	25	19	0	25	25	0	0
Utilities—Power	25	18	36	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Source of Applications Programs (%)											
In-House Personnel	100	100	100	100	100	96	100	100	92	100	100
Ready-Made Programs From Manufacturer	0	0	0	0	0	15	29	13	8	14	29
Contract Programming	0	9	0	11	25	8	14	0	8	8	14
Manufacturer's Personnel	0	9	0	11	0	27	29	25	8	8	0
Proprietary Software Packages	50	9	9	0	0	0	0	25	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Hardware Configuration											
No. of CPUs	4	11	12	7	7	27	7	4	8	12	8
No. of Workstations (avg.)	200	4	4	0	9	10	9	6	4	3	19
Software Configuration											
Database Management Systems (%)	75	36	18	33	50	54	57	75	25	25	29
Data Communications Monitors (%)	50	64	45	67	75	73	86	25	25	0	0
Primary Programming Languages (%)	0	0	0	0	0	0	0	0	0	0	0
APL	0	18	0	0	0	0	0	0	100	83	100
BASIC	0	0	91	100	92	100	100	100	0	17	29
COBOL	75	27	0	0	25	15	0	0	0	8	0
FORTRAN	0	0	0	0	0	27	14	0	0	33	43
RPG	0	55	0	0	31	0	50	0	0	0	0
Other	75	0	27	22	0	0	0	0	0	0	0
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	0	18	0	11	0	12	14	25	0	8	14
Proprietary Software	25	9	0	0	25	23	71	0	0	17	29
Expanded Data Communications	75	27	45	56	0	58	71	0	13	8	0
Distributed Processing	0	9	18	11	25	15	29	0	8	8	0
Integrated Word Processing	50	18	0	0	0	8	0	0	0	8	14
Other	0	18	0	0	0	0	0	0	0	0	0
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	0	64	55	56	25	15	14	0	38	25	29
Yes, Different Manufacturer	100	0	9	44	50	81	86	100	63	50	71
No	0	27	45	0	0	0	0	0	0	0	0

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Ratings of Computer Systems by French Users

Table 1. Mainframes & Plug-Compatible Mainframes

Survey Item	Manufacturer and Model										
	Amdahl 470	Burroughs B 1700	Burroughs B 2700	Burroughs B 3700	Burroughs B 4700	Burroughs B 1800	Burroughs B 2800	Burroughs B 4800	CII-HB 2000	CII-HB IRIS 42E45	CII-HB IRIS 50E55
Significant Problems (%)											
System proposed by vendor was too small	0	27	0	0	0	15	50	0	38	33	14
Delivery and/or installation of equipment was late	0	18	9	33	25	0	29	25	13	17	43
Delivery of required software was late	0	0	9	11	25	4	0	25	36	0	0
System costs exceeded expected total	0	0	18	11	0	12	0	0	0	17	14
Vendor did not provide all promised software or support	0	0	18	22	25	19	0	0	0	0	0
Program/data compatibility not what vendor promised	0	0	0	11	0	4	0	0	0	8	14
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	0	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	0	9	9	0	0	8	0	0	0	25	14
Equipment excessively noisy	0	0	0	0	0	0	0	0	13	33	0
Power/cooling requirements excessive	25	9	27	11	25	12	0	25	13	25	29
Other	0	0	18	11	0	15	0	0	38	42	0
Significant Advantages (%)											
Users happy with response time	75	45	55	22	0	38	71	75	13	50	57
System easy to expand/reconfigure	100	—	45	78	25	77	86	25	50	8	29
System costs less than expected	0	0	0	0	25	4	0	0	13	8	14
Programs/data compatible, as vendor promised	100	27	45	56	25	27	86	50	13	8	14
Terminals/peripherals compatible, as vendor promised	75	9	9	22	0	4	43	25	0	0	0
System power/energy efficient	50	0	0	0	0	19	43	0	13	17	0
Productivity aids help keep programming costs down	0	18	0	11	0	27	29	0	0	0	0
Database language efficient and effective	25	9	18	0	0	19	14	0	13	0	14
Delivery and/or installation of equipment was ahead of schedule	100	36	36	11	0	19	14	0	25	14	0
Delivery of required software was ahead of schedule	0	18	9	11	0	4	0	25	0	8	0
Other	0	0	0	0	0	0	0	0	0	0	0
System Ratings (4.0-1.0)											
Ease of operation	4.0	3.5	3.5	3.7	3.3	3.2	3.7	3.5	2.8	2.6	2.8
Reliability of mainframe	4.0	3.0	3.1	3.4	3.0	3.0	3.4	3.5	3.3	3.7	2.9
Reliability of peripherals	—	2.4	2.5	2.2	2.3	2.6	3.0	2.0	2.6	2.0	2.3
Maintenance services	3.8	2.8	2.6	2.3	2.3	2.7	2.4	2.0	3.0	2.8	2.9
Responsiveness	3.8	2.7	2.2	2.3	2.5	2.6	2.6	1.8	2.6	2.6	2.9
Effectiveness	3.7	2.9	2.0	2.1	1.8	2.3	2.3	1.0	2.4	2.2	2.0
Technical Support	2.3	2.4	2.0	2.3	2.0	2.3	2.3	1.8	2.3	2.8	2.4
Trouble-shooting	2.7	2.0	1.9	2.6	1.8	1.9	2.0	1.8	2.0	2.5	2.3
Education	—	3.6	3.9	3.7	3.3	3.1	3.7	3.0	3.0	2.5	2.6
Documentation	—	3.5	3.3	3.7	3.0	3.2	3.3	3.3	3.0	2.8	3.0
Manufacturer's Software	—	3.3	3.2	3.4	3.0	2.6	2.9	—	2.3	2.5	2.2
Operating system	—	3.5	3.3	3.3	3.3	3.1	3.3	2.8	2.4	2.6	3.0
Compilers & assemblers	—	3.4	3.1	3.1	—	2.8	3.0	2.8	2.2	2.0	2.5
Applications programs	4.0	3.2	3.0	3.1	3.0	2.7	3.0	2.8	2.6	2.5	2.9
Ease of programming	—	—	—	—	—	—	—	—	—	—	—
Ease of conversion	—	—	—	—	—	—	—	—	—	—	—
Overall satisfaction	—	—	—	—	—	—	—	—	—	—	—
Would you recommend system to another user? (%)											
Yes	100	91	64	78	25	85	100	25	50	42	43
No	0	0	27	22	75	12	0	75	50	58	43

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Ratings of Computer Systems by French Users
Table 1. Mainframes & Plug Compatible Mainframes

Manufacturer and Model	Survey Item										
	CIH-HB IRIS 80	CIH-HB Series 77 (Unidata)	CIH-HB 64/20	CIH-HB 64/30	CIH-HB 64/40	CIH-HB 64/50	CIH-HB 64/60	CIH-HB 64/DPS-2	CIH-HB 64/DPS (Other Models)	CIH-HB 66/20	CIH-HB 66/40
No. of User Responses	7	5	24	10	16	5	7	7	5	9	6
No. of Systems Represented	7	5	24	10	16	5	7	7	5	9	6
Avg. Life of System (mos.)	49	25	34	19	18	31	25	8	14	11	31
Acquisition Method (%)	57	40	29	50	31	20	14	0	0	56	33
Purchase	14	40	38	40	25	0	29	29	80	11	17
Rental	29	20	33	10	38	80	71	57	20	33	50
Lease											
Principal Applications (%)											
Accounting	14	80	75	70	88	40	57	71	60	78	33
Construction	0	0	0	0	0	0	0	0	0	0	0
Education	29	0	0	0	0	0	0	0	0	0	0
Government	57	20	21	40	6	0	43	43	0	22	0
Manufacturing	0	20	25	10	25	20	14	60	11	17	0
Payroll/Personnel	14	100	54	80	88	60	57	80	0	11	17
Service Bureau	0	20	13	20	0	20	0	0	0	11	0
Transportation	0	0	0	0	0	0	0	14	20	11	0
Word Processing	0	0	0	0	0	0	29	0	0	0	0
Banking/Finance	14	20	17	10	19	0	0	0	20	67	50
Distributed Processing	14	0	0	0	6	0	0	0	20	11	0
Engineering/Scientific	71	0	0	0	0	20	0	0	0	0	0
Insurance	0	20	4	0	6	20	0	0	0	22	0
Medical/Health Care	0	0	0	0	0	0	14	29	0	0	17
Retail	0	20	0	30	6	0	0	0	0	22	0
Transaction Processing	43	40	33	30	38	40	57	43	40	67	33
Utilities—Power	29	0	13	0	13	0	29	0	0	0	17
Other	14	0	17	10	6	20	57	14	0	0	17
Source of Applications Programs (%)											
In-House Personnel	71	100	100	90	88	100	86	86	80	89	100
Ready-Made Programs From Manufacturer	57	20	8	20	25	40	29	0	20	22	17
Contract Programming	29	20	25	0	13	40	14	0	20	11	0
Manufacturer's Personnel	0	0	0	10	6	20	0	0	0	11	0
Proprietary Software Packages	43	20	13	10	19	20	57	43	20	44	33
Other	14	0	0	10	6	0	14	29	0	22	17
Hardware Configuration											
No. of CPUs	12	7	24	19	19	5	8	7	6	15	9
No. of Workstations (avg.)	213	17	6	3	10	8	12	6	15	28	73
Software Configuration											
Database Management Systems (%)	43	40	17	40	25	20	43	14	80	89	100
Data Communications Monitors (%)	71	60	79	80	81	60	86	86	80	89	100
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	0	0	0	0	0
BASIC	0	0	0	0	0	20	0	0	0	0	17
COBOL	43	100	96	100	100	100	100	100	80	89	100
FORTRAN	57	0	0	0	0	6	20	0	20	11	0
RPG	0	40	8	0	13	20	14	0	0	0	0
Other	67	20	0	10	6	0	0	0	20	22	17
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	0	20	38	30	19	40	0	29	20	22	17
Proprietary Software	29	20	21	20	19	40	14	43	20	11	0
Expanded Data Communications	67	20	58	60	56	60	86	71	40	67	100
Distributed Processing	29	0	38	10	31	0	0	14	40	33	33
Integrated Word Processing	0	0	0	0	13	20	14	0	0	0	0
Other	14	0	4	0	13	0	14	0	40	11	0
Plans for System Replacement in 1980 (%)											
Yes—Same Manufacturer	0	60	25	10	13	0	0	0	20	11	33
Yes—Different Manufacturer	14	20	8	0	0	0	0	0	0	0	0
No	67	20	67	90	88	100	100	100	80	89	67

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Ratings of Computer Systems by French Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item										
	70-6 CIH-HB IRIS 80	CIH-HB (Unidata) Series 77	CIH-HB 64/20	CIH-HB 64/30	CIH-HB 64/40	CIH-HB 64/50	CIH-HB 64/60	CIH-HB 64/DPS-2	CIH-HB 64/DPS (Other Models)	CIH-HB 66/20	CIH-HB 66/40
Significant Problems (%)											
System proposed by vendor was too small	0	20	46	10	38	40	14	14	20	22	50
Delivery and/or installation of equipment was late	29	40	33	50	44	20	14	14	86	20	33
Delivery of required software was late	29	0	25	60	19	60	0	14	40	11	0
System costs exceeded expected total	49	0	17	10	6	0	14	29	20	11	0
Vendor did not provide all promised software or support	14	0	13	20	6	0	0	0	0	0	33
Program/data compatibility not what vendor promised	14	0	8	0	6	0	0	0	20	0	0
Terminals/peripherals compatibility not what vendor promised	29	0	29	0	19	20	43	0	0	44	17
Vendor enhancements/changes to hardware/software hard to keep up with	0	20	4	0	0	20	0	14	0	11	33
Equipment excessively noisy	14	0	4	0	0	0	0	0	0	0	17
Power/cooling requirements excessive	57	20	25	0	13	0	14	20	11	17	0
Other											
Significant Advantages (%)											
Users happy with response time	57	0	17	50	38	20	43	71	40	22	33
System easy to expand/reconfigure	71	0	58	70	75	40	100	71	80	67	67
System costs less than expected	0	0	0	10	0	0	0	0	0	0	0
Programs/data compatible, as vendor promised	14	40	54	70	75	80	29	71	40	33	0
Terminals/peripherals compatible, as vendor promised	14	0	4	20	13	20	0	0	0	0	0
System power/energy efficient	0	0	4	10	13	0	14	0	14	11	33
Productivity aids help keep programming costs down	0	0	13	10	31	20	0	14	40	11	0
Database language efficient and effective	14	20	21	10	13	0	0	0	60	44	83
Delivery and/or installation of equipment was ahead of schedule	0	0	21	10	13	20	0	0	0	0	0
Delivery of required software was ahead of schedule	0	0	21	0	6	0	14	0	0	0	0
Other	29	0	4	10	13	0	0	0	0	0	17
System Ratings (4.0-1.0)											
Ease of operation	2.4	2.6	2.8	2.8	3.3	2.6	2.8	2.9	2.4	2.8	2.8
Reliability of mainframe	2.7	2.4	3.1	3.4	3.4	3.0	3.6	3.3	3.0	3.2	3.7
Reliability of peripherals	2.0	2.4	2.5	2.5	2.8	2.6	1.9	2.1	2.6	2.6	2.5
Maintenance service	2.6	2.4	2.5	2.7	2.4	2.4	2.4	2.6	2.8	2.8	3.0
Responsiveness	2.1	2.0	2.8	2.5	2.6	2.2	2.1	2.7	2.6	2.7	3.2
Effectiveness											
Technical Support:											
Trouble-shooting	1.6	2.0	2.3	2.3	2.3	2.5	2.7	2.3	2.0	1.9	1.8
Education	2.1	1.6	2.3	2.2	2.3	2.0	2.4	1.7	2.0	2.1	2.2
Documentation	2.4	1.6	2.4	2.6	2.2	2.2	2.1	2.3	2.2	2.7	2.2
Manufacturer's Software:											
Operating system	3.1	2.4	3.2	3.3	3.2	3.0	3.5	3.1	2.6	3.0	3.7
Compilers & assemblers	3.0	2.4	3.0	3.1	3.3	2.8	3.0	3.3	3.0	3.0	3.0
Applications programs	2.2	—	2.8	3.0	3.0	2.7	2.3	3.3	2.8	2.4	2.8
Ease of programming	2.8	2.6	2.9	3.0	3.1	2.8	2.6	2.4	3.3	3.0	3.0
Ease of conversion	2.4	2.5	2.7	2.9	3.2	3.2	2.6	2.8	2.2	2.0	2.0
Overall satisfaction	2.1	2.2	2.7	2.9	3.0	2.6	2.7	2.9	2.8	2.8	3.0
Would you recommend system to another user? (%)											
Yes	14	0	79	90	81	80	86	86	60	67	83
No	71	100	17	10	13	20	14	14	20	22	17

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Ratings of Computer Systems by French Users
Table 1. Mainframes & Plug Compatible Mainframes

Survey Item	Manufacturer and Model													
	CIH-HB 66/60	CIH-HB Level 66 (Other Models)	CIH-HB 66/DFS-1	DEC DECsystem 20	IBM 360	IBM 370/115	IBM 370/125	IBM 370/135	IBM 370/138	IBM 370/145	IBM 370/148	IBM 370/148	IBM 370/148	IBM 370/148
No. of User Responses	5	5	5	4	10	37	28	22	66	20	34	34	34	34
No. of Systems Represented	7	5	5	4	11	37	34	22	66	20	34	34	34	34
Avg. Life of System (mos.)	35	31	15	23	78	47	47	58	20	38	38	33	33	33
Acquisition Method (%)														
Purchase	20	60	60	25	50	27	43	18	30	35	41	41	41	41
Rental	20	40	40	0	10	54	39	32	58	35	32	32	32	32
Lease	60	0	40	75	40	16	18	45	12	25	26	26	26	26
Principal Applications (%)														
Accounting	40	80	20	50	30	76	79	91	64	80	65	65	65	65
Construction	0	20	0	25	0	27	4	0	0	0	0	0	0	0
Education	0	20	0	0	0	27	4	0	0	0	0	0	0	0
Government	0	20	0	0	0	16	18	14	8	30	6	6	6	6
Manufacturing	0	0	20	0	0	30	32	41	30	45	21	21	21	21
Payroll/Personnel	60	80	20	25	30	65	57	77	67	75	65	65	65	65
Service Bureau	0	0	0	0	0	5	25	14	8	30	0	0	0	0
Transportation	20	0	0	0	0	0	0	0	6	5	12	12	12	12
Word Processing	0	0	0	25	10	5	21	9	24	20	26	26	26	26
Banking/Finance	60	60	0	0	0	0	11	9	11	15	15	15	15	15
Distributed Processing	0	40	20	0	0	4	0	0	0	0	0	0	0	0
Engineering/Scientific	0	20	0	50	0	5	7	4	5	0	15	15	15	15
Insurance	20	0	40	0	0	8	0	0	5	0	12	12	12	12
Medical/Health Care	20	0	0	0	0	27	0	0	0	0	18	18	18	18
Retail	0	0	0	0	40	32	25	50	30	30	30	30	30	30
Transaction Processing	60	40	20	25	0	19	11	27	39	45	53	53	53	53
Utilities—Power	0	20	0	0	0	8	4	0	2	5	6	6	6	6
Other	20	20	0	0	20	19	14	18	8	10	6	6	6	6
Source of Applications Programs (%)														
In-House Personnel	100	100	60	75	90	97	96	100	95	100	95	95	95	95
Ready-Made Programs From Manufacturer	0	20	0	0	0	8	18	27	15	15	24	24	24	24
Contract Programming	0	20	20	25	20	27	7	9	3	35	9	9	9	9
Manufacturer's Personnel	0	40	20	0	0	5	0	0	0	0	0	0	0	0
Proprietary Software Packages	0	0	25	10	24	25	18	24	15	32	0	0	0	0
Other	0	0	0	0	0	27	0	0	5	10	0	0	0	0
Hardware Configuration														
No. of CPUs	8	6	9	4	11	37	34	22	66	20	34	34	34	34
No. of Workstations (avg.)	90	21	35	26	2	3	6	12	20	17	47	47	47	47
Software Configuration														
Database Management Systems (%)	100	80	80	100	20	30	29	36	38	45	53	53	53	53
Data Communications Monitors (%)	100	80	80	0	20	38	54	59	68	90	85	85	85	85
Primary Programming Languages (%)														
APL	0	0	0	50	0	0	0	0	2	0	0	0	0	0
BASIC	0	0	20	0	0	0	0	0	0	0	0	0	0	0
COBOL	100	100	100	75	80	70	71	91	76	85	47	47	47	47
FORTRAN	60	20	40	75	10	11	11	5	5	5	6	6	6	6
RPG	0	0	0	40	38	21	41	18	10	9	9	9	9	9
Other	0	40	20	25	80	49	57	41	55	55	47	47	47	47
Planned Acquisitions/Implementations for 1980 (%)														
Additional Software From Manufacturer	40	40	20	0	10	16	21	9	42	30	41	41	41	41
Proprietary Software	0	0	0	50	10	22	32	23	42	40	41	41	41	41
Expanded Data Communications	60	60	60	25	0	32	54	50	82	65	71	71	71	71
Distributed Processing	0	20	0	0	10	16	21	32	17	20	29	29	29	29
Integrated Word Processing	0	0	25	10	27	7	0	15	15	21	21	21	21	21
Other	0	20	0	0	10	11	18	9	9	5	9	9	9	9
Plans for System Replacement in 1980 (%)														
Yes, Same Manufacturer	0	20	0	0	60	51	57	55	42	35	35	35	35	35
Yes, Different Manufacturer	0	0	0	0	10	11	0	0	0	0	0	0	0	0
No	100	80	80	100	30	35	43	45	56	60	65	65	65	65

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Ratings of Computer Systems by French Users

Table 1. Mainframes & Plug-Compatible Mainframes

Survey Item	Manufacturer and Model													
	CIH-HB 66/60	CIH-HB Level 66 (Other Models)	CIH-HB 66/DFS-1	DEC DECsystem 20	IBM 360	IBM 370/115	IBM 370/125	IBM 370/135	IBM 370/138	IBM 370/145	IBM 370/148	IBM 370/148	IBM 370/148	IBM 370/148
Significant Problems (%)														
System proposed by vendor was too small	20	20	0	0	0	14	32	5	14	5	0	18	18	18
Delivery and/or installation of equipment was late	40	0	40	75	0	27	11	11	14	14	10	15	15	15
Delivery of required software was late	0	0	40	0	0	0	0	0	0	3	10	10	10	10
System costs exceeded expected total	0	0	40	0	0	11	7	0	0	0	3	6	6	6
Vendor did not provide all promised software or support	0	0	0	0	0	27	0	0	0	0	0	0	0	0
Program/data compatibility not what vendor promised	0	0	0	0	20	0	0	0	0	3	0	0	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	20	0	0	0	0	0	0	18	15	20	15	15
Equipment excessively noisy	0	0	40	25	0	14	14	18	15	2	10	3	3	3
Power/cooling requirements excessive	20	20	20	0	0	0	0	5	2	9	12	9	9	9
Other	20	40	40	25	20	11	7	17	6	30	30	30	30	30
Significant Advantages (%)														
Users happy with response time	60	60	60	50	20	24	39	36	52	45	35	35	35	35
System easy to expand/reconfigure	80	100	40	75	20	27	39	23	39	5	44	44	44	44
System costs less than expected	0	0	0	0	0	0	0	0	0	5	5	5	5	5
Programs/data compatible, as vendor promised	40	20	0	25	0	22	46	27	38	25	38	38	38	38
Terminals/peripherals compatible, as vendor promised	40	20	20	25	0	27	7	9	29	25	21	21	21	21
System power/energy efficient	20	40	20	50	10	8	4	0	9	0	6	6	6	6
Productivity aids help keep programming costs down	20	0	20	75	0	8	18	0	20	10	26	26	26	26
Database language efficient and effective	60	60	40	50	0	27	11	5	18	20	24	24	24	24
Delivery and/or installation of equipment was ahead of schedule	40	60	20	25	20	27	29	23	32	15	15	15	15	15
Delivery of required software was ahead of schedule	20	60	0	10	27	21	9	9	0	9	0	0	0	0
Other	0	20	40	25	20	8	4	14	3	0	0	0	0	0
System Ratings (4-0-1-0)														
Ease of operation	2.8	3.4	3.0	4.0	2.9	2.7	2.7	2.8	2.8	2.6	2.5	2.5	2.5	2.5
Reliability of mainframe	3.0	3.4	2.8	3.3	3.0	3.7	3.6	3.6	3.6	3.2	3.3	3.3	3.3	3.3
Reliability of peripherals	2.8	2.6	2.8	2.5	2.5	3.3	3.0	3.4	3.1	2.8	2.8	2.8	2.8	2.8
Maintenance service	2.8	2.6	2.6	2.5	3.1	3.4	3.2	3.3	2.9	3.1	2.9	2.9	2.9	2.9
Responsiveness	2.6	3.0	2.6	2.3	2.7	3.4	3.6	3.3	2.9	2.8	2.8	2.8	2.8	2.8
Effectiveness	2.2	2.8	2.3	2.3	2.5	2.6	2.4	2.7	2.4	2.5	2.5	2.5	2.5	2.5
Trouble-shooting	2.4	2.2	2.0	1.8	2.5	2.7	2.4	2.8	2.6	2.6	2.6	2.6	2.6	2.6
Education	2.2	2.2	2.3	3.0	2.5	2.8	2.5	2.8	2.6	2.6	2.6	2.6	2.6	2.6
Documentation	3.6	3.2	3.0	3.8	2.9	2.8	2.8	2.8	2.9	2.9	2.7	2.7	2.7	2.7
Manufacturer's Software	3.2	3.0	2.8	3.3	3.0	3.2	2.9	3.0	3.2	3.4	2.9	2.9	2.9	2.9
Operating system	—	2.8	2.3	—	—	2.6	2.8	2.8	2.7	2.5	2.5	2.5	2.5	2.5
Compilers & assemblers	3.0	3.0	3.0	3.8	2.9	2.8	2.8	2.8	2.7	2.8	2.7	2.7	2.7	2.7
Applications programs	2.8	3.0	2.5	3.3	2.9	3.0	2.9	3.0	2.9	2.6	2.6	2.6	2.6	2.6
Ease of programming	3.0	3.0	3.0	3.8	2.9	2.8	2.8	2.8	2.7	2.8	2.7	2.7	2.7	2.7
Ease of conversion	2.8	3.0	2.5	3.3	2.9	3.0	2.9	3.0	2.9	2.6	2.6	2.6	2.6	2.6
Overall satisfaction	2.8	3.0	2.5	3.3	2.9	3.0	2.9	3.0	2.9	2.6	2.6	2.6	2.6	2.6
Would you recommend system to another user? (%)														
Yes	80	100	50	100	50	62	68	68	88	75	85	85	85	85
No	20	0	50	0	40	38	32	32	12	25	15	15	15	15

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Ratings of Computer Systems by French Users

Table 1. Mainframes & Plug Compatible Mainframes

Manufacturer and Model	Survey Item										
	IBM 370/158	IBM 3031	IBM 3032	IBM 3033	IBM 4331	IBM 4341	ICL 1900 Series	ICL 2900 Series	NCR Century 101 thru 200	NCR 8400 Series	NCR 8500 Series
No. of User Responses	17	16	7	5	25	4	6	10	12	8	8
No. of Systems Represented	20	16	7	5	25	4	6	10	12	8	8
Avg. Life of System (mos.)	50	14	13	11	4	2	42	9	68	11	17
Acquisition Method (%)											
Purchase	53	25	14	60	8	0	33	20	33	38	25
Rental	18	19	43	0	92	100	50	70	58	63	75
Lease	29	56	43	40	0	0	0	0	8	0	0
Principal Applications (%)											
Accounting	59	94	86	80	52	25	100	90	75	75	88
Construction	0	0	0	0	0	0	0	0	0	0	13
Education	0	0	0	0	0	0	0	0	0	0	13
Government	18	13	14	40	0	0	0	10	8	0	0
Manufacturing	18	50	71	0	40	25	17	30	25	13	63
Payroll/Personnel	53	94	71	80	52	25	50	70	67	75	63
Service Bureau	18	19	29	20	0	25	0	0	0	13	0
Transportation	0	6	0	0	0	0	17	0	0	0	0
Word Processing	6	13	0	0	0	0	17	30	25	0	50
Banking/Finance	18	13	0	60	20	4	25	0	0	0	0
Distributed Processing	18	25	43	20	4	25	0	0	0	0	0
Engineering/Scientific	6	25	57	20	8	0	0	10	0	0	13
Insurance	18	13	0	20	0	0	0	30	8	25	13
Medical/Health Care	6	0	0	0	0	25	0	10	0	13	0
Retail	6	31	43	20	28	0	33	20	17	13	0
Transaction Processing	47	63	57	40	44	75	33	50	0	25	38
Utilities—Power	12	6	0	0	0	0	0	0	0	0	0
Other	24	6	29	0	20	0	17	0	8	13	25
Source of Applications Programs (%)											
In-House Personnel	100	94	100	100	88	100	83	100	83	88	88
Ready-Made Programs From Manufacturer	24	25	43	20	28	25	17	20	8	38	38
Contract Programming	24	13	0	0	16	0	17	20	0	25	13
Manufacturer's Personnel	0	6	29	20	0	50	0	40	17	0	25
Proprietary Software Packages	41	44	29	20	20	0	17	30	0	0	13
Other	12	6	14	0	8	0	0	0	8	13	0
Hardware Configuration											
No. of CPUs	20	18	7	6	25	4	6	11	13	8	8
No. of Workstations (avg.)	110	56	73	180	8	30	24	48	3	8	82
Software Configuration											
Database Management Systems (%)	71	69	86	100	52	0	0	20	8	0	38
Data Communications Monitors (%)	47	88	86	100	96	100	33	40	25	13	75
Primary Programming Languages (%)											
APL	6	25	29	0	0	0	0	0	0	0	0
BASIC	0	0	0	0	0	0	0	0	0	0	0
COBOL	88	69	86	80	96	75	100	100	67	100	88
FORTRAN	12	13	29	20	4	0	0	30	0	0	0
RPG	0	0	0	0	20	25	0	0	8	0	0
Other	65	75	57	100	44	50	40	83	50	63	63
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	29	38	57	20	20	25	0	10	8	25	38
Proprietary Software	29	38	29	20	28	0	0	20	8	0	13
Expanded Data Communications	65	88	100	100	56	50	67	50	8	50	63
Distributed Processing	29	25	57	20	8	25	33	20	42	38	13
Integrated Word Processing	24	38	43	40	0	25	0	10	8	0	13
Other	24	13	0	0	12	25	0	20	8	13	13
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	35	6	14	0	12	0	50	10	58	25	13
Yes, Different Manufacturer	0	0	0	0	4	0	0	0	25	25	0
No	65	94	86	100	84	100	50	90	17	38	75

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Ratings of Computer Systems by French Users

Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item										
	IBM 370/158	IBM 3031	IBM 3032	IBM 3033	IBM 4331	IBM 4341	ICL 1900 Series	ICL 2900 Series	NCR Century 101 thru 200	NCR 8400 Series	NCR 8500 Series
Significant Problems (%)											
System proposed by vendor was too small	18	13	14	20	4	0	17	20	17	50	25
Delivery and/or installation of equipment was late	6	19	0	40	56	25	0	10	17	63	38
Delivery of required software was late	6	6	0	20	52	0	50	40	17	50	50
System costs exceeded expected total	12	19	0	0	20	25	33	0	17	0	0
Vendor did not provide all promised software or support	6	6	0	0	16	25	0	20	0	38	25
Program/data compatibility not what vendor promised	0	0	0	0	24	0	0	0	0	0	13
Terminals/peripherals compatibility not what vendor promised	0	6	0	0	4	0	0	10	0	0	13
Vendor enhancements/changes to hardware/software hard to keep up with	24	38	29	0	32	25	0	0	0	0	25
Equipment excessively noisy	0	0	0	0	0	0	0	0	25	0	0
Power/cooling requirements excessive	6	6	43	20	0	0	17	0	0	0	0
Other	35	31	43	0	20	0	17	40	42	13	38
Significant Advantages (%)											
Users happy with response time	47	44	43	80	44	25	50	60	25	25	50
System easy to expand/reconfigure	47	63	43	40	36	25	67	70	17	50	63
System costs less than expected	6	0	0	0	4	0	0	0	8	0	0
Programs/data compatible, as vendor promised	6	38	57	0	44	25	50	70	33	63	63
Terminals/peripherals compatible, as vendor promised	0	50	29	0	24	0	17	30	8	38	25
System power/energy efficient	6	19	0	0	56	25	0	20	8	25	50
Productivity aids help keep programming costs down	12	56	0	0	58	25	0	10	0	0	13
Database language efficient and effective	24	31	14	40	12	0	0	8	0	0	25
Delivery and/or installation of equipment was ahead of schedule	24	25	43	40	16	75	33	40	25	0	25
Delivery of required software was ahead of schedule	12	13	14	40	16	25	0	10	25	13	25
Other	12	0	0	0	4	0	0	10	0	13	25
System Ratings (4 0-1 0)											
Ease of operation	27	26	26	30	28	30	30	34	28	33	30
Reliability of mainframe	31	33	31	35	36	35	28	34	29	35	34
Reliability of peripherals	28	29	33	30	28	33	22	26	20	30	28
Maintenance service	28	28	36	28	32	30	32	32	30	28	30
Responsiveness	29	29	30	28	30	25	25	28	26	24	28
Effectiveness											
Technical Support	24	26	29	26	23	28	28	29	23	24	20
Trouble-shooting	26	27	29	30	24	28	22	24	23	21	21
Education	27	27	30	32	24	28	24	22	19	23	21
Documentation											
Manufacturer's Software											
Operating system	31	29	33	28	28	33	25	26	20	26	29
Compilers & assemblers	31	33	30	30	31	30	22	28	25	28	29
Applications programs	27	26	—	—	26	27	20	30	18	24	26
Ease of programming	26	29	27	30	28	28	27	29	28	30	30
Ease of conversion	27	24	23	—	26	28	20	24	22	34	21
Overall satisfaction	28	28	29	32	28	30	25	28	24	28	28
Would you recommend system to another user? (%)											
Yes	71	88	14	80	80	75	17	80	50	75	75
No	24	0	86	0	20	0	67	20	50	25	25

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Ratings of Computer Systems by French Users
Table 1. Mainframes & Plug Compatible Mainframes

Survey Item	Manufacturer and Model							
	NASCO (Itecl) All Models	Siemens 4004	Siemens 7 700 Series	Univac 90/25	Univac 90/30	Univac 90/40	Univac 90/60	Univac 1106
No. of User Responses	6	6	7	3	31	3	6	3
No. of Systems Represented	6	7	10	3	34	3	6	3
Avg. Life of System (mos.)	9	44	42	19	30	15	25	56
Acquisition Method (%)								
Purchase	0	33	29	33	13	0	17	0
Rental	50	50	57	67	71	100	67	100
Lease	50	17	14	0	13	0	17	0
Principal Applications (%)								
Accounting	50	100	86	33	87	67	100	100
Construction	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0
Government	17	0	0	0	13	33	0	33
Manufacturing	17	0	14	33	35	0	17	33
Payroll/Personnel	50	83	43	67	74	67	67	100
Service Bureau	0	0	0	0	26	0	0	33
Transportation	0	17	0	0	0	0	17	33
Word Processing	17	0	0	33	3	33	0	33
Banking/Finance	33	17	43	0	19	0	0	100
Distributed Processing	0	0	0	0	6	0	0	67
Engineering/Scientific	17	0	0	0	6	0	0	33
Insurance	0	0	14	0	6	0	0	33
Medical/Health Care	0	0	0	0	6	33	83	33
Retail	33	0	29	0	45	33	67	33
Transaction Processing	33	33	14	67	26	0	0	0
Utilities—Power	0	0	0	0	0	0	0	0
Other	33	33	29	0	13	0	17	0
Source of Applications Programs (%)								
In-House Personnel	83	100	86	100	94	100	100	100
Ready-Made Programs From Manufacturer	17	0	43	0	19	0	33	33
Contract Programming	17	0	0	33	6	33	17	33
Manufacturer's Personnel	0	0	43	33	23	0	17	33
Proprietary Software Packages	17	17	0	0	23	0	33	0
Other	0	0	0	0	0	0	0	0
Hardware Configuration								
No. of CPUs	6	7	10	3	34	3	6	3
No. of Workstations (avg.)	37	5	16	5	9	16	18	23
Software Configuration								
Database Management Systems (%)	33	33	57	0	32	67	17	67
Data Communications Monitors (%)	50	33	71	67	84	100	83	67
Primary Programming Languages (%)								
APL	0	0	0	0	0	0	0	0
BASIC	0	0	0	0	0	0	0	0
COBOL	67	100	71	100	77	100	100	100
FORTRAN	50	0	0	0	6	0	0	67
RPG	0	17	14	100	55	67	0	0
Other	33	67	43	0	32	0	50	0
Planned Acquisitions/Implementations for 1980 (%)								
Additional Software From Manufacturer	0	17	0	0	23	33	17	33
Proprietary Software	33	17	57	0	16	67	67	0
Expanded Data Communications	67	33	29	33	65	100	83	33
Distributed Processing	50	0	0	0	26	0	17	67
Integrated Word Processing	33	0	0	33	0	0	33	33
Other	17	0	14	33	16	33	33	0
Plans for System Replacement in 1980 (%)								
Yes, Same Manufacturer	0	50	0	33	6	33	0	100
Yes, Different Manufacturer	0	17	0	0	6	0	0	0
No	100	33	100	67	87	67	100	0

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Ratings of Computer Systems by French Users
Table 1. Mainframes & Plug-Compatible Mainframes

Survey Item	Manufacturer and Model							
	NASCO (Itecl) All Models	Siemens 4004	Siemens 7 700 Series	Univac 90/25	Univac 90/30	Univac 90/40	Univac 90/60	Univac 1106
Significant Problems (%)								
System proposed by vendor was too small	0	17	43	100	23	33	17	0
Delivery and/or installation of equipment was late	0	17	29	33	10	0	0	0
Delivery of required software was late	0	0	43	33	3	0	0	0
System costs exceeded expected total	0	0	14	33	16	0	17	0
Vendor did not provide all promised software or support	0	0	0	33	6	0	0	0
Program/data compatibility not what vendor promised	0	0	0	33	3	33	0	33
Terminals/peripherals compatibility not what vendor promised	0	0	0	33	6	0	17	0
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	29	33	13	0	67	33
Equipment excessively noisy	0	0	0	0	6	0	0	0
Power/cooling requirements excessive	0	50	14	0	6	0	17	67
Other	0	17	0	33	23	33	33	33
Significant Advantages (%)								
Users happy with response time	50	33	43	0	42	0	67	33
System easy to expand/reconfigure	17	50	43	33	68	33	67	67
System costs less than expected	0	0	0	0	3	0	0	0
Programs/data compatible as vendor promised	83	67	71	33	42	33	67	0
Terminals/peripherals compatible as vendor promised	50	33	0	0	0	0	0	33
System power/energy efficient	67	0	0	0	33	0	0	0
Productivity aids help keep programming costs down	0	0	0	0	26	33	67	33
Database language efficient and effective	0	0	29	0	13	0	0	33
Delivery and/or installation of equipment was ahead of schedule	50	17	29	33	35	0	83	33
Delivery of required software was ahead of schedule	33	0	14	0	23	0	17	0
Other	17	0	14	0	10	33	33	0
System Ratings (4 0-1 0)								
Ease of operation	3.6	2.7	3.0	1.7	3.1	3.3	3.2	2.7
Reliability of mainframe	3.3	2.8	3.7	3.3	3.2	2.7	3.2	3.7
Reliability of peripherals	3.3	2.8	2.9	2.3	2.7	2.7	2.5	3.3
Maintenance service	3.2	3.0	3.3	3.0	3.0	3.0	3.5	3.3
Responsiveness	3.0	3.3	3.1	3.3	2.9	3.0	3.0	3.0
Effectiveness	3.0	3.3	3.1	3.3	2.9	3.0	3.0	3.0
Technical Support								
Trouble-shooting	3.0	2.5	2.4	—	2.6	2.7	2.5	3.0
Education	2.7	2.5	2.1	2.0	2.2	2.7	2.0	2.7
Documentation	—	1.8	2.0	2.7	2.4	2.3	2.5	3.0
Manufacturer's Software								
Operating system	—	2.7	3.0	2.0	3.1	3.0	4.0	3.7
Compilers & assemblers	—	2.7	2.9	2.3	3.2	3.0	3.3	3.3
Applications programs	—	2.3	2.3	—	2.9	2.3	2.8	—
Ease of programming	—	2.5	2.6	1.7	2.9	2.7	3.4	3.0
Ease of conversion	—	1.8	2.7	2.8	—	—	2.8	1.7
Overall satisfaction	3.2	2.8	3.0	2.0	3.0	2.3	2.8	3.0
Would you recommend system to another user? (%)								
Yes	100	83	71	33	81	33	100	100
No	0	17	14	67	13	67	0	0

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model											
	Burroughs B 700	Burroughs B 80	Burroughs B 800	CII-HB G58	CII-HB G100	CII-HB Mini 6	CII-HB 61/40	CII-HB 61/40-2	CII-HB 61/58	CII-HB 61/60	CII-HB 61/60-2	CII-HB 61/DPS
No. of User Responses	7	7	6	9	11	22	21	9	15	25	14	19
No. of Systems Represented	8	8	6	11	12	34	23	9	43	29	16	25
Avg. Life of System (mos.)	47	20	24	80	69	13	25	18	55	48	35	4
Acquisition Method (%)												
Purchase	43	57	67	56	73	91	33	22	33	64	43	47
Rental	29	29	33	11	27	0	38	33	20	12	36	11
Lease	29	14	0	33	0	9	24	44	40	0	21	42
Principal Applications (%)												
Accounting	71	71	50	89	55	55	86	78	80	88	79	68
Construction	0	0	0	0	0	0	0	0	0	0	0	5
Education	0	0	0	0	0	0	0	0	0	0	0	11
Government	0	0	0	0	0	0	0	0	0	0	0	11
Manufacturing	0	0	33	22	9	5	0	0	0	36	29	16
Payroll/Personnel	43	0	0	11	18	5	19	33	7	60	50	47
Service Bureau	57	57	33	56	27	45	67	44	33	60	50	47
Transportation	14	0	0	11	0	5	5	0	7	4	0	11
Word Processing	0	0	0	0	0	0	0	22	0	0	0	5
Banking/Finance	0	0	0	0	0	0	0	0	0	0	0	0
Distributed Processing	0	0	17	0	45	5	19	11	13	8	0	0
Engineering/Scientific	0	29	33	11	9	32	10	0	0	0	0	0
Insurance	0	0	0	0	0	14	0	0	0	7	8	0
Medical/Health Care	0	0	0	0	0	9	0	0	0	0	0	11
Retail	0	0	0	0	0	0	0	0	0	0	0	11
Transaction Processing	71	14	17	11	0	23	24	11	40	28	43	21
Utilities—Power	0	0	33	0	0	36	19	33	0	44	71	47
Other	0	0	0	0	0	5	5	0	7	4	7	0
Other	14	29	33	22	18	23	10	22	0	0	29	5
Source of Applications Programs (%)												
In-House Personnel	71	43	83	100	82	95	90	89	93	96	93	74
Ready-Made Programs From Manufacturer	29	43	17	22	45	5	33	0	7	4	7	11
Contract Programming	0	29	0	0	9	9	5	11	0	8	21	26
Manufacturer's Personnel	0	0	0	0	0	9	19	0	13	4	0	5
Proprietary Software Packages	0	0	17	0	0	5	19	44	7	8	21	26
Other	29	14	0	0	9	5	0	11	0	4	7	0
Hardware Configuration												
No. of CPUs	8	8	6	11	12	34	23	9	43	29	16	25
No. of Workstations (avg.)	1	1	3	0	1	4	2	3	0	5	7	6
Software Configuration												
Database Management Systems (%)	0	0	17	0	9	0	0	0	0	0	0	0
Data Communications Monitors (%)	0	29	67	11	9	0	0	22	0	12	21	0
Primary Programming Languages (%)												
APL	0	0	0	0	0	0	0	0	0	0	0	21
BASIC	0	0	0	33	0	0	0	22	7	4	0	0
COBOL	86	86	100	100	82	91	95	100	100	100	100	100
FORTRAN	0	0	0	0	0	9	0	0	0	0	0	5
RPG	43	14	17	0	0	9	0	0	0	0	0	0
Other	0	29	0	78	55	0	5	11	40	32	7	0
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	14	29	33	0	0	5	19	22	0	20	7	5
Proprietary Software	0	14	0	0	0	9	14	33	0	4	0	16
Expanded Data Communications	14	57	67	0	9	23	33	33	7	40	43	42
Distributed Processing	0	0	0	11	9	18	33	0	33	12	0	26
Integrated Word Processing	0	14	0	0	0	5	5	0	0	0	0	11
Other	29	14	0	0	0	23	5	11	20	12	36	5
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	57	14	0	78	27	0	33	11	40	40	29	5
Yes, Different Manufacturer	14	0	17	0	0	0	5	0	13	12	7	0
No	29	86	83	22	45	100	62	78	40	48	64	95

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model											
	Burroughs B 700	Burroughs B 80	Burroughs B 800	CII-HB G58	CII-HB G100	CII-HB Mini 6	CII-HB 61/40	CII-HB 61/40-2	CII-HB 61/58	CII-HB 61/60	CII-HB 61/60-2	CII-HB 61/DPS
Significant Problems (%)												
System proposed by vendor was too small	71	43	50	11	0	41	57	0	47	44	36	16
Delivery and/or installation of equipment was late	29	0	33	11	0	86	19	11	0	16	7	74
Delivery of required software was late	43	43	17	0	0	41	10	11	0	12	7	5
System costs exceeded expected total	0	14	17	0	0	32	5	0	0	4	0	5
Vendor did not provide all promised software or support	43	0	17	0	0	0	0	0	0	12	0	0
Program/data compatibility not what vendor promised	14	14	17	0	9	5	14	0	20	12	0	0
Terminals/peripherals compatibility not what vendor promised	0	14	0	0	0	0	0	11	0	12	7	11
Vendor enhancements/changes to hardware/software hard to keep up with	14	29	17	22	0	18	10	11	13	8	7	0
Equipment excessively noisy	14	14	17	33	18	9	24	11	53	16	0	16
Power/cooling requirements excessive	14	0	17	0	9	9	5	11	0	4	7	0
Other	29	29	0	44	9	14	5	11	7	4	43	11
Significant Advantages (%)												
Users happy with response time	14	57	33	0	36	41	19	22	20	36	71	53
System easy to expand/reconfigure	0	86	67	33	18	73	48	78	33	36	43	68
System costs less than expected	14	0	0	0	0	5	44	0	0	0	0	0
Programs/data compatible, as vendor promised	0	14	17	22	18	5	24	11	7	12	36	53
Terminals/peripherals compatible, as vendor promised	0	0	17	0	0	0	0	11	0	4	0	11
System power/energy efficient	14	0	0	11	18	5	5	0	0	8	7	5
Productivity aids help keep programming costs down	14	0	0	0	9	23	29	44	20	20	7	16
Database language efficient and effective	0	0	0	0	0	0	0	0	0	4	0	16
Delivery and/or installation of equipment was ahead of schedule	0	0	0	11	18	5	5	0	0	8	7	5
Delivery of required software was ahead of schedule	14	29	0	22	36	5	33	67	33	20	21	11
Other	0	14	0	22	9	5	14	44	13	8	7	5
System Ratings (4.0-1.0)												
Ease of operation	2.6	3.0	2.3	3.4	2.9	2.6	2.8	3.3	2.9	3.0	3.0	3.1
Reliability of mainframe	3.1	3.7	2.8	3.4	3.3	3.3	3.2	3.8	3.4	3.3	3.5	3.3
Reliability of peripherals	2.1	2.6	2.4	2.9	2.7	2.9	2.7	3.1	2.5	2.6	3.0	2.6
Maintenance service	1.9	2.9	1.5	2.8	2.5	2.6	2.8	2.6	2.5	2.6	2.9	2.9
Responsiveness	2.3	3.0	2.5	2.8	2.5	2.4	3.0	3.1	2.9	2.7	2.9	3.0
Effectiveness												
Technical Support												
Trouble-shooting	1.7	2.4	1.8	2.8	2.8	1.9	2.6	2.6	2.8	1.9	2.4	2.4
Education	2.3	2.9	1.7	2.6	2.8	1.8	2.5	2.7	2.4	2.6	2.1	2.3
Documentation	1.4	2.1	1.7	2.3	2.4	2.1	2.2	2.3	2.1	2.3	1.9	2.2
Manufacturer's Software												
Operating system	2.7	3.7	3.0	3.1	3.0	2.7	3.0	3.0	3.1	3.0	2.9	2.9
Compilers & assemblers	2.3	3.7	2.7	2.2	2.8	3.0	2.6	2.7	2.6	2.3	2.2	2.5
Applications programs	2.2	3.4	2.8	3.0	3.0	2.3	2.6	2.9	2.8	2.9	2.9	2.8
Ease of programming	2.7	3.0	2.3	3.6	2.6	3.0	2.7	2.8	3.0	2.9	3.0	2.8
Ease of conversion	1.7	—	2.5	1.9	2.1	2.7	2.2	2.6	2.1	2.2	2.1	2.5
Overall satisfaction	2.1	2.9	2.2	3.0	2.8	2.5	2.9	3.0	2.8	2.8	3.0	2.8
Would you recommend system to another user? (%)												
Yes	29	86	50	78	55	64	76	89	73	64	71	89
No	71	14	50	22	45	27	24	11	27	36	21	5

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Ratings of Computer Systems by French Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	CII-HB 62/10	CII-HB 62/20	CII-HB 62/25	CII-HB 62/40	CII-HB 62/50	CII-HB 62/60	CMC System 400	Data General Nova 3	Data General CS Series	Data General Eclipse Series	Data General MP 100 Series	Data General (Other Models)
Survey Item												
No. of User Responses	4	4	4	33	19	10	8	4	5	4	4	4
No. of Systems Represented	5	4	4	33	19	10	12	4	5	4	4	4
Avg. Life of System (mos.)	10	17	4	33	29	41	14	34	8	4.2	6.3	4.8
Acquisition Method (%)												
Purchase	50	25	25	33	22	40	0	75	60	50	67	75
Rental	50	25	75	15	33	50	100	0	0	0	0	0
Lease	0	50	0	52	44	10	0	25	40	50	33	25
Principal Applications (%)												
Accounting	0	0	0	0	0	0	0	0	0	0	0	0
Construction	50	50	75	85	89	70	63	75	80	25	0	75
Education	0	0	0	0	0	0	0	0	20	0	0	25
Government	0	0	0	12	0	20	0	0	0	50	33	0
Manufacturing	0	0	0	0	11	10	13	0	20	0	0	50
Payroll/Personnel	25	0	0	6	6	0	0	0	0	0	0	0
Service Bureau	50	50	50	33	22	10	38	0	20	25	0	25
Transportation	0	0	0	0	0	0	0	50	0	0	0	75
Word Processing	0	0	25	0	11	20	0	0	20	0	0	0
Banking/Finance	0	0	0	0	0	0	13	0	0	0	0	25
Distributed Processing	25	0	0	0	3	11	20	0	20	25	0	0
Engineering/Scientific	0	0	0	0	0	0	13	25	0	50	33	25
Insurance	0	0	0	6	6	0	0	50	0	0	0	0
Medical/Health Care	0	0	0	0	0	0	0	0	0	0	0	25
Retail	0	25	0	0	0	0	0	0	0	33	25	25
Transaction Processing	25	25	25	24	0	20	25	0	0	25	33	50
Utilities—Power	0	25	0	30	56	0	25	0	60	75	33	25
Other	25	0	0	0	0	10	0	0	0	0	0	0
Source of Applications Programs (%)												
In-House Personnel	75	100	100	100	89	100	100	80	100	100	100	100
Ready-Made Programs From Manufacturer	0	0	0	21	11	10	13	0	0	0	0	0
Contract Programming	25	0	25	9	33	0	13	0	0	0	0	0
Manufacturer's Personnel	0	0	25	0	0	10	0	0	0	0	0	0
Proprietary Software Packages	0	25	0	36	11	10	0	40	25	33	0	0
Other	0	25	0	6	0	0	13	0	20	33	0	0
Hardware Configuration												
No. of CPUs	5	4	4	50	9	10	12	4	5	6	3	5
No. of Workstations (avg.)	5	8	3	2	4	3	4	5	8	1	2	2
Software Configuration												
Database Management Systems (%)	0	0	0	3	0	0	13	0	40	75	0	0
Data Communications Monitors (%)	75	0	0	55	33	50	0	0	75	33	0	0
Primary Programming Languages (%)												
APL	0	0	0	0	0	0	0	0	0	0	0	0
BASIC	0	0	0	0	0	0	0	75	0	0	33	50
COBOL	100	75	100	91	100	100	100	25	80	75	0	25
FORTRAN	0	0	0	9	11	20	0	75	0	75	67	50
RPG	0	50	0	21	44	10	0	0	0	0	0	0
Other	0	0	0	0	0	10	38	50	0	25	33	50
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	0	0	0	27	22	20	13	25	0	25	0	25
Proprietary Software	50	0	25	3	0	10	50	0	20	0	0	25
Expanded Data Communications	50	100	25	52	33	50	25	0	20	50	33	0
Distributed Processing	25	0	25	12	22	10	25	0	0	25	33	0
Integrated Word Processing	0	0	0	3	0	0	13	0	0	25	0	25
Other	0	25	0	21	11	30	25	25	20	25	0	25
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	0	0	0	9	22	0	0	0	0	0	0	25
Yes, Different Manufacturer	0	0	0	12	0	0	25	0	0	0	0	25
No	100	100	100	79	78	90	75	75	100	100	100	75

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Ratings of Computer Systems by French Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	CII-HB 62/10	CII-HB 62/20	CII-HB 62/25	CII-HB 62/40	CII-HB 62/50	CII-HB 62/60	CMC System 400	Data General Nova 3	Data General CS Series	Data General Eclipse Series	Data General MP 100 Series	Data General (Other Models)	Survey Item
Survey Item													
Significant Problems (%)													
System proposed by vendor was too small	25	50	0	30	44	30	38	25	0	50	33	67	0
Delivery and/or installation of equipment was late	0	100	25	39	11	30	25	75	40	25	67	25	0
Delivery of required software was late	0	0	25	24	0	20	0	25	0	40	0	0	0
System costs exceeded expected total	0	25	0	15	0	20	0	25	0	50	0	0	0
Vendor did not provide all promised software or support	0	0	6	22	10	63	25	20	0	0	0	0	0
Program/data compatibility not what vendor promised	0	0	25	18	22	10	13	0	0	0	0	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	13	50	0	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	25	0	0	30	11	20	13	50	0	50	0	25	0
Equipment excessively noisy	0	0	0	0	0	0	13	0	0	0	0	0	0
Power/cooling requirements excessive	0	0	0	3	0	0	0	0	0	25	0	0	0
Other	0	25	25	21	22	10	13	50	40	0	0	25	0
Significant Advantages (%)													
Users happy with response time	25	50	25	18	11	30	63	25	100	50	67	75	0
System easy to expand/reconfigure	50	50	75	55	33	20	50	50	60	75	33	75	0
System costs less than expected	0	0	0	0	0	0	0	0	0	0	0	0	0
Programs/data compatible, as vendor promised	50	50	25	27	44	20	0	0	20	25	33	50	0
Terminals/peripherals compatible, as vendor promised	25	0	0	0	0	0	0	25	0	25	0	25	0
System power/energy efficient	50	0	0	15	11	0	50	50	60	25	33	0	0
Productivity aids help keep programming costs down	0	0	25	3	11	0	0	40	50	33	0	0	0
Database language efficient and effective	0	0	0	0	0	10	0	0	50	33	0	25	0
Delivery and/or installation of equipment was ahead of schedule	50	0	25	6	11	0	13	25	20	25	0	25	0
Delivery of required software was ahead of schedule	0	25	25	15	0	30	25	0	20	25	33	25	0
Other	30	30	30	26	27	26	28	30	34	30	30	23	0
Ease of operation	3.5	2.5	3.3	3.2	3.2	2.8	3.4	3.8	3.6	3.0	3.0	3.8	0
Reliability of mainframe	3.5	3.0	—	2.8	2.6	2.7	2.6	1.8	3.0	2.5	2.0	3.3	0
Reliability of peripherals	2.8	1.8	2.8	2.4	2.4	2.5	3.3	2.0	2.4	2.0	1.7	2.3	0
Maintenance service	2.3	2.5	2.8	2.6	2.4	2.6	3.0	2.0	2.6	2.5	2.0	2.3	0
Responsiveness	1.5	1.8	2.5	1.9	1.4	2.3	2.3	1.3	2.6	1.8	1.7	2.7	0
Effectiveness	2.5	2.8	2.8	2.1	1.9	2.1	2.0	1.5	2.5	1.8	2.3	2.3	0
Technical Support:	2.0	1.8	3.0	1.9	1.7	2.1	1.5	2.3	3.0	2.0	3.0	2.3	0
Trouble-shooting	3.0	3.0	3.3	2.7	2.3	2.7	2.4	3.5	3.4	3.3	3.3	3.5	0
Education	3.0	3.0	2.8	2.9	2.6	2.8	2.6	3.3	3.4	2.5	3.0	3.3	0
Documentation	2.8	—	—	2.5	2.0	2.5	—	—	—	—	2.7	—	0
Manufacturer's Software:	2.8	2.3	3.0	2.8	2.5	2.7	3.0	3.6	2.8	3.3	3.0	3.0	0
Operating system	2.8	2.5	2.3	2.3	1.9	2.1	3.0	2.0	2.8	3.0	2.0	3.0	0
Compilers & assemblers	3.0	2.8	2.8	2.6	2.3	2.6	2.9	3.2	3.0	2.7	3.0	3.0	0
Applications programs	—	—	—	—	—	—	—	—	—	—	—	—	0
Ease of programming	—	—	—	—	—	—	—	—	—	—	—	—	0
Ease of conversion	—	—	—	—	—	—	—	—	—	—	—	—	0
Overall satisfaction	—	—	—	—	—	—	—	—	—	—	—	—	0
Would you recommend system to another user? (%)													
Yes	100	75	75	58	78	60	88	50	100	75	67	100	0
No	0	25	0	33	22	30	13	25	0	25	33	0	0

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item											
	Datapoint (All Models)	DEC PDP-11/34	DEC PDP-11/70	DEC PDP-11 (Other Models)	DEC VAX-11/780	Hewlett-Packard HP 1000	Hewlett-Packard HP 2000	Hewlett-Packard 3000 Series III	Hewlett-Packard 3000 Series 33	Hewlett-Packard 3000 (Other Models)	IBM Series 1	IBM S/3 Model 8
No. of User Responses	5	18	8	7	12	10	5	6	9	8	8	12
No. of Systems Represented	14	18	11	7	17	10	24	20	15	12	11	12
Avg. Life of System (mos)	20	20	19	35	9	28	35	20	6	22	22	44
Acquisition Method (%)												
Purchase	60	83	38	71	67	60	100	50	78	38	75	33
Rental	40	0	13	0	0	10	0	0	11	0	0	42
Lease	0	17	50	29	25	30	0	33	11	63	25	25
Principal Applications (%)												
Accounting	60	50	75	14	17	50	0	83	89	63	25	83
Construction	0	6	0	0	8	10	0	0	0	25	0	0
Education	40	11	0	0	33	0	0	0	0	0	0	0
Government	0	11	0	0	8	0	0	0	11	13	0	17
Manufacturing	0	22	38	14	0	40	0	50	33	25	25	25
Payroll/Personnel	40	17	63	14	0	50	0	33	67	50	13	83
Service Bureau	0	17	13	0	0	0	0	0	11	13	13	8
Transportation	0	6	13	0	0	0	0	17	0	0	0	8
Word Processing	20	0	13	0	8	10	0	17	22	25	0	8
Banking/Finance	20	0	0	0	0	0	0	33	22	25	13	0
Distributed Processing	20	0	25	14	0	0	0	0	0	0	0	8
Engineering/Scientific	0	17	25	86	92	40	20	17	11	13	0	8
Insurance	0	0	0	0	0	10	0	0	0	0	0	0
Medical/Health Care	0	0	0	0	8	10	0	17	22	25	38	8
Retail	20	6	13	0	8	10	0	67	56	75	0	8
Transaction Processing	20	33	50	0	25	40	0	0	0	0	0	0
Utilities—Power	0	0	13	0	0	0	0	0	0	0	0	17
Other	20	44	13	29	0	10	80	67	11	13	38	17
Source of Applications Programs (%)												
In House Personnel	80	83	88	100	100	80	80	67	89	100	88	100
Ready-Made Programs From Manufacturer	40	6	0	0	29	8	0	0	22	13	25	0
Contract Programming	0	44	25	0	0	20	0	17	33	13	13	0
Manufacturer's Personnel	0	6	0	0	0	10	0	0	0	0	13	0
Proprietary Software Packages	0	11	25	14	42	20	0	67	38	13	0	0
Other	20	17	0	0	0	10	0	0	0	0	0	0
Hardware Configuration												
No. of CPUs	16	18	11	7	17	10	25	20	15	12	11	12
No. of Workstations (avg.)	2	6	8	3	14	6	1	13	7	8	4	1
Software Configuration												
Database Management Systems (%)	0	0	38	14	8	80	20	83	100	88	0	0
Data Communications Monitors (%)	60	0	25	0	17	0	0	17	0	38	25	0
Primary Programming Languages (%)												
APL	0	0	13	0	0	0	0	0	0	0	0	0
BASIC	20	50	88	29	25	0	0	17	11	50	0	0
COBOL	40	0	50	14	33	0	0	100	67	75	13	0
FORTRAN	0	50	38	43	92	100	100	17	33	63	0	17
RPG	20	0	13	0	0	0	0	0	0	13	0	100
Other	40	28	0	57	33	40	100	33	44	25	63	0
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	40	11	0	14	42	0	0	17	0	25	0	0
Proprietary Software	20	6	25	14	33	10	0	33	44	38	0	0
Expanded Data Communications	60	17	63	0	67	10	0	17	22	38	0	0
Distributed Processing	40	0	25	0	0	10	0	17	11	25	0	0
Integrated Word Processing	20	0	0	0	17	0	0	17	0	25	13	0
Other	20	22	25	57	0	30	60	17	0	13	38	25
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	20	22	13	29	0	0	20	0	0	0	0	42
Yes, Different Manufacturer	20	0	0	0	0	0	0	0	0	13	0	0
No	60	78	88	57	100	100	80	100	100	88	100	58

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item											
	Datapoint (All Models)	DEC PDP-11/34	DEC PDP-11/70	DEC PDP-11 (Other Models)	DEC VAX-11/780	Hewlett-Packard HP 1000	Hewlett-Packard HP 2000	Hewlett-Packard 3000 Series III	Hewlett-Packard 3000 Series 33	Hewlett-Packard 3000 (Other Models)	IBM Series 1	IBM S/3 Model 8
Significant Problems (%)												
System proposed by vendor was too small	60	17	50	14	17	30	60	17	11	0	38	0
Delivery and/or installation of equipment was late	20	22	13	57	50	10	100	0	22	25	38	25
Delivery of required software was late	20	11	0	14	58	50	40	0	22	0	50	0
System costs exceeded expected total	0	11	0	8	20	20	0	11	0	0	0	0
Vendor did not provide all promised software or support	20	6	0	14	25	0	20	0	11	0	0	0
Program/data compatibility not what vendor promised	0	0	0	0	0	0	20	0	0	13	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	0	0	0	0	0	0
Vendor enhancements, changes to hardware/software hard to keep up with	60	44	13	0	25	0	40	0	0	0	13	0
Equipment excessively noisy	0	0	0	0	17	0	60	0	0	0	0	0
Power/cooling requirements excessive	0	0	0	0	25	0	40	0	0	0	0	0
Other	20	22	38	14	0	10	0	0	11	25	0	17
Significant Advantages (%)												
Users happy with response time	80	78	88	14	50	60	60	67	44	38	50	25
System easy to expand/reconfigure	60	67	88	43	83	70	60	83	78	88	50	8
System costs less than expected	20	6	13	0	33	20	0	17	11	13	0	17
Programs/data compatible, as vendor promised	0	0	0	0	8	10	0	0	0	25	0	8
Terminals/peripherals compatible, as vendor promised	0	11	25	14	0	60	0	67	89	88	13	8
System power/energy efficient	0	11	25	14	0	40	0	67	33	38	13	25
Productivity aids help keep programming costs down	0	11	25	0	17	40	0	50	67	50	25	0
Database language efficient and effective	0	11	13	0	0	20	20	50	33	13	0	8
Delivery and/or installation of equipment was ahead of schedule	0	11	13	0	0	20	20	50	33	13	0	8
Delivery of required software was ahead of schedule	0	17	25	0	17	10	20	0	11	13	25	17
Other	0	17	25	0	17	10	20	0	11	13	25	17
System Ratings (4.0-1.0)												
Ease of operation	37	29	31	36	32	31	32	33	33	36	29	34
Reliability of mainframe	35	37	35	37	36	37	34	33	37	38	34	38
Reliability of peripherals	33	27	30	27	32	29	34	33	27	33	30	30
Maintenance service	30	31	33	27	33	30	22	35	29	31	30	34
Responsiveness	32	28	28	29	28	24	28	33	28	31	30	35
Effectiveness	20	29	30	23	22	25	30	28	26	28	21	32
Technical Support	18	29	21	23	28	25	28	24	23	24	18	30
Trouble shooting	18	28	28	24	28	25	27	24	26	31	24	29
Education	0	0	0	0	0	0	0	0	0	0	0	0
Documentation	0	0	0	0	0	0	0	0	0	0	0	0
Manufacturer's Software	34	32	30	32	35	35	28	33	38	36	29	32
Operating system	35	30	26	28	31	33	25	30	30	35	21	34
Compilers & assemblers	20	29	26	23	22	25	20	30	33	33	23	33
Applications programs	0	0	0	0	0	0	0	0	0	0	0	0
Ease of programming	30	30	31	34	31	30	37	33	30	36	23	32
Ease of conversion	—	20	28	33	29	25	25	25	24	26	10	30
Overall satisfaction	28	31	29	31	33	30	26	33	33	33	29	32
Would you recommend system to another user? (%)												
Yes	60	89	100	100	75	70	60	100	100	88	50	75
No	40	6	0	0	17	20	20	0	0	13	38	17

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item													
	IBM S/3 Model 10	IBM S/3 Model 12	IBM S/3 Model 15	IBM S/32	IBM S/34	IBM 1130	IBM 8100	ICL System Ten	ICL 2903	ICL 2904	ICL 2904/50	ICL 2906	Manufacturer and Model	
No. of User Responses	6	59	76	19	187	5	15	29	21	11	4			
No. of Systems Represented	6	59	78	27	218	4	5	20	29	21	13	5		
Avg. Life of System (mos.)	88	36	36	37	12	118	2	38	37	39	25	5		
Acquisition Method (%)														
Purchase	50	27	21	53	11	100	0	27	24	19	9	25		
Rental	33	47	47	21	83	0	100	73	66	67	82	75		
Lease	17	24	32	26	5	0	0	10	10	10	9	0		
Principal Applications (%)														
Accounting	83	85	78	79	74	0	40	60	86	86	91	100		
Construction	0	5	4	0	4	25	0	0	0	0	0	0		
Education	0	0	0	5	3	75	0	0	0	0	0	0		
Government	17	12	16	0	6	50	20	27	7	0	0	0		
Manufacturing	33	39	38	16	32	0	40	20	24	33	55	50		
Payroll/Personnel	100	75	72	37	56	0	20	53	69	76	91	100		
Service Bureau	17	20	5	11	4	0	0	13	14	10	27	0		
Transportation	0	7	5	11	4	0	0	7	5	18	0	0		
Word Processing	0	0	1	0	2	0	0	0	0	0	25	0		
Banking/Finance	0	12	13	16	6	0	40	10	10	18	0	0		
Distributed Processing	0	3	8	1	12	0	0	3	0	5	9	0		
Engineering/Scientific	0	3	5	5	3	50	20	0	10	14	9	0		
Insurance	17	2	4	11	3	0	20	0	0	10	0	0		
Medical/Health Care	0	3	3	5	3	0	0	7	0	0	0	0		
Retail	33	34	33	26	37	0	40	24	29	27	0	0		
Transaction Processing	0	12	30	5	29	25	20	7	17	48	45	50		
Utilities—Power	0	2	3	0	1	0	0	0	0	5	0	50		
Other	33	5	16	11	14	0	20	13	17	14	27	25		
Source of Applications Programs (%)														
In-House Personnel	100	98	97	89	92	100	100	80	97	95	100	75		
Ready-Made Programs From Manufacturer	0	20	9	21	20	25	40	7	7	19	18	25		
Contract Programming	0	3	4	5	11	0	0	0	10	14	9	0		
Manufacturer's Personnel	17	2	4	0	3	0	20	7	21	10	0	0		
Proprietary Software Packages	0	7	7	21	16	0	0	27	17	10	27	25		
Other	0	0	3	0	3	25	0	0	0	5	9	0		
Hardware Configuration														
No. of CPUs	6	59	78	27	218	4	5	20	29	21	13	5		
No. of Workstations (avg.)	1	2	9	1	6	0	5	4	4	8	11	11		
Software Configuration														
Database Management Systems (%)	0	14	13	0	4	0	40	20	3	10	0	50		
Data Communications Monitors (%)	0	31	63	0	1	50	60	0	28	62	64	50		
Primary Programming Languages (%)														
APL	0	0	0	0	0	0	0	0	0	0	0	0		
BASIC	0	0	0	0	5	0	0	0	0	0	0	0		
COBOL	0	3	24	0	13	50	80	0	90	76	100	100		
FORTRAN	0	3	4	5	6	100	20	0	3	0	0	0		
RPG	83	92	91	95	95	0	0	67	45	24	18	0		
Other	0	0	1	0	5	25	20	93	10	10	9	25		
Planned Acquisitions/Implementations for 1980 (%)														
Additional Software From Manufacturer	0	2	9	0	16	0	40	7	28	19	9	0		
Proprietary Software	17	5	5	16	17	0	0	20	10	5	9	0		
Expanded Data Communications	0	22	47	0	28	25	20	27	48	57	36	75		
Distributed Processing	33	25	12	11	16	0	40	13	7	5	9	25		
Integrated Word Processing	0	3	3	5	6	0	0	0	7	0	18	0		
Other	0	5	7	16	12	50	0	27	3	0	0	0		
Plans for System Replacement in 1980 (%)														
Yes, Same Manufacturer	33	37	28	32	2	0	0	13	31	33	18	0		
Yes, Different Manufacturer	50	3	4	5	1	50	0	20	10	5	9	0		
No	17	51	67	58	96	50	100	73	52	62	73	75		

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item													
	IBM S/3 Model 10	IBM S/3 Model 12	IBM S/3 Model 15	IBM S/32	IBM S/34	IBM 1130	IBM 8100	ICL System Ten	ICL 2903	ICL 2904	ICL 2904/50	ICL 2906	Manufacturer and Model	
17	27	17	26	17	14	0	100	7	17	24	27	25		
0	8	9	5	14	0	0	0	13	7	33	36	25		
0	0	0	11	5	0	100	20	14	19	14	18	0		
0	0	0	5	4	0	0	0	0	10	10	0	0		
0	2	0	0	3	0	60	13	7	0	0	9	0		
0	0	0	0	0	0	20	0	3	0	0	0	0		
0	0	0	0	3	0	0	0	0	0	0	0	0		
0	2	0	0	2	0	0	0	7	14	14	0	0		
0	2	4	0	5	0	0	0	0	21	19	0	0		
17	10	11	5	2	25	0	0	0	0	14	0	0		
0	0	1	0	2	50	0	0	27	17	36	75			
33	10	22	16	12	12	0	67	31	29	18	25			
17	10	50	47	69	25	0	73	79	62	36	75			
17	7	20	21	83	0	0	0	3	0	0	100			
17	5	11	16	43	25	20	13	38	24	36	0			
0	44	46	26	43	25	20	13	38	24	36	100			
0	15	5	0	1	25	20	0	3	0	18	50			
0	15	5	0	1	25	20	0	3	0	18	50			
17	14	12	37	26	50	20	13	3	19	18	50			
0	3	11	5	39	0	20	7	3	5	0	0			
0	15	8	16	7	0	0	0	0	5	0	0			
17	37	41	26	41	0	0	33	52	14	27	25			
0	22	26	26	25	0	0	13	17	5	9	0			
17	7	4	16	3	50	20	27	14	5	36	0			
33	31	30	32	34	33	24	29	29	28	27	30			
33	35	36	37	37	40	30	37	35	30	32	28			
28	30	31	32	34	30	28	31	28	25	24	23			
30	33	32	32	34	35	35	31	30	29	29	33			
27	33	31	32	33	38	33	31	27	25	24	28			
26	27	26	29	29	30	30	22	25	23	20	23			
25	28	28	28	28	30	24	22	25	23	25	20			
30	27	28	28	29	37	24	21	19	18	19	15			
30	31	30	33	33	30	26	27	30	29	25	28			
32	31	31	33	33	30	26	20	30	29	28	27			
33	28	30	31	33	—	—	20	28	24	27	25			
36	30	29	33	33	—	—	25	17	27	24	28			
30	28	26	26	29	33	33	24	20	28	28	26			
30	30	30	31	32	33	24	20	28	28	27	26			
50	53	75	79	98	25	20	87	83	62	64	50			
17	39	24	21	1	50	20	13	17	33	36	25			

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model											
	Intertrac Reality Series	Logabax LX 50 & LX 5200	MAI (Basic Four) (All Models)	Mohawk Data Sciences Series 21	NCR Century 100	NCR 8200	Nisdorf 8870	Norsk Data NORD 100 & 10S	Olivetti (All Models)	Philips P350 & P400	Philips P7000	Prime Computers 300 & 350
No. of User Responses	16	6	8	10	5	49	9	6	8	6	6	7
No. of Systems Represented	35	8	8	21	13	53	11	7	13	6	9	7
Avg. Life of System (mos.)	19	10	10	10	76	24	22	21	28	48	17	6
Acquisition Method (%)												
Purchase	63	67	50	30	80	29	33	67	88	50	40	86
Rental	19	0	0	0	0	20	61	56	0	0	60	0
Lease	19	33	50	10	0	6	11	33	0	33	0	14
Principal Applications (%)												
Accounting	63	50	75	60	80	78	100	17	75	83	60	0
Construction	13	0	0	0	0	4	0	0	0	0	0	0
Education	0	0	0	0	0	2	0	0	0	0	0	14
Government	0	0	0	10	0	8	0	50	0	17	0	0
Manufacturing	25	50	25	20	40	12	11	17	0	0	0	0
Payroll/Personnel	44	33	38	20	100	57	56	0	83	50	0	0
Service Bureau	31	17	13	0	0	8	0	17	25	0	20	0
Transportation	0	0	0	0	0	4	22	0	0	0	0	0
Word Processing	6	33	0	40	0	11	17	13	0	0	40	14
Banking/Finance	19	0	13	0	0	16	0	0	0	0	0	14
Distributed Processing	19	17	0	10	0	4	11	0	0	0	0	0
Engineering/Scientific	0	0	13	0	20	2	0	50	38	0	0	71
Insurance	0	0	0	0	0	2	0	0	0	0	0	0
Medical/Health Care	0	17	0	0	0	0	0	0	13	0	0	0
Retail	44	17	38	0	40	18	56	0	25	0	40	0
Transaction Processing	25	33	0	10	0	18	22	17	0	0	20	0
Utilities—Power	13	0	0	0	0	2	0	17	0	0	0	0
Other	19	0	25	20	20	33	0	0	17	20	14	0
Source of Applications Programs (%)												
In-House Personnel	81	83	50	50	80	71	44	83	100	67	100	100
Ready-Made Programs From Manufacturer	19	17	0	30	20	35	56	50	0	33	20	14
Contract Programming	6	0	25	20	0	18	22	0	0	0	0	0
Manufacturer's Personnel	6	0	25	20	20	12	22	33	0	17	20	0
Proprietary Software Packages	6	17	25	10	20	12	44	0	0	17	0	43
Other	13	0	25	10	0	6	11	17	0	0	0	14
Hardware Configuration												
No. of CPUs	35	8	8	21	6	53	11	7	13	6	7	7
No. of Workstations (avg.)	4	2	6	1	1	4	3	7	1	1	8	6
Software Configuration												
Database Management Systems (%)	50	0	25	0	0	0	33	67	0	0	0	14
Data Communications Monitors (%)	31	0	13	0	0	0	22	17	0	0	0	0
Primary Programming Languages (%)												
APL	0	0	0	0	0	0	0	0	0	0	0	14
BASIC	100	33	88	0	0	0	78	83	75	0	0	29
COBOL	0	0	0	0	60	96	33	17	0	50	20	14
FORTRAN	0	0	0	0	20	0	0	83	0	0	0	86
RPG	0	0	0	0	0	0	22	0	0	0	0	0
Other	63	50	0	100	100	2	22	33	38	33	80	0
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	0	17	13	10	0	20	44	50	13	17	0	29
Proprietary Software	6	17	25	40	0	10	11	0	0	0	0	29
Expanded Data Communications	38	17	25	20	0	16	44	0	25	0	60	43
Distributed Processing	0	0	0	10	20	0	11	0	13	17	20	14
Integrated Word Processing	6	0	25	0	0	2	11	33	0	0	0	29
Other	25	0	25	0	0	20	11	33	25	33	0	14
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	25	0	0	0	20	24	0	0	38	17	0	0
Yes, Different Manufacturer	13	0	0	0	20	4	11	0	13	17	0	0
No	63	100	100	80	40	67	89	100	50	67	100	100

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Ratings of Computer Systems by French Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Intertrac Reality Series	Logabax LX 50 & LX 5200	MAI (Basic Four) (All Models)	Mohawk Data Sciences Series 21	NCR Century 100	NCR 8200	Nisdorf 8870	Norsk Data NORD 100 & 10S	Olivetti (All Models)	Philips P350 & P400	Philips P7000
38	0	13	20	20	20	56	0	25	17	0	29
25	17	25	40	20	27	0	50	25	0	0	29
19	50	0	40	0	22	44	33	13	17	0	0
6	0	0	10	0	10	11	17	13	0	0	0
31	33	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	14
6	33	0	40	0	10	11	17	0	0	0	0
13	0	0	0	40	12	0	0	13	33	0	0
6	0	0	0	20	0	0	0	13	0	0	43
38	0	38	20	0	12	33	17	0	0	20	0
50	67	88	20	0	53	11	33	13	50	60	57
38	17	75	60	20	65	44	100	25	33	40	100
0	17	25	0	0	6	0	17	25	0	0	0
19	0	0	20	20	6	0	17	0	0	20	0
6	0	0	0	20	2	0	17	0	0	0	0
31	17	63	20	0	27	11	0	38	60	20	0
75	0	63	0	0	8	11	33	25	0	20	0
44	33	38	10	40	22	44	0	0	50	80	43
19	0	38	10	40	12	0	0	0	50	40	14
19	33	50	0	0	8	0	17	13	17	60	29
38	28	39	28	28	31	29	30	33	33	36	33
32	23	35	31	26	32	31	38	31	35	40	30
22	30	30	24	22	29	26	33	24	28	34	29
25	28	29	30	28	28	24	23	31	30	34	23
28	30	28	27	28	29	27	28	30	30	32	23
24	24	24	22	24	23	21	23	30	32	28	26
22	20	24	23	28	24	18	23	32	26	32	21
22	15	26	21	24	19	18	22	25	24	22	20
33	27	38	23	30	28	29	35	27	30	38	34
29	27	39	27	28	29	27	33	28	30	32	33
27	25	34	28	26	27	31	24	33	30	20	28
38	30	39	25	31	30	33	33	28	28	36	33
23	20	29	24	28	25	26	28	25	27	17	28
29	28	36	25	26	28	26	30	29	28	34	30
69	100	88	70	40	82	67	100	63	67	100	86
25	0	0	20	60	10	33	0	38	17	0	14

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item										
	Prime Computer 400 & 500	Prime Computer 550, 650, 750	R2E Series 80	SEMS T1600	SEMS Mitra Series	SEMS Solar Series	Texas Instruments 990 Series	Univac BC/7 Series	Wang Laboratories (All Models)		
No of User Responses	8	9	5	7	32	14	12	6	10		
No of Systems Represented	8	9	7	8	41	14	34	6	27		
Avg. Life of System (mos.)	22	7	10	53	31	29	21	9	41		
Acquisition Method (%)											
Purchase	50	22	60	86	59	71	75	33	90		
Rental	0	11	20	0	25	0	0	50	0		
Lease	38	67	20	14	9	21	25	17	10		
Principal Applications (%)											
Accounting	25	11	60	29	19	36	75	33	50		
Construction	25	0	20	0	0	0	0	0	10		
Education	0	22	20	14	13	43	0	0	20		
Government	13	0	0	0	31	7	0	0	20		
Manufacturing	13	0	0	43	13	14	8	33	10		
Payroll/Personnel	13	0	60	0	6	29	33	17	50		
Service Bureau	0	11	20	0	3	7	17	0	10		
Transportation	0	0	0	0	0	0	0	0	0		
Word Processing	0	0	0	0	0	0	0	0	0		
Banking/Finance	0	0	0	0	0	0	0	0	0		
Distributed Processing	13	22	0	0	9	0	0	0	0		
Engineering/Scientific	75	44	40	29	38	21	0	0	40		
Insurance	0	0	20	0	3	7	0	0	0		
Medical/Health Care	0	0	20	0	6	0	0	0	0		
Retail	0	11	20	0	3	0	0	0	0		
Transaction Processing	13	11	0	0	28	7	0	0	0		
Utilities—Power	0	22	0	0	3	7	0	0	0		
Other	25	33	0	29	31	43	33	67	10		
Source of Applications Programs (%)											
In-House Personnel	75	100	80	86	69	71	67	83	100		
Ready-Made Programs From Manufacturer	13	0	0	29	31	14	8	17	10		
Contract Programming	0	11	0	0	13	7	0	0	0		
Manufacturer's Personnel	0	33	0	0	6	0	0	0	0		
Proprietary Software Packages	38	33	40	14	31	21	0	0	20		
Other	25	0	0	29	6	7	0	0	0		
Hardware Configuration											
No of CPUs	8	9	7	8	42	18	34	6	28		
No of Workstations (avg.)	14	14	1	3	3	7	3	2	2		
Software Configuration											
Database Management Systems (%)	25	22	20	14	28	21	33	0	0		
Data Communications Monitors (%)	0	33	0	0	28	50	8	0	0		
Primary Programming Languages (%)											
APL	0	22	0	0	0	0	0	0	0		
BASIC	13	22	60	14	3	36	25	0	80		
COBOL	38	33	0	0	25	0	58	0	20		
FORTTRAN	75	89	20	29	58	71	42	0	0		
RPG	0	0	0	0	0	0	0	83	10		
Other	0	0	60	71	63	43	50	50	0		
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	25	11	20	0	13	7	33	17	20		
Proprietary Software	13	33	40	0	6	7	25	0	10		
Expanded Data Communications	38	67	0	0	25	14	25	17	10		
Distributed Processing	13	11	0	0	14	0	0	0	20		
Integrated Word Processing	0	11	0	0	0	7	17	17	30		
Other	38	22	40	0	16	50	42	33	30		
Plans for System Replacement in 1980 (%)											
Yes, Same Manufacturer	0	0	0	14	16	0	0	17	20		
Yes, Different Manufacturer	0	0	20	29	3	14	0	0	20		
No	100	100	80	57	75	86	100	83	60		

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Ratings of Computer Systems by French Users

Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item										
	Prime Computer 400 & 500	Prime Computer 550, 650, 750	R2E Series 80	SEMS T1600	SEMS Mitra Series	SEMS Solar Series	Texas Instruments 990 Series	Univac BC/7 Series	Wang Laboratories (All Models)		
Significant Problems (%)											
System proposed by vendor was too small	13	22	20	29	19	43	0	17	10		
Delivery and/or installation of equipment was late	0	80	43	19	64	33	33	0	0		
Delivery of required software was late	0	33	20	29	28	64	7	8	0		
System costs exceeded expected total	0	20	29	29	16	29	17	17	0		
Vendor did not provide all promised software or support	13	11	0	14	16	29	7	8	33		
Program/data compatibility not what vendor promised	0	11	0	14	3	0	0	0	0		
Terminals/peripherals compatibility not what vendor promised	13	0	0	0	3	0	0	0	0		
Vendor enhancements/changes to hardware/equipment hard to keep up with	0	0	40	57	19	29	0	0	10		
Equipment excessively noisy	13	0	0	0	13	0	0	0	10		
Power/cooling requirements excessive	0	11	0	0	3	7	8	0	10		
Other	13	11	0	0	28	50	25	33	30		
Significant Advantages (%)											
Users happy with response time	63	67	40	29	38	57	33	17	60		
System easy to expand/reconfigure	88	100	60	0	34	21	75	50	70		
System costs less than expected	0	0	20	0	0	0	0	17	10		
Programs/data compatible, as vendor promised	50	78	0	0	13	21	0	17	10		
Terminals/peripherals compatible, as vendor promised	13	44	0	0	3	0	0	0	0		
System power/energy efficient	0	22	20	14	19	14	33	17	30		
Productivity aids help keep programming costs down	50	33	0	0	3	0	25	33	0		
Database language efficient and effective	13	11	40	0	13	7	8	17	0		
Delivery and/or installation of equipment was ahead of schedule	50	67	0	14	22	0	17	33	50		
Delivery of required software was ahead of schedule	13	33	0	14	6	0	17	17	10		
Other	25	33	20	14	9	14	0	17	20		
System Ratings (4.0-1.0)											
Ease of operation	3.8	3.8	3.2	1.7	2.7	2.4	3.0	2.8	3.7		
Reliability of mainframe	3.1	3.8	3.2	2.9	3.3	3.1	3.4	2.8	3.7		
Reliability of peripherals	2.6	3.4	2.2	2.0	2.8	2.2	2.7	2.2	2.7		
Maintenance service	2.6	3.2	2.5	2.0	2.8	2.6	2.8	3.0	2.8		
Responsiveness	2.6	3.2	2.5	2.0	2.8	2.6	2.8	3.0	2.8		
Effectiveness	2.6	3.2	2.5	2.0	2.8	2.6	2.8	3.0	2.8		
Technical Support	2.5	3.4	2.3	1.7	2.4	2.2	2.5	3.3	2.3		
Trouble-shooting	2.6	2.4	2.0	2.3	2.1	2.3	2.2	3.0	1.7		
Education	2.5	2.7	2.0	2.3	2.0	2.1	1.7	2.2	1.8		
Documentation	3.7	3.7	2.8	2.5	2.5	2.7	3.0	2.5	2.5		
Manufacturer's Software	3.6	3.0	2.8	2.7	2.4	2.2	3.3	3.0	3.0		
Operating system	—	3.0	2.3	—	2.1	2.4	2.6	3.0	1.0		
Compilers & assemblers	3.9	3.7	3.4	1.8	2.6	2.4	3.3	3.2	3.5		
Applications programs	3.2	3.3	2.0	1.2	2.0	2.3	2.9	2.3	2.4		
Ease of programming	3.3	3.6	2.3	2.1	2.6	2.5	3.1	2.7	2.8		
Ease of conversion											
Overall satisfaction											
Would you recommend system to another user? (%)											
Yes	100	100	80	29	38	64	83	83	70		
No	0	0	20	71	62	29	8	17	20		

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Ratings of Computer Systems by French Users

Table 3. Desktop, Personal, & Microcomputers

Survey Item	Manufacturer and Model				
	Apple Computer Apple II	Hewlett-Packard 9800	IBM 5110	Tandy (Radio Shack) TRS-80	Other PC's & Micros
No. of User Responses	5	9	8	6	18
No. of Systems Represented	8	13	9	7	44
Avg. Life of System (mos.)	14	37	20	11	14
Acquisition Method (%)					
Purchase	100	100	38	83	89
Rental	0	0	25	0	0
Lease	0	0	38	0	11
Principal Applications (%)					
Accounting	40	22	63	50	28
Construction	0	0	0	0	6
Education	0	11	0	50	44
Government	0	0	13	0	6
Manufacturing	0	11	13	0	0
Payroll/Personnel	0	11	25	17	11
Service Bureau	20	0	0	33	6
Transportation	0	0	0	0	0
Word Processing	40	11	13	0	11
Banking/Finance	0	22	0	0	6
Distributed Processing	0	0	0	0	0
Engineering/Scientific	20	78	50	50	33
Insurance	0	0	0	0	0
Medical/Health Care	20	0	0	17	6
Retail	0	11	0	0	6
Transaction Processing	20	0	0	0	0
Utilities—Power	0	0	0	0	0
Other	40	33	38	0	17
Source of Applications Programs (%)					
In-House Personnel	100	100	0	100	94
Ready-Made Programs From Manufacturer	20	11	0	17	22
Contract Programming	0	0	38	0	0
Manufacturer's Personnel	0	0	13	0	0
Proprietary Software Packages	20	0	25	17	17
Other	0	11	0	0	0
Hardware Configuration					
No. of CPUs	8	13	9	7	44
No. of Workstations (avg.)	1	1	1	1	1
Software Configuration					
Database Management Systems (%)	20	0	0	0	11
Data Communications Monitors (%)	0	0	0	0	0
Primary Programming Languages (%)					
APL	0	0	63	0	0
BASIC	80	89	75	83	67
COBOL	0	0	0	0	17
FORTRAN	0	0	0	0	17
RPG	60	11	0	33	61
Other	0	0	0	0	0
Planned Acquisitions/Implementations for 1980 (%)					
Additional Software From Manufacturer	0	22	0	17	39
Proprietary Software	20	0	25	50	11
Expanded Data Communications	0	0	0	0	6
Distributed Processing	0	0	0	0	6
Integrated Word Processing	20	22	25	33	17
Other	0	0	0	0	0
Plans for System Replacement in 1980 (%)					
Yes, Same Manufacturer	0	11	13	0	6
Yes, Different Manufacturer	0	11	0	0	0
No	100	78	75	100	94

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Ratings of Computer Systems by French Users

Table 3. Desktop, Personal, & Microcomputers

Survey Item	Manufacturer and Model				
	Apple Computer Apple II	Hewlett-Packard 9800	IBM 5110	Tandy (Radio Shack) TRS-80	Other PC's & Micros
Significant Problems (%)					
System proposed by vendor was too small	0	11	13	0	6
Delivery and/or installation of equipment was late	0	11	38	17	17
Delivery of required software was late	0	0	0	17	22
System costs exceeded expected total or support	20	0	13	0	17
Program/data compatibility not what vendor promised	0	0	0	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	0	0	11
Equipment excessively noisy	0	0	0	0	17
Power/cooling requirements excessive	0	0	0	0	0
Other	60	33	38	33	17
Significant Advantages (%)					
Users happy with response time	20	56	13	17	39
System easy to expand/reconfigure	40	56	0	33	39
System costs less than expected	20	0	0	17	39
Programs/data compatible, as vendor promised	20	11	0	17	17
Terminals/peripherals compatible, as vendor promised	20	0	13	0	11
System power/energy efficient	20	0	0	50	50
Productivity aids help keep programming costs down	20	56	25	0	22
Database language efficient and effective	20	33	0	0	0
Delivery and/or installation of equipment was ahead of schedule	20	11	0	33	33
Delivery of required software was ahead of schedule	40	67	13	0	22
Other	0	11	0	0	6
System Ratings (4.0-1.0)					
Ease of operation	3.6	3.9	3.4	3.3	3.3
Reliability of mainframe	3.3	3.6	3.3	3.3	3.6
Reliability of peripherals	2.8	2.7	3.0	2.7	2.9
Maintenance service:					
Responsiveness	2.7	2.9	3.6	—	2.2
Effectiveness	2.0	3.1	2.9	—	2.3
Technical Support:					
Trouble-shooting	—	3.1	2.7	—	1.9
Education	—	2.1	1.7	—	2.1
Documentation	—	2.2	2.1	2.8	2.6
Manufacturer's Software:					
Operating system	3.3	3.8	3.1	2.7	2.9
Compilers & assemblers	3.3	4.0	2.7	3.0	3.2
Applications programs	3.3	—	2.5	—	2.8
Ease of programming	—	—	—	—	3.4
Ease of conversion	3.8	3.8	2.9	3.5	2.9
Overall satisfaction	—	3.3	1.8	—	2.9
Would you recommend system to another user? (%)					
Yes	80	78	88	100	89
No	0	11	13	0	11

Table begins on facing page.

Ratings of Computer Systems by French Users

Table 4. Mainframe & Plug-Compatible Mainframe Vendor Summaries

Survey Item	Manufacturer and Model									
	Amdahl	Burroughs	CII-HB	DEC	IBM	ICL	NASCO (Itecl)	NCR	Siemens	Univac
No. of User Responses	4	72	143	4	291	16	6	28	13	46
No. of Systems Represented	4	80	166	4	301	16	6	29	17	48
Avg. Life of System (mos.)	11	29	35	23	33	22	9	38	43	29
Acquisition Method (%)										
Purchase	25	22	34	25	31	25	0	32	31	13
Rental	25	67	27	0	45	63	50	64	54	74
Lease	50	10	38	75	23	0	50	4	15	11
Principal Applications (%)										
Accounting	100	72	66	50	69	94	50	79	92	85
Construction	0	6	3	25	3	0	0	0	0	0
Education	0	4	2	75	1	0	0	0	0	0
Government	50	13	24	0	12	6	17	7	8	11
Manufacturing	75	63	63	25	65	63	50	68	62	74
Payroll/Personnel	25	8	9	0	12	0	0	4	8	2
Service Bureau	0	0	1	25	5	6	17	0	0	9
Transportation	0	6	12	0	4	0	0	0	0	7
Word Processing	50	14	22	0	11	0	33	0	0	20
Banking/Finance	25	11	6	50	10	6	17	0	0	9
Distributed Processing	0	4	6	0	0	0	14	8	7	0
Engineering/Scientific	50	3	6	0	8	19	0	4	0	7
Insurance	25	1	8	0	3	6	0	11	15	46
Medical/Health Care	50	22	14	0	29	25	33	11	23	33
Retail	75	15	36	25	37	44	33	18	23	0
Transaction Processing	25	0	9	0	4	0	0	0	0	0
Utilities—Power	25	18	13	0	13	6	33	14	31	11
Other	25	18	13	0	13	6	33	14	31	11
Source of Applications Programs (%)										
In-House Personnel	100	99	99	75	97	94	83	86	92	96
Ready-Made Programs From Manufacturer	0	22	18	25	19	19	17	25	20	20
Contract Programming	0	8	15	0	10	19	17	11	0	13
Manufacturer's Personnel	0	4	7	0	5	25	0	14	23	22
Proprietary Software Packages	50	17	21	25	25	17	4	7	8	20
Other	0	1	8	0	4	0	0	0	0	0
Hardware Configuration										
No. of CPUs	4	80	182	26	304	43	39	37	26	12
No. of Workstations (avg.)	200	7	26	4	43	39	37	26	12	11
Software Configuration										
Database Management Systems (%)	75	44	39	100	44	13	33	14	46	33
Data Communications Monitors (%)	50	65	70	0	69	38	50	36	54	83
Primary Programming Languages (%)										
APL	0	0	0	50	3	0	0	0	0	0
BASIC	0	3	2	0	0	0	0	0	0	0
COBOL	75	96	94	75	76	8	82	85	8	85
FORTRAN	0	11	13	0	19	0	0	4	15	48
RPG	0	19	6	0	19	0	0	4	15	48
Other	75	21	16	25	55	44	33	68	54	28
Planned Acquisitions/Implementations for 1980 (%)										
Additional Software From Manufacturer	0	11	22	0	27	6	0	21	8	22
Proprietary Software	25	13	15	50	33	13	33	4	38	24
Expanded Data Communications	75	46	57	0	21	25	50	39	0	24
Distributed Processing	0	15	20	25	14	6	33	7	0	9
Integrated Word Processing	50	6	8	0	11	13	17	11	8	20
Other	0	6	8	0	11	13	17	11	8	20
Plans for System Replacement in 1980 (%)										
Yes, Same Manufacturer	0	33	18	0	38	25	0	36	23	15
Yes, Different Manufacturer	0	3	4	100	2	0	0	18	8	4
No	100	63	77	0	59	75	100	39	69	80

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Table 4. Mainframe & Plug-Compatible Mainframe Vendor Summaries

Survey Item	Manufacturer and Model									
	Amdahl	Burroughs	CII-HB	DEC	IBM	ICL	NASCO (Itecl)	NCR	Siemens	Univac
Significant Problems (%)										
System proposed by vendor was too small	0	10	27	7	14	19	0	29	31	26
Delivery and/or installation of equipment was late	0	32	37	0	15	6	0	36	23	9
Delivery of required software was late	0	7	20	0	9	44	0	36	23	4
System costs exceeded expected total	0	8	8	0	9	13	0	18	0	15
Vendor did not provide all promised software or support	0	14	11	0	3	13	0	4	0	7
Program/data compatibility not what vendor promised	0	3	8	0	3	0	0	4	0	9
Terminals/peripherals compatibility not what vendor promised	0	4	4	0	2	6	0	4	0	9
Vendor enhancements/changes to hardware software hard to keep up with	0	0	4	0	2	6	0	7	15	22
Equipment excessively noisy	0	6	19	25	18	0	0	11	0	4
Power/cooling requirements excessive	0	6	19	25	18	0	0	11	0	4
Other	0	17	21	25	15	31	0	32	8	26
Significant Advantages (%)										
Users happy with response time	75	43	38	50	41	56	50	32	38	39
System easy to expand/reconfigure	100	65	59	75	37	69	17	39	46	63
System costs less than expected	0	4	3	25	3	0	0	4	0	2
Programs/data compatible, as vendor promised	0	40	40	25	32	63	83	50	69	41
Terminals/peripherals compatible, as vendor promised	75	13	8	25	18	25	50	21	15	2
System power/energy efficient	0	11	9	50	11	13	67	25	0	15
Productivity aids help keep programming costs down	75	13	8	25	18	25	50	21	15	2
Database language efficient and effective	50	11	9	50	11	13	67	25	0	15
Delivery and/or installation of equipment was ahead of schedule	0	17	13	75	20	6	0	0	11	39
Delivery of required software was ahead of schedule	25	13	13	22	15	27	38	50	18	23
Other	100	21	13	25	27	38	50	18	23	39
System Ratings (4.0-1.0)										
Ease of operation	4.0	3.4	2.8	4.0	2.7	3.2	3.6	3.0	2.9	3.0
Reliability of mainframe	4.0	3.1	3.1	3.3	3.5	3.2	3.3	3.2	3.3	3.2
Reliability of peripherals	4.0	2.5	2.4	2.5	3.0	2.5	3.3	2.5	2.9	2.7
Maintenance service	—	—	—	—	—	—	—	—	—	—
Responsiveness	—	—	—	—	—	—	—	—	—	—
Effectiveness	—	—	—	—	—	—	—	—	—	—
Technical Support:										
Trouble-shooting	3.8	2.6	2.6	2.5	3.1	3.2	3.2	2.9	3.2	3.1
Education	3.8	2.5	2.6	2.3	3.1	2.7	3.0	2.6	3.2	3.0
Documentation	3.7	2.2	2.2	2.3	2.5	2.9	3.0	2.2	2.4	2.6
Manufacturer's Software:	2.3	2.2	2.2	1.8	2.6	2.3	2.7	2.2	2.3	2.2
Operating system	2.7	2.0	2.3	3.0	2.6	2.3	2.1	2.1	1.9	2.5
Compilers & assemblers	—	3.4	3.1	3.8	2.9	2.6	—	2.4	2.9	3.1
Applications programs	—	3.3	3.0	3.3	3.1	2.6	—	2.7	2.8	3.1
Ease of programming	—	2.9	2.6	—	2.7	2.7	—	2.2	2.3	2.7
Ease of conversion	—	3.2	2.9	3.8	2.8	2.8	—	2.9	2.6	2.9
Overall satisfaction	—	3.0	2.6	3.3	2.6	2.2	3.2	2.6	2.3	2.9
Would you recommend system to another user? (%)										
Yes	100	76	66	100	77	56	100	64	77	78
No	0	17	29	0	18	38	0	36	15	17

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Ratings of Computer Systems by French Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Manufacturer and Model	Survey Item											
	Burroughs	CII-HB	CMC	Data General	Datapoint	DEC	Hewlett-Packard	IBM	ICL	Inter-technique (Microdata)	Logabax	MAI (Basic Four)
No. of User Responses	20	209	8	20	5	45	38	376	80	16	6	8
No. of Systems Represented	22	284	12	23	14	53	81	420	88	35	8	8
Avg. Life of System (mos.)	31	33	14	28	20	19	21	25	35	19	10	10
Acquisition Method (%)												
Purchase	55	47	0	65	60	69	63	19	21	63	67	50
Rental	30	22	100	0	40	2	5	63	70	19	0	0
Lease	15	26	0	35	0	27	29	16	8	19	33	50
Principal Applications (%)												
Accounting	65	76	63	55	60	40	61	75	83	63	50	75
Construction	0	1	0	10	0	4	3	4	0	13	0	0
Education	0	5	0	15	40	13	5	3	0	0	0	0
Government	10	5	13	15	0	7	5	10	33	25	50	25
Manufacturing	15	22	38	10	0	18	32	33	61	73	44	33
Payroll/Personnel	50	54	50	30	40	20	45	5	10	14	31	17
Service Bureau	15	6	0	35	0	9	5	10	14	31	17	13
Transportation	5	1	13	5	0	4	16	1	3	6	0	0
Word Processing	5	10	0	10	20	0	5	9	6	19	17	0
Banking/Finance	5	10	0	10	20	0	16	9	6	9	0	13
Distributed Processing	0	3	0	20	0	49	21	6	3	0	0	13
Engineering/Scientific	0	4	0	5	0	2	3	3	3	0	17	0
Insurance	0	2	0	10	0	2	3	3	3	0	17	38
Medical/Health Care	0	2	0	10	0	7	16	34	28	44	17	38
Retail	35	23	25	20	20	7	16	34	28	44	17	38
Transaction Processing	10	29	25	32	20	29	50	23	29	25	33	0
Utilities—Power	0	3	0	0	0	2	0	1	4	13	0	0
Other	25	14	50	15	20	24	29	14	18	19	0	25
Source of Applications Programs (%)												
In-House Personnel	65	92	100	95	80	91	84	94	93	81	83	50
Ready-Made Programs From Manufacturer	30	14	13	0	40	9	8	17	13	19	17	0
Contract Programming	10	11	13	0	0	22	18	7	9	6	0	25
Manufacturer's Personnel	0	6	0	0	0	2	3	3	11	6	0	25
Proprietary Software Packages	5	17	0	20	0	22	32	11	19	6	17	25
Other	15	4	13	5	20	7	3	2	3	13	0	25
Hardware Configuration												
No. of CPUs	22	284	12	23	16	53	82	420	88	35	8	8
No. of Workstations (avg.)	1	3	3	4	2	8	7	5	6	4	2	6
Software Configuration												
Database Management Systems (%)	5	1	13	25	0	11	79	7	10	50	0	25
Data Communications Monitors (%)	30	19	0	20	60	9	11	20	38	31	0	13
Primary Programming Languages (%)												
APL	0	0	0	0	0	2	0	0	0	0	0	0
BASIC	90	96	100	45	40	20	47	14	71	1	0	0
COBOL	0	5	0	50	0	58	63	7	38	0	0	0
FORTRAN	25	8	0	0	20	2	3	89	38	0	0	0
RPG	10	15	38	30	40	29	45	5	26	63	50	0
Other												
Planned Acquisitions/Implementations for 1980 (%)												
Additional Software From Manufacturer	25	13	13	15	40	18	8	11	18	0	17	13
Proprietary Software	5	8	50	10	20	18	27	11	10	6	17	25
Expanded Data Communications	45	35	25	20	60	36	18	28	46	0	0	0
Distributed Processing	0	17	25	10	40	4	13	18	8	0	0	25
Integrated Word Processing	5	2	13	10	20	4	8	5	6	6	0	25
Other	15	15	25	20	20	22	21	11	9	25	0	25
Plans for System Replacement in 1980 (%)												
Yes, Same Manufacturer	25	21	0	5	20	16	3	16	25	25	0	0
Yes, Different Manufacturer	10	5	25	0	20	0	3	3	10	13	0	0
No	65	71	75	40	60	82	95	78	63	63	100	100

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Ratings of Computer Systems by French Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Manufacturer and Model	Survey Item											
	Burroughs	CII-HB	CMC	Data General	Datapoint	DEC	Hewlett-Packard	IBM	ICL	Inter-technique (Microdata)	Logabax	MAI (Basic Four)
Significant Problems (%)												
System proposed by vendor was too small	55	38	38	20	60	22	21	19	19	38	0	13
Delivery and/or installation of equipment was late	20	37	25	36	20	33	26	13	20	25	17	25
Delivery of required software was late	35	15	63	20	20	22	24	5	20	19	50	0
System costs exceeded expected total	10	13	0	5	0	7	11	6	10	6	0	0
Vendor did not provide all promised software or support	20	8	63	10	20	11	5	2	8	31	33	0
Program/data compatibility not what vendor promised	15	10	13	0	20	0	5	2	3	0	0	0
Terminals/peripherals compatibility not what vendor promised	5	3	13	10	0	0	0	1	0	13	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	20	13	13	25	60	27	5	4	10	6	33	0
Equipment excessively noisy	15	14	13	0	0	4	8	6	13	13	0	0
Power/cooling requirements excessive	10	5	0	5	0	7	5	1	4	6	0	0
Other	20	15	13	25	20	18	11	14	25	38	0	38
Significant Advantages (%)												
Users happy with response time	35	31	63	65	80	62	53	51	38	50	67	88
System easy to expand/reconfigure	50	48	50	60	60	71	76	49	65	38	17	75
System costs less than expected	5	2	0	0	0	11	0	6	1	0	17	25
Programs/data compatible as vendor promised	10	24	0	25	20	13	13	40	33	19	0	0
Terminals/peripherals compatible as vendor promised	5	2	0	15	20	2	8	5	6	6	0	0
System power/energy efficient	10	18	50	45	20	18	42	22	20	31	17	63
Productivity aids help keep programming costs down	5	5	0	25	0	20	26	23	4	38	0	38
Database language efficient and effective	0	5	0	15	0	11	66	9	1	75	0	63
Delivery and/or installation of equipment was ahead of schedule	15	25	75	25	0	13	37	37	34	44	33	38
Delivery of required software was ahead of schedule	5	11	13	20	0	7	26	23	11	19	0	38
Other	15	11	25	20	0	16	11	6	16	19	33	50
System Ratings (4.0-1.0)												
Ease of operation	26	28	28	30	37	31	33	32	29	38	28	39
Reliability of mainframe	32	33	34	35	35	36	36	36	33	32	23	35
Reliability of peripherals	24	28	26	26	33	29	31	32	27	22	30	30
Maintenance service	21	26	33	21	30	31	30	33	30	25	28	29
Responsiveness	26	27	30	23	32	28	28	33	27	28	30	28
Effectiveness												
Technical Support												
Trouble-shooting	20	22	23	21	20	26	28	28	23	24	24	24
Education	23	23	20	21	18	26	25	28	24	22	20	24
Documentation	17	21	15	25	18	27	27	28	19	22	15	26
Manufacturer's Software												
Operating system	31	29	24	34	34	32	35	32	28	33	27	38
Compilers & assemblers	29	26	26	31	35	29	31	32	29	29	27	39
Applications programs	28	27	—	28	20	26	28	30	25	27	25	34
Ease of programming	27	29	30	32	30	31	32	31	24	35	30	39
Ease of conversion	22	22	30	22	—	28	24	28	24	23	20	29
Overall satisfaction	24	28	29	30	26	31	31	31	27	29	28	36
Would you recommend system to another user? (%)												
Yes	55	62	88	80	60	89	84	81	74	69	100	88
No	45	25	13	10	40	7	11	15	24	25	0	0

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Ratings of Computer Systems by German Users

This year, in addition to its annual survey of U.S. computer users, Datapro conducted user surveys in France, Germany and the United Kingdom. This report contains the detailed results of the survey conducted in Germany with the cooperation of *Computerwoche*.

Table 1 presents a model by model summary of user experience with mainframes and plug-compatible mainframes.

Table 2 presents a model by model summary of user experience with minicomputers and small business systems.

Table 3 presents a model by model summary of user experience with desktop, personal, and microcomputers.

Table 4 presents a vendor by vendor summary of user experience with mainframes and plug-compatible mainframes.

Table 5 presents a vendor by vendor summary of user experience with minicomputers and small business systems.

This report contains the detailed results of Datapro's first survey of computer systems users in Germany and includes ratings of 1,273 systems based on 1,013 user responses. For summary information and an explanation of how the survey was conducted, please see Report 70C-010-51.

Because Table 3 already effectively provides a vendor by vendor summary of user experience with desktop, personal, and microcomputers, we have not prepared a separate table for this category.

While we believe the information contained in these tables can be extremely useful in the early stages of system selection, we urge users not to allow this information to dictate their final decision. The survey results are detailed enough to advise you of *potential* strengths and warn you of *potential* weaknesses, but they are not detailed enough to tell you how a particular system would perform in your unique environment with your unique applications.

A full introduction to this survey, including country by country summary information, appears in Report 70C-010-51. □

Ratings of Computer Systems by German Users

Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item													
	Burroughs B 1700 & B 1800	Burroughs (other models)	Ci Honeywell Bull Level 64	Ci Honeywell Bull Level 66	Ci Honeywell Bull (other models)	Control Data (all models)	DEC DECsystem 20	IBM 360 (all models)	IBM 370/115	IBM 370/125	IBM 370/135	IBM 370/138	IBM 370/145	
No. of User Responses	5	4	23	9	3	3	5	15	63	53	14	59	18	18
No. of Systems Represented	6	4	25	11	3	23	4	17	64	53	15	61	18	18
Avg. Life of System (mos.)	22	34	26	35	89	29	16	82	60	52	53	26	43	43
Acquisition Method (%)														
Purchase	17	75	26	67	67	33	80	8	51	49	29	41	33	33
Rental	0	0	17	11	0	67	0	7	30	43	14	29	17	17
Lease	17	25	61	22	33	0	20	13	22	26	57	31	67	67
Principal Applications (%)														
Accounting	100	75	87	56	67	0	20	87	94	70	93	85	94	94
Construction	20	0	0	11	0	0	60	7	11	8	21	14	11	11
Education	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	25	0	0	0	33	0	0	0	8	0	5	6	6
Manufacturing	0	0	13	0	0	0	0	0	0	0	0	0	0	0
Payroll/Personnel	40	50	78	33	100	0	20	27	48	47	71	53	61	61
Service Bureau	0	0	17	0	0	0	40	27	19	11	7	7	6	6
Transportation	20	0	4	0	0	0	40	27	19	11	7	7	6	6
Word Processing	0	25	0	0	0	0	0	0	0	6	4	0	5	11
Banking/Finance	0	0	4	33	33	0	0	13	14	11	14	20	17	17
Distributed Processing	20	0	4	11	0	0	0	0	0	6	7	3	22	22
Engineering/Scientific	0	0	0	22	0	100	60	1	2	29	5	11	11	11
Insurance	0	0	4	11	0	0	0	1	0	6	0	15	0	0
Medical/Health Care	0	0	4	0	0	0	0	0	2	0	2	0	6	6
Retail	40	75	30	11	0	0	0	47	32	13	14	19	17	17
Transaction Processing	60	0	17	11	0	0	0	0	25	21	36	25	28	28
Utilities—Power	40	0	17	22	33	0	40	13	11	2	15	6	6	6
Other	0	25	9	0	33	0	20	20	6	2	14	7	17	17
Source of Applications Programs (%)														
In-House Personnel	80	100	91	89	100	100	80	93	100	100	100	100	94	94
Ready-Made Programs From Manufacturer	60	100	40	11	33	33	20	20	35	47	57	49	78	78
Contract Programming	20	50	22	11	33	0	20	20	24	21	36	24	28	28
Manufacturer's Personnel	0	0	4	11	67	0	0	0	3	13	0	7	11	11
Proprietary Software Packages	20	50	35	22	33	33	80	13	22	38	79	51	67	67
Other	0	0	0	0	33	0	0	0	2	4	0	0	0	0
Hardware Configuration														
No. of CPUs	6	4	25	12	2	3	4	17	64	53	15	61	18	18
No. of Workstations (avg.)	11	32	10	14	3	43	21	5	12	17	32	34	34	34
Software Configuration														
Database Management Systems (%)	80	75	26	67	0	33	40	7	24	43	50	59	61	61
Data Communications Monitors (%)	60	50	26	44	0	0	20	13	49	69	79	86	83	83
Primary Programming Languages (%)														
APL	20	0	0	0	0	0	0	0	0	0	0	0	0	0
BASIC	100	75	100	67	67	0	60	27	17	46	71	49	67	67
COBOL	20	25	0	22	0	67	60	7	7	0	14	0	6	6
FORTRAN	60	25	7	0	0	0	40	75	43	43	14	17	17	17
RPG	0	50	0	0	67	33	40	67	79	75	86	78	50	50
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned Acquisitions/Implementations for 1980 (%)														
Additional Software From Manufacturer	80	0	38	22	0	0	0	20	11	21	43	39	50	50
Proprietary Software	20	0	17	11	0	0	20	33	19	23	43	36	39	39
Expanded Data Communications	40	50	26	44	0	0	40	27	19	34	43	46	39	39
Distributed Processing	20	0	22	0	0	0	0	7	8	11	0	8	28	28
Integrated Word Processing	0	50	0	0	0	0	0	5	6	7	7	2	6	6
Other	0	0	9	0	0	0	20	0	0	4	7	2	6	6
Plans for System Replacement in 1980 (%)														
Yes, Same Manufacturer	20	25	4	33	33	33	0	47	29	43	60	41	28	28
Yes, Different Manufacturer	0	0	0	0	0	0	0	20	3	5	36	54	67	67
No	60	75	96	56	67	67	100	27	65	53	36	54	67	67

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Ratings of Computer Systems by German Users

Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item													
	Burroughs B 1700 & B 1800	Burroughs (other models)	Ci Honeywell Bull Level 64	Ci Honeywell Bull Level 66	Ci Honeywell Bull (other models)	Control Data (all models)	DEC DECsystem 20	IBM 360 (all models)	IBM 370/115	IBM 370/125	IBM 370/135	IBM 370/138	IBM 370/145	
Significant Problems (%)														
System proposed by vendor was too small	60	25	30	56	33	0	60	0	0	35	32	43	12	22
Delivery and/or installation of equipment was late	40	0	9	11	33	0	0	0	0	3	8	7	8	11
Delivery of required software was late	0	25	13	0	0	0	0	0	0	2	2	7	7	6
System costs exceeded expected total	20	0	4	0	0	0	0	0	0	2	6	14	14	11
Vendor did not provide all promised software or support	0	0	0	0	0	0	0	0	0	10	4	7	7	6
Program: data compatibility not what vendor promised	0	0	9	0	0	0	0	0	0	6	4	0	2	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	0	0	0	3	0	0	2	0
Vendor enhancements / changes to hardware / software hard to keep up with	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equipment excessively noisy	20	0	9	0	67	0	0	7	21	15	14	19	17	17
Power: cooling requirements excessive	0	0	9	22	0	0	0	0	6	0	14	3	6	6
Other	0	25	9	0	33	0	0	7	14	11	36	12	28	28
Significant Advantages (%)														
Users happy with response time	60	25	4	0	33	33	0	20	13	8	7	8	7	8
System easy to expand/reconfigure	20	50	39	78	0	0	60	0	25	34	14	56	39	39
System costs less than expected	40	75	87	78	67	67	100	7	33	15	7	5	11	11
Programs: data compatible as vendor promised	20	0	4	0	33	0	0	0	3	11	7	25	44	44
Terminals/peripherals compatible as vendor promised	40	0	61	11	0	33	20	7	14	28	7	25	28	28
System power / energy efficient	20	0	4	33	0	0	40	13	13	19	21	25	20	20
Productivity aids help keep programming costs down	0	0	0	0	0	0	20	0	2	0	2	0	2	0
Database language efficient and effective	20	50	13	0	33	0	60	13	17	23	36	42	39	39
Delivery and/or installation of equipment was ahead of schedule	40	50	4	33	0	0	0	7	3	11	21	7	11	11
Delivery of required software was ahead of schedule	0	0	0	11	0	0	0	0	3	0	7	14	6	6
Other	0	0	0	0	0	0	0	0	2	0	7	5	0	0
System Ratings (4.0-1.0)														
Ease of operation	3.2	3.3	2.8	3.5	3.5	—	3.2	2.9	2.7	2.8	2.5	2.7	2.7	2.7
Reliability of mainframe	2.6	3.0	3.4	3.8	3.3	2.3	2.6	3.2	3.6	3.6	3.1	3.5	3.0	2.9
Reliability of peripherals	2.4	2.8	2.8	2.3	3.0	3.0	2.6	2.6	3.0	3.1	2.6	3.0	2.9	2.9
Maintenance service	2.4	2.5	2.8	3.5	3.0	3.0	2.8	2.6	2.9	3.0	2.5	2.8	2.9	2.9
Responsiveness	2.4	2.5	2.6	3.4	3.3	3.0	2.4	2.7	2.9	3.0	2.5	2.8	2.5	2.5
Effectiveness	2.2	2.5	2.4	2.6	2.0	2.3	2.8	2.6	2.3	2.5	2.1	2.3	2.6	2.6
Technical Support	1.8	2.5	2.3	2.3	2.0	2.0	2.6	2.7	2.4	2.6	2.4	2.3	2.6	2.6
Trouble-shooting	1.4	2.5	2.2	2.4	1.7	2.7	2.6	2.6	2.3	2.4	2.4	2.4	2.5	2.5
Education	4.0	2.5	3.3	3.5	3.3	2.0	3.6	2.7	2.6	2.7	2.2	2.6	2.8	2.8
Documentation	3.2	3.3	3.2	3.3	3.0	2.7	3.0	2.9	3.0	3.0	2.9	3.1	3.1	3.1
Manufacturer's Software	2.7	2.7	2.4	3.0	2.0	2.3	2.5	2.7	2.7	2.6	2.1	2.3	2.5	2.5
Operating system	2.4	3.0	2.9	3.3	2.5	1.7	3.0	2.6	2.6	2.5	2.4	2.5	2.6	2.6
Compilers & assemblers	3.0	3.0	2.8	3.4	2.5	2.0	3.0	2.8	2.8	2.5	2.3	2.6	2.2	2.2
Applications programs	2.0	2.8	2.8	3.4	3.0	2.7	2.8	2.8	2.8	2.9	2.5	2.9	2.8	2.8
Ease of programming	2.4	3.0	2.9	3.3	2.5	1.7	3.0	2.6	2.6	2.5	2.4	2.5	2.6	2.6
Ease of conversion	3.0	3.0	2.8	3.4	2.5	2.0	3.0	2.8	2.8	2.5	2.3	2.6	2.2	2.2
Overall satisfaction	2.0	2.8	2.8	3.4	3.0	2.7	2.8	2.8	2.8	2.9	2.5	2.9	2.8	2.8
Would you recommend system to another user? (%)														
Yes	40	75	91	67	33	67	100	47	71	74	57	86	56	56
No	60	25	4	11	67	33	0	47	29	23	29	12	28	28

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Ratings of Computer Systems by German Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item														
	IBM 370/148	IBM 370/158	IBM 370/168	IBM 3031	IBM 3032	IBM 3033	IBM 4331	IBM (other models)	NASCO (total all models)	NCR Century 101 thru 300	NCR 8400 Series	NCR 8500 Series	Siemens 4004 Series		
No. of User Responses	32	22	4	23	8	14	14	3	6	10	4	9	15		
No. of Systems Represented	34	28	7	25	9	21	14	3	6	13	4	9	15		
Avg. Life of System (mos.)	23	23	24	11.5	7	11	3	34	12	48	9	17	63		
Acquisition Method (%)															
Purchase	22	64	50	30	25	50	14	67	17	50	25	44	40		
Rental	22	5	25	39	25	21	71	0	57	40	50	33	40		
Lease	56	27	50	30	50	29	14	33	33	10	25	22	20		
Principal Applications (%)															
Accounting	78	64	50	70	75	43	50	33	83	80	100	44	80		
Construction	16	0	0	9	25	14	21	0	33	0	0	0	20		
Education	3	0	0	9	0	0	0	33	17	0	0	0	20		
Government	13	23	25	22	0	7	7	0	0	30	50	33	33		
Manufacturing	56	23	0	39	63	57	43	33	67	90	75	78	67		
Payroll/Personnel	78	68	50	65	88	57	0	17	20	0	0	0	7		
Service Bureau	19	14	25	9	0	14	0	0	17	0	0	0	7		
Transportation	0	5	25	4	13	7	0	0	17	0	0	0	7		
Word Processing	13	18	0	17	13	21	0	0	33	0	0	22	0		
Banking/Finance	13	32	50	30	38	50	7	0	17	0	0	0	7		
Distributed Processing	13	5	25	9	13	36	7	0	17	0	0	0	13		
Engineering/Scientific	16	18	0	9	13	21	0	0	17	0	0	0	0		
Insurance	6	18	0	22	13	21	0	0	0	20	0	0	0		
Medical/Health Care	6	5	0	17	13	0	0	0	17	10	0	0	20		
Retail	31	18	25	13	25	7	14	0	17	30	50	11	20		
Transaction Processing	31	23	75	30	38	57	7	67	33	10	0	11	13		
Utilities—Power	22	18	0	30	38	29	0	0	33	20	0	11	13		
Other	6	0	0	4	0	0	36	0	0	25	33	20	20		
Source of Applications Programs (%)															
In-House Personnel	97	100	100	100	100	100	100	83	100	100	100	100	100		
Ready-Made Programs From Manufacturer	53	55	25	43	63	79	57	67	50	60	75	67	53		
Contract Programming	41	41	0	30	25	43	29	0	67	10	0	11	47		
Manufacturer's Personnel	9	18	0	9	13	7	29	0	0	10	0	11	13		
Proprietary Software Packages	63	64	25	65	50	57	36	0	50	10	0	22	33		
Other	0	9	0	0	0	0	0	100	0	0	0	0	0		
Hardware Configuration															
No. of CPUs	34	30	9	25	9	21	14	3	6	13	4	12	15		
No. of Workstations (avg.)	46	116	106	62	148	118	10	34	106	7	5	16	9		
Software Configuration															
Database Management Systems (%)	63	82	100	70	88	93	50	100	83	50	50	67	33		
Data Communications Monitors (%)	84	86	75	83	100	79	79	100	67	30	50	56	40		
Primary Programming Languages (%)															
APL	0	0	0	4	13	0	0	33	0	0	0	0	0		
BASIC	0	0	0	0	0	0	0	0	0	0	0	0	0		
COBOL	56	46	75	52	38	64	57	33	50	30	0	67	67		
FORTRAN	6	14	25	4	0	21	0	0	0	0	0	0	20		
RPG	3	0	0	4	0	71	43	33	0	0	0	0	7		
Other	69	86	50	74	75	86	79	100	33	90	100	56	73		
Planned Acquisitions/Implementations for 1980 (%)															
Additional Software From Manufacturer	31	36	75	43	38	50	36	0	33	30	50	44	33		
Proprietary Software	34	32	50	52	50	43	36	33	50	10	0	11	20		
Expanded Data Communications	44	46	25	48	38	57	43	67	33	20	75	11	20		
Distributed Processing	28	9	75	17	63	57	0	0	33	0	0	0	7		
Integrated Word Processing	3	18	25	9	25	21	0	0	0	0	0	0	13		
Other	3	0	0	0	0	0	7	0	33	0	0	11	13		
Plans for System Replacement in 1980 (%)															
Yes, Same Manufacturer	22	23	25	4	13	7	14	33	0	30	25	11	33		
Yes, Different Manufacturer	0	5	0	0	0	0	0	0	0	10	0	0	7		
No	75	68	75	96	88	86	67	66	100	40	75	89	60		

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User Ratings of Computer Systems by German Users
Table 1. Mainframes & Plug-Compatible Mainframes

Manufacturer and Model	Survey Item														
	IBM 370/148	IBM 370/158	IBM 370/168	IBM 3031	IBM 3032	IBM 3033	IBM 4331	IBM (other models)	NASCO (total all models)	NCR Century 101 thru 300	NCR 8400 Series	NCR 8500 Series	Siemens 4004 Series		
Significant Problems (%)															
System proposed by vendor was too small	16	18	0	17	13	0	7	21	14	0	0	33	10	25	27
Delivery and/or installation of equipment was late	0	9	0	9	0	0	0	21	33	17	10	0	11	0	20
Delivery of required software was late	3	0	0	9	0	0	0	21	33	17	0	0	11	0	7
System costs exceeded expected total	16	5	0	9	0	0	0	14	33	17	10	0	0	0	7
Vendor did not provide all promised software or support	13	0	0	13	0	0	0	0	0	0	0	0	11	13	0
Program/data compatibility not what vendor promised	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	9	5	0	4	13	0	7	0	17	0	10	0	0	27	0
Equipment excessively noisy	13	18	50	26	25	0	29	0	0	17	0	0	0	7	0
Power/cooling requirements excessive	9	0	0	4	0	0	0	0	0	0	0	0	11	20	0
Other	16	14	25	4	50	21	0	7	0	0	10	0	0	0	0
Significant Advantages (%)															
Users happy with response time	53	68	75	70	100	71	79	67	100	40	75	67	47		
System easy to expand/reconfigure	19	64	50	67	63	36	43	0	67	40	100	67	33		
System costs less than expected	6	0	0	0	0	0	7	33	83	30	50	56	7		
Programs/data compatible, as vendor promised	28	9	25	30	25	50	29	33	83	30	50	22	0		
Terminals/peripherals compatible, as vendor promised	41	32	25	35	75	36	21	67	83	10	50	22	0		
System power/energy efficient	0	0	0	0	0	14	67	67	0	10	25	11	13		
Productivity aids help keep programming costs down	28	14	50	35	50	29	50	0	17	10	0	11	0		
Database language efficient and effective	6	0	0	17	25	0	0	33	33	10	50	33	7		
Delivery and/or installation of equipment was ahead of schedule	0	0	0	13	7	29	0	0	0	0	0	0	0		
Delivery of required software was ahead of schedule	3	0	0	0	0	0	0	0	0	0	0	0	0		
Other	0	0	0	0	0	0	0	0	17	10	0	0	7		
System Ratings (4.0-1.0)															
Ease of operation	27	28	28	27	31	28	28	27	28	29	33	30	27		
Reliability of mainframe	34	33	33	32	30	33	35	30	35	32	35	34	28		
Reliability of peripherals	30	31	30	30	26	27	31	30	30	27	30	31	28		
Maintenance service:															
Responsiveness	30	30	35	30	31	32	29	33	33	26	33	31	29		
Effectiveness	26	29	28	24	30	26	28	30	28	26	30	30	25		
Technical Support:															
Trouble-shooting	23	26	25	23	26	25	31	23	20	21	25	23	20		
Education	25	25	25	24	25	28	23	20	22	20	22	22	22		
Documentation	24	26	25	24	28	24	23	20	20	21	17	20	21		
Manufacturer's Software:															
Operating system	25	29	33	27	31	30	29	23	20	25	32	30	32		
Compilers & assemblers	28	30	33	30	29	30	29	25	28	29	25	35	27		
Applications programs	25	30	—	26	23	25	25	29	27	25	29	25	26		
Ease of programming	25	25	25	27	31	27	25	27	26	27	33	30	25		
Ease of conversion	26	25	25	26	30	26	27	30	28	28	33	30	23		
Overall satisfaction	28	29	33	28	30	30	30	27	27	26	28	30	27		
Would you recommend system to another user? (%)															
Yes	81	91	100	91.3	75	100	93	100	83	70	100	100	67		
No	16	5	0	8.7	13	0	7	0	17	20	0	0	33		

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Ratings of Computer Systems by German Users
Table 1. Mainframes & Plug-Compatible Mainframes

Survey Item	Siemens 7.631	Siemens 7.722	Siemens 7.730	Siemens 7.738	Siemens 7.740	Siemens 7.748	Siemens 7.760	Siemens 7.700 (other models)	Univac 90/30	Univac 90 Series (other models)
No. of User Responses	3	22	25	21	4	7	15	4	25	10
No. of Systems Represented	3	22	26	25	3	9	20	4	28	10
Avg. Life of System (mos.)	3	32	35	17	50	30	11	49	38	19
Acquisition Method (%)										
Purchase	33	41	44	48	50	43	13	0	20	20
Rental	0	64	44	62	25	43	87	50	76	70
Lease	67	18	16	14	25	14	7	50	0	10
Principal Applications (%)										
Accounting	67	82	72	90	50	14	20	75	84	80
Construction	0	5	0	10	0	0	7	25	4	0
Education	33	5	0	0	0	0	40	0	0	0
Government	33	14	16	24	0	0	7	75	28	30
Manufacturing	67	32	36	52	50	29	7	29	72	70
Payroll/Personnel	67	59	80	81	75	29	47	75	72	70
Service Bureau	0	9	12	14	0	0	7	50	16	10
Transportation	0	18	8	0	0	0	13	0	4	10
Word Processing	0	5	4	10	0	14	13	0	0	10
Banking/Finance	0	23	4	19	0	0	7	25	0	20
Distributed Processing	0	5	4	19	0	14	33	0	4	20
Engineering/Scientific	33	5	8	24	20	0	13	0	0	10
Insurance	0	0	5	10	0	0	7	0	0	0
Medical/Health Care	0	0	0	10	0	0	7	0	52	50
Retail	33	23	28	19	25	14	7	0	12	30
Transaction Processing	0	14	0	24	25	14	27	0	12	20
Utilities—Power	33	18	12	14	25	0	7	0	8	10
Other	0	9	24	19	50	14	13	25	12	10
Source of Applications Programs (%)										
In-House Personnel	100	95	100	100	100	100	100	75	100	100
Ready-Made Programs From Manufacturer	67	45	72	71	50	57	53	75	44	50
Contract Programming	0	14	28	29	0	43	13	25	28	50
Manufacturer's Personnel	0	5	16	5	0	29	13	25	4	10
Proprietary Software Packages	33	36	28	48	0	43	53	0	0	0
Other	0	0	8	0	0	0	7	0	0	0
Hardware Configuration										
No. of CPUs	3	22	26	26	3	9	20	4	28	10
No. of Workstations (avg.)	8	6	10	33	49	28	59	10	8	19
Software Configuration										
Database Management Systems (%)	0	14	44	52	25	71	53	50	16	70
Data Communications Monitors (%)	33	32	32	57	50	57	40	50	40	60
Primary Programming Languages (%)										
APL	0	0	0	0	0	0	0	0	0	0
BASIC	100	55	60	86	100	29	67	100	44	80
COBOL	0	5	12	14	0	14	27	0	0	0
FORTRAN	0	32	24	14	0	0	0	50	52	20
RPG	33	59	24	10	50	43	53	100	60	20
Other	0	0	0	0	0	0	0	0	0	0
Planned Acquisitions/Implementations for 1980 (%)										
Additional Software From Manufacturer	100	23	28	48	25	43	27	25	20	30
Proprietary Software	0	27	24	38	25	0	13	0	12	10
Expanded Data Communications	67	32	20	24	50	29	27	75	20	50
Distributed Processing	33	9	0	14	0	0	13	25	4	10
Integrated Word Processing	0	5	4	14	0	0	0	0	8	20
Other	33	5	8	0	0	14	7	0	4	10
Plans for System Replacement in 1980 (%)										
Yes, Same Manufacturer	0	18	4	10	25	14	7	0	4	0
Yes, Different Manufacturer	0	0	0	0	0	0	0	25	4	0
No	100	82	92	71	75	86	80	75	88	100

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Ratings of Computer Systems by German Users
Table 1. Mainframes & Plug-Compatible Mainframes

Survey Item	Siemens 7.531	Siemens 7.722	Siemens 7.730	Siemens 7.738	Siemens 7.740	Siemens 7.748	Siemens 7.760	Siemens 7.700 (other models)	Univac 90/30	Univac 90 Series (other models)
Significant Problems (%)	33	27	32	24	0	29	13	25	20	20
System proposed by vendor was too small	0	14	4	19	0	14	27	0	8	10
Delivery and/or installation of equipment was late	0	5	8	5	0	29	13	25	16	0
Delivery of required software was late	0	18	16	14	0	14	7	0	12	20
System costs exceeded expected total	0	5	8	14	0	33	0	4	10	0
Vendor did not provide all promised software or support	0	9	4	19	25	14	0	25	12	10
Program data compatibility not what vendor promised	0	5	0	0	0	14	0	0	4	0
Terminals/peripherals compatibility not what vendor promised	0	9	4	19	25	14	0	25	12	10
Vendor enhancements/changes to hardware/software hard to keep up with	0	5	0	0	0	14	0	0	4	0
Equipment excessively noisy	0	9	24	43	0	29	13	25	12	10
Power/cooling requirements excessive	0	18	8	0	0	29	0	0	12	0
Other	0	14	20	10	0	14	27	0	8	10
Significant Advantages (%)	33	14	8	5	0	14	27	0	7	10
Users happy with response time	67	32	60	71	50	57	60	75	16	50
System easy to expand/reconfigure	0	59	48	86	75	71	53	75	68	80
System costs less than expected	33	9	12	5	25	0	7	0	36	50
Programs/data compatible, as vendor promised	67	36	16	38	25	14	20	0	0	0
Terminals/peripherals compatible, as vendor promised	0	0	0	14	0	0	7	25	4	10
System power/energy efficient	0	0	12	5	0	0	13	0	0	30
Productivity aids help keep programming costs down	67	9	24	19	0	57	13	50	24	60
Database language efficient and effective	0	0	16	19	0	29	27	50	8	20
Delivery and/or installation of equipment was ahead of schedule	33	9	4	14	0	0	0	25	12	10
Delivery of required software was ahead of schedule	0	5	4	0	0	0	0	0	0	0
Other	33	0	4	0	0	14	7	0	8	0
System Ratings (4 0-1 0)										
Ease of operation	30	29	27	31	30	29	24	33	28	30
Reliability of mainframe	33	32	34	34	33	30	28	38	31	33
Reliability of peripherals	30	25	28	30	33	26	28	25	28	30
Maintenance service	37	30	30	34	30	27	28	30	30	27
Responsiveness	30	27	28	28	28	26	25	23	29	27
Effectiveness	30	24	24	24	23	20	22	25	28	26
Trouble-shooting	27	29	28	28	27	23	25	30	23	22
Education	23	24	23	23	20	19	21	30	23	22
Documentation	30	27	28	30	35	26	28	30	31	33
Manufacturer's Software	30	28	28	30	30	30	28	30	29	30
Operating system	25	26	27	27	27	20	25	25	25	23
Compilers & assemblers	30	28	28	27	30	27	27	27	27	28
Applications programs	30	26	27	24	27	24	23	27	27	29
Ease of programming	30	28	29	29	30	27	27	30	28	28
Ease of conversion	30	28	29	29	30	27	27	27	27	28
Overall satisfaction	30	28	29	29	30	27	27	27	27	28
Would you recommend system to another user? (%)										
Yes	100	73	88	95	100	100	73	100	76	100
No	0	27	12	5	0	0	13	0	20	0

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Ratings of Computer Systems by German Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item												
	Burroughs (all models)	Cii Honeywell Bull G100	Cii Honeywell Bull Level 61	Cii Honeywell Bull Level 62	CGK TR 440	CTM 70/900	Data General (all models)	Datapoint (all models)	Dietz (all models)	DEC PDP-11/04	DEC PDP-11/34	DEC PDP-11/40	
No of User Responses	3	7	6	18	4	6	3	3	7	6	3	3	
No of Systems Represented	3	7	8	18	4	11	6	3	7	6	3	3	
Avg Life of System (mos.)	3	7	8	18	4	11	6	3	7	6	3	3	
Acquisition Method (%)	32	80	23	31	77	18	37	55	38	63	27	57	
Purchase													
Rental	0	86	50	17	75	67	100	71	67	50	67	50	
Lease	100	29	50	50	75	0	0	67	0	0	0	0	
Principal Applications (%)													
Accounting	67	100	67	94	0	100	67	67	14	0	83	33	
Construction	0	0	0	0	0	17	0	0	0	33	0	0	
Education	0	0	0	0	0	17	0	0	0	0	0	0	
Government	0	0	0	0	75	17	0	0	29	0	0	33	
Manufacturing	0	0	0	11	0	33	0	0	0	0	0	0	
Payroll/Personnel	67	29	17	44	0	17	33	33	14	33	33	33	
Service Bureau	33	100	67	67	0	67	33	33	14	0	50	33	
Transportation	0	29	17	6	0	33	0	0	14	33	0	0	
Word Processing	0	14	0	0	0	33	0	0	0	0	0	0	
Banking/Finance	0	0	0	0	0	50	0	33	0	0	17	0	
Distributed Processing	0	0	0	6	0	17	0	0	0	0	0	0	
Engineering/Scientific	33	14	0	0	0	17	0	33	14	0	17	33	
Insurance	0	14	0	0	100	17	0	0	57	67	33	33	
Medical/Health Care	0	0	17	6	0	17	0	0	0	17	0	0	
Retail	0	0	0	0	0	17	0	0	14	0	17	0	
Transaction Processing	33	57	17	39	0	50	33	33	14	0	17	0	
Utilities—Power	0	0	17	6	0	17	0	33	14	0	0	33	
Other	0	0	0	11	50	33	0	33	14	0	0	0	
Source of Applications Programs (%)													
In-House Personnel	33	100	17	94	100	50	33	100	57	100	67	100	
Ready-Made Programs From Manufacturer	33	43	67	44	50	83	33	33	43	0	17	33	
Contract Programming	67	14	67	11	0	50	33	0	43	33	50	0	
Manufacturer's Personnel	0	29	0	11	0	0	0	0	0	0	0	0	
Proprietary Software Packages	0	0	17	6	0	33	0	0	0	17	33	33	
Other	0	0	0	6	25	50	0	0	0	0	0	33	
Hardware Configuration													
No of CPUs	3	9	8	18	5	13	5	32	22	3	6	3	
No of Workstations (avg.)	2	0	3	4	32	5	4	6	3	1	9	8	
Software Configuration													
Database Management Systems (%)	0	0	0	11	50	0	0	0	0	67	0	0	
Data Communications Monitors (%)	0	0	17	33	0	33	33	0	0	17	33	0	
Primary Programming Languages (%)													
APL	0	0	0	0	0	0	0	0	0	0	0	0	
BASIC	0	0	0	0	0	17	33	0	71	33	83	0	
COBOL	100	86	83	78	25	0	67	0	0	0	0	0	
FORTRAN	0	0	0	0	100	0	33	0	43	33	33	100	
RPG	0	0	0	56	0	0	0	0	0	0	0	0	
Other	0	14	0	0	100	83	0	100	29	67	33	67	
Planned Acquisitions/Implementations for 1980 (%)													
Additional Software From Manufacturer	33	14	0	17	0	83	0	33	0	0	33	0	
Proprietary Software	67	0	17	28	0	17	33	0	0	33	50	0	
Expanded Data Communications	0	0	0	22	0	33	0	33	0	0	17	33	
Distributed Processing	0	0	0	0	0	0	33	14	0	0	0	67	
Integrated Word Processing	0	0	0	0	0	33	0	33	0	0	33	0	
Other	33	0	17	0	0	33	0	0	0	0	0	0	
Plans for System Replacement in 1980 (%)													
Yes Same Manufacturer	0	14	17	22	0	17	0	0	14	33	17	33	
Yes Different Manufacturer	33	14	33	0	0	33	33	14	0	0	0	0	
No	67	43	50	72	100	83	67	33	71	67	67	67	

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Ratings of Computer Systems by German Users
Table 2. Minicomputers & Small Business Computers

Manufacturer and Model	Survey Item												
	Burroughs (all models)	Cii Honeywell Bull G100	Cii Honeywell Bull Level 61	Cii Honeywell Bull Level 62	CGK TR 440	CTM 70/900	Data General (all models)	Datapoint (all models)	Dietz (all models)	DEC PDP-11/04	DEC PDP-11/34	DEC PDP-11/40	
Significant Problems (%)													
System proposed by vendor was too small	67	0	17	44	0	50	33	33	29	0	33	0	0
Delivery and/or installation of equipment was late	0	0	17	28	0	17	0	0	0	33	0	0	0
Delivery of required software was late	0	0	33	17	0	50	0	0	29	0	17	0	0
System costs exceeded expected total	0	0	0	6	0	0	0	33	0	33	17	83	0
Vendor did not provide all promised software or support	0	0	0	0	0	0	0	43	0	0	33	0	0
Program/data compatibility not what vendor promised	0	0	0	17	0	17	0	67	0	0	17	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	25	0	0	14	0	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	33	0	33	11	75	0	0	33	29	0	0	67	0
Equipment excessively noisy	0	43	17	6	50	0	0	14	33	0	0	0	0
Power/cooling requirements excessive	33	0	33	11	25	0	0	0	0	0	0	0	0
Other	67	0	17	11	25	17	33	0	14	0	17	0	0
Significant Advantages (%)													
Users happy with response time	33	14	33	44	75	100	100	33	43	0	50	67	67
System easy to expand/reconfigure	33	29	0	50	75	83	67	100	29	67	67	67	67
System costs less than expected	0	0	0	6	0	17	0	14	0	17	0	0	0
Programs/data compatible, as vendor promised	0	29	0	44	0	0	33	0	0	33	0	0	0
Terminals/peripherals compatible, as vendor promised	0	0	0	6	0	0	0	0	33	50	0	0	0
System power/energy efficient	0	0	0	6	0	17	0	33	0	0	0	0	0
Productivity aids help keep programming costs down	33	0	0	11	50	67	0	33	14	67	33	0	0
Database language efficient and effective	0	0	0	11	0	0	0	33	0	0	17	0	0
Delivery and/or installation of equipment was ahead of schedule	33	0	0	11	0	0	0	0	0	0	17	0	0
Delivery of required software was ahead of schedule	33	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	25	33	0	29	0	0	0	0	0
System Ratings (4.0-1.0)													
Ease of operation	3.3	3.0	2.8	2.8	3.5	3.3	3.7	3.3	2.6	—	3.0	3.0	3.0
Reliability of mainframe	3.3	3.7	2.8	3.2	3.0	3.2	3.3	2.7	2.9	3.3	3.5	3.7	3.7
Reliability of peripherals	2.3	2.6	1.8	2.8	3.0	3.0	3.0	2.7	2.9	2.7	3.0	3.0	3.0
Maintenance service	3.3	2.6	1.8	2.6	3.8	2.7	3.0	1.7	3.1	3.0	3.5	2.0	—
Responsiveness	3.3	2.5	2.0	2.6	3.5	2.4	2.7	1.7	2.8	3.0	3.0	—	—
Effectiveness	2.0	2.5	1.8	2.0	2.0	2.7	—	1.7	2.6	—	2.2	2.0	—
Technical Support:	1.7	2.8	2.3	2.4	2.3	2.0	—	—	2.0	—	2.2	2.0	—
Trouble-shooting	2.3	2.7	1.7	1.9	3.0	2.0	—	—	1.7	—	2.2	3.0	—
Education	2.7	2.9	2.7	2.7	3.5	3.2	3.3	3.3	2.6	—	3.5	3.0	—
Documentation	2.7	3.0	2.5	2.7	3.0	2.5	2.7	—	2.3	—	2.9	2.7	—
Manufacturer's Software:	—	3.0	2.2	2.3	3.0	2.7	2.3	—	2.2	—	2.2	—	—
Operating system	2.3	3.0	2.5	2.6	3.5	3.0	3.3	3.0	2.9	—	3.0	—	—
Compilers & assemblers	2.0	2.9	2.0	2.7	3.0	2.3	2.3	—	2.2	—	2.8	—	—
Applications programs	2.3	2.9	1.8	2.7	3.3	3.2	3.0	—	2.4	—	3.2	2.7	—
Ease of programming	3.3	3.6	3.0	3.0	3.5	3.3	3.3	3.3	2.6	—	3.5	3.0	—
Ease of conversion	67	14	50	17	25	100	0	33	33	57	67	67	100
Overall satisfaction	67	14	50	17	25	100	0	33	33	57	67	67	100
Would you recommend system to another user? (%)													
Yes	33	86	50	83	75	100	0	67	67	43	67	67	100
No	67	14	50	17	25	0	33	33	57	33	33	33	0

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Ratings of Computer Systems by German Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model													
	DEC PDP-11 (other models)	Hewlett-Packard 250	Hewlett-Packard 1000 Series	Hewlett-Packard (other models)	IBM Series 1	IBM S/3 Model 10	IBM S/3 Model 12	IBM S/3 Model 15	IBM S/32	IBM S/34	IBM (other models)	ICL System Ten	ICL 2903 & 2904	
No. of User Responses	5	3	4	3	4	4	52	48	8	51	5	7	8	
No. of Systems Represented	11	12	4	5	8	4	52	48	5	59	5	12	8	
Avg. Life of System (mos.)	41	11	26	37	14	87	39	39	29	10	79	44	50	
Acquisition Method (%)														
Purchase	80	67	100	33	100	100	50	46	67	24	100	43	38	
Rental	0	0	0	0	0	0	46	27	33	78	20	29	50	
Lease	20	33	0	67	0	0	12	27	0	6	0	29	13	
Principal Applications (%)														
Accounting	40	33	25	33	25	75	92	90	88	78	20	43	88	
Construction	0	0	25	33	0	0	0	0	0	2	0	0	0	
Education	20	0	0	0	0	0	2	4	0	2	20	0	0	
Government	20	0	0	0	50	75	58	65	25	48	20	43	75	
Manufacturing	40	0	40	0	0	50	88	85	63	59	20	29	13	
Payroll/Personnel	40	0	0	0	0	0	21	17	25	16	0	0	13	
Service Bureau	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transportation	40	0	0	0	0	0	0	0	0	6	0	0	0	
Word Processing	0	33	0	0	0	12	10	13	6	0	0	0	13	
Banking/Finance	0	33	0	0	25	0	4	4	0	6	0	0	0	
Distributed Processing	40	33	0	0	0	4	2	2	0	2	20	0	0	
Engineering/Scientific	20	0	40	33	0	0	0	0	0	0	0	0	0	
Insurance	0	33	0	0	25	0	0	0	39	20	43	38		
Medical/Health Care	0	33	0	0	25	25	31	33	50	10	40	0	13	
Retail	40	33	0	0	25	0	6	15	0	14	0	14	25	
Transaction Processing	40	0	0	0	0	0	2	15	25	14	0	14	25	
Utilities—Power	40	0	0	0	0	0	2	15	25	14	0	14	25	
Other	0	0	25	0	50	25	13	8	13	14	20	43	0	
Source of Applications Programs (%)														
In-House Personnel	80	33	75	100	50	100	100	100	38	78	100	71	75	
Ready-Made Programs From Manufacturer	80	33	25	33	0	50	37	46	50	49	40	71	63	
Contract Programming	20	67	50	67	50	0	10	23	75	39	20	57	25	
Manufacturer's Personnel	0	0	0	0	0	0	6	13	13	2	0	0	0	
Proprietary Software Packages	0	0	0	33	50	0	10	13	25	24	20	14	13	
Other	0	0	0	0	0	0	0	0	2	0	0	0	0	
Hardware Configuration														
No. of CPUs	11	12	4	5	8	5	52	48	9	59	5	12	11	
No. of Workstations (avg.)	13	1	6	21	5	0	2	12	1	6	3	3	4	
Software Configuration														
Database Management Systems (%)	40	100	75	67	25	0	6	0	0	2	0	0	13	
Data Communications Monitors (%)	20	0	0	0	0	0	15	48	0	4	20	0	0	
Primary Programming Languages (%)														
APL	60	100	0	33	0	0	0	0	0	6	0	0	75	
BASIC	0	0	0	67	0	0	6	6	13	6	20	0	0	
COBOL	20	0	100	0	25	0	2	2	0	0	40	57	25	
FORTRAN	0	0	0	0	0	75	96	98	75	90	4	60	100	
RPG	20	0	25	0	75	0	0	0	0	0	60	100	25	
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
Planned Acquisitions/Implementations for 1980 (%)														
Additional Software From Manufacturer	20	33	25	0	0	0	8	15	0	12	0	14	13	
Proprietary Software	0	67	0	33	0	0	15	6	50	16	0	14	25	
Expanded Data Communications	0	0	25	33	25	0	12	23	13	18	0	14	0	
Distributed Processing	20	33	25	33	0	0	6	6	13	12	0	0	0	
Integrated Word Processing	0	0	0	0	0	0	0	4	0	8	0	0	0	
Other	0	33	25	0	0	0	8	0	13	16	20	14	0	
Plans for System Replacement in 1980 (%)														
Yes, Same Manufacturer	20	0	0	0	0	25	29	15	13	0	20	0	0	
Yes, Different Manufacturer	0	0	0	0	0	0	15	2	0	4	20	0	0	
No	80	100	100	100	75	25	54	79	75	84	60	100	100	

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Ratings of Computer Systems by German Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model													
	DEC PDP-11 (other models)	Hewlett-Packard 250	Hewlett-Packard 1000 Series	Hewlett-Packard (other models)	IBM Series 1	IBM S/3 Model 10	IBM S/3 Model 12	IBM S/3 Model 15	IBM S/32	IBM S/34	IBM (other models)	ICL System Ten	ICL 2903 & 2904	
Significant Problems (%)														
System proposed by vendor was too small	40	33	0	0	50	0	25	75	2	25	0	25	80	14
Delivery and/or installation of equipment was late	20	0	50	33	50	25	25	0	4	4	0	4	0	14
Delivery of required software was late	20	33	0	25	0	50	0	0	0	0	0	0	0	14
System costs exceeded expected total	20	0	0	0	0	0	0	0	0	0	0	0	0	13
Vendor did not provide all promised software or support	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Program/data compatibility not what vendor promised	0	0	25	0	0	0	0	0	4	0	0	0	0	0
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	0	0	0	0	0	0	8	8	13	12	40	29
Equipment excessively noisy	0	0	25	0	0	0	0	0	0	0	0	0	0	13
Power/cooling requirements excessive	0	33	25	0	0	75	6	4	25	10	20	14	13	13
Other	0	0	25	0	0	75	6	10	0	0	0	0	0	13
Significant Advantages (%)														
Users happy with response time	60	67	100	33	100	25	15	52	38	71	40	86	38	
System easy to expand/reconfigure	60	67	50	33	75	25	12	42	38	71	0	86	50	
System costs less than expected	0	33	25	33	0	25	8	2	13	8	0	0	0	
Programs/data compatible, as vendor promised	20	0	25	33	0	25	12	19	13	31	0	14	38	
Terminals/peripherals compatible, as vendor promised	0	0	25	0	50	0	6	31	0	8	0	14	13	
System power/energy efficient	0	0	0	0	0	0	0	0	13	14	0	0	0	
Productivity aids help keep programming costs down	0	0	0	0	25	0	6	13	25	45	0	29	0	
Database language efficient and effective	40	100	75	33	0	0	2	4	0	12	0	14	0	
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	0	0	0	0	0	8	0	0	13	
Delivery of required software was ahead of schedule	0	0	0	0	0	0	0	0	0	0	0	14	0	
Other	0	33	0	0	0	25	4	4	13	4	0	14	0	
System Ratings (4 0-1 0)														
Ease of operation	30	40	28	33	33	27	30	29	33	33	30	31	28	
Reliability of mainframe	26	37	30	33	33	37	33	35	36	34	34	33	35	
Reliability of peripherals	30	30	30	33	35	20	30	28	32	31	30	27	25	
Maintenance service	22	23	20	17	30	37	30	31	35	30	26	24	28	
Responsiveness	26	20	23	17	30	30	30	29	34	28	28	26	27	
Effectiveness														
Technical Support														
Trouble shooting	20	—	—	23	30	27	24	26	30	25	28	22	24	
Education	22	33	25	20	23	33	26	28	29	27	28	30	25	
Documentation	20	27	25	20	28	27	25	24	28	28	30	20	25	
Manufacturer's Software														
Operating system	30	33	33	37	30	30	30	29	33	33	30	30	31	
Compilers & assemblers	30	37	—	—	—	—	25	26	30	32	26	20	31	
Applications programs	28	37	—	—	—	—	30	30	33	28	30	30	25	
Ease of programming	35	40	23	30	30	30	30	30	35	30	25	30	28	
Ease of conversion	33	—	20	25	—	—	30	28	30	30	29	20	28	
Overall satisfaction	28	37	25	27	33	30	29	29	31	31	28	23	28	
Would you recommend system to another user? (%)														
Yes	80	100	75	67	100	50	60	81	100	90	40	71	63	
No	20	0	25	0	0	50	40	19	0	6	60	29	25	

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Ratings of Computer Systems by German Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model													
	ICL (other models)	Kemzle 9066	Kienzle (other models)	MAI (Basic Four) Model 400	MAI (Basic Four) Model 600	MAI (Basic Four) Model 700	NCR Century 50 thru 100	NCR 8200 Series	Nixdorf 620	Nixdorf 8870	Nixdorf (other models)	Philips P300 Series	Philips P400 Series	
No. of User Responses	6	5	6	3	3	5	6	13	21	20	10	5	4	
No. of Systems Represented	9	8	6	3	3	7	7	18	42	22	23	6	15	
Avg. Life of System (mos.)	19	12	23	36	27	15	72	20	37	28	31	46	19	
Acquisition Method (%)														
Purchase	50	60	17	100	67	40	83	54	29	25	10	40	75	
Rental	33	0	17	0	0	0	20	33	67	50	70	25	25	
Lease	17	40	67	0	33	40	0	8	10	25	20	60	0	
Principal Applications (%)														
Accounting	67	60	67	67	100	100	100	85	48	65	50	80	50	
Construction	17	0	0	0	0	0	0	0	10	15	10	0	0	
Education	17	0	0	0	0	0	0	0	0	0	0	0	0	
Government	0	0	17	0	0	0	0	0	10	0	20	0	0	
Manufacturing	0	0	0	0	0	0	0	0	10	0	0	0	0	
Payroll/Personnel	17	20	0	67	0	0	17	15	33	40	30	0	0	
Service Bureau	33	40	33	0	67	20	83	69	14	60	40	80	25	
Transportation	33	0	0	0	0	0	0	0	10	15	20	20	25	
Word Processing	17	0	0	0	33	0	0	0	14	10	20	0	25	
Banking/Finance	17	0	17	0	33	0	0	0	10	40	0	0	0	
Distributed Processing	33	0	0	0	0	0	0	17	10	10	0	0	0	
Engineering/Scientific	33	0	0	33	0	0	0	0	10	0	0	25	0	
Insurance	17	0	0	0	0	0	0	0	0	0	0	0	0	
Medical/Health Care	0	0	0	0	0	0	0	0	0	0	0	0	0	
Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transaction Processing	17	20	17	33	0	60	33	77	19	30	40	0	0	
Utilities—Power	33	0	0	0	0	17	8	10	5	0	0	0	0	
Other	17	0	0	33	67	20	17	8	14	20	20	20	0	
Source of Applications Programs (%)														
In-House Personnel	83	40	50	33	100	60	100	31	90	65	70	40	75	
Ready-Made Programs From Manufacturer	83	60	83	0	0	0	67	85	38	50	50	100	50	
Contract Programming	17	40	0	67	33	80	0	23	5	50	20	20	25	
Manufacturer's Personnel	0	0	50	0	0	0	50	31	5	10	20	20	25	
Proprietary Software Packages	17	0	0	33	33	40	0	10	15	0	0	0	0	
Other	0	0	0	0	0	0	0	0	15	0	0	0	25	
Hardware Configuration														
No. of CPUs	9	8	6	5	3	5	7	18	42	22	4	6	15	
No. of Workstations (avg.)	15	4	1	3	4	9	1	4	7	4	4	1	2	
Software Configuration														
Database Management Systems (%)	33	20	0	0	0	0	17	8	0	10	0	0	0	
Data Communications Monitors (%)	67	0	0	0	0	0	17	8	0	20	0	0	0	
Primary Programming Languages (%)														
APL	0	0	0	0	0	0	0	0	0	0	0	0	0	
BASIC	0	0	0	100	100	100	0	0	15	30	0	0	25	
COBOL	67	100	33	0	0	0	33	85	48	70	33	0	100	
FORTRAN	17	0	0	0	0	0	0	0	0	0	0	0	0	
RPG	0	0	0	0	0	0	0	0	25	0	0	0	0	
Other	50	0	33	0	0	0	67	8	0	45	50	80	0	
Planned Acquisitions/Implementations for 1980 (%)														
Additional Software From Manufacturer	0	60	17	0	0	0	17	38	0	10	0	20	25	
Proprietary Software	17	20	0	33	33	60	17	15	10	30	20	0	0	
Expanded Data Communications	33	20	0	0	0	0	33	15	10	15	10	0	0	
Distributed Processing	17	0	0	33	0	20	17	0	0	0	0	0	0	
Integrated Word Processing	33	0	17	0	0	20	0	0	5	5	30	0	0	
Other	0	20	17	33	33	20	0	0	5	20	0	0	0	
Plans for System Replacement in 1980 (%)														
Yes, Same Manufacturer	17	40	17	67	0	20	33	46	19	15	20	20	0	
Yes, Different Manufacturer	0	0	17	0	0	0	17	8	5	0	10	20	0	
No	83	60	50	33	100	60	50	46	76	85	70	60	100	

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Ratings of Computer Systems by German Users
Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model													
	ICL (other models)	Kemzle 9066	Kienzle (other models)	MAI (Basic Four) Model 400	MAI (Basic Four) Model 600	MAI (Basic Four) Model 700	NCR Century 50 thru 100	NCR 8200 Series	Nixdorf 620	Nixdorf 8870	Nixdorf (other models)	Philips P300 Series	Philips P400 Series	
Significant Problems (%)														
System proposed by vendor was too small	0	60	33	100	33	40	83	69	14	35	10	40	50	
Delivery and/or installation of equipment was late	0	0	33	33	0	20	17	23	10	5	20	20	0	
Delivery of required software was late	17	60	33	67	0	40	0	46	5	15	0	40	25	
System costs exceeded expected total	0	40	33	0	0	20	17	0	0	15	0	20	0	
Vendor did not provide all promised software or support	0	20	33	0	0	0	17	38	5	10	30	20	0	
Program/data compatibility not what vendor promised	0	0	0	0	0	0	17	8	10	10	20	0	0	
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	0	0	0	0	0	0	10	0	0	
Vendor enhancements/changes to hardware/software hard to keep up with	0	20	33	0	0	0	17	8	0	25	40	20	0	
Equipment excessively noisy	17	40	0	0	0	0	33	0	5	15	10	20	0	
Power/cooling requirements excessive	0	0	0	0	0	0	33	0	10	5	0	0	0	
Other	0	20	17	33	33	20	33	23	10	10	10	40	0	
Significant Advantages (%)														
Users happy with response time	67	40	33	0	67	80	33	23	57	70	50	80	50	
System easy to expand/reconfigure	67	20	0	33	100	100	17	54	62	60	20	20	25	
System costs less than expected	0	0	0	0	0	0	0	0	0	0	20	0	0	
Programs/data compatible, as vendor promised	67	0	17	0	33	20	0	8	0	15	10	0	25	
Terminals/peripherals compatible, as vendor promised	67	0	0	0	0	0	0	0	0	0	0	0	0	
System power/energy efficient	0	20	0	0	0	0	0	8	5	5	10	40	0	
Productivity aids help keep programming costs down	50	40	0	67	33	0	33	8	38	30	10	40	25	
Database language efficient and effective	17	20	0	0	33	40	17	8	14	0	10	0	0	
Delivery and/or installation of equipment was ahead of schedule	0	0	0	0	33	0	0	0	0	0	10	0	0	
Delivery of required software was ahead of schedule	0	0	0	0	0	20	0	0	0	0	0	0	0	
Other	0	20	0	33	33	0	0	0	5	0	10	0	25	
System Ratings (4.0-1.0)														
Ease of operation	3.0	2.4	2.6	3.3	3.3	3.4	2.5	2.7	3.4	3.2	2.8	3.0	2.6	
Reliability of mainframe	3.7	3.0	3.4	3.0	3.7	2.9	3.3	2.8	3.3	3.4	3.0	3.0	3.8	
Reliability of peripherals	3.6	2.8	3.0	2.7	3.7	3.0	2.7	2.5	2.7	2.6	2.9	2.0	3.0	
Maintenance service:														
Responsiveness	2.8	3.0	3.0	3.0	2.3	2.8	2.8	3.0	2.7	3.0	2.8	3.6	3.0	
Effectiveness	3.0	2.6	2.8	—	2.7	2.6	2.8	3.2	2.8	2.7	2.6	3.0	3.3	
Technical Support:														
Trouble-shooting	2.8	2.4	2.2	2.3	—	2.2	2.3	2.3	2.6	2.1	2.3	2.2	2.7	
Education	2.5	2.4	2.0	3.0	2.0	2.0	2.0	2.6	2.5	2.4	2.0	2.0	2.7	
Documentation	2.3	1.4	1.6	3.0	2.0	2.6	1.8	1.4	2.3	1.9	1.5	2.2	2.7	
Manufacturer's Software:														
Operating system	3.0	2.8	2.8	3.7	3.7	3.6	2.7	2.2	3.0	2.8	2.5	2.4	3.8	
Compilers & assemblers	3.0	2.5	—	—	—	3.3	2.8	2.8	2.9	2.9	3.0	2.5	3.5	
Applications programs	2.8	1.8	2.0	3.3	—	3.0	1.8	2.1	2.8	2.7	2.3	2.5	—	
Ease of programming	3.0	3.0	2.0	3.7	4.0	2.8	2.5	2.5	3.3	2.9	2.6	1.8	3.3	
Ease of conversion	3.0	2.7	2.3	—	3.7	—	2.2	2.6	2.9	2.7	3.7	2.0	3.3	
Overall satisfaction	2.8	2.4	2.6	3.3	3.3	3.0	2.3	2.4	2.9	2.8	2.3	2.4	3.0	
Would you recommend system to another user? (%)														
Yes	100	60	50	67	100	100	50	33	85	100	85	50	80	
No	0	20	33	33	0	0	50	15	10	0	15	50	20	

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Ratings of Computer Systems by German Users

Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Philips X1100 Series	Prime (all models)	Siemens 300 (all models)	Siemens 6,000 Series	Tandem T-16	Univac (all models)	Wang Laboratories 2200VP	Wang Laboratories 2200MVP	Minis & SBC's (other vendors)		
No. of User Responses	4	5	6	3	4	4	3	10			
No. of Systems Represented	4	5	13	10	4	3	3	11			
Avg. Life of System (mos.)	56	10	31	5	20	58	33	18	25		
Acquisition Method (%)											
Purchase	0	80	83	0	100	25	67	33	90		
Rental	75	0	0	100	0	75	0	33	10		
Lease	25	20	17	0	0	0	33	33	0		
Principal Applications (%)											
Accounting	50	40	0	0	0	75	33	67	30		
Construction	0	60	0	0	0	0	67	0	0		
Education	0	0	0	0	0	0	0	0	10		
Government	0	0	0	0	0	0	0	0	0		
Manufacturing	25	40	17	33	0	25	33	33	10		
Payroll/Personnel	25	40	0	0	0	50	0	0	30		
Service Bureau	0	0	0	0	0	0	0	0	0		
Transportation	0	0	0	0	0	0	0	33	20		
Word Processing	0	20	0	0	0	0	0	0	0		
Banking/Finance	0	0	0	0	0	0	0	0	10		
Distributed Processing	25	20	17	33	0	33	0	0	30		
Engineering/Scientific	0	80	0	0	0	50	0	0	0		
Insurance	0	0	0	0	0	0	0	33	10		
Medical/Health Care	25	0	0	0	100	25	0	67	0		
Retail	0	0	0	0	33	0	33	33	40		
Transaction Processing	0	0	0	0	0	0	0	0	20		
Utilities—Power	0	0	0	0	0	0	0	0	0		
Other	75	40	50	67	0	0	0	0	0		
Source of Applications Programs (%)											
In-House Personnel	100	100	83	100	100	75	67	67	80		
Ready-Made Programs From Manufacturer	50	60	83	33	0	50	67	0	30		
Contract Programming	0	20	0	0	67	25	0	33	30		
Manufacturer's Personnel	0	0	17	0	0	25	0	0	10		
Proprietary Software Packages	0	20	0	33	0	0	33	33	10		
Other	0	20	0	0	0	0	0	0	10		
Hardware Configuration											
No. of CPUs	4	5	13	10	12	4	3	4	10		
No. of Workstations (avg.)	6	6	4	5	24	0	2	6	4		
Software Configuration											
Database Management Systems (%)	0	60	33	67	100	0	0	100	0		
Data Communications Monitors (%)	25	0	17	33	67	0	0	0	10		
Primary Programming Languages (%)											
APL	0	0	0	0	0	0	67	100	30		
BASIC	0	0	0	0	0	67	67	100	0		
COBOL	0	80	33	0	0	0	0	0	20		
FORTRAN	0	20	0	0	0	25	0	0	0		
RPG	0	0	67	67	0	50	0	0	80		
Other	0	0	0	0	0	0	0	0	0		
Planned Acquisitions/Implementations for 1980 (%)											
Additional Software From Manufacturer	0	40	67	0	33	0	0	0	10		
Proprietary Software	0	60	0	0	0	25	0	67	10		
Expanded Data Communications	0	0	0	0	33	25	33	0	10		
Distributed Processing	0	0	17	0	0	0	0	0	30		
Integrated Word Processing	25	0	0	33	0	0	0	0	0		
Other	25	40	0	33	0	25	0	0	20		
Plans for System Replacement in 1980 (%)											
Yes Same Manufacturer	0	0	17	0	0	0	0	0	10		
Yes Different Manufacturer	25	0	0	33	0	50	0	0	10		
No	50	100	83	67	100	25	67	100	80		

Ratings of Computer Systems by German Users

Table 2. Minicomputers & Small Business Computers

Survey Item	Manufacturer and Model										
	Philips X1100 Series	Prime (all models)	Siemens 300 (all models)	Siemens 6,000 Series	Tandem T-16	Univac (all models)	Wang Laboratories 2200VP	Wang Laboratories 2200MVP	Minis & SBC's (other vendors)		
Significant Problems (%)	75	0	50	67	100	50	0	33	10		
System proposed by vendor was too small	0	0	33	67	0	0	0	0	0		
Delivery and/or installation of equipment was late	0	0	17	0	0	25	0	0	20		
System costs exceeded expected total	25	0	33	67	0	50	0	0	30		
Vendor did not provide all promised software or support	0	0	17	67	0	0	0	0	0		
Program/data compatibility not what vendor promised	0	0	17	0	0	0	0	0	0		
Terminals/peripherals compatibility not what vendor promised	0	0	17	0	0	0	0	0	0		
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	17	0	0	25	0	0	20		
Equipment excessively noisy	25	20	33	67	0	75	0	0	10		
Power/cooling requirements excessive	25	20	33	67	0	75	0	0	20		
Other	25	20	33	67	0	75	0	0	10		
Significant Advantages (%)	25	20	33	67	0	75	0	0	10		
Users happy with response time	25	20	33	67	0	75	0	0	10		
System easy to expand/reconfigure	50	20	33	67	0	50	0	0	10		
System costs less than expected	25	20	33	67	0	75	0	0	10		
Programs/data compatible, as vendor promised	25	20	33	67	0	75	0	0	10		
Terminals/peripherals compatible, as vendor promised	25	20	33	67	0	75	0	0	10		
System power/energy efficient	25	20	33	67	0	75	0	0	10		
Productivity aids help keep programming costs down	0	60	0	0	0	0	0	0	10		
Database language efficient and effective	0	60	0	0	0	0	0	0	10		
Delivery and/or installation of equipment was ahead of schedule	0	60	0	0	0	0	0	0	10		
Delivery of required software was ahead of schedule	0	60	0	0	0	0	0	0	10		
Other	0	60	0	0	0	0	0	0	10		
System Ratings (4 0-1 0)	28	34	27	20	37	25	37	37	33		
Ease of operation	30	30	33	30	37	23	37	37	33		
Reliability of mainframe	28	28	27	23	30	18	27	30	29		
Reliability of peripherals	25	36	32	20	30	33	33	23	28		
Maintenance service:	30	28	28	20	27	28	33	27	27		
Responsiveness	2.3	2.6	2.2	1.3	3.3	1.7	—	2.0	2.7		
Effectiveness	2.3	2.3	2.2	2.3	2.3	1.7	—	2.3	2.8		
Technical Support:	2.0	2.6	2.2	1.3	3.3	1.7	—	2.0	2.4		
Trouble-shooting	2.5	3.4	2.7	2.0	3.3	2.3	3.7	3.0	2.9		
Education	2.8	3.2	3.0	1.7	3.7	2.5	—	3.0	3.1		
Documentation	2.8	3.0	2.2	—	3.0	2.5	—	3.0	2.1		
Manufacturer's Software:	2.8	3.2	2.2	1.7	3.7	2.0	3.3	3.7	3.2		
Operating system	3.0	3.2	1.8	—	—	2.0	3.7	3.3	2.8		
Compilers & assemblers	2.3	3.2	2.3	1.7	—	1.8	3.7	3.0	2.9		
Applications programs	50	100	0	50	33	100	0	100	60		
Ease of programming	50	100	0	50	33	100	0	100	60		
Ease of conversion	50	100	0	50	33	100	0	100	60		
Overall satisfaction	50	100	0	50	33	100	0	100	60		
Would you recommend system to another user? (%)											
Yes	50	100	0	50	33	100	0	100	60		
No	50	100	0	50	33	100	0	100	60		

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Ratings of Computer Systems by German Users

Table 3. Desktop, Personal, & Microcomputers

Survey Item	Manufacturer and Model		
	Commodore (all models)	North Star Horizon	Other Personal Computers
No. of User Responses	6	3	11
No. of Systems Represented	11	3	30
Avg. Life of System (mos.)	19	16	14
Acquisition Method (%)			
Purchase	100	67	91
Rental	0	0	9
Lease	0	33	0
Principal Applications (%)			
Accounting	17	67	18
Construction	0	33	9
Education	33	33	45
Government	0	0	0
Manufacturing	0	33	27
Payroll/Personnel	17	33	9
Service Bureau	0	0	9
Transportation	0	33	9
Word Processing	50	100	45
Banking/Finance	17	0	0
Distributed Processing	0	33	0
Engineering/Scientific	33	33	36
Insurance	17	0	0
Medical/Health Care	0	0	9
Retail	0	0	0
Transaction Processing	0	33	0
Utilities—Power	0	0	27
Other	67	33	36
Source of Applications Programs (%)			
In-House Personnel	100	67	100
Ready-Made Programs From Manufacturer	0	33	27
Contract Programming	0	0	9
Manufacturer's Personnel	0	0	0
Proprietary Software Packages	33	100	27
Other	0	33	9
Hardware Configuration			
No. of CPUs	11	3	24
No. of Workstations (avg.)	1	1	3
Software Configuration			
Database Management Systems (%)	17	0	9
Data Communications Monitors (%)	17	0	9
Primary Programming Languages (%)			
APL	0	0	0
BASIC	83	67	55
COBOL	0	33	9
FORTRAN	0	33	27
RPG	0	0	0
Other	17	33	45
Planned Acquisitions/Implementations for 1980 (%)			
Additional Software From Manufacturer	0	0	18
Proprietary Software	17	100	36
Expanded Data Communications	17	33	36
Distributed Processing	0	33	9
Integrated Word Processing	17	33	27
Other	33	33	0
Plans for System Replacement in 1980 (%)			
Yes, Same Manufacturer	0	0	9
Yes, Different Manufacturer	0	0	9
No	100	100	91

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Ratings of Computer Systems by German Users

Table 3. Desktop, Personal, & Microcomputers

Survey Item	Manufacturer and Model		
	Commodore (all models)	North Star Horizon	Other Personal Computers
Significant Problems (%)			
System proposed by vendor was too small	0	0	0
Delivery and/or installation of equipment was late	0	33	18
Delivery of required software was late	0	0	9
System costs exceeded expected total	0	0	0
Vendor did not provide all promised software or support	17	0	0
Program/data compatibility not what vendor promised	0	0	0
Terminals/peripherals compatibility not what vendor promised	33	0	0
Vendor enhancements/changes to hardware/software hard to keep up with	33	0	0
Equipment excessively noisy	0	0	9
Power/cooling requirements excessive	0	0	0
Other	50	33	36
Significant Advantages (%)			
Users happy with response time	50	67	45
System easy to expand/reconfigure	33	100	55
System costs less than expected	33	33	9
Programs/data compatible, as vendor promised	0	33	27
Terminals/peripherals compatible, as vendor promised	0	67	18
System power/energy efficient	33	67	27
Productivity aids help keep programming costs down	0	67	36
Database language efficient and effective	0	0	9
Delivery and/or installation of equipment was ahead of schedule	0	0	0
Delivery of required software was ahead of schedule	0	0	9
Other	50	0	27
System Ratings (4 0-1 0)			
Ease of operation	3.7	3.0	3.3
Reliability of mainframe	3.5	2.7	3.1
Reliability of peripherals	2.7	—	2.5
Maintenance service	2.3	—	2.0
Responsiveness	2.7	—	2.6
Effectiveness	—	—	—
Technical Support	—	—	—
Trouble-shooting	1.4	—	2.3
Education	1.2	—	1.8
Documentation	1.3	—	2.7
Manufacturer's Software	—	—	—
Operating system	3.0	—	3.0
Compilers & assemblers	2.5	—	2.6
Applications programs	—	—	2.2
Ease of programming	3.2	—	3.4
Ease of conversion	2.4	—	2.9
Overall satisfaction	2.8	3.3	3.0
Would you recommend system to another user? (%)			
Yes	83	100	82
No	17	0	18

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Ratings of Computer Systems by German Users

Table 4. Mainframe and Plug-Compatible Mainframe Vendor Summaries

Survey Item	Manufacturer and Model								
	Burroughs	Cii Honeywell Bull	Control Data	DEC	IBM	NASCO (Itel)	NCR	Siemens	Univac
No. of User Responses	9	35	3	5	342	6	23	116	35
No. of Systems Represented	10	39	3	5	369	6	26	127	38
Avg. Life of System (mos.)	30	34	29	16	39	12	29	31	32
Acquisition Method (%)									
Purchase	40	40	33	80	44	17	43	38	20
Rental	40	14	67	0	29	50	39	54	74
Lease	20	49	0	20	33	33	17	18	3
Principal Applications (%)									
Accounting	89	77	0	20	78	83	70	65	83
Construction	11	3	0	60	11	33	0	7	3
Education	11	0	33	0	1	17	0	0	6
Government	0	9	0	0	8	0	0	22	6
Manufacturing	11	37	0	20	46	67	35	36	29
Payroll/Personnel	44	69	0	20	72	67	83	66	71
Service Bureau	0	14	0	40	12	17	22	10	14
Transportation	11	3	0	0	5	17	0	8	3
Word Processing	11	0	0	0	8	33	0	6	6
Banking/Finance	0	14	0	0	19	17	13	11	7
Distributed Processing	11	6	0	0	7	17	0	7	6
Engineering/Scientific	0	6	100	60	8	17	0	16	9
Insurance	0	0	0	0	3	0	9	3	0
Medical/Health Care	0	3	0	0	21	17	26	20	51
Retail	56	23	0	0	27	33	9	14	17
Transaction Processing	33	14	0	0	15	33	13	13	11
Utilities—Power	22	20	0	20	7	0	17	18	11
Other	11	9	0	0	0	0	0	0	0
Source of Applications Programs (%)									
In-House Personnel	89	92	100	80	99	83	100	98	100
Ready-Made Programs From Manufacturer	78	31	33	20	49	50	65	60	46
Contract Programming	33	20	0	20	27	67	9	25	34
Manufacturer's Personnel	0	11	0	0	9	0	9	11	6
Proprietary Software Packages	33	31	33	80	46	50	13	36	17
Other	0	3	0	0	2	0	0	3	0
Hardware Configuration									
No. of CPUs	10	39	3	5	373	6	29	128	38
No. of Workstations (avg.)	20	12	43	21	41	106	9	20	12
Software Configuration									
Database Management Systems (%)	78	34	33	40	53	83	57	40	31
Data Communications Monitors (%)	56	29	0	20	72	67	43	41	46
Primary Programming Languages (%)									
APL	0	0	0	0	1	0	0	0	0
BASIC	11	3	0	0	0	0	0	0	0
COBOL	89	89	0	60	45	50	39	67	54
FORTRAN	22	6	67	60	4	0	0	13	0
RPG	44	6	0	0	33	33	0	16	43
Other	22	6	33	40	76	33	78	43	49
Planned Acquisitions/Implementations for 1980 (%)									
Additional Software From Manufacturer	44	29	0	0	31	33	39	34	23
Proprietary Software	11	14	0	20	32	50	9	22	11
Expanded Data Communications	44	29	0	40	38	33	26	28	29
Distributed Processing	11	14	0	0	15	33	4	9	9
Integrated Word Processing	22	0	0	0	8	0	0	5	6
Other	0	6	0	20	3	33	4	7	11
Plans for System Replacement in 1980 (%)									
Yes, Same Manufacturer	22	14	33	0	30	0	22	13	3
Yes, Different Manufacturer	0	0	0	0	2	0	4	2	3
No	67	83	67	100	64	100	65	79	91

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Ratings of Computer Systems by German Users

Table 4. Mainframe and Plug-Compatible Mainframe Vendor Summaries

Survey Item	Manufacturer and Model								
	Burroughs	Cii Honeywell Bull	Control Data	DEC	IBM	NASCO (Itel)	NCR	Siemens	Univac
Significant Problems (%)									
System proposed by vendor was too small	44	37	0	60	21	0	9	25	20
Delivery and/or installation of equipment was late	22	11	0	0	6	33	17	15	9
Delivery of required software was late	11	9	0	0	4	17	9	10	11
System costs exceeded expected total	11	3	0	0	8	0	4	11	6
Vendor did not provide all promised software or support	11	0	0	0	7	17	4	11	6
Program/data compatibility not what vendor promised	0	0	0	0	2	0	4	10	11
Terminals/peripherals compatibility not what vendor promised	0	6	0	0	2	0	4	2	3
Vendor enhancements/changes to hardware/software hard to keep up with	0	0	0	0	3	17	0	22	11
Equipment excessively noisy	11	6	0	0	18	0	4	8	9
Power/cooling requirements excessive	0	11	0	0	4	17	0	14	9
Other	11	6	33	0	10	0	9	13	9
Significant Advantages (%)									
Users happy with response time	33	46	0	60	46	100	57	55	37
System easy to expand/reconfigure	56	83	67	100	30	67	61	58	71
System costs less than expected	11	6	0	0	5	33	9	9	0
Programs/data compatible, as vendor promised	22	43	33	20	24	83	43	28	40
Terminals/peripherals compatible, as vendor promised	11	11	0	40	26	83	22	4	6
System power/energy efficient	0	0	0	20	2	67	0	5	9
Productivity aids help keep programming costs down	33	11	0	60	29	17	13	21	34
Database language efficient and effective	44	11	0	0	8	33	26	15	11
Delivery and/or installation of equipment was ahead of schedule	0	3	0	0	6	50	4	7	20
Delivery of required software was ahead of schedule	0	0	0	0	2	0	0	2	0
Other	11	6	33	0	3	17	4	4	6
System Ratings (4 0-1 0)									
Ease of operation	32	30	—	32	27	28	30	28	29
Reliability of mainframe	28	35	23	26	34	35	33	33	32
Reliability of peripherals	26	27	30	26	30	30	29	28	29
Maintenance service	24	30	30	28	29	33	29	30	29
Responsiveness	24	29	30	24	28	28	28	27	28
Effectiveness	23	24	23	28	24	20	22	23	26
Technical Support:	21	23	20	26	25	20	22	27	27
Trouble-shooting	19	22	27	26	24	20	20	23	23
Education									
Documentation									
Manufacturer's Software									
Operating system	33	33	20	36	27	25	32	28	32
Compilers & assemblers	32	32	27	30	30	28	32	29	29
Applications programs	27	25	23	25	26	25	27	26	24
Ease of programming	27	30	17	30	26	26	29	27	27
Ease of conversion	30	29	20	30	26	28	30	25	28
Overall satisfaction	24	30	27	28	28	28	29	28	28
Would you recommend system to another user? (%)									
Yes	56	80	67	100	78	83	87	84	83
No	44	11	33	0	18	17	9	15	14

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Ratings of Computer Systems by German Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Survey Item	Manufacturer and Model									
	Burroughs	CI Honeywell Bull	Computer Gesellschaft Konstanz (CGK)	CTM	Data General	Datapoint	Dierz	DEC	Hewlett-Packard	IBM
No. of User Responses	33	31	4	6	3	3	7	17	10	172
No. of Systems Represented	33	4	11	5	32	22	23	21	186	
Avg. Life of System (mos.)	3.2	1.34	7.7	1.8	3.7	5.5	3.8	4.7	1.5	3.1
Acquisition Method (%)										
Purchase	0	39	75	67	67	100	71	65	70	46
Rental	0	45	75	0	0	67	0	0	0	47
Lease	100	19	0	33	0	0	14	29	30	13
Principal Applications (%)										
Accounting	67	90	0	100	67	67	14	47	30	83
Construction	0	0	0	0	0	0	6	0	2	2
Education	0	0	75	0	0	0	29	12	0	1
Government	0	6	0	33	0	0	0	6	0	3
Manufacturing	67	35	0	17	33	33	14	35	20	55
Payroll/Personnel	33	74	0	67	33	33	14	35	0	73
Service Bureau	0	13	0	33	0	0	14	6	0	17
Transportation	0	0	0	33	0	0	0	12	0	5
Word Processing	0	3	0	33	0	0	0	6	10	2
Banking/Finance	0	0	0	50	0	33	0	0	10	9
Distributed Processing	33	3	0	17	0	0	0	24	10	5
Engineering/Scientific	0	3	100	17	0	0	57	35	30	3
Insurance	0	6	0	17	0	0	0	6	10	1
Medical/Health Care	0	3	0	17	0	0	14	10	0	1
Retail	33	39	0	50	33	33	14	16	20	34
Transaction Processing	0	6	0	33	0	33	14	6	0	10
Utilities—Power	0	6	50	33	0	33	14	12	0	10
Other	33	13	0	33	0	33	29	6	10	13
Source of Applications Programs (%)										
In-House Personnel	33	81	100	50	33	100	57	82	70	90
Ready-Made Programs From Manufacturer	33	48	50	83	33	33	43	41	30	37
Contract Programming	67	23	0	50	33	0	43	29	60	28
Manufacturer's Personnel	0	13	0	0	0	0	0	0	0	6
Proprietary Software Packages	0	6	0	33	0	0	12	10	16	16
Other	0	3	25	50	0	0	6	0	0	1
Hardware Configuration										
No. of CPUs	3	35	5	13	5	32	22	23	21	186
No. of Workstations (avg.)	2	3	40	3	4	1	3	10	4	6
Software Configuration										
Database Management Systems (%)	0	6	50	0	0	0	0	35	80	3
Data Communications Monitors (%)	0	23	0	0	33	33	0	18	0	20
Primary Programming Languages (%)										
APL	0	0	0	0	0	0	0	0	0	0
BASIC	0	0	0	17	33	0	71	53	40	1
COBOL	100	81	25	0	67	0	0	0	0	6
FORTRAN	0	0	100	0	33	0	43	41	40	2
RPG	0	32	0	0	0	0	0	0	0	90
Other	0	3	100	83	0	100	29	41	10	5
Planned Acquisitions/Implementations for 1980 (%)										
Additional Software From Manufacturer	33	13	0	83	0	33	0	18	20	10
Proprietary Software	67	19	0	17	33	0	0	24	30	13
Expanded Data Communications	0	13	0	33	0	33	0	12	20	16
Distributed Processing	0	0	0	0	33	14	18	30	8	3
Integrated Word Processing	0	0	0	33	0	33	0	12	0	8
Other	33	3	0	0	33	0	0	20	8	
Plans for System Replacement in 1980 (%)										
Yes, Same Manufacturer	0	19	0	17	0	0	14	24	0	15
Yes, Different Manufacturer	33	10	0	0	33	33	14	0	0	7
No	67	61	100	83	67	33	71	71	100	71

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Ratings of Computer Systems by German Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Survey Item	Manufacturer and Model									
	Burroughs	CI Honeywell Bull	Computer Gesellschaft Konstanz (CGK)	CTM	Data General	Datapoint	Dierz	DEC	Hewlett-Packard	IBM
Significant Problems (%)										
System proposed by vendor was too small	67	32	0	50	33	0	29	18	10	26
Delivery and/or installation of equipment was late	0	19	0	17	0	0	0	6	20	8
Delivery of required software was late	0	16	0	50	0	0	29	12	30	8
System costs exceeded expected total	0	3	0	0	33	0	0	24	20	5
Vendor did not provide all promised software or support	33	19	0	17	0	0	43	18	10	5
Program/data compatibility not what vendor promised	0	10	0	17	0	67	0	6	10	2
Terminals/peripherals compatibility not what vendor promised	0	0	25	0	0	0	14	0	0	2
Vendor enhancements/changes to hardware/software hard to keep up with	33	13	75	0	0	33	29	12	10	10
Equipment excessively noisy	0	16	50	0	0	0	14	6	20	9
Power/cooling requirements excessive	33	13	25	0	0	0	0	0	10	6
Other	67	10	25	17	33	0	14	6	20	16
Significant Advantages (%)										
Users happy with response time	33	35	75	100	100	33	43	47	70	46
System easy to expand/reconfigure	33	35	75	83	67	100	29	65	50	40
System costs less than expected	0	3	0	17	0	0	14	6	30	6
Programs/data compatible, as vendor promised	0	32	0	0	33	0	0	18	20	19
Terminals/peripherals compatible, as vendor promised	0	3	0	0	0	0	0	24	10	14
System power/energy efficient	0	3	0	17	0	33	0	0	0	5
Productivity aids help keep programming costs down	33	6	50	67	0	33	14	24	40	20
Database language efficient and effective	0	6	0	0	0	33	0	18	70	2
Delivery and/or installation of equipment was ahead of schedule	33	6	0	0	0	0	0	6	0	5
Delivery of required software was ahead of schedule	33	0	0	0	0	0	0	0	0	2
Other	0	0	25	33	0	0	29	0	10	5
System Ratings (4.0-1.0)										
Ease of operation	3.3	2.8	3.5	3.3	3.7	3.3	2.6	3.1	3.3	3.1
Reliability of mainframe	3.3	3.3	3.0	3.2	3.3	2.7	2.9	3.2	3.3	3.5
Reliability of peripherals	2.3	2.6	3.0	3.0	3.0	2.7	2.9	2.9	2.8	3.0
Maintenance service: Responsiveness	3.3	2.4	3.8	2.7	3.0	1.7	3.1	2.8	2.0	3.0
Effectiveness	3.3	2.4	3.5	2.4	2.7	1.7	2.8	2.8	2.0	2.9
Technical Support: Trouble-shooting	2.0	2.0	—	2.7	—	1.7	2.6	2.1	1.8	2.6
Education	1.7	2.4	2.3	2.0	—	—	2.0	2.2	2.6	2.7
Documentation	2.3	2.0	3.0	2.0	—	—	1.7	2.4	2.4	2.6
Manufacturer's Software: Operating system	2.7	2.7	3.5	3.2	3.3	3.3	2.6	3.3	3.4	3.1
Compilers & assemblers	2.7	2.7	3.0	2.5	2.7	—	2.3	2.8	3.1	3.1
Applications programs	—	2.5	3.0	2.7	2.3	—	2.2	2.5	3.2	2.7
Ease of programming	2.3	2.7	3.5	3.0	3.3	3.0	2.9	3.1	3.0	3.0
Ease of conversion	—	2.6	3.0	2.3	2.3	—	2.2	2.8	2.7	2.9
Overall satisfaction	2.3	2.5	3.3	3.2	3.0	—	2.4	2.9	2.9	3.0
Would you recommend system to another user? (%)										
Yes	33	77	75	100	67	67	43	71	80	77
No	67	23	25	0	33	33	57	24	10	22

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Ratings of Computer Systems by German Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Manufacturer and Model	Survey Item												
	ICL	Kienzle	MAI	NCR	Nixdorf	Philips	Prime	Siemens	Tandem	Univac	Wang Labs	Mini & SBC (other vendors)	
No. of User Responses	21	11	11	19	51	13	9	23	4	4	6	10	
No. of Systems Represented	29	14	13	25	87	25	3	23	4	7	11	25	
Avg. Life of System (mos.)	39	18	23	42	32	41	10	22	20	58	28	20	
Acquisition Method (%)													
Purchase	43	36	64	63	24	38	80	56	100	25	50	90	
Rental	38	9	9	42	61	31	0	33	0	75	0	10	
Lease	19	55	27	5	18	31	20	11	0	0	39	0	
Principal Applications (%)													
Accounting	67	64	91	89	55	62	40	0	0	75	50	30	
Construction	5	0	0	0	12	0	60	0	0	0	33	0	
Education	5	0	0	0	0	0	0	0	0	0	0	10	
Government	0	9	0	0	8	0	0	0	0	0	0	0	
Manufacturing	14	9	18	16	35	8	40	22	0	0	0	0	
Payroll/Personnel	52	36	27	74	37	46	40	11	0	25	33	10	
Service Bureau	24	0	0	0	14	15	0	0	0	50	0	0	
Transportation	10	0	9	0	14	8	0	0	0	0	0	0	
Word Processing	5	9	9	0	12	0	20	0	0	0	17	20	
Banking/Finance	5	0	0	11	8	0	0	0	0	0	0	0	
Distributed Processing	10	0	9	0	4	15	20	22	0	0	0	10	
Engineering/Scientific	5	0	0	0	0	0	80	22	0	0	17	30	
Insurance	0	0	0	0	0	0	0	0	0	50	0	0	
Medical/Health Care	0	0	0	0	0	0	0	0	0	0	17	0	
Retail	3	18	36	63	27	8	0	0	100	25	33	10	
Transaction Processing	14	0	0	11	6	0	0	0	33	0	33	0	
Utilities—Power	19	0	36	11	18	8	0	0	0	0	17	40	
Other	19	45	18	16	33	46	40	56	0	0	0	20	
Source of Applications Programs (%)													
In-House Personnel	76	45	64	53	76	69	100	89	100	75	67	80	
Ready-Made Programs From Manufacturer	71	73	0	79	45	69	60	67	0	50	33	30	
Contract Programming	33	18	64	16	25	15	20	0	67	25	17	30	
Manufacturer's Personnel	0	27	0	37	10	15	0	11	0	25	0	10	
Proprietary Software Packages	14	0	36	0	10	0	20	11	0	0	33	10	
Other	0	0	0	0	6	8	20	0	0	0	0	10	
Hardware Configuration													
No. of CPUs	32	14	13	25	79	25	5	23	12	4	7	10	
No. of Workstations (avg.)	5	3	6	2	8	3	6	3	24	0	4	4	
Software Configuration													
Database Management Systems (%)	10	9	0	11	4	0	60	44	100	0	50	0	
Data Communications Monitors (%)	24	0	0	11	8	8	0	22	67	0	0	10	
Primary Programming Languages (%)													
APL	0	0	0	0	0	0	0	0	33	0	0	0	
BASIC	0	0	100	0	12	8	0	0	0	0	83	30	
COBOL	2	64	0	68	53	38	0	22	67	100	0	10	
FORTRAN	5	0	0	0	0	0	80	22	0	0	0	20	
RPG	4	0	0	0	10	0	20	0	0	25	0	0	
Other	57	18	0	26	27	46	0	67	0	50	0	80	
Planned Acquisitions/Implementations for 1980 (%)													
Additional Software From Manufacturer	10	36	0	32	4	15	40	44	33	0	0	10	
Proprietary Software	5	9	45	16	20	0	60	0	0	25	33	10	
Expanded Data Communications	24	9	0	21	12	0	0	0	0	0	0	30	
Distributed Processing	10	0	18	5	4	0	0	11	0	0	0	30	
Integrated Word Processing	10	9	9	5	10	8	0	0	33	0	0	30	
Other	5	18	27	0	10	8	40	11	0	25	0	20	
Plans for System Replacement in 1980 (%)													
Yes, Same Manufacturer	5	27	27	42	18	8	0	11	0	0	0	10	
Yes, Different Manufacturer	0	9	0	11	4	15	0	11	0	50	0	10	
No	95	55	64	47	78	69	100	78	100	25	83	80	

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Ratings of Computer Systems by German Users

Table 5. Minicomputer and Small Business Computer Vendor Summaries

Manufacturer and Model	Survey Item												
	ICL	Kienzle	MAI	NCR	Nixdorf	Philips	Prime	Siemens	Tandem	Univac	Wang Labs	Mini & SBC (other vendors)	
Significant Problems (%)													
System proposed by vendor was too small	24	45	55	74	22	10	54	0	56	100	50	17	10
Delivery and/or installation of equipment was late	10	18	18	21	10	8	8	0	44	0	17	30	
Delivery of required software was late	19	45	36	32	12	23	0	56	0	25	17	20	
System costs exceeded expected total	5	36	9	5	6	8	0	11	33	0	0	10	
Vendor did not provide all promised software or support	10	27	0	32	12	15	0	44	0	50	0	30	
Program/data compatibility not what vendor promised	0	0	0	11	12	0	0	33	0	0	0	0	
Terminals/peripherals compatibility not what vendor promised	0	0	0	0	2	0	0	11	0	0	0	0	
Vendor enhancements/changes to hardware/software hard to keep up with	14	27	0	11	18	15	20	44	0	25	0	20	
Equipment excessively noisy	14	18	0	11	10	15	20	0	0	75	0	20	
Power/cooling requirements excessive	5	0	0	11	6	8	0	0	0	25	0	10	
Other	10	18	27	26	10	31	20	44	0	50	0	10	
Significant Advantages (%)													
Users happy with response time	62	36	55	26	61	54	40	56	67	25	83	70	
System easy to expand/reconfigure	67	9	82	42	53	23	80	0	100	25	83	50	
System costs less than expected	0	0	0	0	4	0	0	0	50	17	30	40	
Programs/data compatible, as vendor promised	38	9	18	5	8	8	40	0	0	0	0	40	
Terminals/peripherals compatible, as vendor promised	29	0	9	0	0	0	60	0	0	0	17	40	
System power/energy efficient	0	9	0	5	6	15	0	11	0	0	0	10	
Productivity aids help keep programming costs down	24	18	27	16	29	46	60	11	67	25	17	30	
Database language efficient and effective	5	9	27	11	8	0	20	0	100	0	0	10	
Delivery and/or installation of equipment was ahead of schedule	5	0	9	0	2	23	0	11	0	0	17	30	
Delivery of required software was ahead of schedule	5	0	9	0	0	0	0	0	0	0	17	30	
Other	5	9	18	0	4	8	0	0	0	0	0	10	
System Ratings (4.0-1.0)													
Ease of operation	30	25	33	26	32	28	34	25	37	25	37	33	
Reliability of mainframe	35	32	31	30	33	32	30	32	—	23	37	33	
Reliability of peripherals	28	29	31	26	27	26	28	26	30	18	29	29	
Maintenance service	27	30	27	29	28	31	36	28	30	33	28	28	
Responsiveness	28	27	27	31	27	31	28	25	27	28	30	27	
Effectiveness													
Technical Support:													
Trouble-shooting	2.5	2.3	2.3	2.3	2.4	2.4	2.6	1.9	3.3	1.7	2.2	2.7	
Education	2.7	2.2	2.3	2.4	2.4	2.3	2.3	2.2	2.3	1.7	2.4	2.8	
Documentation	2.3	1.5	2.5	1.5	2.0	2.3	2.6	1.9	1.7	1.7	2.2	2.4	
Manufacturer's Software:													
Operating system	3.0	2.8	3.7	2.4	2.8	2.9	3.4	2.5	3.3	2.3	3.4	2.9	
Compilers & assemblers	2.7	2.7	3.2	2.8	2.9	2.9	3.2	2.5	3.7	—	3.0	3.1	
Applications programs	2.8	1.9	3.1	2.0	2.7	2.6	3.0	2.4	3.0	2.5	3.0	2.1	
Ease of programming	2.9	2.6	3.4	2.5	3.0	2.6	3.2	2.0	3.7	2.0	3.5	3.2	
Ease of conversion	2.9	2.5	3.7	2.4	2.9	2.8	3.2	1.5	—	2.0	3.5	2.8	
Overall satisfaction	2.7	2.5	3.2	2.4	2.8	2.6	3.2	2.1	—	1.8	3.4	2.9	
Would you recommend system to another user? (%)													
Yes	76	55	91	74	78	77	100	0	44	100	0	60	
No	19	27	9	21	20	23	0	56	0	75	100	30	

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