EUROPEAN COMPUTER SERVICES PRICING TRENDS

INPUT

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INPUT Planning Services for Management

EUROPEAN COMPUTER SERVICES
PRICING TRENDS

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EXHIBITS

1 INTRODUCTION

I INTRODUCTION

- This report is produced by INPUT as a result of a multiclient study on European computer services pricing trends. The report covers pricing methods and trends for processing services vendors, software products/ professional services vendors, and turnkey systems vendors for the period 1981 to 1983 and forecasts pricing trends for the period 1983 to 1988.

- The research was done in four European countries (the United Kingdom, France, Germany, and Italy). The structure and analysis of vendor types is conducted in parallel in order to facilitate comparison and contrast.

- Research for this report was conducted by interviewing 58 representative processing services, software products, professional services, and turnkey systems vendors, and 43 users of these services.

- All of the interviews were conducted on-site or by telephone. In each country the interviews were conducted by nationals with computer services expertise and knowledge of business practices in their country.

- In the user interview program, every effort was made to contact executives who make the decisions to buy computer services, as shown in Exhibit I-1.

- The interview sample contains companies ranging in size from small to very large, having annual EDP expenditures between $5,000 and $27,000,000. As shown in the Exhibit I-2 average annual EDP expenditures were smallest for

EXHIBIT I-1

COMPUTER SERVICES USER INTERVIEW PROGRAM

COUNTRY	NUMBER OF INTERVIEWS					
	DIRECTOR/ MANAGER EDP	MANAGING DIRECTOR/ PROPRIETOR	DIRECTOR/ MANAGER ADMINISTRATIONS PLANNING	DIRECTOR/ MANAGER OPERATIONS/ PROGRAMMING	DIRECTOR/ MANAGER ACCOUNTING	TOTAL
United Kingdom	3	2	-	2	2	9
France	9	2	2	-	-	13
Germany	3	4	2	1	-	10
Italy	1	6	3	-	1	11
Europe	16	14	7	3	3	43

* 1 = Least Important, 5 = Most Important

EXHIBIT I-2

COMPANY EDP EXPENDITURES IN 1982
AS REPORTED BY USERS IN INTERVIEW SAMPLE

COUNTRY	NUMBER OF RESPONDENTS	ANNUAL EDP EXPENDITURES ($ thousands)	
		AVERAGE	RANGE
United Kingdom	9	$2,300	$56-9,600
France	13	5,800	6-26,700
Germany	10	3,500	30-11,300
Italy	11	53	5-207
Europe	43	$3,060	$5-26,700

Italy and largest for France, with an overall weighted average expenditure for all respondents slightly over $3,000,000 annually.

- The vendor interview program consisted of 58 on-site and telephone interviews, as shown in Exhibit I-3. Over half of the interviews concentrated on processing services vendors, which included batch, interactive, and remote batch processing.

- Aggregate revenue and growth figures in 1982, where available, are shown in Exhibit I-4. The data appear representative of the computer services market in Europe.

  - Processing services vendor revenues are over four times those of software products vendors.

  - Growth of software products revenue is largest, exceeding that of processing services by a factor of at least three.

  - Turnkey system vendor revenues, just over half those of software product vendors, show a significant aggregate growth for all of Europe but vary widely by country.

- Interviews were conducted from February through May 1983.

- Particular areas investigated were:

  - Current pricing practices.

  - Discounting.

  - Pricing trends.

EXHIBIT I-3

COMPUTER SERVICES VENDOR INTERVIEW PROGRAM

COUNTRY	NUMBER OF INTERVIEWS			
	SOFTWARE PRODUCTS/ PROFESSIONAL SERVICES	PROCESSING SERVICES	TURNKEY SYSTEMS	TOTAL
United Kingdom	3	6	4	13
France	7	6	3	16
Germany	2	8	2	12
Italy	4	10	3	17
Europe	16	30	12	58

EXHIBIT I-4

AVERAGE REVENUES IN 1982
AS REPORTED BY VENDORS IN INTERVIEW SAMPLE

COUNTRY	SOFTWARE PRODUCTS				PROCESSING SERVICES				TURNKEY			
	RESPONDENTS		1982 REVENUES ($ thousands)	AAGR 1981/1983 (percent)	RESPONDENTS		1982 REVENUES ($ thousands)	AAGR 1981/1983 (percent)	RESPONDENTS		1982 REVENUES ($ thousands)	AAGR 1981/1983 (percent)
	A	NA			A	NA			A	NA		
United Kingdom	3	0	$3,710	49%	2	4	$14,160	10%	1	3	$1,210	14%
France	3	4	6,180	43	4	2	46,870	8	3	0	8,280	45
Germany	2	0	312	70	8	0	562	4	2	0	265	70
Italy	4	0	1,420	54	10	0	3,190	31	3	0	3,160	18
Europe	12	4	$2,300	53%	24	6	$10,510	16%	9	3	$4,010	38%

A = Available
NA = Not Available

- Actual changes in prices for 1981 to 1982 and both vendor and user expectations for 1983.

- Buyer and vendor expectations are compared with respect to:

  - Impact of price changes.

  - Pricing and service selection factors.

  - Expectations for future prices.

- Vendors were asked to provide information about pricing policies and plans. There is no identification of specific vendors who participated in the market research. The study addresses domestic pricing and policy trends in the four European countries, considered in the aggregate as Europe.

- Financial data, when presented, has been converted to U.S. dollars at the following conversion rates:

  - 0.625 pounds per dollar.

  - 7.35 francs per dollar.

  - 1,450 lire per dollar.

- Vendor and user questionnaires are shown as Appendix A.

- Definitions of terms used in this report are included as Appendix B.

II EXECUTIVE SUMMARY

II EXECUTIVE SUMMARY

A. EUROPEAN MARKETS AT A GLANCE

- Use of computer services varies greatly among the four European countries surveyed: the U.K., France, Germany, and Italy. As shown in Exhibit II-1, users in the four countries as a group spent nearly one-third of their total EDP budgets on computer services in 1982.

  - Nearly equal portions were spent on processing services, software products, and professional services.

  - Less than 10% (primarily in the U.K.) was spent on turnkey systems. INPUT expects that the portion spent for turnkey systems will rapidly rise from 1983 to 1987.

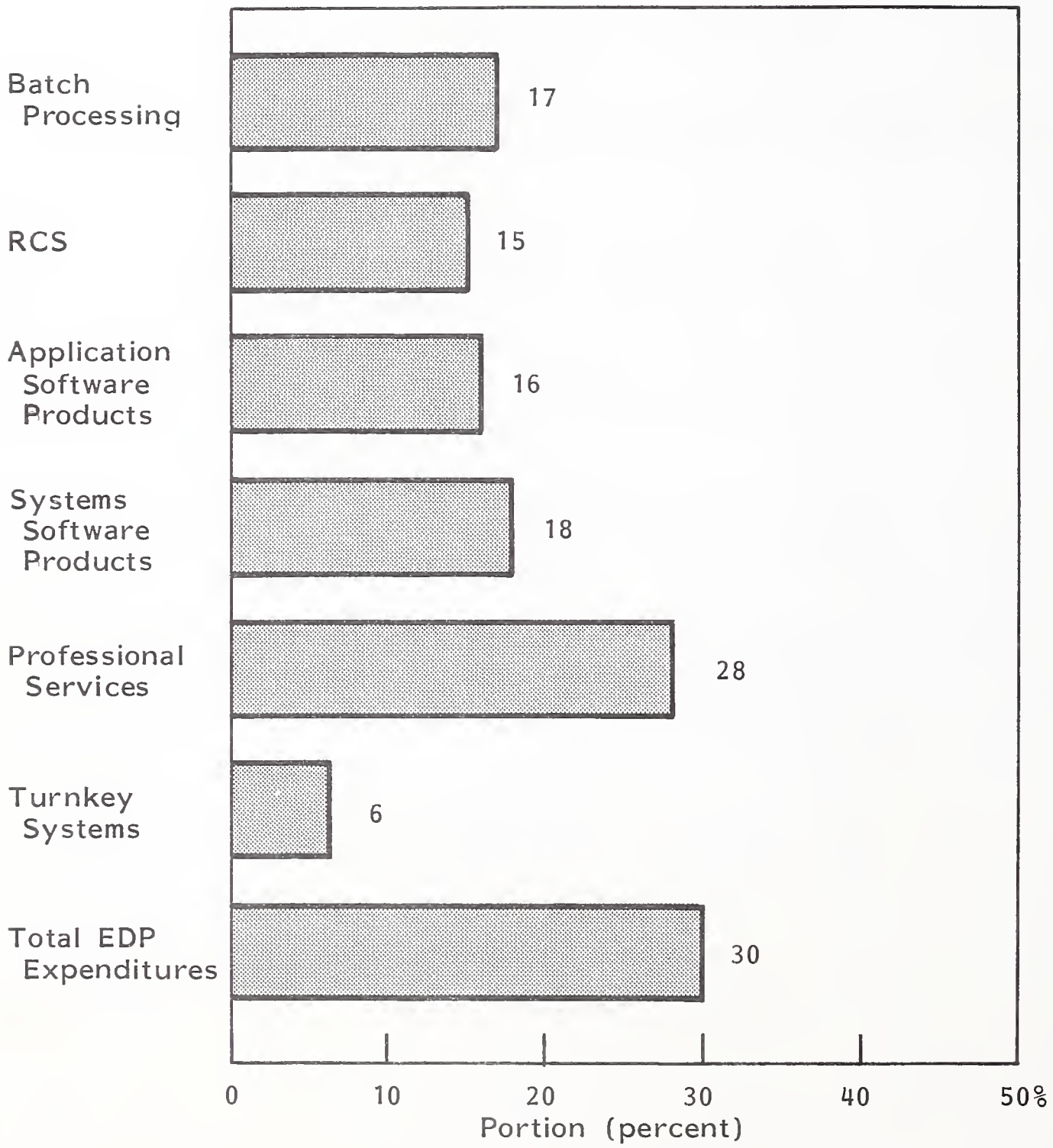
  - Batch services are still used by approximately one-third of users in Germany and Italy.

  - Over half of total expenditures for computer services are spent on software products in the U.K., a forerunner for the rest of Europe.

  - Nearly 40% of total EDP expenditures for computer services is spent for professional services for custom application development by users in both France and Germany.

EXHIBIT II-1

DISTRIBUTION OF EDP EXPENDITURES FOR
COMPUTER SERVICES IN EUROPE FOR 1982



- Nearly 70% of total EDP expenditures is utilized for computer services by users in Italy, indicating that vendors might well give more marketing attention to this country.

- Inflation, price control (France), recession, and technology are all affecting the structure of the European computer services marketplace. The market is shifting from delivery of computer services through batch and remote processing services to a market driven by software products and professional services, which in turn will soon be driven by systems, both turnkey and processing service, vendor-supplied user site hardware systems. Vendor growth rates for 1981 to 1983 reveal this trend:

  - Just over 15% for processing services vendors.

  - Well over 50% for software product vendors.

  - Nearly 40% annually for turnkey systems vendors.

- Computer processing vendors in all four European countries report plans to increase the portion of total revenues derived from software, hardware, and professional services as the price of 16-32 bit microprocessors seriously affect the price/performance of RCS services delivered over increasingly expensive telecommunication networks. It is in this setting that attention is now turned to computer services pricing trends in Europe.

B. BALANCING COSTS WITH REVENUES

- Because of the recessionary economy and the added complication of inflation, computer service vendors' prices have not kept pace with their costs.

- Just over 60% of computer services vendors in Europe (the U.K., France, Germany, and Italy) increased, or plan to increase, prices during the 1981-1983 timeframe.

- The data summary as shown in Exhibit II-2 indicates that RCS vendors averaged a 15% annual increase in total revenues, only 19% of which was price related. Therefore, price increases account for only 3% of total RCS vendor revenue, the remainder coming from increased volume and value-added services.

  - Because of government price control, increased price represents less than 1% of total revenues for processing vendors in France.

  - The effect of prices on revenues was greatest in Italy but was still only 6% of total processing vendor revenues.

- The picture is similar for software product vendors. With increased revenues averaging over 50% annually, of which only 11% were price related, price increases account for just over 6% of total revenues.

  - Price increase represents only 3% of total software product vendor revenues in the U.K..

  - The figure is slightly higher (4% in France) where government price control is less effective (i.e., imported systems software products).

  - Again, price has the greatest impact on software vendor product revenues in Italy, but even here it is less than 15%.

- Another indication of the conservative approach in pricing taken by computer service vendors is shown in Exhibit II-3.

EXHIBIT II-2

IMPORTANCE OF PRICE INCREASES TO
COMPUTER SERVICES VENDORS' REVENUE IN EUROPE 1981-1983

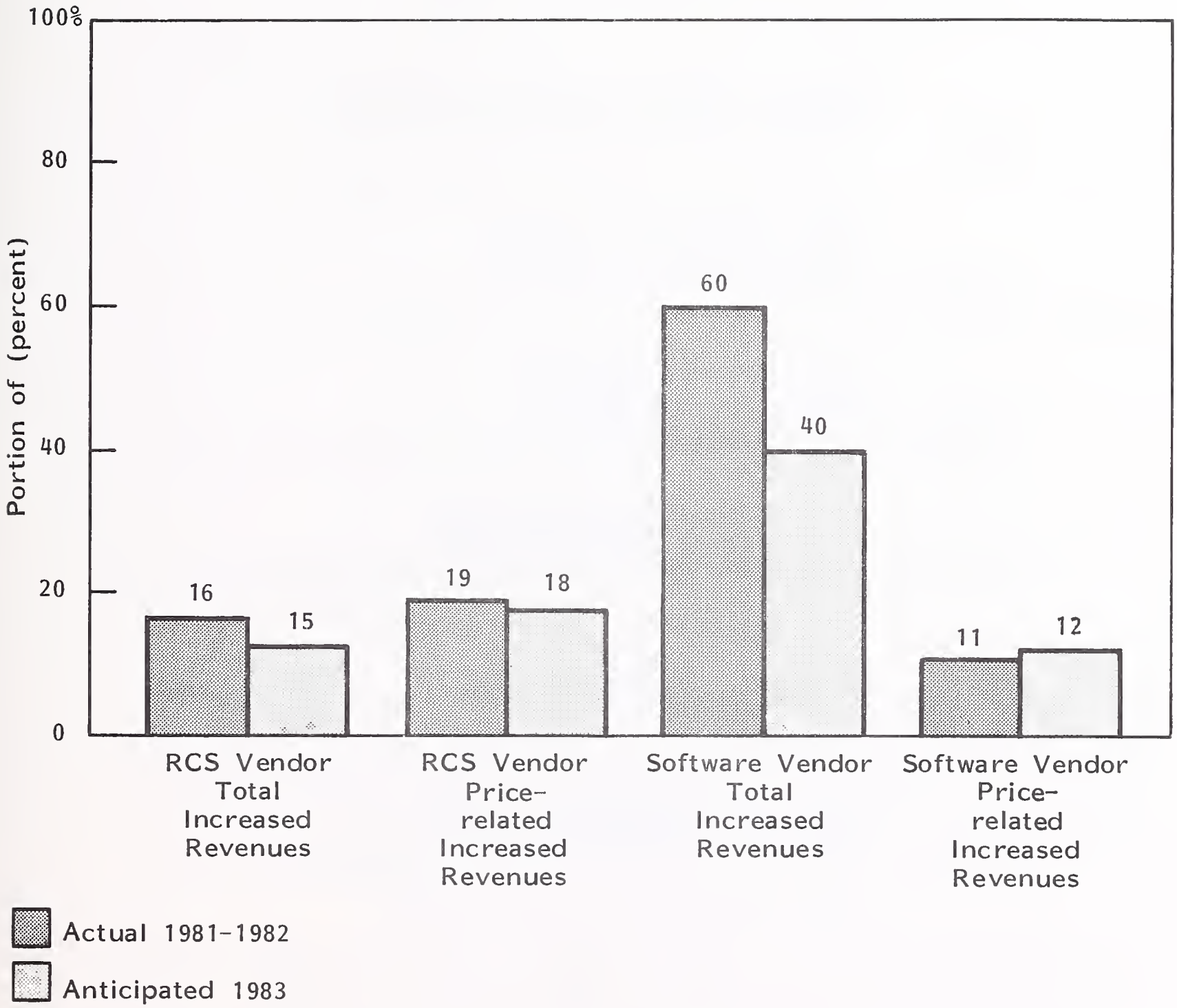
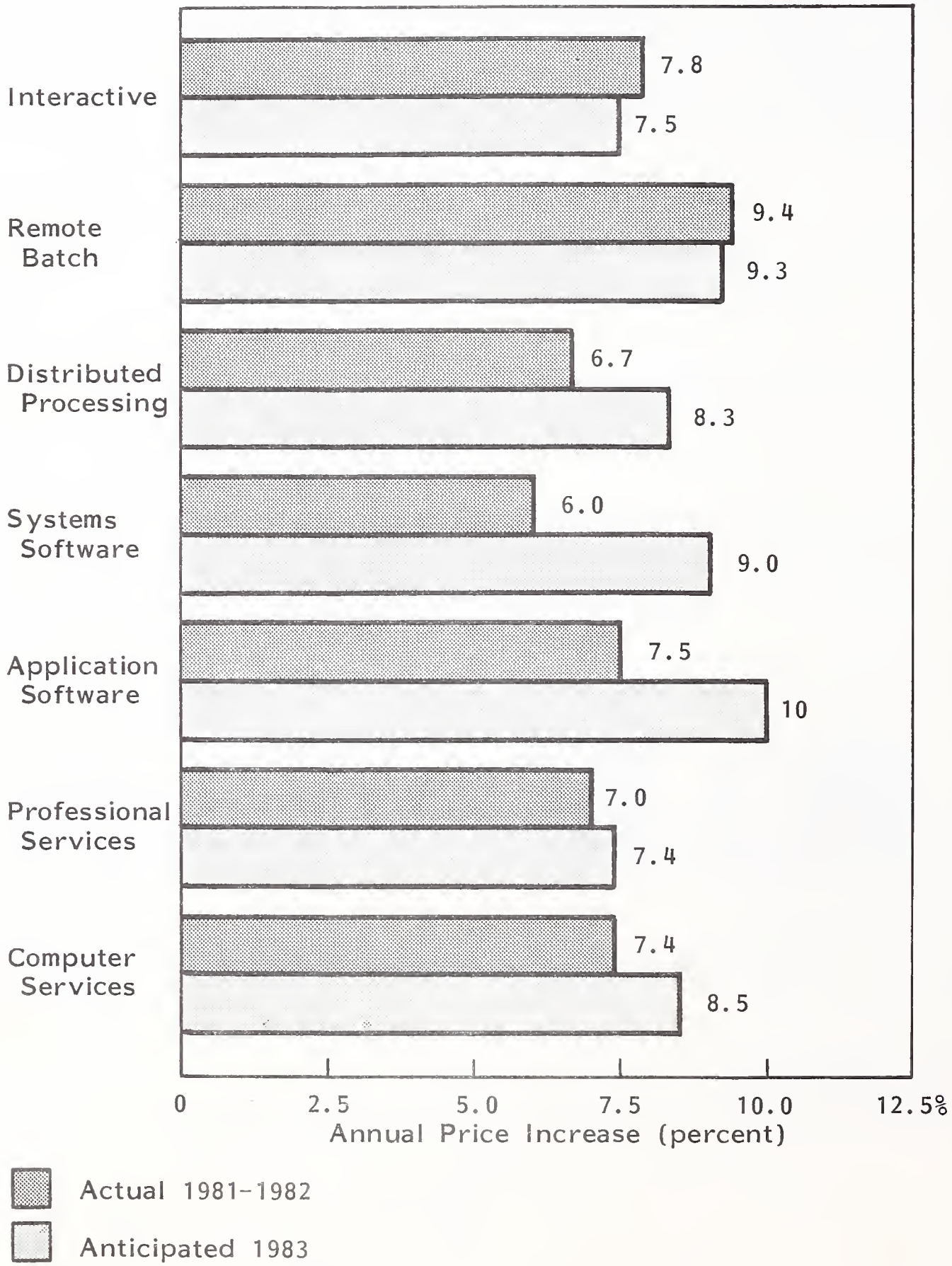


EXHIBIT II-3

VENDOR PRICE INCREASES FOR COMPUTER SERVICES IN EUROPE
BY DELIVERY MODE 1981-1983



- Those computer service vendors who did raise prices increased them an average of 7% annually over all delivery modes for 1981 to 1982. The 6-9% price increase range is conservative.

- Expected price increases in 1983 for computer service vendors as a group will approach 9%. Again, the narrow range (7% to 10%) indicates vendors' defensive pricing strategies.

- Turnkey systems vendors' reliance on hardware in pricing is shown in Exhibit II-4, where hardware represents over half of all turnkey systems.

  - Of the value-added components, only software has been priced as a profit component.

  - In Germany the value-added components represent less than 30% of total turnkey systems product costs.

- Only in France does the value-added portion exceed hardware costs.

C. DISCOUNTING, OR THE REAL PRICE

- INPUT's research showed that nearly 60% of RCS and 90% of software product vendors used discounting as a strategy in Europe. For vendors using this strategy, price discounting is important, more so for RCS vendors but also for software product vendors. Importance is illustrated in the summary data shown in Exhibit II-5.

  - RCS vendors discount, primarily on volume, to less than 20% of their customer base (large users), obtaining nearly half of their revenues from other than published list prices.

EXHIBIT II-4

DISTRIBUTION OF PRICING COMPONENTS OF
TURNKEY SYSTEMS IN EUROPE 1982

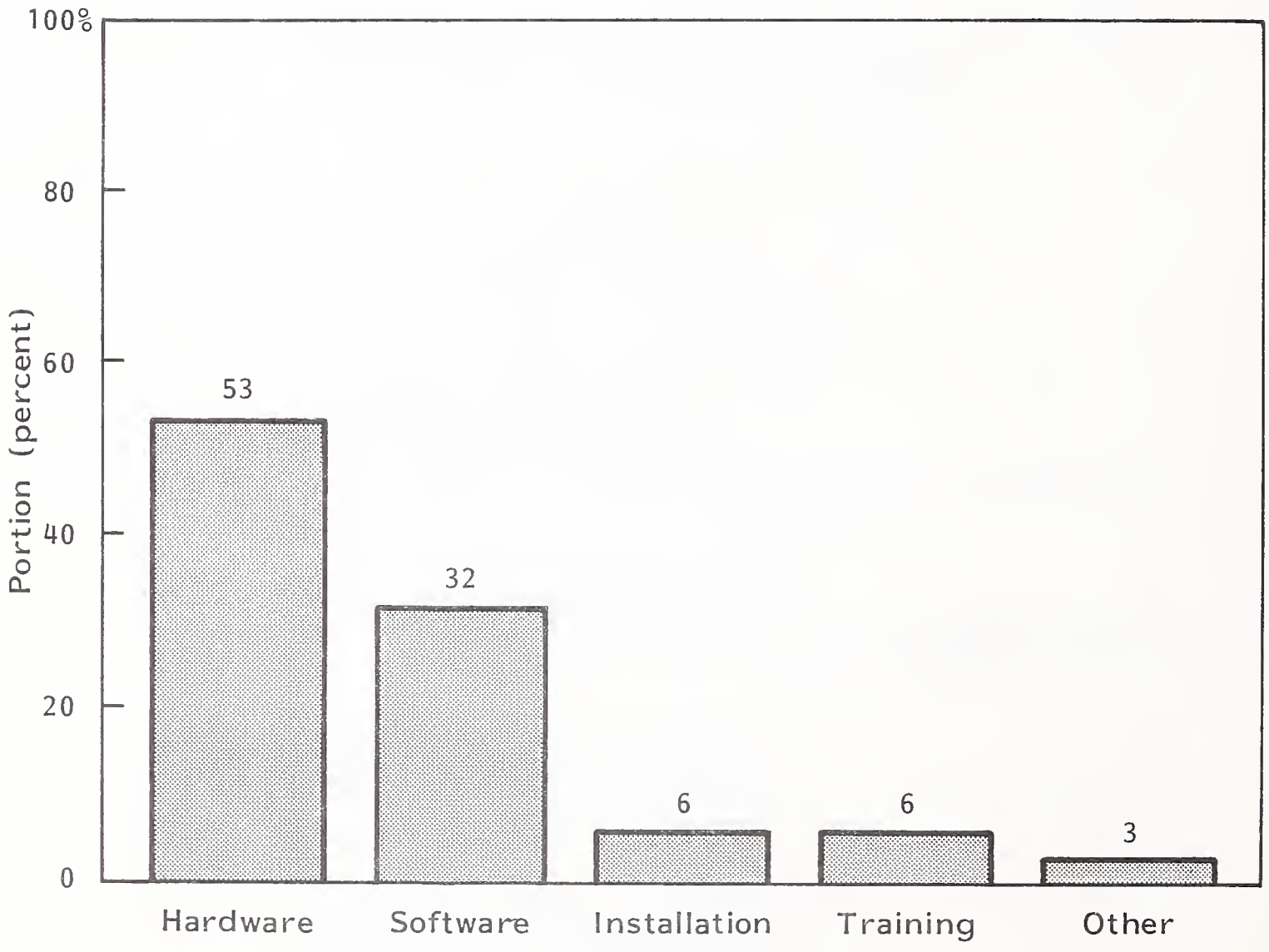
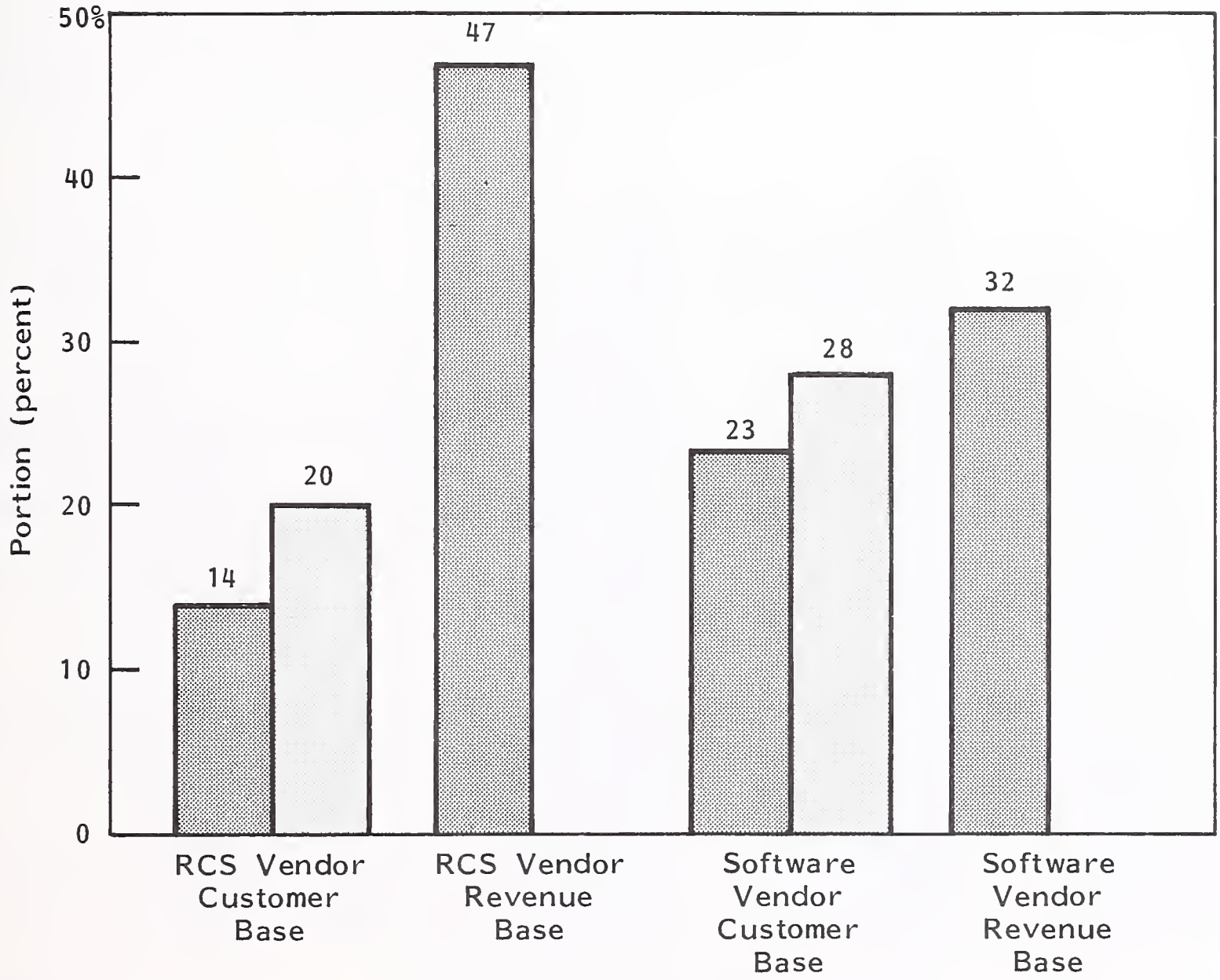


EXHIBIT II-5

IMPORTANCE OF PRICE DISCOUNTING TO
COMPUTER SERVICES VENDORS' CUSTOM BASE AND
REVENUE IN EUROPE, 1981-1983



- Software product vendors give discounts to a greater proportion (23% to 28%) of their customer base, but they obtain about one-third of their revenues at real as contrasted to published prices.

- From a revenue-based sense, price discounting was less important to RCS vendors in Germany than in the other three European countries, where it was equally important.

- Similarly, discounting policy was less important by half to software product vendors in France than to vendors in the other European countries.

D. PRICE FORECASTS, 1983-1988

- Market research data have shown that, except in cases of government intervention, price changes for computer services correspond to inflation rates in each of the four European countries. The influence of rapidly changing technology on price is established, but not by much. Forecasted price changes through 1988 are shown in Exhibit II-6.

- Growth in RCS revenues and profits will be severely affected by technology offering alternative delivery modes with better price and performance.

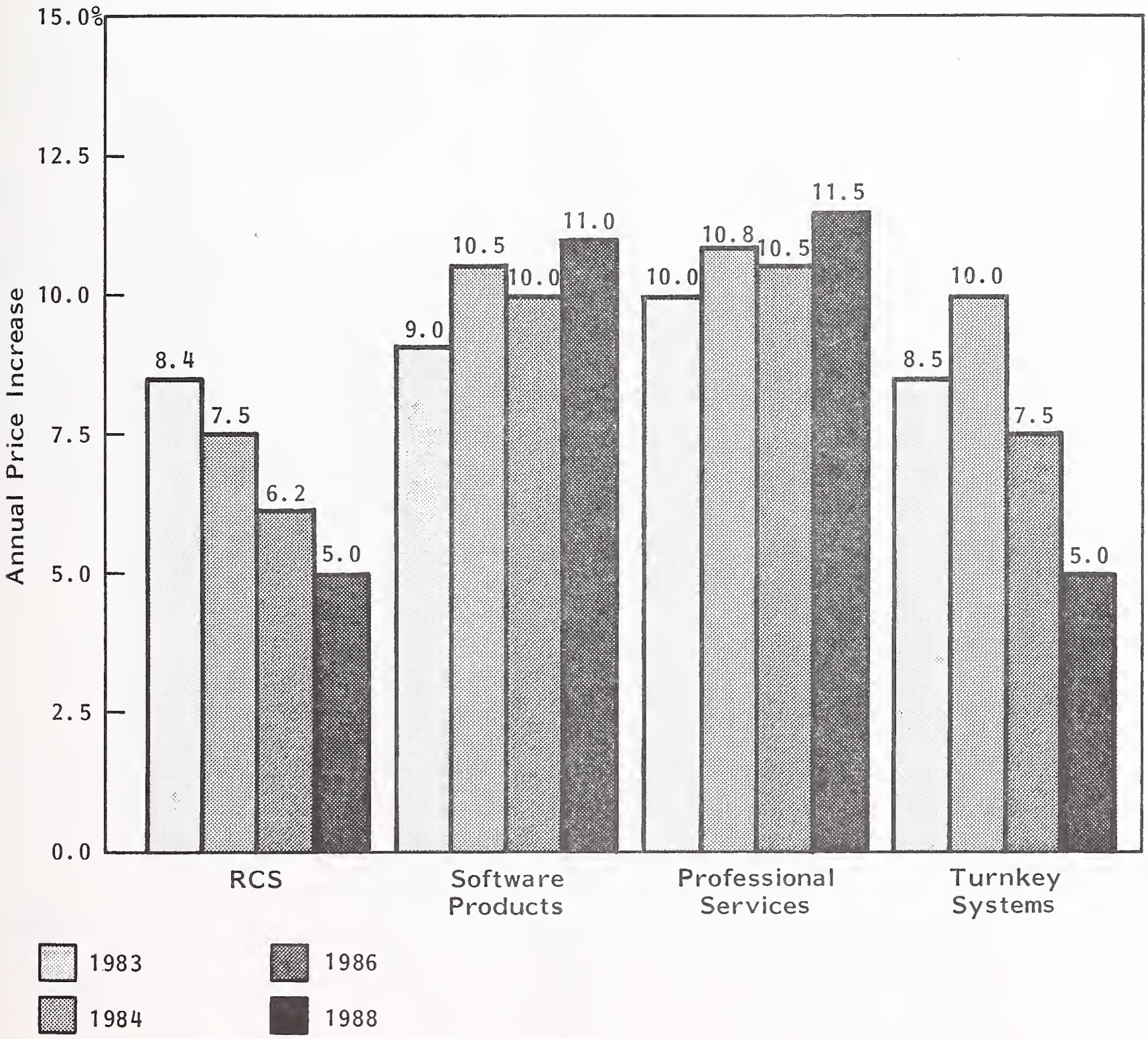
  - The first challenge was microprocessors and now it is optical memory.

  - Revenue and, to an extent, price increase will come from new services such as videotext and data bases.

  - A breakthrough in reducing telecommunications costs (primarily PTT controlled) to restore price/performance balance appears unlikely during the forecast period.

EXHIBIT II-6

FORECAST OF PRICE CHANGES FOR COMPUTER SERVICES IN EUROPE
BY DELIVERY MODE, 1983-1988



- Software product prices are forecast to continue rising through 1984 with price growth retarded by price competition and the development of alternative distribution channels (distributors) through 1986. They will continue to grow through value-added products, distributed data base, and on-line oriented products through 1988.

- Professional services prices are expected to increase in 1984 as France relaxes price controls. Price increases will moderate as inflation ebbs and the European economy recovers through 1986. Prices will continue to rise as the business cycle swings through 1988.

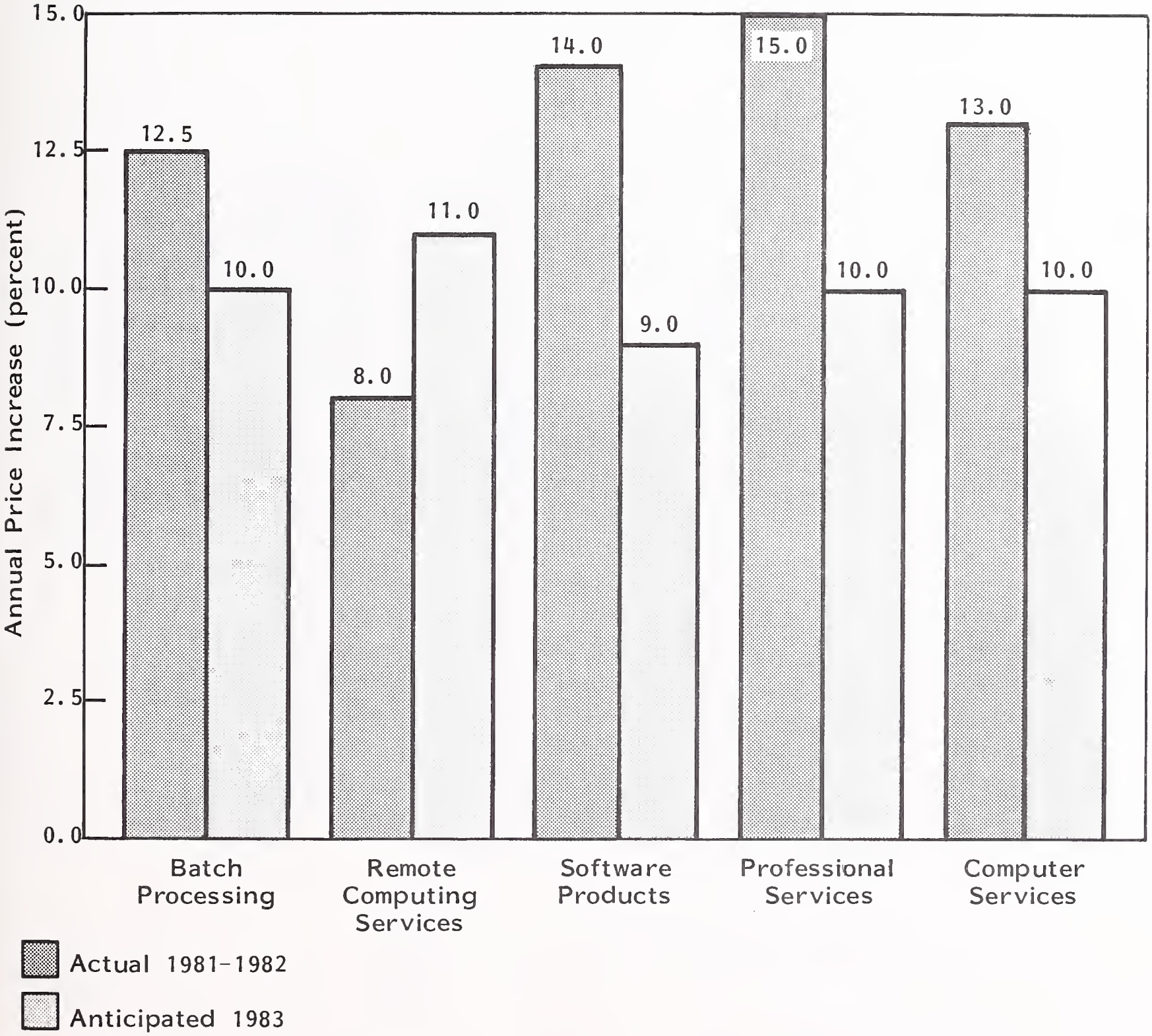
- Turnkey systems prices are expected to rapidly increase through 1984 as at least the software value-added component in turnkey sytems is given better recognition in the marketplace. Advanced technologies, particularly microprocessors, but also storage, will cause a rapid reduction in turnkey system prices. Corresponding price increases will moderate through 1986. Turnkey systems will continue to offer improved price/performance at least through 1988.

E. WHAT USERS EXPECT

- Users want cost increases to moderate. In fact, the data shown in Exhibit II-7 indicates that user expectations for cost increases (10%) in 1983 are about on a par with vendor expectations (9%, see Exhibit II-3). User expectations are by in large based on assessment of the price index (inflation) in each of the European countries. The downward trend in user expectations cost increases runs counter to the trend of vendor price increases because users uniformly report actual 1981-1982 cost increases higher than actual prices increases reported by vendors. INPUT believes that the actual user cost increases for 1981 to 1982 are closer to real prices and has used them for the forecast shown in Exhibit II-6.

EXHIBIT II-7

USER COST INCREASES FOR COMPUTER SERVICES IN EUROPE BY DELIVERY MODE 1981-1983



- Price is a factor, although not the most important one, that users consider in buying computer services in Europe. As shown in Exhibit II-8, all modes of delivery, except RCS vendor knowledge of application, are consistently more important than price when users consider buying computer services. The data imply that vendors have wider latitude in pricing strategies than they are using.

F. STRATEGIC APPROACHES TO PRICING

- Vendors in Europe have by in large adopted a defensive (conservative) strategy in pricing computer services. Data as shown in Exhibit II-9 indicate that both processing and software vendors rate covering costs and meeting competition as the two most important factors in pricing their services.
  - The overall low level of importance assigned to each of the strategies raises the question, "What degree of strategic planning for pricing is actually done by computer services vendors in Europe?"

1. RCS VENDORS

- Strategic approaches are:
  - Transaction pricing, allowing customers to understand how much their application will cost.
  - Offering fixed-price contracts with a ceiling based on volume.
  - Increasing prices based on value-added services, targeted to profit margin.

EXHIBIT II-8

MOST IMPORTANT FACTORS TO USERS
IN BUYING COMPUTER SERVICES IN EUROPE

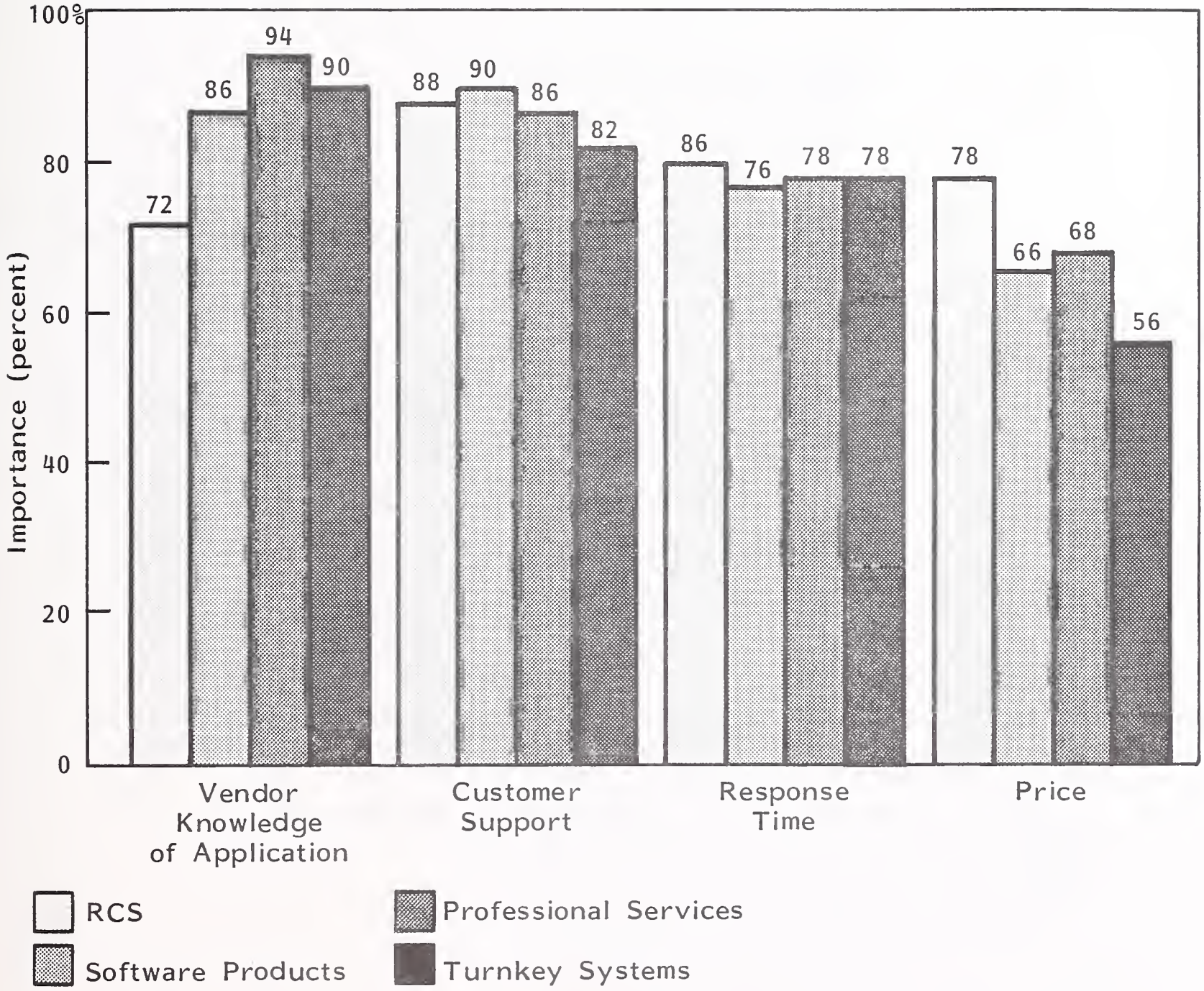
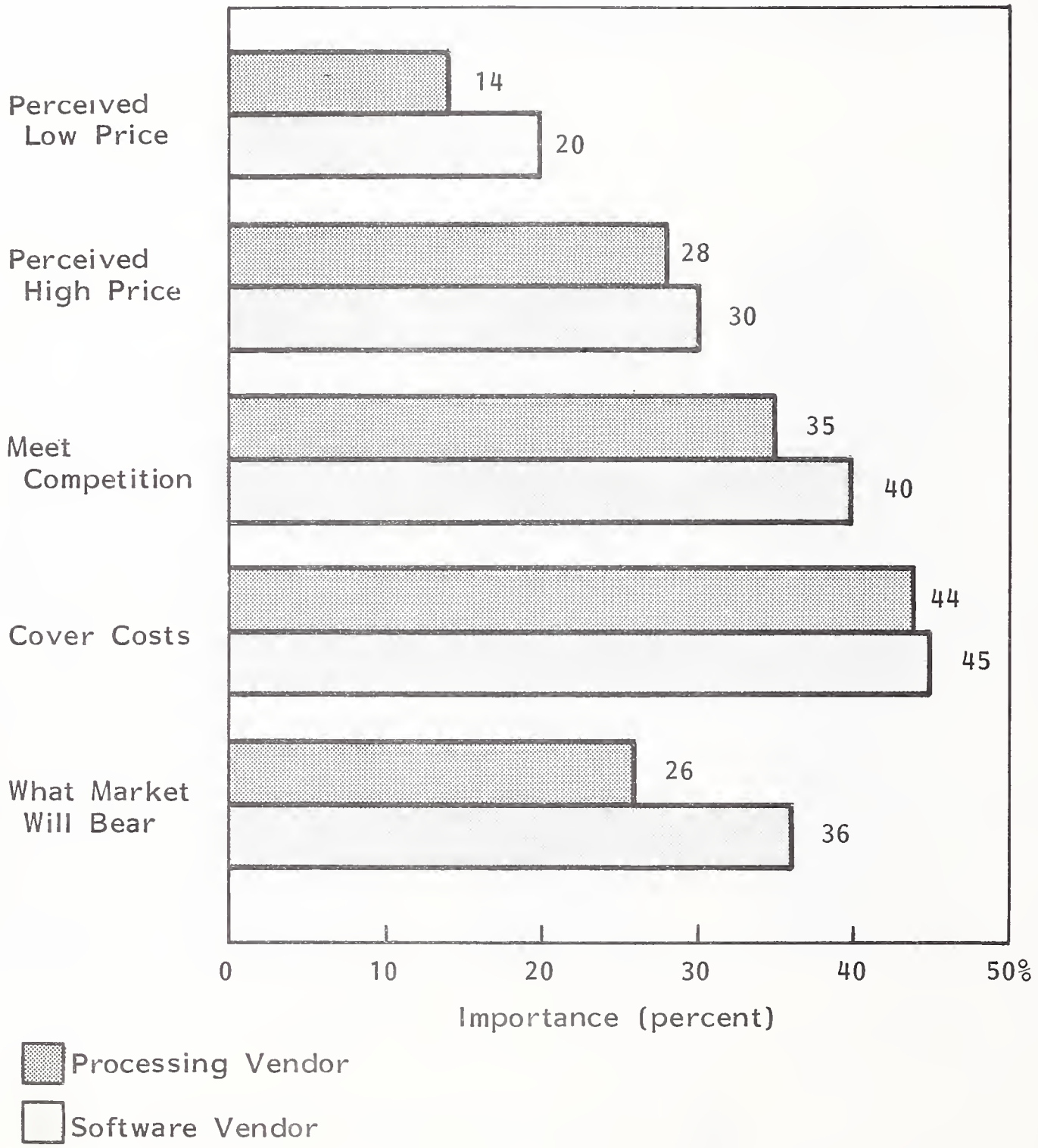


EXHIBIT II-9

STRATEGIES FOR PRICING COMPUTER SERVICES IN EUROPE



- Widening range and types of discount policies subject to minimum profit margins.

- Increased portion of revenue obtained from software products and professional services, each subject to separate profit center control. Increased portion of total revenues derived from on-desk site hardware (particularly microprocessors).

- Shift selected mainframe applications to turnkey systems, pricing value-added software for high profit.

2. SOFTWARE PRODUCT VENDORS

- Strategic approaches are to:

  - Separately, profitably price software services such as installation, training, and maintenance.

  - Modularize software products and orient them to users' applications, pricing each module for a targeted profit.

  - Increase range and types of discounts to expand customer base subject to a targeted level of profit.

  - Establish new distribution channels for marketing software products throughout Europe and possibly in the U.S. and Japan, offering a separate discount structure for products sold through distributors.

  - Increase price of software maintenance to insure a targeted profit.

  - Shift selected software products to microprocessors utilizing UNIX to achieve portability. Base prices on volume sales with a minimum number of installations per company.

3. PROFESSIONAL SERVICES VENDORS

- Strategic approaches are to:

  - Establish professional services as a separate activity, with both sales and profit targets, assigning professional services support for sales proposals, etc., as necessary.

  - Price separately each type of service, such as installation, training, maintenance, and customization, with a targeted contribution to profit.

4. TURNKEY SYSTEM VENDORS

- Strategic approaches are to:

  - Increase the value-added software component of the total turnkey system price.

  - Price separately each value-added component, such as installation, training, and maintenance, and targeted a level of profit.

  - Increase price/performance offered by advanced microprocessors.

  - Offer to advanced microprocessors cross-industry and selected industry-specific applications formerly accomplished on mainframes, increasing price/performance while maintaining a targeted level of profit.

III PROCESSING SERVICES PRICING

III PROCESSING SERVICES PRICING

A. CURRENT PRICING PRACTICES BY COUNTRY

- Processing services vendors were asked for pricing methods used for each of the following types of services:

  - Batch processing.

  - Interactive processing.

  - Remote batch processing.

- Analysis of pricing methods for each type of delivery is shown in Exhibits III-1 to III-3.

1. THE U.K.

- No one vendor offered all three types of service. Nearly all (83%) offered interactive processing, whereas only one-third were still offering batch processing.

- On the whole, processing services vendors used a variety of pricing methods. No one method is more frequently used for the three delivery modes.

EXHIBIT III-1

PRICING METHODS FOR BATCH PROCESSING
AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF RESPONDENTS (percent)*			
	Offering	Not Offering	FIXED PRICE	TRANSACTION	RESOURCES	OTHER
United Kingdom	2	4	0%	50%	50%	50%
France	4	2	25	50	75	25
Germany	7	1	100	86	0	57
Italy	7	3	43	57	57	14
Europe	20	10	55%	65%	40%	35%

*Multiple Responses Possible

EXHIBIT III-2

PRICING METHODS FOR INTERACTIVE PROCESSING
AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF RESPONDENTS (percent)*			
	Offering	Not Offering	FIXED PRICE	TRANSACTION	RESOURCES	OTHER
United Kingdom	5	1	60%	20%	60%	80%
France	5	1	40	40	100	20
Germany	7	1	43	57	57	57
Italy	6	4	50	33	67	33
Europe	23	7	48%	39%	70%	48%

* Multiple Responses Possible

EXHIBIT III-3

PRICING METHODS FOR REMOTE BATCH PROCESSING
AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF RESPONDENTS (percent)*			
	Offering	Not Offering	FIXED PRICE	TRANSACTION	RESOURCES	OTHER
United Kingdom	4	2	50%	75%	25%	75%
France	3	3	33	0	100	0
Germany	4	4	50	50	50	50
Italy	7	3	57	43	43	14
Europe	18	12	50%	44%	50%	33%

* Multiple Responses Possible

- Batch processing vendors more frequently used a combination of pricing parameters for batch processing services, for example:

  - Fixed charge plus variable pricing according to volume.

  - Fixed charge based on volume of master file plus transaction pricing against the master file.

- RCS vendors favored resources pricing and connect charges per hour for inquiry services.

- Several vendors were planning to develop transaction pricing based on work units most familiar to the end user.

2. FRANCE

- No one vendor offered all three processing services delivery modes. Most (83%) offered interactive processing. Batch processing (67%) is still a popular delivery mode. Processing services vendors used a variety of pricing methods, frequently in combination. Pricing based on resources used was the dominant method for all three delivery modes.

3. GERMANY

- No one vendor offered all three processing delivery modes for processing services. Most (88%) offered both interactive and batch processing services. Processing services vendors most frequently used a combination of fixed price and transaction pricing methods. Billing on the basis of resources was the least frequently used pricing method.

- Other frequently used pricing methods are:

  - Monthly fixed price plus transaction volume for batch processing.

- Connect time plus communication fee for remote batch processing.

- Fixed annual price plus price discounts above annual targeted volume.

- Fixed fee per month per terminal plus communication costs plus fee per inquiry access.

4. ITALY

- No one vendor offers all three delivery processing modes. The major portion (70%) offer both batch and remote batch processing. Vendors use a wide variety of pricing methods, usually in combination. All methods appear equally used across the three delivery modes.

- Several vendors are heading towards fixed price contracts based on volume of work units familiar to end users with annual price discounts for volumes exceeding the fixed-price contract amount.

5. EUROPE

- Interactive processing has become the dominant (77%) delivery mode offered by processing services vendors among the four major countries that constitute Europe in this study.

- Processing vendors, as a rule, do not use a single method for pricing processing services.

- Although a number of vendors are heading towards transaction pricing where the transaction is a work unit familiar to the end user, a trend as such is not yet clearly established.

- The portion of "other" pricing methodologies indicates that standardization is a long way off.

- There is considerable variation in pricing methodology from country to country:

  - Of the four countries, fixed price and transaction pricing are most important in Germany for batch processing, whereas resource pricing is the leading method in France.

  - With respect to remote batch processing, of the four countries, the resource pricing method is the most frequently used in France whereas transaction pricing (primarily wholesale bank related) is the most important method used in the U.K..

  - Resource pricing is the dominant pricing method used for interactive processing in at least three of the four countries.

B. RESOURCE PRICING OF REMOTE COMPUTING SERVICES

- Processing services vendors were asked to rate selected pricing parameters related to resource pricing of interactive and remote batch processing services in terms of importance to total remote computing services (RCS) revenue.

1. INTERACTIVE PROCESSING

- Analysis of data for interactive processing, as shown in Exhibit III-4, indicates consistent agreement among vendors in the four European countries:

EXHIBIT III-4

IMPORTANCE OF PRICING FACTORS IN CONTRIBUTING TO
TOTAL INTERACTIVE PROCESSING REVENUES AS REPORTED BY VENDORS

COUNTRY	FACTOR*			
	CONNECT TIME	CENTRAL RESOURCE UNIT	STORAGE	PERIPHERAL
United Kingdom	2.7	4.3	3.1	2.7
France	2.6	5.0	2.8	1.0
Germany	2.2	3.6	3.2	1.8
Italy	2.5	3.8	3.3	2.0
Europe	2.5	4.1	3.1	1.8

* 1 = Least Contribution, 5 = Greatest Contribution

- The central resource unit uniformily provides the greatest contribution to interactive processing revenues.

- Storage, connect time, and peripheral pricing are uniform and relatively lesser contributing factors to total interactive processing revenues.

2. REMOTE BATCH PROCESSING

- The analysis of the remote batch processing pricing factors, as shown in Exhibit III-5, indicates that, with the exception of Germany, the central resource unit remains the most important factor in contributing to total remote batch processing revenues.

  - The extremely high cost of high-speed data communications in Germany probably accounts for the importance of connect time in pricing remote batch processing services.

- With the exception of Germany, rate connect time is making the least contribution to total remote batch processing revenues.

- Storage was rated second and peripheral was rated third in contributing to total remote batch processing revenues in Europe.

C. RECENT PRICE CHANGES TO PROCESSING SERVICES

- Processing vendors were asked to indicate actual price changes for the last two years, and anticipated price changes for the next year for each delivery mode.

EXHIBIT III-5

IMPORTANCE OF PRICING FACTORS IN CONTRIBUTING TO TOTAL REMOTE BATCH PROCESSING REVENUES AS REPORTED BY VENDORS

COUNTRY	FACTOR*			
	CONNECT TIME	CENTRAL RESOURCE UNIT	STORAGE	PERIPHERAL
United Kingdom	2.0	4.3	3.0	3.3
France	1.5	5.0	3.3	2.0
Germany	3.7	2.3	1.3	1.3
Italy	1.6	3.6	2.4	2.0
Europe	2.0	3.9	2.6	2.1

* 1 = Least Contribution, 5 = Greatest Contribution

1. INTERACTIVE PROCESSING

- Analysis of anticipated price increases for interactive processing services, as shown in Exhibit III-6, indicates that anticipated price changes for 1983 in Europe will be in a par with those for the past two years.

- Price increases are related to actual and anticipated inflation in each country. They are greatest in Italy. The low price increases in France are related to government price control.

2. REMOTE BATCH

- Price increases for remote batch processing in Europe, as shown in Exhibit III-7, are expected to remain on a par with actual ones, approaching 9% annually.

- Again price increases seem directly related to inflation and, to some degree, government price control:

  - Actual and anticipated price increases are greatest in Italy approaching 13%, and are next in the U.K., approaching 9%.

  - Actual and anticipated price increases for remote batch services are lowest in Germany.

3. DISTRIBUTED DATA PROCESSING

- Only a small number (13%) of processing vendors in Europe are offering distributed data processing services.

- As shown in Exhibit III-8, actual price increases now approaching 7% annually are anticipated to increase in 1983 to over 8%. Price increases in 1983 might well have been greater if price control were not in effect in France.

EXHIBIT III-6

ACTUAL AND ANTICIPATED PRICE INCREASES FOR INTERACTIVE PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	PRICE INCREASE (percent)		
	ACTUAL		ANTICIPATED
	1981	1982	1983
United Kingdom	9.5%	10.5%	9.0%
France	6.8	2.8	4.8
Germany	4.8	4.3	5.0
Italy	10.3	18.7	13.3
Europe	7.4%	8.1%	7.5%

EXHIBIT III-7

ACTUAL AND ANTICIPATED PRICE INCREASES FOR
REMOTE BATCH PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	PRICE INCREASE (percent)		
	ACTUAL		ANTICIPATED
	1981	1982	1983
United Kingdom	8.0%	8.0%	9.0%
France	13.5	1.5	6.5
Germany	2.5	3.5	1.5
Italy	7.8	15.0	12.5
Europe	8.8%	8.5%	8.7%

EXHIBIT III-8

ACTUAL AND ANTICIPATED PRICE INCREASES FOR
DISTRIBUTED DATA PROCESSING AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PRICE INCREASE (percent)		
			ACTUAL		ANTICIPATED
	Offering	Not Offering	1981	1982	1983
United Kingdom	2	4	8.0%	8.0%	9.0%
France	1	5	11.0	0	5.0
Germany	0	8	0	0	0
Italy	1	9	0	10.0	10.0
Europe	4	26	6.8%	6.5%	8.2%

4. PROFESSIONAL SERVICES

- Anticipated price increases for professional services in processing services are about on a par with actual price increases over the past two years, exceeding 7% annually, as shown in Exhibit III-9.

- Price increases seem to be related to inflation rates. In Italy they average 12% annually over the three years. In the United Kingdom they approach 7% annually. Increases in France are close behind and probably would have been higher than the U.K.'s were it not for government price control. And increases are smallest in Germany, averaging 5%.

D. DISCOUNTING PRACTICES BY COUNTRY

- Processing vendors were asked to provide their minimum and maximum discounting practices based on volume, term contracts, usage pattern (nonprime use, data entry mode, etc.), government sector, education sector, and other.

1. THE U.K.

- Processing services vendors are not usually involved in discounting from list prices, as shown in Exhibit III-10. The most common practice is volume discounting, offered by some 80% of the vendors interviewed.

- There is wide variation between the range for the minimum and maximum discounts as reported by vendors. For example, maximum discounts for usage pattern range from 3% to 125% of daytime charges.

- Processing vendors favor annual, individual negotiations of discounts, particularly with large clients. These are based on:

EXHIBIT III-9

ACTUAL AND ANTICIPATED PRICE INCREASES FOR
PROFESSIONAL SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PRICE INCREASE (percent)		
			ACTUAL		ANTICIPATED
	Offering	Not Offering	1981	1982	1983
United Kingdom	3	3	6.0%	7.0%	6.3%
France	3	3	10.7	4.3	4.0
Germany	1	7	5.0	4.0	6.0
Italy	2	8	10.0	7.5	15.0
Europe	9	21	8.3%	5.9%	7.4%

EXHIBIT III-10

PRICE DISCOUNTING PRACTICES AS REPORTED BY PROCESSING SERVICES VENDORS IN THE UNITED KINGDOM

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	5	1	7%	1-20%	26%	10-40%
Term Contract	2	4	4	1-6	31	12-62
Usage Pattern	2	4	11	1-20	64	3-125
Government Sector	0	6	0	-	0	-
Education Sector	0	6	0	-	0	-
Other	4	2	N	-	N	-

N = Negotiated

- The level of negotiated annual revenue.

- Fixed price options.

- The number of terminal/on-site installation.

2. FRANCE

- Most processing vendors are not heavily involved in price discounting. As shown in Exhibit III-11, the most popular practice is volume discounting, and only 50% of vendors are involved.

- No special discounts are given in either the government or education sectors. Vendors were willing to negotiate annual discounts when bidding on large contracts.

3. GERMANY

- Discounting for volume is the primary discounting practice utilized by processing service vendors in Germany, as shown in Exhibit III-12.

  - Some 60% of processing services vendors are so involved.

  - The price range of discounts is narrow, indicating that vendors are aware of the volume discounts practiced by competitors.

  - Discounting from lists is not a practice for either the government or education sectors.

- Discounting is used by vendors as a defensive strategy.

  - It is granted to new customers during initial installation and early use.

EXHIBIT III-11

PRICE DISCOUNTING PRACTICES AS REPORTED BY
PROCESSING SERVICES VENDORS IN FRANCE

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	3	3	3%	2-5%	32%	30-35%
Term Contract	1	5	10	-	25	-
Usage Pattern	2	4	65	50-80	65	50-80
Government Sector	0	6	0	-	0	-
Education Sector	0	6	0	-	0	-
Other	2	4	N	-	N	-

N = Negotiated

EXHIBIT III-12

PRICE DISCOUNTING PRACTICES AS REPORTED BY PROCESSING SERVICES VENDORS IN GERMANY

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	5	3	8	5-10%	24%	20-25%
Term Contract	1	7	3	-	3	-
Usage Pattern	1	7	10	-	10	-
Government Sector	0	0	0	-	0	-
Education Sector	0	0	0	-	0	-
Other	5	3	N	-	N	-

N = Negotiated

- It is granted to old customers to prevent cancellation of contracts.

- Some vendors negotiate discounts for large volume customers.

4. ITALY

- Discounting practices vary widely among processing services vendors in Italy, as shown in Exhibit III-13. The range of discount amounts for volume, term, and use, indicates that discounting is more ad hoc than planned.

- Processing service vendors are prone to negotiate discount amounts for each customer, for example, large contracts at a fixed price (with inflation adjustment), including volume discounts, and nationwide, including subsidiaries for large corporations.

5. EUROPE

- A summary of the price discounting practices among vendors of the four European countries is shown in Exhibit III-14.

- Volume discounting is the most widely practiced, being offered by over half (53%) of the processing service vendors.

  - The average minimum discount (6%) falls in the low end of the range.

  - The average maximum discount (29%) falls in the high end of the range, indicating wide latitude in volume price discounting practices.

- Price discounting in the government and education sectors is not practiced by processing service vendors in Europe.

EXHIBIT III-13

PRICE DISCOUNTING PRACTICES AS REPORTED BY
PROCESSING SERVICES VENDORS IN ITALY

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	3	7	5%	1-10%	37%	20-60%
Term Contract	2	8	6	3-10	27	3-40
Usage Pattern	2	8	25	10-40	45	30-60
Government Sector	0	10	0	-	0	-
Education Sector	0	10	0	-	0	-
Other	4	6	N	-	N	-

N = Negotiated

EXHIBIT III-14

PRICE DISCOUNTING PRACTICES AS REPORTED BY
PROCESSING SERVICES VENDORS IN EUROPE

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	16	14	6%	1-20	36%	10-40%
Term Contract	6	24	6	1-10	24	3-62
Usage Pattern	7	23	20	1-80	42	3-125
Government Sector	0	30	0	-	0	-
Education Sector	0	30	0	-	0	-
Other	15	15	N	-	N	-

N = Negotiated

- Discounting is used in specialized situations as frequently as standard policy in the European marketplace.

E. TRENDS IN DISCOUNTING

- Processing vendors were asked what trends they foresaw in discounting practices within the next two years with respect to selected practices. Analysis of the data is shown as Exhibit III-15.

- Most processing services vendors do not expect much change in future discounting policies. Overall:

  - The four countries comprising Europe, expect the greatest change in volume discounting: 23% of all vendors expect an increase.

  - Processing vendors in Germany expect the greatest increase in price discounting. Across all policy types and on the average, some 30% of the processing vendors expect increases in discounting.

  - Discounting policies are expected to remain most stable in the U.K..

F. REMOTE COMPUTING SERVICES DISCOUNTING

1. CUSTOMERS RECEIVING DISCOUNTS

- Remote computing services vendors were asked for the actual and expected portions of customer discounts from rates quoted in pricing schedules. As Exhibit III-16 indicates, that portion is expected to rise from 14 to 20% in Europe.

EXHIBIT III-15

TRENDS IN DISCOUNTING POLICIES WITHIN NEXT TWO YEARS
AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	NUMBER OF RESPONDENTS	POLICY PORTION (percent)											
		VOLUME		TERM PATTERN		USAGE PATTERN		GOVERNMENT SECTOR		EDUCATION SECTOR		OTHER	
		S	I	S	I	S	I	S	I	S	I	S	I
United Kingdom	6	100%	0%	100%	0%	100%	0%	100%	0	100%	0	83%	17%
France	6	50	50	100	0	66	34	100	0	100	0	100	0
Germany	8	62	38	100	0	87	13	87	13	100	0	62	38
Italy	10	90	10	80	20	90	10	100	0	100	0	90	10
Europe	30	77%	23%	93%	7%	86%	14%	97%	3%	100%	0%	83%	17%

S = Same, I = Increasing

EXHIBIT III-16

PORTION OF CUSTOMERS RECEIVING DISCOUNTS ON
REMOTE COMPUTING SERVICE AS REPORTED BY PROCESSING SERVICE VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION RECEIVING DISCOUNTS (percent)					
			ACTUAL				EXPECTED	
			1981		1982		1983	
	Offering	Not Offering	Average	Range	Average	Range	Average	Range
United Kingdom	3	3	19%	3-50%	19%	3-50%	19%	3-50%
France	4	2	4	0-10	3	0-8	10	5-15
Germany	5	3	13	5-30	14	5-32	18	7-35
Italy	5	5	11	0-25	26	8-30	31	10-60
Europe	17	13	12%	0-50%	16%	0-50%	20%	3-60%

- There will be no increase in the U.K..

- The rise will be greatest in Italy (12%).

- More vendors (7%) expect to be offering discounts than have been so doing in the past two years (see Exhibit III-14).

2. DISCOUNTING AND TOTAL RCS REVENUES

- Processing services vendors were asked to estimate the portion of total RCS revenue represented by customers receiving discounts.

- Analysis of the data, as shown in Exhibit III-17, indicates that for those vendors (57%) offering discounts to selected customers, discounting is a significant pricing policy.

- The importance of discounting varies by country. Assuming that the portion of revenues falls in the midpoint of each of the five revenue ranges in Exhibit III-17, then:

  - Half of total RCS revenues in the U.K. come from customers receiving discounts.

  - In France 55% of total revenues are represented by customers receiving discounts.

  - In Germany the portion is 34%.

  - In Italy the portion of revenues represented by customers receiving discounts is 54%.

EXHIBIT III-17

PORTION OF TOTAL RCS REVENUES REPRESENTED BY
CUSTOMERS RECEIVING DISCOUNTS AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF REVENUES (percent)				
	Offering	Not Offering	80-100%	60-79%	40-59%	20-39%	< 20%
United Kingdom	3	3	0%	0%	100%	0%	0%
France	4	2	0	75	0	0	25
Germany	5	3	0	20	0	60	20
Italy	5	5	0	40	40	20	0
Europe	17	13	0%	35%	29%	24%	12%

- Using the same criteria for the four countries comprising Europe, the portion of revenues represented by customers receiving discounts exceeds 45% of total RCS revenues.

G. PROCESSING SERVICES PRICING POLICIES AND STRATEGIES

1. PRICE INCREASES AND REVENUES

- Processing services vendors were asked to estimate the portion of increased revenues attributed to increased prices.

- Analysis of the data presented in Exhibit III-18 indicates that not all processing services vendors increased prices over the past two years or plan to increase them in the current year (1983). For example:

  - Only one-third of the processing services vendors in the U.K. had increased or intended to increase prices over this period.

  - For the four European countries as a whole, just over 63% of all vendors had or expected to have price increases.

- The significance of increased prices on revenues varied widely between countries:

  - With government price control, the portion of total revenues attributed to increased prices was, by far, lowest in France.

  - The influence of price increases on total revenues was greatest in Germany. The same is true of the range of actual and expected price increases.

EXHIBIT III-18

PORTION OF INCREASED REVENUES ATTRIBUTABLE TO PRICE INCREASES AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF PRICE INCREASE (percent)			
	PRICE INCREASE	NO PRICE INCREASE	ACTUAL 1981-1982		EXPECTED 1983	
			AVERAGE	RANGE	AVERAGE	RANGE
United Kingdom	2	4	50%	50-50%	40%	33-47%
France	5	1	7	3-10	4	0-8
Germany	4	4	29	0-60	38	0-70
Italy	8	2	24	10-75	12	0-25
Europe	19	11	23%	0-75%	18%	0-70%

- Vendors indicated that price increases are frequently tied to increases in value-added services.

- Price increases do not represent a significant portion of total increases in processing services revenues in the four European countries.

  - Price increases represent less than 20% of the total revenues of vendors having price increases.

  - Considering all processing services vendors in the four European countries, price increases represented only 12% of total increases in processing services revenues in Europe from 1981 to 1983.

2. LOST CUSTOMER ANALYSIS

- Processing vendors were asked to indicate whether or not they lost customers due to price increases and, if so, to estimate what portion were lost to alternative processing methods.

- The analysis of lost customers as a result of past price increases is shown in Exhibit III-19. The data indicate that price is at least a factor in the loss of customer base.

  - For the four countries as a whole, some 70% of all vendors indicated that they had lost customers as a result of price increases.

  - Many of the vendors felt that price was a, if not the major, factor in customer loss.

  - Other factors were bankruptcy, merger, and dropping the application.

- With the exception of transfer of applications to minicomputers in the U.K., the major portion of customers were lost by transfer to existing in-house data processing.

EXHIBIT III-19

ANALYSIS OF LOST CUSTOMERS AS A RESULT OF
PAST PRICE INCREASES AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF CUSTOMER LOST TO (percent)						
					ACQUIRED				
	LOST BUSINESS	NO LOST BUSINESS	IN-HOUSE D.P.	OTHER SERVICES VENDOR	PERSONAL COMPUTER	MINI COMPUTER	MAINFRAME	DROPPED APPLICATION	OTHER
United Kingdom	4	2	48%	0%	9%	41%	0%	0%	2%
France	4	2	65	5	0	12	5	3	10
Germany	7	1	38	5	4	7	2	31	13
Italy	6	4	32	19	0	31	8	10	0
Europe	21	9	43%	8%	3%	21%	4%	14%	7%

3. FACTORS AFFECTING PROCESSING SERVICES PRICING

- Vendors were asked to rate selected factors in terms of importance to pricing policy and to indicate which are most important. As shown in Exhibit III-20, personnel cost is the most important factor and communication cost the least in Europe.

- The relative importance holds true for the most part on a country-by-country basis:

  - Personnel cost has the highest relative importance in three countries - France, Germany, and Italy - and is second only to profit margin in the U.K.

  - Sales and marketing cost is the next most important factor in three countries and of lesser importance in one, the U.K.

  - Profit margins are least important in Germany, where most processing vendors have adopted a defensive pricing strategy.

- Processing services vendors in Europe held personnel costs to be by far the most important factor affecting processing services prices, as shown in Exhibit III-21.

- In the U.K., however, because of the impact of professional/personal computers, technology is considered the most important factor.

4. FACTORS AFFECTING FUTURE PRICING

- Processing vendors were asked to indicate the relative importance of selected factors on future pricing policies. Exhibit III-22 indicates that, for the four European countries as a group, new technology will have the greatest impact.

EXHIBIT III-20

IMPORTANCE OF SELECTED FACTORS IN PRICING OF
PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	RELATIVE IMPORTANCE*				
		HARDWARE COST	PERSONNEL/ COST	COMMUNICATIONS COST	SALES/ MARKETING COST	PROFIT MARGINS
United Kingdom	6	2.8	3.7	1.7	3.0	4.2
France	6	3.5	4.0	2.2	3.9	3.2
Germany	8	2.5	4.8	2.6	3.1	2.0
Italy	10	1.4	4.7	2.4	3.2	2.2
Europe	30	2.4	4.4	2.3	3.3	2.7

* 1 = Least Important, 5 = Most Important

EXHIBIT III-21

MOST IMPORTANT FACTOR AFFECTING CURRENT PRICING OF PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	PORTION OF RESPONDENTS (percent)					
		PERSONNEL COSTS	SALES/ MARKETING COSTS	PROFIT MARGINS	ECONOMY	TECHNOLOGY MINIS/MICROS	SOFTWARE DEVELOP-MENT
United Kingdom	6	0%	0%	0%	34%	66%	0%
France	6	50	34	0	0	0	16
Germany	8	100	0	0	0	0	0
Italy	10	70	10	10	0	0	10
Europe	30	60%	10%	3%	7%	13%	7%

EXHIBIT III-22

IMPORTANCE OF SELECTED FACTORS ON FUTURE PROCESSING SERVICES PRICING POLICY
AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	RELATIVE IMPORTANCE*					
		GOVERNMENT ACTIONS	ECONOMIC CONDITIONS	COMPETITION FROM			NEW TECHNOLOGY
				SERVICES VENDORS	HARDWARE VENDORS	IN-HOUSE EDP	
United Kingdom	6	1.7	3.0	2.2	2.7	3.2	4.4
France	6	3.7	2.8	2.8	2.0	2.5	2.5
Germany	8	1.3	2.3	3.3	3.1	2.5	1.8
Italy	10	1.2	3.6	1.6	2.4	2.2	3.9
Europe	30	1.8	3.0	2.4	2.6	2.5	3.2

* 1 = Least Important, 5 = Most Important

- Except in France where the government is exercising price control on processing services pricing, vendors rated government actions as least important in setting future processing services pricing policy.

- Economic conditions, indirectly and at times directly affected by government action, were rated by three of the four countries and by the four countries as a group (Europe) as second in importance in affecting future processing services pricing policy.

- As shown in Exhibit III-23, processing vendors in the aggregate agreed with the relative ranking of the factors, as presented in Exhibit III-22.

  - Technology was ranked as the most important factor by 33% of total processing vendors, the greatest portion.

  - Only 10% of total processing vendors (the portion coming from France) rated government action as the most important factor.

5. PRICING STRATEGIES

- Processing vendors were asked to rate selected strategic objectives in setting pricing policy and to select the most important objective. Exhibit III-24 indicates that the four European countries as a whole consider value-added pricing the most important strategy in pricing processing services.

  - This strategic objective is most important to processing vendors in the U.K., France, and Italy.

  - German processing vendors appear to have adopted the most defensive pricing strategy; that of covering costs and meeting competitive pricing, rating the value-added objective only third in importance.

EXHIBIT III-23

MOST IMPORTANT FACTOR AFFECTING FUTURE PRICING POLICY OF PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	PORTION OF RESPONDENTS (percent)*					
		GOVERNMENT ACTIONS	ECONOMIC CONDITIONS	COMPETITION FROM HARDWARE VENDORS	COMPETITION FROM		TECHNOLOGY MINIS/ MICROS
					IN-HOUSE VENDORS	SERVICES VENDORS	
United Kingdom	6	0%	17%	0%	0%	0%	83%
France	6	50	0	12	12	13	13
Germany	8	0	10	20	30	40	0
Italy	10	0	42	16	0	0	42
Europe	30	10%	20%	13%	10%	13%	33%

* Multiple Responses Possible

EXHIBIT III-24

IMPORTANCE OF SELECTED STRATEGIES IN
PRICING OF PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	RELATIVE IMPORTANCE*					
		PERCEIVED LOW PRICE	PERCEIVED HIGH PRICE	MEET COMPETITION'S PRICES	COVER COSTS	WHAT MARKET WILL BEAR	VALUE-ADDED PRICING
United Kingdom	6	1.0	2.2	2.4	4.0	3.5	4.7
France	6	1.0	2.8	2.8	3.0	2.0	4.3
Germany	8	1.3	2.4	3.2	3.6	2.4	3.0
Italy	10	1.0	1.7	2.9	3.4	1.4	3.6
Europe	30	1.1	2.2	2.9	3.5	2.2	3.8

* 1 = Least Important, 5 = Most Important

- Processing services vendors in the four European countries neither want to take advantage of the user nor enter into price competition with other processing vendors.

  - They rate perceived low price as least important both on an overall basis (Europe) and individually within each country.

  - Vendors rank the strategic objective of pricing for what the market will bear in Europe as the second least important strategy with vendors in three of the four European countries in agreement with the overall European ranking.

- Covering costs is still a very important objective to processing services vendors.

  - It is ranked by the four European countries as a whole as the second most important objective.

  - Three European countries rank covering costs as the second most important strategic objective whereas processing vendors in Germany give it top priority.

- Vendor selection of the most important strategic objective in pricing processing services, as shown in Exhibit III-25, is in general agreement with that of the selected strategies presented in Exhibit III-24.

  - Some 44% of the respondents selected the value-added strategy as the most important objective, followed by covering costs as the second most important.

  - Vendors added price/performance in maintaining profit margin as an additional strategic objective used in pricing processing services.

EXHIBIT III-25

MOST IMPORTANT STRATEGIC OBJECTIVE IN
PRICING PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	PORTION OF RESPONDENTS (percent)					
		COVER COSTS	VALUE ADDED	PRICE/ PERFORMANCE	MEET COMPETITION	PROFIT MARGIN	ALL IMPORTANT
United Kingdom	6	16%	50%	0%	0%	17%	17%
France	6	16	84	0	0	0	0
Germany	8	12	13	38	12	0	25
Italy	10	40	40	10	10	0	0
Europe	30	23%	44%	13%	7%	3%	10%

H. PRICE INCREASES EXPECTED BY USERS AND UNDERSTANDING OF BILLING METHODS

1. VENDOR PERCEPTIONS

- Vendors were asked what price increases users expected for the balance of 1982 and 1983. Exhibit III-26 indicates that not all vendors believe users expect price increases in the current market. Only 50% of the vendors in the U.K. believe users expect price increases, whereas in Italy, probably due to inflation, all the vendors believe users are planning to pay higher prices for processing services.

- Vendors in the four European countries as a group believe users planned on a 5% increase for the balance of 1982 to be followed by a 10% price increase in 1983.

  - Overall price increases were least in Germany, greatest in Italy, and for 1982 at least, held down by government price control in France.

  - The range of expected price increases for 1983 is rather narrow on a country-by-country basis, indicating close vendor agreement on user price expectations.

2. BILLING METHODOLOGY

- Processing vendors were asked to assess user understanding of processing services billing methodology. Exhibit III-27 indicates that they gave themselves relatively high grades with respect to their perception of user understanding of their billing methods.

EXHIBIT III-26

PRICE INCREASES EXPECTED BY USERS FOR
PROCESSING SERVICES AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		EXPECTED PRICE INCREASES (percent)			
			BALANCE 1982		1983	
	CHANGING PRICES	NOT CHANGING PRICES	AVERAGE	RANGE	AVERAGE	RANGE
United Kingdom	3	3	8.3%	7-10%	7.5%	5-10%
France	5	1	3.2	0-8	7.2	5-10
Germany	6	2	3.7	0-8	5.0	3-7
Italy	10	0	5.1	0-20	13.9	10-15
Europe	24	6	4.8%	0-20%	9.5%	3-15%

EXHIBIT III-27

USER UNDERSTANDING OF PROCESSING SERVICES BILLING METHODOLOGY AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	USER UNDERSANDING RELATIVE RATING*	
		AVERAGE	RANGE
United Kingdom	6	4.3	4-5
France	6	3.4	1-5
Germany	7	3.6	3-4
Italy	9	4.1	3-5
Europe	28	3.9	1-5

* 1 = Low Understanding, 5 = High Understanding

- The 28 vendors as a group rated user understanding of their billing methods close to 80%, or excellent.

- Except for processing service vendors in France, the range of relative rating was narrow, indicating processor vendor agreement on user perception of their billing methodology.

I. USER SELECTION CRITERIA

1. VENDOR PERCEPTIONS

- Vendors were asked to assess the importance of selected factors in future buying of processing services. Exhibit III-28 indicates that the four European vendors as a group and individually feel that users consider quality of the service the most important factor in selecting processing services. Consulting support closely allied to service quality was the next most important factor in selecting processing services as perceived by the vendors in the four European countries as a group. Vendors in the U.K., Germany, and Italy, supported this finding, with vendors in France rating it a third in importance to users just behind software availability.

- Processing vendors as a group (Europe) felt that personal computers would be the least important factor users would consider in selecting processing services over the next two years. INPUT believes that personal computers, which have already become a significant factor in services offerings of U.S. RCS firms, will also become a high priority factor for users in European markets within the next two years.

- Data analysis, as presented in Exhibit III-29, support the ranking of selected factors as shown in Exhibit III-28. The major portion (66%) of total vendors selected service quality as the most important factor in the buying of pro-

EXHIBIT III-28

IMPORTANCE OF SELECTED FACTORS IN THE FUTURE BUYING OF SERVICES AS REPORTED BY PROCESSING VENDORS

COUNTRY	NUMBER OF RESPONDENTS	RELATIVE IMPORTANCE*					
		SERVICE PRICE	SERVICE QUALITY/ SUPPORT/ MAINTEN-ANCE	CONSULTING SUPPORT	IN-HOUSE EDP OPTION	PERSONAL COMPUTERS	SOFTWARE AVAIL-ABILITY
United Kingdom	6	3.2	4.7	4.0	3.5	3.2	3.0
France	6	2.0	4.5	3.3	3.5	2.8	3.8
Germany	7	3.7	4.3	4.3	2.9	2.0	3.0
Italy	10	3.0	4.8	3.8	2.3	2.1	3.0
Europe	29	3.0	4.6	3.9	2.9	2.4	3.2

* 1 = Least Important, 5 = Most Important

EXHIBIT III-29

MOST IMPORTANT FACTOR IN THE FUTURE BUYING OF SERVICES BY USERS AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS	PORTION OF RESPONDENTS (percent)*					
		SERVICE QUALITY SUPPORT/ MAINTENANCE	SERVICE PRICE	SOFTWARE AVAILABILITY	CONSULTING SUPPORT	IN-HOUSE EDP OPTION	PERSONAL COMPUTERS
United Kingdom	6	66%	17%	17%	0%	0%	0%
France	6	49	0	17	0	17	17
Germany	7	72	14	0	14	0	0
Italy	10	70	10	10	10	0	0
Europe	29	65%	10%	10%	7%	4%	4%

* Multiple Responses Possible

cessing services by users. Similarly, personal computers and in-house DP option were rated most important by only 4% of vendors.

2. USER PERCEPTIONS

- Users were asked to assess the importance of selected factors in buying processing services. Exhibit III-30 indicates that, for European users as a group, the vendor's knowledge of the application is the most important factor in buying batch processing services. Users as a group and individually rate the range of batch processing services offered as the least important factor in service selection.

- Exhibit III-31 indicates that users in the four European countries as a group rate customer support as the most important criterion, just ahead of response time in buying remote computing services.

  - Users in France and Germany rate customer support most important, while users in the U.K. and Germany rated price/discount most important.

  - Users as a group and individually rated response time as the second most important factor.

  - Range of services was least important to users in buying remote computing services.

EXHIBIT III-30

IMPORTANCE OF SELECTED FACTORS IN
BUYING BATCH-PROCESSING SERVICES AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS		RELATIVE IMPORTANCE*						
	USING	NOT USING	VENDORS' KNOWLEDGE OF THE APPLICATION	VENDORS' SPECIFIC INDUSTRY KNOWLEDGE	CUSTOMER SUPPORT/ DOCUMENTATION MAINTENANCE	PRICE/ DISCOUNT	CONTRACT TERMS	RESPONSE TIME	RANGE OF SERVICES
United Kingdom	5	4	4.2	3.0	3.6	3.2	3.0	3.8	2.2
France	1	12	5.0	0.0	5.0	3.0	5.0	3.0	0.0
Germany	4	6	4.8	3.2	3.3	4.2	3.8	4.0	3.0
Italy	4	7	5.0	4.5	5.0	3.0	3.5	4.0	1.0
Europe	14	29	4.7	3.3	4.0	3.4	3.5	3.9	1.9

* 0 = Least Important, 5 = Most Important

EXHIBIT III-31

IMPORTANCE OF SELECTED FACTORS IN
BUYING REMOTE COMPUTING SERVICES AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS		RELATIVE IMPORTANCE*						
	USING	NOT USING	VENDORS' KNOWLEDGE OF THE APPLICATION	VENDORS' SPECIFIC INDUSTRY KNOWLEDGE	CUSTOMER SUPPORT/ DOCUMENTATION MAINTENANCE	PRICE/ DISCOUNT	CONTRACT TERMS	RESPONSE TIME	RANGE OF SERVICES
United Kingdom	5	4	4.0	2.4	4.0	4.8	3.4	4.4	2.4
France	5	8	3.3	2.0	5.0	3.0	3.3	4.0	3.0
Germany	3	7	3.3	2.3	3.7	4.7	4.0	4.0	2.0
Italy	2	9	3.5	4.0	5.0	3.0	4.0	4.5	2.0
Europe	15	28	3.6	2.5	4.4	3.9	3.6	4.2	2.5

* 0 = Least Important, 5 = Most Important

IV SOFTWARE PRODUCTS PRICING

IV SOFTWARE PRODUCTS PRICING

A. CURRENT PRICING PRACTICES BY COUNTRY

- Software product vendors were asked, for both systems and application packages, what portion of their products were priced by the following methods:

  - Lump sum purchase, where purchase is equivalent to perpetual lease.
  - Annual fee/rental.
  - Installment purchase.
  - Other.

1. SYSTEMS SOFTWARE PRODUCTS

- Data analysis, as shown in Exhibit IV-1, is from just over half (56%) of the software product vendors in the four European countries as a group offering systems software products.

- The sparsity of data elements for vendors in individual countries (except for France) permits only speculation as to rationale for pricing methods used on a country-to-country basis. However, the aggragate data (Europe) does indicate that:

EXHIBIT IV-1

PRICING METHODS USED FOR SYSTEMS SOFTWARE PRODUCTS
AS REPORTED BY VENDORS

COUNTRY	PORTION (percent)			
	LUMP SUM PURCHASE	ANNUAL FEE/ RENTAL	INSTALLMENT PURCHASE	OTHER
United Kingdom	100%	0%	0%	0%
France	62	37	1	0
Germany	80	0	0	20
Italy	0	10	90	0
Europe	61%	26%	11%	2%

- Most (61%) of vendors sell systems software products on a perpetual lease basis. An alternative is annual leasing.

- It might be deduced that due to the uncertainty engendered by inflation in Italy, vendors are forced to offer systems software on an installment purchase basis in that country.

- Other methods include pricing based on the number of installations within the company or corporate group.

2. APPLICATION PACKAGES

- As Exhibit IV-2 indicates, software product vendors in Europe consider sale of application software products through perpetual leases the most important pricing method. This is also true for three individual countries - the U.K., France, and Germany. In Italy, most likely responding to uncertainties engendered by inflation, software product vendors have been forced to use the installment purchase method to market their application software products.

- Other pricing methods include:

  - Monthly rental, with rental applied to purchase option in decreasing portion over time.

  - Monthly rental for a fixed period of time followed by one-time charge for perpetual lease.

EXHIBIT IV-2

PRICING METHODS USED FOR APPLICATION SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	PORTION (percent)			
	LUMP SUM PURCHASE	ANNUAL FEE/ RENTAL	INSTALLMENT PURCHASE	OTHER
United Kingdom	99%	1%	0%	0%
France	73	23	1	3
Germany	70	10	0	20
Italy	0	3	97	0
Europe	59%	12%	25%	4%

B. RECENT PRICE CHANGES TO SOFTWARE PRODUCTS

- Software product vendors were asked about price changes for the last two years and for the next year (1983) for both system and application software packages.

1. SYSTEMS SOFTWARE PRODUCTS

- European vendors as a group anticipated price increases slightly greater (9%) than those of the last two years (6%), as shown in Exhibit IV-3.

- With the exception of France, the cell data for vendors in the other three European countries is too small to make a valid country-by-country comparison.

- Price increases for systems software products are not as easily controlled as other computer services. The range of actual and anticipated price increase is quite broad from vendor to vendor. A significant portion of systems software products originated outside France.

2. APPLICATION PACKAGES

- European software product vendors as a group anticipate an average price increase (10%) slightly greater than that experienced in the past two years (7.5%), as shown in Exhibit IV-4. Increase in software prices is as much related to added functionality and improved performance (efficiency) as it is to inflation.

  - Price increase is least in Italy where products are being sold to smaller companies requiring less sophistication.

EXHIBIT IV-3

ACTUAL AND ANTICIPATED PRICE INCREASES FOR
SYSTEMS SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	PORTION RECEIVING DISCOUNTS (percent)					
	ACTUAL				ANTICIPATED	
	1981		1982		1983	
	Average	Range	Average	Range	Average	Range
United Kingdom	0%	-	0%	-	0%	-
France	11	2-15%	3	0-13%	12	10-35%
Germany	0	-	0	-	5	-
Italy	10	-	15	-	5	-
Europe	8%	2-15%	4%	0-13%	9%	10-35%

EXHIBIT IV-4

ACTUAL AND ANTICIPATED PRICE INCREASES FOR
APPLICATION SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	PORTION RECEIVING DISCOUNTS (percent)					
	ACTUAL				EXPECTED	
	1981		1982		1983	
	Average	Range	Average	Range	Average	Range
United Kingdom	13%	12-15%	10%	10-10%	10%	10-10%
France	10	2-15	3	0-15	12	10-15
Germany	11	5-10	8	0-10	8	5-10
Italy	4	0-15	6	0-15	7	0-15
Europe	9%	0-15%	6%	0-15%	10%	0-15%

- Anticipated price increase is greatest in France. This is probably due to the combination of importation of software products, particularly in micros and minis, and for increased price/performance over the packages formerly offered.

- The relatively narrow range of both actual and anticipated price increases indicates vendor awareness of software product pricing in European markets.

C. REVENUE SOURCES

- Software product vendors were asked to estimate the portion of total revenue derived from selected software product services in the last two years.

- Data presented in Exhibit IV-5 indicates that, for software product vendors in Europe, a significant portion (46%) of total revenues was derived from services as contrasted to the sale of software products, and that the portion was increasing.

- Modification of standard packages to meet specific customer requirements is a significant activity for software product vendors as a group (Europe) and in the U.K. and France individually. Apparently users are more willing to accept standard packages in Italy and Germany.

- Software product vendors as a group derived only 11% of total revenues from maintenance. INPUT believes that software product vendors need to price maintenance services higher (approximately 15%) in order to insure profitability.

- Software product vendors as a group derived only 5% of total revenues over the two year period from training services. INPUT believes that software product vendors must be more realistic in pricing training services to insure profitability.

EXHIBIT IV-5

PORTION OF TOTAL REVENUES DERIVED FROM
SELECTED SOFTWARE PRODUCT SERVICES AS REPORTED BY VENDORS

COUNTRY	PORTION OF TOTAL REVENUE (percent)										TOTAL PORTION (percent)	
	ENHANCEMENTS		INSTALLATION		TRAINING		MAINTENANCE		MODIFICATIONS			
	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982
United Kingdom	6%	11%	9%	10%	2%	3%	5%	10%	14%	31%	36%	65%
France	5	8	3	4	3	5	8	11	14	13	33	41
Germany	5	4	1	1	2	3	6	8	6	5	20	21
Italy	0	11	6	8	6	10	16	11	2	5	30	4
Europe	4%	10%	5%	6%	4%	6%	11%	11%	10%	13%	34%	46%

D. SERVICE CHARGING

1. METHODS OF CHARGING FOR SERVICES

- Software product vendors indicated their methods of charging for selected software services, as shown in Exhibit IV-6.

- A negotiated fixed additional price for enhancements was the most prominent method utilized by software products vendors as a group. A major exception to this method was in Germany where software product vendors either negotiate enhancements with each client and include in the total contract price or make them on a time-and-material basis.

- Over 60% of all software product vendors do not charge separately for installation.

  - The time-and-material method, particularly in Italy, was favored by software product vendors when installation fees were charged separately (31%).

  - INPUT believes that software product vendors should price installation services on a separate and profitable basis.

- There is great disparity in the way that software product vendors, by individual country and as a group, charge for training services.

  - The time-and-material basis is most popular in Italy and the U.K..

  - Nearly 40% of the software product vendors as a group do not separately charge for training services.

EXHIBIT IV-6

METHODS OF CHARGING FOR SELECTED SOFTWARE PRODUCT SERVICES
AS REPORTED BY VENDORS

COUNTRY	PORTION (percent)*														
	ENHANCEMENTS					INSTALLATION					TRAINING				
	NC	IP	AP	HRE	OT	NC	IP	AP	HRE	OT	NC	IP	AP	HRE	OT
United Kingdom	0%	0%	67%	33%	0%	0%	34%	33%	33%	0%	33%	0%	0%	67%	0%
France	17	33	17	33	0	14	72	0	14	0	0	45	45	10	0
Germany	50	0	0	50	0	33	67	0	0	0	0	50	50	0	0
Italy	0	25	75	0	0	0	25	0	75	0	0	20	20	60	0
Europe	14%	21%	39%	27%	0%	10%	52%	6%	31%	0%	6%	31%	31%	32%	0%

* May be multiple responses

NC = No Change
IP = Included in Purchase Price
AP = Fixed Additional Price
HRE = Hourly Rate and Expenses
OT = Other

EXHIBIT IV-6 (Cont.)

METHODS OF CHARGING FOR SELECTED SOFTWARE PRODUCT SERVICES
AS REPORTED BY VENDORS

COUNTRY	PORTION (percent)*									
	MAINTENANCE					CUSTOM MODIFICATIONS				
	NC	IP	AP	HRE	OT	NC	IP	AP	HRE	OT
United Kingdom	0%	33%	67%	0%	0%	0%	0%	50%	50%	0%
France	0	20	30	40	10	0	0	17	66	17
Germany	0	0	100	0	0	0	0	33	67	0
Italy	0	0	75	0	25	0	0	25	75	0
Europe	0%	15%	57%	18%	11%	0%	0%	27%	65%	7%

* May be multiple responses

NC = No Change
IP = Included in Purchase Price
AP = Fixed Additional Price
HRE = Hourly Rate and Expenses
OT = Other

- INPUT believes that software product vendors should charge for training services on a separate and profitable basis.

- The major portion (57%) of software product vendors as a group used the fixed-price method for independently charging for software maintenance services. Other methods software vendors used for charging for maintenance were a fixed monthly charge, and a fixed level of effort negotiated annually.

- The major portion (65%) of software product vendors in the four European countries as a group utilized the time-and-material method to accomplish custom modification to software products. This method is also used by software vendors in each of the four European countries. Other methods of charging for custom modifications include a level of effort negotiated annually.

2. PRICE INCREASES FOR SERVICES

- Software product vendors were asked to estimate the actual price increases for the past two years, and those anticipated for next year (1983) for selected software services. As shown in Exhibit IV-7, software product vendors in the four European countries as a group anticipated price increases for all selected services except training. Anticipated increases are approximately the same as actual price increases for the past two years.

  - The sharp decrease from nearly 9% for the past two years to 4% for 1983 indicates the need for attention to the profitability of training services.

  - The small number of respondents for each European country does not allow for meaningful by-country comparisons.

EXHIBIT IV-7

ACTUAL AND ANTICIPATED PRICE INCREASES FOR SELECTED SOFTWARE PRODUCT SERVICES AS REPORTED BY VENDORS

COUNTRY	AVERAGE PRICE INCREASE (percent)								
	ENHANCEMENTS			INSTALLATION			TRAINING		
	1981	1982	1983	1981	1982	1983	1981	1982	1983
United Kingdom	0%	3%	3%	6%	3%	3%	10%	3%	3%
France	8	0	0	8	0	0	8	0	0
Germany	10	4	8	6	6	7	10	5	9
Italy	20	15	18	13	14	14	13	12	5
Europe	11%	7%	8%	9%	7%	7%	11%	6%	4%

Continued

EXHIBIT IV-7 (Cont.)

ACTUAL AND ANTICIPATED PRICE INCREASES FOR SELECTED SOFTWARE PRODUCT SERVICES AS REPORTED BY VENDORS

COUNTRY	AVERAGE PRICE INCREASE (percent)					
	MAINTENANCE			CUSTOM MODIFICATIONS		
	1981	1982	1983	1981	1982	1983
United Kingdom	6%	3%	3%	0%	3%	3%
France	13	0	0	15	0	0
Germany	8	0	8	5	0	7
Italy	5	6	10	13	23	20
Europe	8%	3%	6%	9%	8%	9%

- It does appear that price control in France is limiting price increases for the selected software services.

- Software product vendors in Italy report consistently higher actual and anticipated prices than those in the other three European countries, probably due to inflation and price instability.

E. DISCOUNTING BY COUNTRY

1. PRICE DISCOUNTING

- Software product vendors were asked for the minimum and maximum discounts percentages they provide under selected conditions.

a. The U.K.

- Data analysis shown in Exhibit IV-8 indicates that software product vendors in the U.K. discount primarily on volume, or the number of copies of the product installed in a company, including its subsidiaries.

  - Discounts are also negotiated under term contracts and in the education sector.

b. France

- Less than half (43%) of the software product vendors in France use any form of price discounting, as shown in Exhibit IV-9. Volume discounting is the most widely practiced. Discounting does occur in both the education and government sectors. Other discounting practices include special discounts for upgrading existing products with advanced versions within the same company and joint ventures with customers receiving discounts in the form of programming/machine time.

EXHIBIT IV-8

PRICE DISCOUNTING PRACTICES AS REPORTED BY
SOFTWARE PRODUCT VENDORS IN THE UNITED KINGDOM

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	3	0	22%	10-30%	45%	25-60%
Term Contract	1	2	15	-	35	-
Usage Pattern	0	3	0	-	0	-
Government Sector	0	3	0	-	0	-
Education Sector	1	2	15	-	35	-
Other	0	3	0	-	0	-

EXHIBIT IV-9

PRICE DISCOUNTING PRACTICES AS REPORTED BY SOFTWARE PRODUCT VENDORS IN FRANCE

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	3	4	6%	1-10%	32	12-70%
Term Contract	0	7	0	-	0	-
Usage Pattern	1	6	10	-	50	-
Government Sector	1	6	20	-	20	-
Education Sector	1	6	10	-	15	-
Other	3	4	10	-	100	-

c. Germany

- Data analysis, as shown in Exhibit IV-10, indicates that software product vendors offer volume discounts on the number of installations per company and special discounts in the education sector.

- Special discounts of approximately twice the rate of other discounting practices are given to distributors.

e. Italy

- The data presented in Exhibit IV-11 indicates that not all vendors utilize any discounting practice in the sale of software products. Volume discounting is the most widely used. The wide range of the minimum and maximum discount amount for volume discounting suggests that individual arrangements are negotiated with each client.

- Software product vendors make special agreements with public bodies and consortiums in the government and education sectors.

f. Europe

- Data analysis, as presented in Exhibit IV-12, indicates that software products vendors in the four European countries as a group do not make wide use of discounting practices.

  - Volume discounting is the most widely practiced by 70% of the vendors.

  - Considering all discounting practices (6), any one practice is, on the average, likely to be used by only 30% of the software product vendors.

EXHIBIT IV-10

PRICE DISCOUNTING PRACTICES AS REPORTED BY SOFTWARE PRODUCT VENDORS IN GERMANY

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	2	0	6%	1-10%	20%	20%
Term Contract	0	2	0	-	0	-
Usage Pattern	1	1	10	-	10	-
Government Sector	0	2	0	-	0	-
Education Sector	2	0	13	10-15	20	10-30
Other	1	0	25	-	40	-

EXHIBIT IV-11

PRICE DISCOUNTING PRACTICES AS REPORTED BY
SOFTWARE PRODUCT VENDORS IN ITALY

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	3	1	20%	5-50%	32%	10-70%
Term Contract	2	2	8	5-10	18	10-25
Usage Pattern	1	3	10	-	20	-
Government Sector	1	3	10	-	15	-
Education Sector	1	3	10	-	15	-
Other	1	3	10	-	15	-

EXHIBIT IV-12

PRICE DISCOUNTING PRACTICES AS REPORTED BY
SOFTWARE PRODUCT VENDORS IN EUROPE

DISCOUNT PRACTICE	NUMBER OF RESPONDENTS		DISCOUNT AMOUNT (percent)			
			MINIMUM		MAXIMUM	
	DISCOUNT	NO DISCOUNT	AVERAGE	RANGE	AVERAGE	RANGE
Volume	11	5	14%	1-50%	33%	10-70%
Term Contract	3	13	10	5-15	24	10-35
Usage Pattern	3	13	10	10-10	27	10-50
Government Sector	2	14	15	10-20	18	15-20
Education Sector	5	11	12	10-15	21	10-30
Other	5	10	13	10-25	31	15-100

- On the average the minimum discount is not very high (13%) and except for volume discounting, the range is rather narrow. Even the average maximum discount over the six practices (28%) indicates a conservative approach toward discounting.

- INPUT believes that as software distribution channels expand, particularly with the advent of microprocessors, software product vendors will have to more aggressively utilize price discounting practices in the European marketplace.

2. DISCOUNTING TRENDS

- Software vendors were asked to indicate trends in discounting policies over the next two years for selected discounting practices.

- As Exhibit IV-13 indicates, software product vendors in the four European countries as a whole expect little change in the pattern of discounting for the six selected practices.

  - Selected software product vendors in Germany and Italy are pursuing other discounting practices through expanded software product distribution channels.

  - Selected software product vendors in France and Italy see increased competition from volume discounting.

3. CUSTOMERS RECEIVING DISCOUNTS

- Software product vendors were asked to estimate what portion of their customers buy software products at a discount, both currently and in the next two years. Data analysis, as presented in Exhibit IV-14, indicates that software vendors in the four European countries as a group expect some increase (5%) in the portion of their customer base purchasing software products at a discount.

EXHIBIT IV-13

TRENDS IN DISCOUNTING POLICIES WITHIN NEXT TWO YEARS
AS REPORTED BY SOFTWARE PRODUCT VENDORS

COUNTRY	POLICY PORTION (percent)											
	VOLUME		TERM CONTRACT		USAGE PATTERN		GOVERNMENT SECTOR		EDUCATION SECTOR		OTHER	
	S	I	S	I	S	I	S	I	S	I	S	I
United Kingdom	100%	+0%	100%	+0%	100%	+0%	100%	+0%	67%	+33%	100%	+0%
France	80	20	100	0	100	0	100	0	100	0	100	0
Germany	100	0	50	50	50	50	100	0	100	0	50	50
Italy	67	33	67	33	100	0	100	0	100	0	50	50
Europe	85%	15%	85%	15%	92%	8%	100%	0%	92%	8%	81%	19%

EXHIBIT IV-14

PORTION OF CUSTOMERS RECEIVING DISCOUNTS
AS REPORTED BY SOFTWARE PRODUCT VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION RECEIVING DISCOUNTS (percent)			
			NOW		NEXT TWO YEARS	
	OFFERING	NOT OFFERING	AVERAGE	RANGE	AVERAGE	RANGE
United Kingdom	3	0	34%	2-50%	38%	2-60%
France	6	1	11	1-30	20	2-50
Germany	2	0	25	20-30	25	20-30
Italy	3	1	34	0-80	37	0-80
Europe	14	2	23%	0-80%	28%	0-80%

- The wide range in the portion of customers receiving discounts individually by country, and in the aggregate Europe both now and in the next two years, indicates absence of strategic planning in the use of software product discounting for software product vendors in Europe.

- INPUT believes that European software product vendors must give greater attention to discounting strategies where individual product volume through expanded distribution channels will likely run into the tens of thousands.

4. DISCOUNTING AND TOTAL REVENUES

- Software product vendors were asked to estimate the portion of total software product revenues represented by discounted products.

- Data analysis, as shown in Exhibit IV-15, indicates that nearly 90% of software vendors in the four European countries as a group offered discounts.

- Taking the midpoint in each of the revenue ranges, shown in Exhibit IV-14 for software product vendors in the four European countries as a group, discounted software products represent 32% of total software product revenues.

  - Discounted product revenues are greatest in Italy (50%).

  - The portion is least for software product vendors in France (17%).

- The portion of total software product revenues represented by discounted products (32%) is considerably less than the portion for discounted RCS services (see Exhibit III-17 in Chapter III, Processing Services Pricing), which approached 50%.

EXHIBIT IV-15

PORTION OF TOTAL SOFTWARE PRODUCT REVENUES REPRESENTED BY CUSTOMERS RECEIVING DISCOUNTS AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		PORTION OF REVENUES (percent)				
	Offering	Not Offering	80-100%	60-79%	40-59%	20-39%	< 20%
United Kingdom	3	0	0%	0%	34%	33%	33%
France	6	1	0	0	0	33	67
Germany	2	0	0	50	0	50	0
Italy	3	1	33	0	0	67	0
Europe	14	2	7%	7%	7%	43%	36%

F. PRICING POLICIES AND IMPACT ON REVENUE GROWTH

1. PRICING AND REVENUE GROWTH

- Software product vendors were asked to provide actual and expected revenue growth percentages for the past two years and 1983, and to estimate the portion attributable to price increases.

- Data analysis, as shown in Exhibit IV-16, indicates that, for software product vendors in the four European countries as a group, the expected portion of increased revenues represented by price increase (12%) will be about the same as that of the past two years (11%).

- Because of lower expected revenue growth (39%) as compared to average revenue growth in the last two years (61%), the expected portion represented by price increase is 30% as compared to the actual portion of just over 20% for the past two years.

2. FACTORS IN CURRENT PRICING

- Software product vendors were asked to rate the importance of selected factors in their pricing policies and to define the most important factor. In the four European countries as a group, personnel cost is the most important factor in pricing the software products, as shown in Exhibit IV-17.

  - Software product vendors in three countries - France, Germany, and Italy - also selected this factor as the most important.

  - Software product vendors in the U.K. ranked personnel costs just below sales and marketing costs, and profit margins.

EXHIBIT IV-16

PORTION OF INCREASED REVENUES ATTRIBUTABLE TO
PRICE INCREASES AS REPORTED BY SOFTWARE PRODUCTS VENDORS

COUNTRY	NUMBER OF RESPONDENTS		REVENUE INCREASE (percent)				PRICE INCREASE PORTION (percent)			
			1981-1982		1983		1981-1982		1983	
	OFFERED	NOT OFFERED	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE
United Kingdom	3	0	52%	25-87%	43%	30-55%	5%	0-10%	5%	0-10%
France	6	1	51	10-140	37	12-70	7	0-13	8	3-11
Germany	2	0	18	17-20	15	10-20	26	3-50	28	3-50
Italy	3	1	119	40-350	54	20-100	14	3-21	15	10-18
Europe	14	2	61%	10-350%	39%	10-100%	11%	0-50%	12%	0-50%

EXHIBIT IV-17

IMPORTANCE OF SELECTED FACTORS IN PRICING OF SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	RELATIVE IMPORTANCE*				
	HARDWARE COST	PERSONNEL COST	COMMUNICATION COST	SALES/ MARKETING COST	PROFIT MARGINS
United Kindgom	1.3	3.7	1.3	4.0	4.0
France	2.0	5.0	1.6	3.4	2.4
Germany	4.5	4.5	1.5	3.5	2.5
Italy	1.2	5.0	1.2	3.5	4.3
Europe	2.0	4.7	1.4	3.6	3.2

* 1 = Least Important, 5 = Most Important

- Software product vendors in the four European countries individually and as a group (Europe) rated communication costs as the least important factor in pricing their software products.

- Data analysis presented in Exhibit IV-18 indicates that the major portion (76%) of software product vendors rank personnel costs as the most important factor in pricing their products. By introducing foreign exchange rates as the most important factor, software product vendor(s) are giving recognition to the distribution of software products from foreign countries (U.S. and Japan), primarily related to microprocessors and sold through distributors.

3. FACTORS IMPACTING FUTURE PRICING

- Software product vendors were asked to rate the impact of selected factors on future pricing policies and to select the most important one. Vendors from the four European countries as a whole believe that future economic conditions will be most important, as shown in Exhibit IV-19.

  - Vendors in two countries, France and Italy, rated economic conditions as the most important factor.

  - Vendors in the U.K. and Germany rated economic conditions second most important, just behind competition from services vendors, which is the second most important for software product vendors as a group (Europe).

- Software product vendors as a group rated new technology as the third most important factor, with agreement by software product vendors in three European countries - France, Germany, and Italy.

- INPUT believes that new technology in the form of 16-32 bit microprocessors will become the most important factor in pricing future software products within the next two to three years.

EXHIBIT IV-18

MOST IMPORTANT FACTOR AFFECTING CURRENT PRICING OF SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	PORTION OF RESPONDENTS (percent)*			
	PERSONNEL COSTS	SALES/ MARKETING COSTS	PROFIT MARGINS	FOREIGN EXCHANGE RATE
United Kingdom	0%	34%	33%	33%
France	100	0	0	0
Germany	100	0	0	0
Italy	80	0	20	0
Europe	76%	6%	11%	6%

*** Multiple Responses Possible**

EXHIBIT IV-19

IMPORTANCE OF SELECTED FACTORS IN
FUTURE SOFTWARE PRODUCT PRICING AS REPORTED BY VENDORS

COUNTRY	RELATIVE IMPORTANCE*				
		COMPETITION FROM			
	ECONOMIC CONDITIONS	SERVICES VENDORS	HARDWARE VENDORS	IN-HOUSE EDP	NEW TECHNOLOGY
United Kingdom	2.7	4.3	2.7	2.3	1.7
France	3.9	3.6	2.6	2.0	3.3
Germany	2.5	3.0	2.0	2.5	2.5
Italy	4.0	2.3	3.0	1.5	2.5
Europe	3.5	3.3	2.6	2.0	2.7

*1 = Least Important, 5 = Most Important

- Data analysis, as shown in Exhibit IV-20, indicates that software products vendors as a group selected the most important factor (in portion of total vendors) with the same relative importance as was determined for Exhibit IV-19.

  - Nearly 40% of the vendors ranked "economic conditions" most important.

  - Less than 10% of total processing vendors felt that "competition from in-house DP" was the most important factor affecting future pricing of their products.

G. PRICING STRATEGIES

- Software product vendors were asked to rate selected strategic objectives used in establishing software product prices and to select the most important strategic objective. As shown in Exhibit IV-21, software product vendors in the four European countries as a group are using a defensive strategy in their pricing. Covering costs and meeting competition are their most important strategies.

- There is considerable variation from country to country in strategic objectives.

  - Software product vendors in the U.K. have the most aggressive pricing policy; what the market will bear is their most important objective.

  - Software product vendors in Italy have the primary objective of offering high-quality products at a perceived high price while insuring that product sales cover costs.

EXHIBIT IV-20

MOST IMPORTANT FACTOR AFFECTING FUTURE PRICING OF SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	PORTION OF RESPONDENTS (percent)*				
	ECONOMIC CONDITIONS	COMPETITION FROM			TECHNOLOGY MICROS MINIS
		SERVICES VENDORS	HARDWARE VENDORS	IN-HOUSE EDP	
United Kingdom	33%	67%	0%	0%	0%
France	43	14	14	0	29
Germany	0	50	0	50	0
Italy	50	0	25	0	25
Europe	38%	25%	12%	6%	19%

*** Multiple response possible**

EXHIBIT IV-21

IMPORTANCE OF SELECTED STRATEGIES IN PRICING OF SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	RELATIVE IMPORTANCE*				
	PERCEIVED LOW PRICE	PERCEIVED HIGH PRICE	MEET COMPETITION	COVER COSTS	WHAT MARKET WILL BEAR
United Kingdom	1.0	3.3	4.0	2.7	4.3
France	1.0	1.4	3.6	4.4	1.9
Germany	1.5	2.0	4.0	3.5	3.5
Italy	2.8	3.8	1.5	3.0	3.0
Europe	1.5	2.4	3.2	3.6	2.8

*1 = Least Important, 5 = Most Important

- Software product vendors in France and Germany have the most defensive strategic pricing policy of meeting competition while covering costs.

- Data analysis, as shown in Exhibit IV-22, indicates that covering costs is the most important strategic objective selected by software vendors as a group. Nearly 40% total selected this objective as most important.

  - Maintaining market share implying meeting competition the other component of a defensive strategy was selected as most important by the second largest proportion of total software product vendors (19%) in Europe.

  - A number of software product vendors selected other objectives as being most important, maintaining profit margins and believing that all of the objectives were equally important.

H. CLIENT EXPECTATIONS

1. PRICE EXPECTATIONS

- Vendors were asked to estimate on a percentage basis prices users expect for software products for the next 18 months (through 1983). As shown in Exhibit IV-23, only 75% of the vendors in the four European countries as a group believe users expect price increases, at least from them, during this period. The price increase expected by users for the last six months of 1982 is approximately the same as that expected by vendors in 1983.

- The narrow range of vendor perceptions of user expectations over the 18-month period perhaps indicates that vendors are aware of pricing limitations in a recessionary European economy.

EXHIBIT IV-22

MOST IMPORTANT STRATEGIC OBJECTIVE IN
PRICING SOFTWARE PRODUCTS AS REPORTED BY VENDORS

COUNTRY	PORTION OF RESPONDENTS (percent)					
	PERCEIVED LOW PRICE	COVER COSTS	MAINTAIN MARKET SHARE/ MEET COMPETITION	MAKE PROFIT OBJECTIVES	WHAT MARKET WILL BEAR	ALL IMPORTANT
United Kingdom	0%	0%	0%	34%	66%	0%
France	14	72	14	0	0	0
Germany	0	0	50	0	50	0
Italy	25	25	25	0	0	25
Europe	12%	38%	19%	6%	19%	6%

EXHIBIT IV-23

PRICE INCREASES EXPECTED BY USERS FOR SOFTWARE PRODUCTS
AS REPORTED BY VENDORS

COUNTRY	NUMBER OF RESPONDENTS		EXPECTED PRICE INCREASE (percent)			
			BALANCE OF 1982		1983	
	CHANGING PRICES	NOT CHANGING PRICES	AVERAGE	RANGE	AVERAGE	RANGE
United Kingdom	3	0	8.3%	5-11%	7.5%	5-10%
France	5	2	6.0	0-10	13.6	8-20
Germany	2	0	5.0	0-10	7.5	5-15
Italy	2	2	8.0	0-16	16.5	13-20
Europe	12	4	6.7%	0-16%	11.5%	5-20%

2. IN-HOUSE DEVELOPMENT

- Software product vendors were asked to rank the importance of selected factors from the user viewpoint leading to in-house development of software applications and to select the most important factor. Data shown in Exhibit IV-24 indicates that software vendors in the four European countries as a group believe that greater in-house sophistication is the most important. Software product vendors in three countries - the U.K., France, and Germany, support greater in-house sophistication as the most important factor, whereas software product vendors in Italy rate it second, behind cost.

- Software product vendors as a group (Europe) rate distributing processing requirements as least important from the user viewpoint, indicating that vendors do not yet believe distributed processing is a major factor in European markets.

- The factor selected as most important by software product vendors as a group (Europe) from the user viewpoint leading to in-house development of software applications is greater in-house maturity (43%), as shown in Exhibit IV-25.

- Some software product vendors selected other factors as being most important to users in deciding to develop software applications in-house.

  - Portability/adaption (14%).

  - Interfacing with existing systems and better software from hardware vendors (each 7%).

- INPUT believes that the ability to interface with existing systems (particularly DBMS) and portability are both very important factors that software product vendors must consider incorporating in their product development strategies to offset user tendencies to develop software applications in-house.

EXHIBIT IV-24

IMPORTANCE OF SELECTED FACTORS LEADING USERS TO DEVELOP SOFTWARE PRODUCTS IN-HOUSE AS REPORTED BY VENDORS

COUNTRY	RELATIVE IMPORTANCE*					
	GREATER IN-HOUSE SOPHISTICATION	BETTER IN-HOUSE DEVELOPED SOFTWARE	BETTER SOFTWARE FROM HARDWARE VENDORS	DISTRIBUTED PROCESSING REQUIREMENTS	INTERFACE WITH OTHER IN-HOUSE SYSTEMS	COST
United Kingdom	4.0	3.0	3.0	2.3	2.7	3.0
France	4.8	4.0	1.5	2.2	2.5	1.8
Germany	3.5	3.0	1.5	1.5	1.5	3.5
Italy	3.5	3.5	3.5	2.5	3.5	5.0
Europe	4.1	3.5	2.3	2.2	2.6	3.0

*1 = Least Important, 5 = Most Important

EXHIBIT IV-25

MOST IMPORTANT FACTOR LEADING USERS TO
DEVELOP SOFTWARE PRODUCTS IN-HOUSE AS REPORTED BY VENDORS

COUNTRY	PORTION OF RESPONDENTS (percent)					
	GREATER IN-HOUSE MATURITY	INTERFACE WITH EXISTING SYSTEMS	COST OF IN-HOUSE DEVELOPMENT	NOT CONFIDENT IN COMPUTER SERVICES	PORTABILITY/ ADAPTION	BETTER SOFTWARE FROM HARDWARE VENDOR
United Kingdom	34%	33%	0%	0%	0%	33%
France	67	0	0	0	33	0
Germany	50	0	0	50	0	0
Italy	0	0	66	34	0	0
Europe	43%	7%	14%	14%	14%	7%

* Multiple Answers Possible

3. REPLACEMENT OF IN-HOUSE APPLICATIONS

- Based on their long-range EDP plans, users were asked which in-house applications together with the rationale are candidates for replacement by software products.

- As shown in Exhibit IV-26, users cited functional, companywide, and cross-industry applications as candidates for replacement by vendor software products.

- With few exceptions vendors have mature software products that are state of the art, flexible, and reliable and can be offered at a fraction of the cost of upgrading or developing the application in-house.

- The information presented in Exhibit IV-27 supports the overall assessment, where users sight greater sophistication in vendor products, cost of in-house development is too high, etc.

- Software product vendors might well look for industry applications (i.e., personal trust in commercial banking) which are always in a high state of change. INPUT believes that offering software products with continuous updating to many users is much more cost effective, than each user continually trying to upgrade and change the application in-house.

I. USER SELECTION CRITERIA

1. VENDOR PERCEPTIONS

- Software product vendors were asked to rate selected factors that will affect software purchased during the next two years and to select the most impor-

EXHIBIT IV-26

APPLICATIONS WHICH ARE CANDIDATES FOR REPLACEMENT OF IN-HOUSE DEVELOPED SOFTWARE WITH VENDOR SOFTWARE PRODUCTS AS REPORTED BY USERS

APPLICATION	MULTIPLE RESPONSES			
	UNITED KINGDOM	FRANCE	GERMANY	ITALY
Human Resources	X	X		X
Payroll	X	X		X
Fixed Assets Accounting	X		X	
Receivables/Payables/General Ledger	X	X	X	X
Word Processing/Office Automation	X		X	X
Inventory/Order Processing	X	X		X
Travel Agency Administration				X
Tax Accounting	X		X	
Financial Planning/Reporting	X	X	X	
Project Management			X	

EXHIBIT IV-27

RATIONALE FOR SHIFTING SELECTED APPLICATIONS FROM IN-HOUSE DEVELOPED SOFTWARE TO VENDOR SOFTWARE PRODUCTS AS REPORTED BY USERS

RATIONALE	MULTIPLE RESPONSES			
	UNITED KINGDOM	FRANCE	GERMANY	ITALY
More sophisticated vendor products available	X	X	X	X
Well structured/documented vendor products			X	
Cost to develop revised application too high	X	X	X	X
Staff not experienced enough to redo system			X	
Cut down development time	X	X	X	X
Improve company efficiency				X
Current systems too difficult to maintain	X	X		
Application in high state of change	X			

tant factor. Exhibit IV-28 indicates that vendors in the four European countries as a group view service quality, as the most important factors users will consider in buying software products and product availability.

- There is considerable variation among software product vendors in each European country about the relative importance of the selected factors in the vendor perception of the user viewpoint. Vendors in only one country, Italy, select service quality as the most important criteria from the user viewpoint. Vendors in the other three countries rate service quality second in importance.

  - The U.K. and France rate software availibility first whereas it is second in importance to the overall group (Europe).

  - Price, third in importance for the group as a whole, is considered unimportant to users by software product vendors in Italy and most important by the vendors in Germany.

  - In-house development is rated least important to users by software product vendors as a group.

- Exhibit IV-29 confirms that software product vendors as a group believe that users perceive "service quality" as the most important factor when buying software products.

- Software product vendors in the U.K., France, and Italy, and in the group (Europe) as a whole, have added another criteria, uniqueness/ease of use, as the second most important user consideration when buying software packages.

2. USER PERCEPTIONS

- Users were asked to rate the importance of selected factors in buying software products. Just over half (54%) of them either had purchased or were planning to purchase software packages, as indicated in Exhibit IV-30.

EXHIBIT IV-28

IMPORTANCE OF SELECTED FACTORS IN FUTURE BUYING OF SOFTWARE PRODUCTS BY USERS AS REPORTED BY VENDORS

COUNTRY	RELATIVE IMPORTANCE*					
	SOFTWARE PRODUCT PRICE	SERVICE QUALITY	IN-HOUSE DEVELOPMENT OPTION	HARDWARE AVAILABILITY	SOFTWARE AVAILABILITY	ECONOMIC CONDITION
United Kingdom	3.3	3.3	2.7	2.7	4.3	1.7
France	2.9	3.9	1.6	2.4	4.3	2.3
Germany	3.5	3.0	3.0	3.0	3.0	3.0
Italy	2.8	4.5	3.0	2.8	3.0	3.5
Europe	3.0	3.8	2.3	2.6	3.8	2.6

* 1 = Least Important, 5 = Most Important

EXHIBIT IV-29

MOST IMPORTANT FACTOR IN FUTURE BUYING OF
SOFTWARE PRODUCTS BY USERS AS REPORTED BY VENDORS

COUNTRY	PORTION OF RESPONDENTS (percent)*					
	SOFTWARE PRODUCT PRICE	IN-HOUSE DEVELOP-MENT COST	SERVICE QUALITY	NEW HARDWARE AVAILABILITY	UNIQUENESS/ EASE OF USE	ECONOMIC CONDITION
United Kingdom	0%	34%	0%	0%	66%	0%
France	12	0	38	12	26	12
Germany	0	0	50	50	0	0
Italy	17	17	32	0	17	17
Europe	10%	11%	31%	12%	28%	10%

* Multiple Responses Possible

EXHIBIT IV-30

IMPORTANCE OF SELECTED FACTORS IN
BUYING SOFTWARE PRODUCTS AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS		RELATIVE IMPORTANCE*						
	USING	NOT USING	VENDORS' KNOWLEDGE OF THE APPLICATION	VENDORS' SPECIFIC INDUSTRY KNOWLEDGE	CUSTOMER SUPPORT/ DOCUMENTATION MAINTENANCE	PRICE/ DISCOUNT	CONTRACT TERMS	RESPONSE TIME	RANGE OF SERVICES
United Kingdom	9	0	4.4	3.0	4.2	3.0	3.3	4.0	2.5
France	7	6	4.0	2.0	4.6	3.3	2.2	4.1	2.4
Germany	5	5	5.0	4.0	4.6	3.8	3.6	2.7	2.0
Italy	2	9	3.5	2.5	5.0	2.5	3.5	4.5	2.5
Europe	23	20	4.3	2.9	4.5	3.2	3.0	3.8	2.4

* 0 = Least Important, 5 = Most Important

- Users in the four European countries as a group rated the quality of customer support, including documentation and maintenance, as their most important consideration in buying vendor software products. Among individual countries, France and Italy rated customer support most important. In the U.K. and Germany, customer support was second only to vendors' knowledge of the application.

- Users in the four European countries as a group and in most individual countries felt that two factors, range of services and vendors' specific industry knowledge, were of least importance in buying software products.

- Vendors and users agree that service quality/customer support is the most important factor. Other factors are not so easily equatable.

  - If vendor knowledge of the application is indeed incorporated in the software that the vendor makes available, then vendor and user perceptions are in agreement as to the second most important factor (software availability) that users consider in buying vendor software products.

V PROFESSIONAL SERVICES PRICING

V PROFESSIONAL SERVICES PRICING

- INPUT did not interview firms offering only professional services, whether processing related, software related, or both. The information in this chapter concerns professional services offered by processing services vendors and software product vendors. It also contains user selection criteria for professional services.

A. PROCESSING SERVICES VENDORS - RELATED SERVICES

1. PROFESSIONAL SERVICES PRICING

- Processing services vendors were asked to indicate the existence of separate professional services groups within their organizations and to indicate professional services pricing methods. As Exhibit V-1 indicates, over 60% of the processing services vendors in Europe maintain a separate professional services group within their organizations. This practice is most common in the U.K. and Germany where processing services vendors are dealing with larger clients than are vendors in Italy.

- Nearly half of the processing services vendors favor billing professional services on a time-and-material basis. This method is favored by processing services vendors in the U.K., France, and Italy.

EXHIBIT V-1

METHODS FOR OFFERING AND BILLING PROFESSIONAL SERVICES
AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	PORTION (percent)				
	SEPARATE PROFESSIONAL SERVICES GROUP	BILLING METHODS			
		No Charge	Hourly Rate and Resources	Fixed Price	Other
United Kingdom	80%	0%	38%	27%	35%
France	50	8	49	35	8
Germany	88	48	33	19	0
Italy	40	2	58	33	7
Europe	62%	16%	46%	29%	10%

- Processing services vendors in Germany prefer to annually negotiate for professional services; accordingly, nearly half do not charge separately for such services.

- Other billing methods include a fixed price for the application package including consultancy, installation, and training.

2. SALES OFFICE-RELATED PROFESSIONAL SERVICES

- Processing services vendors were asked to indicate if professional services were available at local sales/support offices and to indicate their billing methods. The data shown in Exhibit V-2 indicate that just over half (53%) of the processing services vendors in Europe provide professional services at the local sales/support level.

- Methods of pricing are both more widely distributed and varied from country to country than are professional services provided by a separate professional services group (as was shown in Exhibit V-1).

  - There is a tendency to include professional services without charge (26% of all vendors having professional services available locally do not charge), especially during the early stages of product/application implementation.

  - There is also a tendency to negotiate a fixed price level of effort for professional services as part of the sales proposal package, whereby the customer is assured of an upper limit to start-up costs.

3. PROFESSIONAL STAFF BILLING RATES

- Processing services vendors in Europe were asked to provide their minimum and maximum published billing rates for analysts and programmers. As shown in Exhibit V-3, they indicated that nearly 80% of them publish those rates daily.

EXHIBIT V-2

PRICING METHODS FOR PROFESSIONAL SERVICES PROVIDED BY LOCAL SALES/SUPPORT OFFICES
AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	NUMBER OF RESPONDENTS		BILLING METHOD PORTION (percent)			
	Providing	Not Providing	NO CHARGE	HOURLY RATE AND RESOURCES	FIXED PRICE	OTHER
United Kingdom	4	2	0%	45%	55%	0%
France	5	1	60	24	16	0
Germany	3	5	33	37	30	0
Italy	4	6	5	50	45	0
Europe	16	14	26%	38%	36%	0%

EXHIBIT V-3

BILLING RATE FOR PROFESSIONAL SERVICES
AS REPORTED BY PROCESSING SERVICES VENDORS

COUNTRY	PORTION WITH PUBLISHED RATES	BILLING RATE PER DAY (dollars)			
		ANALYST		PROGRAMMER	
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
United Kingdom	50%	$290	$460	$250	$350
France	80	340	620	270	350
Germany	100	360	400	325	360
Italy	80	275	310	220	250
Europe	79%	$310	$420	$260	$320

- Processing services vendors in the four European countries individually and as a group (Europe) have clearly delineated billing rates between analysis and programmers. The billing rate structure allows wide latitude in personnel assignment for both experience and specialization when offering professional staff services.

- Both minimum analyst and programmer billing rates are greatest in Germany and lowest in Italy, which is consistent with the different price levels of those two countries. Processing services vendors in the U.K. and France have the widest latitude in analyst billing rates, giving vendors greater latitude in professional staffing and pricing.

B. SOFTWARE PRODUCT - RELATED SERVICES

1. PROFESSIONAL SERVICES PRICING

- Software product vendors were asked to include the existence of the separate professional services groups within their organizations and to indicate uses of selected methods of pricing system and application packages. Data analysis, as shown in Exhibit V-4, indicates that just over half (56%) of the software product vendors in the four European countries as a group offer systems software products. Of that group, nearly 80% have a separate professional services group.

- Most (87%) of the software product vendors as a group price professional services for customer system software products separately, either on a fixed additional price or time-and-materials basis.

- The data analysis, as shown in Exhibit V-5, indicates all of the software product vendors from the four European countries as a group offer application packages, and over 80% have a separate professional services group.

EXHIBIT V-4

METHODS FOR OFFERING AND BILLING PROFESSIONAL SERVICES FOR CUSTOMIZED SYSTEMS SOFTWARE PACKAGES AS REPORTED BY VENDORS

COUNTRY			PORTION (percent)					
	OFFERING	NOT OFFERING	SEPARATE PROFESSIONAL SERVICES GROUP	NO CHARGE	INCLUDED IN PURCHASE PRICE	FIXED ADDITIONAL PRICE	HOURLY RATE AND EXPENSES	OTHER
United Kingdom	1	2	67%	0%	0%	90%	10%	0%
France	6	1	71	0	0	53	47	0
Germany	1	1	100	10	30	20	40	0
Italy	1	3	100	0	80	0	20	0
Europe	9	7	77%	1%	12%	48%	39%	0%

EXHIBIT V-5

METHODS FOR OFFERING AND BILLING PROFESSIONAL SERVICES FOR CUSTOMIZED APPLICATION PACKAGES AS REPORTED BY VENDORS

COUNTRY	PORTION (percent)					
	SEPARATE PROFESSIONAL SERVICES GROUP	NO CHARGE	INCLUDED IN PURCHASE PRICE	FIXED ADDITIONAL PRICE	HOURLY RATE AND EXPENSES	OTHER
United Kingdom	67%	0%	0%	70%	30%	0%
France	71	0	38	52	10	0
Germany	100	5	30	27	38	0
Italy	100	0	0	38	62	0
Europe	81%	1%	20%	49%	30%	0%

- Most (79%) of the software product vendors as a group separately price professional services for custom application software products either on a fixed additional price or time-and-material basis. Software product vendors in France and Germany include a level of professional effort for installation, training, and a small degree of customization as part of the product price.

2. BILLING RATES FOR PROFESSIONAL STAFF

- Data analysis, as shown in Exhibit V-6, indicates that over 80% of the software product vendors in the four European countries as a group published their billing rates.

- Analyst and programmer billing rates for software product vendors as a group are comparable to those published by processing services vendor, as shown in Exhibit V-3 above.

- There is practically no overlap between programmer and analyst billing rates for software product vendors in each of the four countries and for vendors as a group (Europe), giving flexibility in assignments both with respect to expertise and experience.

C. USER SELECTION CRITERIA

- Users were asked to rate the importance of selective factors in buying software products. Data analysis, as shown in Exhibit V-7, indicates that users in the four European countries as a group rate customer support, including documentation and maintenance, as the most important factor in buying professional services from software product vendors.

EXHIBIT V-6

BILLING RATE FOR PROFESSIONAL SERVICES AS REPORTED BY SOFTWARE PRODUCT VENDORS

COUNTRY	PORTION WITH PUBLISHED RATES	BILLING RATE PER DAY (dollars)			
		ANALYST		PROGRAMMER	
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
United Kingdom	34%	$400	$440	$280	$350
France	86	340	540	170	260
Germany	100	125	140	125	140
Italy	100	260	370	190	225
Europe	82%	$305	$430	$190	$255

EXHIBIT V-7

IMPORTANCE OF SELECTED FACTORS IN BUYING PROFESSIONAL SERVICES FROM SOFTWARE PRODUCT VENDORS AS REPORTED BY USERS

COUNTRY	RELATIVE IMPORTANCE*						
	VENDORS' KNOLWEDGE OF APPLICATION	VENDORS' SPECIFIC INDUSTRY KNOWLEDGE	CUSTOMER SUPPORT/ DOCUMENTATION/ MAINTENANCE	PRICE/ DISCOUNT	CONTRACT TERMS	RESPONSE TIME	RANGE OF SERVICE
United Kingdom	3.5	3.1	3.8	3.0	3.7	4.2	2.6
France	3.5	3.4	4.7	3.2	2.3	3.2	1.7
Germany	3.5	2.8	3.8	3.7	2.5	4.0	2.5
Italy	4.0	3.3	4.8	3.8	3.3	4.5	3.6
Europe	3.6	3.2	4.3	3.4	2.9	3.9	2.6

* 0 = Least Important, 5 = Most Important

- Users in two countries, France and Italy, selected customer support as the most important factor.

- Users in the U.K. and Germany rated customer support as second most important just behind response time to customer problems, which was the second most important factor for Europe.

- Users as a group (Europe) and within three countries selected range of service and contract terms as the two least important factors in buying professional services from software product vendors.

VI TURNKEY SYSTEMS PRICING

VI TURNKEY SYSTEMS PRICING

- Turnkey systems vendors in the four European countries as a group all agreed with the following definition of turnkey systems:

  - Turnkey systems are a complete package of standalone hardware, systems software, and applications software sold together to solve a user's problem. The key is a solution rather than specific hardware or software.

- Turnkey systems vendors expanded the definition to include:

  - The option of linking with other computers for remote diagnostics, downline loading, and distribution of new software.

  - Provision for vendor-supplied operations personnel.

A. TYPICAL SYSTEMS PRICES

- The data analysis for 32 turnkey systems offered by 21 vendors in the four European countries is shown in Exhibit VI-1. The range of turnkey system prices from $13,000 to $3.2 million indicates the diversity of turnkey systems offerings in the four European countries.

EXHIBIT VI-1

TYPICAL SYSTEMS PRICES AS REPORTED BY
TURNKEY SYSTEMS VENDORS

COUNTRY	NUMBER OF RESPONDENTS		SYSTEM PRICE	
	VENDORS	SYSTEMS	AVERAGE ($ thousands)	RANGE ($ thousands)
United Kingdom	# 1	2	$107	$13-200
	# 2	1	64	16-144
	# 3	3	395	640-3,200
France	# 1	5	38	14-82
	# 2	2	44	20-68
	# 3	7	88	48-272
Germany	# 1	1	143	102-306
	# 2	1	40	30-50
Italy	# 1	4	88	31-200
	# 2	3	57	31-103
	# 3	3	27	13-55
Europe	11	32	$98	$13-3,200

Vendor Number

- Turnkey systems in the $13,000-30,000 range utilized microprocessors, have 64K or less of memory, five or less CRTs, and are used for process control, order entry, data entry, message switching, laboratory analysis, and food servicing.

- Turnkey systems in the $30,000-70,000 range use small minicomputers (i.e., DEC PDP8, Datapoint) with memory sizes up to 128K, 10-20MB disk storage, and perhaps five to seven terminals. Applications include distribution, hotel administration, property management, order entry, medical laboratories, and automotive dealers.

- Turnkey systems in the $70,000-120,000 range utilize minicomputers (i.e., DEC PDP11, IBM System 1, HB Mini 6, HI-SI, and the Philips 3500) up to 512K of memory, 100MB disk storage and up to 25 terminals. Typical applications include bookstores, distribution, and wholesale agriculture.

- Turnkey systems greater than $120,000 use minicomputers (i.e., HP3000, DEC VAX, and DEC 20) have typical memory sizes between 512 to 1 megabyte, disk storage between 50 and 300 megabytes, and 20-100 terminals. Applications range from reservation systems, production control, to distribution and banking.

B. MIGRATION PATHS AND COSTS

- Vendors were asked to describe the upper migration path that customers would take using their turnkey systems, including connection to a host system. As shown in Exhibit VI-2, users have wide latitude in upgrading turnkey systems offerings as their requirements grow.

- In addition to upward migration within the turnkey system, users can expand turnkey systems operations through connection to a host system for fully

EXHIBIT VI-2

MIGRATION PATHS OF TYPICAL SYSTEMS
AS REPORTED BY TURNKEY VENDORS

COUNTRY	PORTION OF RESPONDENTS (percent)*						
	UPGRADE PROCESSOR	ADD DISK STORAGE	UPGRADE DISK STORAGE	ADD MEMORY	ADD TERMINALS	CONNECT TO HOST SYSTEM	OTHER
United Kingdom	60%	80%	80%	80%	80%	75%	40%
France	100	100	67	100	100	66	100
Germany	50	50	100	100	100	100	50
Italy	67	67	33	33	0	66	0
Europe	70%	77%	68%	77%	68%	75%	47%

* Multiple responses possible

three-quarters of the product offerings of the turnkey systems vendors in the four European countries as a group.

- Users have fewer options for upward migration using the turnkey product offerings from vendors in Italy than do users in the other three European countries. Turnkey system vendors in Italy would do well to improve migration paths for their systems.

- Other upward migration paths include:

  - Adding processors in a multiprocessor or network architecture environment.

  - Addition of line printers.

C. PRICING METHODOLOGY

- Turnkey systems vendors were asked what portion of the total system price was represented by selected price components.

- As shown in Exhibit VI-3, for turnkey systems vendors in the four European countries as a group, the hardware represents over half of the total system cost.

  - The exception is in France where software prices slightly exceeds those for hardware.

  - Turnkey systems vendors in Germany appear to be underpricing the software value-added component to their systems, as the software component is less than half the average (32%) of the group (Europe).

EXHIBIT VI-3

PRICING COMPONENTS OF TYPICAL SYSTEMS AS REPORTED BY TURNKEY VENDORS

COUNTRY	PORTION OF TURNKEY SYSTEM COST (percent)				
	HARDWARE	SOFTWARE	INSTALLATION	TRAINING	OTHER
United Kingdom	50%	33%	7%	9%	1%
France	40	43	8	6	3
Germany	72	12	8	8	0
Italy	57	33	1	2	7
Europe	53%	32%	6%	6%	3%

- Other pricing components include a level of customization of the turnkey system for printing formats on such items as corporate forms and invoices.

D. TURNKEY SYSTEM TRENDS

1. TECHNOLOGY

- Turnkey systems vendors were asked for their technology forecasts. In all of the four European countries, they believe 16-31 bit microprocessors will have the greatest impact on turnkey system development, as shown in Exhibit VI-4. Vendors expect a considerable increase in price/performance and are considering offering what were formerly mainframe applications as turnkey systems utilizing this technology.

- Turnkey system vendors are recognizing the importance of communications in interconnecting and integrating turnkey system applications within corporate entities.

- The turnkey systems vendors in only one European country, Germany, recognize the importance of imaging technology, including optical storage, on the turnkey systems marketplace. INPUT believes that imaging technology offers turnkey systems vendors great opportunity in European markets.

2. APPLICATIONS

- Turnkey systems vendors were asked to indicate applications they are considering for future systems. As shown in Exhibit VI-5, they are primarily considering functional, or cross-industry applications for future product offerings.

- Turnkey systems vendors recognize the necessity of interfacing with host system DBMS, including the ability to accomplish distributed data processing in the DBMS environment.

EXHIBIT VI-4

TECHNOLOGY CONSIDERATIONS FOR FUTURE SYSTEMS
AS REPORTED BY TURNKEY VENDORS

TECHNOLOGY	MULTIPLE RESPONSES			
	UNITED KINGDOM	FRANCE	GERMANY	ITALY
16-32 Bit Microprocessors	X	X	X	X
Local Area Communications Networks	X		X	X
Imaging			X	
Multiprocessing with Micros		X		

EXHIBIT VI-5

APPLICATIONS THAT ARE CANDIDATES FOR
FUTURE SYSTEMS AS REPORTED BY TURNKEY VENDORS

APPLICATIONS	MULTIPLE RESPONSES			
	UNITED KINGDOM	FRANCE	GERMANY	ITALY
DBMS Applications	X	X	X	X
Viewdata/Videotext	X	X		
Electronic Mail		X		
Word Processing/Office Automation	X			X
Distributed Data Processing	X			X
Run Under Unix-Portability	X	X	X	
Database Services			X	
Graphic Systems		X	X	

- Utilization of 16-32 bit microprocessors running under UNIX will permit turnkey systems vendors to give recognition to portability, an important criteria in user selection of future applications.

3. PRICING

- Turnkey systems vendors were asked to forecast pricing trends for turnkey systems. As shown in Exhibit VI-6, vendors in the four European countries all expect a sharp reduction in their prices within the next year. This will mean more performance for the same price and more processing power for the same amount of storage.

- Turnkey systems vendors in France and Germany believe greater recognition must be given to the value-added software portion of turnkey system prices.

E. USER SELECTION CRITERIA

- Users were asked to rate the importance of selected factors in buying turnkey systems. Just over 20% of the respondents use turnkey systems.

- As shown in Exhibit VI-7, users in the four European countries as a group believe vendor knowledge of the application and customer support are the most important, and range of services and price/discount are the two least important factors in buying turnkey systems.

  - The number of respondents per cell is too small to permit meaningful country-by-country comparison.

  - Instability in cell size does not alter the most important and least important factors for users as a group (Europe).

EXHIBIT VI-6

PRICING TRENDS FOR FUTURE SYSTEMS
AS REPORTED BY TURNKEY SYSTEM VENDORS

PRICING TRENDS	MULTIPLE RESPONSES			
	UNITED KINGDOM	FRANCE	GERMANY	ITALY
Greater Performance for Same Price	X	X		X
More Processing Power for Same Amount of Storage	X			
Sharp Cost Reduction Within One Year Based on Volume	X	X	X	X
Increase in Software Protion of System Price		X	X	
Increase in Maintenance Price/ Profitability		X		

EXHIBIT VI-7

IMPORTANCE OF SELECTED FACTORS IN BUYING TURNKEY SYSTEMS
AS REPORTED BY USERS

COUNTRY	RELATIVE IMPORTANCE*						
	VENDORS' KNOWLEDGE OF APPLICATION	VENDORS' SPECIFIC INDUSTRY KNOWLEDGE	CUSTOMER SUPPORT/ DOCUMENTATION MAINTENANCE	PRICE/ DISCOUNT	CONTRACT TERMS	RESPONSE TIME	RANGE OF SERVICES
United Kingdom	4.3	3.7	4.1	2.7	3.3	4.0	3.1
France	5.0	0.0	5.0	3.0	5.0	4.0	0.0
Germany	5.0	4.0	4.0	3.0	5.0	3.0	0.0
Italy	-	-	-	-	-	-	-
Europe	4.5	3.3	4.2	2.8	3.7	3.9	2.4

* 0 = Least Important, 5 = Most Important

VII USER ATTITUDES

VII USER ATTITUDES

A. OUTSIDE SERVICE EXPENDITURES

- Users were asked what portion of their EDP expenditures were for computer services and what was the distribution of their computer service expenditures by delivery mode. As a group, users in the four European countries spent 30% of their EDP budgets on computer services, as shown in Exhibit VII-1.

  - The portion is less for users in the U.K., France, and Germany, ranging from 17-20%.

  - Users in Italy spend nearly 70% of their total information processing budgets on computer services. Clearly, Italy is a country upon which computer services vendors should focus greater marketing attention.

- Users as a group (Europe) spent the greater portion of their budgets on professional services (28%) and systems software packages (18%). However, the markets are quite different from country to country.

  - Users in the U.K. spend over half their EDP budgets on systems software packages and turnkey systems and are by far the largest purchaser of turnkey systems.

EXHIBIT VII-1

DISTRIBUTION OF COMPUTER SERVICES EXPENDITURES
AS REPORTED BY USERS IN 1982

COUNTRY	NUMBER OF RESPONDENTS	PORTION OF EDP EXPENDITURES FOR COMPUTER SERVICES (percent)	DISTRIBUTION OF COMPUTER SERVICES EXPENDITURES (percent)						
			BATCH PROCESSING	RCS	APPLICATION SOFTWARE PACKAGES	SYSTEM SOFTWARE PACKAGES	PROFESSIONAL SERVICES	TURNKEY SYSTEMS	TOTAL
United Kingdom	9	20%	6%	7%	16%	37%	13%	21%	100%
France	13	17	1	18	17	23	39	2	100
Germany	10	17	29	22	18	12	19	0	100
Italy	11	67	33	12	13	2	35	5	100
Europe	43	30%	17%	15%	16%	18%	28%	6%	100%

- Users in France spend over 60% of their information processing budgets on professional services and systems software packages.

- Users in Germany spend over half (51%) on batch and RCS processing services.

- Users in Italy spend nearly 70% of their total EDP budgets on professional services and batch processing.

- INPUT believes that the markets are changing in Germany and Italy, particularly in batch processing, which will probably be replaced by a combination of turnkey systems and on-site remote computing services.

B. BILLING BY MODE OF DELIVERY

- Users were asked to indicate how vendors bill them for computer services by mode of delivery and their level of satisfaction with that method. As shown in Exhibit VII-2, except for turnkey systems, computer services vendors use more than one method of billing for each mode of delivery (service type).

- Considering all delivery modes as a group (computer services), users reported that the fixed price method was the major method for billing computer services.

- There is considerable variation among delivery modes. For example:

  - Software products are sold primarily through fixed price arrangements, at times billed monthly for the contract term.

  - Professional services are billed either on a fixed price basis, sometimes billed monthly, or on another basis such as time and material.

EXHIBIT VII-2

METHOD OF BILLING COMPUTER SERVICES AS REPORTED BY USERS

DELIVERY MODE	NUMBER OF RESPONDENTS	PORTION (percent)*					
		APPLICATION FIXED PRICE	USAGE	TRANSACTION	WEEKLY	MONTHLY	OTHER
Batch Processing	8	25%	63%	0%	13%	37%	0%
RCS	11	55	36	27	27	0	0
Software Products	22	73	14	0	0	32	36
Turnkey Systems	7	14	0	0	0	29	57
Professional Services	23	48	9	4	0	48	26
Total Computer Services	71	50%	20%	5%	6%	32%	25%

*** Multiple responses likely**

- Turnkey systems are billed most frequently by other arrangements:

  . Initial down payment and remainder on successful acceptance test after delivery.

  . Perpetual lease with proprietary rights retained by the vendor.

- As shown in Exhibit VII-3, among the delivery modes as a group (computer services), users are most satisfied with fixed price billing methods, which allow better control over planned budgets versus actual expenditures.

- There are some billing methods that users feel are inappropriate for selected delivery modes. For example:

  - Transaction or weekly billing for software products and professional services.

  - Usage, transaction, or weekly billing methods for turnkey systems.

- Users have a strong preference for monthly billing for all but RCS services. Because of its highly variable nature and a need for budgetary control, users prefer to be billed for RCS services weekly.

C. USER PREFERENCES FOR BILLING

- Users were asked to rate selected factors of vendor billing. As shown in Exhibit VII-4, users in the four European countries as a group rate vendor billing methods considerably above average. Related to a scale of 100:

  - Clarity is rated as excellent (80).

EXHIBIT VII-3

SATISFACTION WITH CURRENT METHOD OF BILLING
FOR COMPUTER SERVICES AS REPORTED BY USERS

DELIVERY MODE	NUMBER OF RESPONDENTS	PORTION (percent)*					
		APPLICATION FIXED PRICE	USAGE	TRANSACTION	WEEKLY	MONTHLY	OTHER
Batch Processing	8	5.0	4.6	0	5.0	4.7	0
RCS	11	3.8	3.3	3.5	5.0	0	0
Software Products	22	4.2	3.0	0	0	4.2	3.7
Turnkey Systems	7	4.0	0	0	0	4.5	5.0
Professional Services	23	4.2	3.0	0	0	3.7	3.8
Total Computer Services	71	4.2	2.9	0.5	1.3	3.5	2.9

* 0 = Least, 5 = highest

EXHIBIT VII-4

EVALUATION OF VENDOR BILLING METHODS AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS	RELATIVE IMPORTANCE*				
		CLARITY	ACCURACY	REASONABLENESS	AUDIT TRAIL	AVERAGE
United Kingdom	9	3.3	3.6	3.0	2.3	3.1
France	13	3.6	3.0	2.2	2.5	2.8
Germany	10	3.8	3.7	4.1	3.6	3.8
Italy	11	4.6	4.9	4.6	4.4	4.6
Europe	43	4.0	3.8	3.4	3.2	3.6

* 1 = Least Important, 5 = Most Important

- Accuracy is rated as very good (76).

- Reasonableness and audit trail are rated satisfactory (68).

- Users evaluate vendor billing methods somewhat, but not much, lower than the vendor assessment (3.9) (see Exhibit III-27 in Chapter III, Processing Services Pricing). The disparity between vendors' and users' assessment of billing methods in the U.K. and in France indicates that computer services vendors should reevaluate billing method at least for processing services.

- Data analysis, as shown in Exhibit VII-5, indicates that nearly half (49%) of the users as a group seek no change in the current billing method. Those who do are nearly equally divided between shifting to fixed price on the one hand and transaction pricing on the other; by transaction pricing most users mean pricing in units familiar to the users as related to the application.

- Other improvements that users would like to see in the billing procedure are:

  - Consistent multisite billing with billing costs the same for service offerings at various sites (the U.K.).

  - Consolidation of transaction billing by month (the U.K.).

  - Consolidation of software product options into fewer and more meaningful modules as contrasted to the "nickel-and-dime approach" (the U.K.).

  - Extension of the time period to 60 days with discounts for payment in 30 days (Italy).

  - Consolidated billing for all services from each vendor (France).

EXHIBIT VII-5

IMPROVEMENTS IN COMPUTER SERVICES VENDOR BILLING PROCEDURES AS REPORTED BY USERS

COUNTRY	Number of Respondents	PORTION (percent)					
			SHIFT TO				
		No Change	Transaction Pricing	Fixed Price	Monthly Billing	Multiple Site Billing	Other
United Kingdom	8	50%	13%	0%	13%	12%	12%
France	13	31	15	23	0	8	23
Germany	10	60	10	20	10	0	0
Italy	12	58	8	17	0	0	17
Europe	43	49%	11%	16%	5%	5%	14%

- Billing related to users' perceptions of the problem and solution rather than system factors such as resources, lines per minute (France).

D. PRICING INCREASES AND USER REACTION

1. PRICE INCREASES

- Users were asked to indicate the percent increase in computer service costs during the past two years. As shown in Exhibit VII-6, users as a group experienced an average increase of approximately 13% per year for computer services over the past two years. The wide range of price increases experienced by users for the two years indicates the ad hoc nature of pricing policies by computer services vendors within the four European countries.

- Comparing users' experience in increased computer service costs with vendors', users experienced an average price increase of 8% for RCS services, which agrees with that reported by vendors for combined remote batch and interactive processing (see Exhibits III-7 and III-8).

- Users report an average price increase of 14% per year over the past two years, whereas software product vendors report a price increase of 11% (see Exhibit IV-16).

- Professional services are not so easily compared. However, users report an average price increase of 15% per year over the past two years. Processing services vendors report a 7% increase in professional services costs (see Exhibit III-9).

- Averaging the software services that directly relate to professional services (see Exhibit IV-7), implies an average price increase of 9% over the past two years. The average of software product and processing services vendors, 8%,

EXHIBIT VII-6

INCREASE IN COMPUTER SERVICES COSTS IN EUROPE AS REPORTED BY USERS

DELIVERY MODE	NUMBER OF RESPONDENTS	PRICE INCREASE (percent)			
		1981		1982	
		AVERAGE	RANGE	AVERAGE	RANGE
BATCH	6	11%	0-15%	13%	8-20%
RCS	7	6	0-13	10	8-15
Software Products	8	9	0-50	19	10-50
Professional Services	15	15	0-50	15	5-50
Total Computer Services	36	11%	0-50%	15%	5-50%

indicates a significant disparity between what vendors and users report for the past two years. In that price increases for professional services more closely track increase in the consumer price index (inflation), INPUT believes that price increases reported by users are close to the actual price increases for professional services.

- No users shifted to other computer services vendors as a direct result of price increases in vendor product/services. Considerations of service quality, response, and system functionality, not price, are the prime inducements users site for shifting to other computer services vendors.

2. VENDOR JUSTIFICATION

- Users were asked to describe how vendors justified price increases.

- In the four European countries as a group, users indicated inflation was the most frequently used justification, followed by increased operating costs, as shown in Exhibit VII-7.

- Vendor rationale varied between countries. For example:

  - In Italy the major portion were first-time users of computer services in 1983, experiencing no price increase in prior years.

  - In Germany, where the inflation rate is the lowest in Europe, increased operating costs was the justification more frequently used.

  - In France vendors utilized the increases allowed by the government as the most frequent justification.

EXHIBIT VII-7

VENDOR JUSTIFICATION FOR PRICE INCREASES AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS	PORTION (percent)					
		INFLATION	INCREASED OPERATING COSTS	MORE VALUE-ADDED SERVICES	GOVERNMENT PRICE CONTROL	BY NEGOTIATION	NO INCREASE/ NEW USER
United Kingdom	9	34%	22%	22%	0%	0%	22%
France	13	23	15	0	31	23	8
Germany	10	0	40	20	0	10	30
Italy	11	36	0	0	0	0	64
Europe	43	23%	18%	9%	9%	9%	30%

E. USER EXPECTATIONS FOR 1983

- Users were asked what percent increase in computer services they expect for 1983.

- Analysis as shown in Exhibit VII-8 indicates that as a group users expect a 10% average price increase in computer services for 1983. The increase is slightly less (3%) than in the past two years (see Exhibit VII-6). The narrow range of expected price increases by users indicates their expectations of greater price stability in the coming year.

  - The decrease will come from three delivery modes, professional services (5%), software products (2%) and batch services (3%).

  - Users expect a slight increase for RCS services (1%).

- Price increases expected by users are comparable to those planned by vendors. For example:

  - Users expect an average price increase of 11% in 1983 whereas RCS vendors are planning an 8% increase on the average (see Exhibits III-6 and III-7).

  - Users expect only a 9% increase on the average for software products, whereas vendors anticipate a 12% increase (see Exhibit IV-16).

  - Users expect a 10% increase on the average for professional services in 1983. Both processing services vendors (see Exhibit III-9), and software products vendors (see Exhibit IV-7) anticipate a 7% price increase in the cost of professional services for 1983.

EXHIBIT VII-8

EXPECTED 1983 PRICE INCREASES FOR COMPUTER SERVICES
IN EUROPE AS REPORTED BY USERS

SERVICE TYPE	NUMBER OF RESPONDENTS	PRICE INCREASE (percent) 1983	
		AVERAGE	RANGE
BATCH	9	10%	13-20%
RCS	9	11	7-30
Software Products	16	9	7-20
Professional Services	22	10	5-20
Computer Services	56	10%	5-30%

F. USER MOTIVATION FOR USING OUTSIDE SERVICES

1. SHIFTING PROCESSING TO SERVICES VENDOR

- Users were asked what price advantage would induce them to shift processing from in-house to a processing services vendor. As shown in Exhibit VII-9, price was not an important consideration.

  - Of those users having in-house EDP, nearly 40% would not shift to a computer services vendor at any price.

  - Only 13% of all users as a group would consider shifting to a computer services vendor at a price that would allow vendors to remain profitable.

2. SHIFTING TO PROFESSIONAL SERVICES OR SOFTWARE VENDOR FOR APPLICATION DEVELOPMENT

- Users were asked what price advantage would induce them to shift application development to a professional services or software product vendor. But data analysis, as shown in Exhibit VII-10, indicates that price is not a primary inducement.

  - Nearly 80% of those users having in-house EDP, either would not shift to a computer services vendors at any price or indicate that price is not really the issue.

  - Less than 20% of users having in-house EDP would be willing to shift application development to computer services vendors at price reductions that would potentially allow computer services vendors to remain profitable.

EXHIBIT VII-9

PRICE DIFFERENTIAL INDUCING SHIFT FROM IN-HOUSE TO COMPUTER PROCESSING SERVICES AS REPORTED BY USERS

COUNTRY	PORTION (percent)							
	WOULD NOT SHIFT AT ANY PRICE	PRICE IS NOT THE ISSUE	REDUCTION				NO IN-HOUSE EDP	DON'T KNOW
			10%	15%	20%	⩾50%		
United Kingdom	44%	11%	0%	0%	0%	23%	11%	11%
France	47	0	0	0	15	8	15	15
Germany	50	30	0	0	10	0	10	0
Italy	9	9	9	9	9	9	46	0
Europe	37%	12%	2%	2%	9%	10%	21%	7%

EXHIBIT VII-10

PRICE DIFFERENTIAL INDUCING SHIFT OF CURRENT EDP DEVELOPMENT FROM IN-HOUSE TO COMPUTER SERVICES VENDORS AS REPORTED BY USERS

COUNTRY	PORTION (percent)							
	WOULD NOT SHIFT AT ANY PRICE	PRICE IS NOT THE ISSUE	REDUCTION				NO IN-HOUSE EDP	DON'T KNOW
			20%	30%	40%	50%		
United Kingdom	34%	22%	11%	0%	11%	0%	11%	11%
France	31	31	0	0	8	15	15	0
Germany	20	40	20	10	0	0	10	0
Italy	18	9	18	0	0	0	46	9
Europe	26%	26%	12%	2%	5%	4%	21%	5%

3. SHIFTING COMPUTER PROCESSING IN-HOUSE

- Users were asked what factors would induce them to bring remote computing services in-house. As shown in Exhibit VII-11, users in the four European countries as a group are not highly motivated to shift remote computing services in-house.

  - The majority of users either don't use RCS or have no in-house time-sharing to accomodate either interactive or remote batch processing.

  - Only 20% of users as a group (Europe) would shift processing in-house for policy reasons, high RCS cost, and to achieve better integration.

4. CROSSOVER POINT TO IN-HOUSE PROCESSING

- Users were asked what monthly billing rate would induce them to bring processing services in-house. Exhibit VII-12 indicates that users consider level of monthly cost a significant factor in shifting current vendor processing in-house.

  - Data cell size for France and Germany is too small to make country-by-country comparisons meaningful.

  - The order of magnitude difference in the average monthly billing level between Italy and the U.K. indicates company size.

  - The wide range in the level of monthly costs for users in the U.K., Italy, and Europe indicate that factors other than cost affect the decision-making process.

EXHIBIT VII-11

FACTORS MOTIVATING THE SHIFT OF REMOTE COMPUTING SERVICES
IN-HOUSE AS REPORTED BY USERS

COUNTRY	PORTION (percent)				
	DON'T USE RCS	WOULD TAKE SHIFT IN COMPANY POLICY	NO IN-HOUSE RCS	RCS COSTS TOO HIGH	TO ACHIEVE BETTER INTEGRATION
United Kingdom	33%	33%	23%	11%	0%
France	70	0	15	15	0
Germany	50	10	10	0	30
Italy	18	18	37	18	9
Europe	44%	14%	21%	11%	9%

EXHIBIT VII-12

LEVEL OF MONTHLY COSTS FOR COMPUTER PROCESSING SERVICES THAT WOULD INDUCE SHIFTING CURRENT PROCESSING TO IN-HOUSE AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS		LEVEL OF MONTHLY COST (dollars)	
	Consider	Not Consider	AVERAGE	RANGE
United Kingdom	3	6	$42,400	$3,200-120,000
France	1	12	1,500	-
Germany	1	9	12,000	-
Italy	7	4	3,600	400-15,000
Europe	12	31	$13,800	$400-120,000

5. APPLICATIONS RESISTANT TO BEING SHIFTED IN-HOUSE

- Users were asked which applications are unlikely ever to be brought in-house. Exhibit VII-13 indicates that there are a number of applications, mostly functional and cross-industry, that are likely to remain with computer processing vendors.

- Applications such as payroll and employee benefits remain with processing vendors because of factors such as:

  - Company policy.

  - Numerous regulatory changes that require constant updating of the application.

  - Prohibitive costs to accomplish the function in-house, particularly for smaller companies.

- Specialized applications such as econometric modeling and applications that appear one time or ad hoc that cannot be accomplished on in-house systems in a reasonable time. Once established, such applications are likely to remain with the computer processing vendors for a long time.

- Processing services that require access to external information, such as stock prices, interest rates, and industry production data, are likely to remain with processing vendors because of the economics of building and maintaining the data bases. INPUT believes that new technology such as optical disks may well change the mode of delivery of significant portions of on-line data base services in the near future (2-4 years).

EXHIBIT VII-13

APPLICATIONS MOST LIKELY TO REMAIN WITH COMPUTER PROCESSING VENDORS AS REPORTED BY USERS

APPLICATIONS	MULTIPLE RESPONSES			
	UNITED KINGDOM	FRANCE	GERMANY	ITALY
Computer Output Microfilming	X		X	
Data Base Services	X	X	X	
Payroll/Employment Benefits	X	X	X	X
Specialized Applications/Ad Hoc	X		X	
Financial Modeling/Planning		X		X

G. PURCHASE DECISION LEVELS

1. MANAGEMENT INVOLVEMENT

- Users were asked at what management level in their company makes the purchase decision for each computer services delivery mode. Exhibit VII-14, indicates that for those users buying batch processing services (37%), the key decision maker is either the EDP director for large companies (in the U.K. and France) or the managing director/proprietor in smaller companies (in Germany and Italy).

- Batch processing tends to be both a small portion of EDP budgets and a highly specific application, and it usually involves operating management in the purchase decision.

- Data analysis, as shown in Exhibit VII-15, indicates greater involvement in corporate management in the RCS purchase decision process. RCS applications tend to involve information of interest to corporate management, and are frequently a part of managements control process.

- Exhibit VII-16 indicates that purchasing decisions for software products are made more often by the EDP director than by corporate management. Corporate management is more heavily involved for smaller companies in Italy, many of which do not have EDP directors.

- The EDP director is directly involved in the purchase of all systems software products and frequently with application software products, working with the operating department director.

- Exhibit VII-17 indicates that purchase decisions for professional services to develop in-house applications are made primarily by the EDP director and at times by corporate management when the application is related to company-

EXHIBIT VII-14

MANAGEMENT LEVEL WHERE PURCHASE DECISIONS ARE MADE FOR
BATCH PROCESSING SERVICES AS REPORTED BY USERS

COUNTRY	DIRECTOR/ MANAGER EDP/MIS	CORPORATE MANAGING DIRECTOR/ EXECUTIVE/ PROPRIETOR	DIRECTOR/ MANAGER/ PURCHASING/ ADMINISTRATION	FUNCTION DIRECTOR/ MANAGER DIV./DEPT.	COMMITTEE EDP/CORP. EXECUTIVE DEPARTMENT MANAGER
United Kingdom	33%	33%	17%	17%	0
France	70	0	0	30	0
Germany	0	67	0	33	0
Italy	0	67	33	0	0
Europe	43%	38%	13%	26%	0%

EXHIBIT VII-15

MANAGEMENT LEVEL WHERE PURCHASE DECISIONS ARE MADE FOR
REMOTE COMPUTING SERVICES AS REPORTED BY USERS

COUNTRY	DIRECTOR/ MANAGER EDP/MIS	CORPORATE MANAGING DIRECTOR/ EXECUTIVE/ PROPRIETOR	DIRECTOR/ MANAGER/ PURCHASING/ ADMINISTRATION	DIRECTOR/ MANAGER OPERATING DIVISION/ DIV. DEPT.	COMMITTEE EDP/CORP. EXECUTIVE DEPARTMENT MANAGER
United Kingdom	33%	33%	17%	17%	0%
France	50	25	0	25	0
Germany	20	60	0	0	20
Italy	0	100	0	0	0
Europe	33%	43%	5%	14%	5%

EXHIBIT VII-16

MANAGEMENT LEVEL WHERE PURCHASE DECISIONS ARE MADE FOR SOFTWARE PRODUCTS AS REPORTED BY USERS

COUNTRY	DIRECTOR/ MANAGER EDP/MIS	CORPORATE MANAGING DIRECTOR/ EXECUTIVE/ PROPRIETOR	DIRECTOR/ MANAGER/ PURCHASING/ ADMINISTRATION	DIRECTOR/ MANAGER OPERATING DIVISION/ DIV. DEPT.	COMMITTEE EDP/CORP. EXECUTIVE DEPARTMENT MANAGER
United Kingdom	25%	37%	0%	38%	0%
France	91	0	0	9	0
Germany	30	20	0	30	20
Italy	0	67	33	0	0
Europe	47%	22%	3%	22%	6%

EXHIBIT VII-17

MANAGEMENT LEVEL WHERE PURCHASE DECISIONS ARE MADE FOR PROFESSIONAL SERVICES AS REPORTED BY USERS

COUNTRY	DIRECTOR/ MANAGER EDP/MIS	CORPORATE MANAGING DIRECTOR/ EXECUTIVE/ PROPRIETOR	DIRECTOR/ MANAGER/ PURCHASING/ ADMINISTRATION	DIRECTOR/ MANAGER OPERATING DIVISION/ DIV. DEPT.	COMMITTEE EDP/CORP. EXECUTIVE DEPARTMENT MANAGER
United Kingdom	38%	37%	0%	25%	0%
France	91	0	0	9	0
Germany	50	12	0	13	25
Italy	0	73	27	0	0
Europe	52%	25%	5%	12%	6%

wide operations. In Italy, where users were from smaller companies, the managing director/proprietor is a primary decision maker in the purchase of professional services.

- Exhibit VII-18 indicates that the EDP director is the key decision maker in those companies having or planning the purchase of turnkey systems.

  - For larger turnkey systems (i.e., DEC VAX, DEC 20) where company-wide operations are involved, the purchase decision is made at the corporate executive level.

  - For smaller companies (Italy) without EDP directors, the purchase decision is made by the managing director/proprietor.

- Thus far, operating managers have little input into the purchasing decision for turnkey systems in Europe. INPUT expects this situation to change radically as more turnkey systems are shifted from mainframes to operate successfully on 16-32 bit microprocessors.

2. OTHERS INVOLVED IN THE PURCHASE DECISION

- Users were asked where else in the company computer services can be purchased and if the EDP manager is involved in the decisions. Exhibit VII-19 indicates that in the four European countries as a group the EDP director is involved in the purchase decision most (74%) of the time.

- Approximately one-third of knowledgeable users believe that company policy prohibits the purchase of computer services by anyone other than the EDP director. The remaining two-thirds believe limited purchasing ability is vested with the operating department and strategic decision making with corporate management.

EXHIBIT VII-18

MANAGEMENT LEVEL WHERE PURCHASE DECISIONS ARE MADE FOR TURNKEY SYSTEMS AS REPORTED BY USERS

COUNTRY	DIRECTOR/ MANAGER EDP/MIS	CORPORATE MANAGING DIRECTOR/ EXECUTIVE/ PROPRIETOR	DIRECTOR/ MANAGER/ PURCHASING/ ADMINISTRATION	DIRECTOR/ MANAGER OPERATING DIVISION/ DIV. DEPT	COMMITTEE EDP/CORP. EXECUTIVE DEPARTMENT MANAGER
United Kingdom	17%	66%	0%	17%	0%
France	90	0	0	10	0
Germany	0	0	0	0	0
Italy	25	75	0	0	0
Europe	55%	35%	0%	10%	0%

EXHIBIT VII-19

OTHER ORGANIZATIONAL FUNCTIONS INVOLVED IN PURCHASING
COMPUTER SERVICES AS REPORTED BY USERS

COUNTRY	PORTION (percent)	PORTION OF RESPONDENTS (percent)			
	EDP INVOLVEMENT IN ALL DECISIONS	RESPONSIBLE USER DEPARTMENT	CORPORATE MANAGEMENT/ ADMINISTRATION	NO ONE ELSE	DON'T KNOW
United Kingdom	78%	33%	22%	45%	0%
France	92	60	8	32	0
Germany	70	30	60	10	0
Italy	54	0	27	27	46
Europe	74%	32%	28%	28%	12%

- INPUT believes that as microprocessors proliferate and are connected to each other and to host systems by local area networks, European users in operating departments will become prime decision makers in the purchase of computer services.

H. ON-SITE HARDWARE

1. AWARENESS OF VENDOR OFFERINGS

- Users were asked if they were aware of RCS vendor on-site systems offerings and if their companies were considering on-site systems. As Exhibit VII-20 indicates, users in the four European countries as a whole are very aware (84%) of on-site systems offerings, but just over 20% consider them applicable to their information processing requirements.

- Users have decided not to use on-site systems for at least the following reasons:

  - Level of EDP expenditures does not justify (the U.K.).
  - Level of computer processing services is not that large (France).
  - Evaluation indicates that on-site systems would increase EDP expenditures (France).
  - Not now but perhaps in the future for accessing on-line data bases (France).
  - Not now but perhaps in the future for videotext applications (France).
  - Management policy is against using outside services (Germany).

EXHIBIT VII-20

AWARENESS OF RCS VENDOR OFFERINGS OR ON-SITE SYSTEMS
AS REPORTED BY USERS

COUNTRY	NUMBER OF RESPONDENTS	PORTION OF RESPONDENTS (percent)	
		AWARE OF ON-SITE SYSTEMS	CONSIDERING ON-SITE SYSTEMS
United Kingdom	9	56%	22%
France	13	100	23
Germany	10	80	20
Italy	11	91	27
Europe	43	84%	23%

2. SYSTEMS UNDER CONSIDERATION

- Users were asked to describe on-site systems under consideration, planned installation dates, maintenance and financial arrangements, and rationale for systems selection. Typical on-site systems under consideration by users in the four European countries are shown in Exhibit VII-21. The number of installations planned for 1983 indicates users' increased interest in on-site solutions to information processing problems.

- Rationale for on-site systems selection include:

  - Place some processing power with end users and take the development workload off the central EDP department (the U.K.).

  - To reduce EDP expenditures and increase performance of RCS (the U.K.).

  - For access to econometric and economic data base services (France).

  - The IBM-PC because the company is an IBM shop (France).

  - To respond to user requirements (France).

  - To solve ad hoc EDP problems quickly (Germany).

  - To develop an application quickly as a short-term test (Germany).

  - To remain flexible in the face of rapidly changing technology (Germany).

EXHIBIT VII-21

TYPICAL ON-SITE SYSTEMS UNDER CONSIDERATION
AS REPORTED BY USERS

SYSTEM NAME/ CONFIGURATION	QUANTITY	INSTALLATION DATE(S)	HOW MAINTAINED	FINANCING ARRANGEMENTS		COUNTRY
				PURCHASE	LEASE	
Siruis Micro-systems	2	1983	Vendor	X		United Kingdom
ADP 20/ Terminals	1	1980	ADP		X	United Kingdom
Professional Computers	3	1983-1984	Distributor	X		France
Intelligent Workstation	1	1983	Vendor		X	France
Graphic Workstation	2	1983	Vendor		X	Germany
COM System	1	1983	Vendor		X	Germany
Honeywell Level-6	1	1982	Honeywell		X	Italy
IBM System 34/2 CRTS	1	1983	IBM		X	Italy

- To get immediate availability of dealer data (Italy).

- To get control over the centralized operations (Italy).

- To reduce EDP expenditures for and increase performance of RCS services (the U.K.).

APPENDIX A: USER QUESTIONNAIRE

USER QUESTIONNAIRE

INPUT CONFIDENTIAL

All information provided in this questionnaire will be confidential. INPUT will not identify who participated in this survey.

EDP EXPENDITURES

		Local Currency	Dollar Equivalent
1.	What are your approximate EDP expenditures?	_____	_____

2. What percent are for in-house expenses? _____ For outside services? _____

3. For outside services, what percent are for:

Batch Processing	_____
Remote Computing Services	_____
Applications Software Packages	_____
System Software Packages	_____
Professional Services	_____
Turnkey Systems	_____

4. Please check how you are billed for outside services and your level of satisfaction with the billing method (5 = high, 0 = low).

	Batch	RCS	SP	TK	Professional Services
Application/ Fixed Price					
Usage					
Transaction					
Weekly					
Monthly					
Other (specify)					

5. Which vendor has the best billing procedure? _____

Why? _____

6. Please rate outside vendor billing in terms of the following factors (5 = high, 0 = low):

Clarity _____

Accuracy _____

Reasonableness _____

Audit Trial _____

Other (specify) _____

7. How would you like to see current billing procedures changed?

_____

_____

8. Please indicate the percent increase of your outside service costs during the past two years:

	1981 (percent)	1982 (percent)
Batch Services	_____	_____
Remote Computing Services	_____	_____
Software Products	_____	_____
Professional Services	_____	_____

9. How did your vendor justify these increases in price?

_____

_____

_____

10. As a result of these price increases, what percent have you shifted to other vendors?

	Percent Shifted
Batch Services	_____
Remote Computing Services	_____
Software Products	_____
Professional Services	_____

11. What percent increase in prices do you expect in outside services in 1983?

	1983 Percent Increase
Batch Services	_____
Remote Computing Services	_____
Software Products	_____
Professional Services	_____

12. For those EDP activities you are currently performing in-house, what price advantage would a service bureau have to offer in order for you to shift to his service?

13. For those EDP developments you are currently considering performing in-house, what price advantage would a professional services or software vendor have to offer for you to consider him for the development?

14. What factors would motivate you to bring in-house the remote computing computing services currently being supplied outside?

15. At what monthly billing rate (based on volume) would you bring current outside services in-house?

16. Which applications are you unlikely ever to bring in-house? _____

17. At what level(s) in your company are purchase decisions made for:

Batch Services: _____

Remote Computing Services: _____

Software Products: _____

Professional Services: _____

Turnkey Systems: _____

18. Where, other than the EDP Department, can services and products be purchased? _____

_____

19. Is the EDP manager involved in all of these purchase decisions?
☐ Yes ☐ No

20. A number of RCS vendors are now offering on-site hardware in the customer's facility as a complement to RCS. Are you aware of these offerings? ☐ Yes ☐ No

Are you considering using such products? _____

_____

21. What will this hardware consist of? _____

_____

_____

22. When do you expect the hardware to be installed? _____

23. How is the hardware being financed? _____

_____

24. How will the hardware be maintained? _____

_____

25. What were your major reasons for selecting this hardware option?

_____

_____

_____

26. In terms of your own long-range EDP plans, which in-house applications are candidates for replacement by a software product?

_____

27. Why will this occur? _____

_____

28. In selecting a vendor, a number of factors are considered. Would you please rate the following factors in order of importance (5 = high, 0 = low)?

	Batch	RCS	SP	TK	Professional Services
Vendor's knowledge of application					
Vendor's knowledge of your industry					
Customer support (documentation, maintenance, etc.)					
Price (especially discount practices)					
Contract terms					
Response time					
Range of services					
Others (please specify)					

Thank You!

APPENDIX B: VENDOR QUESTIONNAIRES

TRENDS IN COMPUTER SERVICES PRICING
PROCESSING SERVICES VENDOR QUESTIONNAIRE

The purpose of this interview is to determine trends in pricing of processing services through 1983. Your responses to this questionnaire will be kept confidential. We will aggregate all responses for analysis but will not divulge individual answers. In return for your participation, we will send you a summary of the results of the study.

1. How much noncaptive revenue is derived from the following services?

BATCH	1981	1982	1983
Interactive	$_____	$_____	$_____
Remote Batch	$_____	$_____	$_____
Data Base Servcies	$_____	$_____	$_____
Professional Services	$_____	$_____	$_____
Other	$_____	$_____	$_____

2. a. Which pricing method is used for each service?

	Fixed Price per Month	Transaction	Resource	Other
Batch	_____	_____	_____	_____
Interactive	_____	_____	_____	_____
Remote Batch	_____	_____	_____	_____

If "other," go to next question. If not, go to question 2.c.

b. Please describe the "other" pricing method referred to in the previous question.

_____

_____

_____

_____

c. For the "resource" pricing component of interactive and remote batch remote computing services, please rate the following pricing parameters in terms of their contribution to total remote computing services revenue (5 = greatest contribution, 1 = least contribution).

	Interactive	Remote Batch
Connect (communications)	_____	_____
CPU, CRU, etc.	_____	_____
Storage	_____	_____
Peripheral Usage (e.g., tape, printing, plotting)	_____	_____

d. Considering modes of delivery of services, what pricing changes have you made in the last two years, and what changes do you expect? We are interested in percent change, up or down.

	1981 - Present	Balance of 1982	1983
Interactive	_____%	_____%	_____%
Remote Batch	_____%	_____%	_____%
DDP from Services Vendors	_____%	_____%	_____%
Professional Services	_____%	_____%	_____%

e. Does your remote computing organization have a separate group which provides professional software development services to clients?

☐ Yes ☐ No

If yes, go to the next question. If no, go to question 2.g.

f. For these professional services, what percent of the total billings are priced?

No Charge	_____%
Hourly Rate Plus Resources	_____%
Fixed Price	_____%
Other	_____%

If "Other," please describe: _____

_____

g. For professional services provided by staff of local sales/support offices, what percent of the servcies are priced?

No Charge _____%

Hourly Rate Plus Resources _____%

Fixed Price _____%

None Provided _____%

Other _____%

If "other," please describe: _____

_____

h. Do your published price schedules provide rates for systems analysts and/or programming staff?

☐ Yes ☐ No

i. What are the minimum and maximum rates for the professional services staff?

	Minimum	Maximum
Analysts	$_____	$_____
Programmers	$_____	$_____

3. a. What discounting from basic list prices do you provide, and on what basis?

	Minimum Percent Discount	Maximum Percent Discount
Volume	_____%	_____%
Term Contract	_____%	_____%
Usage Pattern (e.g., nonprime usage, data entry mode, etc.)	_____%	_____%
Government Sector	_____%	_____%
Education Sector	_____%	_____%
Other	_____%	_____%

b. Please describe "other" discounting basis noted in the previous question:

_____

_____

3. c. What trends do you foresee in discounting policies within the next two years?

	Trend Direction (+ or -)	Percent Change
Volume	_____	_____%
Term Contract	_____	_____%
Usage Pattern	_____	_____%
Government Sector	_____	_____%
Education Sector	_____	_____%
Other	_____	_____%

d. What percent of your remote computing customers buy services at other than the basic retail rates quoted in the pricing schedule?

1981 - Present _____%

Balance of 1982 _____% } expected

1983 _____%

e. What percent of your total remote computing revenue do these "discounted" customers represent?

80 - 100% _____

60 - 80% _____

40 - 60% _____

20 - 40% _____

0 - 20% _____

4. a. What portion of sales increases are attributable to price increases?

   1981 - Present _____% Present - 1983(expected) _____%

   b. As a result of past price increases, have you lost any customers?

   ☐ Yes ☐ No

   If yes, what percent of:

   Customer Base _____%

   Sales Volume _____%

   If yes, go to the next question. If no, go to question 5.

   c. What percent were lost to the following alternatives?

   In-House DP _____%

   Other Service Vendor _____%

   Acquired Personal Computer _____%

   Acquired Own Minicomputer _____%

   Acquired Own Mainframe _____%

   Dropped Application _____%

   Other _____% Explain: _____

5. There are a number of factors which contribute to the price of services.

   a. Rate the following factors in terms of their importance to your pricing policies (5 = high, 1 = low):

   Hardware Cost _____

   Personnel Cost _____

   Communications Cost _____

   Sales/Marketing Cost _____

   Profit Margin _____

   b. Which is the most important factor?

   _____

6. a. Please rate how the following factors will impact your pricing policies for the next two years (5 = high, 1 = low):

Government Actions _____

General Economic Conditions _____

Competition from Service Vendors _____

Competition from Hardware Vendors _____

Competition from In-House DP _____

Availability of New Technology _____

b. Which is the most important factor?

_____

7. There are a variety of strategies which firms pursue in establishing prices.

a. Please rate the following strategic objectives in your price procedure (5 = high, 1 = low):

Perceived Low Price _____

Perceived High Price _____

Meet Competition Prices _____

Cover Costs _____

"What the Market Will Bear" _____

Value Added _____

b. Which is the most important strategic objective?

_____

8. What percent changes do you believe your clients expect in prices for your services?

	Balance of 1982	1983
Percent Change (up or down)	_____%	_____%

9. How would you rate your customer understanding of your billing parameters and rates (5 = high, 1 = low)?

_____ Rating

10. Technology and other factors will affect your clients' buying during the coming two-year period.

a. Please rate the following factors as you believe your clients will see them (5 = high, 1 = low):

Service Price _____

Service Quality (e.g., support, reliability, etc.) _____

Consulting Support _____

In-House DP Option _____

Personal Computers _____

Software Availability _____

b. Which is the most important factor?

_____

c. Why, in your opinion?

_____

_____

TRENDS IN COMPUTER SERVICES PRICING
SOFTWARE VENDOR QUESTIONNAIRE

The purpose of this interview is to determine trends in pricing of software products through 1984. Your responses to this questionnaire will be kept confidential. We will aggregate all responses for analysis but will not divulge individual answers. In return for your participation, we will send you a summary of the results of the study.

1. a. How much noncaptive revenue was derived from the following categories of software?

	1981	1982	1983
Systems Packages	$_____	$_____	$_____
Application Packages	$_____	$_____	$_____

2. a. Within the two categories of software products, what percent of your products are priced using the following methods? (Purchase = perpetual lease.)

	Lump Sum Purchase	Annual Fee/ Rental	Installment Purchase	Other
Systems Packages	_____%	_____%	_____%	_____%
Application Packages	_____%	_____%	_____%	_____%

If "other," go to the next question. If not, go to question 3.

b. Please describe the "other" pricing methods referred to in the previous question.

_____

_____

_____

3. a. For each of the categories of software products, what pricing changes (+ or -) have you made from the beginning of 1981 to the present?

Systems Packages: _____

_____

Application Packages: _____

_____

b. What changes do you plan for the balance of 1982?

Systems Packages: _____

_____

Application Packages: _____

_____

c. What pricing plans do you have for 1983?

Systems Packages: _____

_____

Application Packages: _____

_____

4. How much software product revenue was derived from the following phases of your relationships with your customers?

	1981	1982 (expected)
Enhancements	_____	_____
Installation	_____	_____
Training	_____	_____
Maintenance	_____	_____
Custom Modifications	_____	_____

5. a. How do you charge for the phases of service noted in the preceding question?

	No Charge	Included in Purchase	Fixed Additional Price	Hourly Rate + Expenses	Other
Enhancements					
Installation					
Training					
Maintenance					
Custom Modifications					

If "other," go to the next question. If not, go to question 6.

b. Please describe the "other" method for charging referred to in the preceding question.

6. For each of the phases of your client relationship:

a. What pricing changes (+ or -) have you made from the beginning of 1981 to present?

Enhancements:

Installation:

Training:

Maintenance:

Custom Modification:

6. b. What changes do you plan for the balance of 1982?

Enhancements: _____

Installation: _____

_____

Training: _____

_____

Maintenance: _____

Custom Modifications: _____

c. What changes do you plan for 1983?

Enhancements: _____

Installation: _____

_____

Training: _____

_____

Maintenance: _____

Custom Modifications: _____

7. Does your software products organization have a separate group which provides customized professional services to clients?

☐ Yes ☐ No

If yes, go to the next question. If no, go to question 9.

8. For these professional services, what percent of the total billings are priced as follows:

	No Charge	Included in Purchase	Fixed Additional Price	Hourly Rate + Expenses	Other
Systems Packages	____%	____%	____%	____%	____%
Applications Packages	____%	____%	____%	____%	____%

If "other," please describe:

_____

_____

_____

9. Do your published price schedules provide rates for systems analysts and/or programming staff?

☐ Yes ☐ No

10. What are the minimum and maximum rates for these professional services staff?

	Minimum	Maximum
Analyst	$_____	$_____
Programmer	$_____	$_____

11. a. What discounting from basic list prices do you provide, and on what basis?

Basis	Minimum Percent Discount	Maximum Percent Discount
Volume (e.g., number of installations)	_____%	_____%
Term Contract	_____%	_____%
Optional Modules	_____%	_____%
Government Sector	_____%	_____%
Education Sector	_____%	_____%
Other	_____%	_____%

b. Please describe the "other" discounting basis referred to in the preceding question:

_____

_____

_____

c. What trends do you foresee in discounting policies within the next two years?

Basis	Trend Direction	Percent Change
Volume	_____	_____%
Term Contract	_____	_____%
Usage Pattern	_____	_____%
Government Sector	_____	_____%
Education Sector	_____	_____%
Other	_____	_____%

11. d. What percent of your software product customers buy your products at other than the basic list prices quoted in the pricing schedule?

_____%

What do you expect in the next two years?

_____%

e. What percent of your total software product revenue do these "discounted" customers represent?

80 - 100% _____

60 - 80% _____

40 - 60% _____

20 - 40% _____

0 - 20% _____

12. a. What average percent sales increase have you had over the last two years, and what are you projecting in the next two years?

1981 - Present _____%

Present - 1983 _____%

b. What portion of these increases would you attribute to price increases?

1981 - Present _____%

Present - 1983 _____%

13. There are a number of cost factors which contribute to the price of software products.

a. Rate the following factors in terms of their importance to your pricing policies (5 = high, 1 = low)

Hardware Cost _____

Personnel Cost _____

Communication Cost _____

Sales/Marketing Cost _____

Profit Margin _____

b. Which is the most important factor? _____

14. a. Please rate how the following factors will impact your pricing policies for the next two years (5 = high, 1 = low):

General Economic Conditions _____

Competition from Service Vendors _____

Competition from Hardware Vendors _____

Competition from In-House DP _____

Availability of New Technology _____

b. Which is the most important factor? _____

15. There are a variety of strategies which firms pursue in establishing prices.

a. Please rate the following strategic objectives as they relate to your pricing procedures (5 = high, 1 = low):

Perceived Low Price _____

Perceived High Price _____

Meet Competition Prices _____

Cover Costs _____

"What the Market Will Bear" _____

b. Which is the most important strategic objective?

_____

16. What percent change in prices for your products do you believe your clients expect?

	Balance of 1982	1983
Percent Change (up or down)	_____%	_____%

17. Technology and other factors will affect your clients' buying during the coming two years.

    a. Please rate the following factors as you believe your clients will see them (5 = high, 1 = low):

    Software Product Price _____

    Service Quality _____

    In-House DP Development Option _____

    Hardware Availability _____

    Software Availability _____

    Economic Conditions _____

    b. Which is the most important factor? _____

18. Considering in-house development further:

    a. Rate the following factors in terms of their importance from the point of view of the client (5 = high, 1 = low):

    Greater In-House Sophistication _____

    Better In-House-Developed Software _____

    Better Software from Hardware Vendors _____

    Distributed Processing Requirements _____

    Tied to Other In-House Systems _____

    Cost _____

    b. Which is the most important factor? _____

TURNKEY SYSTEMS MARKETS

Turnkey systems are a complete package of standalone hardware, systems software and applications software sold together to solve a user's problem. The key is the solution rather than the specific hardware or software. Do you agree with this definition? If not, how would you modify it? _____

1. Please describe your turnkey systems.

APPLICATION AND INDUSTRY	VENDOR		MEMORY SIZE RANGE	TYPICAL MEMORY SIZE	DISK STORAGE RANGE	TYPICAL DISK SYSTEM SIZE	TYPICAL NUMBER OF CRTs OR TERMINALS	SYSTEM PRICE RANGE	TYPICAL SYSTEM PRICE	NUMBER OF CUSTOMERS	NUMBER OF INSTALLATIONS	USER PROSPECT COMPANY SIZE
	PROCESSOR	PERIPHERALS										

2. Could your turnkey system be connected to a larger computer system?
☐ Yes ☐ No

Describe: _____

_____

_____

3. Describe the upward migration path that your customer would typically take as a system is outgrown:

	YES/NO	APPROXIMATE COST
Processor Change		
Add Disk Storage		
Change Disk Storage		
Add Memory		
Add CRTs or Terminals		
Other		

4. In developing a price for your turnkey systems, what percent of the price applies to each of the following?

COMPONENT	PERCENT OF PRICE
Hardware	
Software	
Installation	
Training	
Other	
Total	100%

5. Please indicate your revenue and systems-shipped figures for turnkey systems only (this data will be aggregated for forecasting purposes only).

		REVENUE	NUMBER OF SYSTEMS SHIPPED
	1980	_____	_____
	1981	_____	_____
Estimated	1982	_____	_____
Forecast	1983	_____	_____

6. In considering the future of turnkey systems, what do you forecast regarding:

Technology: _____

_____

_____

Applications, e.g., Office of the Future _____

_____

_____

Pricing _____

_____

_____

7. Are you considering hardware alternatives?

Describe: _____

_____

_____

_____