SYSTEMS OPERATIONS

BUYER ISSUES AND ALTERNATIVES

INPUT

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Abstract

This report examines the process by which the potential buyer selects a systems operations vendor and enters into a contractual and operational relationship with it. In the new relationship, the vendor assumes responsibility for the systems operations of the client organization, so the process is critical to the successful transfer of the operation.

The process is subdivided into three phases, the selection phase, the negotiation phase and the transition phase. The responses of users who had outsourced their systems operations to a vendor in the last three years were analyzed to study the process.

In the selection phase, the preparation and the evaluation of the solicitation document are critical to the proper selection of the right vendor. This report first discusses what data is generally provided to vendors to allow them to develop a proposal. Then evaluation criteria that buyers most frequently used to assess the merits of vendors are reviewed.

In the negotiation phase, four types of issues that need to be addressed are identified. These are:

- Financial/legal issues
- Technology issues
- Capital investment/transfer issues
- Personnel issues

Respondents' experiences in the negotiation phase are documented.

In the transition phase, the critical elements of schedule and personnel transition are addressed. In addition, there is documentation of various strategies used by the respondents to retain control of the vendor's management of the systems operations.

Three case studies are included to present a more detailed review of the motivations for outsourcing and the internal process that has to occur during the acquisition process. They represent a classic platform systems operation, an application systems operation with a unique vendor relationship, and an example of the outsourcing of network systems operations.

This report contains 124 pages and 36 exhibits and was prepared as part of INPUT's Systems Operations Program.

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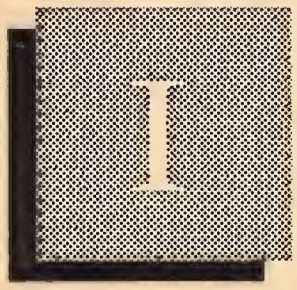
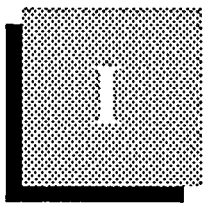


Introduction



Introduction

The systems operations (SO) market continues to be one of the fastest growing in the information services industry. Vendors are forging longer lasting relationships with SO buyers and are investing in the client's equipment, facilities, and sometimes, their business activities. Users are becoming more comfortable in outsourcing their information processing operations to third parties and are beginning to see the benefits this approach can bring in terms of technology update and reduced capital investment requirements.

The economic climate in which U.S. industry is operating in 1991 has fostered in part the growth of systems operations outsourcing. More companies need to preserve capital resources and improve cash flow. The rash of mergers and acquisitions, and the downsizing of businesses that has occurred over the past two years has left many companies with radically changed information services requirements. A continued lack of critical technical skills has made methods that pool these resources an attractive alternative. Finally, corporate management, as well as information systems organizations, are finding it more and more difficult to keep abreast of rapidly changing technology.

These trends will continue and a growing number of systems operations vendors are well positioned to capitalize on the opportunities that will emerge in this environment.

A

Objective and Use

INPUT has been closely watching these trends and has studied the evolution of the relationship between the vendor and the buyer. This report examines the buying process that is an integral part of the development of a relationship between a corporation and the firm it chooses to supply its information processing services.

The primary objective of this report is to examine the buying process which follows the decision to contract out for systems operations. The perspective of the Chief Information Officer will be taken since INPUT has found that the person in this position is always intimately involved in the process. To achieve this objective, the following steps in the process will be documented:

- The selection process is the procedure in which the buyer makes his requirements known to potential vendors and requests them to propose their solutions. The development of the solicitation and the evaluation of the proposals are critical elements in the selection of the best vendor.

- The negotiation process begins after the vendor is selected. The many details of the relationship that are defined at this stage help structure the interface between the user and vendor personnel.

- The transition stage is the crucial final stage at which the vendor steps up to the task of taking over the processing requirements of the client. Personnel issues and user interface matters need to be addressed and the management of the contract by the CIO begins in earnest.

B

Scope of Study

The report examines the procurement process as it exists in the U.S. commercial information services market. The federal market is specifically excluded because procurement in that environment is rigidly controlled by statutes and regulations. Samples of respondents from several industries are included. INPUT was also careful to select companies using several established vendors.

C

Methodology

Telephone interviews were conducted with the CIOs at user companies. All systems operations contracts reviewed were mature enough to have experienced all three phases of the procurement cycle, yet recent enough to reflect current practices in the industry. The questionnaire used for the interviews is included as an appendix to this report.

In addition, on-site interviews were conducted with the CIOs of three companies that had recently outsourced systems operations. The results of these interviews, presented as case studies, serve as in-depth descriptions of the environment surrounding the procurement process and how that environment influences the process.

D

Report Structure

This report is organized in the following manner:

- Chapter I, Introduction, identifies the objectives and the scope of the report and outlines what is to follow.

- Chapter II, Executive Overview, provides a summary of the contents of the report. Since this report will be produced in modules, it will be the last part of the report produced.

- Chapter III, Selection Process, examines the various steps in the procurement of a systems operations vendor. It analyzes data on what evaluation criteria are most effective. It reviews the steps buyers take in selecting a vendor and provides data on what a vendor must do to be acceptable to the buyer.

- Chapter IV, Contract Negotiations, reviews the process that begins after a vendor is selected and establishes a set of contractual terms for the relationship. This process is usually completed before the vendor can assume responsibility for the data processing operations of the client.

- Chapter V, Transition Period, reports on the experiences of companies in the crucial period when the operations are completely turned over to the vendor. It also reports on how the buyer feels the working relationship can remain a healthy, cooperative one.

- Chapters VI, VII and VIII are case studies that describe in detail how the procurement process evolved within a particular company's framework.

- Chapter IX, Conclusions, reviews the lessons learned in the procurement process as reported by companies that have experienced it. It draws conclusions and makes recommendations for vendors who are currently in the market as well as those who may be considering entering the market.

E

Related INPUT Documents

For additional insight into the systems operation markets, readers are directed to the following published INPUT reports:

Federal Processing Services/Systems Operations Market, 1989-1994	(1988)
Systems Operations—Growth for the 1990s	(1989)
Systems Operations—Management Issues and Practices	(1990)
Network Operations Management	(1990)
Systems Operations Market Analysis, 1990-1995	(1991)
Systems Operations: Vendor Analysis	(1991)

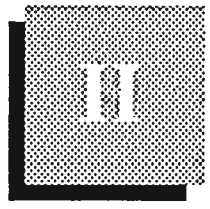
The following reports, to be published in 1991, will also provide further insight:

Systems Management Priorities and Directions	(May, 1991)
Systems Operations Market Analysis	(Aug., 1991)

In addition, a series of Systems Operations Research Bulletins will be issued, highlighting some aspect of the systems operations market, throughout the year.

II

Executive Overview



Executive Overview

Outsourcing of systems operations is a major decision that the CIO of an organization makes after careful review of the available options. He usually views the choice with much concern regarding his ability to properly manage the new environment. He worries about losing control of the technology and resources needed to provide information processing services to the organization.

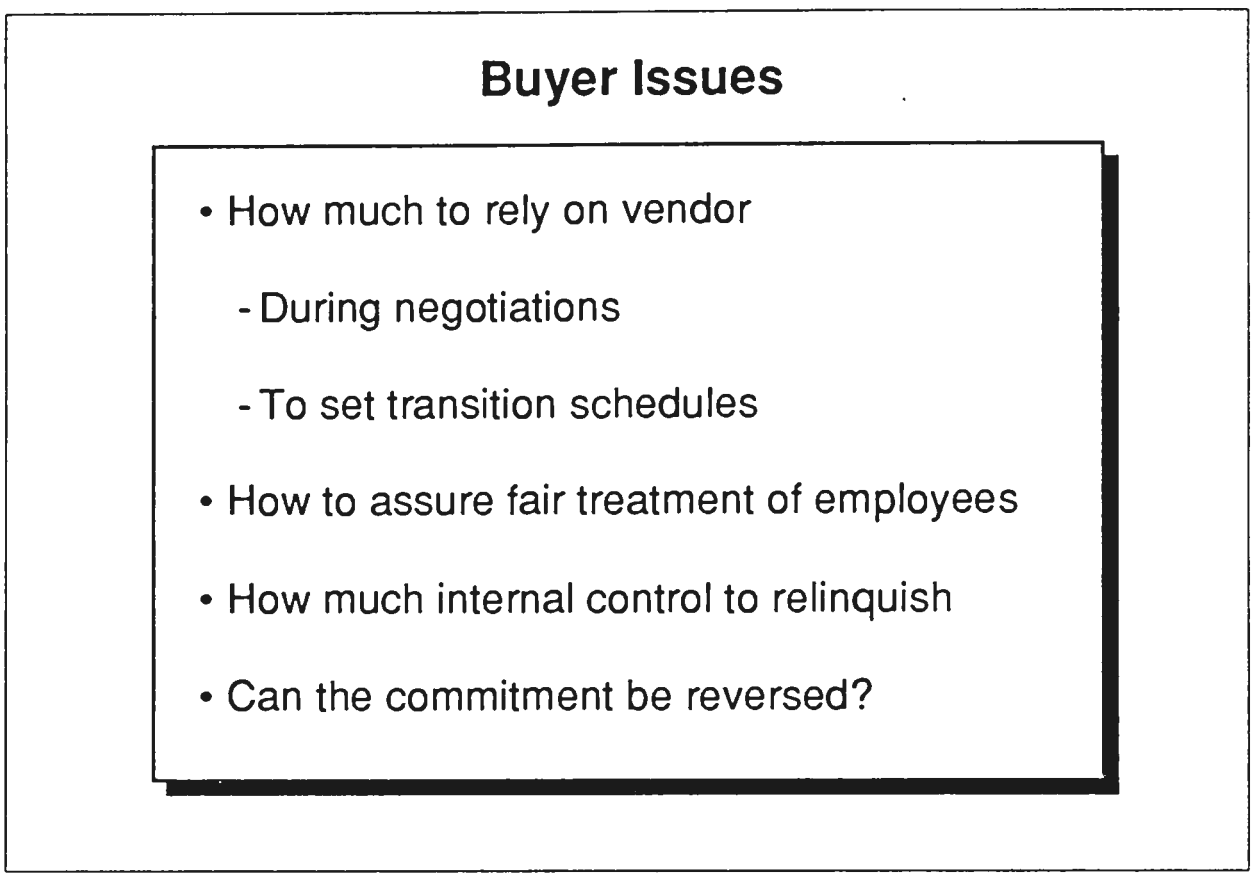
There are times when the decision to outsource is a forced one, but generally the motivation is to do more with less resources. The CIO may have inherited a set of incompatible processing systems environments as the result of a merger or acquisition. He may have excess capacity to dispose of because the company is downsizing its operations. The company may be undergoing general belt-tightening because of changing economic conditions. Whatever the incentive, INPUT research indicates that the CIO's desire to reduce costs is tempered by a need to find a systems operations vendor whom he can trust with his operations, one who has done it before and can point to demonstrated successes.

A Buyer Issues

Exhibit II-1 summarizes issues that the buyers interviewed by INPUT felt most strongly about. In some cases these are real problems that are a function of real differences in the vendor's motivations versus that of the client, while in other cases they are simply perceived issues that vendors can remedy with good client communications.

The CIO, who is considering systems operations as the solution to his information processing needs, can't do it all himself. The burden of evaluating the vendors is primarily his, but once he has selected a vendor, he begins to rely more on that vendor's past experience in the systems operations environment. Many CIOs are uncomfortable in a negotiating role and rely on the vendor to provide contractual guidance based on previous experience. Several respondents indicated they were impressed at how smoothly negotiations proceeded and credited it to the extensive experience the vendor personnel brought to this area.

EXHIBIT II-1



When asked who established the transition schedule, most respondents either turned that task over to the vendor entirely or relied heavily on the vendor's past experience to establish the schedule.

All respondents to INPUT's study indicated a great deal of concern for the employees who would be displaced by the transfer of operations to the vendor. Vendors appeared willing, in many cases, to assimilate the staff. Most of the transfer agreements were worked out before the contract was finalized and details were not included in the contract itself. CIOs relied on the vendor's professionalism to assure fair treatment of the displaced employees.

A number of CIOs adopted different strategies to maintain control over operations. Some had structured reporting; others relied on more informal arrangements. These techniques were established while both parties were still trying to develop a good working relationship based on mutual benefit and risk sharing. CIOs were often concerned that they would give up too much control.

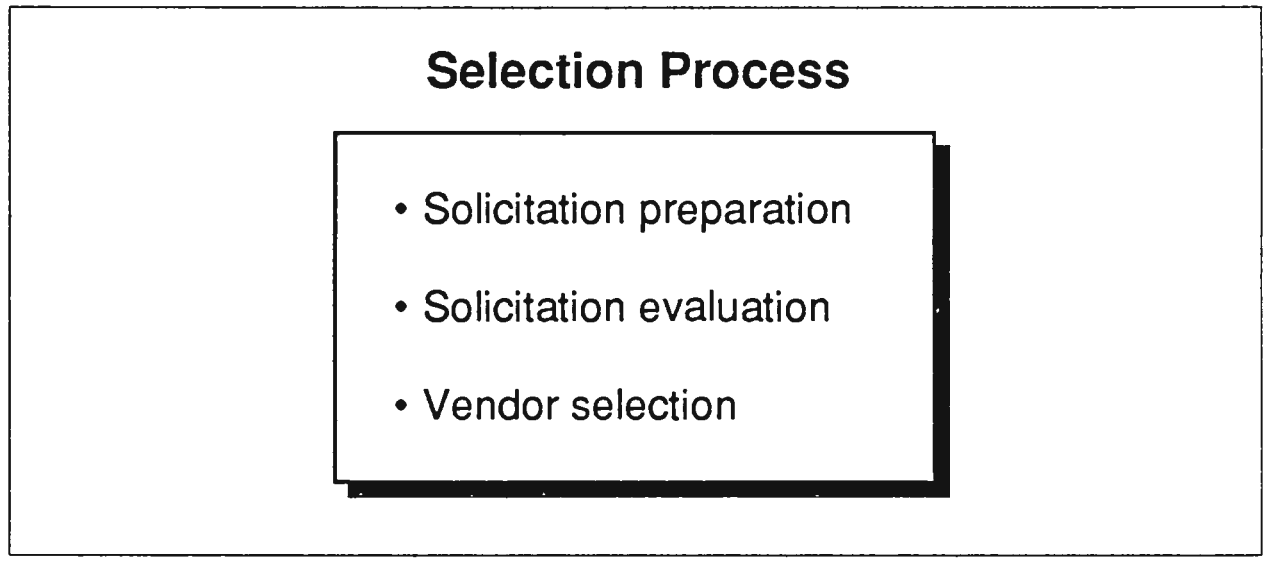
What would happen if the relationship failed? Could the client reassume responsibility for operations after having disposed of all his technical expertise? As the contract progresses, the client has less and less expertise in-house that could reassume operations; the client becomes more and more dependent on the vendor. Several CIOs expressed this concern, admitted they had no good answer, and felt the risk was worth taking. Others felt they could easily transfer the operations to another systems operations vendor if a rift developed.

B

Selection Process

The selection process for a systems operations vendor can be conveniently subdivided into three steps, illustrated in Exhibit II-2.

EXHIBIT II-2



Each step requires specific action on the part of both buyer and vendor:

- Solicitation preparation—At this point, the buyer assembles the material necessary to adequately describe the information systems operations to prospective vendors so they can prepare detailed bids in response.

  Fifty percent of the INPUT respondents had prepared a formal solicitation document; the others simply provided the vendors with current operating statistics and requirements. The amount of data provided to the vendor is often a function of the type of systems operations that the buyer is seeking. For example, if personnel transfer is involved, the prospective vendors need to have much more data about employees.

  The process of notifying vendors that a systems operations opportunity exists is radically different in the commercial sector than in the federal sector. In the latter case, requests for proposals (RFPs) are publicly advertised and a "sealed-bid" procedure is used for responses. In the commercial sector, prospective buyers decide from whom to solicit responses. The decision is often based on the vendor's reputation or a previous relationship.

- Solicitation evaluation—Vendors submit proposals to the buyer, addressing the firm's systems operations requirements and identifying the costs. The buyer then evaluates the proposals on some comparative basis to determine which vendors present the most benefits.

Comparing vendor solutions is a crucial step in deciding who to select. INPUT research indicates the proposed solution may be less significant than the perceived technical ability and the financial stability of the vendor. The financial stability of the prospective vendor was the most frequently mentioned evaluation criterion. Buyers want to be sure that, if they turn over processing responsibilities to an outside firm, that firm will be a viable provider for the long term.

Most of the prospects are, of course, interested in the price of the services. However, they generally use the price to differentiate between vendors rather than assess how much they would save under the vendors' proposed solutions.

Buyers are not concerned about the vendor having experience in the buyer's industry, but the vendor must demonstrate experience in systems operations in general. Respondents indicated that they evaluated the vendor's general technical abilities rather than industry knowledge. Financial institutions are an exception to that rule. Many of them consider experience in the banking environment a critical criterion for vendor selection. Another common selection criterion, culture, is a measure of the prospect's comfort level with the vendor's concerns and attitudes about business issues.

Other common criteria evaluate more specific technical capabilities of the vendor and can be important in some situations but do not apply to every case.

- Vendor Selection—The final selection is based not only on an objective evaluation of the solutions proposed by competing vendors, but on some further discussion with vendors who appear to be offering the best solution.

  The final selection of a vendor is not done in a vacuum. The original list is usually narrowed down to a short list through the evaluation process. Further discussions then ensue, followed by client visits or site visits. All these preliminaries serve to begin defining how the eventual relationship between the two parties will work.

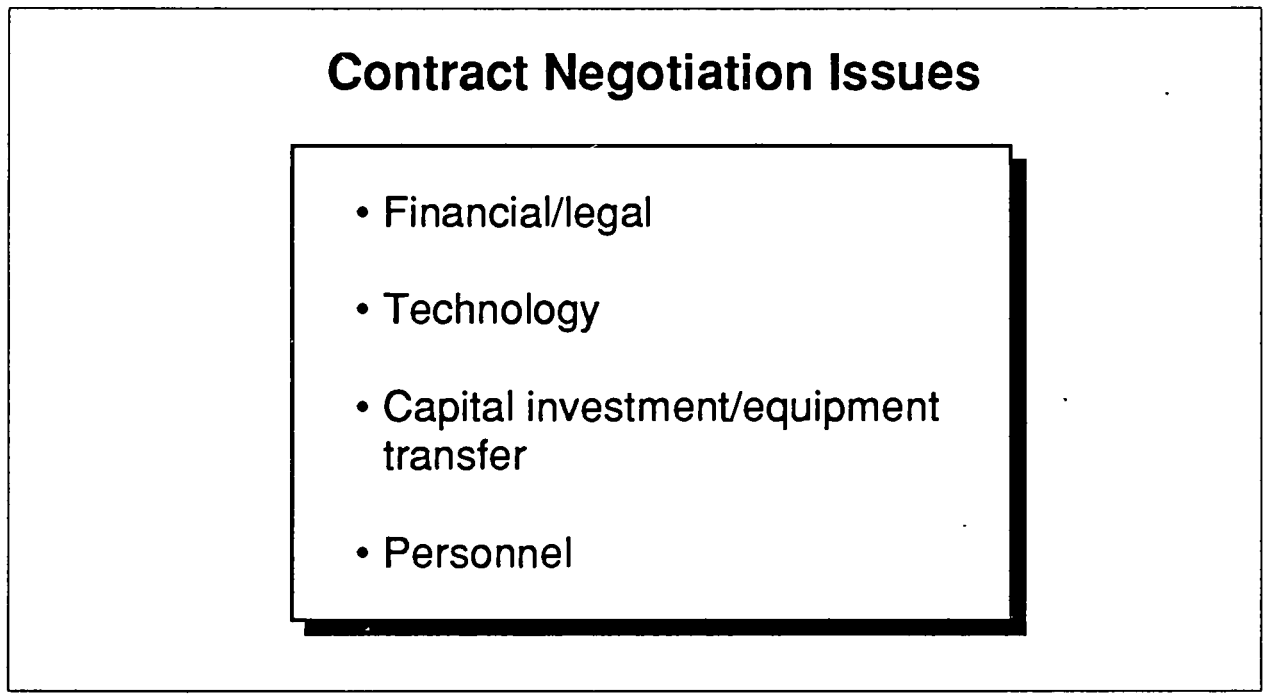
C

Contract Negotiations

The purpose of the negotiation phase is to define the obligations of the vendor and the client, once the vendor assumes responsibility for systems operations. It is an iterative process that allows both parties to clearly define how all the user requirements will be met.

Four types of issues are generally included in the contract. These are illustrated in Exhibit II-3.

EXHIBIT II-3



The most significant financial/legal contractual issue addresses performance penalties for non-achievement of specified service levels. Most respondents indicated that they included some measures of performance in their contracts and specified what penalties would occur if these levels were not attained.

Most of these criteria are based on performance data compiled by the client on the performance of in-house systems or staff. The performance criteria are generally set to maintain or improve the level of service users were experiencing prior to the move to a systems operations vendor. Penalties for non-performance are usually financial ones, either a fixed dollar penalty or a predefined percent reduction in the monthly charges.

Termination clauses are also included that indicate what happens if the client wants to end the contract early. These clauses usually explain compensation provided for the vendor and, if applicable, some rights to vendor-developed software for the client. Many contracts also include terms specifying how the contract can be extended.

On the technical side, contracts generally include terms relating to the management of the communications network, the provision of disaster recovery capabilities, security measures, and software-related issues.

Communications networks are the backbone of systems operations activities when client organizations are geographically dispersed. Whether the vendor provides the service or there is a separate network vendor, communications elements are identified in the contract so that there is a clear statement of responsibilities. All respondents indicated they had language in their contracts covering this issue.

Including disaster recovery and security issues in the contract emphasizes the value clients place on their data. All respondents consider these services critical, but many had only general terms covering them. It is very difficult to describe in concrete terms how adequate security can be monitored. Most clients, in fact, rely on the reputation of the vendor.

Software development and maintenance issues are addressed in applications systems operations contracts, since the software is a major service component. In most platform systems operations contracts, the maintenance of systems software is assumed and not usually included in the contract.

Issues relating to capital investment and transfer of assets were usually not included in the contract, unless there was an arrangement where the client retained equipment ownership. Most often, these issues were resolved in the late proposal or early negotiation stages and were not included in the contract.

Personnel issues are of primary importance to CIOs when transfer of personnel is planned, yet in many cases, there is no contract language addressing it. INPUT believes this is because the contract is regarded as an operating document for the partnership and, since the personnel transfer issues are resolved at the start, they are not included in the contract.

The issue of who provides user support is an exception to this rule. Many of the respondents indicated that their contracts included language clearly defining this responsibility. This service is of continuing importance to the ongoing relationship.

Though the negotiation phase can take considerable time (two weeks to three months), most respondents indicated that they try to avoid referring to the resulting contract during its life. They simply feel the relationship can be better maintained by daily communications between the parties rather than by constant reference to the agreement.

D

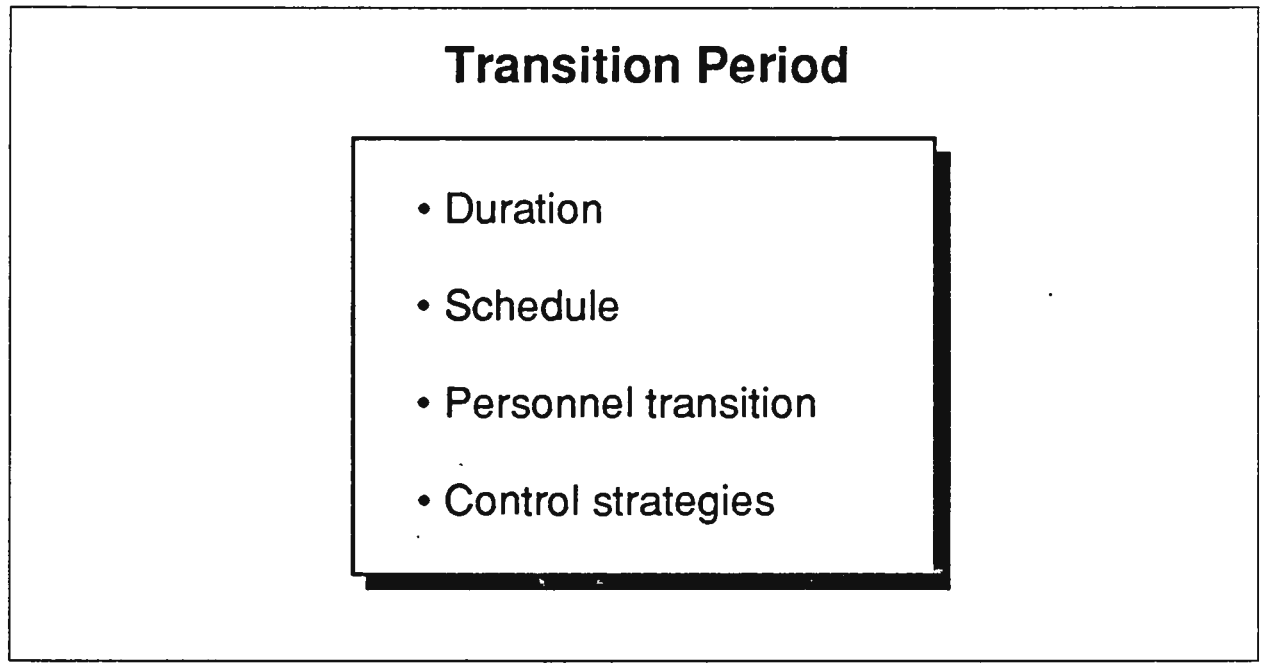
Transition Period

The transition of operational responsibilities from the client to the vendor is the first test of the relationship between the two parties. The issues that are critical in that period are illustrated in Exhibit II-4.

The length of the transition may be crucial to a user-transparent transfer. The transfer duration is a function of the type of systems operations service planned. There are three basic types of transition:

- If the vendor is simply taking over existing staff and facilities, the transition will usually take between two and four weeks.

EXHIBIT II-4



- When the vendor is transferring all processing to his site, with or without staff transfer, it is more likely to take three months.

- In the applications systems operations environment, the transition can take up to eighteen months because software conversion and application development are generally involved. In this case, the vendor usually migrates the existing user software to the vendor site, begins processing in one to three months, and converts to the new software over the next twelve to fifteen months.

In most cases studied, respondents indicated they rely completely on the expertise of the vendor in establishing the transition schedule, rationalizing that vendors are the experts in transition and most capable of accurately assessing how long it will take.

The transfer or the termination of personnel is a major concern of the client CIO at the time of transition. The staff must be fairly treated in either case. When a personnel transfer occurs, most of the issues concerning that transfer have been resolved before the transition and all that remains is to present it to the employees in a positive light. Vendors are highly motivated to make this process go smoothly, since they are assuming responsibility for the personnel.

When employees are being terminated, it is often desirable to motivate them to stay until systems transfer is effected, since they are the most knowledgeable about the systems being transferred. Several respondents indicated they simply offered the departing employees incentives, in the form of bonuses or better severance packages, if they agreed to stay until the end. Either technique appeared to be effective.

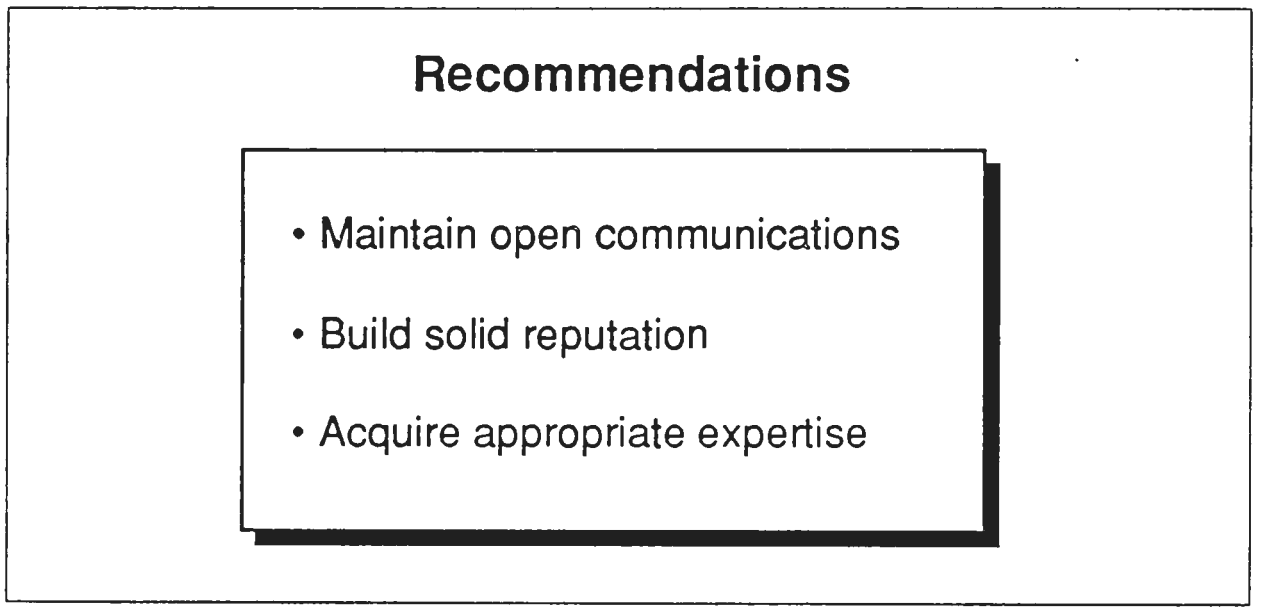
The transition period is also the first opportunity for the CIO to develop and test the control strategy he will use to manage the vendor relationship. In response to an open-ended question on how CIOs controlled the relationship with the vendor, they indicated that the strategy is an evolving one that leads different executives to different strategies, usually based on personal style. As the transition begins, many questions have to be resolved with close participation of vendor and client. Later in the contract, the relationship becomes more structured.

E

Recommendations

Exhibit II-5 summarizes the recommendations of this study. These are more fully discussed in Chapter IX.

EXHIBIT II-5



Communications are particularly important in the systems operations business, because the vendor must become an integral part of the client's operating environment. Communication must begin in the selection phase, when both parties are still defining their positions; continue through the negotiation phase; and build the partnership that must exist in the operational portion of the contract.

Since so much of the selection decision is based on the vendor's reputation, it is imperative that the vendor build a reputation on the basis of good performance on current and past contracts. That reputation must be supplemented by the right expertise, particularly in the areas of networks and other technical specialties. The vendors don't need all the resources in their own organizations, but can supplement it with strong alliances with recognized experts in the field.

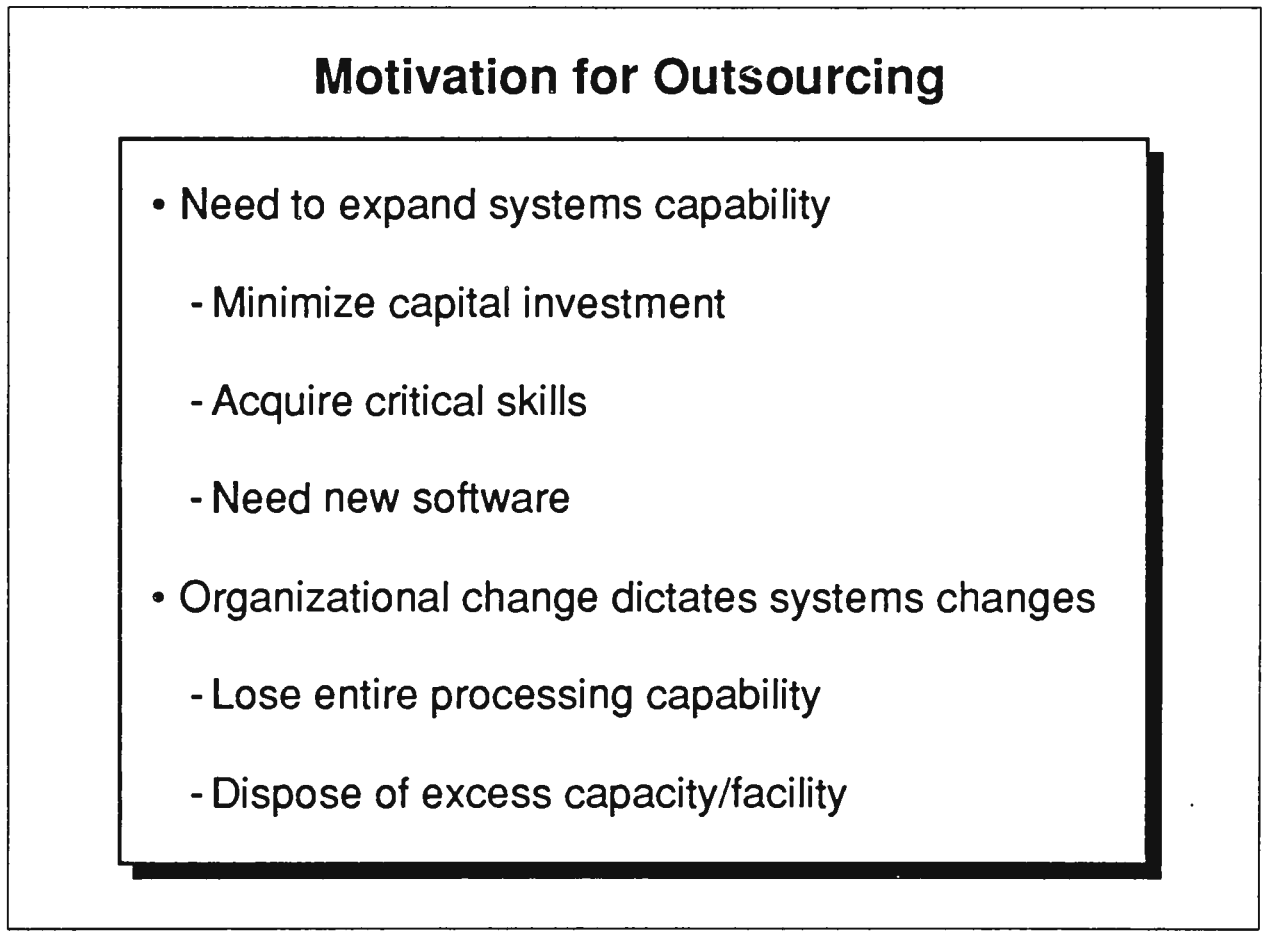
Selection Process

III

Selection Process

The decision to outsource systems operations is generally made for one of the reasons outlined in Exhibit III-1.

EXHIBIT III-1



A thorough review of the existing capabilities of the internal information services organization may determine that outsourcing operations to an external vendor is more attractive than internal expansion.

- The company may be trying to minimize the capital investment that new computer equipment requires.

- It may be difficult to recruit and retain the highly qualified personnel needed to maintain a first-class information systems operation.

- The company might be looking for new software to replace aging home-grown applications.

Organizational changes in the company or its parent may entirely eliminate a source of data processing capability.

- Many leveraged buyouts leave the resulting company without any data processing capabilities. The existing facilities are often retained by the former parent and the new entity is given a deadline for removing its processing from the data center.

- The new entity may have been downsized and have more processing equipment and facilities than it requires.

In any case, once the decision is made, the process of finding the best vendor begins in earnest. It involves the development of the solicitation materials which describe the current processing environment and the services the vendor must provide. After a suitable response preparation time, vendors bids are submitted and evaluated according to criteria established to allow all vendors to be compared on a relatively equal basis. Finally, the selection of a vendor is made. The steps in this selection process will be discussed below.

A

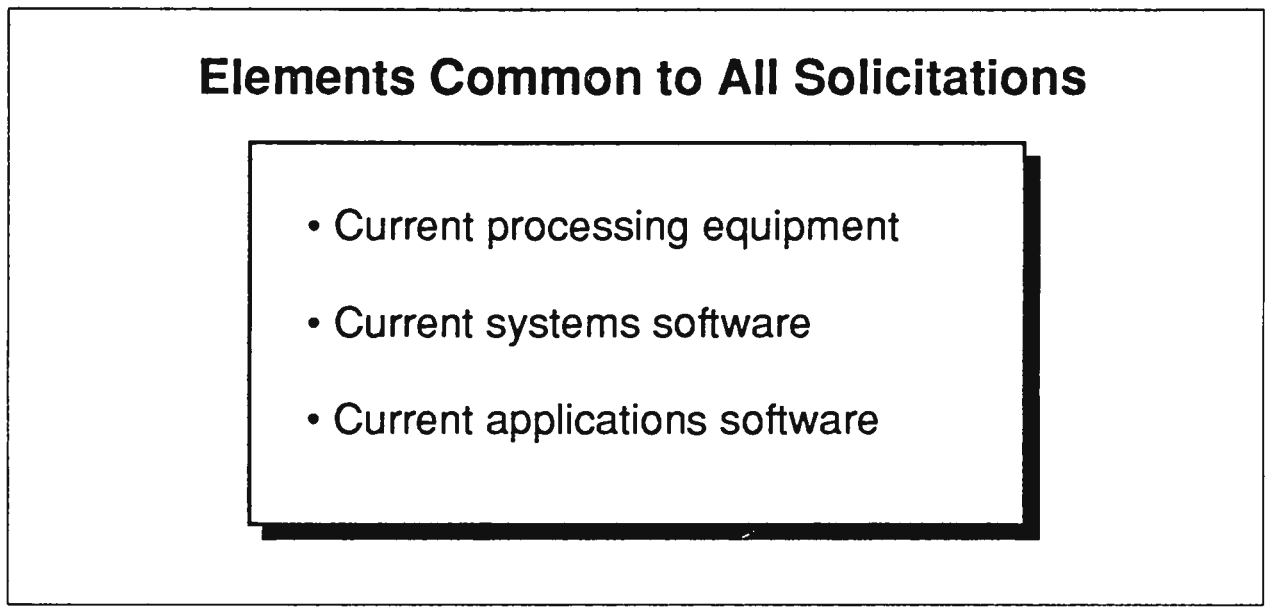
Solicitation Development

Many commercial firms prepare a formal solicitation document for vendors, but others simply gather material that describes their current operating environment, combine that with their expectations and ask the vendors to respond.

In INPUT's sampling of users, 50% of the users prepared a formal solicitation document. The buyer's purpose is to provide the vendors with a common set of data upon which to base their proposals. This makes it easier to compare the vendor responses during the evaluation phase. Respondents to INPUT's survey indicated that the preparation of the actual document took from two weeks to two months to prepare. The preparation was always the responsibility of the Chief Information Officer in the organization. He usually was assisted by a staff analyst or, in some cases, by outside management consultants. On occasion, he was also assisted by a senior financial officer in the company. Only in one instance, at a bank, was user management included in both the solicitation development phase and in the bid evaluation phase.

Exhibit III-2 presents the types of information that are always provided to the vendors, whether or not a formal solicitation document is prepared. There are no surprises here. No vendor can prepare a valid proposal without at least this basic data. The fact that the list is not longer is a bit surprising, though. It is also revealing that the buyer's transition plan expectations are generally not included in the solicitation document, for example.

EXHIBIT IIII-2



In addition to the basic data identified in Exhibit III-2, other information is usually provided to the prospective vendors to allow them to better tailor their responses to the specific needs of the company. This information varies by buyer but generally includes the items included in Exhibit III-3.

By providing resource accounting data such as SMF (Systems Management Facilities) data and other operating parameters such as data storage requirements, the buyer is giving the vendor still more data with which to sharpen the proposal. In certain cases, this data may be difficult to acquire. As an example, one of the respondents indicated that the decision was made to change from one failing systems operations vendor to another successful one. As might be expected, it was extremely difficult to get good operating statistics from the departing vendor.

Network communications requirements are only provided if the vendor is being asked to provide that part of the service. In some of the cases reviewed, the buyer was either retaining management of that component or outsourcing that service under a separate contract. Most recent outsourcing agreements are including communications in the agreement and vendors are prepared to provide this service in most instances.

Whenever the user is considering being shifted to a shared environment at the vendor site, processing volumes need to be provided. When the buyer is seeking a proposal in which the vendor simply takes over the entire existing operation, this data is less important. Even then it is

probably advisable to provide it since it gives the more aggressive vendor additional data on which to do an economic analysis and prepare a more cost-effective solution. In a tight competition, the vendor that uses this data to propose a downsized processing environment at substantial savings to the users has a significant advantage.

EXHIBIT III-3

Contents of Solicitation Document

Item	Number of Responses
SMF Data	9
Communications Requirements	8
Processing Volumes	7
Current Staffing	6
Transition Plans	4
Data Storage Requirements	4

Staff deployment data, including current headcount and skills inventories, are essential if the proposal is to include transfer of the operating staff from the user to the vendor. More and more systems operations outsourcing agreements include such arrangements.

Some of the buyers carefully outline what their transition expectations are for the prospective vendors. This may be dictated by a corporate divestiture schedule or by some other external factor. A surprising number of respondents indicated they did not provide such data however, as they feel that vendors are often more experienced and capable of establishing the transition schedule than their own staffs.

Most respondents indicated they did not provide cost information to prospective vendors. Those that did felt the openness and understanding of each other's business that resulted made it easier to reach a better working relationship in the final agreement. In cases where the data was provided, the comment was made that it was the most difficult to compile and to provide in a meaningful form for the vendors.

B

Solicitation of Bids

Once the data describing the current environment is assembled and the organization's requirements are clearly stated, bids can be solicited from SO vendors. Unlike the federal government market environment, requests for proposals are not advertised for the vendor community at large to review. Companies send out bid requests only to those companies they feel can respond positively. It is the vendor's responsibility to make its presence known in the user community.

As mentioned in Section A, 50% of the respondents issued formal requests for bids. The other firms simply assembled their requirement data and notified known vendors or current suppliers that they were looking for an external systems operations management arrangement. It should be noted, however, that in the case of some banking industry respondents the systems operations contract really started with the bank's search for an upgrade in software being used by the user departments, evolved into a reassessment of the entire information services function, and eventually led to a contract for systems operations with an external vendor.

The challenge to the vendor's marketing staff is to know when an SO solicitation is being prepared by a potential client. The commercial market certainly favors any vendor that has an ongoing relationship with a company. Vendors with strong reputations and a proven track record in a given industry market will probably also get an invitation to bid.

Though the trade press tells us that the systems operations market is full of aggressive companies looking for business, INPUT found that 65% of the companies surveyed sent out more bid solicitations than they received proposals. Exhibit III-4 illustrates what the response rate was for those companies.

EXHIBIT III-4

Bid Solicitation versus Response

Number of Proposal Requests	Number of Responses
8	6
7	4
6	5
5	3
5	1

C

Evaluation Techniques

When INPUT asked companies that had recently outsourced systems operations how they evaluated the returned proposals, some common patterns emerged. There was much variation in the details of the procedures they employed, however.

A preliminary review was always made to eliminate some vendors prior to doing a more complete evaluation. Those eliminated usually had not responded completely or had obvious omissions in their proposals. Several buyers indicated to INPUT that they eliminated some vendors simply because they did not demonstrate sufficient "professionalism" in preparing and presenting their bids. A lack of professionalism was defined as either a demonstrated lack of understanding of the buyer's business needs or an inability to present the image of a firm that could be entrusted with the buyer's entire systems operations.

All of the buyers insisted on visiting vendor's current client sites and many also toured the prospective vendor's processing facilities. Surprisingly, none of the respondents required any benchmark or demonstration of processing capability from the vendors. The general attitude was that if the vendor has already demonstrated the ability to run systems for other clients, it could adequately meet the buyer's processing needs.

The real discrimination between vendors was generally not of a specific technical nature. How the vendor proposes to assist in the relocation of staff, or how the user interfaces will be handled are often as important in the evaluation cycle as the price per transaction or the transition plan submitted by the vendor.

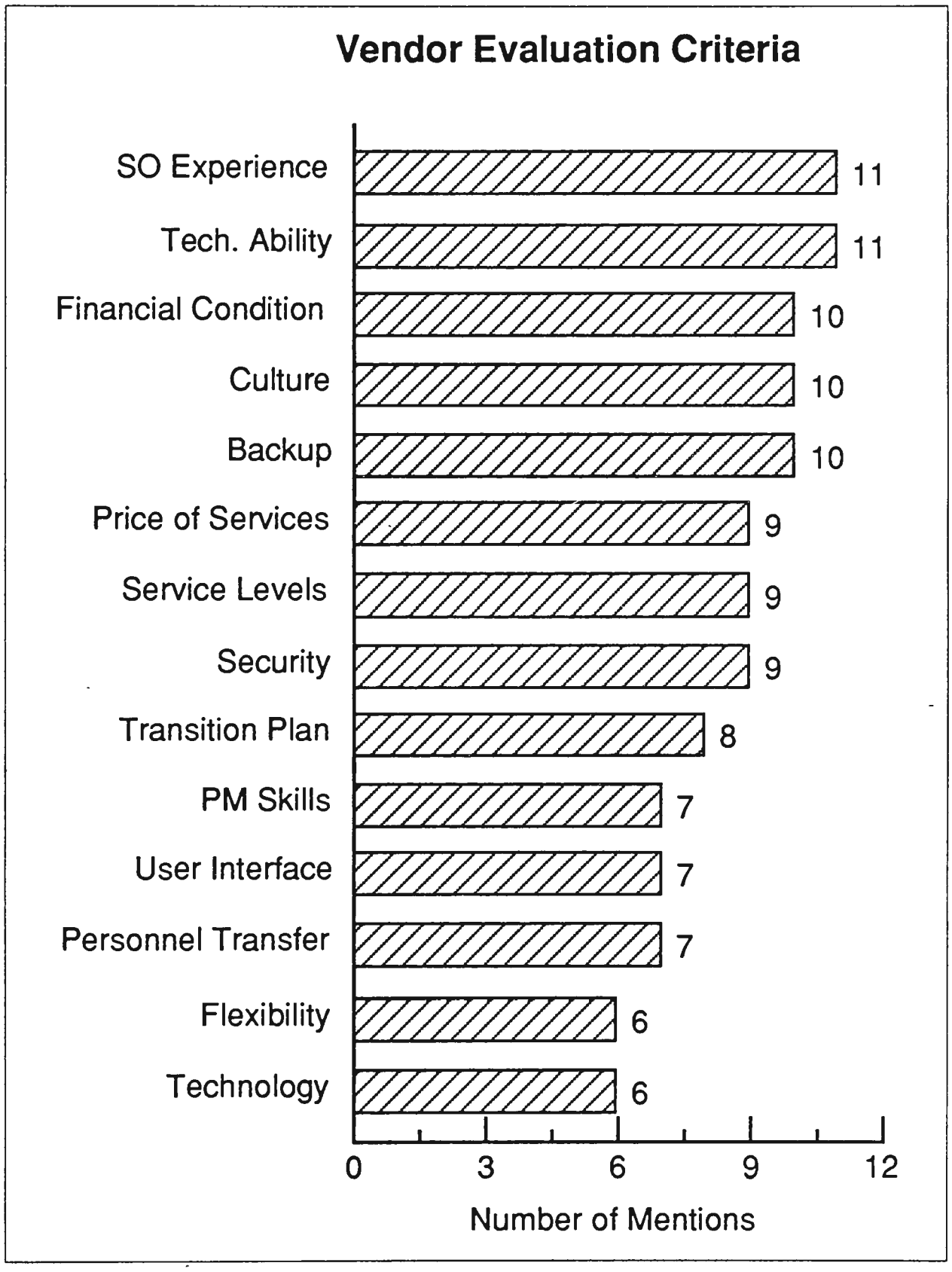
As mentioned earlier, users were generally not involved in the evaluation process, except in the case of one bank, just as they had not been involved in the development of the solicitation document.

Certain vendor capabilities repeatedly appeared on the respondents' list of criteria. Exhibit III-5 presents the data on the number of times a particular evaluation criterion was mentioned by the respondents. This is one measure of the importance of these criteria in assessing the capabilities of a vendor. The relative importance assigned to each criterion will be discussed later.

The most frequently mentioned items were the related criteria, SO experience and technical ability. Note that experience was defined as prior systems operations experience. Buyers wanted to entrust their data processing centers to experienced hands, not to new players in the game. They were much less concerned whether the vendor had any experience in the buyer's own industry. The comment was often made that they, the buyers, had enough knowledge of their own industry and did not need to rely on the vendor. They reinforced this statement by indicating that

they evaluated the general technical abilities of the vendor, rather than evaluating industry knowledge. The respondents in the banking industry were an exception to that rule. They preferred that the selected vendor know a lot about the banking industry.

EXHIBIT III-5



The next most frequently mentioned items included the financial stability of the prospective vendor. Buyers are looking for some assurance that the selected vendors can do the job. They also want to be sure that if they turn over their processing to a third party, that firm will be a viable

provider for the long term. For that reason they heavily weigh the financial condition of the vendor as an important characteristic. Two recent moves by vendors improved their strength in this area. Systematics, recently acquired by Alltel, strengthened its financial position substantially through that merger. The merger of Genix Group with MCN Services Group combined Genix's reputation and skills with MCN's financial resources and client base.

The issue of culture needs further explanation. Respondents said there had to be a similarity of culture between their organization and the vendor's. This usually meant that the vendor had to be perceived as having the same concern for quality and/or service as the buyer, or the same conservative attitude toward technology changes and investment in new equipment. This is a reasonable requirement, since the buyer's staff will have to be working very closely with the vendor's staff to achieve common objectives.

Backup and disaster recovery provisions are important to all buyers. Only in cases where the buyer provided backup through a third party was disaster recover not included in the list of evaluation criteria. It did not seem to be necessary that vendors provide the disaster backup themselves, but they had to make it available at least through a third party. In fact, since backup should be provided from an alternate site, it may be perceived as an advantage if a third party provides it.

A majority of the users were, as expected, interested in the price the vendor would charge for the service. Additional comments indicated that not all buyers had a clear concept of what their true costs were, however, so they generally used the price to differentiate between vendors rather that assess how much they would save under the vendor-proposed solutions. They may be outsourcing systems operation to avoid further capital investment in equipment or to improve their cash flow, but they can best compare one vendor to another by looking at the overall prices for the services proposed. Other financial criteria were applied also, such as impact on cash flow and reduction in capital investment, but their inclusion in the evaluation depended on the circumstances that had motivated the outsourcing consideration in the first place.

Though service levels were mentioned by most buyers as a factor to be evaluated, they were much less consistent when asked how they evaluated this item. The most common answer was that they required the vendor to provide the same or better level of service than they currently experienced. There was very little evidence, though, that they applied quantitative measurements to this criterion.

The security issue has become a more important criterion in recent procurements. This evaluation criterion was always mentioned as important in procurements conducted in the last two years.

It would be expected that the transition plan provided by the vendor would be an important consideration in evaluating the proposals. Surprisingly, INPUT found that many buyers did not include it as a criterion at all. We will see later that whenever it was included it was regarded as important. Why was it not included more often? The answer is contained in comments made by buyers who did not include it as a consideration. They relied on the vendor to define the transition schedule, judging that the vendor had done transitions before and could schedule it better than the buyer's own staff. Only when external circumstances dictated a schedule did the buyers provide a transition plan.

Those who cited project management skills also provided transition plans to the vendors. Several of the respondents indicated that that was when the project management skills were considered critical and needed to be an important consideration.

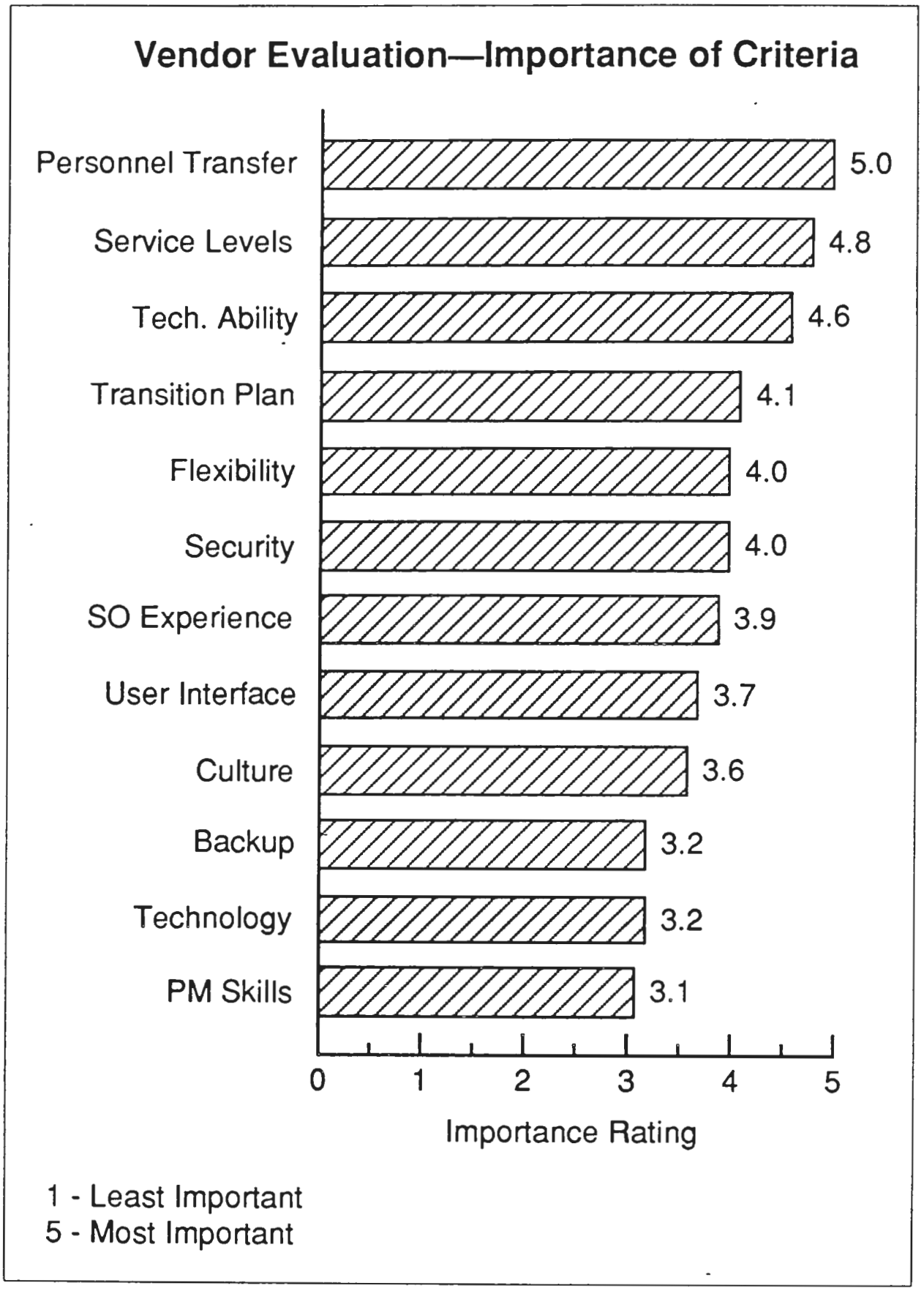
The next item, user interface, received few mentions primarily because many of the buyers planned on keeping the user interface or help desk function within their own organization, even when it was staffed by vendor personnel. They evaluated the vendor's response to problem resolution through the visits to its clients conducted as part of the evaluation process.

Personnel transfer issues are of utmost importance when the vendor is assuming responsibility for the processing staff and/or those who do the applications development. The buyer is always very concerned that the employees be treated fairly and that their careers not be negatively impacted by the change. Most vendors are aware of this and have adopted strategies to deal with this buyer need. Such strategies range from transferring all the staff to bringing in a third-party outplacement service to deal with the displaced employees.

The less-frequently mentioned items covered a number of capabilities. Though only a few buyers cited the vendor's need to be flexible to changes in processing requirements, Exhibit III-6 illustrates that those who considered it thought it was more important than this list indicates.

The comment was made by several respondents that technical proficiency was not included because they simply assumed that the vendors being considered would maintain themselves at the current state of technology for their own cost effectiveness.

EXHIBIT III-6



In addition to noting the number of times an evaluation criterion was mentioned, INPUT gathered data as to how important each criterion was in the opinions of the evaluators. The respondents were asked to rank the non-financial criteria on a scale of one to five, with one being least important and five being most important. Exhibit III-6 presents the results of this survey.

Personnel transfer policies were the most important issue in the buyers' minds in the five firms that transferred their employees to the vendor. It was extremely important that the vendor have a good plan to assimilate the staff or otherwise protect them. Earlier INPUT research also established this as a very important consideration.

The service level issue is a very important consideration, yet buyers generally admit that they do not have a good way to measure future service levels. Note the distinction: buyers identify it as very important yet can't measure it quantitatively. The fall-back position is to question the vendor's current clients on this subject. (As an aside, early comments by respondents indicate that vendors usually do meet delivery schedules and maintain high service levels once the contract is in place.)

The flexibility to adjust the processing requirements to meet changing user demands and the technical ability of the vendor to provide good service are considered critical. Both of these are variations of the service level issues mentioned earlier. Yet as Exhibit III-5 showed, though most buyers mentioned technical ability as an important consideration, far fewer buyers used the flexibility to change as an evaluation criterion. One explanation is that the buyers actually found it very difficult to assess the vendor's flexibility, so they left it out.

Transition plans were critical to those who had a tight schedule to meet. One respondent, for example, had been told by the former parent corporation that, as the result of a leveraged buyout, he had two months to find a new source for data processing services. Other respondents had similar stories, yet many simply were not in a time-critical mode and depended on the vendor to define the schedule for transition. This was particularly true when the vendor was simply proposing to take over the entire data processing function, including the staff.

Security, mentioned by more than half the respondents, also weighed heavily in the evaluator's minds. Several comments from the respondents indicate that the buyers generally assumed the vendors were protecting their own interests by paying careful attention to security issues.

It is also interesting to note that, though both the vendor's SO experience and culture were mentioned frequently as evaluation criteria, they were not considered as important as might be expected. The preselection process that goes on in the commercial marketplace can account for this. Buyers often preselect their bidders by only soliciting bids from vendors they perceive as recognized suppliers of systems operations services. Thus, anyone they contact has already been qualified as to SO experience and cultural compatibility.

User interface issues were certainly important when the vendor was to provide this service, yet the more common mode was for the buyer to maintain the contact with the users and provide a single focal point for contacts back to the vendor's systems operations staff.

Backup considerations are certainly important to SO buyers, but the comment of one respondent probably best sums up the attitude in the marketplace. "All decent vendors have a backup capability already built into their facilities." This worked for most buyers, except for those who had entered into a separate contract with a disaster recovery contractor.

The issue of maintaining current technology was not rated as very important either in the number of times it was cited or in the weight attached to it. The conclusion is that the vendors have convinced the prospects that they will maintain state-of-the-art technology. To prosper in the systems operations business, vendors must constantly leverage current technology to maintain their competitive edge and improve their service offering.

The same respondents who thought transition plans were important tended to be concerned about the vendor's project management skills and usually indicated that they were most concerned about project management during the crucial transition process. Project management did not receive as high a ranking as transition plans, however. This is probably because it is very difficult to judge a vendor's project management skills (except by reputation), but is much easier to review and make a judgment on specified transition plans.

D

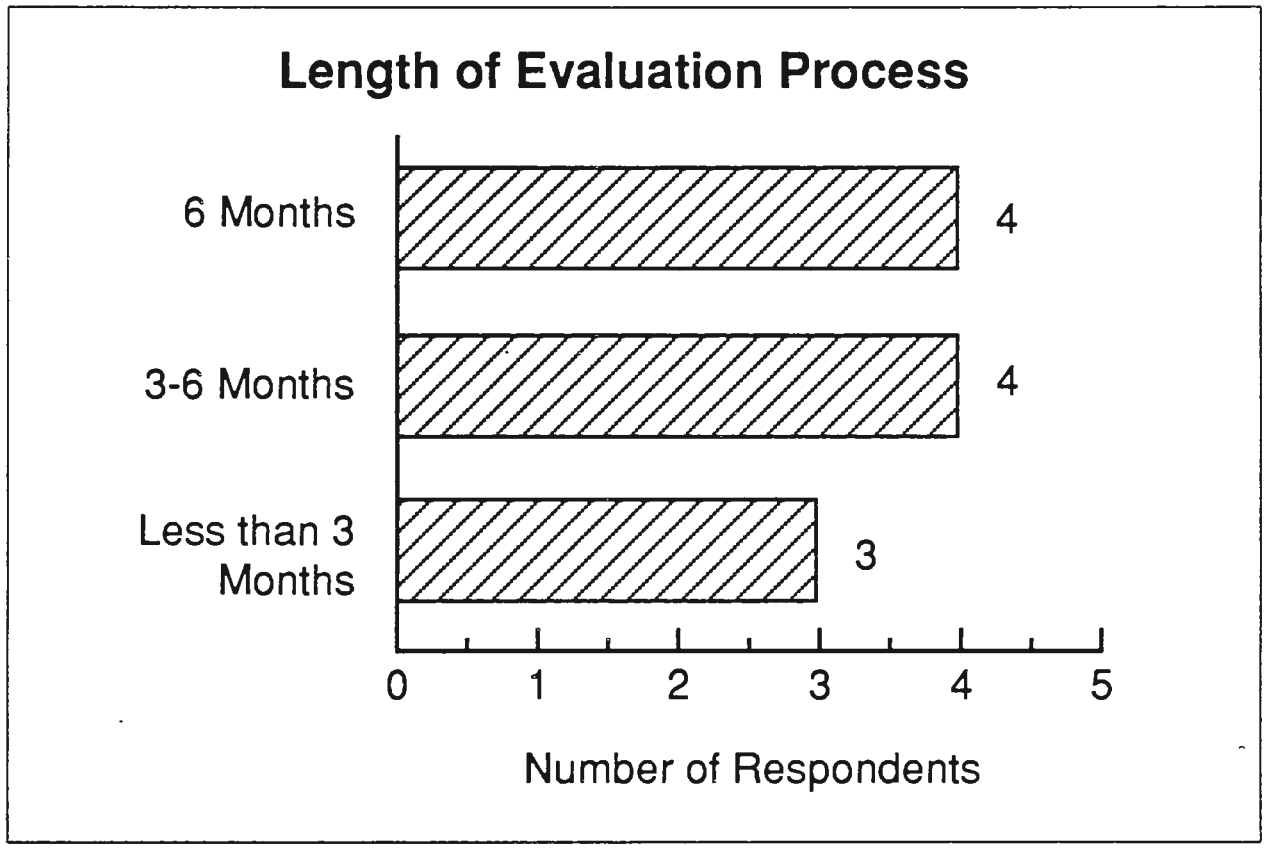
Selection of a Vendor

The selection process begins as a screening process. The first set of responding vendors is narrowed down to a smaller, more viable short list through a preliminary evaluation. This usually involves a comparison of some common set of criteria. The short list of vendors is then reviewed more thoroughly and discussions are typically begun with several vendors. At this point, more data is generally exchanged between the buyer and the vendors; further refinements of the requirements are made, and visits to client sites are scheduled. As mentioned earlier, every respondent indicated that visits to vendor client sites were a very important part of the evaluation.

Unlike the process of "sealed bids" so common in the public sector, respondents indicated that there is much discussion at this stage between the buyers and the vendors with regard to services provided and the price for these services. The systems operations vendor trying to move from the federal marketplace into the commercial market should be aware of this and be prepared to interact with the prospect during the selection phase.

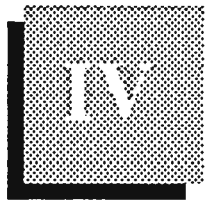
The evaluation and selection process generally took from 3 weeks to 6 months, with the majority taking at least three months, as illustrated in Exhibit III-7. The evaluation team, usually made up of the same people who prepared the solicitation document, prepares a recommendation for an executive board. The recommendation of the evaluation team is generally accepted without extensive discussion by the board. This process was more formal in the financial community than in the manufacturing sector.

EXHIBIT III-7



The winning vendor is selected on the basis of much analysis and review, but all aspects of how the relationship between the two parties will work are not clearly defined, even at this stage. The details of day-to-day interaction are really determined during the negotiation stage. The real health of the relationship depends even more on the day-to-day interaction that evolves after the contract is signed and the systems have been turned over to the vendor. These issues will be explored further in Chapters IV and V.

Contract Negotiations



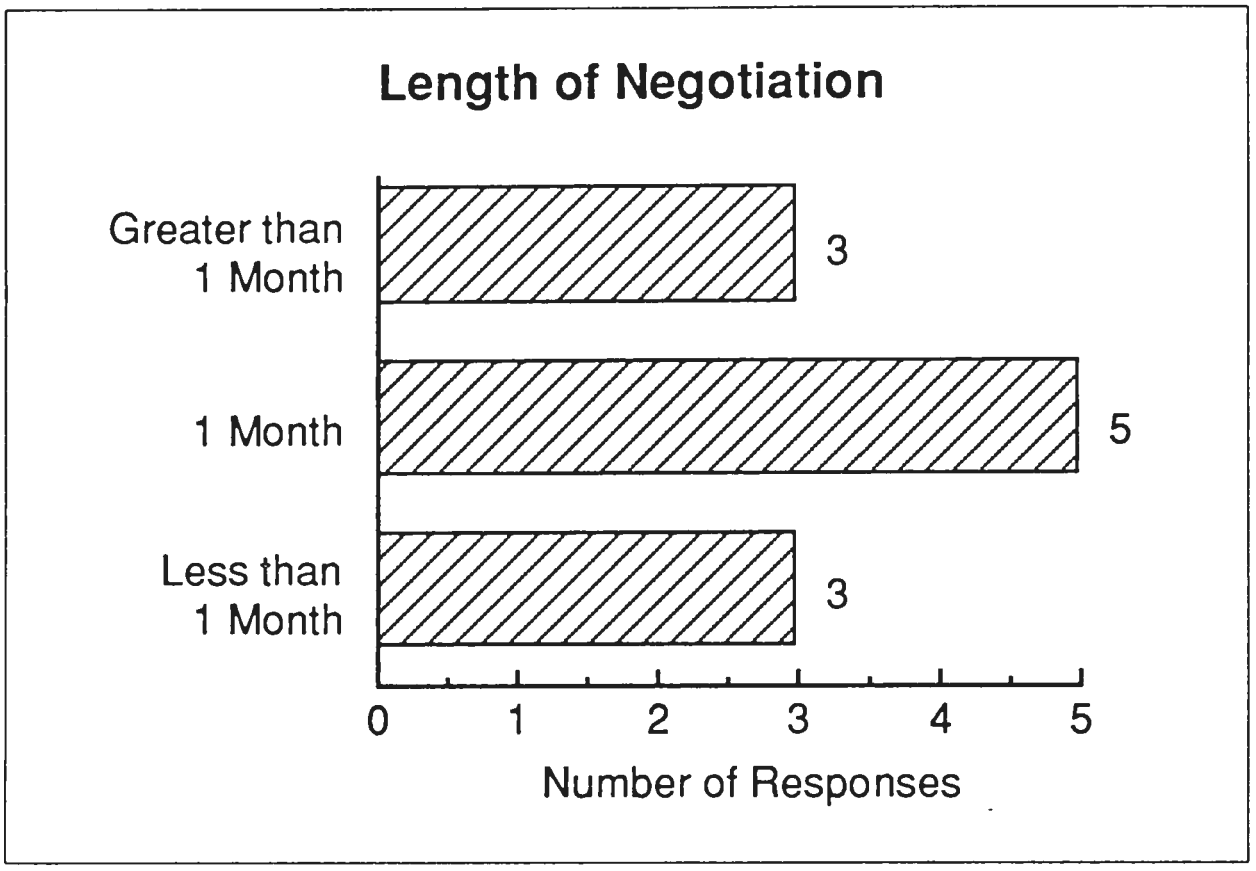
Contract Negotiations

One of the key management tools available to CIOs, to assure an effective working relationship between systems operations vendors and buyers, is the contract negotiated between the parties. This chapter reviews the negotiating process, describes the issues generally addressed, and how the process usually proceeds. This chapter also describes the contents of a typical contract.

The respondents to the INPUT survey indicated that the negotiation time varied from as little as two weeks (for 14 hours a day) to as much as three and one-half months. Exhibit IV-1 presents the range of the responses. Several of those responding also indicated that they were surprised at how smoothly the negotiations went. Those respondents were impressed by the professionalism the vendors demonstrated during this phase. One comment was typical: "They obviously were very experienced at negotiating contracts" was how one CIO felt about the process. The favorable comments were not for a single vendor, but shared by all of the vendors represented in the survey. Only one respondent described it as a "tough process."

The process itself was described by most respondents as a series of face-to-face discussions between both parties in which the differences between the two parties were resolved. Only two of the respondents started with a formal document as a "strawman" to be modified and used as a negotiating tool. The real negotiations were conducted by teams established by each of the buying organizations.

EXHIBIT IV-1



A

Negotiating Team

Each of the respondents was asked about the participants on his/her negotiation teams. The almost universal constant in the responses, as might be expected, was that the Chief Information Officer (CIO) was always on the negotiation team, just as he had been on the procurement team. He also was always assisted by legal counsel, who was usually a company employee. In only one case was the legal counsel from outside the company.

INPUT also compared the composition of the evaluation team to that of the negotiation team. Exhibit IV-2 demonstrates how the two teams compared in each of the nine cases studied. There is some variety in the composition of the evaluation teams. There is much more consistency in the makeup of the negotiation teams. They are also often smaller than the evaluation team.

There was some consistency within vertical industries. Banks tended to have more members on the negotiation team. Companies that had only a lawyer and the CIO on the team were in the manufacturing or retail distribution vertical industry markets.

The vendor's negotiating team generally consisted of a senior sales or marketing executive and a lawyer. In about half of the cases, the vendor included an operations executive on the negotiating team, probably because there was a need to make commitments at that stage on the level and type of service to be ultimately provided.

EXHIBIT IV-2

Comparison of Buyer Team Compositions

	Evaluation Team	Negotiation Team
1	CIO 2 management consultants	CIO Executive VP Lawyer
2	CIO CEO Chairman of Board 2 user VPs	CEO VP Finance Lawyer
3	CIO	CIO VP Finance Lawyer
4	CIO Data Center Manager	CIO Data Center Manager 2 external lawyers
5	CIO Analyst	CIO Lawyer
6	CIO 2 analysts	CIO Lawyer
7	CIO Data Center Manager	CIO Data Center Manager VP Quality Assurance Lawyer
8	CIO 1 consultant	Executive Board Lawyer
9	CIO Data Center Manager Communications Manager 2 user executives 1 consultant	CIO Lawyer

In two cases it was reported by the respondent that the chief operating officer of the vendor participated in the negotiations. Both of those cases were negotiations that had occurred at least three years ago. None of the more recent contracts involved vendor COOs. Apparently the industry has matured to the point where the vendor COOs are no longer directly involved in negotiating individual contracts.

B

Contract Content

The contract is considered the document that defines the relationship between the vendor and the client. Its content varies markedly from case to case. Some buyers prefer to make sure every aspect of the relationship is clearly stated on paper, while others depend more on day-to-day, give-and-take development to establish the working relationship. Exhibits IV-3 through IV-7 tabulate, for twelve respondents, the items generally included in the contract.

For the sake of clarity, these are divided into four sections:

- Financial/legal issues
- Technology-related issues
- Capital investment and equipment transfer issues
- Personnel issues

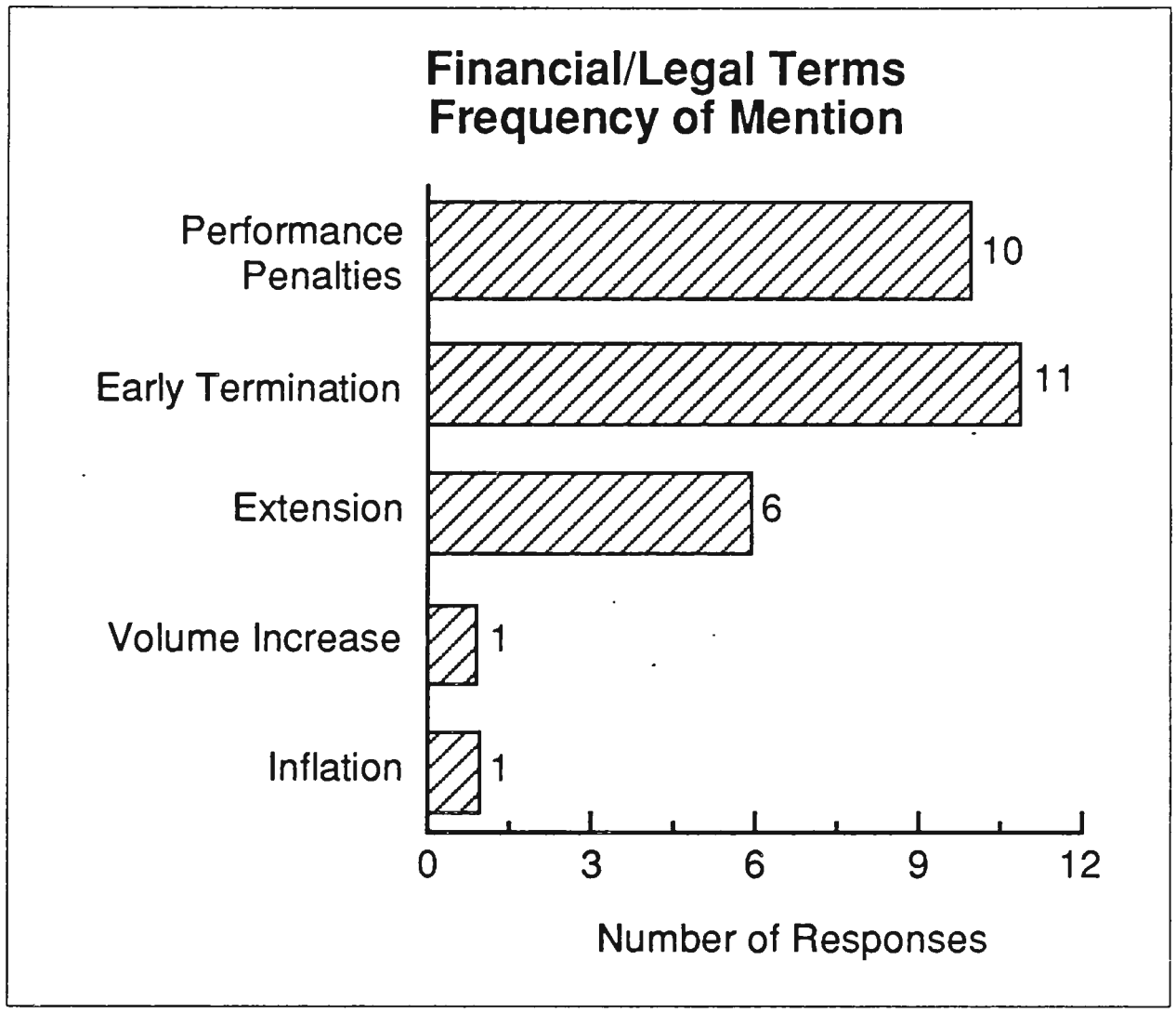
1. Financial/Legal Issues

Though the most important financial issue is the cost of service, the respondents did not consider this part of their contract. Rather, it was usually a separate document referred to in the contract but contained in an addendum or an appendix. The cost document could be as elaborate as a price list for each user group, defining costs per transaction type, or a much simpler cost schedule listing standard resource consumption costs for such elements as processing units, storage capacity and personnel services.

Prominent on the list of financial issues identified in Exhibit IV-3 is the issue of the vendor's performance against specified service criteria. There are clauses in the contract that address the performance levels the vendor is expected to attain, and the penalties that occur if the vendor does not maintain these levels. Examples of the service level measurements are the following:

- System availability percentage
- 98% on-time delivery or reports
- Response time maintained at 2 seconds or less
- 90% of batch jobs returned in 1 minute or less
- Limit on response time for problem resolution

EXHIBIT IV-3



When these levels are not maintained for a given service period, the penalty is usually a financial one, which increases as the performance degrades. The monthly service fee may be reduced by a prespecified percentage, or a fixed dollar amount may be deducted from the monthly amount. In two cases, the contract specified that if the vendor did not meet the service level specified for three consecutive months, the buyer had cause for termination of the arrangement.

Most contracts also have specific language that addresses early termination provisions. As mentioned above, two of the contracts discussed early termination as a consequence of poor vendor performance.

Most of the contracts allowed the buyer to terminate the contract and either provide the service internally or buy it externally from another vendor. In those cases, a specified buyout schedule was included in the contract. In cases that included applications development and maintenance in the agreement, namely applications systems operations environments, a software licensing agreement was also included in the contract. That agreement would give the client use of the software after the systems operations contract was terminated.

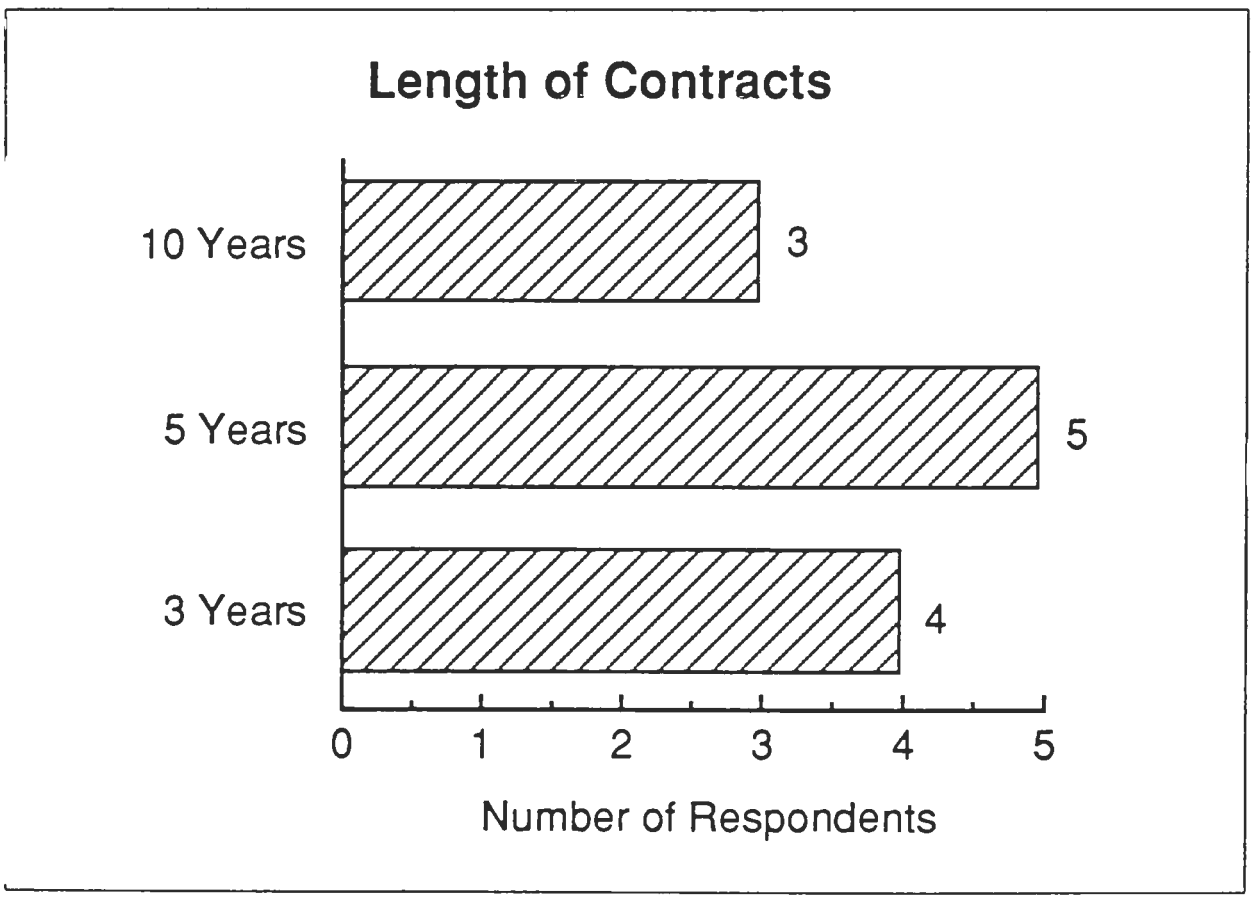
Most contracts also contained extension clauses that specified what would happen at the end of the contract. The options varied and are summarized as follows:

- One to five years extension at specified price increase
- Renegotiation under specified conditions
- Two automatic extensions of one year each
- A discount granted to buyer to extend the contact
- Movement to a platform-type contract, then migration to an in-house option managed internally

Two other items were mentioned by one respondent. The contract specified how inflation would be treated in determining the service price and that as the user's volume of usage increased, new price schedules would go into effect at certain predefined thresholds. These two items were included in a long-term (10 years) contract.

The lengths of the contracts reviewed are illustrated in Exhibit IV-4. The largest grouping is at five years. Two of the three ten-year contracts were held by the same vendor. Other evidence indicates that this vendor tends to sign longer-term contracts than other vendors. No pattern emerged in any particular vertical industry market. The ten-year contracts, for example, were in the banking and the discrete manufacturing industries, while the three-year contracts were in the retail distribution, process manufacturing, and banking industries.

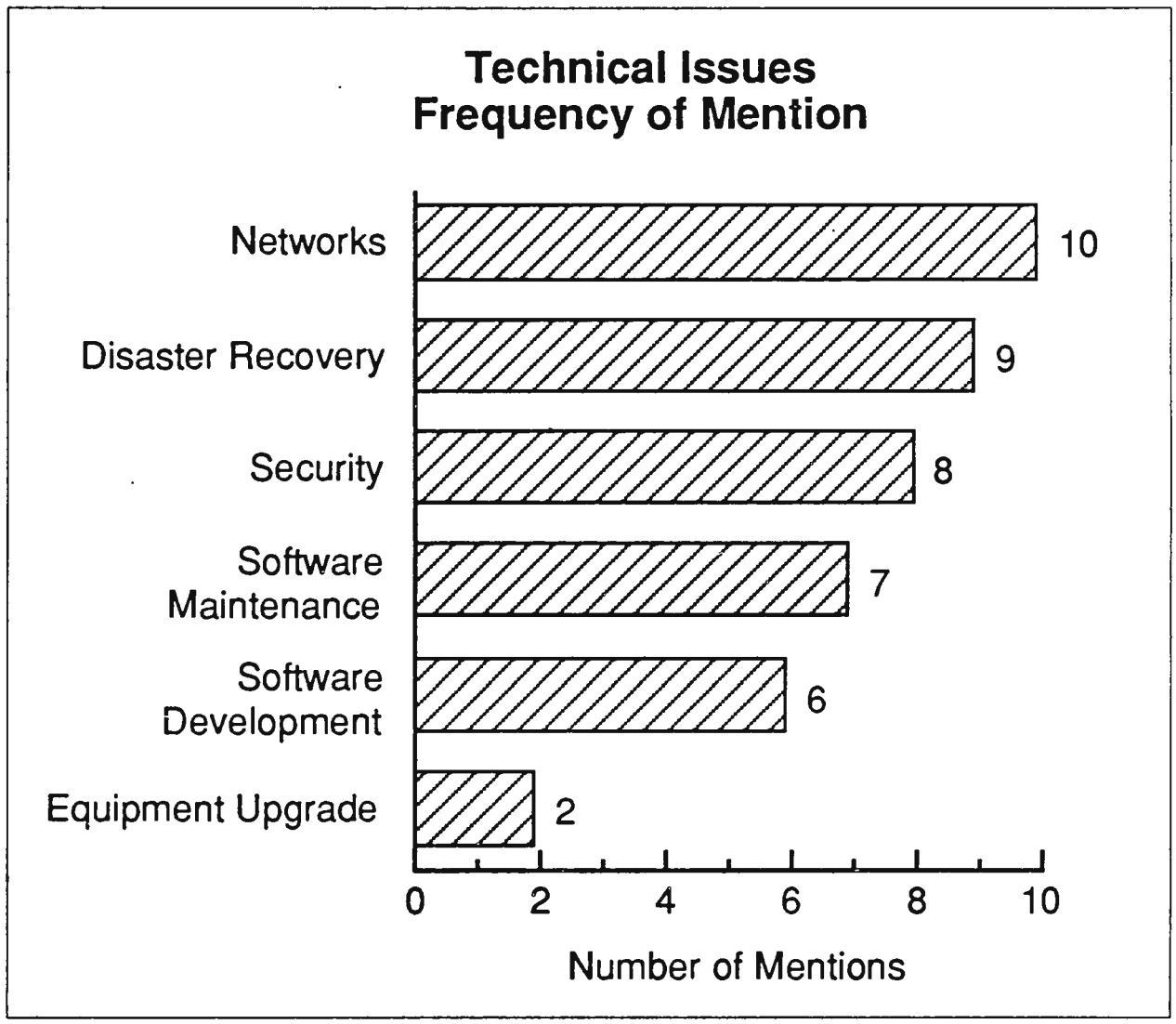
EXHIBIT IV-4



2. Technical Issues

A number of technical issues are considered significant enough to be included in the contract terms. The service level issue was addressed in Section 1 above. In this section, other, non-performance items are discussed. These issues are enumerated in Exhibit IV-5.

EXHIBIT IV-5



Most contracts had clauses identifying the vendor and client responsibilities with regard to the communications network. Either it was specified that the vendor would provide it, or the client specifically excluded it from the agreement and managed it separately. When it was included, performance criteria were included in the contract addressing communications service levels.

Disaster recovery was included often, identifying whether it was to be provided by the vendor or specifically excluded from the contract. Clients who did not include it in the agreement often contracted for it separately, though one respondent provided it from a company-owned facility.

Data security was included in eight of the contracts, according to the respondents, yet they could not remember how it was specified. In most cases, the vendors were providing service to the client in a shared environment. INPUT interprets this phenomenon as an indication that most CIOs feel the security of their data is important, but find it difficult to

describe how that security can be guaranteed in concrete terms. The fact that all vendors had demonstrated that they had well-established site security and data security procedures in place for their own protection usually satisfied the buyers' concerns.

Software maintenance and development were included in all four applications systems operations agreements considered in the study. These were all banks. One of the other respondents who included it in the contract, from a discrete manufacturing company, specified that only the systems software would be maintained by the vendor. Most of the other respondents did not specify systems software maintenance in their contracts, but expected it to be provided as part of the processing environment.

The two respondents who mentioned equipment upgrades were clients of the same vendor. Essentially, they established in their contract a schedule of equipment upgrade that the vendor would honor, assuming the usage volumes projected by the client were met. In both cases the upgrades were viewed as necessary to accommodate increased volumes, rather than any attempt to adopt a new technology.

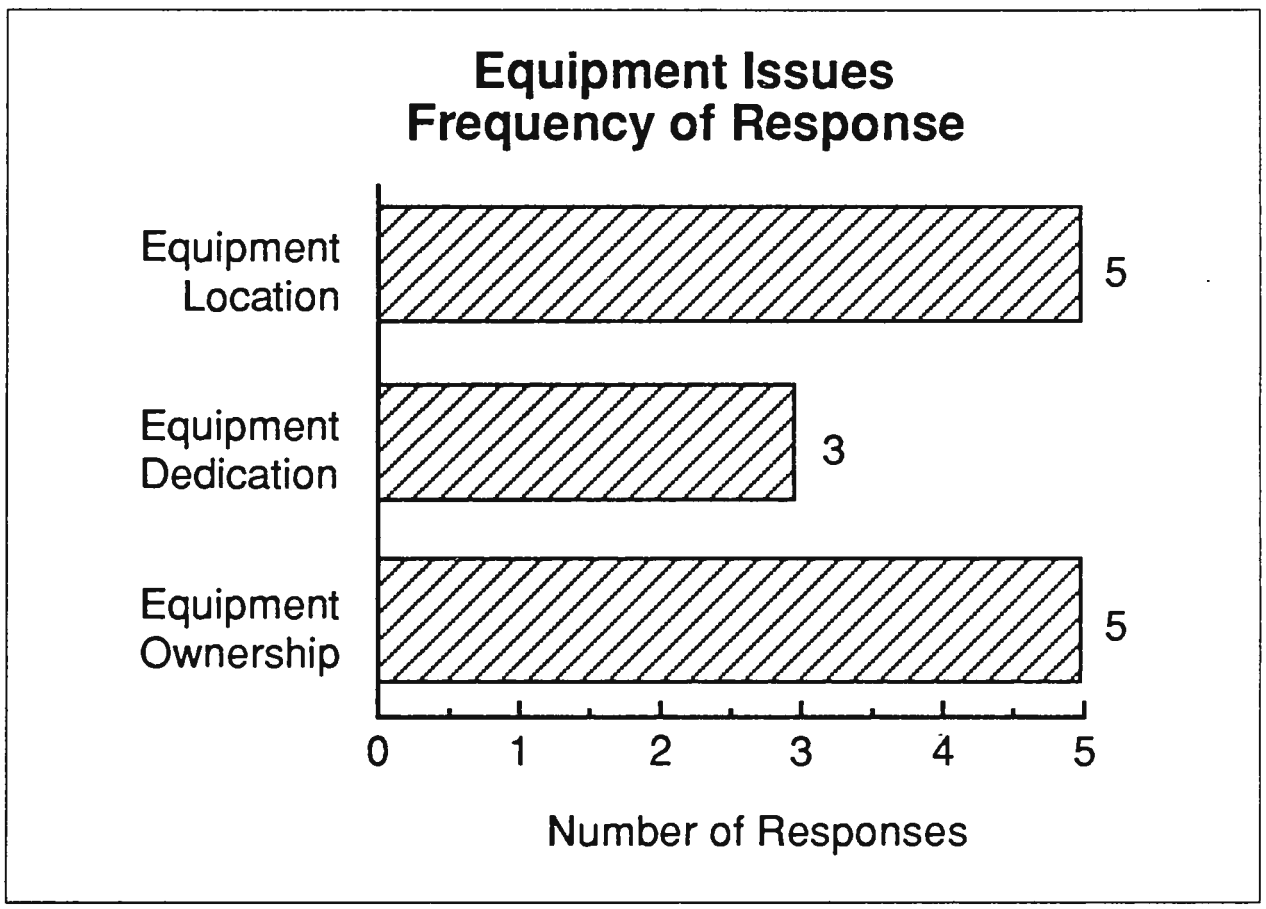
3. Capital Investment/Transfer of Assets

In Chapter III of this report, one of the primary reasons for outsourcing systems operations was identified as the need to minimize capital investment. Another motivator was elimination of excess capacity or of an underutilized facility. INPUT's research indicates that many of the issues relating to capital investment and transfer of assets were resolved in the proposal stage and not included in the contract.

Respondents were asked to identify equipment issues that were included in the contract. As Exhibit IV-6 illustrates, about half the respondents included references to equipment location and dedication, and the same number, though different respondents, addressed the issue of equipment ownership. There was no pattern between these responses and the vendor involved, nor was there a pattern relating to the client's industry.

The capital investment issue was included in the contract, generally, when there was some unique aspect to the operation. For example, one vendor agreed to build a new data center in the community and assume responsibility for the client's processing and staff. This unique commitment was included in the contract. Another vendor agreed to assume responsibility for the client's equipment and software, but would operate them on the client's site, sharing the same facility as the client's own staff. Again, this arrangement was clearly defined in the contract.

EXHIBIT IV-6

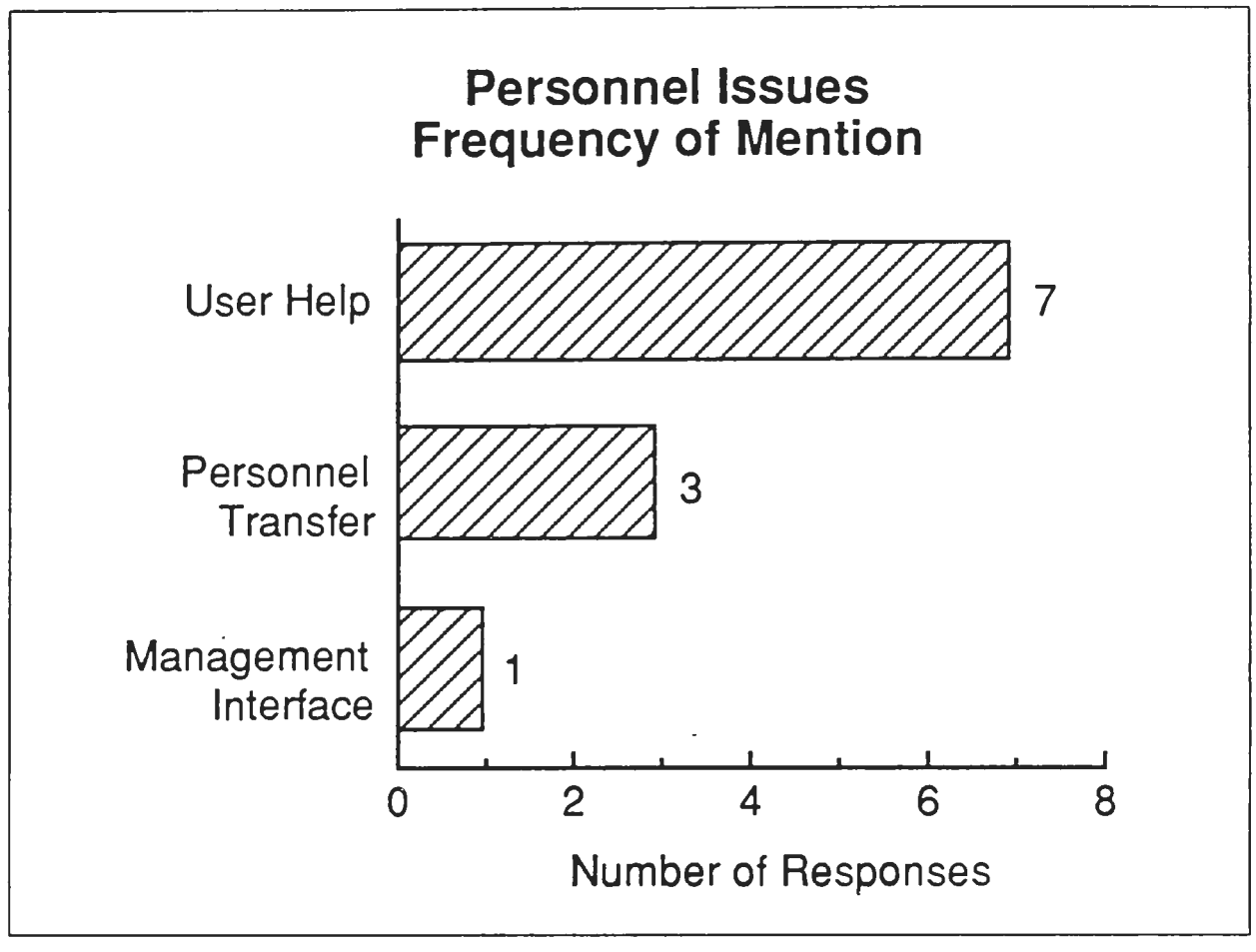


4. Personnel Issues

The question of who would provide interface to the systems' users and how the user interface would be provided was the personnel issue most often included in the contract. Exhibit IV-7 illustrates this. The buyer obviously considers this a vital issue, both for smooth transition and for continued responsiveness to the user community. Again, there was no clear pattern by industry or vendor as to who would provide the user interface. In the case of applications systems operations, the client retained responsibility for the user interface in two cases, and even when the vendor assumed that responsibility, the user help desk was always located at the client site. Software problems were usually referred to the vendor from a common internal point of contact.

INPUT's earlier research into the outsourcing of systems operations indicated that both buyers and vendors were concerned with the personnel issues resulting from the new arrangement. All buyers wanted to be assured that the vendor would either provide outplacement for the staff or assimilate them without adverse impact on their careers. It is surprising, however, that only three of the five buyers whose employees were acquired by the vendor included contract language addressing personnel transfer. INPUT's interpretation, based on discussions with the buyers, is that the contract is considered an operating document which defines the ongoing relationship between the two parties. The personnel transfer issue is resolved prior to the transition period and, therefore, does not become part of the contract. Those respondents who did not include it as a contract item stated that they had a clear verbal understanding between the vendor and the client as to what would happen. Both of those respondents were clients of the same vendor.

EXHIBIT IV-7



C

Negotiation Summary

When asked how the contract protected them from the vendor failing to meet commitments, the CIOs' responses reflected a number of viewpoints. One almost universal theme emerged. It can best be summed up by quoting one of the respondents: "Once the contract is signed, put it away in a drawer and forget it. If you have to use it for day-to-day operations, you're in trouble." How the CIO retained control over the relationship will be discussed further in Chapter V.

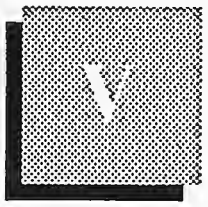
It is useful to review some of the comments that other users made about vendor relationships. Some CIOs admitted that they were somewhat at the mercy of the vendor, but felt the process of defining priorities and specifying development targets gave them the protection they needed. These same respondents generally depended on the size, financial stability, and reputation of the vendor for protection rather than on any legal recourse.

Others cited that there were other vendors they could turn to, should the current vendor not perform as expected. Two had already switched from one vendor to another and felt it was feasible to do so again. In the applications systems operations environments, the CIOs generally had a software licensing option in place that could be exercised. Those that retained the equipment on their own site felt still more secure.

In summary, the contract negotiation process presents an opportunity to define the obligations of the vendor and the client, once the vendor assumes responsibility for the client's systems operations. It is an iterative process that allows both parties to better identify how all the user requirements will be met. Though much detail is often included in the body of the contract, most CIOs feel that the real operational details get ironed out when the vendor starts providing the service. Then the unexpected can be experienced and action taken to address it, generally in a less formal, more cooperative atmosphere.

V

Transition Period



Transition Period

After the discussions and the negotiations are completed, the day arrives when the systems operation vendor takes over data processing operations. Now the vendor must become integrated into the client company's activities. The respondents to INPUT's survey had all gone through this transition smoothly. Their experiences varied, however, primarily because the transitions were of two different types.

The simplest transition is the one which involves the most drastic change for the client organization. When the vendor takes over the existing facility and the staff supporting that facility, the initial transfer happens very rapidly. The functions of the staff do not change initially, the applications being supported don't change, and the user interfaces remain in place. In effect, only the IS staff's paychecks have a new company name on them.

In many cases, however, the client is using the change-over to the systems operations outsourcing vendor as an opportunity to make a more significant change in the data processing environment. The systems operations vendor may be consolidating several data centers. New software may be part of the transition to bring new functions to the users. The processing may be moved from a local site to a remote facility. In all these cases a more elaborate transition plan needs to be executed.

A Transition Duration

Exhibit V-1 illustrates how the transition time varied for some typical situations. The transition took as little as two weeks when the vendor took over an existing operation and staff, and simply continued to run it the way it had been operated. It takes a little more time to do the same thing if a transfer is being made to the vendor's site. In the third and fourth instances, the processing was moved but the staff was not transferred. This activity added considerable time to the transition period. In the final case, the most extreme one, the bank in question not only moved processing to the vendor site, but also gradually changed over to the vendor's applications software for most of its applications. The response

here may be misleading, however, because in fact, the processing load was shifted to the vendor's responsibility within 6 weeks. At that time, the software migration began and required an additional fifteen months to complete.

EXHIBIT V-1

Transition Duration

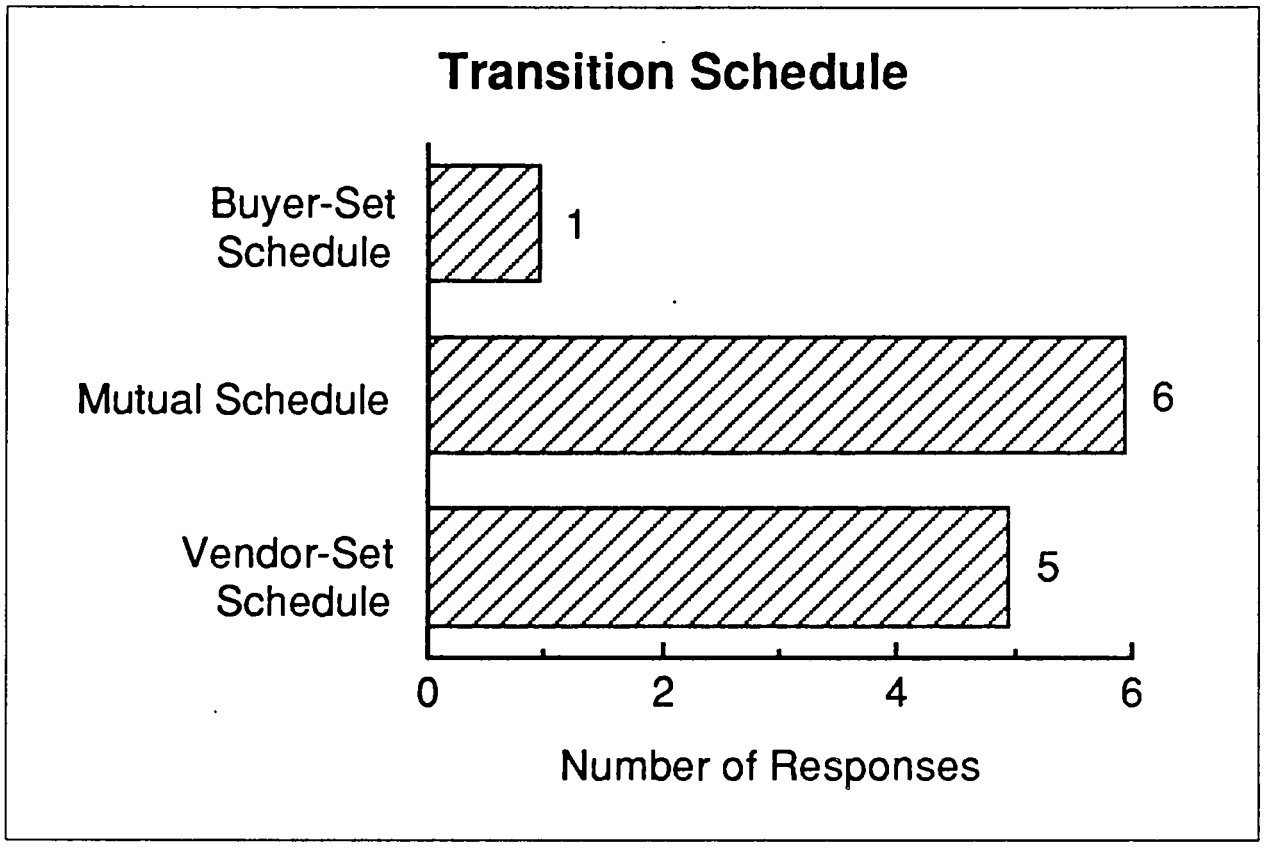
Company Type	Transition Duration	Type of Change
Bank	2 weeks	Take over client site/staff
Discrete Manufacturing	4 weeks	Transfer staff and processing to vendor site
Discrete Manufacturing	12 weeks	Transfer processing to vendor site
Retailer	12 weeks	Transfer processing to vendor site
Bank	18 months	Converted to new software on company site

B

Transition Schedule

It was stated in Chapter III that many buyers relied on the vendor to establish the transition schedule. Almost all the respondents either negotiated a mutually agreeable schedule or left it entirely at the vendor's discretion. Though this was a surprising finding, the rationale used by the respondents was that the vendor had much more experience in transitions than the buyer. Exhibit V-2 shows that only one buyer dictated a schedule to the vendor when there was an overriding reason for a tight schedule.

EXHIBIT V-2



The respondent who dictated a schedule had been notified by its former parent corporation that, as the result of the recently completed LBO, the former parent would only provide data processing services for the next six months. In that case, the urgency applied not only to the transition phase but to the procurement process as a whole. The CIO specified his transition schedule requirements to the vendor from the start.

The converse was the respondent who indicated that he argued with the vendor to take four months for the transition rather than three. The vendor complied, but in retrospect, the client realized it could have been done in three months with fewer morale problems.

C

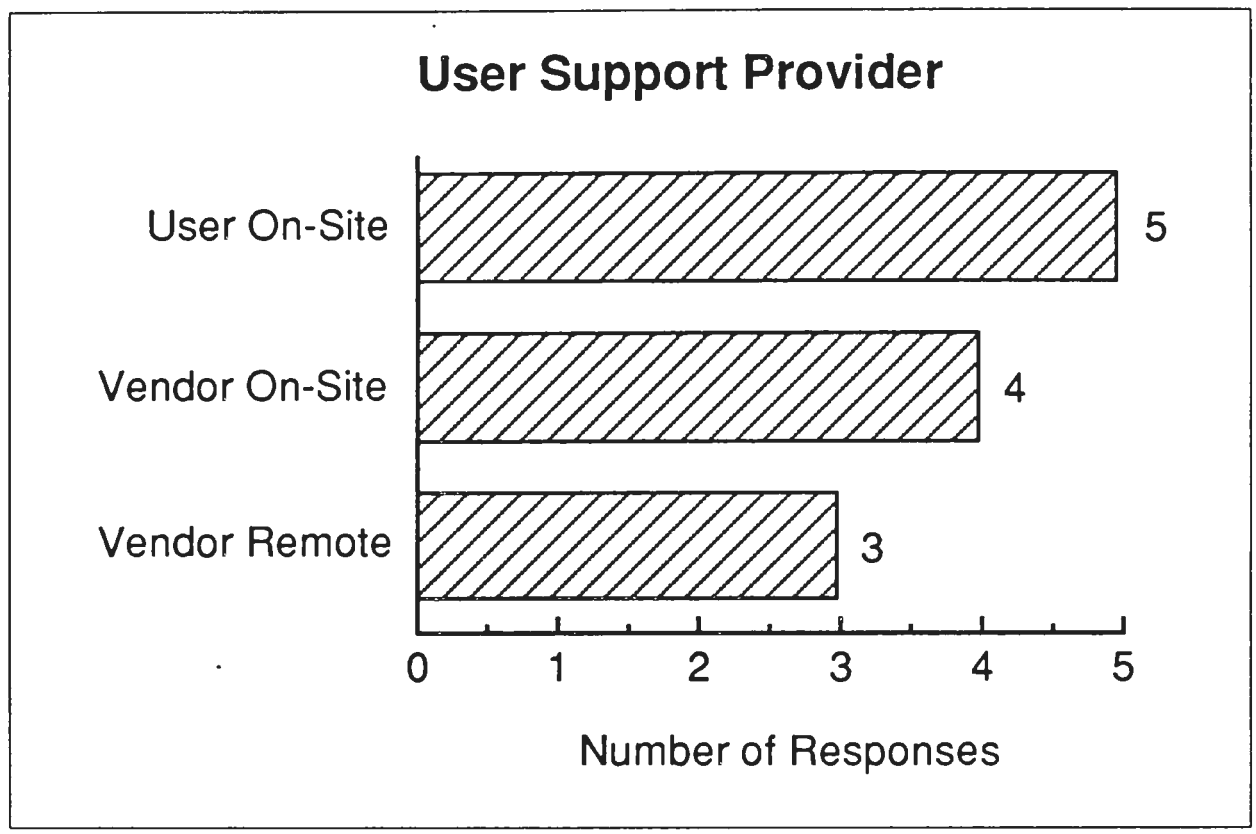
Vendor/User Relations

Exhibit V-3 shows how the interface with the users of the service was handled in the new outsourced environment. All respondents felt this was critical for a smooth transition and successful future operations. The data indicates that less than half the respondents retained responsibility for interface with the users. Many turned it over to the vendor. That did not mean good on-site user support was not provided, however. Note that in the cases here the vendor provides user support, four out of the seven provided local staff for user support, even though, in all cases, the processing was done at the vendor site.

Many of the respondents stated that they were trying to make the transition to the outsourcing vendor as transparent as possible. All of them announced the agreement when it was completed, but they wanted operations to continue just as they had before. This attitude may clarify the

earlier finding reported in Chapter III, that the user groups were rarely included in the evaluation and negotiation phase of the procurement process. The rationale is that the user need not be concerned where the processing capacity is located or who is providing it, as long as the support is available when the user needs it.

EXHIBIT V-3



D

Personnel Incentives

The users may not be aware of or concerned that the processing support is being transferred to a systems operations vendor; however, the in-house information systems staff is concerned and worried about the transfer, from the moment the decision to look at outsourcing is made known to them. The CIO is faced with a major problem. All respondents to an earlier INPUT survey indicated that they considered the personnel transfer issue the most critical one. It was reported in Chapter III that the personnel transfer program proposed by the vendor was the most important evaluation criterion, whenever the issue of transfer was a factor.

The CIO is, indeed, concerned that the employees be treated fairly and their careers not be adversely impacted by the move to an outsourcing vendor. The CIO often has another concern, also—the need to motivate the staff to continue to be productive in the interim period, between the decision to outsource and the actual transfer to the vendor. Two situations require very different personnel strategies.

1. Staff Transfer

First, there is the case when the staff is being transferred to the vendor. In that case the problem is to alleviate any doubts about the new employer that the employees may have. This requires the cooperation of the vendor but is certainly the easier problem to solve, since the threat to the employees is minor.

The transfer strategies varied considerably but had one common element. All employees were transferred at equivalent salaries and benefits. Human relations staffs, from both the vendor and the client, reportedly spent considerable time dealing with each individual's situation to minimize any adverse impact from the move. The amount of advance notice the staff received varied considerably, however. The following scenarios illustrate the range of strategies:

- Employees were notified at the start of the evaluation period, even before the vendor was selected. When the vendor selection process was complete, vendor management was introduced to the IS staff immediately.

- The staff was notified two weeks prior to the start of the transition period and was given the option to transfer to the vendor or stay with the company in a non-IS-related job. Most of them chose the transfer.

- The staff was notified one week prior to transition that they would become employees of the vendor and that their salary and benefits would be transferred. Announcement was made by a joint client/vendor management team.

- The staff was advised of the transfer to the vendor on the day of the transfer. Client management made the announcement, introduced the vendor's management, and left the meeting. The vendor took over the meeting at that point and explained, within the next hour, the process and the impact on the transferred employees.

2. Staff Termination

The second situation, when the vendor is not assimilating the IS staff, is much more challenging. There are two opposing forces at work. On the one hand, the IS staff want to find new jobs or new careers as soon as possible. Furthermore, they may be demoralized by the decision to use a systems operations vendor and not be as effective as prior to the announcement. On the other hand, the current staff represents a valuable source of knowledge about the current operations that the new vendor needs to tap. In the cases studied by INPUT, incentive schemes were devised to hold onto this talent as long as possible, even though the employees knew they would be out of a job within weeks or months.

Three respondents handled this situation as follows:

- All employees were offered other jobs in the client's organization, in either IS-related or non-IS-related jobs. Most employees accepted the offered positions.

- The IS staff was offered a bonus to stay until the transition was made to the vendor site; then the employees were terminated with a generous benefits package. The bonus was larger for those who stayed until the end of the transition.

- All terminated employees were provided with a good severance package and were given outplacement help provided by the vendor, who retained a professional outplacement firm. Certain key employees were retained by the client and there was a retention program for them. The program included discussions of whether the non-retained employees were being fairly treated.

E

Control Strategies

CIOs were asked to respond to the open-ended question, "How do you control the relationship with the vendor?" The answers were varied and revealed a lot about management techniques. To gain the most information from the answers, it is best to review and comment on a sampling of those responses individually.

Response 1:

"The only way is to have regular open discussion with the vendor. Put the contract away in a drawer once it is signed. If you have to refer to it to solve a problem, you're in trouble."

Two other CIOs gave this same answer in different words. All of them were managing platform systems operations contracts, where they retained the systems development responsibility. These executives really believed in the partnership concept and felt the daily give-and-take between the vendor and the client was the only way to make the relationship work. The words on the contract were just words. The real incentives were not the legal conditions set down in the contract, but an understanding that both sides benefit most by cooperating with one another and negotiating solutions to the inevitable problems that arise.

Response 2:

"This is a highly managed environment. There are weekly meetings held in every application area with users and vendor people present. A published list comes from these meetings which directs what needs to be done in detail. A detailed monthly meeting report is presented by the vendor to the firm's management, which includes operating performance statistics for the previous month."

The environment described in this case is an application systems operation, in which the vendor and the client staff are sharing a common facility. It is obvious that both parties are working as if they were one organization, yet management gets a monthly status report on the ongoing performance.

Communications are maintained through the "published list," assuring that all interested parties know the status of each project and what is expected of everyone. In addition, the client's management is advised on a monthly basis of the status of the development projects, as well as the system's performance.

Response 3:

" I consider that the vendor staff reports to me. The management is done executive level-to-executive level. I go to their corporate headquarters if there is a real problem. I actually am more demanding of the vendor's people than I was of my own."

This CIO has established high-level relations with the vendor senior management and uses this relationship to advantage. It is interesting that he feels more comfortable making demands of the vendor staff than he did of his own people. Apparently, he has not really relinquished his management role but simply directs a different cadre of personnel now. In fact, most of the staff are the same, since most of the personnel were transferred to the vendor. The CIO now has vendor management to call to task for any problems.

Response 4:

"We take charge in a lot of situations. We have the responsibility to design the systems and have them implement it. We interface directly with two account executives from the vendor on-site."

This is an applications operations environment in which the client is responsible for systems design, but the vendor does the applications software maintenance and modification. The CIO still feels he retains control, and cites the presence of two account executives as evidence that he is getting the attention he needs. In this instance, the client actually moved from one systems operations vendor to another, and already has long experience in working with an outsourcing vendor.

Response 5:

"I use my administrative group to manage the relationship. I have a finance person, a system development person, a security specialist and a generalist in the group. The biggest issue is the system development priorities. The vendor is not a member of the planning team but we do share our plans with them."

Another case of an applications systems SO environment is where the client retains control of the vendor through a staff that reports to him. The systems development work is done by the vendor but the client sets priorities for the vendor, based on his own internal user organizations' requirements. Apparently the vendor is told of the plans only after the client has formulated them, and does not participate in their development. This is not the classic partnership that other respondents alluded to, yet this contract has been in place for some time and the client/vendor relationship is a very congenial and successful one.

In summary, the transition period represents the start of the partnership between the systems operations vendor and the client. Both parties are entering the relationship with high expectations that it will work, according to the plan the vendor has presented so convincingly to the client. The reality is that neither side knows what problems will develop until the transition is underway. Respondents to the INPUT survey indicated that systems operations is successful for both parties. However, the degree of success and ease of transition are a function of the professionalism of the vendor's staff, and the flexibility and openness of the client's management.

VI

Case Study I: Bank South

VI

Case Study I: Bank South

A Introduction

Bank South is a bank holding company with $5.4 billion in assets serving 50 municipalities in Georgia and Florida. Its headquarters, in Atlanta, Georgia, is the nerve center for a network of 150 local offices.

Bank South, according to *Fortune*'s latest rankings (June 14, 1990), is 10th in the nation in terms of total return to investors for the last 10 years, 33rd in terms of return on equity, 40th in return on assets, and 69th nationwide in terms of profitability. Exhibit VI-1 summarizes some of the bank's statistics.

EXHIBIT VI-1

Bank South Corporation

- 140 offices in 50 municipalities
- Operations in Georgia and Florida
- $5.4 billion in assets (1990)
- National ranking by Fortune:
  - 10th in return to investors over 10 years
  - 11th in annual EPS growth over last 10 years
  - 33rd in return on equity
  - 40th in return on assets
  - 69th in profitability

The bank has been growing at between 10% and 20% each year for the past 10 years. In 1989, there were over 3,000 on-line terminals, including 150 ATMs. These terminals generate 5.5 million on-line transactions each month to be processed by the data center in Atlanta. In 1989, the bank had 100 gigabytes of storage available to support this environment.

Fred Cisewski, Senior Vice President and Director of Management Information Systems at Bank South, described the current systems operations outsourcing arrangement the bank has with IBM. He also outlined the background leading to the decision that made Bank South an early participant in this expanding market segment.

B

Brief History

To put the outsourcing decision in perspective, it is necessary to go back to 1979. At that time Bank South was a $1 billion bank with a data center containing both Honeywell and GE computers. At that time, the bank decided to offer NOW accounts (interest-bearing checking accounts) to its customers. After some searching, it became evident that there was no applications software for NOW accounts for Honeywell or GE equipment. The bank decided to switch to IBM equipment at that time to acquire the right software. It has been an IBM customer since then.

In that same time period, in fact through 1981, the bank itself was providing service bureau functions to smaller banks in its geographic area. In 1981, the decision was made to get out of that business. This early exposure to remote processing as a provider of services gave it a healthy perspective on outsourcing.

Mr. Cisewski pointed out that banks have been using outsourcing services for a long time in a variety of business areas. Most regional banks, for example, use New York banks as their agent for security trading, passing the requests on to them to be processed. Cash management services are generally performed by third parties for banks. Even the crucial job of collecting checks from branch locations, a job that greatly affects the amount of cash float in the system, is done by third parties for the bank. Bank South recently outsourced its entire mailroom operation to Pitney Bowes; outsourcing was not a new concept to the bank's senior management.

C

Motivation for Outsourcing

Two major factors converged to bring Bank South to consider outsourcing of systems operations as a viable alternative to its information processing needs.

In 1988, the bank had installed a 3084-QX with 27 MIPs. By late 1989, its requirements called for an upgrade to a 3090-400 with 50 MIPs. In 1989, management projected that the bank would have to double MIPs capacity every two and a half years. Though technology would allow them to attain that level at virtually no increase in hardware cost, other costs, namely for peripherals and labor costs, were expected to keep going up.

Management was concerned that there were cost elements they could not control. They analyzed both costs and revenue elements. They determined that they could increase revenues by increasing transaction volume, both through the acquisition of new clients and by providing new services to existing clients. On the other hand, this same analysis determined that one of their major expenses, the cost of buying money, was not within their direct control since interest rates were set by the marketplace. They decided the solution was to greatly reduce non-interest expense. To do this, costs had to be held to a 2% to 3% annual growth rate.

Another factor also helped draw attention to the information services costs. In the 1985 to 1986 period, the bank had moved all its input/output operations, those more labor-intensive tasks, to a new operations center on the outskirts of Atlanta. The mainframes and the telecommunications equipment had not been moved at that time, however, because the communications lines in the center of Atlanta provided the needed redundancy. In 1989, the bank decided to consolidate everything to the operations center on the outskirts of Atlanta. They needed to spend an additional $1 million to do that. This also had to be factored into the cost analysis.

D

Procurement Strategy

The task of funding a cost-effective alternative to the bank's information services needs was paramount in Fred Cisewski's mind in early 1989. He started by telling his staff to examine the current operations in detail, and develop recommendations as to how they could reduce costs and how much they could save. They were not given a goal, but were simply told to reduce costs as much as possible.

Meanwhile, Mr. Cisewski looked at standard facilities management arrangements. He wasn't comfortable with such an arrangement because the vendors who offered them also wanted Bank South to use their software. In his opinion, the software was what differentiated Bank South from other banks and was too valuable an asset to transfer to a vendor.

The option of hiring consultants to assist in the evaluation was also available to the bank. Many bank executive boards use them, according to Mr. Cisewski, because:

- The management board does not trust its own information technology department to propose the best solution.
- It generally doesn't understand the technology involved and prefers to use specialists for evaluations in the information technology area.
- The managing directors are often concerned about upsetting the information technology executives in the company, and so they bring in consultants to act as a buffer.

This was, therefore, a valid option, but it could cost as much as $3 million; therefore, it was not seriously considered by Mr. Cisewski.

He contacted IBM directly, since IBM was the equipment vendor that knew the most about the bank's needs and had the most to gain from developing a workable solution to controlling its information services costs. What Mr. Cisewski proposed was a new concept to the bank's IBM account executives, but not to IBM's National Services Division, which was in the process of working the Eastman Kodak contract. It was very similar to what Fred had in mind, and they soon became involved.

Meanwhile, Fred Cisewski called other vendors to review the options they could present; he continued talking to these vendors throughout the early stages of the procurement cycle. All this activity went on concurrently with his own staff's internal analysis.

E

Chronology of Events

Before the procurement process is examined in detail, a brief summary of the chronology of events will give a useful perspective for the whole process. Exhibit VI-2 summarizes the schedule.

The most striking feature of the procurement process was that there were three proposals made by IBM to the bank during the evaluation process. The ongoing consultation and negotiations between the vendor and the prospect are typical of many commercial outsourcing procurements. Notice also that management became convinced they would eventually get an acceptable deal prior to the final agreement being reached. They were so convinced that the employees were notified before the contract was signed.

EXHIBIT VI-2

Schedule of Events

April 1, 1989	Requested a proposal from IBM
April-May,1989	Discussed options with other vendors
July 1, 1989	Received first proposal from IBM
July 10, 1989	Rejected IBM proposal
August 1, 1989	Received second proposal from IBM
August 5, 1989	Rejected second IBM proposal
late August,1989	Notified IS staff of eminent outsourcing
Sept. 1, 1989	Received third proposal from IBM
Sept. 8, 1989	Signed letter of intent with IBM
Sept. 20, 1989	Received Board approval for letter of intent
Sept. 20 1989	Staff told transfer would be by year-end
Sept. 30, 1989	Signed contract with IBM
Feb. 1, 1990	Transition to IBM completed

F

Procurement Process

The procurement cycle actually lasted from April 1 to September 20, 1989. As mentioned above, it proceeded along three distinct tracks. While IBM was developing all three of its proposals for Bank South, the internal IS staff was still examining the internal cost structure and proposing cost-cutting measures. At the same time, Fred Cisewski was in discussions with other vendors to consider the options they might offer.

Most of his energies were, nevertheless, directed at fully exploring the IBM outsourcing option. In fact, he worked on it for two months before he advised the bank's CEO that he was considering an outsourcing arrangement. Mr. Cisewski started by defining to IBM what the bank would do, what IBM would do, and what would be joint functions in the new arrangement. In effect, he kept the control and the audit functions exclusively for the bank and made all other functions joint or provided by the vendor.

It was important for IBM to have as much information as possible about the bank's operations to prepare a realistic proposal for the bank. This required a significant amount of data, more than Mr. Cisewski wanted to compile, particularly since his own staff was busy developing internal cost-reduction strategies. He allowed IBM to send in an "application transfer team," which examined the operations on-site and gathered any data it needed for the proposal. Mr. Cisewski commented that other vendors were not given that option and actually never submitted proposals to the bank.

Mr. Cisewski also indicated he gave IBM whatever cost data it requested. This was particularly important when IBM proposed a local data processing operation alternative, because the labor structure was more comparable to the bank's own.

The definitions of functions and the gathering of data were just the start, however. It was obvious that there were a number of arrangements that could be made to provide the service. The first proposal from IBM called for processing to be done at a remote IBM site in Colorado, with the bank staff continuing in many of their current operational roles. This was unacceptable to the bank.

The second proposal called for the processing to be done at the same remote site, but the staff would be transferred to IBM. This, also, was unacceptable to the bank.

The final proposal presented a totally different approach. It called for IBM to invest in a data center at Bank South's current operations center outside of Atlanta. It would be owned by IBM and staffed by current bank employees. Those employees would, in turn, become employees of Computer Task Group (CTG), an IBM partner in several outsourcing arrangements. Eighty of the 84 current operations staff would be transferred to CTG. After some adjustments, this proposal was accepted by the bank.

The process of reiteration and reproposing alternatives was particularly valuable to both parties. Fred Cisewski stated that he was told 33 people from IBM had been involved in preparing the proposals. Pricing was an especially difficult task for the vendor. The bank's management insisted from the start that the pricing be done in business terms, which meant that it had to be tied to items such as the number of transactions for a given period and the number of accounts in the bank, not the amount of processing resources consumed.

The bank, on the other hand, did not assign a lot of resources to the evaluation and negotiation task. Mr. Cisewski was the entire evaluation team and was assisted by an attorney in the negotiation phases. He described his evaluation system as being based on "a gut feeling for the vendor's abilities and a close look at price." When asked to rank the most important evaluation factors, qualitative factors were as important as price, as is evident in Exhibit VI-3.

EXHIBIT VI-3

Bank South Evaluation Criteria Ranking

Factor	Rank
Price for service	1
Reputation of vendor	1
Technical ability	2
Business stability	3

Though it was easy to assess the business stability of IBM and judge its technical ability (since IBM had been the bank's primary equipment vendor for the last 10 years), it was more difficult to evaluate IBM's reputation as a provider of systems operations services. Only one bank, Hibernia Bank, had outsourced its systems operations to IBM before this time. Mr. Cisewski contacted Hibernia and reviewed its experience with IBM. What he heard was positive, so his decision ultimately hinged on what it would cost to outsource the systems operations function.

The cost issue was also addressed in another way. The bank's IS staff had been conducting their own internal analysis of the operations during this period. Mr. Cisewski, reviewing their recommendations for a bare-bones budget, told them to go back to the analysis and eliminate $2 million more from the budget. They only were able to come up with $1 million in additional savings.

G

Contract Characteristics

The contract that was finally negotiated between Bank South and IBM was a 10-year, fixed-price agreement. There was a specified amount of growth defined in the terms. Anything above that was paid for according to a schedule of service-level increases built into the agreement from the start. It gave the bank predictable costs over that time period, and assured it would have the capacity to grow to meet the bank's operational needs.

The contract document itself was described by Mr. Cisewski as "short but with long appendices." It is, in fact, less than eight pages long. Its contents are outlined in Exhibit VI-4.

EXHIBIT VI-4

Outline of Bank South/IBM Contract

- Preamble
- Definitions
- IBM responsibilities
- Bank South responsibilities
- Payment terms
- Additional charges
- Termination charges
- Confidentiality clauses
- Security provisions

The *Preamble* simply states how the systems operations outsourcing is to be done, according to Mr. Cisewski, and the *Definitions* are simply to establish common terminology and legal terms. The next two sections clarify who is responsible for each part of the operation. For example, Bank South kept responsibility for the following functions:

- Data Security
- Auditing
- Change Control
- Application Programming
- End-User Devices

The *Payment Terms* essentially fit on one sheet, which refers to an Appendix where much more detail on the pricing terms is provided. The *Additional Charges* are the schedule of increases mentioned above that allow the bank to increase its requirements beyond the base levels stipulated in the Appendix.

The *Termination Charges* include a buyout schedule, which is based on what IBM has invested at any time and what it would cost to close down the data center if the bank were acquired by another bank. This was a sensitive issue for the Board. The *Confidentiality Clauses* and the *Security Provisions* are expressed in general terms according to Mr. Cisewski.

Besides the details on the prices, the appendixes also contain a Disaster Recovery agreement and Service Level Agreements with each user department. These Service Level Agreements are mini-contracts in which the IS provider agrees to meet certain standards requested by the user in delivering services to each department. This somewhat vague definition of service level reflects Mr. Cisewski's feeling that the level of service is a moving target that must be renegotiated frequently between the users and the service provider. It also reflects Mr. Cisewski's strong conviction that the relationship between the vendor and the client cannot be an adversarial one, but must be based on a strong working relationship.

Mr. Cisewski was particularly eloquent on what the relationship between the vendor and the client should be. It has to be a true partnership, one in which the contract is not referred to at all, but rather the needs of both parties are considered. For example, he stated that there are no financial penalties for non-performance stipulated in the contract, for two reasons:

- It is very difficult to determine what an equitable penalty is, particularly before the fact.

- There is no need for financial penalties. A professionally motivated vendor wants to do well and knows its reputation is at risk if it doesn't meet or exceed expectations.

Mr. Cisewski went on to predict that he fully expected the following scenario to develop in the course of the 10-year life of the agreement:

Some new federal banking regulation will be adopted, which radically changes the bank's processing requirements. IBM will assess the impact on the processing volumes, and meet with bank IS management to explain why they cannot do all the additional work for the fixed price specified in the contract. If the request is legitimate, the bank will readily agree to a negotiated change in the contract. After all, it is not to Bank South's advantage to have IBM losing money on the arrangement, since it expects high-quality service to be maintained.

H

Transition and Interface Issues

How was the transition schedule arrived at for such a major change-over? Fred Cisewski said it was proposed by IBM and that he "reluctantly" agreed to it. He would have preferred a shorter schedule (he accepted four months), but reasoned that the IBM account executive was being named as program manager and that he ultimately would have to live with the results of the transition, so it was accepted for that reason.

How was this major change in processing services accepted by the bank management? Did the users notice any change? How did the IS staff fare in the transfer? To each of these questions, Fred Cisewski had ready answers. Remember that in the early stages of the outsourcing evaluation, his CEO was not even advised of the activity. By the time the final proposal was ready for presentation to the Board of Directors, however, all issues had been sufficiently addressed and the Board concurred in one short session.

In fact, the CEO saw the change to systems operations outsourcing as an opportunity for the bank to restructure. As soon as the contract was signed, Bank South published an internal letter from the President, explaining why and how it was part of the restructuring and how it would affect operations. Now the CEO receives a quarterly report from Mr. Cisewski advising him on status and performance levels.

The user departments had to continue their operations. They had to serve their client base in the same way before and after the change. To them, they still looked to the IS department for services, not to IBM or CTG. The change was essentially invisible to them. In many cases, the same people were interfacing with the users, though they were now CTG employees. In fact, Mr. Cisewski stated that the user interface, through the help desk, became more efficient because IBM, during its data gathering phase, had discovered that several help desks were actually functioning in the bank prior to outsourcing. They have since been consolidated.

As mentioned above, 80 of the IS staff (out of 84) simply transferred to a new corporate entity at the end of 1989, becoming employees of CTG. Human resources staff from IBM, CTG, and the bank had worked long and hard to guarantee a smooth transition which did not adversely impact the staff. There is no assurance that CTG will not move them eventually, but most have been kept in place or offered promotions in the first year.

I Reflections

The outsourcing agreement has been in place for one year now. Fred Cisewski, sitting in his office at the operations center on the outskirts of Atlanta, has had time to reflect on what it means to the bank. Here are some of his recent thoughts:

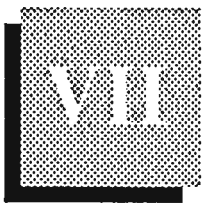
Five banks have now signed with IBM for outsourcing of systems operations since the Bank South agreement was signed. He has responded to a lot of calls from bankers (a close knit community), so there is a lot of activity in the marketplace now.

In its own situation, IBM is about to start servicing another major bank's requirements from the Atlanta data center, so the facility will be shared. That doesn't bother Mr. Cisewski at all. The new bank will help pay the rent on the facility and, in fact, they are ahead of Bank South in at least one critical area of technology—image processing—so he expects some synergy to result from the new arrangement.

Looking back at the negotiation phase, he has this advice for those starting out: "Get together with the vendor of choice, agree to the operating conditions early, then let the lawyers write it up."

VII

Case Study II: BICC Cables



Case Study II: BICC Cables

A

Introduction

Systems operations outsourcing is provided in a variety of forms. INPUT currently differentiates between applications systems operations, where the vendor provides both the processing platform and the applications software support, and platform systems operations, where the vendor is only responsible for providing the processing environment.

The service described in this case study is an example of an applications systems operations arrangement from the end user's viewpoint, but there are actually two vendors involved. One provides the processing platform and the other provides the applications software and applications management services in a unique value-added arrangement. Though the buyer, BICC Cables, negotiated its systems operations agreement with Information Systems Incorporated (ISI), the service is being provided by both ISI and Litton Computer Services. Though the arrangement itself is interesting in its own right, the purpose for studying this particular case is to learn more about the procurement process.

B

Background

To better understand the reasons why BICC Cables chose systems operations to satisfy its information systems needs, some background on the origins of the company itself is helpful. BICC Cables Corp. is the North American arm of BICC PLC, the world's second-largest wire and cable manufacturer. It is the result of the consolidation of a number of U.S. wire and cable companies assembled under the name Cablec Corporation between 1984 and 1989. It started with a leveraged employee buyout in 1984 of Phelps Dodge Cable, then additional acquisitions and mergers with other wire and cable manufacturers between 1984 and 1989. By 1990, U.S. sales had risen to $370 million, from the original company's base of $55 million in 1984. With the consolidation of the Canadian operations in late 1990, North American sales for the BICC Group reached $750 million.

BICC Cables Corporation became the new name of the company in January 1990 after BICC PLC completed its purchase of the outstanding shares of Cablec, which it had acquired in three separate transactions between 1987 and 1990. Throughout this time period, Sal Tramaglini was MIS Director at the company and saw the MIS needs evolve as the corporation changed. His viewpoint on the company's motivations for change, and his discussion of how the changes were effected, describe the reasons why an MIS department in an organization in transition is an excellent candidate for systems operations outsourcing.

C

Motivation for Change

As the corporation evolved from a single manufacturer to a conglomerate of many manufacturing operations, the MIS operation went from an MIS department servicing the original company, to one with processing components inherited from other acquisitions running on different operating systems on a variety of platforms. "At one point," Sal remembers, "five general ledger systems were operated by the company on three different platforms." Most of the inherited software served the same purpose in each component but was all home grown and unique to that operating environment.

Besides being a nightmare to manage, the operating costs were unusually high for several reasons:

- License fees had to be paid for several software systems, even when they were performing the same functions. There were different application packages or operating systems at different sites.

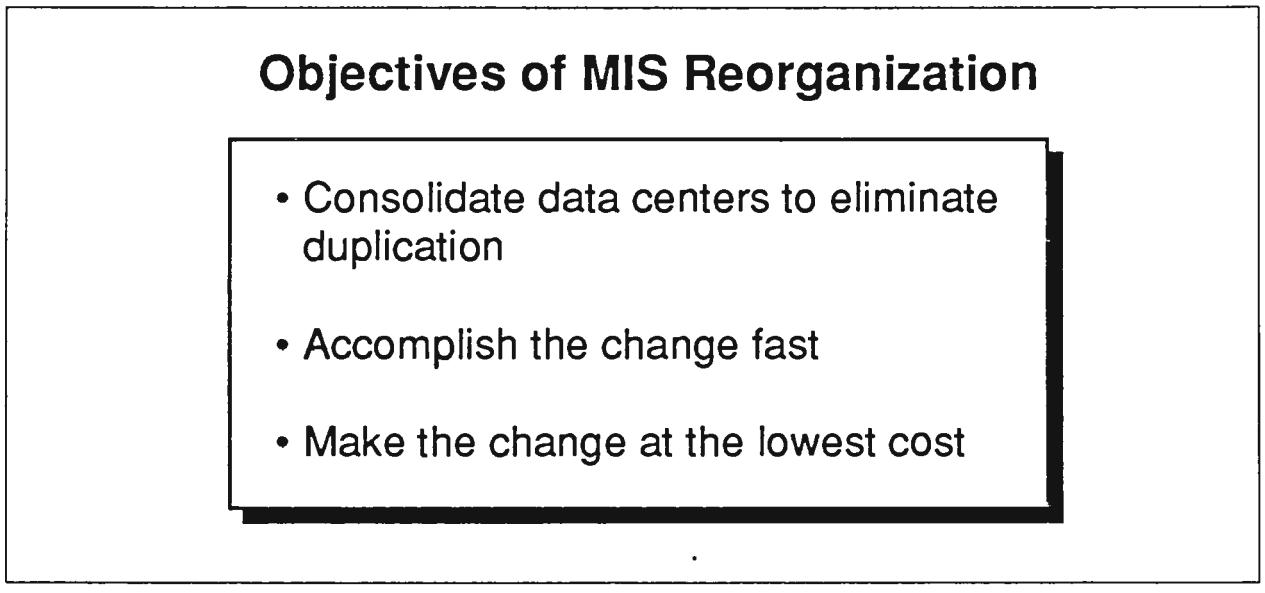
- There was a duplication of IS personnel in several locations, and labor costs were high when compared to industry standards.

- There was a high turnover in the staff because most of the systems were old and the personnel saw no real growth opportunities.

In 1988, BICC IS management decided to reorganize to address the problems that had evolved as a result of the acquisition process. It assessed its problems and drew up three general objectives that had to be met in the reorganization of MIS functions. These are illustrated in Exhibit VII-1.

It was obvious that the duplication of functions and software was extremely inefficient. The multiplicity of systems had been the result of assimilating existing operations and not trying to merge them at the start. The time had come to remedy this situation.

EXHIBIT VII-1



Since this duplication had been tolerated for a long time, it was imperative that this unsatisfactory condition not continue any longer than necessary, so speed was essential. Finally, since the motivation for the consolidation was to reduce operating costs, it was important to minimize the costs of the change process itself.

A consulting firm with extensive manufacturing industry experience was retained to assess the company's business direction on a global basis. It was also chartered to establish some guidelines for the information systems operations, as well as for other functions in the corporation. The firm's recommendations to Sal Tramaglini were as follows:

- Obtain packaged applications software to replace the home grown systems inherited in the series of consolidations. This would have two immediate advantages for BICC Cables. Firstly, it would provide for a fast upgrade to more current software, and secondly, it would reduce ongoing labor requirements since maintenance of the software would be the responsibility of the vendor.

- Replace the current equipment mix through consolidation into either one mainframe or several minis located on one site. Investigate which of these two alternatives would be most cost-effective for the corporation.

The broad direction was clear, but Sal and his staff conducted extensive evaluation and analysis to select the best alternatives. The equipment strategy that evolved was two-pronged: (1) replace the 4381s at the two existing data centers with linked AS/400s located at one processing site, and (2) acquire packaged software for those minis to replace the existing home-grown software. This strategy would work for BICC because, though they had a large dollar sales volume, their transaction volume was low because each sale represented a large dollar value. In this environment, linked minis would provide adequate capacity as well as room for growth.

This two-pronged strategy was approved by senior management, the equipment was ordered, software evaluation and selection was started, and staff training was initiated. The upgrade and consolidation had begun.

D

Outsourcing Option

At about this time, both Sal Tramaglini and BICC Cables' President, Harry C. Schell, received letters from Information Systems, Inc. (ISI), suggesting that outsourcing of BICC's systems operations would be a good economic choice for the company.

Sal's first reaction was, as expected, skeptical. He was well on his way to the internal upgrade, he didn't want to give up control of his department nor reduce its size significantly. His second reaction was to invite ISI in to present an alternate solution to BICC's information systems problems. It would be good to show the board of directors that an alternative to the strategy the company was about to select had been considered.

Sal expected the meeting with ISI to last at most about two hours. He was pleasantly surprised with what he heard, and the meeting went on much longer. In fact, a second meeting was scheduled, and then a third, this time at the data center that was providing ISI its processing platform.

ISI proposed an innovative alternative to BICC's upgrade strategy. ISI would provide MSA's financial and order-processing software and Comserve's AMAPS manufacturing software from Dun & Bradstreet to replace BICC's aging home-grown suite of software. It would provide ISI staff to convert the systems. It would provide the processing capacity through its own platform systems operations vendor. In effect, ISI was serving as a value-added reseller of both Dun and Bradstreet products and the systems operations vendor's services.

What BICC management heard was that ISI could provide them with the upgrade they wanted at a lower cost and in a shorter timeframe than the internal staff could do it. The three most attractive elements of the ISI plan were:

- Operating costs would be reduced by 20%.
- The conversion would be accomplished in 18 months to two years, not the planned three to four years.
- The systems staff would be reduced by one-third.

Since Sal had already analyzed his costs and resource requirements to develop his own upgrade plan, he was well prepared to assess the merit of ISI's plans.

E

Evaluation Process

The next step was to verify that what sounded good on paper also worked in practice. Not only did Sal visit the systems operations vendor's processing center, he also met with another ISI customer who had gone through a similar conversion to Dun and Bradstreet software with ISI. His most vivid impression of that meeting was not the good report on ISI he got from the client, but the fact that the ISI manager introduced Sal to the client's chief financial officer, then left the room to ensure that the client felt free to talk openly about his experience. This discussion was followed by discussions on the shop floor with current users of the system. Sal came away from the encounter impressed that ISI could deliver.

ISI's proposal made good business sense to Sal, and he was now convinced that it would work, so he presented it to his board of directors. The board members were soon convinced that the cost savings were real, but they had another more serious concern. They questioned whether the company wanted to give up control of the information processing function, in spite of the apparent cost savings. They were concerned about the security of the remote systems and the confidentiality that could be maintained by a vendor. The board had to be convinced. Both Sal and senior executives from ISI accompanied the board on a second trip to the systems operations vendor's data center. After that "kick the tires" session, the board was satisfied and work started on developing a new plan in earnest.

The final hurdle was a review of the plan and the proposed contract by the company's auditors, who, incidentally, happened to be in the systems operations business themselves. The proposed arrangements passed muster and the board approved the move in late December 1989.

F

Negotiation Phase

"The evaluation and negotiation process really went on in parallel and took about six months" said Sal Tramaglini, as he reflected on how the ISI relationship had developed. The discussions with ISI began in July 1989. The three-year contract was signed in December 1989. Actual work began in January 1990. The fact that ISI represented several vendors to BICC Cables may have been a complicating factor, but one additional complication developed in that time period also.

ISI decided to change from its current vendor to Litton Computer Services as the provider of the processing platform it used for its clients. According to John McCormick, president of ISI, it was strictly an economic decision, based on the fact that Litton offered ISI substantial operating cost savings. It is, however, a reflection of how competitive the platform systems operations market has become. The systems operations provider has little to differentiate himself from other vendors, unless he can demonstrate industry expertise or offer additional capabilities such as application software.

As a prospective client of ISI, this should have been somewhat unnerving for Sal Tramaglini. The proposed change was reviewed and fully discussed with BICC before ISI made the move, however, and all participants were convinced it could only provide additional benefits for them.

After extensive discussion, the following arrangements were concluded: BICC would essentially have two contracts with ISI. The first would be for platform systems operations. In this contract ISI acted as a broker for Litton Computer Services, who provided BICC a platform on which to load its existing application software. This contract allowed BICC to close its two existing data centers.

Second, ISI would be under contract to BICC Cables to customize MSA's financial and order-processing software and Comserve's AMAPS software from Dun and Bradstreet to replace BICC's existing applications software and migrate BICC to that software. The first contract would be the largest in value at the start of the transition, but would gradually decrease over time. The migration/conversion contract would increase in value as the conversion progressed, then fall off after 18 months when the conversion was completed.

G

Transition Process

The transition from in-house operations to processing at Litton Computer Services and the conversion to the new software were to follow the schedule outlined in Exhibit VII-2.

EXHIBIT VII-2

Transition Schedule

December 1989	Sign ISI contract
January-March 1990	ISI conducts feature/function study
March 1990	Start migration to Litton
March 1990	Start conversion of BICC software
June 1990	Close first BICC data center
July 1990	Close second BICC data center
September 1991-March 1992	Complete conversion to packages

As soon as the contract with ISI was signed, a Feature/Functions study, which lasted three months, was conducted at four of BICC's nine plants and corporate headquarters. The purpose of the study was to thoroughly analyze BICC's user requirements to determine which D&B software modules should be implemented to meet the company's operating needs. In March the migration to Litton's computer center began. This first phase, managed jointly by Litton and BICC's operations staff, was simply the transfer of the existing BICC software to the new platform. The first data center transfer was completed in three months and the second data center took one additional month. By the end of July, all processing operations had been transferred to the Litton center with no visible impact on the users. The contract specified that the same or better service levels had to be achieved by the vendor and, indeed, that was the case. BICC had established the service levels using three months' worth of SMF data from its own data centers, so it could accurately establish performance standards.

As the migration was going on, another ISI group was already beginning the conversion of the BICC software to packaged software. That activity began on March 1 and is ongoing. Already, two systems have been fully converted and progress is continuing on schedule toward the targeted completion date.

1. Personnel Issues

The transition eliminated the need for the two BICC data centers and one-third of the staff of the Information Services department. Basically, all the operators and the systems programmers were surplused. The systems operators were offered bonuses to stay on until the data center operations were closed, then given generous severance benefits. According to Sal Tramaglini, all found employment soon after their departure. In the case of the systems programmers—a scarce commodity in their respective market areas—most left long before the data centers closed.

The remaining two-thirds of the staff consisted mostly of application programmers, data control, and administrative personnel. They were retained, since those functions were to be kept by BICC under the new arrangement. In fact, each business unit within the company was assigned its own development staff for any custom work that had to be done and also to serve as an interface to user departments.

2. Equipment Disposition

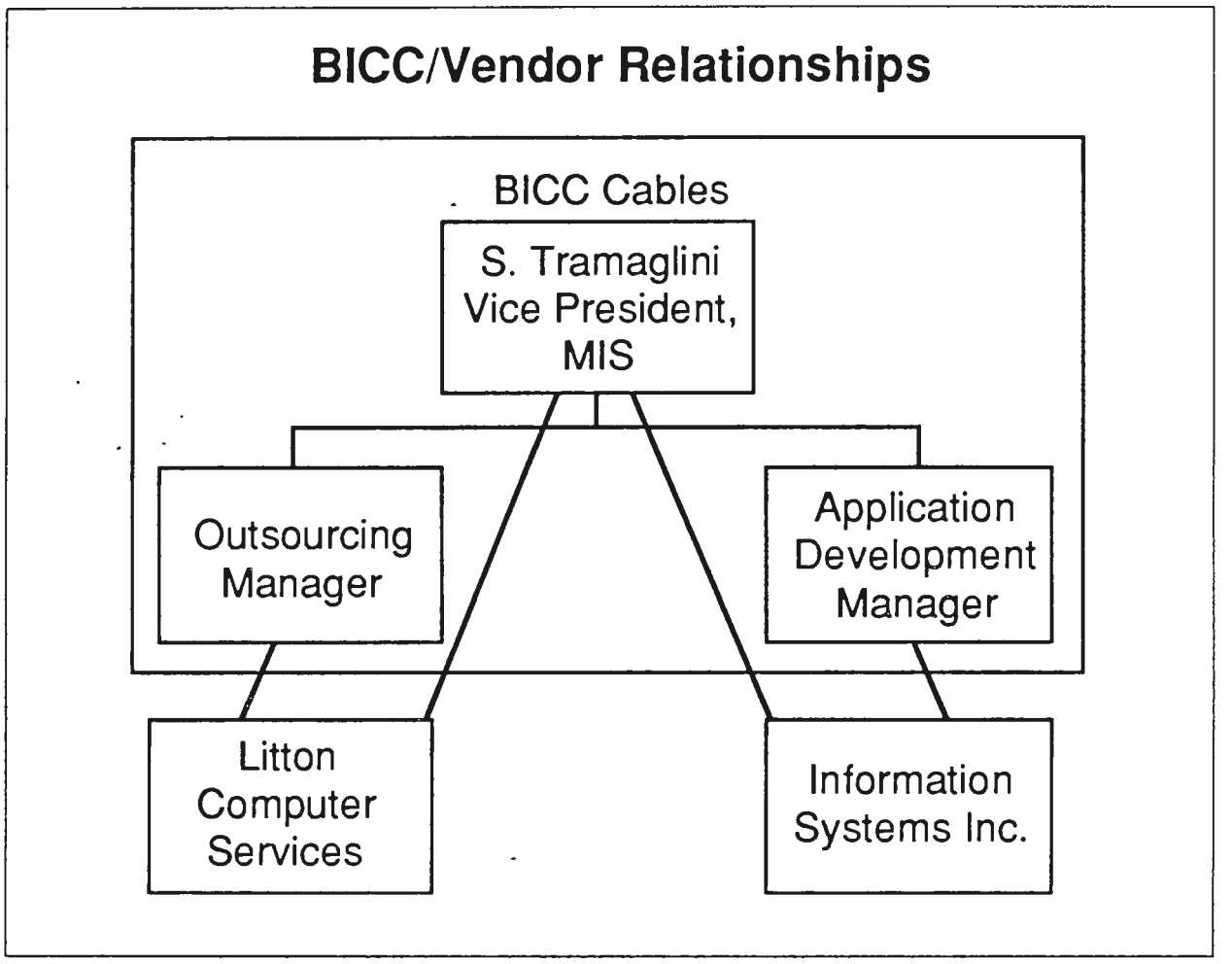
The equipment at the two data centers was also disposed of. Since most of the processing hardware was on third-party leases, it was either sub-leased or the leases were terminated. The capital equipment—the UPS equipment, the tape vaults and even the raised floor—was readily sold on the open market. BICC was able to dispose of its computing assets without the assistance of the vendor.

H

BICC Relationship to ISI and Litton

The three-tiered relationship that exists between BICC and its two SO vendors is illustrated in Exhibit VII-3. It has been working effectively since June of 1990 and, according to Sal Tramaglini, continues to be a cost-effective solution to BICC's processing needs.

EXHIBIT VII-3



As mentioned earlier, Litton Computer Services provides the processing platform for BICC while ISI converts the software over 18 months to D&B's MSA and Comserve packages. BICC has maintained the help desk function at its site, staffed by BICC personnel. They interface directly with Litton about problems relating to processing the BICC-developed software, but interface with ISI for problems with the new packaged software, which comes on-line.

There is a designated interface at BICC for each of the relationships. The former Operations Manager has now become the Outsourcing Manager and is the prime interface with Litton. The Corporate Manager of Applications Development became the prime interface with ISI. Both of these individuals report to Sal Tramaglini who, as VP of MIS, interfaces with both ISI and Litton for contractual issues.

I

Summary and Conclusions

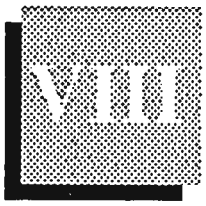
Sal sums up his experience with one telling incident. This winter the Westchester County area, where BICC corporate operations are located, was hit with a severe winter storm about midday during a busy workday. "For the first time," Sal said smiling, "I didn't have to worry about lining up motel rooms for the data center second shift and could tell the staff to leave early if they wanted to. What a difference!"

There are other more tangible benefits Sal has experienced. He estimates that he has saved about $1 million in applications software license fees, staff reduction, and equipment elimination through the ISI arrangement. He is saving substantially on licensing fees, because ISI is operating with multiclient licenses from its software vendors. ISI can, therefore, spread the cost of these fees over many users. The communications costs to link BICC's manufacturing sites has been reduced substantially; he now only pays for access to the nearest node of the Litton network to these sites, instead of paying for data links from all his manufacturing plants to his two data centers. BICC has gained bandwidth in this process, while reducing its communications costs by 30%.

He estimates his labor costs to be 20% lower than before he outsourced his operations, and his total operating costs are 20% below the level they would have been if he had exercised the option to install the linked AS/400s.

Does Sal feel he has had to give up too much control to obtain these cost savings? He indicates he has as much operational control as before. As a customer, he feels he can get the attention he needs from both Litton and ISI because he is a *sizeable* customer. He stressed the point that it is important to be a significant customer to the vendor to ensure that requests are given high priority. He suggests that this is a valid evaluation criterion when considering which systems operations vendor to use. Make sure you matter to the vendor.

Case Study III: Kodak Network



Case Study III: Kodak Network

The trade press in 1990 was full of articles and commentaries on the major outsourcing contract between IBM and Kodak in which IBM assumed all systems operations responsibilities for the Rochester, New York-based supplier of photographic products. It was hailed as a "landmark" agreement, setting a trend in the outsourcing marketplace.

A parallel outsourcing agreement with Digital Equipment Corporation (DEC) to manage all of Kodak's U.S. communications requirements got much less publicity. However, in many ways it is just as significant and will establish the parameters for such agreements for some time. To round out the picture, Kodak also concluded an outsourcing agreement with Businessland for PCs and related services in this same period. This case study focuses on the network operations agreement with DEC, known internally as Telstar, to emphasize that there are lessons to be learned from network systems operations services agreements as well as data processing services agreements.

Gerald Swan, Manager of Marketing and Customer Relations for DEC's Telstar operation, can provide us with a unique in-depth perspective on the procurement process involved in the acquisition. What makes Mr. Swan's viewpoint particularly revealing is that he has been on both sides of the fence. Prior to the contract award to DEC, Gerry was a member of the Kodak project team, responsible for evaluating alternatives and negotiating the contract with DEC. He did such a good job that he became part of DEC's project management team upon award. He first presented his perspective at INPUT's Conference on Outsourcing in late 1990. This case study is an expansion of that presentation.

A

Background

Kodak's reasons for entering into outsourcing agreements can be described as classic. Management felt compelled to spend more time on their core business issues, not on computers and communications links. They were in the business of developing and marketing photographic products, knew that business well, and wanted to concentrate on being still more competitive.

Because of the geographic scope of Kodak's organization, its communications requirements were particularly broad and complex. The voice, data, and video communications requirements of the organization were vital to the company's business success and had to be managed very effectively. This required constant attention from management, attention that might be better focused on core business issues. Section E of this study describes the breadth of services that Kodak eventually turned over to the vendor for management.

Management was concerned about stabilizing costs and conserving capital. The costs had to be controlled without any downgrading in service levels. Service levels had to be the same or better as business demands changed or expanded, but costs couldn't rise. In fact, management wanted to continue using information technology to improve its competitive position but wanted to reduce its capital outlay in the process.

The challenge was significant, but to quote Gerry Swan, "the solution was obvious." Kodak had to find a world-class company with sufficient technical expertise and resources to manage the computing and telecommunications infrastructure for Kodak. How DEC became that world-class company in Kodak's eyes is the theme of this study.

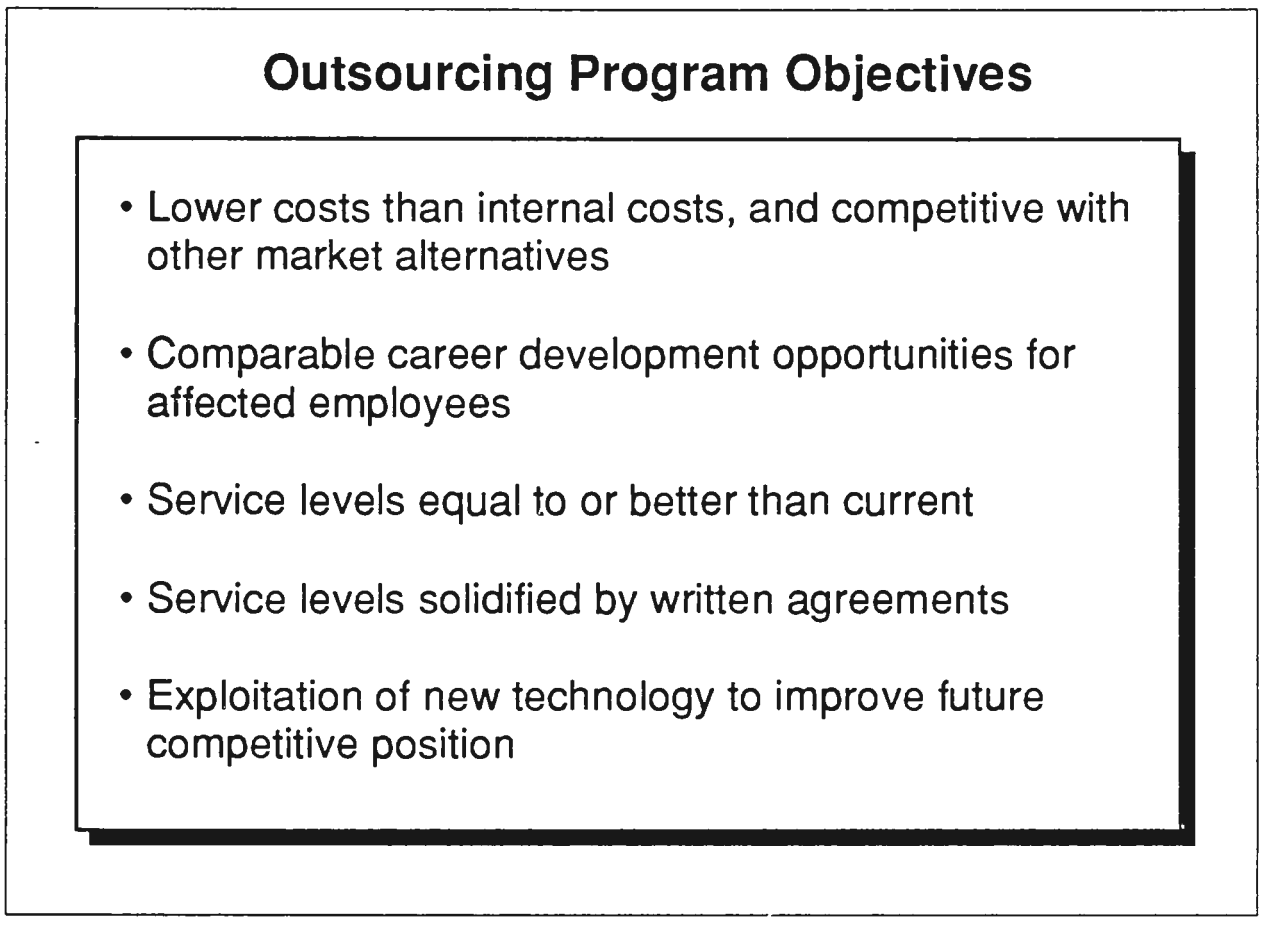
B

Finding the Right Supplier

Once Kodak knew it wanted to find the best vendor for network management services, the next step was to identify the major players in the marketplace and issue to each of them an invitation to bid. Kodak decided the major players were IBM, DEC, EDS, AT&T, and U.S. Sprint. Since there was a real possibility that more than one award for services could be made, the local Bell operating company (Rochester Telephone Company) also received an invitation.

A Request for Information (RFI) was issued to the potential vendors as the first step. The decision to issue an RFI rather than the more traditional Request for Proposal (RFP) was deliberate. Kodak believed that the RFP would be too restrictive. The RFI format would permit each vendor to be more creative in proposing a solution to meet Kodak's objectives. Those objectives, outlined in Exhibit VIII-1, reflected the challenging goals management had set at the outset for the information processing supplier.

EXHIBIT VIII-1



The objectives represented sound business strategies that combined Kodak's increased concern about costs and its determination to maintain its competitive edge in the marketplace. They emphasized the belief that superior service levels had to be provided at the lowest possible cost. They also specified that Kodak must continue to be in a position to exploit new information technology to enhance and improve its competitive position in the future. Finally, the employee issues had to be addressed fairly and in such a manner that those displaced employees were not adversely affected by the change.

This was a challenging list of objectives, and Kodak wanted to allow the prospective vendors to be as creative as possible in addressing them. The less restrictive format of the RFI gave them that option.

1. Contents of RFI

The RFI provided the prospective vendors with information about Kodak that would allow the vendors to formulate a complete response, including:

- Expected annual volumes and estimated current annual cost for all current products and services.
- A "market basket" of frequently purchased items, along with their quantities, to serve as a type of benchmark for cost-evaluation purposes.

- Detailed information describing the network architecture, capital assets, operating and support personnel, and organizational structure.

In addition, extensive personnel information was provided for each person likely to be affected by the proposed change-over. The data included:

- Age of employee
- Length of service
- Current wage grade
- Salary history
- Current job definition
- Expectations for each person regarding benefits and career growth

The depth and breadth of the data provided served two purposes. Firstly, it gave the prospective vendors all the data necessary to build a comprehensive proposal. Secondly, it clearly demonstrated to the vendors from the outset that Kodak was interested in developing a partnership, not just hiring a contractor.

The burden was not all on Kodak's side, however. Kodak required a comprehensive response from the vendors, which was to include the following:

- Pricing over a five-year period for each product and service proposed. An indication of volume sensitivity had to be included.
- A price for each item in the predefined "market basket"
- Proposed technologies to be used, including support systems
- A disaster recovery and backup plan
- A detailed transition plan
- The proposed structure for the vendor's support organization
- Information regarding the use of third parties as service or support providers
- Information on the vendors' customers for reference purposes.

The response also would include substantial information addressing the personnel issues. The required information included:

- Quality of worklife descriptions

- Kodak to vendor comparisons of
  - Benefits packages
  - Proposed compensation plan
  - Employee treatment philosophy

This is a representative list of what was requested of the vendors, intended to demonstrate the breadth of the issues to be addressed. It is not a detailed, all-inclusive list.

2. Evaluation of Responses

Much effort was involved in the preparation of the RFI for the vendors, and even more effort was required by the vendors to respond. Kodak accomplished the solicitation and evaluation step on a very tight time schedule. The elapsed time, from pre-RFI presentation to the prospective vendors to submission of responses from the vendors, was only three weeks. This period included a tour of Kodak's physical plant and review meetings between Kodak project team members and the vendor teams.

DEC met the deadline imposed by Kodak through intensive effort. From 20 to 40 people were assigned to respond. They worked 10 to 12 hours per day, six days per week to prepare the proposal within the three weeks' limit.

Kodak then took an additional three weeks to evaluate the submitted proposals. Since Kodak had selected the RFI approach, the responses from the vendors were inconsistent in format and, thus, more difficult to compare. This was a small price to pay, in Kodak's view, for the flexibility it gave the vendors, allowing them to be more creative.

Gerry noted that Kodak did not try to define the contract requirements in the bidding process. It recognized that the eventual agreement would require considerable discussion and that predefined terms would be counterproductive. Kodak was looking for a true partner as its communications supplier: in Kodak's opinion, the best way to accomplish that was to develop the contract through mutual agreement after the selection was made.

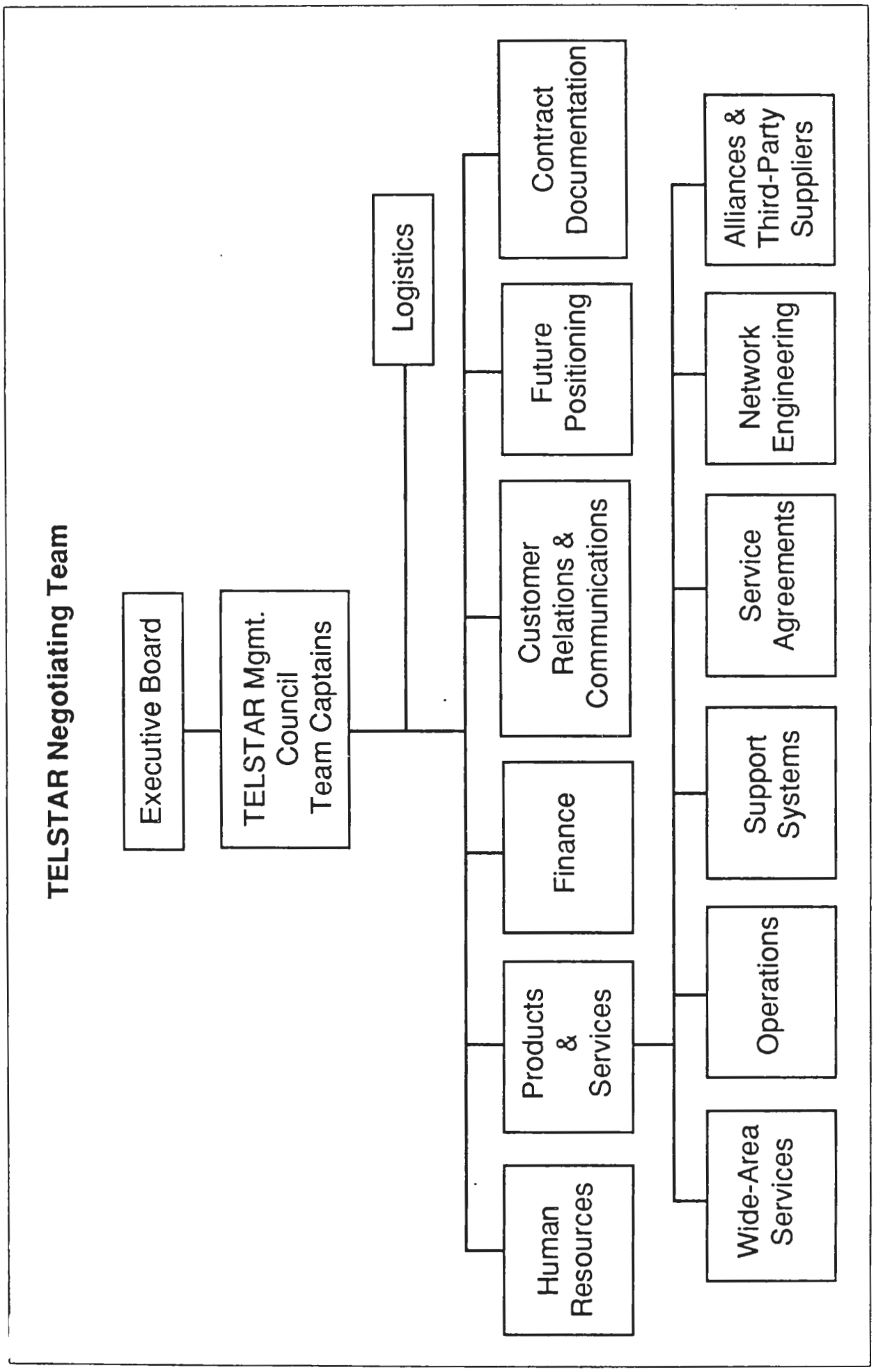
C

The Crafting Process

Negotiating the contract began after the evaluation phase identified the apparent winner, Digital Equipment Corporation. As conducted by Kodak and DEC, the negotiation process was patterned after Conflict Management, Inc.'s procedures. With that approach, the *win-win* philosophy is adopted by the negotiating parties at the outset. The critical factor to success is an open and sharing environment, which stimulates open discussion and promotes the understanding of each party's interests. This approach contrasts with more traditional negotiating practices in which each side takes a negotiating position that hides its true interests and tries to force concessions from the other side.

Exhibit VIII-2 presents the Telstar negotiating team structure used to ensure that all aspects of the relationship were properly considered. Multiple work teams were set up to subdivide the task into manageable components and ensure that all issues would be thoroughly addressed in the agreement.

EXHIBIT VIII-2



The negotiation process itself, an intense activity, went on for four months, using 20 to 40 people, working 10- to 12-hour days and six-day weeks. Gerry best described the process as one of crafting an agreement between two partners.

D

The Agreement between Partners

A five-year contract was signed between Kodak and Digital in February 1990. The contract features can be summarized into the following major topics:

- Description of products and services to be provided with a price schedule for each element extending over all five years.
- Description of Service Level Objectives (SLOs) to be met by DEC, as well as the penalties associated with not achieving each SLO.
- Description of the transfer conditions for the employees DEC was assimilating.
- Identification of the assets being transferred from Kodak to DEC.
- Description of the managing boards, councils, and committees to be established to ensure proper review and communications between DEC and Kodak.
- Description of the working relationship that would exist between the two parties.
- Legal terms that would govern the agreement.

Gerry Swan describes the relationship as a partnership for managing the delivery of communications services, and a vehicle for improving the overall service quality and cost structure of the Eastman Kodak Company. He further defines the term *partnership* to mean a relationship between two business partners in which there is a sharing of information, risks, and benefits. This is significantly different from the usual buyer/vendor relationship common in the information technology market.

E

Telstar Service Components

The services provided by DEC are extensive and critical to the business success of Kodak. The geographic coverage of the services includes all domestic U.S. marketing, distribution, sales, and service locations for Kodak. They include nearly all aspects of local-area services; wide-area services; engineering and consulting; and installation, maintenance, and repair.

As part of the local-area service, DEC is responsible for providing and maintaining all voice access, local- and metropolitan-area networking, paging/radio services, and audio/video teleconferencing.

As part of the wide-area services, DEC is responsible for providing and maintaining all 800 telephone service and value-added and wide-area networking. It is also responsible for ensuring the availability of cellular telephone services, international direct-dialing services, and telephone calling cards.

In addition to ensuring the availability of basic voice, data, and video services, DEC is responsible for engineering and consulting related to all voice and data services. This includes all aspects of network management, from physical layout to security and network integration.

F

Telstar after a Year

The agreement is now one year old. Benefits have already accrued to both DEC and Kodak. For DEC, the agreement has been profitable, even in the early stages. For Kodak, the service levels achieved and other benefits obtained have exceeded expectations, according to Gerry.

Initial efforts were directed toward streamlining operations and ensuring that procedures reflected the company's focus on the customer. The initial transition was transparent to the users. Ten months into the agreement, DEC was still being asked when the transition would take place, Gerry says. DEC indicates that it will now place more emphasis on evaluating alternatives to provide even more cost-effective operations, and on applying new technologies to give Kodak a competitive or economic advantage.

G

Differences in Network Management Outsourcing

The DEC/Kodak agreement is unique, both in the breadth of services provided and in the speed with which it was accomplished. This uniqueness also serves to point out some distinct differences between network management and data center outsourcing. Exhibit VIII-3 summarizes these differences.

The differences are important to vendors. They indicate clearly that managing a network is frequently more complex and requires a more flexible management approach than data center operations.

- The assets of data centers are generally centrally located or at least readily identifiable. Network assets can be spread through a wide geographic area. Because of the geographic dispersion, network assets are frequently more difficult to identify and control.

EXHIBIT VIII-3

Network Management vs. Data Center Outsourcing

Attribute	Networks	Data Center
Asset location	Distributed	Central
Asset ownership	Many owners	Usually one
Boundary delineation	Fuzzy	Crisp
Operating systems	Many	Few
People location	Distributed	Central

Source: Digital Equipment

- Data center assets are generally owned by one organization. Network assets may be owned by virtually everyone that uses the network. Remote offices often purchase their own telephones, terminals, and circuits. Remote offices enter into contracts that can have a wide variety of terms and conditions. Circuits are generally not owned by the company, but by the carrier providing the circuit.

- Identifying responsibility boundaries in data centers is comparatively easy. It's reasonably easy to distinguish application software from system software and from hardware. It's easy to distinguish central equipment from remote equipment. In a network environment—with multiple providers, multiple types of equipment, multiple layers of technology, and multiple standards—it's difficult to distinguish where boundaries begin and end.

- Data centers generally are limited to a few operating systems. Networks can have many. They can include a variety of local-area networks, wide-area networks, and voice systems. In addition, there can be software for intelligent multiplexors, routers, and video conferencing systems.

- Staff to manage data centers are generally centrally located. Staff to manage networks need to be located over a wide geographic area.

The differences are important. Managing a network requires greater flexibility, and agreements need to reflect the differences outlined above. The more restrictive the agreement, the less likely that the relationship will be successful. Network management requires an even greater acceptance of the partnership concept than does data center operations.

Systems operations vendors should note these differences and review their own capabilities to see if they can absorb network management functions. Prospective clients are beginning to demand this capability of vendors also.

H

Summary

As time passes and DEC and Kodak become more comfortable in the relationship, DEC is beginning to take on responsibilities beyond those defined in the initial contract. Most notably, it has begun to consider improvements to Kodak's international networks. Both DEC and Kodak expect the agreement to evolve over time to reflect Kodak's broad international presence.

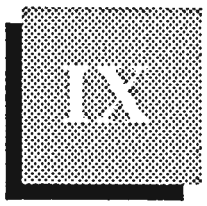
One aspect of this scenario raises an important question. Users have said, both directly and indirectly, that in order for a vendor to be a viable candidate for network management, it must be able to demonstrate experience in managing several types of networks.

Would DEC generally be considered such a company, having experience in either cellular telephone services or video teleconferencing? It is not that DEC can't provide these capabilities. It is only that DEC is generally perceived as a provider of computer and data communications equipment and services, not voice communications.

Kodak's selection of DEC, and the satisfactory completion of one year of the relationship with both parties happy, suggest that an ability to manage a complex communications environment is what is really needed.

INPUT believes the real need is for vendors to be able to manage highly complex technology projects. Demonstration of this capability in prior engagements can establish the vendor as one able to smoothly take over both a company's communications and its data processing operations, even though, in the past, it has only demonstrated proficiency in one. Yet the vendor that assumes responsibility for network operations must understand the unique aspects of that set of services.

Conclusions and Recommendations



Conclusions and Recommendations

INPUT interviewed the CIOs of a representative set of companies that had outsourced systems operations. The sample included clients of five different vendors operating in four different vertical industries. Both the client firms and the vendors represented a broad spectrum of experiences in the systems operations market. Some general conclusions can be drawn from the research data.

A Conclusions

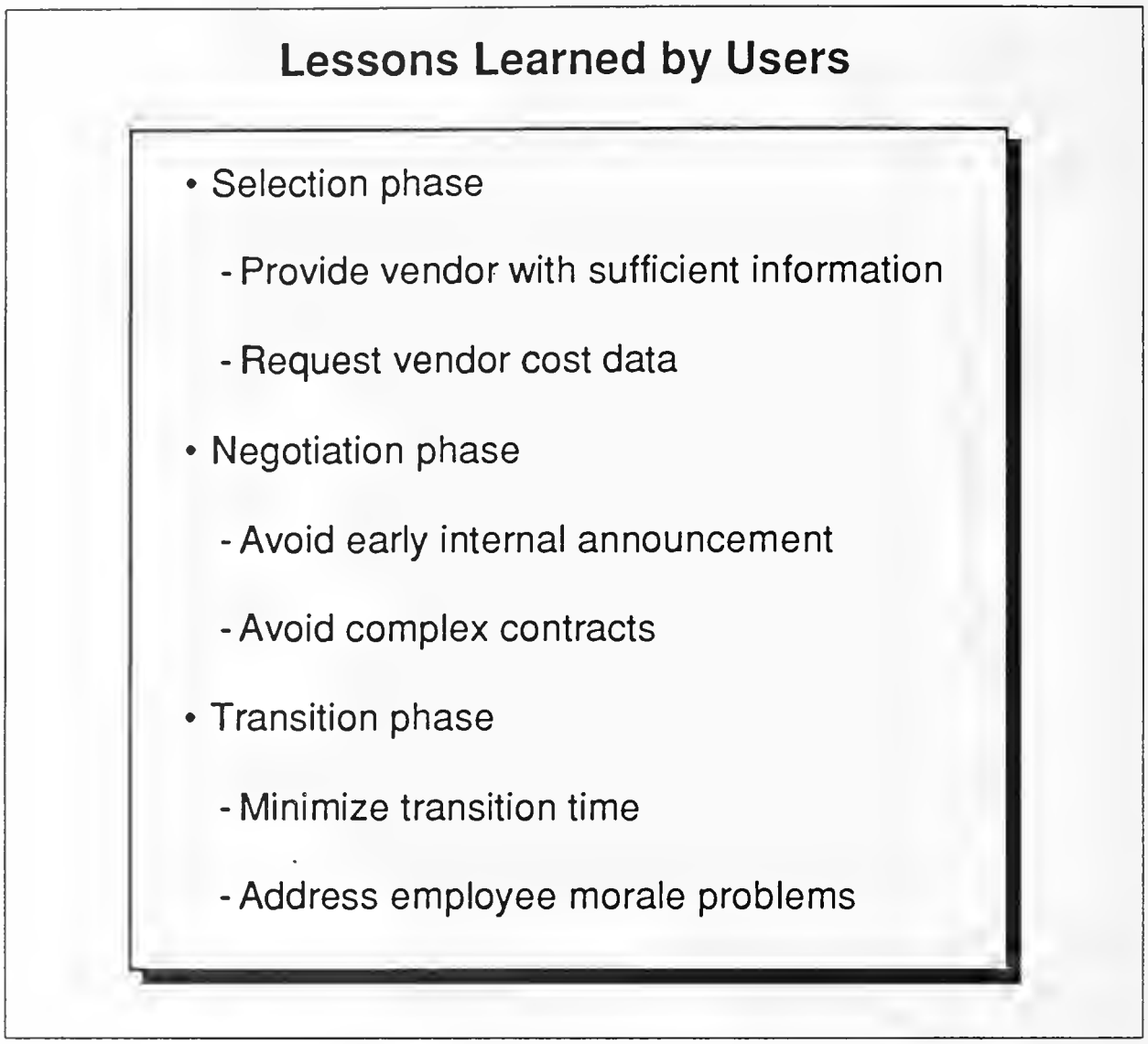
The conclusions are divided into two sections to reflect their sources. The Lessons Learned section is based on users' responses to open-ended questions INPUT asked about whether they would do anything differently the next time. The Observations section represents those items that appeared to recur, both in the discussions with the respondents and in their responses to the questionnaires.

1. Lessons Learned

In each discussion with clients of systems operations vendors, the respondents were asked what they would do differently in each of the three phases of the acquisition cycle. In a surprising number of cases, the answer was that everything had gone smoothly and nothing would be done differently the next time. The respondents often commented that they were surprised there were so few problems; they suggested it was a measure of the professionalism of the vendor.

In view of the general consensus that they wouldn't do anything differently, those few who did comment probably identified some potentially significant trouble spots. The comments will be associated with the phase of the acquisition cycle to which they most closely relate. Exhibit IX-1 summarizes their comments.

EXHIBIT IX-1



a. Selection Phase

The principal comment made about this phase related to the amount of information made available early in the discussions. The buyer should be prepared to provide as much data as the vendor feels is needed. SMF data, or similar operating statistics, was most often cited as the type of data required. However, job descriptions, salary data, communications volumes, and actual applications code are sometimes required.

On the other hand, some respondents felt they should have access to the vendor's cost data also, so they could better understand the impact of some of their requirements on the vendor's ability to deliver the most cost-effective service. The vendors were often unwilling to provide this.

The consensus of the prospective buyers was that, as more data is shared, it becomes more likely that a real partnership will develop between the vendor and the client. It is an indicator of both parties' intention to develop a true partnership when they are willing to share detailed data.

b. Negotiation Phase

Most of the comments relating to what the respondents would do differently next time related to the negotiation phase. Though many of the CIOs were impressed with the professionalism of the vendors in this phase, they were usually uncomfortable because this was where they had the least experience.

Several respondents commented that real complications could develop if the expected agreement were announced too early in the negotiation phase. They indicated this could cause two distinct types of problems. Firstly, early announcement could put additional pressure on the negotiators to tie up the loose ends rapidly. That pressure could result in some issues remaining unaddressed, or in some terms and conditions being forced upon one party or the other. When you consider the additional comment made by one respondent that "you never know when you've reached the right price," it becomes clear that premature announcement of completed negotiations can impose additional pressures on the negotiators during the process.

The second problem with early internal announcement is that it may adversely affect the morale of the IS staff. No staff is comfortable with such a major impending change. Long periods of anticipation only allow more false rumors to start and more anxiety to build. There is no consensus as to what the right timing is. Some chose to announce the day before the vendor came in to take over operations, while others advised the employees when they were merely at the stage of considering outsourcing as an option. In the latter case, the early notification was made because the staff was either to be terminated or to be transferred to the new vendor.

The comment was made that, once the decision has been made to go with a particular vendor, there must be a balance between overdefining the problems and getting started. This concern relates to the above problem of early announcement, but also reflects an uneasiness on the part of some CIOs that they retain contractual control of the business issues involved. The study suggests that the CIO must leave some of the operating details, on the basis of good/sound business decisions, to be worked out after the contract has been implemented. The consensus seemed to be that details should not be included in the contract, though one respondent felt there should have been more time spent on ironing out details such as internal contact points and software maintenance issues.

c. Transition Phase

Concern over morale problems was also mentioned during the discussion of the transition phase. The longer it took to convert, the more opportunity existed for rumors and misunderstandings. There is a problem inherent in handling the staff at this stage. The problem is particularly acute if the staff is not being transferred to the vendor. It is vital to the transition process that the old staff be available to pass on their operating knowledge to the vendor's operations staff. Yet, they may have little incentive to participate in the transition, since they must get on with finding another position. Most respondents solved this problem by giving the departing staff sufficient incentives, in the form of good severance packages or bonuses, to stay until the transition was completed. These strategies were discussed in detail in Chapter V.

Even in the case where the vendor was taking over the IS staff, the natural anxiety presented by the new environment had to be addressed. Most respondents felt the vendors were very professional at planning for that change and communicating their message to the prospective new employees.

2. Observations

The review of the entire acquisition process, from the user's point of view, leads to some general observations that should be factored into vendor marketing strategies. Exhibit IX-2 summarizes the key observations—drawn from INPUT's analysis—about each phase of the procurement cycle.

a. Selection Process

The CIO is the key contact throughout the procurement cycle, according to respondents to INPUT's survey. These responses are biased, since all the respondents were CIOs. However, it is obvious in the cases studied that the clients' senior management relied heavily on the CIO for assessment of the offers the vendors were presenting. Even in cases where the initial idea for outsourcing systems operations was planted at the corporate management level, the choice of vendor and the negotiation of terms and conditions fell to the chief information processing executive in the firm.

EXHIBIT IX-2

Observations

- Selection process
  - CIO is critical factor
  - Reputation/experience most important
  - Cost must beat in-house
- Contract contents
  - Performance penalties
  - Termination/extension clauses
  - Definition of responsibilities
- Transition period
  - Vendor sets schedule
  - Personnel transfer can be key

The decision to pick a specific vendor for systems operations was generally influenced by two key factors. The decision was price sensitive, since cost savings and capital preservation were generally the initial motivation which began the outsourcing investigation. Time after time, however, our respondents indicated that they weighed the vendor's experience, financial stability, and reputation as heavily as the cost of the service. Respondents indicated they depended on the reputation and stability of the vendor to protect themselves from a situation that would cause them to reverse their outsourcing decision.

b. Contract Contents

The development and evolution of the contract between vendor and client is a tedious and difficult task to which both sides devote significant energy. Clients tend to feel less secure with this process, and they were generally impressed with the professionalism demonstrated by the vendor's negotiators. One statement best summed up the respondents' impressions: "This wasn't the first systems operations contract they had negotiated."

The most frequently mentioned contract clause was the one that defined penalties for non-performance on the part of the vendor. Most respondents agreed that some performance parameters had to be identified and some course of action defined in the contract, if the parameters were not met. Beyond that point, however, there was little agreement. Some contracts had clearly defined systems performance criteria established, based on an analysis of the client's own operating performance statistics, such as SMF data. Others had what the respondent described as "just general terms" in the contract. There was the same broad range of remedies defined in the contract, from imposing specific financial penalties for each contract breach, to exercising a cancellation after three months of poor performance.

Most contracts also stated the contract could be terminated before the term had expired, and also spelled out what the client's renewal options were. These issues, more thoroughly discussed in Chapter IV, clearly defined what buyout charges the client would incur if he terminated early, or what discounts he enjoyed if he renewed ahead of schedule.

The contract language also generally addressed what each party's responsibilities were in the systems operations relationship. Though generally expressed in broad terms, some also addressed more specific areas such as user support and network management responsibilities.

c. Transition Period

The evaluation and negotiation eventually leads to the moment of truth when the transition from client to vendor operations takes place. It is a critical time, one which has to be made essentially invisible to the users.

Most respondents reported that the transition had gone very smoothly, generally better than they had expected. The most frequent success factor cited was the vendor's experience assuming operations responsibilities for other clients. Since many of these same respondents had depended on the vendor to set the transition schedule, they were in effect saying that the vendors "knew their business" quite well.

The transition period is also often the time when the IS staff joins a new employer, when the processing load is transferred to a new data center, or when the users call a new help desk for assistance. All respondents indicated they had strong concerns for their employees during the initial phases of the transition. However, in retrospect, they felt all had benefited from the change, either progressing to better positions with the vendor or performing similar responsibilities in the new environment.

The transition period was completed from two weeks to four months after initial conversion, unless a major software rewrite or conversion was also included. The respondents had all been in the post-transition mode for from three months to five years. They were almost unanimous in indicating that the relationship was a day-to-day, give-and-take relationship. It depended on continuous communications between vendor and client and usually avoided any reference to the contract terms.

To add more insight into the systems operations management procedures in the operational phase, INPUT grouped the buyers into platform systems operations users and applications systems operations users. Platform systems operations represent an operating environment where the vendor has no applications software responsibility; in applications systems operations, the vendor also assumes responsibility for the applications software and provides operations management. Exhibit IX-3 illustrates that clients who had turned over their applications software also had a more structured relationship with the vendor than those who were only outsourcing the processing component, i.e., platform operations. The applications systems operations users held structured meetings on a weekly basis within each work group, with monthly meetings at the group management level. The platform operations users relied on more informal one-to-one daily communications on operational issues to manage the arrangement effectively. INPUT believes this distinction will continue.

EXHIBIT IX-3

Post-Transition Strategies

Platform Operations	Applications Operations
Daily communications	Weekly meetings
Executive-to-executive	Monthly reports
Account manager on site	Quarterly VP meeting
Ad hoc contacts	

B

Recommendations

The strong positive consensus on the part of most respondents that the vendors had demonstrated a high degree of professionalism during the acquisition cycle indicates that vendors are doing many of the right things. INPUT believes there are certain market characteristics that lead to recommendations for other actions for vendors. Exhibit IX-4 summarizes these recommendations.

EXHIBIT IX-4

Recommendations

- Maintain open communications
  - Prior to selection
  - During negotiations
  - During operations
- Build a solid industry reputation
  - Cultivate good references
  - Demonstrate industry knowledge
- Acquire appropriate expertise
  - Cultivate strong alliances
  - Have solid network strategy
  - Define personnel transfer policies

The first rule of any good marketer is to communicate effectively with the prospect. That same rule applies to any vendor wanting to penetrate the systems operations outsourcing market. The time for good communications extends throughout the life cycle of the relationship, beginning when the buyer is still a prospect and extending throughout the life of the contract.

Communication is particularly important in the systems operations business, because the vendor has to become an integral part of the client's operating environment. For this reason, the client will want to be comfortable during the evaluation stage, feeling that he knows everything about the vendor and his capabilities. If the prospect is considering systems operations outsourcing for the first time, an on-going dialogue with the vendor helps answer questions early, before they become misconceptions.

Every systems operations situation has unique characteristics—at least in the eyes of the buyer—so the dialogue has to continue into the negotiation stage. At this point, the two parties have agreed that they want to establish a business relationship, but many details of that relationship have to be more clearly defined through mutual discussion. Ideas will change, and commitments will have to be adjusted until both sides are comfortable with the results. Our respondents have indicated that can take from two weeks to three months to resolve.

The final document is just the beginning of the relationship. The dialogue must continue into the transition and the operational phases, to ensure that the client receives the service levels he expects and that changes in his requirements are translated into new services by the vendor. Most vendors maintain on-site account executives, according to the users polled in INPUT's survey. All the CIOs indicated they had direct access to the vendor's senior management when that was appropriate. The respondents kept referring to the partnership between the client and the vendor as the real working arrangement between the two parties. Such a strong relationship is essential to a successful systems operations arrangement, one that can be pointed to with pride by both parties.

Vendors need to have some strong vendor/client relationships to develop their reputations as established systems operations suppliers. Prospective buyers need to be convinced they are placing their requirements in capable hands. They will want to talk to other buyers who have worked with a vendor. INPUT's data indicates that the vendor's reputation—either in the form of past SO experience, earlier industry-specific experience, or financial stability—is most often the critical decision factor in the selection process.

Every SO vendor cannot be all-encompassing, either in the breadth of his industry experience or his in-house capabilities. No one vendor can have all the answers every time. The solution for most vendors is to establish and nurture strong alliances with other suppliers that can supplement their own capabilities. Disaster recovery and network communications services are examples of areas that many vendors frequently choose to subcontract to reliable partners.

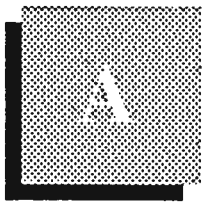
As clients expand to serve their worldwide markets, SO vendors will have to expand their own geographic coverage to meet these needs. The network management capability of the SO vendors will become even more important in the future than it is now. Most respondents to INPUT's survey rated it as one of the critical technical evaluation criteria.

Still another issue of critical importance to the CIO is the disposition of the current IS staff. When considering outsourcing systems operations, all CIOs are acutely aware that any favorable decision to outsource systems operations could have a strong negative impact on their current staff. Some personnel will no longer be needed at all, or at least the staff requirements will be considerably reduced. The SO vendor can greatly enhance its credibility with the prospective client if:

- He can demonstrate that he has dealt with the personnel transfer issue successfully before.
- He has outplacement services in place to ease the displacement of IS staff.
- He can assure the prospect that he will take over the IS staff with little or no impact on their careers.

In summary, the vendor must demonstrate a professional approach to meeting the client's needs. This attitude must be evident to the buyer from the day that vendor becomes a potential supplier in the eyes of the selection committee. The term *professional* was used time after time by the respondents to describe a variety of responses. Negotiation approaches, transition planning, personnel transfer policies, and ongoing adjustments to service requirements all have to be handled professionally to convince the client that his requirements are being given priority consideration by the vendor and that he is experiencing service levels at least as good as what he could obtain from an in-house operation.

Appendixes



Definition of Terms

A

Overall Definitions and Analytical Framework

Information Services - Computer/telecommunications-related products and services that are oriented toward the development or use of information systems. Information services typically involve one or more of the following:

- Processing of specific applications using vendor-provided systems (called **Processing Services**)
- A combination of hardware, packaged software and associated support services which will meet a specific application processing need (called **Turnkey Systems**)
- Packaged software (called **Software Products**)
- People services that support users in developing and operating their own information systems (called **Professional Services**)
- Bundled combinations of products and services where the vendor assumes responsibility for the development of a custom solution to an information system problem (called **Systems Integration**)
- Services that provide operation and management of all or a significant part of a user's information systems functions under a long-term contract (called **Systems Operations**)
- Services associated with the delivery of information in electronic form—typically network-oriented services such as value-added networks, electronic mail and document interchange, on-line data bases, on-line news and data feeds, videotex, etc. (called **Network Services**)

In general, the market for information services does not involve providing equipment to users. The exception is where the equipment is bundled as part of an overall service offering such as a turnkey system, a systems operations contract, or a systems integration project.

The information services market also excludes pure data transport services (i.e., data or voice communications circuits). However, where information transport is associated with a network-based service (e.g., EDI or VAN services), or cannot be feasibly separated from other bundled services (e.g., some systems operations contracts), the transport costs are included as part of the services market.

The analytical framework of the **Information Services Industry** consists of the following interacting factors: overall and industry-specific business environment (trends, events and issues); technology environment; user information system requirements; size and structure of information services markets; vendors and their products, services and revenues; distribution channels, and competitive issues.

All **Information Services Market** forecasts are estimates of **User Expenditures** for information services. When questions arise about the proper place to count these expenditures, INPUT addresses them from the user's viewpoint: expenditures are categorized according to what users perceive they are buying.

By focusing on user expenditures, INPUT avoids two problems which are related to the distribution channels for various categories of services:

- Double counting, which can occur by estimating total vendor revenues when there is significant reselling within the industry (e.g., software sales to turnkey vendors for repackaging and resale to end users)

- Missed counting, which can occur when sales to end users go through indirect channels such as mail order retailers

Market Sectors or markets, are groupings or categories of the users who purchase information services. There are three types of user markets:

- *Vertical Industry* markets, such as Banking, Transportation, Utilities, etc.

- *Functional Application* markets, such as Human Resources, Accounting, etc. These are also called "Cross-Industry" markets.

- *Generic* markets, which are neither industry- nor application-specific, such as the market for systems software.

Specific market sectors used by INPUT are defined in Section D, below.

Captive Information Services User Expenditures are expenditures for products and services provided by a vendor that is part of the same parent corporation as the user. These expenditures are not included in INPUT forecasts.

Non-captive Information Services User Expenditures are expenditures that go to vendors which have a different parent corporation than the user. It is these expenditures which constitute the information services market.

Delivery Modes are defined as specific products and services that satisfy a given user need. While *Market Sectors* specify *who* the buyer is, *Delivery Modes* specify *what* the user is buying.

Of the eight delivery modes defined by INPUT, five are considered primary products or services:

- *Processing Services*
- *Network Services*
- *Professional Services*
- *Applications Software Products*
- *Systems Software Products*

The remaining three delivery modes represent combinations of these products and services, bundled together with equipment, management and/or other services:

- *Turnkey Systems*
- *Systems Operations*
- *Systems Integration*

Section B describes the delivery modes and their structure in more detail.

Outsourcing is defined as the contracting of information systems (IS) functions to outside vendors. Outsourcing should be viewed as the opposite of *insourcing*: anything that IS management has considered feasible to do internally (e.g., data center operations, applications development and maintenance, network management, training, etc.) is a potential candidate for outsourcing.

IS has always bought systems software, as it is infeasible for companies to develop it internally. However, all other delivery modes represent functions or products that IS management could choose to perform or develop in-house. Viewed this way, outsourcing is the result of a make-or-buy decision, and the outsourcing market covers any product or service where the vendor must compete against the client firm's own internal resources.

B

Industry Structure and Delivery Modes

1. Service Categories

The following exhibit presents the structure of the information services industry. Several of the delivery modes can be grouped into higher level **Service Categories**, based on the kind of problem the user needs to solve. These categories are:

- **Business Application Solutions (BAS)** - prepackaged or standard solutions to common business applications. These applications can be either industry-specific (e.g., mortgage loan processing for a bank), cross-industry (e.g., payroll processing), or generic (e.g., utility timesharing). In general, BAS services involve minimal customization by the vendor, and allow the user to handle a specific business application without having to develop or acquire a custom system or system resources. The following delivery modes are included under BAS:

  - *Processing Services*
  - *Applications Software Products*
  - *Turnkey Systems*

- **Systems Management Services (SMS)** - services which assist users in developing systems or operating/managing the information systems function. Two key elements of SMS are the customization of the service to each individual user and/or project, and the potential for the vendor to assume significant responsibility for management of at least a portion of the user's information systems function. The following delivery modes are included under SMS:

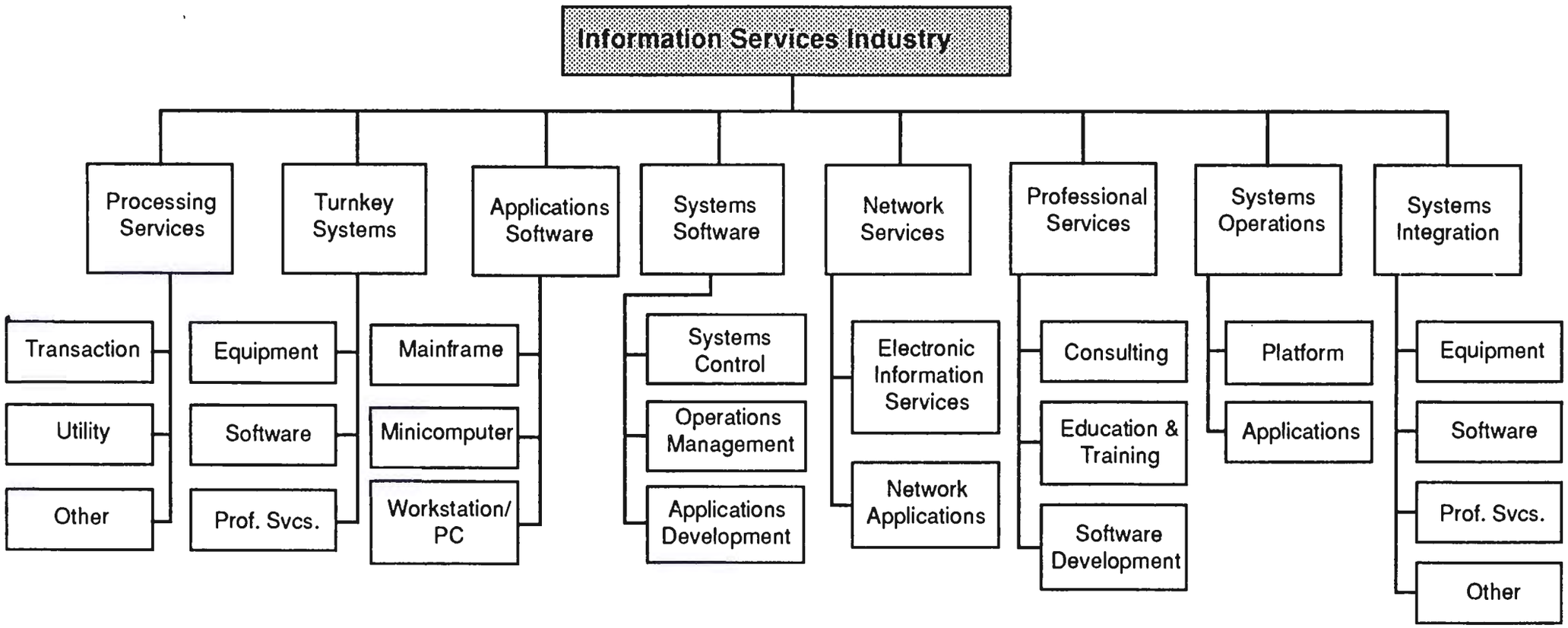
  - *Systems Operations*
  - *Systems Integration*

Each of the remaining three delivery modes represents a separate service category:

- *Professional Services*
- *Network Services*
- *System Software Products*

Note: These service categories are a new concept introduced in the 1990 MAP Program. They are purely an aggregation of lower level delivery mode data. They do not change the underlying delivery modes or industry structure.

Information Services Industry Structure—1991



Source: INPUT

2. Software Products

There are many similarities between the applications and systems software delivery modes. Both involve user purchases of software packages for in-house computer systems. Included are both lease and purchase expenditures, as well as expenditures for work performed by the vendor to implement or maintain the package at the user's sites. Vendor-provided training or support in operation and use of the package, if bundled in the software pricing, is also included here.

Expenditures for work performed by organizations other than the package vendor are counted in the category of professional services. Fees for work related to education, consulting, and/or custom modification of software products are counted as professional services, provided such fees are charged separately from the price of the software product itself.

- **Systems Software Products**

  Systems software products enable the computer/communications system to perform basic machine-oriented or user interface functions. These products include:

  - *Systems Control Products* - Software programs that function during application program execution to manage computer system resources and control the execution of the application program. These products include operating systems, emulators, network control, library control, windowing, access control, and spoolers.

  - *Operations Management Tools* - Software programs used by operations personnel to manage the computer system and/or network resources and personnel more effectively. Included are performance measurement, job accounting, computer operation scheduling, disk management utilities, and capacity management.

  - *Applications Development Tools* - Software programs used to prepare applications for execution by assisting in designing, programming, testing, and related functions. Included are traditional programming languages, 4GLs, data dictionaries, data base management systems, report writers, project control systems, CASE systems and other development productivity aids. Also included are system utilities (e.g., sorts) which are directly invoked by an applications program.

- **Application Software Products**

  - *Industry-Specific Application Software Products* - Software products that perform functions related to solving business or organizational needs unique to a specific vertical market and sold to that market

only. Examples include demand deposit accounting, MRPII, medical recordkeeping, automobile dealer parts inventory, etc.

- *Cross-Industry Application Software Products* - Software products that perform a specific function that is applicable to a wide range of industry sectors. Applications include payroll and human resource systems, accounting systems, word processing and graphics systems, spreadsheets, etc.

3. Turnkey Systems

A turnkey system is an integration of equipment (CPU, peripherals, etc.), systems software, and packaged or custom application software into a single system developed to meet a specific set of user requirements. Value added by the turnkey system vendor is primarily in the software and support services provided. Most CAD/CAM systems and many small business systems are turnkey systems. Turnkey systems utilize standard computers and do not include specialized hardware such as word processors, cash registers, process control systems, or embedded computer systems for military applications.

Hardware vendors that combine software with their own general-purpose hardware are not classified by INPUT as turnkey vendors. Their software revenues are included the appropriate software category.

Most turnkey systems are sold through channels known as value-added resellers.

- *Value-Added Reseller (VAR):* A VAR adds value to computer hardware and/or software and then resells it to an end user. The major value added is usually application software for a vertical or cross-industry market, but also includes many of the other components of a turnkey systems solution, such as professional services.

Turnkey systems are divided into two categories.

- *Industry-Specific Systems* - systems that serve a specific function for a given industry sector, such as automobile dealer parts inventory, medical recordkeeping, or discrete manufacturing control systems.

- *Cross-Industry Systems* - systems that provide a specific function that is applicable to a wide range of industry sectors, such as financial planning systems, payroll systems, or personnel management systems.

4. Processing Services

This category includes transaction processing, utility processing, and other processing services.

- *Transaction Processing:* - Client uses vendor-provided information systems—including hardware, software and/or data networks—at vendor site or customer site, to process transactions and update client data bases. Transactions may be entered in one of four modes:

  - *Interactive* - Characterized by the interaction of the user with the system for data entry, transaction processing, problem solving and report preparation: the user is on-line to the programs/files stored on the vendor's system.

  - *Remote Batch* - Where the user transmits batches of transaction data to the vendor's system, allowing the vendor to schedule job execution according to overall client priorities and resource requirements.

  - *Distributed Services* - Where users maintain portions of an application data base and enter or process some transaction data at their own site, while also being connected through communications networks to the vendor's central systems for processing other parts of the application.

  - *Carry-in Batch* - Where users physically deliver work to a processing services vendor.

- *Utility Processing*: Vendor provides basic software tools (language compilers, assemblers, DBMSs, graphics packages, mathematical models, scientific library routines, etc.), generic applications programs and or data bases, enabling clients to develop their own programs or process data on vendor's system.

- *Other Processing Services*: Vendor provides services—usually at vendor site—such as scanning and other data entry services, laser printing, computer output microfilm (COM), CD preparation and other data output services, backup and disaster recovery, etc.

5. Systems Operations

Systems operations involves the operation and management of all or a significant part of the user's information systems functions under a long-term contract. These services can be provided in either of two distinct submodes:

- *Professional Services:* The vendor provides personnel to operate client-supplied equipment. Prior to 1990, this was a submode of the Professional Services delivery mode.

- *Processing Services:* The vendor provides personnel, equipment and (optionally) facilities. Prior to 1990, this was a submode of the Processing Services delivery mode.

In the federal government market the processing services submode is called "COCO" (Contractor-Owned, Contractor-Operated), and the professional services mode is referred to as "GOCO" (Government-Owned, Contractor-Operated).

Systems operations vendors now provide a wide variety of services in support of existing information systems. The vendor can plan, control, provide, operate, maintain and manage any or all components of the user's information systems (equipment, networks, systems and/or application software), either at the client's site or the vendor's site. Systems operations can also be referred to as "resource management" or "facilities management."

There are two general levels of systems operations:

- *Platform/network operations* - where the vendor operates the computer system and/or network without taking responsibility for the applications

- *Application operations* - where the vendor takes responsibility for the complete system, including equipment, associated telecommunications networks, and applications software

Note: Systems Operations is a new delivery mode introduced in the 1990 MAP Program. It was created by taking the Systems Operations submode out of both Processing Services and Professional Services. No other change has been made to the delivery mode definitions, and the total forecast expenditures for these three delivery modes are identical to the total forecast expenditures of the two original modes before the breakout of Systems Operations.

6. Systems Integration (SI)

Systems integration is a business offering that provides a complete solution to an information system, networking or automation requirement through the custom selection and implementation of a variety of information system products and services. A systems integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price.

To be included in the information services market, systems integration projects must involve some application processing component. In addition, the majority of cost must be associated with information systems products and/or services.

The systems integrator will perform, or manage others who perform, most or all of the following functions:

- Program management, including subcontractor management
- Needs analysis
- Specification development
- Conceptual and detailed systems design and architecture
- System component selection, modification, integration and customization
- Custom software design and development
- Custom hardware design and development
- Systems implementation, including testing, conversion and post-implementation evaluation and tuning
- Life cycle support, including
  - System documentation and user training
  - Systems operations during development
  - Systems maintenance
- Financing

7. Professional Services

This category includes consulting, education and training, and software development.

- *Consulting:* Services include management consulting (related to information systems), information systems consulting, feasibility analysis and cost-effectiveness studies, and project management assistance. Services may be related to any aspect of information systems, including equipment, software, networks and systems operations.

- *Education and Training:* Products and services related to information systems and services for the professional and end user, including computer-aided instruction, computer-based education, and vendor instruction of user personnel in operations, design, programming, and documentation.

- *Software Development:* Services include user requirements definition, systems design, contract programming, documentation and implementation of software performed on a custom basis. Conversion and maintenance services are also included.

8. Network Services

Network services typically include a wide variety of network-based functions and operations. Their common thread is that most of these functions could not be performed without network involvement. Network services is divided into two major segments: *Electronic Information Services,* which involve selling information to the user, and *Network Applications,* which involve providing some form of enhanced transport service in support of a user's information processing needs.

- *Electronic Information Services*

  Electronic information services are data bases that provide specific information via terminal- or computer-based inquiry, including items such as stock prices, legal precedents, economic indicators, periodical literature, medical diagnosis, airline schedules, automobile valuations, etc. The terminals used may be computers themselves, such as communications servers or personal computers. Users typically inquire into and extract information from the data bases. Although users may load extracted data into their own computer systems, the electronic information vendor provides no data processing or manipulation capability and the users cannot update the vendor's data bases.

  The two kinds of electronic information services are:

  - *On-line Data Bases* - Structured, primarily numerical data on economic and demographic trends, financial instruments, companies, products, materials, etc.

  - *News Services* - Unstructured, primarily textual information on people, companies, events, etc.

  While electronic information services have traditionally been delivered via networks, there is a growing trend toward the use of CD ROM optical disks to support or supplant on-line services, and these optical disk-based systems are included in the definition of this delivery mode.

- *Network Applications*

  - *Value-Added Network Services (VAN Services)* - VAN services are enhanced transport services which involve adding such functions as automatic error detection and correction, protocol conversion, and store-and-forward message switching to the provision of basic network circuits.

    While VAN services were originally provided only by specialized VAN carriers (Tymnet, Telenet, etc.), today these services are also offered by traditional common carriers (AT&T, Sprint, etc.). Mean-

while, the VAN carriers have also branched into the traditional common carriers' markets and are offering unenhanced basic network circuits as well.

INPUT's market definition covers VAN services only, but includes the VAN revenues of all types of carriers.

- *Electronic Data Interchange (EDI)* - Application-to-application exchange of standardized business documents between trade partners or facilitators. This exchange is commonly performed using VAN services. Specialized translation software is typically employed to convert data from organizations' internal file formats to EDI interchange standards; this software may be provided as part of the VAN service, or may be resident on the organization's own computers.

- *Electronic Information Exchange (EIE)* - Also known as Electronic Mail (E-mail), EIE involves the transmission of messages across an electronic network managed by a services vendor, including facsimile transmission (FAX), voice mail, voice messaging, and access to Telex, TWX, and other messaging services. This also includes bulletin board services.

- *Other Network Services* - This segment contains videotex and pure network management services. Videotex is actually more a delivery mode than an application. Its prime focus is on the individual as a consumer or in business. These services provide interactive access to data bases and offer the inquirer the capability to send as well as receive information for such purposes as home shopping, home banking, travel reservations, and more.

  Network management services included here must involve the vendor's network and network management systems as well as people. People-only services, or services that involve the management of networks as part of the broader task of managing a user's information processing functions, are included in Systems Operations.

C

Vendor Revenue and User Expenditure Conversion

The size of the information services market may be viewed from two perspectives: vendor (producer) revenues, and user expenditures. While the primary data for INPUT's research is vendor interviews, INPUT defines and forecasts the information services market in terms of end-user expenditures. End-user expenditures reflect the markup in producer sales when a product such as software is delivered through indirect distribution channels, such as original equipment manufacturers (OEMs), retailers and distributors. The focus on end-user expenditure also eliminates the double counting of revenues which would occur if sales were tabulated for both producer (e.g., Lotus) and distributor (e.g., BusinessLand).

For most delivery modes, vendor revenues and user expenditures are fairly close. However, there are some significant areas of difference. Many microcomputer software products, for example, are marketed through indirect distribution channels. To capture the valued added through these indirect distribution channels, adjustment factors which incorporate industry discount ratios are used to convert estimated information services vendor revenues to end-user expenditures.

For some delivery modes, including software products, systems integration and turnkey systems, there is a significant volume of intra-industry sales. For example, systems integrators purchase software and subcontract the services of other professional services vendors. And turnkey vendors incorporate purchased software into the systems which they sell to end users.

To account for such intra-industry transactions, INPUT uses other conversion ratios to derive the estimate of end-user expenditures.

The following table summarizes the net effect of the various ratios used by INPUT to convert vendor revenues to end-user expenditure (market size) figures for each delivery mode:

Delivery Mode	Vendor Revenue Multiplier
Application Software Products	1.18
Systems Software Products	1.10
Systems Operations	1.00
Systems Integration	0.99
Professional Services	0.99
Network Services	0.99
Processing Services	0.99
Turnkey Systems	0.95

D

Sector Definitions and Delivery Mode Reporting

1. Industry Sector Definitions (Vertical Markets)

INPUT has structured the information services market into 16 generic industry sectors, such as process manufacturing, insurance, transportation, etc. The definitions of these sectors are based on the 1987 revision of the Standard Industrial Classification (SIC) Code system. The specific industries (and their SIC Codes) included under these generic industry sectors are detailed in the attached table.

EXHIBIT A-2

Industry Sector Definitions

Industry Sector	SIC Code	Description
Discrete Manufacturing	23xx	Apparel and other finished products
	25xx	Furniture and fixtures
	27xx	Printing, publishing and allied industries
	31xx	Leather and leather products
	34xx	Fabricated metal products, except machinery and transportation equipment
	35xx	Industrial and commercial machinery and computer equipment
	36xx	Electronic and other electrical equipment and components, except computer equipment
	37xx	Transportation equipment
	38xx	Instruments; photo/med/optical goods; watches/clocks
	39xx	Miscellaneous manufacturing industry
Process Manufacturing	10xx	Metal mining
	12xx	Coal mining
	13xx	Oil and gas extraction
	14xx	Mining/quarrying nonmetalic minerals
	20xx	Food and kindred products
	21xx	Tobacco products
	22xx	Textile mill products
	24xx	Lumber and wood products, except furniture
	26xx	Paper and allied products
	28xx	Chemicals and allied products
	29xx	Petroleum refining and related industries
	30xx	Rubber and miscellaneous plastic products
	32xx	Stone, clay, glass and concrete products
	33xx	Primary metal industries
Transportation Services	40xx	Railroad transport
	41xx	Public transit/transport
	42xx	Motor freight transport/warehousing
	43xx	U.S. Postal Service
	44xx	Water transportation
	45xx	Air transportation (except airline reservation services in 4512)
	46xx	Pipelines, except natural gas
	47xx	Transportation services (except 472x, arrangement of passenger transportation)

EXHIBIT A-2 (Con't)

Industry Sector Definitions

Industry Sector	SIC Code	Description
Utilities	49xx	Electric, gas and sanitary services
Telecommunications	48xx	Communications
Retail Distribution	52xx 53xx 54xx 55xx 56xx 57xx 58xx 59xx	Building materials General merchandise stores Food stores Automotive dealers, gas stations Apparel and accessory stores Home furniture, furnishings and accessory stores Eating and drinking places Miscellaneous retail
Wholesale Distribution	50xx 51xx	Wholesale trade - durable goods Wholesale trade - nondurable goods
Banking and Finance	60xx 61xx 62xx 67xx	Depositary institutions Nondepositary institutions Security and commodity brokers, dealers, exchanges and services Holding and other investment offices
Insurance	63xx 64xx	Insurance carriers Insurance agents, brokers and services
Health Services	80xx	Health services
Education	82xx	Educational services

EXHIBIT A-2 (Con't)

Industry Sector Definitions

Industry Sector	SIC Code	Description
Business and Technical Services	65xx	Real estate
	73xx	Business services (except hotel reservation services in 7389)
	81xx	Legal services
	87xx	Engineering, accounting, research, management, and related services
	89xx	Miscellaneous services
Federal Government	9xxx	
State and Local Government	9xxx	
Miscellaneous Industries	01xx	Agricultural production - crops
	02xx	Agricultural production - livestock/animals
	07xx	Agricultural services
	08xx	Forestry
	09xx	Fishing, hunting and trapping
	15xx	Building construction - general contractors, operative builders
	16xx	Heavy construction - contractors
	17xx	Construction - special trade contractors
Personal/Consumer Services	4512x	Airline reservation services
	472x	Arrangement of passenger transportation (travel agencies)
	70xx	Hotels, rooming houses, camps, and other lodging places
	72xx	Personal services
	7389x	Hotel reservation services
	75xx	Automotive repair, services and parking
	76xx	Miscellaneous repair services
	78xx	Motion pictures
	79xx	Amusement and recreation services
	83xx	Social services
	84xx	Museums, art galleries, and botanical/zoological gardens
	86xx	Membership organizations
	88xx	Private households

2. Cross-Industry Sector Definitions (Horizontal Markets)

In addition to these vertical industry sectors, INPUT has also identified seven cross-industry or horizontal market sectors. These sectors or markets involve multi-industry applications such as human resource systems, accounting systems, etc. In order to be included in an industry sector, the service or product delivered must be specific to that sector only. If a service or product is used in more than one industry sector, it is counted as cross-industry. The seven cross-industry markets are:

- *Human Resource Systems*
- *Education and Training*
- *Office Systems*
- *Accounting Systems*
- *Engineering and Scientific Applications*
- *Planning and Analysis Systems*
- *Other Applications (including telemarketing, sales management and electronic publishing)*

3. Delivery Mode Reporting by Sector

The tables below show how market forecasts for individual delivery modes are related to specific market sectors.

Vertical Market Sectors Only

The following delivery modes are reported by industry sector (vertical market) only:

Delivery Mode	Applicable Submodes
• Network Services:	Network Applications
• Systems Operations:	All
• Systems Integration:	All
• Professional Services:	All

This reporting structure is intended to provide expenditures by industry sector. However, it is recognized that many of the services provided are not necessarily specific or unique to any of the individual sectors.

Vertical and Cross-Industry Market Sectors

The following delivery modes are reported by industry sector and cross-industry sector (vertical and horizontal markets):

Delivery Mode	Applicable Submodes
• Processing Services:	Transaction Processing
• Software	Applications
• Turnkey Systems	All

All of these delivery modes represent specific business application solutions.

Vertical and Generic Market Sectors

The following submode is reported both by industry sector (vertical market), and the generic market:

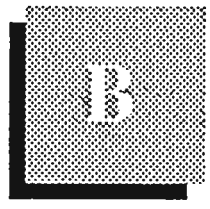
Delivery Mode	Applicable Submodes
• Network Services	Electronic Information Services

While some electronic information is industry-specific (e.g., farm crop reports), much of it is relevant to or may be used by any industry (e.g., data base services such as Dialog).

Generic Market Sector Only

The following delivery modes are so generic that they are not reported by industry or cross-industry sector (vertical or horizontal market):

Delivery Mode	Applicable Submodes
• Processing Services:	Utility Processing Other Processing
• Software	Systems (All)



User Questionnaire

Good morning (afternoon). This is _____. I'm calling from INPUT, a leading market research firm in the field of information services.

We're conducting research in the area of the outsourcing of systems operations and would like to ask for your assistance in identifying issues in the procurement process.

We appreciate your assistance and, in return, we would be pleased to send you a copy of the executive overview when the report is completed.

We have a number of questions that will take about 15 minutes. Are you the person I should be discussing your firm's recent systems outsourcing agreement with? Yes/No___

If yes, would this be a good time or would you prefer to schedule a specific time for me to call back?
_____Now (go to next page)
_____Later _____(time and date)

If no, can you refer me to the right person?

_____

_____

_____

Thank you for your help.

Background Information

1. What is your organizational affiliation?
   Corporate management _____
   Information services management _____
   User organization _____

2. Were you directly involved in the outsourcing evaluation?
   Yes _____
   No _____

3. Why did your firm decide to outsource systems operations?

   _____

   _____

   _____

4. Who owns the processing equipment?
   You _____
   Vendor _____
   Third party _____

5. Where is the processing done?
   Vendor site _____
   Company site _____

6. The equipment is:
   Dedicated _____
   Shared _____

7. Who is responsible for:

appl. development		appl. maintenance	
Users	_____	Users	_____
Vendor	_____	Vendor	_____
Third party	_____	Third party	_____

Procurement Stage

8. How many SO vendors did you contact? _____

9. Please describe how you solicited bids.

_____

_____

_____

10. Was there a solicitation document?
Yes _____
No _____ (go to 13).

11. How long did it take to develop the solicitation document? _____

12. What was the organization of the team that assembled the solicitation document?

_____

_____

_____

13. What information did you provide to the vendors about your operations? The following list is included for suggestion only. Rank the top 4 or 5 in importance.

Current processing volumes _____
Future processing requirements _____
Current staff deployment _____
Current equipment inventory _____
Current software inventory _____
Current comm. requirement _____
SMF Data _____
Expectations as to:
  Staff absorption _____
  Equipment ownership _____
  Transition period _____
Other factors

_____

_____

_____

14. How were the vendor responses evaluated?

_____

_____

_____

15. Who evaluated the vendor responses?

_____

_____

_____

16. How long did it take to evaluate the responses from the vendors? _____

17. What items did you include in your non-financial evaluation of the vendor? The following list is provided as a guide. Could you identify which items you considered in your evaluation and rate those on a scale of 1 to 5, with 1 being least important and 5 being most important.

	Yes	No	1	2	3	4	5
Technical abilities							
Related experience							
Cultural compatibility							
Level of service							
Security provisions							
Personnel transfer policies							
Organizational structure							
User interface plans							
Use of third parties							
Proposed technologies							
Project management skills							
Transition plan							
Backup provisions							
Flexibility for change							
Other							

_____

_____

18. Which financial criteria were used? The following list is only meant for suggestion. Which were most important?

Price proposed for services	_____
Financial condition of vendor	_____
Impact on internal company cash flow	_____
Willingness of vendor to invest in	
equipment	_____
facilities	_____
Reduction of capital investment	_____
Other (please identify)	_____

19. Did you require any of the bidders to demonstrate how they would run your system?

Yes _____(go to 20)
No _____(go to 21)

20. Please describe the demonstration.

21. Would you do anything differently in the procurement phase the next time?

Negotiation Stage

22. How was the contract negotiated?

23. Please describe the negotiation team on your side and on the vendor's side.

_____

_____

_____

24. What was included in your contract with the vendor? The following items are suggestions only. Rate the top four in importance:

Processing location _____
Equipment ownership _____
Equipment dedication _____
Software development or acquisition _____
Software maintenance _____
Network management services _____
Problem resolution/help desk _____
Data Security _____
Disaster recovery _____
Personnel disposition issues _____
Performance criteria/penalties _____
Equipment upgrade _____
Management interface _____
Other

_____

_____

25. What is the term of the contract?_____

26. Are there clauses permitting extension?
Yes_____ Please describe these.

_____

_____

_____

No_____

27. Are early termination provisions built in?
Yes_____ Please describe.

_____

_____

_____

No_____

28. Are penalties specified in the contract if the vendor fails to satisfy certain performance criteria?
Yes_____ Please describe.

_____

_____

_____

No_____

29. Was there an escrow fund to protect the vendor from a business downturn?
Yes_____
No_____

30. How are you protected from a vendor failure?

_____

_____

_____

31. Would you do anything differently in the negotiation stage next time?

_____

_____

_____

Transition Phase

32. Were actions taken to minimize employee problems?
Yes_____ Please describe briefly.

_____

_____

_____

No _____

33. How long did the transition take, from end of negotiations to complete cutover of all systems?

_____

34. How was the transition schedule arrived at?

_____

_____

_____

35. Was there any parallel processing before final cutover?
Yes _____
No _____

36. How do you control the relationship with the vendor?

_____

_____

_____

37. Please specify how user support is provided.

_____

_____

_____

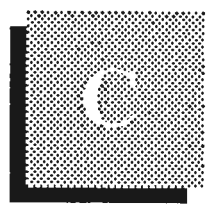
38. Would you do anything differently in the transition stage the next time?

_____

_____

_____

end



About INPUT

Company Profile

INPUT provides planning information, analysis, and recommendations to managers and executives in the information services industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

Continuous-information advisory services, proprietary research/ consulting, merger/acquisition assistance, and multiclient studies are provided to users and vendors of information systems and services (software products, processing and network services, systems management, and systems/software maintenance and support).

Many of INPUT's professional staff have more than 20 years' experience in their areas of specialization. Most have held management positions in large organizations, enabling them to supply practical solutions to complex business problems.

Formed as a privately held corporation in 1974, INPUT has become a leading international research and consulting firm. Clients include more than 100 of the world's largest and most technically advanced companies.

Staff Credentials

INPUT's staff have been selected for their broad background in a variety of functions, including planning, marketing, operations, and information processing. Many of INPUT's professional staff have held executive positions in some of the world's leading organizations, both as vendors and users of information services, in areas such as the following:

- Processing Services
- Professional Services
- Turnkey Systems
- Applications Software
- Field (customer) Service
- Banking and Finance
- Insurance
- Process Manufacturing
- Telecommunications
- Federal Government

Educational backgrounds include both technical and business specializations, and many INPUT staff hold advanced degrees.

U.S. and European Advisory Services

INPUT offers the following advisory services on an annual subscription basis.

1. Market Analysis Program—U.S.
The Market Analysis Program provides up-to-date U.S. information services market analyses, five-year forecasts, trend analyses, vertical/cross-industry market reports, an on-site presentation, hotline inquiry service, and sound recommendations for action. It covers software products, turnkey systems, processing and network services, and professional services markets. It is designed to satisfy the planning and marketing requirements of current and potential information services vendors.

2. Market Analysis Program—Europe
This program is designed to help vendors of software and services with their market planning. It examines the issues in the marketplace, from both a user and a vendor viewpoint. It provides detailed five-year market forecasts to help plan for future growth.

3. Vendor Analysis Program—U.S.
A comprehensive reference service covering more than 400 U.S. information services vendor organizations, VAP is often used for competitive analysis and prescreening of acquisition and joint-venture candidates. Profiles on leading vendors are updated regularly, and hotline inquiry service is provided.

4. Vendor Analysis Program—Europe
This is an invaluable service for gaining competitive information and for seeking targets for partnerships or acquisitions. The service provides profiles on some 450 European software and services vendors. A hotline enquiry service provides details on companies not covered by the profiles.

5. Electronic Data Interchange Program
Focusing on what is fast becoming a major computer/communications market opportunity, this program keeps you well informed. Through monthly newsletters, timely news flashes, comprehensive studies, and telephone inquiry privileges, you will be informed and stay informed about the events and issues impacting this burgeoning market.

6. Network Services Program—Europe
Network services is a fast-growing area of the software and services industry. This program is essential to vendors of EDI, electronic information services, and network products and services, keeping clients informed of the latest developments in the European marketplace.

7. Systems Integration Program—U.S.
Focus is on the fast-moving world of systems integration and the provision of complex information systems requiring vendor management and installation of multiple products and services. The program includes an annual market analysis of the U.S. systems integration market, SI vendor profiles and updates, topical market analysis reports, and an annual SI seminar.

8. Systems Operations Program—U.S.
This program focuses on the exciting resurgence of the market for outsourcing systems operations. It includes an annual market analysis report of the systems operations market, SO vendor profiles and updates, topical market analysis reports, and an annual SO seminar.

9. Systems Management Program—Europe
Systems integration and systems operations (facilities management) are key growth areas for the decade. This program examines these two areas and analyzes current market trends, user needs, and vendor offerings.

10. Federal Information Systems and Services Program
This program presents highly specific information on U.S. federal government procurement practices, identifies information services vendor opportunities, and provides guidance from INPUT's experienced Washington professionals to help clients maximize sales effectiveness in the federal government marketplace.

11. State Information Systems and Services Program (proposed)
This program presents extensive information on state government spending and procurement policies, identifies key contacts and opportunities, and provides guidance from INPUT's experienced professionals to help clients maximize sales opportunities in the state government marketplace.

12. Information Systems Program
ISP is designed for executives of large information systems organizations and provides crucial information for planning, procurement, and management decision making. This program is widely used by both user and vendor organizations.

13. Customer Service Program—International
This program provides customer service organization management with data and analyses needed for marketing, technical, financial, and organizational planning. The program pinpoints user perceptions of service received, presents vendor-by-vendor service comparisons, and analyzes and forecasts service markets for large systems, minicomputers, personal computer systems, and third-party maintenance. A monthly newsletter keeps clients informed of the latest developments in the market.

14. Customer Service Program—Europe
Customer service is an expanding area. Companies are now expanding from hardware service to more software-related maintenance and professional services. This program helps vendors penetrate these new areas and provides guidelines for future market strategy. A monthly newsletter helps clients keep abreast of the latest developments in the market.

15. Worldwide Information Services Market Forecasts
In 1989 INPUT initiated this research study, which provides an international forecast for the information services market.

Customized Advisory Services

In addition to standard continuous-information programs, INPUT will work with you to develop and provide a customized advisory service that meets your unique requirements.

Acquisition Services

INPUT also offers acquisition services that are tailor-made for your requirements. INPUT's years of experience and data base of company information about information systems and services companies have helped many companies in their acquisition processes.

An Effective Combination

INPUT's Executive Advisory Services are built on an effective combination of research-based studies, client meetings, informative conferences, and continuous client support. Each service is designed to deliver the information you need in the form most useful to you, the client. Executive Advisory Services are composed of *varied combinations of the following products and services:*

Research-Based Studies
Following a proven research methodology, INPUT conducts major research studies throughout each program year. Each year INPUT selects issues of concern to management. Topical reports are prepared and delivered throughout the calendar year.

Information Service Industry Reports
INPUT's Executive Advisory Services address specific issues, competitive environments, and user expenditures relative to:

- Software Products
- Processing Services
- Network Services
- Systems Integration
- Systems Operations
- Professional Services
- Turnkey Systems
- Small-Systems Service
- Third-Party Maintenance
- Large-Systems Service

Industry-Specific Market Reports

Detailed analyses of market trends, forces driving the markets, problems, opportunities, and user expenditures are available for the following sectors:

- Discrete Manufacturing
- Process Manufacturing
- Transportation
- Utilities
- Telecommunications
- Retail Distribution
- Wholesale Distribution
- Banking and Finance
- Insurance
- Medical
- Education
- Business Services
- Consumer Services
- Federal Government
- State and Local Government
- Miscellaneous Industries

Cross-Industry Market Report

A separate analysis covers the following cross-industry application areas:

- Accounting
- Education and Training
- Engineering and Scientific
- Human Resources
- Office Systems
- Planning and Analysis
- Other Cross-Industry Sectors

Hotline: Client Inquiry Services

Inquiries are answered quickly and completely through use of INPUT's Client Hotline. Clients may call any INPUT office (San Francisco, New York, Washington D.C., London, or Paris) during business hours or they may call a voicemail service to place questions after hours. This effective Hotline service is the cornerstone of every INPUT Executive Advisory Service.

The Information Center

One of the largest and most complete collections of information services industry data, the Information Center houses literally thousands of up-to-date files on vendors, industry markets, applications, current/emerging technologies, and more. Clients have complete access to the Information Center. In addition to the information contained in its files, the center maintains an 18-month inventory of over 130 major trade publications, vendor consultant manuals, economic data, government publications, and a variety of important industry documents.

Access to INPUT Professional Staff

Direct access to INPUT's staff, many of whom have more than 20 years of experience in the information services industry, provides you with continuous research and planning support. When you buy INPUT, you buy experience and knowledge.

Client Conference

You can attend INPUT's Client Conference. This event addresses the status and future of the information services industry, the competitive environment, important industry trends potentially affecting your business, the impact of new technology and new service offerings, and more.

You will attend with top executives from many of the industry's leading, fastest-growing, and most successful vendor companies—and with top Information Systems (IS) managers from some of the world's most sophisticated user organizations.

On-Site Presentation by INPUT Executives

Many of INPUT's programs offer an informative presentation at your site. Covering the year's research, this session is scheduled at the convenience of the client.

Proprietary Research Service

INPUT conducts proprietary research that meets the unique requirements of an individual client. INPUT's custom research is effectively used:

For Business Planning

Planning for new products, planning for business startups, planning for expansion of an existing business or product line—each plan requires reliable information and analysis to support major decisions. INPUT's dedicated efforts and custom research expertise in business planning ensure comprehensive identification and analysis of the many factors affecting the final decision.

For Acquisition Planning

Successful acquisition and divestiture of information services companies requires reliable information. Through constant contact with information services vendor organizations and continuous tracking of company size, growth, financials, and management "chemistry," INPUT can provide the valuable insight and analysis you need to select the most suitable candidates.

For the Total Acquisition Process

INPUT has the credentials, the data base of company information, and—most importantly—the contacts to assist you with total acquisition and/or partnering relationship processes:

- Due Diligence
- Schedules and Introduction
- Criteria & Definitions
- Retainer and Fee-Based
- Active Search

For Competitive Analysis
Knowing marketing and sales tactics, product capabilities, strategic objectives, competitive postures, and strengths and weaknesses of your competition is as critical as knowing your own. The career experience of INPUT's professionals—coupled with INPUT's collection and maintenance of current financial, strategic, tactical, and operational information about more than 400 active companies—uniquely qualifies INPUT to provide the best competitive information available today.

For Market and Product Analysis
Developing new products and entering new markets involves considerable investment and risk. INPUT regularly conducts research for clients to identify product requirements, market dynamics, and market growth.

More About INPUT...

- More than 5,000 organizations worldwide have charted business directions based on INPUT's research and analysis.
- Many clients invest more than $50,000 each year to receive INPUT's recommendations and planning information.
- INPUT regularly conducts proprietary research for some of the largest companies in the world.
- INPUT has developed and maintains one of the most complete information industry libraries in the world (access is granted to all INPUT clients).
- INPUT clients control an estimated 70% of the total information industry market.
- INPUT analyses and forecasts are founded upon years of practical experience, knowledge of historical industry performance, continuous tracking of day-to-day industry events, knowledge of user and vendor plans, and business savvy.
- INPUT analysts accurately predicted the growth of the information services market—at a time when most research organizations deemed it a transient market. INPUT predicted the growth of the microcomputer market in 1980 and accurately forecasted its slowdown in 1984.

For More Information . . .

INPUT offers products and services that can improve productivity, and ultimately profit, in your firm. Please give us a call today. Our representatives will be happy to send you further information on INPUT services or to arrange a formal presentation at your offices.

For details on delivery schedules, client service entitlement, or Hotline support, simply call your nearest INPUT office. Our customer support group will be available to answer your questions.

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