INFORMATION SYSTEMS AND OUTSOURCING

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Information Systems Program

***Information Systems and Outsourcing—
A Strategic assessment***

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Abstract

Under the broad term *outsourcing*, a number of changes in the information systems and services industry are being chronicled. Users are turning to outside processing utilities, turning over management of major segments of the information system process to vendors, and are looking at the role and contribution of information technology in significantly different ways.

This report analyzes, for the information systems manager, the forces underlying this outsourcing phenomenon, and provides a framework to help that manager begin to take advantage of the outsourcing alternative. This analysis looks at what is different as we enter the 1990s, and how vendors are changing. A number of the underlying issues are discussed. The goal of the report is to change and broaden the perspective of IS managers and to help them look at outsourcing from a strategic viewpoint. To meet today's information systems goals, the approach should be to use outside vendors in more expansive, longer term agreements rather than the prior approach of buying bits and pieces from a number of vendors.

Information systems managers are under ever-increasing pressure to find new, responsive alternatives to meet requirements and keep up with the pace of change. Vendors have developed broader capabilities; they are proving they can contribute to the management process, and they are selling to operating management. Outsourcing is an alternative of importance for the 1990s.

This report contains 88 pages and 41 exhibits, and was prepared as part of INPUT's Information Systems Management program.

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Introduction

Outsourcing is a term being used with ever greater frequency to describe events within the information systems and services industry, and to describe the strategies of vendors and information systems organizations alike. As we enter the new decade of the 1990s it appears there is a rush by IS groups to outsource their data centers, applications development activities (both new and maintenance) and more; and for the vendors to change their colors to become full service providers.

To the IS executive who is burdened with strategic systems objectives, systems integration projects, and more technological alternatives than can be utilized, the call to *outsource* is one more challenge, disruption and proverbial pain in the side. Operating management is asking enough questions. IS doesn't need the vendors selling yet another solution over their heads and believes it certainly doesn't need to give up further *control.* Yet as story after story indicates, IS is doing just that and claiming significant benefits.

The intent of this report is to help the IS executive look at outsourcing with a balanced view. Just what is really happening; what makes the vendors believe they can do it better; and how can an IS strategy and processes benefit from outsourcing? The goal of this report is to clarify why outsourcing in the 1990s is an alternative to consider.

A Objectives

This report on outsourcing has the following major objectives:

- To characterize the forces behind the growing tendency for large IS organizations to turn over major elements of the IS function to outside vendors
- To provide a framework for IS management to make and implement outsourcing decisions

- To identify the pitfalls and opportunities offered by outsourcing
- To characterize strategies of the growing group of vendors
- To position outsourcing as a valuable tool of the progressive IS organization in the 1990s

This report is written for the IS executive who is ready to look outside for a greater share of the resources required for success and for the vendor who desires to serve the IS function with a broad set of services.

B Methodology and Scope

1. Methodology

This report will provide a qualitative rather than a quantitative analysis. The research for this report comes, in part, from work performed by INPUT over several years in a number of areas.

- INPUT's Market Analysis Program (MAP) has tracked the underlying elements of outsourcing since its inception. MAP has identified each of the major shifts in the information systems and services industry as they pertain to the services offered and purchased. Systems integration was the most recent shift prior to the outsourcing events of 1989.
  - For this report, INPUT has looked back over the 1970s and 1980s to capture the evolution and source of change for what is now occurring.
  - The ups and downs of processing services and professional services, as well as the other delivery modes of the industry all have bearing on the direction for the 1990s.
- INPUT's Systems Integration Program has, since 1988, tracked the shift from IS buying pieces of a project or need from a group of vendors to the sourcing of the entire need from a single vendor. The emergence of systems integration marked a major change in IS alternatives and in the capabilities of many vendors.
  - In 1989, the Systems Integration Program analyzed changes in traditional facilities management. The result was a change in the name of this offering to systems operations, a recognition that the services offered and the vendor/client relationship had changed significantly.
  - This program continues to explore how the systems integration process is adding fuel to the outsourcing trend.

- INPUT's Information Systems Management program, of which this report is part, has focused on the changing role of the IS executive and function. Prior reports have also contributed to the framework and message of this report.

In June 1990, INPUT hosted a conference, *Outsourcing of Information Systems*, which was attended by the leading vendors and a cross-section of users. The numerous speakers—both vendors and information systems managers—addressed the outsourcing phenomenon from a number of viewpoints and provided support for many of the ideas contained in this report.

To verify the findings of prior research and the material presented at the conference, a limited number of interviews were conducted with vendors and IS organizations that are currently involved in outsourcing.

- The IS/user interviews were primarily of organizations that had made major outsourcing decisions in the past year or two. The questions, included as Appendix A, were intended to assess progress and performance while questioning IS management about the process and their current views towards outsourcing.

- The vendor interviews included a cross-section of the vendors from large to small, and with various heritages (professional services, processing services, etc.). The questionnaire for these interviews is included as Appendix B.

Ever since Kodak announced its decision to outsource major segments of its IS organization and function, outsourcing has been the number one topic of the industry press. A thorough review of the literature on this topic was also conducted for this report.

2. Scope

The scope of the report is sufficient to provide IS executives with an understanding of the value of outsourcing, help in assessing the opportunity, and give some initial guidelines for implementation. The report is not a cookbook, but rather a conceptual framework to help IS management consider outsourcing as a tool for success in the 1990s.

The report does not provide significant statistics supporting the outsourcing phenomenon, nor does it include a full forecast of future expenditures.

C
Report Structure

The following is a brief description of the organization of this report.

- Chapter II is an Executive Overview providing a summary of the research findings, analysis, conclusions and recommendations of the report.
- Chapter III, *Outsourcing—Past and Present*, positions this current phenomenon and provides a definitional framework for information systems to use in considering outsourcing.
- Chapter IV, *Information Systems Perspective*, positions outsourcing against the forces driving information systems functions and the organizations they serve as they enter the 1990s, and discusses how outsourcing can be used to achieve an organization's IS goals.
- Chapter V, *Outsourcing and Vendor Capabilities*, provides an overview of the vendor capabilities that are making outsourcing a viable alternative.
- Chapter VI, *Outsourcing—Decision and Implementation*, provides a framework to help the information systems executive push forward with consideration and use of outsourcing to meet his function's objectives and responsibilities.
- Chapter VII, *Conclusions and Recommendations*, summarizes the findings of this report and makes recommendations for the information systems organization concerning outsourcing.
- Appendix A is a copy of the user questionnaire used in the research for this report.
- Appendix B is a copy of the vendor questionnaire used in the research for this report.
- Appendix C is a vendor selection checklist questionnaire developed by one of the vendors interviewed for this report and reproduced with their approval.

D

Related Reports

Because of the conceptual nature of this report, it was possible—even essential—to draw on research performed by a number of other INPUT research programs. As the reader will see, outsourcing is treated as an underlying trend in information systems and services as we enter the 1990s. The impact of outsourcing is apparent throughout INPUT's recent and planned research and analysis activities, and is reflected in a variety of the reports published in the past two years and planned through 1991.

This report, as noted above, addresses the outsourcing trend from the viewpoint of the information systems executive and organization. Its primary objective is to help the IS function consider outsourcing as a viable alternative in meeting its responsibilities.

1. Information Systems Management Reports

- *The Future of Information Systems Management, 1989*
- *Information Systems Planning Report, 1988*

2. Systems Integration and Systems Operations Reports

- *Systems Operations—Growth for the 1990s*
- *Network Operations Management, 1990-1995*
- *Buyer Issues, 1988*
- *Systems Integration, 1989-1994*

3. Market Analysis Program Reports

- *U.S. Processing Services Markets, 1989-1994*
- *U.S. Professional Services Market, 1989-1994*
- *U.S. Software Products Markets, 1989-1994*

II

Executive Overview

A

Background and Methodology

Outsourcing is becoming the theme for the early 1990s within the information systems arena, just as systems integration was the new theme of the late 1980s. Information systems management is being challenged by its management and the vendor community to look differently at the process of buying products and services, and to consider giving up more of its historic turf.

In this report INPUT looks at outsourcing in a top-down qualitative style to determine if the trend is real (it is), what is driving the trend (the explosion of information technology and the pace of business change), and how IS management can use outsourcing to meet its goals of the 1990s (shift focus from operations to strategy).

To perform this analysis, INPUT has drawn on a great deal of recent research, interviewed a cross-section of vendors who are shifting their strategies to an outsourcing perspective, and interviewed a number of users who have made recent outsourcing decisions.

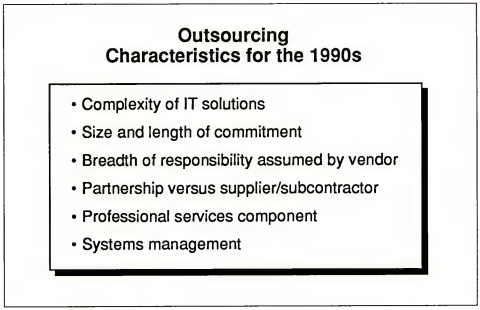
B

Outsourcing—What is Different?

As Exhibit II-1 highlights, the environment within which information systems and services are provided today is quite different from that of a few years ago.

- Today's use of information technology results in complex solutions, not individual applications. Yet the user expects them with faster delivery than ever before.

EXHIBIT II-1



- The size and length of the commitments that buyers (users and information systems) are willing to make are much larger. The focus is on solutions—not the bits and pieces that have been the general buying patterns of the 1970s and 1980s. The buyer today turns to a single purchase point, a full service vendor who can deal with a complex problem.

- The vendors who are leading the way in the changing information system sand services market have also changed.

  - They are now ready, able and willing to take on a broad set of responsibilities and to invest in the relationship with the client.

  - They are interested in long-term versus short-term relationships with their primary customers. The goal is a partnership—not a subcontractor relationship—that provides lasting client relationships and account control. This partnership makes the vendor's investment possible and of mutual value.

- The typical outsourcing relationship includes a much greater service element than before.

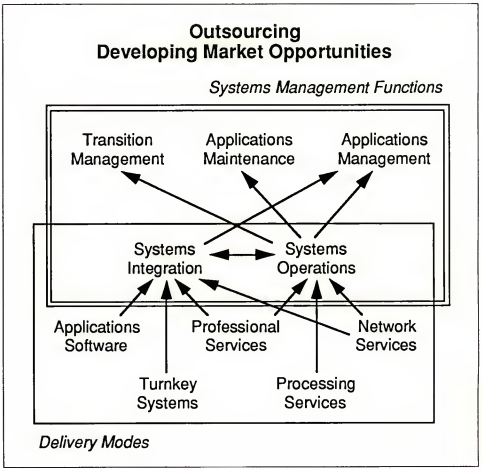
  - First, there is a large component of professional services as the buyer looks outside for expertise as well as technology solutions.

  - Second, the vendor is providing a significant management component that was simply not provided previously. The relationships are being formed at a much higher level of client and vendor management.

Outsourcing is causing some fundamental changes in the structure of the information systems and services market. Exhibit II-2 provides a comparison between the industry modes as used by INPUT to project the industry and the market opportunities developing out of this outsourcing trend.

- Over the past three years INPUT has modified its delivery mode structure to identify systems integration and systems operations as emerging and unique delivery modes. They represent significant shifts in the professional services and the processing services markets respectively.
- Systems integration and systems operations, plus additional combinations of products and services from all of the delivery modes, represent opportunities for vendors and users in the 1990s. Applications management, transition management and applications maintenance represent emerging opportunities for information systems to draw on expanding vendor capabilities.
  - Users can improve response, cost-effectiveness and planning.
  - Vendors can capture more business opportunities.

EXHIBIT II-2



C

Information Systems Perspective

1. Driving Forces

Today's information systems programs are impacted to an ever greater degree by the driving forces impacting the business in general. As Exhibit II-3 indicates, the primary forces for the early 1990s are globalization, specialization, pace of change and integration.

EXHIBIT II-3

Information Technology Driving Forces

Industry	Organization	Information Systems
Globalization	International opportunities and competition	International processing requirements
Specialization	Core business and functions	Strategic systems
Pace of change	Structural change	Rapid response and deployment
Integration	Intra-organizational relationships	Intra- and inter-organizational systems

Each force is causing management to rethink its fundamental strategies and in turn is causing information systems programs to shift as well. Today's information systems program must include:

- Full consideration of what competitors are doing on an international scale.
- True focus on the core business and functions. A strategic system is a solution that helps an organization execute a core function—one that helps differentiate it from the competition.
- The ability to respond to structural change in the business—merger, acquisition, divestiture, LBO and the elimination of levels of management. Each change can demand very fast response from the information systems staff if the change is to be successful.

- Today's strategic systems not only integrate the internal functions of a business, they also interconnect organizations. Progressive companies today use EDI to speed communication and interaction with their business partners. IS must be prepared to build bridges with external organizations.

2. Information Systems Strategy and Outsourcing

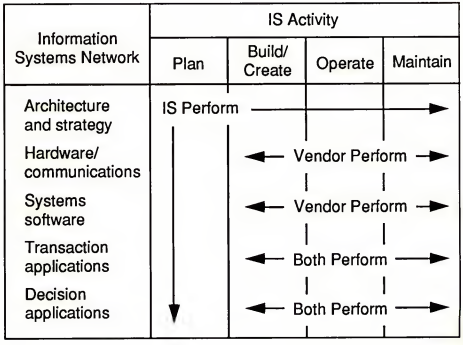
The IS function needs to take a new perspective towards its acquisition of external products and services. Exhibit II-4 defines the information systems role in terms of the elements of the information network and the activities of planning, building or creating, operating and maintaining.

INPUT believes that IS can be successful if it only controls the *planning* activity and the *architecture and strategy* element of the total information systems effort. All the rest of the elements and activities are open to outsourcing. The second and third elements have been traditionally outsourced and today's vendors are capable of creating, operating and maintaining the applications elements as well.

If it has not already done so, information systems management needs to expand its consideration and use of outsourcing products and services.

EXHIBIT II-4

Information Systems and Outsourcing



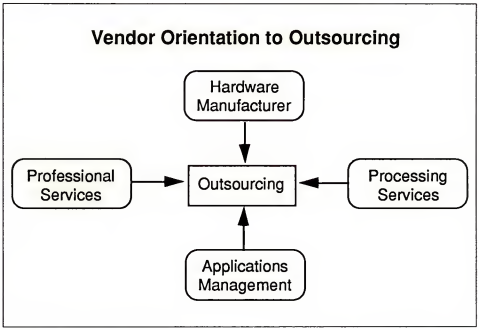
D

Vendor Capabilities

It is important for information systems to recognize the evolution taking place within the vendor community and that vendors bring different orientations to the expanding outsourcing market.

Exhibit II-5 suggests that the heritage of vendors has an impact on how they will serve the outsourcing market.

EXHIBIT II-5



- The applications management vendor is currently the true outsourcing vendor. They already provide the complete applications development, operations and support and, in vertical industries, the applications software.
- Certainly a hardware manufacturer brings to the outsourcing market an orientation tied to its installed base. Any movement to dismantle internal data centers in favor of a processing utility has complex implications.
- The professional services vendor, already challenged by systems integration, must now find the means to provide systems operations and application software if it wants to become a full outsourcing vendor.
- The processing services vendor must add applications support capabilities to participate in the redefined facilities management market (now referred to as systems operations).

Without question, the most significant change in vendor capabilities and offerings is the management component. As Exhibit II-6 shows, the management component of today's vendor offerings is much greater than it had been previously.

EXHIBIT II-6

Outsourcing Offerings
Management Component

Management Component	Vendor Offerings
Strategic	Systems management
Tactical	Applications management Transition management
Operational	Applications maintenance Systems operations
Project	Systems integration Professional services
Technical Support	Network services Processing services Turnkey systems Applications software

- In the traditional offerings of applications software, turnkey systems and processing services, there was little or no management component.
- Professional services introduced a project management component, which has expanded significantly with the emergence of systems integration. Turning the entire project over to a single vendor removes internal management from direct project control.
- Operational management was first purchased in facilities management agreements, but has expanded with today's systems operations and the newer applications maintenance offerings. Under an applications maintenance agreement the vendor is typically charged with the day-to-day interface with the end user. Internal IS management removes itself from this operational management responsibility.

- With applications management and transition management, the management component shifts to the tactical level. Not only is the vendor managing operational aspects, but many of the short-term planning elements as well.

- The next step is for the vendor to provide strategic management support. Though there are few, if any, examples of such a *systems management* offering, it does fit with the objective of forming a true partnership.

As the 1990s progress, the degree to which outsourcing agreements assign systems management responsibility to the vendor will continue to expand.

E

Outsourcing—Decisions and Implementation

1. Decision Factors

Deciding to outsource a major segment of information systems is a significant step. It is important that the right factors be part of that decision. In Exhibit II-7, INPUT contrasts the factors that would commonly be listed by general management with those of information systems. They differ significantly.

EXHIBIT II-7

Outsourcing Decision Factors
Organization versus Information Systems

Organization/ Business	Information Systems
Cost	Scheduling
Merger/acquisition	Software
Postponement	Personnel
New directions	Motivation
Focus/time	Pride
Response time	Response time
Quality sooner	Quality

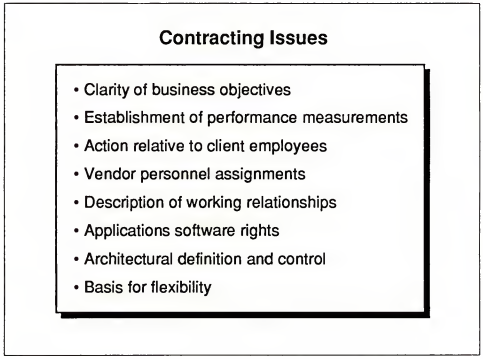
In the 1990s information systems must transcend its traditional decision criteria and adopt those of the full organization. It is such a transition that caused Kodak, a large manufacturer, to make its decision to form a systems operations agreement instead of building a new data center, and that has caused a growing number of companies to assign full maintenance support for large sets of existing systems to an applications maintenance vendor.

2. Contracting Issues

These outsourcing agreements are resulting in multiyear performance-based relationships between customer and vendor. The more expansive agreements (applications management and systems operations) have true partnerships as the overall goal. Systems integration, transition management and applications management agreements are based on specific but complex objectives. All are based on defined service levels and include a significant systems management contribution by the vendor.

In Exhibit II-8 INPUT has listed the key issues in the outsourcing contracting process. All these issues must be addressed—many before reaching the contracting phase—in order for a lasting relationship to be put in place.

EXHIBIT II-8



In discussions with vendors and IS managers it was found that the contracting process itself was not a major issue. If the following was present prior to the negotiation phase, a workable agreement resulted with reasonable effort.

- A clear set of business (versus technical) objectives for the relationship
- A means of measuring performance
- Clarity concerning personnel issues
- Customer control of the information systems architecture
- A basis for flexibility.

3. Benefits

Different categories of outsourcing have different primary benefits. Exhibit II-9 lists key benefits and identifies which are most likely to result from each of the five outsourcing categories used in this report.

The final and greatest benefit is the ability of information systems management to increase its emphasis on future uses of information technology, rather than on those currently in place.

EXHIBIT II-9

Outsourcing Benefits

Outsourcing Category	Benefits						
	Costs		Skills Access	Rapid Response	Use of Skills		Management Time
	Oper'n.	Cap'l.			Vendor	IS	
Applications management	X	X	X	X	X	X	X
Systems operations	X	X	X	X			X
Transition management			X	X	X	X	X
Applications maintenance	X			X		X	X
Systems integration			X	X	X		X

F

Conclusions and Recommendations

The conclusions from this report are presented in Exhibit II-10. The message is quite clear: outsourcing is different, has been proven effective, and can help IS be more successful in the 1990s.

INPUT's recommendation to all information systems managers is to make outsourcing part of the information systems program; it is a viable and valuable alternative.

EXHIBIT II-10

Conclusions

- Outsourcing in the 1990s is different
- Outsourcing offers a number of opportunities
- Outsourcing can lead to faster response
- Outsourcing can help IS change its role for the better
- Vendor strategies are shifting in favor of outsourcing
- Vendor performance is proving to be more than satisfactory
- The volume of outsourcing activity can only increase

Outsourcing—Past and Present

In this chapter INPUT provides a framework for IS and vendors to use in positioning outsourcing. INPUT considers outsourcing an evolving concept and trend in the information systems and services market. It is not a new delivery mode, but includes all of the products and services within the information systems and services industry as categorized by INPUT's delivery mode structure.

This chapter will provide a short historical perspective, identify what is different as we enter the 1990s, and provide a definition for outsourcing that information systems can use to consider this ever more viable alternative.

A Historic Perspective

To no one's surprise, the concept of outsourcing information systems products and services is not new. In fact, the value of IS has always been based on acquiring and applying products and services from a unique set of vendors. At first, only hardware and systems software was acquired; now a complete set of products and supporting services, including management, is acquired. Throughout the past three decades, the complexity and variety of capabilities available for sale by information systems and services vendors has increased.

Exhibit III-1 traces the evolution of three primary INPUT delivery modes: applications software, professional services, and processing services. Each has moved from a singular product or subcontractor mode in the early 1970s to a complex partnership-based suite of products and services as we enter the 1990s.

EXHIBIT III-1

Evolution of Outsourcing

Type of Product or Service	1960s 1970s	1980s	1990s
Applications Software	Applications Packages	Turnkey Systems	Applications Management
Professional Services	Consulting Contract Prog	Applications Development	Systems Integration
Processing Services	Specific Proc Serv	Facilities Management	Systems Operations

- Applications software began as—and to some degree remains—a product-only-based business. Over time some vendors began to provide a complete system that included the computer software and installation—turnkey systems. Today, the leading vendors are providing professional services to customize, integrate and even maintain the application. The product will be only a small part of the sale in the 1990s.

- The professional services vendor started by selling planning and requirements specifications or by being a programming contractor—somewhat of a jack of all trades. The next step was to merge these two services and develop the entire application. Now professional services firms (systems integrators) do it all: design the application, program it, acquire the hardware, install it and even operate it for some period of time.

- Processing services began by providing very specific individual services. They were often either application-specific (e.g., payroll) or technically unique (e.g., timesharing). That expanded in numerous directions, including network services and contracting for the operation of the central data center (facilities management).

  - Now we find the facilities management definition too limiting and have renamed it systems operations.

- The focus, formerly only on computer operations, now includes planning, control, operations and often networks and some elements of development.

- To a growing degree, the focus is on the dismantling of data centers with the client turning to vendors to provide services from the vendor's data centers—a processing utility.

None of these changes occurred overnight, but they have occurred at a reasonably fast pace over the last two decades. Where IS hesitated to go outside and usually only did so on a subcontractor basis for bits and pieces, now IS is looking at the entire requirement and buying a bigger piece from a single vendor.

B

What is Different

Perhaps it is the beginning of a new decade, but there are a number of significant elements within the information systems arena, involving users as well as vendors, that are quite different than they were just five years ago. The next two exhibits summarize those differences and help explain the source of the move to outsourcing.

1. Information Systems Users

Listed in Exhibit III-2 are the key differences as viewed from the IS perspective. They add up to a greater complexity of information technology (IT) and to the measurement of the value of information technology being tied more directly to the success of the business.

- The simple fact is that there are too many ways to use information technology within an organization. Developers have always created information technology faster than users could apply it. However, in the last half of the 1980s the rate of development exploded, outstripping an already burdened IS function. There is no way that most IS organizations can know about—let alone understand and select from—all that is available for use.

- A key restriction on the IS function is the size of the existing information technology investment. After two to three decades of development, most IS functions carry along an incredible amount of valuable, but at times restrictive, baggage. The maintenance drag is well-documented. Whether it is trying to reengineer the older applications, interface them to newer technology, or just support them, the resources required for maintenance restrict what is available for new applications and technology.

- Older information technology investments may need to be written off just like old machinery. Unfortunately, this investment isn't on the books and isn't valued like old machinery. Information systems has trouble gaining agreement to write it off.

- One benefit from a more active involvement in information systems by senior operating management is that they can decide to write off older IS investments. The expansion of systems integration is a confirmation of this change.

EXHIBIT III-2

What Is Different Information Systems

- Variety of information technology alternatives
- Size of existing information technology investment
- Size and complexity of solutions
- Organizational skills required
- Requirement for flexibility and rapid response
- Business measurement of information systems
- Shift in the location of the IT payback

- For a number of reasons the systems being developed today are larger and more complex. They address larger segments of an organization's operations, impact more people and cause more change. Yet the time between identification of need and implementation has shortened. The internal IS function often finds it does not have the necessary knowledge and skills to create today's complex solutions.

- Almost every organization is trying to do more today with less staff. There is very little ability to respond to unexpected staff requirements or to evaluate the expanded set of information technology capabilities.

  - The available pool of information systems professionals has not kept up with the demand, making them ever more expensive.

  - IS vendors have been able to attract a larger percentage of IS professionals by providing more expansive career opportunities, further impacting the recruiting efforts of traditional IS departments.

- The pace of business change is significantly faster than it was a few years ago. However, strapped with an existing information technology investment and an explosion in capabilities, the typical IS function struggles to keep up with daily requirements, let alone be able to respond quickly to the unplanned.

- A major result of the increased involvement of the end user in information technology is a change in the way the IS function is measured and evaluated. Today the measurements are commonly tied to the success of the business, which is permitting and driving different types of IS decisions.

- A recent result of the information technology explosion is a shift in emphasis within the information network. Although the mainframe will not go away, the payback is now tied to workstations, LANs and networks. The data center is becoming a utility in the true sense of the word. Once its value is viewed in this fashion, alternatives become easier to consider.

The beginning of the 1990s finds IS a more integrated and better understood function, facing the same business challenges as the rest of the organization. Because of this, IS management needs to be more flexible and open minded.

2. Information Systems Vendors

Listed in Exhibit III-3 are the key differences between current and former information systems vendors, as viewed from the vendor perspective. They add up to a stronger and more proven resource with an emphasis on services first and products second.

- The explosion in IT, though a burden for the IS user, represents an opportunity for the IS vendor. The ability to select segments of information technology in which to specialize, jump on new technology faster than the user community, and to attract skilled personnel have permitted a number of vendors to grow to significant size and capability.

- Where a large IS vendor in the 1970s was a $100 million company, today many vendors that did not exist ten years ago are approaching $1 billion. The largest professional services firms are capable of investing in and developing their own products. The larger software firms are building large professional services organizations and the already large hardware firms are shifting to software and professional services. Today, it is possible to find a strong, viable IS vendor to do almost anything with information technology and often do it better than the internal IS staff.

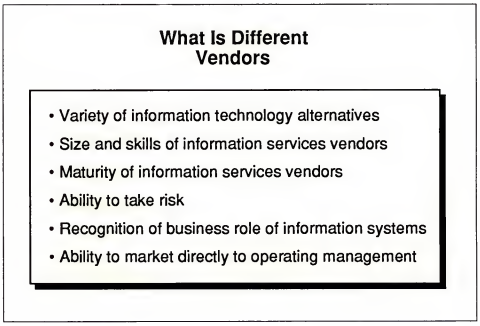
- Along with skills and size has come a maturity in the IS vendors. Many vendors now have seasoned management that is willing and prefers to establish long-term client relationships.

- Their size, along with seasoned management, makes it viable for many IS vendors to assume significant risk. In the past, as a programming subcontractor, the vendor sought short-term, time and material contracts, and the application software vendor sold but did not install its product. Today the vendor will accept a reduced return in the short term if the relationship has a long-term basis. Fixed-price contracts are the standard for systems operations agreements.

- The increased importance placed on the use of information technology by operating management has also benefited the vendor. Since operating management is more likely to describe the problem in a larger context, more complex ideas and solutions result. Many vendors are now more effective than the internal IS staff at describing how information technology can benefit the business.

- The result is the opportunity for the vendor to market directly to operating management. This permits more information technology alternatives to be considered and newer technology to be considered more quickly.

EXHIBIT III-3



The 1990s are starting with stronger, larger IS vendors capable of attacking large, complex requirements and managing the total process.

C

A Working Definition

So far this chapter has characterized outsourcing as a trend, summarized the evolution of IS vendor products and services, and shown the status of information technology use from the vendor and user points of view. In this last section, outsourcing will be described in terms of the underlying characteristics of the outsourcing decision and a definition of the types of outsourcing opportunities that are or will become common.

INPUT views *outsourcing* as the opposite of *insourcing*. Anything that IS has considered feasible to insource (data center operations, applications development, applications maintenance, network management, training, etc.) and, has traditionally done itself, should now be viewed as a candidate for outsourcing.

The momentum behind outsourcing is reflected in the recent trends in systems integration and systems operations.

Outsourcing in systems integration reflects the recognition by the buyer that the thing to be purchased is the *solution* rather than *components*. Just as a company would contract to have a new plant built, now it also contracts for all facets of the factory control systems for that plant. Instead of buying the hardware, software and integration effort in pieces from a number of vendors, it turns to a single vendor.

IS has always bought systems software, as it was just not feasible to produce it inside. On the other hand, IS traditionally has run its own data center for control and economic reasons. Today that rationale is no longer viable for many organizations; thus, the recent expansion of the systems operations market sector.

- The challenge of running a data center is demanding more financial, personnel and technical resources, which is changing the economic equation.

- Many large organizations are consolidating data centers into very large processing utilities to take advantage of data center automation and to meet the demands of network integration, yet they find the challenge outstrips the skills of their staffs.

- Meeting the demands for processing services is diverting IS management from the real priorities of solving operating problems and fulfilling information needs. By contracting the processing utility outside, attention can be focused on new applications and solutions.

Many progressive companies are looking to vendors and finding that they are now equipped to provide broadbased information systems implementation and management more effectively than are internal staffs—that is, at a lower cost and with better performance over time.

The characteristics of today's vendor/client relationships are, as noted in Exhibit III-4, quite different than those of a few years ago.

EXHIBIT III-4

Outsourcing Characteristics for the 1990s

- Size and length of commitment
- Breadth of responsibility assumed by vendor
- Partnership versus supplier/subcontractor
- Complexity of IT solutions
- Professional services component
- Systems management

- The size and length of commitment is growing along with the breadth of responsibility assumed by the vendor. Systems operations contracts are typically five years in length and often longer. Most partnerships include the vendor either taking over the entire data center or shutting the center down in favor of off-site processing. Systems integration projects are all-inclusive, and multiyear in duration.

- The relationship between client (IS and the operating unit) and vendor is better characterized by the term partnership than by buyer/supplier. The buyer is contracting for a set of services that are of strategic as well as operational value, and expects to have a relationship marked by a high level of communication, performance, flexibility and integrity—a relationship similar to the type it has with its other business partners for the products and services it markets.

- To say all of this is driven by the growing complexity of information technology is a simplification, but true. The need to integrate computing with the minute-by-minute operation of any type of business, and to do so at a lower unit cost, has added pressure to the information systems process of all organizations. The result is a changing market need and a business opportunity. Progressive IS executives are recognizing that they can't do it all, while many vendors are proving they can fill the need.

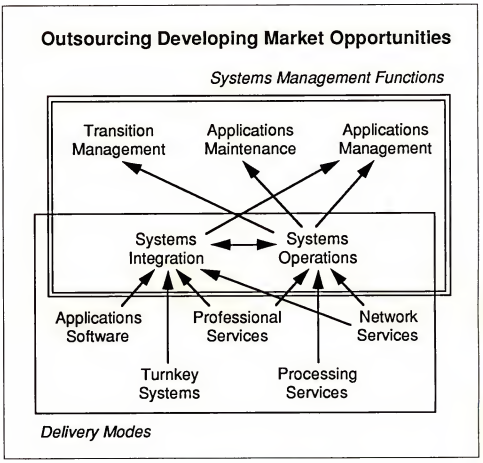
- The shift in the makeup of what is bought from information services vendors to include an ever-growing professional services component is the final significant difference. Among the fastest growing software companies are those that have made professional services a critical strategy element, which was not the case in the 1970s and early 1980s. The buyer is turning to a single vendor for the complete package of products and services.

- The result of these differences is that the vendor is now providing a significant management element along with the products and services. Whether serving as the prime contractor on a systems integration project or providing full data center and data network services, the vendor interface is at the top of the client IS organization and includes an operational, tactical and strategic element. The vendor is managing a significant portion of the IS process.

To help characterize the outsourcing trend, Exhibit III-5 draws a relationship between the delivery modes used by INPUT to forecast the information services industry and the types of outsourcing relationships that are becoming common between clients and vendors.

EXHIBIT III-5

Outsourcing Developing Market Opportunities



- All of the delivery modes represent products and services purchased (outsourced) by information systems. However, those not included in the systems management functions box do not typically include the partnership commitment of today's outsourcing decision. Professional services, processing services and the others are now the subcomponents of outsourcing relationships.

- Systems integration and systems operations are examples of today's combination of products and services, and are classified as separate delivery modes from professional services and processing services.

- Applications management has existed for some time with a few vendors taking on total operations and development support for specific applications suites. Today's applications management includes a full systems operations agreement, combined with applications maintenance and applications software, and often a systems integration assignment as well.

- INPUT considers applications maintenance an emerging outsourcing opportunity. The maintenance of the existing application investment is the greatest inhibitor to the ability of information systems to progress in the eyes of management. A small but growing number of vendors are proving they can do it better at lower costs, using disciplined methodologies, reengineering tools and entry-level staff with strong management. The opportunity exists to outsource maintenance and use internal staff to attack the backlog.

- Transition management is a second emerging opportunity. Information systems functions are shifting technology, adjusting to mergers and acquisitions, consolidating data centers and more. These shifts often take three to five years and offer the basis for a partnership with the vendor either managing the old systems, serving as a systems integrator to install the new systems, or both.

Applications management, applications maintenance and transition management all include *management* as a critical element of the service, as do systems operations and systems integration. It is the systems management skill brought to the partnership by the vendor that is the major difference and which permits the user to concentrate on other priorities.

Outsourcing is an evolutionary step, not a specific delivery mode. It impacts traditional application software, turnkey systems, processing services, network services and professional services and, most importantly, has created the newer delivery modes of systems integration and systems operations (formerly referred to as facilities management).

- Of equal importance, the outsourcing concept is being associated with new perspectives and opportunities that can be characterized as applications management, applications maintenance, and transition management.

- Each of these new outsourcing alternatives draws on the products and services that INPUT categorizes in its delivery mode forecasts, but adds a significant new element: ***systems management.***

Outsourcing is a phase in the evolution of the information services industry that greatly expands the opportunities for progressive IS executives and information services vendors.

Information Systems Perspective

The previous chapter provided the framework for outsourcing and identified the key elements of the information systems and services arena that are different as we enter the 1990s. This chapter shows the focus on outsourcing from the information systems perspective, including:

- A closer inspection of the driving forces
- A review of recent research on the evolving role of IS
- A framework for mapping outsourcing to the IS strategy
- Identification of potential outsourcing opportunities

A Driving Forces

The primary forces impacting larger organizations are well chronicled. As shown in Exhibit IV-1, today's business must deal with globalization, specialization, a rapid pace of change, and integration if it is to succeed. Each of these factors is reshaping industry and business, and is directly impacting information systems strategies and programs.

- Few industries are free today from international impacts. Market barriers are being removed in all corners of the globe, creating new opportunities and permitting the entry of numerous new competitors. Today's information systems strategy must:
  - Provide international access
  - Use international standards
  - Support international operations

EXHIBIT IV-1

Information Technology Driving Forces

Industry	Organization	Information Systems
Globalization	International opportunities and competition	International processing requirements
Specialization	Core business and functions	Strategic systems
Pace of change	Structural change	Rapid response and deployment
Integration	Intra-organizational relationships	Intra- and inter-organizational systems

- The failures of the merger/acquisition explosion of the 1980s are causing senior management to focus on the core of an organization's capabilities. The result is a more specialized and focused organization that emphasizes what it does best. Not only are organizations limiting the breadth of their mission, they are focusing on the functions most critical to that mission. If an automobile company does not need to manufacture radios to maintain its product differentiation, it also does not need to operate its own central data center. Information systems programs must:
  - Concentrate on strategic systems that support the critical functions
  - Provide the most cost effective alternative for secondary systems requirements
- The pace of change in the world has never been more rapid. Certainly information technology has been a factor in speeding up the pace, yet it remains the primary tool to help management deal with the pace. In the 1970s it was acceptable to take three to five years to build a major new system. Today it can be assumed that in three years the priorities will be different, the organization will be structured differently, and it is likely the system will not fit.
  - Today's IS program must be prepared to react rapidly to unplanned requirements, large or small.

- Doing the routine is important, but doing the unplanned is the measure of success today.

- Competing on a global basis, specializing as a source of competitive strength, and responding rapidly to change all drive today's critical requirement to integrate all aspects of an organization. Since the core of integration is the flow of information, the impacts on the IS program are extensive.

  - Internally, the information network must support the flow of the organization. Today's applications are described as large, complex, integrated and cross-functional.

  - Externally, today's IS program must create interorganizational systems. The introduction of electronic data interchange (EDI) systems has gotten more than one IS manager a deserved promotion.

No large business or organization is free from unexpected significant change today. Mergers, acquisitions, divestitures, leveraged buyouts, and reductions in work force and levels of management are all commonplace. These occurrences introduce a requirement for change into the information systems strategy that was not common just a few years ago. Change is a strong element of the equation that is driving outsourcing within the information systems arena today.

B

IS Organization in the 1990s

For years INPUT has been researching and identifying shifts in the role and priorities of information systems and the IS executive. Over the past three years, that research identified significant shifts resulting from the driving forces listed above and the explosion of information technology.

The impacts of these shifts are now being realized through such untypical decisions as those made by Kodak regarding the outsourcing of almost its entire IS function; manufacturers and banks hiring a single vendor to provide applications software, data and network operations, and all maintenance; and IS executives saying publicly, "I don't ever want to manage a data center again."

A recent INPUT report, *The Future of Information Systems Management*, recommended that corporate IS organizations adopt a significantly different style for the 1990s. As Exhibit IV-2 suggests, the IS organization of the 1990s must be:

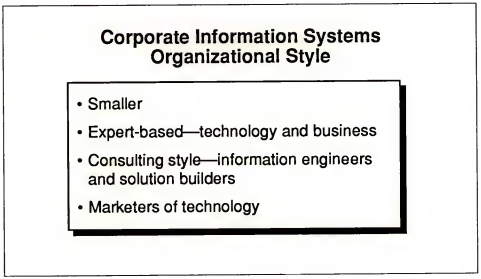
- Smaller, thus more flexible and responsive

- Expert-based, both in technology and the business

- Organized as consultants helping others to tap the benefits of information technology
- A promoter of information technology, not necessarily the implementer

The real job is to get the maximum benefit for the organization from information technology, both short- and long-term, by whatever means are available.

EXHIBIT IV-2



INPUT recommends that the central IS function consider the four roles described in Exhibit IV-3 its primary roles. IS management cannot ignore the more operational aspects of the information systems process, but with open-minded use of today's vendors' capabilities they can switch the balance of their efforts in favor of strategy, architecture, verification of implementation and the equipping of users.

- *Strategy* - This has always been an IS role, but not one that has been done well in many cases. It simply has not had time. Without a defined evolutionary strategy, new technology can't be assessed and the best alternative selected. Today there is nothing more important than concentrating on identifying the next strategic information technology alternative.
- *Architecture* - Integration can't be accomplished without a technology plan or architecture. With an architecture it becomes easier to consider outsourced alternatives and new technologies, and it is possible to address the unplanned, major requirement.

EXHIBIT IV-3

Primary Roles of Information Systems

Role	Description
Strategy	Linking information technology to business objectives
Architecture	Providing the technical infrastructure
Contract/Project Management	Overseeing the execution of major efforts
Organizational Behavior	Providing the people skills and environment for IT use

- *Contract Management* - Getting things done on time and on budget has not been a strength of information systems—yet today, more than ever, it is a requirement. IS vendors have learned how to do this, and IS departments can learn from them. If the management skills are in place, then who performs the work is secondary to being sure it is performed properly. The vendor can manage the project and IS can manage the vendor (or contract).

- *Organizational Behavior* - Today everyone is a hands-on user of information technology. From the executive suite to the factory floor, work patterns are being changed by information systems and their use. As the pace quickens, so does the requirement for behavioral support. Someone has to deal with the behavior and training aspects of IT. Who better than the IS function? It is now a full-time activity.

Successfully performing these four roles can increase the impact of information technology on the organization.

C

Information Systems Strategy and Outsourcing

1. Activity versus Control

One way for IS to stand back and consider outsourcing in a balanced manner is to tie it into the information strategy of the organization. In Exhibit IV-4, the role of IS has been divided into five elements: (1) architecture and strategy, (2) hardware and communications (3) systems software (4) transaction applications and (5) decision applications. The activities for each element of the IS program are planning, building or creating, operating and maintaining.

EXHIBIT IV-4

Information Systems and Outsourcing

Information Systems Network	IS Activity			
	Plan	Build/ Create	Operate	Maintain
• Architecture and strategy	IS Perform →			
• Hardware/ communications		← Vendor Perform →		
• Systems software		← Vendor Perform →		
• Transaction applications		← Both Perform →		
• Decision applications		← Both Perform →		

- The activity of planning and the elements of architecture and strategy should always remain within the purview of IS. They form the basis of control and, to the truly capable IS executive, are all that must be performed totally internally to meet the challenges of the 1990s.
- From the beginning, vendors have built and maintained the hardware and systems software. The renewed interest in facilities management (systems operations) is increasing vendor involvement and control over operation and maintenance of this element.

- Today, through the extensive use of applications software packages and because of the push towards systems integration, the vendor's role in applications is expanding. Either the vendor or IS can effectively build, operate and maintain these elements of today's complex information network.

INPUT suggests that IS management use this structure to evaluate forthcoming key programs. One result will be an assessment of vendor alternatives for more major programs. A second result could be better overall performance of the information systems function.

2. Impact versus Outsourcing Category

Exhibit IV-5 suggests another assessment framework. Each of the outsourcing categories is classified by the value of impact it can have on the business relative to operational, tactical and strategic activities.

EXHIBIT IV-5

Business Impact and Level of Benefit

Outsourcing Category	Business Impact		
	Operational	Tactical	Strategic
Applications Management	High	High	Medium
Systems Operations	High	Medium	Medium
Transition Management	Medium	High	Medium
Applications Maintenance	High	Medium	Low
Systems Integration	Medium	High	Medium

- If an applications management vendor can provide advanced applications software while assuming full systems operations responsibilities, information systems management can increase its focus on the goals of

the business. This is proving to be a more and more common approach in the banking industry. The outsourcing decision can have significant benefit for all levels of the business.

- A systems operations vendor can free the internal technical staff to concentrate on future information technology strategy.
- In a technology transition situation, the vendor can assume day-to-day management of the older technology, freeing the internal staff to speed its acclimation to and implementation of the new technology.
- If an applications maintenance vendor can bring a discipline to the support of the current application investment, the internal staff can work on what the user really wants—the new application.
- A systems integration project typically has its highest impact and benefit at the tactical level. The new application solution will change how a process is performed and integrate the function more tightly with the rest of the business.

By understanding the elements of the information systems program that IS must control, and recognizing where major programs will impact the organization, each new program can be assessed against the outsourcing alternative.

D

Outsourcing Opportunities

Exhibit IV-6 provides a short list of the opportunities that outsourcing can provide and which may result in benefits greater than can be provided by insourcing. This list is only a sample of what can be accomplished today with speed and success.

EXHIBIT IV-6

Outsourcing Opportunities

Need	Opportunity
Critical Application Development	Shift existing system maintenance outside
Data Center Consolidation	Use systems operations vendor to consolidate and operate with greater economies of scale
Lower Investment and Operating Costs	Move the hardware and supporting assets from balance sheet to operating expense
Transition Support	Use applications management vendor to operate existing environment while developing with systems integrator
Investment Deferral	Use a systems operations vendor to provide capacity rather than adding a computer
Advanced Data Center Technology	Use a systems operations vendor to make data center control software and disaster recovery capabilities affordable on shared basis

Outsourcing and Vendor Capabilities

The objective of this chapter is to characterize and categorize vendor strategies for the benefit of the IS executive considering outsourcing. The vendors focusing on outsourcing come from various backgrounds, have a variety of skills and orientations, and therefore fit differing client requirements. The chapter offers:

- A framework to categorize the vendors against IS requirements
- Examples of vendors and how their strategies will shift in the near term
- A review of the performance of systems integration and systems operations vendors
- A look at how the vendors help IS deal with the internal IS staff relative to an outsourcing decision
- A framework for assessing vendor capabilities in the various categories of outsourcing

In addition to the vendors that spoke at the INPUT Outsourcing Conference, INPUT interviewed a cross-section of vendors active in the broadening outsourcing arena. Included were:

- Applications management and systems integration vendors
- Traditional large facilities management firms that are adding full systems operations and applications maintenance capabilities
- A professional services vendor offering typical contract programming services who is building a successful outsourcing business in applications maintenance

- A regional processing services company that is refocusing its strategy to include expanded systems operations services on an international basis.
- A smaller systems operations company that provides services from its central data center
- A new processing services company that is the result of an internal corporate data center's decision to enter the outsourcing business as part of a strategy to stay current with technology and to maximize economies of scale

A Vendor Categorization

The five categories of outsourcing outlined in Chapter III provide a framework in which to look at typical vendors and evolving vendor strategies.

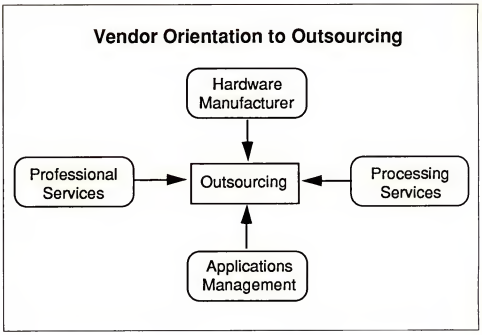
1. Vendor Orientation to Outsourcing

Just as systems integration attracted IS vendors from every segment of the industry, so is outsourcing in general. Hardware vendors expanding services, processing services companies adding application support, and professional services firms adding facilities management and processing services to become systems operations vendors are all changes currently underway.

As Exhibit V-1 depicts, the vendors bring different strengths, assets and history to meeting the outsourcing requirements of the 1990s. As a result, their strategies may differ in significant ways.

- A hardware manufacturer may be approaching systems operations defensively to protect its hardware installed base. Such a view may not fit the goals of the information systems function that is striving for the most cost-effective processing utility.
- The professional services vendor brings the ability to perform project-oriented assignments, but may not have the proven capabilities to operate the system after it is installed.
- Vendors currently offering applications management capabilities typically do so in a vertical industry (e.g., banking or health care) and often provide the core application software. Yet they may not have the skills to provide maintenance and support for the internally developed software if that is to be part of the outsourcing agreement.

EXHIBIT V-1



- Today's processing services (facilities management) vendors either take over and run the client's data center or shut it down and shift to an off-site multiclient center. The vendor requirements shift depending on whether information systems is looking for a true processing utility or just operations management.

It is important to understand the capabilities that a potential outsourcing vendor has, and those it is trying to add to expand its service offerings.

2. Vendor Strategies

Exhibit V-2 lists a small sample of the vendors that indicate they are active and aggressively pursuing the outsourcing opportunity. They range in size from about $20 million to over $1 billion. The common elements of their strategies are:

- Systems management—they will manage a full set of services for the client on a day-to-day, minute-to-minute basis.

- Longer-term relationships—an outsourcing agreement lasts at least three years, with the possible exception of systems integration projects.

- Expansion of services—not one vendor is narrowing its offerings. Their business is information systems and services.

EXHIBIT V-2

Vendor Examples

Vendor	Category	Strategy & Direction
EDS	Applications Management	Flexibility built on partnership-based strategy in all industries. Clients use own or EDS' software.
Systematics	Applications Management	Focused on partnership-based strategy in banking. It provides the software.
Genix	Systems Operations	Retaining its off-site data center focus - avoids application support, but may begin to provide through partnering.
Litton	Systems Operations	Adding capabilities to provide full applications management services.
McDonnell Douglas	Systems Operations	Committing to build a partnership by investing in the relationship.
STM Systems	Systems Operations	Expanding from facilities management strategy using advanced data center technology.
Ciber Technology	Applications Maintenance	Building applications maintenance business out of contract programming relationships. Has created own methodology.
Andersen Consulting	Systems Integration	Adding systems operations capabilities to support partnership-based strategy.

There is another class of vendor to consider: the corporate data center that decides to sell services. Certainly this is where many of the current outsourcing vendors (e.g., Litton and McDonnell Douglas) got started. One company interviewed decided to do this at the beginning of 1989.

- Corporate management identified a leveragable asset in its state-of-the-art data center and network. To keep it at the leading edge, yet affordable, it decided to sell remote processing services.
- Outside customers are treated the same way as internal business units.
- The strategy is providing expanded capabilities for internal users which are made available more quickly and on a more affordable basis.
- Although it may not be a full systems operations firm, it competes with such firms. This vendor wins the business when the potential customer is looking for something less than a full systems operations relationship.
- It aims to be processing service company like those of the 1970s offering services based on 1990s technology.

B

Systems Operations and Systems Integration

A quick review of INPUT's research into the systems integration and systems operations areas of outsourcing provides a number of insights.

1. Market Forecast

Exhibit V-3 shows the 1989-1994 forecasts for the systems integration and systems operations delivery modes. Both are key strong growth sectors for the information and services industry.

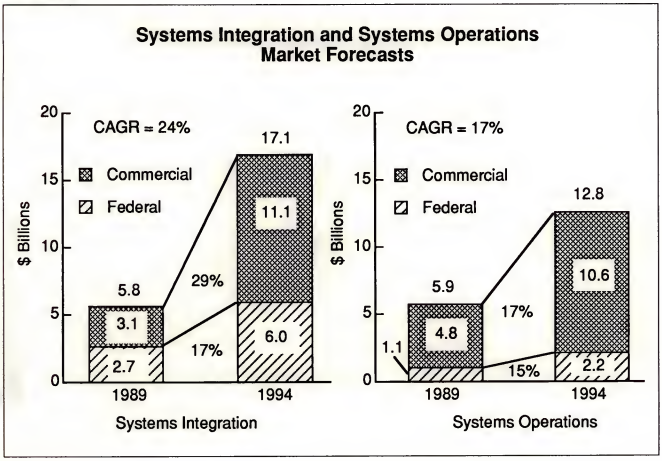
- Both systems integration and systems operations have growth rates exceeding the overall industry, which is projected to grow at 15% from 1989-1994.
- The professional services sector is projected to grow at a CAGR of 14% through 1994, while systems integration is projected to grow at a 24% rate.
- The processing services sector will grow at 12%, while systems operations will grow at 17%. The higher growth is primarily in the off-site systems operations sector, as these vendors create larger and more capable processing utilities.

These forecasts solidly substantiate the fact that users are shifting their buying patterns towards the more comprehensive services as described in this report.

- The movement by users to extended relationships with vendors can be expected to continue.

- The trend towards outsourcing will result in expanded markets for those vendors that continue to offer specialized services and products to systems integration and systems operations firms.

EXHIBIT V-3



2. Driving Forces

Exhibit V-4 provides a comparison of the forces and factors leading to the use of these delivery modes. In turn, these factors suggest some of the characteristics the vendors must have to serve one or both major sectors of outsourcing.

- Both systems integration and systems operations are proving to be a source of staff and talents not available internally to IS.

- In the technology area, these vendors offer quicker access to new technology, for the automation of the data center and data network, or for a new complex systems solution to an operating problem.

EXHIBIT V-4

Driving Forces
Systems Integration versus Systems Operations

Category	Systems Integration	Systems Operations
Staff	Scarcity of talents Unique skills	Scarcity of talents
Technology	Unique technology New technology	Increasing complexity New technology
Response	Rapid response	Service requirements Disaster recovery
Financial	One-time investment	Investment avoidance New scales of economy

- The technologies available today to improve data center operations are extensive, but expensive, and require expanded implementation skills. The systems operations vendor can afford to acquire and maintain the necessary capabilities, where many internal data centers cannot.

- The systems integration vendor is proving to be the source of new technology that the internal staff is not equipped to implement.

• The need for responsiveness is being driven by operating management in its struggle to react to business changes. Although subjective, management's reactions provide today's measure of service from the information systems program.

- Systems integrators offers the ability to meet unexpected requirements without having to expand or divert resources in-house.

- The systems operations vendor offers greater opportunities to respond to unexpected processing requirements, the flexibility to downsize due to divestiture, and affordable disaster recovery services for the medium-sized data center.

- The financial driving forces are different for systems integration and systems operations.
  - With systems integration, there is a project-oriented investment and cost.
  - With system operations, the opportunity exists to postpone major investments, put everything on a pay-as-you-go basis, remove the capital costs from the balance sheet and gain access to improved economies of scale.

The sum of these forces is further verification that today's IS vendor can provide services that truly respond to the driving forces discussed in Chapter III.

3. Vendor Performance

Research conducted by INPUT in systems integration and systems operations has helped it evaluate the performance of vendors. As shown in Exhibit V-5, satisfaction in general is quite high.

- The lowest ratings were on costs—but even these were above 3.0 on a scale of 1 to 5. The levels were above the satisfied level, and cost is not the only reason for outsourcing. In many instances cost is a secondary reason.
- The ratings on performance and quality are quite high, exceeding 4 on a scale of 1 to 5.

Although no one suggests that performance is perfect, it is achieving more than satisfactory levels and reinforcing the viability of the outsourcing alternative.

C

Vendor Support for Organizational Issues

One of the strongest deterrents to an IS manager making an outsourcing decision is the impact on the existing IS staff. A team of unique professionals that knows the current IS investment, and maintains it at any cost, has great trouble accepting that someone else can do it just as well, if not better. However, in today's fast-paced business world of constant restructuring and workforce change, resisting for this reason is unacceptable.

Fortunately, most vendors who are trying to meet application requirements, run a processing utility, maintain applications and/or operate networks realize how critical this issue can be. They have developed programs to help address this issue, and because of their own business development requirements, are always on the look-out for qualified IS professionals.

EXHIBIT V-5

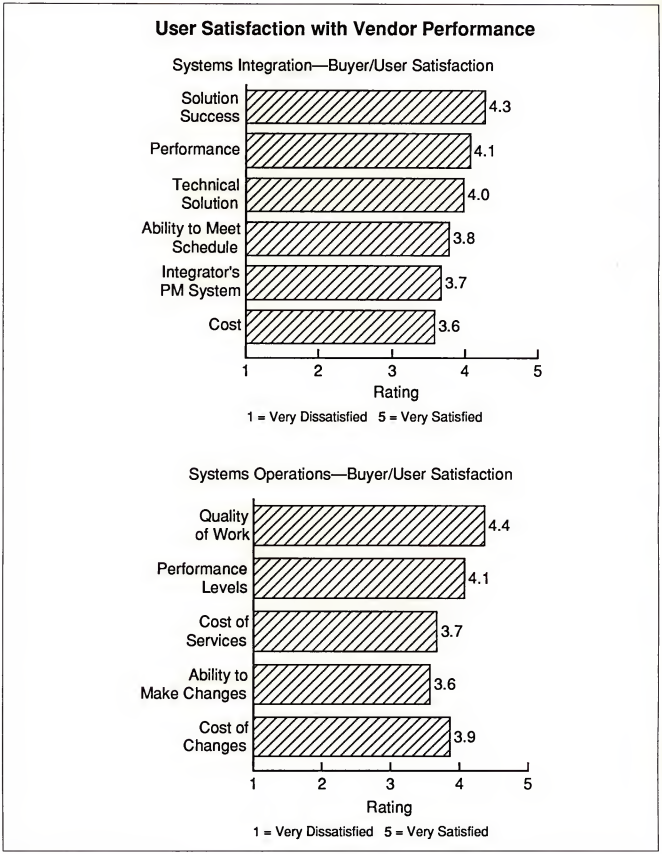


Exhibit V-6 summarizes the key efforts made by outsourcing vendors to address the personnel impacts and issues. Although some vendors are more skilled than others, every vendor works to alleviate this problem. Many of the benefits are the same, regardless of the type of outsourcing decision, but some are more important than others in the various types.

EXHIBIT V-6

Vendor Organizational Support

Outsourcing Category	Benefits/Services
Applications Management	Absorb key applications staff Provide expanded career opportunities
Systems Operations	Absorb key technical staff Provide outplacement service
Transition Management	Off-load operational management Provide crisis management
Applications Maintenance	Strengthen management process May hire key applications staff Provide entry-level training
Systems Integration	Strengthened project management Access to specialized skills Provide entry-level training

- All of the vendors indicate that they will consider hiring the staff of the new client.
  - In some instances this is essential, because the vendor will be operating the client's own data center or, more importantly, will be assuming applications maintenance responsibility.
  - In all cases it is to the vendor's benefit to work with the new client to identify which staff members are critical and need to stay on the client's staff.

- When employment offers are made, the process is well managed.
  - Vendors offer to extend benefits if there are significant differences from their own benefits programs.
  - Vendors typically have comparable or better pay scales.
  - Vendors generally end up providing a better long-term career path for the IS professional.
  - Vendors interviewed indicated they have not experienced turnover problems with staff that came to them as a result of an outsourcing agreement.
- The systems operations decision primarily impacts data center and systems programming personnel. One firm, because it uses a central data center, is always prepared to offer a structured outplacement program.
  - It uses a firm theat specializes in IS professionals and has a proven record of helping the new client keep its employees reasonably satisfied.
  - The human resources executive of this systems operations firm has become a key element in its sales cycle. The vendor's human resources department implements the outplacement program for the client.
- Compared to many internal IS functions, the vendor training programs for IS professionals are stronger.

In the next chapter, Outsourcing—Decision and Implementation, some suggestions are made for managing the impact on the IS staff.

D

Vendor Capabilities

INPUT is quick to admit that outsourcing is not a panacea or the right move for every IS organization, but INPUT does believe that it is an alternative that all IS organizations must assess in the near term. The vendors are not perfect. Vendor capabilities and related issues depend on what type of outsourcing decision is under consideration.

In Exhibit V-7, INPUT has rated the level of importance of each of seven key vendor capabilities for the five categories of outsourcing used throughout this report. A high importance rating indicates that capability is critical to the success of the outsourcing agreement between information systems and the vendor.

EXHIBIT V-7

Vendor Capabilities
Relative Importance

Outsourcing Category	Capabilities						
	Organ. Skills	Technology		Application		Sys. Mgmt.	Proj. Mgmt.
		Data Ctr.	Other	Gen'l.	Specific		
Applications Management	H	H	M	H	M	M	H
Systems Operations	H	H	M	L	L	M	H
Transition Management	M	M	M	L	L	H	M
Applications Maintenance	L	L	M	L	L	H	L
Systems Integration	L	L	H	L	H	H	L

H = High Importance, M = Medium Importance, L = Low Importance

- Key vendor issues are:

  - *Organizational Skills*—Applications management and systems operations agreements cause significant upheaval in the internal information systems organization. Progressive vendors provide support in this area to help IS management and internal personnel plan and execute the organizational changes. The outsourcing vendor may want to hire some of the staff, and has its own the reputation to protect as well.

- *Technology - Data Center*—The data center capabilities required today are far more expansive than in traditional facilities management. Proven capability to shut down a data center and integrate it into a processing utility is required for the applications and systems operations decision. A management contol system must exist to assure the contracted performance levels.

- *Technology - Other*—Other technology issues are important and can be critical to a systems integration project. The systems integrator must have the technology skills that match the specific systems solution and that are probably missing from the internal staff.

- *Application Knowledge - General*—Broad application knowledge is of great importance only in an applications management relationship where the entire suite of application systems is to be supported, and will possibly be replaced by the vendor's proprietary software.

- *Application Knowledge - Specific*—Specific application knowledge is most important to the systems integration project. It is an ingredient of success and the client should not have to teach the vendor's staff.

- *Project Management*—This is a fundamental skill required in any information systems program or project. It is of critical importance to those outsourcing relationships that are objective-based: transition management, applications maintenance, and systems integration.

- *Systems Management*—As noted in previous chapters, it is management skills (systems management) that is being purchased through outsourcing. If IS has to manage the vendor day by day, a key advantage of outsourcing is lost. In an applications management or systems operations agreement, the final test of success will be the vendor's ability to fully manage the operation and provide the service levels specified. In the end, all other issues become secondary.

INPUT believes vendors are working hard to strengthen their capabilities on a number of fronts. Their business is to manage information systems projects, programs and operations; and it is through disciplined management that they can provide a valued set of products and services.

E

Outsourcing and Systems Management

At a number of points in this report INPUT has noted the changes occurring in the management component of outsourcing offerings. Exhibit V-8 clarifies the changes.

In traditional offerings from vendors, the management component was modest at the most.

EXHIBIT V-8

Outsourcing Offerings
Management Component

Management Component	Vendor Offerings
Strategic	Systems management
Tactical	Applications management Transition management
Operational	Applications maintenance Systems operations
Project	Systems integration Professional services
Technical Support	Network services Processing services Turnkey systems Applications software

- In the earliest, traditional offerings of applications software, turnkey systems, processing services and network services, there was little if any management component. Support following the purchase was and remains technical in nature.

- With the growth in professional services from contract programming to actual applications development, a project management component was introduced. It was part of the service purchased by information systems.

- Only in the facilities management area was there any operational management contribution.

In the current offerings of systems integration and systems operations, the management component becomes more dominant.

- The project management component expanded in size and importance with the emergence of systems integration. By turning to a single vendor, who in turn may subcontract, information systems is transferring the majority of the project management task to the systems integrator. The vendor interface is with a senior IS manager and is limited to a specific project.

- Today's systems operations agreement provides for a significant operational management component. With the entire data center and data network being turned over to a vendor, the full day-to-day management responsibility is being provided by the vendor. Management is performed by information systems tied to specified performance levels.

With the newer categories of outsourcing, the management component is again growing.

- In an applications maintenance agreement, the operational management component typically includes a direct day-to-day interface with the user and a 24-hour interface with the data center. Internal IS management steps back to a measurement and planning role.

- For applications management and transition management, the management relationship reaches the tactical level. The vendor is directly involved and is impacting the entire information systems program. The management component goes beyond day-to-day to short-term plans and decisions. The vendor interface now spans most or all levels of internal IS management and has many of the elements required to form a partnership.

All of this suggests a future outsourcing offering that could be called systems management, at which point the full partnership is achieved. The vendor is involved in all levels of the information systems program and is providing a strategic, tactical, and operational management component.

The closest outsourcing decisions to get to this level to date might be the following:

- Kodak's decisions (however, there are at least three primary vendors involved)

- A few banks have signed applications management agreements that have resulted in the transfer of all IS activities, except long-range plans and architecture, to a single outsourcing vendor.

Outsourcing—Decision and Implementation

Chapter III provided a framework for understanding the recent growth in outsourcing and the underlying causes, Chapter IV put outsourcing into the perspective of the information systems function, and Chapter V provided an overview of vendor strategies and capabilities. In this Chapter INPUT discusses the decision making and implementation process.

This chapter addresses the factors impacting outsourcing decisions and the vendor selection process, presents ideas for managing the vendor, and discusses organizational impacts. The last section provides a framework for assessing benefits from outsourcing.

A Outsourcing Decision Factors

A variety of factors are driving a greater number of organizations to consider IS outsourcing. Exhibit VI-1 provides two perspectives on outsourcing decision factors: that of the organization or business and that of the information systems function.

EXHIBIT VI-1

Outsourcing Decision Factors
Organization versus IS

Organization/Business	Information Systems
Cost	Cost
Merger/Acquisition	Software
Postponement	Personnel
New Directions	Motivation
Focus/Time	Pride
Response Time	Response Time
Quality Sooner	Quality

1. Organizations' Perspective

Many of the major outsourcing decisions that have been chronicled in the industry press and those identified by INPUT can be tracked directly to a major shift in the direction of business. Mergers, acquisitions, LBOs, and restructuring all lead senior management to ask for quick, responsive, and more-cost-effective IS organizations. When senior management participates in the outsourcing decision, the process becomes very business driven, as indicated by the factors listed in the left-hand column of Exhibit VI-2.

- A number of the organizations that are considering systems operations firms for data center outsourcing are looking for ways to lower investments and find cost savings in the immediate time period following an LBO or divestiture.

- One of the companies interviewed turned to a systems operations company to support its merger and acquisitions strategy. The IS executive knew there was no way his IS strategy could be supported internally on a cost-effective basis. The response required to absorb acquired companies and spin off divestitures could only be accomplished with the capabilities and flexibility provided by a systems operations vendor.

- A principal element in the growing use of systems integration is simply response time. Today's complex systems take significant blocks of development resources that are best outsourced—especially when they also require technical skills not present in adequate quantity within the current IS staff. Operating management increasingly knows what it wants and when it is needed; the decision to outsource is then a result of business needs, not the personal or technical preferences of IS experts.

EXHIBIT VI-2

Outsourcing Relationship Classification

Relationship Type	Outsourcing Category	Relationship Characteristics
Partnership-Based	Applications Management Systems Operations	Management-oriented Broad scope Open-ended timing Broad expertise Personnel transfer Flexible agreement Service levels
Objective-Based	Transition Management Applications Maintenance Systems Integration	Project-oriented Specific scope Specific timing Specific expertise Focused agreement Target dates

2. Information Systems' Perspective

When the outsourcing decision falls to IS, it can become entangled in the internal pride and history of a support organization that is increasingly in the limelight. The result is that most IS management still typically looks at outsourcing, at least initially, with a negative connotation. IS managers believe:

- Outsourcing will lead to a loss of direct control, create new management challenges, and further represents the growing involvement of operating management in the operation of IS. (Interestingly, the last two are something IS management has sought in prior years.)

- Outsourcing often results in organizational upheaval and consequent personal issues. IS management continues to prefer to deal with the technical, not the personal, issues. An IS manager may not realize that once the outsourcing agreement is implemented, the people management challenge of the job may have diminished.

- Outsourcing entails long-term commitments at a time when management is asking for increased flexibility and speed of response. It's not apparent that the vendor can be more flexible and responsive than the internal IS organization.

This leads to a set of decision factors like those in the right-hand column of Exhibit VI-2. The management challenge for IS is to transcend this list and to adopt a set of factors that more directly parallels that of the organization as a whole.

For example, a recent decision by a major manufacturing firm to outsource its data center resulted from a need to build a new center at a time of significant capital demands by the business.

- The data center had to move and be upgraded. The CIO realized that the capital required would be taken from more-critical business programs. He introduced the outsourcing concept, then spent a year developing the alternative and selling it to senior management.

- This CIO transcended the issues of control and internal pride and provided the organization with more capability and flexibility while avoiding a major investment. In addition, the community gained because the outsourcing vendor agreed to install a regional data center in the city.

Another example was the decision, in late 1989, by a large process manufacturing company to contract for application maintenance services. Although not a major decision, it involves the equivalent of ten to twelve application development personnel; it is one example of IS management's looking for business solutions.

- The applications maintenance vendor has contracted for a specified service level for a set of application systems representing about 1200 programs. These systems are mostly older technologies representing COBOL, IMS, FORTRAN, HP3000, and others.

- The agreement provides 24-hour maintenance support and application enhancement. It transfers day-to-day responsibility for the end-user interface directly to the vendor. The internal IS staff is not involved to any degree on a day-to-day basis.

- Following initial apprehension by the user community, service and user acceptance has been very high.

- The benefits to IS include: availability of the internal staff for new assignments, higher efficiencies, and guaranteed backup of specialized skills (e.g., HP3000 support) for a standalone set of applications.

- This contracting decision is just one of a number of incremental decisions by this IS management team that has turned the orientation from doing everything internally to looking for the best alternative, including the use of outside services.

B

Client-Vendor Relationship

1. Type of Outsourcing Relationship

As discussed in Chapters IV and V, there are some important differences in the various categories of outsourcing. In Exhibit VI-2, INPUT has contrasted the categories on the basis of the types of relationships that are established and the differences in the characteristics of those relationships.

The stated objective of today's outsourcing vendor is a *partnership* with its clients, yet the result of many major outsourcing decisions remains an *objective-based* relationship that is tied to fairly specific but complex goals.

- Systems operations and applications management can be classified as having a true partnership as an underlying goal. Both represent a *single-source* buy decision for critical services—including a processing utility, application software, and application maintenance.

  - Although it is services that are being sourced, it is the management process along with a broad basis of expertise that is most critical to services. The customer becomes dependent on the vendor for day-to-day, minute-to-minute support.

  - The relationship scope is broad and nonspecific and deals with a large set of individual services.

  - The timing is designed to be open ended and starts with a long-term (three- to five-year) commitment.

  - There are significant, lasting organizational impacts.

  - The business structure must be flexible and allow the client to change its business and the vendor to suggest changes that are of mutual benefit.

- Performance is based on service-level measurements not specific point-in-time accomplishments. The cost structure needs to be predictable. Predictability usually means a fixed base level of cost plus predefined incremental costs and penalties for changes in service requirements.

- Applications maintenance, transition maintenance, and systems integration outsourcing decisions are generally based on a set of specific objectives. While they also tend to be single-source decisions, the breadth of the decision and the various delineating elements are more specific.

  - The primary goal tends to be project oriented; timing and scope are tied to specific goals.

  - The expertise required by the vendor is specific and often not available within the client's staff.

  - The business relationship is focused on the specific goals, and performance measurement is tied to specific dates and costs.

The objective-based relationships can certainly lead to partnership-based relationships.

- An applications maintenance relationship, if successful, will extend over a long time and can expand to cover a complete set of applications and even new development.

- A systems integration relationship can become, or include from the beginning, systems operations requirements.

When the change occurs, it is critical that the client and vendor recognize the differences in characteristics of the changed relationship. The result will probably mean a redefinition of the business relationship.

It is essential that IS management define the expected outsourcing relationship from the start and understand the key characteristics desired for the relationship. Otherwise the vendor may define it for you, or worse, both parties get it wrong.

2. Systems Operations Experience

Exhibit VI-3 draws on recent research in the systems operations area. It ranks a number of criteria used by a group of IS organizations that have made outsourcing decisions and are using a systems operations vendor to provide the data processing utility.

- Better service, scarcity of required skills, and lower costs top the list.
- Better response is a theme throughout the list of criteria.

EXHIBIT VI-3

Systems Operations
Original Decision Factors

Ranking	Criteria
1	Better/more-flexible service
2	Availability of internal operating skills
3	Lower operating expenses
4	Faster application changes
5	Data security/privacy
6	Faster application development
7	Response to personnel changes
8	Reduced capital investment
9	Mission-critical applications
10	Labor relations/unions
12	Executive energy and time
13	Operation on a dedicated system

C

Vendor Selection

Having made a decision to seriously consider outsourcing, the next step is to begin the vendor selection process.

The components of the outsourcing requirement are the initial set of criteria for vendor assessment. Exhibit IV-4 provides a sample list of the standard components of most systems outsourcing decisions.

- Taking the time to create an initial requirements specification for each of these standard components, as well as any unique components, will provide a foundation for understanding and comparison.
- The same requirements specification provides the basis for a true evaluation of whether to continue to insource the portion of IS activity under study.

- The requirements specification will also identify the critical elements and type of vendor relationship required should outsourcing result.

EXHIBIT VI-4

Components of an Outsourcing Decision

- Hardware
- Software
- Personnel
- Telecommunications
- Facilities
- Disaster backup
- Security
- Flexibility

Exhibit VI-5 provides the results from the same research displayed in Exhibit VI-3. In this exhibit the criteria used to evaluate the vendors are ranked.

- Not surprisingly, prior experience in systems operations and overall cost received the highest ranking. The experience criteria include proven management capability.

- The least important criterion was where the systems operations was to be performed. Once you decide to have someone else operate the processing utility, it doesn't really matter where it is located. The key measurement becomes service level, not location.

- The linking of systems integration and systems operations, as indicated by the fourth-ranked evaluation criterion, is further validation of the linking of these outsourcing services by the customer.

EXHIBIT VI-5

Systems Operations
Vendor Evaluation Criteria

Ranking	Criteria
1	Vendor Systems Operations experience
2	Overall cost
3	Data security and protection
4	If SI contract, SO by prime contractor
5	Vendor provided hardware and software maintenance
6	Application software repair
7	Application software improvements
8	Reduced capital investment
9	Cash flow improvements
10	SO performed in client's facility
11	Labor relations/unions
12	SO performed at vendor location

Exhibit VI-6 depicts similar results concerning the selection of systems integration vendors. Four of the first five criteria map directly to the objective-based relationship that is the basis of systems integration.

- Without the combination of industry, application-specific, and project-oriented experience required for success, there is little reason to keep the vendor on the list.
- The second tier of criteria tends to deal with either the ability to counter potential weaknesses through alliances, or verification that the vendor has performed efforts of similar complexity.

EXHIBIT VI-6

Systems Integration Vendor Selection Criteria

Ranking	Criteria
1	Industry experience
2	Application knowledge
3	Cost/performance
4	SI experience
5	Project management skills
6	Support skills
7	Service orientation
8	On-site visits
9	References
10	Alliances

Appendix C of this report provides an extensive checklist questionnaire offered by a full-service vendor to its potential clients. It will prove useful to any IS organization during the vendor evaluation process. Many of the same questions can be asked of the insourcing alternative if it is to be considered.

D

Managing the Vendor

1. Information Systems Responsibilities

When the decision has been made and the vendor selected, just what role must IS management play? Although some vendors might imply they want you to walk away and leave them the keys, those with experience know that does not work because it eliminates a key element necessary to the partnership.

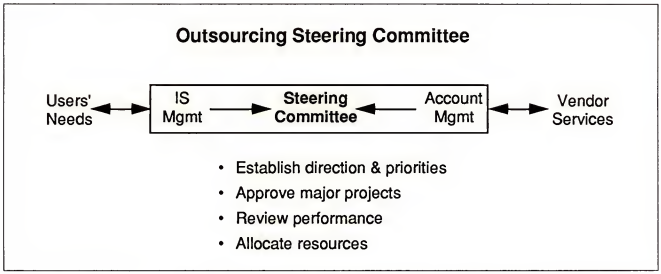
- IS management serves as the buffer, the policeman, and the controller of the relationship.
- IS must do all the things a purchasing agent does to manage the relationship with a principal supplier of components to a manufacturing plant. Just-in-time management applies in systems outsourcing as well.

- Information systems management provides the primary management between the partner managing the outsourced services and the business organization, a relationship that is very similar to that which IS has with current, major internal users such as business units or divisions.

2. Outsourcing Steering Committee

Remember the information systems steering committee, the often-suggested, seldom-effective means to draw senior management into the information systems planning and decision process? Such a structure is proving to be an ideal approach to managing an outsourcing relationship. Exhibit VI-7 provides a framework for an outsourcing steering committee.

EXHIBIT VI-7



- The benefits accrue to both the client and vendor by having a forum for structured interchange and planning that is separate from the day-to-day operational interface.

- The primary interface must be with an account manager from the vendor. That person may be responsible for the day-to-day as well as the overall relationship. By using a steering committee, the account manager and the internal IS manager have an infrastructure that permits them to back away and look at the relationship with a broader perspective. Without the steering committee, the broader perspective is not easily developed.

- The steering committee provides a structure to draw operating management into the relationship with the outsourcing vendor on a routine or as-needed basis, while keeping operating management separate from the daily interface.

- When there is a need to make a change in the relationship, which is inevitable, the forum exists for client management to present that need.

3. Contracting Issues

Constructing an agreement for a broad set of services can be complicated and time consuming. There are simply too many possibilities and unexpected events to be able to anticipate them all in the agreement.

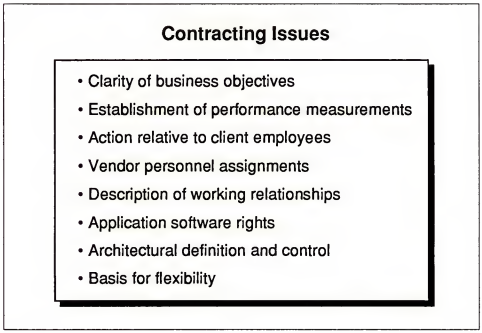
From discussions with IS managers who have negotiated outsourcing agreements, INPUT has concluded that the success of the contractual process is directly tied to the quality of the work that has preceded this phase.

- If the decision is well thought out, and the services to be outsourced defined and understood, the contractual element can become a reasonably straightforward event.

- Research on both systems integration and systems operations contracting efforts has confirmed that the process can be efficient and nondisruptive. While these agreements may be vastly different from those previously negotiated by IS managers, such agreements can be created with reasonable effort and without significant apprehension.

Exhibit VI-8 lists the key issues that need to be addressed prior to starting the actual negotiating process.

EXHIBIT VI-8



- If the business objectives are clear and the performance measurements defined, the majority of the monitoring controls will already exist.

- If the action relative to existing client personnel and the key vendor assignments is defined, then personnel surprises will be prevented. The one repeated complaint from clients is that the vendor changes the account manager at the wrong time, just when he/she is doing a good job.

- If the working relationship for operations and planning is described, then both parties will know how issues will be worked out. If there is to be a steering committee (INPUT recommends one), then specify the participants and obligations in the agreement.

- If applications software is involved, either owned by the vendor or developed by the vendor, the agreement must specify ownership and rights beyond the term of the initial agreement. It is the application software, not the processing capability, that has significant long-term value.

  - If the applications software is vendor owned, does the customer retain the right to keep it if they insource or change vendors in the future?

  - If developed by the vendor for the client, what rights does each party have?

  - If developed by the client, but enhanced and maintained by the vendor, what rights does each party have?

- The smart vendor will agree that the final control on the use of information technology must remain with the client. The definition of the architecture is essential to success today, whether outsourcing is used or not. If you decide to use the outsourcing alternative, you must create and maintain an IT architecture to assure clarity of overall direction to both parties.

- Most importantly, think about and define in simple terms the type of flexibility required to meet the longer term business objectives of the organization.

The contractual process really starts before the vendor selection process when the outsourcing specification is created. Exhibit VI-9 defines four phases of the contracting process. Viewed in this way, the process is not a single step, and negotiations are just one step in the process versus an activity in and of itself.

EXHIBIT VI-9

Contracting Process

Phase	Objectives
Investigation	Clarity of business objectives Initial vendor elimination
Relationship Definition	Define it without the lawyers Emphasis on service and flexibility Business versus contractual Include IS responsibilities Define transition responsibilities
Contract Negotiation	Keep it short Provide mutual incentives Clarity about people issues
Contract Monitoring	Ability to adjust plan, not contract Control by a steering committee

- One of the first requests to a vendor receiving serious consideration should be for a sample contract. All vendors have them and, even though you may want to use your own contract, it will provide insight into how this vendor defines its client relationships.

- As noted above, the key to a successful contract is a clear definition of the desired business relationship. If it exists, the contract will reinforce it, not complicate it.

- If the relationship is to resemble a partnership, then there must be mutual incentives. Build incentives into the contract and make them simple to measure.

- In the long run, a key element of the agreement will be how it deals with changes in requirements. Nothing is constant, yet a common goal is a fixed-price, easy-to-understand business relationship. Create a framework to absorb change without disrupting the basic agreement. Doing so will provide a true test of how interested the vendor is in a long-term relationship.

E

Organizational Impacts

In Chapter V the issues of organizational impact were introduced in conjunction with vendor capabilities in this area. In this section, these impacts will be looked at from three perspectives: the total organization, IS management, and the IS professional.

Exhibit VI-10 summarizes the impacts described in the following subsections.

EXHIBIT VI-10

Organizational Impacts

Group	Impacts
Total Organization	No visible impact Reallocation of personnel Faster access to skills More disciplined implementation
Information Systems Management	Manage a smaller organization Shift to tactics and strategy Time available for planning
Information Systems Professional	Significant initial anxiety Greater career opportunities

1. Total Organization

If implemented successfully, a systems operations agreement should result in the organization as a whole seeing no immediate impact, with improvements in services and service levels occurring over time.

Systems integration and applications management can provide much faster access to the skills and capabilities required by today's information technology to respond to the unexpected business requirement.

Systems operations and applications maintenance can bring more disciplined management of systems functions that will provide benefits through improved execution while demanding more discipline from the client organization.

The benefits from outsourcing to the organization as a whole will come over time. The impetus to outsource will often come from changes in the organization as a whole.

2. Information Systems Management

The anxiety that will be felt by the IS professional staff will hit most IS executives even earlier. Even the progressive executive who sees real opportunity from outsourcing will have serious concerns the first time they consider systems integration, systems operations, etc.

- That anxiety may be heightened if senior management is the promoter of the outsourcing concept.
- Anxiety certainly is caused by the challenge to deal with a changed role if outsourcing of any significance is implemented.
- Anxiety may result in the belief that after outsourcing, there will not be a role for the senior level of IS management.

Once a major outsourcing decision is implemented, IS management should experience the following from almost any outsourcing decision. All permit IS management to increase its contribution to the business.

- A shift in management attention from operational to strategic issues—in particular, relative to the specifics of the area(s) involved in the outsourcing decision
- An opportunity to deploy more disciplined management techniques
- An opportunity to increase time allocations to other areas of IS
- The opportunity to build an IS organization for the 1990s as discussed in Chapter IV

The idea that outsourcing will eliminate the need for IS executives or an in-house IS staff will prove ill-founded. The role changes, but only for the better for IS and the organization served.

3. Information Systems Professionals

There are three categories of IS professionals impacted by most outsourcing decisions: those who stay, those who join the vendor, and those redeployed internally or externally. In the beginning and until implementation, all are critical to success.

- It may be obvious, but keeping any member of the IS staff in the dark during the study period is a mistake. No organization has a grapevine-like information systems. Very early in the process, it is essential that management begin to lay out the possibilities that are under review.

- Anxiety will be great among the IS staff and will grow if management doesn't follow an open-book policy.
- Personnel issues need to be identified up front and initial commitments made.
- A process for keeping everyone informed must be put in place.
- A means to generate broad participation must be developed.

• For each of the categories, incentives need to be considered.

- If staying, identify the future opportunities.
- If being ask to join the vendor, emphasize the career benefits.
- If employees will be offered opportunities elsewhere in the organization, be sure the process is understood.
- If employees will be asked to find employment elsewhere, decide what type of assistance will be offered.

The outsourcing vendors interviewed uniformly reported success with the hiring of IS professionals from their clients following the signing of an agreement. Certainly not all can be offered a job, but those who receive offers frequently accept and do not have a turnover rate any higher than that of existing vendor employees.

• For the true IS professional, working for a company that considers information systems and services its true business can bring far greater career opportunities than cases where IS is only a part of the business.

• The vendor will identify preferred transferees very early.

• The vendor will also identify those who are overpaid or underqualified and help the client address what may be a long-standing problem in some individual cases.

IS management should expect significant help from the outsourcing vendor in this area. Such vendors have experience to draw upon.

F

Insourcing

Certainly any IS organization that makes an outsourcing decision must consider the potential need to insource at a future date.

• A systems integration decision brings new technology and added operations and applications maintenance responsibilities at some time.

- An applications maintenance outsourcing agreement will mean the deterioration of internal knowledge about a set of applications.

- A systems operations relationship means elimination of extensive capabilities, both hardware and personnel.

- An applications management relationship is a combination of all of the above.

Only a transition management outsourcing effort seems to have limited long-term exposures. If the outsourcing vendor assumes responsibility to operate the existing environment while a new hardware technology and application set is implemented, then the old skills do not have to be maintained while the new are being developed. The benefits can be extensive.

1. Vendor Perspective

Discussions with vendors indicate that the insourcing issue, while always present, is not a critical factor.

- Vendors offer protection to their clients with commitments to help insource, licenses to software proprietary to the vendor, and help in training new staff.

- All of the vendors indicated that they have not experienced significant decisions to insource at the end of agreements and that they believe this success record will continue as the outsourcing concept becomes institutionalized.

  - Once the IS executive and organization as a whole can concentrate on futures, they are not interested in returning to the distractions of operations and maintenance.

  - More common is the expansion of the outsourcing relationship midway through, or at the end of, the initial term of the agreement.

- It is also interesting to note that most systems operations and applications management vendors report very few if any losses to other vendors at the end of the agreement.

  - This is an indication that strong balanced relationships are being developed between vendor and client.

  - Perhaps as the utilization of outsourcing and competition among vendors grows movement among vendors will develop. But if there are five years of reasonable success between the vendor and client, there will have to be significant incentives to change.

2. Information Systems' Perspective

When the IS managers were asked about insourcing, they tended to downplay the issue. Having made and implemented their outsourcing decision, the idea of insourcing was years into the future.

- More than one IS executive has been heard to say, "I do not want to ever run a data center again."
- Others commented that in five years the central data center will be even more of a processing utility. They can not conceive of strategic reasons to insource.

It seems that decisions to insource major applications management and systems operations agreements after a five-year period will be driven by the following:

- A significant and unexpected shift in the cost equation in favor of insourcing
- A decision to shift the underlying information technology

G

Information Systems Outsourcing Benefits

If IS is to look at outsourcing in a balanced manner, it needs to recognize the specific benefits that will result. Exhibit VI-11 summarizes the key potential benefits against the five most common outsourcing categories as defined in Chapter III. Although this table is an oversimplification, it also provides a framework for IS management to consider outsourcing on a balanced basis.

To be of value, outsourcing must provide benefits critical to today's challenges.

- Cost benefits can be of two types: operational and capital.
  - Vendors have a proven ability to lower operating costs with applications management, systems operations, and applications maintenance services. In many cases the savings reach 20% or more, and of course stretch over three to five years.
  - With applications management and systems operations, the capital costs transfer from the client to the vendor. In today's world where capital requirements exceed resources, the ability to transfer capital costs to another company can be of great benefit and can permit the capital to be applied to core business functions.

- The ability to access skills not available internally, and thereby respond much more quickly, is a benefit gained from all categories of outsourcing.

- Making the best use of the personnel skills of the vendor and the internal IS staff is a paramount goal today.

  - In a transition management situation, IS can focus its internal staff on the strategic goal, moving to the new while the vendor operates the old.

  - With applications maintenance, the internal skills needed to achieve development of the new are no longer diverted by the never-ending, easier-to-accomplish maintenance of the old.

- Furthermore, IS can gain by reducing the day-to-day management efforts in one area (e.g., data center operations) and applying them to other, more important areas (e.g., planning a future IT architecture).

In actual practice the benefits will be more specific and quantifiable. The key is to realize that they are real and worthy of consideration.

EXHIBIT VI-11

Outsourcing Benefits

Outsourcing Category	Benefits						
	Costs		Skills Access	Rapid Response	Use of Skills		Management Time
	Oper'n.	Cap'l.			Vendor	IS	
Applications management	X	X	X	X	X	X	X
Systems operations	X	X	X	X			X
Transition management			X	X	X	X	X
Applications maintenance	X			X		X	X
Systems integration			X	X	X		X

Conclusions and Recommendations

This analysis of outsourcing has been addressed to information systems management with the objective of broadening their perspective on the value of outsourcing. There is ample documentation that information systems and operating management are turning more frequently to outside resources for information technology, and doing so by sourcing from a single vendor.

A Conclusions

The key conclusions from this qualitative analysis of outsourcing are the following:

- There are significant differences in the outsourcing being done today than just a few years ago. Most significant are:
  - The breadth of services from a single vendor
  - The inclination to buy from a single vendor
  - The magnitude of the professional services content of most outsourcing relationships
  - The amount of management responsibility assumed by the outsourcing vendor
- Outsourcing is more than systems integration and systems operations—including new and expansive combinations of existing products and services to provide applications management, transition management, and applications services.

- The biggest challenge facing any organization today is response time. An IS organization that continues to do all or most by itself cannot meet the response expectations of management. Outsourcing is a tool to meet that expectation.

- The benefits to the information systems function from outsourcing can be many, but most significant is that IS can gain the freedom and ability to play a stronger leadership role.

- The progressive information systems and services vendors are shifting their strategies to provide broad, flexible products and services to meet outsourcing requirements. These vendors market a combination of professional services, systems operations, applications development, and support—and within vertical industries, focus on applications software as well.

- INPUT's research in the systems operations and systems integration areas is recording better-than-satisfactory vendor performance. Vendors are proving they can provide the products and services on large agreements, provide systems management, and build solid partnership relationships with their clients.

- The fastest growing delivery modes within the information systems and services market are tied to outsourcing. Systems integration is growing faster than professional services, and systems operations is outgrowing processing services.

EXHIBIT VII-1

Conclusions

- Outsourcing in the 1990s is different.
- Outsourcing offers a number of opportunities.
- Outsourcing can lead to faster response.
- Outsourcing can help IS change its role for the better.
- Vendor strategies are shifting in favor of outsourcing.
- Vendor performance is proving to be more than satisfactory.
- The volume of outsourcing activity can only increase.

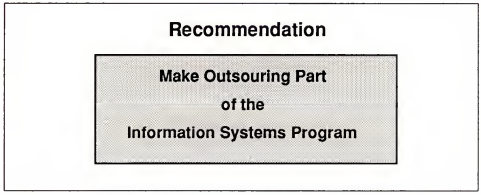
B

Recommendations

INPUT's recommendation to IS management is simple—consider outsourcing as an alternative for each major information systems program. Outsourcing can prove to be the tool that unlocks the information systems program from a number of the existing restrictions, including: limited staff, application development backlog, knowledge of new technology, management skills for large projects, and more.

- Use outsourcing to assess the overall effectiveness of the data center and network. The result may well lead you to switch to an outside utility and simplify your life.
- Use outsourcing as a solution to the maintenance-versus-new-development dilemma. The result may be a more disciplined maintenance process.
- Use outsourcing as a means to broaden the thinking of operating management—they pay the bills and should have access to all alternatives.
- Use outsourcing as a means to reorient IS management to higher-level priorities. For example, the data center manager can become the architecture manager.
- Use outsourcing as a means to get the most out of a smaller, more proactive IS organization.

EXHIBIT VII-1



C

Closing Thoughts

1. For Information Systems

Outsourcing, in the eyes of the progressive IS manager, is an opportunity to speed the change in his/her role to tactician and strategist planning the next wave. Prudent use of the outsourcing products and services can increase the opportunity of success in the short term and facilitate plans for the long term.

The belief that outsourcing can lead to a decline in the role of the IS executive is unwarranted. The real role of IS is the future, not the current, use of information technology. No IS executive need fear for his/her role unless the executive is comfortable only with the day-to-day activities of the IS function.

2. For Outsourcing Vendors

The proof in the end will be in the vendor's ability to manage what it sells. At no time in the history of the information services industry has the vendor assumed such a significant management role in its relationship with its clients.

Vendors are signing up for full responsibility for the data center and data network, delivery of strategic solutions, and providing 24-hour application maintenance service. Vendors are saying and proving that they can manage information technology better, or at least as well as, the internal information systems function...and that by assuming a significant management role, can help IS achieve its goals more effectively. Over the long haul, the proof will be in how the vendors perform this management role.

Appendix: User Questionnaire

Outsourcing—User Questionnaire

INPUT, a leading information services industry market research firm, is analyzing the emerging outsourcing market. The objective of this research is to present a clear and helpful picture of the outsourcing opportunity to the information systems executives of larger organizations.

As part of the research, INPUT is talking with a number of IS executives, in particular those that have made outsourcing decisions, about their views of this market. I would like to take about 15 minutes of your time to ask a few (about 10) questions. Would this be a good time?

INTERVIEWEE: _____

TITLE: _____

COMPANY: _____

1a. I understand your firm is outsourcing its _____
Is that correct? Yes ___ No ___

1b. When was that decision made? _____

1c. What was the size and length of the agreement?

Size $____ Millions Length _____ years

2a. What were the three main factors behind this outsourcing decision?

1. _____

2. _____

3. _____

2b. If cost not mentioned, were there cost savings and how important were they to the decision?

_____

_____

3. Who initiated this outsourcing activity?

___ Management (specify _____)
___ Information Systems
___ A Vendor
  ___ Selected Vendor
  ___ Other Vendor
___ Other

4. Could you please comment on the results to date?

Status: _____

_____

Progress versus plan: (Rate 1-Low to 5-High) _____

Relationship with vendor: _____

_____

Any surprises: _____

_____

5. Have there been or are there plans for other outsourcing decisions?
Yes ____ No ____

Please describe.

_____

_____

Prior:

Since/Planned:

6. Please describe the sales cycle.

   Length of sales cycle:

   No. of vendors considered: ____

   Who selected vendor: IS ____ User ____ Both ____

   Key selection factors:

7. Would you please describe the contracting process? Who was involved; how long did it take?

8. What type of incentives, guarantees, etc. did the vendor provide?

   Financial:

   Personnel-related:

   Performance:

Insourcing:

_____

_____

Other:

_____

_____

9. How was the personnel issue addressed?

_____

_____

Was the approach successful? Yes ___ No ___

Did the vendor help? Yes ___ No ___ How?

_____

_____

10. What has been learned?

By information systems:

_____

_____

By users and management:

_____

_____

THANK YOU. INPUT will send you a copy of the Executive Summary of the resulting report in August.

Appendix: Vendor Questionnaire

Outsourcing—Vendor Questionnaire

INPUT, a leading information services industry market research firm, is analyzing the emerging outsourcing market. The objective of this research is to present a clear and helpful picture of the outsourcing opportunity to the information systems executives of larger organizations.

As part of the research, INPUT is talking with a number of vendors about their views of this market. I would like to take about 15 minutes of your time to ask a few (about 10) questions. Would this be a good time?

INTERVIEWEE: _____

TITLE: _____

COMPANY: _____

1. What does outsourcing mean to your firm?

   _____

   _____

2. Please describe your outsourcing products/services? How are they different from previous offerings?

   _____

   _____

   _____

   _____

3. Is there a particular market sector or type of client to which you sell? Please describe.

4a. What is the typical sales cycle and size of agreement for your outsourcing products/services?

4b. What percent of sales contacts result in:

- Direct turn down (IS won't even consider) ____%
- Interested leads ____%
- True prospects ____%

4c. How often is a true opportunity initiated by:

- The potential customer ____%
- Your sales force ____%
- Other (describe _____) ____%

5. What do you tell the skeptical IS executive?

6. Who are your competitors?

Primary:

Secondary:

7. How do you differentiate your company from your primary competitors?

8. Would you please describe the contracting process for your outsourcing services? Is there a standard term sheet, and would you provide one for INPUT's review?

9. What type of incentives, guarantees, etc. do you commonly employ or agree to in you contracts?

   Financial:

   Personnel-related:

   Performance:

   Insourcing:

   Other:

10. What are the three primary reasons you find for IS turning more frequently to outsourcing services?

    1. _____

    2. _____

    3. _____

11. How do you see the outsourcing market developing over the next three years? For example, new opportunities, consolidation/shakeout, rate of growth, impact on more traditional market sectors such as applications software, processing services, network management.

    _____

    _____

    _____

    _____

12. How do you see your market strategy changing over this same three-year period?

    _____

    _____

    _____

THANK YOU. INPUT will send you a copy of the Executive Summary of the resulting report in August.

OUTSOURCING:

JUDGING THE FINALIST

Litton
Computer Services

How do I judge the finalists?

After your initial screening, it is time to break the competing vendors down into categories and to rate all contenders on specifics. Below you will find a checklist of concerns, each one of which has an impact on the effectiveness or efficiency of your information processing activity.

Computer Resources

1. Does the supplier have adequate computing capacity to accommodate your current and future requirements, including "peak" processing periods?

2. Has the vendor installed multiple computers, uninterruptible power supply systems, and backup generators to ensure continuity and reliability?

3. Is the vendor well established in the commercial sale of services, so that continued availability of these resources is assured?

4. Is outsourcing the supplier's primary business (or) is the supplier's business motive only to "sell off" excess time on an existing computer with "unused" capacity?

System Performance

5. Does the vendor establish and maintain proper system performance standards to insure adequate service to customers? Is service availability and response time closely monitored and recorded?

6. Does the vendor do long-range planning so that high performance standards will continue as business grows?

Software

7. Are all the latest languages and utilities available?

8. Are adequate application programs available? Applications software is expensive to purchase and maintain, a close "fit" in the selection process is important.

9. Can the vendor provide support and assistance to the customer using applications?

Telecommunications

10. Does the vendor have a nationwide network?

11. Is dial-up access to local nodes available from all user locations?

12. Are dedicated lines backed up with an auto-dial capability?

13. If needed, can the vendor supply high-speed leased lines and/or communications equipment?

Support

14. Is there a reliable customer support organization?

15. Is there an experienced migration team and procedure in place?

16. Is user training available at the data center and in your own office or facility?

17. Are customer start-up procedures established and documented?

18. Is there available support on an on-call basis? (e.g., 800 telephone support).

19. Is there on-going customer service support?

20. Is there adequate documentation of services available for users, and how is this information communicated to customer?

Cost

21. Does the supplier use current technology and large-scale computing equipment that offers the greatest cost-effectiveness?

22. What are the front-end cost commitments and recurring fixed costs?

23. Is competitive pricing available?

24. Will the vendor offer fixed price options in applicable customer situations?

25. Has competitive price performance been demonstrated?

26. What are the other costs to be incurred? (i.e., storage, communications, terminals, etc.).

Contract

27. What are the contract term commitments? Will the vendor enter into a long term contract commitment (3 to 5 years)?

28. Will the vendor provide flexible contract conditions?

29. What are the contract cost commitments?

    A. Is there price protection over the term of the contract?

    B. Are you protected against escalating costs?

References

30. Are customer references available?

31. What do these customers have to say about the service; vendor; actual support and value of the relationship?

32. Is there an adequate customer base available to provide references indicating a "solid" history of service.

33. Has the supplier provided processing services to other companies in your industry? If not, are the references in businesses having similar processing requirements?

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