



MARKET FORECAST

U.S. Information Systems Outsourcing Market

1993-1998

U.S. Market Analysis Program

D E C E M B E R

1 9 9 3

U.S. INFORMATION SYSTEMS OUTSOURCING MARKET

1993-1998

CA
LIBRARY

INPUT®

San Francisco • New York • Washington D.C. • London • Paris • Frankfurt • Tokyo

Clients make informed decisions more quickly and economically by using INPUT's services. Since 1974, information technology (IT) users and vendors throughout the world have relied on INPUT for data, research, objective analysis and insightful opinions to prepare their plans, market assessments and business directions, particularly in computer software and services.

Contact us today to learn how your company can use INPUT's knowledge and experience to grow and profit in the revolutionary IT world of the 1990s.

SUBSCRIPTION SERVICES

- **Information Services Markets**
 - Worldwide and country data
 - Vertical industry analysis
- **Systems Integration and Business Process Re-engineering**
- **Client/Server Applications and Directions**
- **IT Outsourcing Opportunities and Analysis**
- **Information Services Vendor Profiles and Analysis**
- **EDI/Electronic Commerce**
- **U.S. Federal Government IT Markets**
- **IT Customer Services Directions**
- **Multimedia Opportunities**

SERVICE FEATURES

Research-based reports on trends, etc.
(Over 100 in-depth reports a year)

Frequent bulletins on events, issues, etc.

5-year market forecasts

Competitive analysis

Access to experienced consultants

Immediate answers to questions

DATABASES

- **Software and Services Market Forecasts**
- **Software and Services Vendors**
- **U.S. Federal Government**
 - Procurement Plans (PAR)
 - Forecasts
 - Awards (FAIT)
- **Commercial Application LEADS**

CUSTOM PROJECTS

For Vendors—analyze:

- **Market strategies and tactics**
- **Product/service opportunities**
- **Customer satisfaction levels**
- **Competitive positioning**
- **Acquisition targets**

For Buyers—evaluate:

- **Specific vendor capabilities**
- **Outsourcing options**
- **Systems plans**
- **Peer position**

OTHER SERVICES

Presentations to user groups, planning meetings, etc.

Acquisition/partnership searches

Newsletters

INPUT WORLDWIDE

Frankfurt

Sudetenstraße 9
D-35428 Langgöns-
Niederkleen
Germany
Tel. +49 (0) 6447-7229
Fax +49 (0) 6447-7327

London

17 Hill Street
London W1X 7FB
England
Tel. +44 (0) 71 493-9335
Fax +44 (0) 71 629-0179

New York

400 Frank W. Burr Blvd.
Teaneck, NJ 07666
U.S.A.
Tel. 1 (201) 801-0050
Fax 1 (201) 801-0441

Paris

24, avenue du Recteur
Poincaré
75016 Paris
France
Tel. +33 (1) 46 47 65 65
Fax +33 (1) 46 47 69 50

San Francisco

1881 Landings Drive
Mountain View
CA 94043-0848
U.S.A.
Tel. 1 (415) 961-3300
Fax 1 (415) 961-3966

Tokyo

Saida Building, 4-6,
Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101
Japan
Tel. +81 3 3864-0531
Fax +81 3 3864-4114

Washington, D.C.

1953 Gallows Road
Suite 560
Vienna, VA 22182
U.S.A.
Tel. 1 (703) 847-6870
Fax 1 (703) 847-6872

Abstract

This report summarizes the information systems outsourcing market as it exists now and as it will evolve through 1998. It examines the structure of the market, analyzes the major market influences and discusses the competitive environment and leading vendors. Particular attention is paid to the effect that the client/server shift and the expansion of telecommunications services are having on outsourcing activity. It concludes with a summary and a series of recommendations for participants in this market.

This report is part of INPUT's Information Services Market Analysis Program. It contains research done for this program as well as for INPUT's Outsourcing Information Systems Program.

Published by
INPUT
1881 Landings Drive
Mountain View, CA 94043-0848
U.S.A.

Information Services Market Analysis Program

U.S. Information Systems Outsourcing Market, 1993-1998

Copyright © 1993 by INPUT. All rights reserved.

Printed in the United States of America.

No part of this publication may be reproduced or distributed in any form, or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

The information provided in this report shall be used only by the employees of and within the current corporate structure of INPUT's clients, and will not be disclosed to any other organization or person including parent, subsidiary, or affiliated organization without prior written consent of INPUT.

INPUT exercises its best efforts in preparation of the information provided in this report and believes the information contained herein to be accurate. However, INPUT shall have no liability for any loss or expense that may result from incompleteness or inaccuracy of the information provided.

Table of Contents

I	Overview	I-1
	A. Definitions and Methodology	I-1
	1. Definitions	I-1
	2. Methodology	I-3
II	Information Systems Environment	II-1
	A. Needs Influencing Use of IS	II-1
	1. Timeliness of Information	II-2
	2. Technology Changes	II-2
	3. Dispersed Processing Power	II-3
	B. Technology	II-3
	1. Telecommunications Changes	II-3
	2. Shift to Client/Server	II-4
	C. Key Issues and Trends	II-5
	1. Driving Forces	II-5
	2. Inhibiting Forces	II-7
III	Market Forecast	III-1
	A. Market Overview and Structure	III-1
	B. Forecast by Submode	III-2
	1. Platform and Applications Operations	III-2
	2. Desktop Services	III-4
	3. Network Management	III-4
	4. Business Operations	III-4
	C. Analysis	III-5

Table of Contents (Continued)

IV

Competitive Analysis	IV-1
A. Major Players	IV-1
B. Competitive Positioning	IV-2
1. Client/Server Strategies	IV-3
2. Transition Outsourcing	IV-3
3. Broadened Services Offerings	IV-3
4. Business Operations Outsourcing	IV-4
C. Opinion	IV-4

V

Conclusions and Recommendations	V-1
A. Conclusions	V-1
B. Recommendations	V-3

Appendix

A. Forecast Database and Reconciliation	A-1
A. Outsourcing Reconciliation Comments	A-4
1. Short Term Changes (1992 Market)	A-4
2. Long Term Changes (1997 Market)	A-5

Exhibits

I

- | | | |
|----|---------------------------|-----|
| -1 | IS Outsourcing Components | I-2 |
|----|---------------------------|-----|

II

- | | | |
|----|---|------|
| -1 | Needs Influencing the Use of Information Services | II-1 |
| -2 | Information Technologies Affecting Outsourcing | II-3 |
| -3 | Market Driving Forces | II-5 |
| -4 | Market Inhibitors | II-8 |

III

- | | | |
|----|--|-------|
| -1 | U.S. Outsourcing Market, 1993-1998 | III-2 |
| -2 | U.S. Outsourcing Market by Market Segment, 1993-1998 | III-3 |
| -3 | Characteristics of the Changing Outsourcing Market | III-6 |

IV

- | | | |
|----|--|------|
| -1 | Leading Outsourcing Vendors, 1989-1992 | IV-2 |
|----|--|------|

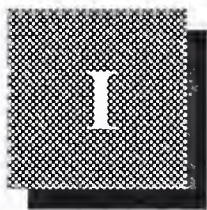
V

- | | | |
|----|------------------------------------|-----|
| -1 | Outsourcing Market—Conclusions | V-1 |
| -2 | Outsourcing Market—Recommendations | V-3 |

Appendix

- | | | |
|----|--|-----|
| -1 | Systems Operations U.S. Market Forecast by Industry Sector—1992-1998 | A-2 |
| -2 | Systems Operations U.S. Market Forecast by Sub-Mode—1992-1998 | A-3 |
| -3 | Systems Operations Forecast Reconciliation | A-4 |

(Blank)



Overview

This report is one of a series of market analysis reports by INPUT on the key service modes in the U.S. Information Services market. The report is published as part of INPUT's Market Analysis Program and also in an expanded form as part of the Information Systems Outsourcing Program.

A

Definitions and Methodology

This report provides an analysis of the outsourcing market in the United States for the period from 1993 to 1998. It summarizes the trends and market factors that influence the size and composition of this segment of the U.S. Information Services market.

Vendors can assess how their market shares compare to overall market segmentation. They can identify the factors that are bringing about changes in this market and assess their strategies and tactics to continue meeting their clients' changing needs.

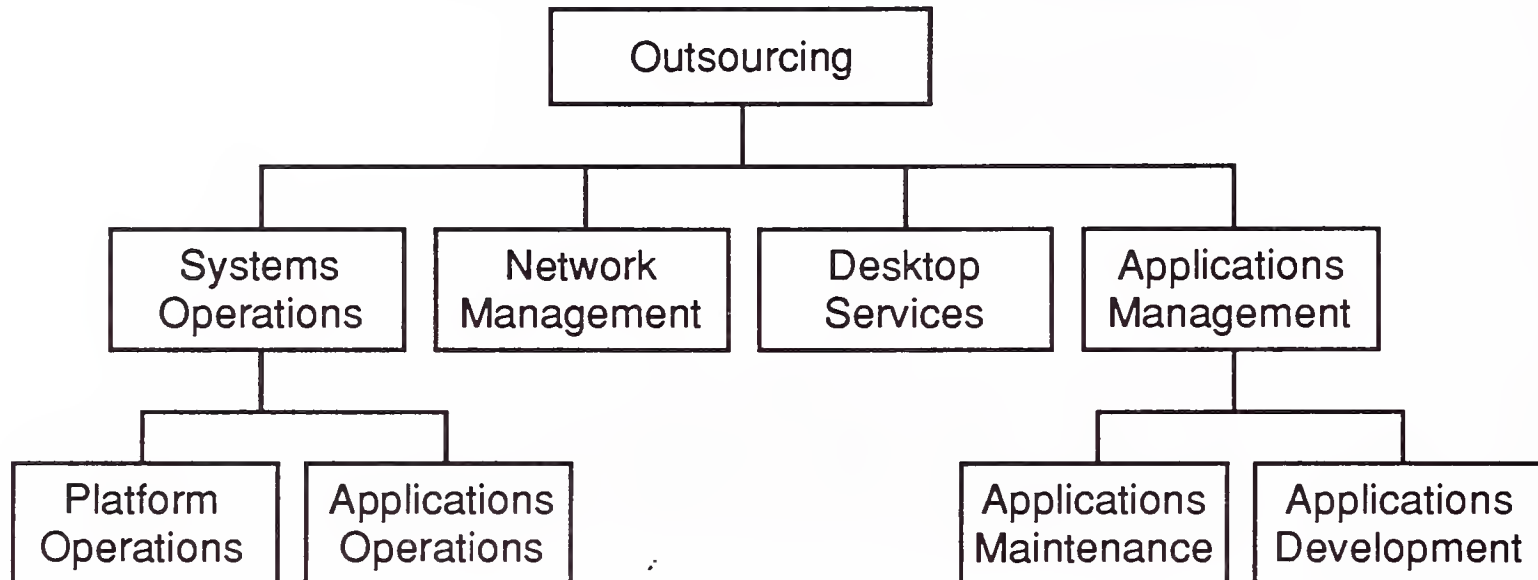
1. Definitions

Exhibit I-1 shows how the segments of the outsourcing market are related. To insure consistency in the interpretation of the data in this report, the following definitions of the various outsourcing segments are provided:

Systems Operations—The vendor can provide information systems operations in either of two ways:

- **Platform Systems Operations**—The vendor is responsible for managing the computer systems and their associated networks.
- **Applications Systems Operations**—The vendor is responsible for developing and/or maintaining a client's applications software as well as operating the computer systems and the associated networks.

EXHIBIT I-1

IS Outsourcing Components

Network Management—The vendor is responsible for the management and operation of the computer-related information network, transmitting data, text, voice, image, and video as required. Voice-only network operations are not currently considered part of information systems outsourcing.

Desktop Services—The vendor provides for the deployment, maintenance, support, and connectivity of the client organization's PC/workstation inventory. The service often includes performing the "help desk" function for the client.

Applications Management—The vendor is responsible for the maintenance and development of all the applications software a client uses to support a business operation. There are two types of applications management:

- **Applications Development**—The vendor provides for the design, development, maintenance, and enhancement of new applications software associated with a business operation.
- **Applications Maintenance**—The vendor provides only for the maintenance of existing applications software associated with a business operation.

Business Operations Outsourcing—The vendor is responsible for an entire business process in the client's organization, including the staff, facilities, and related IS functions or other technology that may be used in the function. That business operation can be a financial operation, a human resources function, or an entire manufacturing or logistics process.

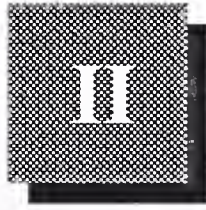
2. Methodology

The data presented in this report have been compiled from a variety of sources. Primary research was conducted with both vendors and clients in the outsourcing market. Data were gathered from the vendors concerning revenue and their market activity, as well as their opinions and strategies. Users were polled as to their spending intentions and their future requirements.

Structured questionnaires were used to collect this data and opinions on a variety of sub-topics concerning the outsourcing market. There is a more detailed discussion of the methodology that INPUT uses to calculate revenue forecasts in the Introduction to the Information Services Market Analysis Binder.

A discussion of the economic assumptions that were used in developing these forecasts is also included in that Introduction. The impact of these economic assumptions on INPUT forecasts is a continuation of the moderate growth rates forecast earlier. INPUT does not see a quick recovery for information services spending in general, though the outsourcing market is one of the brighter segments of the market, growing at a faster rate than most of the other segments of the Information Services market.

(Blank)



Information Systems Environment

Many factors in the changing information systems environment are having a profound influence on the outsourcing market in particular. This chapter divides these factors into two categories. First discussed are the business needs for which the outsourcing clients and prospects must find solutions. Then the impact of major information technologies on the market is reviewed, along with how this is changing the very composition of the outsourcing opportunities available for vendors.

A

Needs Influencing Use of IS

Exhibit II-1 presents, in summary form, some needs expressed by the business community that can be addressed by the proper application of information technology. In the broader perspective, the needs discussed can be resolved by a variety of technologies, but the solutions that can be provided by an outsourcing arrangement will be emphasized in this discussion.

EXHIBIT II-1

Needs Influencing the Use of Information Services

- Time value of information
- Flexibility of IS tools
- Distribution of IS capability

1. Timeliness of Information

The need for near-instant reaction to the changes in business conditions continues to be one of the key requirements for business organizations striving to be successful in the 1990s. Retail establishments such as The Limited and Walmart have been successful in large part because they have been able to react overnight to changes in customer purchasing patterns. Manufacturing concerns that are succeeding are interconnecting themselves through electronic commerce technology to respond in a timely manner to fluctuating fabrication and delivery schedules.

Airlines need to report the latest changes in passenger bookings instantly. Travel agencies need instant access to the available capacities on scheduled flights. The existing reservation systems represent the investment of millions of dollars of systems development and hundreds of millions of dollars of IT and telecommunications equipment.

These examples illustrate that there is a high value associated with the currency of information. Note the use of the term information, not data. To be useful, data such as passenger name, part number, or store location must be converted into information. Its correlation with historical data and its relationship to other information collected need to be considered to convert it into information. Only then can the executives of the organization effectively apply their experience and decision models to that information. The results are decisions and directives that guide the successful organization in continuing its rapid response to changing market conditions.

2. Technology Changes

Not only are market conditions changing, the application of information systems technology is also changing rapidly. These new systems are necessary because so many firms are actually changing the way they do business. The explosive success of telemarketing as an effective tool for sales organizations is but one example.

The ability of Land's End, a marketer of clothing and related items, to design and implement a client buying history system increased their sales in one quarter by 20%. Telemarketing representatives and customer service staff can call up a record of any client's past buying pattern with the company as they interact with that client. It is then easy to ask if an item ordered previously needs to be replenished. The telemarketer can also advise the customer that a favorite piece of clothing is currently on sale. This is just one small example of the possibilities provided by responsive information systems.

There is a new empowerment evident in most business organizations. Many operational managers have taken over much of the responsibility for their own information systems destiny. Sales managers are equipping their

sales forces with laptop computers to give them instant access to changing product information and to allow them to process orders through a streamlined ordering system.

3. Dispersed Processing Power

The general availability of laptop computers, and soon personal computing devices such as Apple's Newton, is revolutionizing the capture of data. When this technology is coupled with the cellular technology that is transforming the telecommunications industry, it becomes apparent that IS capabilities need to be extremely responsive to change and continuous accessibility.

These same devices provide for the dispersed elements of any organization to have at their fingertips the data and algorithms they need for critical applications like order placement, policy preparation, and problem resolution without referring back to the corporate office for direction. This capability will improve customer satisfaction and greatly speed up the sales cycle.

B

Technology

There are a number of technologies evolving rapidly in the market that have profound implications for information services in general. Exhibit II-2 summarizes those that are of particular interest to outsourcing vendors and users.

EXHIBIT II-2

Information Technologies Affecting Outsourcing

- Telecommunications explosion
- Client/server shift

1. Telecommunications Changes

The telecommunications industry is undergoing some fundamental changes. The rapid acceptance of cellular telephone technology and the mobility of communications it promises are already accepted factors in the business community. The expansion of communications capabilities from the personal telephone to the laptop computer is fully underway now.

The growing demand for accessible information will greatly increase the need for data that are current, accurate, and available in a variety of forms. The expertise of those who can capture, process, and deliver current operating data on demand is increasingly in demand. Retail stores want to know what their customers are buying off the shelves at that moment. Travel agents need the booking status of flights as they change. Individuals are increasingly turning to the Internet to find key federal information and copies of public documents. More timely business and personal information is being demanded every day to help individuals and corporations make even more informed decisions.

2. Shift to Client/Server

The shift to client/server computing is accelerating as LAN configurations continue to proliferate. The PCs and workstations linked to them continue to get more powerful and applications get more sophisticated, and at the same time easier to use.

The initial reaction in some quarters has been that this will have a dampening effect on the growth of the outsourcing market in general. If the leading vendors were still intent on only managing mainframe data centers and their related systems and applications software, that would indeed be so.

In fact, many vendors are finding that there are hidden opportunities in the client/server revolution. As the shift continues to dispersed computing, three trends are evident.

- IS departments have less control over the new environment. Even when they do maintain some management responsibilities, they are finding it is more difficult to manage a distributed computing environment than one located in a single data center.
- When the users assume responsibility for their own computing environment, they need help and, increasingly, are turning to vendors for advanced technical skills, rather than their own IS departments.
- The shift to client/server operations doesn't occur overnight. The new environment has to be introduced gradually. In the interim, there is still need to operate the old systems that make the organization run effectively. Opportunities are emerging for outsourcing vendors to help with this transition by supporting legacy systems.

The information technology industry continues to be a rapidly changing environment that requires a flexible response on the part of users and vendors alike to take advantage of the newest technology and market developments. The technological changes represented by the telecommunications revolution and the related client/server shift are today's

issues. Tomorrow the fundamental changes will take place in how business operates. That will bring even greater challenges to the IT community, challenges that will not only require the wise application of technology, but also a rethinking of how basic problems are addressed.

C

Key Issues and Trends

The Information Systems environment described in the preceding section of this report has created two sets of forces that affect the growth of the outsourcing market as it currently exists. They can be conveniently divided into positive factors or driving forces and negative or inhibiting factors. A better understanding of these forces will assist vendors in adopting a winning market strategy that takes advantage of the current conditions.

1. Driving Forces

Exhibit II-3 summarizes the positive factors at work in the outsourcing industry.

EXHIBIT II-3

Market Driving Forces

- Lack of IS skills
- Changing business environment
 - Cost reduction
 - Re-engineered processes

As the IS environment changes, new skills and techniques are required of those individuals who currently are responsible for an organization's information systems. Some of those skills are extensions of old ones, such as programming and systems design. Others are new ones that require extensive retraining or redirection, such as telecommunications and distributed data base design, among others.

There is an abundant supply of computer-literate individuals graduating from the universities. In fact, most college graduates leave the universities comfortable with using PCs for word processing, at least. Many are also attuned to electronic mail and the remote access of data from libraries via PCs.

This is a double-edged sword. These individuals are entering industry without any fear of computers. They usually expect to have a PC immediately available to them to do their work. That is a positive factor, but on the negative side they often see more applications of IS technology than the internal organization has the capacity to implement.

This situation may lead to two scenarios. First, users may implement the solution themselves, often ignoring the company standards, thus creating islands of processing and automation while solving their immediate problems. In the process, the implementers often find the solution consumes more of their time than it should.

Second, they may turn to outside help to deliver some procedure or process they do not have the internal skills to implement. This provides them with the solution more efficiently, but requires a clear knowledge of what the requirements really are so that the external vendor or supplier can deliver the right product.

In this environment, outsourcing vendors who have demonstrated past success in solving IS problems and who have some knowledge of the client organization's business can appear to be a very attractive solution. In the new environment, however, those vendors must demonstrate that they have kept abreast of the changes in technology and business conditions that make the redesign and rethinking necessary in the first place.

The changing IS environment is only a part of the transformation of U.S. industry today. A more fundamental change is taking place in the way organizations conduct their business. The need to reduce costs and remain competitive is driving many companies to rethink all of their internal operating procedures.

The result can be a complete change in the way many organizations conduct their operations. The changes will be more fundamental than a shift in technology. The information technology involved will simply be an enabler, albeit an important one.

Gone are the days when an improvement in the processing technology was automatically seen as the best way to reduce operating expenses. Many of the current advocates of business re-engineering see IT as the follow-on to the redesign of the business operation. IT is really just a tool for the implementation of new procedures, processes, and organizational structures.

Vendors like CSC and Systemhouse have recognized the changes in the complexion of the market and broadened the scope of the services they offer their clients and prospects. CSC has been particularly successful at making acquisitions that position it to provide the business re-engineering services that are currently required.

Systemhouse has been acquiring expertise in client/server implementation by buying a number of small companies specializing in that segment of the market.

EDS and Perot Systems are downplaying the technical aspects of their services and stressing the solutions delivery they can provide. They are positioning themselves to apply technology to the client's business problem, stressing the solution, not the technology being used.

There will be more discussion of specific vendor actions later in this report. Generally, outsourcing vendors are finding opportunities in the changing business environment in the following areas:

- Outsourcing vendors are finding that they can provide a transition service that takes over the old processing platforms and their applications while the client organization concentrates on creating the new environment.
- Vendors are filling a need to manage the resulting client/server environment as it becomes an integral part of more organizations. These users, typically without in-depth IS backgrounds, are discovering that it requires specialized skills and careful management to manage the resulting desktop environment profitably.
- Communications is becoming an ever more important part of the solution to the IT problem. Dispersed computing, home-based work, a mobile work force—all these are increasing the demands for telecommunications management skills that are already scarce. Specialist firms are increasingly considered a good solution to these problems. Both traditional outsourcing vendors and telecommunications consortia are active in this market.
- More services are being required of the outsourcing vendor as the business processes change. They are being called upon to provide management consulting services, systems integration services, and even to take over entire business operations.

As the nature and the texture of the business community changes, the nature and shape of the outsourcing market changes also. Most vendors are actively changing their posture to take advantage of these developments.

2. Inhibiting Forces

It is easy to paint a bright picture of the state of the outsourcing market, stimulated as it is by the profound changes taking place in the business community. To present a balanced picture, however, the problems that currently exist must also be reviewed. Exhibit II-4 identifies the two major inhibitors to market growth.

EXHIBIT II-4

Market Inhibitors

- Changing mix of processing platforms
- Investment in legacy systems

New applications are often developed by individual departments on platforms selected on the basis of convenience. As client/server technology is introduced to provide a particular business solution, a great variety of processing environments can be found in the typical business organization.

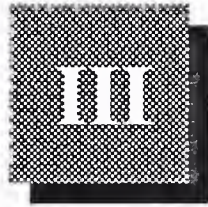
This disparity is often difficult to manage because the era of open systems has not really arrived yet and much is still proprietary. Such an environment is difficult to manage and also appears to the user organization to be difficult to turn over to a vendor for management. In fact, outsourcing vendors are usually better organized and more experienced in managing such a disparate environment. The perception is still there, however, that multiple platforms cannot be managed effectively by one entity. This is still a dampening factor in the marketplace.

The typical business organization has been operating with old systems for a number of years. These so-called legacy systems are often the repository of much of the company's knowledge and standard procedures. They may now be past their useful life span but they cannot be turned off overnight. Invoices have to be generated, production schedules have to be prepared, payroll has to be met.

Most of these systems were developed over a span of years and were updated and modified as the business needs changed. They represent a major investment in both software and hardware. Everyone thinks twice before changing them and eventually scrapping them.

This negative factor does have a positive aspect, however, as we mentioned earlier. A number of outsourcing vendors have found many clients that want to outsource these legacy systems while their internal staff concentrates on designing and implementing new systems that reflect the new business conditions. This type of transitory outsourcing is just that—a transition phenomenon—but one that will be viable for several years.

The net effect of these positive and negative driving forces is still a growing outsourcing market. In the next chapter, an analysis of the various sub-components of that market provides additional insight into where the most likely growth will take place and why that will happen.



Market Forecast

The early press reports in 1993 that the outsourcing market was beginning to slow down were greatly exaggerated. INPUT's continuing analysis of the market indicates that the healthy growth rate enjoyed in the last few years has indeed continued. It is a certainty that some of the contracts currently being bid and negotiated will be very large, and some are likely to close before the end of 1993. All indications are that the market is healthy, though significant changes are still taking place.

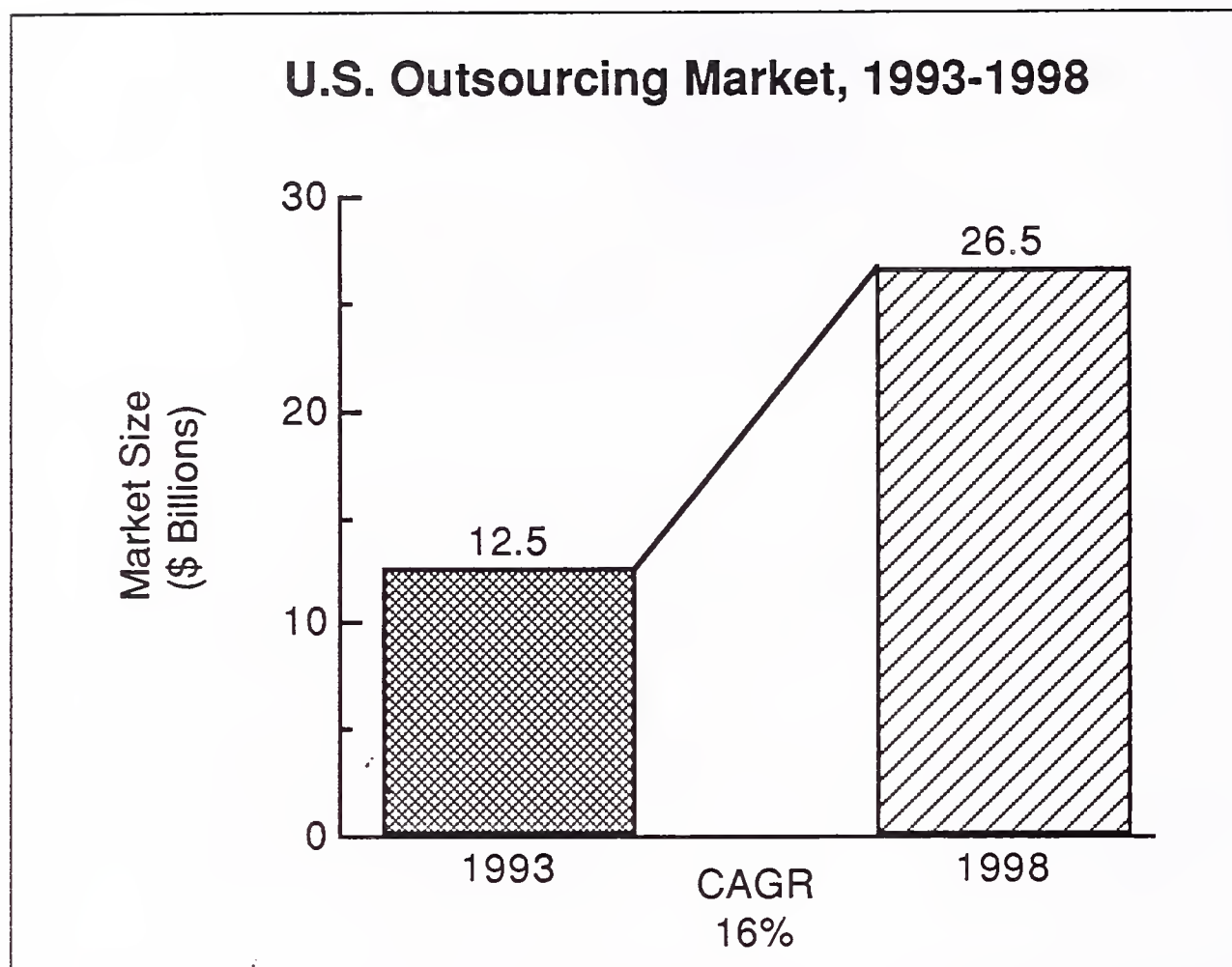
A

Market Overview and Structure

Exhibit III-1 illustrates what will happen to the outsourcing market in the period from 1993 to 1998. The compound annual growth rate of 16% still makes outsourcing one of the fastest-growing segments of the information services market.

Though the overall market growth has slowed somewhat from last year's rate (from 18% to 16%), certain components of the market are showing an increase in growth. Those components showing this increased growth over the five-year period are those most impacted by the shift to client/server platforms. These are the network management and the desktop services components.

EXHIBIT III-1

**B****Forecast by Submode**

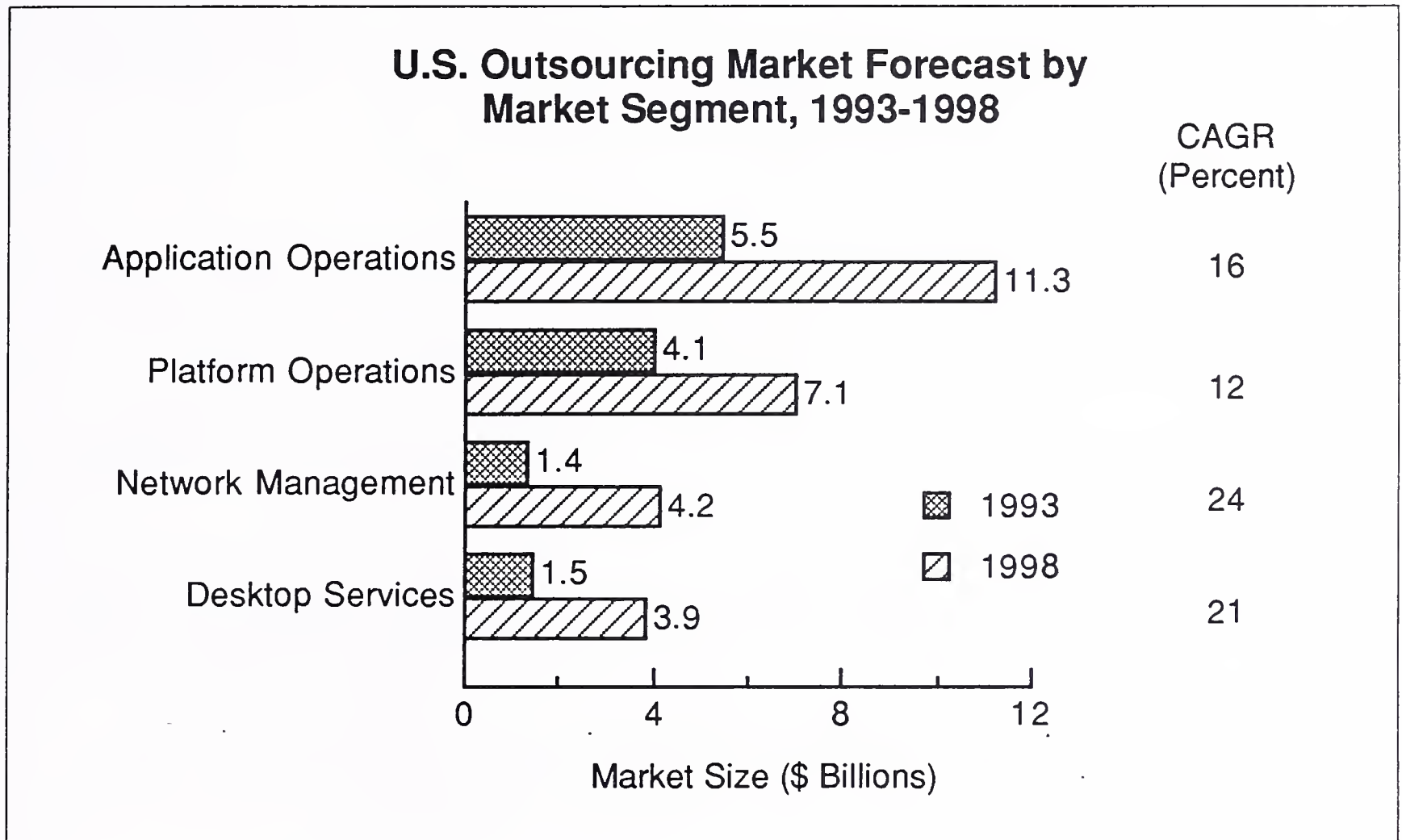
Each segment of the market will be discussed in this section. It continues to be important to understand each segment of the market to identify how the market is shifting as client needs change and what the implications are for outsourcing vendors.

Exhibit III-2 illustrates how each component of the overall outsourcing market compares in size to the other components.

1. Platform and Applications Operations

The two systems operations submodes continue to be the dominant segments of the outsourcing market. Most clients still want the vendor to take over management of the data center, or the data center with its associated applications software. The two components together make up 78% of current contract revenues.

EXHIBIT III-2



This phenomenon reflects two market conditions. First, a large number of the contracts entered into several years ago are still in effect. The majority of those were for platform operations or applications operations. Second, most of the so-called mega-contracts that have emerged in the last few years are of the systems operations type. The mere size of these individually has a definite effect on the overall size of the market for platform and/or applications operations.

There is a change even in the systems operations segment of the market, however. Many of these new contracts are considered transition outsourcing contracts. The vendor takes over management of the legacy systems while the client turns its energies and resources to designing and implementing a new, re-engineered environment, usually involving client/server platforms. These contracts, by their transitory nature, are often of shorter duration than earlier systems operations contracts. So the impact of the shift to client/server is also being felt in this segment of the market.

There are indications that some legacy systems that are run infrequently will stay on the old platforms indefinitely. These are natural candidates for smaller applications operations arrangements. The client has no need for the

the hardware to process them. Rather, the client will look for a vendor to simply provide an environment in which these applications can be run. The vendor will assume responsibility for maintaining the software to reflect changing operating conditions and running them upon request on a facility owned and operated by that vendor.

2. Desktop Services

The desktop services segment of the outsourcing market continues to grow at a rate above 20% over the five-year period from 1993 to 1998. This reflects the recognition in the market that it is more difficult to manage a distributed computing environment than a centralized one. More organizations are outsourcing the management of their PC/workstation inventory to vendors who will deal with the problems of standardization, compatibility, and security. The LANs associated with this equipment are also generally included in the arrangement with the vendor.

The typical pattern reported in a desktop services environment is for a net increase in total operating costs to occur at the start, with substantial savings occurring in the future years of the contract for the user organization. EDS has reported this pattern in its experience with clients. They attribute it primarily to a gradual centralization of many of the diverse functions involved, such as help desk support and equipment maintenance. This eventually provides substantial cost leverage to the service supplier, which may be partially passed on as savings to the client.

3. Network Management

There is a healthy increase in the growth rate of the network management segment of the market over the rate reported last year (20% to 24%). The network management component includes only those contracts where the network alone is outsourced. When the network is outsourced as a part of the platform or applications operations agreement, that network component is counted in those contracts.

There have been several examples of such contracts this year, notably NASDAQ to MCI, Republic Bank to EDS, and Metropolitan Life to AT&T.

More of these contracts can be expected. This change reflects the increasing importance of the communications network as a way to interconnect the distributed computing environments emerging as a result of the shift to client/server.

4. Business Operations

There is an increasing demand for outsourcing vendors to take over entire business functions for clients. This is not a new market; print shops have

been outsourced for some time now, and the existing arrangements are evolving into more comprehensive document management contracts.

Medical claims processing contracts that have been a part of the market for some time now no longer include only the processing of the claims. Now the client usually turns over responsibility for the issuing of checks and the handling of complaints and claimant questions to vendor personnel also.

Andersen Consulting attracted attention to this market shift two years ago when it assumed management of the accounting function at BP Exploration in the U.K. There is some activity among the large accounting firms to take over financial functions for some of their clients, though no contracts have been announced yet.

EDS has assumed operational responsibility for customer services operations in three situations, one of them with Chevrolet Motors Division of GM. In these cases, EDS can apply technology and best management practices to the improvement of the process. The results are lowered costs and reduced need for management attention to the process, as well as improved customer service.

This segment of the outsourcing market was not included in the overall market analysis forecast this year, thus it is not included in the tables in the Appendix. It will show up as a forecast component in 1994.

C

Analysis

Exhibit III-3 summarizes four characteristics of the outsourcing market that indicate the changing nature of this market.

As mentioned earlier, the fastest-growing segments of the outsourcing market are those impacted by the client/server shift. Network management is clearly the one component that is related to the increasing dispersion of computing power that the client/server shift is introducing into organizations. To date, much of the increase has been simply due to the proliferation of PCs and workstations in all organizations and the need to interconnect them. This requirement will only increase as the shift continues.

EXHIBIT III-3

Characteristics of the Changing Outsourcing Market

- Client/server developments affecting contract types
- Transition outsourcing a viable alternative for legacy systems
- Demands for vendors to share in client performance increasing
- Systems integration services often required

The desktop services segment is also expected to expand because of the shift to client/server systems. It is already so difficult to manage the distributed computing power that organizations are turning to vendors to do it. When true client/server applications emerge, this need will only increase.

This shift to client/server environments cannot be accomplished overnight. The legacy systems that now keep organizations running and responsive to their customers must be maintained and operated as the shift is accomplished. More and more organizations are turning to outsourcing vendors to manage these legacy systems while their own staff concentrates on upgrading the internal systems.

The next two characteristics are not derived from the shift in market sizes and growth rates but are conclusions drawn from other analyses and observations that INPUT has gathered in the process of studying the outsourcing market.

The changing requirements of the clients are not only caused by a shift in how they will do their computing. They are rethinking the way they do business and their relationships to suppliers and competitors alike. Several major organizations in public forums have called upon outsourcing vendors to share in the business risks with the clients.

Many vendors are understandably reluctant to do this. Some feel that the metrics do not exist that can accurately measure the relationship of vendor performance to business success. This is still uncharted territory.

Yet there are documented cases of such arrangements in place. EDS gets paid on the basis of how successful the Chicago Parking Authority is in collecting parking fines. They developed and are operating the new system to manage this function. Perot Systems will be paid on the basis of the

profitability of EuroCar Rentals after the second year of the outsourcing contract the two parties have signed.

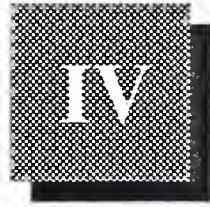
The concept of "value pricing," still ill-defined, is another indication that vendors will increasingly be paid on the basis of what they can contribute to improving the performance of the client's business.

Finally, earlier studies done by INPUT indicated that once a client selects an outsourcing vendor, there is a high probability that the same vendor will be considered for add-on work, often systems integration activity. There is now market experience that demonstrates a closer relationship between the two.

Some vendors have successfully migrated systems integration projects into outsourcing arrangements and vice versa. Perot did that after it designed and implemented a data center for Nationsbank in Dallas. ISSC has done extensive systems integration work to convert much of its Eastman Kodak contract from a mainframe environment to a client/server environment. There are other such examples, and the increasing complexity of the IT environment promises that there will be many more such situations developing.

As the outsourcing market has changed over the years, vendors have responded to these changes with increased service offerings. They need to continue this expansion of their service line while restructuring their contractual relationships. It is necessary that vendors continue to meet changing client demands in a variety of innovative ways, some of them initiated by the vendors, others stimulated by the client and prospect requirements.

(Blank)



Competitive Analysis

The traditional view of outsourcing vendors is no longer valid as the market increases in complexity and variety. The forecast in Chapter III identified several market segments, all growing at different rates, some attracting new players, others providing new challenges for the existing vendors.

The current, on-going transformation of several equipment manufacturers into service companies has had a profound impact on the market in the last few years. The increased acceptance of outsourcing as a viable approach to achieving improved performance from the IS function has attracted some major participants to the vendor community.

A

Major Players

Exhibit IV-1 identifies the changes that have taken place in the market between 1989 and 1992. EDS had the market leadership position then and still does now. It has expanded the breadth of services it offers from traditional facilities management to desktop services and is also positioning itself to move aggressively into business operations outsourcing.

CSC remains in the second spot but its revenue mix has also changed considerably. In 1989 it derived most of its outsourcing revenues from the federal market. In 1992, after a concerted effort and several major wins, particularly the large General Dynamics contract, it has a better balance between federal and commercial contracts.

EXHIBIT IV-1

Leading Outsourcing Vendors, 1989-1992

1989	Percent Share	1992	Percent Share
EDS	16	EDS	14
CSC	5	CSC	5
Systematics	3	ISSC	4
ACS	3	First Data	3
Shared Medical	2	Digital	2

The other leading positions have been changed in the three-year period. ISSC did not even appear on the list in 1989 because ISSC had not been organized into a separate unit yet and some of the IBM revenue that was really outsourcing was not identified as such. It has aggressively attacked this market, however, and is growing its revenue base substantially each year.

First Data Resources has moved into the leading vendor ranks because it has capitalized on its own strong position in the financial community and coupled that with substantial growth of its health care business acquired from Lockheed several years ago.

Digital has shown substantial overall growth in the services portion of its business, much of it in the outsourcing area, particularly in the network management and desktop services segments.

B**Competitive Positioning**

As the market changes, there are some significant actions being taken by some of the major players to better position themselves to benefit from these changes. Some of these changes are very obvious, others are less evident but may emerge as even more significant in the long run.

1. Client/Server Strategies

Most vendors are aware that the client/server shift will impact what they have to offer as outsourcing vendors. Certain vendors have demonstrated some clear signals as to how they plan to address this change.

SHL Systemhouse has adopted a strategy of acquiring a number of small regional companies that are specializing in client/server implementations. This strategy will help build systems integration business in the short term but will also position SHL to have a large pool of expertise to manage the resulting distributed computing environments in the long run. The remaining question is whether or not it can assimilate and manage all these small components effectively.

EDS has prepared itself for the client/server market by becoming a force in the desktop services market. Though this is not the management of a client/server environment as such, it does position EDS to manage the PC/workstation complexes that result from such a change in computing environment.

2. Transition Outsourcing

The shifting of emphasis to client/server technology is having a two-fold impact on many IT users. One, they must change the systems they now have in place to environments better equipped to employ newer technologies. Two, they must continue to manage the legacy systems that keep their current operations functioning. They usually don't have enough staff to do both jobs effectively.

Many organizations are turning to outsourcing vendors to take over their legacy operations while they develop the replacements systems. Certain outsourcing vendors have recognized this as an opportunity and are actively pursuing these opportunities. Since most development plans take longer than anticipated, some of these transition contracts last for several years.

The Genix Group and Power Computing, in particular, have targeted these situations and have a number of contracts of this type. This gives them an opportunity to generate additional interim revenues while they change their marketing tactics to respond to the changing market conditions.

3. Broadened Services Offerings

CSC has achieved a significant transformation, as mentioned above, in changing from a federal government orientation to a commercial one. In the process, it has also increased its range of services from outsourcing and systems integration and gained a strong position in the business process re-engineering market. CSC Index has attained an enviable reputation in this area.

Several other vendors have also broadened their scope to meet increasing customer demands. ISSC has a desktop services component in several of its contracts, particularly those in the retail and manufacturing sectors. It also has created a consulting group to provide the management consulting and operations redesign activity that is being required. Digital has also formed a consulting division to broaden the range of IT services it offers in the marketplace. Digital has also had some success in the network management component of the outsourcing market.

EDS has seen its services in demand in the network management segment. Non-traditional vendors like MCI and AT&T are joining Advantis in providing stiff competition in that area of the market. More of this competitive activity can be expected in the future as the communications between distributed computing centers increase in scope and importance.

4. Business Operations Outsourcing

Outsourcing vendors are being asked to take over some business operations that can be favorably leveraged by the application of information technology. Vendors such as EDS and Genix are providing document management activities for clients, joining Xerox in that market.

EDS has also acquired several contracts in which it manages the customer service operation for the client. Customer service is a key function that would not normally be considered for outsourcing. But vendors who provide the latest call-handling and data base management techniques to the client, as well as promising a reduction in the turnover of the help desk staff, have been able to acquire business in this area.

Many of the claims processing contracts that outsourcing vendors such as CSC, EDS, and ISSC have held over the years, particularly in the health insurance and public entitlement programs, are evolving into much more comprehensive contracts that include a variety of business operations, including funds disbursement and client contacts.

C

Opinion

Though the relative shares of the major outsourcing vendors are not changing significantly, there are new entrants in the market. The existing participants include some major vendors and a number of much smaller players who have identified a regional niche or technical specialty they can provide effectively to their clients. The fragmentation of the market is likely to continue as the market expands.

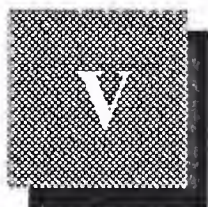
There are new types of opportunities emerging that will be attractive to all vendors. The three dominant trends, a) to include a broader range of

services in contracts, b) to include entire business functions, and c) to provide expanded services for the developing client/server population, does favor vendors with substantial resources. These vendors can better invest in planning, staffing, and training activities to meet these new opportunities.

Many clients may be reluctant to turn over a major business function to a smaller vendor; this will provide a substantial advantage to the larger vendors. Prospects are telling INPUT in surveys that they want their vendors to have financial stability and to be able to invest to insure technical innovation. They are increasingly asking for contracts in which the vendor participates in the clients' success by getting paid from the business profits. To date, only EDS and Perot Systems have done this.

In this changing environment, there are both risks and opportunities. The vendors that are ready to provide a full range of services, from consulting to running business operations, will be well positioned to add business with existing clients as well as to demonstrate that they have the experience needed to attract new clients. It will become more and more important to manage the outsourced activities as efficiently as possible, leveraging technology and business practices, to operate in the profit-sharing environment that will emerge.

(Blank)



Conclusions and Recommendations

This report has analyzed the forces at work in the outsourcing market. The continued health of this segment of the information services industry is due in part to the continued aggressive marketing of the concept by vendors. It also reflects the increasing complexity of the IT environment as client/server architectures begin to dominate, and the benefits of expanded communications systems continue to increase. Finally, the continued success of the outsourcing concept as evidenced by many successful contract implementations is a positive influence on the market as a whole.

The market conditions were discussed in Chapter II and are summarized below. This summary will lead to some recommendations for the participants in today's outsourcing market as well as any organizations that may be considering entering the commercial outsourcing market.

A

Conclusions

The analysis of the outsourcing market is based on extensive contacts with outsourcing vendors and clients by INPUT staff in the course of the year. These are reinforced by focused research conducted by INPUT during the year on specific topics.

EXHIBIT V-1

Outsourcing Market—Conclusions

- Strong market growth continues
- Client/server shift impacting market
- New vendor/client relationships emerging

The outsourcing market continues to show vigor by growing at a faster rate than most other segments of the information services market. The continued slow recovery of the economy and the massive downsizing that has been experienced in the commercial arena is now affecting the public sector. The option of turning over IS functions to a vendor is becoming more attractive in both worlds, as IS staffs shrink and IS expenditures are scrutinized even more closely.

There are more and more success stories to encourage senior management to consider outsourcing. INPUT research indicates that outsourcing clients are generally satisfied with the performance of the vendors with whom they have contracted.

Infoworld reported in October that seven of the top 25 Fortune 500 companies have outsourced their IS operations. The serious negotiations going on between Xerox and selected outsourcing vendors will add an eighth member of this select group if the contract is signed soon, as expected.

INPUT has reported on the rapid shift to client/server operations that has been going on in the IS community recently. This shift will have a profound impact on many aspects of the information services market. Not least, outsourcing will be directly affected.

The traditional modes of systems operations, platform, and applications operations will experience a slowing in their growth rates because of client/server implementation. Other types of outsourcing, notably desktop services and network management, will experience a substantial increase in their rates of growth.

Desktop services deals directly with the immediate problem of managing the burgeoning inventory of PCs and workstations and their associated LANs and WANs that result from the shift to dispersed processing. The vendors must deal with issues of compatibility as well as providing management of standards, system security, and trouble-shooting connectivity problems in the networks. Most of these arrangements eventually include the management of the help desk functions for the client.

The network configuration needed to support this dispersed computing connecting the LANs to gateways, providing for the higher-capacity T1 transmission lines, and managing common carrier network management is also a challenge. Vendors are increasingly considered the repository for tools and expertise to provide this service in a much more effective manner than individual IS organizations can. For this reason, traditional outsourcing vendors such as EDS, Digital, and ISSC (through Advantis) are now providing this service, while the common carriers are also entering this market.

Downsizing and the need for improved financial performance that commercial organizations are experiencing has had another effect on the outsourcing market. Clients are demanding a closer link between the management of their IS resources by the vendor and the resulting impact on the firm's financial performance.

In a number of public forums, conferences, and press statements, outsourcing prospects and clients alike are asking the vendors to share in the risk of the client's business. They are asking that vendors share with the clients the benefits of the cost reductions that are realized. They are suggesting that vendors be compensated on the basis of the success of the client organization's business, not on the basis of the work performed.

As of yet many vendors are reluctant to do this. There are several reasons for this. It is obviously difficult to agree on the metrics that would be used in this environment. There are also difficulties in assigning responsibility for business performance under this scenario.

But examples of such arrangements are now emerging. The oft-cited case of EDS and the Chicago Parking Authority is mentioned above. There are likely to be more such arrangements, particularly as outsourcing vendors assume responsibility for more than just IS operations, expanding to business operations.

B

Recommendations

The changing market conditions require some changes in strategy on the part of outsourcing vendors. These changes must reflect the new demands placed on the vendors by the business community. They must also reflect the changes in technology that are shaping the new market environment. INPUT has the following recommendations for the vendor community, summarized in Exhibit V-2.

EXHIBIT V-2

Outsourcing Market—Recommendations

- Broaden service offerings
- Demonstrate value of arrangement
- Expand relationship with clients

It is evident that many of the outsourcing vendors in the market are currently increasing the scope of the services they offer to their clients and prospects. Some of the firms are already large and are simply assimilating some of the service components of their kindred organizations. IBM's recent consolidation of most of the company's service functions under Denny Welsh at ISSC is the most recent example of this. Digital's earlier Services Group reorganization is a similar strategy.

Others are acquiring assets in the marketplace to supplement their own resources. CSC did this over the last three years and SHL Systemhouse has been aggressively acquiring client/server assets this year. Still others are forming strategic alliances that make sense. Unisys teaming with Systematics, and May and Speh teaming with Ameritech are two examples that come to mind.

Outsourcing vendors will need to become systems integrators. They will need to expand their telecommunications capabilities. They will have to decide if they also want to manage applications software. All of these options will lead to an expanded market presence.

Vendors are being asked to demonstrate the value they bring to the outsourcing relationship. The direct cost benefits associated with IS cost reductions are still an important factor. The client is asking questions about how the relationship can improve the client's competitive position, how it can provide better service to the organization's customers.

EDS is addressing this question with a value-based pricing mechanism. Though much of the strategy is proprietary, the principle is to be able to demonstrate qualitative value in concrete terms that include other than direct cost benefits.

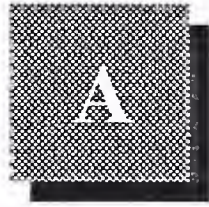
More of these creative approaches—part marketing approach, part hard-nosed financial analysis and measurement—need to be developed by the vendors who want to distinguish themselves from the other market players.

Another way to provide more value is to expand the relationship with the client to a stronger one. The prime example of this type of arrangement is the relationship Acxiom has with its largest outsourcing client, TransUnion. The president of TransUnion joined the board of directors of Acxiom shortly after the contract was signed. Now the client's chief executive has a direct hand in strategy review for the vendor and is also intimately aware of the vendor's on-going financial condition.

Not all client/vendor relationships need to be this close. The reality is that the direct involvement of the vendor in supporting the day-to-day business of the client through the IS function makes this relationship evolve into a closer one in any case. By finding ways of creating enhanced communications between the two parties, vendors will go a long way

toward assuring client satisfaction, and the chances for a long-term relationship are greatly improved.

(Blank)



Appendix: Forecast and Reconciliation

EXHIBIT A-1

Systems Operations U.S. Market Forecast by Industry Sector 1992-1998

Industry Sector	1992 (\$M)	Growth 92 93 (%)	1993 (\$M)	1994 (\$M)	1995 (\$M)	1996 (\$M)	1997 (\$M)	1998 (\$M)	CAGR 93-98 (%)
Delivery Mode Total	11,284	11	12,528	14,418	16,703	19,402	22,676	26,538	16
Discrete Manufacturing	705	20	846	1,017	1,226	1,479	1,789	2,168	21
Process Manufacturing	717	15	824	945	1,095	1,270	1,480	1,740	16
Transportation	206	14	235	278	321	363	415	477	15
Utilities	57	23	70	85	108	133	167	203	24
Telecom- munications	74	12	83	95	108	121	136	154	13
Retail Distribution	350	24	435	525	655	820	1,010	1,253	24
Wholesale Distribution	214	14	244	280	321	369	423	486	15
Banking and Finance	2,545	13	2,880	3,330	3,880	4,555	5,355	6,320	17
Insurance	1,225	16	1,420	1,660	1,950	2,313	2,642	3,083	17
Health Services	1,125	10	1,240	1,400	1,585	1,789	2,020	2,278	13
Education	235	17	275	325	375	445	535	640	18
Business Services	181	20	218	262	319	380	454	520	19
Federal Government	1,870	-10	1,685	1,780	1,900	1,985	2,110	2,245	6
State & Local Governm't	1,760	16	2,050	2,410	2,830	3,345	4,100	4,925	19
Miscellaneous Industries	20	15	23	26	30	35	40	46	15

EXHIBIT A-2

Systems Operations U.S. Market Forecast by Sub-Mode 1992-1998

Delivery Mode/ Submode	1992 (\$M)	Growth 92 93 (%)	1993 (\$M)	1994 (\$M)	1995 (\$M)	1996 (\$M)	1997 (\$M)	1998 (\$M)	CAGR 93-98 (%)
Systems Operations	11,284	11	12,528	14,418	16,703	19,402	22,677	26,538	16
- Platform Operations	3,781	8	4,095	4,565	5,106	5,695	6,347	7,092	12
- Application Operations	4,962	11	5,485	6,239	7,186	8,285	9,649	11,328	16
- Desktop Services	1,358	12	1,520	1,838	2,222	2,690	3,288	4,075	21
- Network Management	1,183	21	1,423	1,776	2,189	2,733	3,393	4,244	24

EXHIBIT A-3

Systems Operations Forecast Reconciliation

Delivery Modes	1992 Market				1997 Market				92-97 CAGR per data '92 Rpt (%)	92-97 CAGR per data '93 Rpt (%)
	1992 Market (Fcst) (\$M)	1993 Report (Actual) (\$M)	Variance from 1992 Report		1992 Market (Fcst) (\$M)	1993 Report (Actual) (\$M)	Variance from 1992 Report			
			(\$M)	(%)			(\$M)	(%)		
Total	11,705	11,284	-421	-4	26,520	22,677	-3,843	-14	18	15
Platform Operations	3,895	3,781	-114	-3	7,000	6,347	-653	-9	12	11
Applications Operations	5,195	4,962	-233	-4	11,505	9,649	-1,856	-16	17	14
Desktop Operations	1,175	1,358	183	16	4,470	3,288	-1,182	-26	31	19
Network Management	1,440	1,183	-257	-18	3,545	3,393	-152	-4	20	23

A**Outsourcing Reconciliation Comments****1. Short Term Changes (1992 Market)**

Minor changes in the platform and applications operations segments of the market reflect decreases in the activity in certain market, particularly process manufacturing and the Federal Government.

The change in desktop services reflects a greater than anticipated increase in this activity. Last year was the first year we separately identified this segment of the market and our data this year is better so we can more accurately forecast it.

The network management market was also forecast separately for the first time last year and the discrepancy reflects some anticipated major contracts that did not occur until this year, such as NASDAQ and Metropolitan Life among others.

2. Long Term Changes (1997 Market)

The decreasing long term growth rate of both platform and applications operations reflects the increased importance of transition outsourcing as a component of these two segments. These contracts tend to be of shorter duration and go away after three years. These phenomena were not reflected sufficiently in last year's forecast. The expected continued slow growth of the Federal market had an impact on this also.

The substantial change in the long range forecast for desktop services reflects over optimism in some of the data collected last year, and subsequent adjustment because actual experience has indicated that these contracts are not as large as had been anticipated.

The discrepancy in the 1997 figures for network management are much less than for the 1992 market and simply reflect the adjustment made in the 1992 figures. The growth rate for the long term is expected to increase, in fact, because there will be greater recognition of the value of outsourcing the network, and newer players will become even more active in this market.

(Blank)

