INPUT

RESEARCH REPORT

Operational Services Market Forecast, US 1997-2002

SOF7U

Operational Services Market Forecast, US 1997-2002

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Abstract

The purpose of this report is to track the key trends in the US outsourcing market and to provide a comprehensive forecast of the size of the market over the period 1997 - 2002. In addition, the report forecasts the changing pattern of demand, and hence service types within the U.S.

The report provides:

- An analysis of the changing nature of the US outsourcing market
- Forecasts by service type
- Forecasts of the information systems outsourcing market by industry
- Market shares of the leading outsourcing vendors in the US

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Introduction

A
Scope and Objectives

Growth in the US IT outsourcing market has been strong in recent years. This high level of growth is set to continue over the next few years, fueled by organizations' increasing acceptance of the outsourcing concept, the Year 2000 problem and the fundamental changes taking place in the IT infrastructures of many organizations.

Indeed, acceptance of the outsourcing concept has now moved beyond IT outsourcing to encompass many additional business functions. Business operations outsourcing is the major growth opportunity for the major US outsourcing vendors over the next five years.

The objectives of this report are:

- To identify the major market trends taking place in the US outsourcing market
- To forecast the size of the US outsourcing market by delivery mode and industry
- To provide league tables of outsourcing vendors.

Outsourcing is defined by INPUT as follows:

Outsourcing is a long-term relationship (greater than one year) between a client and vendor in which the client delegates all, or a major portion, of an operation or function to the vendor. The operation or function may be solely Information Systems Outsourcing-based, or merely include Information Systems Outsourcing as a prominent component of the operation (at least 30% of the budget).

The critical components defining an outsourcing service are:

- Delegating an identifiable area of the operation to a vendor
- Single vendor responsibility for performing that delegated function
- Intended, long-term relationship between the client and vendor
- Contract term is at least one year
- Client's intent is not to perform this function with internal resources
- The contract may include non-Information Systems Outsourcing activities, but Information Systems Outsourcing must be an integral part of the contract
- Outsourcing is a collection of services integrated under a single, long-term contract with one vendor responsible for its operation and management.

Business Operations Outsourcing - (also known as, Business Outsourcing or Functional Outsourcing) is a relationship in which one vendor is responsible for performing an entire business/operations function including the Information Systems Outsourcing that support it. The Information Systems Outsourcing content of such a contract must be at least 30% of the total annual expenditure in order for INPUT to include it in the Business Operations Outsourcing market.

Information Systems (IS) - Outsourcing can be viewed as a component of the Business Operations Outsourcing market (i.e., Information Systems Outsourcing is a business/operations function, see Exhibit I-1). However, in order to delineate between outsourcing contracts that are solely IS versus those that include IS as well as other functions, IS Outsourcing will be segregated from Business Operations Outsourcing. Information systems outsourcing is divided into four service components as shown in Exhibit I-2.

- *Systems Operations* outsourcing describes a relationship in which a vendor is responsible for managing and operating a client's "computer system"/data center (*Platform Systems Operations*) or developing and/or maintaining a client's application as well as performing Platform Operations for those applications (Applications Systems Operations).

- *Desktop Services* is a relationship in which a vendor assumes responsibility for the deployment, maintenance and connectivity of personal computer, workstations, client/server and LAN systems in the client organization. To be considered as Desktop Services outsourcing, a contract must include a significant number of the individual services listed below.

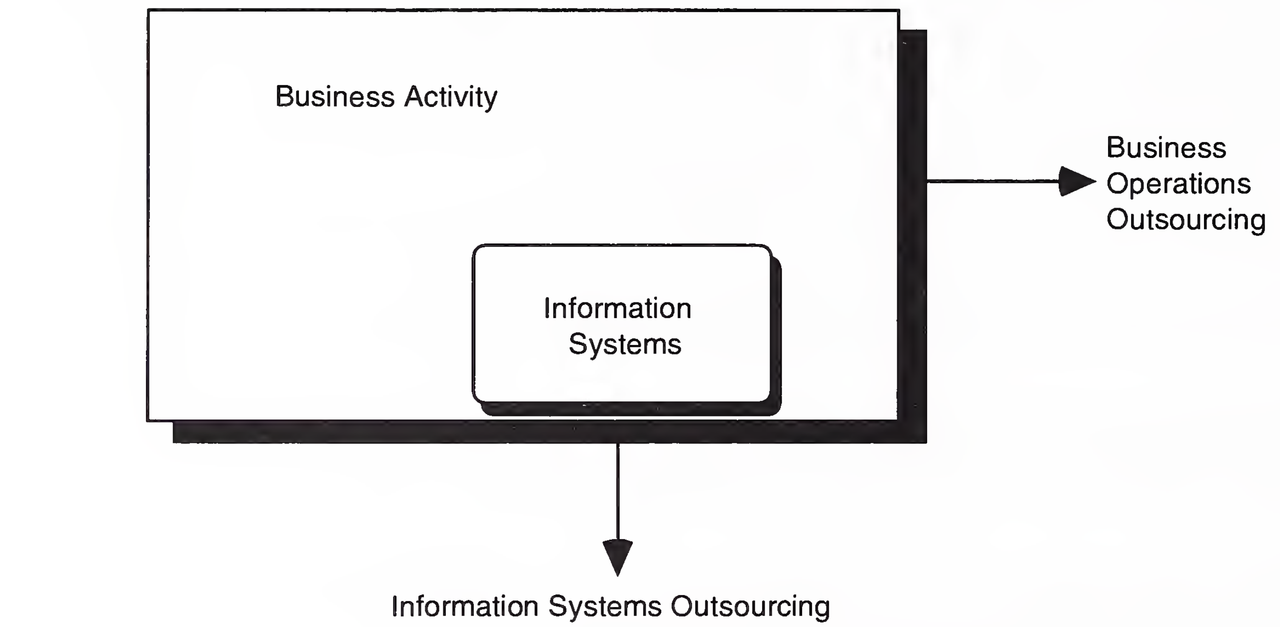
  - Software Product Supply
  - Equipment Supply
  - Equipment/Software Installation
  - Equipment Maintenance
  - LAN Installation and Expansion
  - LAN Management
  - Network Interface Management
  - Client/Server Support
  - Logistics Management
  - User Support
  - Help Desk Functions
  - User Training and Education

- *Network Management* outsourcing is a relationship in which a vendor assumes full responsibility for operating and managing the client's data telecommunications systems. This may also include the voice, image and video telecommunications components

- *Application Management* is a relationship in which the vendor has full responsibility for developing and maintaining all of the application or function.

Exhibit I-1

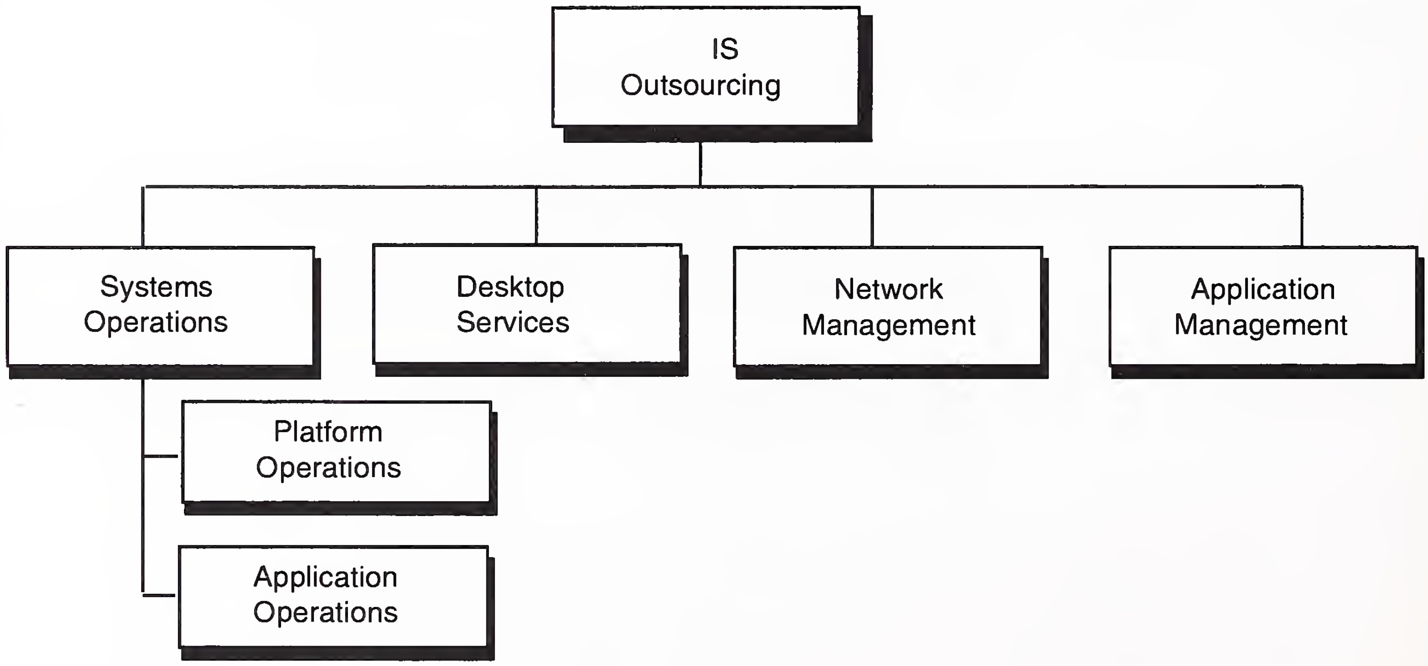
Business Operations Outsourcing



Source: INPUT

Exhibit I-2

Information Systems (IS) Outsourcing Service Categories



Source: INPUT

The above definitions focus on the services covered in the outsourcing contract. For example, an Application Operations contract can include all facets of Information Systems Outsourcing (platform operations, desktop services, network and application management). The key to INPUT's market definition is the service contract . If a customer only wants to outsource the network, it is network management outsourcing. If an airline, for example, wishes to outsource their reservation operation which includes not only the network, but also its infrastructure, applications and the people running the operation, this is a Business Operations Outsourcing contract. Exhibit I-3 shows the service components that may be included in each outsourcing service category.

Exhibit I-3

Outsourcing Service Components

Component	Platform Ops	Appl. Ops.	Desktop Services	Network Mgt.	Appl. Mgt.	Business Ops.
Project/Contract Management	X	X	X	X	X	X
Data Center Management	X	X				X
Client/Server Operations	X	X	X			X
Equipment Maintenance	X	X	X			X
System Software Maintenance	X	X	X	X		X
Application Software Maintenance		X	X		X	X
Application Development		X			X	X
LAN Management		X	X	X		X
WAN/MAN Management		X		X		X
Transaction Processing Services		X				X
Other Professional Services		X	X		X	X
Business Process Operations						X

Source: INPUT

The largest, most visible contracts awarded over the past year have been typically Application Operation outsourcing contracts since they, at least, included management of the infrastructure (various computing platforms) and the support of some legacy applications. In the past, most Application and Platform Operation outsourcing contracts included network management but recent contracts have also included desktop services.

What is not included in INPUT's world of outsourcing are the following:

- Project based services are not considered as part of outsourcing. Thus, Systems Integration and application development projects are not included

- Services that were never intended to be performed internally. Maintenance only services do not constitute an outsourcing function by itself. However, responsibility for hardware and software maintenance is inherent in most outsourcing contracts

- Processing services contracts of less than one year

- Voice-only network management

- Business operations with minimal information systems content. For example, the outsourcing of the marketing communication function to an outside agency is not covered by INPUT's analysis. A function or business operation must at least have 30% of its budget attributed to information technology to be included.

B
Methodology

The data shown in this study was derived from the following combination of sources:

- Interviews with key software and services vendors
- INPUT's continuous analysis of the delivery modes and vertical industry sectors comprising the computer software and services market
- INPUT's extensive library and database of information relating to the US outsourcing market.

C
Report Structure

Chapter II consists of the Executive Summary which provides an overview of the key findings of the report.

Chapter III provides forecasts of the US outsourcing market by service category.

Chapter IV provides forecasts of the US outsourcing market by vertical industry market.

D
Related Reports

Opportunities in Business Process Outsourcing, US (1997)

Opportunities in Applications Management Outsourcing (1997)

IS Outsourcing Competitive Analysis (1996)

Impact of the Internet on Outsourcing and Processing Services (1996)

Outsourcing Vendor Performance Analysis (1996)

Opportunities for Outsourcing Supply Chain Management (1996)

Outsourcing Services Competitive Analysis (1996)

Negotiating Outsourcing Contract Terms and Conditions (1995)

Pricing and Marketing of Outsourcing Services (1995)

Information Systems Outsourcing Market Opportunities, 1993-1998 (1994)

The Role of the CFO in Outsourcing Decisions (1994)

Desktop Services User Perspectives (1994)

The Impact of Business Process Reengineering on Outsourcing (1994)

Client Satisfaction with Outsourcing (1994)

Business Operations Outsourcing (1993)

II

Executive Summary

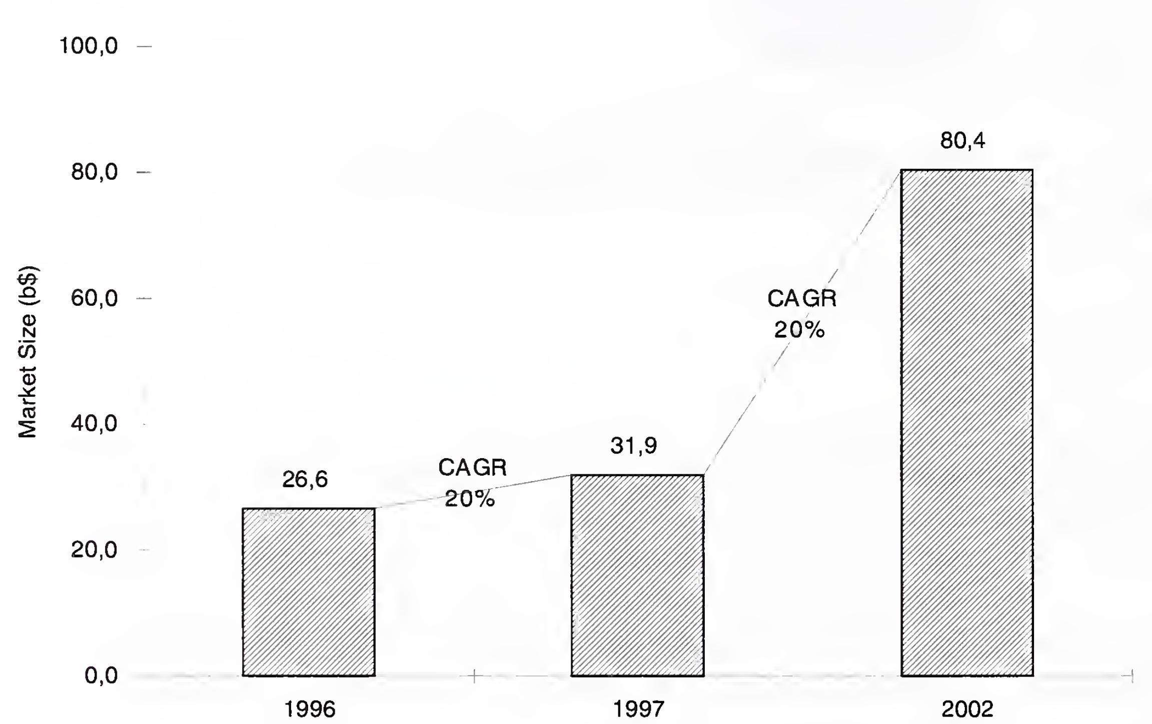
A
Electronic Business Changes the Requirement from Outsourcing

As outsourcing has become commonplace and major contracts have been signed across a wide range of industry sectors, so outsourcing has come to be viewed as yet another business tool. This has legitimized outsourcing to a wide range of senior executives and outsourcing has continued to grow rapidly. This high level of market growth is expected to continue over the next five years.

INPUT's overall forecast for the US outsourcing market is shown in Exhibit II-1.

Exhibit II-1

US Outsourcing Market



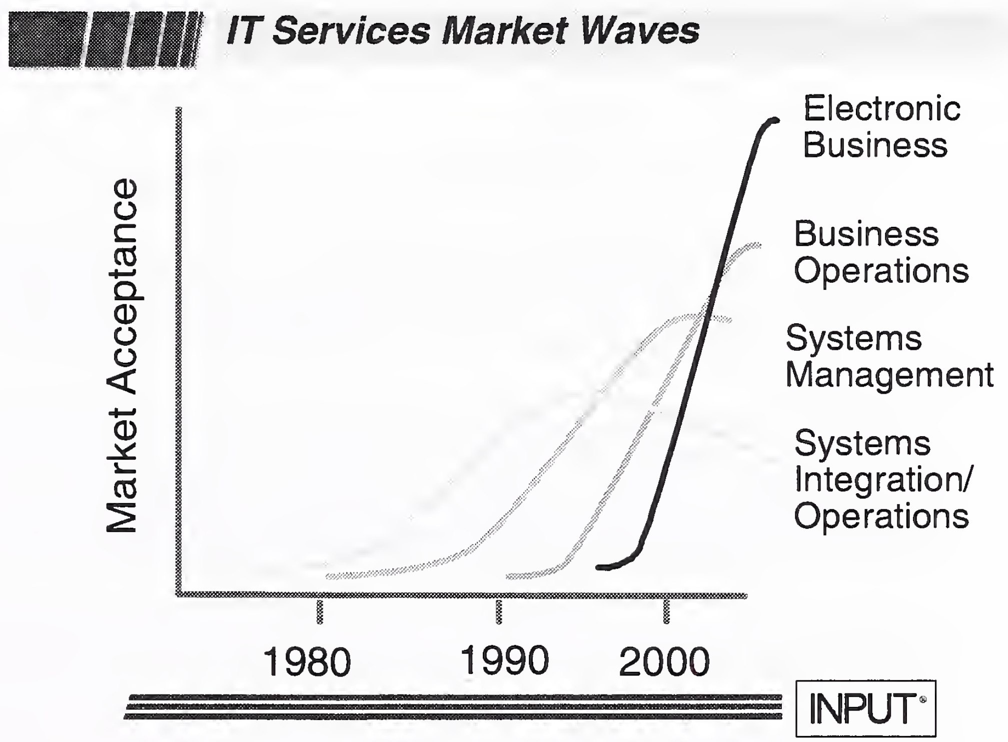
Source: INPUT

This forecast includes both IS outsourcing and business operations outsourcing. Business Operations outsourcing has become firmly established in the US during 1997 and will continue to be a major area of growth throughout the forecast period.

However, the IT services market is entering a new phase and this is changing the profile of demand in the outsourcing market. The changes taking place in the IT services market are summarized in Exhibit II-2.

Exhibit II-2

IT Services Market Waves



Source: INPUT

The IT services market is now moving into the electronic business phase. Electronic Business is the combination of information technology and business process to form a new way of working and involves the embedding of IT into a business or other organizational process in order to enable that process to operate. Electronic Business is typically much more externally focused on the organization's clients and suppliers than the more traditional uses of IT to support business processes.

In this phase, the principal market drivers are changing, producing a significant change in client requirement. Electronic business is emerging at different rates across industry sectors, and vendors with an emphasis on IT outsourcing services will need to build complementary partnerships with organizations possessing expertise in areas such as call center services, marketing and design services and logistics.

B
Evolution of Market Drivers

The outsourcing market has always depended on two factors for its existence:

- A need for change. This can be either a changing business requirement producing a consequent need for IT change or a direct change in IT technology creating new ways of servicing the business

- Cost or skills pressure on the client organization.

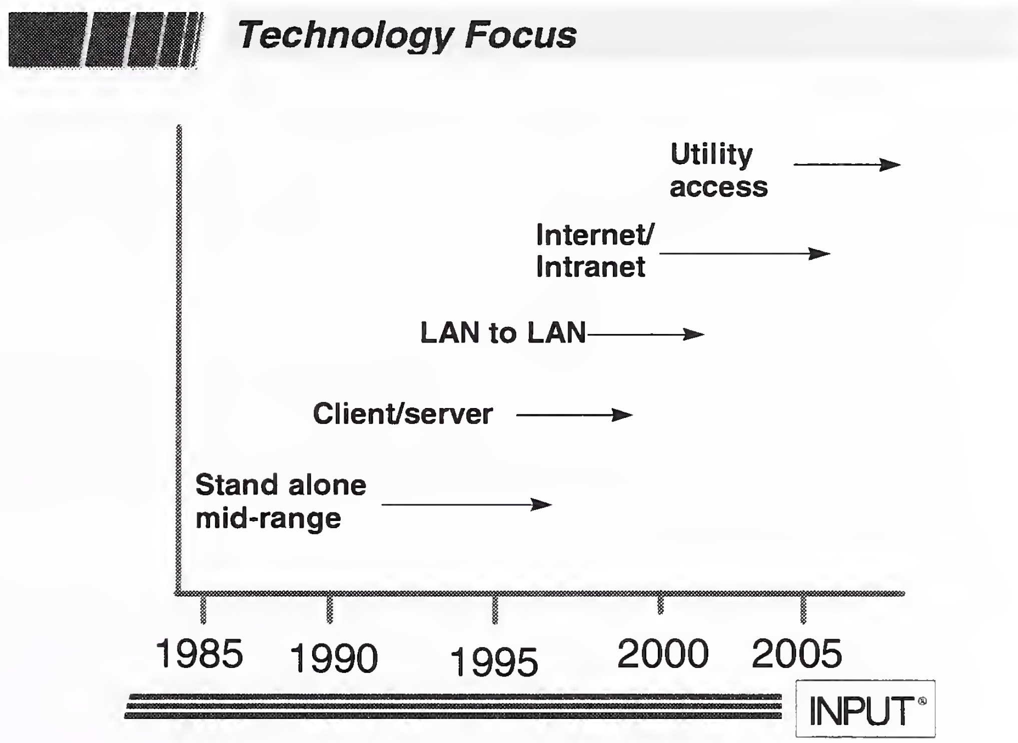
In addition, the attitudes of senior executives towards management philosophies governing sourcing policies and the management of change are important determinants of the acceptance of outsourcing.

At present, there is currently a very high level of enthusiasm for change. Many executives now recognize the potential of information technology to assist proactively in the reengineering of key business processes and are increasingly prepared to be more aggressive in their use of IT.

This is having a major impact on the way in which IT is applied. Senior executives now place a strong emphasis on electronic commerce which they see as a key means of enhancing service delivery to customers and partners. Indeed, much of the focus of IT is now moving towards direct interaction with the organization's clients. In some sectors, witness the explosion in home banking services in the banking sector, the organization's ability to offer online services direct to their clients is critical to their future success.

Exhibit II-3

Changing Technology Focus



Source: INPUT

In response to these goals, the technology focus of many clients is changing as shown in Exhibit II-3.

The change in emphasis described above is leading to an increasing emphasis on outward facing services based around Internet and call center technologies.

Consequently, one of the key issues for outsourcing vendors is that the mainframe platform, though central to many existing IT outsourcing contracts, is no longer the principal concern of clients. Over the past few years, they have become primarily concerned with the quality of distributed systems management including desktop services. Unfortunately, the systems management technologies and processes required to cost-effectively manage such environments have not kept pace with this switch in emphasis on the part of users. Accordingly desktop services outsourcing services have still not reached the level of maturity attained by datacenter based services some years ago. As a result, outsourcing vendors continue to suffer from relatively low levels of satisfaction and relatively low profitability in desktop services.

However, driven by this move to electronic business, the client requirement is already moving on, resulting in increasing expectation of vendor ability to implement and manage Internet and Intranet based infrastructures.

Intranets, in particular, are being increasingly adopted as a means of communicating both within an organization and with key partners. At the present time, approximately 60% of major US organizations either have implemented or are currently implementing Intranets. This will create significant opportunities in Intranet server management over the next few years.

At the same time, approximately 40% of major US organizations expect to adopt network computers for use within their organizations by the Year 2000. However, this does not mean that the network computer, despite its potential for control and minimization of support costs, will replace the personal computer.

These changes are creating major opportunities in distributed systems management. Many wide area networks will have to undergo fundamental changes over the next few years if they are to play an effective part in their organization's use of information technology. However, for many organizations it requires a considerable investment to upgrade the technology of their corporate data network, with the consequence that wide area network outsourcing is increasingly being seen as the answer.

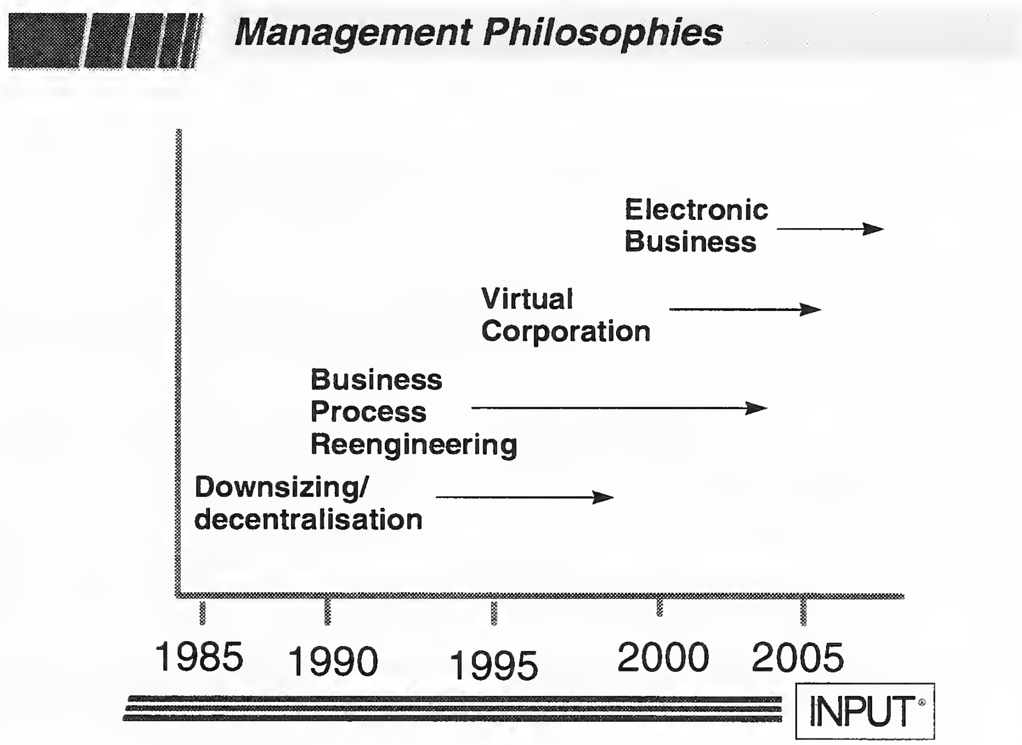
At present many of the major IT outsourcing contracts in the US market are handled by a consortium, with one partner handling the IT infrastructure, another the telecoms infrastructure and another application management. At present, IBM Global Services, EDS and CSC are the major players in IT infrastructure management; AT&T and Sprint are major players in wide-area network management; and Andersen Consulting is a major player in application management.

However, the change in technology emphasis, has considerable future implications for infrastructure support. The trend is increasingly away from supporting the IT infrastructure on a piecemeal basis with one group supporting datacenters, another supporting networks and a third supporting the desktop environment.

Instead many organizations, particularly in the medium-sized deals, are increasingly recognizing the need to adopt end-to-end service management which treats the IT infrastructure as an integrated whole.

Exhibit II-4

Changing Management Philosophies



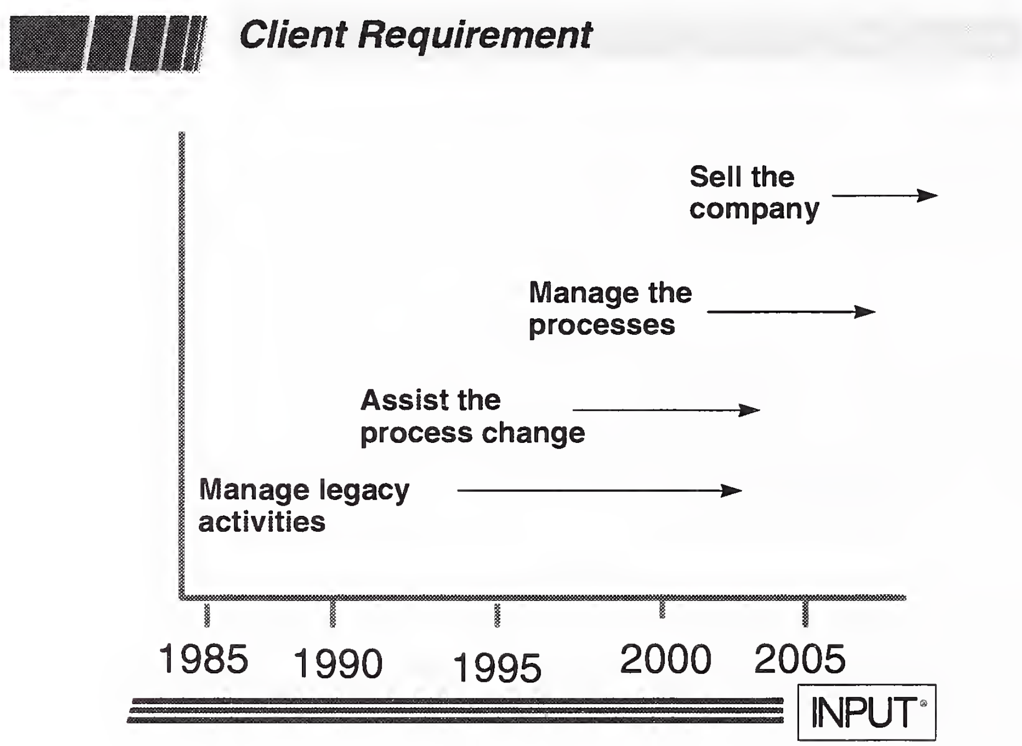
Source: INPUT

The possibilities created by new technology are leading to an increasing belief in electronic business as a way of doing business as shown in Exhibit II-4.

However, the co-existence of a number of these philosophies is leading to a complex mix of outsourcing requirements at present, ranging from some residual management of legacy platforms through business process outsourcing to a need to implement and manage architectures to support electronic commerce as shown in Exhibit II-5.

Exhibit II-5

Changing Client Outsourcing Requirement



Source: INPUT

The speed of this change is a major issue for both buyers and vendors. Many existing outsourcing contracts were established primarily with the management of existing IT infrastructures in mind and the contracts were constructed to maximize the value for money obtained from very specific and tightly defined services. In many cases, this model has already been found to be inappropriate with the buyer complaining about the ability of the vendor to be innovative in the application of IT yet unwilling to make major changes to the nature of the relationship.

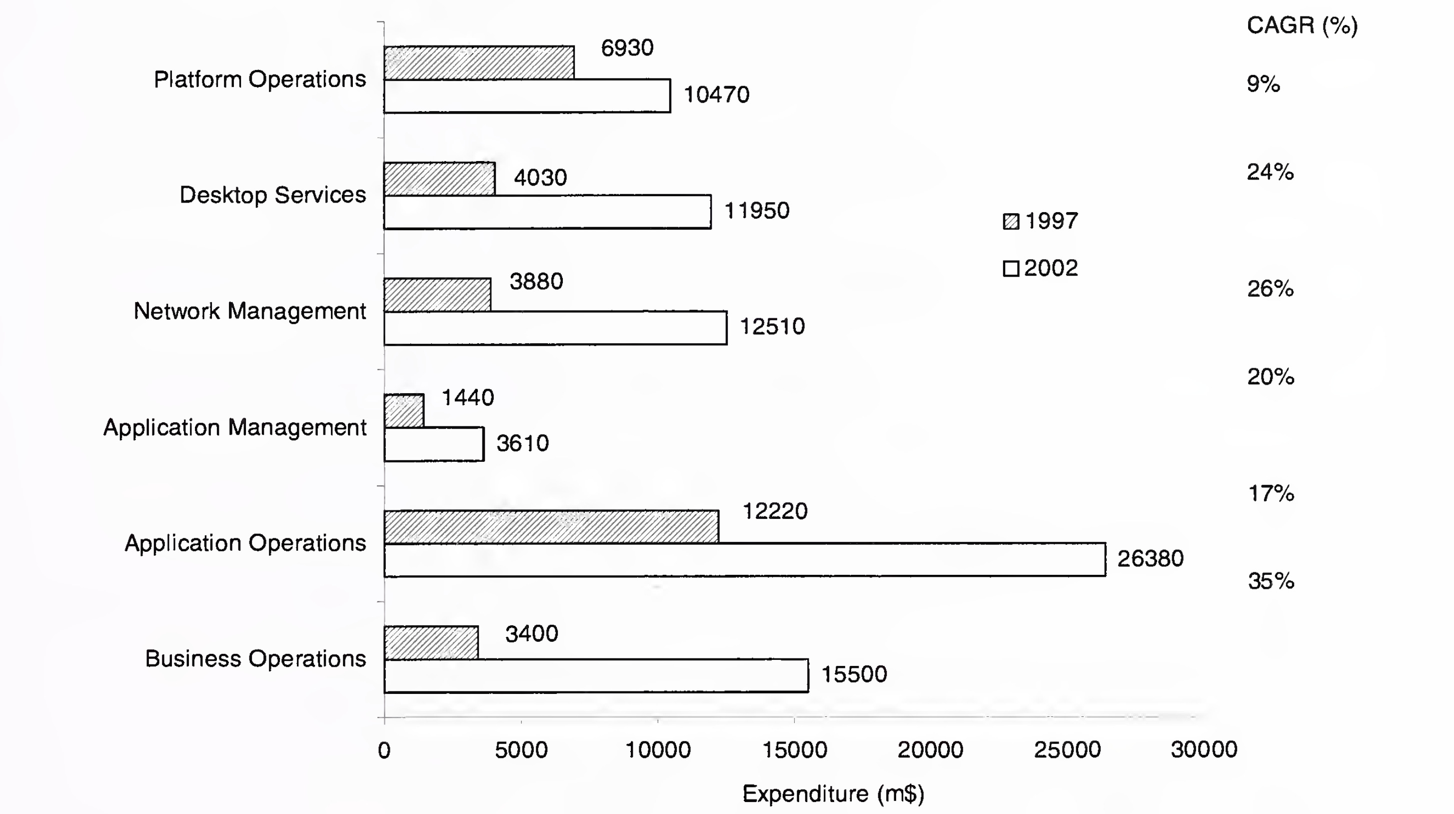
This situation is now being exacerbated by a further shift in technology. At the same time the focus in the application of IT has also shifted with organizations in many sectors such as financial services, utilities and transportation now viewing IT as a key direct sales tool and link with their clients.

This requires a much closer working relationship between buyers and vendors and a much more flexible contractual approach. The services, level of services provided and service pricing now all need to be reviewed by buyer and vendor in a relatively informal manner on a regular basis. The basis of pricing is expected to change over the next few years moving away from fixed price contracts in favor of benchmarked price comparisons and utility pricing models.

Exhibit II-6 provides a forecast of the growth in the US outsourcing market by segment.

Exhibit II-6

Outsourcing Market Segments, US 1997-2002



Source: *INPUT*

The fastest growing sectors of the US outsourcing market are forecast to be business operations and network management. Platform operations will be the lowest growth area.

Some organizations have, in the past, used IT outsourcing to demonstrate the feasibility of outsourcing to other business functions within their organization.

As IT outsourcing matures, so these organizations, and others, are becoming increasingly prepared to outsource entire business processes that are either non-core or not performed to an adequate standard in-house.

As a result of this increasing acceptance of the role of the virtual corporation, business operations outsourcing is forecast to be the fastest growing sector of the outsourcing market over the next five years.

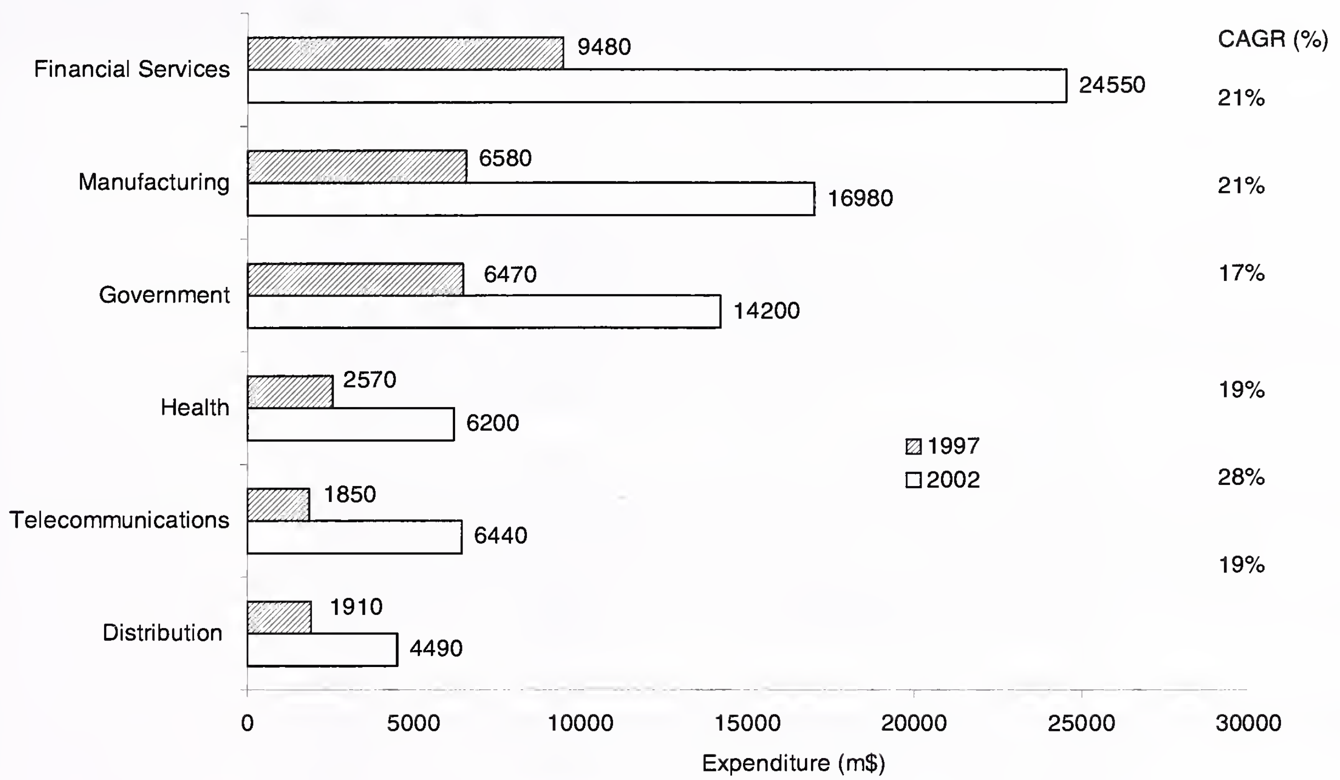
The adoption of an electronic business model may hasten this desire to outsource legacy business processes which are no longer key to the future of the organization.

C
Industry Sector Forecast

Exhibit II-7 provides a forecast for the US outsourcing market by industry sector. The forecasts shown in this exhibit include business operations outsourcing in addition to IS outsourcing.

Exhibit II-7

US Outsourcing Industry Sector Forecast



Source: INPUT

The financial services sector has always been at the forefront in the use of outsourcing in the US and this is expected to continue for some years to come. Financial institutions continue to face a need for major business change and are using outsourcing as a means of driving the corresponding changes in their IT focus. At the same time, financial institutions are using business operations outsourcing as a means of withdrawing from non-core business activities such as check processing.

Telecommunications is another sector that is undergoing major change generating demand for outsourcing, particularly in call center related activities such as customer care and billing.

D

New Partnerships are Required to Meet Electronic Business Needs

Exhibit II-8 shows the leading outsourcing vendors in the US outsourcing market at the end of 1996 and Exhibit II-9 shows the changes in market share that took place between 1992 and 1996.

Exhibit II-8

Leading Vendors: US — 1996

Vendor	Estimated 1996 Revenues ($ m)	Estimated Market Share (%)
EDS	6770	25
IBM Global Services	3100	12
CSC	1570	6
FlServ	600	2
ACS	430	2
Digital	400	2
Unisys	400	2
Andersen Consulting	330	1
AT&T Solutions	320	1
MCI Systemhouse	316	1
Alltel IS	300	1
Perot Systems Corp.	250	1
CBIS	250	1
Hewlett-Packard	230	1
Lockheed Martin	180	1

Source: INPUT

Exhibit II-9

Leading Vendors: US —1992 - 1996

1992	Estimated Market Share (%)	1996	Estimated Market Share (%)
EDS	14	EDS	25
CSC	5	IBM Global services	12
ISSC	4	CSC	6
First Data	3	FI Serv	2
Digital	2	Digital	2

Source: INPUT

EDS, although the market leader, has been suffering profitability problems in its traditional IT outsourcing market and is taking steps to alleviate these through both a voluntary redundancy program and by increasing its focus on new areas of activity such as business operations outsourcing and electronic markets.

The company has been successful in making the switch to business operations outsourcing and is currently the market leader for this activity in the US EDS is assisted in targeting the business operations outsourcing market by its strong image with prospects as a change agent and business advisor.

In electronic markets, EDS faces strong competition from vendors with a strong technology background such as IBM and Siemens.

Although IBM Global Services has all-round outsourcing capability, including a major presence in application management, the company is at its strongest as a competitor for network-centric infrastructure management, as demonstrated by its recent contracts with Washington Mutual for network management and desktop services and with Sears, Roebuck for desktop services.

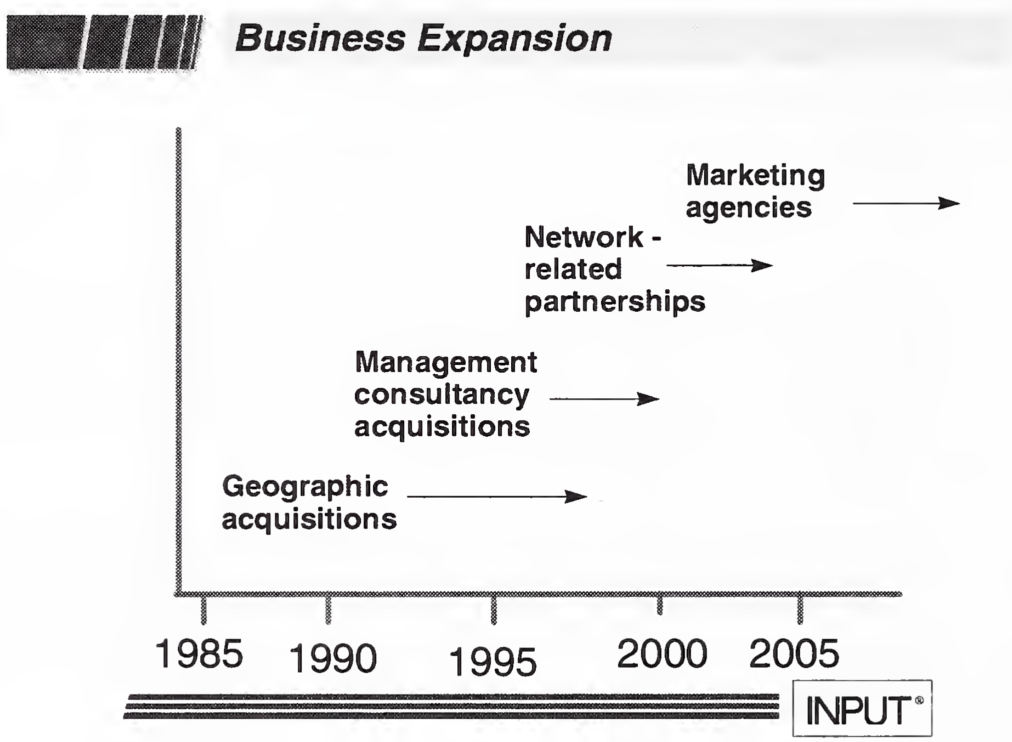
Andersen Consulting has traditionally lacked a major infrastructure management capability and has targeted those areas where its strong industry focus and reengineering skills are most relevant, namely application management and business operations outsourcing. The company has had major successes participating in consortia with this approach, for example, in the Pinnacle consortium. One feature of Andersen Consulting's approach its extensive use of partnerships and joint ventures with both partners and clients.

CSC is seen more as a technology consultant than a business advisor in the US and has not made the same progress as EDS and Andersen Consulting in targeting business operations outsourcing.

Exhibit II-10 shows the pattern of merger and acquisition strategies adopted by leading outsourcing vendors.

Exhibit II-10

Partnership and M&A Strategies: Outsourcing Vendors



Source: INPUT

In the early 1990s, the major outsourcing vendors were on the acquisition trail.

However, as the need to deliver business change became increasingly important, a number of the leading outsourcing vendors acquired management consultancy organizations. The talks between Origin, C&L and Price Waterhouse were the latest manifestation of this trend.

The emphasis is now on acquiring the new skills required to operate in the new environment created by electronic business. Here there may be a need for outsourcing vendors to extend their service capability beyond IT and process change and form partnerships to deliver new business services such as marketing services, design services, call center capability and logistics fulfillment.

Logistics is often the weak link when an organization begins to move into electronic business.

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III

US— Operational Services

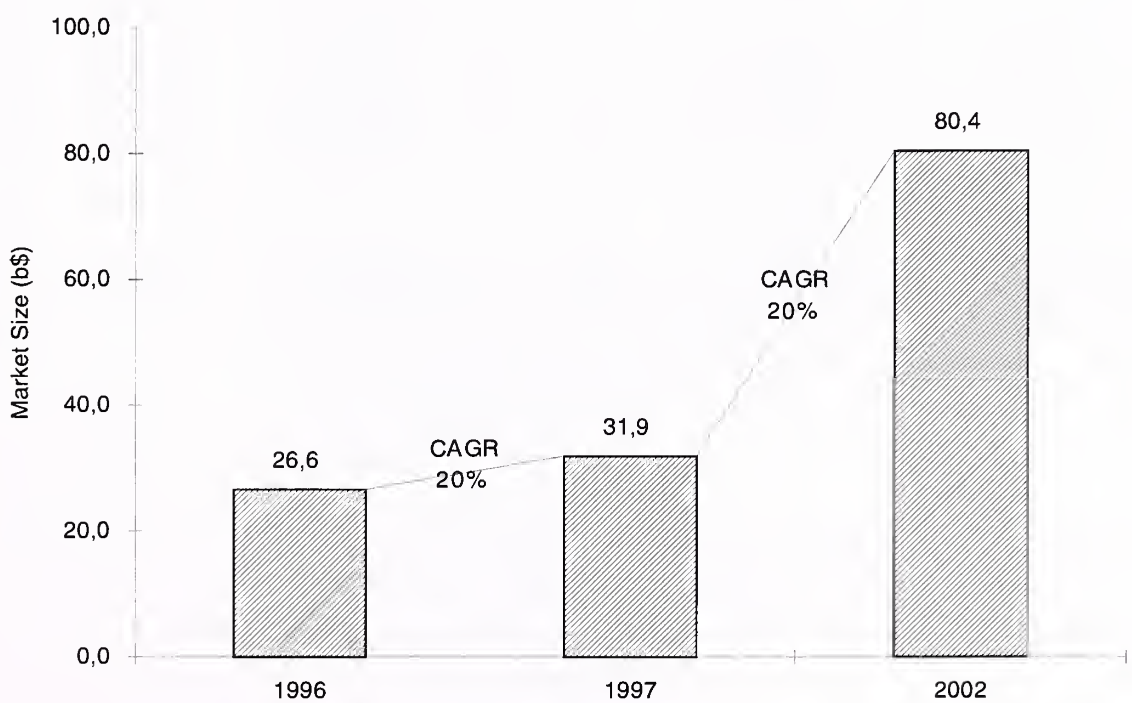
A

US Outsourcing Market Growth will Average 20% Growth Until 2002

INPUT's overall forecast for the US outsourcing market including business operations outsourcing is shown in Exhibit III-1.

Exhibit III-1

US Outsourcing Market



Source: INPUT

Typically, US is the most advanced outsourcing market with:

- A strong emphasis on desktop services and network management
- A wide range of business operations outsourcing contracts.

Exhibit III-2 forecasts the US outsourcing market by delivery mode over the period 1997-2002.

Exhibit III-2

US Outsourcing Market, 1997-2002

	Market Forecast (US $ Millions)				
	1996	Growth 1996-1997 (%)	1997	Growth 1997-2002 (%)	2002
Platform Operations	6300	10	6930	10470	9
Desktop Services	3250	25	4030	12000	24
Network Management	3150	23	3880	12500	26
Applications Management	1200	20	1450	3600	20
Applications Operations	10200	19	12200	26400	17
Total IS Outsourcing	24100	18	28500	64900	18
Business Operations	2500	36	3400	15500	35
Total Outsourcing	26600	20	31900	80400	20

Source: INPUT

This chart provides a complete forecast for outsourcing including the business operations activity carried out by IT services vendors.

Business Operations contracts are becoming more and more commonplace as companies move beyond IS outsourcing. Acceptance for this kind of contract is now found in industry sectors such as the state & local government sector, the telecommunications sector, and the transportation sector.

Although the IS outsourcing market has exhibited high growth rates for a number of years, there are no signs of growth slackening over the next three years. Beyond this period a slowdown in growth may occur as a result of increasing market saturation and the removal of the Y2K effect as a driver of change.

The current high market growth is being driven by the simultaneous impact of a number of factors, namely:

- The Year 2000 problem. This problem is forcing organizations to audit their current systems portfolio and decide whether to retain or replace each application. This process, combined with resource shortfalls and an immovable deadline, will increase application management expenditure considerably. At the same time, organizations will require a robust distributed systems environment and an industrial strength help-desk to meet the challenges of Year 2000. This is creating increased demand in IT infrastructure management and, in particular, desktop services.

- Increasing use of electronic commerce and the move towards distributed IT infrastructures. Electronic commerce is putting existing network infrastructures under considerable pressure since these are typically inappropriate for the widespread transmission of multi-media content both within the enterprise and to external clients and partners.

- The need to adopt an enterprise management approach to IT infrastructure management and to develop a support infrastructure, including network management centers, that enables this to take place.

- Another change in IT platforms towards increased use of Intranets and, to a certain extent, use of network computers.

These driving forces will have greatest impact on distributed systems management, i.e. desktop services and network management, and on application management. Consequently, there will be a relative decline in the importance of datacenter management though this will still remain an important component of total IT infrastructure management and applications operations contracts.

In addition, the non-captive outsourcing market has been increased by an ongoing transfer of contracts from the captive to the non-captive sector. The EDS split-off from General Motors, its former parent, has significantly impacted EDS' 1996 outsourcing revenues in the discrete manufacturing sector, as the contract revenues between the two companies are no longer considered to be captive. This separation boosted the size of the non-captive outsourcing market in the US and all other countries where EDS and GM work together.

Since INPUT's delivery modes typically contain a combination of service components, Exhibit III-3 forecasts the outsourcing market by service component over the period 1997-2002.

Exhibit III-3

IS Outsourcing by Service Component, US 1997-2002

Service Component	User Expenditure $(m)		CAGR (%)
	1997	2002	
Datacenter Management	15500	25000	10
Distributed Systems Management	4600	14100	25
WAN Management	4300	20000	36
Application Management	7500	21320	23
Total	31900	80420	20

Source: INPUT

The leading outsourcing vendors in the US are listed in Exhibit III-4.

Exhibit III-4

Leading Outsourcing Vendors, US 1996

Vendor	Estimated 1996 Revenues ($ m)	Estimated Market Share (%)
EDS	6770	25
IBM Global Services	3100	12
CSC	1570	6
FIServ	600	2
ACS	430	2
Digital	400	2
Unisys	400	2
Andersen Consulting	330	1
AT&T Solutions	320	1
MCI Systemhouse	316	1
Alltel IS	300	1
Perot Systems Corp.	250	1
Hewlett-Packard	230	1
CBIS	230	1
Lockheed Martin	180	< 1
Total listed	15426	58
Total market	26610	100

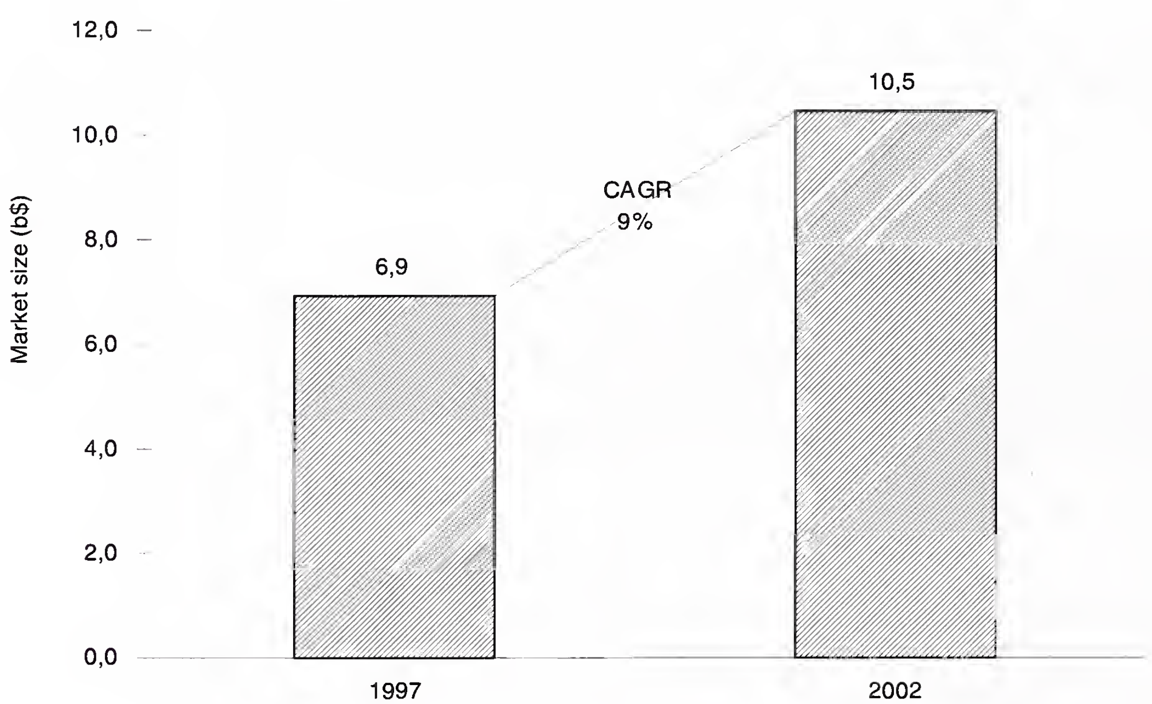
Source: INPUT

B
Platform Operations in Relative Decline

The growth rate of the platform operations segment within the outsourcing market is by far the lowest. However this sector is the second largest, accounting for 22% of the outsourcing market in 1997, but slipping to only 13% in 2002. INPUT projects that this market will grow at 9% over the forecast period, increasing from $6.9 billion in 1997 to $10.5 billion in 2002, as shown in Exhibit III-5.

Exhibit III-5

Platform Operations Outsourcing Market, 1997-2002



Source: INPUT

The platform operations market is driven by the desire to reduce the cost of running mainframe datacenters and by the trend to phase out mainframes in favor of more distributed IT infrastructures.

In 1997, the datacenter management component represents nearly 50% of outsourcing revenues. But INPUT projects this component to reduce to 30% of the market value by 2002.

C

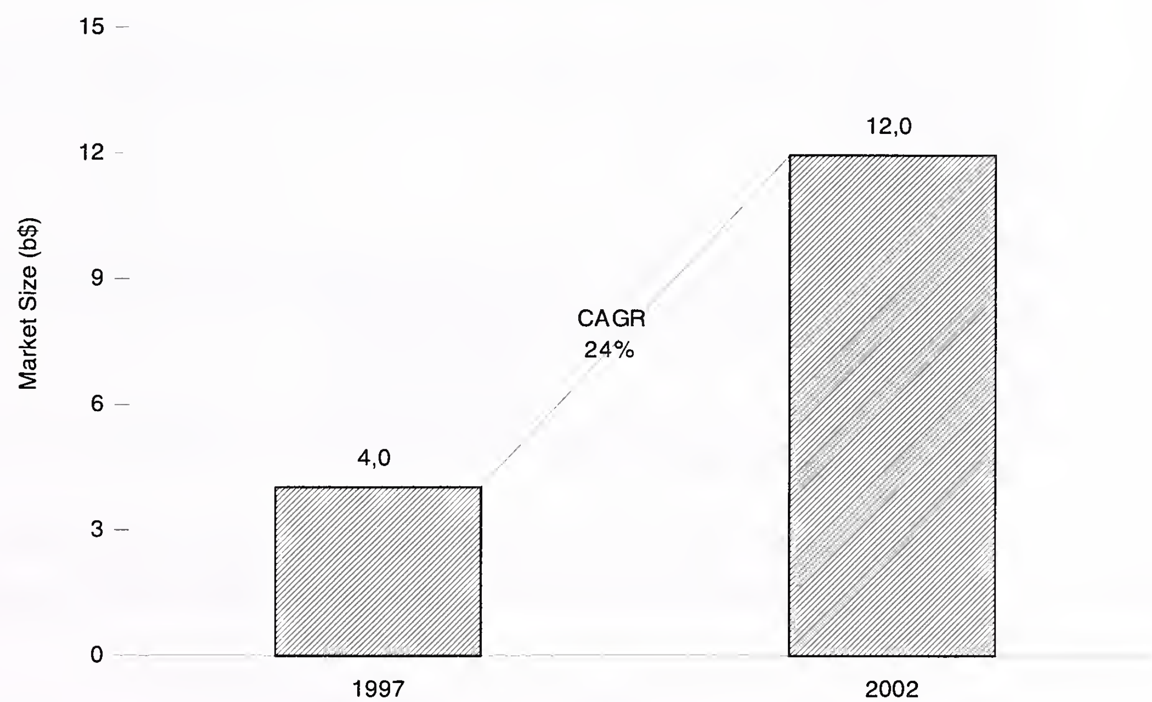
Desktop Services — Operational Services for the Distributed IT Infrastructure

The US desktop services market is $4 billion in 1997, and INPUT predicts it to grow at a 24% compounded annual growth rate over the five next years (see Exhibit III-6).

However, many vendors are finding it difficult to penetrate the market for desktop services outsourcing, because of the difficulty of providing a proactive desktop management service at a price below the real support cost achieved by internal IT departments.

Exhibit III-6

Desktop Services Outsourcing Market, 1997-2002



Source: INPUT

The desktop services market is characterized by a wide range of vendors. Contract lengths also tend to be shorter in this market segment than other areas of the outsourcing market, typically around 3 years.

Many significant contracts have been signed recently such as

in 1996:

- The 3-year, $550 million contract signed by Vanstar with Microsoft
- The $500 million contract signed by Digital with Citicorp in the financial sector
- The 7-year, $280 million contract signed by Unisys with the Social Security Administration
- The 3-year, $250 million contract signed by GE Capital Tech/AmeriData with the State of Minnesota
- The 3-year, $250 million contract signed by Minerva Technology Inc. with Vanstar Corp., in the discrete manufacturing sector.

in 1997:

- The 3-year, $200 million contract signed by both Vanstar and Hewlett Packard with Chevron Information Technology Corp., in the process manufacturing sector
- The 3-year, $70 million contract signed by Digital with TransAlta, in the utilities sector.

In addition to these major desktop services contracts, there are a considerable number of such contracts signed every year for smaller amounts.

D

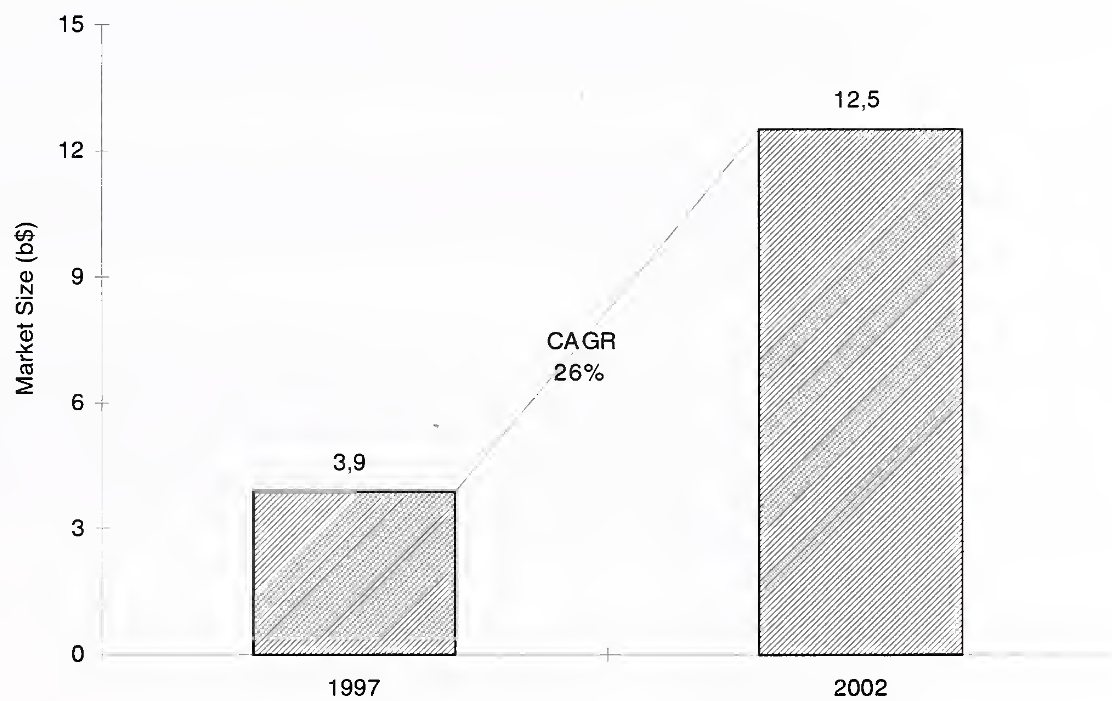
Network Management Growth Driven by Electronic Business

This segment is the second fastest growing after business operations.

Exhibit III-7 provides forecasts for the network management market over the period 1997-2002. The market will grow by 26% to reach $12.5 billion in 2002.

Exhibit III-7

Network Management Outsourcing Market, 1997-2002



Source: INPUT

Large contracts signed in 1997 are:

- The 11-year, $3 billion contract signed by MCI Systemhouse (and Digital and Cisco) with the US Postal Service

- EDS signed a $900 million contract with Electronic Broking Services and a 5-year, $600 million contract with the Department of Energy

- The SITA/Equant joint venture award with SABRE Group valued at $450 million over 7 years.

In addition, a 10-year contract, valued at $1.1 billion, was signed in 1996 by AT&T Solutions with Textron, a discrete manufacturing company.

Many organizations are now facing a similar situation in wide area networks to that they faced in their datacenters five to ten years ago. In particular, many corporate data networks lack the throughput required to support interconnected LANs and new technologies such as Intranets. They are also implemented in inappropriate topologies for support of client/server infrastructures and in legacy technologies.

Accordingly, the potential demand for WAN outsourcing is very strong. Indeed, many users would like to appoint a single vendor to provide management of their combined LAN and WAN infrastructures.

Therefore, network specialists like AT&T Solutions, MCI Systemhouse and SITA need to partner with IT suppliers to broaden their operational services offering and provide best-of-breed solutions across both local and wide area networks.

At present, the financial services, federal, healthcare and transportation sectors are in the vanguard of the network outsourcing movement. Organizations in these sectors and elsewhere are under pressure to adopt new network technology to assist them in offering new types of service and improving service delivery.

E

Application Management Stimulated by Year 2000 Problem

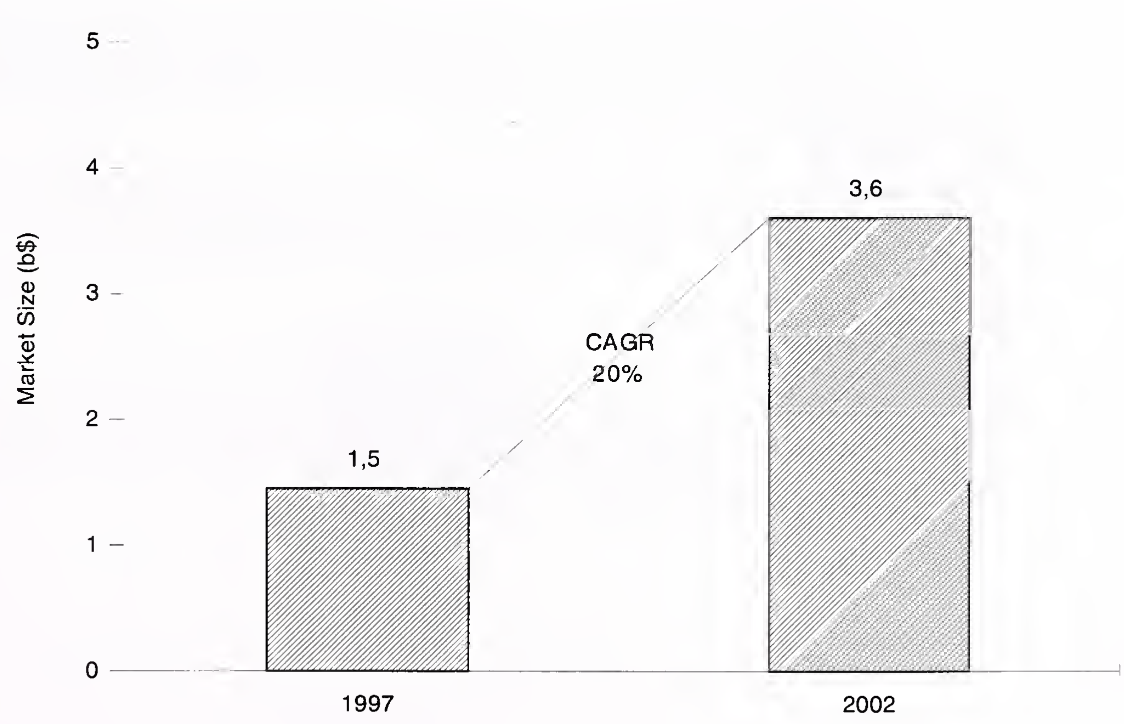
The market for applications management outsourcing reached $1.5 billion in 1997 and is forecast to reach $3.6 billion in 2002. (see Exhibit III-8).

Application management is expected to show high growth rates over the forecast period as organizations struggle to come to terms with the Year 2000 problem. One tactic when faced with this problem is to outsource application maintenance for applications that are to be phased out by the Year 2000. Another tactic is to outsource complete suites of applications or even the whole systems development department.

The compounded annual growth rate (CAGR) over the forecast period is 20%, which parallels the overall growth rate of the market.

Exhibit III-8

Application Management Outsourcing Market, 1997-2002



Source: INPUT

A previous survey by INPUT on opportunities in applications management outsourcing observed that applications management outsourcing demand is increasing as business pressures intensify. Therefore IT managers are turning to outsourcers to help them achieve the business objectives.

Drivers of applications management outsourcing market growth include:

- Increased dependence on applications for improved business performance
- Transition to distributed systems
- Increasing complexity of applications
- Technological change and the desire to integrate/utilize new technology
- Re-engineering efforts and the need to focus staff on core competencies
- Lack of enough appropriately skilled in-house personnel who can develop, implement, and manage new applications, and modify and maintain legacy applications
- Absorption of internal resources by Year-2000 projects, requiring outside help for other key projects and transition
- Cost pressures.

As applications increase in complexity, it becomes more cost effective to outsource their management rather than maintain in-house operations for non-core competencies.

F

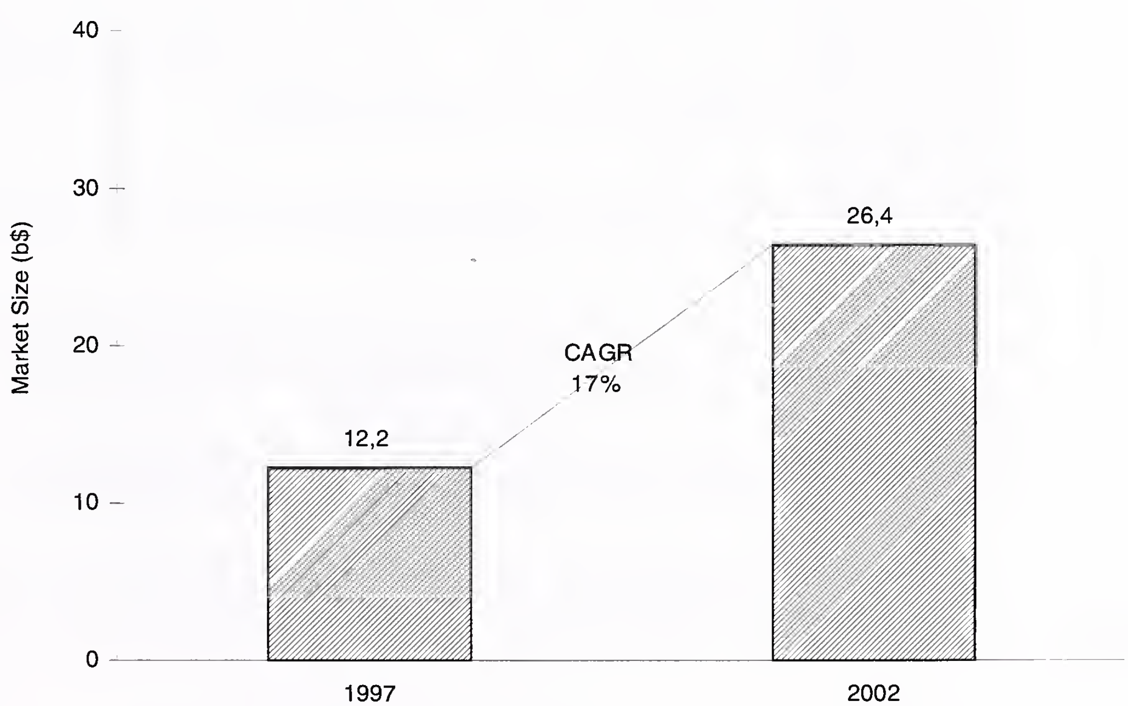
Applications Operations Affected by More Selective Approach to Outsourcing

Applications operations is the largest segment of the US outsourcing market, accounting for nearly 40% in 1997. In the future, it will account for a smaller proportion of the outsourcing market. INPUT estimates that the applications operations category will account for one third of the US market in 2002.

Exhibit III-9 provides forecasts for the applications operations market over the period 1997-2002.

Exhibit III-9

Applications Operations Outsourcing Market, 1997-2002



Source: INPUT

The applications operations market will continue to grow over the forecast period although at a slower rate than the overall outsourcing market. Some of this growth is at the expense of the platform operations market, as the principal drivers of IS outsourcing shift from factors overwhelmingly concerned with cost reduction to factors related to improving the effectiveness with which IT is applied in support of business goals.

However, there are signs that organizations are becoming more selective in their use of outsourcing partners. Consequently individual service types such as application management and network management are expected to show higher growth rates than the all-inclusive application operations.

There were many large applications operations contracts signed in the US in 1997 including:

- The $2.5 billion agreement of Sabre Group with the US Airways
- The 5-year, $450 million contract signed by Perot Systems Corp. with Parsons Corp., a services company
- The 5-year, $300 million contract signed by EDS with Chevron, a process manufacturing company
- The 10-year, $450 million contract signed by IBM Global Services with Monsanto, also a process manufacturing company
- The 10-year, $300 million contract signed by Andersen Consulting in the financial sector with CoreSates Financial Corp.

In addition, companies such as Affiliate Computer Services and FIServ, specialists in that industry sector, both signed $100 million contracts in 1997.

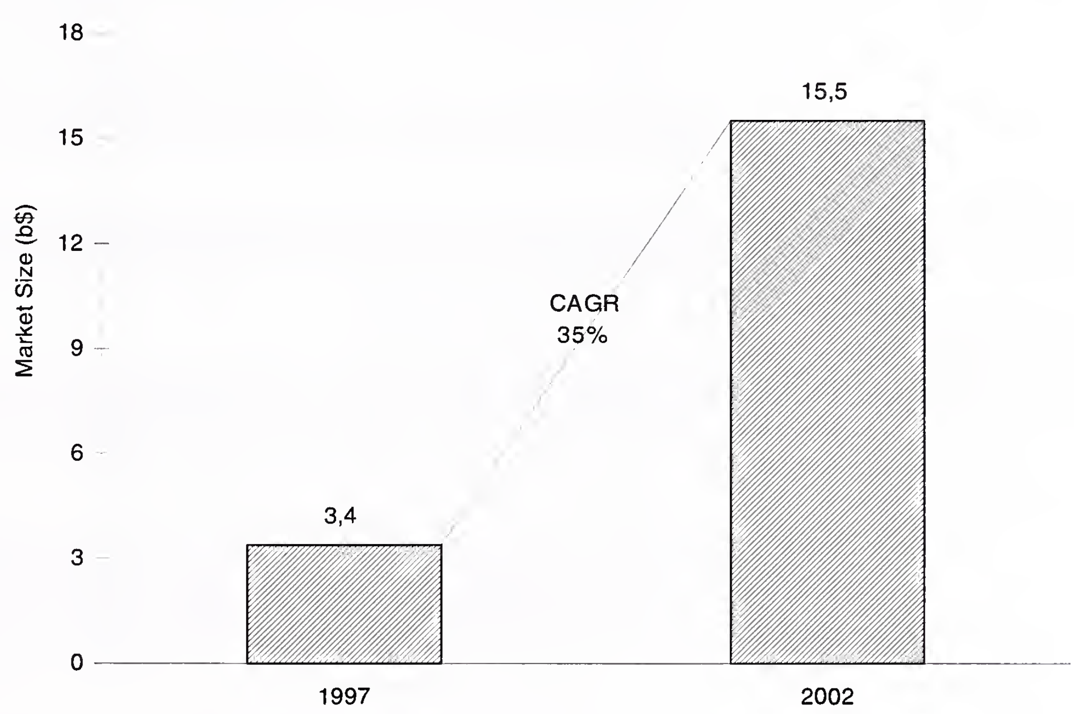
G

Business Operations is the Fastest Growing Segment of the Outsourcing Market

Business operations extends the outsourcing concept beyond the IT Department. It is the fastest growing segment of the outsourcing market, increasing from $3.4 billion in 1997 to $15.5 billion in 2002 (see Exhibit III-10).

Exhibit III-10

Business Operations Market, 1997-2002



Source: INPUT

Opportunities in business process outsourcing include:

- Customer services, comprising customer service desks and customer order fulfillment services
- Accounting services, including billing and day-to-day accounts preparation
- Human resources administration, principally payroll and pensions administration

- Supply chain management, comprising purchasing and logistics
- Procurement services.

A significant proportion of senior executives world-wide now believe that the concept of the virtual corporation can profitably be applied to their organizations. The result of this thinking is that organizations will increasingly outsource business functions that cannot be performed both successfully and cost-effectively in-house.

Previous research conducted by INPUT revealed that:

- Almost two-thirds of organizations expect to extend their use of business operations outsourcing within the next 2-3 years
- In the short term, organizations will focus on outsourcing payroll, accounting and human resources administration
- Typically vendors targeting large organizations will offer them highly customized outsourcing, while offering mid-sized companies a highly packaged service.

INPUT predicts particularly high rates of growth in the business services industry (40% growth expected over the forecast period), in the utilities sector (39%) and in the transportation sector(38%).

At the same time, the state & local government sector and health sectors will achieve particularly high levels of acceptance for these kinds of contracts and these sectors will enjoy a 37% growth over the five next years.

- Examples of major business operations contracts in 1997 include:
- The IBM Global Services and Andersen Consulting 10 years contract signed with Ryder System (transportation company), Inc. valued at $700 million
- The $500 million contract signed by EDS with Digital for 8 years
- The ten years contract signed by Lockheed Martin with the NY State Department of Social Services valued at $720 million.

Exhibit III-11 lists the business operations contract value won by a number of leading outsourcing vendors in the first half of 1997.

Exhibit III-11

Business Operations Contract Value Awarded: Jan-June 1997

Vendor	Global Contract Value ($m)
EDS	1500
Andersen Consulting	1000
CSC	500
IBM Global Services	150

Source: INPUT

In 1997, EDS and Andersen Consulting positioned themselves strongly in this market.

At present, these companies appear to be operating in complementary segments of the business operations outsourcing market. EDS has achieved successes in:

- Check and credit card processing
- Customer services/customer care
- Public sector administration.

Andersen Consulting has achieved success in:

- Supply chain management
- Accounting services.

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IV

Vertical Industry Markets

A
Industry Sector Forecast – US, 1997-2002

Exhibit IV-1 provides a forecast for the US outsourcing market by industry sector over the period 1997-2002.

This forecast includes both IS outsourcing and business operations outsourcing.

Exhibit IV-1

Industry Sector Breakdown, US 1997-2002

	US $m 1996	Growth 96-97 %	US $m 1997	Growth 97-02 %	US $m 2002
Banking & Finance	5470	19	6500	22	17650
State & Local Government	3720	22	4500	20	11400
Federal Government	1800	7	1950	8	2850
Insurance	2520	18	2960	18	6900
Health Services	2270	13	2570	19	6200
Process Manufacturing	1900	20	2300	19	5500
Discrete Manufacturing	3400	26	4280	22	11500
Retail Distribution	1100	24	1375	20	3400
Education	515	14	590	14	1150
Transportation	940	20	1130	21	2900
Wholesale Distribution	455	17	530	15	1100
Business Services	630	16	730	21	1900
Telecommunications	1400	33	1850	28	6450
Utilities	355	30	460	25	1400
Miscellaneous Industries	125	14	140	10	230
TOTAL	26600	20	31900	20	80400

Source: INPUT

B

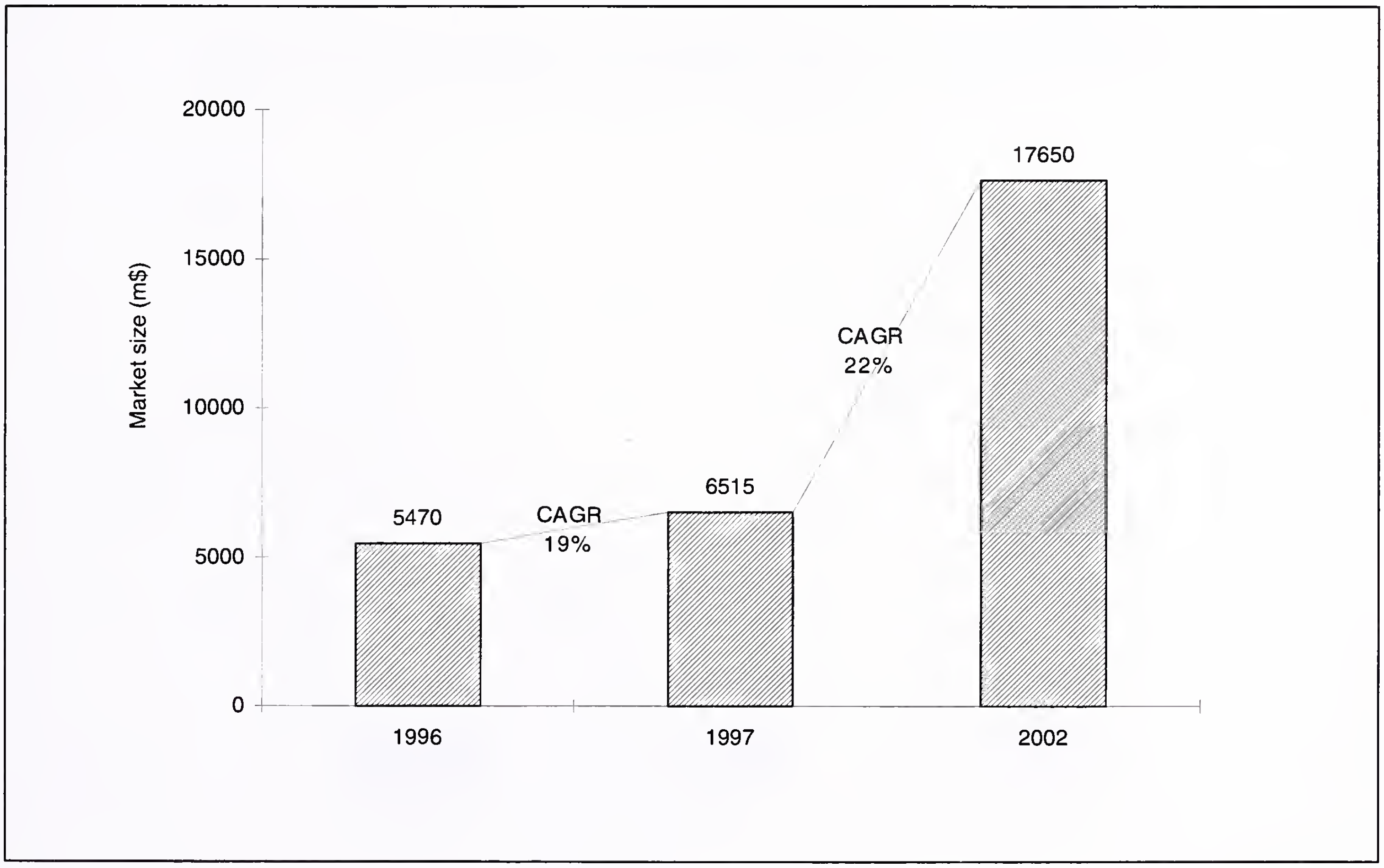
Banking & Finance Industry Market, 1997-2002

Banking and finance companies have traditionally been more receptive to outsourcing arrangements than any other sector's organizations. This sector is the largest segment of the outsourcing market, representing approximately 20% of the US outsourcing market in 1997.

INPUT expects the banking and finance sector to exhibit growth rates consistent with the overall outsourcing market, growing from about $6.5 billion in 1997 to $17.6 billion in 2002 (see Exhibit IV-2).

Exhibit IV-2

US Outsourcing Market, 1997-2002 Banking & Finance Services



Source: INPUT

The financial services sector has been at the forefront of the adoption of outsourcing. Despite its role in the vanguard of outsourcing, there are no signs of any significant slackening of growth, in the banking sector especially.

For example, a $900 million contract was signed this year by EDS with Electronic Broking Services (EBS) for network management.

The top three vendors that serve the banking & finance sector are EDS, IBM Global Services and FIServ.

EDS has maintained its strong presence in this market while FIServ competes as an industry specialist.

Other generalist vendors such as CSC and Unisys have reinforced their presence in the banking and finance sector through their vertical sales strategies. In particular, CSC (as part of the Pinnacle Alliance) won a $2 billion contract in 1996 over 7 years.

Financial institutions face the need for major business and technology change. For example, call centers are of critical importance in supporting banking clients usage of electronic and telephone banking.

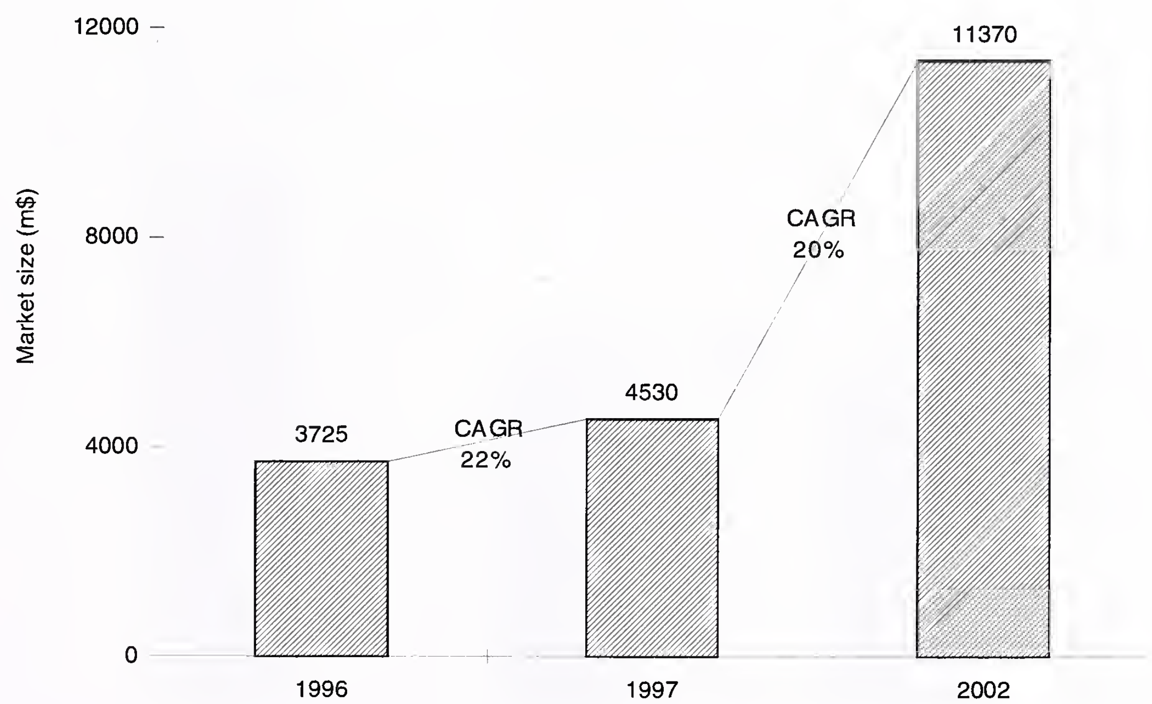
C
State & Local Government Industry Market, 1997-2002

Outsourcing within the state & local government has grown strongly over the past 2-3 years compared to the Federal government market and, as shown in Exhibit IV-3, will grow at a sustained CAGR of 20% over the five-year period from 1997 to 2002.

One of the significant contracts signed in 1997 in the state & local government sector is the NY State Metropolitan Transportation Authority contract signed by Lockheed Martin to provide business operations. This agreement is valued at $720 million dollars over 5 years.

Exhibit IV-3

US Outsourcing Market, 1997-2002 State & Local Government



Source: INPUT

D
Federal Government Industry Market, 1997-2002

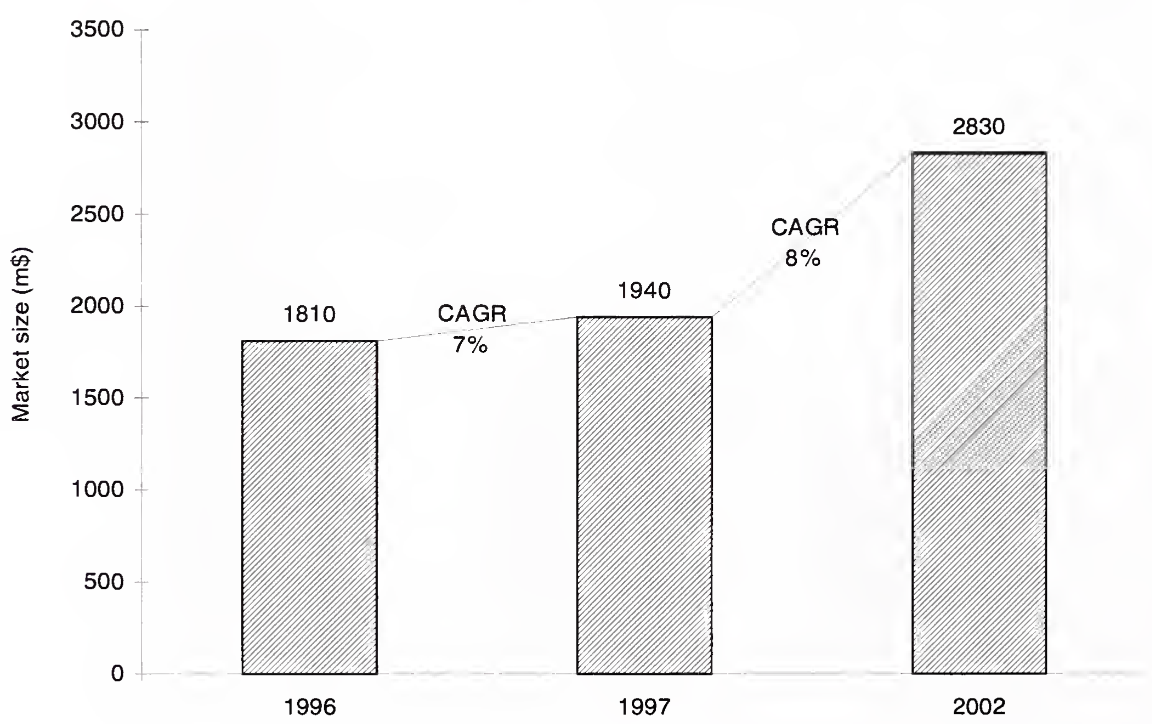
The growth rate of the outsourcing market in the federal government sector is one of the lowest. INPUT projects that the federal market will grow at 8% over the forecast period , increasing from $1.9 billion in 1997 to $2.8 billion in 2002, as shown in Exhibit IV-4.

However, 1997 has seen some large contract awards providing applications operations including:

- The 10-year applications operations contract valued at $2 billion signed by CSC, Unisys and SunGard with the Federal Computer Acquisition Center.

Exhibit IV-4

US Outsourcing Market, 1997-2002 Federal Government



Source: INPUT

- The 10-year contract with US Navy (ViVid) signed by Lucent Technologies, EDS and GTE, valued $1450 million.

- The 5-year contract between EDS and the Department of Energy valued at $600m.

In addition, a major contract was signed in 1997 by MCI Systemhouse, Digital and Cisco with the US Postal Service to provide network management. This contract is valued at $3 billion over 11 years.

Exhibit IV-5 lists the leading providers of outsourcing services to the federal government industry.

Exhibit IV-5

Leading Federal Government Outsourcing Vendors

- CSC
- EDS
- Unisys

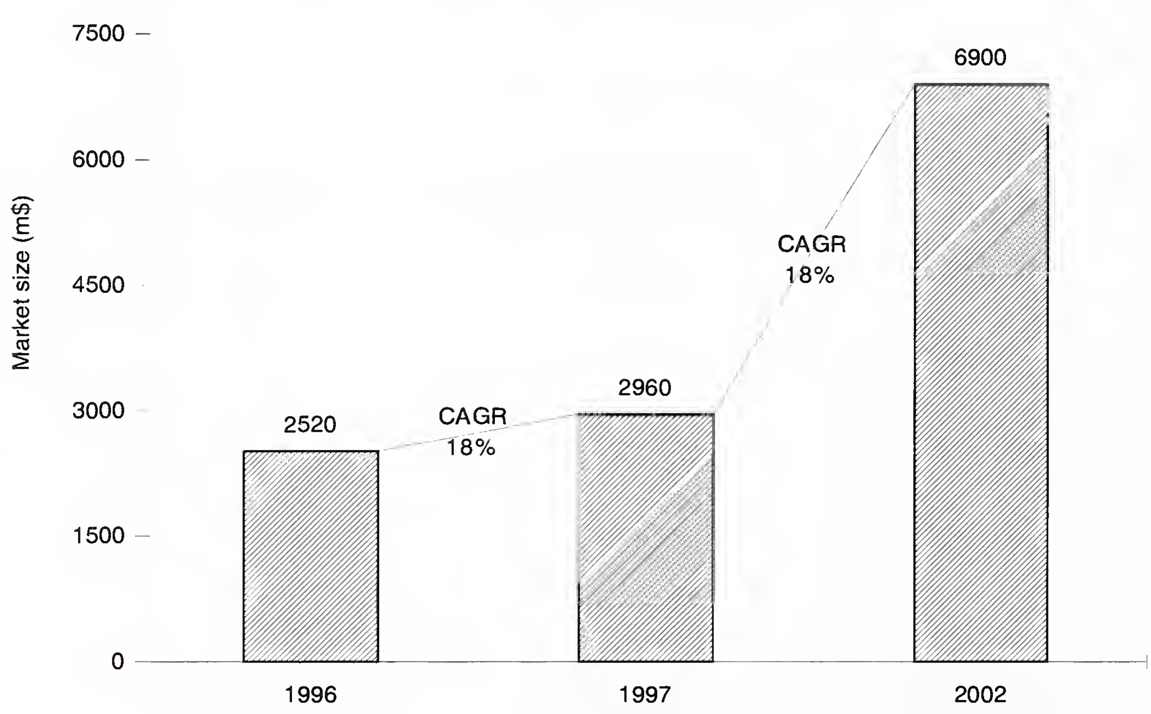
E
Insurance Industry Market, 1997-2002

Insurance companies have traditionally been reluctant to outsource. However, because of increased competition, this sector's companies have re-examined their core processes and are showing increasing acceptance of outsourcing as a viable approach.

INPUT projects this market to grow at an annual growth rate of 18% over the next five years, expanding this market from $2.9 billion in 1997 to $6.9 billion in 2002 and making it the fourth largest sector in the overall US outsourcing market. (see Exhibit IV-6).

Exhibit IV-6

US Outsourcing Market, 1997-2002 Insurance



Source: INPUT

F

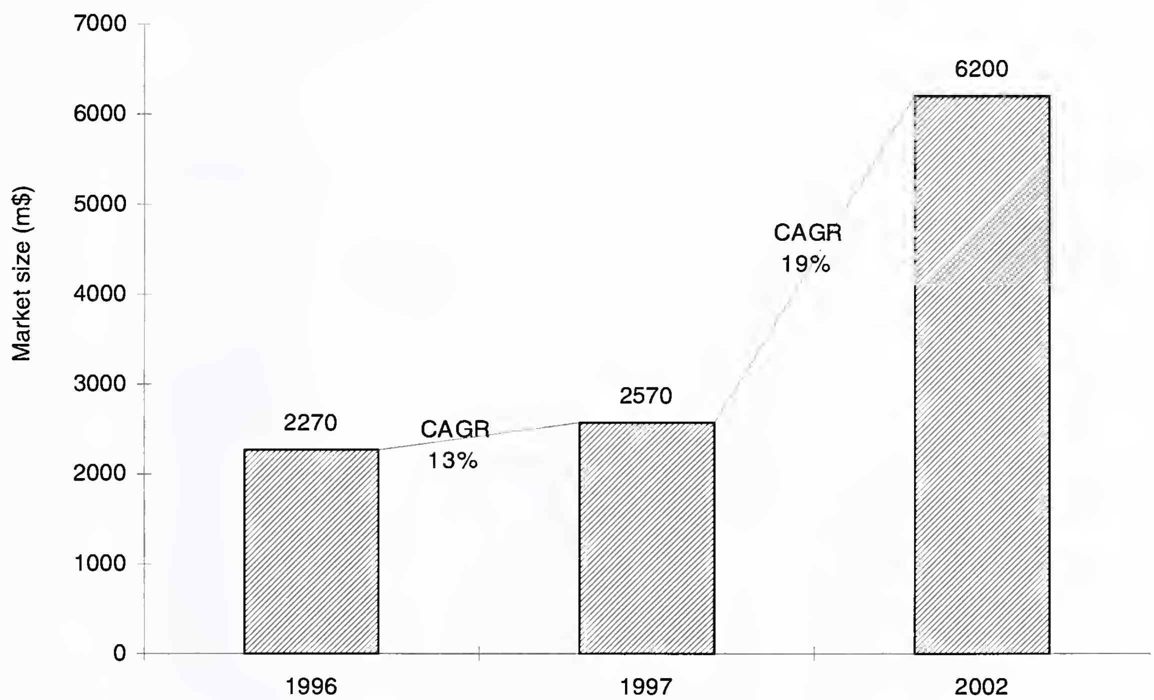
Health Industry Market, 1997-2002

Exhibit IV-7 provides a forecast of the market for outsourcing services within the health sector over the five-year period from 1997 to 2002.

Recently, CSC signed several contracts for business operations in this sector. This trend towards business process outsourcing in the health sector is bringing some fresh air to a market that seemed to be suffocating.

Exhibit IV-7

US Outsourcing Market, 1997-2002 Health Services



Source: INPUT

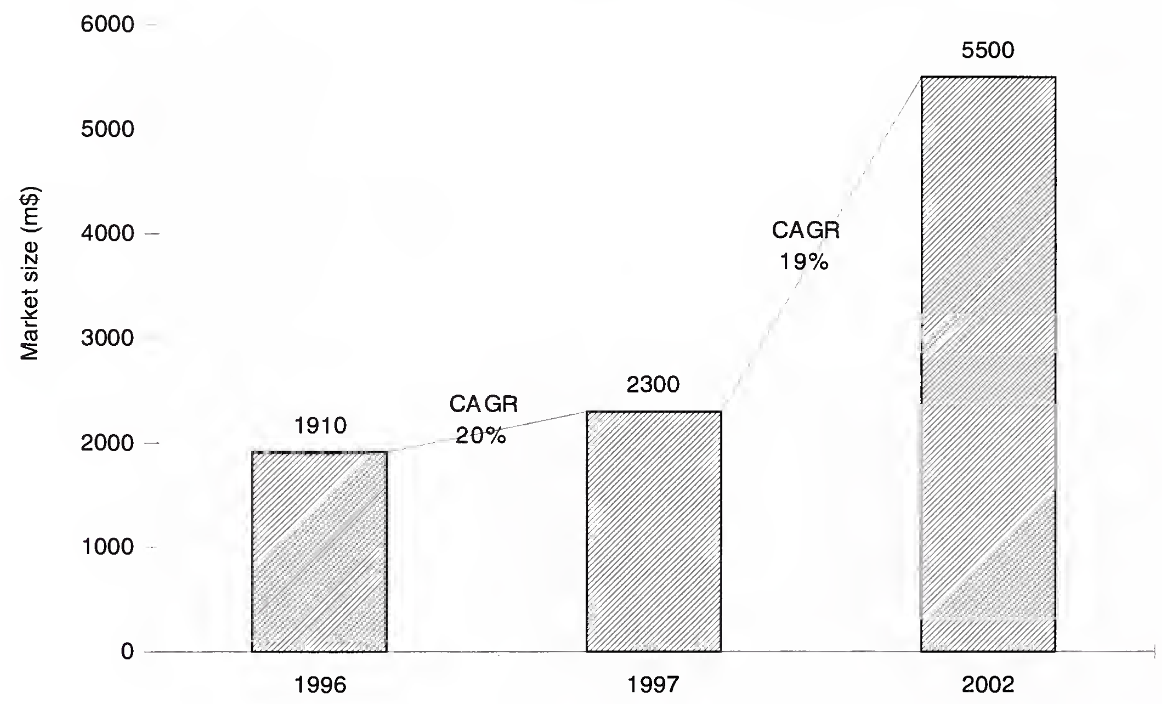
G
Process Manufacturing Industry Market, 1997-2002

Exhibit IV-8 provides a forecast of the market for outsourcing services within the process manufacturing sector in the five-year period from 1997 to 2002.

CSC entered in 1996 a 10-year, multi billion-dollar technology alliance with global chemical and energy power DuPont. CSC operates DuPont's global information systems and communications network, and manages selected applications in the US, Canada and Europe.

Exhibit IV-8

US Outsourcing Market, 1997-2002 Process Manufacturing



Source: INPUT

Cost effectiveness is still the strongest driver of outsourcing in the process manufacturing sector. Business process outsourcing in this sector is forecast to grow significantly over the forecast period, from $200 million to $800 million.

Exhibit IV-9 lists the leading providers of outsourcing services to the process manufacturing industry.

Exhibit IV-9

Leading Process Manufacturing Outsourcing Vendors

- EDS
- IBM Global Services
- Andersen Consulting

CSC is strongly penetrating this market with the DuPont contract and is likely to appear in the top 3 outsourcing vendors within discrete manufacturing in the next few years.

H

Discrete Manufacturing Industry Market, 1997-2002

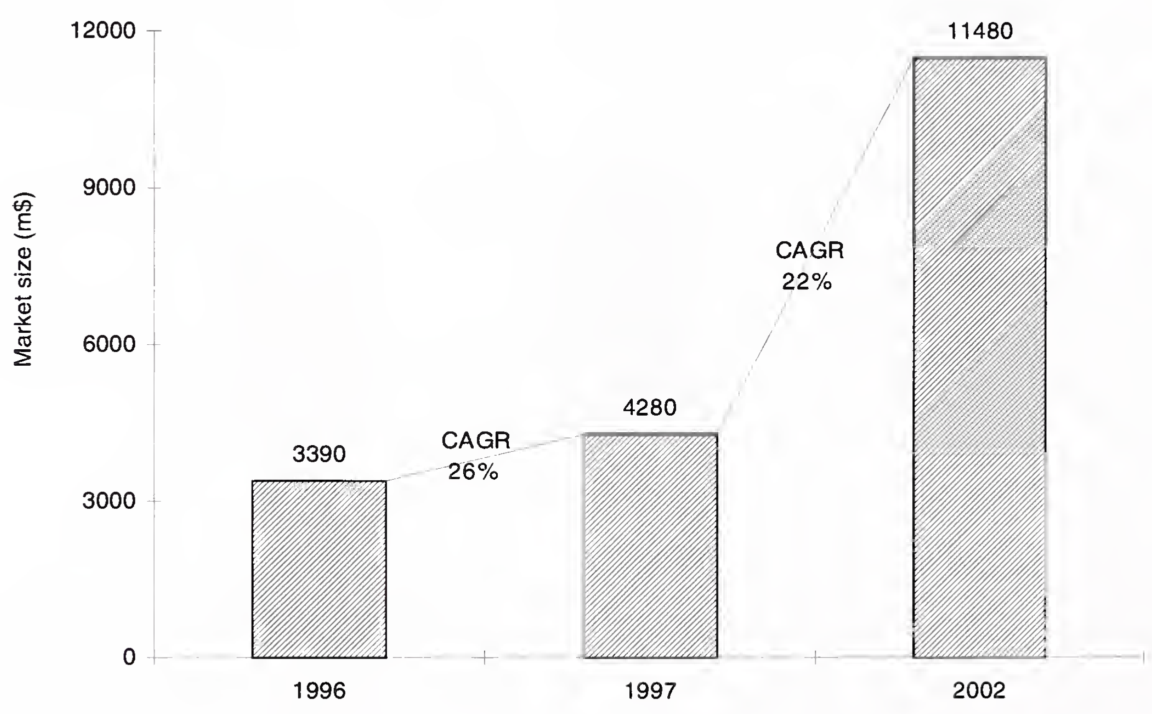
The second largest industry sector in the US outsourcing market is discrete manufacturing. This sector has overtaken the state and local government sector, previously second largest sector in the US outsourcing market. This change in status is partly due to the General Motors-EDS split generating large outsourcing revenues in this sector.

INPUT projects that the discrete manufacturing market will grow at 22% over the forecast period, increasing from $4.2 billion in 1997 to $11.4 billion in 2002 as shown in Exhibit IV-10.

The growth is also due to several contracts worth over a billion dollars signed in 1996 and 1997 such as EDS with Allison Engine Co. (Rolls-Royce group), AT&T Solutions with Textron, IBM with Lucent Technologies (estimated by INPUT at $4 billion over 5 years).

Exhibit IV-10

US Outsourcing Market, 1997-2002 Discrete Manufacturing



Source: INPUT

Exhibit IV-11 lists the leading providers of outsourcing services to the discrete manufacturing industry.

Exhibit IV-11

Leading Discrete Manufacturing Outsourcing Vendors

1. EDS
2. IBM Global Services
3. Andersen Consulting

The leading vendors within the discrete manufacturing sector are the major outsourcing companies. However, there are some local vendors with a strong position in this sector such as Affiliate Computer Services (ACS), AT&T Solutions and Systems Maintenance Specialists signing medium-sized & length contracts.

In addition, a new entrant from Germany, Siemens Business Services, from the Siemens Group signed its first large contract in 1997 in the US with KSB SA. This five-year contract is valued $240 million.

The manufacturing sector is very big, counting for 13% of the overall outsourcing market. Seemingly, cost pressures have further increased over the past year and created another wave of outsourcing activity. Huge contracts like that of IBM Global Services with Lucent Technologies were signed recently. Indeed, over the next five years, outsourcing will continue to advance beyond IT outsourcing to forms of business operations outsourcing such as accounting and logistics management.

I

Other Industries

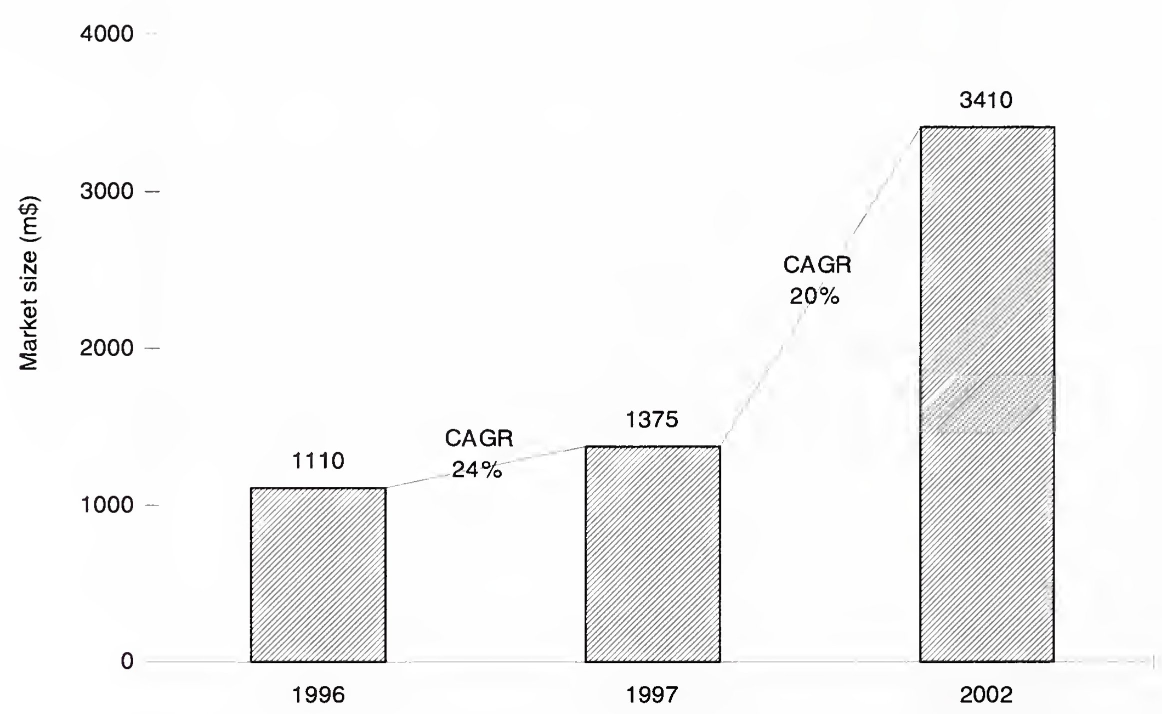
1. Retail Industry Market, 1997-2002

Exhibit IV-12 provides a forecast of the market for outsourcing services in the five-year period from 1997 to 2002.

The business pressures on the distribution sector (retail and wholesale distribution) are high. This sector traditionally operates on narrow profit margins and faces considerable cost competition. In addition the sector faces strong competition for its customers and needs to meet the demands for increasing levels of customer service. Improved partnerships with suppliers are a key means of improving customer service while simultaneously keeping costs down.

Exhibit IV-12

US Outsourcing Market, 1997-2002 Retail



Source: INPUT

As within the financial services sector, new technology is creating innovative ways of delivering customer service in the distribution sector.

Moreover, organizations in the distribution sector are highly distributed in nature and already have distributed IT infrastructures. The level of support for these distributed systems now typically needs to be upgraded creating opportunities for vendors of distributed systems management services.

The leading outsourcing providers for this sector are : EDS with contracts signed in 1996 with Computer City and Kellwood both for business operations and with 1997 contracts with Driver's Mart Worldwide and SIAM - Jusco for application management and operations; IBM Global Services, MCI Systemhouse and Affiliate Computer Services, which have a number of significant contracts in this sector.

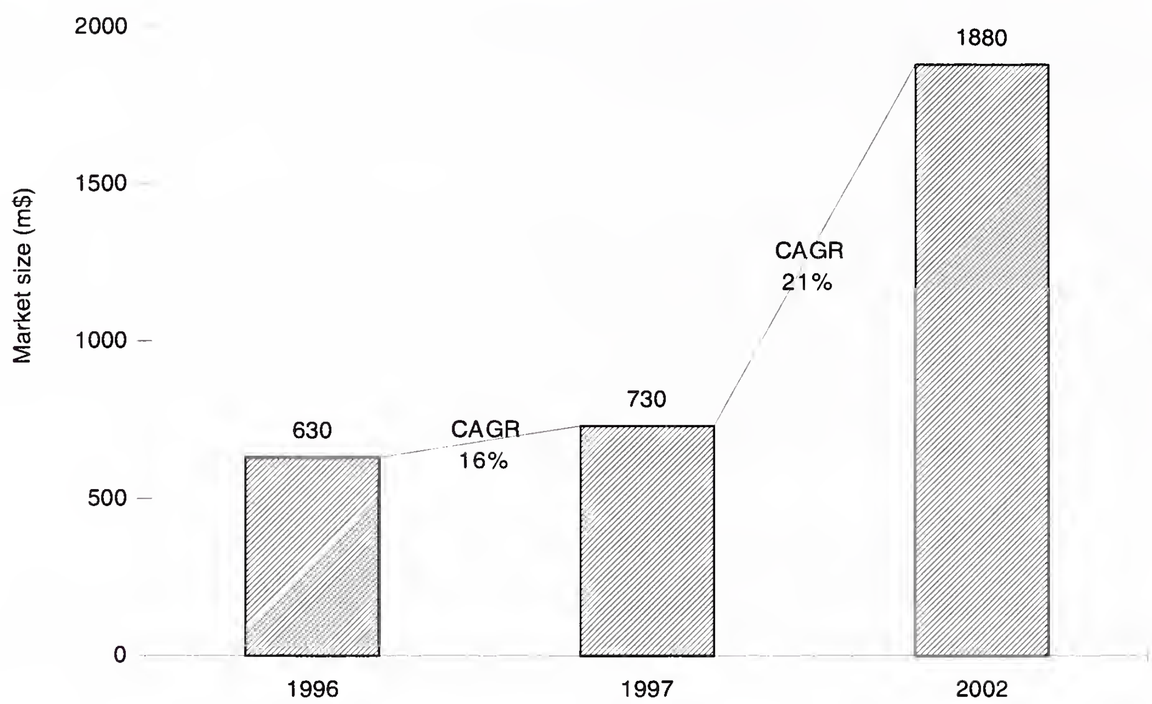
2. Business Services Industry Market, 1997-2002

Exhibit IV-13 provides a forecast of the market for outsourcing services in the business services sector for the five-year period from 1997 to 2002.

This sector is characterized by a wide variety of vendors in addition to EDS and IBM Global Services, including 800 Support, Acxiom, ADP, Cap Gemini America, CGT, DecisionOne, Digital, Donnelly Enterprise Solutions Inc., Entex Information Services, Information Management Resources, Innovative Services of America, Keane Inc. and Racal-BR Telecommunications.

Exhibit IV-13

US Outsourcing Market, 1997-2002 Business Services



Source: INPUT

A number of these vendors have recently signed significant contracts such as the 3-year contract signed in 1996 by Entex Information Services with Microsoft Corporation for desktop services.

The cost pressure in the business services sector is less extreme than elsewhere, with much of the focus on developing improved international coverage and closer interaction with key customers.

A greater emphasis on support for distributed systems is required to support the international ambitions of major business services organizations necessitating support from international IT suppliers.

3. Transportation Industry Market, 1997-2002

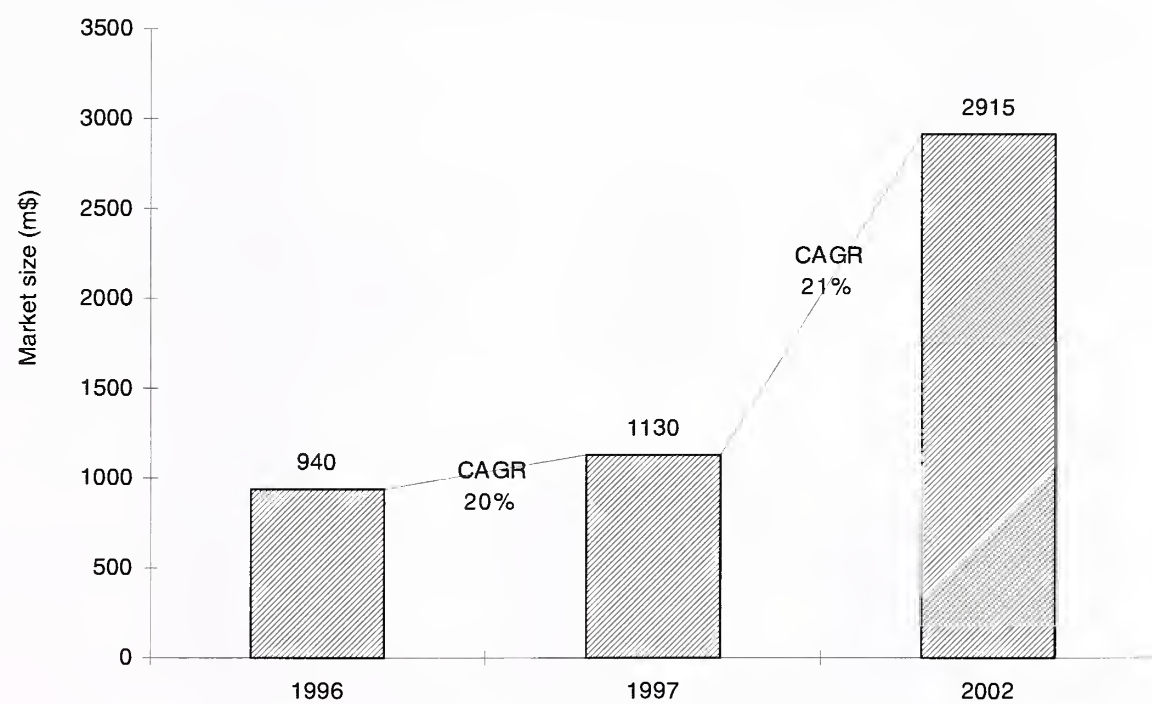
Exhibit IV-14 provides a forecast of the market for outsourcing services in this sector over the five-year period from 1997 to 2002. The growth of this market should reach 21% during the forecast period, growing from over $1.1 billion in 1997 to $2.9 billion in 2002.

The transportation sector has been the recipient of a mega-contract in 1997: Ryder System, Inc. signed a 10-year contract with IBM Global Services and Andersen Consulting valued at $1.4 billion.

Still the biggest contract identified by INPUT remains the 10-year applications operations contract signed in 1991 by EDS with Continental Airlines Holding valued at 2.1 billion dollars.

Exhibit IV-14

US Outsourcing Market, 1997-2002 Transportation



Source: INPUT

4. Utilities Industry Market, 1997-2002

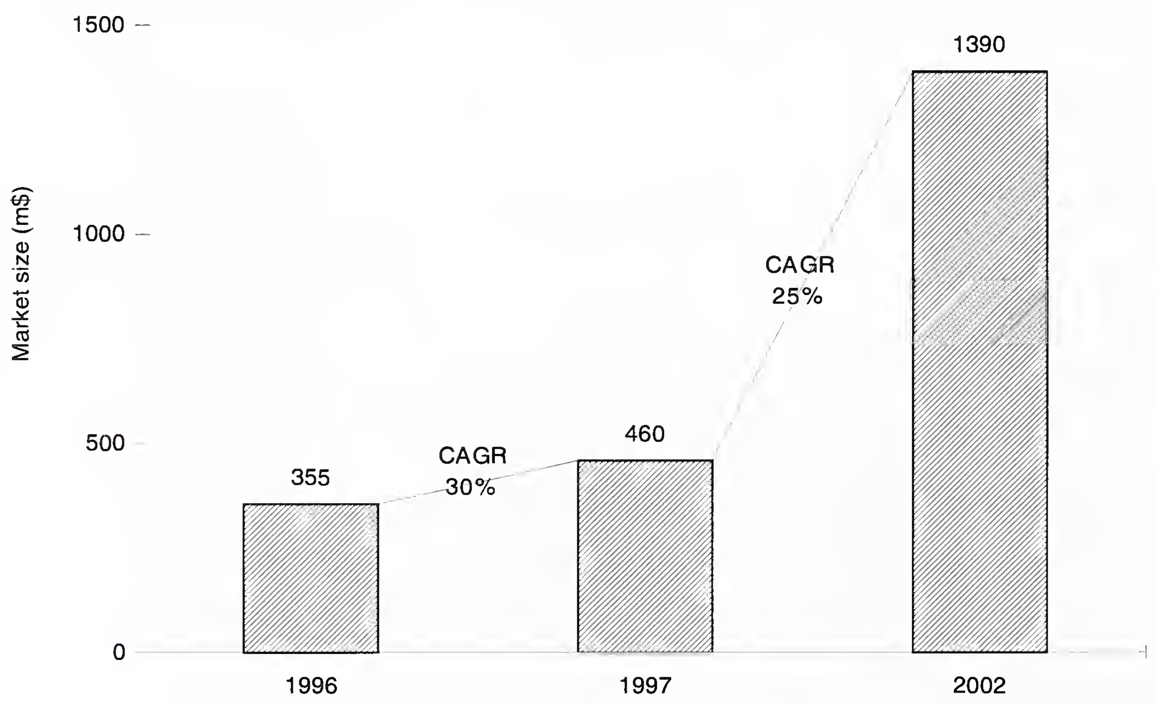
Traditionally, the utilities sector is one of the smallest vertical markets for outsourcing in the US . However, this segment is beginning to show some activity and INPUT predicts it should grow at one of the fastest rates, at 25% per year between 1997 and 2002. It will grow from $460 million to $1.3 billion in 2002 (see Exhibit IV-15).

Major drivers of outsourcing in this sector have been the desire to off-load responsibility for business functions that are not mission critical and/or that are inefficiently performed in-house.

Billing is a process that lends itself well to outsourcing in this sector. For example, Affiliate Computer Services is providing Central Louisiana Electric Co., Inc. with bill-image preparation, address cleansing and pre-sorting, bill printing, and intelligent-mail insertion services.

Exhibit IV-15

US Outsourcing Market, 1997-2002 Utilities



Source: INPUT

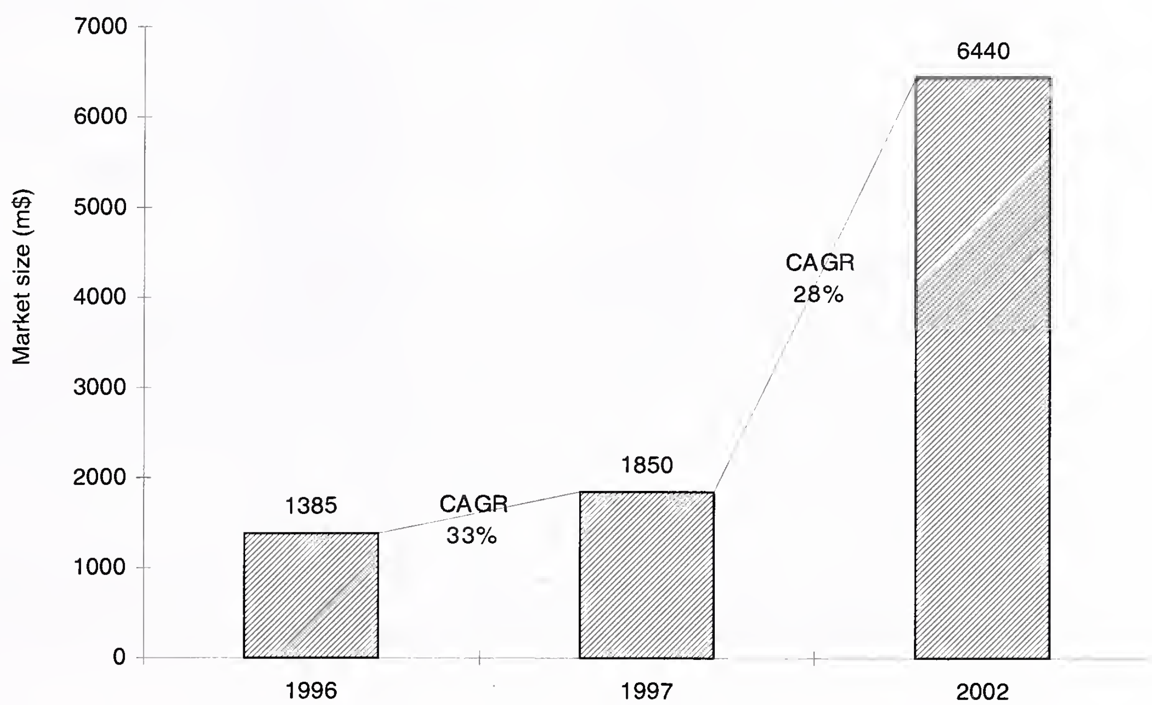
Other examples of large contracts signed in 1997 in this sector for business operations are: EDS with United Water Resources, Andersen Consulting with ISO New England.

5. Telecommunications Industry Market, 1997-2002

The telecommunications industry is poised to take advantage of outsourcing services. INPUT predicts that it will grow at one of the fastest rates of any industry, at 28% per year between 1997 and 2002. It will grow from $ 1.8 billion to $ 6.4 billion in 2002 as shown in Exhibit IV-16.

Exhibit IV-16

US Outsourcing Market, 1997-2002 Telecommunications



Source: INPUT

The telecommunications industry generated several very large outsourcing contracts signed in 1997 such as:

- EDS and Andersen Consulting signed a contract with Bell South worth more than 3.2 billion dollars for 7 years providing applications operations and management
- IBM Global Services signed a 10-year applications operations contract with Telstra valued $2.9 billion.

These large contracts have spurred the telecommunications industry to become the fastest growing sector for the use of outsourcing services in the U.S. In particular, applications operations and applications management are required from services vendors. Customer care and billing solutions often form the basis of these contracts.

Vendors such as IBM Global Services, EDS and Andersen Consulting are very well positioned in this sector.

In addition, CBIS is a major vendor in the telecommunications sector having signed several large contracts in 1997 with Galaxy Telecom, TCA Cable TV and Time Warner. CBIS signed a significant contract in 1996 with 360 Degree Communications valued at $600 million.

In this context, INPUT predicts huge growth potential for outsourcing within the telecommunications sector over the next few years.

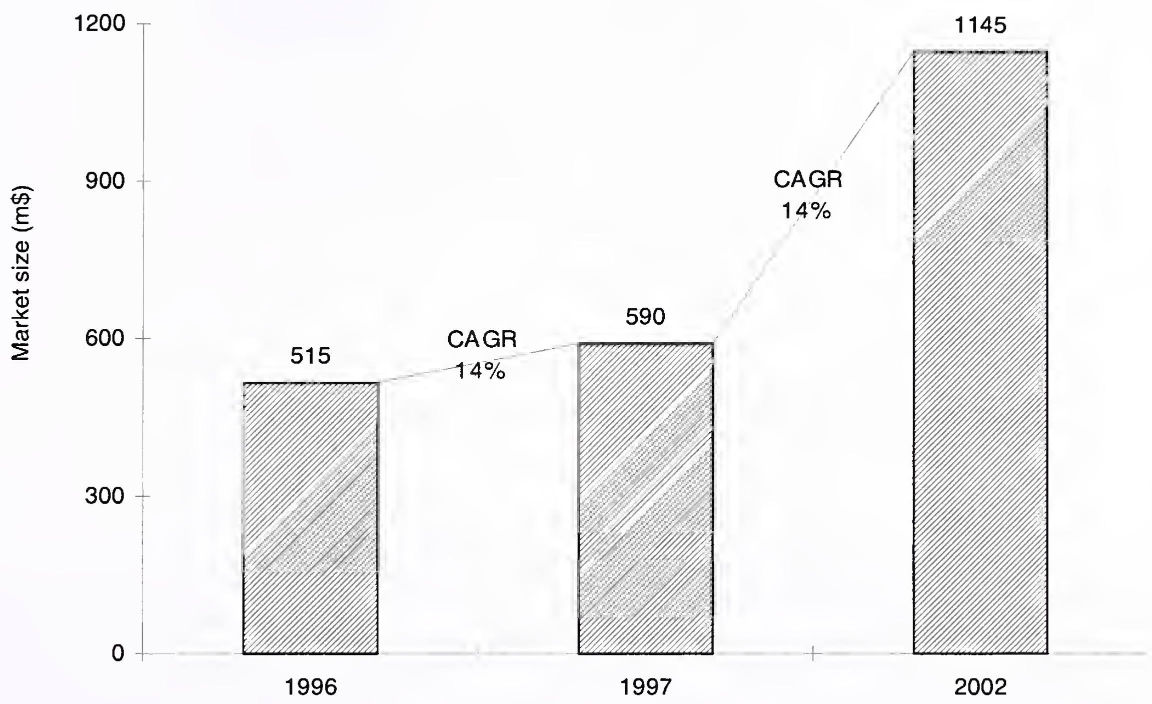
6. Education Industry Market, 1997-2002

Exhibit IV-17 provides a forecast of the market for outsourcing services in this sector in the five-year period from 1997 to 2002. INPUT projects that the education sector will grow more slowly than the overall outsourcing market, growing at an annual rate of 14% over the forecast period, from $590 million in 1997 to over $1.1 billion in 2002.

In this sector, Systems and Computer Technology remains the major vendor signing 1997 contracts with universities for applications concerns.

Exhibit IV-17

US Outsourcing Market, 1997-2002 Education



Source: INPUT

A

Appendix

Exhibit A-1 presents detailed outsourcing market forecasts.

Exhibit A-1

Outsourcing, US 1997-2002

	Market Forecast (US $ Millions)				
	1996	Growth 1996-1997 (%)	1997	Growth 1997-2002 (%)	2002
Platform Operations	6290	10	6930	9	10465
Desktop Services	3230	25	4030	24	11955
Network Management	3145	23	3880	26	12510
Applications Management	1200	20	1440	20	3610
Applications Operations	10245	19	12220	17	26380
Total IS Outsourcing	24110	18	28500	18	64920
Business Operations	2500	36	3400	35	15500
Total Outsourcing	26610	20	31900	20	80420

Source: INPUT

Exhibit A-2 provides a forecast for US outsourcing market by industry sector over the period 1997-2002.

This forecast includes both IS outsourcing and business operations outsourcing.

Exhibit A-2

Industry Sector Breakdown, US 1997-2002

	US $m 1996	Growth 96-97 %	US $m 1997	Growth 97-02 %	US $m 2002
Banking & Finance	5470	19	6515	22	17650
State & Local Government	3725	22	4530	20	11370
Federal Government	1810	7	1940	8	2830
Insurance	2520	18	2960	18	6900
Health Services	2270	13	2570	19	6200
Process Manufacturing	1910	20	2300	19	5500
Discrete Manufacturing	3390	26	4280	22	11480
Retail Distribution	1110	24	1375	20	3410
Education	515	14	590	14	1145
Transportation	940	20	1130	21	2915
Wholesale Distribution	455	17	530	15	1080
Business Services	630	16	730	21	1880
Telecommunications	1385	33	1850	28	6440
Utilities	355	30	460	25	1390
Miscellaneous Industries	125	14	140	10	230
TOTAL	26610	20	31900	20	80420

Source: INPUT

The leading outsourcing vendors in the US are listed in Exhibit A-3.

Exhibit A-3

Leading Outsourcing Vendors, US 1996

Vendor	Estimated 1996 Revenues ($ m)	Estimated Market Share (%)
EDS	6770	25
IBM Global Services	3100	12
CSC	1570	6
FIServ	600	2
ACS	430	2
Digital	400	2
Unisys	400	2
Andersen Consulting	330	1
AT&T Solutions	320	1
MCI Systemhouse	316	1
Alltel IS	300	1
Perot Systems Corp.	250	1
Hewlett-Packard	230	1
CBIS	230	1
Lockheed Martin	180	< 1
Total listed	15426	58
Total market	26610	100

Source: INPUT