# Outsourcing Vendor Performance Analysis -U.S. 1999



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# Abstract

The nature of outsourcing is changing with decreasing emphasis on platform operations and increasing emphasis on the operational management of new technologies such as Intranets and web servers and delivery of business value.

In response to these trends, this study aims to identify how client expectations are evolving in line with these market changes and to monitor vendor performance against these expectations, enabling vendors to re-align their service offerings and service styles accordingly.

In particular, this report provides an overall assessment of outsourcing vendor performance from the clients' perspective, including analyses of:

- · Service quality by service type
- Vendor service culture, including measures of vendor responsiveness, flexibility, and creativity
- · Contract terms and pricing mechanisms
- · Level of contribution to desired benefits and IT goals.

In conclusion, the report identifies the principal issues faced by outsourcing vendors and the key directions in which clients would like their outsourcing offerings to evolve.

In addition to this report vendors that have subscribed to the associated sponsored research project each receive a detailed analysis of their performance compared to the average for the outsourcing industry enabling them to identify their own relative strengths and weaknesses. Published by INPUT 1881 Landings Drive Mountain View, CA 94043-0848 United States

#### **Operational Services**

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# Introduction

# A Scope and Objectives

Traditionally, the level of satisfaction with outsourcing services has been high and the rate of contract renewal has been impressive. However, there are now some indications that outsourcing clients are showing an increased propensity to switch vendors.

Accordingly, it is important that vendors maintain very high levels of client satisfaction throughout the life of the contract. This is particularly true of the more people-oriented aspects of customer service. While clients may employ teams of lawyers to specify their precise contractual requirements, few clients are satisfied if the vendor performs their duties to the letter of the contract. In practice, the majority of clients are seeking a more flexible and pro-active service than is outlined in their contracts or service level agreements.

In addition, the benefits sought from outsourcing change as the contract matures and clients become more demanding.

Consequently, it is important that outsourcing vendors closely monitor their client satisfaction and, where possible, benchmark their performance against that of their major competitors.

This report aims to assist vendors in these activities. Its objectives are:

- To identify the major benefits sought by clients and vendors' performance in meeting these expectations
- To identify the contribution that outsourcing is perceived to make towards the clients' overall IT objectives

1

- To enable vendors to benchmark their performance against industry parameters
- · To identify areas for improvement by outsourcing vendors.

Within the quantitative benchmarking of current services, the report focuses on three key aspects of outsourcing performance:

- · Service quality analysis, including breakdowns by service type
- Service culture analysis, including perceptions of vendor responsiveness, flexibility, and pro-activity/creativity
- · Contract terms and pricing mechanisms.

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:

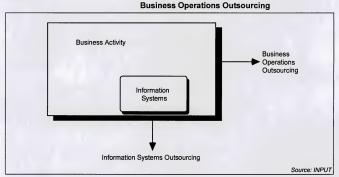
- · Delegating an identifiable area of the operation to a vendor
- Single vendor responsibility for performing that delegated function
- · Intended, long-term relationship between the client and vendor
- · Contract term is at least one year
- Client's intent is not to perform this function with internal 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 1-1). 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 1-2.

- 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 computers, 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

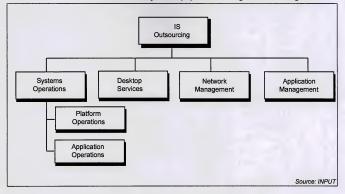
- User Training and Education
- Network Management outsourcing is a relationship in which a vendor assumes full responsibility for operating and managing the client's data telecommunications systems. This may also include the voice, image and video telecommunications components
- Application Management is a relationship in which the vendor has full responsibility for developing and maintaining all of the application or function.



## Exhibit I-1

Exhibit I-2

# Information Systems (IS) Outsourcing Service Categories



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.

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## 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
System Software Maintenance	×	x	×	x		x
Application Software Maintenance		x	x		x	x
Application Development		x			x	x
LAN Management		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 in recent years have been typically Application Operation outsourcing contracts since they, at least, included management of the infrastructure (data centers and various computing platforms) and the support of some of the 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. 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 report is based on telephone interviews with 35 respondents in the U.S. The majority of these interviews were carried out with IT contract managers. The interviews were conducted across the clients of a range of major outsourcing vendors.

This study was performed as part of a sponsored research project. In addition to this document, the research sponsors each received a confidential report comparing their performance from their clients' perspective with the overall industry performance.

This enables the sponsors to identify the relative strengths and weaknesses of their outsourcing services in considerable detail.

The average length of the outsourcing contracts covered in this research is three years. This counts rolling contracts with annual renewals as a series of one-year contracts.

The average value of the outsourcing contracts covered is \$3 million per annum.

Throughout this report, the interpretations of importance and satisfaction ratings listed in Exhibit I-4 have been adopted.

Exhibit I-4

#### Interpretation of Ratings

Rating	Interpretation
3.9 or higher	High
3.4 to 3.8	Medium
3.3 or lower	Low

Source: INPUT

# C Report Structure

Chapter II consists of the Executive Summary, which is a summary of the key conclusions and recommendations of the research, and identifies the main issues that outsourcing vendors need to address.

Chapter III contains an analysis of vendor performance relative to client expectations. It analyses vendor performance in terms of:

- · Service quality by service function
- Vendor service culture
- · Commercial terms and pricing
- Their contribution to achievement of IT goals and benefits sought
- A number of summary criteria, including clients' renewal intentions.

Chapter IV provides an analysis of the change in client satisfaction between 1995 and 1998.

Appendix A summarizes the results of the outsourcing vendor performance analysis in U.S. for 1998.

Appendix B summarizes the results of the outsourcing vendor performance analysis in the U.S. for 1997.

# D Related Reports

Outsourcing Pricing Mechanisms — U.S., 1995 Outsourcing Vendor Performance Analysis, — U.S., 1996 Opportunities in Business Operations Outsourcing — U.S., 1996 Information Systems Outsourcing Market — U.S., 1997-2002 Outsourcing Vendor Performance Analysis — U.S., 1997 Outsourcing Vendor Performance Analysis — Europe, 1999 Assessment of Human Resources Services — Europe, 1998 Assessment of Human Resources Services — U.S., 1998

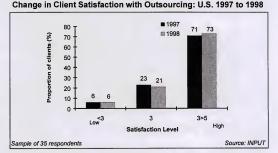


# **Executive Summary**

#### A Overall Satisfaction with Outsourcing Remained Unchanged in 1998

Clients of outsourcing vendors in the U.S. are typically satisfied with the overall service that they receive. The level of satisfaction remained roughly constant between 1997 and 1998. Exhibit II-1 shows the profiles of overall satisfaction ratings given to outsourcing vendors in the U.S. in 1997 and 1998. Clients were asked to rate their overall satisfaction on a scale of 1 to 5 where 1 = very dissatisfied and 5 = very satisfied.

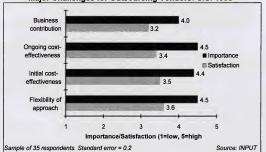




In addition to their level of overall satisfaction, clients were asked the likelihood of their renewing contracts with their current supplier. In this instance, the results are more polarized, with 80% of clients showing a high vendor loyalty. Approximately 20% of clients are currently likely to switch outsourcing vendors on contract renewal.

However despite this high apparent level of overall satisfaction, many of the more detailed measures of satisfaction used in the survey showed a significant fall in client satisfaction between 1997 and 1998. Vendors will need to deliver service improvements in many areas in the coming years if the predicted high renewal rates are to become a reality.

Exhibit II-2 lists some of the key summary criteria against which vendors need to deliver immediate improvement.



#### Major Challenges for Outsourcing Vendors: U.S. 1998

The three principal themes to emerge in 1998 were the needs for vendors to deliver:

- · Higher levels of client responsiveness
- Achievement of business benefits
- Improved value for money and contractual flexibility.

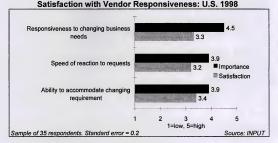
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Exhibit II-2

# Vendors Must Deliver Higher Levels of Client Responsiveness

Exhibit II-3 lists the importance and satisfaction perceived by clients against a number of measures of vendor responsiveness.

Exhibit II-3



Clients perceive vendors' reactive service capabilities to have worsened in the last year. This is unlikely to reflect a fall in standards of service by the vendors. It is more likely to reflect the rapidly increasing numbers of personnel dependent on IT and the strain being placed on help-desk services. While satisfaction with desktop services increased, probably reflecting the tools now available and the increasing ability of vendors to deliver a more proactive LAN management service, satisfaction with help-desk services fell sharply.

In addition, the contractual style of outsourcing often appears cumbersome, making change management a difficult process for clients. The result is that clients often perceive vendors' to be inflexible both in terms of reacting to, and anticipating, changing circumstances.

Vendors need to overcome these negative impressions of outsourcing. At the day-to-day level, vendors should address their support mechanisms to ensure faster, more accurate responses to users. This may include devising ways of enhancing their help-desks with e-care systems to provide some element of self-service support, freeing up the help-desk for the demanding support tasks.

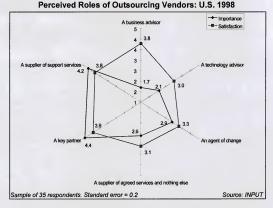
At a more fundamental level, the search is still on for contractual frameworks that enable outsourcing to facilitate the introduction of new technologies and processes rather than hinder their development.

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# C Vendors Need to Realize Business Benefits

Exhibit II-4 lists U.S. clients' overall perception of the role of outsourcing vendors.

Exhibit II-4



Between 1997 and 1998, outsourcing vendors made significant progress towards becoming key partners to their clients. Their clients, however, typically do not expect outsourcing vendors to behave as:

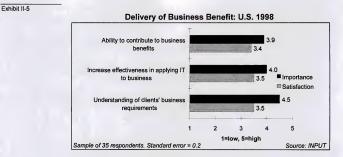
- Business advisors
- Technology advisors
- Agents of change.

To continue to strengthen the sense of partnership with their clients, outsourcing vendors need to be seen either as key technology advisors and implementers or as business advisors and business change agents. Unless outsourcing vendors can begin to deliver the levels of technical and business innovation required by their clients, there is a danger that they will become just commodity suppliers of support services.

Although the skills of many outsourcing vendors are primarily technical, it is important that vendors can use their skills to deliver business benefit on behalf of their clients.

Exhibit II-5 shows vendor performance against selected measures of delivery of business benefit.

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The typical levels of achievement in this area remain low, from the fundamental understanding of clients' business requirements through to the achievement of the projected business benefits from new systems.

# D

# Improved Value for Money and Contractual Styles Remain Important

A traditional disadvantage of outsourcing is that it can potentially slow-down the rate at which new systems and technologies are introduced. This effect can be caused by contractual style and pricing mechanisms, irrespective of vendor capabilities.

It is important if outsourcing vendors are to become business advisors and change agents that they develop contractual styles that complement the implementation of change rather than impede it. Despite much talk of shared risk/reward, such contractual styles are currently rare. In practice, vendors are frequently reluctant to take on a level of risk that threatens more than their profit margin on an individual contract. At the same time, clients tend to negotiate a fixed price and are often reluctant to make major investments outside their existing contractual agreements. The resulting stalemate can lead to stagnation of the client's IT and a lack of process innovation.

Furthermore, clients are often led to expect a reducing cost for support of existing systems and infrastructure over time. These cost reductions do not always manifest themselves as strongly as clients expect and, as a result clients are increasingly critical of vendors' abilities to meet budget targets and deliver ongoing cost reduction. Exhibit II-6 lists the difference between importance and satisfaction from the client perspective against a number of cost control criteria.

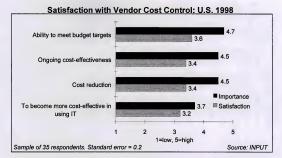


Exhibit II-6

Cost control and/or reduction and delivery of business benefit are not viewed by clients as mutually exclusive. Clients would like outsourcing vendors to be more proactive but, at the same time, to supply the basic services underlying such activity at competitive rates. Clients are more likely to favor forms of risk sharing where the vendor takes the risk of falling workloads, than forms of risk sharing that merely enhance vendor profitability.

Clients also frequently perceive that they receive poor value for money from any changes in operational service volumes. They perceive that they are expected to pay additional charges when volumes increase but do not receive a proportionate decrease in charges when transaction volumes decrease.

Overall clients:

- Dislike pricing mechanisms such as time and materials that allocate the major elements of risk to the client rather than the vendor. This particularly applies to systems development contracts where clients perceive themselves to carry the bulk of the burden of commercial risk
- Would like to encourage greater vendor creativity but with the vendor taking a major share of the risk.

In particular, clients would like greater flexibility in service usage with considerable flexibility to adjust the volume of services used according to their business requirement and circumstances. In extreme cases, this could entail turning services on and off at short notice with the vendor taking the commercial risk over whether the services are utilized or not.

Overall there is an increasing tendency for clients to insist on value for money throughout the life of outsourcing contracts. Some clients are ensuring that they achieve this by developing contracts that permit them to benchmark vendor pricing throughout the contract. This will place greater margin pressure on vendors by making it more difficult for them to significantly increase their profitability in the later stages of the contract.



# Vendor Performance Analysis — U.S. 1998

#### Α

# Intranets and Web Servers Emerge as Key Platforms

Exhibit III-1 identifies the pattern of services being outsourced by the organizations surveyed.

#### Exhibit III-1

# **Outsourcing Service Breakdown by Function**

Function	Proportion of respondents outsourcing (%)
Desktop Services	40
Application Maintenance Management	29
Corporate Intranet and web servers	29
WAN Management	23
IT Strategy Consultancy	23
Mainframe Operations	17
Application Development Management	14
Business Process Operations	6
All	100

Source: INPUT

The management of datacenter operations no longer dominates outsourcing activity. The challenge in IT infrastructure management now is to provide end-to-end service management covering the desktop, LANs, WANs and servers. Indeed the areas in need of systems management are now moving beyond these with Intranets and web services strongly emerging as key technologies requiring external management services.

# Exhibit III-2 lists the perceived service quality by IT function.

#### Exhibit III-2

# Service Quality by IT Function

Function	Satisfaction Rating (1998)
Other IT consultancy services	4.0
Business functions such as accounting services or HR benefits administration	4.0
Day-to-day management of the personal computer infrastructure including servers and local area networks	4.0
Business process reengineering consultancy)	3.8
Day-to-day management of the corporate data network	3.8
Responsibility for new systems development as a preferred supplier	3.8
IT strategy consultancy	3.7
Development and operation of corporate Intranet and web servers	3.6
Support and maintenance for in-house developed applications	3.6
Day-to-day operation of mainframe(s) and/or stand-alone mid-range equipment	3.2

Source: INPUT

Unlike in Europe, the problems associated with the management of the desktop infrastructure appear to be finally coming to an end in the U.S. Although many vendors established their initial desktop services offerings five years or more ago, desktop services have proved troublesome throughout this period for both vendors and clients alike and the overall level of satisfaction has typically been moderate in earlier years.

The challenge now for vendors in the U.S. is to develop high quality services around the development and operation of Intranets and web servers. Organizations are now starting to require web-hosting services.

Exhibit III-3 lists the difference between importance and client satisfaction against a range of operational management criteria.

Exhibit III-3

# **Operational Management: Service Features**

Feature	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Utilization of new technologies	4.2	3.6	0.7
Scope of operational capability	4.3	3.6	0.7
Moves and user requested changes	4.3	3.4	0.9
Achievement of operational service level agreements	4.7	3.6	1.1
Capability of help-desk	4.5	3.4	1.2

Source: INPUT

The scope of operational management capability has often failed to keep pace with the rate of change of technology. Vendors initially experienced difficulties in operational management when making the transition from operating centralized to decentralized systems. In addition, they now have to adjust rapidly to the need for operational capability in support of web technologies.

Clients would like vendors to assist them more in speeding up these changes in architecture. At the same time, help-desk support remains a major priority to be addressed with vendors perceived to perform inadequately in this area.

Exhibit III-4 presents the data from Exhibit III-3 in a manner aimed to facilitate vendors in identifying the main priorities for service improvement.

	High Satisfaction	Medium Satisfaction	Low Satisfaction
High Importance		Utilization of new technologies Scope of operational capability Achievement of operational service level agreements Capability of help-desk Moves and user requested changes	
Medium Importance			

# Exhibit III-4

#### Satisfaction with Operational Management

Source: INPUT

The provision of help-desk services becomes more vital to the client and a more demanding challenge for vendors as systems being outsourced become more distributed in nature. This challenge has been exacerbated by the emphasis on interoperability and the move to e-business access for all personnel. While vendors can transfer some elements of support to the web or corporate Intranet, and will increasingly need to do so to ensure support quality and responsiveness, such systems still need to be integrated with a highly capable help-desk facility.

Overall the main challenges in operational management remain keeping pace with technology and providing high-quality support for the end user.

Exhibit III-5 lists the difference between importance and client satisfaction against a range of application management-related criteria.

Service Characteristic	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Achievement of agreed support service levels	4.7	4.2	0.5
Ability to contribute to business benefits	3.9	3.4	0.5
End user satisfaction	4.5	4.1	0.5
Achievement of projected business benefits	4.2	3.5	0.6
Ability to control costs/meet budget targets	4.7	3.6	1.1
Meeting of requirements/specification	4.8	3.6	1.2
Delivery of projects on time	4.9	3.7	1.2

#### Application Management: Service Features

Source: INPUT

Vendors are relatively successful in delivering support to agreed specifications, but are less effective in delivering business benefit to the client organization. This shows the need for vendors to continue to develop understanding of the client's business and become more proactive in the development of new systems rather than reacting to client requests and specifications.

There are also some concerns about the ability of vendors to deliver projects on time and on budget. Many clients have outsourcing contracts that have a fixed price component for systems management, but use time and materials pricing for systems development. There is some concern that while fixed price contracts for systems

Exhibit III-5

21

management work well from the clients' perspective, vendors sometimes go over-budget when working against time and materials contracts on systems development projects.

# Exhibit III-6

# Satisfaction with Application Management

Report 2	High Satisfaction	Medium Satisfaction	Low Satisfaction
High Importance	Achievement of agreed support service levels End user satisfaction	Delivery of projects on time Achievement of projected business benefits Ability to control costs/meet budget targets Meeting of requirements/specification Ability to contribute to business benefits	
Medium Importance			

Source: INPUT

Exhibit III-7 shows the proportions of projects performed on time within the outsourcing contracts surveyed.

#### Exhibit III-7

# Profile of Projects On-time

Proportion of projects on- time (%)	Proportion of respondents(%)
0 - 50%	0
51-75%	30
76-90%	30
91-100%	40
Total	100

Source: INPUT

On average 85% of projects are completed on time within outsourcing contracts.

Exhibit III-8 shows the proportions of projects performed on budget within the outsourcing contracts surveyed.

Exhibit III-8

# Profile of Projects On-budget

Proportion of projects on- time (%)	Proportion of respondents (%)
0 - 50%	15
51-90%	40
91-100%	45

Source: INPUT

Despite the complaints about the ability of vendors to operate within budget, 75% of systems development projects within outsourcing contracts are delivered on budget.

Overall, vendors need to place greater emphasis in assisting their clients to realize the anticipated business benefits from systems development projects. In addition, it appears that the vendors still need to improve their ability in the basic project disciplines of delivering on time within budget.

# Vendors Need To Become More Responsive To Changing Business Needs

Exhibit III-9 lists the most frequently given replies from outsourcing clients when asked unprompted what they most liked about their vendors' service culture or approach.

# Exhibit III-9

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One of the advantages often cited for outsourcing is the introduction of a more professional service culture to in-house IT personnel. This argument has been supported by previous studies of this type. Clients have tended to be pleased with the overall responsiveness of vendor personnel and the efforts that these personnel take in order to meet their commitments.

However, the stage beyond professionalism demands seamless integration with in-house staff and a strong feeling of partnership by the client. In many cases, this type of relationship has now been established showing that vendors are working well with their clients.

Exhibit III-10 lists the most frequently given replies from outsourcing clients when asked unprompted how they perceived their vendors' service culture or approach could be improved.





Nonetheless, the principal criticism of outsourcing vendors centers around the need to continue to work on building relationships and a sense of partnership with clients. Account management is critical to the success of outsourcing and in some instances there remains scope for improvement. Money, in particular, is a cause of many of the relationship-related problems with some clients believing that vendors need to take more financial risk if they are to develop true partnerships with their clients.

Extending this theme, some clients would like their suppliers to become more involved and take a greater ownership of their IT issues and direction.

Exhibit III-11 lists the difference between importance and client satisfaction against a range of service culture criteria.

# Exhibit III-11

Service Culture Ratings			
Attribute	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Low level of bureaucracy	3.0	3.0	0.0
Co-operation with other vendors	3.9	3.6	0.4
Willingness to compromise when conflicts arise	4.2	3.8	0.5
Caliber of personnel	4.4	3.8	0.6
Responsiveness to day-to-day issues	4.4	3.8	0.6
Ability to apply latest technologies	4.2	3.5	0.7
Understanding of latest technologies	4.4	3.6	0.8
Continuity of personnel	4.4	3.5	0.8
Effective and appropriate communications channels	4.2	3.5	0.8
Fast speed of reaction to requests	3.9	3.2	0.8
Understanding of your business requirements	4.5	3.5	0.9
Responsiveness to changing business needs	4.5	3.5	1.0
Sense of responsibility for your goals	4.6	3.5	1.1
Commitment to achieving agreed requirements	4.6	3.5	1.1

Service Culture Ratings

Source: INPUT

INPUT

Exhibit III-12 presents the data from Exhibit III-11 in a manner aimed to facilitate vendors in identifying the main priorities for service improvement. Exhibit III-12

# Satisfaction with Service Culture Features

	High Satisfaction	Medium Satisfaction	Low Satisfaction
High Importance		Caliber of personnel Understanding of your business requirements Responsiveness to changing business needs Sense of responsibility for clients' goals Commitment to achieving agreed requirements Responsiveness to day-to-day issues Continuity of personnel Effective and appropriate communications channels Willingness to compromise when conflicts arise Ability to apply latest technologies Understanding of latest technologies Co-operation with other vendors	Fast speed of reaction to requests
Medium Importance			
Low Importance			Low level of bureaucracy

Source: INPUT

Clients are reasonably impressed with the caliber of vendor personnel. At the same time, they are reasonably satisfied with vendor responsiveness on a day-to-day basis.

However, vendors still need to improve their understanding of their clients' business requirement and have a sense of commitment to achieving agreed requirements.

In particular, the major problems seem to lie in implementing this philosophy at speed. Organizations are currently faced with major changes in the way they operate, much of it facilitated by e-business, and they would like vendors to exhibit much higher levels of performance in:

- Responding to changing business needs
- · Reacting much more quickly to requests.

# **Clients Require Ability to Accommodate Change**

In contractual terms, clients want a known commitment that facilitates their budgeting but, at the same time, a relatively simple and fair means of accommodating their changing requirements.

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Exhibit III-13 lists the difference between importance and client satisfaction against a range of contract-related criteria.

### Exhibit III-13

Ratings of contract remis				
Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)		
1.9	4.3	(2.5)		
3.0	3.6	(0.6)		
3.2	3.5	(0.2)		
3.7	3.8	(0.2)		
4.3	3.9	0.3		
4.2	3.8	0.4		
4.4	3.7	0.7		
3.8	3.0	0.8		
4.5	4.4	0.1		
3.9	3.4	0.5		
	Importance Rating (1998) 1.9 3.0 3.2 3.7 4.3 4.2 4.4 3.8 4.5	Importance Rating (1998)         Satisfaction Rating (1998)           1.9         4.3           3.0         3.6           3.2         3.5           3.7         3.8           4.3         3.9           4.2         3.8           4.4         3.7           3.8         3.0           4.5         4.4		

**Ratings of Contract Terms** 

Source: INPUT

INPUT

Exhibit III-14 presents the data from Exhibit III-13 in a manner aimed to facilitate vendors in identifying the main priorities for improvement in contract terms.

#### Exhibit III-14

# Satisfaction with Outsourcing Contract Features

and the stand and the second	High Satisfaction	Medium Satisfaction	Low Satisfaction
High Importance	Overall contract flexibility Length of contract	Willingness to tailor contract to client's situation Commitment to meet agreed prices Ability to accommodate changing requirements	
Medium Importance		Length of contract Ease of termination of contract	Service level agreement
Low Importance		Flexibility to use additional suppliers where appropriate Penalties and bonuses	Terms of transfer of employees

Source: INPUT

Overall, outsourcing clients are moderately satisfied with the general terms of their outsourcing contracts.

However, clients would like vendors to introduce greater flexibility into their contracts. In particular, they are dissatisfied with vendors' ability to accommodate changing requirements by re-negotiation during the life of a contract.

Perhaps surprisingly, clients typically do not regard vendor penalties and bonuses or terms of transfer of employees as a high priority.

Nor is the freedom to use third parties seen as important despite the indications that outsourcing clients will become increasingly selective in the functions outsourced, and in the manner in which they bundle services for outsourcing. In particular, clients that perceive their vendor to under perform in certain functions will seek to contract those functions separately to a third party or even transfer them back in-house.

Outsourcing clients tend to favor fixed-price contracts because these enable clients to work to fixed budgets and are very simple to understand.

However, this approach has a number of disadvantages. In particular, it can be quite inflexible and be a significant impediment to change if the client's circumstances are evolving rapidly.

On the other hand, time and materials pricing elements are typically perceived as introducing excessive charges and as unduly passing all risk to the client. This is currently most prevalent in systems development projects. Clients would typically like vendors to take a greater share of the financial risk inherent in new developments and to be contractually committed not to exceed target budgets.

The difficulty of establishing and managing contracts is also a major concern to some organizations. Vendors need to assist their clients in making contract monitoring and amendment a much more simple process.

Vendors should consider discussing future service requirements with their clients on a regular basis e.g. quarterly and adjusting the service and contract terms as required. This approach can avoid a major discontinuity between service requirement and the actual services being delivered. It can also reduce the impact of pricing changes.

Clients are also concerned in a number of cases about the unexpectedly high costs of their outsourcing services. Another challenge for vendors is not only delivery of an initial cost reduction but demonstrating to clients that they can maintain the cost reduction momentum throughout the life of the contract.

#### D Vendors' Need to Focus on the Commercial Relationship

Exhibit III-15 lists the principal benefits sought by outsourcing clients and the extent to which those seeking each of these benefits felt that they had been achieved.

#### Exhibit III-15

#### Principal Benefits Sought

Benefit Sought	Level of achievement (1998)
Improved efficiency/cost reduction (14)	3.5
Access to technical expertise (13)	4.4
Focus in-house staff (4)	2.5
Ease support burden (3)	3.7

Source: INPUT

The overwhelming majority of outsourcing clients cited traditional criteria such as cost savings and access to IT skills. However, there was marked emphasis in 1998 on access to IT skills indicating that clients are now relying heavily on vendors to supply personnel skilled in new technologies such as the web technologies.

Overall clients are pleased with the caliber of these personnel. Surprisingly, the provision of technical expertise was perceived to be delivered to a higher standard than support for existing systems. This may reflect the problems currently being experienced in some instances in providing high levels of help-desk service.

The other area of concern was the cost-efficiency of outsourcing vendors.

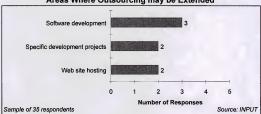
When outsourcing clients were asked unprompted what key benefits they would seek from a vendor in any future outsourcing contracts three main themes emerged.

Firstly, clients are showing much more emphasis on introducing business change through IT. In particular, their emphasis is now moving in favor of new systems development supported by the introduction of new technology.

Secondly, outsourcing clients are still extending the use of outsourcing within their organizations. However, they are becoming more selective in their choice of supplier for each function so that vendors will need to ensure high levels of service and staff resourcing in each service area in order to ensure access to this apparently captive business.

Exhibit III-16 lists the profile of areas where outsourcing is most likely to be extended within client organizations.





#### Areas Where Outsourcing may be Extended

The emphasis in extension of outsourcing contracts is now very forward-looking. It has moved away from desktop services to new systems development and the management of web technologies such as corporate Intranets and web servers.

Thirdly, clients would like vendors to maintain the cost reduction momentum and to assume a greater level of financial risk. In particular, they would like to combine value for money with greater contractual flexibility enabling them to change their service usage profiles much more rapidly than at present. Also they would specifically like vendors to take a greater share of the financial risk involved in systems development projects.

Exhibit III-17 shows the extent to which outsourcing vendors are perceived to contribute towards each of a number of potential IT goals.

#### Exhibit III-17

Ratings Of Contribution To IT Goals

Goal	Expectation Rating (1998)	Rating Rating	
To introduce knowledge of new technologies	3.7	3.1	0.6
To reduce the time taken to implement new system	2.5	3.0	(0.5)
To free in-house managers/staff for other work	3.5	3.6	(0.1)
To aggressively use IT for competitive advantage	4.0	3.7	0.3
To become more cost-effective in using IT	3.7	3.2	0.5
To increase effectiveness in applying IT to the business	4.0	3.5	0.5

Source: INPUT

Exhibit III-18 highlights the difference between the importance of contributing to each of these IT goals and clients' satisfaction with vendors' current contribution.

#### Exhibit III-18

#### Satisfaction with Contribution to IT Goals

And the second second	High Satisfaction	Medium Satisfaction	Low Satisfaction
High Importance		To aggressively use IT for competitive advantage To increase effectiveness in applying IT to the business	
Medium Importance		To free in-house managers/staff for other work	To become more cost-effective in using IT To introduce knowledge of new technologies
Low Importance			To reduce the time taken to implement new systems

Source: INPUT

Clients currently expect the major contribution from outsourcing to come from increased effectiveness in applying IT to their businesses.

At the same time, there is continuing scope to improve the contribution that outsourcing makes towards introducing knowledge of new technologies within client organizations and in delivering improved cost-effectiveness.

Exhibit III-19 lists the difference between client expectation and perceived vendor achievement against a number of potential benefits.

**Contribution to Benefits** 

Contribution to Deticitia					
Potential Benefit	Expectation Rating (1998)	Achievement Rating (1998)	Difference (1998)		
Access to best practices in using IT	4.5	3.9	0.3		
Removed in-house involvement with legacy systems	4.1	3.7	0.4		
Cost reduction	4.5	3.4	1.1		
Improved cost-effectiveness	4.4	3.7	0.8		
Improved operational service levels	4.2	3.9	0.3		
Introduction of up-to-date technical knowledge	4.2	3.9	0.3		
Introduction of new technologies	4.2	3.6	0.6		
More effective introduction of new systems	3.6	3.5	0.1		
Improved ability to relate IT to the business	4.6	3.9	0.7		

#### Exhibit III-19

Source: INPUT

Exhibit III-20 highlights the difference between the clients' expectation of vendors contributing to each of these potential benefits and clients' perception of vendors' current achievement.

#### Exhibit III-20

#### Achievement of Potential Benefits

	High Achievement	Medium Achievement	Low Achievement
High Expectation	Improved operational service levels Access to best practices in using IT Improved ability to relate IT to the business Introduction of up-to-date technical knowledge	Removed in-house involvement with legacy systems Cost reduction Improved cost-effectiveness Introduction of new technologies	
Medium Expectation		More effective introduction of new systems	

Source: INPUT

At present, outsourcing vendors are perceived to be most successful in delivering:

- · Improved ability to relate IT to the business
- Improved operational service levels
- · Access to best practices in using IT.

However, vendors need to pay continuing attention to cost reduction and their ability to transfer financial risk away from their clients. In addition, vendors need to pay particular attention to the introduction and support of new systems and new technology.

Exhibit III-21 shows the perceived roles of outsourcing vendors from the perspective of their clients.

#### Exhibit III-21

3						
Potential Role	Importance	Achievement	Difference			
A business advisor	1.7	3.8	(2.1)			
A technology advisor	2.1	3.0	(0.9)			
An agent of change	2.9	3.3	(0.4)			
A supplier of agreed services and nothing else	2.6	3.1	(0.5)			
A key partner	4.4	3.9	0.5			
A supplier of support services	4.2	3.8	0.4			

#### Perceived Role of Outsourcing Vendor

Source: INPUT

Outsourcing vendors are typically perceived to have progressed beyond being suppliers of agreed services and nothing else and have made some progress towards being viewed as key partners in the supply of support services. This is the role that they are currently expected to play by their clients. However, despite favorable ratings, they are typically not yet expected to act as business advisors and expectations in this area are low.

In addition, outsourcing vendors receive low ratings as *technology advisors* and *agents of change*. Vendors should work to change the expectation that they can make a significant contribution in these areas.

The key challenge for outsourcing vendors is to improve these perceptions so that they become key technology advisors and agents of change that play a crucial role in assisting their clients in improving their business processes through the application of new technology. At present, outsourcing vendors tend to be viewed as primarily playing a supporting role to their clients rather than one of thought leadership.

#### Ε

#### Vendors Need to Strengthen Their Business Contribution to Protect Contract Renewals

Exhibit III-22 summarizes attitudes to overall vendor performance.

Exhibit III-22

Criterion	Importance	Achievement	Difference			
Overall		3.8				
Innovation and creativity	2.9	3.0	(0.1)			
Vendor service culture	3.9	3.6	0.3			
Strength of partnership	4.3	3.8	0.5			
Commercial terms and conditions	4.1	3.6	0.6			
Business contribution	4.0	3.2	0.8			
Initial cost-effectiveness	4.4	3.5	0.8			
Flexibility of approach	4.5	3.6	0.9			
Ongoing cost- effectiveness	4.5	3.4	1.0			
Service provision	4.8	3.8	1.0			

#### Summary Criteria

Source: INPUT

The overall performance of outsourcing vendors is in line with their clients' expectations and their service provision is basically sound.

However, outsourcing vendors are perceived to make a low level of business contribution though their clients typically have high expectations in this area. To begin to address this situation, outsourcing vendors need initially to address their cost-effectiveness and their commercial flexibility.

Subsequently, they need to become more involved in assisting their clients to adopt e-business by acting as a change agent within the client's organization.

Exhibit III-23 shows those aspects of their outsourcing services with which clients are particularly pleased.

INPUT

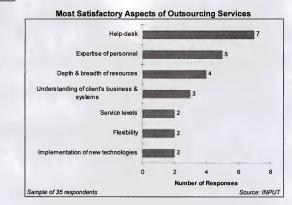


Exhibit III-24 shows those aspects of their outsourcing services that currently cause clients concern.



Vendors are beginning to develop an understanding of clients' business requirements and current systems, but now need to find ways in which they can utilize this knowledge by being more proactive and taking responsibility for advancing the use of new technology within client organizations.

Exhibit III-24

Exhibit III-23

Although clients are often pleased with the high level of technical capability shown by vendor personnel, there remains scope for improving technical support further in some instances and vendors need to continue to improve their ability to apply new technology.

Exhibit III-25 lists the likelihood of clients renewing their outsourcing contracts with the same vendor.

# Likelihood of Contract Renewal

Clients exhibit a relatively high level of loyalty with approximately 80% of clients exhibiting a strong likelihood of contract renewal with their existing vendor. This figure has increased from 55% in 1997, indicating a considerable increase in client loyalty during 1998.

Twenty per cent of clients show a marked disinclination to renew contracts with their existing suppliers. Few clients are undecided indicating that approximately 30% of clients will switch vendors on contract renewal.

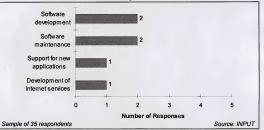
Overall, clients tend to express a high likelihood of renewing their contracts with their current vendor where they are pleased with the current service and perceive the commercial terms and conditions of the contract favorably. However, a perception of cost-effectiveness in itself offers little protection against competitors. Clients will typically want to benchmark vendors that offer primarily cost-effectiveness to ensure their future cost-competitiveness.

Vendors are better protected from their competitors where they are perceived to be key partners that can make a significant business contribution to the client.

#### Exhibit III-25

There are also some indications that clients will unbundle services where they perceive vendor service quality to be variable across a range of services. In some cases, clients expect to break up existing contracts into a number of smaller contracts; in others clients anticipate taking services back in-house.

Exhibit III-26 lists the profile of activities that organizations expect to revert in-house.



#### **Functions That May Revert In-house**

Application development and maintenance, as in the past, are regarded as the most likely activities to bring back in- house given their clear importance to client organizations.

Exhibit III-26



# Changes in Vendor Performance 1995 - 1998

This chapter compares the relative levels of satisfaction of outsourcing clients in the U.S. between 1995 and 1998 and comments on the principal changes in satisfaction that have taken place.

#### A Desktop Services Delivery Improved During 1998

Exhibit IV-1 lists the level of satisfaction with service quality by service function. No data is available by IT function for 1995.

Exhibit IV-1

Function	Satisfaction Rating (1997)	Satisfaction Rating (1998)	Difference
Day-to-day management of the personal computer infrastructure including servers and local area networks(2)	3.7	4.0	0.3
IT strategy consultancy(7)	4.1	3.7	(0.4)
Responsibility for new systems development as a preferred supplier(5)	4.2	3.8	(0.4)
Day-to-day management of the corporate data network(3)	4.4	3.8	(0.6)
Support and maintenance for in-house developed applications(4)	4.2	3.6	(0.6)
Day-to-day operation of mainframe(s) and/or stand-alone mid-range equipment(1)	3.9	3.2	(0.7)

#### Satisfaction with Service Quality by IT Function: 1997 to 1998

Source: INPUT

Overall, the level of satisfaction with service quality declined to moderate levels in 1998. The one area that showed a significant improvement was desktop services. This is the first occasion on which organizations have shown a high level of satisfaction with desktop services, implying that vendors may finally have succeeded in reengineering the delivery of these services.

Exhibit IV-2 lists the level of satisfaction with a number of service features relating to operational management.

1550					
Feature	Satisfaction Rating (1995)	Satisfaction Rating (1997)	Satisfaction Rating (1998)	Difference	
Scope of operational capability	3.7	4.0	3.6	(0.4)	
Speed of migration to new platforms/technologies*		4.0	3.6	(0.4)	
Achievement of operational service level agreements	4.0	4.1	3.6	(0.5)	
Capability of help-desk	3.7	3.9	3.4	(0.5)	

#### Satisfaction with Operational Management Capability: 1995 to 1998

Source: INPUT

Note: \* called "utilization of new technologies" in 1998

In 1998, satisfaction with operational management capability fell significantly despite the improvement in quality of desktop services. The principal reason for this may be the desire to implement and manage new technologies. Desktop services capability is no longer sufficient and outsourcing vendors need to urgently address the management of emerging technologies such as Intranets and web servers to a high standard.

In addition to concern about the rate at which new technology is introduced into the client's IT infrastructure, there remain concerns regarding help-desk services. The demands placed on help-desks increase as these new technologies are introduced and computer usage widens even further within client organizations.

Exhibit IV-3 lists the levels of satisfaction with a number of service features relating to application management.

Exhibit IV-2

Satisfaction with Application Management Capability: 1995 to 1998

Service Characteristic	Satisfaction Rating (1995)	Satisfaction Rating (1997)	Satisfaction Rating (1998)	Difference
Achievement of agreed support service levels		4.0	4.2	0.2
Delivery of projects on time	3.7	4.0	3.7	(0.3)
Meeting of requirements/specification	4.0	4.0	3.6	(0.4)
Achievement of projected business benefits		4.0	3.5	(0.5)
Ability to control costs/meet budget targets	3.7	4.1	3.6	(0.5)
Ability to contribute to business benefits		4.0	3.4	(0.6)

Source: INPUT

INPUT

The overall level of satisfaction with application management fell during 1998, despite the strengthening of support service levels.

In particular, clients now expect vendors to go beyond basic software development services and play a greater role in addressing, and delivering, business benefits.

Although the nature of systems development is changing, moving away from bespoke development to focus on the implementation and integration of standard software products vendors still need to improve the delivery of projects on budget and on time.

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#### Vendors Need to React More Quickly

Exhibit IV-4 lists the level of satisfaction with a number of customer service criteria.

#### Satisfaction with Vendor Service Cultures: 1995 to 1998

Attribute	Satisfactio n Rating (1995)	Satisfaction Rating (1997)	Satisfaction Rating (1998)	Difference
Willingness to compromise when conflicts arise	3.9	3.7	3.8	0.1
Responsiveness to day-to-day issues	3.9	3.8	3.8	0.0
Caliber of personnel	3.8	3.9	3.8	(0.1)
Responsiveness to changing business needs		3.7	3.5	(0.2)
Co-operation with other vendors	3.6	3.9	3.6	(0.3)
Continuity of personnel	3.6	3.8	3.5	(0.3)
Effective and appropriate communications channels		3.9	3.5	(0.4)
Sense of responsibility for your goals		4.0	3.5	(0.5)
Understanding of your business requirements	3.8	4.0	3.5	(0.5)
Commitment to achieving agreed requirements	3.9	4.0	3.5	(0.5)
Speed of reaction to requests	3.7	3.7	3.2	(0.5)
Level of bureaucracy		3.7	3.0	(0.7)

Source: INPUT

Satisfaction with the caliber of vendor personnel and with reactive service criteria remained relatively high during 1998. However, the overall level of satisfaction with vendor service cultures deteriorated in 1998. This was because client satisfaction fell against the majority of proactive service criteria.

In particular, client satisfaction with vendors' understanding of their business requirements and vendors' ability to respond to clients' changing business needs fell compared to levels of satisfaction with these criteria shown in 1997. These decreases in satisfaction may reflect the increasing pace of technology change and also the business urgency to implement e-business solutions. In some instances, vendors may lack the ability to translate business vision into appropriate IT systems. Alternatively the low levels of satisfaction may reflect the lack of a suitable contractual mechanism that would facilitate a rapid response.

The challenges for vendors are:

 To strengthen their relatively high level of reactive support (at least partially through much improved help-desks and online support capabilities)  To develop mechanisms that enable them to develop further their understanding of client business requirements and to translate these into improved processes for their clients with a sense of urgency.

#### С

# Vendors Must Be Prepared To Be Flexible And Accept More Commercial Risk

Exhibit IV-5 lists the level of satisfaction with criteria relating to the commercial terms of outsourcing contracts.

#### Exhibit IV-5

#### Satisfaction with Contract Terms: 1995 to 1998

Attribute	Satisfaction Rating (1995)	Satisfaction Rating (1997)	Satisfaction Rating (1998)	Difference
Length of contract		4.0	4.4	0.4
Terms of transfer of employees	4.2	4.0	4.3	0.3
Overall contract flexibility	4.1	4.0	3.9	(0.1)
Ease of termination of contract	3.8	4.0	3.8	(0.2)
Willingness to tailor contract to client's situation		4.1	3.8	(0.3)
Penalties and bonuses	3.8	3.8	3.5	(0.3)
Commitment to meet agreed prices		4.0	3.7	(0.3)
Ability to accommodate changing requirements		4.0	3.4	(0.6)
Flexibility to use additional suppliers where appropriate		4.2	3.6	(0.6)
Service level agreement	4.0	4.1	3.0	(1.1)

Source: INPUT

Satisfaction with contract terms declined in 1998.

Clients are becoming steadily less satisfied with vendors' commitments to meet agreed prices and clients remain concerned about vendors' ability to accommodate their changing requirements. Vendors need to develop more flexible contractual frameworks that will enable them to react quickly and cost-effectively to emerging technologies and the need for new business processes.

#### D Vendors Must Utilize New Technologies More Readily

Exhibit IV-6 lists the perceived level of contribution made by outsourcing vendors towards potential IT goals.

Exhibit IV-6

Goal	Achievement Rating (1995)	Achievement Rating (1997)	Achievement Rating (1998)	Difference
To free in-house managers/staff for other work	3.6	3.8	3.6	(0.2)
To increase effectiveness in applying IT to the business	3.6	3.7	3.5	(0.2)
To aggressively use IT for competitive advantage		4.0	3.7	(0.3)
To become more cost-effective in using IT	3.6	3.8	3.2	(0.6)
To adopt a distributed, rather than centralized, architecture	3.3	4.2		
To reduce the time taken to implement new systems	3.6	3.9	3.0	(0.9)

#### Perceived Contribution to IT Goals: 1995 to 1998

Source: INPUT

The overall satisfaction with vendors' contribution to their clients' IT goals remained decreased during 1998.

Firstly, the perceived contribution of outsourcing to the goal of increasing effectiveness in applying IT to business fell. In particular, its contribution was perceived to fall in reducing the time taken to implement new systems.

Secondly, the level of satisfaction with assisting organizations become more cost-effective in using IT fell sharply.

Exhibit IV-7 lists the perceived level of contribution made by outsourcing vendors towards potential benefits.

#### Perceived Contribution to Benefits: 1995 to 1998

Potential Benefit	Achievement Rating (1995)	Achievement Rating (1997)	Achievement Rating (1998)	Difference
Removed in-house involvement with legacy systems		3.5	3.7	0.2
Access to best practices in using IT		3.8	3.9	0.1
Improved ability to relate IT to the business		3.8	3.9	0.1
Introduction of up-to-date technical knowledge	3.5	3.9	3.9	0.0
Improved operational service levels	3.7	3.9	3.9	0.0
Improved cost-effectiveness		3.9	3.7	(0.2)
Introduction of new technologies		3.9	3.6	(0.3)
More effective introduction of new systems		3.8	3.5	(0.3)
Cost reduction		3.9	3.4	(0.5)

Source: INPUT

In this instance there is more encouraging news for outsourcing vendors. In 1998, outsourcing was regarded as maintaining its high contribution towards:

- Access to best practices in using IT
- Improved operational service levels.

However these improvements did not translate into corresponding improvements in more effective introduction of new systems or new technologies.

In addition, satisfaction with vendors' ability to deliver cost reduction and improved cost-effectiveness declined significantly.

Exhibit IV-8 lists the extent to which outsourcing vendors are perceived to play a number of potential roles.

#### Perception of Vendor Roles: 1995 to 1998

Vendor Role	Rating (1995)	Rating (1997)	Rating (1998)	Difference
A business advisor		2.4	3.8	1.4
An agent of change		2.3	3.3	1.0
A supplier of support services		3.3	3.8	0.5
A key partner		3.6	3.9	0.3
A technology advisor		2.9	3.0	0.1
A supplier of agreed services and nothing else		3.2	3.1	(0.1)

Source: INPUT

Despite a number of major concerns, the overall perception of outsourcing vendors improved during 1998. Vendors strengthened their positions as key partners and suppliers of support services.

However, despite the apparent improvements in perception of outsourcing vendors as business advisors and agents of change, clients' expectations of vendors remain very low in these areas. Similarly, outsourcing vendors are still not seen to play a significant role as technology advisors. It is critical for the future success of outsourcing vendors that they can begin to make a more significant contribution to their clients' technology strategies.

#### **Outsourcing Vendors Need to Meet the Contractual Challenge**

Exhibit IV-9 lists the level of vendor satisfaction against a number of summary criteria.

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#### Summary Satisfaction Criteria: 1997 to 1998

Summary Criteria	Satisfaction Rating (1997)	Satisfaction Rating (1998)	Difference
Overall	3.9	3.8	(0.1)
Service provision	3.9	3.8	(0.1)
Initial cost-effectiveness	3.7	3.5	(0.2)
Strength of partnership	4.0	3.8	(0.2)
Flexibility of approach	3.8	3.6	(0.2)
Vendor service culture	3.8	3.6	(0.2)
Commercial terms and conditions	3.8	3.6	(0.2)
Ongoing cost-effectiveness	3.9	3.4	(0.5)
Business contribution	3.8	3.2	(0.6)
Innovation and creativity	3.7	3.0	(0.7)

Source: INPUT

Overall satisfaction with outsourcing vendors worsened during 1998. Despite this overall level of deterioration, satisfaction with service provision remained comparatively high and the sense of partnership largely remained.

However, there are some significant causes for concern beginning to emerge.

Firstly, satisfaction with innovation and creativity, although not widely regarded as important by the client community, fell sharply.

Secondly, satisfaction with the business contribution of outsourcing vendors fell more sharply than many other criteria. Business contribution is ultimately a key criterion against which outsourcing vendors will be judged and could be a key to future contract renewals.

Finally, satisfaction with commercial terms and conditions and ongoing cost-effectiveness decreased. If outsourcing vendors fail to rise to this primarily contractual challenge, they will miss the opportunity to play a vital role in their clients' business development and so will play increasingly minor roles in the development of their clients' future IT.

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## Results in Questionnaire Format: U.S. 1998

#### Service Quality

 Which of the following functions does your organization outsource and to whom? How satisfied are you with the service you receive in each of these areas? Please rate on a scale of 1-5 where 1 = dissatisfied and 5 = very satisfied.

Function	Outsourced (%)	Satisfaction (1-5)
Day-to-day operation of mainframe(s) and/or stand-alone mid-range equipment(1)	17	3.2
Day-to-day operation of the personal computer infrastructure including servers and local area networks(2)	40	4.0
Day-to-day operation of the corporate data network(3)	23	3.8
Development and operation of corporate Intranet and web servers	30	3.6
Support and maintenance for in-house developed applications(4)	30	3.6
Responsibility for new systems development as a preferred supplier(5)	15	3.8

From this point onwards, I should like to concentrate on your attitudes towards the services that you receive from name.

- · Responsiveness and quality of help-desk (7)
- Level of expertise/quality of personnel (5)
- Depth and breadth of resources (4)
- · Understanding of clients' business and systems (3)
- · Service levels (2)
- Implementation of new technologies (2)
- 3. Which aspects of your current outsourcing services, if any, cause you concern?
  - · Ability to apply new technology (6)
  - Technical support/help-desk (3)
  - · Unwillingness to take responsibility (3)
  - · Lack of proactivity (2)

#### If respondent answered yes to Q1 (1,2 or 3)

4. Would you please rate the importance of, and your level of satisfaction with, each of the following service features relating to operational management? Please rate on a scale of 1-5 where 1 = not at all important/dissatisfied and 5 = very important/very satisfied.

Feature	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Scope of operational capability	4.3	3.6	0.7
Achievement of operational service level agreements	4.7	3.6	1.1
Utilization of new technologies	4.2	3.6	0.7
Capability of help-desk	4.5	3.4	1.2
Moves and user requested changes	4.3	3.4	0.9

4b. If you have an overall systems availability guarantee, please indicate the level of availability that is guaranteed

4c. If you have an overall network availability guarantee, please indicate the level of availability that is guaranteed

#### If respondent answered yes to Q1 (4 or 5)

5. Would you please rate the importance of, and your level of satisfaction with, each of the following areas relating to application support and development? Please rate on a scale of 1-5 where 1 = not at all important/dissatisfied and 5 = very important/very satisfied.

Service Characteristic	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Delivery of projects on time	4.9	3.7	1.2
Ability to control costs/meet budget targets	4.7	3.6	1.1
Meeting of requirements/specification	4.8	3.6	1.2
Achievement of agreed support service levels	4.7	4.2	0.5
Achievement of projected business benefits	4.2	3.5	0.6
Ability to contribute to business benefits	3.9	3.4	0.5
End user satisfaction	4.5	4.1	0.5

5b What proportion of development projects performed by this vendor in the last year were carried out: 85% On time 75% On budget

#### Vendor Style

- 6. What do you like about the culture/approach of your outsourcing vendor?
  - Good working relationship (4)
  - Service orientation (3)
  - Well proven relationship (2)
- 7. In what respects do you think their service culture could be improved?
  - Become less risk averse (2)
  - Take greater responsibility (1)
  - Take long-term perspective (1)
  - Stop arguing about invoices (1)

 How important, and how satisfactory, are the following aspects of their approach? Please rate on a scale of 1-5 where 1 = unimportant/dissatisfied and 5 = very important/very satisfied.

Attribute	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Understanding of your business requirements	4.5	3.5	0.9
Sense of responsibility for your goals	4.6	3.5	1.1
Commitment to achieving agreed requirements	4.6	3.5	1.1
Responsiveness to changing business needs	4.5	3.5	1.0
Willingness to compromise when conflicts arise	4.2	3.8	0.5
Responsiveness to day-to-day issues	4.4	3.8	0.6
Continuity of personnel	4.4	3.5	0.8
Effective and appropriate communications channels	4.2	3.5	0.8
Low level of bureaucracy	3.0	3.0	0.0
Fast speed of reaction to requests	3.9	3.2	0.8
Co-operation with other vendors	3.9	3.6	0.4
Caliber of personnel	4.4	3.8	0.6
Understanding of latest technologies	4.4	3.6	0.8
Ability to apply latest technologies	4.2	3.5	0.7

#### **Commercial Terms**

 How important, and how satisfactory, are the following aspects of your outsourcing contract(s)? Please rate on a scale of 1-5 where 1 = unimportant/dissatisfied and 5 = very important/very satisfied.

Attribute	Importance Rating (1998)	Satisfaction Rating (1998)	Difference (1998)
Overall contract flexibility	4.3	3.9	0.3
Length of contract	4.5	4.4	0.1
Willingness to tailor contract to client's situation	4.2	3.8	0.4
Terms of transfer of employees	1.9	4.3	-2.5
Commitment to meet agreed prices	4.4	3.7	0.7
Flexibility to use additional suppliers where appropriate	3.0	3.6	-0.6
Ease of termination of contract	3.7	3.8	-0.2
Ability to accommodate changing requirements	3.9	3.4	0.5
Overall service level agreement	3.8	3.0	0.8
Penalties and bonuses	3.2	3.5	-0.2

10.On what basis is your outsourcing contract priced?

- 11. What do you like and dislike about the pricing mechanism used within your outsourcing contract?
- 12. How important, and how satisfactory, are the following aspects of your pricing mechanism? Please rate on a scale of 1-5 where 1 = unimportant/dissatisfied and 5 = very important/very satisfied.
- 13. How would you like to change the pricing mechanism used? What pricing mechanisms will you seek to adopt for use in future outsourcing contracts?

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13b. What change in cost-effectiveness have you achieved by outsourcing in each of the following areas: (Please prompt for percentage increase or decrease)

Mainframe operations	
Distributed systems management	-13%
Wide area network operations	
Application maintenance and development	
Business process outsourcing	

13c Can you estimate your average costs for each of the following service types?

#### **Overall Objectives/Benefits Sought**

14. To what extent do you expect your outsourcing vendor to contribute towards each of these potential IT goals? To what extent have they contributed towards these goals? Please rate on a scale of 1-5 where 1 = low expectation/achievement and 5 = high expectation/achievement.

Goal	Expectation Rating (1998)	Achievement Rating (1998)	Difference (1998)
To aggressively use IT for competitive advantage	4.0	3.7	0.3
To increase effectiveness in applying IT to the business	4.0	3.5	0.5
To introduce knowledge of new technologies	3.7	3.1	0.6
To become more cost-effective in using IT	3.7	3.2	0.5
To reduce the time taken to implement new system	2.5	3.0	-0.5
To free in-house managers/staff for other work	3.5	3.6	-0.1

15. What were the principal benefits you originally sought from using outsourcing and, to what extent have each of these anticipated benefits been delivered? Please rate on a scale of 1-5 where 1 = low achievement and 5 = high achievement.

Benefit Sought	Level of achievement (1998)
Improved efficiency/cost reduction (14)	3.5
Access to technical expertise (13)	4.4
Focus in-house personnel (4)	2.5
Ease support burden (3)	3.7

- 16. Your expectations have probably changed over the life of the contract. Which key benefits will you seek from a vendor in any future outsourcing contracts?
- 17. To what extent do you currently expect your outsourcing vendor to contribute towards each of the following potential benefits? To what extent have they contributed towards each of these? Please rate on a scale of 1-5 where 1 = low expectation/achievement and 5 = high expectation/achievement.

Potential Benefit	Expectation Rating (1998)	Achievement Rating (1998)	Difference (1998)
Improved cost-effectiveness	4.4	3.7	0.8
Cost reduction	4.5	3.4	1.1
Improved operational service levels	4.2	3.9	0.3
Removed in-house involvement with legacy systems	4.1	3.7	0.4
Introduction of up-to-date technical knowledge	4.2	3.9	0.3
Introduction of new technologies	4.2	3.6	0.6
Improved ability to relate IT to the business	4.6	3.9	0.7
More effective introduction of new systems	3.6	3.5	0.1
Access to best practices in using IT	4.3	3.9	0.3

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18. To what extent would you like your current outsourcing vendor to undertake each of the following roles: (Please rate on a scale of 1-5 where 1 = not their role and 5 = a key role). To what extent do you perceive them to undertake each of these roles at present?

Potential Role	Importance	Achievement	Difference
A supplier of agreed services and nothing else	2.6	3.1	-0.5
A business advisor	1.7	3.8	-2.1
A technology advisor	2.1	3.0	-0.9
An agent of change	2.9	3.3	-0.4
A supplier of support services	4.2	3.8	0.4
A key partner	4.4	3.9	0.5

#### **Overall Satisfaction**

19. How important is each of the following criteria? What is your overall level of satisfaction with your outsourcing vendor against each of these criteria? Please rate on a scale of 1-5 where 1 = dissatisfied and 5 = very satisfied:

Criterion	Importance	Achievement	Difference	
Overall		3.8		
Service provision	4.8	3.8	1.0	
Flexibility of approach	4.5	3.6	0.9	
Vendor service culture	3.9	3.6	0.3	
Commercial terms and conditions	4.1	3.6	0.6	
Innovation and creativity	2.9	3.0	-0.1	
Strength of partnership	4.3	3.8	0.5	
Business contribution	4.0	3.2	0.8	
Initial cost-effectiveness	4.4	3.5	0.8	
Ongoing cost-effectiveness	4.5	3.4	1.0	

20. How likely are you to renew the contract with the same vendor? Please rate on a scale of 1-5 where 1 = not at all likely and 5 = very likely. Why/Why not? 21.Do you believe that you have benefited from outsourcing compared to a continuation of in-house operations? 90% Yes

22. Which functions, if any, might you take back in-house? Why?

- None (19)
- Application development (2)
- Application maintenance (2)
- Support for new development (1)
- Development of Internet services (1)

23.In what ways are you likely to extend your use of outsourcing?

- Application development (3)
- Specific development projects (2)
- Web site hosting (2)

#### **Background Details**

24. When did your outsourcing contract begin?

25. What is the total length of your outsourcing contract?

26.What is the approximate value of your outsourcing contract? Please state currency and time period.

Thank you very much for your assistance.

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### Results in Questionnaire Format: U.S. 1997

#### Service Quality

 Which of the following functions does your organization outsource and to whom? How satisfied are you with the service you receive in each of these areas? Please rate on a scale of 1-5 where 1 = dissatisfied and 5 = very satisfied.

Function	Satisfaction Rating (OVERALL)
Day-to-day operation of mainframe(s) and/or stand-alone mid-range equipment(1)	3.9
Day-to-day management of the personal computer infrastructure including servers and local area networks(2)	3.7
Day-to-day management of the corporate data network(3)	4.4
Support and maintenance for in-house developed applications(4)	4.2
Responsibility for new systems development as a preferred supplier(5)	4.2
Business process reengineering consultancy(6)	4.5
IT strategy consultancy(7)	4.1
Other IT consultancy services(8)	4.2
Business functions such as accounting or fulfillment(9)	

# From this point onwards, I should like to concentrate on your attitudes towards the services that you receive from *name*.

- 2. Which aspects of your current outsourcing services, if any, are you particularly pleased with?
  - Responsiveness (4)
  - Expertise (3)

- Mainframe-based services (3)
- Operational services (2)
- Help-desk (2)
- · Cost savings (1)
- Increase focus on IS (1)
- · Reliability (1)
- Project methodology (1)
- 3. Which aspects of your current outsourcing services, if any, cause you concern?
  - Cost/cost overruns (5)
  - Speed of response (3)
  - · Support for desktop (2)
  - Not committed to client goals (2)
  - Don't meet deadlines (2)
  - · Lack of innovation (1)
  - · Lack of flexibility (1)
  - Support of Year 2000 upgrades (1)
  - Insufficient staffing (1)

#### If respondent answered yes to Q1 (1,2 or 3)

4. Would you please rate the importance of, and your level of satisfaction with, each of the following service features relating to operational management? Please rate on a scale of 1-5 where 1 = not at all important/dissatisfied and 5 = very important/very satisfied.

Feature	Importance Rating (OVERALL)	Satisfaction Rating (OVERALL)	Difference (OVERALL )
Scope of operational capability	4.4	4.0	0.4
Achievement of operational service level agreements	4.5	4.1	0.4
Speed of migration to new platforms/technologies	3.8	4.0	(0.2)
Capability of help-desk	4.4	3.9	0.5
Moves and user requested changes	4.3	3.9	0.5

#### If respondent answered yes to Q1 (4 or 5)

5. Would you please rate the importance of, and your level of satisfaction with, each of the following areas relating to application support and development? Please rate on a scale of 1-5 where 1 = not at all important/dissatisfied and 5 = very important/very satisfied.

Service Characteristic	Importance Rating (OVERALL)	Satisfaction Rating (OVERALL)	Difference (OVERALL)
Delivery of projects on time	4.3	4.0	0.3
Ability to control costs/meet budget targets	4.5	4.1	0.4
Meeting of requirements/specification	4.3	4.0	0.4
Achievement of agreed support service levels	4.4	4.0	0.4
Achievement of projected business benefits	4.3	4.0	0.3
Ability to contribute to business benefits	4.3	4.0	0.3

#### Vendor Style

- 6. What do you like about the culture/approach of your outsourcing vendor?
  - Responsiveness/support (5)
  - Reliability (3)
  - Professionalism (2)

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- · Consulting capability (1)
- Flexibility (1)
- Technically up-to-date (1)
- Project focus (1)
- · Ability to work with users (1)
- Operational capability (1)
- In what respects do you think their service culture could be improved?
  - Improve business understanding & response to business need(4)
  - Improve speed of response (4)
  - Improve honesty and reliability (2)
  - Improve productivity (2)
  - · Improve communication with clients (2)
  - Improve proactivity (1)
  - Remove compartmentalization of services (1)
  - Increase staff training (1)

 How important, and how satisfactory, are the following aspects of their approach? Please rate on a scale of 1-5 where 1 = unimportant/dissatisfied and 5 = very important/very satisfied.

Attribute	Importance Rating (OVERALL)	Satisfaction Rating (OVERALL)	Difference (OVERALL)
Understanding of your business requirements	4.5	4.0	0.5
Sense of responsibility for your goals	4.6	4.0	0.6
Commitment to achieving agreed requirements	4.7	4.0	0.7
Flexible and innovative approach to your business requirement	4.2	3.8	0.4
Responsiveness to changing business needs	4.4	3.7	0.6
Willingness to compromise when conflicts arise	4.4	3.7	0.7
Willingness to take ownership of problems	4.6	3.8	0.8
Responsiveness to day-to-day issues	4.5	3.8	0.7
Continuity of personnel	4.3	3.8	0.4
Openness of communication	4.5	3.8	0.8
Effective and appropriate communications channels	4.6	3.9	0.7
Level of bureaucracy	3.8	3.7	0.2
Speed of reaction to requests	4.4	3.7	0.7
Co-operation with other vendors	4.2	3.9	0.3
Caliber of personnel	4.4	3.9	0.5

Source: INPUT

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#### **Commercial Terms**

- 9. What do you like and dislike about the contract terms of your outsourcing arrangement? Like:
  - Flexibility (3)
  - · Maintains current cost level (1)
  - Structured on win/win basis (1)

Dislike:

- Price is too high (5)
- Inflexible (1)
- Charging for minor extras (1)

• Out-dated contract (1)

10. How important, and how satisfactory, are the following aspects of
your outsourcing contract(s)? Please rate on a scale of 1-5 where 1
= unimportant/dissatisfied and 5 = very important/very satisfied.

Attribute	Importance Rating (OVERALL)	Satisfaction Rating (OVERALL)	Difference (OVERALL)
Overall contract flexibility	4.5	4.0	0.5
Length of contract	4.1	4.0	0.1
Willingness to tailor contract to client's situation	4.7	4.1	0.6
Terms of transfer of employees	4.2	4.0	0.2
Commitment to meet agreed prices	4.7	4.0	0.7
Flexibility to use additional suppliers where appropriate	4.2	4.2	0.1
Ease of termination of contract	4.3	4.0	0.3
Ability to accommodate changing requirements	4.6	4.0	0.6
Service level agreement	4.6	4.1	0.5
Penalties and bonuses	4.2	3.8	0.3

Source: INPUT

11.On what basis is your outsourcing contract priced?

- Resource-based (10)
- Fixed price (7)
- 12. What do you like and dislike about the pricing mechanism used within your outsourcing contract? Like:
  - Value for money (2)
  - Flexibility (1)
  - Easy to understand (1)

Dislike:

- High price (3)
- · Lack of flexibility (1)
- · Pricing not aligned with business reality (1)

13. How important, and how satisfactory, are the following aspects of your pricing mechanism? Please rate on a scale of 1-5 where 1 = unimportant/dissatisfied and 5 = very important/very satisfied.

Attribute	Importance Rating (OVERALL)	Satisfaction Rating (OVERALL)	Difference (OVERALL)
Open book approach	4.3	3.8	0.5
Sharing of risk with vendor	4.4	4.0	0.4
Incentives to encourage vendor creativity	4.4	3.8	0.6
Links to business parameters	4.2	4.0	0.2
Links to business success	4.3	4.0	0.3
Ability to deliver initial cost reduction	4.7	3.9	0.8
Ability to deliver ongoing cost reduction	4.6	3.9	0.8
			Source: INPUT

- 14. How would you like to change the pricing mechanism used? What pricing mechanisms will you seek to adopt for use in future outsourcing contracts?
  - No change (10)
  - More competitive pricing (2)
  - Incentives to reduce overall cost (1)
  - Move to fixed price (1)
  - Increase flexibility (1)

## **Overall Objectives/Benefits Sought**

15. To what extent do you expect your outsourcing vendor to contribute towards each of these potential IT goals? To what extent have they contributed towards these goals? Please rate on a scale of 1-5 where 1 = low expectation/achievement and 5 = high expectation/achievement.

Goal	Expectation Rating (OVERALL)	Achievement Rating (OVERALL)	Difference (OVERALL)
To aggressively use IT for competitive advantage	3.9	4.0	(0.1)
To increase effectiveness in applying IT to the business	3.9	3.7	0.1
To adopt a distributed, rather than centralized, architecture	3.6	4.2	(0.6)
To become more cost-effective in using IT	4.5	3.8	0.6
To reduce the time taken to implement new system	4.1	3.9	0.1
To free in-house managers/staff for other work	4.2	3.8	0.4
Other(please specify)			

Source: INPUT

16. What were the principal benefits you originally sought from using outsourcing and, to what extent have each of these anticipated benefits been delivered? Please rate on a scale of 1-5 where 1 = low achievement and 5 = high achievement.

Benefit Sought	Level of achievement (OVERALL)
Cost-effectiveness/reduction	3.9
Increased access to resources/scarce skills	4.3
Improve level of IT expertise	4.4
Free up in-house resources	3.8

Source: INPUT

- 17. Your expectations have probably changed over the life of the contract. Which key benefits will you seek from a vendor in any future outsourcing contracts?
  - Increased cost reduction (3)
  - · Increase rate of introduction of new technology (2)

- Increased ability to interpret business needs (2)
- Increased flexibility (2)
- Increase vendor's sense of ownership (1)
- Scaleable pricing (1)
- · Increased commitment to personnel training
- 18. To what extent do you currently expect your outsourcing vendor to contribute towards each of the following potential benefits? To what extent have they contributed towards each of these? Please rate on a scale of 1-5 where 1 = low expectation/achievement and 5 = high expectation/achievement.

Potential Benefit	Expectation Rating (OVERALL)	Achievement Rating (OVERALL)	Difference (OVERALL)
Improved cost-effectiveness	4.5	3.9	0.6
Cost reduction	4.5	3.9	0.6
Improved operational service levels	4.4	3.9	0.4
Removed in-house involvement with legacy systems	3.5	3.5	(0.1)
Introduction of up-to-date technical knowledge	4.3	3.9	0.4
Introduction of new technologies	4.4	3.9	0.5
Improved ability to relate IT to the business	3.9	3.8	0.1
More effective introduction of new systems	4.0	3.8	0.2
Access to best practices in using IT	4.2	3.8	0.4

Source: INPUT

19.To what extent do you perceive your current outsourcing vendor to be: (Please rate on a scale of 1-5 where 1 = not their role and 5 = a key role).

A supplier of agreed services and nothing else	3.2	
A business advisor	2.4	
A technology advisor		2.9
An agent of change	2.3	
A supplier of support services	3.3	
A key partner		3.6

## **Overall Satisfaction**

<ol><li>Please rate your overall level of satisfaction wit</li></ol>	th your outsourcing
vendor on the following criteria on a scale of 1-	-5 where 1 =
dissatisfied and 5 = very satisfied:	
Overall	3.9
Service provision	3.9
Flexibility of approach	3.8
Vendor service culture	3.8
Commercial terms and conditions	3.8
Innovation and creativity	3.7
Strength of partnership	4.0
Business contribution	3.8
Initial cost-effectiveness	3.7
Ongoing cost-effectiveness	3.9

- 21. How likely are you to renew the contract with the same vendor? Please rate on a scale of 1-5 where 1 = not at all likely and 5 = very likely. 3.9
- 22. Which functions, if any, might you take back in-house? Why?
  - None (13)
  - Datacenter (1)
  - Operations (1)
  - WAN management (1)

## **Background Details**

23. When did your outsourcing contract begin?

- 24. What is the total length of your outsourcing contract
- 25. What is the approximate value of your outsourcing contract? Please state currency and time period.

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# U.S. IT Professional Services Markets, 1998-2003



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# About INPUT\*

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## Abstract

This Industry Guide examines the IT Professional Services market structure and evaluates how Electronic Business will change it.

The Industry Guide defines the components of the Professional Services market and forecasts the market by type of Professional Service and by industry sector. It analyzes the impact of Y2K and Electronic Business, and evaluates major vendors.

The market for IT Professional Services in the U.S. will grow from \$49.5 billion in 1998 to \$112 billion in 2003. The IT Professional Services delivery mode comprises of three subcategories: IT Consulting, Software Development, and Education & Training. Both the IT Consulting and Education & Training related markets are forecast to grow at 17% CAGR while the Software development market is forecast to grow at a rate of 19% CAGR. However, these growths rates hide substantial differences between the growth of "old" IT Professional Services and those associated with the Internet, Web and Electronic Business. Published by INPUT 1881 Landings Drive Mountain View, CA 94043-0848 United States

IT Market Forecast

## U.S. IT Professional Services Markets, 1998-2003

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# Ι

## Introduction

The report is accompanied by spreadsheets showing the forecasts of the US Professional Services industry and the 1998 market share of leading vendors.

The report is arranged as follows:

Chapter 2 is an Executive Summary

Chapter 3 presents the environment for Professional Services

Chapter 4 defines Professional Services and presents the forecasts from 1998 to 2003

Chapter 5 presents a summary of professional services and systems integration issues by industry sector.

# п

## **Executive Overview**

The discussions and analyses of the systems integration (SI) and professional services (PS) markets are related because of their overlapping service content and the fact that they are beginning to lose their historic distinction in the eyes of the customer community.

There are two key distinctions between contracts for SI and contracts for PS:

- 1. A professional services contract does not include any hardware whereas SI contracts do
- Systems integration contracts always involve the vendor taking prime responsibility for the successful completion of the contract on time and within budget

Based on these differences between the types of expenditure the SI market is a separate market from professional services.

Both of these service modes are critically positioned in the planning and implementation stage of major projects. These projects are responses to profound shifts taking place in the business environment as organizations react to (or attempt to cause) changes in competition, technology, customer demand, financial pressures, and workforce makeup. Electronic Business and the Internet are the prime factors affecting these markets today.

This report focuses on project related PS.

## A Driving Forces

The major forces fueling PS markets are shown in Exhibit II-1. The continued growth *in the U.S. economy* and corporate profits has created a more positive attitude about IS investments as well as providing increased funding for them.

#### Exhibit II-1

## **Driving Forces**

- U.S. economic performance
- Electronic Business
- Technology and related IT architecture issues Internet
- Limited in-house expertise Y2K drain
- Functional users are becoming buyers of services
- Time

Source: INPUT

**Electronic Business** requires business engineering to address the increasing complexity of business relationships (e.g., partnering with suppliers, competitors, customers, and other third-parties). New ways of doing business demand information systems to support unique ways of communicating and providing service. Often these take on industry or application specific form, or they are driven by new technology (e.g., Internet, imaging).

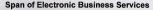
Electronic Business has quickly become a major focus of attention for management consulting and PS vendors because of its early stage influence in large scale project decisions. Exhibit II-2 shows the range of services involved in business process engineering for Electronic Business. The chronological flow from left to right suggests strong account control benefits accrue to vendors who use management consulting to aid their clients in addressing the Electronic Business changes.

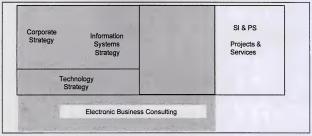
This can be achieved by:

- · Expanding the range of internal expertise
- Partnering with firms who traditionally operate in this area (e.g., McKinsey, Bain & Co.)
- · Acquiring smaller specialists with niche market expertise

Note that Information Systems and Corporate Strategy are now in the same "box" - they can no longer be considered independently. This is a fundamental result of the shift to Electronic Business.

#### Exhibit II-2





Source: INPUT

INPUT

**Technology/ architecture** is now a top management concern because of the Internet. This is another major driver in markets that have been historically driven primarily by application skill requirements. So much new platform/architecture-related technology is emerging that vendors must possess competency across an overwhelming range of technology and application areas to be responsive to market needs. This places emphasis on vendor's internal training programs, partnering and acquisition strategies.

Limited in-house expertise is a traditional demand generator for PS services. Constrained internal IS resources and skills push organizations to go outside for project accomplishment. This has been exacerbated by the Y2K debacle. Users have been unable to keep up with the explosion in technology partially because of their diversion into Y2K. The impact of this diversion will not be fully felt until 2000 when the need to rapidly implement new Electronic Business applications will become crucial. In addition, there is an expectation for a more rapid solution accomplishment from external vendors.

There are **more buyers of PS services** due to shifts in the internal buying process. Electronic Business issues demand the participation of departmental/functional users plus senior executives in the purchasing decision. These non-IS buyers are also playing a much bigger role in the implementation phase. Vendors must now deal with a more complex situation, developing relationships with, and selling to, both users and corporate IS departments. In many cases, vendors, with a historic focus on targeting the IS function, have missed the booming user market. This omission will have an even more profound impact in the future as Electronic Business gathers momentum

## B Inhibiting Factors

Factors inhibiting the growth of PS markets are shown in Exhibit II-3. In spite of the good economy, and increased budgets, there are simply more projects than funding to support them. Competing needs are more severe in certain vertical markets and geographic areas.

## Exhibit II-3

## Inhibiting Factors

- Short term Y2K impact due to:
  - Reduction in Y2K contracting itself
  - Release of internal resources previously devoted to Y2K projects
- Budget limitations/competing needs
- Skills shortage for suppliers
- · Low user risk tolerance in certain vertical markets

Source: INPUT

Skill shortages, within the vendors, may become the most serious factor limiting PS growth. Skills always lag behind the introduction of new technology. PS firms face an explosion of new technology from areas such as Internet, networking, open systems, imaging, objectoriented programming, multi-media, business intelligence and wireless communication options. Sometimes, neither internal training nor the external labor market may be able to supply needed resources. Wiser users demand "proof" of skills and project staffing expertise. Vendors with more robust internal training will have an advantage. Those without large internal training programs must resort to partnering or acquisition.

Low user risk tolerance limits PS market size and growth in vertical markets such as health care, insurance and education. These verticals are characterized by combinations of old legacy mainframe and/or turnkey systems, reluctance to disrupt old operating processes with new systems, and a general aversion to change.

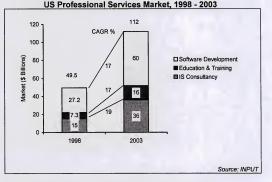
## C Market Forecasts

Exhibit II-4 shows the growth of the Professional Services delivery mode in the US IT Software & Services market. It is the largest individual service category in this market that will reach over \$650 Billion in 2003.

The Professional Services delivery mode comprises three subcategories: IT Consulting, Software Development and Education and Training. Software Development is provided in two ways; project contracts and supplemental staffing (time and material) or resource based.

"Software Development" includes all activities performed by external companies to develop, install and maintain software for clients. It does not include the professional services associated with Systems Integration, Turnkey Systems, Operational Services (including Outsourcing) and Customer Services.

## Exhibit II-4



The 1998 market grew slightly faster than was predicted in 1997. Professional services companies benefited in 1998 from the move to install standard products such as ERP software from SAP and Baan to address Y2K and other issues. As 2000 approaches this business has slowed considerably in 1999.

## The Y2K Recession

D

In fact professional services other than those related to Electronic Business and CRM activities have been severely hit in the third quarter of 1999 as we predicted. We have termed this the "Y2K Recession".

Just as in a recession there is a flywheel affect at the start of the period that continues existing projects but there is a lack of new starts. This dearth of new starts began in the second quarter of 1999 and became most obvious in the third quarter when "platform freezes" went into place at many major companies. They simply did not want to alter in any way their base platform of operations so that any problem occurring on or about January 1, 2000 could be more easily traced and fixed.

However, just as in a recession, demand does not decrease; in fact in many areas demand is increased as companies realize that the only way they are going to become more efficient and competitive is through the use of technology. But the demand is not translated into action. So there is a build up of demand rather like water behind a dam.

Organizations will not initiate new starts until they are comfortable This is happening in the Y2K area beginning in the 4<sup>th</sup> quarter of 1999 as organizations realize that any projects they now start will not go into effect until after the Y2K crisis is over. The water is starting to trickle over the dam!

Further, at the beginning of 2000 there will be an explosion of demand for services as organizations struggle to catch up with the demand. Certainly there will be a release of internal resources to address some of this but internal IS units will not have the skills or the capacity to apply to the kind of projects that will be required in the new Electronic Business environment.

This stricture will also apply to those PS companies that have over emphasized Y2K as a "quick fix" and who are not positioned in the Electronic Business space. This cannot be done cosmetically as many of them are trying to do with advertising and marketing campaigns.

Professional services related to Enterprise Applications Solutions (EAS) will grow at over 18% per year through the forecast period. A major portion of the growth will be due to the education and training market related to products such as SAP, Oracle and Baan. The product companies themselves are participating strongly in this market as their core license business slows. The out year forecasts have stayed at the same overall growth rates as last year even though the market will have more than doubled by 2003. However, the mix of business in 2003 is dramatically changed from 1999. Staffing and projects in the traditional areas will not grow by more than 10% per year on average. The really rapid growth is in new areas related to Electronic Business as shown in Exhibit II-5.

### Exhibit II-5

## US Electronic Business Related Professional Services Markets, 1998 – 2003

		Market (\$ Millions)	CAGR (%)		
Electronic Business Applications Services					
Internet/Web	3,000	26,800	55%		
Electronic Business Platform Services					
Internet/Web	1,300	8,000	44%		
Total EB Related Professional Services	4,300	34,800	52%		

Source: INPUT

The total professional services market reaches almost \$190 Billion in 2003 in the US if all services that are related to IT Professional Services are included. Over 1 1/2 million people will be employed by then in developing the knowledge-based economy.

Professional Services	1998 (\$M)	2003 (\$M)	CAGR 1998- 2003 (%)		
Total	49,500	112,000	18%		
IT Consulting	15,000	36,000	19%		
Education & Training	7,250	16,000	17%		
Software Development	27,250	60,000	17%		
Turnkey Systems Professional Services					
Professional Services	5,300	11,000	16%		
Systems Inte	gration Profe	ssional Serv	rices		
Professional Services	11,500	34,000	24%		
Total Professional Servi	ces	And alle	- Barris allow		
	66,300	157,000	19%		
EB Professional Service	S	1. 1. 1.	A. A.		
	4,000	30,000	50%		
			On the INIDI		

Source: INPUT

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Marketing Services is the largest component of the EB Professional Services market. Total US spending on marketing was over \$300 Billion in 1998: of this approximately \$140 Billion was in Businessto-Business marketing. This segment is already being penetrated by EB: IT services companies such as USWeb/CKS are actively acquiring agencies and marketing services companies such as Omnicom are rapidly moving into this space.

# III

## Professional Services Environment

## Factors Driving Use of Professional Services

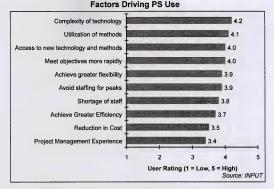
## 1. Buyer Needs/Issues

Underneath the traditional broad purchasing motivations, like increased revenue, productivity, and service, lie the more tangible buying reasons reported by buyers, the importance of each of which is graphically noted in Exhibit III-1.

- The primary reason that encourages use of a vendor is the need to solve problems associated with complex and/or large-scale business processes.
- There are certain processes in each industry or vertical market that become prime targets for IT solutions. The major vendors are continually analyzing other processes in order to identify the potential for new solutions with the promise of these becoming industry standards (and the vendors becoming known as specialists in these areas).

Α

Exhibit III-1



## In addition to complexity and specialization needs, buyers are also driven outside to gain access to new technology and meet internal objectives more rapidly than an in-house approach would permit. Internet and networking requirements (geographically and between applications and business processes) are the primary technical drivers.

- Often buyers go to PS vendors to augment internal expertise and staffing. This provides more technical flexibility in meeting goals and sometimes is the only way a project can be accomplished.
- A new factor in the degree of contracting and subcontracting is the rapid growth of the US/Indian companies that transfer IT work to India to take advantage of the low cost of labor. GE reportedly now has 3,500 programmers in India.

Exhibit III-2 shows another view of buyer needs as reflected in their vendor selection criteria. The dominant theme is users' desire for a vendor to support project success across a wide spectrum of activities, such as technical skills, marketing to users, and training.

These factors also are a testimony to the increased importance of users and the fact that they are learning to work separately from, as well as in conjunction with, IS departments on projects.

Another factor that influences selection is the ability of vendors to promote an image of value. Users are interested in the question of value (applications that have fewer problems, are easy to use and can be upgraded), but some of them state that the values a vendor offers have to be pointed out and emphasized. Unless an image of value is established, selection may be made only on price and past accomplishments.

## Exhibit III-2

## Vendor Selection Criteria Factor

- Availability of skills
- Ability to market to users
- Flexibility
- Value

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· Ability to work with IS staff and users

Source: INPUT

At the highest user organization level, the market drivers shift to those shown in Exhibit III-3. It becomes critical for vendors to have people with strong executive-level communication skills to address these broad, often conceptual, issues. Electronic Business engineering is a key factor driving PS decisions. Vendors need to develop these skills or seek a partner that has them.

## Exhibit III-3

### Market Drivers

- Electronic Business & engineering of business processes
- · Aligning IS and corporate goals
- Organizing and utilizing data Business Intelligence
- · Systems for continuous change Projects become processes
- Creating an information architecture for the 21<sup>st</sup> Century

Source: INPUT

## В

## **User Buying Patterns**

## 1. Procurement Trends

The majority of projects are still in-house. This will change as Electronic Business picks up because of the lack of skills internally and the need to scale up rapidly. There is a shift, from the implementation of huge infrastructure projects, to the implementation of multiple, smaller, functional Electronic Business projects at the user level. Monolithic, tightly integrated architectures are no longer acceptable; Internet architecture allows open systems to be built and interfaced. It allows for flexibility.

Users are making more of their own decisions and, increasingly, using their IS function as a procurement channel.

As PS procurement decision making becomes more decentralized, IS functions will become involved in fewer, but larger, procurement decisions and require less staff to interface and support users on the smaller projects.

The "buyer" of PS services for large projects will typically be more than one person or organization. The buying process involves an often challenging coordination of multiple players and organizations, each with their own needs and priorities. In the future, the management of relationships with this expanding group will be a challenge for the vendor sales force.

The buying process involves more than competitive product comparisons. Vendors must become more proficient at demonstrating technical capabilities to prospective clients but must combine this with a successful track record of on-time delivery.

#### 2. Inhibiting Factors

As Exhibit III-4 shows, there are definite factors that have inhibited the use of external services.

Uncertainty in business planning is a key inhibitor, having more of an impact than budget limitations. The uncertainty may be related to the discontinuation or sale of product lines or other major business changes, notably Electronic Business. Corporate acquisitions and mergers may also be reasons to suspend consideration of PS projects.

Considering outsourcing affects the use of PS vendors because it may result in the planning, development and maintenance of future systems being passed to an external provider. This limits the potential to gain maximum share of the market for PS vendors who cannot or do not offer outsourcing services. This is one of the forces that has driven PS vendors to offer outsourcing services, particularly applications management.

## Exhibit III-4

## Key Factors Inhibiting Use of PS

## Factor

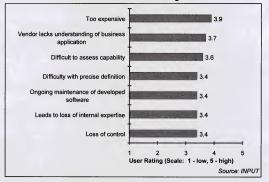
- · Uncertainty in corporate planning Electronic Business.
- Budget limitations Y2K
- · Short term pressures on IS departments Productivity
- Merger, acquisitions, reorganizations being planned
- · Outsourcing being considered

#### Source: INPUT

Exhibit III-5 describes a set of buyer concerns at a more tactical level. No single concern dominates, and any one, by itself, can be enough to stalemate the procurement process. The relatively low rating given to the inhibitors shows that IT Departments have got over their attitudes of being threatened by external companies.



### User Concerns About Using PS



Issues under a PS vendor's control are:

 Total purchase price of the implemented solution including associated services. This emphasizes the need for identification of the value of the solution when measured in terms of benefits to the business instead of low cost.

- Understanding the client's business. This illustrates the necessity for vendors to demonstrate their industry and application expertise early in the sales cycle.
- User assessment of the vendor's capabilities. Testimonial management is very important in this context. In addition to industry expertise, vendors should provide examples of the technical abilities of the staff that may be involved in the project.
- Ongoing maintenance of newly developed software. This provides an opportunity for vendors to offer application management services and is becoming increasingly popular as applications become more complex and the maintenance more difficult.

## C Vendor Competition

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## 1. Analysis of Competition

Competition has been rapidly increasing. PS companies now include computer vendors, software product companies, independent professional services firms, auditing firms, strategic consultants and SI vendors.

PS project-based contracts involve committing to achievement of a complete solution and acceptance of the associated risks. This is priced and paid for at a higher rate than supplying additional staff to work on a time- or task-based assignment, as offered by many professional services staffing firms.

PS vendors also compete against numerous temporary services firms, and one person, or small vendors, offering professional services capabilities at very low prices. These vendors have increased greatly in number due to corporate personnel reductions, the growth of independent consulting and increased use of offshore development staff.

Specialist services, for example, Web consulting, some application areas (such as Siebel Systems), and Internet technical expertise, command premium prices.

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#### Exhibit III-6

## **Reasons for Increasing PS Competition**

- Product companies are all moving to services
- · Competition from temporary services vendors and small vendors
- · Projects are more likely to lead to add-on work such as outsourcing
- · Integration of IT and process bringing new vendors
- · Outsourcing is being considered more often by users

Source: INPUT

There is the opportunity to preclude competition in some situations. If the vendor becomes involved in consulting work that requires reengineering or other strategic level consulting, there is a good possibility the resulting projects will use the vendor. In the past, a buyer would often use one vendor as a consultant and select another vendor to implement the systems recommended. In an Electronic Business engineering situation, the knowledge the vendor has acquired will be invaluable in implementation work, particularly because the process and the IT system is likely to change during development.

At the present time, buyers are interested in finding vendors they can rely on to aid with business and technological change. When a vendor can point to in-depth experience with change and has relevant technical and business knowledge, there is less likelihood that assignments will be split between vendors. This is a strong reason for PS vendors to expand the range of services they offer.

## 2. Vendor Selection Criteria

Factors in vendor selection are indicated in Exhibit III-7. Some of the lowest bids are not even considered, based on the vendor's lack of relevant experience or inability to convey an understanding of the technology, process or problem involved. This places considerable pressure on the demonstration of knowledge and expertise (Testimonials are vital – management of testimonial databases is a new area that INPUT specializes in).





A key trend is "technical capability" replacing "application knowledge" as the leading factor—the complexity of technology and number of solution options has finally overwhelmed the challenge of application knowledge. Sometimes users can assume some of the application knowledge burden in a project, but seldom can they deliver the full range of technical skills required for the dazzling array of technology choices.

The accelerated pace of global business has put a premium on timely solutions and completion. For example, a year late, excellent sales order entry system (integrated with finance and manufacturing) may not be considered worth the risk.

The relatively low position of price appears to contradict the earlier finding (shown in Exhibit III-6) that cost is the main concern of users about using external vendors. This is explained by the focus that users now have on receiving *value* from the project. This change will sometimes result in a lower-price project proposal being rejected in favor of a higher-price bid.

### 3. Increasing Role of Users

Users and their management are far more influential than before in determining the use of vendors. Their use of IT has expanded beyond simply obtaining data from IS, to the point where changes to

anything affecting their applications requires their active approval and involvement. They own their IT, which is integrated into their processes in Electronic Business.

Users, functional managers and executives are not only interested in having application problems solved. They will also want to know how the problems are going to be solved, what role they will play in the solution and what capabilities they (the users) must have to help achieve the solution.

The pressure by top management to improve corporate results is the overriding reason for the increasing power of user areas. Processes in which users are involved must respond to these pressures. Users are demanding changes that are necessary to bring about these improvements, especially in Electronic Business.

IT staff are being employed by users to enable them to achieve corporate results. This is an important point to bear in mind for the vendor who concentrates on staff augmentation services. Traditionally, PS vendors sell to IS departments, but the channel to user departments is now available and will provide an alternative source of business.

# IV

## **Market Analysis and Forecast**

## A Market Analysis

## 1. Definition of Services

INPUT differentiates between professional services (PS) and systems integration (SI) delivery modes as follows.

Systems integration is a vendor service that involves providing a complete IT solution to a complex business problem. An SI contract includes sub-modes for hardware, software product and professional services elements, and may also include activities such as environmental or wiring services, which are categorized as "Other." The SI vendor acts as a prime contractor by taking responsibility for the complete solution.

The professional services market consists of expenditures on *only* people-based skills. These expenditures are applied to the sub-modes of consulting, software development, and training.

Many SI vendors are also PS vendors. The gap between the services is shrinking.

Exhibit IV-1 shows the defined sub-modes within each category of expenditure and identifies which ones are optional and which ones are essential for inclusion in each delivery mode. Exhibit IV-1

Sub-mode	Systems Integration Contract	Professional Services Contract
SI Sub-modes:		
Hardware	Essential	No
Software	Optional	No
Integration Services (not subdivided into consulting etc.)	Essential	Optional
Other	Optional	No
PS Sub-modes:		At least one of the following must be present:
Consulting	Optional	Optional
Software Development	Optional	Optional
IT Education & Training	Optional	Optional

## **Characteristics of PS and SI Delivery Modes**

Source: INPUT

In effect, to be categorized as an SI contract, the project (and related expenditure) must include vendor responsibility for both hardware and professional services.

Therefore, if a user anticipates giving one vendor the responsibility for the delivery of system or applications software plus some services, but does not include hardware, then INPUT will include the PS element in the PS forecast and the software product expenditure in the appropriate systems software or application software forecasts.

The user expenditures that INPUT classifies as professional services are activities associated with the support of the use of information technology, including:

- Consulting
- IT Education and training
- Software development and maintenance

### 2. Project-Based and Staff Augmentation Services

All SI contracts require that the SI vendor take prime responsibility for the project. However, some activities delivered as part of a PS contract may have a similar requirement. INPUT refers to professional services such as these as "project-based services". Activities delivered as part of a PS contract where the control and management of the outcome are in the hands of the customer are referred to by INPUT as "staff augmentation services".

Exhibit IV-2 provides a graphical representation of how the professional services portions of the PS markets may be separated in terms of these two types of services.

## Exhibit IV-2

## Types of Professional Services Included in Each Delivery Mode

Type of Service	Systems Integration Delivery Mode	Professional Services Delivery Mode
Project-Based Service	Yes	Yes
Staff Augmentation Service	N/A	Yes

Source: INPUT

## 3. Differences in Federal and Commercial Systems Integration and Professional Services Work

Many vendors in the federal market are attempting to develop their presence in the commercial market. For that reason, it is important to understand the differences that exist in the nature of business in these two markets.

The interests of commercial clients can vary widely from one job to another. Federal jobs don't vary significantly, and they tend to have many more clearly defined common characteristics than do commercial tasks, as noted in Exhibit IV-3.

### Exhibit IV-3

### **Characteristics of Federal versus Commercial PS**

- More detailed requirements
- · Often multiple vendors for each requirement
- · Government contracts are indefinite
- More standardized approach (e.g., project office)
- More formal process
- Costly and open bidding process
- Different approach to marketing

Source: INPUT

- Increasingly, multiple vendors are chosen for each requirement the federal government awards many of its larger professional services contracts to multiple vendors. These vendors then must compete with each other for task orders on these contracts over the contract life.
- Government contracts are indefinite and undependable The contracts awarded by the government, with few exceptions, are indefinite - quantity, indefinite-delivery (IDIQ) contracts. As a result, the level of spending on a contract can vary widely.
- The federal customer usually has a more detailed set of requirements included in an RFP, and a vendor that has helped to develop those requirements will probably be excluded from bidding.
- Federal organizations establish program offices with legal and technical staff members ready to administer contracts.
   Commercial procurement organizations are generally less prepared to administer contracts and have to rely on more general, distributed capabilities to help.
- There is a more formal process for evaluating bids and price, and the completion date and past performance are measured and compared more closely. Increasingly, government agencies are sharing past performance data with each other. Laws also control what information can be disclosed to vendors during stages of procurement.
- The federal process and awards of contracts are more open than in the commercial sector. The requirement of competitive bidding for all jobs over \$100,000 also is unique to the federal market.

- Marketing differs greatly between these markets. Information on major programs is available in various documents. Upcoming solicitations for bids in the federal market are advertised through the Commerce Business Daily and frequently, on the Internet through the agencies procurement pages. Commercial business depends on obtaining information about possible jobs from the sales force and other types of contacts. Commercial vendors may also cause companies to consider and initiate projects through presentations.
- Federal bids can be costly to prepare due to the complex process. The profit from jobs is tightly controlled and limited to 15% on fixed-price contracts. The federal government also can audit vendor records. Incentive or award fees can be used, however, to improve performance or schedules.
- Commercial profits can be and are generally higher, but the specifications for a job are not as rigid commercial vendors are generally more exposed to the risk of lawsuits over performance.
- Substantial delays can occur in the lengthy and costly federal process, which can result in the need to reconsider the technology that has been bid or proceed with a solution that is not current.

Some commercial clients have incorporated aspects of the government procurement process for their own projects in order to provide more protection for critical undertakings.

Staff augmentation is not a large federal market directly. The federal government contracts out whole jobs, not just resources. However, prime contractors often need staff augmentation services through sub contractors.

### 4. Professional Services Market Sectors

Vertical applications oriented vendors usually focus on just a subset of the 15 vertical markets available because each market requires an investment of time and resources.

- Prospects seek, from prospective vendors, a high level of market problem knowledge and solution approaches in key application areas.
- Prospects also seek a high level of experience with new technology in their market area. Vendors are forced to rapidly update their knowledge and experience when new IT developments appear.

As a result, many vendors serve only a few markets. Even major vendors, such as EDS or Andersen Consulting, do not seek applications business in all vertical markets. Staff augmentation is a skill-based service that can be offered across all sectors and disciplines.

### 5. Professional Services Vendor Classification

A wide range of firms are vendors in the PS markets, and many of the vendors with the largest revenues from these markets, such as IBM and EDS, are also involved with other services (e.g., outsourcing). However, new groups of vendors are taking some of the share of this market—the software vendors and hardware distributors.

Software companies, such as Oracle Corporation and SAP, are rapidly growing their PS businesses. Systems and application software companies have become forces in the PS market over the last five years.

Distributors have also entered the PS market. Many large distributors are acting as PS vendors, particularly within the LAN/desktop arena, and they are also being used as subcontractors to large vendors for network-related services in large deals.

### B Market Forecast

Electronic Business will drive the PS market. Buyers will show great interest in projects that improve their sales, earnings and productive capacity. As a result the PS market will grow faster than the overall industry as shown in Exhibit IV-4.

ILS Profossional Services Market 1998-2003

	0.3. F	101655101	lai Seivi	Ces main	ец, 1330-	2005	
Product/Service Categories	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 97-02 (%)
Industry Total	307,244	354,100	410,880	480,172	564,709	649,247	16%
Professional Services	49,500	58,274	68,607	80,778	95,113	112,000	18%
IS Consulting	15,000	17,870	21,290	25,364	30,218	36,000	19%
Education & Training	7,250	8,494	9,951	11,658	13,657	16,000	17%
Software Development	27,250	31,910	37,366	43,756	51,238	60,000	17%

#### Exhibit IV-4

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Source: INPUT

A discussion of each of the verticals markets is offered in Chapter V and shows the forecast size of the markets as well as the factors that are driving and inhibiting the growth of PS. Although software products are often a relatively small component of the expenditures for projects, they are critical elements because they address vital parts of the solution—such as CRM, SCM, ERP, etc. Many vendors, such as Andersen Consulting, AMS and TSC, have software products that are key components of solutions. This submode is forecast to grow faster than the others do as software products are replicated in functional and vertical markets, as shown in Exhibit IV-5.

#### Exhibit IV-5

			1990-2	003			
Type of Service	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 1998- 2003 (%)
Applications Related Profess	ional Serv	ices					
EAS Related*	6,900	8,143	9,611	11,343	13,387	15,800	18%
Electronic Business Application	S						
Non-Internet	1,300	2,000	2,500	2,200	2,100	2,000	9%
Internet/Web	3,000	4,649	7,203	11,162	17,295	2,800	55%
Other Custom Applications	21,000	23,083	25,374	27,891	30,658	33,700	10%
Total Applications	32,200	37,876	44,688	52,596	63,441	78,300	19%
Platform Related Professiona	I Services						
Network (non-Internet)	4,500	5,049	5,665	6,355	7,130	8,000	12%
Internet/Web	1,300	1,870	2,689	3,868	5,562	8,000	44%
Systems & Other**	11,500	12,536	13,665	14,896	16,237	17,700	14%
Total Platform	17,300	19,454	22,019	25,119	28,930	33,700	14%
Total Professional Services	49,500	57,330	66,707	77,715	92,371	112,000	18%

### U.S. IT Professional Services Market by Type of Service, 1998-2003

\* "EAS Related" Includes Applications Software Product Support Contracted Separately from Software Products, e.g. Education and Training

\*\* "Systems & Other" includes Systems Software Product Support Contracted Separately from Software Products, e.g. Education and Training

### Total Internet/Web Related IT Professional Services (Sum of Applications and Platform Related)

Total Internet/Web Related	4,300	6,518	9,892	15,029	22,858	34,800	52%
						Sourc	e INPUT

If a customer contracts for the management and maintenance of a set of applications for over one year the contract is classified as application management, and is included in INPUT's Application Management sub-mode of the Outsourcing service category.

INPUT

The consulting segment of professional services includes the following types of work:

- Electronic Business planning and business process (re)engineering
- Operational planning (when related to IT)
- Software selection & installation planning
- Information systems audit
- Personnel planning
- · Policies and procedures development
- Network planning and design
- Information systems strategic planning
- Systems analysis

Many professional services vendors are entering "management consulting". Most of this growth comes from Electronic Business consulting services by firms such as Andersen Consulting, CSC, EDS, Unisys and IBM. It is no longer possible to separate management consulting from IT consulting because of the revolutionary changes that Electronic Business will bring. As a result buyers want consultants who understand the real technology involved. Electronic Business consulting is important not only for the large fees that it generates, but also because it will often lead to large projects.

The growth of education and training has been stimulated by the introduction of Internet technology and the increase in the number of workers that will be affected by IT systems. For example SAP product based systems now touch about 1 million people worldwide. It costs about \$2,000 per year per person to keep people trained in SAP. By 2003 or so SAP hopes to expand use of its systems through the Internet and Intranets to 10 million. This provides a market potential in this area alone of about \$20 billion. Companies such as Andersen Consulting and EDS have strengthened training in this area in order to deliver resources into the rapidly growing number of project opportunities.

However, the Internet will lead to the introduction of many new education and training options and dilute training dollars previously devoted to standard education services.

### C Competitive Environment

### 1. Market Shares

The leading PS vendors are shown in Exhibit IV-6 with estimated revenues and combined PS and SI revenues for 1998.

### Exhibit IV-6

1996 U.S. Revenues of Major PS and Si vendors									
Vendor	1998 U.S. SI Revenues (\$M)	1998 U.S. PS Revenues (\$M)	Total						
IBM	\$2700	\$2700	\$5400						
Andersen Consulting	\$1600	\$3500	\$5100						
CSC	\$800	\$1700	\$2500						
Lockheed Martin	\$600	\$1200	\$1800						
PwC	\$300	\$1200	\$1500						
EDS	\$1000	\$500	\$1500						
TRW	\$200	\$1200	\$1400						
KPMG	\$250	\$800	\$1050						
Deloitte	\$200	\$800	\$1000						
Compaq	\$400	\$600	\$1000						
AT&T	\$500	\$500	\$1000						

### 1998 U.S. Revenues of Major PS and SI Vendors

Source: INPUT

### 2. Vendor Strategies

The future success of these leading vendors is dependent upon the need for an ever-expanding range of service offerings. Traditionally, project PS activities are specified in terms of application functionality. However, Electronic Business projects emphasize business results and have a less precise functional specification but an increased scope of operation due to the crossing of functional boundaries. Relationships developed here, especially with functional users, enhance the probability of winning follow-on business.

Another advantage can accrue to vendors strong in the Electronic Business area. When users employ different firms for the Electronic Business and technology implementation phases, they often get mixed messages from conflicting vendor views in the technology strategy area. The resulting user confusion is often solved by a preference for a single-vendor solution. As these leading vendors expand to higher margin boardroom Electronic Business consulting work, they miss many user/department-level smaller jobs—a significant part of the Internet market. The result has been the birth of many local and regional firms specializing in Internet solutions. To the industry leaders, these smaller vendors offer opportunities for partnering and acquisition.

The degree to which vendors can convert users to value-based pricing is still an open question. Vendors who offer a full spectrum of services, such as EDS and Andersen Consulting, claim high levels of success with this approach. The growing number of Electronic Business efforts under way will create additional opportunities. However, users do not appear to be expressing much enthusiasm for the concept

The major trends impacting contracts are:

- An accelerating shift from time-and-materials pricing to valuebased or other incentive-based approaches.
- A movement toward pricing schemes such as range based and phase fixed, which encourage risk sharing (with or without incentive clauses) and acknowledge at the start of a project that there may be elements of risk that simply cannot be properly estimated in financial terms.
- A range based pricing agreement establishes a bandwidth of prices for one or more of the phases. From a user's viewpoint, this approach has the advantage of putting a ceiling on the price almost regardless of contingencies.
- Phase fixed pricing is most popular in situations where a vendor is brought in prior to the generation of any detailed specifications, or when the project will involve the application of leading edge technology. In these cases, there are too many unknowns to fix the price for the entire engagement the start. Instead, a fixed price is established for the first phase and rough estimates for the follow-on phases. As one phase is completed, fixed prices are established for one or more of the subsequent phases. This form of pricing is well suited to projects that are generated by Electronic Business activities, particularly in those cases where the consulting vendor is also the implementation vendor.
- The use of joint venture development efforts between buyers and vendors to deal with extremely high-risk projects involving advanced or unproven technology.

Exhibit IV-7 lists the major trends in PS contract pricing and gives INPUT's assessment of their potential benefits and impacts.

Exhibit IV-7

Trends	in PS	Contract	Pricing
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Trend	Impact/Benefit
Shift to value-based and incentive pricing	Increased incentive for PS vendors to apply innovative approaches Improved partnership relationship Lower user costs to cover risk
Movement toward range based and phase fixed pricing	Objective recognition of the inability to define certain elements of risk Lower costs to user and an inducement to user participation in the partnership
Contractual commitment to user involvement	Insures user resources will be available to meet contract commitments Increases sense of partnership and participation
Joint venture for leading-edge efforts	Formalizes the concept of risk sharing with shared benefits Promotes user involvement in the design process

Source: INPUT

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# Vertical Markets for Professional Services

This chapter provides an overview of the size, growth and factors influencing the growth of the PS markets for each of the 15 vertical markets tracked by INPUT. The vertical market analyses are presented in alphabetical order.

### A Overview

Vendors of project-based services orient their offerings to target vertical markets more than do vendors of staff-augmentation services. Vendors provide solutions to business problems in a particular market by using a combination of industry knowledge and the ability to integrate information services and technology. The service could involve cross-industry applications, such as accounting, as well as vertical market application systems, but the service is oriented to the problems in a specific vertical market, or a niche within that market.

Vendors are generally identified with the markets in which they can provide solutions; as Andersen, CSC and TSC are in manufacturing, EDS and AMS are in banking and Unisys is in airline applications. Most of the vendors named have SI and PS business in multiple vertical markets, but some, such as SCT, have successfully found solutions focused on only a small section of the overall market.

The relative size of the PS market, split by vertical industry, is shown in Exhibit V-1.

### Exhibit V-1

Professional Services U.S. Market Size by Industry Sector, 1998-2003

Product/Service Category	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 1998- 2003 (%)				
Total All Sectors	49450	57993	68153	80259	94715	112000	18%				
Banking & Finance	5400	6486	7791	9357	11239	13500	20%				
Business Services	2140	2672	3337	4168	5205	6500	25%				
Discrete Manufacturing	11500	13225	15209	17490	20114	23100	15%				
Education	630	704	787	880	984	1100	12%				
Federal Government	3300	3586	3897	4234	4601	5000	9%				
Health Services	1500	1830	2233	2724	3323	4050	22%				
Insurance	3100	3784	4619	5638	6882	8400	22%				
Miscellaneous	500	591	698	824	974	1150	18%				
Process Manufacturing	5500	6270	7148	8148	9289	10600	14%				
Retail Trade	1550	1891	2307	2815	3434	4150	22%				
State & Local Government	6080	6808	7622	8535	9556	10700	12%				
Telecommunications	4500	5760	7373	9437	12080	15500	28%				
Transportation	900	1080	1296	1555	1866	2250	20%				
Utilities	1800	2068	2375	2728	3134	3600	15%				
Wholesale Trade	1050	1239	1461	1724	2034	2400	18%				
						Sourc	e: INPU1				

в

### **Banking and Finance**

### 1. Overview

Demand for complex new projects will grow as the pace of bank mergers, consolidations and reengineering of the IS environment increases. The services of systems integration firms will be increasingly important to guide newly merged commercial banks through the complexities of systems consolidation, the implementation of Electronic Banking systems, and the linking of new technology systems to old client/server and other legacy systems. Strong and aggressive non bank financial services firms are expected to make continuing large systems investments, providing some specific niche opportunities for systems integration firms. However, as these firms are relatively few in number, their impact on this market will be relatively small.

Package suppliers include: CSC, Alltel, DST, First Data, SunGard

**Examples of Professional Services/SI/Turnkey** companies that specialize in this industry are:

- FedComp, Inc. Provides turnkey systems for credit unions
- Ultradata serves credit unions also

### 2. Driving Forces

- Mergers and acquisitions
- Competition from non banks
- Introduction of new technology (Internet)
- 3. Inhibiting Factors
- Uncertainty regarding digital money, competition, etc.
- · Over capacity in the banking industry

### C Business Services

### 1. Overview

A strong economy has had a great impact on this sector, especially in real estate, travel, entertainment, recreation, repair services, and personal/professional services.

### 2. Driving Forces

- U.S. economy impact on consumer
- Impact of the Internet
- Need for innovative services and marketing strategies
- Need for internal efficiency (e.g., via Intranet applications, databases, networks)

### 3. Inhibiting Factors

- Internal cost control pressures
- Strong in-house control of IS
- · Many small enterprises with limited IS budgets

# Discrete Manufacturing

D

### 1. Overview

The 'legacy' buildup of islands of automation and information is a deterrent to the success of a reengineered business. Electronic commerce will have a huge impact. Trade will increase dramatically.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- Harbinger Corporation \$135.2 provides manufacturers with electronic commerce solutions
- Mentor Graphics Corporation \$490.4M provides systems for r the world's largest electronics and semiconductor companies.

### 2. Driving Forces

- Growth of electronic commerce.
- International competition between vendors
- Switch to emphasis on sales rather than ERP productivity.
- · Demand for increased computer expertise in users' functions

#### 3. Inhibiting Factors

- Y2K
- Customization of solutions reduces potential for replication of services
- Lengthier and more complex buying process

### E Education

#### 1. Overview

There is a continuing need for providing intra- as well as intercampus networking capabilities—tasks which typically involve integrating diverse computers, operating systems and network architectures. At the K-12 level, there is also a growing need to interconnect local schools with district headquarters, as well as a requirement for providing interactive courseware delivery to improve curriculum quality and cost effectiveness.

In higher education, the use of outside services is limited. Contributing factors include the perceived high cost of long-term contracts, a desire to maintain integration control, and the movement toward the Internet. Many of these establishments are using their students to implement the new Internet/Intranet systems.

#### 2. Driving Forces

- Emphasis on technology especially the Internet in education
- Increased higher education enrollment
- Increased distance learning
- Tuition increases and corporate sponsorship of educational programs and resources

### 3. Inhibiting Factors

- Risk averse/noncompetitive environment
- Limited funding lack of voter willingness to fund public education
- Use of Internet enabled students

### Federal Government

#### 1. Overview

The Administration and Congress continue to believe in the payoff from data processing investments, and scaling back has only been witnessed in defense-related projects. But there are no aggressive moves to use the Internet to change their processes.

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Federal projects tend to be communications intensive. Defense will continue to lose ground to civilian market demand over the forecast period.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- CACI \$326.1M classic government contractor; no specialty
- Federal Data Corporation \$520.3M an established IT integrator, services provider to the Federal Government, delivering solutions from desktop systems to space shuttle payloads.
- Computer Sciences Corp. \$7,660.0M was once almost all government but is now down to less than 40%

#### 2. Driving Forces

- Need to upgrade systems specially to Electronic Government
- Administration and congressional support (given demonstration of project benefits)
- · Declining in-house IS skills
- · Public demand for improved services

#### 3. Inhibiting Factors

- Federal budget funding limitations (cut-back pressure)
- Lack of will to change
- Y2K

#### G

### Health Services

### 1. Overview

Health care will require greater amounts of information for determining the cost of health care delivery for providers and payers. Growth is driven by the difficulty health care institutions have in managing large, new-systems projects internally, given the complexity of today's information technology, the pressure to adapt to managed care, and the accelerating pace of technical change in health care information systems. This is especially true for those new projects requiring a combination of in-house and outside resources and for the potentially overwhelming challenge of integrating "islands of automation" across a number of associated institutions providing a continuum of care. Network and data integration across the enterprise are major requirements.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- McKesson HBOC, Inc.Is a Fortune 100 corporation, that provides turnkey systems for providers such as hospitals, clinics, medical practices,
- SunGard Data Systems, Inc. \$1,159.7M- a computer services and software company specializing in health care information systems providing workflow management and document imaging for health care institutions.

### 2. Driving Forces

- Reorganization of the industry
- Changing regulation and legislation
- Need for system to support integrated health care delivery (doctor's office/hospital/nursing and home care)
- · Need for more data on treatment outcomes

### 3. Inhibiting Factors

- Unwillingness to face disruption of changing legacy systems
- Conservative environment
- · Extreme cost pressures with limited funds for new investment
- Lack of clarity in direction of health care industry

### Insurance

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### 1. Overview

Insurers will update legacy systems and use newer technology options such as imaging, EDI and Internet options. They will integrate with their customers' systems at the personal and corporate level.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

Fiserv, Inc. \$1,223.7M. – has an Insurance Solutions Group

### 2. Driving Forces

- Emphasis on sales
- · Emphasis on customer service
- Restructuring disintermediation of the agents and brokers
- Increased emphasis on use of IT Internet and Intranets
- Replacement of aging legacy systems

### 3. Inhibiting Factors

- · Record-breaking claims payments
- · Insurers are seeking to reduce IS costs
- · Confusion regarding health care reform
- · Confusion regarding channels what to do about agents/brokers

### **Miscellaneous Industries**

### 1. Overview

Some opportunity in construction and large agricultural products companies that will be impacted by Electronic Business.

### 2. Driving Forces

- Strong U.S. economy
- Increased trade from Electronic Business
- Interest in IS to manage and plan business more effectively

### 3. Inhibiting Factors

- Mature industry sector
- Not IT intensive or innovative

### **Process Manufacturing**

### 1. Overview

Will be heavily impacted in some areas by electronic commerce.

#### 2. Driving Forces

- Growth of Electronic Commerce/Electronic Business.
- · Switch to sales from ERP
- Demand for increased user knowledge Business Intelligence

#### 3. Inhibiting Factors

- Customization of solutions reduces potential for replication of services
- Lengthier and more complex buying process
- Large, conservative organizations

### K Retail Distribution

### 1. Overview

This sector will be the most impacted by Electronic Business and electronic retailing. There will also be major requirements for customer value added services from companies to meet competition. Internal operating efficiency will become key and all forms of sales and customer relationship systems should benefit.

Package suppliers include: PRJ inc., JDA Software Group

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

 Symbol Technologies, Inc. is a global leader in mobile data management systems for retailing, and other industries

### 2. Driving Forces

- Impact of Web based systems; E-tailers!
- Expanding use of technology
- Increased interest in faster supply and improved services to customers
- · Expanding use of electronic commerce.

### 3. Inhibiting Factors

- Low profit margins
- New competition

- Precarious condition of some large companies
- Desire to economize on IT expenditures
- · Limited number of large companies

## State and Local Government

#### 1. Overview

The need for comprehensive, integrated systems solutions is growing in states, larger cities, and counties, where systems tend to be old and fragmented. Growing public demand for services, coupled with a shifting of the burden from the federal level to the state and local level, are fueling a demand for comprehensive, integrated systems to reduce waste and fraud.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- Halifax Corp. \$73.7M, Provides communications, and simulator systems. Through its three wholly owned subsidiaries, Halifax provides support to state and local governments.
- American Management Systems, Inc. \$1,057.8M
- · SCT serves local government and higher education

### 2. Driving Forces

- Electronic Government initiatives
- Increased demand for services to the public
- Improved affordability of technology
- Legislative mandates necessitate integration of services and systems

#### 3. Inhibiting Factors

- · Limited availability of funding
- Lack of qualified personnel
- Political impact of technology
- Poor quality of executives unable to clearly identify the benefits associated with new technology

### M Telecommunications

### 1. Overview

Technology change and explosive demand for new communications services drive rapid growth.

Competitive pressures spawned by deregulation, and high customer demand for new services/technology, are creating a requirement for new IS systems to support them. Witness cellular and radio-based communications and expanding cable systems and applications.

Since deregulation, carriers have devoted extensive resources to enhancing their primary applications. The billing and customer service systems that they inherited functioned poorly and were not able to meet changing needs. The majority of these systems have been either enhanced or replaced. However, the process of integrating major systems and incorporating new areas, such as electronic commerce and Electronic Business is just beginning.

Customer service systems, containing profiles of a wide variety of features and services, must increasingly be linked to maintenance and network configuration systems. Charges for features must be integrated with charges for maintenance and troubleshooting.

There are severe internal restrictions on staff levels and skills caused by Y2K and other factors.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- IMI Systems Inc.\$418M specializes in customer care and billing systems.
- Amdocs Limited \$403.8 Amdocs provides customer and business management software and services to wireless (cellular and paging) and wireline (local, long distance, Internet) telecommunications providers worldwide.
- Cotelligent Inc. \$327.2M provides computer programming, data analysis, Web design, and systems integration. Its primary customers are telecommunications companies

#### 2. Driving Forces

- Internet, Internet, Internet...
- Deregulation releasing pent up demand

- New technology enables thresholds to be economically crossed (e.g. videophone)
- · Competition among cable, wire, wireless, satellite, etc.
- Service/organization integration
- CC&B (Customer Care and Billing) changes because of new products
- New companies

### 3. Inhibiting Factors

- Regulatory realities especially local ones
- Uncertainty
- Payment concerns gross margin attrition.

# Transportation

### 1. Overview

Growth will be fueled primarily by the need to provide connectivity between shippers and modes of shipping. Transportation sector firms have traditionally had a focus on operations and have often lost sight of their role in serving customers. Even the trucking companies, which get the highest service grades from shippers, are not immune from having more concern for tires and fuel than a customer's needs. Although transportation operational systems are still significant, IS is being asked to build systems that are more shipment oriented.

There are many small trucking companies in the US; these typically use packages so that the main professional services, SI and turnkey companies are built around them. These are usually medium sized installation projects.

Airlines, Railroads, Pipeline and Shipping Companies are large and generally use custom suppliers. In the Airline industry the large reservation systems companies like Saber and Covia supply packaged services. Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- Manhattan Associates \$62.1M provides information technology solutions, including distribution management, transportation management and supply chain interface systems, that enable the efficient movement of goods throughout the supply chain.
- Vertex Industries, Inc. \$3.6M integration of electronic commerce applications

### 2. Driving Forces

- Electronic Business and electronic commerce
- Growth of passenger and goods traffic
- Lack of internal expertise
- Emphasis on customer service systems
- 3. Inhibiting Factors
- Lack of executive skills
- Cost containment pressures

### O Utilities

#### 1. Overview

Deregulation is beginning to play a role in the utilities industry. Power companies are redoing their basic distribution systems. CC&B systems are also needed here; electronic bill presentation and payment systems will be important.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- Intergraph Corporation \$1,032.8M provides comprehensive engineering, mapping/GIS, and IT solutions for the utilities industry.
- 2. Driving Forces
- CC&B
- Deregulation

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- Increasing requirement to integrate operational systems with other corporate systems
- Increasing use of systems aimed at optimizing the use of existing facilities

#### 3. Inhibiting Factors

- Small number of large utility companies
- Pressure to limit new investment
- Lack of competitive pressure

### P Wholesale Distribution

### 1. Overview

Fuel for growth comes from wholesalers' need to make their businesses more responsive to retailers' needs via improved communications, cost reduction and electronic commerce. They must add value in order to survive in the Electronic Business world.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

- EXE Technologies, Inc. \$26.8M provider of supply chain execution software to retail/wholesale, manufacturing/consumer-packaged goods and third-party logistics providers.
- Catalyst International, Inc. \$33.9 provides full control over warehouse operations.

#### 2. Driving Forces

- Electronic Business and electronic commerce.
- Need for faster and more responsive service
- Need for improved communication
- Need to add value to avoid being squeezed out

### 3. Inhibiting Factors

- Internet
- Narrow margins
- Large retailers are bypassing wholesalers

Small size of many establishments

### Q Financial Service

### 1. Overview

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Large companies for whom IT is absolutely essential populate this industry. Projects are mostly package based. Typical are the trading room floor systems where Reuters products (Tipco) and Micrognosis products are key.

Investment companies also make use of software from First Data, DST, Alldata and others.

### R Printing & Publishing

### 1. Overview

This is a very fragmented industry with a few very large companies; even those are made up of many small units.

Examples of Professional Services/SI/Turnkey companies that specialize in this industry are:

Dataware Technologies provides electronic publishing solutions



# Appendix

Exhibit A-1

Total U.S. IT Software and Services Industry Market, 1998-2003 (Reference)

	1998	1999	2000	2001	2002	2003	CAGR 1998-
	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	2003 (%)
INDUSTRY TOTAL	307,244	354,100	410,880	480,172	564,709	649,247	16%

Source: INPUT

Exhibit A-2

### U.S. IT Professional Services Market by Industry Sector, 1998-2003

INDUSTRY SECTOR	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 1998- 2003 (%)
Total All Sectors	49,450	57,993	68,153	80,258	94,715	112,000	18%
Banking and Finance	5,400	6,486	7,791	9,357	11,239	13,500	20%
Business Services	2,140	2,672	3,337	4,168	5,205	6,500	25%
Discrete Manufacturing	11,500	13,225	15,209	17,490	20,114	23,100	15%
Education	630	704	787	880	984	1,100	12%
Federal Government	3,300	3,586	3,897	4,234	4,601	5,000	9%
Health Services	1,500	1,830	2,233	2,724	3,323	4,050	22%
Insurance	3,100	3,784	4,619	5,638	6,882	8,400	22%
Miscellaneous	500	591	698	824	974	1,150	18%
Process Manufacturing	5,500	6,270	7,148	8,148	9,289	10,600	14%
Retail Trade	1,550	1,891	2,307	2,815	3,434	4,150	22%
State & Local Government	6,080	6,808	7,622	8,535	9,556	10,700	12%
Telecommunications	4,500	5,760	7,373	9,437	12,080	15,500	28%
Transportation	900	1,080	1,296	1,555	1,866	2,250	20%
Utilities	1,800	2,068	2,375	2,728	3,134	3,600	15%
Wholesale Trade	1,050	1,239	1,461	1,724	2,034	2,400	18%

Source: INPUT

Exhibit A-3

### U.S. Commercial IT Professional Services Market, 1998-2003

			(\$M)		(\$M)	(\$M)	2003 (%)
Excludes Federal, State and Lo	cal Gover	nment					
Commercial Market	40,070	47,600	56,633	67,489	80,557	96,300	19%

Exhibit A-4

Source: INPUT

# U.S. IT Professional Services Market by Type of Service,

			1990 -	2003			
TYPE OF SERVICE	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 1998- 2003 (%)
Applications Related Profess	sional Servic	es					
EAS Related*	6,900	8,143	9,611	11,343	13,387	15,800	18%
Electronic Business Application	IS						
Non - Internet	1,300	2,000	2,500	2,200	2,100	2,000	9%
Internet/Web	3,000	4,649	7,203	11,162	17,295	26,800	55%
Other Custom Applications	21,000	23,083	25,374	27,891	30,658	33,700	10%
Total Applications	32,200	37,876	44,688	52,596	63,441	78,300	19%
Platform Related Professiona	al Services						
Network (non-Internet)	4,500	5,049	5,665	6,355	7,130	8,000	12%
Internet/Web	1,300	1,870	2,689	3,868	5,562	8,000	44%
Systems & Other**	11,500	12,536	13,665	14,896	16,237	17,700	9%
Total Platform	17,300	19,454	22,019	25,119	28,930	33,700	14%
Total Professional Services	49,500	57,330	66,707	77,715	92,371	112,000	18%

\*\*EAS Related\* Includes Applications Software Product Support Contracted Separately from Software Products, e.g. Education and Training \*\* "systems & Other\* Includes Systems Software Product Support Contracted Separately from Software Products, e.g. Education and Training Source: IN/PUT

### Total Internet/Web Related IT Professional Services (Sum of Applications and Platform Related)

	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 1998- 2003 (%)
Total Internet/Web Related	4,300	6,518	9,892	15,029	22,858	34,800	52%

Source: INPUT

### Exhibit A-5

### U.S. IT Professional Services Market by Category of Service, 1998-2003

PRODUCT/SERVICE CATEGORY	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 98-03 (%)
IS Consulting	15,000	17,870	21,290	25,364	30,218	36,000	19%
Education & Training	7,250	8,494	9,951	11,658	13,657	16,000	17%
Software Development	27,250	31,910	37,366	43,756	51,238	60,000	17.1%
Total IT Professional Services	49,500	58,274	68,607	80,778	95,113	112,000	18%
Commercial Soft. Dev.*	22,081	26,19,	31,051	36,794	43,579	51,589	18.5%

\* "Software Development" less Federal, State and Local Government

Source: INPUT

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Exhibit A-6

### U.S. IT Professional Services Market Components in All industry Categories, 1998-2003

PRODUCT/SERVICE CATEGORY	1998 (\$M)	1999 (\$M)	2000 (\$M)	2001 (\$M)	2002 (\$M)	2003 (\$M)	CAGR 98-03 (%)
Operational Services							_
Applications Management	1,469	1,763	2,142	2,624	3,240	4,035	22%
Other Outsourcing	4,931	5,770	6,691	7,902	9,506	10,725	17%
Turnkey Systems						10	and y are
Professional Services	5,285	6,085	7,029	8,140	9,451	11,000	16%
Systems Integration					1. 1. 1.	1999 - 19	_
Professional Services	11,529	14,313	17,770	22,060	27,387	34,000	24%
IT Professional Services	1 and a co		2 44 2			. ,	
Professional Services	49,500	58,274	68,607	80,778	95,113	112,000	18%
Total Professional Services	11.00					ford a	. ,
	72,714	86,205	102,238	121,503	144,697	171,760	19%
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#### U.S. IT PROFESSIONAL SERVICES MARKETS, 1998-2003

### Exhibit A-7

### Major Vendors by Size

Vendor	1. Alle	1998 US PS		Comment
	1998 US SI Revenues (\$Millions)	Revenues (\$Millions)	Total	
Acxciom	\$50	\$50	\$100	Mailing
ADP	\$100	\$100	\$200	
Affiliated Computer Services	\$50	\$300	\$350	Small
Ajilon		\$500	\$500	Staff Augmentation
Alltel	\$50	\$150	\$200	Network. Banks, Health Care
Amdahl	\$200	\$400	\$600	Bought Tracor & DMR
Ameritech	\$100	\$100	\$200	Network
AMS	\$150	\$600	\$750	Application
Analysts International	\$75	\$445	\$520	
Andersen Consulting	\$1,600	\$3,500	\$5,100	
Anstec		\$66	\$66	Application/Platform
Aris		\$55	\$55	Networks
Arthur Andersen	\$100	\$300	\$400	Small/Medium
Arthur D.Little		\$100	\$100	
AT&T	\$500	\$500	\$1,000	Telecom/Network; most of the estimated \$2.6 Billion of SI Business is in the voice network area that is not included in IT SI
Atlantic Data Services		\$45	\$45	Banks
Baan	\$25	\$100	\$125	ERP
Bain		\$25	\$25	
BCG		\$50	\$50	
Bell Atlantic	\$300	\$300	\$600	Telecom/Network; also a significan Government Supplier
Bell South	\$300	\$300	\$600	Telecom/Network
Best		\$69	\$69	Data Base Design
Bisys	\$50	\$150	\$200	Financial Industry
Boeing			\$0	
Booz Allen		\$250	\$250	
BrightStar		\$81	\$81	Typical;It Consulting, Development, Training
Cambridge Technology Partners	\$200	\$200	\$400	EBusiness
Cap Gemini	\$50	\$500	\$550	Small/EAS

Exhibit A-7 Cont.

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Vendor	1 x room to	1998 U	S PS	Comment	
· 376	1998 US SI Revenues (\$Millions)	Revenues (\$Millions)	Total	et alla segue de	
Capricorn Systems		\$35	\$35	Typical Indian US transfer	
CIBER	\$50	\$600	\$650	Small/EAS	
CMS Information Services		\$23	\$23	US Federal Government	
Comdisco	\$100	\$100	\$200	DTS/Network, Sub of leasing company	
Compaq	\$400	\$600	\$1,000	Digital SI Group	
Complete Business Solutions		\$180	\$180	Transfer to India (Total revenues \$377m)	
Computer Associates	\$25	\$250	\$275	Platform/Manufacturing, Training	
Computer Generated Solutions		\$80	\$80	Help Desk/Training/Netwoks, etc.	
Computer Horizons	\$0	\$500	\$500	Primarily supplemental staffing	
Computer People		\$100	\$100	Staffing (Acquired by Ajilon)	
Compuware	\$50	\$250	\$300	Small	
Control Data Corp	\$25	\$75	\$100	Government &EC	
csc	\$800	\$1,700	\$2,500	Platform/Custom/Government/Banks/Insurance	
СТБ	\$50	\$400	\$450	Small	
Data Dimensions		\$115	\$115	Y2K	
Data General	\$50	\$250	\$300	Platform	
Decision One	\$50	\$150	\$200	DTS	
Deloitte	\$200	\$800	\$1,000	Application/Platform	
Diamond Technology		\$48	\$48		
DPRC		\$211	\$211	Staffing (Acquired by Compuware 8/99)	
E&Y	\$250	\$350	\$600	Secondary	
EDS	\$1,000	\$500	\$1,500	Platform/Custom/Banks/I surance. Excludes GM	
First Consulting		\$92	\$92		
GE	\$400	\$400	\$800	Medical/ Network	
Global Knowledge Network		\$250	\$250	Education	
Grant Thornton	\$50	\$250	\$300	Small/Medium	
Greenbrier & Russel		\$45	\$45		
GTE	\$200	\$400	\$600	Telecom/Network	

Exhibit A-7 Cont.

Vendor	Sala Sala and	1998 L	IS PS	Comment	
	1998 US SI Revenues (\$Millions)	Revenues (\$Millions)	Total		
HP	\$400	\$400	\$800	Platform; 50% of ww estimates	
I- Cube		\$41	\$41	All; excludes internal	
IBM	\$2,700	\$2,700	\$5,400	Large scale application development	
IMRglobal		\$160	\$160	Indian development	
INS	\$25	\$130	\$155	Networks	
Intelligroup		\$80	\$80		
iXL	\$45	\$45	\$90		
JDEdwards	\$50	\$200	\$250	ERP	
Keane	\$50	\$800	\$850	HealthCare and 1/3 Y2K	
KPMG	\$250	\$800	\$1,050	Application/Industry	
Lockheed Martin	\$600	\$1,200	\$1,800	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Logicon			\$0	Government	
MCI/Worldcom	\$225	\$400	\$625	Without Systemhouse; with EDS network	
McKinsey		\$250	\$250		
Merant		\$200	\$200	Application Development/Primarily Software (Microfocus)	
Metamor	\$50	\$800	\$850	Application implementation	
Metro		\$155	\$155		
Metzler		\$84	\$84		
NCR	\$150	\$250	\$400	Platform/Applications Financial & Retailing	
NetSolve	\$25	\$25	\$50	Networks	
Oracle	\$50	\$500	\$550		
Origin	\$150	\$200	\$350	Phillips ownership/Baan	
Paragon		\$60	\$60	Image processing and presentation software	
PeopleSoft	\$25	\$150	\$175	ERP	
Proxicom	\$25	\$25	\$50		
PSW Technologies		\$50	\$50		
PwC	\$300	\$1,200	\$1,500	EAS Share that is SI	
Raytheon		-	\$0		
RCG		\$275	\$275	General Professional Services	
Renaissance Solutions	\$50	\$700	\$750	General Professional Services	

Exhibit A-7 Cont.

Vendor		1998 U	Comment	
in the second	1998 US SI Revenues (\$Millions)	Revenues (\$Millions)	Total	
RWD Technologies		\$85	\$85	
Sabre	\$100	\$200	\$300	Airlines
SAIC	\$300	\$600	\$900	Government & Commercial
SAP	\$100	\$500	\$600	ERP
Sapient	\$65	\$100	\$165	about 30% is Internet eCommerce
SBC	\$150	\$400	\$550	Telecom/Network
SCB Computer Technology		\$157	\$157	
SCT	\$100	\$100	\$200	Education Industry
SITA/Equant	\$300	\$100	\$400	Airlines/Networks
SMS	\$150	\$150	\$300	HealthCare
Sprint	\$50	\$250	\$300	Telecom/Network
SRA		\$150	\$150	IT consulting & SI to healthhcare, financial services & legal entities
Sun Integration Services	\$250	\$250	\$500	Platform/Supports Application SI Vendors
SunGard	\$50	\$50	\$100	HealthCare
Technology Solutions		\$220	\$220	
Towers Perrin		\$150	\$150	
TRW	\$200	\$1,200	\$1,400	Government
Unisys	\$250	\$600	\$850	Network/ Airlines/Banks
US Internetworking	\$50	\$100	\$150	Networks
US West	\$50	\$50	\$100	Telecom/Network
USWeb	\$100	\$200	\$300	Internet
Vanstar	\$25	\$250	\$275	DTS
Viasoft		\$104	\$104	Consulting for IT management
Wang	\$50	\$500	\$550	DTS, Network
Whitman Hart	\$50	\$300	\$350	Small
Total	\$15,110	\$36,586	\$51,696	

Source: INPUT

