INPUT

EXECUTIVE OVERVIEW

The Impact of the Internet on Outsourcing and Processing Services

U.S. Outsourcing Program

To Our Clients:

This summary is an excerpt from a full research report, *Outsourcing Services Competitive Analysis,* issued as part of INPUT's Outsourcing Program.

If you have questions or comments about this report, please call (415) 961-3300 to contact your INPUT analyst.

Abstract

The Internet is being adopted at a startlingly rapid rate by corporations and service providers, alike. This report explores the impact that the Internet is having on outsourcing vendors' ability to deliver services, the opportunities that the Internet presents, and the manner in which the Internet is being used to promote corporate images and market services.

Information systems outsourcing services have matured from an environment of solutions solely motivated by cost reduction pressures to one in which the outsourcing decision is part of overall corporate strategy to improve delivery of services and impact bottom-line performance. No longer is the decision only to contract for the traditional facility management services. Selective outsourcing islands or segments of operations today are responsive to the best-practice demands resulting from business process reengineering.

There is a trend away from multimillion-dollar, long-term outsourcing contracts toward shorter duration, focused outsourcing services. The emergence of the client/server environment and the transition from mainframe-based legacy systems have created new opportunities for transitional outsourcing in which the legacy environment is supported by the vendor. Further, the distributed environment offers many opportunities for desktop, application management, and network management outsourcing services.

INPUT also includes the processing services market in this report. This report, *The Impact of the Internet on Outsourcing and Processing Services,* discusses issues and identifies opportunities for vendors in the outsourcing and processing services markets. In addition, the report contains forecasts for the outsourcing services and processing services markets for the period 1995-2000.

Overview Contents

Executive Overview

This year's five-year market analysis includes forecasts for the outsourcing and processing services markets as well as forecasts of expenditure on these services that is Internet-related. In addition, the influences of the Internet today and its future impact and directions are analyzed and discussed for outsourcing and processing services.

Outsourcing services have emerged as a strategic option for corporations planning to strengthen operational capabilities while keeping focused on managing core business issues and activities. No longer strictly viewed as an option for reducing expenses, outsourcing has the potential for improving the delivery of internal corporate services as well as for enhancing capabilities to deliver customer service and products. It continues to gain popularity as a complement to business process reengineering efforts.

Outsourcing now is woven into the fabric of business operations and enjoys status in areas unrelated to information systems services, including services such as equipment and building maintenance, purchase order initiation and processing, and document reproduction and mail room services. No longer is information systems outsourcing considered only for overall operational activities; rather, companies are choosing to outsource selected segments of their operations. Selective outsourcing activities based on technology, application, location, and business process are becoming the norm. The customer's decision to dismantle overall information systems operations and outsource selected support services is the driving force behind one of the fastest growing service markets.

In addition to outsourcing's high growth rate (18% CAGR), the use of the Internet to promote and support outsourcing and processing services is beginning to take on prominence that will add to the base of service growth potential. The Internet represents a technology and resource base that will produce early and significant changes in the way vendors promote their service and to the manner in which operations are managed and delivered. There is a quiet revolution taking place in which many vendors already are relying heavily upon the Internet. Areas of use include:

- Improvement in capability to communicate within and outside the corporation
- Movement of data more economically between sites

- Promotion and sale of services to current customers and new business prospects.

The challenge is to decide upon the best way to knit the Internet's functionality into the vendor's operation. Finally, the Internet will present new business opportunities for outsourcing and processing vendors alike.

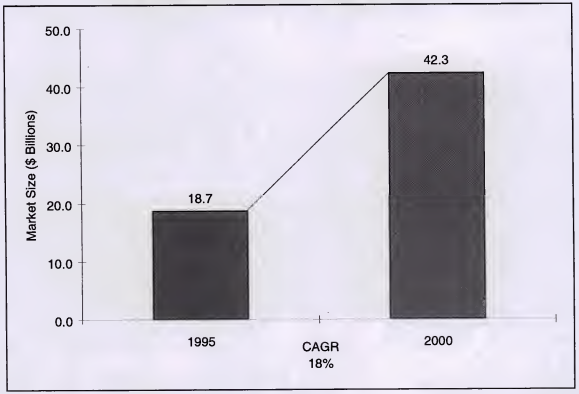
A
Market Forecast, 1995-2000

1. Outsourcing Services

The compound annual 5-year growth rate is projected to be 18%, equal to that of the previous year's forecast. The sustained rate of growth further confirms the industry acceptance of outsourcing as part of a strategic corporate plan. Exhibit 1 shows the market growing to over $42 billion in 2000.

Exhibit 1

U. S. Outsourcing Service Markets, 1995-2000



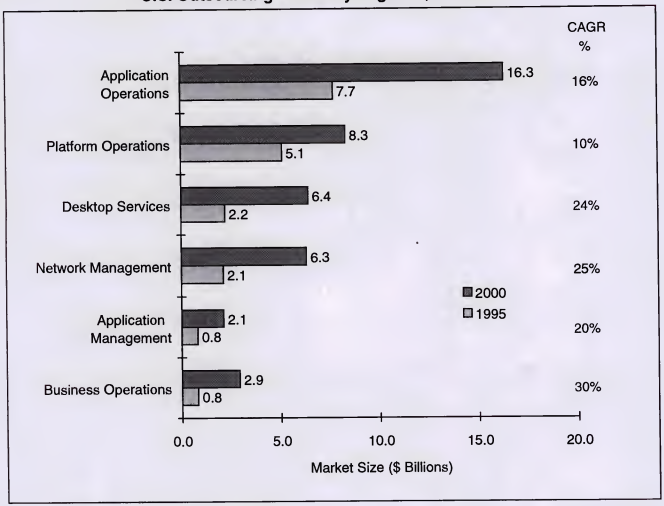
Source: INPUT

The composition of the outsourcing market continues to evolve. Recent emphasis has been on contracting for segments of the market based on technology, location, application, or business process requirements. The

change to selective buying from an overall information systems operation impacts the growth rates of the individual components of the market, as shown in Exhibit 2.

Exhibit 2

U.S. Outsourcing Market by Segment, 1995-2000



Source: INPUT

a. Platform and Application Operations

Systems operations, which includes the application and platform operations categories, continues to dominate the overall market and will nearly double in market value during the next five years. With an initial market share of 68%, systems operations outsourcing is projected to account for a smaller share in 2000, falling to 58% of the market. While this is still a significant share, the fall-off is attributable to two factors: changing user buying patterns and other sectors that are growing even more rapidly. For the moment, the revenue contribution of the large mega-contracts is declining due to a moving away from these deals and the fact that those now in

existence will be finishing during the next five-years. Further, there is clear indication of customer preference for shorter contract duration, smaller value, specialized outsourcing contracts for application management, network management, desktop services and business operations outsourcing. This change in emphasis is directly linked to the migration of operations from the data center environment to distributed computing.

Exhibit 3 shows the portion of outsourcing expenditure across the 3 areas of the data center, distributed systems and business operations outsourcing.

Exhibit 3

Location of Outsourcing Services Expenditure

Area of Application			
Data Center	95%	70%	50%
Distributed Systems	5%	25%	40%
Business Operations		5%	10%

Source: INPUT

Application operations is forecast to enjoy a 16% growth rate, the basis for which is the increasing commitment to client/server application development, stimulating a move to transitional outsourcing in which the vendor supports the legacy application in order to free up customer personnel to work on client/server application. While the bulk of this expenditure is currently within the data center there is a growing tendency for the operation of distributed servers, and associated application processing (e.g. SAP running on systems spread throughout the organization), to be outsourced. This is the primary reason for the volume of data center-related expenditure to fall to 50% of the total by the year 2000.

b. Desktop Services

Desktop outsourcing services are projected to grow at a robust 24% CAGR, from $2.2 billion in 1995 to $6.4 billion in 2000. The growth rate is impressive and largely credited to corporate realization that the support of desktop computing environment is becoming more onerous as increasing varieties of hardware, software, and networks are added to the desktop environment. Further, outsourcing vendors are making desktop outsourcing more attractive with the inclusion of and emphasis on asset management and other related services.

c. Network Management

With an equally impressive growth rate, network management services has remained steady at 25% CAGR for the last three forecast reports. The market is $2.1 billion in 1995 and will grow to $6.3 billion in 2000. Reflecting a growing commitment to client/server technology and its momentum toward network management requirements to support LAN and WAN configuration, network support requires trained personnel and policies and procedures that many companies would prefer to contract out. In addition, the introduction of the Internet and access to this resource will add to the network management burden that many corporations will want to outsource. The Internet factor undoubtedly will stimulate the network management growth rate in years to come.

d. Application Management

The application management growth rate is projected to be 20% CAGR, reflecting a small decrease from the previous year's forecast. Market size is a relatively modest $0.8 billion in 1995, growing to $2.1 billion in 2000. The high growth rate of this sector reflects, in part, the trend toward selective outsourcing of non-mission-critical applications and the lack of skilled personnel in corporate roles who can develop and maintain client/server applications.

e. Business Operations

The market for business operations outsourcing (and supporting IT operations) continues at its explosive 30% CAGR pace, with a 1995 market of $0.8 billion, growing to $2.9 billion in 2000. The demand for business operations outsourcing is strong. Much of this demand derives from business process reengineering projects that identify non-critical business operations and functions as candidates for outsourcing.

The potential market for business operations outsourcing is considerably greater than forecast, given that processing services vendors are moving to complement their service offering with business operations specialists. This prospective transition from processing services to business operations services portends a market size with potential to double to $4 billion. This would require a shift of 5-10% of the annual processing services expenditure to business operations. Though this is not out of the question, this change is yet to be seen in the market.

f. Outsourcing Services Recommendations

Technology, business process and industry specialization will be necessary for vendors to be positioned for the requirements of the outsourcing market. Outsourcing projects are moving toward specialization, shorter duration and

lower value contracts. Market differentiation calls for marketing teams with specialized industry knowledge dedicated to market, sell and consult on the outsourcing contract of the future. Exhibit 4 summarizes the recommendations for outsourcing services.

Exhibit 4

Outsourcing Service Recommendations

- Use the Internet to promote service capabilities, convey corporate image and receive feedback from customers and prospects.
- Look to Internet-related outsourcing opportunities related to design, implementation and management of the Webmaster environment.
- Focus on vertical industry niches to build credibility and understand and serve business process requirements.
- Develop alliances with complementary service providers to broaden the outsourcing service offering.
- Complement the outsourcing needs resulting from business process reengineering.
- Prepare for smaller value, shorter duration contracts.
- Prepare to address the service requirements evolving outside of the data center environment.

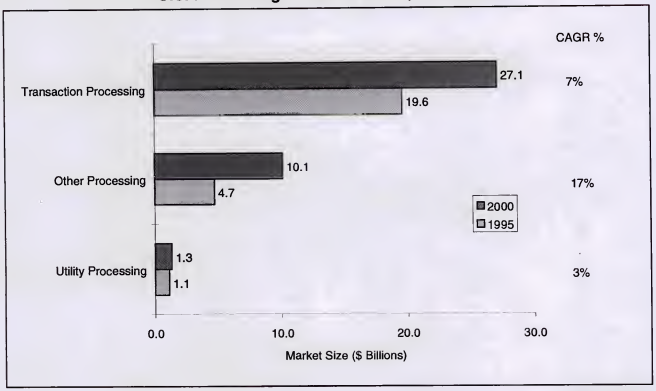
Source: INPUT

2. Processing Services

The processing services market is projected to grow at 9% CAGR for the forecast period (see Exhibit 5).

Exhibit 5

U.S. Processing Services Market, 1995-2000



Source: INPUT

The transaction processing sector of the processing services market represents the largest market share, accounting for 77% of the total market in 1995, yet falling to 70% in 2000. This is due to the rapid growth of disaster recovery services during the period.

The growth of transaction processing services will be stimulated by the new demand for claims processing as the health care system changes, and by the growth of electronic commerce directly related to retail and home banking. In addition, the growth of credit card-based services linked to the home, underpinned by Internet access, will compound the demand for transaction processing services. Equally important will be the continuing growth of the credit and debit card business linked to traditional mail order, Internet-based shopping/catalogue services and point-of-sale services in retail operations.

The processing service market growth will be driven by expanding acceptance of off-site services that replace transaction-based operational functions previously staffed and managed in-house. The primary market drivers include volume-driven cost competitiveness with respect to the investment in infrastructure and ongoing operational cost, as well as leveraging the latest technology. The Internet is a case in point with its

potential ubiquitous reach into all facets of network-based processing services.

The disaster recovery services market will continue to grow in response to the corporate awareness of data center and client/server vulnerability to man-made and natural disasters. The unusually high number of hurricanes in 1995 and the tragic Kansas City federal office building bombing are top of mind evidence that preparedness is mandatory.

Exhibit 6

Processing Service Recommendations

- Use the Internet to promote service capabilities, convey corporate image and receive feedback from customers and prospects.
- Explore and implement Internet-based communication services to improve global reach while reducing the cost of information transmission.
- Investigate the potential for value-added services utilizing Internet-enabled customer service centers and disaster recovery.

Source: INPUT

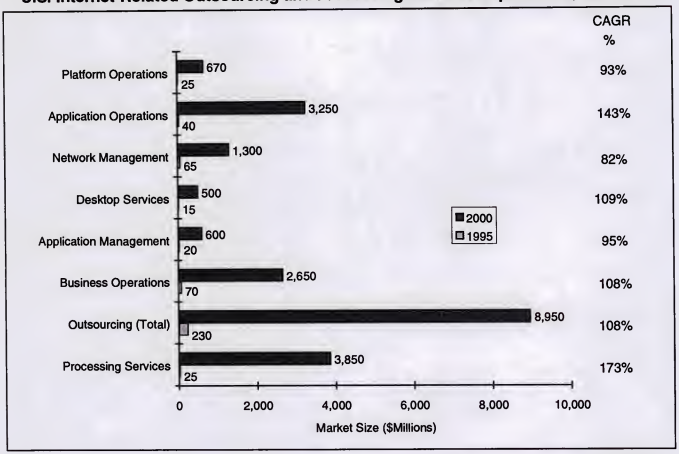
3. The Internet

The Internet will play a significant role in changing the way outsourcing and processing services are marketed, sold and delivered. Many first- and second- tier vendors already have adopted aspects of the Internet to reduce operational costs and increase their ability to reach prospects and inform customers. Momentum is building for the use of the Internet as a competitive and operations-enabling tool.

The majority of vendors surveyed believe that the Internet will significantly change the way their business will be conducted within the next five years. In particular, most agree that the Internet will improve business operations and have a significant impact on vendor and supply management, order processing, product and service delivery, human resource management (including recruiting), and corporate communications. In addition to the vendor perception, recent surveys also indicate that corporations already are adopting the Internet for promotion, public relations, communication and business process improvement. INPUT's ongoing studies of the Internet market have provided forecasts of the user expenditure for outsourcing and processing services related to the Internet. These forecasts are shown in Exhibit 7.

Exhibit 7

U.S. Internet-Related Outsourcing and Processing Services Expenditure,1995-2000



Source: INPUT

The high growth rate for each of these markets is due to the low starting point for each of the forecasts, as well as to the vast potential of the Internet market.

Examples of new service opportunities, and the related outsourcing service categories, are:

- Management of internal networks based on Internet technology (Intranet network management)
- Management and operation of web servers (application and platform operations)
- Management and operation of firewall security (business operations)
- Development and maintenance of web site content (business operations)

Vendors are finding that the Internet resource presents three significant leverage points for improving operations and enhancing business

opportunities. Outsourcing and processing service vendors believe that these points hold potential and should not be ignored.

- The first is the E-mail service available through the Internet. The majority of companies surveyed by INPUT for this report already are, or are giving strong consideration to, using Internet E-mail for intra-company communication. A key feature of the Internet is its built-in global, self-supporting infrastructure capable of satisfying worldwide, multi-office requirements for rapid, unlimited communication. Those currently considering Internet E-mail use are, in many cases, analyzing the cost savings and trade-off between previous investment in proprietary systems and software and the conversion to the Internet. Internet E-mail also is being used for single-site inter-departmental communication. In addition to the above, outsourcing vendors believe this offers them the potential to assist their customers in their use of E-mail to communicate with the user's own business partners and customers.

- The second and equally important Internet resource is the hypertext-linked, multimedia-based World Wide Web and its uses for corporate communications, marketing and sales. The establishment of a presence on the Internet through the Web is becoming mandatory in order for service providers to be considered competitive, and to ensure a modern image. Use of the Web to establish corporate identity is gaining momentum as well as creating new challenges. In the first place, use of the web for corporate marketing and communication carries with it the demand for well-conceived, carefully produced material that will reflect the professionalism of the corporation. Many companies also use Web links to catalog product and services offerings. An INPUT survey reveals that vendors give strong ratings to use of the Web to deliver more information to and receive more feedback from prospects and customers, enhance relationships with customers, and support customers at lower cost.

- A third aspect of advantages offered by the Internet relates to the new business opportunities that arise from the existence of the Internet. The large outsourcing and processing service vendors believe that there is limited new business opportunity for Internet implementation consulting. Large vendors see little potential in assisting customers with home page design and development, server and network design, and implementation. However, services in these areas may be used as precursor to delivery of larger network and Web site maintenance outsourcing services. Indeed, many small consulting companies are addressing the home page design and development need; these two- and three-person organizations are candidates for alliance with the larger service providers. INPUT believes that the initial cool reception given to Internet-based service opportunities will blossom into substantial

projects that provide full-cycle services, from design to ongoing management, for Internet-based communication services and Web-based promotion, sales, and image communication. These services require an entire set of technical personnel and management that corporations are not able to provide easily.

In addition to the above uses, processing services vendors also believe that the Internet holds major potential to reduce communication costs for raw data and report transmission. Several major processing service vendors already have adopted the Internet for EDI communication. The influence of the Internet on electronic commerce is being studied by INPUT and the findings are available in its report *Electronic Commerce Over the Internet*.

There is a dark side to the Internet that cannot be ignored, yet for which there is also opportunity. Interface to the Internet from within the organization opens issues of data security and access control from within and without. It is important to acknowledge and assess the potential for unauthorized entry to corporate networks and the data residing on them. The risk can be managed through the implementation of appropriate policies and procedures and the introduction of firewalls and data encryption to guard against unauthorized entry and to secure corporate data. These weaknesses present a significant opportunity for outsourcing and processing services vendors to assist the customer with issues of access control and data security and manage, on an ongoing basis, the development and operation of Internet-related services.

In summary, the Internet holds great potential to enhance service delivery by reducing the cost of service operation, extend the communication reach with minimal incremental cost, and broaden the opportunities for marketing corporate image and selling service and product capabilities. It is a resource that holds great potential at manageable risk. INPUT's Internet recommendations are:

- Explore the potential for implementation of Web site hosting and content management
- Approach customers with suggestions to assess their attitudes toward Internet services and promote uses where appropriate. Complement new business opportunities for design, implementation and management of Internet Web sites with value-added services that improve qualification of hits on linked home pages and frequent refresh of content
- Establish and market a migration service for clients to move from current internal networks to Internet-technology based networks (i.e. Intranets) and offer to manage these new networks

- Consider security management—a growing and important Internet market opportunity
- Explore the use of Internet E-mail services for inter- and intra-company communication within user and vendor organizations
- Assess internal needs and implement policies, procedures, and infrastructure to control unauthorized access and secure corporate data in transmission and resident on servers.

Table of Contents

Exhibits

Title: Impact of the Internet on Outsourcing & Processing Services.

- [x] Report
- [ ] Research Bulletin
- [ ] Profiles
- [ ] Newsletter
- [ ] Reprints
- [ ] Other_____

Fulfillment - Please print list to order covers>>

TO: GBC
Covers Order
Date_____
Quantity_____
Color_____
Size _____
P. O. Number _____
GBC Control Number _____

TO BRADFORD ADAMS

>>

Other Information/Notes

Fulfillment/Printing for INPUT
Date 5/23/96 By JP.
Program Code OSPR Project Code OSM2
INPUT P. O. #_____ BAC Ref. #_____

Reports		Executive OV	
Fulfillment	63	Fulfill.	75
Stock	25	Stock	25
Total	79	TU Pkg.	25
		Total	125

Research Bulletin	Newsletter
Fulfillment ____	Fulfill. ____

Date/ FedX GBC _____
Date Due INPUT _____
Date Rec. INPUT _____

Date _____
PLEASE PRINT ☐ labels ☑ packing slips attached w/ duets cut
To: BAC_____

☑ Folder ☑ Disk ☑ Hard Copy ☑ Blue Form ☐ GBC Cover BA

Dates
For Set Up/Proof 5/28/96
Proof rtn to INPUT 5/28/96
Final proof rtn to BA 5/30/96 JP
Scheduled to Ship _____

Instructions:
- ☐ Window Cover
- ☐ Hot Strip
- ☐ 3-Hole Drill
- ☐ Staple
- ☐ Shrink Wrap
- ☐ Other_____

Return to INPUT Ship Date_____
- ☐ Originals/Disk in folder
- ☐ For Stock: _____RP_____OV____RB_____PR
- ☐ Internals for Distribution
- ☐ International for mailing/DHL
- ☐ Other_____
- ☐ INPUT *add stock quantity to inventory report*

INPUT

COVERS

– REPORT –
PRODUCTION QC SCHEDULE

PRINTING/BINDING SPECIFICATIONS

AUTHOR PLEASE COMPLETE:

Project Code: OSMO

Cover: **GBC Soft Vinyl** ☐ —
Hot Strip Paper Cover ☐ —
Binder ☐ —

Soft Vinyl Window Cover ☐
80 lb. White Paper ☐
3-Hole Drill ☐

Color Cardstock ☐
Shrink Wrap ☐

Cover Title—Exactly how it is to appear on the report cover:

Front: _____

_____

_____

_____

Spine: (1 Line) _____
(more than 67 pages only)

(Binder spine may have 2 lines)

Estimated number of pages: < 32 ☐ 1/16" spine
Please note: 1/16" spine is too small for title to be printed on it.
33-66 ☐ 1/8" spine
67-130 ☒ 1/4" spine
131-196 ☐ 3/8" spine
197-260 ☐ 1/2" spine
261-324 ☐ 5/8" spine

Executive Overviews:
No. required for Thank-You packages: 25

Program Manager Approval: _____ Date: _____

CENTRAL FULFILLMENT/PRINTING PLEASE COMPLETE:

1. REPORTS: Fulfillment 5463
Stock 25
_____
TOTAL 79

2. EXECUTIVE OVERVIEWS Fulfillment 7175
Stock 25
for Thank-You packages 25
TOTAL 125

3. Binding: Cover Color _____ Spine Size _____ Hot Strip Color _____

4. Date to print: _____

5. Date to be shipped: _____ Complete actual ship date on first side.

6. Fulfillment, **PLEASE PRINT:** ☐ labels ☐ packing slips

Renee - I ordered 100 covers.
Bradford has.
JF

ADM400/02
10/94

INPUT REPORT COVERS

Date 2/20/96.

CODE OSMO

TITLE Impact of the Internet on Outsourcing Services & Processing Service

QUANTITY 100

COLOR Maroon

SIZE 1/4"

P. O. # 8840

CONTROL NUMBER #210234KA.

INPUT

STRATEGIC MARKET PERSPECTIVE

Impact of the Internet on Outsourcing and Processing Services

U.S. Outsourcing Program

Impact of the Internet on Outsourcing and Processing Services

INPUT®

INPUT

– REPORT –
PRODUCTION QC SCHEDULE

Program: _____ **Program Year:** _____

Report: _____ **Project Code:** _____

Author: _____ **QC Performed By:** _____

Author I.D. or
Employee No.: _____

		DATE REC.	DATE SENT	INITIAL
RESEARCH	1. Author—Write report, send to QC Officer			
	2. QC Officer—Review, discuss or return to Author			
	3. Author—Revise report, send to Local Administrator with ☐ Printed MS Word Draft/Exhibits ☐ MSWord Disk ☐ Transmittal Letter ☐ Thank-You Package Letter/Information ☐ Press Release Draft ☐ Brochure Draft/Direct Mail Purchase Order ☐ Exhibits tagged for slide library ☐ INPUT/Output Article Draft ☐ **Reverse Side of Form Completed**			
DESKTOP PUBLISHING	4. Local Administrator—Check items, log in			
	5. Desktop Publishing—Create/correct exhibits and formatting			
	6. Send art for cover to Central Printing			
	7. Editor*—Edit/proofread/note queries			
RES	8. Author —Final review, accept/reject edits			
DTP	9. Desktop Publishing—Finalize report			
	10. Local Administrator—Check items, log out			
CENTRAL PRINTING	11. Central QC—QC print-ready status			
	12. Print, bind, ship		DATE SHIPPED	
	Thank You Package Shipped		DATE SHIPPED	

* Complete proofreader form (ADM 450/01), and attach to QC Schedule

Dist: ORIG: Report Draft/Orig. File COPY: Fulfill./Shipping

INPUT

1881 Landings Drive
Mountain View, CA 94043-0848
Tel. (415) 961-3300
Fax (415) 961-3966

Dear Colleague:

Enclosed is the latest report from the U.S. Outsourcing Services program—"The Impact of the Internet on Outsourcing and Processing Services".

The report contains the industry's first forecast of Internet-related expenditures on outsourcing and on processing services for the period 1995-2000.

This study explores the emerging opportunities for vendors presented by the Internet, based on information from recent surveys of vendor and customer uses of the Internet. In addition, this report investigates the influences and trends on each service area and then forecasts U.S. expenditure on outsourcing and processing services for each service category for 1995-2000. Vertical industry forecasts for these services are also provided.

If you have any questions on this study or wish additional information regarding the research in the U.S. Outsourcing Services program then please do not hesitate to contact me at INPUT.

Sincerely,

Wilson Haddow
Vice President, Market Research

Report Quality Evaluation

To our clients:
To ensure that the highest standards of report quality are maintained, INPUT would appreciate your assessment of this report. Please take a moment to provide your evaluation of the usefulness and quality of this study. When complete, simply fax to INPUT at (415) 961-3966 or fold, tape, and drop in the mail. Postage has been pre-paid by INPUT if mailed in the U.S.

Thank You.

1. Report title:
   The Impact of the Internet on Outsourcing and Processing Services (OSMO)

2. Please indicate your reason for reading this report:
   - ☐ Required reading
   - ☐ Area of high interest
   - ☐ Area of general interest
   - ☐ New product development
   - ☐ Business/market planning
   - ☐ Product planning
   - ☐ Future purchase decision
   - ☐ Systems planning
   - ☐ Other _____

3. Please indicate extent report used and overall usefulness:

	Extent		Usefulness (1=Low, 5=High)				
	Read	Skimmed	1	2	3	4	5
Executive Overview	☐	☐	☐	☐	☐	☐	☐
Complete report	☐	☐	☐	☐	☐	☐	☐
Part of report (_____ %)	☐	☐	☐	☐	☐	☐	☐

4. How useful were:

Data presented	☐	☐	☐	☐	☐
Analyses	☐	☐	☐	☐	☐
Recommendations	☐	☐	☐	☐	☐

5. How useful was the report in these areas:

Alert you to new opportunities or approaches	☐	☐	☐	☐	☐
Cover new areas not covered elsewhere	☐	☐	☐	☐	☐
Confirm existing ideas	☐	☐	☐	☐	☐
Meet expectations	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐

6. Which topics in the report were the most useful? Why? _____

7. In what ways could the report have been improved? _____

8. Other comments or suggestions: _____

Name _____ Title _____

Department _____ Company _____

Address _____

Country _____

Telephone _____ Date completed _____

Thank you for your time and cooperation.

INPUT

TAPE

FOLD HERE

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
First Class Permit No. 982 Mountain View, CA

POSTAGE WILL BE PAID BY ADDRESSEE

Attention: Marketing Department

INPUT
1881 Landings Drive
Mountain View, CA 94043-0848

FOLD HERE

JUNE 1996

The Impact of the Internet on Outsourcing and Processing Services

INPUT®

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

replace with about INPUT page

Abstract

The Internet is being adopted at a startlingly rapid rate by corporations and service providers, alike. This report explores the impact that the Internet is having on outsourcing vendors' ability to deliver services, the opportunities that the Internet presents, and the manner in which the Internet is being used to promote corporate images and market services.

Information systems outsourcing services have matured from an environment of solutions solely motivated by cost reduction pressures to one in which the outsourcing decision is part of overall corporate strategy to improve delivery of services and impact bottom-line performance. No longer is the decision only to contract for the traditional facility management services. Selective outsourcing islands or segments of operations today are responsive to the best-practice demands resulting from business process reengineering.

There is a trend away from multimillion-dollar, long-term outsourcing contracts toward shorter duration, focused outsourcing services. The emergence of the client/server environment and the transition from mainframe-based legacy systems have created new opportunities for transitional outsourcing in which the legacy environment is supported by the vendor. Further, the distributed environment offers many opportunities for desktop, application management, and network management outsourcing services.

INPUT also includes the processing services market in this report. This report, *The Impact of the Internet on Outsourcing and Processing Services,* discusses issues and identifies opportunities for vendors in the outsourcing and processing services markets. In addition, the report contains forecasts for the outsourcing services and processing services markets for the period 1995-2000.

This report contains 76 pages and 45 exhibits.

Published by
INPUT
1881 Landings Drive
Mountain View, CA 94043-0848
United States of America

U.S. Outsourcing Program

The Impact of the Internet on Outsourcing and Processing Services

OSMO • 683 • 1996

Table of Contents

Exhibits

I

Introduction

The outsourcing services market growth for the period 1995-2000 is forecast at 18%. Competitive forces are encouraging corporations, large and small, to broaden considerations for outsourcing operational functions and business processes as the focus on core business activities sharpens. Outsourcing takes a place in the strategic arsenal of options a corporation can select in response to the competitive demands to control or reduce costs while bringing the best products and services early to market. As businesses operate globally and information value increases, companies must identify and build on their strengths while outsourcing non-essential functions.

In addition to being the fastest growing sector of the information technology market, outsourcing continues to evolve in scope and opportunity. The evolution is driven in part by emerging technologies and their potential impact upon service delivery. This report amplifies the initial and, in some cases, weak signals about the Internet and its influence on outsourcing service delivery, new service opportunities, and its uses to promote additional services. Further, the confluence of vendor services are highlighted where outsourcing services and processing services have overlapping interfaces.

This year's report also contains a discussion on the processing services market. However, the forecasts for outsourcing and processing services in this report are discussed separately.

This report investigates the influences and trends on each service area and then forecasts the U. S. outsourcing and processing services market levels for each service category. Vertical industry forecasts for these services are also provided. In addition, the report explores the emerging opportunities for vendors presented by the Internet, based on information from recent surveys of vendor and customer uses of the Internet.

A
Objectives and Scope

1. Objectives

The objectives of this report are to:

- Identify market drivers and inhibitors with special emphasis on the Internet
- Define the U. S. outsourcing market and forecast its size for the next five years
- Define the U. S. processing service market and forecast its size for the next five years
- Provide conclusions and recommendations for both vendors and users of outsourcing and processing services

2. Scope

a. Outsourcing Services

Businesses contract with vendors to staff, manage and operate all or portions of a business activity or function. The outsourcing activity may be for either an entire information systems (IS) operation, including related communication system services, or a business operation (e.g. operation of a payroll department) in which the information systems activities account for at least 30% of the overall operation budget.

The vendor undertakes responsibility for a specific operational activity. The contract duration is at least one year and, in many instances, is as long as ten years. Typically, a single vendor takes responsibility for outsourcing management and operation although in the future vendor alliances may evolve to support a single client with requirements for support of several functions or operations.

INPUT categorizes specific information systems activities and selected business operations in its outsourcing analysis. A detailed definition of the various types of outsourcing services is given in Appendix A but in summary the services analyzed in this report are:

- *Business Operations Outsourcing*

- *Systems Operations Outsourcing* (including Platform Operations and Application Operations)
- *Desktop Services Outsourcing*
- *Network Management Outsourcing*
- *Application Management Outsourcing*

Any one or a combination of the above service categories will constitute an outsourcing contract between vendor and client. The key to INPUT's definition and inclusion in the analysis is determined by the contract requirements. If the customer contracts only for the installation and maintenance of personal computers, then the outsourcing category would be desktop services. If a chemical manufacturer, for example, wishes to outsource its entire material safety data sheet operation, including the platform, applications, database maintenance, data and information updating, and the personnel involved in the overall operation, this would be classified as a business operations outsourcing contract. Exhibit I-1 shows the service components that may be included in each outsourcing service category.

Exhibit I-1

Outsourcing Service Components

Component	Plat. Ops.	Appl. Ops.	Desktop Services	Net. Mgt.	Appl. Mgt.	Bus. Ops.
Proj./Contract Mgmt.	X	X	X	X	X	X
Data Ctr. Mgmt.	X	X				X
Client/Server Ops.	X	X	X			X
Equipment Maint.	X	X	X			X
Sys. SW Maint.	X	X	X	X		X
Appl. SW Maint.		X	X		X	X
Appl. Dev.		X			X	X
LAN Mgmt.			X	X		X
WAN/MAN Mgmt.				X		X
Trans. Proc. Svcs.		X				X
Other Prof. Svcs.			X		X	X
Bus. Process Ops.						X

Source: INPUT

For purposes of this analysis and for further clarification, INPUT does not include activities/contract items as follows:

- Services that are project-based are not considered part of outsourcing. Rather, they are included in systems integration and professional services market analyses.
- Services that are never intended to be performed internally. Maintenance-only services are not included in the outsourcing category.
- Processing services contracted for less than one year
- Voice-only network management services
- Business operations contracts with minimal content of information systems services. The function or business operation must allocate at least 30% of its budget to information systems activities.

b. Processing Services

The processing services market, in the past, was reported separately in INPUT's five-year forecast series. This year, analysis of the processing services market is in the same report as the outsourcing services market analysis because common elements exist between these service markets. However, each can be uniquely defined and quantified. Therefore, the processing services market forecast is shown separately in this report.

In general, processing services are characterized by industry and cross-industry specialization. In the case of industry specialization, vendors generally provide high-volume processing services for customers. Examples include invoicing services for the utility industry, point-of-sale data access and analysis for the retail industry, item processing for the banking industry, and billing and accounts receivable for the health care industry. Cross-industry services include payroll processing, invoicing and accounts payable services, credit and debit card processing, and image processing services.

The principal components of processing services are:

- *Transaction Processing* Services
- *Utility Processing*
- *Backup and Disaster Recovery Services*

B
Methodology

There already are clear indications that the Internet will play a significant role in the nature, cost, and scope of outsourcing and processing service delivery. In both service domains, major vendors are already positioning numerous operational activities to take advantage of the Internet infrastructure. These activities include sales and marketing, order processing, customer and user support, and inter- and intra-office communication. In addition, the Internet presents new consulting, outsourcing and processing service opportunities unique to its Internet infrastructure and capabilities.

INPUT developed surveys to assess the importance that outsourcing and processing service vendors and customers place upon the Internet—currently, and into the future. The vendor survey was designed to investigate three areas of interest:

- Uses of the Internet to improve operational efficiencies and reduce costs
- Service opportunities created by the existence of the Internet
- Uses of the Internet for sales and marketing activities

Major vendors of outsourcing and processing services were surveyed recently. Two-thirds of the surveyed population have revenues in excess of $1 billion and several as high as $25 billion. The primary thrust was to assess vendor ratings of the current and future ways in which the Internet affects how new business is developed and services are delivered. The outsourcing vendors ranged in size from $500 million to in excess of $25 billion and the processing services vendors ranged between $100 million and $500 million in processing service revenue.

In addition to the vendor survey, this report presents the selected results of a recent cross-industry survey of the influences of the Internet on 205 North American companies. The customers' attitudes and buying patterns with respect to the Internet are equally important to an understanding of the opportunities and influences presented by the Internet. The Internet already is being adopted to provide E-mail services for interoffice, intra-office and inter-corporate communication. Many organizations are working through the transformation from proprietary networks to the Internet. In addition, most companies are establishing an Internet presence as an additional

channel of corporate marketing communications. In spite of this progress and rate of adoption, many questions remain to be answered and many potential capabilities are to evolve. The survey results and specific conclusions are treated in Chapter III, Market Analysis and Forecast.

Major vendors in both service categories were surveyed. The results provide a clear message that the Internet already is being integrated into the operations and marketing infrastructure of many organizations. Further, the forecast for the impact on sales and service delivery holds major revenue potential. Although significant issues related to data security, ease of use, and bandwidth are acknowledged by respondents, the majority of survey participants are enthusiastic about the prospects for Internet uses.

The data presented in this report was compiled from a variety of sources:

- The interviews (described above) conducted with vendors of outsourcing and processing services
- Interviews with users of outsourcing and processing services to assess the plans for service requirements and expenditures and the future of these services
- INPUT's database of more than 700 outsourcing contracts
- INPUT's continuous analysis of the service categories and industry sectors comprising the outsourcing and processing services markets

C
Report Structure

Chapter II, Executive Overview, is a summary of the key findings of this report.

Chapter III, Market Analysis and Forecast, describes the U. S. outsourcing and processing services markets by service category. In addition, the chapter discusses the impact of the Internet and other drivers and inhibitors in these markets and the implication of the market forces for vendors and users.

Chapter IV, Vertical Markets, describes the Internet-related market activities for the leading industry sectors. In addition, the chapter contains forecasts for each sector's market size and growth.

Chapter V contains a summary of INPUT's conclusions and recommendations regarding the outsourcing and processing markets.

Appendix A provides definitions of the various services discussed in this report plus it shows the SIC codes that comprise each of the vertical markets.

Appendix B contains the detailed forecasts and reconciliation with 1994 forecasts for outsourcing and processing services, by service category, for 15 industry sectors.

The survey used to obtain data for this analysis is shown in Appendix C.

D
Related Reports

INPUT has completed a variety of studies on the Internet and the outsourcing services and processing services markets, including:

- *Pricing and Marketing of Outsourcing Services*
- *Negotiation of Outsourcing Contract Terms and Conditions*
- *Electronic Catalogs, Web Storefronts and Internet Malls*
- *Internet Sales and Marketing Directions*
- *Internet Security: The Impact of Firewalls on Client/Server Applications*
- *Analysis of Leading Outsourcing Vendors*
- *U.S. Outsourcing Market Analysis, 1994-1999*
- *The Impact of Business Process Reengineering on Outsourcing Services*
- *Outsourcing Vendor Performance Analysis*

In addition to these reports, profiles are available on many outsourcing and processing services vendors. Examples of the companies profiled by INPUT include:

- *ALLTEL Information Services, Inc.*
- *Andersen Consulting*
- *AT&T Global Information Systems (now NCR)*
- *Bell Atlantic Network Integration, Inc.*

- *CAP Gemini America*
- *Computer Sciences Corporation*
- *Coopers & Lybrand*
- *Digital Equipment Corporation*
- *EDS*
- *Ernst & Young*
- *Fiserv, Inc.*
- *Genix*
- *Hewlett-Packard*
- *I-Net, Inc.*
- *ISSC*
- *SHL Systemhouse*
- *Unisys*

II

Executive Overview

This year's five-year market analysis includes forecasts for the outsourcing and processing services markets as well as forecasts of expenditure on these services that is Internet-related. In addition, the influences of the Internet today and its future impact and directions are analyzed and discussed for outsourcing and processing services.

Outsourcing services have emerged as a strategic option for corporations planning to strengthen operational capabilities while keeping focused on managing core business issues and activities. No longer strictly viewed as an option for reducing expenses, outsourcing has the potential for improving the delivery of internal corporate services as well as for enhancing capabilities to deliver customer service and products. It continues to gain popularity as a complement to business process reengineering efforts.

Outsourcing now is woven into the fabric of business operations and enjoys status in areas unrelated to information systems services, including services such as equipment and building maintenance, purchase order initiation and processing, and document reproduction and mail room services. No longer is information systems outsourcing considered only for overall operational activities; rather, companies are choosing to outsource selected segments of their operations. Selective outsourcing activities based on technology, application, location, and business process are becoming the norm. The customer's decision to dismantle overall information systems operations and outsource selected support services is the driving force behind one of the fastest growing service markets.

In addition to outsourcing's high growth rate (18% CAGR), the use of the Internet to promote and support outsourcing and processing services is beginning to take on prominence that will add to the base of service growth potential. The Internet represents a technology and resource base that will produce early and significant changes in the way vendors promote their

service and to the manner in which operations are managed and delivered. There is a quiet revolution taking place in which many vendors already are relying heavily upon the Internet. Areas of use include:

- Improvement in capability to communicate within and outside the corporation
- Movement of data more economically between sites
- Promotion and sale of services to current customers and new business prospects.

The challenge is to decide upon the best way to knit the Internet's functionality into the vendor's operation. Finally, the Internet will present new business opportunities for outsourcing and processing vendors alike.

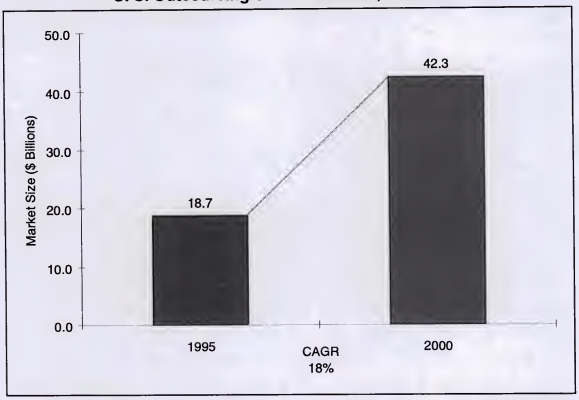
A
Market Forecast, 1995-2000

1. Outsourcing Services

The compound annual 5-year growth rate is projected to be 18%, equal to that of the previous year's forecast. The sustained rate of growth further confirms the industry acceptance of outsourcing as part of a strategic corporate plan. Exhibit II-1 shows the market growing to over $42 billion in 2000.

Exhibit II-1

U. S. Outsourcing Service Markets, 1995-2000

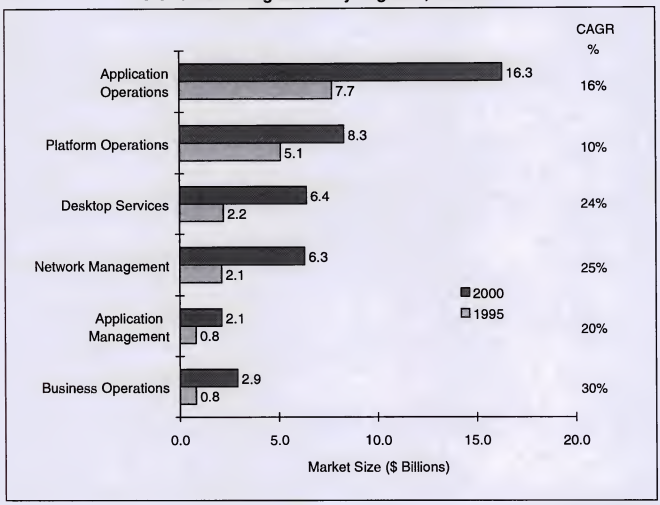


Source: INPUT

The composition of the outsourcing market continues to evolve. Recent emphasis has been on contracting for segments of the market based on technology, location, application, or business process requirements. The change to selective buying from an overall information systems operation impacts the growth rates of the individual components of the market, as shown in Exhibit II-2.

Exhibit II-2

U.S. Outsourcing Market by Segment, 1995-2000



Source: INPUT

a. Platform and Application Operations

Systems operations, which includes the application and platform operations categories, continues to dominate the overall market and will nearly double in market value during the next five years. With an initial market share of 68%, systems operations outsourcing is projected to account for a smaller share in 2000, falling to 58% of the market. While this is still a significant share, the fall-off is attributable to two factors: changing user buying patterns and other sectors that are growing even more rapidly. For the moment, the revenue contribution of the large mega-contracts is declining due to a moving away from these deals and the fact that those now in existence will be finishing during the next five-years. Further, there is clear indication of customer preference for shorter contract duration, smaller value, specialized outsourcing contracts for application management, network management, desktop services and business operations outsourcing.

This change in emphasis is directly linked to the migration of operations from the data center environment to distributed computing.

Exhibit II-3 shows the portion of outsourcing expenditure across the 3 areas of the data center, distributed systems and business operations outsourcing.

Exhibit II-3

Location of Outsourcing Services Expenditure

Area of Expenditure	1990	1995	2000
Data Center	95%	70%	50%
Distributed Systems	5%	25%	40%
Business Operations		5%	10%

Source: INPUT

Application operations is forecast to enjoy a 16% growth rate, the basis for which is the increasing commitment to client/server application development, stimulating a move to transitional outsourcing in which the vendor supports the legacy application in order to free up customer personnel to work on client/server application. While the bulk of this expenditure is currently within the data center there is a growing tendency for the operation of distributed servers, and associated application processing (e.g. SAP running on systems spread throughout the organization), to be outsourced. This is the primary reason for the volume of data center-related expenditure to fall to 50% of the total by the year 2000.

b. Desktop Services

Desktop outsourcing services are projected to grow at a robust 24% CAGR, from $2.2 billion in 1995 to $6.4 billion in 2000. The growth rate is impressive and largely credited to corporate realization that the support of desktop computing environment is becoming more onerous as increasing varieties of hardware, software, and networks are added to the desktop environment. Further, outsourcing vendors are making desktop outsourcing more attractive with the inclusion of and emphasis on asset management and other related services.

c. Network Management

With an equally impressive growth rate, network management services has remained steady at 25% CAGR for the last three forecast reports. The market is $2.1 billion in 1995 and will grow to $6.3 billion in 2000.

Reflecting a growing commitment to client/server technology and its momentum toward network management requirements to support LAN and WAN configuration, network support requires trained personnel and policies and procedures that many companies would prefer to contract out. In addition, the introduction of the Internet and access to this resource will add to the network management burden that many corporations will want to outsource. The Internet factor undoubtedly will stimulate the network management growth rate in years to come.

d. Application Management

The application management growth rate is projected to be 20% CAGR, reflecting a small decrease from the previous year's forecast. Market size is a relatively modest $0.8 billion in 1995, growing to $2.1 billion in 2000. The high growth rate of this sector reflects, in part, the trend toward selective outsourcing of non-mission-critical applications and the lack of skilled personnel in corporate roles who can develop and maintain client/server applications.

e. Business Operations

The market for business operations outsourcing (and supporting IT operations) continues at its explosive 30% CAGR pace, with a 1995 market of $0.8 billion, growing to $2.9 billion in 2000. The demand for business operations outsourcing is strong. Much of this demand derives from business process reengineering projects that identify non-critical business operations and functions as candidates for outsourcing.

The potential market for business operations outsourcing is considerably greater than forecast, given that processing services vendors are moving to complement their service offering with business operations specialists. This prospective transition from processing services to business operations services portends a market size with potential to double to $4 billion. This would require a shift of 5-10% of the annual processing services expenditure to business operations. Though this is not out of the question, this change is yet to be seen in the market.

f. Outsourcing Services Recommendations

Technology, business process and industry specialization will be necessary for vendors to be positioned for the requirements of the outsourcing market. Outsourcing projects are moving toward specialization, shorter duration and lower value contracts. Market differentiation calls for marketing teams with specialized industry knowledge dedicated to market, sell and consult on the

outsourcing contract of the future. Exhibit II-4 summarizes the recommendations for outsourcing services.

Exhibit II-4

Outsourcing Service Recommendations

- Use the Internet to promote service capabilities, convey corporate image and receive feedback from customers and prospects.
- Look to Internet-related outsourcing opportunities related to design, implementation and management of the Webmaster environment.
- Focus on vertical industry niches to build credibility and understand and serve business process requirements.
- Develop alliances with complementary service providers to broaden the outsourcing service offering.
- Complement the outsourcing needs resulting from business process reengineering.
- Prepare for smaller value, shorter duration contracts.
- Prepare to address the service requirements evolving outside of the data center environment.

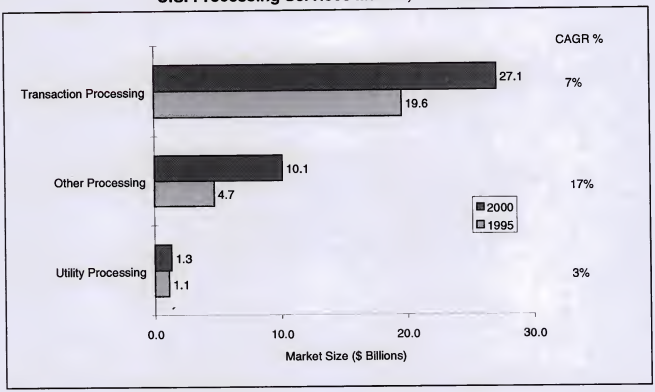
Source: INPUT

2. Processing Services

The processing services market is projected to grow at 9% CAGR for the forecast period (see Exhibit II-5).

Exhibit II-5

U.S. Processing Services Market, 1995-2000



Source: INPUT

The transaction processing sector of the processing services market represents the largest market share, accounting for 77% of the total market in 1995, yet falling to 70% in 2000. This is due to the rapid growth of disaster recovery services during the period.

The growth of transaction processing services will be stimulated by the new demand for claims processing as the health care system changes, and by the growth of electronic commerce directly related to retail and home banking. In addition, the growth of credit card-based services linked to the home, underpinned by Internet access, will compound the demand for transaction processing services. Equally important will be the continuing growth of the credit and debit card business linked to traditional mail order, Internet-based shopping/catalogue services and point-of-sale services in retail operations.

The processing service market growth will be driven by expanding acceptance of off-site services that replace transaction-based operational functions previously staffed and managed in-house. The primary market drivers include volume-driven cost competitiveness with respect to the investment in infrastructure and ongoing operational cost, as well as

leveraging the latest technology. The Internet is a case in point with its potential ubiquitous reach into all facets of network-based processing services.

The disaster recovery services market will continue to grow in response to the corporate awareness of data center and client/server vulnerability to man-made and natural disasters. The unusually high number of hurricanes in 1995 and the tragic Kansas City federal office building bombing are top of mind evidence that preparedness is mandatory.

Exhibit II-6

Processing Service Recommendations

- Use the Internet to promote service capabilities, convey corporate image and receive feedback from customers and prospects.
- Explore and implement Internet-based communication services to improve global reach while reducing the cost of information transmission.
- Investigate the potential for value-added services utilizing Internet-enabled customer service centers and disaster recovery.

Source: INPUT

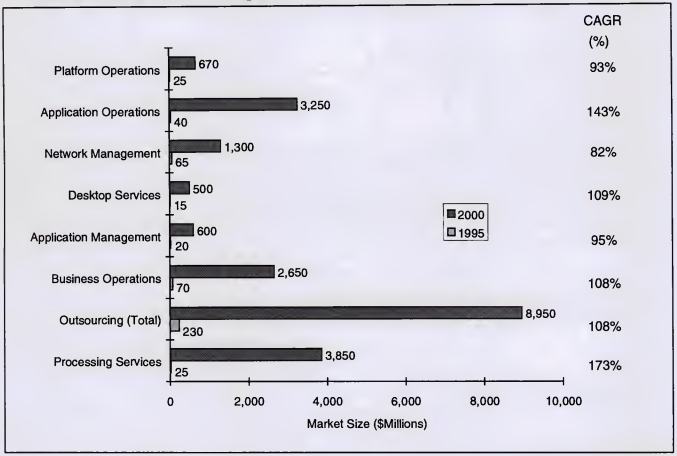
3. The Internet

The Internet will play a significant role in changing the way outsourcing and processing services are marketed, sold and delivered. Many first- and second- tier vendors already have adopted aspects of the Internet to reduce operational costs and increase their ability to reach prospects and inform customers. Momentum is building for the use of the Internet as a competitive and operations-enabling tool.

The majority of vendors surveyed believe that the Internet will significantly change the way their business will be conducted within the next five years. In particular, most agree that the Internet will improve business operations and have a significant impact on vendor and supply management, order processing, product and service delivery, human resource management (including recruiting), and corporate communications. In addition to the vendor perception, recent surveys also indicate that corporations already are adopting the Internet for promotion, public relations, communication and business process improvement. INPUT's ongoing studies of the Internet market have provided forecasts of the user expenditure for outsourcing and processing services related to the Internet. These forecasts are shown in Exhibit II-7.

Exhibit II-7

Internet-Related Outsourcing and Processing Services Expenditures, 1995-2000



Source: INPUT

The high growth rate for each of these markets is due to the low starting point for each of the forecasts, as well as to the vast potential of the Internet market.

Examples of new service opportunities, and the related outsourcing service categories, are:

- Management of internal networks based on Internet technology (Intranet network management)
- Management and operation of web servers (application and platform operations)
- Management and operation of firewall security (business operations)
- Development and maintenance of web site content (business operations)

Vendors are finding that the Internet resource presents three significant leverage points for improving operations and enhancing business opportunities. Outsourcing and processing service vendors believe that these points hold potential and should not be ignored.

- The first is the E-mail service available through the Internet. The majority of companies surveyed by INPUT for this report already are, or are giving strong consideration to, using Internet E-mail for intra-company communication. A key feature of the Internet is its built-in global, self-supporting infrastructure capable of satisfying worldwide, multi-office requirements for rapid, unlimited communication. Those currently considering Internet E-mail use are, in many cases, analyzing the cost savings and trade-off between previous investment in proprietary systems and software and the conversion to the Internet. Internet E-mail also is being used for single-site inter-departmental communication. In addition to the above, outsourcing vendors believe this offers them the potential to assist their customers in their use of E-mail to communicate with the user's own business partners and customers.

- The second and equally important Internet resource is the hypertext-linked, multimedia-based World Wide Web and its uses for corporate communications, marketing and sales. The establishment of a presence on the Internet through the Web is becoming mandatory in order for service providers to be considered competitive, and to ensure a modern image. Use of the Web to establish corporate identity is gaining momentum as well as creating new challenges. In the first place, use of the web for corporate marketing and communication carries with it the demand for well-conceived, carefully produced material that will reflect the professionalism of the corporation. Many companies also use Web links to catalog product and services offerings. An INPUT survey reveals that vendors give strong ratings to use of the Web to deliver more information to and receive more feedback from prospects and customers, enhance relationships with customers, and support customers at lower cost.

- A third aspect of advantages offered by the Internet relates to the new business opportunities that arise from the existence of the Internet. The large outsourcing and processing service vendors believe that there is limited new business opportunity for Internet implementation consulting. Large vendors see little potential in assisting customers with home page design and development, server and network design, and implementation. However, services in these areas may be used as precursor to delivery of larger network and Web site maintenance

outsourcing services. Indeed, many small consulting companies are addressing the home page design and development need; these two- and three-person organizations are candidates for alliance with the larger service providers. INPUT believes that the initial cool reception given to Internet-based service opportunities will blossom into substantial projects that provide full-cycle services, from design to ongoing management, for Internet-based communication services and Web-based promotion, sales, and image communication. These services require an entire set of technical personnel and management that corporations are not able to provide easily.

In addition to the above uses, processing services vendors also believe that the Internet holds major potential to reduce communication costs for raw data and report transmission. Several major processing service vendors already have adopted the Internet for EDI communication. The influence of the Internet on electronic commerce is being studied by INPUT and the findings are available in its report *Electronic Commerce Over the Internet*.

There is a dark side to the Internet that cannot be ignored, yet for which there is also opportunity. Interface to the Internet from within the organization opens issues of data security and access control from within and without. It is important to acknowledge and assess the potential for unauthorized entry to corporate networks and the data residing on them. The risk can be managed through the implementation of appropriate policies and procedures and the introduction of firewalls and data encryption to guard against unauthorized entry and to secure corporate data. These weaknesses present a significant opportunity for outsourcing and processing services vendors to assist the customer with issues of access control and data security and manage, on an ongoing basis, the development and operation of Internet-related services.

In summary, the Internet holds great potential to enhance service delivery by reducing the cost of service operation, extend the communication reach with minimal incremental cost, and broaden the opportunities for marketing corporate image and selling service and product capabilities. It is a resource that holds great potential at manageable risk. INPUT's Internet recommendations are:

- Explore the potential for implementation of Web site hosting and content management

- Approach customers with suggestions to assess their attitudes toward Internet services and promote uses where appropriate. Complement new business opportunities for design, implementation and management of Internet Web sites with value-added services that improve qualification of hits on linked home pages and frequent refresh of content
- Establish and market a migration service for clients to move from current internal networks to Internet-technology based networks (i.e. Intranets) and offer to manage these new networks
- Consider security management—a growing and important Internet market opportunity
- Explore the use of Internet E-mail services for inter- and intra-company communication within user and vendor organizations
- Assess internal needs and implement policies, procedures, and infrastructure to control unauthorized access and secure corporate data in transmission and resident on servers

(Blank)

III

Market Analysis and Forecast

This chapter is devoted to an examination of the market forces and technology issues driving the growth of the outsourcing and processing services markets. Surveys and research into Internet-related impacts on outsourcing and processing service delivery are discussed and new opportunities for services are explored. The size and composition of each market and the major components of each, today and during the next five years, are examined. The competitive environment is analyzed and the leading outsourcing and processing services vendors in 1995 are identified.

A
Trends in Outsourcing and Processing Services

The outsourcing services market continues to grow rapidly (18% CAGR), playing a crucial role, in many cases, as a complement to business process reengineering efforts. As corporations recast their structure, operations, and staffing, outsourcing emerges as a cornerstone by-product of reengineering efforts. No longer merely a cost containment option, outsourcing has evolved with strategic significance for growth and, in many cases, corporate survival. However, the depth and complexity of the business operations and functions outsourced challenge a vendor's ability to respond to the customer's needs on a sole-source basis, increasing the need for vendor alliances in support of the customer. The Internet already is being included in outsourcing services in an effort to improve delivery and reduce cost.

The processing services marketplace also is experiencing growth but at a less aggressive rate (9% CAGR). Transaction processing services, including credit and debit card processing, reservation services, health care claims processing, payroll, billing, and point-of-sale services, account for the major portion of this category.

The growth momentum is not without challenge, however. Decreasing hardware costs and improvements to networks bring the linking of the user and data within easy reach of more organizations, suggesting a potential to move these services in-house in some sectors. In spite of this, there are still compelling reasons to contract out these activities, given the specialized skills and specialized software required to serve ongoing high-transaction-volume operations. Challenges to the processing services market, underpinned by technology gains, will continue, but corporate need to stay focused on the core business processes will undoubtedly also continue to be a barrier to bringing these services in-house.

Classified as a processing service, backup and disaster recovery services are growing at a rapid rate and evolving to support the distributed processing environment. Vendors are complementing traditional disaster recovery services with unique user support and system support services. For example, IBM Business Recovery Services now offers an antivirus service for the client/server environment that includes proprietary software and subscription-based consulting services.

Concurrent with the evolution and introduction of services in response to customer demand, INPUT has identified that the Internet resources already are stimulating changes in the manner of promotion, sales and operation of outsourcing and processing services. In addition to the trends brought on by new technologies, selected cross-industry processing services vendors are moving to complement their service with personnel who possess specialized business operations skills. These moves are blurring the lines between processing service and business operations outsourcing providers.

The Internet and other proprietary networks that offer access to the Internet (i.e., America Online, CompuServe, and Prodigy) present a resource with tremendous potential for improving the use of information technology. The Internet facilitates global access to data and information and encourages inter- and intra-company communication at attractive operating and implementation costs. It can be used for electronic mail (E-mail) services, news group or bulletin board services, file transfer capabilities, database services and multimedia-based Web site services. INPUT found that the E-mail, Web site and, to a lesser extent, file transfer capabilities are the most heavily used resources on the Internet.

Consistent with this belief, INPUT recently performed a study of vendor perceptions, plans and ongoing uses of the Internet in support of outsourcing and processing service delivery. The thrust of the study was to investigate three aspects related to the Internet's impact:

- Uses of the Internet to improve the operation and service delivery of ongoing projects, to change the way future services are delivered, to improve business operations, and to impact vertical markets
- Service opportunities presented by the Internet
- Uses of the Internet to market, promote and sell services

The following subsections contain analysis and discussion of the three topics.

1. The Internet, Service Operations and Vertical Markets

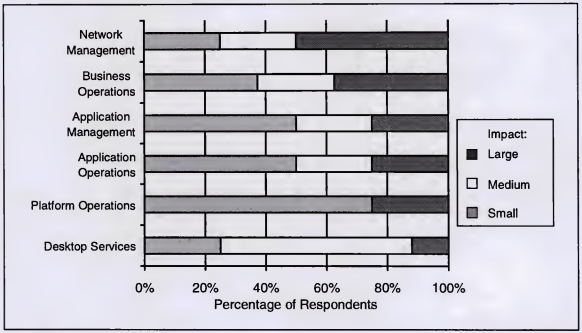
The objective of this survey segment was to evaluate vendor assessment of the Internet's influence on service operations, internal business operations, and services for vertical markets, today and in the future.

Respondents were asked to rate and assess the importance of the Internet for enhancing the operational efficiency or cost performance of ongoing outsourcing and processing service projects. There was overwhelming agreement (83% of the respondents) that both service areas will be positively impacted by the Internet. In most instances, the immediate benefit mentioned is the cost reduction afforded by substitution of the Internet for proprietary E-mail services. Though this was identified as the most obvious and readily implemented leveraged use of the Internet, second-level considerations include the facilitation of communication between the vendor, its customers and its customers' customers. Reduction of global E-mail costs and the in-place global network also were identified as having specific advantages.

Outsourcing vendors were asked to rate the influence that the Internet will have on categories of outsourcing services. The results are shown in Exhibit III-1.

Exhibit III-1

Outsourcing Categories and the Impact of the Internet



Source: INPUT

Note the high aggregate count for "moderate" and "large" impact ratings for network management and desktop service. Many of the respondent companies already are committed to the Internet for user support and remote network monitoring. Internet use to facilitate these services already suggests a paradigm shift in thinking about the feasibility for remote management and support of networks, software, and hardware. These shifts provide new opportunities for vendors to rethink staffing levels and organizational structure.

The "large" rating for platform operations reflects secondary consequences. In these cases, use of the Internet to facilitate remote application development and transitioning from centralized to distributed, client/server environments appears to be the reason for the high rating.

Respondents were asked to rate the influences the Internet will have upon their business operational activities, now, in two years, and in five years. The rating are on a scale of 1 to 5, where 1 is low and 5 is high. Exhibit III-2 shows the results for this question.

Exhibit III-2

Operational Activities with High Ratings for Internet Impact

	Average Rating					
	Outsourcing Services			Processing Services		
Operational Activity	Now	2 years	5 years	Now	2 years	5 years
• Vendor and Supply Mgmt.	2.0	3.5	4.4	1.8	3.5	4.6
• Order Processing	1.8	3.1	4.0	1.5	3.0	4.3
• Product/Service Delivery	2.3	3.4	4.1	1.5	3.5	4.5
• Product and Service Promotion	2.4	3.9	4.6	2.0	4.0	4.5
• Human Resources Mgmt.	2.0	3.4	4.0	1.8	3.0	4.0
• Employee Communication	2.0	3.4	4.3	1.5	3.0	4.3
• Inter-office Communication	1.8	3.1	3.6	2.0	3.8	4.8
• Corporate Communications	2.3	3.9	4.3	1.7	3.3	4.7
• Aggregate Average	1.8	3.1	3.9	1.5	3.0	3.9

Source: INPUT

There is a strong feeling that the Internet will build in importance during the next five years. Usage will increase sharply during the next two years. Outsourcing and processing service vendors are particularly enthusiastic about the use of the Internet for vendor and supply management, order processing, product/service promotion and delivery, human resources management, and corporate and employee communication.

One outsourcing vendor in the survey related that his company has been involved for several years in the investigation and use of the Internet. The survey and media point to an active interest in adapting the Internet to the business operations environment.

Organizations with proprietary E-mail systems will move slowly to Internet E-mail for employee and inter-office communication. Human resources management received a high Internet rating, with specific reference to personnel recruiting. This rating confirms the strong evidence that many companies and placement firms are using the Internet for recruiting. Because staffing issues are universal to vendor and customer alike, vendors are in a position to benefit their customers and themselves by using the Internet for this purpose.

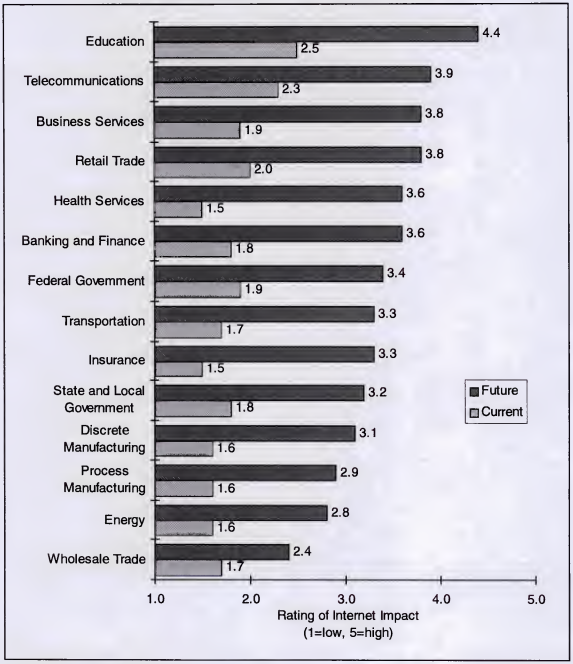
The high potential impact on corporate communication and product/service promotion is discussed further in the section on the Internet and marketing and sales activities. It is important to note that neither outsourcing nor processing services vendors gave high ratings to using the Internet for accounts payable, invoicing, or accounts receivable functions. Legal affairs

received a similar low rating. There is ample indication that data security and access control issues raise sufficient concern to dampen enthusiasm for Internet use for these business functions. This presents issues of caution and opportunity. Caution is recommended to adopters of the Internet to plan and implement measures to control unauthorized access and manage data security. Opportunity will arise for both processing and outsourcing services facilitated by secure Internet access. INPUT recently reported on firewalls in its 1995 report, *Internet Security: The Impact of Firewalls on Client/Server Applications*.

Respondents also were surveyed for Internet impact ratings on vertical markets, today and in the future. The ratings were on a scale of 1 to 5, where 1 is minor and 5 is major, as shown in Exhibit III-3.

Exhibit III-3

Vendor Ratings of Internet Impact on Vertical Markets



Note: number of respondents = 16 *Source: INPUT*

Vendors in both service sectors generally give a low to modest rating to the impact upon vertical markets today. However, the processing services

vendors rate highly the future impact the Internet will have upon banking and finance, health services, retail trade, business services and education. Common to all of these markets is the requirement for fast, efficient and secure data movement.

Processing service vendors view the Internet as a vehicle for lowering the cost of data acquisition and redistribution and obviating the need for investment in global network infrastructure. Implied in the strong rating is a belief that data security can be assured in the years to come. Along with cost containment and an enhanced cost competitiveness, these vendors have the opportunity to move into traditional outsourcing service sectors. In particular, processing service vendors will be forming alliances with business operations and functions specialists to compete for the business operations services. This trend is already occurring in the payroll processing service market with Ceridian and ADP providing direct human resources support services to the customer and its employees.

Retailing is another vertical market that will be strongly influenced by the Internet. The nature of retail trade is already in a state of change, being driven by both consumer preferences and technology. It is responding to changes in pricing points, shopping conveniences, and service quality. The interest in on-line services and the growth of mail order shopping are clear indications of consumers' desire for simplified item selection and delivery.

While secure and authenticated ordering transactions using the Internet are still at the early stages of development, electronic shopping has the potential to get the information to customers when they need it and at a lower cost to the provider. Both outsourcing and processing services vendors rate the Internet as a significant factor in the retailing market. Processing services vendors already are using the Internet in electronic commerce to facilitate communication of transaction activity to and from the retailer.

How additional use of the Internet will play out and the manner in which the Internet may complement other vehicles for service remain to be seen. For example, there is the recent announcement of the collaborative association between Netscape Communications Corporation and @Home (a joint venture of TCI Technology Ventures Inc., a subsidiary of Tele-Communications Inc., and Kleiner Perkins Caulfield & Byers) to establish a partnership for the development of broadband, cable-based Internet service for the home. Although the specifics of the content that will be carried by this new venture have not been disclosed, it is clear that the transmission rate—at more than 500 times faster than current technology—offers a welcoming medium for rich content that can only benefit retail commerce. The opportunity for

expanded services from retailers means that the demand for support services will also grow.

Finally, the respondents were asked to rate the extent to which the Internet will change the way the vendor conducts its business, two years and five years from now. All survey respondents believe that the Internet will have at least a modest impact on the way business is conducted within two years and 67% rated the impact to be major within five years.

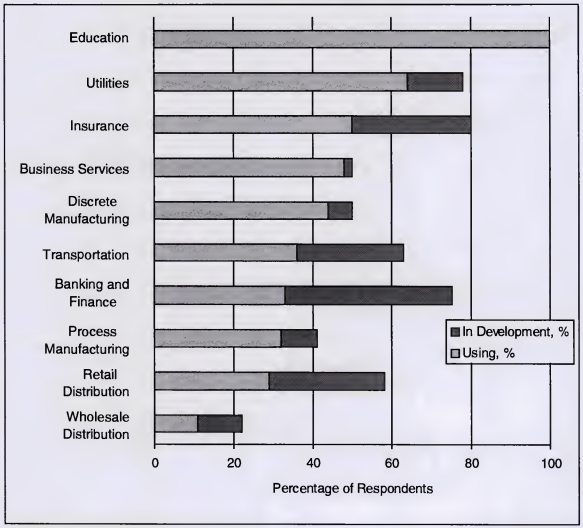
In summary, there is a consensus the Internet is becoming a vital asset in vendors' service delivery. Further, the Internet will impact vendor business operations and the way companies do business. The Internet will play a key role in improving the delivery of outsourcing and processing services for a number of vertical and cross-industry markets. The major themes, today, are an expanding global reach for inter- and intra-company communication, facilitated by Internet E-mail and the reduction of communication costs achieved through substitution of the Internet for proprietary networks. There was a recurring message, in the domain of electronic commerce, that the Internet will impact the "consumer-direct" services with an explosion of retail and banking services. In support of these services, vendors identified the facilitation of communication between customer and provider and value-added services involving analysis of customer buying patterns and preferences.

2. The Internet and New Service Opportunities

The Internet presents a wealth of new business opportunities for systems integration, professional services and outsourcing service providers. Evidence of prospective demand can be found in a recent INPUT cross-industry survey of 205 companies on their uses of the Internet. Fifty-five percent of the surveyed companies are already using or developing capabilities for the Internet. Exhibit III-4 profiles the use by industry and commitment level for those industries with at least 10 respondents.

Exhibit III-4

Industry Sector and Commitment to Internet Use

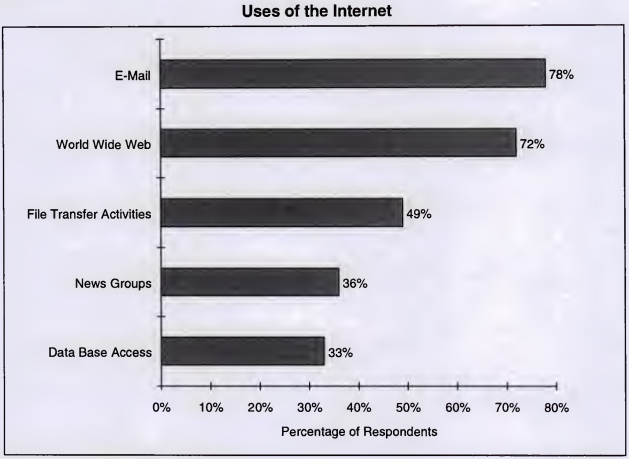


Note: number of respondents = 205 *Source: INPUT*

The percentages provide striking evidence that the Internet is in the process of becoming ingrained in corporate activities. Usage has moved from an incipient phase to wholesale adoption, in a very short time period. For

organizations already utilizing the Internet, the activity profile is shown in Exhibit III-5.

Exhibit III-5



Note: number of respondents = 205 *Source: INPUT*

The profile confirms early and overwhelming Internet use for E-mail services and the hypertext-based World Wide Web (WWW). This commitment provides clear evidence of need for a broad spectrum of support services.

In view of this groundswell of Internet involvement, this report's second survey topic was to understand the processing and outsourcing vendors' assessment of the opportunities for services related to the Internet. Though there are several potential service areas, a number of vendors responded that it is too early to understand what customers will want. In view of the acceleration in Internet adoption, it is believed prudent to revisit the question of customer and prospect use of the Internet on frequently. The survey identified several Internet-related outsourcing services as having excellent business potential; they are listed in Exhibit III-6.

Exhibit III-6

Examples of Internet Outsourcing Service Opportunities

Service Activity	Outsourcing Service Opportunity
Extend vendor reach into customer services for consumer direct sales	Business Operations
Firewall design, installation & management	Application Operation Application Management
Web Server design, installation and management	Application Operation Application Management
Network antivirus services	Network Management Desktop Services
Network breach detection services	Network Management
Development and management of WWW presence	Business Operations

Source: INPUT

Many of these services already are being offered by outsourcing and processing service vendors. For example, the Business Recovery Service division of IBM's ISSC recently announced a suite of antivirus product and services for users of the Internet.

Outsourcing vendors were specifically asked to rate the opportunities for Internet-related services. The rating was on a scale of 1 to 5 where 1 is minor and 5 is major; the results of the most highly rated opportunities are shown in Exhibit III-7.

Exhibit III-7

Rating of Internet-Related Service Opportunities

Service Area	Average Rating (1=low and 5=high)
Server and network design	4.2
Internet training services	3.1
Web site management	3.2
Ongoing Webmaster services	3.3

Source: INPUT

Only the server and network design service area received a high rating. In general, the other support services were perceived to represent modest value

and, therefore, were not consistent with vendor mission. However, in view of the growing corporate commitment to Internet adoption and use, many of these service areas are looming as opportunities for base building and evolution to substantial outsourcing services.

Other services, such as server and network design and Internet needs analysis also received mention (although all their ratings were in the 3.2-3.4 range). These, viewed in isolation, are "one-time" system integration or professional services projects. However, early use of these Internet-related services may evolve to application management or business operation outsourcing opportunities. Indeed, major vendors, including Unisys, Digital, and Hewlett-Packard, are providing ongoing Webmaster design, installation, and management services. As the uses of the Internet for internal (E-mail) and external (E-mail and WWW) communication proliferate, the opportunities for business operation outsourcing will grow to complement customer needs for Internet technical and operational skills.

As corporations commit to using the Internet, this will create new opportunities for vendor support. For example, the on-line version of the daily newspaper *USA Today* receives as many as one million "hits" per day. A response volume such as this for other corporations may stimulate considerations for turning over the operation and management of home page offerings. Vendors who respond to these opportunities could add value by developing capabilities to filter and qualify and distinguish between random browsing hits and those that are qualified interest in the corporation's products and services.

The future is not too distant when such a vendor will be measured on the basis of its performance in attracting qualified responses and screening out the random hits. This will cause pricing models to incorporate factors such as numbers of initial and return visits to the Web site.

3. The Internet and Sales and Marketing Opportunities

Almost without exception, vendors view the Internet as an important tool for marketing and sales of their services. Establishment of a presence through home page content on the World Wide Web is already viewed as mandatory for the majority of vendors surveyed. The issue has become one of staying even or, preferably, ahead of the competition by maintaining a presence that clearly and professionally conveys corporate image, service capabilities, and the latest services and capabilities.

Many vendors already have placed a majority of their promotional materials on the Web and are using the Internet for dissemination of quarterly and

annual reports, along with regular corporate communication. One vendor observed the need for great care and effort to insure a professional presence on the Web. Otherwise, the experience may be similar to walking into a corporate office with a shoddy reception area and finding ill conceived promotional materials. The Internet is definitely becoming another very important window into the corporation and its services. Exhibit III-8 provides samples of comments from respondents to the question on how vendors will use the Internet to promote and broaden market reach.

Exhibit III-8

Uses of the Internet for Marketing and Sales

- Internet presence will be established, but do not know how to target prospects
- The Internet will be used to feature new offerings and recruit personnel
- Use Internet to communicate with current customers who can be better informed about what the vendor offers—want to have the customer remember them
- Create a sense of community with customers—home page will supplement brochures
- The Internet will force new practices and create new ways to disseminate news—there are similarities with the impact of the Gutenberg press and its profound influence on the dissemination of information—the entire process will change

Source: INPUT

Vendors using or considering use of the Internet for purposes of sales and marketing were asked to rate its use. The rating is on a sale of 1 to 5, where 1 is low and 5 is high. The results are shown in Exhibit III-9.

The general thrust is to inform customers and prospects about vendor capabilities and to be recalled the next time the prospect/customer needs an additional service or product. A key issue arises regarding how to distinguish between those who browse the Web (i.e., surfers) with no qualifying interest and those who have need of more corporate information and details about services. Currently, there is no way of passively qualifying interest. A Web home page may experience thousands of "hits" that have nothing to do with future business potential. This is an issue needing further investigation by the outsourcing vendors, as it opens the door for Internet profiling services. This can become a captive market for those organizations offering Web site hosting and management services.

Exhibit III-9

Vendors' Rating of Benefit of Internet's Use for Sales and Marketing

Benefit	Average Rating (1=low, 5=high)	Percentage of Respondents Giving Rating of 4 or 5
Deliver more information	4.1	75%
Receive more immediate feedback	3.8	67%
Enhance relationship with customer	3.7	67%
Respond more quickly to customer	3.2	67%
Deliver sales information at lower cost	3.8	50%
Promote products through new media	3.8	67%
Provide better sales information	3.7	67%
Test new sales strategies	3.3	42%
Obtain new customers	3.0	42%
Support new customers at lower cost	3.6	58%

Source: INPUT

The Internet is viewed as a vehicle by which to communicate vendor capabilities to and receive feedback from customers and prospects. The outsourcing and processing services vendors are not the only ones realizing the benefits of the Internet for getting information out to prospects and users. A recent INPUT report, *Internet Application Case Studies,* reviews the uses to which companies as diverse as General Motors' Saturn Division, J. P. Morgan, Schlumberger, and General Electric are putting their presence on the Internet.. As a final note, the recent cross-industry corporate survey about adoption of the Internet by corporate users reveals that of the 55% of the survey population already using it, 26% of that population is using the Internet for promotion and outreach to customers.

The processing services vendors were found to be more enthusiastic about using the Internet to deliver sales and marketing information and to promote products. The difference in rating, while not stark, may indicate that processing services vendors have progressed further in the uses of Internet for promotion and service delivery. None of the ratings fell below 2.8.

Once a decision is made to establish a Web site, the vendor must then decide whether to develop the Web site in house or contract the effort out. This

decision is very much a function of the resources available to develop a presence and the content of the home page. The greater the need for graphics and screen forms, the larger the effort and the more technical expertise required. Further, the extent to which the vendor wants its presence available (i.e., 24 hours per day, 365 day per year, or 8 hours per day, 5 days per week) also will point to maintenance of the Web site in house or contracting the operation out.

Finally, the content and frequency of information update of the home page must be the responsibility of the vendor. Several outsourcing vendors have contracted their Web site development and maintenance to Technology Partners Inc., an outsourcing consulting company that is providing this tailored service.

4. Convergence of Processing and Outsourcing Vendors

Processing services vendors orient their service toward delivering a resource, as in the case of the disaster recovery provider, or a narrowly delineated processing service (e.g., payroll processing) in response to the customer's functional or operational need. The extent to which a vendor takes responsibility for total service delivery highlights the difference that exist between the processing service vendor and a vendor delivering a business operation outsourcing service. The market opportunity can be satisfied by overlapping delivery capabilities. INPUT expects that this convergence will take on new significance as the processing service vendors strive for new areas of growth. The competition is becoming intense. The payroll processing service market is a case in point.

As the cost of hardware and availability of off-the-shelf software makes payroll services more attractive for in-house processing, payroll processing vendors search for value-added services by which to sustain their position as payroll processors and supplement or replace services that the customer may be willing to "outsource." There is clear indication, for example, that both Ceridian and ADP have added human resources support services to their offerings. In addition to software for human resources management (i.e., ADP with PeopleSoft and Ceridian with Tesseract), these companies are moving toward providing employee assistance and benefits and other human resource-related services. An example of this is the recently announced alliance between ADP and ABR, Inc.

Further, the availability of operations or business function specialists has been simplified for the processing service vendor through the resources of staffing augmentation services. An immediate opportunity arises for alliances between the processing service vendor and the 2,100 vendors of specialized contract personnel. Once the business/functional service is offered by the processing service vendor, the distinction between this partnership and that of the business process outsourcing vendor blurs. These new competitive issues and forces must be addressed by both service vendors. The competition will become more intense as markets for services continue to grow and vendors are able to hurdle technology and staffing barriers previously thought to be unique.

5. Phases of Outsourcing and Internet Opportunity

INPUT's last five-year forecast, *U. S. Outsourcing Market Analysis 1994-1999,* developed the concept of a three-phased outsourcing evolution. Each phase evolved in response to market demand and represents the continuum of today's outsourcing options. As client needs and technological forces create new thinking about the uses of technology, changes in business process, and core business domains, the latter phases are projected to play increasingly important roles in the outsourcing services market. It is suggested that dynamics and issues addressed in the evolutionary phases of outsourcing will find similarities in the evolution of the Internet and its adaptation to the outsourcing and processing services markets. The early initiatives and evidence will be discussed in the following subsections.

a. Phase I—Utility Service

In Phase I, known as Utility Service, the early outsourcing business decisions coalesce around contracting for outsourcing as a step to reduce the cost of operation. In addition to the cost considerations, outsourcing is viewed as a utility function in which the data center, for example, is outsourced, but the activities surrounding the business function are retained by the client. The business applications were maintained by the client. Application operations was a typical Phase I service in which the hardware, including system software, networks and databases, were managed by the vendor. Phase I outsourcing activities include computer asset purchase and management, software license fees, and client staff assimilation.

The adoption of the Internet within the corporate environment is a microcosm of the outsourcing evolution. Attraction to the Internet, today, is stimulated largely by the opportunity to reduce communication cost and enhance the facility for in-house communication and external promotion-related communication. Although use of the Internet has moved beyond the

curiosity stage and mainline uses have been identified, vendor opportunity in the Internet's utility phase exists in the implementation and management of services that are cost-saving replacements for traditional business operations. In addition to the direct benefits, the dearth of in-house technical staffing and technical knowledge are driving the utility phase.

b. Phase II—Transitional

Phase II, known as transitional outsourcing, is broadly defined to include service activities that facilitate the transition from large, mainframe-oriented legacy systems to a client/server computing environment. At a minimum, the vendor undertakes operation of the hardware, network, and systems applications and the maintenance and upgrade of legacy systems. Usually, the vendor also will work with the client to develop and implement the infrastructure of client/server applications and hardware. In contrast to Phase I, transitional outsourcing requires the vendor to have sufficient expertise to understand the business environment and industry. As the demand for client/server applications continues to grow across all industries, Phase II outsourcing services continue to expand.

The Internet service transitional phase already looms, with corporate requirements to integrate the Internet resource into all phases of activity while developing metrics for measuring the effectiveness of its use. It is not enough for a corporate Web site to receive 1,000 or 10,000 hits per week when the qualification and quality of hits are unknown. Vendors have the opportunity to provide value-added services by assisting the customer to implement Internet services and measure the effectiveness and utility of the resource. The transition will move the vendor service from providing only a technical resource related to Internet access to integration of the Internet into the backbone of corporate operations. The phase represents the integration of Internet technology into the corporate business operation. In addition, the vendor will be held responsible for meeting service-level objectives and enhancing the value of service from one of utility (or curiosity) to mainline business operations functions.

c. Phase III—Business Process

Phase III, business process outsourcing, is responding to the client's need to focus clearly on core business activities while redefining all business processes. Phase III outsourcing has begun a strong move toward business operations outsourcing. In the process of identifying the core business activities essential for corporate growth (or maybe survival) and the steps for improving the business processes across the entire corporation, many subordinate business activities are ideal candidates for outsourcing for

vendors having knowledge and expertise in information technology solution delivery, support of legacy systems, and management of business process services. A vendor must have an outstanding knowledge of the business operation that it is expected to support. A prime example of a Phase III outsourcing provider is Andersen Consulting with its recently announced Business Process Management (BPM) service. BPM is designed specifically to address the transformation of a business process in which outsourcing is a facet of the solution. The entire business process is restructured, in which not only is the information systems function outsourced, but application management is also considered a process for improvement.

Phase III outsourcing will drive business alliances between vendors to support the across-the-board service requirements. Subcontractors with specialized service capabilities will be sought to participate in these alliances. A recent alliance that points to such moves is the teaming of IBM's ISSC with Kodak Imaging Services, in which the latter will manage the output of ISSC's operation.

The Phase III segment of corporate adoption of the Internet will include opportunities for vendors who can meld the technology of the Internet with business process expertise. For example, there is already evidence of the convergence of the Internet with EDI applications. Vendors who can provide both the technical expertise and the business process expertise to facilitate such purchase order and invoice processing will have a strong position.

Exhibit III-10 summarizes the outsourcing phases and the business/industry content.

Exhibit III-10

Outsourcing Phases

Phase		Driver	Business/ Industry Content
• Phase I:	Utility	Cost	Low
• Phase II:	Transition	Technology Change	Moderate
• Phase III	Business Process	Core Business Change	High

Source: INPUT

The importance of business process outsourcing will increase and will account for 7% of the total outsourcing market by 2000, compared with 4% in 1995. These figures refer to only the non-Internet services. Once the Internet-related services are included then Business Operations outsourcing is expected to potentially account for 15% of the total outsourcing market.

6. Consulting Service Opportunities

Consistent with the continuing trend toward corporate staff reduction, limited investment in staff personnel with leading-edge information technology skills and the direction toward reengineered business processes, companies have ever-increasing needs for consulting service support to guide them through the strategic, tactical, and implementation stages of the restructuring process. Often process reengineering includes the outsourcing of business operations and information systems activities.

Demand is building for consulting in support of the analysis, planning and management of outsourcing services. The growth rate parallels that of the outsourcing industry expansion. Consulting services related to client/server transition, end-user computing, strategic planning and value-added services are forecast to have the most aggressive growth during the next five years. In particular, the planning, implementation, and operation of client/server applications and the infrastructure that underpins them offers ongoing opportunity for consulting services.

In many cases, the limited ability of prospective clients to analyze and plan, to develop the baseline requirement statement for outsourcing, and to evaluate the vendor responses opens many consulting avenues for outsourcing providers and information systems consultants.

The Internet presents a new set of consulting opportunities for the outsourcing vendor. In particular, a built-in opportunity exists in ongoing outsourcing contracts to assist the customer in deciding how and for which operations the Internet should be adopted. Strategic consulting would address the fundamental questions about how and in what context the Internet should play a role in the business operation, if any.

Vendors with Internet experience will provide invaluable insight into its uses. Tactical consulting activities provide a broad spectrum of opportunity for planning and design of Internet uses and laying out of the interfaces between the Internet and ongoing operations. Finally, there are myriad opportunities for outsourcing providers in the implementation phase, including the design, installation, and management of Internet-based services.

In the short term, many of the implementation activities are not of major contract value and so opportunities are presented for outsourcing providers to form alliances with smaller, specialized Internet consulting firms, particularly during the design and implementation stages. By the end of 1997, most large outsourcing contracts will include an Intranet aspect to the

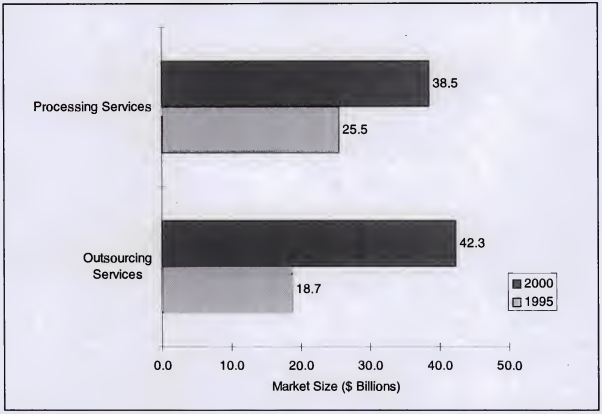
work. This makes it imperative that outsourcing companies develop their own internal Internet expertise as quickly as possible if they are to be able to demonstrate skills in this area.

B
U.S. Market Forecast, 1995-2000 for outsourcing services

The U.S. outsourcing and processing services market forecast for the period 1995 to 2000 continues at a strong pace, as depicted in Exhibit III-11.

Exhibit III-11

U.S. Outsourcing and Processing Service Markets, 1995-2000



Source: INPUT

Outsourcing services is one of the fastest growing information services markets, continuing at last year's 18% forecast rate. The market projection is to more than double, from $18.7 billion in 1995 to $42.3 billion in 2000. This momentum is fueled by the move to outsource functions outside the data center (desktop services, network management and business operations outsourcing).

The processing services aggregate market growth rate is 9%, equal to that of last year. Despite the far higher growth rate of outsourcing services, it will

be 1999 before expenditure on outsourcing services exceeds that of processing services. However, the impact of the Internet will bring that date forward by a year.

The major areas of activity in the processing services market are transaction processing services, with the expanding role of credit and debit transactions in the retail environment, and the resurgence of interest in and contract activities for disaster recovery services.

C
Forecast for Services Categories

This section discusses the forecasts for service categories in the outsourcing and processing service domains.

There is an overlap between the technology-specific categories (i.e., desktop services, network management, and application management) and systems (i.e., infrastructure) operations. For example, in the case of a contract that involves both infrastructure management as well as, say, application management, INPUT treats the annual revenues as accrued against either network or application operation outsourcing. Further, for business operations outsourcing, transaction processing, and disaster recovery, the annual revenues are accrued directly to the specific category without consideration for allocation to any infrastructure services.

The following presents the category forecasts for each service domain.

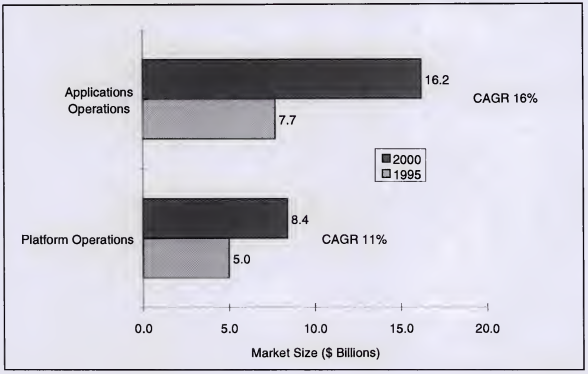
1. Outsourcing Services

a. Systems Operation

Systems operations includes application operations and platform operations and enjoys a dominant share of the outsourcing services market, accounting for 68% of the expenditure. A 14% overall compound annual growth rate for systems operations places the market size at $24.6 billion in 2000, as shown in Exhibit III-12, representing a 58% market share. The systems operations outsourcing segment will continue its market dominance into the turn of the century, even though its market share will decrease during the five-year period to 58%.

Exhibit III-12

U.S. Systems Operations Outsourcing Market, 1995-2000



Source: INPUT

Application management is maintaining its high rate of growth even though the nature of the contracts is changing. There are fewer data center-based contracts being signed relative to the number of contracts involving distributed systems. Transition outsourcing, in which the vendor supports the legacy applications while the customer or vendor converts to a client/server environment, continues to grow.

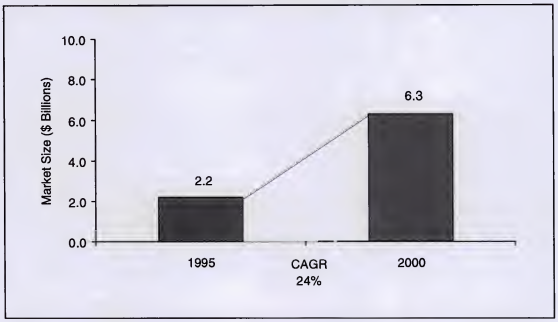
1994 was marked by few multibillion-dollar contracts. The Hughes Aircraft $1.5 billion contract awarded to CSC for platform operations ranks in this category. This contract also includes elements of desktop services, network management, and application operations over an eight-year contract period. The Hughes contract is atypical of the majority of systems operations awards in that most are contracts for islands or segments of information systems services, as opposed to awards for the entire infrastructure support. The service segmentation trend continues from last year as a clear indication that not only is outsourcing being used on a broad strategic basis, but for isolated, tactical services as well. A review of other recent, but smaller, systems operations contracts reveals that most are for platform operations, with contract values ranging between $5-10 million and $450 million.

b. Desktop Services

The desktop services outsourcing market is conservatively estimated to be $2.2 billion and growing at a compound rate of 24% during the next five years. This rate is slightly more aggressive than last year's rate, reflecting the increasing importance that industry is placing upon the use of desktop systems in a networked environment and acknowledging the value that outsourcing support brings to desktop systems installation, configuration, maintenance, and user support. The market value of desktop outsourcing services in 2000 is forecast to be $6.3 billion, as shown in Exhibit III-13.

Exhibit III-13

U.S. Desktop Services Outsourcing Market, 1995-2000



Source: INPUT

The near trebling of market size is very conservative, since this service classification does not recognize the desktop service components involved in the delivery of other outsourcing services. Specifically, infrastructure outsourcing other times encompasses desktop services in the delivery of platform or applications operations outsourcing services. It is estimated that the desktop services component of systems operations represents as much as 25% of the expenditure on desktop services.

The trend toward outsourcing of desktop support services cannot be underestimated, in view of the corporate decisions to migrate to client/server computing environments, the need to insure the integrity of desktop systems, and the constraint placed on support budgets for personnel with requisite skills. Consider, for example, the implications for large corporations with

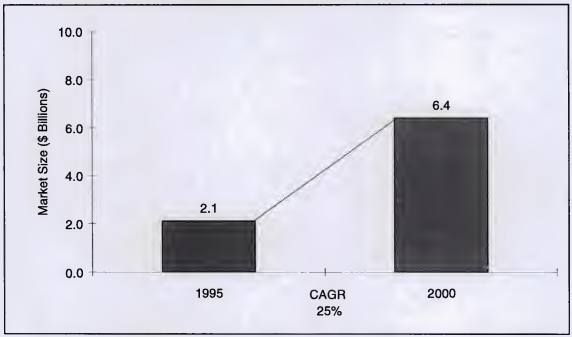
thousands of installed PCs making the decision to install Microsoft Windows 95. With an installation time of up to two hours per machine, a decision to allocate in-house personnel and training time for person-years of effort or to outsource the reconfiguration, installation, and upgrade activities becomes a very serious consideration.

c. Network Management

The market for network management services will continue its growth at last year's CAGR of 25%. The market size for 1995 is $2.1 billion, growing to $6.4 billion in 2000, as shown in Exhibit III-14.

Exhibit III-14

U.S. Network Management Outsourcing Market, 1995-2000



Source: INPUT

The rate is reflective of the growth in corporate commitment to client/server computing and the concomitant requirements for LAN and WAN infrastructure. In addition to this, the rapid adoption of the Internet for inter- and intra-company communication raises new requirements for firewall infrastructure in response to security concerns. These elevate the complexity of installation and maintenance of the entire network environment. The interface to the Internet presents a significant consulting and outsourcing opportunity to vendors with network and security expertise.

Network management encompasses only contracts that strictly call for management of the network. Network management activities that are a

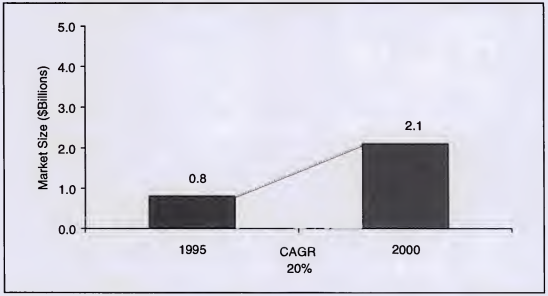
component of other outsourcing services are not included in the analysis. When the network is outsourced as part of the application, platform, or business operation contract, the network service component is counted in those contracts.

d. Application Management

The application management outsourcing market enjoys solid growth fueled by the tendency of companies to opt for vendors to develop, maintain, and operate non-mission-critical applications. Growing at a compound annual rate of 20%, the market size is $0.8 billion and growing to 2.1 billion in 2000 (see Exhibit III-15).

Exhibit III-15

U.S. Application Management Outsourcing Market, 1995-2000



Source: INPUT

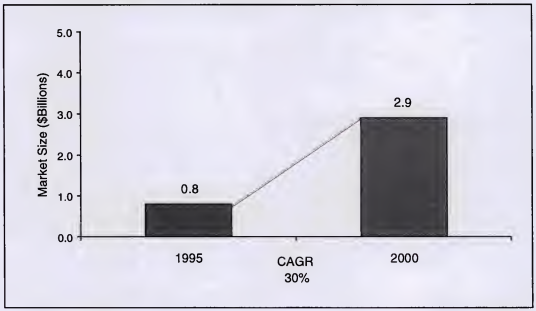
Application outsourcing is an attractive alternative for organizations with limited availability to trained personnel. It is a valid alternative to client managed operations. As with network management, INPUT only includes contracts in which the application alone is outsourced. When the application is outsourced as a facet of platform or business processes, the application service is counted in either the application or business operation service categories.

e. Business Operations

The growing commitment to business process reengineering acts as a well-spring of new requirements for outsourcing suppliers to take responsibility for operating non-critical business applications and also providing the business services keyed to that application. These applications usually underpin business processes not central to business success. Examples of these include accounting, accounts payable, order processing, and customer service activities. In each case, the vendor must bring to the table the information systems and business process expertise to offer a service that is undistinguished from the performance environment of the customer. An explosive market with a growth rate of 30%, business operations outsourcing is a $0.8 billion market, today, growing to $2.9 billion in 2000, as shown in Exhibit III-16.

Exhibit III-16

U.S. Business Operations Outsourcing Market, 1995-2000



Source: INPUT

The business operations outsourcing service area continues to offer new market opportunities to processing services providers who are complementing their transaction-oriented services with related business functions services. Convergence of the service capabilities offered by outsourcing and processing services vendors portends new competitiveness that will sustain the explosive nature of this and other service markets. An example of this convergence is the move by Ceridian, a payroll processor, to offer software and personnel for human resources-related services. As processing services vendors enter the business operations market, the size of

the latter market may potentially increase by a factor of 10, to $30 billion in 2000.

2. Processing Services

The processing services market growth is at a modest compound annual rate, with a 1995 market value of $25.4 billion, growing to $38.5 billion in 2000 (see Exhibit III-11).

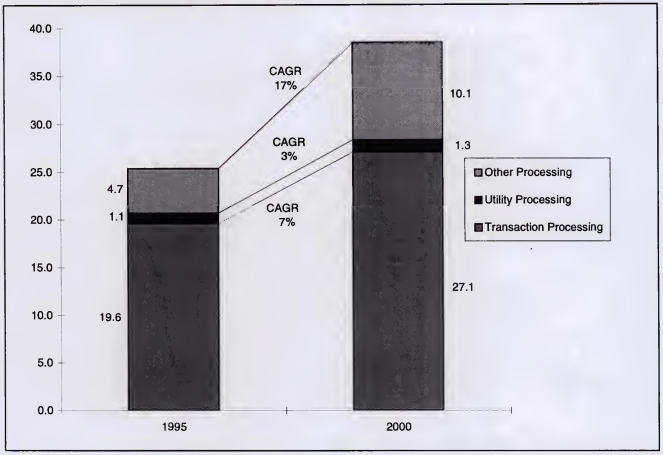
Several vertical industry markets and processing service sub-categories will experience rates considerably in excess of the aggregate rate. For example, in addition to the expected cost saving potential that the Internet offers for intra- and inter-company communications, the link the Internet will offer for home banking and credit card transaction processing will inevitably drive up the growth rate. The Internet offers new ways for transactions to be communicated and arrive at the processing site. In general, it is expected that the Internet will drive the growth of electronic commerce. The direction and growth rate promoted will create new roles for processing services vendors.

a. Transaction Processing

Transaction processing services will grow at a 7% compound annual rate. The current market value is $19.6 billion and the value is forecast to be $27.5 billion in 2000, as shown in Exhibit III-17. The rate will be fueled by the growth of point-of-sale, home banking and electronic benefits transfer applications.

Exhibit III-17

U.S. Processing Services Market by Component Service, 1995-2000



Source: INPUT

b. Other Processing Services

These services are predominantly disaster recovery services, but also include activities that can best be classified as operational support, such as remote data entry and specialized output services (e.g., computer output on microfilm and printing services). Disaster recovery is the segment with the greatest growth potential.

The interest in and commitment to disaster recovery services is forecast to continue and to push the CAGR up to 17%. In large measure, this growth is in response to heightened awareness of the perils of natural disasters, as well as increased business awareness of the necessity for insurance as the availability of these systems is now so critical to a corporation's operation. The 1995 market expenditure is $4.7 billion, growing to $10.1 billion in 2000.

In addition to current sensitivities about recent natural and man-made disasters, the distribution of the computing environment to the desktop and

the residence of data on multiple platforms in the client/server environment heightens concern for operation recovery and platform stability in the event of a disruption. The issues have moved from a centralized (i.e., glass house) environment with single point responsibility to one of a decentralized (i.e., distributed) environment with numerous points of responsibility. Flexible and responsive backup and recovery now becomes an urgent management issue. Disaster recovery vendors are responding to this challenge with mobile computing facilities and user support help desk centers.

D
Competitive Analysis

1. Market Specialization

The leading vendors are responding to changes and shifts in outsourcing demand by adjusting their marketing strategies. The trend is toward tailored sales strategies keyed to specific market verticalization. Vendors are improving their ability to deliver value-added services through alliances with industry specialists and niche service providers. The Big Three outsourcing vendors continue their general market momentum using a selling strategy and self-contained teams with marketing, sales, consulting and systems integration expertise centered around each vertical market.

- CSC's commercial market specialization includes financial services, insurance, manufacturing, health care, utilities and telecommunications. Recent awards in the manufacturing sector include contracts from Hughes Aircraft, Scott Paper, and Polaroid, each one for platform operations. Another platform operations contract is with Southern New England Telecommunications. A clear indication of the move toward alliances that strengthen industry penetration strategies is CSC's platform operations contract with Mutual Life Insurance Company of New York, which calls for the companies jointly to establish an Insurance Technology Center to offer a range of services that includes outsourcing and industry-specific consulting services.

- ISSC has organized its sales, marketing, and consulting teams to address the retail, insurance, transportation, manufacturing, and utility industries. Recent manufacturing contracts include those with Bethlehem Ship Building and Allied Signal for platform operations. Retail industry outsourcing contracts recently signed are with Merisel, Owens & Minor, and America's Favorite Chicken. In addition, Peco Energy awarded a large platform outsourcing contract to ISSC.

- EDS maintains its dominant position and continues to sell and service through Strategic Business Units (SBUs), each of which focuses on an industry such as insurance, finance, manufacturing, energy, and government. Recent awards in the insurance-related services industry include those from Mississippi Medicaid and Blue Cross/Blue Shield of Arkansas.

Exhibit III-18 shows the target industries of the Big Three outsourcing vendors.

Exhibit III-18

Top-Tier Outsourcing Vendors' Vertical Market Emphasis

Industry	EDS	ISSC	CSC
Banking and Finance	X	X	
Business Services			
Discrete Manufacturing	X	X	X
Education		X	
Federal Government	X		X
Health Services		X	X
Insurance	X	X	X
Process Manufacturing	X	X	X
Retail	X	X	X
State and Local Government	X	X	
Telecommunications	X	X	X
Transportation	X	X	X
Utilities	X	X	X
Wholesale		X	

Source: INPUT

Other vendors are moving their market strategies toward vertical market services. Perot Systems' alliance with the Swiss Bank Corp. signals the outsourcing provider's move toward banking and finance services specialization; Perot also picked up a significant platform operations

outsourcing contract for the bank's international investment banking division.

A review of outsourcing contract awards during the past year provides further evidence that the era of the "mega-deal" contracts is waning, and giving clear evidence that utility-based services are in demand for systems operations and application management services. In addition to the smaller but focused contracts, vendors are positioning themselves to provide process management services. For example, Andersen Consulting has begun to concentrate on process management services while forming an alliance agreement to sell off its outsourcing data center to GE Capitol. Further, SHL Systemhouse continues its move toward process management services and will undoubtedly also add industry specialization in the aftermath of the MCI acquisition.

The acceptance of outsourcing as an element of strategic business decision-making processes has encouraged additional outsourcing initiatives, which can best be classified as nontraditional and, in many cases, unrelated to mainstream services. Demand is building for peripheral support services such as printing and output services, data and voice communication management services, and provision of vendor personnel with specialized functional or industry knowledge. These demands will create new opportunities for collaborative alliances between multiple service providers.

2. Vendor Market Share and Strategies

In response to the shift away from large outsourcing contracts in the U.S., both first- and second-tier outsourcing companies are shifting strategies to selected industry targets, business operations services, operations management and application management services.

The first-tier vendors—CSC, EDS and IBM/ISSC—dominate as they continue to deliver on the mega-contract operations. Their total revenues account for approximately 34% of the market. As the trend toward smaller, process- and utility-oriented contracts increases, the Big Three will still dominate, but their total market share is expected to decrease unless they widen the scope of their operations and seek to have a far higher portion of their contracts from network-related activity. ISSC has already announced its intention to actively pursue outsourcing contracts with smaller companies than it has traditionally approached.

There is also increased competition with second-tier vendors who are specializing in niche service areas. Further, it is expected that processing services vendors will seize the opportunity to branch into outsourcing

services by expanding their scope of services to include business processes. Companies already showing momentum for this migration are Ceridian, ADP, Fiserv, Shared Medical Services, and Policy Management Services.

(Blank)

IV

Vertical Markets

This chapter provides an overview of selected vertical markets and the influences and potential impacts of the Internet on them. A common theme is developing for increased access to network-borne information and communication between business and its customers and providers.

Much of the information regarding the Internet comes from a recent survey of 205 corporations for the status of their uses of the Internet and rating of current and future potential.

For each of the vertical markets the influence of the Internet is considered from the standpoint of:

- On-line services most frequently used
- Area of highest operational impact from the Internet
- Area of highest revenue or cost impact resulting from use of the Internet

A
Banking and Finance

The increasing competition, merger activities and efforts to improve low-margin business segments have stimulated banking industry uses of network services, with special emphasis on the Internet. The use of new technology is at the center of the industry's efforts to leverage increasing size and improve profits. Retailers and third-party service providers are stimulating the growth of electronic commerce and this is adding further fuel to the Internet-related activity in the banking sector. In addition, commerce is promoted by proprietary network providers who are managing financial transactions for network-based goods and services.

As in many industries, the Internet is being adopted by banks for marketing and corporate communication via the Web, as well for interoffice E-mail services. The referenced corporate survey indicates that, of the twelve banking institutions contacted, nine are currently using or developing Internet applications. Respondent activities and ratings are shown in Exhibit IV-1.

Exhibit IV-1

Internet Influences—Banking & Finance

Usage/Impact	Response	Percentage of Respondents Using the Service/Rating of Importance*
On-line services most frequently used	Electronic mail	58%
	WWW	50%
High-impact areas	Technology	4.5
	Service	4.2
Anticipated revenue/cost impact	Cost will be reduced	3.5
	Profits will increase	3.5

*1 = "not important," 5 = "very important"; n=12 *Source: INPUT*

The strong technology rating relates to the Internet being used to interface with multiple platforms. In addition, the Internet is being adopted to provide easy customer access to greater levels of information. Note the high incidence of usage of E-mail and Web services for communication within the organization and with customers, respectively. The banking industry's trend toward promoting home banking will depend upon the availability of the Internet for access. As Wells Fargo Bank found, the number of people ready and willing to subscribe to an Internet-based home banking service was ten-times the number who subscribed to Wells Fargo's proprietary network-based service.

Data security and access control will remain key barriers to generalized use. Processing service and outsourcing vendors should view these trends as an opportunity to provide both implementation and ongoing operational services.

B
Discrete Manufacturing

Discrete manufacturing organizations have started business process reengineering activities to improve their ability to deliver products in a more timely and cost-competitive manner. In addition to the opportunities presented to vendors for outsourcing non-strategic business operations, this market is working to improve intra-company communication while implementing systems for on-line access to catalogues of products, on-line ordering services, and customer access to status reports.

Exhibit IV-2

Internet Influences—Discrete Manufacturing

Usage/Impact	Response	Percentage of Respondents Using the Service/Rating of Importance
On-line services most frequently used	Electronic mail	32%
	FTP	31%
High impact areas	Technology	4.0
	Sales	3.8
Anticipated revenue/cost impact	Cost will be reduced	3.3
	Profits will increase	3.2

*1 = "not important," 5 = "very important"; n=16 *Source: INPUT*

Exhibit IV-2 shows the results of the survey assessment. There is a consensus for use of the Internet to provide wider employee access. The high-impact operational areas for the Internet are sales and the delivery of real-time quotes facilitated by end-to-end customer transactions.

C
Insurance

The insurance industry is experiencing dramatic changes in its market for services and in the way services are to be delivered. Of utmost importance are the changes in the health care industry and the associated new demands on insurance services. Insurance carriers are looking to on-line services to communicate with insured members (i.e., employers, their employees and the self-insured) and providers (i.e., those in the health care network, including

physicians, dentists, hospitals and support services). Many HMOs are already moving toward on-line membership and policy information. Exhibit IV-3 shows the ratings of Internet-related services.

Exhibit IV-3

Internet Influences—Insurance

Usage/Impact	Response	Percentage of Respondents Using the Service/Rating of Importance
On-line services most frequently used	Electronic mail	60%
	WWW	60%
High-impact areas	Technology	4.2
	Service	4.2
Anticipated revenue/cost impact	Cost will be reduced	3.3
	Profits will increase	3.1

*1 = "not important," 5 = "very important"; n=10 *Source: INPUT*

The E-mail service was identified as a primary vehicle for membership information. Further, insurers believe that use of the Internet for policy servicing and membership will ultimately reduce cost while offering the potential for increasing revenue. Opportunities for outsourcing service vendors abound in the operation and management of Internet-based communication and product information services. In addition, processing services vendors can respond to demand for expanded transaction processing services.

D
Process Manufacturing

The market and operations dynamics for process manufacturers are similar to those of discrete manufacturers. New service requirements include improved customer communication and availability of on-line catalogues, shipping information, and information access for research activities. Exhibit IV-4 provides details of the survey responses.

Exhibit IV-4

Internet Influences—Process Manufacturing

Usage/Impact	Response	Percentage of Respondents Using the Service/Rating of Importance
On-line services most frequently used	Electronic mail	39%
	WWW	22%
High-impact areas	Technology	4.4
	Service	4.0
Anticipated revenue/cost impact	Cost will be reduced	3.4
	Profits will increase	3.5

1 = "not important," 5 = "very important"; n=44 *Source: INPUT*

Respondents believe that within the next five years, the Internet will be used to communicate material safety data sheets and other related product data. Note the high ratings for the technology and service areas as they relate to direct communication capabilities for both customers and employees. Opportunities will continue to be present for outsourcing providers in support of the reengineering efforts designed to concentrate on core operations while contracting out non-strategic business operations.

E
Retail Distribution

The retailing industry is counting on applying technology to enhance profit margins. Point-of-sale enhancements and greater use of communication among manufacturer, distributor and retailer is common. In addition, as the number of on-line service users increases, retailers are becoming more interested in electronic commerce. Many retailers report that Web pages are on-line or in development and that they are generating strong sales of selected items. Late adopters suggest that new market segments and on-line catalogues are attractive opportunities.

Exhibit IV-5

Internet Influences—Retail Trade

Usage/Impact	Response	Percentage of Respondents Using the Service/Rating of Importance
On-line services most frequently used	Electronic mail	43%
	WWW	29%
High-impact areas	Technology	4.3
	Service	3.7
Anticipated revenue/cost impact	Revenue will increase	3.2
	Profits will increase	3.3

1 = "not important," 5 = "very important"; n=14 *Source: INPUT*

The potential growth of transaction processing services will offer new opportunities for processing services vendors to support the broad-based retailer service needs. Outsourcing service providers also have an opportunity to implement and manage Internet-based on-line transaction and information services.

In general, even though respondents in all industries expect their revenues to increase and costs to decrease as a result of using the Internet, the level of confidence appears low, as indicated by ratings in the range of 3.1-3.5. However, there is a consistent high expectation that the Internet will have a significant impact on technology and service.

V

Conclusions and Recommendations

A Conclusions

Outsourcing services are forecast to grow at an 18% CAGR to $42 billion, market the processing services 9% growth rate will reach a $38 billion market level in 2000. Growth of these services is a confirmation of their solid positioning in response to corporate need for by-product services spun off by business process reengineering (BPR), corporate emphasis and focus on core competencies, and the evolutionary migration to new computing environments.

1. Outsourcing

Outsourcing service providers are responding to the growing demand for infrastructure and business operation management services. As corporations sharpen their attention to core competencies, outsourcing has become a strategic tool in the matrix of management options. There is a clear trend for outsourcing service providers to play an increasingly important role through the staffing and management of business processes and their attendant computing and communication service environment.

The traditional patterns of "big-ticket facility management" outsourcing is giving way to selected services based on requirements for application, business function, business process, or technology management. The patterns of 1994/1995 U.S. awards verify the trend toward shorter duration and smaller, specialized contracts. This opens the door for specialized, niche vendors to either compete directly or collaborate with larger outsourcing providers in alliances to respond to broadening service requirements. Teaming alliances for large, multifaceted outsourcing projects are expected to evolve as customers opt to outsource larger segments of their non-strategic operations.

Further, the movement toward BPR heightens the demand for specialized service delivery and for the vendor to focus on tailored teams to address the customer's needs. These teams are organized around full-cycle marketing, sales, technical support and delivery in selected vertical markets. Vendors are taking this approach, confirming the trend from generalized utility outsourcing to specialized business operations outsourcing services.

Finally, the growing commitment to the client/server computing environment is stimulating demand for complementary outsourcing services. In many cases, the need is for transitional outsourcing support of legacy systems and related platforms. Though this is a service area that eventually will fade out, there are numerous related opportunities. As client/server applications are brought on-line, demand is growing for both desktop support and network management outsourcing services in response to the lack of qualified technical support either in-house or through the client/server vendor. Systems and network management support services are critical to the success of these new application environments.

As discussed later in this section, the Internet is already being adopted by corporations and outsourcing vendors. Key uses of the Internet resource include the global reach and attractive cost advantage of E-mail services, sales and marketing initiatives carried out on the multimedia-based World Wide Web, and global file transfer capabilities.

Exhibit V-1 summarizes the conclusions for outsourcing services.

Exhibit V-1

1995 Outsourcing Services Market Analysis Conclusions

- Outsourcing has become an accepted strategic business option.
- Outsourcing contract awards are tending toward shorter duration and smaller value.
- There is a high level of focus on business process and application management outsourcing.
- Business process reengineering is triggering demand for non-strategic operations outsourcing services.
- Vendors are selling services into vertical markets.
- The Internet will have a positive impact on the cost of outsourcing operations.
- The Internet opens new opportunities for additional outsourcing services.

Source: INPUT

2. Processing Services

Transaction processing services represents the largest segment of the processing services market. Offering its customers economies of scale and specialized expertise in a high-volume processing environment, transaction processing is projected to expand services in traditional markets and create new opportunities for services in nontraditional markets. The traditional service markets, including airline reservations, item processing for banks, and debit and credit card processing, are expected to be tightly coupled to national economic trends. Opportunities for service expansion are already evidenced by the expansion of debit and credit card service reach into U.S. post offices, fast food operations and other retailing operations. Point-of-sale transaction processing services are enhancing the level of analysis and reporting services.

Although declining hardware costs and off-the-shelf software can make it more attractive for smaller companies to consider keeping transaction processing services in-house, technical competence and functional capabilities remain out of reach for many. In the face of this potential market competition, many vendors are taking steps to offset their customers' temptation to bring the services in house. Payroll processing is a case in point in which vendors are responding to the potential business loss by offering process-specific human resources services as a complement to the transaction processing offering. The move by transaction processing vendors toward a convergence with the outsourcing market highlights the competition that is building in the business operations outsourcing market.

Transaction processing represents the largest segment of the processing services market. However, the fastest growing market continues to be disaster recovery services. The steady growth of client/server environments with multiple processors linked by networks has heightened the awareness of the critical nature of corporate data and processing services. Recent natural and man-made disasters highlight the vulnerability of corporate operations and their dependence upon information systems services. Disaster recovery services are the front-line protection in the event of service disruption. Vendors of these services have responded to the challenges present in the distributed computing environment by offering mobile recovery services.

The cost performance and global access to the Internet is an attractive resource for data transmission and E-mail services. This is discussed further in the subsection on the Internet.

Exhibit V-2 provides a summary of the conclusions for the processing services market.

Exhibit V-2

1995 Processing Services Market Analysis Conclusions

- Transaction processing services are expanding service reach in response to growing demand for debit and credit card services and the growth of electronic commerce.
- Low-cost hardware and software combinations will create greater competition for transaction processing providers.
- The Internet will have high impact upon the cost of transaction processing operations.
- Transaction processing vendors are creating new competition and expanding the market for business operation outsourcing services.

Source: INPUT

3. The Internet and Vendor Services

The Internet is a ubiquitous and readily available resource with potential for significant influence upon the marketing, sales, and delivery of outsourcing and processing services. The general consensus of vendors is that the Internet is already beyond the early stages of integration into service activities. Early adopters are finding the Internet to have high impact upon technology, sales, and service delivery. The Internet is destined to play a significant role in corporate business operations.

The enthusiasm for the Internet's potential should be tempered by issues of data security and unauthorized access. Internet use carries with it a burden of need for careful consideration of internal and external access control and the security of data. Firewall technology embodied in hardware and software modules and data encryption must be employed to address these issues.

a. Operational Uses and Considerations

The Internet is in use today to support many aspects of operational activities managed by outsourcing and processing services vendors. At this early stage of adoption, the Internet is an obvious candidate to replace proprietary E-mail services. The leverage offered is access to an in-place infrastructure, reduction of operational cost, and global access. Many vendors already have implemented use of the Internet for intra-company communication. Further, the Internet offers a significant advantage for vendor-sponsored facilitation of links between clients and their customers.

The INPUT survey of outsourcing vendors reveals an early-stage aggressive assessment of the impact that the Internet will have on various service categories. More than 60% of the vendors believe that the Internet will have a moderate to large impact on each of the outsourcing service categories, with the exception of platform operations. A key use issue that will be resolved is the trade-off between the customer's in-place proprietary network and the Internet. Further, there is striking agreement that, within a five-year period, the Internet will have a modest to major influence on the way the vendor conducts its own business.

Outsourcing and processing services vendors believe that there are many areas in which the Internet will influence aspects of business operation activities. For example, the transaction processing vendors view the Internet as a new, lower cost resource for enhancing data transmission and delivery of services to the customer. There is strong consensus that the Internet will positively influence a number of general business operations during the next five years. Any one of these operational aspects will apply equally to customer and prospect, thus representing new opportunities for value-added services. They are:

- Vendor and Supply Management
- Order Processing
- Product and Service Promotion
- Human Resources Management
- Employee Communication
- Inter-office Communication
- Corporate Communications

Human resources management with specific reference to personnel recruiting received a high rating, as well. Issues of data security influenced lower ratings for invoicing and accounts receivable, accounts payable, and legal affairs.

b. Sales and Marketing Opportunities

The Internet World Wide Web, a hypertext-linked multimedia resource, holds considerable promise of changing the way companies communicate their capabilities and services to and receive feedback from customers and

prospects. The ease and attractiveness with which corporations can establish an identity on the Web has created a momentum ultimately requiring all vendors to establish such a competitive presence. There is consensus that establishment of a Web site home page will be mandatory in the near future. Some vendors are progressively using their home page presence to communicate their corporate image as well as to catalog their service and product offerings. Many are only now becoming aware of the need for a presence. Procedures for determining interest in and capability to buy services remains an outstanding issue related to targeting the audience.

Processing services vendors give relatively high ratings to use of the Internet Web to deliver more information, receive more immediate feedback, promote new products and enhance their relationship with the customer. Outsourcing services vendors are not as enthusiastic as the processing service providers about use of the Web for sales and marketing. However, all outsourcing vendors acknowledged that establishing an Internet Web presence will be mandatory for the future.

c. The Internet and New Business Opportunities

The Internet does present new opportunities for consulting, implementation, operation, and maintenance services. These include design, installation, and operation of servers and networks, Internet training services, design and installation of Web sites, and home page development. With the exception of the server and network-related services, the majority of the vendors surveyed expressed little interest in low-value, one-time consulting services. Many small niche consulting companies are addressing the lower value projects, such as home page design and content development; these are candidates for alliance with the larger consulting and service vendors. These alliances will be required to satisfy the overall service needs that Internet-based communication, promotions, and information transport will demand.

B
Recommendations

1. Outsourcing Services

It is extremely important that vendors clearly define the service offerings and select service areas in which they can excel. Customers are outsourcing target portions of their operations and are looking for vendors who bring both technical and process expertise to the project. On the technology side, skills related to client/server migration and network evolution will be important to future outsourcing contracts. As customers focus on core strategic issues and outsource non-strategic operations, vendor success also

will depend upon the ability to understand customers' business issues and manage the related processes. Future outsourcing requirements will encourage alliances between vendors who can meld the technical and process expertise to better serve the customer.

Outsourcing projects will demand that the vendor be able to balance technology and process expertise in a consistent manner across the spectrum of its marketing, sales, consulting, and operations activities. From small to large, vendors must understand and recast their service offerings to be responsive to the customer's needs for business process-oriented outsourcing.

Consistent with targeted offerings, vendors also are moving toward selected vertical markets. Industry credibility has become another competitive differentiation. This move demands that the vendor demonstrate new levels of business process understanding specifically related to targeted industries. Major vendors are now assigning teams to address industry groups. These teams will be staffed for marketing, sales, and account management that can demonstrate both technology and business orientation. The future for outsourcing will demand this level of focus and dedication. Exhibit V-3 summarizes the recommendations for outsourcing services.

Exhibit V-3

Outsourcing Service Recommendations

- Use the Internet to promote service capabilities, convey corporate image and receive feedback from customers and prospects.
- Focus on vertical industry niches to build credibility and to understand and serve business process requirements.
- Develop alliances with complementary service providers to broaden the outsourcing service offering.
- Complement the outsourcing needs resulting from business process reengineering.
- Prepare for smaller value, shorter duration contracts.
- Prepare to address the service requirements evolving outside of the data center environment.
- Look to Internet-related outsourcing opportunities related to design, implementation and management of the Webmaster environment.

Source: INPUT

2. Processing Services

Processing service vendors are in a position to take significant advantage of the Internet's resources. The edge that the Internet offers comes at a time when transaction processing services are poised for new growth in volume,

stimulated by the growth of debit and credit card processing and the opportunity to use the Internet in support of growing electronic commerce services. Further, the disaster recovery service providers are in a strong position to address the backup and recovery needs of client/server and centralized processing environments. These services are further facilitated by the availability of the Internet for remote monitoring, direct link to hot sites, and downloading of backup files. The recommendations are shown in Exhibit V-4.

Exhibit V-4

Processing Service Recommendations

- Use the Internet to promote service capabilities, convey corporate image and receive feedback from customers and prospects.
- Explore and implement Internet-based communication services to improve global reach while reducing the cost of information transmission.
- Internet-based remote customer service centers are additional services that disaster recovery centers can offer on a value-added basis.

Source: INPUT

3. The Internet

The Internet is a readily available resource destined to have an increasing influence on the marketing, sales, and delivery of outsourcing and processing services. In fact, the Internet has already been adopted by many service vendors to benefit internal operations and improve delivery of customer services. The barriers to Internet use are relatively low. Its services can be used for inter-company and intra-company communication via E-mail, corporate and service promotion using the capabilities of the Web, and order processing and information and data transfer using the Internet for EDI.

There are three principal uses of the Internet:

- *The Internet is being adopted as a low-cost vehicle for E-mail communication.* Replacement of proprietary E-mail services with the Internet, both internal and external, offers the potential for global communications without the burden of establishing the related infrastructure. Organizations with major investment in proprietary E-mail software and infrastructure will want to evaluate the trade-off as need for communication services expands. Many vendors point out that Internet E-mail use has reduced corporate communication costs as well as provided leverage for reduction of outsourcing project operational costs. Vendors with multiple sales and project sites praise the capabilities of Internet E-mail access. The enthusiasm for access to the Internet must be tempered by the knowledge that an interface to the Internet global network presents the potential for unauthorized access to the corporate internal networks and data residing in a client/server environment. Detailed consideration of access policies, procedures, and control infrastructure is highly recommended. Firewall hardware and software are gaining popularity as the control infrastructure vehicle.

- *The potential use of the World Wide Web for promoting, informing, selling, and surveying.* Though use of Internet E-mail facilities is optional, it is becoming a reality that use of the Web will be mandatory as a competitive vehicle for communication with customers and prospects (it is interesting to note that all but one of the vendors surveyed had a Web presence). The Web is a convenient vehicle for communicating corporate image and capabilities, business products and services, and for surveying prospect interest. Vendor investment to establish and maintain a Web site can be significant. In addition to the planning and effort required to decide on the content and extent of corporate and promotional material that is to be part of the Web site, issues will have to addressed about whether the vendor's corporate Web site is developed, operated, and maintained externally or within the organization. Many competent Web providers offer design, development, operation, and maintenance of their customers' Web sites and will support any aspect that the vendor wants to outsource. However, the content of the Web site must be the responsibility of the vendor. Finally, many issues still remain to be addressed about qualifying access to the vendor's Web site and targeting first-tier customers and prospects.

- *Use of the Internet for the data communication and file transfer capabilities.* Outsourcing and processing services vendors can leverage capabilities where transport of data is required. Again, access control and data security must take priority when considering the use of file transfer capabilities.

Exhibit V-5 summarizes the Internet recommendations.

Exhibit V-5

Internet Recommendations

- Explore the use of Internet e-mail services for inter- and intra-company communication.
- Explore implementation of a Web site highlighting corporate capabilities, service offerings, and customer feedback.
- Assess needs and implement policies, procedures, and infrastructure to control unauthorized access and secure corporate data in transmission and resident on servers.
- Assess customer attitudes toward the Internet services and promote uses where appropriate.
- New business opportunities for design, implementation, and management of Internet Web sites can be complemented by value-added services that improve qualification of hits on linked home pages and frequent refreshment of content.
- Firewall and data encryption design, implementation, and management represent a growing and important Internet market opportunity.

Source: INPUT

A

Definition of Terms

A
Introduction

INPUT's *Definition of Terms* provides the framework for all of INPUT's market analyses and forecasts of the information services industry. It is used for all U.S. programs, in Europe, and for INPUT's worldwide forecasts. The information services industry structure is diagrammed in Exhibit 1.

One of the strengths of INPUT's market analysis services is the consistency of the underlying market sizing and forecast data. Each year INPUT reviews its industry structure and makes changes if they are required. When changes are made, they are carefully documented and the new definitions and forecasts reconciled to the prior definitions and forecasts. INPUT clients have the benefit of being able to track market forecast data from year to year against a proven and consistent foundation of definitions.

B
Overall Definitions and Analytical Framework

1. Information Services

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

- Packaged software products, including systems software or applications software (called *Software Products*)
- A combination of computer equipment, packaged software and associated support services that will meet an application systems need (called *Turnkey Systems*)
- People services that support users in developing and operating their own information systems (called *Professional Services)*

- A combination of products (software and equipment) and services in which the vendor assumes total responsibility for the development of a custom integrated solution, or part of a solution, to an information systems need (called *Systems Integration*)

- Services that provide operation and management of all or a significant part of a user's information systems or telecommunications functions under a long-term contract (called *Outsourcing*)

- Use of vendor-provided computer processing services to develop or run applications or provide services such as disaster recovery or data entry (called *Processing Services*)

- *Network Services* has two components:

  - Services that support the delivery of information in electronic form—typically network-oriented services such as value-added networks and electronic mail (called *Network Applications*)

  - Services that support the access and use of public and proprietary information such as on-line databases and news services (called *Electronic Information Services*)

- Services that support the operation and maintenance of computer and digital communication equipment (called *Equipment Services*)

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

The information services market also excludes pure data transport services (i.e., data or voice communications circuits such as T-1 carriers). However, where information transport is associated with a network-based service (e.g., electronic data interchange services), or cannot feasibly be separated from other bundled services (e.g., some outsourcing contracts), the transport costs are included as part of the information services market.

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

C
Product/Service Categories and Subcategories

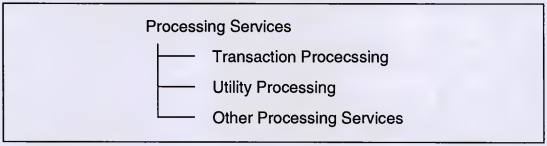
This section of the *Definition of Terms* provides definitions for each of the product/service categories and their submodes or components.

1. Processing Services

This product/service category includes three subcategories: transaction processing, utility processing, and "other" processing services. See Exhibit A-1.

Exhibit A-1

Processing Services Market Structure



Source: INPUT

The three processing services subcategories are:

- *Transaction Processing* - The client uses vendor-provided information systems—including hardware, software and/or data networks—at the vendor or customer site to process specific applications and update client databases. The application software is typically provided by the vendor.
- *Utility Processing* - The vendor provides basic software tools (language compilers, assemblers, DBMSs, graphics packages, mathematical models, scientific library routines, etc.), enabling clients to develop and/or operate their own programs or process data on the vendor's system.
- *Other Processing Services* - The vendor provides a service—usually at the vendor site—such as scanning and other data entry services, laser printing, computer output microfilm (COM), CD preparation and other data output services. This category also includes backup, contingency and disaster recovery services.

2. Outsourcing

Outsourcing (previously called Systems Operations and Facilities Management) was introduced as a product/service category in the 1990 Market Analysis and Systems Operations programs.

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

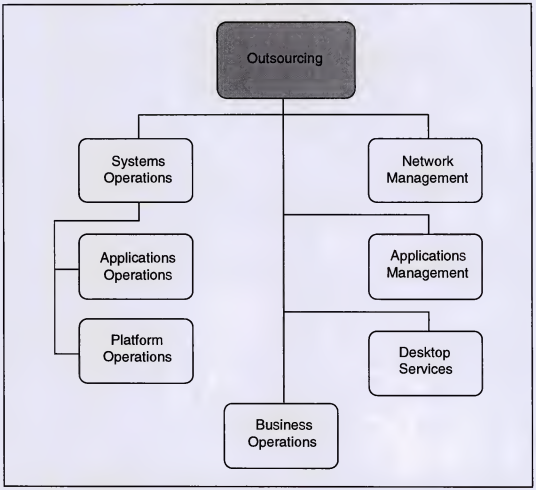
The critical components that define an outsourcing service are:

- Delegating an identifiable area of the operation to a vendor
- Single-vendor responsibility for performing the delegated function
- Intended, long-term relationship between the client and the vendor, where:
  - The contract term is for at least one year
  - The client's intent is not to perform the 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.

For 1996, the outsourcing product/service subcategories have been defined as shown in Exhibit A-2 and defined below:

Exhibit A-2

Outsourcing Components



Source: INPUT

- *Platform Operations* - The vendor manages and operates the computer systems, to perform the client's business functions, without taking responsibility for the client's application systems.

- *Applications Operations* - The vendor manages and operates the computer systems to perform the client's business functions, and is also responsible for maintaining, or developing and maintaining, the client's application systems.

- *Network Management* - The vendor assumes responsibility for operating and managing the client's data communications systems. This may also include the client's voice communications resources. A network management outsourcing contract may include only the management services or it may cover the full costs of the communications services and equipment plus the management services.

- *Desktop Services* - The vendor assumes responsibility for the deployment, maintenance, and connectivity among the personal computers and/or workstations in the client organization. The services may also include performing the help-desk function. Equipment as well as services can be part of a desktop services outsourcing contract.

  Note: This type of client service can also be provided through traditional professional services where the contractual criteria of outsourcing are not present.

- *Applications Management* - The vendor has full responsibility for maintaining and upgrading some or all of the application systems that a client uses to support business operations and may also develop and implement new application systems for the client.

  An applications management contract differs from traditional software development in the form of the client/vendor relationship. Under traditional software development services, the relationship is project based. Under applications management, it is time and function based.

  These services may be provided in combination or separately from platform outsourcing.

- *Business Operations* - 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 supports 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 outsourcing market. Examples of business operations that are outsourced include telephone company billing and employee benefits processing.

Outsourcing vendors now provide a wide variety of services in support of existing information systems. The vendor can plan, control, provide, operate, maintain and manage any or all components of the client's information systems environment (equipment, networks, applications systems), either at the client's site or the vendor's site.

Note: In the federal government market, systems operation services are also defined by equipment ownership with the terms "COCO" (Contractor-Owned, Contractor-Operated), and "GOCO" (Government-Owned, Contractor-Operated).

D
Industry Sector Definitions

INPUT structures the information services market into industry sectors such as process manufacturing, insurance, transportation, etc. The definitions of these sectors are based on the most recent revision of the Standard Industrial Classification (SIC) code system. The specific industries (and their SIC codes) included under these industry sectors are detailed in Exhibit A-3.

INPUT includes all product/service categories except systems software products and equipment services in industry market sectors.

Note: SIC code 88 is Personal Households. INPUT does not currently analyze or forecast information services in this market sector.

Exhibit A-3

Industry Sector Definitions

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

Source: INPUT

Exhibit A-3 (continued)

Industry Sector Definitions

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

Source: INPUT

Exhibit A-3 (continued)

Industry Sector Definitions

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

Source: INPUT

B

Forecast and Reconciliation for Outsourcing and Processing Services

A

Internet Services Forecast

Exhibit B-1

U.S. Internet-Related Outsourcing and Processing Services Markets, 1995-2000

Service Categories	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	1999 ($M)	2000 ($M)	CAGR 95-00 (%)
Platform Operations (Web Hosting long term) for the Internet	25	56	126	209	382	672	93%
Application Operations (Web Hosting + App. Management) for the Internet	38	89	207	600	1,396	3,247	143%
Network Management for the Internet	64	156	322	524	861	1,276	82%
Desktop Services	13	25	50	125	250	500	109%
Application Management	21	40	70	175	300	600	95%
Business Operations	68	284	387	1,084	1,615	2,635	108%
Content - Advertising Agencies	43	80	140	350	600	1,200	95%
Security Management	26	204	247	734	1,015	1,435	124%
Total Internet-Related Outsourcing	229	651	1,162	2,716	4,804	8,931	108%
Processing Services	25	275	598	1,298	2,473	3,851	173%

Source: INPUT

B
Outsourcing Services Forecast

Exhibit B-2

U.S. Outsourcing Market by Industry, 1994-2000

INDUSTRY SECTORS	1994 ($M)	Growth 94-95 (%)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	1999 ($M)	2000 ($M)	CAGR 95-00 (%)
Total All Sectors	**15,740**	19%	**18,664**	**21,785**	**25,619**	**30,170**	**35,651**	**42,297**	18%
Banking and Finance	3,684	18%	4,341	5,131	6,070	7,203	8,538	10,158	19%
Business Services	296	20%	355	424	508	599	712	849	19%
Discrete Manufacturing	1,258	20%	1,505	1,808	2,182	2,641	3,206	3,904	21%
Education	359	19%	427	507	598	705	832	980	18%
Federal Government	1,515	8%	1,635	1,683	1,813	1,924	2,038	2,165	6%
Health Services	1,586	12%	1,781	2,028	2,349	2,764	3,245	3,839	17%
Insurance	1,778	15%	2,045	2,385	2,792	3,268	3,830	4,485	17%
Miscellaneous	28	14%	32	37	44	51	61	72	18%
Process Manufacturing	1,234	18%	1,457	1,723	2,038	2,408	2,845	3,354	18%
Retail Sales	600	22%	730	912	1,136	1,397	1,739	2,170	24%
State and Local Government	2,534	19%	3,018	3,609	4,328	5,203	6,304	7,664	20%
Telecommunications	104	17%	122	139	162	188	217	254	16%
Transportation	354	100%	708	790	880	972	1,097	1,244	12%
Utilities	99	52%	150	194	240	294	348	418	23%
Wholesale Sales	311	15%	358	415	479	553	639	741	16%

Source: INPUT

Exhibit B-3

U.S. Outsourcing Market by Service Category, 1994-2000

Service Category	1994 ($)	Growth 94-95 (%)	1995 ($)	1996 ($)	1997 ($)	1998 ($)	1999 ($)	2000 ($)	CAGR 95-00 (%)
Outsourcing	15,740	19%	18,664	21,785	25,619	30,170	35,651	42,297	18%
- Platform Operations	4,542	12%	5,083	5,639	6,283	6,951	7,645	8,404	11%
- Applications Operations	6,353	21%	7,668	8,878	10,329	12,003	13,961	16,234	16%
- Desktop Services	1,802	22%	2,192	2,686	3,315	4,092	5,080	6,322	24%
- Network Management	1,737	22%	2,117	2,603	3,224	4,031	5,065	6,382	25%
- Application Management	703	20%	841	1,004	1,203	1,439	1,725	2,072	20%
- Business Operations	603	27%	763	975	1,265	1,654	2,175	2,883	30%

Source: INPUT

C
Processing Services Forecast

Exhibit B-4

U.S. Processing Services Market by Industry, 1994-2000

INDUSTRY SECTORS	1994 ($M)	Growth 94-95 (%)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	1999 ($M)	2000 ($M)	CAGR 95-00 (%)
Total All Sectors	**23,415**	9%	**25,425**	**27,538**	**29,921**	**32,452**	**35,331**	**38,506**	9%
Banking and Finance	4,490	9%	4,880	5,280	5,700	6,122	6,580	7,006	8%
Business Services	1,755	2%	1,790	1,820	1,855	1,883	1,925	1,970	2%
Discrete Manufacturing	910	3%	940	966	994	1,021	1,046	1,071	3%
Education	215	3%	221	226	231	235	238	241	2%
Federal Government	108	2%	110	107	105	101	104	108	0%
Health Services	575	4%	596	617	638	660	683	700	3%
Insurance	406	4%	424	447	474	499	525	545	5%
Miscellaneous	133	-2%	131	128	125	123	121	119	-2%
Process Manufacturing	810	4%	840	871	900	929	955	978	3%
Retail Sales	200	6%	211	223	236	251	267	286	6%
State and Local Government	402	12%	452	505	565	630	705	790	12%
Telecommunications	1,397	16%	1,622	1,880	2,197	2,574	3,024	3,555	17%
Transportation	2,395	6%	2,550	2,705	2,875	3,015	3,175	3,350	6%
Utilities	305	11%	339	377	420	467	520	573	11%
Wholesale Sales	340	4%	352	362	372	380	386	392	2%
Total Cross-Industry	3,879	6%	4,123	4,363	4,623	4,856	5,097	5,372	5%
Other Markets	5,095	15%	5,844	6,661	7,611	8,706	9,980	11,450	14%
- Processing Services-Utility	1,085	4%	1,132	1,171	1,211	1,251	1,290	1,325	3%
- Processing Services-Other	4,010	18%	4,712	5,490	6,400	7,455	8,690	10,125	17%
Cross-Industry Summary									
Accounting	158	-1%	156	154	152	150	148	146	-1%
Education & Training	4	0%	4	3	3	3	2	2	-13%
Engineering & Scientific	123	-5%	117	111	104	98	91	85	-6%
Human Resources	2,805	9%	3,050	3,290	3,555	3,795	4,045	4,325	7%
Office Systems	27	-4%	26	25	24	23	21	19	-6%
Planning & Analysis	147	-12%	130	115	100	87	75	65	-13%
Sales & Marketing	615	4%	640	665	685	700	715	730	3%
Total Cross-Industry	**3,879**	**6%**	**4,123**	**4,363**	**4,623**	**4,856**	**5,097**	**5,372**	**5%**

Source: INPUT

Exhibit B-5

U.S. Processing Services Market by Service Category, 1994-2000

Service Categories	1994 ($)	Growth 94-95 (%)	1995 ($)	1996 ($)	1997 ($)	1998 ($)	1999 ($)	2000 ($)	CAGR 95-00 (%)
Processing Services	23,415	9%	25,425	27,538	29,921	32,452	35,331	38,506	9%
- Transaction Processing	18,320	7%	19,581	20,877	22,310	23,746	25,351	27,056	7%
- Utility Processing	1,085	4%	1,132	1,171	1,211	1,251	1,290	1,325	3%
- Other Processing	4,010	18%	4,712	5,490	6,400	7,455	8,690	10,125	17%

Source: INPUT

D
Reconciliation

Exhibit B-6

U.S. Outsourcing and Processing Services Database Reconciliation

	1994 Market				1999 Market				94-99	94-99
	1994 Market (Fcst)	1995 Report (Actual)	Variance From 1994 Forecast		1994 Market (Fcst)	1995 Report (Actual)	Variance From 1994 Forecast		CAGR per data 94 Rpt	CAGR per data 95 Rpt
Service Category	($M)	($M)	($M)	(%)	($M)	($M)	($M)	(%)	(%)	(%)
Outsourcing Services	15,908	15,740	168	1%	36,049	35,651	398	1%	18%	18%
Platform Operations	4,592	4,542	50	1%	7,715	7,645	70	1%	11%	11%
Application Operations	6,442	6,353	89	1%	13,942	13,961	-19	0%	17%	17%
Network Management	1,744	1,737	7	0%	5,223	5,065	158	3%	25%	24%
Desktop Services	1,809	1,802	7	0%	5,067	5,080	-13	0%	23%	23%
Application Management	707	703	4	1%	1,803	1,725	78	4%	21%	20%
Business Operations	614	603	11	2%	2,300	2,175	125	5%	30%	29%
Processing Services	23,407	23,415	-8	0%	35,205	35,331	-126	0%	9%	9%
Transaction Processing	18,397	18,320	77	0%	25,795	25,351	444	2%	7%	7%
Utility Processing	1,075	1,085	-10	-1%	1,320	1,290	30	2%	4%	4%
Other Processing	3,935	4,010	-75	-2%	8,090	8,690	-600	-7%	16%	17%

Source: INPUT

C

Survey Questionnaires for Outsourcing and Processing Services

A
Outsourcing Services Questionnaire

Introduction

This survey is designed to determine the impact that the Internet will have upon the marketing, sale and delivery of outsourcing services, including consideration for:

a. operational economies afforded by use of the Internet

b. new outsourcing opportunities presented by the Internet

c. the use of the Internet in the sales and marketing of outsourcing services

The results of this survey enables INPUT to better highlight the trends and directions in its five year outsourcing services forecast.

A. USES OF THE INTERNET TO ACHIEVE ADDITIONAL OPERATIONAL ECONOMIES IN ONGOING OUTSOURCING OPERATIONS

1. To what extent does the company believe that the Internet will change the way outsourcing services are delivered to its customers. The thrust is to what extent the Internet will provide internal operations cost savings or operational improvements on ongoing outsourcing operations?

no impact_____

small _____

moderate _____

large _____

(*If the response rating is moderate or large*) Please describe how the Internet is or would be used to affect a cost savings or improve operations_

_____

_____

_____

2. Please indicate the impact the Internet is having upon categories of outsourcing services.

Outsourcing Categories	Degree of Impact on the Service Small	Moderate	Large	How is the Service Impacted
Platform Operations	____	____	____	_____
Desktop Services	____	____	____	_____
Network Management	____	____	____	_____
Application Management	____	____	____	_____
Application Operations	____	____	____	_____
Business Operations	____	____	____	_____

Comments _____

_____

3. Please rate on a scale of 1 to 5 (1 being minor and 5 major) the impact of the Internet in the following operational activities, now and 2 and 5 years from now:

	Now	2 years	5 years
Vendor and supply management	___	___	___
Order processing	___	___	___
Inventory & warehousing management	___	___	___
Product/service delivery	___	___	___
Invoicing and accounts receivable	___	___	___
Accounts payable	___	___	___
Sales force management	___	___	___
Product and service promotion	___	___	___
Human resources management	___	___	___
Employee communication	___	___	___
Interoffice communication	___	___	___
Legal affairs	___	___	___
Corporate communications	___	___	___
Other Business Application	___	___	___

4. Please rate on a scale of 1 to 5 (1 being low and 5 high) the impact of the Internet on each vertical market, today and in the future.

Vertical Market	Internet Impact Now	Future	Internet Application/Usage
Banking & Finance	____	____	_____
State & Local Government	____	____	_____
Federal Government	____	____	_____
Insurance	____	____	_____
Health Services	____	____	_____
Process Manufacturing	____	____	_____
Discrete Manufacturing	____	____	_____
Retail	____	____	_____
Telecommunications	____	____	_____
Transportation	____	____	_____
Energy	____	____	_____
Wholesale	____	____	_____
Business Services	____	____	_____
Education	____	____	_____

5. What are the numbers of personnel involved with the Internet team that developed and maintains the Internet presence:

	Vendor Staff	Consultants	Outside Service
Develop presence	_____	_____	_____
Maintain presence	_____	_____	_____

New skills required for the Internet services: _____

_____

6. During the next 2 and 5 years, to what extent will the Internet change the way that the company conducts its business

	2 years	5 years
No change	___	___
Modest change	___	___
Major change	___	___

6a. (*If the change is modest or major*) What will the changes be in each of the time frames? _____

_____

B. USES OF THE INTERNET TO CREATE ADDITIONAL OUTSOURCING OPPORTUNITIES.

1. What kind of new outsourcing opportunities will the Internet create for your company?

_____

_____

1a. Are these new opportunities an extension of current services or will they be a departure from the areas of services traditionally provided by your company?

- New service opportunities ___ (*if new*) describe it _____
- Traditional service extension ___ (*if traditional*) describe it _____

2. Please rate on a scale of 1 to 5 (1 being low and 5 high) the revenue opportunities of service and product opportunities.

	Rating		Rating
- Home Page Content Development	___	Web Site Maintenance	___
- Home Page Development	___	Internet Training Services	___
- Install & Maintain Web Sites	___	Server & Network Design	___
- Webmaster ongoing service	___	Other_____	
- Internet Needs Analysis	___		

C. USES OF THE INTERNET FOR OUTSOURCING MARKETING AND SALES ACTIVITIES

1. How will your company employ the Internet to promote and broaden the marketing reach for traditional and new market opportunities? _____

_____

_____

1a. What unique capabilities of the Internet will be used to expand the prospect base? _____

_____

_____

2. Rate on a scale of 1 to 5 (1 being low and 5 high) the potential benefits that will be derived from use of the Internet.

Item	Rating
Deliver more information	___
Receive more immediate feedback	___
Enhance relationship with customer	___
Respond more quickly to customer	___
Deliver sales information at less cost	___
Promote products through new media	___
Provide better sales information	___
Test new sales strategies	___
Obtain new customers	___
Support customers at less cost	___

D. GENERAL INFORMATION AND COMMENTS

Additional comments and recommendations:

_____

_____

_____

_____

Thank you for your time and efforts to assist INPUT with this study.

B
Processing Services Questionnaire

INTRODUCTION

This survey is designed to determine the impact that the Internet will have upon the marketing, sale and delivery of processing services, including consideration for:

a. operational economies afforded by use of the Internet

b. new outsourcing opportunities presented by the Internet

c. the use of the Internet in the sales and marketing of processing services

The results of this survey enables INPUT to better highlight the trends and directions in its five year processing services forecast.

A. USES OF THE INTERNET TO ACHIEVE ADDITIONAL OPERATIONAL ECONOMIES IN ONGOING PROCESSING SERVICE OPERATIONS

1. To what extent does the company believe that the Internet will change the way processing services are delivered to its customers. The thrust of this question is to what extent the Internet will provide internal operations cost savings or operational improvements on ongoing processing operations.

   no impact_____

   small _____

   moderate _____

   large _____

   (*If the response rating is moderate or large*) Please describe how the Internet is or would be used to affect a cost savings or improve operations_

B
Processing Services Questionnaire

INTRODUCTION

This survey is designed to determine the impact that the Internet will have upon the marketing, sale and delivery of processing services, including consideration for:

a. operational economies afforded by use of the Internet

b. new outsourcing opportunities presented by the Internet

c. the use of the Internet in the sales and marketing of processing services

The results of this survey enables INPUT to better highlight the trends and directions in its five year processing services forecast.

A. USES OF THE INTERNET TO ACHIEVE ADDITIONAL OPERATIONAL ECONOMIES IN ONGOING PROCESSING SERVICE OPERATIONS

1. To what extent does the company believe that the Internet will change the way processing services are delivered to its customers. The thrust of this question is to what extent the Internet will provide internal operations cost savings or operational improvements on ongoing processing operations.

   no impact_____

   small _____

   moderate _____

   large _____

   (*If the response rating is moderate or large*) Please describe how the Internet is or would be used to affect a cost savings or improve operations_____

2. Please indicate the impact the Internet is having upon categories of processing services.

Processing Categories	Degree of Impact on the Service Small	Moderate	Large	How is the Service Impacted
Transaction Processing	___	___	___	_____
Backup & Disaster Recovery	___	___	___	_____
Data Entry & Scanning	___	___	___	_____
CD Preparation	___	___	___	_____
Printing Services & COM	___	___	___	_____
Other_____	___	___	___	_____

Additional comments about impact _____

_____

_____

3. Please rate on a scale of 1 to 5 (1 being minor and 5 major) the impact of the Internet on the following operational activities, now and 2 and 5 years from now:

	Now	2 years	5 years
Vendor and supply management	___	___	___
Order processing	___	___	___
Inventory & warehousing management	___	___	___
Product/service delivery	___	___	___
Invoicing and accounts receivable	___	___	___
Accounts payable	___	___	___

Sales force management	___	___	___
Product and service promotion	___	___	___
Human resources management	___	___	___
Employee communication	___	___	___
Interoffice communication	___	___	___
Legal affairs	___	___	___
Corporate communications	___	___	___
Other _____	___	___	___
Business Application _____		___	___

4. Please rate on a scale of 1 to 5 (1 being low and 5 high,) the impact of the Internet on each vertical market, today and in the future.

	Internet Impact		Internet
Vertical Market	Now	Future	Application/Usage
Banking & Finance	___	___	_____
State & Local Government	___	___	_____
Federal Government	___	___	_____
Insurance	___	___	_____
Health Services	___	___	_____
Process Manufacturing	___	___	_____
Discrete Manufacturing	___	___	_____
Retail Trade	___	___	_____
Telecommunications	___	___	_____

Transportation	___	___	_____
Energy	___	___	_____
Wholesale Trade	___	___	_____
Business Services	___	___	_____
Education	___	___	_____

5. What are the numbers of personnel involved with the Internet team that developed and maintains the Internet presence:

	Vendor Staff	Consultants	Outside Service
Develop presence	_____	_____	_____
Maintain presence	_____	_____	_____

New skills required for the Internet services: _____

_____ _____

6. During the next 2 and 5 years, to what extent will the Internet change the way that the company conducts its business

	2 years	5 years
No change	___	___
Modest change	___	___
Major change	___	___

6a. (*If the change is modest or major*) What will the changes be in each of the time frames?_____

_____

B. INTERNET USE TO CREATE NEW PROCESSING SERVICE OPPORTUNITIES

1. What kind of new processing service opportunities will the Internet create for your company?

_____

_____

_____

1a. Are these new opportunities an extension of current services or will they be a departure from the areas of services traditionally provided by your company?

- New service opportunities ___ (*if new*) describe it _____
- Traditional service extension ___ (*if traditional*) describe it _____

2. Please rate on a scale of 1 to 5 (1 being low and 5 high) the revenue potential of service and product opportunities.

	Rating		Rating
- Home Page Content Development	___	Web Site Maintenance	___
- Home Page Development	___	Internet Training Services	___
- Install & Maintain Web Sites	___	Server & Network Design	___
- Webmaster ongoing service	___	Other_____	___
- Internet Needs Analysis	___		

C. INTERNET USES FOR PROCESSING SERVICE MARKETING AND SALES ACTIVITIES

1. How will your company employ the Internet to promote and broaden the marketing reach for traditional and new market opportunities?_____

_____

1a. What unique capabilities of the Internet will be used to expand the prospect base? _____

2. Please rate on a scale of 1 to 5 (1 being low and 5 high) the potential benefits that will be derived from use of the Internet.

Item	Rating
Deliver more information	___
Receive more immediate feedback	___
Enhance relationship with customer	___
Respond more quickly to customer	___
Deliver sales information at less cost	___
Promote products through new media	___
Provide better sales information	___
Test new sales strategies	___
Obtain new customers	___
Support customers at less cost	___

D. GENERAL INFORMATION AND COMMENTS

Additional comments _____

_____

Thank you for your time and efforts to assist INPUT with this study.

Dear Colleague:

Thank you for your recent participation in the research for the study "The Impact of the Internet on Outsourcing and Processing Services". As promised, we have enclosed an Executive Overview of the report in appreciation of your efforts.

The report contains the first forecast of Internet-related expenditures on outsourcing and on processing services and also explores the emerging opportunities for vendors presented by the Internet, based on information from recent surveys of vendor and customer uses of the Internet. In addition, this report investigates the influences and trends on each service area and then forecasts the U. S. outsourcing and processing services market levels for each service category. Vertical industry forecasts for these services are also provided.

If you are interested in purchasing the report in its entirety, please contact Bob Goodwin, Vice President of Sales at INPUT.

Again, thank you for your participation.

Sincerely,

Wilson Haddow
Vice President, Market Research

Fulfillment/Printing for INPUT

Date 5/23/96 By JP.
Program Code OSPR Project Code OSMD
INPUT P. O. # **BAC Ref. #**

Title: Impact of the Internet on Outsourcing & Processing Services.

- ☑ Report
- ☐ Research Bulletin
- ☐ Profiles
- ☐ Newsletter
- ☐ Reprints
- ☐ Other

Reports		Executive OV	
Fulfillment	63	Fulfill.	75
Stock	25	Stock	25
	(see attached)	TU Pkg.	25
Total	19	Total	125

Research Bulletin	Newsletter
Fulfillment ____	Fulfill. ____

Fulfillment - Please print list to order covers>>

TO: GBC
Covers Order
Date
Quantity
Color
Size
P. O. Number
GBC Control Number

Date/ FedX GBC
Date Due INPUT
Date Rec. INPUT

Date
PLEASE PRINT ☐ labels ☑ packing slips attached w/ duty list
To: BAC

TO BRADFORD ADAMS

>>

☑ Folder ☑ Disk ☑ Hard Copy ☑ Blue Form
☐ GBC Cover BA

Dates
For Set Up/Proof 5/23/96.
Proof rtn to INPUT
Final proof rtn to BA
Scheduled to Ship

Instructions:
- ☐ Window Cover
- ☐ Hot Strip
- ☐ 3-Hole Drill
- ☐ Staple
- ☐ Shrink Wrap
- ☐ Other

Other Information/Notes

Return to INPUT **Ship Date**
- ☐ Originals/Disk in folder
- ☐ For Stock: ____RP____OV____RB____PR
- ☐ Internals for Distribution
- ☐ International for mailing/DHL
- ☐ Other
- ☐ **INPUT** ***add stock quantity to inventory report***

INPUT

Distribution Report

As of 5/15/96

Commercial Unit

Project	Company Name	Name	Product Type	Quantity
Impact of Internet on Outsourcing Processing Svcs				
Order #				
120290	ADP- GSI - FM	Beatrice Brechignac	Report	1
111303	ANDERSEN CONSULTING	Martha Jameson	Report	2
121214	AT&T SOLUTIONS	Phil Hornthal	Report	2
3000855	COMDISCO	Mary Romito	Report	2
3000729	CONTINIUM COMPANY, INC.	Jackie VanErp	report	2
120810	DIGITAL EQUIPMENT CORPORATION	Andy Breeding	Report	1
120812	DIGITAL EQUIPMENT CORPORATION	Tracey Dyson	Report	2
120813	DIGITAL EQUIPMENT CORPORATION	Jane Lincoln	Report	1
120814	DIGITAL EQUIPMENT CORPORATION	Elise McMullin	Report	1
120816	DIGITAL EQUIPMENT CORPORATION	Spitbrook Library	Report	1
120503	ERNST & YOUNG	Elizabeth L. Nowak	Report	1
120503	ERNST & YOUNG LLP	Dale L. Wartluft	Report	1
3000748	FUJITSU	Yoshikazu Hoshi	Report	2
121289	GENIX GROUP, THE	Douglas H. Tayler	Report	1
121222	GEOPARTNERS RESEARCH INC.	Abby Christopher	Report	1
120290	GSI	Mike Russo	Report	1
120844	GTE DATA SERVICES INC.	Tom Walters	Report	1
120126	HEWLETT-PACKARD	Rebecca Lee	Report	1
120126	HEWLETT-PACKARD COMPANY	Brooks Esser	Report	1
111568	IBM CORPORATION	Ilse Ruckert	Report	2

INPUT

Distribution Report

As of 5/15/96

Commercial Unit

Project	Company Name	Name	Product Type	Quantity
3000758	MARS & COMPANY	Susan CHALIAN	Report	1
120292	MCKINSEY & COMPANY	Melanie McArthur	Report	1
120292	MCKINSEY & COMPANY	Librarian	Report	1
112484	MCKINSEY & COMPANY, INC.	Susan Porras	Report	1
121177	MITCHELL MADISON GROUP	Vanessa Bailey	Report	1
121264	SAIC	John Kelly	Report	2
121034	SHL SYSTEMHOUSE INC	Rick Gray	Report	2
3000864	STEPHENS, INC.	Nathan Gaskill	Report	1
120675	UNISYS CORPORATION	Paul G. Robertson	Report	1
120739	UNISYS CORPORATION	Elizabeth Schwatka	Report	1
120751	UNISYS LIMITED	Tony Locke	Report	1
112521	Z,, GOODWIN	Robert Goodwin	Report	1
111027	Z.. INTERNAL - COMMERCIAL	Library	Report	2
111024	Z.. INTERNAL - COMMERCIAL	ATTEN: JUDY Sales Miner Library	Report	2
111028	Z.. INTERNAL - FRANCE	Library - Sales	Report	1
111038	Z.. INTERNAL - GERMANY	Frank Solbach	Report	5
111034	Z.. INTERNAL - JAPAN	Library	Report	2
111029	Z.. INTERNAL - NEW JERSEY	Office Manager	Report	2
111030	Z.. INTERNAL - UK	Library/Stock	Report	2
111031	Z.. INTERNAL - VIRGINIA	Norm Berthaut	Report	2
3000930	Z.. INTERNAL COMMERCIAL	Randi Haran	Report	1
3000886	Z.. INTERNAL COMMERICAL	Nancy Hill	Report	1

INPUT

Distribution Report

As of 5/15/96

Commercial Unit

Project	Company Name	Name	Product Type	Quantity
111063	Z.. INTERNAL REG. OF COPYRIGHT	Dep & Acq Div-LM438C	Report	2
			Total:	**63**