Market Analysis
Program (MAP)

Industry Sector Markets 1988-1993

Services Sector

INPUT®

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INDUSTRY SECTOR MARKETS 1988-1993

SERVICES SECTOR

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I

Introduction

A

Market Structure

The services sector is composed of a number of widely varying businesses with the common characteristic that they all provide services for a fee or on a contractual basis rather than produce tangible goods. Another common characteristic is that they are all participating in a massive transition in the U.S. from an industrial to a service-oriented economy. The sectors covered in this report represent SIC codes 65, 73, 81, and 87—which include the following:

- Accounting
- Legal services
- Architectural and engineering services
- Real estate
- Business services
- Business consulting
- Advertising

B

IS Applications

Unlike other industry sectors, the nature of the services sector results in IS applications that are highly varied. In addition, since the sector is composed significantly of small mom-and-pop enterprises, many of the IS products and services are designed to be used in conjunction with a PC and have a low sales price.

Although there are numerous products and services available for organizations in this sector, the following provides a brief summary of the types of products that represent the more significant applications for each of the categories.

- Accounting - Key applications for the accounting profession are tax preparation packages and spreadsheets for analysis, as shown in Exhibit I-1.

EXHIBIT I-1

KEY APPLICATIONS ACCOUNTING

- Tax preparation
- Spreadsheets

- Legal Services - Within the legal profession, key applications are related to client accounting, practice management, litigation support, and docket scheduling, as shown in Exhibit I-2.

EXHIBIT I-2

KEY APPLICATIONS LEGAL SERVICES

- Client accounting
- Practice management
- Litigation support
- Docket scheduling

- Architectural/Engineering - For architects and engineers, the three key application areas are project estimating, CAD (computer-aided design) systems, and project management. Details are shown in Exhibit I-3.

EXHIBIT I-3

KEY APPLICATIONS ARCHITECTURE/ENGINEERING

- Project estimating
- Computer-aided design
- Project management

- Real Estate - As shown in Exhibit I-4 for property management the key applications are property management and investment analysis.

EXHIBIT I-4

KEY APPLICATIONS REAL ESTATE

- Property management
- Investment analysis
- Multiple-listing services

II

Trends and Issues

A
Introduction

A common characteristic of the services sector is that these businesses are at the forefront of a dynamic and frequently wrenching change in the U.S. from an industrial to a service-oriented economy. Effects of the change can be seen in all sectors of the economy.

B
Key Trends and Issues

Many of the changes taking place have their greatest effect on the services sector. This sector is composed of the greatest number of small independent businesses that have the least capital to be able to take advantage of innovative technology. This sector also frequently has the greatest need for methods to improve service to the public and hold costs to a minimum.

Effects of the changes can be seen in each of the subsectors included in the report.

1. Accounting

Change in computer technology is one of the greatest influences driving change in the accounting profession. With the simplification of many routine tasks, there has been a change in the nature and scope of services provided by accountants. Exhibit II-1 summarizes a number of key trends in accounting.

EXHIBIT II-1

KEY TRENDS/ISSUES ACCOUNTING SERVICES

- Reduce tedious tasks
- Increase electronics interaction
  - Accountant/client
  - Accountant/IRS
- Liability insurance

- Computers have taken over some of the tedious tasks previously performed by accountants, freeing them to focus on more analytical tasks, such as interpreting results and advising appropriate action. This change provides a more consultive or value-added service.

- Accountants and accounting firms are expanding to offer computer services alongside their more-traditional auditing and accounting services.

- Some firms offer software products and professional services to help clients design and implement their own in-house systems. By moving into a more services-oriented business, some firms are leveraging the benefits of technology rather than being replaced by it.

- Continuing development in telecommunication and integrated software will facilitate utilization and transfer of information within accounting firms and between firms and their clients. Recent events indicate increased use of communications as a means of interaction between firms and clients.

  - Although this trend is not widespread and is generally limited to the business community, a number of firms have significantly increased their ability to interact electronically with clients. Firms generally see this interaction as a future method of conducting business.

  - The federal government has begun pilot programs to permit the filing of tax forms electronically. Although currently limited in scope, initial reaction is positive and the practice is expected to grow over the next several years.

- Although not nearly as pronounced as in the medical profession, the accounting profession is finding the issue of liability insurance to be increasingly difficult. The costs of liability insurance have continued to rise, prompting some individuals and firms to seek alternative means of protecting themselves in an increasingly litigious society.

- Since many accounting firms already use outside services to meet their primary requirements (tax preparation), business functions such as client time and billing, office automation, and professional services are the remaining areas for which firms are likely to require outside products and services.

2. Legal Services

Services provided by the legal profession can be highly varied and are influenced by a number of internal and external forces. Some of the issues that continue to affect the industry are summarized in Exhibit II-2 and discussed below.

EXHIBIT II-2

KEY TRENDS/ISSUES
LEGAL SERVICES

- Advertising
- Prepaid service plans
- Liability insurance
- Communications deregulation
- Tax reform

- Until 1977, advertising of legal services was not permitted. Since then, the practice has grown steadily. Although issues related to advertising have not been at the forefront of public awareness, the subject remains controversial within the industry. Because the public generally does not believe that advertising diminishes the professionalism of the industry and because competition is likely to intensify, advertising of services is expected to grow.

- Prepaid legal plans are becoming increasingly accepted as part of employee benefit packages. When available, a single or annual payment covers all routine consultation. Some plans also provide for payment of nonroutine legal services.

- As in the medical and accounting professions, the need for liability insurance is growing in the legal profession. Although the public has not widely embraced the idea of suing lawyers, the practice is growing and is expected to continue to grow.

- Increased advertising, prepaid legal plans, and increased liability risk affect the profession by increasing the need for record keeping and document preparation. Lawyers will be increasingly in need of easy-to-use document preparation and record-keeping systems to track their cases. In addition, increased consultation for routine services will lead to a need for improved efficiency in office automation.

- Telecommunications industry deregulation has fostered numerous opportunities for the legal community and for some professional services organizations. With deregulation have come a wide range of issues related to regulatory interpretation.

  As the fervor over interpreting FCC actions has declined, the number of acquisitions and mergers has increased. The changes have brought opportunities for the legal industry and for professional services organizations that are thoroughly versed in the telecommunications industry. Understanding the new rules will continue to be critical and directly related to understanding future opportunities.

- Tax reform will continue to result in opportunities for tax lawyers to provide consulting services to businesses and consumers trying to sort out budgets and investments to take advantage of remaining or new tax shelters. There is an expectation that a number of changes to the previous tax reform will begin to appear, providing ongoing opportunities.

3. Architectural/Engineering Services

Until recently, this sector of the economy continued to expand at a comparatively rapid pace. However, the industry as a whole has slowed considerably over the past year. The outlook for 1989 is decidedly cautious, with declines predicted in some areas.

The outlook for 1989 suggests that the demand for commercial and manufacturing floor space could decline by as much as 16%, and the demand for residential units could decline by as much as 6%.

Overall, the industry is significantly driven by changes in interest rates and increasingly by the world economic outlook (Exhibit II-3). The industry indicates that a one-percent change in rates will result in a change in the number of housing units by 100,000—in the opposite direction of the interest rates.

EXHIBIT II-3

KEY TRENDS/ISSUES ARCHITECTURAL/ENGINEERING SERVICES

- World economic outlook
- Interest rates
- Project management

The industry is also driven by the world economy. Until recently, the Middle East was a large market for architectural and engineering services, followed by Asia.

With the decline in oil prices and as business focus shifted from the Middle East to the Asia/Pacific area, Asia has become a key area for the export of these services. However, slower growth in a number of countries and extensive competition has reduced market opportunities.

As an industry, more than 80% of the architectural/engineering services are related to construction—mostly commercial and public. Most of the service firms are small and specialized.

Within the U.S., markets that have not realized anticipated potential and continue to be promising include electric cogeneration plants, trash-to-energy plants, and toxic waste cleanup.

Within the industry, project management, time-and-billing, and general-office automation are the primary functions of information services in this sector. Computer-aided design (CAD) applications are being used with increasing frequency. However, it is interesting to note that CAD systems are frequently used to improve quality rather than reduce costs.

4. Real Estate

Real estate consists of a number of subsectors (Exhibit II-4), each with its own set of needs for information services.

EXHIBIT II-4

KEY TRENDS/ISSUES
REAL ESTATE

- Property management
- Continuing development
- Real estate investment

- Property Management - Applications for this subsector include accounting, tenant information maintenance, and on-line data bases containing industry statistics and information on lease and rent laws.

- Real Estate Development - The goal of real estate development is to purchase and develop land in the most profitable ways possible. Computer services needs include on-line data bases to keep track of properties for sale and their prices. There is also a need for spreadsheet software for analyzing potential investments.

- Real Estate Investment - Real estate investments such as limited partnerships provide start-up capital for real estate developers and property managers. Computer services needs for this subsector are the same as those for real estate development.

Although these subsectors are distinct by definition, they are highly interrelated, and economic factors affecting one generally affect the others. The real estate subsector is generally in a state of flux due to three major factors:

- Overbuilding of commercial office space
- Tax reform
- Interest rates

In many areas of the country, the past few years have seen extensive overbuilding, resulting in vacancy rates that can exceed 20% in some cities. This vacancy rate is causing rents to decrease, profitability to decrease, and discouraging new investment.

Tax reform has discouraged the formation of investment groups, since the tax benefits no longer exist. This reduction in investment groups has significantly reduced the available supply of construction monies.

However, the long-term effect is expected to be positive, because investments in real estate will be based on the economic value of the property and its prospects for generating profits rather than on the investment's tax-sheltering capability. This shift could also help stabilize the boom-and-bust characteristics of real estate in the past.

With the general tightening of the economy and the industry, the ability to use computing systems to monitor trends and analyze investment opportunities and alternatives becomes increasingly important. Overall, the pattern of development for computer services in property management should be the same as for other management-related sectors.

- Software - The trend toward integrated software will continue. Particular emphasis will be placed on the development of software that will integrate property management financial data and investment analysis.

- Processing Services - The demand for remote computing services will decline as more software becomes available for office PCs and minicomputer systems. However, the use of remote data bases is expected to grow.

- Professional Services - The markets for system design and integration and education and training will grow as systems move in-house.

- Turnkey Systems - The growth of turnkey systems will continue as growing businesses look for packaged solutions. However, growth of this delivery mode will be impacted by the growth of integrated PC applications.

5. Business Services

For the purposes of this report, business services have been defined to include business consulting, advertising, and public relations. This group is typified by numerous small businesses and a very few large ones.

Within this group, consulting is further fragmented into a very small number of large firms and numerous small firms and independent operators. In the early 1980s, there were an estimated 50,000 full-time consultants and 30,000 part-time consultants. Consulting services revenue reached $3 billion, with the top 30 firms billing $2 billion.

Business consulting has developed into a highly sophisticated and technical field over the past 20 years. Mathematical modeling of the economy

and extensive statistical analysis are the focuses of this field, making it a major consumer of computer services.

- Business services, along with the legal services, rank among the two or three largest markets for on-line data bases, particularly for news and business data bases such as Mead Data Central's Nexis and various data bases provided by Dialog Information Services (recently acquired by Knight-Ridder).

- Computer applications for business services include time-and-billing and general office automation, in addition to mathematical modeling, statistical analysis, and on-line data bases.

The advertising industry has experienced considerable change, and some trauma, over the past three to four years. Consolidations are reshuffling and changing the character of the industry. Customers have suffered while "mega-agencies" have been created.

Unknown is whether the mega-agency will result in megacreativity. Some industry representatives believe that the opposite will result. Creativity may be stifled, to the detriment of the industry and the consumer. If stifling does happen, there is a general expectation that creativity will be rejuvenated in new, boutique firms that will be similar to those that have been recently absorbed.

International presence is an increasing demand made of advertising agencies by their large corporate clients. Large organizations have increasing needs to market in a multicultural environment.

There are two major areas of automation applicable to the advertising industry: the first is desktop publishing and the other is general office automation.

- Development of the laser printer has significantly enhanced the desktop publishing market by making very high quality print and graphics available through microcomputers. This development is especially important to the advertising industry since advertisers can now present polished copy without having to coordinate with a printing department.

- Office automation is important in the large organizations that have been created. However, the need for automation could decline if the large agencies begin to break up into smaller companies.

III

Market Forecast

A

Market Overview

Within the Services Sector, the need for information services varies considerably. Within each of the subsectors (accounting, legal, etc.) there are typically fewer than a dozen firms that account for the majority of the information service revenues for that subsector. The remainder of the revenues are spread throughout numerous small enterprises.

B

Environmental Factors

1. Driving Forces

As indicated in Exhibit III-1, there are a number of forces driving the services sector. Although the key forces are not necessarily applicable to all of the subsectors, they do represent major forces affecting the sector as an entity.

EXHIBIT III-1

MARKET FORECAST
DRIVING FORCES

- Productivity improvement
- Competition
- Consolidation
- Integration

- Productivity Improvement - Improved productivity is a need of nearly all service organizations. Faced with increasing competition, many, if not most, are having to learn to accomplish more with less.

- Competition - The services sector is highly competitive. There are numerous independent operators in each of the subsectors, many with high-quality products that can meet the needs of many enterprises.

- Consolidation - At the time of startup of many of the providers in this sector, the primary assets are the efforts of the people.

  However, as each business grows, a point is reached where development capital is needed. To meet growth needs, many are looking to establish financial partnerships. Many of these partnerships result in an acquisition and resultant consolidation of the industry.

- Integration - Increasingly users are interested in the integration, or at least the ability to integrate, various pieces of software (and hardware). Users want to be able to implement sets of solutions. This has meant the expansion and restructuring of many products and has contributed to the consolidation of the industry.

2. Growth Inhibitors

Working against the driving forces are a number of growth inhibiters, shown in Exhibit III-2.

EXHIBIT III-2

MARKET FORECAST
GROWTH INHIBITORS

- Economic unknowns
- Competition
- Minimal capital
- Management attitude

- Economic Unknowns - Many businesses have adopted a wait-and-see attitude regarding the economy. Although many services firms are generally insulated from economic cycles, factors such as changes in interest rates can have an effect on short-term borrowing, financing, etc.
- Competition - For providers in the services sector, there are numerous competitors. Even though the majority are extremely small and are viable competitors only locally, their large number make competition difficult. Even with the consolidation going on, new competitors are entering the business.
- Minimal Capital - The majority of firms in this sector have only minimal capital. Many, if not most, develop their businesses from minimal investment and utilize cash flow as the ongoing investment vehicle. This lack of capital inhibits many from developing their products.
- Management Attitude - For companies with the funds, and for some without, attitude of management can be a more significant consideration. Senior management of many firms are not attuned to the use of technology as a competitive tool. Education is needed to change their ideas about how information services can be of value.

C

Services Sector

1. Size/User Expenditures

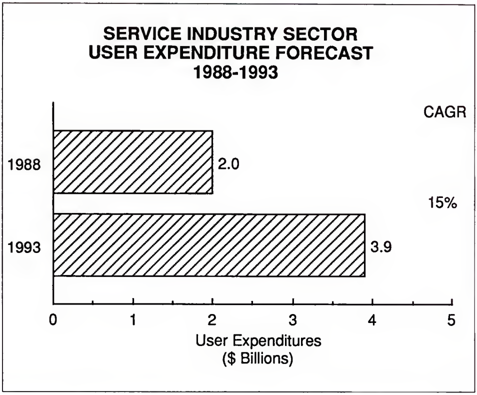
As indicated in Exhibit III-3, 1988 information services expenditures in the service sector were approximately $2 billion, up an estimated 16% over 1987. The sector is projected to continue to grow at a compound annual growth rate of 15% through 1993, when the total for the sector is projected to be $3.9 billion.

Overall, growth of the services sector has generally followed the pattern of the total U.S. industry. The sector has seen a shift toward applications and integration as the growth areas and a reduction in processing services as a key focus of the industry.

2. Current Condition

The general condition of the services sector is good. Growth in certain of the delivery modes is very strong, exceeding 30% per year, and is expected to continue. Other delivery modes more closely parallel the industry, with a number of the delivery modes averaging between 15% and 20%.

EXHIBIT III-3



Within the numerous subsectors, growth is expected to be steady, but not exceptional. There is a general uncertainty about the economy; many firms have adopted a wait-and-see attitude.

D

Expenditures by Delivery Mode

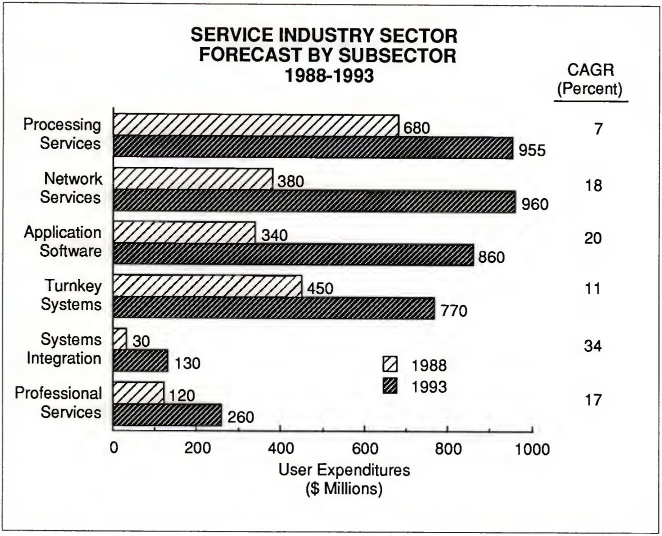
1. Processing Services

As in other parts of the industry, the rate of growth of processing services has been declining slowly. Between 1987 and 1988, the growth rate was approximately 13%. Between 1988 and 1993, the rate of growth is projected to average 7% per year.

The reduction in growth rate is generally attributable to the increased ability to meet processing requirements on minis and micros. As shown in Exhibit III-4, this rate of growth will result in an increase in revenues from $680 million in 1988 to approximately $955 million by 1993.

Within the processing services subsector, the majority of the revenues are derived from transaction processing services. Only a minor portion (less than 1%) is derived from systems operations.

EXHIBIT III-4



2. Network/Electronic Information Services

Representing an estimated 18% of the sector, network services are expected to experience an overall growth rate of approximately 18%, resulting in growth from $380 million in 1988 to $960 million in 1989 (Exhibit III-4).

Within the network services subsector, network applications (value-added networks, Electronic Data Interchange, and electronic mail) represent the smallest portion (3%), but also the portion with the fastest rate of growth.

Driven by the need for services such as EDI, network applications software is a rapidly growing area. The growth rate for network applications is expected to reach nearly 40% per year.

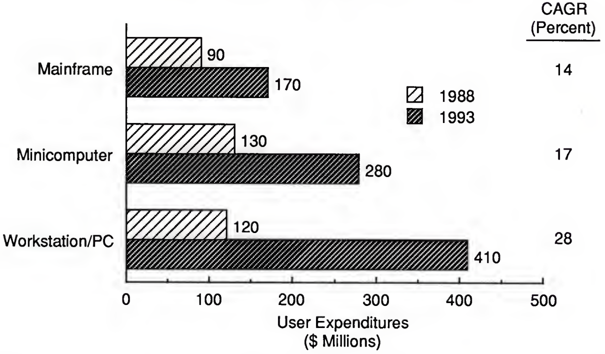
3. Application Software

Currently representing an estimated 16% of the services sector, the market for application software products is expected to have an overall growth rate of 20% over the next five years. As illustrated in Exhibit III-4, this rate could result in growth from $340 million in 1988 to $860 million in 1993.

Within the application software delivery mode, the demand for workstation/PC software is expected to have the highest rate of growth (28%), resulting in growth from $120 million to $410 million by 1993, as shown in Exhibit III-5. This growth is due to the rapid proliferation of increasingly sophisticated workstations and PCs that are obviating the need for minis and certainly mainframes.

EXHIBIT III-5

SERVICE INDUSTRY SECTOR APPLICATION SOFTWARE FORECAST 1988-1993



Note is made that, although INPUT's previous forecasts projected a growth rate of approximately 25% for applications software products for the year 1987 to 1988, the actual rate was nearly 40%.

INPUT believes that this underestimate represents a more-rapid-than-anticipated shift from processing services and turnkey systems to in-house, PC-based solutions for many businesses in the sector.

4. Turnkey Systems

Although revenues from turnkey systems continue to be a significant portion of the revenues for the processing services sector, the growth rate has stagnated at around 11%. As shown in Exhibit III-4, turnkey systems are expected to grow from $450 million in 1988 to an estimated $770 in 1993, a growth rate of 11%.

One of the key reasons for the somewhat static growth rate of turnkey systems in this sector is the increasing versatility of PCs and the increasing breadth of software available.

With the general usability of PC applications growing and individuals becoming increasingly computer literate, more firms are developing their own solutions or purchasing software as a standalone product.

5. Systems Integration

Within the sector, the highest growth rate is being experienced by systems integration. Currently representing only 1% of the sector, the market is expected to grow from $30 million in 1988 to $130 million by 1993, a rate of 37% (Exhibit III-4).

The growth of systems integration reflects changes taking place within many of the larger firms in the industry. With increasing competition and systems that are frequently fragmented and out-of-date, there is increasing need for solutions that are integrated and able to provide competitive advantage.

6. Professional Services

The need for professional services is expected to continue growing at a steady rate of 17% per year. At this rate, the demand for professional services will expand from an estimated $120 million to $260 million in 1993 (Exhibit III-4).

Although the demand for professional services is strong, the demand is stronger in other sectors. Much of the difference is attributed to the fact that many businesses in this sector are small and frequently unable to afford professional services.

IV

Competitive Developments

A

Introduction

Vendors in the services sector could best be described as numerous, with few having dominance. There are a number of major players, but the service sector has the greatest number of small players that provide niche products.

B

Leading IS Vendors

The following provides a summary of notable information service vendors in each of the major categories of the services sector. Notable vendors are summarized in Exhibits IV-1 thru IV-4.

- In the accounting subsector, the CPA firms themselves are major contributors. In addition, there are suppliers of tax preparation software and services, such as CCH Computax and Computer Language Research, Inc. There are a number of other small vendors providing time-and-billing and client write-up packages.

EXHIBIT IV-1

LEADING IS VENDORS
ACCOUNTING

- CPA Firms
- CCH Computax
- Computer Language Research, Inc.

- For the Architectural/Engineering Services subsector, major providers include McDonnell Douglas' Architectural, Engineering, and Construction Systems Division; IBM for computer-aided design and other technical applications; and Metier Management Systems, Inc. for project management packages. Other project management vendors include Design Consultants, Inc.; Information Builders, Inc.; Management Sciences America; and SAS Institute.

EXHIBIT IV-2

LEADING IS VENDORS ARCHITECTURE/ENGINEERING

- McDonnell Douglas
- IBM
- Metier Management Systems
- Design Consultants, Inc.
- Information Builders
- Management Sciences America

- In the legal subsector, there are few major providers. There is a very small number of leading vendors and a number of smaller vendors. Leaders include Mead Data Central and Westlaw for data base services; Inslaw, Inc. for software; and Barrister Information Systems Corporation and Baron Data (acquired by Convergent Technologies in 1987) for software and turnkey systems.

EXHIBIT IV-3

LEADING IS VENDORS
LEGAL SERVICES

- Mead Data Central
- Westlaw
- Inslaw
- Barrister Information Systems

- Major providers in the real estate subsector include Timberline Systems; Tenman; SSI; Analytic Science, Inc.; Informatics; Automatic Data Processing; and Management Reports, Inc.

EXHIBIT IV-4

LEADING IS VENDORS
REAL ESTATE

- Timberline Systems
- Tenman
- SSI
- Analytic Science
- Informatics
- Automatic Data Processing
- Management Reports

- For the business services subsector, the major applications include the standard spreadsheet, data base, and scheduling applications. Major competitors for business service products include Lotus Development Corporation, Ashton-Tate, and Jonas and Erickson Software Technology, Inc.

C Vendor Profiles

1. Barrister Information Systems Corporation

a. Products and Markets

Barrister serves the legal service market, providing turnkey systems, software products, processing services, professional services, and service and maintenance.

Functions provided by Barrister's applications include every aspect of law office automation, including accounting, word processing, spreadsheets, data base management systems, docket control, record keeping, and document management for litigation support.

b. Company Revenues

Between 1987 and 1988, Barrister's revenues increased by approximately 14% from $33.2 million to $37.7 million. During the same period, earnings declined from $964 thousand to $188 thousand.

Of the total revenue, product sales ($22.5 million) represented approximately 60% of total revenue. Services accounted for the additional 40%.

c. Company Strategy

The overall goal of the company is to bring the benefits of automation to lawyers so they can improve their productivity and manage their practices more effectively. To achieve the goal, the company plans to continue its basic strategy of being a single resource for all information systems needs for the legal profession.

d. Recent Activities

Following a period of less-than-hoped-for operating results, the company took several steps to position itself for the future. To help improve the overall responsiveness to the customer, the company established a field operations office and reorganized product management operations.

In addition, the company has been making investments in manufacturing equipment and facilities and has been expanding its training programs to increase overall performance.

2. Computer Language Research, Inc.

a. Products and Markets

Computer Language Research (CLR) provides mainframe and microcomputer-based tax processing to accounting firms, corporations, partnerships, and banks.

The company believes that it is the leading supplier of income tax processing services to national public accounting firms. Services offered by the company include processing of individual, corporate, partnership, fiduciary, exempt organization, and other federal and state tax returns.

b. Markets Served

CLR sells its services, software, and equipment in five primary markets: accounting, corporate, partnership, bank, and commercial.

- Accounting - The accounting tax market is composed of 29,000 public accounting firms that prepare tax returns. The size of the firms ranges from the largest national firms to sole practitioners.
- Corporate - The corporate tax market is made up of large corporations that use the company to process consolidated federal tax returns, a variety of state returns, and other tax-related planning and administrative tasks.
- Partnership - The company provides tax processing services to large and small partnerships.
- Banks - Included in the bank tax market are large- and medium-size commercial banks that offer trust services to their customers.
- Commercial - The commercial tax market consists of companies, primarily financial service organizations, that prepare tax returns for individuals who do not use CPA firms.

c. Company Revenues

CLR's 1988 revenues increased by approximately 15%, from $102 million to $117 million. However, the company experienced a net loss of $1.9 million.

The loss in 1988 represented the fourth straight year of declining income. In 1985, the company achieved a net income of $4.6 million. This was followed by a net income of approximately $215,000 in 1986 and a loss of $1.5 million in 1987.

The company attributes the loss to increased expenditures necessary to develop and market new products. New product development has been necessitated by a shift of clients from older, mainframe, and mini-based technology to newer, microcomputer technology.

d. Company Strategy

In the short term, the company's basic strategy centers around product development to meet the growing need for micro-based processing capability.

In the longer term, the company is committed to a broadening of its services by identifying related services needed by the industry. An example is the development of Electronic Form Systems to replace some of the paper forms that are common in the industry.

e. Recent Activities

The most notable recent activities include the ongoing development efforts to restructure the product line from mainframe-based products to micro-based products.

In addition, the company released several new products during the year. Of these, the GoSystem is the most significant and is an indicator of the direction the company is taking.

The GoSystem software allows customers to compute tax returns of any complexity in-house without mainframe computer interaction or dependency. The system is designed to run in a local-area network environment, but can operate on a standalone microcomputer.

f. Future Direction

During the next two to three years, CLR is expected to devote the majority of its efforts to capitalize on development activities that are reported to be nearing completion.

With micro-based products, the company is expected to expend greater efforts penetrating smaller firms that can take advantage of micro software, but were not able to make use of mainframe software. A question remains as to whether the company will enter the consumer market with any of the new products.

3. Lotus Development Corporation

a. Products and Markets

Lotus is a large, independent software company, and its two key products—1-2-3 and Symphony—are standards in the business consulting and services industry. Lotus 1-2-3 integrates spreadsheet, graphics, and data base functions. Symphony incorporates word processing and communications as well as spreadsheet, graphics, and data base functions.

b. Company Revenues

Lotus's sales and net income continue to be leaders in the industry. For the year ended 1988, Lotus' sales were $469 million, an increase of 18% over the previous year's revenue of $396 million. For the same reporting period, Lotus' net income declined by nearly 18%, from $72 million to $59 million.

c. Company Strategy

The company's basic strategy is to expand and solidify its market position by stimulating the creation of solution tools to meet customer requirements. Included as part of the strategy is a program of acquisition and development that will expand the applications for 1-2-3 and Symphony. The company offers a variety of enhancements and add-ons. Others will be added.

d. Recent Activities

Recent activities have been generally dominated by the significantly delayed shipment of the latest release of Lotus 1-2-3. Originally scheduled for shipment in the first quarter of 1988, recent announcements indicate shipment in the second quarter of 1989, at the earliest.

Whether because of difficulties with the 1-2-3 product or for other reasons, Lotus canceled development of its Modern Jazz. Modern Jazz was to be Lotus's entry into the Macintosh processing world. This cancellation is believed by some to be a withdrawal by Lotus from the Macintosh market. However, Lotus indicates that it will be providing other products for the Macintosh.

During the year, Lotus also released a new version of The Application Connection (T-A-C, a host interface), to improve the ability to interact with large mainframes. Lotus also introduced Manuscript, a new technical word processing program.

e. Future Direction

Lotus' future course is well established—acquire companies and develop products to supply an increasingly wide range of applications via 1-2-3 and Symphony, and develop 1-2-3 into a major operating environment. Lotus will continue to focus on providing products for the IBM PC and compatible microcomputers.

4. Mead Data Central

a. Products and Services

One of the leading online data base service providers, particularly to the legal profession, Mead Data Central (MDC) provides a series of on-line data base information retrieval services to over 200,000 subscribers worldwide.

In 1987, the majority of MDC's revenue was derived from on-line data base services. A small portion was from the rental of equipment associated with data base retrieval services.

The services available through MDC include LEXIS, LEXPAT, NEXIS, EXCHANGE, MEDIS, APOLIT, and NAARS. The data bases currently hold over 130 billion characters, which are contained in over 36 million documents.

b. Markets Served

MDC derives its revenue from a wide variety of subscribers, including law firms, corporations, government agencies and courts, publishers, broadcasters, banks, management consultants, public relations and advertising firms, and law schools.

INPUT estimates that most of MDC's revenue is derived from the U.S. A small portion is derived from international sources.

c. Company Revenues

Mead's 1988 revenue was $308 million, an increase of 33% over 1987 revenue. Over the past five years, MDC's revenue growth has remained strong, averaging 20% per year. Of this revenue, service to the legal profession represented approximately 70%.

d. Company Strategy

Mead seeks to be a full-service information services provider. Using its own network, Mead seeks to be the source of one-stop shopping for information on a wide variety of topics.

e. Recent Activities

Most notable of the recent activities was the acquisition, in December 1987, of Dateline, Inc. of Toronto, Canada. Dateline, a Canadian financial information services company, provides on-line Canadian and U.S. stock market and other financial information primarily to the investment management, stock brokerage, and banking industries.

f. Future Direction

Mead is expected to continue to look for opportunities to expand into other markets. The primary method of expansion appears to be through acquisition.

5. Timberline Software Corporation

a. Products and Markets

With more than 6,000 installations, Timberline is a leading provider of mini- and microcomputer software products for real estate, architectural/ engineering firms, and the construction industry.

Timberline offers more than 40 applications. The applications are designed for estimating, job costing, subcontractor control, and tenant management and project management for architects, engineers, and contractors.

Products include PROMPT, a minicomputer-based property management system for large commercial properties; TENANTRAC, a microcomputer-based system for residential property management; and APEX, a microcomputer-based project management and accounting package for architects and engineers.

In addition to property-oriented products, Timberline has a broad line of products to manage construction projects. These are provided to homebuilders, general contractors, and specialty contractors. These products are of increasing importance to the company.

b. Company Revenues

As of the end of fiscal year 1988, overall sales for the company had increased by approximately 6% over the previous year. However, microcomputer sales, now the primary product focus of the company, increased by 45% during the same period. The 6% increase resulted in net sales of $7.6 million as compared to $7.2 million the previous year.

The increase in microcomputer-based revenues was due to the introduction of ten new products during the year and continued expansion of the dealer network. This increase was offset by decreases in minicomputer hardware and software sales.

c. Company Strategy

The basic company strategy is to be an industry leader in supplying high-quality software to property-related industries.

As a result of operating losses for the past several years, Timberline has expended considerable time evaluating key products and services. The evaluation led to the sale of hardware-related activities and increased focus on the development and support of microcomputer-based products. In addition, the company has sold its minicomputer software tax products.

Increased attention has been placed on the integration and strengthening of products.

d. Recent Activities

Timberline has been active in developing new products and establishing alliances that will provide opportunities to maximize the use of its products. Recent activities include the following.

- Timberline formed an alliance with Autodesk, Inc., a provider of computer-aided design software. These products, along with Timberline's Precision Estimating software, provide strong competitive positioning.
- To enhance product integration, a link has been developed between Autodesk and the Precision Estimating product lines.
- Recognizing that there is little commercially available software for Timberline products, the company has strengthened its relationship with IBM by tailoring its proprietary software to work with IBM's OS/2 operating system.
- Timberline has established a formal relationship with two leading producers of scheduling systems, Primavera Systems, Inc. and Microsoft.
- To emphasize its commitment to providing software internationally, relationships have been established with Tactical Computer Services (estimating and construction software) and Ledgerwood Associates (architect/engineer and property management software) for product sales and support in Australia.

e. Future Direction

From recent announcements, Timberline's increased focus on the development of a broad, comprehensive set of microcomputer-based software tools is clear. Investments for products such as OS/2 indicate that Timberline has a clear intention of ensuring market leadership for several years to come.

V

User Budget Considerations

A

Introduction

In the past few years, the user's world has changed dramatically. Not five years ago, the number of applications available for a comparatively small number of PCs was fairly low. Many systems were difficult to use and users were reluctant to attempt the new technology.

In the past few years, the environment has changed considerably. Users now enthusiastically support the use of PCs for business management. There is an extensive array of applications designed to assist nearly all businesses.

Having had an opportunity to experience the capability of microcomputers and PCs and to achieve a certain degree of productivity improvement, users are now looking for the means to gain added functionality through improved connectivity and enhanced software.

B

Driving Forces

As shown in Exhibit V-1 there are three primary driving forces behind changes taking place in the services sector.

EXHIBIT V-1

USER BUDGET CONSIDERATIONS
DRIVING FORCES

- Productivity improvement
- Competition
- Integration

- Productivity Improvement - Although productivity has been improved with the increased use of the PC, the gains have been primarily in smaller organizations where a single PC can meet company needs. Additional software functionality, connectivity, and time will be needed for significant productivity improvements to be made in medium-size service sector organizations.

- Competition - Keen competition exists in the services sector. There are numerous firms entering the sector, and many of the medium-sized and larger firms are broadening their offerings to provide one-stop shopping for many service needs.

- Integration - As in many sectors of business, integration has become increasingly important over the past several years. Many businesses increasingly recognize the strategic value of information and are placing increased effort on integrating systems to achieve the maximum value for their investment.

C

Major Issues

There are a number of issues facing the services sector. Many are not new, but a number are receiving increased focus, as shown in Exhibit V-2.

EXHIBIT V-2

USER BUDGET CONSIDERATIONS
MAJOR ISSUES

- Obsolescence
- Software integration
- Connectivity
- Education
- Technology
- Management acceptance
- Data base standards

- Obsolescence - The accepted industry standard is that computer hardware becomes obsolete approximately every three years. The period of obsolescence has been dropping steadily over the past several years. As recently as ten years ago, five (and sometimes seven) years was the generally accepted period of obsolescence. The time period needs to be considered when planning for new systems. IS managers need to recognize that hardware budgeting is an ongoing process, not a one-shot effort.

- Software Integration - Integrated software ensures the availability of data through several applications. With integrated software, data used for building design and project estimating can be used as a basis for monitoring project development.

- Connectivity - Although significant strides have been made in the ability to connect differing types of hardware, the ability to share information across systems and organizational entities remains a problem in most organizations.

- Education - The support and training provided by vendors should be a major consideration in selecting a system. There is always a learning curve with implementation of a new system, and managers must expect an initial decrease in productivity before the benefits of a new system begin to show. The period of decreased productivity can be minimized by effective training and good support.

- Technology - Technology is changing so quickly that it is difficult for partners, principals, and managers to keep up with the options available to them, but it is important that they be versed in the general direction of developments in computer systems for their industries. This familiarity will enable them to understand and identify the possible benefits of new systems.

- Management Acceptance - In many organizations, senior management is still not in agreement that systems can provide any real benefit for their organizations.

- On-Line Data Base Standards - Accounting, legal services, and real estate all use on-line data bases to speed research. A common complaint among companies using more than one data base is the lack of a standard command language. Each data base has its own command language, making it necessary for users to relearn each set of commands for each session. This is a problem for all users except those that use a wide variety of data bases frequently.

D

Key Services/ Applications

As shown in Exhibit V-3, there are a number of services and applications that are key to user development.

EXHIBIT V-3

USER BUDGET CONSIDERATIONS KEY SERVICES/APPLICATIONS

- Micro/mainframe links
- Project management
- Property management
- Desktop publishing
- Billing and record-keeping
- On-line data bases

- Micro/Mainframe Links - For service organizations with large data processing organizations, there is a steady increase in the number of individuals who want to establish links between their PC and a mainframe. An increasing number of people need access to corporate information for analysis and planning.

- Project Management - For the construction industry, project management is increasingly necessary as competition increases and profit margins decrease.

- Property Management - As for the construction industry, the real estate industry is under increasing pressure to manage properties more productively.

- Desktop Publishing - A primary requirement for graphic artists and advertising agencies, desktop publishing can be found in all types of firms to improve the overall quality of print products.

- Billing and Record-keeping - Among the professional services firms (legal, accounting, etc.), the need for up-to-date information about client billing and charges incurred is increasingly important due to erosion of fees.

- On-Line Data Bases - On-Line data bases are an increasingly important source of financial and general business information. Through numerous service providers, information can be found on nearly any subject. The use of on-line data bases is increasing as a way to augment the work of corporate planning staffs.

VI

Opportunities

A Introduction

Providing technology-based products and services to the services sector presents a number of challenges that may not be found in other sectors.

Although the vendor organizations in other sectors are generally similar in their products and services, the products and services as well as the size of organizations in the services sector vary greatly. The services sector, in a bimodal distribution, encompasses organizations that are exceptionally large and those that are individually owned and operated.

To be successful in the services sector, it is necessary to have a thorough understanding of the most cost-effective marketing and distribution methods, as well as a thorough understanding of the specific type of organization.

B Key Opportunities

As illustrated in Exhibit VI-1, there are a number of key opportunities within the services sector.

- Value-Added Processing Services - Although the processing services mode of delivering services is not growing significantly, there are still opportunities for the vendor that can provide integrated application solutions. With many existing needs generally satisfied (accounts receivable, payroll, etc.) and others being successfully performed on PCs, there are still opportunities for services that can provide added value. Applications that are integrated and provide an organization with the means to perform analysis and planning from the same set of data will be of value.

- Connectivity - Many organizations that are not large enough to have in-house staffs are in need of establishing connections between a variety of products. Connectivity solutions that permit the integration of a variety of disparate pieces are needed by many organizations. Medium-size organizations that have permitted departments to pursue their own

EXHIBIT VI-1

KEY SERVICE OPPORTUNITIES

- Value-added processing services
- Connectivity
- Training
- Integrated solutions
- Professional services
- Turnkey systems

PC/micro strategies, need assistance to establish an organization-wide network.

- Training - Although documentation and training material has been steadily improving, there is still a need for training of nontechnical people. Many nontechnicians can master the basics from improved documentation, but are generally not able to make maximum use of hardware and software.

- Integrated Solutions - An increasing number of users need to have applications that permit the use of information across applications. As an example, payroll data may be needed in a production planning application.

- Professional Services - Professional services (consulting) will continue to be needed to help users understand and plan for the use of technology.

- Turnkey Systems - Turnkey systems will continue to be in demand for organizations that need a packaged solution. These types of systems are particularly suitable to organizations that are no longer small, but cannot afford a full-time staff to plan for technology usage.

In general, there are opportunities in all delivery modes, but an increasing number of opportunities are being satisfied through the use of PCs and packaged application software. The greatest rewards will come to those that can integrate the variety of standalone solutions that have been developed.

VII

Conclusions and Recommendations

A Conclusions

There are several conclusions that can be drawn from research in the services sector.

- Although service sector firms are frequently less affected by swings in the economy than are other firms, many are less able to withstand a lackluster economy.

  Generally adaptable to changing conditions, but with few financial reserves, smaller service firms require an economy that is moving, either up or down.

  For these reasons, economic uncertainty has caused many service firms to be less responsive to making investments than is desirable. This situation is expected to continue until a more definite direction for the economy has been established.

- There is a keen interest in automation within the services sector. There is also a general lack of understanding regarding ways in which the technology can improve a business or create greater opportunities.

- There is a great deal of turmoil in the services sector as industry struggles to establish a service-oriented economy. The turmoil has caused many firms to adopt a wait-and-see attitude, thus reducing investment in technology and growth.

B Recommendations

Ten years from now, the services sector could be structured quite differently from the way it is today. There may be a smaller number of large organizations that account for the majority of the revenues, or there may be a greater number of small organizations, each representing small portions of a growing revenue base.

Even though the exact changes are not yet known, there are several recommendations related to the existing environment. The recommendations also acknowledge the potential for change.

- Providers should recognize that the environment is changing and that a different structure in a few years would necessitate different ways of marketing. Providers should begin to assess alternative marketing strategies and distribution channels.
- Generally, patience is advised where the economy is concerned. There is extensive speculation about the direction and timing of the economy, but the general consensus is that time may be needed for the economy to set a definitive direction.
- With the needs of many of the larger organizations generally satisfied, providers need to assess strategies for penetrating lower into the sector. Marketing strategies and revenue expectations need to be changed and the cost of sales/marketing well understood.
- The services sector is growing and will continue to grow for a number of years. To maximize the opportunities, providers will need to be able to develop and manage a mix of products and marketing strategies.

SI-A

Appendix: Forecast Data Base 1988-1993

EXHIBIT SI-A-1

SERVICES SECTOR USER EXPENDITURE FORECAST BY DELIVERY MODE, 1988-1993

($ Millions)

Sector by Delivery Mode	1987	Growth 87-88 (%)	1988	1989	1990	1991	1992	1993	CAGR 88-93 (%)
Total Services Sector	1,705	16	2,000	2,285	2,625	2,995	3,435	3,935	15
Processing Services	595	13	680	730	790	845	900	955	7
Transaction Processing Services	590	13	670	720	780	830	885	940	7
Systems Operations	5	25	10	10	10	15	15	15	5
Network/Electronic Information Services	310	22	380	460	565	680	810	960	21
Electronic Information Services	300	12	370	450	550	660	780	920	20
Network Applications	10	17	10	10	15	20	30	40	39
Application Software Products	270	22	340	405	490	580	710	860	20
Mainframe	80	12	90	105	120	120	150	170	12
Minicomputer	110	17	130	150	180	210	240	280	17
Workstation/PC	80	40	120	150	190	250	320	410	28
Turnkey Systems	410	11	450	510	570	630	700	770	11
Systems Integration	20	42	30	40	50	70	95	130	37
Professional Services	100	14	120	140	160	190	220	260	17

SI-B

Appendix: Data Base Reconciliation

Appendix B provides a summary reconciliation of INPUT's 1988 forecast for the services sector with forecasts previously made for 1987.

Between the time the forecasts reflecting 1987 and 1988 were prepared, there were a number of changes to the overall structure of the data. Major changes included the following:

- Processing/Network Services - In 1988, processing and network services were split into two separate groupings. For the purpose of the reconciliation, they have been re-combined.

- Systems Integration - In 1988, systems integration was added as a separate category. This addition has increased the 1988 data over the 1987 data by the amount shown.

- Professional Services - In 1988, professional services was added as a separate category. This addition has increased the 1988 data over the 1987 data by the amount shown.

Exclusive of the additional revenues reported, there are two basic reasons for the variance between projected and actual revenues for 1987 and 1988.

- Approximately half of the variance is accounted for by a more-rapid-than-anticipated shift from processing services to PCs and related software. At the time the 1987 data was originally prepared, INPUT anticipated that the shift would take place over a longer period of time.

- The other half of the variance results from a realignment in the collected data. A review of data originally collected indicated that information for a number of firms closely aligned with the service sector needed to be reclassified.

Overall, the adjustments are believed to have resulted in a single dip in reported revenues; the projected growth rates are expected to remain generally as reported.

EXHIBIT SI-B-1

RECONCILIATION OF SERVICES SECTOR INDUSTRY-SPECIFIC MARKET FORECAST

Delivery Mode	1987 Market			1991 Market			87-92 CAGR (%) 1987 Report	87-92 CAGR (%) 1988 Report
	1987 Forecast ($M)	1988 Report ($M)	Variance as % 1988 Report	1987 Forecast ($M)	1988 Forecast ($M)	Variance as % 1987 Format		
Processing/Network Services	1,102	905	-18	1,793	1,525	-15	13	15/21
Application Software	165	270	63	370	580	57	22	20
Turnkey Systems	465	410	-12	880	630	-28	17	11
Systems Integration	-	20	-	-	70	-	-	37
Professional Services	-	100	-	-	190	-	-	17
Sector Total	1,732	1,705 (1,585)	-2 (-8)	3,043	2,995 (2,735)	-2 (10)	15	15

About INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

Continuous-information advisory services, proprietary research/consulting, merger/acquisition assistance, and multiclient studies are provided to users and vendors of information systems and services (software, processing services, turnkey systems, systems integration, professional services, communications, systems/software maintenance and support).

Many of INPUT's professional staff members have more than 20 years' experience in their areas of specialization. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed as a privately held corporation in 1974, INPUT has become a leading international research and consulting firm. Clients include more than 100 of the world's largest and most technically advanced companies.

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