SEPTEMBER 1992

ANALYSIS OF "TOP TEN" PROFESSIONAL SERVICES FIRMS

Prepared for CGI

INPUT®

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Analysis of "Top Ten" Professional Services Firms

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Table of Contents

Table of Contents (Continued)

Exhibits

Exhibits (Continued)

Appendixes

I

Background and Methodology

A

Background

INPUT was engaged in June 1992 to help CGI develop a stragetic plan to maximize growth and profitability. As part of INPUT's assistance, INPUT was to identify ten professional services firms that INPUT considers the most successful in the marketplace. CGI was especially interested in the critical success factors associated with these firms.

INPUT and senior CGI staff met in a four-hour interactive session on August 6, 1992 to review INPUT's findings and conclusions. Later that day INPUT made an abbreviated version of the presentation to CGI's Board of Directors.

This report provides a summary of critical success factor findings and contains details on each firm in the Appendixes.

B

Methodology

INPUT set the following criteria for a company to be included in the top ten list:

- A compound annual growth rate (CAGR) for the period 1988-1991 of 15%, combined with consistent profitability

OR

- An average margin (i.e., profit before tax - PBT) during this period of at least 15%.

One immediately interesting finding is that no firm qualified on the basis of the second criterion alone. That is, the firms with high margins also grew fast (the reverse was not necessarily true).

Exhibit I-1 shows the firms that qualified for inclusion in the top ten.

- Several other firms (e.g., other Big 6 firms) would have qualified also, but INPUT wanted to have a representative group of firms. However, INPUT does not believe that more than 20 firms would have qualified.

- Note that only one firm not based in the U.S. is on this list. This was not intentional; INPUT searched for more non-U.S. firms to add to the list.

After the firms were selected, detailed profiles were developed covering objective factors such as financials, business focus, and geographic, industry and technical specialization; INPUT also summarized each firm's position concerning acquisition/alliances, organization, training, compensation/incentives, method of planning for growth, strengths, weaknesses and an overall assessment. This material is contained in an appendix for each firm.

Much of INPUT's qualitative assessment was spent on determining the critical success factors for each firm. The presentation--as well as this report--was focused on these success factors.

C

Structure of This Report

This report is organized into the following sections:

- An overview of the structure of the professional services/systems integration marketplace. This overview is important from the standpoint of definitions as well as understanding some of the principal drviers of growth and margins.
- The significant characteristics of a "top ten" firm. These characteristics include:
  - Size, growth and profitability
  - Geographic and industry focus
  - Individual success factors
- An analysis of success factors overall
- Ten appendixes with additional detail for each firm.

EXHIBIT I-1

"Top Ten" Professional Services Firms

Andersen Consulting
CAP Gemini Sogeti (CGS)
Computer Science Corp. (CSC) Non-Federal operations
Digital Equipment Corp. (DEC)
Electronic Data Systems (EDS) Non-General Motors operations
Ernst & Young (E & Y)
International Business Machines (IBM)
Oracle Complex Systems
Perot Systems
TSC, Inc

Note: All data and analysis is limited to these companies' professional services/systems integration business, unless otherwise specified.

II

The Professional Services Market

Putting the professional services market into context is important to understanding the top ten firms and their strategies and for helping to form CGI's strategies.

This chapter provides an overview of the structure of the professional services business and expected growth and profitability benchmarks.

A

Professional Services and Systems Integration

The term "professional services" is sometimes used to refer to standalone professional services and sometimes to also include systems integration (SI) activities. This study has used professional services in the latter, more inclusive sense. (Note, though, that when INPUT's standard materials refer to "professional services" they mean standalone professional services.)

Exhibit II-1 contrasts the differences between the two activities.

- The typical business opportunity often does not fall tidily into one category or another. The two categories are more likely to represent ends of a continuum, with considerable activity in a grey area.

- Most projects have a preponderance of characteristics that place them into either "systems integration" or "standalone professional services."

However, differences between the two categories increasingly have very real business meaning in terms of potential growth and profitability opportunities.

B

Growth and Profitability Benchmarks

The U.S. standalone professional services market is quite large--almost $18 billion in 1991--but is expected to grow at only a 9% rate over the next five years, as shown in Exhibit II-2. Since INPUT's growth rates include an inflation factor of about 4%, this means a 5% real growth rate.

This rate is contrasted to an underlying growth rate of twice that for the systems integration market (see Exhibit II-3), although starting from a base of about half the size of the standalone professional services market.

Some components of the professional services market will still have respectable growth rates, such as consulting (see Exhibit II-4). However, software development/maintenance growth will barely keep ahead of inflation.

The professional services component of systems integration will grow even faster than systems integration overall, as shown in Exhibit II-5.

One of the most important differences between professional services categories are differences in potential margins. Exhibit II-6 shows these margins, which range from under 5% in government projects to 30% in commercial systems integration projects.

- The government margins are artificially constrained by regulation; true margins may be somewhat higher.
- The ranges represent the variation between average companies and what very well-run organizations can hope to attain. The high end represents a realistic objective to aim for.
- Note that programming/systems development has the lowest margins and the lowest expected growth. This is reasonable because low growth with relatively fungible offerings generally means increased price competition.
- Systems integration, on the other hand, offers far more opportunities for differentiation, mainly from the standpoint of providing a business-oriented solution. Obviously, though, there is also greater risk assumed by the vendor in return for the higher margins.

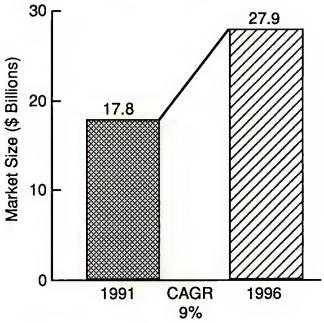
EXHIBIT II-1

Differences Between Professional Services and Systems Integration

Category	Standalone Professional Services	Systems Integration
Project Duration	Can be continuous	Limited
Project Management Responsibility	Usually customer	Prime contractor
Computer Equipment Selection	Customer	Prime contractor for customer
Services Provided	Often a single service (e.g., software development)	Usually multiservice, including hardware/ software integration
Pricing	Time and materials	Fixed-price
Item Purchased	Resources	"A solution"

EXHIBIT II-2

U.S. Professional Services Market
1991-1996



Without Systems Operations

EXHIBIT II-3

U.S. Systems Integration Market
1991-1996

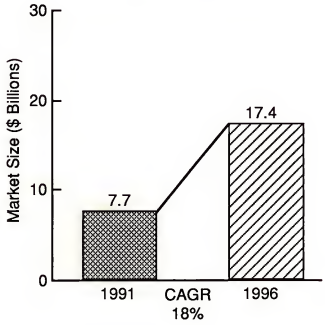


EXHIBIT II-4

U.S. Professional Services Market
1991-1996

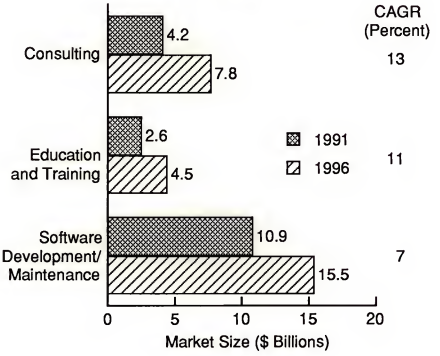


EXHIBIT II-5

Commercial Systems Integration Market by Component, 1991-1996

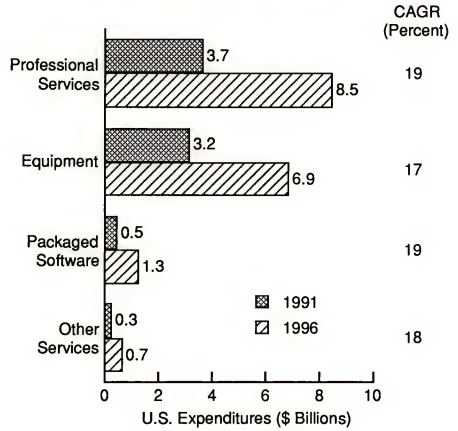
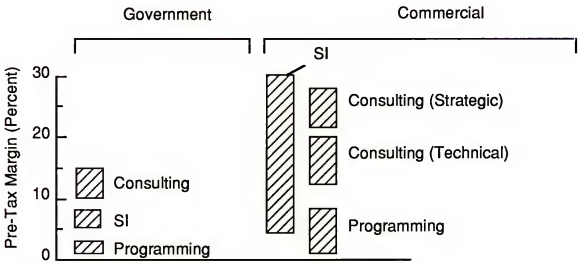


EXHIBIT II-6

Typical Professional Services Margins



Source: INPUT estimates

III

"Top Ten" Analysis: Significant Characteristics

A

Overview: Size, Growth and Profitability

Size, per se, is not a significant factor in qualifying to be a top ten firm. As shown in Exhibit III-1, the size of professional services/systems integration revenues ranges from IBM at over $5.4 billion in 1991 to TSC at $63 million. (Note: The revenue for systems integration does not include revenues from hardware or software products; it represents pure services revenues.)

Exhibit III-2 contrasts the growth rates and the average pre-tax margins for 1988-1991.

· The median growth rate was 28% and median margin was 18%.

· Several firms had much higher growth rates, but these each had special factors behind them:

  - DEC had not been correctly counting all professional services-related revenues in the late 1980s; it is not possible at this point to adjust these years. However, DEC does have a true professional services growth rate in excess of 30% annually.

  - Perot Systems and TSC growth rates are affected by their being relatively recent startups. However, their current growth rates are still in excess of 30%. It is important to understand that there is still an opportunity for new startups to make their marks quickly.

· The firms with lower margins fell into two groups:

  - IBM and DEC are still trying to deal with their generally high overheads, including higher than average personnel costs.

- CSC and CGS, on the other hand, are still supplying considerable amounts of lower margin applications development services.

Exhibit III-3 graphs growth rates versus average margins. The scatter diagram shows that there is no simple relationship between growth and margins. However, there is not necessarily a profit penalty paid for high growth.

It should be stressed here that these figures are for top companies; most average companies find it difficult to combine sustained growth and profitability.

This last observation is important because it is often believed that a "reinvestment" period is necessary to support high growth. These figures show that in a services business this is not always true.

B

Geographic and Industry Focus

Exhibit III-4 summarizes the geographic distribution of the top firms' professional services/systems integration business.

- Only CGS does not have a significant portion of its business in the U.S. This is a situation that it has publicly stated it intends to change.

- IBM, DEC and Oracle do less than half of their business in the U.S.; this largely reflects the worldwide scope of their product business. Andersen, on the other hand, has always aimed at having international scope.

- Non-U.S. business generally still means Europe, although growth rates in general for the Pacific Rim are high (but starting from a low base).

- EDS, TSC and Perot illustrate that a U.S.-centered business can be quite successful.

Exhibit III-5 shows the distribution of business across five major verticals for each of the top ten firms.

- Firms such as IBM, DEC, CSC and CGS tend to be active in most verticals. This activity is partly a result of having enough critical mass to actually be able to focus on a number of verticals, and partly

(especially CGS) performing relatively undifferentiated work, such as applications development.

- Other firms--such as EDS, Andersen, Perot and, especially, TSC--focus on particular verticals and subverticals. In the case of TSC, this has been one of the principal reasons for its success.

C
Critical Success Factors for Individual Firms

This section provides INPUT's evaluation of the most significant factors behind the success of individual firms.

1. IBM

- IBM's sizable, global presence is a strong factor supporting large-scale projects, particularly international ones.

- IBM's installed base helps to provide an assurance of service and continuing presence.

- The experience in systems integration (SI), which IBM has developed over a period of years, is reflected in its ability to market and manage large, multivendor projects. This experience also helps IBM to be considered for new projects.

- Knowledge of IBM equipment should not be overlooked as a success factor. This provides IBM the opportunity to be considered or participate in many large jobs.

2. EDS (Non-GM Business)

- The strength of EDS in SI is marked by its ability to anticipate and support the needs of large organizations.

- EDS has an objective to learn as much as possible about the vertical markets that it will focus on. This was made possible by its 1989 reorganization.

- The strength that EDS has gained over time in outsourcing has proven to be an important asset, as this technique has gained popularity.

- In Europe, EDS has gained needed strength for developing the market through selected acquisitions.

3. Andersen Consulting

- Andersen has important global strength through its information services business and its auditing activities.
- Andersen's SI strength has been developed through assignments as well as a set of products that support SI work.
- The vertical focus of the firm has been supported with demonstrations that help to convince prospects of Andersen's knowledge and methods of addressing problems.
- Management provides unusually strong central direction in a partnership environment.
- The matrixed organization of Andersen allows technical specialties and industry expertise to be brought to bear on SI and other projects.

4. Digital Equipment Corporation

- DEC's sufficient presence in global markets and worldwide level of installed equipment provide reassurance of support and confidence in problem resolution.
- DEC's experience with SI in a number of industries and its knowledge of transaction processing data management and open systems provide strength in SI marketing.

5. CAP Gemini Sogeti

- CGS has shown the ability to build a company and develop professional services/SI strengths through acquisitions. In addition to its acquisition of SESA in France, CGS has gained market share and capabilities in the U.S., Germany, Italy, and other countries.
- The acquisitions of CGS, including its purchase of United Research and the MAC Group, demonstrate an ability in acquisition management. The components support long-range CGS goals and contribute unique strengths.

6. CSC (Non-Federal)

- CSC has developed and acquired the ability to sell and manage large multivendor SI projects and the industry/application knowledge to handle projects in key market areas.

- CSC has coordinated different orientations toward professional services/SI work (consulting of Index, industry skills of Partners, SI marketing of Cleveland Consulting) while absorbing firms. This coordination demonstrates strength in management practices similar to a Big 6 firm and strength in acquisitions management.

- CSC's acquisitions have given the company the consulting capability needed to help sell and initiate large, profitable contracts as well as to administer and manage them.

7. Ernst & Young

- Through its auditing work, Ernst & Young has gained a global presence and reputation that has been highly useful in gaining prospects and helping to close information services contracts.

- Through internal training and alliances, Ernst & Young has developed the project management and industry knowledge and skills to perform SI work.

- The vertical knowledge that Ernst & Young has gained in finance, banking/finance and other industries has proved to be critical in gaining work.

- Ernst & Young has managed to support a decentralized type of operation that has encouraged separate offices to develop and use strengths to gain SI and professional services work.

8. Oracle

- The global business and installed base of Oracle accounts provide an image of having service nearby and assuring prospects that Oracle will continue to be in business. Both are necessary to support marketing for large SI and professional services contracts.

- The strength in running large SI contracts, which Oracle acquired and supplements through contracts to develop and modify data management systems for a number of industries, is a strong factor in its current performance. The widespread use of Oracle data management products has become, by itself, a critical factor.

9. Perot Systems

- Perot has capitalized on the knowledge of employees who formerly worked for EDS to provide the marketing and large-scale project management capabilities required for success.

- The management practices of Perot, which support dedicated efforts by a team, are a key success factor for the firm.

- Perot also has the ability and experience to develop the interests of prospects and clients in applications management.

10. TSC

- TSC has sought and gained personnel strengths in SI that have been critical in selling and performing projects.

- The knowledge of certain discrete applications that TSC has is an outstanding demonstration of the role that vertical focus plays.

- The management practices of TSC, which resemble those of some of the Big 6, enforce the performance of a team and highly motivate team management and performance.

D

An Analysis of Critical Success Factors

Exhibit III-6 summarizes the success factors for individual firms into eight categories.

- Every firm except CGS has taken a systems integration approach. With CGS's recent U.S. acquisitions (The MAC Group and United Research), INPUT expects that CGS in North America will be more systems integration focused in the future.

- EDS, Andersen, Ernst & Young and TSC have a very real vertical focus also.

- For the firms that have distinctive (although divergent) management practices, these practices have proven to be important for their success. It is not going too far to say that any distinctive way of managing a professional service business (as long as it is practical) is preferable to generic management practices.

- Being global and having an installed base has been helpful for those firms who bring these advantages from other parts of their businesses. For product-oriented companies (IBM, DEC and Oracle), having expertise in their parent company's products has been another advantage.

  - It should be stressed, however, that these kinds of "inherited" advantages are no guarantee of success. Many product-focused companies have tried to piggy-back professional services on top of their existing business without a great deal of success.

- Acquisitions play a relatively small role in the success of most of these companies--CSC is the exception in that it has built up a large U.S. commercial sector business based on its ability to select and manage acquisitions well.

  - CGS has recently used acquisitions to reinforce its position in SI and in the U.S. market.

- Technical specialties are, in general, less important than vertical specialties for success.

  - Major exceptions are EDS and Andersen, which pioneered outsourcing and commercial systems integration respectively.

- It could be argued, however, that these are more specialties in ways of conducting their business than true technical specialties.

· A very real advantage for EDS and Andersen has been their ability to evolve their organizations to keep up with their growth and changing market requirements. E & Y is one of the few professional services firms to perform well in the traditional decentralized operating environment (and to also absorb the shock of a major merger two years ago).

E

Conclusions and Recommendations

Several important findings flow from this analysis:

· The professional services/systems integration business is still very attractive, in spite of current economic conditions.

· Size (at either end of the spectrum) is not an absolute bar to success, measured in growth and profitability.

· Systems integration services are key to growth and sustained profitability. Systems integration goes hand in hand with specialization, preferably in vertical areas.

The most important conclusion is that there is no single road to success in this business. Each successful firm has chosen its own road and has evolved its own model.

· There are certainly lessons that CGI, or any other firm, can gain from studying successful firms.

· However, INPUT expects that other models will be created, depending on the environment for an individual firm as well as the firm's interactions with changing market conditions.

EXHIBIT III-1

"Top Ten" Professional Services/ Systems Integration Firms—1991 Revenues

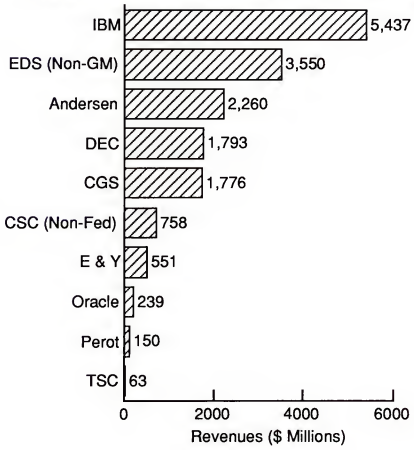


EXHIBIT III-2

"Top Ten" Professional Services/Systems Integration Firms Growth Rates and Margins—1988-1991

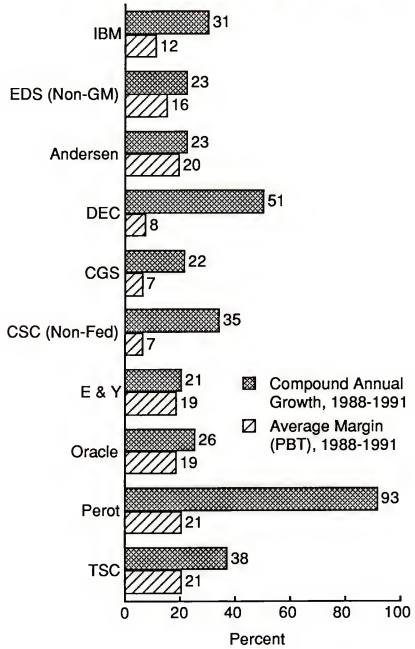


EXHIBIT III-3

Professional Services/Systems Integration Firms
Average Margins versus Growth Rates, 1988-1991

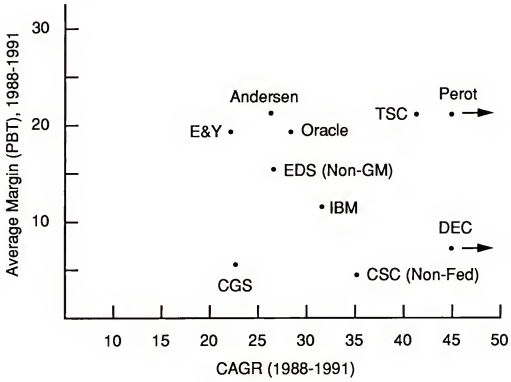


EXHIBIT III-4

"Top Ten" Professional Services/Systems Integration Firms Geographic Distribution of 1991 Revenue

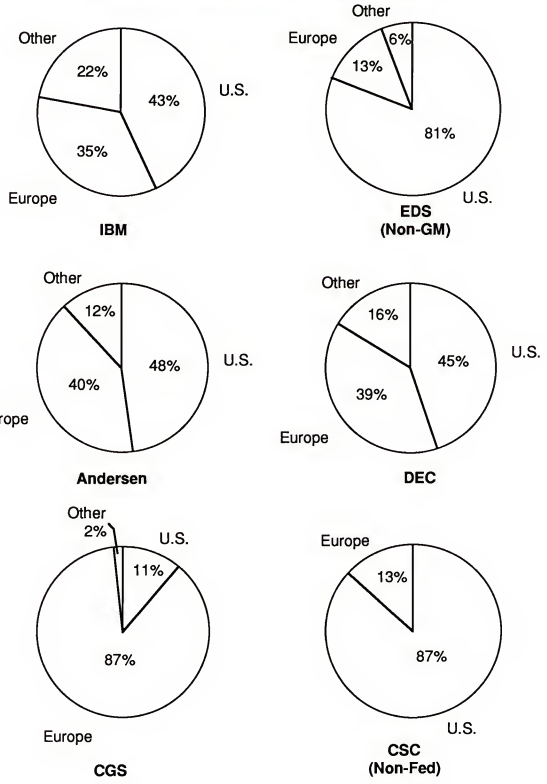


EXHIBIT III-4 (CONT.)

"Top Ten" Professional Services/Systems Integration Firms Geographic Distribution of 1991 Revenue

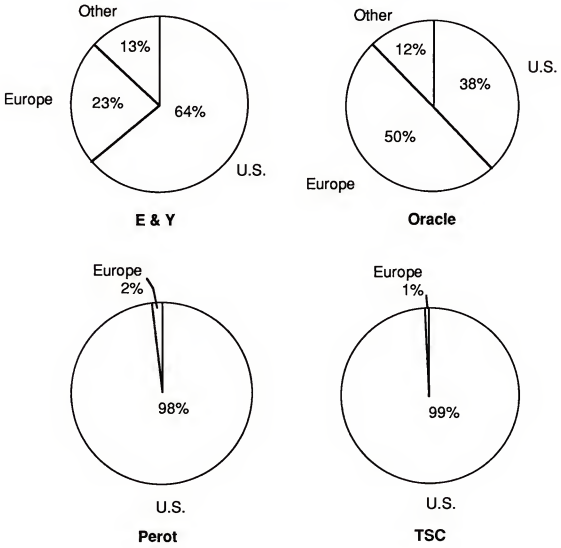


EXHIBIT III-5

"Top Ten" Professional Services/Systems Integration Firms
1991 Vertical Market Specialization

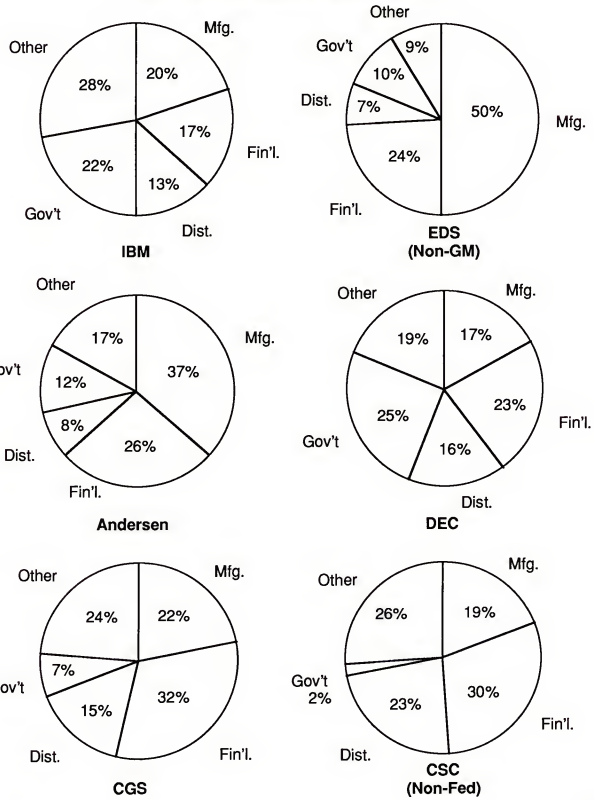


EXHIBIT III-5 (CONT.)

"Top Ten" Professional Services/Systems Integration Firms
1991 Vertical Market Specialization

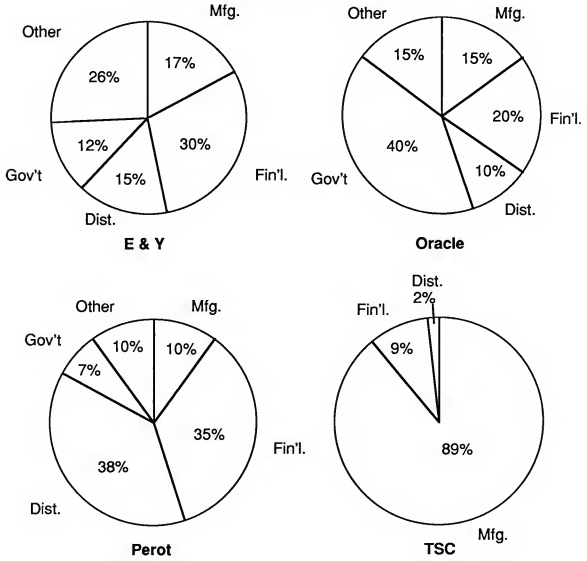


EXHIBIT III-6

Critical Success Factors for Selected Professional Services/Systems Integration Firms

Company	Global	Installed Base	SI	Vertical Focus	Mgmt. Practices	Acquisitions	Technical Specialty	Organization
IBM	X	X	X				IBM	
DEC	X	X	X				DEC	
CSC			X		X	X		Acq. mgmt.
EDS			X	X	X	Europe	Outsourcing	1989 changes
Andersen	X		X	X	X		SI	Matrixed
E&Y	X		X	X				Decentralized
TSC			X	X	X			
CGS						X		Acq. mgmt.
Perot			X		X		Appl. mgmt.	
Oracle	X	X	X				Oracle	

A

IBM (Professional Services and SI)

Exhibit A-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	5437	32	650	34
1990	4116	32	485	33
1989	3120	28	365	30
1988	2430	n/a	280	n/a

Exhibit A-2

Business Focus

Type of Business	Approx. % *	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	75	
- Smaller Projects	23	
· Task/Contract Programming	-	
· Management Consulting	-	
· Other (Network Services/Turnkey)	2	
Outsourcing		
· Platform Management	-	
· Applications Management	-	
· Network Supply/Management	-	
Other	-	
TOTAL	100	

*Does not include outsourcing, software products, network services or processing.

Exhibit A-3

Specialization

Geography	Approximate % 1992	1997
U.S.	43	41
Europe and Africa	35	36
Canada	4	4
Other (Asia)	18	19
TOTAL	100	100

Comments: Will be participating indirectly in multiple geographic markets through investments and alliances.

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	20	Increasing
Financial	17	Flat
Telecomm, transportation and utilities	12	Increasing
Wholesale/retail and other services	13	Flat
Government	22	Decreasing
Cross-industry: (Office, human resources, accounting, planning, engineering/scientific, other)	11	Decreasing
Other	5	Flat
TOTAL	100	

Exhibit A-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	Specialty
Database	Specialty
· CASE	Specialty
Transaction processing	Specialty
Data collection	
Other	

Acquisitions/Alliances

- Many investments in other vendors, including AMS, AIC, Knowledgeware.
- Alliances and arrangements with Coopers & Lybrand, Apple and many other hardware, services and software vendors

Organization

IBM is split into manufacturing/development businesses and marketing/services companies. Marketing/services companies sell and deliver SI and professional services through geographically distributed offices (62 trading areas in the U.S.). The manufacturing/development businesses include some supplementary services capabilities, but most of the strength for doing SI/professional services jobs is housed in the trading areas and profits from the synergy with the sales personnel and client contacts.

Training

Extensive training includes local as well as separate facilities. Training includes technical, management, business, industry, problem-solving, psychological and other elements to meet all needs that can arise. The education and training is shaped to provide all IBM internal and client needs as well as to be a separate marketplace force and revenue contributor.

Compensation/Incentives

Salary plus commission for sales; commission targeted to support company goals. Now IBM has means of sharing rewards across client teams.

Method of Planning for Growth

- IBM is improving market response by distributing control of products and services into many separate businesses.
- IBM has organized to bring a broad range of support capabilities to sales locations.
- Programs are in place to help clients move in concert with new IBM information technology plans.
- Research and investments in other IT vendors help ensure that IBM has aid in assessing and responding to emerging needs with appropriate development.

Strengths

- Comprehensive and thorough approach to marketing and sales as well as research and development

- Willing to modify and redirect efforts in software, services or hardware, but will act most rapidly in services, as shown by SI and SO businesses

- Willing to copy or acquire products and services that meet market needs and to work at improving them

Weaknesses

- Reluctant to back pioneering steps or radically new initiatives such as new methods of providing incentive to the SI/professional services area or technology just beyond its planning horizon

- Has lagged market in introduction of PCs, workstations, parallel processing, RISC

- Absorbing new staff and organization

Overall Assessment

IBM's continuing work with large clients, ongoing research in technology, and history of closely tracking the work of competitors and users will make it continue to be a major force in the SI/professional services market. These characteristics may make it a stronger contender in the services market than in some other markets.

IBM will profit from its flexibility in responding to opportunities. Although its initiative to sell strategic consulting has not reached the level of success desired, the people selling strategic consulting found ways of bringing IBM into large projects. IBM has learned to use temporary agencies to locate needed capabilities for customers.

IBM will not be the leader in providing for solutions in certain industries as Andersen Consulting, TSC or EDS might be, but it will be ready to serve more targets by itself or in concert with many other companies.

B

EDS (Non-GM)

Exhibit B-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	3550	27	570	26
1990	2788	17	450	15
1989	2385	25	390	26
1988	1908	32	310	n/a

Exhibit B-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility	22	
- Systems Integration	15	
- Smaller Projects	-	
· Task/Contract Programming	-	
· Management Consulting	-	
· Other	-	
Outsourcing		
· Platform Management	-	
· Applications Management	58	
· Network Supply/Management	-	
Other	5	
TOTAL	100	

Exhibit B-3

Specialization

Geography	Approximate % 1992	1997
U.S.	81	-
Europe and Africa	13	-
Canada	4	-
Other (Asia)	2	-
TOTAL	100	-

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	50	Slight decrease
Financial	24	Flat
Telecomm, transportation and utilities	7	Slight increase
Wholesale/retail and other services	7	Slight increase
Government (Eliminated U.S. federal from analysis)	12	Slight decrease
Other	2	
TOTAL	100	

Total may not add to 100% due to rounding

Exhibit B-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	
Database	Specialty
· CASE	
Transaction processing	Specialty
Data collection	
Other	

Acquisitions/Alliances

- Recent acquisition of McDonnell Douglas SI company (CAD/CAM and other expertise)
- 20% equity in Hitachi
- Creative software systems (Cable TV)
- Entered Europe by acquisition

Organization

Sales and development work is organized generally by industry with strong roles for account managers and strong emphasis on team implementation. A separate technical services organization supports 20 information processing centers worldwide. Sales and support offices throughout the world sell and perform work.

Training

Heavy emphasis on learning EDS approach to performing work and solving problems. Also, training in technical capabilities, although people with needed experience are hired when necessary. EDS is developing training further to be a marketplace force.

Compensation/Incentives

Commissions are paid in the 20%-30% range and bonuses are paid in relation to meeting objectives.

Method of Planning for Growth

EDS emphasizes planning. Industry targets and types of jobs are selected as much as possible. Employees are trained to perform in ways that guaranty quality results and growth. EDS aims at obtaining larger jobs at top companies and will approach prospects with ideas for improving revenues or performance through the use of systems.

Strengths

- EDS can bring highly motivated and trained teams to work on problems.
- EDS knows how to identify targets for systems work and to sell large contracts.
- EDS has considerable knowledge and capabilities in certain industries.

Weaknesses

- EDS is not as flexible in adapting to changing needs as some other competitors are, according to users.
- EDS may have problems with new working environments where multiple user groups are planning for the use of client/server capabilities and ideas have to be blended together.

Overall Assessment

EDS will continue to be a major force in information services, based on its ability to identify, sell and perform sizable jobs. There will be continuing need for its capabilities, even if competitors find ways to be more responsive to the changing use of information systems.

The EDS growth rate will fall as a result of competition, but still stay comfortably above industry averages.

C

Andersen Consulting

Exhibit C-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	2260	20	455	18
1990	1880	30	385	26
1989	1450	29	305	22
1988	1199	60	250	n/a

Exhibit C-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	63	
- Smaller Projects	30	
· Task/Contract Programming	-	
· Management Consulting	-	
· Other: Applications Software	4	
Systems Software	1	
Outsourcing		
· Platform Management	-	
· Applications Management	2	
· Network Supply/Management	-	
Other	-	
TOTAL	100	

Exhibit C-3

Specialization

Geography	Approximate % 1992	1997
U.S.	48	44
Europe and Africa	40	43
Canada	2	3
Other (Asia)	10	10
TOTAL	100	100

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	37	Decreasing slightly
Financial	26	Flat
Telecomm, transportation and utilities	14	Increasing slightly
Wholesale/retail and other services	8	Increasing slightly
Government	12	Decreasing
Other	3	Flat
TOTAL	100	

Exhibit C-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	Specialty
Database	
· CASE	Specialty
Transaction processing	
Data collection	
Other: Imaging - Centers that demonstrate working models of wholesale, retail, medical and manufacturing (CIM) environments that utilize advanced technology	

Acquisitions/Alliances

Various alliances and marketing agreements. Alliance with Microsoft to provide services via client/server applications. Alliance with Xerox to provide publishing services. Re-marketer of Sun workstations and software. Business integration program has resulted in alliances with many hardware and software vendors.

Organization

Consulting practice organization that includes an associate partner level as a step to partnership work is organized into systems integration, systems management, strategic and systems management services that are provided through 151 offices worldwide.

Training

High level of training ($7,200 per consultant in 1991). More than 250 courses are available. A consultant may have taken over 1,000 hours of training before becoming an associate partner. User training includes an important new offering supporting use of client/server technology.

Compensation/Incentives

Partners earn about $200,000; associate partners earn about $125,000 as a base. Non-partners can be paid 20% to 40% performance bonus in good years.

Method of Planning for Growth

Andersen Consulting focuses on improving its people, its use of technology, its knowledge of and ability to use technology in target markets, and alliances to extend its penetration of target markets.

Strengths

Centers that can demonstrate working solutions to industry problems.

MAC PAC software products that ensure continuing assignments in manufacturing, according to TSC.

Rapid assessment and use of new technology like client/server.

Contacts and organization as well as consulting experience inherited from parent organization.

Weaknesses

A number of employees are more anxious about moving up to associate partner rather than staying in the trenches. In order to overcome high domestic bids in some situations, Andersen has had to use contract and offshore personnel, which have been harder to control.

Overall Assessment

Andersen Consulting is a powerful SI/professional services competitor with knowledge of how to use technology and participate in technology transfer.

There can be challenges as Andersen extends its techniques into new targets industries, but its willingness to explore and bring new technology to clients should bring continued success. Its experience in consulting and problem solving as well as the contacts gained from its parent, together with industry and technological knowledge, make it one of the strongest competitors.

D

Digital Equipment Corporation

Exhibit D-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	1793	17	145	21
1990	1526	94	120	85
1989	785	-	65	-
1988	n/a	n/a	n/a	n/a

Exhibit D-2

Business Focus

Type of Business	Approx. % *	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	67	
- Smaller Projects	32	
· Task/Contract Programming	-	
· Management Consulting	-	
· Other (Network Services/Turnkey)	-	
Outsourcing		
· Platform Management	-	
· Applications Management	1	
· Network Supply/Management	-	
Other	-	
TOTAL	100	

*Does not include outsourcing, software products, network services or processing.

Exhibit D-3

Specialization

Geography	Approximate % 1992	1997
U.S.	45	41
Europe and Africa	39	41
Canada	-	-
Other (Asia)	16	18
TOTAL	100	100

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	17	Slightly increasing
Financial	23	Slightly decreasing
Telecomm, transportation and utilities	17	
Wholesale/retail and other services	16	Slightly increasing
Government	25	Decreasing
Other	2	Flat
TOTAL	100	

Exhibit D-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	
Database	
· CASE	
Transaction processing	Specialty
Data collection	
Other	

Acquisitions/Alliances

One of DEC's many alliances that can be used to support services is an agreement with Novell to knit together network offerings. Other alliances supporting services include those with Ross and Andersen Consulting.

Organization

Sales organization and staff support in regional and local offices sell and provide SI and professional services. Specialized technical and industrial staffs supplement local personnel in development and implementation work.

Training

Most personnel have received a wide range of technical, management and industrial courses. One of the capabilities that is emphasized is networking, a capability that has been gaining attention and opportunities for Digital Equipment Corporation.

Compensation/Incentives

Digital Equipment Corporation counts on the commitment and dedication of staff that has been hired, trained and brought up with DEC. Commissions are not paid for sales, but promotions and new assignments are given as rewards for good performance.

Method of Planning for Growth

Digital Equipment Corporation carries on planning from two perspectives: a technological extension of DEC capabilities aimed at present needs and an examination of user needs from industry research. Digital Equipment Corporation also reviews developments in services such as SI and SO and incorporates them into its services.

Strengths

Strong network and transaction processing capabilities. Well-planned use of its capabilities to meet needs of key industries, including banking, manufacturing and distribution.

Weaknesses

Has not moved rapidly enough to respond to client/server systems. Does not have the intensity in sales and implementation of competitors like EDS and Andersen Consulting. Has used SI/professional services to help leverage sales of hardware and reduced margins to support the sales of hardware.

Overall Assessment

Digital Equipment Corporation is sufficiently large and successful in information technology hardware and software to be able to use professional services and SI work to promote additional sales of hardware and software and to generate additional revenues with those services. It can make those services valuable to users through its technical capabilities and industry/application knowledge.

The net return on these services may be reduced by DEC's use of the services to help the sales of hardware/software, but DEC's use of these services has helped to promote their growth.

Digital Equipment Corporation will not be as successful in the growth rates or margins of return for SI/professional services as some other vendors, but it will continue to be one of the larger vendors of these services.

E

CAP Gemini Sogeti

Exhibit E-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	1176	5	101	(16)
1990	1685	30	117	19
1989	1296	33	99	46
1988	975	39	67	44

Exhibit E-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	11	Increasing
- Smaller Projects	21	Slight decrease
· Task/Contract Programming	52	Decreasing
· Management Consulting	2	Increasing
Outsourcing		
· Platform Management	-	
· Applications Management	6	Increasing
· Network Supply/Management	-	
Other (Software products)	8	Flat
TOTAL	100	

Exhibit E-3

Specialization

Geography	Approximate % 1992	1997
U.S.	11	-
Europe and Africa	87	-
Canada	-	-
Other (Asia)	2	-
TOTAL	100	

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	22	Increasing
Financial	32	Decreasing
Telecomm, transportation and utilities	15	Increasing slightly
Wholesale/retail and other services	15	Flat
Government	7	Decreasing
Other	9	Flat
TOTAL	100	

Exhibit E-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	
Database	Specialty
· CASE	Specialty
Transaction processing	
Data collection	
Other	

Acquisitions/Alliances

Recent alliance with CTG. Acquisitions of Hosbyns in the U.K., SCS in Germany and an alliance with Volmac in Benelux have added to European strengths.

Organization

CGS combines an approach of promoting close working relations between clients and sales/service staffs through decentralized operations together with corporate assistance and guidance through an international sales development activity aimed at leading multinational companies and an international technical support capability that provides common approaches to methodology and quality.

Training

Training is mostly on-site and is oriented to the technology and capabilities being promoted in current work. Special training programs are set up to address management, business, team effectiveness, new technical interests and other topics on an ad hoc basis.

Compensation/Incentives

Sales commissions of up to 20% are used in most offices to provide incentive to sales representatives. Bonuses and promotions reward good performance. CGS also makes an effort to attract people through the image of the company as an excellent and rewarding environment in which to work.

Method of Planning for Growth

CGS has concentrated on incorporating companies and adding competence in areas such as CIM, system conversion and CASE, which can fuel its growth of information services, particularly SI and professional services. In addition, it has worked on methods of stimulating and ensuring common general directions in its separate operations.

Strengths

- Recognizing the importance of SI in the marketplace and adding internal strength to sell and support it
- Developing industry contacts and knowledge that could be used for continuing assignments
- Developing an image of technological leadership that has been helpful in opening doors

Weaknesses

Performance of CGA has been weak. Has not had the depth of industry or technical knowledge to be a leading force in certain industry situations. Has not fully blended or resolved the differences in marketing and work methods used by Hoskyns, CGA, United Research and other units.

Overall Assessment

The strong presence that CGS has developed in the European market (many countries and wide array of capabilities) put it in a position to grow SI, SO and contract services at an attractive rate. Its industry strengths in manufacturing and finance will bring in jobs from Russia (CIS) and Eastern Europe.

The attention being given to strengthening the U.S. component, CGA, through a build up of consulting, SO and SI capabilities may not make CGA one of the top performers, but it will help support activities.

CGS will continue to be one of the leading worldwide competitors based on its plans and market penetration in Europe. Its low margins and lack of team or practice-oriented business strength limit its ability to expand at the rate of Andersen Consulting or EDS, but it is taking steps to address these issues.

F

CSC (Non-Federal)

Exhibit F-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	758	21	58	16
1990	628	30	50	35
1989	483	56	37	54
1988	310	n/a	n/a	n/a

Exhibit F-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	31	Increasing
- Smaller Projects	40	Flat
· Task/Contract Programming	6	Flat
· Management Consulting	5	Increasing
. Other (Network Services/Turnkey)	7	Flat
Outsourcing		
· Platform Management	11	Increasing
· Applications Management	-	
· Network Supply/Management	-	
Other	-	
TOTAL	100	

Exhibit F-3

Specialization

Geography	Approximate % 1992	1997
U.S.	87	83
Europe and Africa	13	15
Canada	-	-
Other (Asia)	-	2
TOTAL	100	100

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	19	Slight increase
Financial	30	Slight decrease
Telecomm, transportation and utilities	23	Not sure
Wholesale/retail and other services	16	Slight increase
Government		
Other	12	Not sure
TOTAL	100	

Exhibit F-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	
Database	Specialty
· CASE	
Transaction processing	
Data collection	
Other	

Acquisitions/Alliances

CSC's most notable acquisitions in the commercial SI/professional services business have been Index Consulting, Computer Partners and Cleveland Consulting. CSC has made other recent acquisitions in these delivery modes, including Butler Cox in the U.K. and Paragon in the U.S. (consultant in consumer products industries). Alliances have been made with Digital Equipment Corporation, Mitsui and other firms to expand market coverage.

Organization

Two of the three main operating groups provide SI/professional services: the Consulting Group (headquartered in MA), the chief provider of these services, and the Industry Services Group, headquartered in El Segundo (CA). The Consulting Group concentrates on SI, consulting and other professional services. The Industry Services Group concentrates chiefly on outsourcing and processing, but provides modification and development work for clients. Sales and support people for activities work out of CSC offices (200 domestic offices and offices of overseas subsidiaries). There has been an attempt to emphasize teams more.

Training

CSC has a large-scale training capability that addresses technology, management and industry subjects. Many members of the Consulting Group were hired for their knowledge and do not require a full program of training.

Compensation/Incentives

The Consulting Group awards commission-like bonuses to sales personnel. Performance on projects can also lead to bonuses.

Method of Planning for Growth

CSC has acquired the capabilities and industry strengths that have proved attractive in the commercial SI/professional services environment and is using its capabilities to manage large information services organizations to address the market. Additional industry strength and industry knowledge has been added through acquisition.

Strengths

Through Index, CSC has strong consulting capabilities that can appeal to strategic planning needs of prospects. Also, Index, Partners and Cleveland Consulting, as well as CSC, have demonstrated capabilities in performing large systems projects.

Weaknesses

Margins have been low compared to major competitors. When CSC/Index obtains real strategic planning projects, some clients have wanted to award follow-on work to another vendor to keep CSC/Index disinterested in regard to planning. There have been continuing problems in getting merged companies to work together smoothly.

Overall Assessment

CSC is the largest independent provider of information services. It has the size, reputation and capabilities to continue in the business, but its margins will have to improve in order to remain at the top level of competition. It has shown the capacity to analyze market changes and find partners or acquisitions that can help it to move ahead.

Adjustments may be advisable in its organization and approach to the market to bring the intensity in selling and focus on industry-oriented solutions that Andersen Consulting, TSC and EDS, for example, bring to the business. The CSC organization may not create as much team or account-oriented strength.

G

Ernst & Young

Exhibit G-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	551	12	105	11
1990	490	9	95	12
1989	450	43	95	41
1988	315	30	60	n/a

Exhibit G-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	35	Increasing
- Smaller Projects	45	Decreasing
· Task/Contract Programming	7	Decreasing
· Management Consulting	5	Increasing
· Other (Software products)	7	Flat
Outsourcing		
· Platform Management		
· Applications Management	1	Increasing
· Network Supply/Management		
Other		
TOTAL	100	

Exhibit G-3

Specialization

Geography	Approximate % 1992	1997
U.S.	64	56
Europe and Africa	23	28
Canada	-	-
Other (Asia)	13	16
TOTAL	100	100

Industry (if under 3% put In "other")	Approx. %	Trends
Manufacturing	17	Increasing slightly
Financial	30	Decreasing slightly
Telecomm, transportation and utilities	16	Not sure
Wholesale/retail and other services	15	Increasing slightly
Government	12	Decreasing slightly
Other	10	Decreasing slightly
TOTAL	100	

Exhibit G-4

Technical Specialties

Communications	
· Network Integration	
· Distributed/LAN	
Database	Specialty
· CASE	Specialty
Transaction processing	
Data collection	
Other: Quality improvement	Specialty

Acquisitions/Alliances

Alliance with Dun & Bradstreet Software as a preferred installer.

Organization

SI and professional services are sold and delivered through 100+ locations worldwide with the aid of two technology centers that can bid on and handle special jobs related to their areas of expertise. One center (Massachusetts) is chiefly devoted to IT strategy and CASE, and the center in Texas is devoted chiefly to IT delivery. The company serves clients through a consulting practice approach in which partners run teams that are assigned to accounts or industries.

Training

Comprehensive training in IT technology and consulting (practice) management as well as in vertical markets and business. IT training emphasizes strategic planning, CASE, decision support, workstations and other topics that E & Y uses to attract business.

Compensation/Incentives

Sales commissions and bonuses are used to motivate staff. The possibility of becoming a partner and the rewards of partnership are used at upper levels. E & Y also promotes its approach to the sale of IT services as a plus to encourage staff performance.

Method of Planning for Growth

Ernst & Young has used long-term strategies--such as CASE and information engineering, redevelopment and strategic planning--as a backbone to add services to and a means of attracting business. These emphases are used as topics in contact work and ways of providing a common orientation for planning the expansion of business through the network of sales offices.

Strengths

- Knowledge of certain technological capabilities.
- Contacts, organization and methods of providing accounting and consulting work gained in the past.
- In-depth knowledge of finance, distribution and manufacturing.

Weaknesses

- Has relied on outside sources to provide new technological initiatives (even if they were acquired).
- Has not developed unique combinations of industry and technical knowledge as EDS, Andersen Consulting, and TSC have.

Overall Assessment

Ernst and Young has been well positioned, with the right technology, industry knowledge and contacts to take advantage of the need in many large organizations to rebuild major applications and change the way that they use technology. Ernst & Young will take advantage of this continuing opportunity and add new areas of expertise to meet prospect needs, but it will probably not achieve the levels of success of EDS or Andersen or TSC in developing solutions that uniquely exploit the use of technology to meet industry problems.

H

Oracle

Exhibit H-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	239	20	42	11
1990	200	39	38	27
1989	154	28	30	-
1988	120	n/a	n/a	n/a

Exhibit H-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	43	
- Smaller Projects	47	
· Task/Contract Programming	-	
· Management Consulting (Professional Services)	10	
· Other	-	
Outsourcing		
· Platform Management	-	
· Applications Management	-	
· Network Supply/Management	-	
Other	-	
TOTAL	100	

Exhibit H-3

Specialization

Geography	Approximate % 1992	1997
U.S.	38	35
Europe and Africa	50	49
Canada	-	2
Other (Asia)	12	14
TOTAL	100	100

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	15	Increasing
Financial	20	Increasing
Telecomm, transportation and utilities	10	Increasing
Wholesale/retail and other services	10	Increasing
Government	40	Decreasing
Other	5	Flat
TOTAL	100	

Exhibit H-4

Technical Specialties

Communications	
· Network Integration	
· Distributed/LAN	
Database	Specialty: Major emphasis
· CASE	Specialty
Transaction processing	Specialty
Data collection	
Other	

Acquisitions/Alliances

Alliances with many hardware vendors, including AT&T, Bull, Unisys, Convex, Data General, Unisys, Texas Instruments, Toshiba.

Organization

Direct sales force in the U.S., based in 40 metropolitan offices. International market is covered by wholly owned subsidiaries and independent distributors. This sales organization is supplemented with local SI, consulting, training people based on the volume of business. Additional resources are available from the home office or sites with large staff pools.

Training

Training in Oracle software products and in handling consulting assignments (many of which are based on Oracle software, previous experience in industry markets and software engineering specialty).

Compensation/Incentives

Salary plus commission. All employees are given incentive with the idea that the rapid growth of Oracle as a company (and its stock) will provide significant opportunities.

Method of Planning for Growth

Plans to keep leveraging the use of data management expertise in relation to industry solutions to promote SI/professional services business. Also plans to promote situations in which SI and professional services can be used with Oracle software to provide synergy such as OLTP systems in manufacturing, finance and distribution markets; industry solutions that make use of past experience (e.g., for banking); and the use of CASE tools in conjunction with Oracle environments.

Strengths

- Degree to which Oracle DB products are in use
- Knowledge of industry markets
- Experience with OLTP and CASE tools

Weaknesses

- Dependence on continuing improvements in and popularity of Oracle software products.
- Requirement to keep supporting older clients, who may not want to upgrade

Overall Assessment

Oracle has developed an image based on the use of its software products that will continue to promote the use of its SI and professional services. Oracle has also developed strengths to meet a set of the most significant current problems in application development, the use of distributed data and use of advanced development tools together with data management expertise. These strengths have been supplemented with industry and application knowledge that provides Oracle with the opportunity for further growth.

Oracle will need to expand its capabilities in technology, however, to continue its growth in the future.

I

Appendix I is intentionally omitted to avoid conflict with Chapter I numbering.

J

Perot Systems

Exhibit J-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	150	66	31	63
1990	90	125	19	137
1989	40	-	8	-
1988	n/a	n/a	n/a	n/a

Exhibit J-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	35	
- Smaller Projects	-	
· Task/Contract Programming	-	
· Management Consulting	-	
· Other	-	
Outsourcing		
· Platform Management	-	
· Applications Management	65	
· Network Supply/Management	-	
Other	-	
TOTAL	100	

Exhibit J-3

Specialization

Geography	Approximate % 1992	1997
U.S.	98	88
Europe and Africa	2	9
Canada	-	1
Other (Asia)	-	2
TOTAL	100	100

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	10	Increasing
Financial	35	Flat
Telecomm, transportation and utilities	-	Increasing
Wholesale/retail and other services	38	Decreasing
Government		Uncertain
Other	17	Not sure
TOTAL	100	

Exhibit J-4

Technical Specialties

Communications	
· Network Integration	Specialty
· Distributed/LAN	
Database	
· CASE	
Transaction processing	
Data collection	
Other (Image processing)	Specialty

Acquisitions/Alliances

Organization

Organization is divided into groups serving target markets. Within those groups, the organization is divided into teams dedicated to certain client and prospect accounts.

Training

Have acquired very trained personnel. Will strengthen training to address new technology.

Compensation/Incentives

Bonus and commissions to stimulate sales and encourage performance. Esprit de corps is also used to stimulate performance.

Method of Planning for Growth

- Using same combination of technical and industry knowledge and intensity in selling benefits of technology that EDS uses.
- Targeting markets that offer the most opportunity in relation to its methods.
- Targeting prospects that could have large jobs and approaching them with ideas for gaining benefits through automation.
- Relying on hiring and instilling the motivation and knowledge required to serve accounts successfully.

Strengths

Using a tested approach for gaining and performing business that combines intense and dedicated work with a reliance on technical knowledge.

Knowledge and experience of personnel that have joined the company in technology and target markets.

Have been encouraged by clients to take on systems operations business.

Perot name has proved to be a strength.

Weaknesses

Probably not as innovative as companies such as Andersen Consulting or TSC in developing products or technological approaches to meet classes of industry problems. May not be flexible in working with user environments.

Overall Assessment

The company has successfully taken off and started to grow, but it will have to develop more of a plan for future growth, and this may cause problems in market selection or development of technical resources.

The company has people who have the capabilities, knowledge of organization, and experience in sales and implementation that are required to succeed. If it can develop more comprehensive plans and learn to be more flexible in dealing with user-oriented projects, it can be one of the important competitors.

K

Technology Solutions (TSC)

Exhibit K-1

Financials

	Revenues		Profit (before tax)	
	$ Millions	% Increase	$ Millions	% Increase
1991	63	31	13	30
1990	48	45	10	43
1989	33	n/a	7	n/a
1988	n/a	n/a	n/a	n/a

Exhibit K-2

Business Focus

Type of Business	Approx. %	Trends
Project-Oriented		
· Project Responsibility		
- Systems Integration	95	Few changes
- Smaller Projects	2	
· Task/Contract Programming	-	
· Management Consulting	-	
· Other	-	
Outsourcing		
· Platform Management	-	
· Applications Management	-	
· Network Supply/Management	-	
Other (Hardware/Software)	3	
TOTAL	100	

Exhibit K-3

Specialization

Geography	Approximate % 1992	1997
U.S.	99	90
Europe and Africa	1	8
Canada	-	-
Other (Asia)	-	2
TOTAL	100	100

Industry (if under 3% put in "other")	Approx. %	Trends
Manufacturing	89	Relative decrease
Financial	9	Increasing
Telecomm, transportation and utilities	-	-
Wholesale/retail and other services	-	-
Government	-	-
Other	2	Increasing
TOTAL	100	

Exhibit K-4

Technical Specialties

Communications	
· Network Integration	
· Distributed/LAN	Specialty
Database	
· CASE	
Transaction processing	
Data collection	
Other	

Acquisitions/Alliances

TSC will acquire the staff of Clarkston Potomac, which specializes in supporting SAA software. TSC has been a subcontractor to IBM.

Organization

Divided into three groups (manufacturing, financial services and consumer products) that concentrate on market targets. Organized like a consulting (or Big 6) practice with vice presidents, including senior project managers chiefly responsible for sales and implementation of teams that they manage.

Training

TSC has relied on hiring people well experienced in the vertical markets and technology of interest to the company. On the job exposure and selected training are used for further development.

Compensation/Incentives

Project managers are paid at the highest rate in the business (average near $300,000), but they and all employees work with 10%-25% of salary "at risk" if net income growth does not meet targets. If it exceeds targets, stock options are awarded based on performance. The result is a highly motivated staff.

Method of Planning for Growth

The incentive plan outlined above is one ingredient of TSC's planning. A second ingredient is preparing, in terms of finances and technological strength, to be able to perform large SI contracts in selected areas of business, where high margins can be secured. A third, and related, aim is to leverage knowledge and experience with MRPII systems in two of its major target markets: manufacturing and consumer products.

Strengths

TSC has proved to have considerable strength in its ability to provide incentive to people and in its knowledge of how to manage and perform SI projects.

Its knowledge of MRPII products has also been reflected in projects.

Weaknesses

The percentage of its business that is based on large projects is a risk, although TSC is prepared to cut back personnel rapidly. Its new approach to providing personnel with incentive has risk in handling of some individuals. Market focus is not broad.

Overall Assessment

TSC has an energetic and enthusiastic approach to business combined with competence and methodology. It appears to be headed for rapid growth despite occasional contract losses and adjustments in entering new fields.