INPUT

STRATEGIC MARKET PERSPECTIVE

European Software & Services Market – Competitive Analysis 1995

Market Analysis Programme – Europe

1 9 9 5

European Software & Services Market – Competitive Analysis 1995

INPUT®

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

INPUT®

Clients make informed decisions more quickly and economically by using INPUTs services. Since 1974, information technology (IT) users and vendors throughout the world have relied on INPUT for data, research, objective analysis and insightful opinions to prepare their plans, market assessments and business directions, particularly in computer software and services.

Contact us today to learn how your company can use INPUT's knowledge and experience to grow and profit in the revolutionary IT world of the 1990s.

Subscription Services

- Information Services Markets
  - Worldwide and country data
  - Vertical industry analysis
- Business Integration Markets
- Systems Integration and Professional Services Markets
- Client/Server Software Platforms
- Outsourcing Markets
- Information Services Vendor Profiles and Analysis
- Electronic Commerce/Internet
- U.S. Federal Government IT Markets
- IT Customer Services Directions (Europe)

Service Features

- Research-based reports on trends, etc. (Over 100 in-depth reports per year)
- Frequent bulletins on events, issues, etc.
- 5-year market forecasts
- Competitive analysis
- Access to experienced consultants
- Immediate answers to questions
- On-site presentations

Databases

- Software and Services Market Forecasts
- Software and Services Vendors
- U.S. Federal Government
  - Procurement Plans (PAR)
  - Forecasts
  - Awards (FAIT)
  - Agency Procurement Requests (APR)

Custom Projects

For Vendors–analyse:

- Market strategies and tactics
- Product/service opportunities
- Customer satisfaction levels
- Competitive positioning
- Acquisition targets

For Buyers–evaluate:

- Specific vendor capabilities
- Outsourcing options
- Systems plans
- Peer position

Other Services

Acquisitions/partnerships searches

INPUT Worldwide

Frankfurt
Perchstätten 16
D-35428 Langgöns
Germany
Tel. +49 (0) 6403 911420
Fax +49 (0) 6403 911413

London
Cornwall House
55-77 High Street
Slough, Berkshire
SL1 1DZ
Tel: 44 (0) 1753 530444
Fax: 44 (0) 1753 577311

New York
400 Frank W. Burr Blvd.
Teaneck, NJ 07666
U.S.A.
Tel. 1 (201) 801-0050
Fax 1 (201) 801-0441

Paris
24, avenue du Recteur Poincaré
75016 Paris
France
Tel. +33 (1) 46 47 65 65
Fax +33 (1) 46 47 69 50

San Francisco
1881 Landings Drive
Mountain View
CA 94043-0848
U.S.A.
Tel. 1 (415) 961-3300
Fax 1 (415) 961-3966

Tokyo
Saida Building, 4-6,
Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101
Japan
Tel. +81 3 3864-0531
Fax +81 3 3864-4114

Washington, D.C.
1921 Gallows Road
Suite 250
Vienna, VA 22182 3900
U.S.A.
Tel. 1 (703) 847-6870
Fax 1 (703) 847-6872

Abstract

Over the last decade there has been immense growth in the area of competitor evaluation. There are now positions within companies which devote all of their time to compiling intelligence on the tactics, strategies and day-to-day activities of their rivals.

This process is made more complex due to the global nature of the software and services market and the labyrinthine nature of the alliances, partnerships and cross-shareholdings that exist between vendors.

The purpose of this report is to examine the key competitive pressures existing within the European software and services market place. This report will also comment on merger and acquisition activity and analyse revenue performance among the key players by country.

Specifically, the objectives of this report are:

- To analyse the competitive environment within the European IT services market
- To examine the potential of emerging players and those experiencing substantial market share gains
- To highlight significant acquisition and partnering activity between vendors
- To provide vendor league tables by country for each of the major delivery modes, as well as for Europe in total.

Published by
INPUT
Cornwall House, 55-77 High Street
Slough, Berkshire, SL1 1DZ
United Kingdom

Market Analysis Programme — Europe

European Software & Services Market - Competitive Analysis, 1995

MACA • 764• 1996

Table of Contents

Appendices

List of Exhibits

L

M

N

(Blank)

I

Introduction

A
Scope and Objectives

Over the last decade there has been immense growth in the area of competitor evaluation. There are now positions within companies which devote all of their time to compiling intelligence on the tactics, strategies and day-to-day activities of their rivals. Key personnel changes, new product announcements, movement into new markets, acquisitions or partnerships - all are scrutinised for the light they may shed on a rival's ambitions.

This becomes a complex undertaking in an age where many of the major vendors in the IT software and services markets are international in reach and often appear to have conflicting strategic alliances - working with one vendor in one country while openly competing against them in another. This 'competition/ collaboration' model is becoming increasingly widespread. What is even more confusing is when such a model exists *inside* a vendor organisation.

The objectives of this report are:

- To analyse the competitive environment within the European IT services market
- To examine the potential of emerging players and those experiencing substantial market share gains
- To highlight significant acquisition and partnering activity between vendors
- To provide vendor league tables by country for each of the major delivery modes, as well as for Europe in total.

The report will examine developments within the following major delivery modes:

- Professional services
- Systems Integration
- Outsourcing
- Processing services
- Network services
- Systems software products
- Applications software products
- Turnkey systems
- Equipment services.

For the purpose of this report outsourcing is defined as including systems operations, desktop services, applications management and network management.

Systems Operations outsourcing describes a relationship in which a vendor is responsible for managing and operating a client's "computer system"/ data centre (platform systems operations) or developing and/or maintaining a client's application as well as performing platform operations for those applications (applications systems operations).

Desktop Services is a relationship in which a vendor assumes responsibility for the deployment, maintenance and connectivity of personal computer, workstations, client-server and LAN systems in the client organisation.

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

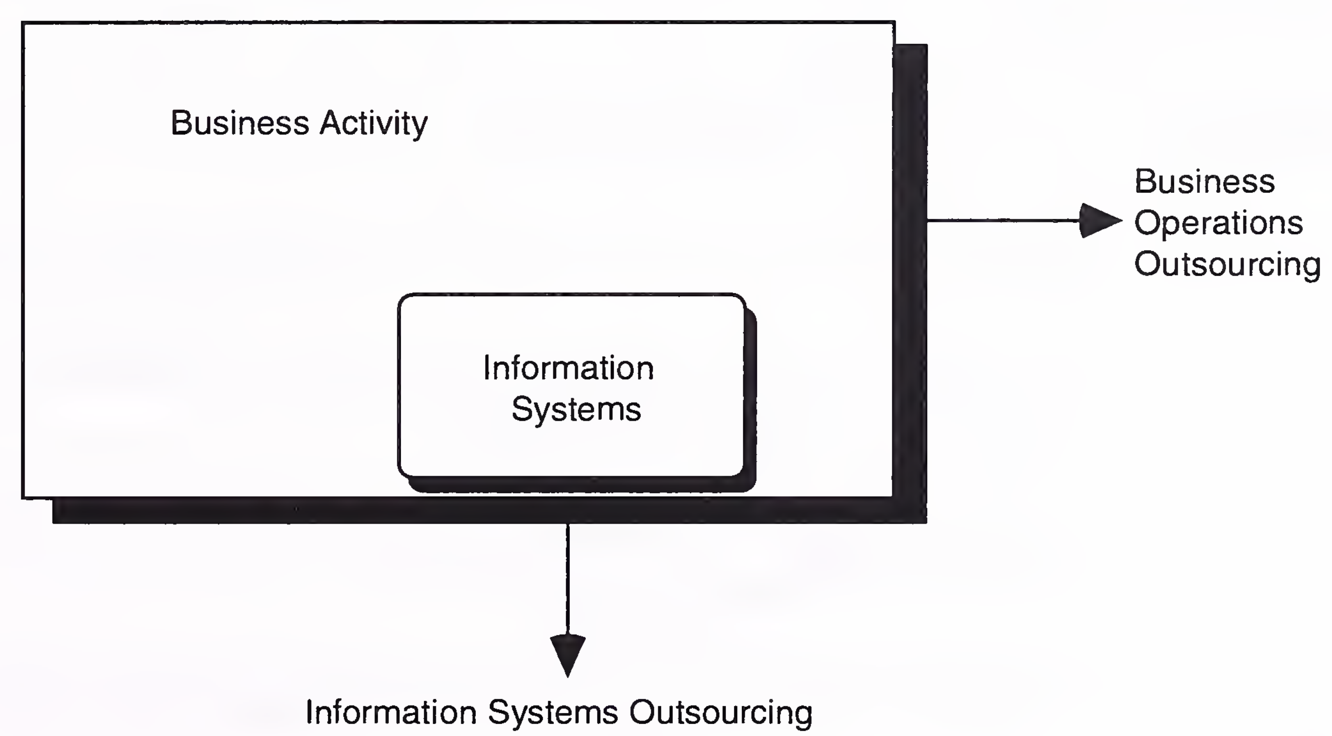
Application Management is a relationship in which the vendor has full responsibility for developing and maintaining all of the application or function.

There are also distinct regional characteristics. Within the UK, for example, business operations outsourcing is becoming stronger and in Germany SAP outsourcing is emerging as a new form of outsourcing. *Business Operations* outsourcing is a relationship in which one vendor is responsible for performing an entire business/ operations function including the information systems outsourcing that supports it. The IS outsourcing content of such a contract must be at least 30% of the total annual expenditure in order for INPUT to include it in the business operations outsourcing market.

INPUT classifies SAP outsourcing as a processing service rather than a form of outsourcing. However, SAP outsourcing is widely regarded as a form of outsourcing within the German market. In recognition of this, the German outsourcing market breakdown includes revenues from SAP outsourcing and the vendor rankings for Germany include each vendor's SAP outsourcing revenues where appropriate.

Exhibit I-1

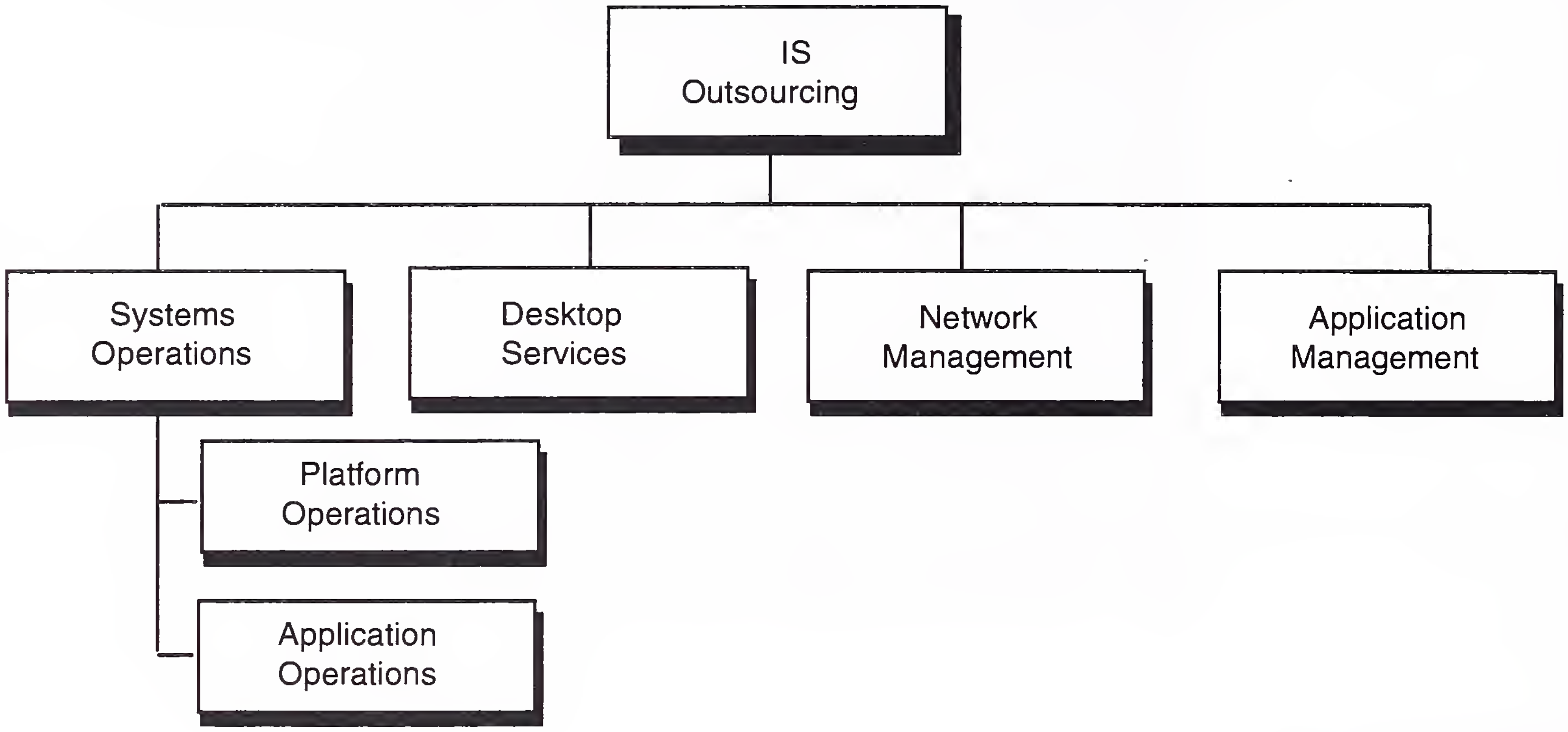
Business Operations Outsourcing



Source: INPUT

Exhibit I-2

Information Systems (IS) Outsourcing Service Categories



Source: INPUT

B
Methodology

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

- A vendor research programme of over 500 interviews with key software and service vendors across Europe

- INPUT's extensive library and database of information relating to the European software and services market

- Further vendor and user interviews across European markets to determine trends and opinions within specific market sectors.

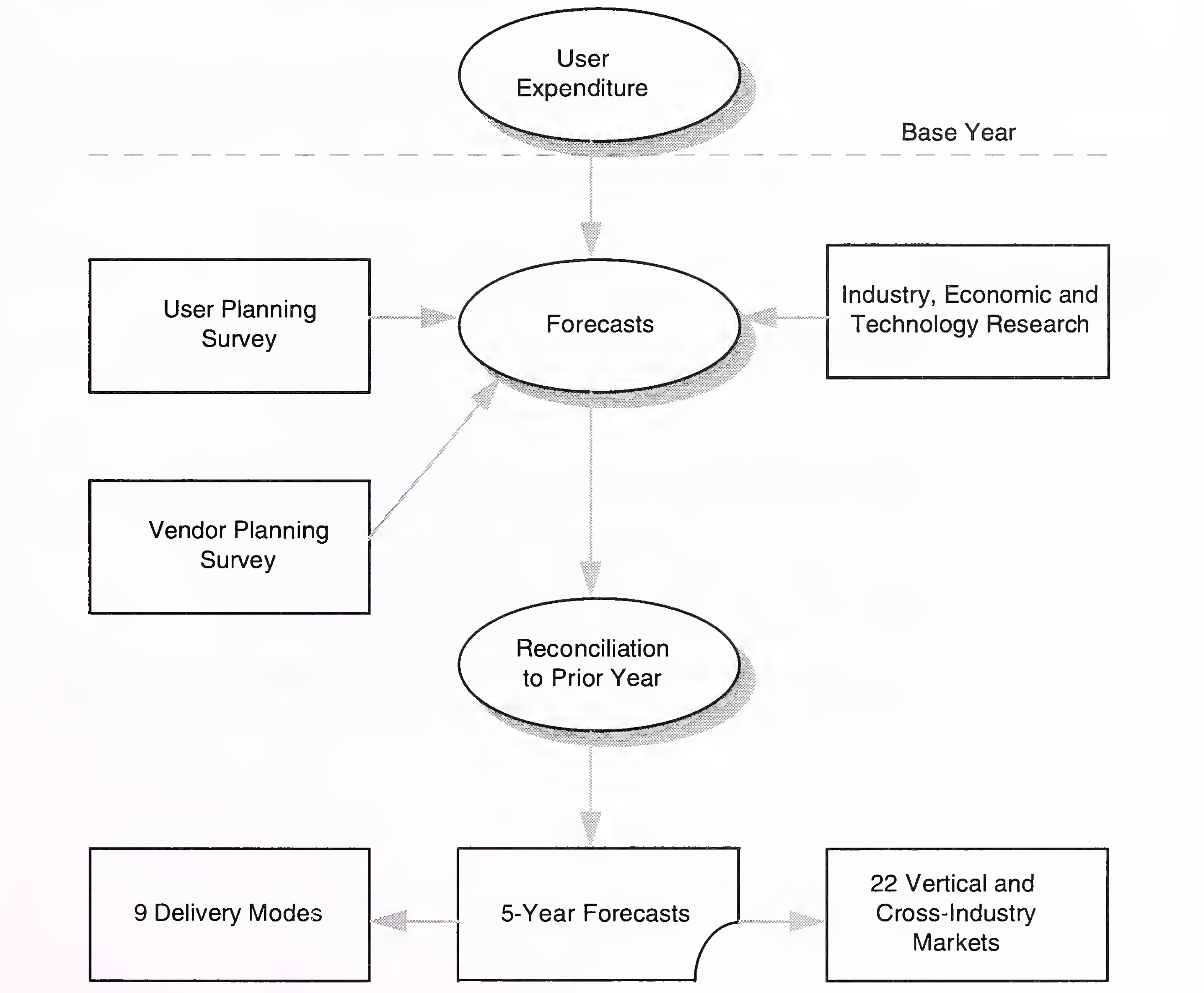
INPUT's methodology for ranking vendor performance and producing market forecasts remains the same as previous years. This research process is accomplished through interviews, use of public data such as press articles and annual company reports. Where firms are privately owned estimates have been made by INPUT consultants.

Only revenues derived from within a country are included in the vendor revenues for that country. Adjustments are made to eliminate errors due to distribution channel overlap or mark-up and to ensure that captive information is excluded. Captive markets are those revenues which a vendor receives from within the vendor's parent group of companies.

Market sizes are based on data from INPUT's *European Software & Services Market Forecast, 1995-2000*. The only adjustments to such market sizes are in the outsourcing sector to include network and applications management (see above) as well as SAP and business operations outsourcing.

Exhibit I-3

Country Market Forecasts



Source: INPUT

C
Report Structure

Chapter I outlines the scope and objectives of the report.

Chapter II consists of an Executive Overview which is a summary of the key findings of the report.

Chapter III examines how the competitive landscape is changing within Europe and how vendors are reacting to changes in market structure.

Chapter IV highlights merger and acquisition activity and focuses on emerging players in the software and services market as well as those vendors experiencing significant market share growth.

Chapter V provides country-specific competitive analysis.

The *Appendices* give rankings by country by individual delivery mode, as well as a total European perspective.

D
Related Reports

The European Software & Services Market Forecast, 1995-2000

Outsourcing in Europe, Competitive Analysis 1995

European Business Integration, 1995 - Competitive Analysis

IT Customer Services Competitive Analysis, Europe 1995

Software Product Support - Competitive Analysis, 1995

In addition, subscribers to INPUT's research programmes receive regular updates on the activities and positioning of leading vendors in Europe.

II

Executive Overview

A
American Vendor Growth Continues

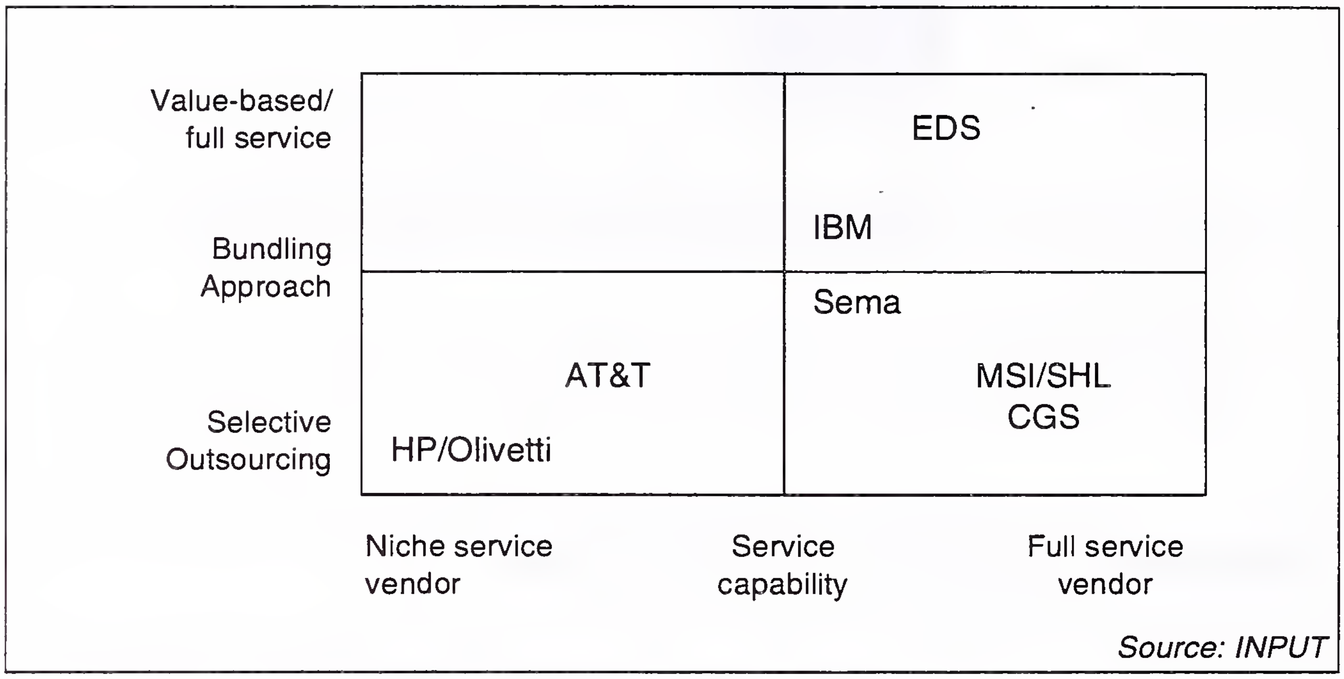
1. American Vendors Find Ready Market For Services in Europe

A key issue for vendors within Europe is to offer support and services to their clients on an international scale. One of the reasons for the growth in US vendor revenues in Europe over the last five years has been their ability to track their US clients to Europe and offer similar services here. Vendors who are initiating this process include EDS, IBM, CSC and Andersen Consulting.

Because multi-national clients are demanding multi-national service offerings it is becoming increasingly difficult for national vendors to grow their customer base. The *geographical* spread of such service offerings is not the only factor: the *range* of services offered is also critical to success for large, international players. Vendors are positioning themselves as either full service operators or niche players. Exhibit II-1 shows how a selection of vendors are positioning themselves on the service spectrum.

Exhibit II-1

Service Focus



Where there are a high proportion of local players in the top thirty vendor rankings - such as France where thirteen of the top twenty vendors are French in origin - such markets will increasingly become dominated by international vendors.

Interestingly, market share held by the top thirty European vendors is still around 40% (as was the case in 1993). What is significant is that the number of local or national vendors within the top thirty is declining, as they are replaced by new American entrants. The highest new entrant into the top thirty this year was CSC, which came in at twentieth position.

2. National Players Respond To American Threat

Recent developments in the Netherlands suggest that national players are responding to American vendors' penetration of national markets by forming alliances to obtain international reach and extend their service portfolios. In September 1995 Getronics and Roccade Informatica Groep announced plans to acquire a 50% stake in Raet. The main benefits cited were the creation of a broader IT services base and the opportunity to *internationalise* some of the group's activities, given the critical mass gained as a result of the alliance. Exhibit II-2 outlines the rationale behind such "regrouping".

Exhibit II-2

The Rationale for "Regrouping" Among National Vendors

Positive	Negative
Reposition Service Offerings	Defensive Strategy
Greater Opportunities to Tender for Business	Lack of Skill Sets
Operational Synergies	Lack of International Reach
Gain Critical Mass	Lack of Market Growth

Source: INPUT

In July 1995 Philips announced its intention to merge its I.T. services organisation, Philips C&P, with BSO-Origin to form a new company which will simply be named Origin. The new company will be set up in early 1996 and is expected to have annual revenues of 2 billion Dutch Guilders ($1.15 billion) and will employ 10,000 people.

B
Telecommunications Vendors Enter Market Under Service Umbrella

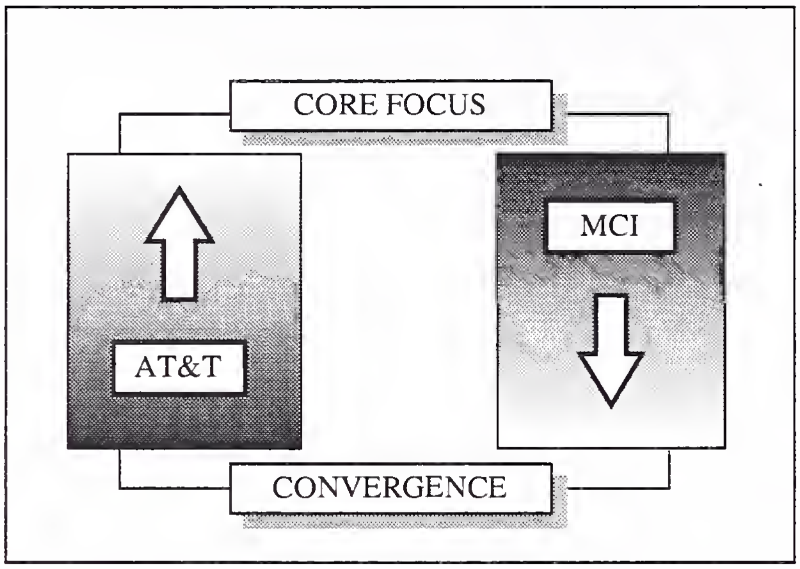
1. AT&T Still Poised To Become Major European Services Player

Despite the recent AT&T demerger announcement it is certainly not the case that telecoms organisations have lost sight of the potential for providing IT services, particularly around a network framework. The one positive announcement coming from AT&T was the decision to set up AT&T Services. This will operate under the AT&T brand name and contain telephone and credit card services, multimedia activities and the AT&T Solutions consulting business, accounting for sales of $49 billion.

Significantly, AT&T Network Equipment is the second largest manufacturer of telecom equipment in the world and accounts for around $20 billion in revenues. This business will become an increasingly important player in connecting multinational clients on a global basis as well as offering leverage for the provision of Internet services.

Exhibit II-3

Convergence versus Core Focus



Source: INPUT

2. MCI Increases Services Potential with SHL Acquisition

Ironically, on the same day AT&T announced its demerger plans, MCI, its major rival, agreed to pay $1 billion cash for SHL Systemhouse, a Canadian systems integration business. Exhibit II-3 compares the two strategic drivers. SHL employs 5,000 people and has, through a series of acquisitions, increased its revenues in 1994 to $850 million.

SHL will operate as a stand-alone company and will also offer MCI's professional services. MCI stated that the acquisition will enable it to design, build and manage systems that integrate computing with communications.

The ability to manage distributed, international client/server architectures with large numbers of LANs and WAN inter-connections will increasingly become the critical skill in IT infrastructure management.

This change in emphasis could assist in establishing MCI and SHL as a provider of substantial client/server systems management capability. Exhibit II-4 provides a competitive map of the players with client/server management offerings.

Exhibit II-4

Client/Server Systems Management Capability

Scope of geographic coverage	LAN or WAN	LAN and WAN
Global	HP, EDS, AT&T, Olivetti	IBM, MCI/SHL
National	CGS, Sema, National PTTs, Computacenter	

Scope of client/server management offering

Source: INPUT

3. Internet Gives Network Organisations Major Revenue Boost

Because of the surge in Internet use networking organisations - such as 3Com, Cisco Systems and Bay Networks - have been inundated with business. This has led to major acquisition activity as smaller rivals are snapped up so companies can obtain skill sets which can be utilised at all points across the network (routers, hubs *et al*). This is driven by users who want to buy network systems from *one* vendor who will assume responsibility for all problems - regardless of which company's kit is at fault.

C

Value-Based Services: The New Pricing Panacea?

Another emerging trend within the IT services market is the number of vendors willing to emphasise long-term relationships with clients as the way forward for profitable, sustainable business. Users sometimes perceive this "relationship" marketing as an excuse for simply avoiding penalty clauses - after all, the atmosphere vendors wish to engender is one of trust. Penalty clauses do not signal respect and collaboration. Andersen Consulting and EDS have been extremely vocal in pushing out one key message: contracts to deliver IT projects should be assessed in the light of non-IT business metrics, rather than traditional IT measures.

Value-based pricing can be defined as a payment mechanism linking project remuneration to achievement of specific business goals within a client company. This has become a more appropriate stance to take over the last five years as organisations seek to re-engineer their business processes.

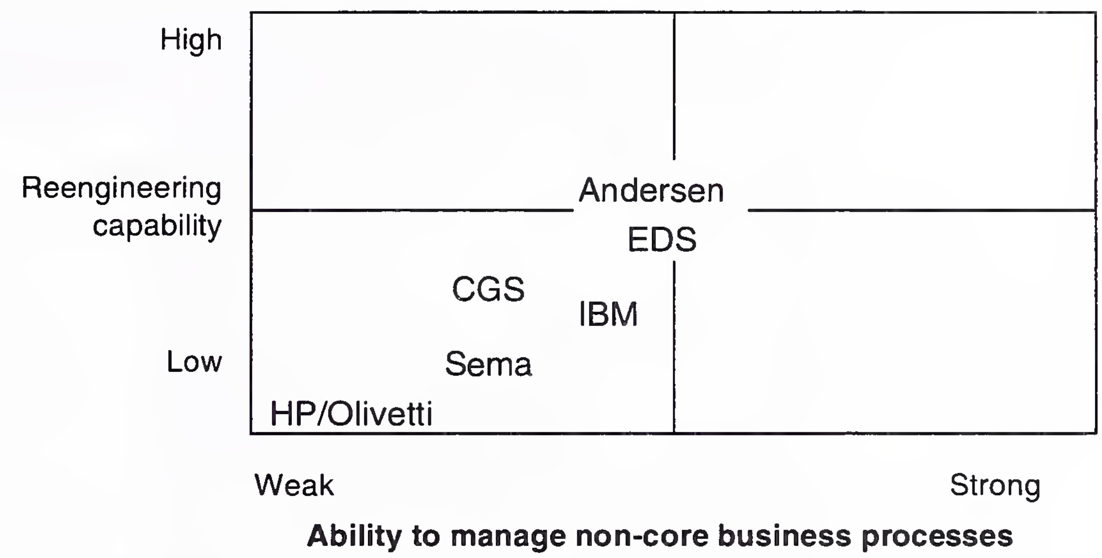
Andersen Consulting has set up a separate company to run an outsourcing operation for Northwest Airlines ticketing and booking operations. This stand-alone business has increased risk exposure but has the potential to generate additional revenues well above a "normal" deal.

There is a debate as to how important a vendor's industry knowledge can be when it comes to bidding for contracts. EDS and CSC have certainly benefited from their business process re-engineering work in the States, as risk-averse customers in Europe are keen to work with such companies who have an established track record in this area. However, in spite of consultancy units which provide apparently superior industry knowledge organisations typically perceive that that their own in-house IT departments have greater business knowledge than the leading IT vendors. This is particularly the case in the outsourcing market.

By way of contrast, leading vendors are perceived to have greater levels of ability in reengineering and in applying IT to business processes. But even within the systems integration market such process expertise is usually kept in-house while technology-intensive projects are put out to systems integrators. Exhibit II-5 shows competitive mapping relating to business process capability.

Exhibit II-5

Business Process Capability



Source: INPUT

D
Vendors To Watch: Baan, Celsius and CSC

1. CSC Continues Rapid Growth

Although an established player in the European IT services market CSC finally made the INPUT European top thirty rankings for the first time this year, coming in at twentieth position. CSC achieved critical mass with the acquisition of Ploenzke AG in 1994, a leading German professional services organisation.

Exhibit II-6

Selected CSC Contracts in the UK, 1992-95

Client	Year Signed	Value $m
Anglian Water	1995	235
Autoglass	1995	45
ICI Paints	1995	45
John Menzies Retail	1995	40
Lucas Industries	1995	785
Oxford Consortium (NHS)	1995	16 p.a.
Scottish Health Service Trusts	1995	70
Ford of Europe	1994	110
British Aerospace	1994	1400
BhS	1992	155

Source: INPUT

CSC has already put together an impressive list of deals within Europe, such as a ten year outsourcing contract in 1992 with BhS, a British retailer. Also, in 1994 CSC signed a ten year agreement with British Aerospace worth $1400 million. At the time it was the largest commercial outsourcing contract ever signed in Europe. In 1995 CSC announced a $785 million outsourcing deal with Lucas Industries. Exhibit II-6 gives selected CSC contracts from the UK market alone.

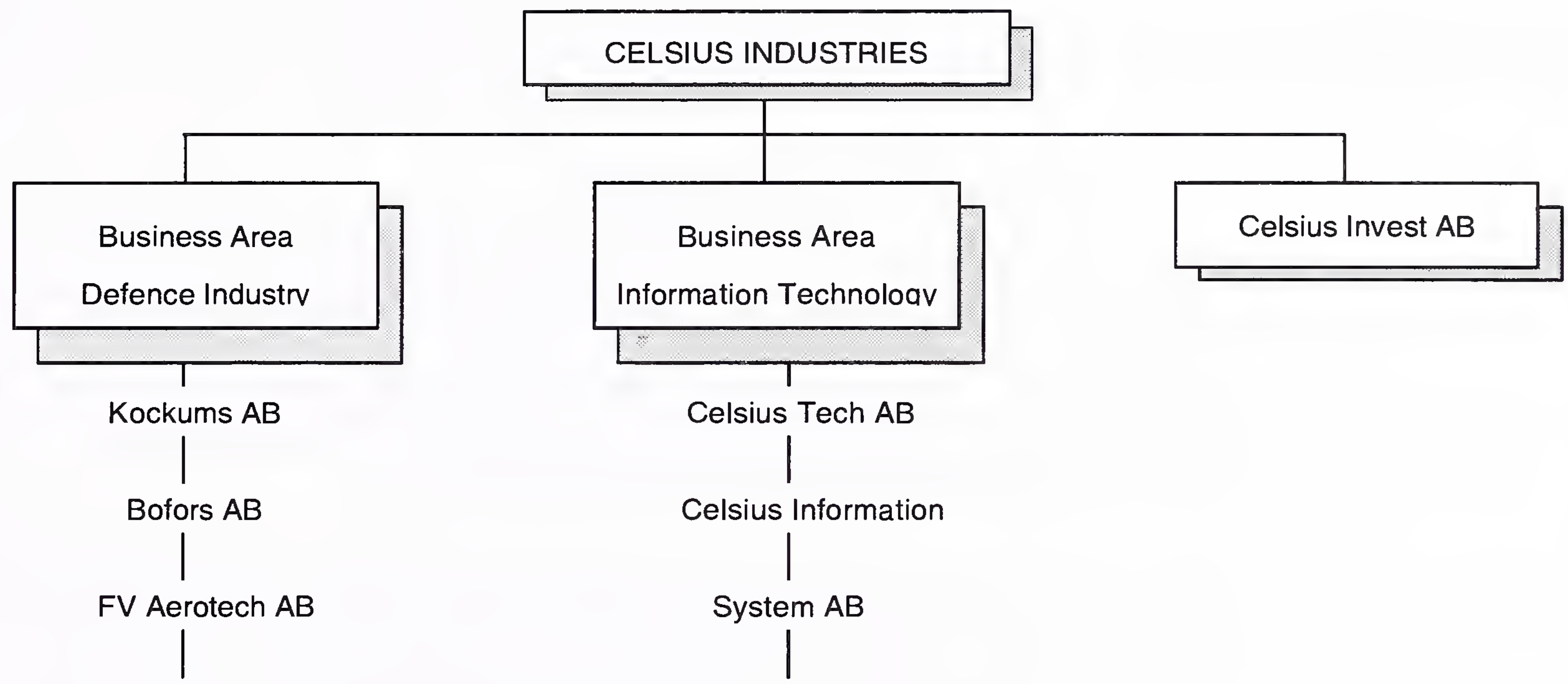
2. Celsius Becomes Major Swedish Player

Celsius Industries, one of Sweden's largest groups with over 50% of the defence-related equipment market, has faced challenges in transforming itself into a solutions based services provider able to compete in the fast changing IT services market. Clearly, Celsius needed to become a non-defence dependent organisation.

In June 1995 Celsius restructured around three operational areas: defence, IT operations and other industrial operations. Exhibit II-7 shows the new organisation structure.

Exhibit II-7

Celsius Industries — Organisation Structure



Source: INPUT

Celsius Information System (CIS) is the main holding group and is made up of three formerly independent companies: Telub, Dialog and Enator. The combined revenues from this group have placed Celsius in number one position within Sweden in 1994.

3. Baan: Growing Through Partnership

Baan was established by Jan and Paul Baan in the Netherlands in 1978 to provide financial consulting services. In 1981 the company focused on applications software, where it has experienced impressive growth. It is estimated that Baan recorded revenues of $124 million in 1994, a 94% increase on 1993 results.

Baan's major customers include Mercedes and Northern Telecom. Its major competitors include SAP and Oracle, whom it recently beat to win a $20 million contract to supply Boeing's commercial aircraft division with a new client/server production system. At the time this deal was the largest in the history of the company.

Baan plans to focus on multinational clients and as such is increasing its direct support operations in all its major geographic markets. Baan wishes to grow through strategic global partnerships. Therefore in order to win multinational accounts it has signed worldwide deals with CGS and consultancies such as KPMG and Ernst & Young. One major task for Baan is to quickly expand into new international markets around Europe without diluting its core product offerings.

E
Established Vendors Continue To Improve

1. "Lean and Mean" Organisations

Many established players are either in the middle of a turnaround situation or have recently come out of one. There may be a resurgence by the likes of SNI, Digital, CGS, Bull and IBM as they either maintain profitability or become profitable for the first time in many years. All of these companies are surfacing after major internal restructuring operations with leaner and fitter organisations.

IBM worldwide now makes more money from software and services than it does from hardware. In October 1995 IBM announced its intention to set up a unified global services division by January 1996. This would include outsourcing (ISSC), management consultancy and IBM's Global Network. SNI needs to reduce its dependence on the German market and operate in a much more entrepreneurial manner. Its recent emphasis on service offerings - such as Siemens Business Services in the UK - could enhance SNI's position within Europe provided it can offer truly pan-European service.

Digital appears to have risen to profitability through the sale of Alpha servers and networks. However, multivendor services continue to account for an increasing proportion of business, as recognised by the recent low-key announcement that MCS Europe (DEC's customer service operation) will now be treated as a separate division. Bull is still suffering from its weak financial position but is generating high levels of business, particularly in the UK with its outsourcing and systems integration arm, Integris.

2. Stable Performers

The Sema Group continues to perform well, extending its geographic coverage and industry-specific capability. The company's focus remains on industrial applications and computer integrated manufacturing, retail banking and CASE tools. It is in the process of acquiring CISI, the French services group. In December 1995 CGS finally sold its 28% stake in Sema.

Hewlett Packard has produced excellent results by targeting selective niches, such as the client/server consulting market, where it enjoys a leadership position. It has opposed a global approach to the services market and acts as prime contractor for only 20% of its professional service revenues.

Andersen Consulting went through the $1 billion ceiling in 1994, with growth up at 9%. Andersen's financial services division performed particularly strongly in 1994, growing over 35% and accounting for 37% of total European revenues.

3. EDS and SAP: Exceptional Growth

EDS continues to thrive. By offering value-based pricing contracts EDS has been able to secure major outsourcing contract wins, such as the Inland Revenue in the UK. This approach, combined with its strengthened consultancy offering through its A.T Kearney acquisition, will enable it to offer business-oriented solutions linking a thorough understanding of business processes with industry experience.

SAP is also experiencing rapid growth and aims to become a $5 billion company by the year 2000 - no mean feat given that this requires compound *annual* growth of almost 50%. Exhibit II-8 gives SAP's historic financial performance over the last five years.

Exhibit II-8

SAP — Five-Year Summary of Turnover, Net Profit, Headcount ($m)

	1990	1991	1992	1993	1994
Sales	320	460	540	710	1,180
Net Profit	53	80	82	95	180
Employees	2,138	2,685	3,157	3,648	5,229

Source: INPUT

Given the return to financial health of so many established players and the potential for high growth from HP, Sema and Andersen Consulting, vendors such as EDS and SAP will be under intense competitive pressure to maintain their exceptional performance over the next year.

F

Country Analysis: IBM Still Dominates

Overall, IBM's dominance seems to be holding in the major economies. However, it is facing strong competition in the Nordic region where it lost number one position in all four countries. National vendors appear to be putting up stronger resistance in the Nordic region than in other parts of Europe; the exceptions are Spain (Eritel) and Austria (Management Data and AI-Informatics).

The top thirty vendors in each of the major economies still account for approximately the same market share as last year. There does not appear to be a significant consolidation process emerging. In general, top vendors are growing with the market and maintaining their position. IBM is still maintaining top position in three of the four major economies but its market share is declining.

When analysing the top vendors for each delivery mode (see Exhibit II-9) in the four major economies (France, Germany, UK and Italy) the following trends emerge:

- IBM's dominance in system software and, surprisingly, systems integration across all four countries; IBM is also strong in equipment maintenance and environmental services; out of a total of 44 top positions IBM is number one in eighteen of them

- The dominance of "niche" players, such as Reuters, within the electronic services segment

- The dominance of national vendors in the professional services market; the exception being Germany where SNI is number two

- There is increasing fragmentation in the processing, turnkey systems and application software segments, where there is no obvious leader in these countries.

Exhibit II-9

Top Vendors by Delivery Mode — Four Major Economies

Delivery Mode	France	Germany	UK	Italy
Professional Services	CGS	IBM	ICL	Finsiel
Systems Integration	IBM	IBM	IBM	IBM
Outsourcing	EDS	IBM	Hoskyns (CGS)	Finsiel
Processing	Axime	Datev	MR Group	Finsiel
Network Applications	Infonet	IBM	AT&T	IBM
EIS	Reuters	Reuters	Reuters	Reuters
System Software	IBM	IBM	IBM	IBM
Application Software	Microsoft	SAP	ACT	Olivetti
Turnkey Systems	Sligos	SNI	MDIS	Olivetti
Equipment Maintenance	IBM	SNI	IBM	IBM
Environmental Services	IBM	IBM	Digital	IBM

Source: INPUT

Within the French market *all* companies have maintained their position as number one vendor for their respective delivery mode. Significantly, the two national vendors, Sligos and Axime, have both moved down the rankings since last year. This trend will continue next year as international, full service vendors aggressively grow their market share position through winning major contracts and acquiring national players.

SAP and EDS have made the greatest movement within the German rankings, moving up from seventh and twenty first to fourth and seventh place respectively. These vendors are the only ones who can seriously challenge the supremacy of IBM and SNI over the next three years.

IBM has lost pole position in all four of the Nordic countries. Partly due to groups formed through acquisition (Sweden), forceful niche players (Denmark) and local vendors robustly defending their markets (Finland and Norway). The major shift in rankings within the Swedish market is due to the creation of Celsius Information System in 1994. Celsius has moved IBM from the top position and established a clear lead in terms of market share - 7.5% ahead of IBM.

The Netherlands software and services market is in a state of flux. With the recent announcements of the merger between Philips and BSO-Origin and the alliance of Getronics, Roccade and Raet - a group worth Dfl 1.3 million in 1994 alone — the market will experience upheaval over the next year.

National vendors are more in evidence within the Austrian market, dominating the professional services, processing, network management (Management Data) and outsourcing (AI Informatics) sectors.

Andersen Consulting continues to perform well in the Mediterranean region, especially Spain and Portugal. Although the top three positions remain unchanged Andersen Consulting have increased their market share by 1.3% on last year, while IBM has declined by 1.4%. Eritel, the only Spanish vendor in the top ten rankings, has, however, displaced Andersen Consulting as the number one vendor in the professional services market.

III

Competitive Dynamics Within the European IT Services Arena

A
American Vendors Continue to Grow: National Players Regroup

1. American Threat Persists in Europe

One of the reasons for the growth in US vendor revenues in Europe over the last five years has been their ability to track their US clients to Europe and offer similar services here. Vendors who are initiating this process include EDS, IBM, CSC and Andersen Consulting.

Because multi-national clients are demanding multi-national service offerings it is becoming increasingly difficult for national vendors to grow their customer base. Where there are a high proportion of national players in the top thirty vendor rankings - such as France where thirteen of the top twenty vendors are French in origin - these markets will suffer from such competitive forces. It is markedly lower for Germany (eight), Italy (seven) and the UK (six).

There are also specific examples within individual countries. Finsiel, Italy's number one IT services company, generates over 90% of its revenues within Italy. SNI currently generates 65% of its revenues within Germany, although its CEO, Gerhard Schulmeyer, has stated that he wants this to be reduced to a third, with one third coming from the rest of Europe and the final third from the rest of the world. Companies such as Getronics (Netherlands) and Sligos (France) would also be good examples.

One of the exceptions to this underlying trend within the IT services market is SAP, which is experiencing phenomenal growth rates in the United States (over 150% in 1994), although there will be limitations as clients absorb R/3 application software into their businesses - usually a two to three year cycle.

Interestingly, market share held by the top thirty European vendors is still around 40% (as was the case in 1993). What is significant is that the number of local vendors within the top thirty is decreasing, as they are replaced by new American entrants. The highest new entrant into the top thirty this year was CSC, which came in at twentieth position. The exception is Celsius Information System, which is now the number one software and services vendor in Sweden, due to its acquisition of Telub, Dialog and Enator in 1994; Celsius entered the European rankings in twenty second place (the appendices give full details). The top ten European vendors are given below in Exhibit III-1.

Exhibit III-1

Leading European Software & Service Vendors, 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue ($ Millions)
1	IBM	9.5	7,890
2	CGS	2.4	2,025
3	SNI	2.3	1,905
4	DEC	2.1	1,765
5	Reuters	2.1	1,755
6	EDS	1.9	1,585
7	Microsoft	1.5	1,260
8	ICL	1.4	1,150
9	Bull	1.3	1,115
10	Andersen Consulting	1.3	1,065
	Total Listed	25.8	21,515
	Total Market	100	83,300

Source: INPUT

American vendors are not simply growing organically. They have a powerful strategy of acquisition. Some recent examples are listed below:

- Over the last three years IBM ISSC has acquired eleven companies. These include CGI, and Pyrenees Information (France); Responsor, CRI, EDB and DanNet (Denmark); Sistemi, Intesa and IPACRI (Italy); Iberimatica (Spain) and Informatica (Sweden)

- CSC acquired Ploenzke, a large German professional services firm, in 1994. In addition, it acquired two consulting firms; the DiBianca Berkman Group, specialising in corporate cultural change; and Ouroumoff Consultants in France, and its sister company Ouroumoff International, whose key areas of interest are business re-engineering, change management, logistics and quality management

- EDS have made numerous acquisitions including Apiron in Sweden, Eurosept in France, Database Informatica in Italy as well as acquiring a share of Gruppo Systems & Management, also an Italian company.

The issue for national players is how to respond to such competitive forces. There are various alternatives:

- Continue to work within a national environment, gradually focusing on lower value projects which the large, international players will not compete for, as it is not cost-effective to do so. This has the serious disadvantage of losing market share and forces such companies to compete with smaller, nimbler players who have a leaner cost structure

- Select profitable niches and offer exceptional customer service. However, this is also the strategy of some of the international vendors, such as HP, who do not wish to offer full service provision but rather focus on tightly defined target market sectors or sub-sectors. Vendors such as HP are adopting world class, 'best of breed' techniques which positions them as a key player within their chosen areas of focus

- Group together with other local/ national/ international vendors to form medium-sized organisations with complementary portfolios of skills and industry knowledge. Such an alliance may then provide extra internal resources for expansion outside the home base.

The third option is already producing surprising results. Within the Netherlands there have recently been two major announcements of such alliances taking place.

2. Netherlands Vendors Regroup to Offer Global Services

In September 1995 Getronics and Roccade Informatica Groep (state-owned but soon to be privatised) announced plans to acquire a 50% stake in Raet. The main benefits cited were the creation of a broader IT business base and the opportunity to *internationalise* some of the group's activities, given the critical mass gained as a result of the alliance.

Raet's activities include payroll, HR and finance systems, EDP solutions for the professional, health and government markets and IT solutions for larger companies, often operating internationally. Getronics comprises a number of complementary business units each specialising in a specific area of information and telecommunications technology. Roccade's core activities include applications development, operations and network services and on-site systems management.

The combined group revenues exceed $1.5 billion. Getronics was keen to include Roccade in the group as it possessed specific expertise in application packages which Getronics regarded as outside its core competence of computer networking for multinational firms. Expansion will occur outside the Netherlands in areas where Getronics already has offices.

In July 1995 Philips announced its intention to merge its I.T. services organisation, Philips C&P, with BSO-Origin to form a new company which will be named Origin. Philips is to acquire a majority interest. At present Philips has a 41% interest in BSO/Beheer, the holding company of BSO-Origin. The remainder is held by employees (35%) and banks (24%). The new company will have many strengths as a result of this alliance (see Exhibit III-2).

Origin will be set up in early 1996 and is expected to have annual revenues of 2 billion Dutch Guilders ($1.15 billion) and will employ 10,000 people.

Philips specialises in communication and data processing and currently employs 3,300 people worldwide. Philips C&P provides services in the area of computer centre management and the management of computer networks in 22 countries. At present there are 80,000 individuals worldwide connected to such networks. Philips is targeting the following sectors with its services: manufacturing, finance and health care.

Exhibit III-2

Origin — A New Force in Worldwide IT Services

- Operations in 27 Countries
- Partnership already established between Philips and BSO-Origin
- Comprehensive Package of IT Services
- Annual Revenues of $1.15 billion
- Employing 10,000 People
- Focus on Consultancy, Systems Integration and Outsourcing
- Linking 80,000 individuals via its network
- Managing computer networks in 22 countries

Source: INPUT

BSO-Origin focuses on software development and implementation, systems integration, applications facilities management, project management and consultancy.

BSO-Origin operates across most vertical markets. In 1994 over 50% of total revenues was derived from industrial/ manufacturing clients., while finance and insurance markets accounted for 12% of revenue. At its 1994 year end BSO-Origin achieved sales of 817 million Dutch Guilders ($475 million) and estimates revenue of 950 million Dutch Guilders for 1995.

Both companies already work together in the UK, Brazil, Sweden, Denmark, Portugal, Argentina and Mexico. The new company will be positioned on a global basis with operations in 27 countries. On a worldwide scale Origin will offer a comprehensive package of IT services comprising consultancy, systems design, implementation and systems management.

Interestingly, several partners from KPMG Consulting recently left to join BSO-Origin prior to the announcement. Origin will be doubling the size of its implementation group by acquiring SAP specialists as a result of an imminent outsourcing contract with ICI systems. This emphasis on professional services (consultancy, using SAP as part of a re-engineering process), combined with a truly international perspective could make Origin one of the key players of the future in the international IT services market.

This process of "re-grouping" among national players will certainly prevent them being swallowed up by the global full service operators. However, the key benefit is that it actually allows them to seriously compete on an international scale offering a broad range of services.

There is plenty of potential within the European market for similar agreements among national vendors, particularly within the French market. Otherwise, the small but increasingly powerful number of American operators will begin to form an unofficial oligopoly which will be hard to beat when major accounts put out tenders for business.

B
New Market Entrants: Telecommunications and IT Services Converge

1. AT&T Emphasises Its Service Offering

Despite the recent AT&T demerger announcement it is certainly not the case that telecoms organisations have lost sight of the potential for providing IT services, particularly around a network framework. The one positive announcement coming from AT&T was the decision to set up AT&T Services. This will operate under the AT&T brand name and contain telephone and credit card services, as well as its mobile phone operations (McCaw Cellular), multimedia activities and the AT&T Solutions consulting business, accounting for sales of $49 billion.

Significantly, AT&T Network Equipment is the second largest manufacturer of telecom equipment in the world and accounts for around $20 billion in revenues. This business will become an increasingly important player in connecting multinational clients on a global basis as well as offering leverage for the provision of Internet services.

In August 1995 AT&T announced its Internet strategy (even though it was the last of the three major US carriers to do so). Branded WorldNet Services, it comprises three business units:

- *Gateway Services* will provide Internet access for AT&T's 90 million customers
- *Business Multimedia Groupware Services* will help companies to do business on the World Wide Web
- *Content Services* will assist media companies in offering tailored information and entertainment services to businesses and consumers.

Its partners for this venture include Netscape Communications, which will produce an AT&T-branded browser and other Internet client/server software in order to navigate the Internet; Harley Hahn - best known as a publisher of the Internet Yellow Pages - will develop Internet exploration capabilities for the service; McKinley Group, an on-line directory service, will provide navigational tools; Verity, a software firm, will offer full-text search facilities and "intelligent agents" to do the customer's on-line bidding; Adobe System's Acrobat will be used for viewing, navigating and printing Internet text and images. One of the key issues is how to offer such Internet services in Europe where the market for home shopping and video, for example, is much more fragmented and penetration is much lower.

AT&T is still committed to partnerships which will give it access to new markets and still views such opportunities as being within its remit as a telecommunications company. Its AT&T Solutions business is still poised to make major inroads as a professional services player.

However, AT&T is also concerned that it does not diversify into areas where it has no real competence. It is significant, for example, that CEO Robert Allen did not mention whether the three new businesses will enter the cable business or invest in providers of multimedia content.

2. SHL Acquisition Gives MCI Immediate Professional Services Capability

Ironically, on the same day AT&T announced its demerger plans, MCI, its major rival, agreed to pay $1 billion cash for SHL Systemhouse, a Canadian systems integration business. SHL employs 5,000 people and had, through a series of acquisitions, increased its revenues by 1994 to $850 million.

SHL will operate as a stand-alone company and will also offer MCI's professional services. MCI stated that the acquisition will enable it to design, build and manage systems that integrate computing with communications. SHL's core competencies are listed below in Exhibit III-3.

Exhibit III-3

SHL — Key Service Offerings

- Systems integration (such as client/server design) and Outsourcing
- Transformational Services (such as consultancy or BPR)
- Education & Training
- Technology Deployment (LANs, mobile computing)

Source: INPUT

SHL's core offerings include:

- Systems integration and transformational services: this includes the planning, design and implementation of client/server architectures and open systems plus business process re-engineering consulting capability

- Outsourcing services: this unit has responsibility for computing and communications services, including the management of SHL's six outsourcing centres worldwide in Canada, US and the UK

- Technology deployment and education and training services: the former element involves the configuration, installation, procurement and support of advanced workstations, LANs and mobile computing; education and training services range from teaching basic computer skills to advanced client-specific applications.

SHL's positioning in the market makes it a good acquisition for MCI, given current trends towards network-centric organisational models and the growth of outsourcing services and business process consulting.

Already datacentre management capability, which has been critical to outsourcing success, is beginning to decline in importance. The ability to manage distributed, international client/server architectures with large numbers of LANs and WAN inter-connections will increasingly become the critical skill in IT infrastructure management. This change in emphasis could well assist in establishing MCI and SHL as a provider of substantial client/server systems management capability.

At present lack of WAN management capability is inhibiting market growth. The national PTTs cannot provide widespread international coverage, high bandwidth and cost-effectiveness. IBM is the only company to offer both LAN and WAN capability, the latter through the IBM Global Network.

Through alliances with PTTs IBM hopes to offer a variety of "value added network-centric services", such as network outsourcing, systems outsourcing, EDI (electronic data interchange) and LAN services, Internet access, e-mail, electronic commerce, video on demand, videoconferencing services and interactive multimedia. Its agreement in August 1995 with Stet, a privately-owned Italian telecommunications company with revenues of $21 billion, will be the first of many such deals. Organisations such as Olivetti and Hewlett Packard are also building strong LAN management capability so there is potential for similar partnerships between such vendors and telecoms organisations.

3. Network Organisations Ride The Crest of a Wave

Because of the surge in Internet use networking organisations have been inundated with business. Companies like 3Com, Cisco Systems and Bay Networks cannot keep up with demand. This has led to major acquisition activity as smaller rivals are snapped up. Broadview Associates estimate that deals worth nearly $3 billion will take place in this sector by the end of 1995.

This stems from the importance of the network itself, as opposed to the hardware at either end of it. As PCs moved computing power to the desktop, networks that connected each machine had not only to carry far more traffic, but also take on the role of the mainframe as the essential link. A PC may fail but if the network goes down, every PC is effectively redundant.

Traditionally, networking companies would specialise in a few components - routers to direct data down the right path, cards to connect the PC to the network, hubs to link many PCs - but now many systems managers are demanding more. They want to buy network systems from one vendor who will assume responsibility for all problems - regardless of which company's kit is at fault. For 3Com *et al* this has meant "filling in the gaps" in their product line in order to offer one stop service management. This cannot be done overnight, hence, the rise in acquisition activity.

Acquisitions, however, can actually slow such companies down. Bay Networks, a merger between SynOptics and Wellfleet, still effectively operates as two companies (the two firms were based on opposite coasts), despite attempts to merge the operations. As a result the company has not grown as fast as its rivals. Cisco, by way of comparison, targets small firms (10 to 100 employees) and tries to keep their management intact after the purchase. 3Com is more aggressive; in November 1995 it acquired Chipcom for $775 million.

Clients certainly expect the kind of worldwide service that only a large company can provide, so growth will continue and smaller rivals will benefit as they are snapped up for premium prices. However, as long as the Internet continues to grow, networking companies will not have any trouble finding the money.

C

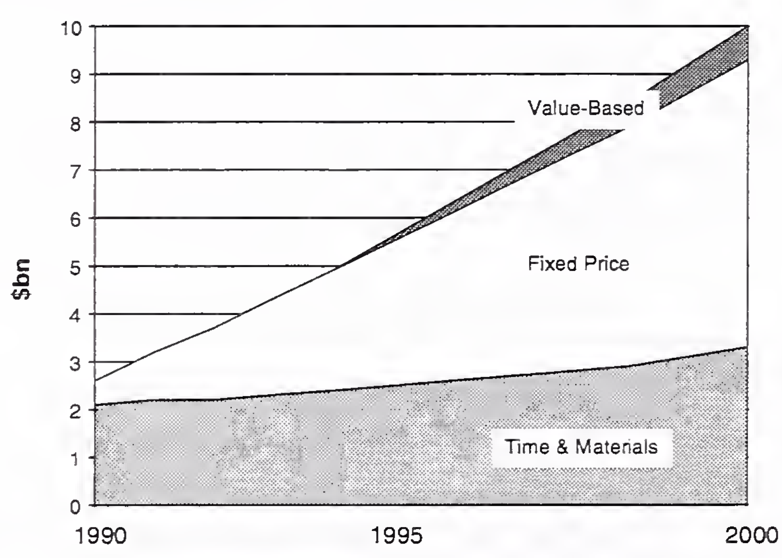
Value-Based Pricing Provides Key to Closer Client Relationships

Another emerging trend within the IT services market is the number of vendors willing to emphasise long-term relationships with clients as the way forward for profitable, sustainable business. This has been the case in both the systems integration and outsourcing markets. Under the "value-based pricing" banner vendors such as Andersen Consulting and EDS have been extremely vocal in pushing out one key message: contracts to deliver IT projects should be assessed in the light of non-IT business metrics, rather than traditional IT measures based on fixed price or time and material scenarios.

This has raised considerable debate and controversy within the vendor community with certain players expressing scepticism as to how business metrics can be used to judge the success or failure of a project. There is a related issue as to whether any correlation exists between the installation or development of an IT system and the subsequent increased revenues of an organisation. However, it is clear that this will be an emerging opportunity, particularly within the systems integration market. Exhibit III-4 provides a forecast for such contracts over the next five years.

Exhibit III-4

Contractual Approaches to European Systems Integration Projects 1990-2000



Source: INPUT

Value-based pricing can be defined as a payment mechanism linking project remuneration to achievement of specific business goals within a client company. If the project does succeed the vendor receives a proportion of any savings generated or any increased revenues. This has become a more appropriate stance to take over the last five years as organisations seek to re-engineer their business processes.

Without understanding and changing the technology underlying and facilitating those processes, such re-engineering will be ultimately wasted. One of the benefits arising from this value-based approach is that it emphasises revenue generation rather than cost reduction, as such vendors look for shares of the value they claim their systems will deliver.

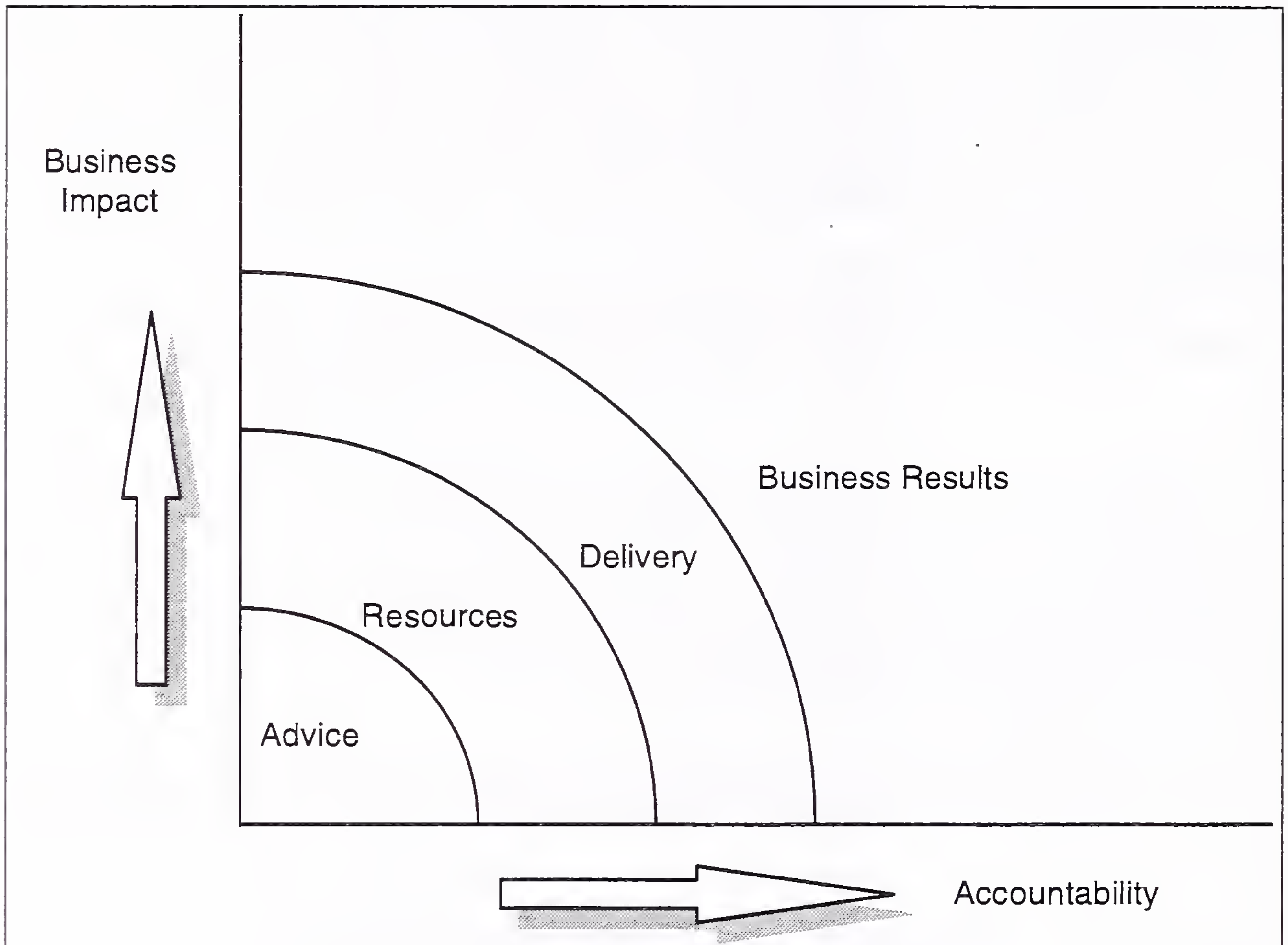
Allied to this is the argument that vendors cannot add value to contracts unless they understand the client's business drivers. Hence, the strong stance such vendors are taking to offer consultancy as part of their operation. This was the rationale behind EDS' acquisition of A.T. Kearney, the U.S. management consultancy. CGS, however, is currently finding it difficult to reconcile the management consulting message of Gemini Consulting with the marketing of its IT outsourcing services as essentially professional technical management services. Accordingly the company is still having trouble in fully integrating Gemini Consulting with its IT activities.

Understanding the client's business is essential for relationships to grow over time and for mutual understanding and trust to develop between client and vendor. A good example of this is the EDS deal with IBOS (the Inter-Bank On-Line system) and the Royal Bank of Scotland. EDS state that they have *not yet been paid* for this contract but will see revenue streams arising in 1996.

Exhibit III-5 shows the various stages through which vendors go before offering risk-reward contracts. Advice is essentially consultancy; resources is equivalent to body-shopping; delivery refers to fixed price SI contracts; finally, value-based pricing emerges as an alternative pricing mechanism.

Exhibit III-5

Risk — Reward Pricing: The Quest For Predictable Business Results



Source: INPUT

Other examples would include Andersen's deal with Astra Merck where Andersen has assisted in re-inventing production and retail processes and are now sharing a proportion of the annual $5 billion business with Merck. Andersen has also moved the proposition on a stage by setting up a separate company to run an outsourcing operation for Northwest Airlines ticketing and booking operations. This stand-alone business has increased risk exposure but has the potential to generate additional revenues well above a "normal" deal.

Also, such an approach allows contracts to be more flexibly written, which is particularly important given the long time frame over which these contracts are expected to last, usually five to ten years. Hence, if a client's business needs change over time vendors can proactively adjust to the new environment without generating legal arguments as to the precise letter of the contract.

However, there are certain issues which have to be faced when adopting this approach. This has been highlighted within the outsourcing market. The adoption of a value-based message has been a successful differentiator for CSC, EDS and to a lesser extent Andersen Consulting. Examples of recent contract wins for EDS include INA in Italy, the Inland Revenue in the UK and the Dutch National Railway. In Germany, EDS has established a joint venture with Lufthansa, entitled Lufthansa Systems, to target the transportation sector internationally. But such a position is incompatible with simultaneously providing lower level technical support services to IT executives. As a result EDS does not have a significant presence in application management or desktop services in Europe.

By way of contrast, CGS has been less successful in winning major application operations contracts but has been very successful in marketing platform operations, application management and distributed systems management as relatively stand-alone services.

A value-based approach by definition implies a high level of service bundling. INPUT research tends to suggest that clients are evenly split as to those who wish to adopt a high level of services bundling of outsourcing from one single vendor and those that wish to individually select a best of breed supplier for each service area.

One future scenario may be as follows. Organisations may increasingly select one supplier, or a small number of suppliers, to manage their IT infrastructure while appointing other suppliers to assist them both in the re-engineering and application management associated with core business processes and in managing the business operations of non-core processes. As ever, one of the key skills needed for success either as a niche player or a supplier of unbundled services within this scenario is an aptitude to work well with other vendors involved in the account.

It is possible to segment vendors on the basis of their approach to client projects - whether the focus is on access to the latest products or technology, whether the emphasis is on the breadth of service offerings or whether this value-added perspective is the *modus operandi* for maintaining client loyalty. In some cases, it is a mixture of all three. Exhibit III-6 illustrates this process.

Exhibit III-6

Maintaining Client Loyalty — Major Approaches

Vendor	Technology & Product Focus	Services Orientation	Value-Added Customer Focus
IBM	Strong	Weak	Weak
CGS	Average	Average	Weak
CSC	Average	Strong	Strong
DEC	Strong	Average	
EDS		Strong	Strong
Andersen Consulting		Strong	Strong
SNI	Strong	Weak	Weak
ICL	Strong	Average	Weak
HP	Strong	Average	Average
Sema	Average	Strong	Average
Bull	Strong	Average	
Olivetti	Strong	Average	
	Strong	*Average*	*Weak*
KEY			

Source: INPUT

Both EDS and Andersen Consulting have visions which are remarkably similar, despite the different methods of expression. Both use the language of partnership when discussing client relationships. Both talk about realising the potential of the future. Both emphasise transformation or change as a major enabler for improved performance. A key issue for both companies is the conversion of information into knowledge which will enhance client competitiveness. HP is also committed to knowledge creation and transfer, although this is not as explicit as EDS and Andersen.

DEC, Bull, Olivetti and ICL place a strong emphasis on products and technology, assuring customers that they understand IT and can deliver the right systems for their clients. ICL and Bull also emphasise their commitment to service and delivery.

SNI's position reflects its transformation from an internally focused, bureaucratic environment to a customer-oriented business. CGS, with its desire to offer business transformation services, is itself also emerging from a major re-engineering exercise, again with a strong customer focus and a desire to assist clients with change or transformation programmes. IBM is in a similar position. Having recently become profitable again it is talking much more about customer orientation and concentrating on the way its products and services can enhance the productivity of customers at the end of the value chain.

Sema Group and CSC are the two vendors who adopt marketing positions which are not obviously similar to other vendors in the group. Both emphasise their industry knowledge and expertise. CSC does not focus on one area of strength such as its provision of leading-edge technology or product solutions or its services capability. Rather it is keen to stress its coverage of *all* elements of the mix: industry knowledge, technology focus, breadth of service offerings and its desire to add value to the enterprise.

There is a debate as to how important a vendor's industry knowledge can be when it comes to bidding for contracts. EDS and CSC have certainly benefited from their business process re-engineering work in the States, as risk-averse customers in Europe are keen to work with such companies who have an established track record in this area. However, in spite of consultancy units which provide apparently superior industry knowledge organisations typically perceive that that their own in-house IT departments have greater business knowledge than the leading IT vendors. This is particularly the case in the outsourcing market.

By way of contrast, leading vendors are perceived to have greater levels of ability in reengineering and in applying IT to business processes. But even within the systems integration market such process expertise is usually kept in-house while technology-intensive projects are put out to systems integrators.

It is questionable, therefore, whether vendors should place such a high level of stress on industry sector knowledge. A better approach might be to stress their skills in reengineering processes and in managing the introduction of IT in support of these processes. But business processes often owe much to custom and practise. World class organisations will begin to adopt best process practices from sectors *outside their own.*

Thus in the future there will be an argument for organising operational staff into business process rather than industry sector groupings. Such groupings could provide support for reengineering where the process is critical to the company and undertake business operations for companies where this is not the case.

(Blank)

IV

Vendor Strategies: New Players and Established Brands

A
New Players in Europe: CSC, Celsius and Baan

1. CSC Keep on Winning Contracts

Although an established player in the European IT services market CSC finally made the INPUT European top thirty rankings for the first time this year, coming in at twentieth position. CSC achieved critical mass with the acquisition of Ploenzke AG in 1994, a leading German professional services organisation. Prior to the acquisition CSC had only 150 personnel in Europe and revenues of DM 30 million ($20 million). In contrast Ploenzke has annual revenues of $170 million and 19 offices within Germany as well as subsidiaries in Switzerland, Austria, Spain and Holland.

A key benefit of the acquisition was Ploenzke's strength in supporting software products developed by SAP. Ploenzke's SAP consulting capability has had a strong positive impact on CSC's SAP services business performance in both the States and Europe. Also, CSC has provided education and training services for large systems integration projects through the Ploenzke education and training unit.

CSC has set its sights on becoming a major player in Europe in the systems integration, outsourcing and professional services markets. CSC's strategy is built around consulting provided by the Index Group and its solid project management skills.

CSC has already put together an impressive list of deals within Europe, such as a ten year outsourcing contract in 1992 with Bhs, a British retailer. Also, in 1994 CSC signed a ten year agreement with British

Aerospace worth £900 million. At the time it was the largest commercial outsourcing contract ever signed in Europe. In 1995 CSC announced a £500 million outsourcing deal with Lucas Industries. The deal is one of the UK's largest outsourcing deals, rivalling the EDS agreement with the Inland Revenue.

2. Celsius Restructuring Creates Major Force in Sweden

Celsius Industries, one of Sweden's largest groups with over 50% of the defence-related equipment market, has faced challenges in transforming itself into a solutions based services provider able to compete in the fast changing IT services market. Clearly, Celsius needed to become a non-defence dependent organisation. Along with other European one-country market players Celsius faced issues as to how it should offer support for market leading applications such as SAP in the local market.

In June 1995 Celsius restructured around three operational areas: defence, IT operations and other industrial operations. IT interests make up almost a third (28%) of Celsius' business. Celsius Information System (CIS) is the main holding group for its IT operations and includes IT Services and Business Consulting, EDP and Technical Consulting, Technology and Maintenance Services and software development. CIS is made up of three formerly independent companies:

- Telub: which performs maintenance and technical consultancy and has capabilities in the logistics and telecoms sectors. Telub also contains a division called Dotcom which is a sales channel for Alcatel and SynOptics data network equipment

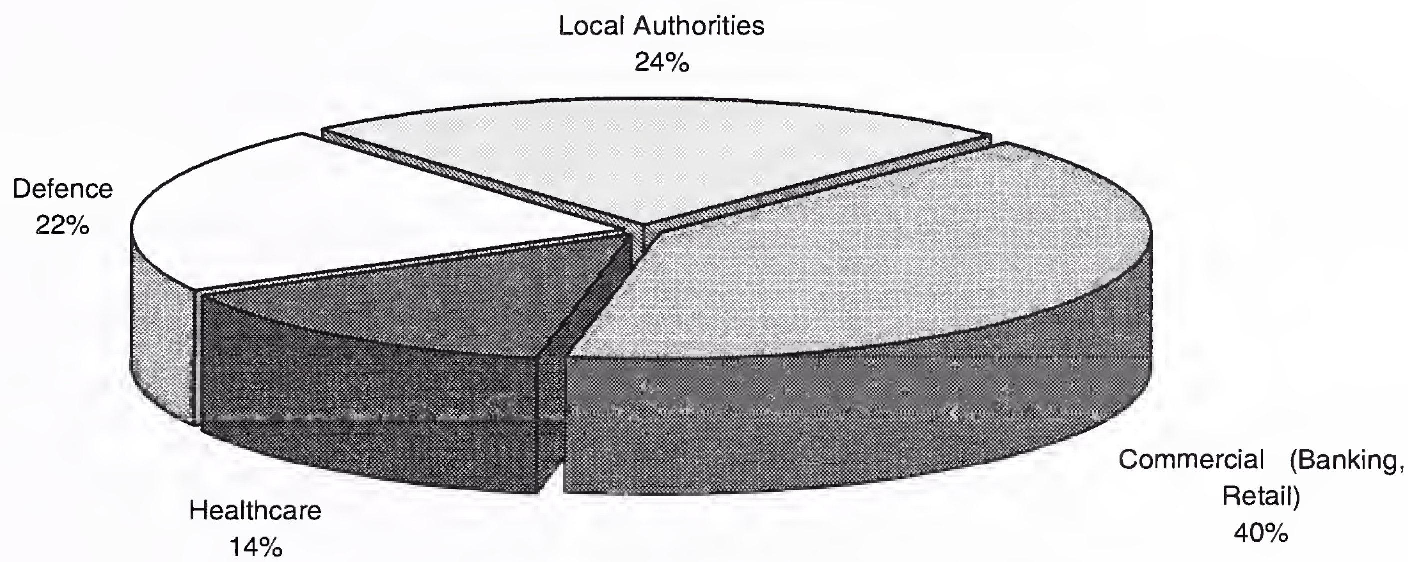
- Dialog: which is an IT outsourcing and bureau services operation acquired in mid-1994. Dialog is Sweden's largest mainframe services bureau and owns Sweden's largest private data and voice network with 20,000 users throughout the Nordic region

- Enator: which is one of the largest Nordic professional services companies and has divisions focused on telecommunications (Enator Technic) and the commercial sector (Enator ABB).

Revenues by delivery mode, vertical market and staff numbers are given in Exhibits IV-1 and IV-2 below.

Exhibit IV-1

Celsius Information Systems — Revenue by Vertical Market



Source: INPUT

Exhibit IV-2

Celsius Information Systems — Revenues and Staff by Delivery Mode

	$ Millions	Staff
Professional Services	230	2,200
Application Products	80	600
Outsourcing	63	250
Communications Services	48	550
Training and Education	20	200

Source: INPUT

Celsius are attempting to move outside of their traditional home market and position themselves as more than a one-country player. Celsius certainly has the resources to do so now the three companies have been integrated within the organisation.

3. Baan: Exceptional Growth Performance

Baan was established by Jan and Paul Baan in the Netherlands in 1978 as a private company to provide financial and administrative consulting services. In 1981 the company focused on applications software, where it has experienced impressive growth. It is estimated that Baan recorded revenues of $124 million in 1994, a 94% increase on 1993 results.

Forecasts for 1995 are set at $160 million. It has 1,100 employees worldwide.

Due to demand the company set up operations in Menlo Park, California in 1993 and American sales now account for over 30% of total revenues, the remainder coming from Germany (around 20%) and the Netherlands (over 40%). Prospects for profitability look good as Baan has now completed significant infrastructure changes.

Baan provides an enterprise resource planning (ERP) suite named Triton, comprising a set of business applications, implementation tools and a 4GL development environment. Its major customers include Mercedes and Northern Telecom. Its major competitors include SAP and Oracle, whom it recently beat to win a $20 million contract to supply Boeing's commercial aircraft division with a new client/server production system. At the time this deal was the largest in the history of the company. The company is also embarking on a global advertising campaign to increase its recognition against better known competitors, such as Oracle or SAP.

Baan plans to focus on multinational clients and as such is increasing its direct support operations in all its major geographic markets - currently it has direct and indirect operations in 18 and 29 countries respectively. Baan does not wish to focus on becoming the largest organisation in this field. Therefore in order to win multinational accounts it has signed worldwide deals with CGS and consultancies such as KPMG and Ernst & Young.

Baan is ranked eighteenth in the Netherlands software and services market and second in its application software segment. Clearly, there is scope for improvement. One issue is how quickly Baan can expand into new international markets around Europe without diluting its core product offerings.

B
Established Vendors: Opportunities for the Taking

1. Established Players: Returning to the Black

Many established players are either in the middle of a turnaround situation or have recently come out of one. There may be a resurgence by the likes of SNI, Digital, CGS, Bull and IBM as they either maintain profitability or become profitable for the first time in many years. All of these companies are surfacing after major internal restructuring operations with leaner and fitter organisations.

SNI needs to reduce its dependence on the German market and operate in a much more entrepreneurial manner. The creation of Siemens Business Services in the UK to provide outsourcing services was the first part of an international strategic initiative that lead to the formation in Germany of a new global outsourcing organisation with start-up revenues of DM 800 million. This emphasis on service offerings could enhance SNI's position within Europe provided it can offer truly pan-European service.

IBM worldwide now makes more money from software and services than it does from hardware. In October 1995 IBM announced its intention to set up a unified global services division by January 1996. This would include outsourcing (ISSC), management consultancy and IBM's Global Network. IBM has a backlog of outsourcing contracts alone worth $30 billion and estimate that their outsourcing and system integration revenues will reach $9 billion worldwide in 1995. The issues here are how IBM will position itself in the Internet services market and how the Lotus acquisition will evolve now that Jim Manzi has left the company.

Ironically, Digital appears to have risen to profitability through the sale of Alpha servers and networks. Service revenues are around 45%, a decrease on previous years. This is partly due to the move out of consultancy and the lack of VAX sites as sales decline in this segment. However, multivendor services continue to account for an increasing proportion of business, as recognised by the recent low-key announcement that MCS Europe (DEC's customer service operation) will now be treated as a separate division. DEC has recently announced that it will not adopt a policy of acquisitions to grow the company.

Bull is still suffering from its weak financial position but is generating high levels of business, particularly in the UK with its outsourcing and systems integration arm, Integris. Bull recently took over Data Sciences IBM mainframe processing business, which was worth £8m over ten years. It is also making inroads into the German market with deals with

Verstolen (a Veba subsidiary) to implement SAP R/3 and communication solutions worth DM 6 million to local government authorities.

CGS has risen to number two slot from fourth position in 1993. Its biggest challenge lies in maximising its consulting capability through Gemini Consulting. It also needs to work hard at ensuring that debis Systemhaus is successful now that it represents all of CGS' German revenues. It is doubtful whether Daimler Benz will exercise their option to have a controlling interest in this company.

2. Established Players: Solid Base for Growth

ICL has experienced flat revenues (£2.6 billion) and declining profits for 1994 and is suffering setbacks in one of its core UK markets, the government sector, having lost out to Andersen Consulting and EDS. There are also issues about how ICL's strategy - "a systems company focused on services" - will be delivered now that Peter Bonfield has announced his move to BT as chief executive. However, ICL's systems integration business has been successful in winning and implementing contracts from the National Lottery, Eurostar, Berlin County Court (the largest county court in Europe) and the London Underground.

CFM, ICL's outsourcing arm, continues to grow revenues at over 25% per annum. It is also responsible for one of the largest IT training and education groups, now that Peritas has linked up with Amdahl and Fujitsu. Because of its internal structure ICL has many impressive businesses which compete and collaborate with other units. But the next year must see organic revenue growth in its core businesses for ICL to continue to be a major European player.

Unisys has recently announced plans, similar to the demerger of AT&T, aimed at restructuring the company into three units: the largest will incorporate the hardware and software product division, the other two will focus on services - consulting/integration services and global support services. Services within Unisys now account for 27% of revenue and are their single largest business area.

Moving from a product focus to an information services mentality will result in greater costs of sale to support such service operations. For instance, operating costs within the products division account for 62% of sales; within services the figure is 78%. Unisys have recently recruited top level consultants (from McKinsey and Ernst & Young) to run their consultancy practise. In 1994 Unisys recruited 300 consultants worldwide. Unisys faces significant challenges in repositioning itself as a services organisation in terms of culture and image change, improving its customer focus and reskilling its staff. Long-term commitment to this new strategic vision is essential if Unisys is to be perceived as a worldwide services player.

The Sema Group continues to perform well financially, extending its geographic coverage and industry-specific capability. The company's focus remains on industrial applications and computer integrated manufacturing, retail banking and CASE tools. Consultancy is becoming a much more powerful offering within its portfolio. It has a joint venture with British Aerospace to exploit the civil and defence market place, a 40% stake in France Telecom's facilities management subsidiary and is in the process of acquiring CISI, the French services group. In December 1995 CGS finally sold its 28% stake in Sema.

Hewlett Packard has produced excellent results by targeting selective niches, such as the client/server consulting market, where it enjoys a leadership position. It has opposed a global approach to the services market and acts as prime contractor for only 20% of its professional service revenues. HP has concentrated on partnering with consultancy vendors and would not claim expertise in the areas of BPR or business strategy consulting. The exceptions would be the automotive sector - where HP has undertaken process redesign assignments for BMW - and telecommunications - where HP has been extremely active in developing and integrating systems for Northern Telecom.

Despite a decline in revenues in Europe in 1993 Andersen Consulting went through the $1 billion ceiling in 1994, with growth up at 9%. Andersen's financial services division performed particularly strongly in 1994, growing over 35% and accounting for 37% of total European revenues. Andersen have benefited from on-going relationships with the London Stock Exchange and Barclays Bank in the UK, the Banca Nazionale dell' Agricoltura in Italy and Caja Espana in Spain.

The other two areas driving Andersen's growth include the utilities and telecommunications sectors. In utilities Andersen has provided customer services to Thames Water in the UK and the Spanish group, ENDESA. Andersen are also pioneering the value-based pricing concept (see chapter three) and have set up, in effect, separate businesses to manage client contracts. Andersen's Business Process Management team have set up a joint venture with FIAT at their new agricultural machinery plant in the Netherlands, managing FIAT's $400 million parts business for the whole of Europe.

3. Established Players: Outstanding Performers

EDS continues to thrive. It has moved up three places to sixth position and increased its market share by 0.6% to 1.9% in 1994. By also offering value-based pricing contracts EDS has been able to secure major outsourcing contract wins, such as the Inland Revenue in the UK. EDS will continue to focus on business (as oppose to IT) metrics as the criteria for judging the success of a contract. This approach, combined with its strengthened consultancy offering through its A,T Kearney acquisition, will enable it to offer business-oriented solutions linking a thorough understanding of business processes with industry experience.

SAP is also experiencing rapid growth and aims to become a $5 billion company by the year 2000 - no mean feat given that this requires compound *annual* growth of almost 50%. SAP are facing criticism - particularly in Germany - as customer expectations increase and clients seek to justify the expense of R/3 installation. SAP are also witnessing competition from Oracle, Baan, JBA, SSA, Coda and QSP, as well as a growing number of small niche vendors who typically have a vertical focus. SAP are responding by placing emphasis on customer service, appointing "troubleshooters" to avoid project overruns and establishing global account management for multi-national clients.

Given the return to financial health of so many established players and the potential for high growth from HP, Sema and Andersen Consulting, vendors such as EDS and SAP will be under intense competitive pressure to maintain their exceptional performance over the next year.

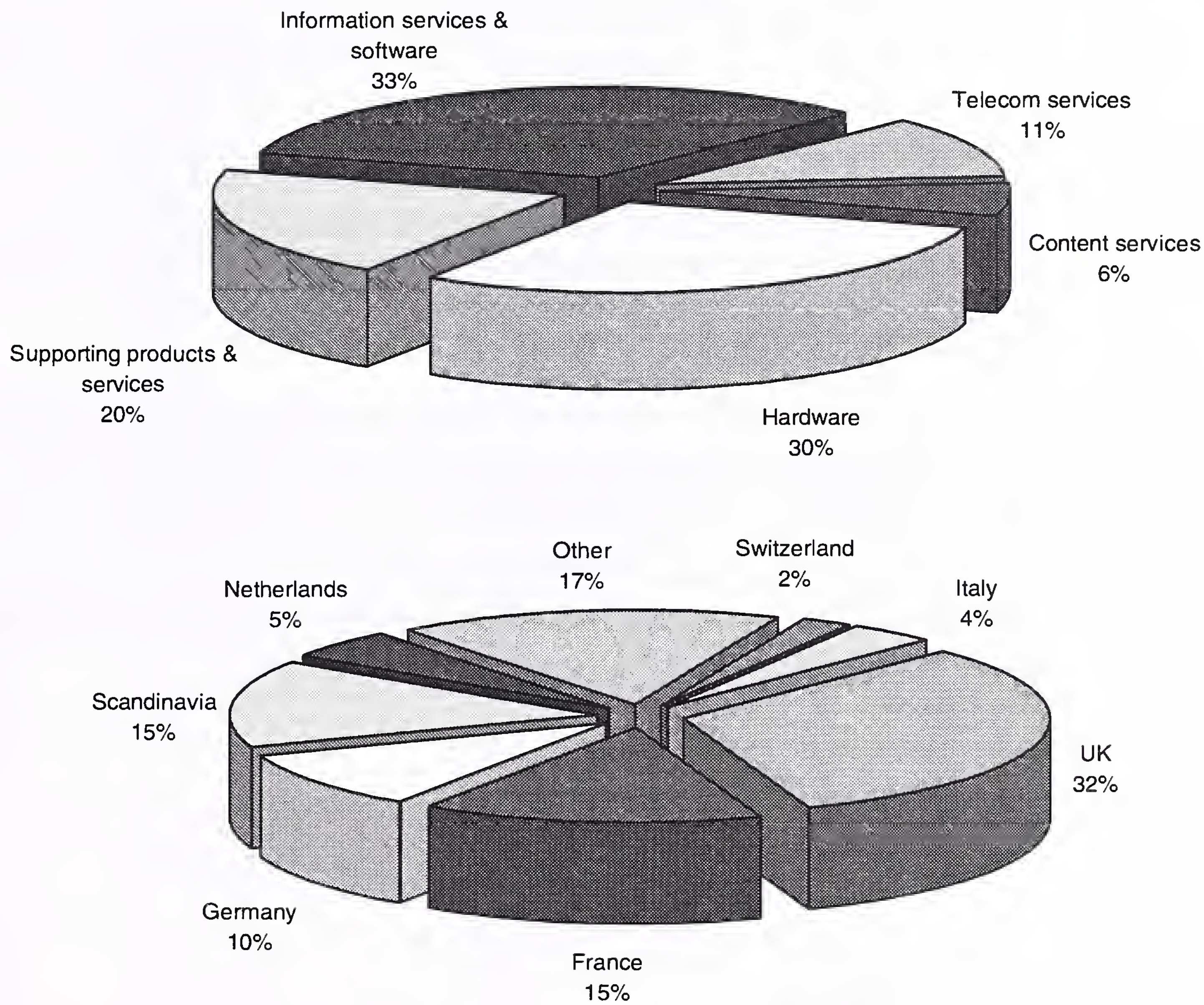
C
Merger and Acquisition Activity

Activity in the IT services market has been exceptionally busy over the last six months, even when compared with a hectic period last year. Broadview Associates estimate that the number of acquisitions within the European IT industry in the first half of 1994 was 413 as compared with 547 for the first half of 1995 - an increase of 32%. The values of such transactions increased even more. The value of deals during the first half of 1994 was $7.4 billion; in the first half of 1995 it was worth $17.5 billion - almost 140% up year on year.

The breakdown by business type and nationality of the seller is given below in Exhibit IV-3.

Exhibit IV-3

European Acquisition by Type of Business and Nationality of Seller (first half of 1995)



Source: Broadview Associates

This is not surprising given the desire for growth by acquisition which is characterising US vendor activity, particularly CSC and EDS. This strategy is, in turn, caused by customer demand for global support and service. Not only are such companies growing faster than the worldwide average but their acquisitions are proving to be good purchases. Recent research suggests that most large deals do not deliver significant returns. In fact, in a recent study which covered 150 acquisitions worth more than $500 million over the last five years the following results emerged:

- 30% of deals substantially eroded shareholder returns

- 33% only created marginal returns

- 17% gave substantial returns.

Of companies that closed six or more deals 72% had returns above the industry average - this group accounted for just under a quarter of the total group (24%). Of companies which closed five or fewer deals 54% had above average returns - this accounted for over three quarters of the group (76%). Significantly, among non-acquirers 69% produced returns superior to industry indexes while only 58% of acquirers produced superior returns. Specific examples of deals with poor returns includes Novell's purchase of Wordperfect in June 1994 (which it is now trying to sell as part of its business applications division) and the AT&T acquisition of NCR in 1991.

The inexorable drive to grow by acquisition inevitably places stress on such companies to continue at the same rate each year. Good targets become scarcer and higher prices can be paid for mediocre organisations. The American vendors who are regularly acquiring European companies will experience above average returns but there will be limits as to the number of major acquisitions which are available each year. Exhibit IV-4 illustrates the key European acquisitions during 1995.

Exhibit IV-4

Key European Acquisitions During 1995

Date	Buyer	Seller	Seller Activity	Value
January	CSC (US)	Ouroumoff International (France)	IT management consultancy	n/a
	debis Systemhaus (Germany)	Cap Volmac CAP debis VFC unit (France)	Systems Integrator	n/a
	EDS (US)	Database (Italy)	Facilities Management	n/a
	EDS (US)	Varitel Video (US)	Video/Film	n/a
	SNI (Germany)	Pyramid Technology Corp (US)	Servers	n/a
	Wang Laboratories (US)	Various Bull Businesses (France)	Computer Services, Systems Integration	n/a
February	Microsoft (US)	RenderMorphics (UK)	3D Programming	n/a
	Misys (UK)	ACT Group (UK)	Software & Services	$336 mn
	Unisys (US)	TopSystems Int'l (Netherlands)	Client/server software	n/a
March	CMG (UK)	Pecom (Germany)	Computer Services	n/a
April	EDS (US)	Banco Banesto (Spain)	Computer Services	n/a
May	ICL (UK)	Dataserv (US)	Retail Applications	n/a
June	CSC (US)	Lucas Engineering & Management Systems	Consultancy & Project Management	$500 mn
	EDS (US)	AT Kearney (US)	Consultancy	$600 mn
	ICL (UK)	Aquarius Robotron Systems (Germany)	PCs	n/a
July	CSC (US)	Oxford Consortium (UK)	Healthcare Computer Services	n/a
	Phillips (Netherlands)	BSO-Origin (Netherlands)	IT consultancy	n/a
	SafetyNet (UK)	PSL (UK)	IT disaster recovery	n/a
September	Getronics/Roccade (Netherlands)	Raet (Netherlands)	Computer Services	n/a
	SHL Systemhouse (Canada)	Planning Consultancy (UK)	Computer services	£13.5 mn
October	IBM (UK)	K3 Group (UK)	Financial software	£7 mn

Source: INPUT

(Blank)

V

Country-Specific Competitive Analysis

This chapter contains highlights of the competitive rankings for each country market in Europe. The countries have been segmented into four groups:

- The four major economies: France, Germany, UK and Italy
- The Nordic region: Sweden, Norway, Finland and Denmark
- Eastern and Central Europe
- Netherlands, Belgium, Switzerland, Austria and Spain.

Overall, IBM's dominance seems to be holding in the major economies. However, it is facing strong competition in the Nordic region where it lost number one position in all four countries. National vendors appear to be putting up stronger resistance in the Nordic region than in other parts of Europe; the exceptions are Spain (Eritel) and Austria (Management Data and AI-Informatics).

A
The Four Major Economies

The top thirty vendors in each of the major economies still account for approximately the same market share as last year. The exception is the UK where the top thirty now account for 64% versus 60% last year. There does not appear to be a significant consolidation process emerging.

In general, top vendors are growing with the market and maintaining their position. IBM is still maintaining top position in three of the four major economies but its market share is declining.

There are, of course, exceptions to the rule (see chapter four for a brief summary of the outstanding performers). EDS has moved up the rankings in all four countries: up three places to fifth and fourth place in France and the UK respectively; up fourteen places to seventh position in Germany; and up fourteen places to fifteenth in Italy. Digital has moved up four places to fifth in France. SAP has also moved three places to fourth in Germany. Andersen Consulting has moved up three places to sixth position in Italy.

Exhibit V-1

Leading Software & Service Vendors, France 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (FF Millions)
1	IBM	7.2	7,820
2	CGS	2.9	3,115
3	Bull	2.6	2,850
4	EDS	1.9	2,020
5	Digital	1.8	1,960
6	Sligos	1.8	1,915
7	Reuters	1.7	1,875
8	Axime	1.5	1,660
9	GSI	1.5	1,610
10	Microsoft	1.3	1,455
	Total Listed	24.3	26,280
	Total Market	100	108,000

Source: INPUT

Within the French market *all* companies have maintained their position as number one vendor for their respective delivery mode.

Significantly, the two national vendors, Sligos and Axime, have both moved down the rankings since last year. This is at the expense of Digital and EDS who have made substantial moves to position themselves within the top five. This trend will continue next year as international, full service vendors aggressively grow their market share position through winning major contracts and acquiring national players. However, given Sema's recent announcement of its intention to buy CISI, national vendors may also increase market share by acquiring smaller players. This may result in pushing up the cost of acquisition of smaller vendors in national markets as "reasonably priced" companies become harder to find.

Exhibit V-2

Leading Software & Service Vendors, Germany 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (DM Millions)
1	IBM	11.4	3,070
2	SNI	7.6	2,040
3	Datev	3.6	980
4	SAP	3.1	850
5	Digital	2.9	775
6	debis Systemhaus	2.5	685
7	EDS	2.2	585
8	Reuters	2.1	570
9	Microsoft	1.8	485
10	Compunet	1.0	265
	Total Listed	38.2	10,305
	Total Market	100	27,000

Source: INPUT

SAP and EDS have made the greatest movement within the German rankings, moving up from seventh and twenty first respectively. These players are the only ones who can seriously challenge the supremacy of IBM and SNI over the next three years. The top three positions remain unchanged from last year. IBM has the greatest domination in Germany of all four major economies, being number one in *six* delivery modes.

Exhibit V-3

Leading Software & Service Vendors, UK 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (£ Millions)
1	IBM	9.4	815
2	ICL	8.1	705
3	Digital	4.6	400
4	Reuters	3.6	315
5	EDS	3.0	265
6=	Sema	2.9	250
6=	Hoskyns	2.9	250
8	Andersen Consulting	2.8	245
9	AT&T	2.4	205
10	ACT	1.8	160
	Total Listed	41.5	3,610
	Total Market	100	8,700

Source: INPUT

IBM and ICL are still in powerful positions. The gap between Digital and ICL has increased by £ 55 million on last year. The real newcomer within the top ten next year will be CSC, given the number of major UK contracts it has won over the last twelve months.

Exhibit V-4

Leading Software & Service Vendors, Italy 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (Lira Billions)
1	Finsiel	12.4	1.475
2	IBM	11.8	1.400
3	Olivetti	8.7	1.030
4	Digital	3.2	385
5	Reuters	2.2	255
6=	Andersen Consulting	1.6	190
6=	Microsoft	1.6	190
8	Cerved	1.5	180
9	Bull	1.5	175
10	Computer Associates	1.3	155
	Total Listed	45.9	5,435
	Total Market	100	11,850

Source: INPUT

Finsiel continues to dominate the Italian market, being top in the professional services, outsourcing and processing segments, although it has lost market share (0.4%) since last year, as has IBM (0.7%). Olivetti finally pushed through the 1 trillion lira mark and maintained its position as part of the "top trio" of vendors in Italy. It remains to be seen how the current restructuring within Olivetti - especially within the PC business - will result in greater revenue growth next year.

B
The Nordic region

IBM has lost pole position in all four of the Nordic countries. Partly due to groups formed through acquisition (Sweden), forceful niche players (Denmark) and local vendors robustly defending their markets (Finland and Norway).

The major shift in rankings within the Swedish market is due to the creation of Celsius Information System in 1994 (see chapter four for more details). Celsius has moved IBM from the top position and established a clear lead in terms of market share - 7.5% ahead of IBM. Other players worth watching in this market include WM-Data (moving up to third from seventh position last year), Sema (from twelve to five) and ICL (from fifteen to nine).

Exhibit V-5

Leading Software & Service Vendors, Sweden 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (SK Millions)
1	Celsius Info. System	14.8	3,545
2	IBM	7.3	1,740
3	WM-Data	6.2	1,485
4	CGS	5.8	1,390
5	Sema	5.6	1,345
6	Sapia	4.5	1,065
7	SKD Foretagen	3.0	720
8	EDS	2.4	585
9	ICL	2.1	505
10	Digital	1.9	450
	Total Listed	53.7	12,830
	Total Market	100	23,900

Source: INPUT

In Denmark Kommunedata has moved to top position due to its dominance of the local authority application software market, from where it derives 95% of its revenues. ICL also moved up to fourth place from tenth position last year.

Exhibit V-6

Leading Software & Service Vendors, Denmark 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (DK Millions)
1	Kommunedata	11.6	1,485
2	IBM	10.8	1,385
3	PBS	7.2	920
4	ICL	1.8	225
5	Computer Associates	1.7	220
6	JDC Data	1.6	200
7	Oracle	1.5	195
8	Microsoft	1.2	155
9	DanNet	1.2	150
10	Digital	1.1	145
	Total Listed	39.7	5,080
	Total Market	100	12,800

Source: INPUT

NIT has moved into top position, beating IBM into second place. However, IBM acquired NIT in 1995 which will give them an extremely dominant position of almost 20% of the market, based on this year's results. Between them the two companies were number one in *ten* of the fourteen delivery modes (see Appendices for details). Celsius Information System entered the top ten rankings for the first time in 1994 in sixth position.

Exhibit V-7

Leading Software & Service Vendors, Norway 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (NK Millions)
1	NIT	10.6	1,235
2	IBM	8.7	1,020
3	Fellesdata	5.5	640
4	BBS	4.9	570
5	Novit	3.7	435
6	Rogalandsdata	2.3	270
7=	Celsius Info. System	2.1	245
7=	EDB	2.1	245
9	Andersen Consulting	1.9	220
10	Computer Associates	1.8	210
	Total Listed	43.5	5,090
	Total Market	100	11,700

Source: INPUT

KT- Datacenter - formerly known as KT- Tietokeskus - continues to be a leading player in the professional services and systems integration markets while dominating the processing services sector. Tietotehdas is the number one player in systems integration, application software and turnkey systems.

Exhibit V-8

Leading Software & Service Vendors, Finland 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (FM Millions)
1	Tietotehdas	13.2	800
2	KT-Datacenter	11.4	690
3	IBM	9.9	600
4	VTKK	9.1	550
5	ICL	8.1	490
6	Paakaupunkiseudom	3.0	180
7	Digital	2.9	175
8	Elorg-Data	2.8	170
9	Computer Associates	2.4	145
10	CGS	2.0	120
	Total Listed	64.6	3,920
	Total Market	100	6,070

Source:INPUT

C
Eastern and Central Europe

Major hardware vendors, such as Digital, ICL, Bull and IBM have been setting up new infrastructures in the region to support banking and central government over the last three to four years.

The Russian market is experiencing significant growth in PC sales while the more mature central European markets - such as Poland, Hungary and the Czech republic - are finding mid-range systems more popular, particularly with client/server configurations. It is in these countries that professional services organisations such as EDS are establishing relationships in advance of the next wave of demand for more sophisticated service offerings.

Exhibit V-9

Leading Software & Service Vendors, CIS 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (FM Millions)
1	IBM	4.2	30
2=	ICL	2.8	20
2=	Microsoft	2.8	20
4	Unisys	2.1	15
5=	SNI	1.4	10
5=	Digital	1.4	10
7=	SAP	0.7	5
7=	Andersen Consulting	0.7	5
7=	SSA	0.7	5
7=	CGS	0.7	5
	Total Listed	17.5	125
	Total Market	100	715

Source: INPUT

In September 1995 Unisys signed up Compulink as a distributor and is close to agreements with assembly companies Aquarius Systems and Sunrise. The Russian companies stated that their motivation in entering into these agreements is that they would like to start winning systems integration business and Unisys has brand recognition in the Russian banking community. The largest distributor of Acer computers in Russia, Compulink, has won a three year agreement from Unisys to distribute their PCs and servers.

In August 1995 Advanced Micro Devices (AMD) also appointed Sunrise as its only official Russian distributor; Sunrise is AMD's largest Russian customer.

Alcatel NV's Russian turnover in 1994 was $100 million. The firm has two joint ventures in Russia and is a co-founder of several other telecommunication enterprises. The St Petersburg-based LenBell joint venture, formed by Alcatel's Belgian subsidiary Alcatel Bell, Belgian company Fonds Nieuw NV, Norwegian firm Nordex and two Russian firms, A/O Telecom and NIIETU, is involved in producing equipment for urban and international networks.

In September 1995 Moscow-based software firm Diasoft and IBM have signed an agreement under which the Russian company will offer its banking applications on R/6000 systems.

Olivetti sales in the banking sector now account for over 30% of the company's turnover in Russia; about 60 Russian banks are clients. Among the largest projects was a turnkey system for the new building of Unikombank.

In April 1995 SNI signed a one year agreement with Intermicro Business Systems (Dell Computer's master Russian distributor) under which both firms will distribute each other's banking computer systems and software. Intermicro will install Siemens Nixdorf banking systems and provide training.

Compaq dealer, Computer Group Ukraine, has a $100,000 contract to supply the Ukrainian Space Agency with Compaq and Sun Microsystems equipment; the company, set up in 1993, specialises in large computer projects.

Bull has formed a joint venture with KABIS, the Kazakh Association of Banks for Information Systems, a Bull business partner, and state organisation Ulan. The company, named Bulak, will represent Bull's interests in Kazakhstan and will be the sole distributor of Bull's products. Bull has a majority shareholding in the operation. In 1993 Bull won a $5m contract to supply a PC-based installation to the region's central bank.

In Hungary, the top PC maker, Albacomp Computers, recently bought 51% of SZUV, a former state-owned computer company that operates 15 data processing centres throughout Hungary. By moving into the systems integration market Albacomp recently secured a networking systems contract for state telecommunications company Matav, as well as contracts with Unilever, Levi Strauss and domestic oil and gas company MOL.

D

Netherlands, Belgium, Switzerland, Austria and Spain

The Netherlands software and services market is in a state of flux. With the recent announcements of the merger between Philips and BSO-Origin and the alliance of Getronics, Roccade and Raet - a group worth Dfl 1.3 million in 1994 alone - the market will experience upheaval over the next year. Both IBM and Cap Volmac will be extremely hard pressed to maintain their top two positions.

Exhibit V-10

Leading Software & Service Vendors, Netherlands 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (DFl Millions)
1	Cap Volmac	8.5	735
2	IBM	8.3	715
3	Getronics	5.7	490
4	Roccade	5.3	460
5	BSO-Origin	4.8	410
6	Raet	4.2	360
7	CMG	2.3	200
8	Digital	1.6	140
9	Microsoft	1.3	110
10	CSC	1.2	100
	Total Listed	44.4	3,820
	Total Market	100	8,600

Source: INPUT

CSC have grown rapidly over the last year, moving up to number two position from third place last year. The company is the leading Belgian outsourcing organisation and also dominates the processing services arena. Dolmen, the only Belgian vendor, also moved up the rankings to fourth place.

Exhibit V-11

Leading Software & Service Vendors, Belgium 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (BF Millions)
1	IBM	7.5	6,660
2	CSC	7.1	6,325
3	SNI	2.7	2,365
4	Dolmen	2.2	1,920
5	Computer Associates	2.0	1,760
6	Digital	1.9	1,695
7	CGS	1.8	1,625
8	Unisys	1.6	1,430
9=	EDS	1.4	1,205
9=	Microsoft	1.4	1,205
	Total Listed	29.6	26,190
	Total Market	100	89,000

Source: INPUT

IBM continues to dominate the Swiss market. It has twice the market share of its nearest rival and is number one vendor in professional services, systems integration and outsourcing.

Exhibit V-12

Leading Software & Service Vendors, Switzerland 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (SF Millions)
1	IBM	16.6	500
2	Telekurs	8.3	250
3	Digital	4.3	130
4	Reuters	3.8	115
5=	Fides	2.8	85
5=	SNI	2.8	85
7	AT&T	2.5	75
8	Computer Associates	2.3	70
9	Microsoft	2.3	70
10	Unisys	1.8	55
	Total Listed	47.6	1,435
	Total Market	100	3,015

Source: INPUT

National vendors are more in evidence within the Austrian market, dominating the professional services, processing, network management (Management Data) and outsourcing (AI Informatics) sectors. SAP entered the top ten rankings for the first time this year and is number one vendor in the applications software segment.

Exhibit V-13

Leading Software & Service Vendors, Austria 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (Sch Millions)
1	IBM	10.7	1,765
2	SNI	5.4	895
3	Management Data	3.9	645
4	Digital	3.6	600
5	Computer Associates	2.4	395
6	SAP	2.3	375
7	EDV	2.2	370
8	Beko	1.7	275
9	AI Informatics	1.6	265
10	GRZ Linz	1.5	250
	Total Listed	35.4	5,835
	Total Market	100	16,500

Source: INPUT

Andersen Consulting continue to perform well in the Mediterranean region, especially Spain and Portugal. Although the top three positions remain unchanged Andersen Consulting have increased their market share by 1.3% on last year, while IBM has declined by 1.4%. Although Eritel, the only national vendor in the top ten rankings, has displaced Andersen Consulting as number one vendor in the professional services market. EDS have moved straight into sixth position and HP have moved from tenth to fifth place.

Exhibit V-14

Leading Software & Service Vendors, Spain 1994

Rank	Company	Estimated Market Share (Per Cent)	1994 Estimated Revenue (Pta Millions)
1	IBM	9.3	29,995
2	Andersen Consulting	8.2	26,405
3	Eritel	3.5	11,345
4	Reuters	2.5	8,080
5	HP	2.2	6,980
6	EDS	2.1	6,890
7	SNI	2.1	6,825
8	Microsoft	2.1	6,635
9	Sema	2.0	6,440
10	Computer Associates	1.9	6,295
	Total Listed	35.9	115,890
	Total Market	100	323,000

Source: INPUT

A

Leading Vendors ($ Millions) – Europe

Exhibit A-1

Software and Services Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share(%)
1	IBM	U.S.	7,890	9.5
2	CGS	France	2,025	2.4
3	SNI	Germany	1,905	2.3
4	Digital Equipment Corp	U.S.	1,765	2.1
5	Reuters	U.K.	1,755	2.1
6	EDS	U.S.	1,585	1.9
7	Microsoft	U.S.	1,260	1.5
8	ICL	U.K.	1,150	1.4
9	Bull	France	1,115	1.3
10	Andersen Consulting	U.S.	1,065	1.3
11	Computer Associates	U.S.	955	1.1
12	Sema	France	950	1.1
13	Finsiel	Italy	905	1.1
14	Olivetti	Italy	895	1.1
15	Oracle	U.S.	815	1.0
16	SAP	Germany	800	1.0
17	AT&T	U.S.	795	1.0
18	HP	U.S.	735	0.9
19	Datev	Germany	640	0.8
20	CSC	U.S.	635	0.8
21	Unisys	U.S.	605	0.7
22=	Celsius Info. System	Sweden	540	0.6
22=	Novell	U.S.	540	0.6
24=	GSI	France	495	0.6
24=	Sligos	France	495	0.6
26	Debis Systemhaus	Germany	470	0.6
27	Syseca	France	390	0.5
28	Logica	U.K.	360	0.4
29=	Getronics	Netherlands	355	0.4
29=	BSO-Origin	Netherlands	355	0.4
	Total Listed		34,245	41.1
	Total Market		83,300	100.0

Source: INPUT

Exhibit A-2

Professional Services Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	1,260	5.5
2	CGS	France	900	3.9
3	Finsiel	Italy	650	2.8
4	Digital Equipment Corp	U.S.	500	2.2
5	Andersen Consulting	U.S.	435	1.9
6=	ICL	U.K.	400	1.7
6=	Sema	France	400	1.7
6=	Oracle	U.S.	400	1.7
9	EDS	U.S.	390	1.7
10	SNI	Germany	350	1.5
	Total Listed		5,685	24.7
	Total Market		23,060	100.0

Source: INPUT

Exhibit A-3

Systems Integration Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	995	21.1
2	Andersen Consulting	U.S.	475	10.1
3	Bull	France	370	7.9
4	CGS	U.S.	340	7.2
5	ICL	U.K.	260	5.5
6	EDS	U.S.	250	5.3
7	Digital Equipment Corp	U.S.	235	5.0
8	Sema	France	190	4.0
9	SNI	Germany	150	3.2
10	Logica	U.K.	125	2.7
	Total Listed		3,390	72.0
	Total Market		4,710	100.0

Source: INPUT

Exhibit A-4

Outsourcing Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	EDS	U.S.	650	14.7
2	CGS	France	570	12.9
3	IBM	U.S.	340	7.7
4	Sema	France	290	6.6
5	CSC	U.S.	180	4.1
6=	ICL	U.K.	160	3.6
6=	Digital Equipment Corp	U.S.	160	3.6
8	Bull	France	140	3.2
9	Andersen Consulting	U.S.	125	2.8
10	Telesystemes	France	120	2.7
	Total Listed		2,735	62.0
	Total Market		4,410	100.0

Source: INPUT

Exhibit A-5

Processing Services Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	Datev	Germany	440	5.3
2	Sligos	France	205	2.5
3	Axime	France	180	2.2
4	Telekurs	Switzerland	155	1.9
5	EDS	U.S.	130	1.6
6	Roccade	Netherlands	115	1.4
7	IBM	U.S.	110	1.3
8	Debis Systemhaus	Germany	100	1.2
9	GSI	France	95	1.1
10	CSC	U.S.	85	1.0
	Total Listed		1,615	19.5
	Total Market		8,290	100.0

Source: INPUT

Exhibit A-6

Network Applications Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	Infonet	Belgium	215	11.9
2	IBM	U.S.	190	10.6
3	GEIS	U.S.	110	6.1
4	AT&T	U.S.	105	5.8
5	BT	U.K.	80	4.4
6	Digital Equipment Corp	U.S.	60	3.3
7	GSI	France	55	3.1
8=	Sligos	France	50	2.8
8=	Bull	France	50	2.8
10	SG2	France	45	2.5
	Total Listed		960	53.3
	Total Market		1,800	100.0

Source: INPUT

Exhibit A-7

Electronic Information Services Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	Reuters	U.K.	1,315	35.2
2	Telerate	U.S.	290	7.8
3	Dun & Bradstreet	U.S.	175	4.7
4	Telekurs	Switzerland	125	3.3
5	Citicorp	U.S.	100	2.7
6	DAFSA	France	80	2.1
7	Extel	U.K.	75	2.0
8	Mead	U.S.	60	1.6
9	ADP	U.S.	55	1.5
10	FTLIS	France	50	1.3
	Total Listed		2,325	62.2
	Total Market		3,740	100.0

Source: INPUT

Exhibit A-8

Systems Software Products Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	4,120	30.6
2	Microsoft	U.S.	730	5.4
3	SNI	Germany	570	4.2
4	Novell	U.S.	540	4.0
5	Digital Equipment Corp	U.S.	490	3.6
6	Computer Associates	U.S.	450	3.3
7	Bull	France	395	2.9
8	Oracle	U.S.	375	2.8
9	HP	U.S.	295	2.2
10	Software AG	Germany	285	2.1
	Total Listed		8,250	61.3
	Total Market		13,450	100.0

Source: INPUT

Exhibit A-9

Application Software Products Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	580	5.2
2	SAP	Germany	545	4.9
3	Microsoft	U.S.	505	4.5
4	Computer Associates	U.S.	335	3.0
5	Lotus	U.S.	235	2.1
6	Kommunedata	Denmark	230	2.1
7	SNI	Germany	205	1.8
8	SAS	U.S.	170	1.5
9	Olivetti	Italy	150	1.4
10	ACT	U.K.	145	1.3
	Total Listed		3,100	27.9
	Total Market		11,100	100.0

Source: INPUT

Exhibit A-10

Turnkey Systems Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	SNI	Germany	580	4.5
2	IBM	U.S.	350	2.7
3=	Intergraph	U.S.	270	2.1
3=	Digital Equipment Corp	U.S.	270	2.1
5	Reuters	U.K.	170	1.3
6	Olivetti	Italy	160	1.2
7	Sligos	France	100	0.8
8	AT&T	U.S.	95	0.7
9	CGS	France	85	0.7
10	MDIS	U.S.	75	0.6
	Total Listed		2,155	16.7
	Total Market		12,890	100.0

Source: INPUT

Exhibit A-11

Equipment Maintenance Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	2,450	18.4
2	SNI	Germany	1,305	9.8
3	Digital Equipment Corp	U.S.	925	7.0
4=	Olivetti	Italy	700	5.3
4=	Bull	France	700	5.3
6	ICL	U.K.	620	4.7
7	HP	U.S.	560	4.2
8	AT&T	U.S.	435	3.3
9	Memorex Telex	U.S.	400	3.0
10	Unisys	U.S.	380	2.9
	Total Listed		8,475	63.7
	Total Market		13,300	100.0

Source: INPUT

Exhibit A-12

Environmental Services Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	430	5.5
2	Digital Equipment Corp	U.S.	315	4.1
3	HP	U.S.	95	1.2
4	Unisys	U.S.	95	1.2
5	AT&T	U.S.	90	1.2
6	SNI	Germany	80	1.0
7	Olivetti	Italy	80	1.0
8	Bull	France	65	0.8
9	ICL	U.K.	65	0.8
10	Getronics	Netherlands	60	0.8
	Total Listed		1,375	17.7
	Total Market		7,760	100.0

Source: INPUT

Exhibit A-13

Information Services Leading Vendors Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	10,740	10.2
2	SNI	Germany	3,290	3.1
3	Digital Equipment Corp	U.S.	3,000	2.9
4	CGS	France	2,025	1.9
5	Bull	France	1,860	1.8
6	ICL	U.K.	1,835	1.8
7	Reuters	U.K.	1,755	1.7
8	Olivetti	Italy	1,675	1.6
9	EDS	U.S.	1,585	1.5
10	HP	U.S.	1,390	1.3
	Total Listed		29,155	27.8
	Total Market		104,810	100.0

Source: INPUT

B

Leading Vendors in Local Currency (Sch Millions) – Austria

Exhibit B-1

Software and Services Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	1,765	10.7
2	SNI	Germany	895	5.4
3	Management Data	Austria	645	3.9
4	Digital Equipment Corp	U.S.	600	3.6
5	Computer Associates	U.S.	395	2.4
6	SAP	Germany	375	2.3
7	EDV	Austria	370	2.2
8	Beko	Austria	275	1.7
9	AI Informatic	Austria	265	1.6
10	GRZ Linz	Austria	250	1.5
11	Microsoft	U.S.	235	1.4
12	Unisys	U.S.	215	1.3
13	Reuters	U.K.	190	1.2
14	Data Service	Austria	185	1.1
15	Voest-Alpine	Austria	175	1.1
16	Oracle	U.S.	155	0.9
17	Bull	France	145	0.9
18	HP	U.S.	140	0.8
19=	Software AG	Germany	100	0.6
19=	Han - Dataport	Germany	100	0.6
21=	Novell	U.S.	95	0.6
21=	AT&T	U.S.	95	0.6
23	EDS	U.S.	85	0.5
24	Raet	Netherlands	70	0.4
25	Telekurs	Switzerland	65	0.4
26	Lotus	U.S.	55	0.3
27	Andersen Consulting	U.S.	50	0.3
28	Infonet	Belgium	45	0.3
29	Dun & Bradstreet	U.S.	40	0.2
30	Phillips C&P	Netherlands	35	0.2
	Total Listed		8,110	49.2
	Total Market		16,500	100.0

Source: INPUT

Exhibit B-2

Professional Services Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	465	12.8
2	EDV	Austria	370	10.2
3	IBM	U.S.	280	7.7
4	Beko	Austria	275	7.6
5=	GRZ Linz	Austria	250	6.9
5=	Digital Equipment Corp	U.S.	250	6.9
7	AI Informatics	Austria	205	5.6
8	Data Service	Austria	185	5.1
9	Voest-Alpine	Austria	175	4.8
10	SNI	Germany	170	4.7
	Total Listed		2,625	72.3
	Total Market		3,630	100.0

Source: INPUT

Exhibit B-3

Systems Integration Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	155	28.2
2	CGS	France	70	12.7
3	Unisys	U.S.	65	11.8
4	Bull	France	60	10.9
5	EDS	U.S.	50	9.1
	Total Listed		400	72.7
	Total Market		550	100.0

Source: INPUT

Exhibit B-4

Outsourcing Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	AI Informatics	Austria	70	25.5
2	IBM	U.S.	65	23.8
3	Phillips C&P	Netherlands	35	12.7
4	Spardat	Austria	30	10.9
5	EDS	U.S.	10	3.6
	Total Listed		210	76.5
	Total Market		275	100.0

Source: INPUT

Exhibit B-5

Processing Services Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	65	3.4
2	Telekurs	Switzerland	35	1.8
3	IBM	U.S.	20	1.0
4	Unisys	U.S.	15	0.8
5	EDS	U.S.	10	0.5
6=	Raet	Netherlands	5	0.3
6=	GEIS	U.S.	5	0.3
6=	HP	U.S.	5	0.3
6=	SNI	Germany	5	0.3
6=	Digital Equipment Corp	U.S.	5	0.3
	Total Listed		170	8.9
	Total Market		1,910	100.0

Source: INPUT

Exhibit B-6

Network Applications Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	65	42
2	IBM	U.S.	55	35
	Total Listed		120	77
	Total Market		155	100

Source: INPUT

Exhibit B-7

Electronic Information Services Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Reuters	U.K.	145	21
2=	Telerate	U.S.	30	4
2=	Telekurs	Switzerland	30	4
4	Dun & Bradstreet	U.S.	20	3
	Total Listed		225	33
	Total Market		675	100

Source: INPUT

Exhibit B-8

Systems Software Products Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	1,005	33.0
2	SNI	Germany	265	8.7
3	Digital Equipment Corp	U.S.	205	6.7
4	Computer Associates	U.S.	185	6.1
5	Microsoft	U.S.	135	4.4
6	Novell	U.S.	95	3.1
7	Software AG	Germany	80	2.6
8	Unisys	U.S.	75	2.5
9	Oracle	U.S.	75	2.5
10	HP	U.S.	65	2.1
	Total Listed		2,185	71.6
	Total Market		3,050	100.0

Source: INPUT

Exhibit B-9

Application Software Products Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	SAP	Germany	235	10.7
2=	IBM	U.S.	140	6.4
2=	Computer Associates	U.S.	140	6.4
4=	SNI	Germany	95	4.3
4=	Microsoft	U.S.	95	4.3
6	Han - Dataport	Germany	85	3.9
7=	Lotus	U.S.	50	2.3
7=	AI Informatics	Austria	50	2.3
7=	Data-Service	Austria	50	2.3
10	AT&T	U.S.	20	0.9
	Total Listed		960	43.6
	Total Market		2,200	100.0

Source: INPUT

Exhibit B-10

Turnkey Systems Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	SNI	Germany	250	6.1
2	Digital Equipment Corp	U.S.	145	3.6
3	IBM	U.S.	90	2.2
4=	SAP	Germany	40	1.0
4=	Intergraph	U.S.	40	1.0
6	AT&T	U.S.	30	0.7
7	Reuters	U.K.	20	0.5
8=	Raet	Netherlands	15	0.4
8=	Software AG	Germany	15	0.4
10	Computer Associates	U.S.	10	0.2
	Total Listed		655	16.1
	Total Market		4,080	100.0

Source: INPUT

Exhibit B-11

Equipment Maintenance Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	655	22.7
2	SNI	Germany	550	19.0
3	Digital Equipment Corp	U.S.	385	13.3
4	Olivetti	Italy	155	5.4
5	Unisys	U.S.	140	4.8
6	HP	U.S.	130	4.5
7	Bull	France	105	3.6
8	AT&T	U.S.	95	3.3
9	Memorex Telex	U.S.	85	2.9
10	Management Data	Austria	70	2.4
	Total Listed		2,370	82.0
	Total Market		2,890	100.0

Source: INPUT

Exhibit B-12

Environmental Services Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	130	7.5
2	IBM	U.S.	85	4.9
3	Unisys	U.S.	35	2.0
4=	Olivetti	Italy	20	1.1
4=	HP	U.S.	20	1.1
4=	AT&T	U.S.	20	1.1
7	SNI	Germany	15	0.9
8=	Comparex	Germany	10	0.6
8=	Bull	France	10	0.6
8=	Thomainfor	France	10	0.6
	Total Listed		355	20.4
	Total Market		1,740	100.0

Source: INPUT

Exhibit B-13

Information Services Leading Vendors Austria, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	2,505	11.8
2	SNI	Germany	1,455	6.9
3	Digital Equipment Corp	U.S.	1,115	5.3
4	Management Data	Austria	715	3.4
5	Computer Associates	U.S.	395	1.9
6	Unisys	U.S.	390	1.8
7	SAP	Germany	375	1.8
8	EDV	Austria	370	1.7
9	HP	U.S.	290	1.4
10	Beko	Austria	275	1.3
	Total Listed		7,885	37.2
	Total Market		21,200	100.0

Source: INPUT

C

Leading Vendors in Local Currency (BF Millions) – Belgium

Exhibit C-1

Software and Services Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	6,660	7.5
2	CSC	U.S.	6,325	7.1
3	SNI	Germany	2,365	2.7
4	Dolmen	Belgium	1,920	2.2
5	Computer Associates	U.S.	1,760	2.0
6	Digital Equipment Corp	U.S.	1,695	1.9
7	CGS	France	1,625	1.8
8	Unisys	U.S.	1,430	1.6
9=	EDS	U.S.	1,205	1.4
9=	Microsoft	U.S.	1,205	1.4
11	Andersen Consulting	U.S.	1,160	1.3
12	Reuters	U.K.	1,115	1.3
13	Sema	France	1,085	1.2
14	Getronics	Netherlands	1,045	1.2
15	TIS Group	Belgium	1,000	1.1
16	Syseca	France	980	1.1
17	Trasys	Belgium	930	1.0
18	SAP	Germany	895	1.0
19	BSO	Netherlands	850	1.0
20	Olivetti	Italy	840	0.9
21	Oracle	U.S.	835	0.9
22	Bull	France	775	0.9
23	HP	U.S.	765	0.9
24	Cipal	Belgium	700	0.8
25	Dun & Bradstreet	U.S.	650	0.7
26	Novell	U.S.	545	0.6
27	P&P	U.K.	410	0.5
28=	Infonet	Belgium	340	0.4
28=	AT&T	U.S.	340	0.4
30	Cegeka	Belgium	330	0.4
	Total Listed		41,780	46.9
	Total Market		89,000	100.0

Source: INPUT

Exhibit C-2

Professional Services Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	1,290	4.4
2	CGS	France	1,255	4.3
3	Dolmen	Belgium	1,200	4.1
4	TIS Group	Belgium	1,000	3.4
5	Trasys	Belgium	930	3.2
6	Sema	France	800	2.7
7	CSC	U.S.	720	2.5
8	Digital Equipment Corp	U.S.	715	2.4
9	Cipal	Belgium	700	2.4
10	Orda-B	Belgium	660	2.3
	Total Listed		9,270	31.6
	Total Market		29,300	100.0

Source: INPUT

Exhibit C-3

Systems Integration Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	900	21.4
2	Andersen Consulting	U.S.	475	11.3
3	Bull	France	470	11.2
4	CSC	U.S.	445	10.6
5	CGS	France	350	8.3
6	Sema	France	330	7.9
7	EDS	U.S.	310	7.4
8	Logica	U.K.	220	5.2
9	Syseca	France	160	3.8
10	Unisys	U.S.	145	3.5
	Total Listed		3,805	90.6
	Total Market		4,200	100.0

Source: INPUT

Exhibit C-4

Outsourcing Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	CSC	U.S.	605	17.6
2	CGS	France	540	15.7
3	Cegeka	Belgium	330	9.6
4=	EDS	U.S.	190	5.5
4=	Digital Equipment Corp	U.S.	190	5.5
6	Phillips C&P	Netherlands	160	4.7
7	Telesystemes	France	80	2.3
8=	Bull	France	65	1.9
8=	Olivetti	Italy	65	1.9
8=	HP	U.S.	65	1.9
	Total Listed		2,290	66.6
	Total Market		3,440	100.0

Source: INPUT

Exhibit C-5

Processing Services Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	CSC	U.S.	820	10.7
2	Dolmen	Belgium	335	4.4
3	Administra Computing	Belgium	275	3.6
4	Orda-B	Belgium	220	2.9
5	Axime	France	170	2.2
6	BSO	Netherlands	155	2.0
7	EDS	U.S.	120	1.6
8	Unisys	U.S.	115	1.5
9	Telesystemes	France	70	0.9
10	IBM	U.S.	60	0.8
	Total Listed		2,340	30.6
	Total Market		7,640	100.0

Source: INPUT

Exhibit C-6

Network Applications Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Infonet	Belgium	340	17.0
2	IBM	U.S.	180	9.0
3	Digital Equipment Corp	U.S.	70	3.5
4	GEIS	U.S.	65	3.3
5	Dolmen	Belgium	45	2.3
6	Bull	France	35	1.8
7	SG2	France	30	1.5
8=	GSI	France	25	1.3
8=	EDS	U.S.	25	1.3
10	Olivetti	Italy	15	0.8
	Total Listed		830	41.5
	Total Market		1,700	100.0

Source: INPUT

Exhibit C-7

Electronic Information Services Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue BF Millions)	Market Share (%)
1	Reuters	U.K.	860	26.9
2	Dun & Bradstreet	U.S.	330	10.3
3	Telerate	U.S.	185	5.8
	Total Listed		1,375	43.0
	Total Market		3,200	100.0

Source: INPUT

Exhibit C-8

Systems Software Products Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	3,465	24.2
2	Computer Associates	U.S.	825	5.8
3	Microsoft	U.S.	700	4.9
4	SNI	Germany	695	4.9
5	Digital Equipment Corp	U.S.	575	4.0
6	Novell	U.S.	545	3.8
7	Unisys	U.S.	500	3.5
8	Oracle	U.S.	405	2.8
9	HP	U.S.	360	2.5
10	Bull	France	275	1.9
	Total Listed		8,345	58.4
	Total Market		14,300	100.0

Source: INPUT

Exhibit C-9

Application Software Products Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Computer Associates	U.S.	615	6.5
2	SAP	Germany	555	5.9
3	IBM	U.S.	485	5.2
4	Microsoft	U.S.	480	5.1
5	Dolmen	Belgium	335	3.6
6	SAS	U.S.	275	2.9
7	SNI	Germany	250	2.7
8	Lotus	U.S.	240	2.6
9	Dun & Bradstreet	U.S.	190	2.0
10	Olivetti	Italy	140	1.5
	Total Listed		3,565	37.9
	Total Market		9,400	100.0

Source: INPUT

Exhibit C-10

Turnkey Systems Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	SNI	Germany	800	7.5
2	CSC	U.S.	430	4.0
3	Digital Equipment Corp	U.S.	400	3.8
4	IBM	U.S.	260	2.4
5	Intergraph	U.S.	190	1.8
6	Getronics	Netherlands	165	1.5
7	Olivetti	Italy	155	1.5
8	Syseca	France	145	1.4
9	BSO	Netherlands	140	1.3
10	Reuters	U.K.	105	1.0
	Total Listed		2,790	26.2
	Total Market		10,650	100.0

Source: INPUT

Exhibit C-11

Equipment Maintenance Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	2,065	15.5
2	SNI	Germany	1,990	15.0
3	Digital Equipment Corp	U.S.	1,350	10.2
4	Unisys	U.S.	920	6.9
5	HP	U.S.	730	5.5
6	Bull	France	675	5.1
7	Olivetti	Italy	635	4.8
8	Getronics	Netherlands	535	4.0
9	Memorex Telex	U.S.	475	3.6
10	AT&T	U.S.	345	2.6
	Total Listed		9,720	73.1
	Total Market		13,300	100.0

Source: INPUT

Exhibit C-12

Environmental Services Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	460	6.8
2	IBM	U.S.	380	5.6
3	Unisys	U.S.	225	3.3
4	Getronics	Netherlands	185	2.7
5	SNI	Germany	165	2.4
6	Bull	France	100	1.5
7	HP	U.S.	95	1.4
8	AT&T	U.S.	70	1.0
9	Olivetti	Italy	65	1.0
10	Thomainfor	France	60	0.9
	Total Listed		1,805	26.5
	Total Market		6,800	100.0

Source: INPUT

Exhibit C-13

Information Services Leading Vendors Belgium, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	8,530	7.4
2	CSC	U.S.	6,325	5.5
3	SNI	Germany	4,520	3.9
4	Digital Equipment Corp	U.S.	3,505	3.0
5	Intergraph	U.S.	2,720	2.4
6	Unisys	U.S.	2,575	2.2
7	Dolmen	Belgium	1,920	1.7
8	Getronics	Netherlands	1,765	1.5
9	Computer Associates	U.S.	1,760	1.5
10	CGS	France	1,625	1.4
	Total Listed		35,245	30.6
	Total Market		115,000	100.0

Source: INPUT

D

Leading Vendors in Local Currency (DK Millions) – Denmark

Exhibit D-1

Software and Services Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	Kommunedata	Denmark	1,485	11.6
2	IBM	U.S.	1,385	10.8
3	PBS	Denmark	920	7.2
4	ICL	U.K.	225	1.8
5	Computer Associates	U.S.	220	1.7
6	JDC Data	Denmark	200	1.6
7	Oracle	U.S.	195	1.5
8	Microsoft	U.S.	155	1.2
9	DanNet	Denmark	150	1.2
10	Digital Equipment Corp	U.S.	145	1.1
11	SNI	Germany	140	1.1
12	AT&T	U.S.	130	1.0
13	Reuters	U.K.	110	0.9
14=	Andersen Consulting	U.S.	105	0.8
14=	CGS	France	105	0.8
16	SAS	U.S.	95	0.7
17	Olivetti	Italy	80	0.6
18	WM-Data	Sweden	75	0.6
19	Novell	U.S.	70	0.5
20	SAP	Germany	60	0.5
21	HP	U.S.	55	0.4
22=	ASK	U.S.	50	0.4
22=	Microgen	U.K.	50	0.4
22=	Unisys	U.S.	50	0.4
25=	Dun & Bradstreet	U.S.	40	0.3
25=	Infonet	Belgium	40	0.3
27=	Computer Resource	Denmark	35	0.3
27=	Bull	France	35	0.3
27=	Intergraph	U.S.	35	0.3
27=	Celsius Info. System	Sweden	35	0.3
	Total Listed		6,475	50.6
	Total Market		12,800	100.0

Source: INPUT

Exhibit D-2

Professional Services Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	PBS	Denmark	870	28.8
2	IBM	U.S.	260	8.6
3	JDC Data	Denmark	160	5.3
4	Oracle	U.S.	95	3.1
5=	ICL	U.K.	90	3.0
5=	Kommunedata	Denmark	90	3.0
7	DanNet	Denmark	80	2.6
8	CGS	France	75	2.5
9	AT&T	U.S.	65	2.1
10	Digital Equipment Corp	U.S.	50	1.7
	Total Listed		1,835	60.7
	Total Market		3,025	100.0

Source: INPUT

Exhibit D-3

Systems Integration Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	85	27.9
2	ICL	U.K.	45	14.7
3=	Andersen Consulting	U.S.	35	11.5
3=	Computer Resource	Denmark	35	11.5
5	Kommunedata	Denmark	25	8.2
6=	Bull	France	20	6.6
6=	CGS	France	20	6.6
8	Digital Equipment Corp	U.S.	15	4.9
9=	Olivetti	Italy	5	1.6
9=	Unisys	U.S.	5	1.6
	Total Listed		290	95.0
	Total Market		305	100.0

Source: INPUT

Exhibit D-4

Outsourcing Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	PBS	Denmark	50	17.9
2	JDC Data	Denmark	40	14.4
3	Olivetti	Italy	30	10.9
4=	DanNet	Denmark	15	5.4
4=	OK Data	Denmark	15	5.4
6=	Digital Equipment Corp	U.S.	10	3.6
6=	HP	U.S.	10	3.6
6=	Datema	Denmark	10	3.6
9=	WM-Data	Sweden	5	1.8
9=	Celsius Info. System	Sweden	5	1.8
	Total Listed		190	68.3
	Total Market		278	100.0

Source: INPUT

Exhibit D-5

Processing Services Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	Microgen	U.K.	45	1.5
2	IBM	U.S.	15	0.5
3	Tietotehdas	Finland	10	0.3
4	WM-Data	Sweden	5	0.2
5	GEIS	U.S.	5	0.2
6	Unisys	U.S.	5	0.2
7	Olivetti	Italy	5	0.2
8	HP	U.S.	2	0.1
9	ICL	U.K.	1	0.0
10	Comdisco	U.S.	1	0.0
	Total Listed		95	3.2
	Total Market		2,960	100.0

Source: INPUT

Exhibit D-6

Network Applications Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	DanNet	Denmark	55	21.1
2=	IBM	U.S.	40	15.4
2=	Infonet	Belgium	40	15.4
4	GEIS	U.S.	10	3.8
5=	Digital Equipment Corp	U.S.	5	1.9
5=	ICL	U.K.	5	1.9
	Total Listed		155	59.5
	Total Market		260	100.0

Source: INPUT

Exhibit D-7

Electronic Information Services Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	Reuters	U.K.	80	20.5
2=	Dun & Bradstreet	U.S.	20	5.1
2=	Telerate	U.S.	20	5.1
	Total Listed		120	30.8
	Total Market		390	100.0

Source: INPUT

Exhibit D-8

Systems Software Products Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	790	43.9
2	Computer Associates	U.S.	105	5.8
3	Oracle	U.S.	95	5.3
4	Microsoft	U.S.	90	5.0
5	Novell	U.S.	70	3.9
6	Digital Equipment Corp	U.S.	50	2.8
7	ASK	U.S.	45	2.5
8	SNI	Germany	40	2.2
9	ICL	U.K.	35	1.9
10	HP	U.S.	25	1.4
	Total Listed		1,345	74.7
	Total Market		1,800	100.0

Source: INPUT

Exhibit D-9

Application Software Products Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	Kommunedata	Denmark	1,400	87.5
2	IBM	U.S.	110	6.9
	Total Listed		1,510	94.4
	Total Market		1,600	100.0

Source: INPUT

Exhibit D-10

Turnkey Systems Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	70	3.2
2	Digital Equipment Corp	U.S.	30	1.4
3=	SAP	Germany	25	1.2
3=	Intergraph	U.S.	25	1.2
5=	AT&T	U.S.	20	0.9
5=	Olivetti	Italy	20	0.9
7=	CGS	France	10	0.5
7=	Reuters	U.K.	10	0.5
7=	Logica	U.K.	10	0.5
10	ComputerVision	U.S.	5	0.2
	Total Listed		225	10.4
	Total Market		2,170	100.0

Source: INPUT

Exhibit D-11

Equipment Maintenance Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	485	27.5
2=	AT&T	U.S.	130	7.4
2=	ICL	U.K.	130	7.4
4=	Olivetti	Italy	90	5.1
4=	Digital Equipment Corp	U.S.	90	5.1
6	SNI	Germany	85	4.8
7	HP	U.S.	55	3.1
8	Memorex Telex	U.S.	35	2.0
9=	Unisys	U.S.	30	1.7
9=	Bull	France	30	1.7
	Total Listed		1,160	65.7
	Total Market		1,765	100.0

Source: INPUT

Exhibit D-12

Environmental Services Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	90	6.9
2	Digital Equipment Corp	U.S.	30	2.3
3=	AT&T	U.S.	25	1.9
3=	SNI	Germany	25	1.9
5=	Olivetti	U.S.	10	0.8
5=	Unisys	U.S.	10	0.8
7=	HP	U.S.	5	0.4
7=	ICL	U.K.	5	0.4
9=	Bull	France	2	0.2
9=	Wang	U.S.	2	0.2
	Total Listed		204	15.7
	Total Market		1,305	100.0

Source: INPUT

Exhibit D-13

Information Services Leading Vendors Denmark, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	1,965	12.3
2	Kommunedata	Denmark	1,485	9.3
3	PBS	Denmark	920	5.8
4	ICL	U.K.	360	2.3
5	AT&T	U.S.	290	1.8
6	Digital Equipment Corp	U.S.	265	1.7
7	SNI	Germany	250	1.6
8	Computer Associates	U.S.	220	1.4
9	JDC Data	Denmark	200	1.3
10	Oracle	U.S.	195	1.2
	Total Listed		6,150	38.4
	Total Market		16,000	100.0

Source: INPUT

E

Leading Vendors in Local Currency ($ Millions) – Central & Eastern Europe

Exhibit E-1

Software and Services Leading Vendors Central and Eastern Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	30	4.2
2=	ICL	U.K.	20	2.8
2=	Microsoft	U.S.	20	2.8
4	Unisys	U.S.	15	2.1
5=	SNI	Germany	10	1.4
5=	Digital Equipment Corp	U.S.	10	1.4
7=	SAP	Germany	5	0.7
7=	Andersen Consulting	U.S.	5	0.7
7=	SSA	U.S.	5	0.7
7=	CGS	France	5	0.7
	Total Listed		125	17.5
	Total Market		715	100.0

Source: INPUT

Exhibit E-2

Information Services Leading Vendors Central and Eastern Europe, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	60	6.3
2	ICL	U.K.	30	3.1
3	Unisys	U.S.	25	2.6
4=	Digital Equipment Corp	U.S.	20	2.1
4=	SNI	Germany	20	2.1
4=	Microsoft	U.S.	20	2.1
7=	SAP	Germany	5	0.5
7=	Andersen Consulting	U.S.	5	0.5
7=	SSA	U.S.	5	0.5
7=	CGS	France	5	0.5
	Total Listed		195	20.3
	Total Market		960	100.0

Source: INPUT

F

Leading Vendors in Local Currency (FM Millions)

Exhibit F-1

Software and Services Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tietotehdas	Finland	800	13.2
2	KT - Datacenter	Finland	690	11.4
3	IBM	U.S.	600	9.9
4	VTKK	Finland	550	9.1
5	ICL	U.K.	490	8.1
6	Paakaupunkisedom	Finland	180	3.0
7	Digital Equipment Corp	U.S.	175	2.9
8	Elorg-Data	Finland	170	2.8
9	Computer Associates	U.S.	145	2.4
10	CGS	France	120	2.0
11	SNI	Germany	110	1.8
12	Valmet Data	Finland	90	1.5
13=	Celsius Info. System	Sweden	75	1.2
13=	Unic	Finland	75	1.2
15	Microsoft	U.S.	70	1.2
16	Reuters	U.K.	60	1.0
17	EDS	U.S.	45	0.7
18=	Oracle	U.S.	40	0.7
18=	Intergraph	U.S.	40	0.7
18=	Microgen	U.K.	40	0.7
21	Novell	U.S.	35	0.6
22=	Andersen Consulting	U.S.	30	0.5
22=	Progmatic	Finland	30	0.5
24=	Unisys	U.S.	25	0.4
24=	WM-Data	Sweden	25	0.4
26=	Olivetti	Italy	20	0.3
26=	Lotus	U.S.	20	0.3
26=	AT&T	U.S.	20	0.3
26=	SAS	U.S.	20	0.3
30	Informix	U.S.	15	0.2
	Total Listed		4,805	79.2
	Total Market		6,070	100.0

Source: INPUT

Exhibit F-2

Professional Services Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	VTKK	Finland	400	24.8
2	KT - Datacenter	Finland	345	21.4
3	Elorg-Data	Finland	170	10.5
4	Paakaupunkisedom	Finland	145	9.0
5	ICL	U.K.	100	6.2
6	Valmet Data	Finland	90	5.6
7	IBM	U.S.	80	5.0
8=	Digital Equipment Corp	U.S.	75	4.6
8=	Unic	Finland	75	4.6
10	Celsius Info. System	Finland	45	2.8
	Total Listed		1,525	94.5
	Total Market		1,613	100.0

Source: INPUT

Exhibit F-3

Systems Integration Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tietotehdas	Finland	60	28.6
2	KT - Datacenter	Finland	45	21.4
3	Nokia Data	Finland	25	11.9
4	CGS	France	20	9.5
5	Bull	France	20	9.5
	Total Listed		170	80.9
	Total Market		210	100.0

Source: INPUT

Exhibit F-4

Outsourcing Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	CGS	France	110	30.1
2	EDS	U.S.	50	13.7
3	Tietotehdas	Finland	40	11.0
4	Paakaupunkisedom	Finland	35	9.6
5	Progmatic	Finland	30	8.2
	Total Listed		265	72.6
	Total Market		365	100.0

Source: INPUT

Exhibit F-5

Processing Services Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	KT - Datacenter	Finland	300	31.5
2	Tietotehdas	Finland	280	29.5
3	VTKK	Finland	145	15.3
4	Microgen	U.K.	35	3.6
5	EDS	U.S.	5	0.5
6	IBM	U.S.	5	0.5
7	GEIS	U.S.	5	0.5
8	ICL	U.K.	5	0.5
9	Unisys	U.S.	5	0.5
10	WM-Data	Sweden	5	0.5
	Total Listed		790	83.1
	Total Market		950	100.0

Source: INPUT

Exhibit F-6

Network Applications Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	IBM	U.S.	15	14.3
2	Infonet	Belgium	10	9.7
3=	ICL	U.K.	5	4.8
3=	Digital Equipment Corp	U.S.	5	4.8
3=	GEIS	U.S.	5	4.8
	Total Listed		40	38.2
	Total Market		105	100.0

Source: INPUT

Exhibit F-7

Electronic Information Services Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	VTKK	Finland	65	39.4
2	Reuters	U.K.	45	27.2
3	Telerate	U.S.	10	6.1
4	Dun & Bradstreet	U.S.	5	3.0
	Total Listed		125	75.7
	Total Market		165	100.0

Source: INPUT

Exhibit F-8

Systems Software Products Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	IBM	U.S.	240	30.4
2	ICL	U.K.	80	10.1
3	Computer Associates	U.S.	70	8.9
4	Tietotehdas	Finland	65	8.2
5	Digital Equipment Corp	U.S.	60	7.6
6	VTKK	Finland	55	6.9
7	Microsoft	U.S.	40	5.1
8	Novell	U.S.	35	4.4
9	SNI	Germany	30	3.8
10	Oracle	U.S.	20	2.5
	Total Listed		695	87.9
	Total Market		790	100.0

Source: INPUT

Exhibit F-9

Application Software Products Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tietotehdas	Finland	160	18.4
2	ICL	U.K.	60	6.9
3	VTKK	Finland	55	6.3
4	Computer Associates	U.S.	50	5.7
5	IBM	U.S.	35	4.0
6	Microsoft	U.S.	30	3.4
7	SAS	U.S.	20	2.3
8	Lotus	U.S.	20	2.3
9	Celsius Info. System	Sweden	15	1.7
10	SNI	Germany	15	1.7
	Total Listed		460	52.9
	Total Market		870	100.0

Source: INPUT

Exhibit F-10

Turnkey Systems Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tietotehdas	Finland	80	8.0
2	Intergraph	U.S.	40	4.0
3	IBM	U.S.	35	3.5
4	Digital Equipment Corp	U.S.	35	3.5
5	CGS	France	15	1.5
	Total Listed		205	20.5
	Total Market		1,000	100.0

Source: INPUT

Exhibit F-11

Equipment Maintenance Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	ICL	U.K.	325	32.8
2	IBM	U.S.	150	15.2
3	Digital Equipment Corp	U.S.	85	8.6
4	VTKK	Finland	60	6.1
5	SNI	Germany	45	4.5
6	AT&T	U.S.	20	2.0
7	ComputerVision	U.S.	20	2.0
8	Unisys	U.S.	15	1.5
9	Intergraph	U.S.	10	1.0
10	Wang	U.S.	10	1.0
	Total Listed		740	74.7
	Total Market		990	100.0

Source: INPUT

Exhibit F-12

Environmental Services Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	IBM	U.S.	35	5.6
2	Digital Equipment Corp	U.S.	30	4.8
3	ICL	U.K.	20	3.2
4	Unisys	U.S.	5	0.8
5	AT&T	U.S.	5	0.8
	Total Listed		95	15.2
	Total Market		625	100.0

Source: INPUT

Exhibit F-13

Information Services Leading Vendors Finland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	ICL	U.K.	835	10.8
2	Tietotehdas	Finland	800	10.4
3	KT - Datacenter	Finland	690	9.0
4	IBM	U.S.	680	8.8
5	VTKK	Finland	610	7.9
6	Digital Equipment Corp	U.S.	290	3.8
7	Paakaupunkisedom	Finland	180	2.3
8	Elorg-Data	Finland	170	2.2
9	SNI	Germany	260	3.4
10	Computer Associates	U.S.	145	1.9
	Total Listed		4,660	60.5
	Total Market		7,700	100.0

Source: INPUT

G

Leading Vendors in Local Currency (FF Millions) – France

Exhibit G-1

Software and Services Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	7,820	7.2
2	CGS	France	3,115	2.9
3	Bull	France	2,850	2.6
4	EDS	U.S.	2,020	1.9
5	Digital Equipment Corp	U.S.	1,960	1.8
6	Sligos	France	1,915	1.8
7	Reuters	U.K.	1,875	1.7
8	Axime	France	1,660	1.5
9	GSI	France	1,610	1.5
10	Microsoft	U.S.	1,455	1.3
11	Sema	France	1,450	1.3
12	Telesystemes	France	1,345	1.2
13	CGI	France	1,275	1.2
14	SG2	France	1,135	1.1
15	Syseca	France	1,130	1.0
16	AT&T	U.S.	986	0.9
17	Steria	France	935	0.9
18	CISI	France	880	0.8
19	Sopra	France	810	0.8
20	Andersen Consulting	U.S.	805	0.7
21	CCMX	France	750	0.7
22	Alcatel TiTN	France	735	0.7
23	Unilog	France	695	0.6
24	Computer Associates	U.S.	690	0.6
25	Novell	U.S.	630	0.6
26	Oracle	U.S.	600	0.6
27	Euriware	France	585	0.5
28	HP	U.S.	540	0.5
29=	SNI	Germany	535	0.5
29=	Fininfor	France	535	0.5
	Total Listed		43,325	40.1
	Total Market		108,000	100.0

Source: INPUT

Exhibit G-2

Professional Services Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	CGS	France	1,400	3.6
2	IBM	U.S.	1,130	2.9
3	Syseca	France	1,000	2.6
4	Sema	France	900	2.3
5	CGI	France	820	2.1
6	Unilog	France	570	1.5
7=	Steria	France	470	1.2
7=	Altran	France	470	1.2
9	IBSI	France	465	1.2
10	Digital Equipment Corp	U.S.	420	1.1
	Total Listed		7,645	19.8
	Total Market		38,540	100.0

Source: INPUT

Exhibit G-3

Systems Integration Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	1,070	19.8
2	CGS	France	830	15.4
3	Bull	France	575	10.6
4	Andersen Consulting	U.S.	470	8.7
5	Sema	France	455	8.4
6	EDS	U.S.	340	6.3
7	Syseca	France	300	5.6
8	Alcatel ISR	France	180	3.3
9	Digital Equipment Corp	U.S.	165	3.1
10	Axime	France	130	2.4
	Total Listed		4,515	83.6
	Total Market		5,400	100.0

Source: INPUT

Exhibit G-4

Outsourcing Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	EDS	U.S.	1,000	17.2
2	Telesystemes	France	620	10.7
3	CGS	France	560	9.7
4	Axone	U.S.	550	9.5
5=	Integris	France	400	6.9
5=	GSI	France	400	6.9
7	SG2	France	230	4.0
8=	France Telecom	France	200	3.4
8=	Perot	U.S.	200	3.4
10	Axime	France	185	3.2
	Total Listed		4,345	74.9
	Total Market		5,800	100.0

Source: INPUT

Exhibit G-5

Processing Services Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Axime	France	890	10.0
2	Sligos	France	785	8.8
3	Telesystemes	France	380	4.3
4	GSI	France	310	3.5
5	Inforsud	France	200	2.2
6=	SG2	France	170	1.9
6=	Ares	France	170	1.9
8	CCMX	France	160	1.8
9	EDS	U.S.	145	1.6
10	Euriware	France	135	1.5
	Total Listed		3,345	37.6
	Total Market		8,900	100.0

Source: INPUT

Exhibit G-6

Network Applications Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Infonet	Belgium	400	14.2
2	SG2	France	225	8.0
3	Sligos	France	190	6.8
4	GSI	France	185	6.6
5=	AT&T	U.S.	170	6.0
5=	Bull	France	170	6.0
7	IBM	U.S.	105	3.7
8	GEIS	France	95	3.4
9	Creditrans	France	80	2.8
10	Axime	France	55	2.0
	Total Listed		1,675	59.6
	Total Market		2,810	100.0

Source: INPUT

Exhibit G-7

Electronic Information Services Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Reuters	U.K.	1,445	30.7
2	Telerate	U.S.	295	6.3
3	Dun & Bradstreet	U.S.	215	4.6
4	Citicorp	U.S.	120	2.6
5	Mead	U.S.	75	1.6
6	Telekurs	Switzerland	30	0.6
7	Lotus	U.S.	10	0.2
8=	Extel	U.K.	5	0.1
8=	Quick	Japan	5	0.1
8=	Infonet	U.S.	5	0.1
	Total Listed		2,205	46.9
	Total Market		4,700	100.0

Source: INPUT

Exhibit G-8

Systems Software Products Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	4,030	25.5
2	Bull	France	1,270	8.0
3	Microsoft	U.S.	845	5.3
4	Novell	U.S.	630	4.0
5	Digital Equipment Corp	U.S.	360	2.3
6	Computer Associates	U.S.	325	2.1
7	Oracle	U.S.	290	1.8
8	CGI	France	270	1.7
9	HP	U.S.	255	1.6
10	Software AG	Germany	170	1.1
	Total Listed		8,444	53.4
	Total Market		15,800	100.0

Source: INPUT

Exhibit G-9

Application Software Products Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Microsoft	U.S.	580	3.9
2	IBM	U.S.	565	3.8
3	Sopra	France	385	2.6
4	GSI	France	345	2.3
5	Lotus	U.S.	315	2.1
6=	Axime	France	270	1.8
6=	CCMX	France	270	1.8
8	Computer Associates	U.S.	240	1.6
9	Fininfor	France	220	1.5
10	CGI	France	165	1.1
	Total Listed		3,355	22.5
	Total Market		14,900	100.0

Source: INPUT

Exhibit G-10

Turnkey Systems Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Sligos	France	375	3.4
2=	IBM	U.S.	300	2.7
2=	Syseca	France	300	2.7
4	Alcatel TiTN	France	270	2.5
5	Fininfor	France	255	2.3
6	Digital Equipment Corp	U.S.	230	2.1
7	CISI	France	200	1.8
8	Reuters	U.K.	190	1.7
9	IBSI	France	165	1.5
10	SNI	Germany	110	1.0
	Total Listed		2,395	21.8
	Total Market		11,000	100.0

Source: INPUT

Exhibit G-11

Equipment Maintenance Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	2,350	18.6
2	Bull	France	1,900	15.1
3	Digital Equipment Corp	U.S.	650	5.2
4	SNI	Germany	525	4.2
5	HP	U.S.	505	4.0
6	Memorex Telex	U.S.	425	3.4
7	Thomainfor	France	410	3.3
8	AT&T	U.S.	370	2.9
9	ICL	U.K.	325	2.6
10	Olivetti	Italy	320	2.5
	Total Listed		7,780	61.7
	Total Market		12,600	100.0

Source: INPUT

Exhibit G-12

Environmental Services Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	400	5.5
2	Digital Equipment Corp	U.S.	220	3.0
3	Thomainfor	France	120	1.6
4	Bull	France	95	1.3
5	AT&T	U.S.	75	1.0
6	HP	U.S.	70	1.0
7	Unisys	U.S.	60	0.8
8	Olivetti	Italy	35	0.5
9	Sun Microsystems	U.S.	20	0.3
10	Wang	U.S.	15	0.2
	Total Listed		1,110	15.2
	Total Market		7,300	100.0

Source: INPUT

Exhibit G-13

Information Services Leading Vendors France, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	9,820	7.7
2	Bull	France	5,570	4.4
3	CGS	France	2,955	2.3
4	Sligos	France	1,970	1.5
5	Digital Equipment Corp	U.S.	1,930	1.5
6	Reuters	U.K.	1,875	1.5
7	Axime	France	1,705	1.3
8	GSI	France	1,555	1.2
9	EDS	U.S.	1,465	1.1
10	Microsoft	U.S.	1,455	1.1
	Total Listed		30,300	23.7
	Total Market		128,000	100.0

Source: INPUT

H

Leading Vendors in Local Currency (DM Millions) — Germany

Exhibit H-1

Software and Services Leading Vendors Germany 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	3,070	11.4
2	SNI	Germany	2,040	7.6
3	Datev	Germany	980	3.6
4	SAP	Germany	850	3.1
5	Digital Equipment Corp	U.S.	775	2.9
6	debis Systemhaus	Germany	685	2.5
7	EDS	U.S.	585	2.2
8	Reuters	U.K.	570	2.1
9	Microsoft	U.S.	485	1.8
10	Compunet	Germany	265	1.0
11	Computer Associates	U.S.	245	0.9
12	Ploenzke	Germany	230	0.9
13	Novell	U.S.	225	0.8
14=	HP	U.S.	220	0.8
14=	Fiducia	U.S.	220	0.8
16=	Oracle	U.S.	200	0.7
16=	Software AG	Germany	200	0.7
18	Alldata	Germany	175	0.6
19	AT&T	U.S.	155	0.6
20=	Unisys	U.S.	150	0.6
20=	Sligos	Germany	150	0.6
22=	Intergraph	U.S.	135	0.5
22=	ESG	Germany	135	0.5
22=	Bull	France	135	0.5
25=	Taylorix	Germany	125	0.5
25=	Strassle	Germany	125	0.5
27=	Andersen Consulting	U.S.	120	0.4
27=	PDV-Gruppe	Germany	120	0.4
29	Sema	France	100	0.4
30	ICL	U.K.	95	0.4
	Total Listed		13,564	50.2
	Total Market		27,000	100.0

Source: INPUT

Exhibit H-2

Professional Services Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	475	9.2
2	SNI	Germany	375	7.3
3	Debis Systemhaus	Germany	245	4.7
4	SAP	Germany	230	4.5
5	Ploenzke	Germany	215	4.2
6	Datev	Germany	160	3.1
7	ESG	Germany	135	2.6
8=	Digital Equipment Corp	U.S.	130	2.5
8=	HP	U.S.	130	2.5
10	EDS	U.S.	120	2.3
	Total Listed		2,216	42.9
	Total Market		5,167	100.0

Source: INPUT

Exhibit H-3

Systems Integration Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	250	22.7
2	SNI	Germany	210	19.1
3=	Andersen Consulting	U.S.	70	6.3
3=	Bull	France	70	6.3
5	EDS	U.S.	65	5.9
6	Digital Equipment Corp	U.S.	55	5.0
7=	debis Systemhaus	Germany	50	4.5
7=	CSC	U.S.	50	4.5
9	HP	U.S.	35	3.2
10	AT&T	U.S.	25	2.3
	Total Listed		878	79.9
	Total Market		1,100	100.0

Source: INPUT

Exhibit H-4

Outsourcing Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	230	18.4
2	EDS	U.S.	200	16.0
3	debis Systemhaus	Germany	180	14.4
4	tds	Germany	90	7.2
5	Alldata	Germany	80	6.4
6	Sema	France	75	6.0
7	SNI	Germany	50	4.0
8	Digital Equipment Corp	U.S.	45	3.6
9	AC Service (Raet)	Netherlands	40	3.2
10	Ploenzke	Germany	30	2.4
	Total Listed		1,019	81.5
	Total Market		1,250	100.0

Source: INPUT

Exhibit H-5

Processing Services Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	Datev	Germany	685	26.3
2	Fiducia	Germany	145	5.6
3	debis Systemhaus	Germany	140	5.4
4	IBM	U.S.	85	3.3
5=	Sligos	France	60	2.3
5=	EDS	Germany	60	2.3
5=	RRZ	U.S.	60	2.3
8=	Alldata	Germany	45	1.7
8=	Info AG	Germany	45	1.7
10	Telekurs	Switzerland	40	1.5
	Total Listed		1,365	52.5
	Total Market		2,600	100.0

Source: INPUT

Exhibit H-6

Network Applications Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1=	Deutsche Telekom	Germany	60	15.2
1=	IBM	U.S.	60	15.2
3=	debis Systemhaus	Germany	20	5.1
3=	Infonet	Belgium	20	5.0
5=	Digital Equipment Corp	U.S.	15	3.8
5=	AT&T	U.S.	15	3.8
5=	Sligos	Germany	15	3.7
8=	EDS	U.S.	10	2.5
8=	GSI	France	10	2.5
8=	GEIS	U.S.	10	2.5
	Total Listed		235	59.4
	Total Market		395	100.0

Source: INPUT

Exhibit H-7

Electronic Information Services Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	Reuters	U.K.	440	36.6
2	Telerate	U.S.	90	7.5
3=	Bertelsmann	Germany	65	5.4
3=	Genios	Germany	65	5.4
5=	Dun & Bradstreet	U.S.	40	3.3
5=	VW-Gedas	Germany	40	3.3
7	Telekurs	Switzerland	35	2.9
8=	Info AG	Germany	15	1.3
8=	Infodas	Germany	15	1.3
8=	Mead	U.S.	15	1.3
	Total Listed		820	68.3
	Total Market		1,200	100.0

Source: INPUT

Exhibit H-8

Systems Software Products Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	1,625	30.7
2	SNI	Germany	560	10.6
3	Microsoft	U.S.	280	5.3
4	Novell	U.S.	225	4.2
5	Software AG	Germany	160	3.0
6	Digital Equipment Corp	U.S.	140	2.6
7	Computer Associates	U.S.	115	2.2
8=	HP	U.S.	100	1.9
8=	Oracle	U.S.	100	1.9
10	Borland	U.S.	75	1.4
	Total Listed		3,380	63.8
	Total Market		5,300	100.0

Source: INPUT

Exhibit H-9

Application Software Products Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	SAP	Germany	600	16.2
2	IBM	U.S.	230	6.2
3	SNI	Germany	200	5.4
4	Microsoft	U.S.	195	5.3
5	Compunet	Germany	125	3.4
6=	Computer Associates	U.S.	85	2.3
6=	Lotus	U.S.	85	2.3
8	Datev	Germany	80	2.2
9	KHK	Germany	75	2.0
10	SAS	U.S.	60	1.6
	Total Listed		1,735	46.9
	Total Market		3,700	100.0

Source: INPUT

Exhibit H-10

Turnkey Systems Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	SNI	Germany	640	9.4
2	Intergraph	U.S.	150	2.2
3	IBM	U.S.	120	1.8
4	Taylorix	Germany	110	1.6
5	Digital Equipment Corp	U.S.	100	1.5
6	debis Systemhaus	Germany	95	1.4
7	Compunet	Germany	85	1.3
8	EDS	U.S.	75	1.1
9	Reuters	U.K.	50	0.7
10	Sligos	France	35	0.5
	Total Listed		1,460	21.5
	Total Market		6,800	100.0

Source: INPUT

Exhibit H-11

Equipment Maintenance Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	SNI	Germany	1,260	28.9
2	IBM	U.S.	980	22.5
3	Digital Equipment Corp	U.S.	270	6.2
4	Memorex Telex	U.S.	155	3.6
5	HP	U.S.	140	3.2
6=	AT&T	U.S.	100	2.3
6=	Bull	France	100	2.3
8	Unisys	U.S.	95	2.2
9	Comparex	U.S.	90	2.1
10	ICL	U.K.	70	1.6
	Total Listed		3,260	74.8
	Total Market		4,360	100.0

Source: INPUT

Exhibit H-12

Environmental Services Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	170	6.6
2	Digital Equipment Corp	U.S.	90	3.5
3	SNI	Germany	55	2.1
4	HP	U.S.	50	1.9
5	Unisys	U.S.	25	1.0
6=	Bull	France	20	0.8
6=	AT&T	U.S.	20	0.8
8	Comparex	U.S.	15	0.6
9	Olivetti	Italy	10	0.4
10	Sun	U.S.	5	0.2
	Total Listed		460	17.7
	Total Market		2,590	100.0

Source: INPUT

Exhibit H-13

Information Services Leading Vendors Germany, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	4,000	11.8
2	SNI	Germany	3,200	9.4
3	Datev	Germany	980	2.9
4	SAP	Germany	970	2.9
5	Digital Equipment Corp	U.S.	780	2.3
6	debis Systemhaus	Germany	685	2.0
7	EDS	U.S.	585	1.7
8	Reuters	U.K.	570	1.7
9	Microsoft	U.S.	485	1.4
10	HP	U.S.	405	1.2
	Total Listed		12,660	37.2
	Total Market		34,000	100.0

Source: INPUT

I

Leading Vendors in Local Currency (Dra Millions) — Greece

Exhibit I-1

Software and Services Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	6,220	9.0
2	Andersen Consulting	U.S.	5,240	7.6
3	Digital Equipment Corp	U.S.	2,990	4.3
4	Microsoft	U.S.	1,515	2.2
5	Computer Associates	U.S.	1,480	2.1
6=	Reuters	U.K.	1,375	2.0
6=	GEIS	U.S.	1,375	2.0
8	SNI	Germany	970	1.4
9	Unisys	U.S.	865	1.3
10	Bull	France	820	1.2
11	Oracle	U.S.	500	0.7
12	Dun & Bradstreet	U.S.	410	0.6
13	Novell	U.S.	325	0.5
14	AT&T	U.S.	310	0.4
15	ICL	U.K.	265	0.4
16	ComputerVision	U.S.	220	0.3
17	Telerate	U.S.	210	0.3
18	Lotus	U.S.	130	0.2
19	Borland	U.S.	120	0.2
20	ASK	U.S.	110	0.2
	Total Listed		25,450	36.9
	Total Market		69,000	100.0

Source: INPUT

Exhibit I-2

Professional Services Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Andersen Consulting	U.S.	2,800	14.3
2	Digital Equipment Corp	U.S.	1,140	5.8
3	IBM	U.S.	1,100	5.6
4	HP	U.S.	500	2.6
5	Computer Associates	U.S.	250	1.3
6	Oracle	U.S.	225	1.1
7	Unisys	U.S.	205	1.0
8	AT&T	U.S.	165	0.8
9	Reuters	U.K.	150	0.8
10	Bull	France	90	0.5
	Total Listed		6,625	33.8
	Total Market		19,600	100.0

Source: INPUT

Exhibit I-3

Processing Services Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	GEIS	U.S.	485	4.8
2	Unisys	U.S.	45	0.4
3	IBM	U.S.	35	0.3
4	SNI	Germany	10	0.1
5=	Digital Equipment Corp	U.S.	5	0.0
5=	HP	U.S.	5	0.0
	Total Listed		585	5.8
	Total Market		10,150	100.0

Source: INPUT

Exhibit I-4

Network Applications Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	GEIS	U.S.	890	74.8
2	IBM	U.S.	105	8.8
3	Bull	France	40	3.4
4	Digital Equipment Corp	U.S.	35	2.9
5=	ICL	U.K.	5	0.4
5=	AT&T	U.S.	5	0.4
	Total Listed		1,080	90.8
	Total Market		1,190	100.0

Source: INPUT

Exhibit I-5

Electronic Information Services Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Reuters	U.K.	975	42.0
2=	Telerate	U.S.	210	9.1
2=	Dun & Bradstreet	U.S.	210	9.1
	Total Listed		1,395	60.1
	Total Market		2,320	100.0

Source: INPUT

Exhibit I-6

Systems Software Products Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	2,015	17.4
2	Microsoft	U.S.	880	7.6
3	Computer Associates	U.S.	695	6.0
4	SNI	Germany	685	5.9
5	Novell	U.S.	325	2.8
6	Digital Equipment Corp	U.S.	315	2.7
7	Bull	France	385	3.3
8	Oracle	U.S.	350	3.0
9	Unisys	U.S.	185	1.6
10	Borland	U.S.	120	1.0
	Total Listed		5,955	51.3
	Total Market		11,600	100.0

Source: INPUT

Exhibit I-7

Application Software Products Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Microsoft	U.S.	610	7.6
2	Computer Associates	U.S.	515	6.4
3	IBM	U.S.	285	3.6
4	SNI	Germany	245	3.1
5	ComputerVision	U.S.	125	1.6
6=	Dun & Bradstreet	U.S.	120	1.5
6=	Lotus	U.S.	120	1.5
8	AT&T	U.S.	70	0.9
9	SSA	U.S.	55	0.7
10	Reuters	U.K.	40	0.5
	Total Listed		2,185	27.3
	Total Market		8,000	100.0

Source: INPUT

Exhibit I-8

Turnkey Systems Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	680	5.0
2	Intergraph	U.S.	600	4.4
3	IBM	U.S.	270	2.0
4	Reuters	U.K.	185	1.4
5	AT&T	U.S.	80	0.6
	Total Listed		1,735	12.8
	Total Market		13,600	100.0

Source: INPUT

Exhibit I-9

Equipment Maintenance Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	3,370	42.6
2	Bull	France	675	8.5
3	SNI	Germany	590	7.5
4	Digital Equipment Corp	U.S.	545	6.9
5	Unisys	U.S.	340	4.3
6	AT&T	U.S.	315	4.0
7	ICL	U.K.	300	3.8
8	Olivetti	Italy	240	3.0
9	Rank Xerox	U.S.	135	1.7
10	ComputerVision	U.S.	125	1.6
	Total Listed		6,634	83.9
	Total Market		7,910	100.0

Source: INPUT

Exhibit I-10

Environmental Services Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	480	60.0
2	Digital Equipment Corp	U.S.	185	23.1
3	SNI	Germany	100	12.5
	Total Listed		765	95.6
	Total Market		800	100.0

Source: INPUT

Exhibit I-11

Information Services Leading Vendors Greece, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	10,065	13.1
2	Andersen Consulting	U.S.	5,240	6.8
3	Digital Equipment Corp	U.S.	3,670	4.8
4	Bull	France	2,980	3.9
5	SNI	Germany	2,325	3.0
6	Microsoft	U.S.	1,685	2.2
7	Unisys	U.S.	1,650	2.1
8	Computer Associates	U.S.	1,480	1.9
9	AT&T	U.S.	1,450	1.9
10	GEIS	U.S.	1,375	1.8
	Total Listed		31,920	41.5
	Total Market		77,000	100.0

Source: INPUT

(Blank)

J

Leading Vendors in Local Currency (IR £ Millions) — Ireland

Exhibit J-1

Software and Services Leading Vendors Ireland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	35	8.2
2	Digital Equipment Corp	U.S.	15	4.1
3=	Reuters	U.K.	10	2.7
3=	Unisys	U.S.	10	2.6
3=	Andersen Consulting	U.S.	10	2.7
3=	ICL	U.K.	10	2.7
3=	Microsoft	U.S.	10	2.7
8=	SNI	Germany	5	1.4
8=	HP	U.S.	5	1.4
8=	Computer Associates		5	1.4
	Total Listed		110	30.0
	Total Market		365	100.0

Source: INPUT

Exhibit J-2

Professional Services Leading Vendors Ireland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1=	Andersen Consulting	U.S.	10	10.6
1=	IBM	U.S.	10	10.6
3=	Digital Equipment Corp	U.S.	5	5.5
3=	Unisys	U.S.	5	5.5
3=	HP	U.S.	5	5.3
	Total Listed		35	37.6
	Total Market		94	100.0

Source: INPUT

Exhibit J-3

Systems Software Products Leading Vendors Ireland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	15	25.4
2=	Digital Equipment Corp	U.S.	5	8.5
2=	Microsoft	U.S.	5	8.0
2=	Novell	U.S.	5	8.5
2=	Unisys	U.S.	5	8.5
	Total Listed		35	58.9
	Total Market		59	100.0

Source: INPUT

Exhibit J-4

Equipment Maintenance Leading Vendors Ireland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	10	20.8
2=	IBM	U.S.	5	10.4
2=	Unisys	U.S.	5	10.4
2=	HP	U.S.	5	10.4
2=	ICL	U.K.	5	9.9
	Total Listed		30	62.0
	Total Market		48	100.0

Source: INPUT

Exhibit J-5

Information Services Leading Vendors Ireland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	35	8.0
2	Digital Equipment Corp	U.S.	25	5.7
3=	Unisys	U.S.	15	3.4
3=	ICL	U.K.	15	3.4
3=	HP	U.S.	15	3.4
6=	SNI	Germany	10	2.3
6=	Reuters	U.K.	10	2.3
6=	Andersen Consulting	U.S.	10	2.3
6=	Microsoft	U.S.	10	2.3
10	AT&T	U.S.	5	1.1
	Total Listed		150	34.5
	Total Market		435	100.0

Source: INPUT

(Blank)

K

Leading Vendors in Local Currency (Lira Billions) — Italy

Exhibit K-1

Software and Services Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Finsiel	Italy	1,475	12.4
2	IBM	U.S.	1,400	11.8
3	Olivetti	Italy	1,030	8.7
4	Digital Equipment Corp	U.S.	385	3.2
5	Reuters	U.K.	255	2.2
6=	Andersen Consulting	U.S.	190	1.6
6=	Microsoft	U.S.	190	1.6
8	Cerved	Italy	180	1.5
9	Bull	France	175	1.5
10	Computer Associates	U.S.	155	1.3
11	Database Informatica	Italy	150	1.3
12=	SNI	Germany	145	1.2
12=	CGS	France	145	1.2
14	CED Borsa	Italy	115	1.0
15	EDS	U.S.	105	0.9
16=	Datamat	Italy	95	0.8
16=	Novell	U.S.	95	0.8
18	HP	U.S.	90	0.8
19=	Engineering	Italy	85	0.7
19=	Unisys	U.S.	85	0.7
21	ITP	Italy	75	0.6
22	Lombardia Informatica	Italy	70	0.6
23=	Logica	U.K.	65	0.5
23=	Sopin	Italy	65	0.5
23=	Oracle	U.S.	65	0.5
26	CDS	Italy	60	0.5
27	Lotus	U.S.	50	0.4
28=	Sicit	Italy	45	0.4
28=	GEIS	U.S.	45	0.4
30	Telerate	U.S.	40	0.3
	Total Listed		7,125	60.1
	Total Market		11,850	100.0

Source: INPUT

Exhibit K-2

Professional Services Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Finsiel	Italy	1,050	31.2
2	Olivetti	Italy	360	10.7
3	IBM	U.S.	320	9.5
4	Database Informatica	Italy	150	4.5
5	Cerved	Italy	110	3.3
6	Datamat	Italy	95	2.8
7=	Engineering	Italy	85	2.5
7=	Digital Equipment Corp	U.S.	85	2.5
7=	Andersen Consulting	U.S.	85	2.5
10	CGS	France	75	2.2
	Total Listed		2,415	71.7
	Total Market		3,370	100.0

Source: INPUT

Exhibit K-3

Systems Integration Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1=	IBM	U.S.	90	16.8
1=	Andersen Consulting	U.S.	90	16.8
3	Finsiel	Italy	80	15.0
4=	Bull	France	65	12.1
4=	Olivetti	Italy	65	12.1
6=	Digital Equipment Corp	U.S.	30	5.6
6=	CGS	France	30	5.6
8	Logica	U.K.	20	3.7
9=	Datitalia	Italy	15	2.8
9=	SNI	Germany	15	2.7
	Total Listed		500	93.4
	Total Market		535	100.0

Source: INPUT

Exhibit K-4

Outsourcing Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Finsiel	Italy	140	13.7
2	Olivetti	Italy	80	7.8
3	IBM	U.S.	25	2.5
4	CGS	France	20	2.0
5=	Lombardia Informatica	Italy	15	1.5
5=	Bull	France	15	1.5
5=	Digital Equipment Corp	U.S.	15	1.5
8=	Sarin	Italy	10	1.0
8=	Andersen Consulting	U.S.	10	1.0
8=	Enidata	Italy	10	1.0
	Total Listed		340	33.3
	Total Market		1,020	100.0

Source: INPUT

Exhibit K-5

Processing Services Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1=	Finsiel	Italy	115	10.0
1=	CED Borsa	Italy	115	10.0
3	Lombardia Informatica	Italy	65	5.7
4	Sopin	Italy	50	4.3
5	Olivetti	Italy	35	3.0
6	Sarin	Italy	30	2.6
7	Cedacrinord	Italy	25	2.2
8=	Database Informatica	Italy	15	1.3
8=	GEIS	U.S.	15	1.3
8=	IBM	U.S.	15	1.3
	Total Listed		480	41.7
	Total Market		1,150	100.0

Source: INPUT

Exhibit K-6

Network Applications Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1=	IBM	U.S.	25	9.6
1=	GEIS	U.S.	25	9.6
3	Olivetti	Italy	20	7.7
4=	Infonet	Belgium	15	5.8
4=	Finsiel	Italy	15	5.7
4=	INTESA	Italy	15	5.8
7=	Digital Equipment Corp	U.S.	10	3.8
7=	Bull	France	10	3.8
9=	Engineering	Italy	5	1.9
9=	EDS	U.S.	5	1.9
	Total Listed		145	55.6
	Total Market		260	100.0

Source: INPUT

Exhibit K-7

Electronic Information Services Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Reuters	U.K.	200	47.6
2=	Telerate	U.S.	40	9.5
2=	Cerved	Italy	40	9.5
4	Stet	Italy	25	6.0
5	Dun & Bradstreet	U.S.	20	4.7
6	Citicorp	U.S.	15	3.6
7=	INTESA	Italy	10	2.4
7=	Datitalia	Italy	10	2.4
9=	Mead	U.S.	5	1.2
9=	Extel	U.K.	5	1.2
	Total Listed		370	88.0
	Total Market		420	100.0

Source: INPUT

Exhibit K-8

Systems Software Products Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	745	31.0
2	Microsoft	U.S.	110	4.6
3	Olivetti	Italy	105	4.4
4	Novell	U.S.	95	4.0
5	Digital Equipment Corp	U.S.	85	3.5
6	Computer Associates	U.S.	75	3.1
7	Bull	France	60	2.5
8=	SNI	Germany	45	1.9
8=	HP	U.S.	45	1.9
10	Oracle	U.S.	30	1.3
	Total Listed		1,395	58.1
	Total Market		2,400	100.0

Source: INPUT

Exhibit K-9

Application Software Products Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Olivetti	Italy	175	8.3
2	IBM	U.S.	105	5.0
3	Microsoft	U.S.	75	3.6
4	Finsiel	Italy	70	3.3
5	Computer Associates	U.S.	55	2.6
6	Lotus	U.S.	45	2.1
7	SAS	U.S.	25	1.2
8	SAP	Germany	20	1.0
9=	SNI	Germany	15	0.7
9=	ITP	Italy	15	0.7
	Total Listed		600	28.6
	Total Market		2,100	100.0

Source: INPUT

Exhibit K-10

Turnkey Systems Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Olivetti	Italy	210	19.4
2	IBM	U.S.	75	6.9
3	Digital Equipment Corp	U.S.	50	4.7
4	Sicit	Italy	45	4.2
5=	SNI	Germany	30	2.8
5=	Reuters	U.K.	30	2.8
5=	Intergraph	U.S.	30	2.8
5=	Editrice	Italy	30	2.8
9=	Cortis Lentini	Italy	25	2.3
9=	Cerved	Italy	25	2.3
	Total Listed		550	50.9
	Total Market		1,080	100.0

Source: INPUT

Exhibit K-11

Equipment Maintenance Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Olivetti	Italy	610	25.9
2	IBM	U.S.	550	23.4
3	Bull	France	135	5.7
4	Digital Equipment Corp	U.S.	100	4.2
5	HP	U.S.	90	3.8
6	SNI	Germany	80	3.4
7	Memorex Telex	U.S.	65	2.8
8	Unisys	U.S.	55	2.3
9	AT&T	U.S.	40	1.7
10	ICL	U.K.	30	1.3
	Total Listed		1,755	74.5
	Total Market		2,355	100.0

Source: INPUT

Exhibit K-12

Environmental Services Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	115	9.5
2	Olivetti	Italy	70	5.8
3	Digital Equipment Corp	U.S.	35	2.9
4=	Bull	France	15	1.2
4=	Unisys	U.S.	15	1.2
4=	HP	U.S.	15	1.2
7	AT&T	U.S.	10	0.8
8=	SNI	Germany	5	0.4
8=	Sun	U.S.	5	0.4
8=	Wang	U.S.	5	0.4
	Total Listed		290	24.0
	Total Market		1,205	100.0

Source: INPUT

Exhibit K-13

Information Services Leading Vendors Italy, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	1,975	12.7
2	Olivetti	Italy	1,710	11.0
3	Finsiel	Italy	1,475	9.5
4	Digital Equipment Corp	U.S.	380	2.5
5	Bull	France	330	2.1
6	Reuters	U.K.	255	1.6
7	SNI	Germany	230	1.5
8	Andersen Consulting	U.S.	205	1.3
9	HP	U.S.	195	1.3
10	Microsoft	U.S.	190	1.2
	Total Listed		6,945	44.8
	Total Market		15,500	100.0

Source: INPUT

L

Leading Vendors in Local Currency (Dfl Millions) — Netherlands

Exhibit L-1

Software and Services Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Cap Volmac	U.S.	735	8.5
2	IBM	U.S.	715	8.0
3	Getronics	Netherlands	490	5.7
4	Roccade	Netherlands	460	5.3
5	BSO	Netherlands	410	4.8
6	Raet	Netherlands	360	4.2
7	CMG	U.K.	200	2.3
8	Digital Equipment Corp	U.S.	140	1.6
9	Microsoft	U.S.	110	1.3
10=	CSC	U.S.	100	1.2
10=	Ordina	Netherlands	100	1.2
12	Reuters	U.K.	90	1.0
13=	Oracle	U.S.	85	1.0
13=	Bouwfonds Informatica	Netherlands	85	1.0
13=	Multihouse	Netherlands	85	1.0
13=	Computer Associates	U.S.	85	1.0
13=	Computer Centrum Nederland	Netherlands	85	1.0
18=	Baan	Netherlands	80	0.9
18=	EDS	U.S.	80	0.9
20=	Olivetti	Italy	75	0.9
20=	SNI	Germany	75	0.9
22	Unisys	U.S.	60	0.7
23=	Novell	U.S.	55	0.6
23=	HP	U.S.	55	0.6
23=	ICL	U.K.	55	0.6
23=	SAP	Germany	55	0.6
27=	Bull	France	50	0.6
27=	Phillips C&P	Netherlands	50	0.6
27=	DataSciences	U.K.	50	0.6
27=	Andersen Consulting	U.S.	50	0.6
	Total Listed		5,100	59.3
	Total Market		8,600	100.0

Source: INPUT

Exhibit L-2

Professional Services Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Cap Volmac	France	595	19.7
2	Getronics	Netherlands	300	10.0
3	Roccade	Netherlands	260	8.6
4=	BSO	Netherlands	200	6.6
4=	Raet	Netherlands	200	6.6
6	CMG	U.K.	140	4.6
7	IBM	U.S.	120	4.0
8=	Ordina	Netherlands	85	2.8
8=	Bouwfonds Informatica	Netherlands	85	2.8
10	Digital Equipment Corp	U.S.	55	1.8
	Total Listed		2,040	67.7
	Total Market		3,015	100.0

Source: INPUT

Exhibit L-3

Systems Integration Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	65	21.0
2	Cap Volmac	France	50	16.1
3	BSO	Netherlands	40	12.9
4	CMG	U.K.	35	11.2
5=	Getronics	Netherlands	25	8.1
5=	Bull	France	25	8.1
7	Andersen Consulting	U.S.	20	6.5
8=	Raet	Netherlands	15	4.8
8=	Multihouse	Netherlands	15	4.8
10	ICL	U.K.	10	3.2
	Total Listed		300	96.7
	Total Market		310	100.0

Source: INPUT

Exhibit L-4

Outsourcing Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1=	Cap Volmac	Netherlands	50	13.8
1=	CSC	U.S.	50	13.8
1=	EDS	U.S.	50	13.8
1=	Phillips C&P	Netherlands	50	13.7
5	CMG	U.K.	30	8.2
6	Olivetti	Italy	20	5.5
7=	BSO	Netherlands	10	2.7
7=	Digital Equipment Corp	U.S.	10	2.7
7=	HP	U.S.	10	2.9
10	Bull	France	5	1.4
	Total Listed		287	78.6
	Total Market		365	100.0

Source: INPUT

Exhibit L-5

Processing Services Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Roccade	Netherlands	200	19.4
2	BSO	Netherlands	75	7.3
3	Computer Centrum Nederland	Netherlands	40	3.9
4	ADP	U.S.	40	3.9
5	Raet	Netherlands	35	3.4
6	CMG	U.K.	20	1.9
7	Getronics	Netherlands	20	1.9
8	Telekurs	Switzerland	15	1.5
9	Medsys	Netherlands	15	1.5
10	CSC	U.S.	10	1.0
	Total Listed		470	45.6
	Total Market		1,030	100.0

Source: INPUT

Exhibit L-6

Network Applications Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1=	Infonet	Belgium	20	10.0
1=	IBM	U.S.	20	10.0
3=	Raet	Netherlands	10	5.0
3=	CMG	U.K.	10	4.9
5=	Digital Equipment Corp	U.S.	5	2.5
5=	BSO	Netherlands	5	2.5
7=	Bull	France	2	1.2
7=	GEIS	U.S.	2	1.0
7=	EDS	U.S.	2	0.8
7=	Olivetti	Italy	2	0.8
	Total Listed		77	38.6
	Total Market		200	100.0

Source: INPUT

Exhibit L-7

Electronic Information Services Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Reuters	U.K.	70	25.9
2	Dun & Bradstreet	U.S.	20	7.4
3	Telerate	U.S.	15	5.6
4	Telekurs	Switzerland	15	5.6
5	Lotus	U.S.	5	1.9
	Total Listed		125	46.4
	Total Market		270	100.0

Source: INPUT

Exhibit L-8

Systems Software Products Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	395	32.9
2	Getronics	Netherlands	100	8.3
3	Microsoft	U.S.	65	5.4
4	Novell	U.S.	55	4.6
5	Digital Equipment Corp	U.S.	50	4.2
6	Oracle	U.S.	45	3.8
7	Computer Associates	U.S.	40	3.3
8=	Cap Volmac	Netherlands	30	2.5
8=	HP	U.S.	30	2.5
10	SNI	Germany	25	2.1
	Total Listed		835	69.6
	Total Market		1,200	100.0

Source: INPUT

Exhibit L-9

Application Software Products Leading Vendors Netherlands, 1994

Ran k	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Raet	Netherlands	80	6.6
2	Baan	Netherlands	65	5.3
3	IBM	U.S.	55	4.5
4	Microsoft	U.S.	45	3.7
5	SAP	Germany	35	2.9
6	Computer Associates	U.S.	30	2.5
7=	Cap Volmac	France	25	2.0
7=	Lotus	U.S.	25	2.0
9=	Olivetti	Italy	15	1.2
9=	SAS	U.S.	15	1.2
	Total Listed		390	32.0
	Total Market		1,220	100.0

Source: INPUT

Exhibit L-10

Turnkey Systems Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Getronics	Netherlands	95	9.2
2	BSO	Netherlands	90	8.8
3	Raet	Netherlands	70	6.8
4	IBM	U.S.	50	4.9
5	Intergraph	U.S.	45	4.4
6=	Cap Volmac	France	40	3.9
6=	SNI	Germany	40	3.9
6=	Multihouse	Netherlands	40	3.9
9	Digital Equipment Corp	U.S.	35	3.4
10	Olivetti	Italy	25	2.4
	Total Listed		530	51.5
	Total Market		1,030	100.0

Source: INPUT

Exhibit L-11

Equipment Maintenance Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Getronics	Netherlands	250	16.8
2	IBM	U.S.	210	14.1
3	Digital Equipment Corp	U.S.	120	8.1
4=	HP	U.S.	55	3.7
4=	SNI	Germany	55	3.7
6	Bull	France	45	3.0
7=	AT&T	U.S.	40	2.7
7=	Olivetti	Italy	40	2.7
7=	Unisys	U.S.	40	2.7
10	ICL	U.K.	35	2.3
	Total Listed		890	59.7
	Total Market		1,490	100.0

Source: INPUT

Exhibit L-12

Environmental Services Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Getronics	Netherlands	85	8.9
2	IBM	U.S.	60	6.3
3	Digital Equipment Corp	U.S.	40	4.2
4=	Unisys	U.S.	10	1.0
4=	AT&T	U.S.	10	1.1
4=	SNI	Germany	10	1.1
7=	HP	U.S.	5	0.5
7=	Olivetti	Italy	5	0.5
7=	Bull	France	5	0.5
7=	Raet	Netherlands	5	0.5
	Total Listed		234	24.7
	Total Market		950	100.0

Source: INPUT

Exhibit L-13

Information Services Leading Vendors Netherlands, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	985	8.6
2	Getronics	Netherlands	830	7.5
3	Cap Volmac	France	735	6.6
4	Roccade	Netherlands	460	4.1
5	BSO	Netherlands	420	3.8
6	Raet	Netherlands	385	3.5
7	Digital Equipment Corp	U.S.	305	2.7
8	Intergraph	U.S.	220	2.0
9	CMG	U.K.	195	1.8
10	SNI	Germany	140	1.3
	Total Listed		4,650	41.9
	Total Market		11,100	100.0

Source: INPUT

M

Leading Vendors in Local Currency (NK Millions) — Norway

Exhibit M-1

Software and Services Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	NIT	U.S.	1,235	10.6
2	IBM	U.S.	1,020	8.7
3	Fellesdata	Norway	640	5.5
4	BBS	Norway	570	4.9
5	Novit	Norway	435	3.7
6	Rogalandsdata	Norway	270	2.3
7=	Celsius Info. System	Sweden	245	2.1
7=	EDB	Norway	245	2.1
9	Andersen Consulting	U.S.	220	1.9
10	Computer Associates	U.S.	210	1.8
11	CGS	France	185	1.6
12	WM-Data	Sweden	155	1.3
13	Digital Equipment Corp	U.S.	125	1.1
14=	Oracle	U.S.	120	1.0
14=	Microsoft	U.S.	120	1.0
14=	Reuters	U.K.	120	1.0
17	EDS	U.S.	115	1.0
18	Olivetti	U.S.	90	0.8
19	SNI	Germany	80	0.7
20=	Bull	France	65	0.6
20=	ICL	U.K.	65	0.6
22	AT&T	U.S.	60	0.5
23	Microgen	U.K.	55	0.5
24	Unisys	U.S.	50	0.4
25	Dun & Bradstreet	U.S.	45	0.4
26=	HP	U.S.	40	0.3
26=	SAS	U.S.	40	0.3
28=	Intergraph	U.S.	35	0.3
28=	ASK	U.S.	35	0.3
28=	Novell	U.S.	35	0.3
	Total Listed		6,725	57.5
	Total Market		11,700	100.0

Source: INPUT

Exhibit M-2

Professional Services Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	NIT	Norway	505	17.6
2	Fellesdata	Norway	350	12.2
3	Novit	Norway	230	8.0
4	Rogalandsdata	Norway	190	6.6
5	IBM	U.S.	185	6.4
6	CGS	France	145	5.0
7	BBS	Norway	140	4.9
8	Celsius Info. System	Sweden	140	4.9
9	Andersen Consulting	U.S.	110	3.8
10	EDS	U.S.	105	3.7
	Total Listed		2,100	73.0
	Total Market		2,875	100.0

Source: INPUT

Exhibit M-3

Systems Integration Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	100	40.0
2	Bull	France	50	20.0
3	Andersen Consulting	U.S.	30	12.0
4=	Nokia Data	Finland	25	10.0
4=	Celsius Info. System	Sweden	25	10.0
	Total Listed		230	92.0
	Total Market		250	100.0

Source: INPUT

Exhibit M-4

Outsourcing Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	Fellesdata	Norway	60	24.5
2	NIT	Norway	30	12.2
3	Celsius Info. System	Sweden	30	12.2
4	Teamco	Norway	20	8.2
5=	WM-Data	Sweden	15	6.1
5=	Digital Equipment Corp	U.S.	15	6.1
7	Olivetti	Italy	10	4.1
8=	Bull	France	5	2.0
8=	CGS	France	5	2.0
8=	EDS	U.S.	5	2.0
	Total Listed		195	79.6
	Total Market		245	100.0

Source: INPUT

Exhibit M-5

Processing Services Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	NIT	Norway	600	18.0
2	BBS	Norway	430	12.9
3	Fellesdata	Norway	210	6.3
4	Novit	Norway	150	4.5
5	EDB	Norway	140	4.2
6	Rogalandsdata	Norway	55	1.6
7	Microgen	U.K.	50	1.5
8	WM-Data	Sweden	15	0.4
9	Tietotehdas	Finland	10	0.3
10	IBM	U.S.	10	0.3
	Total Listed		1,670	50.0
	Total Market		3,340	100.0

Source: INPUT

Exhibit M-6

Network Applications Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	30	19.2
2	Infonet	Belgium	15	9.7
3	GEIS	U.S.	10	6.5
4=	Digital Equipment Corp	U.S.	5	3.2
4=	Celsius Info. System	Sweden	5	3.2
4=	Bull	France	5	3.2
	Total Listed		70	44.9
	Total Market		155	100.0

Source: INPUT

Exhibit M-7

Electronic Information Services Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	Reuters	U.K.	90	32.7
2	Dun & Bradstreet	U.S.	25	9.1
3	Telerate	U.S.	20	7.2
	Total Listed		135	49.0
	Total Market		275	100.0

Source: INPUT

Exhibit M-8

Systems Software Products Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	570	40.4
2	Computer Associates	U.S.	100	7.1
3	Microsoft	U.S.	70	5.0
4	Oracle	U.S.	60	4.3
5	Digital Equipment Corp	U.S.	40	2.8
6	Novell	U.S.	35	2.5
7	ASK	U.S.	30	2.1
8=	Bull	France	25	1.8
8=	SNI	Germany	25	1.8
10	HP	U.S.	20	1.4
	Total Listed		975	69.2
	Total Market		1,410	100.0

Source: INPUT

Exhibit M-9

Application Software Products Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	NIT	Norway	100	6.9
2	IBM	U.S.	80	5.5
3	Computer Associates	U.S.	75	5.2
4	Novit	Norway	55	3.8
5=	Fellesdata	Norway	50	3.5
5=	Microsoft	U.S.	50	3.4
7	Celsius Info. System	Sweden	45	3.1
8	SAS	U.S.	40	2.8
9	Provida	Norway	35	2.4
10	Rogalandsdata	Norway	25	1.7
	Total Listed		555	38.3
	Total Market		1,450	100.0

Source: INPUT

Exhibit M-10

Turnkey Systems Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	50	3.0
2	Intergraph	U.S.	40	2.4
3	Digital Equipment Corp	U.S.	20	1.2
4=	Olivetti	Italy	15	0.9
4=	AT&T	U.S.	15	0.9
6=	CGS	France	10	0.6
6=	Reuters	U.K.	10	0.6
8	Tietotehdas	Finland	5	0.3
	Total Listed		165	10.1
	Total Market		1,640	100.0

Source: INPUT

Exhibit M-11

Equipment Maintenance Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	320	18.0
2	Norsk Data	Italy	210	11.8
3	Olivetti	Italy	100	5.6
4	Digital Equipment Corp	U.S.	65	3.7
5=	ICL	U.K.	60	3.4
5=	SNI	Germany	60	3.4
5=	AT&T	U.S.	60	3.4
8	Bull	France	45	2.5
9	HP	U.S.	40	2.2
10	Amdahl	U.S.	35	2.0
	Total Listed		995	55.9
	Total Market		1,780	100.0

Source: INPUT

Exhibit M-12

Environmental Services Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	55	5.0
2	Digital Equipment Corp	U.S.	20	1.8
3=	Norsk Data	Norway	15	1.4
3=	SNI	Germany	15	1.4
3=	Olivetti	Italy	15	1.4
6=	AT&T	U.S.	10	0.9
6=	Unisys	U.S.	10	0.9
8=	HP	U.S.	5	0.5
8=	ICL	U.K.	5	0.5
8=	Bull	France	5	0.5
	Total Listed		155	14.0
	Total Market		1,110	100.0

Source: INPUT

Exhibit M-13

Information Services Leading Vendors Norway, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	1,365	9.3
2	NIT	Norway	1,235	8.5
3	Fellesdata	Norway	640	4.4
4	BBS	Norway	570	3.9
5	Novit	Norway	435	3.0
6	Rogalandsdata	Norway	270	1.8
7	EDB	Norway	245	1.7
8	Celsius Info. System	Sweden	245	1.7
9	Andersen Consulting	U.S.	225	1.5
10	Digital Equipment Corp	U.S.	210	1.4
	Total Listed		5,440	37.3
	Total Market		14,600	100.0

Source: INPUT

N

Leading Vendors in Local Currency (Esc Millions) — Portugal

Exhibit N-1

Software and Services Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	6,580	20.9
2	Andersen Consulting	U.S.	4,900	15.6
3	Unisys	U.S.	2,225	7.1
4	Digital Equipment Corp	U.S.	1,935	6.1
5	EDS	U.S.	1,875	6.0
6	ICL	U.K.	1,570	5.0
7	SNI	Germany	1,540	4.9
8	Reuters	U.K.	1,395	4.4
9	GEIS	U.S.	1,060	3.4
10	HP	U.S.	1,025	3.3
11	Computer Associates	U.S.	980	3.1
12	CGI	France	605	1.9
13	Microsoft	U.S.	600	1.9
14	Bull	France	530	1.7
15	Intergraph	U.S.	435	1.4
16	AT&T	U.S.	340	1.1
17	Oracle	U.S.	340	1.1
18	Dun & Bradstreet	U.S.	270	0.9
19	Novell	U.S.	260	0.8
20	Telerate	U.S.	230	0.7
21	Axime	France	165	0.5
22	ComputerVision	U.S.	145	0.5
23	Lotus	U.S.	130	0.4
24	SSA	U.S.	115	0.4
25	Infonet	Belgium	100	0.3
26	Data General	U.S.	95	0.3
27	Rank Xerox	U.S.	85	0.3
28	Borland	U.S.	80	0.3
29	ASK	U.S.	70	0.2
30	Tandem	U.S.	70	0.2
	Total Listed		29,750	94.4
	Total Market		31,500	100.0

Source: INPUT

Exhibit N-2

Professional Services Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Andersen Consulting	U.S.	1,900	24.5
2	Digital Equipment Corp	U.S.	790	10.2
3	IBM	U.S.	750	9.7
4	Unisys	U.S.	740	9.6
5	CGI	France	395	5.1
6	HP	U.S.	330	4.3
7	Computer Associates	U.S.	165	2.1
8	Oracle	U.S.	150	1.9
9	AT&T	U.S.	115	1.5
10	Bull	France	70	0.9
	Total Listed		5,405	69.8
	Total Market		7,740	100.0

Source: INPUT

Exhibit N-3

Outsourcing Leading Vendors Portugal 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	EDS	U.S.	880	45.5
2	Digital Equipment Corp	U.S.	150	7.8
3	Bull	France	45	2.3
4	SNI	Germany	20	1.0
5	Axime	France	15	0.8
	Total Listed		1,110	57.4
	Total Market		1,935	100.0

Source: INPUT

Exhibit N-4

Processing Services Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	GEIS	U.S.	315	8.9
2	EDS	U.S.	185	5.2
3	Unisys	U.S.	180	5.1
4	Axime	France	85	2.4
5	IBM	U.S.	45	1.3
	Total Listed		810	22.8
	Total Market		3,550	100.0

Source: INPUT

Exhibit N-5

Electronic Information Services Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Reuters	U.K.	1,075	61.4
2	Telerate	U.S.	230	13.1
3	Dun & Bradstreet	U.S.	140	8.0
	Total Listed		1,445	82.6
	Total Market		1,750	100.0

Source: INPUT

Exhibit N-6

Systems Software Products Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	2,670	50.9
2	Unisys	U.S.	780	14.8
3	Digital Equipment Corp	U.S.	660	12.6
4	HP	U.S.	480	9.1
5	Computer Associates	U.S.	460	8.8
	Total Listed		5,050	96.2
	Total Market		5,250	100.0

Source: INPUT

Exhibit N-7

Application Software Products Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	375	11.7
2	Computer Associates	U.S.	340	10.6
3	Microsoft	U.S.	240	7.5
4	ICL	U.K.	190	5.9
5	Andersen Consulting	U.S.	170	5.3
6	SNI	Germany	160	5.0
7	Unisys	U.S.	155	4.8
8	Lotus	U.S.	115	3.6
9	ComputerVision	U.S.	85	2.7
10	CGI	France	80	2.5
	Total Listed		1,910	59.7
	Total Market		3,200	100.0

Source: INPUT

Exhibit N-8

Turnkey Systems Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	440	7.0
2	Intergraph	U.S.	435	6.9
3	IBM	U.S.	210	3.3
4	Reuters	U.K.	140	2.2
5	AT&T	U.S.	55	0.9
	Total Listed		1,280	20.3
	Total Market		6,300	100.0

Source: INPUT

Exhibit N-9

Equipment Maintenance Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	1,910	15.0
2	Digital Equipment Corp	U.S.	1,435	11.3
3	Unisys	U.S.	1,435	11.3
4	Olivetti	Italy	1,275	10.0
5	SNI	Germany	1,195	9.4
6	HP	U.S.	955	7.5
7	ICL	U.K.	600	4.7
8	Bull	France	415	3.3
9	AT&T	U.S.	345	2.7
10	Data General	U.S.	210	1.7
	Total Listed		9,775	77.0
	Total Market		12,700	100.0

Source: INPUT

Exhibit N-10

Environmental Services Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	490	9.8
2	Unisys	U.S.	350	7.0
3	Bull	France	180	3.6
4=	IBM	U.S.	160	3.2
4=	Olivetti	Italy	160	3.2
4=	HP	U.S.	160	3.2
7	SNI	Germany	75	1.5
8=	AT&T	U.S.	70	1.4
8=	ICL	U.K.	70	1.4
10	Rank Xerox	U.S.	20	0.4
	Total Listed		1,735	34.7
	Total Market		5,000	100.0

Source: INPUT

Exhibit N-11

Information Services Leading Vendors Portugal, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	8,650	17.6
2	Andersen Consulting	U.S.	4,900	10.0
3	Unisys	U.S.	4,015	8.2
4	Digital Equipment Corp	U.S.	3,862	7.8
5	SNI	Germany	2,805	5.7
6	ICL	U.K.	2,237	4.5
7	HP	U.S.	2,139	4.3
8	EDS	U.S.	1,875	3.8
9	Olivetti	Italy	1,433	2.9
10	Reuters	U.K.	1,397	2.8
	Total Listed		33,312	67.7
	Total Market		49,200	100.0

Source: INPUT

(Blank)

O

Leading Vendors in Local Currency (Pta Millions) — Spain

Exhibit O-1

Software and Services Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	29,995	9.3
2	Andersen Consulting	U.S.	26,405	8.2
3	Eritel	Spain	11,345	3.5
4	Reuters	U.K.	8,080	2.5
5	HP	U.S.	6,980	2.2
6	EDS	U.S.	6,890	2.1
7	SNI	Germany	6,825	2.1
8	Microsoft	U.S.	6,635	2.1
9	Sema	France	6,440	2.0
10	Computer Associates	U.S.	6,295	1.9
11	AT&T	U.S.	6,195	1.9
12	GEIS	U.S.	6,120	1.9
13	CISI	France	6,060	1.9
14	Digital Equipment Corp	U.S.	5,330	1.7
15	GSI	France	5,135	1.6
16	Logic Group	Spain	4,650	1.4
17	Software AG	Germany	4,605	1.4
18	Oracle	U.S.	3,730	1.2
19	Bull	France	3,650	1.1
20	Iberimatica	Spain	3,350	1.0
21	Novell	U.S.	3,185	1.0
22	Unisys	U.S.	3,005	0.9
23	Syseca	France	2,860	0.9
24	Dun & Bradstreet	U.S.	2,685	0.8
25	ICL	U.K.	2,450	0.8
26	SAP	Germany	2,410	0.7
27	Olivetti	Italy	2,325	0.7
28	Intergraph	U.S.	2,160	0.7
29	CGS	France	2,015	0.6
30	Debis Systemhaus	Germany	1,935	0.6
	Total Listed		189,745	58.7
	Total Market		323,000	100.0

Source: INPUT

Exhibit O-2

Professional Services Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Eritel	Spain	12,480	13.8
2	Andersen Consulting	U.S.	10,490	11.6
3	IBM	U.S.	4,990	5.5
4	Sema	France	4,670	5.2
5	Logic Group	Spain	4,650	5.1
6	Iberimatica	Spain	3,350	3.7
7	HP	U.S.	2,390	2.6
8	Digital Equipment Corp	U.S.	2,175	2.4
9	AT&T	U.S.	2,080	2.3
10	CGS	France	2,000	2.2
	Total Listed		49,275	54.6
	Total Market		90,300	100.0

Source: INPUT

Exhibit O-3

Systems Integration Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Andersen Consulting	U.S.	4,750	25.0
2	Digital Equipment Corp	U.S.	2,090	11.0
3=	EDS	U.S.	1,900	10.0
3=	IBM	U.S.	1,900	10.0
5	Page Iberica	Spain	950	5.0
6	Eritel	Spain	565	3.0
7=	Bull	France	485	2.6
7=	ICL	U.K.	485	2.6
9	Syseca	France	470	2.5
10	Logica	U.K.	450	2.4
	Total Listed		14,045	73.9
	Total Market		19,000	100.0

Source: INPUT

Exhibit O-4

Outsourcing Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Sema	France	5,000	41.7
2	Eritel	Spain	1,840	15.3
3	CGS	France	1,450	12.1
4	Andersen Consulting	U.S.	1,055	8.8
5	EDS	U.S.	500	4.2
6	Debis Systemhaus	Germany	385	3.2
7	Bull	France	315	2.6
8=	IBM	U.S.	265	2.2
8=	Unisys	U.S.	265	2.2
8=	Olivetti	U.S.	265	2.2
	Total Listed		11,340	94.5
	Total Market		12,000	100.0

Source: INPUT

Exhibit O-5

Processing Services Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	GEIS	U.S.	1,835	5.3
2	GSI	France	1,025	3.0
3	EDS	U.S.	690	2.0
4	Eritel	Spain	625	1.8
5	Axime	France	465	1.3
6	IBM	U.S.	300	0.9
7	HP	U.S.	280	0.8
8	Unisys	U.S.	240	0.7
9	SafetyNet	U.K.	100	0.3
10	Debis Systemhaus	Germany	90	0.3
	Total Listed		5,650	16.4
	Total Market		34,500	100.0

Source: INPUT

Exhibit O-6

Network Applications Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	GEIS	U.S.	3,200	55.2
2	IBM	U.S.	895	15.4
3	Infonet	Belgium	775	13.4
4	GSI	France	405	7.0
5	Digital Equipment Corp	U.S.	175	3.0
	Total Listed		5,450	94.0
	Total Market		5,800	100.0

Source: INPUT

Exhibit O-7

Electronic Information Services Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Reuters	U.K.	6,220	45.1
2	Dun & Bradstreet	U.S.	1,370	9.9
3	Telerate	U.S.	1,340	9.7
	Total Listed		8,930	64.7
	Total Market		13,800	100.0

Source: INPUT

Exhibit O-8

Systems Software Products Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	17,100	34.8
2	Microsoft	U.S.	3,850	7.8
3	Software AG	Germany	3,730	7.6
4	HP	U.S.	3,280	6.7
5	Novell	U.S.	3,185	6.5
6	Computer Associates	U.S.	2,960	6.0
7	SNI	Germany	2,015	4.1
8=	Digital Equipment Corp	U.S.	1,810	3.7
8=	Oracle	U.S.	1,810	3.7
10	Bull	France	1,295	2.6
	Total Listed		41,035	83.4
	Total Market		49,200	100.0

Source: INPUT

Exhibit O-9

Application Software Products Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Microsoft	U.S.	2,655	6.3
2	IBM	U.S.	2,400	5.7
3	Computer Associates	U.S.	2,205	5.3
4	SAP	Germany	1,500	3.6
5	AT&T	U.S.	1,365	3.3
6	GSI	France	1,130	2.7
7	Lotus	U.S.	1,000	2.4
8	Logic Group	Spain	1,000	2.4
9	Andersen Consulting	U.S.	925	2.2
10	Dun & Bradstreet	U.S.	780	1.9
	Total Listed		14,960	35.6
	Total Market		42,000	100.0

Source: INPUT

Exhibit O-10

Turnkey Systems Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1=	SNI	Germany	2,100	3.7
1=	Intergraph	U.S.	2,100	3.7
3	Eritel	Spain	2,000	3.5
4=	IBM	U.S.	1,200	2.1
4=	Digital Equipment Corp	U.S.	1,200	2.1
6	Reuters	U.K.	750	1.3
7	AT&T	U.S.	700	1.2
8	Syseca	France	430	0.8
9	Olivetti	Italy	420	0.7
10	Sema	France	415	0.7
	Total Listed		11,315	20.1
	Total Market		56,400	100.0

Source: INPUT

Exhibit O-11

Equipment Maintenance Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	12,895	17.1
2	HP	U.S.	6,845	9.1
3	AT&T	U.S.	6,295	8.4
4	SNI	Germany	4,075	5.4
5	Eltec	Spain	3,600	4.8
6	Digital Equipment Corp	U.S.	3,565	4.7
7	Olivetti	Italy	3,420	4.5
8	Memorex Telex	U.S.	3,160	4.2
9	Bull	France	3,080	4.1
10	Unisys	U.S.	1,935	2.6
	Total Listed		48,870	65.0
	Total Market		75,200	100.0

Source: INPUT

Exhibit O-12

Environmental Services Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	2,500	6.2
2	AT&T	U.S.	1,305	3.2
3	Digital Equipment Corp	U.S.	1,215	3.0
4	HP	U.S.	920	2.3
5	Bull	France	665	1.7
6	Unisys	U.S.	475	1.2
7	Eltec	Spain	460	1.1
8	Olivetti	Italy	395	1.0
9	SNI	Germany	340	0.8
10	Getronics	Netherlands	305	0.8
	Total Listed		8,580	21.3
	Total Market		40,300	100.0

Source: INPUT

Exhibit O-13

Information Services Leading Vendors Spain, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	45,395	10.3
2	Andersen Consulting	U.S.	26,405	6.0
3	HP	U.S.	14,745	3.4
4	AT&T	U.S.	13,795	3.1
5	Eritel	Spain	11,345	2.6
6	SNI	Germany	11,240	2.6
7	Digital Equipment Corp	U.S.	10,105	2.3
8	Reuters	U.K.	8,080	1.8
9	Bull	France	7,395	1.7
10	EDS	U.S.	6,890	1.6
	Total Listed		155,395	35.4
	Total Market		439,000	100.0

Source: INPUT

P

Leading Vendors in Local Currency (SK Millions) — Sweden

Exhibit P-1

Software and Services Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Celsius Info. System	Sweden	3,545	14.8
2	IBM	U.S.	1,740	7.3
3	WM-Data	Sweden	1,485	6.2
4	CGS	France	1,390	5.8
5	Sema	France	1,345	5.6
6	Sapia	Sweden	1,065	4.5
7	SKD Foretagen	Sweden	720	3.0
8	EDS	U.S.	585	2.4
9	ICL	U.K.	505	2.1
10	Digital Equipment Corp	U.S.	450	1.9
11	Reuters	U.K.	390	1.6
12	Computer Associates	U.S.	365	1.5
13	P&P	U.K.	365	1.5
14	Lantbruksdata	Sweden	330	1.4
15	Andersen Consulting	U.S.	305	1.3
16	Oracle	U.S.	290	1.2
17	Microsoft	U.S.	255	1.1
18	Tietotehdas	Finland	235	1.0
19	Communicator AB	Sweden	215	0.9
20	Conor Information	Sweden	210	0.9
21	IBS	Sweden	205	0.9
22=	Industri-Matematik	Sweden	180	0.8
22=	SNI	Germany	180	0.8
24	Infonet	Belgium	160	0.7
25	Unisys	U.S.	150	0.6
26	Intergraph	U.S.	120	0.5
27=	Bull	France	105	0.4
27=	AT&T	U.S.	105	0.4
29=	CRS Datacraft	Sweden	100	0.4
29=	Maldata	Sweden	100	0.4
	Total Listed		17,195	71.9
	Total Market		23,900	100.0

Source: INPUT

Exhibit P-2

Professional Services Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Celsius Info. System	Sweden	1,700	17.1
2	CGS	France	500	5.0
3	EDS	U.S.	420	4.2
4	WM-Data	Sweden	335	3.4
5=	Sapia	Sweden	265	2.7
5=	Communicator AB	Sweden	170	1.7
7	IBS	Sweden	165	1.7
8	Sema	France	165	1.7
9=	IBM	U.S.	155	1.6
9=	Oracle	U.S.	145	1.5
	Total Listed		4,020	40.4
	Total Market		9,955	100.0

Source: INPUT

Exhibit P-3

Systems Integration Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	CGS	France	110	29.7
2	IBM	U.S.	100	27.0
3	EDS	U.S.	40	10.8
4	Ericcson	Sweden	30	8.1
5	Bull	France	25	6.8
	Total Listed		305	82.4
	Total Market		370	100.0

Source: INPUT

Exhibit P-4

Outsourcing Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	EDS	U.S.	600	24.6
2	Celsius Info. System	Sweden	470	19.3
3	CGS	France	455	18.7
4	Sema	France	400	16.4
5	IBM	U.S.	240	9.9
	Total Listed		2,165	88.9
	Total Market		2,435	100.0

Source: INPUT

Exhibit P-5

Processing Services Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	SKD Foretagen	Sweden	570	20.0
2	Sapia	Sweden	340	11.9
3	WM-Data	Sweden	165	5.8
4	Conor Information	Sweden	140	4.9
5	Lantbruksdata	Sweden	130	4.6
6	Tietotehdas	Finland	80	2.8
7	CRS Datacraft	Sweden	70	2.5
8	EDS	U.S.	60	2.1
9	Microgen	U.K.	55	1.9
10	Datema	Sweden	45	1.6
	Total Listed		1,655	58.1
	Total Market		2,850	100.0

Source: INPUT

Exhibit P-6

Network Applications Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Infonet	Belgium	160	43.2
2	Celsius Info. System	Sweden	70	18.9
3	Lantbruksdata	Sweden	65	17.6
4	IBM	U.S.	50	13.5
5	GEIS	U.S.	25	6.8
6	Digital Equipment Corp	U.S.	20	5.4
7=	AT&T	U.S.	15	4.1
7=	EDS	U.S.	15	4.1
9	ICL	U.K.	10	2.7
10	Bull	France	5	1.4
	Total Listed		435	117.6
	Total Market		370	100.0

Source: INPUT

Exhibit P-7

Electronic Information Services Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Reuters	U.K.	300	54.5
2	Telerate	U.S.	65	11.8
3	Dun & Bradstreet	U.S.	25	4.5
	Total Listed		390	70.9
	Total Market		550	100.0

Source: INPUT

Exhibit P-8

Systems Software Products Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	965	41.8
2	Computer Associates	U.S.	170	7.4
3	Digital Equipment Corp	U.S.	155	6.7
4	Microsoft	U.S.	145	6.3
5	Oracle	U.S.	140	6.1
6	Novell	U.S.	95	4.1
7	P&P	U.K.	90	3.9
8	ICL	U.K.	80	3.5
9	ASK	U.S.	70	3.0
10	CGS	France	55	2.4
	Total Listed		1,965	85.1
	Total Market		2,310	100.0

Source: INPUT

Exhibit P-9

Application Software Products Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Celsius Info. System	Sweden	685	27.4
2	IBM	U.S.	135	5.4
3	Computer Associates	U.S.	130	5.2
4	WM-Data	Sweden	125	5.0
5	P&P	U.K.	105	4.2
6	Microsoft	U.S.	100	4.0
7	ICL	U.K.	60	2.4
8	SAS	U.S.	55	2.2
9	CGS	France	50	2.0
10	Tietotehdas	Finland	45	1.8
	Total Listed		1,490	59.6
	Total Market		2,500	100.0

Source: INPUT

Exhibit P-10

Turnkey Systems Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Sapia	Sweden	460	17.7
2	Industri-Matematik	Sweden	180	6.9
3	Intergraph	U.S.	120	4.6
4	Digital Equipment Corp	U.S.	100	3.8
5	IBM	U.S.	80	3.1
6	EDS	U.S.	60	2.3
7	SNI	Germany	55	2.1
8	CGS	France	50	1.9
9	Maldata	Sweden	50	1.9
10	Reuters	U.K.	40	1.5
	Total Listed		1,195	46.0
	Total Market		2,600	100.0

Source: INPUT

Exhibit P-11

Equipment Maintenance Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	670	18.4
2	Digital Equipment Corp	U.S.	335	9.2
3	ICL	U.K.	335	9.2
4	WM-Data	U.S.	185	5.1
5	SNI	Germany	125	3.4
6	HP	U.S.	95	2.6
7	Unisys	U.S.	95	2.6
8	Olivetti	Italy	75	2.1
9	AT&T	U.S.	65	1.8
10	Bull	France	60	1.6
	Total Listed		2,040	55.9
	Total Market		3,650	100.0

Source: INPUT

Exhibit P-12

Environmental Services Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	115	5.2
2	IBM	U.S.	75	3.4
3	Unisys	U.S.	25	1.1
4	ICL	U.K.	20	0.9
5	HP	U.S.	15	0.7
6	SNI	Germany	15	0.7
7	AT&T	U.S.	10	0.5
8	Olivetti	Italy	5	0.2
9	Wang	U.S.	5	0.2
10	Datapoint	U.S.	5	0.2
	Total Listed		290	13.2
	Total Market		2,200	100.0

Source: INPUT

Exhibit P-13

Information Services Leading Vendors Sweden, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Celsius Info. System	Sweden	3,545	11.9
2	IBM	U.S.	2,435	8.2
3	WM-Data	Sweden	1,665	5.6
4	CGS	France	1,390	4.7
5	Sema	France	1,345	4.5
6	Sapia	Sweden	1,065	3.6
7	Digital Equipment Corp	U.S.	900	3.0
8	ICL	U.K.	860	2.9
9	SKD Foretagen	Sweden	720	2.4
10	EDS	U.S.	585	2.0
	Total Listed		14,510	48.7
	Total Market		29,800	100.0

Source: INPUT

Q

Leading Vendors in Local Currency (SF Millions) — Switzerland

Exhibit Q-1

Software and Services Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	500	16.6
2	Telekurs	Switzerland	250	8.3
3	Digital Equipment Corp	U.S.	130	4.3
4	Reuters	U.K.	115	3.8
5=	Fides	Switzerland	85	2.8
5=	SNI	Germany	85	2.8
7	AT&T	U.S.	75	2.5
8=	Computer Associates	U.S.	70	2.3
8=	Microsoft	U.S.	70	2.3
10	Unisys	U.S.	55	1.8
11	SAP	Germany	50	1.7
12	Oracle	U.S.	35	1.2
13=	HP	U.S.	30	1.0
13=	Novell	U.S.	30	1.0
13=	ATAG debis Informatik	Switzerland	30	1.0
16=	EDS	U.S.	25	0.8
16=	Andersen Consulting	U.S.	25	0.8
18=	Dun & Bradstreet	U.S.	20	0.7
18=	Bull	France	20	0.7
18=	Delta ST	U.S.	20	0.7
18=	Telerate	U.S.	20	0.7
18=	Lotus	U.S.	20	0.7
23	GSI	France	15	0.5
24=	SAS	U.S.	10	0.3
24=	Raet	Netherlands	10	0.3
24=	Intergraph	U.S.	10	0.3
24=	ICL	U.K.	10	0.3
24=	AC Service	Switzerland	10	0.3
24=	CGI	France	10	0.3
24=	Borland	U.S.	10	0.3
	Total Listed		1,845	61.2
	Total Market		3,015	100.0

Source: INPUT

Exhibit Q-2

Professional Services Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	80	10.9
2	Digital Equipment Corp	U.S.	60	8.2
3	Fides	Switzerland	60	8.2
4	AT&T	U.S.	30	4.1
5	ATAG debis Informatik	Switzerland	30	4.1
6	Delta ST	Switzerland	20	2.7
7	CGS	France	20	2.7
8	Oracle	U.S.	20	2.7
9	SAP	Germany	15	2.0
10	SNI	Germany	15	2.0
	Total Listed		350	47.6
	Total Market		735	100.0

Source: INPUT

Exhibit Q-3

Systems Integration Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	55	34.2
2	Digital Equipment Corp	U.S.	50	30.9
3	Unisys	U.S.	20	12.2
4	EDS	U.S.	20	12.2
5	CGS	France	10	6.5
	Total Listed		155	96.0
	Total Market		161	100.0

Source: INPUT

Exhibit Q-4

Outsourcing Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	15	16.1
2	Digital Equipment Corp	U.S.	12	12.7
3	Telekurs	Switzerland	12	12.7
4	HP	U.S.	10	11.3
5	AC Service	Switzerland	10	10.8
	Total Listed		59	63.5
	Total Market		93	100.0

Source: INPUT

Exhibit Q-5

Processing Services Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Telekurs	Switzerland	135	36.5
2	ATAG debis Informatik	Switzerland	30	8.1
3	Fides	Switzerland	30	8.1
4	IBM	U.S.	5	1.3
5	Unisys	U.S.	5	1.4
	Total Listed		205	55.3
	Total Market		370	100.0

Source: INPUT

Exhibit Q-6

Network Applications Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	15	30.0
2=	Infonet	Belgium	5	10.0
2=	Digital Equipment Corp	U.S.	5	10.0
2=	GEIS	U.S.	5	10.0
2=	GSI	France	5	10.0
	Total Listed		35	70.0
	Total Market		50	100.0

Source: INPUT

Exhibit Q-7

Electronic Information Services Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Telekurs	Switzerland	55	37.9
2	Reuters	U.K	40	27.6
3	Telerate	U.S.	20	13.8
4	Dun & Bradstreet	U.S.	10	6.9
	Total Listed		125	86.2
	Total Market		145	100.0

Source: INPUT

Exhibit Q-8

Systems Software Products Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	270	46.6
2	Digital Equipment Corp	U.S.	45	7.8
3	Microsoft	U.S.	40	6.9
4	Computer Associates	U.S.	35	6.0
5	Novell	U.S.	30	5.2
6	SNI	Germany	25	4.3
7=	Unisys	U.S.	20	3.4
7=	Oracle	U.S.	20	3.4
9=	HP	U.S.	15	2.5
9=	AT&T	U.S.	15	2.6
	Total Listed		515	88.8
	Total Market		580	100.0

Source: INPUT

Exhibit Q-9

Application Software Products Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	40	9.9
2=	SAP	Germany	30	7.4
2=	Microsoft	U.S.	30	7.4
4	Computer Associates	U.S.	25	6.3
5=	Lotus	U.S.	15	3.7
5=	AT&T	U.S.	15	3.7
7=	SAS	U.S.	10	2.5
7=	SNI	Germany	10	2.5
9=	Dun & Bradstreet	U.S.	5	1.2
9=	Han - Dataport	Germany	5	1.2
	Total Listed		185	45.8
	Total Market		405	100.0

Source: INPUT

Exhibit Q-10

Turnkey Systems Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	SNI	Germany	40	6.3
2	Fides	Switzerland	25	4.0
3	IBM	U.S.	25	4.0
4	AT&T	U.S.	20	3.1
5	Intergraph	U.S.	15	2.4
6	Digital Equipment Corp	U.S.	10	1.7
7	Reuters	U.K.	10	1.7
8	Raet	Netherlands	5	0.8
9	SAP	Germany	5	0.8
10	Software AG	Germany	5	0.8
	Total Listed		161	25.5
	Total Market		630	100.0

Source: INPUT

Exhibit Q-11

Equipment Maintenance Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	100	16.9
2	AT&T	U.S.	75	12.7
3	SNI	Germany	50	8.5
4=	Digital Equipment Corp	U.S.	35	5.9
4=	Unisys	U.S.	35	5.9
6	HP	U.S.	30	5.1
7=	ICL	U.K.	15	2.5
7=	Memorex Telex	U.S.	15	2.5
7=	Bull	France	15	2.5
10	Wang	U.S.	10	1.7
	Total Listed		380	64.4
	Total Market		590	100.0

Source: INPUT

Exhibit Q-12

Environmental Services Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1=	AT&T	U.S.	15	3.4
1=	IBM	U.S.	15	3.4
3=	Digital Equipment Corp	U.S.	10	2.2
3=	Unisys	U.S.	10	2.2
5	HP	U.S.	5	1.1
	Total Listed		55	12.4
	Total Market		445	100.0

Source: INPUT

Exhibit Q-13

Information Services Leading Vendors Switzerland, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	585	14.4
2	Telekurs	Switzerland	250	6.2
3	Digital Equipment Corp	U.S.	180	4.4
4	AT&T	U.S.	160	4.0
5	SNI	Germany	135	3.3
6	Reuters	U.K.	115	2.8
7	Unisys	U.S.	95	2.3
8	Fides	Switzerland	85	2.1
9=	Computer Associates	U.S.	70	1.7
9=	Microsoft	U.S.	70	1.7
	Total Listed		1,745	43.1
	Total Market		4,050	100.0

Source: INPUT

R

Leading Vendors in Local Currency (PS Millions) — United Kingdom

Exhibit R-1

Software and Services Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	815	9.4
2	ICL	U.K.	705	8.1
3	Digital Equipment Corp	U.S.	400	4.6
4	Reuters	U.K.	315	3.6
5	EDS	U.S.	265	3.0
6=	Sema	France	250	2.9
6=	Hoskyns	France	250	2.9
8	Andersen Consulting	U.S.	245	2.8
9	AT&T	U.S.	205	2.4
10	ACT	U.K.	160	1.8
11=	P&P	U.K.	155	1.8
11=	Oracle	U.S.	155	1.8
13	CSC	U.S.	150	1.7
14	Syntegra	U.K.	140	1.6
15=	Microsoft	U.S.	130	1.5
15=	Bull	France	130	1.5
17	Logica	U.K.	125	1.4
18	Computer Associates	U.S.	105	1.2
19	Cray Electronics	U.S.	100	1.1
20	HP	U.S.	95	1.1
21=	Misys	U.K.	90	1.0
21=	DataSciences	U.K.	90	1.0
23	MDIS	U.S.	85	1.0
24	Unisys	U.S.	80	0.9
25	Easams	U.K.	75	0.9
26	Coopers & Lybrand	U.S.	70	0.8
27=	Telerate	U.S.	55	0.6
27=	SNI	Germany	55	0.6
29=	Dun & Bradstreet	U.S.	50	0.6
29=	Capita Group	U.K.	50	0.6
	Total Listed		5,595	64.3
	Total Market		8,700	100.0

Source: INPUT

Exhibit R-2

Professional Services Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	ICL	U.K.	180	9.4
2	IBM	U.S.	115	6.0
3	Sema	France	95	5.0
4	Andersen Consulting	U.S.	90	4.7
5	Oracle	U.S.	75	3.9
6	Coopers & Lybrand	U.K.	70	3.6
7=	Logica	U.K.	65	3.4
7=	Digital Equipment Corp	U.S.	65	3.4
9	Cray Electronics	U.S.	60	3.1
10	HP	U.S.	55	2.9
	Total Listed		870	45.3
	Total Market		1,920	100.0

Source: INPUT

Exhibit R-3

Systems Integration Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	150	17.2
2	ICL	U.K.	110	12.6
3	Andersen Consulting	U.S.	75	8.5
4	Syntegra	U.K.	70	8.0
5=	Bull	France	60	6.9
5=	EDS	U.S.	60	6.9
7	Sema	France	50	5.7
8	Hoskyns	France	45	5.1
9	Digital Equipment Corp	U.S.	40	4.6
10	Logica	U.K.	35	4.0
	Total Listed		695	79.4
	Total Market		875	100.0

Source: INPUT

Exhibit R-4

Outsourcing Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	Hoskyns	U.K.	125	12.3
2	EDS	U.S.	120	11.8
3	ICL	U.K.	100	9.8
4	Sema	France	90	8.8
5	CSC	U.S.	70	6.9
6=	Andersen Consulting	U.S.	65	6.4
6=	DataSciences	U.K.	65	6.4
8	AT&T Istel	U.S.	60	5.9
9=	Digital Equipment Corp	U.S.	45	4.4
9=	Capita group	U.K.	45	4.4
	Total Listed		785	77.0
	Total Market		1,020	100.0

Source: INPUT

Exhibit R-5

Processing Services Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	MR Group	U.K.	40	7.0
2	Centrefile	U.K.	30	5.2
3	Microgen	U.K.	25	4.4
4	EDS	U.S.	20	3.5
5	CSC	U.S.	20	3.5
6	ADP	U.K.	15	2.6
7	GEIS	U.S.	10	1.8
8	DataSciences	U.K.	10	1.8
9	IBM	U.S.	10	1.8
10	AT&T	U.S.	5	0.9
	Total Listed		185	32.4
	Total Market		570	100.0

Source: INPUT

Exhibit R-6

Network Applications Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	(Estimated Sector Revenue PS Millions)	Market Share(%)
1	AT&T	U.S.	40	14.9
2	IBM	U.S.	35	13.0
3	Infonet	U.K.	25	9.3
4	GEIS	U.S.	15	5.6
5=	Syntegra	U.K.	10	3.7
5=	Digital Equipment Corp	U.S.	10	3.7
7=	ICL	U.K.	5	1.9
7=	EDS	U.S.	5	1.9
7=	GSI	France	5	1.9
7=	Bull	France	5	1.9
	Total Listed		155	57.5
	Total Market		270	100.0

Source: INPUT

Exhibit R-7

Electronic Information Services Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue(PS Millions)	Market Share(%)
1	Reuters	U.K.	240	36.9
2	Telerate	U.S.	55	8.5
3=	Citicorp	U.S.	35	5.4
3=	Extel	U.K.	35	5.4
5=	Dun & Bradstreet	U.S.	25	3.8
5=	ADP	U.S.	25	3.8
7	Quick	U.K.	20	3.1
8=	Mead	U.S.	15	2.3
8=	Infolink	Belgium	15	2.3
10	Infocheck	U.K.	10	1.5
	Total Listed		475	73.1
	Total Market		650	100.0

Source: INPUT

Exhibit R-8

Systems Software Products Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	400	32.0
2=	Microsoft	U.S.	75	6.0
2=	Oracle	U.S.	75	6.0
4=	Digital Equipment Corp	U.S.	65	5.2
4=	ICL	U.K.	65	5.2
6	Computer Associates	U.S.	50	4.0
7	HP	U.S.	45	3.6
8=	Novell	U.S.	40	3.2
8=	P&P	U.K.	40	3.2
10	Informix	U.S.	30	2.4
	Total Listed		885	70.8
	Total Market		1,250	100.0

Source: INPUT

Exhibit R-9

Application Software Products Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	ACT Group	U.K.	80	9.7
2	IBM	U.S.	55	6.7
3=	Microsoft	U.S.	50	6.1
3=	ICL	U.K.	50	6.1
5	P&P	U.K.	45	5.5
6	Computer Associates	U.S.	35	4.3
7	Peterborough	U.K.	30	3.7
8	Autodesk	U.S.	25	3.0
9	SAS	U.S.	20	2.4
10	Lotus	U.S.	15	1.8
	Total Listed		404	49.3
	Total Market		820	100.0

Source: INPUT

Exhibit R-10

Turnkey Systems Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	MDIS	U.S.	50	3.7
2	Cray Electronics	U.S.	40	2.9
3	JBA	U.K.	40	2.9
4=	Reuters	U.K.	35	2.6
4=	Intergraph	U.S.	35	2.6
4=	IBM	U.S.	35	2.6
7=	Misys	U.K.	30	2.2
7=	Kalamazoo	U.K.	30	2.2
9=	AT&T	U.S.	20	1.5
9=	Digital Equipment Corp	U.S.	20	1.5
	Total Listed		335	24.6
	Total Market		1,365	100.0

Source: INPUT

Exhibit R-11

Equipment Maintenance Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.K.	200	13.7
2	ICL	U.K.	190	13.0
3	Digital Equipment Corp	U.K.	150	10.3
4	Granada	U.K.	95	6.5
5	HP	U.K.	90	6.2
6=	Unisys	U.K.	50	3.4
6=	Memorex Telex	U.S.	50	3.4
6=	Bull	France	50	3.4
9	AT&T	U.K.	45	3.1
10	Olivetti	Italy	35	2.4
	Total Listed		955	65.4
	Total Market		1,460	100.0

Source: INPUT

Exhibit R-12

Environmental Services Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	Digital Equipment Corp	U.S.	50	5.5
2	ICL	U.K.	30	3.3
3	IBM	U.S.	25	2.7
4	Unisys	U.S.	15	1.6
5	HP	U.S.	10	1.1
6	AT&T	U.S.	10	1.1
7	SNI	Germany	10	1.1
8	Bull	France	5	0.5
9	Olivetti	Italy	5	0.5
10	ACT Group	U.K.	5	0.5
	Total Listed		165	18.1
	Total Market		910	100.0

Source: INPUT

Exhibit R-13

Information Services Leading Vendors United Kingdom, 1994

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	930	8.5
2	ICL	U.K.	635	5.8
3	Digital Equipment Corp	U.S.	400	3.6
4	Reuters	U.K.	315	2.9
5	AT&T	U.S.	250	2.3
6	Sema	France	225	2.0
7=	Andersen Consulting	U.S.	220	2.0
7=	Hoskyns	France	220	2.0
9	HP	U.S.	195	1.8
10	EDS	U.S.	190	1.7
	Total Listed		3,580	32.5
	Total Market		11,000	100.0

Source: INPUT