

INPUT

STRATEGIC MARKET PERSPECTIVE

European Software and  
Services Market –  
Competitive Analysis 1996

Market Analysis Programme – Europe





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**European Software &  
Services Market —  
Competitive Analysis, 1996**

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- Outsourcing options
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# 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.

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# Table of Contents

<b>I</b>	<b>Introduction</b>	<b>1</b>
	A. Scope and Objectives	
	B. Methodology	2
	C. Report Structure	5
	D. Related Reports	5
<b>II</b>	<b>Executive Summary</b>	<b>7</b>
	A. American Players' European Revenues and Profit Growth Continue to Impress	7
	B. Some Indigenous European Players Return to Profit, others Forced to Restructure	9
	C. National Markets Continue to Consolidate, with IBM Still Dominating	10
	D. Telecommunications Alliances Set Platform to Capitalise on Internet-based IT Services	13
	E. Competitive Structure of European Marketplace	15
<b>III</b>	<b>Country-Specific Competitive Analysis</b>	<b>19</b>
	A. The Four Major Economies	20
	B. The Nordic Region	25
	C. Eastern and Central Europe	27
	D. Netherlands, Belgium, Switzerland, Austria and Spain	30
	E. Merger and Acquisition Activity	35
<b>IV</b>	<b>Competitive Profiles of 10 Leading Players</b>	<b>39</b>
	A. IBM	39
	B. Cap Gemini Sogeti	42
	C. SNI	45
	D. EDS	48
	E. Digital	51
	F. Microsoft	54
	G. Andersen Consulting	56
	H. ICL	59
	I. Bull	62
	J. Computer Associates	65

<b>A</b>	<b>Leading Vendors (\$ Millions) — Europe</b>	<b>71</b>
<b>B</b>	<b>Leading Vendors in Local Currency (Sch Millions) — Austria</b>	<b>79</b>
<b>C</b>	<b>Leading Vendors in Local Currency (BF Millions) — Belgium</b>	<b>87</b>
<b>D</b>	<b>Leading Vendors in Local Currency (DK Millions) — Denmark</b>	<b>95</b>
<b>E</b>	<b>Leading Vendors in Local Currency (\$ Millions) — Central &amp; Eastern Europe</b>	<b>103</b>
<b>F</b>	<b>Leading Vendors in Local Currency (FM Millions) — Finland</b>	<b>105</b>
<b>G</b>	<b>Leading Vendors in Local Currency (FF Millions) — France</b>	<b>113</b>
<b>H</b>	<b>Leading Vendors in Local Currency (DM Millions) — Germany</b>	<b>121</b>
<b>I</b>	<b>Leading Vendors in Local Currency (Dra Millions) — Greece</b>	<b>129</b>
<b>J</b>	<b>Leading Vendors in Local Currency (IR £ Millions) — Ireland</b>	<b>137</b>
<b>K</b>	<b>Leading Vendors in Local Currency (Lira Billions) — Italy</b>	<b>141</b>
<b>L</b>	<b>Leading Vendors in Local Currency (Dfl Millions) — Netherlands</b>	<b>149</b>



<b>M</b>	<b>Leading Vendors in Local Currency (NK Millions) — Norway</b>	<b>157</b>
<b>N</b>	<b>Leading Vendors in Local Currency (Esc Millions) — Portugal</b>	<b>165</b>
<b>O</b>	<b>Leading Vendors in Local Currency (Pta Millions) — Spain</b>	<b>173</b>
<b>P</b>	<b>Leading Vendors in Local Currency (SK Millions) — Sweden</b>	<b>181</b>
<b>Q</b>	<b>Leading Vendors in Local Currency (SF Millions) — Switzerland</b>	<b>189</b>
<b>R</b>	<b>Leading Vendors in Local Currency (PS Millions) — United Kingdom</b>	<b>197</b>
<b>S</b>	<b>Exchange Rates used in Calculations</b>	<b>205</b>

# List of Exhibits

<b>I</b>		
-1	Country Market Sizings	3
<hr/>		
<b>II</b>		
-1	Top Vendors by Delivery Mode — Four Major Economies	12
-2	Telecommunications/IT Vendor Alliances	14
-3	Competitive Market Forces	15
-4	Acquisitions of Internet-based Companies by Major Players 1995/6	17
<hr/>		
<b>III</b>		
-1	1995 Country Market Sizes for Software & Services	19
-2	Leading Software & Services Vendors, France 1995	21
-3	Leading Software & Services Vendors, Germany 1995	22
-4	Leading Software & Services Vendors, UK 1995	23
-5	Leading Software & Services Vendors, Italy 1995	24
-6	Leading Software & Services Vendors, Sweden 1995	25
-7	Leading Software & Services Vendors, Denmark 1995	26
-8	Leading Software & Services Vendors, Norway 1995	26
-9	Leading Software & Services Vendors, Finland 1995	27
-10	Leading Software & Services Vendors, Central & Eastern Europe 1995	28
-11	Leading Software & Services Vendors, Netherlands 1995	30
-12	Leading Software & Services Vendors, Belgium 1995	31
-13	Leading Software & Services Vendors, Switzerland 1995	32
-14	Leading Software & Services Vendors, Austria 1995	33
-15	Leading Software & Services Vendors, Spain 1995	34
-16	European Acquisition by Type of Business of Seller (first half of 1996 by Number of Transactions)	36
-17	Key European Acquisitions During October 1995-May 1996	37
-18	Key European Acquisitions During June 1996-December 1996	38
<hr/>		
<b>IV</b>		
-1	IBM — 1995 Total European Revenues	40
-2	IBM — 1995 Software & Services Revenues by Delivery Mode	40
-3	IBM — 1995 Software & Services Revenues by Vertical Market	41
-4	IBM — Five Year Financial Summary (IS\$ Millions)	41
-5	IBM — Analysis of European Profit after Tax	42
-6	Cap Gemini Sogeti — 1995 Software & Services Revenues by Delivery Mode	43
-7	Cap Gemini Sogeti — 1995 Software & Services Revenues by Vertical Market	43
-8	Cap Gemini Sogeti — Five Year Financial Summary (FF Millions)	44
-9	Cap Gemini Sogeti — Analysis of European Revenues	44
-10	SNI — 1995 Total European Revenues	45



-11	SNI — 1995 Software & Services Non-captive Revenues by Delivery Mode	46
-12	SNI — 1995 Software & Services Revenues by Vertical Market	46
-13	SNI — Five Year Financial Summary (DM Millions)	47
-14	SNI — Analysis of European Revenues	47
-15	EDS — 1995 All European Software & Services Revenues	48
-16	EDS — 1995 Non-captive Software & Services Revenues by Delivery Mode	49
-17	EDS — 1995 Software & Services Revenues by Vertical Market	49
-18	EDS — Five Year Financial Summary (US\$ Millions)	50
-19	EDS — Analysis of Non-captive European Revenues	50
-20	Digital — 1995 Total European Revenues	51
-21	Digital — 1995 Software & Services Revenues by Delivery Mode	52
-22	Digital — 1995 Software & Services Revenues by Vertical Market	52
-23	Digital — Five Year Financial Summary (US\$ Millions)	53
-24	Digital — Analysis of European Revenues	53
-25	Microsoft — 1995 Software & Services Revenues by Delivery Mode	54
-26	Microsoft — Five Year Financial Summary (US\$ Millions)	55
-27	Microsoft — Analysis of European Revenues (US\$ Millions)	55
-28	Andersen Consulting — 1995 Software & Services Revenues by Delivery Mode	56
-29	Andersen Consulting — 1995 Software & Services Revenues by Vertical Market	57
-30	Andersen Consulting — Five Year Financial Summary (US\$ Millions)	57
-31	Andersen Consulting — Analysis of European Revenues	58
-32	ICL — 1995 Total European Revenues	59
-33	ICL — 1995 Software & Services Revenues by Delivery Mode	59
-34	ICL — 1995 Software & Services Revenues by Vertical Market	60
-35	ICL — Five Year Financial Summary (PS Millions)	60
-36	ICL — Analysis of European Revenues	61
-37	Bull — 1995 Total European Revenues	62
-38	Bull — 1995 Software & Services Revenues by Delivery Mode	63
-39	Bull — 1995 Software & Services Revenues by Vertical Market	63
-40	Bull — Five Year Financial Summary (FF Millions)	64
-41	Bull — Analysis of European Revenues (FF Millions)	64
-42	Computer Associates — 1995 Software & Services Revenues by Delivery Mode	65

-43	Computer Associates — 1995 Software & Services Revenues by Vertical Market	66
-44	Computer Associates — Five Year Financial Summary (US\$ Millions)	66
-45	Computer Associates — Analysis of European Revenues	67
<hr/>		
<b>A</b>		
-1	Software and Services Leading Vendors Europe, 1995	71
-2	Professional Services Leading Vendors Europe, 1995	72
-3	Systems Integration Leading Vendors Europe, 1995	72
-4	Outsourcing Leading Vendors Europe, 1995	73
-5	Processing Services Leading Vendors Europe, 1995	73
-6	Network Applications Leading Vendors Europe, 1995	74
-7	Electronic Information Services Leading Vendors Europe, 1995	74
-8	Systems Software Products Leading Vendors Europe, 1995	75
-9	Application Software Products Leading Vendors Europe, 1995	75
-10	Turnkey Systems Leading Vendors Europe, 1995	76
-11	Equipment Maintenance Leading Vendors Europe, 1995	76
-12	Environmental Services Leading Vendors Europe, 1995	77
-13	Information Services Leading Vendors Europe, 1995	77
<hr/>		
<b>B</b>		
-1	Software and Services Leading Vendors Austria, 1995	80
-2	Professional Services Leading Vendors Austria, 1995	81
-3	Systems Integration Leading Vendors Austria, 1995	81
-4	Outsourcing Leading Vendors Austria, 1995	82
-5	Processing Services Leading Vendors Austria, 1995	82
-6	Network Applications Leading Vendors Austria, 1995	83
-7	Electronic Information Services Leading Vendors Austria, 1995	83
-8	Systems Software Products Leading Vendors Austria, 1995	84
-9	Application Software Products Leading Vendors Austria, 1995	84
-10	Turnkey Systems Leading Vendors Austria, 1995	85
-11	Equipment Maintenance Leading Vendors Austria, 1995	85
-12	Environmental Services Leading Vendors Austria, 1995	86
-13	Information Services Leading Vendors Austria, 1995	86
<hr/>		
<b>C</b>		
-1	Software and Services Leading Vendors Belgium, 1995	88
-2	Professional Services Leading Vendors Belgium, 1995	89
-3	Systems Integration Leading Vendors Belgium, 1995	89
-4	Outsourcing Leading Vendors Belgium, 1995	90
-5	Processing Services Leading Vendors Belgium, 1995	90
-6	Network Applications Leading Vendors Belgium, 1995	91
-7	Electronic Information Services Leading Vendors Belgium, 1995	91
-8	Systems Software Products Leading Vendors Belgium, 1995	92
-9	Application Software Products Leading Vendors Belgium, 1995	92
-10	Turnkey Systems Leading Vendors Belgium, 1995	93
-11	Equipment Maintenance Leading Vendors Belgium, 1995	93
-12	Environmental Services Leading Vendors Belgium, 1995	94
-13	Information Services Leading Vendors Belgium, 1995	94



**D**

-1	Software and Services Leading Vendors Denmark, 1995	96
-2	Professional Services Leading Vendors Denmark, 1995	97
-3	Systems Integration Leading Vendors Denmark, 1995	97
-4	Outsourcing Leading Vendors Denmark, 1995	98
-5	Processing Services Leading Vendors Denmark, 1995	98
-6	Network Applications Leading Vendors Denmark, 1995	99
-7	Electronic Information Services Leading Vendors Denmark, 1995	99
-8	Systems Software Products Leading Vendors Denmark, 1995	100
-9	Application Software Products Leading Vendors Denmark, 1995	100
-10	Turnkey Systems Leading Vendors Denmark, 1995	101
-11	Equipment Maintenance Leading Vendors Denmark, 1995	101
-12	Environmental Services Leading Vendors Denmark, 1995	102
-13	Information Services Leading Vendors Denmark, 1995	102

**E**

-1	Software and Services Leading Vendors Central and Eastern Europe, 1995	104
-2	Information Services Leading Central and Eastern Europe, 1995	104

**F**

-1	Software and Services Leading Vendors Finland, 1995	106
-2	Professional Services Leading Vendors Finland, 1995	107
-3	Systems Integration Leading Vendors Finland, 1995	107
-4	Outsourcing Leading Vendors Finland, 1995	108
-5	Processing Services Leading Vendors Finland, 1995	108
-6	Network Applications Leading Vendors Finland, 1995	109
-7	Electronic Information Services Leading Vendors Finland, 1995	109
-8	Systems Software Products Leading Vendors Finland, 1995	110
-9	Application Software Products Leading Vendors Finland, 1995	110
-10	Turnkey Systems Leading Vendors Finland, 1995	111
-11	Equipment Maintenance Leading Vendors Finland, 1995	111
-12	Environmental Services Leading Vendors Finland, 1995	112
-13	Information Services Leading Vendors Finland, 1995	112

**G**

-1	Software and Services Leading Vendors France, 1995	114
-2	Professional Services Leading Vendors France, 1995	115
-3	Systems Integration Leading Vendors France, 1995	115
-4	Outsourcing Leading Vendors France, 1995	116
-5	Processing Services Leading Vendors France, 1995	116
-6	Network Applications Leading Vendors France, 1995	117
-7	Electronic Information Services Leading Vendors France, 1995	117
-8	Systems Software Products Leading Vendors France, 1995	118

-9	Application Software Products Leading Vendors France, 1995	118
-10	Turnkey Systems Leading Vendors France, 1995	119
-11	Equipment Maintenance Leading Vendors France, 1995	119
-12	Environmental Services Leading Vendors France, 1995	120
-13	Information Services Leading Vendors France, 1995	120

**H**

-1	Software and Services Leading Vendors Germany, 1995	122
-2	Professional Services Leading Vendors Germany, 1995	123
-3	Systems Integration Leading Vendors Germany, 1995	123
-4	Outsourcing Leading Vendors Germany, 1995	124
-5	Processing Services Leading Vendors Germany, 1995	124
-6	Network Applications Leading Vendors Germany, 1995	125
-7	Electronic Information Services Leading Vendors Germany, 1995	125
-8	Systems Software Products Leading Vendors Germany, 1995	126
-9	Application Software Products Leading Vendors Germany, 1995	126
-10	Turnkey Systems Leading Vendors Germany, 1995	127
-11	Equipment Maintenance Leading Vendors Germany, 1995	127
-12	Environmental Services Leading Vendors Germany, 1995	128
-13	Information Services Leading Vendors Germany, 1995	128

**I**

-1	Software and Services Leading Vendors Greece, 1995	130
-2	Professional Services Leading Vendors Greece, 1995	131
-3	Systems Integration Leading Vendors Greece, 1995	131
-4	Processing Services Leading Vendors Greece, 1995	132
-5	Network Applications Leading Vendors Greece, 1995	132
-6	Electronic Information Services Leading Vendors Greece, 1995	133
-7	Systems Software Products Leading Vendors Greece, 1995	133
-8	Application Software Products Leading Vendors Greece, 1995	134
-9	Turnkey Systems Leading Vendors Greece, 1995	134
-10	Equipment Maintenance Leading Vendors Greece, 1995	135
-11	Environmental Services Leading Vendors Greece, 1995	135
-12	Information Services Leading Vendors Greece, 1995	136

**J**

-1	Software and Services Leading Vendors Ireland, 1995	138
-2	Professional Services Leading Vendors Ireland, 1995	138
-3	Systems Integration Leading Vendors Ireland, 1995	139
-4	Application Software Leading Vendors Ireland, 1995	139
-5	Information Services Leading Vendors Ireland, 1995	140

**K**

-1	Software and Services Leading Vendors Italy, 1995	142
-2	Professional Services Leading Vendors Italy, 1995	143
-3	Systems Integration Leading Vendors Italy, 1995	143
-4	Outsourcing Leading Vendors Italy, 1995	144
-5	Processing Services Leading Vendors Italy, 1995	144



-6	Network Applications Leading Vendors Italy, 1995	145
-7	Electronic Information Services Leading Vendors Italy, 1995	145
-8	Systems Software Products Leading Vendors Italy, 1995	146
-9	Application Software Products Leading Vendors Italy, 1995	146
-10	Turnkey Systems Leading Vendors Italy, 1995	147
-11	Equipment Maintenance Leading Vendors Italy, 1995	147
-12	Environmental Services Leading Vendors Italy, 1995	148
-13	Information Services Leading Vendors Italy, 1995	148

## L

-1	Software and Services Leading Vendors Netherlands, 1995	150
-2	Professional Services Leading Vendors Netherlands, 1995	151
-3	Systems Integration Leading Vendors Netherlands, 1995	151
-4	Outsourcing Leading Vendors Netherlands, 1995	152
-5	Processing Services Leading Vendors Netherlands, 1995	152
-6	Network Applications Leading Vendors Netherlands, 1995	153
-7	Electronic Information Services Leading Vendors Netherlands, 1995	153
-8	Systems Software Products Leading Vendors Netherlands, 1995	154
-9	Application Software Products Leading Vendors Netherlands, 1995	154
-10	Turnkey Systems Leading Vendors Netherlands, 1995	155
-11	Equipment Maintenance Leading Vendors Netherlands, 1995	155
-12	Environmental Services Leading Vendors Netherlands, 1995	156
-13	Information Services Leading Vendors Netherlands, 1995	156

## M

-1	Software and Services Leading Vendors Norway, 1995	158
-2	Professional Services Leading Vendors Norway, 1995	159
-3	Systems Integration Leading Vendors Norway, 1995	159
-4	Outsourcing Leading Vendors Norway, 1995	160
-5	Processing Services Leading Vendors Norway, 1995	160
-6	Network Applications Leading Vendors Norway, 1995	161
-7	Electronic Information Services Leading Vendors Norway, 1995	161
-8	Systems Software Products Leading Vendors Norway, 1995	162
-9	Application Software Products Leading Vendors Norway, 1995	162
-10	Turnkey Systems Leading Vendors Norway, 1995	163
-11	Equipment Maintenance Leading Vendors Norway, 1995	163
-12	Environmental Services Leading Vendors Norway, 1995	164
-13	Information Services Leading Vendors Norway, 1995	164

## N

-1	Software and Services Leading Vendors Portugal, 1995	166
-2	Professional Services Leading Vendors Portugal, 1995	167
-3	Systems Integration Leading Vendors Portugal, 1995	167
-4	Processing Services Leading Vendors Portugal, 1995	168
-5	Electronic Information Services Leading Vendors Portugal, 1995	168
-6	Systems Software Products Leading Vendors Portugal, 1995	169



-7	Application Software Products Leading Vendors Portugal, 1995	169
-8	Turnkey Systems Leading Vendors Portugal, 1995	170
-9	Equipment Maintenance Leading Vendors Portugal, 1995	170
-10	Environmental Services Leading Vendors Portugal, 1995	171
-11	Information Services Leading Vendors Portugal, 1995	171

## O

-1	Software and Services Leading Vendors Spain, 1995	174
-2	Professional Services Leading Vendors Spain, 1995	175
-3	Systems Integration Leading Vendors Spain, 1995	175
-4	Outsourcing Leading Vendors Spain, 1995	176
-5	Processing Services Leading Vendors Spain, 1995	176
-6	Network Applications Leading Vendors Spain, 1995	177
-7	Electronic Information Services Leading Vendors Spain, 1995	177
-8	Systems Software Products Leading Vendors Spain, 1995	178
-9	Application Software Products Leading Vendors Spain, 1995	178
-10	Turnkey Systems Leading Vendors Spain, 1995	179
-11	Equipment Maintenance Leading Vendors Spain, 1995	179
-12	Environmental Services Leading Vendors Spain, 1995	180
-13	Information Services Leading Vendors Spain, 1995	180

## P

-1	Software and Services Leading Vendors Sweden, 1995	182
-2	Professional Services Leading Vendors Sweden, 1995	183
-3	Systems Integration Leading Vendors Sweden, 1995	183
-4	Outsourcing Leading Vendors Sweden, 1995	184
-5	Processing Services Leading Vendors Sweden, 1995	184
-6	Network Applications Leading Vendors Sweden, 1995	185
-7	Electronic Information Services Leading Vendors Sweden, 1995	185
-8	Systems Software Products Leading Vendors Sweden, 1995	186
-9	Application Software Products Leading Vendors Sweden, 1995	186
-10	Turnkey Systems Leading Vendors Sweden, 1995	187
-11	Equipment Maintenance Leading Vendors Sweden, 1995	187
-12	Environmental Services Leading Vendors Sweden, 1995	188
-13	Information Services Leading Vendors Sweden, 1995	188

## Q

-1	Software and Services Leading Vendors Switzerland, 1995	190
-2	Professional Services Leading Vendors Switzerland, 1995	191
-3	Systems Integration Leading Vendors Switzerland, 1995	191
-4	Outsourcing Leading Vendors Switzerland, 1995	192
-5	Processing Services Leading Vendors Switzerland, 1995	192
-6	Network Applications Leading Vendors Switzerland, 1995	193
-7	Electronic Information Services Leading Vendors Switzerland, 1995	193
-8	Systems Software Products Leading Vendors Switzerland, 1995	194

-9	Application Software Products Leading Vendors Switzerland, 1995	194
-10	Turnkey Systems Leading Vendors Switzerland, 1995	195
-11	Equipment Maintenance Leading Vendors Switzerland, 1995	195
-12	Environmental Services Leading Vendors Switzerland, 1995	196
-13	Information Services Leading Vendors Switzerland, 1995	196

**R**

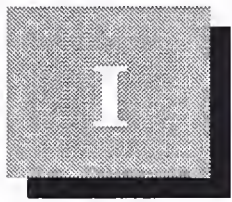
-1	Software and Services Leading Vendors United Kingdom, 1995	198
-2	Professional Services Leading Vendors United Kingdom, 1995	199
-3	Systems Integration Leading Vendors United Kingdom, 1995	199
-4	Outsourcing Leading Vendors United Kingdom, 1995	200
-5	Processing Services Leading Vendors United Kingdom, 1995	200
-6	Network Applications Leading Vendors United Kingdom, 1995	201
-7	Electronic Information Services Leading Vendors United Kingdom, 1995	201
-8	Systems Software Products Leading Vendors United Kingdom, 1995	202
-9	Application Software Products Leading Vendors United Kingdom, 1995	202
-10	Turnkey Systems Leading Vendors United Kingdom, 1995	203
-11	Equipment Maintenance Leading Vendors United Kingdom, 1995	203
-12	Environmental Services Leading Vendors United Kingdom, 1995	204
-13	Information Services Leading Vendors United Kingdom, 1995	204

**S**

-1	US Dollar Exchange Rates	206
----	--------------------------	-----

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# Introduction

## A

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### Scope and Objectives

The objectives of this report are:

- To analyse the competitive environment within the European IT services market
- To examine players 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.

In order to meet these objectives, INPUT reports on open market opportunities within the European market, ensuring that only revenues derived from sales within a country are included in the vendor revenues for that country. Correspondingly, adjustments are made to eliminate errors due to distribution channel overlap or mark-up and to ensure that **captive revenues are excluded.**

Captive revenues are defined as revenues which a vendor receives from within the vendor's parent group of companies. Most companies do not have captive revenues, but notable exceptions are debis Systemhaus, Siemens Nixdorf, EDS and Alcatel TiTN.

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

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

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.

## **B**

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### **Methodology**

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

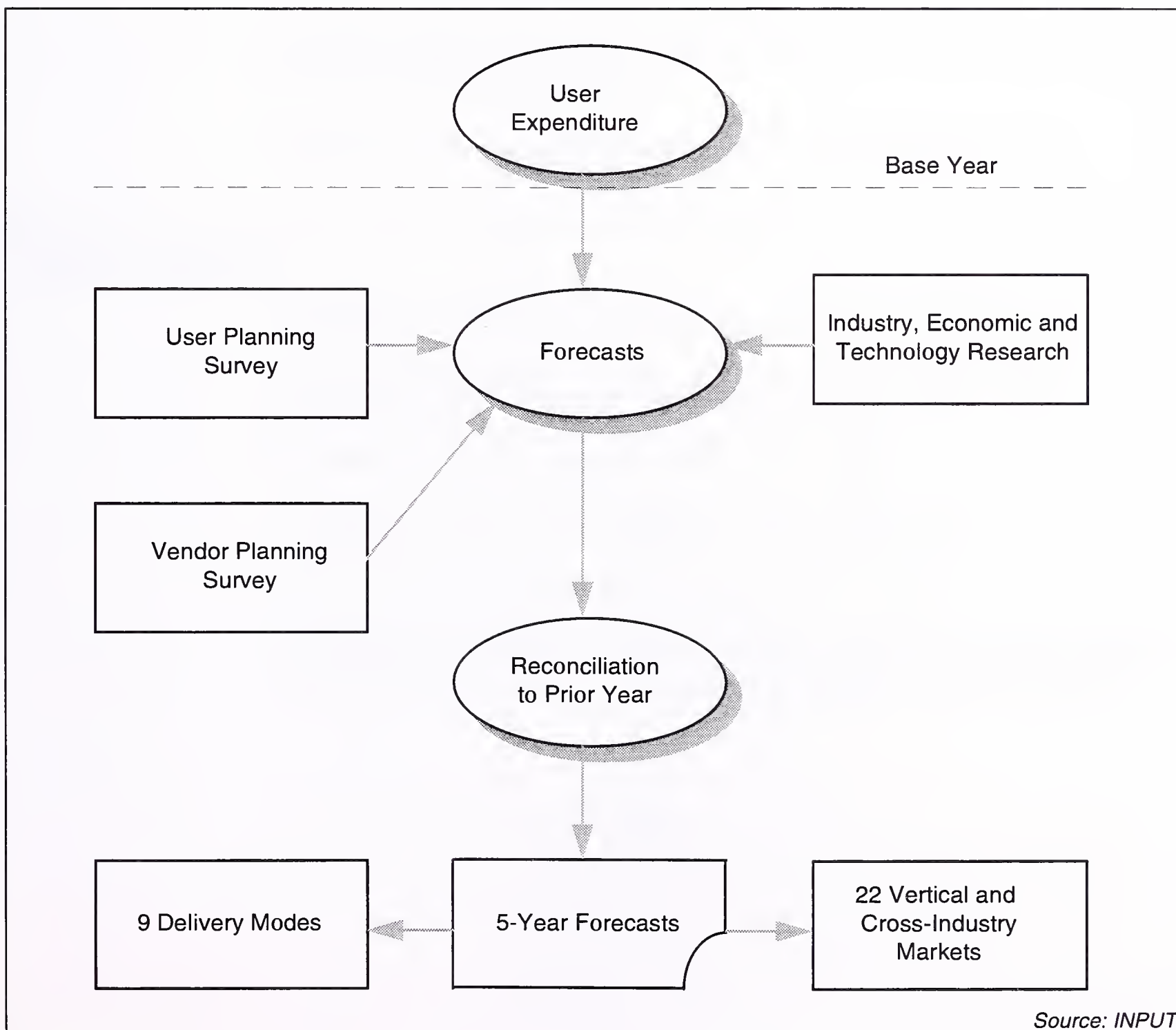
- A vendor research programme of over 500 interviews with key software and service vendors across Europe
- INPUT's extensive library and database of information relating to the European software and services market
- Further vendor and user interviews across European markets to determine trends and opinions 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.

Market sizes used herein are based on data from INPUT’s *European Software & Services Market Forecast, 1996-2001*. The broad methodology for defining market sizes is shown in Exhibit 1-3. However, in the outsourcing sector, the figures quoted herein include SAP and business operations outsourcing.

Exhibit I-3

### Country Market Sizings





In light of better market knowledge, some delivery mode market sizes have been adjusted from the equivalent INPUT report published in 1995. This adjustment, principally to professional services figures, has resulted in an overall increase to our estimates of the size of German Software and Services market and a decrease to our estimates of the overall size of the French market. The distribution of Software and Services expenditure across Europe is shown in Chapter III, Exhibit III-1

**C**

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**Report Structure**

*Chapter I* outlines the scope and objectives of the report.

*Chapter II* consists of an Executive Summary itemising the main findings of the report.

*Chapter III* provides country-specific competitive analysis and focuses on key mergers and acquisitions which took place between October 1995 and December 1996.

*Chapter IV* examines the revenue profiles and financial ratios of ten leading European software and services vendors.

*Appendix 1* gives rankings by country by individual delivery mode, as well as a total European perspective.

*Appendix 2* provides exchange rates used in currency conversions.

**D**

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**Related Reports**

*The European Software & Services Market Forecast, 1996-2001*

*Information Systems Outsourcing Market in Europe, 1996 - 2001*

*European Business Integration Market, 1996 -2001*

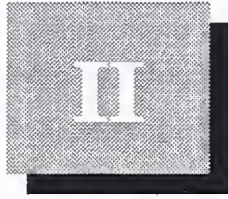
*IT Customer Services Market Analysis, Europe 1996 -2001*

*Software Product Support Market Analysis, 1996 - 2001*

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

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## Executive Summary

### A

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#### American Players' European Revenues and Profit Growth Continue to Impress

Between 1994 and 1995, the European Software and Services market grew by some 11.3% to US \$92.75 billion over the period. The growth figure has been somewhat inflated by the effect of exchange rate fluctuations, resulting in a 1995 dollar devaluation of approximately 6% against a basket of European currencies.

The top thirty vendors account for an increasing slice of the European software and services market, with their shares collectively up from 41.1% to 43.4% of the total. This trend seems set to continue as volume driven outsourcing business accounts for an increasing slice of total software and services revenues.

EDS, Andersen Consulting and Microsoft all managed to increase their ranking positions in the league of European software and services vendors. Between 1994 and 1995, EDS' European revenues increased by 26%, Andersen Consulting's revenues increased by 23% and Microsoft's revenues increased by approximately 27%.

Each of these companies continue to show deft marketing ability: in Microsoft's case, the use of its critical mass to undermine the credibility of competitors; EDS' and Andersen's use astute account management and differentiated services offerings, allowing them to successfully move up the value chain.

Ahead of all of these players, IBM consolidated its status in lead ranking position, achieving a software and services market share of over 10% for

the first time. In revenue terms, European software and services turnover increased by approximately 18% to \$9,310 million, whilst information services revenues (software and services plus equipment maintenance and environmental services) registered an increase of approximately 12% on the previous year to a figure of \$12,070 million.

In recent years, IBM has made great strides to win back key accounts it lost during the late 1980's. A major factor in IBM's turnaround has been its greater customer focus. World-wide, it is estimated that the company is currently winning four out of five computer services deals it bids on.

Whilst the services companies noted above seldom disclose profit figures at a European level, at a global level, gross profit margins were as follows:

- IBM (all services excluding maintenance): an increase between 1994 and 1995 of 21%
- EDS: an increase of 12%, with gross profits of \$1,529 million
- Andersen Consulting: net revenues up 22% from \$3,452 million to \$4224 million.

Not all American players were so successful. Digital achieved a net profit margin of only 1% world-wide and appears to have suffered further losses in its European operations. Between 1992 and 1996, the company nearly halved its world-wide work force. This retrenchment was reflected in a fall of two places in the European software and services revenue rankings, from fourth to sixth position. The company has all but dissolved its vertical market focus in Europe and appears to be pinning its future on new products such as its Alpha servers and Intranet services built around the market presence of its Alta Vista brand.

The company has fared better in its equipment maintenance and environmental services markets, raising its 1995 position one place to number two in the European information services table, derived from revenues of \$3,495 million.

Lower down the software and services rankings, Hewlett Packard rose two places to sixteenth position, achieved through a rise in 1995 revenues to \$1,000 million, representing an increase of nearly 36% on the previous year. Central to its European expansion in services has been successful targeting of SAP R/3 implementation projects. This strategy has been assisted by the company becoming the leading hardware platform for SAP software world-wide, with more than 40% of the installed base.

Another U.S. company achieving significant in-roads in the European IT sector is CSC. During 1995, it increased its revenues by more than 27% on the previous year. By 1997, the company aims to generate one quarter of its world-wide revenues from European business, largely on the basis of further outsourcing contracts. It projects \$1,200 million of European business by this time, which on current INPUT estimates will place the company on a par with some of the largest native European players.

## **B**

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### **Some Indigenous European Players Return to Profit, others Forced to Restructure**

Forced to compete with the increased threat of American competition, indigenous European players have been unable to take full advantage of the improvement in market conditions across Europe.

Despite some acquisitions noted in Section D, few companies are able to offer pan European services, and this appears disadvantageous to winning high value contracts placed by an elite of globalised IT users.

In 1995, despite a software and services revenue increase of approximately 10%, across the group, ICL made a \$300 million loss which was instrumental in the company's announcement in 1996 of its future focus on software and services provision, leaving parent company Fujitsu to develop hardware business, particularly in Asia.

After a spate of losses through the 1990's, including a \$1,055 million loss in 1995, Olivetti has also been forced to restructure, announcing in August 1996 the departure of Carlo de Benedetti and the recent sale of 'non-core' business such as its Omnitel mobile telecommunications subsidiary- perceived by many to be its jewel in the crown. The company is also expected to severely reduce its presence in the hardware sector and a link up with Hewlett Packard has been muted.

Modest revenue increases were posted by Group Bull and Siemens Nixdorf, both estimated to be of the order of 6% for software and services.

The former has managed to diversify successfully outside of its home market, seeing excellent growth in Germany and the UK, particularly in the areas of systems integration and outsourcing. Across Europe, Group Bull reported an increase in business integration revenues of 21%.



Siemens Nixdorf returned to the black for the first time in five years, posting a profit of \$16 million across the group as a whole (including hardware).

Cap Gemini Sogeti (CGS) also experienced a positive year, achieving a 20% increase in European revenues. At the forefront of this turnaround was a 21% growth in orders booked during the year, chiefly in the areas of applications management (67% increase) and distributed computing services (38% increase). The group reported a 'return to profit' but did not disclose details. Rumours remain of a possible closing of ties between CGS and debis Systemhaus, the latter of whom generated \$1,020 of non-captive revenues, with sales outside the group increasing 25% during 1995, and outside of Germany by 50%.

If a full CGS/debis Systemhaus merger were to take place, this would create a combined entity generating non-captive software and services revenues of approximately \$3 billion, based on 1995 figures. Although such an entity would still be only one third the size of IBM's software and services business in Europe, it would finally provide the continent with a competitor of gravitas by World standards. Even in these circumstances, IBM's large installed base remains its trump card to generating future business.

Worryingly for the indigenous European players, vertical market analysis reveals that many are still overly reliant on domestic government IT contracts — which typically represent 50% of total revenues. Firstly, given that the EC is targeting restrictive practices benefiting local players and secondly, that many European Governments are increasingly looking to adopt outsourcing as a means of balancing fiscal budgets, this public sector business may become increasingly vulnerable.

## C

### **National Markets Continue to Consolidate, with IBM Still Dominating**

At the head of the European software and services rankings, IBM occupies lead ranking position in all countries monitored with the exception of Finland, where Tieto and KT Datacentre precede it.

Elsewhere, Finsiel is a close second to IBM in Italy with a software and services market share of approximately 14%. Of the main economies, Italy's IT software and services sector is the most consolidated, with top thirty players accounting for nearly 62% of total business. This contrasts markedly with the French market, whose top thirty players account for less than 40%. Not surprisingly then, this market has witnessed some of the most of the significant merger and

acquisition activity, headed by the December 1996 announcement of Axime SA's \$670 m purchase of Sligos. This creates a merged entity claimed to be the world's seventh largest system integrator.

As shown in Exhibit II-1, analysis of the top vendors for each delivery mode across the four major economies (France, Germany, UK and Italy) revealed the following trends:

- Out of a total of 44 top positions, IBM is number one in fifteen of them with strength in system software and, surprisingly, systems integration across three of the four countries
- IBM is also strong in environmental services but compared to 1994, has lost some ground in equipment maintenance to ICL Sorbus in the UK
- The dominance of "niche" players, such as Reuters, within the electronic services segment
- The dominance of national vendors in the professional services market
- The fragmentation in the processing, turnkey systems and application software segments, where there is no obvious leader in these countries.

Exhibit II-1

**Top Vendors by Delivery Mode — Four Major Economies**

Delivery Mode	France	Germany	UK	Italy
Professional services	CGS	debis Systemhaus	ICL	Finsiel
Systems integration	IBM	IBM	IBM	Andersen Consulting
Outsourcing	EDS	debis Systemhaus	EDS	Finsiel
Processing services	Sligos	Datev	MR Group	Finsiel
Network applications	Infonet	Deutsche Telecom	AT&T	IBM
Electronic information services	Reuters	Reuters	Reuters	Reuters
Systems software	IBM	IBM	IBM	IBM
Applications software	Microsoft	SAP	IBM	IBM
Turnkey systems	Sligos	SNI	IBM	Olivetti
Equipment maintenance	IBM	SNI	ICL Sorbus	IBM
Environmental services	IBM	IBM	IBM	Olivetti

*Source: INPUT*

Within the French market, all companies have maintained their position as number one vendor for their respective delivery mode, with the exception of Sligos replacing Axime as lead processing services vendor.

The German software and services table is notable for its lack of change in eight of the top ten places. Lower down the rankings, some of the most notable developments have been Hewlett Packard's climb to tenth place from equal fourteenth last year, and Andersen Consulting's seven point climb from equal twenty seventh to twentieth. On current trends, SAP and EDS look unable to sustain the same levels of high growth that they achieved in previous years, thus assuring that SNI and IBM remain in the top two places.

Compared to 1994, IBM's UK market share declined 0.7 of a percentage point to 8.7%, while ICL lost 2.6 percentage point to 5.5%. Some of this



decline was at the expense of a strong performance by EDS, which climbed two places to third place in the software and services rankings.

IBM has regained pole position in three of the four Nordic countries, the exception being in Finland, where Tieto, a new grouping deriving from the merger of VTKK and Tietotehdas, has become lead vendor. Whilst a niche player by European standards, the company enjoys high profitability and reported a 78% increase in net sales to \$330m for the first three quarters of 1996, compared to the same period in 1995.

In Sweden and Denmark, both lead national vendors dropped one place behind IBM, with Enator capturing 8.6% market share and Kommunedata registering market share of 12.4%. In Norway, IBM's position was strengthened considerably by its recent acquisition of NIT.

The Netherlands software and services market continues to undergo consolidation, with the completion of the merger between Philips and BSO-Origin taking the new group to fourth place in the software and services rankings. The recent announcement that Getronics is to buy from the Dutch government the remaining 50% of Raet that it does not already own, will put both Origin and Getronics in a strong position to challenge IBM and CGS next year.

Andersen Consulting continues to perform well in the Mediterranean region, especially Spain and Portugal, where it lies in second place behind IBM. In Greece, from a negligible presence, EDS climbed to second place in the professional services rankings and to fourth in the software and services rankings.

## D

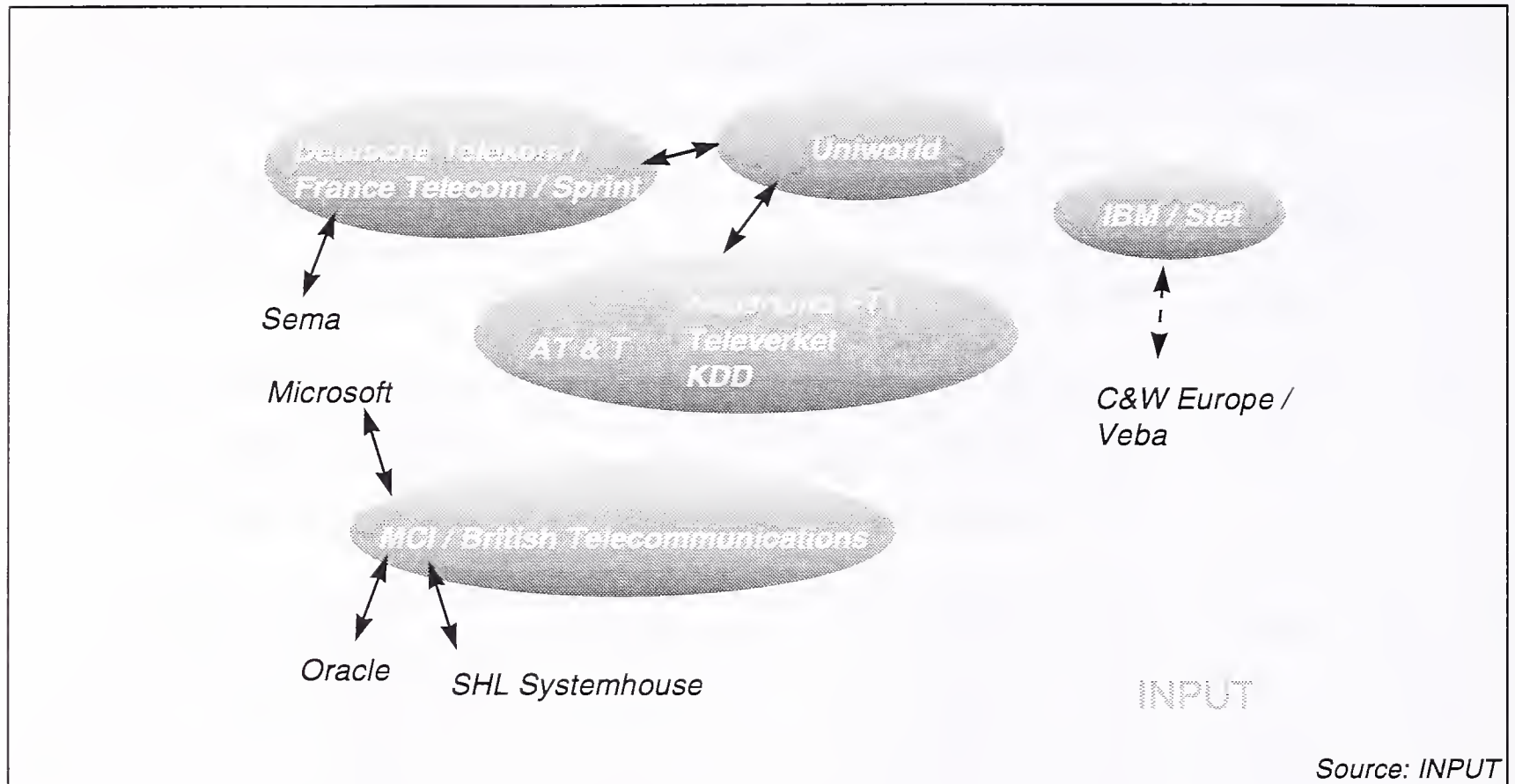
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### **Telecommunications Alliances Set Platform to Capitalise on Internet-based IT Services**

Spurred by global deregulation of telecommunications markets and assisted by computer telephony integration, during the 1990s, national PTTs have formed super alliances designed with the intent of integrated world-wide telecommunications coverage, as shown in Exhibit II-2.

Exhibit II-2

## Telecommunications / IT Vendor Alliances



Concert, the recently announced merger of MCI and BT, is presently building a world-wide network which unlike the Internet, will be controlled and operated exclusively by its partners throughout the whole network. This greater control will allow higher quality, faster transmission, in turn making it attractive to corporate business users seeking premium services for high bandwidth applications such as video conferencing and interactive broadcasting.

From the perspective of IT services vendors, this infrastructure is likely to give the network provider enhanced power within the supply chain, since it will be in a gateway position between user and on-line application, through the control of the delivery channel. Furthermore, as the line between telecommunications and IT services becomes increasingly blurred, network providers appear ready to use this strategic position as an opportunity to promote 'one-stop' professional services, either by going it alone e.g. as AT&T has done with its on-line services launch of WorldNet, or through strategic alliances with IT services vendors including the following:

- MCI-SHL Systemhouse — systems integration, outsourcing, education and training

- MCI-Microsoft — Internet and on-line information services including audio, video and computer conferencing services and high speed data Integrated Services Digital Network transmission services
- MCI-Oracle — Internet provision, satellite services joint venture, co-marketing of database software products
- France Telecom /Olivetti /Bell Atlantic — desktop videoconferencing and Internet access services
- AT&T/Novell/Deutsche Telecom/NTT development of network security and standardisation of operations and to provide network services for business communications.

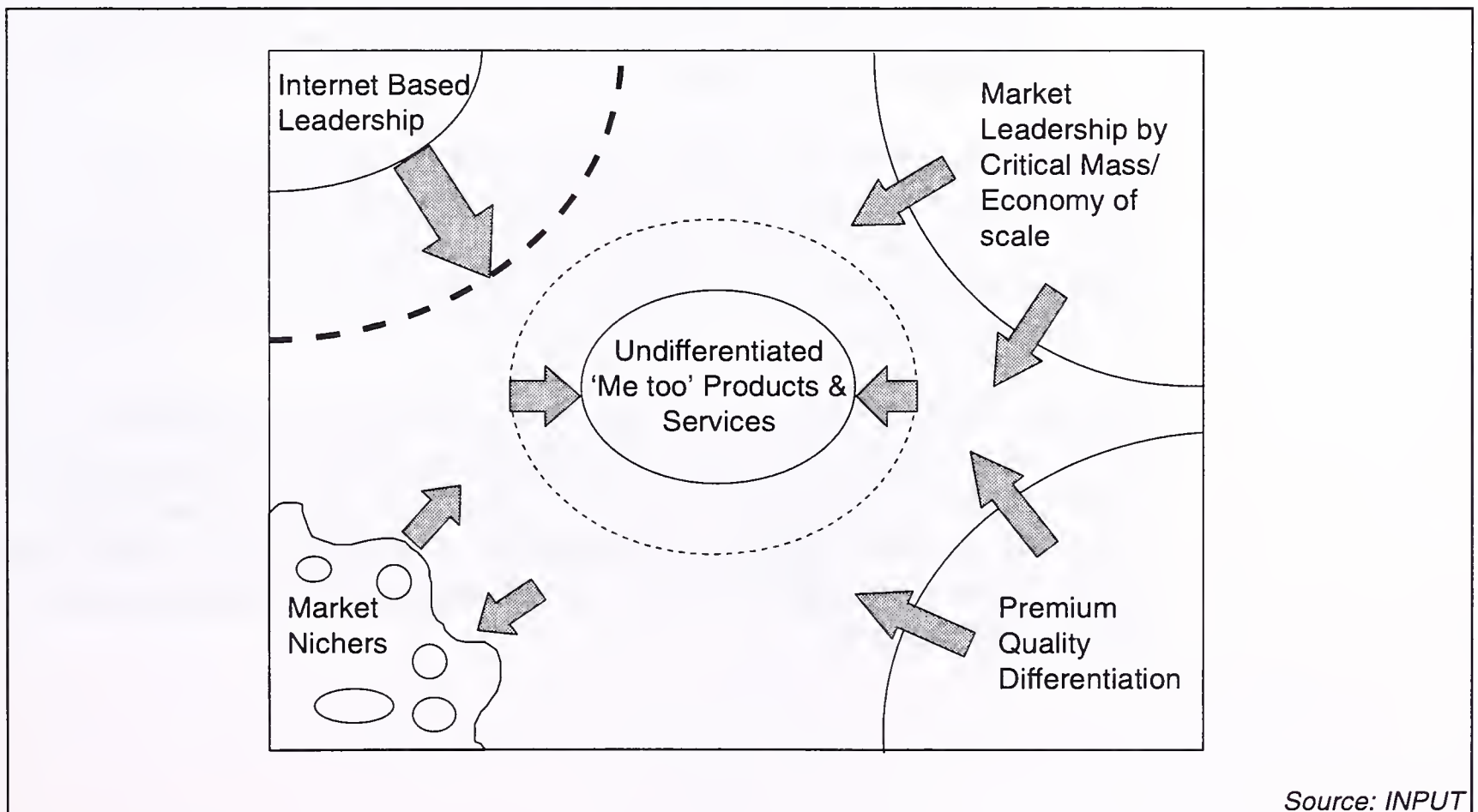
## E

### Competitive Structure of European Marketplace

Exhibit II-3 shows schematically the competitive structure of the European marketplace and the market share/profit margin squeeze faced by players not able to offer differentiated services.

Exhibit II-3

#### Competitive Market Forces





Related to individual vendors, the four (*and only four*) places where long term profitability can be sustained are as follows:-

- In the top right hand corner, as a **market leader by size**. Here, IBM has an unassailed position as leading European player by critical mass, with four and a half times the business of its next nearest competitor
- In the bottom right hand corner, as a **market differentiator**. Here, EDS and Andersen Consulting have both managed to enhance their product and service offerings by a focus on differentiated, business oriented solutions, permitting higher value adding and increased margins
- In the top left hand corner, as a **Technological leader**. These companies are typically small, high growth operations and strong take over targets. Vocalnet, Integralis and Intelligent Environments are examples of companies offering leading edge network integration and Internet/intranet services sectors of the market set to expand rapidly
- In bottom left hand corner, as **Market nichers**. Companies such as Oracle, Reuters and Logica have grown substantially with best of breed knowledge in a particular application or vertical market. Smaller companies of this ilk (of which we include Logica) are also typical take over targets.

The dilemma for many vendors is that they do not fall into any of the above categories, invariably forcing them to compete on price. Even Microsoft's future revenue position looks vulnerable in this respect, as Java based applications gain market dominance through users' migration to Internet platforms.

Exhibit II-4 illustrates strategic acquisitions made during 1995/96 by major players aiming to regain technological leadership in fundamental areas of Internet technology. Microsoft features strongly. In the crucial area of electronic commerce, Microsoft is also working on what could be its future 'killer app': a PC-based electronic payment system which operates through Windows 95.

Exhibit II-4

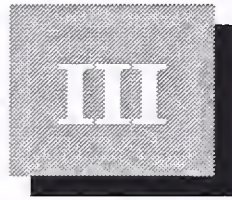
**Acquisitions of Internet-based Companies by Major Players, 1995-6**

<b>Company Acquiring</b>	<b>Company Acquired</b>	<b>Sector</b>	<b>Date Acquired</b>
3 Comm	Primary Access Corp.	Inter-networking	Mar- 1995
Hewlett Packard	SecureWare	Internet Software	Mar- 1995
AT & T	Interchange Network Company Ltd.	Internet Publishing Tools	Apr 1995
Microsoft Corp.	eShop Inc.	Electronic Commerce software	Jun- 1995
UUNET Technologies	Unipalm Plc	Internet Access	Oct- 1995
M.A.I.D Plc	Easynet Plc	Internet Software	Feb-96
Microsoft Corp.	Colusa Software Inc.	Internet Software	Mar- 1996
Microsoft Corp.	Aspect Software Engineering	Internet/database Software	Mar- 1996
Microsoft Corp.	Electronic Gravity Inc.	Internet On-line Games	Jun- 1996

*Source: INPUT*

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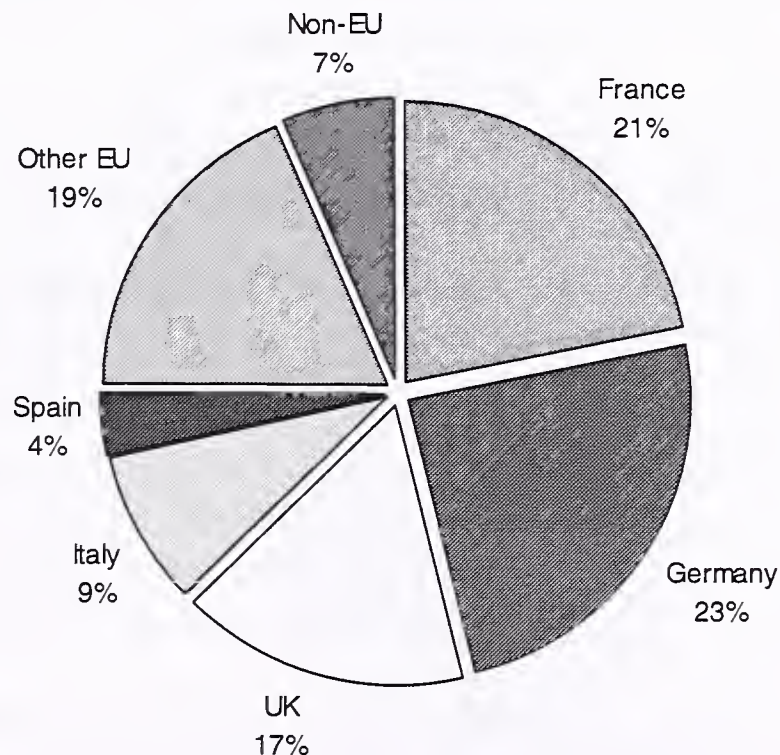


## Country-Specific Competitive Analysis

This chapter analyses the competitive rankings listed in Appendix 1, together with a commentary of estimated company market shares in each of those countries. With regard to the latter, INPUT has reappraised the country market shares comprising the European Software and Services market. These percentages are indicated in Exhibit III-1.

Exhibit III-1

### 1995 Country Market Sizes for Software & Services



Total Size of European Software & Services Market: \$92,750M

Source: INPUT

Specifically, this has had greatest bearing on market share calculations for France and Germany, since the German software and services market has been resized upwards and the French software and services market has been resized downwards to more accurately reflect market conditions.

The following analysis segments European countries 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.

## A

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### The Four Major Economies

Exhibits III-2, III-3, III-4 and III-5 show the top ten software and services rankings of France, Germany, the UK and Italy respectively. Of these four countries, France has the most fragmented software and services market, with its top thirty players accounting for just less than 39% of the total market. Next is Germany with approximately 45%, then the UK with approximately 55%, and then Italy with approximately 62%. A general trend towards increased consolidation is occurring in all of these countries, though surprisingly this was not the case at the top of the rankings, where with the exception of Italy, most leading players actually lost market share compared to the previous year.

IBM remained in top position in France, Germany and the UK, and climbed one place to top position in Italy, ahead of Finsiel.

Exhibit III-2

**Leading Software & Service Vendors, France 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	6,515	6.6
2	Cap Gemini Sogeti	France	3,265	3.3
3	Bull	France	2,360	2.4
4	Sligos	France	1,960	1.9
5	EDS	U.S.	1,915	1.9
6	Microsoft	U.S.	1,840	1.9
7	Axime	France	1,805	1.8
8	Reuters	U.K.	1,680	1.7
9	Syseca	France	1,650	1.7
10	Sema	France	1,420	1.4
	Total Listed		24,410	24.8
	Total Market		98,300	100.0

*Source: INPUT*

Within the French market, all companies have maintained their position as number one vendor for their respective delivery mode, with the exception of Sligos replacing Axime as lead processing services vendor.

The top three positions of the software and services table remain unchanged. Reversing their decline of the previous year, the two national vendors, Sligos and Axime, have both moved up the rankings from sixth to fourth and eighth to seventh, respectively. As a combined entity (which they will be due to their merger announced in December, 1996), the joint group will become the second largest player in France behind IBM.

Outside of the top ten, other players with significant ranking increases were Andersen Consulting, rising from twentieth to fifteenth position and Computer Associates, who climbed from twenty-fourth place to fourteenth on the basis of increased client server software sales.



Exhibit III-3

**Leading Software & Service Vendors, Germany 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	3,315	10.7
2	SNI	Germany	2,145	6.9
3	debis Systemhaus	Germany	1,315	4.2
4	Datev	Germany	910	2.9
5	SAP	Germany	890	2.9
6=	Digital	U.S.	620	2.0
6=	EDS	U.S.	620	2.0
8	Microsoft	U.S.	575	1.8
9	Reuters	U.K.	500	1.6
10	Hewlett Packard	U.S.	390	1.3
	Total Listed		11,280	36.2
	Total Market		31,100	100.0

*Source: INPUT*

Debis Systemhaus has shown the greatest movement in the German delivery mode rankings, rising to top position in both the professional services and outsourcing tables from third positions the year before. This climb is primarily due to a re-rating by INPUT on the basis of under calculation the previous year. Otherwise, the German software and services table is notable for its lack of change in eight of the top ten places. Lower down the rankings, some of the most notable developments have been Hewlett Packard's climb to tenth place from equal fourteenth last year, and Andersen Consulting's seven point climb from equal twenty seventh to twentieth.

Exhibit III-4

**Leading Software & Service Vendors, UK 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	860	8.7
2	ICL	U.K.	545	5.5
3	EDS	U.S.	390	4.0
4	Reuters	U.K.	310	3.1
5=	Andersen Consulting	U.S.	260	2.6
5=	Sema	France	260	2.6
7	Cap Gemini Sogeti	France	240	2.4
8=	AT & T	U.S.	200	2.0
8=	CSC	U.S.	200	2.0
10	BT/Syncordia	U.K.	195	2.0
	Total Listed		3,460	34.8
	Total Market		9,850	100.0

*Source: INPUT*

Compared to 1994, IBM's market share declined 0.7 of a percentage point to 8.7%, while ICL lost 2.6 of a percentage point to 5.5%. Some of this decline was at the expense of a strong UK performance by EDS, which climbed two places to third place in the software and services rankings. This company was particularly successful in its bids for several large UK government contracts. With regard to individual delivery modes, the outsourcing sector witnessed the strongest growth and greatest changes, with new entrants emerging in the form of BT/Syncordia in second place and Racal in seventh. Just outside of the outsourcing top ten but large enough to feature in the top thirty UK software and services rankings is Capita Group - a new entrant in twenty fourth position. On the basis of 30% revenue growth assisted by the purchase of the Penta Group in August 1995, Misys achieved nineteenth position in the UK. This company is now the tenth largest independent application software developer in the World.

Exhibit III-5

**Leading Software & Service Vendors, Italy 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	1,875	14.6
2	Finsiel	Italy	1,765	13.8
3	Olivetti	Italy	1,140	8.9
4	Digital	U.S.	385	3.0
5=	Cerved	Italy	250	2.0
5=	Reuters	U.K.	250	2.0
7	Microsoft	U.S.	235	1.8
8	Andersen Consulting	U.S.	230	1.8
9	EDS	U.S.	225	1.8
10	Bull	France	215	1.7
	Total Listed		6,570	51.2
	Total Market		12,820	100.0

*Source: INPUT*

Finsiel increased revenues by nearly 20% on the previous year, but this was insufficient to prevent it losing premier position to IBM in the software and services rankings. Olivetti maintained third position, but given its recent severe losses, can be expected to lose market share in the near future as it is forced to rationalise. Well placed to capture business in newly deregulated Italian markets are EDS and Andersen Consulting. The former rose six places to ninth position, while the latter increased turnover by 21% but still fell two places to eighth.



**B****The Nordic Region**

IBM has regained pole position in three of the four Nordic countries, the exception being in Finland, where Tieto, a new grouping deriving from the merger of VTKK and Tietotehdas, has become lead vendor. Whilst a niche player by European standards, the company enjoys high profitability and reported a 78% increase in net sales to \$330m for the first three quarters of 1996, compared to the same period in 1995.

In Sweden and Denmark, both lead national vendors dropped one place behind IBM, with Enator capturing 8.6% market share and Kommunedata registering market share of 12.4%. In Norway, IBM's position was strengthened considerably by its recent acquisition of NIT.

Exhibit III-6

**Leading Software & Service Vendors, Sweden 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	1,915	8.9
2	Enator	Sweden	1,855	8.6
3	EDS*	U.S.	1,600	7.4
4	Sapia	Sweden	1,150	5.3
5	WM-Data	Sweden	1,050	4.9
6	Sema	France	830	3.8
7	Cap Gemini Sogeti	France	785	3.6
8	SKD Foretagen	Sweden	625	2.9
9	Digital	U.S.	620	2.9
10	Reuters	U.K.	405	1.9
	Total Listed		10,835	50.2
	Total Market		21,570	100.0

\* includes Apiron

Source: INPUT

Exhibit III-7

**Leading Software & Service Vendors, Denmark 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	1,620	13.4
2	Kommunedata	Denmark	1,495	12.4
3	PBS	Denmark	955	7.9
4=	Digital	U.S.	220	1.8
4=	Cap Gemini Sogeti	France	220	1.8
6	ICL	U.K.	190	1.6
7=	AT & T	U.S.	170	1.4
7=	Microsoft	U.S.	170	1.4
9	Hewlett Packard	U.S.	165	1.4
10	Computer Associates	U.S.	155	1.3
	Total Listed		5,360	44.3
	Total Market		12,100	100.0

Source: INPUT

Exhibit III-8

**Leading Software & Service Vendors, Norway 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM*	U.S.	2,660	20.6
2	Fellesdata	Norway	820	6.4
3	BBS	Norway	650	5.0
4	Novit	Norway	480	3.7
5	Digital	U.S.	270	2.1
6	EDB	Norway	265	2.1
7	Andersen Consulting	U.S.	225	1.7
8	Oracle	U.S.	205	1.6
9	Enator	Sweden	190	1.5
10	Cap Gemini Sogeti	France	165	1.3
	Total Listed		5,930	45.9
	Total Market		12,900	100.0

\* Includes NIT

Source: INPUT

Exhibit III-9

**Leading Software & Service Vendors, Finland 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	1,150	19.2
2	KT-Datacentre	Finland	685	11.5
3	IBM	U.S.	455	7.6
4	ICL	U.K.	250	4.2
5	Digital	U.S.	180	3.0
6	Paapkapunkiseudom	Finland	170	2.8
7	Elorg Data	Finland	150	2.5
8	Cap Gemini Sogeti	France	115	1.9
9	Computer Associates	U.S.	95	1.6
10=	Microsoft	U.S.	85	1.4
10=	Valmet Data	Finland	85	1.4
	Total Listed		3,420	57.2
	Total Market		5,980	100.0

*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 III-10

**Leading Software & Service Vendors, Central & Eastern Europe 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	195	18.6
2	EDS	U.S.	90	8.6
3	Microsoft	U.S.	35	3.3
4=	Reuters	U.K.	30	2.8
4=	Syseca	France	30	2.8
6	ICL	U.K.	25	2.4
7	SNI	Germany	22	2.1
8	Andersen Consulting	U.S.	20	1.9
9=	Unisys	U.S.	15	1.4
9=	Digital	U.S.	15	1.4
	Total Listed		477	45.6
	Total Market		1,045	100.0

*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 NIETU, 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 continues to undergo consolidation, with the completion of the merger between Philips and BSO-Origin taking the new group to fourth place in the software and services rankings. The recent announcement that Getronics is to buy from the Dutch government the remaining 50% of Raet that it does not already own, will put both these national players in a strong position to challenge IBM and CGS next year.

Exhibit III-11

### Leading Software & Service Vendors, Netherlands 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	865	11.0
2	Cap Gemini Sogeti	France	650	8.3
3	Getronics	Netherlands	635	8.1
4	Origin BV	Netherlands	550	7.0
5	Raet	Netherlands	325	4.1
6	Roccade	Netherlands	270	3.4
7	CMG	U.K.	235	3.0
8	Digital	U.S.	205	2.6
9	CSC	U.S.	200	2.6
10	Hewlett Packard	U.S.	105	1.3
	Total Listed		4,040	51.5
	Total Market		7,835	100.0

Source: INPUT



In Belgium, IBM have strengthened market lead at the top of the rankings, with a market share rise of two point three percentage points. Sema Group have moved up from thirteenth position to eighth place on the basis of increased business in professional services and systems integration.

Exhibit III-12

### Leading Software & Service Vendors, Belgium 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	7,900	9.8
2	Cap Gemini Sogeti	France	3,735	4.6
3	CSC	U.S.	2,460	3.1
4	Trasys	Belgium	2,350	2.9
5	Computer Associates	U.S.	1,690	2.1
6	Andersen Consulting	U.S.	1,610	2.0
7	Hewlett Packard	U.S.	1,565	1.9
8	Sema	France	1,550	1.9
9	EDS	U.S.	1,490	1.9
10	Origin BV	Netherlands	1,360	1.7
	Total Listed		25,710	31.9
	Total Market		80,500	100.0

Source: INPUT

IBM has twice the market share of the Swiss market of its nearest rival and is number one vendor in professional services and outsourcing. Compared to last year, it lost its lead position in systems integration to Digital.

Exhibit III-13

### Leading Software & Service Vendors, Switzerland 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	435	12.6
2	Telekurs	Switzerland	220	6.4
3	Digital	U.S.	195	5.6
4	Fides	Switzerland	145	4.2
5	SAP	Germany	110	3.2
6=	AT & T	U.S.	75	2.2
6=	Unisys	U.S.	75	2.2
8	Reuters	U.K.	60	1.7
9=	Computer Associates	U.S.	55	1.6
9=	Hewlett Packard	U.S.	55	1.6
9=	SNI	Germany	55	1.6
	Total Listed		1,480	42.8
	Total Market		3,460	100.0

Source: INPUT

National vendors are more in evidence within the Austrian market, with Management Data leading the professional services, processing and applications sectors. Nonetheless, IBM showed increased penetration in other sectors, with its revenue position now on a par with Al Informatics in outsourcing.

Exhibit III-14

### Leading Software & Service Vendors, Austria 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	2,080	10.2
2	SNI	Germany	1,150	5.6
3	Management Data	Austria	1,090	5.3
4	Digital	U.S.	800	3.9
5	EDV	Austria	470	2.3
6	Hewlett Packard	U.S.	380	1.9
7	Unisys	U.S.	340	1.7
8	Beko	Austria	305	1.5
9	GRZ	Austria	260	1.3
10	Microsoft	U.S.	245	1.2
10	Reuters	U.K.	245	1.2
	Total Listed		7,365	36.1
	Total Market		20,400	100.0

Source: INPUT



Andersen Consulting continues to perform well in the Mediterranean region, especially Spain and Portugal, where it lies in second place behind IBM. In Greece, from a negligible presence, EDS climbed to second place in the professional services rankings and fourth in the software and services rankings.

Exhibit III-15

### Leading Software & Service Vendors, Spain 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	35,600	9.2
2	Andersen Consulting	U.S.	16,600	4.3
3	Eritel	Spain	16,050	4.1
4	EDS	U.S.	11,650	3.0
5	Digital	U.S.	9,950	2.6
6	Hewlett Packard	U.S.	9,030	2.3
7	Bull	France	7,400	1.9
8	Reuters	U.K.	7,200	1.9
9	Sema	France	6,110	1.6
10	Microsoft	U.S.	6,060	1.6
	Total Listed		125,650	32.4
	Total Market		388,200	100.0

Source: INPUT

**E****Merger and Acquisition Activity**

1996 witnessed a high level of merger and acquisition activity. Up until the end of the third quarter, Broadview Associates monitored 987 acquisitions in Europe, three greater than the number of transactions by third quarter 1995. However, the most noticeable increase was in the value of acquisitions — up from US\$ 30.2 bn in 1994 to US\$48.7 bn. This represents an increase of over 60%.

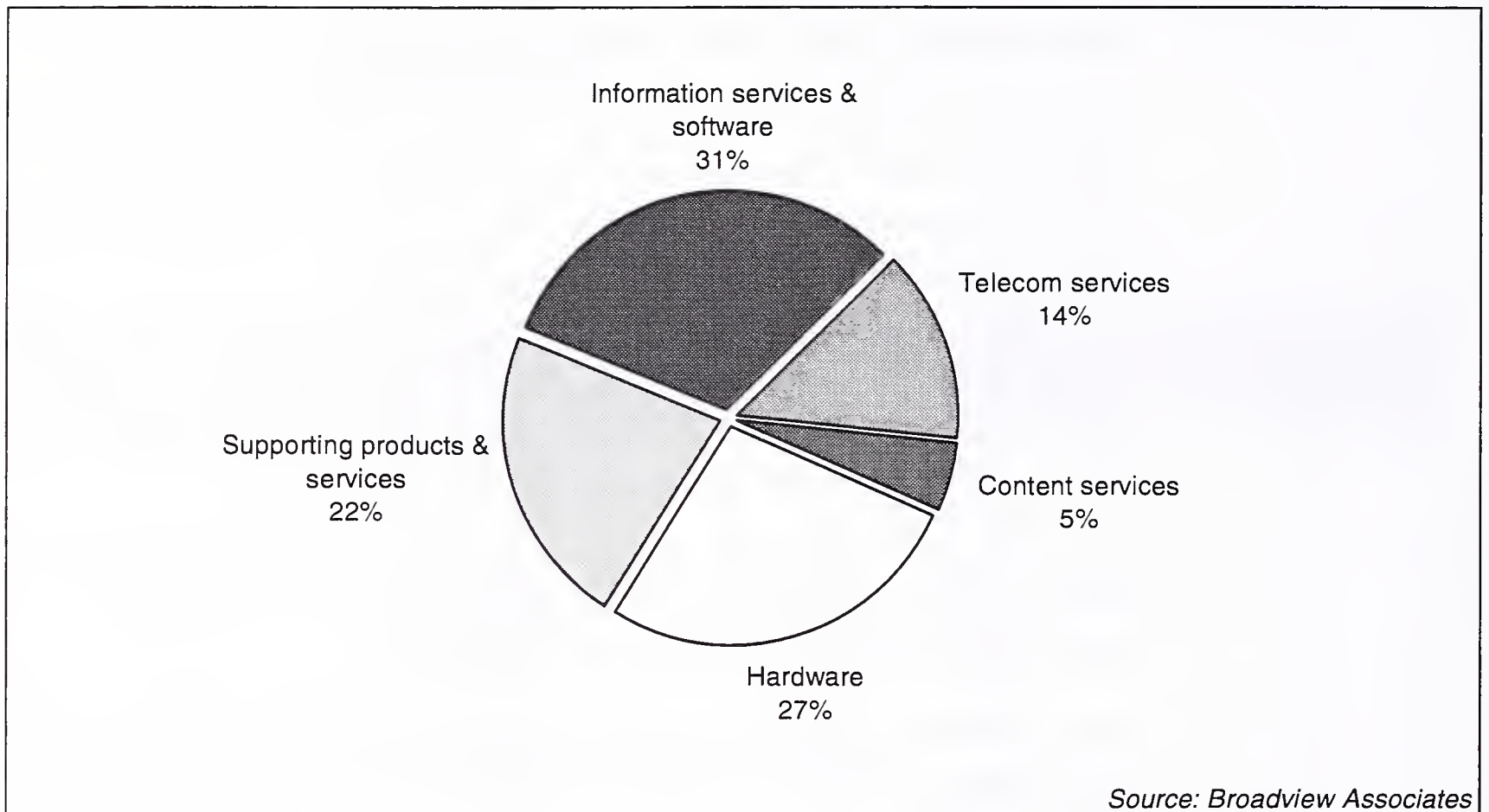
By value, the telecommunications sector saw the greatest increases, rising 15% on 1995's January to end of September figure. This sector is facing major restructuring and consolidation as European countries prepare for deregulation of their telecommunications markets by 1998.

As a proportion, the number of deals in the hardware sector declined to 27% of the total in 1996, but a series of key acquisitions by leading players saw transaction values to rise significantly.

As in 1995, the UK again accounted for the highest number of European transactions, representing approximately one third of all buying and selling activity.

The breakdown by business type of the seller (by number of transactions) is given below in Exhibit IV-3.

Exhibit III-16

**European Acquisition by Type of Business of Seller  
(first half of 1996 by Number of Transactions)**

Exhibits III-17 and III-18 illustrate key European acquisitions during the fourth quarter of 1995 and 1996. Most notable is a flurry of strategic acquisitions at the end of 1996, which have resulted in major French market restructuring. For example:

- Sema Group's full take over of TELIS SA, adding an extra 2000 computer services staff and \$171mn to its revenues. This is in addition to Sema Group's 1995 purchase of a 40% share in France Telecom's facilities management division TS FM
- Axime SA's purchase of Sligos for \$670 mn, creating a merged entity claimed to be the world's seventh largest system integrator
- Logica Plc's acquisition of loss making Axime Ingenierie SA for \$21 mn, permitting Logica a strong foothold in the French market and also a strengthening of the company's presence in Luxembourg and Belgium.



Exhibit III-17

**Key European Acquisitions During October 1995 - May 1996**

Date	Buyer	Seller	Seller Activity	Value
October 1995	IBM (UK) Ltd.	K3 Group (UK)	Financial software	£7 mn
	Lynx Holdings Plc (UK)	Vistec group Plc. (UK)	Computer services	£22 mn
	Wang Inet (US)	BISS (UK)	Network integration	N/A
	Ceridian (US)	Centre-file (UK)	Payroll processing	£52 mn
November 1995	Sema Group (Fra)	TS FM SA (Fra)	40% O/S Stake from France Telecom	Ffr 1.6 Bn
December 1995	EDS (US)	80% stake TechnoCaixa (Spa)	Computer services	\$33 mn
January 1996	IBM (US)	Data Sciences (UK)	IT Consultancy	£110mn
	Sage Group Plc (UK)	Sybel Informatique SA (Fra)	Financial software	N/A
	Syntegra (UK)	Europe Informatique (Fra)	Systems integration	N/A
February 1996	Siemens Netwk sys Dvn. (Ger)	Arche Communications SA (Fra)	Network systems	N/A
	Siemens Nixdorf Info Sys AG (Ger)	ICL Medical Division (UK)	Medical admin S/W	N/A
March 1996	Sema Group Plc. (Fra)	Datashield Ltd. (UK)	IT Disaster recovery	N/A
	Sema Group Plc. (Fra)	Mouncey & Partners (UK)	IT svcs. consultancy	N/A
	IBM Corp. (US)	ISL Integrated Services Ltd. (UK)	Computer maint. services	N/A
April 1996	BT/Syntegra (UK)	Rijnhaave Groep NV (Net)	Computer services	N/A
May 1996	Ing C Olivetti & Co Spa (Ita)	Datrac AG (Swi)	Networking systems integration	N/A
	Granada Computer Services (UK)	Securordis (Fra)	Unix disaster recovery	N/A
	Thompson Software Products (Fra)	Interactive Development Environments (US)	GUI software development tools	N/A
	Baan Company NV (Net)	Berclain Group Inc. (Can)	Manufacturing S/W	N/A

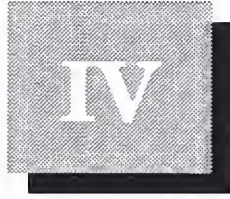
Source: INPUT

Exhibit III-18

**Key European Acquisitions During June 1996 - December 1996**

Date	Buyer	Seller	Seller Activity	Value
June 1996	Metrica Systems (UK)	ADC Telecommunications (US)	Software toolsets to monitor networks	\$36 mn
	CSC (US)	Perihellion Software (UK)	Health mgmt. S/W	N/A
	Sun Microsystems (US)	Lighthouse Design Ltd. (UK)	Object S/W analysis / design tool	N/A
July 1996	CSC (US)	75% stake in Datacentralen (Den)	Outsourcing	N/A
	Sema Group (Fra)	Syntax Processing Spa (Ita)	FM Outsourcing	£64 mn
October 1996	Geac Computer Corp (Can)	Dun & Bradstreet Software (US)	Business software & host maintenance	\$191 mn
	Sema Group Plc (Fra)	TELIS/ France Telecom (Fra)	Systems integration	\$4.8 mn
November 1996	Baan NV (Net)	Antalys Inc. (US)	Configuration S/W	N/A
	Getronics NV (Net)	Roccade Informatica Groep NV (Net)	Computer svcs. 50% Stake of Raet NV not already owned	N/A
	Axime SA (Fra)	Sligos (Fra)	Systems integration	\$670 mn
	Lernout & Hauspie NV (Bel)	Berkeley Speech Technologies Inc. (US)	Text to speech S/W	\$15.5 mn
December 1996	Logica Plc. (UK)	Axime Ingenierie SA (Fra)	Systems Integration	£18.4 mn
	Groupe Bull (Fra)	Cara Group Ltd (Ire)	S/W & services	N/A

Source: INPUT



## Competitive Profiles of 10 Leading Players

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### A

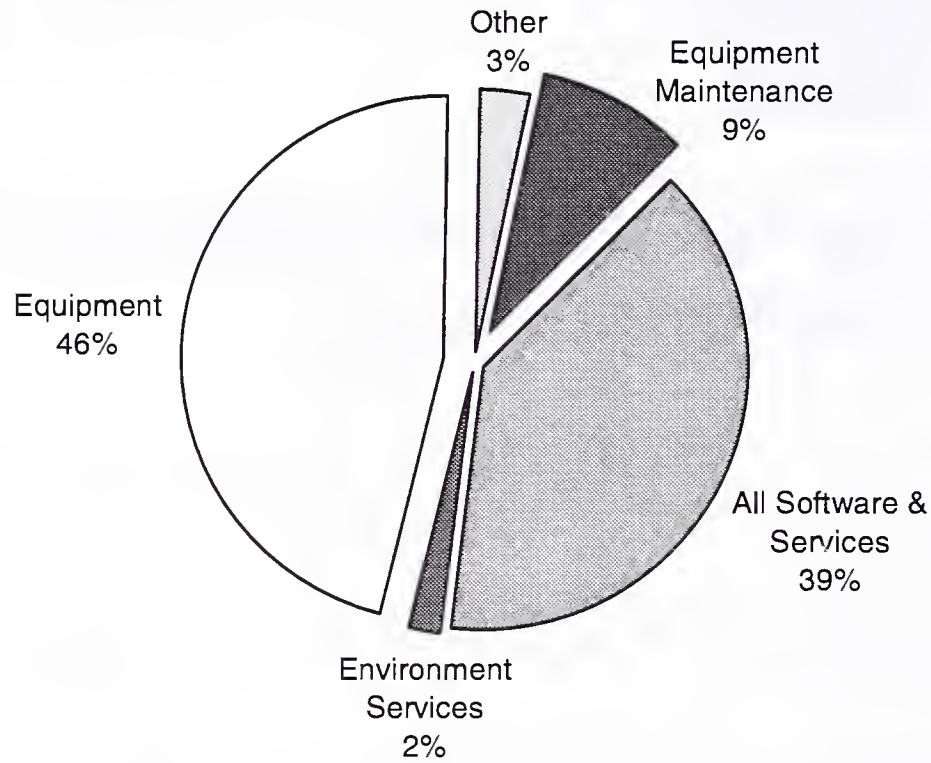
#### IBM

IBM world-wide now makes more money from software and services than it does from hardware. At the beginning of 1996, it set up a unified global services division including outsourcing (ISSC), management consultancy and IBM's Global Network. The company is also increasing its focus on electronic commerce through its Integriion financial network. This will provide on-line banking services to a consortium of banks, with IBM's remuneration being made as a broker, through its tracking of Internet payments each time financial transaction is performed on behalf of the consortium.



Exhibit IV-1

**IBM — 1995 Total European Revenues**

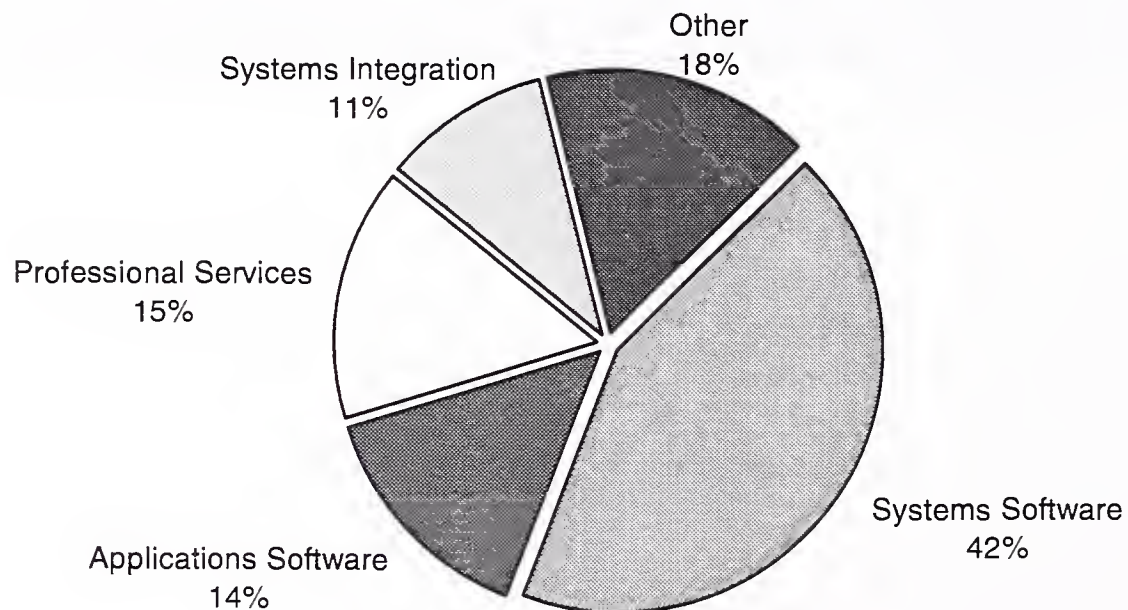


IBM 1995 Total European Revenues = US\$23,980 M.

Source: INPUT Estimates

Exhibit IV-2

**IBM — 1995 Software & Services Revenues by Delivery Mode**



IBM 1995 Total European Software & Service Revenues = US\$9,310 M.

Source: INPUT Estimates

Exhibit IV-3

**IBM — 1995 Software & Services Revenues by Vertical Market**

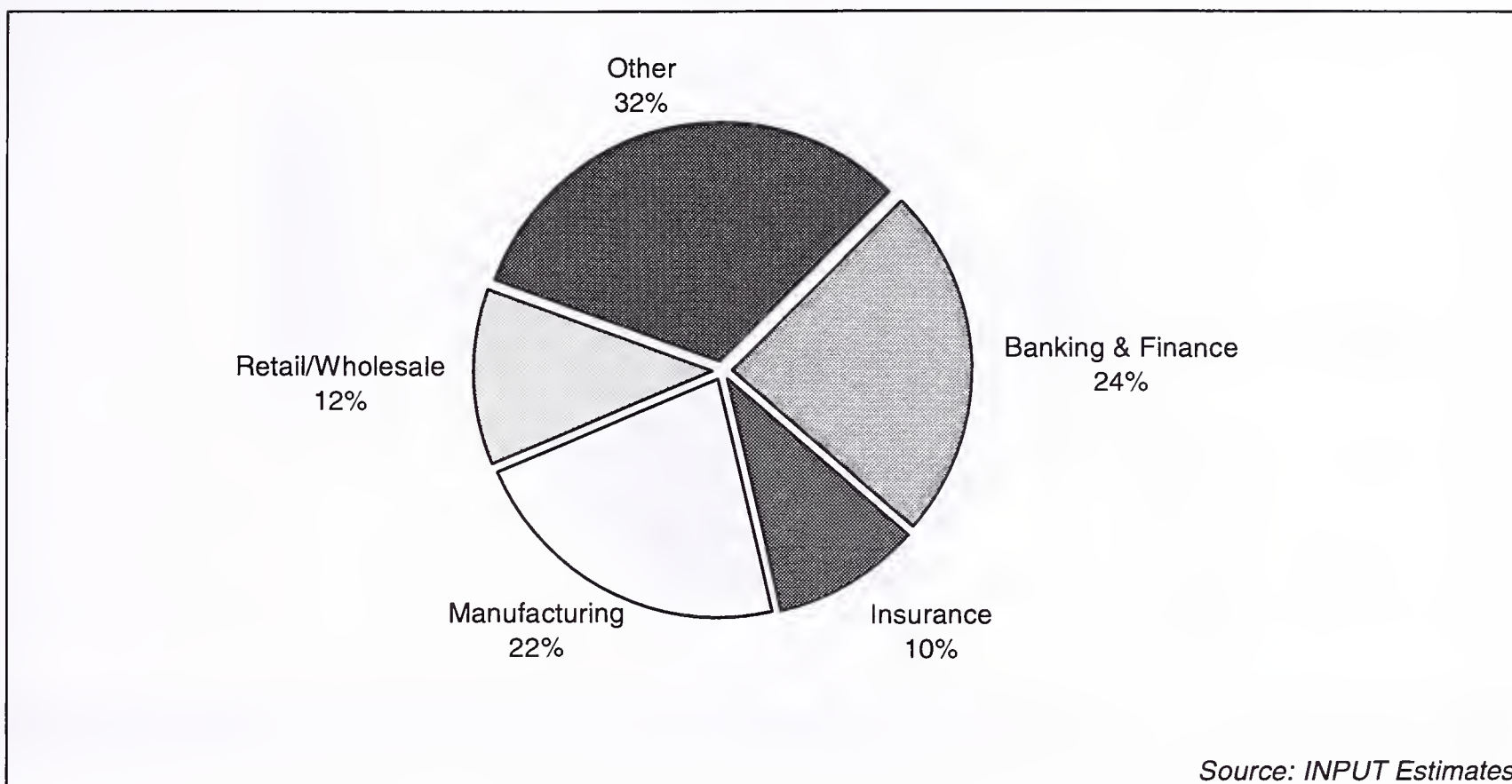


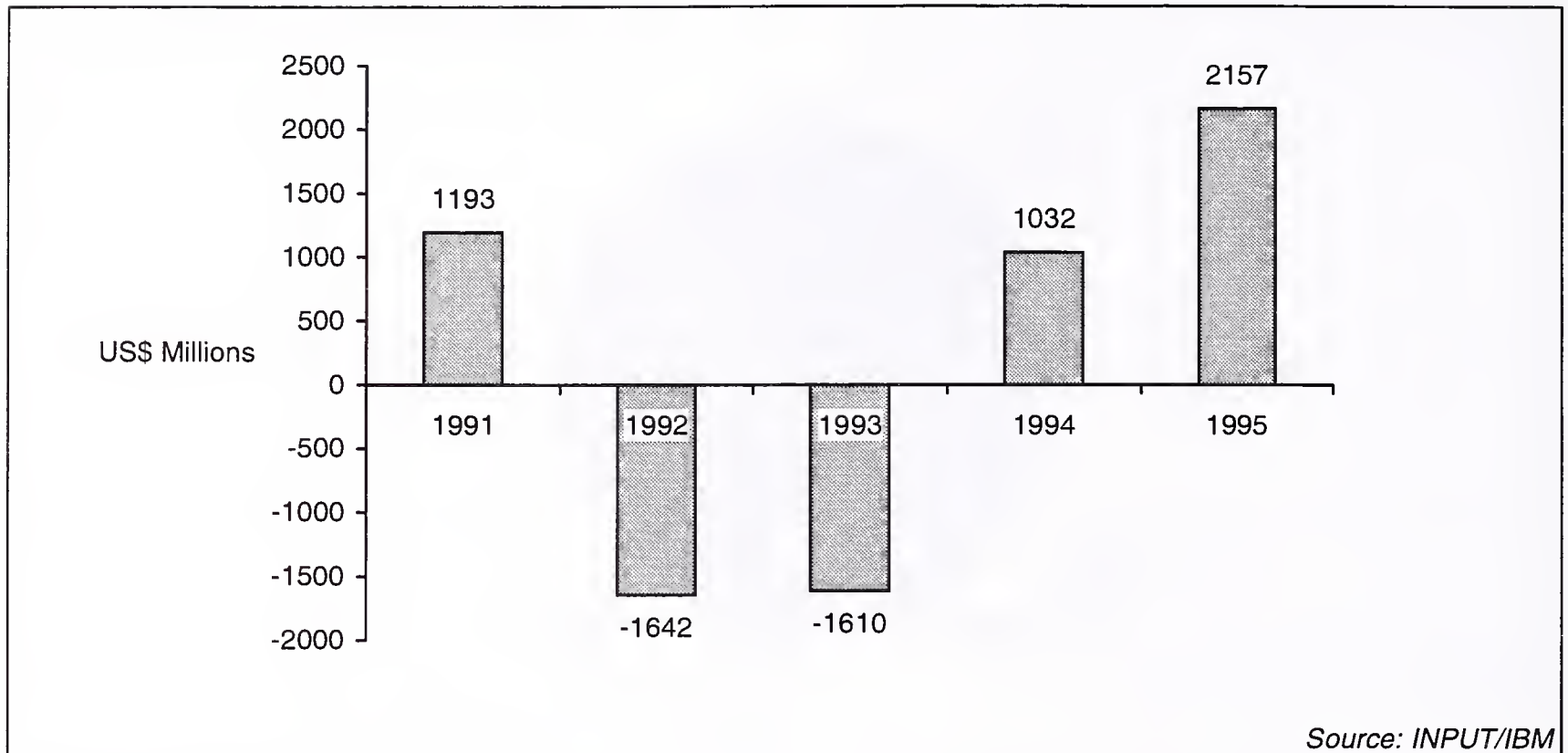
Exhibit IV-4

**IBM — Five Year Financial Summary (US\$ Millions)**

Year	1991	1992	1993	1994	1995
World-wide revenues	64766	64523	62716	64052	71940
Profit after tax	-2861	-4965	-8101	3021	4178
Earnings per share (\$)	-5.0	-8.7	-14.2	5.0	7.2
Total European Revenues	24808	23722	20690	21882	23976
European Profit after tax	1193	-1642	-1610	1032	2157

*Source: INPUT/IBM*

Exhibit IV-5

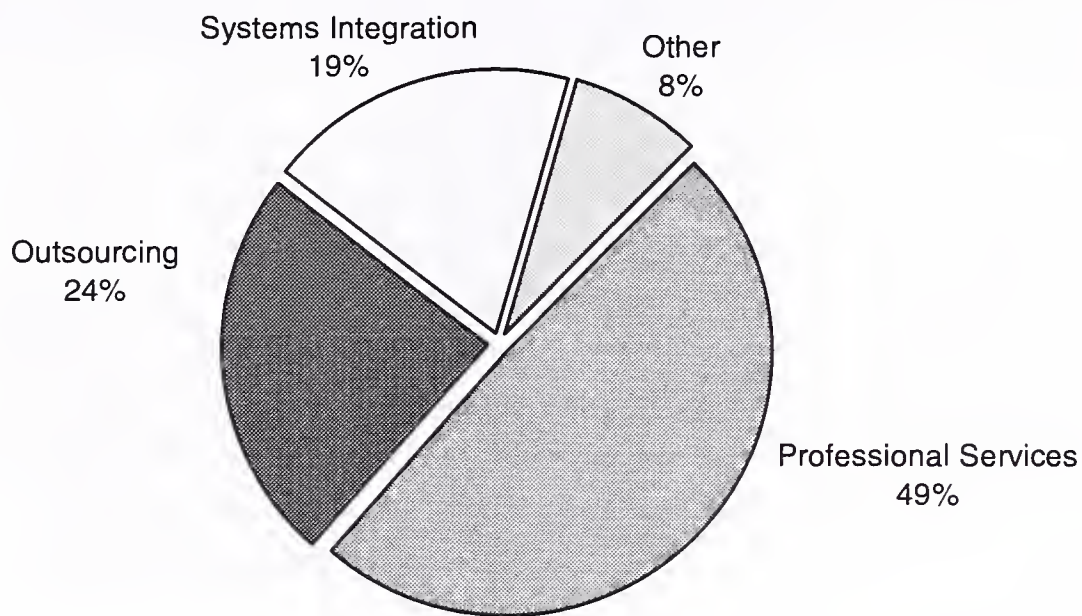
**IBM — Analysis of European Profit after Tax****B****Cap Gemini Sogeti**

In 1995, Cap Gemini Sogeti performed well, achieving a 20% increase in European revenues. At the forefront of this turnaround was a 21% growth in orders booked during the year, chiefly in the areas of applications management (67% increase) and distributed computing services (38% increase). The group reported a 'return to profit' but did not disclose details. Rumours remain of a possible closing of ties between Cap Gemini Sogeti and debis Systemhaus, the latter of whom generated \$1,020 of non-captive revenues, with sales outside the group increasing 25% during 1995, and outside of Germany by 50%. Cap Gemini Sogeti's biggest challenge lies in maximising its consulting capability through Gemini Consulting.



Exhibit IV-6

**Cap Gemini Sogeti — 1995 Software & Services Revenues by Delivery Mode**

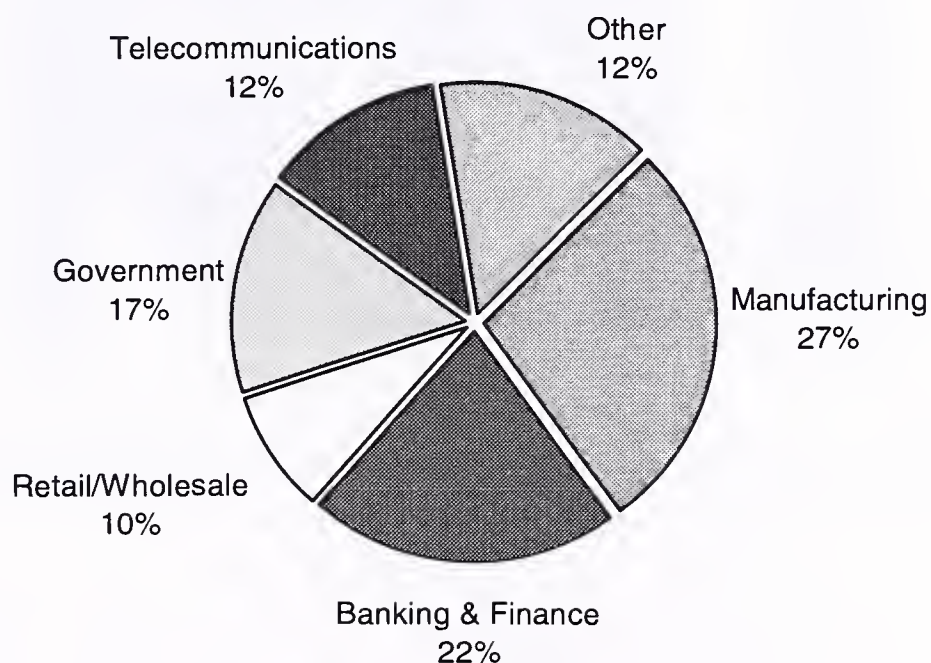


Cap Gemini Sogeti 1995 Total European Software & Service Revenues = US\$2,050 M.

Source: INPUT Estimates

Exhibit IV-7

**Cap Gemini Sogeti — 1995 Software & Services Revenues by Vertical Market**



N.B. Manufacturing includes process industries

Source: CGS

Exhibit IV-8

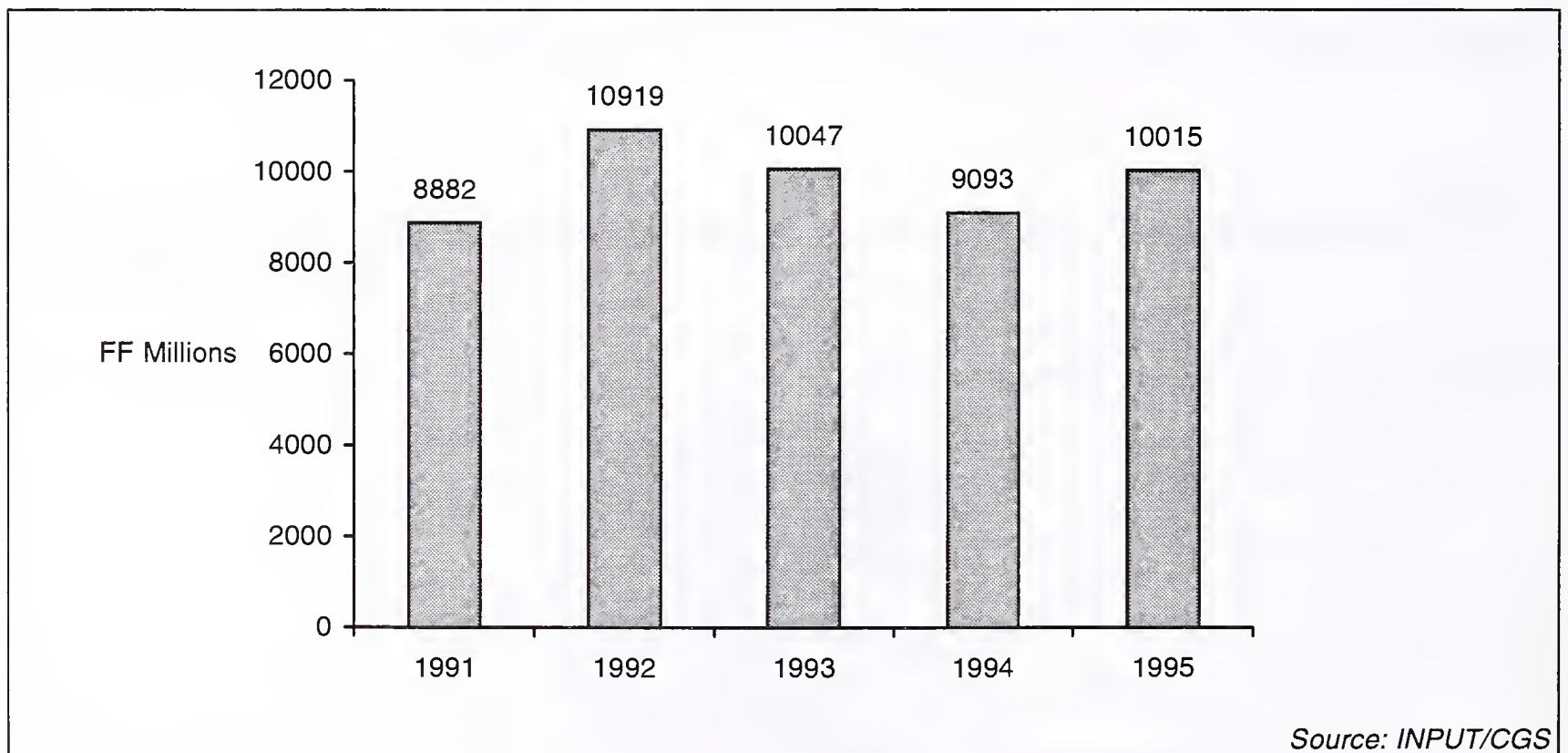
**Cap Gemini Sogeti — Five Year Financial Summary (FF Millions)**

Year	1991	1992	1993	1994	1995
World-wide revenues	10028	11884	11028	10176	11329
Profit after tax	560	-72	-8101	3021	4178
Earnings per share (FF)	16.00	1.00	-8.00	0.00	1.00
Total European Revenues	8882	10919	10047	9093	10015
European Profit after tax	N/A	N/A	N/A	N/A	N/A

Source: INPUT/CGS

Exhibit IV-9

**Cap Gemini Sogeti — Analysis of European Revenues**



Source: INPUT/CGS



**C**  
**SNI**

In 1995, INPUT estimates that SNI generated between 65-70% of its software and services revenues in Germany, and success in its home market through contract wins with Deutsche Telekom and Deutsche Bank helped to steer the group to profitability for the first time in five years. However, the company remains committed to geographical diversification, and to this extent, it has created Siemens Business Services in the UK as part of the first phase of a new global outsourcing organisation. In 1996, its first major contract was signed with UK Immigration Service for a contract value between £3-5 million. This greater emphasis on service offerings could enhance SNI's position within Europe provided it can offer truly pan-European service.

Exhibit IV-10

**SNI — 1995 Total European Revenues**

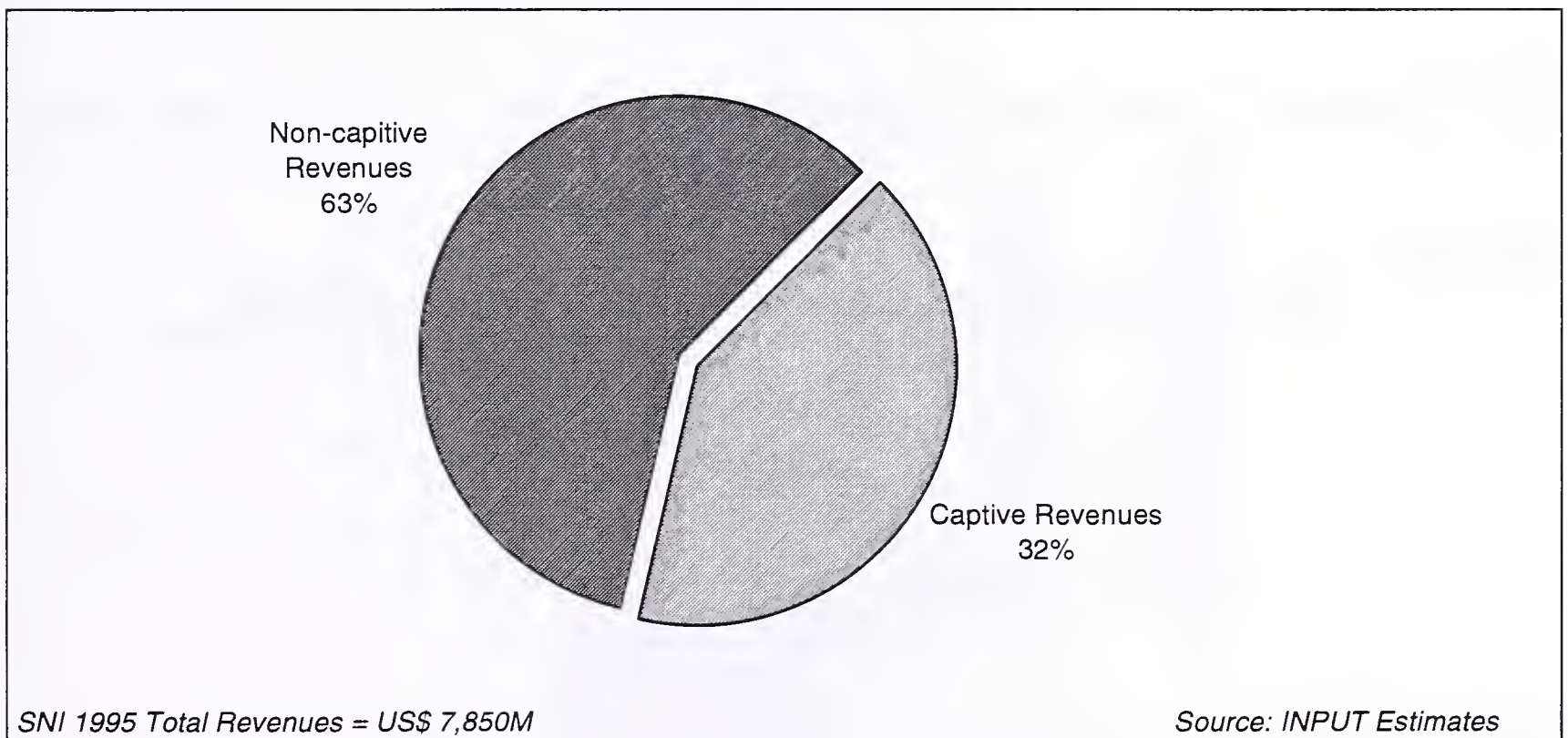
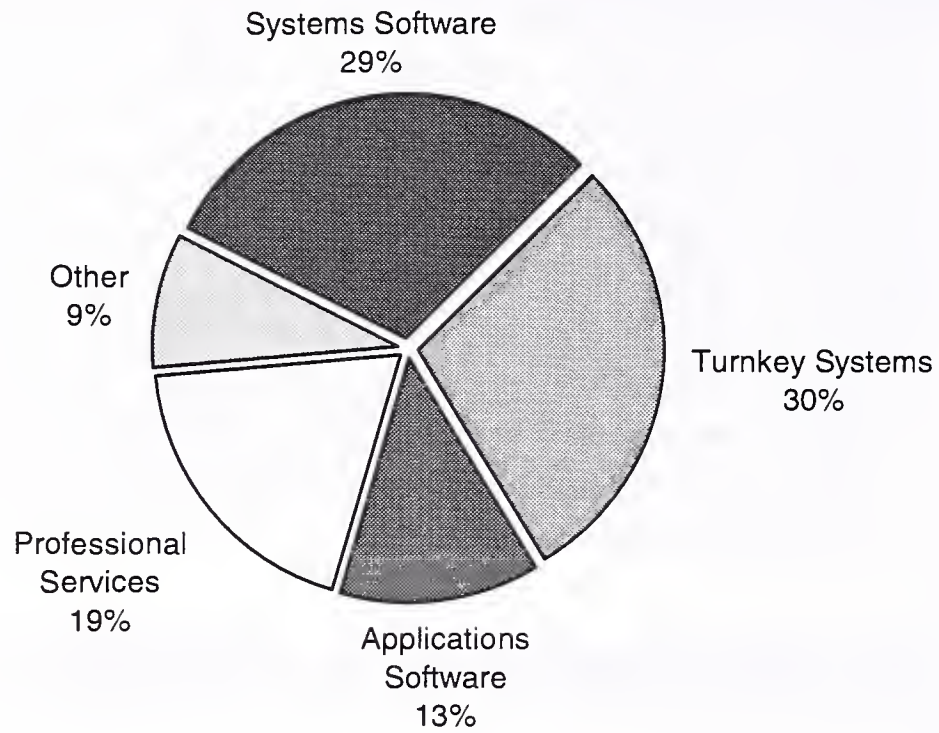




Exhibit IV-11

**SNI — 1995 Software & Services Non-captive Revenues by Delivery Mode**

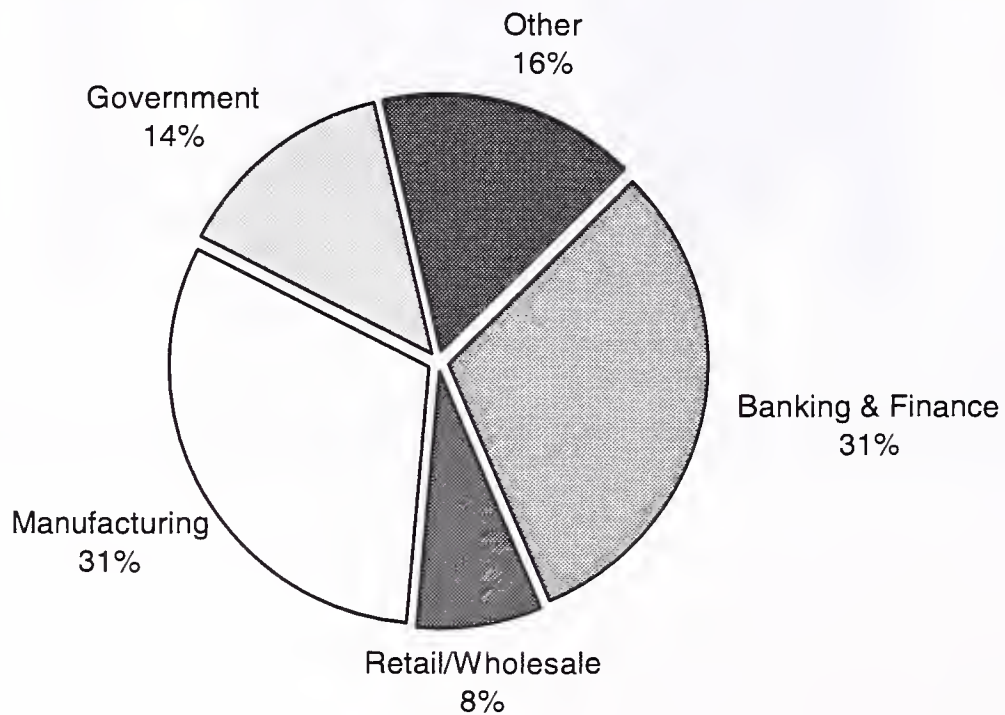


SNI 1995 Total European Software & Service Non-captive Revenues = US\$2,030 M.

Source: INPUT Estimates

Exhibit IV-12

**SNI — 1995 Software & Services Revenues by Vertical Market**



Source: INPUT Estimates

Exhibit IV-13

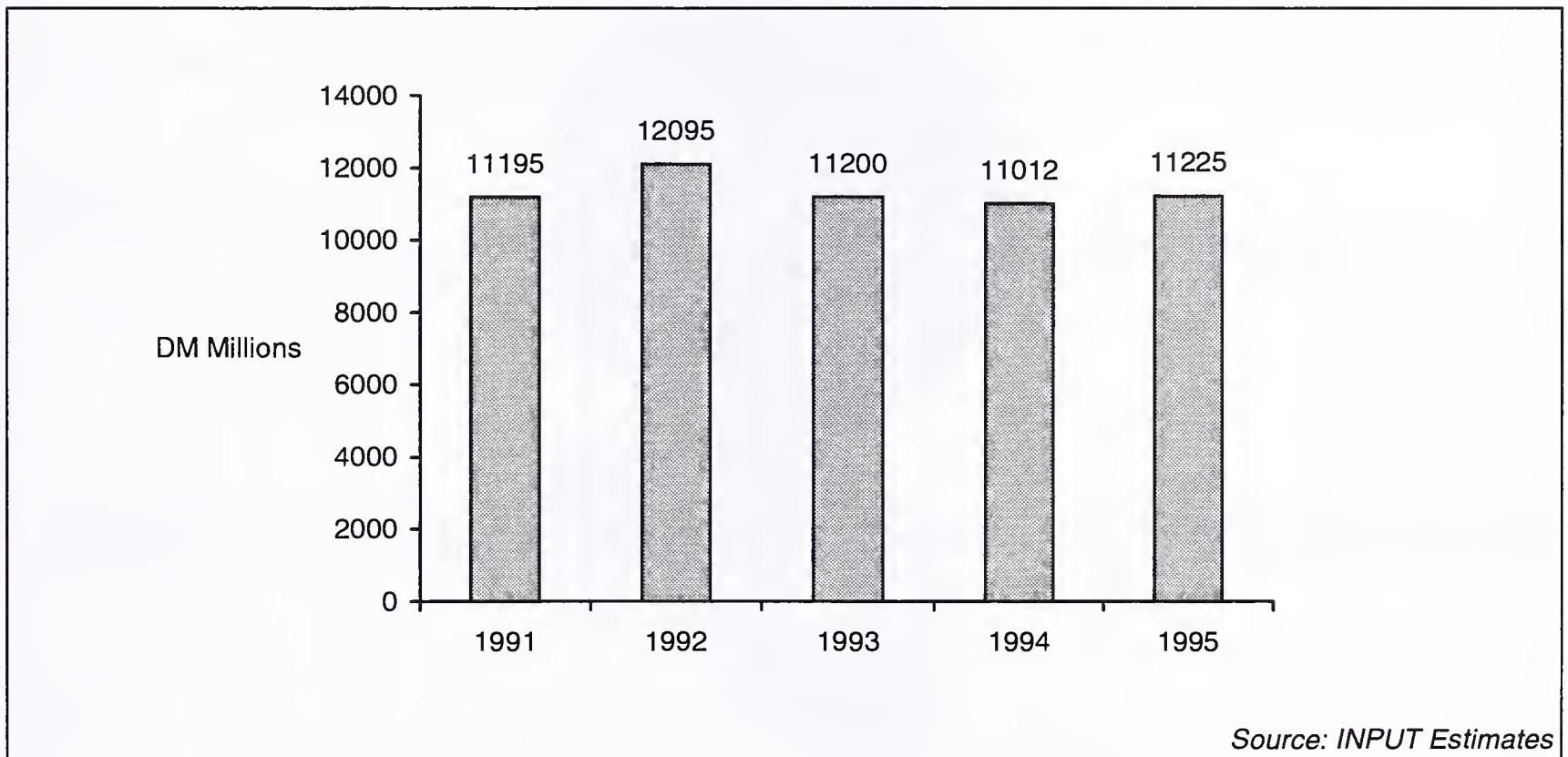
**SNI — Five Year Financial Summary (DM Millions)**

Year	1991	1992	1993	1994	1995
Worldwide revenues	12100	13000	11900	11700	12800
Profit after tax	-781	-513	-419	-350	23
Earnings per share (DM)	N/A	N/A	N/A	N/A	N/A
Total European Revenues	11195	12095	11200	11012	11225
European Profit after tax	N/A	N/A	N/A	N/A	N/A

Source: INPUT/SNI

Exhibit IV-14

**SNI — Analysis of European Revenues**



Source: INPUT Estimates

**D****EDS**

Despite promoting itself as a global player, EDS still generates 70% of its revenues in the US and remains weak in the Asia/Pacific region. Worldwide, EDS posted an increase gross profits of \$1,529 million, representing 12% growth on the previous year. In Europe, the company continued to strengthen its position, increasing its market share from 1.3% (1993), to 1.9% in 1994 and to 2.2% in 1995. Strong performances were registered in the UK and Italy, where it rose to third in the UK software and services rankings from fifth and to ninth in Italy from fifteenth.

Exhibit IV-15

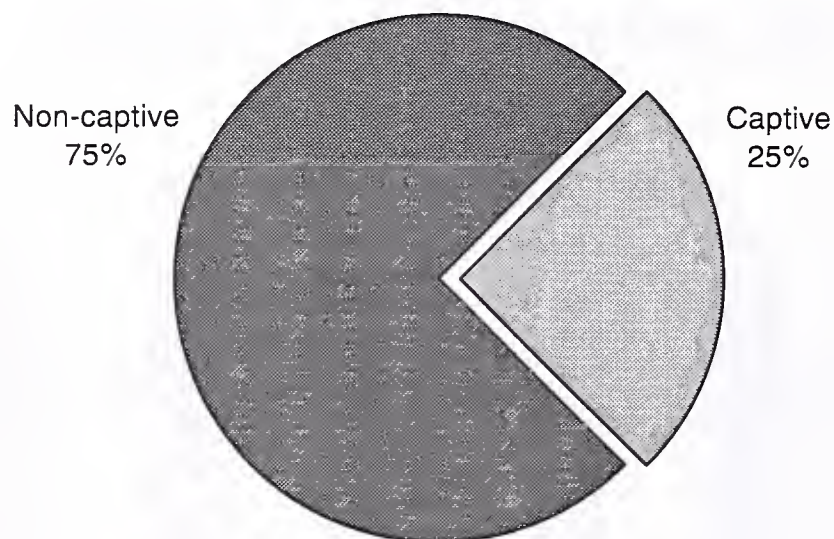
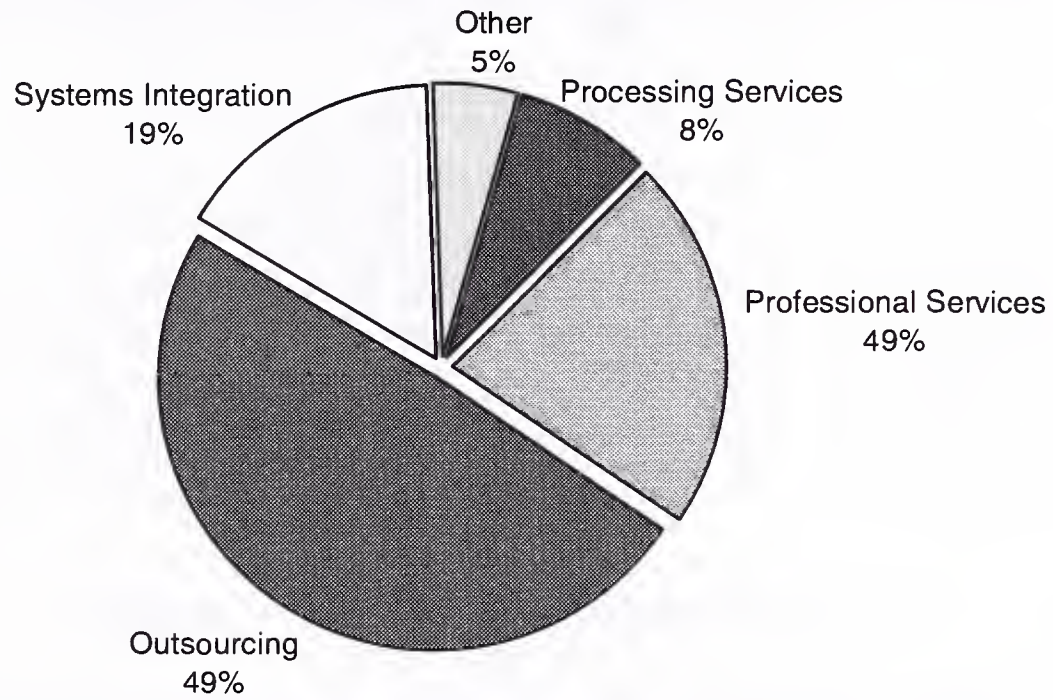
**EDS — 1995 European Software & Services Revenues***EDS 1995 Total European Revenues = US\$2,660 M.**Source:EDS*



Exhibit IV-16

**EDS — 1995 Non-captive Software & Services Revenues by Delivery Mode**

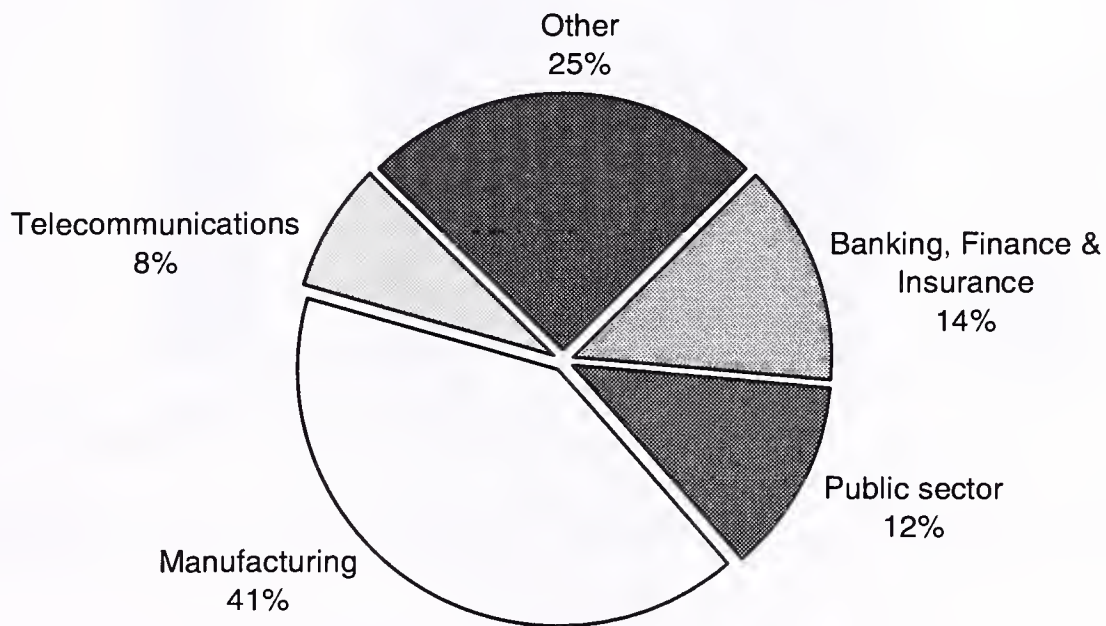


EDS 1995 Total European Non-captive Software & Service Revenues = US\$2000 M.

Source: INPUT Estimates

Exhibit IV-17

**EDS — 1995 Software & Services Revenues by Vertical Market**



N.B. Includes GM captive revenues

Source: INPUT Estimates

Exhibit IV-18

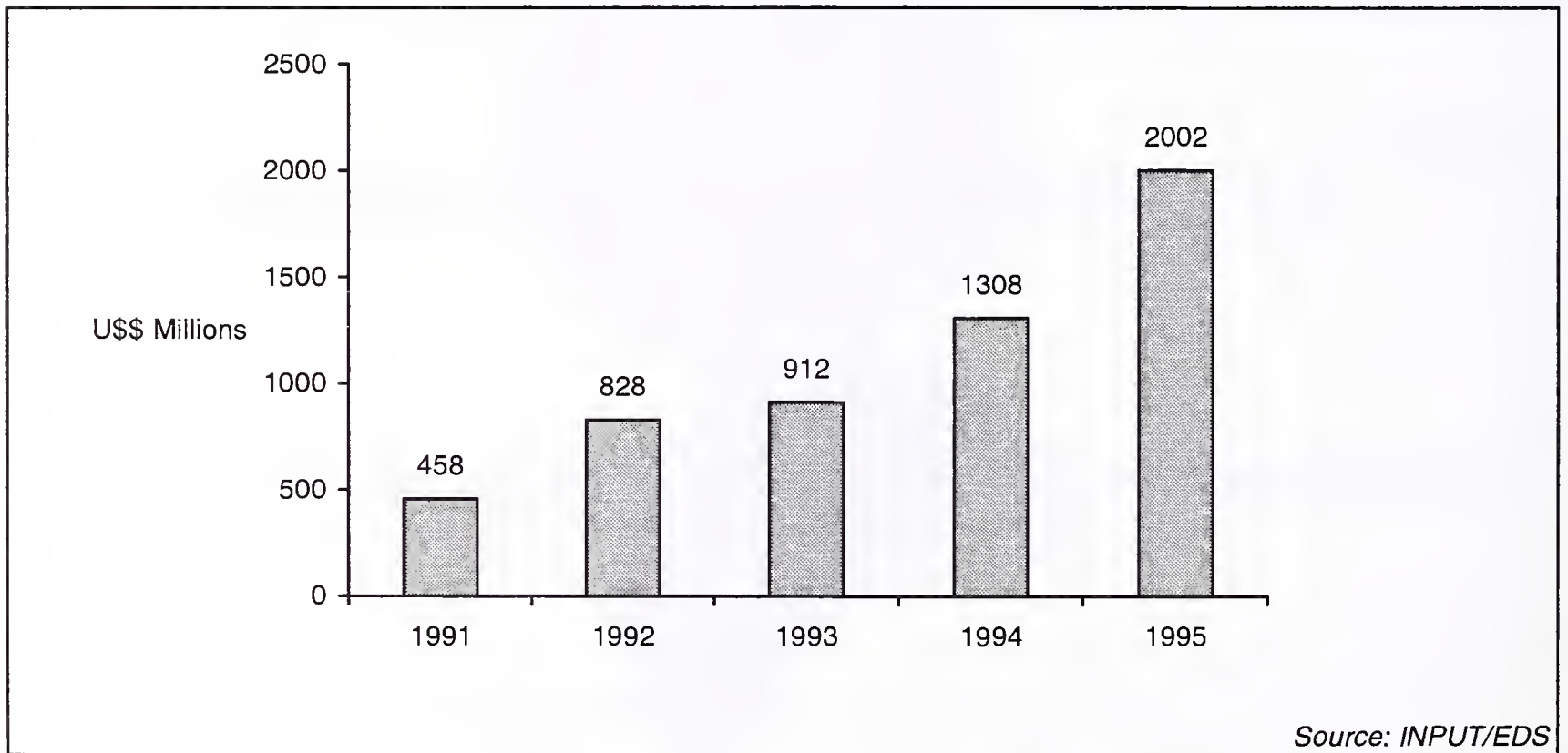
**EDS — Five Year Financial Summary (US\$ Millions)**

Year	1991	1992	1993	1994	1995
World-wide revenues	7029	8155	8507	9960	12422
Profit after tax	547	635	724	822	939
Earnings per share (\$)	1.14	1.33	1.51	1.71	1.96
Total European Revenues	720	1375	1423	1832	2661
European Operating Profit	108	131	149	168	192
Non-captive European Rev.	458	828	912	1308	2002

Source: INPUT/EDS

Exhibit IV-19

**EDS — Analysis of Non-captive European Revenues**



Source: INPUT/EDS

**E**

**Digital**

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 (Digital’s customer service operation) will now be treated as a separate division. Digital has recently announced that it will not adopt a policy of acquisitions to grow the company.

Exhibit IV-20

**Digital — 1995 Total European Revenues**

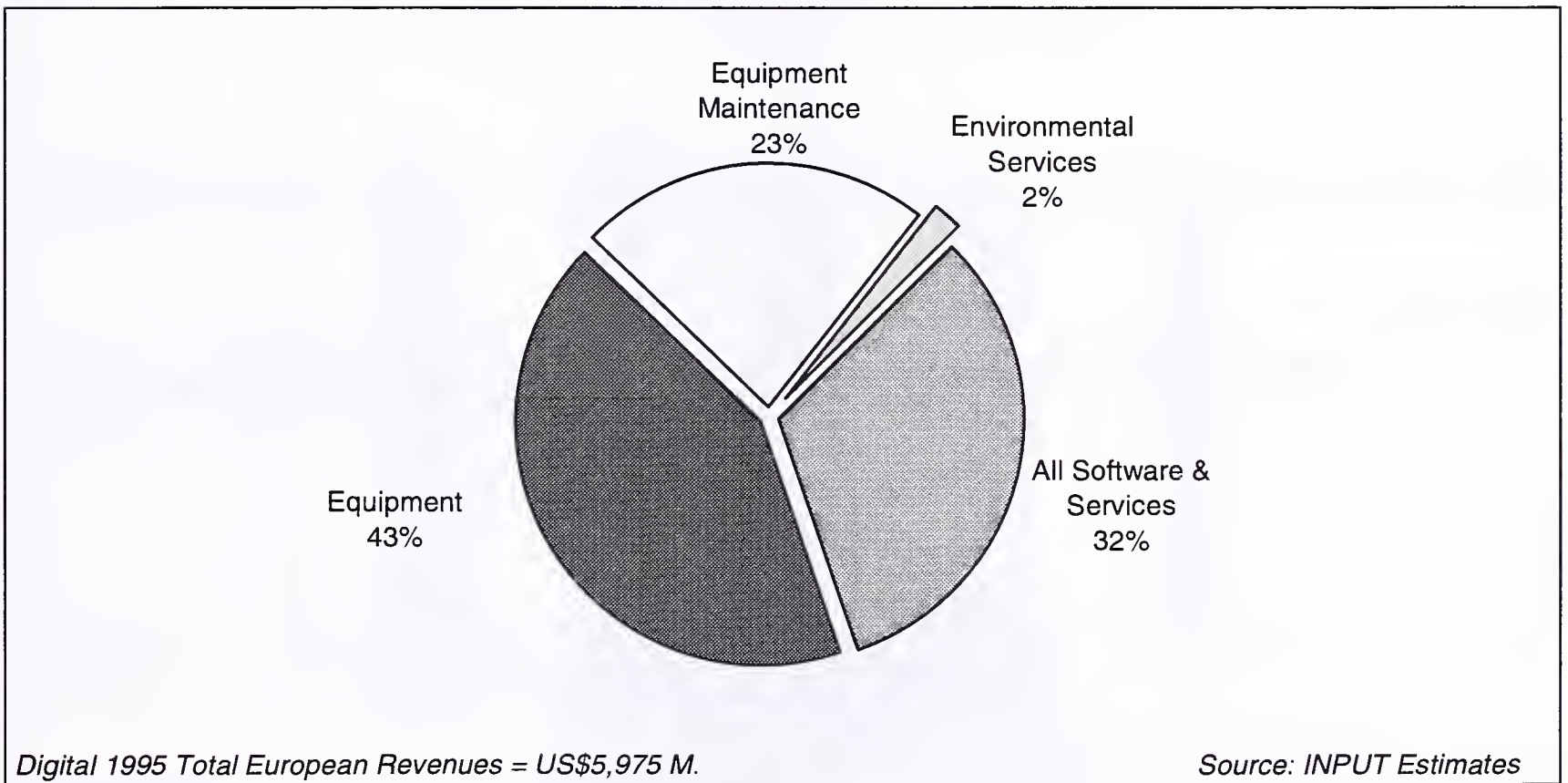




Exhibit IV-21

**Digital — 1995 Software & Services Revenues by Delivery Mode**

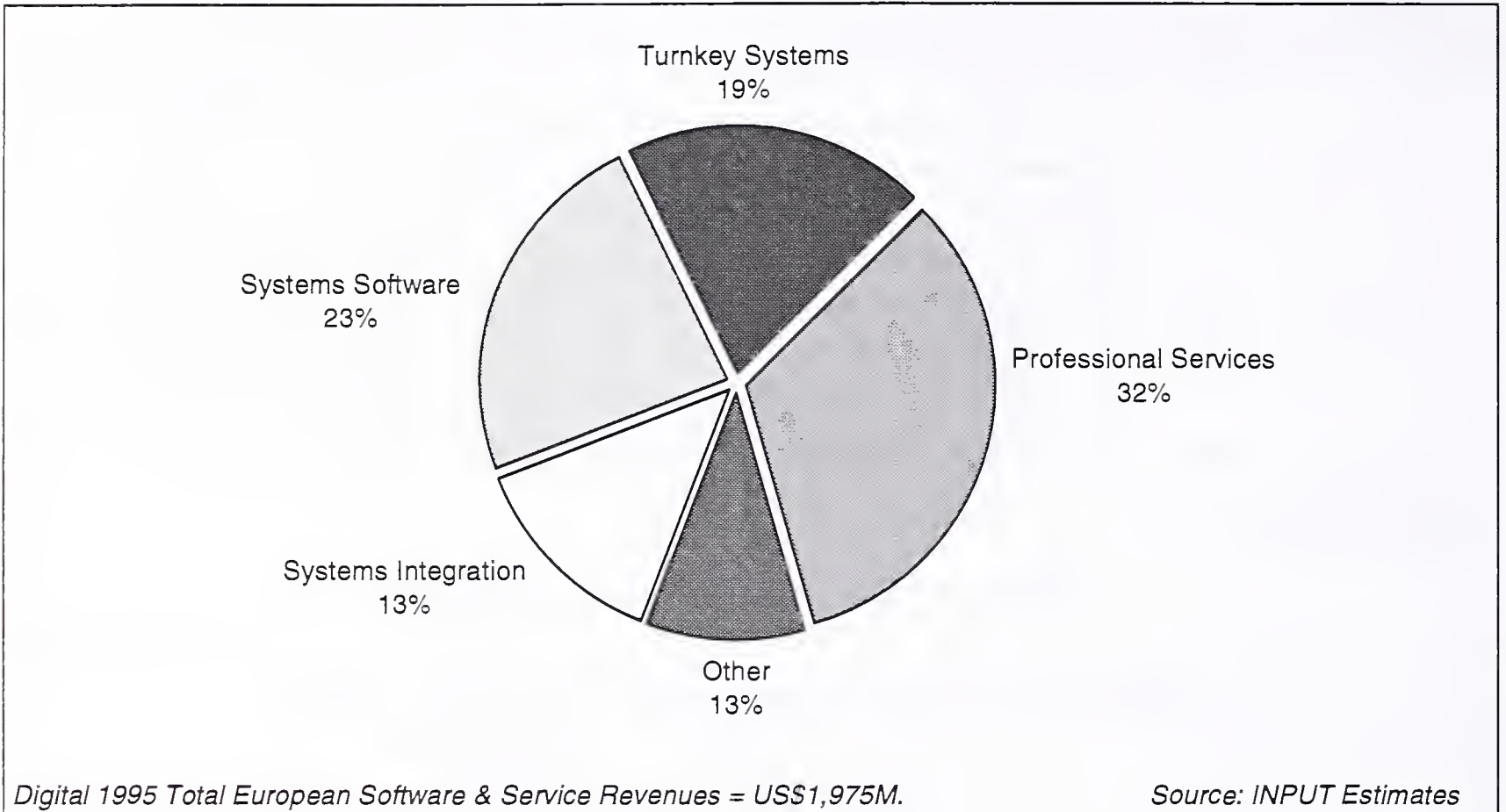


Exhibit IV-22

**Digital — 1995 Software & Services Revenues by Vertical Market**

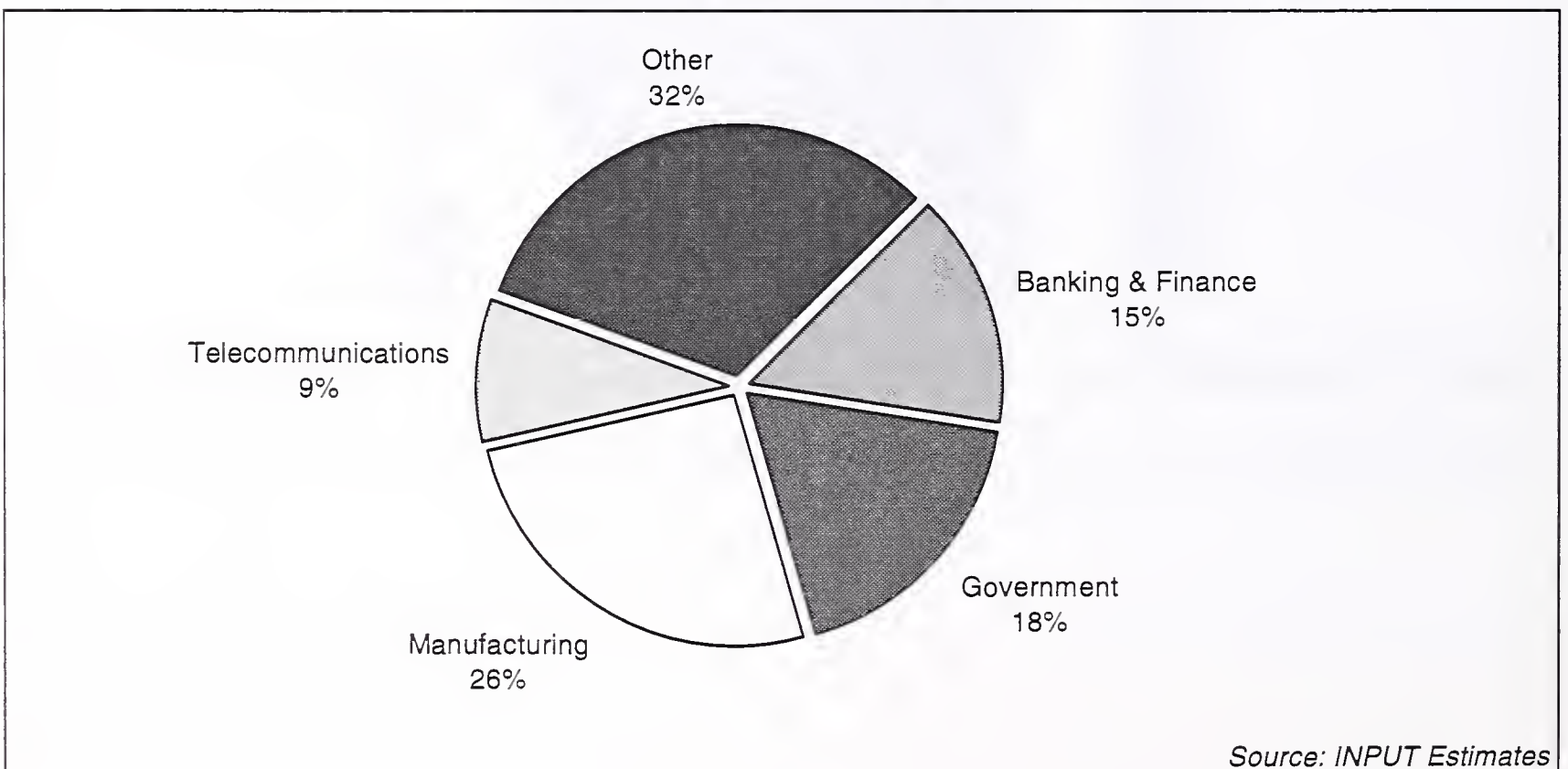


Exhibit IV-23

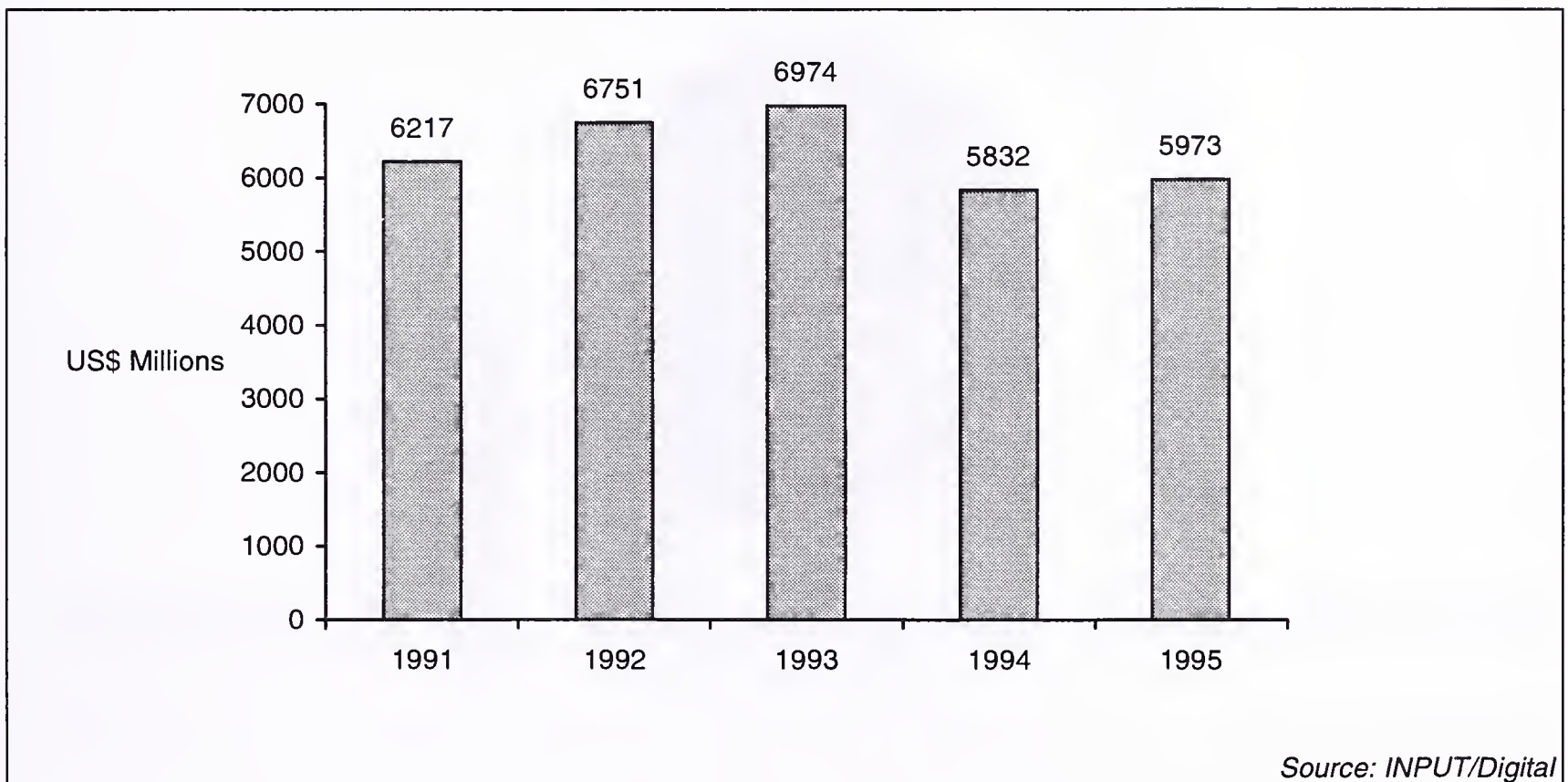
**Digital — Five Year Financial Summary (US\$ Millions)**

Year	1991	1992	1993	1994	1995
World-wide revenues	13911	13930	14371	13451	13813
Profit after tax	-617	-2796	-251	-2156	122
Earnings per share (\$)	-5.08	-22.39	-1.93	-15.80	0.59
Total European Revenues	6217	6751	6974	5832	5973
European Profit after tax	N/A	0	0	-1	-40

Source: INPUT/Digital

Exhibit IV-24

**Digital — Analysis of European Revenues**



Source: INPUT/Digital

## F

**Microsoft**

Microsoft increased its European revenues from \$1,260 to \$1,600 between 1994 and 1995; representing growth of 27%. However, as the migration towards Internet platforms gathers momentum, the threat posed by Java-based applications is obvious. The company appears to be responding to the treat with vigour, and during 1996 it made several strategic purchases of smaller players with leading edge technologies. These were namely Colusa Software Inc. (Internet software), Aspect Software Engineering (Internet database software) and eShop Inc. (electronic commerce software).

Exhibit IV-25

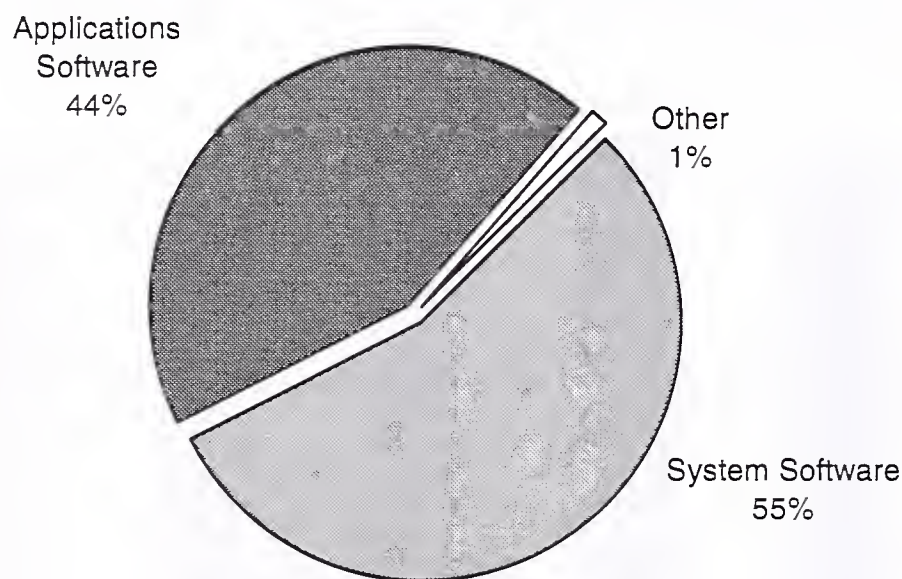
**Microsoft — 1995 Software & Services Revenues by Delivery Mode***Microsoft 1995 Total European Software & Service Revenues = US\$1600 M.**Source: INPUT Estimates*



Exhibit IV-26

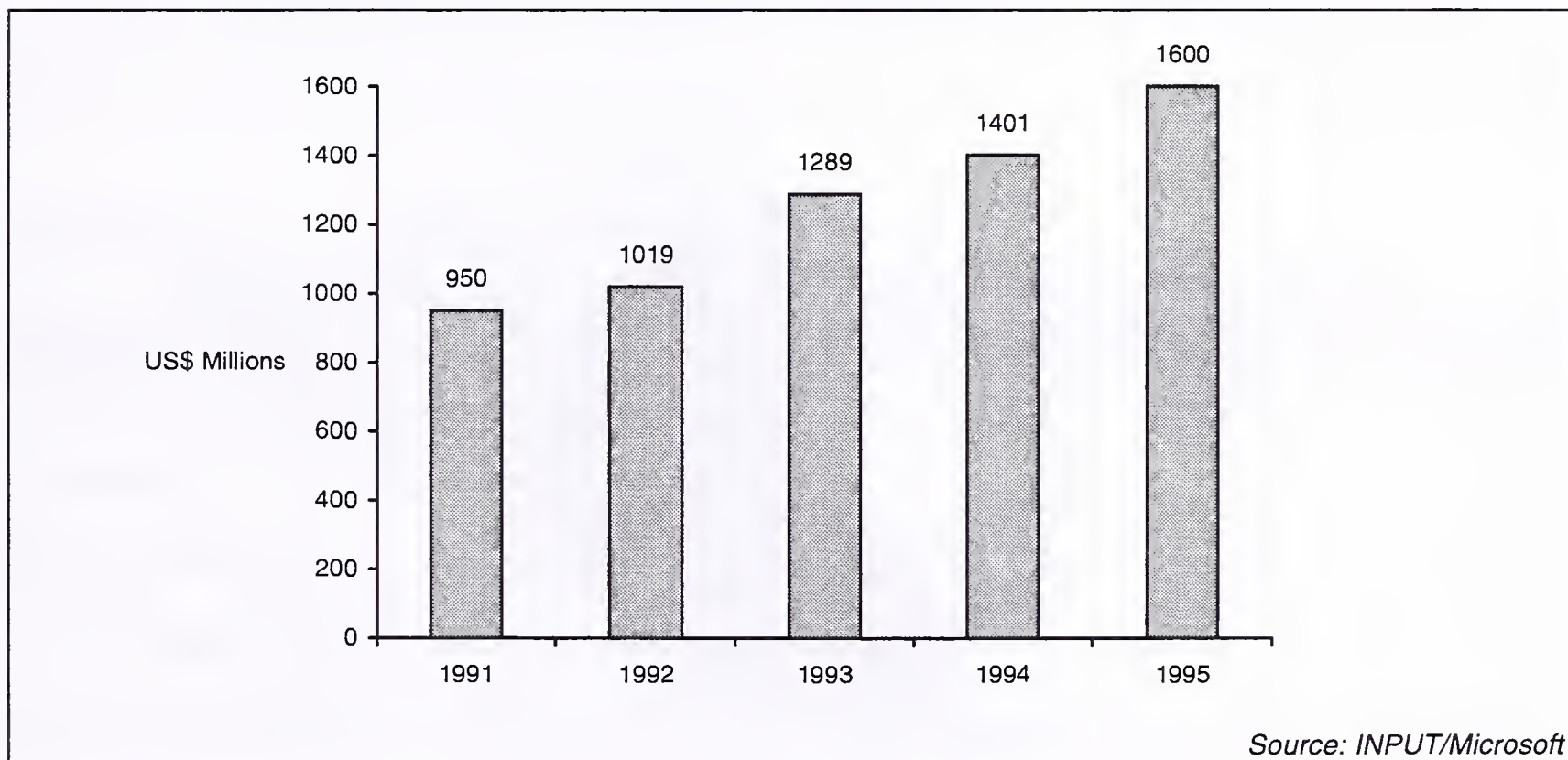
**Microsoft — Five Year Financial Summary (US\$ Millions)**

Year	1991	1992	1993	1994	1995
Worldwide revenues	1843	2759	3753	4649	5937
Profit after tax	463	708	953	1146	1453
Earnings per share (\$)	0.82	1.20	1.57	1.88	2.32
Total European Revenues	950	1019	1289	1401	1600
European Profit after tax	N/A	329	360	346	367

Source: INPUT Estimates

Exhibit IV-27

**Microsoft — Analysis of European Revenues (US\$ Millions)**



Source: INPUT/Microsoft

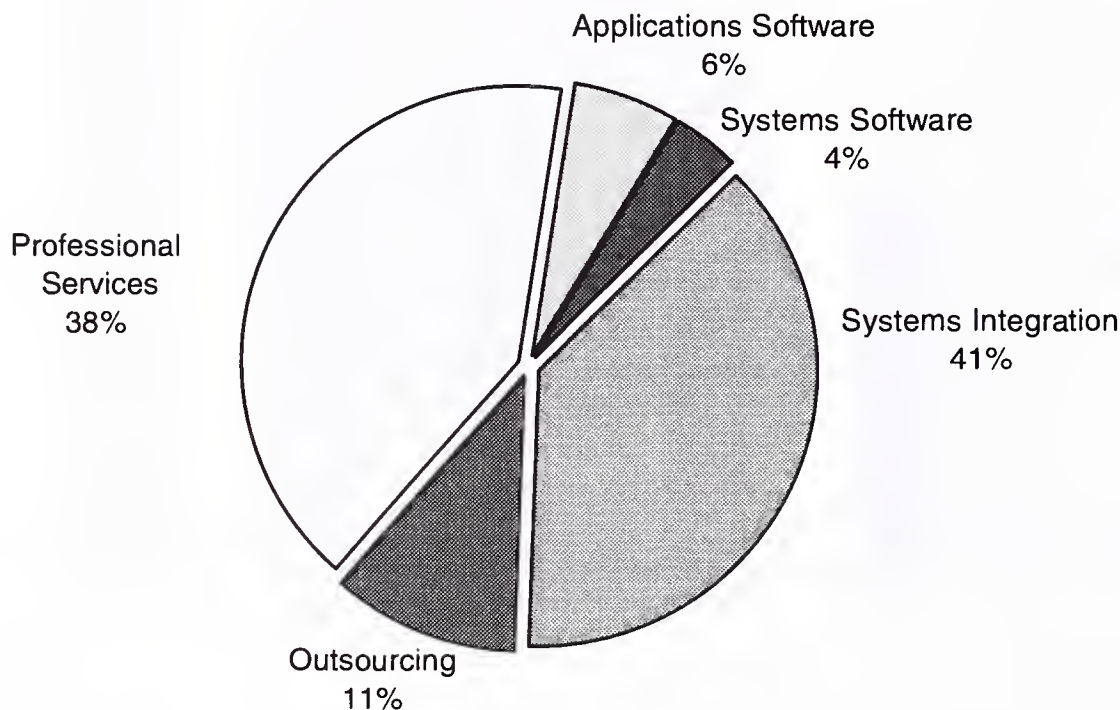
**G**

**Andersen Consulting**

INPUT estimates that Andersen Consulting win 60% of the projects it actively bids on, and has completed projects ranging from \$2 million to \$80 million (average size about \$10 million). It achieved estimated European revenues of \$1,315 million in 1995, with growth up at 23%. The utilities sector has become one of Andersen’s highest growth markets, with key European contracts being undertaken for Thames Water (UK), BP Exploration, Statoil Norge AS and Slovakia gas. In the public sector, the practice has also gained a series of recent contracts for social security agencies, including the National Insurance Recording Service in the UK and a smart card benefit payment system for the Spanish Ministry of Labor and Social Security.

Exhibit IV-28

**Andersen Consulting — 1995 Software & Services Revenues by Delivery Mode**



Andersen Consulting 1995 Total European Software & Service Revenues = US\$1,315 M.

Source: INPUT Estimates

Exhibit IV-29

**Andersen Consulting — 1995 Software & Services Revenues by Vertical Market**

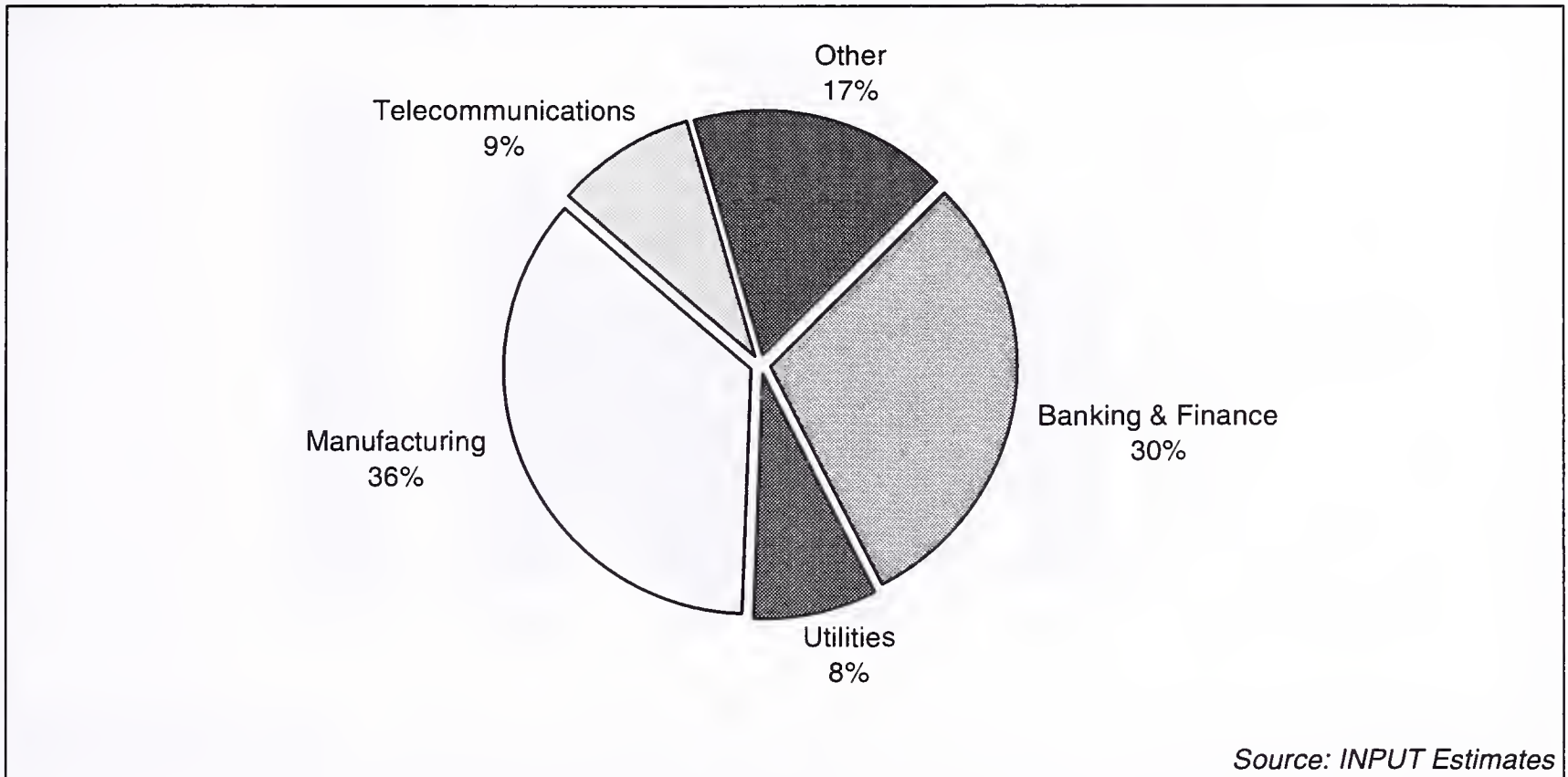


Exhibit IV-30

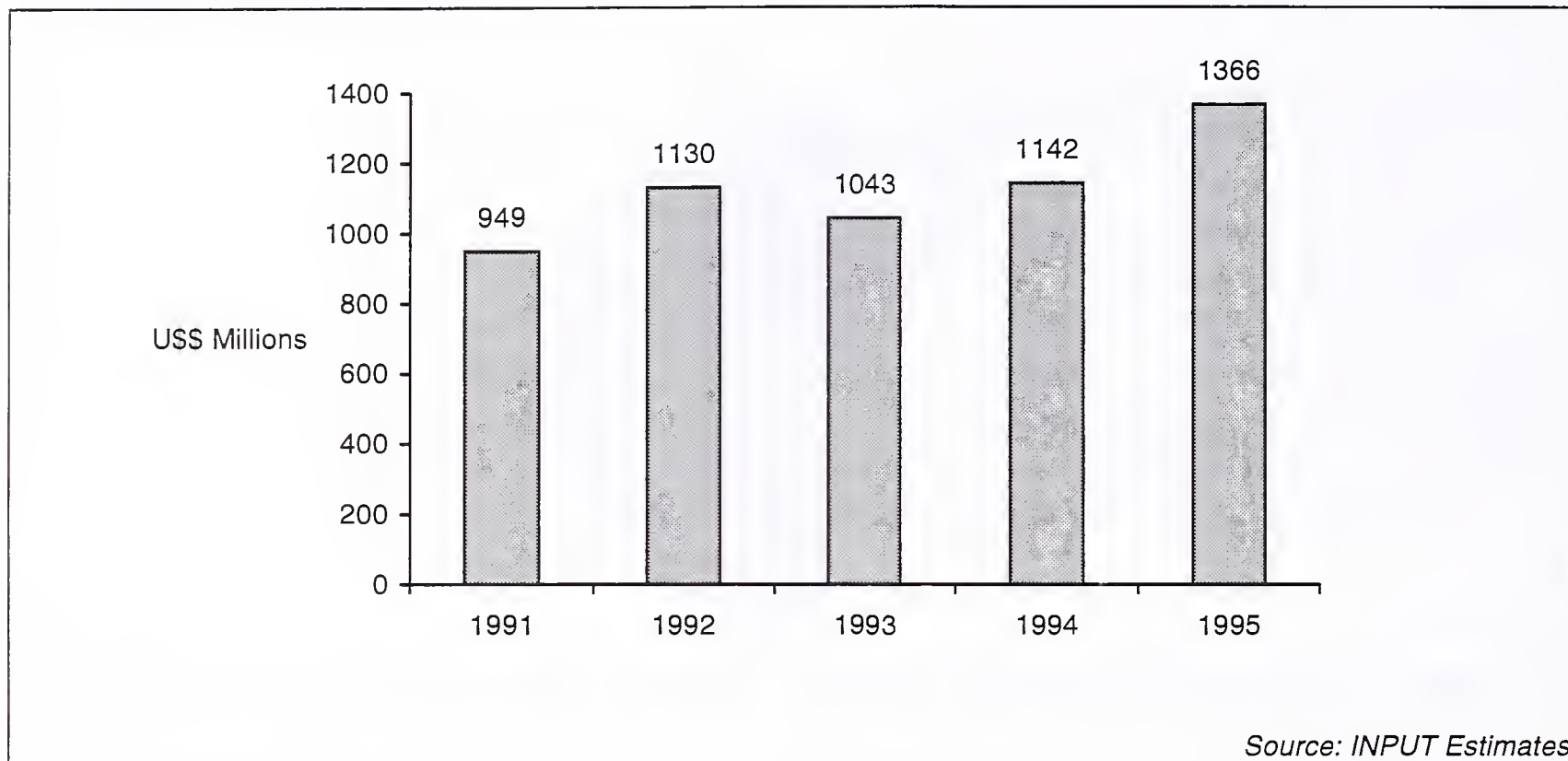
**Andersen Consulting — Five Year Financial Summary (US\$ Millions)**

Year	1991	1992	1993	1994	1995
Worldwide revenues	2341	2723	2876	3452	4224
Profit after tax	N/A	N/A	N/A	N/A	N/A
Earnings per share (FF)	N/A	N/A	N/A	N/A	N/A
Total European Revenues	949	1130	1043	1142	1366
European Profit after tax	N/A	N/A	N/A	N/A	N/A

*Source: INPUT/Andersen Consulting*



Exhibit IV-31

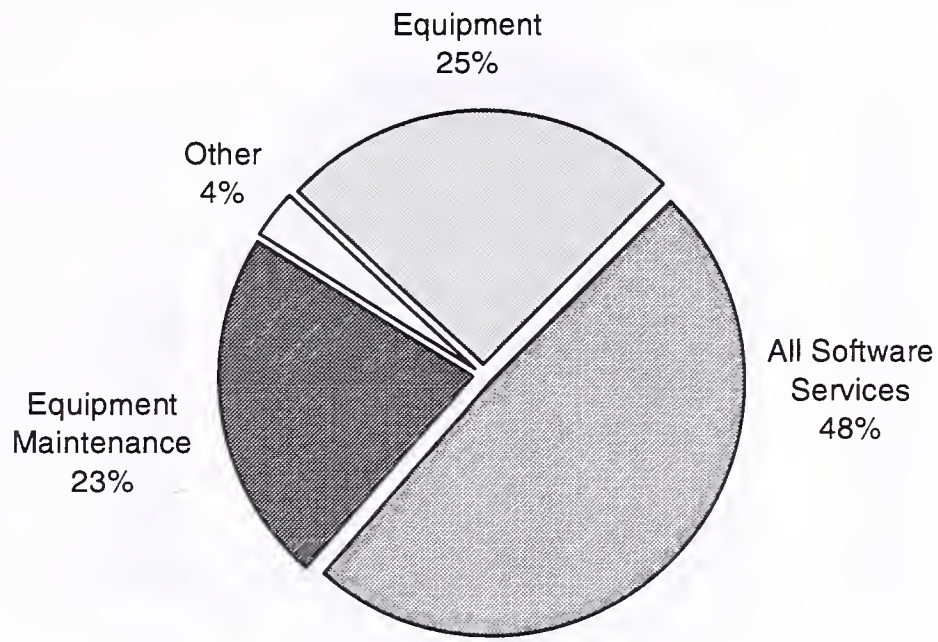
**Andersen Consulting — Analysis of European Revenues****H****ICL**

In 1995, despite a software and services revenue increase of approximately 10%, across the group, ICL made a \$300 m loss which was instrumental in the company's announcement in 1996 of its future focus on software and services provision. During 1995, CFM, ICL's outsourcing arm, signed £50 million of business including IT outsourcing contracts for London Underground and a third of London's boroughs. ICL's systems integration business won contracts for GKN Westland Helicopters, the London Underground and was also appointed prime contractor for Swedish Telecom's multimedia kiosk network.

The main problem for the company appears to be improving employee productivity: in line with many other indigenous European players, significant staff reductions were announced during 1996.

Exhibit IV-32

**ICL — 1995 Total European Revenues**

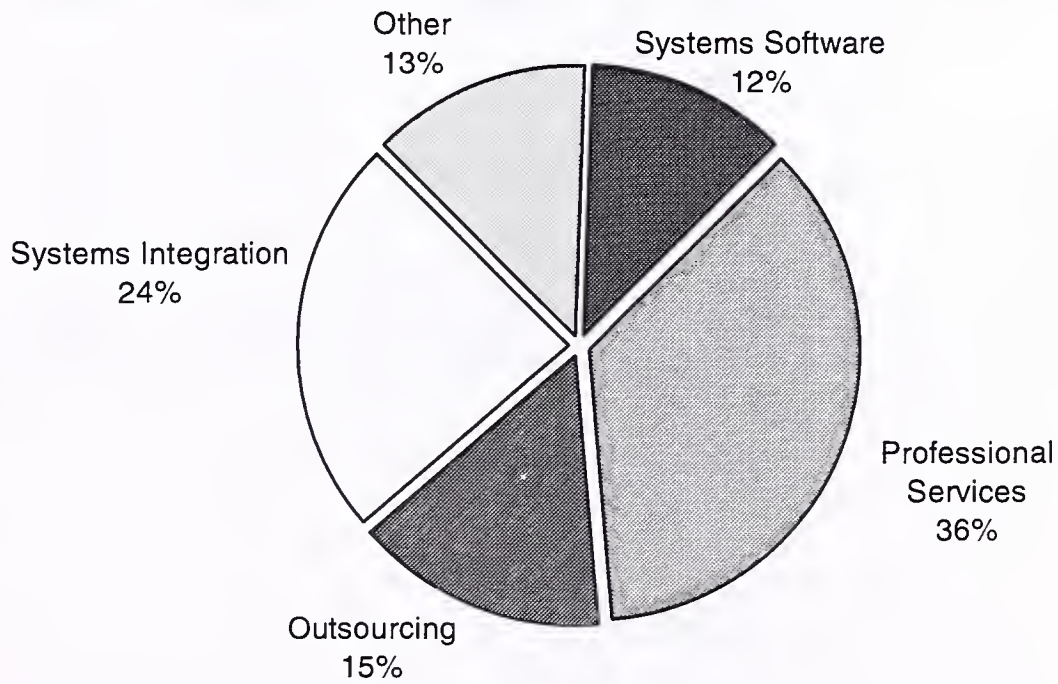


ICL 1995 Total European Revenues = US\$2,625 M.

Source: INPUT Estimates

Exhibit IV-33

**ICL — 1995 Software & Services Revenues by Delivery Mode**



ICL 1995 Total European Software & Service Revenues = US\$1,270 M.

Source: INPUT Estimates

Exhibit IV-34

**ICL — 1995 Software & Services Revenues by Vertical Market**

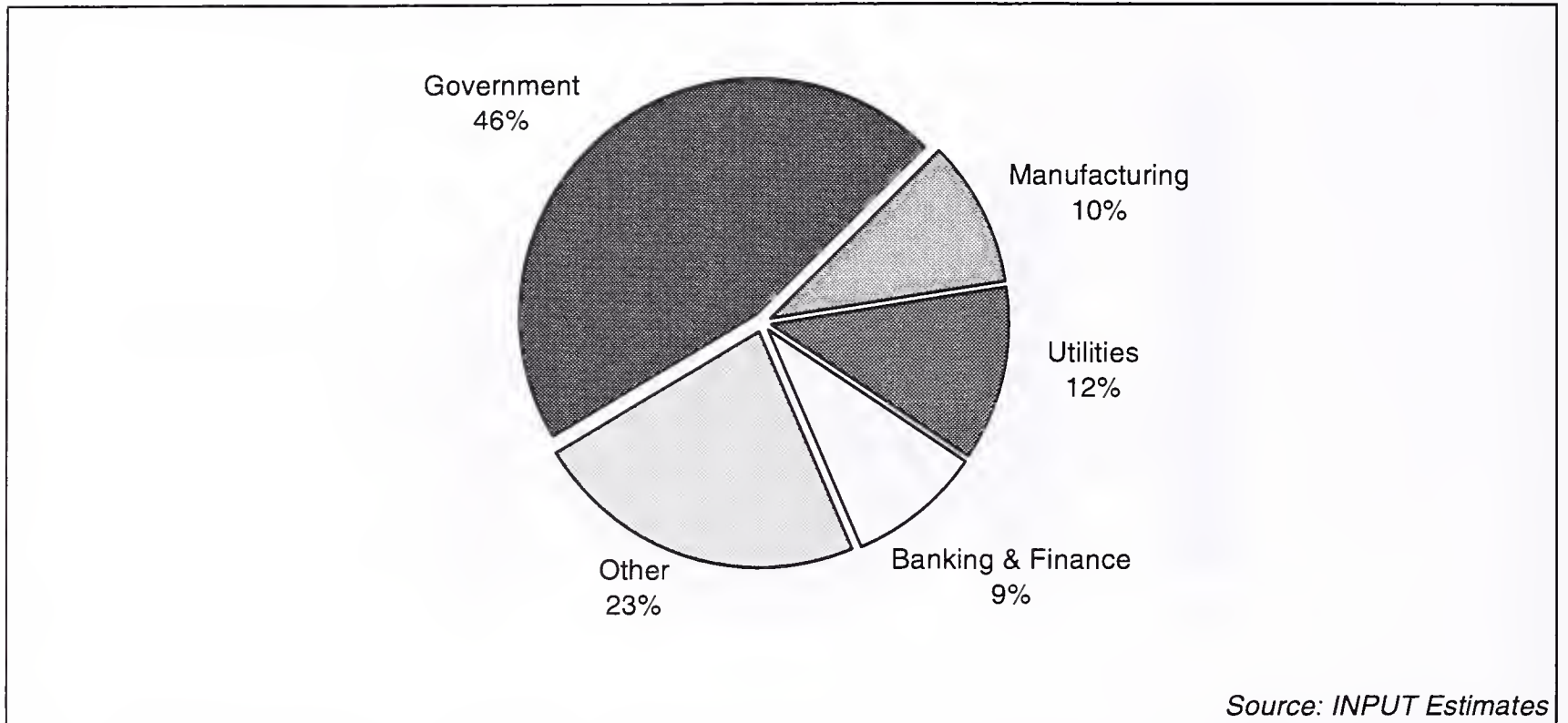


Exhibit IV-35

**ICL — Five Year Financial Summary (PS Millions)**

Year	1991	1992	1993	1994	1995
Worldwide revenues	1876	2480	2624	2655	3114
Profit after tax	69.0	41.1	26.3	15.9	-192.8
Earnings per share (PS)	N/A	N/A	N/A	0.3	-28.9
Total European Revenues	1565	2075	2210	2236	2623*
European Profit after tax	N/A	N/A	N/A	N/A	N/A

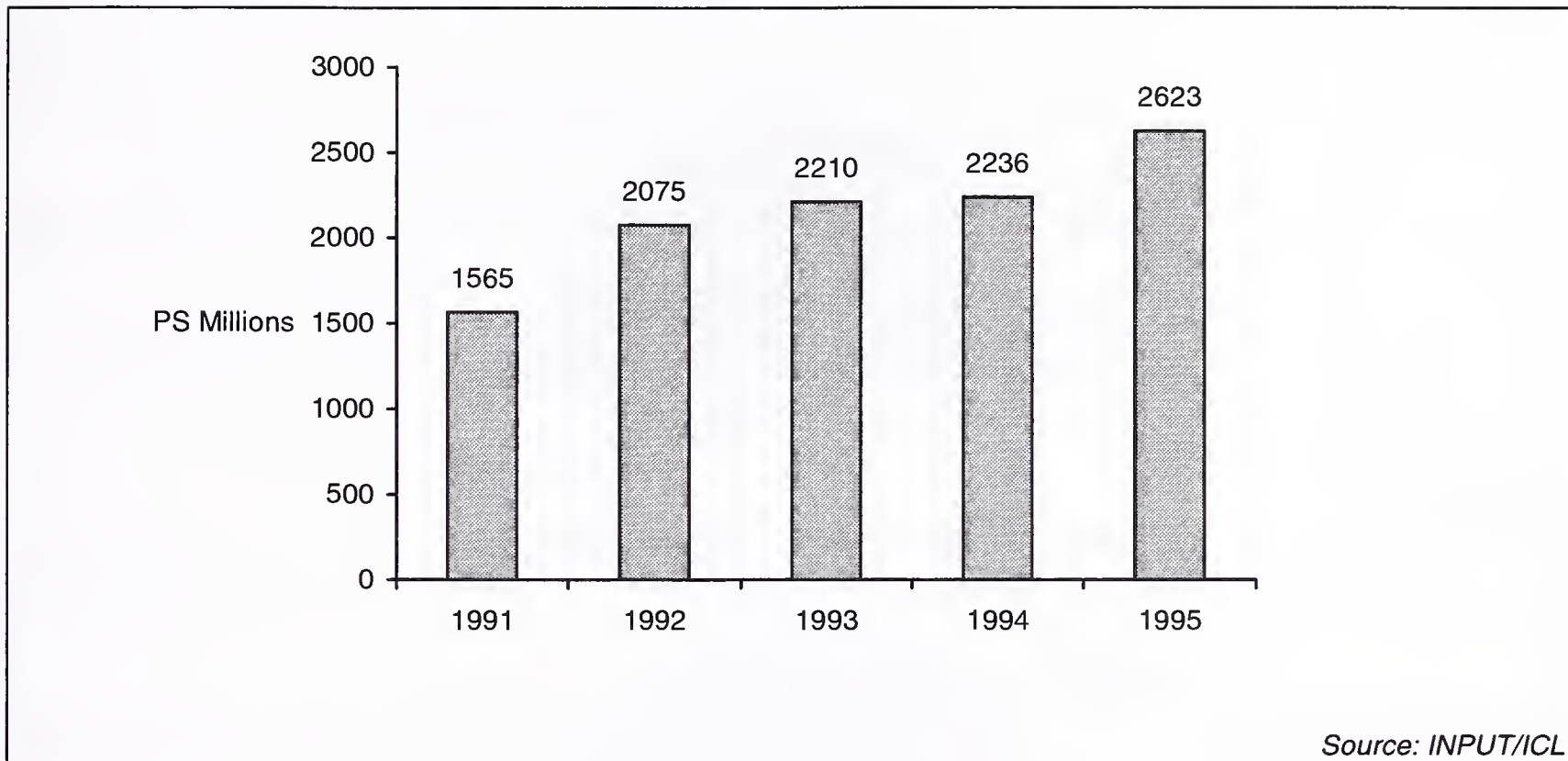
\* Estimate

*Source: INPUT/ICL*



Exhibit IV-36

### ICL — Analysis of European Revenues



I

**Bull**

In 1995, Bull reported a world-wide profit for the first time in five years, with this improvement mirrored in European software and services, including a 21% rise in systems integration revenues. A Significant turnaround was registered in the Spanish division, which generated 1995 profits of \$8 million on turnover up 12% at \$152m, further to restructuring. The German and UK divisions also performed well with and the latter reporting revenue growth of 31%, with profits before tax climbing to £16.9 m.

Exhibit IV-37

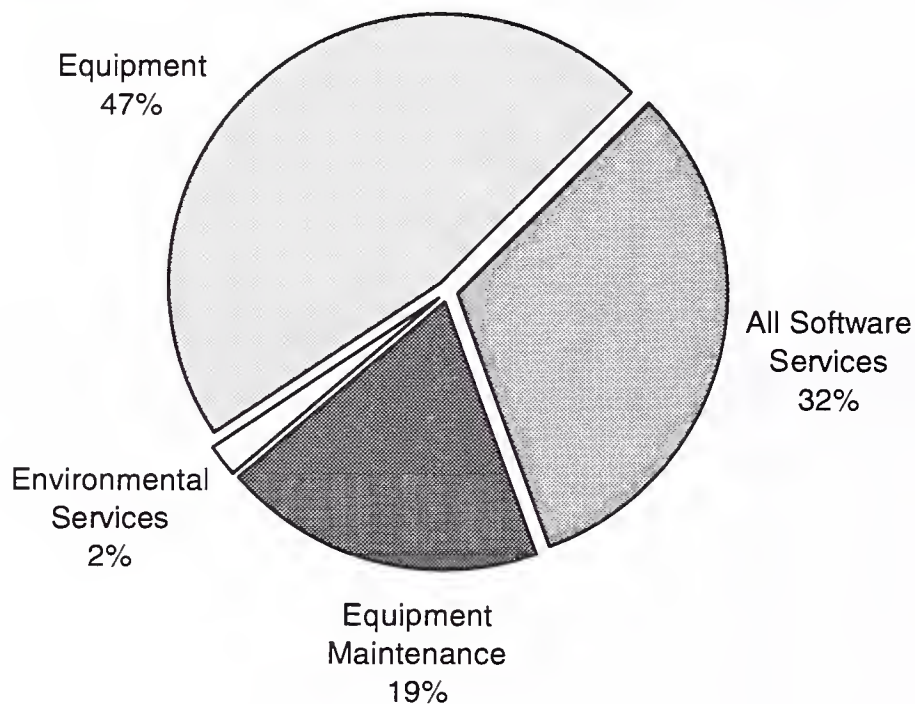
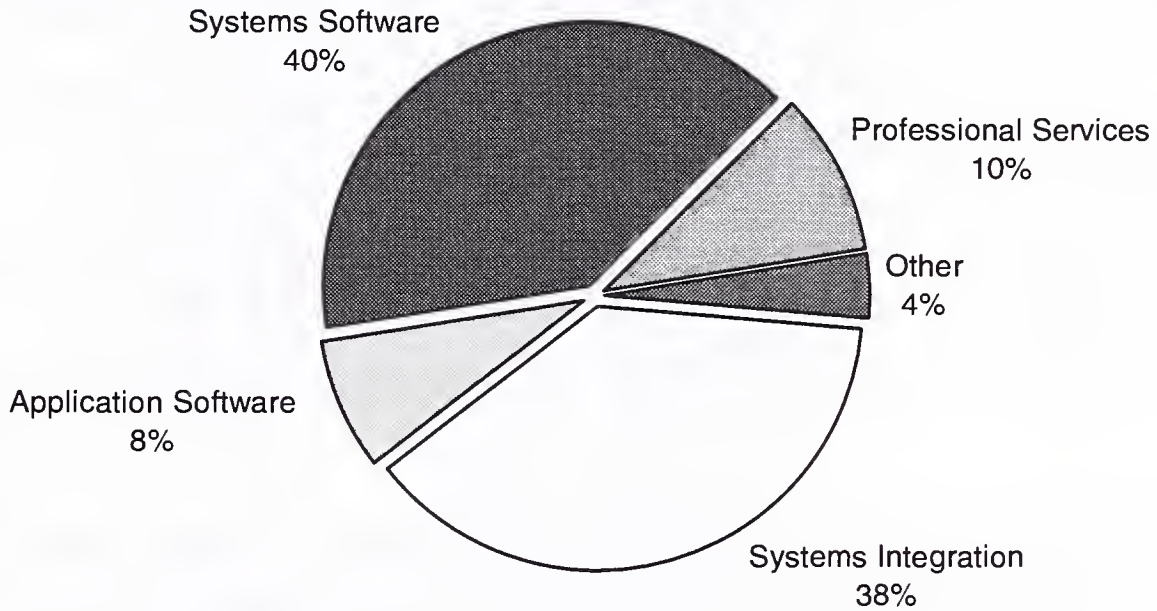
**Bull — 1995 Total European Revenues***Bull 1995 Total European Revenues = US\$3,705 M.**Source: INPUT Estimates*

Exhibit IV-38

**Bull — 1995 Software & Services Revenues by Delivery Mode**

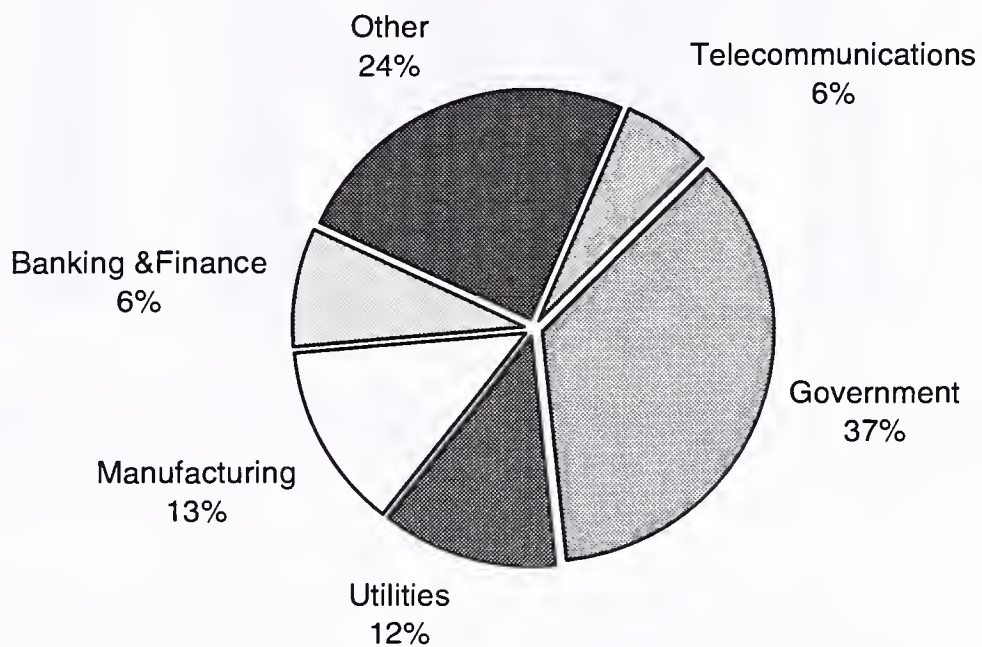


Bull 1995 Total European Software & Service Revenues = US\$1,190 M.

Source: INPUT Estimates

Exhibit IV-39

**Bull — 1995 Software & Services Revenues by Vertical Market**



Source: INPUT Estimates



Exhibit IV-40

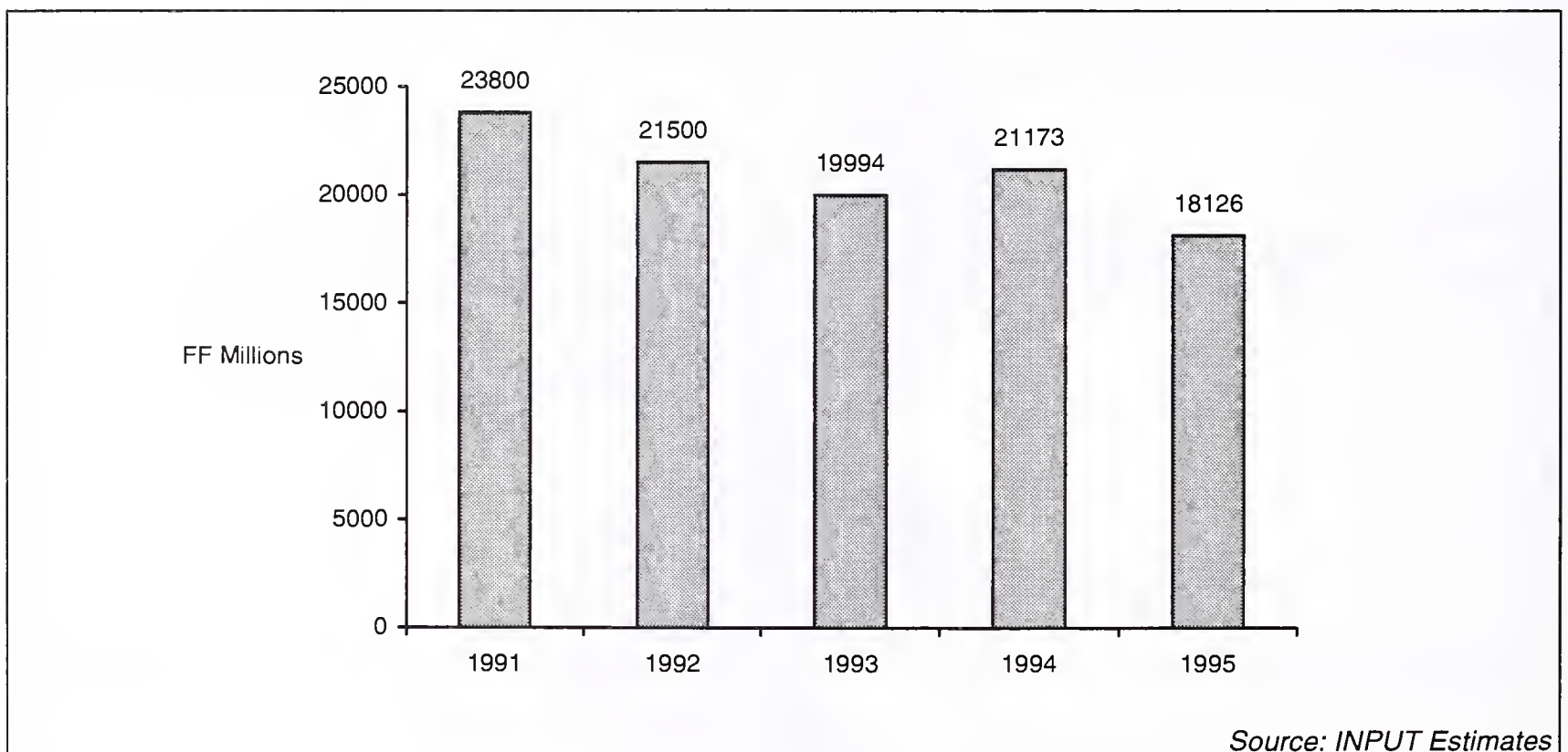
**Bull — Five Year Financial Summary (FF Millions)**

Year	1991	1992	1993	1994	1995
Worldwide revenues	33450	30187	28250	29915	26656
Profit after tax	-2626	-2274	-5068	-1960	306
Earnings per share (FF)	N/A	N/A	N/A	N/A	N/A
Total European Revenues	23800	21500	19994	21173	18126
European Profit after tax	N/A	N/A	N/A	N/A	N/A

Source: INPUT/Bull

Exhibit IV-41

**Bull — Analysis of European Revenues (FF Millions)**



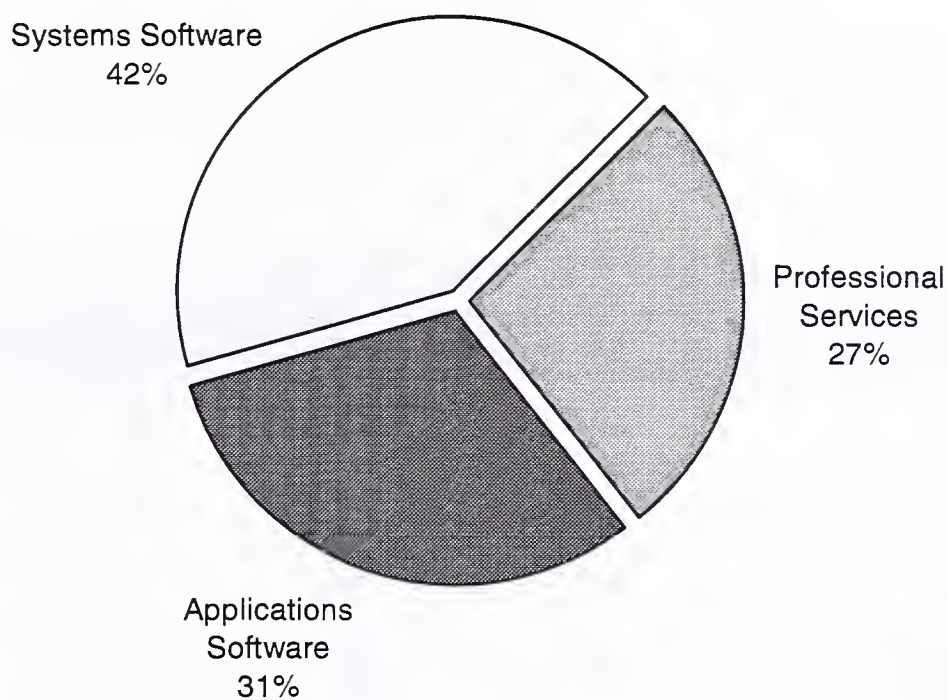
Source: INPUT Estimates

## J

**Computer Associates**

Computer Associates, the world's second largest software company after Microsoft, generated estimated software and services revenues of \$1,080m in 1995 - sufficient to maintain its 1994 European market share at 1.1%. The company is now placing increased emphasis on mid-range and desktop software products and reported world-wide revenue growth for the former to the tune of 66% for 1995. It continues to outperform market expectations and through its recent acquisitions of Legent and the ASK group, has positioned itself as 'best of breed' mainframe/database software solutions provider.

Exhibit IV-42

**Computer Associates — 1995 Software & Services Revenues by Delivery Mode**

Computer Associates 1995 Total European Software & Service Revenues = US\$1,080 M. Source: INPUT Estimates

Exhibit IV-43

**Computer Associates — 1995 Software & Services Revenues by Vertical Market**

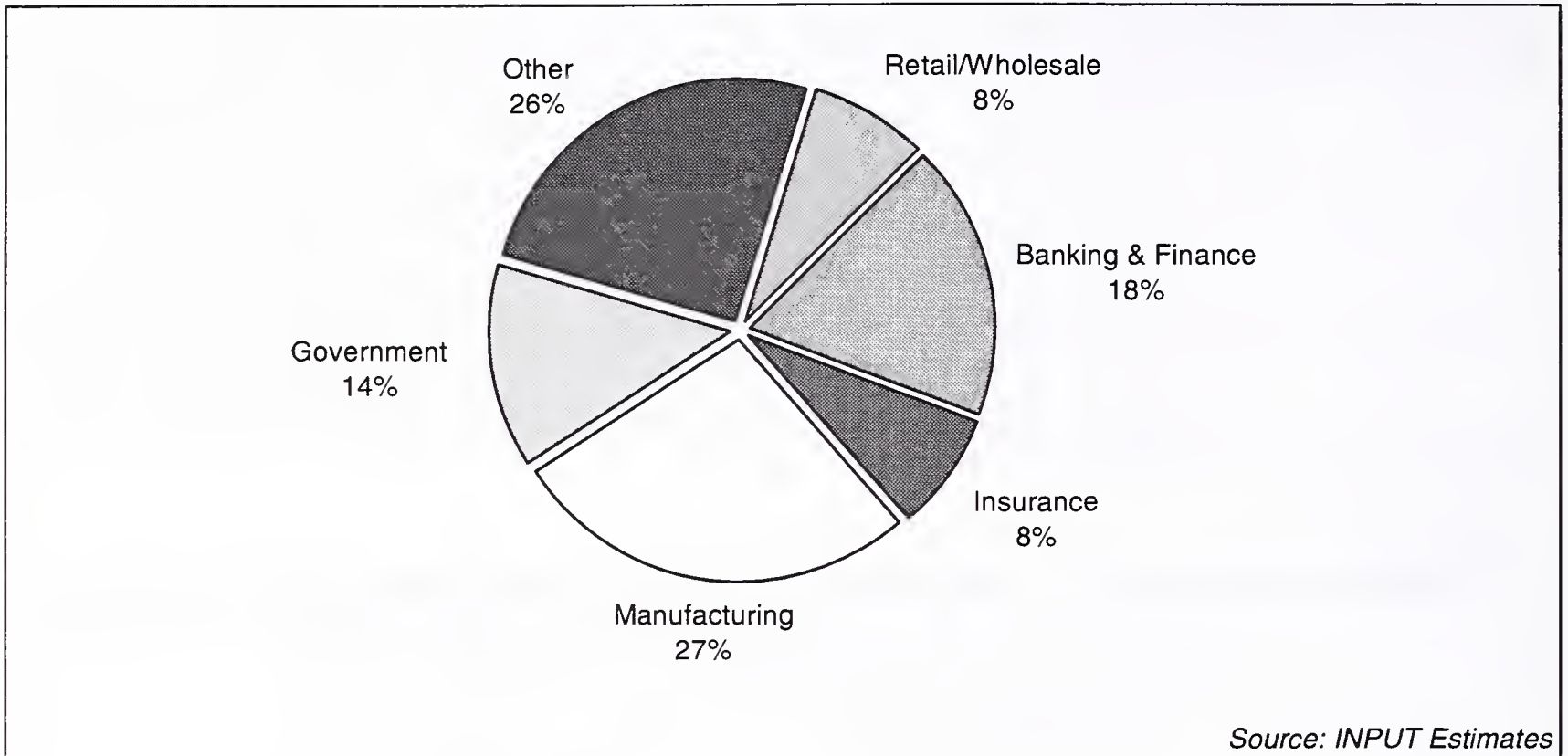


Exhibit IV-44

**Computer Associates — Five Year Financial Summary (US\$ Millions)**

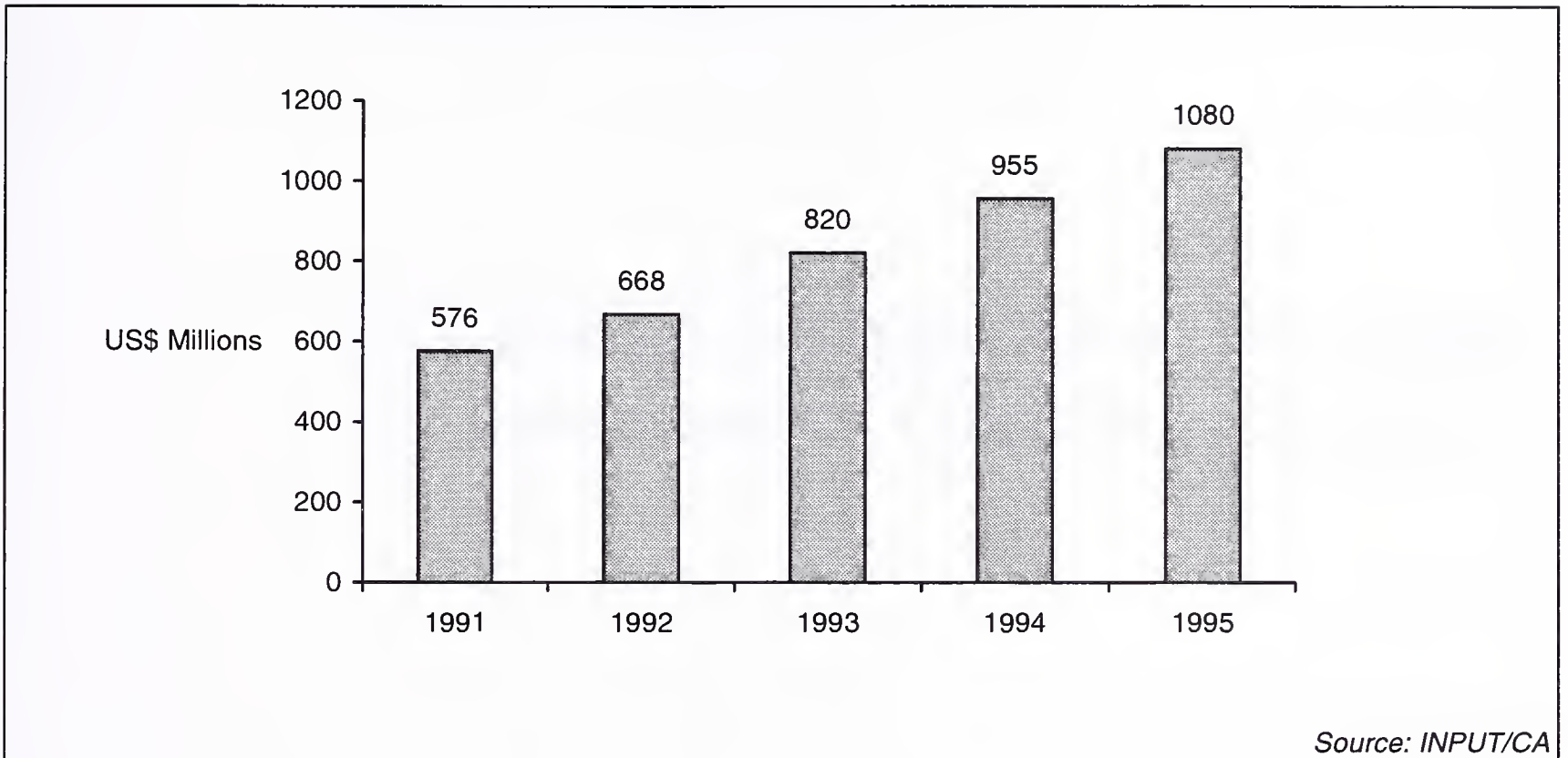
Year	1991	1992	1993	1994	1995
Worldwide revenues	1300	1508	1841	2148	2623
Profit after tax	130	163	245	401	432
Earnings per share (\$)	0.70	0.92	1.44	0.63	2.41
Total European Revenues	576	668	820	955	1080*
European Profit after tax	N/A	N/A	N/A	N/A	N/A

\*Does not include ASK acquisition

Source: INPUT/CA



Exhibit IV-45

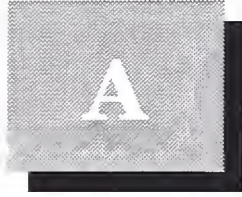
**Computer Associates — Analysis of European Revenues**

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# Appendix 1

## European Competitive Rankings by Revenue of Leading Players





## **Leading Vendors (\$ Millions) – Europe**

Exhibit A-1

## Software and Services Leading Vendors Europe, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	9,310	10.0
2	Reuters	U.K.	2,060	2.2
3	Cap Gemini Sogeti	France	2,050	2.2
4	SNI	Germany	2,030	2.2
5	EDS	U.S.	2,000	2.2
6	Digital	U.S.	1,975	2.1
7	Microsoft	U.S.	1,600	1.7
8	Andersen Consulting	U.S.	1,315	1.4
9	ICL	U.K.	1,270	1.4
10	Bull	France	1,190	1.3
11	Finsiel	Italy	1,110	1.2
12	Oracle	U.S.	1,085	1.2
13	Computer Associates	U.S.	1,080	1.3
14	SAP	Germany	1,030	1.1
15	debis Systemhaus	Germany	1,020	1.1
16	Hewlett Packard	U.S.	1,000	1.1
17	Olivetti	Italy	985	1.1
18	Sema	France	980	1.1
19	Unisys	U.S.	880	0.9
20	AT&T	U.S.	850	0.9
21	Datev	Germany	670	0.7
22	Origin BV	Netherlands	630	0.7
23=	Sligos	France	610	0.7
23=	Getronics	Netherlands	610	0.7
25	Novell	U.S.	550	0.6
26	CSC	U.S.	535	0.6
27	ADP GSI	France	530	0.6
28	Enator	Sweden	440	0.5
29=	Syseca	France	400	0.4
29=	P & P	U.K.	400	0.4
	Total Listed		40,210	43.4
	Total Market		92,750	100.0

Source: INPUT

Exhibit A-2

**Professional Services Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	1,390	5.8
2	Cap Gemini Sogeti	France	1,010	4.2
3	Finsiel	Italy	670	2.8
4	Digital	U.S.	640	2.7
5	Oracle	U.S.	560	2.4
6	Andersen Consulting	U.S.	500	2.1
7	EDS	U.S.	470	2.0
8	ICL	U.K.	460	1.9
9	Sema	France	420	1.8
10	SNI	Germany	385	1.6
	Total Listed		6,505	27.4
	Total Market		23,780	100.0

Source: INPUT

Exhibit A-3

**Systems Integration Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	985	17.4
2	Andersen Consulting	U.S.	540	9.5
3	Bull	France	450	8.0
4	Cap Gemini Sogeti	France	380	6.7
5	EDS	U.S.	330	5.8
6	ICL	U.K.	300	5.3
7	Digital	U.S.	260	4.6
8	Sema	France	200	3.5
9	SNI	Germany	190	3.4
10	Logica	U.K.	150	2.7
	Total Listed		3,785	66.8
	Total Market		5,660	100.0

Source: INPUT



Exhibit A-4

**Outsourcing Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	EDS	U.S.	1,030	13.3
2	IBM	U.S.	850	11.0
3	Cap Gemini Sogeti	France	500	6.4
4	debis Systemhaus	Germany	375	4.8
5	Sema Group	France	345	4.4
6	BT/Syncordia	U.K.	300	3.9
7	CSC	U.S.	280	3.6
8	AT&T	U.S.	200	2.6
9	ICL	U.K.	190	2.4
10	Digital	U.S.	180	2.3
	Total Listed		4,250	54.8
	Total Market		7,760	100.0

Source: INPUT

Exhibit A-5

**Processing Services Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	Datev	Germany	475	5.7
2	Sligos	France	255	3.1
3	IBM	U.S.	240	2.9
4	Axime	France	190	2.3
5	Telekurs	Switzerland	170	2.0
6	Roccade	Netherlands	145	1.7
7	EDS	U.S.	160	1.9
8=	ADP GSI	France	115	1.4
8=	Origin BV	Netherlands	115	1.4
10	debis Systemhaus	Germany	75	0.9
	Total Listed		1,940	23.3
	Total Market		8,340	100.0

Source: INPUT

Exhibit A-6

**Network Applications Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	Infonet	Belgium	215	8.8
2	IBM	U.S.	190	7.8
3	GEIS	U.S.	110	4.5
4	AT&T	U.S.	105	4.3
5	BT	U.K.	80	3.3
6	Digital	U.S.	60	2.5
7	ADP GSI	France	55	2.3
8=	Sligos	France	50	2.1
8=	Bull	France	50	2.1
10	SG2	France	45	1.9
	Total Listed		960	39.5
	Total Market		2,430	100.0

Source: INPUT

Exhibit A-7

**Electronic Information Services Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	Reuters	U.K.	1,315	30.5
2	Telerate	U.S.	290	6.7
3	Dun & Bradstreet	U.S.	175	4.1
4	Telekurs	Switzerland	125	2.9
5	Citicorp	U.S.	100	2.3
6	DAFSA	France	80	1.9
7	Extel	U.K.	75	1.7
8	Mead	U.S.	60	1.4
9	ADP GSI	France	55	1.3
10	FTLIS	France	50	1.2
	Total Listed		2,325	53.9
	Total Market		4,310	100.0

Source: INPUT

Exhibit A-8

**Systems Software Products Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	3,870	27.0
2	Microsoft	U.S.	880	6.1
3	SNI	Germany	580	4.0
4	Novell	U.S.	540	3.8
5	Bull	France	480	3.3
6=	Digital	U.S.	455	3.2
6=	Computer Associates	U.S.	455	3.2
8	Oracle	U.S.	450	3.2
9	HP	U.S.	345	2.4
10	Software AG	Germany	190	1.3
	Total Listed		8,245	57.5
	Total Market		14,340	100.0

Source: INPUT

Exhibit A-9

**Application Software Products Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	1,285	10.1
2	Microsoft	U.S.	705	5.5
3	SAP	Germany	650	5.1
4	Computer Associates	U.S.	635	5.0
5	SNI	Germany	270	2.1
6	Kommunedata	Denmark	245	1.9
7	Enator	Sweden	125	1.0
8	AT & T	U.S.	120	0.9
9=	ADP GSI	France	115	0.9
9=	Unisys	U.S.	115	0.9
	Total Listed		3,965	31.1
	Total Market		12,750	100.0

Source: INPUT



Exhibit A-10

**Turnkey Systems Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	SNI	Germany	600	4.5
2	IBM	U.S.	500	3.7
3	Digital	U.S.	380	2.8
4	Intergraph	U.S.	330	2.5
5	Olivetti	Italy	240	1.8
6	Reuters	U.K.	230	1.7
7	Hewlett Packard	U.S.	190	1.4
8	Sligos	France	130	1.0
9	Cap Gemini Sogeti	France	115	0.9
10	Getronics	Netherlands	90	0.7
	Total Listed		2,805	21.0
	Total Market		13,380	100.0

Source: INPUT

Exhibit A-11

**Equipment Maintenance Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	2,250	16.7
2	Digital	U.S.	1,390	10.3
3	SNI	Germany	1,225	9.1
4	Bull	France	700	5.2
5	ICL	U.K.	590	4.4
6	Hewlett Packard	U.S.	500	3.7
7	Olivetti	Italy	485	3.6
8	AT&T	U.S.	465	3.4
9	Unisys	U.S.	355	2.6
10	ICG	U.S.	350	2.6
	Total Listed		8,310	61.6
	Total Market		13,500	100.0

Source: INPUT

Exhibit A-12

**Environmental Services Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	510	5.7
2	SNI	Germany	195	2.2
3	Olivetti	Italy	155	1.7
4=	Digital	U.S.	130	1.4
4=	Hewlett Packard	U.S.	130	1.4
6	Unisys	U.S.	105	1.2
7	Getronics	Netherlands	90	1.0
8	Bull	France	85	0.9
9	AT&T	U.S.	65	0.7
10	Memorex Telex	U.S.	30	0.3
	Total Listed		1,495	16.6
	Total Market		8,980	100.0

Source: INPUT

Exhibit A-13

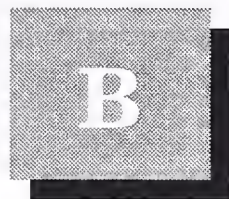
**Information Services Leading Vendors Europe, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	12,070	10.5
2	Digital	U.S.	3,495	3.0
3	SNI	Germany	3,450	3.0
4	Reuters	U.K.	2,060	1.8
5	Cap Gemini Sogeti	France	2,050	1.8
6	EDS	U.S.	2,000	1.8
7	Bull	France	1,975	1.7
8	ICL	U.K.	1,870	1.6
9	Hewlett Packard	U.S.	1,630	1.4
10	Olivetti	Italy	1,625	1.4
	Total Listed		30,600	26.6
	Total Market		115,230	100.0

Source: INPUT

(Blank)





## **Leading Vendors in Local Currency (Sch Millions) – Austria**

Exhibit B-1

**Software and Services Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	2,080	10.2
2	SNI	Germany	1,150	5.6
3	Management Data	Austria	1,090	5.3
4	Digital	U.S.	800	3.9
5	EDV	Austria	470	2.3
6	Hewlett Packard	U.S.	380	1.9
7	Unisys	U.S.	340	1.7
8	Beko	Austria	305	1.5
9	GRZ	Austria	260	1.3
10=	Reuters	U.K.	245	1.2
10=	Microsoft	U.S.	245	1.2
12	Computer Associates	U.S.	240	1.2
13	AI Informatics	Austria	225	1.1
14	SAP	Germany	190	0.9
15	Compunet	Germany	180	0.9
16	EDS	U.S.	130	0.6
17	Bull	France	120	0.6
18	CSC	U.S.	110	0.5
19=	Voest Alpine	Austria	105	0.5
19=	Han Dataport	Germany	105	0.5
21	Oracle	U.S.	100	0.5
22	Cap Gemini Sogeti	France	95	0.5
23	Novell	U.S.	90	0.4
24=	Software AG	Germany	80	0.4
24=	ComputerVision	U.S.	80	0.4
24=	Telekurs	Switzerland	80	0.4
27	Origin BV	Netherlands	70	0.3
28	Data Service	Austria	50	0.2
29=	GEIS	U.S.	35	0.2
29=	Spardat	Austria	35	0.2
	Total Listed		9,485	46.5
	Total Market		20,400	100.0

Source: INPUT

## Exhibit B-2

**Professional Services Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	505	8.4
2=	EDV	Austria	405	6.8
2=	IBM	U.S.	405	6.8
2=	SNI	Germany	405	6.8
5=	Digital	U.S.	305	5.1
5=	Beko	Austria	305	5.1
7	Hewlett Packard	U.S.	150	2.5
8=	CSC	U.S.	100	1.7
8=	AI Infomatics	Austria	100	1.7
8=	Voest-Alpine	Austria	100	1.7
	Total Listed		2,780	46.3
	Total Market		6,000	100.0

Source: INPUT

## Exhibit B-3

**Systems Integration Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	200	30.8
2	Digital	U.S.	100	15.4
3=	SNI	Germany	80	12.3
3=	Cap Gemini Sogeti	France	80	12.3
5	EDS	U.S.	60	9.2
	Total Listed		520	80.0
	Total Market		650	100.0

Source: INPUT



Exhibit B-4

**Outsourcing Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1=	IBM	U.S.	70	21.9
1=	AI Informatics	Austria	70	21.9
3	EDS	U.S.	50	15.6
4	Origin BV	Netherlands	45	14.1
5	Spardat	Austria	35	10.9
	Total Listed		270	84.4
	Total Market		320	100.0

Source: INPUT

Exhibit B-5

**Processing Services Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	100	4.5
2	Telekurs	Switzerland	45	2.0
3	IBM	U.S.	35	1.6
4	Origin BV	Netherlands	20	0.9
5	EDS	U.S.	10	0.5
6	Unisys	U.S.	9	0.4
7	Hewlett Packard	U.S.	8	0.4
8	GEIS	U.S.	6	0.3
9	Digital	U.S.	4	0.2
10	SNI	Germany	2	0.1
	Total Listed		239	10.9
	Total Market		2,200	100.0

Source: INPUT

## Exhibit B-6

**Network Applications Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	70	28
2	IBM	U.S.	60	24
	Total Listed		130	52
	Total Market		250	100

Source: INPUT

## Exhibit B-7

**Electronic Information Services Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Reuters	U.K.	170	23
2	Telerate	U.S.	60	8
3	Telekurs	Switzerland	50	7
4	Dun & Bradstreet	U.S.	35	5
	Total Listed		315	43
	Total Market		725	100

Source: INPUT

Exhibit B-8

**Systems Software Products Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	860	26.1
2	Digital	U.S.	175	5.3
3	Microsoft	U.S.	145	4.4
4	SNI	Germany	120	3.6
5	Bull	France	105	3.2
6	Oracle	U.S.	90	2.7
7=	Novell	U.S.	85	2.6
7=	Computer Associates	U.S.	85	2.6
9=	Hewlett Packard	U.S.	70	2.1
9=	Unisys	U.S.	70	2.1
	Total Listed		1,805	54.7
	Total Market		3,300	100.0

Source: INPUT

Exhibit B-9

**Application Software Products Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Management Data	Austria	415	17.3
2	IBM	U.S.	250	10.4
3	SAP	Germany	190	7.9
4	Computer Associates	U.S.	145	6.0
5	Microsoft	U.S.	100	4.2
6	Unisys	U.S.	55	2.3
7=	AI Informatics	Austria	50	2.1
7=	Data Service	Austria	50	2.1
9	Adobe	U.S.	35	1.5
10	SNI	Germany	30	1.3
	Total Listed		1,320	55.0
	Total Market		2,400	100.0

Source: INPUT



Exhibit B-10

**Turnkey Systems Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	SNI	Germany	505	11.1
2	IBM	U.S.	200	4.4
3=	Digital	U.S.	180	4.0
3=	Compunet	Germany	180	4.0
5=	Hewlett Packard	U.S.	150	3.3
5=	Unisys	U.S.	150	3.3
7	Reuters	U.K.	100	2.2
8=	Software AG	Germany	80	1.8
8=	ComputerVision	U.S.	80	1.8
10	EDV	Austria	60	1.3
	Total Listed		1,685	37.0
	Total Market		4,555	100.0

Source: INPUT

Exhibit B-11

**Equipment Maintenance Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	Digital	U.S.	595	21.0
2	SNI	Germany	545	19.3
3	IBM	U.S.	535	18.9
4=	Unisys	U.S.	130	4.6
4=	Hewlett Packard	U.S.	130	4.6
6	Bull	France	110	3.9
7	Olivetti	Italy	80	2.8
8=	Comparex	U.S.	50	1.8
8=	Thomainfor	France	50	1.8
10	Rank Xerox	U.S.	40	1.4
	Total Listed		2,265	80.0
	Total Market		2,830	100.0

Source: INPUT

Exhibit B-12

**Environmental Services Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	SNI	Germany	110	6.0
2	IBM	U.S.	100	5.4
3=	Digital	U.S.	30	1.6
3=	Unisys	U.S.	30	1.6
3=	Hewlett Packard	U.S.	30	1.6
6	Olivetti	Italy	20	1.1
7=	Bull	France	10	0.5
7=	Comparex	U.S.	10	0.5
7=	Thomainfor	France	10	0.5
7=	Rank Xerox	U.S.	10	0.5
	Total Listed		360	19.5
	Total Market		1,845	100.0

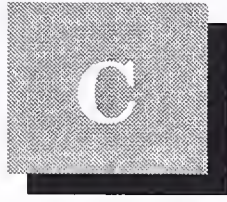
Source: INPUT

Exhibit B-13

**Information Services Leading Vendors Austria, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Sch Millions)	Market Share (%)
1	IBM	U.S.	2,715	10.8
2	SNI	Germany	1,755	7.0
3	Digital	U.S.	1,425	5.7
4	Management Data	Austria	1,090	4.3
5	Hewlett Packard	U.S.	540	2.2
6	Unisys	U.S.	500	2.0
7	EDV	Austria	470	1.9
8	Beko	Austria	305	1.2
9	GRZ	Austria	260	1.0
10	Reuters	U.K.	245	1.0
	Total Listed		9,305	37.1
	Total Market		25,075	100.0

Source: INPUT



## **Leading Vendors in Local Currency (BF Millions) – Belgium**



Exhibit C-1

## Software and Services Leading Vendors Belgium, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	7,900	9.8
2	Cap Gemini Sogeti	France	3,735	4.6
3	CSC	U.S.	2,460	3.1
4	Trasys	Belgium	2,350	2.9
5	Computer Associates	U.S.	1,690	2.1
6	Andersen Consulting	U.S.	1,610	2.0
7	Hewlett Packard	U.S.	1,565	1.9
8	Sema	France	1,550	1.9
9	EDS	U.S.	1,490	1.9
10	Origin BV	Netherlands	1,360	1.7
11	Microsoft	U.S.	1,260	1.6
12	Bull	France	1,210	1.5
13	Digital	U.S.	1,200	1.5
14	Reuters	U.K.	1,155	1.4
15	Unisys	U.S.	1,030	1.3
16	Dolmen	Belgium	1,020	1.3
17=	Cipal	Belgium	890	1.1
17=	Olivetti	Italy	890	1.1
19	TIS Group	Belgium	590	0.7
20=	Getronics	Netherlands	570	0.7
20=	Axime	France	570	0.7
22	Novell	U.S.	500	0.6
23	Intergraph	U.S.	450	0.6
24	Logica	U.K.	430	0.5
25	SAP	Germany	390	0.5
26	Oracle	U.S.	360	0.4
27=	Cegeka	Belgium	350	0.4
27=	Infonet	Belgium	350	0.4
29	Dun & Bradstreet	U.S.	340	0.4
30	P&P	U.K.	130	0.2
	Total Listed		37,340	46.4
	Total Market		80,500	100.0

Source: INPUT

Exhibit C-2

**Professional Services Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share(%)
1	IBM	U.S.	1,470	6.3
2=	Cap Gemini Sogeti	France	1,030	4.4
2=	CSC	U.S.	1,030	4.4
2=	Sema	France	1,030	4.4
2=	Trasys	Belgium	1,030	4.4
2=	Andersen Consulting	U.S.	1,030	4.4
7	Cipal	Belgium	880	3.7
8=	Hewlett Packard	U.S.	590	2.5
8=	TIS Group	Belgium	590	2.5
8=	EDS	U.S.	590	2.5
	Total Listed		9,270	39.4
	Total Market		23,500	100.0

Source: INPUT

Exhibit C-3

**Systems Integration Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	915	15.9
2	Bull	France	590	10.3
3	Andersen Consulting	U.S.	515	9.0
4=	Cap Gemini Sogeti	France	440	7.7
4=	Sema	France	440	7.7
4=	EDS	U.S.	440	7.7
7	Logica	U.K.	410	7.1
8	Axime	France	400	7.0
9	CSC	U.S.	345	6.0
10	Origin BV	Netherlands	270	4.7
	Total Listed		4,765	82.9

Source: INPUT

Exhibit C-4

**Outsourcing Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	1,000	25.0
2	CSC	U.S.	700	17.5
3	Olivetti	Italy	400	10.0
4	Cegeka	Belgium	350	8.8
5	Origin BV	Netherlands	250	6.3
6	EDS	U.S.	220	5.5
7	Digital	U.S.	200	5.0
8	Cap Gemini Sogeti	France	150	3.8
9	Unisys	U.S.	120	3.0
10	Hewlett Packard	U.S.	75	1.9
	Total Listed		3,465	86.6
	Total Market		4,000	100.0

Source: INPUT

Exhibit C-5

**Processing Services Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Origin BV	Netherlands	395	4.9
2	Dolmen	Belgium	390	4.9
3	Administra Computing	Belgium	290	3.6
4	CSC	U.S.	255	3.2
5	Orda-B	Belgium	250	3.1
6	Getronics	Netherlands	210	2.6
7	EDS	U.S.	165	2.1
8	Axime	France	160	2.0
9	Unisys	U.S.	100	1.3
10	IBM	U.S.	70	0.9
	Total Listed		2,285	28.6
	Total Market		8,000	100.0

Source: INPUT



## Exhibit C-6

**Network Applications Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue(BF Millions)	Market Share(%)
1	Infonet	Belgium	345	19.2
2	IBM	U.S.	190	10.6
3=	Digital	U.S.	70	3.9
3=	GEIS	U.S.	70	3.9
5	Dolmen	Belgium	50	2.8
6	Bull	France	45	2.5
7	SG2	France	35	1.9
8	EDS	U.S.	30	1.7
9	ADP GSI	France	25	1.4
10	Olivetti	Italy	17	0.9
	Total Listed		875	48.6
	Total Market		1,800	100.0

Source: INPUT

## Exhibit C-7

**Electronic Information Services Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Reuters	U.K.	860	25.3
2	Dun & Bradstreet	U.S.	340	10.0
3	Telerate	U.S.	200	5.9
	Total Listed		1,400	41.2
	Total Market		3,400	100.0

Source: INPUT

Exhibit C-8

**Systems Software Products Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	2,950	24.6
2	Microsoft	U.S.	730	6.1
3	Computer Associates	U.S.	615	5.1
4	Bull	France	570	4.8
5=	Digital	U.S.	490	4.1
5=	Novell	U.S.	490	4.1
7	Unisys	U.S.	450	3.8
8	Hewlett Packard	U.S.	420	3.5
9	Oracle	U.S.	345	2.9
10	SNI	Germany	330	2.8
	Total Listed		7,390	61.6
	Total Market		12,000	100.0

Source: INPUT

Exhibit C-9

**Application Software Products Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Computer Associates	U.S.	1,050	9.4
2	IBM	U.S.	860	7.7
3	Microsoft	U.S.	530	4.7
4	Dolmen	Belgium	390	3.5
5	SAP	Germany	370	3.3
6	Unisys	U.S.	355	3.2
7	Cap Gemini Sogeti	France	300	2.7
8	SAS	U.S.	285	2.5
9	Olivetti	Italy	150	1.3
10	Origin BV	Netherlands	145	1.3
	Total Listed		4,435	39.6
	Total Market		11,200	100.0

Source: INPUT

Exhibit C-10

**Turnkey Systems Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	Trasys	Belgium	1,175	10.8
2=	Digital	U.S.	440	4.1
2=	IBM	U.S.	440	4.1
2=	Intergraph	U.S.	440	4.1
5	Hewlett Packard	U.S.	380	3.5
6	Getronics	Netherlands	355	3.3
7=	Olivetti	Italy	295	2.7
7=	Reuters	U.K.	295	2.7
9	Origin BV	Netherlands	235	2.2
10	Dolmen	Belgium	145	1.3
	Total Listed		4,200	38.7
	Total Market		10,850	100.0

Source: INPUT

Exhibit C-11

**Equipment Maintenance Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1=	Digital	U.S.	1,890	14.9
1=	SNI	Germany	1,890	14.9
3	IBM	U.S.	1,675	13.2
4	Hewlett Packard	U.S.	735	5.8
5=	Unisys	U.S.	705	5.6
5=	Bull	France	705	5.6
7	Getronics	Netherlands	615	4.9
8	Olivetti	Italy	500	3.9
9	AT&T	U.S.	320	2.5
10	Granada	U.K.	235	1.9
	Total Listed		9,270	73.2
	Total Market		12,670	100.0

Source: INPUT



Exhibit C-12

**Environmental Services Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	SNI	Germany	440	6.2
2	IBM	U.S.	410	5.8
3=	Digital	U.S.	205	2.9
3=	Unisys	U.S.	205	2.9
3=	Getronics	Netherlands	205	2.9
6=	Hewlett Packard	U.S.	120	1.7
6=	Olivetti	Italy	120	1.7
8=	Bull	France	90	1.3
8=	Thomainfor	France	90	1.3
10	AT&T	U.S.	60	0.8
	Total Listed		1,945	27.4
	Total Market		7,090	100.0

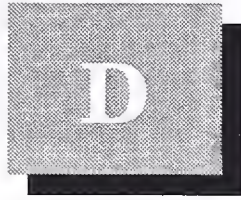
Source: INPUT

Exhibit C-13

**Information Services Leading Vendors Belgium, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (BF Millions)	Market Share (%)
1	IBM	U.S.	9,985	10.0
2	Cap Gemini Sogeti	France	3,735	3.7
3	Digital	U.S.	3,295	3.3
4	CSC	U.S.	2,460	2.5
5	Hewlett Packard	U.S.	2,420	2.4
6	Trasys	Belgium	2,350	2.3
7	Bull	France	2,005	2.0
8	Unisys	U.S.	1,940	1.9
9	Computer Associates	U.S.	1,690	1.7
10	Andersen Consulting	U.S.	1,610	1.6
	Total Listed		31,490	31.4
	Total Market		100,260	100.0

Source: INPUT



## **Leading Vendors in Local Currency (DK Millions) – Denmark**

Exhibit D-1

**Software and Services Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	1,620	13.4
2	Kommunedata	Denmark	1,495	12.4
3	PBS	Denmark	955	7.9
4=	Digital	U.S.	220	1.8
4=	Cap Gemini Sogeti	France	220	1.8
6	ICL	U.K.	190	1.6
7=	AT & T	U.S.	170	1.4
7=	Microsoft	U.S.	170	1.4
9	Hewlett Packard	U.S.	165	1.4
10	Computer Associates	U.S.	155	1.3
11	SNI	Germany	140	1.2
12	DanNet	Denmark	95	0.8
13=	EDS	U.S.	90	0.7
13=	Bull	France	90	0.7
15	Unisys	U.S.	85	0.7
16	Microgen	U.K.	70	0.6
17	Novell	U.S.	60	0.5
18	Oracle	U.S.	55	0.5
19=	Infonet	U.S.	40	0.3
19=	Olivetti	Italy	40	0.3
21=	Computer Resource	Denmark	35	0.3
21=	CSC	U.S.	35	0.3
23	Intergraph	U.S.	30	0.2
24	Origin BV	Netherlands	25	0.2
25=	Dun & Bradstreet	U.S.	20	0.2
25=	OK Data	Denmark	20	0.2
25=	Telerate	U.S.	20	0.2
25=	Teito	Finland	20	0.2
29	Geis	U.S.	18	0.1
30	ComputerVision	U.S.	15	0.1
	Total Listed		6,363	52.6
	Total Market		12,100	100.0

Source: INPUT



## Exhibit D-2

**Professional Services Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	PBS	Denmark	885	31.6
2	IBM	U.S.	275	9.8
3=	Cap Gemini Sogeti	France	140	5.0
3=	Digital	U.S.	140	5.0
3=	ICL	U.K.	140	5.0
3=	AT&T	U.S.	140	5.0
7=	Hewlett Packard	U.S.	85	3.0
7=	EDS	U.S.	85	3.0
7=	Kommunedata	Denmark	85	3.0
10	CSC	U.S.	30	1.1
	Total Listed		2,005	71.6
	Total Market		2,800	100.0

Source: INPUT

## Exhibit D-3

**Systems Integration Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	85	28.3
2	Bull	France	55	18.5
3	Cap Gemini Sogeti	France	45	15.0
4=	Kommunedata	Denmark	35	11.7
4=	Computer Resource	Denmark	35	11.7
	Total Listed		255	85.1
	Total Market		300	100.0

Source: INPUT

Exhibit D-4

**Outsourcing Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	250	62.5
2	PBS	Denmark	60	15.0
3	OK Data	Denmark	15	3.8
4	Hewlett Packard	U.S.	12	3.0
5=	Digital	U.S.	10	2.5
5=	WM-Data	Sweden	10	2.5
5=	Datema	Denmark	10	2.5
8	Enator	Sweden	5	1.3
	Total Listed		372	93.0
	Total Market		400	100.0

Source: INPUT

Exhibit D-5

**Processing Services Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	95	4.5
2	Microgen	U.K.	70	3.3
3	Tieto	Finland	20	1.0
4	Origin BV	Netherlands	10	0.5
5=	Olivetti	Italy	10	0.5
5=	Hewlett Packard	U.S.	10	0.5
5=	GEIS	U.S.	8	0.4
8=	WM-Data	Sweden	5	0.2
8=	Unisys	U.S.	5	0.2
8=	ICL	U.K.	5	0.2
	Total Listed		238	11.3
	Total Market		2,100	100.0

Source: INPUT

Exhibit D-6

**Network Applications Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	DanNet	Denmark	80	26.7
2	IBM	U.S.	50	16.7
3	Infonet	Belgium	40	13.3
4	GEIS	U.S.	12	4.0
5	Digital	U.S.	5	1.7
	Total Listed		187	62.3
	Total Market		300	100.0

Source: INPUT

Exhibit D-7

**Electronic Information Services Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	Reuters	U.K.	85	21.3
2	Telerate	U.S.	25	6.3
3	Dun & Bradstreet	U.S.	20	5.0
	Total Listed		130	32.5
	Total Market		400	100.0

Source: INPUT



Exhibit D-8

**Systems Software Products Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	595	31.3
2	Microsoft	U.S.	95	5.0
3	Computer Associates	U.S.	90	4.7
4	Novell	U.S.	60	3.2
5	Oracle	U.S.	50	2.6
6=	Digital	U.S.	40	2.1
6=	ICL	U.K.	40	2.1
8=	AT&T	U.S.	30	1.6
8=	Hewlett Packard	U.S.	30	1.6
10	Bull	France	25	1.3
	Total Listed		1,055	55.5
	Total Market		1,900	100.0

Source: INPUT

Exhibit D-9

**Application Software Products Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	Kommunedata	Denmark	1,355	75.3
2	IBM	U.S.	195	10.8
3	Microsoft	U.S.	75	4.2
4	Computer Associates	U.S.	65	3.6
	Total Listed		1,690	93.9
	Total Market		1,800	100.0

Source: INPUT

Exhibit D-10

**Turnkey Systems Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	85	4.0
2=	Digital	U.S.	30	1.4
2=	Olivetti	Italy	30	1.4
2=	Intergraph	U.S.	30	1.4
5=	Hewlett Packard	U.S.	20	1.0
5=	Cap Gemini Sogeti	France	20	1.0
7=	ComputerVision	U.S.	15	0.7
7=	Origin BV	Netherlands	15	0.7
7=	Reuters	U.K.	15	0.7
10	Kommunedata	Denmark	10	0.5
	Total Listed		270	12.9
	Total Market		2,100	100.0

Source: INPUT

Exhibit D-11

**Equipment Maintenance Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	390	22.9
2=	Digital	U.S.	100	5.9
2=	ICL	U.K.	100	5.9
4=	Olivetti	Italy	80	4.7
4=	SNI	Germany	80	4.7
6=	AT&T	U.S.	60	3.5
6=	Hewlett Packard	U.S.	60	3.5
8	Telenor Comma (ND)	Netherlands	45	2.6
9=	Nexor Perinet AB	Sweden	35	2.1
9=	Bull	France	35	2.1
	Total Listed		985	57.9
	Total Market		1,700	100.0

Source: INPUT

Exhibit D-12

**Environmental Services Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	100	7.1
2	SNI	Germany	35	2.5
3	Digital	U.S.	20	1.4
4=	AT&T	U.S.	10	0.7
4=	Hewlett Packard	U.S.	10	0.7
6=	Olivetti	Italy	6	0.4
6=	Rank Xerox	U.S.	6	0.4
6=	Unisys	U.S.	6	0.4
9	Telenor Comma (ND)	Netherlands	3	0.2
10	ICL	U.K.	1	0.1
	Total Listed		195	13.9
	Total Market		1,400	100.0

Source: INPUT

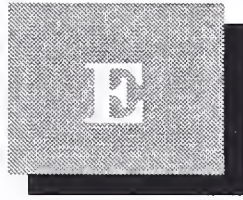
Exhibit D-13

**Information Services Leading Vendors Denmark, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DK Millions)	Market Share (%)
1	IBM	U.S.	2,110	13.9
2	Kommunedata	Denmark	1,495	9.8
3	PBS	Denmark	955	6.3
4	Digital	U.S.	340	2.2
5	ICL	U.K.	290	1.9
6	SNI	Germany	255	1.7
7	AT & T	U.S.	240	1.6
8	Hewlett Packard	U.S.	235	1.5
9	Cap Gemini Sogeti	France	220	1.4
10	Microsoft	U.S.	170	1.1
	Total Listed		6,310	41.5
	Total Market		15,200	100.0

Source: INPUT





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

Exhibit E-1

### Software and Services Leading Vendors Central and Eastern Europe, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	195	18.7
2	EDS	U.S.	90	8.6
3	Microsoft	U.S.	35	3.3
4=	Reuters	U.K.	30	2.9
4=	Syseca	France	30	2.9
6	ICL	U.K.	25	2.4
7	SNI	Germany	22	2.1
8	Andersen Consulting	U.S.	20	1.9
9=	Unisys	U.S.	15	1.4
9=	Digital	U.S.	15	1.4
	Total Listed		477	45.6
	Total Market		1,045	100.0

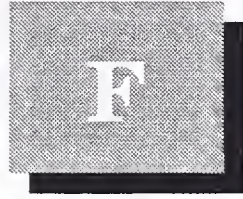
Source: INPUT

Exhibit E-2

### Information Services Leading Vendors Central and Eastern Europe, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (\$ Millions)	Market Share (%)
1	IBM	U.S.	230	17.2
2	EDS	U.S.	90	8.6
3	Microsoft	U.S.	35	2.6
4=	SNI	Germany	30	2.2
4=	Syseca	France	30	2.9
4=	Reuters	U.K.	30	2.9
4=	ICL	U.K.	30	2.2
8=	Unisys	U.S.	20	1.5
8=	Digital	U.S.	20	1.5
8=	Andersen Consulting	U.S.	20	1.5
	Total Listed		535	40.1
	Total Market		1,335	100.0

Source: INPUT



## **Leading Vendors in Local Currency (FM Millions) — Finland**



Exhibit F-1

**Software and Services Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	1,150	22.0
2	KT-Datacentre	Finland	685	11.5
3	IBM	U.S.	455	7.6
4	ICL	U.K.	250	4.2
5	Digital	U.S.	180	3.0
6	Paapkapunkiseudom	Finland	170	2.8
7	Elorg Data	Finland	150	2.5
8	Cap Gemini Sogeti	France	115	1.9
9	Computer Associates	U.S.	95	1.6
10=	Microsoft	U.S.	85	1.4
10=	Valmet Data	Finland	85	1.4
12	Reuters	U.K.	80	1.3
13=	Unic	Finland	65	1.1
13=	Intergraph	U.S.	65	1.1
15	EDS	U.S.	55	0.9
16	Hewlett Packard	U.S.	45	0.8
17=	Nokia Data	Finland	35	0.6
17=	Microgen	U.K.	35	0.6
17=	SAS	U.S.	35	0.6
20=	Novell	U.S.	30	0.5
20=	Adobe	U.S.	30	0.5
22	Origin BV	Netherlands	25	0.4
23=	Unisys	U.S.	20	0.3
23=	Oracle	U.S.	20	0.3
23=	Bull	France	20	0.3
23=	Informix	U.S.	20	0.3
23=	Enator	Sweden	20	0.3
28	Sybase	U.S.	15	0.3
29=	Infonet	U.S.	10	0.2
29=	Telerate	U.S.	10	0.2
	Total Listed		4,055	67.8
	Total Market		5,980	100.0

Source: INPUT

Exhibit F-2

**Professional Services Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	370	25.2
2	KT-Datacentre	Finland	330	22.4
3	Elorg-Data	Finland	150	10.2
4	Paakaupunkiseudom	Finland	130	8.9
5	ICL	U.K.	95	6.5
6	Valmet Data	Finland	85	5.8
7	IBM	U.S.	75	5.1
8=	Digital	U.S.	65	4.4
8=	Unic	Finland	65	4.4
10	Hewlett Packard	U.S.	45	3.1
	Total Listed		1,410	95.9
	Total Market		1,470	100.0

Source: INPUT

Exhibit F-3

**Systems Integration Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	65	29.6
2	Cap Gemini Sogeti	France	45	20.5
3=	Nokia Data	Finland	35	15.9
3=	KT- Datacentre	Finland	35	15.8
5	Groupe Bull	France	20	9.1
	Total Listed		200	90.8
	Total Market		220	100.0

Source: INPUT

Exhibit F-4

**Outsourcing Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	100	20.0
2=	Cap Gemini Sogeti	France	70	14.0
2=	IBM	U.S.	70	14.0
4	EDS	U.S.	50	10.0
5	Paapkapunkiseudom	Finland	40	8.0
	Total Listed		330	66.0
	Total Market		500	100.0

Source: INPUT

Exhibit F-5

**Processing Services Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	KT Datacenter	Finland	320	32.3
2	Tieto	Finland	305	30.8
3	Microgen	U.K.	35	3.5
4=	Origin BV	Netherlands	7	0.7
4=	ICL	U.K.	7	0.7
	Total Listed		674	68.1
	Total Market		990	100.0

Source: INPUT



Exhibit F-6

**Network Applications Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue(FM Millions)	Market Share(%)
1	IBM	U.S.	15	13.6
2	Infonet	Belgium	10	9.2
3=	ICL	U.K.	8	7.3
3=	GEIS	U.S.	8	7.3
5	Digital	U.S.	5	4.5
	Total Listed		46	42.0
	Total Market		110	100.0

Source: INPUT

Exhibit F-7

**Electronic Information Services Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	75	44.1
2	Reuters	U.K.	45	26.4
3	Telerate	U.S.	10	5.9
	Total Listed		130	76.4
	Total Market		170	100.0

Source: INPUT

Exhibit F-8

**Systems Software Products Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	IBM	U.S.	200	25.6
2	Tieto	Finland	90	11.5
3	ICL	U.K.	85	10.9
4=	Digital	U.S.	50	6.5
4=	Microsoft	U.S.	50	6.5
6	Computer Associates	U.S.	35	4.5
7	Novell	U.S.	30	3.8
8=	Oracle	U.S.	20	2.6
8=	Informix	U.S.	20	2.6
10	Sybase	U.S.	15	1.9
	Total Listed		595	76.3
	Total Market		780	100.0

Source: INPUT

Exhibit F-9

**Application Software Products Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Tieto	Finland	310	33.0
2	Computer Associates	U.S.	60	6.4
3	ICL	U.K.	55	5.9
4	IBM	U.S.	45	4.8
5=	SAS	U.S.	35	3.7
5=	Microsoft	U.S.	35	3.7
7	Adobe	U.S.	30	3.2
8=	Enator	Sweden	20	2.1
8=	Unisys	U.S.	20	2.1
10	Digital	U.S.	15	1.6
	Total Listed		625	66.5
	Total Market		940	100.0

Source: INPUT

Exhibit F-10

**Turnkey Systems Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Intergraph	U.S.	65	8.1
2=	IBM	U.S.	45	5.6
2=	Digital	U.S.	45	5.6
4	Reuters	U.K.	35	4.3
5	Origin BV	Netherlands	20	2.5
	Total Listed		210	26.2
	Total Market		800	100.0

Source: INPUT

Exhibit F-11

**Equipment Maintenance Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	ICL	U.K.	230	24.0
2	IBM	U.S.	120	12.5
3	Digital	U.S.	90	9.4
4	AT&T	U.S.	50	5.2
5	Hewlett packard	U.S.	40	4.2
6	Nexor Perinet AB	Sweden	20	2.1
7	Unisys	U.S.	15	1.6
8=	ComputerVision	U.S.	13	1.4
8=	Rank Xerox	U.S.	13	1.4
10	WM-Data	Sweden	12	1.3
	Total Listed		603	62.9
	Total Market		960	100.0

Source: INPUT



Exhibit F-12

**Environmental Services Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FM Millions)	Market Share (%)
1	Hewlett Packard	U.S.	40	6.0
2	IBM	U.S.	35	5.2
3=	Digital	U.S.	9	1.3
3=	AT&T	U.S.	9	1.3
5	ICL	U.K.	4	0.6
	Total Listed		96	14.4
	Total Market		670	100.0

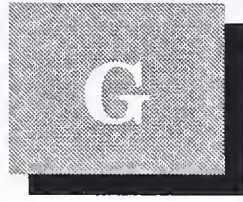
Source: INPUT

Exhibit F-13

**Information Services Leading Vendors Finland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue(FM Millions)	Market Share(%)
1	Tieto	Finland	1,150	15.1
2	KT-Datacentre	Finland	690	9.1
3	IBM	U.S.	610	8.0
4	ICL	U.K.	485	6.4
5	Digital	U.S.	290	3.8
6	Paapkapunkiseudom	Finland	180	2.4
7	Elorg Data	Finland	155	2.0
8	Cap Gemini Sogeti	France	125	1.6
9	Computer Associates	U.S.	95	1.2
10	Microsoft	U.S.	85	1.1
	Total Listed		3,860	50.7
	Total Market		7,610	100.0

Source: INPUT



## **Leading Vendors in Local Currency (FF Millions) – France**

Exhibit G-1

## Software and Services Leading Vendors France, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	6,515	6.6
2	Cap Gemini Sogeti	France	3,265	3.3
3	Bull	France	2,360	2.4
4	Sligos	France	1,960	2.0
5	EDS	U.S.	1,915	1.9
6	Microsoft	U.S.	1,840	1.9
7	Axime	France	1,805	1.8
8	Reuters	U.K.	1,680	1.7
9	Syseca	France	1,650	1.7
10	Sema	France	1,420	1.4
11	Digital	U.S.	1,225	1.2
12	ADP GSI	France	1,195	1.2
13	CGI	France	1,185	1.2
14	Computer Associates	U.S.	1,025	1.0
15	Andersen Consulting	U.S.	885	0.9
16	Inforsud	France	720	0.7
17	SG2	France	705	0.7
18	Oracle	U.S.	640	0.7
19	IBSI	France	615	0.6
20	Novell	U.S.	600	0.6
21=	Unilog	France	560	0.6
21=	Altran	France	560	0.6
23	Alcatel TiTN	France	490	0.5
24	Steria	France	470	0.5
25	Ares	France	430	0.4
26=	CCMX	France	415	0.4
26=	Infonet	Belgium	415	0.4
27	Sopra	France	405	0.4
29	Euriware	France	390	0.4
30	AT & T	U.S.	380	0.4
	Total Listed		37,720	38.4
	Total Market		98,300	100.0

Source: INPUT



Exhibit G-2

**Professional Services Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Cap Gemini Sogeti	France	1,225	4.1
2=	IBM	U.S.	980	3.3
2=	Sema	France	980	3.3
4	Syseca	France	955	3.2
5	CGI	France	830	2.8
6=	Unilog	France	560	1.9
6=	Altran	France	560	1.9
8=	Steria	France	465	1.6
8=	Digital	U.S.	465	1.5
10	IBSI	France	440	1.5
	Total Listed		7,460	24.9
	Total Market		30,000	100.0

Source: INPUT

Exhibit G-3

**Systems Integration Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	1,025	18.8
2	Cap Gemini Sogeti	France	855	15.7
3	Bull	France	710	13.0
4	Andersen Consulting	U.S.	490	9.0
5=	EDS	U.S.	465	8.5
5=	Sema	France	465	8.5
7	Syseca	France	295	5.4
8=	Axime	France	170	3.1
8=	Alcatel ISR	France	170	3.1
8=	Sligos	France	170	3.1
	Total Listed		4,815	88.3
	Total Market		5,450	100.0

Source: INPUT

Exhibit G-4

**Outsourcing Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	EDS	U.S.	1,250	18.4
2=	IBM	U.S.	700	10.3
2=	Cap Gemini Sogeti	France	700	10.3
4=	Axime	France	500	7.4
4=	ADP / GSI	France	500	7.4
4=	TS FM	France	500	7.4
7	Sligos	France	300	4.4
8=	SG2	France	250	3.7
8=	France Telecom	France	250	3.7
8=	Perot Systems	U.S.	250	3.7
	Total Listed		5,200	76.5
	Total Market		6,800	100.0

Source: INPUT

Exhibit G-5

**Processing Services Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Sligos	France	910	11.7
2	Axime	France	870	11.2
3	Sema	France	440	5.6
4	ADP / GSI	France	330	4.2
5	Inforsud	France	215	2.8
6	EDS	U.S.	200	2.6
7=	SG2	France	175	2.2
7=	Ares	France	175	2.2
9	CCMX	France	160	2.1
10	Euriware	France	140	1.8
	Total Listed		3,615	46.3
	Total Market		7,800	100.0

Source: INPUT

Exhibit G-6

**Network Applications Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Infonet	Belgium	410	14.6
2	SG2	France	230	8.2
3	AT&T	U.S.	200	7.1
4	ADP GSI	France	195	7.0
5	Sligos	France	190	6.8
6	Bull	France	180	6.4
7	IBM	U.S.	115	4.1
8	GEIS	U.S.	100	3.6
9	Creditrans	France	80	2.9
10	Axime	France	65	2.3
	Total Listed		1,765	63.0
	Total Market		2,800	100.0

Source: INPUT

Exhibit G-7

**Electronic Information Services Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Reuters	U.K.	1,460	31.1
2	Dun & Bradstreet	U.S.	260	5.5
3	Telerate	U.S.	245	5.2
4	Mead	U.S.	85	1.8
5	Citicorp	U.S.	70	1.5
6=	CGI	France	35	0.7
6=	Telekurs	Switzerland	35	0.7
8	IBM	U.S.	15	0.3
9=	Infonet	Belgium	5	0.1
9=	Quick	Japan	5	0.1
	Total Listed		2,215	47.1
	Total Market		4,700	100.0

Source: INPUT



Exhibit G-8

**Systems Software Products Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	3,435	21.6
2	Bull	France	1,315	8.3
3	Microsoft	U.S.	1,105	6.9
4	Oracle	U.S.	620	3.9
5	Novell	U.S.	600	3.8
6	Computer Associates	U.S.	370	2.3
7	CGI	France	320	2.0
8	Digital	U.S.	310	1.9
9	Hewlett Packard	U.S.	280	1.8
10	Software AG	Germany	170	1.1
	Total Listed		8,525	53.6
	Total Market		15,900	100.0

Source: INPUT

Exhibit G-9

**Application Software Products Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	Microsoft	U.S.	735	4.8
2	IBM	U.S.	650	4.2
3	Computer Associates	U.S.	635	4.2
4	ADP GSI	U.S.	500	3.3
5	Sopra	France	405	2.6
6	Top Log International	France	300	2.0
7	Saari	France	220	1.4
8	Alcatel TiTN	France	210	1.4
9	AT&T	U.S.	180	1.2
10	Bull	France	150	1.0
	Total Listed		3,985	26.0
	Total Market		15,300	100.0

Source: INPUT

Exhibit G-10

**Turnkey Systems Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1=	Sligos	France	390	4.1
1=	Syseca	France	390	4.1
3	IBM	U.S.	295	3.1
4=	Digital	U.S.	270	2.8
4=	Alcatel TiTN	France	270	2.8
6	Reuters	U.K.	220	2.3
7	Dassault	France	195	2.0
8=	IBSI	France	170	1.8
8=	Fininfor	France	170	1.8
8=	CISI	France	170	1.8
	Total Listed		2,540	26.6
	Total Market		9,550	100.0

Source: INPUT

Exhibit G-11

**Equipment Maintenance Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	1,990	16.9
2	Bull	France	1,740	14.7
3	Digital	U.S.	870	7.4
4	Hewlett Packard	U.S.	515	4.4
5	SNI	Germany	440	3.7
6	Thomainfor	France	400	3.4
7	AT&T	U.S.	370	3.1
8	Fininfor	France	245	2.1
9	Rank Xerox	U.S.	240	2.0
10	Olivetti	Italy	235	2.0
	Total Listed		7,045	59.7
	Total Market		11,800	100.0

Source: INPUT

Exhibit G-12

**Environmental Services Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	440	5.5
2	Thomainfor	France	110	1.4
3	Bull	France	105	1.3
4	Hewlett Packard	U.S.	90	1.1
5=	Digital	U.S.	85	1.1
5=	Olivetti	Italy	85	1.1
7	SNI	Germany	80	1.0
8	Unisys	U.S.	70	0.9
9	AT&T	U.S.	55	0.7
10	Allium	France	50	0.6
	Total Listed		1,170	14.6
	Total Market		8,000	100.0

Source: INPUT

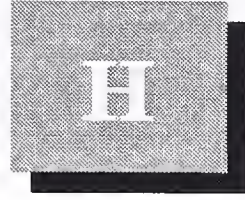
Exhibit G-13

**Information Services Leading Vendors France, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (FF Millions)	Market Share (%)
1	IBM	U.S.	8,945	7.6
2	Bull	France	4,205	3.6
3	Cap Gemini Sogeti	France	3,265	2.8
4	Digital	U.S.	2,180	1.8
5	Sligos	France	2,005	1.7
6	EDS	U.S.	1,915	1.7
7	Microsoft	U.S.	1,840	1.6
8	Axime	France	1,805	1.5
9	Reuters	U.K.	1,680	1.4
10	Syseca	France	1,650	1.4
	Total Listed		29,490	24.9
	Total Market		118,100	100.0

Source: INPUT





## **Leading Vendors in Local Currency (DM Millions) — Germany**

Exhibit H-1

**Software and Services Leading Vendors Germany 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	3,315	10.7
2	SNI	Germany	2,145	6.9
3	debis Systemhaus	Germany	1,315	4.2
4	Datev	Germany	910	2.9
5	SAP	Germany	890	2.9
6=	Digital	U.S.	620	2.0
6=	EDS	U.S.	620	2.0
8	Microsoft	U.S.	575	1.8
9	Reuters	U.K.	500	1.6
10	Hewlett Packard	U.S.	390	1.3
11	Computer Associates	U.S.	320	1.0
12	Novell	U.S.	220	0.7
13	Bull	France	215	0.7
14	Software AG	Germany	170	0.5
15	Oracle	U.S.	165	0.5
16	Fiducia	Germany	160	0.5
17	Sligos	France	150	0.5
18	ESG	Germany	145	0.5
19	Alldata	Germany	140	0.5
20	Taylorix	Germany	130	0.4
21	Andersen Consulting	U.S.	125	0.4
22=	Strassle	Germany	125	0.4
22=	PDV-Gruppe	Germany	125	0.4
22=	Compunet	Germany	120	0.4
25=	Deutsche Telekom	Germany	120	0.4
25=	Coopers & Lybrand	U.K.	110	0.4
27	tds	Germany	105	0.3
28	Sema	France	100	0.3
29	Telerate	U.S.	90	0.3
30	ICL	U.K.	90	0.3
	Total Listed		14,115	45.5
	Total Market		31,100	100.0

Source: INPUT

## Exhibit H-2

**Professional Services Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	debis Systemhaus	Germany	540	8.4
2	IBM	U.S.	470	7.3
3	SNI	Germany	465	7.3
4	SAP	Germany	240	3.8
5	Digital	U.S.	165	2.6
6=	ESG	Germany	145	2.3
6=	Datev	Germany	145	2.3
8	EDS	U.S.	120	1.9
9	Hewlett Packard	U.S.	115	1.8
10	Coopers & Lybrand	U.K.	110	1.7
	Total Listed		2,515	39.3
	Total Market		6,400	100.0

Source: INPUT

## Exhibit H-3

**Systems Integration Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	265	18.9
2	SNI	Germany	215	15.4
3	Digital	U.S.	115	8.2
4	debis Systemhaus	Germany	90	6.4
5	EDS	U.S.	85	6.1
6=	Bull	France	70	5.0
6=	Andersen Consulting	U.S.	70	5.0
8=	CSC	U.S.	45	3.2
8=	Hewlett Packard	U.S.	45	3.2
10	AT&T	U.S.	30	2.1
	Total Listed		1,030	73.6
	Total Market		1,400	100.0

Source: INPUT



Exhibit H-4

**Outsourcing Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	debis Systemhaus	Germany	490	22.3
2	IBM	U.S.	450	20.5
3	EDS	U.S.	300	13.6
4	tds	Germany	105	4.8
5	Alldata	Germany	85	3.9
6	Sema	France	80	3.6
7	SNI	Germany	70	3.2
8=	Digital	U.S.	45	2.0
8=	AC Service	Germany	45	2.0
10	Origin BV	Netherlands	40	1.8
	Total Listed		1,710	77.7
	Total Market		2,200	100.0

*N.B. Estimates include business operations in addition to SAP outsourcing*

*Source: INPUT*

Exhibit H-5

**Processing Services Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	Datev	Germany	680	30.9
2	Fiducia	Germany	160	7.3
3	debis Systemhaus	Germany	105	4.8
4	IBM	U.S.	95	4.3
5	Sligos	France	80	3.6
6	EDS	U.S.	75	3.4
7	RRZ	Germany	65	3.0
8=	Info AG	Germany	50	2.3
8=	Alldata	Germany	50	2.3
10	Telekurs	Switzerland	35	1.6
	Total Listed		1,395	63.4
	Total Market		2,200	100.0

*Source: INPUT*

Exhibit H-6

**Network Applications Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	Deutsche Telekom	Germany	120	12.6
2	Infonet	Belgium	80	8.4
3	IBM	U.S.	65	6.8
4=	EDS	U.S.	40	4.2
4=	Danet	U.S.	40	4.2
6	Digital	U.S.	35	3.7
7=	debis Systemhaus	Germany	20	2.1
7=	AT&T	U.S.	20	2.1
9=	GEIS	U.S.	15	1.6
9=	Sligos	France	15	1.6
	Total Listed		450	47.3
	Total Market		950	100.0

Source: INPUT

Exhibit H-7

**Electronic Information Services Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	Reuters	U.K.	450	30.0
2	Telerate	U.S.	90	6.0
3=	Bertelsmann	Germany	70	4.7
3=	Genios	Germany	70	4.7
5=	VW-Gedas	Germany	40	2.7
5=	Telekurs	Switzerland	40	2.7
7	Dun & Bradstreet	U.S.	35	2.3
8	Info AG	Germany	20	1.3
9=	Infodas	Germany	15	1.0
9=	Mead	U.S.	15	1.0
	Total Listed		845	56.4
	Total Market		1,500	100.0

Source: INPUT

Exhibit H-8

**Systems Software Products Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	1,520	26.7
2	SNI	Germany	500	8.8
3	Microsoft	U.S.	335	5.9
4	Novell	U.S.	220	3.9
5	Software AG	Germany	160	2.8
6	Oracle	U.S.	155	2.7
7	Digital	U.S.	130	2.3
8	Computer Associates	U.S.	125	2.2
9	Hewlett Packard	U.S.	110	1.9
10	Bull	France	80	1.4
	Total Listed		3,335	58.5
	Total Market		5,700	100.0

Source: INPUT

Exhibit H-9

**Application Software Products Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	SAP	Germany	610	14.2
2	IBM	U.S.	300	7.0
3	Microsoft	U.S.	240	5.6
4	Computer Associates	U.S.	195	4.5
5	SNI	Germany	180	4.2
6	KHK	Germany	85	2.0
7	Datev	Germany	80	1.9
8	SAS	U.S.	65	1.5
9	Softlab	Germany	50	1.2
10	Compunet	U.S.	45	1.0
	Total Listed		1,850	43.0
	Total Market		4,300	100.0

Source: INPUT



Exhibit H-10

**Turnkey Systems Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	SNI	Germany	715	11.1
2	IBM	U.S.	245	3.8
3	Digital	U.S.	130	2.0
4	Hewlett Packard	U.S.	120	1.9
5=	debis Systemhaus	Germany	70	1.1
5=	Compunet	Germany	70	1.1
7=	Unisys	U.S.	50	0.8
7=	Reuters	U.K.	50	0.8
7=	Intergraph	U.S.	50	0.8
10	Sligos	France	45	0.7
	Total Listed		1,545	24.0
	Total Market		6,450	100.0

Source: INPUT

Exhibit H-11

**Equipment Maintenance Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	SNI	Germany	1,095	27.4
2	IBM	U.S.	820	20.5
3	Digital	U.S.	415	10.4
4	Compunet	U.S.	230	5.8
5	Hewlett Packard	U.S.	140	3.5
6	AT&T	U.S.	120	3.0
7	Unisys	U.S.	85	2.1
8	Bull	France	80	2.0
9	Comparex	U.S.	75	1.9
10	StorageTek	U.S.	70	1.8
	Total Listed		3,130	78.2
	Total Market		4,000	100.0

Source: INPUT

Exhibit H-12

**Environmental Services Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue(DM Millions)	Market Share(%)
1	IBM	U.S.	190	6.7
2	SNI	Germany	110	3.9
3	Hewlett Packard	U.S.	55	1.9
4	Digital	U.S.	40	1.4
5	Bull	France	35	1.2
6	Unisys	U.S.	30	1.1
7=	Comparex	U.S.	15	0.5
7=	Memorex Telex	U.S.	15	0.5
9	Sun	U.S.	9	0.3
10	AT&T	U.S.	7	0.2
	Total Listed		506	17.8
	Total Market		2,850	100.0

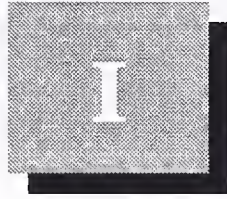
Source: INPUT

Exhibit H-13

**Information Services Leading Vendors Germany, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (DM Millions)	Market Share (%)
1	IBM	U.S.	4,325	11.4
2	SNI	Germany	3,350	8.8
3	debis Systemhaus	Germany	1,315	3.5
4	Digital	U.S.	1,075	2.8
5	Datev	Germany	910	2.4
6	SAP	Germany	890	2.3
7	EDS	U.S.	620	1.6
8	Hewlett Packard	U.S.	585	1.5
9	Microsoft	U.S.	575	1.5
10	Reuters	U.K.	500	1.3
	Total Listed		14,145	37.3
	Total Market		37,950	100.0

Source: INPUT



## **Leading Vendors in Local Currency (Dra Millions) — Greece**



Exhibit I-1

**Software and Services Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	5,970	5.6
2	Digital	U.S.	3,900	3.6
3	Andersen Consulting	U.S.	3,560	3.3
4	EDS	U.S.	2,380	2.2
5=	Reuters	U.K.	1,925	1.8
5=	Hewlett Packard	U.S.	1,925	1.8
7	Microsoft	U.S.	1,690	1.6
8	GEIS	U.S.	1,410	1.3
9	Oracle	U.S.	1,260	1.2
10	Bull	France	1,145	1.1
11	AT & T	U.S.	835	0.8
12	Computer Associates	U.S.	810	0.8
13	ICL	U.K.	800	0.7
14	Origin BV	Netherlands	555	0.5
15	CSC	U.S.	480	0.4
16	SNI	Germany	345	0.3
17	Software AG	Germany	325	0.3
18	Adobe	U.S.	320	0.3
19	Novell	U.S.	310	0.3
20	Dun & Bradstreet	U.S.	290	0.3
	Total Listed		30,235	28.2
	Total Market		107,370	100.0

Source: INPUT

Exhibit I-2

**Professional Services Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Andersen Consulting	U.S.	3,555	7.6
2	EDS	U.S.	2,370	5.1
3=	Digital	U.S.	1,895	4.1
3=	IBM	U.S.	1,895	4.1
5	Hewlett Packard	U.S.	1,185	2.5
6	Oracle	U.S.	950	2.0
7	AT&T	U.S.	710	1.5
8=	CSC	U.S.	475	1.0
8=	Reuters	U.K.	475	1.0
10	Bull	France	235	0.5
	Total Listed		13,745	29.6
	Total Market		46,500	100.0

Source: INPUT

Exhibit I-3

**Systems Integration Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1=	IBM	U.S.	710	20.3
1=	Digital	U.S.	710	20.3
3=	Cap Gemini Sogeti	France	235	6.7
3=	Bull	France	235	6.7
5	AT&T	U.S.	120	3.4
	Total Listed		2,010	57.4
	Total Market		3,500	100.0

Source: INPUT

Exhibit I-4

**Processing Services Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	GEIS	U.S.	515	4.7
2	Olivetti	Italy	130	1.2
3	Unisys	U.S.	80	0.7
4	IBM	U.S.	40	0.4
5	Hewlett Packard	U.S.	15	0.1
	Total Listed		790	7.2
	Total Market		10,920	100.0

Source: INPUT

Exhibit I-5

**Network Applications Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	GEIS	U.S.	895	38.9
2	IBM	U.S.	125	5.4
3	Bull	France	50	2.2
4	Digital	U.S.	40	1.7
5	ICL	U.K.	10	0.4
	Total Listed		1,120	48.7
	Total Market		2,300	100.0

Source: INPUT



Exhibit I-6

**Electronic Information Services Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Reuters	U.K.	975	38.2
2	Dun & Bradstreet	U.S.	290	11.4
3	Telerate	U.S.	260	10.2
	Total Listed		1,525	59.8
	Total Market		2,550	100.0

Source: INPUT

Exhibit I-7

**Systems Software Products Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share(%)
1	IBM	U.S.	1,835	14.9
2	Microsoft	U.S.	1,015	8.3
3	Bull	France	625	5.1
4	ICL	U.K.	470	3.8
5	Software AG	Germany	325	2.6
6	Novell	U.S.	310	2.5
7	Oracle	U.S.	305	2.5
8	Computer Associates	U.S.	300	2.4
9	Digital	U.S.	295	2.4
10	SNI	Germany	215	1.7
	Total Listed		5,695	46.3
	Total Market		12,300	100.0

Source: INPUT

Exhibit I-8

**Application Software Products Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	Microsoft	U.S.	675	7.5
2	Computer Associates	U.S.	510	5.7
3	IBM	U.S.	415	4.6
4=	ICL	U.K.	320	3.6
4=	Adobe	U.S.	320	3.6
6	Syseca	France	215	2.4
7=	Stream International	U.S.	140	1.6
7=	Unisys	U.S.	140	1.6
9	SNI	Germany	120	1.3
10	Origin BV	Netherlands	75	0.8
	Total Listed		2,930	32.6
	Total Market		9,000	100.0

Source: INPUT

Exhibit I-9

**Turnkey Systems Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1=	Digital	U.S.	950	5.8
1=	IBM	U.S.	950	5.8
3	Hewlett Packard	U.S.	710	4.4
4=	Reuters	U.K.	475	2.9
4=	Origin BV	Netherlands	475	2.9
	Total Listed		3,560	21.8
	Total Market		16,300	100.0

Source: INPUT

Exhibit I-10

**Equipment Maintenance Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	2,845	33.0
2	Digital	U.S.	1,420	16.5
3	Olivetti	Italy	1,185	13.8
4	Bull	France	710	8.2
5=	ICL	U.K.	235	2.7
5=	Hewlett Packard	U.S.	235	2.7
5=	ComputerVision	U.S.	235	2.7
5=	Wang	U.S.	235	2.7
5=	SNI	Germany	235	2.7
5=	Unisys	U.S.	235	2.7
	Total Listed		7,570	87.9
	Total Market		8,610	100.0

Source: INPUT

Exhibit I-11

**Environmental Services Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	475	41.3
2=	ICL	U.K.	235	20.4
2=	Hewlett Packard	U.S.	235	20.4
	Total Listed		945	82.2
	Total Market		1,150	100.0

Source: INPUT

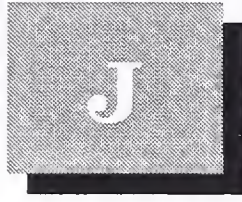


Exhibit I-12

**Information Services Leading Vendors Greece, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dra Millions)	Market Share (%)
1	IBM	U.S.	9,290	7.9
2	Digital	U.S.	5,335	4.6
3	Andersen Consulting	U.S.	3,560	3.0
4	Hewlett Packard	U.S.	2,395	2.0
5	EDS	U.S.	2,380	2.0
6	Reuters	U.K.	1,925	1.6
7	Bull	France	1,855	1.6
8	Microsoft	U.S.	1,690	1.4
9	GEIS	U.S.	1,410	1.2
10	Oracle	U.S.	1,260	1.1
	Total Listed		31,100	26.6
	Total Market		117,130	100.0

Source: INPUT



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

Exhibit J-1

**Software and Services Leading Vendors Ireland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	45	8.3
2=	Digital	U.S.	20	3.7
2=	Microsoft	U.S.	20	3.7
4=	Andersen Consulting	U.S.	15	2.8
4=	Unisys	U.S.	15	2.8
4=	Coopers & Lybrand	U.K.	15	2.8
7=	Ernst & Young	U.S.	10	1.8
7=	Hewlett Packard	U.S.	10	1.8
7=	Reuters	U.K.	10	1.8
10	ICL	U.K.	5	0.9
	Total Listed		165	30.3
	Total Market		545	100.0

Source: INPUT

Exhibit J-2

**Professional Services Leading Vendors Ireland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1=	IBM	U.S.	12	6.2
1=	Andersen Consulting	U.S.	12	6.2
3=	Digital	U.S.	11	5.6
3=	Coopers & Lybrand	U.K.	11	5.6
4	Ernst & Young	U.S.	9	4.7
5	Unisys	U.S.	7	3.7
6=	CSC	U.S.	3	1.6
6=	Hewlett Packard	U.S.	3	1.6
6=	Price Waterhouse	U.S.	3	1.6
6=	KPMG	U.S.	3	1.6
	Total Listed		77	38.4
	Total Market		200	100.0

Source: INPUT



Exhibit J-3

**Systems Software Products Leading Vendors Ireland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	13	19.7
2	Microsoft	U.S.	10	15.4
3=	Digital	U.S.	4	6.8
3=	Hewlett Packard	U.S.	4	5.5
5	Novell	U.S.	3	5.0
	Total Listed		34	52.3
	Total Market		65	100.0

Source: INPUT

Exhibit J-4

**Application Software Leading Vendors Ireland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	15	23.1
2	Microsoft	U.S.	10	15.4
3=	Computer Associates	U.S.	4	6.8
3=	Unisys	U.S.	4	5.5
5	Misys	U.K.	3	5.0
	Total Listed		36	55.8
	Total Market		70	107.7

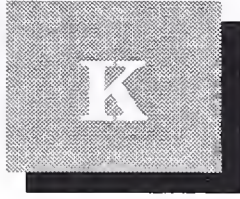
Source: INPUT

Exhibit J-5

**Information Services Leading Vendors Ireland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (IR £ Millions)	Market Share (%)
1	IBM	U.S.	50	7.4
2	Digital	U.S.	25	3.7
3	Microsoft	U.S.	20	2.9
4=	Unisys	U.S.	15	2.2
4=	ICL	U.K.	15	2.2
4=	Hewlett Packard	U.S.	15	2.2
4=	Andersen Consulting	U.S.	15	2.2
4=	Coopers & Lybrand	U.K.	15	2.2
9=	SNI	Germany	10	1.5
9=	Reuters	U.K.	10	1.5
	Total Listed		190	27.9
	Total Market		680	100.0

Source: INPUT



## **Leading Vendors in Local Currency (Lira Billions) — Italy**



Exhibit K-1

## Software and Services Leading Vendors Italy, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	1,875	14.6
2	Finsiel	Italy	1,765	13.8
3	Olivetti	Italy	1,140	8.9
4	Digital	U.S.	385	3.0
5=	Cerved	Italy	250	2.0
5=	Reuters	U.K.	250	2.0
7	Microsoft	U.S.	235	1.8
8	Andersen Consulting	U.S.	230	1.8
9	EDS	U.S.	225	1.8
10	Bull	France	215	1.7
11	Computer Associates	U.S.	155	1.2
12=	SNI	Germany	150	1.2
12=	CED Borsa	Italy	130	1.0
14	Cap Gemini Sogeti	France	130	1.0
15	Novell	U.S.	95	0.7
16	Hewlett Packard	U.S.	90	0.7
17=	Oracle	U.S.	70	0.5
17=	Lombardia Informatica	Italy	70	0.5
19	Sopin	Italy	60	0.5
20	Sarin	Italy	50	0.4
21=	Telerate	U.S.	45	0.4
21=	GEIS	U.S.	45	0.4
21=	CSC	U.S.	45	0.4
24	Logica	U.K.	40	0.3
25	Unisys	U.S.	40	0.3
26=	Editrice	Italy	35	0.3
26=	Intergraph	U.S.	35	0.3
26=	Software AG	Germany	35	0.3
29=	SAP	Germany	30	0.2
29=	Cedacrinord	Italy	30	0.2
	Total Listed		7,950	62.0
	Total Market		12,820	100.0

Source: INPUT

Exhibit K-2

**Professional Services Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Finsiel	Italy	1,180	34.0
2	Olivetti	Italy	400	11.5
3	Cerved	Italy	175	5.0
4	IBM	U.S.	160	4.6
5	Andersen Consulting	U.S.	125	3.6
6=	Cap Gemini Sogeti	France	70	2.0
6=	Digital	U.S.	70	2.0
8	EDS	U.S.	50	1.4
9=	CSC	U.S.	30	0.9
9=	Hewlett Packard	U.S.	30	0.9
	Total Listed		2,290	66.0
	Total Market		3,470	100.0

Source: INPUT

Exhibit K-3

**Systems Integration Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Andersen Consulting	U.S.	105	18.1
2	IBM	U.S.	95	16.4
3	Finsiel	Italy	90	15.5
4	Bull	France	80	13.7
5	Olivetti	Italy	55	9.5
6	Digital	U.S.	45	7.8
7=	SNI	Germany	25	4.3
7=	Cap Gemini Sogeti	France	25	4.3
7=	Logica	U.K.	25	4.3
10	Datitalia	Italy	15	2.6
	Total Listed		560	96.5
	Total Market		580	100.0

Source: INPUT

Exhibit K-4

**Outsourcing Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Finsiel	Italy	140	20.9
2=	EDS	U.S.	80	11.9
2=	IBM	U.S.	80	11.9
2=	Olivetti	Italy	80	11.9
5=	Cap Gemini Sogeti	France	20	3.0
5=	Enidata	Italy	20	3.0
7	Digital	U.S.	15	2.2
8	Sarin	Italy	12	1.8
9	Andersen Consulting	U.S.	10	1.5
10	CED Borsa	Italy	9	1.3
	Total Listed		466	69.6
	Total Market		670	100.0

Source: INPUT

Exhibit K-5

**Processing Services Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Finsiel	Italy	125	10.2
2	CED Borsa	Italy	120	9.8
3	Olivetti	Italy	85	7.0
4	Lombardia Informatica	Italy	70	5.7
5	Sopin	Italy	60	4.9
6	Sarin	Italy	35	2.9
7	Cedacrinord	Italy	30	2.5
8	GEIS	U.S.	15	1.2
9	Sligos	France	14	1.1
10	EDS	U.S.	10	0.8
	Total Listed		554	45.4
	Total Market		1,220	100.0

Source: INPUT



Exhibit K-6

**Network Applications Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	30	50.0
2	GEIS	U.S.	27	45.0
3	Olivetti	Italy	25	41.7
4	Infonet	Belgium	20	33.3
5	Finsiel	Italy	17	28.3
6	INTESA	Italy	15	25.0
7=	Digital	U.S.	10	16.7
7=	Bull	France	10	16.7
7=	EDS	U.S.	10	16.3
10	Engineering	Italy	7	11.7
	Total Listed		170	60.7
	Total Market		280	100.0

Source: INPUT

Exhibit K-7

**Electronic Information Services Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Reuters	U.K.	210	262.5
2=	Cerved	Italy	45	56.3
2=	Telerate	U.S.	45	56.3
4	Dun & Bradstreet	Italy	20	25.0
5	Citicorp	U.S.	17	21.3
6	Stet	Italy	15	18.8
7	Dataitalia	Italy	12	15.0
8	INTESA	Italy	10	12.5
9=	Mead	U.S.	5	6.3
9=	Extel	U.K.	5	6.3
	Total Listed		385	87.5
	Total Market		440	100.0

Source: INPUT

Exhibit K-8

**Systems Software Products Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	745	29.8
2	Microsoft	U.S.	110	4.4
3	Olivetti	Italy	105	4.2
4	Novell	U.S.	95	3.8
5	Digital	U.S.	85	3.4
6	Bull	France	60	2.4
7	Computer Associates	U.S.	50	2.0
8=	SNI	Germany	45	1.8
8=	Hewlett Packard	U.S.	45	1.8
10	Oracle	U.S.	30	1.2
	Total Listed		1,370	54.8
	Total Market		2,500	100.0

Source: INPUT

Exhibit K-9

**Application Software Products Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	680	26.5
2	Microsoft	U.S.	125	4.9
3	Olivetti	Italy	120	4.7
4=	Digital	U.S.	80	3.1
4=	Computer Associates	U.S.	80	3.1
6	Finsiel	Italy	75	2.9
7	Bull	France	65	2.5
8=	Oracle	U.S.	40	1.6
8=	Software AG	Germany	30	1.2
8=	Unisys	U.S.	30	1.2
	Total Listed		1,325	51.6
	Total Market		2,570	100.0

Source: INPUT

Exhibit K-10

**Turnkey Systems Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Olivetti	Italy	270	24.8
2	IBM	U.S.	85	7.8
3	Digital	U.S.	80	7.3
4	EDS	Italy	75	6.9
5	Sicit	Italy	50	4.6
6=	Editrice	Italy	30	2.8
6=	Intergraph	U.S.	30	2.8
6=	Reuters	U.K.	30	2.8
6=	Cerved	Italy	30	2.8
10	Cortis Lentini	Italy	25	2.3
	Total Listed		705	64.7
	Total Market		1090	100.0

Source: INPUT

Exhibit K-11

**Equipment Maintenance Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	490	20.4
2	Olivetti	Italy	415	17.3
3	Digital	U.S.	150	6.3
4	Bull	France	130	5.4
5	Infocamere	Italy	85	3.5
6	SNI	Germany	75	3.1
7	AT&T	U.S.	65	2.7
8	Hewlett Packard	U.S.	50	2.1
9=	Unisys	U.S.	45	1.9
9=	StorageTek	U.S.	45	1.9
	Total Listed		1,550	64.6
	Total Market		2,400	100.0

Source: INPUT



Exhibit K-12

**Environmental Services Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	Olivetti	Italy	145	11.5
2	IBM	U.S.	135	10.7
3	SNI	Germany	25	2.0
4	Bull	France	20	1.6
5=	Digital	U.S.	16	1.3
5=	Unisys	U.S.	16	1.3
7	Hewlett Packard	U.S.	14	1.1
8	AT&T	U.S.	13	1.0
9	Memorex Telex	U.S.	8	0.6
10	StorageTek	U.S.	3	0.3
	Total Listed		395	31.3
	Total Market		1,260	100.0

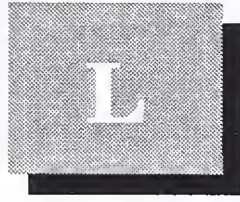
Source: INPUT

Exhibit K-13

**Information Services Leading Vendors Italy, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Lira Billions)	Market Share (%)
1	IBM	U.S.	2,500	15.2
2	Finsiel	Italy	1,765	10.7
3	Olivetti	Italy	1,700	10.3
4	Digital	U.S.	550	3.3
5	Bull	France	365	2.2
6	Cerved	Italy	250	1.5
7=	Reuters	U.K.	250	1.5
7=	Microsoft	U.S.	235	1.4
9	Andersen Consulting	U.S.	230	1.4
10	EDS	U.S.	225	1.4
	Total Listed		7,845	47.6
	Total Market		16,480	100.0

Source: INPUT



## **Leading Vendors in Local Currency (Dfl Millions) — Netherlands**

Exhibit L-1

**Software and Services Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	865	11.0
2	Cap Gemini Sogeti	France	650	8.3
3	Getronics	Netherlands	635	8.1
4	Origin BV	Netherlands	550	7.0
5	Raet	Netherlands	325	4.1
6	Roccade	Netherlands	270	3.4
7	CMG	U.K.	235	3.0
8	Digital	U.S.	205	2.6
9	CSC	U.S.	200	2.6
10	Hewlett Packard	U.S.	105	1.3
11	EDS	U.S.	95	1.2
12=	Computer Associates	U.S.	90	1.1
12=	Bouwfonds Informatica	Netherlands	90	1.1
14	Microsoft	U.S.	85	1.1
15	AT & T	U.S.	80	1.0
16=	Reuters	U.K.	75	1.0
16=	SNI	Germany	75	1.0
18=	Bull	France	70	0.9
18=	Ordina	Netherlands	70	0.9
20=	Olivetti	Italy	65	0.8
20=	SAS	U.S.	65	0.8
22	Unisys	U.S.	60	0.8
23	Baan	Netherlands	55	0.7
24=	Intergraph	U.S.	50	0.6
24=	Coopers & Lybrand	U.K.	50	0.6
24=	SAP	Germany	50	0.6
24=	Andersen Consulting	U.S.	50	0.6
27=	Novell	U.S.	45	0.6
27=	Computer Centrum	Netherlands	45	0.6
27=	ADP GSI	France	45	0.6
	Total Listed		5,350	68.3
	Total Market		7,835	100.0

Source: INPUT



Exhibit L-2

**Professional Services Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Cap Gemini Sogeti	France	545	22.7
2	Getronics	Netherlands	320	13.3
3	Raet	Netherlands	270	11.3
4	IBM	U.S.	190	7.9
5=	CSC	U.S.	130	5.4
5=	CMG	U.K.	130	5.4
7	Origin BV	Netherlands	90	3.8
8	Hewlett Packard	U.S.	65	2.7
9=	Digital	U.S.	50	2.1
9=	Coopers & Lybrand	U.K.	50	2.1
	Total Listed		1,840	76.7
	Total Market		2,400	100.0

Source: INPUT

Exhibit L-3

**Systems Integration Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	70	21.5
2	Digital	U.S.	35	10.8
3=	Origin BV	Netherlands	30	9.2
3=	Cap Gemini Sogeti	France	30	9.2
5=	Bull	France	25	7.7
5=	CMG	U.K.	25	7.7
5=	Andersen Consulting	U.S.	25	7.7
8	Getronics	Netherlands	20	6.2
9	Logica	U.K.	15	4.6
10	Raet	Netherlands	13	3.9
	Total Listed		288	88.6
	Total Market		325	100.0

Source: INPUT

Exhibit L-4

**Outsourcing Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Origin BV	Netherlands	100	16.7
2=	EDS	U.S.	80	13.3
2=	IBM	U.S.	80	13.3
4	AT&T	U.S.	70	11.7
5	CSC	U.S.	60	10.0
6	Cap Gemini Sogeti	France	45	7.5
7	CMG	U.K.	35	5.8
8	Digital	U.S.	15	2.5
9	Hewlett Packard	U.S.	12	2.0
10	SHL Systemhouse	Canada	10	1.7
	Total Listed		507	84.5
	Total Market		600	100.0

Source: INPUT

Exhibit L-5

**Processing Services Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Roccade	Netherlands	230	25.6
2	Origin BV	Netherlands	140	15.6
3	Getronics	Netherlands	105	11.7
4=	Computer Centrum Nederland	Netherlands	45	5.0
4=	ADP GSI	France	45	5.0
6	CMG	U.K.	30	3.3
7	Medsys	Netherlands	15	1.7
8	Telekurs	Switzerland	13	1.4
9	CSC	U.S.	11	1.2
10	EDS	U.S.	9	1.0
	Total Listed		643	71.4
	Total Market		900	100.0

Source: INPUT

Exhibit L-6

**Network Applications Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	25	12.5
2	Infonet	Belgium	22	11.0
3	Raet	Netherlands	12	6.0
4=	Origin BV	Netherlands	10	5.0
4=	CMG	U.K.	10	5.0
6	Digital	U.S.	7	3.5
7=	GEIS	U.S.	5	2.5
7=	EDS	U.S.	5	2.5
7=	Bull	France	5	2.5
10	Olivetti	Italy	2	0.8
	Total Listed		105	52.5
	Total Market		200	100.0

Source: INPUT

Exhibit L-7

**Electronic Information Services Leading Vendors  
Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Reuters	U.K.	75	27.8
2	Dun & Bradstreet	U.S.	25	9.3
3=	Telerate	U.S.	15	5.6
3=	Telekurs	Switzerland	15	5.6
5	IBM	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, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	335	31.9
2	Getronics	Netherlands	80	7.6
3	Microsoft	U.S.	50	4.8
4	Novell	U.S.	45	4.3
5	Digital	U.S.	40	3.9
6=	Bull	France	35	3.3
6=	Computer Associates	U.S.	35	3.3
8	Origin BV	Netherlands	30	2.9
9	Hewlett Packard	U.S.	25	2.4
10	Unisys	U.S.	20	1.9
	Total Listed		695	66.2
	Total Market		1,050	100.0

Source: INPUT

Exhibit L-9

**Application Software Products Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	95	8.6
2	Computer Associates	U.S.	55	5.0
3=	Origin BV	Netherlands	50	4.5
3=	Baan	Netherlands	50	4.5
5	SAP	Germany	40	3.6
6	Microsoft	U.S.	35	3.2
7=	SAS	U.S.	15	1.4
7=	Unisys	U.S.	15	1.3
9	Olivetti	Italy	13	1.2
10	AT&T	U.S.	9	0.8
	Total Listed		377	34.3
	Total Market		1,100	100.0

Source: INPUT

Exhibit L-10

**Turnkey Systems Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Getronics	Netherlands	110	11.1
2	Origin BV	Netherlands	95	9.6
3	IBM	U.S.	65	6.6
4=	Digital	U.S.	55	5.6
4=	SNI	Germany	55	5.6
6=	Olivetti	Italy	50	5.1
6=	Ordina	Netherlands	50	5.1
6=	Intergraph	U.S.	50	5.1
9	Raet	Netherlands	30	3.0
10	CMG	U.K.	25	2.5
	Total Listed		585	59.1
	Total Market		990	100.0

Source: INPUT

Exhibit L-11

**Equipment Maintenance Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Getronics	Netherlands	335	23.4
2	IBM	U.S.	185	12.9
3	Digital	U.S.	165	11.5
4	Hewlett Packard	U.S.	55	3.8
5	SNI	Germany	50	3.5
6	Bull	France	40	2.8
7=	Unisys	U.S.	35	2.5
7=	Triple P	U.S.	35	2.4
9	Olivetti	Italy	30	2.1
10	ICL	U.K.	25	1.7
	Total Listed		955	66.8
	Total Market		1,430	100.0

Source: INPUT

Exhibit L-12

**Environmental Services Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	Getronics	Netherlands	115	11.3
2	IBM	U.S.	65	6.4
3	SNI	Germany	16	1.6
4	Digital	U.S.	14	1.4
5	Olivetti	Italy	13	1.3
6=	Hewlett Packard	U.S.	8	0.8
6=	Unisys	U.S.	8	0.8
8	Bull	France	5	0.5
9=	AT&T	U.S.	3	0.3
9=	Wang	U.S.	3	0.3
	Total Listed		250	24.5
	Total Market		1,020	100.0

Source: INPUT

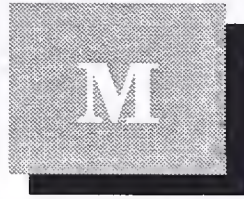
Exhibit L-13

**Information Services Leading Vendors Netherlands, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Dfl Millions)	Market Share (%)
1	IBM	U.S.	1,115	10.8
2	Getronics	Netherlands	1,085	10.5
3	Cap Gemini Sogeti	France	650	6.3
4	Origin BV	Netherlands	550	5.3
5	Digital	U.S.	385	3.7
6	Raet	Netherlands	325	3.2
7	Roccade	Netherlands	270	2.6
8	CMG	U.K.	235	2.3
9	CSC	U.S.	200	1.9
10	Hewlett Packard	U.S.	170	1.7
	Total Listed		4,985	48.5
	Total Market		10,285	100.0

Source: INPUT





## **Leading Vendors in Local Currency (NK Millions) — Norway**

Exhibit M-1

**Software and Services Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM*	U.S.	2,660	20.6
2	Fellesdata	Norway	820	6.4
3	BBS	Norway	650	5.0
4	Novit	Norway	480	3.7
5	Digital	U.S.	270	2.1
6	EDB	Norway	265	2.1
7	Andersen Consulting	U.S.	225	1.7
8	Oracle	U.S.	205	1.6
9	Enator	Sweden	190	1.5
10	Cap Gemini Sogeti	France	165	1.3
11	Computer Associates	U.S.	145	1.1
12	Microsoft	U.S.	130	1.0
13	Bull	France	115	0.9
14=	Reuters	U.K.	90	0.7
14=	Rogalandsdata	Norway	90	0.7
16=	Microgen	U.K.	55	0.4
16=	Getronics	Netherlands	55	0.4
18	Intergraph	U.S.	50	0.4
19	SAS	U.S.	40	0.3
20=	WM-Data	Sweden	35	0.3
20=	Provida	Norway	35	0.3
22=	Olivetti	Italy	30	0.2
22=	Novell	U.S.	30	0.2
24=	AT & T	U.S.	25	0.2
24=	Dun & Bradstreet	U.S.	25	0.2
24=	Teamco	Norway	25	0.2
24=	Informix	U.S.	25	0.2
24=	Telerate	U.S.	25	0.2
28=	Unisys	U.S.	20	0.2
28=	Hewlett Packard	U.S.	20	0.2
	Total Listed		6,995	54.2
	Total Market		12,900	100.0

\* Includes NIT

Source: INPUT

## Exhibit M-2

**Professional Services Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM *	U.S.	725	23.8
2	Fellesdata	Norway	405	13.3
3	Novit	Norway	255	8.4
4	Digital	U.S.	190	6.2
5=	Cap Gemini Sogeti	France	160	5.2
5=	Enator	Sweden	160	5.2
5=	Andersen Consulting	U.S.	160	5.2
5=	BBS	Norway	160	5.2
9	Oracle	U.S.	110	3.6
10	EDB	Norway	105	3.4
	Total Listed		2,430	79.7
	Total Market		3,050	100.0

\* Includes NIT

Source: INPUT

## Exhibit M-3

**Systems Integration Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM*	U.S.	95	36.5
2	Bull	France	50	19.2
3	Andersen Consulting	U.S.	30	11.5
4=	Unisys	U.S.	20	7.7
4=	Hewlett Packard	U.S.	20	7.7
	Total Listed		215	82.6
	Total Market		260	100.0

\* Includes NIT

Source: INPUT



Exhibit M-4

**Outsourcing Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	Fellesdata	Norway	70	18.7
2	IBM*	U.S.	40	10.7
3	Andersen Consulting	U.S.	30	8.0
4	Teamco	Norway	25	6.7
5	WM-Data	Sweden	20	5
	Total Listed		185	49.3
	Total Market		375	100.0

\* Includes NIT

Source: INPUT

Exhibit M-5

**Processing Services Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM*	U.S.	950	25.0
2	BBS	Norway	485	12.8
3	Fellesdata	Norway	275	7.2
4	Novit	Norway	165	4.3
5	EDB	Norway	155	4.1
6	Rogalandsdata	Norway	60	1.6
7	Microgen	U.K.	55	1.4
8	Getronics	Netherlands	30	0.8
9=	Tieto	Finland	15	0.4
9=	WM-Data	Sweden	15	0.4
	Total Listed		2,205	58.0
	Total Market		3,800	100.0

\* Includes NIT

Source: INPUT

Exhibit M-6

**Network Applications Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	35	38.9
2	Infonet	Belgium	17	18.9
3	GEIS	U.S.	15	16.7
4	Enator	Sweden	10	11.1
5	Digital	U.S.	7	7.8
	Total Listed		85	42.5
	Total Market		200	100.0

Source: INPUT

Exhibit M-7

**Electronic Information Services Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	Reuters	U.K.	90	28.1
2	Dun & Bradstreet	U.S.	50	15.6
3	Telerate	U.S.	25	7.8
	Total Listed		165	51.6
	Total Market		320	100.0

Source: INPUT

Exhibit M-8

**Systems Software Products Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	510	31.9
2	Oracle	U.S.	90	5.6
3	Microsoft	U.S.	75	4.7
4	Bull	France	55	3.4
5	Computer Associates	U.S.	50	3.1
6	Digital	U.S.	35	2.2
7	Novell	U.S.	30	1.9
8=	Informix	U.S.	25	1.6
8=	Getronics	Netherlands	25	1.6
10	Sybase	U.S.	20	1.3
	Total Listed		915	57.2
	Total Market		1,600	100.0

Source: INPUT

Exhibit M-9

**Application Software Products Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM*	U.S.	240	14.5
2	Computer Associates	U.S.	90	5.5
3	Fellesdata	Norway	65	3.9
4=	Novit	Norway	55	3.3
4=	Microsoft	U.S.	55	3.3
6	SAS	U.S.	40	2.4
7	Provida	Norway	35	2.1
8	Rogalandsdata	Norway	25	1.5
9=	Enator	Sweden	20	1.2
9=	Adobe	U.S.	20	1.2
	Total Listed		640	38.8
	Total Market		1,650	100.0

\* Includes NIT

Source: INPUT



Exhibit M-10

**Turnkey Systems Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	65	4.0
2	Intergraph	U.S.	50	3.0
3=	Digital	U.S.	30	1.8
3=	Olivetti	Italy	30	1.8
5	AT&T	U.S.	25	1.5
	Total Listed		200	12.2
	Total Market		1,645	100.0

Source: INPUT

Exhibit M-11

**Equipment Maintenance Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	Telenor Comma (ND)	Norway	370	21.2
2	IBM*	U.S.	260	14.9
3	Digital	U.S.	80	4.6
4	SNI	Germany	75	4.3
5	AT&T	U.S.	70	4.0
6	Olivetti	Italy	55	3.2
7	Hewlett Packard	U.S.	50	2.9
8	Bull	France	45	2.6
9	Nexor Perinet AB	Sweden	35	2.0
10	Unisys	U.S.	30	1.7
	Total Listed		1,070	61.3
	Total Market		1,745	100.0

\* Includes NIT

Source: INPUT

Exhibit M-12

**Environmental Services Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	65	5.8
2	SNI	Germany	30	2.7
3	Telenor Comma (ND)	Norway	25	2.2
4=	Digital	U.S.	15	1.3
4=	AT&T	U.S.	15	1.3
6=	Olivetti	Italy	6	0.6
6=	Unisys	U.S.	6	0.6
8	ICL	U.K.	5	0.4
9=	Bull	France	2	0.2
9=	Wang	U.S.	2	0.2
	Total Listed		172	15.2
	Total Market		1,130	100.0

Source: INPUT

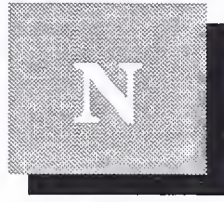
Exhibit M-13

**Information Services Leading Vendors Norway, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (NK Millions)	Market Share (%)
1	IBM	U.S.	2,985	18.9
2	Fellesdata	Norway	820	5.2
3	BBS	Norway	650	4.1
4	Novit	Norway	480	3.0
5	Telenor Comma (ND)	Norway	395	2.5
6	Digital	U.S.	365	2.3
7	EDB	Norway	265	1.7
8	Andersen Consulting	U.S.	225	1.4
9	Oracle	U.S.	205	1.3
10	Enator	Sweden	190	1.2
	Total Listed		6,580	41.7
	Total Market		15,775	100.0

\* Includes NIT

Source: INPUT



## **Leading Vendors in Local Currency (Esc Millions) — Portugal**



Exhibit N-1

**Software and Services Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	5,300	8.2
2	Andersen Consulting	U.S.	3,765	5.8
3	Digital	U.S.	3,200	4.9
4	Unisys	U.S.	2,450	3.8
5	Bull	France	1,700	2.6
6	EDS	U.S.	1,350	2.1
7	Hewlett Packard	U.S.	1,240	1.9
8	Reuters	U.K.	1,175	1.8
9	Intergraph	U.S.	490	0.8
10	GEIS	U.S.	450	0.7
11	Computer Associates	U.S.	370	0.6
12=	AT & T	U.S.	320	0.5
12=	Coopers & Lybrand	U.K.	320	0.5
12=	CSC	U.S.	320	0.5
15	Microsoft	U.S.	300	0.5
16	Telerate	U.S.	250	0.4
17	ICL	U.K.	200	0.3
18	CGI	France	175	0.3
19	Axime	France	160	0.2
20=	Olivetti	Italy	150	0.2
20=	Cap Gemini Sogeti	France	150	0.2
20=	Price Waterhouse	U.S.	150	0.2
23=	Dun & Bradstreet	U.S.	140	0.2
23=	Adobe	U.S.	140	0.2
25	Origin BV	Netherlands	125	0.2
26	Rank Xerox	U.S.	90	0.1
27=	SSA	Belgium	80	0.1
27=	Borland	U.S.	80	0.1
29	Tandem	U.S.	65	0.1
30	SNI	Germany	20	0.1
	Total Listed		24,725	38.1
	Total Market		64,840	100.0

Source: INPUT

## Exhibit N-2

**Professional Services Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Andersen Consulting	U.S.	2,980	8.5
2=	IBM	U.S.	1,490	4.3
2=	Digital	U.S.	1,490	4.3
4	Unisys	U.S.	895	2.6
5	Bull	France	745	2.1
6=	Hewlett Packard	U.S.	300	0.9
6=	Coopers & Lybrand	U.K.	300	0.9
6=	AT&T	U.S.	300	0.9
9=	Price Waterhouse	U.S.	150	0.4
9=	Cap Gemini Sogeti	France	150	0.4
	Total Listed		8,800	25.1
	Total Market		35,000	100.0

Source: INPUT

## Exhibit N-3

**Systems Integration Leading Vendors Portugal 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	445	14.9
2=	Bull	France	300	10.1
2=	Digital	U.S.	300	10.1
2=	CSC	U.S.	300	10.1
2=	Andersen Consulting	U.S.	300	10.1
	Total Listed		1,645	55.2
	Total Market		2,980	100.0

Source: INPUT

Exhibit N-4

**Processing Services Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	GEIS	U.S.	400	9.9
2	EDS	U.S.	290	7.1
3	Unisys	U.S.	230	5.7
4	Origin BV	Netherlands	125	3.1
5	IBM	U.S.	65	1.6
	Total Listed		1,110	27.3
	Total Market		4,060	100.0

Source: INPUT

Exhibit N-5

**Electronic Information Services Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Reuters	U.K.	1,175	60.3
2	Telerate	U.S.	250	12.8
3	Dun & Bradstreet	U.S.	140	7.2
	Total Listed		1,565	80.3
	Total Market		1,950	100.0

Source: INPUT



Exhibit N-6

**Systems Software Products Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	2,105	37.8
2	Unisys	U.S.	710	12.7
3	Digital	U.S.	565	10.1
4	Hewlett Packard	U.S.	540	9.7
5	Bull	France	390	7.0
	Total Listed		4,310	77.4
	Total Market		5,570	100.0

Source: INPUT

Exhibit N-7

**Application Software Products Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	650	18.6
2	Unisys	U.S.	555	15.9
3	Andersen Consulting	U.S.	385	11.0
4	Computer Associates	U.S.	320	9.1
5	Microsoft	U.S.	255	7.3
6	ICL	U.K.	185	5.3
7	CGI	France	175	5.0
8	Adobe	U.S.	140	4.0
9	EDS	U.S.	110	3.1
10	SSA	U.S.	80	2.3
	Total Listed		2,855	81.6
	Total Market		3,500	100.0

Source: INPUT

Exhibit N-8

**Turnkey Systems Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Digital	U.S.	595	7.3
2=	Intergraph	U.S.	445	5.4
2=	IBM	U.S.	445	5.4
4	Hewlett Packard	U.S.	300	3.7
5	Olivetti	Italy	150	1.8
	Total Listed		1,935	23.6
	Total Market		8,200	100.0

Source: INPUT

Exhibit N-9

**Equipment Maintenance Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	Digital	U.S.	1,935	14.9
2	IBM	U.S.	1,640	12.7
3	Unisys	U.S.	1,340	10.3
4	Hewlett Packard	U.S.	1,045	8.1
5	ICL	U.K.	895	6.9
6	Olivetti	Italy	745	5.8
7	Rank Xerox	U.S.	445	3.4
8=	ComputerVision	U.S.	150	1.2
8=	SNI	Germany	150	1.2
8=	Wang	U.S.	150	1.2
	Total Listed		8,495	65.6
	Total Market		12,955	100.0

Source: INPUT

Exhibit N-10

**Environmental Services Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1=	Unisys	U.S.	300	5.6
1=	Olivetti	Italy	300	5.6
2=	Digital	U.S.	150	2.8
2=	IBM	U.S.	150	2.8
2=	Bull	France	150	2.8
	Total Listed		1,050	19.4
	Total Market		5,400	100.0

Source: INPUT

Exhibit N-11

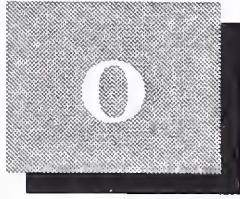
**Information Services Leading Vendors Portugal, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Esc Millions)	Market Share (%)
1	IBM	U.S.	7,090	8.5
2	Digital	U.S.	5,285	6.4
3	Unisys	U.S.	4,090	4.9
4	Andersen Consulting	U.S.	3,765	4.5
5	Hewlett Packard	U.S.	2,285	2.7
6	Bull	France	1,550	1.9
7	EDS	U.S.	1,350	1.6
8	Reuters	U.K.	1,175	1.4
9	Intergraph	U.S.	490	0.6
10	GEIS	U.S.	450	0.5
	Total Listed		27,530	33.1
	Total Market		83,195	100.0

Source: INPUT



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## **Leading Vendors in Local Currency (Pta Millions) — Spain**

Exhibit O-1

**Software and Services Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	35,600	9.2
2	Andersen Consulting	U.S.	16,600	4.3
3	Eritel	Spain	16,050	4.1
4	EDS	U.S.	11,650	3.0
5	Digital	U.S.	9,950	2.6
6	Hewlett Packard	U.S.	9,030	2.3
7	Bull	France	7,400	1.9
8	Reuters	U.K.	7,200	1.9
9	Sema	France	6,110	1.6
10	Microsoft	U.S.	6,060	1.6
11	Software AG	Germany	6,605	1.7
12	Computer Associates	U.S.	5,500	1.4
13	GEIS	U.S.	4,970	1.3
14	Cap Gemini Sogeti	France	4,650	1.2
15	CSC	U.S.	3,340	0.9
16	Cooper & Lybrand	U.K.	3,030	0.8
17	Novell	U.S.	2,840	0.7
18	Olivetti	Italy	2,425	0.6
19	ADP GSI	France	2,330	0.6
20	Oracle	U.S.	2,260	0.6
21	Intergraph	U.S.	2,180	0.6
22=	Price Waterhouse	U.S.	1,815	0.5
22=	Ibermatica	Spain	1,815	0.5
24	SAP	Germany	1,600	0.4
25	SNI	Germany	1,470	0.4
26	Dun & Bradstreet	U.S.	1,400	0.4
27	Telerate	U.S.	1,380	0.4
28	Centrista	Spain	1,200	0.3
29	AT & T	U.S.	1,180	0.3
30	Cray	U.K.	1,125	0.3
	Total Listed		178,765	46.0
	Total Market		388,200	100.0

Source: INPUT



Exhibit O-2

**Professional Services Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Eritel	Spain	12,100	9.7
2=	EDS	U.S.	9,680	7.7
2=	Andersen Consulting	U.S.	9,680	7.7
4	IBM	U.S.	5,445	4.4
5=	Hewlett Packard	U.S.	3,630	2.9
5=	Digital	U.S.	3,630	2.9
7	Coopers & Lybrand	U.K.	3,025	2.4
8	Price Waterhouse	U.S.	1,815	1.5
9=	Cap Gemini Sogeti	France	605	0.5
9=	Sema	France	605	0.5
	Total Listed		50,215	40.2
	Total Market		125,000	100.0

Source: INPUT

Exhibit O-3

**Systems Integration Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	4,960	17.7
2	Bull	France	3,630	13.0
3	Digital	U.S.	3,390	12.1
4=	CSC	U.S.	3,330	11.9
4=	Andersen Consulting	U.S.	3,330	11.9
	Total Listed		18,640	66.6
	Total Market		28,000	100.0

Source: INPUT

Exhibit O-4

**Outsourcing Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Sema	France	5,500	27.5
2	IBM	U.S.	4,000	20.0
3	Eritel	Spain	2,000	10.0
4	Andersen Consulting	U.S.	1,500	7.5
5	Centrista	Spain	1,200	6.0
6=	EDS	U.S.	1,000	5.0
6=	Cap Gemini Sogeti	France	1,000	5.0
8	Ibermatica	Spain	600	3.0
9	Unisys	U.S.	310	1.6
10	Thomainfor	France	250	1.3
	Total Listed		17,360	86.8
	Total Market		20,000	100.0

Source: INPUT

Exhibit O-5

**Processing Services Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	GEIS	U.S.	1,750	4.7
2	EDS	U.S.	940	2.5
3	ADP GSI	France	770	2.1
4	Indra	Spain	680	1.8
5	Axime	France	660	1.8
6	Sligos	France	620	1.7
7	Origin BV	Netherlands	510	1.4
8	Getronics	Netherlands	430	1.2
9	IBM	U.S.	330	0.9
10	Hewlett Packard	U.S.	300	0.8
	Total Listed		6,990	18.8
	Total Market		37,200	100.0

Source: INPUT

Exhibit O-6

**Network Applications Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	GEIS	U.S.	3,220	392.7
2	IBM	U.S.	920	112.2
3	Infonet	Belgium	820	100.0
4	ADP GSI	France	405	49.4
5	Digital	U.S.	185	22.6
	Total Listed		5,550	75.5
	Total Market		7,350	100.0

Source: INPUT

Exhibit O-7

**Electronic Information Services Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Reuters	U.K.	6,230	100.0
2	Dun & Bradstreet	U.S.	1,400	22.5
3	Telerate	U.S.	1,380	22.2
	Total Listed		9,010	60.1
	Total Market		15,000	100.0

Source: INPUT



Exhibit O-8

**Systems Software Products Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	14,510	27.8
2	Software AG	Germany	4,990	9.6
3	Hewlett Packard	U.S.	3,880	7.4
4	Bull	France	3,720	7.1
5	Microsoft	U.S.	3,630	7.0
6	Novell	U.S.	2,830	5.4
7	Oracle	U.S.	2,260	4.3
8	Computer Associates	U.S.	2,020	3.9
9	Digital	U.S.	1,535	2.9
10	SNI	Germany	1,470	2.8
	Total Listed		40,845	78.2
	Total Market		52,200	100.0

Source: INPUT

Exhibit O-9

**Application Software Products Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	4,225	9.3
2	Computer Associates	U.S.	3,460	7.6
3	Microsoft	U.S.	2,420	5.3
4	Andersen Consulting	U.S.	2,040	4.5
5	SAP	Germany	1,600	3.5
6	AT&T	U.S.	1,180	2.6
7	ADP GSI	France	1,155	2.5
8	Cray	U.K.	1,125	2.5
9	Logic Group	Spain	1,115	2.4
10	Unisys	U.S.	740	1.6
	Total Listed		19,060	41.8
	Total Market		45,600	100.0

Source: INPUT

Exhibit O-10

**Turnkey Systems Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	Cap Gemini Sogeti	France	3,025	5.2
2	Olivetti	Italy	2,420	4.2
3	Intergraph	U.S.	2,180	3.8
4	Eritel	Spain	1,935	3.3
5	Ibermatica	Spain	1,815	3.1
6=	Digital	U.S.	1,210	2.1
6=	Hewlett Packard	U.S.	1,210	2.1
6=	IBM	U.S.	1,210	2.1
9	Reuters	U.K.	970	1.7
10	Software AG	Germany	605	1.0
	Total Listed		16,580	28.7
	Total Market		57,850	100.0

Source: INPUT

Exhibit O-11

**Equipment Maintenance Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	11,010	14.9
2	Hewlett Packard	U.S.	7,625	10.3
3	Digital	U.S.	6,775	9.2
4	AT&T	U.S.	4,720	6.4
5	Eltec	Spain	4,235	5.7
6	SNI	Germany	3,990	5.4
7	Bull	France	3,270	4.4
8	Olivetti	Italy	2,060	2.8
9	Unisys	U.S.	1,815	2.5
10	Getronics	Netherlands	1,695	2.3
	Total Listed		47,195	64.0
	Total Market		73,770	100.0

Source: INPUT

Exhibit O-12

**Environmental Services Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	2,785	6.4
2	Bull	France	1,090	2.5
3=	Hewlett Packard	U.S.	970	2.2
3=	SNI	Germany	970	2.2
5	Digital	U.S.	605	1.4
6=	Eltec	Spain	485	1.1
6=	Olivetti	Italy	485	1.1
6=	Unisys	U.S.	485	1.1
6=	Getronics	Netherlands	485	1.1
10	Thomainfor	France	240	0.6
	Total Listed		8,600	19.7
	Total Market		43,550	100.0

Source: INPUT

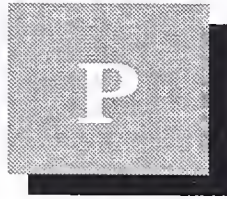
Exhibit O-13

**Information Services Leading Vendors Spain, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (Pta Millions)	Market Share (%)
1	IBM	U.S.	49,395	9.8
2	Hewlett Packard	U.S.	17,625	3.5
3	Digital	U.S.	17,330	3.4
4	Andersen Consulting	U.S.	16,600	3.3
5	Eritel	Spain	16,050	3.2
6	Bull	France	11,760	2.3
7	EDS	U.S.	11,650	2.3
8	Reuters	U.K.	7,200	1.4
9	SNI	Germany	6,430	1.3
10	Sema	France	6,110	1.2
	Total Listed		160,150	31.7
	Total Market		505,520	100.0

Source: INPUT





## **Leading Vendors in Local Currency (SK Millions) — Sweden**

Exhibit P-1

**Software and Services Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	1,915	8.9
2	Enator	Sweden	1,855	8.6
3	EDS*	U.S.	1,600	7.4
4	Sapia	Sweden	1,150	5.3
5	WM-Data	Sweden	1,050	4.9
6	Sema	France	830	3.8
7	Cap Gemini Sogeti	France	785	3.6
8	SKD Foretagen	Sweden	625	2.9
9	Digital	U.S.	620	2.9
10	Reuters	U.K.	405	1.9
11	Computer Associates	U.S.	305	1.4
12	Communicator AB	Sweden	270	1.3
13	Microsoft	U.S.	260	1.2
14	P & P	U.K.	230	1.1
15	Lantbruksdata	Sweden	195	0.9
16	SNI	Germany	190	0.9
17	IBS	Sweden	170	0.8
18	ICL	U.K.	155	0.7
19	Conor Information	Sweden	150	0.7
20	Bull	France	135	0.6
21	Maldata	Sweden	110	0.5
22=	Hewlett Packard	U.S.	100	0.5
22=	Intergraph	U.S.	100	0.5
24=	Novell	U.S.	85	0.4
24=	Industri-Matematik	Sweden	85	0.4
26	Infonet	U.S.	80	0.4
27	CRS Datacraft	Sweden	75	0.3
28=	SAP	Germany	65	0.3
28=	Telerate	U.S.	65	0.3
30	Oracle	U.S.	60	0.3
	Total Listed		13,720	63.6
	Total Market		21,570	100.0

\* Includes Apiron

Source: INPUT

Exhibit P-2

**Professional Services Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	WM-Data	Sweden	530	7.3
2=	EDS	U.S.	365	5.0
2=	Enator	Sweden	365	5.0
4=	Cap Gemini Sogeti	France	265	3.6
4=	Sapia	Sweden	265	3.6
4=	Sema	France	265	3.6
4=	IBM	U.S.	265	3.6
4=	Communicator AB	Sweden	265	3.6
9	IBS	Sweden	165	2.3
10	Digital	U.S.	135	1.8
	Total Listed		2,886	39.5
	Total Market		7,300	100.0

Source: INPUT

Exhibit P-3

**Systems Integration Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Cap Gemini Sogeti	France	105	26.3
2=	EDS	U.S.	80	19.9
2=	IBM	U.S.	80	19.9
4	Bull	France	55	13.8
5	Enator	Sweden	40	9.9
	Total Listed		359	89.7
	Total Market		400	100.0

Source: INPUT



Exhibit P-4

**Outsourcing Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	EDS	U.S.	750	24.2
2=	Enator	Sweden	500	16.1
2=	Sema	France	500	16.1
4	IBM	U.S.	400	12.9
5	Cap Gemini Sogeti	France	350	11.3
	Total Listed		2,500	80.6
	Total Market		3,100	100.0

Source: INPUT

Exhibit P-5

**Processing Services Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	SKD Foretagen	Sweden	610	22.6
2	Sapia	Sweden	350	13.0
3	EDS*	U.S.	225	8.3
4=	WM-Data	Sweden	150	5.6
4=	Conor Information	Sweden	150	5.6
6	Lantbruksdata	Sweden	140	5.2
7	CRS Datacraft	Sweden	75	2.8
8=	Sema	France	60	2.2
8=	Microgen	UK	60	2.2
10	Datema	Sweden	50	1.9
	Total Listed		1,870	69.3
	Total Market		2,700	100.0

\*includes Apiron

Source: INPUT

Exhibit P-6

**Network Applications Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Infonet	Belgium	80	72.7
2	Enator	Sweden	65	59.1
3	Lantbruksdata	Sweden	55	50.0
4	IBM	U.S.	45	40.9
5	Digital	U.S.	30	27.3
	Total Listed		275	74.3
	Total Market		370	100.0

Source: INPUT

Exhibit P-7

**Electronic Information Services Leading Vendors Sweden, 1995**

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.	35	6.4
	Total Listed		400	72.7
	Total Market		550	100.0

Source: INPUT

Exhibit P-8

**Systems Software Products Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	795	36.1
2	Microsoft	U.S.	155	7.0
3	Digital	U.S.	125	5.7
4=	Computer Associates	U.S.	110	5.0
4=	P&P	U.K.	110	5.0
6	SNI	Germany	90	4.1
7=	ICL	U.K.	85	3.9
7=	Novell	U.S.	85	3.9
9	Bull	France	75	3.4
10	Oracle	U.S.	60	2.7
	Total Listed		1,690	76.8
	Total Market		2,200	100.0

Source: INPUT

Exhibit P-9

**Application Software Products Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Enator	Sweden	785	31.4
2	WM-Data	Sweden	300	12.0
3	IBM	U.S.	230	9.2
4	Computer Associates	U.S.	190	7.6
5	P&P	U.K.	120	4.8
6	Microsoft	U.S.	100	4.0
7	SAP	Germany	65	2.6
8=	ICL	U.K.	60	2.4
8=	SAS	U.S.	60	2.4
10	Cap Gemini Sogeti	France	55	2.2
	Total Listed		1,965	78.6
	Total Market		2,500	100.0

Source: INPUT



Exhibit P-10

**Turnkey Systems Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	Sapia	Sweden	530	21.6
2	Digital	U.S.	165	6.7
3=	IBM	U.S.	100	4.1
3=	Hewlett Packard	U.S.	100	4.1
3=	SNI	Germany	100	4.1
3=	Reuters	U.K.	100	4.1
3=	Intergraph	U.S.	100	4.1
3=	Enator	Sweden	100	4.1
9	Industri-Matematik	Sweden	85	3.5
10	WM Data	Sweden	65	2.7
	Total Listed		1,445	59.0
	Total Market		2,450	100.0

Source: INPUT

Exhibit P-11

**Equipment Maintenance Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	525	14.4
2	Digital	U.S.	470	12.9
3	ICL	U.K.	250	6.8
4=	Nexor Perinet AB	Sweden	240	6.6
4=	WM-Data	Sweden	240	6.6
6	SNI	Germany	105	2.9
7	Unisys	U.S.	85	2.3
8	Hewlett Packard	U.S.	80	2.2
9	AT&T	U.S.	75	2.1
10	Bull	France	60	1.6
	Total Listed		2,130	58.4
	Total Market		3,650	100.0

Source: INPUT

Exhibit P-12

**Environmental Services Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	80	3.0
2	SNI	Germany	35	1.3
3	Digital	U.S.	30	1.1
4=	Unisys	U.S.	20	0.8
4=	Hewlett Packard	U.S.	20	0.8
6	AT&T	U.S.	13	0.5
7=	ICL	U.K.	7	0.3
7=	Rank Xerox	U.S.	7	0.3
7=	Olivetti	Italy	7	0.3
7=	Wang	U.S.	7	0.3
	Total Listed		224	8.6
	Total Market		2,610	100.0

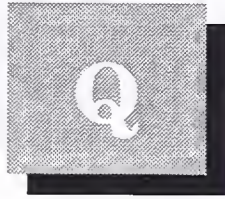
Source: INPUT

Exhibit P-13

**Information Services Leading Vendors Sweden, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SK Millions)	Market Share (%)
1	IBM	U.S.	2,520	9.1
2	Enator	Sweden	1,855	6.7
3	WM-Data	Sweden	1,290	4.6
4	EDS	U.S.	1,280	4.6
5	Sapia	Sweden	1,150	4.1
6	Digital	U.S.	1,120	4.0
7	Sema	France	830	3.0
8	Cap Gemini Sogeti	France	785	2.8
9	SKD Foretagen	Sweden	625	2.2
10	ICL	U.K.	410	1.5
	Total Listed		11,865	42.6
	Total Market		27,830	100.0

Source: INPUT



## **Leading Vendors in Local Currency (SF Millions) — Switzerland**



Exhibit Q-1

## Software and Services Leading Vendors Switzerland, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	435	12.6
2	Telekurs	Switzerland	220	6.4
3	Digital	U.S.	195	5.6
4	Fides	Switzerland	145	4.2
5	SAP	Germany	110	3.2
6=	AT & T	U.S.	75	2.2
6=	Unisys	U.S.	75	2.2
8	Reuters	U.K.	60	1.7
9=	Computer Associates	U.S.	55	1.6
9=	Hewlett Packard	U.S.	55	1.6
9=	SNI	Germany	55	1.6
12	Microsoft	U.S.	50	1.4
13=	Cap Gemini Sogeti	France	40	1.2
13=	ATAG debis Informatik	Switzerland	40	1.2
15	EDS	U.S.	35	1.0
16	Novell	U.S.	30	0.9
17	Oracle	U.S.	25	0.7
18	Telerate	U.S.	20	0.6
19	Delta ST	U.S.	17	0.5
20=	ADP GSI	France	15	0.4
20=	ICL	U.K.	15	0.4
22=	AC Service	Switzerland	12	0.3
22=	Infonet	Belgium	12	0.3
24	SAS	U.S.	11	0.3
25=	Dun & Bradstreet	U.S.	10	0.3
25=	Borland	U.S.	10	0.3
25=	Intergraph	U.S.	10	0.3
28	GEIS	U.S.	8	0.2
29	Cray	U.K.	7	0.2
30	Adobe	U.S.	5	0.1
	Total Listed		1,852	53.5
	Total Market		3,460	100.0

Source: INPUT

Exhibit Q-2

**Professional Services Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	70	8.3
2	Digital	U.S.	65	7.7
3	Fides	Switzerland	60	7.1
4	AT&T	U.S.	40	4.8
5=	SAP	Germany	25	3.0
5=	Hewlett Packard	U.S.	25	3.0
7=	Cap Gemini Sogeti	France	20	2.4
7=	SNI	Germany	20	2.4
9=	Unisys	U.S.	17	2.1
9=	Delta ST	U.S.	17	2.1
	Total Listed		360	42.8
	Total Market		840	100.0

Source: INPUT

Exhibit Q-3

**Systems Integration Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Digital	U.S.	50	25.0
2=	Cap Gemini Sogeti	France	17	8.6
2=	IBM	U.S.	17	8.6
2=	Unisys	U.S.	17	8.6
5	EDS	U.S.	16	8.1
	Total Listed		118	58.9
	Total Market		200	100.0

Source: INPUT

Exhibit Q-4

**Outsourcing Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	30	20.7
2=	EDS	U.S.	15	10.3
2=	Digital	U.S.	15	10.3
4=	Hewlett-Packard	U.S.	12	8.3
4=	AC Service	Switzerland	12	8.3
	Total Listed		84	57.9
	Total Market		145	100.0

Source: INPUT

Exhibit Q-5

**Processing Services Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Telekurs	Switzerland	155	38.8
2=	Fides	Switzerland	35	8.8
2=	ATAG debis Informatik	Switzerland	35	8.8
4=	IBM	U.S.	10	2.5
4=	Unisys	U.S.	10	2.5
	Total Listed		245	61.3
	Total Market		400	100.0

Source: INPUT



Exhibit Q-6

**Network Applications Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	17	30.9
2=	Infonet	Belgium	10	18.2
2=	Digital	U.S.	10	18.2
4	ADP GSI	U.S.	7	12.7
5	GEIS	U.S.	7	12.7
	Total Listed		51	92.7
	Total Market		55	100.0

Source: INPUT

Exhibit Q-7

**Electronic Information Services Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Telekurs	Switzerland	60	37.5
2	Reuters	U.K.	45	28.1
3	Telerate	U.S.	20	12.5
	Total Listed		125	78.1
	Total Market		160	100.0

Source: INPUT

Exhibit Q-8

**Systems Software Products Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	210	33.9
2	Digital	U.S.	40	6.5
3	Microsoft	U.S.	30	4.8
4	Novell	U.S.	25	4.0
5	Oracle	U.S.	20	3.2
6	Computer Associates	U.S.	19	3.1
7=	Hewlett Packard	U.S.	16	2.6
7=	AT & T	U.S.	16	2.6
7=	Unisys	U.S.	16	2.6
10	SNI	Germany	15	2.4
	Total Listed		407	65.6
	Total Market		620	100.0

Source: INPUT

Exhibit Q-9

**Application Software Products Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	SAP	Germany	80	18.2
2	IBM	U.S.	60	13.6
3	Computer Associates	U.S.	35	8.0
4	Microsoft	U.S.	20	4.5
5	AT&T	U.S.	17	4.0
6	Unisys	U.S.	12	2.8
7	SAS	U.S.	11	2.5
8	Cray	U.K.	7	1.6
9=	Adobe	U.S.	5	1.2
9=	ADP GSI	France	5	1.0
	Total Listed		253	57.4
	Total Market		440	100.0

Source: INPUT

Exhibit Q-10

**Turnkey Systems Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Fides	Switzerland	45	7.5
2=	IBM	U.S.	17	2.9
2=	SNI	Germany	17	2.9
2=	Digital	U.S.	17	2.9
2=	Reuters	U.K.	17	2.9
	Total Listed		114	19.0
	Total Market		600	100.0

Source: INPUT

Exhibit Q-11

**Equipment Maintenance Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	Digital	U.S.	110	14.2
2	IBM	U.S.	85	11.0
3	AT&T	U.S.	80	10.3
4	SNI	Germany	45	5.8
5	Hewlett Packard	U.S.	30	3.9
6	Unisys	U.S.	25	3.2
7	Itrix Maintenance	Switzerland	19	2.5
8	Bull	France	16	2.1
9	Wang	U.S.	12	1.5
10	Granada	U.K.	10	1.3
	Total Listed		432	55.7
	Total Market		775	100.0

Source: INPUT



Exhibit Q-12

**Environmental Services Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	14	2.5
2	SNI	Germany	12	2.1
3	Digital	U.S.	10	1.9
4	AT&T	U.S.	8	1.5
5	Unisys	U.S.	7	1.3
	Total Listed		51	9.3
	Total Market		545	100.0

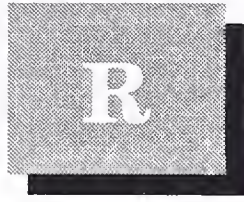
Source: INPUT

Exhibit Q-13

**Information Services Leading Vendors Switzerland, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (SF Millions)	Market Share (%)
1	IBM	U.S.	535	11.2
2	Digital	U.S.	315	6.6
3	Telekurs	Switzerland	220	4.6
4	AT & T	U.S.	165	3.5
5	Fides	Switzerland	145	3.0
6=	SNI	Germany	110	2.3
6=	SAP	Germany	110	2.3
8	Unisys	U.S.	105	2.2
9	Hewlett Packard	U.S.	85	1.8
10	Reuters	U.S.	60	1.3
	Total Listed		1,850	38.7
	Total Market		4,780	100.0

Source: INPUT



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

Exhibit R-1

## Software and Services Leading Vendors United Kingdom, 1995

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	860	8.7
2	ICL	U.K.	545	5.5
3	EDS	U.S.	390	4.0
4	Reuters	U.K.	310	3.1
5=	Andersen Consulting	U.S.	260	2.6
5=	Sema	France	260	2.6
7	Cap Gemini Sogeti	France	240	2.4
8=	AT & T	U.S.	200	2.0
8=	CSC	U.S.	200	2.0
10	BT/Syncordia	U.K.	195	2.0
11	Microsoft	U.S.	190	1.9
12	Bull	France	180	1.9
13	Digital	U.S.	165	1.7
14=	Oracle	U.S.	135	1.4
14=	P&P	U.K.	135	1.4
16	Logica	U.K.	125	1.3
17	Hewlett Packard	U.S.	115	1.2
18=	Computer Associates	U.S.	110	1.1
18=	Racal	U.K.	110	1.1
18=	Misys	U.K.	110	1.1
21	MDIS	U.S.	105	1.1
22=	Syntegra	U.K.	90	0.9
22=	Data Sciences	U.K.	90	0.9
24	Capita Group	U.K.	85	0.9
25	Coopers & Lybrand	U.K.	70	0.7
26	JBA	U.K.	60	0.6
27=	Admiral	U.K.	55	0.6
27=	Telerate	U.S.	55	0.6
27=	Rebus Group	U.K.	55	0.6
30	SNI	Germany	50	0.5
	Total Listed		5,535	56.2
	Total Market		9,850	100.0

Source: INPUT



Exhibit R-2

**Professional Services Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	ICL	U.K.	195	10.0
2	IBM	U.S.	110	5.6
3	Andersen Consulting	U.S.	95	4.9
4	Sema	France	85	4.4
5=	Logica	U.K.	70	3.6
5=	Oracle	U.S.	70	3.6
5=	EDS	U.S.	70	3.6
8	Digital	U.S.	65	3.3
9	Cap Gemini Sogeti	France	55	2.8
10	Coopers & Lybrand	U.K.	50	2.6
	Total Listed		865	44.3
	Total Market		1,950	100.0

Source: INPUT

Exhibit R-3

**Systems Integration Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	175	17.0
2	ICL	U.K.	120	11.7
3	Andersen Consulting	U.S.	85	8.3
4	EDS	U.S.	80	7.8
5=	Syntegra	U.K.	75	7.3
5=	Bull	France	75	7.3
7=	Sema	France	50	4.9
7=	Cap Gemini Sogeti	France	50	4.9
7=	Logica	U.K.	50	4.9
10	CSC	U.S.	45	4.4
	Total Listed		805	78.2
	Total Market		1,030	100.0

Source: INPUT

Exhibit R-4

**Outsourcing Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	EDS	U.S.	200	11.1
2	BT/Syncordia	U.K.	190	10.6
3	Cap Gemini Sogeti	France	170	9.4
4=	CSC	U.S.	125	6.9
4=	ICL	U.K.	125	6.9
6	Sema	France	110	6.1
7	Racal	U.K.	100	5.6
8	AT&T	U.S.	85	4.7
9	Andersen Consulting	U.S.	80	4.4
10	Data Sciences	U.K.	75	4.2
	Total Listed		1,260	70.0
	Total Market		1,800	100.0

*N.B. Estimates include business operations in addition to SAP outsourcing*

*Source: INPUT*

Exhibit R-5

**Processing Services Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	MR Group	U.K.	45	7.5
2	Misys	U.K.	35	5.8
3=	Microgen	U.K.	30	5.0
3=	EDS	U.S.	30	5.0
4	CSC	U.S.	25	4.2
5	GEIS	U.S.	15	2.5
6=	ADP GSI	France	10	1.7
6=	Sema	France	10	1.7
6=	SafetyNet	U.K.	10	1.6
6=	Data Sciences	U.K.	10	1.6
	Total Listed		220	36.6
	Total Market		600	100.0

*Source: INPUT*

Exhibit R-6

**Network Applications Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	AT&T	U.S.	45	450
2=	IBM	U.S.	40	400
2=	Infonet	Belgium	40	400
4	GEIS	U.S.	20	200
5	Syntegra	U.K.	15	150
6=	Digital	U.S.	10	100
6=	EDS	U.S.	10	100
8=	ICL	U.K.	8	80
8=	ADP GSI	U.S.	8	80
10	Bull	France	5	50
	Total Listed		196	68
	Total Market		290	100

Source: INPUT

Exhibit R-7

**Electronic Information Services Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	Reuters	U.K.	280	933
2	Telerate	U.S.	55	183
3	Citicorp	U.S.	50	167
4	Extel	U.K.	35	117
5=	Dun & Bradstreet	U.S.	30	100
5=	ADP GSI	France	30	100
7	Bloomberg	U.K.	25	83
8	Quick	Japan	20	67
9=	Mead	U.S.	15	50
9=	Infocheck	U.K.	15	50
	Total Listed		555	83
	Total Market		670	100

Source: INPUT



Exhibit R-8

**Systems Software Products Leading Vendors  
United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	340	30.6
2	Microsoft	U.S.	90	8.1
3	Oracle	U.S.	65	5.9
4	Digital	U.S.	60	5.4
5=	ICL	U.K.	55	5.0
5=	Hewlett Packard	U.S.	55	5.0
5=	P&P	U.K.	55	5.0
8	Computer Associates	U.S.	45	4.1
9	Novell	U.S.	40	3.6
10	AT & T	U.S.	30	2.7
	Total Listed		835	75.2
	Total Market		1,110	100.0

Source: INPUT

Exhibit R-9

**Application Software Products Leading Vendors  
United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	110	11.6
2	Microsoft	U.S.	100	10.5
3=	Computer Associates	U.S.	60	6.3
3=	P&P	U.K.	60	6.3
5	Misys	U.K.	55	5.8
6	Sage	U.K.	45	4.7
7=	AT & T	U.S.	35	3.7
7=	ICL	U.K.	35	3.7
7=	SAP	Germany	35	3.7
10	Rebus	U.K.	30	3.2
	Total Listed		565	59.5
	Total Market		950	100.0

Source: INPUT

Exhibit R-10

**Turnkey Systems Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	70	4.8
2	Cray Electronics	U.S.	50	3.4
3=	Intergraph	U.S.	40	2.8
3=	JBA	U.S.	40	2.8
5=	Digital	U.S.	30	2.1
5=	Reuters	U.K.	30	2.1
5=	MDIS	U.S.	30	2.1
8=	Unisys	U.S.	25	1.7
8=	Hewlett Packard	U.S.	25	1.7
10	P&P	U.K.	20	1.4
	Total Listed		360	24.8
	Total Market		1,450	100.0

Source: INPUT

Exhibit R-11

**Equipment Maintenance Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	ICL Sorbus	U.K.	220	15.7
2	IBM	U.S.	190	13.6
3	Digital	U.S.	175	12.5
4	Granada	U.K.	65	4.6
5=	Unisys	U.S.	50	3.6
5=	AT&T (NCR)	U.S.	50	3.6
5=	Bull	France	50	3.6
8	Olivetti	Italy	45	3.2
9	Hewlett Packard	U.S.	35	2.5
10	SNI	Germany	30	2.1
	Total Listed		910	65.0
	Total Market		1,400	100.0

Source: INPUT

Exhibit R-12

**Environmental Services Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	30	3.1
2=	Unisys	U.S.	15	1.5
2=	Hewlett Packard	U.S.	15	1.5
2=	Olivetti	Italy	15	1.5
5=	SNI	Germany	10	1.0
5=	Digital	U.S.	10	1.0
5=	AT&T (NCR)	U.S.	10	1.0
8	Amdahl	U.S.	5	0.5
9	Rank Xerox	U.S.	4	0.4
10	ICL Sorbus	U.K.	3	0.3
	Total Listed		116	11.9
	Total Market		980	100.0

Source: INPUT

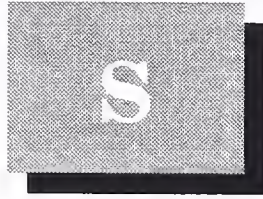
Exhibit R-13

**Information Services Leading Vendors United Kingdom, 1995**

Rank	Vendor	Country of Origin	Estimated Sector Revenue (PS Millions)	Market Share (%)
1	IBM	U.S.	1,050	8.6
2	ICL	U.K.	770	6.3
3	EDS	U.S.	390	3.2
4	Digital	U.S.	350	2.9
5	Reuters	U.K.	310	2.5
6	AT & T	U.S.	260	2.1
7	Cap Gemini Sogeti	France	240	2.0
8	CSC	U.S.	200	1.6
9	BT/Syncordia	U.K.	195	1.6
10	Microsoft	U.S.	190	1.6
	Total Listed		3,940	32.2
	Total Market		12,230	100.0

Source: INPUT





## **Exchange Rates used in Calculations**

Exhibit S-1

**US Dollar Exchange Rates**

Country	Currency	US Dollar
Europe	\$	1
France	FF	4.89
Germany	DM	1.43
United Kingdom	PS	0.644
Italy	Lira (K)	1.59
Sweden	Sek	6.63
Denmark	DK	5.54
Norway	NK	6.32
Finland	FM	4.34
Netherlands	Dfl	1.6
Belgium	BF	29.4
Switzerland	SF	1.15
Austria	Sch	10.1
Spain	Ptas	121
Portugal	Esc	149
Greece	Dra	237
Ireland	IP	0.624
Eastern Europe	\$	1

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