INPUT

MARKET FORECAST

Systems Integration Market Europe

1994-1999

Business Integration Programme–Europe

DECEMBER 1994

Systems Integration Market – Europe, 1994-1999

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Abstract

The last year has been one of consolidation within the European systems integration (SI) market. High levels of growth, reminiscent of the mid to late eighties, are yet to re-emerge and this, among other factors, is placing vendors under increasing pressure to identify viable points on the project services value chain on which they can compete credibly and profitably.

The SI marketplace is witnessing a number of significant developments that reflect the changing shape of the overall software and services industry as well as many market specific trends. These include the growing importance of the telecommunications sector, increasing levels of investment in customer service-related development, and the rise of fixed-price contracts.

This report analyses these developments in the systems integration marketplace and provides market forecasts for each European country over the period 1994-1999. Variations in growth are provided across industry sector and integration project components. Market shares for leading vendors in each national country's market and for Europe are also identified.

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I

Introduction

A Objectives

Despite the economic downturn in Europe, systems integration remains one of the fastest growing areas of the European information services market.

However, the nature of the market is changing. In particular, the pattern of market demand is becoming more volatile as new industry sectors emerge as major purchasers of systems integration projects and regions such as Eastern Europe emerge as key systems integration markets. In addition, the nature of the systems integration project itself is changing as requirements, such as business reengineering, emerge and the technology upon which projects are based moves towards distributed open systems, and client/server architecture.

This report monitors trends in this important market, including the following:

- Changing purchasing patterns
- The impact of the move towards open systems
- The key industry sectors.

It also provides market forecasts and identifies the leading vendors in each country's market. Industry sector breakdowns of the market are provided for France, Germany, the United Kingdom, Italy and elsewhere in Europe.

B
Scope

Systems integration is a business offering that provides a complete solution to an information system, networking or automation requirement through the custom selection and implementation of a variety of information systems products and services. A systems integrator is responsible for the overall management and control of a systems integration contract and is the single point of contact and responsibility in ensuring that a specified system is delivered to an agreed schedule, price and functionality.

As listed in Exhibit I-1, the components of a systems integration project are the following:

- *Equipment* – includes information processing and communication equipment required to build the systems solution. This component may include custom as well as off-the-shelf equipment to meet the unique needs of the project. The systems integration equipment category excludes turnkey systems by definition.
- *Software products* – include pre-packaged applications and systems software products.
- *Professional services* – include the value-added component that adapts the equipment and develops, assembles or modifies the software and hardware to meet the system's requirements. It includes all of the professional services activities required to develop, implement and–if included in the contract–operate an information system, including consulting, programme/project management, design and integration, software development, education and training, documentation and systems operations and maintenance.
- *Other services* – most systems integration contracts include other services and product expenditures that are not classified elsewhere. This category includes miscellaneous items such as engineering services, automation equipment, computer supplies, business support services and supplies, and other items required for a smooth development effort.

Exhibit I-1

Products/Services in Systems Integration Projects

- Equipment
  - Information Systems
  - Communications
- Software Products
  - Systems software
  - Applications Software
- Professional Services
  - Consulting
    - Feasibility and trade-off studies
    - Selection of equipment, network and software
  - Programme/project management
  - Design/integration
    - Systems design
    - Installation of equipment, network and software
  - Demonstration and testing
  - Software development
    - Modification of software packages
    - Modification of existing software
    - Custom development of software
  - Education/training and documentation
    - Systems operations/maintenance
- Other miscellaneous products/services
  - Site preparation
  - Data processing supplies
  - Processing/network services
  - Data/voice communication services

C
Methodology

The research that contributed to this study was derived from three main sources:

- In-depth interviews with systems integration vendors in Europe accounting for 70% of the market

- Information supplied by the systems integration units of vendors in response to a questionnaire
- INPUT's continuous annual analysis of the computer software and services market that includes interviews with both vendors and users.

Additionally, INPUT's extensive library and database of information relating to the software and services industry was utilised.

The forecast data in the Appendices may differ slightly from that shown in the main report, as a result of differences in rounding.

D
Report Structure

Chapter II consists of the Executive Overview which is a summary of the key conclusions of the study.

Chapter III provides an analysis of European systems integration as a whole. This includes market forecasts, industry breakdowns and the identification of leading SI vendors.

Chapter IV provides market forecasts and leading vendor assessments for each individual country market. Industry breakdowns are provided for France, the United Kingdom, Germany and Italy.

E
Related Reports

- Impact of Downsizing on Systems Integration, Europe 1992-1997
- Systems Integration Vendor Analysis, Europe 1993
- Key Applications that Drive Systems Integration Projects, Europe 1994-1994

II

Executive Overview

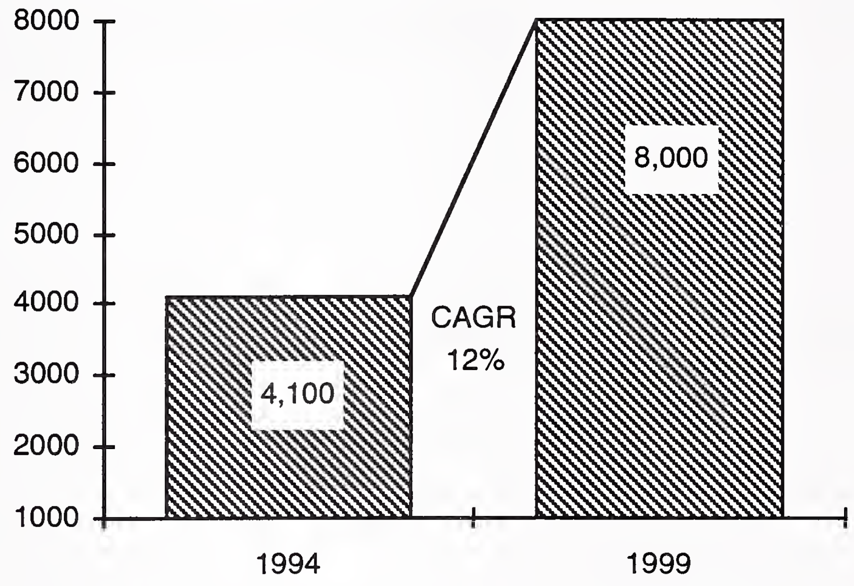
A
Post Recession Growth Reemerging

The Systems Integration (SI) market has grown strongly throughout the last 10 years.

The increasing influence of cost pressures on European businesses in the early part of this decade led to a decline in these growth rates. The SI market is however being to demonstrate healthy growth once again due to the need to utilise new technologies in the drive *to do more for less.* The European SI market is estimated to be have been worth \$4,100m in 1994 and will grow to \$8,000m by 1999 as shown in Exhibit II-1.

Exhibit II-1

Growth in the European Systems Integration Market 1994-1999



Source: INPUT

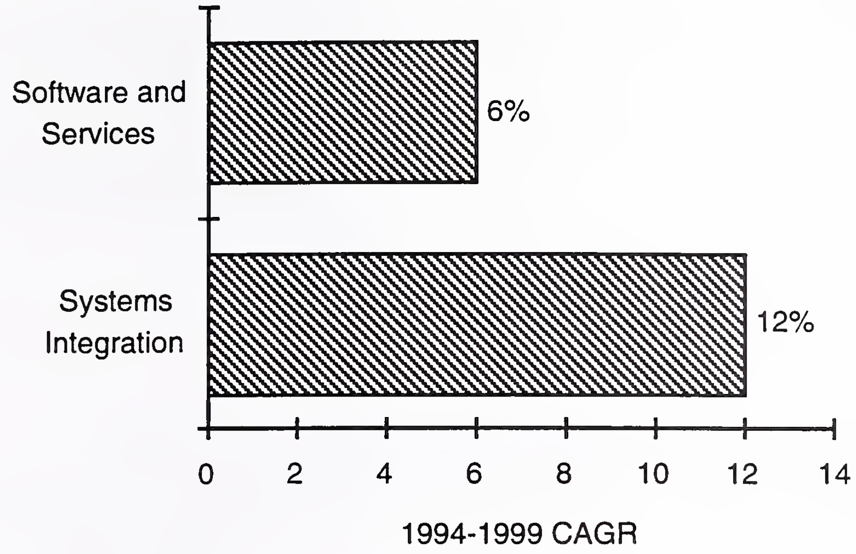
The last year has been one of consolidation within the systems integration market. The market has grown at 17%, in weighted local currency terms, which is the same as last year. High levels of growth, reminiscent of the mid to late eighties, are yet to reemerge and INPUT believes that vendors' views of future prospects expressed last year were prematurely overoptimistic and have been subsequently scaled back. Clearly the worst ravages of the recession are over. INPUT's view is that many vendors turned the corner from decline to growth at the beginning of 1994 but that growth will continue to be steady, rather than spectacular, in the medium term.

These realities have led to a reassessment of the predicted five year compound annual growth rate. This has been reduced for the period 1994 - 1999 to 12%. The SI market has performed acceptably over the last twelve months and the reduction in growth predictions should be seen in the light of sluggish growth overall in the software and services market. A comparison between growth in the systems integration market and the overall software and services market is shown in Exhibit II-2. The key growth drivers in the European systems integration market are:

- The increasing importance of the telecommunications sector
- Continued significant levels of investment in customer service related systems development.

Exhibit II-2

Comparison between Total Software and Services and SI 1994-1999 CAGR Compound Annual Growth Rate



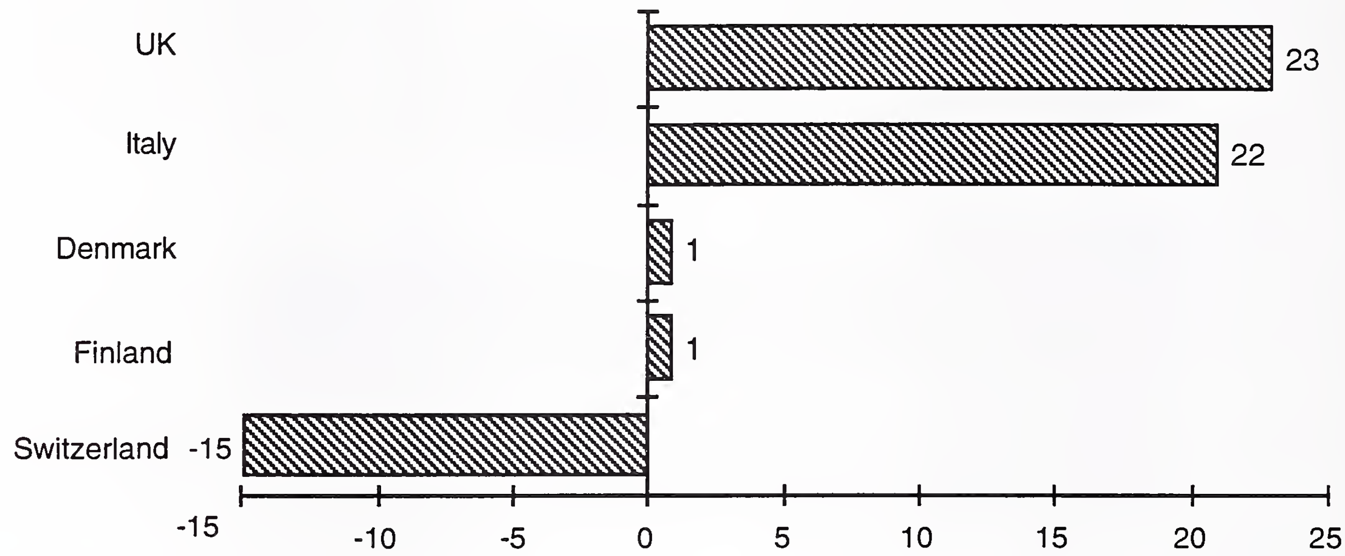
Source: INPUT

B
Fastest Growing Markets are UK and Italy – Continued Growth in Eastern Europe

Exhibit II-3 shows, in local currencies, country markets experiencing the highest and lowest levels of growth over the last year.

Exhibit II-3

Market Growth Rates by Country 1992-1993 – Highest and Lowest



Source: INPUT

It should be noted that the change in the strength of the dollar from 1992 to 1993 has reduced the value of local currencies by 12%.

The country experiencing the greatest growth in this period is the UK with a rise of 23% in local currency terms. The UK is followed closely by Italy.

The UK SI market experienced a surge in contract awards in the second half of 1992 as a result of recovering levels of confidence in general economic conditions and a subsequent release of pent-up project demand.

This is also true of Italy where macro-economic factors, such as the Italian presidential elections, have acted as a catalyst in encouraging corporations to revisit postponed or cancelled project development plans.

The patchy nature of the economic recovery throughout Europe, however, is demonstrated by almost zero levels of growth in some countries such as Finland and Denmark, and a serious decline in the Swiss market.

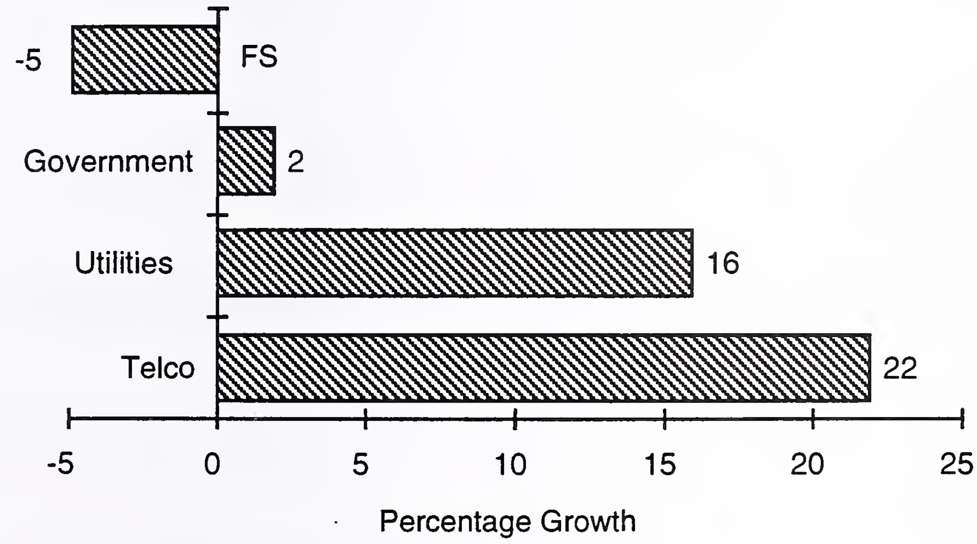
Eastern Europe, flagged in last year's systems integration market report as being a high growth opportunity, continues to be a significant new market for vendors. It is clear, however, that rates of growth have failed to live up to expectations. Concentration on the former East Germany, and indeed Poland and Czechoslovakia, has arguably had a braking effect on overall growth in Germany. Without this "Marshall Plan" impact, growth in Germany would have been closer to being as strong as in Italy and the UK.

C
Telecommunications Sector becoming Key Driver for SI Opportunity

Although overall CAGR forecasts have been reduced in this year's report by 7% reflecting a slight retreat from last year's understandable desire to adopt a clear, positive, optimistic stance, there are some interesting developments in the profile of sectors currently experiencing growth. Growth rates for major sectors over the period 1992-1993 are shown in Exhibit II-4.

Exhibit II-4

Industry Sector Growth Rates 1992-1993



Source: INPUT

Some sectors which have traditionally been areas of high IT investment, primarily financial services, are stagnating and others such as the public sector and utilities are beginning to stagnate.

Others, from a low base, such as distribution and perhaps most importantly telecommunications have seen a significant upturn.

It is not hard to discern a certain holding pattern in the financial services community. Clearly a leader throughout the 1980's, banks, both retail and wholesale and other organisations like insurance companies now have in place sophisticated information technology infrastructures which require management rather than continued development focus. These three–four–or five-year-old systems, many developed in leading edge distributed mode, are not yet ready to be consigned to the file marked legacy.

In addition, the "cold water" effect of major project failures, such as the Stock Exchange Taurus project, continue to have a restraining influence on the ambitions of many companies.

A similar effect is also clearly noticeable in the public sector where a number of high profile project failures, coupled with the increasing importance and influence of outsourcing, are leading to a reining back of development work.

The utilities sector, driven in the UK and elsewhere by government moves towards privatisation, and which subsequently saw enormous systems development, is another sector that demonstrated healthy growth in the last year, but is now beginning to stagnate for reasons akin to those in the financial sector.

The major area which has seen explosive growth recently is telecommunications. This is being driven by factors such as de-regulation leading to increased competition, new technologies such as interactive media, the digitisation of existing networks, and the development of cable communications. This area promises to be one of considerable opportunity over the short-to-medium term.

D

Customer Service Continues to Motivate Large Development Projects

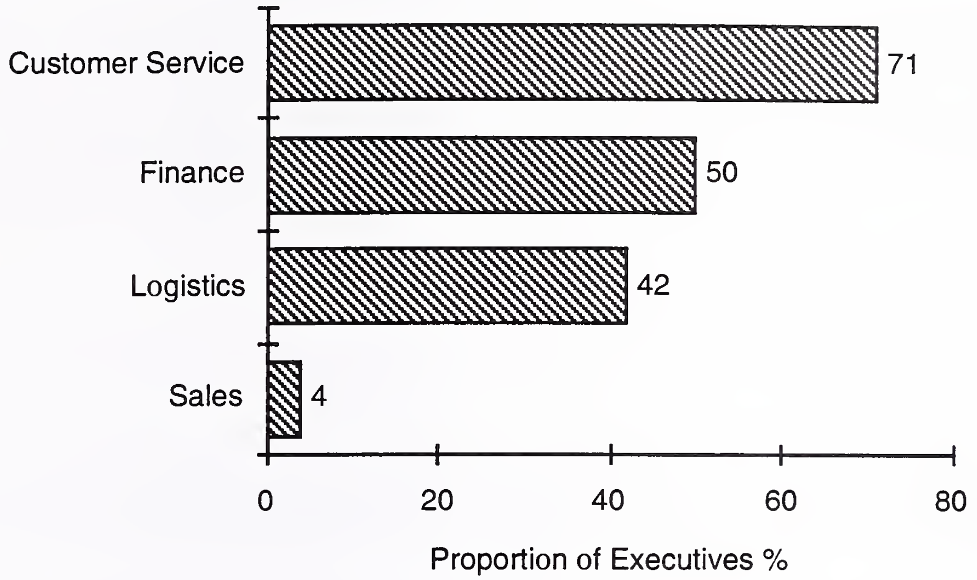
Until recently, many companies' IT investment focused on the development, improvement and management of their internal organisation.

However, it is becoming clear that executives are now moving from being purely inward-looking towards a more customer-oriented approach.

This is a result of the increasing competitive need to provide better service. The leverage that IT can provide is a clear differentiator and is reflected in Exhibit II-5 which demonstrates that customer service is at the head of the executive agenda.

Exhibit II-5

Senior IS Executives' Views of the Key Area for Application of Technology



Source: INPUT

INPUT believes that this trend, which has risen in rankings of executives' views of key applications for technology from nowhere to number one in the last three years, will continue to gain weight and momentum in the foreseeable future.

The promise of gaining competitive edge through technology may have faded but the success of companies like First Direct and DHL, has highlighted the benefits that technology can bring to certain core processes. Customer service is clearly one core process which can be improved significantly through the judicious use of IT.

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III

European SI Market Reflects the Changing Shape of the Software and Services Industry

A
The Industry Profile of the SI Market is Entering a Period of Major Change

Traditionally the industry sector profile of the SI market has been comparatively slow to change. After the public sector, the financial services and manufacturing sectors have dominated. As remarked upon in last year's market forecast report this has begun to change. Yet INPUT believes that this process has some way to go.

Exhibit III-1 provides a breakdown of the European SI market by industry sector for 1993 and Exhibit III-2 provides growth forecast by industry sector.

Exhibit III-1

Systems Integration Industry Sector Analysis Europe, 1993

Sector	Value ($ M)	Proportion of Market (Percent)
Government	1,640	40
- Defence	533	13
- Central	738	18
- Local	369	9
Financial Services	820	20
- Banking & Finance	533	13
- Insurance	287	7
Manufacturing	533	13
- Process	246	6
- Discrete	287	7
Utilities	451	11
Transportation	287	7
Telecommunications	246	6
Distribution	123	3
Total	**4,100**	**100**

Source: INPUT

Exhibit III-2

Systems Integration Industry Sector Forecast Europe, 1994-1999

Sector	Market Size ($ M)		
	1994	1999	CAGR (Percent)
Government	1,890	3,331	12
- Defence	580	934	17
- Central	880	1,621	21
- Local	430	758	19
Financial Services	930	1,366	8
- Banking & Finance	570	838	8
- Insurance	360	529	8
Manufacturing	700	1,029	8
- Process	330	629	18
- Discrete	370	400	13
Utilities	430	943	17
Transportation	315	752	19
Telecommunications	225	473	18
Distribution	110	212	14
Total	**4,600**	**8,100**	**12**

Source: INPUT

Vendors are reporting a major increase in the level of integration work in the telecommunications sector, and are rapidly attempting to increase both their presence and their relevant service offering.

Although there is little evidence of this so far, INPUT believes that the importance of the telecommunications sector will also attract new players who have traditionally had a low profile in Europe into competing more aggressively within the European market.

There will continue to be major opportunities in healthcare, utilities and financial services, but real growth opportunity and, most importantly, leading edge technology will be deployed elsewhere.

Exhibit III-3 shows growth forecasts for all European countries over the period 1994-1999.

Exhibit III-3

Systems Integration Markets by Country Europe,1994-1999

Country	Market Size ($ M)			
	1993	1994	1999	1994 - 1999 CAGR (%)
France	864	930	1,567	11
Germany	603	660	1,150	12
United Kingdom	1,146	1,290	2,190	11
Italy	286	310	510	10
Sweden	73	77	137	12
Denmark	56	61	101	11
Norway	37	41	73	12
Finland	48	52	104	15
Netherlands	190	204	338	11
Belgium	131	144	251	12
Switzerland	172	194	295	9
Austria	36	41	73	12
Spain	142	165	299	13
Ireland	9	10	16	9
Portugal	9	11	23	15
Greece	6	7	14	15
Eastern Europe	325	390	920	19
Total (Rounded)	**4,100**	**4,600**	**8,100**	**12**

Source: INPUT

B

Growth in the SI Market is not Replicated in Professional Services

The overall growth levels in the systems integration market, though not quite measuring up to last year's expectations, are positively buoyant in comparison with those in the professional services market.

Although clearly from a significantly lower base position the forecast for SI is still three times greater in comparison to that for professional services as shown in Exhibit III-4.

Professional service vendors are understandably struggling to reach the billing hours, critical mass and profit levels which they enjoyed in pre-recession times.

Many are also experiencing difficulties adjusting their service lines and skill offerings to the new realities of client/server architectures and object- oriented development.

There are no easy solutions for the traditional software houses and management consultants in aligning themselves with these new paradigms.

Skilled portfolio management will clearly be key; within these portfolios business applications expertise will be of paramount importance.

Exhibit III-4

Comparison between Professional Service and Systems Integration 1994-1999 Compound Annual Growth Rates

	1994	1995	1996	1997	1998	1999	1994/1999 CAGR
Professional Services	21,000	22,000	22,500	23,000	24,000	25,000	4
Systems Integration	4,600	5,100	5,700	6,400	7,100	8,000	12

Source: INPUT

C
Business Process Reengineering's Influence on SI Project Scope is Growing

In many organisations, the growth of business process reengineering is having a profound impact on both process, content and delivery of systems development projects.

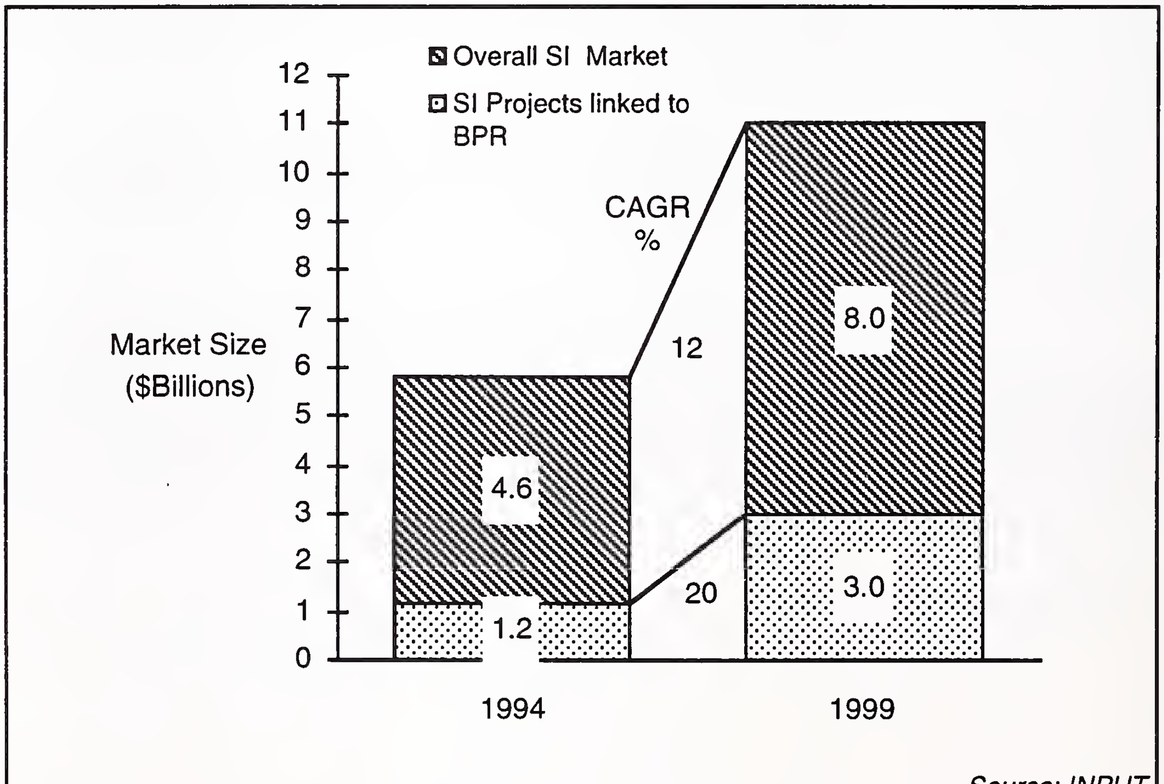
BPR driven projects are aimed at major rather than incremental changes, fronted and championed by executive level personnel.

Exhibit III-5 shows the increasing importance of the relationship between BPR and SI.

BPR has been recognised as important to project services vendors as most, if not all, BPR requires significant change in IT; in architectures, platforms, applications, and solutions.

Exhibit III-5

Business Process Reengineering and the SI Market, Europe 1994-1999



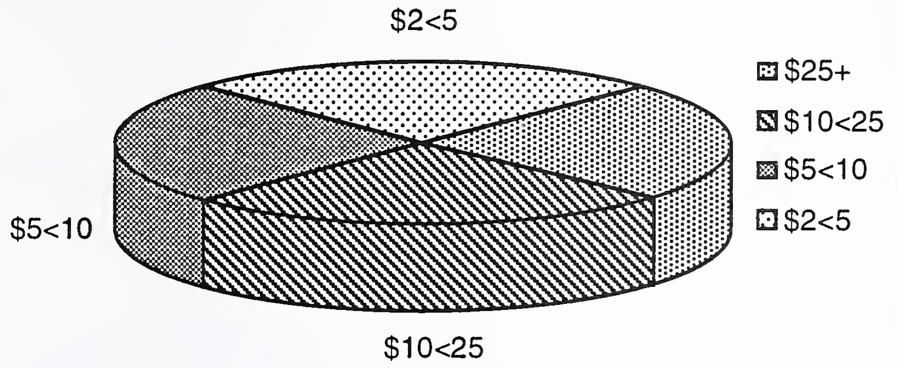
Source: INPUT

D
The Trend Towards Smaller Size SI Projects Gathers Momentum

As highlighted in last year's report, the average project size in financial terms is slowly decreasing. The proportion of the market at the lower level ($2-5m) is growing faster than at the large project scale end. Exhibit III-6 highlights these trends.

Exhibit III-6

Systems Integration 1993 Projects by Value ($M)



Source: INPUT

The most noticeable change is at the $25m+ end of the market where there has been a 4% decrease in its proportion of the overall market. For the first time, this part of the market is of a smaller size that the £2-5m level. The reasons for these changes are a re-iteration of those put forward last year:

- Increased recognition of risk in high cost, lengthy projects
- Decentralisation of organisations
- Increased willingness of users to subcontract small development projects.

INPUT has also discerned significant new developments including movements towards:

- Rapid application development
- Increased "industrialisation" of systems development
- Reduced ambition of project aims

all of which are having an impact on the average size and price of project development.

Perhaps the most important of these trends is the movement, led by vendors such as Cap Gemini Sogeti, towards the "industrialisation" of systems development, signalling the end of development projects being regarded as a "cottage industry". CGS claim that this is final proof of the argument for the utilisation of advanced development methodologies.

E
IBM Extends its Market Share

Exhibit III-7 shows the leading European systems integration vendors in 1993. IBM has increased its leadership by 2%. Together with Andersen Consulting, their dominance of the market is slowly being extended and the two major players now control over 40% of the listed systems integration market.

ICL have moved from equal eighth to equal fifth with Groupe Bull, thanks largely to revenues from the CHOTS project coming on stream.

There is little overall dramatic change from last year in the split between professional services vendors and the "evolving" equipment vendors. This remains at 45% and 55% respectively.

Exhibit III-7

Leading Systems Integration Vendors Europe, 1993

Rank	Company	Market Share (Percent)	1993 Estimated Revenue (US. $ Millions)
1	IBM	20	800
2	Andersen Consulting	10	430
3	Cap Gemini Sogeti	8	335
4	Digital	6	250
5=	Groupe Bull	5	220
5=	EDS	5	220
5=	ICL	5	220
8	Sema Group	5	185
9	Siemens Nixdorf/Sietec Consulting	4	155
10	Logica	3	120
	Total Listed	**72**	**2,935**
	Total Market	**100**	**4,100**

Source: INPUT

Blank

IV

Country Market Analysis

A
France – Lower Growth Than in Other "Major" Country Markets

The market forecast for systems integration in France is shown in Exhibit IV-1.

Exhibit IV-1

Systems Integration Market
France, 1994-1999

Subsector	Market Forecast (FF Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	1,400	1,450	7	2,034
Application Software	950	1,000	29	3,572
System Software	400	450	7	631
Professional Services	2,250	2,500	3	2,898
Other	100	120	9	185
Total (Rounded)	**5,100**	**5,500**	**11**	**9,100**

Source: INPUT

The French SI market grew in local currency terms by 7% in 1993, which is the smallest increase in any of the four major country markets which INPUT track.

The promise of healthy prospects which were remarked upon in last year's report appear to have been unfulfilled. The effects of privatisation of many large state-owned businesses have yet to lead to major SI awards. This development is still expected to impact in the medium term.

Exhibit IV-2 provides a breakdown of the French systems integration market by industry sector for 1993, and Exhibit IV-3 provides the corresponding market forecast for the period 1994-1994.

Exhibit IV-2

Systems Integration Industry Sector Analysis France, 1993

Sector	Value (FFm)	Proportion of Market (%)
Government	2,040	40
- Defence	663	13
- Central	1,020	20
- Local	357	7
Financial Services	867	17
- Banking & Finance	510	10
- Insurance	357	7
Manufacturing	816	16
- Process	408	8
- Discrete	408	8
Utilities	459	9
Transportation	408	8
Telecommunications	357	7
Distribution	153	3
Total	**5,100**	**100**

Source: INPUT

Exhibit IV-3

Systems Integration Industry Sector Analysis France, 1994-1999

Sector	Market Size (FF Millions)		
	1994	1999	CAGR (Percent)
Government	2,000	3,000	11
- Defence	600	866	5
- Central	1,050	1,440	13
- Local	300	529	12
Financial Services	750	1,052	7
- Banking & Finance	450	1,100	5
- Insurance	350	1,050	8
Manufacturing	1,020	1,499	8
- Process	420	1,050	10
- Discrete	400	800	5
Utilities	670	1,234	13
Transportation	700	1,601	18
Telecommunications	300	603	15
Distribution	60	121	15
Total	**5,500**	**9,100**	**11**

Source: INPUT

The shifts in patterns of expenditure in France mirror those being witnessed at a pan-European level. In France, the sectors showing the highest growth are forecast to be:

- Transportation
- Distribution
- Telecommunications
- Utilities

The leading vendors in the systems integration market in France are listed in Exhibit IV-4.

Exhibit IV-4

Leading Systems Integration Vendors France, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (FF Millions)
1	IBM	18	932
2	CGS	16	832
3	Sema	9	480
4	Andersen Consulting	8	436
5	Groupe Bull	6	322
6	EDS	6	307
7	Thomson	4	223
8=	DEC	3	166
8=	Alcatel	3	165
10	Axime	2	107
	Total Listed	**78**	**4,000**
	Total Market	**100**	**5,100**

Source: INPUT

The professional services vendors are particularly strong in the systems integration market in France and hold a dominant market position compared to the equipment vendors. The equipment vendors tend to be the stronger grouping in the SI markets of Germany, the UK and Italy.

1993 has seen IBM gain a position of market leadership in the French SI market, moving ahead of Cap Gemini Sogeti who have been in the number one position for the last three years. This change in leadership is a reflection of the difficulty CGS have experienced in their local market to bring onstream contracts replacing their successful projects, such as the SIT Interbank Clearing System, as much as IBM's successful year. IBM increased their market share by 2% while CGS's has slipped by 5%.

Sema have had a second successful year in a row both in France and across the whole of Europe. One of their major contracts in France has been the BNP dealing room system installation in Paris.

The issues surrounding the future ownership of Groupe Bull are still as yet unresolved but this failed to prevent them performing well in 1993.

Increased penetration of the systems integration market in France remains, as stated in last year's report, a major challenge for the evolving equipment vendors. IBM are in the vanguard of this movement.

B
Germany – Recessionionary Effects Still Linger Over SI Markets

Exhibit IV-5 shows the forecast for the systems integration market in Germany.

Exhibit IV-5

Systems Integration Market Germany, 1994-1999

Subsector	Market Forecast (DM Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	290	310	7	430
Application Software	200	250	25	770
System Software	90	95	9	145
Professional Services	450	470	5	600
Other	20	25	19	60
Total (Rounded)	**1,050**	**1,150**	**12**	**2,000**

Source: INPUT

The German market is struggling to re-establish itself as a dynamic environment for vendors of large-scale systems integration projects. Although the recession, as elsewhere in Europe is "officially" over, the effects of it are proving hard to shrug off. INPUT has re-assessed the level of systems integration business claimed by vendors in Germany.

As a result, the overall market size has been revised downwards, and the software product content increased. The long-term forecast of growth has been reduced as a result of the poor economic outlook and the likely continued impact that this will have on project investment.

Exhibit IV-6 provides a breakdown of the German systems integration market by industry sector for 1992, and Exhibit IV-7 provides the corresponding market forecast for the period 1994-1999.

Exhibit IV-6

Systems Integration Industry Sector Analysis Germany, 1993

Sector	Value (DMm)	Proportion of Market (Percent)
Government	315	30
- Defence	105	10
- Central	105	10
- Local	105	10
Financial Services	294	28
- Banking & Finance	178	17
- Insurance	116	11
Manufacturing	210	20
- Process	73	7
- Discrete	137	13
Utilities	84	8
Transportation	52	5
Telecommunications	63	6
Distribution	32	3
Total	**1,050**	**100**

Source: INPUT

Exhibit IV-7

Systems Integration Industry Sector Analysis Germany, 1994-1999

Sector	Market Size (FF Millions)		
	1994	1999	CAGR (Percent)
Government	400	705	13
- Defence	110	169	9
- Central	160	308	15
- Local	130	229	13
Financial Services	285	439	10
- Banking & Finance	165	265	10
- Insurance	120	195	10
Manufacture	220	354	11
- Process	75	132	13
- Discrete	145	223	10
Utilities	85	203	20
Transportation	65	143	18
Telecommunications	70	147	17
Distribution	25	46	14
Total	**1,150**	**2,000**	**12**

Source: INPUT

The financial services and manufacturing sectors remain of considerable significance to systems integration vendors in Germany.

The leading systems integration vendors in 1993 are listed in Exhibit IV-8.

Exhibit IV-8

Leading Systems Integration Vendors Germany, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (DM Millions)
1	IBM	22	222
2	Siemens Nixdorf	19	193
3	Digital	6	66
4	Andersen Consulting	6	64
5	EDS	5	55
6	Groupe Bull	5	50
7=	Cap Gemini Sogeti	3	31
7=	Ploenzke	3	31
9	Ferranti	3	30
10	Debis Systemhaus	2	20
	Total Listed	**76**	**765**
	Total Market	**100**	**1,050**

Source: INPUT

The most noticeable development within the German market over recent years, and a trend which appears to be accelerating, is the increased concentration of market share amongst the largest two vendors, IBM and Siemens Nixdorf. Between them, these two vendors have over 53% of the listed market in Germany. Siemens Nixdorf's market share is over three times that of its nearest rival, Digital Equipment Company.

C

United Kingdom – Leading the Movement to Recovery

Exhibit IV-9 shows the market forecast for the systems integration market in the United Kingdom.

Exhibit IV-9

Systems Integration Market United Kingdom 1994-1999

Subsector	Market Forecast (£ Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	200	220	8	325
Application Software	130	165	24	480
System Software	60	65	7	90
Professional Services	370	410	6	555
Other	15	17	13	30
Total (Rounded)	**775**	**877**	**11**	**1,480**

Source: INPUT

The UK market has been the strongest performing market within the overall European systems integration market in 1993.

Exhibit IV-10 provides a breakdown of the United Kingdom systems integration market by industry sector for 1992, and Exhibit IV-11 provides the corresponding market forecast for the period 1994-1999.

Exhibit IV-10

Systems Integration Industry Sector Analysis United Kingdom, 1993

Sector	Value (£ Millions)	Proportion of Market (Percent)
Government	340	44
- Defence	131	17
- Central	131	17
- Local	78	10
Financial Services	155	20
- Banking & Finance	108	14
- Insurance	47	6
Manufacturing	100	13
- Process	54	7
- Discrete	47	6
Utilities	63	8
Transportation	47	6
Telecommunications	46	6
Distribution	23	3
Total	**775**	**100**

Source: INPUT

Exhibit IV-11

Systems Integration Industry Sector Analysis United Kingdom, 1994-1999

Sector	Market Size (£ Millions)		
	1994	1999	CAGR (Percent)
Government	400	674	11
- Defence	150	253	11
- Central	160	282	12
- Local	90	139	10
Financial Services	140	215	9
- Banking & Finance	90	132	8
- Insurance	50	83	7
Manufacturing	115	161	7
- Process	65	96	8
- Discrete	50	65	6
Utilities	75	144	14
Transportation	55	111	15
Telecommunications	60	111	13
Distribution	30	55	13
Total	**875**	**1,480**	**11**

Source: INPUT

Growth in the UK SI market had been, in local currency terms, around 23% which has been produced by major contracts such as

- Groupe Bull's "Unicom" $350m project for the British Army
- Syntegra's trading support system development for the Nippon Credit Bank
- Andersen Consulting's customer service project for Thames Water ($20m) and technical infrastructure renewal for National Power ($20m)

- IBM's customer service development for the South West Electricity Board and integration project for the Civil Aviation Authority.

These new contracts were in addition to ongoing developments such as ICL's CHOTs project.

The leading systems integration vendors in the United Kingdom are listed in Exhibit IV-12.

Exhibit IV-12

Leading Systems Integration Vendors
United Kingdom, 1993

Rank	Company	Estimated Market Share (%)	1993 Estimated Revenue (£M)
1	IBM	17	130
2	ICL	14	110
3	Andersen Consulting	10	75
4	Syntegra	8	60
5	EDS	6	50
6=	Digital	6	45
6=	Sema	6	45
6=	Groupe Bull	6	45
9	CGS/Hoskyns	5	40
10	Logica	4	32
	Total Listed	**81**	**630**
	Total Market	**100**	**775**

Source: INPUT

IBM has increased its lead in the UK marketplace but is now being run a close race by ICL which has moved from fifth to second place, largely as a result of the CHOTS project.

Otherwise there has been little dramatic movement in the rankings of major vendors in the UK marketplace.

D

Italy – IBM Extends Leadership in Second-fastest Growing Country Market

Exhibit IV-13 shows the market forecast for systems integration in Italy.

Exhibit IV-13

Systems Integration Market
Italy, 1994-1999

Subsector	Market Forecast (Lira Billions)			
	1993	1994	1993-1998 CAGR (%)	1998
Equipment	140	140	7	200
Application software	95	95	22	260
System Software	40	40	10	60
Professional Services	205	250	6	330
Other	10	10	15	30
Total (Rounded)	**490**	**535**	**10**	**880**

Source: INPUT

Exhibit IV-14 provides a breakdown of the Italian systems integration market by industry sector for 1993, and Exhibit IV-15 provides the corresponding market forecast for the period 1994-1999.

Exhibit IV-14

Systems Integration Industry Sector Analysis Italy, 1993

Sector	Value (Lira Billion)	Proportion of Market (Percent)
Government	190	39
– Defence	24	5
– Central	117	24
– Local	49	10
Financial Services	107	22
– Banking & Finance	73	15
– Insurance	34	7
Manufacturing	87	18
– Process	44	9
– Discrete	43	9
Utilities	48	10
Transportation	15	3
Telecommunications	33	7
Distribution	10	2
Total	**490**	**100**

Source: INPUT

Exhibit IV-15

Systems Integration Industry Sector Analysis Italy, 1994-1999

Sector	Market Forecast (Lira Billions)		
	1994	1999	CAGR (Percent)
Government	202	315	10
– Defence	26	33	5
– Central	120	183	10
– Local	56	99	12
Financial Services	120	166	8
– Banking & Finance	83	120	5
– Insurance	35	45	4
Manufacturing	93	120	5
– Process	47	65	7
– Discrete	46	55	6
Utilities	55	100	15
Transportation	15	34	18
Telecommunications	38	103	22
Distribution	12	25	16
Total	**535**	**880**	**10**

Source: INPUT

Despite the reported decline in growth in the financial services sector, the government and financial services sectors are expected to retain their dominant positions in the systems integration market over the forecast period.

The leading systems integration vendors in Italy are listed in Exhibit IV-16.

Exhibit IV-16

Leading Systems Integration Vendors Italy, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (Lira Billions)
1	IBM	17	85
2	Andersen	15	75
3	Finsiel	14	70
4	Olivetti	12	59
5	Bull	10	52
6	Digital	8	39
7	Cap Gemini Sogeti	5	25
8	Logica	4	20
9	Siemens Nixdorf	3	18
10	Datitalia	2	10
	Total Listed	**91**	**450**
	Total Market	**100**	**490**

Source: INPUT

E
Sweden

Exhibit IV-17

Systems Integration Market
Sweden, 1994-1999

Sector	Market Forecast (SK Millions)			
	1993	1994	1994-1999 CAGR (%)	1999
Equipment	160	165	8	240
Application Software	115	135	22	370
System Software	45	46	8	69
Professional Services	270	275	8	395
Other	15	18	28	61
Total (Rounded)	**610**	**640**	**12**	**1,140**

Source: INPUT

Exhibit IV-18

Leading Systems Integration Vendors Sweden, 1993

Rank	Company	Market Share (Percent)	1993 Estimated Revenue (SK Millions)
1	IBM	26	158
2	Cap Gemini Sogeti	16	100
3	EDS	10	58
4	Ericsson	7	45
5	Digital	4	25
	Total Listed	**63**	**386**
	Total Market	**100**	**610**

Source: INPUT

F
Denmark

Exhibit IV-19

Systems Integration Market
Denmark, 1994-1999

Subsector	Market Forecast (DK Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	100	105	7	150
Application Software	70	85	21	225
System Software	30	30	13	55
Professional Services	175	185	5	240
Other	10	11	8	16
Total (Rounded)	**385**	**415**	**11**	**685**

Source: INPUT

Exhibit IV-20

Leading Systems Integration Vendors Denmark, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (DK Millions)
1	IBM	24	92
2	Computer Resources International	13	50
3	Kommunedata	10	40
4	Digital	5	18
5	Cap Gemini Sogeti	4	16
	Total Listed	**57**	**216**
	Total Market	**100**	**385**

Source: INPUT

G
Norway

Exhibit IV-21

Systems Integration Market
Norway, 1994-1999

Subsector	Market Forecast (NK Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	75	80	8	120
Application Software	50	55	25	162
System Software	20	25	2	28
Professional Services	130	145	10	230
Other	5	5	15	10
Total (Rounded)	**280**	**310**	**12**	**550**

Source: INPUT

Exhibit IV-22

Leading Systems Integration Vendors
Norway, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (DK Millions)
1	IBM	34	96
2	Andersen Consulting	9	25
3=	Unisys	4	12
3=	Cap Gemini Sogeti	4	12
5	ICL	4	10
	Total Listed	**56**	**156**
	Total Market	**100**	**280**

Source: INPUT

H
Finland

Exhibit IV-23

Systems Integration Market
Finland, 1994-1999

Subsector	Market Forecast (FM Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	75	80	11	135
Application Software	50	60	27	195
System Software	22	24	13	44
Professional Services	125	130	10	210
Other	6	7	15	14
Total (Rounded)	**280**	**300**	**15**	**600**

Source: INPUT

Exhibit IV-24

Leading Systems Integration Vendors Finland, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (FM Millions)
1	KT-Tietokesku	20	55
2	Tietotehdas	19	52
3	Nokia Data	13	35
4	Cap Gemini Sogeti	6	17
5	Unisys	3	8
	Total Listed	**60**	**167**
	Total Market	**100**	**280**

Source: INPUT

I

Netherlands

Exhibit IV-25

Systems Integration Market Netherlands, 1994-1999

Sector	Market Forecast (SK Millions)			
	1993	1994	1994-1999 CAGR (%)	1999
Equipment	90	95	7	135
Application Software	68	80	25	240
System Software	30	30	0	30
Professional Services	175	180	5	235
Other	7	8	16	17
Total (Rounded)	**370**	**395**	**11**	**655**

Source: INPUT

Exhibit IV-26

Leading Systems Integration Vendors Netherlands, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (DFL Millions)
1	IBM	23	84
2	Cap Gemini Sogeti	12	46
3	BSO	11	40
4	Getronics	6	22
5	Andersen Consulting	6	21
6	Logica	6	20
7=	Groupe Bull	6	19
7=	Digital	6	19
9	Siemens Nixdorf	4	15
10	EDS	4	14
	Total Listed	**81**	**301**
	Total Market	**100**	**370**

Source: INPUT

J
Belgium

Exhibit IV-27

Systems Integration Market
Belgium, 1994-1999

Subsector	Market Forecast (BF Billions)			
	1993	1994	1994-1999 CAGR (%)	1999
Equipment	1,300	1,400	7	2,000
Application Software	850	1,050	26	3,350
System Software	370	390	6	530
Professional Services	2,150	2,240	6	2,930
Other	90	100	17	220
Total (Rounded)	**4,750**	**5,200**	**12**	**9,050**

Source: INPUT

Exhibit IV-28

Leading Systems Integration Vendors Belgium,1993

Rank	Company	Market Share (Percent)	1993 Estimated Revenue (BF Millions)
1	Sema	7	350
2	Cap Gemini Sogeti	7	343
3	EDS	6	307
4	Groupe Bull	6	285
5	Logica	5	253
	Total Listed	**33**	**1,538**
	Total Market	**100**	**4,750**

Source: INPUT

K
Switzerland

Exhibit IV-29

Systems Integration Market
Switzerland, 1994-1999

Subsector	Market Forecast (SF Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	64	70	5	110
Application Software	45	55	17	180
System Software	20	22	6	35
Professional Services	105	115	7	170
Other	5	6	13	15
Total (Rounded)	**240**	**270**	**9**	**410**

Source: INPUT

Exhibit IV-30

Leading Systems Integration Vendors Switzerland, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (SF Millions)
1	Digital	27	64
2	EDS	8	20
3	Unisys	5	12
4	Logica	5	10
5	Cap Gemini Sogeti	3	8
	Total Listed	**47**	**115**
	Total Market	**100**	**240**

Source: INPUT

L
Austria

Exhibit IV-31

Systems Integration Market Austria, 1994-1999

Subsector	Market Forecast (Sch Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	120	130	7	180
Application Software	85	110	25	340
System Software	34	39	12	68
Professional Services	195	210	6	280
Other	10	12	15	24
Total (Rounded)	**440**	**500**	**12**	**890**

Source: INPUT

Exhibit IV-32

Leading Systems Integration Vendors Austria, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (Sch Millions)
1	IBM	27	126
2	Cap Gemini Sogeti	9	40
3	EDS	5	23
4	Unisys	4	19
5	Digital	2	8
	Total Listed	**47**	**197**
	Total Market	**100**	**440**

Source: INPUT

M
Spain

Exhibit IV-33

Systems Integration Market
Spain, 1994-1999

Subsector	Market Forecast (Ptas Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	5,400	6,100	9	9,500
Application Software	3,700	4,300	23	12,300
System Software	1,400	1,900	10	3,000
Professional Services	9,500	10,800	9	16,800
Other	430	480	18	1,100
Total (Rounded)	**20,400**	**23,600**	**13**	**42,700**

Source: INPUT

Exhibit IV-34

Leading Systems Integration Vendors
Spain, 1993

Rank	Company	Estimated Market Share (Percent)	1993 Estimated Revenue (Ptas Millions)
1	Andersen Consulting	25	5,087
2	IBM	13	2,726
3	Digital	11	2,243
4	Page Iberica	8	1,650
5	EDS	7	1,414
	Total Listed	**64**	**12,413**
	Total Market	**100**	**20,400**

Source: INPUT

N
Portugal

Exhibit IV-35

Systems Integration Market
Portugal, 1994-1999

Subsector	Market Forecast (Esc Millions)			
	1993	1994	1994-1999 CAGR (%)	1999
Equipment	450	540	12	970
Application Software	310	330	31	1,260
System Software	140	170	12	305
Professional Services	750	880	9	1,350
Other	35	35	19	85
Total (Rounded)	**1,690**	**1,960**	**15**	**3,970**

Source: INPUT

O

Greece

Exhibit IV-36

Systems Integration Market
Greece, 1994-1999

Subsector	Market Forecast (Dra Millions)			
	1993	1994	1994-1999 CAGR (%)	1999
Equipment	415	460	12	815
Application Software	275	340	24	1,010
System Software	120	130	10	205
Professional Services	680	750	11	1,250
Other	35	40	20	100
Total (Rounded)	**1,550**	**1,700**	**15**	**3,400**

Source: INPUT

P
Ireland

Exhibit IV-37

Systems Integration Market
Ireland, 1994-1999

Subsector	Market Forecast (IR £Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	2	2	7	3
Application Software	1	1	23	3
System Software	1	1	8	1
Professional Services	3	3	6	4
Other	0	0	0	0
Total (Rounded)	**7**	**7**	**9**	**11**

Source: INPUT

Q
Eastern Europe

Exhibit IV-38

Systems Integration Market Eastern Europe, 1994-1999

Subsector	Market Forecast ($ Millions)			
	1993	1994	1994 - 1999 CAGR (%)	1999
Equipment	90	105	14	205
Application Software	60	80	32	325
System Software	25	30	17	65
Professional Services	145	170	12	295
Other	5	7	33	29
Total (Rounded)	**325**	**390**	**19**	**920**

Source: INPUT

A

Systems Integration Market (Local Currencies)

Exhibit A-1

Austria

	Sch Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	440	14	500	560	630	710	800	890	12
- Equipment	120	8	130	140	150	160	170	180	7
- Application Software	85	29	110	140	175	220	275	340	25
- System Software	34	15	39	44	49	55	62	68	12
- Professional Services	195	8	210	225	240	255	270	280	6
- Other	10	20	12	14	16	18	21	24	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-2

Belgium

Subsector	BF Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	4,750	9	5,200	5,750	6,400	7,250	8,150	9,050	12
- Equipment	1,300	8	1,400	1,500	1,600	1,750	1,900	2,000	7
- Application Software	850	24	1,050	1,350	1,700	2,150	2,700	3,350	26
- System Software	370	5	390	420	450	480	510	530	6
- Professional Services	2,150	4	2,240	2,380	2,530	2,690	2,830	2,930	6
- Other	90	11	100	120	140	160	190	220	17

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-3

Denmark

Subsector	DK Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	385	8	415	465	525	580	635	685	11
- Equipment	100	5	105	115	125	135	145	150	7
- Application Software	70	21	85	105	130	160	190	225	21
- System Software	30	0	30	35	40	45	50	55	13
- Professional Services	175	6	185	200	215	225	235	240	5
- Other	10	10	11	12	13	14	15	16	8

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-4

Europe

	DK Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	4,100	12	4,600	5,100	5,700	6,400	7,100	8,000	12
- Equipment	1,100	9	1,200	1,300	1,400	1,500	1,650	1,750	8
- Application Software	750	19	890	1,110	1,390	1,740	2,170	2,680	25
- System Software	330	9	360	390	420	460	500	540	8
- Professional Services	1,850	11	2,050	2,250	2,350	2,500	2,600	2,850	7
- Other	80	19	95	110	130	150	175	210	17

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-5

Eastern Europe

	US$ Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	325	20	390	455	530	640	800	920	19
- Equipment	90	17	105	115	130	150	180	205	14
- Application Software	60	33	80	105	135	180	245	325	32
- System Software	25	20	30	35	40	45	55	65	17
- Professional Services	145	17	170	190	215	250	300	295	12
- Other	5	40	7	9	12	16	22	29	33

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-6

Finland

Subsector	FM Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	280	7	300	335	380	435	500	600	15
- Equipment	75	7	80	85	95	105	115	135	11
- Application Software	50	20	60	75	95	120	150	195	27
- System Software	22	9	24	27	30	33	38	44	13
- Professional Services	125	4	130	140	150	165	185	210	10
- Other	6	17	7	8	9	10	12	14	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-7

France

Subsector	FF Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	5,100	8	5,500	6,000	6,500	7,000	7,600	9,100	11
- Equipment	1,400	4	1,450	1,550	1,650	1,800	1,950	2,050	7
- Application Software	950	5	1,000	1,250	1,550	1,900	2,350	2,850	23
- System Software	400	13	450	480	520	560	610	650	8
- Professional Services	2,250	11	2,500	2,600	2,600	2,550	2,450	3,300	6
- Other	100	20	120	140	165	195	230	270	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-8

Greece

Subsector	Dra Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	1,550	10	1,700	2,000	2,300	2,600	3,000	3,400	15
- Equipment	415	11	460	520	590	655	735	815	12
- Application Software	275	24	340	430	540	660	820	1,010	24
- System Software	120	8	130	145	160	175	190	205	10
- Professional Services	680	10	750	850	950	1,050	1,150	1,250	11
- Other	35	14	40	50	60	70	85	100	20

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-9

Germany

Subsector	DM Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	1,050	10	1,150	1,300	1,450	1,650	1,800	2,000	12
- Equipment	290	7	310	330	350	370	400	430	7
- Application Software	200	25	250	310	390	490	610	770	25
- System Software	90	6	95	105	115	125	135	145	9
- Professional Services	450	4	470	530	560	630	610	600	5
- Other	20	25	25	30	35	40	45	60	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-10

Ireland

	IP Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	7	8	7	8	9	9	10	11	9
- Equipment	2	5	2	2	2	2	3	3	7
- Application Software	1	20	1	2	2	2	3	3	23
- System Software	0	11	1	1	1	1	1	1	8
- Professional Services	3	7	3	3	4	4	4	4	6
- Other	0	0	0	0	0	0	0	0	0

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-11

Italy

	Lira Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	490	9	535	585	650	725	800	880	10
- Equipment	140	0	140	150	160	170	185	200	7
- Application Software	95	0	95	115	140	170	210	260	22
- System Software	40	0	40	45	50	55	60	65	10
- Professional Services	205	22	250	265	285	315	330	335	6
- Other	10	0	10	11	13	15	17	20	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-12

Netherlands

	Dfi Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	370	7	395	430	470	520	590	655	11
- Equipment	90	6	95	100	105	115	125	135	7
- Application Software	68	18	80	100	125	155	195	240	25
- System Software	30	0	30	30	30	30	30	30	0
- Professional Services	175	3	180	190	200	210	225	235	5
- Other	7	14	8	9	11	12	14	17	16

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-13

Norway

	NK Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	280	11	310	355	400	445	500	550	12
- Equipment	75	7	80	90	100	105	115	120	8
- Application Software	50	10	55	70	90	110	135	165	25
- System Software	20	25	25	25	25	25	25	25	0
- Professional Services	130	12	145	165	180	195	215	230	10
- Other	5	0	5	6	7	8	9	10	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-14

Portugal

Subsector	Esc Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	1,690	16	1,960	2,230	2,610	3,020	3,440	3,970	15
- Equipment	450	20	540	610	700	790	870	970	12
- Application Software	310	6	330	430	570	750	970	1,260	31
- System Software	140	21	170	190	220	250	275	305	12
- Professional Services	750	17	880	960	1,070	1,170	1,250	1,350	9
- Other	35	0	35	40	50	60	70	85	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-15

Spain

Subsector	Ptas Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	20,400	16	23,600	26,600	30,100	33,500	37,800	42,700	13
- Equipment	5,400	13	6,100	6,700	7,400	8,000	8,700	9,500	9
- Application Software	3,700	16	4,300	5,300	6,600	8,100	10,000	12,300	23
- System Software	1,400	36	1,900	2,100	2,300	2,500	2,750	3,000	10
- Professional Services	9,500	14	10,800	11,900	13,100	14,100	15,400	16,800	9
- Other	430	12	480	600	700	800	900	1,100	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-16

Switzerland

Subsector	PS Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	240	13	270	295	325	355	385	410	9
- Equipment	64	9	70	75	80	84	88	90	5
- Application Software	45	22	55	65	75	90	105	120	17
- System Software	20	10	22	24	26	27	29	30	6
- Professional Services	105	10	115	125	135	145	155	160	7
- Other	5	20	6	7	8	9	10	11	13

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-17

Sweden

Subsector	SK Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	610	5	640	720	810	900	1,010	1,140	12
- Equipment	160	3	165	180	195	210	225	240	8
- Application Software	115	17	135	165	205	250	305	370	22
- System Software	45	2	46	50	55	59	64	69	8
- Professional Services	270	2	275	300	325	345	370	395	8
- Other	15	20	18	23	30	38	48	61	28

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit A-18

United Kingdom

Subsector	PS Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	775	13	875	980	1,090	1,205	1,335	1,480	11
- Equipment	200	10	220	240	260	285	310	325	8
- Application Software	130	27	165	205	255	320	395	480	24
- System Software	60	8	65	70	75	80	85	90	7
- Professional Services	370	11	410	445	480	495	515	555	6
- Other	15	13	17	19	22	25	28	31	13

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

B

Systems Integration Market (US $)

Exhibit B-1

Austria

Subsector	US $ Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	36	14	41	46	52	58	66	73	12
- Equipment	10	8	11	12	13	13	14	15	7
- Application Software	7	29	9	12	14	18	23	28	25
- System Software	3	15	3	4	4	5	5	6	12
- Professional Services	16	8	17	19	20	21	22	23	6
- Other	1	20	1	1	1	2	2	2	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-2

Belgium

	US $ Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	132	9	144	159	177	201	226	251	12
- Equipment	36	8	39	42	45	49	53	56	7
- Application Software	24	24	29	37	47	59	75	93	26
- System Software	10	5	11	12	12	13	14	15	6
- Professional Services	60	4	62	66	70	75	79	81	6
- Other	3	11	3	3	4	4	5	6	17

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-3

Denmark

	US $ Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	57	8	61	69	78	86	94	101	11
- Equipment	15	5	16	17	19	20	22	22	7
- Application Software	10	21	13	15	19	24	28	33	21
- System Software	4	0	4	5	6	7	7	8	13
- Professional Services	26	6	27	30	32	33	35	36	5
- Other	1	10	2	2	2	2	2	2	8

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-4

Europe

	US $ Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	4,750	4,100	(650)	-14	11,550	7,100	(4,450)	-39	19
- Equipment	1,280	1,100	(180)	-14	2,440	1,650	(790)	-32	14
- Application Software	855	750	(105)	-12	4,150	2,170	(1,980)	-48	37
- System Software	380	330	(50)	-13	800	500	(300)	-38	16
- Professional Services	2,150	1,850	(300)	-14	3,830	2,600	(1,230)	-32	12
- Other	90	80	(10)	-11	340	175	(165)	-49	30

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-5

Eastern Europe

	US $ Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	325	20	390	455	530	640	800	920	19
- Equipment	90	17	105	115	130	150	180	205	14
- Application Software	60	33	80	105	135	180	245	325	32
- System Software	25	20	30	35	40	45	55	65	17
- Professional Services	145	17	170	190	215	250	300	295	12
- Other	5	40	7	9	12	16	22	29	33

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-6

Finland

Subsector	US $ Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	49	7	52	58	66	75	87	104	15
- Equipment	13	7	14	15	17	18	20	24	11
- Application Software	9	20	10	13	16	21	26	34	27
- System Software	4	9	4	5	5	6	7	8	13
- Professional Services	22	4	23	24	26	29	32	37	10
- Other	1	17	1	1	2	2	2	2	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-7

France

Subsector	US $ Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	860	8	930	1,020	1,100	1,190	1,290	1,540	11
- Equipment	240	4	250	260	280	310	330	350	7
- Application Software	161	5	169	212	263	322	398	483	23
- System Software	68	13	76	81	88	95	103	110	8
- Professional Services	380	11	420	440	440	430	420	560	6
- Other	17	20	20	24	28	33	39	46	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-8

Greece

Subsector	US $ Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	6	10	7	8	9	10	12	14	15
- Equipment	2	11	2	2	2	3	3	3	12
- Application Software	1	24	1	2	2	3	3	4	24
- System Software	0	8	1	1	1	1	1	1	10
- Professional Services	3	10	3	3	4	4	5	5	11
- Other	0	14	0	0	0	0	0	0	20

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-9

Germany

Subsector	US $ Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	600	10	660	750	830	950	1,030	1,150	12
- Equipment	170	7	180	190	200	210	230	250	7
- Application Software	115	25	144	178	224	282	351	443	25
- System Software	52	6	55	60	66	72	78	83	9
- Professional Services	260	4	270	300	320	360	350	340	5
- Other	11	25	14	17	20	23	26	34	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-10

Ireland

Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
	US $ Millions								
Systems Integration	9	8	10	11	12	13	14	16	9
- Equipment	3	5	3	3	3	3	4	4	7
- Application Software	1	20	2	2	3	3	4	5	23
- System Software	1	11	1	1	1	1	1	1	8
- Professional Services	4	7	5	5	5	5	6	6	6
- Other	0	0	0	0	0	0	0	0	0

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-11

Italy

Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
	US $ Millions								
Systems Integration	290	9	310	340	380	420	470	510	10
- Equipment	80	0	80	90	90	100	110	120	7
- Application Software	56	0	56	67	82	99	123	152	22
- System Software	23	0	23	26	29	32	35	38	10
- Professional Services	120	22	150	150	170	180	190	200	6
- Other	6	0	6	6	8	9	10	12	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-12

Netherlands

	US $ Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	191	7	204	222	243	268	304	338	11
- Equipment	47	6	49	52	54	60	65	70	7
- Application Software	35	18	41	52	64	80	101	124	25
- System Software	15	0	15	15	15	15	15	15	0
- Professional Services	90	3	93	98	103	108	116	121	5
- Other	4	14	4	5	5	6	7	9	16

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-13

Norway

	US $ Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	37	11	41	47	53	59	67	73	12
- Equipment	10	7	11	12	14	14	16	16	8
- Application Software	7	10	7	9	12	15	18	22	25
- System Software	3	25	3	3	3	3	3	3	0
- Professional Services	18	12	20	22	24	26	29	31	10
- Other	1	0	1	1	1	1	1	1	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-14

Portugal

	US $ Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	10	16	11	13	15	17	20	23	15
- Equipment	3	20	3	4	4	5	5	6	12
- Application Software	2	6	2	2	3	4	5	7	31
- System Software	1	21	1	1	1	1	2	2	12
- Professional Services	4	17	5	5	6	7	7	8	9
- Other	0	0	0	0	0	0	0	0	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-15

Spain

	US $ Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	143	16	165	186	211	235	265	299	13
- Equipment	38	13	43	47	52	56	61	67	9
- Application Software	26	16	30	37	46	57	70	86	23
- System Software	10	36	13	15	16	18	19	21	10
- Professional Services	67	14	76	84	92	99	108	118	9
- Other	3	12	3	4	5	6	6	8	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-16

Switzerland

	US $ Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	173	13	194	212	234	256	277	295	9
- Equipment	46	9	51	54	58	61	64	65	5
- Application Software	32	22	40	47	54	65	76	86	17
- System Software	14	10	16	17	19	19	21	22	6
- Professional Services	76	10	83	90	97	105	112	115	7
- Other	4	20	4	5	6	6	7	8	13

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-17

Sweden

	US $ Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	73	5	77	87	97	108	121	137	12
- Equipment	19	3	20	22	24	25	27	29	8
- Application Software	14	17	16	20	25	30	37	44	22
- System Software	5	2	6	6	7	7	8	8	8
- Professional Services	33	2	33	36	39	42	45	48	8
- Other	2	20	2	3	4	5	6	7	28

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit B-18

United Kingdom

	US $ Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	1,150	13	1,290	1,450	1,610	1,780	1,970	2,190	11
- Equipment	300	10	330	360	380	420	460	480	8
- Application Software	192	27	244	303	377	473	584	710	24
- System Software	89	8	96	104	111	118	126	133	7
- Professional Services	550	11	610	660	710	730	760	820	6
- Other	22	13	25	28	33	37	41	46	13

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

C

Systems Integration Market (ECUs)

Exhibit C-1

Austria

	ECU Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	32	14	36	41	46	52	58	65	12
- Equipment	9	8	10	10	11	12	13	13	7
- Application Software	6	29	8	10	13	16	20	25	25
- System Software	2	15	3	3	4	4	5	5	12
- Professional Services	14	8	15	17	18	19	20	21	6
- Other	1	20	1	1	1	1	2	2	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-2

Belgium

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	118	9	129	143	159	180	202	224	12
- Equipment	32	8	35	37	40	44	47	50	7
- Application Software	21	24	26	33	42	53	67	83	26
- System Software	9	5	10	10	11	12	13	13	6
- Professional Services	53	4	56	59	63	67	70	73	6
- Other	2	11	2	3	3	4	5	5	17

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-3

Denmark

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	51	8	55	62	70	77	84	91	11
- Equipment	13	5	14	15	17	18	19	20	7
- Application Software	9	21	11	14	17	21	25	30	21
- System Software	4	0	4	5	5	6	7	7	13
- Professional Services	23	6	25	27	29	30	31	32	5
- Other	1	10	1	2	2	2	2	2	8

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-4

Europe

	ECU Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	3,700	11	4,100	4,600	5,100	5,700	6,400	7,200	12
- Equipment	1,000	5	1,050	1,150	1,250	1,350	1,500	1,600	9
- Application Software	670	19	800	1,000	1,240	1,550	1,940	2,400	25
- System Software	290	10	320	350	380	410	450	480	8
- Professional Services	1,650	12	1,850	2,000	2,100	2,250	2,350	2,550	7
- Other	70	21	85	95	115	135	160	190	17

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-5

Eastern Europe

	ECU Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	292	20	350	408	475	574	718	825	19
- Equipment	81	17	94	103	117	135	161	184	14
- Application Software	54	33	72	94	121	161	220	291	32
- System Software	22	20	27	31	36	40	49	58	17
- Professional Services	130	17	153	170	193	224	269	265	12
- Other	4	40	6	8	11	14	20	26	33

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-6

Finland

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	44	7	47	53	60	69	79	95	15
- Equipment	12	7	13	14	15	17	18	22	11
- Application Software	8	20	9	12	15	19	24	31	27
- System Software	3	9	4	4	5	5	6	7	13
- Professional Services	20	4	21	22	24	26	29	33	10
- Other	1	17	1	1	1	2	2	2	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-7

France

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	770	8	830	910	990	1,060	1,150	1,380	11
- Equipment	210	4	220	240	250	270	300	310	7
- Application Software	144	5	152	190	235	288	357	432	23
- System Software	61	13	68	73	79	85	93	99	8
- Professional Services	340	11	380	390	390	390	370	500	6
- Other	15	20	18	21	25	30	35	41	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-8

Greece

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	6	10	6	7	8	9	11	12	15
- Equipment	2	11	2	2	2	2	3	3	12
- Application Software	1	24	1	2	2	2	3	4	24
- System Software	0	8	0	1	1	1	1	1	10
- Professional Services	2	10	3	3	3	4	4	5	11
- Other	0	14	0	0	0	0	0	0	20

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-9

Germany

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	540	10	590	670	750	850	930	1,030	12
- Equipment	150	7	160	170	180	190	210	220	7
- Application Software	103	25	129	160	201	253	314	397	25
- System Software	46	6	49	54	59	64	70	75	9
- Professional Services	230	4	240	270	290	320	310	310	5
- Other	10	25	13	15	18	21	23	31	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-10

Italy

	ECU Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	260	9	280	310	340	380	420	460	10
- Equipment	70	0	70	80	80	90	100	110	7
- Application Software	50	0	50	61	74	89	111	137	22
- System Software	21	0	21	24	26	29	32	34	10
- Professional Services	110	22	130	140	150	170	170	180	6
- Other	5	0	5	6	7	8	9	11	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-11

Ireland

	ECU Millions								
Subsector	**1993**	**93-94 (%)**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**94-99 CAGR (%)**
Systems Integration	8	8	9	10	11	11	13	14	9
- Equipment	2	5	3	3	3	3	3	3	7
- Application Software	1	20	2	2	2	3	4	4	23
- System Software	1	11	1	1	1	1	1	1	8
- Professional Services	4	7	4	4	5	5	5	5	6
- Other	0	0	0	0	0	0	0	0	0

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-12

Netherlands

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	171	7	182	198	217	240	272	302	11
- Equipment	42	6	44	46	49	53	58	62	7
- Application Software	31	18	37	46	58	71	90	111	25
- System Software	14	0	14	14	14	14	14	14	0
- Professional Services	81	3	83	88	92	97	104	109	5
- Other	3	14	4	4	5	6	6	8	16

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-13

Norway

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	34	11	37	43	48	53	60	66	12
- Equipment	9	7	10	11	12	13	14	15	8
- Application Software	6	10	7	8	11	13	16	20	25
- System Software	2	25	3	3	3	3	3	3	0
- Professional Services	16	12	18	20	22	23	26	28	10
- Other	1	0	1	1	1	1	1	1	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-14

Portugal

	ECU Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	9	16	10	11	13	15	18	20	15
- Equipment	2	20	3	3	4	4	4	5	12
- Application Software	2	6	2	2	3	4	5	6	31
- System Software	1	21	1	1	1	1	1	2	12
- Professional Services	4	17	5	5	5	6	6	7	9
- Other	0	0	0	0	0	0	0	0	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-15

Spain

	ECU Millions								
Subsector	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	128	16	148	167	189	211	238	268	13
- Equipment	34	13	39	42	47	50	55	60	9
- Application Software	23	16	27	33	41	51	63	77	23
- System Software	9	36	12	13	14	16	17	19	10
- Professional Services	60	14	68	75	82	89	97	106	9
- Other	3	12	3	4	4	5	6	7	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-16

Switzerland

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	146	13	164	179	197	215	234	249	9
- Equipment	39	9	43	46	49	51	54	55	5
- Application Software	27	22	33	39	45	55	64	73	17
- System Software	12	10	13	15	16	16	18	18	6
- Professional Services	64	10	70	76	82	88	94	97	7
- Other	3	20	4	4	5	5	6	7	13

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-17

Sweden

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	66	5	69	78	87	97	109	123	12
- Equipment	17	3	18	20	21	23	24	26	8
- Application Software	12	17	15	18	22	27	33	40	22
- System Software	5	2	5	5	6	6	7	7	8
- Professional Services	29	2	30	32	35	37	40	43	8
- Other	2	20	2	2	3	4	5	7	28

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit C-18

United Kingdom

Subsector	ECU Millions								
	1993	93-94 (%)	1994	1995	1996	1997	1998	1999	94-99 CAGR (%)
Systems Integration	1,030	13	1,160	1,300	1,450	1,600	1,770	1,970	11
- Equipment	270	10	290	320	350	380	410	430	8
- Application Software	173	27	219	272	339	425	525	637	24
- System Software	80	8	86	93	100	106	113	120	7
- Professional Services	490	11	540	590	640	660	680	740	6
- Other	20	13	23	25	29	33	37	41	13

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

D

Systems Integration Market Reconciliation

Exhibit D-1

Austria

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	460	440	(20)	-4	885	800	(85)	-10	14	13
Equipment	125	120	(5)	-4	185	170	(15)	-8	8	7
Application Software	85	85	0	0	320	275	(45)	-14	30	26
System Software	34	34	0	0	59	62	3	5	12	13
Professional Services	205	195	(10)	-5	295	270	(25)	-8	8	7
Others	10	10	0	0	25	21	(4)	-16	20	16

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-2

Belgium

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	5,000	4,750	(250)	-5	10,000	8,150	(1,850)	-19	15	11
Equipment	1,350	1,300	(50)	-4	2,100	1,900	(200)	-10	9	8
Application Software	900	850	(50)	-6	3,600	2,700	(900)	-25	32	26
System Software	400	370	(30)	-8	700	510	(190)	-27	12	7
Professional Services	2,250	2,150	(100)	-4	3,300	2,830	(470)	-14	8	6
Others	100	90	(10)	-10	310	190	(120)	-39	25	16

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-3

Denmark

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	390	385	(5)	-1	970	635	(335)	-35	20	11
Equipment	105	100	(5)	-5	205	145	(60)	-29	14	8
Application Software	70	70	0	0	350	190	(160)	-46	38	22
System Software	30	30	0	0	65	50	(15)	-23	17	11
Professional Services	175	175	0	0	320	235	(85)	-27	13	6
Others	10	10	0	0	29	15	(14)	-48	24	8

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-4

Europe

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	4,750	4,100	(650)	-14	11,550	7,100	(4,450)	-39	19	12
Equipment	1,280	1,100	(180)	-14	2,440	1,650	(790)	-32	14	8
Application Software	855	750	(105)	-12	4,150	2,170	(1,980)	-48	37	25
System Software	380	330	(50)	-13	800	500	(300)	-38	16	8
Professional Services	2,150	1,850	(300)	-14	3,830	2,600	(1,230)	-32	12	7
Others	90	80	(10)	-11	340	175	(165)	-49	30	17

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-5

Eastern Europe

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	325	325	0	0	880	800	(80)	-9	22	20
Equipment	90	90	0	0	185	180	(5)	-3	16	15
Application Software	60	60	0	0	315	245	(70)	-22	39	32
System Software	25	25	0	0	60	55	(5)	-8	19	17
Professional Services	145	145	0	0	295	300	5	2	15	16
Others	5	5	0	0	25	22	(3)	-12	38	34

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-6

Finland

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	280	280	0	0	745	500	(245)	-33	22	12
Equipment	75	75	0	0	155	115	(40)	-26	16	9
Application Software	50	50	0	0	270	150	(120)	-44	40	25
System Software	22	22	0	0	55	38	(17)	-31	20	11
Professional Services	125	125	0	0	245	185	(60)	-24	14	8
Others	6	6	0	0	22	12	(10)	-45	30	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-7

France

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	5,600	5,100	(500)	-9	14,500	7,600	(6,900)	-48	21	8
Equipment	1,450	1,400	(50)	-3	3,150	1,950	(1,200)	-38	17	7
Application Software	1,000	950	(50)	-5	5,200	2,350	(2,850)	-55	39	20
System Software	450	400	(50)	-11	1,000	610	(390)	-39	17	9
Professional Services	2,600	2,250	(350)	-13	4,700	2,450	(2,250)	-48	13	2
Others	100	100	0	0	440	230	(210)	-48	34	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-8

Greece

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	1,650	1,550	(100)	-6	3,800	3,000	(800)	-21	18	14
Equipment	445	415	(30)	-7	800	735	(65)	-8	12	12
Application Software	300	275	(25)	-8	1,350	820	(530)	-39	35	24
System Software	130	120	(10)	-8	270	190	(80)	-30	16	10
Professional Services	740	680	(60)	-8	1,250	1,150	(100)	-8	11	11
Others	35	35	0	0	110	85	(25)	-23	26	19

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-9

Germany

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	1,100	1,050	(50)	-5	2,025	1,800	(225)	-11	13	11
Equipment	300	290	(10)	-3	425	400	(25)	-6	7	7
Application Software	200	200	0	0	730	610	(120)	-16	30	25
System Software	90	90	0	0	140	135	(5)	-4	9	8
Professional Services	490	450	(40)	-8	670	610	(60)	-9	6	6
Others	20	20	0	0	60	45	(15)	-25	25	18

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-10

Ireland

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	7	7	0	0	16	10	(6)	-38	20	9
Equipment	2	2	0	0	3	3	0	-7	8	7
Application Software	1	1	0	0	6	3	(3)	-53	43	23
System Software	0	0	0	0	1	1	0	-7	11	9
Professional Services	3	3	0	0	6	4	(2)	-37	16	6
Others	0	0	0	0	0	0	0	0	0	0

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-11

Italy

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	515	490	(25)	-5	1,130	800	(330)	-29	17	10
Equipment	140	140	0	0	235	185	(50)	-21	11	6
Application Software	95	95	0	0	400	210	(190)	-48	33	17
System Software	40	40	0	0	80	60	(20)	-25	15	8
Professional Services	230	205	(25)	-11	380	330	(50)	-13	11	10
Others	10	10	0	0	36	17	(19)	-53	29	11

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-12

Netherlands

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	380	370	(10)	-3	940	590	(350)	-37	20	10
Equipment	100	90	(10)	-10	200	125	(75)	-38	15	7
Application Software	68	68	0	0	340	195	(145)	-43	38	23
System Software	30	30	0	0	65	30	(35)	-54	17	0
Professional Services	175	175	0	0	310	225	(85)	-27	12	5
Others	7	7	0	0	25	14	(11)	-44	29	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-13

Norway

Subsector	1993 Market				1998 Market					
	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	300	280	(20)	-7	660	500	(160)	-24	17	12
Equipment	80	75	(5)	-6	140	115	(25)	-18	12	9
Application Software	55	50	(5)	-9	240	135	(105)	-44	34	22
System Software	25	20	(5)	-20	40	25	(15)	-38	10	5
Professional Services	135	130	(5)	-4	220	215	(5)	-2	10	11
Others	5	5	0	0	20	9	(11)	-55	32	12

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-14

Portugal

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	1,830	1,690	(140)	-8	4,560	3,440	(1,120)	-25	20	15
Equipment	500	450	(50)	-10	960	870	(90)	-9	14	14
Application Software	330	310	(20)	-6	1,640	970	(670)	-41	38	26
System Software	150	140	(10)	-7	320	275	(45)	-14	16	14
Professional Services	810	750	(60)	-7	1,510	1,250	(260)	-17	13	11
Others	35	35	0	0	125	70	(55)	-44	29	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-15

Spain

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	24,000	20,400	(3,600)	-15	65,100	37,800	(27,300)	-42	22	13
Equipment	6,500	5,400	(1,100)	-17	13,700	8,700	(5,000)	-36	16	10
Application Software	4,300	3,700	(600)	-14	23,400	10,000	(13,400)	-57	40	22
System Software	1,900	1,400	(500)	-26	4,550	2,750	(1,800)	-40	19	14
Professional Services	10,800	9,500	(1,300)	-12	21,400	15,400	(6,000)	-28	15	10
Others	480	430	(50)	-10	2,000	900	(1,100)	-55	33	16

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-16

Switzerland

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	255	240	(15)	-6	510	385	(125)	-25	15	10
Equipment	68	64	(4)	-6	110	88	(22)	-20	10	7
Application Software	45	45	0	0	180	105	(75)	-42	32	18
System Software	20	20	0	0	35	29	(6)	-17	12	8
Professional Services	115	105	(10)	-9	170	155	(15)	-9	8	8
Others	5	5	0	0	15	10	(5)	-33	25	15

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-17

Sweden

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	630	610	(20)	-3	1,700	1,010	(690)	-41	22	11
Equipment	170	160	(10)	-6	360	225	(135)	-38	16	7
Application Software	115	115	0	0	610	305	(305)	-50	40	22
System Software	50	45	(5)	-10	125	64	(61)	-49	20	7
Professional Services	280	270	(10)	-4	560	370	(190)	-34	15	7
Others	15	15	0	0	49	48	(1)	-2	27	26

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

Exhibit D-18

United Kingdom

	1993 Market				1998 Market					
Subsector	1993 Report (Fcst)	1994 Report (Act)	Variance (Amount)	Variance (%)	1993 Report (Fcst)	1994 Report (Fcst)	Variance (Amount)	Variance (%)	1993 Report CAGR (Fcst)	1994 Report CAGR (Fcst)
Systems Integration (rounded)	325	325	0	0	880	800	(80)	-9	22	20
Equipment	90	90	0	0	185	180	(5)	-3	16	15
Application Software	60	60	0	0	315	245	(70)	-22	39	32
System Software	25	25	0	0	60	55	(5)	-8	19	17
Professional Servicess	145	145	0	0	295	300	5	2	15	16
Others	5	5	0	0	25	22	(3)	-12	38	34

Because of rounding, data may not add up to totals. CAGRs are calculated on pre-rounded values. *Source: INPUT*

E

Exchange Rates and Inflation Assumptions

Exhibit E-1 shows the exchange rates used for all INPUT's European forecasts during 1994.

Exhibit E-2 shows the changes in country inflation assumptions that will be incorporated into any new forecasts. All growth forecasts in this report include the inflation figures shown this exhibit.

Exhibit E-1

US Dollar and ECU Exchange Rates 1994

Country	Currency	US Dollar	ECU
Europe	$	1.00	0.89
France	FF	5.9	6.59
Germany	DM	1.74	1.94
United Kingdom	PS	0.676	0.753
Italy	Lira (K)	1.71	1.9
Sweden	Sek	8.34	9.32
Denmark	DK	6.79	7.56
Norway	NK	7.52	8.39
Finland	FM	5.79	6.35
Netherlands	Dfl	1.94	2.17
Belgium	BF	36.15	40.41
Switzerland	SF	1.39	1.65
Austria	Sch	12.19	13.82
Spain	Ptas	142.92	159.3
Ireland	IP	0.71	0.791
Portugal	Esc	176.7	197.1
Greece	Dra	249.35	280
Eastern Europe	$	1	0.89

Source: Financial Times January 1994

Exhibit E-2

Inflation Assumptions 1993 and 1994

Country	Assumption 1993-1998	Assumption 1994-1999	Change
France	2.3	1.9	-0.4
Germany	4	2.9	-1.1
United Kingdom	2	3	1
Italy	3.8	3.2	-0.6
Sweden	2.3	2	-0.3
Denmark	1.6	2.6	1
Norway	2.2	1.5	-0.7
Finland	0.2	2	1.8
Netherlands	1.9	2	0.1
Belgium	3	2.2	-0.8
Switzerland	2.3	1.7	-0.6
Austria	3.8	2.8	-1
Spain	4.5	3.4	-1.1
Portugal	5.8	4.8	-1
Greece	13.2	11.2	-2
Ireland	2.7	3.3	0.6
Eastern Europe	-	-	-
European Average	3.1	2.8	-0.3

Source: OECD December 1993

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