EUROPEAN SOFTWARE AND SERVICES MARKET

1992 - 1997

NATIONAL GOVERNMENT SECTOR

INPUT

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(IEMAP)

*European Software and Services Market,
1992-1997—National Government Sector*

Abstract

This report analyses the market for software and services in the European national government sector. It identifies the major issues and opportunities for vendors with the driving forces in the market.

Market forecasts are provided for the major country markets—France, Germany, the United Kingdom and Italy—and by key delivery mode. The principal delivery modes are sector specific processing services, turnkey systems, application software products, professional services, network services, systems operations and systems integration. The leading vendors within each country market are identified with their market share.

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Introduction

A
Introduction

The principal objectives of this report are:

- To forecast the size of the market for software and services in the national government sector for Europe and for each of the major country markets over the 5-year period 1992-1997.

- To forecast the size of the market for software and services in the national government sector by delivery mode.

- To identify the leading software and services vendors in the sector in each of the major country's markets.

- To identify the major issues facing software and services vendors that are targeting the national government sector.

- To identify the forces influencing demand for software and services within the national government sector.

- To identify the opportunities arising for software and services vendors in this sector over the 5-year period 1992-1997.

B
Scope

This report analyses the market for software and services within the European national government sector over the 5-year period 1992-1997.

The national government sector is defined as comprising those government departments concerned exclusively with national administration and security.

Excluded from the definition are nationalised or publicly owned industries, including healthcare/local government administration and indirect defence expenditures.

Geographically, the report divides Europe into:

• Germany
• France
• United Kingdom
• Italy
• Rest of Europe

Market forecasts are derived from corporate user expenditures on software and services. Forecasts are provided over the 5-year period 1992-1997 for each of the key delivery modes, namely:

• Industry-specific application software products
• Turnkey systems
• Professional services
• Systems integration
• Network services
• Processing services
• Systems operations

C
Methodology

The research that contributed to this study was derived from the following sources:

• In-depth interviews conducted either face-to-face or by telephone with the leading vendors active in the European national government sector.

• INPUT's ongoing research of the European software and services market, which includes the collection of revenue and service product data from over 300 vendors annually.

• The use of INPUT's extensive library facilities, which include vendor literature, press releases, trade press, newspaper and magazine articles.

D

Report Structure

Chapter I provides details of the objectives, the scope of the research and the methodology used.

Chapter II is an Executive Overview of the entire report. It summarises the principal findings of the research with an emphasis on the opportunities for software and services vendors in the national government sector.

Chapter III provides an overview of the driving forces within the national government sector.

Chapter IV provides detailed market forecasts for the software and services market within the European national government sector. These forecasts are broken down by country and by delivery mode. The key issues confronting vendors and their responses to these issues are also discussed in more depth, as are the opportunities arising for vendors.

Chapter V summarises the conclusions and recommendations of the report, emphasising the opportunities available for software and services vendors.

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II
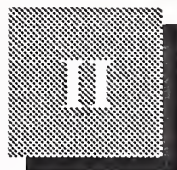
Executive Overview

A

National Governments Favour Established Independents

The high cost of bidding for business in the bureaucratic national government sector has deterred some vendors in the past. Now that growth in the general market for computer software and services in Europe has fallen to single figures, some may be reconsidering the risks and rewards of government contracts.

Reductions in defence spending have hurt those vendors specialising in this sector, but perhaps not as badly as many had feared. Economic recession is now impacting the whole of Europe as Germany faces the extra burden of re-developing industry and infrastructure in the Eastern Lande. As a result, the demand for improved efficiency and more responsive operational and administrative systems continues to grow.

The market for software and services in national government is expected to have grown 11% in 1992, with growth in outsourced computer and network system operations looking particularly promising. Government procurement of software and services throughout Europe seems to strongly favour the independent vendors over the equipment vendors, with the exception of Bull.

INPUT researched vendor issues and strategies in the four largest European economies. In priority order, the most important success factors for vendors in winning new business from the national government sector are:

- Established market reputation
- Political lobbying skills
- High quality of service
- Competitive pricing

The entrenched position of some of the leading vendors acts as natural channels to the market for other vendors. Vendors attempting to enter the bidding for new business can be most successful if they are teamed with an established leader in the national government sector.

Analysis of vendor market shares indicates that U.S.-owned vendors have been far more successful in penetrating each national market than the European vendors from neighbouring countries. U.S. penetration is highest in the U.K. at 42% of the market. The treatment by U.S. vendors of European governments as a common market opportunity is still a rarity for the large majority of European software and services vendors.

For the services industry, wherever the vendor ownership, it is essential to use local staff to serve the customer. National governments still favour established local independent vendors above all else.

B

Market Forecasts—Outsourcing Promises Over 25% Growth

INPUT valued the European user spending for software and services specific to the national government sector at $4.3 billion (ECU 3.2 billion). This market is expected to have grown 11% during 1992 and to grow at an average of 12% per year to $8.6 billion in 1997. Exhibit II-1 lists the subsectors of the market with their relative sizes and forecast growth rates. Despite the conservative nature of government spending, there are major opportunities for established vendors—or for consortia of vendors—particularly in outsourced systems operations.

EXHIBIT II-1

Industry-Specific Software and Services National Government—Europe, 1992-1997

Delivery Mode	$ Millions (rounded)		
	1992	1992-1997 CAGR (%)	1997
Processing Services	490	4	590
Turnkey Systems	460	13	850
Applications Software Products	200	7	280
Professional Services	2,260	7	3,210
Network Services	130	17	290
Systems Operations	410	26	1,310
Systems Integration	860	19	2,020
Total (Rounded)	4,800	12	8,550

There is considerable variation between the major country markets in Europe. Exhibit II-2 illustrates where the largest growth opportunities are in the four largest countries.

EXHIBIT II-2

Growth Opportunities, National Government Europe

Country Markets	Outsourced Systems Operations	Systems Integration	Professional Services
France	**	**	*
Germany	*	***	*
United Kingdom	****	**	
Italy	*	*	

Growth opportunities: **** = Best

A major outsourcing opportunity is opening up as the U.K. government pursues its "market testing" programme, which offers private sector vendors the chance to compete directly for work currently being handled in-house by government departments. INPUT estimates that this will create over $400 million of incremental systems operations business up to 1997. INPUT expects similar, but smaller, outsourcing opportunities to follow throughout Europe as other governments look for ways to contain rising costs. Different employment laws are likely to moderate the whole-sale adoption of outsourcing outside the U.K.

Professional services is by far the largest market segment. However, growth has been severely curtailed compared to past years—especially as defence spending has been heavily cut back since the Iron Curtain collapsed.

The systems integration forecasts reflect the ever increasing complexity of system requirements in all countries. The clear majority of these are now centred on open system standards; the national governments have played a lead role in establishing a strong demand for open systems in Europe. This is where many independent vendors are developing their expertise in large networks and client-server architectures.

C

Leading Vendors—European Neighbours Trail Local and U.S. Vendors

The four major European countries favour the U.S. vendors far ahead of neighbouring European vendors as well as they do their own indigenous suppliers. Exhibit II-3 gives INPUT's estimates of the market shares attributable to local, U.S. and other European vendors for each country.

Market Shares of Local and Foreign Vendors
National Government—Europe

Country Markets	Estimated Market Shares (%)		
	Local Vendors	U.S. Vendors	Other Europeans
France	79	19	2
Germany	63	29	8
United Kingdom	47	42	11
Italy	80	13	7

Italy has the largest national vendor share, largely because in the past acquisitive Finsiel—now owned by the state-owned Italian PTT—has gained over half its revenues from the Italian government sector. France has the least penetration by other Europeans, but U.S. vendors are still well established there. The U.K. has the lowest national vendor share—a result of more than a decade without any government bias toward national ownership in its purchasing policies.

The top ten vendors of software and services in Europe are listed in Exhibit II-4. The U.S. vendors are well positioned for new pan-European business, compared to the vast majority of European vendors, which tend to have a national base and limited international operations.

EXHIBIT II-4

Leading Vendors Software and Services
National Government—Europe, 1991

II-5

Rank	Vendor	Country of Origin	Estimated Sector Revenues ($ Millions)	Market Share (Percent)
1	Finsiel	Italy	410	9.4
2	Bull	France	225	5.2
3	Digital	U.S.	215	5.0
4	Cap Gemini Sogeti	France	170	3.9
5	EDS	U.S.	145	3.3
6	Unisys	U.S.	115	2.6
7	Andersen Consulting	U.S.	105	2.4
8	Olivetti	Italy	90	2.1
9	Siemens-Nixdorf	Germany	85	2.0
10	Sema Group	France	80	1.8
	Total Listed		1,640	37.8
	Total Market		4,340	100.0

Note: Numbers may not add up due to rounding

The European telecommunications service vendors (PTTs) have all made moves to strengthen their software and service interests. Finsiel is now part of STET rather than a separate arm of the state owned IRI. France Telecom has a large group within Cogecom-Telesystemes and has recently purchased a stake in Sema. BT Customer Systems has implemented a number of major government contracts in alliance with other vendors.

Of the equipment manufacturers, Bull has been strongest in strategically penetrating the public sector throughout Europe. Yet, the equipment manufacturers are generally not well positioned to gain more market share.

Bull, Digital and Cap Gemini Sogeti (CGS) all had to shed staff in 1992. In France, this was partly attributed to a considerable shortfall in defence business. Demand for contract staff also fell in 1991 and 1992.

CGS, Andersen Consulting, EDS and Sema are all fighting hard for the major part of the government outsourcing business. IBM—notable for their absence from this list—is also expected to invest in winning a substantial share and so build its systems operations activities in Europe.

III
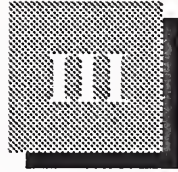
National Government Sector Driving Forces

A

Economic Forces

Profound changes are taking place in the national governments of Europe.

Defence budgets (and physical defence forces) are being significantly reduced, though perhaps not at the rate anticipated.

Privatisation of publicly owned industries is gathering pace throughout the EC. What started as an ideological imperative in the U.K. has become an economic imperative for all of Europe. Government revenues are reduced by the impact of recession throughout the community. At the same time, spending demands increase to provide economic support for unemployed workers, "restructured" industries in Eastern Germany, or simply subsidies to state enterprises in France (see Exhibit III-1).

EXHIBIT III-1

Economic Forces on National Government

Privatisation of State Industries

Industrial Support

Social Support

Income

Expenditure

Tax Revenues

Outsourcing of Government Functions

Defence Expenditure
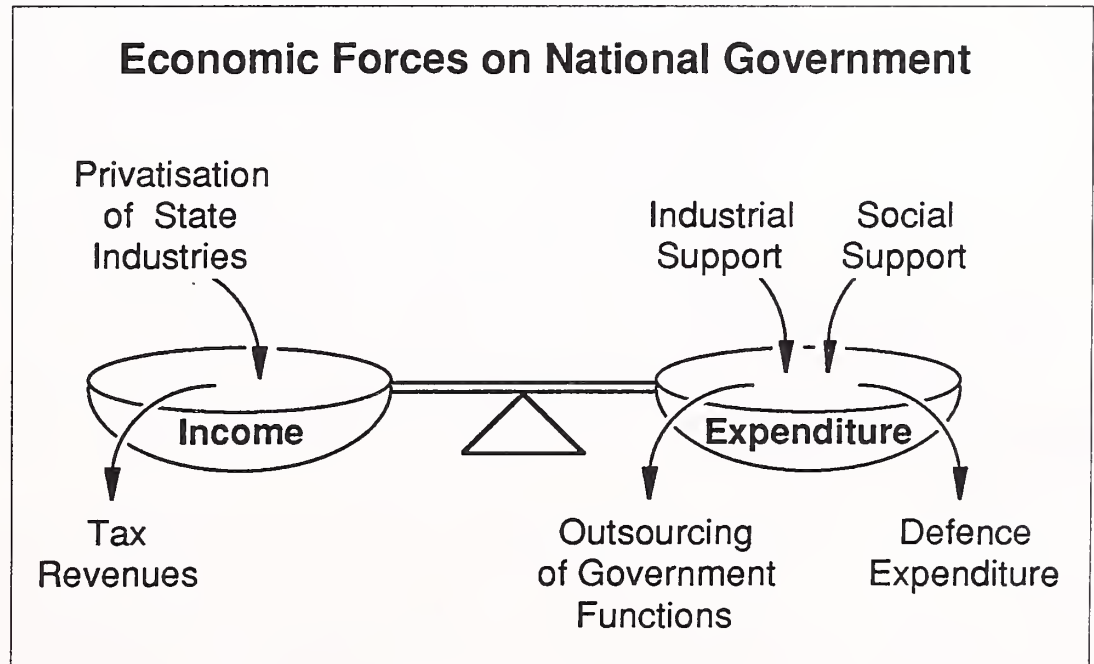
1. Privatisation Raises Capital

The sale of publicly owned industries raises large sums of capital in a very short time and is proving to be irresistible to all the major European governments. For the U.K., it was portrayed as an ideological imperative, but also played a significant political role in allowing the reduction of nominal tax rates. For Italy, it offers a respite from a budget deficit that is careering out of control. In Germany, such revenues will significantly ease the burden of funding the redevelopment of Eastern Germany. Only in France does the privatisation process appear slow; however, it is still proceeding discretely through mechanisms such as IBM's cash injection into publicly held Groupe Bull in exchange for an equity stake.

2. Outsourcing Reduces Government Expenditure

In parallel with these changes, governments are discovering that there may be scope to reduce the running costs of government by "outsourcing" functions. Again, the U.K. is in the vanguard of this process with its policy of "market testing" all non-policy making functions. The essence of market testing is that government departments are obliged to compete with private sector bodies for the provision of their services. Although new to Europe, this is a well established process in the U.S. and has contributed substantially to the growth of corporations like EDS and Computer Sciences Corporation.

The process of change is likely to be slow in Europe. Even in the U.K., where government has directed all departments to produce proposals for market testing by the end of 1992, it will probably take several years for outsourcing to evolve as a natural way for government to operate. Nonetheless, the scale of the opportunity is enormous. Not only are the immediate contracts very large (up to several hundreds of million of dollars per annum), but an outsourced facility effectively becomes the sole ownership of the winning bidder. Any opportunities that might previously have existed for professional services, network services, software products, systems integration or turnkey systems all come under the effective control of the systems operator. The potential market for outsourced government operations could be twice as large as the total current private sector market.

B

The Systems Environment

The primary automation of public administration is almost complete in all the major countries of Europe, but significant development (and redevelopment) continues as public bodies strive to develop their systems from simple reporting systems to real time operating systems (Exhibit III-2). Significant opportunities exist to extend administration systems to provide

services directly to the public. Just as ATMs and direct treasury management systems have transformed the banking industry, direct access to public systems has a similar opportunity to introduce new levels of productivity to government operations. In Italy, for example, it is now possible for citizens to obtain land and real estate registry certificates from customer service points through an on-line database.

EXHIBIT III-2

The Systems Environment Becomes More Operational
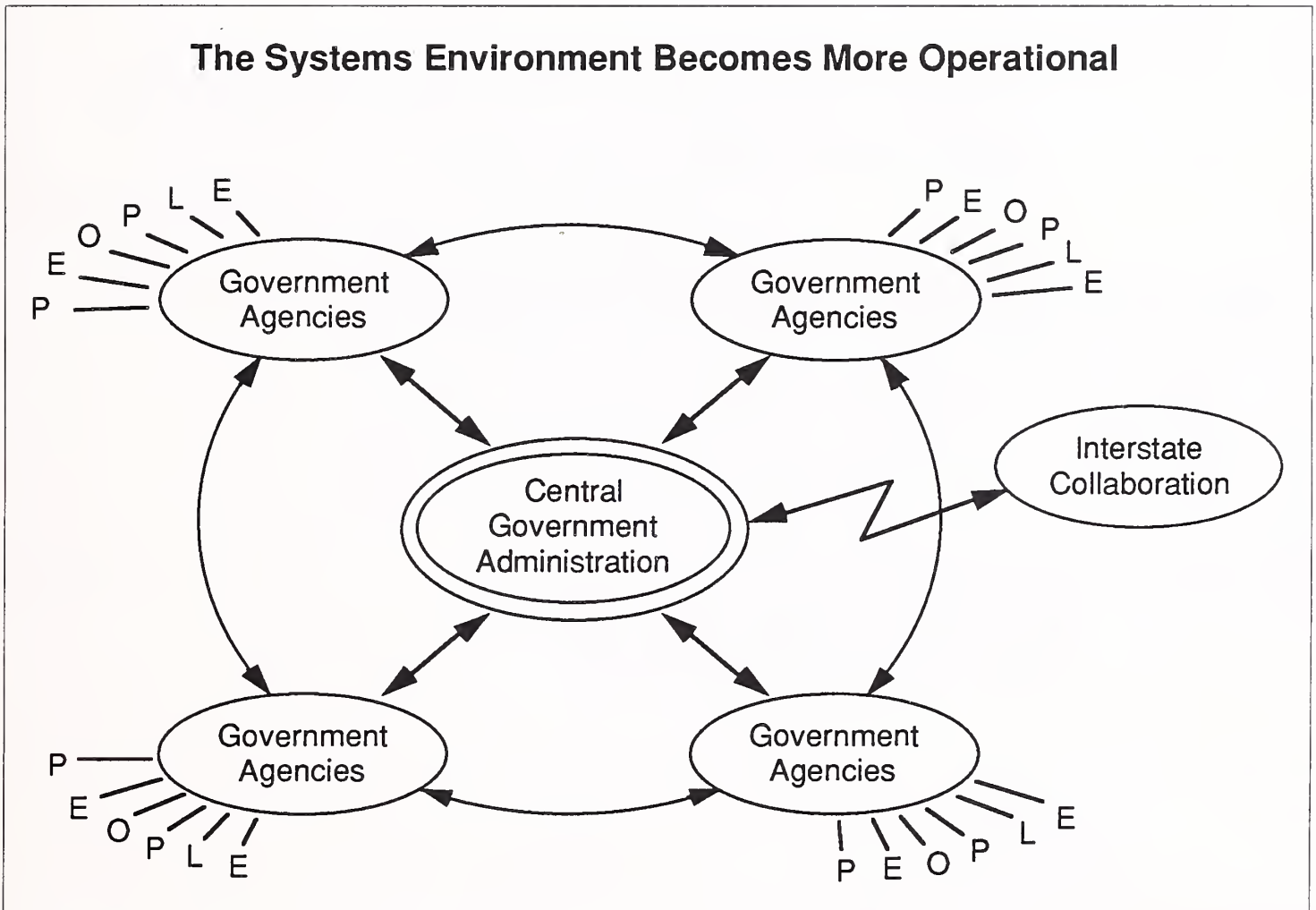
A pre-requisite for achieving these more sophisticated goals is that linkages and information interchange between government departments need to be significantly improved. Government departments traditionally defend their boundaries from outsiders (including other departments) with some vigour. This has led to the development of many incompatible systems requiring significant integration effort. The problem is generally understood and has been one of the driving forces for OSI.

Implementation of EC treaties requires coordination of government agencies across the community and interconnection for data interchange. This, again, highlights the need to make information accessible and transportable. The European Nervous System project will provide systems capable of handling the pan-European dimension. Examples include monitoring tax payments for income arising in more than one country or providing a single payment point for pensions earned in several EC states. The SEDOC system will provide a document exchange system linking the employment ministries of the member states together.

There are simultaneous needs to change or develop existing systems to take account of the harmonisation of EC regulations. The introduction of linked VAT rates and the need to manage financial flows to and from the EC are examples that affect all member states.

The evolving market for pan-governmental systems is not yet on a scale to rival the national administrations of the larger EC states, but could still have a significant impact on system developments in all EC countries.

IV

The Markets

A

European Software and Services Overview

The overall market for software and services within the European national government sector is forecast to grow from $4.8 billion in 1992 to $8.6 billion in 1997, a compound annual growth rate of 12%, as shown in Exhibit IV-1. These figures include only end-user industry-specific revenues. Excluded from the figures, for example, is software sold to defence contractors for integration into weapons platforms that will subsequently be sold to national government.

EXHIBIT IV-1

European National Government Sector Software and Services Market Forecast, 1992-1997
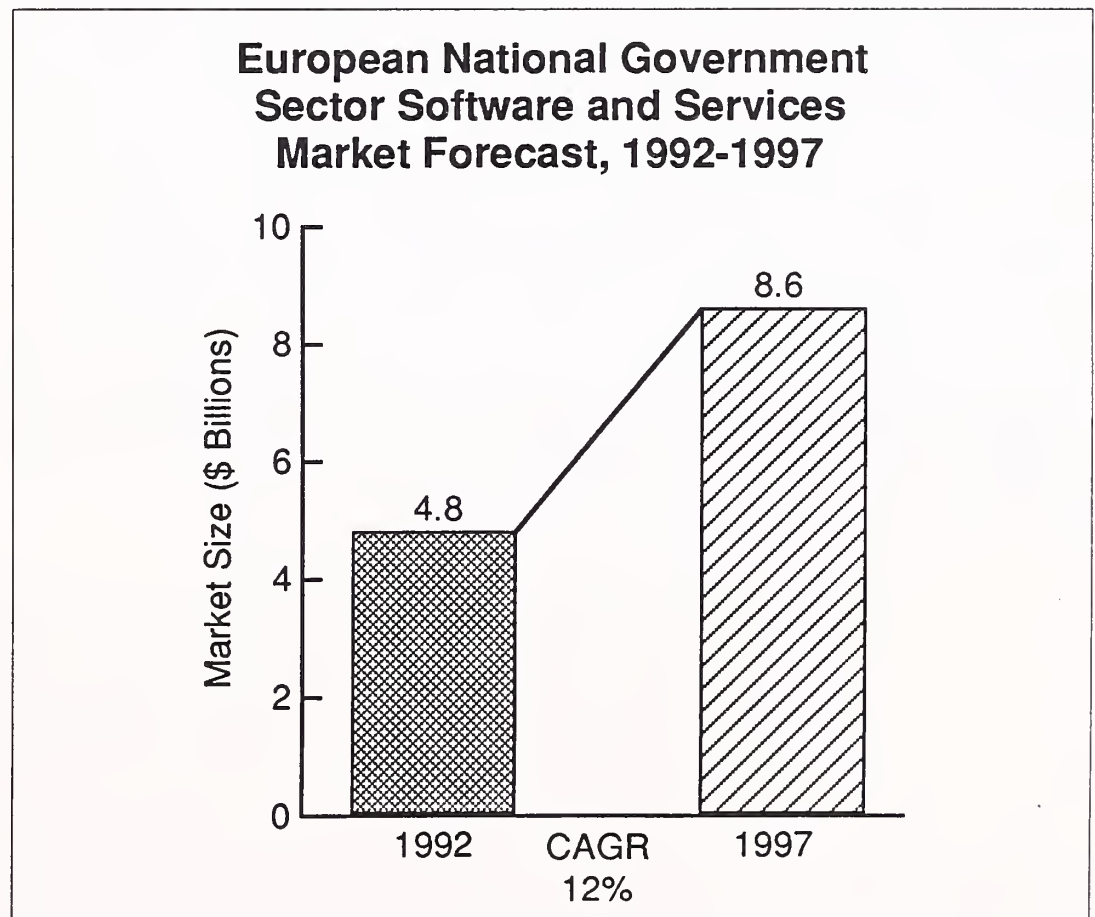
Exhibit IV-2 shows the leading vendors in the national government sector, their estimated industry-specific revenues and their market shares.

EXHIBIT IV-2

Leading Software and Services Vendors
National Government—Europe, 1991

Rank	Vendor	Country of Origin	Estimated Sector of Revenues ($ Millions)	Market Share (Percent)
1	Finsiel	Italy	410	9.4
2	Bull	France	225	5.2
3	Digital	U.S.	215	5.0
4	Cap Gemini Sogeti	France	170	3.9
5	EDS	U.S.	145	3.3
6	Unisys	U.S.	115	2.6
7	Andersen Consulting	U.S.	105	2.4
8	Olivetti	Italy	90	2.1
9	Siemens-Nixdorf	Germany	85	2.0
10	Sema Group	France	80	1.8
	Total Listed		1,640	37.8
	Total Market		4,340	100.0

Note: Numbers may not add up due to rounding.

Finsiel is substantially the largest supplier due to its dominant position in Italy. Finsiel was until recently wholly owned by the state holding company IRI, but has recently been sold to the Italian telecommunications holding company STET, which has IRI as its largest shareholder. Finsiel effectively remains a nationalised industry and has little presence outside of Italy.

It is notable that Cap Gemini Sogeti and Sema Group are the only other two European owned software and services companies to appear in the top 10. Both owe their position to strong performance in the French and U.K. markets, failing to make the top 10 in either Germany or Italy.

Hardware vendors make up 5 of the top 10 software and service suppliers to the national government sector in Europe. In the case of Bull, Olivetti and Siemens-Nixdorf, this reflects obvious government support within their home countries, but Bull is also the only European vendor that features in the top 10 supplier of all four major countries. Digital also features in all four countries with a particularly good showing in Germany following the acquisition of Mannesman-Kienzle.

B
Country Forecasts

1. Overview

Exhibit IV-3 shows INPUT's forecast for industry-specific software and services in the national government sector for each of the major countries.

The major trends in each of these countries are discussed in the following sections of the report. The U.K. will be the fastest growing market due to a government policy of outsourcing functions (including, but not only, information systems) to the private sector where possible. The pressures of unification and a growing federal deficit contribute to Germany, which also shows above average growth.

Italy will be significantly below the European average due to the government's serious financial difficulties and existing market control by Finsiel.

Bearing in mind that most of the market growth arises not from extra software and services, but from a reallocation between internal and external resources; these forecasts are all highly sensitive to political change.

IV-4

Software and Services National Government Sector

	1992	1997	CAGR (Percent)
France	1.3	2.2	11
Germany	0.65	1.4	17
U.K.	0.66	1.5	18
Italy	0.79	1.1	9
Rest of Europe	1.4	2.3	10

Market Size ($ Billions)
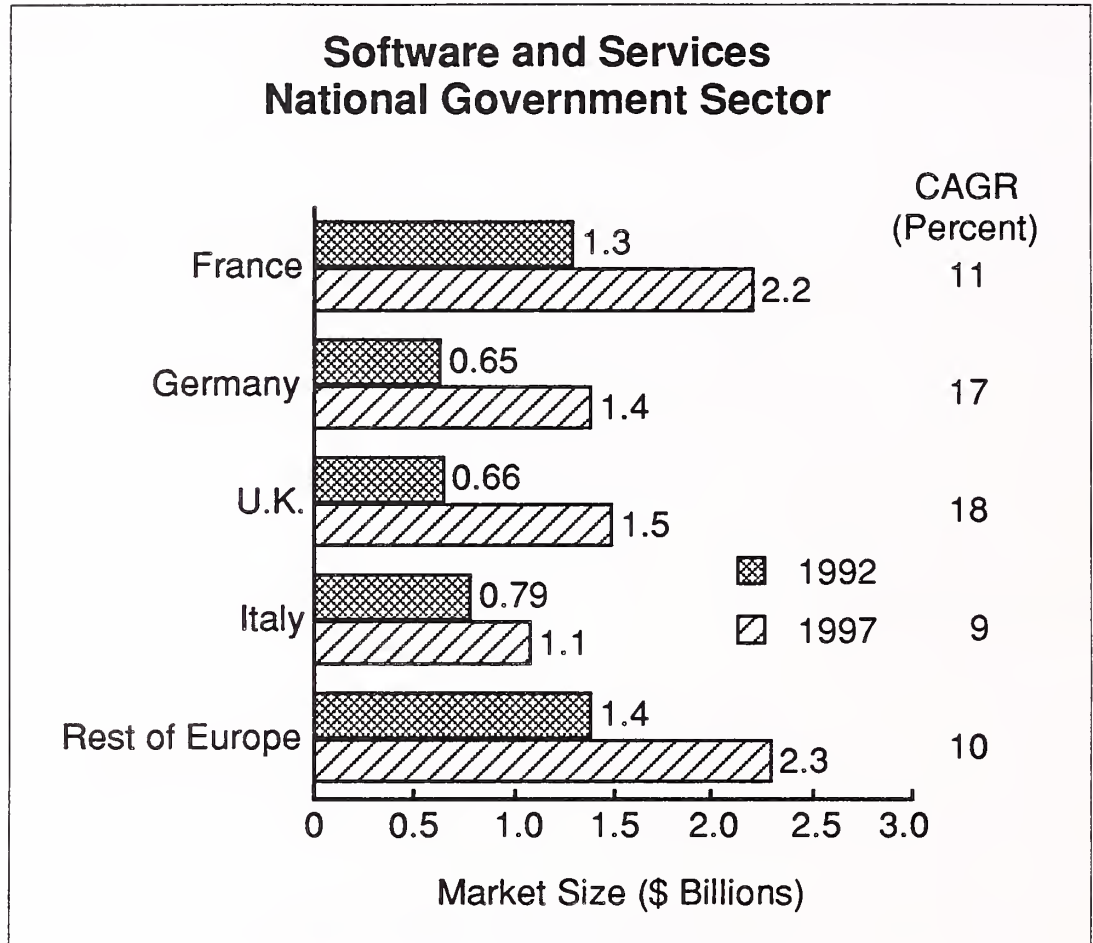
2. France

France has the most active state intervention in the information services industry of all European countries (Finsiel being more passively managed). Eight of the top 10 suppliers to French national government are French owned companies (Exhibit IV-4), while one of the others (EDS-GFI) is a former French company now owned by a U.S. parent.

> *"The growing competition between telecommunications operators forces us to protect our information services partners by making them a part of our core business"*

Michael Hurst—FTLIS, October 1992.

The former policy of supporting Bull as the national champion of French information technology appears to have been de-emphasised in the wake of the company's huge financing requirements. In its place, the government is clearly supporting French software and services companies, and using France Telecom as the vehicle for control. This can be seen in France Telecom's acquisition of a substantial stake in Sema Group.

EXHIBIT IV-4

Leading Software and Services Vendors
National Government—France 1991

Rank	Vendor	Country of Origin	Estimated Sector of Revenues (FF Millions)	Market Share (Percent)
1	Bull	France	565	9.3
2	Cap Gemini Sogeti	France	390	6.4
3	EDS-GFI	U.S.	315	5.2
4	Syseca	France	275	4.5
5	Sligos	France	200	3.3
6	CISI	France	185	3.1
7	Sema Group	France	165	2.7
8	Telesystemes	France	150	2.5
9	Digital	U.S.	130	2.1
10	CGI	France	120	2.0
	Total Listed		2,495	41.2
	Total Market		6,050	100.0

Note: Numbers may not add up due to rounding.

Though system operations will show the most rapid growth (22% p.a. between 1992-97), professional services and systems integration will continue to dominate the national government sector (see Exhibit IV-5).

EXHIBIT IV-5

National Government Software and Services France

Bull's strong position in systems integration and professional services keep it ahead of Cap Gemini Sogeti in total sector revenues, though the latter remains dominant in the supply of professional services

3. Germany

While German companies hold four of the top six places for market share (Exhibit IV-6), Digital's acquisition of Mannesman-Kienzle has put it firmly into second place behind Siemens-Nixdorf.

EXHIBIT IV-6

Leading Software and Services Vendor
National Government—Germany, 1991

Rank	Vendor	Country of Origin	Estimated Sector of Revenues (DM Millions)	Market Share (Percent)
1	Siemens Nixdorf	Germany	85	10.0
2	Digital	U.S.	70	8.2
3	Debis Systemhaus	Germany	45	5.3
4	Datev	Germany	35	4.1
5	Bull	France	30	3.5
6 =	SAP	Germany	25	2.9
6 =	IBM	U.S.	25	2.9
8 =	Unisys	U.S.	20	2.4
8 =	Microsoft	U.S.	20	2.4
10	Computer Associates	U.S.	15	1.8
	Total Listed		370	43.5
	Total Market		850	100.0

Note: Numbers may not add up due to rounding.

Germany's struggle with unification has two consequences for software and services vendors. The obvious direct impact is a need for systems integration services. However, unification is also taking a heavy toll of government finances. The result is an escalating federal deficit and growing pressure to control expenditure (see Exhibit IV-7). Germany's decision to withdraw from the European Fighter Aircraft project is one example of the general decline in defence budgets.

EXHIBIT IV-7

Germany's Growing Public Sector Deficit

	1991	1992	1993
Annual Growth of GNP (%)	0.4	1.0	1.0
Public Sector Deficit (DMbn)	89.1	95.5	100.0

A second level effect, however, is being felt in the development of plans to privatise state owned industries like Deutsche Bundespost Telekom. In due course, tight government budgets will lead to increased use of private system operations at the expense of internally managed operations.

INPUT forecasts that systems integration in the German national government sector will grow at 24% p.a. from 1992 to 1997 (Exhibit IV-8), as a result of unification and the trend towards downsizing. This will make systems integration the largest delivery mode in Germany, 38% ahead of turnkey systems, which is the current leading delivery mode. Systems operations will grow marginally faster (25% CAGR), but from a much smaller base.

EXHIBIT IV-8

IEIG2

National Government Software and Services
Germany

CAGR
(Percent)

Category	1992	1997	CAGR (Percent)
Systems Integration	171	500	24
Systems Operations	49	151	25
Network Services	13	33	20
Professional Services	138	230	11
Applications Software Products	46	66	7
Turnkey Systems	184	362	14
Transaction Processing	53	72	7

1992
1997

Overall CAGR: 17%

Market Size ($ Millions)

0   200   400   600   800   1,000

4. United Kingdom

The United Kingdom offers the greatest opportunity in Europe over the forecast period:

> *"Departments, Executives Agencies, and non-departmental public bodies need to test the scope for a greater private sector contribution to the delivery of, for example, clerical and executive operations, specialist and professional skills, and a wide range of facilities management approaches."*

Norman Lamont, Chancellor of *The Exchequer*, November 1991.

The software and services market is wide open, with only two locally owned companies in the top 10 suppliers to national government (see Exhibit IV-9). The government's decision to "market test" all non-policy government functions means that, in principle, the whole of the government's Pounds Sterling 2 billion ($3.8 billion) p.a. expenditure could be transferred to the private sector. In practice, if IT follows the example of earlier outsourcings, it is likely that up to 50% of government IT would be outsourced within five years. Some of the potential contracts are very large indeed, reaching hundreds of millions of dollars per annum.

The largest opportunities lie in system operations, which INPUT forecasts will grow at 35% p.a. over the forecast period (see Exhibit IV- 10). The scale of some of these potential contracts is such that only the largest and best organised companies will be credible candidates. The importance of the contracts is difficult to overstate because it is unlikely that a winning company for a systems operation contract will choose to subcontract professional services or systems integration business. A sharp disparity will emerge between the winners and losers, which is likely to lead to further restructuring of the U.K. software and services industry.
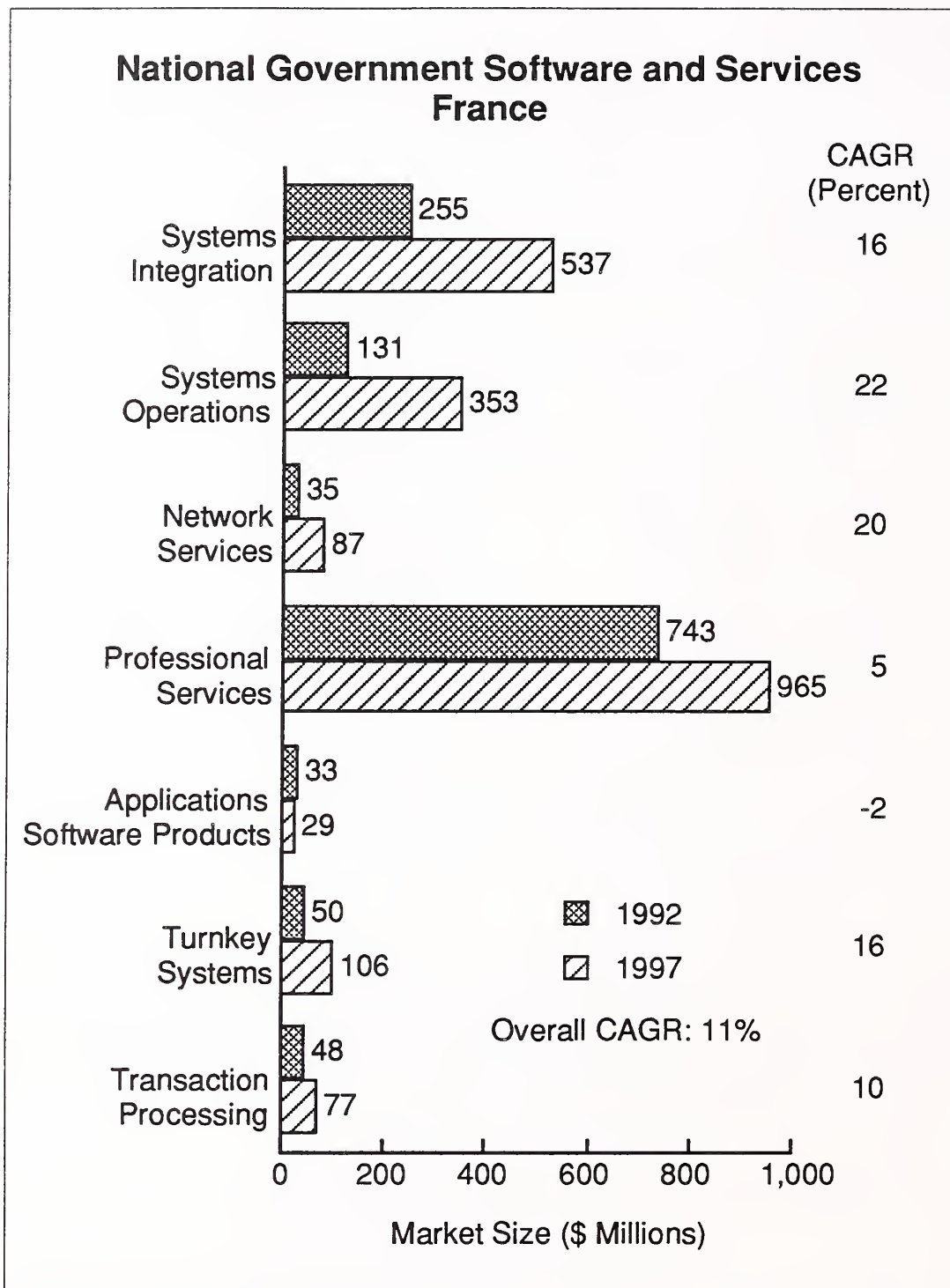
EXHIBIT IV-9

Leading Software and Services Vendors
National Government—U.K., 1991

Rank	Vendor	Country of Origin	Estimated Sector of Revenues (£ Millions)	Market Share (Percent)
1	Data Sciences	U.K.	40	12.5
2	EDS-Scicon	U.S.	30	9.4
3 =	Digital	U.S.	20	6.3
3 =	ICL (Fujitsu)	U.K. (Japan)	20	6.3
5	Hoskyns (CGS)	U.K. (France)	18	5.6
6	Andersen Consulting	U.S.	17	5.3
7	Sema Group	France	14	4.4
8	Logica	U.K.	13	4.1
9 =	Bull	France	12	3.8
9 =	Unisys	U.S.	12	3.8
	Total Listed		196	61.3
	Total Market		320	100.0

Note: Numbers may not add up due to rounding.

EXHIBIT IV-10

IV-12

National Government Software and Services
United Kingdom

CAGR
(Percent)

Category	1992	1997	CAGR (Percent)
Systems Integration	233	523	18
Systems Operations	123	556	35
Network Services	33	67	16
Professional Services	173	202	3
Applications Software Products	27	29	1
Turnkey Systems	48	87	12
Transaction Processing	29	35	4

▨ 1992
◪ 1997

Overall CAGR: 18%

0   200   400   600   800   1,000

Market Size ($ Miliions)

EDS is taking an interesting approach by trying to encourage government departments to outsource entire functions rather than just the IT support elements. This makes sense for the government and EDS because it moves state run business to the private sector in larger pieces, but it creates problems for smaller companies that are unable to compete for such large pieces of business.

5. Italy

Italy is a difficult market for foreign companies. The top three suppliers of software and services to the Italian government are all Italian and alone account for over 60% of the market (see Exhibit IV-11). The government's serious budget deficit will force it to keep a tight reign on all aspects of expenditure, almost irrespective of merit. It could be argued that this creates a case for outsourcing following the U.K. model, but it is not clear what form this might take. Finsiel has, in government eyes, just been transferred to the private sector. Whether that will lead to more competition is uncertain. At present the most likely outcome is that Finsiel will be forced to bear the brunt of any expenditure reductions in software and services. Finsiel itself recognises this and plans to reduce its dependency on government business from 60% to revenues of 50%. A statement on Finsiel's company direction is given in Exhibit IV-11.

EXHIBIT IV-11

Leading Software and Services Vendors
National Government—Italy, 1991

Rank	Vendor	Country of Origin	Estimated Sector of Revenues (£ Millions)	Market Share (Percent)
1	Finsiel	Italy	400	48.2
2	Olivetti	Italy	65	7.8
3	Cerved	Italy	40	4.8
4	Bull	France	35	4.2
5	Datamat	Italy	25	3.0
6	Digital	U.S.	20	2.4
7	Andersen Consulting	U.S.	15	1.8
8	S&M Group	Italy	15	1.8
9	IBM	U.S.	15	1.8
10	Unisys	U.S.	10	1.2
	Total Listed		640	77.1
	Total Market		830	100.0

Note: Numbers may not add up due to rounding.

Finsiel Company Objectives

"To pursue activities in the field of IT and allied activities, through the acquisition of shares in companies and joint ventures in which the company shall be responsible for technical and administrative coordination."

Company Report, 1991

Professional services dominate Italian government software and services expenditure (see Exhibit IV-12). Although INPUT forecasts that the fastest growth will be in systems operations, this remains a minor part of the Italian market.

EXHIBIT IV-12

National Government Software and Services
Italy

Category	1992	1997	CAGR (Percent)
Systems Integration	74	163	17
Systems Operations	43	108	20
Network Services	10	25	19
Professional Services	517	691	6
Applications Software Products	39	57	8
Turnkey Systems	26	48	13
Transaction Processing	82	99	4

◪ 1992
◹ 1997

Overall CAGR: 9%

Market Size ($ Millions)
0   200   400   600   800   1,000
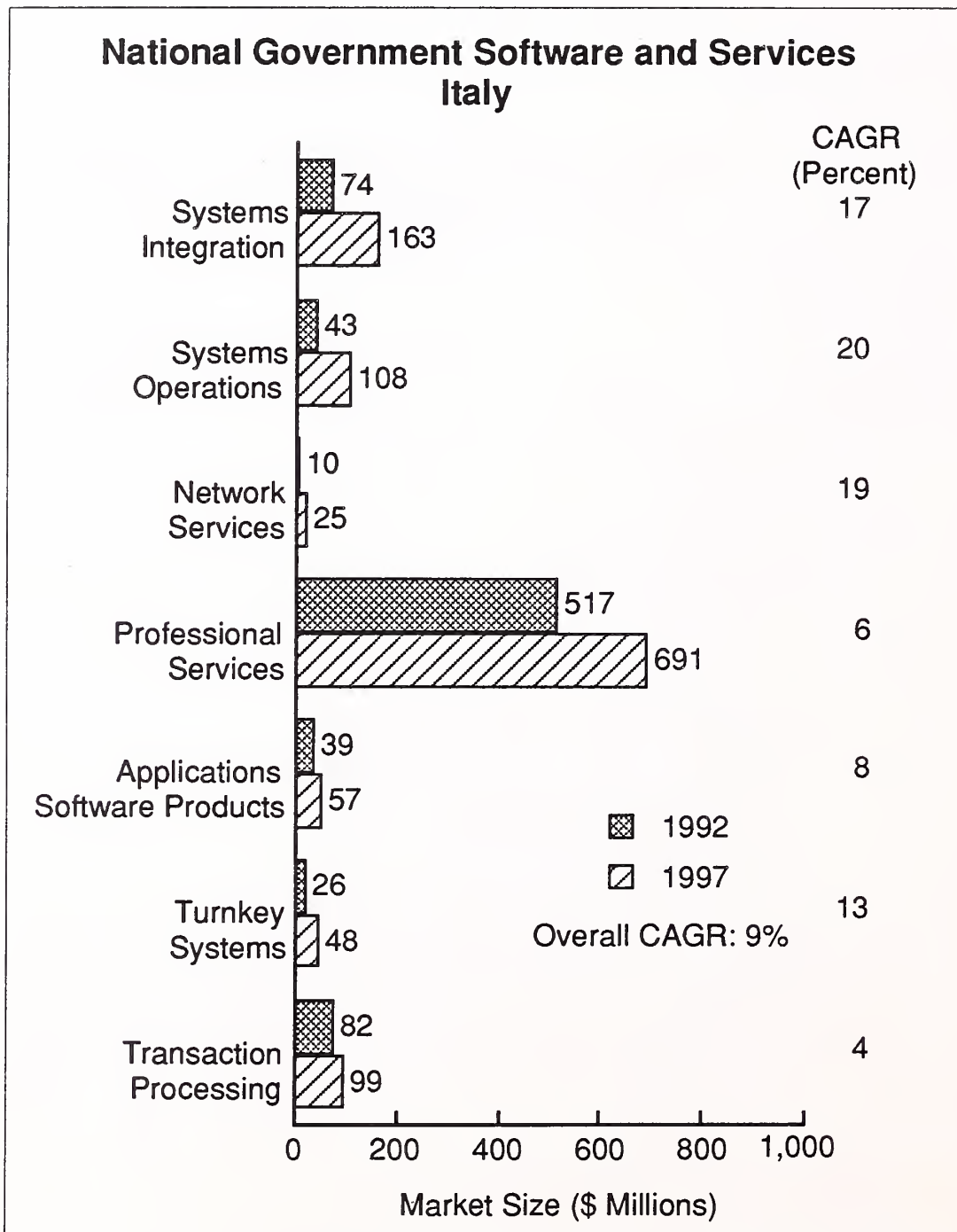
C
Key Delivery Modes

1. Overview

Exhibit IV-13 shows the growth in industry-specific revenues for the European national government sector by delivery mode. The forecast average growth rate over the period 1992-97 is 12%, but there is considerable variation from this average by delivery mode.

The rapid growth anticipated in outsourcing system operations in the U.K. makes systems operations the fastest growing European delivery mode at 26% p.a. growth rate. Despite this, it still only reaches third place in the ranking of delivery modes. Professional services, though only showing a modest 7% growth rate, remains the most significant delivery mode in terms of current size.

EXHIBIT IV-13

IV-16

National Government Software and Services Europe

CAGR
(Percent)

Category	1992	1997	CAGR (Percent)
Systems Integration	860	2,015	19
Systems Operations	410	1,310	26
Network Services	130	290	17
Professional Services	2,260	3,210	7
Applications Software Products	200	280	7
Turnkey Systems	460	850	13
Transaction Processing	490	590	4

▨ 1992
▨ 1997

Overall CAGR: 12%

0   1,000   2,000   3,000   4,000

Market Size ($ Millions)

2. Systems Integration

Systems integration is the provision of a complete solution to an information systems problem by a single contractor that brings together hardware and software elements from a variety of sources to meet the client's need. The solution must include an application processing component.

Systems integration, although only second in growth rate at 19%, and in ranking offers the largest absolute growth opportunity. Between 1992 and 1997 INPUT forecasts that the systems integration market in national governments of Europe will increase by over $1.1 billion to a market total of over $2 billion by 1997.

The main driving force behind this substantial growth is the continued move towards distributed, often UNIX, systems while proprietary mainframes continue to hold their place despite a lower prominence.

As shown in Exhibit IV-14, the three major countries, France, Germany and U.K. all offer comparable size markets with comparable growth rates.

EXHIBIT IV-14

Systems Integration
1992

	1992	1997	CAGR (Percent)
France	255	537	16
Germany	171	500	24
U.K.	233	523	18
Italy	74	163	17
Rest of Europe	128	292	18

Market Size ($ Millions)

1992: $860 million
1997: $2,015 million
CAGR: 19%
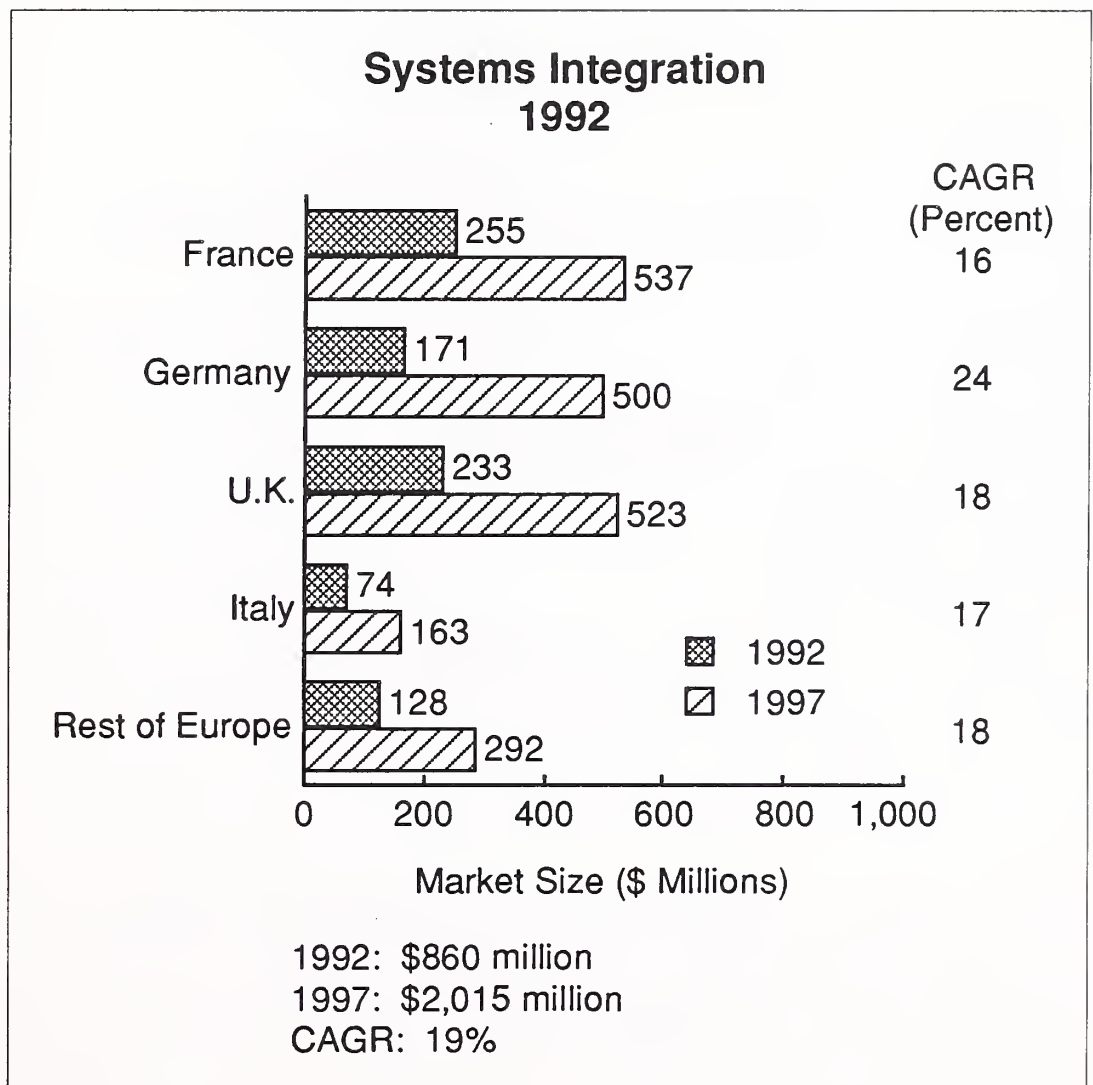
3. Systems Operations

Systems operations involves the operation and management of all or a significant part of the user's information systems functions under a long term contract.

The impact of the U.K. government's decision to outsource substantial parts of its operations can be clearly seen in Exhibit IV-15. The 35% CAGR of systems operations in the U.K. will put it significantly ahead of all other countries, with incremental sales of over $500 million forecast in 1997.

EXHIBIT IV-15

**Systems Operations
1992**

CAGR
(Percent)

France: 131 / 353 — 22
Germany: 49 / 151 — 25
U.K.: 123 / 556 — 35
Italy: 43 / 108 — 20
Rest of Europe: 63 / 142 — 18

⊠ 1992
▨ 1997

Market Size ($ Millions)

0   200   400   600   800   1,000

1992: $410 million
1997: $1,310 million
CAGR: 26%
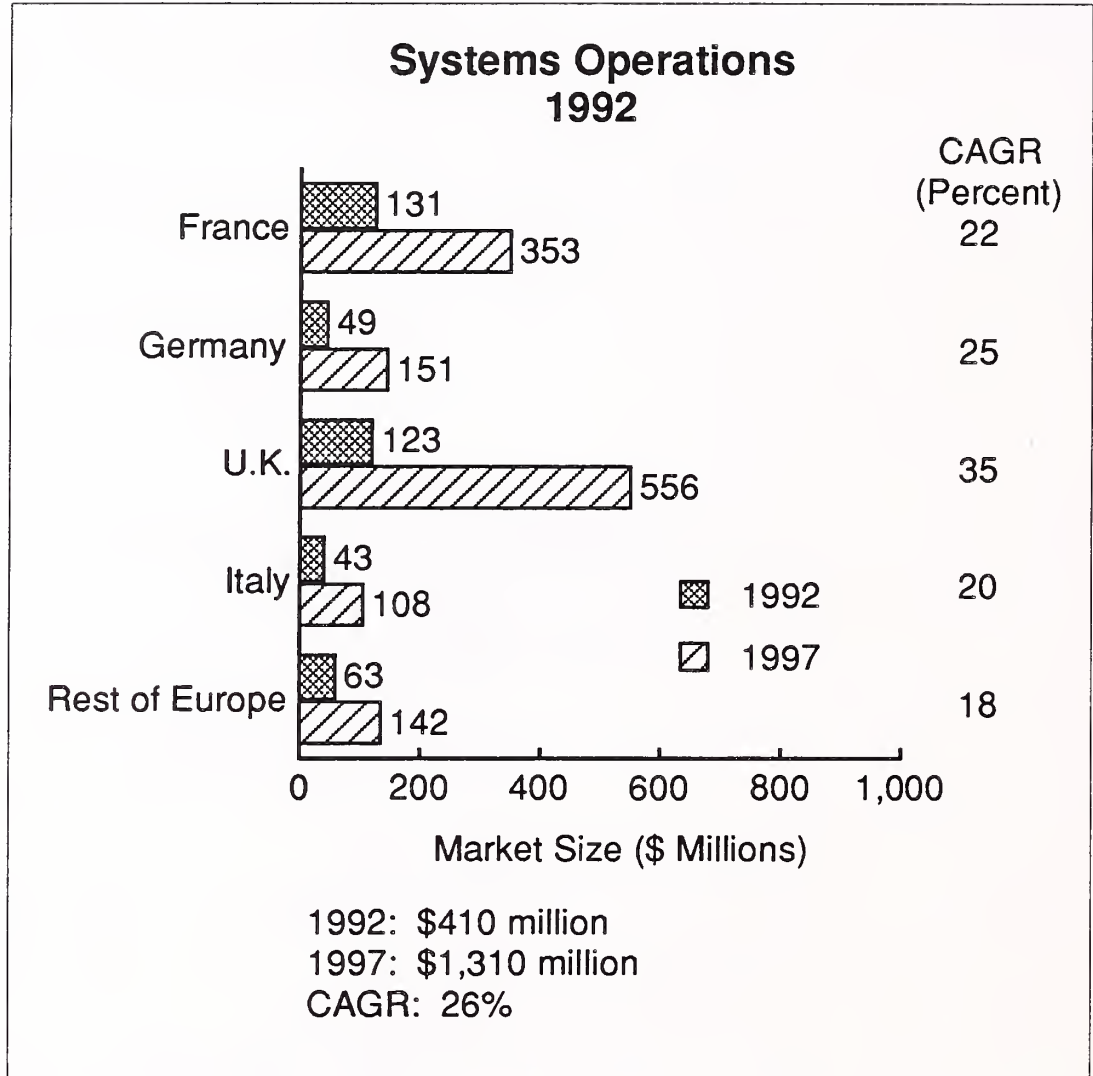
The actual outcome of this outsourcing policy will clearly be dependent on political factors, particularly in regard to timing. There is already evidence that ministers are trying to accelerate the process, even though they are being hampered by the inability of government departments to handle the workload of issuing and responding to competitive tenders. Forecasting in this area is also made less precise because much of the outsourced business is likely to be in large increments.

4. Network Services

Network services includes the provision of information through electronic information services and the provision of value-added network services (VANs).

INPUT forecasts that network services will grow at 17% between 1992 and 1997 (see Exhibit IV-16). There are no significant country differences; and being at under 4% of the total software and services market in national government, network services is not seen as a major issue within this particular industry sector.

EXHIBIT IV-16

Network Services
1992

Country	1992	1997	CAGR (Percent)
France	35	87	20
Germany	13	33	20
U.K.	33	67	16
Italy	10	25	19
Rest of Europe	39	78	15

Market Size ($ Millions)

1992: $130 million
1997: $290 million
CAGR: 17%
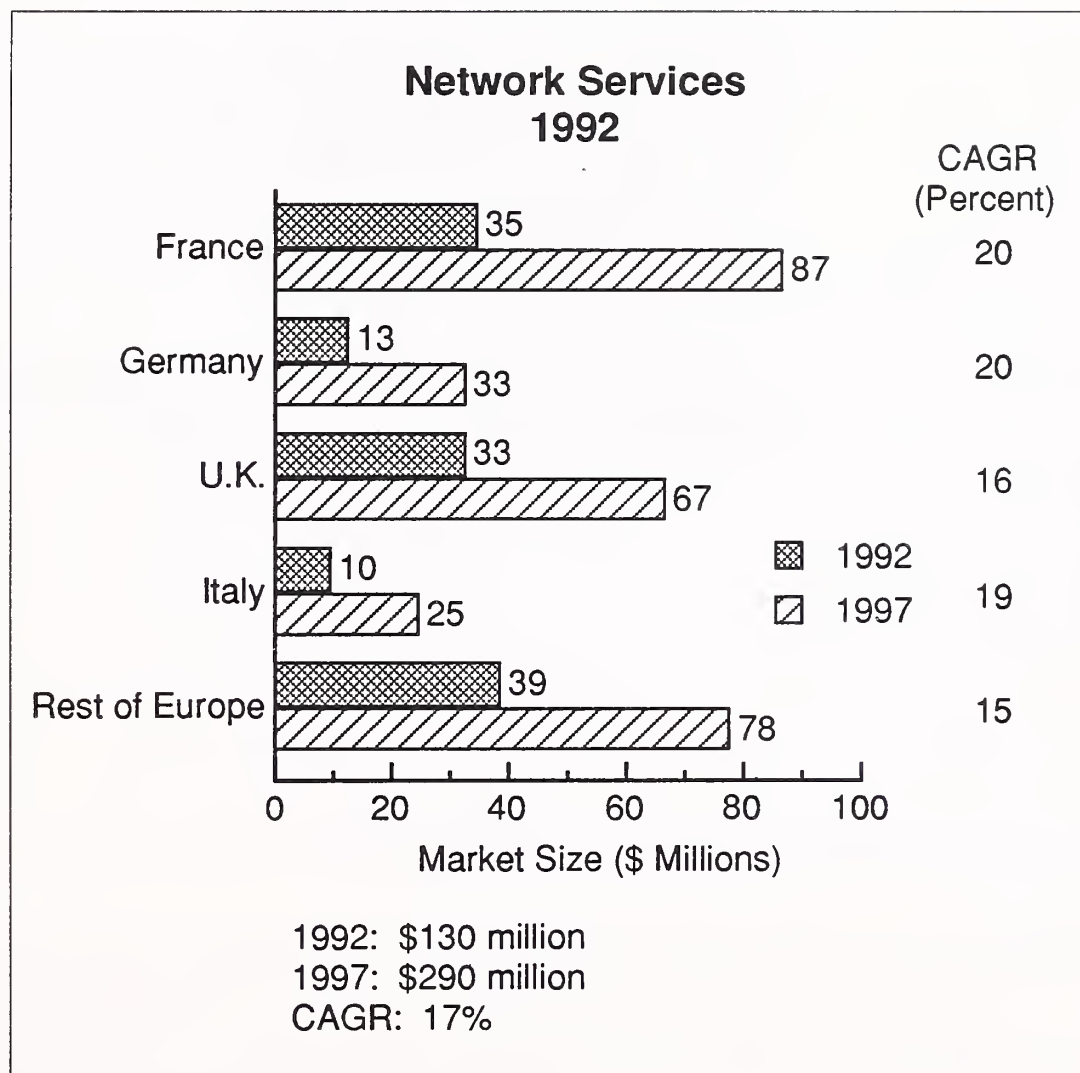
The rapid changes in the telecommunications industry and availability of high-speed digital lines could lead to an increased use of wide-area networking and value-added network services. In the U.K., for example, Racal has developed its management of the Government Data Network into a £24 million ($46 million) business, though most of this is basic network management. At present, however, there is little evidence of major opportunities for software and service vendors.

The growing use of EDI to link government departments nationally and internationally will contribute to the growth of networking services over time, but it is unlikely to be a major factor for the software and services vendors in the foreseeable future. Although projects like the EC's Inter-Institutional Integrated Services Information System (INSIS) appear to be of strategic importance, the annual expenditure is only ECU 6-7 million ($4-5 million), making them of modest commercial interest.

5. Professional Services

Professional Services includes consulting, education and training, and software development.

Professional services represent the largest delivery mode to the national government segment in Western Europe. Exhibit IV-17 shows that IN-PUT forecasts this delivery mode to grow at 7% CAGR to $3.2 billion by 1997. This is scarcely surprising because this delivery mode includes consultancy, bespoke systems design and programming. National governments are still heavily dependent on bespoke systems, making little use of standard application software products.

It is notable that the two countries with the greatest government involvement in their software and services industries (France and Italy) are also the largest consumers of professional services.

EXHIBIT IV-17

Professional Services
1992

CAGR
(Percent)

Country	1992	1997	CAGR
France	763	965	5
Germany	138	230	11
U.K.	173	202	3
Italy	517	691	6
Rest of Europe	688	1,121	10

☒ 1992
☑ 1997

Market Size ($ Millions)

1992: $2,260 million
1997: $3,210 million
CAGR: 7%

6. Application Software Products

Application software products perform functions related to solving business or organizational needs unique to a specific vertical market.

INPUT forecasts that sales of application software products in the national government sector of Europe will grow at 7% CAGR between 1992 and 1997 to $280 million (see Exhibit IV-18). This makes it the smallest delivery mode to this market sector, and is the corollary of the substantial size of the professional services delivery mode.

Although application software products should become more popular in times of economic stringency, it is the smaller countries that are most likely to adopt them. The major countries have already heavily invested in bespoke systems that require maintaining.

EXHIBIT IV-18

Application Software Products
1992

CAGR
(Percent)

Country	1992	1997	CAGR
France	33	29	-2
Germany	46	66	7
U.K.	27	29	1
Italy	39	57	8
Rest of Europe	55	100	13

▨ 1992
▱ 1997

Market Size ($ Millions)

0   20   40   60   80   100

1992: $200 million
1997: $280 million
CAGR: 7%
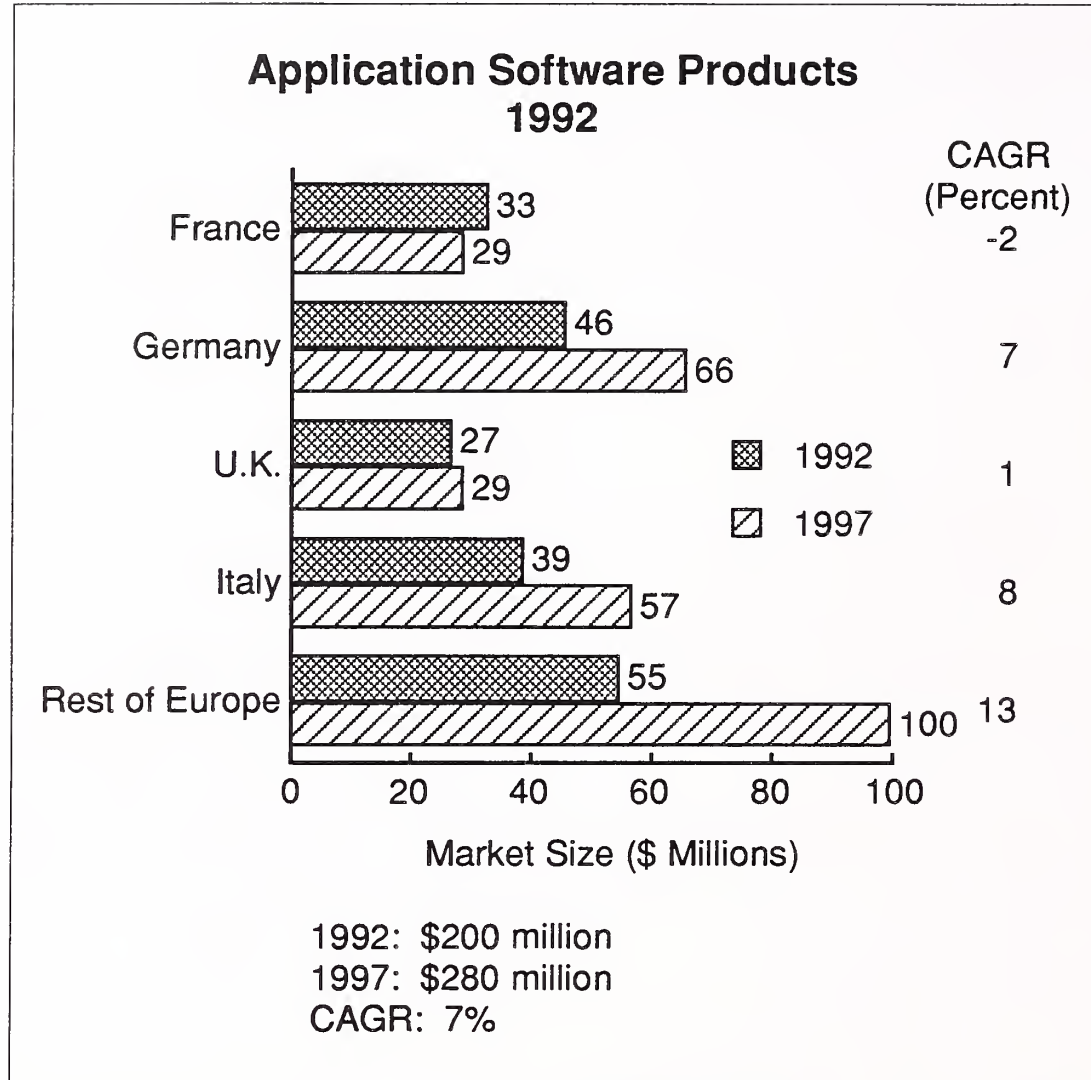
7. Turnkey Systems

Turnkey systems integrates general purpose hardware with packaged or custom software to meet specific user requirements

Exhibit IV-19 shows that INPUT forecasts turnkey systems in the national government sector of Europe to grow at 13% CAGR from $460 million to $850 million between 1992 and 1997. The largest market for this delivery mode is in Germany, where the top two suppliers (Siemens-Nixdorf and Digital) are both major hardware vendors.

The main market for turnkey systems remains defence, but opportunities in civil administration appear in such areas as document image processing.

EXHIBIT IV-19

Turnkey Systems
1992

CAGR
(Percent)

	Market Size ($ Millions)	CAGR (Percent)
France	50 (1992) / 106 (1997)	16
Germany	184 (1992) / 362 (1997)	14
U.K.	48 (1992) / 87 (1997)	12
Italy	26 (1992) / 68 (1997)	13
Rest of Europe	151 (1992) / 248 (1997)	10

Legend: ▨ 1992   ▧ 1997

Market Size ($ Millions): 0 200 400 600 800 1,000

1992: $460 million
1997: $850 million
CAGR: 13%
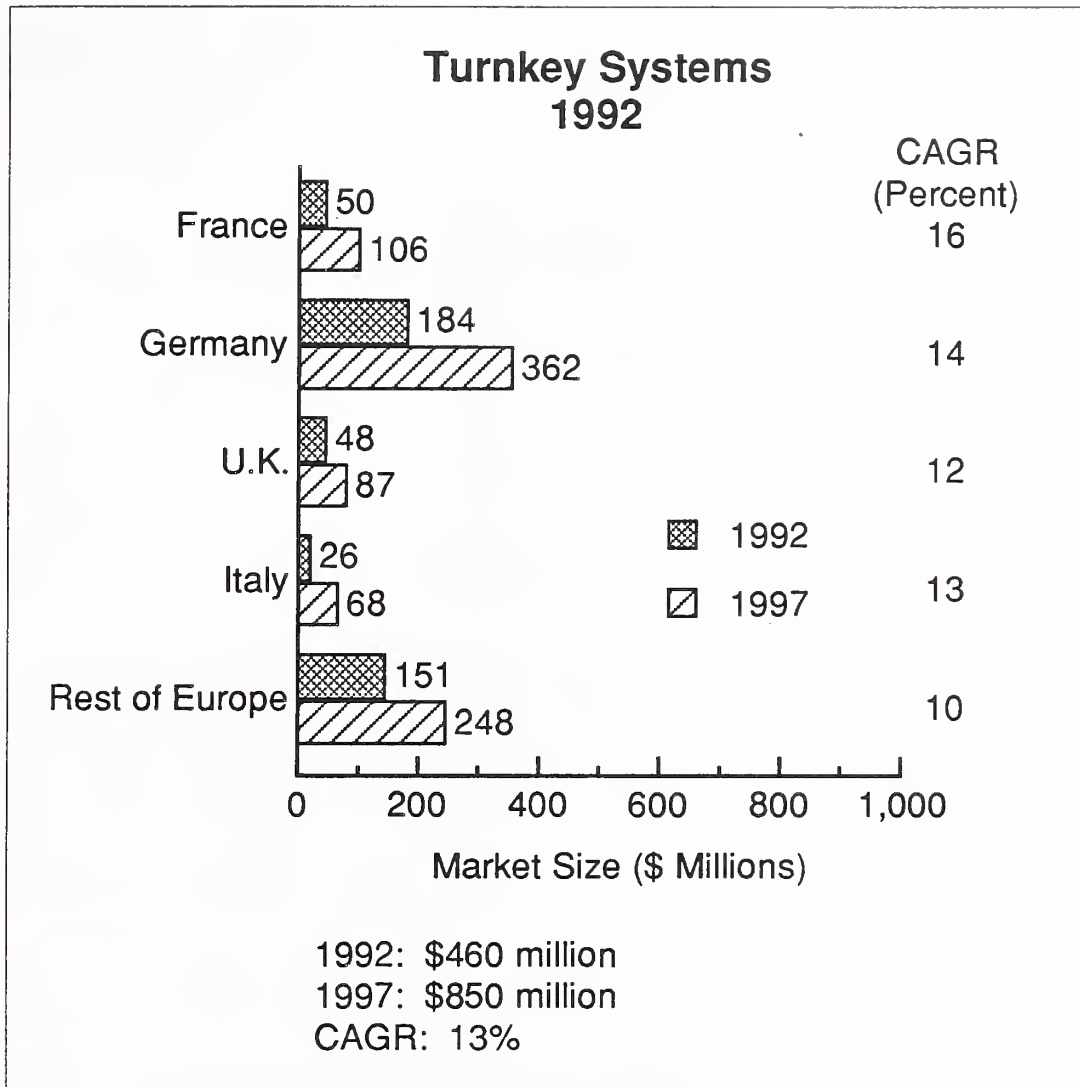
8. Transaction Processing

Exhibit IV-20 shows the size of the transaction processing markets in the major European countries between 1992 and 1997. This is a fairly stable market (4% CAGR) most developed in the Benelux and Scandinavian countries. The major countries make little use of external transaction processing services and account for under half of the total European market between them. Growth rates within these countries will remain at a relatively low level.

EXHIBIT IV-20

**Transaction Processing
1992**

CAGR
(Percent)

France — 48 / 77 — 10

Germany — 53 / 72 — 7

U.K. — 29 / 35 — 4

Italy — 82 / 99 — 4

Rest of Europe — 279 / 307 — 2

▨ 1992
▱ 1997

Market Size ($ Millions)

0   200   400   600   800   1,000

1992: $490 million
1997: $590 million
CAGR: 4%

IEIG2

V
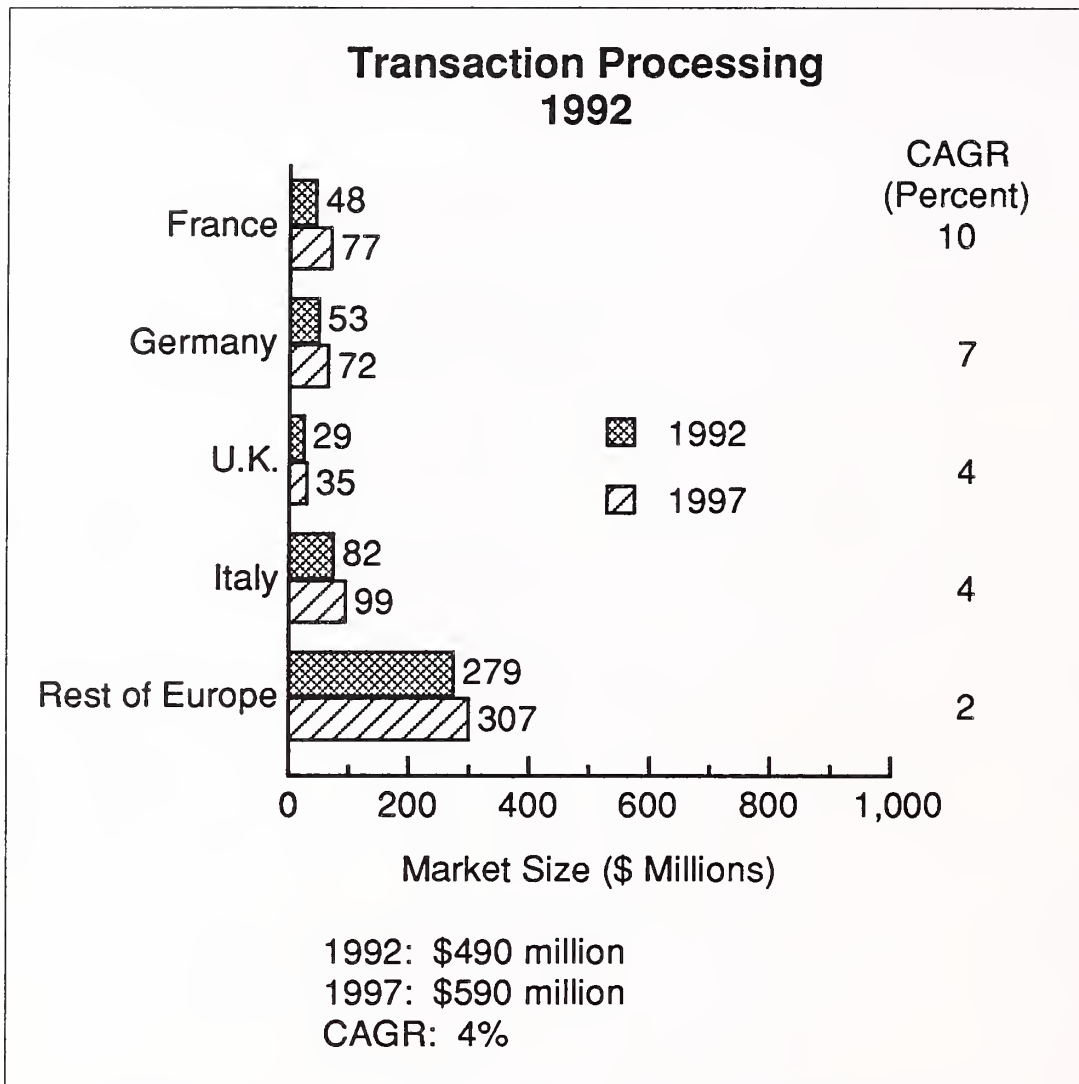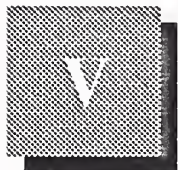
Vendor Issues and Strategies

A

Track Record is Essential

All of the suppliers that INPUT interviewed in all countries rated their established market position as a major factor in winning new business (see Exhibit V-1). It is a natural process for any large organisation to favour existing suppliers that understands its needs; major projects have enough risks without introducing untested suppliers. Furthermore, the scale of many government projects dictates that they can only be tackled by large suppliers, again narrowing the field.

EXHIBIT V-1

Success Factors in Winning New Government Business

Factor	Number of Mentions
Market Presence/Reputation	9
Political Skills/Lobbying	3
Service	2
Price	1

Number of Mentions
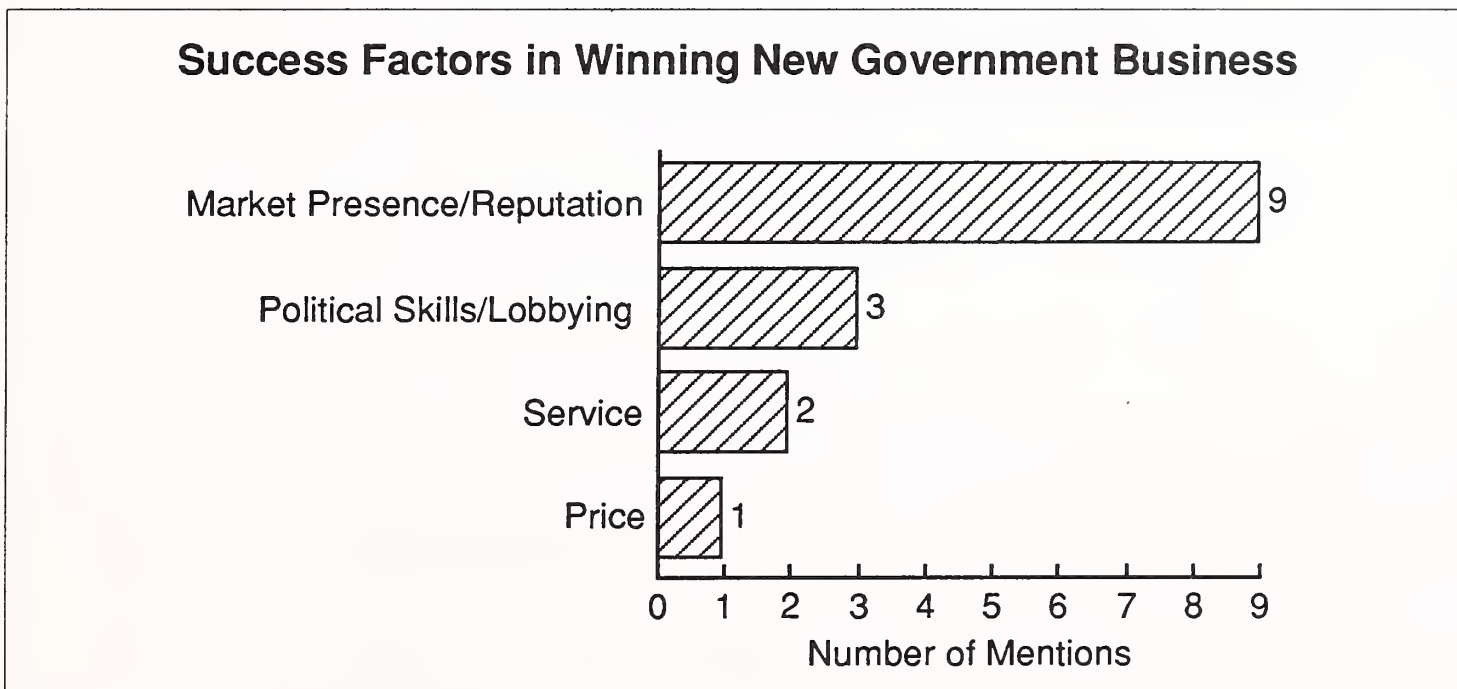
These factors ensure that there are only a few significant suppliers to national government in each country. It also makes it easier for a large software or service organisation to move between markets than for a small organisation to grow organically. Assessing the ownership profiles of groups like CGS, Sema and Finsiel shows how smaller specialist companies have become absorbed into larger organisations.

It is likely that more mergers and acquisitions will take place. Recent examples include the acquisition of Finsiel by STET and France Telecom's purchase of a stake in Sema Group.

B

Market Access

The French and Italian governments have a policy of developing and assisting local companies. Companies with local operations, but foreign ownership still faces greater challenges. However, this is reflected in the fact that, for example, eight of the top ten suppliers to French government are French owned companies (see Exhibit V-2) and five out of the top ten Italian suppliers being Italian. This contrasts with just two out of the top ten in the U.K. and four out of the top ten in Germany. A similar picture emerges from the relative shares of the government market that are held by local companies (see Exhibit V-3).

Finsiel is by far the largest supplier to central government in Europe as a result of its domination of the Italian government market, but has had little impact outside Italy.

EXHIBIT V-2

Ownership of Top Ten Government Sector Vendors
Europe, 1992

V-3

France
- Local Ownership: 8
- Foreign Ownership: 2

Germany
- Local Ownership: 4
- Foreign Ownership: 6

U.K.
- Local Ownership: 2
- Foreign Ownership: 8

Italy
- Local Ownership: 5
- Foreign Ownership: 5

Legend:
▨ Local Ownership
▨ Foreign Ownership

X-axis: 0 2 4 6 8 10
Number of Top Ten Suppliers

EXHIBIT V-3

Market Shares by Vendor Nationality, National Government
Europe, 1991

France
- 79
- 19
- 2

Germany
- 63
- 29
- 8

U.K.
- 47
- 42
- 11

Italy
- 80
- 13
- 7

Legend:
▨ Local Suppliers
▨ U.S. Owned Suppliers
☐ Other European Suppliers

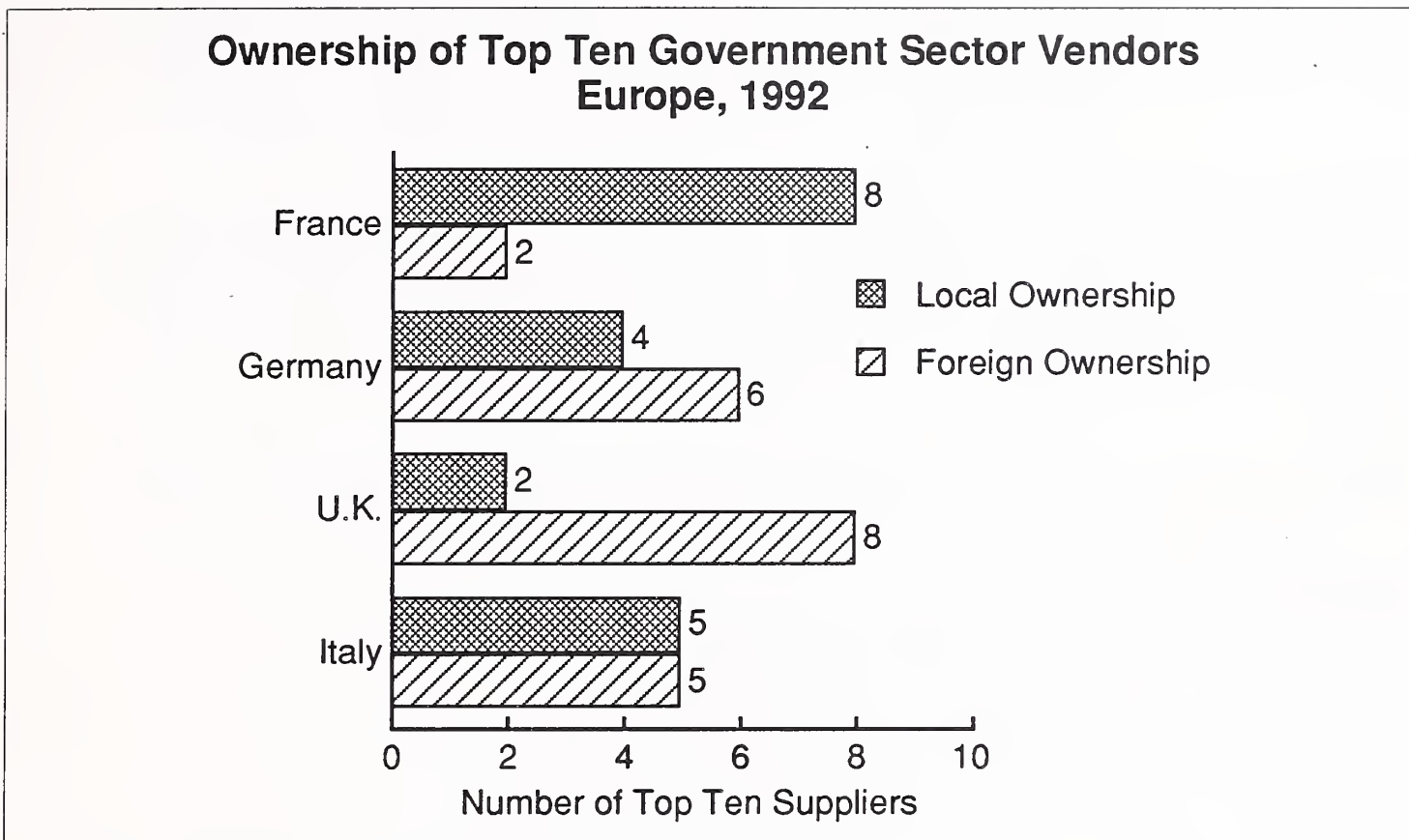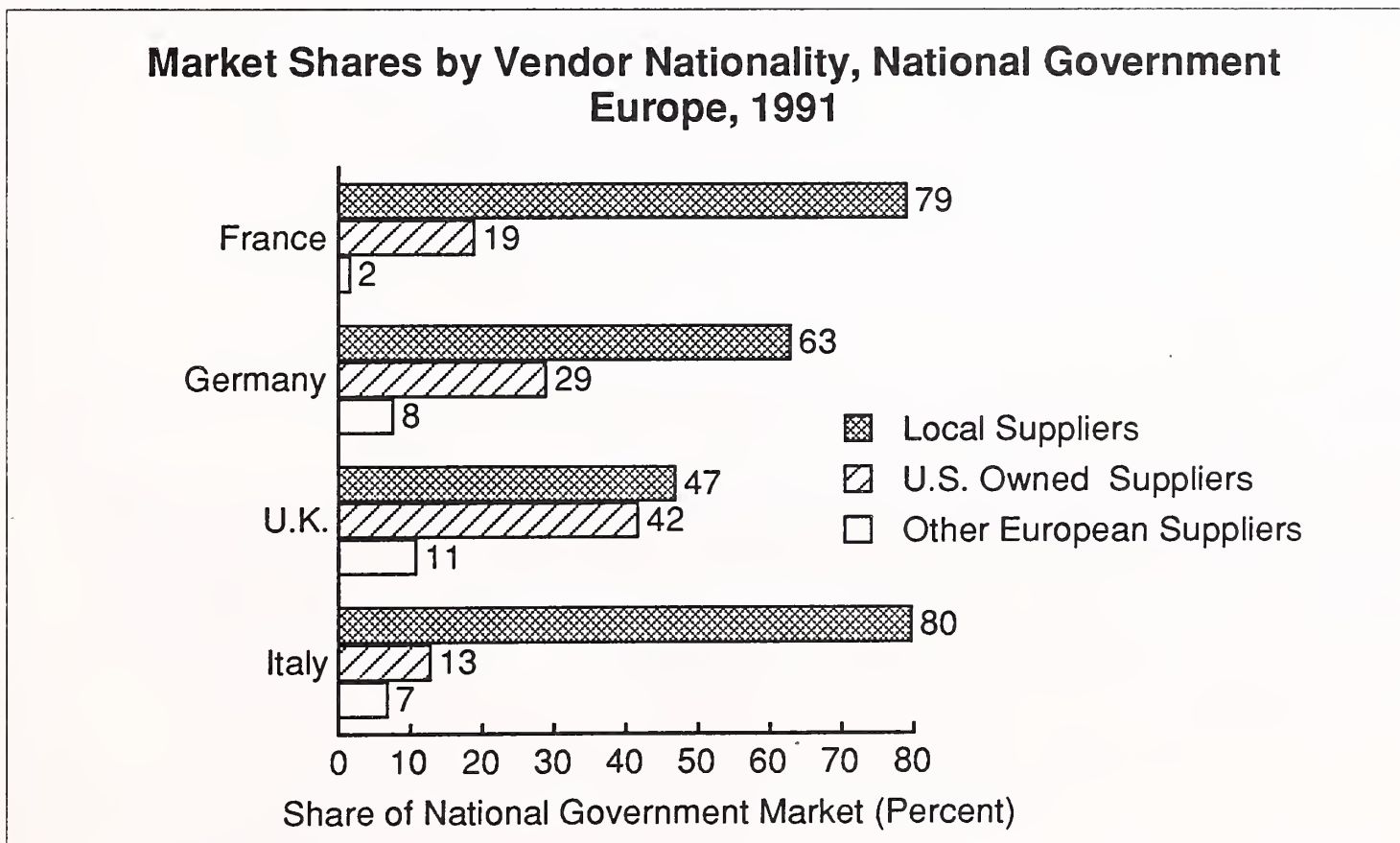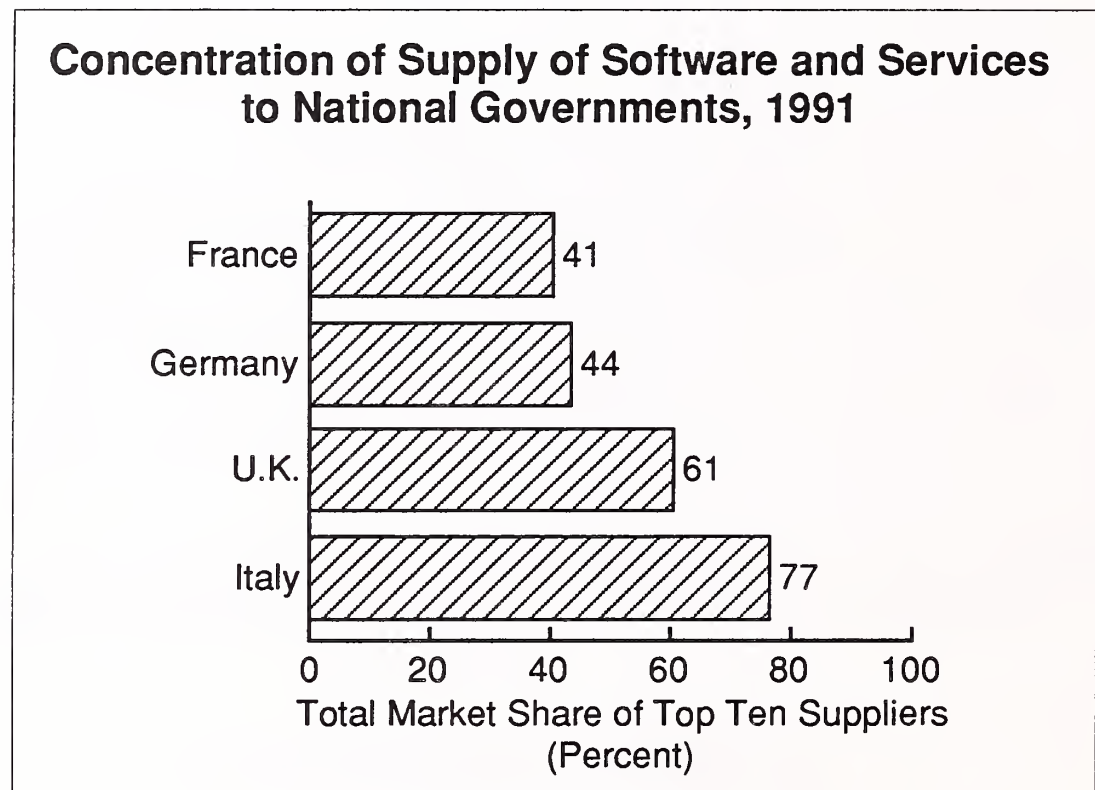X-axis: 0 10 20 30 40 50 60 70 80
Share of National Government Market (Percent)

The U.K. offers the most open government market with company owner-ship being of little consequence, provided that the operating unit has a local track record. This has led to a situation in which only two significant U.K. software suppliers to government remain independent. Although Germany has no overt policy of supporting local firms, the difficulty of acquiring German companies has provided a measure of protection.

When looking at the concentration of power in the market place, Italy clearly has the greatest concentration with the top 10 companies account-ing for 77% of the national government market (see Exhibit V-4). The U.K. has the second highest concentration at 61%, but has the largest penetration by U.S. companies of any of the major European countries.

EXHIBIT V-4

Concentration of Supply of Software and Services to National Governments, 1991

France 41
Germany 44
U.K. 61
Italy 77

Total Market Share of Top Ten Suppliers
(Percent)

C

The PTT's Enter the Software and Services Business

The telephone companies are still mainly government controlled in Europe and have high-level access to all departments. They require high-level software skills as the telephone industry moves from being simply a hardware business of copper wires and switches to a software business of mobile users and added value facilities.

In the U.S., AT&T's purchase of NCR gave it control of one of the world's leading UNIX system vendors which was already a major supplier to U.S. telephone companies. In Europe, because there are no equivalent independent hardware companies, the focus is coming on the major software and service companies.

Examples include France Telecom's stake in Sema and the recent acquisition of Finsiel by STET. The motivations behind these deals are interestingly different. In the case of Sema it appears that France Telecom is trying to protect the French software industry from foreign ownership, following Daimler-Benz's stake in CGS. In Finsiel's case, the Italian government has clearly taken an opportunity to use Finsiel as a vehicle for channelling cash from STET back to the government.

There are significant advantages for a large professional services company to be closely associated with a major PTT. The professional services company gains a large captive market, high level access to government and access to substantial funding. The issue of funding is not immediately apparent when the software companies themselves are generally cash positive. The outsourcing of government functions will, however, require companies to have a large capital base if they are to take on the large system management opportunities. Similarly, the increasing scale of software projects means that the demand for working capital will grow.

1. Hardware Vendors Are Largely Ignored

Although all the major hardware vendors are striving to build software and services businesses to compensate for their declining hardware businesses, it is interesting that some of the largest "pure" software and services vendors feel that they may have left it too late. Few of the hardware vendors have any real track record of installing substantial application software systems in central government and may find it difficult to be viewed as truly independent professional services vendors. At a time when they are almost all seen to be generating less revenue through their traditional businesses, they do not make attractive partners for national governments - unless they are indigenous suppliers like Bull in France or Siemens-Nixdorf in Germany.

2. Large Overseas Competitors Arrive

A potent threat comes from the large U.S. software and services companies like Electronic Data Systems and Computer Science Corporation. EDS, as an example, has a very strong track record in U.S. government administration and is a substantial organisation by any measure, with over $7 billion in annual revenues. It has adopted the "standard" approach of buying its way into the European market through its acquisition of SD-Scicon in the U.K. and GFI in France. In the U.K., this approach is working well due to the lack of focus on company ownership, but EDS-GFI finds it difficult to keep a French identity with its U.S. parent.

D
New Competitors Move Beyond System Operations to Business Operations

One of the advantages of a large organisation is that it can afford to take on tasks that are too large for competitors. EDS, for example, tries to persuade government departments to outsource whole functions rather than just the IT aspect of a function.

The success or other outcome of this approach will occur first in the U.K. where there is a strong momentum for outsourcing government functions along the U.S. model. If all the major European countries follow the U.K. lead in large-scale outsourcing, then size and business management skills would become serious competitive factors alongside traditional technical skills.

E
Technology

The technology characteristics of the national governments market are shown in Exhibit V-5. The importance of UNIX and standard communications protocols between systems is well established.

EXHIBIT V-5

Important Technology Issues in National Government

Technology Issue	Rating
UNIX	5
Standard Communication Interfaces	4
Client/Server	3
Downsizing of Mainframes	3
Use of Personal Computers	3
Distribution Processing	2

1=Low, 5=High

Rating
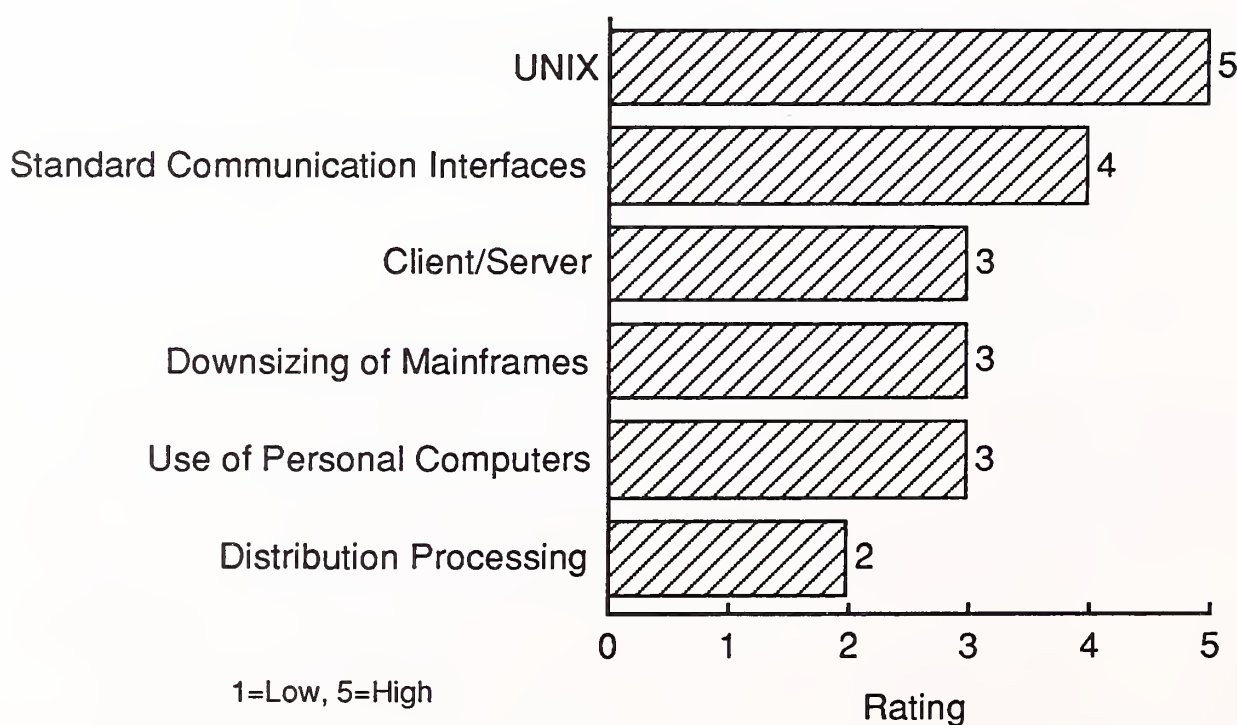
There is a clear trend to create new applications on UNIX platforms when possible, despite the large number of software systems already residing on proprietary mainframes that cannot easily and economically be migrated. Although the focus of effort for software organisations has moved strongly towards UNIX and downsizing, the proprietary mainframes have not yet been displaced.

The relative importance of technology issues to the government sector is illustrated by the number of respondents who raised the issue, as was illustrated in Exhibit V-5.

A consequence of the drive for new systems on UNIX platforms, while retaining major proprietary applications, has been the growth of client/ server systems. This technology has been discussed more than implemented because it represents serious practical challenges. However, it is clear that the major software organisations are increasingly prepared and able to offer this technology in government markets.

Client/server systems will continue to grow in importance in government for three main reasons:

- Client/server provides the opportunity to "buffer" communications between otherwise incompatible systems.

- Government departments will increasingly need to provide computer-based support to staff at the interface with the general public to allow them to be more responsive and less bureaucratic.

- Client/server systems allow full use to be made of personal computers for improving the user interface without abandoning the power of a central computing complex.

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VI

The Opportunities

A

Overview

An overview of the major markets and opportunities is given in Exhibits VI-1 and VI-2.

Exhibit VI-1 shows the delivery modes by country that will contribute most to incremental growth of the software and services market in national government between 1992 and 1997. In essence, the segments highlighted here are those that are most accessible to new vendors.

EXHIBIT VI-1

National Government Sector
The Growth Opportunities, 1992-1997

	France	Germany	U.K.	Italy	Rest of Europe
Systems Operations	**	*	****		
Systems Integration	**	***	**	*	*
Professional Services	*	*		*	****

Exhibit VI-2 shows the delivery modes by country that will represent the largest absolute software and services markets in the national government sector in 1997. Although some delivery modes (notably professional services) are very large, if the growth shown in Exhibit VI-1 is small, it will be more difficult for incumbent suppliers to be displaced than is the case when there is significant incremental growth.

EXHIBIT VI-2

National Government Sector
Main Market's Relative Sizes, 1997

	France	Germany	U.K.	Italy	Rest of Europe
Systems Operations	**	*	**		
Systems Integration	**	**	**		*
Professional Services	****	*	*	***	*****
Turnkey Systems		*			*

B

U.K. Systems Operations—The Big Chance

The largest incremental opportunity in the national government sector for European software and services companies during the next half decade is provided by the U.K. government's "market testing" programme. This gives private sector companies the opportunity to compete directly with existing public sector service providers. The main beneficiaries will be providers of systems operations services that are able to take over work currently being done in-house by government departments.

INPUT forecasts a 35% compound annual growth rate for systems operations services in the U.K. national government between 1992 and 1997 (see Exhibit IV-18). That will take the U.K. systems operations in national government from $123 million in 1992 to $556 million in 1997— over $400 million p.a. of incremental business. This compares with a total government IT spend of about $3 billion in 1991. There is some uncer-

tainty, however, in forecasting the rate at which such business will be transferred to the private sector. Some of the individual contracts being discussed are potentially worth in excess of $100 million p.a. Apart from the obvious fact that internal departments are being allowed to bid against the commercial vendors, some of the projects involve data, such as tax revenues, which may be deemed too sensitive to release at this stage.

The only other country to show significant growth in systems operations is France (see Exhibit IV-18), which will show 22% growth from $131 million in 1992 to $353 million in 1997—over $200 million of incremental business.

C

Professional Services—The Bedrock

Professional services will continue to be the mainstay of software and services in the European national government sector (see Exhibit IV-16). In 1992, professional services alone will account for 47% of the national government expenditure on software and services in Europe. Although this will drop to 37% by 1997, that will still represent a $3.2 billion opportunity, 50% larger than the next largest delivery mode, systems integration.

D

Systems Integration—Good Growth in All Countries

The Eastern Lander present a particular problem in Germany, but all countries face the challenge of installing distributed systems to add operational capability to existing mainframe-based recording systems. It is no longer acceptable for government departments to deprive their people of fast, efficient information systems. In general, these new systems are UNIX-based minicomputers that have to interface with existing mainframe systems. The scale of the opportunity can be seen in INPUT's forecasts for the growth of expenditure on systems integration in all countries.

INPUT forecasts that the systems integration expenditure by national governments will grow by an average of 19% across Europe, from $860 million in 1992 to over $2 billion in 1997 (see Exhibit IV-17). The fastest growth (24% CAGR) will be in Germany where the need to integrate the Eastern Lander continues to be a pressing concern. Incremental growth of over $300 million p.a. is expected between 1992 and 1997.

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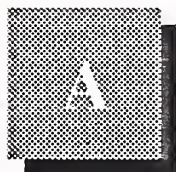
National Government Sector Vendor Questionnaire

Vendor _____

Location _____   Phone _____

Respondent _____   Title _____

Good morning/afternoon. My name is _____ I'm calling on behalf of INPUT, which is researching the key issues and opportunities for computer software and services in the national government and defence markets of Western Europe. We would appreciate your help and opinions on these matters and will be pleased to send you a summary of our reports findings if you can spare the time to help our survey.

If NO, Who is the best person to speak to?
          *(Name)*_____ *(Phone)*_____

*or When would be a better time to call?*_____

There are three groups of questions:

- Changes and Trends in the national government and defence sectors
- Trends and growth in information services within these sectors
- Competition

SECTOR TRENDS

1. What are the main issues or trends that you believe will affect the national government and defence markets over the coming 5 years?

2. What impact will these changes have on your business?

3. Are there any specific technology-driven changes underway or apparent?

4. How is your company responding to these technology changes?

INFORMATION SERVICES TRENDS

INPUT divides the software and services industry into six segments: network services, software products, professional services, systems integration, turnkey systems and facilities management.

5. If I give you the list again, can you tell me the importance of each of these sectors to your business in national government and defence, either by revenue (if known) or as a rating between 0 and 5 where 0 means no importance and 5 means extremely important.

6. What would these ratings be if we were discussing your company's total business?

	Nat. Govt	Defence	Total Co.
Network Services	_____	_____	_____
Software Products	_____	_____	_____
Professional Services	_____	_____	_____
Systems Integration	_____	_____	_____
Turnkey Systems	_____	_____	_____
System Operations	_____	_____	_____

7. What is your total revenue from software and services sales to national government and defence?

National government Revenue_____ Defence revenue_____

8. What growth rates have you experienced over the past 2 years, and what do you expect over the coming 2 years?

	- 2 years	+2 years
National Govt.	_____	_____
Defence	_____	_____

9. What are the key growth promoters for these segments?

	Nat. Govt	Defence
Network services	_____	_____
Software products	_____	_____
Professional services	_____	_____
Systems integration	_____	_____
Turnkey systems	_____	_____
System operations	_____	_____

10. What are the main inhibitors to growth in these segments?

	Nat. Govt	Defence
Network services	_____	_____
Software products	_____	_____
Professional services	_____	_____
Systems integration	_____	_____
Turnkey systems	_____	_____
System operations	_____	_____

11. How are these segments being affected by changes in other areas of information technology?

12. What have been your company's most notable recent achievements in selling to national government or defence?

13. What major projects are currently out to tender?

14. Are you expecting any significant opportunities to arise that are not yet out to tender.?

15. What are the key factors for success in these markets?

COMPETITION

16. Who do you see as your main competitors? What do you believe is their market share compared to yours in national government and defence?

17. Which of these competitors is improving or declining significantly in government and defence?

18. How is the competitive environment changing? (New vendors, exiting vendors, new alliances, M& A activity?)