STRATEGIC MARKET PERSPECTIVE

Vertical Markets Forecast – Europe 1995–2000

Market Analysis Programme – Europe

Vertical Markets Forecast 1995-2000

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Abstract

There is increasing demand for information on software and IT services trends within vertical markets across Europe. Organisations have restructured over the last five years in order to target *particular* sectors with their products and services.

This report provides market forecasts for IT services within specific vertical sectors - in terms of market size and growth rates. The report covers Europe as a whole, France, Germany, UK and Italy, for the period 1995-2000. These forecasts include the following sectors:

- Discrete Manufacturing
- Process Manufacturing
- Transportation
- Utilities
- Telecommunications
- Retail Distribution
- Wholesale Distribution
- Banking & Finance
- Insurance
- Healthcare
- Education
- Central & Local Government
- Business Services.

In addition, there is analysis by cross-industry sector comprising accounting, education and training, engineering and scientific, human resources, office systems and planning and analysis.

Each sector forecast also gives growth data on specific elements of the IT services market - including systems integration, professional services, processing services, outsourcing, turnkey systems, application software and network services. There is also commentary on the key business drivers within the major vertical markets.

Market Analysis Programme — Europe

Vertical Markets Forecast, 1995-2000

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C   Sector Summary in Local Currency — DM Millions

I

Introduction

This report is part of INPUT's European Market Analysis programme for the computer software and services industry.

There is increasing demand for information on trends within vertical markets across Europe. This is a result of organisations restructuring in order to become more aligned with their customer base. Often, this results in companies emphasising specific vertical divisions, as opposed to geography or product categories.

This report is designed to assist marketing, planning or strategy executives in analysing specific vertical markets - in particular, their size and potential growth rates.

The report provides market sizes for 1994 and 1995 with forecasts for each year through 2000.

A

Scope of the Report

This forecast contains an analysis and forecast of the total IT budget, including both internal and external IT-related spending. This is split into:

- Equipment sales — expenditure on hardware products

- Equipment services — expenditure on equipment maintenance and environmental services

- Software products — all expenditure on systems software products and application software product licenses

- Other information services — all expenditure on other services such as professional services, systems integration, outsourcing, processing services, network services, turnkey systems and systems software support products and application software support services

- Communications — all expenditure on IT-related telecommunications equipment or services

- Facilities — IT budget expenditure on overheads such as space, heating, lighting, furniture, vehicles etc.

- Staff — direct in-house staff costs including any temporary contract labour.

1. Information Services Delivery Modes

INPUT defines eight delivery modes that are referred to in this report as the *software and services market* and an additional delivery mode, *equipment services*, which, when included with the other eight, are collectively referred to as the *information services market*. The complete list is as follows:

- Professional services

- Systems integration

- Systems operations

- Processing services

- Network services

- Turnkey systems

- Systems software products

- Application software products

- Equipment services.

Spending on software and services is assessed and forecasted in relation to anticipated changes in the level of overall IT budgets. The market is additionally analysed by cross-industry sectors and generic product sectors.

2. Industry Sectors

These include the following vertical markets:

- Discrete Manufacturing

- Process Manufacturing

- Transportation

- Utilities

- Telecommunications

- Retail Distribution

- Wholesale Distribution

- Banking & Finance

- Insurance

- Healthcare

- Education

- Central & Local Government

- Business Services.

3. Cross-Industry Sectors

INPUT has identified seven cross-industry market sectors. These sectors involve multi-industry applications:

- Accounting

- Education and training

- Engineering and scientific

- Human resources

- Office systems

- Planning and analysis

- Other cross-industry.

4. Generic Sectors

Certain sectors or sub-sectors are considered independent of any industry or cross-industry influence. These are:

- Equipment services

- System software products

- General utility processing services

- General electronic information services.

The full definition of each sector is given in INPUT's definition of terms which is included as an appendix to this report.

B
Methodology

INPUT's methodology for market analysis remains consistent with that used in past years. Vendors and users are surveyed to determine what is being spent on software and services and to anticipate the likely trends both in the short and long term.

1. Sources

This report is based on research activities conducted by INPUT during 1995:

- A vendor research programme of interviews with over 600 software and service vendors across Europe

- Further vendor and user interviews to determine trends and opinions within specific vertical markets

- INPUT's continuous analysis of the delivery modes and vertical industry sectors comprising the information services market.

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

2. Market Sizing

The process used to establish the base year market size is shown in Exhibit I-1.

Exhibit I-1

Base Year Market Sizing

MAI5

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                    ┌──────────────────┐
                    │     Vendor       │
                    │    Revenue       │
                    │    Surveys       │
                    └──────────────────┘
                             │
  ┌──────────────┐           ▼              ┌──────────────────┐
  │  IS Industry │        ╭──────╮          │ User Expenditure │
  │   Research   │        │ Data │          │     Survey       │
  └──────────────┘        │Cleansing        └──────────────────┘
              ╲           ╰──────╯          ╱
               ╲              │            ╱
                ╲             ▼           ╱
                 ╭─────────────────────────╮
                 │        Project          │
                 │   Sample to Industry    │
                 ╰─────────────────────────╯

17 Countries                                            5 Regions

   ╭────────────╮                          ╭────────────────╮
   │ 9 Delivery │                          │  22 Vertical & │
   │   Modes    │                          │   CI Markets   │
   ╰────────────╯                          ╰────────────────╯
           ╲          ╭───────────────╮          ╱
            ╲────────▶│ Aggregation of│◀────────╱
                      │Vendor Revenues│
                      ╰───────────────╯
                             │
                             ▼
                      ╭───────────────╮
                      │ Adjustment for│
                      │  Distribution │
                      │   Channels    │
                      ╰───────────────╯
                             │
                             ▼
                      ╭───────────────╮
                      │     User      │
                      │  Expenditure  │
                      ╰───────────────╯
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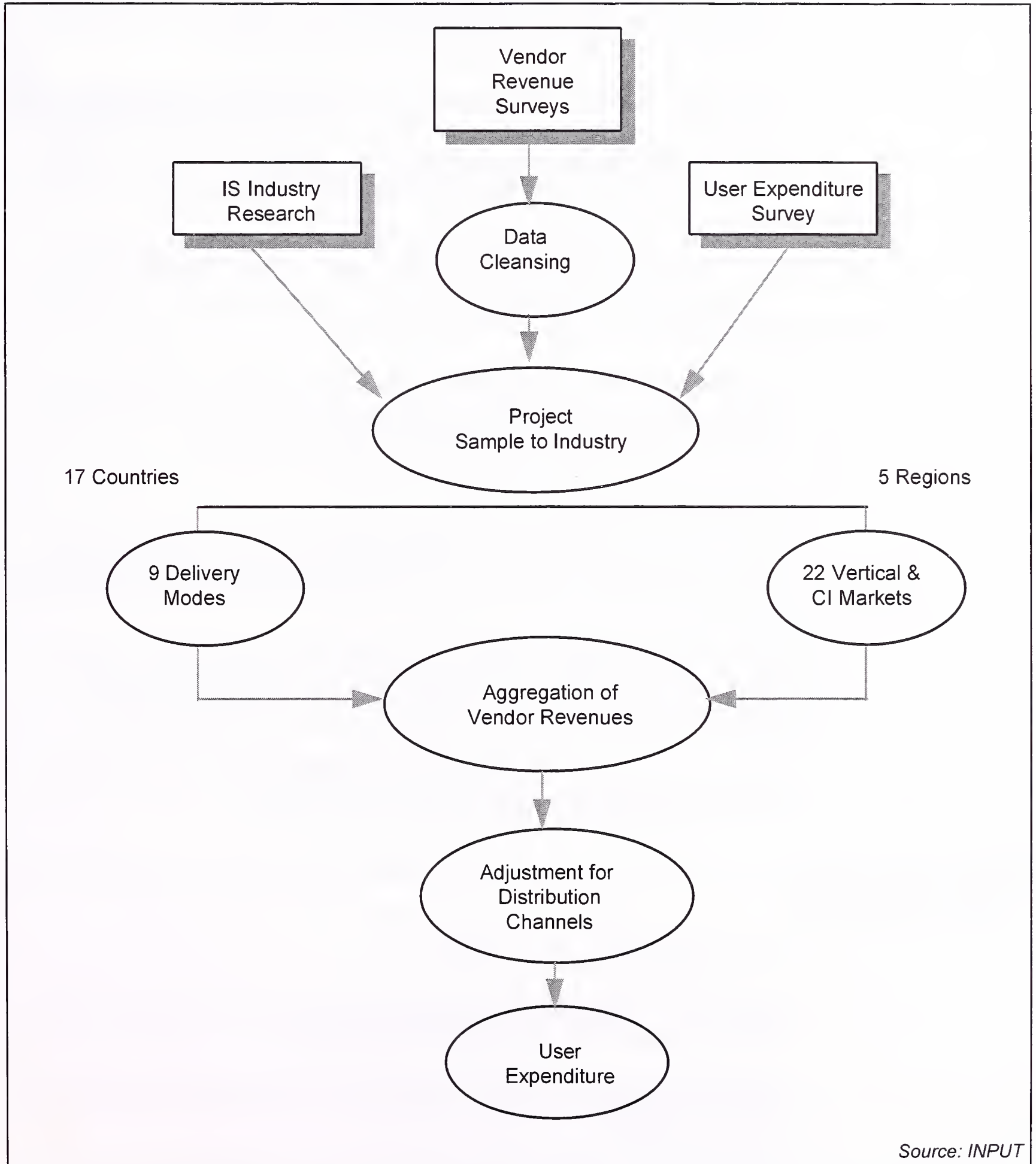
Source: INPUT

INPUT determines previous year software and services revenues for nine delivery modes and 22 vertical and cross-industry sectors for over six hundred vendors across Europe. This research process is accomplished through interviews, use of public data such as press articles and annual company reports, and estimates by INPUT consultants.

The industry sector, delivery mode and sub-sector revenues of each vendor are recombined to ensure there is no double counting or overlap. Initial vendor data is extrapolated to forecast country market revenues based on INPUT's view of the contribution expected from minor vendors.

Adjustments are made to remove distribution channel overlap and to ensure that captive information is excluded. Captive markets are those revenues which a vendor receives from within the vendor's parent group of companies.

Demographic data is also used to validate market sizes. INPUT uses sources published by the European Commission to check trends in sector expenditures and employee levels in different industries.

3. Market Forecasts

INPUT surveys IS executives and finance directors to determine their projected expenditure levels on IT in general and software and services in particular.

The market model which forms the basis for these forecasts includes a GDP deflator (adjustment for predicted inflation) for each country. Economic growth assumptions are also factored into the forecasts.

Vendor interviews are conducted to establish market opinion and key business opportunities within each vertical market.

C
Report Structure

The report is structured as follows:

Chapter II is an executive overview examining the key business drivers within the major vertical markets across Europe.

Appendix A contains detailed vertical market forecasts for Europe in US dollars and ECUs.

Appendices B, C, D and E give detailed vertical market forecasts for France, Germany, UK and Italy repectively. Again, this is provided in local currency, US dollars and ECUs.

Appendix F contains the economic assumptions used by INPUT in the compilation of these forecasts.

Appendix G contains INPUT's definition of terms.

D
Related INPUT Reports

1. European Market Sector Reports

- European Market for Software and Services 1995-2000

- French Market for Software and Services 1994-1999

- German Market for Software and Services 1994-1999

- Italian Market for Software and Services 1994-1999

- UK Market for Software and Services 1994-1999

- Systems Integration Market Forecast 1995-2000

- Software Product Support - Market Trends and Forecast 1995-2000

- Outsourcing Market Analysis and Forecasts 1995-2000

- Customer Services Market Forecast 1995-2000

- Industry Sector Forecast Database 1994-1999

2. US Market Sector Reports

- Information Services Annual Report

- Forecast Compendium

- Professional Services Market

- Systems Software Product Market

- Processing Services Market

- Outsourcing Market

- Application Solutions Market

- Network Services Market

- Equipment Services Market

- Industry Market Reports

- Cross-Industry Market Reports

3. Worldwide Sector Reports

Worldwide Market Forecast 1995-2000
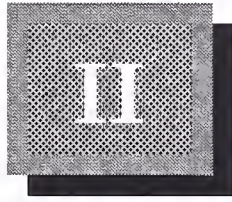
Executive Overview

A

Industry Dynamics in Europe

All over Europe manufacturers are finding ways to improve their competitiveness. Often this simply means cutting jobs. The French steel industry has cut its workforce by 75% over the last 20 years; Germany's motor industry has cut 150,000 jobs since 1990 and the trade federation sees 100,000 disappearing by 2000. Employment in large manufacturing firms in Italy has fallen 20% since 1990.

Other options include concentrating on what a company does best: Volvo has spun off subsidiaries and focused on making vehicles. Sometimes, the answer has been to move operations to countries where labour costs are low: Philips, the world's second-largest supplier of computer monitors, is moving this business to Taiwan. Restructuring usually involves a combination of these: Daimler has thrown itself into cutting jobs and reforming work patterns at Mercedes; merging its satellite and missile businesses with France's Aerospatiale; and selling off parts of AEG, its electronics subsidiary.

Statistics on European competitiveness support the view that manufacturers are keen to cut labour costs - although they are still far behind America. One estimate predicts that by 1998 large European companies will source only 58% of their purchases in their home markets, compared with 70% in 1988. Parts bought in foreign markets can cost up to 15 to 30% less than those produced in domestic markets.

OECD research shows that the proportion of the workforce changing jobs in France, Sweden and Italy (but not Germany) is at least as high as the United States.

The European perspective on restructuring or "downsizing" in America argues that it does nothing to improve overall long-term performance.

Europe's conciliatory approach has made it easier to keep the workforce motivated, although when Europe's managers have 'wielded the knife' it has been vigorous.

Restructuring has occurred fastest in industries where the threat of imports has been greatest, such as consumer electronics, white goods and tyre making. In general, industries which have changed least are those which are either owned or heavily protected by government. The ultimate protection is state ownership. Continental Europe has been slow to privatise. The privatisation of Britain's utilities and the mergers that followed show the scope for rationalisation. Deutsche Telekom, due to be privatised this year, says it needs to lose 60,000 jobs by 2000.

European service industries are just as inefficient. Although cross-border service statistics are difficult to produce, an OECD study found that between 1979 and 1994 the productivity of Germany's much regulated retailers grew only a third as fast as that of Japanese retailing, which has been liberalised. Other pertinent examples include:

- Between 1991 and 1994 the cost of telephone calls for business users fell by 10% in competitive markets, such as Britain; where there are monopolies prices have fallen at half that rate

- Although construction employment in America grew in line with output, it lagged in France, Germany and Italy, where zoning laws and building codes are strict

- The OECD found that retailing and distribution represents over 20% of American jobs, compared with 11% in Germany and 14% in France

- Between 1985 and 1993 the cost of air travel in deregulated America grew by 12%, compared with 40% on European flag carriers

- One study found that the productivity of German banks in 1992 was only 70% of that in America — though British banks were even less efficient.

Europe is now trying to liberalise some of its service industries but progress is slow. The Belgian government has encouraged the country's banks to merge in order to avoid the job losses threatened by a foreign takeover. France has restricted retailing to protect small shops, while Germany hesitated over even a modest increase in shop opening hours. Service industries across Europe are weighed down by minimum wages, high taxes and social charges.

B

Specific Vertical Markets — Key Business Drivers

This section outlines the key business drivers and opportunities within major vertical markets across Europe.

Overall European Trends

Exhibits II-1 to II-4 illustrate in summary form the following characteristics for specific sectors across Europe:

- Key business pressures facing these vertical markets

- Key actions needed by organisations in these sectors

- Most and least important IT challenges.

Exhibit II-1

Principal Business Pressures

Banking & Finance	Insurance	Discrete Mfg	Process Mfg	Retail	Wholesale	Logistics
Improved customer service levels	Improved customer service levels	Improved partnerships with major suppliers	Improved international coverage	Competition for distribution channels	Improved partnerships with major suppliers	Improved international coverage
Interworking with major customers	Cost competition	Interworking with major customers	Improved support of international activities	Cost competition	Interworking with major customers	Cost competition
Improved international coverage	Need to introduce new services	Introduction of new models/servi ces	Improved customer service levels	Improved partnerships with major suppliers	Improved customer service levels	Interworking with major customers
Improved support of international activities	Competition for distribution channels		Interworking with major customers	Improved customer service levels	Competition for distribution channels; Cost competition	Improved customer service levels

Source: INPUT

Exhibit II-2

Key Actions

Banking & Finance	Insurance	Discrete Mfg	Process Mfg	Retail	Wholesale	Logistics
Improve customer service	Improve customer service	Become more efficient	Become more efficient	Improve customer service	Improve customer service	Improve customer service
Increase core business focus	Increase speed of introduction of services	Increase flexibility of business processes	Improve customer service	Become more efficient	Become more efficient	Reduce cost of business processes
Become more efficient	Become more efficient	Reduce cost of business processes	Reduce cost of business processes	Increase core business focus	Reduce cost of business processes	Become more efficient
		Improve customer service		Improve effectiveness of business processes		Increase flexibility of business processes

Source: INPUT

Exhibit II-3

Most Important IT Challenges

Banking & Finance	Insurance	Discrete Mfg	Process Mfg	Retail	Wholesale	Logistics
Applying IT to the business	Applying IT to the business	Applying IT to the business	More cost-effective use	Using IT for competitive advantage	More cost-effective use	Applying IT to the business
Using IT for competitive advantage	Adopting more distributed architecture	More cost-effective use	Applying IT to the business	Applying IT to the business	Applying IT to the business	Using IT for competitive advantage
More cost-effective use	Improve focus of IT department	Using IT for competitive advantage	Using IT for competitive advantage	More cost-effective use	Using IT for competitive advantage	More cost-effective use
More use of IT	More use of IT	Adopting more distributed architecture	More use of IT	More use of IT		Adopting more distributed architecture
International IT co-ordination	More cost-effective	Improve focus of IT department	Adopting more distributed architecture	Adopting more distributed architecture		

Source: INPUT

Exhibit II-4

Least Important IT Challenges

Banking & Finance	Insurance	Discrete Mfg	Process Mfg	Retail	Wholesale	Logistics
Reduce IT expenditure	Replace mainframe-based systems	Improve support for operational systems	Reduce IT expenditure	International IT co-ordination	International IT co-ordination	Replace mainframe-based systems
Improve support for operational systems	Redevelopment of key systems	International IT co-ordination	Replace mainframe-based systems	Replace mainframe-based systems	Replace mainframe-based systems	Increase use of IT
Replace mainframe-based systems	International IT co-ordination	Change IT infrastructure	Improve support for operational systems	Reduce IT expenditure	Change IT infrastructure	Redevelopment of key systems
Change IT infrastructure	Change IT infrastructure	Replace mainframe-based systems	Change IT infrastructure	Improve support for operational systems		

Source: INPUT

Telecommunications and Utilities

The forces of deregulation will hit hard in continental Europe over the next year. The only truly open telecoms markets within Europe are Sweden and Britain.

Previously closed markets in France and Germany will be subject to harsh competitive pressures, from the likes of UK and US telecoms operators working with utility companies (see Exhibit II-5), such as VIAG, Veba and RWE (energy companies) in Germany, British Rail in the UK and Generale des Eaux (water) in France.

Passing information via electricity lines, alongside railway tracks or next to water pipes is a clever use of existing infrastructure, especially given the utilities' expertise in billing and customer information databases. However, the real issue of bringing cable to the home is at present too costly for utilities alone, despite their financial strength — hence, the need for partnership.

The European Union has set a deadline of January 1997 for the liberalisation of 'alternative networks' — telecoms networks run by utilities such as railways and electricity companies. Privatisation of utilities has led to an increasing demand for quality financial information and more flexible and sophisticated reporting tools.

It is not only the British who want privatisation — and competition — in the areas of electricity generation and gas supply. Germany and Holland are also concerned about the rate at which manufacturing industry is moving to Asia and Eastern Europe. An EU report, published in the second half of 1995, concluded that privatisation is the best way of lowering costs in order to tempt firms back to Europe.

France remains slow to change. Apart from blocking the liberalisation of energy, France has dragged its feet over how to introduce competition into Europe's over-staffed postal services. It is hard to think of a rival to its huge state railway, SNCF, despite its announcement of losses ($2.4 billion) last year. Even within countries, there are inconsistencies: water may be heated by a state-owned monopoly but the water itself is likely to come from a private company.

Ironically, Europe has many different ways of running its utilities. Britain has had difficulty privatising the Royal Mail, but Holland has sold off its postal services. Electricite de France is a major state enterprise; Germany's Veba is a private company.

One of the key issues facing telecoms operators over the next five years is globalisation. As businesses increasingly operate globally, so they are

seeking suppliers who can offer global service for their communication needs. Partnering will be a key enterprise skill in the future.

Demand for Internet access, the popularity of cellular phones, the growth of telecommuting and the surge in data transmission will make telephony a growth business. The IT, electronics and communications industries are forecast to be worth 10% of world GDP by 1999.

Exhibit II-5

Utilities Entering the Telecoms Market

Electricity/ Energy	Country
Energis	UK
Norweb	UK
Scottish Power	UK
Yorkshire Electricity	UK
RWE Energie	Germany
Veba	Germany
South Wales Electricity	UK
South Western Electricity	UK
VIAG	Germany
GEB Rotterdam	Holland
Railway	**Country**
British Rail	UK
Deutsche Bundesbahn	Germany
Nederlandse Spoorwogen	Holland
Banverket	Sweden
Water Supply	**Country**
Generale des Eaux	France

Source: INPUT

Retail, Wholesale and Logistics

Retailers are constantly trying to increase margins, beat their competitors on service and provide the best value for money to their customers. They have embraced technological advances in order to pursue these aims — whether it is in reducing supply chain logistics through sophisticated warehouse systems, increasing checkout speed via bar codes and scanning equipment or generating huge customer databases by introducing loyalty cards.

Over the last twenty years power has moved along the value chain from the manufacturer to the retailer and now to the consumer. In parallel with this has been the trend to standardisation and cost reduction. However, retailers are now seeing the re-creation of personal relationships with customers as a source of competitive advantage. The "re-personalisation" of shopping has led to the introduction of loyalty cards within UK supermarkets.

Retailers and suppliers are dropping their adversarial stance and sharing more sensitive sales and customer information. Both sides have invested in making their section of the supply chain more responsive. Strategic partnerships have even been set up between retailers and manufacturers of specific categories, to the exclusion of other parties within that category.

This trend in manufacturer/ retailer relationships is well illustrated with the arrival of a concept named Efficient Consumer Response (ECR). ECR acknowledges that many of the confrontational tactics adopted by both sides simply moves problems — and costs — up and down the supply chain without adding value to the process.

Its basic techniques include automated store ordering (where POS scanning data is used to trigger new orders), cross docking (where goods are moved from suppliers' lorries to retailers' lorries with no time being spent in the warehouse) and reliable operations (100% correct orders, in full, on time). The concept also applies in the areas of product introductions, and promotions. See Exhibit II-6 for details.

Exhibit II-6

Basic ECR Improvement Concepts

Category Management	Operations Improvements	Enabling Technologies
Optimise Promotions	Automated Store Ordering	Electronic Data Interchange
Optimise Assortment	Continuous Replenishment	Electronic Funds Transfer
Optimise Product Introductions	Cross Docking	Item Coding
Strategic Intent	Reliable Operations	Activity Based Costing

Source: ECR Europe

ECR implies that both sides will work together in joint planning and demand forecasting, taking on roles traditionally handled by the other if it can be done better and at a lower cost. A pilot study by the ECR Europe Executive Board — composed of 18 blue chip organisations - claimed ECR could take 5.7% worth of cost - $33 billion - out of the European grocery supply chain.

This study allows companies to benchmark their relative performance against key ECR practices, thus producing a 'scorecard'. This 'scorecard' can be used by manufacturers and retailers to provide a common measure in joint projects. The biggest obstacle is to overcome the 'confrontation culture' that currently exists and move towards one of trust and partnership.

Technology is also playing an important role in another concept within Retail — the "Intelligent Store". Lighting, heating, refrigeration and security alarms can be managed via one staff member and a personal computer. Audible alarms indicate temperature fluctuation; manual checking is eliminated; stores can be warmed up before opening to the public; and payback in staff savings takes less than 12 months. Each store manager can then be equipped with a portable PC that allows him access to the store system from his home, checking stock levels and security.

Logistics businesses have tended to be technology-shy. Many transport and road haulage companies are family-run businesses and are wary of major IT investments. Integrated package software which links together the various elements of a logistics system is becoming more common, but this requires a pooling of expertise among vendors. Booker Belmont Wholesale - a distribution company with 150 subsidiaries - overhauled its system with help from Sema Group, Data General and Computer Associates.

Manufacturing

In recent years dramatic improvements have been achieved through the techniques of continuous improvement, total quality management and just-in-time production; their combined approach is known as lean production. Consequently, differences in manufacturing cost, quality consistency and delivery reliability have been narrowing and cease to be differentiators.

There is a greater need for agile corporations (see Exhibit II-7) — dynamic organisations constantly restructuring and developing new competencies to meet the changing needs of customers. This is due to the following combination of changes:

- Market fragmentation: in most industries consumers expect a wide variety of alternatives or customised options — and do not expect to pay significantly more for this; hence, supermarkets have over 100 varieties of yoghurt on their shelves

- Shorter product life cycles: life cycles can now be measured in months, rather than years; Intel will typically be working on three generations of computer chip at any one time

- Enabling technology: the use of computer integrated manufacturing and robotics means each item on the assembly line can be made differently, giving an effective batch size of one at costs comparable to mass production; Motorola sales people can design a pager meeting a customer's exact specifications using only a simple laptop, transfer the details to company headquarters and manufacture can start at the factory 20 minutes later.

Exhibit II-7

Agile Manufacturing: Key Drivers and Characteristics

Source: INPUT
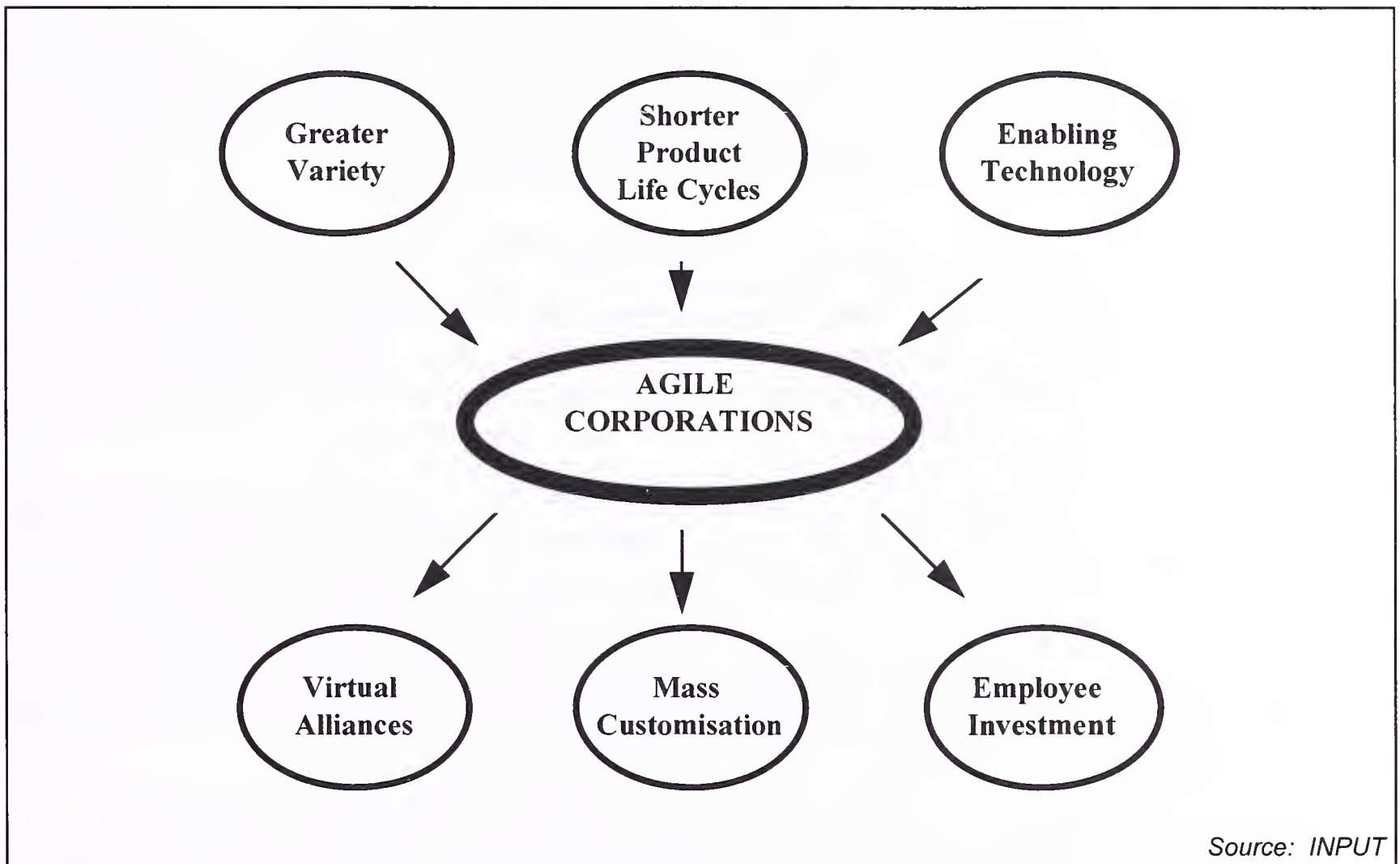
There are two factors restricting agility. First, existing physical plant and equipment rapidly becomes inappropriate as customer needs change. Second, different needs require different competencies; it is difficult to develop these at the same rate. Companies are forming external alliances to get round these problems.

Such alliances, with a number of co-operating companies, form a virtual organisation, tailored to meet the current needs of a particular group of customers. As customer needs change, virtual organisations can be disbanded, modified and new ones formed, all at relatively little cost.

Alliances are not new; what is different is the degree of integration and trust which exists within the virtual organisation, including full sharing of production plans and schedules. For large companies it enables the sharing of cost and risk of R&D and reduces the lead time for new product development. Small organisations can use virtual organisations to share marketing costs and gain access to new markets. For companies of all sizes it enables the linking together of new combinations of

competencies much more rapidly than they could be developed in one organisation.

However, such agility can only be achieved if employees are capable of carrying out a wide variety of jobs. This means a heavy investment in training. The emphasis is on being part of a multi-disciplinary team rather than being a functional specialist.

This fits in with the concept of a company that is organised on the basis that there will always be occurrences which have not been planned for. Its success depends on being able to react rapidly to the unexpected. Hence, it consists of a loosely linked network of highly flexible groups, capable of rapidly re-organising themselves to meet the current needs of each customer.

Another recurring theme is that of IT integration. Basically, this involves the integration of systems within the manufacturing process in order to produce meaningful data and manage it more effectively. Manufacturers expect to turn increasingly to ERP (Enterprise Resource Planning) and networking solutions as they approach the year 2000. These solutions will help them share information which is critical for speeding up product development, production and distribution.

The last ten years have seen a dramatic increase in the power of IT applications - through 3-D modelling software and more powerful MRP II (Manufacturing Resource Planning) software. The next decade will see an emphasis on increasing the integration and flexibility of IT solutions through the increased use of open systems. *Mass customisation* will drive growth in manufacturing systems - tailored products for individual customers within rapid lead times at costs equating to the economics of mass production.

A good example of the increasing role IT is playing within the manufacturing industry is the PRIMA (Process Industries Manufacturing Advantage) project. Fifteen leading European process manufacturers have worked together on the pilot phase of a European Union programme evaluating how IT will integrate different processes of the enterprise.

The second stage includes the participation of vendors, in order that process manufacturers can outline in detail their IT requirements. The breadth of the PRIMA programme means that it will not be easy to benefit from it quickly, although some projects will experience speedy gains, such as Cape (for computer-aided process engineering) Open, which aims to integrate databases, modelling and simulation packages.

Government

The policies of European governments focus on a number of key issues: improvement in public sector competitiveness; reorganisation of internal processes through streamlining and inter-departmental integration; transparent procedures and cost rationalisation; introduction of management control and market testing.

In the UK the public sector is now the biggest user of outsourcing. However, most of this demand has been the result of central government coercion rather than an inherent desire to adopt outsourcing from the departments and local authorities concerned. Nonetheless this will remain a major growth area with the Public Finance Initiative (PFI) producing major outsourcing opportunities for vendors in central government and health for the life of the present administration.

The UK government has committed itself to $3.2 billion of new capital spending in the health sector under PFI. 47 contracts have been approved to date.

Similarly, the deadlines for Compulsory Competitive Tendering in UK local government will lead to major growth in this sector. By forcing local authority IT departments to go out to tender by a certain date the government has given outsourcing vendors a major opportunity to boost revenues — even if, in some cases, the local authority IT department turns out to be cheaper than an external supplier. However, governments in France and Germany have so far not copied the UK in adopting similar measures.

Each ministry within the French central government is responsible for its own IT purchasing. In selecting new technology, however, there is a strong inclination to adopt the latest leading-edge developments. Although external staff are used fairly extensively, internal staff generally have a high reputation in systems development and therefore much of the work is carried out internally.

While budgets have been cut many times the French government considers IT investment to be a function of greater productivity. Where there are cuts — such as in defence — there is still considerable investment in such areas as management systems. The intention is obviously to use systems as a tool for greater efficiency.

In Italy attention continues to be focused on the reengineering and improvement of processes and services, supported by new procedural directives. The main priorities are: transparency in administrative procedures, service quality and inter-departmental integration. Key areas include health, pensions and taxation.

Over the medium term European government investments in IT will address the following issues, albeit within differing timescales:

- Administrative re-engineering through rationalisation and integration of accounting and administration procedures

- Better quality service including the introduction of self-service systems, remote access to administrative procedures and remote payment systems

- Communications infrastructures to support departmental integration and administrative decentralisation.

Banking and Finance

European banks are responding to domestic as well as international developments:

- ING Bank is taking advantage of its branch network to promote the sale of its insurance products, in addition to pursuing international opportunities, such as the acquisition of Barings

- Several French banks are distributing more IT capabilities to branch locations to improve service to retail customers; home banking is also being provided

- Many European banks are taking steps to upgrade their ATM networks and implement customer information facility (CIF) systems - again to improve service to retail customers

- Nat West is taking steps to develop a card based product which could be used for electronic commerce on public networks including the Internet.

Trends in banking applications within Europe cover a range of topics (as shown in Exhibit II-8):

- The highest ranking trend concerning retail banking covers improvement of branch operations, integration of accounts, on-line operation and even detection of money laundering

- Electronic banking includes the expanded use of home banking, improved credit and debit card operation, smart cards, banking kiosks and other on-line developments

- The increase in outsourcing work by vendors will move from transaction processing to cover other processes, such as purchasing, sales support and human resources

- Cost reduction, profit improvement and BPR initiatives are not specific to European banking organisations but reflect global trends.

Exhibit II-8

Key European Banking Trends

European Banking Trends	Relative Ranking by Bank Users and Vendors
Expanding Retail Banking Requirements	4.1
Use of Electronic Banking	3.8
Increased processing/ outsourcing work from banks	3.5
Cost reduction pressures	3.4
BPR and other engineering activities	3.4

5 = High and 1 = Low   Source: INPUT

INPUT research has highlighted a number of key banking needs:

- The highest level of need concerns risk management, including credit and currency risk, and, in some cases, derivatives; some respondents are implementing approaches that would involve the use of large files of historical data and expert systems are being considered

- Lending and deposit systems need significant change, such as the provision of integrated accounts for retail customers, cash management reporting for both wholesale and retail customers and funding systems for wholesale lending

- Banks wish to develop databases and customised applications to meet their CIF needs and to use CIF data for analysing customer profitability

- Electronic banking - including home banking and video links from ATM sites to the home office — continue to be of importance

- There is a moderate level of interest in applications to support international lending including corporate trade payments, Swift and other communication and trading systems.

C

European Vertical Markets — Key Trends

The size and growth rates for each vertical market are given in Appendices A to E. Analysis is provided for each sector in terms of traditional IT budgets (equipment sales, in-house staff et al) and INPUT delivery modes (professional services, systems integration etc.). This is done for Europe, France, Germany, UK and Italy.

Exhibit II-9

Vertical Markets, Europe 1995-2000

CAGR
%

Sector	CAGR %
Business Services	9
Central Government	9
Local Government	8
Education	-3
Healthcare	11
Insurance	10
Banking & Finance	10
Wholesale Distribution	6
Retail Distribution	9
Telecommunications	13
Utilities	13
Transportation	13
Process Manufacturing	12
Discrete Manufacturing	5

■ 2000
▨ 1995

$mn

Source: INPUT
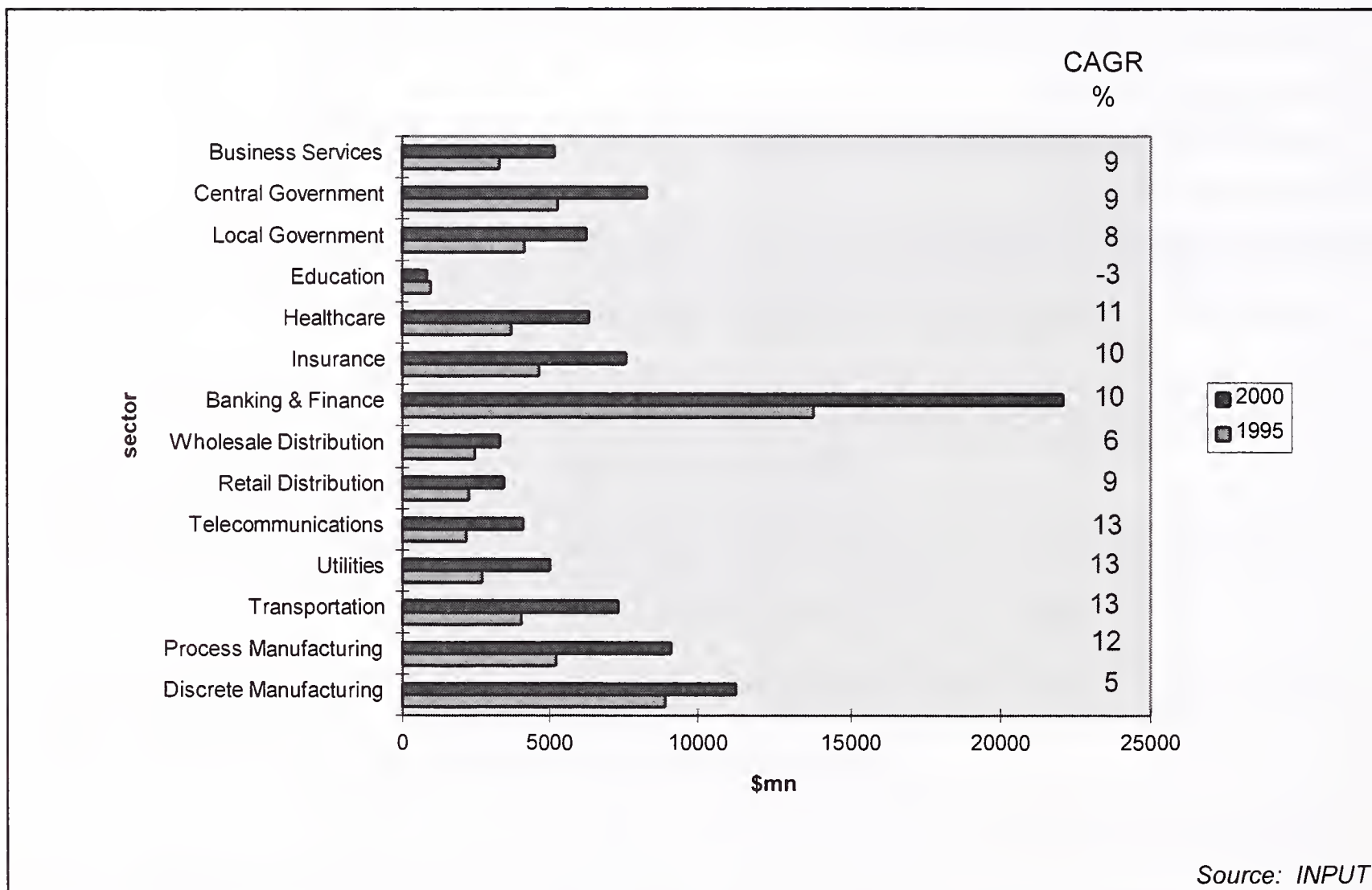
In all country markets the dominance of the banking, finance and insurance sectors is clear. However, when the two separate elements of manufacturing — discrete and process — are combined for 1995 their market size ($14.1bn) is greater than that of the banking and finance sector ($13.8 bn). Although this is reversed by 2000 with banking and finance worth $22.1 bn (9.9% compound annual growth) versus $20.4 bn for manufacturing (7.5% growth). This is the pattern in France and Germany.

Growth within manufacturing is dampened as discrete manufacturing is forecast to grow at only 5% over the next five years, one of the lowest growth rates for all sectors. Process manufacturing, by comparison, has one of the highest: 12% to 2000. The only other sectors higher are logistics/transportation, utilities and telecommunications (13%).

Exhibit II-10

Vertical Markets, France 1995-2000

	CAGR %
Business Services	3
Central Government	6
Local Government	5
Education	-3
Healthcare	8
Insurance	8
Banking & Finance	7
Wholesale Distribution	7
Retail Distribution	8
Telecommunications	11
Utilities	9
Transportation	14
Process Manufacturing	6
Discrete Manufacturing	1

Source: INPUT
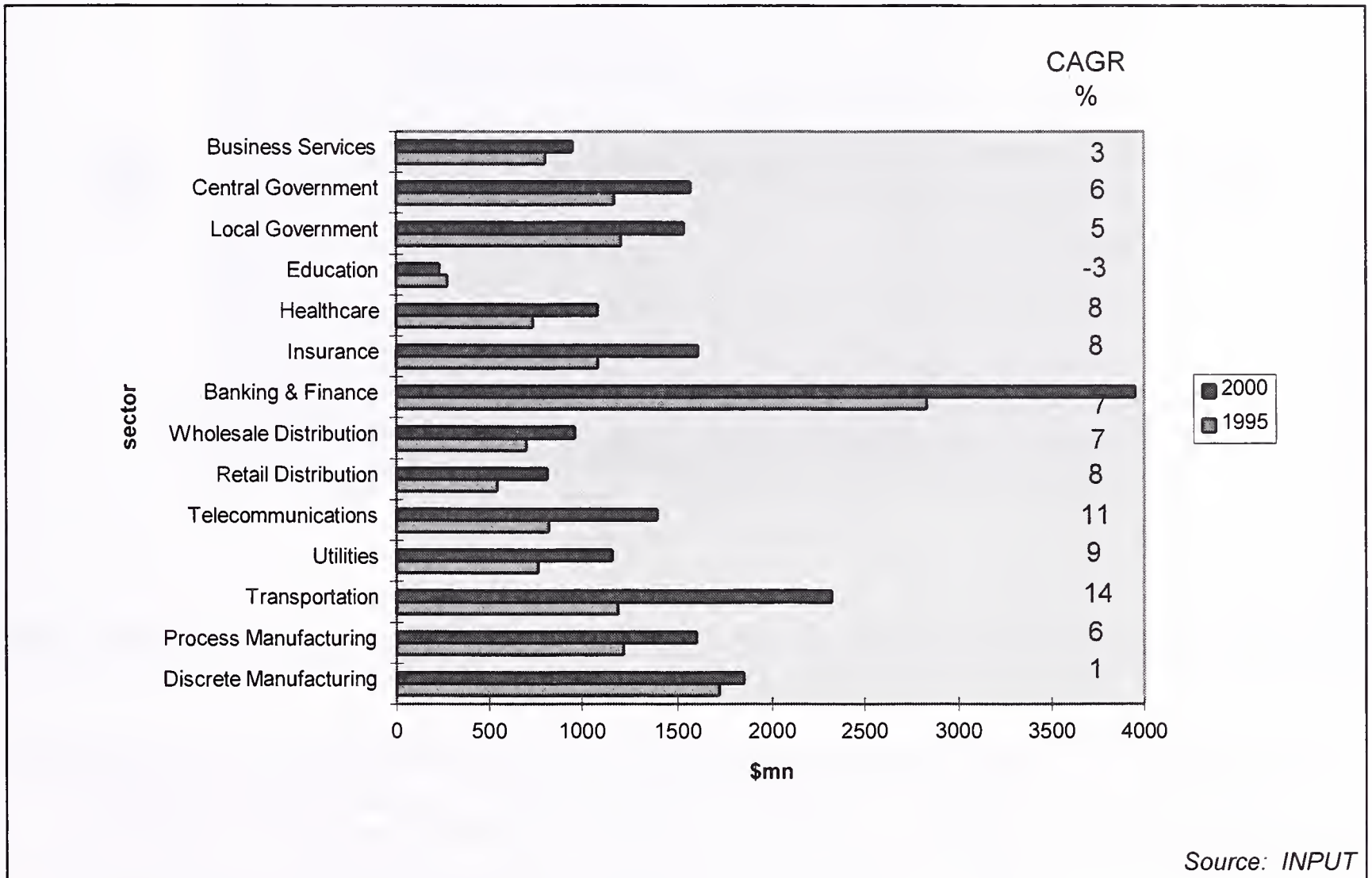
A similar pattern is evident in France. The three top sectors in terms of growth rates over the next five years are also logistics/transportation, utilities and telecommunications (14%, 9% and 11% respectively). Manufacturing is growing at a slower rate — the lowest of all four major economies — despite a large installed base. However, the combined retail and wholesale distribution sectors also demonstrate good growth prospects (7.4%) over the next five years.

Exhibit II-11

Vertical Markets, Germany 1995-2000

CAGR
%

Sector		CAGR %
Business Services		13
Central Government		10
Local Government		6
Education		-1
Healthcare		17
Insurance		11
Banking & Finance		12
Wholesale Distribution		6
Retail Distribution		6
Telecommunications		13
Utilities		13
Transportation		11
Process Manufacturing		13
Discrete Manufacturing		6

Legend: 2000, 1995

$mn

Source: INPUT
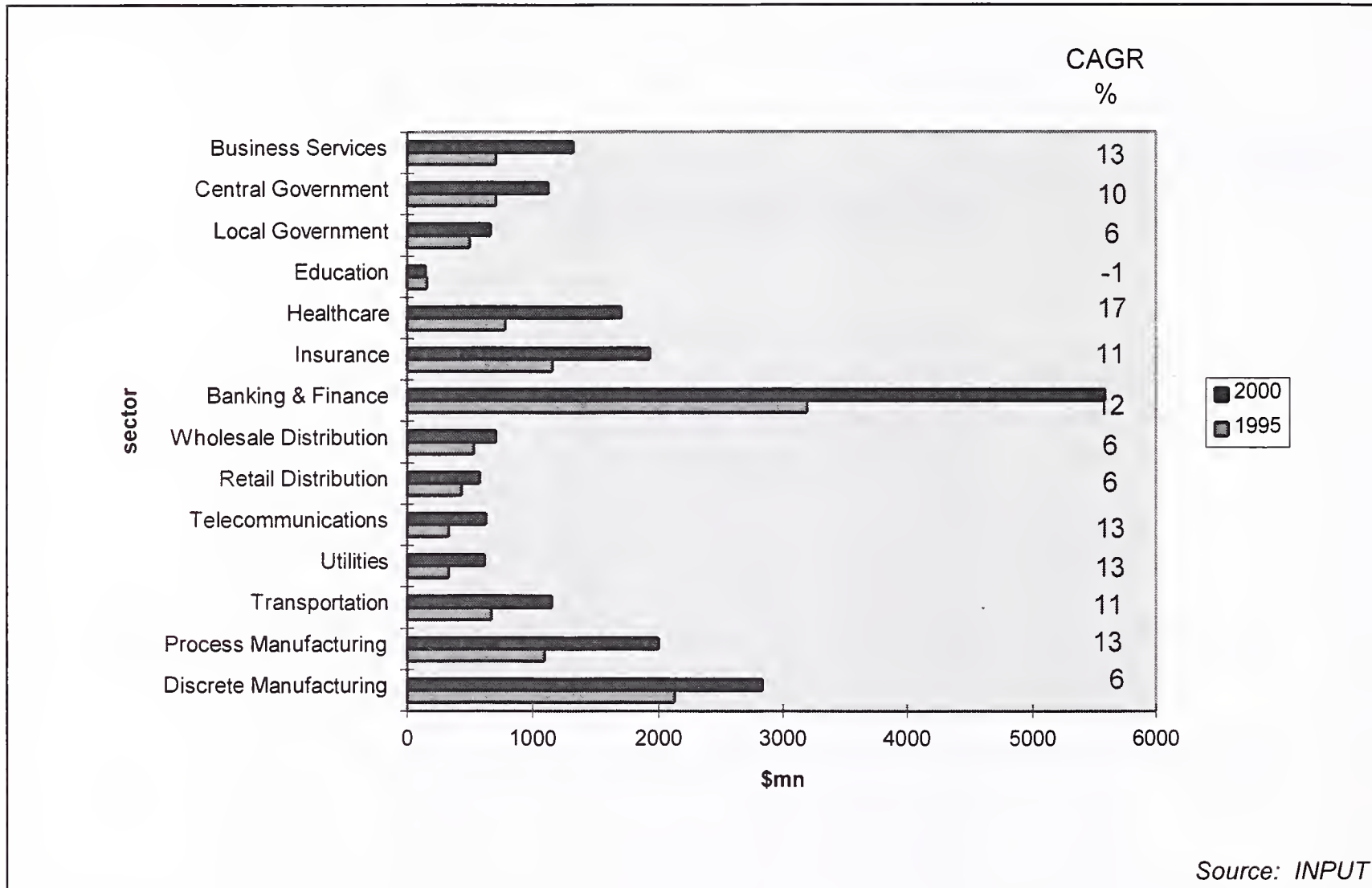
Telecommunications, utilities, process manufacturing (all 13% growth up to 2000) and health (17%) are the fastest growing vertical markets in Germany. Growth in healthcare is fuelled by demand for turnkey systems and application software. The government sector is one of the strongest in Europe, second only to the UK, which has its own unique business drivers (see below).

Exhibit II-12

Vertical Markets, Italy 1995-2000
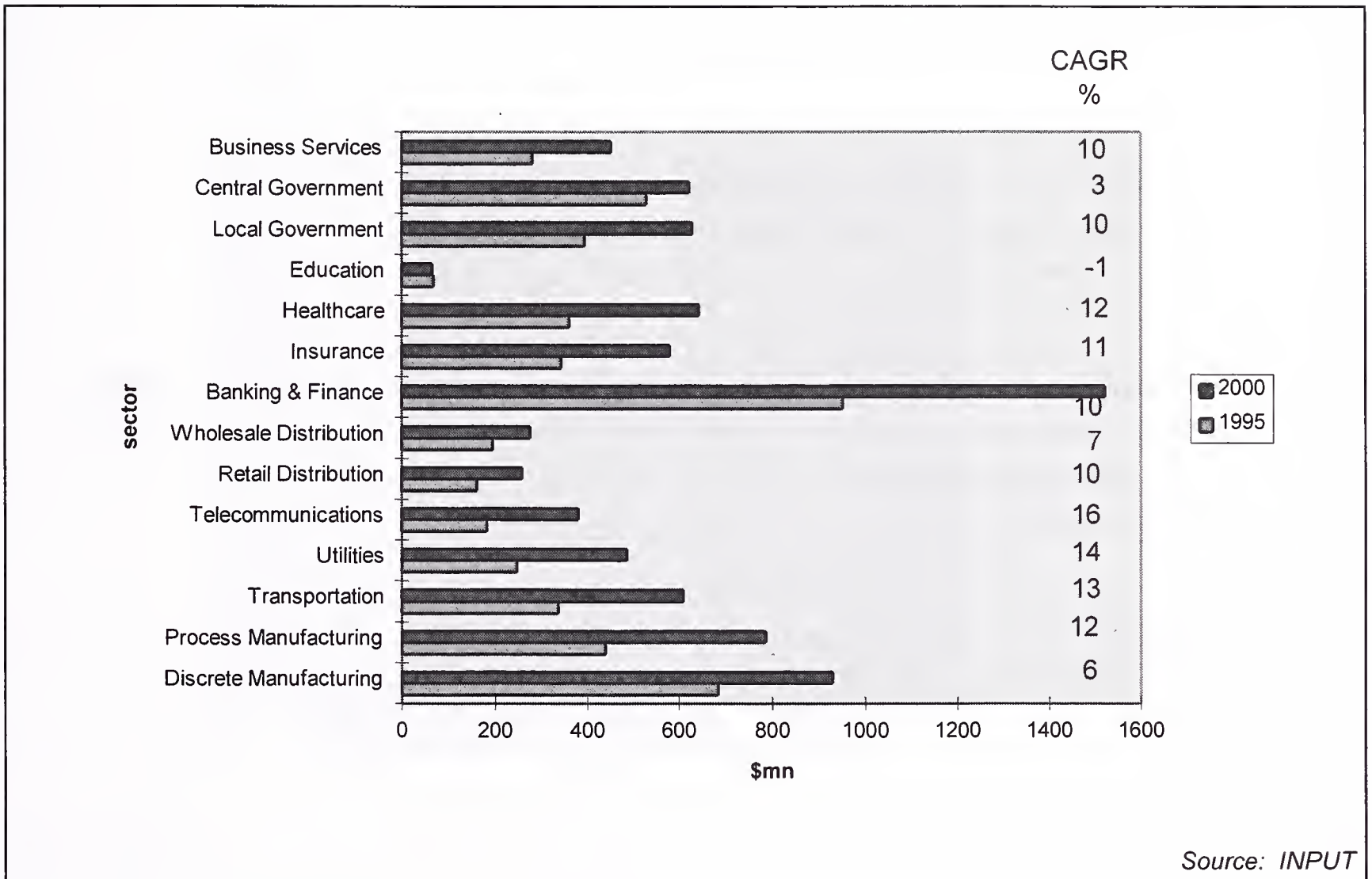
Manufacturing is the largest vertical market in Italy, closely followed by banking and finance and government. In terms of growth prospects, telecommunications (16% up to 2000) and utilities (14%) are the fastest growing sectors; Italy has the fastest growing telecoms and utilities market of all the four major economies.

Exhibit II-12

Vertical Markets, UK 1995-2000
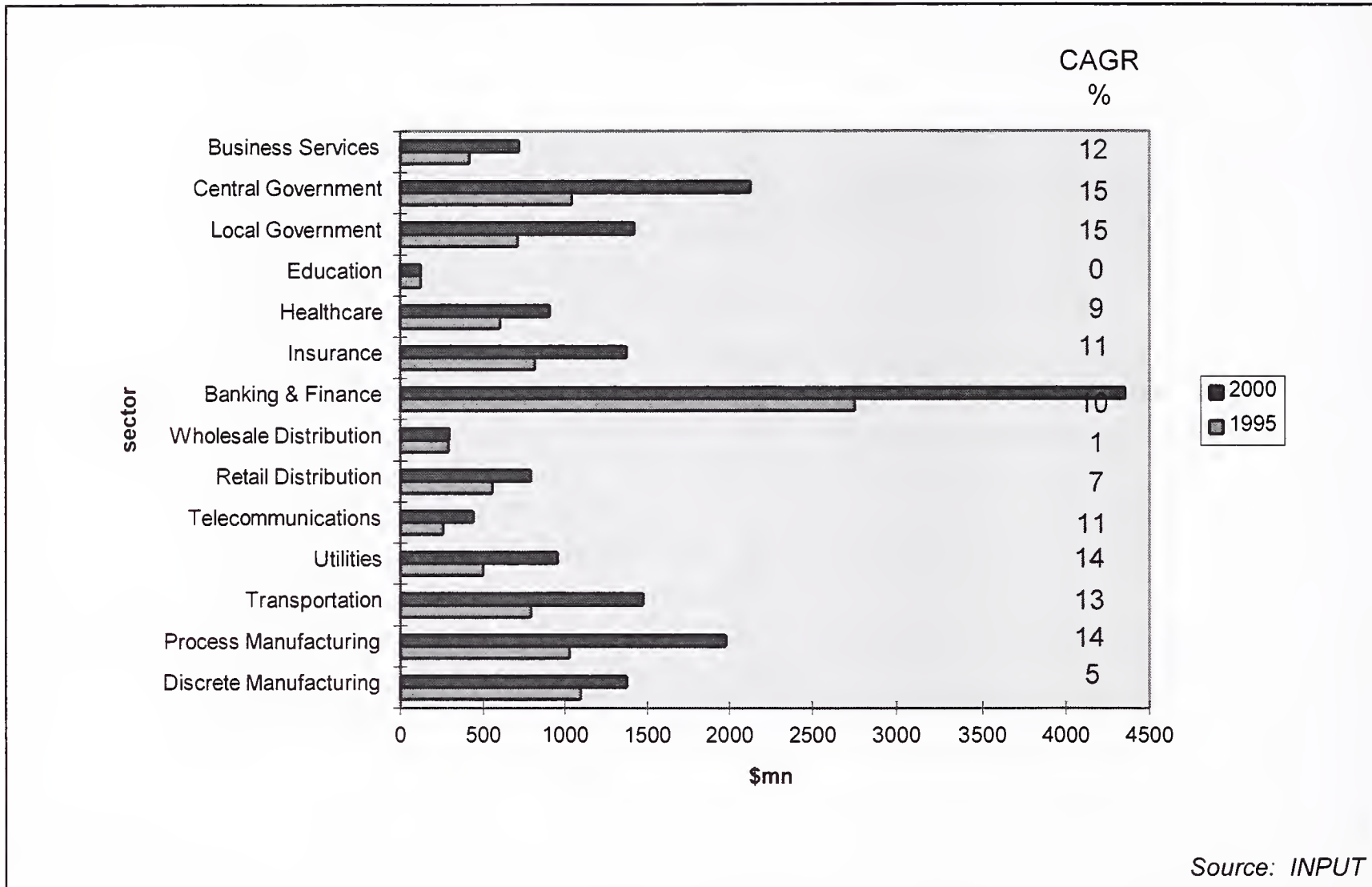
Government is the fastest growing vertical market in the UK — growing at 15% up to 2000. After banking and finance, it is the second largest sector in terms of value. This is due to the Private Finance Initiative within central government and Compulsory Competitive Tendering at local government level (see the previous section for more details). Banking and finance's share of the total UK market will *decline* from 25% to 23% over the next five years due to growth within the government market — the only major economy within Europe where this is taking place.

Appendices

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Appendix A: Vertical Markets - Europe, 1995-2000

A

Information Services Industry Vertical Sector Forecast, 1995-2000 Europe

A

Sector Summary in Local Currency

Exhibit A-1

Information Services Market - Sector Summary

Sector	$ Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 AGR (%)
Processing Services	6,190	2	6,310	6,490	6,840	7,090	7,320	7,610	4
Turnkey Systems	11,500	6	12,200	13,300	14,500	15,700	16,900	18,300	8
Application Software Products	7,800	8	8,440	10,140	11,320	12,890	14,660	16,680	15
Professional Services	23,300	4	24,200	25,100	25,900	26,400	27,500	28,100	3
Network Services	4,210	21	5,090	6,040	7,210	8,870	10,660	12,540	20
Systems Operations	3,420	21	4,130	5,140	6,090	7,160	8,760	10,330	20
Systems Integration	4,620	12	5,170	6,060	6,630	7,370	8,570	9,700	13
Industry Sectors Total	61,000	7	65,500	72,500	78,500	85,500	94,500	103,500	10
Transaction Processing	1,050	-2	1,030	980	980	950	1,050	1,130	2
Turnkey Systems	1,460	2	1,490	1,580	1,730	1,830	1,990	2,140	8
Application Software Products	3,450	7	3,690	4,080	4,580	5,040	5,580	6,130	11
Cross-Industry Sectors Total	6,000	3	6,200	6,600	7,300	7,800	8,600	9,400	9
Equipment Services	21,200	0	21,200	21,400	21,800	21,700	21,700	21,700	0
System Software Products	13,450	5	14,130	15,340	15,700	16,170	16,960	17,440	4
Utility and Other Processing	2,675	-1	2,650	2,625	2,600	2,575	2,550	2,525	-1
Other Electronic Info Services	485	-4	465	445	425	410	375	340	-6
Generic Sectors Total	37,810	2	38,445	39,810	40,525	40,855	41,585	42,005	2
Total Information Services	105,000	5	110,000	119,000	126,000	134,000	145,000	155,000	7

B

Industry Sectors in Local Currency

Exhibit A-2

Information Services Market by Vertical Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	9,050	-2	8,910	9,180	9,640	10,100	10,690	11,260	5
Process Manufacturing	4,890	7	5,240	5,720	6,390	7,200	8,110	9,090	12
Transportation	3,590	13	4,050	4,570	5,010	5,620	6,380	7,330	13
Utilities	2,410	13	2,730	3,200	3,670	4,030	4,580	5,040	13
Telecommunications	1,990	11	2,200	2,560	2,850	3,230	3,620	4,120	13
Retail Distribution	2,140	7	2,290	2,610	2,790	2,960	3,170	3,470	9
Wholesale Distribution	2,440	2	2,480	2,740	2,800	2,950	3,150	3,330	6
Banking & Finance	12,370	11	13,780	15,430	16,920	18,500	20,250	22,080	10
Insurance	4,090	14	4,650	5,230	5,820	6,350	7,020	7,600	10
Healthcare	3,300	12	3,710	4,200	4,680	5,180	5,740	6,340	11
Education	970	2	985	975	970	960	950	840	-3
Local Government	3,890	7	4,170	4,500	4,920	5,290	5,700	6,250	8
Central Government	5,000	6	5,300	5,790	6,210	6,670	7,400	8,300	9
Business Services	3,030	9	3,300	3,620	3,950	4,290	4,780	5,190	9
Other Industries	2,060	5	2,160	2,270	2,370	2,470	2,580	2,680	4
Industry Sectors Total	61,000	7	65,500	72,500	78,500	85,500	94,500	103,500	10

Exhibit A-3

Discrete Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	6,650	-13	5,810	5,220	4,920	4,580	4,460	4,240	-6
Equipment Services	3,300	-10	2,980	2,710	2,650	2,550	2,350	2,250	-5
Software Products	4,450	-4	4,270	4,470	4,650	4,830	5,070	5,310	4
Other Information Services	6,000	-1	5,940	5,980	6,150	6,440	6,790	7,210	4
Data Communications	1,730	-1	1,710	1,800	1,920	1,940	2,080	2,320	6
Facilities/Administration	2,650	-14	2,290	2,020	1,920	1,810	1,630	1,540	-8
In-House Staff	12,190	-11	10,800	9,750	9,070	8,420	7,890	7,370	-7
IT Budget Total	37,000	-9	33,700	32,000	31,300	30,600	30,400	30,200	-2
Processing Services	860	-8	795	650	615	595	555	545	-7
Turnkey Systems	2,130	-3	2,070	2,050	2,040	2,070	2,200	2,210	1
Application Software Products	2,200	0	2,210	2,460	2,680	2,820	3,050	3,290	8
Professional Services	2,140	-5	2,030	1,870	1,820	1,680	1,650	1,610	-5
Network Services	720	8	780	820	900	1,080	1,180	1,270	10
Systems Operations	695	12	780	980	1,120	1,275	1,560	1,755	18
Systems Integration	315	2	320	340	355	375	495	545	11
Industry Sectors Total	9,050	-2	8,910	9,180	9,640	10,100	10,690	11,260	5

Exhibit A-4

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					$ Millions				
Equipment Sales	4,070	-5	3,870	3,820	3,860	3,870	3,970	4,080	1
Equipment Services	1,690	-2	1,650	1,630	1,660	1,690	1,710	1,720	1
Software Products	2,090	4	2,170	2,450	2,710	2,990	3,460	3,870	12
Other Information Services	3,520	4	3,670	3,980	4,400	4,860	5,450	6,020	10
Data Communications	1,810	-2	1,770	1,840	2,040	2,050	2,180	2,320	6
Facilities/Administration	1,970	-4	1,890	1,820	1,820	1,820	1,830	1,840	-1
In-House Staff	7,000	-7	6,500	6,150	6,100	6,100	6,000	5,800	-2
IT Budget Total	22,200	-3	21,600	21,700	22,500	23,300	24,500	25,700	4
Processing Services	300	-3	290	290	295	300	305	310	1
Turnkey Systems	1,160	3	1,190	1,360	1,440	1,650	1,790	1,900	10
Application Software Products	870	7	935	1,190	1,310	1,585	1,855	2,165	18
Professional Services	1,450	1	1,460	1,460	1,500	1,560	1,640	1,700	3
Network Services	360	14	410	435	510	585	770	870	16
Systems Operations	570	17	665	765	880	1,035	1,305	1,515	18
Systems Integration	285	5	300	415	455	485	545	615	15
Industry Sectors Total	4,890	7	5,240	5,720	6,390	7,200	8,110	9,090	12

Exhibit A-5

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					$ Millions				
Equipment Sales	1,330	-5	1,260	1,130	1,060	990	870	830	-8
Equipment Services	520	3	535	545	550	555	555	555	1
Software Products	720	24	890	980	1,060	1,180	1,400	1,540	12
Other Information Services	2,970	9	3,250	3,680	4,040	4,550	5,100	5,800	12
Data Communications	665	17	775	1,050	1,365	1,705	2,135	2,685	28
Facilities/Administration	840	-1	830	825	825	825	825	815	0
In-House Staff	2,090	-8	1,930	1,850	1,660	1,570	1,400	1,320	-7
IT Budget Total	8,900	7	9,500	10,000	10,600	11,300	12,300	13,600	7
Processing Services	330	3	340	350	360	370	370	380	2
Turnkey Systems	530	23	650	695	725	750	775	815	5
Application Software Products	285	11	315	375	415	470	645	700	17
Professional Services	1,270	5	1,330	1,380	1,410	1,440	1,470	1,490	2
Network Services	540	24	670	925	1,120	1,470	1,795	2,305	28
Systems Operations	280	21	340	410	475	555	635	740	17
Systems Integration	260	50	390	460	520	585	680	810	16
Industry Sectors Total	3,590	13	4,050	4,570	5,010	5,620	6,380	7,330	13

Exhibit A-6

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,275	6	1,350	1,590	1,710	1,775	1,910	2,145	10
Equipment Services	600	10	660	730	810	850	910	1,060	10
Software Products	545	12	610	825	920	1,055	1,300	1,435	19
Other Information Services	2,070	13	2,335	2,750	3,070	3,360	3,840	4,215	13
Data Communications	455	9	495	575	650	690	875	980	15
Facilities/Administration	815	6	860	1,030	1,095	1,145	1,195	1,260	8
In-House Staff	2,390	10	2,620	2,790	3,040	3,150	3,260	3,360	5
IT Budget Total	8,200	11	9,100	10,200	11,300	12,200	13,300	14,400	10
Processing Services	125	8	135	145	275	295	305	325	19
Turnkey Systems	250	8	270	285	310	435	455	490	13
Application Software Products	95	11	105	125	160	285	325	360	28
Professional Services	1,270	10	1,400	1,570	1,720	1,860	2,000	2,160	9
Network Services	90	11	100	130	155	180	215	255	21
Systems Operations	120	33	160	180	210	225	260	285	12
Systems Integration	490	13	555	650	750	855	1,105	1,260	18
Industry Sectors Total	2,410	13	2,730	3,200	3,670	4,030	4,580	5,040	13

Exhibit A-7

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,470	17	1,720	1,950	2,290	2,540	2,970	3,440	15
Equipment Services	520	10	570	635	675	720	885	935	10
Software Products	440	11	490	670	730	810	920	1,110	18
Other Information Services	1,760	12	1,970	2,280	2,550	2,820	3,270	3,750	14
Data Communications	520	30	675	765	855	915	1,045	1,165	12
Facilities/Administration	640	8	690	850	900	950	1,030	1,090	10
In-House Staff	2,230	11	2,470	2,630	2,760	2,910	3,140	3,280	6
IT Budget Total	7,500	13	8,500	9,600	10,700	11,800	13,300	14,600	11
Processing Services	120	8	130	140	160	170	295	320	20
Turnkey Systems	220	5	230	240	360	370	395	410	12
Application Software Products	75	7	80	105	130	250	275	290	29
Professional Services	1,150	10	1,260	1,400	1,530	1,680	1,830	1,980	9
Network Services	100	35	135	170	215	380	450	550	32
Systems Operations	40	0	40	50	50	55	65	75	13
Systems Integration	185	22	225	355	400	445	505	590	21
Industry Sectors Total	1,990	11	2,200	2,560	2,850	3,230	3,620	4,120	13

Exhibit A-8

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,340	-1	2,320	2,370	2,380	2,320	2,330	2,320	0
Equipment Services	1,140	2	1,160	1,180	1,200	1,180	1,160	1,140	0
Software Products	1,060	5	1,110	1,200	1,270	1,320	1,390	1,470	6
Other Information Services	1,760	6	1,870	2,010	2,140	2,380	2,550	2,700	8
Data Communications	500	6	530	560	590	590	715	730	7
Facilities/Administration	1,870	-2	1,840	1,730	1,710	1,690	1,670	1,630	-2
In-House Staff	3,080	-6	2,890	2,700	2,470	2,350	2,120	1,980	-7
IT Budget Total	11,800	-1	11,700	11,900	11,900	11,700	11,900	11,900	0
Processing Services	95	0	95	95	95	95	90	90	-1
Turnkey Systems	610	6	645	685	740	775	810	860	6
Application Software Products	325	6	345	410	435	480	515	540	9
Professional Services	680	2	695	700	710	695	690	675	-1
Network Services	160	22	195	220	370	410	470	510	21
Systems Operations	195	23	240	285	340	400	465	540	18
Systems Integration	55	27	70	95	100	115	130	155	17
Industry Sectors Total	2,140	7	2,290	2,610	2,790	2,960	3,170	3,470	9

Exhibit A-9

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	3,200	-8	2,960	2,800	2,720	2,620	2,500	2,460	-4
Equipment Services	1,310	-10	1,180	1,160	1,130	1,100	1,060	1,030	-3
Software Products	1,160	2	1,180	1,250	1,270	1,330	1,360	1,400	3
Other Information Services	1,970	2	2,010	2,120	2,150	2,240	2,420	2,570	5
Data Communications	600	-19	485	505	530	520	535	550	3
Facilities/Administration	2,030	-10	1,830	1,760	1,590	1,520	1,470	1,410	-5
In-House Staff	3,610	-6	3,390	3,170	2,930	2,740	2,620	2,400	-7
IT Budget Total	13,800	-6	13,000	12,800	12,500	12,200	12,000	11,800	-2
Processing Services	205	0	205	205	190	190	190	190	-2
Turnkey Systems	645	4	670	690	705	810	830	850	5
Application Software Products	380	8	410	470	505	525	560	595	8
Professional Services	820	-3	795	775	755	750	740	720	-2
Network Services	140	18	165	180	210	330	365	400	19
Systems Operations	185	24	230	270	305	365	550	610	22
Systems Integration	30	0	30	40	40	40	40	50	11
Industry Sectors Total	2,440	2	2,480	2,740	2,800	2,950	3,150	3,330	6

Exhibit A-10

Banking & Finance

Sector	$ Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	14,000	1	14,100	14,600	14,800	14,600	14,900	15,000	1
Equipment Services	5,370	4	5,600	5,840	6,090	6,120	6,130	6,120	2
Software Products	4,420	12	4,950	5,630	6,150	6,730	7,420	8,010	10
Other Information Services	11,060	11	12,270	13,500	14,800	15,890	17,360	18,630	9
Data Communications	6,680	7	7,150	7,850	8,490	8,670	9,240	9,900	7
Facilities/Administration	6,390	0	6,370	6,510	6,670	6,650	6,650	6,620	1
In-House Staff	20,900	1	21,100	21,200	20,900	20,500	20,000	19,400	-2
IT Budget Total	68,300	5	71,700	75,300	77,700	79,100	81,700	83,700	3
Processing Services	2,040	4	2,130	2,260	2,340	2,510	2,600	2,680	5
Turnkey Systems	1,500	15	1,730	1,890	2,130	2,340	2,500	2,740	10
Application Software Products	1,390	19	1,650	2,030	2,330	2,740	3,180	3,730	18
Professional Services	4,970	7	5,340	5,690	5,890	6,010	6,300	6,430	4
Network Services	1,480	24	1,830	2,230	2,680	3,170	3,810	4,500	20
Systems Operations	370	20	445	630	705	800	895	1,015	18
Systems Integration	610	8	660	820	860	910	970	1,020	9
Industry Sectors Total	12,370	11	13,780	15,430	16,920	18,500	20,250	22,080	10

Exhibit A-11

Insurance

Sector	$ Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	4,650	2	4,720	5,030	5,160	5,200	5,350	5,490	3
Equipment Services	1,780	4	1,860	1,940	2,020	2,060	2,080	2,110	3
Software Products	1,700	8	1,840	2,160	2,420	2,630	2,930	3,260	12
Other Information Services	3,290	12	3,670	4,100	4,590	4,980	5,410	5,840	10
Data Communications	2,170	9	2,360	2,660	2,950	3,020	3,310	3,610	9
Facilities/Administration	2,170	2	2,210	2,270	2,300	2,310	2,340	2,350	1
In-House Staff	7,030	2	7,150	7,410	7,480	7,530	7,430	7,390	1
IT Budget Total	22,700	5	23,800	25,600	26,900	27,800	29,100	30,000	5
Processing Services	525	6	555	580	720	740	760	780	7
Turnkey Systems	885	8	960	1,050	1,240	1,310	1,415	1,605	11
Application Software Products	510	13	575	800	905	1,125	1,235	1,475	21
Professional Services	1,540	8	1,660	1,880	1,980	2,070	2,170	2,260	6
Network Services	150	90	285	320	360	400	460	620	17
Systems Operations	125	24	155	195	315	350	385	425	22
Systems Integration	345	9	375	385	415	430	480	510	6
Industry Sectors Total	4,090	14	4,650	5,230	5,820	6,350	7,020	7,600	10

Exhibit A-12

Healthcare

Sector	$ Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,400	2	2,440	2,540	2,570	2,560	2,620	2,680	2
Equipment Services	1,030	4	1,070	1,120	1,140	1,150	1,150	1,150	1
Software Products	1,170	17	1,370	1,550	1,750	2,000	2,250	2,520	13
Other Information Services	2,350	14	2,670	2,970	3,160	3,430	3,760	4,160	9
Data Communications	1,050	14	1,200	1,310	1,370	1,390	1,480	1,680	7
Facilities/Administration	1,200	0	1,200	1,240	1,340	1,330	1,330	1,320	2
In-House Staff	4,160	2	4,230	4,310	4,360	4,340	4,280	4,220	0
IT Budget Total	13,300	6	14,100	15,100	15,600	16,200	16,900	17,900	5
Processing Services	355	7	380	395	400	425	430	555	8
Turnkey Systems	930	10	1,020	1,220	1,400	1,510	1,730	1,970	14
Application Software Products	430	14	490	705	770	845	1,030	1,230	20
Professional Services	1,240	6	1,320	1,390	1,450	1,500	1,660	1,710	5
Network Services	110	27	140	170	200	340	380	435	25
Systems Operations	140	14	160	190	200	220	240	260	10
Systems Integration	105	5	110	135	140	155	170	195	12
Industry Sectors Total	3,300	12	3,710	4,200	4,680	5,180	5,740	6,340	11

Exhibit A-13

Education

Sector	$ Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	990	-4	950	940	930	910	910	890	-1
Equipment Services	475	-3	460	455	455	450	445	430	-1
Software Products	415	0	415	420	415	420	420	420	0
Other Information Services	755	2	770	770	790	795	800	775	0
Data Communications	455	2	465	485	500	490	500	510	2
Facilities/Administration	565	-4	545	535	515	500	475	460	-3
In-House Staff	2,480	-7	2,310	2,210	1,990	1,910	1,820	1,610	-7
IT Budget Total	6,260	-4	6,040	5,850	5,720	5,490	5,390	5,230	-3
Processing Services	15	0	15	15	15	15	15	15	0
Turnkey Systems	225	0	225	225	225	215	215	205	-2
Application Software Products	95	0	95	110	110	110	110	120	5
Professional Services	455	3	470	465	460	455	435	425	-2
Network Services	36	6	38	38	40	41	42	43	3
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	15	-7	14	13	12	12	22	22	9
Industry Sectors Total	970	2	985	975	970	960	950	840	-3

Exhibit A-14

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					\$ Millions				
Equipment Sales	2,050	-4	1,970	1,850	1,830	1,790	1,670	1,650	-3
Equipment Services	940	-1	930	940	930	910	890	880	-1
Software Products	900	7	960	1,150	1,200	1,320	1,400	1,620	11
Other Information Services	3,340	7	3,560	3,920	4,160	4,430	4,770	5,100	7
Data Communications	920	2	940	1,080	1,110	1,110	1,150	1,170	4
Facilities/Administration	1,190	-4	1,140	1,120	1,100	1,080	1,060	1,030	-2
In-House Staff	4,280	-5	4,070	4,010	3,760	3,550	3,460	3,230	-5
IT Budget Total	13,600	1	13,700	14,000	14,000	14,200	14,500	14,700	1
Processing Services	375	1	380	395	400	415	420	425	2
Turnkey Systems	520	3	535	585	610	640	685	720	6
Application Software Products	285	14	325	355	400	450	500	655	15
Professional Services	2,050	5	2,150	2,230	2,300	2,380	2,480	2,550	3
Network Services	45	2	46	45	45	45	45	45	0
Systems Operations	290	29	375	490	605	750	900	1,100	24
Systems Integration	325	11	360	400	445	505	575	760	16
Industry Sectors Total	3,890	7	4,170	4,500	4,920	5,290	5,700	6,250	8

Exhibit A-15

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					\$ Millions				
Equipment Sales	3,310	-8	3,060	2,800	2,620	2,400	2,280	2,060	-8
Equipment Services	1,420	-2	1,390	1,380	1,360	1,310	1,270	1,220	-3
Software Products	1,380	4	1,440	1,550	1,610	1,850	1,990	2,100	8
Other Information Services	4,140	5	4,360	4,610	4,970	5,260	5,870	6,480	8
Data Communications	1,450	-1	1,430	1,480	1,500	1,450	1,470	1,500	1
Facilities/Administration	1,810	-6	1,700	1,650	1,570	1,390	1,320	1,260	-6
In-House Staff	6,400	-7	5,940	5,440	4,940	4,500	4,100	3,680	-9
IT Budget Total	20,200	-4	19,300	19,000	18,700	18,200	18,200	18,300	-1
Processing Services	490	1	495	495	495	490	495	500	0
Turnkey Systems	470	5	495	615	640	665	695	820	11
Application Software Products	235	2	240	260	265	270	275	280	3
Professional Services	1,820	-1	1,810	1,770	1,830	1,770	1,730	1,670	-2
Network Services	130	4	135	170	185	200	315	340	20
Systems Operations	320	39	445	585	765	1,005	1,360	1,845	33
Systems Integration	1,525	11	1,690	1,865	2,050	2,260	2,645	2,955	12
Industry Sectors Total	5,000	6	5,300	5,790	6,210	6,670	7,400	8,300	9

Exhibit A-16

Business Services

| | $ Millions | | | | | | | |
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	845	-2	825	735	735	725	745	765	-1
Equipment Services	415	0	415	425	430	425	435	435	1
Software Products	720	22	880	990	1,060	1,270	1,360	1,570	12
Other Information Services	2,160	5	2,260	2,450	2,580	2,770	2,920	3,150	7
Data Communications	355	3	365	375	395	395	420	440	4
Facilities/Administration	580	-2	570	560	550	540	530	520	-2
In-House Staff	1,590	-1	1,580	1,570	1,540	1,530	1,500	1,370	-3
IT Budget Total	6,560	4	6,800	7,100	7,290	7,560	7,910	8,250	4
Processing Services	150	3	155	270	275	280	285	290	13
Turnkey Systems	900	10	990	1,200	1,420	1,560	1,820	2,110	16
Application Software Products	350	7	375	435	485	510	665	710	14
Professional Services	1,430	3	1,480	1,490	1,530	1,550	1,590	1,610	2
Network Services	90	22	110	140	165	190	315	355	26
Systems Operations	40	2	41	42	53	55	56	67	10
Systems Integration	35	0	35	45	45	45	45	45	5
Industry Sectors Total	3,030	9	3,300	3,620	3,950	4,290	4,780	5,190	9

Exhibit A-17

Other Industries

| | $ Millions | | | | | | | |
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,820	-4	1,740	1,800	1,770	1,820	1,800	1,790	1
Equipment Services	695	-1	690	685	685	670	650	630	-2
Software Products	770	1	780	900	900	1,030	1,040	1,160	8
Other Information Services	1,540	7	1,650	1,750	1,860	1,860	1,980	1,980	4
Data Communications	560	-3	545	670	680	665	795	815	8
Facilities/Administration	690	-4	660	625	605	595	575	645	0
In-House Staff	2,320	2	2,360	2,380	2,410	2,350	2,280	2,210	-1
IT Budget Total	8,540	1	8,610	8,830	9,020	8,980	9,110	9,130	1
Processing Services	200	2	205	205	200	200	200	200	0
Turnkey Systems	500	-4	480	470	560	560	555	550	3
Application Software Products	275	4	285	305	415	425	435	535	13
Professional Services	1,030	1	1,040	1,020	1,010	1,000	1,100	1,080	1
Network Services	55	0	55	50	50	45	45	45	-4
Systems Operations	50	10	55	65	65	70	85	100	13
Systems Integration	35	14	40	40	45	150	160	165	33
Industry Sectors Total	2,060	5	2,160	2,270	2,370	2,470	2,580	2,680	4

C

Cross-Industry Sectors in Local Currency

Exhibit A-18

Cross-Industry Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				$ Millions					
Accounting	1,370	5	1,440	1,570	1,750	1,910	2,100	2,280	10
Education & Training	255	0	255	260	280	290	315	345	6
Engineering & Scientific	425	4	440	475	530	560	610	660	8
Human Resources	995	-1	985	985	1,020	1,035	1,125	1,205	4
Office Systems	1,160	9	1,260	1,430	1,640	1,840	2,070	2,320	13
Planning & Analysis	955	3	985	1,065	1,165	1,265	1,385	1,495	9
Other Cross-Industry	820	2	835	850	915	940	1,030	1,090	5
Cross-Industry Sectors Total	6,000	3	6,200	6,600	7,300	7,800	8,600	9,400	9

Exhibit A-19

Accounting

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%
				$ Millions					
Transaction Processing	54	-2	53	51	51	49	54	58	2
Turnkey Systems	415	2	425	460	510	545	595	640	9
Application Software Products	900	7	965	1,065	1,195	1,315	1,450	1,590	11
Cross-Industry Sectors Total	1,370	5	1,440	1,570	1,750	1,910	2,100	2,280	10

Exhibit A-20

Education & Training

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%
				$ Millions					
Transaction Processing	15	0	15	14	14	14	15	16	1
Turnkey Systems	175	0	175	180	200	210	230	250	7
Application Software Products	69	-7	64	65	67	70	73	75	3
Cross-Industry Sectors Total	255	0	255	260	280	290	315	345	6

Exhibit A-21

Engineering & Scientific

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%
				$ Millions					
Transaction Processing	48	0	48	46	48	47	53	58	4
Turnkey Systems	120	4	125	125	140	145	155	165	6
Application Software Products	250	8	270	300	340	365	400	435	10
Cross-Industry Sectors Total	425	4	440	475	530	560	610	660	8

Exhibit A-22

Human Resources

Sector	$ Millions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	640	-3	620	585	580	565	620	665	1
Turnkey Systems	87	0	87	93	102	110	121	131	9
Application Software Products	260	6	275	300	335	360	385	415	9
Cross-Industry Sectors Total	995	-1	985	985	1,020	1,035	1,125	1,205	4

Exhibit A-23

Office Systems

Sector	$ Millions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	15	0	15	16	17	18	20	23	9
Turnkey Systems	185	5	195	210	230	250	270	290	8
Application Software Products	965	10	1,060	1,205	1,390	1,570	1,780	1,995	13
Cross-Industry Sectors Total	1,160	9	1,260	1,430	1,640	1,840	2,070	2,320	13

Exhibit A-24

Planning & Analysis

Sector	$ Millions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	72	-3	70	67	67	65	71	78	2
Turnkey Systems	51	-2	50	52	56	59	63	68	6
Application Software Products	830	4	865	940	1,040	1,130	1,245	1,350	9
Cross-Industry Sectors Total	955	3	985	1,065	1,165	1,265	1,385	1,495	9

Exhibit A-25

Other Cross-Industry

Sector	$ Millions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	210	0	210	200	200	195	215	235	2
Turnkey Systems	430	1	435	455	495	515	560	595	6
Application Software Products	180	6	190	200	215	230	250	265	7
Cross-Industry Sectors Total	820	2	835	850	915	940	1,030	1,090	5

Information Services Industry
Vertical Sector Forecast, 1995-2000
Europe
(ECUs)

D

Sector Summary in ECUs

Exhibit A-26

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	ECU Million						95-00 AGR (%
			1995	1996	1997	1998	1999	2000	
Processing Services	7,595	2	7,742	7,963	8,393	8,699	8,982	9,337	4
Turnkey Systems	14,110	6	14,969	16,319	17,791	19,264	20,736	22,454	8
Application Software Products	9,571	8	10,356	12,442	13,890	15,816	17,988	20,466	15
Professional Services	28,589	4	29,693	30,798	31,779	32,393	33,742	34,479	3
Network Services	5,166	21	6,245	7,411	8,847	10,883	13,080	15,387	20
Systems Operations	4,196	21	5,067	6,307	7,472	8,785	10,748	12,675	20
Systems Integration	5,669	12	6,344	7,436	8,135	9,043	10,515	11,902	13
Industry Sectors Total	74,847	7	80,368	88,957	96,319	104,908	115,951	126,994	10
Transaction Processing	1,288	-2	1,264	1,202	1,202	1,166	1,288	1,387	2
Turnkey Systems	1,791	2	1,828	1,939	2,123	2,245	2,442	2,626	8
Application Software Products	4,233	7	4,528	5,006	5,620	6,184	6,847	7,521	11
Cross-Industry Sectors Total	7,362	3	7,607	8,098	8,957	9,571	10,552	11,534	9
Equipment Services	26,012	0	26,012	26,258	26,748	26,626	26,626	26,626	0
System Software Products	16,503	5	17,337	18,822	19,264	19,840	20,810	21,399	4
Utility and Other Processing	3,282	-1	3,252	3,221	3,190	3,160	3,129	3,098	-1
Other Electronic Info Services	595	-4	571	546	521	503	460	417	-6
Generic Sectors Total	46,393	2	47,172	48,847	49,724	50,129	51,025	51,540	2
Total Information Services	128,834	5	134,969	146,012	154,601	164,417	177,914	190,184	7

E

Industry Sectors in ECUs

Exhibit A-27

Information Services Market by Vertical Sectors

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Discrete Manufacturing	11,104	-2	10,933	11,264	11,828	12,393	13,117	13,816	5
Process Manufacturing	6,000	7	6,429	7,018	7,840	8,834	9,951	11,153	12
Transportation	4,405	13	4,969	5,607	6,147	6,896	7,828	8,994	13
Utilities	2,957	13	3,350	3,926	4,503	4,945	5,620	6,184	13
Telecommunications	2,442	11	2,699	3,141	3,497	3,963	4,442	5,055	13
Retail Distribution	2,626	7	2,810	3,202	3,423	3,632	3,890	4,258	9
Wholesale Distribution	2,994	2	3,043	3,362	3,436	3,620	3,865	4,086	6
Banking & Finance	15,178	11	16,908	18,933	20,761	22,699	24,847	27,092	10
Insurance	5,018	14	5,706	6,417	7,141	7,791	8,613	9,325	10
Healthcare	4,049	12	4,552	5,153	5,742	6,356	7,043	7,779	11
Education	1,190	2	1,209	1,196	1,190	1,178	1,166	1,031	-3
Local Government	4,773	7	5,117	5,521	6,037	6,491	6,994	7,669	8
Central Government	6,135	6	6,503	7,104	7,620	8,184	9,080	10,184	9
Business Services	3,718	9	4,049	4,442	4,847	5,264	5,865	6,368	9
Other Industries	2,528	5	2,650	2,785	2,908	3,031	3,166	3,288	4
Industry Sectors Total	74,847	7	80,368	88,957	96,319	104,908	115,951	126,994	10

Exhibit A-28

Discrete Manufacturing

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	8,160	-13	7,130	6,400	6,040	5,620	5,470	5,200	-6
Equipment Services	4,050	-10	3,660	3,330	3,250	3,130	2,880	2,760	-5
Software Products	5,460	-4	5,240	5,480	5,710	5,930	6,220	6,520	4
Other Information Services	7,360	-1	7,290	7,340	7,550	7,900	8,330	8,850	4
Data Communications	2,120	-1	2,100	2,210	2,360	2,380	2,550	2,850	6
Facilities/Administration	3,250	-14	2,810	2,480	2,360	2,220	2,000	1,890	-8
In-House Staff	14,960	-11	13,250	11,960	11,130	10,330	9,680	9,040	-7
IT Budget Total	45,400	-9	41,350	39,260	38,400	37,550	37,300	37,060	-2
Processing Services	1,055	-8	975	798	755	730	681	669	-7
Turnkey Systems	2,613	-3	2,540	2,515	2,503	2,540	2,699	2,712	1
Application Software Products	2,699	0	2,712	3,018	3,288	3,460	3,742	4,037	8
Professional Services	2,626	-5	2,491	2,294	2,233	2,061	2,025	1,975	-5
Network Services	883	8	957	1,006	1,104	1,325	1,448	1,558	10
Systems Operations	853	12	957	1,202	1,374	1,564	1,914	2,153	18
Systems Integration	387	2	393	417	436	460	607	669	11
Industry Sectors Total	11,104	-2	10,933	11,264	11,828	12,393	13,117	13,816	5

Exhibit A-29

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	4,990	-5	4,750	4,690	4,740	4,750	4,870	5,010	1
Equipment Services	2,070	-2	2,020	2,000	2,040	2,070	2,100	2,110	1
Software Products	2,560	4	2,660	3,010	3,330	3,670	4,250	4,750	12
Other Information Services	4,320	4	4,500	4,880	5,400	5,960	6,690	7,390	10
Data Communications	2,220	-2	2,170	2,260	2,500	2,520	2,670	2,850	6
Facilities/Administration	2,420	-4	2,320	2,230	2,230	2,230	2,250	2,260	-1
In-House Staff	8,590	-7	7,980	7,550	7,480	7,480	7,360	7,120	-2
IT Budget Total	27,240	-3	26,500	26,630	27,610	28,590	30,060	31,530	4
Processing Services	368	-3	356	356	362	368	374	380	1
Turnkey Systems	1,423	3	1,460	1,669	1,767	2,025	2,196	2,331	10
Application Software Products	1,067	7	1,147	1,460	1,607	1,945	2,276	2,656	18
Professional Services	1,779	1	1,791	1,791	1,840	1,914	2,012	2,086	3
Network Services	442	14	503	534	626	718	945	1,067	16
Systems Operations	699	17	816	939	1,080	1,270	1,601	1,859	18
Systems Integration	350	5	368	509	558	595	669	755	15
Industry Sectors Total	6,000	7	6,429	7,018	7,840	8,834	9,951	11,153	12

Exhibit A-30

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	1,630	-5	1,550	1,390	1,300	1,210	1,070	1,020	-8
Equipment Services	640	3	660	670	670	680	680	680	1
Software Products	880	24	1,090	1,200	1,300	1,450	1,720	1,890	12
Other Information Services	3,640	9	3,990	4,520	4,960	5,580	6,260	7,120	12
Data Communications	820	17	950	1,290	1,670	2,090	2,620	3,290	28
Facilities/Administration	1,030	-1	1,020	1,010	1,010	1,010	1,010	1,000	0
In-House Staff	2,560	-8	2,370	2,270	2,040	1,930	1,720	1,620	-7
IT Budget Total	10,920	7	11,660	12,270	13,010	13,870	15,090	16,690	7
Processing Services	405	3	417	429	442	454	454	466	2
Turnkey Systems	650	23	798	853	890	920	951	1,000	5
Application Software Products	350	11	387	460	509	577	791	859	17
Professional Services	1,558	5	1,632	1,693	1,730	1,767	1,804	1,828	2
Network Services	663	24	822	1,135	1,374	1,804	2,202	2,828	28
Systems Operations	344	21	417	503	583	681	779	908	17
Systems Integration	319	50	479	564	638	718	834	994	16
Industry Sectors Total	4,405	13	4,969	5,607	6,147	6,896	7,828	8,994	13

Exhibit A-31

Utilities

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,560	6	1,660	1,950	2,100	2,180	2,340	2,630	10
Equipment Services	740	10	810	900	990	1,040	1,120	1,300	10
Software Products	670	12	750	1,010	1,130	1,290	1,600	1,760	19
Other Information Services	2,540	13	2,870	3,370	3,770	4,120	4,710	5,170	13
Data Communications	560	9	610	710	800	850	1,070	1,200	15
Facilities/Administration	1,000	6	1,060	1,260	1,340	1,400	1,470	1,550	8
In-House Staff	2,930	10	3,210	3,420	3,730	3,870	4,000	4,120	5
IT Budget Total	10,060	11	11,170	12,520	13,870	14,970	16,320	17,670	10
Processing Services	153	8	166	178	337	362	374	399	19
Turnkey Systems	307	8	331	350	380	534	558	601	13
Application Software Products	117	11	129	153	196	350	399	442	28
Professional Services	1,558	10	1,718	1,926	2,110	2,282	2,454	2,650	9
Network Services	110	11	123	160	190	221	264	313	21
Systems Operations	147	33	196	221	258	276	319	350	12
Systems Integration	601	13	681	798	920	1,049	1,356	1,546	18
Industry Sectors Total	2,957	13	3,350	3,926	4,503	4,945	5,620	6,184	13

Exhibit A-32

Telecommunications

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,800	17	2,110	2,390	2,810	3,120	3,640	4,220	15
Equipment Services	640	10	700	780	830	880	1,090	1,150	10
Software Products	540	11	600	820	900	990	1,130	1,360	18
Other Information Services	2,160	12	2,420	2,800	3,130	3,460	4,010	4,600	14
Data Communications	640	30	830	940	1,050	1,120	1,280	1,430	12
Facilities/Administration	790	8	850	1,040	1,100	1,170	1,260	1,340	10
In-House Staff	2,740	11	3,030	3,230	3,390	3,570	3,850	4,020	6
IT Budget Total	9,200	13	10,430	11,780	13,130	14,480	16,320	17,910	11
Processing Services	147	8	160	172	196	209	362	393	20
Turnkey Systems	270	5	282	294	442	454	485	503	12
Application Software Products	92	7	98	129	160	307	337	356	29
Professional Services	1,411	10	1,546	1,718	1,877	2,061	2,245	2,429	9
Network Services	123	35	166	209	264	466	552	675	32
Systems Operations	49	0	49	61	61	67	80	92	13
Systems Integration	227	22	276	436	491	546	620	724	21
Industry Sectors Total	2,442	11	2,699	3,141	3,497	3,963	4,442	5,055	13

Exhibit A-33

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	2,870	-1	2,850	2,910	2,920	2,850	2,860	2,850	0
Equipment Services	1,400	2	1,420	1,450	1,470	1,450	1,420	1,400	0
Software Products	1,300	5	1,360	1,470	1,560	1,620	1,710	1,800	6
Other Information Services	2,160	6	2,290	2,470	2,630	2,920	3,130	3,310	8
Data Communications	610	6	650	690	720	720	880	900	7
Facilities/Administration	2,290	-2	2,260	2,120	2,100	2,070	2,050	2,000	-2
In-House Staff	3,780	-6	3,550	3,310	3,030	2,880	2,600	2,430	-7
IT Budget Total	14,480	-1	14,360	14,600	14,600	14,360	14,600	14,600	0
Processing Services	117	0	117	117	117	117	110	110	-1
Turnkey Systems	748	6	791	840	908	951	994	1,055	6
Application Software Products	399	6	423	503	534	589	632	663	9
Professional Services	834	2	853	859	871	853	847	828	-1
Network Services	196	22	239	270	454	503	577	626	21
Systems Operations	239	23	294	350	417	491	571	663	18
Systems Integration	67	27	86	117	123	141	160	190	17
Industry Sectors Total	2,626	7	2,810	3,202	3,423	3,632	3,890	4,258	9

Exhibit A-34

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	3,930	-8	3,630	3,440	3,340	3,210	3,070	3,020	-4
Equipment Services	1,610	-10	1,450	1,420	1,390	1,350	1,300	1,260	-3
Software Products	1,420	2	1,450	1,530	1,560	1,630	1,670	1,720	3
Other Information Services	2,420	2	2,470	2,600	2,640	2,750	2,970	3,150	5
Data Communications	740	-19	600	620	650	640	660	670	3
Facilities/Administration	2,490	-10	2,250	2,160	1,950	1,870	1,800	1,730	-5
In-House Staff	4,430	-6	4,160	3,890	3,600	3,360	3,210	2,940	-7
IT Budget Total	16,930	-6	15,950	15,710	15,340	14,970	14,720	14,480	-2
Processing Services	252	0	252	252	233	233	233	233	-2
Turnkey Systems	791	4	822	847	865	994	1,018	1,043	5
Application Software Products	466	8	503	577	620	644	687	730	8
Professional Services	1,006	-3	975	951	926	920	908	883	-2
Network Services	172	18	202	221	258	405	448	491	19
Systems Operations	227	24	282	331	374	448	675	748	22
Systems Integration	37	0	37	49	49	49	49	61	11
Industry Sectors Total	2,994	2	3,043	3,362	3,436	3,620	3,865	4,086	6

Exhibit A-35

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	17,180	1	17,300	17,910	18,160	17,910	18,280	18,400	1
Equipment Services	6,590	4	6,870	7,170	7,470	7,510	7,520	7,510	2
Software Products	5,420	12	6,070	6,910	7,550	8,260	9,100	9,830	10
Other Information Services	13,570	11	15,060	16,560	18,160	19,500	21,300	22,860	9
Data Communications	8,200	7	8,770	9,630	10,420	10,640	11,340	12,150	7
Facilities/Administration	7,840	0	7,820	7,990	8,180	8,160	8,160	8,120	1
In-House Staff	25,640	1	25,890	26,010	25,640	25,150	24,540	23,800	-2
IT Budget Total	83,800	5	87,980	92,390	95,340	97,060	100,250	102,700	3
Processing Services	2,503	4	2,613	2,773	2,871	3,080	3,190	3,288	5
Turnkey Systems	1,840	15	2,123	2,319	2,613	2,871	3,067	3,362	10
Application Software Products	1,706	19	2,025	2,491	2,859	3,362	3,902	4,577	18
Professional Services	6,098	7	6,552	6,982	7,227	7,374	7,730	7,890	4
Network Services	1,816	24	2,245	2,736	3,288	3,890	4,675	5,521	20
Systems Operations	454	20	546	773	865	982	1,098	1,245	18
Systems Integration	748	8	810	1,006	1,055	1,117	1,190	1,252	9
Industry Sectors Total	15,178	11	16,908	18,933	20,761	22,699	24,847	27,092	10

Exhibit A-36

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	5,710	2	5,790	6,170	6,330	6,380	6,560	6,740	3
Equipment Services	2,180	4	2,280	2,380	2,480	2,530	2,550	2,590	3
Software Products	2,090	8	2,260	2,650	2,970	3,230	3,600	4,000	12
Other Information Services	4,040	12	4,500	5,030	5,630	6,110	6,640	7,170	10
Data Communications	2,660	9	2,900	3,260	3,620	3,710	4,060	4,430	9
Facilities/Administration	2,660	2	2,710	2,790	2,820	2,830	2,870	2,880	1
In-House Staff	8,630	2	8,770	9,090	9,180	9,240	9,120	9,070	1
IT Budget Total	27,850	5	29,200	31,410	33,010	34,110	35,710	36,810	5
Processing Services	644	6	681	712	883	908	933	957	7
Turnkey Systems	1,086	8	1,178	1,288	1,521	1,607	1,736	1,969	11
Application Software Products	626	13	706	982	1,110	1,380	1,515	1,810	21
Professional Services	1,890	8	2,037	2,307	2,429	2,540	2,663	2,773	6
Network Services	184	90	350	393	442	491	564	761	17
Systems Operations	153	24	190	239	387	429	472	521	22
Systems Integration	423	9	460	472	509	528	589	626	6
Industry Sectors Total	5,018	14	5,706	6,417	7,141	7,791	8,613	9,325	10

Exhibit A-37

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	2,940	2	2,990	3,120	3,150	3,140	3,210	3,290	2
Equipment Services	1,260	4	1,310	1,370	1,400	1,410	1,410	1,410	1
Software Products	1,440	17	1,680	1,900	2,150	2,450	2,760	3,090	13
Other Information Services	2,880	14	3,280	3,640	3,880	4,210	4,610	5,100	9
Data Communications	1,290	14	1,470	1,610	1,680	1,710	1,820	2,060	7
Facilities/Administration	1,470	0	1,470	1,520	1,640	1,630	1,630	1,620	2
In-House Staff	5,100	2	5,190	5,290	5,350	5,330	5,250	5,180	0
IT Budget Total	16,320	6	17,300	18,530	19,140	19,880	20,740	21,960	5
Processing Services	436	7	466	485	491	521	528	681	8
Turnkey Systems	1,141	10	1,252	1,497	1,718	1,853	2,123	2,417	14
Application Software Products	528	14	601	865	945	1,037	1,264	1,509	20
Professional Services	1,521	6	1,620	1,706	1,779	1,840	2,037	2,098	5
Network Services	135	27	172	209	245	417	466	534	25
Systems Operations	172	14	196	233	245	270	294	319	10
Systems Integration	129	5	135	166	172	190	209	239	12
Industry Sectors Total	4,049	12	4,552	5,153	5,742	6,356	7,043	7,779	11

Exhibit A-38

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	1,210	-4	1,170	1,150	1,140	1,120	1,120	1,090	-1
Equipment Services	580	-3	560	560	560	550	550	530	-1
Software Products	510	0	510	520	510	520	520	520	0
Other Information Services	930	2	940	940	970	980	980	950	0
Data Communications	560	2	570	600	610	600	610	630	2
Facilities/Administration	690	-4	670	660	630	610	580	560	-3
In-House Staff	3,040	-7	2,830	2,710	2,440	2,340	2,230	1,980	-7
IT Budget Total	7,680	-4	7,410	7,180	7,020	6,740	6,610	6,420	-3
Processing Services	18	0	18	18	18	18	18	18	0
Turnkey Systems	276	0	276	276	276	264	264	252	-2
Application Software Products	117	0	117	135	135	135	135	147	5
Professional Services	558	3	577	571	564	558	534	521	-2
Network Services	44	6	47	47	49	50	52	53	3
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	18	-7	17	16	15	15	27	27	9
Industry Sectors Total	1,190	2	1,209	1,196	1,190	1,178	1,166	1,031	-3

Exhibit A-39

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	2,520	-4	2,420	2,270	2,250	2,200	2,050	2,020	-3
Equipment Services	1,150	-1	1,140	1,150	1,140	1,120	1,090	1,080	-1
Software Products	1,100	7	1,180	1,410	1,470	1,620	1,720	1,990	11
Other Information Services	4,100	7	4,370	4,810	5,100	5,440	5,850	6,260	7
Data Communications	1,130	2	1,150	1,330	1,360	1,360	1,410	1,440	4
Facilities/Administration	1,460	-4	1,400	1,370	1,350	1,330	1,300	1,260	-2
In-House Staff	5,250	-5	4,990	4,920	4,610	4,360	4,250	3,960	-5
IT Budget Total	16,690	1	16,810	17,180	17,180	17,420	17,790	18,040	1
Processing Services	460	1	466	485	491	509	515	521	2
Turnkey Systems	638	3	656	718	748	785	840	883	6
Application Software Products	350	14	399	436	491	552	613	804	15
Professional Services	2,515	5	2,638	2,736	2,822	2,920	3,043	3,129	3
Network Services	55	2	56	55	55	55	55	55	0
Systems Operations	356	29	460	601	742	920	1,104	1,350	24
Systems Integration	399	11	442	491	546	620	706	933	16
Industry Sectors Total	4,773	7	5,117	5,521	6,037	6,491	6,994	7,669	8

Exhibit A-40

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	4,060	-8	3,750	3,440	3,210	2,940	2,800	2,530	-8
Equipment Services	1,740	-2	1,710	1,690	1,670	1,610	1,560	1,500	-3
Software Products	1,690	4	1,770	1,900	1,980	2,270	2,440	2,580	8
Other Information Services	5,080	5	5,350	5,660	6,100	6,450	7,200	7,950	8
Data Communications	1,780	-1	1,750	1,820	1,840	1,780	1,800	1,840	1
Facilities/Administration	2,220	-6	2,090	2,020	1,930	1,710	1,620	1,550	-6
In-House Staff	7,850	-7	7,290	6,670	6,060	5,520	5,030	4,520	-9
IT Budget Total	24,790	-4	23,680	23,310	22,940	22,330	22,330	22,450	-1
Processing Services	601	1	607	607	607	601	607	613	0
Turnkey Systems	577	5	607	755	785	816	853	1,006	11
Application Software Products	288	2	294	319	325	331	337	344	3
Professional Services	2,233	-1	2,221	2,172	2,245	2,172	2,123	2,049	-2
Network Services	160	4	166	209	227	245	387	417	20
Systems Operations	393	39	546	718	939	1,233	1,669	2,264	33
Systems Integration	1,871	11	2,074	2,288	2,515	2,773	3,245	3,626	12
Industry Sectors Total	6,135	6	6,503	7,104	7,620	8,184	9,080	10,184	9

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Exhibit A-41

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	1,040	-2	1,010	900	900	890	910	940	-1
Equipment Services	510	0	510	520	530	520	530	530	1
Software Products	880	22	1,080	1,210	1,300	1,560	1,670	1,930	12
Other Information Services	2,650	5	2,770	3,010	3,170	3,400	3,580	3,870	7
Data Communications	440	3	450	460	480	480	520	540	4
Facilities/Administration	710	-2	700	690	670	660	650	640	-2
In-House Staff	1,950	-1	1,940	1,930	1,890	1,880	1,840	1,680	-3
IT Budget Total	8,050	4	8,340	8,710	8,940	9,280	9,710	10,120	4
Processing Services	184	3	190	331	337	344	350	356	13
Turnkey Systems	1,104	10	1,215	1,472	1,742	1,914	2,233	2,589	16
Application Software Products	429	7	460	534	595	626	816	871	14
Professional Services	1,755	3	1,816	1,828	1,877	1,902	1,951	1,975	2
Network Services	110	22	135	172	202	233	387	436	26
Systems Operations	49	2	50	52	65	67	69	82	10
Systems Integration	43	0	43	55	55	55	55	55	5
Industry Sectors Total	3,718	9	4,049	4,442	4,847	5,264	5,865	6,368	9

Exhibit A-42

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	2,230	-4	2,130	2,210	2,170	2,230	2,210	2,200	1
Equipment Services	850	-1	850	840	840	820	800	770	-2
Software Products	940	1	960	1,100	1,100	1,260	1,280	1,420	8
Other Information Services	1,890	7	2,020	2,150	2,280	2,280	2,430	2,430	4
Data Communications	690	-3	670	820	830	820	980	1,000	8
Facilities/Administration	850	-4	810	770	740	730	710	790	0
In-House Staff	2,850	2	2,900	2,920	2,960	2,880	2,800	2,710	-1
IT Budget Total	10,480	1	10,560	10,830	11,070	11,020	11,180	11,200	1
Processing Services	245	2	252	252	245	245	245	245	0
Turnkey Systems	613	-4	589	577	687	687	681	675	3
Application Software Products	337	4	350	374	509	521	534	656	13
Professional Services	1,264	1	1,276	1,252	1,239	1,227	1,350	1,325	1
Network Services	67	0	67	61	61	55	55	55	-4
Systems Operations	61	10	67	80	80	86	104	123	13
Systems Integration	43	14	49	49	55	184	196	202	33
Industry Sectors Total	2,528	5	2,650	2,785	2,908	3,031	3,166	3,288	4

F

Cross-Industry Sectors in ECUs

Exhibit A-43

Cross-Industry Sectors

Sector	1994	94-95 (%)	ECU Million						95-00 CAGR (%)
			1995	1996	1997	1998	1999	2000	
Accounting	1,681	5	1,767	1,926	2,147	2,344	2,577	2,798	10
Education & Training	313	0	313	319	344	356	387	423	6
Engineering & Scientific	521	4	540	583	650	687	748	810	8
Human Resources	1,221	-1	1,209	1,209	1,252	1,270	1,380	1,479	4
Office Systems	1,423	9	1,546	1,755	2,012	2,258	2,540	2,847	13
Planning & Analysis	1,172	3	1,209	1,307	1,429	1,552	1,699	1,834	9
Other Cross-Industry	1,006	2	1,025	1,043	1,123	1,153	1,264	1,337	5
Cross-Industry Sectors Total	7,362	3	7,607	8,098	8,957	9,571	10,552	11,534	9

Exhibit A-44

Accounting

Sector	1994	94-95 (%)	ECU Million						95-00 CAGR (%)
			1995	1996	1997	1998	1999	2000	
Transaction Processing	66	-2	65	63	63	60	66	71	2
Turnkey Systems	509	2	521	564	626	669	730	785	9
Application Software Products	1,104	7	1,184	1,307	1,466	1,613	1,779	1,951	11
Cross-Industry Sectors Total	1,681	5	1,767	1,926	2,147	2,344	2,577	2,798	10

Exhibit A-45

Education & Training

Sector	1994	94-95 (%)	ECU Million						95-00 CAGR (%)
			1995	1996	1997	1998	1999	2000	
Transaction Processing	18	0	18	17	17	17	18	20	1
Turnkey Systems	215	0	215	221	245	258	282	307	7
Application Software Products	85	-7	79	80	82	86	90	92	3
Cross-Industry Sectors Total	313	0	313	319	344	356	387	423	6

Exhibit A-46

Engineering & Scientific

Sector	1994	94-95 (%)	ECU Million						95-00 CAGR (%)
			1995	1996	1997	1998	1999	2000	
Transaction Processing	59	0	59	56	59	58	65	71	4
Turnkey Systems	147	4	153	153	172	178	190	202	6
Application Software Products	307	8	331	368	417	448	491	534	10
Cross-Industry Sectors Total	521	4	540	583	650	687	748	810	8

Exhibit A-47

Human Resources

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	785	-3	761	718	712	693	761	816	1
Turnkey Systems	107	0	107	114	125	135	148	161	9
Application Software Products	319	6	337	368	411	442	472	509	9
Cross-Industry Sectors Total	1,221	-1	1,209	1,209	1,252	1,270	1,380	1,479	4

Exhibit A-48

Office Systems

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	18	0	18	20	21	22	25	28	9
Turnkey Systems	227	5	239	258	282	307	331	356	8
Application Software Products	1,184	10	1,301	1,479	1,706	1,926	2,184	2,448	13
Cross-Industry Sectors Total	1,423	9	1,546	1,755	2,012	2,258	2,540	2,847	13

Exhibit A-49

Planning & Analysis

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	88	-3	86	82	82	80	87	96	2
Turnkey Systems	63	-2	61	64	69	72	77	83	6
Application Software Products	1,018	4	1,061	1,153	1,276	1,387	1,528	1,656	9
Cross-Industry Sectors Total	1,172	3	1,209	1,307	1,429	1,552	1,699	1,834	9

Exhibit A-50

Other Cross-Industry

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	258	0	258	245	245	239	264	288	2
Turnkey Systems	528	1	534	558	607	632	687	730	6
Application Software Products	221	6	233	245	264	282	307	325	7
Cross-Industry Sectors Total	1,006	2	1,025	1,043	1,123	1,153	1,264	1,337	5

Appendix B: Vertical Markets - France, 1995-2000

B

Information Services Industry
Vertical Sector Forecast, 1995-2000
France

A

Sector Summary in Local Currency

Exhibit B-1

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Processing Services	6,400	0	6,400	6,500	6,600	6,800	7,200	7,300	3
Turnkey Systems	9,700	4	10,100	10,900	11,700	12,500	13,700	14,800	8
Application Software Products	8,200	5	8,600	9,300	10,000	10,900	11,900	12,900	8
Professional Services	38,800	2	39,600	40,500	40,700	40,200	40,300	39,700	0
Network Services	6,000	15	6,900	8,100	9,500	11,300	13,800	16,600	19
Systems Operations	4,500	14	5,150	6,000	6,950	8,150	9,950	12,450	19
Systems Integration	5,500	11	6,100	6,900	7,600	8,200	10,100	12,100	15
Industry Sectors Total	79,000	5	83,000	88,000	93,000	98,000	107,000	116,000	7
Transaction Processing	1,250	-6	1,180	1,180	1,190	1,190	1,200	1,150	-1
Turnkey Systems	1,340	0	1,340	1,500	1,650	1,760	1,920	2,030	9
Application Software Products	6,700	0	6,700	7,400	8,150	8,850	9,600	10,300	9
Cross-Industry Sectors Total	9,300	-1	9,200	10,100	11,000	11,800	12,700	13,500	8
Equipment Services	19,900	-1	19,800	20,200	19,900	19,300	19,000	18,200	-2
System Software Products	15,800	2	16,100	16,400	16,700	17,100	17,700	18,300	3
Utility and Other Processing	1,230	7	1,320	1,410	1,510	1,590	1,690	1,780	6
Other Electronic Info Services	2,350	8	2,540	2,750	2,970	3,210	3,510	3,810	8
Generic Sectors Total	39,280	1	39,760	40,760	41,080	41,200	41,900	42,090	1
Total Information Services	127,500	4	132,000	139,000	145,000	151,000	161,500	171,500	5

FF Millions

B

Industry Sectors in Local Currency

Exhibit B-2

Information Services Market by Vertical Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	9,900	-7	9,200	9,300	9,300	9,300	9,600	9,900	1
Process Manufacturing	6,300	3	6,500	6,650	7,050	7,400	8,000	8,550	6
Transportation	5,550	14	6,350	7,350	8,200	9,200	10,750	12,400	14
Utilities	3,750	9	4,100	4,500	4,850	5,150	5,700	6,200	9
Telecommunications	4,000	10	4,400	4,900	5,500	6,000	6,750	7,450	11
Retail Distribution	2,750	5	2,900	3,150	3,400	3,650	4,000	4,350	8
Wholesale Distribution	3,550	6	3,750	3,950	4,150	4,400	4,750	5,150	7
Banking & Finance	14,500	4	15,100	16,000	17,000	18,100	19,700	21,100	7
Insurance	5,250	10	5,800	6,300	6,750	7,250	7,950	8,600	8
Healthcare	3,650	8	3,950	4,300	4,600	4,900	5,350	5,800	8
Education	1,420	4	1,470	1,460	1,400	1,330	1,290	1,240	-3
Local Government	6,150	-1	6,100	6,250	6,050	6,100	6,150	6,300	1
Central Government	6,050	10	6,650	7,250	7,800	8,050	9,250	10,850	10
Business Services	4,150	4	4,300	4,450	4,600	4,700	4,900	5,100	3
Other Industries	2,250	4	2,350	2,450	2,550	2,600	2,700	2,800	4
Industry Sectors Total	79,000	5	83,000	88,000	93,000	98,000	107,000	116,000	7

Exhibit B-3

Discrete Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	5,900	-20	4,700	4,200	3,700	3,250	2,900	2,550	-12
Equipment Services	2,550	-12	2,250	2,150	1,950	1,750	1,600	1,400	-9
Software Products	4,900	-6	4,600	4,600	4,550	4,500	4,600	4,550	0
Other Information Services	6,400	-8	5,900	5,950	6,000	6,000	6,200	6,500	2
Data Communications	1,700	0	1,700	1,850	1,950	2,000	2,100	2,150	5
Facilities/Administration	3,350	-15	2,850	2,650	2,400	2,150	2,000	1,800	-9
In-House Staff	13,000	-15	11,000	10,000	9,000	8,000	7,500	7,000	-9
IT Budget Total	37,800	-13	33,000	31,400	29,550	27,650	26,900	25,950	-5
Processing Services	700	-17	580	530	475	430	395	355	-9
Turnkey Systems	2,000	-10	1,800	1,750	1,650	1,600	1,550	1,450	-4
Application Software Products	2,650	-4	2,550	2,650	2,700	2,750	2,850	2,900	3
Professional Services	2,300	-17	1,900	1,700	1,450	1,200	1,000	850	-15
Network Services	880	1	885	970	1,045	1,135	1,260	1,375	9
Systems Operations	1,005	10	1,110	1,305	1,510	1,730	2,035	2,370	16
Systems Integration	385	-3	375	400	420	430	505	580	9
Industry Sectors Total	9,900	-7	9,200	9,300	9,300	9,300	9,600	9,900	1

Exhibit B-4

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			FF Millions						
Equipment Sales	4,200	-10	3,800	3,450	3,250	3,050	2,900	2,750	-6
Equipment Services	1,700	0	1,700	1,650	1,600	1,550	1,500	1,400	-4
Software Products	2,600	4	2,700	2,700	2,850	3,050	3,250	3,450	5
Other Information Services	4,500	3	4,650	4,750	5,000	5,200	5,600	5,950	5
Data Communications	2,050	2	2,100	2,100	2,200	2,200	2,250	2,250	1
Facilities/Administration	2,650	-6	2,500	2,300	2,200	2,100	2,050	1,950	-5
In-House Staff	8,600	-6	8,100	7,500	7,200	6,900	6,700	6,400	-5
IT Budget Total	26,300	-3	25,550	24,450	24,300	24,050	24,250	24,150	-1
Processing Services	300	-5	285	265	255	250	250	245	-3
Turnkey Systems	1,500	3	1,550	1,600	1,700	1,800	1,950	2,050	6
Application Software Products	1,000	5	1,050	1,100	1,200	1,300	1,400	1,500	7
Professional Services	1,900	-3	1,850	1,750	1,700	1,650	1,600	1,500	-4
Network Services	495	11	550	610	695	795	930	1,070	14
Systems Operations	650	15	750	850	950	1,050	1,200	1,350	12
Systems Integration	430	7	460	485	525	560	680	810	12
Industry Sectors Total	6,300	3	6,500	6,650	7,050	7,400	8,000	8,550	6

Exhibit B-5

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			FF Millions						
Equipment Sales	1,200	-8	1,100	1,050	950	850	800	750	-7
Equipment Services	530	8	570	620	630	635	640	635	2
Software Products	750	13	850	1,000	1,100	1,250	1,450	1,700	15
Other Information Services	5,050	14	5,750	6,650	7,400	8,300	9,650	11,050	14
Data Communications	610	25	765	970	1,190	1,425	1,725	2,055	22
Facilities/Administration	1,100	5	1,150	1,200	1,200	1,200	1,200	1,200	1
In-House Staff	2,450	-2	2,400	2,400	2,300	2,200	2,150	2,050	-3
IT Budget Total	11,690	8	12,585	13,890	14,770	15,860	17,615	19,440	9
Processing Services	95	5	100	110	115	120	125	130	5
Turnkey Systems	305	11	340	385	420	455	500	540	10
Application Software Products	190	21	230	280	330	390	470	555	19
Professional Services	2,700	7	2,900	3,100	3,150	3,150	3,200	3,150	2
Network Services	970	29	1,255	1,650	2,105	2,705	3,545	4,575	30
Systems Operations	760	20	910	1,090	1,260	1,445	1,700	1,980	17
Systems Integration	525	16	610	725	830	935	1,185	1,480	19
Industry Sectors Total	5,550	14	6,350	7,350	8,200	9,200	10,750	12,400	14

Exhibit B-6

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				FF Millions					
Equipment Sales	1,350	0	1,350	1,400	1,450	1,500	1,600	1,650	4
Equipment Services	550	9	600	650	700	750	800	850	7
Software Products	650	8	700	800	850	1,000	1,150	1,300	13
Other Information Services	3,400	10	3,750	4,100	4,500	4,750	5,250	5,700	9
Data Communications	450	11	500	600	700	800	900	1,000	15
Facilities/Administration	1,150	4	1,200	1,250	1,300	1,350	1,450	1,500	5
In-House Staff	2,800	5	2,950	3,150	3,350	3,550	3,800	4,000	6
IT Budget Total	10,350	7	11,050	11,950	12,850	13,700	14,950	16,000	8
Processing Services	90	11	100	110	120	135	155	170	11
Turnkey Systems	140	4	145	155	160	165	175	180	4
Application Software Products	100	5	105	115	125	135	145	155	8
Professional Services	2,650	9	2,900	3,150	3,350	3,500	3,700	3,850	6
Network Services	140	18	165	195	230	275	335	400	19
Systems Operations	30	17	35	40	45	50	60	70	15
Systems Integration	595	11	660	745	830	910	1,130	1,380	16
Industry Sectors Total	3,750	9	4,100	4,500	4,850	5,150	5,700	6,200	9

Exhibit B-7

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				FF Millions					
Equipment Sales	1,750	9	1,900	2,150	2,450	2,750	3,150	3,550	13
Equipment Services	600	8	650	750	800	850	950	1,000	9
Software Products	550	9	600	700	800	850	1,000	1,150	14
Other Information Services	3,900	10	4,300	4,800	5,400	5,950	6,750	7,450	12
Data Communications	700	14	800	950	1,100	1,250	1,450	1,650	16
Facilities/Administration	1,000	5	1,050	1,150	1,250	1,350	1,500	1,600	9
In-House Staff	2,900	7	3,100	3,400	3,700	4,000	4,400	4,750	9
IT Budget Total	11,400	9	12,400	13,900	15,500	17,000	19,200	21,150	11
Processing Services	90	6	95	105	115	125	140	155	10
Turnkey Systems	125	0	125	130	135	140	145	150	4
Application Software Products	70	7	75	85	95	105	115	125	11
Professional Services	3,250	9	3,550	3,950	4,350	4,700	5,100	5,450	9
Network Services	150	27	190	250	325	430	575	760	32
Systems Operations	30	17	35	40	45	50	60	70	15
Systems Integration	280	11	310	360	415	465	590	740	19
Industry Sectors Total	4,000	10	4,400	4,900	5,500	6,000	6,750	7,450	11

Exhibit B-8

Retail Distribution

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,950	-7	2,750	2,650	2,550	2,450	2,400	2,300	-4
Equipment Services	1,150	0	1,150	1,150	1,150	1,100	1,100	1,050	-2
Software Products	1,200	4	1,250	1,300	1,400	1,450	1,550	1,650	6
Other Information Services	2,450	4	2,550	2,750	2,950	3,200	3,500	3,800	8
Data Communications	600	8	650	700	750	750	800	800	4
Facilities/Administration	2,550	-4	2,450	2,400	2,350	2,300	2,300	2,250	-2
In-House Staff	3,500	-6	3,300	3,100	2,900	2,700	2,600	2,400	-6
IT Budget Total	14,400	-2	14,100	14,050	14,050	13,950	14,250	14,250	0
Processing Services	150	0	150	155	160	165	175	180	4
Turnkey Systems	440	7	470	505	545	585	640	685	8
Application Software Products	355	10	390	430	475	525	590	650	11
Professional Services	950	0	950	950	950	900	850	800	-3
Network Services	340	15	390	450	520	610	730	860	17
Systems Operations	455	15	525	605	700	800	940	1,095	16
Systems Integration	35	14	40	45	50	55	70	85	16
Industry Sectors Total	2,750	5	2,900	3,150	3,400	3,650	4,000	4,350	8

Exhibit B-9

Wholesale Distribution

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	3,150	-10	2,850	2,650	2,500	2,350	2,250	2,100	-6
Equipment Services	1,250	0	1,250	1,250	1,200	1,150	1,100	1,050	-3
Software Products	1,450	7	1,550	1,550	1,600	1,700	1,750	1,850	4
Other Information Services	3,000	5	3,150	3,350	3,450	3,650	3,950	4,300	6
Data Communications	550	0	550	600	650	650	650	650	3
Facilities/Administration	2,650	-6	2,500	2,400	2,300	2,200	2,150	2,050	-4
In-House Staff	4,200	-5	4,000	3,800	3,600	3,400	3,300	3,100	-5
IT Budget Total	16,250	-2	15,850	15,600	15,300	15,100	15,150	15,100	-1
Processing Services	200	-3	195	190	185	185	185	185	-1
Turnkey Systems	600	8	650	700	750	800	850	900	7
Application Software Products	495	7	530	570	615	660	720	770	8
Professional Services	1,400	-4	1,350	1,300	1,250	1,200	1,150	1,100	-4
Network Services	280	14	320	370	430	500	595	695	17
Systems Operations	554	17	646	753	878	1,015	1,203	1,414	17
Systems Integration	35	14	40	45	50	55	70	85	16
Industry Sectors Total	3,550	6	3,750	3,950	4,150	4,400	4,750	5,150	7

Exhibit B-10

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					FF Millions				
Equipment Sales	11,400	-8	10,450	10,000	9,650	9,250	8,950	8,600	-4
Equipment Services	4,350	1	4,400	4,500	4,500	4,450	4,400	4,250	-1
Software Products	4,750	6	5,050	5,300	5,600	6,050	6,500	7,000	7
Other Information Services	13,100	4	13,600	14,350	15,200	16,100	17,400	18,550	6
Data Communications	5,900	5	6,200	6,600	7,000	7,300	7,700	7,900	5
Facilities/Administration	7,000	-3	6,800	6,700	6,600	6,500	6,500	6,400	-1
In-House Staff	20,500	-2	20,000	19,500	19,000	18,500	18,500	18,000	-2
IT Budget Total	67,000	-1	66,500	66,950	67,550	68,150	69,950	70,700	1
Processing Services	3,300	0	3,300	3,400	3,500	3,650	3,850	3,950	4
Turnkey Systems	1,500	7	1,600	1,750	1,900	2,050	2,250	2,450	9
Application Software Products	1,450	10	1,600	1,800	2,000	2,250	2,550	2,850	12
Professional Services	5,350	1	5,400	5,500	5,550	5,450	5,450	5,350	0
Network Services	1,900	13	2,150	2,500	2,900	3,400	4,100	4,850	18
Systems Operations	430	12	480	540	610	680	780	885	13
Systems Integration	520	2	530	550	580	600	700	810	9
Industry Sectors Total	14,500	4	15,100	16,000	17,000	18,100	19,700	21,100	7

Exhibit B-11

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					FF Millions				
Equipment Sales	5,050	-1	5,000	5,000	5,000	4,950	4,950	4,900	0
Equipment Services	1,850	5	1,950	2,050	2,100	2,100	2,100	2,100	1
Software Products	2,250	11	2,500	2,700	2,900	3,200	3,500	3,850	9
Other Information Services	4,200	10	4,600	4,950	5,300	5,650	6,100	6,550	7
Data Communications	2,500	10	2,750	3,000	3,250	3,450	3,700	3,900	7
Facilities/Administration	3,300	3	3,400	3,450	3,450	3,450	3,500	3,500	1
In-House Staff	8,900	2	9,100	9,200	9,300	9,400	9,600	9,600	1
IT Budget Total	28,050	4	29,300	30,350	31,300	32,200	33,450	34,400	3
Processing Services	600	8	650	700	750	800	850	900	7
Turnkey Systems	1,000	15	1,150	1,300	1,450	1,600	1,800	2,000	12
Application Software Products	700	14	800	900	1,000	1,150	1,300	1,450	13
Professional Services	2,100	7	2,250	2,350	2,400	2,400	2,450	2,450	2
Network Services	245	20	295	355	420	500	610	730	20
Systems Operations	200	13	225	250	275	300	335	370	10
Systems Integration	380	8	410	440	470	490	585	685	11
Industry Sectors Total	5,250	10	5,800	6,300	6,750	7,250	7,950	8,600	8

Exhibit B-12

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,300	-4	2,200	2,200	2,200	2,150	2,150	2,150	0
Equipment Services	950	5	1,000	1,050	1,050	1,050	1,050	1,050	1
Software Products	1,100	9	1,200	1,350	1,450	1,600	1,750	2,000	11
Other Information Services	3,200	8	3,450	3,650	3,850	4,000	4,300	4,550	6
Data Communications	1,200	8	1,300	1,400	1,500	1,600	1,700	1,800	7
Facilities/Administration	1,600	0	1,600	1,650	1,650	1,650	1,700	1,700	1
In-House Staff	4,800	0	4,800	4,900	4,900	4,900	5,000	5,000	1
IT Budget Total	15,150	3	15,550	16,200	16,600	16,950	17,650	18,250	3
Processing Services	195	5	205	220	235	255	280	300	8
Turnkey Systems	540	18	635	755	890	1,045	1,245	1,455	18
Application Software Products	335	13	380	435	495	560	645	730	14
Professional Services	2,400	4	2,500	2,600	2,650	2,650	2,700	2,700	2
Network Services	135	22	165	205	250	310	390	485	24
Systems Operations	10	0	10	10	10	10	10	10	0
Systems Integration	55	9	60	65	70	75	90	110	13
Industry Sectors Total	3,650	8	3,950	4,300	4,600	4,900	5,350	5,800	8

Exhibit B-13

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,100	-5	1,050	1,000	950	900	850	800	-5
Equipment Services	500	0	500	500	500	500	500	450	-2
Software Products	450	0	450	450	450	450	450	450	0
Other Information Services	1,400	4	1,450	1,450	1,400	1,400	1,400	1,350	-1
Data Communications	600	8	650	700	750	750	750	750	3
Facilities/Administration	850	0	850	850	800	750	700	650	-5
In-House Staff	3,050	0	3,050	3,000	2,850	2,700	2,600	2,450	-4
IT Budget Total	7,950	1	8,000	7,950	7,700	7,450	7,250	6,900	-3
Processing Services	20	0	20	20	20	20	20	20	0
Turnkey Systems	115	-4	110	100	90	80	75	65	-10
Application Software Products	80	-6	75	70	65	60	55	50	-8
Professional Services	1,100	5	1,150	1,150	1,100	1,050	1,000	950	-4
Network Services	40	0	40	40	40	40	40	40	0
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	65	8	70	75	80	80	95	110	9
Industry Sectors Total	1,420	4	1,470	1,460	1,400	1,330	1,290	1,240	-3

Exhibit B-14

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	3,500	-14	3,000	2,750	2,400	2,200	2,000	1,850	-9
Equipment Services	1,350	-7	1,250	1,250	1,150	1,100	1,000	950	-5
Software Products	1,250	-4	1,200	1,250	1,200	1,300	1,300	1,400	3
Other Information Services	6,000	-1	5,950	6,050	5,850	5,800	5,800	5,900	0
Data Communications	1,550	-3	1,500	1,500	1,450	1,450	1,400	1,350	-2
Facilities/Administration	2,300	-11	2,050	1,900	1,650	1,500	1,350	1,250	-9
In-House Staff	7,100	-11	6,300	5,900	5,200	4,900	4,500	4,200	-8
IT Budget Total	23,050	-8	21,250	20,600	18,900	18,250	17,350	16,900	-4
Processing Services	205	-2	200	205	200	205	210	215	1
Turnkey Systems	300	2	305	325	330	350	370	395	5
Application Software Products	215	7	230	255	270	300	330	365	10
Professional Services	4,800	-2	4,700	4,750	4,500	4,450	4,300	4,200	-2
Network Services	55	-9	50	45	40	40	40	40	-4
Systems Operations	240	10	265	300	325	365	410	470	12
Systems Integration	320	5	335	365	380	410	490	590	12
Industry Sectors Total	6,150	-1	6,100	6,250	6,050	6,100	6,150	6,300	1

FF Millions

Exhibit B-15

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	3,150	-11	2,800	2,500	2,250	1,850	1,600	1,300	-14
Equipment Services	1,350	0	1,350	1,350	1,300	1,150	1,050	900	-8
Software Products	1,500	10	1,650	1,750	1,900	1,950	2,200	2,400	8
Other Information Services	5,250	9	5,700	6,150	6,500	6,650	7,450	8,700	9
Data Communications	1,100	5	1,150	1,200	1,250	1,150	1,100	1,000	-3
Facilities/Administration	2,550	-2	2,500	2,400	2,250	2,000	1,850	1,600	-9
In-House Staff	7,500	-4	7,200	6,800	6,300	5,500	5,000	4,300	-10
IT Budget Total	22,400	0	22,350	22,150	21,750	20,250	20,250	20,200	-2
Processing Services	265	4	275	285	290	280	285	275	0
Turnkey Systems	295	12	330	365	400	415	445	455	7
Application Software Products	105	-5	100	95	85	75	65	55	-11
Professional Services	3,350	6	3,550	3,650	3,700	3,450	3,350	3,100	-3
Network Services	225	11	250	275	300	315	345	360	8
Systems Operations	25	120	55	115	245	505	1,065	2,205	109
Systems Integration	1,800	17	2,100	2,450	2,800	3,000	3,700	4,400	16
Industry Sectors Total	6,050	10	6,650	7,250	7,800	8,050	9,250	10,850	10

FF Millions

Exhibit B-16

Business Services

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	900	-11	800	750	700	650	600	550	-7
Equipment Services	425	0	425	425	415	395	380	355	-4
Software Products	700	14	800	850	900	1,000	1,100	1,200	8
Other Information Services	3,600	0	3,600	3,650	3,700	3,650	3,650	3,650	0
Data Communications	405	1	410	415	425	420	420	410	0
Facilities/Administration	900	-6	850	800	750	700	650	600	-7
In-House Staff	2,150	-5	2,050	1,950	1,900	1,800	1,750	1,650	-4
IT Budget Total	9,080	-2	8,935	8,840	8,790	8,615	8,550	8,415	-1
Processing Services	110	0	110	110	115	120	125	130	3
Turnkey Systems	560	20	670	800	965	1,155	1,400	1,665	20
Application Software Products	295	7	315	335	360	385	415	440	7
Professional Services	3,000	0	3,000	2,950	2,900	2,750	2,650	2,500	-4
Network Services	115	13	130	150	170	195	230	265	15
Systems Operations	25	0	25	25	25	25	25	25	0
Systems Integration	55	0	55	55	60	60	70	80	8
Industry Sectors Total	4,150	4	4,300	4,450	4,600	4,700	4,900	5,100	3

Exhibit B-17

Other Industries

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,950	-8	1,800	1,700	1,650	1,550	1,500	1,450	-4
Equipment Services	760	3	780	810	815	805	795	770	0
Software Products	745	6	790	820	860	900	945	995	5
Other Information Services	2,100	5	2,200	2,300	2,400	2,450	2,550	2,650	4
Data Communications	60	17	70	85	105	120	140	160	18
Facilities/Administration	90	0	90	90	90	90	90	90	0
In-House Staff	255	-4	245	235	225	215	210	200	-4
IT Budget Total	5,960	0	5,975	6,040	6,145	6,130	6,230	6,315	1
Processing Services	80	6	85	90	95	100	110	115	6
Turnkey Systems	250	4	260	275	290	305	325	340	6
Application Software Products	180	8	195	210	230	245	265	285	8
Professional Services	1,550	3	1,600	1,650	1,700	1,700	1,750	1,750	2
Network Services	60	0	60	60	60	60	60	60	0
Systems Operations	65	15	75	85	95	105	120	135	12
Systems Integration	55	9	60	65	70	75	90	110	13
Industry Sectors Total	2,250	4	2,350	2,450	2,550	2,600	2,700	2,800	4

C

Cross-Industry Sectors in Local Currency

Exhibit B-18

Cross-Industry Sectors

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	2,150	0	2,150	2,350	2,550	2,750	2,950	3,150	8
Education & Training	315	-8	290	310	320	330	340	350	4
Engineering & Scientific	670	0	670	730	790	800	810	810	4
Human Resources	1,350	-4	1,300	1,350	1,400	1,400	1,400	1,350	1
Office Systems	2,050	5	2,150	2,550	2,950	3,450	4,000	4,550	16
Planning & Analysis	1,750	-6	1,650	1,800	1,900	2,000	2,100	2,150	5
Other Cross-Industry	1,000	0	1,000	1,050	1,100	1,100	1,150	1,150	3
Cross-Industry Sectors Total	9,300	-1	9,200	10,100	11,000	11,800	12,700	13,500	8

Exhibit B-19

Accounting

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	65	-8	60	60	60	60	60	60	0
Turnkey Systems	400	0	400	450	500	550	600	650	10
Application Software Products	1,700	0	1,700	1,850	2,000	2,150	2,300	2,450	8
Cross-Industry Sectors Total	2,150	0	2,150	2,350	2,550	2,750	2,950	3,150	8

Exhibit B-20

Education & Training

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	20	0	20	20	20	20	20	20	0
Turnkey Systems	165	-3	160	175	185	195	205	215	6
Application Software Products	130	-15	110	115	115	115	115	115	1
Cross-Industry Sectors Total	315	-8	290	310	320	330	340	350	4

Exhibit B-21

Engineering & Scientific

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	60	-8	55	55	55	55	55	50	-2
Turnkey Systems	110	0	110	120	130	140	150	160	8
Application Software Products	500	0	500	550	600	600	600	600	4
Cross-Industry Sectors Total	670	0	670	730	790	800	810	810	4

Exhibit B-22

Human Resources

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	750	-7	700	700	700	700	700	650	-1
Turnkey Systems	80	0	80	85	90	95	100	105	6
Application Software Products	500	0	500	550	600	600	600	600	4
Cross-Industry Sectors Total	1,350	-4	1,300	1,350	1,400	1,400	1,400	1,350	1

Exhibit B-23

Office Systems

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	20	0	20	25	30	35	45	55	22
Turnkey Systems	135	4	140	160	185	210	240	270	14
Application Software Products	1,900	5	2,000	2,350	2,750	3,200	3,700	4,200	16
Cross-Industry Sectors Total	2,050	5	2,150	2,550	2,950	3,450	4,000	4,550	16

Exhibit B-24

Planning & Analysis

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	80	-13	70	70	70	70	70	65	-1
Turnkey Systems	50	0	50	55	60	65	70	75	8
Application Software Products	1,600	-3	1,550	1,650	1,750	1,850	1,950	2,000	5
Cross-Industry Sectors Total	1,750	-6	1,650	1,800	1,900	2,000	2,100	2,150	5

Exhibit A-25

Other Cross-Industry

Sector	FF Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	250	0	250	250	250	250	250	250	0
Turnkey Systems	400	0	400	450	500	500	550	550	7
Application Software Products	350	0	350	350	350	350	350	350	0
Cross-Industry Sectors Total	1,000	0	1,000	1,050	1,100	1,100	1,150	1,150	3

Information Services Industry
Vertical Sector Forecast, 1995-2000
France
(US$ Million)

D

Sector Summary in US Dollars

Exhibit B-26

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Processing Services	1,200	0	1,200	1,220	1,240	1,270	1,350	1,370	3
Turnkey Systems	1,820	4	1,890	2,040	2,190	2,340	2,570	2,770	8
Application Software Products	1,540	5	1,610	1,740	1,870	2,040	2,230	2,420	8
Professional Services	7,270	2	7,420	7,580	7,620	7,530	7,550	7,430	0
Network Services	1,120	15	1,290	1,520	1,780	2,120	2,580	3,110	19
Systems Operations	840	14	960	1,120	1,300	1,530	1,860	2,330	19
Systems Integration	1,030	11	1,140	1,290	1,420	1,540	1,890	2,270	15
Industry Sectors Total	14,790	5	15,540	16,480	17,420	18,350	20,040	21,720	7
Transaction Processing	234	-6	221	221	223	223	225	215	-1
Turnkey Systems	251	0	251	281	309	330	360	380	9
Application Software Products	1,255	0	1,255	1,386	1,526	1,657	1,798	1,929	9
Cross-Industry Sectors Total	1,742	-1	1,723	1,891	2,060	2,210	2,378	2,528	8
Equipment Services	3,727	-1	3,708	3,783	3,727	3,614	3,558	3,408	-2
System Software Products	2,959	2	3,015	3,071	3,127	3,202	3,315	3,427	3
Utility and Other Processing	230	7	247	264	283	298	316	333	6
Other Electronic Info Services	440	8	476	515	556	601	657	713	8
Generic Sectors Total	7,356	1	7,446	7,633	7,693	7,715	7,846	7,882	1
Total Information Services	23,900	4	24,700	26,000	27,200	28,300	30,200	32,100	5

E
Industry Sectors in US Dollars

Exhibit B-27

Information Services Market by Vertical Sectors

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	1,854	-7	1,723	1,742	1,742	1,742	1,798	1,854	1
Process Manufacturing	1,180	3	1,217	1,245	1,320	1,386	1,498	1,601	6
Transportation	1,039	14	1,189	1,376	1,536	1,723	2,013	2,322	14
Utilities	702	9	768	843	908	964	1,067	1,161	9
Telecommunications	749	10	824	918	1,030	1,124	1,264	1,395	11
Retail Distribution	515	5	543	590	637	684	749	815	8
Wholesale Distribution	665	6	702	740	777	824	890	964	7
Banking & Finance	2,715	4	2,828	2,996	3,184	3,390	3,689	3,951	7
Insurance	983	10	1,086	1,180	1,264	1,358	1,489	1,610	8
Healthcare	684	8	740	805	861	918	1,002	1,086	8
Education	266	4	275	273	262	249	242	232	-3
Local Government	1,152	-1	1,142	1,170	1,133	1,142	1,152	1,180	1
Central Government	1,133	10	1,245	1,358	1,461	1,507	1,732	2,032	10
Business Services	777	4	805	833	861	880	918	955	3
Other Industries	421	4	440	459	478	487	506	524	4
Industry Sectors Total	14,794	5	15,543	16,479	17,416	18,352	20,037	21,723	7

Exhibit B-28

Discrete Manufacturing

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,100	-20	880	790	690	610	540	480	-12
Equipment Services	480	-12	420	400	370	330	300	260	-9
Software Products	920	-6	860	860	850	840	860	850	0
Other Information Services	1,200	-8	1,100	1,110	1,120	1,120	1,160	1,220	2
Data Communications	320	0	320	350	370	370	390	400	5
Facilities/Administration	630	-15	530	500	450	400	370	340	-9
In-House Staff	2,430	-15	2,060	1,870	1,690	1,500	1,400	1,310	-9
IT Budget Total	7,080	-13	6,180	5,880	5,530	5,180	5,040	4,860	-5
Processing Services	130	-17	110	100	90	80	70	70	-9
Turnkey Systems	370	-10	340	330	310	300	290	270	-4
Application Software Products	500	-4	480	500	510	510	530	540	3
Professional Services	430	-17	360	320	270	220	190	160	-15
Network Services	160	1	170	180	200	210	240	260	9
Systems Operations	190	10	210	240	280	320	380	440	16
Systems Integration	70	-3	70	70	80	80	90	110	9
Industry Sectors Total	1,850	-7	1,720	1,740	1,740	1,740	1,800	1,850	1

Exhibit B-29

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	790	-10	710	650	610	570	540	510	-6
Equipment Services	320	0	320	310	300	290	280	260	-4
Software Products	490	4	510	510	530	570	610	650	5
Other Information Services	840	3	870	890	940	970	1,050	1,110	5
Data Communications	380	2	390	390	410	410	420	420	1
Facilities/Administration	500	-6	470	430	410	390	380	370	-5
In-House Staff	1,610	-6	1,520	1,400	1,350	1,290	1,250	1,200	-5
IT Budget Total	4,930	-3	4,780	4,580	4,550	4,500	4,540	4,520	-1
Processing Services	60	-5	50	50	50	50	50	50	-3
Turnkey Systems	280	3	290	300	320	340	370	380	6
Application Software Products	190	5	200	210	220	240	260	280	7
Professional Services	360	-3	350	330	320	310	300	280	-4
Network Services	90	11	100	110	130	150	170	200	14
Systems Operations	120	15	140	160	180	200	220	250	12
Systems Integration	80	7	90	90	100	100	130	150	12
Industry Sectors Total	1,180	3	1,220	1,250	1,320	1,390	1,500	1,600	6

Exhibit B-30

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	220	-8	210	200	180	160	150	140	-7
Equipment Services	100	8	110	120	120	120	120	120	2
Software Products	140	13	160	190	210	230	270	320	15
Other Information Services	950	14	1,080	1,250	1,390	1,550	1,810	2,070	14
Data Communications	110	25	140	180	220	270	320	380	22
Facilities/Administration	210	5	220	220	220	220	220	220	1
In-House Staff	460	-2	450	450	430	410	400	380	-3
IT Budget Total	2,190	8	2,360	2,600	2,770	2,970	3,300	3,640	9
Processing Services	20	5	20	20	20	20	20	20	5
Turnkey Systems	60	11	60	70	80	90	90	100	10
Application Software Products	40	21	40	50	60	70	90	100	19
Professional Services	510	7	540	580	590	590	600	590	2
Network Services	180	29	240	310	390	510	660	860	30
Systems Operations	140	20	170	200	240	270	320	370	17
Systems Integration	100	16	110	140	160	180	220	280	19
Industry Sectors Total	1,040	14	1,190	1,380	1,540	1,720	2,010	2,320	14

Exhibit B-31

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					US$ Million				
Equipment Sales	250	0	250	260	270	280	300	310	4
Equipment Services	100	9	110	120	130	140	150	160	7
Software Products	120	8	130	150	160	190	220	240	13
Other Information Services	640	10	700	770	840	890	980	1,070	9
Data Communications	80	11	90	110	130	150	170	190	15
Facilities/Administration	220	4	220	230	240	250	270	280	5
In-House Staff	520	5	550	590	630	660	710	750	6
IT Budget Total	1,940	7	2,070	2,240	2,410	2,570	2,800	3,000	8
Processing Services	20	11	20	20	20	30	30	30	11
Turnkey Systems	30	4	30	30	30	30	30	30	4
Application Software Products	20	5	20	20	20	30	30	30	8
Professional Services	500	9	540	590	630	660	690	720	6
Network Services	30	18	30	40	40	50	60	70	19
Systems Operations	10	17	10	10	10	10	10	10	15
Systems Integration	110	11	120	140	160	170	210	260	16
Industry Sectors Total	700	9	770	840	910	960	1,070	1,160	9

Exhibit B-32

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					US$ Million				
Equipment Sales	330	9	360	400	460	510	590	660	13
Equipment Services	110	8	120	140	150	160	180	190	9
Software Products	100	9	110	130	150	160	190	220	14
Other Information Services	730	10	810	900	1,010	1,110	1,260	1,400	12
Data Communications	130	14	150	180	210	230	270	310	16
Facilities/Administration	190	5	200	220	230	250	280	300	9
In-House Staff	540	7	580	640	690	750	820	890	9
IT Budget Total	2,130	9	2,320	2,600	2,900	3,180	3,600	3,960	11
Processing Services	20	6	20	20	20	20	30	30	10
Turnkey Systems	20	0	20	20	30	30	30	30	4
Application Software Products	10	7	10	20	20	20	20	20	11
Professional Services	610	9	660	740	810	880	960	1,020	9
Network Services	30	27	40	50	60	80	110	140	32
Systems Operations	10	17	10	10	10	10	10	10	15
Systems Integration	50	11	60	70	80	90	110	140	19
Industry Sectors Total	750	10	820	920	1,030	1,120	1,260	1,400	11

Exhibit B-33

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	550	-7	510	500	480	460	450	430	-4
Equipment Services	220	0	220	220	220	210	210	200	-2
Software Products	220	4	230	240	260	270	290	310	6
Other Information Services	460	4	480	510	550	600	660	710	8
Data Communications	110	8	120	130	140	140	150	150	4
Facilities/Administration	480	-4	460	450	440	430	430	420	-2
In-House Staff	660	-6	620	580	540	510	490	450	-6
IT Budget Total	2,700	-2	2,640	2,630	2,630	2,610	2,670	2,670	0
Processing Services	30	0	30	30	30	30	30	30	4
Turnkey Systems	80	7	90	90	100	110	120	130	8
Application Software Products	70	10	70	80	90	100	110	120	11
Professional Services	180	0	180	180	180	170	160	150	-3
Network Services	60	15	70	80	100	110	140	160	17
Systems Operations	90	15	100	110	130	150	180	210	16
Systems Integration	10	14	10	10	10	10	10	20	16
Industry Sectors Total	510	5	540	590	640	680	750	810	8

Exhibit B-34

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	590	-10	530	500	470	440	420	390	-6
Equipment Services	230	0	230	230	220	220	210	200	-3
Software Products	270	7	290	290	300	320	330	350	4
Other Information Services	560	5	590	630	650	680	740	810	6
Data Communications	100	0	100	110	120	120	120	120	3
Facilities/Administration	500	-6	470	450	430	410	400	380	-4
In-House Staff	790	-5	750	710	670	640	620	580	-5
IT Budget Total	3,040	-2	2,970	2,920	2,870	2,830	2,840	2,830	-1
Processing Services	40	-3	40	40	30	30	30	30	-1
Turnkey Systems	110	8	120	130	140	150	160	170	7
Application Software Products	90	7	100	110	120	120	130	140	8
Professional Services	260	-4	250	240	230	220	220	210	-4
Network Services	50	14	60	70	80	90	110	130	17
Systems Operations	100	17	120	140	160	190	230	260	17
Systems Integration	10	14	10	10	10	10	10	20	16
Industry Sectors Total	660	6	700	740	780	820	890	960	7

Exhibit B-35

Banking & Finance

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,130	-8	1,960	1,870	1,810	1,730	1,680	1,610	-4
Equipment Services	810	1	820	840	840	830	820	800	-1
Software Products	890	6	950	990	1,050	1,130	1,220	1,310	7
Other Information Services	2,450	4	2,550	2,690	2,850	3,010	3,260	3,470	6
Data Communications	1,100	5	1,160	1,240	1,310	1,370	1,440	1,480	5
Facilities/Administration	1,310	-3	1,270	1,250	1,240	1,220	1,220	1,200	-1
In-House Staff	3,840	-2	3,750	3,650	3,560	3,460	3,460	3,370	-2
IT Budget Total	12,550	-1	12,450	12,540	12,650	12,760	13,100	13,240	1
Processing Services	620	0	620	640	660	680	720	740	4
Turnkey Systems	280	7	300	330	360	380	420	460	9
Application Software Products	270	10	300	340	370	420	480	530	12
Professional Services	1,000	1	1,010	1,030	1,040	1,020	1,020	1,000	0
Network Services	360	13	400	470	540	640	770	910	18
Systems Operations	80	12	90	100	110	130	150	170	13
Systems Integration	100	2	100	100	110	110	130	150	9
Industry Sectors Total	2,720	4	2,830	3,000	3,180	3,390	3,690	3,950	7

Exhibit B-36

Insurance

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	950	-1	940	940	940	930	930	920	0
Equipment Services	350	5	370	380	390	390	390	390	1
Software Products	420	11	470	510	540	600	660	720	9
Other Information Services	790	10	860	930	990	1,060	1,140	1,230	7
Data Communications	470	10	510	560	610	650	690	730	7
Facilities/Administration	620	3	640	650	650	650	660	660	1
In-House Staff	1,670	2	1,700	1,720	1,740	1,760	1,800	1,800	1
IT Budget Total	5,250	4	5,490	5,680	5,860	6,030	6,260	6,440	3
Processing Services	110	8	120	130	140	150	160	170	7
Turnkey Systems	190	15	220	240	270	300	340	370	12
Application Software Products	130	14	150	170	190	220	240	270	13
Professional Services	390	7	420	440	450	450	460	460	2
Network Services	50	20	60	70	80	90	110	140	20
Systems Operations	40	13	40	50	50	60	60	70	10
Systems Integration	70	8	80	80	90	90	110	130	11
Industry Sectors Total	980	10	1,090	1,180	1,260	1,360	1,490	1,610	8

Exhibit B-37

Healthcare

	US$ Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	430	-4	410	410	410	400	400	400	0
Equipment Services	180	5	190	200	200	200	200	200	1
Software Products	210	9	220	250	270	300	330	370	11
Other Information Services	600	8	650	680	720	750	810	850	6
Data Communications	220	8	240	260	280	300	320	340	7
Facilities/Administration	300	0	300	310	310	310	320	320	1
In-House Staff	900	0	900	920	920	920	940	940	1
IT Budget Total	2,840	3	2,910	3,030	3,110	3,170	3,310	3,420	3
Processing Services	40	5	40	40	40	50	50	60	8
Turnkey Systems	100	18	120	140	170	200	230	270	18
Application Software Products	60	13	70	80	90	100	120	140	14
Professional Services	450	4	470	490	500	500	510	510	2
Network Services	30	22	30	40	50	60	70	90	24
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	10	9	10	10	10	10	20	20	13
Industry Sectors Total	680	8	740	810	860	920	1,000	1,090	8

Exhibit B-38

Education

	US$ Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	210	-5	200	190	180	170	160	150	-5
Equipment Services	90	0	90	90	90	90	90	80	-2
Software Products	80	0	80	80	80	80	80	80	0
Other Information Services	260	4	270	270	260	260	260	250	-1
Data Communications	110	8	120	130	140	140	140	140	3
Facilities/Administration	160	0	160	160	150	140	130	120	-5
In-House Staff	570	0	570	560	530	510	490	460	-4
IT Budget Total	1,490	1	1,500	1,490	1,440	1,400	1,360	1,290	-3
Processing Services	0	0	0	0	0	0	0	0	0
Turnkey Systems	20	-4	20	20	20	10	10	10	-10
Application Software Products	10	-6	10	10	10	10	10	10	-8
Professional Services	210	5	220	220	210	200	190	180	-4
Network Services	10	0	10	10	10	10	10	10	0
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	10	8	10	10	10	10	20	20	9
Industry Sectors Total	270	4	280	270	260	250	240	230	-3

Exhibit B-39

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	660	-14	560	510	450	410	370	350	-9
Equipment Services	250	-7	230	230	220	210	190	180	-5
Software Products	230	-4	220	230	220	240	240	260	3
Other Information Services	1,120	-1	1,110	1,130	1,100	1,090	1,090	1,100	0
Data Communications	290	-3	280	280	270	270	260	250	-2
Facilities/Administration	430	-11	380	360	310	280	250	230	-9
In-House Staff	1,330	-11	1,180	1,100	970	920	840	790	-8
IT Budget Total	4,320	-8	3,980	3,860	3,540	3,420	3,250	3,160	-4
Processing Services	40	-2	40	40	40	40	40	40	1
Turnkey Systems	60	2	60	60	60	70	70	70	5
Application Software Products	40	7	40	50	50	60	60	70	10
Professional Services	900	-2	880	890	840	830	810	790	-2
Network Services	10	-9	10	10	10	10	10	10	-4
Systems Operations	40	10	50	60	60	70	80	90	12
Systems Integration	60	5	60	70	70	80	90	110	12
Industry Sectors Total	1,150	-1	1,140	1,170	1,130	1,140	1,150	1,180	1

Exhibit B-40

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	590	-11	520	470	420	350	300	240	-14
Equipment Services	250	0	250	250	240	220	200	170	-8
Software Products	280	10	310	330	360	370	410	450	8
Other Information Services	980	9	1,070	1,150	1,220	1,250	1,400	1,630	9
Data Communications	210	5	220	220	230	220	210	190	-3
Facilities/Administration	480	-2	470	450	420	370	350	300	-9
In-House Staff	1,400	-4	1,350	1,270	1,180	1,030	940	810	-10
IT Budget Total	4,190	0	4,190	4,150	4,070	3,790	3,790	3,780	-2
Processing Services	50	4	50	50	50	50	50	50	0
Turnkey Systems	60	12	60	70	70	80	80	90	7
Application Software Products	20	-5	20	20	20	10	10	10	-11
Professional Services	630	6	660	680	690	650	630	580	-3
Network Services	40	11	50	50	60	60	60	70	8
Systems Operations	0	120	10	20	50	90	200	410	109
Systems Integration	340	17	390	460	520	560	690	820	16
Industry Sectors Total	1,130	10	1,250	1,360	1,460	1,510	1,730	2,030	10

Exhibit B-41

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	170	-11	150	140	130	120	110	100	-7
Equipment Services	80	0	80	80	80	70	70	70	-4
Software Products	130	14	150	160	170	190	210	220	8
Other Information Services	670	0	670	680	690	680	680	680	0
Data Communications	80	1	80	80	80	80	80	80	0
Facilities/Administration	170	-6	160	150	140	130	120	110	-7
In-House Staff	400	-5	380	370	360	340	330	310	-4
IT Budget Total	1,700	-2	1,670	1,660	1,650	1,610	1,600	1,580	-1
Processing Services	20	0	20	20	20	20	20	20	3
Turnkey Systems	100	20	130	150	180	220	260	310	20
Application Software Products	60	7	60	60	70	70	80	80	7
Professional Services	560	0	560	550	540	510	500	470	-4
Network Services	20	13	20	30	30	40	40	50	15
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	10	0	10	10	10	10	10	10	8
Industry Sectors Total	780	4	810	830	860	880	920	960	3

Exhibit B-42

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	370	-8	340	320	310	290	280	270	-4
Equipment Services	140	3	150	150	150	150	150	140	0
Software Products	140	6	150	150	160	170	180	190	5
Other Information Services	390	5	410	430	450	460	480	500	4
Data Communications	10	17	10	20	20	20	30	30	18
Facilities/Administration	20	0	20	20	20	20	20	20	0
In-House Staff	50	-4	50	40	40	40	40	40	-4
IT Budget Total	1,120	0	1,120	1,130	1,150	1,150	1,170	1,180	1
Processing Services	10	6	20	20	20	20	20	20	6
Turnkey Systems	50	4	50	50	50	60	60	60	6
Application Software Products	30	8	40	40	40	50	50	50	8
Professional Services	290	3	300	310	320	320	330	330	2
Network Services	10	0	10	10	10	10	10	10	0
Systems Operations	10	15	10	20	20	20	20	30	12
Systems Integration	10	9	10	10	10	10	20	20	13
Industry Sectors Total	420	4	440	460	480	490	510	520	4

F
Cross-Industry Sectors in US Dollars

Exhibit B-43

Cross-Industry Sectors

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	403	0	403	440	478	515	552	590	8
Education & Training	59	-8	54	58	60	62	64	66	4
Engineering & Scientific	125	0	125	137	148	150	152	152	4
Human Resources	253	-4	243	253	262	262	262	253	1
Office Systems	384	5	403	478	552	646	749	852	16
Planning & Analysis	328	-6	309	337	356	375	393	403	5
Other Cross-Industry	187	0	187	197	206	206	215	215	3
Cross-Industry Sectors Total	1,742	-1	1,723	1,891	2,060	2,210	2,378	2,528	8

Exhibit B-44

Accounting

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	12	-8	11	11	11	11	11	11	0
Turnkey Systems	75	0	75	84	94	103	112	122	10
Application Software Products	318	0	318	346	375	403	431	459	8
Cross-Industry Sectors Total	403	0	403	440	478	515	552	590	8

Exhibit B-45

Education & Training

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	4	0	4	4	4	4	4	4	0
Turnkey Systems	31	-3	30	33	35	37	38	40	6
Application Software Products	24	-15	21	22	22	22	22	22	1
Cross-Industry Sectors Total	59	-8	54	58	60	62	64	66	4

Exhibit B-46

Engineering & Scientific

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	11	-8	10	10	10	10	10	9	-2
Turnkey Systems	21	0	21	22	24	26	28	30	8
Application Software Products	94	0	94	103	112	112	112	112	4
Cross-Industry Sectors Total	125	0	125	137	148	150	152	152	4

Exhibit B-47

Human Resources

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	140	-7	131	131	131	131	131	122	-1
Turnkey Systems	15	0	15	16	17	18	19	20	6
Application Software Products	94	0	94	103	112	112	112	112	4
Cross-Industry Sectors Total	253	-4	243	253	262	262	262	253	1

Exhibit B-48

Office Systems

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	4	0	4	5	6	7	8	10	22
Turnkey Systems	25	4	26	30	35	39	45	51	14
Application Software Products	356	5	375	440	515	599	693	787	16
Cross-Industry Sectors Total	384	5	403	478	552	646	749	852	16

Exhibit B-49

Planning & Analysis

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	15	-13	13	13	13	13	13	12	-1
Turnkey Systems	9	0	9	10	11	12	13	14	8
Application Software Products	300	-3	290	309	328	346	365	375	5
Cross-Industry Sectors Total	328	-6	309	337	356	375	393	403	5

Exhibit B-50

Other Cross-Industry

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	47	0	47	47	47	47	47	47	0
Turnkey Systems	75	0	75	84	94	94	103	103	7
Application Software Products	66	0	66	66	66	66	66	66	0
Cross-Industry Sectors Total	187	0	187	197	206	206	215	215	3

Information Services Industry
Vertical Sector Forecast, 1995-2000
France
(ECUs)

G

Sector Summary in ECUs

Exhibit B-51

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Processing Services	979	0	979	994	1,009	1,040	1,101	1,116	3
Turnkey Systems	1,483	4	1,544	1,667	1,789	1,911	2,095	2,263	8
Application Software Products	1,254	5	1,315	1,422	1,529	1,667	1,820	1,972	8
Professional Services	5,933	2	6,055	6,193	6,223	6,147	6,162	6,070	0
Network Services	917	15	1,055	1,239	1,453	1,728	2,110	2,538	19
Systems Operations	688	14	787	917	1,063	1,246	1,521	1,904	19
Systems Integration	841	11	933	1,055	1,162	1,254	1,544	1,850	15
Industry Sectors Total	12,080	5	12,691	13,456	14,220	14,985	16,361	17,737	7
Transaction Processing	191	-6	180	180	182	182	183	176	-1
Turnkey Systems	205	0	205	229	252	269	294	310	9
Application Software Products	1,024	0	1,024	1,131	1,246	1,353	1,468	1,575	9
Cross-Industry Sectors Total	1,422	-1	1,407	1,544	1,682	1,804	1,942	2,064	8
Equipment Services	3,043	-1	3,028	3,089	3,043	2,951	2,905	2,783	-2
System Software Products	2,416	2	2,462	2,508	2,554	2,615	2,706	2,798	3
Utility and Other Processing	188	7	202	216	231	243	258	272	6
Other Electronic Info Services	359	8	388	420	454	491	537	583	8
Generic Sectors Total	6,006	1	6,080	6,232	6,281	6,300	6,407	6,436	1
Total Information Services	19,495	4	20,183	21,254	22,171	23,089	24,694	26,223	5

H

Industry Sectors in ECUs

Exhibit B-52

Information Services Market by Vertical Sectors

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Discrete Manufacturing	1,514	-7	1,407	1,422	1,422	1,422	1,468	1,514	1
Process Manufacturing	963	3	994	1,017	1,078	1,131	1,223	1,307	6
Transportation	849	14	971	1,124	1,254	1,407	1,644	1,896	14
Utilities	573	9	627	688	742	787	872	948	9
Telecommunications	612	10	673	749	841	917	1,032	1,139	11
Retail Distribution	420	5	443	482	520	558	612	665	8
Wholesale Distribution	543	6	573	604	635	673	726	787	7
Banking & Finance	2,217	4	2,309	2,446	2,599	2,768	3,012	3,226	7
Insurance	803	10	887	963	1,032	1,109	1,216	1,315	8
Healthcare	558	8	604	657	703	749	818	887	8
Education	217	4	225	223	214	203	197	190	-3
Local Government	940	-1	933	956	925	933	940	963	1
Central Government	925	10	1,017	1,109	1,193	1,231	1,414	1,659	10
Business Services	635	4	657	680	703	719	749	780	3
Other Industries	344	4	359	375	390	398	413	428	4
Industry Sectors Total	12,080	5	12,691	13,456	14,220	14,985	16,361	17,737	7

Exhibit B-53

Discrete Manufacturing

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	900	-20	720	640	570	500	440	390	-12
Equipment Services	390	-12	340	330	300	270	240	210	-9
Software Products	750	-6	700	700	700	690	700	700	0
Other Information Services	980	-8	900	910	920	920	950	990	2
Data Communications	260	0	260	280	300	310	320	330	5
Facilities/Administration	510	-15	440	410	370	330	310	280	-9
In-House Staff	1,990	-15	1,680	1,530	1,380	1,220	1,150	1,070	-9
IT Budget Total	5,780	-13	5,050	4,800	4,520	4,230	4,110	3,970	-5
Processing Services	107	-17	89	81	73	66	60	54	-9
Turnkey Systems	306	-10	275	268	252	245	237	222	-4
Application Software Products	405	-4	390	405	413	420	436	443	3
Professional Services	352	-17	291	260	222	183	153	130	-15
Network Services	135	1	135	148	160	174	193	210	9
Systems Operations	154	10	170	200	231	265	311	362	16
Systems Integration	59	-3	57	61	64	66	77	89	9
Industry Sectors Total	1,514	-7	1,407	1,422	1,422	1,422	1,468	1,514	1

Exhibit B-54

Process Manufacturing

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	640	-10	580	530	500	470	440	420	-6
Equipment Services	260	0	260	250	240	240	230	210	-4
Software Products	400	4	410	410	440	470	500	530	5
Other Information Services	690	3	710	730	760	800	860	910	5
Data Communications	310	2	320	320	340	340	340	340	1
Facilities/Administration	410	-6	380	350	340	320	310	300	-5
In-House Staff	1,310	-6	1,240	1,150	1,100	1,060	1,020	980	-5
IT Budget Total	4,020	-3	3,910	3,740	3,720	3,680	3,710	3,690	-1
Processing Services	46	-5	44	41	39	38	38	37	-3
Turnkey Systems	229	3	237	245	260	275	298	313	6
Application Software Products	153	5	161	168	183	199	214	229	7
Professional Services	291	-3	283	268	260	252	245	229	-4
Network Services	76	11	84	93	106	122	142	164	14
Systems Operations	99	15	115	130	145	161	183	206	12
Systems Integration	66	7	70	74	80	86	104	124	12
Industry Sectors Total	963	3	994	1,017	1,078	1,131	1,223	1,307	6

Exhibit B-55

Transportation

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	180	-8	170	160	150	130	120	110	-7
Equipment Services	80	8	90	90	100	100	100	100	2
Software Products	110	13	130	150	170	190	220	260	15
Other Information Services	770	14	880	1,020	1,130	1,270	1,480	1,690	14
Data Communications	90	25	120	150	180	220	260	310	22
Facilities/Administration	170	5	180	180	180	180	180	180	1
In-House Staff	370	-2	370	370	350	340	330	310	-3
IT Budget Total	1,790	8	1,920	2,120	2,260	2,430	2,690	2,970	9
Processing Services	15	5	15	17	18	18	19	20	5
Turnkey Systems	47	11	52	59	64	70	76	83	10
Application Software Products	29	21	35	43	50	60	72	85	19
Professional Services	413	7	443	474	482	482	489	482	2
Network Services	148	29	192	252	322	414	542	700	30
Systems Operations	116	20	139	167	193	221	260	303	17
Systems Integration	80	16	93	111	127	143	181	226	19
Industry Sectors Total	849	14	971	1,124	1,254	1,407	1,644	1,896	14

MAI5   B-25

Exhibit B-56

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	210	0	210	210	220	230	240	250	4
Equipment Services	80	9	90	100	110	110	120	130	7
Software Products	100	8	110	120	130	150	180	200	13
Other Information Services	520	10	570	630	690	730	800	870	9
Data Communications	70	11	80	90	110	120	140	150	15
Facilities/Administration	180	4	180	190	200	210	220	230	5
In-House Staff	430	5	450	480	510	540	580	610	6
IT Budget Total	1,580	7	1,690	1,830	1,960	2,090	2,290	2,450	8
Processing Services	14	11	15	17	18	21	24	26	11
Turnkey Systems	21	4	22	24	24	25	27	28	4
Application Software Products	15	5	16	18	19	21	22	24	8
Professional Services	405	9	443	482	512	535	566	589	6
Network Services	21	18	25	30	35	42	51	61	19
Systems Operations	5	17	5	6	7	8	9	11	15
Systems Integration	91	11	101	114	127	139	173	211	16
Industry Sectors Total	573	9	627	688	742	787	872	948	9

Exhibit B-57

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	270	9	290	330	370	420	480	540	13
Equipment Services	90	8	100	110	120	130	150	150	9
Software Products	80	9	90	110	120	130	150	180	14
Other Information Services	600	10	660	730	830	910	1,030	1,140	12
Data Communications	110	14	120	150	170	190	220	250	16
Facilities/Administration	150	5	160	180	190	210	230	240	9
In-House Staff	440	7	470	520	570	610	670	730	9
IT Budget Total	1,740	9	1,900	2,130	2,370	2,600	2,940	3,230	11
Processing Services	14	6	15	16	18	19	21	24	10
Turnkey Systems	19	0	19	20	21	21	22	23	4
Application Software Products	11	7	11	13	15	16	18	19	11
Professional Services	497	9	543	604	665	719	780	833	9
Network Services	23	27	29	38	50	66	88	116	32
Systems Operations	5	17	5	6	7	8	9	11	15
Systems Integration	43	11	47	55	63	71	90	113	19
Industry Sectors Total	612	10	673	749	841	917	1,032	1,139	11

Exhibit B-58

Retail Distribution

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	450	-7	420	410	390	370	370	350	-4
Equipment Services	180	0	180	180	180	170	170	160	-2
Software Products	180	4	190	200	210	220	240	250	6
Other Information Services	370	4	390	420	450	490	540	580	8
Data Communications	90	8	100	110	110	110	120	120	4
Facilities/Administration	390	-4	370	370	360	350	350	340	-2
In-House Staff	540	-6	500	470	440	410	400	370	-6
IT Budget Total	2,200	-2	2,160	2,150	2,150	2,130	2,180	2,180	0
Processing Services	23	0	23	24	24	25	27	28	4
Turnkey Systems	67	7	72	77	83	89	98	105	8
Application Software Products	54	10	60	66	73	80	90	99	11
Professional Services	145	0	145	145	145	138	130	122	-3
Network Services	52	15	60	69	80	93	112	131	17
Systems Operations	70	15	80	93	107	122	144	167	16
Systems Integration	5	14	6	7	8	8	11	13	16
Industry Sectors Total	420	5	443	482	520	558	612	665	8

Exhibit B-59

Wholesale Distribution

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	480	-10	440	410	380	360	340	320	-6
Equipment Services	190	0	190	190	180	180	170	160	-3
Software Products	220	7	240	240	240	260	270	280	4
Other Information Services	460	5	480	510	530	560	600	660	6
Data Communications	80	0	80	90	100	100	100	100	3
Facilities/Administration	410	-6	380	370	350	340	330	310	-4
In-House Staff	640	-5	610	580	550	520	500	470	-5
IT Budget Total	2,480	-2	2,420	2,390	2,340	2,310	2,320	2,310	-1
Processing Services	31	-3	30	29	28	28	28	28	-1
Turnkey Systems	92	8	99	107	115	122	130	138	7
Application Software Products	76	7	81	87	94	101	110	118	8
Professional Services	214	-4	206	199	191	183	176	168	-4
Network Services	43	14	49	57	66	76	91	106	17
Systems Operations	85	17	99	115	134	155	184	216	17
Systems Integration	5	14	6	7	8	8	11	13	16
Industry Sectors Total	543	6	573	604	635	673	726	787	7

Exhibit B-60

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	1,740	-8	1,600	1,530	1,480	1,410	1,370	1,310	-4
Equipment Services	670	1	670	690	690	680	670	650	-1
Software Products	730	6	770	810	860	930	990	1,070	7
Other Information Services	2,000	4	2,080	2,190	2,320	2,460	2,660	2,840	6
Data Communications	900	5	950	1,010	1,070	1,120	1,180	1,210	5
Facilities/Administration	1,070	-3	1,040	1,020	1,010	990	990	980	-1
In-House Staff	3,130	-2	3,060	2,980	2,910	2,830	2,830	2,750	-2
IT Budget Total	10,240	-1	10,170	10,240	10,330	10,420	10,700	10,810	1
Processing Services	505	0	505	520	535	558	589	604	4
Turnkey Systems	229	7	245	268	291	313	344	375	9
Application Software Products	222	10	245	275	306	344	390	436	12
Professional Services	818	1	826	841	849	833	833	818	0
Network Services	291	13	329	382	443	520	627	742	18
Systems Operations	66	12	73	83	93	104	119	135	13
Systems Integration	80	2	81	84	89	92	107	124	9
Industry Sectors Total	2,217	4	2,309	2,446	2,599	2,768	3,012	3,226	7

Exhibit B-61

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	770	-1	760	760	760	760	760	750	0
Equipment Services	280	5	300	310	320	320	320	320	1
Software Products	340	11	380	410	440	490	540	590	9
Other Information Services	640	10	700	760	810	860	930	1,000	7
Data Communications	380	10	420	460	500	530	570	600	7
Facilities/Administration	500	3	520	530	530	530	540	540	1
In-House Staff	1,360	2	1,390	1,410	1,420	1,440	1,470	1,470	1
IT Budget Total	4,290	4	4,480	4,640	4,790	4,920	5,110	5,260	3
Processing Services	92	8	99	107	115	122	130	138	7
Turnkey Systems	153	15	176	199	222	245	275	306	12
Application Software Products	107	14	122	138	153	176	199	222	13
Professional Services	321	7	344	359	367	367	375	375	2
Network Services	37	20	45	54	64	76	93	112	20
Systems Operations	31	13	34	38	42	46	51	57	10
Systems Integration	58	8	63	67	72	75	89	105	11
Industry Sectors Total	803	10	887	963	1,032	1,109	1,216	1,315	8

Exhibit B-62

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	350	-4	340	340	340	330	330	330	0
Equipment Services	150	5	150	160	160	160	160	160	1
Software Products	170	9	180	210	220	240	270	310	11
Other Information Services	490	8	530	560	590	610	660	700	6
Data Communications	180	8	200	210	230	240	260	280	7
Facilities/Administration	240	0	240	250	250	250	260	260	1
In-House Staff	730	0	730	750	750	750	760	760	1
IT Budget Total	2,320	3	2,380	2,480	2,540	2,590	2,700	2,790	3
Processing Services	30	5	31	34	36	39	43	46	8
Turnkey Systems	83	18	97	115	136	160	190	222	18
Application Software Products	51	13	58	67	76	86	99	112	14
Professional Services	367	4	382	398	405	405	413	413	2
Network Services	21	22	25	31	38	47	60	74	24
Systems Operations	2	0	2	2	2	2	2	2	0
Systems Integration	8	9	9	10	11	11	14	17	13
Industry Sectors Total	558	8	604	657	703	749	818	887	8

Exhibit B-63

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	170	-5	160	150	150	140	130	120	-5
Equipment Services	80	0	80	80	80	80	80	70	-2
Software Products	70	0	70	70	70	70	70	70	0
Other Information Services	210	4	220	220	210	210	210	210	-1
Data Communications	90	8	100	110	110	110	110	110	3
Facilities/Administration	130	0	130	130	120	110	110	100	-5
In-House Staff	470	0	470	460	440	410	400	370	-4
IT Budget Total	1,220	1	1,220	1,220	1,180	1,140	1,110	1,060	-3
Processing Services	3	0	3	3	3	3	3	3	0
Turnkey Systems	18	-4	17	15	14	12	11	10	-10
Application Software Products	12	-6	11	11	10	9	8	8	-8
Professional Services	168	5	176	176	168	161	153	145	-4
Network Services	6	0	6	6	6	6	6	6	0
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	10	8	11	11	12	12	15	17	9
Industry Sectors Total	217	4	225	223	214	203	197	190	-3

Exhibit B-64

Local Government

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	540	-14	460	420	370	340	310	280	-9
Equipment Services	210	-7	190	190	180	170	150	150	-5
Software Products	190	-4	180	190	180	200	200	210	3
Other Information Services	920	-1	910	930	890	890	890	900	0
Data Communications	240	-3	230	230	220	220	210	210	-2
Facilities/Administration	350	-11	310	290	250	230	210	190	-9
In-House Staff	1,090	-11	960	900	800	750	690	640	-8
IT Budget Total	3,520	-8	3,250	3,150	2,890	2,790	2,650	2,580	-4
Processing Services	31	-2	31	31	31	31	32	33	1
Turnkey Systems	46	2	47	50	50	54	57	60	5
Application Software Products	33	7	35	39	41	46	50	56	10
Professional Services	734	-2	719	726	688	680	657	642	-2
Network Services	8	-9	8	7	6	6	6	6	-4
Systems Operations	37	10	41	46	50	56	63	72	12
Systems Integration	49	5	51	56	58	63	75	90	12
Industry Sectors Total	940	-1	933	956	925	933	940	963	1

Exhibit B-65

Central Government

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	480	-11	430	380	340	280	240	200	-14
Equipment Services	210	0	210	210	200	180	160	140	-8
Software Products	230	10	250	270	290	300	340	370	8
Other Information Services	800	9	870	940	990	1,020	1,140	1,330	9
Data Communications	170	5	180	180	190	180	170	150	-3
Facilities/Administration	390	-2	380	370	340	310	280	240	-9
In-House Staff	1,150	-4	1,100	1,040	960	840	760	660	-10
IT Budget Total	3,430	0	3,420	3,390	3,330	3,100	3,100	3,090	-2
Processing Services	41	4	42	44	44	43	44	42	0
Turnkey Systems	45	12	50	56	61	63	68	70	7
Application Software Products	16	-5	15	15	13	11	10	8	-11
Professional Services	512	6	543	558	566	528	512	474	-3
Network Services	34	11	38	42	46	48	53	55	8
Systems Operations	4	120	8	18	37	77	163	337	109
Systems Integration	275	17	321	375	428	459	566	673	16
Industry Sectors Total	925	10	1,017	1,109	1,193	1,231	1,414	1,659	10

Exhibit B-66

Business Services

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	140	-11	120	110	110	100	90	80	-7
Equipment Services	60	0	60	60	60	60	60	50	-4
Software Products	110	14	120	130	140	150	170	180	8
Other Information Services	550	0	550	560	570	560	560	560	0
Data Communications	60	1	60	60	60	60	60	60	0
Facilities/Administration	140	-6	130	120	110	110	100	90	-7
In-House Staff	330	-5	310	300	290	280	270	250	-4
IT Budget Total	1,390	-2	1,370	1,350	1,340	1,320	1,310	1,290	-1
Processing Services	17	0	17	17	18	18	19	20	3
Turnkey Systems	86	20	102	122	148	177	214	255	20
Application Software Products	45	7	48	51	55	59	63	67	7
Professional Services	459	0	459	451	443	420	405	382	-4
Network Services	18	13	20	23	26	30	35	41	15
Systems Operations	4	0	4	4	4	4	4	4	0
Systems Integration	8	0	8	8	9	9	11	12	8
Industry Sectors Total	635	4	657	680	703	719	749	780	3

Exhibit B-67

Other Industries

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	300	-8	280	260	250	240	230	220	-4
Equipment Services	120	3	120	120	120	120	120	120	0
Software Products	110	6	120	130	130	140	140	150	5
Other Information Services	320	5	340	350	370	370	390	410	4
Data Communications	10	17	10	10	20	20	20	20	18
Facilities/Administration	10	0	10	10	10	10	10	10	0
In-House Staff	40	-4	40	40	30	30	30	30	-4
IT Budget Total	910	0	910	920	940	940	950	970	1
Processing Services	12	6	13	14	15	15	17	18	6
Turnkey Systems	38	4	40	42	44	47	50	52	6
Application Software Products	28	8	30	32	35	37	41	44	8
Professional Services	237	3	245	252	260	260	268	268	2
Network Services	9	0	9	9	9	9	9	9	0
Systems Operations	10	15	11	13	15	16	18	21	12
Systems Integration	8	9	9	10	11	11	14	17	13
Industry Sectors Total	344	4	359	375	390	398	413	428	4

I

Cross-Industry Sectors in ECUs

Exhibit B-68

Cross-Industry Sectors

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Accounting	329	0	329	359	390	420	451	482	8
Education & Training	48	-8	44	47	49	50	52	54	4
Engineering & Scientific	102	0	102	112	121	122	124	124	4
Human Resources	206	-4	199	206	214	214	214	206	1
Office Systems	313	5	329	390	451	528	612	696	16
Planning & Analysis	268	-6	252	275	291	306	321	329	5
Other Cross-Industry	153	0	153	161	168	168	176	176	3
Cross-Industry Sectors Total	1,422	-1	1,407	1,544	1,682	1,804	1,942	2,064	8

Exhibit B-69

Accounting

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	10	-8	9	9	9	9	9	9	0
Turnkey Systems	61	0	61	69	76	84	92	99	10
Application Software Products	260	0	260	283	306	329	352	375	8
Cross-Industry Sectors Total	329	0	329	359	390	420	451	482	8

Exhibit B-70

Education & Training

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	25	-3	24	27	28	30	31	33	6
Application Software Products	20	-15	17	18	18	18	18	18	1
Cross-Industry Sectors Total	48	-8	44	47	49	50	52	54	4

Exhibit B-71

Engineering & Scientific

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	9	-8	8	8	8	8	8	8	-2
Turnkey Systems	17	0	17	18	20	21	23	24	8
Application Software Products	76	0	76	84	92	92	92	92	4
Cross-Industry Sectors Total	102	0	102	112	121	122	124	124	4

Exhibit B-72

Human Resources

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	115	-7	107	107	107	107	107	99	-1
Turnkey Systems	12	0	12	13	14	15	15	16	6
Application Software Products	76	0	76	84	92	92	92	92	4
Cross-Industry Sectors Total	206	-4	199	206	214	214	214	206	1

Exhibit B-73

Office Systems

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	3	0	3	4	5	5	7	8	22
Turnkey Systems	21	4	21	24	28	32	37	41	14
Application Software Products	291	5	306	359	420	489	566	642	16
Cross-Industry Sectors Total	313	5	329	390	451	528	612	696	16

Exhibit B-74

Planning & Analysis

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	12	-13	11	11	11	11	11	10	-1
Turnkey Systems	8	0	8	8	9	10	11	11	8
Application Software Products	245	-3	237	252	268	283	298	306	5
Cross-Industry Sectors Total	268	-6	252	275	291	306	321	329	5

Exhibit B-75

Other Cross-Industry

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Transaction Processing	38	0	38	38	38	38	38	38	0
Turnkey Systems	61	0	61	69	76	76	84	84	7
Application Software Products	54	0	54	54	54	54	54	54	0
Cross-Industry Sectors Total	153	0	153	161	168	168	176	176	3

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Appendix C: Vertical Markets - Germany, 1995-2000

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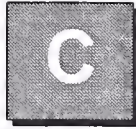
Information Services Industry Vertical Sector Forecast, 1995-2000 Germany

A

Sector Summary in Local Currency

Exhibit C-1

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			DM Millions						
Processing Services	1,850	11	2,050	2,250	2,350	2,500	2,650	2,800	6
Turnkey Systems	6,100	7	6,500	7,200	7,900	8,500	9,300	9,800	9
Application Software Products	3,050	11	3,400	4,000	4,700	5,500	6,500	7,550	17
Professional Services	5,200	4	5,400	5,700	5,900	5,900	6,100	6,100	2
Network Services	1,300	19	1,550	1,900	2,350	2,850	3,600	4,400	23
Systems Operations	480	23	590	730	880	1,030	1,240	1,470	20
Systems Integration	1,150	13	1,300	1,450	1,650	1,800	2,050	2,250	12
Industry Sectors Total	19,100	9	20,800	23,200	25,700	28,100	31,400	34,400	11
Transaction Processing	320	-2	315	320	335	335	355	355	2
Turnkey Systems	720	1	730	770	850	900	990	1,060	8
Application Software Products	690	12	770	890	1,050	1,180	1,370	1,540	15
Cross-Industry Sectors Total	1,750	3	1,800	2,000	2,250	2,400	2,700	2,950	10
Equipment Services	6,950	-2	6,800	6,800	6,850	6,750	6,800	6,800	0
System Software Products	5,300	4	5,500	5,700	5,800	5,900	6,100	6,200	2
Utility and Other Processing	470	11	520	580	640	700	780	850	10
Other Electronic Info Services	480	10	530	590	630	660	710	750	7
Generic Sectors Total	13,200	2	13,400	13,700	13,900	14,000	14,400	14,600	2
Total Information Services	34,100	6	36,000	38,900	41,900	44,500	48,500	52,000	8

Source: INPUT

B

Industry Sectors in Local Currency

Exhibit C-2

Information Services Market by Vertical Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					DM Millions				
Discrete Manufacturing	3,400	-3	3,300	3,400	3,650	3,850	4,150	4,400	6
Process Manufacturing	1,600	6	1,700	1,900	2,150	2,450	2,800	3,100	13
Transportation	890	17	1,040	1,200	1,310	1,430	1,610	1,790	11
Utilities	460	13	520	620	710	780	870	960	13
Telecommunications	450	16	520	590	660	740	850	970	13
Retail Distribution	660	3	680	710	740	780	840	900	6
Wholesale Distribution	830	0	830	890	930	980	1,040	1,100	6
Banking & Finance	4,350	14	4,950	5,600	6,250	6,900	7,800	8,650	12
Insurance	1,550	16	1,800	2,050	2,300	2,550	2,800	3,000	11
Healthcare	1,040	16	1,210	1,430	1,670	1,940	2,280	2,640	17
Education	250	-2	245	245	240	240	235	230	-1
Local Government	730	7	780	830	880	920	980	1,030	6
Central Government	1,050	5	1,100	1,250	1,350	1,450	1,600	1,750	10
Business Services	950	16	1,100	1,250	1,450	1,600	1,850	2,050	13
Other Industries	900	22	1,100	1,300	1,450	1,600	1,700	1,850	11
Industry Sectors Total	19,100	9	20,800	23,200	25,700	28,100	31,400	34,400	11

Exhibit C-3

Discrete Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					DM Millions				
Equipment Sales	2,300	-15	1,950	1,700	1,600	1,450	1,350	1,250	-9
Equipment Services	1,260	-14	1,080	980	940	870	840	800	-6
Software Products	1,800	-6	1,700	1,700	1,850	1,900	2,050	2,150	5
Other Information Services	2,200	-2	2,150	2,250	2,350	2,450	2,600	2,750	5
Data Communications	750	0	750	750	800	800	850	900	4
Facilities/Administration	900	-17	750	650	600	550	500	450	-10
In-House Staff	5,800	-18	4,750	4,150	3,800	3,400	3,150	2,850	-10
IT Budget Total	15,000	-13	13,100	12,200	11,900	11,400	11,300	11,200	-3
Processing Services	410	-5	390	380	370	350	345	330	-3
Turnkey Systems	990	-6	930	930	960	980	1,010	1,010	2
Application Software Products	725	0	725	790	895	985	1,125	1,250	12
Professional Services	670	-10	600	570	560	530	520	490	-4
Network Services	300	3	310	340	385	425	485	540	12
Systems Operations	155	23	190	235	290	350	435	525	23
Systems Integration	140	4	145	160	185	205	235	265	13
Industry Sectors Total	3,400	-3	3,300	3,400	3,650	3,850	4,150	4,400	6

Exhibit C-4

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					DM Millions				
Equipment Sales	1,300	-4	1,250	1,200	1,200	1,200	1,200	1,200	-1
Equipment Services	490	-4	470	470	480	480	490	500	1
Software Products	760	7	810	890	1,020	1,150	1,330	1,500	13
Other Information Services	1,020	6	1,080	1,210	1,340	1,510	1,690	1,840	11
Data Communications	670	0	670	680	720	750	800	840	5
Facilities/Administration	630	-8	580	560	570	570	580	590	0
In-House Staff	2,950	-8	2,700	2,550	2,500	2,450	2,450	2,400	-2
IT Budget Total	7,800	-3	7,550	7,550	7,850	8,100	8,550	8,850	3
Processing Services	100	10	110	120	130	140	155	165	8
Turnkey Systems	500	4	520	570	630	700	780	840	10
Application Software Products	320	9	350	410	500	600	730	870	20
Professional Services	440	0	440	450	470	480	500	510	3
Network Services	105	14	120	140	170	200	245	290	19
Systems Operations	85	24	105	130	160	190	235	280	22
Systems Integration	70	7	75	85	100	115	135	155	16
Industry Sectors Total	1,600	6	1,700	1,900	2,150	2,450	2,800	3,100	13

Exhibit C-5

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					DM Millions				
Equipment Sales	450	-11	400	350	300	250	200	150	-18
Equipment Services	170	0	170	160	150	140	130	120	-7
Software Products	300	33	400	400	450	500	550	600	8
Other Information Services	550	9	600	750	800	900	1,000	1,150	14
Data Communications	280	32	370	470	590	730	910	1,130	25
Facilities/Administration	300	0	300	300	300	300	300	300	0
In-House Staff	950	-11	850	750	650	550	450	400	-14
IT Budget Total	3,000	3	3,100	3,200	3,250	3,350	3,550	3,850	4
Processing Services	55	18	65	70	70	70	70	70	1
Turnkey Systems	350	14	400	450	450	450	450	450	2
Application Software Products	110	23	135	165	195	230	275	320	19
Professional Services	145	3	150	150	145	135	130	120	-4
Network Services	145	34	195	255	325	410	530	670	28
Systems Operations	9	22	11	13	14	15	17	19	12
Systems Integration	75	13	85	100	110	120	135	145	11
Industry Sectors Total	890	17	1,040	1,200	1,310	1,430	1,610	1,790	11

Exhibit C-6

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	300	17	350	400	450	450	500	550	9
Equipment Services	125	12	140	165	190	205	230	255	13
Software Products	190	18	225	270	315	355	405	450	15
Other Information Services	280	14	320	395	460	510	580	655	15
Data Communications	130	15	150	175	200	220	245	270	12
Facilities/Administration	210	10	230	260	295	320	350	380	11
In-House Staff	850	6	900	1,000	1,050	1,050	1,100	1,150	5
IT Budget Total	2,100	10	2,300	2,650	2,950	3,100	3,400	3,700	10
Processing Services	45	22	55	70	80	90	105	120	17
Turnkey Systems	155	13	175	205	230	250	275	290	11
Application Software Products	50	10	55	65	75	85	95	105	14
Professional Services	80	6	85	95	100	100	100	100	3
Network Services	16	13	18	21	23	24	26	27	8
Systems Operations	14	29	18	23	28	32	38	44	20
Systems Integration	95	21	115	145	175	200	235	270	19
Industry Sectors Total	460	13	520	620	710	780	870	960	13

Exhibit C-7

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	480	19	570	660	750	840	960	1,080	14
Equipment Services	135	15	155	175	195	215	240	265	11
Software Products	190	18	225	260	295	330	375	410	13
Other Information Services	280	20	335	390	450	520	615	735	17
Data Communications	205	15	235	265	290	315	345	375	10
Facilities/Administration	215	7	230	240	250	260	275	285	4
In-House Staff	950	8	1,030	1,090	1,130	1,150	1,200	1,240	4
IT Budget Total	2,450	14	2,800	3,100	3,350	3,650	4,000	4,400	9
Processing Services	45	22	55	65	70	75	85	95	12
Turnkey Systems	170	15	195	220	240	260	285	300	9
Application Software Products	50	10	55	65	75	85	95	105	14
Professional Services	90	6	95	100	100	100	100	100	1
Network Services	22	50	33	49	71	102	149	213	45
Systems Operations	9	33	12	15	17	19	22	25	16
Systems Integration	60	17	70	80	90	100	115	130	13
Industry Sectors Total	450	16	520	590	660	740	850	970	13

Exhibit C-8

Retail Distribution

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	105	-5	100	100	100	100	100	100	0
Equipment Services	385	-5	365	345	330	315	310	300	-4
Software Products	400	2	410	420	425	440	465	480	3
Other Information Services	460	4	480	500	525	555	605	655	6
Data Communications	215	2	220	220	220	225	235	240	2
Facilities/Administration	610	-8	560	520	490	470	460	450	-4
In-House Staff	1,400	-11	1,250	1,100	1,000	900	850	750	-10
IT Budget Total	3,600	-6	3,400	3,200	3,100	3,000	3,050	3,000	-2
Processing Services	60	8	65	70	70	70	75	75	3
Turnkey Systems	300	0	300	300	300	300	300	300	0
Application Software Products	85	12	95	110	125	145	170	195	15
Professional Services	140	-4	135	130	125	120	120	115	-3
Network Services	50	20	60	75	90	110	140	175	24
Systems Operations	10	30	13	16	19	23	28	34	21
Systems Integration	10	0	10	10	10	10	10	10	0
Industry Sectors Total	660	3	680	710	740	780	840	900	6

Exhibit C-9

Wholesale Distribution

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,170	-10	1,050	990	930	860	820	770	-6
Equipment Services	420	-10	380	365	350	330	315	300	-5
Software Products	455	0	455	470	480	490	510	520	3
Other Information Services	585	-1	580	620	645	680	720	770	6
Data Communications	240	-4	230	230	230	225	225	225	0
Facilities/Administration	700	-14	600	550	500	450	450	400	-8
In-House Staff	1,700	-12	1,500	1,400	1,300	1,150	1,050	950	-9
IT Budget Total	5,250	-9	4,800	4,650	4,450	4,200	4,100	3,950	-4
Processing Services	95	0	95	100	100	100	100	100	1
Turnkey Systems	345	0	345	365	380	395	410	415	4
Application Software Products	110	5	115	130	145	160	180	200	12
Professional Services	190	-8	175	170	165	155	150	140	-4
Network Services	50	10	55	65	75	90	110	130	19
Systems Operations	29	28	37	47	57	68	84	101	22
Systems Integration	10	0	10	10	10	10	10	10	0
Industry Sectors Total	830	0	830	890	930	980	1,040	1,100	6

Exhibit C-10

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	5,250	1	5,300	5,300	5,300	5,300	5,350	5,350	0
Equipment Services	1,800	3	1,850	1,900	1,950	1,950	2,000	2,000	2
Software Products	2,050	15	2,350	2,650	2,900	3,200	3,650	4,000	11
Other Information Services	3,500	14	4,000	4,400	4,900	5,300	5,900	6,400	10
Data Communications	2,950	8	3,200	3,400	3,650	3,850	4,100	4,350	6
Facilities/Administration	2,450	-2	2,400	2,400	2,450	2,450	2,500	2,550	1
In-House Staff	10,350	-1	10,250	10,150	10,050	9,850	9,750	9,550	-1
IT Budget Total	28,400	4	29,400	30,200	31,200	31,900	33,300	34,200	3
Processing Services	280	14	320	360	385	410	445	465	8
Turnkey Systems	650	15	750	850	950	1,050	1,150	1,250	11
Application Software Products	750	20	900	1,100	1,300	1,550	1,900	2,250	20
Professional Services	1,950	8	2,100	2,250	2,350	2,400	2,500	2,550	4
Network Services	455	24	565	705	875	1,075	1,345	1,640	24
Systems Operations	60	25	75	90	105	120	140	160	16
Systems Integration	205	7	220	240	260	280	305	325	8
Industry Sectors Total	4,350	14	4,950	5,600	6,250	6,900	7,800	8,650	12

Exhibit C-11

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	2,150	2	2,200	2,300	2,350	2,350	2,400	2,400	2
Equipment Services	700	0	700	750	800	800	800	800	3
Software Products	750	13	850	950	1,050	1,150	1,250	1,350	10
Other Information Services	1,200	17	1,400	1,600	1,800	2,000	2,150	2,300	10
Data Communications	1,100	9	1,200	1,350	1,500	1,600	1,750	1,850	9
Facilities/Administration	900	0	900	950	1,000	1,000	1,000	1,000	2
In-House Staff	3,950	0	3,950	4,050	4,100	4,000	3,950	3,850	-1
IT Budget Total	10,750	4	11,200	11,950	12,600	12,900	13,300	13,550	4
Processing Services	285	16	330	385	425	455	495	525	10
Turnkey Systems	395	11	440	500	555	610	665	705	10
Application Software Products	195	18	230	285	345	405	485	565	20
Professional Services	450	11	500	550	600	600	600	600	4
Network Services	75	27	95	120	150	185	230	280	24
Systems Operations	50	24	62	76	89	101	117	132	16
Systems Integration	120	8	130	145	160	170	185	195	8
Industry Sectors Total	1,550	16	1,800	2,050	2,300	2,550	2,800	3,000	11

Exhibit C-12

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	730	3	750	770	790	810	830	850	3
Equipment Services	290	3	300	310	320	330	340	350	3
Software Products	490	18	580	670	780	900	1,070	1,230	16
Other Information Services	540	15	620	730	850	980	1,140	1,330	16
Data Communications	370	8	400	430	470	500	540	580	8
Facilities/Administration	360	3	370	380	410	430	460	490	6
In-House Staff	1,650	3	1,700	1,750	1,800	1,800	1,850	1,900	2
IT Budget Total	4,450	6	4,700	5,050	5,400	5,750	6,250	6,750	8
Processing Services	105	19	125	145	165	185	210	235	13
Turnkey Systems	545	16	630	735	855	990	1,140	1,290	15
Application Software Products	170	21	205	255	315	385	475	580	23
Professional Services	160	9	175	195	215	230	250	270	9
Network Services	20	45	29	42	60	85	122	173	43
Systems Operations	9	22	11	13	15	17	20	23	16
Systems Integration	30	17	35	40	45	50	60	70	15
Industry Sectors Total	1,040	16	1,210	1,430	1,670	1,940	2,280	2,640	17

Exhibit C-13

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	300	0	300	300	300	300	300	300	0
Equipment Services	145	-3	140	135	130	120	115	110	-5
Software Products	165	0	165	165	160	155	155	150	-2
Other Information Services	150	3	155	155	160	160	160	165	1
Data Communications	200	0	200	200	200	200	200	200	0
Facilities/Administration	200	0	200	200	200	200	200	200	0
In-House Staff	1,100	-9	1,000	900	850	750	700	650	-8
IT Budget Total	2,250	-4	2,150	2,050	2,000	1,900	1,850	1,800	-3
Processing Services	11	0	11	11	11	10	10	10	-2
Turnkey Systems	130	-4	125	125	125	125	120	115	-2
Application Software Products	40	0	40	40	40	40	40	40	0
Professional Services	50	0	50	50	50	50	50	50	0
Network Services	5	0	5	5	5	5	5	5	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	13	-8	12	11	10	9	8	7	-10
Industry Sectors Total	250	-2	245	245	240	240	235	230	-1

Exhibit C-14

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	640	-9	580	520	470	420	380	340	-10
Equipment Services	270	0	270	270	270	270	270	270	0
Software Products	340	12	380	410	440	480	530	560	8
Other Information Services	490	6	520	550	570	580	610	640	4
Data Communications	350	6	370	390	410	430	450	470	5
Facilities/Administration	360	-3	350	340	340	340	340	340	-1
In-House Staff	1,700	-6	1,600	1,500	1,400	1,300	1,200	1,100	-7
IT Budget Total	4,150	-2	4,050	4,000	3,900	3,800	3,800	3,700	-2
Processing Services	95	11	105	115	120	120	125	130	4
Turnkey Systems	270	6	285	300	315	330	345	350	4
Application Software Products	100	15	115	135	160	185	220	255	17
Professional Services	210	0	210	210	205	195	190	180	-3
Network Services	5	0	5	5	5	5	5	5	0
Systems Operations	9	22	11	13	15	17	20	23	16
Systems Integration	44	11	49	55	62	68	76	84	11
Industry Sectors Total	730	7	780	830	880	920	980	1,030	6

Exhibit C-15

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	1,000	-5	950	850	800	750	700	650	-7
Equipment Services	380	-8	350	330	310	290	270	250	-7
Software Products	460	4	480	500	520	550	590	610	5
Other Information Services	710	1	720	840	900	950	1,040	1,150	10
Data Communications	530	0	530	520	520	510	500	500	-1
Facilities/Administration	510	-10	460	420	390	360	330	310	-8
In-House Staff	2,500	-10	2,250	2,050	1,900	1,700	1,550	1,400	-9
IT Budget Total	6,100	-6	5,750	5,500	5,350	5,100	5,000	4,850	-3
Processing Services	105	14	120	135	145	155	170	180	8
Turnkey Systems	325	9	355	395	435	480	525	560	10
Application Software Products	80	6	85	90	95	100	110	115	6
Professional Services	220	2	225	230	235	235	235	235	1
Network Services	36	19	43	52	63	75	91	108	20
Systems Operations	15	33	20	25	30	35	45	55	22
Systems Integration	250	10	275	310	350	385	430	475	12
Industry Sectors Total	1,050	5	1,100	1,250	1,350	1,450	1,600	1,750	10

Exhibit C-16

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	240	-2	235	230	225	220	215	210	-2
Equipment Services	105	0	105	105	105	105	105	105	0
Software Products	350	14	400	450	520	595	685	770	14
Other Information Services	430	17	505	570	670	710	840	925	13
Data Communications	120	4	125	130	140	145	150	160	5
Facilities/Administration	175	-6	165	160	160	155	150	145	-3
In-House Staff	640	-3	620	600	590	570	550	530	-3
IT Budget Total	2,050	5	2,150	2,250	2,400	2,500	2,700	2,850	6
Processing Services	60	17	70	80	85	90	95	100	7
Turnkey Systems	545	16	630	735	855	990	1,140	1,290	15
Application Software Products	145	10	160	180	205	230	260	290	13
Professional Services	180	6	190	200	210	210	215	215	3
Network Services	19	37	26	36	50	69	96	132	38
Systems Operations	9	11	10	10	10	10	10	10	0
Systems Integration	7	14	8	9	10	11	12	13	10
Industry Sectors Total	950	16	1,100	1,250	1,450	1,600	1,850	2,050	13

Exhibit C-17

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				DM Millions					
Equipment Sales	890	12	1,000	1,090	1,160	1,170	1,190	1,210	4
Equipment Services	280	11	310	330	350	350	350	350	2
Software Products	410	20	490	580	660	730	810	890	13
Other Information Services	540	26	680	800	890	980	1,010	1,100	10
Data Communications	320	19	380	440	500	540	580	630	11
Facilities/Administration	440	7	470	500	530	530	540	550	3
In-House Staff	1,700	9	1,850	2,000	2,100	2,100	2,100	2,100	3
IT Budget Total	4,600	13	5,200	5,750	6,200	6,400	6,600	6,850	6
Processing Services	90	22	110	130	145	155	165	175	10
Turnkey Systems	400	16	465	535	590	625	655	675	8
Application Software Products	125	24	155	200	250	295	355	420	22
Professional Services	245	18	290	335	370	385	410	425	8
Network Services	7	14	8	9	10	10	10	10	5
Systems Operations	14	29	18	22	26	29	32	35	14
Systems Integration	36	25	45	57	70	81	95	109	19
Industry Sectors Total	900	22	1,100	1,300	1,450	1,600	1,700	1,850	11

C

Cross-Industry Sectors in Local Currency

Exhibit C-18

Cross-Industry Sectors

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	400	6	425	475	540	585	655	715	11
Education & Training	105	5	110	115	125	135	155	170	9
Engineering & Scientific	115	4	120	130	145	155	175	195	10
Human Resources	290	0	290	305	325	335	365	380	6
Office Systems	290	10	320	370	440	495	575	650	15
Planning & Analysis	215	5	225	255	290	325	370	415	13
Other Cross-Industry	325	0	325	335	365	380	415	435	6
Cross-Industry Sectors Total	1,750	3	1,800	2,000	2,250	2,400	2,700	2,950	10

Exhibit C-19

Accounting

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	17	0	17	18	19	19	20	20	3
Turnkey Systems	205	2	210	225	250	265	290	310	8
Application Software Products	180	11	200	230	270	300	345	385	14
Cross-Industry Sectors Total	400	6	425	475	540	585	655	715	11

Exhibit C-20

Education & Training

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	4	0	4	4	4	4	4	4	0
Turnkey Systems	85	6	90	95	105	115	130	145	10
Application Software Products	15	-7	14	15	17	18	20	22	9
Cross-Industry Sectors Total	105	5	110	115	125	135	155	170	9

Exhibit C-21

Engineering & Scientific

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	13	0	13	13	14	14	15	15	3
Turnkey Systems	55	0	55	55	60	60	65	70	5
Application Software Products	45	11	50	60	70	80	95	110	17
Cross-Industry Sectors Total	115	4	120	130	145	155	175	195	10

Exhibit C-22

Human Resources

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	190	-3	185	190	195	195	205	205	2
Turnkey Systems	50	0	50	55	60	65	75	80	10
Application Software Products	50	10	55	60	70	75	85	95	12
Cross-Industry Sectors Total	290	0	290	305	325	335	365	380	6

Exhibit C-23

Office Systems

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	4	0	4	4	4	4	4	4	0
Turnkey Systems	75	0	75	80	90	95	105	110	8
Application Software Products	210	14	240	285	345	395	465	535	17
Cross-Industry Sectors Total	290	10	320	370	440	495	575	650	15

Exhibit C-24

Planning & Analysis

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	22	0	22	23	24	24	25	26	3
Turnkey Systems	26	-4	25	26	28	29	31	33	6
Application Software Products	165	9	180	205	240	270	315	355	15
Cross-Industry Sectors Total	215	5	225	255	290	325	370	415	13

Exhibit A-25

Other Cross-Industry

Sector	DM Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	70	0	70	70	75	75	80	80	3
Turnkey Systems	225	0	225	235	255	270	295	315	7
Application Software Products	29	3	30	32	35	37	40	42	7
Cross-Industry Sectors Total	325	0	325	335	365	380	415	435	6

Information Services Industry
Vertical Sector Forecast, 1995-2000
Germany
(US$ Million)

D

Sector Summary in US Dollars

Exhibit C-26

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Processing Services	1,190	11	1,320	1,450	1,520	1,610	1,710	1,810	6
Turnkey Systems	3,940	7	4,190	4,650	5,100	5,480	6,000	6,320	9
Application Software Products	1,970	11	2,190	2,580	3,030	3,550	4,190	4,870	17
Professional Services	3,350	4	3,480	3,680	3,810	3,810	3,940	3,940	2
Network Services	840	19	1,000	1,230	1,520	1,840	2,320	2,840	23
Systems Operations	310	23	380	470	570	660	800	950	20
Systems Integration	740	13	840	940	1,060	1,160	1,320	1,450	12
Industry Sectors Total	12,320	9	13,420	14,970	16,580	18,130	20,260	22,190	11
Transaction Processing	206	-2	203	206	216	216	229	229	2
Turnkey Systems	465	1	471	497	548	581	639	684	8
Application Software Products	445	12	497	574	677	761	884	994	15
Cross-Industry Sectors Total	1,129	3	1,161	1,290	1,452	1,548	1,742	1,903	10
Equipment Services	4,484	-2	4,387	4,387	4,419	4,355	4,387	4,387	0
System Software Products	3,419	4	3,548	3,677	3,742	3,806	3,935	4,000	2
Utility and Other Processing	303	11	335	374	413	452	503	548	10
Other Electronic Info Services	310	10	342	381	406	426	458	484	7
Generic Sectors Total	8,516	2	8,645	8,839	8,968	9,032	9,290	9,419	2
Total Information Services	22,000	6	23,000	25,000	27,000	29,000	31,000	34,000	8

E
Industry Sectors in US Dollars

Exhibit C-27

Information Services Market by Vertical Sectors

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Discrete Manufacturing	2,194	-3	2,129	2,194	2,355	2,484	2,677	2,839	6
Process Manufacturing	1,032	6	1,097	1,226	1,387	1,581	1,806	2,000	13
Transportation	574	17	671	774	845	923	1,039	1,155	11
Utilities	297	13	335	400	458	503	561	619	13
Telecommunications	290	16	335	381	426	477	548	626	13
Retail Distribution	426	3	439	458	477	503	542	581	6
Wholesale Distribution	535	0	535	574	600	632	671	710	6
Banking & Finance	2,806	14	3,194	3,613	4,032	4,452	5,032	5,581	12
Insurance	1,000	16	1,161	1,323	1,484	1,645	1,806	1,935	11
Healthcare	671	16	781	923	1,077	1,252	1,471	1,703	17
Education	161	-2	158	158	155	155	152	148	-1
Local Government	471	7	503	535	568	594	632	665	6
Central Government	677	5	710	806	871	935	1,032	1,129	10
Business Services	613	16	710	806	935	1,032	1,194	1,323	13
Other Industries	581	22	710	839	935	1,032	1,097	1,194	11
Industry Sectors Total	12,323	9	13,419	14,968	16,581	18,129	20,258	22,194	11

Exhibit C-28

Discrete Manufacturing

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	1,480	-15	1,260	1,100	1,030	940	870	810	-9
Equipment Services	810	-14	700	630	610	560	540	520	-6
Software Products	1,160	-6	1,100	1,100	1,190	1,230	1,320	1,390	5
Other Information Services	1,420	-2	1,390	1,450	1,520	1,580	1,680	1,770	5
Data Communications	480	0	480	480	520	520	550	580	4
Facilities/Administration	580	-17	480	420	390	350	320	290	-10
In-House Staff	3,740	-18	3,060	2,680	2,450	2,190	2,030	1,840	-10
IT Budget Total	9,680	-13	8,450	7,870	7,680	7,350	7,290	7,230	-3
Processing Services	260	-5	250	250	240	230	220	210	-3
Turnkey Systems	640	-6	600	600	620	630	650	650	2
Application Software Products	470	0	470	510	580	640	730	810	12
Professional Services	430	-10	390	370	360	340	340	320	-4
Network Services	190	3	200	220	250	270	310	350	12
Systems Operations	100	23	120	150	190	230	280	340	23
Systems Integration	90	4	90	100	120	130	150	170	13
Industry Sectors Total	2,190	-3	2,130	2,190	2,350	2,480	2,680	2,840	6

Exhibit C-29

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	840	-4	810	770	770	770	770	770	-1
Equipment Services	320	-4	300	300	310	310	320	320	1
Software Products	490	7	520	570	660	740	860	970	13
Other Information Services	660	6	700	780	860	970	1,090	1,190	11
Data Communications	430	0	430	440	460	480	520	540	5
Facilities/Administration	410	-8	370	360	370	370	370	380	0
In-House Staff	1,900	-8	1,740	1,650	1,610	1,580	1,580	1,550	-2
IT Budget Total	5,030	-3	4,870	4,870	5,060	5,230	5,520	5,710	3
Processing Services	60	10	70	80	80	90	100	110	8
Turnkey Systems	320	4	340	370	410	450	500	540	10
Application Software Products	210	9	230	260	320	390	470	560	20
Professional Services	280	0	280	290	300	310	320	330	3
Network Services	70	14	80	90	110	130	160	190	19
Systems Operations	50	24	70	80	100	120	150	180	22
Systems Integration	50	7	50	50	60	70	90	100	16
Industry Sectors Total	1,030	6	1,100	1,230	1,390	1,580	1,810	2,000	13

US$ Million

Exhibit C-30

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	290	-11	260	230	190	160	130	100	-18
Equipment Services	110	0	110	100	100	90	80	80	-7
Software Products	190	33	260	260	290	320	350	390	8
Other Information Services	350	9	390	480	520	580	650	740	14
Data Communications	180	32	240	300	380	470	590	730	25
Facilities/Administration	190	0	190	190	190	190	190	190	0
In-House Staff	610	-11	550	480	420	350	290	260	-14
IT Budget Total	1,940	3	2,000	2,060	2,100	2,160	2,290	2,480	4
Processing Services	40	18	40	50	50	50	50	50	1
Turnkey Systems	230	14	260	290	290	290	290	290	2
Application Software Products	70	23	90	110	130	150	180	210	19
Professional Services	90	3	100	100	90	90	80	80	-4
Network Services	90	34	130	160	210	260	340	430	28
Systems Operations	10	22	10	10	10	10	10	10	12
Systems Integration	50	13	50	60	70	80	90	90	11
Industry Sectors Total	570	17	670	770	850	920	1,040	1,150	11

US$ Million

Exhibit C-31

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Equipment Sales	190	17	230	260	290	290	320	350	9
Equipment Services	80	12	90	110	120	130	150	160	13
Software Products	120	18	150	170	200	230	260	290	15
Other Information Services	180	14	210	250	300	330	370	420	15
Data Communications	80	15	100	110	130	140	160	170	12
Facilities/Administration	140	10	150	170	190	210	230	250	11
In-House Staff	550	6	580	650	680	680	710	740	5
IT Budget Total	1,350	10	1,480	1,710	1,900	2,000	2,190	2,390	10
Processing Services	30	22	40	50	50	60	70	80	17
Turnkey Systems	100	13	110	130	150	160	180	190	11
Application Software Products	30	10	40	40	50	50	60	70	14
Professional Services	50	6	50	60	60	60	60	60	3
Network Services	10	13	10	10	10	20	20	20	8
Systems Operations	10	29	10	10	20	20	20	30	20
Systems Integration	60	21	70	90	110	130	150	170	19
Industry Sectors Total	300	13	340	400	460	500	560	620	13

Exhibit C-32

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Equipment Sales	310	19	370	430	480	540	620	700	14
Equipment Services	90	15	100	110	130	140	150	170	11
Software Products	120	18	150	170	190	210	240	260	13
Other Information Services	180	20	220	250	290	340	400	470	17
Data Communications	130	15	150	170	190	200	220	240	10
Facilities/Administration	140	7	150	150	160	170	180	180	4
In-House Staff	610	8	660	700	730	740	770	800	4
IT Budget Total	1,580	14	1,810	2,000	2,160	2,350	2,580	2,840	9
Processing Services	30	22	40	40	50	50	50	60	12
Turnkey Systems	110	15	130	140	150	170	180	190	9
Application Software Products	30	10	40	40	50	50	60	70	14
Professional Services	60	6	60	60	60	60	60	60	1
Network Services	10	50	20	30	50	70	100	140	45
Systems Operations	10	33	10	10	10	10	10	20	16
Systems Integration	40	17	50	50	60	60	70	80	13
Industry Sectors Total	290	16	340	380	430	480	550	630	13

Exhibit C-33

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					US$ Million				
Equipment Sales	70	-5	60	60	60	60	60	60	0
Equipment Services	250	-5	240	220	210	200	200	190	-4
Software Products	260	2	260	270	270	280	300	310	3
Other Information Services	300	4	310	320	340	360	390	420	6
Data Communications	140	2	140	140	140	150	150	150	2
Facilities/Administration	390	-8	360	340	320	300	300	290	-4
In-House Staff	900	-11	810	710	650	580	550	480	-10
IT Budget Total	2,320	-6	2,190	2,060	2,000	1,940	1,970	1,940	-2
Processing Services	40	8	40	50	50	50	50	50	3
Turnkey Systems	190	0	190	190	190	190	190	190	0
Application Software Products	50	12	60	70	80	90	110	130	15
Professional Services	90	-4	90	80	80	80	80	70	-3
Network Services	30	20	40	50	60	70	90	110	24
Systems Operations	10	30	10	10	10	10	20	20	21
Systems Integration	10	0	10	10	10	10	10	10	0
Industry Sectors Total	430	3	440	460	480	500	540	580	6

Exhibit C-34

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					US$ Million				
Equipment Sales	750	-10	680	640	600	550	530	500	-6
Equipment Services	270	-10	250	240	230	210	200	190	-5
Software Products	290	0	290	300	310	320	330	340	3
Other Information Services	380	-1	370	400	420	440	460	500	6
Data Communications	150	-4	150	150	150	150	150	150	0
Facilities/Administration	450	-14	390	350	320	290	290	260	-8
In-House Staff	1,100	-12	970	900	840	740	680	610	-9
IT Budget Total	3,390	-9	3,100	3,000	2,870	2,710	2,650	2,550	-4
Processing Services	60	0	60	60	60	60	60	60	1
Turnkey Systems	220	0	220	240	250	250	260	270	4
Application Software Products	70	5	70	80	90	100	120	130	12
Professional Services	120	-8	110	110	110	100	100	90	-4
Network Services	30	10	40	40	50	60	70	80	19
Systems Operations	20	28	20	30	40	40	50	70	22
Systems Integration	10	0	10	10	10	10	10	10	0
Industry Sectors Total	540	0	540	570	600	630	670	710	6

Exhibit C-35

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	3,390	1	3,420	3,420	3,420	3,420	3,450	3,450	0
Equipment Services	1,160	3	1,190	1,230	1,260	1,260	1,290	1,290	2
Software Products	1,320	15	1,520	1,710	1,870	2,060	2,350	2,580	11
Other Information Services	2,260	14	2,580	2,840	3,160	3,420	3,810	4,130	10
Data Communications	1,900	8	2,060	2,190	2,350	2,480	2,650	2,810	6
Facilities/Administration	1,580	-2	1,550	1,550	1,580	1,580	1,610	1,650	1
In-House Staff	6,680	-1	6,610	6,550	6,480	6,350	6,290	6,160	-1
IT Budget Total	18,320	4	18,970	19,480	20,130	20,580	21,480	22,060	3
Processing Services	180	14	210	230	250	260	290	300	8
Turnkey Systems	420	15	480	550	610	680	740	810	11
Application Software Products	480	20	580	710	840	1,000	1,230	1,450	20
Professional Services	1,260	8	1,350	1,450	1,520	1,550	1,610	1,650	4
Network Services	290	24	360	450	560	690	870	1,060	24
Systems Operations	40	25	50	60	70	80	90	100	16
Systems Integration	130	7	140	150	170	180	200	210	8
Industry Sectors Total	2,810	14	3,190	3,610	4,030	4,450	5,030	5,580	12

Exhibit C-36

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	1,390	2	1,420	1,480	1,520	1,520	1,550	1,550	2
Equipment Services	450	0	450	480	520	520	520	520	3
Software Products	480	13	550	610	680	740	810	870	10
Other Information Services	770	17	900	1,030	1,160	1,290	1,390	1,480	10
Data Communications	710	9	770	870	970	1,030	1,130	1,190	9
Facilities/Administration	580	0	580	610	650	650	650	650	2
In-House Staff	2,550	0	2,550	2,610	2,650	2,580	2,550	2,480	-1
IT Budget Total	6,940	4	7,230	7,710	8,130	8,320	8,580	8,740	4
Processing Services	180	16	210	250	270	290	320	340	10
Turnkey Systems	250	11	280	320	360	390	430	450	10
Application Software Products	130	18	150	180	220	260	310	360	20
Professional Services	290	11	320	350	390	390	390	390	4
Network Services	50	27	60	80	100	120	150	180	24
Systems Operations	30	24	40	50	60	70	80	90	16
Systems Integration	80	8	80	90	100	110	120	130	8
Industry Sectors Total	1,000	16	1,160	1,320	1,480	1,650	1,810	1,940	11

Exhibit C-37

Healthcare

	US$ Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	470	3	480	500	510	520	540	550	3
Equipment Services	190	3	190	200	210	210	220	230	3
Software Products	320	18	370	430	500	580	690	790	16
Other Information Services	350	15	400	470	550	630	740	860	16
Data Communications	240	8	260	280	300	320	350	370	8
Facilities/Administration	230	3	240	250	260	280	300	320	6
In-House Staff	1,060	3	1,100	1,130	1,160	1,160	1,190	1,230	2
IT Budget Total	2,870	6	3,030	3,260	3,480	3,710	4,030	4,350	8
Processing Services	70	19	80	90	110	120	140	150	13
Turnkey Systems	350	16	410	470	550	640	740	830	15
Application Software Products	110	21	130	160	200	250	310	370	23
Professional Services	100	9	110	130	140	150	160	170	9
Network Services	10	45	20	30	40	50	80	110	43
Systems Operations	10	22	10	10	10	10	10	10	16
Systems Integration	20	17	20	30	30	30	40	50	15
Industry Sectors Total	670	16	780	920	1,080	1,250	1,470	1,700	17

Exhibit C-38

Education

	US$ Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	190	0	190	190	190	190	190	190	0
Equipment Services	90	-3	90	90	80	80	70	70	-5
Software Products	110	0	110	110	100	100	100	100	-2
Other Information Services	100	3	100	100	100	100	100	110	1
Data Communications	130	0	130	130	130	130	130	130	0
Facilities/Administration	130	0	130	130	130	130	130	130	0
In-House Staff	710	-9	650	580	550	480	450	420	-8
IT Budget Total	1,450	-4	1,390	1,320	1,290	1,230	1,190	1,160	-3
Processing Services	10	0	10	10	10	10	10	10	-2
Turnkey Systems	80	-4	80	80	80	80	80	70	-2
Application Software Products	30	0	30	30	30	30	30	30	0
Professional Services	30	0	30	30	30	30	30	30	0
Network Services	0	0	0	0	0	0	0	0	0
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	10	-8	10	10	10	10	10	0	-10
Industry Sectors Total	160	-2	160	160	150	150	150	150	-1

Exhibit C-39

Local Government

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	410	-9	370	340	300	270	250	220	-10
Equipment Services	170	0	170	170	170	170	170	170	0
Software Products	220	12	250	260	280	310	340	360	8
Other Information Services	320	6	340	350	370	370	390	410	4
Data Communications	230	6	240	250	260	280	290	300	5
Facilities/Administration	230	-3	230	220	220	220	220	220	-1
In-House Staff	1,100	-6	1,030	970	900	840	770	710	-7
IT Budget Total	2,680	-2	2,610	2,580	2,520	2,450	2,450	2,390	-2
Processing Services	60	11	70	70	80	80	80	80	4
Turnkey Systems	170	6	180	190	200	210	220	230	4
Application Software Products	60	15	70	90	100	120	140	160	17
Professional Services	140	0	140	140	130	130	120	120	-3
Network Services	0	0	0	0	0	0	0	0	0
Systems Operations	10	22	10	10	10	10	10	10	16
Systems Integration	30	11	30	40	40	40	50	50	11
Industry Sectors Total	470	7	500	540	570	590	630	660	6

Exhibit C-40

Central Government

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	650	-5	610	550	520	480	450	420	-7
Equipment Services	250	-8	230	210	200	190	170	160	-7
Software Products	300	4	310	320	340	350	380	390	5
Other Information Services	460	1	460	540	580	610	670	740	10
Data Communications	340	0	340	340	340	330	320	320	-1
Facilities/Administration	330	-10	300	270	250	230	210	200	-8
In-House Staff	1,610	-10	1,450	1,320	1,230	1,100	1,000	900	-9
IT Budget Total	3,940	-6	3,710	3,550	3,450	3,290	3,230	3,130	-3
Processing Services	70	14	80	90	90	100	110	120	8
Turnkey Systems	210	9	230	250	280	310	340	360	10
Application Software Products	50	6	50	60	60	60	70	70	6
Professional Services	140	2	150	150	150	150	150	150	1
Network Services	20	19	30	30	40	50	60	70	20
Systems Operations	10	33	10	20	20	20	30	40	22
Systems Integration	160	10	180	200	230	250	280	310	12
Industry Sectors Total	680	5	710	810	870	940	1,030	1,130	10

Exhibit C-41

Business Services

	US$ Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	150	-2	150	150	150	140	140	140	-2
Equipment Services	70	0	70	70	70	70	70	70	0
Software Products	230	14	260	290	340	380	440	500	14
Other Information Services	280	17	330	370	430	460	540	600	13
Data Communications	80	4	80	80	90	90	100	100	5
Facilities/Administration	110	-6	110	100	100	100	100	90	-3
In-House Staff	410	-3	400	390	380	370	350	340	-3
IT Budget Total	1,320	5	1,390	1,450	1,550	1,610	1,740	1,840	6
Processing Services	40	17	50	50	50	60	60	60	7
Turnkey Systems	350	16	410	470	550	640	740	830	15
Application Software Products	90	10	100	120	130	150	170	190	13
Professional Services	120	6	120	130	140	140	140	140	3
Network Services	10	37	20	20	30	40	60	90	38
Systems Operations	10	11	10	10	10	10	10	10	0
Systems Integration	0	14	10	10	10	10	10	10	10
Industry Sectors Total	610	16	710	810	940	1,030	1,190	1,320	13

Exhibit C-42

Other Industries

	US$ Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	570	12	650	700	750	750	770	780	4
Equipment Services	180	11	200	210	230	230	230	230	2
Software Products	260	20	320	370	430	470	520	570	13
Other Information Services	350	26	440	520	570	630	650	710	10
Data Communications	210	19	250	280	320	350	370	410	11
Facilities/Administration	280	7	300	320	340	340	350	350	3
In-House Staff	1,100	9	1,190	1,290	1,350	1,350	1,350	1,350	3
IT Budget Total	2,970	13	3,350	3,710	4,000	4,130	4,260	4,420	6
Processing Services	60	22	70	80	90	100	110	110	10
Turnkey Systems	260	16	300	350	380	400	420	440	8
Application Software Products	80	24	100	130	160	190	230	270	22
Professional Services	160	18	190	220	240	250	260	270	8
Network Services	0	14	10	10	10	10	10	10	5
Systems Operations	10	29	10	10	20	20	20	20	14
Systems Integration	20	25	30	40	50	50	60	70	19
Industry Sectors Total	580	22	710	840	940	1,030	1,100	1,190	11

F
Cross-Industry Sectors in US Dollars

Exhibit C-43

Cross-Industry Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Accounting	258	6	274	306	348	377	423	461	11
Education & Training	68	5	71	74	81	87	100	110	9
Engineering & Scientific	74	4	77	84	94	100	113	126	10
Human Resources	187	0	187	197	210	216	235	245	6
Office Systems	187	10	206	239	284	319	371	419	15
Planning & Analysis	139	5	145	165	187	210	239	268	13
Other Cross-Industry	210	0	210	216	235	245	268	281	6
Cross-Industry Sectors Total	1,129	3	1,161	1,290	1,452	1,548	1,742	1,903	10

Exhibit C-44

Accounting

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Transaction Processing	11	0	11	12	12	12	13	13	3
Turnkey Systems	132	2	135	145	161	171	187	200	8
Application Software Products	116	11	129	148	174	194	223	248	14
Cross-Industry Sectors Total	258	6	274	306	348	377	423	461	11

Exhibit C-45

Education & Training

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	55	6	58	61	68	74	84	94	10
Application Software Products	10	-7	9	10	11	12	13	14	9
Cross-Industry Sectors Total	68	5	71	74	81	87	100	110	9

Exhibit C-46

Engineering & Scientific

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Transaction Processing	8	0	8	8	9	9	10	10	3
Turnkey Systems	35	0	35	35	39	39	42	45	5
Application Software Products	29	11	32	39	45	52	61	71	17
Cross-Industry Sectors Total	74	4	77	84	94	100	113	126	10

Exhibit C-47

Human Resources

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	123	-3	119	123	126	126	132	132	2
Turnkey Systems	32	0	32	35	39	42	48	52	10
Application Software Products	32	10	35	39	45	48	55	61	12
Cross-Industry Sectors Total	187	0	187	197	210	216	235	245	6

Exhibit C-48

Office Systems

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	48	0	48	52	58	61	68	71	8
Application Software Products	135	14	155	184	223	255	300	345	17
Cross-Industry Sectors Total	187	10	206	239	284	319	371	419	15

Exhibit C-49

Planning & Analysis

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	14	0	14	15	15	15	16	17	3
Turnkey Systems	17	-4	16	17	18	19	20	21	6
Application Software Products	106	9	116	132	155	174	203	229	15
Cross-Industry Sectors Total	139	5	145	165	187	210	239	268	13

Exhibit C-50

Other Cross-Industry

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	45	0	45	45	48	48	52	52	3
Turnkey Systems	145	0	145	152	165	174	190	203	7
Application Software Products	19	3	19	21	23	24	26	27	7
Cross-Industry Sectors Total	210	0	210	216	235	245	268	281	6

Information Services Industry
Vertical Sector Forecast, 1995-2000
Germany
(ECUs)

G

Sector Summary in ECUs

Exhibit C-51

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Processing Services	974	11	1,079	1,184	1,237	1,316	1,395	1,474	6
Turnkey Systems	3,211	7	3,421	3,789	4,158	4,474	4,895	5,158	9
Application Software Products	1,605	11	1,789	2,105	2,474	2,895	3,421	3,974	17
Professional Services	2,737	4	2,842	3,000	3,105	3,105	3,211	3,211	2
Network Services	684	19	816	1,000	1,237	1,500	1,895	2,316	23
Systems Operations	253	23	311	384	463	542	653	774	20
Systems Integration	605	13	684	763	868	947	1,079	1,184	12
Industry Sectors Total	10,053	9	10,947	12,211	13,526	14,789	16,526	18,105	11
Transaction Processing	168	-2	166	168	176	176	187	187	2
Turnkey Systems	379	1	384	405	447	474	521	558	8
Application Software Products	363	12	405	468	553	621	721	811	15
Cross-Industry Sectors Total	921	3	947	1,053	1,184	1,263	1,421	1,553	10
Equipment Services	3,658	-2	3,579	3,579	3,605	3,553	3,579	3,579	0
System Software Products	2,789	4	2,895	3,000	3,053	3,105	3,211	3,263	2
Utility and Other Processing	247	11	274	305	337	368	411	447	10
Other Electronic Info Services	253	10	279	311	332	347	374	395	7
Generic Sectors Total	6,947	2	7,053	7,211	7,316	7,368	7,579	7,684	2
Total Information Services	17,947	6	18,947	20,474	22,053	23,421	25,526	27,368	8

H

Industry Sectors in ECUs

Exhibit C-52

Information Services Market by Vertical Sectors

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	1,789	-3	1,737	1,789	1,921	2,026	2,184	2,316	6
Process Manufacturing	842	6	895	1,000	1,132	1,289	1,474	1,632	13
Transportation	468	17	547	632	689	753	847	942	11
Utilities	242	13	274	326	374	411	458	505	13
Telecommunications	237	16	274	311	347	389	447	511	13
Retail Distribution	347	3	358	374	389	411	442	474	6
Wholesale Distribution	437	0	437	468	489	516	547	579	6
Banking & Finance	2,289	14	2,605	2,947	3,289	3,632	4,105	4,553	12
Insurance	816	16	947	1,079	1,211	1,342	1,474	1,579	11
Healthcare	547	16	637	753	879	1,021	1,200	1,389	17
Education	132	-2	129	129	126	126	124	121	-1
Local Government	384	7	411	437	463	484	516	542	6
Central Government	553	5	579	658	711	763	842	921	10
Business Services	500	16	579	658	763	842	974	1,079	13
Other Industries	474	22	579	684	763	842	895	974	11
Industry Sectors Total	10,053	9	10,947	12,211	13,526	14,789	16,526	18,105	11

Exhibit C-53

Discrete Manufacturing

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,210	-15	1,030	890	840	760	710	660	-9
Equipment Services	660	-14	570	520	490	460	440	420	-6
Software Products	950	-6	890	890	970	1,000	1,080	1,130	5
Other Information Services	1,160	-2	1,130	1,180	1,240	1,290	1,370	1,450	5
Data Communications	390	0	390	390	420	420	450	470	4
Facilities/Administration	470	-17	390	340	320	290	260	240	-10
In-House Staff	3,050	-18	2,500	2,180	2,000	1,790	1,660	1,500	-10
IT Budget Total	7,890	-13	6,890	6,420	6,260	6,000	5,950	5,890	-3
Processing Services	216	-5	205	200	195	184	182	174	-3
Turnkey Systems	521	-6	489	489	505	516	532	532	2
Application Software Products	382	0	382	416	471	518	592	658	12
Professional Services	353	-10	316	300	295	279	274	258	-4
Network Services	158	3	163	179	203	224	255	284	12
Systems Operations	82	23	100	124	153	184	229	276	23
Systems Integration	74	4	76	84	97	108	124	139	13
Industry Sectors Total	1,789	-3	1,737	1,789	1,921	2,026	2,184	2,316	6

Exhibit C-54

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	680	-4	660	630	630	630	630	630	-1
Equipment Services	260	-4	250	250	250	250	260	260	1
Software Products	400	7	430	470	540	610	700	790	13
Other Information Services	540	6	570	640	710	790	890	970	11
Data Communications	350	0	350	360	380	390	420	440	5
Facilities/Administration	330	-8	310	290	300	300	310	310	0
In-House Staff	1,550	-8	1,420	1,340	1,320	1,290	1,290	1,260	-2
IT Budget Total	4,110	-3	3,970	3,970	4,130	4,260	4,500	4,660	3
Processing Services	53	10	58	63	68	74	82	87	8
Turnkey Systems	263	4	274	300	332	368	411	442	10
Application Software Products	168	9	184	216	263	316	384	458	20
Professional Services	232	0	232	237	247	253	263	268	3
Network Services	55	14	63	74	89	105	129	153	19
Systems Operations	45	24	55	68	84	100	124	147	22
Systems Integration	37	7	39	45	53	61	71	82	16
Industry Sectors Total	842	6	895	1,000	1,132	1,289	1,474	1,632	13

Exhibit C-55

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	240	-11	210	180	160	130	110	80	-18
Equipment Services	90	0	90	80	80	70	70	60	-7
Software Products	160	33	210	210	240	260	290	320	8
Other Information Services	290	9	320	390	420	470	530	610	14
Data Communications	150	32	190	250	310	380	480	590	25
Facilities/Administration	160	0	160	160	160	160	160	160	0
In-House Staff	500	-11	450	390	340	290	240	210	-14
IT Budget Total	1,580	3	1,630	1,680	1,710	1,760	1,870	2,030	4
Processing Services	29	18	34	37	37	37	37	37	1
Turnkey Systems	184	14	211	237	237	237	237	237	2
Application Software Products	58	23	71	87	103	121	145	168	19
Professional Services	76	3	79	79	76	71	68	63	-4
Network Services	76	34	103	134	171	216	279	353	28
Systems Operations	5	22	6	7	7	8	9	10	12
Systems Integration	39	13	45	53	58	63	71	76	11
Industry Sectors Total	468	17	547	632	689	753	847	942	11

Exhibit C-56

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	160	17	180	210	240	240	260	290	9
Equipment Services	70	12	70	90	100	110	120	130	13
Software Products	100	18	120	140	170	190	210	240	15
Other Information Services	150	14	170	210	240	270	310	340	15
Data Communications	70	15	80	90	110	120	130	140	12
Facilities/Administration	110	10	120	140	160	170	180	200	11
In-House Staff	450	6	470	530	550	550	580	610	5
IT Budget Total	1,110	10	1,210	1,390	1,550	1,630	1,790	1,950	10
Processing Services	24	22	29	37	42	47	55	63	17
Turnkey Systems	82	13	92	108	121	132	145	153	11
Application Software Products	26	10	29	34	39	45	50	55	14
Professional Services	42	6	45	50	53	53	53	53	3
Network Services	8	13	9	11	12	13	14	14	8
Systems Operations	7	29	9	12	15	17	20	23	20
Systems Integration	50	21	61	76	92	105	124	142	19
Industry Sectors Total	242	13	274	326	374	411	458	505	13

Exhibit C-57

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	250	19	300	350	390	440	510	570	14
Equipment Services	70	15	80	90	100	110	130	140	11
Software Products	100	18	120	140	160	170	200	220	13
Other Information Services	150	20	180	210	240	270	320	390	17
Data Communications	110	15	120	140	150	170	180	200	10
Facilities/Administration	110	7	120	130	130	140	140	150	4
In-House Staff	500	8	540	570	590	610	630	650	4
IT Budget Total	1,290	14	1,470	1,630	1,760	1,920	2,110	2,320	9
Processing Services	24	22	29	34	37	39	45	50	12
Turnkey Systems	89	15	103	116	126	137	150	158	9
Application Software Products	26	10	29	34	39	45	50	55	14
Professional Services	47	6	50	53	53	53	53	53	1
Network Services	12	50	17	26	37	54	78	112	45
Systems Operations	5	33	6	8	9	10	12	13	16
Systems Integration	32	17	37	42	47	53	61	68	13
Industry Sectors Total	237	16	274	311	347	389	447	511	13

Exhibit C-58

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	60	-5	50	50	50	50	50	50	0
Equipment Services	200	-5	190	180	170	170	160	160	-4
Software Products	210	2	220	220	220	230	240	250	3
Other Information Services	240	4	250	260	280	290	320	340	6
Data Communications	110	2	120	120	120	120	120	130	2
Facilities/Administration	320	-8	290	270	260	250	240	240	-4
In-House Staff	740	-11	660	580	530	470	450	390	-10
IT Budget Total	1,890	-6	1,790	1,680	1,630	1,580	1,610	1,580	-2
Processing Services	32	8	34	37	37	37	39	39	3
Turnkey Systems	158	0	158	158	158	158	158	158	0
Application Software Products	45	12	50	58	66	76	89	103	15
Professional Services	74	-4	71	68	66	63	63	61	-3
Network Services	26	20	32	39	47	58	74	92	24
Systems Operations	5	30	7	8	10	12	15	18	21
Systems Integration	5	0	5	5	5	5	5	5	0
Industry Sectors Total	347	3	358	374	389	411	442	474	6

Exhibit C-59

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	620	-10	550	520	490	450	430	410	-6
Equipment Services	220	-10	200	190	180	170	170	160	-5
Software Products	240	0	240	250	250	260	270	270	3
Other Information Services	310	-1	310	330	340	360	380	410	6
Data Communications	130	-4	120	120	120	120	120	120	0
Facilities/Administration	370	-14	320	290	260	240	240	210	-8
In-House Staff	890	-12	790	740	680	610	550	500	-9
IT Budget Total	2,760	-9	2,530	2,450	2,340	2,210	2,160	2,080	-4
Processing Services	50	0	50	53	53	53	53	53	1
Turnkey Systems	182	0	182	192	200	208	216	218	4
Application Software Products	58	5	61	68	76	84	95	105	12
Professional Services	100	-8	92	89	87	82	79	74	-4
Network Services	26	10	29	34	39	47	58	68	19
Systems Operations	15	28	19	25	30	36	44	53	22
Systems Integration	5	0	5	5	5	5	5	5	0
Industry Sectors Total	437	0	437	468	489	516	547	579	6

Exhibit C-60

Banking & Finance

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,760	1	2,790	2,790	2,790	2,790	2,820	2,820	0
Equipment Services	950	3	970	1,000	1,030	1,030	1,050	1,050	2
Software Products	1,080	15	1,240	1,390	1,530	1,680	1,920	2,110	11
Other Information Services	1,840	14	2,110	2,320	2,580	2,790	3,110	3,370	10
Data Communications	1,550	8	1,680	1,790	1,920	2,030	2,160	2,290	6
Facilities/Administration	1,290	-2	1,260	1,260	1,290	1,290	1,320	1,340	1
In-House Staff	5,450	-1	5,390	5,340	5,290	5,180	5,130	5,030	-1
IT Budget Total	14,950	4	15,470	15,890	16,420	16,790	17,530	18,000	3
Processing Services	147	14	168	189	203	216	234	245	8
Turnkey Systems	342	15	395	447	500	553	605	658	11
Application Software Products	395	20	474	579	684	816	1,000	1,184	20
Professional Services	1,026	8	1,105	1,184	1,237	1,263	1,316	1,342	4
Network Services	239	24	297	371	461	566	708	863	24
Systems Operations	32	25	39	47	55	63	74	84	16
Systems Integration	108	7	116	126	137	147	161	171	8
Industry Sectors Total	2,289	14	2,605	2,947	3,289	3,632	4,105	4,553	12

Exhibit C-61

Insurance

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,130	2	1,160	1,210	1,240	1,240	1,260	1,260	2
Equipment Services	370	0	370	390	420	420	420	420	3
Software Products	390	13	450	500	550	610	660	710	10
Other Information Services	630	17	740	840	950	1,050	1,130	1,210	10
Data Communications	580	9	630	710	790	840	920	970	9
Facilities/Administration	470	0	470	500	530	530	530	530	2
In-House Staff	2,080	0	2,080	2,130	2,160	2,110	2,080	2,030	-1
IT Budget Total	5,660	4	5,890	6,290	6,630	6,790	7,000	7,130	4
Processing Services	150	16	174	203	224	239	261	276	10
Turnkey Systems	208	11	232	263	292	321	350	371	10
Application Software Products	103	18	121	150	182	213	255	297	20
Professional Services	237	11	263	289	316	316	316	316	4
Network Services	39	27	50	63	79	97	121	147	24
Systems Operations	26	24	33	40	47	53	62	69	16
Systems Integration	63	8	68	76	84	89	97	103	8
Industry Sectors Total	816	16	947	1,079	1,211	1,342	1,474	1,579	11

Exhibit C-62

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	380	3	390	410	420	430	440	450	3
Equipment Services	150	3	160	160	170	170	180	180	3
Software Products	260	18	310	350	410	470	560	650	16
Other Information Services	280	15	330	380	450	520	600	700	16
Data Communications	190	8	210	230	250	260	280	310	8
Facilities/Administration	190	3	190	200	220	230	240	260	6
In-House Staff	870	3	890	920	950	950	970	1,000	2
IT Budget Total	2,340	6	2,470	2,660	2,840	3,030	3,290	3,550	8
Processing Services	55	19	66	76	87	97	111	124	13
Turnkey Systems	287	16	332	387	450	521	600	679	15
Application Software Products	89	21	108	134	166	203	250	305	23
Professional Services	84	9	92	103	113	121	132	142	9
Network Services	11	45	15	22	32	45	64	91	43
Systems Operations	5	22	6	7	8	9	11	12	16
Systems Integration	16	17	18	21	24	26	32	37	15
Industry Sectors Total	547	16	637	753	879	1,021	1,200	1,389	17

Exhibit C-63

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	160	0	160	160	160	160	160	160	0
Equipment Services	80	-3	70	70	70	60	60	60	-5
Software Products	90	0	90	90	80	80	80	80	-2
Other Information Services	80	3	80	80	80	80	80	90	1
Data Communications	110	0	110	110	110	110	110	110	0
Facilities/Administration	110	0	110	110	110	110	110	110	0
In-House Staff	580	-9	530	470	450	390	370	340	-8
IT Budget Total	1,180	-4	1,130	1,080	1,050	1,000	970	950	-3
Processing Services	6	0	6	6	6	5	5	5	-2
Turnkey Systems	68	-4	66	66	66	66	63	61	-2
Application Software Products	21	0	21	21	21	21	21	21	0
Professional Services	26	0	26	26	26	26	26	26	0
Network Services	3	0	3	3	3	3	3	3	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	7	-8	6	6	5	5	4	4	-10
Industry Sectors Total	132	-2	129	129	126	126	124	121	-1

Exhibit C-64

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	340	-9	310	270	250	220	200	180	-10
Equipment Services	140	0	140	140	140	140	140	140	0
Software Products	180	12	200	220	230	250	280	290	8
Other Information Services	260	6	270	290	300	310	320	340	4
Data Communications	180	6	190	210	220	230	240	250	5
Facilities/Administration	190	-3	180	180	180	180	180	180	-1
In-House Staff	890	-6	840	790	740	680	630	580	-7
IT Budget Total	2,180	-2	2,130	2,110	2,050	2,000	2,000	1,950	-2
Processing Services	50	11	55	61	63	63	66	68	4
Turnkey Systems	142	6	150	158	166	174	182	184	4
Application Software Products	53	15	61	71	84	97	116	134	17
Professional Services	111	0	111	111	108	103	100	95	-3
Network Services	3	0	3	3	3	3	3	3	0
Systems Operations	5	22	6	7	8	9	11	12	16
Systems Integration	23	11	26	29	33	36	40	44	11
Industry Sectors Total	384	7	411	437	463	484	516	542	6

Exhibit C-65

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	530	-5	500	450	420	390	370	340	-7
Equipment Services	200	-8	180	170	160	150	140	130	-7
Software Products	240	4	250	260	270	290	310	320	5
Other Information Services	370	1	380	440	470	500	550	610	10
Data Communications	280	0	280	270	270	270	260	260	-1
Facilities/Administration	270	-10	240	220	210	190	170	160	-8
In-House Staff	1,320	-10	1,180	1,080	1,000	890	820	740	-9
IT Budget Total	3,210	-6	3,030	2,890	2,820	2,680	2,630	2,550	-3
Processing Services	55	14	63	71	76	82	89	95	8
Turnkey Systems	171	9	187	208	229	253	276	295	10
Application Software Products	42	6	45	47	50	53	58	61	6
Professional Services	116	2	118	121	124	124	124	124	1
Network Services	19	19	23	27	33	39	48	57	20
Systems Operations	8	33	11	13	16	18	24	29	22
Systems Integration	132	10	145	163	184	203	226	250	12
Industry Sectors Total	553	5	579	658	711	763	842	921	10

Exhibit C-66

Business Services

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	130	-2	120	120	120	120	110	110	-2
Equipment Services	60	0	60	60	60	60	60	60	0
Software Products	180	14	210	240	270	310	360	410	14
Other Information Services	230	17	270	300	350	370	440	490	13
Data Communications	60	4	70	70	70	80	80	80	5
Facilities/Administration	90	-6	90	80	80	80	80	80	-3
In-House Staff	340	-3	330	320	310	300	290	280	-3
IT Budget Total	1,080	5	1,130	1,180	1,260	1,320	1,420	1,500	6
Processing Services	32	17	37	42	45	47	50	53	7
Turnkey Systems	287	16	332	387	450	521	600	679	15
Application Software Products	76	10	84	95	108	121	137	153	13
Professional Services	95	6	100	105	111	111	113	113	3
Network Services	10	37	14	19	26	36	51	69	38
Systems Operations	5	11	5	5	5	5	5	5	0
Systems Integration	4	14	4	5	5	6	6	7	10
Industry Sectors Total	500	16	579	658	763	842	974	1,079	13

Exhibit C-67

Other Industries

Sector	ECU Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	470	12	530	570	610	620	630	640	4
Equipment Services	150	11	160	170	180	180	180	180	2
Software Products	220	20	260	310	350	380	430	470	13
Other Information Services	280	26	360	420	470	520	530	580	10
Data Communications	170	19	200	230	260	280	310	330	11
Facilities/Administration	230	7	250	260	280	280	280	290	3
In-House Staff	890	9	970	1,050	1,110	1,110	1,110	1,110	3
IT Budget Total	2,420	13	2,740	3,030	3,260	3,370	3,470	3,610	6
Processing Services	47	22	58	68	76	82	87	92	10
Turnkey Systems	211	16	245	282	311	329	345	355	8
Application Software Products	66	24	82	105	132	155	187	221	22
Professional Services	129	18	153	176	195	203	216	224	8
Network Services	4	14	4	5	5	5	5	5	5
Systems Operations	7	29	9	12	14	15	17	18	14
Systems Integration	19	25	24	30	37	43	50	57	19
Industry Sectors Total	474	22	579	684	763	842	895	974	11

I

Cross-Industry Sectors in ECUs

Exhibit C-68

Cross-Industry Sectors

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	211	6	224	250	284	308	345	376	11
Education & Training	55	5	58	61	66	71	82	89	9
Engineering & Scientific	61	4	63	68	76	82	92	103	10
Human Resources	153	0	153	161	171	176	192	200	6
Office Systems	153	10	168	195	232	261	303	342	15
Planning & Analysis	113	5	118	134	153	171	195	218	13
Other Cross-Industry	171	0	171	176	192	200	218	229	6
Cross-Industry Sectors Total	921	3	947	1,053	1,184	1,263	1,421	1,553	10

Exhibit C-69

Accounting

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	9	0	9	9	10	10	11	11	3
Turnkey Systems	108	2	111	118	132	139	153	163	8
Application Software Products	95	11	105	121	142	158	182	203	14
Cross-Industry Sectors Total	211	6	224	250	284	308	345	376	11

Exhibit C-70

Education & Training

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	45	6	47	50	55	61	68	76	10
Application Software Products	8	-7	7	8	9	9	11	12	9
Cross-Industry Sectors Total	55	5	58	61	66	71	82	89	9

Exhibit C-71

Engineering & Scientific

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	7	0	7	7	7	7	8	8	3
Turnkey Systems	29	0	29	29	32	32	34	37	5
Application Software Products	24	11	26	32	37	42	50	58	17
Cross-Industry Sectors Total	61	4	63	68	76	82	92	103	10

Exhibit C-72

Human Resources

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	100	-3	97	100	103	103	108	108	2
Turnkey Systems	26	0	26	29	32	34	39	42	10
Application Software Products	26	10	29	32	37	39	45	50	12
Cross-Industry Sectors Total	153	0	153	161	171	176	192	200	6

Exhibit C-73

Office Systems

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	39	0	39	42	47	50	55	58	8
Application Software Products	111	14	126	150	182	208	245	282	17
Cross-Industry Sectors Total	153	10	168	195	232	261	303	342	15

Exhibit C-74

Planning & Analysis

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	12	0	12	12	13	13	13	14	3
Turnkey Systems	14	-4	13	14	15	15	16	17	6
Application Software Products	87	9	95	108	126	142	166	187	15
Cross-Industry Sectors Total	113	5	118	134	153	171	195	218	13

Exhibit C-75

Other Cross-Industry

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	37	0	37	37	39	39	42	42	3
Turnkey Systems	118	0	118	124	134	142	155	166	7
Application Software Products	15	3	16	17	18	19	21	22	7
Cross-Industry Sectors Total	171	0	171	176	192	200	218	229	6

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Appendix D: Vertical Markets - UK, 1995-2000

D

Information Services Industry Vertical Sector Forecast, 1995-2000 U.K.

A

Sector Summary in Local Currency

Exhibit D-1

Information Services Market - Sector Summary

Sector	PS Millions								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Processing Services	380	4	395	420	440	455	470	485	4
Turnkey Systems	1,160	7	1,240	1,360	1,490	1,620	1,770	1,900	9
Application Software Products	550	15	635	735	850	965	1,100	1,235	14
Professional Services	1,960	4	2,030	2,130	2,150	2,190	2,250	2,270	2
Network Services	680	19	810	965	1,150	1,350	1,580	1,825	18
Systems Operations	790	25	990	1,230	1,460	1,715	2,005	2,315	19
Systems Integration	875	13	990	1,135	1,285	1,445	1,625	1,800	13
Industry Sectors Total	6,400	11	7,100	8,000	8,850	9,750	10,800	11,850	11
Transaction Processing	45	-11	40	40	40	40	40	40	0
Turnkey Systems	195	5	205	215	235	255	275	295	8
Application Software Products	265	11	295	335	375	415	460	505	11
Cross-Industry Sectors Total	505	7	540	590	650	710	775	840	9
Equipment Services	2,370	1	2,390	2,440	2,440	2,430	2,420	2,380	0
System Software Products	1,250	4	1,300	1,350	1,400	1,450	1,500	1,550	4
Utility and Other Processing	140	14	160	180	205	230	260	290	13
Other Electronic Info Services	325	12	365	410	455	505	545	585	10
Generic Sectors Total	4,085	3	4,215	4,380	4,500	4,615	4,725	4,805	3
Total Information Services	11,000	8	11,900	13,000	14,000	15,100	16,300	17,500	8

B

Industry Sectors in Local Currency

Exhibit D-2

Information Services Market by Vertical Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	680	3	700	715	760	805	850	880	5
Process Manufacturing	590	11	655	745	845	970	1,115	1,265	14
Transportation	450	12	505	570	645	730	830	945	13
Utilities	275	16	320	385	440	490	550	610	14
Telecommunications	145	14	165	185	205	225	255	280	11
Retail Distribution	325	9	355	390	420	450	480	505	7
Wholesale Distribution	185	0	185	185	185	185	190	190	1
Banking & Finance	1,560	13	1,760	2,010	2,205	2,390	2,600	2,785	10
Insurance	465	12	520	605	670	740	815	880	11
Healthcare	350	10	385	425	460	500	545	580	9
Education	80	0	80	80	85	85	85	80	0
Local Government	395	15	455	530	605	695	800	910	15
Central Government	585	14	665	770	885	1,025	1,185	1,360	15
Business Services	240	10	265	300	335	370	415	460	12
Other Industries	70	0	70	75	80	85	90	90	5
Industry Sectors Total	6,400	11	7,100	8,000	8,850	9,750	10,800	11,850	11

Exhibit D-3

Discrete Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	360	-11	320	280	260	240	220	200	-9
Equipment Services	270	-7	250	230	220	210	200	190	-5
Software Products	240	4	250	240	250	260	270	280	2
Other Information Services	540	2	550	570	600	640	670	700	5
Data Communications	100	5	105	110	120	125	135	140	6
Facilities/Administration	200	-15	170	150	140	130	120	110	-8
In-House Staff	800	0	800	800	800	800	800	800	0
IT Budget Total	2,510	-3	2,445	2,380	2,390	2,405	2,415	2,420	0
Processing Services	35	-6	33	31	30	29	28	27	-4
Turnkey Systems	180	-3	175	170	175	180	185	185	1
Application Software Products	90	6	95	100	110	120	130	135	7
Professional Services	155	-6	145	135	130	125	120	115	-5
Network Services	73	10	80	87	98	111	124	136	11
Systems Operations	110	18	130	150	170	190	210	225	12
Systems Integration	39	5	41	43	46	50	54	57	7
Industry Sectors Total	680	3	700	715	760	805	850	880	5

Exhibit D-4

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				PS Millions					
Equipment Sales	320	-6	300	295	295	295	295	290	-1
Equipment Services	165	-3	160	160	160	165	170	170	1
Software Products	185	11	205	230	265	305	355	415	15
Other Information Services	440	10	485	550	610	700	795	885	13
Data Communications	135	0	135	140	145	150	155	160	3
Facilities/Administration	180	-8	165	160	165	170	175	175	1
In-House Staff	470	-11	420	390	360	350	340	320	-5
IT Budget Total	1,895	-1	1,870	1,925	2,000	2,135	2,285	2,415	5
Processing Services	17	0	17	18	19	20	21	22	5
Turnkey Systems	140	7	150	165	185	210	240	270	12
Application Software Products	75	20	90	110	135	165	200	240	22
Professional Services	135	4	140	145	150	160	175	185	6
Network Services	54	15	62	72	85	101	119	138	17
Systems Operations	115	22	140	170	200	235	275	315	18
Systems Integration	55	5	58	63	69	77	85	93	10
Industry Sectors Total	590	11	655	745	845	970	1,115	1,265	14

Exhibit D-5

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				PS Millions					
Equipment Sales	185	-5	175	170	160	150	140	130	-6
Equipment Services	68	1	69	70	69	69	69	68	0
Software Products	76	14	87	97	111	125	145	165	14
Other Information Services	375	12	420	475	535	605	685	780	13
Data Communications	55	27	70	90	114	144	181	226	26
Facilities/Administration	95	-5	90	90	90	90	90	85	-1
In-House Staff	175	-9	160	145	130	115	105	95	-10
IT Budget Total	1,029	4	1,071	1,137	1,209	1,298	1,415	1,549	8
Processing Services	105	5	110	115	120	125	130	135	4
Turnkey Systems	65	8	70	75	80	85	90	95	6
Application Software Products	21	19	25	30	35	41	48	55	17
Professional Services	90	0	90	90	90	90	90	90	0
Network Services	80	25	100	125	160	200	250	310	25
Systems Operations	35	29	45	55	65	75	85	95	16
Systems Integration	55	22	67	81	97	116	139	164	20
Industry Sectors Total	450	12	505	570	645	730	830	945	13

Exhibit D-6

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	110	9	120	135	145	150	155	160	6
Equipment Services	70	11	78	89	97	104	111	118	9
Software Products	63	21	76	92	111	127	152	176	18
Other Information Services	230	15	265	320	360	405	450	490	13
Data Communications	37	14	42	49	55	60	65	70	11
Facilities/Administration	95	5	100	110	120	125	130	135	6
In-House Staff	200	0	200	200	200	200	200	200	0
IT Budget Total	805	9	881	995	1,088	1,171	1,263	1,349	9
Processing Services	6	17	7	9	11	13	15	17	19
Turnkey Systems	27	11	30	35	39	42	45	48	10
Application Software Products	10	20	12	15	18	21	25	29	19
Professional Services	95	11	105	120	130	140	150	160	9
Network Services	12	25	15	19	23	27	32	37	20
Systems Operations	41	17	48	57	62	65	68	69	8
Systems Integration	83	23	102	128	155	183	216	251	20
Industry Sectors Total	275	16	320	385	440	490	550	610	14

Exhibit D-7

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	125	12	140	160	175	190	205	220	9
Equipment Services	59	8	64	68	70	73	76	78	4
Software Products	40	15	46	51	57	62	71	79	11
Other Information Services	131	15	151	170	189	209	237	259	11
Data Communications	40	15	46	52	57	62	68	73	10
Facilities/Administration	59	10	65	72	79	86	94	102	9
In-House Staff	155	3	160	165	160	160	160	160	0
IT Budget Total	609	10	672	738	787	842	911	971	8
Processing Services	2	0	2	2	2	2	2	2	0
Turnkey Systems	15	0	15	15	15	15	15	15	0
Application Software Products	6	17	7	8	9	10	12	14	15
Professional Services	66	11	73	80	84	90	96	101	7
Network Services	14	29	18	23	29	36	45	55	25
Systems Operations	5	0	5	5	5	5	5	5	0
Systems Integration	36	19	43	51	59	68	78	88	15
Industry Sectors Total	145	14	165	185	205	225	255	280	11

Exhibit D-8

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					PS Millions				
Equipment Sales	345	-1	340	340	335	320	305	290	-3
Equipment Services	175	0	175	175	175	170	165	160	-2
Software Products	120	8	130	135	145	150	155	165	5
Other Information Services	275	9	300	330	350	380	405	420	7
Data Communications	58	5	61	65	68	69	70	71	3
Facilities/Administration	255	-4	245	245	245	240	235	225	-2
In-House Staff	350	-6	330	320	300	280	260	240	-6
IT Budget Total	1,578	0	1,581	1,610	1,618	1,609	1,595	1,571	0
Processing Services	8	0	8	8	8	8	8	8	0
Turnkey Systems	101	8	109	120	131	140	150	158	8
Application Software Products	25	12	28	31	34	36	39	41	8
Professional Services	105	0	105	105	100	95	90	85	-4
Network Services	32	16	37	43	49	55	61	66	12
Systems Operations	34	26	43	54	64	74	85	96	17
Systems Integration	21	19	25	30	35	40	46	52	16
Industry Sectors Total	325	9	355	390	420	450	480	505	7

Exhibit D-9

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					PS Millions				
Equipment Sales	180	-8	165	155	145	135	125	115	-7
Equipment Services	110	-5	105	100	95	90	85	80	-5
Software Products	75	0	75	75	75	75	75	75	0
Other Information Services	160	3	165	165	165	165	175	175	1
Data Communications	33	3	34	35	36	36	36	36	1
Facilities/Administration	150	-10	135	125	120	115	110	100	-6
In-House Staff	200	-10	180	170	150	140	130	120	-8
IT Budget Total	908	-5	859	825	786	756	736	701	-4
Processing Services	6	0	6	6	6	6	6	6	0
Turnkey Systems	52	-4	50	49	48	47	46	44	-3
Application Software Products	19	11	21	23	25	27	29	31	8
Professional Services	68	-7	63	59	53	49	45	41	-8
Network Services	17	6	18	19	20	21	22	22	4
Systems Operations	16	25	20	24	28	32	36	40	15
Systems Integration	5	0	5	5	5	5	5	5	0
Industry Sectors Total	185	0	185	185	185	185	190	190	1

Exhibit D-10

Banking & Finance

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,400	4	1,450	1,500	1,500	1,450	1,400	1,350	-1
Equipment Services	720	6	765	810	820	820	820	810	1
Software Products	450	14	515	565	625	655	710	765	8
Other Information Services	1,500	13	1,700	1,950	2,100	2,300	2,500	2,650	9
Data Communications	635	9	690	760	805	830	855	870	5
Facilities/Administration	785	1	795	825	840	830	820	805	0
In-House Staff	1,900	0	1,900	1,900	1,800	1,700	1,600	1,500	-5
IT Budget Total	7,390	6	7,815	8,310	8,490	8,585	8,705	8,750	2
Processing Services	140	7	150	165	175	180	185	190	5
Turnkey Systems	180	14	205	235	260	285	310	330	10
Application Software Products	110	23	135	165	195	220	250	280	16
Professional Services	640	6	680	730	740	750	770	770	3
Network Services	260	23	320	395	475	560	655	755	19
Systems Operations	100	25	125	155	180	200	220	240	14
Systems Integration	130	12	145	165	180	195	210	220	9
Industry Sectors Total	1,560	13	1,760	2,010	2,205	2,390	2,600	2,785	10

Exhibit D-11

Insurance

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	400	2	410	435	450	450	450	445	2
Equipment Services	200	5	210	225	235	240	245	250	4
Software Products	150	13	170	190	215	235	265	295	12
Other Information Services	410	11	455	535	590	650	710	765	11
Data Communications	180	8	195	220	240	255	270	285	8
Facilities/Administration	220	0	220	230	235	235	235	235	1
In-House Staff	530	-1	525	540	525	510	495	475	-2
IT Budget Total	2,090	5	2,185	2,375	2,490	2,575	2,670	2,750	5
Processing Services	22	9	24	27	29	31	33	34	7
Turnkey Systems	81	10	89	101	112	122	133	142	10
Application Software Products	43	23	53	67	82	98	117	137	21
Professional Services	210	10	230	260	280	300	320	335	8
Network Services	35	20	42	51	60	70	81	92	17
Systems Operations	28	25	35	44	51	58	66	73	16
Systems Integration	44	9	48	53	57	60	63	65	6
Industry Sectors Total	465	12	520	605	670	740	815	880	11

Exhibit D-12

Healthcare

Sector	PS Millions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	215	-2	210	210	210	205	200	195	-1
Equipment Services	115	0	115	115	115	115	115	115	0
Software Products	110	9	120	130	140	155	170	190	10
Other Information Services	265	9	290	315	340	365	390	410	7
Data Communications	90	6	95	100	105	110	115	120	5
Facilities/Administration	140	-7	130	125	125	120	115	110	-3
In-House Staff	330	-6	310	300	275	260	245	230	-6
IT Budget Total	1,265	0	1,270	1,295	1,310	1,330	1,350	1,370	2
Processing Services	12	8	13	14	15	16	17	18	7
Turnkey Systems	102	11	113	128	143	160	179	197	12
Application Software Products	32	16	37	43	49	56	64	72	14
Professional Services	81	2	83	86	87	90	93	94	3
Network Services	33	18	39	46	54	64	75	86	17
Systems Operations	60	8	65	70	70	69	68	65	0
Systems Integration	32	9	35	38	41	44	47	49	7
Industry Sectors Total	350	10	385	425	460	500	545	580	9

Exhibit D-13

Education

Sector	PS Millions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	80	-13	70	70	70	70	70	60	-3
Equipment Services	60	0	60	60	60	60	60	55	-2
Software Products	55	0	55	55	60	60	65	65	3
Other Information Services	55	9	60	60	65	70	70	65	2
Data Communications	40	0	40	40	40	40	40	40	0
Facilities/Administration	45	0	45	45	45	45	45	45	0
In-House Staff	180	-11	160	140	120	110	100	90	-11
IT Budget Total	515	-5	490	470	460	455	450	420	-3
Processing Services	1	0	1	1	1	1	1	1	0
Turnkey Systems	22	-5	21	21	21	20	19	18	-3
Application Software Products	25	8	27	29	31	33	35	36	6
Professional Services	26	-4	25	25	24	23	22	21	-3
Network Services	4	0	4	4	4	4	4	4	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	1	0	1	1	1	1	1	1	0
Industry Sectors Total	80	0	80	80	85	85	85	80	0

Exhibit D-14

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				PS Millions					
Equipment Sales	200	-8	185	175	165	155	145	135	-6
Equipment Services	122	-4	117	112	106	101	96	90	-5
Software Products	99	8	107	113	124	132	147	160	8
Other Information Services	336	15	387	454	515	596	686	781	15
Data Communications	91	-2	89	88	87	84	81	78	-3
Facilities/Administration	125	-8	115	110	110	105	100	95	-4
In-House Staff	340	-10	305	280	245	220	195	170	-11
IT Budget Total	1,313	-1	1,305	1,332	1,352	1,393	1,450	1,509	3
Processing Services	6	0	6	6	6	6	6	6	0
Turnkey Systems	57	5	60	64	68	72	76	79	6
Application Software Products	20	15	23	27	32	37	43	49	16
Professional Services	90	0	90	90	85	85	85	80	-2
Network Services	12	0	12	12	12	12	12	12	0
Systems Operations	129	33	172	227	286	355	437	529	25
Systems Integration	81	12	91	102	114	127	141	154	11
Industry Sectors Total	395	15	455	530	605	695	800	910	15

Exhibit D-15

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				PS Millions					
Equipment Sales	265	-11	235	215	195	175	155	135	-10
Equipment Services	155	-3	150	145	140	135	130	120	-4
Software Products	150	10	165	180	200	220	255	280	11
Other Information Services	460	14	525	615	705	820	950	1,085	16
Data Communications	120	0	120	120	120	115	110	105	-3
Facilities/Administration	165	-9	150	145	140	135	130	120	-4
In-House Staff	445	-12	390	350	305	270	240	210	-12
IT Budget Total	1,760	-1	1,735	1,770	1,805	1,870	1,970	2,055	3
Processing Services	10	0	10	10	10	10	10	10	0
Turnkey Systems	28	7	30	33	36	39	43	46	9
Application Software Products	14	0	14	14	14	14	14	14	0
Professional Services	110	-3	107	105	101	98	95	90	-3
Network Services	31	13	35	40	46	52	58	64	13
Systems Operations	105	38	145	200	260	335	430	540	30
Systems Integration	285	14	325	370	420	475	535	595	13
Industry Sectors Total	585	14	665	770	885	1,025	1,185	1,360	15

Exhibit D-16

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				PS Millions					
Equipment Sales	55	0	55	55	55	55	55	55	0
Equipment Services	33	6	35	37	38	40	42	43	4
Software Products	64	14	73	83	94	107	121	138	14
Other Information Services	150	7	160	175	190	205	225	245	9
Data Communications	24	4	25	27	29	30	32	33	6
Facilities/Administration	47	-2	46	46	47	47	47	47	0
In-House Staff	90	0	90	90	85	85	85	80	-2
IT Budget Total	463	5	484	513	538	569	607	641	6
Processing Services	3	0	3	3	3	3	3	3	0
Turnkey Systems	102	16	118	139	164	192	225	259	17
Application Software Products	25	12	28	32	36	40	44	48	11
Professional Services	87	2	89	92	93	95	97	97	2
Network Services	13	23	16	19	23	27	32	37	18
Systems Operations	7	14	8	9	10	10	10	10	5
Systems Integration	5	0	5	5	5	5	5	5	0
Industry Sectors Total	240	10	265	300	335	370	415	460	12

Exhibit D-17

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				PS Millions					
Equipment Sales	80	-13	70	65	60	55	50	45	-8
Equipment Services	44	-9	40	39	37	36	35	33	-4
Software Products	56	0	56	58	60	63	66	68	4
Other Information Services	41	-2	40	43	47	50	53	51	5
Data Communications	33	-3	32	33	34	34	34	34	1
Facilities/Administration	55	-18	45	40	35	30	25	20	-15
In-House Staff	115	-13	100	90	80	70	65	60	-10
IT Budget Total	424	-10	383	368	353	338	328	311	-4
Processing Services	5	0	5	5	5	5	5	5	0
Turnkey Systems	10	-10	9	9	9	9	9	9	0
Application Software Products	37	3	38	41	44	47	50	52	6
Professional Services	3	0	3	3	3	3	3	3	0
Network Services	10	0	10	10	10	10	10	10	0
Systems Operations	5	20	6	7	8	9	10	11	13
Systems Integration	1	0	1	1	1	1	1	1	0
Industry Sectors Total	70	0	70	75	80	85	90	90	5

C

Cross-Industry Sectors in Local Currency

Exhibit D-18

Cross-Industry Sectors

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	125	8	135	150	170	185	205	225	11
Education & Training	25	0	25	25	25	25	25	30	4
Engineering & Scientific	40	0	40	45	50	55	60	65	10
Human Resources	55	0	55	60	60	65	70	75	6
Office Systems	120	13	135	150	170	185	200	220	10
Planning & Analysis	65	15	75	80	90	100	110	115	9
Other Cross-Industry	70	7	75	80	90	95	105	110	8
Cross-Industry Sectors Total	505	7	540	590	650	710	775	840	9

Exhibit D-19

Accounting

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	49	6	52	56	63	69	76	82	10
Application Software Products	72	13	81	92	105	116	129	141	12
Cross-Industry Sectors Total	125	8	135	150	170	185	205	225	11

Exhibit D-20

Education & Training

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	18	0	18	18	19	20	21	22	4
Application Software Products	5	0	5	5	5	5	5	5	0
Cross-Industry Sectors Total	25	0	25	25	25	25	25	30	4

Exhibit D-21

Engineering & Scientific

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	18	6	19	20	22	24	26	28	8
Application Software Products	19	11	21	24	27	29	32	35	11
Cross-Industry Sectors Total	40	0	40	45	50	55	60	65	10

Exhibit D-22

Human Resources

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	25	-4	24	23	23	23	23	23	-1
Turnkey Systems	9	0	9	10	11	12	13	14	9
Application Software Products	20	10	22	25	28	31	35	39	12
Cross-Industry Sectors Total	55	0	55	60	60	65	70	75	6

Exhibit D-23

Office Systems

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	49	6	52	55	61	66	71	75	8
Application Software Products	72	14	82	93	106	117	130	142	12
Cross-Industry Sectors Total	120	13	135	150	170	185	200	220	10

Exhibit D-24

Planning & Analysis

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	4	0	4	4	4	4	4	4	0
Application Software Products	60	12	67	74	83	91	101	110	10
Cross-Industry Sectors Total	65	15	75	80	90	100	110	115	9

Exhibit A-25

Other Cross-Industry

Sector	PS Millions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	9	0	9	9	9	9	9	9	0
Turnkey Systems	47	4	49	51	56	61	66	71	8
Application Software Products	16	13	18	20	23	26	29	32	12
Cross-Industry Sectors Total	70	7	75	80	90	95	105	110	8

Information Services Industry
Vertical Sector Forecast, 1995-2000
U.K.
(US$ Million)

D

Sector Summary in US Dollars

Exhibit D-26

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Processing Services	590	4	620	660	690	710	740	760	4
Turnkey Systems	1,820	7	1,940	2,130	2,330	2,540	2,770	2,970	9
Application Software Products	860	15	990	1,150	1,330	1,510	1,720	1,930	14
Professional Services	3,070	4	3,180	3,330	3,360	3,430	3,520	3,550	2
Network Services	1,060	19	1,270	1,510	1,800	2,110	2,470	2,860	18
Systems Operations	1,240	25	1,550	1,920	2,280	2,680	3,140	3,620	19
Systems Integration	1,370	13	1,550	1,780	2,010	2,260	2,540	2,820	13
Industry Sectors Total	10,020	11	11,110	12,520	13,850	15,260	16,900	18,540	11
Transaction Processing	70	-11	63	63	63	63	63	63	0
Turnkey Systems	305	5	321	336	368	399	430	462	8
Application Software Products	415	11	462	524	587	649	720	790	11
Cross-Industry Sectors Total	790	7	845	923	1,017	1,111	1,213	1,315	9
Equipment Services	3,709	1	3,740	3,818	3,818	3,803	3,787	3,725	0
System Software Products	1,956	4	2,034	2,113	2,191	2,269	2,347	2,426	4
Utility and Other Processing	219	14	250	282	321	360	407	454	13
Other Electronic Info Services	509	12	571	642	712	790	853	915	10
Generic Sectors Total	6,393	3	6,596	6,854	7,042	7,222	7,394	7,520	3
Total Information Services	17,000	8	19,000	20,000	22,000	24,000	26,000	27,000	8

E

Industry Sectors in US Dollars

Exhibit D-27

Information Services Market by Vertical Sectors

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Discrete Manufacturing	1,064	3	1,095	1,119	1,189	1,260	1,330	1,377	5
Process Manufacturing	923	11	1,025	1,166	1,322	1,518	1,745	1,980	14
Transportation	704	12	790	892	1,009	1,142	1,299	1,479	13
Utilities	430	16	501	603	689	767	861	955	14
Telecommunications	227	14	258	290	321	352	399	438	11
Retail Distribution	509	9	556	610	657	704	751	790	7
Wholesale Distribution	290	0	290	290	290	290	297	297	1
Banking & Finance	2,441	13	2,754	3,146	3,451	3,740	4,069	4,358	10
Insurance	728	12	814	947	1,049	1,158	1,275	1,377	11
Healthcare	548	10	603	665	720	782	853	908	9
Education	125	0	125	125	133	133	133	125	0
Local Government	618	15	712	829	947	1,088	1,252	1,424	15
Central Government	915	14	1,041	1,205	1,385	1,604	1,854	2,128	15
Business Services	376	10	415	469	524	579	649	720	12
Other Industries	110	0	110	117	125	133	141	141	5
Industry Sectors Total	10,016	11	11,111	12,520	13,850	15,258	16,901	18,545	11

Exhibit D-28

Discrete Manufacturing

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Equipment Sales	560	-11	500	440	410	380	340	310	-9
Equipment Services	420	-7	390	360	340	330	310	300	-5
Software Products	380	4	390	380	390	410	420	440	2
Other Information Services	850	2	860	890	940	1,000	1,050	1,100	5
Data Communications	160	5	160	170	190	200	210	220	6
Facilities/Administration	310	-15	270	230	220	200	190	170	-8
In-House Staff	1,250	0	1,250	1,250	1,250	1,250	1,250	1,250	0
IT Budget Total	3,930	-3	3,830	3,720	3,740	3,760	3,780	3,790	0
Processing Services	50	-6	50	50	50	50	40	40	-4
Turnkey Systems	280	-3	270	270	270	280	290	290	1
Application Software Products	140	6	150	160	170	190	200	210	7
Professional Services	240	-6	230	210	200	200	190	180	-5
Network Services	110	10	130	140	150	170	190	210	11
Systems Operations	170	18	200	230	270	300	330	350	12
Systems Integration	60	5	60	70	70	80	80	90	7
Industry Sectors Total	1,060	3	1,100	1,120	1,190	1,260	1,330	1,380	5

Exhibit D-29

Process Manufacturing

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	500	-6	470	460	460	460	460	450	-1
Equipment Services	260	-3	250	250	250	260	270	270	1
Software Products	290	11	320	360	410	480	560	650	15
Other Information Services	690	10	760	860	950	1,100	1,240	1,380	13
Data Communications	210	0	210	220	230	230	240	250	3
Facilities/Administration	280	-8	260	250	260	270	270	270	1
In-House Staff	740	-11	660	610	560	550	530	500	-5
IT Budget Total	2,970	-1	2,930	3,010	3,130	3,340	3,580	3,780	5
Processing Services	30	0	30	30	30	30	30	30	5
Turnkey Systems	220	7	230	260	290	330	380	420	12
Application Software Products	120	20	140	170	210	260	310	380	22
Professional Services	210	4	220	230	230	250	270	290	6
Network Services	80	15	100	110	130	160	190	220	17
Systems Operations	180	22	220	270	310	370	430	490	18
Systems Integration	90	5	90	100	110	120	130	150	10
Industry Sectors Total	920	11	1,030	1,170	1,320	1,520	1,740	1,980	14

Exhibit D-30

Transportation

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	290	-5	270	270	250	230	220	200	-6
Equipment Services	110	1	110	110	110	110	110	110	0
Software Products	120	14	140	150	170	200	230	260	14
Other Information Services	590	12	660	740	840	950	1,070	1,220	13
Data Communications	90	27	110	140	180	230	280	350	26
Facilities/Administration	150	-5	140	140	140	140	140	130	-1
In-House Staff	270	-9	250	230	200	180	160	150	-10
IT Budget Total	1,610	4	1,680	1,780	1,890	2,030	2,210	2,420	8
Processing Services	160	5	170	180	190	200	200	210	4
Turnkey Systems	100	8	110	120	130	130	140	150	6
Application Software Products	30	19	40	50	50	60	80	90	17
Professional Services	140	0	140	140	140	140	140	140	0
Network Services	130	25	160	200	250	310	390	490	25
Systems Operations	50	29	70	90	100	120	130	150	16
Systems Integration	90	22	100	130	150	180	220	260	20
Industry Sectors Total	700	12	790	890	1,010	1,140	1,300	1,480	13

Exhibit D-31

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	170	9	190	210	230	230	240	250	6
Equipment Services	110	11	120	140	150	160	170	180	9
Software Products	100	21	120	140	170	200	240	280	18
Other Information Services	360	15	410	500	560	630	700	770	13
Data Communications	60	14	70	80	90	90	100	110	11
Facilities/Administration	150	5	160	170	190	200	200	210	6
In-House Staff	310	0	310	310	310	310	310	310	0
IT Budget Total	1,260	9	1,380	1,560	1,700	1,830	1,980	2,110	9
Processing Services	10	17	10	10	20	20	20	30	19
Turnkey Systems	40	11	50	50	60	70	70	80	10
Application Software Products	20	20	20	20	30	30	40	50	19
Professional Services	150	11	160	190	200	220	230	250	9
Network Services	20	25	20	30	40	40	50	60	20
Systems Operations	60	17	80	90	100	100	110	110	8
Systems Integration	130	23	160	200	240	290	340	390	20
Industry Sectors Total	430	16	500	600	690	770	860	950	14

Exhibit D-32

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	200	12	220	250	270	300	320	340	9
Equipment Services	90	8	100	110	110	110	120	120	4
Software Products	60	15	70	80	90	100	110	120	11
Other Information Services	210	15	240	270	300	330	370	410	11
Data Communications	60	15	70	80	90	100	110	110	10
Facilities/Administration	90	10	100	110	120	130	150	160	9
In-House Staff	240	3	250	260	250	250	250	250	0
IT Budget Total	950	10	1,050	1,150	1,230	1,320	1,430	1,520	8
Processing Services	0	0	0	0	0	0	0	0	0
Turnkey Systems	20	0	20	20	20	20	20	20	0
Application Software Products	10	17	10	10	10	20	20	20	15
Professional Services	100	11	110	130	130	140	150	160	7
Network Services	20	29	30	40	50	60	70	90	25
Systems Operations	10	0	10	10	10	10	10	10	0
Systems Integration	60	19	70	80	90	110	120	140	15
Industry Sectors Total	230	14	260	290	320	350	400	440	11

Exhibit D-33

Retail Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	540	-1	530	530	520	500	480	450	-3
Equipment Services	270	0	270	270	270	270	260	250	-2
Software Products	190	8	200	210	230	230	240	260	5
Other Information Services	430	9	470	520	550	590	630	660	7
Data Communications	90	5	100	100	110	110	110	110	3
Facilities/Administration	400	-4	380	380	380	380	370	350	-2
In-House Staff	550	-6	520	500	470	440	410	380	-6
IT Budget Total	2,470	0	2,470	2,520	2,530	2,520	2,500	2,460	0
Processing Services	10	0	10	10	10	10	10	10	0
Turnkey Systems	160	8	170	190	210	220	230	250	8
Application Software Products	40	12	40	50	50	60	60	60	8
Professional Services	160	0	160	160	160	150	140	130	-4
Network Services	50	16	60	70	80	90	100	100	12
Systems Operations	50	26	70	80	100	120	130	150	17
Systems Integration	30	19	40	50	50	60	70	80	16
Industry Sectors Total	510	9	560	610	660	700	750	790	7

US$ Million

Exhibit D-34

Wholesale Distribution

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	280	-8	260	240	230	210	200	180	-7
Equipment Services	170	-5	160	160	150	140	130	130	-5
Software Products	120	0	120	120	120	120	120	120	0
Other Information Services	250	3	260	260	260	260	270	270	1
Data Communications	50	3	50	50	60	60	60	60	1
Facilities/Administration	230	-10	210	200	190	180	170	160	-6
In-House Staff	310	-10	280	270	230	220	200	190	-8
IT Budget Total	1,420	-5	1,340	1,290	1,230	1,180	1,150	1,100	-4
Processing Services	10	0	10	10	10	10	10	10	0
Turnkey Systems	80	-4	80	80	80	70	70	70	-3
Application Software Products	30	11	30	40	40	40	50	50	8
Professional Services	110	-7	100	90	80	80	70	60	-8
Network Services	30	6	30	30	30	30	30	30	4
Systems Operations	30	25	30	40	40	50	60	60	15
Systems Integration	10	0	10	10	10	10	10	10	0
Industry Sectors Total	290	0	290	290	290	290	300	300	1

US$ Million

Exhibit D-35

Banking & Finance

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	2,190	4	2,270	2,350	2,350	2,270	2,190	2,110	-1
Equipment Services	1,130	6	1,200	1,270	1,280	1,280	1,280	1,270	1
Software Products	700	14	810	880	980	1,030	1,110	1,200	8
Other Information Services	2,350	13	2,660	3,050	3,290	3,600	3,910	4,150	9
Data Communications	990	9	1,080	1,190	1,260	1,300	1,340	1,360	5
Facilities/Administration	1,230	1	1,240	1,290	1,310	1,300	1,280	1,260	0
In-House Staff	2,970	0	2,970	2,970	2,820	2,660	2,500	2,350	-5
IT Budget Total	11,560	6	12,230	13,000	13,290	13,440	13,620	13,690	2
Processing Services	220	7	230	260	270	280	290	300	5
Turnkey Systems	280	14	320	370	410	450	490	520	10
Application Software Products	170	23	210	260	310	340	390	440	16
Professional Services	1,000	6	1,060	1,140	1,160	1,170	1,210	1,210	3
Network Services	410	23	500	620	740	880	1,030	1,180	19
Systems Operations	160	25	200	240	280	310	340	380	14
Systems Integration	200	12	230	260	280	310	330	340	9
Industry Sectors Total	2,440	13	2,750	3,150	3,450	3,740	4,070	4,360	10

Exhibit D-36

Insurance

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	630	2	640	680	700	700	700	700	2
Equipment Services	310	5	330	350	370	380	380	390	4
Software Products	230	13	270	300	340	370	410	460	12
Other Information Services	640	11	710	840	920	1,020	1,110	1,200	11
Data Communications	280	8	310	340	380	400	420	450	8
Facilities/Administration	340	0	340	360	370	370	370	370	1
In-House Staff	830	-1	820	850	820	800	770	740	-2
IT Budget Total	3,270	5	3,420	3,720	3,900	4,030	4,180	4,300	5
Processing Services	30	9	40	40	50	50	50	50	7
Turnkey Systems	130	10	140	160	180	190	210	220	10
Application Software Products	70	23	80	100	130	150	180	210	21
Professional Services	330	10	360	410	440	470	500	520	8
Network Services	50	20	70	80	90	110	130	140	17
Systems Operations	40	25	50	70	80	90	100	110	16
Systems Integration	70	9	80	80	90	90	100	100	6
Industry Sectors Total	730	12	810	950	1,050	1,160	1,280	1,380	11

Exhibit D-37

Healthcare

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	340	-2	330	330	330	320	310	310	-1
Equipment Services	180	0	180	180	180	180	180	180	0
Software Products	170	9	190	200	220	240	270	300	10
Other Information Services	410	9	450	490	530	570	610	640	7
Data Communications	140	6	150	160	160	170	180	190	5
Facilities/Administration	220	-7	200	200	200	190	180	170	-3
In-House Staff	520	-6	490	470	430	410	380	360	-6
IT Budget Total	1,980	0	1,990	2,030	2,050	2,080	2,110	2,140	2
Processing Services	20	8	20	20	20	30	30	30	7
Turnkey Systems	160	11	180	200	220	250	280	310	12
Application Software Products	50	16	60	70	80	90	100	110	14
Professional Services	130	2	130	130	140	140	150	150	3
Network Services	50	18	60	70	80	100	120	130	17
Systems Operations	90	8	100	110	110	110	110	100	0
Systems Integration	50	9	50	60	60	70	70	80	7
Industry Sectors Total	550	10	600	670	720	780	850	910	9

Exhibit D-38

Education

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	130	-13	110	110	110	110	110	90	-3
Equipment Services	90	0	90	90	90	90	90	90	-2
Software Products	90	0	90	90	90	90	100	100	3
Other Information Services	90	9	90	90	100	110	110	100	2
Data Communications	60	0	60	60	60	60	60	60	0
Facilities/Administration	70	0	70	70	70	70	70	70	0
In-House Staff	280	-11	250	220	190	170	160	140	-11
IT Budget Total	810	-5	770	740	720	710	700	660	-3
Processing Services	0	0	0	0	0	0	0	0	0
Turnkey Systems	30	-5	30	30	30	30	30	30	-3
Application Software Products	40	8	40	50	50	50	50	60	6
Professional Services	40	-4	40	40	40	40	30	30	-3
Network Services	10	0	10	10	10	10	10	10	0
Systems Operations	0	0	0	0	0	0	0	0	0
Systems Integration	0	0	0	0	0	0	0	0	0
Industry Sectors Total	130	0	130	130	130	130	130	130	0

Exhibit D-39

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	310	-8	290	270	260	240	230	210	-6
Equipment Services	190	-4	180	180	170	160	150	140	-5
Software Products	150	8	170	180	190	210	230	250	8
Other Information Services	530	15	610	710	810	930	1,070	1,220	15
Data Communications	140	-2	140	140	140	130	130	120	-3
Facilities/Administration	200	-8	180	170	170	160	160	150	-4
In-House Staff	530	-10	480	440	380	340	310	270	-11
IT Budget Total	2,050	-1	2,040	2,080	2,120	2,180	2,270	2,360	3
Processing Services	10	0	10	10	10	10	10	10	0
Turnkey Systems	90	5	90	100	110	110	120	120	6
Application Software Products	30	15	40	40	50	60	70	80	16
Professional Services	140	0	140	140	130	130	130	130	-2
Network Services	20	0	20	20	20	20	20	20	0
Systems Operations	200	33	270	360	450	560	680	830	25
Systems Integration	130	12	140	160	180	200	220	240	11
Industry Sectors Total	620	15	710	830	950	1,090	1,250	1,420	15

Exhibit D-40

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	410	-11	370	340	310	270	240	210	-10
Equipment Services	240	-3	230	230	220	210	200	190	-4
Software Products	230	10	260	280	310	340	400	440	11
Other Information Services	720	14	820	960	1,100	1,280	1,490	1,700	16
Data Communications	190	0	190	190	190	180	170	160	-3
Facilities/Administration	260	-9	230	230	220	210	200	190	-4
In-House Staff	700	-12	610	550	480	420	380	330	-12
IT Budget Total	2,750	-1	2,720	2,770	2,820	2,930	3,080	3,220	3
Processing Services	20	0	20	20	20	20	20	20	0
Turnkey Systems	40	7	50	50	60	60	70	70	9
Application Software Products	20	0	20	20	20	20	20	20	0
Professional Services	170	-3	170	160	160	150	150	140	-3
Network Services	50	13	50	60	70	80	90	100	13
Systems Operations	160	38	230	310	410	520	670	850	30
Systems Integration	450	14	510	580	660	740	840	930	13
Industry Sectors Total	920	14	1,040	1,210	1,380	1,600	1,850	2,130	15

Exhibit D-41

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Equipment Sales	90	0	90	90	90	90	90	90	0
Equipment Services	50	6	50	60	60	60	70	70	4
Software Products	100	14	110	130	150	170	190	220	14
Other Information Services	230	7	250	270	300	320	350	380	9
Data Communications	40	4	40	40	50	50	50	50	6
Facilities/Administration	70	-2	70	70	70	70	70	70	0
In-House Staff	140	0	140	140	130	130	130	130	-2
IT Budget Total	720	5	760	800	840	890	950	1,000	6
Processing Services	0	0	0	0	0	0	0	0	0
Turnkey Systems	160	16	180	220	260	300	350	410	17
Application Software Products	40	12	40	50	60	60	70	80	11
Professional Services	140	2	140	140	150	150	150	150	2
Network Services	20	23	30	30	40	40	50	60	18
Systems Operations	10	14	10	10	20	20	20	20	5
Systems Integration	10	0	10	10	10	10	10	10	0
Industry Sectors Total	380	10	410	470	520	580	650	720	12

Exhibit D-42

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Equipment Sales	130	-13	110	100	90	90	80	70	-8
Equipment Services	70	-9	60	60	60	60	50	50	-4
Software Products	90	0	90	90	90	100	100	110	4
Other Information Services	60	-2	60	70	70	80	80	80	5
Data Communications	50	-3	50	50	50	50	50	50	1
Facilities/Administration	90	-18	70	60	50	50	40	30	-15
In-House Staff	180	-13	160	140	130	110	100	90	-10
IT Budget Total	660	-10	600	580	550	530	510	490	-4
Processing Services	10	0	10	10	10	10	10	10	0
Turnkey Systems	20	-10	10	10	10	10	10	10	0
Application Software Products	60	3	60	60	70	70	80	80	6
Professional Services	0	0	0	0	0	0	0	0	0
Network Services	20	0	20	20	20	20	20	20	0
Systems Operations	10	20	10	10	10	10	20	20	13
Systems Integration	0	0	0	0	0	0	0	0	0
Industry Sectors Total	110	0	110	120	130	130	140	140	5

F

Cross-Industry Sectors in US Dollars

Exhibit D-43

Cross-Industry Sectors

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Accounting	196	8	211	235	266	290	321	352	11
Education & Training	39	0	39	39	39	39	39	47	4
Engineering & Scientific	63	0	63	70	78	86	94	102	10
Human Resources	86	0	86	94	94	102	110	117	6
Office Systems	188	13	211	235	266	290	313	344	10
Planning & Analysis	102	15	117	125	141	156	172	180	9
Other Cross-Industry	110	7	117	125	141	149	164	172	8
Cross-Industry Sectors Total	790	7	845	923	1,017	1,111	1,213	1,315	9

Exhibit D-44

Accounting

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	77	6	81	88	99	108	119	128	10
Application Software Products	113	13	127	144	164	182	202	221	12
Cross-Industry Sectors Total	196	8	211	235	266	290	321	352	11

Exhibit D-45

Education & Training

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	28	0	28	28	30	31	33	34	4
Application Software Products	8	0	8	8	8	8	8	8	0
Cross-Industry Sectors Total	39	0	39	39	39	39	39	47	4

Exhibit D-46

Engineering & Scientific

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	28	6	30	31	34	38	41	44	8
Application Software Products	30	11	33	38	42	45	50	55	11
Cross-Industry Sectors Total	63	0	63	70	78	86	94	102	10

Exhibit D-47

Human Resources

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
	US$ Million								
Transaction Processing	39	-4	38	36	36	36	36	36	-1
Turnkey Systems	14	0	14	16	17	19	20	22	9
Application Software Products	31	10	34	39	44	49	55	61	12
Cross-Industry Sectors Total	86	0	86	94	94	102	110	117	6

Exhibit D-48

Office Systems

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
	US$ Million								
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	77	6	81	86	95	103	111	117	8
Application Software Products	113	14	128	146	166	183	203	222	12
Cross-Industry Sectors Total	188	13	211	235	266	290	313	344	10

Exhibit D-49

Planning & Analysis

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
	US$ Million								
Transaction Processing	5	0	5	5	5	5	5	5	0
Turnkey Systems	6	0	6	6	6	6	6	6	0
Application Software Products	94	12	105	116	130	142	158	172	10
Cross-Industry Sectors Total	102	15	117	125	141	156	172	180	9

Exhibit D-50

Other Cross-Industry

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
	US$ Million								
Transaction Processing	14	0	14	14	14	14	14	14	0
Turnkey Systems	74	4	77	80	88	95	103	111	8
Application Software Products	25	13	28	31	36	41	45	50	12
Cross-Industry Sectors Total	110	7	117	125	141	149	164	172	8

Information Services Industry
Vertical Sector Forecast, 1995-2000
U.K.
(ECUs)

G

Sector Summary in ECUs

Exhibit D-51

Information Services Market - Sector Summary

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Processing Services	485	4	504	536	561	580	599	619	4
Turnkey Systems	1,480	7	1,582	1,735	1,901	2,066	2,258	2,423	9
Application Software Products	702	15	810	938	1,084	1,231	1,403	1,575	14
Professional Services	2,500	4	2,589	2,717	2,742	2,793	2,870	2,895	2
Network Services	867	19	1,033	1,231	1,467	1,722	2,015	2,328	18
Systems Operations	1,008	25	1,263	1,569	1,862	2,188	2,557	2,953	19
Systems Integration	1,116	13	1,263	1,448	1,639	1,843	2,073	2,296	13
Industry Sectors Total	8,163	11	9,056	10,204	11,288	12,436	13,776	15,115	11
Transaction Processing	57	-11	51	51	51	51	51	51	0
Turnkey Systems	249	5	261	274	300	325	351	376	8
Application Software Products	338	11	376	427	478	529	587	644	11
Cross-Industry Sectors Total	644	7	689	753	829	906	989	1,071	9
Equipment Services	3,023	1	3,048	3,112	3,112	3,099	3,087	3,036	0
System Software Products	1,594	4	1,658	1,722	1,786	1,849	1,913	1,977	4
Utility and Other Processing	179	14	204	230	261	293	332	370	13
Other Electronic Info Services	415	12	466	523	580	644	695	746	10
Generic Sectors Total	5,210	3	5,376	5,587	5,740	5,886	6,027	6,129	3
Total Information Services	14,031	8	15,179	16,582	17,857	19,260	20,791	22,321	8

H

Industry Sectors in ECUs

Exhibit D-52

Information Services Market by Vertical Sectors

	ECU Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	867	3	893	912	969	1,027	1,084	1,122	5
Process Manufacturing	753	11	835	950	1,078	1,237	1,422	1,614	14
Transportation	574	12	644	727	823	931	1,059	1,205	13
Utilities	351	16	408	491	561	625	702	778	14
Telecommunications	185	14	210	236	261	287	325	357	11
Retail Distribution	415	9	453	497	536	574	612	644	7
Wholesale Distribution	236	0	236	236	236	236	242	242	1
Banking & Finance	1,990	13	2,245	2,564	2,813	3,048	3,316	3,552	10
Insurance	593	12	663	772	855	944	1,040	1,122	11
Healthcare	446	10	491	542	587	638	695	740	9
Education	102	0	102	102	108	108	108	102	0
Local Government	504	15	580	676	772	886	1,020	1,161	15
Central Government	746	14	848	982	1,129	1,307	1,511	1,735	15
Business Services	306	10	338	383	427	472	529	587	12
Other Industries	89	0	89	96	102	108	115	115	5
Industry Sectors Total	8,163	11	9,056	10,204	11,288	12,436	13,776	15,115	11

Exhibit D-53

Discrete Manufacturing

	ECU Million								
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	460	-11	410	360	330	310	280	260	-9
Equipment Services	340	-7	320	290	280	270	260	240	-5
Software Products	310	4	320	310	320	330	340	360	2
Other Information Services	690	2	700	730	770	820	850	890	5
Data Communications	130	5	130	140	150	160	170	180	6
Facilities/Administration	260	-15	220	190	180	170	150	140	-8
In-House Staff	1,020	0	1,020	1,020	1,020	1,020	1,020	1,020	0
IT Budget Total	3,200	-3	3,120	3,040	3,050	3,070	3,080	3,090	0
Processing Services	45	-6	42	40	38	37	36	34	-4
Turnkey Systems	230	-3	223	217	223	230	236	236	1
Application Software Products	115	6	121	128	140	153	166	172	7
Professional Services	198	-6	185	172	166	159	153	147	-5
Network Services	93	10	102	111	125	142	158	173	11
Systems Operations	140	18	166	191	217	242	268	287	12
Systems Integration	50	5	52	55	59	64	69	73	7
Industry Sectors Total	867	3	893	912	969	1,027	1,084	1,122	5

Exhibit D-54

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	410	-6	380	380	380	380	380	370	-1
Equipment Services	210	-3	200	200	200	210	220	220	1
Software Products	240	11	260	290	340	390	450	530	15
Other Information Services	560	10	620	700	780	890	1,010	1,130	13
Data Communications	170	0	170	180	180	190	200	200	3
Facilities/Administration	230	-8	210	200	210	220	220	220	1
In-House Staff	600	-11	540	500	460	450	430	410	-5
IT Budget Total	2,420	-1	2,390	2,460	2,550	2,720	2,910	3,080	5
Processing Services	22	0	22	23	24	26	27	28	5
Turnkey Systems	179	7	191	210	236	268	306	344	12
Application Software Products	96	20	115	140	172	210	255	306	22
Professional Services	172	4	179	185	191	204	223	236	6
Network Services	69	15	79	92	108	129	152	176	17
Systems Operations	147	22	179	217	255	300	351	402	18
Systems Integration	70	5	74	80	88	98	108	119	10
Industry Sectors Total	753	11	835	950	1,078	1,237	1,422	1,614	14

Exhibit D-55

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	240	-5	220	220	200	190	180	170	-6
Equipment Services	90	1	90	90	90	90	90	90	0
Software Products	100	14	110	120	140	160	180	210	14
Other Information Services	480	12	540	610	680	770	870	990	13
Data Communications	70	27	90	110	150	180	230	290	26
Facilities/Administration	120	-5	110	110	110	110	110	110	-1
In-House Staff	220	-9	200	180	170	150	130	120	-10
IT Budget Total	1,310	4	1,370	1,450	1,540	1,660	1,800	1,980	8
Processing Services	134	5	140	147	153	159	166	172	4
Turnkey Systems	83	8	89	96	102	108	115	121	6
Application Software Products	27	19	32	38	45	52	61	70	17
Professional Services	115	0	115	115	115	115	115	115	0
Network Services	102	25	128	159	204	255	319	395	25
Systems Operations	45	29	57	70	83	96	108	121	16
Systems Integration	70	22	85	103	124	148	177	209	20
Industry Sectors Total	574	12	644	727	823	931	1,059	1,205	13

Exhibit D-56

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	140	9	150	170	180	190	200	200	6
Equipment Services	90	11	100	110	120	130	140	150	9
Software Products	80	21	100	120	140	160	190	220	18
Other Information Services	290	15	340	410	460	520	570	630	13
Data Communications	50	14	50	60	70	80	80	90	11
Facilities/Administration	120	5	130	140	150	160	170	170	6
In-House Staff	260	0	260	260	260	260	260	260	0
IT Budget Total	1,030	9	1,120	1,270	1,390	1,490	1,610	1,720	9
Processing Services	8	17	9	11	14	17	19	22	19
Turnkey Systems	34	11	38	45	50	54	57	61	10
Application Software Products	13	20	15	19	23	27	32	37	19
Professional Services	121	11	134	153	166	179	191	204	9
Network Services	15	25	19	24	29	34	41	47	20
Systems Operations	52	17	61	73	79	83	87	88	8
Systems Integration	106	23	130	163	198	233	276	320	20
Industry Sectors Total	351	16	408	491	561	625	702	778	14

Exhibit D-57

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	160	12	180	200	220	240	260	280	9
Equipment Services	80	8	80	90	90	90	100	100	4
Software Products	50	15	60	70	70	80	90	100	11
Other Information Services	170	15	190	220	240	270	300	330	11
Data Communications	50	15	60	70	70	80	90	90	10
Facilities/Administration	80	10	80	90	100	110	120	130	9
In-House Staff	200	3	200	210	200	200	200	200	0
IT Budget Total	780	10	860	940	1,000	1,070	1,160	1,240	8
Processing Services	3	0	3	3	3	3	3	3	0
Turnkey Systems	19	0	19	19	19	19	19	19	0
Application Software Products	8	17	9	10	11	13	15	18	15
Professional Services	84	11	93	102	107	115	122	129	7
Network Services	18	29	23	29	37	46	57	70	25
Systems Operations	6	0	6	6	6	6	6	6	0
Systems Integration	46	19	55	65	75	87	99	112	15
Industry Sectors Total	185	14	210	236	261	287	325	357	11

Exhibit D-58

Retail Distribution

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	440	-1	430	430	430	410	390	370	-3
Equipment Services	220	0	220	220	220	220	210	200	-2
Software Products	150	8	170	170	180	190	200	210	5
Other Information Services	350	9	380	420	450	480	520	540	7
Data Communications	70	5	80	80	90	90	90	90	3
Facilities/Administration	330	-4	310	310	310	310	300	290	-2
In-House Staff	450	-6	420	410	380	360	330	310	-6
IT Budget Total	2,010	0	2,020	2,050	2,060	2,050	2,030	2,000	0
Processing Services	10	0	10	10	10	10	10	10	0
Turnkey Systems	129	8	139	153	167	179	191	202	8
Application Software Products	32	12	36	40	43	46	50	52	8
Professional Services	134	0	134	134	128	121	115	108	-4
Network Services	41	16	47	55	63	70	78	84	12
Systems Operations	43	26	55	69	82	94	108	122	17
Systems Integration	27	19	32	38	45	51	59	66	16
Industry Sectors Total	415	9	453	497	536	574	612	644	7

Exhibit D-59

Wholesale Distribution

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	230	-8	210	200	180	170	160	150	-7
Equipment Services	140	-5	130	130	120	110	110	100	-5
Software Products	100	0	100	100	100	100	100	100	0
Other Information Services	200	3	210	210	210	210	220	220	1
Data Communications	40	3	40	40	50	50	50	50	1
Facilities/Administration	190	-10	170	160	150	150	140	130	-6
In-House Staff	260	-10	230	220	190	180	170	150	-8
IT Budget Total	1,160	-5	1,100	1,050	1,000	960	940	890	-4
Processing Services	8	0	8	8	8	8	8	8	0
Turnkey Systems	66	-4	64	63	61	60	59	56	-3
Application Software Products	24	11	27	29	32	34	37	40	8
Professional Services	87	-7	80	75	68	63	57	52	-8
Network Services	22	6	23	24	26	27	28	28	4
Systems Operations	20	25	26	31	36	41	46	51	15
Systems Integration	6	0	6	6	6	6	6	6	0
Industry Sectors Total	236	0	236	236	236	236	242	242	1

Exhibit D-60

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	1,790	4	1,850	1,910	1,910	1,850	1,790	1,720	-1
Equipment Services	920	6	980	1,030	1,050	1,050	1,050	1,030	1
Software Products	570	14	660	720	800	840	910	980	8
Other Information Services	1,910	13	2,170	2,490	2,680	2,930	3,190	3,380	9
Data Communications	810	9	880	970	1,030	1,060	1,090	1,110	5
Facilities/Administration	1,000	1	1,010	1,050	1,070	1,060	1,050	1,030	0
In-House Staff	2,420	0	2,420	2,420	2,300	2,170	2,040	1,910	-5
IT Budget Total	9,430	6	9,970	10,600	10,830	10,950	11,100	11,160	2
Processing Services	179	7	191	210	223	230	236	242	5
Turnkey Systems	230	14	261	300	332	364	395	421	10
Application Software Products	140	23	172	210	249	281	319	357	16
Professional Services	816	6	867	931	944	957	982	982	3
Network Services	332	23	408	504	606	714	835	963	19
Systems Operations	128	25	159	198	230	255	281	306	14
Systems Integration	166	12	185	210	230	249	268	281	9
Industry Sectors Total	1,990	13	2,245	2,564	2,813	3,048	3,316	3,552	10

Exhibit D-61

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	510	2	520	550	570	570	570	570	2
Equipment Services	260	5	270	290	300	310	310	320	4
Software Products	190	13	220	240	270	300	340	380	12
Other Information Services	520	11	580	680	750	830	910	980	11
Data Communications	230	8	250	280	310	330	340	360	8
Facilities/Administration	280	0	280	290	300	300	300	300	1
In-House Staff	680	-1	670	690	670	650	630	610	-2
IT Budget Total	2,670	5	2,790	3,030	3,180	3,280	3,410	3,510	5
Processing Services	28	9	31	34	37	40	42	43	7
Turnkey Systems	103	10	114	129	143	156	170	181	10
Application Software Products	55	23	68	85	105	125	149	175	21
Professional Services	268	10	293	332	357	383	408	427	8
Network Services	45	20	54	65	77	89	103	117	17
Systems Operations	36	25	45	56	65	74	84	93	16
Systems Integration	56	9	61	68	73	77	80	83	6
Industry Sectors Total	593	12	663	772	855	944	1,040	1,122	11

Exhibit D-62

Healthcare

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	270	-2	270	270	270	260	260	250	-1
Equipment Services	150	0	150	150	150	150	150	150	0
Software Products	140	9	150	170	180	200	220	240	10
Other Information Services	340	9	370	400	430	470	500	520	7
Data Communications	110	6	120	130	130	140	150	150	5
Facilities/Administration	180	-7	170	160	160	150	150	140	-3
In-House Staff	420	-6	400	380	350	330	310	290	-6
IT Budget Total	1,610	0	1,620	1,650	1,670	1,700	1,720	1,750	2
Processing Services	15	8	17	18	19	20	22	23	7
Turnkey Systems	130	11	144	163	182	204	228	251	12
Application Software Products	41	16	47	55	63	71	82	92	14
Professional Services	103	2	106	110	111	115	119	120	3
Network Services	42	18	50	59	69	82	96	110	17
Systems Operations	77	8	83	89	89	88	87	83	0
Systems Integration	41	9	45	48	52	56	60	63	7
Industry Sectors Total	446	10	491	542	587	638	695	740	9

Exhibit D-63

Education

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	100	-13	90	90	90	90	90	80	-3
Equipment Services	80	0	80	80	80	80	80	70	-2
Software Products	70	0	70	70	80	80	80	80	3
Other Information Services	70	9	80	80	80	90	90	80	2
Data Communications	50	0	50	50	50	50	50	50	0
Facilities/Administration	60	0	60	60	60	60	60	60	0
In-House Staff	230	-11	200	180	150	140	130	110	-11
IT Budget Total	660	-5	630	600	590	580	570	540	-3
Processing Services	1	0	1	1	1	1	1	1	0
Turnkey Systems	28	-5	27	27	27	26	24	23	-3
Application Software Products	32	8	34	37	40	42	45	46	6
Professional Services	33	-4	32	32	31	29	28	27	-3
Network Services	5	0	5	5	5	5	5	5	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	1	0	1	1	1	1	1	1	0
Industry Sectors Total	102	0	102	102	108	108	108	102	0

Exhibit D-64

Local Government

	ECU Million							
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	260	-8	240	220	210	200	180	170	-6
Equipment Services	160	-4	150	140	140	130	120	110	-5
Software Products	130	8	140	140	160	170	190	200	8
Other Information Services	430	15	490	580	660	760	880	1,000	15
Data Communications	120	-2	110	110	110	110	100	100	-3
Facilities/Administration	160	-8	150	140	140	130	130	120	-4
In-House Staff	430	-10	390	360	310	280	250	220	-11
IT Budget Total	1,670	-1	1,660	1,700	1,720	1,780	1,850	1,920	3
Processing Services	8	0	8	8	8	8	8	8	0
Turnkey Systems	73	5	77	82	87	92	97	101	6
Application Software Products	26	15	29	34	41	47	55	63	16
Professional Services	115	0	115	115	108	108	108	102	-2
Network Services	15	0	15	15	15	15	15	15	0
Systems Operations	165	33	219	290	365	453	557	675	25
Systems Integration	103	12	116	130	145	162	180	196	11
Industry Sectors Total	504	15	580	676	772	886	1,020	1,161	15

Exhibit D-65

Central Government

	ECU Million							
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	340	-11	300	270	250	220	200	170	-10
Equipment Services	200	-3	190	180	180	170	170	150	-4
Software Products	190	10	210	230	260	280	330	360	11
Other Information Services	590	14	670	780	900	1,050	1,210	1,380	16
Data Communications	150	0	150	150	150	150	140	130	-3
Facilities/Administration	210	-9	190	180	180	170	170	150	-4
In-House Staff	570	-12	500	450	390	340	310	270	-12
IT Budget Total	2,240	-1	2,210	2,260	2,300	2,390	2,510	2,620	3
Processing Services	13	0	13	13	13	13	13	13	0
Turnkey Systems	36	7	38	42	46	50	55	59	9
Application Software Products	18	0	18	18	18	18	18	18	0
Professional Services	140	-3	136	134	129	125	121	115	-3
Network Services	40	13	45	51	59	66	74	82	13
Systems Operations	134	38	185	255	332	427	548	689	30
Systems Integration	364	14	415	472	536	606	682	759	13
Industry Sectors Total	746	14	848	982	1,129	1,307	1,511	1,735	15

Exhibit D-66

Business Services

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	70	0	70	70	70	70	70	70	0
Equipment Services	40	6	40	50	50	50	50	50	4
Software Products	80	14	90	110	120	140	150	180	14
Other Information Services	190	7	200	220	240	260	290	310	9
Data Communications	30	4	30	30	40	40	40	40	6
Facilities/Administration	60	-2	60	60	60	60	60	60	0
In-House Staff	110	0	110	110	110	110	110	100	-2
IT Budget Total	590	5	620	650	690	730	770	820	6
Processing Services	4	0	4	4	4	4	4	4	0
Turnkey Systems	130	16	151	177	209	245	287	330	17
Application Software Products	32	12	36	41	46	51	56	61	11
Professional Services	111	2	114	117	119	121	124	124	2
Network Services	17	23	20	24	29	34	41	47	18
Systems Operations	9	14	10	11	13	13	13	13	5
Systems Integration	6	0	6	6	6	6	6	6	0
Industry Sectors Total	306	10	338	383	427	472	529	587	12

Exhibit D-67

Other Industries

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	100	-13	90	80	80	70	60	60	-8
Equipment Services	60	-9	50	50	50	50	40	40	-4
Software Products	70	0	70	70	80	80	80	90	4
Other Information Services	50	-2	50	50	60	60	70	70	5
Data Communications	40	-3	40	40	40	40	40	40	1
Facilities/Administration	70	-18	60	50	40	40	30	30	-15
In-House Staff	150	-13	130	110	100	90	80	80	-10
IT Budget Total	540	-10	490	470	450	430	420	400	-4
Processing Services	6	0	6	6	6	6	6	6	0
Turnkey Systems	13	-10	11	11	11	11	11	11	0
Application Software Products	47	3	48	52	56	60	64	66	6
Professional Services	4	0	4	4	4	4	4	4	0
Network Services	13	0	13	13	13	13	13	13	0
Systems Operations	6	20	8	9	10	11	13	14	13
Systems Integration	1	0	1	1	1	1	1	1	0
Industry Sectors Total	89	0	89	96	102	108	115	115	5

I

Cross-Industry Sectors in ECUs

Exhibit D-68

Cross-Industry Sectors

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	159	8	172	191	217	236	261	287	11
Education & Training	32	0	32	32	32	32	32	38	4
Engineering & Scientific	51	0	51	57	64	70	77	83	10
Human Resources	70	0	70	77	77	83	89	96	6
Office Systems	153	13	172	191	217	236	255	281	10
Planning & Analysis	83	15	96	102	115	128	140	147	9
Other Cross-Industry	89	7	96	102	115	121	134	140	8
Cross-Industry Sectors Total	644	7	689	753	829	906	989	1,071	9

Exhibit D-69

Accounting

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	63	6	66	71	80	88	97	105	10
Application Software Products	92	13	103	117	134	148	165	180	12
Cross-Industry Sectors Total	159	8	172	191	217	236	261	287	11

Exhibit D-70

Education & Training

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	23	0	23	23	24	26	27	28	4
Application Software Products	6	0	6	6	6	6	6	6	0
Cross-Industry Sectors Total	32	0	32	32	32	32	32	38	4

Exhibit D-71

Engineering & Scientific

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	23	6	24	26	28	31	33	36	8
Application Software Products	24	11	27	31	34	37	41	45	11
Cross-Industry Sectors Total	51	0	51	57	64	70	77	83	10

Exhibit D-72

Human Resources

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	32	-4	31	29	29	29	29	29	-1
Turnkey Systems	11	0	11	13	14	15	17	18	9
Application Software Products	26	10	28	32	36	40	45	50	12
Cross-Industry Sectors Total	70	0	70	77	77	83	89	96	6

Exhibit D-73

Office Systems

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	63	6	66	70	78	84	91	96	8
Application Software Products	92	14	105	119	135	149	166	181	12
Cross-Industry Sectors Total	153	13	172	191	217	236	255	281	10

Exhibit D-74

Planning & Analysis

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	4	0	4	4	4	4	4	4	0
Turnkey Systems	5	0	5	5	5	5	5	5	0
Application Software Products	77	12	85	94	106	116	129	140	10
Cross-Industry Sectors Total	83	15	96	102	115	128	140	147	9

Exhibit D-75

Other Cross-Industry

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Transaction Processing	11	0	11	11	11	11	11	11	0
Turnkey Systems	60	4	63	65	71	78	84	91	8
Application Software Products	20	13	23	26	29	33	37	41	12
Cross-Industry Sectors Total	89	7	96	102	115	121	134	140	8

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Appendix E: Vertical Markets - Italy, 1995-2000

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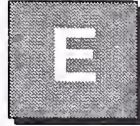
Information Services Industry Vertical Sector Forecast, 1995-2000 Italy

A

Sector Summary in Local Currency

Exhibit E-1

Information Services Market - Sector Summary

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Processing Services	930	-1	925	975	990	990	1,015	1,030	2
Turnkey Systems	960	6	1,020	1,130	1,220	1,300	1,415	1,530	8
Application Software Products	1,430	11	1,590	1,840	2,050	2,250	2,520	2,810	12
Professional Services	3,430	0	3,420	3,650	3,770	3,900	4,110	4,310	5
Network Services	530	18	625	770	925	1,100	1,330	1,600	21
Systems Operations	430	17	505	625	755	910	1,110	1,345	22
Systems Integration	535	9	585	675	755	825	925	1,030	12
Industry Sectors Total	8,250	5	8,650	9,650	10,450	11,300	12,450	13,650	10
Transaction Processing	105	-5	100	100	100	100	100	100	0
Turnkey Systems	115	0	115	120	130	140	150	160	7
Application Software Products	660	10	725	815	920	1,020	1,130	1,250	12
Cross-Industry Sectors Total	880	7	940	1,035	1,150	1,260	1,380	1,510	10
Equipment Services	3,560	1	3,580	3,740	3,750	3,720	3,730	3,730	1
System Software Products	2,400	4	2,500	2,650	2,750	2,850	3,000	3,150	5
Utility and Other Processing	130	4	135	145	155	165	175	185	7
Other Electronic Info Services	210	5	220	235	250	250	250	250	3
Generic Sectors Total	6,300	2	6,435	6,770	6,905	6,985	7,155	7,315	3
Total Information Services	15,400	4	16,000	17,500	18,500	19,500	21,000	22,500	7

B

Industry Sectors in Local Currency

Exhibit E-2

Information Services Market by Vertical Sectors

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				Lira Billions					
Discrete Manufacturing	1,115	0	1,110	1,160	1,225	1,295	1,400	1,505	6
Process Manufacturing	695	2	710	795	880	985	1,125	1,275	12
Transportation	510	7	545	615	685	760	865	990	13
Utilities	360	11	400	485	555	615	700	785	14
Telecommunications	260	13	295	350	405	460	535	615	16
Retail Distribution	240	8	260	300	325	350	385	420	10
Wholesale Distribution	305	3	315	345	365	385	415	445	7
Banking & Finance	1,400	10	1,540	1,755	1,920	2,060	2,255	2,465	10
Insurance	505	10	555	640	705	770	850	940	11
Healthcare	520	13	585	685	755	830	930	1,045	12
Education	115	-4	110	110	110	105	105	105	-1
Local Government	610	5	640	720	775	840	930	1,020	10
Central Government	875	-2	855	900	910	930	970	1,010	3
Business Services	430	6	455	510	555	600	665	730	10
Other Industries	295	-3	285	295	290	295	295	300	1
Industry Sectors Total	8,250	5	8,650	9,650	10,450	11,300	12,450	13,650	10

Exhibit E-3

Discrete Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				Lira Billions					
Equipment Sales	1,040	-10	940	880	840	800	770	730	-5
Equipment Services	570	-9	520	500	480	460	440	420	-4
Software Products	740	0	740	760	790	810	860	910	4
Other Information Services	690	-4	660	680	720	770	820	880	6
Data Communications	280	4	290	310	335	355	385	415	7
Facilities/Administration	470	-13	410	380	360	340	330	310	-5
In-House Staff	1,800	-11	1,600	1,500	1,350	1,250	1,200	1,150	-6
IT Budget Total	5,590	-8	5,160	5,010	4,875	4,785	4,805	4,815	-1
Processing Services	100	-17	83	74	67	60	55	50	-10
Turnkey Systems	225	-2	220	225	230	235	245	250	3
Application Software Products	365	4	380	410	440	470	510	550	8
Professional Services	210	-10	190	185	185	185	190	195	1
Network Services	119	9	130	147	168	191	220	252	14
Systems Operations	59	10	65	76	90	106	127	150	18
Systems Integration	39	3	40	43	47	50	54	58	8
Industry Sectors Total	1,115	0	1,110	1,160	1,225	1,295	1,400	1,505	6

Exhibit E-4

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			Lira Billions						
Equipment Sales	750	-5	715	725	740	760	785	805	2
Equipment Services	320	-5	305	310	315	320	330	335	2
Software Products	385	4	400	435	475	525	590	665	11
Other Information Services	495	-1	490	545	600	665	760	850	12
Data Communications	315	0	315	335	355	375	405	430	6
Facilities/Administration	395	-8	365	365	375	380	395	405	2
In-House Staff	1,180	-6	1,110	1,130	1,110	1,110	1,140	1,160	1
IT Budget Total	3,800	-3	3,700	3,845	3,970	4,135	4,405	4,650	5
Processing Services	45	-7	42	43	44	45	47	49	3
Turnkey Systems	100	0	100	110	120	130	145	160	10
Application Software Products	175	9	190	220	250	285	330	380	15
Professional Services	225	-4	215	225	235	250	270	290	6
Network Services	64	14	73	89	108	130	159	193	21
Systems Operations	37	14	42	52	65	80	100	124	24
Systems Integration	48	2	49	54	60	65	72	79	10
Industry Sectors Total	695	2	710	795	880	985	1,125	1,275	12

Exhibit E-5

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			Lira Billions						
Equipment Sales	185	-8	170	160	145	135	125	115	-8
Equipment Services	90	2	92	96	97	97	98	99	1
Software Products	130	12	145	165	185	205	230	260	12
Other Information Services	425	6	450	500	555	610	695	795	12
Data Communications	110	33	146	196	258	336	445	585	32
Facilities/Administration	140	-4	135	135	135	135	135	135	0
In-House Staff	290	-7	270	260	235	215	205	190	-7
IT Budget Total	1,200	17	1,408	1,512	1,610	1,733	1,933	2,179	9
Processing Services	94	-2	92	95	95	94	95	95	1
Turnkey Systems	36	6	38	42	45	47	50	53	7
Application Software Products	69	16	80	96	110	125	144	165	16
Professional Services	200	0	200	210	215	220	230	240	4
Network Services	63	30	82	109	141	181	236	305	30
Systems Operations	30	17	35	42	50	59	71	85	19
Systems Integration	16	19	19	23	28	33	40	48	20
Industry Sectors Total	510	7	545	615	685	760	865	990	13

Exhibit E-6

Utilities

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			Lira Billions						
Equipment Sales	270	9	295	340	370	395	425	450	9
Equipment Services	131	11	145	170	187	199	214	229	10
Software Products	115	17	134	163	187	206	235	271	15
Other Information Services	325	9	355	430	495	550	625	695	14
Data Communications	86	15	99	120	137	151	170	189	14
Facilities/Administration	185	5	195	225	245	260	280	300	9
In-House Staff	485	8	525	605	640	670	715	755	8
IT Budget Total	1,500	17	1,748	2,053	2,261	2,431	2,664	2,889	11
Processing Services	30	10	33	39	43	46	50	54	10
Turnkey Systems	15	7	16	18	19	20	21	22	7
Application Software Products	26	19	31	39	45	50	57	64	16
Professional Services	200	8	215	255	285	310	345	380	12
Network Services	9	22	11	14	16	18	21	24	17
Systems Operations	22	23	27	35	44	53	65	80	24
Systems Integration	58	19	69	87	104	119	139	160	18
Industry Sectors Total	360	11	400	485	555	615	700	785	14

Exhibit E-7

Telecommunications

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			Lira Billions						
Equipment Sales	255	16	295	350	405	465	535	610	16
Equipment Services	95	12	106	122	135	146	160	174	10
Software Products	92	16	107	127	147	164	190	220	16
Other Information Services	224	13	254	301	348	400	465	534	16
Data Communications	92	16	107	128	148	166	190	215	15
Facilities/Administration	116	8	125	141	156	168	184	199	10
In-House Staff	345	9	375	425	450	480	520	560	8
IT Budget Total	1,000	37	1,369	1,594	1,789	1,989	2,244	2,512	13
Processing Services	31	10	34	39	43	47	52	57	11
Turnkey Systems	17	6	18	20	22	23	25	27	8
Application Software Products	28	18	33	40	47	53	61	70	16
Professional Services	127	9	139	162	182	203	230	259	13
Network Services	9	33	12	16	21	27	35	46	31
Systems Operations	15	27	19	25	32	40	51	64	27
Systems Integration	35	17	41	50	60	69	81	94	18
Industry Sectors Total	260	13	295	350	405	460	535	615	16

Exhibit E-8

Retail Distribution

Sector	Lira Billions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	405	4	420	445	450	445	445	440	1
Equipment Services	170	3	175	190	190	185	185	185	1
Software Products	155	13	175	195	210	215	235	255	8
Other Information Services	200	2	205	235	250	275	295	320	9
Data Communications	72	7	77	85	89	90	93	95	4
Facilities/Administration	270	0	270	280	280	275	275	270	0
In-House Staff	390	-5	370	370	335	305	280	255	-7
IT Budget Total	1,700	0	1,692	1,800	1,804	1,790	1,808	1,820	1
Processing Services	19	0	19	20	20	20	20	20	1
Turnkey Systems	32	9	35	39	41	42	44	46	6
Application Software Products	55	16	64	77	87	95	106	117	13
Professional Services	82	0	82	88	89	89	91	92	2
Network Services	36	22	44	55	66	77	91	107	19
Systems Operations	7	14	8	10	12	14	17	20	20
Systems Integration	7	14	8	10	12	14	16	19	19
Industry Sectors Total	240	8	260	300	325	350	385	420	10

Exhibit E-9

Wholesale Distribution

Sector	Lira Billions							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	440	-6	415	405	380	360	345	325	-5
Equipment Services	195	-3	190	190	180	170	165	160	-3
Software Products	185	5	195	205	205	210	220	230	3
Other Information Services	250	0	250	270	290	300	325	345	7
Data Communications	82	0	82	85	84	83	83	83	0
Facilities/Administration	305	-8	280	275	260	245	235	225	-4
In-House Staff	515	-6	485	475	435	405	385	365	-6
IT Budget Total	2,200	-14	1,897	1,905	1,834	1,773	1,758	1,733	-2
Processing Services	17	-6	16	16	15	14	14	13	-4
Turnkey Systems	40	2	41	43	44	44	45	46	2
Application Software Products	69	9	75	85	91	97	105	113	9
Professional Services	123	-2	120	125	126	128	132	135	2
Network Services	39	15	45	53	61	69	80	92	15
Systems Operations	8	25	10	13	16	20	25	31	25
Systems Integration	7	14	8	9	10	11	13	15	13
Industry Sectors Total	305	3	315	345	365	385	415	445	7

Exhibit E-10

Banking & Finance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				Lira Billions					
Equipment Sales	2,000	5	2,100	2,200	2,250	2,250	2,250	2,250	1
Equipment Services	790	6	835	895	910	905	910	910	2
Software Products	680	13	765	855	920	970	1,050	1,145	8
Other Information Services	1,200	8	1,300	1,500	1,600	1,750	1,900	2,050	10
Data Communications	915	10	1,010	1,125	1,195	1,235	1,300	1,355	6
Facilities/Administration	980	3	1,005	1,060	1,085	1,080	1,095	1,100	2
In-House Staff	2,850	5	3,000	3,200	3,150	3,100	3,100	3,100	1
IT Budget Total	8,700	15	10,015	10,835	11,110	11,290	11,605	11,910	4
Processing Services	235	4	245	265	275	275	280	285	3
Turnkey Systems	195	13	220	250	275	295	320	345	9
Application Software Products	185	19	220	265	305	340	385	435	15
Professional Services	565	5	595	655	690	720	765	805	6
Network Services	116	24	144	182	221	262	315	376	21
Systems Operations	25	28	32	42	54	68	87	110	28
Systems Integration	80	6	85	95	100	100	105	110	5
Industry Sectors Total	1,400	10	1,540	1,755	1,920	2,060	2,255	2,465	10

Exhibit E-11

Insurance

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				Lira Billions					
Equipment Sales	505	4	525	565	590	605	625	640	4
Equipment Services	195	5	205	220	230	235	240	245	4
Software Products	225	13	255	290	325	355	395	440	12
Other Information Services	380	7	405	465	505	550	605	660	10
Data Communications	225	9	245	275	300	315	340	360	8
Facilities/Administration	245	2	250	265	275	280	290	295	3
In-House Staff	705	4	730	785	790	795	815	825	2
IT Budget Total	2,400	9	2,615	2,865	3,015	3,135	3,310	3,465	6
Processing Services	63	3	65	71	75	77	80	83	5
Turnkey Systems	88	10	97	111	123	132	144	156	10
Application Software Products	90	19	107	131	152	172	198	227	16
Professional Services	195	5	205	230	245	260	280	300	8
Network Services	29	24	36	46	57	69	84	102	23
Systems Operations	8	25	10	13	16	20	25	31	25
Systems Integration	31	6	33	36	38	39	41	42	5
Industry Sectors Total	505	10	555	640	705	770	850	940	11

Exhibit E-12

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	395	6	420	450	455	460	470	475	2
Equipment Services	180	6	190	205	205	205	205	205	2
Software Products	210	17	245	285	305	330	365	405	11
Other Information Services	415	10	455	520	575	625	695	775	11
Data Communications	180	11	200	225	235	245	260	270	6
Facilities/Administration	220	2	225	235	235	235	240	240	1
In-House Staff	655	5	685	730	705	695	700	695	0
IT Budget Total	1,900	27	2,420	2,650	2,715	2,795	2,935	3,065	5
Processing Services	72	6	76	83	85	86	89	91	4
Turnkey Systems	54	19	64	77	87	98	112	127	15
Application Software Products	97	20	116	141	158	176	200	225	14
Professional Services	205	5	215	235	245	255	270	285	6
Network Services	8	25	10	13	16	19	23	28	23
Systems Operations	65	26	82	106	131	160	199	246	25
Systems Integration	21	14	24	28	31	34	38	42	12
Industry Sectors Total	520	13	585	685	755	830	930	1,045	12

Exhibit E-13

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	150	0	150	150	150	150	150	150	0
Equipment Services	74	-3	72	72	69	66	64	61	-3
Software Products	63	-2	62	62	59	57	56	55	-2
Other Information Services	101	-2	99	100	104	101	104	105	1
Data Communications	72	1	73	76	76	76	77	77	1
Facilities/Administration	90	-6	85	85	80	75	70	65	-5
In-House Staff	345	-7	320	310	280	260	245	230	-6
IT Budget Total	900	-4	861	855	818	785	766	743	-3
Processing Services	7	0	7	7	7	7	7	7	0
Turnkey Systems	13	-8	12	12	11	10	9	8	-8
Application Software Products	19	-5	18	18	17	16	15	14	-5
Professional Services	69	-3	67	69	69	69	71	72	1
Network Services	3	0	3	3	3	3	3	3	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	4	-25	3	2	1	1	1	1	-20
Industry Sectors Total	115	-4	110	110	110	105	105	105	-1

Exhibit E-14

Local Government

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	505	1	510	540	550	560	575	585	3
Equipment Services	223	2	227	242	244	245	248	250	2
Software Products	205	10	225	255	280	300	330	370	10
Other Information Services	545	3	560	625	660	715	780	845	9
Data Communications	220	7	235	260	275	285	305	320	6
Facilities/Administration	270	-2	265	275	275	275	280	280	1
In-House Staff	885	-1	880	920	885	870	875	870	0
IT Budget Total	2,700	7	2,902	3,117	3,169	3,250	3,393	3,520	4
Processing Services	68	0	68	73	75	76	79	81	4
Turnkey Systems	34	9	37	42	46	50	55	60	10
Application Software Products	63	16	73	89	102	116	134	153	16
Professional Services	325	0	325	350	360	375	400	420	5
Network Services	5	0	5	5	5	5	5	5	0
Systems Operations	58	17	68	85	102	122	148	178	21
Systems Integration	58	12	65	76	86	96	109	123	14
Industry Sectors Total	610	5	640	720	775	840	930	1,020	10

Exhibit E-15

Central Government

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	800	-8	740	715	660	610	570	525	-7
Equipment Services	365	-3	355	360	345	330	320	305	-3
Software Products	285	4	295	310	315	315	325	345	3
Other Information Services	825	-4	795	830	830	850	880	900	3
Data Communications	365	1	370	390	390	390	395	395	1
Facilities/Administration	445	-8	410	405	385	365	350	335	-4
In-House Staff	1,435	-7	1,340	1,320	1,195	1,105	1,045	975	-6
IT Budget Total	4,800	-10	4,305	4,330	4,120	3,965	3,885	3,780	-3
Processing Services	89	-4	85	87	85	82	81	79	-1
Turnkey Systems	32	6	34	38	40	42	45	48	7
Application Software Products	51	4	53	57	58	58	59	60	3
Professional Services	495	-9	450	445	420	400	390	375	-4
Network Services	19	16	22	26	30	34	39	45	15
Systems Operations	70	14	80	97	114	133	157	184	18
Systems Integration	120	8	130	150	165	180	200	220	11
Industry Sectors Total	875	-2	855	900	910	930	970	1,010	3

Exhibit E-16

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			Lira Billions						
Equipment Sales	110	5	115	125	130	135	145	155	6
Equipment Services	64	2	65	68	68	68	68	68	1
Software Products	135	12	151	173	190	209	234	262	12
Other Information Services	315	2	320	350	375	395	430	460	8
Data Communications	55	7	59	65	69	72	77	81	7
Facilities/Administration	99	-3	96	98	98	97	98	98	0
In-House Staff	250	0	250	260	250	245	245	245	0
IT Budget Total	1,000	6	1,056	1,139	1,180	1,221	1,297	1,369	5
Processing Services	38	3	39	42	43	44	46	48	4
Turnkey Systems	55	20	66	81	97	115	138	165	20
Application Software Products	85	13	96	112	124	136	152	168	12
Professional Services	225	0	225	240	250	260	275	290	5
Network Services	7	14	8	10	12	14	17	20	20
Systems Operations	13	8	14	16	18	20	23	26	13
Systems Integration	7	14	8	9	10	11	12	13	10
Industry Sectors Total	430	6	455	510	555	600	665	730	10

Exhibit E-17

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			Lira Billions						
Equipment Sales	235	-6	220	215	205	195	185	175	-4
Equipment Services	99	-3	96	96	92	88	85	82	-3
Software Products	109	3	112	117	118	119	122	126	2
Other Information Services	250	-5	238	245	239	244	242	245	1
Data Communications	99	0	99	102	101	99	99	98	0
Facilities/Administration	120	-8	110	105	100	95	90	85	-5
In-House Staff	360	-6	340	335	305	285	270	255	-6
IT Budget Total	1,500	-19	1,215	1,215	1,160	1,125	1,093	1,066	-3
Processing Services	21	-5	20	20	19	18	18	17	-3
Turnkey Systems	22	-5	21	20	19	18	17	16	-5
Application Software Products	49	6	52	57	60	62	65	68	6
Professional Services	185	-5	175	180	175	175	175	175	0
Network Services	2	0	2	2	2	2	2	2	0
Systems Operations	10	0	10	11	12	13	14	15	8
Systems Integration	5	0	5	5	5	5	5	5	0
Industry Sectors Total	295	-3	285	295	290	295	295	300	1

C

Cross-Industry Sectors in Local Currency

Exhibit E-18

Cross-Industry Sectors

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	215	9	235	260	295	325	360	395	11
Education & Training	25	0	25	30	30	30	35	35	7
Engineering & Scientific	60	8	65	70	80	90	95	105	10
Human Resources	135	0	135	140	150	160	170	180	6
Office Systems	195	10	215	245	280	310	340	380	12
Planning & Analysis	175	6	185	205	225	250	275	300	10
Other Cross-Industry	75	7	80	85	95	100	110	120	8
Cross-Industry Sectors Total	880	7	940	1,035	1,150	1,260	1,380	1,510	10

Exhibit E-19

Accounting

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	6	0	6	6	6	6	6	6	0
Turnkey Systems	33	3	34	36	39	41	43	46	6
Application Software Products	175	11	195	220	250	280	310	345	12
Cross-Industry Sectors Total	215	9	235	260	295	325	360	395	11

Exhibit E-20

Education & Training

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	14	0	14	15	16	17	18	19	6
Application Software Products	11	0	11	11	12	13	14	15	6
Cross-Industry Sectors Total	25	0	25	30	30	30	35	35	7

Exhibit E-21

Engineering & Scientific

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	5	0	5	5	5	5	5	5	0
Turnkey Systems	8	0	8	8	8	8	8	8	0
Application Software Products	47	11	52	59	68	75	83	92	12
Cross-Industry Sectors Total	60	8	65	70	80	90	95	105	10

Exhibit E-22

Human Resources

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	77	-5	73	72	72	72	72	72	0
Turnkey Systems	5	0	5	5	6	7	8	9	12
Application Software Products	52	8	56	63	71	79	88	98	12
Cross-Industry Sectors Total	135	0	135	140	150	160	170	180	6

Exhibit E-23

Office Systems

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	2	0	2	2	2	2	2	2	0
Turnkey Systems	10	10	11	12	13	14	15	17	9
Application Software Products	183	11	203	231	263	292	324	360	12
Cross-Industry Sectors Total	195	10	215	245	280	310	340	380	12

Exhibit E-24

Planning & Analysis

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	9	0	9	9	9	9	9	9	0
Turnkey Systems	5	0	5	5	6	7	8	9	12
Application Software Products	161	7	172	191	212	233	256	282	10
Cross-Industry Sectors Total	175	6	185	205	225	250	275	300	10

Exhibit A-25

Other Cross-Industry

Sector	Lira Billions								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	5	0	5	5	5	5	5	5	0
Turnkey Systems	38	3	39	41	44	47	50	54	7
Application Software Products	32	9	35	39	44	49	54	60	11
Cross-Industry Sectors Total	75	7	80	85	95	100	110	120	8

Information Services Industry
Vertical Sector Forecast, 1995-2000
Italy
(US$ Million)

D

Sector Summary in US Dollars

Exhibit E-26

Information Services Market - Sector Summary

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Processing Services	574	-1	571	602	611	611	627	636	2
Turnkey Systems	593	6	630	698	753	802	873	944	8
Application Software Products	883	11	981	1,136	1,265	1,389	1,556	1,735	12
Professional Services	2,117	0	2,111	2,253	2,327	2,407	2,537	2,660	5
Network Services	327	18	386	475	571	679	821	988	21
Systems Operations	265	17	312	386	466	562	685	830	22
Systems Integration	330	9	361	417	466	509	571	636	12
Industry Sectors Total	5,093	5	5,340	5,957	6,451	6,975	7,685	8,426	10
Transaction Processing	65	-5	62	62	62	62	62	62	0
Turnkey Systems	71	0	71	74	80	86	93	99	7
Application Software Products	407	10	448	503	568	630	698	772	12
Cross-Industry Sectors Total	543	7	580	639	710	778	852	932	10
Equipment Services	2,198	1	2,210	2,309	2,315	2,296	2,302	2,302	1
System Software Products	1,481	4	1,543	1,636	1,698	1,759	1,852	1,944	5
Utility and Other Processing	80	4	83	90	96	102	108	114	7
Other Electronic Info Services	130	5	136	145	154	154	154	154	3
Generic Sectors Total	3,889	2	3,972	4,179	4,262	4,312	4,417	4,515	3
Total Information Services	10,000	4	10,000	11,000	11,000	12,000	13,000	14,000	7

MAI5

E

Industry Sectors in US Dollars

Exhibit E-27

Information Services Market by Vertical Sectors

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	688	0	685	716	756	799	864	929	6
Process Manufacturing	429	2	438	491	543	608	694	787	12
Transportation	315	7	336	380	423	469	534	611	13
Utilities	222	11	247	299	343	380	432	485	14
Telecommunications	160	13	182	216	250	284	330	380	16
Retail Distribution	148	8	160	185	201	216	238	259	10
Wholesale Distribution	188	3	194	213	225	238	256	275	7
Banking & Finance	864	10	951	1,083	1,185	1,272	1,392	1,522	10
Insurance	312	10	343	395	435	475	525	580	11
Healthcare	321	13	361	423	466	512	574	645	12
Education	71	-4	68	68	68	65	65	65	-1
Local Government	377	5	395	444	478	519	574	630	10
Central Government	540	-2	528	556	562	574	599	623	3
Business Services	265	6	281	315	343	370	410	451	10
Other Industries	182	-3	176	182	179	182	182	185	1
Industry Sectors Total	5,093	5	5,340	5,957	6,451	6,975	7,685	8,426	10

Exhibit E-28

Discrete Manufacturing

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	642	-10	580	543	519	494	475	451	-5
Equipment Services	352	-9	321	309	296	284	272	259	-4
Software Products	457	0	457	469	488	500	531	562	4
Other Information Services	426	-4	407	420	444	475	506	543	6
Data Communications	173	4	179	191	207	219	238	256	7
Facilities/Administration	290	-13	253	235	222	210	204	191	-5
In-House Staff	1,111	-11	988	926	833	772	741	710	-6
IT Budget Total	3,451	-8	3,185	3,093	3,009	2,954	2,966	2,972	-1
Processing Services	62	-17	51	46	41	37	34	31	-10
Turnkey Systems	139	-2	136	139	142	145	151	154	3
Application Software Products	225	4	235	253	272	290	315	340	8
Professional Services	130	-10	117	114	114	114	117	120	1
Network Services	73	9	80	91	104	118	136	156	14
Systems Operations	36	10	40	47	56	65	78	93	18
Systems Integration	24	3	25	27	29	31	33	36	8
Industry Sectors Total	688	0	685	716	756	799	864	929	6

Exhibit E-29

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	463	-5	441	448	457	469	485	497	2
Equipment Services	198	-5	188	191	194	198	204	207	2
Software Products	238	4	247	269	293	324	364	410	11
Other Information Services	306	-1	302	336	370	410	469	525	12
Data Communications	194	0	194	207	219	231	250	265	6
Facilities/Administration	244	-8	225	225	231	235	244	250	2
In-House Staff	728	-6	685	698	685	685	704	716	1
IT Budget Total	2,346	-3	2,284	2,373	2,451	2,552	2,719	2,870	5
Processing Services	28	-7	26	27	27	28	29	30	3
Turnkey Systems	62	0	62	68	74	80	90	99	10
Application Software Products	108	9	117	136	154	176	204	235	15
Professional Services	139	-4	133	139	145	154	167	179	6
Network Services	40	14	45	55	67	80	98	119	21
Systems Operations	23	14	26	32	40	49	62	77	24
Systems Integration	30	2	30	33	37	40	44	49	10
Industry Sectors Total	429	2	438	491	543	608	694	787	12

Exhibit E-30

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			US$ Million						
Equipment Sales	114	-8	105	99	90	83	77	71	-8
Equipment Services	56	2	57	59	60	60	60	61	1
Software Products	80	12	90	102	114	127	142	160	12
Other Information Services	262	6	278	309	343	377	429	491	12
Data Communications	68	33	90	121	159	207	275	361	32
Facilities/Administration	86	-4	83	83	83	83	83	83	0
In-House Staff	179	-7	167	160	145	133	127	117	-7
IT Budget Total	741	17	869	933	994	1,070	1,193	1,345	9
Processing Services	58	-2	57	59	59	58	59	59	1
Turnkey Systems	22	6	23	26	28	29	31	33	7
Application Software Products	43	16	49	59	68	77	89	102	16
Professional Services	123	0	123	130	133	136	142	148	4
Network Services	39	30	51	67	87	112	146	188	30
Systems Operations	19	17	22	26	31	36	44	52	19
Systems Integration	10	19	12	14	17	20	25	30	20
Industry Sectors Total	315	7	336	380	423	469	534	611	13

Exhibit E-31

Utilities

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	167	9	182	210	228	244	262	278	9
Equipment Services	81	11	90	105	115	123	132	141	10
Software Products	71	17	83	101	115	127	145	167	15
Other Information Services	201	9	219	265	306	340	386	429	14
Data Communications	53	15	61	74	85	93	105	117	14
Facilities/Administration	114	5	120	139	151	160	173	185	9
In-House Staff	299	8	324	373	395	414	441	466	8
IT Budget Total	926	17	1,079	1,267	1,396	1,501	1,644	1,783	11
Processing Services	19	10	20	24	27	28	31	33	10
Turnkey Systems	9	7	10	11	12	12	13	14	7
Application Software Products	16	19	19	24	28	31	35	40	16
Professional Services	123	8	133	157	176	191	213	235	12
Network Services	6	22	7	9	10	11	13	15	17
Systems Operations	14	23	17	22	27	33	40	49	24
Systems Integration	36	19	43	54	64	73	86	99	18
Industry Sectors Total	222	11	247	299	343	380	432	485	14

Exhibit E-32

Telecommunications

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	157	16	182	216	250	287	330	377	16
Equipment Services	59	12	65	75	83	90	99	107	10
Software Products	57	16	66	78	91	101	117	136	16
Other Information Services	138	13	157	186	215	247	287	330	16
Data Communications	57	16	66	79	91	102	117	133	15
Facilities/Administration	72	8	77	87	96	104	114	123	10
In-House Staff	213	9	231	262	278	296	321	346	8
IT Budget Total	617	37	845	984	1,104	1,228	1,385	1,551	13
Processing Services	19	10	21	24	27	29	32	35	11
Turnkey Systems	10	6	11	12	14	14	15	17	8
Application Software Products	17	18	20	25	29	33	38	43	16
Professional Services	78	9	86	100	112	125	142	160	13
Network Services	6	33	7	10	13	17	22	28	31
Systems Operations	9	27	12	15	20	25	31	40	27
Systems Integration	22	17	25	31	37	43	50	58	18
Industry Sectors Total	160	13	182	216	250	284	330	380	16

Exhibit E-33

Retail Distribution

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	250	4	259	275	278	275	275	272	1
Equipment Services	105	3	108	117	117	114	114	114	1
Software Products	96	13	108	120	130	133	145	157	8
Other Information Services	123	2	127	145	154	170	182	198	9
Data Communications	44	7	48	52	55	56	57	59	4
Facilities/Administration	167	0	167	173	173	170	170	167	0
In-House Staff	241	-5	228	228	207	188	173	157	-7
IT Budget Total	1,049	0	1,044	1,111	1,114	1,105	1,116	1,123	1
Processing Services	12	0	12	12	12	12	12	12	1
Turnkey Systems	20	9	22	24	25	26	27	28	6
Application Software Products	34	16	40	48	54	59	65	72	13
Professional Services	51	0	51	54	55	55	56	57	2
Network Services	22	22	27	34	41	48	56	66	19
Systems Operations	4	14	5	6	7	9	10	12	20
Systems Integration	4	14	5	6	7	9	10	12	19
Industry Sectors Total	148	8	160	185	201	216	238	259	10

Exhibit E-34

Wholesale Distribution

Sector	US$ Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	272	-6	256	250	235	222	213	201	-5
Equipment Services	120	-3	117	117	111	105	102	99	-3
Software Products	114	5	120	127	127	130	136	142	3
Other Information Services	154	0	154	167	179	185	201	213	7
Data Communications	51	0	51	52	52	51	51	51	0
Facilities/Administration	188	-8	173	170	160	151	145	139	-4
In-House Staff	318	-6	299	293	269	250	238	225	-6
IT Budget Total	1,358	-14	1,171	1,176	1,132	1,094	1,085	1,070	-2
Processing Services	10	-6	10	10	9	9	9	8	-4
Turnkey Systems	25	2	25	27	27	27	28	28	2
Application Software Products	43	9	46	52	56	60	65	70	9
Professional Services	76	-2	74	77	78	79	81	83	2
Network Services	24	15	28	33	38	43	49	57	15
Systems Operations	5	25	6	8	10	12	15	19	25
Systems Integration	4	14	5	6	6	7	8	9	13
Industry Sectors Total	188	3	194	213	225	238	256	275	7

Exhibit E-35

Banking & Finance

	US$ Million							
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,235	5	1,296	1,358	1,389	1,389	1,389	1,389	1
Equipment Services	488	6	515	552	562	559	562	562	2
Software Products	420	13	472	528	568	599	648	707	8
Other Information Services	741	8	802	926	988	1,080	1,173	1,265	10
Data Communications	565	10	623	694	738	762	802	836	6
Facilities/Administration	605	3	620	654	670	667	676	679	2
In-House Staff	1,759	5	1,852	1,975	1,944	1,914	1,914	1,914	1
IT Budget Total	5,370	15	6,182	6,688	6,858	6,969	7,164	7,352	4
Processing Services	145	4	151	164	170	170	173	176	3
Turnkey Systems	120	13	136	154	170	182	198	213	9
Application Software Products	114	19	136	164	188	210	238	269	15
Professional Services	349	5	367	404	426	444	472	497	6
Network Services	72	24	89	112	136	162	194	232	21
Systems Operations	15	28	20	26	33	42	54	68	28
Systems Integration	49	6	52	59	62	62	65	68	5
Industry Sectors Total	864	10	951	1,083	1,185	1,272	1,392	1,522	10

Exhibit E-36

Insurance

	US$ Million							
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	312	4	324	349	364	373	386	395	4
Equipment Services	120	5	127	136	142	145	148	151	4
Software Products	139	13	157	179	201	219	244	272	12
Other Information Services	235	7	250	287	312	340	373	407	10
Data Communications	139	9	151	170	185	194	210	222	8
Facilities/Administration	151	2	154	164	170	173	179	182	3
In-House Staff	435	4	451	485	488	491	503	509	2
IT Budget Total	1,481	9	1,614	1,769	1,861	1,935	2,043	2,139	6
Processing Services	39	3	40	44	46	48	49	51	5
Turnkey Systems	54	10	60	69	76	81	89	96	10
Application Software Products	56	19	66	81	94	106	122	140	16
Professional Services	120	5	127	142	151	160	173	185	8
Network Services	18	24	22	28	35	43	52	63	23
Systems Operations	5	25	6	8	10	12	15	19	25
Systems Integration	19	6	20	22	23	24	25	26	5
Industry Sectors Total	312	10	343	395	435	475	525	580	11

MAI5

Exhibit E-37

Healthcare

		US$ Million						
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	244	6	259	278	281	284	290	293	2
Equipment Services	111	6	117	127	127	127	127	127	2
Software Products	130	17	151	176	188	204	225	250	11
Other Information Services	256	10	281	321	355	386	429	478	11
Data Communications	111	11	123	139	145	151	160	167	6
Facilities/Administration	136	2	139	145	145	145	148	148	1
In-House Staff	404	5	423	451	435	429	432	429	0
IT Budget Total	1,173	27	1,494	1,636	1,676	1,725	1,812	1,892	5
Processing Services	44	6	47	51	52	53	55	56	4
Turnkey Systems	33	19	40	48	54	60	69	78	15
Application Software Products	60	20	72	87	98	109	123	139	14
Professional Services	127	5	133	145	151	157	167	176	6
Network Services	5	25	6	8	10	12	14	17	23
Systems Operations	40	26	51	65	81	99	123	152	25
Systems Integration	13	14	15	17	19	21	23	26	12
Industry Sectors Total	321	13	361	423	466	512	574	645	12

Exhibit E-38

Education

		US$ Million						
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	93	0	93	93	93	93	93	93	0
Equipment Services	46	-3	44	44	43	41	40	38	-3
Software Products	39	-2	38	38	36	35	35	34	-2
Other Information Services	62	-2	61	62	64	62	64	65	1
Data Communications	44	1	45	47	47	47	48	48	1
Facilities/Administration	56	-6	52	52	49	46	43	40	-5
In-House Staff	213	-7	198	191	173	160	151	142	-6
IT Budget Total	556	-4	531	528	505	485	473	459	-3
Processing Services	4	0	4	4	4	4	4	4	0
Turnkey Systems	8	-8	7	7	7	6	6	5	-8
Application Software Products	12	-5	11	11	10	10	9	9	-5
Professional Services	43	-3	41	43	43	43	44	44	1
Network Services	2	0	2	2	2	2	2	2	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	2	-25	2	1	1	1	1	1	-20
Industry Sectors Total	71	-4	68	68	68	65	65	65	-1

Exhibit E-39

Local Government

| | US$ Million | | | | | | | |
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	312	1	315	333	340	346	355	361	3
Equipment Services	138	2	140	149	151	151	153	154	2
Software Products	127	10	139	157	173	185	204	228	10
Other Information Services	336	3	346	386	407	441	481	522	9
Data Communications	136	7	145	160	170	176	188	198	6
Facilities/Administration	167	-2	164	170	170	170	173	173	1
In-House Staff	546	-1	543	568	546	537	540	537	0
IT Budget Total	1,667	7	1,791	1,924	1,956	2,006	2,094	2,173	4
Processing Services	42	0	42	45	46	47	49	50	4
Turnkey Systems	21	9	23	26	28	31	34	37	10
Application Software Products	39	16	45	55	63	72	83	94	16
Professional Services	201	0	201	216	222	231	247	259	5
Network Services	3	0	3	3	3	3	3	3	0
Systems Operations	36	17	42	52	63	75	91	110	21
Systems Integration	36	12	40	47	53	59	67	76	14
Industry Sectors Total	377	5	395	444	478	519	574	630	10

Exhibit E-40

Central Government

| | US$ Million | | | | | | | |
Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	494	-8	457	441	407	377	352	324	-7
Equipment Services	225	-3	219	222	213	204	198	188	-3
Software Products	176	4	182	191	194	194	201	213	3
Other Information Services	509	-4	491	512	512	525	543	556	3
Data Communications	225	1	228	241	241	241	244	244	1
Facilities/Administration	275	-8	253	250	238	225	216	207	-4
In-House Staff	886	-7	827	815	738	682	645	602	-6
IT Budget Total	2,963	-10	2,657	2,673	2,543	2,448	2,398	2,333	-3
Processing Services	55	-4	52	54	52	51	50	49	-1
Turnkey Systems	20	6	21	23	25	26	28	30	7
Application Software Products	31	4	33	35	36	36	36	37	3
Professional Services	306	-9	278	275	259	247	241	231	-4
Network Services	12	16	14	16	19	21	24	28	15
Systems Operations	43	14	49	60	70	82	97	114	18
Systems Integration	74	8	80	93	102	111	123	136	11
Industry Sectors Total	540	-2	528	556	562	574	599	623	3

Exhibit E-41

Business Services

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Equipment Sales	68	5	71	77	80	83	90	96	6
Equipment Services	40	2	40	42	42	42	42	42	1
Software Products	83	12	93	107	117	129	144	162	12
Other Information Services	194	2	198	216	231	244	265	284	8
Data Communications	34	7	36	40	43	44	48	50	7
Facilities/Administration	61	-3	59	60	60	60	60	60	0
In-House Staff	154	0	154	160	154	151	151	151	0
IT Budget Total	617	6	652	703	728	754	801	845	5
Processing Services	23	3	24	26	27	27	28	30	4
Turnkey Systems	34	20	41	50	60	71	85	102	20
Application Software Products	52	13	59	69	77	84	94	104	12
Professional Services	139	0	139	148	154	160	170	179	5
Network Services	4	14	5	6	7	9	10	12	20
Systems Operations	8	8	9	10	11	12	14	16	13
Systems Integration	4	14	5	6	6	7	7	8	10
Industry Sectors Total	265	6	281	315	343	370	410	451	10

Exhibit E-42

Other Industries

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Equipment Sales	145	-6	136	133	127	120	114	108	-4
Equipment Services	61	-3	59	59	57	54	52	51	-3
Software Products	67	3	69	72	73	73	75	78	2
Other Information Services	154	-5	147	151	148	151	149	151	1
Data Communications	61	0	61	63	62	61	61	60	0
Facilities/Administration	74	-8	68	65	62	59	56	52	-5
In-House Staff	222	-6	210	207	188	176	167	157	-6
IT Budget Total	926	-19	750	750	716	694	675	658	-3
Processing Services	13	-5	12	12	12	11	11	10	-3
Turnkey Systems	14	-5	13	12	12	11	10	10	-5
Application Software Products	30	6	32	35	37	38	40	42	6
Professional Services	114	-5	108	111	108	108	108	108	0
Network Services	1	0	1	1	1	1	1	1	0
Systems Operations	6	0	6	7	7	8	9	9	8
Systems Integration	3	0	3	3	3	3	3	3	0
Industry Sectors Total	182	-3	176	182	179	182	182	185	1

F

Cross-Industry Sectors in US Dollars

Exhibit E-43

Cross-Industry Sectors

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Accounting	133	9	145	160	182	201	222	244	11
Education & Training	15	0	15	19	19	19	22	22	7
Engineering & Scientific	37	8	40	43	49	56	59	65	10
Human Resources	83	0	83	86	93	99	105	111	6
Office Systems	120	10	133	151	173	191	210	235	12
Planning & Analysis	108	6	114	127	139	154	170	185	10
Other Cross-Industry	46	7	49	52	59	62	68	74	8
Cross-Industry Sectors Total	543	7	580	639	710	778	852	932	10

Exhibit E-44

Accounting

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	4	0	4	4	4	4	4	4	0
Turnkey Systems	20	3	21	22	24	25	27	28	6
Application Software Products	108	11	120	136	154	173	191	213	12
Cross-Industry Sectors Total	133	9	145	160	182	201	222	244	11

Exhibit E-45

Education & Training

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	9	0	9	9	10	10	11	12	6
Application Software Products	7	0	7	7	7	8	9	9	6
Cross-Industry Sectors Total	15	0	15	19	19	19	22	22	7

Exhibit E-46

Engineering & Scientific

Sector	US$ Million								95-00
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	5	0	5	5	5	5	5	5	0
Application Software Products	29	11	32	36	42	46	51	57	12
Cross-Industry Sectors Total	37	8	40	43	49	56	59	65	10

Exhibit E-47

Human Resources

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Transaction Processing	48	-5	45	44	44	44	44	44	0
Turnkey Systems	3	0	3	3	4	4	5	6	12
Application Software Products	32	8	35	39	44	49	54	60	12
Cross-Industry Sectors Total	83	0	83	86	93	99	105	111	6

Exhibit E-48

Office Systems

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	6	10	7	7	8	9	9	10	9
Application Software Products	113	11	125	143	162	180	200	222	12
Cross-Industry Sectors Total	120	10	133	151	173	191	210	235	12

Exhibit E-49

Planning & Analysis

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Transaction Processing	6	0	6	6	6	6	6	6	0
Turnkey Systems	3	0	3	3	4	4	5	6	12
Application Software Products	99	7	106	118	131	144	158	174	10
Cross-Industry Sectors Total	108	6	114	127	139	154	170	185	10

Exhibit E-50

Other Cross-Industry

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				US$ Million					
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	23	3	24	25	27	29	31	33	7
Application Software Products	20	9	22	24	27	30	33	37	11
Cross-Industry Sectors Total	46	7	49	52	59	62	68	74	8

Information Services Industry
Vertical Sector Forecast, 1995-2000
Italy
(ECUs)

G

Sector Summary in ECUs

Exhibit E-51

Information Services Market - Sector Summary

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Processing Services	467	-1	465	490	497	497	510	518	2
Turnkey Systems	482	6	513	568	613	653	711	769	8
Application Software Products	719	11	799	925	1,030	1,131	1,266	1,412	12
Professional Services	1,724	0	1,719	1,834	1,894	1,960	2,065	2,166	5
Network Services	266	18	314	387	465	553	668	804	21
Systems Operations	216	17	254	314	379	457	558	676	22
Systems Integration	269	9	294	339	379	415	465	518	12
Industry Sectors Total	4,146	5	4,347	4,849	5,251	5,678	6,256	6,859	10
Transaction Processing	53	-5	50	50	50	50	50	50	0
Turnkey Systems	58	0	58	60	65	70	75	80	7
Application Software Products	332	10	364	410	462	513	568	628	12
Cross-Industry Sectors Total	442	7	472	520	578	633	693	759	10
Equipment Services	1,789	1	1,799	1,879	1,884	1,869	1,874	1,874	1
System Software Products	1,206	4	1,256	1,332	1,382	1,432	1,508	1,583	5
Utility and Other Processing	65	4	68	73	78	83	88	93	7
Other Electronic Info Services	106	5	111	118	126	126	126	126	3
Generic Sectors Total	3,166	2	3,234	3,402	3,470	3,510	3,595	3,676	3
Total Information Services	7,739	4	8,040	8,794	9,296	9,799	10,553	11,307	7

H

Industry Sectors in ECUs

Exhibit E-52

Information Services Market by Vertical Sectors

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Discrete Manufacturing	560	0	558	583	616	651	704	756	6
Process Manufacturing	349	2	357	399	442	495	565	641	12
Transportation	256	7	274	309	344	382	435	497	13
Utilities	181	11	201	244	279	309	352	394	14
Telecommunications	131	13	148	176	204	231	269	309	16
Retail Distribution	121	8	131	151	163	176	193	211	10
Wholesale Distribution	153	3	158	173	183	193	209	224	7
Banking & Finance	704	10	774	882	965	1,035	1,133	1,239	10
Insurance	254	10	279	322	354	387	427	472	11
Healthcare	261	13	294	344	379	417	467	525	12
Education	58	-4	55	55	55	53	53	53	-1
Local Government	307	5	322	362	389	422	467	513	10
Central Government	440	-2	430	452	457	467	487	508	3
Business Services	216	6	229	256	279	302	334	367	10
Other Industries	148	-3	143	148	146	148	148	151	1
Industry Sectors Total	4,146	5	4,347	4,849	5,251	5,678	6,256	6,859	10

Exhibit E-53

Discrete Manufacturing

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	523	-10	472	442	422	402	387	367	-5
Equipment Services	286	-9	261	251	241	231	221	211	-4
Software Products	372	0	372	382	397	407	432	457	4
Other Information Services	347	-4	332	342	362	387	412	442	6
Data Communications	141	4	146	156	168	178	193	209	7
Facilities/Administration	236	-13	206	191	181	171	166	156	-5
In-House Staff	905	-11	804	754	678	628	603	578	-6
IT Budget Total	2,809	-8	2,593	2,518	2,450	2,405	2,415	2,420	-1
Processing Services	50	-17	42	37	34	30	28	25	-10
Turnkey Systems	113	-2	111	113	116	118	123	126	3
Application Software Products	183	4	191	206	221	236	256	276	8
Professional Services	106	-10	95	93	93	93	95	98	1
Network Services	60	9	65	74	84	96	111	127	14
Systems Operations	30	10	33	38	45	53	64	75	18
Systems Integration	20	3	20	22	24	25	27	29	8
Industry Sectors Total	560	0	558	583	616	651	704	756	6

Exhibit E-54

Process Manufacturing

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	377	-5	359	364	372	382	394	405	2
Equipment Services	161	-5	153	156	158	161	166	168	2
Software Products	193	4	201	219	239	264	296	334	11
Other Information Services	249	-1	246	274	302	334	382	427	12
Data Communications	158	0	158	168	178	188	204	216	6
Facilities/Administration	198	-8	183	183	188	191	198	204	2
In-House Staff	593	-6	558	568	558	558	573	583	1
IT Budget Total	1,910	-3	1,859	1,932	1,995	2,078	2,214	2,337	5
Processing Services	23	-7	21	22	22	23	24	25	3
Turnkey Systems	50	0	50	55	60	65	73	80	10
Application Software Products	88	9	95	111	126	143	166	191	15
Professional Services	113	-4	108	113	118	126	136	146	6
Network Services	32	14	37	45	54	65	80	97	21
Systems Operations	19	14	21	26	33	40	50	62	24
Systems Integration	24	2	25	27	30	33	36	40	10
Industry Sectors Total	349	2	357	399	442	495	565	641	12

Exhibit E-55

Transportation

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
					ECU Million				
Equipment Sales	93	-8	85	80	73	68	63	58	-8
Equipment Services	45	2	46	48	49	49	49	50	1
Software Products	65	12	73	83	93	103	116	131	12
Other Information Services	214	6	226	251	279	307	349	399	12
Data Communications	55	33	73	98	130	169	224	294	32
Facilities/Administration	70	-4	68	68	68	68	68	68	0
In-House Staff	146	-7	136	131	118	108	103	95	-7
IT Budget Total	603	17	708	760	809	871	971	1,095	9
Processing Services	47	-2	46	48	48	47	48	48	1
Turnkey Systems	18	6	19	21	23	24	25	27	7
Application Software Products	35	16	40	48	55	63	72	83	16
Professional Services	101	0	101	106	108	111	116	121	4
Network Services	32	30	41	55	71	91	119	153	30
Systems Operations	15	17	18	21	25	30	36	43	19
Systems Integration	8	19	10	12	14	17	20	24	20
Industry Sectors Total	256	7	274	309	344	382	435	497	13

Exhibit E-56

Utilities

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	136	9	148	171	186	198	214	226	9
Equipment Services	66	11	73	85	94	100	108	115	10
Software Products	58	17	67	82	94	104	118	136	15
Other Information Services	163	9	178	216	249	276	314	349	14
Data Communications	43	15	50	60	69	76	85	95	14
Facilities/Administration	93	5	98	113	123	131	141	151	9
In-House Staff	244	8	264	304	322	337	359	379	8
IT Budget Total	754	17	878	1,032	1,136	1,222	1,339	1,452	11
Processing Services	15	10	17	20	22	23	25	27	10
Turnkey Systems	8	7	8	9	10	10	11	11	7
Application Software Products	13	19	16	20	23	25	29	32	16
Professional Services	101	8	108	128	143	156	173	191	12
Network Services	5	22	6	7	8	9	11	12	17
Systems Operations	11	23	14	18	22	27	33	40	24
Systems Integration	29	19	35	44	52	60	70	80	18
Industry Sectors Total	181	11	201	244	279	309	352	394	14

Exhibit E-57

Telecommunications

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	128	16	148	176	204	234	269	307	16
Equipment Services	48	12	53	61	68	73	80	87	10
Software Products	46	16	54	64	74	82	95	111	16
Other Information Services	113	13	128	151	175	201	234	268	16
Data Communications	46	16	54	64	74	83	95	108	15
Facilities/Administration	58	8	63	71	78	84	92	100	10
In-House Staff	173	9	188	214	226	241	261	281	8
IT Budget Total	503	37	688	801	899	999	1,128	1,262	13
Processing Services	16	10	17	20	22	24	26	29	11
Turnkey Systems	9	6	9	10	11	12	13	14	8
Application Software Products	14	18	17	20	24	27	31	35	16
Professional Services	64	9	70	81	91	102	116	130	13
Network Services	5	33	6	8	11	14	18	23	31
Systems Operations	8	27	10	13	16	20	26	32	27
Systems Integration	18	17	21	25	30	35	41	47	18
Industry Sectors Total	131	13	148	176	204	231	269	309	16

Exhibit E-58

Retail Distribution

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	204	4	211	224	226	224	224	221	1
Equipment Services	85	3	88	95	95	93	93	93	1
Software Products	78	13	88	98	106	108	118	128	8
Other Information Services	101	2	103	118	126	138	148	161	9
Data Communications	36	7	39	43	45	45	47	48	4
Facilities/Administration	136	0	136	141	141	138	138	136	0
In-House Staff	196	-5	186	186	168	153	141	128	-7
IT Budget Total	854	0	850	905	907	899	909	915	1
Processing Services	10	0	10	10	10	10	10	10	1
Turnkey Systems	16	9	18	20	21	21	22	23	6
Application Software Products	28	16	32	39	44	48	53	59	13
Professional Services	41	0	41	44	45	45	46	46	2
Network Services	18	22	22	28	33	39	46	54	19
Systems Operations	4	14	4	5	6	7	9	10	20
Systems Integration	4	14	4	5	6	7	8	10	19
Industry Sectors Total	121	8	131	151	163	176	193	211	10

Exhibit E-59

Wholesale Distribution

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	221	-6	209	204	191	181	173	163	-5
Equipment Services	98	-3	95	95	90	85	83	80	-3
Software Products	93	5	98	103	103	106	111	116	3
Other Information Services	126	0	126	136	146	151	163	173	7
Data Communications	41	0	41	43	42	42	42	42	0
Facilities/Administration	153	-8	141	138	131	123	118	113	-4
In-House Staff	259	-6	244	239	219	204	193	183	-6
IT Budget Total	1,106	-14	953	957	922	891	883	871	-2
Processing Services	9	-6	8	8	8	7	7	7	-4
Turnkey Systems	20	2	21	22	22	22	23	23	2
Application Software Products	35	9	38	43	46	49	53	57	9
Professional Services	62	-2	60	63	63	64	66	68	2
Network Services	20	15	23	27	31	35	40	46	15
Systems Operations	4	25	5	7	8	10	13	16	25
Systems Integration	4	14	4	5	5	6	7	8	13
Industry Sectors Total	153	3	158	173	183	193	209	224	7

Exhibit E-60

Banking & Finance

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	1,005	5	1,055	1,106	1,131	1,131	1,131	1,131	1
Equipment Services	397	6	420	450	457	455	457	457	2
Software Products	342	13	384	430	462	487	528	575	8
Other Information Services	603	8	653	754	804	879	955	1,030	10
Data Communications	460	10	508	565	601	621	653	681	6
Facilities/Administration	492	3	505	533	545	543	550	553	2
In-House Staff	1,432	5	1,508	1,608	1,583	1,558	1,558	1,558	1
IT Budget Total	4,372	15	5,033	5,445	5,583	5,673	5,832	5,985	4
Processing Services	118	4	123	133	138	138	141	143	3
Turnkey Systems	98	13	111	126	138	148	161	173	9
Application Software Products	93	19	111	133	153	171	193	219	15
Professional Services	284	5	299	329	347	362	384	405	6
Network Services	58	24	72	91	111	132	158	189	21
Systems Operations	13	28	16	21	27	34	44	55	28
Systems Integration	40	6	43	48	50	50	53	55	5
Industry Sectors Total	704	10	774	882	965	1,035	1,133	1,239	10

Exhibit E-61

Insurance

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	254	4	264	284	296	304	314	322	4
Equipment Services	98	5	103	111	116	118	121	123	4
Software Products	113	13	128	146	163	178	198	221	12
Other Information Services	191	7	204	234	254	276	304	332	10
Data Communications	113	9	123	138	151	158	171	181	8
Facilities/Administration	123	2	126	133	138	141	146	148	3
In-House Staff	354	4	367	394	397	399	410	415	2
IT Budget Total	1,206	9	1,314	1,440	1,515	1,575	1,663	1,741	6
Processing Services	32	3	33	36	38	39	40	42	5
Turnkey Systems	44	10	49	56	62	66	72	78	10
Application Software Products	45	19	54	66	76	86	99	114	16
Professional Services	98	5	103	116	123	131	141	151	8
Network Services	15	24	18	23	29	35	42	51	23
Systems Operations	4	25	5	7	8	10	13	16	25
Systems Integration	16	6	17	18	19	20	21	21	5
Industry Sectors Total	254	10	279	322	354	387	427	472	11

Exhibit E-62

Healthcare

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	198	6	211	226	229	231	236	239	2
Equipment Services	90	6	95	103	103	103	103	103	2
Software Products	106	17	123	143	153	166	183	204	11
Other Information Services	209	10	229	261	289	314	349	389	11
Data Communications	90	11	101	113	118	123	131	136	6
Facilities/Administration	111	2	113	118	118	118	121	121	1
In-House Staff	329	5	344	367	354	349	352	349	0
IT Budget Total	955	27	1,216	1,332	1,364	1,405	1,475	1,540	5
Processing Services	36	6	38	42	43	43	45	46	4
Turnkey Systems	27	19	32	39	44	49	56	64	15
Application Software Products	49	20	58	71	79	88	101	113	14
Professional Services	103	5	108	118	123	128	136	143	6
Network Services	4	25	5	7	8	10	12	14	23
Systems Operations	33	26	41	53	66	80	100	124	25
Systems Integration	11	14	12	14	16	17	19	21	12
Industry Sectors Total	261	13	294	344	379	417	467	525	12

Exhibit E-63

Education

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
			ECU Million						
Equipment Sales	75	0	75	75	75	75	75	75	0
Equipment Services	37	-3	36	36	35	33	32	31	-3
Software Products	32	-2	31	31	30	29	28	28	-2
Other Information Services	51	-2	50	50	52	51	52	53	1
Data Communications	36	1	37	38	38	38	39	39	1
Facilities/Administration	45	-6	43	43	40	38	35	33	-5
In-House Staff	173	-7	161	156	141	131	123	116	-6
IT Budget Total	452	-4	433	430	411	394	385	373	-3
Processing Services	4	0	4	4	4	4	4	4	0
Turnkey Systems	7	-8	6	6	6	5	5	4	-8
Application Software Products	10	-5	9	9	9	8	8	7	-5
Professional Services	35	-3	34	35	35	35	36	36	1
Network Services	2	0	2	2	2	2	2	2	0
Systems Operations	1	0	1	1	1	1	1	1	0
Systems Integration	2	-25	2	1	1	1	1	1	-20
Industry Sectors Total	58	-4	55	55	55	53	53	53	-1

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Exhibit E-64

Local Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	254	1	256	271	276	281	289	294	3
Equipment Services	112	2	114	122	123	123	125	126	2
Software Products	103	10	113	128	141	151	166	186	10
Other Information Services	274	3	281	314	332	359	392	425	9
Data Communications	111	7	118	131	138	143	153	161	6
Facilities/Administration	136	-2	133	138	138	138	141	141	1
In-House Staff	445	-1	442	462	445	437	440	437	0
IT Budget Total	1,357	7	1,458	1,566	1,592	1,633	1,705	1,769	4
Processing Services	34	0	34	37	38	38	40	41	4
Turnkey Systems	17	9	19	21	23	25	28	30	10
Application Software Products	32	16	37	45	51	58	67	77	16
Professional Services	163	0	163	176	181	188	201	211	5
Network Services	3	0	3	3	3	3	3	3	0
Systems Operations	29	17	34	43	51	61	74	89	21
Systems Integration	29	12	33	38	43	48	55	62	14
Industry Sectors Total	307	5	322	362	389	422	467	513	10

Exhibit E-65

Central Government

Sector	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
				ECU Million					
Equipment Sales	402	-8	372	359	332	307	286	264	-7
Equipment Services	183	-3	178	181	173	166	161	153	-3
Software Products	143	4	148	156	158	158	163	173	3
Other Information Services	415	-4	399	417	417	427	442	452	3
Data Communications	183	1	186	196	196	196	198	198	1
Facilities/Administration	224	-8	206	204	193	183	176	168	-4
In-House Staff	721	-7	673	663	601	555	525	490	-6
IT Budget Total	2,412	-10	2,163	2,176	2,070	1,992	1,952	1,899	-3
Processing Services	45	-4	43	44	43	41	41	40	-1
Turnkey Systems	16	6	17	19	20	21	23	24	7
Application Software Products	26	4	27	29	29	29	30	30	3
Professional Services	249	-9	226	224	211	201	196	188	-4
Network Services	10	16	11	13	15	17	20	23	15
Systems Operations	35	14	40	49	57	67	79	92	18
Systems Integration	60	8	65	75	83	90	101	111	11
Industry Sectors Total	440	-2	430	452	457	467	487	508	3

Exhibit E-66

Business Services

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	55	5	58	63	65	68	73	78	6
Equipment Services	32	2	33	34	34	34	34	34	1
Software Products	68	12	76	87	95	105	118	132	12
Other Information Services	158	2	161	176	188	198	216	231	8
Data Communications	28	7	30	33	35	36	39	41	7
Facilities/Administration	50	-3	48	49	49	49	49	49	0
In-House Staff	126	0	126	131	126	123	123	123	0
IT Budget Total	503	6	531	572	593	614	652	688	5
Processing Services	19	3	20	21	22	22	23	24	4
Turnkey Systems	28	20	33	41	49	58	69	83	20
Application Software Products	43	13	48	56	62	68	76	84	12
Professional Services	113	0	113	121	126	131	138	146	5
Network Services	4	14	4	5	6	7	9	10	20
Systems Operations	7	8	7	8	9	10	12	13	13
Systems Integration	4	14	4	5	5	6	6	7	10
Industry Sectors Total	216	6	229	256	279	302	334	367	10

Exhibit E-67

Other Industries

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Equipment Sales	118	-6	111	108	103	98	93	88	-4
Equipment Services	50	-3	48	48	46	44	43	41	-3
Software Products	55	3	56	59	59	60	61	63	2
Other Information Services	126	-5	120	123	120	123	122	123	1
Data Communications	50	0	50	51	51	50	50	49	0
Facilities/Administration	60	-8	55	53	50	48	45	43	-5
In-House Staff	181	-6	171	168	153	143	136	128	-6
IT Budget Total	754	-19	611	611	583	565	549	536	-3
Processing Services	11	-5	10	10	10	9	9	9	-3
Turnkey Systems	11	-5	11	10	10	9	9	8	-5
Application Software Products	25	6	26	29	30	31	33	34	6
Professional Services	93	-5	88	90	88	88	88	88	0
Network Services	1	0	1	1	1	1	1	1	0
Systems Operations	5	0	5	6	6	7	7	8	8
Systems Integration	3	0	3	3	3	3	3	3	0
Industry Sectors Total	148	-3	143	148	146	148	148	151	1

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Cross-Industry Sectors in ECUs

Exhibit E-68

Cross-Industry Sectors

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Accounting	108	9	118	131	148	163	181	198	11
Education & Training	13	0	13	15	15	15	18	18	7
Engineering & Scientific	30	8	33	35	40	45	48	53	10
Human Resources	68	0	68	70	75	80	85	90	6
Office Systems	98	10	108	123	141	156	171	191	12
Planning & Analysis	88	6	93	103	113	126	138	151	10
Other Cross-Industry	38	7	40	43	48	50	55	60	8
Cross-Industry Sectors Total	442	7	472	520	578	633	693	759	10

Exhibit E-69

Accounting

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	17	3	17	18	20	21	22	23	6
Application Software Products	88	11	98	111	126	141	156	173	12
Cross-Industry Sectors Total	108	9	118	131	148	163	181	198	11

Exhibit E-70

Education & Training

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	7	0	7	8	8	9	9	10	6
Application Software Products	6	0	6	6	6	7	7	8	6
Cross-Industry Sectors Total	13	0	13	15	15	15	18	18	7

Exhibit E-71

Engineering & Scientific

Sector	ECU Million								
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	4	0	4	4	4	4	4	4	0
Application Software Products	24	11	26	30	34	38	42	46	12
Cross-Industry Sectors Total	30	8	33	35	40	45	48	53	10

Exhibit E-72

Human Resources

Sector	ECU Million							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	39	-5	37	36	36	36	36	36	0
Turnkey Systems	3	0	3	3	3	4	4	5	12
Application Software Products	26	8	28	32	36	40	44	49	12
Cross-Industry Sectors Total	68	0	68	70	75	80	85	90	6

Exhibit E-73

Office Systems

Sector	ECU Million							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	1	0	1	1	1	1	1	1	0
Turnkey Systems	5	10	6	6	7	7	8	9	9
Application Software Products	92	11	102	116	132	147	163	181	12
Cross-Industry Sectors Total	98	10	108	123	141	156	171	191	12

Exhibit E-74

Planning & Analysis

Sector	ECU Million							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	5	0	5	5	5	5	5	5	0
Turnkey Systems	3	0	3	3	3	4	4	5	12
Application Software Products	81	7	86	96	107	117	129	142	10
Cross-Industry Sectors Total	88	6	93	103	113	126	138	151	10

Exhibit E-75

Other Cross-Industry

Sector	ECU Million							
	1994	94-95 (%)	1995	1996	1997	1998	1999	2000	95-00 CAGR (%)
Transaction Processing	3	0	3	3	3	3	3	3	0
Turnkey Systems	19	3	20	21	22	24	25	27	7
Application Software Products	16	9	18	20	22	25	27	30	11
Cross-Industry Sectors Total	38	7	40	43	48	50	55	60	8

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Appendix F: Economic Assumptions
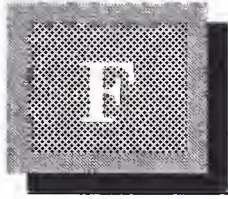
Economic Assumptions

INPUT reports are based principally on three strands of research activity conducted throughout the year:

- A vendor research programme with more than 600 interviews with prominent software and services vendors across Europe. This research assesses their attributable revenues in each country by delivery mode and, where possible, by industry sector. INPUT consultants use their own judgement in many cases to categorise revenues into sub-sectors. In particular INPUT excludes revenues considered captive, such as those from a vendor's parent company.

- Several hundred vendor and user interviews across all European market sectors to determine trends and opinions. These interviews are part of the research that INPUT carries out in specific sectors of the software and services market. In 1993, for example, INPUT produced reports on over 20 different software and services market sectors.

- Additionally, INPUT maintains an extensive library and database relating to the information services industry.

All the forecasts from these activities are produced in local currency for each country, then consolidated with common economic and exchange rate data to produce a top level forecast. This is done for software and services in each country and in Europe as a whole. At each stage it is examined for reasonableness and consistency.

The forecasts also benefit from assignments for and feedback from INPUT clients, who include over 100 of the leading vendors of software and services around the world. For example, INPUT supplied an economic model to a market leading client on the potential effect of rising commodity prices on forecast software and services growth rates.

In order to consolidate INPUT's forecasts and vendor data into a consistent set of European analyses each year, it is essential to use a standard set of economic factors. The following pages show the inflation and exchange rates in use for 1995 studies.

A

European Exchange Rates

The following table, Exhibit F-1, shows the standard exchange rates used throughout the 1995 programme to consolidate country market data for overall European forecasts.

Exhibit F-1

US Dollar and ECU Exchange Rates 1995

Country	Currency	US Dollar	ECU
Europe	$	1	0.815
France	FF	5.34	6.54
Germany	DM	1.55	1.90
United Kingdom	PS	0.639	0.784
Italy	Lira (K)	1.62	1.99
Sweden	Sek	7.43	9.11
Denmark	DK	6.08	7.45
Norway	NK	6.76	8.29
Finland	FM	4.74	5.82
Netherlands	Dfl	1.74	2.13
Belgium	BF	31.8	39.0
Switzerland	SF	1.31	1.6
Austria	Sch	10.9	13.4
Spain	Ptas	131.6	161.4
Ireland	IP	0.647	0.794
Portugal	Esc	159.2	195.2
Greece	Dra	240.6	295.2

Source: Financial Times January 1995

B

European Inflation Rates

Exhibit F-2 shows the average five year inflation assumptions for each reported country and the changes from those used in reports produced in the previous year. All INPUT forecasts include the effects of inflation as well as natural market growth rates. For consistency, the same inflation rates are used throughout all the different market sector research and analysis during the calendar year, unless specified otherwise.

Exhibit F-2

Inflation Assumptions 1994-1999 and 1995-2000

Country	Assumption 1994-1999	Assumption 1995-2000	Change
France	1.9	1.9	—
Germany	2.9	2.4	-0.5
United Kingdom	3.0	2.9	-0.1
Italy	3.2	3.2	—
Sweden	2.0	2.4	0.4
Denmark	2.6	2.8	0.2
Norway	1.5	2.3	0.8
Finland	2.0	3.2	1.2
Netherlands	2.0	2.3	0.3
Belgium	2.2	2.4	0.2
Switzerland	1.7	2.1	0.4
Austria	2.8	3.1	0.3
Spain	3.4	2.6	-0.8
Portugal	4.8	3.8	-1.0
Greece	11.2	5.3	-5.9
Ireland	3.3	2.8	-0.5
Eastern Europe	—	—	—
European Average	2.8	2.6	-0.2

Source: OECD 1994

The economic growth measurements and predictions from OECD forecasts are listed in Exhibit F-3.

Exhibit F-3

GDP Growth Rate Assumptions

Country	1993 (%)	1994 (%)	1995 (%)	1996 (%)
Austria	-0.3	2.6	3.0	3.1
Belgium	-1.7	2.3	3.0	3.1
Denmark	1.4	4.7	3.3	2.9
Finland	-2.0	3.5	4.8	3.9
France	-1.0	2.2	3.1	3.2
Germany	-1.1	2.8	2.8	3.5
Greece	-0.5	1.0	1.5	2.3
Ireland	4.0	5.0	5.0	4.6
Italy	-0.7	2.2	2.7	2.9
Netherlands	0.4	2.5	2.9	3.2
Norway	2.2	3.6	2.9	2.3
Portugal	-1.1	1.0	2.6	2.9
Spain	-1.0	1.7	2.9	3.3
Sweden	-2.1	2.3	2.3	2.5
Switzerland	-0.9	1.7	2.2	2.7
United Kingdom	2.0	3.5	3.4	3.0
EC	-0.3	2.5	3.0	3.2

Source: OECD 1994

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F-6

Appendix G: Definition of Terms
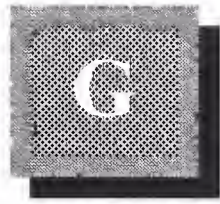
Definition of Terms

A
Introduction

INPUT's *Definition of Terms* provides the framework for all of INPUT's market analyses and forecasts of the information services industry. The structure is defined in Exhibit G-1.

One of the strengths of INPUT's market analysis services is the consistency of the underlying market sizing and forecast data. Each year INPUT reviews its industry structure and makes changes if they are required. When changes are made they are carefully documented and the new definitions and forecasts reconciled to the prior definitions and forecasts. INPUT clients have the benefit of being able to track market forecast data from year to year against a proven and consistent foundation of definitions.

B
Overall Definitions and Analytical Framework

1. Information Services

Information Services are computer/telecommunications-related products and services that are oriented toward the development or use of information systems. Information services typically involve one or more of the following:

- Use of vendor-provided computer processing services to develop or run applications or provide services such as disaster recovery or data entry (called *Processing Services*)

- A combination of computer equipment, packaged software and associated support services which will meet an application systems need (called *Turnkey Systems*)

- Packaged software products, including systems software or applications software products (called *Software Products*)

- People services that support users in developing and operating their own information systems (called *Professional Services*)

- The combination of products (software and equipment) and services where the vendor assumes total responsibility for the development of a custom integrated solution to an information systems need (called *Systems Integration*)

- Services that provide operation and management of all or a significant part of a user's information systems functions under a long-term contract (called *Systems Operations*)

- Services that support the delivery of information in electronic form — typically network-oriented services such as value-added networks, electronic mail and document interchange (called *Network Applications*)

- Services that support the access and use of public and proprietary information such as on-line databases and news services (called *Electronic Information Services*)

- Services that support the operation of computer and digital communication equipment (called *Equipment Services*).

In general, the market for information services does not involve providing equipment to users. The exception is where the equipment is part of an overall service offering such as a turnkey system, a systems operations contract or a systems integration project.

The information services market also excludes pure data transport services (i.e., data or voice communications circuits). However, where information transport is associated with a network-based service (e.g., electronic data interchange services), or cannot be feasibly separated from other bundled services (e.g., some systems operations contracts), the transport costs are included as part of the services market.

The analytical framework of the information services industry consists of the following interacting factors: overall and industry-specific business environment (trends, events and issues); technology environment; user information system requirements; size and structure of information services markets; vendors and their products, services and revenues; distribution channels; and competitive issues.

2. Market Forecasts/User Expenditures

All information services market forecasts are estimates of *User Expenditures* for information services. When questions arise about the proper place to count these expenditures, INPUT addresses them from the user's viewpoint: expenditures are categorised according to what users perceive they are buying.

By focusing on user expenditures, INPUT avoids two problems which are related to the distribution channels for various categories of services:

- Double-counting, which can occur by estimating total vendor revenues when there is significant reselling within the industry (e.g., software sales to turnkey vendors for repackaging and resale to end users)

- Missed counting, which can occur when sales to end users go through indirect channels such as mail order retailers.

Captive Information Services User Expenditures are expenditures for products and services provided by a vendor that is part of the same parent corporation as the user. These expenditures are not included in INPUT forecasts.

Noncaptive Information Services User Expenditures are expenditures that go to vendors that have a different parent corporation than the user. It is these expenditures which constitute the information services market analysed by INPUT and that are included in INPUT forecasts.

3. Delivery Modes

Delivery Modes are defined as specific products and services that satisfy a given user need. While *Market Sectors* specify *who* the buyer is, *Delivery Modes* specify *what* the user is buying.

Of the nine delivery modes defined by INPUT, six are considered primary products or services:

- Processing Services

- Network Services

- Professional Services

- Applications Software Products

- Systems Software Products

- Equipment Services.

The remaining three delivery modes represent combinations of these products and services, combined with equipment, management and/or other services:

- Turnkey Systems

- Systems Operations

- Systems Integration.

Section C describes the delivery modes and their structure in more detail.

4. Market Sectors

Market Sectors are groupings or categories of the buyers of information services. There are three types of user markets:

- *Vertical Industry* markets, such as Banking, Transportation, Utilities, etc. These are called "industry-specific" markets

- *Functional Application* markets, such as Human Resources, Accounting, etc. These are called "cross-industry" markets

- *Other* markets, which are neither industry- nor application-specific, such as the market for systems software products and much of the on-line database market.

Specific market sectors used by INPUT are defined in Section E below.

5. Trading Communities

Information technology is playing a major role in business reengineering, not just companies but the value chain or *Trading Communities* in which these companies operate. This reengineering is resulting in electronic commerce emerging where interorganisational electronic systems facilitate the business processes of the trading community.

- A trading community is the group or organisations — commercial and non-commercial — involved in producing goods or services

- Electronic commerce and trading communities are addressed in INPUT's EDI and Electronic Commerce programme.

6.   Outsourcing

Over the past few years a major change has occurred in the way clients are buying some information services. The shift has been labelled *outsourcing*.

INPUT views outsourcing as a change in the form of the client/vendor relationship. Under an outsourcing relationship, all or a major portion of the information systems function is contracted to a vendor in a long-term relationship. The vendor is responsible for the performance of the function.

INPUT considers the following submodes to be outsourcing-type relationships and in aggregate to represent the outsourcing market. See Exhibit G-1. Complete definitions are provided in Section C of this document. INPUT provides these forecasts as part of the corresponding delivery modes.

- *Platform Systems Operations* — The vendor is responsible for managing and operating the client's computer systems

- *Applications System Operations* — The vendor is responsible for developing and/or maintaining a client's applications as well as operating the computer systems

- *Network Management* — The vendor assumes full responsibility for operating and managing the client's data communications systems. This may also include the voice communications of the client.

Exhibit G-1

Outsourcing Components — INPUT's View

```
                          ┌──────────────────┐
                          │    Outsourcing   │
                          └──────────────────┘
                 ┌──────────────────┐      ┌──────────────────────┐
                 │ Systems Operations│     │ Professional Services│
                 └──────────────────┘      └──────────────────────┘
       ┌──────────┬──────────────┐              ┌──────────────────────┐
  ┌─────────┐ ┌──────────┐                      │Applications Management│
  │Platforms│ │ Network  │                      └──────────────────────┘
  │Operations│ │Management│
  └─────────┘ └──────────┘
  ┌──────────┐  ┌──────────┐
  │Applications│ │ Desktop │
  │Operations │  │ Services │
  └──────────┘  └──────────┘
```

Source: INPUT
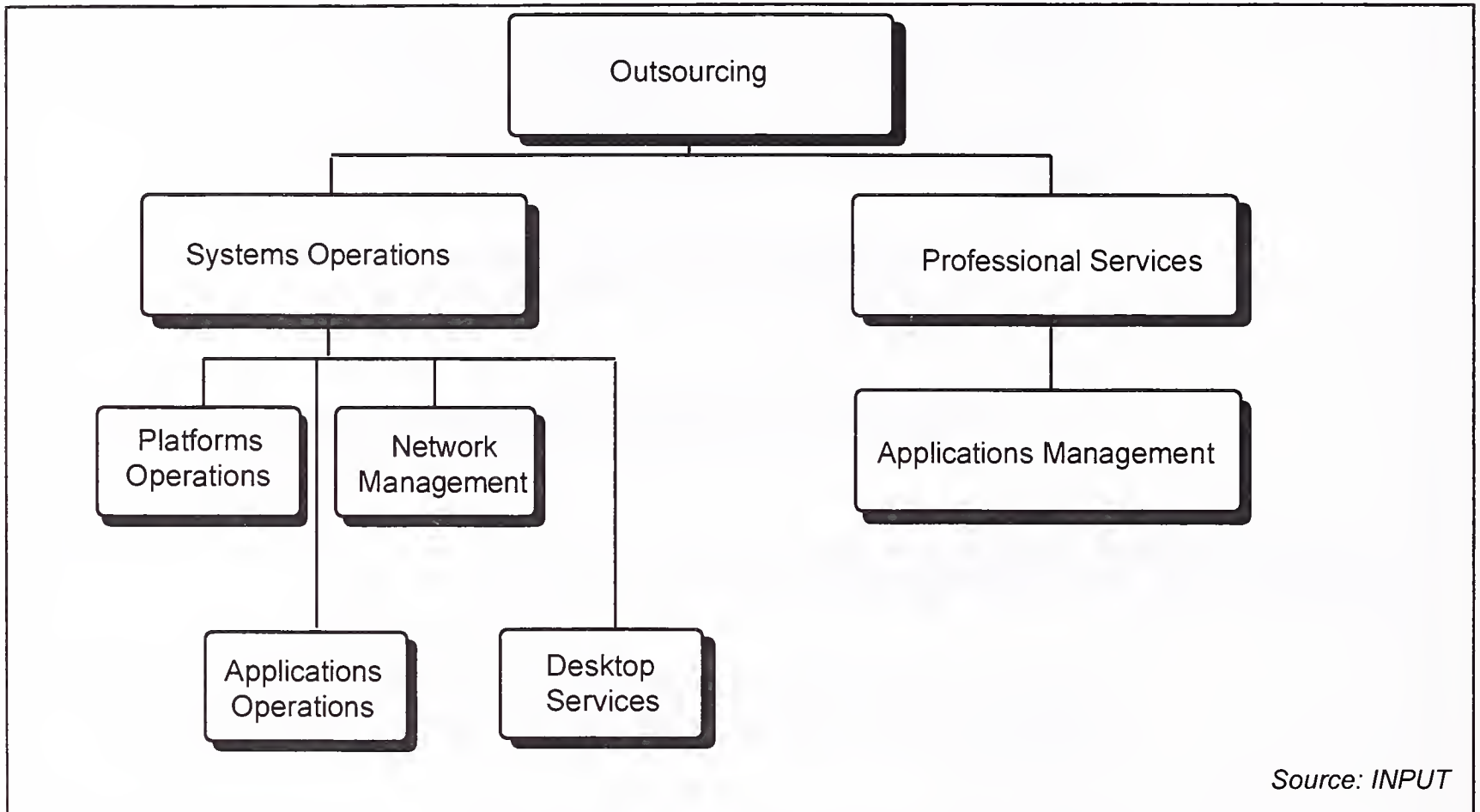
- *Applications Management/Maintenance* — The professional services vendor has full responsibility for developing and/or maintaining some or all of the applications systems that a client uses to support business operations. The services are provided on a long-term contractual basis

- *Desktop Services* — The vendor assumes responsibility for the deployment, maintenance and connectivity between the personal computers and/or intelligent workstations in the client organisation. The services may also include performing the help-desk function. The services are provided on a long-term contractual basis.

C
Delivery Modes and Submodes

Exhibit G-2 provides the overall structure of the information services industry as defined and used by INPUT. This section of *Definition of Terms* provides definitions for each of the delivery modes and their submodes or components.

1. Software Products

INPUT divides the software products market into two delivery modes: systems software and applications software. The two delivery modes have many similarities. Both involve purchases of software packages for in-house computer systems. Included are both lease and purchase expenditures, as well as expenditures for work performed by the vendor to implement or maintain the package at the user's sites. Vendor-provided training or support in operation and use of the package, if part of the software pricing, is also included here.

Expenditures for work performed by organisations other than the package vendor are counted in the professional services delivery mode. Fees for work related to education, consulting, and/or custom modification of software products are also counted as professional services, provided such fees are charged separately from the price of the software product itself.

a. Systems Software Products

Systems software products enable the computer/communications system to perform basic machine-oriented or user interface functions. INPUT divides systems software products into three submodes. See Exhibit G-3.

- *Systems Control Products* — Software programs that manage computer system resources and control the execution of programs. These products include operating systems, emulators, network control, library control, windowing, access control and spoolers

- *Operations Management Tools* — Software programs used by operations personnel to manage the computer system and/or network resources and personnel more effectively. Included are performance measurement, job accounting, computer operation scheduling, disk management utilities and capacity management

- Applications Development Tools — Software programs used to prepare applications for execution by assisting in designing, programming, testing, and related functions. Included are traditional programming languages, 4GLs, data dictionaries, database management systems, report writers, project control systems, CASE systems and other development productivity aids

- INPUT forecasts the systems software products delivery mode by platform level: mainframe, minicomputer and workstation/PC.
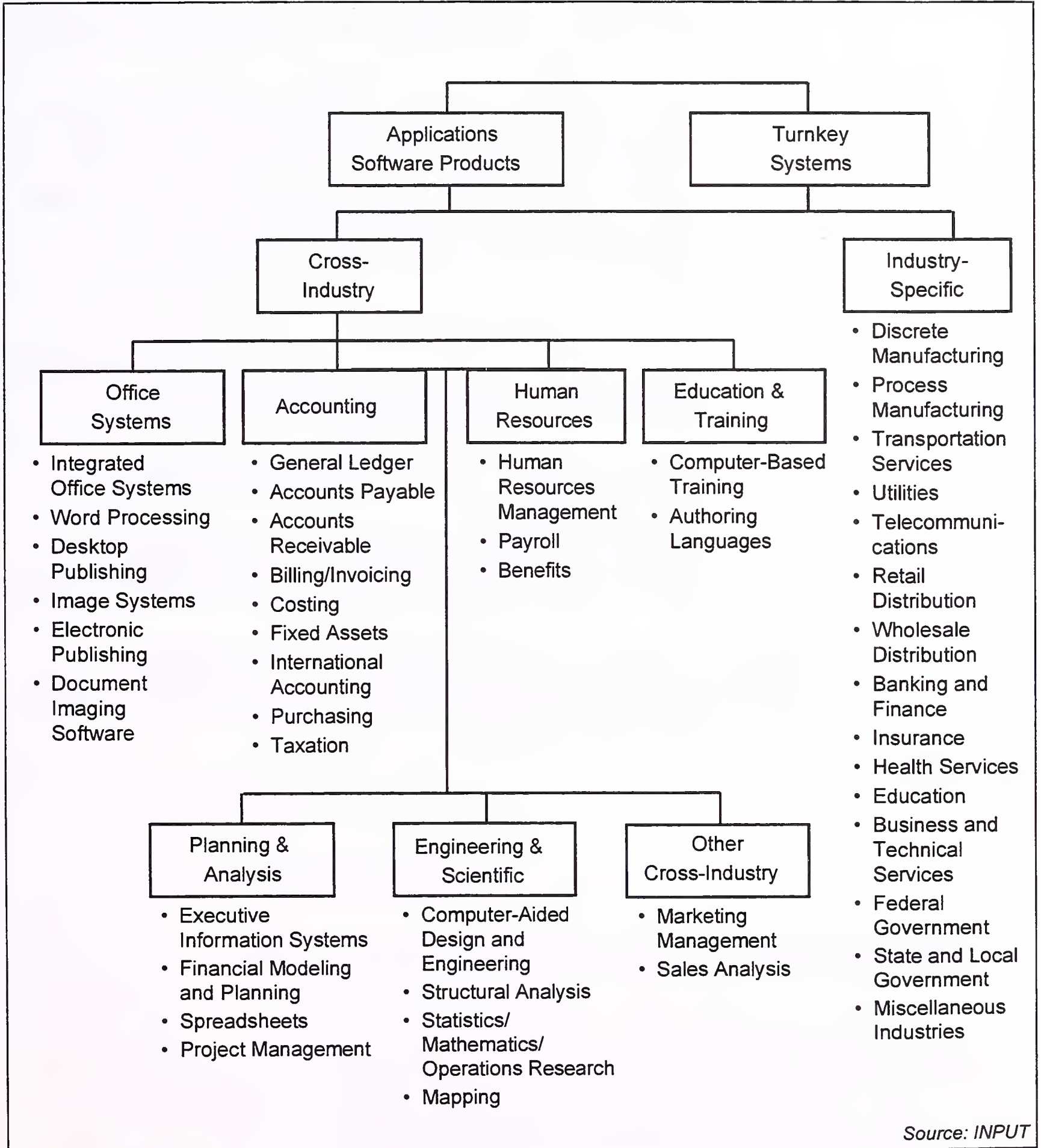
Exhibit G-2

Information Services Structure

System Software Products	Applications Software Products	Turnkey Systems	Equipment Services	Professional Services
- Mainframe	- Mainframe	- Equipment	- Equipment Maintenance	- Consulting
- Minicomputer	- Minicomputer	- Software Products	- Environmental Services	- Education & Training
- Workstation/PC	- Workstation/PC	- Professional Services		- Software Development/ Maintenance
				- Application Mgmt/ Maintenance

Systems Integration	Systems Operations	Processing Services	Network Services
- Equipment	- Platform Operation	- Transaction	- Electronic Information Services
- Software Products	- Application Operations	- Utility	- Network Applications
- Professional Services	- Desktop Services	- Other	
- Other	- Network Management		

Source: INPUT

Exhibit G-3

Systems Software Products Market Structure

```
                          ┌─────────────────┐
                          │    Systems      │
                          │    Software     │
                          └────────┬────────┘
            ┌──────────────────────┼──────────────────────┐
   ┌────────┴────────┐    ┌────────┴────────┐    ┌─────────┴─────────┐
   │    Systems      │    │   Data Center   │    │   Applications    │
   │    Control      │    │   Management    │    │ Development Tools │
   └─────────────────┘    └─────────────────┘    └─────────┬─────────┘
                                                 ┌─────────┴─────────┐
                                                 │ Program Development│
                                                 │ and Production Tools│
                                                 └───────────────────┘
```

Systems Control

• Access Control
• Communications Monitors
• Micro-Mainframe Links
• Network Control
• Operating Systems
• Security Systems
• System Library Control
• Windowing Systems
• Other

Data Center Management

• Capacity Management
• Computer Operations
  Scheduling
• Data Center Management
• Disk Management
• Downtime/Repair
  Monitoring Management
• Job Accounting
• Performance Monitors
• Tape Management
• Utilities
• Other

Program Development and Production Tools

• Applications Generators
• Assemblers
• Automatic Documentation
• Configuration Management
• Debugging Aids
• Languages
  (All Generations)
• Systems Development
  Control
• Retrieval Systems
• Translators
• 4GL
• I-CASE
• Other

Database Management Systems

• Database Management
  Systems
• Data Dictionaries
• Other

Source: INPUT

b. Applications Software Products

Applications software products enable a user or group of users to support an operational or administrative process within an organisation. Examples include accounts payable, order entry, project management and office systems. INPUT categorises applications software products into two groups of market sectors. (See Exhibit G-4)

- *Industry Applications Software Products* — Software products that perform functions related to fulfilling business or organisational needs unique to a specific industry (vertical) market and sold to that market only. Examples include demand deposit accounting, MRPII, medical record keeping, automobile dealer parts inventory, etc

- *Cross-Industry Applications Software Products* — Software products that perform a specific function that is applicable to a wide range of industry sectors. Examples include payroll and human resource systems, accounting systems, word processing and graphics systems, spreadsheets, etc.

INPUT also forecasts the applications software products delivery mode by platform level: mainframe, minicomputer and workstation/PC.

2. Turnkey Systems

A turnkey system is an integration of equipment (CPU, peripherals, etc.), systems software, and packaged applications software into a single product developed to meet a specific set of user requirements. Value added by the turnkey system vendor is primarily in the software and professional services provided. INPUT categorises turnkey systems into two groups of market sectors as it does for applications software products. (See Exhibit G-4)

Most CAD/CAM systems and many small business systems are turnkey systems. Turnkey systems utilise standard computers and do not include specialised hardware such as word processors, cash registers, process control systems or embedded computer systems for military applications.

Exhibit G-4

Application Products and Turnkey Systems

- **Applications Software Products**
  - **Cross-Industry**
    - **Office Systems**
      - Integrated Office Systems
      - Word Processing
      - Desktop Publishing
      - Image Systems
      - Electronic Publishing
      - Document Imaging Software
    - **Accounting**
      - General Ledger
      - Accounts Payable
      - Accounts Receivable
      - Billing/Invoicing
      - Costing
      - Fixed Assets
      - International Accounting
      - Purchasing
      - Taxation
    - **Human Resources**
      - Human Resources Management
      - Payroll
      - Benefits
    - **Education & Training**
      - Computer-Based Training
      - Authoring Languages
    - **Planning & Analysis**
      - Executive Information Systems
      - Financial Modeling and Planning
      - Spreadsheets
      - Project Management
    - **Engineering & Scientific**
      - Computer-Aided Design and Engineering
      - Structural Analysis
      - Statistics/ Mathematics/ Operations Research
      - Mapping
    - **Other Cross-Industry**
      - Marketing Management
      - Sales Analysis

- **Turnkey Systems**
  - **Industry-Specific**
    - Discrete Manufacturing
    - Process Manufacturing
    - Transportation Services
    - Utilities
    - Telecommunications
    - Retail Distribution
    - Wholesale Distribution
    - Banking and Finance
    - Insurance
    - Health Services
    - Education
    - Business and Technical Services
    - Federal Government
    - State and Local Government
    - Miscellaneous Industries

Source: INPUT

Computer manufacturers (e.g., IBM or DEC) that combine software with their own general-purpose hardware are not classified by INPUT as turnkey vendors. Their software revenues are included in the appropriate software category.

Most turnkey systems are sold through channels known as value-added resellers.

- *Value-Added Reseller (VAR):* A VAR adds value to computer hardware and/or software and then resells it to an end user. The major value added is usually applications software for a vertical or cross-industry market, but also includes many of the other components of a turnkey systems solution, such as professional services, software support, and applications upgrades.

Turnkey systems have three components:

- Equipment — computer hardware supplied as part of the turnkey system

- Software products — pre-packaged systems and applications software products

- Professional services — services to install or customise the system or train the user, provided as part of the turnkey system sale.

Exhibit G-5 contrasts turnkey systems with systems integration. Turnkey systems are based on available software products that a vendor may modify to a modest degree.

Exhibit G-5

The Customisation Spectrum

Systems Integration	Custom Turnkey	Turnkey
Degree of Customisation		

100%   50%   25%

Source: INPUT
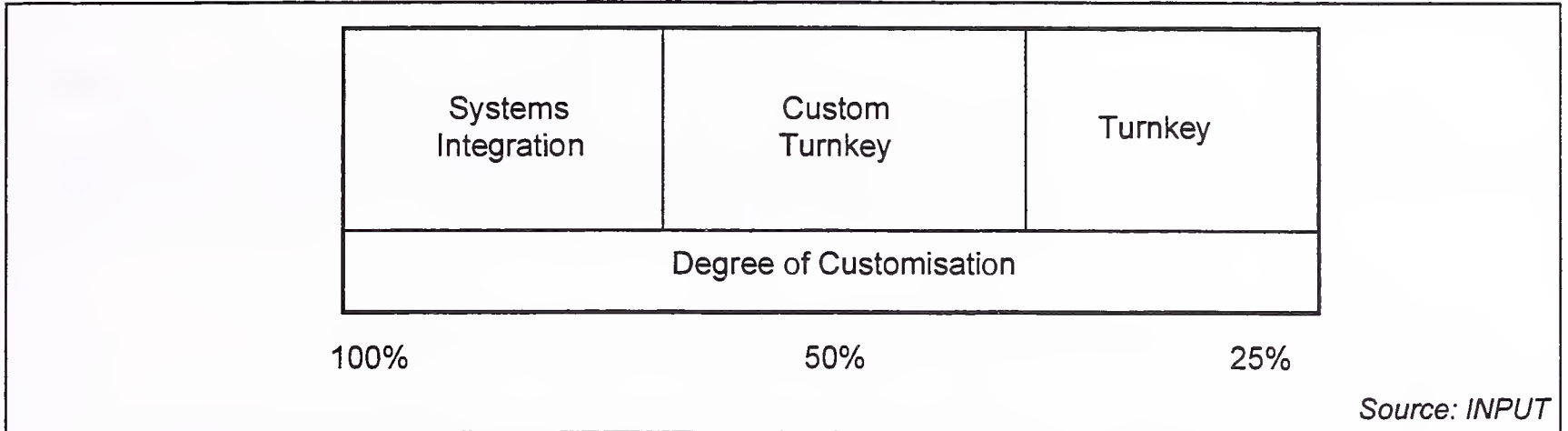
Exhibit G-6

Processing Services Structure

Processing Services

———— Transaction Processing

———— Utility Processing

———— Other Processing Services

Source: INPUT
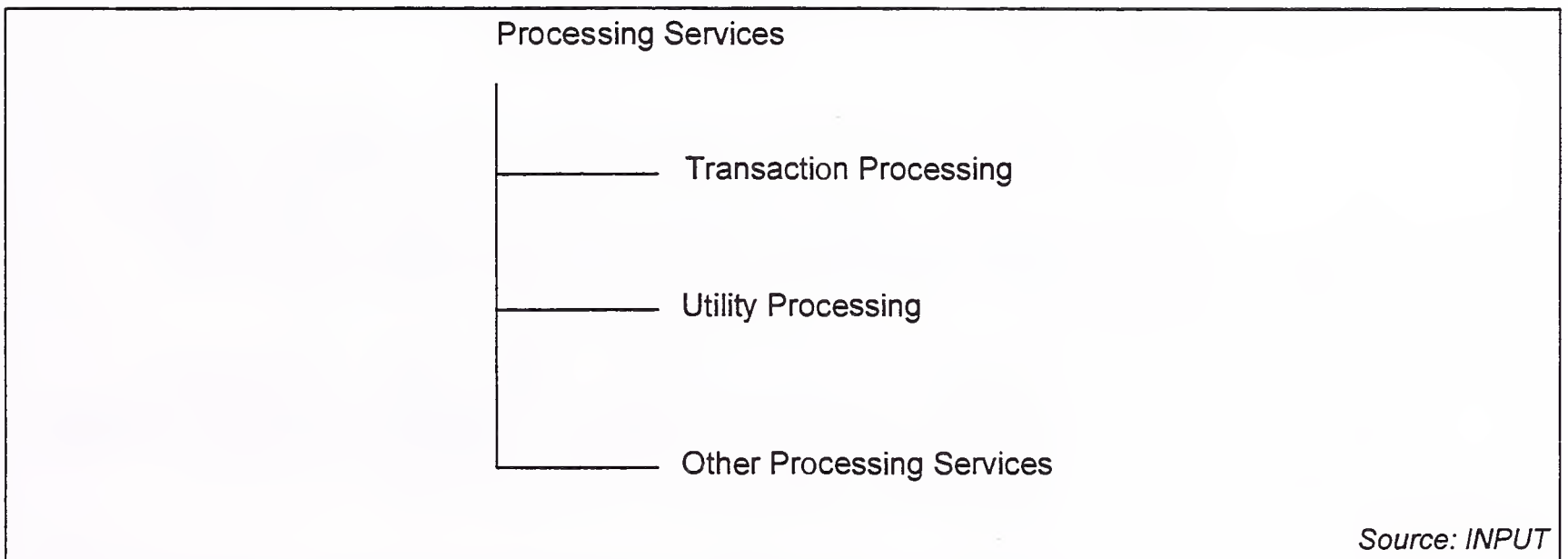
3. Processing Services

This delivery mode includes three submodes: transaction processing, utility processing, and "other" processing services. (See Exhibit G-6)

- *Transaction Processing* — Client uses vendor-provided information systems — including hardware, software and/or data networks — at the vendor site or customer site to process specific applications and update client databases. The application software is typically provided by the vendor

- *Utility Processing* — Vendor provides basic software tools (language compilers, assemblers, DBMSs, graphics packages, mathematical models, scientific library routines, etc.), enabling clients to develop and/or operate their own programs or process data on the vendor's system

- *Other Processing Services* — Vendor provides service — usually at the vendor site — such as scanning and other data entry services, laser printing, computer output microfilm (COM), CD preparation and other data output services, backup and disaster recovery, etc.

4. Systems Operations

Systems operations as a delivery mode was introduced in the 1990 Market Analysis and Systems Operations programmes. Previously called Facilities Management, this delivery mode was created by taking the Systems Operations submode out of both Processing Services and Professional Services. Since 1992 the submodes have been defined as follows.

Systems operations involves the operation and management of all or a significant part of the client's information systems functions under a long-term contract. These services can be provided in either of four distinct submodes where the difference is whether the support of applications, as well as data centre operations, is included.

- *Platform systems operations* — The vendor manages and operates the computer systems, to perform the client's business functions, without taking responsibility for the client's application systems

- *Applications systems operations* — The vendor manages and operates the computer systems to perform the client's business functions, and is also responsible for maintaining, or developing and maintaining, the client's application systems

- *Network Management* — The vendor assumes responsibility for operating and managing the client's data communications systems. This may also include the voice communications of the client. A network management outsourcing contract may include only the management services or the full costs of the communications services and equipment plus the management services

- *Desktop Services* — The vendor assumes responsibility for the deployment, maintenance and connectivity among the personal computers and/or workstations in the client organisation. The services may also include performing the help-desk function. Equipment as well as services can be part of a desktop services outsourcing contract.

    Note: This type of client service can also be provided through traditional professional services where the contractual criteria of outsourcing are not present.

Systems operations vendors now provide a wide variety of services in support of existing information systems. The vendor can plan, control, provide, operate, maintain and manage any or all components of the client's information systems environment (equipment, networks, applications systems), either at the client's site or the vendor's site.

    Note: In the federal government market, systems operation services are also defined by equipment ownership with the terms "COCO" (Contractor-Owned, Contractor-Operated), and "GOCO" (Government-Owned, Contractor-Operated).

5. Systems Integration (SI)

Systems integration is a vendor service that provides a complete solution to an information system, networking or automation development requirement through the custom selection and implementation of a variety of information system products and services. A systems integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price. (Refer to Exhibit G-7).
The components of a systems integration project are the following:

- *Equipment* — information processing and communications 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* — pre-packaged applications and systems software products

- *Professional services* — 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, program/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 G-7

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

- Program/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

Source: INPUT

6. Professional Services

This category includes four submodes: consulting, education and training, software development and applications management. Exhibit G-8 provides additional detail.

- *Consulting:* Services include management consulting (related to information systems), information systems reengineering, information systems consulting, feasibility analysis and cost-effectiveness studies and project management assistance. Services may be related to any aspect of the information system, including equipment, software, networks and systems operations

- *Education and Training:* Services that provide training and education or the development of training materials related to information systems and services for the information systems professional and the user, including computer-aided instruction, computer-based education and vendor instruction of user personnel in operations, design, programming, and documentation. Education and training provided by school systems is not included. General education and training products are included as a cross-industry market sector

- *Software Development:* Services include user requirements definition, systems design, contract programming, documentation, and implementation of software performed on a custom basis. Conversion and maintenance services are also included.

Applications Management: The vendor has full responsibility for maintaining and upgrading some or all of the application systems that a client uses to support business operations and may develop and implement new application systems for the client.

An applications management contract differs from traditional software development in the form of the client/vendor relationship. Under traditional software development services the relationship is project based. Under applications management it is time and function based.

These services may be provided in combination or separately from platform systems operations.

Exhibit G-8

Professional Services Market Structure

```
                          ┌──────────────────────┐
                          │ Professional Services │
                          └──────────────────────┘
```

Applications Management *

- Applications Maintenance
- Applications Development
- Application Support

Software Development/ Maintenance

- User Requirements Definition
- Systems Design
- Systems Conversion
- Database Design
- Programming
- Testing
- System Modification
- Documentation/ Technical Writing
- Network Development
- Other

Consulting *

- Installation Planning
- Network Planning and Design
- Information Systems Audit
- IS Planning
- IS Security/Audit
- System Evaluation
- Systems Evaluation
- IS Personnel Planning
- Systems Analysis
- IS Policies and Procedures Development
- Project Management
- Other

Education & Training

- Computer Operations Training
- IS Management Training
- Analyst/Programmer Training
- Systems Use Training
- Video Instruction
- Other

* Related to computer systems, topics or issues

** Vendor assumes full responsibility on contracted longer term basis

Source: INPUT

7. Network Services

Network services are a variety of telecommunications-based functions and operations. Network service includes two submodes, as shown in Exhibit G-9.

Exhibit G-9

Network Services Market Structure

```
                    ┌─────────────────────┐
                    │   Network Services   │
                    └─────────────────────┘
              ┌───────────────┴───────────────┐
  ┌─────────────────────┐          ┌─────────────────────┐
  │ Network Applications │          │ Electronic Information│
  │      Services        │          │      Services         │
  └─────────────────────┘          └─────────────────────┘
```

— Value-added Neworks (VANs)

- Packet Swtiching
- Store and Forward

— Electronic Data
Interchange (EDI)

— Electronic Information Interchange

- Electronic Mail
- Bulletin Boards

— On-Line Databases

— On-Line News (text) Services

— Other

Source: INPUT
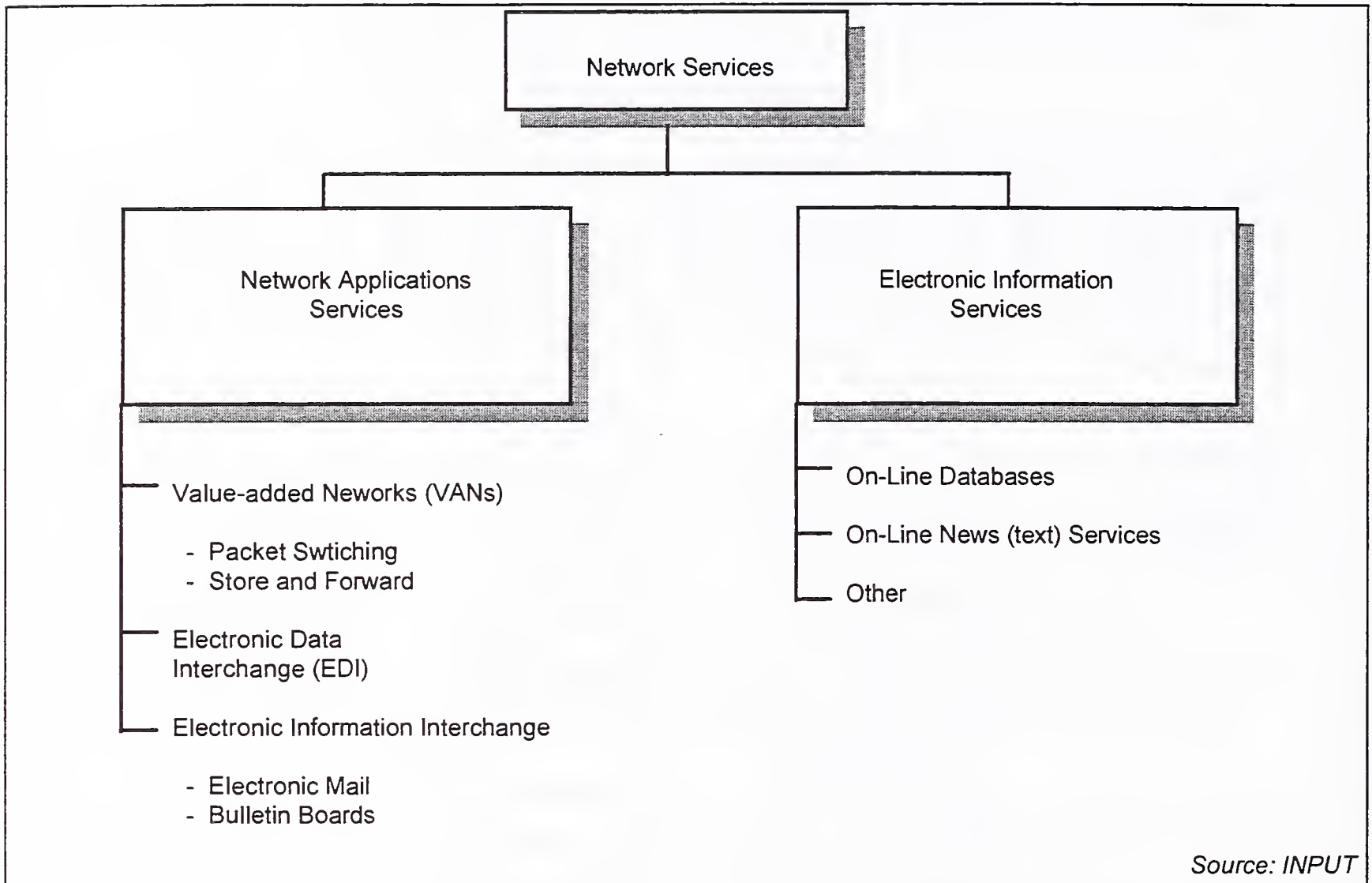
a. Electronic Information Services

Electronic information services are databases that provide specific information via terminal or computer-based inquiry, including items such as stock prices, legal precedents, economic indicators, periodical literature, medical diagnosis, airline schedules, automobile valuations, etc. The terminals used may be computers themselves, such as communications servers or personal computers.

Users inquire into and extract information from the databases. They may load extracted data into their own computer systems; the vendor does not provide data processing or manipulation capability as part of the electronic information service and users cannot update the vendor's databases. However, the vendor may offer other services (network applications or processing services) that do offer processing or manipulation capability.

The two kinds of electronic information services are:

On-line Databases — Structured, primarily numerical data on economic and demographic trends, financial instruments, companies, products, materials, etc.

- Unstructured, primarily textual information on people, companies, events, etc. These are often news services.

While electronic information services have traditionally been delivered via networks, there is a growing trend toward the use of CD ROM optical disks to support or supplant on-line services, and these optical disk-based systems are included in the definition of this delivery mode.

b. Network Applications

Value-Added Network Services (VAN Services) — VAN services are enhanced transport services which involve adding such functions as automatic error detection and correction, protocol conversion, and store-and-forward message switching to the provision of basic network circuits.

While VAN services were originally provided only by specialised VAN carriers (Tymnet, Telenet, etc.), today these services are also offered by traditional common carriers (AT&T, BT, Sprint, etc.). Meanwhile, the VAN carriers have also branched into the traditional common carriers' markets and are offering unenhanced basic network circuits as well.

Electronic Data Interchange (EDI) — Application-to-application electronic exchange of business data between trade partners or facilitators using a telecommunications network.

Electronic Information Interchange — The transmission of messages across an electronic network managed by a services vendor, including electronic mail, voice mail, voice messaging and access to Telex, TWX, and other messaging services. This also includes bulletin board services.

8. Equipment Services

The equipment services delivery mode includes two submodes. Both deal with the support and maintenance of computer equipment:

- *Equipment Maintenance* — Services provided to repair, diagnose problems and provide preventive maintenance both on-site and off-site for computer equipment. The costs of parts, media and other supplies are excluded. These services are typically provided on a contract basis

Environmental Services — Composed of equipment and data centre related special services such as cabling, air conditioning and power supply, equipment relocation and similar services.

D

Computer Equipment

These definitions have been included to provide the basis for market segmentation in the software products markets.

- *Computer Equipment* — Includes all computer and telecommunications equipment that can be separately acquired with or without installation by the vendor and not acquired as part of an integrated system. Unless otherwise noted in an INPUT forecast, computer equipment is only included where it is part of the purchase of services or software products (e.g., turnkey systems and systems integration)

- *Peripherals* — Includes all input, output, communications, and storage devices (other than main memory) that can be channel connected to a processor, and generally cannot be included in other categories such as terminals

- *Input Devices* — Includes keyboards, numeric pads, card readers, light pens and track balls, tape readers, position and motion sensors, and analogue-to-digital converters

- *Output Devices* — Includes printers, CRTs, projection television screens, micro graphics processors, digital graphics, and plotters

- *Communication Devices* — Includes modem, encryption equipment, special interfaces, and error control

- *Storage Devices* — Includes magnetic tape (reel, cartridge, and cassette), floppy and hard disks, solid state (integrated circuits), and bubble and optical memories

- *Computer Systems* — Includes all processors from personal computers to supercomputers. Computer systems may require type- or model-unique operating software to be functional, but this category excludes applications software and peripheral devices and processors or CPUs not provided as part of an integrated (turnkey) system

- *Personal computers* — Smaller computers using 8-, 16-, or 32-bit computer technology. Generally designed to sit on a desktop and are portable for individual use. Price generally less than $5,000

- *Workstations* — High-performance, desktop, single-user computers often employing Reduced Instruction Set Computing (RISC). Workstations provide integrated, high-speed, local network-based services such as database access, file storage and back-up, remote communications, and peripheral support. These products usually cost from $5,000 to $15,000

- *Minicomputer or midsize computers* — Minicomputers are generally priced from $15,000 to $350,000. Many of the emerging client/server computers are in this category

- *Mainframe or large computers* — Traditional mainframe and supercomputers costing more than $350,000

- *Client/server computing* — Client/server is an architecture that assembles applications software and databases, systems software, and computer and networking equipment into a usable form for the purpose of leveraging information technology investments.

Broadly defined, it can include any kind of server, such as file servers and network servers, that are accessed by any kind of client, including a non-intelligent terminal. INPUT has elected to use the narrower and newer definition, by which application and data processing is shared between a client and a server. It is through the act of sharing that the greatest benefit is derived in terms of leveraging information technology investments. It is also the cause of the greatest change for vendors and users.

E
Sector Definitions

1. Industry Sector Definitions

INPUT structures the information services market into industry sectors such as process manufacturing, insurance, transportation, etc. The definitions of these sectors are based on the 1987 revision of the Standard Industrial Classification (SIC) code system. The specific industries (and their SIC codes) included under these industry sectors are detailed in Exhibit G-10.

INPUT includes all delivery modes except systems software products and equipment services in industry market sectors. See Exhibit G-9 and section E-3 (Delivery Mode Reporting by Sector).

Note: SIC code 88 is Personal Households. INPUT does not currently analyse or forecast information services in this market sector.

2. Cross-Industry Sector Definitions

INPUT has identified seven cross-industry market sectors. These sectors or markets involve multi-industry applications such as human resource systems, accounting systems, etc.

- In order to be included in an industry sector, the service or product delivered must be specific to that sector only. If a service or product is used in more than one industry sector, it is counted as cross-industry

- INPUT only includes the turnkey systems, applications software products, and transaction processing services in the cross-industry sectors.

Exhibit G-10

Industry Sector Definitions

Industry Sector	SIC Code	Description
Discrete Manufacturing	23xx	Apparel and other finished products
	25xx	Furniture and fixtures
	27xx	Printing, publishing and allied industries
	31xx	Leather and leather products
	34xx	Fabricated metal products, except machinery and transportation equipment
	35xx	Industrial and commercial machinery and computer equipment
	36xx	Electronic and other electrical equipment and components, except computer equipment
	37xx	Transportation equipment
	38xx	Instruments; photo/med/optical goods; watches/clocks
	39xx	Miscellaneous manufacturing industry
Process Manufacturing	10xx	Metal mining
	12xx	Coal mining
	13xx	Oil and gas extraction
	14xx	Mining/quarrying non-metalic minerals
	20xx	Food and kindred products
	21xx	Tobacco products
	22xx	Textile mill products
	24xx	Lumber and wood products, except furniture
	26xx	Paper and allied products
	28xx	Chemicals and allied products
	29xx	Petroleum refining and related industries
	30xx	Rubber and miscellaneous plastic products
	32xx	Stone, clay, glass and concrete products
	33xx	Primary metal industries
Transportation Services	40xx	Railroad transport
	41xx	Public transit/transport
	42xx	Motor freight transport/warehousing
	43xx	US Postal services
	44xx	Water transportation
	45xx	Air transportation (including airline resevation services in 4512)
	46xx	Pipelines, except natural gas
	47xx	Transportation services (including 472x, arrangement of passenger transportation)
Telecommunications	48xx	Communications
Utilities	49xx	Electric, gas and sanitary services

Exhibit G-10
(Cont'd)

Industry Sector Definitions (Cont'd)

Industry Sector	SIC Code	Description
Retail Distribution	52xx 53xx 54xx 55xx 56xx 57xx 58xx 59xx	Building materials General merchandise stores Food stores Automotive dealers, gas stations Apparel and accessory stores Home furniture, furnishings and accessory stores Eating and drinking places Miscellaneous retail
Wholesale Distribution	50xx 51xx	Wholesale trade–durable goods Wholesale trade–non-durable goods
Banking and Finance	60xx 61xx 62xx 67xx	Depository institutions Non-depository credit institutions security and commodity brokers, dealers, exchanges and services Holding and other investment offices
Insurance	63xx 64xx	Insurance carriers Insurance agents, brokers and services
Health Services	80xx	Health services
Education	82xx	Educational services
Business Services	65xx 70xx 72xx 73xx 7389x	Real estate Hotels, rooming houses, camps and other lodging places Personal services Business services (except hotel reservation services in 7389) Hotel reservation services
	75xx 76xx	Automotive repair, services and parking Miscellaneous repair services
	78xx 79xx 81xx	Motion pictures Amusement and recreation services Legal services
	83xx 84xx 87xx 89xx	Social services Museums, art galleries and botanical/zoological gardens membership organisations Engineering, accounting, research, management and related services Miscellaneous services

Exhibit G-10
(Cont'd)

Industry Sector Definitions (Cont'd)

Industry Sector	SIC Code	Description
Federal Government	9xxx	
State and Local Government	9xxx	
Miscellaneous Industries	01xx	Agricultural production – crops
	02xx	Agricultural production – livestock/animals
	07xx	Agricultural services
	08xx	Forestry
	09xx	Fishing, hunting and trapping
	15xx	Building construction – general contractors, operative builders
	16xx	Heavy construction – contractors
	17xx	Construction – special trade contractors

Source: INPUT

The seven cross-industry markets are:

Accounting — consists of applications software products and information services that serve such functions as:

- General ledger
- Financial management
- Accounts payable
- Accounts receivable
- Billing/invoicing
- Fixed assets
- International accounting
- Purchasing
- Taxation
- Financial consolidation.

Excluded are accounting products and services directed to a specific industry, such as tax processing services for CPAs and accountants within the business services industry sector.

Human Resources — consists of application solutions purchased by multiple industry sectors to serve the functions of human resources

management and payroll. Examples of specific applications within these two major functions are:

- Employee relations

- Benefits administration

- Government compliance

- Manpower planning

- Compensation administration

- Applicant tracking

- Position control

- Payroll processing.

Education and Training — consists of education and training for information systems professionals and users of information systems delivered as a software product, turnkey system or through processing services. The market for computer-based training tools for the training of any employee on any subject is also included.

Office Systems consists of the following six categories:

Integrated Office Systems (IOSs) — IOSs integrate the applications that perform common office tasks. Typically these tasks include the following core applications, all of which are accessed from the same terminal, microcomputer or workstation:

- Electronic mail

- Decision support systems

- Time management

- Filing systems.

IOSs enable office workers to utilise applications that are resident on a number of hosts or servers, thus creating a corporate communication environment through integrating line-of-business software with personal software productivity tools. IOSs capitalise on the cross-platform architectures of major vendors. Major hardware vendors such as IBM, Data General, Digital, Hewlett-Packard and NCR all offer IOSs.

Work flow and groupware products are also included within the IOS definition.

Word Processing — Word processing is the most common microcomputer application and is a basic application within the office systems sector. Word processing addresses several levels of functionality, from the production of simple correspondence to large document generation where many people within different departments have input.

Desktop Publishing (DTP) — Desktop publishing refers to the page-design software programs that allow small and mid-sized organisations to publish printed documents (brochures, catalogues, newsletters, reports, etc.) from the desktop. The primary functions of DPT software include the manipulation of the following functions:

- Layout and design of columns

- Text manipulation (font type)

- Graphic manipulation

- Print Control (colour type, paper type).

Electronic Publishing — Electronic publishing includes composition, printing, and editing software for documents containing multiple typefaces and graphics including charts, diagrams, computer-aided design (CAD) drawings, line art, and photographs. Electronic publishing products may also have different data formats such as text, graphs, images, voice and video.

The fundamental difference between electronic publishing and desktop publishing is that electronic publishing encompasses a method of document management and control from a single point regardless of how many authors/locations work on a document. Desktop publishing (DTP) on the other hand, is considered a personal productivity tool and is generally a lower-end product residing on a personal computer.

Graphics — Graphics packages that are used for presentations or freehand drawings and/or are ancillary to desktop publishing are part of office systems. Thus, the graphics component of office systems sector includes the following elements:

- Presentation graphics represent the bulk of office systems graphics. Most presentations involve a combination of graphs and text. They are used to communicate a series of messages to an audience rather than to analyse data

- Paint and line art drawing programs are used for illustrations while page layout programs are used to integrate text and graphics

- Electronic form programs allow users to create and print forms in-house. Some applications work with OCR scanners allowing users to scan pictures and logos directly on the forms.

Document Imaging Software — The software that allows users to manipulate (store, retrieve, print) images that have been scanned from paper documents. The applications that imaging software generates include full text retrieval, document management, and database management. Document imaging software is a component of an imaging system. Hardware components of imaging systems include scanners, image servers, workstations, optical drives, printers, and storage devices.

Engineering and Scientific encompasses the following applications:

– Computer-aided design and engineering (CAD and CAE)

– Structural analysis

– Statistics/mathematics/operations research

– Mapping/GIS.

- Computer-aided manufacturing (CAM) or CAD that is integrated with CAM is excluded from the cross-industry sector as it is specific to the manufacturing industries. CAD or CAE that is dedicated to integrated circuit design is also excluded because it is specific to the semiconductor industry.

Planning and Analysis consists of software products and information services in four application areas:

– Executive Information Systems (EIS)

– Financial modelling or planning systems

– Spreadsheets

– Project management.

Other encompasses marketing/sales and electronic publishing application solutions such as:

– Sales analysis

– Marketing management

– Demographic market planning models.

3. Delivery Mode Reporting by Sector

This section describes how the delivery mode forecasts relate to the market sector forecasts. Exhibit G-11 summarises the relationships.

- *Processing services* — The transaction processing services submode is forecasted for each industry and cross-industry market sector. The utility and other processing services submodes are forecasted in total for the general market sector

- *Turnkey systems* — Turnkey systems is forecasted for the 15 industry and 7 cross-industry sectors. Each component of turnkey systems is forecasted in each sector

- *Applications software products* — The applications software products delivery mode is forecasted for the 15 industry and 7 cross-industry sectors. In addition, each forecast is broken down by platform level: mainframe, minicomputer and workstation/PC

- *Systems operations* — Each of the systems operations submodes is forecasted for each of the 15 industry sectors

- *Systems integration* — Systems integration and each of the components of systems integration are forecasted for each of the 15 industry sectors

- *Professional services* — Professional services and each of the submodes is forecasted for each of the 15 industry sectors

- *Network services* — The network applications submode of network services forecasted for each of the 15 industry sectors.

Industry and cross-industry electronic information services are forecast in relevant market sectors. The remainder of electronic information services is forecasted in total for the general market sector.

- *Systems software products* — Systems software products and its submodes are forecasted in total for the general market sector. Each submode forecast is broken down by platform level: mainframe, minicomputer and workstation/PC

- *Equipment services* — Equipment services and its submodes are forecasted in total in the general market sectors.

Exhibit G-11

Delivery Mode versus Market Sector Forecast Content

Delivery Mode	Submode	Market Sectors		
		Industry Sectors	Cross-Industry Sectors	General
Processing Services	Transaction Utility Other	X	X	X X
Turnkey Systems		X	X	
Applications Software Products		X	X	
Systems Operations	Platform Applications	X X		
Systems Integration		X		
Professional Services		X		
Network Services	Network Applications Electronic Information Services	X X		X
Systems Software Products				X
Equipment Services				X

Source: INPUT

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G-34