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European Business Integration Market 1995 – Competitive Analysis

Business Integration Programme — Europe

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European Business Integration Market 1995 – Competitive Analysis

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Abstract

The European market for the development and integration of large scale, mission-critical business systems, a strategically important area for IT services vendors, is presently undergoing significant change.

The emergence of new technologies, new approaches to integration projects and new competitors, coupled with increasing commercial pressures, are producing major challenges for Business Integration (BI) services suppliers.

BI vendors, faced with increasing concentration of supply and the search for sustainable profit margins, are having to examine many of the fundamentals of their existing business models.

This report, complementary to *Systems Integration Market - Europe, 1995 - 2000*, which examined many of the key business issues and drivers affecting organisations that BI vendors offer services to, and focuses on the vendor community (i.e. the supply side of the supply/demand equation) by:

- Describing the major challenges facing BI vendors
- Examining how leading BI organisations are attempting to position themselves to meet both present and future market demands
- Providing estimates of the revenues of leading BI vendors at a European level, and for 16 individual European country markets. For each country top 10 vendor rankings are provided for each of the three sub-delivery modes within the BI Market, Systems Integration, Turnkey Systems and Professional Services.

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I

Introduction

A Objectives

The European Business Integration market, which covers $40 billion of vendor revenues, has grown healthily since the European economy came out of recession in 1993.

However, the nature of competition has changed and is continuing to change significantly. Vendors are increasingly faced with the pressing need not only to respond to these changes but more importantly to *initiate* change in order to remain competitive.

Vendors who understand the parameters, drivers and dynamics of change and can sense the likely shape of the industry over the coming years will be those best placed to successfully frame winning approaches to this strategically important marketplace.

Major change in the BI marketplace can be characterised in terms of:

- Increasing customer requirements
- A move to focus on *business* metrics
- A growing separation between *solution*-based and *platform*-based competition
- The increasing dominance of *full service* providers
- The imperative of Service Differentiation
- Increasing commercial pressures.

This report monitors trends in the Business Integration market, an area important due to the fact that it accounts for:

- Almost 40% of the overall European software and services market
- Is one of the main market segments in which mission critical IT and business systems are delivered to large, blue chip European organisations.

These trends include:

- The emergence of value-based contracting
- The entry of new players from outside of the traditional Business Integration marketplace
- A market undergoing simultaneous concentration and fragmentation.

B
Scope

This report covers the European Business Integration market. Business Integration, as defined by INPUT, is a "meta" term which reflects the increasingly embedded role technology plays in business processes.

From the point of view of tracking vendor's Business Integration revenues, this meta term has three delivery sub-modes, Systems Integration, Turnkey Systems and Professional services.

This report provides qualitative and quantitative analysis covering all three delivery modes which are described in detail below.

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 function, on schedule and at the contracted price.

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* — prepackaged 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, programme/project management, design and integration, software development, education and training, documentation and systems operations and maintenance

- *Other services* — most systems integration contracts include other services and product expenditures that are not classified elsewhere. This category includes miscellaneous items such as engineering services, automation equipment, computer supplies, business support services and supplies and other items required for a smooth development effort.

Exhibit I-1

Products/Services in Systems Integration Projects

Equipment

- Information systems
- Communications

Software Products

- Systems software
- Applications software

Professional Services

- Consulting
  - Feasibility and trade-off studies
  - Selection of equipment, network and software
- 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

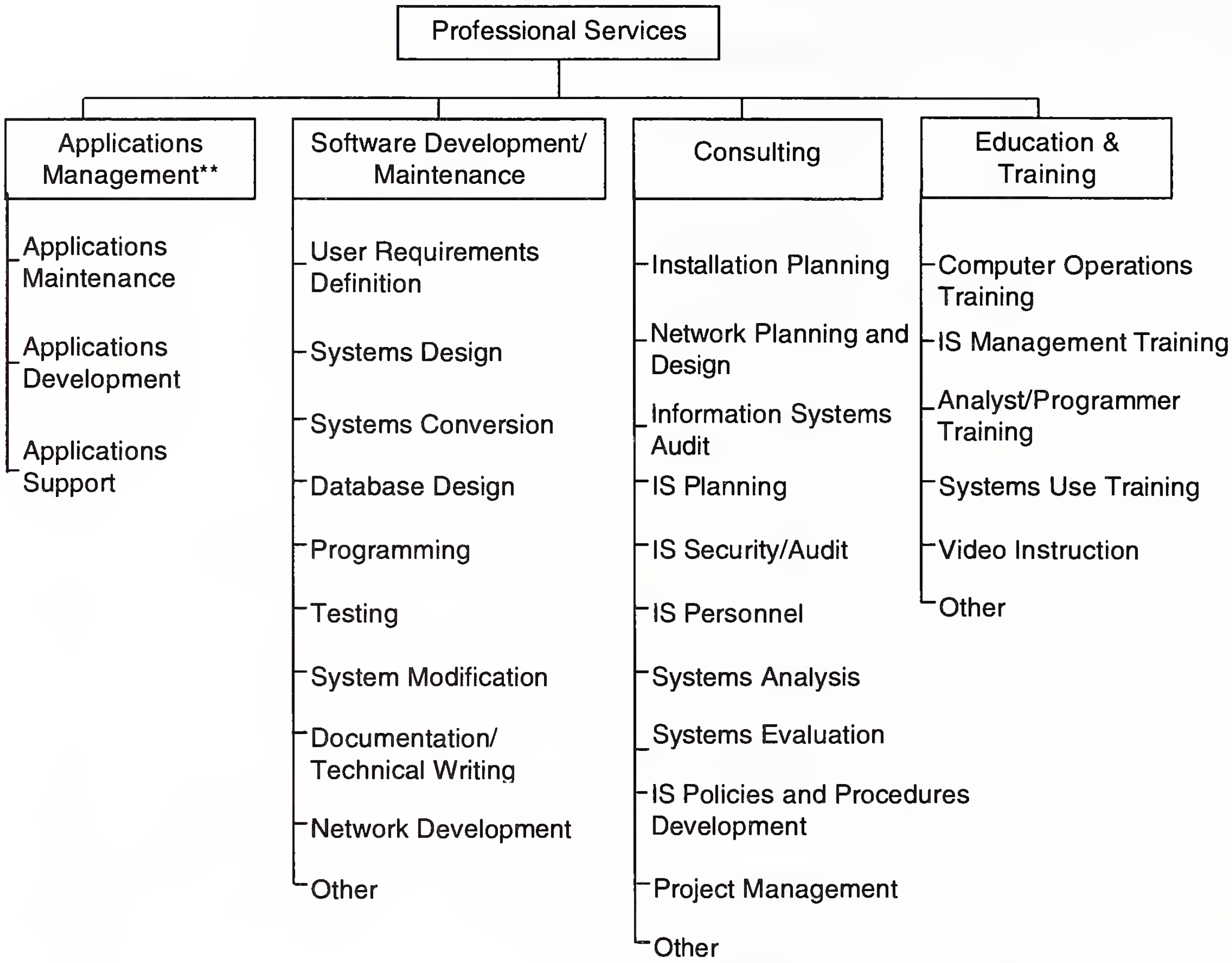
Other Miscellaneous Products/Services

- Site preparation
- Data processing supplies
- Processing/network services
- Data/voice communication services

Source: INPUT

Exhibit I-2

Professional Services Market Structure



*Related to computer systems, topics or issues

**Vendor assumes full responsibility on contracted longer-term basis

Source: INPUT

Professional Services

This category includes four submodes: consulting, education and training, software development, and applications management.

- 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 as regards 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.

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.

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, proven control systems, or embedded computer systems for military applications.

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.

C
Methodology

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

- Continuing discussions with leading systems integration, professional services and turnkey systems vendors whose market share accounts for 70% of the European BI marketplace

- Information supplied by the Business Integration units of vendors in response to a questionnaire

- INPUT's continuous tracking and analysis of the computer software and services market.

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

D
Report Structure

Chapter II consists of the Executive Overview which is a survey of the key findings of the study.

Chapter III provides an analysis of the major trends and developments in the supply side (i.e. within the vendor community) of the European Business Integration marketplace. It presents an overview of the competitive landscape derived from continuing discussions with leading vendors and financial details obtained from these vendors via a structured questionnaire sent to vendors in mid 1995.

Chapter IV provides a snapshot of 15 of the leading vendors in the European marketplace and presents their systems integration (the high end, most strategic segment of the overall BI marketplace) revenues by geographical market.

Chapters V gives country market rankings of the leading BI vendors in the three delivery sub-modes of systems integration, professional services and turnkey systems respectively.

Appendix A explains INPUT's definition of Business Integration and the concepts behind this definition.

Appendix B provides Business Integration vendor rankings in US dollars.

Appendix C provides similar details in ECUs.

Appendix D provides the questionnaire sent to 67 leading European Business Integration vendors.

E
Related Reports

- Systems Integration Market Europe, 1995– 2000
- The Impact of BPR on Systems Integration, 1995
- The European Business Integration Marketplace 1995
- Multimedia; Implications for Business Integrators, 1994

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II

Executive Overview

A
Market Experiencing Simultaneous Concentration and Fragmentation

The business of developing and integrating large scale, *business*-critical, systems is a key area of strategic focus for IT vendors.

INPUT describes this as the Business Integration (BI) market as it places emphasis on the *integration* of IT systems into the *business* environment.

The European BI marketplace is currently witnessing upheaval as vendors attempt simultaneously respond to and initiate change to meet the challenges they face from increasingly demanding user organisations.

The strategic choices vendors are having to make are becoming more stark and clearly articulated, whilst at the same time the range of options open to vendors is becoming more limited. This trend is even more discernible as clear groupings of market positioning emerge.

Increasingly competitive conditions, coupled with new market entrants, primarily driven by the commercial impact of technological *convergence*, are ensuring that the search for sustainable profitable marketplace differentiation has become crucial.

The European BI market, and the sub-modes of which it is comprised, is currently in a period in which a two-tier marketplace is merging. Vendors able to respond to the increasingly competitive commercial pressures are becoming separated and differentiated in the marketplace's perception, from those finding marketplace conditions increasingly arduous.

Those vendors emerging in the top tier are also strenuously developing creative new approaches to service delivery and the marketing of their capabilities which will see them extend their leadership over the course of the late 1990's.

Beneath this increasing concentration of leading vendors the marketplace is extremely fragmented, and becoming more so as vendors attempt, in the face of pan-European, broad-based, major service players, to redefine competitive domains appropriate to their skill sets, geographical coverage, vertical market experience and, perhaps most importantly, their financial resources.

Exhibits II-1, II-2, and II-3, list the leading vendors in the three BI sub modes of systems integration, professional services, and turnkey systems, respectively. Exhibit II-4 compares the growth rates of the three modes.

Exhibit II-1

Leading Systems Integration Vendors, Europe 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	21	994
2	Andersen Consulting	10	474
3	Groupe Bull	8	370
4	Cap Gemini Sogeti	7	342
5	ICL	6	260

Source: INPUT

Exhibit II-2

Leading Professional Services Vendors, Europe 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	5.3	1240
2	Cap Gemini Sogeti	3.9	900
3	Finsiel	2.7	620
4	Digital	2.1	500
5	Andersen Consulting	1.9	435

Source: INPUT

Exhibit II-3

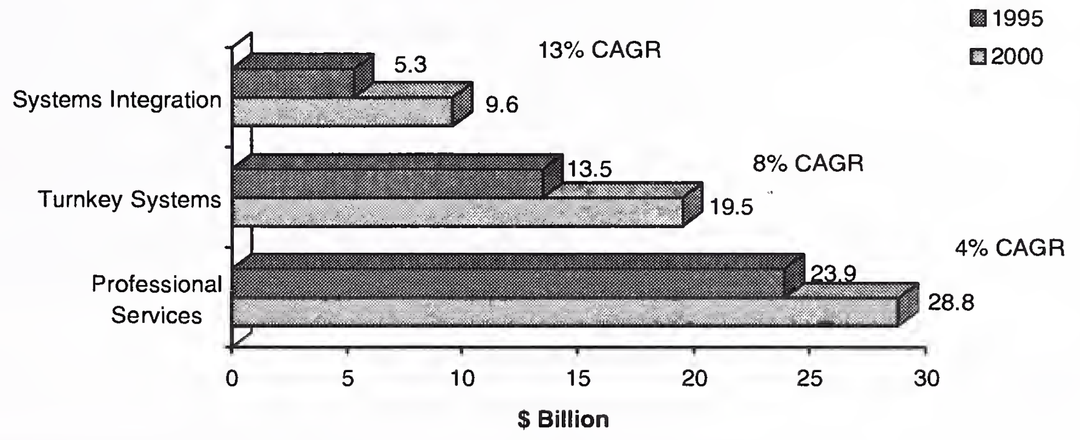
Leading Turnkey Systems Vendors, Europe 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Siemens Nixdorf	4.5	580
2	IBM	2.1	275
3	Digital	2.0	260
4	Intergraph	1.9	240
5	Olivetti	1.2	150

Source: INPUT

Exhibit II-4

Comparison of Business Integration Sub-mode Growth Rates, Europe 1995-2000



Source: INPUT

Exhibit II-5 details the defining characteristics of changing competition in the marketplace; the altering landscape which vendors have to navigate across includes:

- *Marketing Competitive Differentiation* — Many vendors are increasingly engaged in the process of attempting to distinguish themselves from their competitors in the marketplace by trying to rise above the amorphous mass of service provision. Services marketing has traditionally been a haphazard, unscientific exercise, and it is still an extremely immature and unrefined discipline in comparison with product-based marketing within the IT industry, let alone with marketing in other industry sectors. Leading vendors are attempting, to change this and in some cases they have succeeded.

- *Integrating Business Solutions or Technology* — Vendors are increasingly being forced to choose between focusing their service offering around a *solutions*-or *technology*-based approach. Some vendors who, over the last three years attempted to become solutions-based providers, offering services ranging from strategic consulting to maintenance services, have withdrawn from this modus operandi, after experiencing many difficulties. These vendors are now refocusing on technology-or platform-based service offerings.

- *Altering Critical Success Factors* — The critical success factors for BI vendors are changing as conditions in the marketplace themselves change.

Exhibit II-5

Changing Characteristics of BI Marketplace Competition

- Vendors establish differentiated, premium positions
- Services consolidate around "solutions" and "technology" based delivery
- Critical success factors themselves changing

Source: INPUT

B

Vendors Establish Differentiated Premium Positions

One of the key dilemmas BI vendors have faced over the last five years has been the difficulty of differentiating their service offering from that of their competitors in the marketplace.

This has proved especially hard for those vendors with an equipment, rather than a pure services, background; with no physical items to represent or illustrate, marketing propositions have been vague, seductive, but ultimately icing rather than cake.

This has led to a situation in which not only are marketing messages confused and valueless but more dangerously in which vendors own marketing capabilities have been discredited within their own overall organisation.

Exhibit II-6 is an example of a vendor's key marketing differentiation; this chart **does** actually represent a particular BI vendor; however, it could in reality be **any** vendor.

This problem, it should be noted, is not purely the preserve of the IT services industry; accountants, lawyers, chartered surveyors and consultants have also struggled with many of these same issues.

Exhibit II-6

Vendor Marketing

Vendor X's Differentiators

People, Processes, Technology

- Leader in client/server technology
- Commitment to knowledge transfer
- Senior level consultants
- Problem solving approach
- Direct access to advance technology

Source: INPUT

However, the marketplace is beginning to witness renewed and more successful attempts by a number of leading vendors to successfully establish differentiated marketing propositions and positions.

Chief among the means by which vendors have undertaken this step has been the development of the concept of delivering IT systems to business metrics aligned to the concept of *delivering value* rather than purely *containing cost.*

Vendors such as EDS and Andersen Consulting have been extremely vocal in pushing the message that they are now contracting to deliver IT projects to non-IT metrics rather than traditional IT ones based on functional requirements aligned to a fixed development term or price.

Other vendors have expressed scepticism towards these developments seeing enormous complication in defining and isolating specific measurable metrics which can be used to judge the long-term success or failure of a contract.

Whilst this of course is true, the ability to engage a potential customer's senior executives in discussion about the contribution technology can make to an organisation in terms of value rather than purely cost **is** giving certain vendors an edge in the marketplace's consideration of service providers.

The development of the concept of "value-delivery" is part of this process of creating a differentiated, premium position and the attempt to move a vendor up the value chain of positioning, pricing, and profitability, away from pure IT-based systems integration, in which margins are under intense pressure.

Value-based pricing, emerging as the next level of sophistication in the delivery of integration and development services, will not replace other forms of contracting but will play an important part in attracting and potentially seducing major user organisations.

C

Service Offerings Consolidate Around Solutions or Technologies

Two of the most prominent competitive positions which vendors have adopted in the marketplace over the last year have been around being regarded as “solution-based” or “technological/platform-based” service providers.

This has been forced by the realisation that sustaining a full service, broad-based, solutions approach requires extremely broad skill sets, geographical coverage, and marketing and financial resources.

This has evidently become too demanding for all but the largest, most well resourced vendors.

The solutions-based approach, predicated on the concepts of delivering value, communicating in business rather than technology terms, and relegating technology to mere appendices in proposals, was perhaps the chosen marketing stance of most, if not, all vendors in the early part of the 1990’s.

It has become clear, however, that only a few vendors are continuing to drive down this particular strategic route.

Many vendors such as DEC and Sema Group have now refocused their market offering around a small number of key vertical markets and platforms. Of course, within this movement these vendors have retained much of the language of the broader, solutions-based approach, but it is clear that they are no longer attempting to compete head-to-head in all parts of the marketplace with the largest of the pan-European solutions-based services vendors.

Exhibit II-7 positions a number of leading vendors against these diverging strategic approaches.

Exhibit II-7

Vendor Concentration Around "Solutions" and "Technology Based" Service Delivery

Solutions Based	Technology/Platform Based
• EDS	• DEC
• A/C	• SNI
• ICL	• Intergraph

Source: INPUT

The mistake many vendors, and indeed commentators, have made is to regard the platform/technology-based approach.

There has been a perception that not to be able to play at the broad-based approach was in some ways an illustration of a weakened position. This perception was, of course, largely instrumental in driving vendors to attempt to proffer full service provision in the first place.

What has become evident, however, over the last year is that competition need not be judged purely against broad macro market parameters. Vendors such as HP have been extremely successful within tightly defined target market areas.

By refusing to be drawn into competition outside of areas of their key capabilities they have established world-class, highly profitable competitive domains where they are regarded by the marketplace as a key player.

By defining these areas, then going into the marketplace to partner with other vendors, both full-service and platform-based, they have established a model approach to BI marketplace competition.

HP's success, noted by many other vendors, has become a benchmark by which other vendors are attempting to restructure their own service offering.

Full-service, broad-based, solutions-driven services provision will essentially dominate the high-end area of the marketplace, with vendors operating at this level demonstrating leadership in its many facets, but the BI marketplace is of sufficient size to support many other operational models.

Vendors should be wary of attempting to be dragged down inappropriate competitive channels.

D
Changing Critical Success Factors

Service providers who succeed in establishing successful, profitable domains in this period of change will be extremely well placed for the medium term, whilst those who do not will increasingly find competitive conditions severe. In short, big winners and big losers are emerging against a background of increasing underlying risk in the industry, due to a mixture of the complexity of systems requirements and increasing competition.

To benefit from the enormous opportunities that do exist service providers need to act with vision, timing, leadership and careful risk analysis, whilst continuing to keep the needs of their customers to the forefront of their agenda.

The European BI marketplace faces the constant threat of commoditisation which, while in many ways good for the customer, continually threatens the service offerings of vendors. This dynamic forces vendors to unceasingly reinvent themselves as higher added-value providers firstly just to remain as competitive as they presently are (i.e. other are undergoing this process), and secondly to attempt to achieve market leadership.

Michael Porter's famous dictum, shown in Exhibit II-8, is particularly appropriate; if you are not expanding into other spaces, others will expand into your space. There are a number of aggressive players presently operational in the marketplace who have this creed uppermost in their strategic plans at present. Of course in addition, higher added services attract higher added fees and profit.

Exhibit II-8

Key Dynamic of BI Competition

"Protect and expand core business through account control"

Source: Michael Porter

Conversely, vendors face a situation in which customers are increasingly offered choice, though the growth of competition. This situation threatens to create an environment of decreasing customer loyalty, in which long-term account control is hard to achieve and in which a customer, if not fully satisfied, is able to switch service provider with considerable ease. The adoption of standard technologies is facilitating this dynamic whilst at the same time, intense competition is forcing down prices, putting significant pressures on margins and squeezing out the inefficient.

Exhibit II-9 illustrates five of the key critical success factors that vendors should be addressing as the BI marketplace continues to develop over the next three to five years.

Exhibit II-9

Key Success Factors for European BI Vendor

- Strategic choice of competitive domain
- Emphasis of focused marketing
- Price competitiveness
- Speed of responsiveness
- Reinvention of service capability

Source: INPUT

Competitive Domains — Vendors will need to demonstrate to the marketplace clear coherent visions of where they will compete; an unfocused, entrepreneurial, all-things-to-all-people approach, is increasingly becoming untenable. The BI marketplace provides enough opportunity for a wide variety of different players; however, vendors must choose where they want and are able to play, rather than be forced there through circumstance.

Focused Marketing — Vendors must skillfully communicate these visions to potential customers illustrating the world-class qualities they are able to bring to these *selected* competitive domains.

Price Competitiveness — Successful vendors will be those able to deliver their world-class capabilities and service offerings at competitive costs, allied to creating value rather than primarily containing cost for their customers. Broad solutions-based vendors must deliver competitive costing through critical mass, whilst dynamic niche players need to focus on premier customer service.

Market Responsiveness — A vendor's ability to respond and react to the needs of the marketplace and deliver more quickly than its competitors will be crucial to an oganisation's success. The increasingly fierce conditions of marketplace competition ensure that the European BI marketplace will not be a place for the hesitant or the faint-hearted.

Credible Reinvention of Capability — Service vendors face a period of unprecedented change and turmoil but a period of great opportunity in which they must face the pressing need to become purely customer-driven. Vendors must move from being technology organisations to customer services organisations, aiming to deliver business options rather than technological possibilities.

However, this reinvention must appear, indeed be, logical, strategic, achievable and driven by the needs of the marketplace. The market is awash with examples of vendors horizontally or vertically extending their reach into areas where they are clearly unable to add value to their customer base.

During change, those vendors who are able to outpace the marketplace, understand the relationship between risk and reward and re-invent themselves credibly will establish market leadership for the medium term.

III

Competitive Landscape of the European Business Integration Marketplace

A
Characterising Competition in Business Integration

The European Business Integration (BI) marketplace is presently in a period of transition in which many of the key dynamics which vendors, purchasers and commentators have understood and come to regard as fixed are undergoing considerable change.

Increasing concentration of supply, the search for sustainable profit margins, over-capacity in various sub-sectors, and new market entrants are altering the competitive climate in the marketplace.

The BI market is dominated by an increasingly distinct "breakaway" group of vendors in which only eight companies have revenues above the overall marketplace average.

This breakaway group are being forced head-to-head in the most aggressive and strategic part of the marketplace, systems integration, which although the smallest element of this combined marketplace is the fire in which the shape of overall competition is currently being forged

Below this level, the marketplace, contrary to some opinion, is extremely fragmented with only 10 companies having over 1% market share. Even the leading players, such as IBM, CGS, EDS and Andersen Consulting, only possess low, single-figure market shares.

Although the BI industry is some way from maturity and penetration levels comparable to the US market, the strategic choices vendors must make to compete successfully have become more stark, clearly articulated, but in some ways more limited, as clear groupings of competitive positioning have emerged over the last year to meet the growing requirements of demanding users. Success in the coming period will offer BI vendors a clear differentiation opportunity in the marketplace.

Clearly, the three different sub-modes within Business Integration have differing characteristics and competitive dynamics; for example, at a European level, the top 10 suppliers have 85% of the $4.7 bn "systems integration market" while within the $11 bn "turnkey systems market" the top ten suppliers only capture 17% of the market.

However, certain key characteristics are common to all three delivery modes and will undoubtedly have a significant effect on competition at all levels of this $40 billion marketplace. Exhibit III-1 lists a number of these key characteristics.

Exhibit III-1

Characteristics Common to all Three Business Integration Delivery Sub-Modes

- Partnering relationships
- Skills transfer
- Project management
- Development methodologies

Source: INPUT

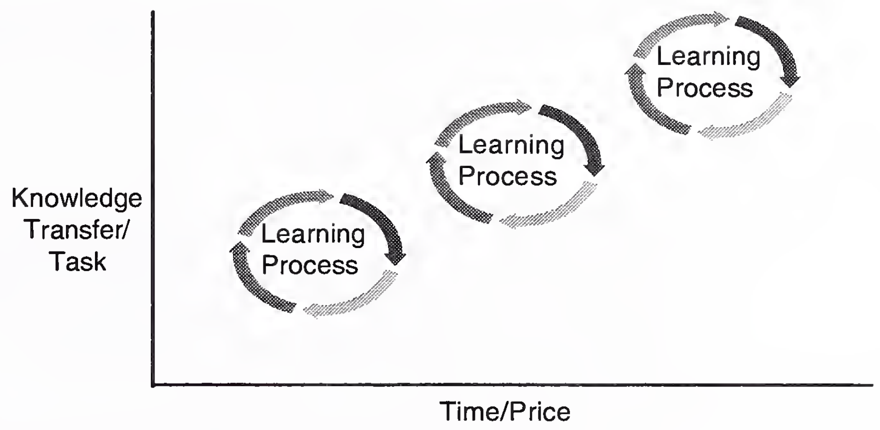
Perhaps most importantly amongst these will be the development of long-term, partnering-type relationships in which vendors move from an adversarial business model to one in which skills transfer, joint problem ownership and resolution, and shared long term goals are the order of the day.

Underpinning these themes will be first-class competencies in project management and development methodologies; these will be key to vendors' ability to operate profitably when entering into large, increasingly fixed-price contracts.

Exhibit III-2 illustrates the theoretical challenges and benefits of moving up the competitive “value-chain” into this new relationship-based paradigm of competition.

Exhibit III-2

Changing Client/Supplier Relationship



Source: INPUT

B
Choices Between Horizontal Coverage and Vertical Depth

One of the most critical issues for BI vendors has been meeting the dynamics of specialisation and internationalisation; a dynamic driven by the organisations BI vendors attempt to serve.

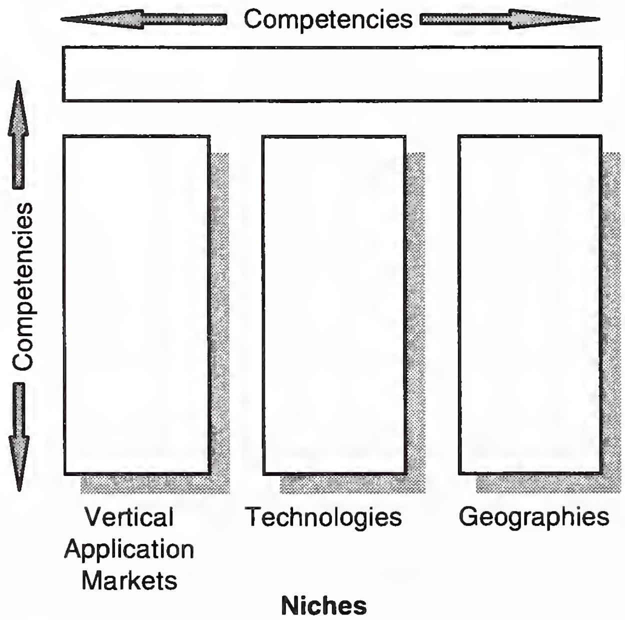
Exhibit III-3 provides a mapping of the commercial territory BI vendors face in attempting to serve the European marketplace. This mapping is analogous to the "T" model of management consultancy service offerings; breadth aligned to depth.

Large multi-national corporations, the primary target market for BI vendors, are having to compete against international benchmarks of performance where it is no longer an operational objective to be a strong player, in whatever field, by local standards.

Local benchmarks of performance have been supplanted by international benchmarks. Banks aim to be "world-class banks", airlines "world-class" airlines, oil companies "world-class oil companies".

Exhibit III-3

Mapping of BI Competitive Landscape



- International coverage
- Solutions based delivery
- Business metric driven
- Consultancy led services

Source: INPUT

This drive for world-class performance as a result of commercial pressures in increasingly deregulated, time-sensitive, globally competitive, technologically-rich environments, is leading corporations to seek the same capabilities which they themselves have to offer in order to compete.

Organisations seek "best of breed" across all territories and time-zones and this is resulting in the demand for standardised and compatible solutions, packages, applications, platforms, and services and the elimination of cost through economies of scale wherever possible.

The maturing evident in the BI marketplace, driven by increased user sophistication and expectation, has resulted in growing demands from purchasers that vendors demonstrate and almost guarantee not only that a project will come in on budget and time, but that there will be measurable value in business terms from the deliverable.

To meet increasing customer requirements, vendors are enhancing their traditional areas of competence to fulfill demand for either specialised expertise or a "one-stop" service delivery approach. One approach vendors which are adopting is to forward-or backward-integrate via acquisitions or alliances in order to broaden skill sets.

However, whilst this classic "T" model of the management consultancy market, broad coverage aligned to depth in skill sets, is becoming more applicable to Business Integration services delivery, at the same time, ironically the mainstream consultancies are finding it increasingly difficult to successfully operate this "T" model.

The problems "big six" consultancies have had in bridging strategy and implementation has left a gap in the market which vendors such as EDS and CSC are attempting to fill.

Coupled with these dynamics, there is also a clear movement away from custom development project delivery and towards "commodity" product integration. These projects utilise stable and proven lower-cost packaged software rather than high-risk custom-developed software and require a smaller, but more skilled number of programmers.

R/3, though obviously requiring tailoring in implementation, is one of the major "packaged applications" clearly finding significant favour amongst users at present.

Packaged application software will grow from representing 19% of the overall contract to 33% and clearly represents a major shift in systems development and utilisation. It is one that has significant implications for vendors' strategic positioning over the medium term.

The far from straight forward challenge for all integration and development services vendors, but felt especially keenly by the mid sized, in the main local market focused vendors, will be to develop offerings around the major packaged software applications such as R/3 and Oracle Financials as the demand for these services grows and while the demand for their custom software development skills declines rapidly.

As the market for this the R/3 style approach matures vendors will increasingly be under pressure to develop viable marketplace competitive differentiators.

Vendors will face difficult decisions in choosing which packages to center their offerings around, how to gain and retain access to the relevant skill sets, and how to offer competitive pricing strategies against the large pan-European, established professional services vendors, able to discount more aggressively, and leverage a wider range of competencies and solutions-based offerings.

Standardised approaches and increasing competition will continue to erode margins and force vendors to examine and improve their delivery mechanisms to in order to be able survive profitably in this important part of the overall IT services marketplace.

Another generic issues across the BI domain is the issue of box independence which is still a key factor in vendor selection.

Even though the large systems vendors such as Groupe Bull and ICL now typically gain 15-20% of their platform revenues from integrating solutions on other equipment manufactures boxes transitioning to be perceived by the market as a business solutions or business services player will still be hindered by the user's suspicion of vendors "box agenda".

Unisys' recent "demerger" is an attempt similar to AT&T's in the broader information services marketplace, to finally establish services platform independence. Other vendors may be forced by the marketplace to consider this approach.

C

Strategic Positioning Across the BI Services Spectrum

The overall size of the BI market allows smaller competitors enormous opportunity to operate successfully and profitably in a myriad number of niches and specialisations.

The leading vendors in the overall European BI marketplace are listed in Exhibit III-4.

Exhibit III-4

Leading Business Integration Vendors, Europe 1994

Rank	Company	1994 Estimated Revenues ($ Millions)			Total BI Revenues
		Professional Services	Systems Integration	Turnkey Systems	
1	IBM	1240	994	275	2509
2	Cap Gemini Sogeti	900	342	85	1327
3	Siemens Nixdorf	350	152	580	1082
4	Digital	500	235	260	995
5	Andersen Consulting	435	474	-	909
6	ICL	400	260	-	660
7	EDS	390	250	-	640
8	Finsiel	620	-	-	620
9	Sema	400	190	-	590
10	Groupe Bull	170	370	-	540

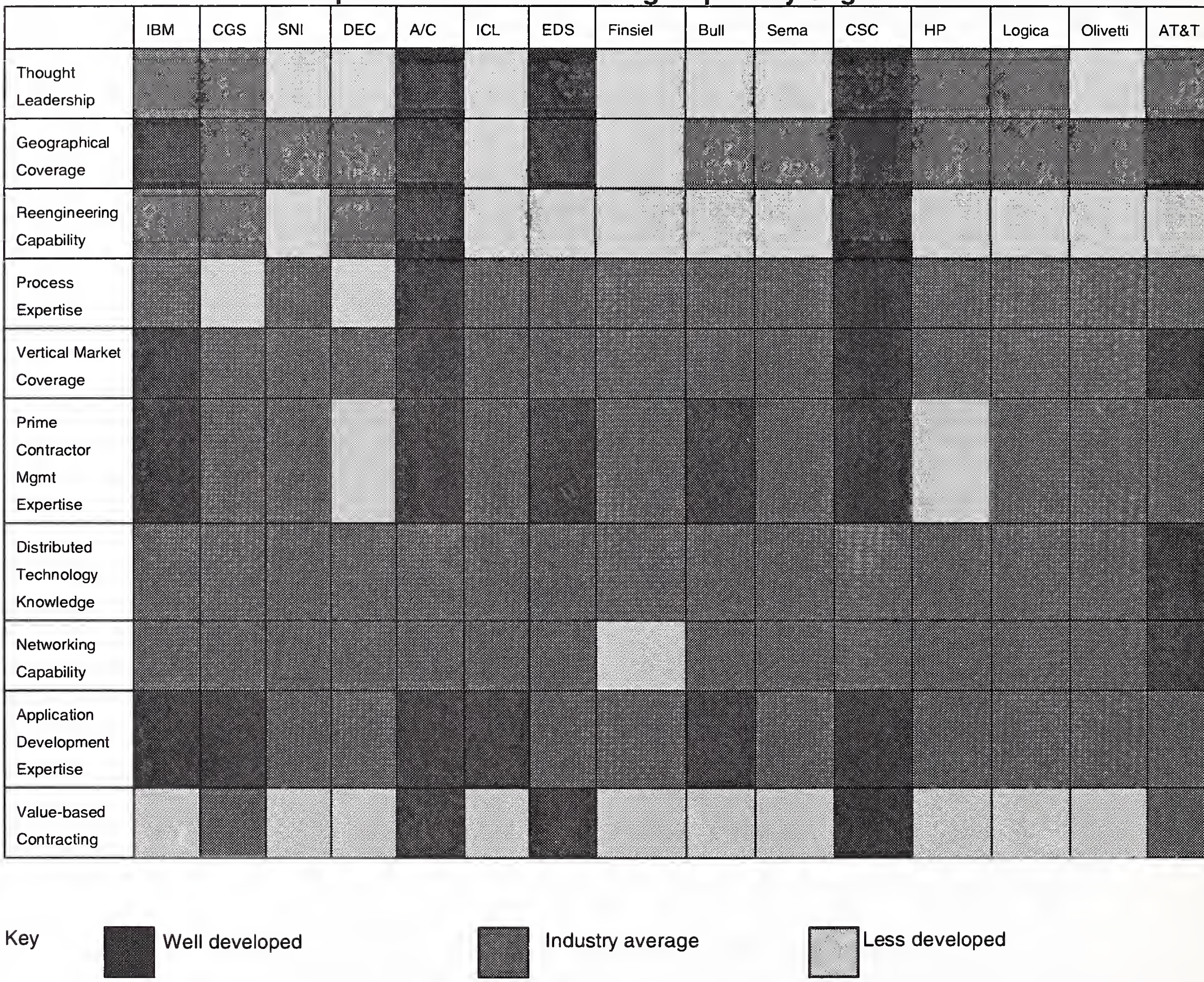
Source: INPUT

Combined revenues from the three BI delivery modes in 1994 were $40.8 billion which represents over 40% of the overall services market in Europe. The top 10 vendors represent 24% of the total BI market while the top 20 extends this to 32%. Sixty-seven companies generate significant revenues (above $3m) within the European BI marketplace.

However, will be the adoption of a clear, coherent, strategic vision of an organisation's core competitive domain crucial to operational success. Exhibit III-5 provides a schematic of the positioning of leading BI vendors' capability segmentation.

Exhibit III-5

European Vendor Positioning Capability Segmentation

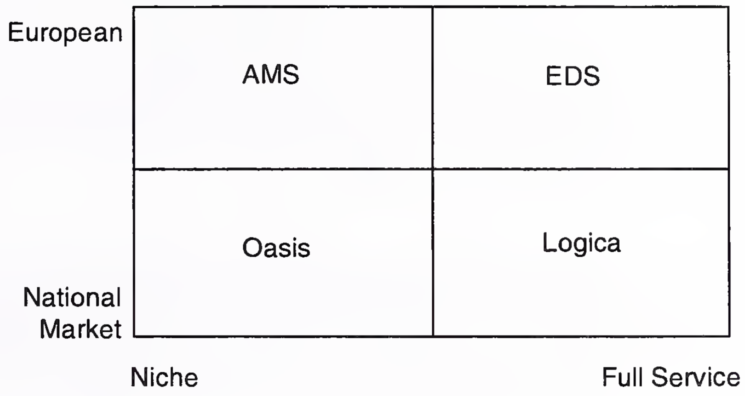


Source: INPUT

A number of market positions are emerging which provide a framework for examining the overall marketplace, are summarised in Exhibit III-6.

Exhibit III-6

BI — Market Positioning



Source: INPUT

1. Pan-European Full Service

Critical mass, of whatever offering, will become increasingly important. Although there has been a decline in the number of "mega" contracts, size will still be of crucial importance when vendors are attempting to bid for pan-European, infrastructure-based assignments.

2. Pan-European Niche

Customer, or vertical market, orientation is also becoming a more pressing requirement. The debate around vertical markets has long raged in the industry, as with many other industries, but there appears to be an increasing number of vendors who are structurally reorganising their services offering in this way at present; Digital and Sema Group are two examples.

Another is a non-geographical, but focused approach. Companies choosing to play in this way are basing their service offering on a niche capability, usually based on a software application which is applicable across national boundaries. Players in the CAD/CAM solutions market appear to be operating in this way.

3. National Market Full Service

Perhaps the most threatened position is the local territory, broad professional services-based firm. Vendors such as RAET and debis

Systemhaus through alliances have taken actions to transition themselves away from this precarious position.

4. National Market Niche

This will be a sustainable position as long as the niche grows and the services offering is first class. However, this positioning has the inherent problem of offering little protection from the vagaries of wider competition; multiple service offerings give vendors the opportunity to avoid the full effects of cyclical downturns in one particular sector, or indeed technology.

Across these three non-European positions there will an be increasing number of partnering, alliances and consortia bidding to attempt to build opportunities in non-local markets. As local markets are expanded into by international players, local players need to isolate degrees of specialisation and quality of services.

Although a large proportion of lower-end BI projects will inevitably continue to be undertaken by home market-focused vendors, those services vendors targeting large multinational accounts, of which AT&T suggest there are only 2,500 worldwide, will increasingly need to obtain access to an international infrastructure. Service companies with an international network will have more and more of a competitive advantage in contract bidding.

Vendors already operating multi-locally are attempting either to extend or optimise their international reach and or increase their degree of integration by entering into other IT segments.

Vendors who do not have the financial resources to take pro-active steps in this period of change are becoming more vulnerable to acquisition as competitive pressures increase.

D

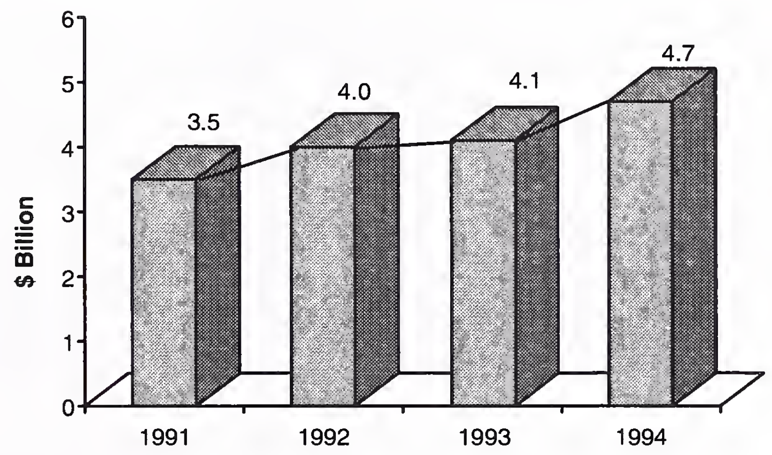
Systems Integration — Increasing Dominance of Pan-European Service Providers

At the high-value end of the BI marketplace, essentially dominated by the systems integration delivery mode, where the market for local contracts is in decline and demand is becoming increasingly international, vendors of localised, bespoke, sub-international standard services delivery are become increasingly subservient to the broader, and faster growing players and are finding it hard to compete against these growing demands.

Exhibit III-7 shows how the European Systems Integration market has grown over the last four years, and Exhibit III-8 provides a forecast of growth up until 2000.

Exhibit III-7

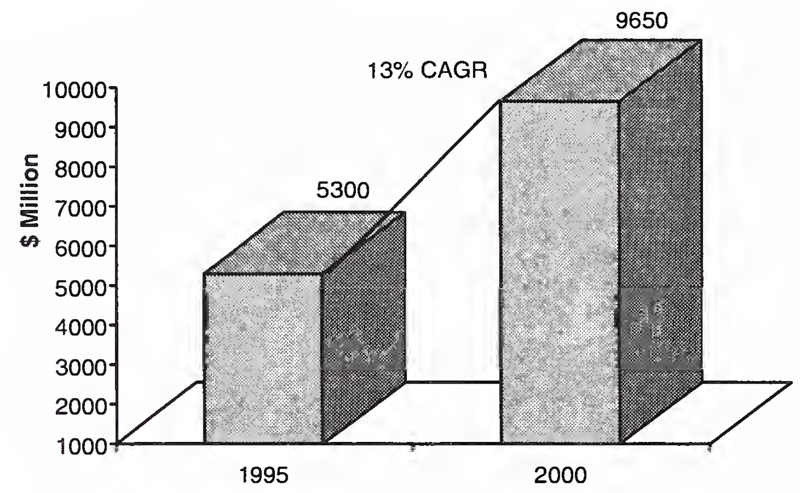
European SI Market 1991-1994



Source: INPUT

Exhibit III-8

European Systems Integration Market, 1995-2000



Source: INPUT

Large-scale integration services have become the battleground for competition between systems vendors and the large professional services firms. Systems integration has become the main channel for the delivery of mission-critical business systems into major blue chip organisations.

The large, mainly US-based, professional services firms are increasing their dominance of the overall BI market, having the competitive advantage of hardware and software independence, and the background of largely American-originated technology management best practice.

This is leading to an increasing utilisation by large multinational corporations of the pan-European capabilities of the major service vendors such as EDS, CSC, ISSC, Andersen Consulting and CGS.

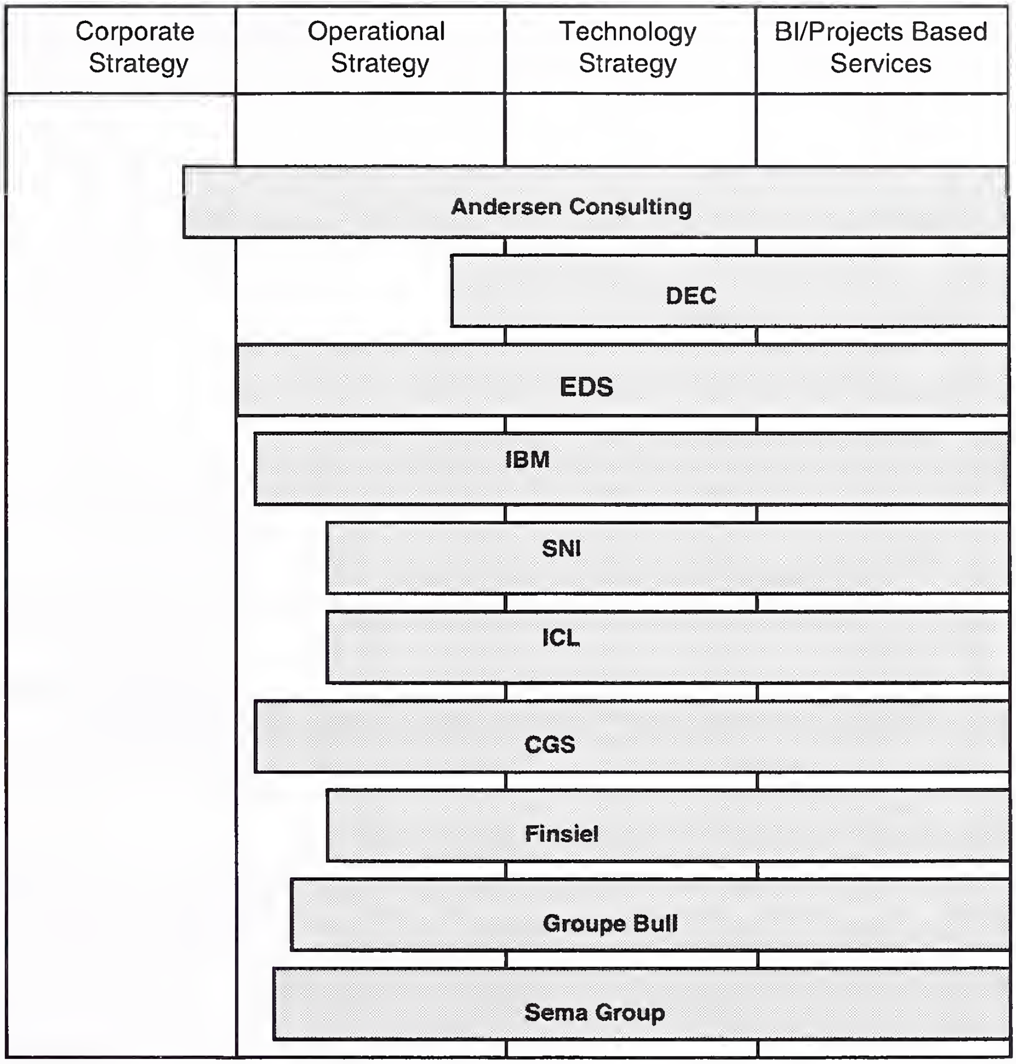
These companies, or divisions, have been able to meet the demand for international best of breed in terms of:

- Capability
- Thought leadership
- Market coverage.

At the same time these vendors have been able to assign these attributes to markets with localised sensitivities. Exhibit III-9 illustrates the services spectrum of the leading European SI vendors.

Exhibit III-9

Service Spectrum of Leading Systems Integration Vendors

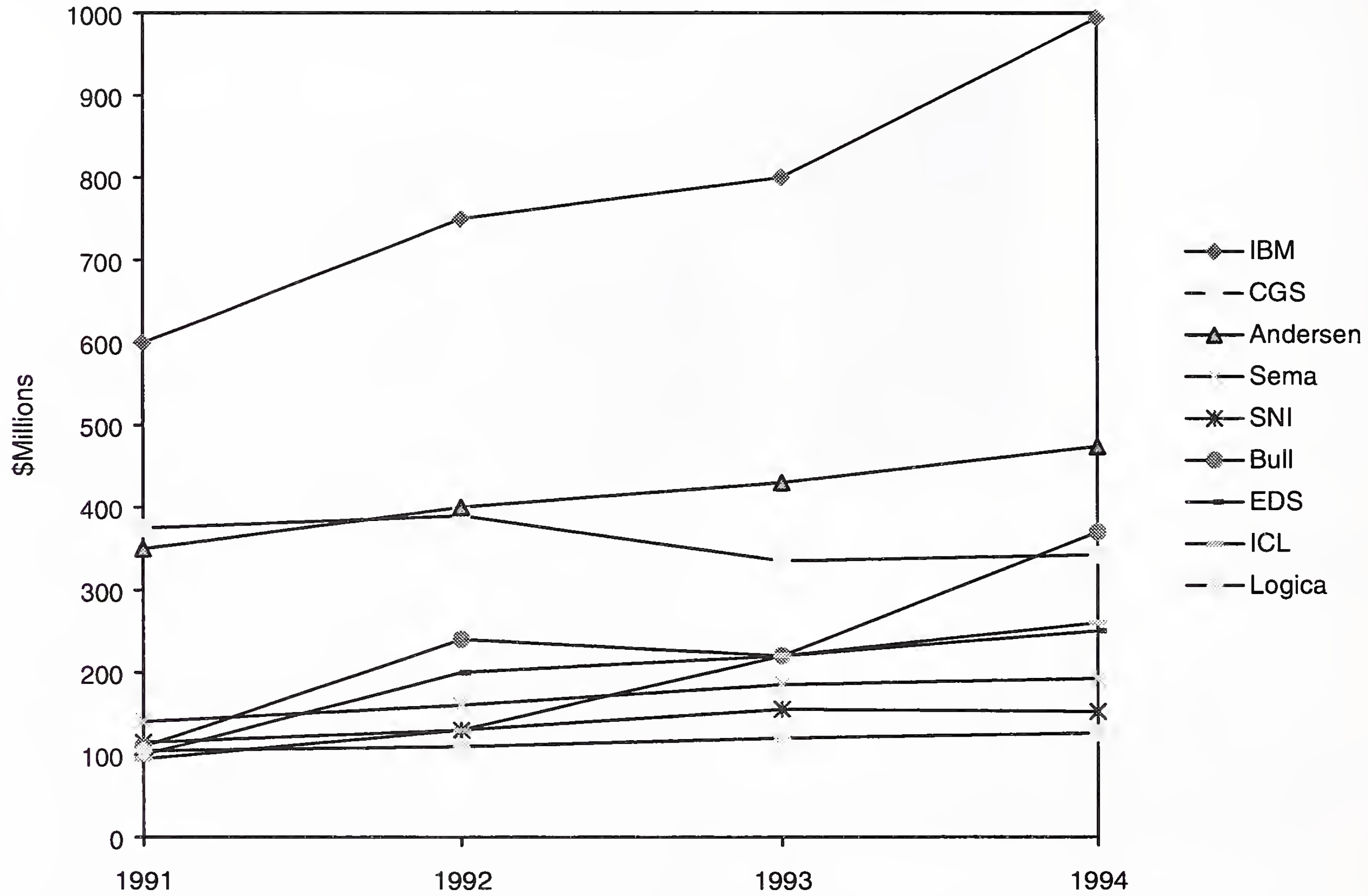


Source: INPUT

Exhibit III-10 shows the revenues of the leading SI vendors over the last four years. Exhibit III-11 lists the top ten vendors in 1994.

Exhibit III-10

Leading Systems Integration Vendors, 1991-1994



Source: INPUT

Exhibit III-11

Leading Systems Integration Vendors, Europe 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	21	994
2	Andersen Consulting	10	474
3	Groupe Bull	8	370
4	Cap Gemini Sogeti	7	342
5	ICL	6	260
6	EDS	5	250
7	DEC	5	235
8	Sema Group	4	192
9	Siemens Nixdorf	3	152
10	Logica	3	126
	Total Listed	72	3395
	Total Market	100	4700

Source: INPUT

The success of the leading vendors such as IBM, Andersen Consulting, Groupe Bull, and EDS, has opened up a significant gap in market share between themselves and the more local, one-or-two-country market players who now, with one or two notable exceptions, appear to be struggling to maintain the competitive pace.

The expertise needed for large-scale integration contracts requires both horizontal and vertical integration. At a European level, few players have the resources to be "best of breed" across the T-model spectrum.

Many vendors have therefore moved aggressively into partnering relations, alliances aimed at maximising access to expertise while minimising exposure to risk. Alliances also offer vendors extended and enhanced client base access.

However, there are a number of examples in the marketplace of organisations attempting to develop full service capabilities but finding that the strategy is awash with tactical problems.

Gresh Brebach's departure from DEC in June 1994 illustrates that the complex and often widely misunderstood issue of culture is of crucial significance in organisational transformation. Issues of culture are at the crux of all people-based businesses.

Brebach, hired in April 1993 to run DEC's worldwide systems integration and professional services business, was an extremely strong candidate to push DEC through the painful transition of becoming a predominately services orientated company.

Ex-Andersen and McKinsey, Brebach's recruitment signaled DEC's commitment of helping their clients to utilise technology for the sake of the business, rather than for the sake of utilising technology.

The fact that Brebach was unsuccessful in fulfilling his remit shows the power of ingrained culture and the difficulty of changing it, even where there is senior executive commitment.

Change in any sphere, be it operational or strategic, is a long-term exercise which brings dislocation, pain and self-doubt. Changing *culture* increases these experiences by a factor of ten.

Whether the strategy being pursued by vendors such as EDS, Amdahl and Unisys proves to be successful remains to be seen. EDS consultancy offering, now under the AT Kearney brand, will be a melting pot of management consultancy cultures for some time.

Either a hybrid EDS culture, distinct, robust and marketable, will emerge, or the differences will lead to a difficult period of internal struggle in which focus on the marketplace will be undermined and the very advantages of the exercise will be lost.

Another major dynamic in the high-end systems integration industry is the emergence of the major vendor's attempts to demonstrate IT's ability to deliver benefits on business terms, i.e. increasing an organisation's earnings per share or its market ranking. This message is fast becoming the new mantra for success in the increasingly competitive project delivery marketplace.

Vendors such as EDS and Andersen Consulting have been extremely vocal in promoting the message that they are now contracting to deliver IT projects to non-IT metrics rather than traditional IT metrics based on functional requirements aligned to a fixed development term or price.

Other vendors have expressed scepticism concerning these developments, seeing enormous complication in defining and isolating specific measurable metrics which can be used to judge the long-term success or failure of a contract. The ability to separate the causal correlations between the development of an IT system and the subsequent fortunes of a company have also been questioned.

EDS and Andersen Consulting stress that clients are increasingly looking to suppliers to suggest innovative contract approaches and that although value-based contracts only represent a small proportion of their overall contract base, a statement supported by INPUT research, it is an important "leading edge" of market development.

Exhibit III-12 shows the percentage of revenues leading vendors are presently deriving from value-based contracts. Exhibit III-13 provides a forecast of the changing proportions which value-based fixed and time-based contracts will have of the overall SI marketplace over the next five years.

Exhibit III-12

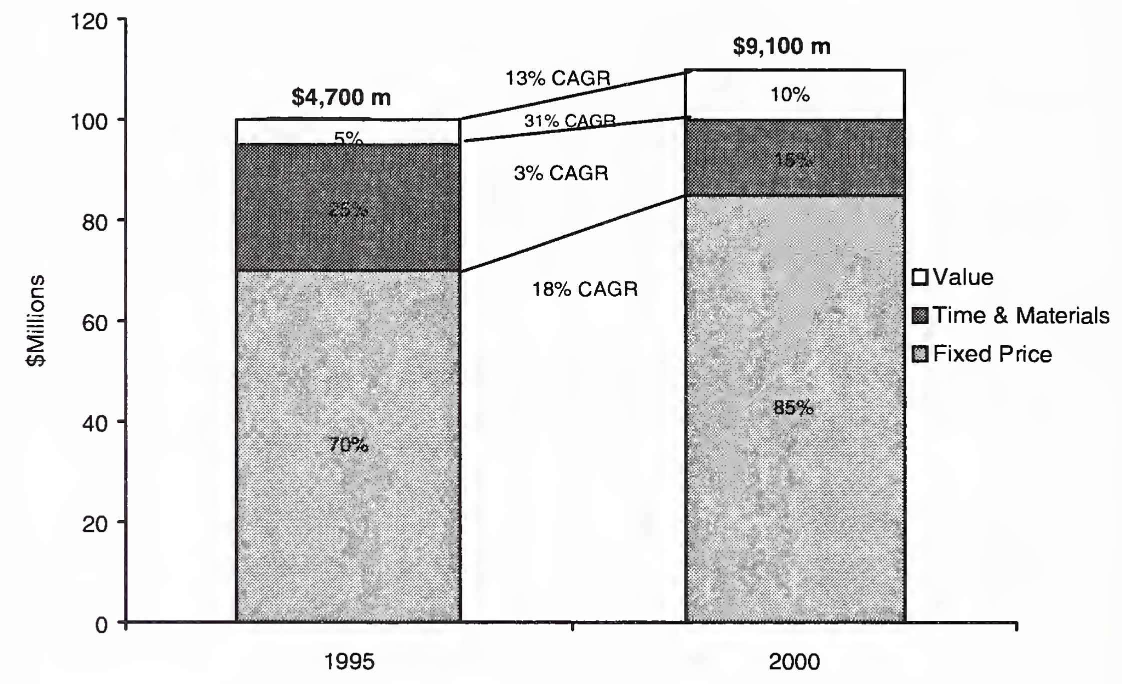
Percentage of Revenues Derived from Value-based Pricing Contracts

Vendor	*%*
Andersen Consulting	20
Cap Gemini Sogeti	15
Logica	15
EDS	10
AT&T GIS	5

Source: INPUT

Exhibit III-13

Changing Percentage of SI Contracts Derived from Different Contract Approaches



Source: INPUT

Not all vendors are driving these ideas; ICL, for example, are not currently involved in value-based contracts and do not plan to approach the marketplace in this manner.

However, the ability to engage a potential customer's senior executives in discussion about the contribution technology can make to an organisation in terms of value rather than pure cost **is** giving certain vendors an edge in the marketplace's consideration of service providers.

The development of the concept of "value-delivery" is part of the process of creating a differentiated, premium position and is an attempt to move a vendor up the value chain of positioning, pricing and profitability away from pure IT-based systems integration where margins are under intense pressure.

The development of this "value proposition" is in many ways analogous to the development over the last five years of Business Process Reengineering which may have had many detractors as a theory, has had a significant impact on the systems development and integration industry.

As in the early period of the BPR movement there are, as yet, only fragmented details about the actual structure of these types of contract; vendors are, not unsurprisingly, cautious about laying competitive details on the table. This tantalising situation plays into the hands of the doubters and sceptics.

Value-based pricing which is emerging as the next level of sophistication in the delivery of integration and development services is still, it appears, at a nascent stage.

Value-based pricing will not replace other forms of contracting but will play an important part in attracting and possibly seducing major user organisations.

E

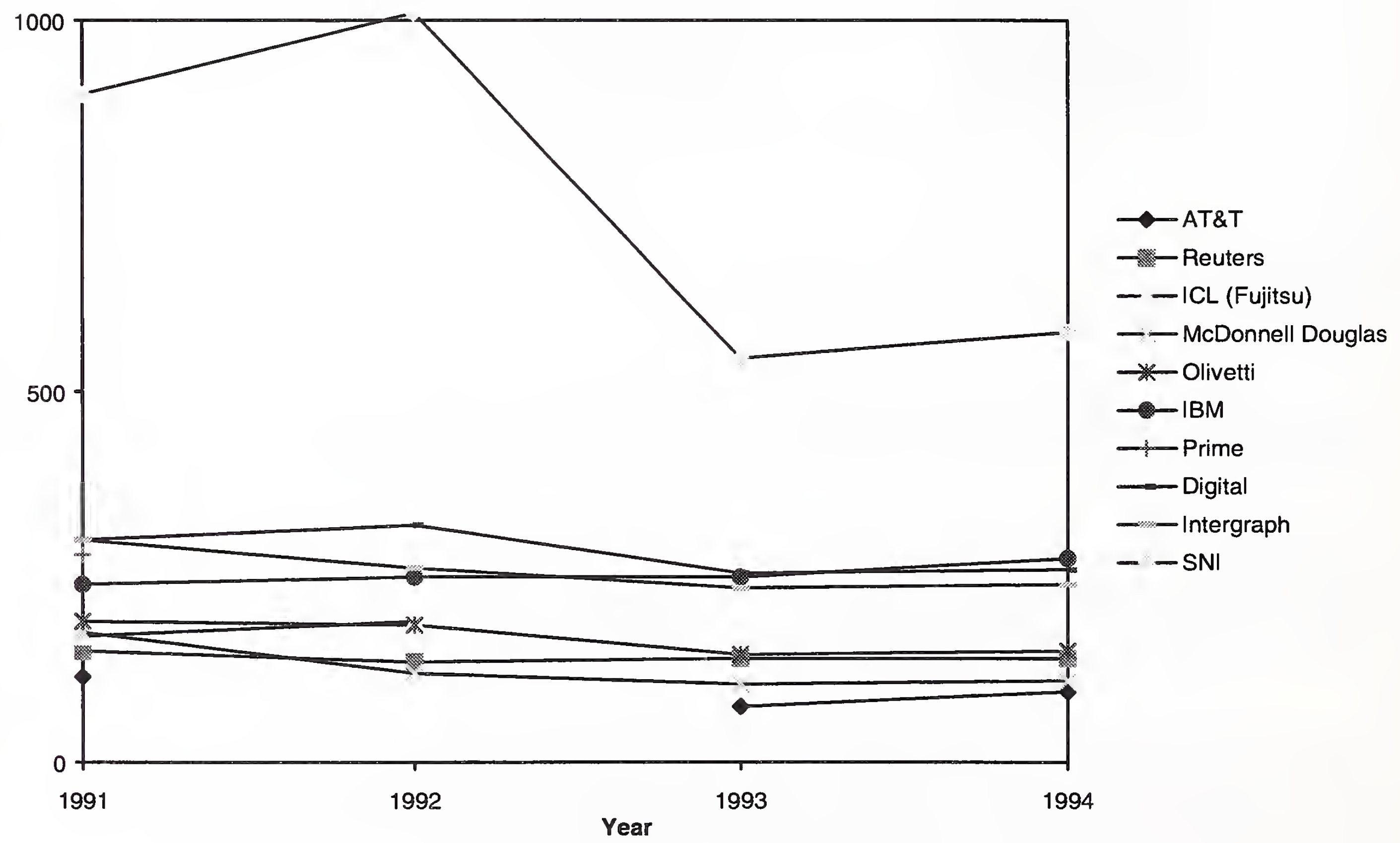
Turnkey Systems — Remaining an Attractive Proposition

The size of the overall BI market continues to generate opportunity for turnkey systems vendors away from the high-value end of the SI arena. However, vendors are increasingly faced with the question of whether a single country market, single vertical market or technology focus is a sustainable niche market position.

Exhibit III-14 illustrates the changing market shares of the leading European turnkey systems vendors over the last four years. Exhibit III-15 lists the leading vendors in 1994.

Exhibit III-14

Leading Vendors Turnkey Systems Europe 1991-1994



Source: INPUT

Exhibit III-15

Leading Turnkey Systems Vendors, Europe 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Siemens-Nixdorf	4.5	580
2	IBM	2.1	275
3	Digital	2.0	260
4	Intergraph	1.9	240
5	Olivetti	1.2	150
6	Reuters	1.1	140
7	McDonnell Douglas	0.9	110
8	Sligos	0.8	100
9	AT&T	0.7	95
10	Cap Gemini Sogeti	0.7	85
	Total Listed	15.8	2035
	Total Market	100	12890

Source: INPUT

The Turnkey Systems delivery mode, a phenomena of the minicomputer boom, is changing rapidly due to the trend towards Open systems, UNIX and Client/Server-based systems. Downsizing, a cause and an effect of the emergence of these technologies, has pushed turnkey systems down into the PC/workstation market, and the trend towards networking is now presenting the turnkey systems delivery mode with fresh opportunities.

As a result, turnkey systems which had been regarded as an antiquated delivery mode are still an important part of the overall software and services market. Indeed, there is an argument to suggest that turnkey-style development contracts will increase their proportion of the overall information services market.

Increasing demand for turnkey projects is particularly evident in organisations such as hotels, car garages and doctors' surgeries where there is a relatively low-cost/low-functional requirement, but where there is a significant opportunity for vendors to replicate a solution for a large number of organisations. This type of integration project is potentially very attractive to companies in the large small and medium sized (SME) company market.

The boundaries between this type of service solution and full systems integration are if anything becoming murkier rather than clearer. Local country market variations must also be considered when evaluating the SI and turnkey systems "markets"; for instance, a truer picture of competition in Germany is only gained by regarding the two delivery modes combined.

The competitive structure of the UK BI marketplace is less fragmented that in other European countries, such as France and Germany. Systems Integration is more widely accepted in the UK market than in other European countries, reflecting the greater degree of maturity in the UK marketplace.

The fragmented nature of the turnkey systems delivery mode, coupled with the changing cost profile of developing solutions are producing the conditions in which the "lower-end" reseller community is becoming more influential. The VAR (Value-Added-Reseller) channel is enjoying the benefits of the trend towards platform downsizing and the movement towards packaged applications software.

This is allowing these types of vendors to attempt to achieve greater cultural similarity with systems integrators, and extend their influence higher up the buying point value chain. Players such as Getronics, ComputerVision, and KT-Tietokesku are well-placed to exploit their expertise in applications-driven niches around LAN integration and client/server networking.

Medium-sized vendors are rapidly entering the standard software application integration market, where profitability currently is higher, as they face the realisation that the historical approach to systems development and delivery namely, time-based contracting, is in a slow but steady decline.

The success of many turnkey systems-based vendors is indicative of the healthy order books vendors can generate in multi-platform services through targeting niche markets and through specific market focus, rather than attempting, as many vendors have done, to develop a full-service, pan-European offering.

Segmentation of the overall BI market, beneath the level of the large pan-European full service players, will increasingly threaten vendors' attempts to gain access to the market and will require innovative approaches. The development of *long-term* client relationships will become even more important than at present.

F

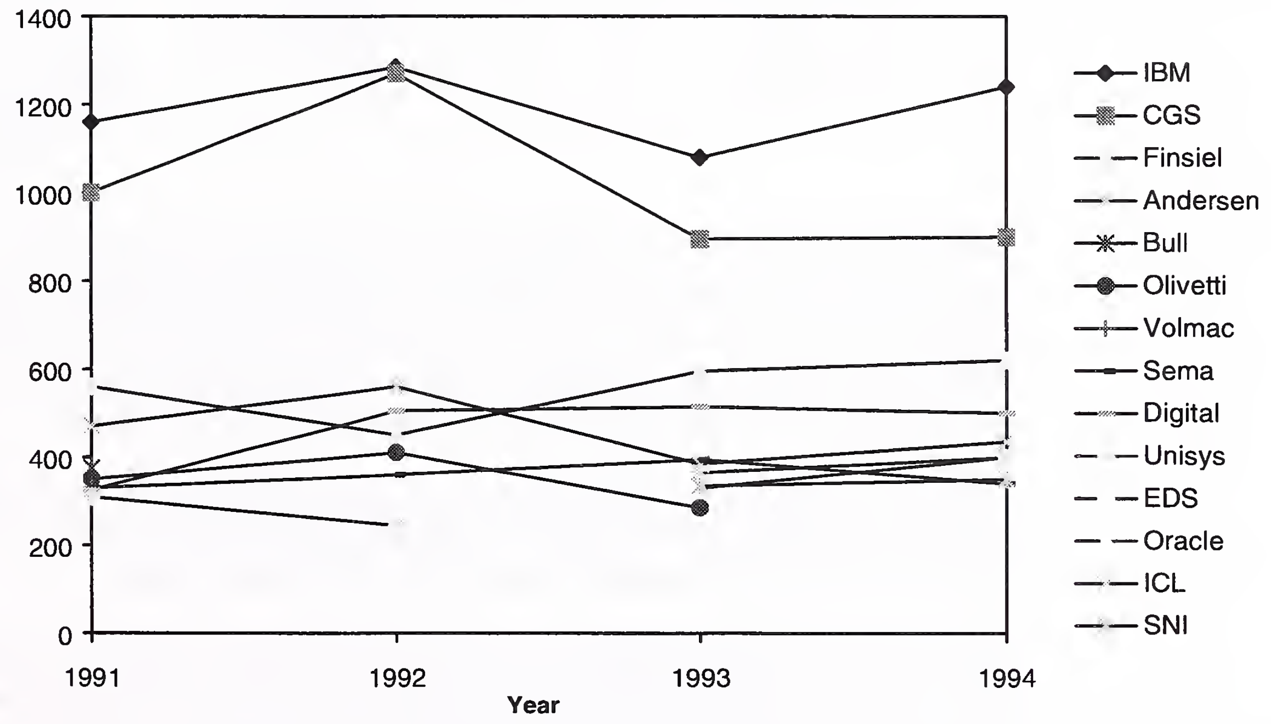
Professional Services — The Demise of Day Rate Billing

The boundary between professional services within SI and exclusive to SI is another area which needs careful consideration. The need to understand this complex interface is increasing as a result of the fierce battle being fought between established SI vendors, system houses, management consultancies, software vendors and new entrants from areas such as telecommunications.

Exhibit III-16 illustrates the changing market shares of the leading European professional services vendors over the last four years. Exhibit III-17 lists the leading vendors in 1994.

Exhibit III-16

Leading Vendors Professional Services, Europe 1991-1994



Source: INPUT

Exhibit III-17

Leading Professional Services Vendors, Europe 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	5.3	1240
2	Cap Gemini Sogeti	3.9	900
3	Finsiel	2.7	620
4	Digital	2.1	500
5	Andersen Consulting	1.9	435
6=	ICL	1.7	400
6=	Oracle	1.7	400
8	EDS	1.7	390
9	Siemens-Nixdorf	1.5	350
10	Sema Group	1.5	340
	Total Listed	23.9	5575
	Total Market	100	23290

Source: INPUT

Professional services, and particularly strategic and management consultancy, has established itself as the *commanding heights* of the business integration market and will continue to do so. Its role in terms of identifying, producing and capturing opportunities within systems development is increasingly being seen as a key leverage point.

However, a combination of intense cost pressure, the rise of open systems and the increasing availability of commodity software is however generating increased project demand at lower levels of cost.

At the same time, the traditional model of time-based billing is under considerable threat from user organisations who are demanding fixed price contracts, and are looking to gain “value” from relationships with suppliers rather than be purely motivated by the cost of a service.

These factors represent and reflect important shifts in the marketplace. They herald a phase in which long-term, high-priced, high-risk projects are no longer the exclusive form of delivery.

Key capabilities of professional services vendors, i.e. multi-platform/network skills, will remain of undiminished importance but vendors will need to adopt a fluid, adaptable approach, and be able to demonstrate the ability to recommend and implement different solutions to different requirements. Many of these, and hence much opportunity, will be outside of vendors traditional marketplaces.

Continuing professional services orientated success for vendors such as IBM, Groupe Bull and ICL, however, will depend on their ongoing efforts to develop their overall services capability in the face of the diminishing proprietary platforms, and most importantly, in the relationship access that these platforms have traditionally provided. As these platforms are challenged and replaced vendors will increasingly be forced to develop and demonstrate open technology abilities.

Many medium-sized and smaller professional services firms will also face the pressing need to work as sub-contractors to the larger firms in addition to their locally focused stand-alone professional services activities. Vendors are increasingly being forced to focus on their domestic market and fill particular niches in their local market. Examples would be Compunet AG in Germany and Syntegra in the UK. These players are moving to a business model of low service integration, but high-level focus and expertise.

G
New Market Entrants Alter Competitive Domains

The BI market is currently attracting new market entrants, such as telecommunications operators, who in attempting to transform themselves into global information services players see the Information Solutions arena as a key competitive battlefield.

The convergence of information technology and communications, long heralded, is finally becoming a reality and will increasingly influence the future development of both areas. It will no longer be possible to think about IT and communications technologies in isolation; this is leading to increasingly interlinked and inseparable supply-side value chains where BI vendors will take smaller market shares of larger markets. This alters the possible competitive domains BI vendors are able to adopt significantly. Vendors need to take a broader view of what constitutes an opportunity, and their ability to address opportunity than they have done hitherto.

The marketplace is undergoing a period of hectic self-reassessment as vendors study their own network-centric capabilities and offerings and jockey for position in these mutating value chains. These include both those organisations who have, and those who have not, traditionally been perceived as major players in communications intensive IT as well as these who have not.

Examples of the new relationships include the increasing presence of MCI in the European market. MCI owns 10% of Rupert Murdoch's News International, whilst British Telecom has a 20% stake in MCI centred on the international telecommunications services company Concert. MCI also recently bought the integrator, SHL Systemhouse, in order to leverage and exploit the development and integration synergies these relationships bring.

SNI is involved in a joint venture with Mercury Communications; Andersen Consulting has tied up with the US company, General Electric, in order to finance and manage large SI deals.

ATLAS, the joint venture between France Tèlècom and Deutsche Telekom and possibly Sprint in the United States is already generating in-house and externally based integration projects. Unisource, the Swiss, Spanish and Swedish telecom joint venture is also generating SI project based opportunities, from which the PTT's are attempting to benefit.

Convergence is driving many other areas of industry "mutation" with railways and utility companies attempting to offer information services through their existing delivery channels; “Hermes” the European railways joint venture is offering telecommunication services; as is the Générale des Eaux in France.

In the UK, Northwest Electricity and Northwest Gas are establishing a joint venture organisation to offer telecommunications services. Amdahl are also involved with British Gas in establishing a joint integration organisation.

Clearly, communications is playing an ever more important role in information-based industries and vendors such as AT&T, BT Deutsche Telekom, are well positioned to grow their solutions-based revenues.

Their existing size, financial muscle and expertise in both account and project management clearly also give them capabilities which will enable them to bid for the larger solutions-based contracts with which many of the professional services vendors would find it hard to profitably compete.

Convergence of voice and data technologies is driving convergence of commercial value chains, altering existing ones and creating altogether new mutations. Liberalisation is unleashing and accelerating this process.

However, those with vested interests are not graciously giving ground to new players and these new agendas. Liberalisation is not a homogenous force across Europe and is impacting at different rates in different countries. France’s experience is clearly shaping quite differently to Germany’s. National PTTs are, with varying degrees of political backing, fixed on retaining their dominance and control over the majority of basic service provision and attempting to leverage new services from these entrenched platforms.

IT is enhancing traditional services and creating new forms of potential service. The strategic importance of new technologies is dictating the extent of IT’s influence in emerging value chains. PTT’s are utilising new IT-led technologies but at the same time are attempting to control the channels by which these technologies impact on the user market.

Managed networks (both data and voice) and their interface with the wider telecom infrastructure are one of the key areas in which PTT’s IT vendors, and new telecommunications players compete most aggressively whilst at the same time they offer enormous opportunity for lucrative partnering, the first sign of value chain alteration. Those vendors who are already network-centric will undoubtedly have a competitive advantage over those who have traditionally been either more mainframe orientated or purely focused on IT professional services.

The needs of organisation to optimise internal and external communications and interactive technology flows will be increasingly facilitated by new, distributed, communications-intensive technologies.

One very strong and clear message that users are expressing is that the integration of existing systems and their "islands of information" are currently a key strategic focus for IT operations. Organisations increasingly recognise that one of their most pressing needs is to utilise information capital in a far more efficient method.

Far from needing more data or information, companies realise they need to manage, access and use the information they already have. At present, information exists in many different systems, in different departments and in different formats but from a corporate perspective it is often unobtainable.

Companies clearly recognise that these islands of information in many cases represent huge financial and intellectual investments which are too valuable to write off. Better utilisation of existing systems is, in many cases, preferable to starting again from scratch. These developments are clearly generating extremely attractive opportunities for vendors.

In Europe, increased outsourcing of both the development and operation of mission-critical business systems, the private and public sectors, is positioning value-led services vendors as the dominant force in the utilisation of technology. Product suppliers are increasingly becoming subservient to them, although they publicly deny this.

Best-of-breed products are extending market leadership through a combination of critical mass and subsequent relationships with those value-led services vendors who implement and manage technology.

There will not be a single winner in the marketplace, since the market is now too large for any single vendor to control — IBM in the late 1970/80's — but instead there are new winning relationships á la Intel/Microsoft/EDS. Those closest to the ultimate customer will always be the ultimate winner.

Focus on core competence, margin pressure and increasing competition will continue the process of vertical market disintegration. Manufacturing is chasing lowest priced labour, making national boundaries irrelevant. The ability to operate as and manage world-wide alliances, to support international clients, is fast becoming the key differentiator for IT organisations, within the proviso "this company has no eternal friends nor enemies but only eternal interest".

IV

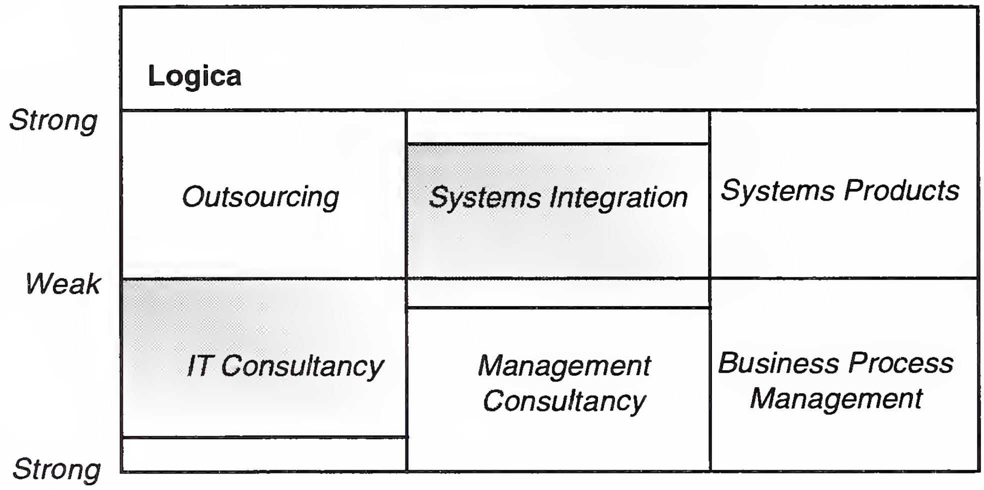
Analysis of Leading Business Integration Vendors

A Logica

Exhibit IV-1 presents a mapping of Logica's key areas of competitive excellence within the Business Integration domain. Exhibit IV-2 analyses Logica's Business Integration revenues as a proportion of their overall revenue. Exhibit IV-3 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-1

Logica — Key Competency Areas

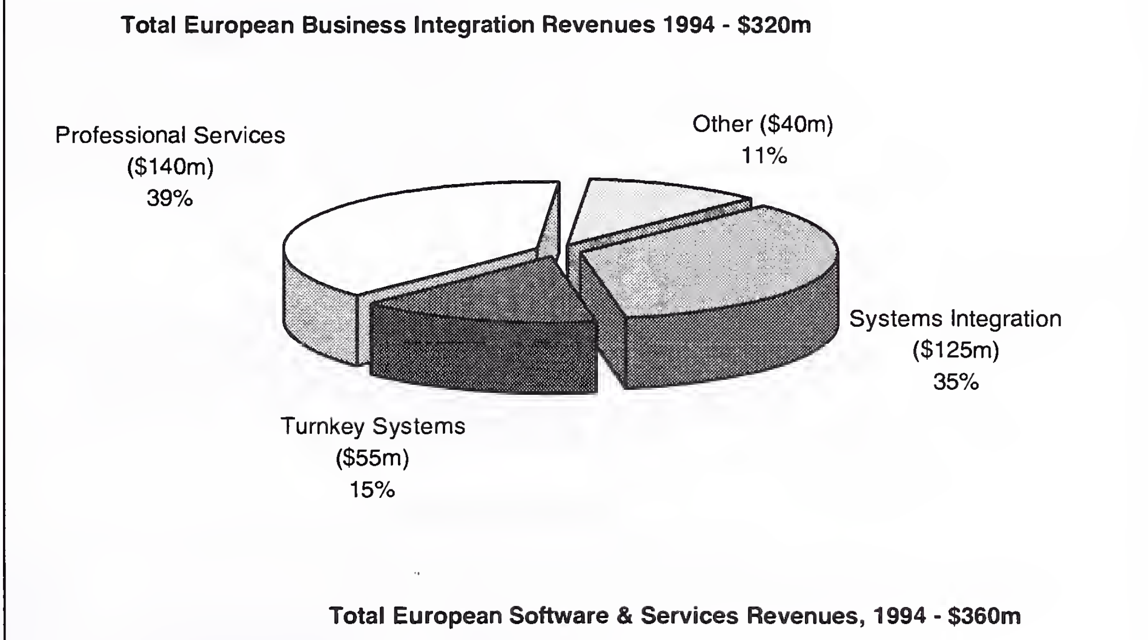


- *IT Systems development strengths positioned around quasi-product solutions*
- *No operational capabilities – embryonic applications management services leveraged from SI contracts*
- *Strong IT technology orientation*
- *Sub-contract/development contractor ethos – not prime relationship contractor*

Source: INPUT

Exhibit IV-2

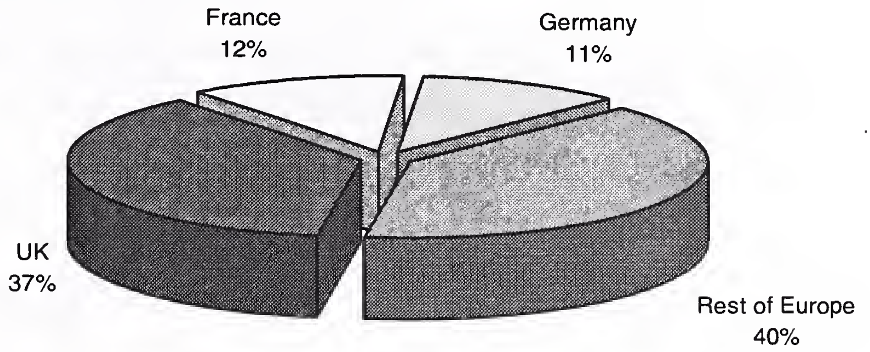
Logica – Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-3

Logica – Business Integration, Geographical Analysis



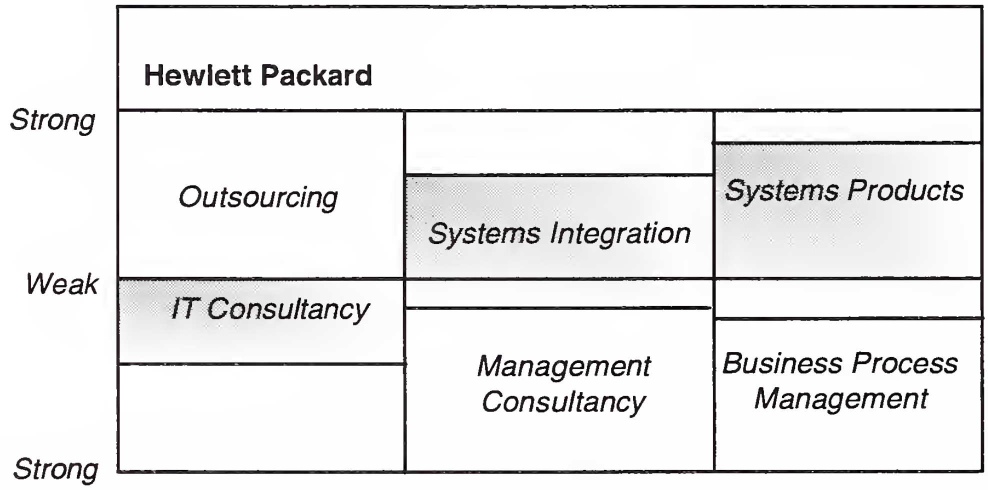
Source: INPUT

B
Hewlett Packard

Exhibit IV-4 presents a mapping of Hewlett Packard's key areas of competitive excellence within the Business Integration domain. Exhibit IV-5 analyses Hewlett Packard's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-6 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-4

Hewlett Packard — Key Competency Areas in Business Integration Services

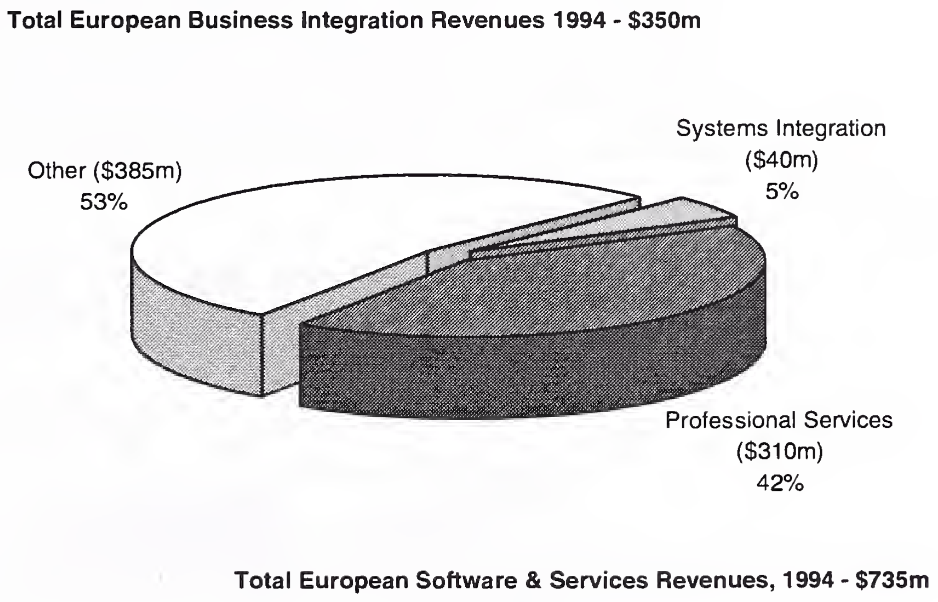


- *Clear strategic focus based on partnering*
- *Excellent product range - clever leverage of related services*
- *Strong process expertise in selected vertical markets*
- *Strong relationship with SAP*

Source: INPUT

Exhibit IV-5

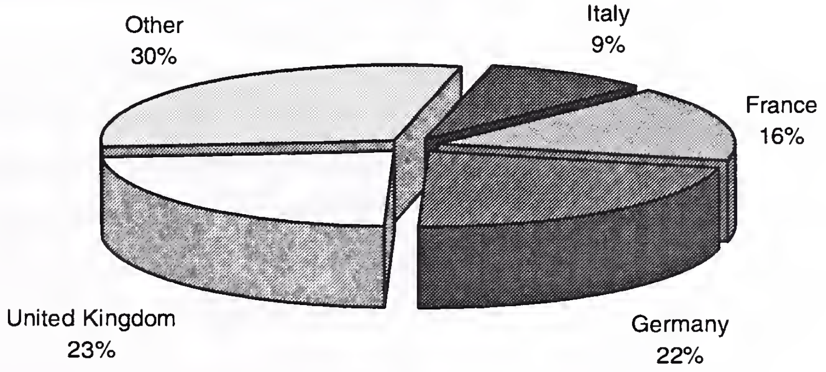
Hewlett Packard - Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-6

Hewlett Packard – Business Integration, Geographical Analysis



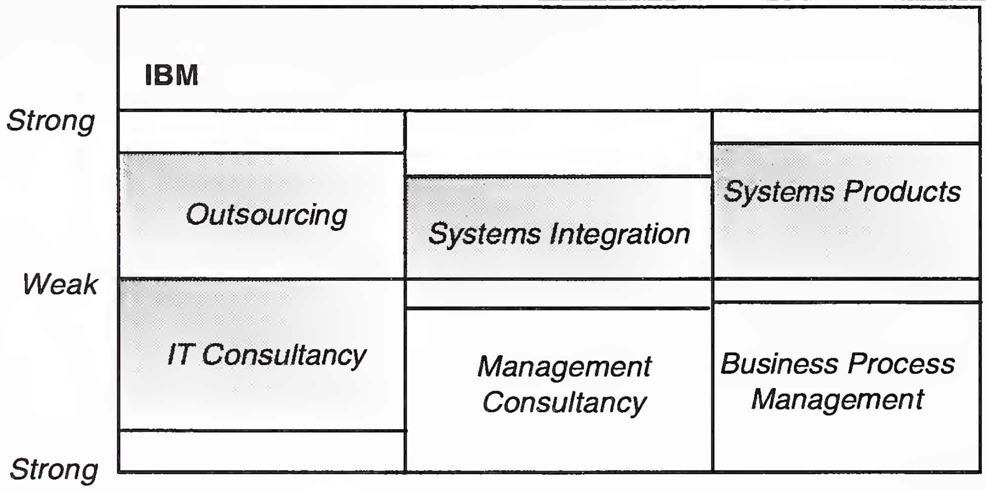
Source: INPUT

C
IBM

Exhibit IV-7 presents a mapping of IBM's key areas of competitive excellence within the Business Integration domain. Exhibit IV-8 analyses IBM's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-9 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-7

IBM — Key Competency Areas in Business Integration Services

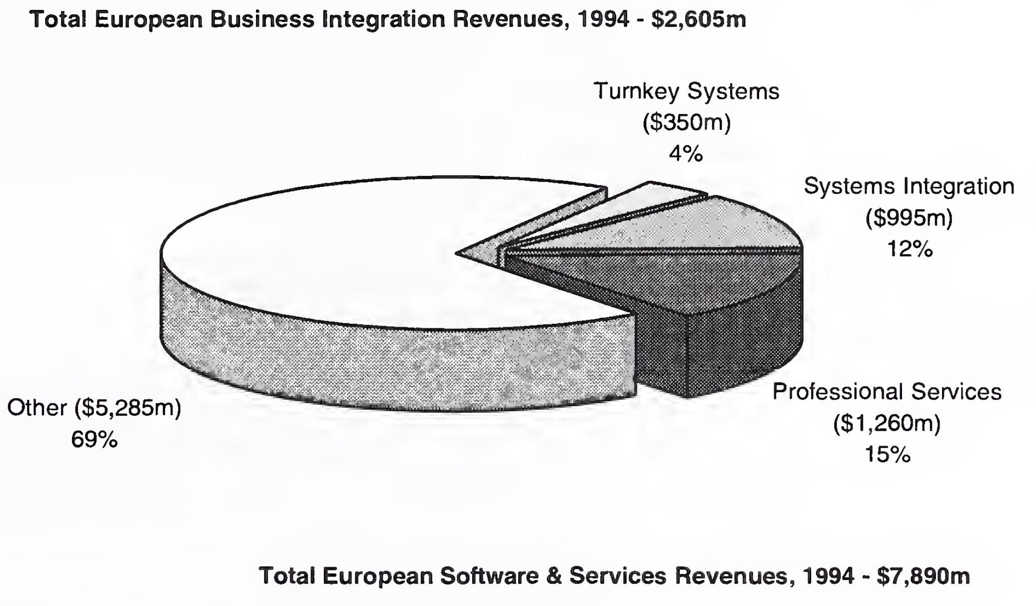


- *Multi-faceted organisation operating symbiotically - contrasts with ICL model where units interact on a commercial basis*
- *Strong IT image leveraged into development and IT skill specific consultancy*
- *Computing services capability not yet developed into Business Process Management (BPM) offering*
- *Management consultancy embroyonic*
- *IT Product orientation still dominates*
- *Still possess greater resources than competitors to provide wide scope of technology*

Source: INPUT

Exhibit IV-8

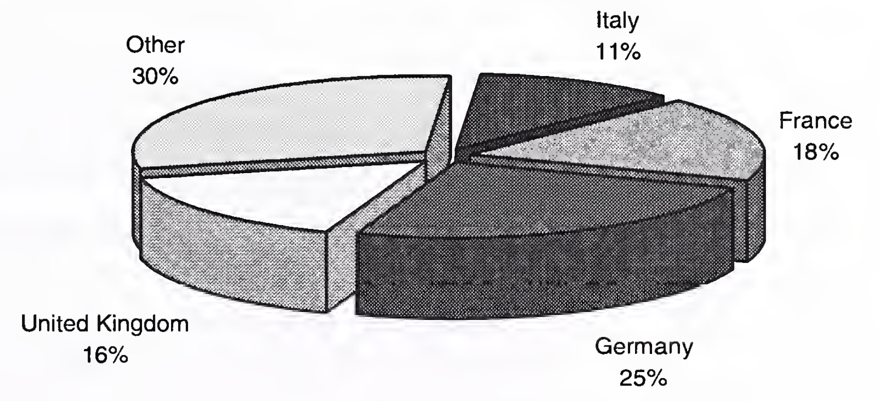
IBM - Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-9

IBM – Business Integration, Geographical Analysis



Source: INPUT

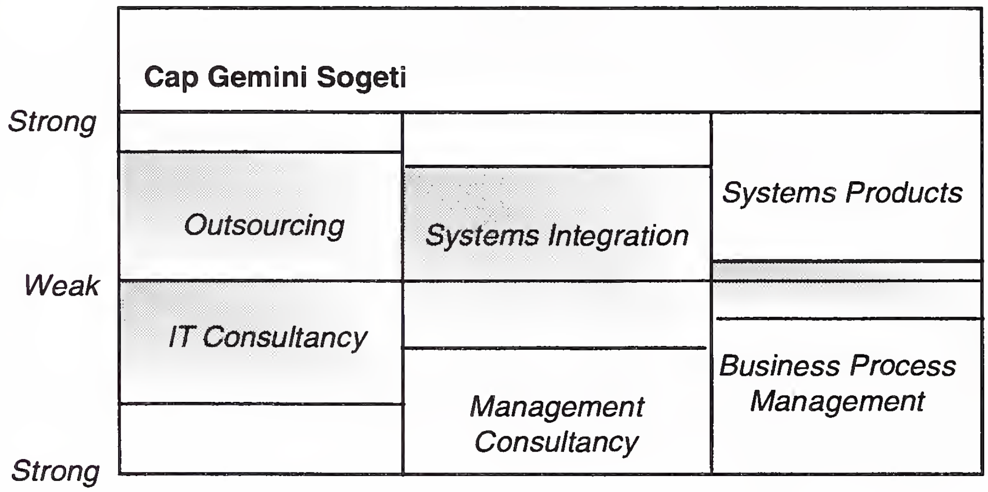
D

Cap Gemini Sogeti

Exhibit IV-10 presents a mapping of Cap Gemini Sogeti's key areas of competitive excellence within the Business Integration domain. Exhibit IV-11 analyses Cap Gemini Sogeti's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-12 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-10

Cap Gemini Sogeti — Key Competency Areas in Business Integration Services

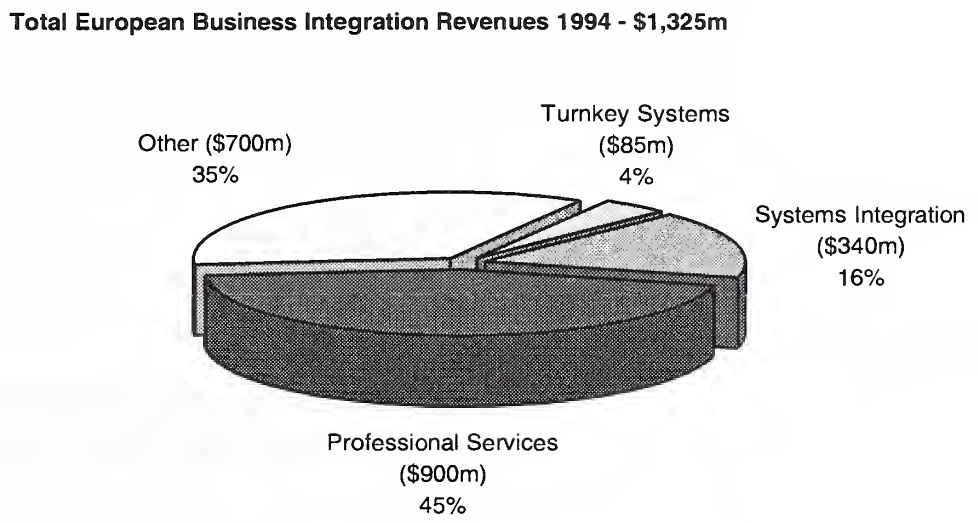


- *Systems development and operations heritage*
- *Continuing issue of shift away from "body shopping"*
- *Needing to integrate Gemini to present seamless services a la Andersen Consulting - Gemini weakened by over emphasis on strategy consulting*
- *IT product adverse culture*
- *Dominant French culture perceived internationally as a "negative"*

Source: INPUT

Exhibit IV-11

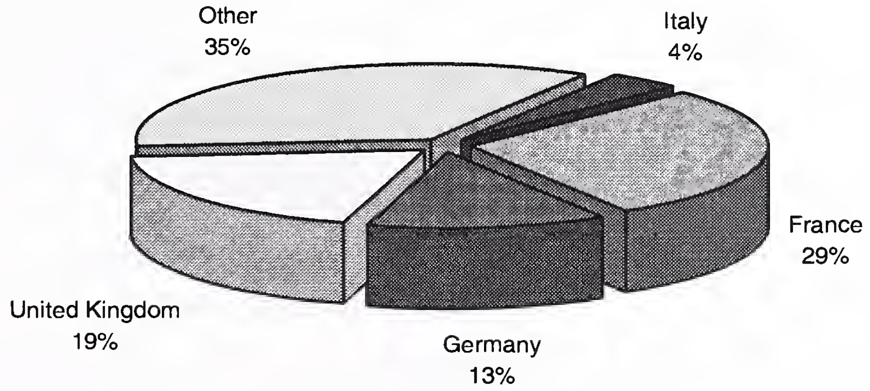
Cap Gemini Sogeti - Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-12

Cap Gemini Sogeti – Business Integration, Geographical Analysis



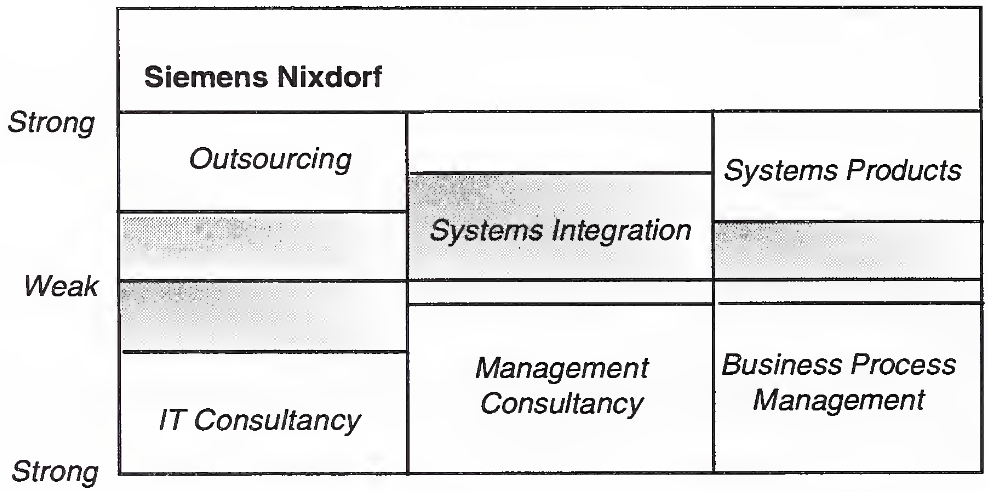
Source: INPUT

E
Siemens Nixdorf

Exhibit IV-13 presents a mapping of Siemens Nixdorf's key areas of competitive excellence within the Business Integration domain. Exhibit IV-14 analyses Siemens Nixdorf's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-15 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-13

Siemens Nixdorf — Key Competency Areas in Business Integration Services



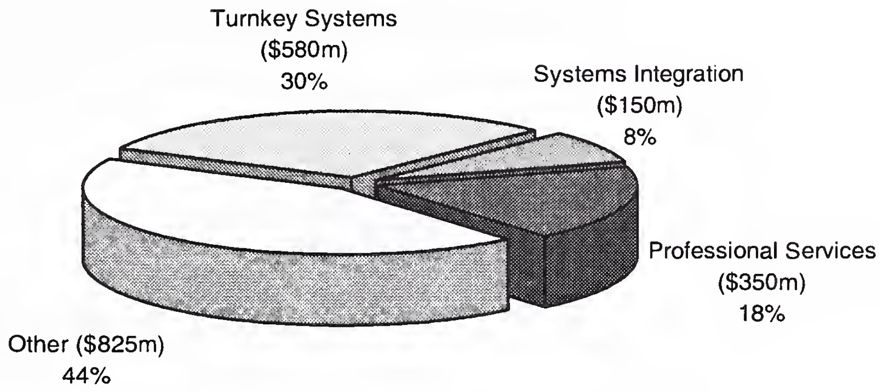
- *Presently undergoing massive internal change programme - of both culture and competencies*
- *Excellent product reputation being leveraged into the services marketplace*
- *Lagging in "internationalisation"*
- *Strong vertical market focus*

Source: INPUT

Exhibit IV-14

Siemens Nixdorf - Business Integration Revenues in Relation to Overall Revenues

Total European Business Integration Revenues 1994 - $1,080m

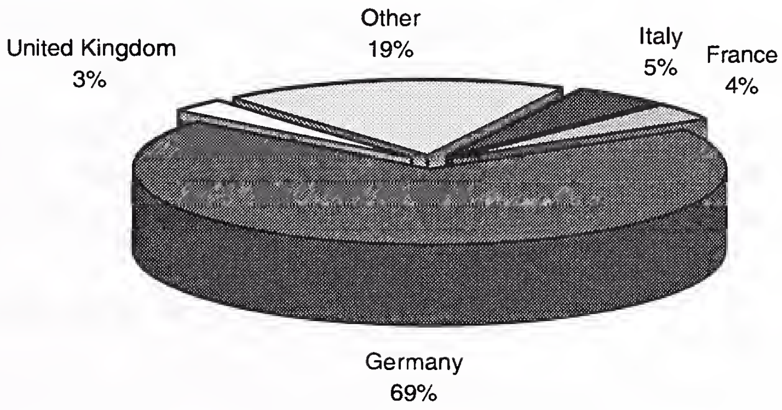


Total European Software & Services Revenues, 1994 - $1,905m

Source: INPUT

Exhibit IV-15

Siemens Nixdorf – Business Integration, Geographical Analysis



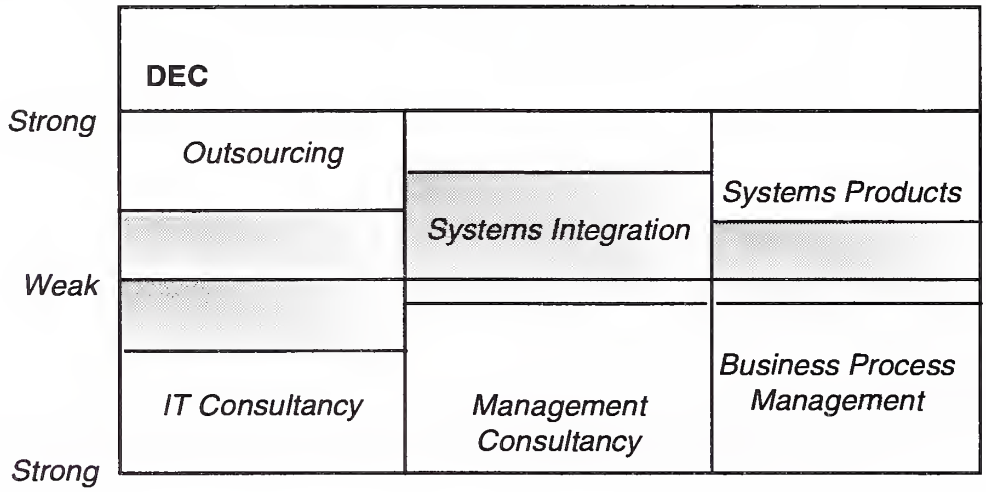
Source: INPUT

F
DEC

Exhibit IV-16 presents a mapping of DEC's key areas of competitive excellence within the Business Integration domain. Exhibit IV-17 analyses DEC's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-18 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-16

DEC— Key Competency Areas in Business Integration Services



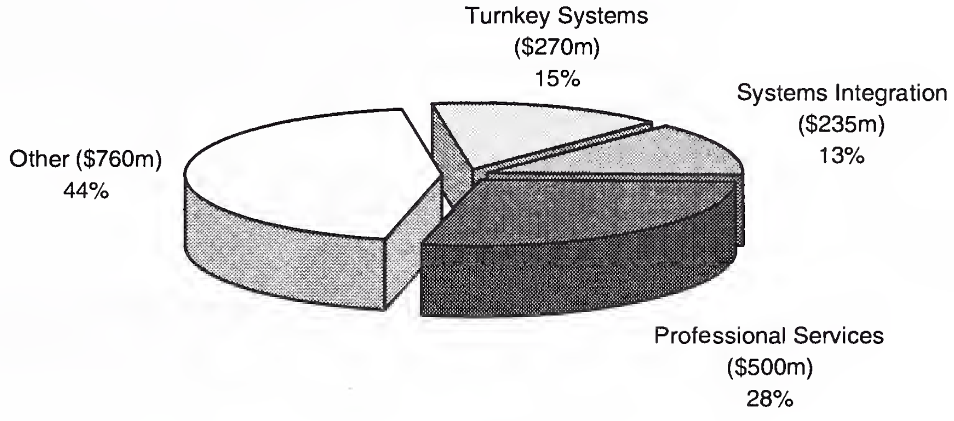
- *Refocusing on three key vertical markets (Telco's, Retail, Manufacturing)*
- *Strengthening services based relationship with Microsoft*
- *Withdrawing from "solutions" driven systems integration*
- *Leveraging off strong platform base as a "technical" SI player*
- *Heritage in distributed, mid size, multivendor environments*

Source: INPUT

Exhibit IV-17

DEC - Business Integration Revenues in Relation to Overall Revenues

Total European Business Integration Revenues 1994 - $1,005m

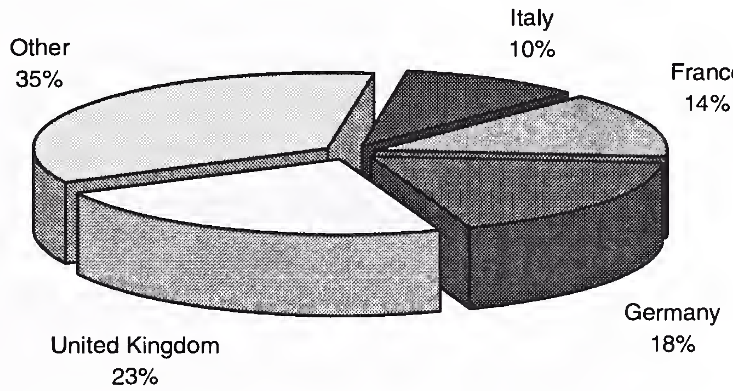


Total European Software & Services Revenues, 1994 - $1,765m

Source: INPUT

Exhibit IV-18

DEC – Business Integration, Geographical Analysis



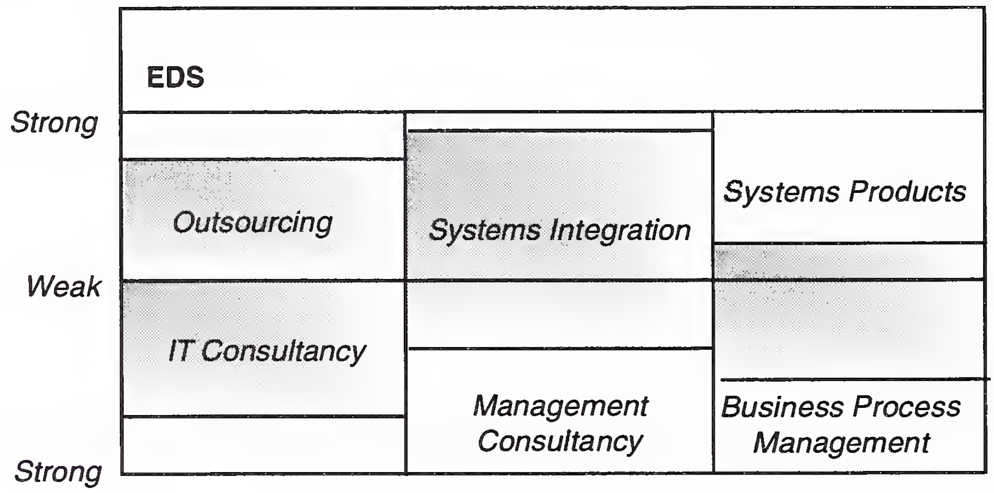
Source: INPUT

G
EDS

Exhibit IV-19 presents a mapping of EDS's key areas of competitive excellence within the Business Integration domain. Exhibit IV-20 analyses EDS's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-21 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-19

EDS— Key Competency Areas in Business Integration Services



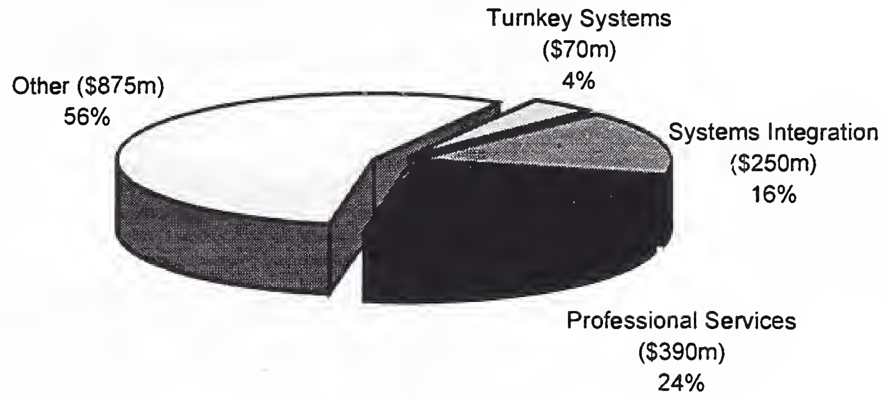
- *Computing services image morphed into business process management services*
- *AT Kearney acquisition signals further drive to strengthen full life cycle relationship with client*
- *Focus on value based pricing*
- *Systems integration skills complement operational capability*
- *An IT technology user and facilitator (not an IT company)*

Source: INPUT

Exhibit IV-20

EDS - Business Integration Revenues in Relation to Overall Revenues

Total European Business Integration Revenues 1994 - $710m

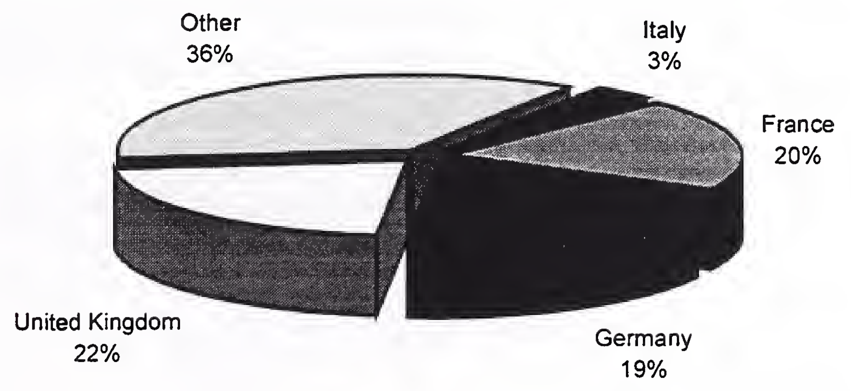


Total European Software & Services Revenues, 1994 - $1,585m

Source: INPUT

Exhibit IV-21

EDS – Business Integration, Geographical Analysis



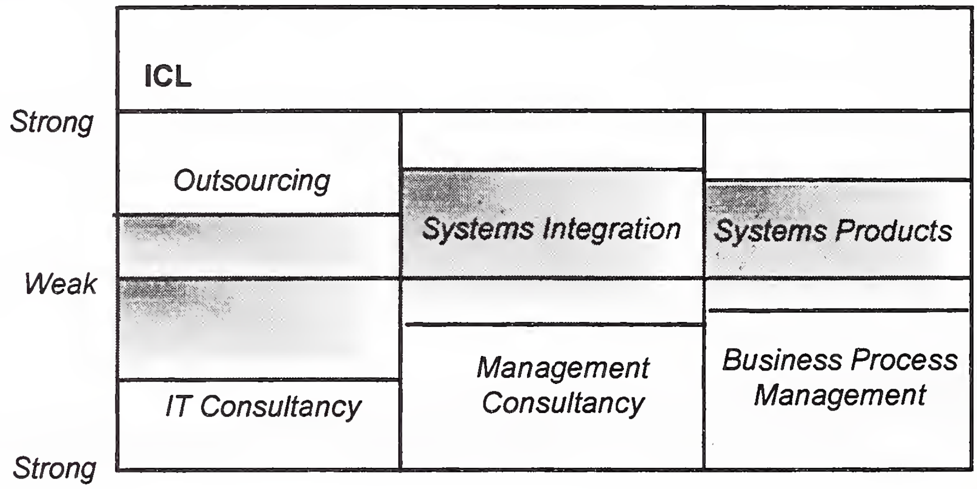
Source: INPUT

H
ICL

Exhibit IV-22 presents a mapping of ICL's key areas of competitive excellence within the Business Integration domain. Exhibit IV-23 analyses ICL's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-24 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-22

ICL— Key Competency Areas in Business Integration Services

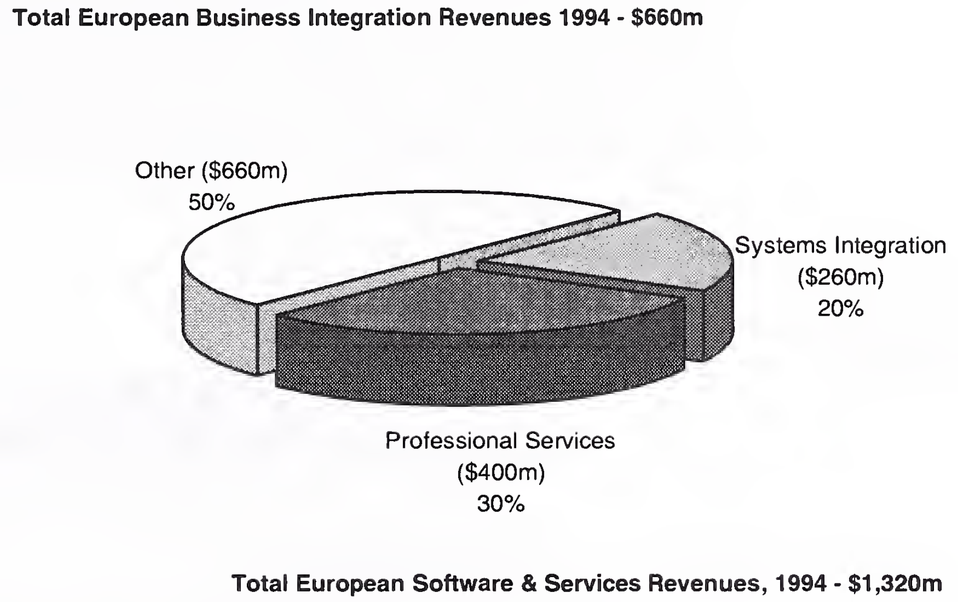


- *Maximising leverage from Fujitsu technology relationship*
- *Adding high end value services to existing strong vertical focus (ie retail)*
- *Ease in playing both prime and sub contractor roles*
- *Attempting to extend geographical coverage*
- *Candidate for AT&T/Unisys style "demerger" (?)*

Source: INPUT

Exhibit IV-23

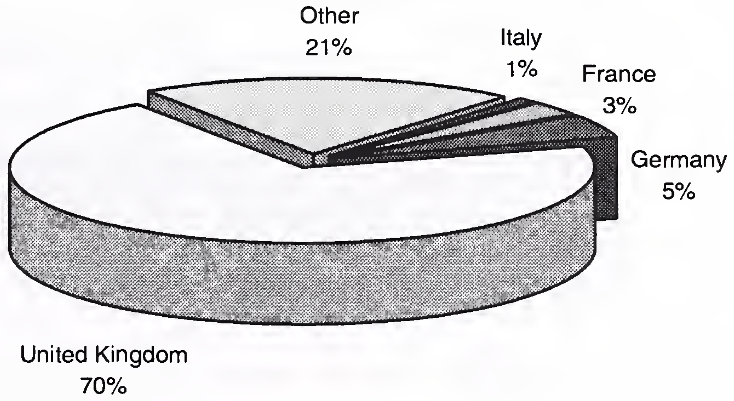
EDS - Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-24

EDS – Business Integration, Geographical Analysis



Source: INPUT

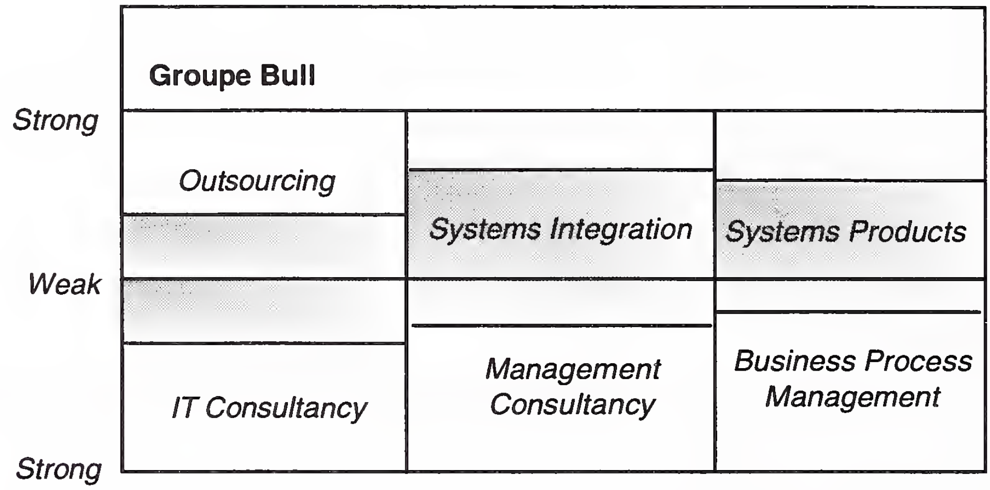
I

Groupe Bull

Exhibit IV-25 presents a mapping of Groupe Bull's key areas of competitive excellence within the Business Integration domain. Exhibit IV-26 analyses Groupe Bull's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-27 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-25

Groupe Bull— Key Competency Areas in Business Integration Services



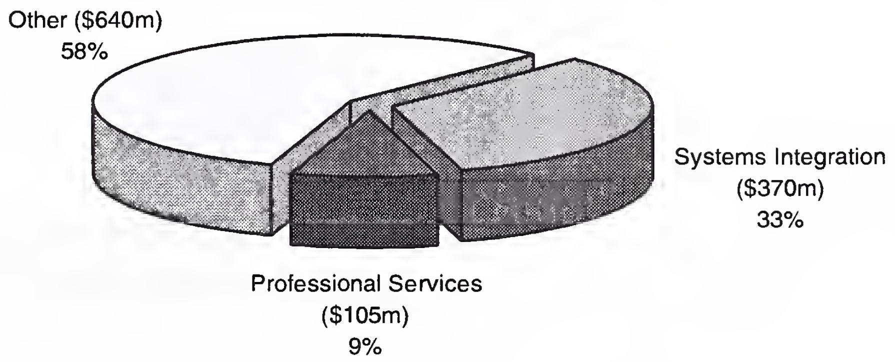
- *Major push into high end systems integration*
- *Significant refocusing on services*
- *First rate development methodologies*
- *Sharp vertical market focus*

Source: INPUT

Exhibit IV-26

Groupe Bull - Business Integration Revenues in Relation to Overall Revenues

Total European Business Integration Revenues 1994 - $475m

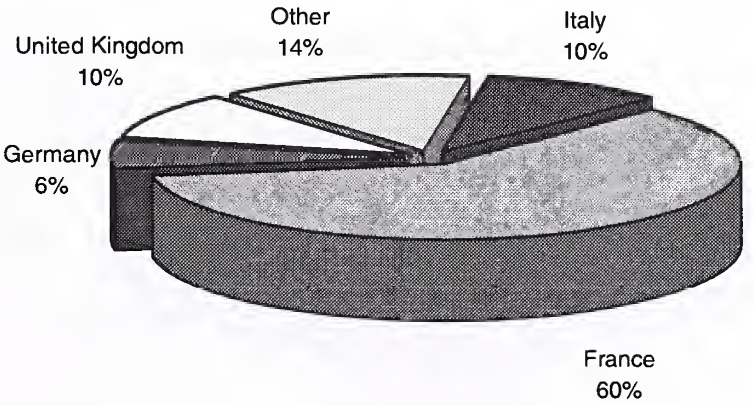


Total European Software & Services Revenues, 1994 - $1,115m

Source: INPUT

Exhibit IV-27

Groupe Bull – Business Integration, Geographical Analysis



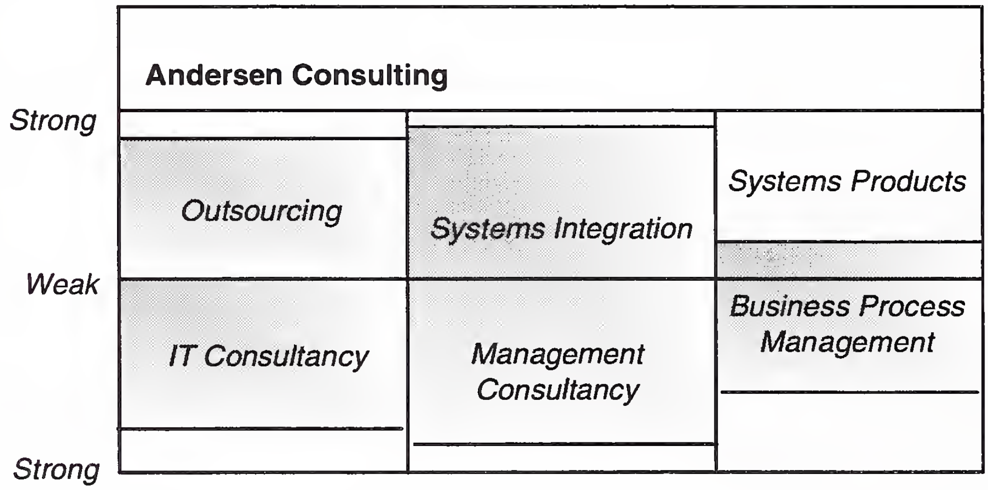
Source: INPUT

J
Andersen Consulting

Exhibit IV-28 presents a mapping of Andersen Consulting's key areas of competitive excellence within the Business Integration domain. Exhibit IV-29 analyses Andersen Consulting's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-30 presents an analysis of their Business Integration related revenues by geographical coverage across Europe.

Exhibit IV-28

Andersen Consulting— Key Competency Areas in Business Integration Services

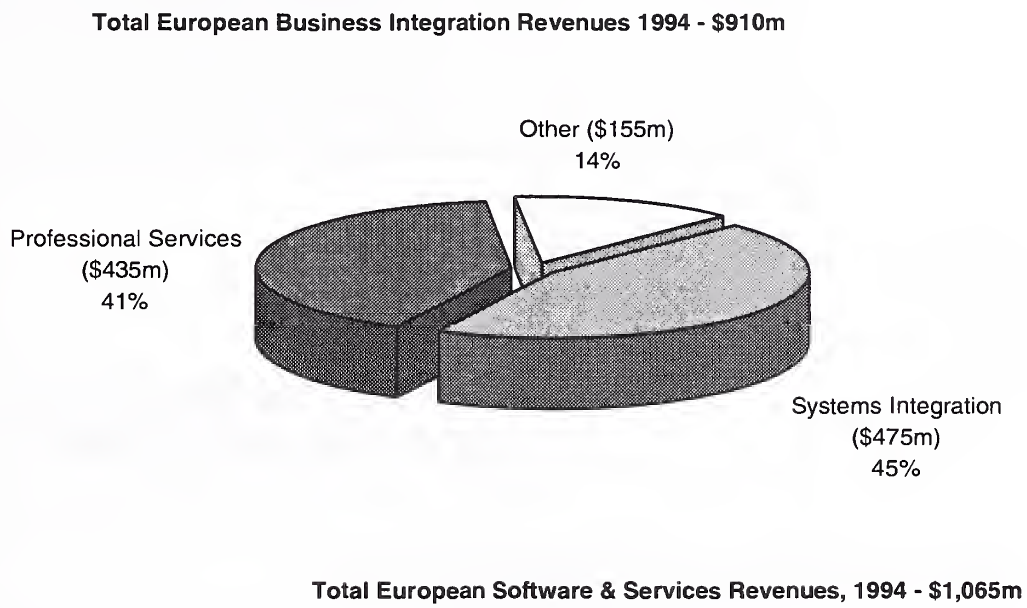


- *Love or loathe relationship perception*
- *Vision - building the services firm of the future (whatever it is?) delivering value to clients across a continuum of change*
- *Neither IT or computing services oriented*
- *Shifting from internal day rate services to value added on outsourced services*
- *Capabilities have been built from within rather than through acquisitions*

Source: INPUT

Exhibit IV-29

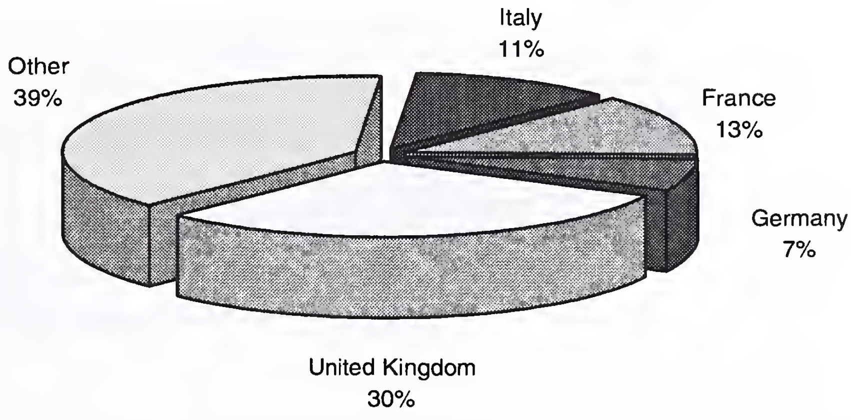
Andersen Consulting - Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-30

Andersen Consulting – Business Integration, Geographical Analysis



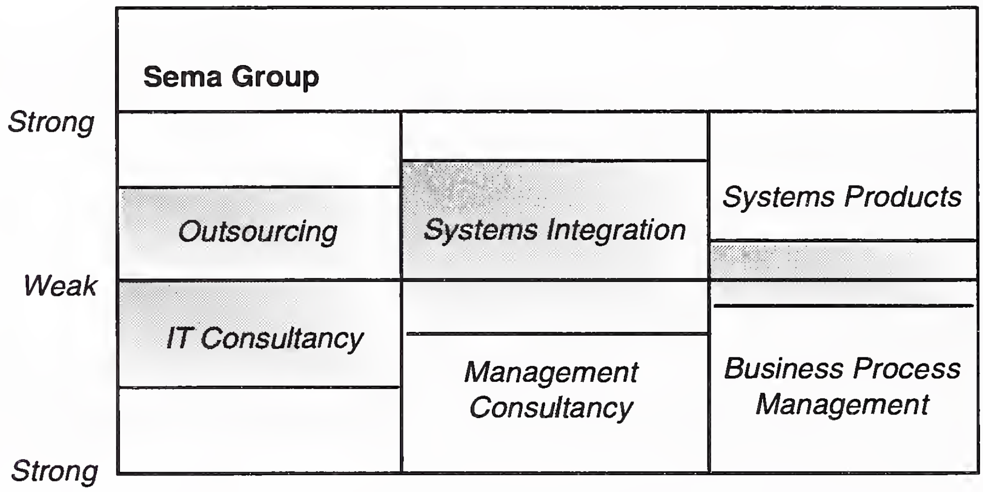
Source: INPUT

K
Sema Group

Exhibit IV-30 presents a mapping of Sema Group's key areas of competitive excellence within the Business Integration domain. Exhibit IV-31 analyses Sema Group's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-32 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-30

Sema Group— Key Competency Areas in Business Integration Services

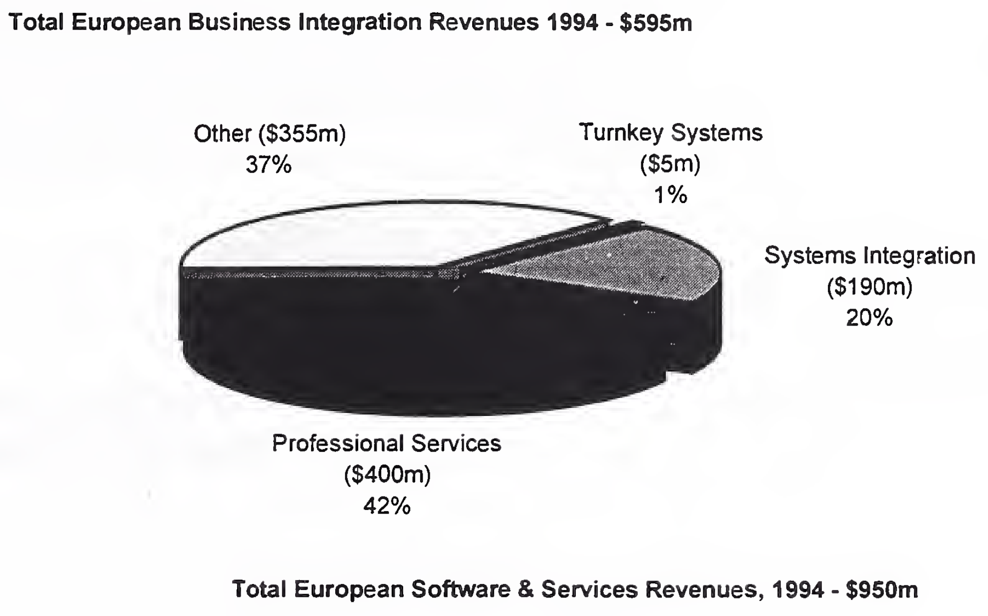


- *System development heritage being complemented by expanding operational capabilities*
- *Operational capability lacks business process management capability*
- *Limited geographic and vertical industry scope ... but extremely strong where they choose to play*
- *Relationship potential limited by management consulting weakness*

Source: INPUT

Exhibit IV-31

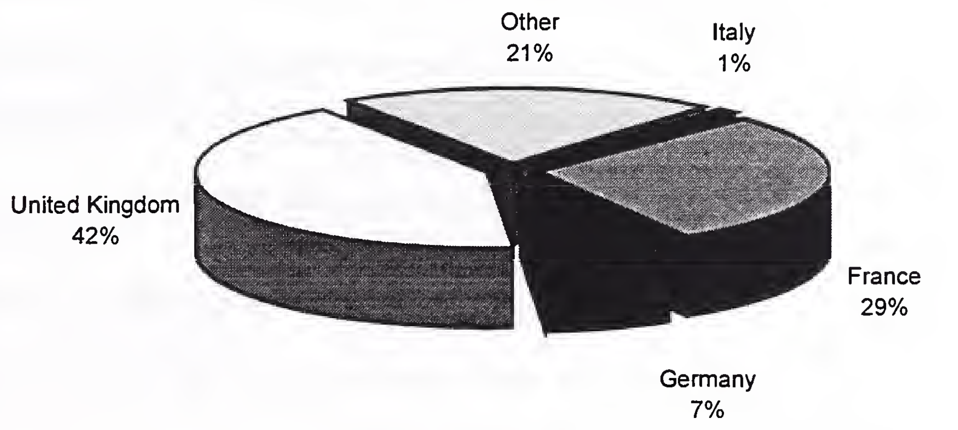
Sema Group - Business Integration Revenues in Relation to Overall Revenues



Source: *INPUT*

Exhibit IV-32

Sema Group – Business Integration, Geographical Analysis



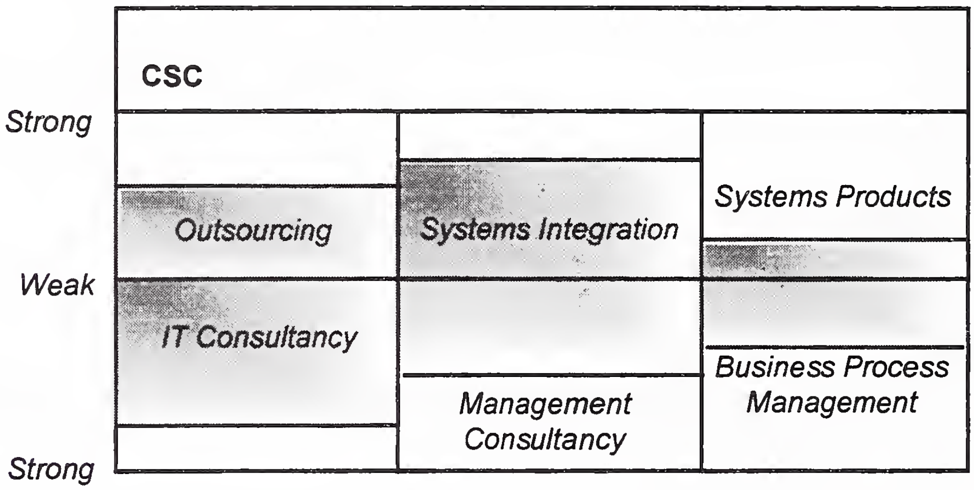
Source: *INPUT*

L
CSC

Exhibit IV-33 presents a mapping of CSC's key areas of competitive excellence within the Business Integration domain. Exhibit IV-34 analyses CSC's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-35 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-33

CSC— Key Competency Areas in Business Integration Services

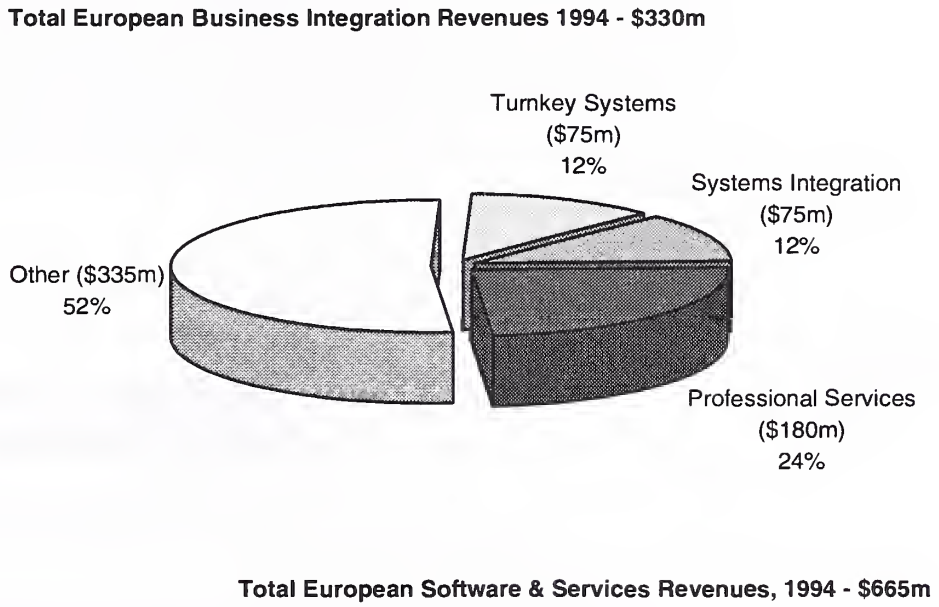


- *Strong system development and computing services heritage*
- *Business process management capabilities under developed versus EDS*
- *Index represents the drive for higher value added - pushing out the envelope*
- *Like EDS an IT technology user and facilitator*

Source: INPUT

Exhibit IV-34

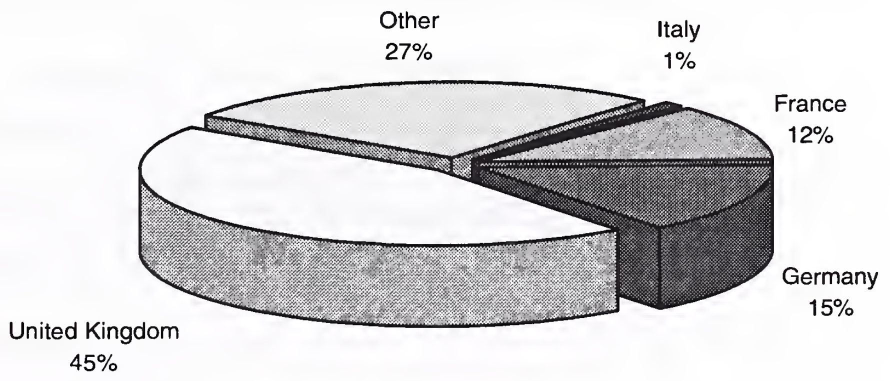
CSC- Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-35

CSC – Business Integration, Geographical Analysis



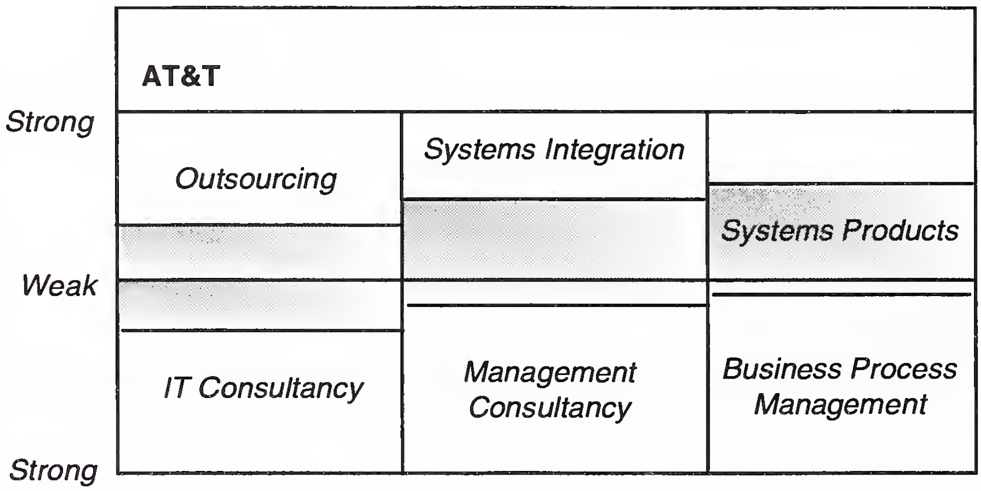
Source: INPUT

M
AT&T

Exhibit IV-36 presents a mapping of AT&T's key areas of competitive excellence within the Business Integration domain. Exhibit IV-37 analyses AT&T's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-38 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-36

AT&T— Key Competency Areas in Business Integration Services

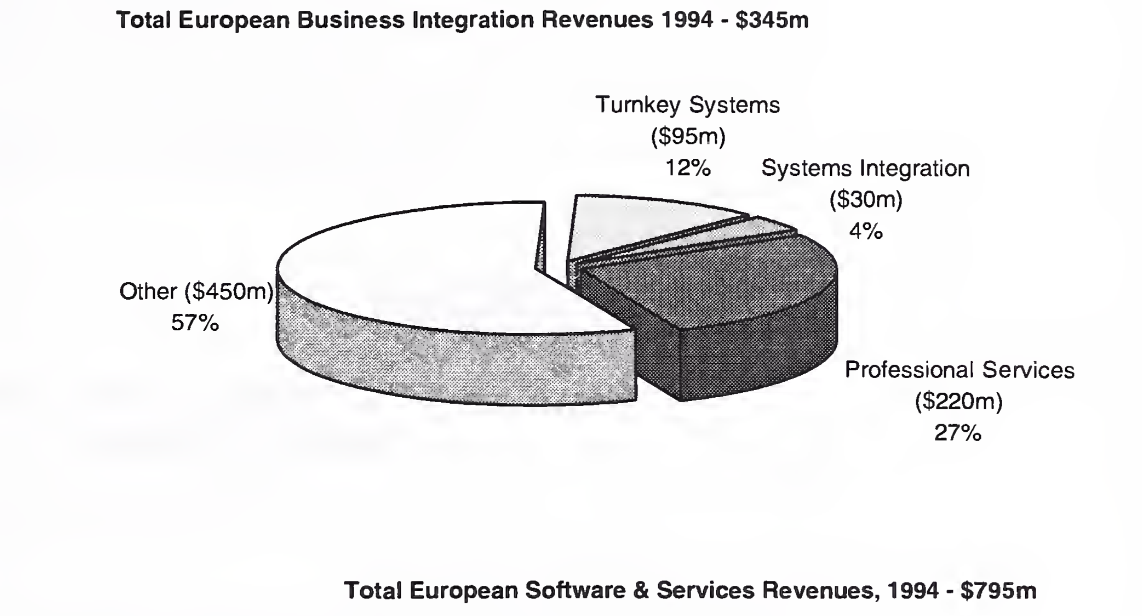


- *Troubled history in the IT business*
- *Solutions driven (pace the recruitment of Victor Millar)*
- *Premier international coverage*
- *Developing process and vertical market coverage*
- *Re-naming NCR ... "Back to the Future"?*

Source: INPUT

Exhibit IV-37

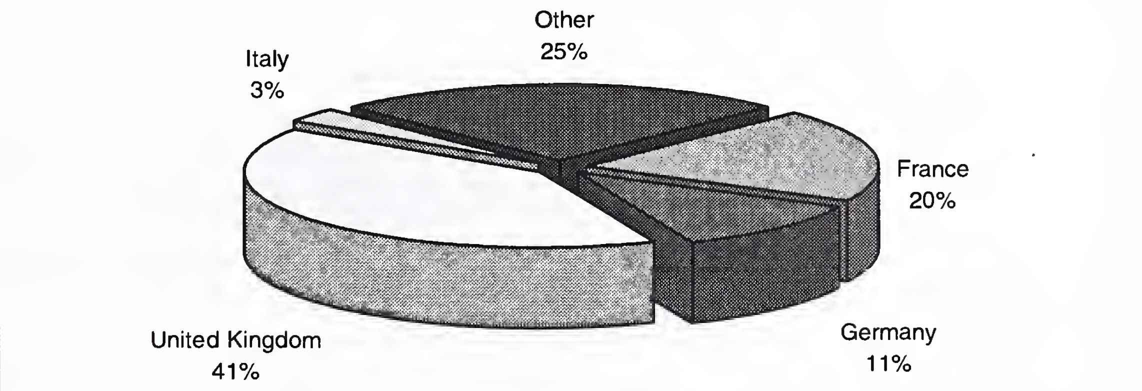
AT&T- Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-38

AT&T – Business Integration, Geographical Analysis



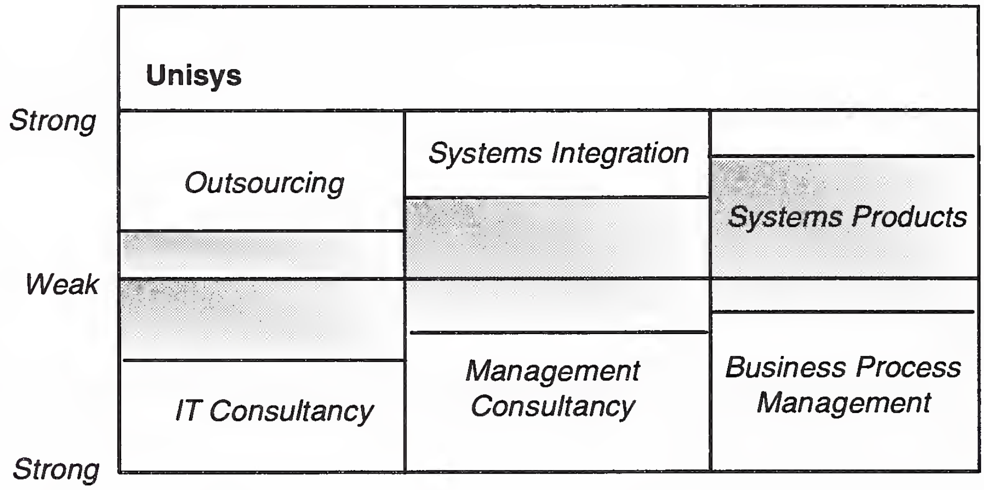
Source: INPUT

N
Unisys

Exhibit IV-39 presents a mapping of Unisys's key areas of competitive excellence within the Business Integration domain. Exhibit IV-40 analyses Unisys's Business Integration revenues as a proportion of their overall revenues. Exhibit IV-41 presents an analysis of their Business Integration derived revenues by geographical coverage throughout Europe.

Exhibit IV-39

Unisys — Key Competency Areas in Business Integration Services

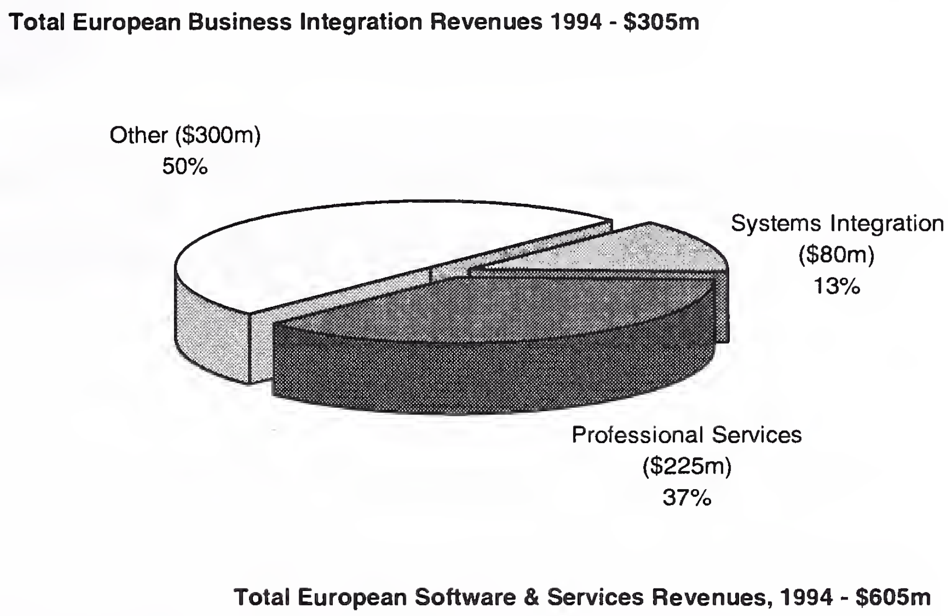


- *Technology heritage*
- *Vertical market domain knowledge*
- *Portfolio of client services for entire business cycle from planning to operations management*
- *Recent "demerger" aims at unleashing services*

Source: INPUT

Exhibit IV-40

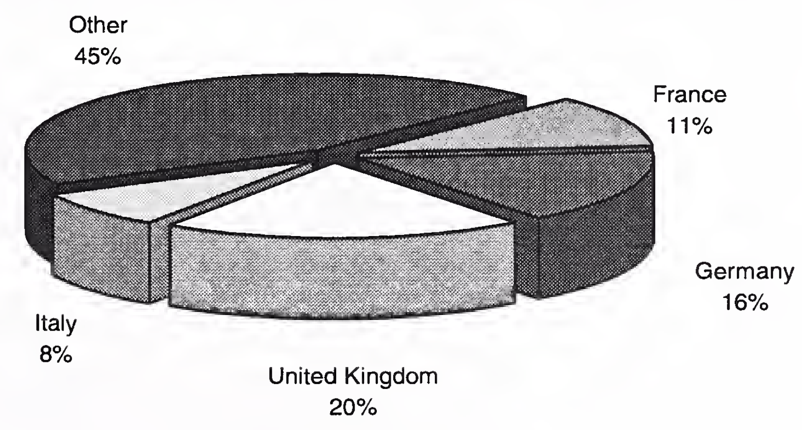
Unisys- Business Integration Revenues in Relation to Overall Revenues



Source: INPUT

Exhibit IV-41

Unisys – Business Integration, Geographical Analysis



Source: INPUT

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V

Leading Business Integration Vendors by Country

A
United Kingdom

Exhibit V-1 provides a ranking of the Leading Systems Integration Vendors in the United Kingdom market in 1994. Exhibits V-2 and V-3 provide rankings for Turnkey and Professional Services.

Exhibit V-1

Leading Systems Integration Vendors, United Kingdom 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (£ Millions)
1	IBM	17.1	150
2	ICL	12.6	110
3	Andersen Consulting	8.6	75
4	Syntegra	8.0	70
5	Groupe Bull	7.0	61
6	EDS	6.8	60
7	Sema	5.5	48
8	CGS/Hoskyns	5.1	45
9	DEC	4.8	42
10	Logica	3.9	34
	Total Listed	79.3	695
	Total Market	100	876

Source: INPUT

Exhibit V-2

Leading Turnkey Vendors, United Kingdom 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (£ Millions)
1	MDIS	3.7	50
2	Cray Electronics	3.1	42
3	JBA	2.9	40
4=	Intergraph	2.6	35
4=	Reuters	2.6	35
4=	IBM	2.6	35
7	Kalamazoo	2.2	30
8	Misys	2.2	30
9	Digital	1.5	20
10	AT&T	1.5	20
	Total Listed	24.7	337
	Total Market	100	1365

Source: INPUT

Exhibit V-3

Leading Professional Services Vendors, United Kingdom 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (£ Millions)
1	ICL	9	180
2	IBM	6	117
3	Sema Group	5	95
4	Andersen Consulting	5	90
5	Oracle	4	76
6	Coopers & Lybrand	4	70
7	Logica	3	66
8	Digital	3	65
9	Cray Electronics	3	60
10	Hewlett Packard	3	55
	Total Listed	46	874
	Total Market	100	1920

Source: INPUT

B
France

Exhibit V-4 provides a ranking of the Leading Systems Integration Vendors in the French market in 1994. Exhibits V-5 and V-6 provide rankings for Turnkey and Professional Services.

Exhibit V-4

Leading Systems Integration Vendors, France 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (FF Millions)
1	IBM	20	1070
2	Cap Gemini Sogeti	15	830
3	Groupe Bull	11	575
4	Andersen Consulting	9	470
5	Sema Group	8	455
6	EDS	6	340
7	Syseca	6	300
8	Alcatel ISR	3	180
9	DEC	3	165
10	Axime	2	130
	Total Listed	84	4515
	Total Market	100	5406

Source: INPUT

Exhibit V-5

Leading Turnkey Systems Vendors, France 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (FF Millions)
1	Sligos	3.4	375
2=	IBM	2.7	300
2=	Syseca	2.7	300
4	Alcatel TiTN	2.5	270
5	Fininfor	2.3	255
6	Digital	2.1	230
7	CISI	1.8	200
8	Reuters	1.7	190
9	IBSI	1.5	165
10	SNI	1.0	110
	Total Listed	21.8	2395
	Total Market	100	11000

Source: INPUT

Exhibit V-6

Leading Professional Services Vendors, France 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (FF Millions)
1	Cap Gemini Sogeti	3.6	1400
2	IBM	2.9	1130
3	Syseca	2.6	1000
3	Sema Group	2.3	900
5	CGI	2.1	820
6	Unilog	1.5	570
7=	Altran	1.2	470
7=	Steria	1.2	470
7=	IBSI	1.2	465
10	Digital	1.1	420
	Total Listed	19.8	7645
	Total Market	100	38550

Source: INPUT

C
Germany

Exhibit V-7 provides a ranking of the Leading Systems Integration Vendors in the German market in 1994. Exhibits V-8 and V-9 provide rankings for Turnkey and Professional Services.

Exhibit V-7

Leading Systems Integration Vendors, Germany 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (DM Millions)
1	IBM	22.3	250
2	SNI	18.7	210
3	Andersen Consulting	6.2	70
4	Groupe Bull	6.1	69
5	EDS	5.8	65
6	Digital	4.9	55
7 =	debis Systemhaus	4.5	50
7 =	CSC	4.5	50
9	Hewlett Packard	4.0	45
10	AT&T	2.2	25
	Total Listed	79.2	889
	Total Market	100	1123

Source: INPUT

Exhibit V-8

Leading Turnkey Systems Vendors, Germany 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (DM Millions)
1	SNI	9.6	650
2	Intergraph	2.2	150
3	IBM	1.8	120
4	Taylorix	1.6	110
5	Digital	1.5	100
6	debis Systemhaus	1.4	95
7	Compunet Computer	1.3	85
8	mbp[EDS]	1.1	75
9	Reuters	0.7	50
10	Sligos	0.5	35
	Total Listed	21.6	1470
	Total Market	100	6800

Source: INPUT

Exhibit V-9

Leading Professional Services Vendors, Germany 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (DM Millions)
1	IBM	9.2	475
2	SNI	7.3	375
3	Cap Gemini Sogeti	4.7	245
4	SAP	4.5	230
5	Ploenzke	4.2	215
6 =	debis Systemhaus	3.1	160
6 =	Datev	3.1	160
8	ESG	2.6	135
9 =	Digital	2.5	130
9 =	Hewlett Packard	2.5	130
	Total Listed	43.7	2255
	Total Market	100	5165

Source: INPUT

D
Italy

Exhibit V-10 provides a ranking of the Leading Systems Integration Vendors in the Italian market in 1994. Exhibits V-11 and V-12 provide rankings for Turnkey and Professional Services.

Exhibit V-10

Leading Systems Integration Vendors, Italy 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Lira Billions)
1	IBM	17	90
2	Andersen Consulting	17	90
3	Finsiel	15	80
4 =	Groupe Bull	12	66
4 =	Olivetti	12	65
6	Digital	6	30
7	Cap Gemini Sogeti	6	30
8	Logica	4	20
9	SNI	3	15
10	Datitalia	3	15
	Total Listed	94	501
	Total Market	100	535

Source: INPUT

Exhibit V-11

Leading Turnkey Systems Vendors, Italy 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Lira Billions)
1	Olivetti	19.4	210
2	IBM	6.9	75
3 =	Digital	4.6	50
3 =	SNI	4.6	50
5	Sicit	4.2	45
6 =	Editrice	2.8	30
6 =	Reuters	2.8	30
6 =	Intergraph	2.8	30
8 =	Cerved	2.3	25
8 =	Cortis Lentini	2.3	25
	Total Listed	52.8	570
	Total Market	100	1080

Source: INPUT

Exhibit V-12

Leading Professional Services Vendors, Italy 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Lira Billions)
1	Finsiel	31.2	1050
2	Olivetti	10.7	360
3	IBM	9.5	320
4	Database Informatica	4.5	150
5	Cerved	3.3	110
6 =	Digital	2.5	85
6 =	Engineering	2.5	85
6 =	Andersen Consulting	2.5	85
8 =	Cap Gemini Sogeti	2.2	75
8 =	Datamat	2.2	75
	Total Listed	71.1	2395
	Total Market	100	3370

Source: INPUT

E
Austria

Exhibit V-13 provides a ranking of the Leading Systems Integration Vendors in the Austrian market in 1994. Exhibits V-14 and V-15 provide rankings for Turnkey and Professional Services.

Exhibit V-13

Leading Systems Integration Vendors, Austria 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Sch Millions)
1	IBM	28	155
2	Cap Gemini Sogeti	13	70
3	Unisys	12	65
4	Groupe Bull	11	60
5	EDS	9	50
	Total Listed	73	400
	Total Market	100	550

Source: INPUT

Exhibit V-14

Leading Turnkey Systems Vendors, Austria 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Sch Millions)
1	SNI	7.6	310
2	Digital	3.6	145
3	IBM	2.2	90
4	SAP	1.0	40
5	Intergraph	1.0	40
6	AT&T	0.7	30
7	Reuters	0.5	20
8	Software AG	0.4	15
9	Computervision	0.2	10
	Total Listed	17.2	700
	Total Market	100	4080

Source: INPUT

Exhibit V-15

Leading Professional Services Vendors, Austria 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Sch Millions)
1	Managment Data	13.4	465
2	EDV	10.6	370
3	IBM	8.0	280
4	Beko	7.9	275
5	Digital	7.2	250
6	GRZ Linz	7.2	250
7	Al Infomatics	5.9	205
8	Data-Services	5.3	185
9	Voest-Alpine	5.0	175
10	SNI	4.9	170
	Total Listed	75.4	2625
	Total Market	100	3481

Source: INPUT

F
Belgium

Exhibit V-16 provides a ranking of the Leading Systems Integration Vendors in the Belgian market in 1994. Exhibits V-17 and V-18 provide rankings for Turnkey and Professional Services.

Exhibit V-16

Leading Integration Vendors, Belgium 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (BF Millions)
1	Groupe Bull	11	470
2	Cap Gemini Sogeti	8	350
3	Sema Group	8	330
4	EDS	7	310
5	Logica	5	220
	Total Listed	40	1680
	Total Market	100	4200

Source: INPUT

Exhibit V-17

Leading Turnkey Systems Vendors, Belgium 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (BF Millions)
1	SNI	7.5	800
2	CSC	4.0	430
3	Digital	3.8	400
4	IBM	2.4	260
5	Intergraph	1.8	190
6	Getronics	1.5	165
7	Olivetti	1.5	155
8	BSO Origin	1.3	140
9	Reuters	1.0	105
10	McDonnell Douglas	0.9	100
	Total Listed	25.8	2745
	Total Market	100	10650

Source: INPUT

Exhibit V-18

Leading Professional Services Vendors, Belgium 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (BF Millions)
1	IBM	4.4	1290
2	Cap Gemini Sogeti	4.3	1255
3	Dolmen	4.1	1200
4	TIS Group	3.4	1000
5	Trasys	3.2	930
6	Sema Group	2.7	800
7	CSC	2.5	720
8	Digital	2.4	715
9	Cipal	2.4	700
10	Orda-B	2.3	660
	Total Listed	31.6	9270
	Total Market	100	29300

Source: INPUT

G
Denmark

Exhibit V-19 provides a ranking of the Leading Systems Integration Vendors in the Danish market in 1994. Exhibits V-20 and V-21 provide rankings for Turnkey and Professional Services.

Exhibit V-19

Leading Systems Integration Vendors, Denmark 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (DK Millions)
1	IBM	28.0	85
2	Computer Resources	11.5	35
3	Kommunedata	8.2	25
4	Groupe Bull	7.2	22
5	Cap Gemini Sogeti	6.6	20
	Total Listed	61.5	187
	Total Market	100	304

Source: INPUT

Exhibit V-20

Leading Turnkey Systems Vendors, Denmark 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (DK Millions)
1	IBM	3.2	70
2	Digital	1.4	30
3	Intergraph	1.2	25
4	SAP	1.2	25
5	AT&T	0.9	20
6	Olivetti	0.9	20
7	Reuters	0.5	10
8	Cap Gemini Sogeti	0.5	10
9	Logica	0.5	10
10	ComputerVision	0.2	5
	Total Listed	10.4	225
	Total Market	100	2170

Source: INPUT

Exhibit V-21

Leading Professional Services Vendors, Denmark 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (DK Millions)
1	PBS	28.8	870
2	IBM	8.6	260
3	JDC Data	5.3	160
4	Oracle	3.1	95
5 =	Kommunedata	3.0	90
5 =	ICL	3.0	90
7	Danet	2.6	80
8	Cap Gemini Sogeti	2.5	75
9	AT&T	2.1	65
10	Digital	1.7	50
	Total Listed	60.7	1835
	Total Market	100	3025

Source: INPUT

H
Finland

Exhibit V-21 provides a ranking of the Leading Systems Integration Vendors in the Finnish market in 1994. Exhibits V-22 and V-23 provide rankings for Turnkey and Professional Services.

Exhibit V-22

Leading Integration Vendors, Finland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (FM Millions)
1	Tietotehdas	29	60
2	KT-Datacentre	21	45
3	Nokia Data	12	25
4	Cap Gemini Sogeti	10	20
5	Groupe Bull	8	17
	Total Listed	80	167
	Total Market	100	210

Source: INPUT

Exhibit V-23

Leading Turnkey Systems Vendors, Finland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (FM Millions)
1	Intergraph	4.0	40
2	IBM	3.5	35
3	Digital	3.5	35
4	Cap Gemini Sogeti	1.5	15
5	Reuters	1.0	10
6	Olivetti	1.0	10
	Total Listed	14.5	145
	Total Market	100	1000

Source: INPUT

Exhibit V-24

Leading Professional Services Vendors, Finland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (FM Millions)
1	VTKK	24.8	400
2	KT-Datacentre	21.4	345
3	Elorg-Data	10.5	170
4	Paakaupunkiseudom	9.0	145
5	ICL	6.2	100
6	Valmet Data	5.6	90
7	IBM	5.0	80
8	Digital	4.6	75
9	Unic	4.6	75
	Total Listed	91.6	1480
	Total Market	100	1615

Source: INPUT

I

Greece

Exhibit V-25 provides a ranking of the Turnkey Vendors in the Greek market in 1994. Exhibit V-26 provides rankings for Professional Services.

Exhibit V-25

Leading Turnkey Systems Vendors, Greece 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Dra Millions)
1	Digital	5.0	680
2	Intergraph	4.4	600
3	IBM	2.0	270
4	Reuters	1.4	185
5	AT&T	0.6	80
6	ComputerVision	0.4	50
	Total Listed	13.7	1865
	Total Market	100	13600

Source: INPUT

Exhibit V-26

Leading Professional Services Vendors, Greece 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Dra Millions)
1	Andersen Consulting	14.3	2800
2	Digital	5.8	1140
3	IBM	5.6	1100
4	Hewlett Packard	2.6	500
5	Computer Associates	1.3	250
6	Oracle	1.1	225
7	AT&T	0.8	165
8	Reuters	0.8	150
9	Groupe Bull	0.5	90
10	ComputerVision	0.4	75
	Total Listed	33.1	6495
	Total Market	100	19600

Source: INPUT

J
Ireland

Exhibit V-27 provides a ranking of the Leading Systems Integration Vendors in the Irish market in 1994.

Exhibit V-27

Leading Integration Vendors, Ireland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (IR £ Millions)
1	Andersen Consulting	9.6	9
2	IBM	8.5	8
3	Digital	5.3	5
4	Unisys	5.3	5
	Total Listed	28.7	27
	Total Market	100	94

Source: INPUT

K
Netherlands

Exhibit V-28 provides a ranking of the Leading Systems Integration Vendors in the Dutch market in 1994. Exhibits V-29 and V-30 provide rankings for Turnkey and Professional Services.

Exhibit V-28

Leading Systems Integration Vendors, Netherlands 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Dfl Millions)
1	IBM	21.0	65
2	Cap Gemini Sogeti	16.1	50
3	CMG	11.3	35
4	BSO Origin	12.9	40
5	Groupe Bull	8.1	25
6	Getronics	7.7	24
7	Andersen Consulting	5.8	18
8	Raet	5.2	16
9	Logica	2.9	9
10	Digital	2.3	7
	Total Listed	93.2	289
	Total Market	100	310

Source: INPUT

Exhibit V-29

Leading Turnkey Systems Vendors, Netherlands 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Dfl Millions)
1	Getronics	9.2	95
2	BSO Origin	8.7	90
3	IBM	4.9	50
4=	Intergraph	4.4	45
4=	SNI	4.4	45
6=	Multihouse	3.9	40
6=	Cap Volmac	3.9	40
8	Digital	3.4	35
9	Olivetti	2.4	25
10	Ordina	1.5	15
	Total Listed	46.6	480
	Total Market	100	1030

Source: INPUT

Exhibit V-30

Leading Professional Services Vendors, Netherlands 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Dfl Millions)
1	Cap Volmac	19.7	595
2	Getronics	10.0	300
3	RCC	8.6	260
4	Raet	6.6	200
5	BSO Origin	6.6	200
6	CMG	4.6	140
7	IBM	4.0	120
8	Ordina	2.8	85
9	Bouwfonds Informatica	2.8	85
10	Digital	1.8	55
	Total Listed	67.7	2040
	Total Market	100	3015

Source: INPUT

L
Norway

Exhibit V-31 provides a ranking of the Leading Systems Integration Vendors in the Norwegian market in 1994. Exhibits V-32 and V-33 provide rankings for Turnkey and Professional Services.

Exhibit V-31

Leading Systems Integration Vendors, Norway 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (NK Millions)
1	IBM	40	100
2	Groupe Bull	20	50
3	Andersen Consulting	12	30
4	Unisys	7	18
5	Cap Gemini Sogeti	6	15
	Total Listed	85	213
	Total Market	100	250

Source: INPUT

Exhibit V-32

Leading Turnkey Systems Vendors, Norway 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (NK Millions)
1	IBM	3.0	50
2	Intergraph	2.4	40
3	Digital	1.2	20
4	Olivetti	0.9	15
5	AT&T	0.9	15
6	Reuters	0.6	10
7	Cap Gemini Sogeti	0.6	10
	Total Listed	9.8	160
	Total Market	100	1640

Source: INPUT

Exhibit V-33

Leading Professional Services Vendors, Norway 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (NK Millions)
1	NIT	17.6	505
2	Fellesdata	12.2	350
3	Novit	8.0	230
4	Rogalandsdata	6.6	190
5	IBM	6.3	180
6	Cap Gemini Sogeti	5.0	145
7	Bankenes Betalingssentral	4.9	140
8	Celsius	4.0	115
9	Andersen Consulting	3.8	110
10	EDS	3.7	105
	Total Listed	72.0	2070
	Total Market	100	2875

Source: INPUT

M
Portugal

Exhibit V-34 provides a ranking of the Turnkey Vendors in the Portuguese market in 1994. Exhibit V-35 provides rankings for Professional Services.

Exhibit V-34

Leading Turnkey Systems Vendors, Portugal 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Esc Millions)
1	Digital	7.0	440
2	Intergraph	6.9	435
3	IBM	3.3	210
4	Reuters	2.2	140
5	AT&T	0.9	55
6	ComputerVision	0.6	40
	Total Listed	21.0	1320
	Total Market	100	6300

Source: INPUT

Exhibit V-35

Leading Professional Services Vendors, Portugal 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Esc Millions)
1	Andersen Consulting	25	1900
2	Digital	10	790
3	IBM	10	750
4	Unisys	10	740
5	Groupe Bull	8	600
6	Hewlett Packard	4	330
7	Computer Associates	2	165
8	Oracle	2	150
9	AT&T	1	115
10	Reuters	1	110
	Total Listed	73	5650
	Total Market	100	7740

Source: INPUT

N
Spain

Exhibit V-36 provides a ranking of the Leading Turnkey Vendors in the Spanish market in 1994. Exhibit V-37 provides rankings for Professional Services.

Exhibit V-36

Leading Systems Integration Vendors, Spain 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Ptas Millions)
1	Andersen Consulting	25	4750
2	Digital	11	2090
3 =	IBM	10	1900
3 =	EDS	10	1900
5	Page Iberica	5	950
	Total Listed	61	11590
	Total Market	100	19000

Source: INPUT

Exhibit V-37

Leading Professional Services Vendors, Spain 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Ptas Millions)
1	Eritel	13.8	12480
2	Andersen Consulting	11.6	10490
3	IBM	5.5	4990
4	Sema Group	5.2	4670
5	Logic Group	5.1	4650
6	Iberimatica	3.7	3350
7	Hewlett Packard	2.6	2390
8	Digital	2.4	2175
9	AT&T	2.3	2080
10	Cap Gemini Sogeti	2.2	2000
	Total Listed	54.5	49275
	Total Market	100	90400

Source: INPUT

O
Switzerland

Exhibit V-38 provides a ranking of the Leading Systems Integration Vendors in the Swiss market in 1994. Exhibits V-39 and V-40 provide rankings for Turnkey and Professional Services.

Exhibit V-38

Leading Systems Integration Vendors, Switzerland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (SF Millions)
1	Digital	24	50
2 =	EDS	10	20
2 =	Unisys	10	20
4	Cap Gemini Sogeti	5	10
5	Logica	4	8
	Total Listed	51	108
	Total Market	100	210

Source: INPUT

Exhibit V-39

Leading Turnkey Systems Vendors, Switzerland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (SF Millions)
1	SNI	4.6	45
2	Fides	2.6	25
3	IBM	2.6	25
4	AT&T	2.1	20
5	Intergraph	1.5	15
6	Reuters	1.0	10
7	Digital	1.0	10
	Total Listed	15.5	150
	Total Market	100	970

Source: INPUT

Exhibit V-40

Leading Professional Services Vendors, Switzerland 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (SF Millions)
1	IBM	8.3	80
2 =	Digital	6.2	60
2 =	Fides	6.2	60
4 =	AT&T	3.1	30
4 =	ATAG debis Informatik	3.1	30
6 =	Delta ST	2.1	20
6 =	Cap Gemini Sogeti	2.1	20
6 =	Oracle	2.1	20
9 =	SNI	1.6	15
9 =	Unisys	1.6	15
	Total Listed	36.3	350
	Total Market	100	965

Source: INPUT

P
Sweden

Exhibit V-41 provides a ranking of the Leading Systems Integration Vendors in the Swedish market in 1994. Exhibits V-42 and V-43 provide rankings for Turnkey and Professional Services.

Exhibit V-41

Leading Systems Integration Vendors, Sweden 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Sek Millions)
1	Cap Gemini Sogeti	30	110
2	IBM	27	100
3	EDS	11	40
4	Ericsson	8	30
5	Groupe Bull	7	27
	Total Listed	83	307
	Total Market	100	371

Source: INPUT

Exhibit V-42

Leading Turnkey Systems Vendors, Sweden 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Sek Millions)
1	Sapia	17.7	460
2	Industri-Matematik	6.9	180
3	Intergraph	4.6	120
4	Digital	3.8	100
5	IBM	3.1	80
6	SNI	2.1	55
7	Cap Programmator	1.9	50
8	EDS	2.3	60
9	Maldata	1.9	50
10	Reuters	1.5	40
	Total Listed	46.0	1195
	Total Market	100	2600

Source: INPUT

Exhibit V-43

Leading Professional Services Vendors, Sweden 1994

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (Sek Millions)
1	Cap Programmator	5.0	500
2	EDS	4.2	420
3	Celsius	3.5	350
4	WM Data	3.4	337
5	Sapia	2.7	265
6	Communicator AB	1.7	170
7 =	IBS	1.7	165
7 =	Sema Group	1.7	165
9	IBM	1.6	155
10	Oracle	1.5	145
	Total Listed	26.8	2672
	Total Market	100	9975

Source: INPUT

(Blank)

A

Business Integration Defined

Business Integration, as defined by INPUT, is a "meta" term which reflects the increasingly embedded role technology plays in business processes as shown in Exhibit A-1.

From the point of view of tracking vendors' Business Integration revenues, this meta terms has three delivery sub-modes, Systems Integration, Turnkey Systems and Professional Services. Exhibit A-2 illustrates how these sub-modes fit into INPUT's mapping of the overall software and services industry.

The complexity of mapping definitions to the nature of the "real world" is such that it is unrealistic to completely mirror the complexity of supply and demand in the marketplace. This complexity is especially evident in the areas INPUT tracks within its Business Integration Programme. It is necessary, therefore, to regard INPUT's definitions as, to some extent, conceptual models of marketplace activity.

Exhibit A-3 illustrates the primary difference between the turnkey systems delivery mode and the systems integration delivery mode. The major difference between the two delivery modes is one of customisation. SI projects are defined as being more than 50% customised. Clearly, the 50% cut off line is an arbitrary figure.

However, there are **real** differences in the marketplace between these two delivery modes. Exhibits A-4 and A-5 provide more detailed analyses of these differences.

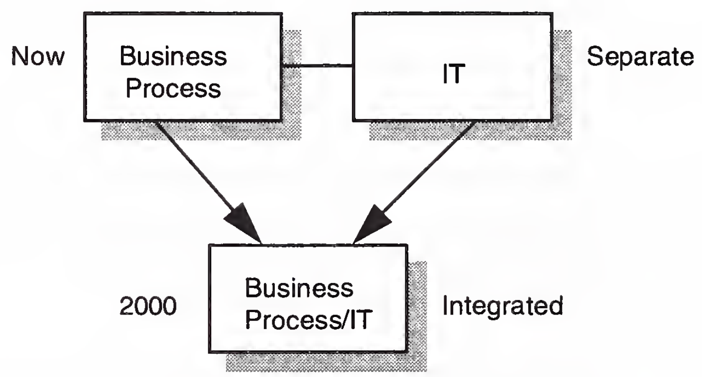
The purpose of presenting the three delivery modes or conceptual modes within the broad term "Business Integration" in this report is to offer vendors the ability to use the analysis in a variety of ways.

Combining the SI and TK delivery modes may be appropriate for certain country markets but inappropriate in others; for example, it is appropriate to combine the delivery modes in German market whereas it is inappropriate to do this in other country markets such as the UK and France and particularly at a European level where this combination would contort a true picture of marketplace competition.

The provision of data and analysis under the meta level allows users of this report the freedom to combine the basic data provided in any way that they see fit and present their own vision of marketplace competition.

Exhibit A-1

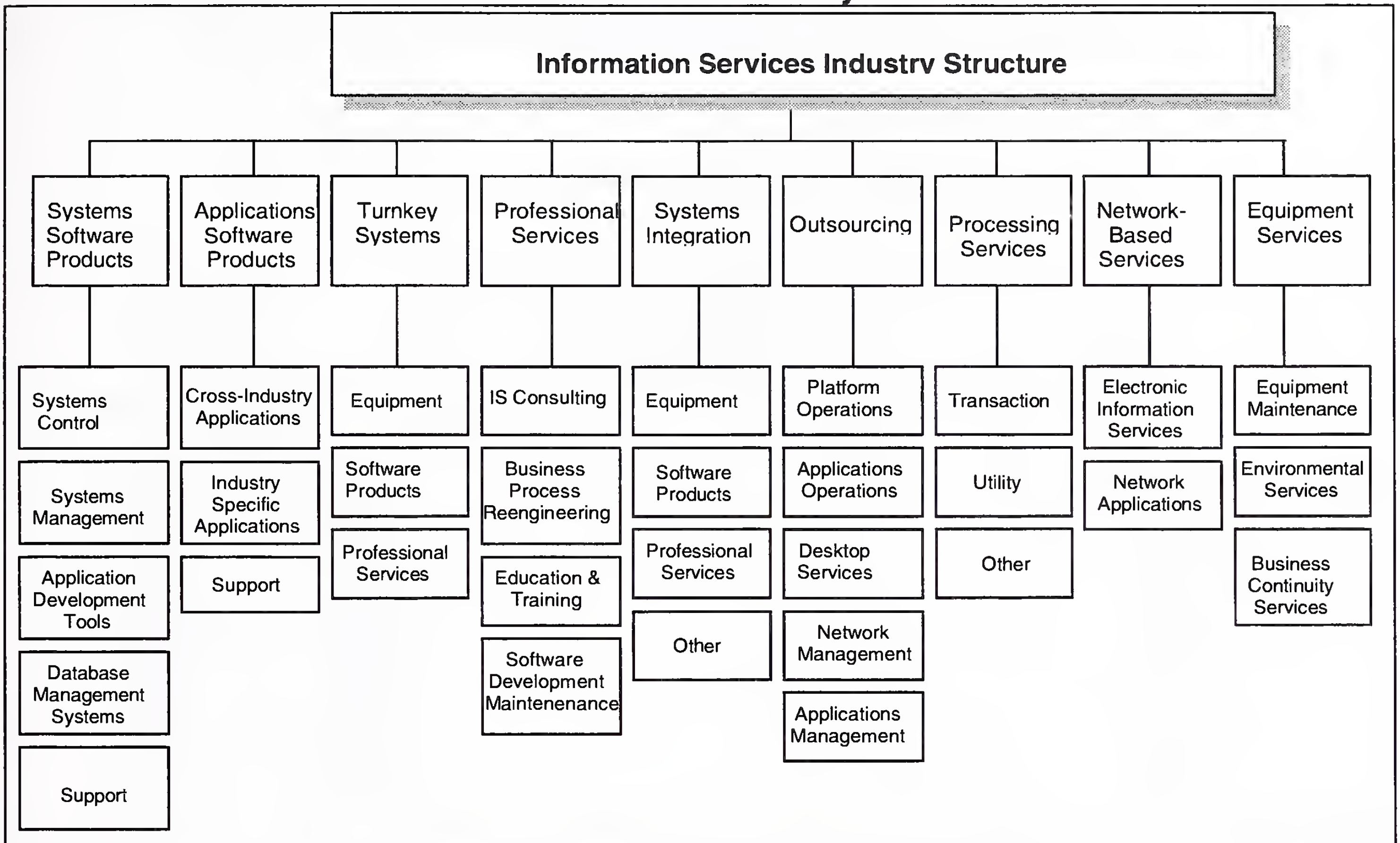
Integration of IT and Business Processes



Source: INPUT

Exhibit A-2

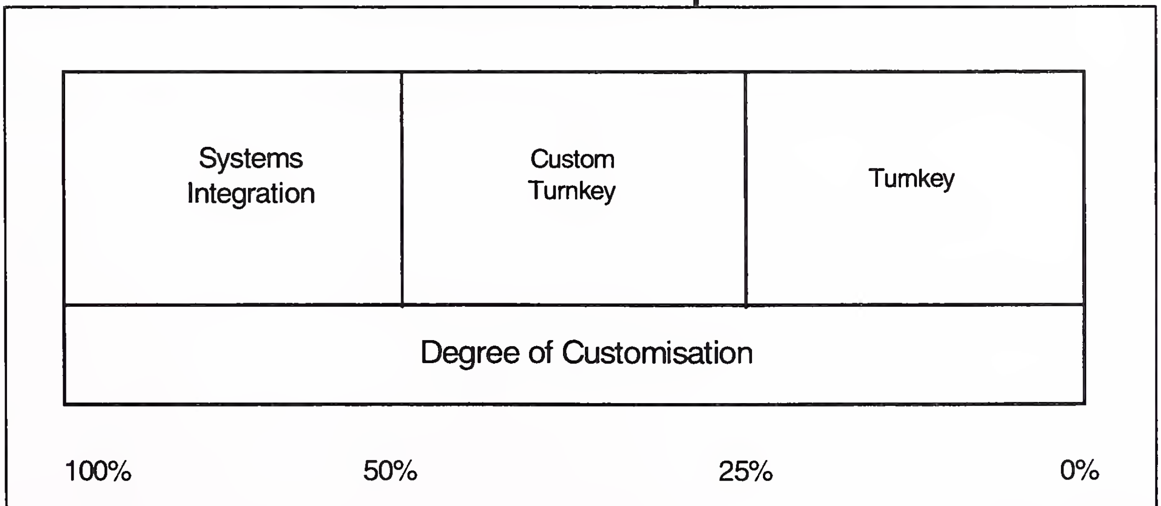
Information Services Industry Structure



Source: INPUT

Exhibit A-3

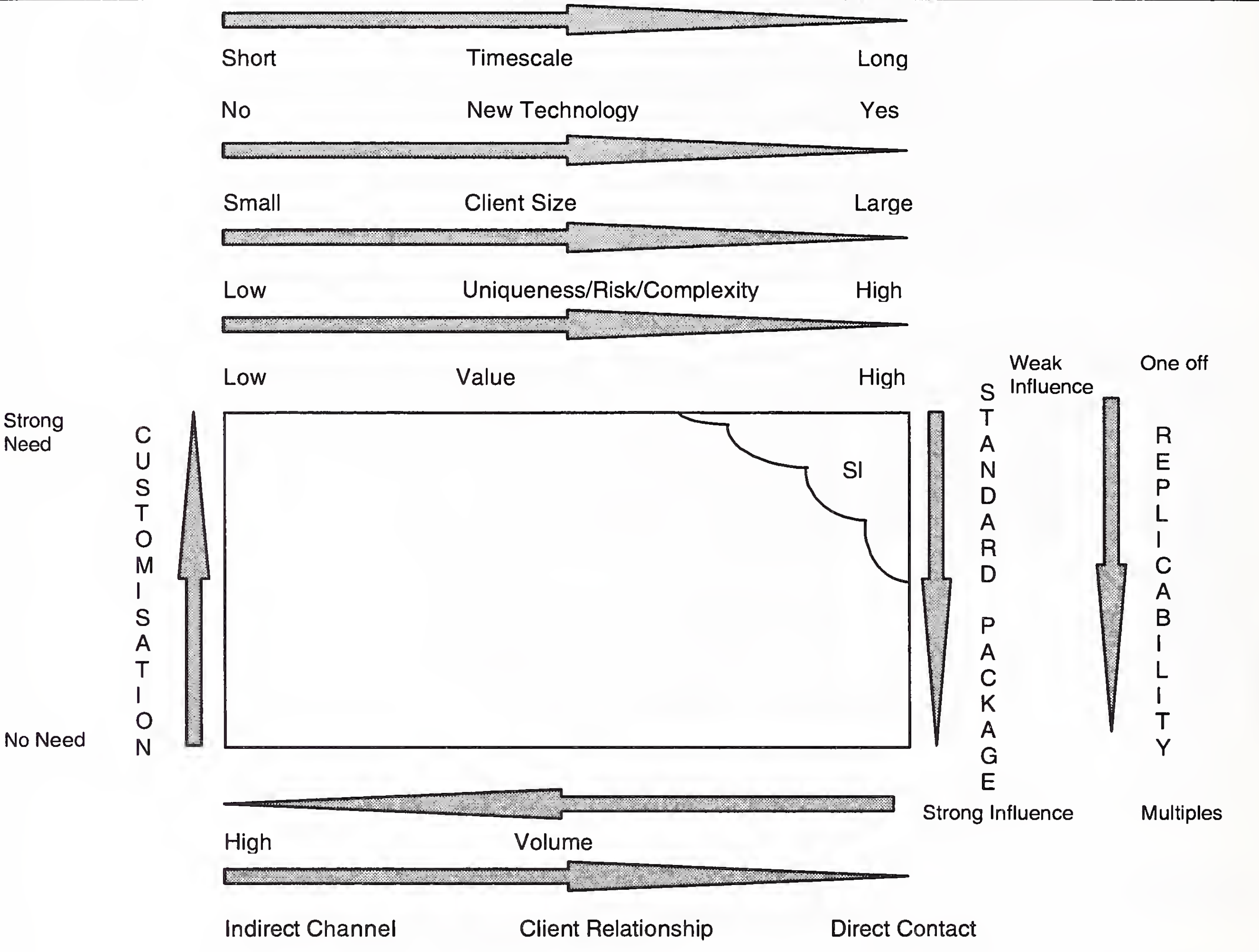
The Customisation Spectrum



Source: INPUT

Exhibit A-4

Systems Integration and Turnkey Mapping



Source: INPUT

Exhibit A-5

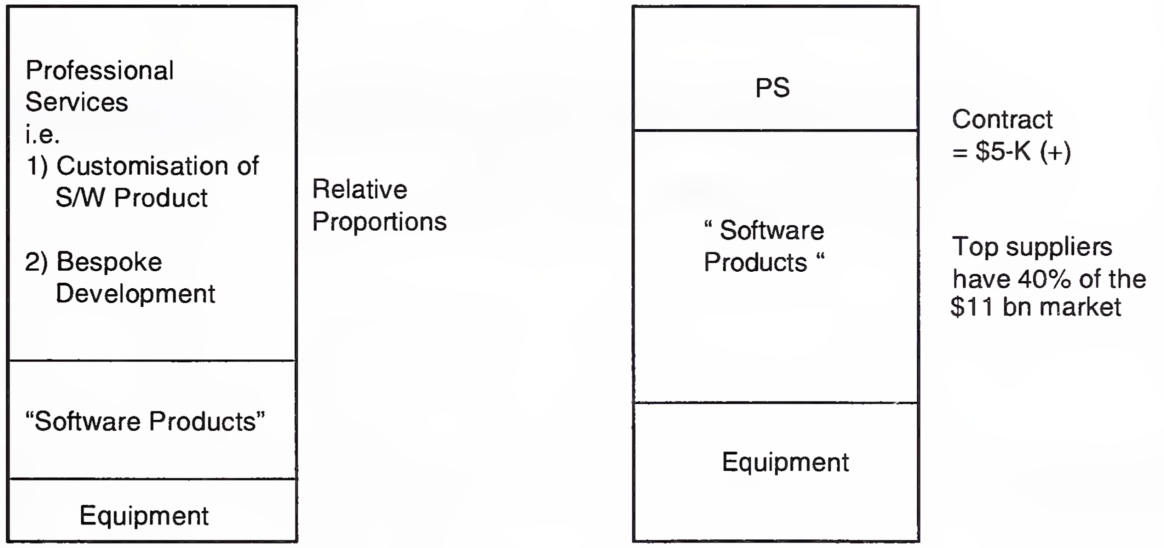
Similarity/Differences Between Systems Integration and Turnkey Systems

Systems Integration

- Prime Contractor
- Contract = $2m(+)
- Top 10 suppliers have 85% of the $4.6 bn market

Turnkey

- Lower Risk
- Fewer subcontractors
- Contract = $55-K (+)
- top suppliers have 40% of the $11 bn market



Contract Components

Contract Components

Source: INPUT

B

Business Integration Vendors Rankings (US $)

A
United Kingdom

Exhibit B-1 provides a ranking of the leading Systems Integration vendors in the United Kingdom market in 1994 in US dollars.

Exhibit B-2 provides a ranking of the leading Turnkey Systems vendors in the United Kingdom market in 1994 in US dollars.

Exhibit B-3 provides a ranking of the leading Professional Services vendors in the United Kingdom market in 1994 in US dollars.

Exhibit B-1

Leading Systems Integration Vendors, United Kingdom 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	17.1	234.7
2	ICL	12.6	172.1
3	Andersen Consulting	8.6	117.4
4	Syntegra	8.0	109.5
5	Groupe Bull	7.0	95.5
6	EDS	6.8	93.9
7	Sema	5.5	75.1
8	CGS/Hoskyns	5.1	70.4
9	DEC	4.8	65.7
10	Logica	3.9	53.2
	Total Listed	79.3	1087.6
	Total Market	100	1370.9

Source: INPUT

Exhibit B-2

Leading Turnkey Systems Vendors, United Kingdom 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	MDIS	3.7	78.2
2	Cray Electronics	3.1	65.7
3	JBA	2.9	62.6
4=	Intergraph	2.6	54.8
4=	Reuters	2.6	54.8
4=	IBM	2.6	54.8
7	Kalamazoo	2.2	46.9
8	Misys	2.2	46.9
9	Digital	1.5	31.3
10	AT&T	1.5	31.3
	Total Listed	24.7	527.4
	Total Market	100	2136.2

Source: INPUT

Exhibit B-3

Leading Professional Services Vendors, United Kingdom 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	ICL	9	281.7
2	IBM	6	183.1
3	Sema Group	5	148.7
4	Andersen Consulting	5	140.8
5	Oracle	4	118.9
6	Coopers & Lybrand	4	109.5
7	Logica	3	103.3
8	Digital	3	101.7
9	Cray Electronics	3	93.9
10	Hewlett Packard	3	86.1
	Total Listed	46	1367.8
	Total Market	100	3003.8

Source: INPUT

B
France

Exhibit B-4 provides a ranking of the leading Systems Integration vendors in the French market in 1994 in US dollars.

Exhibit B-4 provides a ranking of the leading Turnkey Systems vendors in the French market in 1994 in US dollars.

Exhibit B-4 provides a ranking of the leading Professional Services vendors in the French market in 1994 in US dollars.

Exhibit B-4

Leading Systems Integration Vendors, France 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	20	200.4
2	Cap Gemini Sogeti	15	155.4
3	Groupe Bull	11	107.7
4	Andersen Consulting	9	88.0
5	Sema Group	8	85.2
6	EDS	6	63.7
7	Syseca	6	56.2
8	Alcatel ISR	3	33.7
9	DEC	3	30.9
10	Axime	2	24.3
	Total Listed	84	845.5
	Total Market	100	1012.4

Source: INPUT

Exhibit B-5

Leading Turnkey Systems Vendors, France 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Sligos	3.4	70.2
2=	IBM	2.7	56.2
2=	Syseca	2.7	56.2
4	Alcatel TiTN	2.5	50.6
5	Fininfor	2.3	47.8
6	Digital	2.1	43.1
7	CISI	1.8	37.5
8	Reuters	1.7	35.6
9	IBSI	1.5	30.9
10	SNI	1.0	20.6
	Total Listed	21.8	448.5
	Total Market	100	2059.9

Source: INPUT

Exhibit B-6

Leading Professional Services Vendors, France 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Cap Gemini Sogeti	3.6	262.2
2	IBM	2.9	211.6
3	Syseca	2.6	187.3
3	Sema Group	2.3	168.5
5	CGI	2.1	153.6
6	Unilog	1.5	106.7
7=	Altran	1.2	88.0
7=	Steria	1.2	88.0
7=	IBSI	1.2	87.1
10	Digital	1.1	78.7
	Total Listed	19.8	1431.6
	Total Market	100	7219.1

Source: INPUT

C

Germany

Exhibit B-7 provides a ranking of the leading Systems Integration vendors in the German market in 1994 in US dollars.

Exhibit B-8 provides a ranking of the leading Turnkey Systems vendors in the German market in 1994 in US dollars.

Exhibit B-9 provides a ranking of the leading Professional Services vendors in the German market in 1994 in US dollars.

Exhibit B-7

Leading Systems Integration Vendors, Germany 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	22.3	161.3
2	SNI	18.7	135.5
3	Andersen Consulting	6.2	45.2
4	Groupe Bull	6.1	44.5
5	EDS	5.8	41.9
6	Digital	4.9	35.5
7 =	debis Systemhaus	4.5	32.3
7 =	CSC	4.5	32.3
9	Hewlett Packard	4.0	29.0
10	AT&T	2.2	16.1
	Total Listed	79.2	573.5
	Total Market	100	724.5

Source: INPUT

Exhibit B-8

Leading Turnkey Systems Vendors, Germany 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	SNI	9.6	419.4
2	Intergraph	2.2	96.8
3	IBM	1.8	77.4
4	Taylorix	1.6	71.0
5	Digital	1.5	64.5
6	debis Systemhaus	1.4	61.3
7	Compunet Computer	1.3	54.8
8	mbp[EDS]	1.1	48.4
9	Reuters	0.7	32.3
10	Sligos	0.5	22.6
	Total Listed	21.6	948.4
	Total Market	100	4387.1

Source: INPUT

Exhibit B-9

Leading Professional Services Vendors, Germany 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	9.2	306.5
2	SNI	7.3	241.9
3	Cap Gemini Sogeti	4.7	158.1
4	SAP	4.5	148.4
5	Ploenzke	4.2	138.7
6 =	debis Systemhaus	3.1	103.2
6 =	Datev	3.1	103.2
8	ESG	2.6	87.1
9 =	Digital	2.5	83.9
9 =	Hewlett Packard	2.5	83.9
	Total Listed	43.7	1454.8
	Total Market	100	3332.3

Source: INPUT

D
Italy

Exhibit B-10 provides a ranking of the leading Systems Integration vendors in the Italian market in 1994 in US dollars.

Exhibit B-11 provides a ranking of the leading Turnkey Systems vendors in the Italian market in 1994 in US dollars.

Exhibit B-12 provides a ranking of the leading Professional Services vendors in the Italian market in 1994 in US dollars.

Exhibit B-10

Leading Systems Integration Vendors, Italy 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	17	55.6
2	Andersen Consulting	17	55.6
3	Finsiel	15	49.4
4 =	Groupe Bull	12	40.7
4 =	Olivetti	12	40.1
6	Digital	6	18.5
7	Cap Gemini Sogeti	6	18.5
8	Logica	4	12.3
9	SNI	3	9.3
10	Datitalia	3	9.3
	Total Listed	94	309.3
	Total Market	100	330.2

Source: INPUT

Exhibit B-11

Leading Turnkey Systems Vendors, Italy 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Olivetti	19.4	129.6
2	IBM	6.9	46.3
3 =	Digital	4.6	30.9
3 =	SNI	4.6	30.9
5	Sicit	4.2	27.8
6 =	Editrice	2.8	18.5
6 =	Reuters	2.8	18.5
6 =	Intergraph	2.8	18.5
8 =	Cerved	2.3	15.4
8 =	Cortis Lentini	2.3	15.4
	Total Listed	52.8	351.9
	Total Market	100.0	666.7

Source: INPUT

Exhibit B-12

Leading Professional Services Vendors, Italy 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Finsiel	31.2	648.1
2	Olivetti	10.7	222.2
3	IBM	9.5	197.5
4	Database Informatica	4.5	92.6
5	Cerved	3.3	67.9
6 =	Digital	2.5	52.5
6 =	Engineering	2.5	52.5
6 =	Andersen Consulting	2.5	52.5
8 =	Cap Gemini Sogeti	2.2	46.3
8 =	Datamat	2.2	46.3
	Total Listed	71.1	1478.4
	Total Market	100.0	2080.2

Source: INPUT

E
Austria

Exhibit B-13 provides a ranking of the leading Systems Integration vendors in the Austrian market in 1994 in US dollars.

Exhibit B-14 provides a ranking of the leading Turnkey Systems vendors in the Austrian market in 1994 in US dollars.

Exhibit B-15 provides a ranking of the leading Professional Services vendors in the Austrian market in 1994 in US dollars.

Exhibit B-13

Leading Systems Integration Vendors, Austria 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	28	14
2	Cap Gemini Sogeti	13	6
3	Unisys	12	6
4	Groupe Bull	11	6
5	EDS	9	5
	Total Listed	73	37
	Total Market	100	50

Source: INPUT

Exhibit B-14

Leading Turnkey Systems Vendors, Austria 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	SNI	7.6	28
2	Digital	3.6	13
3	IBM	2.2	8
4	SAP	1.0	4
5	Intergraph	1.0	4
6	AT&T	0.7	3
7	Reuters	0.5	2
8	Software AG	0.4	1
9	Computervision	0.2	1
	Total Listed	17.2	64
	Total Market	100.0	374

Source: INPUT

Exhibit B-15

Leading Professional Services Vendors, Austria 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Managment Data	13.4	43
2	EDV	10.6	34
3	IBM	8.0	26
4	Beko	7.9	25
5	Digital	7.2	23
6	GRZ Linz	7.2	23
7	AI Infomatics	5.9	19
8	Data-Services	5.3	17
9	Voest-Alpine	5.0	16
10	SNI	4.9	16
	Total Listed	75.4	241
	Total Market	100.0	319

Source: INPUT

F
Belgium

Exhibit B-16 provides a ranking of the leading Systems Integration vendors in the Belgium market in 1994 in US dollars.

Exhibit B-17 provides a ranking of the leading Turnkey Systems vendors in the Belgium market in 1994 in US dollars.

Exhibit B-18 provides a ranking of the leading Professional Services vendors in the Belgium market in 1994 in US dollars.

Exhibit B-16

Leading Systems Integration Vendors, Belgium 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Groupe Bull	11	14.8
2	Cap Gemini Sogeti	8	11.0
3	Sema Group	8	10.4
4	EDS	7	9.7
5	Logica	5	6.9
	Total Listed	40	52.8
	Total Market	100	132.1

Source: INPUT

Exhibit B-17

Leading Turnkey Systems Vendors, Belgium 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	SNI	7.5	25.2
2	CSC	4.0	13.5
3	Digital	3.8	12.6
4	IBM	2.4	8.2
5	Intergraph	1.8	6.0
6	Getronics	1.5	5.2
7	Olivetti	1.5	4.9
8	BSO Origin	1.3	4.4
9	Reuters	1.0	3.3
10	McDonnell Douglas	0.9	3.1
	Total Listed	25.8	86.3
	Total Market	100.0	334.9

Source: INPUT

Exhibit B-18

Leading Professional Services Vendors, Belgium 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	4.4	40.6
2	Cap Gemini Sogeti	4.3	39.5
3	Dolmen	4.1	37.7
4	TIS Group	3.4	31.4
5	Trasys	3.2	29.2
6	Sema Group	2.7	25.2
7	CSC	2.5	22.6
8	Digital	2.4	22.5
9	Cipal	2.4	22.0
10	Orda-B	2.3	20.8
	Total Listed	31.6	291.5
	Total Market	100.0	921.4

Source: INPUT

G
Denmark

Exhibit B-19 provides a ranking of the leading Systems Integration vendors in the Danish market in 1994 in US dollars.

Exhibit B-20 provides a ranking of the leading Turnkey Systems vendors in the Danish market in 1994 in US dollars.

Exhibit B-21 provides a ranking of the leading Professional Services vendors in the Danish market in 1994 in US dollars.

Exhibit B-19

Leading Systems Integration Vendors, Denmark 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	28.0	14.0
2	Computer Resources	11.5	5.8
3	Kommunedata	8.2	4.1
4	Groupe Bull	7.2	3.6
5	Cap Gemini Sogeti	6.6	3.3
	Total Listed	61.5	30.8
	Total Market	100.0	50.0

Source: INPUT

Exhibit B-20

Leading Turnkey Systems Vendors, Denmark 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	3.2	11.5
2	Digital	1.4	4.9
3	Intergraph	1.2	4.1
4	SAP	1.2	4.1
5	AT&T	0.9	3.3
6	Olivetti	0.9	3.3
7	Reuters	0.5	1.6
8	Cap Gemini Sogeti	0.5	1.6
9	Logica	0.5	1.6
10	ComputerVision	0.2	0.8
	Total Listed	10.4	37.0
	Total Market	100.0	356.9

Source: INPUT

Exhibit B-21

Leading Professional Services Vendors, Denmark 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	PBS	28.8	143.1
2	IBM	8.6	42.8
3	JDC Data	5.3	26.3
4	Oracle	3.1	15.6
5 =	Kommunedata	3.0	14.8
5 =	ICL	3.0	14.8
7	Danet	2.6	13.2
8	Cap Gemini Sogeti	2.5	12.3
9	AT&T	2.1	10.7
10	Digital	1.7	8.2
	Total Listed	60.7	301.8
	Total Market	100.0	497.5

Source: INPUT

F
Finland

Exhibit B-22 provides a ranking of the leading Systems Integration vendors in the Finland market in 1994 in US dollars.

Exhibit B-23 provides a ranking of the leading Turnkey Systems vendors in the Finalnd market in 1994 in US dollars.

Exhibit B-24 provides a ranking of the leading Professional Services vendors in the Finland market in 1994 in US dollars.

Exhibit B-22

Leading Systems Integration Vendors, Finland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Tietotehdas	29	12.7
2	KT-Datacentre	21	9.5
3	Nokia Data	12	5.3
4	Cap Gemini Sogeti	10	4.2
5	Groupe Bull	8	3.6
	Total Listed	80	35.2
	Total Market	100	44.3

Source: INPUT

Exhibit B-23

Leading Turnkey Systems Vendors, Finland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Intergraph	4.0	8.4
2	IBM	3.5	7.4
3	Digital	3.5	7.4
4	Cap Gemini Sogeti	1.5	3.2
5	Reuters	1.0	2.1
6	Olivetti	1.0	2.1
	Total Listed	14.5	30.6
	Total Market	100	211.0

Source: INPUT

Exhibit B-24

Leading Professional Services Vendors, Finland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	VTKK	24.8	84.4
2	KT-Datacentre	21.4	72.8
3	Elorg-Data	10.5	35.9
4	Paakaupunkiseudom	9.0	30.6
5	ICL	6.2	21.1
6	Valmet Data	5.6	19.0
7	IBM	5.0	16.9
8	Digital	4.6	15.8
9	Unic	4.6	15.8
	Total Listed	91.6	312.2
	Total Market	100.0	340.7

Source: INPUT

H
Greece

Exhibit B-25 provides a ranking of the leading Turnkey Systems vendors in the Greek market in 1994 in US dollars.

Exhibit B-26 provides a ranking of the leading Professional Services vendors in the Greek market in 1994 in US dollars.

Exhibit B-25

Leading Turnkey Systems Vendors, Greece 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Digital	5.0	2.8
2	Intergraph	4.4	2.5
3	IBM	2.0	1.1
4	Reuters	1.4	0.8
5	AT&T	0.6	0.3
6	ComputerVision	0.4	0.2
	Total Listed	13.7	7.8
	Total Market	100	56.5

Source: INPUT

Exhibit B-26

Leading Professional Services Vendors, Greece 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Andersen Consulting	14.3	11.6
2	Digital	5.8	4.7
3	IBM	5.6	4.6
4	Hewlett Packard	2.6	2.1
5	Computer Associates	1.3	1.0
6	Oracle	1.1	0.9
7	AT&T	0.8	0.7
8	Reuters	0.8	0.6
9	Groupe Bull	0.5	0.4
10	ComputerVision	0.4	0.3
	Total Listed	33.1	27.0
	Total Market	100	81.5

Source: INPUT

J

Ireland

Exhibit B-27 provides a ranking of the leading Professional Services vendors in the Irish market in 1994 in US dollars.

Exhibit B-27

Leading Professional Services Vendors, Ireland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Andersen Consulting	9.6	13.9
2	IBM	8.5	12.4
3	Digital	5.3	7.7
4	Unisys	5.3	7.7
	Total Listed	28.7	41.7
	Total Market	100	145.3

Source: INPUT

K
Netherlands

Exhibit B-28 provides a ranking of the leading Systems Integration vendors in the Dutch market in 1994 in US dollars.

Exhibit B-29 provides a ranking of the leading Turnkey Systems vendors in the Dutch market in 1994 in US dollars.

Exhibit B-30 provides a ranking of the leading Professional Services vendors in the Dutch market in 1994 in US dollars.

Exhibit B-28

Leading Systems Integration Vendors, Netherlands 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	21.0	37.4
2	Cap Gemini Sogeti	16.1	28.7
3	CMG	11.3	20.1
4	BSO Origin	12.9	23.0
5	Groupe Bull	8.1	14.4
6	Getronics	7.7	13.8
7	Andersen Consulting	5.8	10.3
8	Raet	5.2	9.2
9	Logica	2.9	5.2
10	Digital	2.3	4.0
	Total Listed	93.2	166.1
	Total Market	100	178.2

Source: INPUT

Exhibit B-29

Leading Turnkey Systems Vendors, Netherlands 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Getronics	9.2	54.6
2	BSO Origin	8.7	51.7
3	IBM	4.9	28.7
4=	Intergraph	4.4	25.9
4=	SNI	4.4	25.9
6=	Multihouse	3.9	23.0
6=	Cap Volmac	3.9	23.0
8	Digital	3.4	20.1
9	Olivetti	2.4	14.4
10	Ordina	1.5	8.6
	Total Listed	46.6	275.9
	Total Market	100	592.0

Source: INPUT

Exhibit B-30

Leading Professional Services Vendors, Netherlands 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Cap Volmac	19.7	342.0
2	Getronics	10.0	172.4
3	RCC	8.6	149.4
4	Raet	6.6	114.9
5	BSO Origin	6.6	114.9
6	CMG	4.6	80.5
7	IBM	4.0	69.0
8	Ordina	2.8	48.9
9	Bouwfonds Informatica	2.8	48.9
10	Digital	1.8	31.6
	Total Listed	67.7	1172.4
	Total Market	100	1732.8

Source: INPUT

L
Norway

Exhibit B-31 provides a ranking of the leading Systems Integration vendors in the Norwegian market in 1994 in US dollars.

Exhibit B-32 provides a ranking of the leading Turnkey Systems vendors in the Norwegian market in 1994 in US dollars.

Exhibit B-33 provides a ranking of the leading Professional Services vendors in the Norwegian market in 1994 in US dollars.

Exhibit B-31

Leading Systems Integration Vendors, Norway 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	40	14.8
2	Groupe Bull	20	7.4
3	Andersen Consulting	12	4.4
4	Unisys	7	2.7
5	Cap Gemini Sogeti	6	2.2
	Total Listed	85	31.5
	Total Market	100	37.0

Source: INPUT

Exhibit B-32

Leading Turnkey Systems Vendors, Norway 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	3.0	7.4
2	Intergraph	2.4	5.9
3	Digital	1.2	3.0
4	Olivetti	0.9	2.2
5	AT&T	0.9	2.2
6	Reuters	0.6	1.5
7	Cap Gemini Sogeti	0.6	1.5
	Total Listed	9.8	23.7
	Total Market	100.0	242.6

Source: INPUT

Exhibit B-33

Leading Professional Services Vendors, Norway 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	NIT	17.6	74.7
2	Fellesdata	12.2	51.8
3	Novit	8.0	34.0
4	Rogalandsdata	6.6	28.1
5	IBM	6.3	26.6
6	Cap Gemini Sogeti	5.0	21.4
7	Bankenes Betalingssentral	4.9	20.7
8	Celsius	4.0	17.0
9	Andersen Consulting	3.8	16.3
10	EDS	3.7	15.5
	Total Listed	72.0	306.2
	Total Market	100.0	425.3

Source: INPUT

M
Portugal

Exhibit B-34 provides a ranking of the leading Turnkey Systems vendors in the Portuguese market in 1994 in US dollars.

Exhibit B-35 provides a ranking of the leading Professional Services vendors in the Portuguese market in 1994 in US dollars.

Exhibit B-34

Leading Turnkey Systems Vendors, Portugal 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Digital	7.0	2.8
2	Intergraph	6.9	2.7
3	IBM	3.3	1.3
4	Reuters	2.2	0.9
5	AT&T	0.9	0.3
6	ComputerVision	0.6	0.3
	Total Listed	21.0	8.3
	Total Market	100	39.6

Source: INPUT

Exhibit B-35

Leading Professional Services Vendors, Portugal 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Andersen Consulting	25	11.9
2	Digital	10	5.0
3	IBM	10	4.7
4	Unisys	10	4.6
5	Groupe Bull	8	3.8
6	Hewlett Packard	4	2.1
7	Computer Associates	2	1.0
8	Oracle	2	0.9
9	AT&T	1	0.7
10	Reuters	1	0.7
	Total Listed	73	35.5
	Total Market	100	48.6

Source: INPUT

N
Spain

Exhibit B-36 provides a ranking of the leading Systems Integration vendors in the Spanish market in 1994 in US dollars.

Exhibit B-37 provides a ranking of the leading Turnkey Systems vendors in the Spanish market in 1994 in US dollars.

Exhibit B-38 provides a ranking of the leading Professional Services vendors in the Spanish market in 1994 in US dollars.

Exhibit B-36

Leading Systems Integration Vendors, Spain 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Andersen Consulting	25	36.1
2	Digital	11	15.9
3 =	IBM	10	14.4
3 =	EDS	10	14.4
5	Page Iberica	5	7.2
	Total Listed	61	88.1
	Total Market	100	144.4

Source: INPUT

Exhibit B-37

Leading Turnkey Systems Vendors, Spain 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	SNI	3.7	16.0
2	Intergraph	3.7	16.0
3	Eritel	3.5	15.2
4	Digital	2.1	9.1
5	IBM	2.1	9.1
6	Reuters	1.3	5.7
7	AT&T	1.2	5.3
8	Software AG	0.8	3.3
9	Olivetti	0.7	3.2
10	Sema Group	0.7	3.2
	Total Listed	20.1	86.0
	Total Market	100.0	428.6

Source: INPUT

Exhibit B-38

Leading Professional Services Vendors, Spain 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Eritel	13.8	94.8
2	Andersen Consulting	11.6	79.7
3	IBM	5.5	37.9
4	Sema Group	5.2	35.5
5	Logic Group	5.1	35.3
6	Iberimatica	3.7	25.5
7	Hewlett Packard	2.6	18.2
8	Digital	2.4	16.5
9	AT&T	2.3	15.8
10	Cap Gemini Sogeti	2.2	15.2
	Total Listed	54.5	374.4
	Total Market	100.0	686.9

Source: INPUT

O
Switzerland

Exhibit B-39 provides a ranking of the leading Systems Integration vendors in the Swiss market in 1994 in US dollars.

Exhibit B-40 provides a ranking of the leading Turnkey Systems vendors in the Swiss market in 1994 in US dollars.

Exhibit B-41 provides a ranking of the leading Professional Services vendors in the Swiss market in 1994 in US dollars.

Exhibit B-39

Leading Systems Integration Vendors, Switzerland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Digital	24	38.2
2 =	EDS	10	15.3
2 =	Unisys	10	15.3
4	Cap Gemini Sogeti	5	7.6
5	Logica	4	6.1
	Total Listed	51	82.4
	Total Market	100	160.3

Source: INPUT

Exhibit B-40

Leading Turnkey Systems Vendors, Switzerland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	SNI	4.6	34.4
2	Fides	2.6	19.1
3	IBM	2.6	19.1
4	AT&T	2.1	15.3
5	Intergraph	1.5	11.5
6	Reuters	1.0	7.6
7	Digital	1.0	7.6
	Total Listed	15.5	114.5
	Total Market	100.0	740.5

Source: INPUT

Exhibit B-41

Leading Professional Services Vendors, Switzerland 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	IBM	8.3	61.1
2 =	Digital	6.2	45.8
2 =	Fides	6.2	45.8
4 =	AT&T	3.1	22.9
4 =	ATAG debis Informatik	3.1	22.9
6 =	Delta ST	2.1	15.3
6 =	Cap Gemini Sogeti	2.1	15.3
6 =	Oracle	2.1	15.3
9 =	SNI	1.6	11.5
9 =	Unisys	1.6	11.5
	Total Listed	36.3	267.2
	Total Market	100.0	736.6

Source: INPUT

P
Sweden

Exhibit B-42 provides a ranking of the leading Systems Integration vendors in the Swedish market in 1994 in US dollars.

Exhibit B-43 provides a ranking of the leading Turnkey Systems vendors in the Swedish market in 1994 in US dollars.

Exhibit B-44 provides a ranking of the leading Professional Services vendors in the Swedish market in 1994 in US dollars.

Exhibit B-42

Leading Systems Integration Vendors, Sweden 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Cap Gemini Sogeti	30	14.8
2	IBM	27	13.5
3	EDS	11	5.4
4	Ericsson	8	4.0
5	Groupe Bull	7	3.6
	Total Listed	83	41.3
	Total Market	100	49.9

Source: INPUT

Exhibit B-43

Leading Turnkey Systems Vendors, Sweden 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Sapia	17.7	61.9
2	Industri-Matematik	6.9	24.2
3	Intergraph	4.6	16.2
4	Digital	3.8	13.5
5	IBM	3.1	10.8
6	SNI	2.1	7.4
7	Cap Programmator	1.9	6.7
8	EDS	2.3	8.1
9	Maldata	1.9	6.7
10	Reuters	1.5	5.4
	Total Listed	46.0	160.8
	Total Market	100	349.9

Source: INPUT

Exhibit B-44

Leading Professional Services Vendors, Sweden 1994 ($ Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue ($ Millions)
1	Cap Programmator	5.0	67.3
2	EDS	4.2	56.5
3	Celsius	3.5	47.1
4	WM Data	3.4	45.4
5	Sapia	2.7	35.7
6	Communicator AB	1.7	22.9
7 =	IBS	1.7	22.2
7 =	Sema Group	1.7	22.2
9	IBM	1.6	20.9
10	Oracle	1.5	19.5
	Total Listed	26.8	359.6
	Total Market	100	1342.5

Source: INPUT

C

Business Integration Vendors Rankings (ECUs)

A
United Kingdom

Exhibit C-1 provides a ranking of the leading Systems Integration vendors in the United Kingdom market in 1994 in ECUs.

Exhibit C-2 provides a ranking of the leading Turnkey Systems vendors in the United Kingdom market in 1994 in ECUs.

Exhibit C-3 provides a ranking of the leading Professional Services vendors in the United Kingdom market in 1994 in ECUs.

Exhibit C-1

Leading Systems Integration Vendors, United Kingdom 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	17.1	191.3
2	ICL	12.6	140.3
3	Andersen Consulting	8.6	95.7
4	Syntegra	8.0	89.3
5	Groupe Bull	7.0	77.8
6	EDS	6.8	76.5
7	Sema	5.5	61.2
8	CGS/Hoskyns	5.1	57.4
9	DEC	4.8	53.6
10	Logica	3.9	43.4
	Total Listed	79.3	886.5
	Total Market	100	1117.3

Source: INPUT

Exhibit C-2

Leading Turnkey Systems Vendors, United Kingdom 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	MDIS	3.7	63.8
2	Cray Electronics	3.1	53.6
3	JBA	2.9	51.0
4=	Intergraph	2.6	44.6
4=	Reuters	2.6	44.6
4=	IBM	2.6	44.6
7	Kalamazoo	2.2	38.3
8	Misys	2.2	38.3
9	Digital	1.5	25.5
10	AT&T	1.5	25.5
	Total Listed	24.7	429.8
	Total Market	100	1741.1

Source: INPUT

Exhibit C-3

Leading Professional Services Vendors, United Kingdom 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	ICL	9	229.6
2	IBM	6	149.2
3	Sema Group	5	121.2
4	Andersen Consulting	5	114.8
5	Oracle	4	96.9
6	Coopers & Lybrand	4	89.3
7	Logica	3	84.2
8	Digital	3	82.9
9	Cray Electronics	3	76.5
10	Hewlett Packard	3	70.2
	Total Listed	46	1114.8
	Total Market	100	2449.0

Source: INPUT

B
France

Exhibit C-4 provides a ranking of the leading Systems Integration vendors in the French market in 1994 in ECUs.

Exhibit C-5 provides a ranking of the leading Turnkey Systems vendors in the French market in 1994 in ECUs.

Exhibit C-5 provides a ranking of the leading Professional Services vendors in the French market in 1994 in ECUs.

Exhibit C-4

Leading Systems Integration Vendors, France 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	20	163.6
2	Cap Gemini Sogeti	15	126.9
3	Groupe Bull	11	87.9
4	Andersen Consulting	9	71.9
5	Sema Group	8	69.6
6	EDS	6	52.0
7	Syseca	6	45.9
8	Alcatel ISR	3	27.5
9	DEC	3	25.2
10	Axime	2	19.9
	Total Listed	84	690.4
	Total Market	100	826.6

Source: INPUT

Exhibit C-5

Leading Turnkey Systems Vendors, France 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Sligos	3.4	57.3
2=	IBM	2.7	45.9
2=	Syseca	2.7	45.9
4	Alcatel TiTN	2.5	41.3
5	Fininfor	2.3	39.0
6	Digital	2.1	35.2
7	CISI	1.8	30.6
8	Reuters	1.7	29.1
9	IBSI	1.5	25.2
10	SNI	1.0	16.8
	Total Listed	21.8	366.2
	Total Market	100	1682.0

Source: INPUT

Exhibit C-6

Leading Professional Services Vendors, France 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Cap Gemini Sogeti	3.6	40.1
2	IBM	2.9	32.4
3	Syseca	2.6	28.6
3	Sema Group	2.3	25.8
5	CGI	2.1	23.5
6	Unilog	1.5	16.3
7=	Altran	1.2	13.5
7=	Steria	1.2	13.5
7=	IBSI	1.2	13.3
10	Digital	1.1	12.0
	Total Listed	19.8	218.9
	Total Market	100	1103.8

Source: INPUT

C
Germany

Exhibit C-7 provides a ranking of the leading Systems Integration vendors in the German market in 1994 in ECUs.

Exhibit C-8 provides a ranking of the leading Turnkey Systems vendors in the German market in 1994 in ECUs.

Exhibit C-8 provides a ranking of the leading Professional Services vendors in the German market in 1994 in ECUs.

Exhibit C-7

Leading Systems Integration Vendors, Germany 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	22.3	131.6
2	SNI	18.7	110.5
3	Andersen Consulting	6.2	36.8
4	Groupe Bull	6.1	36.3
5	EDS	5.8	34.2
6	Digital	4.9	28.9
7 =	debis Systemhaus	4.5	26.3
7 =	CSC	4.5	26.3
9	Hewlett Packard	4.0	23.7
10	AT&T	2.2	13.2
	Total Listed	79.2	467.9
	Total Market	100	591.1

Source: INPUT

Exhibit C-8

Leading Turnkey Systems Vendors, Germany 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	SNI	9.6	342.1
2	Intergraph	2.2	78.9
3	IBM	1.8	63.2
4	Taylorix	1.6	57.9
5	Digital	1.5	52.6
6	debis Systemhaus	1.4	50.0
7	Compunet Computer	1.3	44.7
8	mbp[EDS]	1.1	39.5
9	Reuters	0.7	26.3
10	Sligos	0.5	18.4
	Total Listed	21.6	773.7
	Total Market	100	3578.9

Source: INPUT

Exhibit C-9

Leading Professional Services Vendors, Germany 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	9.2	250
2	SNI	7.3	197.4
3	Cap Gemini Sogeti	4.7	128.9
4	SAP	4.5	121.1
5	Ploenzke	4.2	113.2
6 =	debis Systemhaus	3.1	84.2
6 =	Datev	3.1	84.2
8	ESG	2.6	71.1
9 =	Digital	2.5	68.4
9 =	Hewlett Packard	2.5	68.4
	Total Listed	43.7	1186.8
	Total Market	100	2718.4

Source: INPUT

D
Italy

Exhibit C-10 provides a ranking of the leading Systems Integration vendors in the Italian market in 1994 in ECUs.

Exhibit C-11 provides a ranking of the leading Turnkey Systems vendors in the Italian market in 1994 in ECUs.

Exhibit C-12 provides a ranking of the leading Professional Services vendors in the Italian market in 1994 in ECUs.

Exhibit C-10

Leading Systems Integration Vendors, Italy 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	28	12
2	Cap Gemini Sogeti	13	5
3	Unisys	12	5
4	Groupe Bull	11	4
5	EDS	9	4
	Total Listed	73	30
	Total Market	100	41

Source: INPUT

Exhibit C-11

Leading Turnkey Systems Vendors, Italy 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	SNI	7.6	23
2	Digital	3.6	11
3	IBM	2.2	7
4	SAP	1.0	3
5	Intergraph	1.0	3
6	AT&T	0.7	2
7	Reuters	0.5	1
8	Software AG	0.4	1
9	Computervision	0.2	1
	Total Listed	17.2	52
	Total Market	100.0	304

Source: INPUT

Exhibit C-12

Leading Professional Services Vendors, Italy 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Management Data	13.4	35
2	EDV	10.6	28
3	IBM	8.0	21
4	Beko	7.9	21
5	Digital	7.2	19
6	GRZ Linz	7.2	19
7	AI Infomatics	5.9	15
8	Data-Services	5.3	14
9	Voest-Alpine	5.0	13
10	SNI	4.9	13
	Total Listed	75.4	196
	Total Market	100.0	260

Source: INPUT

E
Austria

Exhibit C-13 provides a ranking of the leading Systems Integration vendors in the Austrian market in 1994 in ECUs.

Exhibit C-14 provides a ranking of the leading Turnkey Systems vendors in the Austrian market in 1994 in ECUs.

Exhibit C-15 provides a ranking of the leading Professional Services vendors in the Austrian market in 1994 in ECUs.

Exhibit C-13

Leading Systems Integration Vendors, Austria 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	28	12
2	Cap Gemini Sogeti	13	5
3	Unisys	12	5
4	Groupe Bull	11	4
5	EDS	9	4
	Total Listed	73	30
	Total Market	100	41

Source: INPUT#

Exhibit C-14

Leading Turnkey Systems Vendors, Austria 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	SNI	7.6	23
2	Digital	3.6	11
3	IBM	2.2	7
4	SAP	1.0	3
5	Intergraph	1.0	3
6	AT&T	0.7	2
7	Reuters	0.5	1
8	Software AG	0.4	1
9	Computervision	0.2	1
	Total Listed	17.2	52
	Total Market	100.0	304

Source: INPUT

Exhibit C-15

Leading Professional Services Vendors, Austria 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Managment Data	13.4	35
2	EDV	10.6	28
3	IBM	8.0	21
4	Beko	7.9	21
5	Digital	7.2	19
6	GRZ Linz	7.2	19
7	AI Infomatics	5.9	15
8	Data-Services	5.3	14
9	Voest-Alpine	5.0	13
10	SNI	4.9	13
	Total Listed	75.4	196
	Total Market	100.0	260

Source: INPUT

F
Belgium

Exhibit C-16 provides a ranking of the leading Systems Integration vendors in the Belgium market in 1994 in ECUs.

Exhibit C-17 provides a ranking of the leading Turnkey Systems vendors in the Belgium market in 1994 in ECUs.

Exhibit C-18 provides a ranking of the leading Professional Services vendors in the Belgium market in 1994 in ECUs.

Exhibit C-16

Leading Systems Integration Vendors, Belgium 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Groupe Bull	11	12.1
2	Cap Gemini Sogeti	8	9.0
3	Sema Group	8	8.5
4	EDS	7	7.9
5	Logica	5	5.6
	Total Listed	40	43.1
	Total Market	100	107.7

Source: INPUT

Exhibit C-17

Leading Turnkey Systems Vendors, Belgium 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	SNI	7.5	20.5
2	CSC	4.0	11.0
3	Digital	3.8	10.3
4	IBM	2.4	6.7
5	Intergraph	1.8	4.9
6	Getronics	1.5	4.2
7	Olivetti	1.5	4.0
8	BSO Origin	1.3	3.6
9	Reuters	1.0	2.7
10	McDonnell Douglas	0.9	2.6
	Total Listed	25.8	70.4
	Total Market	100.0	273.1

Source: INPUT

Exhibit C-18

Leading Professional Services Vendors, Belgium 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	4.4	33.1
2	Cap Gemini Sogeti	4.3	32.2
3	Dolmen	4.1	30.8
4	TIS Group	3.4	25.6
5	Trasys	3.2	23.8
6	Sema Group	2.7	20.5
7	CSC	2.5	18.5
8	Digital	2.4	18.3
9	Cipal	2.4	17.9
10	Orda-B	2.3	16.9
	Total Listed	31.6	237.7
	Total Market	100.0	751.3

Source: INPUT

G
Denmark

Exhibit C-19 provides a ranking of the leading Systems Integration vendors in the Danish market in 1994 in ECUs.

Exhibit C-20 provides a ranking of the leading Turnkey Systems vendors in the Danish market in 1994 in ECUs.

Exhibit C-21 provides a ranking of the leading Professional Services vendors in the Danish market in 1994 in ECUs.

Exhibit C-19

Leading Systems Integration Vendors, Denmark 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	28.0	11.4
2	Computer Resources	11.5	4.7
3	Kommunedata	8.2	3.4
4	Groupe Bull	7.2	2.9
5	Cap Gemini Sogeti	6.6	2.7
	Total Listed	61.5	25.1
	Total Market	100.0	40.8

Source: INPUT

Exhibit C-20

Leading Turnkey Systems Vendors, Denmark 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	3.2	9.4
2	Digital	1.4	4.0
3	Intergraph	1.2	3.4
4	SAP	1.2	3.4
5	AT&T	0.9	2.7
6	Olivetti	0.9	2.7
7	Reuters	0.5	1.3
8	Cap Gemini Sogeti	0.5	1.3
9	Logica	0.5	1.3
10	ComputerVision	0.2	0.7
	Total Listed	10.4	30.2
	Total Market	100.0	290.9

Source: INPUT

Exhibit C-21

Leading Professional Services Vendors, Denmark 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	PBS	28.8	116.6
2	IBM	8.6	34.9
3	JDC Data	5.3	21.4
4	Oracle	3.1	12.7
5 =	Kommunedata	3.0	12.1
5 =	ICL	3.0	12.1
7	Danet	2.6	10.7
8	Cap Gemini Sogeti	2.5	10.1
9	AT&T	2.1	8.7
10	Digital	1.7	6.7
	Total Listed	60.7	246.0
	Total Market	100.0	405.5

Source: INPUT

H
Finland

Exhibit C-22 provides a ranking of the leading Systems Integration vendors in the Finnish market in 1994 in ECUs.

Exhibit C-23 provides a ranking of the leading Turnkey Systems vendors in the Finnish market in 1994 in ECUs.

Exhibit C-24 provides a ranking of the leading Professional Services vendors in the Finnish market in 1994 in ECUs.

Exhibit C-22

Leading Systems Integration Vendors, Finland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Tietotehdas	29	10.3
2	KT-Datacentre	21	7.7
3	Nokia Data	12	4.3
4	Cap Gemini Sogeti	10	3.4
5	Groupe Bull	8	2.9
	Total Listed	80	28.7
	Total Market	100	36.1

Source: INPUT

Exhibit C-23

Leading Turnkey Systems Vendors, Finland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Intergraph	4.0	6.9
2	IBM	3.5	6.0
3	Digital	3.5	6.0
4	Cap Gemini Sogeti	1.5	2.6
5	Reuters	1.0	1.7
6	Olivetti	1.0	1.7
	Total Listed	14.5	24.9
	Total Market	100.0	171.8

Source: INPUT

Exhibit C-24

Leading Professional Services Vendors, Finland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	VTKK	24.8	68.7
2	KT-Datacentre	21.4	59.3
3	Elorg-Data	10.5	29.2
4	Paakaupunkiseudom	9.0	24.9
5	ICL	6.2	17.2
6	Valmet Data	5.6	15.5
7	IBM	5.0	13.7
8	Digital	4.6	12.9
9	Unic	4.6	12.9
	Total Listed	91.6	254.3
	Total Market	100.0	277.5

Source: INPUT

J Greece

Exhibit C-25 provides a ranking of the leading Turnkey Systems vendors in the Greek market in 1994 in ECUs.

Exhibit C-26 provides a ranking of the leading Professional Services vendors in the Greek market in 1994 in ECUs.

Exhibit C-25

Leading Turnkey Systems Vendors, Greece 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Digital	5.0	2.3
2	Intergraph	4.4	2.0
3	IBM	2.0	0.9
4	Reuters	1.4	0.6
5	AT&T	0.6	0.3
6	ComputerVision	0.4	0.2
	Total Listed	13.7	6.3
	Total Market	100	46.1

Source: INPUT

Exhibit C-26

Leading Professional Services Vendors, Greece 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Andersen Consulting	14.3	9.5
2	Digital	5.8	3.9
3	IBM	5.6	3.7
4	Hewlett Packard	2.6	1.7
5	Computer Associates	1.3	0.8
6	Oracle	1.1	0.8
7	AT&T	0.8	0.6
8	Reuters	0.8	0.5
9	Groupe Bull	0.5	0.3
10	ComputerVision	0.4	0.3
	Total Listed	33.1	22.0
	Total Market	100	66.4

Source: INPUT

K
Ireland

Exhibit C-27 provides a ranking of the leading Professional Services vendors in the Irish market in 1994 in ECUs.

Exhibit C-27

Leading Professional Services Vendors, Ireland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Andersen Consulting	9.6	11.3
2	IBM	8.5	10.1
3	Digital	5.3	6.3
4	Unisys	5.3	6.3
	Total Listed	28.7	34.0
	Total Market	100	118.4

Source: INPUT

K
Netherlands

Exhibit C-28 provides a ranking of the leading Systems Integration vendors in the Netherlands market in 1994 in ECUs.

Exhibit C-29 provides a ranking of the leading Turnkey Systems vendors in the Netherlands market in 1994 in ECUs.

Exhibit C-30 provides a ranking of the leading Professional Services vendors in the Netherlands market in 1994 in ECUs.

Exhibit C-28

Leading Systems Integration Vendors, Netherlands 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	21.0	30.5
2	Cap Gemini Sogeti	16.1	23.5
3	CMG	11.3	16.4
4	BSO Origin	12.9	18.8
5	Groupe Bull	8.1	11.7
6	Getronics	7.7	11.3
7	Andersen Consulting	5.8	8.5
8	Raet	5.2	7.5
9	Logica	2.9	4.2
10	Digital	2.3	3.3
	Total Listed	93.2	135.7
	Total Market	100	145.5

Source: INPUT

Exhibit C-29

Leading Turnkey Systems Vendors, Netherlands 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Getronics	9.2	44.6
2	BSO Origin	8.7	42.3
3	IBM	4.9	23.5
4=	Intergraph	4.4	21.1
4=	SNI	4.4	21.1
6=	Multihouse	3.9	18.8
6=	Cap Volmac	3.9	18.8
8	Digital	3.4	16.4
9	Olivetti	2.4	11.7
10	Ordina	1.5	7.0
	Total Listed	46.6	225.4
	Total Market	100	483.6

Source: INPUT

Exhibit C-30

Leading Professional Services Vendors, Netherlands 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Cap Volmac	19.7	279.3
2	Getronics	10.0	140.8
3	RCC	8.6	122.1
4	Raet	6.6	93.9
5	BSO Origin	6.6	93.9
6	CMG	4.6	65.7
7	IBM	4.0	56.3
8	Ordina	2.8	39.9
9	Bouwfonds Informatica	2.8	39.9
10	Digital	1.8	25.8
	Total Listed	67.7	957.7
	Total Market	100	1415.5

Source: INPUT

L
Norway

Exhibit C-31 provides a ranking of the leading Systems Integration vendors in the Norwegian market in 1994 in ECUs.

Exhibit C-32 provides a ranking of the leading Turnkey Systems vendors in the Norwegian market in 1994 in ECUs.

Exhibit C-33 provides a ranking of the leading Professional Services vendors in the Norwegian market in 1994 in ECUs.

Exhibit C-31

Leading Systems Integration Vendors, Norway 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	40	12.1
2	Groupe Bull	20	6.0
3	Andersen Consulting	12	3.6
4	Unisys	7	2.2
5	Cap Gemini Sogeti	6	1.8
	Total Listed	85	25.7
	Total Market	100	30.2

Source: INPUT

Exhibit C-32

Leading Turnkey Systems Vendors, Norway 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	3.0	6.0
2	Intergraph	2.4	4.8
3	Digital	1.2	2.4
4	Olivetti	0.9	1.8
5	AT&T	0.9	1.8
6	Reuters	0.6	1.2
7	Cap Gemini Sogeti	0.6	1.2
	Total Listed	9.8	19.3
	Total Market	100.0	197.8

Source: INPUT

Exhibit C-33

Leading Professional Services Vendors, Norway 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	NIT	17.6	60.9
2	Fellesdata	12.2	42.2
3	Novit	8.0	27.7
4	Rogalandsdata	6.6	22.9
5	IBM	6.3	21.7
6	Cap Gemini Sogeti	5.0	17.5
7	Bankenes Betalingssentral	4.9	16.9
8	Celsius	4.0	13.9
9	Andersen Consulting	3.8	13.3
10	EDS	3.7	12.7
	Total Listed	72.0	249.7
	Total Market	100.0	346.8

Source: INPUT

M
Portugal

Exhibit C-34 provides a ranking of the leading Systems Integration vendors in the Portuguese market in 1994 in ECUs.

Exhibit C-35 provides a ranking of the leading Professional Services vendors in the Portuguse market in 1994 in ECUs.

Exhibit C-34

Leading Systems Integration Vendors, Portugal 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Digital	7.0	2.3
2	Intergraph	6.9	2.2
3	IBM	3.3	1.1
4	Reuters	2.2	0.7
5	AT&T	0.9	0.3
6	ComputerVision	0.6	0.2
	Total Listed	21.0	6.8
	Total Market	100	32.3

Source: INPUT

Exhibit C-35

Leading Professional Services Vendors, Portugal 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Andersen Consulting	25	9.7
2	Digital	10	4.0
3	IBM	10	3.8
4	Unisys	10	3.8
5	Groupe Bull	8	3.1
6	Hewlett Packard	4	1.7
7	Computer Associates	2	0.8
8	Oracle	2	0.8
9	AT&T	1	0.6
10	Reuters	1	0.6
	Total Listed	73	28.9
	Total Market	100	39.7

Source: INPUT

N

Spain

Exhibit C-36 provides a ranking of the leading Systems Integration vendors in the Spanish market in 1994 in ECUs.

Exhibit C-37 provides a ranking of the leading Turnkey Systems vendors in the Spanish market in 1994 in ECUs.

Exhibit C-38 provides a ranking of the leading Professional Services vendors in the Spanish market in 1994 in ECUs.

Exhibit C-36

Leading Systems Integration Vendors, Spain 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Andersen Consulting	25	29.4
2	Digital	11	12.9
3 =	IBM	10	11.8
3 =	EDS	10	11.8
5	Page Iberica	5	5.9
	Total Listed	61	71.8
	Total Market	100	117.7

Source: INPUT

Exhibit C-37

Leading Turnkey Systems Vendors, Spain 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	SNI	3.7	13.0
2	Intergraph	3.7	13.0
3	Eritel	3.5	12.4
4	Digital	2.1	7.4
5	IBM	2.1	7.4
6	Reuters	1.3	4.6
7	AT&T	1.2	4.3
8	Software AG	0.8	2.7
9	Olivetti	0.7	2.6
10	Sema Group	0.7	2.6
	Total Listed	20.1	70.1
	Total Market	100.0	349.4

Source: INPUT

Exhibit C-38

Leading Professional Services Vendors, Spain 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Eritel	13.8	77.3
2	Andersen Consulting	11.6	65.0
3	IBM	5.5	30.9
4	Sema Group	5.2	28.9
5	Logic Group	5.1	28.8
6	Iberimatica	3.7	20.8
7	Hewlett Packard	2.6	14.8
8	Digital	2.4	13.5
9	AT&T	2.3	12.9
10	Cap Gemini Sogeti	2.2	12.4
	Total Listed	54.5	305.3
	Total Market	100.0	560.1

Source: INPUT

O
Switzerland

Exhibit C-39 provides a ranking of the leading Systems Integration vendors in the Swiss market in 1994 in ECUs.

Exhibit C-40 provides a ranking of the leading Turnkey Systems vendors in the Swiss market in 1994 in ECUs.

Exhibit C-31 provides a ranking of the leading Professional Services vendors in the Swiss market in 1994 in ECUs.

Exhibit C-39

Leading Systems Integration Vendors, Switzerland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Digital	24	31.3
2 =	EDS	10	12.5
2 =	Unisys	10	12.5
4	Cap Gemini Sogeti	5	6.3
5	Logica	4	5.0
	Total Listed	51	67.5
	Total Market	100	131.3

Source: INPUT

Exhibit C-40

Leading Turnkey Systems Vendors, Switzerland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	SNI	4.6	28.1
2	Fides	2.6	15.6
3	IBM	2.6	15.6
4	AT&T	2.1	12.5
5	Intergraph	1.5	9.4
6	Reuters	1.0	6.3
7	Digital	1.0	6.3
	Total Listed	15.5	93.8
	Total Market	100.0	606.3

Source: INPUT

Exhibit C-41

Leading Professional Services Vendors, Switzerland 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	IBM	8.3	50.0
2 =	Digital	6.2	37.5
2 =	Fides	6.2	37.5
4 =	AT&T	3.1	18.8
4 =	ATAG debis Informatik	3.1	18.8
6 =	Delta ST	2.1	12.5
6 =	Cap Gemini Sogeti	2.1	12.5
6 =	Oracle	2.1	12.5
9 =	SNI	1.6	9.4
9 =	Unisys	1.6	9.4
	Total Listed	36.3	218.8
	Total Market	100.0	603.1

Source: INPUT

P

Sweden

Exhibit C-42 provides a ranking of the leading Systems Integration vendors in the Swedish market in 1994 in ECUs.

Exhibit C-43 provides a ranking of the leading Turnkey Systems vendors in the Swedish market in 1994 in ECUs.

Exhibit C-44 provides a ranking of the leading Professional Services vendors in the Swedish market in 1994 in ECUs.

Exhibit C-42

Leading Systems Integration Vendors, Sweden 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Cap Gemini Sogeti	30	12.1
2	IBM	27	11.0
3	EDS	11	4.4
4	Ericsson	8	3.3
5	Groupe Bull	7	3.0
	Total Listed	83	33.7
	Total Market	100	40.7

Source: INPUT

Exhibit C-43

Leading Turnkey Systems Vendors, Sweden 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Sapia	17.7	50.5
2	Industri-Matematik	6.9	19.8
3	Intergraph	4.6	13.2
4	Digital	3.8	11.0
5	IBM	3.1	8.8
6	SNI	2.1	6.0
7	Cap Programmator	1.9	5.5
8	EDS	2.3	6.6
9	Maldata	1.9	5.5
10	Reuters	1.5	4.4
	Total Listed	46.0	131.2
	Total Market	100	285.4

Source: INPUT

Exhibit C-44

Leading Professional Services Vendors, Sweden 1994 (ECU Millions)

Rank	Company	Estimated Market Share (Per cent)	1994 Estimated Revenue (ECU Millions)
1	Cap Programmator	5.0	54.9
2	EDS	4.2	46.1
3	Celsius	3.5	38.4
4	WM Data	3.4	37.0
5	Sapia	2.7	29.1
6	Communicator AB	1.7	18.7
7 =	IBS	1.7	18.1
7 =	Sema Group	1.7	18.1
9	IBM	1.6	17.0
10	Oracle	1.5	15.9
	Total Listed	26.8	293.3
	Total Market	100	1095.0

Source: INPUT

D

Business Integration Marketplace Questionnaire

Business Integration (BI) revenues include all project-related revenues in the area of systems integration, turnkey systems development and professional services, whether on a time and materials, fixed price or other basis.

However, it specifically excludes all activity undertaken as part of an outsourcing contract, maintenance contract or a processing services contract. It also excludes software product sales not undertaken as part of wider project activity, for example shrink-wrapped software.

1. What were your organisation's overall European BI revenues in 1994[Please state currency used]

____

____

2. What does this represent in terms of percentage growth over 1993 ?

____

____

3. Have you included sub-contractor revenues within your 1994 figure ?

   Yes ____________

   No ____________

If yes, what proportion of your BI revenues are accounted for by payments to sub-contractors ?

____

____

4. Does your 1993 figure include sub-contractor revenues ?

Yes ______________

No ______________

If yes, what proportion ?

____

____

5. Which of the following components have you included in your BI revenues ?

Equipment	total value	yes	no
	commission	yes	no
Third-party software products	total value	yes	no
	commission	yes	no
Services	own organisation	yes	no
	sub-contractor	yes	no

6. What was the mix of products and services for your organisation's overall 1994 BI revenues ?

Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Component	Proportion of 1994 BI Revenues (%)	Growth Over 1993 (%)	Projected Growth for 1995 (%)
Equipment			
Packaged system software			
Packaged application software			
Management Consulting			
IS Consulting			
Software Development			
Technical Integration/Implementation			
Education & Training			
Other			
Overall			

7. What proportion of your overall BI revenues was delivered on each of the following pricing bases ? Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Pricing Basis	Proportion of 1994 BI Revenues (%)	Growth Over 1993 (%)	Projected Growth for 1995 (%)
Time and Materials			
Fixed Price			
Value-based			
A combination of the above			

8. Where contracts included an element of value-based pricing, what proportion of the overall contract did this represent?

9. For what proportion of projects delivered on a fixed price or value-based pricing basis was your organisation the prime contractor ?

10. Would you please break down your European BI revenues for 1994 by country ? Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Country	Proportion of 1994 BI Revenues (%)	Growth Over 1993 (%)	Projected Growth for 1995 (%)
France			
Germany			
United Kingdom			
Italy			
Sweden			
Denmark			
Norway			
Finland			
Netherlands			
Belgium			
Switzerland			
Austria			
Spain			
Eastern Europe			
Overall			

11. Would you please also supply similar breakdowns by industry sector ? Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Industry Sector	Proportion of 1994 BI Revenues (%)	Growth Over 1993 (%)	Projected Growth for 1995 (%)
Banking and Finance			
Insurance			
Process Manufacturing			
Discrete Manufacturing			
Retail Distribution			
Wholesale Distribution			
Utilities			
Transportation			
Telecommunications			
Defence			
Central Government			
Local Government			
Healthcare			
Business Services			
Overall			

12. Please provide proportions (in percentage terms) of your 1994 BI revenues by industry sector in country markets.

	Financial Services	Manufacturing	Distribution	Utilities	Transport	Government	Telco
France							
Germany							
United Kingdom							
Italy							
Sweden							
Denmark							
Norway							
Finland							
Netherlands							
Belgium							
Spain							
Switzerland							
Austria							
Portugal							
Greece							
Ireland							
Eastern Europe							

13. Please provide a breakdown of your 1994 BI services revenues by the nature of the project. Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Nature of Project	Proportion of 1994 BI revenues (%)	Growth over 1993 (%)	Projected Growth for 1995 (%)
Networking/			
Infrastructure led			
Application/Business Solution led			
Other			
Overall			

14. Please supply a breakdown of your 1994 BI services revenues by project value ? [Project value being the total value of the project throughout its life, rather than revenues accrued in 1994] Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Value of Project	Proportion of 1994 BI revenues (%)	Growth over 1993 (%)	Projected Growth for 1995 (%)
< $500K			
$500K < $2 million			
$2m < $10 million			
> $10 million			
Overall			

15. What was the average length of 1994 BI contracts by value of project ? Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

Value of Project	Average Project Length (Months)	Growth over 1993 (%)	Projected Growth for 1995 (%)
< $500K			
$500K < $2 million			
$2m < $10 million			
> $10 million			
Overall			

16. What proportion of your 1994 BI revenues were derived from client/server-based projects ? Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

	Proportion of 1994 BI revenues (%)	Growth over 1993 (%)	Projected Growth for 1995 (%)
Client/server-based			

17. What proportion of your 1994 BI revenues were derived from business process reengineering-led assignments ? Can you also indicate how this has changed in relation to 1993 and how you see it changing in 1995 ?

	Proportion of 1994 BI revenues (%)	Growth over 1993 (%)	Projected Growth for 1995 (%)
Business process reengineering-led			

Thank you very much for your assistance

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