END USER NETWORK SERVICES - EUROPE

1992 - 1997

INPUT

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Abstract

This report defines the elements of, and the current state of the European End-User Network Services market. Estimates are provided of current (1992) and future (through 1997) user expenditures on this new service opportunity in Europe.

The strategy of four groups of vendors are analysed including:

- Equipment vendors
- Independent maintenance organisations
- Professional service vendors
- Dealers/distributors

In addition, the requirements and buying profiles of users are given.

The report concludes with a number of recommendations, based on the vendor and user analysis, to vendors which are currently offering end-user network services.

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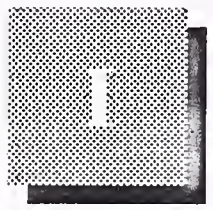


Introduction

This report has been produced by INPUT as part of its 1992 Network Management Services Programme in Europe.

A
Purpose

This report specifically examines the opportunity inherent in the rapid evolution of widely dispersed PCs and workstations connected together by local- and wide-area networks. Service opportunities examined include help desk support services and PC and workstation management.

B
Methodology

This report has been based upon face-to-face and telephone interviews with the four types of vendors operating in the end-user network services marketplace. They are:

- Equipment suppliers
- Independent third-party maintainers
- Professional service vendors
- Personal computer dealers and distributors

Key users were also interviewed to ascertain their service requirements.

C
Report Structure

This report is structured in the following chapters.

Chapter II is an Executive Overview, which highlights the main findings of the report.

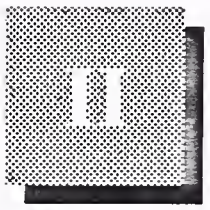
Chapter III outlines the component elements of the end-user network services business.

Chapter IV analyses the market opportunity for end-user network services. It gives current market size and five-year projected forecasts.

Chapter V describes user-requirements for end-user network services. It discusses the forces driving the market and potential market inhibitors. It examines user needs and likely purchases matched against the delivery capability of vendors.

Chapter VI discusses the four types of vendors operating in the market, how they are responding to the challenges, their strategies and their use of partnerships. It also examines the profitability level of service elements and the critical success factors for vendors.

Chapter VII assess the offerings of eight leading vendors in the end-user network services market. It also looks briefly at a particular partnership formed by two vendors.



Executive Overview

A

Prime Contractor Status is a Critical Success Factor

The downsizing trend to a client/server architecture is driving European companies to seek vendor participation in managing and developing their desktop operations. A critical component of desktop outsourcing is the installation and management of the LAN and WAN networks required to operate a desktop environment. Outsourcing at the desktop level is becoming a necessity for users as the sheer numbers of devices, types of hardware and software, connectivity issues and end-user requirements become increasingly complex for internal IS departments to manage.

Outsourcing desktop operations offers many potential benefits to users. IS departments are freed from the daily operational problems that usually require immediate attention. Internal staffing problems are eliminated. Significant cost savings are usually achieved while improving the quality of services to the user's organization. Vendors have many more resources available to them through their internal organisations and alliances with other vendors to respond to specific user needs, sometimes on an as-needed basis.

The strong market growth at the end-user level offers alternative markets for vendors as many traditional lines of business are experiencing little or no growth. Many vendors are restructuring internally to provide the service levels that outsourcing customers require. Other vendors are busy forming partnerships that will allow them to strategically compete in a diverse market.

INPUT expects the end-user network services market to grow substantially over the next several years and beyond, as business re-engineering principles gain acceptance and end-user demands intensify in this market.

INPUT's recommendations for vendors offering, or considering offering end-user network services are as follows:

- Plan as a long-term strategic venture
- Must accept prime contractor status
- Build up application software product knowledge and support expertise
- Select specialisation areas
- Bridge gap in service provision by forming alliances and subcontracting

Desktop services promises to be a major, if not the predominant, method of managing the IT infrastructure in the mid and late 1990s. For this reason, vendors must regard market entry as a long-term, strategic venture and build their positions on solid foundations.

To succeed vendors must be able to take prime responsibility for all elements of end-user network services and be perceived as having the resources and skills to deliver a full-service capability.

Expertise in the latest technical products is critical to success in this market. Key skills should include a wide breadth and depth of application software product knowledge and expertise in support within an open systems environment. INPUT expects expertise in this functional area to be a key differentiator and one of the critical success factors, characteristic of winners in this emerging sector.

Most vendors will not have sufficient resources or a wide enough skill set to be able to support all of the elements of an end-user network service contract. Therefore, INPUT recommends specialising in selected service elements and subcontracting to partners to bridge the gap in the overall services provision capability.

B

Defining the Service Elements

The PC may have freed the individual but not the corporates. PC networks bring fresh costs: high training and support costs, plus back-up problems and disorganised files. The sheer effort of supporting enterprisewide systems is forcing many down the service vendor route.

End-user network services is defined as a management contract involving the day-to-day management and support of an organisation's network information systems infrastructure. End-user network services can be sold in three levels of packaging:

- Individual elements marketed as separate services from a portfolio.

- Selected packages of services put together to meet individual needs, possibly after a short specification stage.

- Outsourcing of the whole requirement on a systems operation contract.

Its requirements include any or all of the following:

- Equipment evaluation, selection and/or supply
- Network installation or upgrade
- Equipment maintenance
- Software product supply and/or support
- Help-desk system selection and/or management
- Billing and administration
- Application development and/or maintenance

End-user network services are already widespread among many vendors but only sometimes are they known as such. Rarely are they marketed as a family of services to the user.

The key to vendor success in this sector is knowledge of standard software products for the desktop and their evaluation, integration and support. Finally, the ability to deliver service through a network opens up a range of possibilities for the vendor, which sees its role more in the area of service delivery through personnel.

C

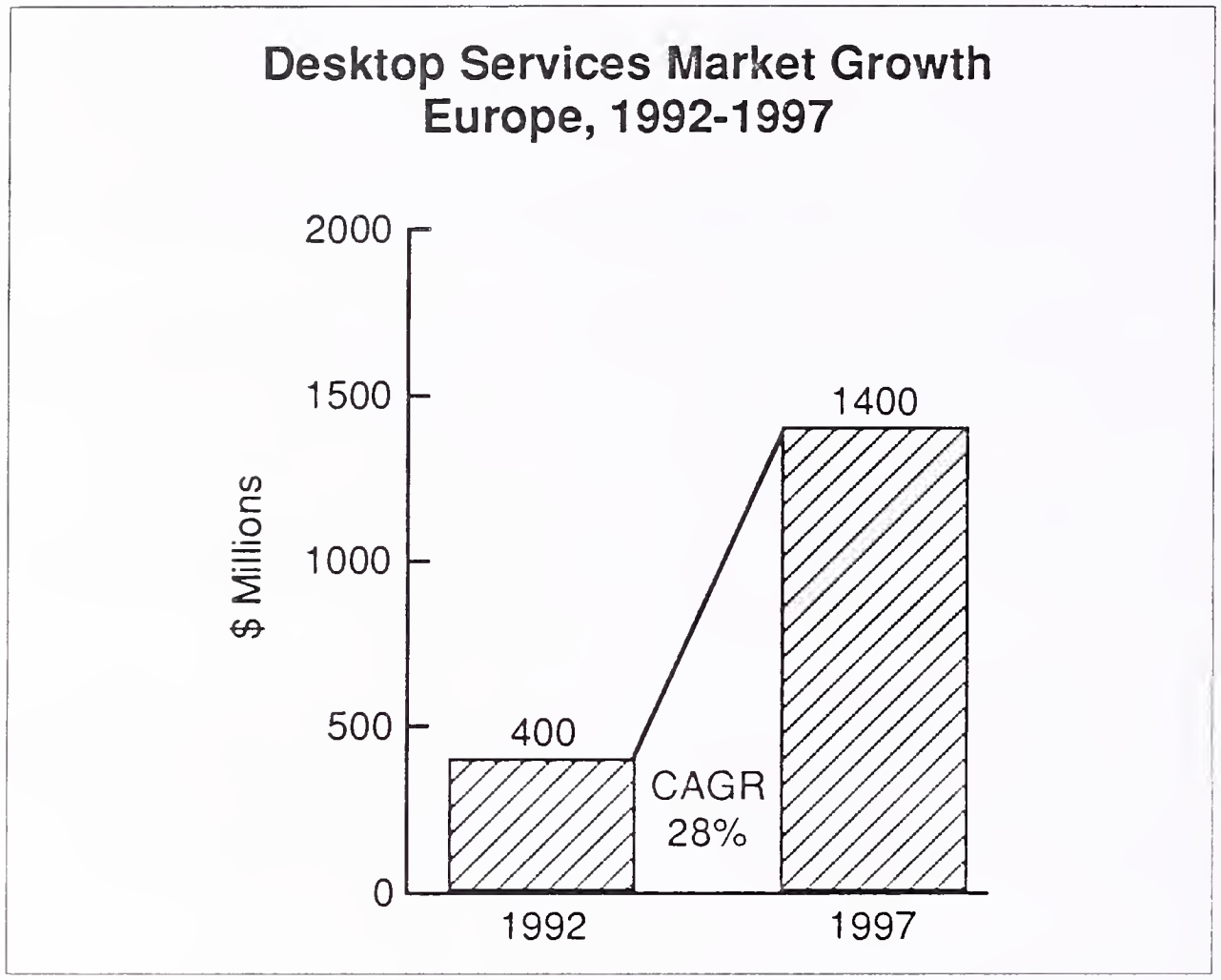
End-User Network Services, a New Direction for the 1990s

The intricacies of managing an inventory of PCs and workstations, hardware and software, maintaining standards among diverse user groups and meeting the challenges that LAN and WAN connectivity entails are numerous and complex. Corporate and IT management are deciding to leave these operational concerns to outside professionals. Corporate resources can then be redirected to core business strategies.

Outsourcing of desktop functions and other IS functions is a natural outgrowth of business process re-engineering. It is more efficient and usually less costly to move operation responsibility to those best qualified to perform IS functions.

INPUT's forecasts for the growth of this emerging market is shown in Exhibit II-1

EXHIBIT II-1



The market for end-user network services is forecast to reach $400 million in Europe in 1992 rising to $1,400 million in 1997. The growth shown of 28% CAGR is for the whole sector including all services from equipment selection and network installation to support and maintenance, but it excludes equipment supply.

The U.K. is the most developed European market, worth $175 million in 1992 with an expected CAGR of 30%. So far, outside the U.K. the end-user network services market is less developed. Germany and France currently account for $68 million and $45 million respectively, while the fourth largest market is the Netherlands worth $30 million.

The financial services sector is perceived by vendors as the most attractive industry market. This sector currently accounts for 40% of the overall market, with government organisations the next largest accounting for 25%.

D

Downsizing Spurs Market Growth for End-User Network Services

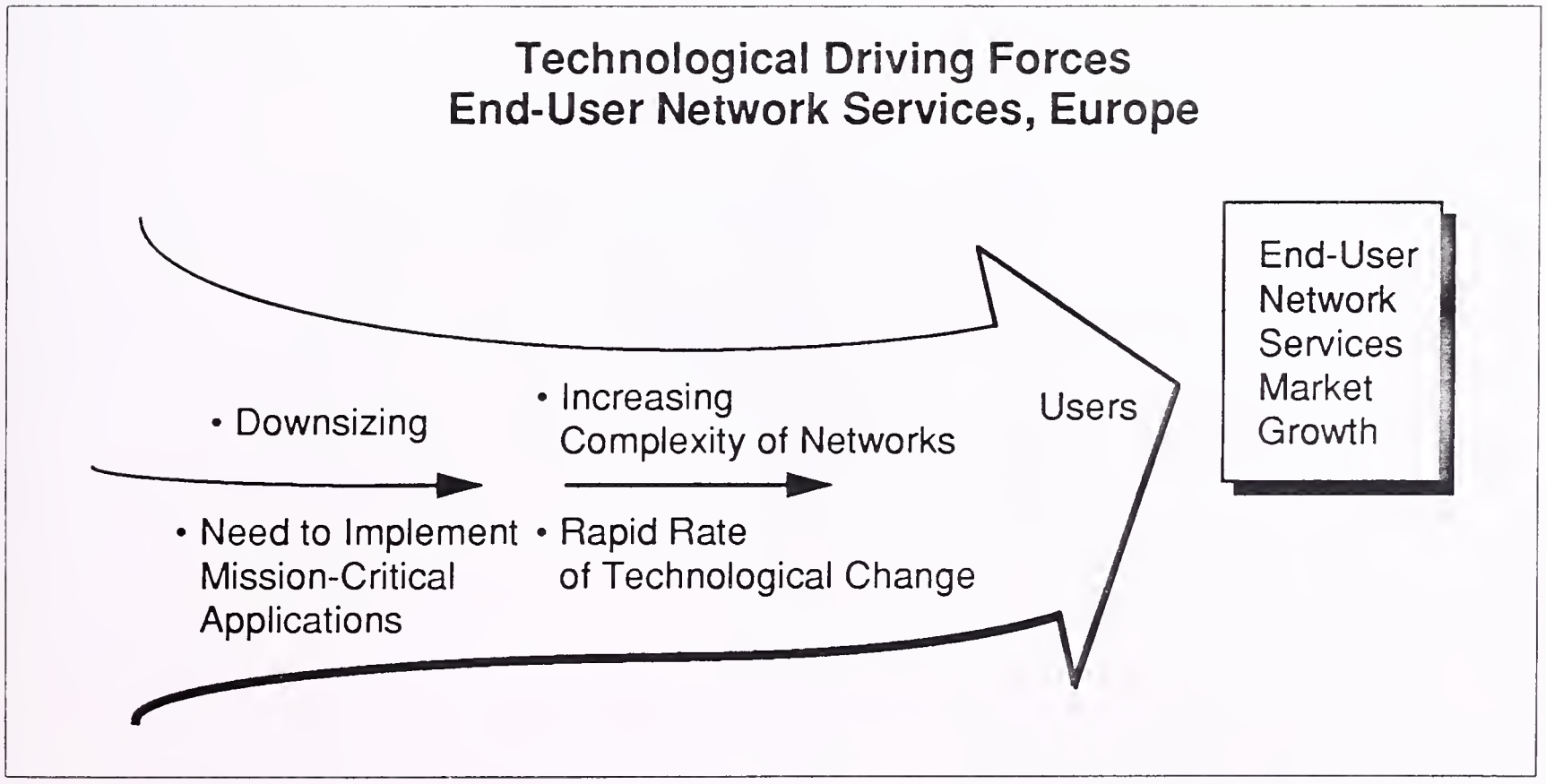
The criticality of effectively operating the end-user network environment is becoming more acute as mission-critical applications increasingly move off mainframe platforms. User demands for quick problem solving and training continue to mount as information systems operations downsize to client/server platforms.

Downsizing is defined as:

- The continual increase year by year in the price/performance ratio of processors and of data transmission services, which creates an undercurrent of continually increasing value for money in the expectations of users whether purchasing equipment, software or services.

Downsizing of systems to the departmental level and the spread of local area networks is the principal driver of the end-user network services market. This is aided by the move of organisations towards adopting an open systems IS strategy. Other technological drivers include the difficulties in managing complex networks and the cost of keeping support staff up-to-date with the fast pace of technological change. Exhibit II-2 provides a summary of the technological forces driving this emerging market.

EXHIBIT II-2



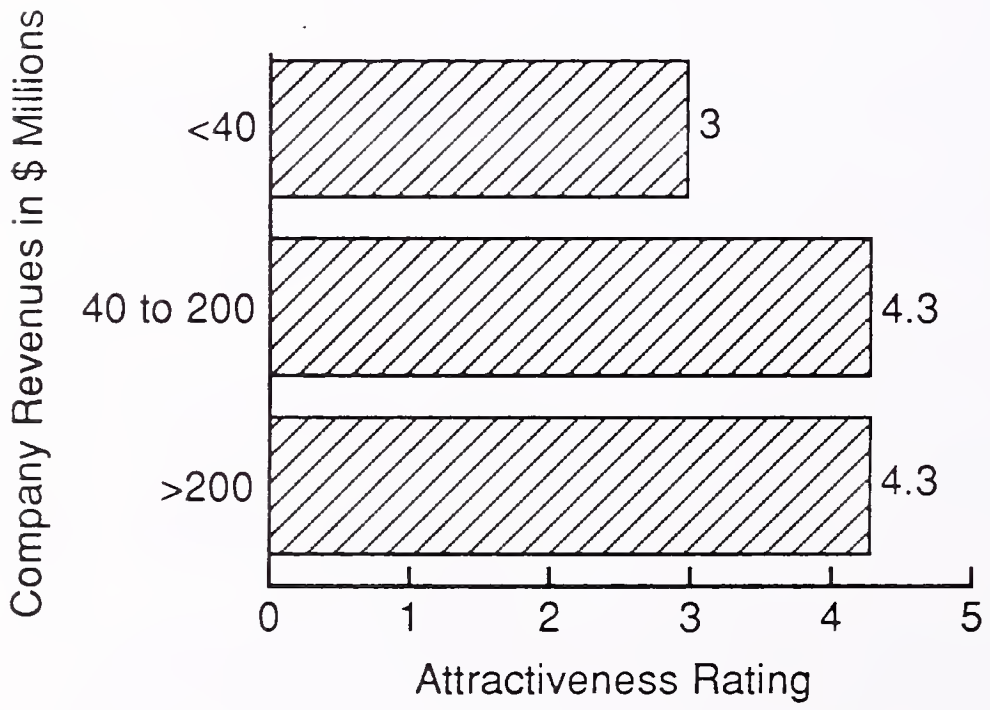
The main commercial force driving the market is the increasing desire of the larger organisations to concentrate on future business growth, by focusing on building up core business activities. Gving control of desktop products and services to third party is an attractive option to larger corporations with complex organisation structures.

Under the pressures of an increasingly competitive global economy, companies in all industries are becoming more cost-conscious and inspecting their IT budgets more keenly. Many user organisations have found themselves in the situation in which the number and cost of IT personnel have grown extensively as their IT infrastructures have become more complex. They are now going back to basics in order to save money. The recession has acted as a catalyst to this trend.

In its early pioneering phase, the end-user network service sector is emerging as an opportunity for outsourcing among large- and medium-sized organisations in which the number of existing desktop devices is large enough to require considerable IS management effort. Vendors interviewed by INPUT see most contract opportunities for end-user network services occurring at large companies with revenues of over $200 million, as shown in Exhibit II-3.

EXHIBIT II-3

Attractiveness Rating by Company Size
End-User Network Services, Europe



Rating:
0 = not at all attractive
5 = very attractive

The service elements which users choose to buy obviously varies from client to client. In general, equipment maintenance has been a mainstay purchase from vendors and continues to grow in demand. Installation services and LAN management services also rate highly for users.

In the help-desk services area, systems software is a medium-to-high purchasing possibility while applications software is not seen as a priority purchase. Equipment selection consultancy and equipment supply services are somewhat easier to perform internally and may not be purchased on a regular basis.

E

Vendors—Meeting the Opportunity

There are principally four types of vendor which are operating in the end-user network services marketplace, they are:

- System vendors
- Independent maintainers
- Professional service vendors
- PC dealers and distributors

Different vendors are taking different approaches to this opportunistic marketplace, principally dictated by their backgrounds. Typically this means that:

- The outstanding option is attractive to vendors from the PC distributors and independent maintainer communities
- A stand-alone set of services is the option chosen naturally by equipment vendors
- Offering ad hoc services is the preferred approach among the professional services vendors

The strategies of the four types are summarised in Exhibits II-4 through II-7.

EXHIBIT II-4

Equipment Vendors, Strategies
End-User Network Services, Europe

- Building comprehensive portfolio of end-user network services
- Offering stand-alone set of product services
- Restructuring customer service organisations
- Reinforcing service image

The strategy which the equipment suppliers are adopting is to develop a portfolio of individual services from which users can select a set which is appropriate to their own needs. This strategy runs the risk of being too slow to implement, leaving the initial large outsourced contracts to be picked up by the smaller organisations such as the large dealer chains.

EXHIBIT II-5

Independent Maintenance Organisations, Strategies
End-User Network Services, Europe

- Outsourcing contracts are common
- Build outward from existing strengths
- Brand name service line
  - Software maintenance
  - Badging of the service line mark

The strategy of the independent maintenance vendors is to aim for project management of large desktop service contracts, subcontracting to other vendors the components such as software support for which they do not have adequate skills.

EXHIBIT II-6

Professional Services Vendors, Strategies
End-User Network Services, Europe

- Targeting market through
  - LAN implementation
  - LAN management
- Treating the sector as an additional part of their overall service offering

Professional services vendors are now realising that the market for end-user network services is a separate one in its own right. However, their current activities amount, in most cases, to little more than treating the sector as an additional service area which they are willing to support on behalf of their major clients. The vendors that are targeting the market are doing so principally through marketing of LAN implementation and LAN management capabilities.

INPUT expects a much more serious attack on this market to be made soon by the professional service companies.

EXHIBIT II-7

Dealer/Distributor, Strategies
End-User Network Services, Europe

- Diversifying to higher-margin service areas
- Moving towards alliances/partnerships with other vendors for proprietary capability
- Developing pan-European coverage
- Move to become 'one-stop-shop'

PC dealers and distributors are unique among the four classes of vendors, insofar as they have the skill in evaluation, supply and support of industry software products for the desktop. All other vendors have tended to concentrate their software skills on minicomputer and mainframe platforms. The PC dealers' main strategies include the diversification into higher value-added support services, away from low value-added activities such as equipment sales and maintenance.

F

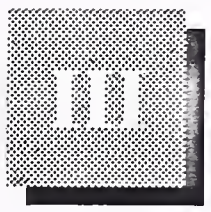
The Vendor Challenges

As downsizing and the trend to open systems in Europe continue, end-user network services is set to become one of the key outsourcing services of the future. The principal challenges facing the vendors operating in, or looking to enter, the market are summarised in Exhibit II-8.

EXHIBIT II-8

Vendor Challenges in End-User Network Services, Europe

- Outsourcing ITTs* increasingly request end-user network services
- Desktop services are emerging as standalone service products
- End-user network services are set to become dominant form of infrastructure management
- Downsizing requires vendors to rethink their standard support contracts
- Technical skill levels are increasing
- Pan-European coverage is a major advantage
- Breadth of software product capability is increasing



End-User Network Services—The Elements

End-user network services are already widespread among many vendors but only sometimes are they known as such. They are frequently marketed as a family of services for the desktop.

This chapter describes the elements of a family of desktop services which may be offered by vendors operating in this marketplace. These service lines may be marketed individually or as a selection to suit a particular user's needs. They can also be sold as a complete package amounting to an overall outsourcing or facilities management exercise for the desktop or workstation.

A

Equipment and Network Supply

The principal components of end-user computing remain the personal computer (PC) and its separate peripherals, chief among which is the printer—these days typically a laser printer for office systems although bubble-jet printers are increasing in popularity for the single executive or professional worker.

The ability to supply these devices has typically been the province of the PC dealer and many major equipment suppliers have relinquished the control of their low-end accounts to their dealer distribution chains. Use of catalogue-based and direct mail selling techniques are a way in which equipment suppliers such as Digital, Bull or Unisys are retaining or recapturing end-user contacts, at least within their traditional proprietary user bases.

Moving to a networked office, departmental or company workstations is often the second stage for many medium-sized or fast growing small organisations. The supply of a network server and network operating system, and the integration of the new and the existing equipment into a working whole, has become a growth area for many vendors.

B

Equipment and Network Maintenance

Both types of supply, i.e., for the PCs and peripherals as stand-alone units and for the network installation to convert users into having a multi-user system, need to be supported by equipment maintenance contracts.

In past research, INPUT has found that as few as 20% of small businesses with PC-based systems have bothered to take out a standard maintenance contract, preferring one of the apparently cheaper options such as returning units for repair, or calling out local service engineers only when a critical fault occurs. As more desktop units become linked into enterprise networks which support day to day operations, these systems will become more mission-critical to their owners and the risk of not having on-site on-call cover at the cheapest rate, will cause the penetration of standard contracts to increase.

C

Installation Services and Training

Many users expect an amount of up-front support in the areas of installation and training. Although simple, free-standing units are normally user-installed, network installation usually requires on-site vendor assistance. As an element of desktop service there are a number of ways in which this potentially loss-making component can be marketed for profit:

- User-installed units can be sold with installation as an optional extra

- Installation of networks should be priced to include basic installation as free-of-charge up to an agreed level of commissioning, with more elaborate implementation, including handholding and parameter changing of user data testing, being used to attract additional fees.

Training is a more easily marketed service since the requirements for subject coverage are vast in the increasingly complex arena created by the possible combinations of multi-vendor platforms, software products and applications. It remains true that even with the vast array of training courses on the market, supplied by equipment vendors, independent professional services companies and training specialists, individual users will perceive themselves in need of education tailored to their unique situation. Standard and customised courses both have their place in this environment.

D

Networking Enhancement

Many users in large organisations have been involved with LAN developments at the building, campus or site level. Linking PCs and workstations requires cabling, network operating system and environmental services skills, many of which reside in the traditional customer services organisations. Since the advent of bridges, routers and intelligent hubs, the local area network (LAN) has become potentially a unit in the wider networking scene with TCP/IP, DECnet, SNMP and OSI leading the way as interconnection protocols, with varying degrees of openness and standardisation. This latest chapter in the networking business—LANs challenging the role of wide-area networks (WANs)—is moving many vendors into territory in which the business considerations are even more important than the technical aspects.

This challenge to the innovativeness of vendors points to desktop services as in need of this extra component of networking enhancement, as a separate service including consultancy, design, implementation and operational phases.

E

Systems Planning and Management

Large users of PCs and workstations become all to easily embroiled in the administration-intensive areas associated with the inventory, accounting, user invoicing and future planning for these systems. Because of the 'low technology' status of PCs in the eyes of many IS departments, there has been a tendency to form a separate administrative unit to look after the desktop and its end-users. This can often grow into being an alternative IS department causing organisational conflict and a slowing down in the rate of absorption of new software technology, much of which is aimed at desktop users.

There is a service requirement for the administration of existing services and the planning of future ones. This can be a free-standing service or a component of a total service package depending on the needs of individual users. External vendors can often bring to the planning process expertise which is not available in-house, concerning the strategic directions of vendor policies.

F

Supply and Support of Application Software

Application software for the desktop and workstation consists largely of standard products fulfilling the basic productivity needs of the office or professional user, i.e., word processors, graphic packages, desktop publishing, spreadsheets, database handlers, and integrated products providing a selection of these basic functions.

Accounting suites are also very common on both stand-alone and networked desktop systems. There are literally tens of thousands of MSDOS-based products currently available including shareware products, which can be purchased cheaply but without any commercial support.

One of the key elements in a family of desktop service products will be application software product expertise in: product selection, product interfacing, product supply, product support and system maintenance for systems containing a high proportion of interacting standard products.

INPUT expects expertise in this functional area to be a key differentiator and one of the critical success factors, characteristic of winners in this emerging sector.

G

Help-Desk Services

Help desks are, since the 1980s, common in a vast range of service industries in which customers can phone in to make enquiries or complaints and to seek help, e.g., in banking, catering, health care, insurance, mail order, tourism and travel, telecommunications and utilities.

Help desk technology has developed into a niche market in its own right and is now threatening to impact all types of business from an internal perspective.

As an internal function, help desks already support user groups in the U.K. and Germany. As users of increasingly intelligent, networked systems start to deal with greater complexity in the work environment, the supply of help desk expertise, systems and service will become subject to outsourcing. This is purely because of the numbers of systems required throughout industry and commerce, help desks are rapidly becoming commodity products. It will become less cost-effective to try to run help

desks through internal resources. External expertise already present in the forms of consultancy and software systems will extend more into the areas of desktop operations, with the help desk being seen as one element in a full range of desktop services.

H

Software Development

This is probably the most difficult area of the desktop services requirement because of profitability factors. The need is to make available to the desktop-based end user a range of analysis and programming expertise so that applications can be tailored to individual organisations. It has been customary with each succeeding generation of computing technology to announce the demise of programming. In spite of this the need remains to develop applications even with the most basic of software products; for example:

- Spreadsheet formulae must be designed for Lotus 1-2-3 or Supercalc.
- Desktop publishing benefits from professional layout guidance and parameter building.
- Database records need specification and design.
- Graphics packages require careful design if the correct messages are to be transmitted at a key presentation.

All these activities have both an application and a product aspect, i.e.:

- Knowing what the business information needs are
- Knowing how best to achieve this within the constraints of product and operating environment.

These are essentially programming activities which in a networked open systems environment are even more complex to handle than they were under earlier generations of technology. Good training can raise the standard of 'programming' produced by end-users, but systems and application development will always be able to derive added-value from the expertise of IS professionals, particularly once the system moves from being a personal to a departmental one in which sharing of information is key.

The challenge to vendors with applications development expertise to market to the desktop user, is how to make that expertise available in a cost-effective manner. INPUT believes that the key to profitable delivery of such services lies in two areas:

- Delivery of expertise via the network
- Development of dialoguing technology to support the end-user to IS professional specification dialogue.

These areas are to date undeveloped in terms of desktop services, making application development the last stage of the business to emerge into maturity.

IV

Market Dimensions

A
High-Growth Forecast

Exhibit IV-1 provides INPUT's forecast of the European desktop services market between 1992 and 1997. INPUT predicts the overall market will have a high level of growth at 28% per annum over the next five years, reaching $1.4 billion by 1997.

Outsourced contracts including LAN and software support and maintenance will grow even faster, at 32% per annum. The smaller segment of hardware maintenance contracts is expected to grow at a slower rate of 18% per annum.

The figures shown in Exhibit IV-1 include the areas of hardware maintenance, installation support, LAN management and technical support services, but exclude equipment supply.

EXHIBIT IV-1

Desktop Services Market by Hardware and Software Categories—Europe, 1992-1997

Category	1992-1997 1992 ($ Millions)	CAGR (Percent)	1997 ($ Millions)
LAN and Software Support	270	32	1,100
Hardware Maintenance	130	18	300
Total Desktop Services	400	28	1,400

B

United Kingdom—The Most Advanced Market

Exhibits IV-2 and IV-3 show breakdowns of the European market by country/region. Exhibit IV-2 gives the current size and forecast growth for the overall desktop services sector including hardware maintenance, while Exhibit IV-3 excludes this activity.

The U.K. is by far the largest country market, worth $175 million in 1992. INPUT predicts that this market with have an annual growth rate of 30% and will reach $650 million by 1997.

The market is also starting to develop in Germany, France and Scandinavia, although these countries are still less developed than the U.K. in their adoption of desktop services. Italy and Spain have shown little activity to date in this service sector.

C

Financial Services—The Target Market

The financial services sector has had the largest uptake of desktop services, now representing 40% of the market. Government organisations have had a slower uptake, accounting for 25% of the market but this sector is also considered a target market with high potential.

The manufacturing sector is now perceived by vendors to be an attractive market. This may be true for the discrete manufacturing sector but INPUT expects opportunity to arise in the Oil and Chemicals sector, with large corporations such as Shell and BP. Opportunities lie in other sectors where large multi-national organisations proliferate, i.e., the consumer goods and pharmaceutical industries.

EXHIBIT IV-2

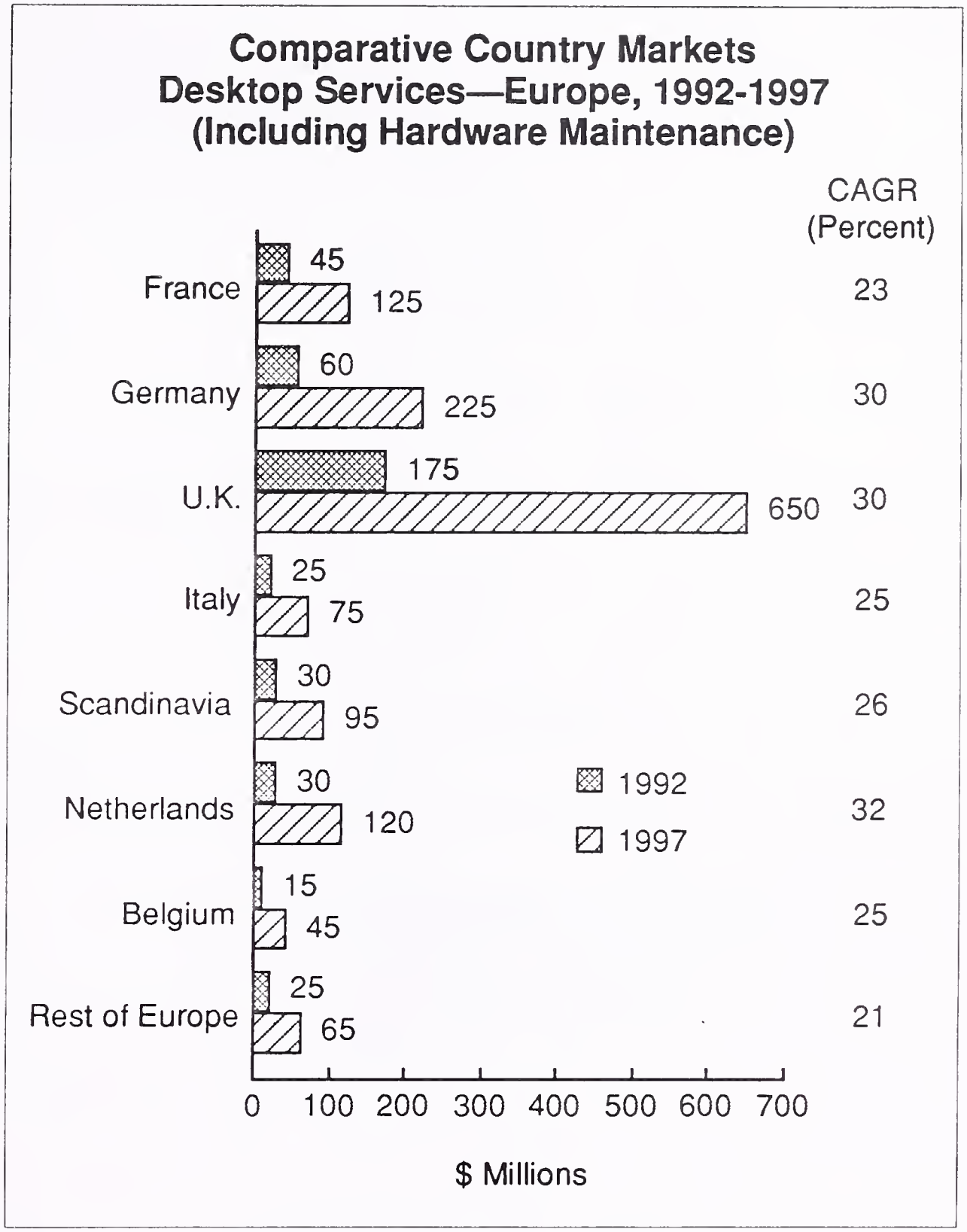
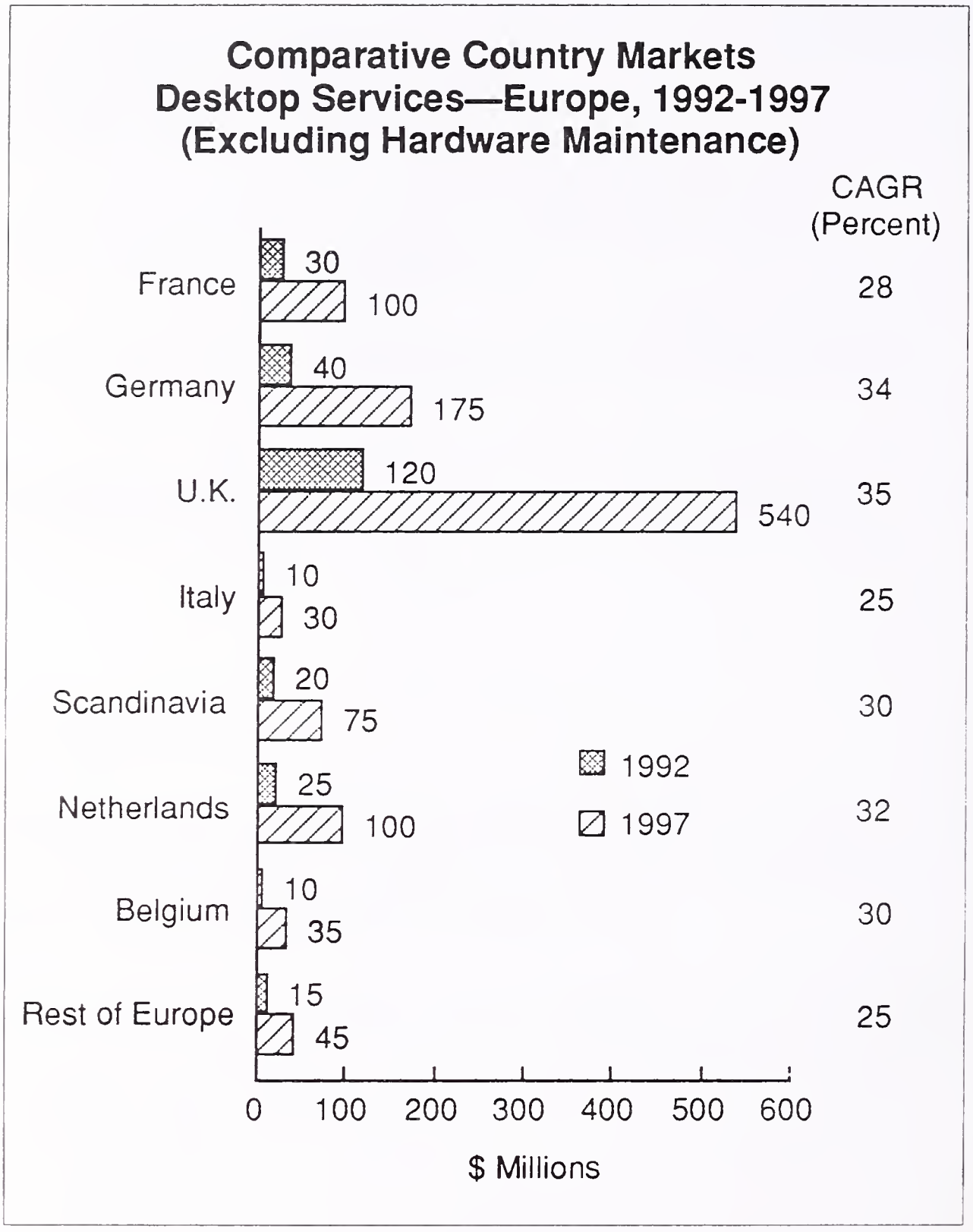


EXHIBIT IV-3



A breakdown of the desktop services market, excluding hardware maintenance is shown in Exhibit IV-4, while Exhibit IV-5 provides a breakdown of the overall market, including this activity. Exhibit IV-6 shows vendor perceptions of the attractiveness of the market by industry sector.

EXHIBIT IV-4

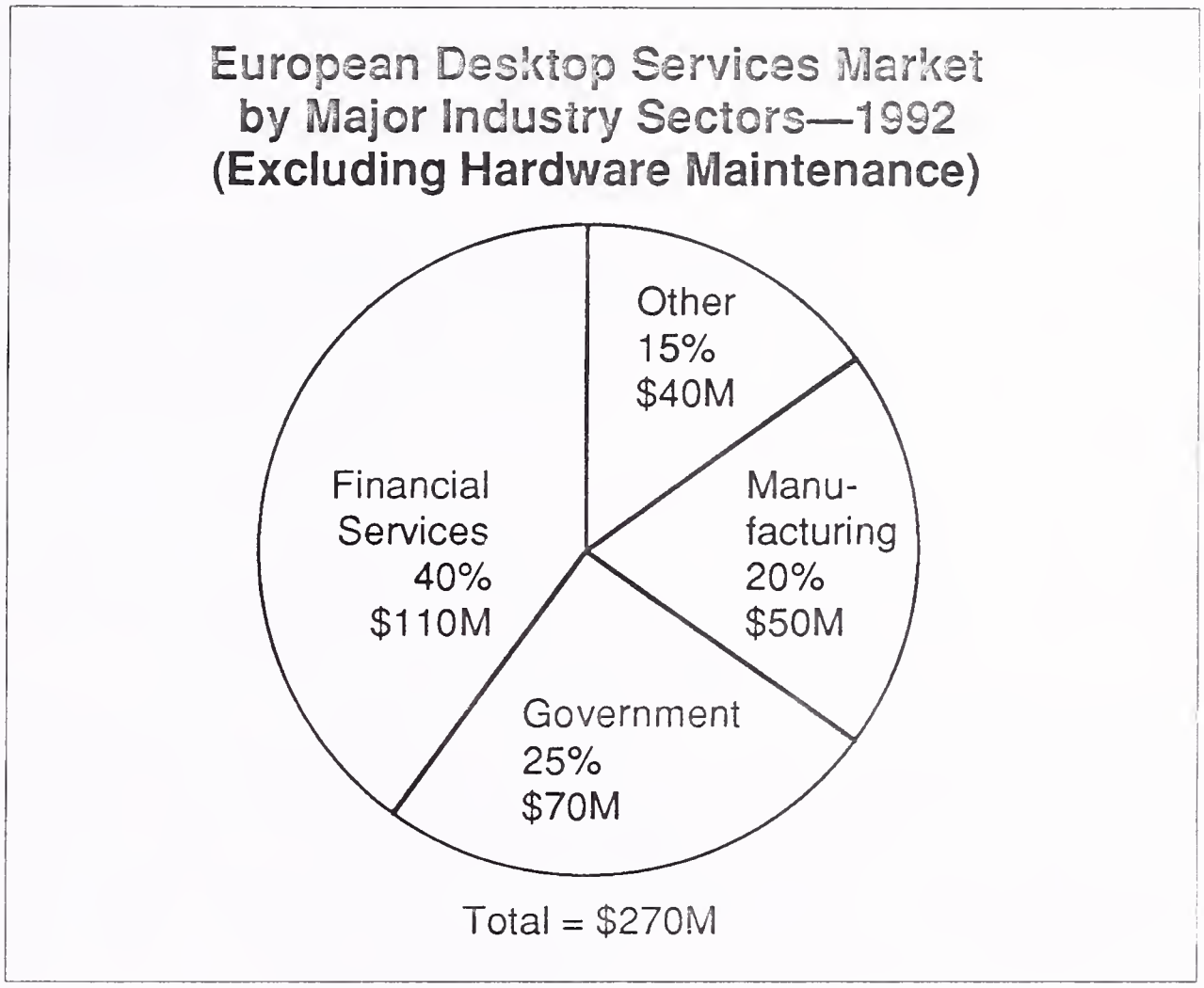


EXHIBIT IV-5

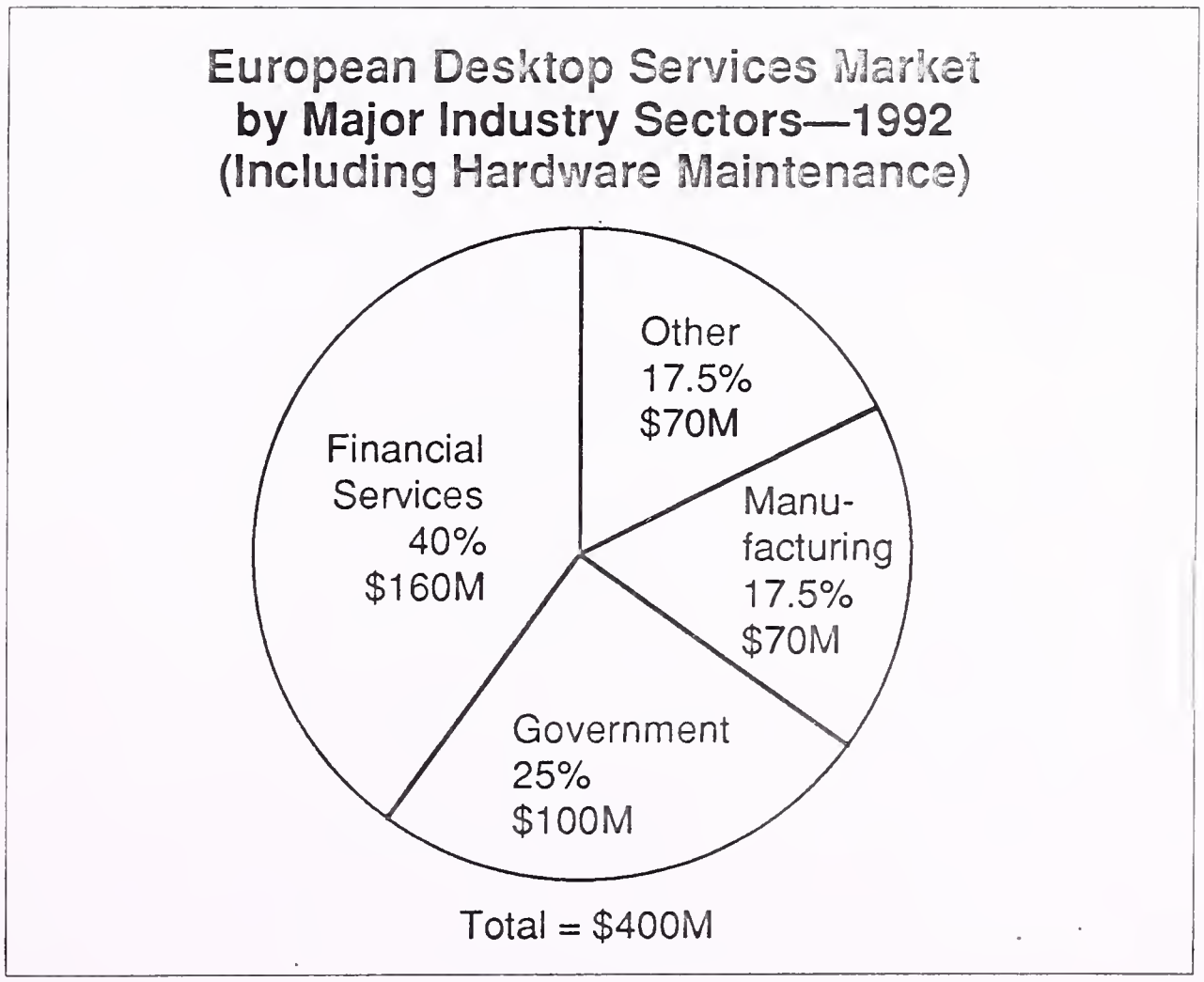
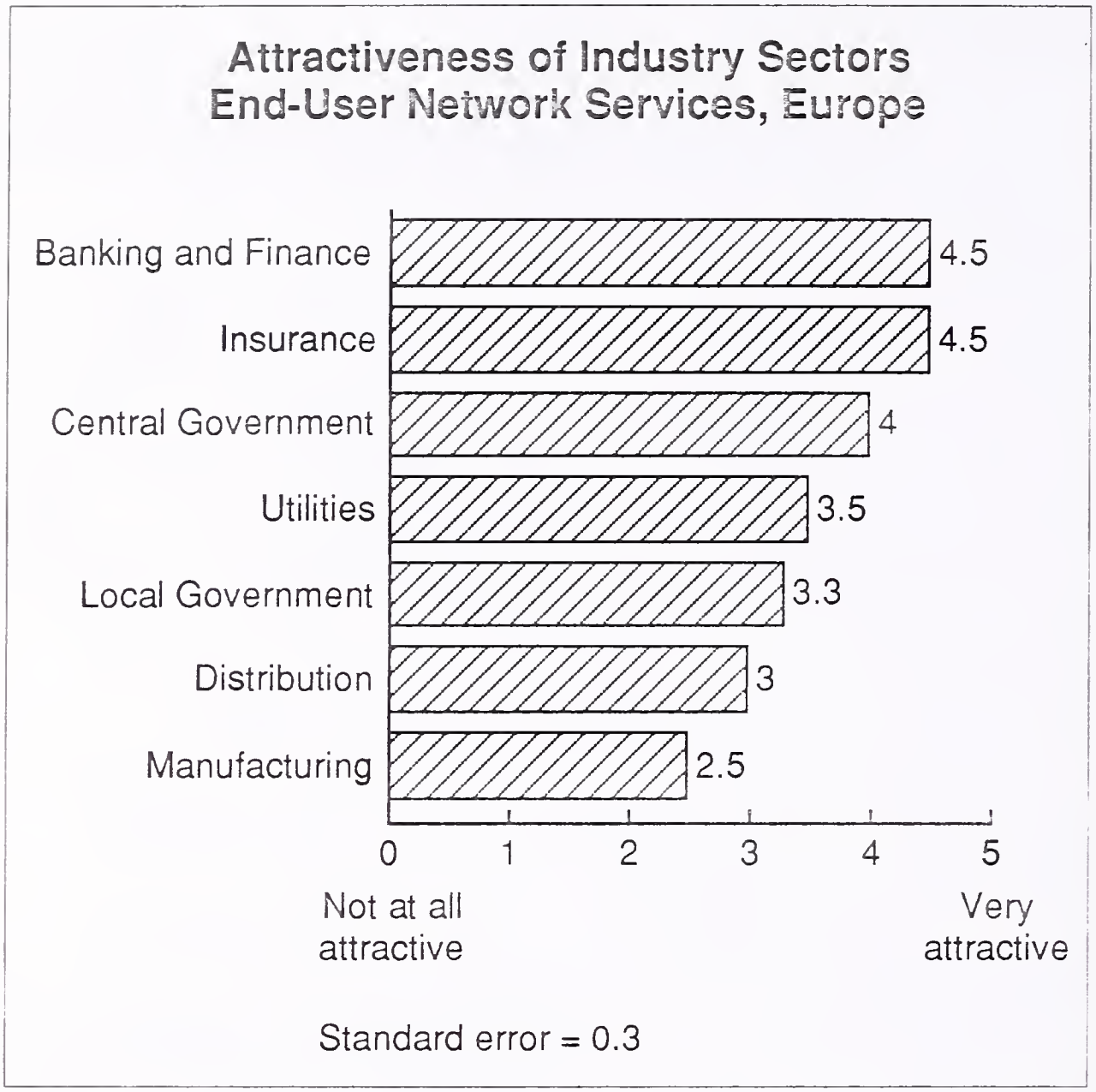
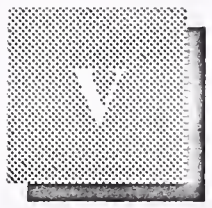


EXHIBIT IV-6





End-User Requirements

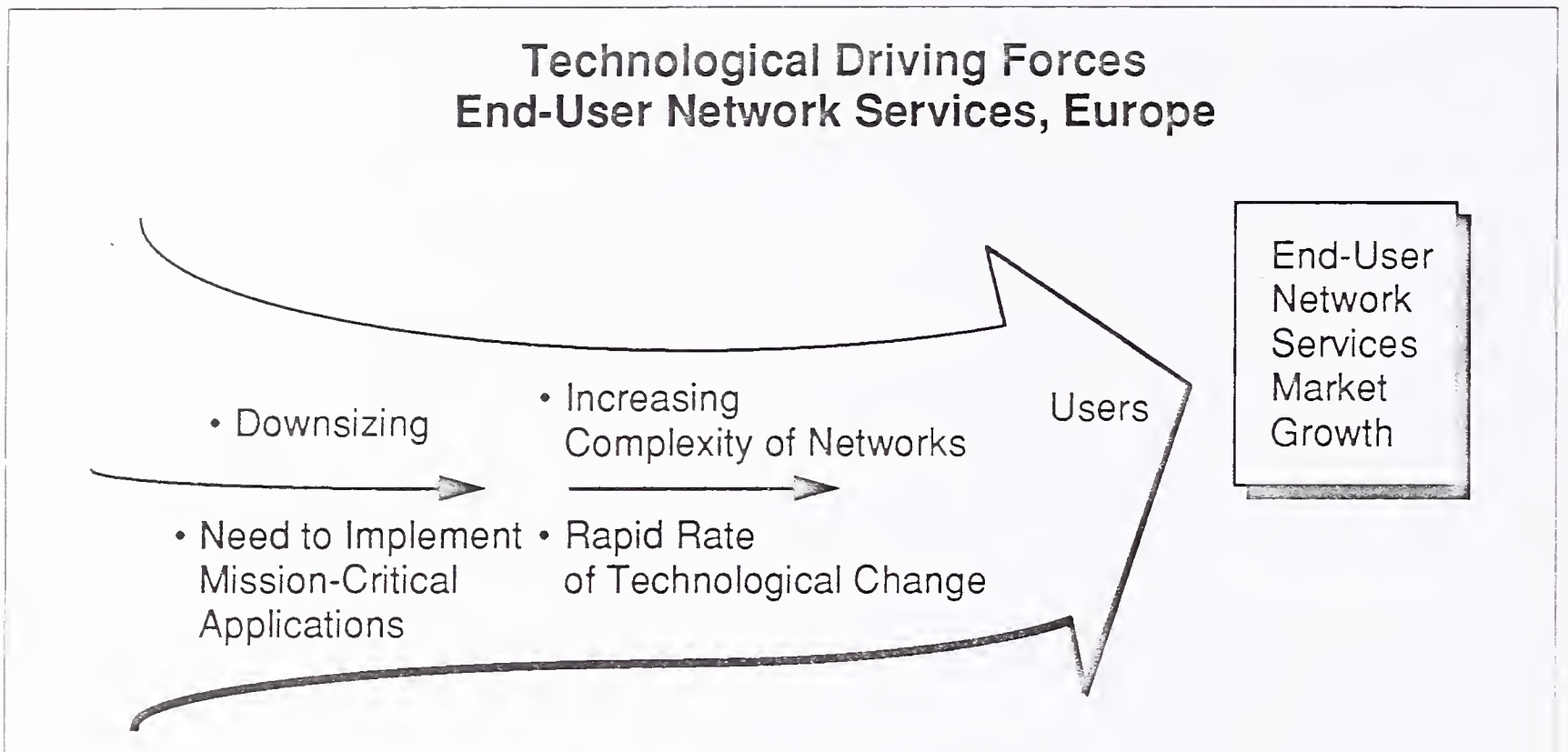
A
The Technological Drive to End-User Network Services

The spread and complexity of local-area networks is a major driving force in the growth of desktop services, with many vendors finding that in-house IS departments are ill-equipped to implement and support local area networks. In fact, desktop services are increasingly being seen as a follow-on service from the initial implementation of LANs. This is aided by the scarcity of in-house skills in the LANs area, and also the rapid rate of technological change and advancement.

Downsizing has elevated the position of personal computers, local area networks and client/server based open systems to one of increasing strategic importance. Mission-critical applications are becoming increasingly implemented in these technologies. As a result the requirement for high-quality end-user support is becoming more critical than when personal computer use was restricted to the role of an individual productivity tool.

The technological factors driving the need for end-user network services are summarised in Exhibit V-1.

EXHIBIT V-1



B

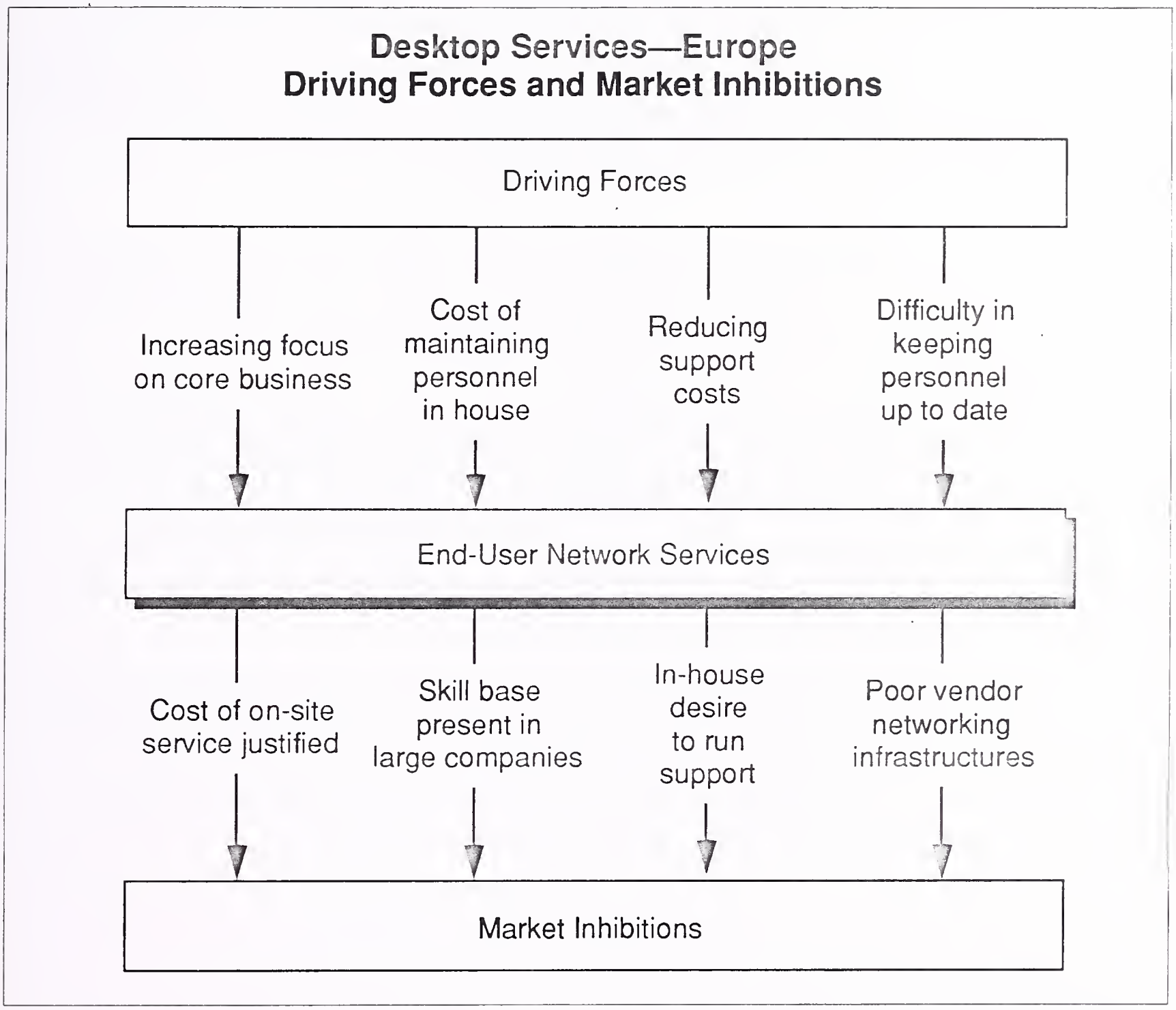
The Commercial Need Versus Market Inhibitors

A number of larger companies in the business community, particularly multi-national corporations have decided to focus on their non-core activities. Examples include ICI and BP. Traditionally both have had in-house expertise to manage their desktop services. Both adopted the outsourcing approach in order to become more focused on their core business, a main advantage being the ability to plan more effectively for the future.

Another driving force is the desire to remove the uncertainty of future IS costs and to reduce them if possible. This outlook is becoming more prevalent in the current recessionary climate in the U.K. These costs are exacerbated by the need to maintain a critical mass of expertise to support the end user. A third party vendor is able to spread the cost of this over a range of clients. The expense of maintaining an in-house desktop support capability is increased by technological advancement and the need to keep in-house personnel up to date with these changes.

The commercial driving forces, and as the market is still in its infancy, growth inhibitors, are shown in Exhibit V-2.

EXHIBIT V-2



There are a number of significant factors which could inhibit the growth of this market.

Firstly, it may be harder to cost-justify desktop services compared to, for example, mainframe platform operations. In mainframe platform operations, there are significant economies of scale which can be introduced by transferring the equipment to the vendor's data centre where both technical and management expertise can be shared among a number of clients. In effect, the whole of the service can be administered remotely.

However, in the case of desktop services contracts, a number of staff may need to be retained on the user's site. While vendors may argue that their on-site staff are more productive than user personnel, they may also be more highly remunerated. In other instances, the on-site support staff will be those personnel who have transferred from the user's organisation to the vendor's organisation. In either case, it can be difficult for the vendor of desktop services to achieve economies of scale from the functions, such as first-line support, carried out from the user's premises. Of course, the vendor should still be able to achieve some economies of scale from the second-line support, which is typically centralised to cover a range of clients.

Secondly, many larger businesses have considerable in-house expertise in local area network implementation and management. Where this exists, it may take adoption of a new business policy or strategic direction to bring about external sourcing of end-user network services.

Thirdly, some vendors, such as iTNet, the U.K. computer services vendor which was formed out of the IS department of Cadbury Schweppes, are finding that users have a strong preference for providing first-line support to end users in-house, but are happy to outsource local area network implementation and second-line support. IS departments tend to justify this behaviour with the rationale that while they may lack detailed technical expertise, they do understand the end-users' business requirements and culture better than an external supplier.

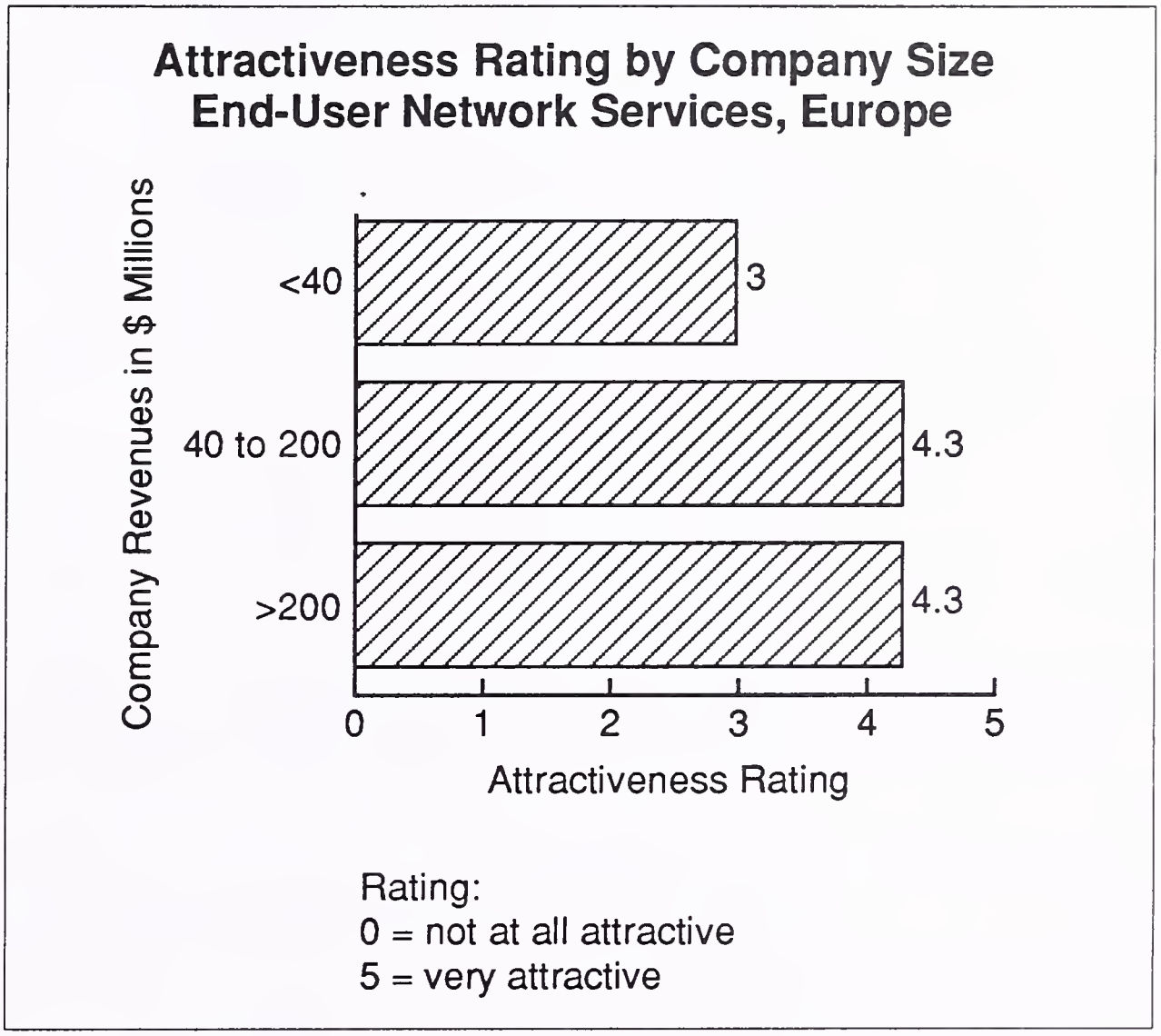
Lastly, many small vendors lack the capability to provide desktop services over a network because they do not have existing network infrastructures, and are therefore restricted to on-site services provided by some manpower resources. This, however, does not apply to large equipment vendors, which are already providing services to the end-user under the guise of a standard maintenance contracts.

C

The Buyer Profile

Exhibit V-3 shows vendors' perceptions of the potential buyer by size of organisation.

EXHIBIT V-3



There are potentially two types of buyers of end-user network services

- The major companies, in particular multi-national corporations.
- Medium-sized companies which are adopting client/server systems.

The reasons for deciding to buy end-user network services and who makes that decision is dependent on the size of the user organisation. Exhibit V-4 outlines the potential buyer.

EXHIBIT V-4

Buying Influence by Company Size

	Company Size	
Management Level	Large Companies	Medium-sized Companies
Senior executives	Strong	Medium
IS management	Medium	Strong

Large companies with multiple locations are the most likely candidates for vendor services. While supporting and maintaining local area networks, personal computers and application software products can be a hassle in the large corporates, they will typically have a high level of in-house capability with which to provide these services. The decision therefore to outsource is more likely to be based on a decision to concentrate on core businesses only, or to fix, or reduce the costs of the IS infrastructure and end user support. Accordingly, within such an organisation, senior company executives will be influential in the decision making process.

Medium-sized companies are likely to have a lower level of in-house capability and as the client/server trend intensifies, it is probable that they will look to vendors to provide administrative and technical management of their desktop platforms. In this case it will most likely be the IS management who will influence such a decision.

D
User Requirements

End-user network services can be sold as individual services, packages of services tailored to meet individual company needs, or outsourcing of the whole requirement on a systems operation contract.

Exhibit V-5 shows service components, and the likelihood of each being purchased by the user.

EXHIBIT V-5

User Purchasing of Desktop Services

Service Component	Likelihood of User Purchasing
Equipment Selection Consultancy	Medium
Equipment Supply	Medium
Equipment Maintenance	Strong
LAN/Equipment Installation	Strong
LAN Management	Strong
Help Desk Services - Systems Software - Applications Software	Medium-Strong Medium

Equipment maintenance has been a mainstay purchase from vendors and continues to grow in demand by user organisations because of the diversity and large numbers of equipment at the desktop level (PCs, workstations, printers and other peripherals).

Installation services and LAN management services are both viewed by users as high on their purchasing lists.

In the help desk services area, systems software rated a medium to high purchasing possibility while applications software was not seen as a priority purchase. INPUT expects help desk/user support services to become a frequently purchased service as a result of the complexity of the growing desktop environment. "On the spot" or "at the moment" support is critical to users which depend on desktop equipment to perform their job functions. Where the end-user needs support for a range of applications, the organisation is turning to vendors which have in-depth knowledge of a wide range of products, and can offer top level support.

Both equipment selection consultancy and equipment supply rated medium as a possible service element purchased. These services are somewhat easier to perform internally, and may not be needed on a regular basis.

E

Vendor Offerings Meeting User Requirements

In this chapter, the forces driving the market and user requirements have been discussed. But what of vendor offerings? Matching vendor offerings against user requirements, Exhibit V-6 summarises delivery capability of the four vendor types operating in the market.

EXHIBIT V-6

Delivery Capability by Type of Vendor
Desktop Services, Europe

Service Offerings \ Vendor Type	Equipment Suppliers	Independent Maintainers	Professional Service Vendors	PC Dealers/ Distributors
Equipment Selection Consultancy	Medium	Low	Medium	Strong
Equipment Supply	Strong	Medium	Medium	Strong
Equipment Maintenance	Strong	Strong	Strong	Strong
LAN/Equipment Installation	Medium	Strong	Strong	Strong
LAN Management	Strong	Medium	Strong	Strong
Help Desk Services - Systems Software - Applications	Strong Medium-Strong	Strong-Medium Low	Strong Medium	Strong Strong

The PC dealer and distributor segment are well positioned to meet user requirements and to take advantage of the opportunity in the end-user network services market. They are highly capable of delivering right across the market. This group's most visible weakness in the past has been its ability to integrate services for clients. However, this issue has been addressed by the larger PC dealers and distributors keen to operate in the increasingly profitable systems integration market.

The professional service vendors are quite capable of successfully delivering the three service elements users designate as most likely to purchase, i.e., equipment maintenance, installation services and LAN management. This vendor type does, however, display a number of shortfalls. Whereas

the user often seeks a single vendor to provide equipment selection consultancy and equipment purchasing, professional service vendors often lack this capability. Also, professional service vendors, unlike the PC dealers, lack breadth and depth of knowledge of PC applications. This affects their ability to provide full-scale support to end-users, and also may impact their ability to deliver LAN-based solutions.

The equipment suppliers are naturally strong in equipment supply and maintenance and highly capable in the management of local area networks. They can provide comprehensive help desk support for systems software, but lack capabilities in supporting application products, and unlike the PC dealers are weak in the provision of equipment selection consultancy.

The independent maintainers have the least capability of providing a full service to the end-user. Their capability profile is markedly different to that of the leading PC dealer and distributor segment. The independent maintainers can match user requirements in the maintenance and installation service areas, but lack a strong delivery capability with regard to the other elements.

F

Vendor Selection—The User Perspective

The following are the main user selection criteria when selecting a vendor of desktop services:

- Networking expertise
- Single/prime supplier
- Latest technology—expertise
- Cross-border coverage
- Vendor impartiality

Networking expertise is the key to attracting users in this market sector.

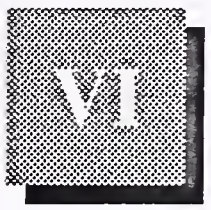
Another key criteria is the vendor's ability to take prime responsibility for all elements of service delivery and to provide a single point of contact to satisfy the end-user's request. Many prime suppliers will need to contract service elements to subcontractors or to other divisions within their own organisations. However, the client must see an overall service that is seamless.

From the user perspective, management of the desktop environment is greatly simplified if the supplier of desktop services is also the preferred equipment and software supplier. For this reason, it would be more advantageous for vendors to include equipment and software product evaluation and supply within the scope of their overall services.

Expertise in the latest technological products is critical. The vendor must show both breadth and depth of product knowledge, and skill in supporting them.

Cross-border activity by the user means that the vendor needs coverage to match the clients' geographic presence. In many cases, particularly for small to medium-sized companies, only limited geographic support capability is required. However, to successfully target the multinational corporations, a high level of pan-European coverage is required. Users typically wish to maintain a single source of support across all their operations, and require a standard level of service independent of location. The leading dealers and distributors of personal computer equipment and software are endeavouring to set up pan-European operations to supply equipment and support services internationally to the largest European users. Similarly the independent maintainers have formed EUROSERV for the same reason to cover their pan-European activities.

Vendor impartiality is another important factor where end-user service contracts include equipment and software selection consultancy and supply. It is important that the vendor has knowledge of a wide range of products and is relatively impartial in its evaluation of product capabilities.



The Vendor Approach

A
Market Entrants

The market for end-user network services is being created largely by the activities of the major dealers in personal computer equipment such as the members of International Computer Group, P&P Corporate, and JWP Businessland. These organisations are motivated to target outsourcing in order to decrease their dependence on areas of low margin, such as equipment supply and maintenance.

The equipment manufacturers are also very keen advocates of desktop services for similar reasons, as are the independent maintenance organisations (IMOs). So far the professional services vendors which have traditionally dominated the outsourcing market—such as Hoskyns, EDS, and Data Sciences—have shown comparatively little interest in desktop services. However, this is now likely to change since the activities of vendors such as ICG and P&P Corporate pose a very real threat to their long-term dominance of the outsourcing market.

The leading vendors from the four categories of vendor offering end-user network services are International Computer Group (ICG), P&P Corporate, JWP Businessland, Olivetti Systems & Networks, Unisys, Computeraid, Digital, PrimeService and Hewlett-Packard.

B
The Market Challenge

1. Equipment Vendors Extend Traditional Services

Equipment suppliers have to re-examine their customer services strategies in the face of the downsizing trend. Delivery of quality support service is increasingly taken as a high priority purchasing criteria for new or replacement systems. Provision of quality support levels is recognised by all the vendors as necessary to the defence of their existing installed bases. To this end, vendors must have a clear understanding of the resources needed. to provide the traditional services of systems maintenance and system software support.

Sales of the new or extended services listed below, in their entirety are a challenge to the systems vendors. These include: systems integration, network integration, building integration services, business continuity services, facilities management (systems operations) for networks and computing platforms and unattended (lights out) computing operations.

End-User Network Services are emerging as an outsourcing market for the management of PCs and their networks, a task traditionally set aside to an information centre or manager responsible in the IS department for the coordination and administration of end-user computing. Its requirements include any or all of:

- PC evaluation, selection and/or supply
- Network installation or upgrade
- Hardware maintenance
- Help desk system selection and/or management
- Billing and administration
- Application development and/or maintenance

2. Independent Maintainers Diversify

The independent maintenance organisations (IMOs) have begun to restructure in order to achieve consistent profit in a more mature marketplace. The IMOs have been through a series of challenging phases since their appearance in the market-place:

- Firstly they were faced (during the second half of the 1980s) with the considerable counter-attack of the equipment vendors which entered the multi-vendor maintenance market. This is a means of defence of their installed maintenance bases.

- The IMOs responded by forming larger units by merger and acquisition. This led, however, to a harmful dilution of management effort and overstretching of company resources. Some independent vendors had to face the stark choice between growth and profit; they have mostly chosen profit.

- No sooner had this phase of rationalisation and consolidation got under way, when a more lasting threat arose from the sudden onset of the shrinking maintenance market. INPUT had been signalling this future problem for several years; nevertheless it has emerged so rapidly that many vendors have still to assess their long-term positions.

The IMOs can follow two paths—either they can retreat into specialist hardware maintenance niche markets or they can diversify within the maintenance areas or alternatively into new service areas.

The end-user network services market has therefore arisen at a strategic juncture for this type of vendor. It offers an opportunity to diversify away from reliance on hardware maintenance into some of the major markets created by the trend to outsource systems operations and private networks for data and voice. The downsizing trend has brought outsourcing contracts to the desktop within the realm of the IMOs activities and expertise; many IMOs have concentrated on maintaining PCs, desktop printers and local networking devices and several of the larger IMOs have software development and software product skills within their parent group or within other divisions.

3. Professional Service Vendors Appear Complacent

Overall many of the professional service vendors are still not seriously targeting desktop services. While these organisations recognise desktop services as a small—typically less than 5%—component of their existing systems operation activity, they are content to treat desktop services as low value-added activity, with a tendency to over-identify desktop services with equipment maintenance.

However, a small number of professional services vendors realise the potential of this emerging market and are actively offering services. For example, iTNET, a leading U.K. systems operations supplier, and Sema Group are both targeting the desktop services market. Both companies are focusing on the service elements of LAN implementation and support services as a means of entering the market. The professional services sector in general, unlike the PC dealer segment, is constrained in its desktop services offerings. This is due to their lack of knowledge and expertise of PC application software products. Indeed, the major challenge facing the professional services vendors operating in this market is to provide a full range of desktop services.

4. PC Dealers & Distributors Lead the Market

PC dealers and distributors are unique among the four vendor types which INPUT has researched, insofar as they have the key skills necessary to supply the following end-user network services:

- Application software product evaluation skills
- Supply of industry standard applications
- Full support of installed applications

All other vendors have tended to concentrate their software skills on minicomputer and mainframe platforms.

The major dealerships are endeavouring firstly to diversify away from low-profitability activities, such as equipment supply and maintenance, into higher value-added activities such as services and systems development. In addition, one-stop-shopping services such as desktop services offer the potential to establish long-term, typically 3-5 year, contracts with major organisation. This protects both the vendor's profitability and its account control.

A number of the major dealerships are already more advanced than the traditional systems operations vendors in targeting desktop services. Much of the initial success in the market has been achieved by dealers such as P&P Corporate, and members of the International Computer Group (ICG), which includes RAET, Compunet and Compucenter.

The main challenge facing the PC dealer vendors is to increase their levels of pan-European capability. A number of the major dealerships, however, are starting to address this issue by forming partnerships.

C
Responding to the Opportunity

1. The New Market for Customer Service Organisation

To take advantage of this emerging market, customer services organisations must re-package and re-define their service offerings.

The equipment vendors and IMOs are taking different approaches, principally dictated by their backgrounds. Typically this means

- The equipment vendors will choose the option of offering a stand-alone set of services.

- The outsourcing option is more attractive to the independent maintenance companies.

The incentives for IMOs to diversify into desktop services (either by offering individual services in stand-alone mode or by tendering for complete contracts) are surely present in today's marketplace. There are also considerable inhibitors in the form of the strongly technical culture of traditional maintenance operations, and its lesser focus on application skills.

Major IMOs which are launching desktop service offerings include:

- Granada Computer Services is restructuring its PC-based activities and rationalising its Microcare associate subsidiary.
- Thorn EMI Computeraid has won a large contract with Sedgwicks, one of Europe's largest insurance brokers.
- Data Logic, part of the worldwide Raytheon group, is designing a branded service, combining its skills in hardware and software maintenance, to be launched in 1992.

All these initiatives attempt to build outward from existing strengths into the new outsourcing markets, with key components of service retained in-house, and partners used for areas in which the IMO does not currently have the capability within its own resources.

Some equipment vendors are responding with a growing portfolio of productised service lines which can be picked and mixed from a comprehensive catalogue of traditional and new services. Others are responding by restructuring their customer services organisations to cope with new types of services aimed at PC users.

Examples of vendors responding in the two ways mentioned are Digital and Hewlett-Packard. Digital has a large portfolio, marketing over 100 separate services in four categories. These are:

- Consultancy
- Education & Training
- Support & Maintenance
- Bespoke (i.e., Customised) services

Among this last category there are four services targeted specifically at the desktop and its network of PCs.

Hewlett-Packard, on the other hand, has formed two new sections to handle network installation and support, and to deal with PC dealers/ distributors.

Two factors are key to the responses of the systems and equipment vendors:

- New services must be clearly packaged, labelled and priced as such if they are to be viable as stand-alone, unbundled service lines.

- The advent of desktop services shifts the emphasis in the organisation as a whole, away from pure product supply and towards a service company image.

The strategies of the equipment vendors are as follows:

- Building comprehensive portfolio of end-user network services
- Offering stand-alone set of product services
- Restructuring customer service organisations
- Reinforcing service image

The strategies of the Independent Maintenance Organisations are as follows:

- Developing outsourcing contracts

- Brand name service line
  - Software maintenance
  - Badging of the service line mark

2. PC Dealers—A Step Ahead of the Professional Services Vendors

To date, the traditional leaders in the outsourcing market, professional services vendors such as Data Sciences, EDS and Hoskyns, have paid little attention to the end-user network services market. However, INPUT expects to see increased interest from these vendors as PC dealers such as ICG and P&P Corporate encroach on their market and become a real competitive threat to their dominance of the outsourcing market.

The threat comes from the growing importance of technologies such as local area networks, open systems and client-server architectures. While these remained a minor proportion of the equipment installed base, the professional services vendors could afford to concentrate on selling outsourcing services based upon their proprietary mainframe and mid-range capabilities. However, this is no longer the case, and the future of IS infrastructure outsourcing increasingly requires desktop services capability.

Of the professional services vendors targeting the market, several recognise that they lack the in-house capability to offer a comprehensive desktop service, and that to take advantage of this opportunity some form of merger or joint venture with a major PC dealer or distributor is required.

The major dealers also perceive that in order to offer a quality service to multinational clients, they require pan-European capability. This would enable them to provide identical offerings and standards of service across Europe via a single point of contact. To this end, PC dealers—Compunet in Germany, Computacenter in the U.K., together with Random in France formed the International Computer Group (ICG). ICG now has partners in 16 countries in Europe and partners in Japan. These vendors are not restricted to PC products and are typically developing strong capabilities in open systems. For example, many of the organisations within the ICG group have divisions acting as value added resellers for the IBM RS/600. Also, in 1991, ICG was appointed as European Project Associate (EPA) for IBM.

The strategies of the professional services vendors are as follows:

- Targeting market through
  - LAN implementation
  - LAN management

- Treating the sector as an additional part of their overall service offering

The strategies of the PC dealerships are as follows:

- Diversifying to higher-margin service areas

- Moving towards alliances/partnerships with other vendors for proprietary capability

- Developing pan-European coverage

- Move to become 'one-stop shop'

D
Vendors—A Strategic View

1. The Move Towards Vendor Partnerships

Throughout the whole of the information services industry, strategic alliances and partnerships between vendors are becoming more common. This reflects the need to diversify and fulfill the more complex needs of the user organisation. The emerging end-user network services market is no exception, and the four vendors discussed in this report are expected to form such partnerships to bridge gaps in their services provision capability.

Exhibit VI-1 lists the use of business partners and subcontractors by the four vendor types discussed in this report.

EXHIBIT VI-1

Use of Partnership by Type of Vendor
Desktop Services

Service Offerings \ Vendor Type	Equipment Suppliers	Independent Maintainers	Professional Service Vendors	PC Dealers/ Distributors
Equipment Selection Consultancy	Low	Low	Low	Low
Equipment Supply/ Purchase	Low	Medium	Low-Medium	Low
Equipment Maintenance	Medium	Strong	Strong	Low
LAN/Equipment Installation	Medium	Low	Low	Low
LAN Management	Low	Low	Low	Low
Help Desk Services - Systems Software - Applications	 Low Strong	 Low Strong	 Low Medium	 Low Low

Currently, it is the PC dealerships which are having a degree of success in marketing desktop/end-user network services as a stand-alone product to major corporations. They are the most likely vendors to meet the end-user requirements discussed in Chapter V. With the exception of their weak pan-European coverage, they largely satisfy the vendor evaluation criteria identified by users. To enhance their service capability and broaden their appeal to the larger client it is probable that they will form partnerships.

The most likely alliance for the dealer is the professional services vendor which has the outsourcing skills required on proprietary mid-range and mainframe equipment, but typically lacks the full service expertise for desktop services contracts.

Accordingly it is likely that a number of partnerships or mergers will occur over the next few years between these two groups of vendors as they position themselves to address the full range of outsourcing needs. This will be in order to protect their markets from the major equipment vendors which will become increasingly active in the outsourcing market.

The customer services organisations would also benefit from strategic alliances and are expected to move in this direction. Equipment vendors like Digital, Unisys and Hewlett-Packard need to overcome their perceived lack of independence in the equipment selection consultancy element of the desktop service, and clearly market their offerings in this area, separate from their many other services.

The IMOs on the other hand need to overcome their perceived lack of application software product expertise, and to market their service outside of their core maintenance business areas.

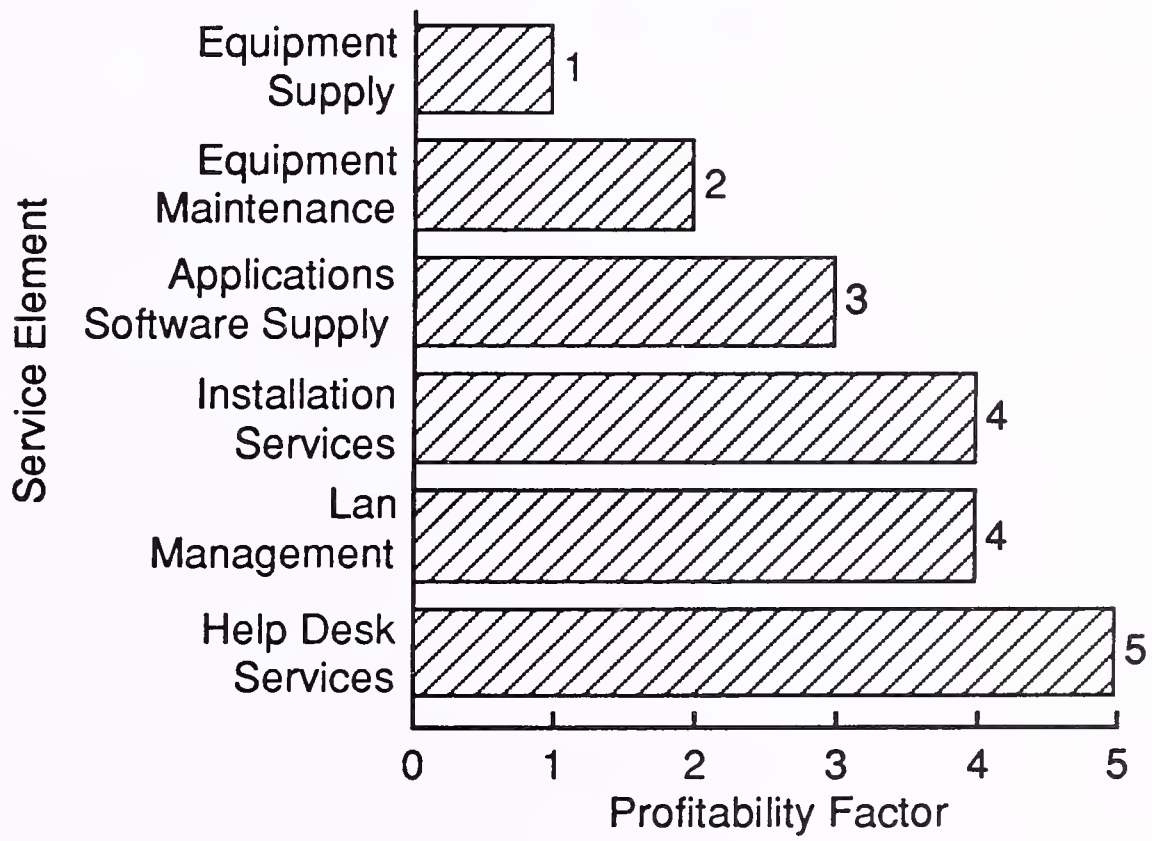
Therefore, strategic business partnerships with other vendors would serve as a method of delivering extended services outside of the customer services traditional skill sets.

2. The Profitability Factor

Exhibit VI-2 shows the profitability level of the main elements of the desktop services/end-user network services market.

EXHIBIT VI-2

Profitability of Desktop Services Elements



Factor = Profitability Level
1 = Very Low 2 = Low
3 = Medium 4 = Medium-High
5 = High

This exhibit demonstrates to some extent the reluctance of the professional services vendors to offer equipment supply and maintenance, and to concentrate instead on the service elements of LAN installation and support.

However, it may be necessary for this group of vendors to move into equipment supply in order to market themselves as full service suppliers to the desktop.

For the PC dealer, the relatively low profit return on equipment supply and maintenance provides the motivation to target desktop services and systems development activities which offer much higher margins.

E
Strengths and Weaknesses

Exhibit VI-3 summarises the strengths and weaknesses of the four groups of services vendors.

EXHIBIT VI-3

Strengths & Weaknesses by Vendor Type

Strengths	Weaknesses
Equipment Suppliers • Established Customer Service divisions • Broad range of skills • Impressive customer base • Financial strength	• Resources already overstretched • Not perceived as impartial • Slowness in adopting new strategies • Channel contention • Product orientation
Independent Maintainers • Strong incentive to diversify • Strong expertise in networking and PCs • Impartial status	• Lack of software skills • Strong maintenance culture • Financial vulnerability
Professional Services Vendors • Strong networking skills • Access to large clients • Systems operations activity	• Lack of depth & breadth of software product knowledge • Lack of full service capability • Lack of awareness of opportunity/need
PC Dealers • Vendor independence • Full end-user network capability • In-depth knowledge of wide range of products	• Weak pan-European coverage • Lack of mainframe & mid-range capability

The PC dealerships are the only group capable of supplying all of the service elements required by the users, from purchasing consultancy through to network implementation and management, and application software product support. They also possess the added strength of having evaluated and marketed thousands of hardware and software products. This automatically puts them in a favourable position compared to the other vendor types.

Most vendors in the other groups will not have sufficient resources nor a wide enough range of skills to be able to support all the elements of the desktop network services contract. They will therefore have to choose which to specialise in themselves, drawing on their particular strengths, and subcontract others to partners. Profit considerations will no doubt play a large part in this decision.

Key skills to be successful in this sector include skills required to support application products in an open systems environment.

F
Critical Success Factors

Many companies in the industry with all sorts of backgrounds are present in the desktop sector, quite often without seeing themselves as fulfilling the role of a total contractor:

- Equipment suppliers are putting together comprehensive portfolios of desktop services, normally marketed as a series of individual service lines.

- Independent maintenance organisations are seeking to diversify their portfolios to include more networking and software services components.

- PC dealers and distributors have awoken to the fact that their expertise in selection and integration of PC-based hardware and software products is extremely valuable to end users and may be unique in the marketplace.

- Professional vendors are often reluctant participants in the desktop sector, often seeing more profit in mainframe and minicomputer based systems and services.

INPUT predicts that the key ingredients for success in the fast-growing desktop network service sector are as follows:

- Up-to-date technical skills
- Wide geographical coverage
- Full service capability in PCs and LANs
- Broad application software product support capability.

Companies that are going to succeed must realise the importance of each of these key factors. Failure to do so will mean lack of flexibility in the offering and inability on the part of the sales force to come up with innovative concepts which have sound reasoning behind them, and which make good business sense.

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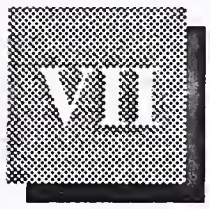

Vendor Offerings

This chapter assesses the offerings of eight leading vendors in the end-user network services market. It also looks briefly at a partnership formed by two vendors (Dell and Sorbus) to enhance delivery of service.

The eight vendors profiled are representative of the four vendor types discussed in Chapter VI. They are:

- Hewlett-Packard
- PrimeService
- Thorn EMI Computeraid
- Data Logic
- iTNET
- Sema Group
- ICG
- P&P Corporate

A
Equipment Suppliers

1. Hewlett-Packard

Hewlett-Packard (HP) prides itself on the quality of its service and the organisation of its third-party channels. Both these factors will need to be carefully husbanded during the transition to a desktop service environment since:

- Service quality will become more dependent on the management of multi-vendor services.

- Equipment suppliers will come into contention with their own third-party distribution channels as downsizing becomes more prevalent, and vendors compete for static or shrinking hardware expenditures.

HP operates with two types of dealer in the sales of PCs, peripherals and small units—i.e., all its low-end sales:

- The first type of supplier is called a reseller. It is effectively an agent for the selling of HP equipment, software and services, but may of course also sell parts of a system or whole systems from other suppliers. A reseller takes service contracts for HP and HP delivers the service. It cannot undertake hardware maintenance or system software support on HP products.

- The second type of supplier is called a remarketer and is capable of adding more types of value than a reseller. Remarketers are trained by HP in the businesses of providing hardware maintenance and software support on HP's systems and applications software product. Like resellers they will also add their own unique value by providing software from independent software vendors (ISVs), or by producing tailored or customised products of their own manufacture. Remarketers offer what is essentially a one-stop shopping outlet to the user organisation.

In the case of the reseller, users with problems will contact the HP Response Centre for diagnosis and help; while remarketers will be expected to provide their own help desk to cope with at least the first level of problem. HP provides second-level support to its remarketers via the Dealer Group in the Response Centres.

Dealers can choose which type of organisation they wish to be—reseller or remarketer. In specific deals the type can be reversed if the situation requires it. In a few cases the system works with two tiers, the first tier acting as a non-exclusive reseller distributing standard products and systems while the second is selling HP products, possibly more on an exclusive basis, and can be either a reseller or a remarketer.

HP end-user network services are not differentiated so clearly from its overall service offerings as are those for Digital. This has advantages as well as disadvantages. The major advantage is that the desktop offerings are organised to draw on all the standard HP resources and so suffer no potential diminution of quality:

- Desktops are serviced from the HP Response Centres.

- Response Centres are reforming to have separate groups for network operations support, for PC/dealer support, and for total support.

- Workstations, PCs and terminals draw on the same block of support contracts as other larger systems, although some of the options are not available to desktop devices.

The disadvantages are that HP may miss out on opportunities to develop a large service revenue stream in the sector due to:

- Opportunities being presented to the distribution chain rather than to the centre.

- Opportunities for outsourcing contracts by-passing HP because the budget control is with the user management and not the central IS management.

Hewlett-Packard offers the following end-user network services:

- Standard contracts for hardware and software product support

- Multi-vendor capability
  - Hardware maintenance
  - PCs, peripherals, PC-LAN operating system
  - Third-party software support, i.e., Oracle, Ingres, etc.

- Open Software Environment (OSE)

- Consultancy services

- Network operations group

- PC dealer support

- Service customisation

The company's strengths and weaknesses in this area are summarised in Exhibit VII-1.

EXHIBIT VII-1

Hewlett-Packard: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• Premier quality support service provider • Consistently placed no.1 in independent services surveys • Tailored service contracts • Strong networking capability • Third-party software products supported on own and multivendor platforms	• Desktop services not differentiated • Technical orientation of much of the company's service offerings • Weak capability for systems operations

2. PrimeService

PrimeService is the customer service organisation of Prime Computer which supplies integrated system solutions to certain selected end-user markets including the mechanical engineering and aerospace sectors.

PrimeService provides standard maintenance, but also offers desktop services as follows:

- Standard equipment supply & maintenance
- Network planning, design & installation
- Multivendor 'One-Call'
- Single source support contract for all desktop equipment

PrimeService offers a multi-vendor service called 'ONE-CALL' which provides a single point of reference for all technical and logistics support services.

Vendors whose equipment is serviced include IBM, Apple, Compaq, Toshiba, Dell and other compatibles. Computeraid also offer a range of non-maintenance services including:

- Applications support
- Network operating system support
- Network facilities management
- Disaster recovery
- Environmental services
- Performance consultancy

These services currently account for only 5% of revenues, but policy is to grow this revenue base as fast as possible to counter the threat of falling maintenance revenues.

Computeraid's strategy in entering the desktop services arena is to go for the longer-term outsourcing business, in which companies will contract out the whole area of desktop supply, maintenance and support on a facilities management contract. The large companies targeted will be most likely to have a plethora of desktop devices to manage, but no in-house skills to be able to allocate to the supposedly routine, 'low-tech' tasks associated with desktop devices.

This view is in accord with INPUT's findings that this type of resource is more likely to be found in the large and very large companies, although even they will outsource desktop services if there is a business culture which is generally favourable to outsourcing.

Computeraid recently announced a three-year contract to manage the desktop devices for the Sedgwick group, one of Europe's largest insurance brokers. This will include putting 15 personnel in various Sedgwick sites round the U.K., as well as linking the sites remotely to the Computeraid help desk function via the THORN EMI network.

Exhibit VII-3 summarises the strengths and weaknesses of this independent maintenance organisation in amplifying its service portfolio by diversification into desktop services.

EXHIBIT VII-3

THORN EMI Computeraid: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• In-depth hardware maintenance skills in PCs/desktop devices	• Perceived software product expertise
• Networking skills	• Maintenance culture
• Help desk skills	• No pan-European status
• Sales track record with MIS function	• Little expertise in selling to end-user/department user
• Large company financial strength	
• Clear strategy	

2. Data Logic

Data Logic is a U.K. medium-sized professional services company. It is a subsidiary of the UDS Raytheon corporation which is active in defence electronics and SI markets in the U.S. Data Logic consists of two divisions: Professional Services and Customer Services.

Originally set up to service the company's own financial dealing systems hardware, it has grown to become a small independent maintainer with hardware maintenance revenues of £6 million per annum, and software service activities amounting to £2 million.

Data Logic plans to target the end-user network services market. The company is putting together a service offering which will encompass all of the service elements discussed in this report. It will aim for full service delivery. Data Logic's planned offerings are as follows:

- Equipment supply
- Equipment maintenance
- LAN design and implementation
- LAN management
- Help-desk services

Some elements will be subcontracted to other vendors such as PC supply and software product supply.

Exhibit VII-4 summarises Data Logic's overall strengths and weaknesses.

EXHIBIT VII-4

Data Logic: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• Good hardware & software skills set • Independent vendor • Desktop services to be focused—separate identity • Part of international group	• No pan-European capability to date • Lack of PC applications expertise • Uneven track record in company growth

C

Professional Services Vendors

1. iTNET

iTNET is a leading U.K. systems operations supplier. The company has particular expertise in the local government and process manufacturing sectors.

iTNET is a wholly owned subsidiary of Cadbury Schweppes and has a turnover of £30 million. Aside from its systems operation activities, the company also offers services in:

- Application management
- Project management
- Systems integration
- IS consultancy
- Disaster recovery

iTNET has taken the initiative in targeting end-user network services although it is marketing its offering differently to the PC dealerships. Its service offerings are led by its focus on LAN implementation.

iTNET's end-user network services capability largely exists in its Network Solutions Division. The company's philosophy is that in order to reap the full benefits of local area networks, extensive LAN implementation experience is required. The company believes that many LANs have been poorly implemented in-house, resulting in the in-house department eventually seeking external assistance.

iTNET's current offerings include:

- LAN implementation & management
- Mainly second-line support for systems software
- Local service only
- Value-added reseller for LANs

The software supported by iTNET is essentially limited to systems software and office automation products such as Lotus Notes. iTNET does not provide first-line support to end-users in the majority of contracts. The typical pattern for iTNET is network installation followed by second-line support for systems software. iTNET's second-line support is organised into technology-dependent teams.

iTNET's first-line support is composed of Customer Delivery Teams, which log all queries and ensure that any response is carried out in accordance with the service level agreement in operation between iTNET and the client. Most of the teams operate off-site although the company does have personnel on some of its clients' sites.

iTNET is currently endeavouring to form an alliance with another vendor to provide equipment maintenance. Presently, in many instances, iTNET's clients retain their existing maintenance company.

iTNET does not supply PC or workstation products, but it does act as a value-added reseller for local area networks on a project-by-project basis.

Exhibit VII-5 provides a summary of iTNET's overall strengths and weaknesses in the end-user network services market.

EXHIBIT VII-5

iTNET: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• Presence in the systems operations market	• Lack of geographic coverage
• Strong LAN support capability	• Lack of support of standard application software packages

iTNET's major strengths are its systems operation customer base and its LAN implementation expertise. iTNET's activity in the U.K. systems operation market should be a major advantage when bidding for services contracts since many prospective users, particularly the larger organisations are seeking a combination of "Large System" systems operations and desktop services.

The company's main weakness is in not offering extensive support of application software products to users. Its other weakness is its self-imposed geographical constraints. The company currently provides 4-hour call-out times from its Birmingham office.

2. Sema Group

- Equipment selection consultancy
- Equipment supply (through third party)
- Centralised help desk service
- Single source support
- Support of an agreed range of application software products
- Equipment maintenance (subcontracted)
- LAN implementation & management

Sema Group prefers to offer a remote, centralised, help desk service to users, rather than an on-site service since only in this way can the company achieve economies of scale in software support.

Sema Group's major strengths and weaknesses are summarised in Exhibit VII-6.

EXHIBIT VII-6

Sema Group: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• Strong networking expertise	• Dependence on other vendors - Equipment supply - Equipment maintenance
• Single point of contact	
• Willingness to support application software products	• Inexperience in supporting PC application software products

D

PC Dealerships

1. ICG

In 1989 CompuNet Computer (Germany) entered a joint venture with Computacenter in the U.K., and Random in France, to form ICG Paris (International Computer Group). ICG was formed by its members to cater for clients' needs for a pan-European service and to provide a consistency of service throughout Europe from a single interface. ICG now has partners in 16 countries in Europe and also in Japan. In 1991, ICG was appointed as European Project Associate (EPA) for IBM.

In addition to their personal computer activities, ICG members are typically RS/600 value-added resellers and hold as AS/400 agreements. The group is actively targeting the end-user network services market. The company leading the development of these services is Computacenter in the U.K., which currently has 10 service contracts in this market.

ICG's service offerings include:

- Equipment selection consultancy
- Equipment supply
- Implementation services
- International account management
- Help desk services
- PC Integration Services
- Project management

The local account manager acts as the single point of contact for the user organisation and any international requirements are co-ordinated through ICG's central coordination centre in Paris. Support services include multi-lingual account coordinators, help desk facilities, sales support, and project management.

The help desk is a service that allows orders, issuing from anywhere in Europe, to be processed as easily on an international scale as they are nationally.

ICG provides an international account management facility, through its International Account Service (IAS) agreement. The IAS agreement can be used for procuring products and services ranging from small PC network installations in a single overseas office, to the implementation of communicating LAN and WAN solutions across the whole of Europe.

ICG's main strengths and weaknesses are summarised in Exhibit VII-7.

EXHIBIT VII-7

ICG: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• Strong European coverage • Full service capability • Strong in equipment supply and installation • Expertise in a broad range of application software products	• Lack of systems operations experience • Lack of large systems expertise • Lack of industry-specific knowledge and expertise • Vendor impartiality questionable

ICG's main strengths are its pan-European coverage and its breadth of support capability. Its members are also particularly strong in the areas of equipment supply and installation.

ICG's main weakness is its lack of industry-specific knowledge. The group also needs to strengthen its systems operations capability targeted at mainframe and proprietary mid-range systems. Also, ICG's dependence on IBM may be viewed by users as a sign of questionable vendor impartiality.

2. P&P Corporate

P&P Corporate was initially established as a distributor of microcomputer products, but subsequently established a dealership operation targeting the Times Top 100 companies in the U.K.

P&P Corporate is strongly targeting the end-user network services market as a further move to higher value added services. A summary of P&P's service characteristics is as follows:

- Contract managed support (facilities management)
- Tailored service to client requirements
- Prepared to take on user IS personnel
- Open relationship with clients

P&P Corporate claim to offer very open relationships to their clients implying that the client is encouraged to monitor the margins that P&P is making on any business contract.

Exhibit VII-8 gives a summary of P&P Corporate's strengths and weaknesses.

EXHIBIT VII-8

P&P Corporate: Strengths & Weaknesses
End-User Network Services

Strengths	Weaknesses
• Vendor independence • Depth & breadth of knowledge of PC products • Established presence in Times 'Top 100' Corporations	• Needs to develop pan-European capability • Comparative lack of industry-specific expertise • Lacks mainframe & proprietary systems operations capability

E

A Working Partnership—Dell and Sorbus

Two vendors that have formed a successful alliance include Dell Computer (Dell) and Sorbus (in which ICL now has a stake).

Dell supplies desktop and portable computers including peripherals such as printers and plotters. Dell's strategy of direct telephone selling to user organisations has been so successful that Dell is now fast approaching the $1 billion revenue mark in its seventh operating year. Dell's strategy of selling direct to the user and cutting out the middleman has re-established the personal contact between supplier and buyer.

Dell's service support strategy builds on the direct customer contact policy which it has adopted for sales by integrating all its customer contacts into one telephone-based operation. The customer support activities are therefore being handled from one customer database, which is used to record each initial sale.

Dell benefits from this strategy in two ways. It has been able to:

- Establish close contact with the client throughout the product life cycle
- Offer competitive prices by cutting out intermediaries.

Dell has formed a close relationship with Sorbus. This involves Sorbus handling all of Dell's field service warranty and maintenance calls on the desktop and portable units. Dell's objective is to have a strong perceived service image. Two strands in developing this objective are:

- On-site service during the first 12 months warranty
- Field call-out to service portable units from calls to any on of the nine worldwide customer services centres, irrespective of country of purchase of the failing unit—a truly global service.

Although there are obvious gaps in Dell's overall desktop service, e.g., application products supply is not yet part of the offering, Dell's reliance on an integrated networked system tracking customers from first enquiry onwards through sales and service life times indicates the way in which desktop and mobile units will be managed in the future, from start to finish. It also shows how Dell as the prime contractor is perceived as offering a seamless service to the client although it has 'subcontracted' service elements to Sorbus.