

PROFESSIONAL SERVICES OPPORTUNITIES

WESTERN EUROPE

CUSTOMER SERVICES

INPUT

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WESTERN EUROPEAN CUSTOMER SERVICES

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**Customer Service Programme in Europe
(CSPE)**

***Professional Services Opportunities—
Western European Customer Services***

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Abstract

This report presents and identifies opportunities for service vendors within the professional services segment of the customer services market. Using data derived from research on attitudes and opinions of computer users concerning customer service, the report contains:

- An analysis of the market and trends between 1987 and 1988 for customer services' related professional services.
- Estimates of current market penetration and an appraisal of the market characteristics for these services.

The report presents analysis by system size (large, medium and small) for the whole of the Western European market. Also included is a review of the professional services segment of the customer services market for the four major European country markets of France, West Germany, Italy and the United Kingdom.

This report contains 52 pages, including 25 exhibits.



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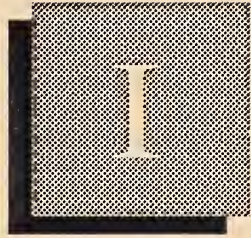
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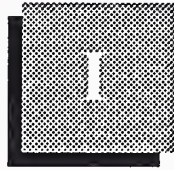
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Introduction





Introduction

This report has been produced by INPUT as part of its 1988 Customer Services Programme in Western Europe.

A

Objectives

In this report INPUT is seeking to identify and define new user requirements that will provide additional incremental revenue opportunities for customer services vendors. Professional services is an attractive high growth market segment that meets these criteria.

The report aims to identify and define, within the context of customer services, the potential market for professional services. In terms of:

- Market Size
- Market Penetration
- Product Identification
- Opportunities

The report also sets out to identify the level of user interest in the mix of service items that constitute the 'Customer Services' professional services market. The term 'CS' professional services is used wherever it is necessary for clarity.

B

Methodology

Data used in the compilation of this report was derived from the following sources:

- INPUT's 1988 user research programme of telephone interviews with computer users throughout Europe (at the time of writing 1,345 had been completed).
- INPUT's 1987 user research programme of 1,321 interviews with computer users throughout Europe was used as a base for trend information.

The structure of these samples is shown in Exhibits I-1 and I-2.

C

Definitions

Three areas are addressed in this section:

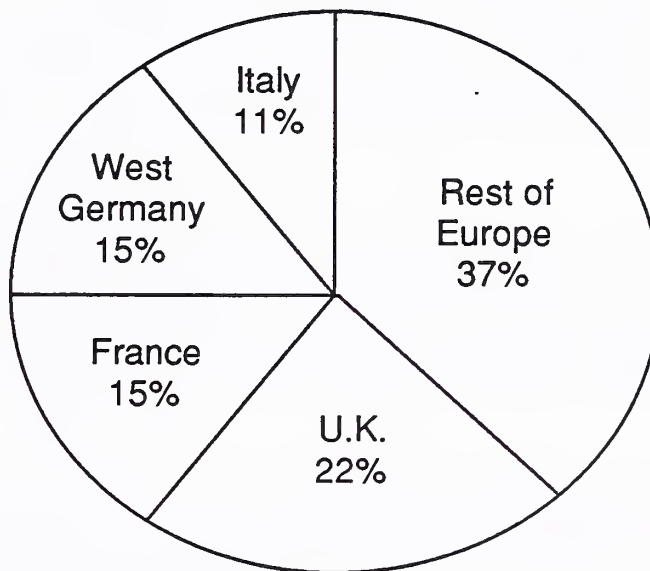
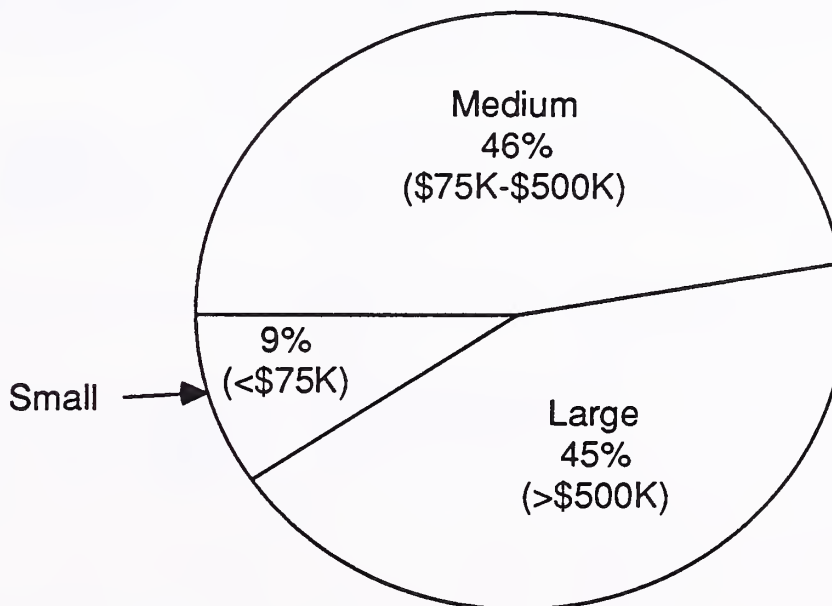
- The definition of 'CS' professional services
- The definition of Level of Interest (LOI)
- The definition of system size by large, medium and small

Professional services that are included within the Customer Services market, 'CS' Professional Services, are defined by INPUT as follows:

- Services required for the installation of computer systems including the management and planning of the environment in which they operate
- 'CS' professional services comprise
 - Cabling
 - Capacity planning
 - Configuration planning
 - Consultancy
 - Environmental planning
 - Network management
 - Network planning
 - Problems management
 - Software evaluation

This report also references two areas that are adjacent to 'CS' professional services:

EXHIBIT I-1

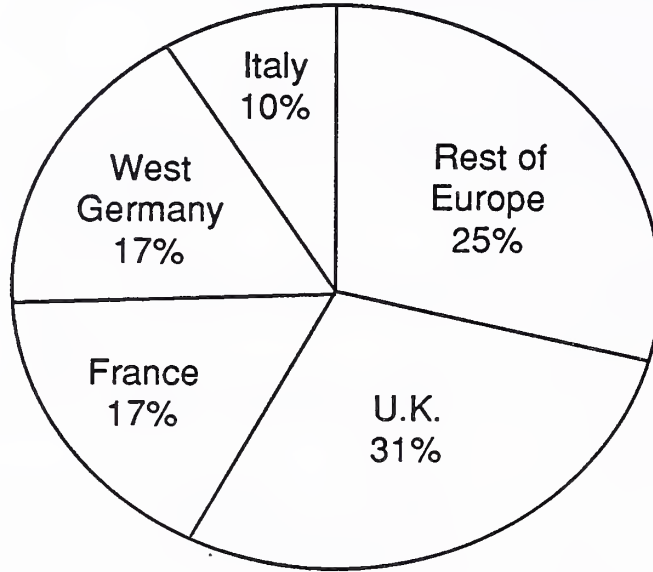
**1988 USER RESEARCH PROGRAMME
SAMPLE DISTRIBUTION****COUNTRY****SYSTEM SIZE**

Sample Size = 1,345

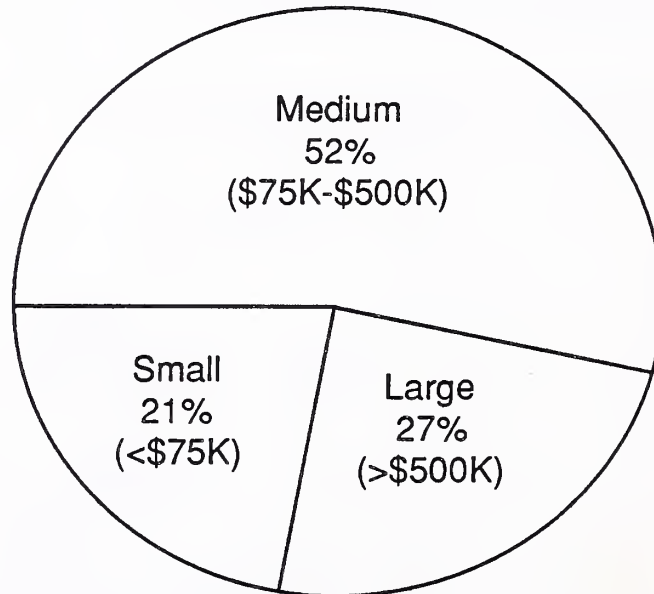
EXHIBIT I-2

1987 USER RESEARCH PROGRAMME SAMPLE DISTRIBUTION

COUNTRY



SYSTEM SIZE



Sample Size = 1,321

- Facilities management is defined as a processing service; however, a number of vendors retain a limited facilities management activity within customer services operations.
- Disaster Recovery is also the subject of a separate INPUT report, *Disaster Recovery in Western Europe*, published in June 1988. Disaster recovery services are generally defined as a processing service and as such are not a 'CS' professional service. However, most computer vendors normally consider disaster recovery services as part of customer services activities.

Education and training is also an area adjacent to professional services. Education and training is defined as a separate market segment by INPUT, and is the subject of a separate report, *IS Education and Training—Western Europe 1988-1993*. Education and training is not referenced in this report.

Level of interest (LOI) is a rating on a scale of 0 to 10 used by INPUT to define the users interest in a particular item, 0 = no interest, 10 = extremely high, or maximum interest.

Data analysed in this report is segmented by system size. System size is classified as the total installed (sales) value of the CPU and all attached local and remote peripherals, defined as follows:

- Large systems, total value of greater than \$500K
- Medium systems, total value between \$75K and \$499K
- Small systems, total value of less than \$75K

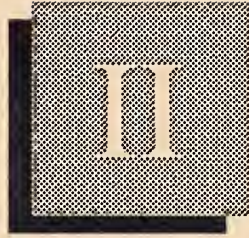
Margins of error for the data presented in this report are

- Level of interest (LOI) standard error 0.05
- Market penetration standard error 0.007

D**Report Structure**

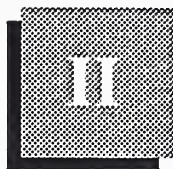
This report is structured in the following way:

- Chapter II is an Executive Overview emphasising the key points.
- Chapter III discusses and defines the market for professional services products.
- Chapter IV contains an overview of the overall Western European market trends and an analysis by system size segment.
- Chapter V discusses and analyses the four major country markets in Western Europe, France, West Germany, the United Kingdom, and Italy.
- Chapter VI identifies and discusses a number of key characteristics of the market.
- The Appendix contains an explanation of the terms used to define the elements of professional services.



Executive Overview





Executive Overview

A

Revenue and Market Opportunities

Computer hardware and service vendors seeking to expand their customer services revenues and extend the range of services offered may wish to consider the professional services segment of this market. The customer services professional services market has been identified by INPUT as a high growth market.

As shown by Exhibit II-1, INPUT has estimated that this segment of the market attracted user expenditures of \$0.5 billion in 1988. Growth is forecast at 24% AAGR (average annual growth rate) in the five-year period to 1993, with user expenditures estimated to reach \$1.5 billion in that year.

Assessment of the market penetration by INPUT indicated that a 42% penetration was achieved in 1987 rising to an estimated 53% in 1988. The growth factor (26%) closely matches INPUT's average five-year forecast growth rate of 24%. During the time period 1987-1988 user interest levels as measured by INPUT's user survey increased only moderately from an indicated 5.7 to 6.1, suggesting that adequate scope remains for vendor marketing and promotional activities to stimulate interest and awareness.

The moderate current level of market penetration indicates the level of opportunity for vendors to achieve increased revenue and growth in this market segment. The profile of this market opportunity is summarised in Exhibit II-2.

EXHIBIT II-1

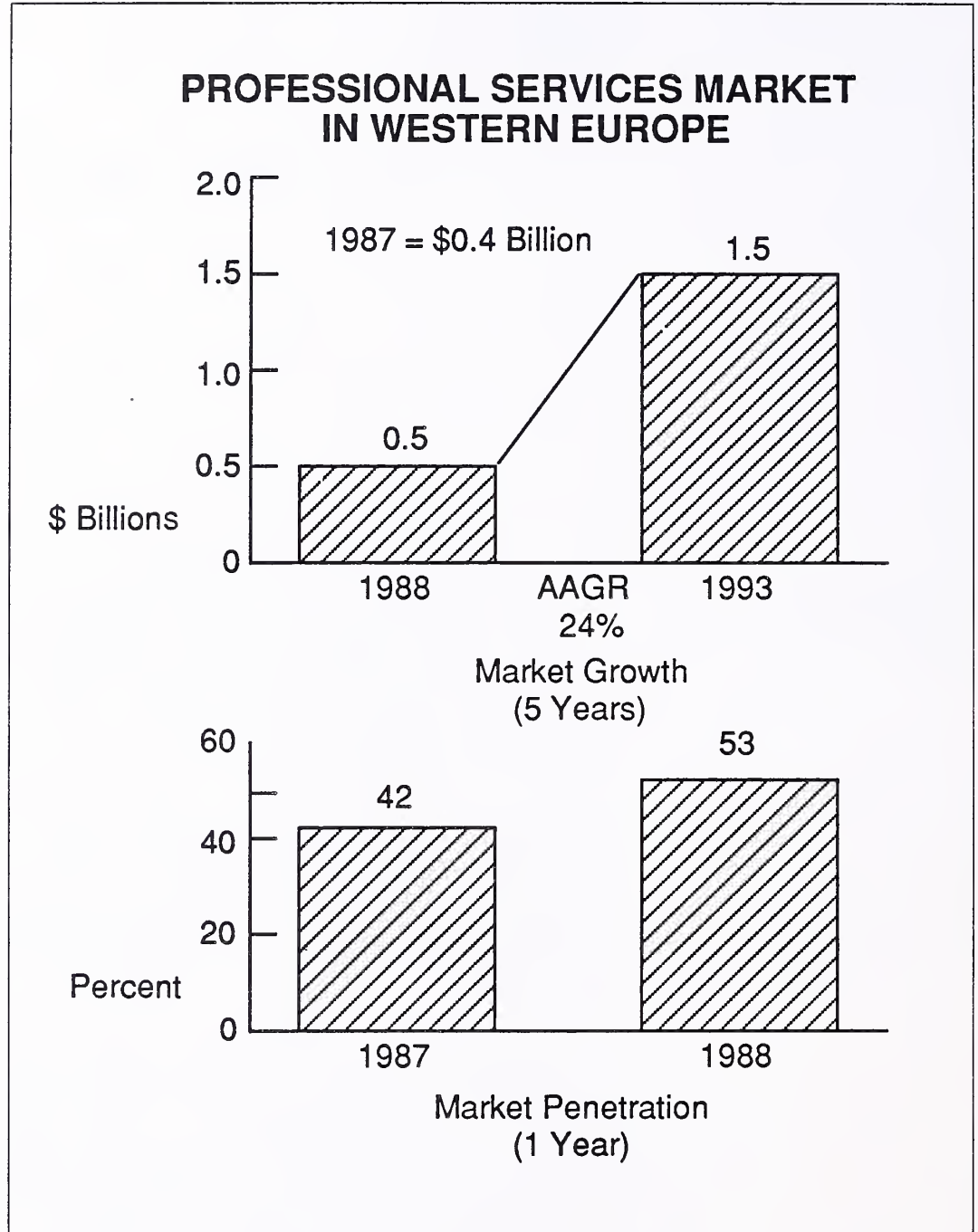


EXHIBIT II-2

**PROFESSIONAL SERVICES—
A CUSTOMER SERVICES OPPORTUNITY**

- High-Growth Market
- \$1.5 Billion Revenue Opportunity 1993
- User Interest Increasing
- Moderate Market Penetration

B**Top Country Markets**

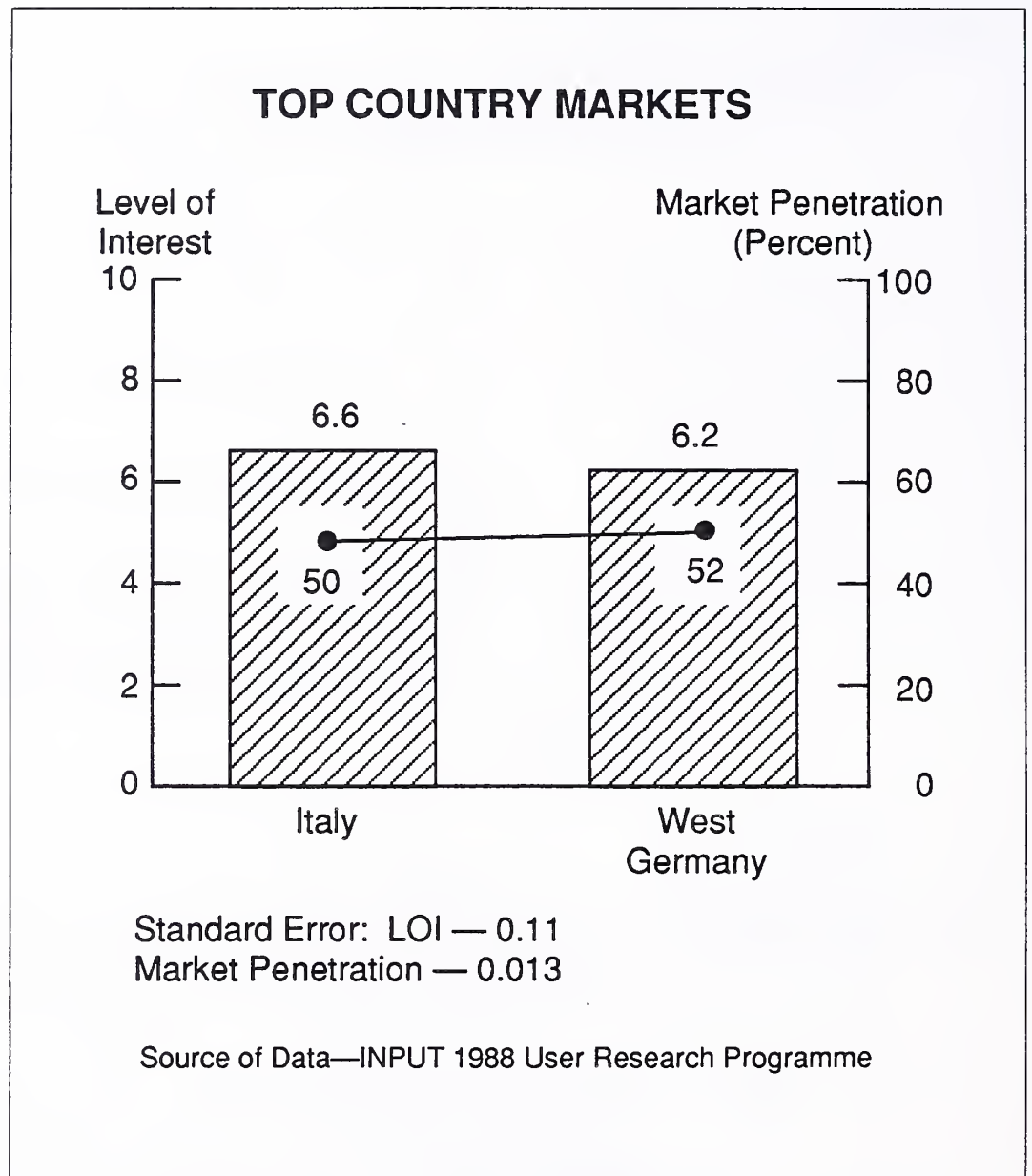
Italy and West Germany are considered by INPUT to offer the most favourable country market opportunities. Levels of interest and market penetration indicated for these two countries are shown in Exhibit II-3.

The Italian user sample indicates consistently higher levels of interest for all elements of professional services, with an indicated 50% average market penetration having been achieved in 1988. Of specific note in the Italian market is an estimated 27% penetration for disaster recovery services. An opportunity for further investigation by vendors is indicated.

The West German user sample also indicates consistently high levels of interest. Although the average market penetration is slightly higher than for Italy, individual sector penetrations are lower, possibly highlighting areas of opportunity.

The United Kingdom represents both an opportunity and a challenge, indicating lower levels of interest and market penetration. But, the opportunity of high rewards exists if the market can be exploited by stimulating user interest, awareness and need.

EXHIBIT II-3



C

Top Customer Service Opportunities

The popularity of individual service items varies between both individual countries and the system size segments of the market. Exhibit II-4 lists the individual service items that achieved consistently higher ratings, as measured by level of interest.

Analysis of the four major country markets indicates that disaster recovery services and consultancy are consistent in achieving the highest rated levels of interest. Software evaluation, problems management and cabling are also consistent in indicating relatively high levels of interest, although slightly lower than disaster recovery services and consultancy.

EXHIBIT II-4



The ratings for level of interest in the system size market sector show less variability than those relating to the country markets with disaster recovery services indicating the highest levels of interest in all sectors. Consultancy is also relatively consistent, indicating the second highest level of interest with software evaluation and cabling also being rated relatively high.

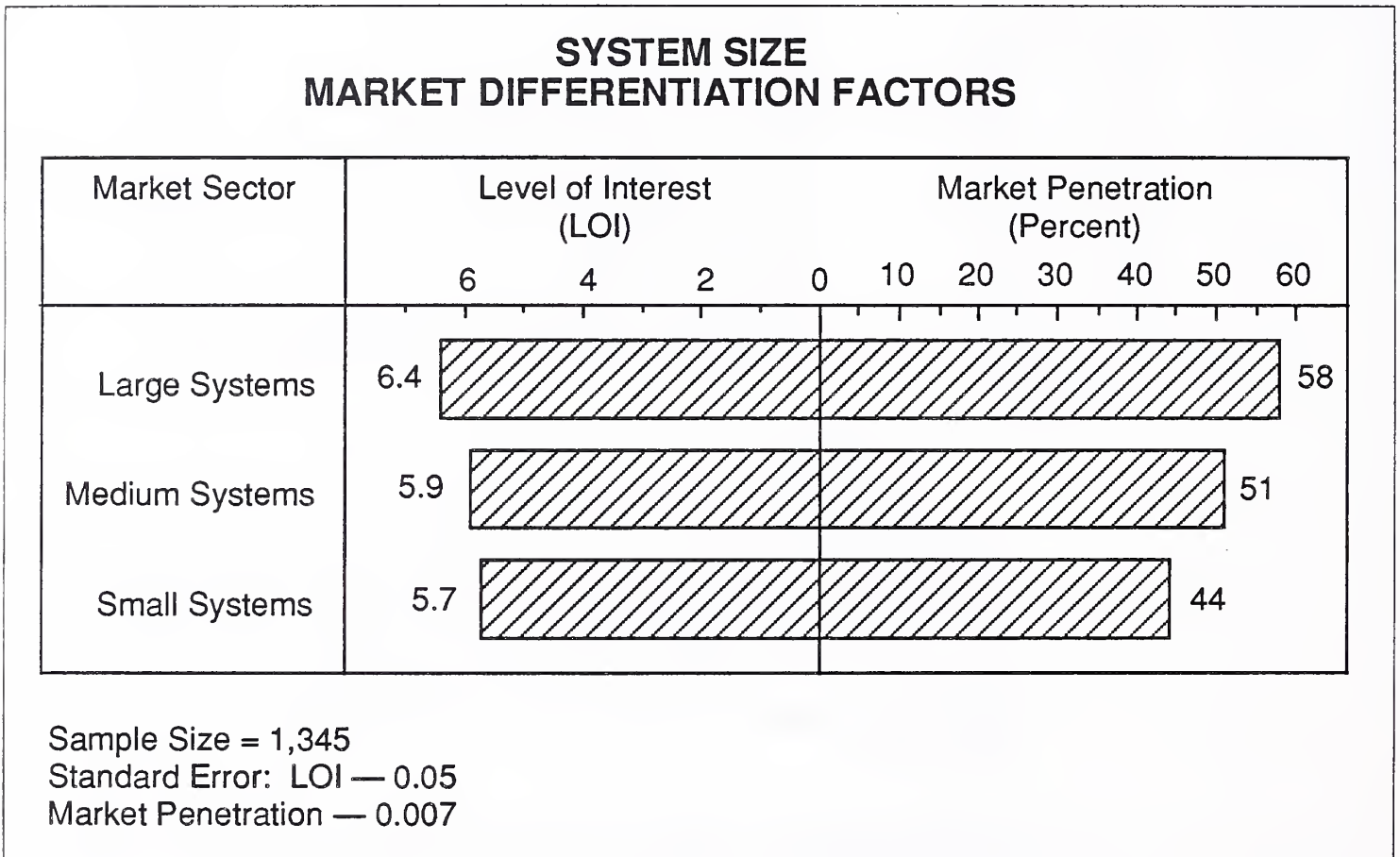
Market penetration for the services indentified as showing the highest levels of interest are less consistent. One example of specific interest is the Italian market for disaster recovery services. Market penetration is indicated at 27% with the level of interest (6.7) rated fourth, lower than consultancy, software evaluation and configuration planning. These characteristics indicate a departure from the pattern shown in other country markets and may indicate an opportunity for service vendors to capitalize in a less developed market.

D

System Size Segment Opportunities

Exhibit II-5 illustrates the indicated differences between the three system size sectors in terms of average level of interest and market penetration. This shows a defined pattern where the large systems segment indicates both the highest level of interest (6.4) and market penetration (58%). Both measures are lower related to smaller system size such that the small systems sector indicates the lowest level of interest (5.7) and market penetration (44%).

EXHIBIT II-5



The Large Systems sector is the most accessible and most readily identifiable, having the smallest population. Also this sector is attributed with higher prestige containing the highest value systems. Being more accessible and identifiable the large systems sector is likely to be the most competitive.

Medium systems may prove to be a good short or medium term opportunity. The criticality and complexity of medium systems is increasing as

is the overall 'power' in computing terms, also the users tend to be less sophisticated. With this upwards migration the need for professional services in this sector is likely to follow a similar trend.

The small systems sector, where both levels of interest and market penetration are lower may indicate a reduced real need for professional services. Small systems are relatively simpler and generally this sector contains the least sophisticated users. However, as systems complexity and power migrate downwards this sector may become more responsive to the approaches of professional services vendors and therefore should be considered as part of a longer term plan.

E

Market Characteristics

The characteristics of the professional services market as identified by INPUT are listed in Exhibit II-6.

EXHIBIT II-6

MARKET CHARACTERISTICS

- Market Forces
 - High Interest Indicates an Opportunity
 - Promotion Stimulates Interest
 - Low Interest Is Not an Inhibitor
- Market Drivers
 - Missionary Marketing
 - Vendor Capability and Resources
 - Needs of Integrity and Security
- Market Inhibitors
 - User Pre-conceptions and Resistance

There are three aspects to the forces operating within the market

- An indicated high level of interest identifies an area of possible opportunity. Where interest levels are high awareness is also likely to be higher placing the emphasis more on activities aimed at increasing penetration and less towards promotional activities.

- Where interest levels are lower INPUT considers that these are influenced by lack of awareness amongst users concerning the range and scope of professional services offerings. Low levels of interest need not necessarily be considered barriers, more a challenge for 'missionary marketing' strategies.
- Promotional activities can stimulate interest by creating awareness. One example of increases in market penetration is provided by Exhibit IV-1 which indicates facilities management showing an increased market penetration of over 200% and a corresponding increase in interest level from 4.0 to 5.5.

Market drivers in the first instance are the vendors' marketing and promotional activities creating awareness. The market need appears to exist, but what is missing is the awareness of the availability of professional services and the scope of services. Further driving forces are provided by the vendor capability to satisfy user needs for system integrity and security, and the ability to satisfy customer nervousness in handing over responsibility for varying degrees of computer operations. Need for professional services is being stimulated by increasing criticality and complexity of systems and the integration of systems within the user business.

Market inhibitors appear to be embedded in user resistance to change and unwillingness to relinquish responsibility to third parties for traditional 'in house' activities.

INPUT believes that the market inhibitors evolve around user attitudes such as:

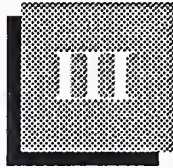
- 'We can do a better job'
- 'These services have always been provided in house'
- 'We prefer to retain control'

The above, together with both emotional and Trade Union resistance to subcontracting previously internal jobs are in part the major market inhibitors. Together with genuine nervousness in losing control or impacting efficiency by introducing a 'remote' element through the use of subcontracted resources.



The Professional Services Market





The Professional Services Market

A

Customer Services Market Overview

The computer market is complex, but can be presented conceptually as a simple two-tier structure as follows:

- Computer product sales, which are essentially either hardware or software-related products.
- Computer services, that relate to a mixture of support elements essential to computer operations.

The customer services market is defined by INPUT as those services relating to:

- All computer system hardware maintenance
- Operating system software support
- Training and education related to the above two items
- Ancillary services relating to computer operations, excluding applications. The generic term used is 'professional services.'

B**Market Definition and Identification**

'CS' Professional Services are closely allied to customer services operations, the resource being 'people'. The range of services are an incremental addition to the traditional customer service offering provided by computer vendors of basic hardware maintenance. The objective of 'professional services' is to assume varying degrees of responsibility for the users' computer operations, thus allowing the users to operate their businesses with a reduced burden of computer operations responsibility.

Relative stagnation in hardware service growth is stimulating the need for service vendors to search for additional incremental revenue sources. Professional services is one source of additional revenue that appears to be responding to stimulation of user demand.

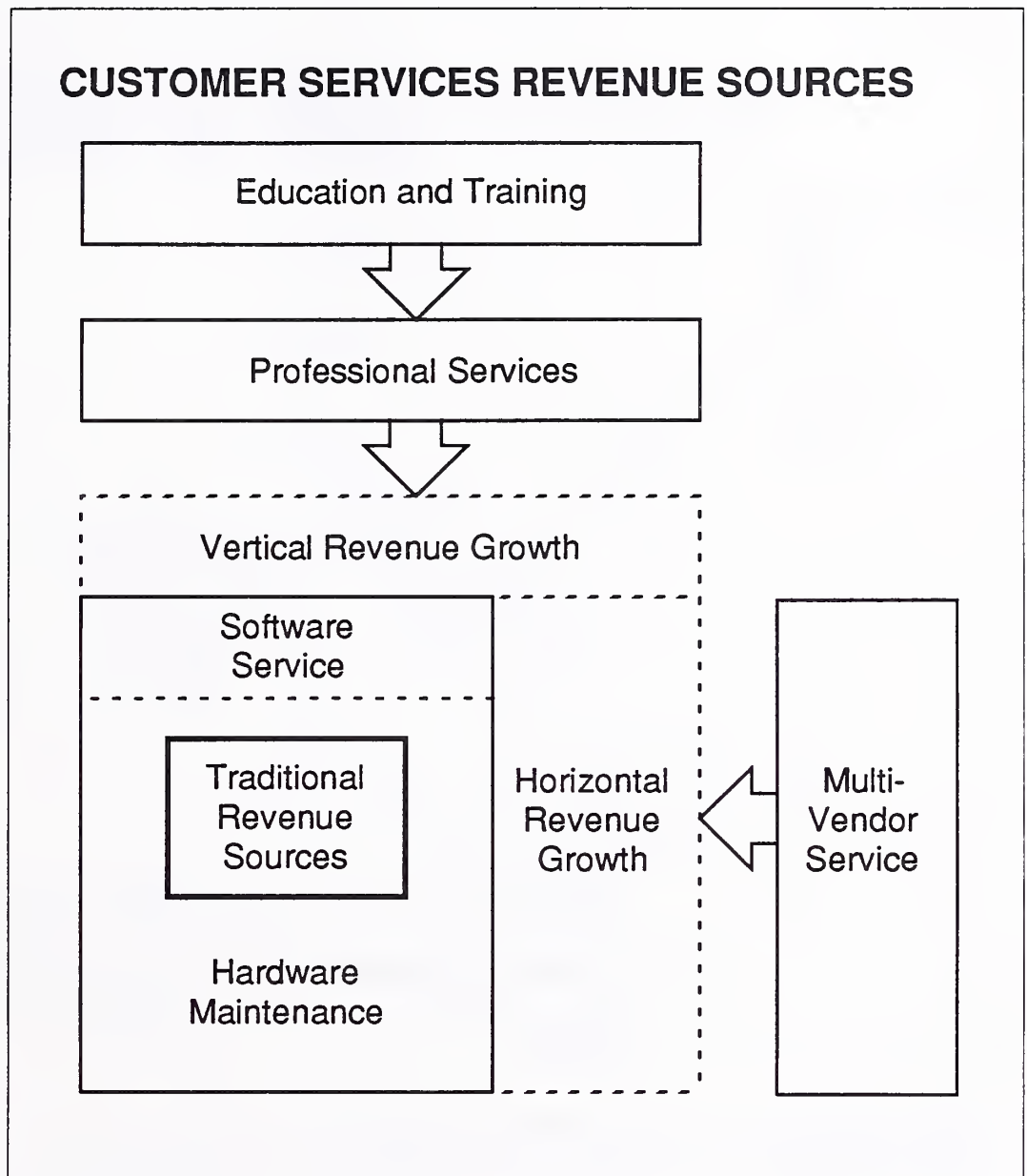
INPUT research shows that sixty-five percent of users indicate a preference for single source service. Further, 90% of users showing preference for single source service prefer that service to be supplied by their main hardware vendor. These preferences signal an opportunity for computer hardware vendors to extend the range of services offered.

Computer vendor extension of services can be in two directions, both of which provide for additional incremental revenue. Conceptually these two dimensions could be labelled horizontal and vertical. Exhibit III-1 illustrates the components of customer services revenue and shows how horizontal and vertical growth can produce a cumulative effect, each component feeding from the other.

- Horizontal growth extends (or expands) the application of existing resources across a wider range of similar compatible activities, for example into the service of multivendor equipment.
- Vertical growth involves extending the range of service products into new areas of service, adding to the existing base of basic hardware maintenance and software support.

Professional services is an opportunity to add vertical growth to customer services revenue, and is considered by INPUT to be an important element in a 'packaged' approach to single source service.

EXHIBIT III-1



C

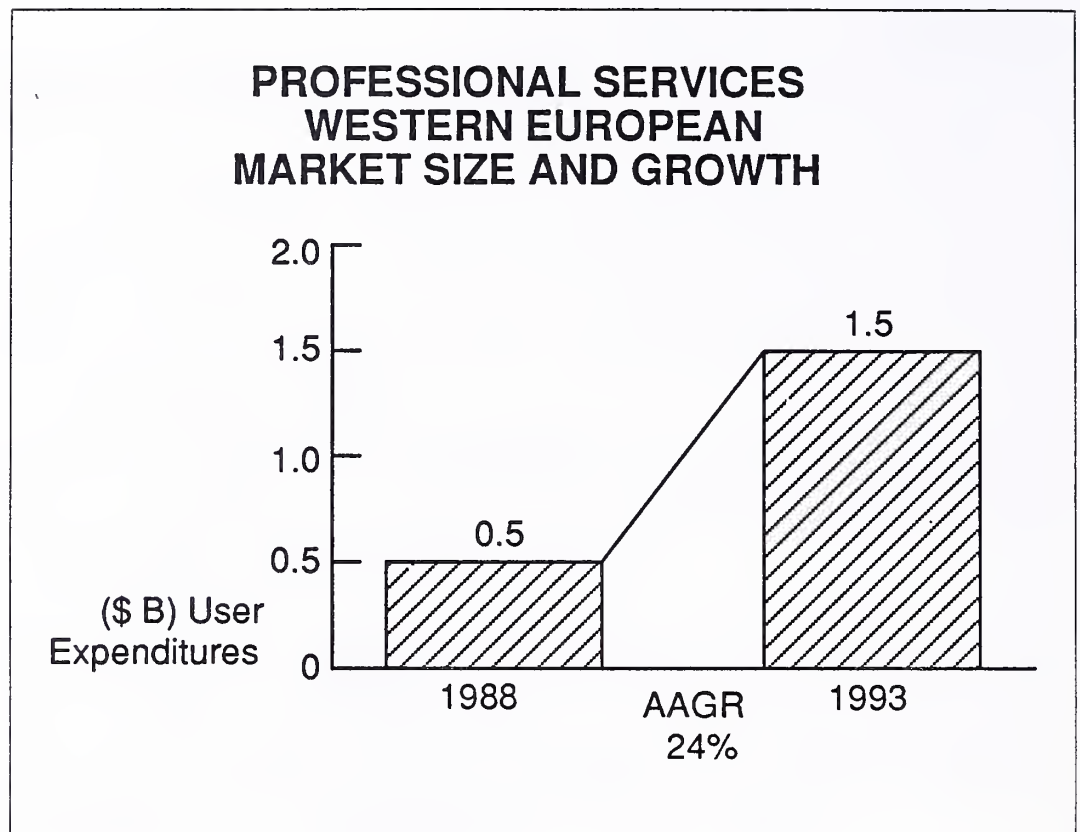
Market Profile

1. Market Size

INPUT estimates that the 'CS' professional services market will reach \$0.5 billion in 1988 and that the market will grow at a 24% average annual growth rate (AAGR), reaching a value of \$1.5 billion in 1993. See Exhibit III-2.

In 1988 professional services revenues were estimated at 4% of the total customer services market revenues, growing to a 7% share of the market in 1993. A growth rate of 24% shows the professional services market to have the highest growth rate in the customer services segment.

EXHIBIT III-2



Hardware maintenance is the dominant source of revenue for customer services vendors, and will remain so for some time to come. But, the high growth rate and potentially lower price sensitivity in other market sectors enhances the attractiveness of developing professional services markets.

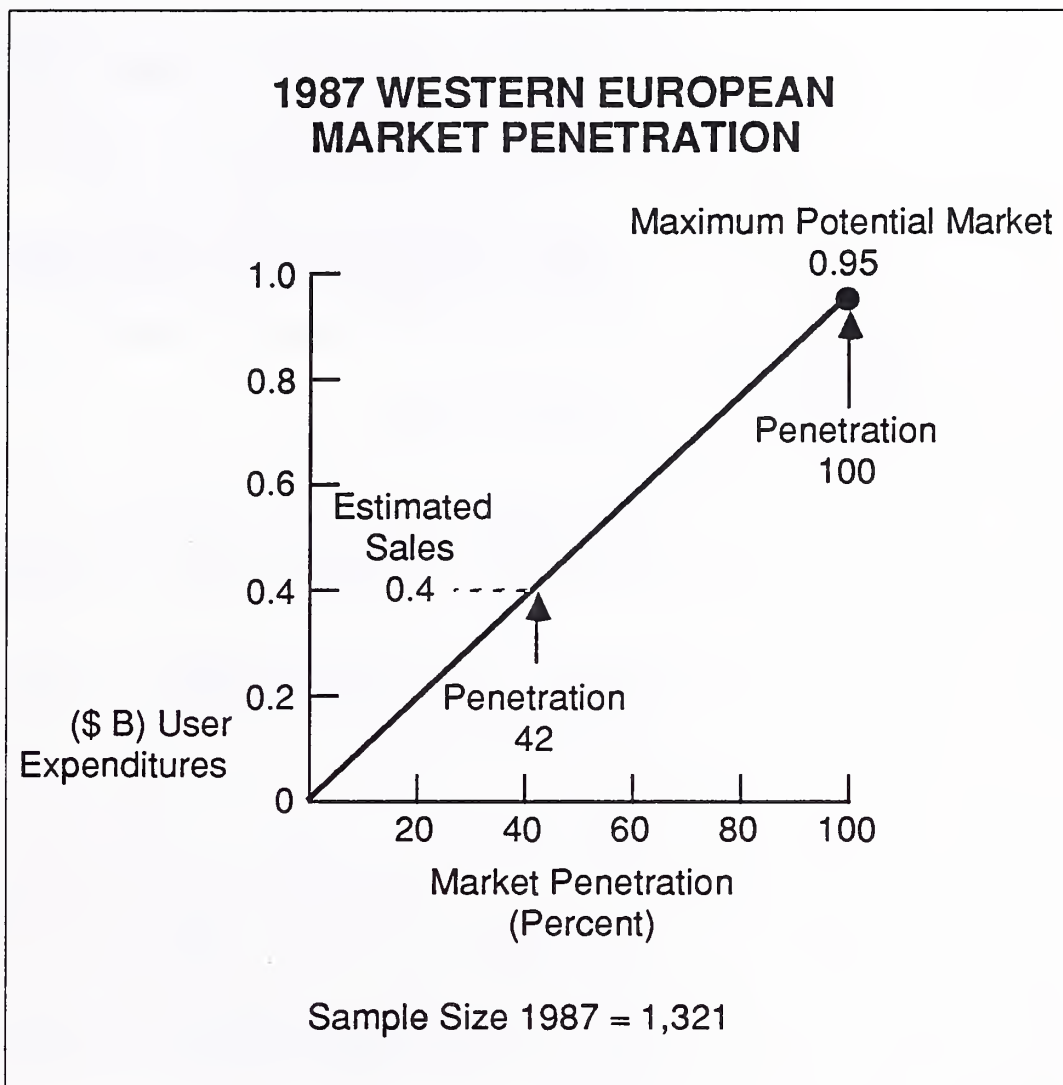
2. Market Potential

Exhibit III-3 shows the market penetration estimated by INPUT in 1987 based on 1987 user research. This penetration is relatively low, at 42%, indicating the opportunity for incremental growth from increased penetration of this market.

Market penetration has been assessed from the ratio of users reporting that they have a particular professional services item and those who do not. This data was interpolated to provide an estimate of the overall average market penetration for professional services.

Exhibit III-3 also shows an estimate for the maximum potential market size. This assessment was derived from a comparison between the

EXHIBIT III-3



market penetration and INPUT's forecast for user expenditures. However, some clarifying comments on the maximum potential market size are appropriate.

In considering the full potential of the market a number of complex, opposing, and inter-related factors need to be taken into account.

- The maximum potential market is likely to be higher than the available market. Not all users would utilize outside services, indicating a portion remaining captive.
- As the operation of computer systems become increasingly de-skilled the need for professional service may decrease.
- As computer systems become more complex the need for professional services may increase.

- As computer systems become more critical to the users business, users may increasingly prefer to delegate some computer operations responsibility. Allowing more opportunity for the users to concentrate on their business, and increasing the need for professional services.
- Specific sectors of the market may develop more quickly, for example, systems management through the use of knowledge data bases and remote maintenance/service techniques.

3. Market Trends

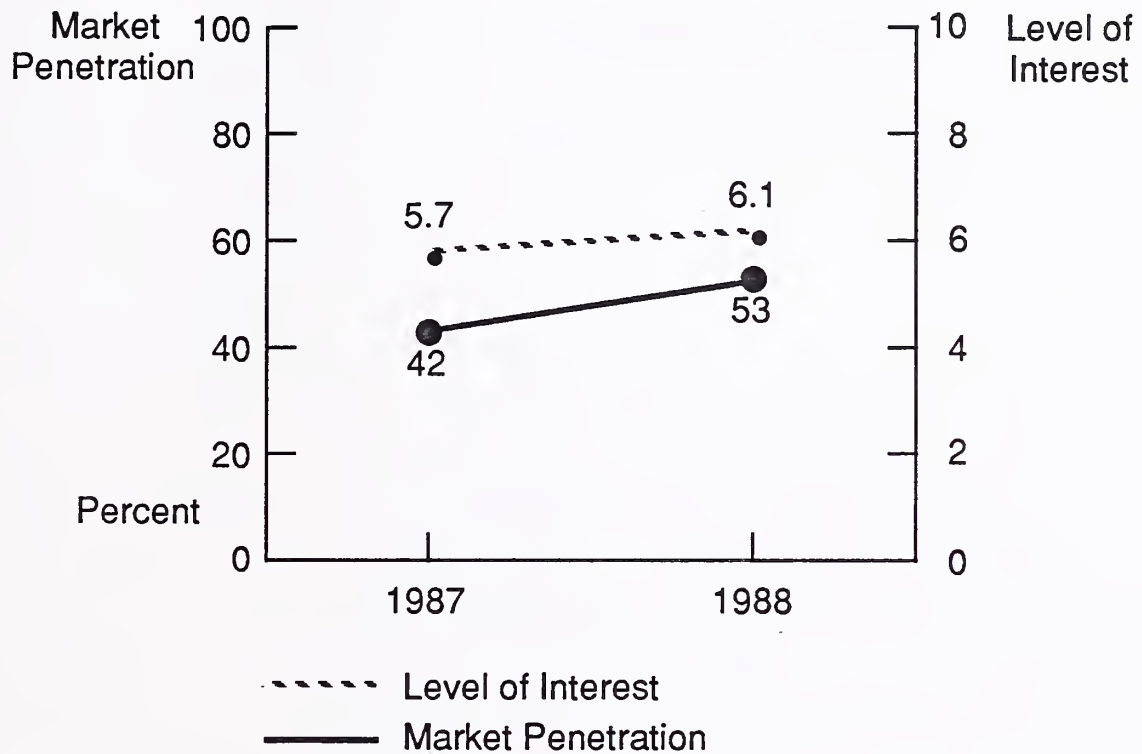
Market trends show continued growth, as illustrated by Exhibit III-4, both market penetration and level of interest have improved in 1988. Trends shown in Exhibit III-4 are overall averages for Western Europe.

The data show that market penetration has increased by 26% whilst levels of interest (LOI) have increased by 7% over the same period, 1987 to 1988. More likely market awareness (and hence interest) is created by vendor promotional activities and by user awareness due to increased market penetration. However, a large number of users are probably unaware of the availability of professional services and the range of services that can be offered. A strategy involving 'missionary marketing' would likely stimulate interest and result in further success in penetrating the 'CS' professional services market. The potential market for professional services is increasing as the installed base of computer systems increases.

Currently the increase in market penetration, for professional services, 26% between 1987 and 1988, is closely following the overall market growth forecasts projected by INPUT in 1987 and 1988.

EXHIBIT III-4

PROFESSIONAL SERVICES WESTERN EUROPEAN MARKET TRENDS, 1987-1988



Sample Sizes: 1987 = 1,321

1988 = 1,345

Standard Error: LOI — 0.05

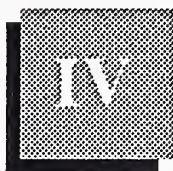
Market Penetration — 0.007

Source of Data: INPUT 1987 and 1988 User Research Programmes



Market Analysis by System Size





Market Analysis by System Size

A

Trends in Western Europe

An analysis of professional services trends in Western Europe highlights two important characteristics of the market.

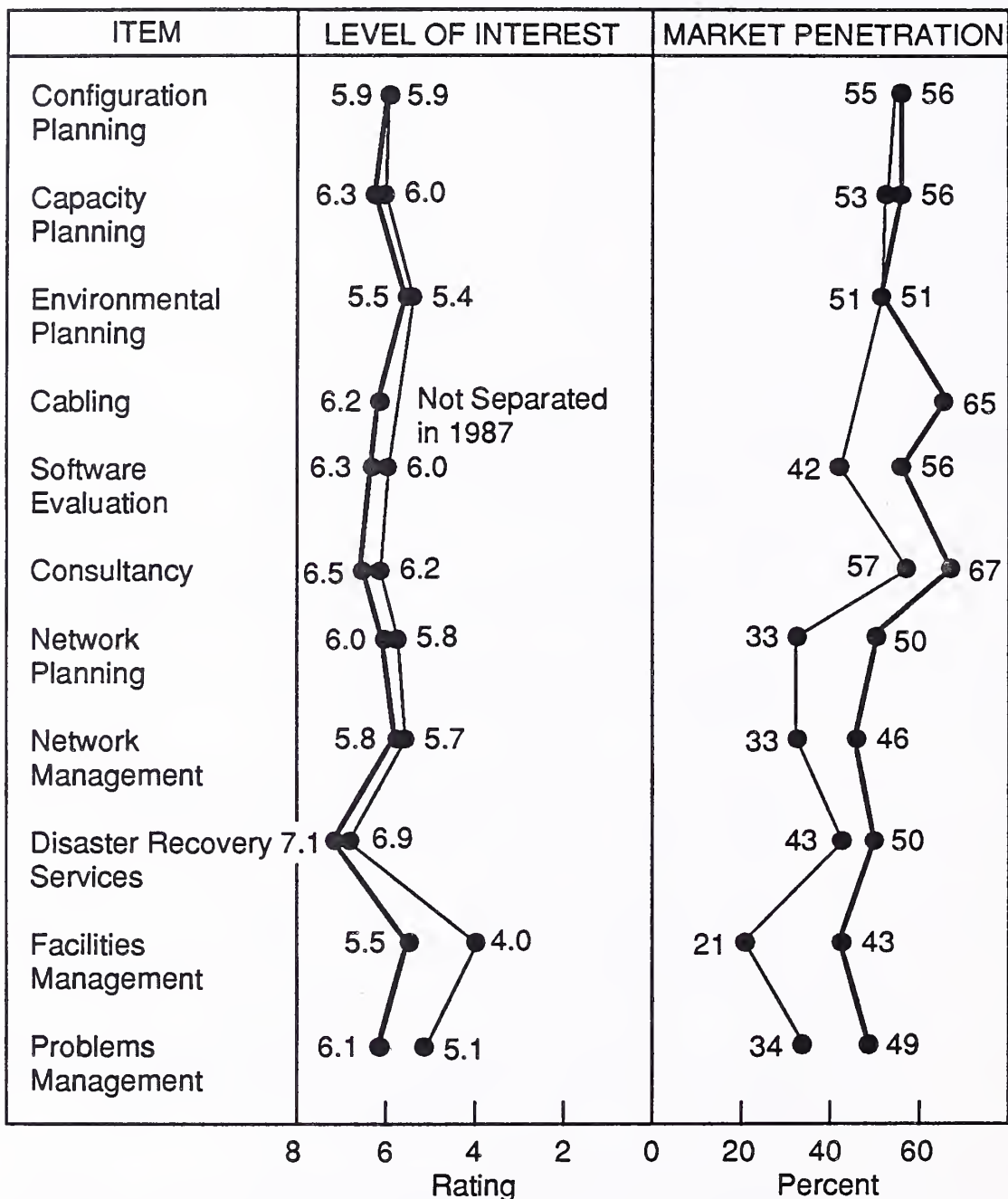
- Market penetration of 'CS' Professional Services has increased in most sectors of the market by relatively significant degrees.
- Level of interest has also increased, but in most sectors this increase has been relatively small.

Trends within the overall frame work of professional services are shown in Exhibit IV-1. These trends can be summarised as follows:

- Configuration planning, capacity planning, and environmental planning are shown to be relatively stable, showing little change between 1987 and 1988.
- Software evaluation is indicating a 33% increase in market penetration between 1987 and 1988 accompanied by a modest (5%) increase in LOI
- Network planning and network management trends indicate respective increases in market penetration of 52% and 39%, with virtually no indicated change in the LOI.
- Disaster recovery services are consistent, indicating the highest LOI in both 1987 and 1988 in the region of 7.0. Although the LOI is relatively high the indicated increase in market penetration is relatively low (16%). Previous research by INPUT in 1988 revealed that this sector of the market is 95% dominated by independents, the computer vendors

EXHIBIT IV-1

EUROPEAN TRENDS, 1987-1988



— 1988
 — 1987

Sample Size: 1987 = 1,321
 1988 = 1,345

Standard Error: LOI — 0.05
 Market Penetration — 0.007

Source of Data: INPUT 1987 and 1988 User Research Programme

do not have a significant presence in this sector. The relatively high LOI may indicate an opportunity for computer vendors to more actively participate in the market.

- Facilities management indicates an increase in market penetration of over 200% between 1987 and 1988 and although the LOI has also improved during this time period it is still low relative to other professional services items.

All sectors of the Western European professional services market offer opportunities for computer systems and service vendors. The potential for gaining incremental service revenues is highly rated.

B

Market Differentiation Factors

Exhibit IV-2 identifies the differences in both market penetration and level of interest for professional services in the three system size sectors of the market. Large systems indicate the highest market penetration and the highest level of interest. Reasons for this are likely to be:

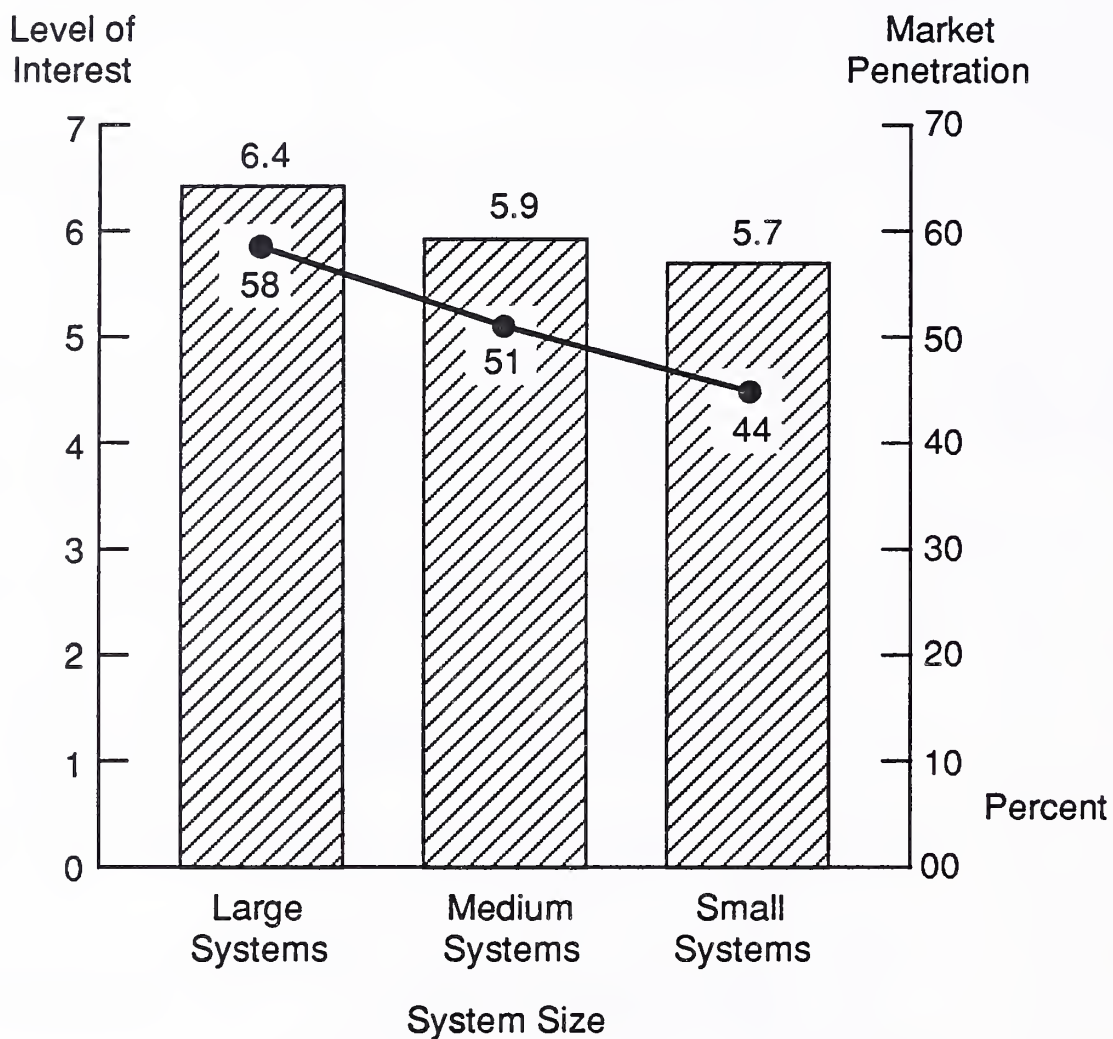
- Large systems need a higher level of service due to complexity and size.
- Users of large systems are more sophisticated and therefore more aware of the type and levels of service available.
- Large systems provide more easily accessible and identifiable markets, they have a smaller population.
- Because of their prestige, and higher value, large systems attract more attention from service vendors.

Indicated levels of market penetration and interest in the medium systems sector closely match the overall European averages. The large systems sector shows above average market penetration and levels of interest while the small systems segment is similarly lower than the overall averages. In all three sectors the market penetration levels indicated are sufficiently low, ranging from 44% (small systems) to 58% (large systems), to suggest growth opportunities.

In assessing growth opportunities by discrete system size sector the differing characteristics of each segment should be considered.

EXHIBIT IV-2

EUROPE—SYSTEM SIZE DIFFERENTIATION



▨ Level of Interest

— Market Penetration

Sample Size = 1,345

Standard Error: LOI — 0.05

Market Penetration — 0.007

Source of Data: 1988 INPUT User Research Programme

- For reasons previously stated the large systems sector is likely to be the most accessible. However, the higher accessibility is likely to generate a more competitive environment, also large system users tend to be more demanding.
- The small systems sector, while indicating the lowest levels of market penetration and interest, is also likely to demonstrate the lowest real need for professional services. This factor is due mainly to the relative lack of systems sophistication. One positive aspect of the small systems sector is the relative lack of user sophistication, a factor that may elevate the need for professional services and justify further investigation and marketing activity by professional services vendors.
- The medium systems segment may well offer a compromise between opportunity and accessibility. Systems and users are relatively sophisticated and becoming more so, therefore the need for professional services could be relatively high. This need could be stimulated by the increasing emphasis on distributed processing and networking in this segment.

C

Large Systems Sector The data presented in Exhibit IV-3 is ordered by levels of interest for each item in the professional services framework. This Exhibit can highlight areas of opportunity where market penetration is indicated as being relatively low in comparison with a relatively high LOI.

The highest level of interest is for disaster recovery services. This is consistent in each system sector, but not at the country market level. Market penetration (51%) is relatively low compared with the LOI, possibly indicating a good opportunity.

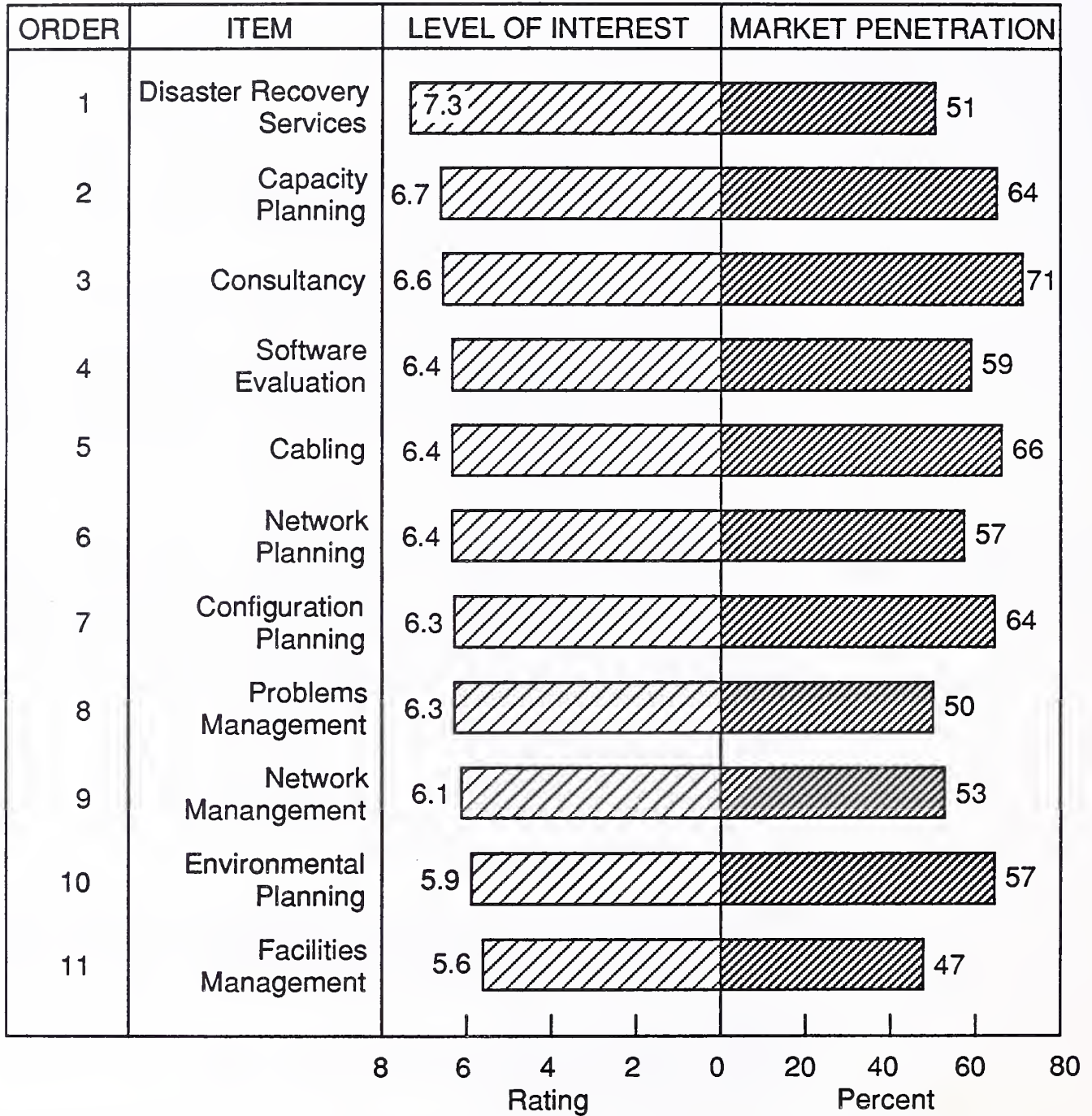
Possible areas of opportunity exist in other areas showing relatively high levels of interest and lower levels of market penetration. For example:

- Problems management
- Network management
- Environmental planning

Three of these areas are showing good growth patterns, 1987-1988, as illustrated by Exhibit IV-1. The highest level of market penetration is indicated for consultancy. Not only in the large systems sector, but also in the medium and small systems sectors as can be seen in the following sections.

EXHIBIT IV-3

PROFESSIONAL SERVICES MARKET— EUROPE LARGE SYSTEMS



Sample Size = 604
 Standard Error: LOI — 0.08
 Market Penetration— 0.01

Source of Data: INPUT 1988 User Research Programme

D**Medium Systems Sector**

Exhibit IV-4 presents the data for the medium systems sector ordered again according to the recorded LOI. Disaster recovery services show the highest level of interest, with indicated market penetration being relatively low at 49%, which may indicate good opportunities for further growth and penetration.

One characteristic of the medium systems sector is the somewhat wider fluctuations in indicated market penetration. One explanation could be that some elements have been subjected to more attention than others, suggesting that low market penetration areas would likely respond to marketing and promotional activities.

Analysis of the medium systems sector indicates that market penetration levels are relatively low compared with the LOI ratings, lower than in the large systems segment. This factor is illustrated by comparing Exhibits IV-3 and IV-4, and by the system size sector averages shown in Exhibit IV-2. These factors indicate that the medium systems sector may offer opportunities for growth.

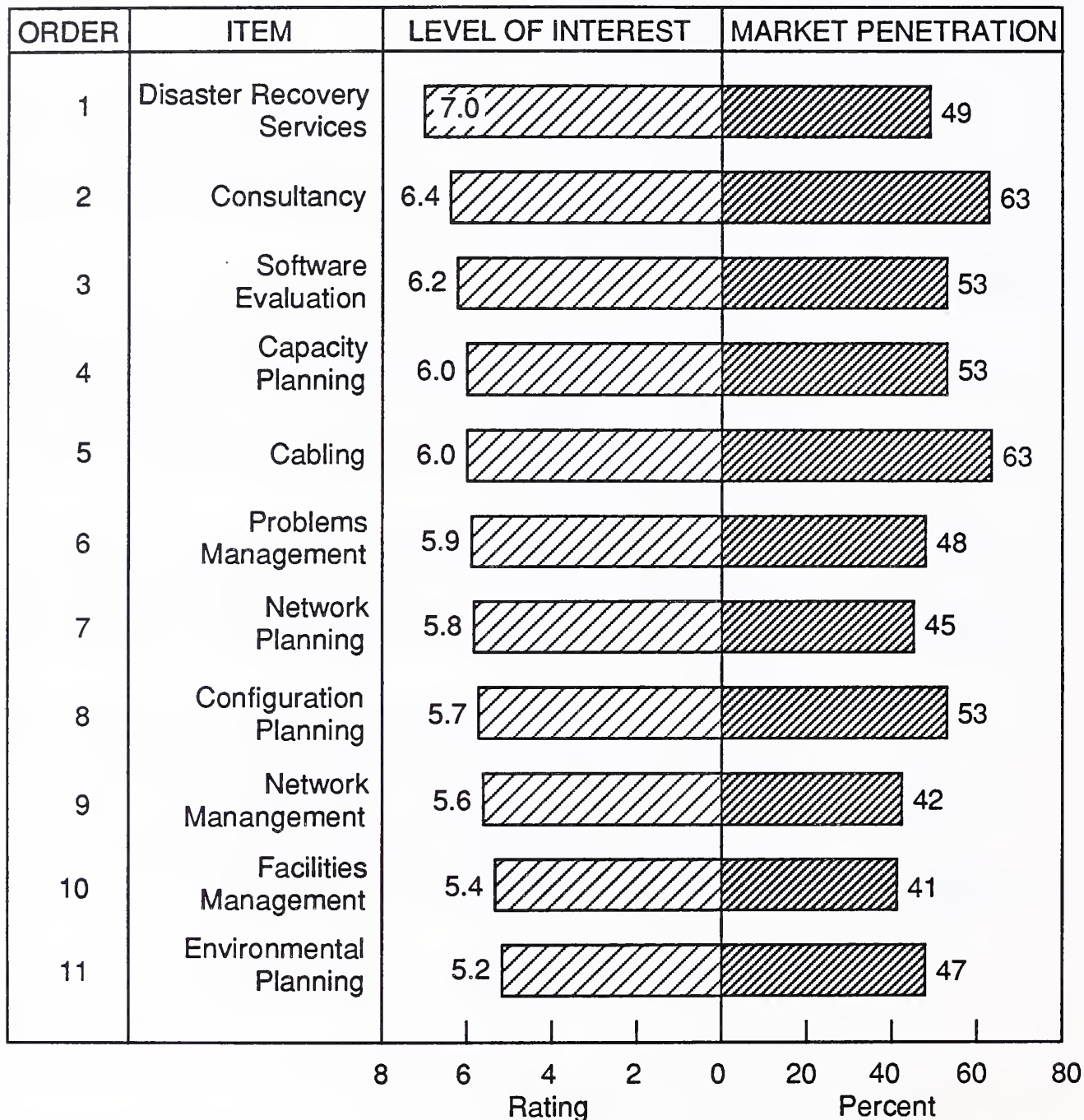
A further factor supporting growth opportunities in the medium systems segment is that medium sized computer systems are becoming increasingly more powerful complex, and therefore tending to become more critical.

Market penetrations lower than 50% are considered by INPUT to identify areas worthy of further study to assess real levels at interest.

As in the large systems sector consultancy and cabling indicate the highest levels of market penetration at 63%.

EXHIBIT IV-4

**PROFESSIONAL SERVICES MARKET—
EUROPE MEDIUM SYSTEMS**



Sample Size = 618
 Standard Error: LOI — 0.08
 Market Penetration — 0.01

Source of Data: INPUT 1988 User Research Programme

E

Small Systems Sector Small systems data is shown in Exhibit IV-5, with ordering by level of interest as in previous exhibits.

Market penetration and levels of interest are much lower in this sector. Also, fluctuations in market penetration are more pronounced.

As small systems increase in complexity and sophistication, as is the trend, the lower interest/penetration areas are likely to offer improved opportunities. These particular aspects of the small systems sector require a longer term approach, to match the development and expansion of systems. The small systems sector is the least sophisticated in user terms and therefore as the complexity of systems increases, the need for professional services is likely to increase.

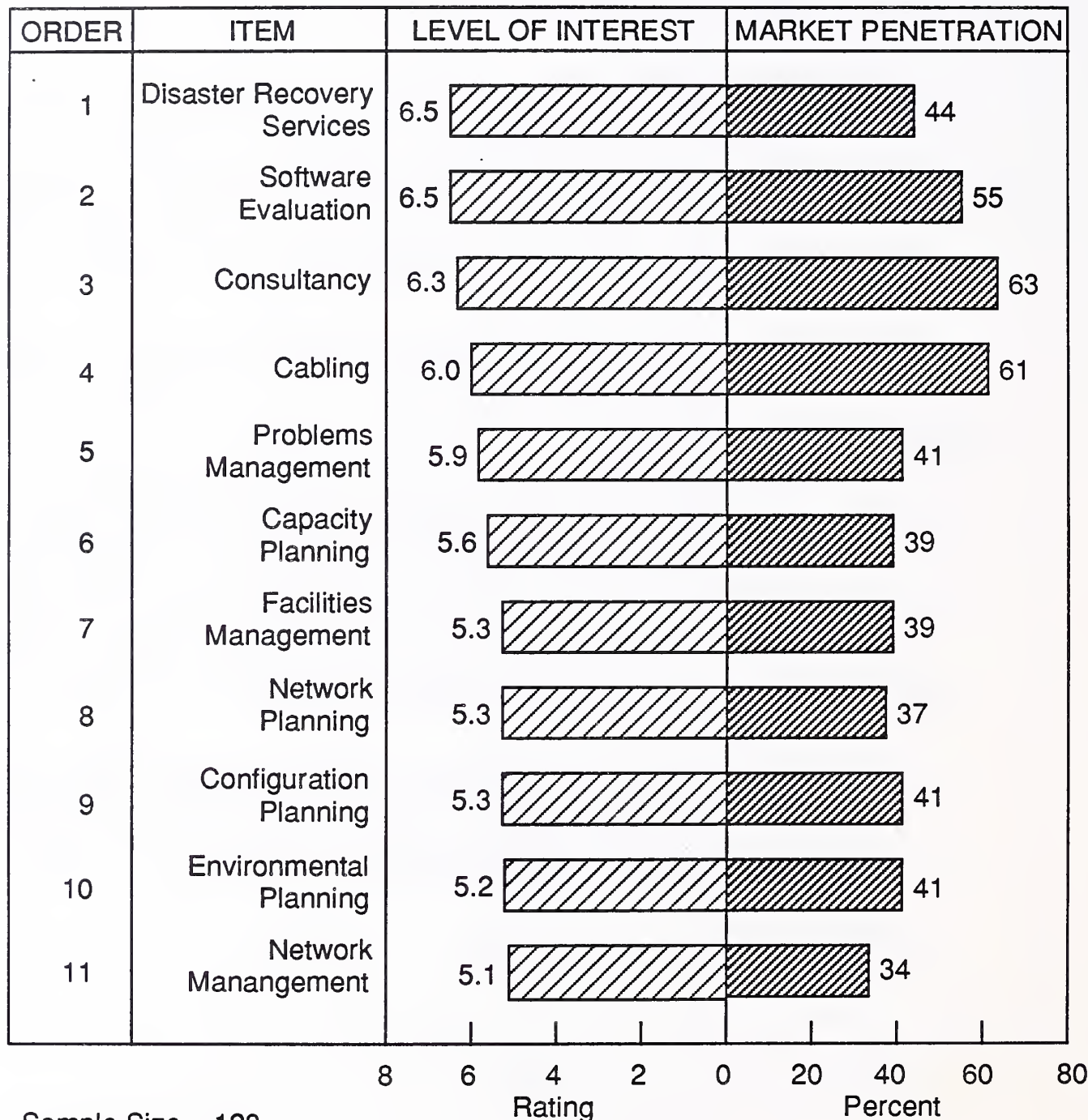
As in the other system size sectors consultancy and cabling indicate the highest levels of market penetration at 63% and 61% respectively.

Disaster recovery shows the highest level of interest, but a very low indicated level of market penetration. Small systems, in today's business environment, are probably tending towards being as critical to the business as larger systems. Therefore, disaster recovery services are considered a possible opportunity. However, as small systems software and hardware is more standardised the opportunity in the longer term will be relatively easier to meet and thus more competitive. Further, it may be an area attractive to users providing an 'in house' solution.

Apart from consultancy, cabling and software evaluation market penetration are indicated as being less than 50%. These areas may be worthy of further investigation by service vendors to assess real levels of interest and potential for incremental growth.

EXHIBIT IV-5

PROFESSIONAL SERVICES MARKET— EUROPE SMALL SYSTEMS



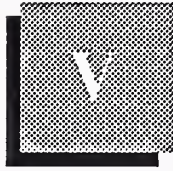
Sample Size = 123
 Standard Error: LOI — 0.18
 Market Penetration — 0.023

Source of Data: INPUT 1988 User Research Programme



Major Country Markets





Major Country Markets

A

Overview

The pattern of market penetration and interest indicated at the country market level shows a slightly different pattern compared with the data shown in the system size sectors.

Reference to Exhibit V-1 (which has been compiled using normalised averages) shows that market penetration does not follow the trend in levels of interest, except in the U.K. market. For example, the French market indicates a relatively high market penetration with an interest level of 5.7, compared with Italy where market penetration is indicated at 50% and interest level as 6.6.

The best opportunities at the country level are indicated by the West German and Italian markets where levels of interest are relatively high and market penetration is lower. The West German market is the largest computer market in Europe and the Italian market a high growth market.

The United Kingdom is generally considered a relatively well developed computer systems market; however, market penetration and levels of interest are the lowest of the four country markets analysed. There are a number of possible explanations for this:

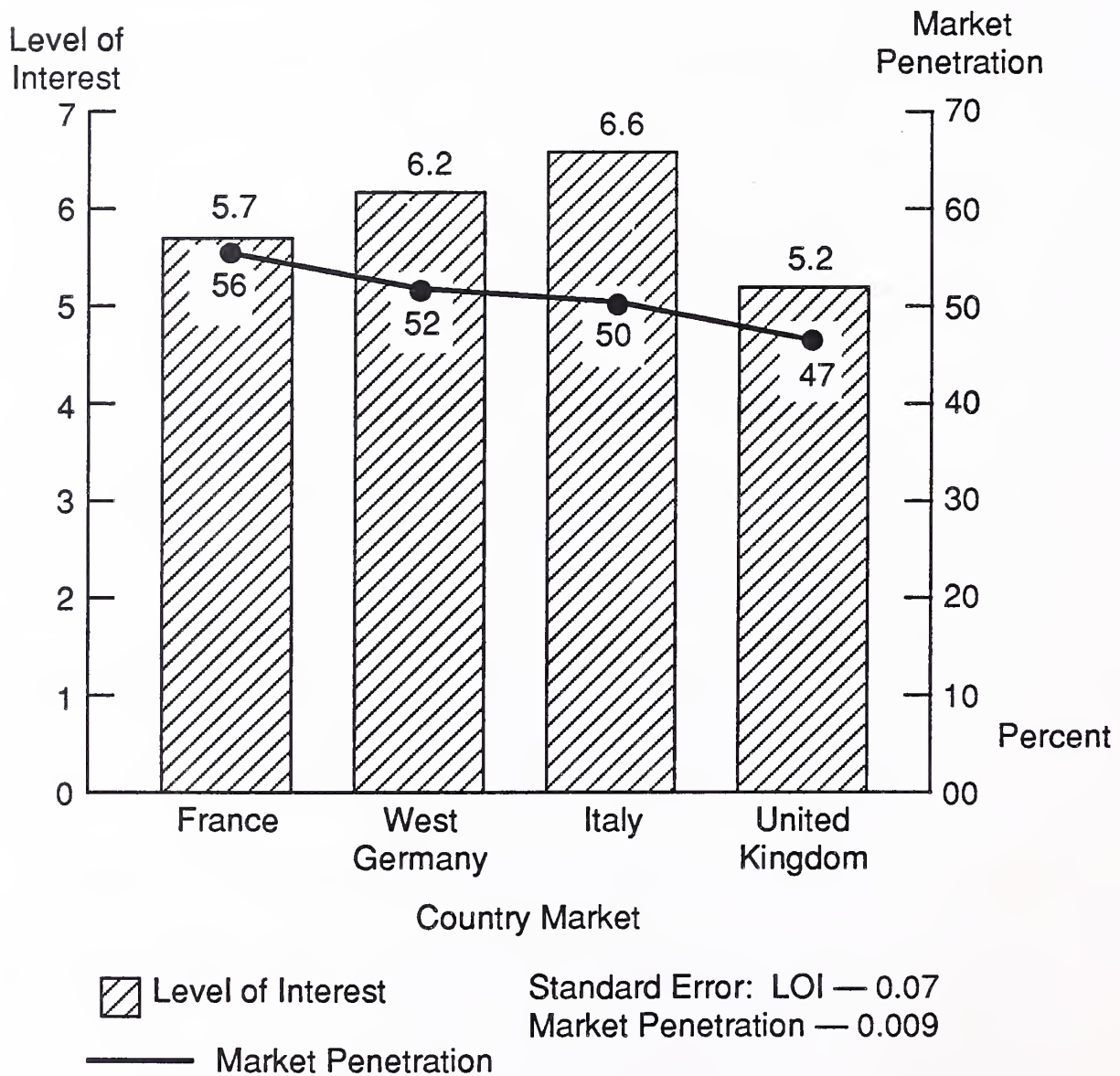
- Lack of marketing activities by customer services vendors
- Reduced real need, U.K. companies have a tradition of self-support and a resistance to external influences
- Genuine lack of interest

- Resistance to change

The potential for professional services could be high; the U.K. is one of the top three computer markets in Europe, therefore the rewards for successful penetration are likely to be high. All four country markets surveyed indicate good opportunities for providing incremental revenue to vendors of professional services.

EXHIBIT V-1

PROFESSIONAL SERVICES MAJOR EUROPEAN COUNTRY MARKETS



B**France**

Data relating to the professional services market in France is shown in Exhibit V-2, ordered by level of interest. The highest level of interest is recorded for disaster recovery services together with a relatively high level of market penetration at 67%. Consultancy, although second in terms of interest level shows the highest market penetration of 73%.

In general, market penetration within the French market is the highest of the four countries surveyed. This is shown clearly by Exhibit V-1. However, one characteristic of the market is the relative consistency of market penetration across the spectrum of services.

The one exception to this is network planning. Although interest level is moderate market penetration is very low, indicating a possible opportunity.

Consistently high levels of interest and market penetration confirm the professional services market in France as an opportunity for vendors. Market penetration figures of 58% on average indicates that over 40% of the potential market remains as yet untapped.

C**West Germany**

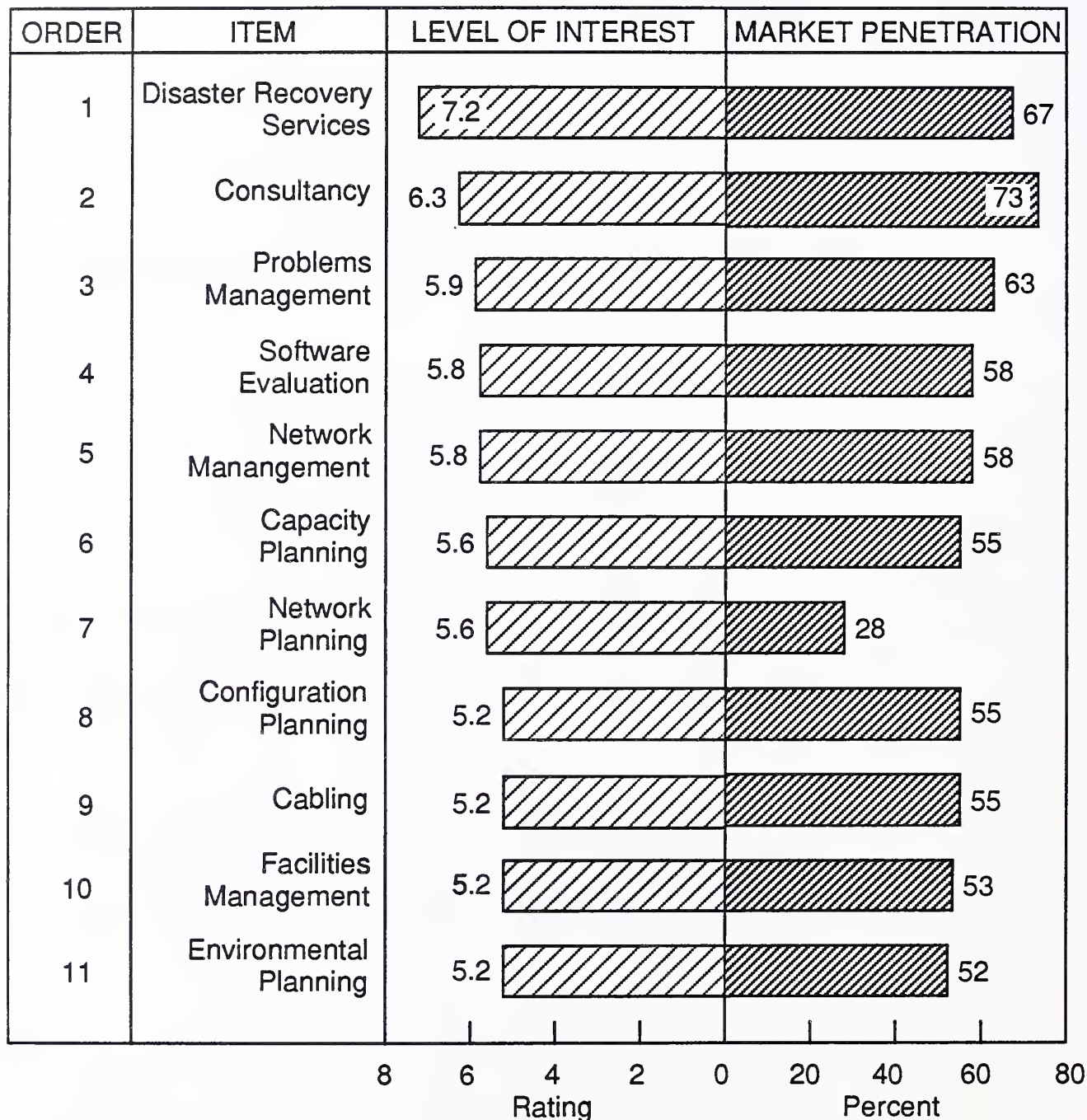
Exhibit V-3 illustrates the data relating to the West German market for professional services, ordered by level of interest. Levels of interest for most elements within the framework of professional services are relatively high. Nine out of eleven service categories show levels of interest higher than 6.0.

Market penetration shows extremes, ranging from 41% to 83%, possibly indicating good opportunities, especially as seven categories indicate market penetrations of less than 50%. The highest level of interest indicated is for consultancy, which also indicates a high market penetration of 83%.

Disaster recovery services indicate a high level of interest at 6.9 but a relatively low market penetration of 43%. This indicates a good area of opportunity for increased market penetration. A recent survey by INPUT, *Disaster Recovery in Western Europe*, published in June 1988, forecasts growth in Western Germany of 19% AAGR between 1987 and 1992.

EXHIBIT V-2

PROFESSIONAL SERVICES MARKET— FRANCE

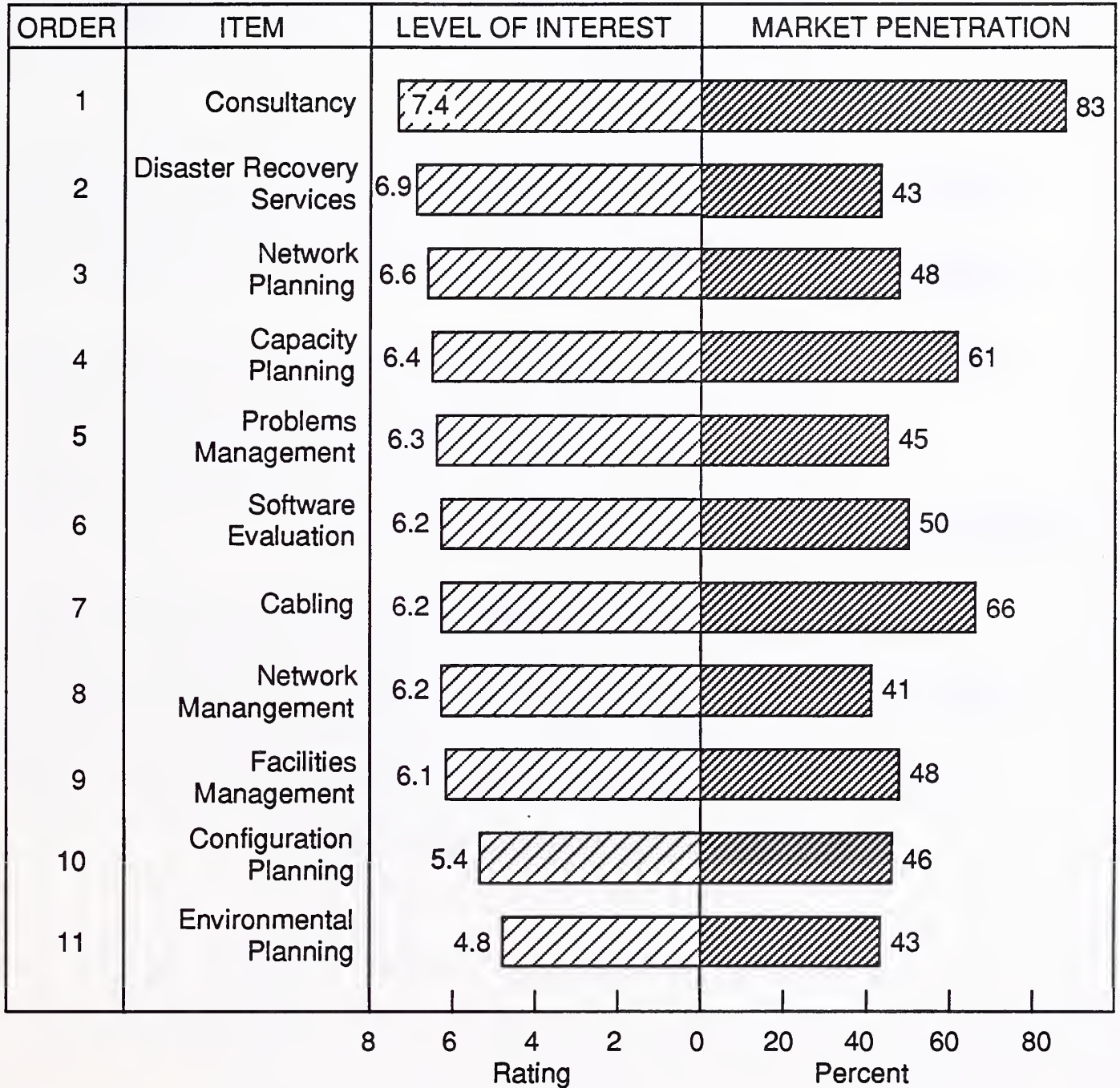


Sample Size = 205
 Standard Error: LOI — 0.14
 Market Penetration— 0.018

Source of Data: INPUT 1988 User Research Programme

EXHIBIT V-3

PROFESSIONAL SERVICES MARKET— WEST GERMANY



Sample Size = 207
 Standard Error: LOI — 0.14
 Market Penetration — 0.017

Source of Data: INPUT 1988 User Research Programme

D

Italy

Analysis of data relating to the professional services market in Italy is shown in Exhibit V-4, ordered by level of interest.

As in the West German market, consultancy records the highest level of interest with a relatively high market penetration of 69%. Cabling also indicates a relatively high level of interest and an indicated market penetration of 70%.

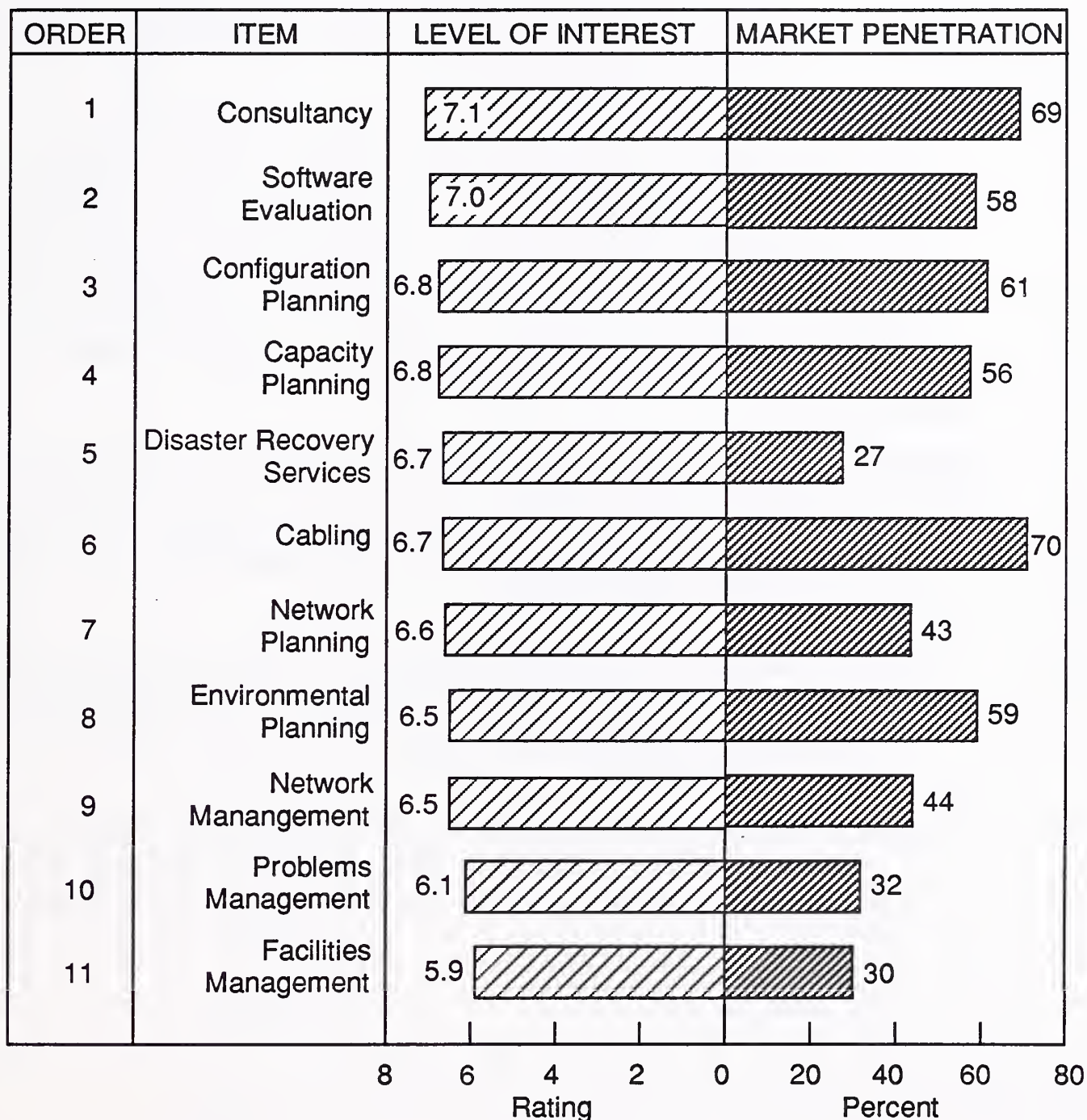
From a list of 11 items making up the framework of professional services, 10 items indicate a level of interest higher than 6.0. Coupled with an average market penetration of 50% this indicates that good opportunities exist within the Italian market for increasing professional services revenues.

As in the West German market indicated levels of market penetration show extreme variations, between 27% and 70%. Comparing the extremes of market penetration with the relatively high and consistent levels of interest in the Italian market INPUT suggests that there are a number of areas that could provide good opportunities for increasing professional services revenues.

One area that may be of special interest to service vendors is disaster recovery services which indicates a relatively high LOI of 6.7 and a market penetration of 27%. The average market penetration for disaster recovery services in Western Europe is indicated as 50% by Exhibit IV-1, the Italian market is well below this figure. The level of opportunity is strengthened by the results of previous INPUT research in which the market growth for disaster recovery services was forecast at 29% AAGR, between 1987 and 1992, in the Italian market.

EXHIBIT V-4

PROFESSIONAL SERVICES MARKET— ITALY



Sample Size = 146
 Standard Error: LOI — 0.17
 Market Penetration — 0.021

Source of Data: INPUT 1988 User Research Programme

E**United Kingdom**

Data relating to the professional services market within the U.K. is shown in Exhibit V-5, ordered by level of interest. The U.K. appears to have a different profile in comparison with other country markets included in the survey. Assessment of the market indicates relatively low levels of interest and market penetration. Market penetration does however show a degree of consistency.

One possible explanation for the different profile could be that the growth of professional services in the UK may have been delayed. This delay could in part be due to attitudes in the UK which until recently were regarded as conservative, staid and resistant to change. Further, until very recently Trade Unions were powerful enough to resist moves by companies to reduce overheads by subcontracting indirect jobs to outside agencies. Recent political and economic pressures have now rationalised this situation to a large degree.

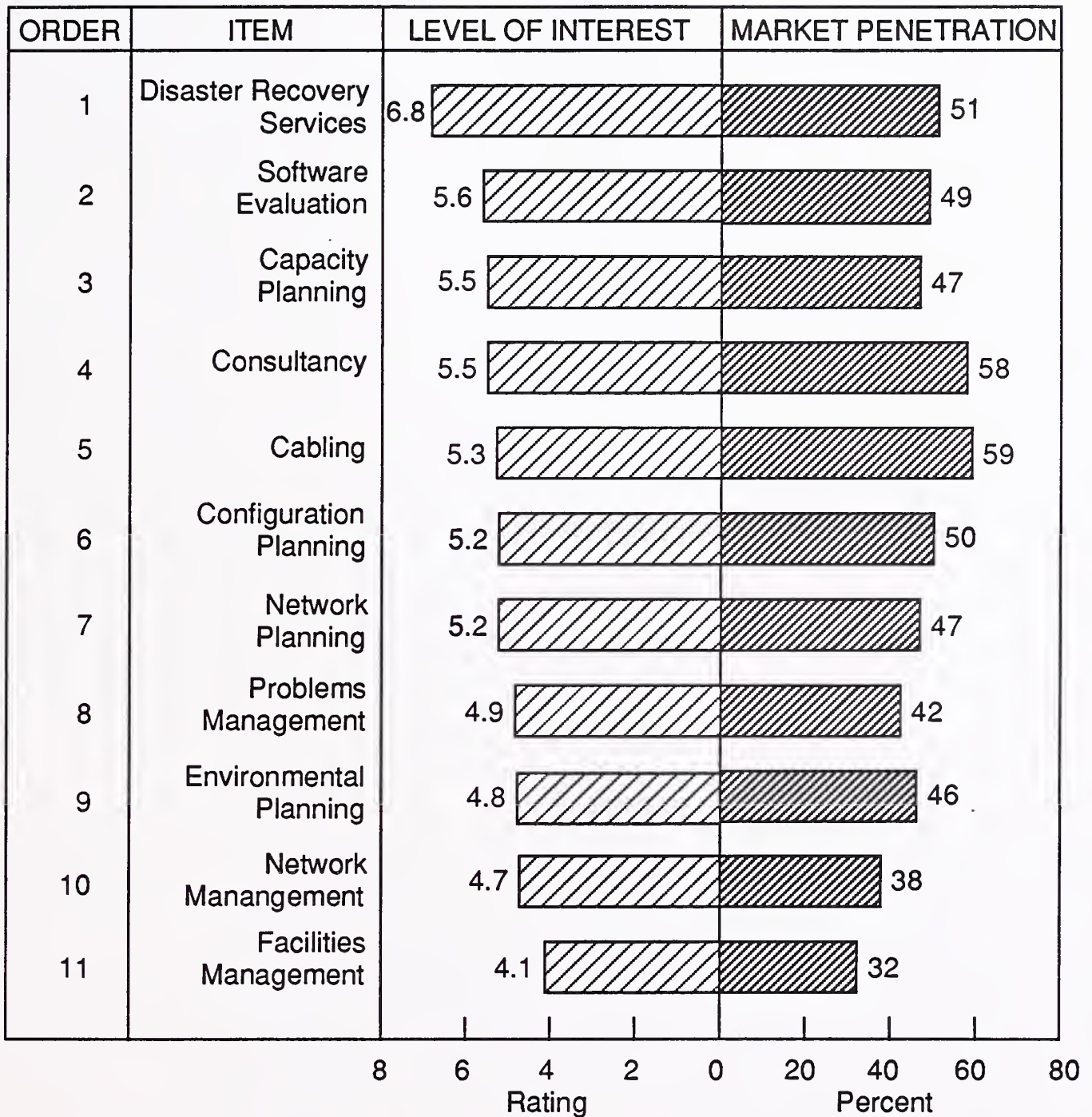
Disaster recovery services indicate the highest level of interest with an indicated market penetration of 51%. INPUT has forecast growth within this area as 28% AAGR between 1987 and 1992 for the U.K. This indicates an opportunity for service vendors to achieve further growth in disaster recovery services.

Level of interest for other services within the framework of professional services is relatively lower. However, some areas show relatively high market penetration. For example, consultancy and cabling are estimated as having achieved close to 60%.

The potential for additional revenue for professional service vendors could be high if successful penetration of the UK market can be achieved, further investigation by service vendors may be justified.

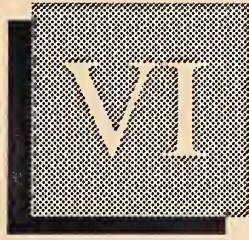
EXHIBIT V-5

PROFESSIONAL SERVICES MARKET— UNITED KINGDOM



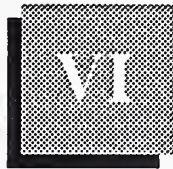
Sample Size = 293
 Standard Error: LOI — 0.12
 Market Penetration — 0.015

Source of Data: INPUT 1988 User Research Programme



Approaching the Market





Approaching the Market

A

Characteristics of the Market

A summary of the characteristics of the 'CS' professional services market is listed in Exhibit VI-1. One significant factor is that market penetration is estimated as being relatively low, on average for the European market this is 53%. Growth is high estimated by INPUT at 24% AAGR for the period 1988 to 1993. Market penetration is indicated as having increased from 42% in 1987 to 53% in 1988, supporting market growth estimates.

Levels of interest generally increase only slightly compared with relatively large increases in market penetration. INPUT has made the following observations relating to this characteristic and from analysis of the patterns of the data shown in various exhibits.

- Relatively high levels of interest can identify opportunity areas, especially where market penetration is relatively low.
- Relatively low levels of interest do not necessarily indicate a lack of opportunity, more likely a lack of user awareness.
- Increased market penetration can be achieved in areas where the level of interest is relatively low.

Based on the above observations INPUT concludes that low levels of interest need not be a barrier to successfully achieving market penetration. One extreme example was shown in Exhibit IV-1 where market penetration for facilities management indicates an increase from 21% in 1987 to 43% in 1988. The 1987 level of interest was indicated as 4.0. Further, it is likely that increased market penetration resulting from vendor sales successes favourably influences levels of interest.

EXHIBIT VI-1

**MARKET
CHARACTERISTICS**

- Market Penetration Low/Growth High
- Promotion and Penetration Stimulate Interest
- Low Levels of Interest Need Not Inhibit Success
- User Popularity of Single Source Service
- Increasing Criticality of Systems
- Increasing Complexity of Systems

Marketing and promotional activity in terms of 'missionary marketing' by professional services vendors could be instrumental in creating awareness and stimulating need in the market.

INPUT research in 1988 indicates that 65% or more users have a preference for single source service. single source infers a 'mixed bag' of service products to satisfy a users total needs. Professional services is an important component of the single source service package.

The increasing criticality of systems in terms of systems availability is a characteristic of the market. Research indicates that users in virtually all market sectors rate systems availability highly. This aspect is related to the integration of systems as working tools critical to the users business operations. This trend enhances the attractiveness of professional services products.

As systems become integrated within the users business the complexity tends to increase, due to networks, multi-tasking and critical data base operations. These trends may encourage the user to relinquish part of the responsibility burden for systems operations activities, providing opportunities for vendors of professional services products.

B**Positive and
Negative Influences**

In the cause of promoting professional services the vendor will find the receptiveness of the market subject to a mix of positive and negative influences. Some significant market drivers and inhibitors, are listed in Exhibit VI-2.

EXHIBIT VI-2**MARKET DRIVERS AND INHIBITORS****Drivers**

- Economies of Scale
- Vendor Resources
- User Need to Concentrate on Business
- Security
- Extension of Customer Care

Inhibitors

- Increases Visible Cost of Service
- User Resistance to Outside Services:
 - We Can Do a Better Job
 - We Prefer to Retain Control
 - Less Costly In-house
 - Do Not Need the Service

INPUT considers that on balance the positive factors outweigh the negative factors. Success by vendors in selling 'CS' professional services is demonstrated by the growth in increased market penetration, indicated in the data, in areas where the levels of interest indicated are relatively modest. In the main levels of interest range between 5.5 and 6.5 on a scale of 0 to 10.

The positive influences relate to the vendors skill in identifying appropriate opportunities and successfully promoting/demonstrating the benefits

of professional services to users. Additionally, the vendor should be prepared to clearly demonstrate the ability to meet user requirements for efficiency and flexibility. Successful penetration of the market allows the vendor to extend the single source/package service concept and enhance the customer care aspects of service by providing a broader range of service to users.

The negative factors relate mainly to two aspects:

- User reaction relating to vulnerability and exposure to risk involved in relinquishing control over possibly critical areas of computer operation and the feelings of isolation that this may create.
- Resultant 'apparent' increase in computer servicing and operating costs.

The second of these factors can be successfully addressed by balancing the costs of professional services against the resulting operational overhead cost savings. Further, the scale of resources available to the vendor, when required to cover unforeseen contingencies, can also be a convincing demonstration of the vendors ability to protect the user against potential disruptions to computer operations.

A well-prepared vendor strategy can overcome the negative influences. Particularly the economies of scale and financial burden distribution available to the vendor to demonstrate a reduction in "real" cost to the user. Gains in convenience and security are key elements.

C

Strategies

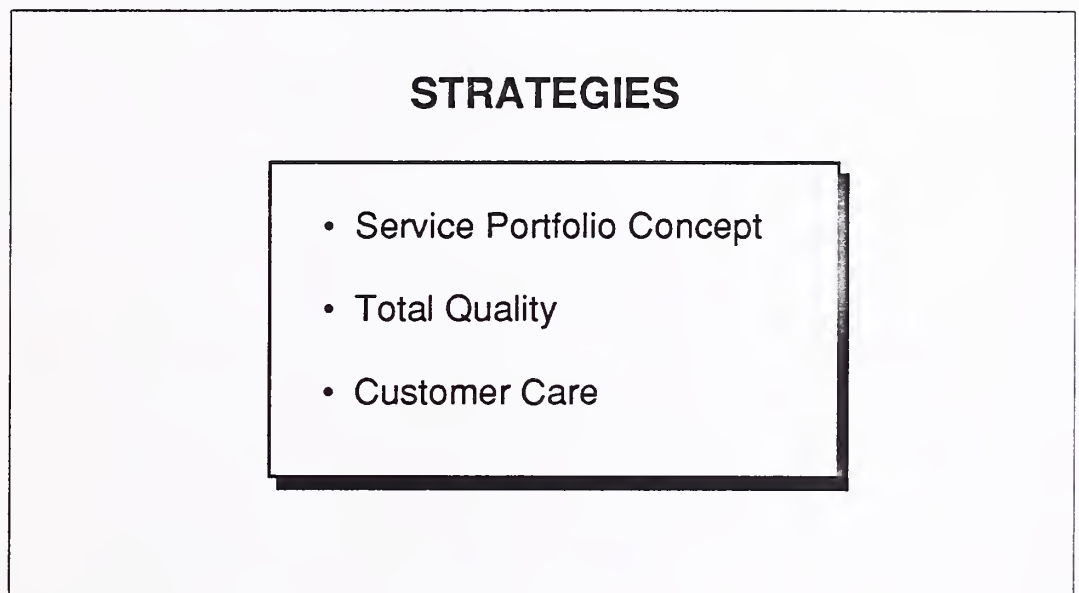
Exhibit VI-3 lists INPUT's recommendations for the key elements of the vendors' marketing strategy.

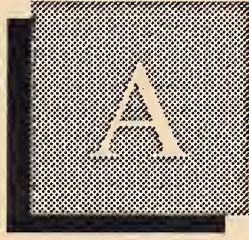
The 'service portfolio' concept is a theme developed by INPUT and published in a report, *Pricing Trends—Western European Customer Services*, during 1988.

This is a conceptual model developed to demonstrate integrated single source service marketing strategies. The model illustrates how the elemental service resources of the vendor can be focused to satisfy a variety of user needs. Additionally, the concept provides a means to inject other elements of strategy, for example pricing, quality and customer care.

Professional services is one of the strategic service components of the service 'portfolio' concept. Research has indicated that 'quality' is rated top by users in defining the importance of service. Adding more service products to the vendors' range of services enhances the perceived quality of service through the 'total service' approach.

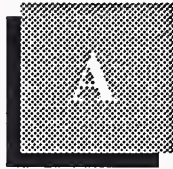
Combining the features of quality, single source, and total service enhances the dimensions of the customer care concept. Customer care and quality are paramount ingredients of service. Professional services provides a logical extension.

EXHIBIT VI-3



Appendix: Definitions of Terminology





Appendix: Definitions of Terminology

The terminology used in this report to identify the individual components within the framework of professional services is as follows:

- *Cabling*
The design, planning, layout and installation of the various connections and cables necessary for interconnection of the hardware components of the computer system.
- *Capacity Planning*
Mainly a software-oriented service, providing advice and assistance to the user. This can include software loading, planning installation workloads, planning disk and storage capacity. Also included under this heading is capacity tuning which is assisting the user to optimise workload and efficiency.
- *Configuration Planning*
Mainly a hardware-oriented service, providing advice and assistance to the user. This entails planning the hardware configuration of the system—the CPU, number of terminals, printers, and other peripherals. Including defining and planning hardware storage requirements.
- *Consultancy*
Detailed analysis and planning of user requirements for systems design and integration needs. Including specific implementation plans and system optimisation.

- *Disaster Recovery*
Providing computer facilities to the user, to allow continued operation of the users critical computer systems in the event of a major system failure or disaster (i.e., fire, flood, etc.). Usually this will entail providing, or giving access to an identical computer system.
- *Environmental Planning*
A range of services and assistance provided to the user concerning the physical environment in which the computer system installation is located. Examples of this service include air conditioning, raised flooring, cable ducting, sound insulation and remote connection links.
- *Facilities Management*
There are two categories of service under this heading.
 - *Processing Facilities Management.* The management of all or part of a user's data processing functions under a long-term contract. Including both remote and batch processing services. In this category the service vendor owns and operates the computer facilities provided to the user. These can be located either remotely or on the user site. The vendor has the responsibility for planning and operating the system. This is a processing service, not a (customer services) professional service.
 - *Operations Management.* The computer system is owned by the user, the service vendor provides human resources to manage and operate the computer system on the users behalf. It is this aspect of facilities management that is defined within the limited scope of 'CS' professional services.
- *Network Management*
This is a service provided to the user for managing the service and operation of communications equipment and networks. Networks tend to be combinations of multi-vendor hardware and software.
- *Network Planning*
Provision of planning and advice to the user to define system solutions related to user needs for network implementation.

- *Problems Management*

The essence of this service is to provide a single central resource for resolution of computer systems problems. To provide definition and resolution of either hardware or software-related computer system operational difficulties.

- *Software Evaluation*

Providing to the user a service to evaluate performance and usability characteristics of software systems in a user environment. Essentially operating systems software, but also the interface with applications. Also to provide a user software tuning service and optimisation of software/hardware interfaces.

