Third-Party Maintenance in Europe Update - 1985

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THIRD-PARTY MAINTENANCE IN EUROPE
UPDATE - 1985

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ABSTRACT

INPUT has been tracking the growth of the third-party maintenance market in Europe for a number of years.

This report details the current status of the market and forecasts its growth up to 1990 in the major countries--the U.K., France, Germany, Italy, Holland, and Sweden.

For the U.K., France, and Germany, data on user reaction to TPM is also presented.

Bringing together as it does user views and market growth forecasts, the report is a valuable aid to planning in the computer services market.

This report contains 66 pages, including 19 exhibits.

THIRD-PARTY MAINTENANCE IN EUROPE
UPDATE - 1985

CONTENTS

THIRD-PARTY MAINTENANCE IN EUROPE
UPDATE - 1985

EXHIBITS

I INTRODUCTION

A. FOREWARD

- Third-party maintenance (TPM) continues to be an area of intense interest among service vendors, and increasingly so among service users.

- As hardware prices fall, service is expected to make an increasingly large contribution to corporate revenues. At the same time, competition for those service revenues is increasing.

- In a business environment, one man's threat is another man's opportunity. This is certainly true of the third-party maintenance market where existing service vendors see both a threat to their current service revenue, but also a new business opportunity.

- It is important to put the third-party threat/opportunity into perspective. Although it is a market of significant size, it is still only a tiny part of the total service market. For the whole European service market, TPM has an estimated share of less than 3%. This low level of penetration contrasts with the 9.5% TPM share in the U.S. market.

- On the assumption that Europe eventually follows the U.S. pattern, there is scope for a significant increase in the TPM penetration of the service market.

B. STUDY METHODOLOGY

- Vendor data was obtained by telephone, face-to-face, and mail contact with the leading TPM companies throughout Europe. Responding companies account for over 70% of the TPM market in the countries surveyed.

- User research was carried out as part of INPUT's 1985 annual service study, which included questions about the use of third-party maintenance.

C. DEFINITION OF THIRD-PARTY MAINTENANCE

- This study defines third-party maintenance (TPM) simply as maintenance that is provided by a supplier that is not the manufacturer or end user of the service being provided. These TPM services do not have to be provided to the end user, but may support value-added resellers, distributors, manufacturers or, indeed, other TPMs.

D. EXCHANGE RATES USED

- Where figures have been converted to U.S. dollars for cross-country comparison purposes, the exchange rates used are at September 27, 1985.

  - U.S. $1 equals:

    . United Kingdom - 0.70 Pounds.

    . West Germany - 2.69 Deutsche Marks.

- France - 8.32 French Francs.
- Holland - 3.03 Guilders.
- Italy - 1,854 Lira.
- Sweden - 8.29 Kroners.

E. TERMINOLOGY

- In this report, the terms 'third-party maintenance' and 'independent maintenance' are used synonymously. The term 'third-party maintenance' has been used because of industry familiarity with it, although it is recognized that many TPM companies dislike it because:
  - Third-party maintenance does not properly describe the business of servicing someone else's equipment. It may be misconstrued to incorporate third-party (computer) leasing businesses.
  - It is perceived by some to have a negative connotation.
- Several U.K. companies are actively compaigning to change the term to 'independent maintenance'.

II EXECUTIVE SUMMARY

A. MARKET STRUCTURE

- The U.K. is by far the largest TPM market in Europe, accounting for over 50% of the total European market (see Exhibit II-1). There are a number of reasons for this, including:

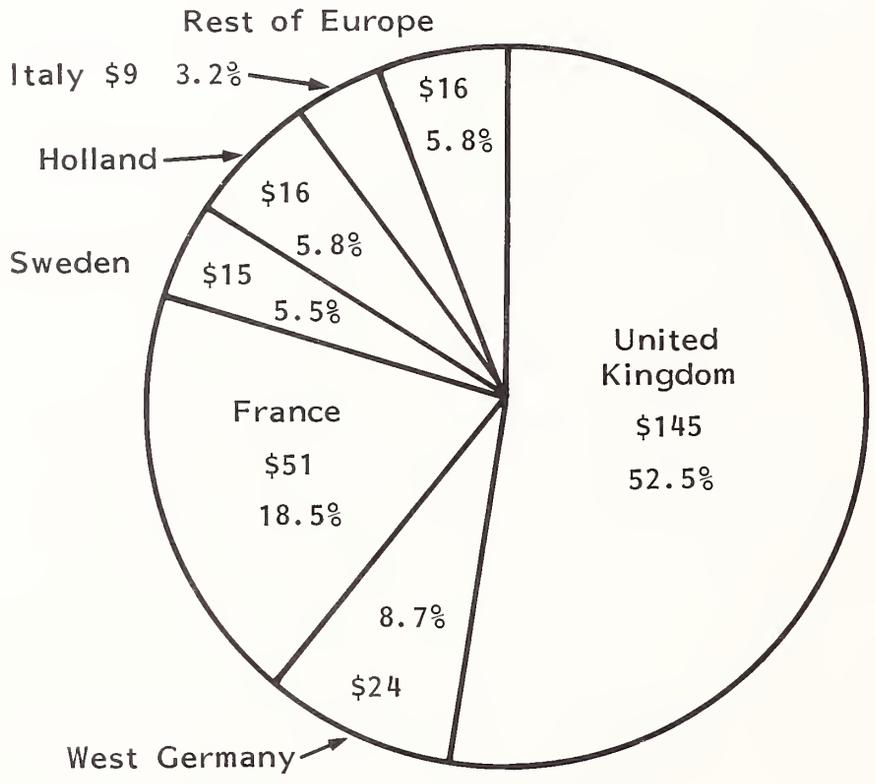
  - Credibility of TPM. Once established as a realistic and reliable alternative to manufacturer-provided service, a 'ratchet effect' comes into play. As more companies use independent maintenance, TPM vendors have more reference sells, further improving their credibility, and so the cycle repeats.

  - Service availability. As the market develops, more companies are attracted to the marketplace by the business opportunity. Greater availability of independent maintenance generates more business, thus attracting more companies into the market, and so on.

  - Greater level of investment. Again, as the market develops, investors become more aware of the opportunity presented by independent maintenance. By raising capital, either through direct private investment or via the stock market, independent maintenance companies are able to build up the necessary level of inventory and plant equipment and manpower essential to provide a credible service product.

EXHIBIT II-1

WESTERN EUROPEAN INDEPENDENT MAINTENANCE MARKET
1985, BY MAJOR COUNTRY
($ Millions)



Total Market: $276 Million

Source: INPUT Survey

- Markets in other parts of Europe are less developed, and although their growth rates may match or even exceed that of the U.K. market, the comparatively low starting point ensures that the U.K. will be the dominant market for the foreseeable future. Growth in other European markets, primarily France, will reduce the U.K. domination from one-half in 1985 to just under one-half of the total by 1990 (see Exhibits II-2 and II-3).

- Although there are many companies active in the U.K., the market is dominated by the three largest companies--Bell Technical Services, Computer Field Maintenance, and DPCE--who together account for over one-third of the market, and indeed, 15% of the total European market.

- Development in many other markets is being retarded by the scarcity of aggressive, credible service companies. Indigenous expansion of independents will slowly help to overcome this handicap, but a more important development will be the invasion of continental Europe by U.K.- and U.S.-based companies bringing their reputations and credibility with them.

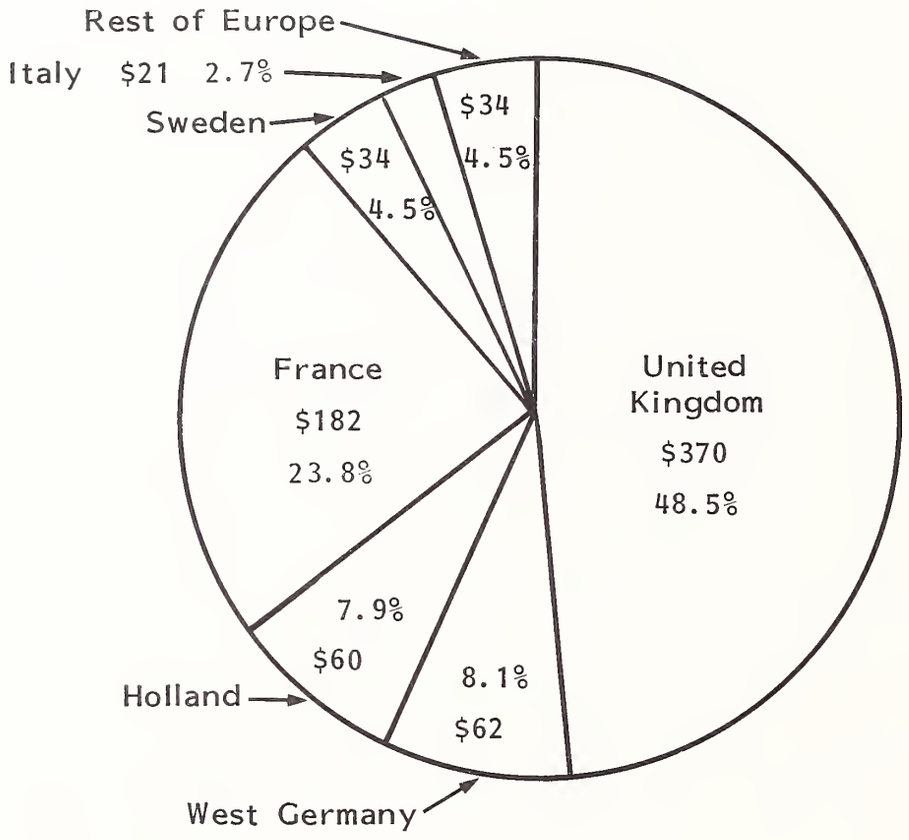
B. COMPANY MARKET SHARE

- The growth by acquisition of Bell Technical Services, swallowing as it has GSC Engineering, Cable and Wireless, and U.S. Continental European subsidiaries, has now established that company as the European market leader. Recently, BTS has extended its operations into Italy by acquiring Datamont SPA.

- Having said that, there is no dominant company in the European market as a whole, as can be seen in Exhibit II-4. Given that credibility is the most vital factor affecting corporate growth, attaining a significant market share is extremely important.

EXHIBIT II-2

WESTERN EUROPEAN INDEPENDENT MAINTENANCE MARKET
1990, BY MAJOR COUNTRY
($ Millions)



Total Market: $763 Million

Source: INPUT Forecast

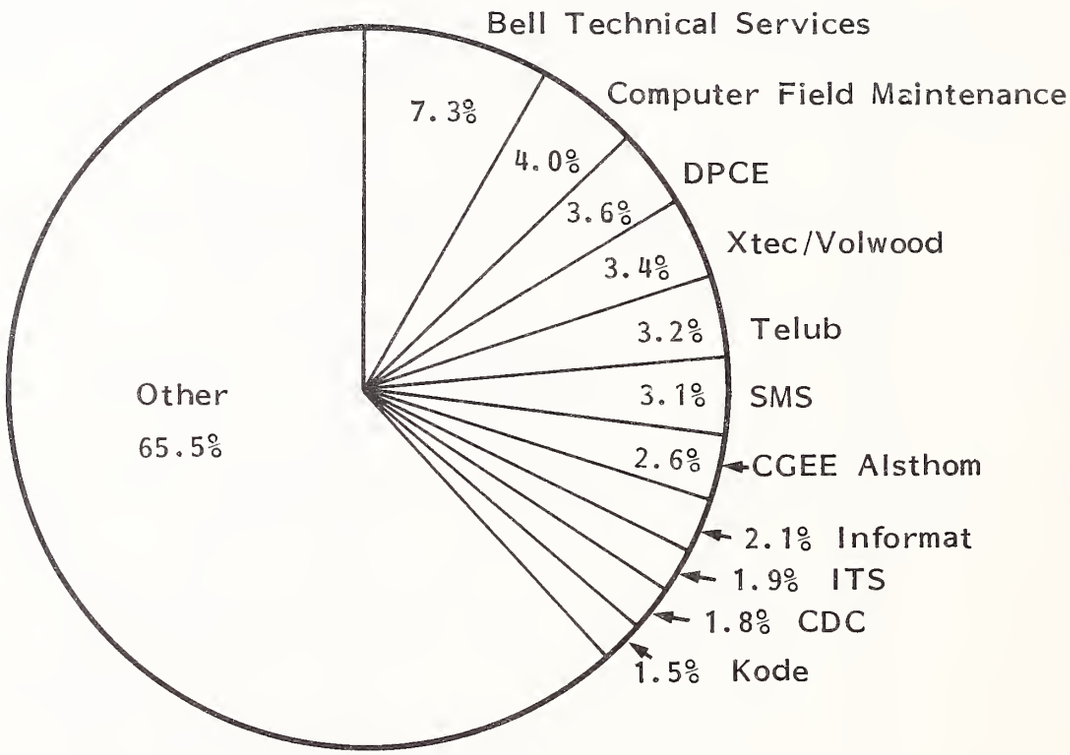
EXHIBIT II-3

TPM MARKET GROWTH IN EUROPE, 1984-1990

	MILLIONS OF U.S. DOLLARS							1984-1990 AAGR (Percent)
	1984	1985	1986	1987	1988	1989	1990	
United Kingdom	$108	$145	$184	$229	$275	$322	$370	20.6%
France	41	51	64	83	108	140	182	29.0
Germany	19	24	29	34	41	50	62	20.9
Holland	12	16	20	26	35	47	60	30.2
Italy	8	9	11	12	15	17	21	18.5
Sweden	13	15	17	21	25	30	34	17.8
Rest of Europe	14	16	18	21	25	29	34	16.3
Total	$215	$276	$343	$426	$524	$635	$763	22.6%

EXHIBIT II-4

MARKET SHARES OF LEADING INDEPENDENT
MAINTENANCE COMPANIES
1985



Source: INPUT Estimates

C. FUTURE DIRECTIONS

1. ACQUISITION/MERGER

- Two of the most dominant companies in Europe, Bell Technical Services and DPCE, have built their position partially by acquisition. This mirrors the trend in the U.S. where there has, over time, been a spate of takeovers and mergers.

- Looking to the future, this trend is almost certain to continue. Independent maintenance companies are very conscious of the 'critical mass' syndrome and try to reach this 'critical mass' by merger or takeover. An important by-product of this growth is the build-up of valuable 'reference-sells'. As has been said before, credibility is one of the key elements in increasing sales, and an increased client list will clearly help in this.

- Changes in the structure of the hardware market could impact independent maintenance. The takeover of ICL by STC may have implications for CFM's (itself an STC subsidiary) future market development. There is already some evidence of increased cooperation between STC and CFM with STC Electronic Services now offering on-site support through its CFM links.

2. NEW ENTRANTS/DIVERSIFICATION

- The size of the market, not to mention its overall potential, has led to a number of significant newcomers entering the market--among them, Mannesman-Kienzle, a manufacturer with a wide installed base, a European outlook, and potentially a major player in the market.

- Several companies have interests other than maintenance, and some are now looking increasingly to their maintenance business as key profit generators. Business Computer Systems, for example, is moving into independent mainte-

nance to build up its revenues on the back of its established software clientele. MBS rentals, who have recently announced relatively poor results, are looking more towards their maintenance activity to provide more sustained, profitable growth.

- In the U.S., there have been interesting developments in the types of companies moving into TPM. In the U.K., one particularly interesting newcomer is Granada Microcare, an offshoot of the television rental company.

3. RESOURCES

- A constraint to growth is the potential shortage of skilled, trained engineers. An interesting development in this area is the U.K. Computer Services Association Third-Party Maintenance Group's attempts to stop staff poaching. Restricting the supply of engineers on the labour market could be one of the hardware manufacturers' responses to the independent threat.

- Similar worries about the shortage of skilled personnel have been voiced by TPM companies in other parts of Europe, particularly France and Holland.

4. TPM STRATEGY

- TPM in the U.K. particularly is now having to meet the challenge of its success. As the market becomes more crowded, continuing success will depend as much, if not more, on effective marketing operations as on the technical excellence or cost benefits of the product. In other European markets, by contrast, the emphasis remains on establishing marketing credibility by building on technical expertise excellence or reduced pricing.

- User comments, quoted in Appendix B, throw an interesting light on the task facing TPM companies, showing that TPM companies still have a lot of work to do to:

- Dispel the 'cheap but adequate' image.

- Face up to and share the problems of their working relationships with the manufacturers.

- Convince potential customers that they do have the inventory and technical capability to provide the level of service users demand.

- The TPM strategic options can be summarized as:

  - Aggressive marketing to further enhance their image in users' eyes as a real alternative to manufacturer maintenance.

  - Further acquisitions/mergers to build up to the critical mass necessary to achieve full use credibility in their long-term financial viability.

  - Ensuring that the quality of service they deliver meets user needs and expectations. As a comparatively young industry, any adverse publicity about an individual company can call into question the credibility of all the other companies in the industry.

  - Constructing working relationships with the manufacturers to ensure that users do not suffer the effects of inter-company warfare. This may mean taking legal action in cases where manufacturers infringe EEC competition laws.

  - Developing links with those non-European manufacturers who are forming or have, established selling activities in Europe but who may not wish to set up a full customer support activity.

  - Establishing ways of optimising the use of scarce, skilled resources; for example, through greater use of centralised repair techniques or development of more skilled technicians in-house.

III THE UNITED KINGDOM

A. MARKET GROWTH AND DEVELOPMENT

- The TPM market in the U.K. was estimated by INPUT in 1984 to be 46.2 million pounds. This transpires to have been a conservative estimate, and the true figure was closer to 76 million pounds. During 1985, the market is expected to have grown by one-third to 101.5 million pounds, and in 1986 it is forecast to grow by 27% to 128.9 million pounds.

- In the years up to 1990, INPUT expects resource constraints and a stiffening of manufacturers' resistance to independent maintenance gradually to reduce the year-on-year rate of increase from 27% in 1986 to 15% by 1990.

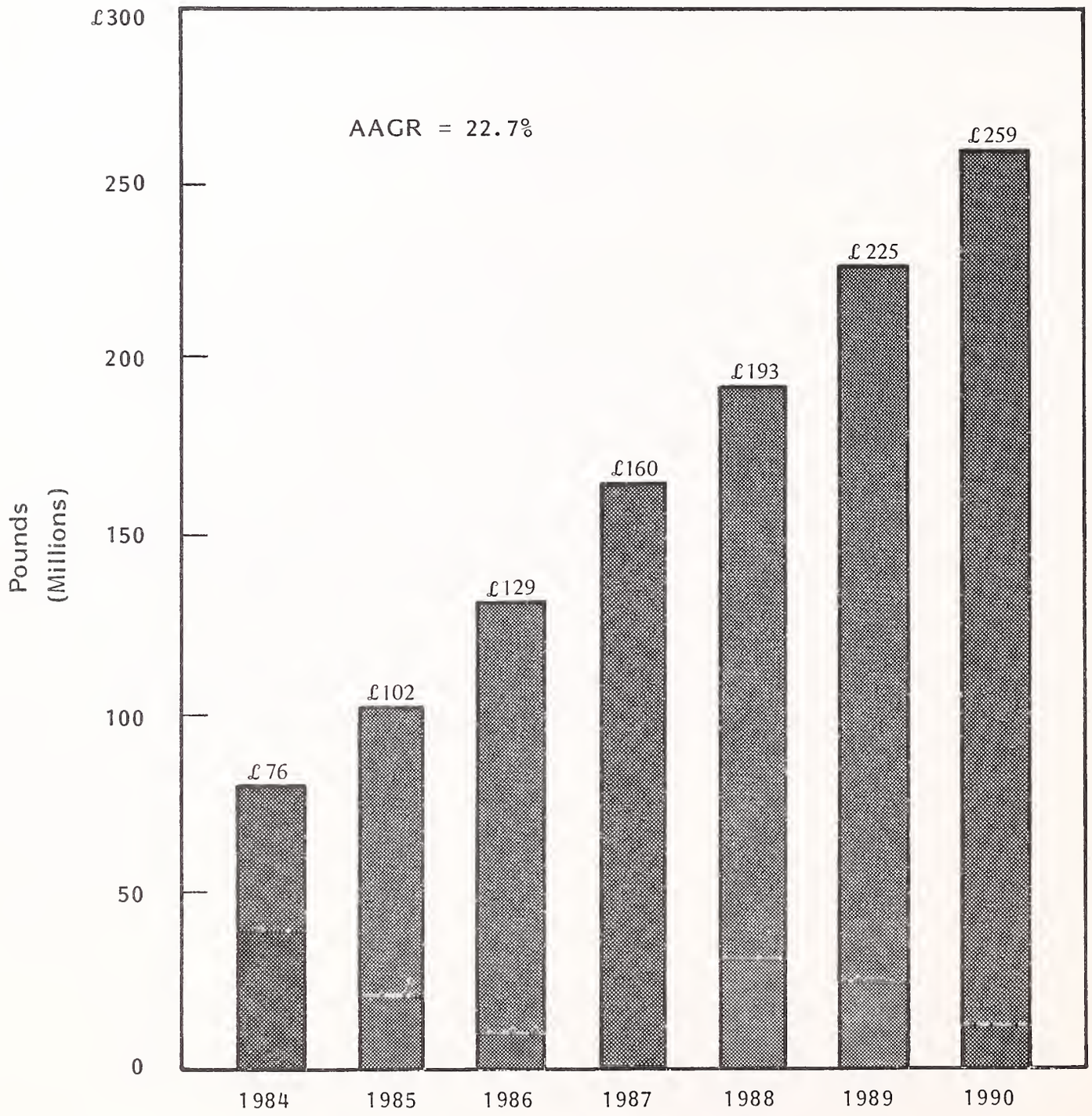
- Exhibit III-1 shows the market growth pattern and forecasts that it will grow to 259 million pounds in 1990, an annual average growth rate of 22.7% over the period 1984 to 1990.

B. USERS AND TPM

- The growth rate described above should be seen in the context that 60% of users are either considering, or have considered, using independent maintenance. Of those that have seriously considered that service route, almost one-third decided against it.

EXHIBIT III-1

TPM MARKET IN THE UNITED KINGDOM, 1984-1990



- In INPUT's 1984 survey, 57% of users said that they would not consider using independent maintenance. In the 1985 study, that figure had shrunk to under 40%, as can be seen in Exhibit III-2.

- Twelve percent of the respondents were already using a third-party source for maintenance for at least some of their equipment.

- A fairly wide range of reasons for considering the use of independent maintenance was given, but two stand out above all others as being of particular importance:

  - Cost - 58% of reasons given.

  - Improving service quality - 26% of reasons given.

- This shows a significant change compared to 1984, with more users now looking to TPM to improve their service availability rather than purely as a cost containment option.

- The reasons for not considering the TPM option also show some interesting changes when compared to the 1984 position. Satisfaction with existing service is the usual reason for not using TPM.

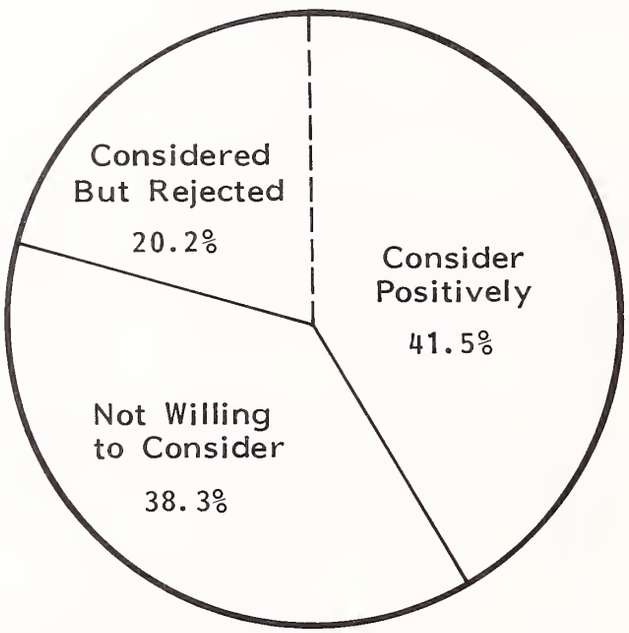
  . In 1984, this accounted for 25% of all reasons given, but by 1985 had fallen to under 18% of reasons.

  . Worries about parts availability seem to be increasingly important, rising from 8% to 12% of reasons given.

  . The wish to maintain a working relationship with the manufacturer remains fairly strong.

EXHIBIT III-2

UNITED KINGDOM USERS' WILLINGNESS
TO CONSIDER USING INDEPENDENT MAINTENANCE



(Percent of Respondents)

Number of Respondents = 188

Source: INPUT 1985 Annual Report

- Perhaps most interesting of all are the reasons given for rejecting TPM after considering it.

    - In 1984, the lack of a suitable TPM vendor was the most common reason given for rejection. By 1985, this reason had almost totally disappeared, and the financial unattractiveness of the move has become the most important disincentive.

    - Fears of poorer service are also still an important factor in slowing the move to TPM.

- Exhibit III-3, III-4, and III-5 show the complete picture.

C. TPM PROFITABILITY

- Few of the TPM companies surveyed are exclusively involved in maintenance in the U.K. Many have other activities such as the sale of supplies or equipment, and so making profit comparisons for the independent maintenance business can be misleading.

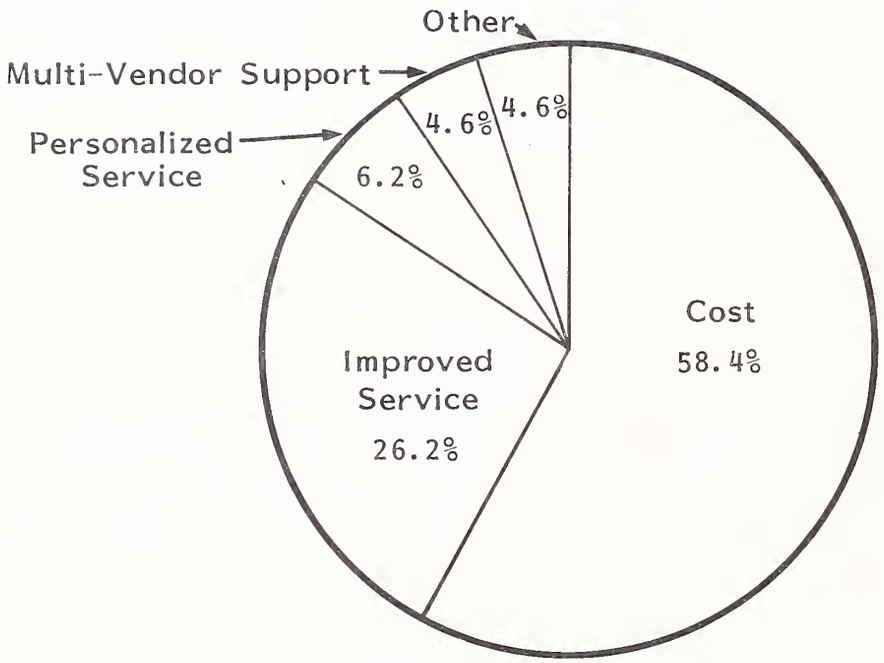
- With that caveat in mind, pre-tax profit as a percent of maintenance turnover averages 14.5%, with a range from just under 8% at the lowest end up to 56% at the highest.

- As service prices continue to come under pressure and competition increases, the lower gross margins will be inadequate to allow scope for those companies to expand. Expansion demands signifcant investment in plant, parts, and people, and low profits will preclude that investment.

- It is extremely likely, therefore, that the U.K. TPM market will follow the trend of the U.S. and a series of acquisitions and mergers and business failures will occur over the next few years.

EXHIBIT III-3

UNITED KINGDOM USERS'
REASONS FOR CONSIDERING INDEPENDENT MAINTENANCE



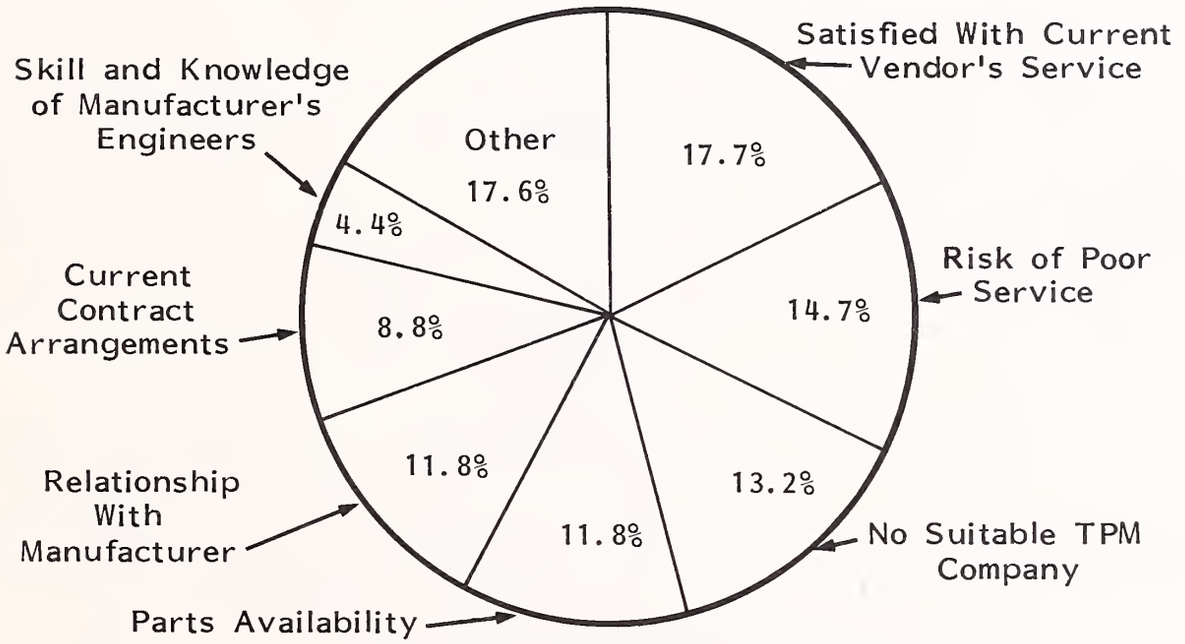
(Percent of Reasons Given)

Number of Respondents = 65

Source: INPUT 1985 Annual Report

EXHIBIT III-4

UNITED KINGDOM USERS'
REASONS FOR NOT CONSIDERING INDEPENDENT MAINTENANCE

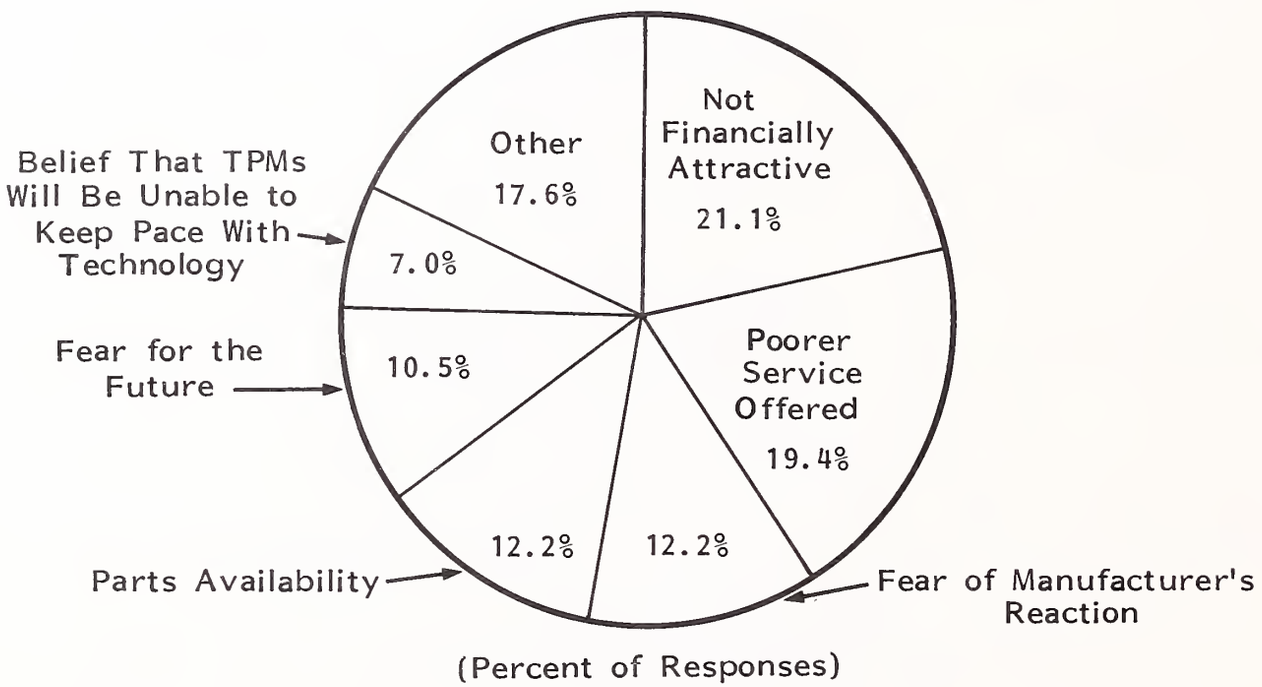


(Percent of Reasons Given)

Number of Responses = 116

EXHIBIT III-5

UNITED KINGDOM USERS'
REASONS FOR REJECTING INDEPENDENT MAINTENANCE
AFTER CONSIDERATION



(Percent of Responses)

D. PERSONNEL PERFORMANCE

- There is, as one would expect, considerable variation in the maintenance revenue generated per engineer among the various independent maintenance companies. The range is from a low of 11,700 pounds to a high of 122,500 pounds, with an average of 39,500 pounds.

- Such figures, expressed as a distribution in dollars in Exhibit III-6, must be treated with caution because:

  - Many service engineers are involved in selling supplies and other equipment in addition to their maintenance activities.

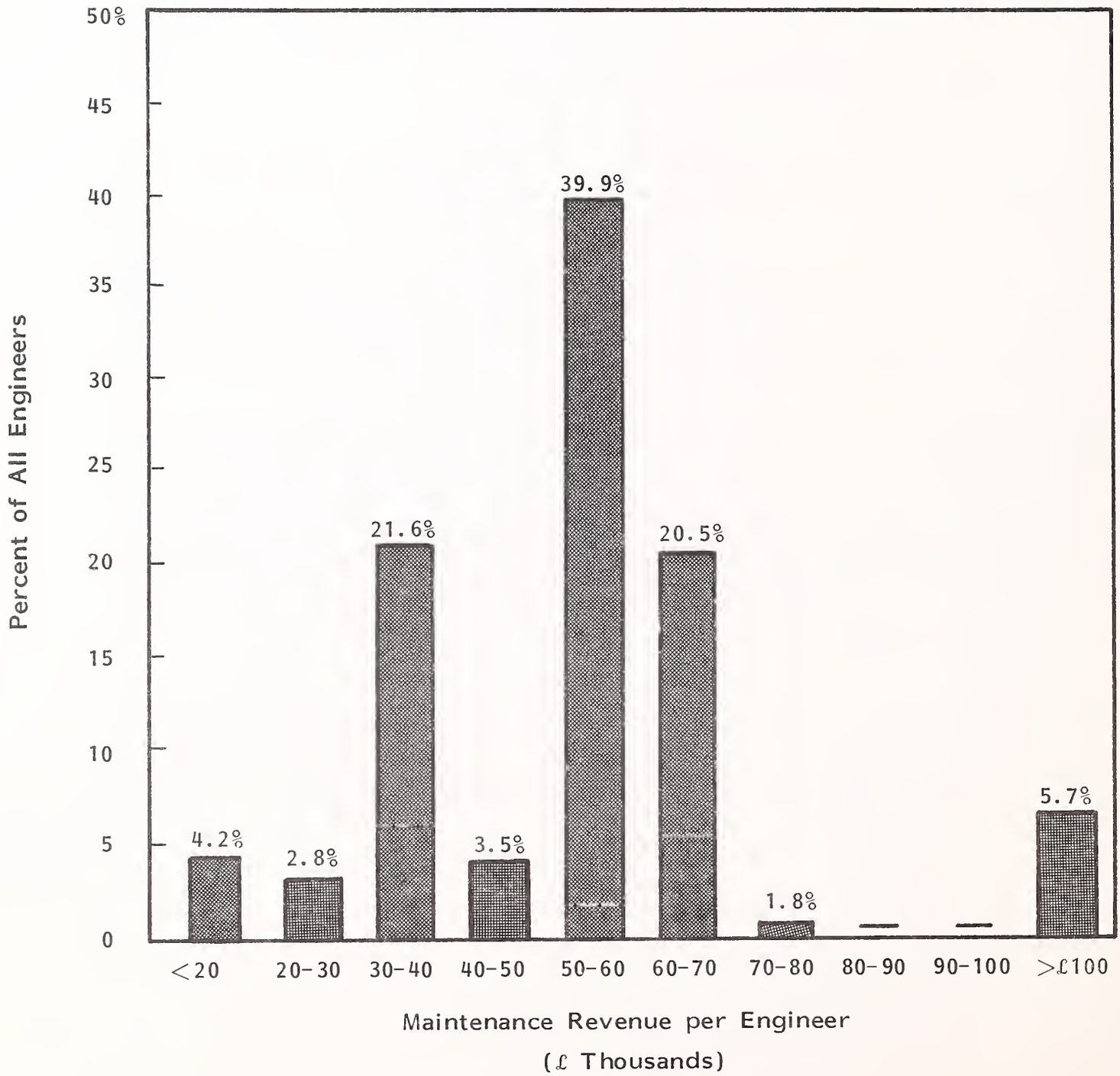
  - Field service engineers may be augmented by central support staff, thereby increasing the size of the 'engineering pool' and, consequently, reducing the revenue per head.

- Profitability data is rather more difficult to determine and subject to more 'caveats' then the revenue data. However, those figures which are available show a range of gross profit per engineer from a low of 675 pounds to a high of 26,400 pounds, with the average being 8,330 pounds. When overheads are taken into account, profit levels of 675 pounds per engineer cannot sustain realistic growth.

- The concept of 'critical mass' again becomes important, for as companies expand, managerial overheads become a more significant issue and, perhaps ironically, moderate expansion may cause a business to collapse.

EXHIBIT III-6

MAINTENANCE REVENUE GENERATION BY ENGINEERS
1985, UNITED KINGDOM



Source: INPUT TPM Study 1985

IV FRANCE

- INPUT estimates the French TPM market to have been 341 million francs ($41 million) and forecasts that it will grow to 1.5 billion francs by 1990, an average annual growth rate of 29% (see Exhibit IV-1).

- This rapid growth rate reflects the increasingly buoyant market conditions being experienced by leading TPM vendors in France, some of whom are reporting revenues up by 50%.

- In terms of the total market, estimated to be $1.9 billion in 1985, the TPM penetration is 2.7%, less than the 7.7% recorded in the U.K. but close to the European average of 2.9%.

- There is still considerable user resistance to the TPM concept in France. As Exhibit IV-2 shows, feelings are mixed. Although more users are prepared to consider TPM, 26.5% against 22.1% in 1984, of those who have considered TPM, a greater proportion have rejected the option--8.9% compared to 2.5%.

    - This would suggest that users are becoming increasingly willing to consider the TPM route, but the level of service which is currently available is not adequate to convert the potential revenue is real revenues.

- The key reasons for not considering TPM in both 1984 and 1985 are given in Exhibit IV-3. A number of interesting points are:

EXHIBIT IV-1

TPM MARKET IN FRANCE, 1984-1990

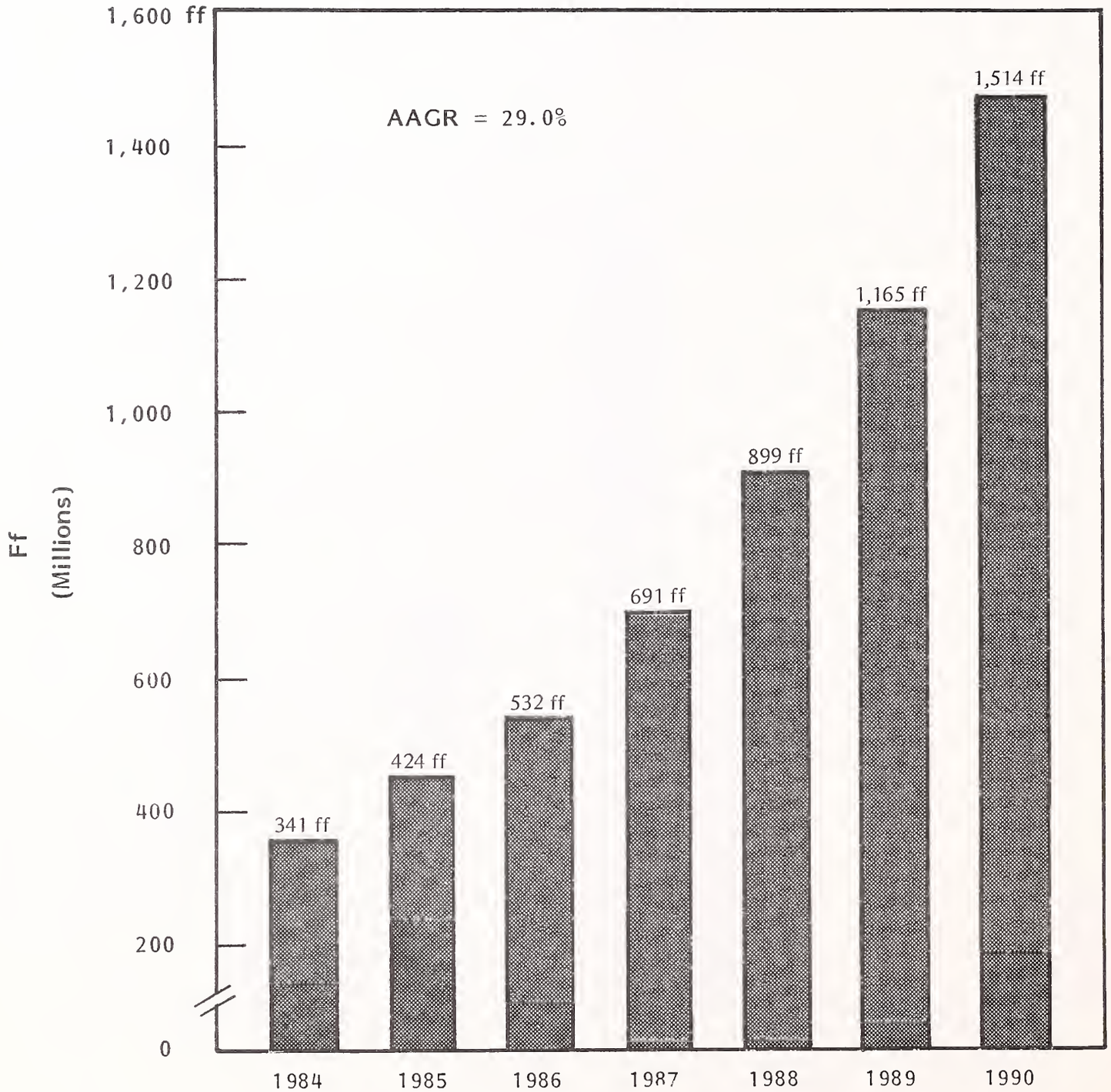
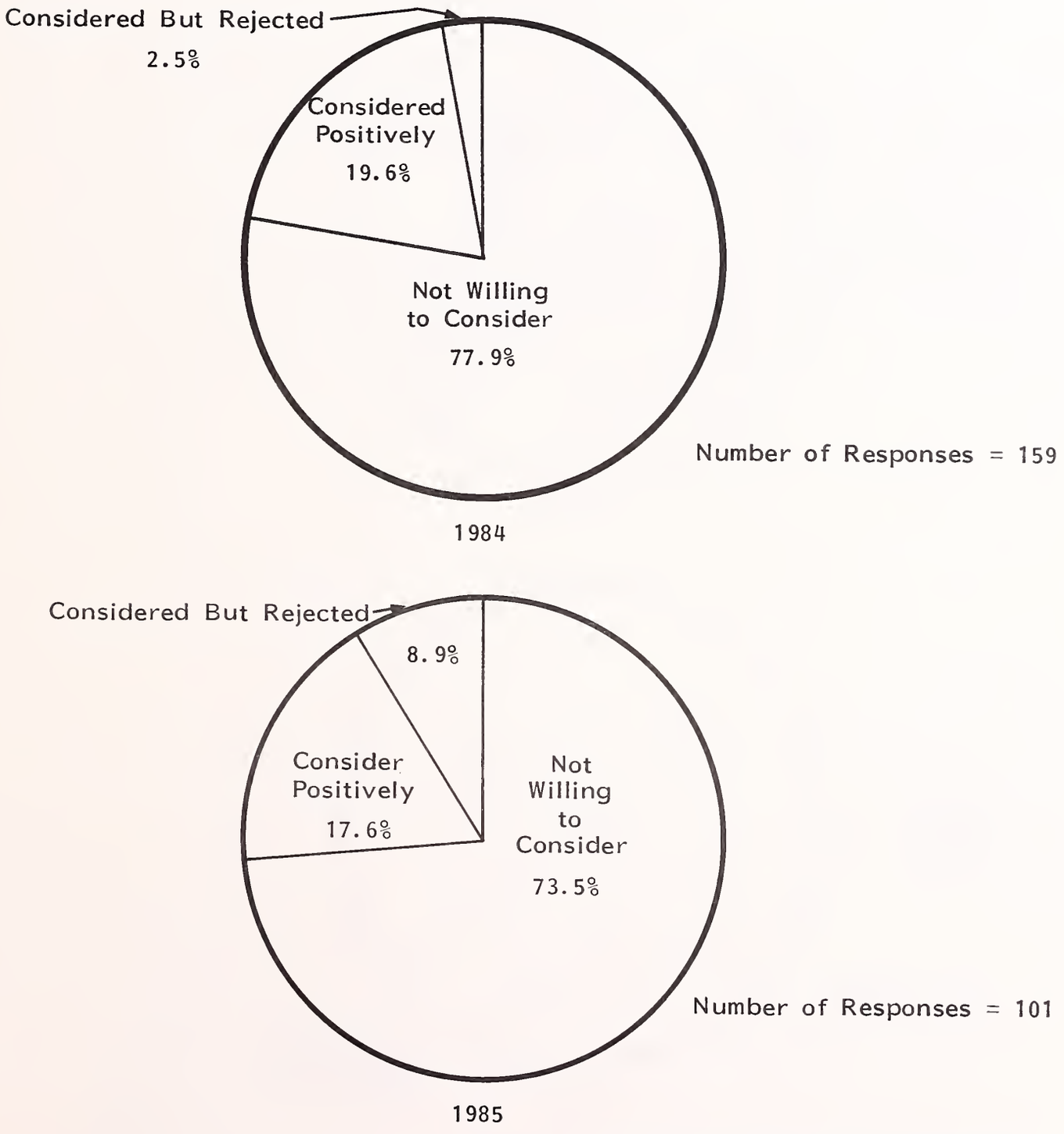


EXHIBIT IV-2

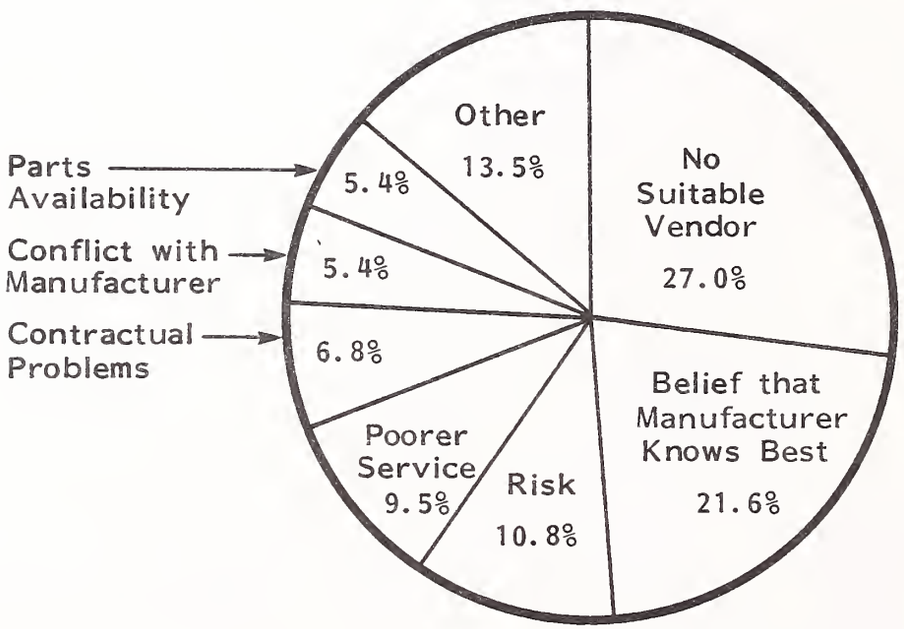
FRENCH USERS' WILLINGNESS TO CONSIDER TPM, 1984 AND 1985
(Percent of Respondents)



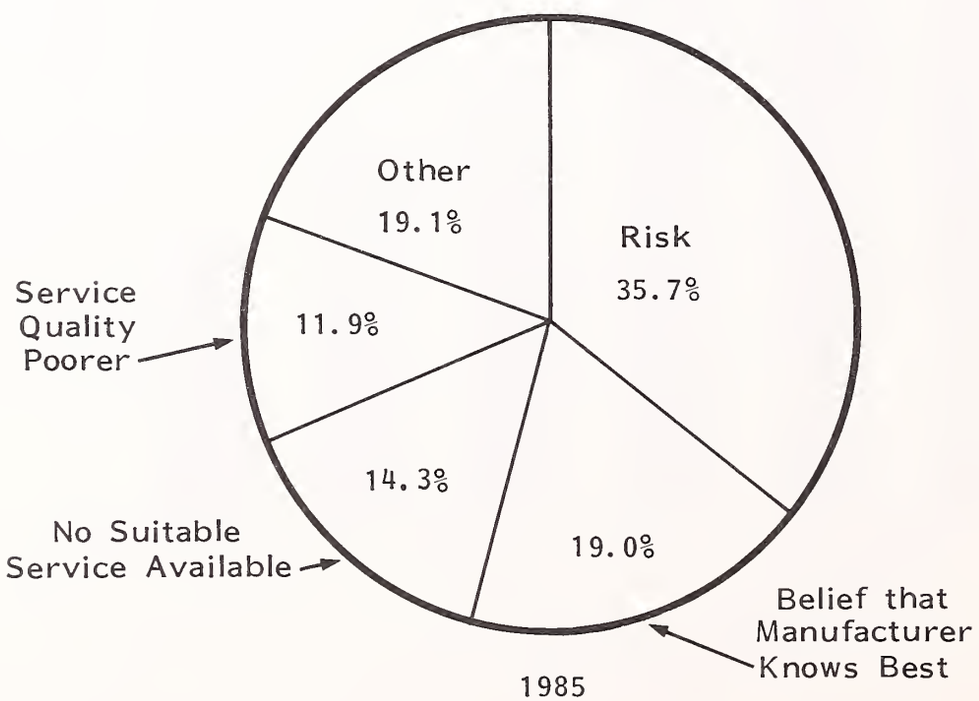
Source: INPUT 1984 and 1985 Annual Reports

EXHIBIT IV-3

FRENCH USERS' REASONS FOR NOT CONSIDERING TPM, 1984 AND 1985
(Percent of Reasons)



1984



1985

- The fairly consistent feeling that the 'manufacturer knows best'.

- A significant drop in the number of users claiming that there is not a suitable vendor or service available.

- A large increase in the proportion of users concerned about the risks involved in taking the TPM route.

- The 'risk consideration' comes back to the concept of TPM credibility. As TPM companies become increasingly competent, and are seen to be so by users, then the perceived risk should diminish considerably.

  - The worried 35.7% represents total service revenues of almost $500 million--some 10 times the size of existing TPM revenues. This pool of potantial business is certainly worth investing both time and resources in cultivating.

V WEST GERMANY

- Although the West German computer services market is the largest in Europe, the TPM element is extremely small. In th U.K., the market has matured to the extent that TPM accounts for 7% of the total; in the U.S., the penetration level is 9.5%. In Germany, by contrast, TPM accounts for only 1% of the market.

- The main reason for this is the strength of the manufacturers in Germany. INPUT's user research over the years shows that German users have received a high quality of service from the manufacturers, thereby denying the TPMs a qualitative advantage and entry into the market.

- Once again, the credibility factor comes into play. As the TPMs in Germany are essentially fragmented, providing a local service only, they remain unable to convince users of their viability and build up a good customer base.

- The main stimulus to the market is likely to come from non-German companies, either by setting up a base in Germany or providing a more remote service from Holland. This latter approach is unlikely to be viable in the long term as it does not go any way towards building up the necessary level of credibility.

- IBM's installed strength in Germany suggests the greatest opportunities lie in servicing that customer base, and companies specializing in that range, such as SMS, will probably experience a faster rate of growth.

- The TPM market size and estimated growth for 1984-1990 are seen in Exhibit V-1.

- The fact is, however, that over two-thirds of the users are prepared to consider using TPM, as shown in Exhibit V-2--a much higher proportion than in the U.S.

  - This suggests that there is scope for a major expansion in the market if only TPM companies can build up their credibility in Germany.

- Cost, once again, is the main reason for users considering the TPM route, with only 18% looking for a quality improvement. Of the minority of users who are not prepared to consider using TPM, over one-half express reservations in one way or another with the expertise of the TPMs, as shown in Exhibit V-3.

EXHIBIT V-1

TPM MARKET IN WEST GERMANY, 1984-1990

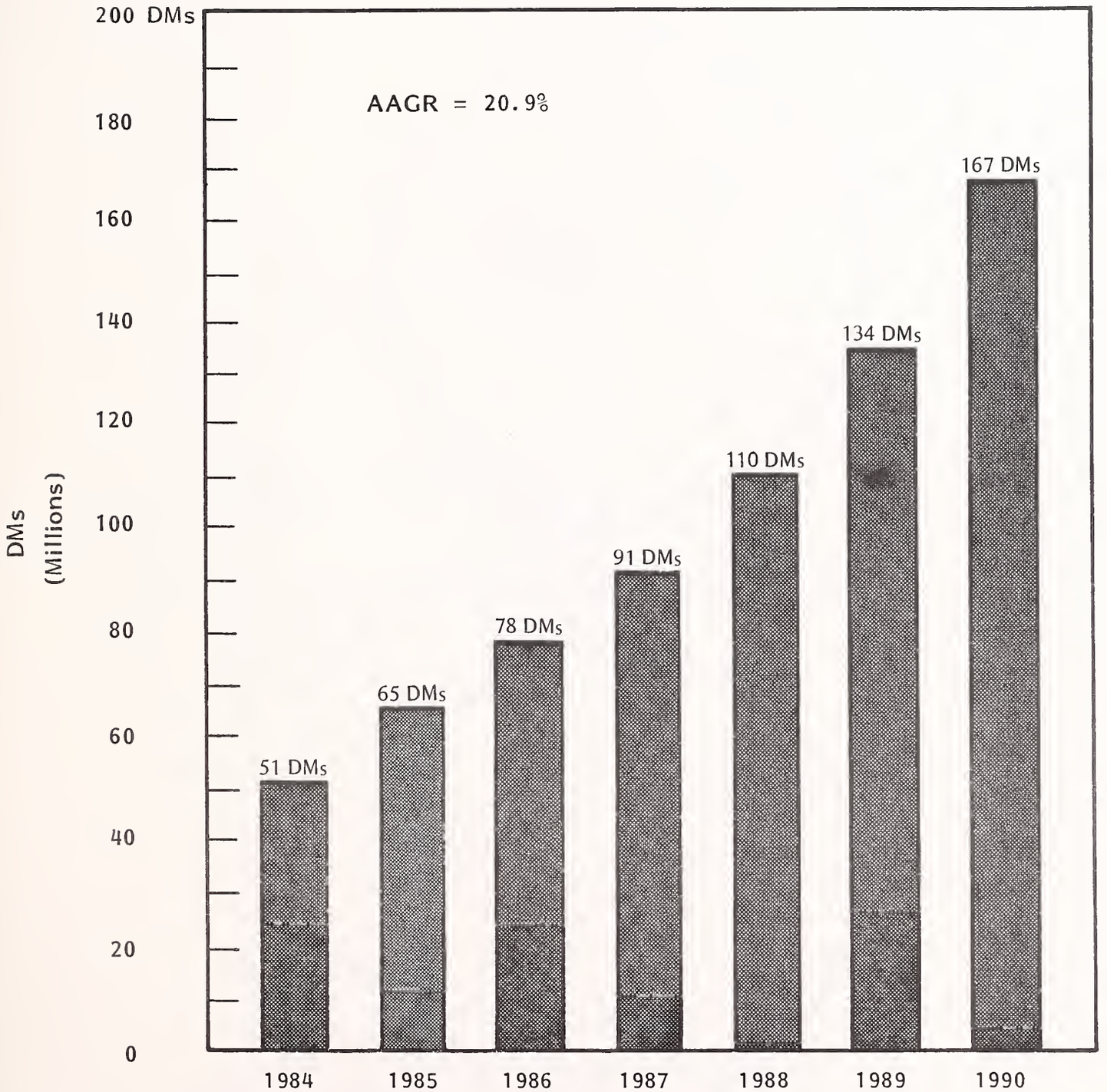
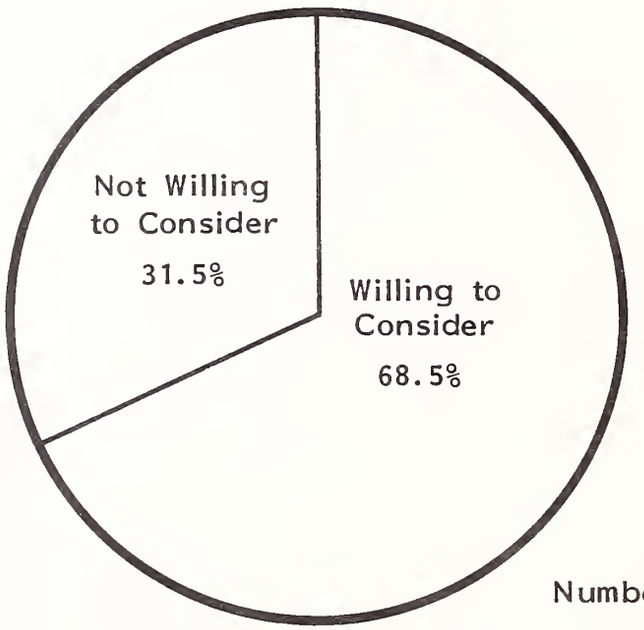


EXHIBIT V-2

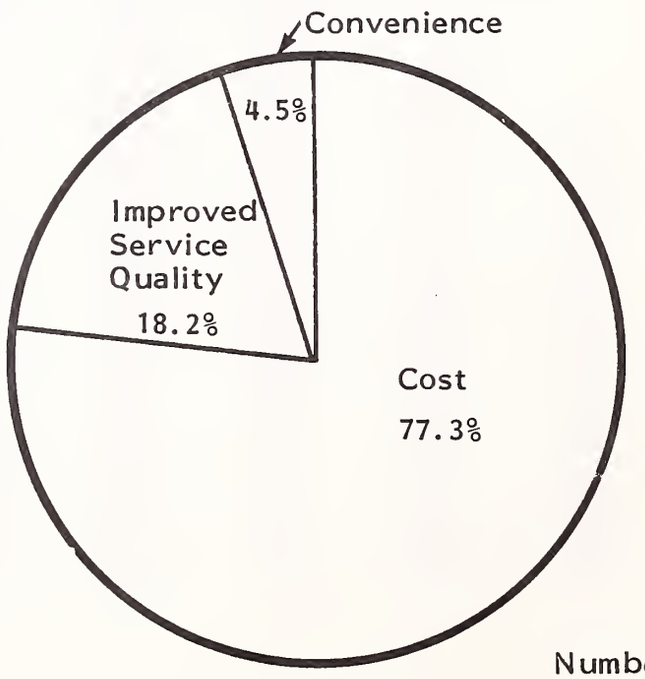
GERMAN USERS' WILLINGNESS TO CONSIDER TPM



Number of Responses = 105

(Percent of Respondents)

REASONS FOR CONSIDERING TPM



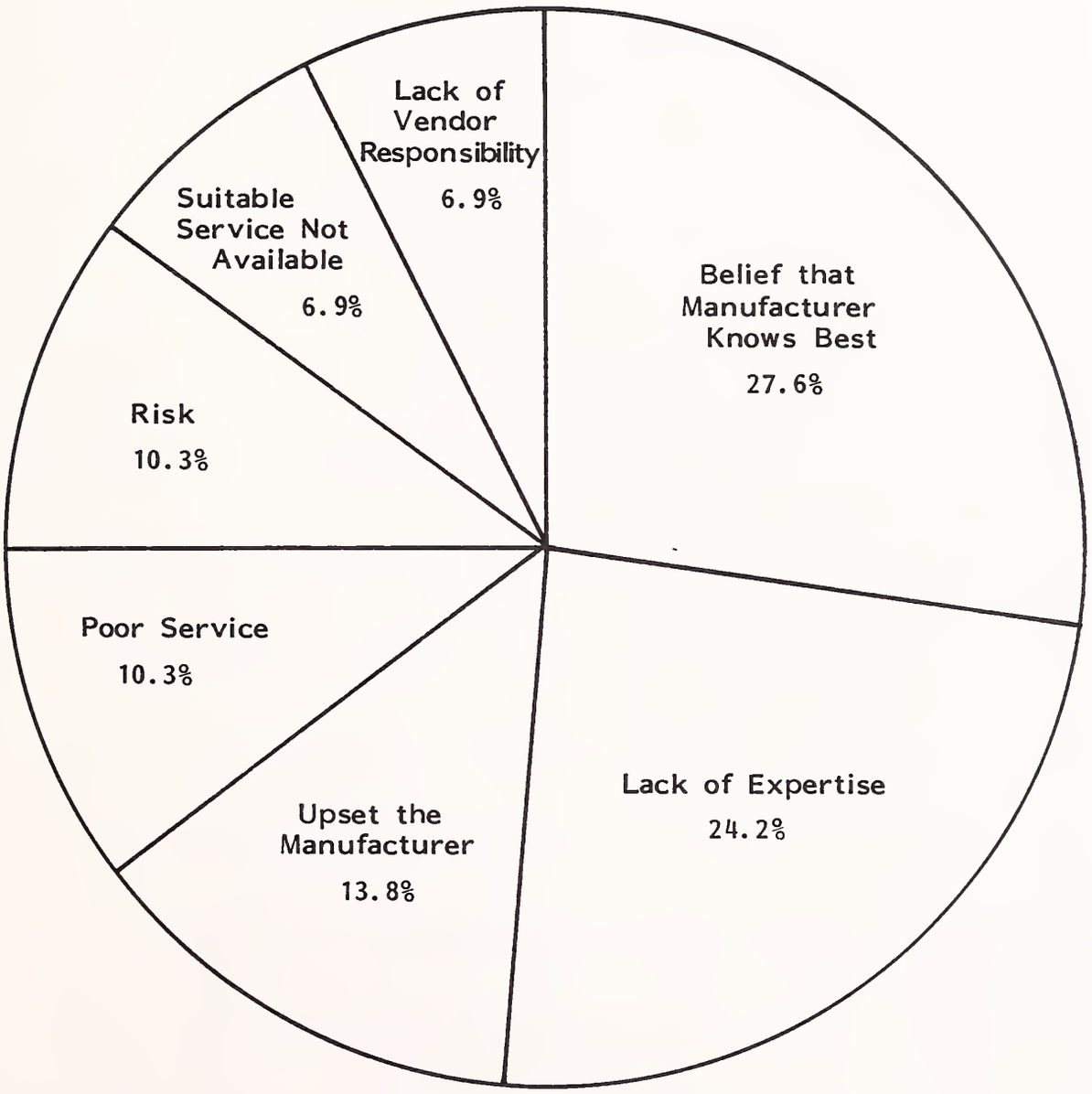
Number of Responses = 58

(Percent of Reasons Given)

Source: INPUT User Survey

EXHIBIT V-3

GERMAN USERS' REASONS FOR NOT CONSIDERING TPM



(Percent of Reasons Given)

Number of Responses = 35

Source: INPUT User Survey

VI HOLLAND

- The Dutch market, like that of the U.K., is very open, with users receptive to the idea of using independent maintenance.

- As well as indigenous vendors such as Thijssen Field Service and DTC Service, several U.K. independent maintenance companies are active in Holland, including DPCE.

- The activity of such well established companies in this market, bringing a high level of credibility and with good 'reference sells' such as KLM, is stimulating the market to a high growth level.

- TPM penetration in the market is estimated to be 3.5% currently. The comparatively high annual average growth rate, which, at 30%, is the highest in Europe, reflects the current status of the Dutch market.

  - There is good user acceptance of the TPM concept.

  - There is good local presence in the market.

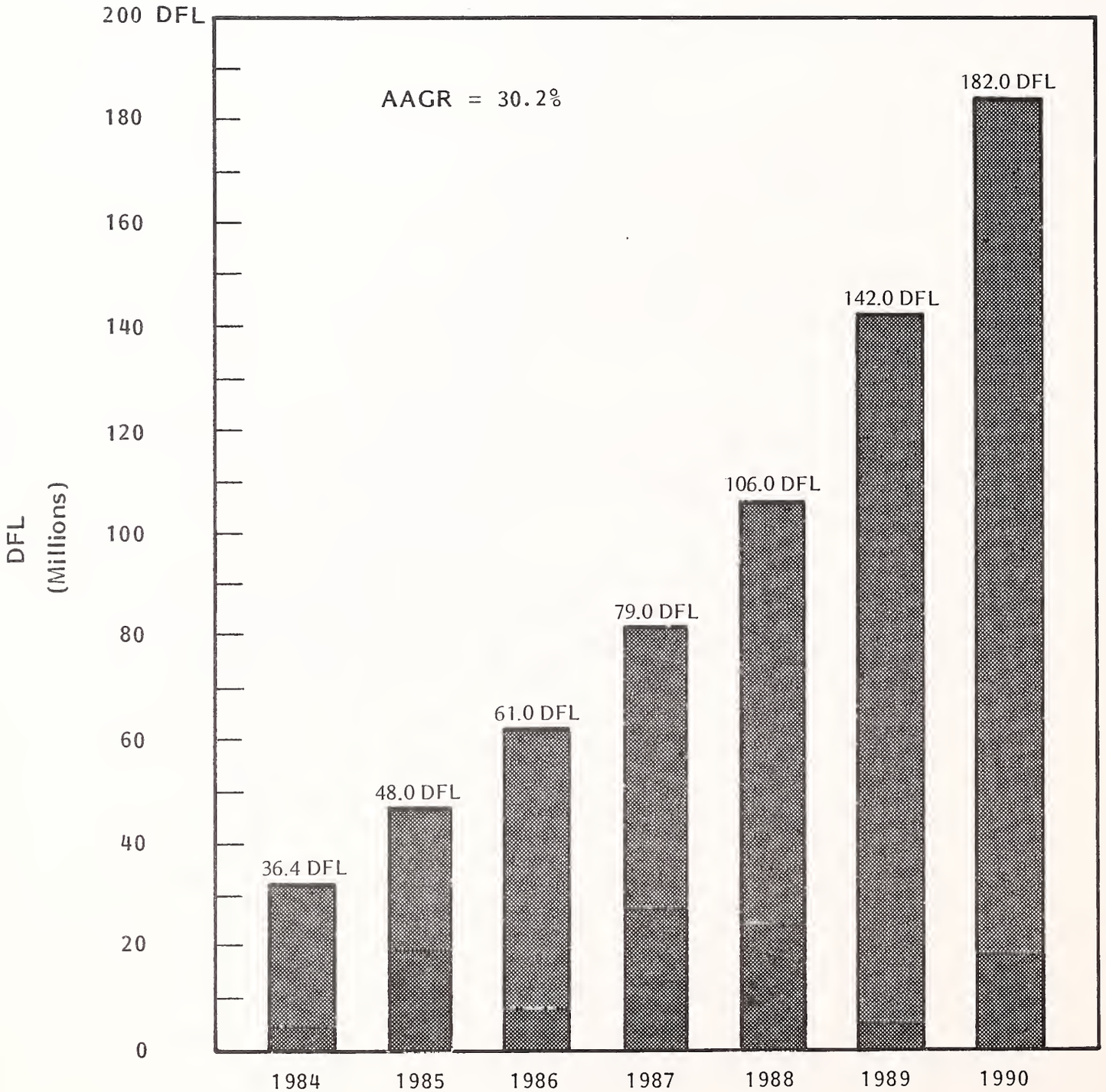
  - There are good reference sells available to enhance credibility.

  - There are no geographic problems.

- Exhibit VI-1 shows the market forecast growth pattern.

EXHIBIT VI-1

TPM MARKET IN HOLLAND, 1984-1990



VII ITALY

- TPM in Italy is at a very early stage of its development. Most of the activity comes from companies providing support in a very localized area.

- This being so, the critical 'credibility gap' has not yet been bridged. Starting from such a low point in the market cycle, the most likely scenario is one of only slow growth through to 1990. As shown in Exhibit VII-1, INPUT expects the annual average market growth rate to be only 18.5%.

- The current level of TPM penetration in Italy is estimated to be slightly less than 1%, compared to the U.K. penetration level of just over 7.5%. This difference in penetration indicates that if conditions were right, TPM could achieve a 7.5% share of the Italian market, the potential market size being $76.5 million.

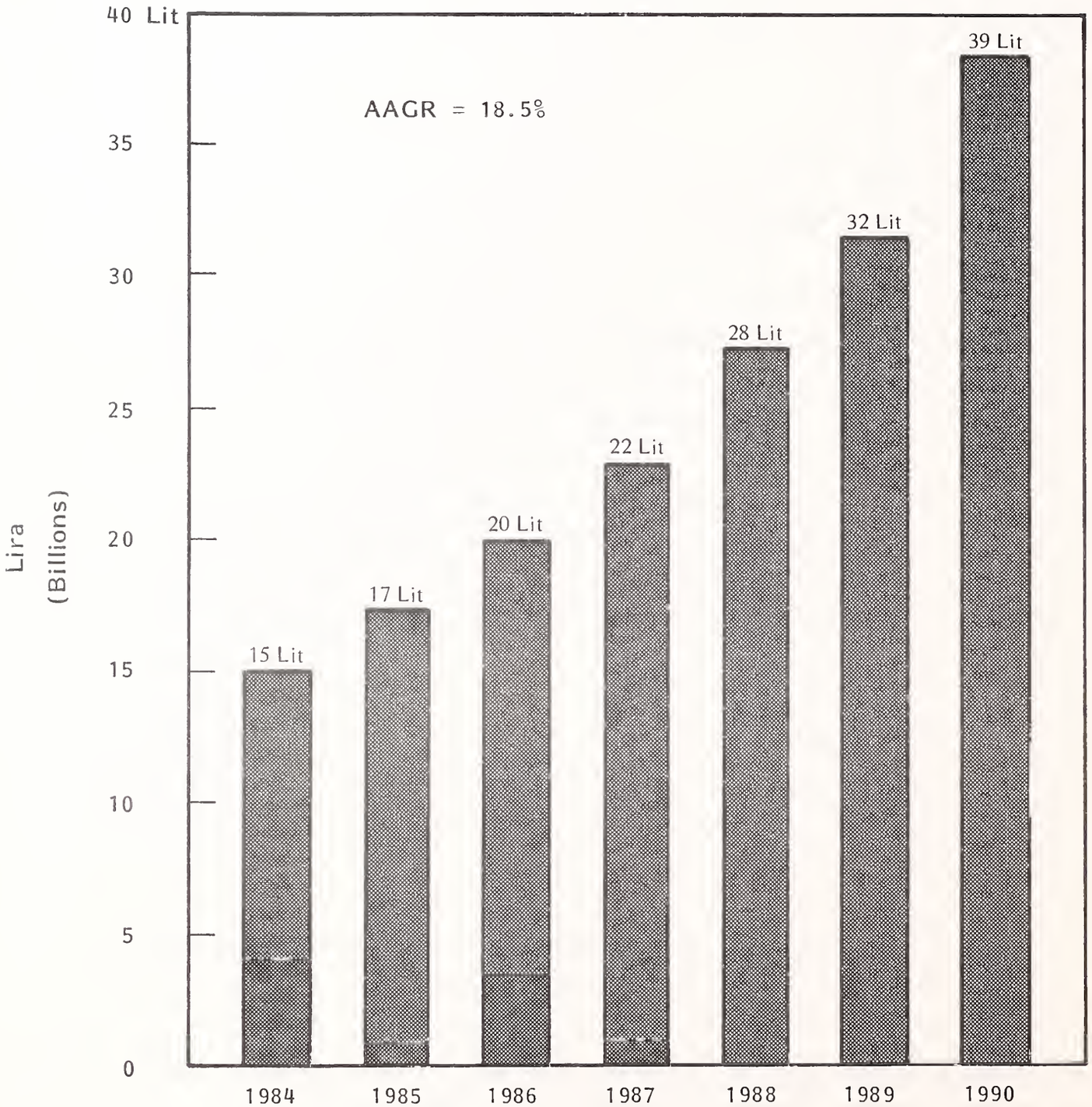
- There are indications that the market may be moving into a more aggressive stage. Olivetti is actively providing TPM services in other parts of Europe and Bell Technical Services (BTS) has recently increased its involvement in the Italian market.

  - BTS has just taken over Datamont SPA and integrated it with their existing Eurotech Italian subsidiary (originally Cable & Wireless).

- Activity by such credible service providers could help to provide the impetus which the market needs to move into a new growth phase.

EXHIBIT VII-1

TPM MARKET IN ITALY, 1984-1990



VIII SWEDEN

- The TPM market in Sweden in 1984 is estimated to have been SEK 108 million ($13 million).

- As with many other European markets, INPUT expects the growth rate to slow down slightly, mainly because of manufacturers' resistance to TPM activity.

- By 1990, the market should reach SEK 282 million ($34.0 million), representing an annual average growth rate of 17.8% (see Exhibit VIII-1).

- The market is dominated by two vendors--Telub and Ericsson Radio Systems--although there are a number of dealers who also offer independent maintenance services. There is some evidence that hardware manufacturers, particularly CDC and Sperry, are making attempts to move into this market.

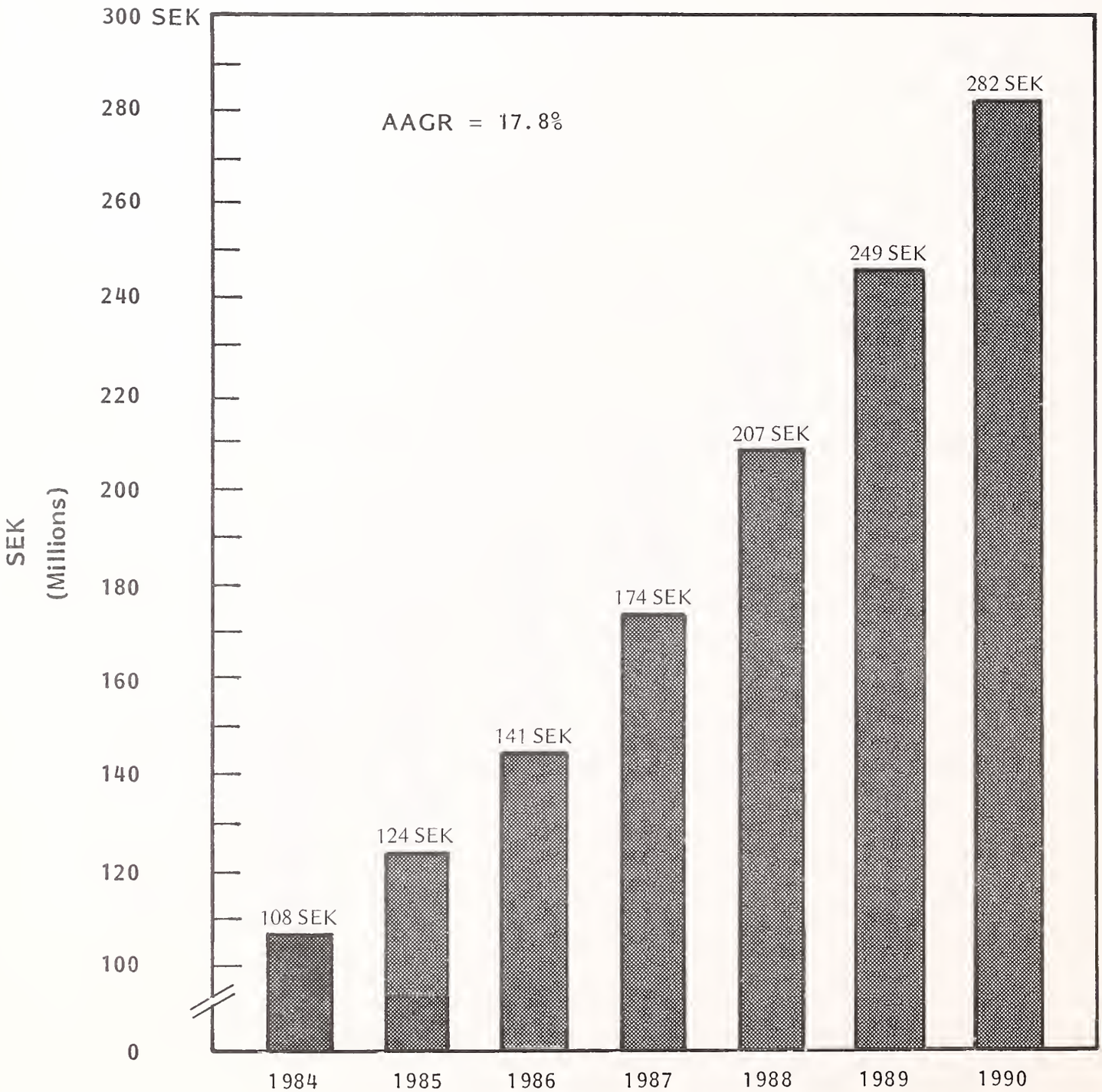
- If there should be real investment in independent maintenance in Sweden, the conservative growth rates shown in Exhibit VIII-1 could be increased from an annual average growth rate of 17.8% to a more aggressive 25%.

  - If this were to be the case, the market could reach some SEK 375 million by 1990.

- TPM currently accounts for some 4% of the total service market, a relatively high figure by European standards, but still lower than the U.K.'s 7.5% and the 9.5% being achieved in the U.S.

EXHIBIT VIII-1

TPM MARKET IN SWEDEN, 1984-1990



- Achieving the 7.5% penetration would create a market in Sweden of some $28 million, almost double the existing level.

APPENDIX A: COMPANY PROFILES

A. BELL TECHNICAL SERVICES

- BTS has arrived as a takeover by Bell Canada of GCS Engineering and Cable and Wireless' third-party maintenance subsidiaries (both U.K. and European).

- With a projected turnover of 20 million pounds, or around 14 million pounds if non-maintenance activities are excluded, BTS is the largest TPM company in the U.K., having a market share of 13.8%. As well as expanding in the U.K. by the takeover route, BTS has also moved into Europe with the acquisition of Eurotech BV, Eurotechnics SA, and Eurotech (Italia) SA (these being the Cable and Wireless European subsidiaries).

- The two acquired companies, GCS and Cable and Wireless, are to an extent complementary, concentrating as they do on minicomputers, microcomputers, and peripherals.

- Size apart, the creation of Bell Technical Services is an important event in the development of TPM in Europe in that it shows significant financial commitment to the market by a non-European company. The effect of this can only be to enhance the status of TPM as a real alternative to manufacturers' service, credibility of TPM being a major stumbling block.

B. COMPUTER FIELD MAINTENANCE (CFM)

1. ADDRESS

- Excell House, Trust Industrial Estate, Hitchin, Herts SG4 0U2.

2. OWNERSHIP

- Owned by International Aeradio, which is in turn owned by Standard Telephones and Cables, a public company. STC, once part of ITT, also owns ICL.

3. FINANCIAL DATA

- Turnover.
  - 1984 - 10 million pounds.
  - 1985 - 12 million pounds---+10% growth.
  - 1986 - 14 million pounds---+17% growth.
- Pre-tax profits of 900,000 pounds in 1984 are expected to rise to 1.2 million pounds in 1985 and 1.4 million pounds in 1986, representing a 10% return on turnover.
- Assets are estimated to be three million pounds, giving a healthy 40% return on investment in 1985.
- Ninety percent of revenue is derived from maintenance, the remainder being sales of supplies.

4. EMPLOYEES

- CFM has a total staff of 400, with 300 being service engineers, working from 22 centres in the U.K. Turnover in 1985 per engineer will be 40,000 pounds and per employee 30,000 pounds. Forecast profit figures are 4,000 pounds and 3,000 pounds, respectively.

- CFM's central workshop activity is growing, and they are currently buying a new five acre site in Stoke-on-Trent.

5. PRODUCTS MAINTAINED

- CFM is mainly involved in medium systems terminals and PCs, but does have a contract to maintain a large bank's Cash Dispensers.

- They provide all hardware services except refurbishment, but do not add, improve, or extend software features, carry out programming, or provide consulting. They do, however, offer free advice on hardware enhancements.

- CFM acts both as an agent of a manufacturer and also competes with manufacturers for service revenue.

- Almost all business is on a contract basis (97%).

C. DATA DYNAMICS LTD.

1. ADDRESS

- Clayton Road, Hayes, Middlesex UB3 1BD.

2. OWNERSHIP

- A private company, wholly owned by Innotech Investments. They have been in business since 1968 maintaining their own manufactured products, but commenced independent maintenance only in 1981.

3. FINANCIAL DATA

- Turnover.
  - 1984 - 3.5 million pounds.
  - 1985 - 4.9 million pounds.
  - 1986 - 6.4 million pounds (INPUT estimate).
- Note, however, that only 20% at most is truly independent maintenance, the balance being the maintenance of the company's own products. Although closely tied at the moment, DDL is aggressively seeking new independent business.

4. EMPLOYEES

- DDL has 40 engineers and support staff working from centres in Hayes, Manchester, and Edinburgh. Repair centres are attached to all three centres. Revenue per engineer is a very high 122,500 pounds, but again it must be stressed that this is not all independent maintenance revenue.

5. PRODUCTS MAINTAINED

- DDL concentrates on small systems, peripherals, telecommunications equipment, and Apple PCs. They shortly anticipate extending their PC range to include IBM PCs.

- All hardware services are provided, but only limited user training and no significant software or consulting activities are undertaken. They do undertake a little support of their own software.

D. DDT MAINTENANCE LTD.

1. ADDRESS

- 58-62 Kingston Road, Kings Norton, Birmingham B30 1JH.

2. OWNERSHIP

- Public company linked with Data Design Techniques Ltd., which sells hardware. The company has been in independent maintenance since 1974.

3. FINANCIAL DATA

- Turnover.
  - 1984 - 2 million pounds (INPUT estimate).
  - 1985 - 3 million pounds.
  - 1986 - 5 million pounds.
- Pre-tax profits are currently running at 12% of turnover and are expected to continue to do so for the foreseeable future. This will give annual profits of 360,000 in 1985 rising to 600,000 pounds in 1986.
- All revenue quoted is from independent maintenance.

4. EMPLOYEES

- DT has some 70 engineers working from centres in Edinburgh, Warrington, Birmingham, London, South Wales, Belfast, Dublin, Cork, and Jersey. They are supported by a workshop and product specialists in South Wales.

- Turnover per engineer in 1985 is 42,900 pounds, and profit per employee is 5,100 pounds.

- Future plans include expansion into Europe, particularly Holland and France.

5. PRODUCTS MAINTAINED

- DDT specializes in the 'low-cost' end of the market, maintaining peripherals, terminals, and PCs. They cover an extensive range of manufacturers, including ACT, Apple, Compaq, IBM, Torch, Sanyo, and North Star.

- As well as normal hardware service, they do have a software support capability, albeit limited, and also offer programming and consulting services.

- They do not sell any supplies or accessories.

6. CUSTOMER PROFILE

- DDT are targetting multi-system users with 5,000 pieces of equipment spread over 1,300 customers. Many of their accounts are large users, insurance companies and retail stores, for example.

E. DPCE COMPUTER SERVICES LTD.

1. ADDRESS

- Cumberland House, Old Bracknell Lane West, Bracknell, Berks RG12 4AE.

2. OWNERSHIP

- DPCE (UK) is a wholly-owned subsidiary of DPCE Holdings PLC, a company which also owns DPC BV and Storage Technology in Holland, DPC Inc. in the U.S., and DPCE Products.

- They are fully listed on the Stock Exchange, and shareholders are mainly large pension organisations.

3. FINANCIAL DATA

- Turnover.

  - 1984 - 8.0 million pounds.

  - 1985 - 11.2 million pounds.

  - 1986 - 15.7 million pounds.

- DPCE is quite certain that they are able to maintain this 40% annual growth rate.

- The 1984 gross profit was 22.5% of turnover. If this is maintained through to 1986, gross profits will rise to 3.5 million pounds.

4. EMPLOYEES

- DPCE has 230 engineers, some working mainly from customer sites. The turnover per engineer in 1985 will be 48,700 pounds, and the resultant gross profit almost 11,000 pounds.

5. PRODUCTS MAINTAINED

- DPCE covers a large range of equipment from IBM mainframes and DEC VAXs down to PCs (IBM, Sirius, and Acorn) and network services. The PC maintenance business is restricted to large customers only. DPCE maintains hardware from over 150 manufacturers.

6. CUSTOMER PROFILE

- Compared to many other independent maintenance companies, DPCE has a relatively small (400) but high quality customer base, including major airlines and large financial and communications companies.

F. MBS RENTALS

1. ADDRESS

- 25 Worship Street, London EC2. MBS Engineering, Unit C Horton Trading Estate, Stanwell Road, Nr. Slough SL5 9PF.

2. OWNERSHIP

- Independent maintenance is provided by MBS Engineering, a division of MBS Rentals, a public quoted company.

3. FINANCIAL DATA

- Although nominally operating in independent maintenance since 1979, a very high proportion of their revenue comes from the sale of telexes and IBM PCs by other MBS group companies. They acquired the Jacquard engineering base when the latter folded.

- Turnover.

  - 1984 - 2.8 million pounds.

  - 1985 - 5.0 million pounds.

  - 1986 - 8.7 million pounds.

4. EMPLOYEES

- MBS service runs out of 12 branch offices with some 70 engineers and a total staff of 106. This gives a revenue per engineer of 40,000 pounds and per employee of 26,400 pounds.

5. PRODUCTS MAINTAINED

- Primarily interested in IBM PCs, claiming that the group is the largest IBM dealer in the U.K. Other equipment includes Altos and Diablo printers. All standard hardware service is offered, but no software support as yet.

6. CUSTOMER PROFILE

- MBS has a number of significant contracts, e.g., 500 PCs at a communications company and 600 PCs with a chemical bank. Eighty percent of all work is under contract, with 20% being T&M.

G. MILLS ASSOCIATES LTD.

1. ADDRESS

- Wonastow Road, Monmouth, Gwent NP5 4YE.

2. OWNERSHIP

- Private company.

3. FINANCIAL DATA

- Turnover.
  - 1984 - 6.1 million pounds (INPUT estimate).
  - 1985 - 7.5 million pounds.
  - 1986 - 9.4 million pounds.
- Of their total turnover, only 40% is generated by independent maintenance, the balance being for equipment and supply sales and bureaux services. They have recently sold off their loss-making software business.
- Their estimated independent maintenance figures are, therefore:
  - 1984 - 2.4 million pounds.
  - 1985 - 3.0 million pounds.
  - 1986 - 3.8 million pounds.

4. EMPLOYEES

- Mills employs 115 engineers working out of 19 U.K. centres, all holding stocks. This gives a revenue per engineer of 20,810 per annum.

5. PRODUCTS MAINTAINED

- ICL systems including 2903/4 DRS range, ME29 PCs including Commodore, Olivetti, IBM, and Apricot Networks.

- They provide most basic hardware support, but not engineering changes, conversions, or upgrades. Nor do they have any particular software or consulting capability.

H. QUEST INTERNATIONAL COMPUTER SERVICES LTD.

1. ADDRESS

- School Lane, Chandlers Ford, Hants, S05 3YY.

2. OWNERSHIP

- Quest International Computer Services Ltd. is a subsidiary of Quest International Computers Ltd., itself a subsidiary of Quest Automation PLC, a publicly quoted company.

3. FINANCIAL DATA

- Turnover.

  - 1984 - 4.0 million pounds.

- 1985 - 5.2 million pounds.

- 1986 - 6.8 million pounds.

- Of this turnover, true independent maintenance accounts for only 10%. The revenue composition is:

  - Maintaining own manufactured equipment - 20%.

  - Maintaining equipment sold by Quest - 70%.

  - Independent maintenance - 10%.

4. EMPLOYEES

- Quest has 100 engineers, giving a revenue per engineer of 52,000 pounds. It is difficult to estimate the total size of the company as they share many 'overhead' functions with other parts of the group, e.g., financial services, stock control, and purchasing.

5. PRODUCTS MAINTAINED

- Mainly small systems, peripherals, terminals, and a wide range of PCs including IBM, ACT, ITL, and Wren.

- Their operation is international, covering the U.K., Germany, Switzerland, France, and Austria. They also have operations in Eastern Europe (including an office in Moscow).

- They offer all hardware services, and also programming and consulting services. Sales of supplies and accessories are catered for in other parts of the group.

- Quest is currently examining the possibility of providing a software maintenance service.

- A comparatively high percentage of Quest's independent maintenance work is ad-hoc--62.5%.

6. CUSTOMER PROFILE

- Quest is mainly interested in the office automation market, and they have a number of blue-chip customers. Their biggest customer is a government office, and a large stationer is also a major client.

I. SYSTEMS RELIABILITY

1. ADDRESS

- 400 Dallow Road, Luton, L1 1UR.

2. OWNERSHIP

- The independent maintenance activity is a division of Systems Reliability PLC.

3. FINANCIAL DATA

- Total group turnover for 1984 was nine million pounds. Independent maintenance accounts for only 35% of that total, giving a maintenance picture as shown below:

  - 1984 - 2.15 million pounds.

- 1985 - 3.78 million pounds.

- 1986 - 4.54 million pounds.

4. EMPLOYEES

- SRL has 100 engineers out of a total staff of 130, working out of centres in Croydon, Bristol, Birmingham, Lutterworth, Luton, Manchester, Newcastle, Dunfermline, and Alperton.

- The maintenance revenues per engineer and per employee are 37,800 pounds and 29,100 pounds, respectively.

- As well as the U.K., they also have operations in Brussels, Paris, Lisbon, and Johannesburg.

5. PRODUCTS MAINTAINED

- SRL has considerable involvement in maintaining Elliott but is becoming increasingly involved in the PC market, servicing Alpha Micro, Altos, IBM PCs, Sanyo, Dynabytes, and Microstars.

- They provide software support for their own hardware and all hardware service for the complete range. All service is provided as an agent of the manufacturer and is 80% contracted.

6. CUSTOMER PROFILE

- A mixture of blue-chip companies, e.g., a large government account plus a large number of small accounts.

J. VISTEC - TSS

1. ADDRESS

- Vistec House, Nottingham Road, Belper, Derby, DG5 1JQ.

2. OWNERSHIP

- Vistec - TSS is a subsidiary of the Electronics Rental Group, which also owns Vision Hire.

3. FINANCIAL DATA

- Turnover.
  - 1984 - 2.23 million pounds.
  - 1985 - 3.0 million pounds (INPUT estimate).
  - 1986 - 3.8 million pounds (INPUT estimate).
- Of the 2.23 million pounds in 1984, around 70% was from maintenance, with the balance coming from the sale of supplies. The maintenance figure is, therefore, 1.55 million pounds. For the period 1984-1986, the maintenance profile is estimated to be:
  - 1984 - 1.55 million pounds.
  - 1985 - 2.10 million pounds.
  - 1986 - 2.70 million pounds.

4. EMPLOYEES

- Vistec employs 52 people in all, with 40 engineers based at 11 service locations. The maintenance revenues per engineer and per employee in 1985 are, therefore, 52,500 pounds and 40,400 pounds, respectively.

5. PRODUCTS MAINTAINED

- Essentially, peripherals, terminals, and PCs including Qume, Apple, DEC, and IBM.
- Vistec is developing their expertise in the area of LANs.
- All normal hardware services are provided.
- They act as agents in some cases, but regard themselves as in competition with DEC.
- As far as price is concerned, they are between 5-10% lower than DEC.

6. CUSTOMER PROFILE

- Wide ranging with some major accounts in both government and private industry, and a range of small clients.

APPENDIX B: USER QUOTES CONCERNING THIRD-PARTY MAINTENANCE

A. 'HAVE YOU CONSIDERED USING THIRD-PARTY MAINTENANCE'? YES

- '...due to dissatisfaction with the manufacturer'.
- '...in our view, TPM vendors maintain better standards and results'.
- '...mainly due to the ever-increasing cost if tied to the mainframe vendors'.
- '...we are discussing it at the moment because it's cheaper'.
- '...presently under consideration for two reasons--(1) costs, (2) the number of different vendors' equipment installed'.
- '...to establish whether significant savings could be made without impacting service quality'.
- '...because of increased costs from the manufacturer'.
- '...to simplify and reduce the number of different service contracts'.
- '...in an attempt to reduce the cost of service without reducing its efficiency'.

- '...the costs and advantages of a single party to cover a whole host of data communications and terminal equipment'.
- '...lack of (manufacturer's) CE management interest'.
- '...because they would give us an on-site engineer and still charge less than (manufacturer) does'.
- '...mainly because of price and the maintenance for all equipment from a single vendor'.
- '...improve the up-time on worst equipment'.
- '...more efficient, so get much better service, cheaper'.
- '...because one approached me'.
- '...to improve service and reduce costs'.
- '...because costs are more reasonable'.
- '...we do use it because the cost is two-thirds that of (manufacturer)'.
- '...prices and increased system availability'.
- '...we currently use (TPM) who provides a more personalised service, cheaper'.
- '...due to unhappiness with previous supplier'.
- '...manufacturer does not have a U.K. maintenance department'.
- '...less expense and better response'.

- '...it's cheaper, as good, faster, and more personalised contact'.

- '...better service provided than the manufacturer'.

B. 'HAVE YOU CONSIDERED USING THIRD-PARTY MAINTENANCE'? YES, BUT

- '...rejected because of fear of poorer service'.

- '...chose not to because (1) longer term support could not be guaranteed, and (2) financial stability of manufacturer'.

- '...we couldn't get such effective maintenance from third parties'.

- '...savings not worth the extra amount of work involved'.

- '...too much trouble for too small a price saving'.

- '...current service not as good as manufacturer'.

- '...the mainframe specialists are with the manufacturer'.

- '...although the price is far cheaper, the response time is not so good and there are sometimes problems getting parts'.

- '...not sufficient justification to proceed'.

- '...heavy financial penalties incurred from manufacturers'.

- '...demarcation disputes feared with intermittent faults'.

- '...doubts about service quality and parts availability'.
- '...the small reduction in price is not worth the possible risks'.
- '...no confidence in the third party to perform as well as the manufacturer'.
- '...(manufacturer) becomes very unpleasant and tries to handicap the third party'.
- '...problems of countrywide service support and access to information and spares severely restrict likely use'.
- '...bundled software support and obstructive attitude of (manufacturer) make this difficult'.
- '...contractual infringement with original vendors'.
- '...mainframe is a new range and I suspect that spares may be difficult to obtain'.
- '...unable to knit software and hardware together and parts availability not comprehensive enough'.
- '...as yet I am not fully convinced they can do what they promise'.
- '...limits criticism against manufacturer/supplier'.
- '...not a very successful experience'.

C. 'HAVE YOU CONSIDERED USING THIRD-PARTY MAINTENANCE'? NO

- '...present service is satisfactory'.
- '...third parties cannot maintain sufficient spares of the equipment or offer significant technical advantages'.
- '...system recently installed'.
- '...better service from manufacturer'.
- '...supply of spares not normally good enough'.
- '...extremely satisfied with (manufacturer's) hardware support'.
- '...I prefer the backup which is available to the manufacturer'.
- '...too many problems with engineers'.
- '...manufacturer's engineers are well trained and up to data. Service is more than satisfactory'.
- '...better service from vendor direct'.
- '...too many problems during system upgrades'.
- '...prefer to stick to the manufacturer as then there is no conflict and the third party cannot necessarily maintain everything'.
- '...only trust the manufacturer'.

- '...too many problems in the market. Cut-throat prices are leading to poorer service'.
- '...we chose our hardware on the basis of local support and are reasonably satisfied'.
- '...can envision problems at the hardware/software interface'.
- '...because of the spares situation, which is bad enough direct from the manufacturers'.
- '...to make their profit they must skimp on quality. Also, they are not given 'trade secret' information by the manufacturer and so cannot diagnose faults'.
- '...not on the mainframe due to satisfaction with existing service and leverage opportunties'.
- '...worry over spares availability, particularly on older and brand new hardware'.
- '...company policy'.
- '...I have no idea what is available'.
- '...manufacturer must have better spares availability'.
- '...our equipment comes mainly from one supplier'.
- '...satisfied with the manufacturer'.

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