

Product Positioning Case Study

PPM Computers

The board of PPM computers is reviewing the direction of the business having asked a group of junior executives to prepare a marketing plan for the future. The company currently sold a range of personal, networked and workstation computers through high street outlets, direct mail and specialised distributors; and direct to its major customers. PPM had been hit by the overall decline in the growth of the personal computer market and the greater pressure on profitability. The trends in company sales and profitability are in Table 2A.

Table 2A. Sales and profitability of PPM Computers for the last 3 years (all figures in £ million, with year 3 most recent).

	Year					
	1		2		3	
	Sales	Profit	Sales	Profit	Sales	Profit
PC sector	50	8	65	6	72	5
Network	10	2	12	2	14	2
Workstation	10	3	17	5	25	7

The decline in profitability reflected an industry-wide change in profitability and return on equity which had been below the average for manufacturing industry over the last 4 years. This compelled PPM to pay more attention to marketing. The PPM board were asking their expert team to provide a detailed analysis of where the company should concentrate. This marketing plan was to include specifications of customer segment, product benefit, distribution channels, salesforce numbers and skills, promotional planning and creative component, and product pricing. The team was also asked to provide an analysis of the likely return to the company from the marketing plan.

The international market and main competitors

Though there had been substantial growth in all sectors during the last 10 years, certain market sectors had performed better than others. The workstation and personal computer (PC) sectors had grown most rapidly; mainframe and minicomputers sectors had expanded more slowly. Computers had become steadily more powerful as new microprocessor variants came available. Speed had increase from 0.1 MIPS (millions of instructions per second), to a projected 250 over a 10 year period. Microprocessors and memory storage had also continued to fall rapidly in price with memory costs falling 50 fold over the same 10 year period. The increasing power of microprocessors and the declining costs of memory had tended to blur the barriers between the sectors, with the increasing power of microprocessors meaning that the current PC has the power of a ten-year-old mainframe. Nevertheless particular market sectors with specific service requirements could continue to be defined. The main characteristics of each of the sectors are in Table 2B.

Table 2B. Main segments of the computer market.

Type	Characteristics	Customer	Software required
Super	V. high calc. speed	Military Govt institute	Tailor made

Main	Large storage many terminals	Big company. system/modified	Complex
Mini	Data storage/ separate terminals	Division or medium firm	Specific package
Work- station	High speed calculations	Design/ Engineering	Package
PC	Small unit	Small firm/ individual	Standard package

Increases in processing power and declining data storage costs had also meant a substantial growth in applications. Some of the most rapid growth has occurred in software, peripheral devices of various types, and a considerable potential expansion foreseen in electronic publishing and multimedia, the interaction of computer and graphic systems. Total world markets for hardware were forecast to grow by around 10 per cent, year on year, but software was likely to grow at around 25 per cent per year. This suggested that the world market for software would equal hardware in the middle of the 1990s and then rapidly surpass it.

The total market for peripherals was also forecast to grow by around 25 per cent per annum with increasingly sophisticated displays, data storage and printers creating a world wide market of \$20 billion by the middle of the 1990s. Combinations of hardware, software and peripherals were likely to produce major new markets. By the mid-1990s, electronic publishing systems were likely to double from around \$5.5 billion in the late 1980s; multimedia from \$0.2 billion in the late 1980s to \$12.0 billion by the middle of the Nineties with spectacular growth in the consumer sector - the expansion of virtual reality games, and major increases in business applications such as training and presentation. Surveys of the most required corporate software in the late 1980s, showed that graphics, communications, electronic mail, and design systems were the most asked for additional software.

Current product range

PPM computers sold the bulk of its computers in the UK. The company had considered export, but felt resources were too limited to effectively compete in world markets. Nevertheless, the percentage of export sales had grown from 1 per cent 5 years ago to a current 6 per cent. The structure of the UK market is shown in Table 2C.

Table 2C. Percentage market shares by product range in UK.

Company	PC market	Network	Workstation
Amstrad	25	3	
Olivetti	10		
Tandon	15	5	
IBM	20	10	15
DEC	25	15	
HP	15	35	
PPM	5	3	10
Apple	10		
Xerox	6	15	

There was little seasonality in all sectors of the computer market with the exception of the summer period from June to September, when sales fell to very low levels. PPM had always planned around an 8 month year, and attempted to achieve their sales budget

within this period. Such seasonality naturally had important implications for their promotional planning which followed the sales seasonality. The current product range consisted of the three core products, listed here.

Personal computer: PC 640. Operating with 386 microprocessor, 1 disc drive, range of hard disk options from £899 in price.

Network computer: X912 486 microprocessor. Unix and MSDOS compatible, 1 disc drive, range of hard disk options from £1699 in price.

Workstation: Y4000. Pentium (double) 2 disc drive, range of hard disc options from £2999 in price.

PPM concentrated on maintaining a low price route to gain market share. The company used Far Eastern manufacturers for all product ranges and did not manufacture in-house. A worrying consequence of this was that the company saw significant fluctuations in stock and was often out of stock of the PC and workstation ranges. The comparison between PPM and its main competitors (PPM based 100) is in Table 2D which shows that PPM is substantially below the competition in pricing especially in the workstation segment. The marketing team has the freedom to suggest new price structures for all the ranges.

Table 2D. Retail or dealer prices in UK on base of PPM =100.

Company	PC market	Network	Workstation
Amstrad	115	130	
Olivetti	125		
Tandon	145	155	
IBM	165	185	225
DEC	180	200	
HP	175		185
PPM	100	100	100
Apple	205		
Xerox	165	175	

The company had a limited service network - its distribution outlets handled the majority of problems. Failure rates were low during previous years, but had risen steadily in the current year, and had become a particular problem for the PC range with rates rising to 5 per cent in the final quarter. This limited service support was because the company used subcontractors for the majority of its servicing and manufacturing. It had continued to emphasise its sales and marketing departments as the key elements of the company. At present there were four company directors; the managing director and founder, a sales director, marketing director and distribution director. The managing director was responsible for liaison with the subcontractors.

Current distribution

The three product ranges used different distribution channels. The PC range was primarily sold through high street outlets, whereas the balance of the networked system was handled through distributors. The physical distribution of the company was handled almost entirely by road haulage subcontractors. PPM continued to use mail order direct from the company for the workstation system. The importance and number of distribution intermediaries are in Table 2E. The pattern of distribution for personal computers showed that the company was broadly in line with others in the personal computer market, the nationwide structure of which is reflected in Table 2F.

Table 2E. Distribution structure of PPM.

	PC	Network	Workstation
High street outlets	1000		
% total sales	85		
Dealer numbers	30	45	
% total sales	5	85	
Mail order outlets	15		
% total sales	10		
% Direct from factory		15	100

In comparison with competitors, PPM was weak in its dependence on dealers for the promotion and sale of network products, an increasing percentage of which were sold by the major companies on a direct basis. Apricot for example, achieved over 60 per cent of its total sales on a direct basis. The reliance on mail order to establish contact with the main customers of the workstation range was another competitive weakness - other companies had highly trained salesforces to demonstrate and install systems to customers' specifications.

Table 2F. Distribution patterns of personal computers by outlet and value by year. Percentage of total sales by outlet type.

Type of outlet	1990	1995
Electrical goods retailers	25	25
Independent specialists	13	22
Specialist computer multiples	12	16
Mail order	4	3

Supporting the distribution channel

Each distribution channel required a specific type of support. The PC range was sold through both high street outlets and dealers. Of these, the high street retailers were the most straightforward. They operated on a gross margin of 40 per cent, and demanded promotional investment in mainstream computer magazines. The dealers that handled PCs looked for sales support as the most important resource that the supplier could provide. The company had two sales representatives for these dealers and three that were responsible for negotiating with the high street multiples. Neither of these sales teams had been properly trained or integrated; the company was unsure how many sales representatives were needed in this area, and about the exact job description. Currently each of the sales representatives cost around £20,000.

The network range was mainly serviced through dealers. The potential market for the network product was firms with more than 200 employees: an estimated 12,000 outlets. Currently, the company employed three sales representatives in this area to support the dealer network; each cost around £25,000. Their exact job had not been properly defined and all three had limited training. In contrast, PPM's main competitors had spent considerable sums annually on training. It was estimated that new recruitment might be necessary to achieve the necessary skill effectively to service the dealer network. A small survey of the dealer network revealed that to service corporate customers effectively, the company must provide a sales representative for every 100 potential clients. The workstation range, sold direct to the potential customer, employed five sales representatives to service an estimated 3,000. Trade sources suggested that this was

totally inadequate; the detailed nature of the selling task demanded that sales representatives concentrate on a limited number of customers, with 60 being the upper limit.

Sector analysis

PPM had carried out detailed market research on the various customers that the company serviced, and their expectations for improved product benefits.

PC. The customer for the PC was the small business and home user. Typically the buyer was around 30, male, and had some computer knowledge. Customers were quite rapidly changing their computer products as new improved systems came along, but thought - in quite great detail - about the type of machine they required before making a purchase. The required product benefits were: simplicity of use, reliability, range of bundled software, comprehensiveness and usefulness of manuals, ease and range of attachments, price, and availability and speed of servicing and the supply of consumables (discs, printer ribbons). The comparison between the PPM product and the main competitors on these key criteria had also been analysed and the results are in Table 2G.

To upgrade the performance of the PC would require a varying level of investment. The big decision that the company had to make was whether to upgrade the current microprocessor to either a 486 or a Pentium base.

Table 2G. Comparison of the PPM PC product range with the competition (1 best, 9 worst).

Factor	PPM	Amstrad	Olivetti	Tandon	IBM
Simplicity	3	2	2	6	4
Reliability	6	3	2	3	2
Software	8	5	5	5	8
Manuals	7	4	2	3	2
Attachments	6	6	5	4	4
Consumables	4	4	3	3	3
Service	9	8	5	5	4
Price	2	3	4	5	7

The trend in the market was favoured a concentration on these faster machines, but there was the inevitable cost implication. Either of these ventures would mean discarding its low price policy to a certain extent. The estimated costs to modify the PC were as follows. Improved simplicity £0.5 million, reliability £0.6 million, software £0.5 million, manuals £0.1 million, attachments £0.1 million, consumables £0.1 million, service £0.5 million, 486 upgrade £0.7 million, Pentium upgrade £2.0 million. The simpler of these changes - such as improved manuals - could be rapidly introduced, but the re-engineering modifications required for the 486 or Pentium chip would take at least 6 months.

One option, not yet explored, was subcontracting the entire PC operation. Though PPM currently assembled all the computers sold, the company already sourced a range of components from the Far East. A possible option to improve costs would be to transfer the entire production to a Far East manufacturer and merely sell under a label. The implications of such a policy change would be considerable. The contribution of PC manufacture to existing manufacturing overheads were substantial and removing this production line might mean that other product ranges became less viable. Subcontracting would also mean that the company would have to commit to significant volumes to achieve adequate economies of scale, and would therefore be unable to rapidly modify products as

market demand shifted. The company had also fallen behind the industry average in promotional expenditure as shown in Table 2H.

The pattern of expenditure varied from company to company. Some - Tandon and Olivetti - concentrated on exhibitions and magazine advertising; others - Apple, Amstrad and IBM - spent a large proportion of their total budget on television. It was considered that press and magazine advertising were more appropriate for products aimed at the mass market; television was often thought important for the corporate sector. The company had also previously used exhibitions for the PC market. On average a national exhibition cost £15,000 per day, when all the costs were included such as stand, personnel and demonstration equipment. There were many exhibitions available to the company, with a total of 102 days per year in the UK alone. The sales effectiveness of such exhibitions had been difficult to estimate, as purchase decisions were made several weeks or months after the exhibition, and relied heavily on the salesforce for effective follow up.

Table 2H .Main trends in promotional expenditure in £000.000 by value, with year 3 the most recent.

Company	Year		
	1	2	3
IBM	15	22	37
Amstrad	18	27	30
Olivetti	5	7	7
Tandon	8	9	7
Apple	15	18	20
PPM	10	7	5

The most commonly used promotional channels were magazines, of which there were over 40 by the beginning of the 1990s. A sample of the specialist channels included Practical Computer with a monthly circulation of 300,000 and a page, colour, price of £3000; Personal Computer with a monthly circulation of 470,000 and a page price of £4500; Computer World 250,000 (£2500); and Global Computer 150,000 (£2500). The company could also use other business magazines or general newspapers read by business personnel. The costs and frequency of such channels are provided in the case study in Chapter 1 (Table 1.G and discussion page 12). None of the current companies used direct mail to promote their PC products; there were around 4 million households nationally in the target market with an average cost per mail item of £0.40. Sales promotion was becoming increasingly important in the industry. Many companies were providing product in bundles, combining printers and software to add value. Each additional item cost around £50.

PPM considered each of the three divisions a separate profit centre, with the unit pricing the product according to market conditions. Each unit shared a common central manufacturing fixed cost of £12 million (current estimates) and effectively 'bought' their products from the manufacturing plant at the variable manufacturing cost. For the PC market the costing and pricing structure for retail, wholesale and manufacturing cost was as follows: Retail 100; wholesale 65; variable manufacturing cost 35. The personal computer market was considered to have a relatively high price elasticity, of around 5. The degree of price competition in the market had tended to increase over the past 3 years as sales growth had slowed and product sophistication had expanded.

X System. The main purchaser of the network model was the medium sized company.

Unlike the PC sector, different types of company required varying performance criteria, the most important are in Table 2I. PPM concentrated on the provision of products to the financial services sector - this had been one of the most rapidly growing sectors of the market and the most likely to yield substantial profits in the future. But market research showed that PPM was failing to meet the key product requirements in this sector (Table 2J).

Table 2I. Key purchase criteria by sector (OS=operating system).

Rank	Manufacturing	Retail	Finance	Transportation
1	Power	Power	Service	Power
2	Service	Service	Power	Service
3	Easy to use	Network	Ease of use	Cost
4	OS	OS	OS	OS
5	Network	Ease of use	Network	Network

Table 2J .Comparison of PPM with other companies in quality of service provision to financial services sector on 1-9 basis (1 excellent, 9 poor).

	PPM	Apricot	DEC	Xerox
Customer service	9	4	2	1
Performance	5	4	2	2
Ease of use	4	5	1	3
Operating system	3	3	1	2
Connectivity	6	3	2	2
Price	2	4	4	6

PPM had carried out the same type of analysis as for the PC on the potential costs of upgrading the systems to meet the comparable competitors. The company found that it would cost around £0.3 million to improve customer service; £0.4 million to improve performance; £1.0 million to improve ease of use; £1.0 million to upgrade the operating system; and £0.5 million to improve the connectivity of the system to others.

Companies in this sector tended to spend little on media investment and concentrated on building an effective salesforce to convince sophisticated buyers of the benefits of their particular products, and to provide the specialist software programming advice they required. PPM lacked such support, which was largely responsible for the high costs of meeting the competitive profile. Nevertheless, the trend towards higher media and below the line investment had been marked over the last 2 years, and PPM's share had collapsed. Total expenditure had risen from £2.5 to £5 million over the last 5 years: PPM's expenditure had remained constant at £0.3 million.

There were a number of specialist publications that serviced particular sectors of the market, and a growing number of small exhibitions aimed a limited audiences. These had been particularly effective at identifying likely prospects and generating business. There were 12 main alternatives with circulations ranging from 80,000 with page costs of £3000,

down to magazines with restricted specialist audiences of 3000+ where page rates averaged around £800.

Most companies used direct mail to potential customers. PPM had concentrated instead on the dealer network. With 12,000 or so potential customers in the UK, direct mail would not be expensive - about £0.80 per mail item (higher than the PC market because of the need for better quality print and response mechanisms). The X System division of PPM followed the same pricing policy as the PC division, though the structure was slightly different - dealers made a higher margin than PC retailers. To offset this, manufacturing margins were substantially higher. From a customer price of 100, and a dealer price of 58, the variable manufacturing costs would be 32. Price elasticities were much lower in the network market than in the PC sector. Customers expected to pay high prices for premium service. It had been estimated that the elasticities operating in the market were of the region of 2. No company currently used any sales promotional techniques.

Workstation. The workstation market was restricted to high speed engineering and design uses. A recent survey revealed that the prime requirements, in order of importance, were very different from those of the network system: speed, power of calculating system, reliability, specialised software, service support, and finally price. PPM had also completed a survey similar to the one carried out for the other two systems. This revealed that the company was suffering in relation to the competition in a number of key areas. These are summarised in Table 2K.

Table 2K .Comparison of PPM workstations with other leading companies in the workstation market from 1 to 9 (1 good to 9 poor).

Factor	DEC	HP	PPM
Speed	2	3	3
Power	4	3	6
Reliability	2	2	4
Specialised software	3	1	5
Service support	2	2	5
Price	5	4	1

The PPM analysis on investment levels to improve competitive advantage revealed the following likely costs: improved speed £7.0 million; power of calculating system £0.8 million; improved reliability £2.0 million; specialised software £1.2 million; and service support £0.7 million.

The promotional channels used by competitors concentrated on a sophisticated and highly trained salesforce. Hewlett Packard, the market leader, considered that a salesforce/ client ratio of 1:120 was the highest acceptable level. Because PPM sold all the workstations direct, it did not have to provide a margin for the distributor. But manufacturing variable costs remained high over the past 3 years, though they were likely to drop in the following year to provide a cost pattern of customer price 100, variable manufacturing cost 48. Price elasticity in the workstation market was low, and continued to be lower than for the network market.

PPM carried out intermittent market research but there was a general lack of information in key areas. An essential recommendation involves the creation of an effective marketing information system.

Action

As the marketing management of PPM computers, what segment should you be concentrating on?

What are the crucial product benefits that you should be supplying?

How should you reach these customers?

What information should you have to control the progress of the marketing plan?

How can you build competitive advantage?