Inventory Management Case Study

Xenon SA

Changes in the product range of Xenon SA a supplier of sophisticated components to industrial lathe users in France, and the effects of severe economic recession, was forcing a re-evaluation of the marketing plan. Founded in the early 1920s, the company remained a medium sized independent operation, based near the large industrial town of Lille.

By the end of the 1980s it manufactured three product ranges. Historically, the engineering range of standard lathes - used throughout the north-east of France, Belgium and Holland - made up the majority of turnover, though a declining proportion of profit as the company faced increasing competition from low-cost Far Eastern suppliers. The product range had high volumes with long product cycles, but margins that were lower every year as the company cut prices to meet Far East competition.

The other two ranges were more specialised and required higher levels of investment in new product development, with shorter product lives and higher returns. The first involved specialist products for the automotive industry, and Xenon supplied Renault, Peugeot/Citroen, Matra, Ford in Belgium and Daf in Holland. The second range was more recent and had been developed to provide specialist cutting heads mainly for the high speed train industry in France, with recent small orders having been received from Germany. Margins in these two sectors were five or six times higher than in the traditional engineering sector in which the company had started.

Xenon's customers varied considerably from sector to sector. The general engineering sector supplied customers from the very small - employing less than five, to the largest of engineering enterprises. Few of these companies held large quantities of stock, and expected delivery within 72 hours of order. The disadvantage of the market was that need for the cutting equipment was directly related to the customers' production. As many of the customers had a very erratic, and rarely planned, production flow, this had severe consequences on the stock planning of the cutting equipment manufacturer. The number of companies in this sector had steadily declined over the years, and in the current year Xenon was supplying 125 companies, approximately 80 per cent of the total in the sector. Typically, the company had held 4 months stock of all product lines A-J. The pattern of sales over the last year is provided in Table 8A.

Table 8A. Product line sales in units by month.

	1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***
A	20	32	45	34	56	21	22	76	45	54	15	87
B	45	65	112	22	13	89	125	23	15	78	32	25
C	216	245	165	301	143	167	112	89	77	274	165	121
D	121	74	62	12	132	145	156	72	54	23	76	112
E	11	21	32	18	27	24	45	61	67	69	43	20
F	321	345	345	321	303	307	311	367	310	312	317	319
G	7	11	9	65	45	35	14	18	21	87	88	23
H	27	45	52	67	28	67	49	41	52	58	34	43
I	889	902	756	621	134	521	432	301	287	276	266	251
J	121	105	112	142	134	137	127	150	162	100	98	112

These product lines - and set up manufacturing costs - varied considerably in price. The

finance cost of holding stock was the same for all products at 20 per cent per annum. With the flexibility of the production process, any of the basic product range could be manufactured within 2 days. The details of the various standard product ranges are in Table 8B.

Table 8B. Set up, production costs and customer price in FF for product lines

Product	Set up cost	Variable cost	Price
A	3000	150	450
B	3750	175	520
C	3150	180	320
D	3050	130	390
E	4300	110	520
F	8000	250	850
G	1100	85	425
H	4500	175	600
I	2400	200	660
J	4500	300	800

Supplying the motor car and train industries was in some ways more predictable, but in other ways more demanding. The purchasing requirements were defined well in advance by both rail and automotive manufacturers, but once agreed the company had to meet time, budget and performance specifications of new cutting tool design. There were no standard set up costs, or standard prices, as each product line varied enormously in specification.

Production

The company still manufactured at the original plant, which had grown slowly over the years. Continuing investment in manufacturing systems had meant that the company had low fixed costs of production and the ability to rapidly switch between the various production items. Xenon maintained a very detailed product inspection process which involved using X rays to ensure that each of the cutting heads would stand up to their intensive use in the factory. For the recent expansion into the motor and railway sectors the company had invested heavily in an integrated computer aided design and manufacturing system. This investment had meant a negative cash flow over the last 2 years.

Distribution channels

Mostly direct, though a new group of wholesalers was establishing itself to sell the more basic industrial components. These distributors were prepared to hold stock of all the Xenon range, but demanded a substantial price margin of 14 per cent. All these wholesalers had sales representatives calling on customers weekly. Xenon at present had not decided what products, if any, should be offered to the 15 wholesalers interested in holding the product range.

Physical distribution

The basic products could be distributed via a range of parcel delivery services, with the more complex cutting equipment delivered in company owned vehicles direct to the factory, essential to meet the just in time production requirements of the major customers.

Salesforce

As the company became more specialised in supplying sophisticated equipment,

requirements of the salesforce had also changed. Selling to the engineering industry meant taking orders and making sure delivery was on time. Sales representatives called on each of the customers weekly to ensure that they got orders in a competitive and rapidly changing market. There was little technical information for the salesforce to provide about a very slowly changing product range; and one that gave few problems to customers highly experienced in their use. Currently Xenon employed four sales representatives to service the traditional market, reporting to a sales manager. Each sales representative received a flat rate salary and benefit package of 200,000FF per annum. There was no commission paid as it was considered inappropriate for the market. The sales manager's cost to the company was 300,000FF per annum.

The motor trade and railway manufacturers required detailed project proposals from suppliers, with design layouts and specifications for all the particular and individual cutting heads that they needed. The sales engineers would then have to supervise the development of prototypes and establish testing programmes to ensure that the specifications were met. At present, the company were using two of the production engineers from the factory as technical sales representatives. Though both were technically extremely competent, they had limited sales skills and could only handle discussions in their native language.

Promotion
Xenon relied on its salesforce for most of its promotional activity, apart from the use of directories and the membership of the appropriate trade organisations. Recently the company had considered whether it should not be attending some of the more prestigious trade exhibitions so as to improve its market presence at the sophisticated end of the sector. Such exhibitions were extremely expensive, with estimates ranging from FF1.5 million to FF1.7 million for the entire costs of a single exhibition appearance.

Action

Have Xenon made the right decision about moving into the higher technology area?
What are the implications for the development of the organisation?
As the company is under pressure to improve the finances in order to fund the development of the new product lines, what changes would you institute in the management of stocks and production schedules?