Engineering

Understanding the Customer

Opportunities for Engineering Companies

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The British engineering industry is being confronted by a wide range of challenges in the early part of this decade. To a large degree these problems are the result of the decline in business investment in the engineering and manufacturing sectors since the late 1990s, with engineering business investment expected to fall even further this year:

- Foreign direct investment into manufacturing projects in the UK has been in decline since 1997 and the climate for manufacturing in the UK is no longer seen as favourable compared to elsewhere in Europe.
- Output has dropped by nearly 25% over the last two years in electrical engineering and by about 12% in mechanical engineering. Export demand is slowly rising, however, there is still a huge gap between actual orders and necessary export to improve the overall situation in the sector.
- Rising labour costs and the long-term under-investment in the country's transport infrastructure is negatively affecting manufacturing's competitiveness in the UK.
- Productivity is lower than in for example France, Germany or the US. There are many world class companies in the UK with high productivity, but on the other hand a long under-performing tail of companies pulls the average productivity rate to a non-competitive level.
- The industry is facing a shortage of intermediate and high-skilled work force.

The UK engineering industry must critically assess the current situation and develop a clear strategy identifying where future growth will come from

These facts show that the UK engineering industry and its main players must critically assess the current situation and develop a clear strategy identifying where future growth will come from. Based on our experience in this industry and our continuing discussions with global engineering companies we have identified several key areas, which need to be part of this strategy to ensure long-term growth:

- Stronger focus on innovation
- Export growth
- Optimised pricing and pricing processes

Stronger Focus on Innovation

Excluding expenditure for defence research the British government spends less on industrial related research than countries such as France and Germany. Additionally, many UK businesses devote fewer resources to innovation and R&D than their European competitors. The number of patent applications to the European Patent Office from the UK is now much lower than for many other European countries on a per capita basis. According to a survey carried out by the European Commission, less than 16% of UK companies' turnover came from new or renewed products in 2001. The EU average was more than 20%.

Engineering companies must become more market-driven and less technology-driven

These facts speak for themselves - engineering companies must become more market-driven and less technology-driven. Customer needs and value structures far too often take a back seat. One example: An industrial company had spent two years developing a prototype of a new measurement device for the logistics industry before talking to customers. The device could log half a dozen different data sets along the supply chain i.e. the time a product spent in different steps of the supply chain, external conditions it had been exposed to etc. The engineers were extremely proud of this technical achievement. It turned out, however, that the customers only needed two of the six functions because the others were only relevant for niche applications and there was no use for most of the data collected. The product was far too over-engineered and the willingness-to-pay stood in no relation with the production cost of the device. Several hundred thousand Pounds Sterling in R&D money had been wasted.

The following aspects are key elements in a critical review of a company's current product line:

- Products must be developed with a clear focus on value-to-customer and willingness-to-pay.
- The markets must be segmented and this segmentation often not only has a consequence for products, but also on organisation. For example a clear organisational split between standard and systems business in the sales organisation is critical.
- Development of a modular concept, which allows customers to upgrade their products as their needs increase and ensures a higher degree of customer loyalty and relationship.

- Development of bundles driving the organisation towards selling systems rather than individual products (for example by including handling systems).
- Critical assessment and streamlining of the product portfolio by using the "double 80-20 rule", which states that 96% of a company's revenue and profits come from 36% of its products. However, the converse of this means that 64% of the total product range only account for 4% of the business, which stands in a huge conflict with their costs. Not only the current products, but also the entire after sales service range must be analysed to ensure that the right products are offered, the customers' willingness-to-pay is understood and exploited, and differentiated services are offered.
- For product development the target costing approach (see chart 1) has proven to be highly effective. Rather than developing a product by assessing its cost, adding a target margin and consequently arriving at the market price, the target costing approach takes a more market and value-orientated inverse approach. The maximum achievable price in the market from the customers' perspective is assessed through sophisticated pricing research and the target margin deducted from that. This tells the company exactly how much cost the product will be allowed to incur. Customer value analysis will then help to identify the right areas this budget must be spent on to maximise the product's value-to-customer.

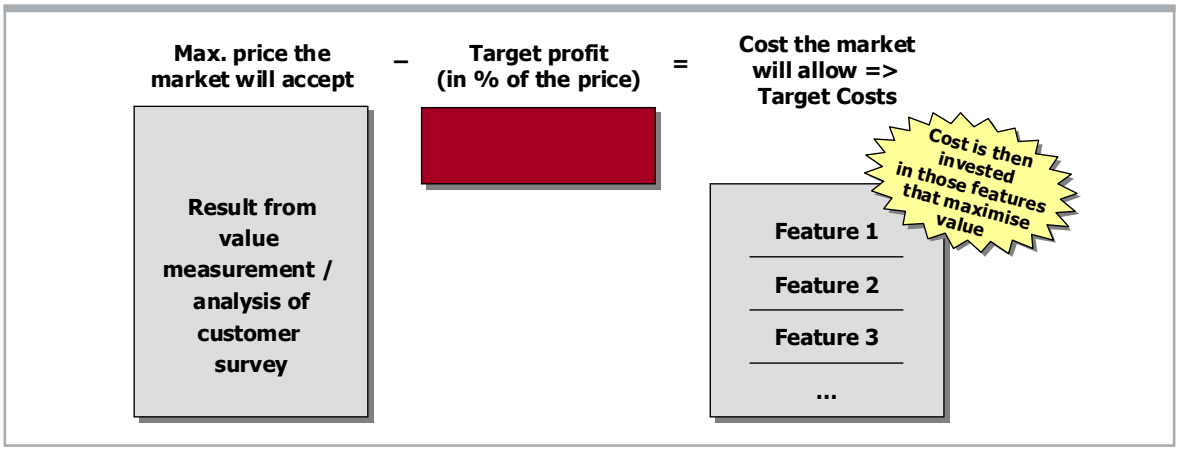

Chart 1: Target costing approach

Export Growth

Significant impulses for future growth will only come from an improvement of the industry's position in the export market

Significant impulses for future growth for the British engineering industry will only come from an improvement of its position in the export market, especially outside of the EU. Markets in Asia and Eastern Europe are growing significantly, especially the middle segment. A conscious decision must be made if and in which form these markets and the respective segments will be approached.

A key challenge is to find the right partners in difficult markets such as China or India, where success without local partners is nearly impossible. Therefore, it is necessary to conduct comprehensive Due Diligence to identify the right partners either for a joint venture or an outright take-over. This Due Diligence must not only focus on legal or financial aspects, but must include an analysis of their market position and future market potential, so-called Market or Commercial Due Diligence (MDD, see chart 2). MDD aims at gathering "hard facts" on the company's future success to allow for a more reliable evaluation of its value.

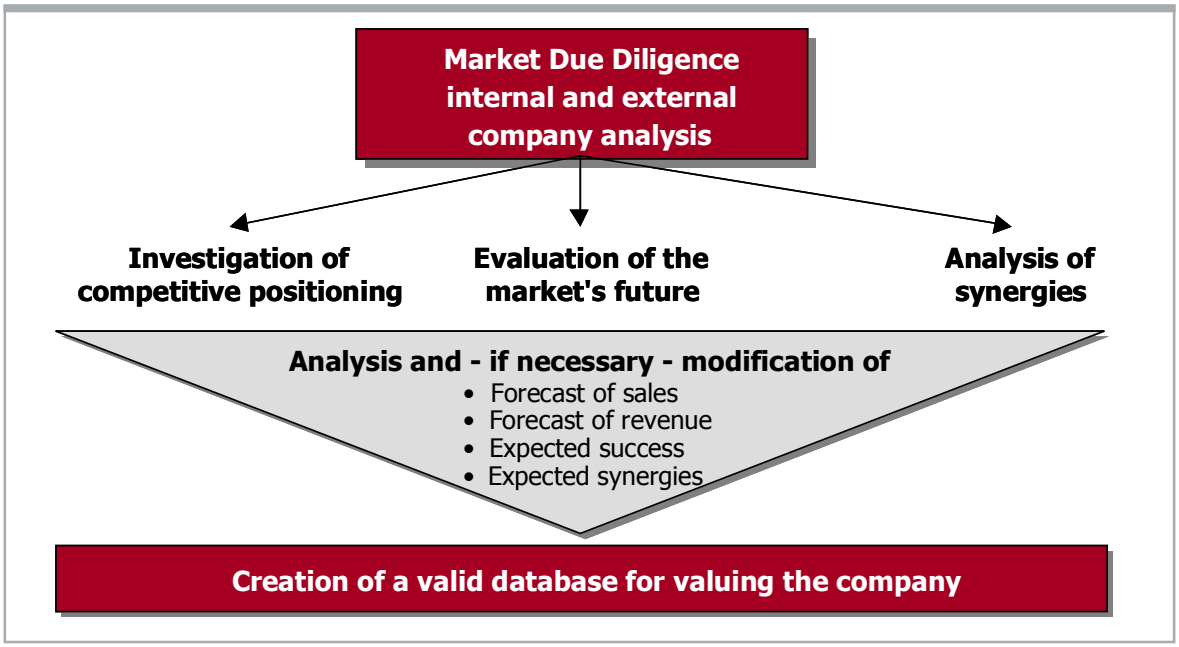

Chart 2: Market Due Diligence

More globalisation also means that productivity needs to increase. This leads to the make or buy decision. The trend in many other industrialised markets, especially in the EU, is to move more towards "buy" and focus one's own resources on the value end of the market, in particular R&D, service and developing customer relationships.

Optimised Pricing and Pricing Processes

Optimised pricing and pricing processes can increase return on sales by up to two percentage points

Price is the biggest profit lever. It is therefore not logical that the majority of engineering companies spend by far more resources on cost optimisation, the second profit driver, than on price optimisation. In our experience, optimised pricing and pricing processes can increase return on sales by up to two percentage points. Chart 3 shows the key elements of a pricing process.

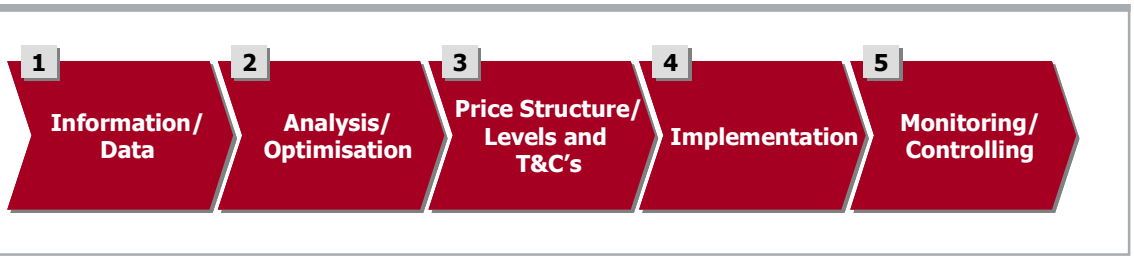

Chart 3: Elements of a pricing process

Optimising a pricing process in particular means:

- Improving the quality of key decision-support data and of its analysis
- Optimising price structures and levels
- Fine-tuning terms and conditions
- Introducing rules and guidelines for easier pricing decisions
- Improving actual price achievement in the market
- Developing more efficient measures for price controlling and monitoring

Given the previous remark on globalisation, this needs to be done on a global basis.

Based on our experience, the following examples are quite representative for the opportunities within better pricing and pricing processes:

- Exploiting the potential of selective price increases. These are usually not possible for core products, but more on peripheral products and services. Price increases also need a very differentiated approach, as they will be different by customer type, channel and country. It should also be kept in mind that a price increase can be more than simply increasing the actual list or net prices by X%. Stricter payment conditions, a

delayed price decrease or the unbundling of certain elements or services are also price increases.

Improving pricing processes has several advantages over cost cutting in terms of profit improvement

- Implementation of supporting measures to achieve higher prices, such as anti-discount incentive systems for the sales force, which are based more on quality of sales rather than pure volume, argumentative "story lines" for the sales organisation to justify price changes, and performance-based discount systems.
- Development of a central organisational pricing unit, which is responsible for all strategic pricing decisions, particularly on a global basis, and ensures implementation of an optimal pricing process.

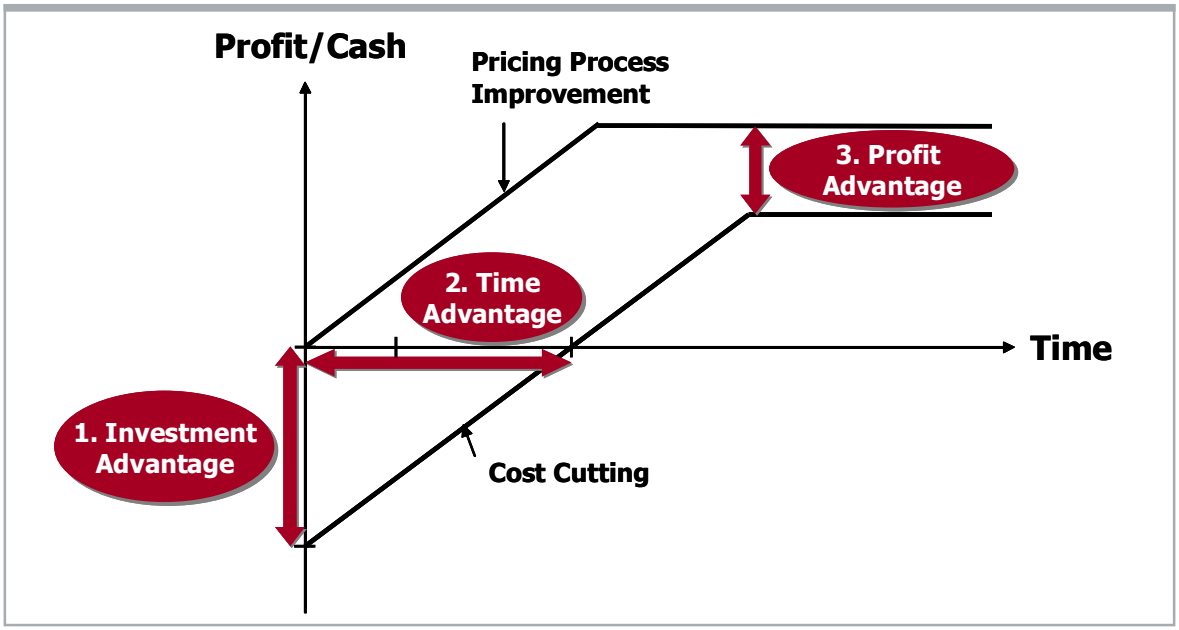

Chart 4: The three advantages of pricing process improvement vs. cost improvement

As chart 4 shows, improving pricing processes has several advantages over cost cutting in terms of profit improvement:

- Investment advantage as no expensive up-front investments such as redundancy packages or plant closures are necessary.
- Time advantage as effect of price changes and quick wins ensure an immediate impact.
- Profit advantage as, in our experience, the impact on the bottom line is higher.

These changes in procedures and mentality are of course not easy to achieve and require an active forward-thinking approach

Improved pricing processes are especially important once the innovative power of an organisation increases (see our earlier point above). Many companies make the mistake of under-pricing a new innovative product. As upward price corrections are only very difficult to implement, revenue and profits are lost forever. The same is true for over-pricing innovations, as this can quickly prevent a company from exploiting the full market and growth potential from its new products.

Improvements in the above stated areas are essential if the British engineering industry wants to play a significant role in the global industrial markets in the coming years and decades. These changes in procedures and mentality are of course not easy to achieve and require an active forward-thinking approach and a reversal of the current trend to under-invest.

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