

## X - Engineering

# Beyond the walls of your company

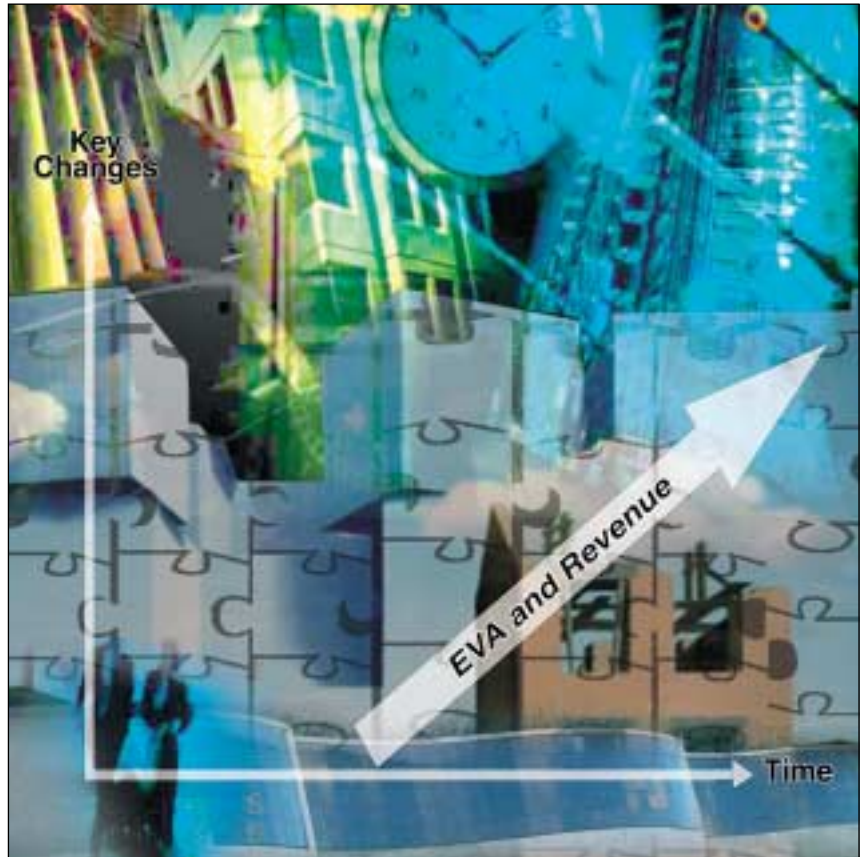
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In contrast to the concept of Re-engineering, which is done principally within the walls of the company, X-engineering is effected across the boundaries between a company and its customers, partners and suppliers. This article presents the success story of an Indian machine tool company that has radically changed the rules of the business to meet compelling customer propositions through redesigning their shared business processes.

Every organisation wants to increase its shareholder value and profits. Hammer and Champy have shown that the path to profits is paved with process. At Machine Tool Building Company (MTBC), Hubli (Karnataka), they learned that compelling forces required the company to change radically in the ways it dealt with its customers, competition and change.

### A success story

At MTBC, they redesigned the work taking a process view. They did not confine themselves to the walls of the factory, but took the processes beyond those walls to



their customers and suppliers. The difference between Re-engineering and X-engineering is that Re-engineering is done principally within the walls of the company; X-engineering is done between a company and its customers, partners and suppliers. X is used to denote across the borders. The company achieved it through developing a new set of skills to do a deep process harmonisation across boundaries and a better understanding of how its customers and suppliers operate and engage with their partners in redesigning its shared processes. "Customer Relationship Management" and "Supply Chain Management" smoothed out the rough edges of processes at the engaging interfaces.

The new processes were completely transparent and managed with openness that seemed foreign in the competitive world. For example, MTBC published a set of bilateral operating rules with its customers, which were accepted by both sides. These rules covered all areas of interface from the time they begin interaction. The customers were involved in deciding the exact design details, specifications, price, and service etc of all the products. At MTBC they did a Wal-Mart and Dell simultaneously - that is, they 'changed the business rules' and 'introduced a lower cost structure'. Their success came by redesigning work around processes.

An example in the airline industry would be customers want to fly more at low costs in clean & punctual aircrafts, conveniently book tickets from their homes or offices, without any frills etc. This is the emergence of low-cost airlines listening and acting on customer expectations. The industry of low-cost airlines is another example of changing the rules and adopting a low-cost structure.

### Gather and digest essential information about your customers

MTBC interacted with over 10,000 customers and listened carefully to every one of them. Then it gathered & digested essential information about customers, and developed discipline & processes to understand customer pull. By developing a unique measurement tool to measure and predict demand accurately the company prepared a scientific vision into the future. After getting to know customers' realities, situations, behaviours, expectations and values it designed processes that responded to customer pull. Caught in the backdrop of the (temporary) closure of the factory the need became imminent for a nimble change.

### Segment customers

MTBC segmented its customers by their expectations and values - not so much by their size, buying or money power. It had built up unique knowledge about its customers and provided equal levels of service to all. Further, it worked on the goal of getting to a single customer segment.

### What is the compelling proposition of each customer (or customer set)

In its extensive market survey MTBC had understood its customers' needs, expectations, values, etc and now had to find compelling propositions. The customers wanted the best quality machines, with just enough features at the lowest price. The company's distinctiveness came from a combination of innovative ideas, least development lead times, fast delivery matching expectation, the best price, the best integration of products and services, and the greatest choice. Having worked hard on quality improvements and rationalisation of

designs MTBC had achieved huge benefits in cost savings and passed on the benefit of these improvements to the customers, which built trust. The company eventually became a model low-cost producer and built distinctiveness on top of price.

### Crawl before you walk and walk before you run

A key in re-engineering is adoption time for the new processes. As long as the mind is set on it change will come. Response cycle times in the human and value chain will determine the rate of change. MTBC used a concurrent method of re-engineering simultaneously in all areas. As customers spoke and the asking was deciphered into product designs, development was concurrent involving the suppliers.

Concurrent engineering produced a remarkable range of new machines in a benchmark development lead-time. The supplier organisations became a part of a larger network with the factory as buyer and its ultimate customers. The overseas customer expectations of MTBC's supplier being certified for quality systems and product quality saw the company being the first machine tool company to be accredited with an ISO 9000 certificate in India.

### Choose partners that can help

MTBC was careful in choosing the partners to work with in delivering value propositions to customers. By defining every industrially dense area as an industry district (not metros only) it built a network of committed partners to distribute the products and provide service. The company changed itself from the concept of a vendor to being an extended manufacturing cell located outside the premises, fully duplicating and responding to the customer pull and quality systems. Even new financial avenues were made whereby the suppliers could get paid in seven days. These alliances were built on common objectives, values and goals; hence the relationships had no interruptions.

### Process redesign

MTBC handled some of the most compelling customer propositions - best quality, superior features, lowest price, fastest delivery, zero complaints and

part failures, response to change and upgrade, new technologies, wider range etc. It chose to re-engineer because it offered hope of getting better and recreating the future, elsewhere, where restructuring was done, it got smaller without the hope of getting better. By redesigning the processes with partners MTBC was able to deliver these most compelling customer propositions and in harmonisation. The most unique processes were retained in-house.

### Customer satisfaction

The biggest lesson MTBC learnt was to be concerned about what will come next when it was doing well. Meeting customer pull on every front the company raised its customer satisfaction index to over 97%. Considering the journey and the distance travelled it was remarkable. Measuring performance constantly helped it to raise the bar and also know what was coming next.

X - engineering requires an objective beyond improved efficiencies. When a company only looks to reduce costs it will miss the opportunity to deliver more value to customers. X - engineering can lead you to conquer the threat substitute processes and products by asking, "What new business proposition might I offer my customer with new processes?" "Whom can we partner with who could help?" Expanding this at MTBC they developed a range of CNC lathes, co-developed (across factory boundaries) milling machines, radial drills, surface grinders and large sizes of machining centers. Using process, proposition and participation together the company was able to connect with its customers to achieve dramatic improvements and create new value. ♦



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