

Introduction: to become the best companies in their

[Business](#), [Industries](#)



Introduction: Evolution of the Manufacturing Strategy Robert H. Hayes Gary P. Pisano (1994, Harvard Business Review) emphasized the need for manufacturing strategies for companies. In the late 1980s, most of the manufacturing companies rediscovered the advantage that comes from good manufacturing and started a variety of activities to improve their manufacturing and in the process become competitive. A lot of companies wanted their “ manufacturing strategy” to become “ world-class” along various measures, to become the best companies in their industries. To attain this goal they typically adopted one or more of a growing number of improvement programs, such as TQM (Total Quality Management), JIT (Just-in-Time) production, and DFM (Design for Manufacturability), lean manufacturing, reengineering, benchmarking, and the ubiquitous team approach. In this research we will try to find out the evolution of manufacturing strategies especially in Mahindra and Mahindra.

We will also try to find answers to questions such as Mahindra is not able to sustain its joint venture partners. Literature Review Manufacturing Strategies and its evolution Both manufacturing strategies with operational objectives plays an important role in achieving the sustainable competitive edge (Ketokivi and Schroeder, 2004). As Brown and Bessant (2003) emphasized the development of capabilities does not simply mean enhancing existing technologies and competencies but also requires disruptive changes in both the external supply chain network and internal organizational structure.

There is a relationship between the manufacturing streams and should be better understood and developed to attain high-level manufacturing performance. Companies should adopt and innovate different capabilities to retain the competitive advantage at every stage. Leung and Lee (2004) stated that a giant company will focus on cost leadership and delivery dependability, while a medium or small-sized company will try to emphasize on quality and flexibility. The manufacturing companies related to bus are currently mostly focusing on building delivery-based competitive capabilities. The important factor is time according to (Krajewski et al., 2010) and focuses on reliability and speed. It also emphasizes on shortening of product development and production cycle times. Thus time is also used instead of delivery in order to broadly cover more time-related issues in the manufacturing environment.

Priority and capability are closely related. Priorities are in a different form than the capabilities (Ward et al., 1998), or goals and objectives (Hallgren et al., 2011) which the different companies want to achieve in the future. Capabilities are sometimes called as realized priorities, which are currently and actually available to the company (Großbler and Grünber, 2006), and it is directly related to the operational performance. Most of the times capabilities are created because they have been previously established as strategic priorities. We will also investigate the capabilities instead of the priorities and which shaped the evolution in manufacturing strategies. Quality has been identified as a key competitive weapon in the global market.

To attain global competitiveness Chinese firms are making a lot of considerable effort in implementing quality management. Choong Y. Lee, Xiaomu Zhou, (2000) compared the manufacturing strategies and business practices between TQM and traditional (or non-TQM) firms in the Chinese manufacturing industry. The differences between TQM and traditional non-TQM firms in manufacturing strategies and business practices were explored in this study by analyzing survey results of 243 Chinese manufacturing firms. The major differences between TQM and traditional non-TQM firms are investigated in several respects as a part of this study. Thus we can come to a conclusion that manufacturing strategy must start with the idea that the primary objective that manufacturing adds value to an enterprise is by enabling it to do certain things better than its competitors can. This will be different for different companies and depends on the sector the company is in.

Every company occasionally lags behind its competitors in some area, but for the long term, it must identify one or two areas—for instance, flexibility and innovativeness in which it try to be the best most of the times.

These capabilities should be ones that is valued by the customers, and they should be ones that are difficult and impossible for competitors to duplicate. Customers might value low cost but as many consumer electronics companies learned during the 1970s and 1980s, that to achieve low cost they have to give away a lot and going offshore does not provide a sustainable advantage because competitors can do the same.

Most importantly, a company must have or develop a plan for building the capabilities it wants to acquire. This is where the question of which manufacturing improvement comes into picture and thus different approaches comes in. A company may decide to use teams, but only after it has cultivated the capabilities that will allow teams to be effective.

Corporate strategy must provide a framework for the selection, development, and exploitation of these capabilities. Since most of the capabilities with the greatest competitive value are in a company's manufacturing organization, corporate strategy must become much more explicit about, and reliant on, manufacturing considerations than in the past. Mahindra and Mahindra:

Company

Overview

´Founded in 1945 in Ludhiana as Mahindra & Mohammed´
Founded by K. C.

Mahindra, J. C. Mahindra and Malik Ghulam Mohammed´
Changed its name to Mahindra & Mahindra in 1948´
Set up as steel trading company´
One of the largest automobile manufacturers by production in INDIA´
Headquarter in Mumbai´
Around 1, 50, 000 employees in over 100 countries across globe´
19th in the list of top companies of India by fortune India 500´
Its major competitors in the Indian market are Tata Motors, Maruti Suzuki, Ashok Leyland etc´
Mahindra has a presence in 40 countries for its tractors´
Automotive business accounts for about 48% in India's utility vehicle market share´
Entered the energy sector in 2002´
In 2010-11 entered in micro drip irrigation also´
One of the largest contributors to the Mahindra Group revenue

is MahindraAutomotive and Farm Equipment Sectors (AFS) which includes 27 businesses, 18subsidiaries and 9 companies´Mahindra & Mahindra won the Deming Application Prize in 2003 Review: Manufacturing Strategy of Mahindraand Mahindra BPR in Mahindra and Mahindra (1994)Why Business Process Reengineering (BPR) started inM&M? Mahindra and Mahindra went for BusinessProcess Reengineering due to manufacturing inefficiencies and Poor productivity. There were long production cycle and most of the time there were sub-optimaloutput. The motive was to increase theefficiency which comes hand-in-hand with a streamlined operation. By paringdown operations and making significant changes in the processes, M&M wantedto achieve faster response time, greatly increase overall efficiency.

Instead of struggling throughorganizational red tape, employees have more time to perform meaningful work. Less time spend working through inefficient organizational structures meanstime better spent in the workplace. Also here was unhealthy work culture andmilitantly organized unions. The phenomenon of corruption was widespread. The managementlenient & often crumbled under pressure thus there was a need of radicalchanges thus BPR was proposed. Implementation of BPR´ In1994 Major Restructuring Program was initiated as a part of BPR in M&M´ UKbased Lucas Engineering System developed the program´ Peopleinvolved in corrupt practices were sacked´ VoluntaryRetirement Schemes were introduced´ Butthe unions refused to co-operate and the workforce could not be reduced´ Stage1:- Restructuring of M&M Group´ Regroupedin six distinct clusters of related businesses as SBU each headed by aPresident•Infrastructure•Trade

& Financial services • Tele communication • Automotive components • Farm Equipment division (Tractors) • Automotive Div (UV, LCV, 3 wheelers)´

Stage2:- Re-engineering the entire layout & processes of working • Cellular Manufacturing´ Multi-tasking through Multi-machine manning´ Reduction in non-productive Activities • Implementation of TQM and Kaizen • Formation of 3 cross functional teams´

Horizon1: Improvement in existing Product´

Horizon2: Up gradation of existing Product´

Horizon3: Development of new Product

Results BPR - M&M´

Igatpuri Plant: Employees declined by 400 but productivity went up by 125 engines per day´

Nasik Plant: 125% improvement in productivity´

Reduction in employee costs In 1994: 12.4% In 1996: 10.1%´

Improve plant's capacity utilization from 45% to 55%

Focus on goals and high efficiency allowed Mahindra and their employees to put more energy towards the products, which improved them.

In addition, better organizational practices and schemes and lines of communication foster improvement and innovation in their business. Thus it makes the business of M more reactive, improved it all round and it can be seen from their results.

Project Scorpio - Integrated Design and Manufacturing (IDAM) (1997)

The Scorpio was an important project for M. M wanted to change its image as a manufacturer of vehicles for rural use and to break into the urban market. Thus as a result, it went all out to ensure that nothing was left to chance in making Scorpio a one-of-a-kind vehicle in the Indian market.

To achieve its goal M set up a new plant at Nashik in Maharashtra to manufacture Scorpio. The estimated cost of the Nashik plant was about \$120

million and had a production capacity of 40, 000 units on a two-shift basis. Some of the strategies adopted by M were follows:- 'Product development process, which was adopted by M to streamline the delivery of a world class Scorpio with zero-defect, trouble-free product to the customer' It focused to cover the entire value chain starting and ending with the customer. This outside-in approach was adopted to ensure that the product is designed around the customer and not vice versa. There was a major restructuring at the team level also. In the old and traditional department structure, the IDAM team consisted of cross-functional teams, co-located in the IDAM Centre in Mumbai. 'These teams had cross-functional strengths and used to cover the product development, from ' Design & Development, Testing & Validation and Manufacturing' to 'Vendor Development and Marketing'. JIT in Mahindra and Mahindra M&M needed to execute JIT at their fundamental plant in Nasik as they knew about the way that JIT approach will help them to work with negligible levels of stock. Their business objective was to make every one of our providers dynamic members" in the creation procedure. They needed that the providers ought to be "empowered" to know about any adjustment in the entire creation process and in the meantime contribute effectively.

This was important to lessen an opportunity to react to a circumstance and enable "without a moment to spare" approach in the creation to process. Objective of JIT at M&M Make every one of our providers dynamic members in the generation procedure. • Suppliers ought to have the capacity to know about any adjustment in the entire creation process and in the meantime

contribute effectively. •Update to best practices for supply systems for 400sellers, 150 vehicles for each day and 1100 sections •Improvement of the renewal proficiency •Reduction of stock at the sequential constructionsystem supporting an adaptable assemblingArrangement Particular standard metal holders and totes in viewof Indian truck measurements.

Load units ergonomically exhibited to thespecialists 25 JIT parts distinguished (provided in grouping), two-levelracking framework for totes with dynamic designation and picking, containerizedsupply from neighborhood merchants with round get Diminished work force and renewal lead time; enhanced assembling adaptability Advantages •By making our providers member in the ' without amoment to spare" technique for generation, they could keep up thelightest stock level. •Suppliers could see continuous the status of theprovisions, charge settlement and host of different parameters. •All dynamic members of a procedure, for example, the procedure from a provider to the merchant can deal with changeadministration with the assistance of a specific arrangement and acharacterized procedure. •Set up times are fundamentally lessened in thedistribution center. Chopping down the set up time to be more profitableenabled the organization to enhance their main concern to look more proficient.

•Having representative concentrated on particularregions of the framework enabled them to process merchandise speedier asopposed to having them defenseless against weariness from doing an excessivenumber of

employments on the double and rearranges the jobs that needs to bedone.

• Increase accentuation on the provider connections Effect of JIT on Capacity Management The advantages of JIT for limit administration JIT helps the specialist organizations in their endeavors to design and additionally oversee limit all the more exactly. This aides in diminishing the general capex and opex nearby guaranteeing the administration quality. The scope quantification of JIT can be utilized to streamline business and IT forms in the systems of wireline, portable and cloudserver farms keeping in mind the end goal to decrease the general time to advertise and additionally time to income. It's adaptable, dependable, snappy and savvy with regards to scope organization. Given the request development rate, specialist co-ops in telecom industry are currently trying to execute a Just-In-Time Capacity Management Solution.

Aside from productive activity administration it additionally diminishes opex. This implies capex can be diminished as well as reallocated to new administrations somewhere else in the system, hence enhancing the general client encounter. This implies more up to date ways to deal with organize operational arranging and execution is required to lessen time to advertise new administrations and also secure the specialist organizations' aggressive position. The expanding interest for information administrations has put on going to costs on the telecom specialist co-ops. An answer like JIT in scope quantification can help settle consumption troubles.

The difficulties in JIT Capacity Management There's a hole that remaining parts between the interest for the cutting edge administrations and the

capacity of the system to react and convey them proficiently and rapidly. For the greater part of the telecom administrators, the greatest test looked by the specialist co-ops in organize arranging is the administration of nonstop change in client designs. This requires the system organizers to react to the possibilities like a very late change in the take-up and use of new administrations.

Traditionally, an arrangement to overhaul speed or some other will require an enormous customer worthiness to legitimize the use designing and promoting the update. These emerge from changes in suspicions of take-up and use of new administrations, spending plan and spending assignments, hardware particulars, merchants chose and specialized or operational issues experienced amid the rollout procedure. The issues experienced amid the conveyance procedure have a noteworthy effect, requesting a re-plan of the system construct and conveyance, which is itself an asset concentrated and tedious process.

JIT strategy requires specialist co-ops to conjecture request precisely and well in time. A noteworthy disadvantage in this procedure is that it includes interruptions in the entire chain of telecom benefit. On the off chance that there's a breakdown at one purpose of transmission and it can basically hamper the conveyance of the administration or more regrettable, could close down the chain totally.