

Toyota total quality management



Introduction Total Quality Management, TQM, is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. This management approach originated in the 1950's and became more popular since the early 1980's. It is a description of the culture and attitude inside the organization that let provide customers with products and services that satisfy their needs. It needs quality in all aspects of the company's operations, with processes being done right the first time and defects and waste eradicated from operations. The aim of the combination of quality and management is increasing business and reducing losses due to wasteful practices to low cost.

This method has been applied by very well known recognised corporations but one of the most successful is Toyota Motor Corporation which has been voted the global most admired motor vehicle company by the Fortune magazine in 2005 and 2006 and ranking first in the industry for quality, social responsibility and global care. The company was voted the 2nd most admired global company overall. The current report paper was meant to give an in depth look at the Toyota Quality Management implementation and the very well recognized Toyota Production System and its effects on the automotive industry. The revolutionary ideas and concepts created by Tashiido Ohno at Toyota have been used in many other organizations and industries throughout the world.

Value as Toyota has set the standard for the rest of the auto industry to follow. Toyota - General Overview Name of Company: Toyota Motor Corporation Head Office: 1 Toyota-Cho, Toyota City, Aichi Prefecture 471-

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8571, Japan Toyota Motor Corporation (TMC) is one of the global leading manufacturing companies with nearly 70 years in the market and has become the world's third largest vehicle manufacturer with a wide range of models and high technology. Toyota was founded in 1919 and the first motorcar was built in 1936. It owns 12 plants in Japan and other manufacturing subsidiaries and as a truly global business, Toyota has built up 52 manufacturing companies in 26 different countries around the world. Toyota's market capitalization is more than \$10 billion, more than the value of General Motors, Ford and Daimler Chrysler put together.

Total Quality Management in Toyota Toyota Motor Corporation introduced total quality control or TQC in 1961. Four years later, the company was awarded the Deming Application Prize for their efforts and continued with this award 40 years since then due to Quality Circles activities started in 1964. TQM's primary aims at Toyota are improving the quality of work and supporting people working for the company. They apply three principles for these aims: putting the customer first, continuous kaizen (improvement), and 100% participation. Toyota has been awarded with different prizes every year worldwide and actually has ISO 9001 and ISO 14,001, about quality and environmental excellences respectively.

1- Customer Satisfaction Customers Toyota customers are the most important for the company and is fully orientated in customer satisfaction. In order to provide an excellent service has been ensured that all its customers receive the best level of service and have easy access to communicate any queries. Toyota's Customer Relations Department across the world is responsible for assisting customers with their questions,

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concerns, and experiences and for maintaining a positive relationship. The communication with customers includes telephone, e-mail, fax, mail, or in person.

It is integrated by a professional, friendly, and qualified team assisting every question or enquiries making the customer experience very pleasant. Toyota understands that the feedback of the customers is very important for improving the service provided. In USA, according the survey of J. D Power Association, Toyota is the number one in customer loyalty for 2007 with 68.7% of customers buying another Toyota car.

Company Philosophy - The Toyota Way The Toyota Way is based on the Guiding Principles. Its five values express the beliefs and values shared by the Toyota Group. All Toyota team members, at every level, are expected to use these values in their daily work and relations with others. Challenge: They maintain a long-term vision and aim to meet all challenges with the courage and creativity needed to realise that vision. Kaizen: It means looking for continuous improvement. Even its advanced improved processes are very good; they declared themselves not perfect, so improvements are always welcomed.

Genchi Genbutsu: It involves going to the source to find the facts to make correct decisions, build consensus and achieve goals. Respect: Toyota respects others, makes every effort to understand others, accepts responsibility and does its best to build mutual trust. Teamwork: Toyota stimulates personal and professional growth, shares opportunities for development and maximises individual and team performance. Source:

Toyota Corp website Internal customers Toyota team members treat the next person on the production line as their customer and will not pass a defective part on to that customer. Everyone is encouraged to behave as an 'internal customer' and always check the quality of the previous process.

If a worker finds a defect, regardless where the source and it is not possible to repair quickly within the time cycle, he is authorised to stop the line in order to prevent the defective car from moving on to the next process. This avoids defects being covered up and subsequently taking up far more time and expense to identify and uncover at the end of the line by inspectors.

Chain of customers - dealers Toyota is selling cars through dealers and supporting them is an important part of the work of Toyota's financing arm. Selling through dealers is fundamental to Toyota as they do not have sell directly so for dealers is important to know that they have the support of the whole organization as they become part of the final quality service provide to the customers. Toyota concludes a Toyota Dealer Agreement with each of its dealers which specifies the mutual rights, obligations and responsibilities of both Toyota and the dealer. The basic contract is renewed once every three years following adequate consultation between Toyota and the dealers, taking into account changes in the business climate.

- Builds the relationship between the distributor/dealer and the customer provides a 'window' for further customer communication.
- Provides the opportunity to market the 'Voice of the Customer' (VOC) and utilize it as a process of change and improvement reinforces staff awareness on the value of customer satisfaction.

2- Satisfy the supplier External suppliers Toyota purchases components from as many as two hundred suppliers and takes

the long view for dealing with them: •It spends 3-5 years evaluating a new supplier before awarding an initial contract. •It understands its suppliers' costs structures in detail and agrees to prices that allow suppliers to make profit.

Price concessions must be accompanied by explanations of related supplier cost improvements. •Toyota treat all suppliers fairly, without discrimination, by providing fair procurement methods and developing long term relationships •Recognise excellent supplier performance by providing repeat business opportunities. Considering environmental and social performance when selecting and reviewing suppliers. Toyota assists suppliers in improving management and quality control with guidance and practical techniques of quality control and lectures.

Jeffrey Liker, who studied the Japanese company for 20 years and wrote the book, " The Toyota Way," said its suppliers become part of an extended family and is very demanding of itself and it is very demanding of its suppliers. But it is also very supportive. If a supplier needs help or is failing, Toyota people descend on it until its basic processes are back under control.

- Continuous improvement Toyota continually improves product so they continually stay ahead of the times and the needs of customers and society with technological capabilities and product quality. Toyota has continued developing new technologies and specifications, achieving greater engine performance and driving safety, make vehicles more environmentally considerate and greater comfort. Engine technology is one of Toyota's greatest assets and its award-winning engine range reflects the high design and quality standards set by its engineers.

Also safety is a top priority for Toyota: Advanced steering, braking, suspension and traction control technologies. Every new Toyota model is carefully designed to maximise safety, using computer simulations and real-life crash tests. Total quality control is carried out using two basic principles: building in quality at every stage and continually improving quality standards in order to achieve total quality and delight the customer. Worker suggestions Through Quality Circles and a suggestion system that rewards employees for ideas, team members strive to achieve the Toyota principle of kaizen, or continuous improvement. More than 90, 000 employee suggestions are adopted each year.

Some individual team members have contributed more than 1, 000 suggestions. Quality methods TOYOTA PRODUCTION SYSTEM (TPS) Toyota Motor Corporation's vehicle production system is a way of "making things" and also known as a "lean manufacturing system" or a "Just-in-Time (JIT) system". This production control system has been established on many years of continuous improvements, with the objective of "making the vehicles ordered by customers in the quickest and most efficient way, in order to deliver the vehicles as quickly as possible. The Toyota Production System (TPS) was established on two concepts: •"Jidoka"(automation with a human touch") which means that when a problem occurs, the equipment stops immediately, preventing defective products from being produced. •"Just-in-Time," in which each process produces only what is needed by the next process in a continuous flow.

Jidoka - Highlighting/visualisation of problems Jidoka means that a machine safely stops when the normal processing is completed. It also means that the

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machine detects the problem on its own and stop, preventing defective products from being produced. As a result, only products satisfying the quality standards will be passed on to the next processes on the production line. Since a machine automatically stops when processing is completed or when a problem arises and is communicated via the “ andon” (problem display board), operators can confidently continue performing work at another machine, as well as easily identify the problem cause and prevent its problem.

This means that each operator can be in charge of many machines, resulting in higher productivity, while the continuous improvements lead to greater processing capacity. Just in Time- Productivity improvement Making only what and when is needed and in the right amount, producing quality products efficiently through the complete elimination of waste, inconsistencies, and unreasonable requirements on the production line. In order to deliver a vehicle ordered by a customer as quickly as possible, the vehicle is efficiently built within the shortest possible period by doing the following: •When a vehicle order is received, a production instruction must be issued to the beginning of the vehicle production line as soon as possible. The assembly line must be stocked with small numbers of all types of parts so that any kind of vehicle ordered can be assembled.

- The assembly line must replace the parts used by retrieving the same number of parts from the parts-producing process (the preceding process).
- The preceding process must be stocked with small numbers of all types of parts and produce only the numbers of parts that were retrieved by an operator from the next process.

7 Principles of Toyota Production System

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(TPS . Reduced Setup Times: All setup practices are wasteful because they add no value and they tie up labour and equipment.

Toyota managed to cut times from months to hours and sometimes even minutes by organizing procedures, using carts, and training workers to do their own setups, 2. Small-Lot Production: Producing things in large batches results in huge setup costs, high capital cost of high-speed dedicated machinery, larger inventories, extended lead times, and larger defect costs. Because Toyota has found the way to make setups short and inexpensive, it became possible for them to economically produce a variety of things in small quantities. 3. Employee Involvement and empowerment: Toyota organized their workers by teams and gave them the responsibility and training to do many specialized tasks.

Teams also do some housekeeping and minor equipment repair. Each team has a leader who also works as one of them on the line. 4. Quality at the Source: To eliminate product defects, they must be discovered and corrected as soon as possible. Workers are at the best position to discover a defect and immediately fix it so they are assigned this responsibility.

If a defect cannot be readily fixed, any worker can halt the entire line by pulling a cord (called Jidoka). 5. Equipment Maintenance: Toyota operators are assigned responsibility for basic maintenance as they are in the position to detect malfunctions. Specialists diagnose and fix only complex problems, improve the performance of equipment, and train workers in maintenance. 6.

Pull Production: To reduce inventory holding costs and lead times, Toyota developed the pull production method wherein the quantity of work

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performed at each stage of the process is dictated solely by demand for materials from the immediate next stage. The Kanban scheme coordinates the flow of small containers of materials between stages. This is where the term Just in time (JIT) originated. 7. Supplier Involvement: Toyota treats its suppliers as partners, as integral elements of Toyota Production System (TPS).

Suppliers are trained in ways to reduce setup times, inventories; defects, machine breakdowns etc. and take responsibility to deliver their best possible parts. When Taiichi Ohno and his colleagues began developing the TPS, the company was nearly bankrupt, turning out less than 10, 000 cars per year. Today's sales for Toyota represent an increase of almost 100, 000%. Back in the 1950s, Toyota was under enormous pressure to cut costs and increase efficiency. Ohno went to the United States to study Ford's assembly lines.

He returned to Japan and, with his colleagues at Toyota, developed the Toyota Production System, widely considered the finest manufacturing model in the world. The Toyota Production System has enabled Toyota to consistently produce vehicles far faster and more efficiently than their competitors. And achieve dramatic growth in sales, profit and market share. Complete the form to the right to find out how your company can use these principles to realize extraordinary business improvement Bibliography Pictures of Derby Toyota Burnaston Mike Smith 2007 http://www.picturesofderby.co.uk/area_toyota.htm

BBC News UK - Business Thursday, 21 March, 2002, 12: 08 GMT <http://news.bbc>.

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co. uk/1/hi/business/746569. tm The Independent- Business By Michael Harrison, Business Editor Friday, 16 March 2001 <http://www.independent.co.uk/news/business/news/shell-contract-with-amec-to-create-4000-jobs-in-uk-687567.html>

Toyota and its component suppliers [elsmar.com/pdf_files/Toyota%20and%20Component%20Suppliers.pdf](http://www.elsmar.com/pdf_files/Toyota%20and%20Component%20Suppliers.pdf)

The Daily Post ? 88m investment at Toyota's Deeside plant Mar 4 2008
By David Jones, Business Correspondent <http://www.dailypost.co.uk/news/north-wales-news/2008/03/04/88m-investment-at-toyota-s-deeside-plant-55578-20556347/> Toyota Corporation Japan