

A brief study on toyota's operation essay



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Operation and Total Quality Management Question 1 The company I chose is Toyota Motor Corporation (Lexus). (i) Goods and service design (product) This operation management decision is about deciding what type of goods or service to provide to customers and also how to design these products and services to appeal to the targeted customers.

Toyota Lexus has to come to a conclusion on the type of cars they should manufacture. For example, should the car be high end or affordable? They need to decide a focus point which is whether the brand Lexus should appeal to the normal working class or swinging bachelors or rich entrepreneurs.

This important factor needs to be carefully pondered over as it will affect the rest of the production and the target marketing later on. The second important decision made was how Toyota designed the Lexus car. They considered the distinguishing feature of the brand and the manner in which they should apply to the design of the car. Since the price range of Lexus is generally higher; hence, the furnishing and engineering of Toyota should be more luxurious and of higher quality.

For example, the Lexus IS is targeted toward richer consumers as it is designed as a compact executive car made to compete with the luxury sport sedans of other leading European brands. Quality Toyota as an automobile manufacturer definitely has to have quality control, and it has to be objective, measured against an accepted standard. Toyota's way of measuring quality is continuous improvement or in Japanese term, Kaizen. Toyota quality management is also tightly related to their Just-in-time system.

As the focus is on Toyota Lexus, there is quality differentiation between Lexus and other brands.

Lexus is a higher end range of Toyota cars and it is more expensive than other range of Toyota cars. The slogan of Lexus is 'The Pursuit of Perfection' and they have proven themselves to be true. For example the series Lexus IS cars has 15 quality gates and each quality gate covers around 20 production processes to ensure all parts are assembled correctly. The quality leader receives an online report or evaluation of each assembly process both the electronic input from tools and manual input from assembly workers. Hence, any deviation from the perfect assembly is monitored, discovered and adjusted before moving forward to the next step.

After the assembly of parts and with quality as a focal point, stringent and extensive inspection is carried out to every Lexus IS. Not only the function but the visual aspect of the car is thoroughly inspected. The exterior component of the car actually has a gap management to reduce the gap between front bumper and wings to 0.35 millimeters. The four doors of the Lexus IS are also inspected.

The engine of the car is also masked hiding away most components. This gives the Lexus IS a cleaner and sleeker appearance. Process and capacity design

The process that the Lexus IS needs is assembling of parts, detailed checks on product, finishing and advance technology is needed for computer simulation and crash tests. Even the finishing for Lexus requires as many as 42 separate steps that are executed with precision to ensure a lustrous and

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luminous finish. The safety test for Lexus is the strictest having obtain the Global Outstanding Assessment as every Lexus is tested against standards of developed countries like North America, Japan and Europe.

Sophisticated equipments and innovative technology are needed for the process and capacity design of Lexus.

As the selling point of Lexus is its luxurious design and engineering so the design technology must match up to its image. Location selection Toyota has manufacturing facilities all over the world. Toyota worldwide operations have resulted in 52 overseas manufacturing companies in 27 regions outside Japan by the year 2006. However, the Lexus manufacturing facilities is only established in five places. There is one in Ontario, Canada and four in Japan.

The Lexus IS is produced in the Kyushu prefecture and Tahara prefecture.

As Toyota is manufacturing the Lexus IS in these places, supplies or vehicle parts will definitely be sourced from nearby and convenient areas. This means that the modules or parts will reach them faster and it also means faster assembly. Hence, the speed and efficiency of the manufacturing facilities of the Lexus IS also means that customer do not have to wait for a long time for the delivery of their vehicle. Toyota has dealers in many countries, having dealers in every continent and region of this international company help them to response quickly to meet their ustomers' needs.

The availability of dealers is an advantage to Toyota as this means convenience to customers. The convenience and availability of the Lexus IS will encourage more people to buy the car instead of buying from other car

manufacturers. In addition, if there are any problems with the product, customers can refer to the nearest Toyota service centers for help with no delay due to geographical limitations or any language barrier. Layout design Toyota uses a work cell layout for production efficiency.

Work cell layout arranges machinery and equipment to focus on production of a single product or a group of related products. Toyota is a multi-national corporation; hence there is always a steady demand of their products.

As an automobile manufacturer, quality is objective and hence using machines and equipment in a work cell layout to make products ensure standardization and uniform quality. Toyota focus on assembling of parts so the work cell layout assembles fabricated parts together using many different machines that are arranged around the production line.

This layout increase efficiency for such manufacturing companies, by lowering variable cost per vehicle, material handling costs, reducing work-in-process inventories and also it is rapid throughout the production. Production is fast and this layout is easier for managers to train and supervise employees. Hence this enables Toyota to compete on speed, meaning a quick and reliable response. Human resource and job design Human resource and job design is about how work task is performed.

Movement of individuals and materials are analyzed as well as human and machines and crew activities using flow diagrams, process charts and activity charts. Body movement may also be analyzed using micro-motion charts. The workforce focus on technical skills in the assembly line and labor standards are consistent and measurable. An output-based salary system is <https://assignbuster.com/a-brief-study-on-toyotas-operation-essay/>

possible with Toyota in the manufacturing department. Toyota needs a company-wide systematic training as well as divisional ones to equip workers with the appropriate skills.

Specialized training for certain divisions, language training, and special knowledge as well as skill training is needed for an automobile company as employees need specialized skills to operate highly sophisticated machinery.

There are assignments for training purposes with an emphasis on on-the-job training (OJT) to ensure that all employees can fully utilize their abilities can contribute to the company as grow on a personal level. The job design is for people manufacturing the Lexus IS is rather technical. Supply chain

Supply chain as it sounds is about deciding what to make and what to buy weighing both the pros and cons in economic sense. The Lexus IS parts are supplied by different companies as Toyota could not be making all parts themselves. Lexus decides what parts they buy and from which suppliers and what parts can be made by themselves to help the company reduce cost. Inventory Toyota uses the Just-in-time (JIT) to manage the inventory.

This inventory strategy helps in many aspects of the business such as reducing storage cost.

As materials and parts are only ordered for immediate needs, there is no need to store for future use hence cutting down storage cost, in-process inventory and its associated costs. The company does not need to dispatch workers to handle the storage of materials that are not yet needed; hence the employees are freed to do other work. This saves the company on

employees' wages as no time is wasted on arranging the inventory. Also the time is reduced for the products or parts to move into the factory; hence with faster speed in processing and production, the delivery to customer is quicker too.

After Toyota implements the JIT system, products are only made or restocked when a customer has bought it; hence with smaller quantity in the inventory, any defects in the parts or products can be discovered faster, hence improving reliability.

The time taken to response to customer is shortened and it allows Toyota to have an edge over their competitors. Scheduling Scheduling is about assigning employees to different jobs and ensuring that the labor is utilized effectively and efficiently. In addition, it is about deciding what jobs to perform next.

Scheduling can be categorized into immediate and short-term scheduling. Lexus practices both type of scheduling. Lexus schedule jobs to employees using job rotation to provide a balance in their work life because that every job requires different usage of certain parts of the body so such scheduling exercises the whole body instead of overstressing one part of it.

Maintenance Maintenance means who is responsible for the maintenance and when should it begin. In the manufacturing facilities, maintenance is needed regularly to ensure efficiency and safe working conditions.

Maintenance occurs on a fixed basis and there is a routine to it. Maintenance is done by professionals like engineers who specialize in machines and also

normal workers who do basic checks before starting work. Repetitive focus
The company process decision is repetitive focus. The Lexus IS requires a more structured way of production than process focus but it also needs to be less rigid than product focus.

It is appropriate to use repetitive focus for the series of Lexus IS range of cars because this allows the manufacturer to have low volume but high variety models of cars.

There is an economic advantage of continuous process and custom advantage of producing a lower volume of cars but yet jazzing up the Lexus brand with many variations. As we can see, for the Lexus IS, there are also quite a number of cars that comes under this range. For example, there is Lexus IS F, IS 250 and also IS 350 etcetera. Hence, it makes sense to use repetitive focus to make variations to the Lexus IS for more variety and for improvement.

(ii) The mission of this company is to sustain profitable growth by providing the best customer experience and dealer support.

The strategy of Lexus is to focus on producing luxury cars of superb quality in terms of appearance, design, performance and comfort to the driver. Using original concepts that are different from competitors, Lexus captures the heart of people who wants novelty. However, Lexus is not just about the superficial appearance, the advance technology involved in making Lexus plays a big part in their strategy. The packaging of the brand and product also comes into play in the strategy to establish their foothold as a luxury car.

The image of quality and luxury for Lexus even extends to the dealers at the point of selling and follow-up maintenance and repair service. Lexus is establishing itself as a high end brand selling dream cars rather than selling affordable cars to middle income customers. (iv) The three primary ways to achieve competitive advantage is to compete based on differentiation, cost leadership and response or a combination of these three. Differentiation is setting the company apart from the rest of the competitors using unique characteristics.