Lean Management

Idea In Short

In today's hyper-competitive business landscape, delivering customers'' demands with profits is challenging. Businesses must constantly evolve and improve to be relevant and meet ever-changing customer demands. Lean management is a technique that helps businesses to provide customer value by reducing waste and continuous improvement. The Toyota Production System that originated in the automobile industry paved the way for Lean management. Today, lean concepts are increasingly applied across industries, such as service, supply chain, healthcare, government, and education. Lean management focuses on waste elimination, increase process efficiency, and optimize cost.

lean Management is about continuous improvements and reducing waste in processes that do not add customer Value. Primarily, there are two types of activities in any business process, namely:

1. value-adding, and
2. non value-adding.

Value-added activities provide value to a business or a customer (marked by their increased willingness to pay); non-value-adding activities are those undifferentiated activities that add no value, either to the firm or for the customer. The objective of lean management is to reduce all non-value-added activities while simultaneously removing such wastes as over-processing, improving quality, cost optimization, and increasing resource efficiency. Lean management originated in the manufacturing industry, but it has an enormous cross-industry scope. Presently, such diverse industry sectors as, services, healthcare, government, and education employ lean management.

Origin

Lean management is one of the most frequently utilized techniques, has originated at

Toyota, a car company. It is based on the Toyota Production System, which dates to the late 1940s. Lean management is often known as The Toyota Way because of its beginnings in the Toyota Production System. Dr. James Womack, Daniel Jone and Daniel Roos in their book titled, The Machine That Changed the World, shared this concept with the world. Dr. Womack oversaw a team that travelled to Japan to assist the country for its post-World War II recovery. He followed up his first book with another titled, Lean Thinking with Jones and Daniel Roos. These two books opened the way for lean management education across the world. Although The Toyota way was in use since the 1940s, Mr John Krafic was the one who coined the term Lean in 1988. Since then, it has been in use extensively in various industries.

Core principles of Lean

Lean Management philosophy can be adopted by businesses across many industries to optimize their operations. There are five core principles of Lean Management, which can help businesses reduce waste and improve their processes continuously:

Identify value

The first stage in implementing Lean Management is to determine value from the perspective of the end customer. To do so, you must first comprehend what drives sales and what customer pain points you are solving. A clear understanding of the value, keeping customers at the center is necessary to take further action.

Value stream mapping

The second stage is to map out all the steps involved in each product or service individually. This refers to all the people involved, and actions taken by your company to provide recognized value to your customers. Value stream mapping (VSM) uses a flowchart to document every step of a process. Many lean practitioners consider Value Stream Mapping as the fundamental tool that helps identify and reduce waste, shorten process cycle times, and improve processes.

Create one-piece flow

Once you've identified the value and mapped the entire value stream, analyze how you can improve it. Assess which steps do not add value and, if possible, remove them. If you can't

remove them, improve them. Also, make sure that all the value-creating or value-adding steps are performed in the right order to ensure an uninterrupted product flow with the least steps possible. While creating a one-piece flow, ensure that defects are dealt with immediately and not transferred down the value chain.

Create pull

Many businesses employ a push strategy, which involves stockpiling supplies in anticipation of demand. The pull strategy, on the other hand, is used by lean organizations, in which production is linked to demand. Customers can "Pull" directly from the producer, receiving exactly what they need, when they need it. As a result, the work is performed only when it is required, reducing waste, both in terms of resources and time. However, the pull approach requires accurate market research and extremely efficient information dissemination throughout the firm to meet the demand. All the processes must also be streamlined; otherwise, changing production to suit demand will take too long.

Continuous improvement

Continuous improvement is at the heart of lean management. Once you've established the one-piece flow and pull, repeat the process until you've reached a state of perfection, where each step in the process adds the most value. Using these core principles, the Lean methodology focuses on creating value at every level, which increases total value for the firm and can be transformational when done effectively. The Lean Management System relies on individuals to promote process improvements, is built on employee involvement and respect. Every employee is expected to be a leader and has the authority to halt work if the quality is a concern. Seiri, Seiton, Seiso, Seiketsu, and Shitsuke are five Japanese words that make up the 5S framework, which translates to Sort, Set in Order, Shine, Standardize, and Sustain in English

Lean Management Strategies

To achieve the desired results, Lean Management employs a wide range of strategies. Here are a few:

5S

5S is a method of organizing workspaces to ensure that workers swiftly, efficiently, and

safely complete the activities. This technique recommends arranging items by use and keeping the workplace tidy, making it easier for personnel to do their duties more efficiently or without inflicting injury. Seiri, Seiton, Seiso, Seiketsu, and Shitsuke are five Japanese words that make up the 5S framework, which translates to Sort, Set in Order, Shine, Standardize, and Sustain in English

Kanban & Andon

Kanban and Andon are techniques that use signaling tools such as information cards and status boards to visually communicate what is required to keep a process moving and how well it is progressing

Takt

The ideal rate at which a task must be completed to meet demand is known as takt. The customer's pull determines the pace, not the producer's ability to push it

Heijunka

Creating a predictable demand and level production flow to meet the fluctuating consumer demand

Case Study – Virginia Mason Health Systems

Virginia Mason Health Systems is a case in point for Lean Management in the healthcare industry. During the years 1998 and 1999, Virginia Mason Medical Center faced significant challenges: for the first time in its existence, the center was losing money in the double digits, employee morale was low, and competition from rival hospitals was increasing. To get out of this trap, VMMC's leadership team devised a strategy that prioritized patients (Customers) and established a vision: to become the industry's quality leader. VMS found the Toyota Production System or Lean Management Principles a good approach to achieve their goal. As a result, VMMC trained hundreds of employees in quality-improvement techniques, with a particular emphasis on identifying and addressing differences in care as well as developing standard work. It reassigned twenty full-time personnel from other positions to focus on the development and deployment of the VMPS. The company made it clear that there would be no layoffs as a result of the lean initiatives; instead, it reassigned employees to different positions. Following the training, VMMC used specific Lean

Management concepts to their healthcare model. Some of the techniques that VMMC used are:

Value Stream Mapping

At VMMC, they began by mapping out the value stream of patient check-in, visits, equipment movement, and inventory. Eventually, all of the departments became involved. It detailed all of the steps involved in patient handling, making it easier to comprehend the process and identify waste.

Rapid Process Improvement Workshops (RPIW)

This five-day programme aimed at reducing waste, improving procedures, and increasing production and efficiency. For the first 2-3 days, each RPIW team defined, evaluated, and analysed existing care processes, then set goals for the new ones to decrease waste and finish processes in the least steps possible. Then, they spent the following few days developing and experimenting with improved methods, and reported to the organisation on the fifth day.

5S

VMMC developed standardized instrument trays for surgeries and procedures. This standardization saved hundreds of dollars and ensured that the personnel open only those instruments required for a procedure. They also adopted team sort - a method of quickly identifying and sorting patients using standard clinical assessment instruments. Those who only require basic services were treated quickly and dismissed without having to use the patient-care beds. By better matching patient need to resource available, VMH created capacity for those patients that required more extensive care.

Kanban and Andon

The hospital now places a reminder note at the bottom of each set of supplies. This visual mechanism helps its personnel reorder supplies only when required. This approach ensures on time supply delivery, while simultaneously lowering storage and holding expenses.

Patient Safety Alerts

Based on Lean principles, Virginia Mason 1 devised a Patient Safety Alert (PSA) system that requires all workers who come across a situation that potentially risks a patient to report it promptly and "stop the line" (cease any activity that could cause further harm). This improved the quality of care while removing the possibility of injury. VMMC also used Lean Management approaches such as 3P, Bundles, and Everyday Lean in addition to the techniques. This Lean Management implementation at VMMC resulted in a 38% reduction in personnel walking distances within the medical centre, a 77% reduction in part travel distances, a 50% reduction in inventory, and a 53% reduction in lead time within the centre. Productivity increased by 44%, patient wait times for lab results fell by 85%, and planned capital cost savings were estimated to be between $12 and $15 million. Like Virginia Mason Medical Centre (Healthcare), we can find many examples across the industries, using Lean management to reduce waste and become efficient.

Advantages

Since its start, lean management has gained a lot of traction. One of the main reasons for its popularity is that it covers a wide range of business aspects. Among the advantages of lean management, the following are a few quick wins that organizations can expect to achieve shortly after lean implementation.

Cost Optimization

The main goal of lean management is to decrease waste, which lowers costs and increases revenues for a company. Lean focuses on the different expenses and wastes that occur during a business operation. There are seven common wastes in lean manufacturing, those are overproduction, inventories, defects, motion, over-processing, transportation, and waiting. Lean helps to eliminate waste, which boosts revenues by lowering manufacturing costs. It has aided numerous businesses in their cost-cutting efforts.

Increased Quality

Lean management places a high priority on defect reduction. Its goals are to cut down on defects, rework, and waste. This assists companies in reducing errors in commercial operations such as manufacturing. It ultimately saves money on numerous costs and enhances product quality.

Improved customer satisfaction and interaction

Lean management prioritises customers above everything else and strives to improve customer interaction and satisfaction. Actions conducted under lean management are aimed at adding more value to customers and, as a result, assisting business growth. Other benefits, such as cost optimization and quality enhancement, also contributes to increased consumer satisfaction.

Efficiency

Lean management, as defined in the definition, detects values, performs value stream mapping, and creates a one-piece flow. Repeated actions, superfluous actions, and non-value-added activities are all reduced by this technique. Employees are more focused and productive because of the clarity in the work to be done. This improves efficiency and productivity in the long run. Businesses can make the best use of their resources and get the most out of them.

Push-Pull strategy

Inventory is a form of dead capital that all businesses strive to reduce. Inventory management is crucial because laying inventory in business results in various capital losses. It is beneficial in terms of budgeting. Lean encourages the use of a pull strategy rather than a push technique. This indicates that production is based on demand. Companies can use the pull method to avoid stockpiling inventory and the costs that come with it.

Disadvantages

There are numerous pros of lean management but at the same time, there are some things of concern. The implementor must take into consideration the following disadvantages of lean management.

Difficult Changeover

Transitioning from traditional processes to lean management is a time-consuming procedure. Businesses must train multiple stakeholders and make several changes. Workers and employees may be resistant to the change, and the transition could be disastrous. As a result, managers and lessees should assess the strategy before using it.

Cutting things too fine

Lean management considers inventory an avoidable waste. Hence, lean manufacturing forces businesses to operate with almost no inventory. This enhances a company's reliance on its suppliers. Just in Time (JIT) techniques may appear to be ideal, but the reality can be quite different. Let's say an utomobile manufacturer expects a part used in the manufacturing process to arrive in 30 minutes. However, it doesn't. In the case of JIT, this delay might result in significant production losses for the manufacturer, potentially negating the cost reductions achieved through lean adoption. Furthermore, today, many businesses have many overseas suppliers, which makes JIT or lean deployment more difficult.

High initial investment

When organisations implement lean management, they will almost certainly have to abandon their current techniques. A business will also have to design, analyse, and implement a completely new system and procedure. Companies may incur significant costs because of this event. Companies will require to pour in a good amount of money which otherwise they would have used in other activities. Various small companies may struggle with this part. Even larger organisations must be very careful about it.

Summary

The Toyota Production System is the foundation for lean management. Continuous improvement and the reduction of procedures that do not add value to the customer are at the heart of lean management. Businesses in every industry can use the Lean Management philosophy to improve their operations. Lean management has five core principles which are, identifying value, value stream mapping, generating one-piece flow, producing pull, and continuous improvement. 5S, Kanban, Heijunka, Just in Time, and lean manufacturing are some of the tools used in lean management. Manufacturing, services, government, healthcare, and education are some of the industries that can benefit from these technologies.