

Quality management and lean systems



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What is Quality Management?

When you think of “ quality” one typically thinks of something that has a level of quality that sets the standards above other things. Of course we all have a different idea of what quality means as well and perspective differs between the consumer and the marketer. Quality management is “ the act of overseeing all activities and tasks needed to maintain a desired level of excellence”. (Kenton, 2017) There are different types of quality management systems that businesses can utilize and implementing an effective quality management system can assist organizations in increasing their competitive edge if utilized correctly.

One Aspect of Quality Management

There are different dimensions of quality; one is the quality the consumer looks for in manufactured products. These dimensions include the performance, features, reliability, conformance, durability, serviceability, aesthetics, safety, and other perception. There are also dimensions of quality in regards to services which include time and timeliness, completeness, courtesy, consistency, accessibility and convenience, accuracy, and responsiveness. When we purchase a high end product we have expectations of what that product should or shouldn't do and if that product doesn't meet those expectations, we, as the consumer, will shop somewhere else which is exactly what the marketer doesn't want us to do.

I will focus on the dimensions of quality in reference to manufactured products. The first dimension of quality in manufactured products is performance and this is the basic operating characteristics of a product. The second is the features of the product, these are the “ extra” items that are added to the basic features. These “ extra” features are meant to make the product seem more appealing to the consumer. The third dimension is reliability. We want to know that the product will operate correctly and not fail within a certain time period, such as a refrigerator. When we buy a new refrigerator, our goal is to not have to buy another one for 10-15 years. The fourth dimension is conformance which is how a product meets specific standards. The fifth dimension is durability which measures the length of a product’s life; basically the life span of a product. The sixth dimension is serviceability which determines the speed that the product could be repaired if necessary. The consumer also wants to know how easy it will be to get the product repaired (are there service shops in the local area) and the courtesy and competence of the repair shop. The seventh dimension is aesthetics which appeals to the consumers senses. How does the product feel, taste, smell, or sounds? These attributes appeal to each individual consumer’s preferences. The eighth dimension is safety and if the consumer can count on not being harmed or injured from the product. This aspect is especially important when new parents are buying a car seat. The final dimension is other perspectives which are subjective perceptions based on a brand name or advertising.

One Aspect of Lean Systems

Lean production was coined by James Womack and Daniel Jones and it basically means that you are doing more with less. Womack and Jones used this term to describe Toyota's production system which is considered one of the most efficient manufacturing systems in the world. (Russell & Taylor, 2017) Based off the just-in-time format, it emphasizes the minimization of inventory and implementing the flow of materials so they arrive as they are needed. Lean production is effective because you are only producing what you need which in the end leaves less room for error. However, for lean production to be effective, the following elements need to be in place-steady production, flexible resources, high quality, reliable equipment, reliable suppliers, and quick setups. (Russell & Taylor, 2017)

The Just-in-time (JIT) system is pretty much exactly what it sounds like. Instead of buying materials in bulk, they are bought on an as needed basis so they are used immediately. This system was designed help avoid waste in overproduction and eliminate excess inventory which in turn decreases overhead costs. One of the issues with this system is delays in actually receiving the part that is needed. In order for this system to work efficiently and effectively, there can't be any delays shipping of the materials that are needed. In a perfect world, that could be achieved but in a world that has to work around weather delays and transportation delays, this makes it more difficult.

The Importance of Deming's Research to the Foundation of Quality

Before advances in technology and globalization were so imperative, the competition among businesses were much lower and they typically focused

their attention on the quality process in the production process. Dr. W. Edwards Deming transformed this way of thinking and his philosophy was that by improving quality, a company will decrease their expenses and also increase their productivity and market share. Even though Deming didn't actually create the term Total Quality Management, many credit him with starting the movement. Deming wrote about his philosophy in a book titled "Out of the Crisis" and in this book he summarized his 14 point management philosophy. Although Deming's 14 points don't tell you how to implement the changes he proposes, they do give valuable information about what you should be changing. Deming's 14 points teaches companies the importance of "building customer awareness, reducing variation, and fostering constant continuous change and improvement throughout organizations". (mindtools.com)

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