TOOLS OF QUALITY IMPROVEMENT – MEASURING CUSTOMER SATISFACTION

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Abstract: Nowadays, quality is often divided into service quality and product quality. The dimensions of quality of service are quite different from the quality of product due to the main difference between services and products (service intangibility and the customer who can use it only once). Customer satisfaction is one of the topics related with the quality due to the main measurement of quality is customer service. The main question about quality service is what the customer expects to get from the service. Knowing the customer' needs of quality and price help the company succeeding. Quality of service is becoming important among various customers. By measuring customer satisfaction companies receive a lot of knowledge about which expectations of the customer are fulfilled and which others need to be satisfied. Acquiring this knowledge is the first step in order has customers satisfied with the service. The second step is implementing a quality improvement system that is based on these results, which will improve the service process. On this ground, the paper opens a route to identification and logical argumentation of use for those tools that should be combined to measure the customer satisfaction in a service company in order to improve the quality of service

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1. Introduction

It has been said that quality is in the eyes of the beholder. Therefore, quality has many definitions and means different things to different people. Nowadays, quality is based on achieving the consumer satisfaction.

Quality can be used as a parameter; it can be useful to check what the employees are doing well and what they can improve or, it is just trying to reach the different needs of the customers that are using a service. To understand quality, one should see it according to Garvin (1984) definition "collection of concepts, ideas or tools that are proven to improve customer satisfaction, reduce cycle time, eliminate errors, and reduce costs and rework." According to him, quality is based in 3 main aspects: understanding, improvement and assurance.

The first stage of any business is understanding, this means what is needed and how to satisfy the stockholder's needs. Understanding the needs is about all the people involved in the service or product. This is knowing who they are, what value they are bringing and what they are expecting from the service or product. Improvement is the second aspect regarding the qualities in which the companies are investing now in order to get the profit from the market. Business decisions at strategic levels lead to necessary changes in order to accomplish the goals. Systems are related to each other, so changing one element can have a significant impact in the other. Therefore meeting today's demand of improvements can be the long-term target. When the needs and capabilities are understood and the system improved and updated, the company must make sure that it actually works. This final aspect is about making things happen on time, every time. Hence, quality is about: knowing what you want to do and how you want

to do it, learning from what you do, using what you learn to develop your organization and its services, seeking to achieve continuous improvement and satisfying stakeholders.

2. Route of quality – continuous improvement

Many times, term quality of service may be ambiguous and subjective for it is in the eye of the beholder. Customer perceived quality is often defined as the relationship between the customers' expectations of the service and his or her perception of the service received. For this, the term quality is multifaceted. According to Edvardsson and Thomasson (1993) "quality is fulfilling expectations and needs from the staff and the owners. Customer expectations are based on their needs, their earlier experiences of the service in question and the reputation the service has in the market". Service quality perceptions are formed and changed in a social process. People receive and interpret impressions in the present, they reinterpret previous perceptions, and form future expectations of quality. These expectations can be developed as service specific measurements.

Zeithaml (1996) has defined five commitments, to which two were added later: reliability, responsiveness, assurance, empathy, tangibles, competition and management leadership.

The customer perceives the quality of a service depending on the competence of the staff to handle their relations with customers. There the staff depends on the competence of other staff members to provide them with what they need to serve the customer. "Service is a social process, and management is the ability to direct social processes. And service organizations are more sensitive to the quality of their management than probably any other kind of organizations", Norman (1984).

According to Norman (1984) and Mitra (1993) there are some steps that may help for the quality improvement: show the need for improvement, identify specific projects for improvement, organize leadership for the projects, organize for diagnosis – for the discovery of causes, identify causes, provide remedies, prove that the remedies are successful under operating conditions, provide for control to hold the gains.

3. Measuring the quality of service

The term quality measurement covers both quantitative measurements, expressed in figures, tables or diagrams, and qualitative measurement, where the results are usually presented in the form of verbal description. Quality measurement is probably the most important technique for a service aiming for more than a superficial improvement. To know where to start and to set the priorities, managers have to measure the quality of their service. Measurement is one of the most important ingredients in customer service; many efforts have been made to develop instruments to measure internal service quality based on external dimensions of customer needs.

4. Customer Satisfaction Measurement (CSM) in quality of service

CSM is related to important business variables such as repeat purchase, customer retention and profitability. It is logical to suppose that if customers are satisfied, they will return. They will be less inclined to switch to another company. Almost by definition, customer satisfaction relates to loyalty and profitability. If customer satisfaction does not accomplish these, then from a business point of view, there would be little point in tracking it. Customer satisfaction could be related to loyalty and profitability, and if it is not, it is the measurement that is at fault.

Many executives explain that their companies do not measure customer satisfaction because there are problems in identifying and communicating with customers; defining what aspects of satisfaction to measure is problematic; and collecting the data was too difficult. Others suggest that measuring customer satisfaction would not add anything useful.

As Chakrapani (1998) says, measuring the performance of a company versus the competitor will be inconsistent or insensitive in detecting differences. Using metrics that are not tested for their validity and reliability can also provide misleading measurements of customer satisfaction.

CSM is not an isolated research activity but a key management tool providing direction to

the company's quality improvement activities. Objectives are also necessary to keep the CSM programme from wandering into other areas of customer research that are best left to the marketing department. Chakrapani shows 10 steps to measure customer satisfaction. In this methodology the first three steps are the conceiving steps, the next three are the developing steps and the last ones are the interpretation and tracking steps.

- Step 1. Gather background data. Is important to begin with some qualitative research; techniques such as brainstorming are useful.
- Step 2. Choose the attributes to measure. In this step relevant attributes may be chosen. These mean that the attributes are relevant to the mission organization, contribute to customer satisfaction, avoiding measures that are no longer valid and avoiding measures that are unfavorable to customer satisfaction.
- Step 3. Choose the right audience to be measured. Customer dissatisfaction is the main engine to look for discrepancies and some customer dissatisfactions.
- Step 4. Decide on the basic CSM question components. Five basic questions relate to the basis of the customer satisfaction measurement: incidence, frequency, importance, performance and an overall criterion measure.
- Step 5. Choose the right metric. Attributes can be measured on a number of different scales. Numeric scale (10 point scale), verbal scale (good, average and poor) and binary (satisfied or not satisfied) scale can be used.
- Step 6. Make Analysis Action Oriented. In this step several analysis techniques can be used; quadrant analysis is one of the most common ones.
- Step 7. Consider Segmenting Customers. Segmentation analysis is the best option because not all customers are seeking the same benefit. Techniques such as cluster analysis and a classification tree can be used.
- Step 8. Interpret the measures correctly. It is important to differentiate common cause and special cause variations, if customer satisfaction is tracking; it may be easy to plot the results on a run chart using upper and lower control limits.
- Step 9. Use results cautiously. For this step it will be easy to have all the results in attributes. For example services give the attribute and the branches can be speed, availability and courtesy.
- Step 10. Create a tracking system. It will be easy to track customers on a continuous basis rather than in longer intervals. Combining standard tracking with proactive tracking might provide greater input in terms of current customer satisfaction.

5. Quality Function Deployment

QFD is a translation of the Japanese. *Hin Shitsu* (quality), *Ki Nou* (function), *Ten Kai* (deployment). The Japanese characters for *Hin Shitsu* represent quality, features or attributes, *Ki* and *No* represent function or mechanization and *Ten* and *Kai* deployment, diffusion, development or evolution, according to Chow-Chua and Komaran (2002).

QFD is a technique where the main task is to integrate the customer voice (expectations and needs) in the process to design and develop a product or service. In a service company QFD can be a very useful technique, Lawrence (1991). The main reason for that is because it is based and focused on what the customer wants and how the company should do it.

Knowledge of customer requirements and "importance weights" provide direct input into QFD.

This is a process plan that guides the design or redesign of a product or service. The purpose of using this tool is to allow the companies to organize and analyze the information related with their product or service.

This tool can indicate the strong areas and the weakness of the service provided. The information provided by the customer is organized and is integrated into the requirements provided to the service into a matrix. QDF allows improving preventive actions instead of corrective actions. So when any company is using this tool they are focusing more on the customer needs and desires, this is the key action to improve the customer satisfaction and their value perception, Summers (2005).

According to Bergman (2003) QFD has many advantages:

- Improved communication.
- Better knowledge transfer.
- Improved designs.
- Higher customer satisfaction.
- Information for competitive benchmarking.
- Service improvement.

According to Bergman (2003), the main difficulties encountered by many companies are the lack of management support, lacking commitment in the project group as well as insufficient resources.

6. Working with QFD

According to Mountain Ash Consulting Ltd White Paper (2007) QFD method follows 5 steps when implemented .

Figure 1. QFD Diagram
courtesy of Mountain Ash Consulting Ltd White Paper, 2007

6.1. Customer requirements

The first step of the QFD methodology starts creating a list of customer needs and requirements. The company has the tough task of know the point of view of the customer. This list must be concrete and specific. MA White paper (2007) recommends using techniques such as affinity diagrams, critical observation or function analysis. They state the "the customer requirements form the first section of the comprehensive matrix for documenting findings, which is commonly referred to as the process House of Quality" MA White paper (2007).

6.2. Competitive comparison

The second step regards a competitive analysis. Executives should compare what the study company does against the competitors in the market. That can be expressed like a SWOT chart. This analysis gives other chance to ensure that all points of view have been taken in consideration in order to get a reliable result based on information from the customer.

6.3. Technical characteristics

At this point customer requirements turn into technical characteristics including design features. Many factors between the WHAT's and the HOWs are complex and they are difficult to take into account. The relationship section of the House of Quality helps the relationships between the WHATs and the HOWs. Symbols inside the house of quality are used to represent the strength of the relationships. At this point the team makes sure that technical characteristics are produced in response to customer needs, this helps to decrease unnecessary costs and service complexity. Using QFD helps the team work to consider plenty alternatives before

choosing the optimal solution.

6.4. Correlation matrix

This is a triangular diagram that shows the relationship between each HOW item. As mention before symbols are used to describe the strength relationships and to indicate the assurance or the negativeness of the relationships. As a House of Quality extension, this tool is very important for identifying positive correlations, which effect is to avoid duplication. Negative relations are shown and it represent trade-offs. Monitoring this tradeoffs will avoid problems in later and may lead to take major competitive advantages and avoid redesign.

6.5. Importance ratings

The last step is about express the level of the strength in the relationship between requirements. MA White paper (2007) states "The importance ratings are calculations based on the customer requirements". Moreover the Service characteristic shall be rated as well. This step of the method will allow to have a ranking among the different aspect and make able to economize efforts.

7. Analysis of results

Based on the 5 steps, any company can end-up the QFD implementation with an analysis when all the information are gathered and the results from the relations are showed, building the House of Quality .

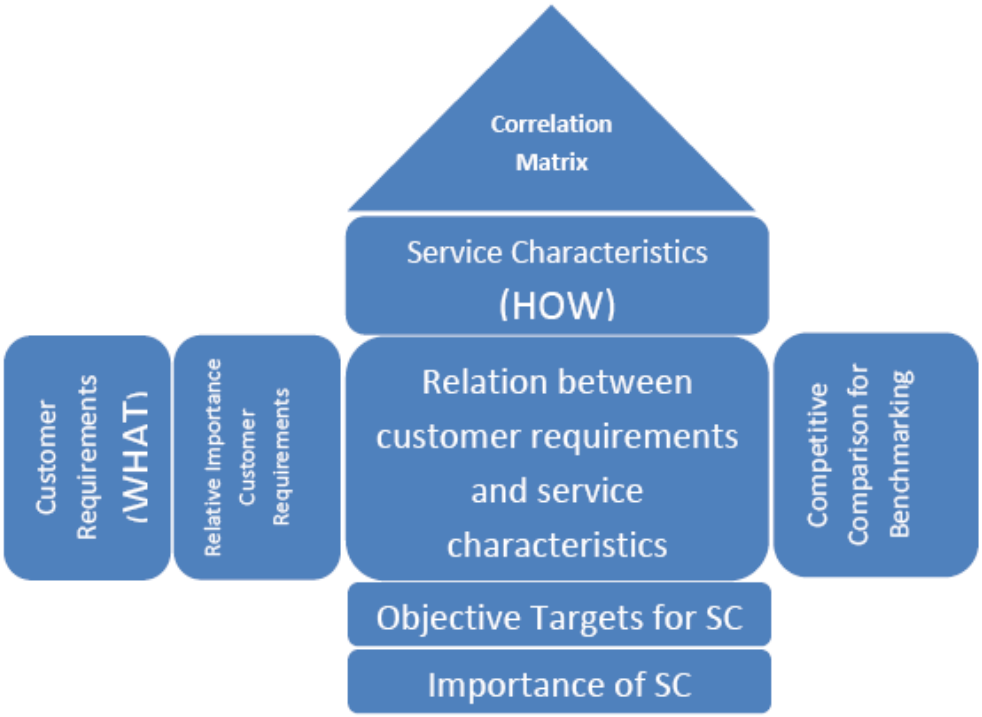

Figure 2.House of Service Quality,
adaption from Mountain Ash Consulting Ltd White Paper, 2007

Now it is time to define the service development strategy and state the action plan.

The information obtained can fed the next phase of a quality management process design deployment.

According to MA White paper, "QFD is a useful methodology to facilitate planning,

decision-making and communication in the service development environment". "At its core is the Voice of the Customer, which gives it the cohesive platform throughout the service development process".

References

[1] Bergman, B., and Klefsjö, B., Quality from Customers Needs to Customer Satisfaction, Studentlitteratur, Lund, 2003.

[2] Chakrapani, C., How to Measure Service Quality & Customer Satisfaction: The Informal Guide for Tools and Techniques, 1998.

[3] C. Chow-Chua, and R. Komaran, "Managing service quality by combining voice of the service provider and voice of their customers", Managing Service Quality Volume 12 Issue 2, New York, 2002, pp.10.

[4] Edvardsson, B., and Thomasson, B., Quality of Service, Making it really work, Mc Graw Hill, New York, 1993.

[5] D. Garvin, "What does Quality Mean?", Sloan Management Review Vol 4, New York: The Free Press, 1984, pp. 16.

[6] A. Lawrence, "Expanding the Role of CSM in Total Quality", International Journal of Service Industry Management Volume 2 Issue 2, London, 1991, pp.15.

[7] Mitra, N., Fundamental of Quality Control and Improvement, Macmillan Publishing Company, New York, 1993.

[8] Norman, R., Service Management, John Wiley & Sons, Chichester, Sussex, 1984

[9] Zeithaml V., Parasuraman A, and Berry L., Delivering Quality Service: Balancing Customer Perceptions and Expectations, The Free Press, New York, 1996.

[10] Mountain Ash Consulting Ltd White Paper, "Customer-driven product development with Quality Function Development", 2007 [accessed 3.12.2009]
http://www.maconsult.co.uk/resources/customer_driven_product_development.pdf