

# **Improving the customer claim resolution process by proposing a standardized Customer Claim Priority Matrix**

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## **Abstract:**

The growth and sustainability of a manufacturing company extensively relies on customer satisfaction regarding the quality of its products. An exemplary study on the customer quality claim management of an international manufacturing company determined that one major reason for customer dissatisfaction was the inability to prioritize the reported quality problems. Therefore, the company's focus was set to enhancing the customer claim resolution process by overcoming the challenges in the prioritization process. Considering the various factors which influence the prioritization process, this study provides a solution by using a unique prioritization technique for the management of customer quality claims. It also focuses on the implementation of the derived solution by providing an explicit evaluation method for each of the prioritization factors.

## **1. Background**

The constantly evolving industrial revolutions and the increasing expectations on the quality of products have increased challenges to the manufacturers (Gupta 2019). Most of the organizations experience enormous challenges in managing the customer quality claims and satisfying their customers. The management of customer quality claims can be improved with respect to the resolution process by adopting good problem solving techniques. Nevertheless, the prioritization of the customer quality claims is challenging when the organization has diverse customers with dissimilar customer expectations.

An exemplary study on the customer quality claim management was conducted within an international company to overcome the challenges in satisfying its customers. It was determined that the major reason for the customer dissatisfaction was the inability to prioritize the quality problems in a structured manner. For resolving that problem the relevant processes and Quality Management System had to be enhanced. Due to the confidentiality and sensitivity of the data involved, the name of the company or its specific products will not be disclosed. Due to the confidentiality, the given data show only a rough estimate based on the real data and therefore it cannot be considered as real values. Nevertheless, the status quo and the solutions to overcome the problems are discussed and presented based on the real survey and data.

## **2. Status Quo**

The major lever for customer satisfaction is the quality of each product and there exists a positive correlation between the customer satisfaction and the company's overall performance (Suchánek et al. 2014). This can be quantified and monitored using a metric known as the Customer Quality PPM<sup>1</sup>.

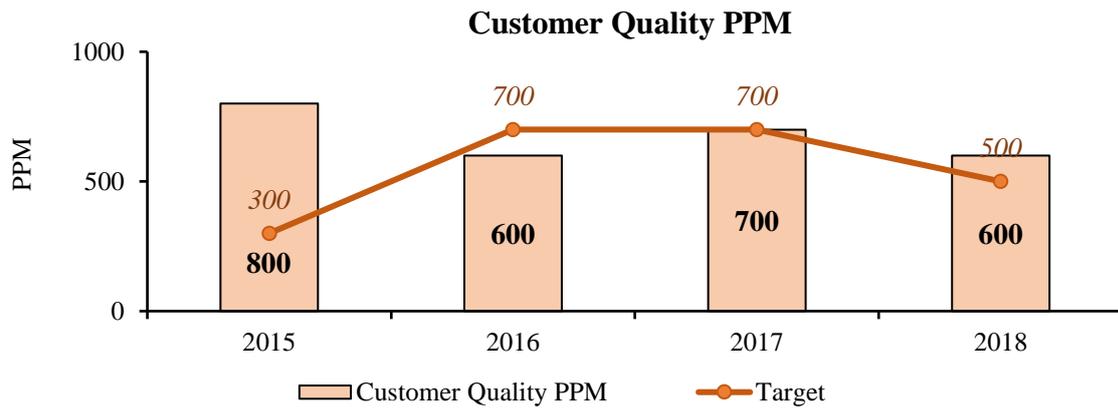


Figure 1: Customer Quality PPM

Figure 1 indicates that the PPM target for the year 2016 was set on a higher level – due to the huge quantity of non-conforming parts in the year 2015. Nevertheless, even in 2019 the organization struggled to achieve its Customer Quality PPM targets.

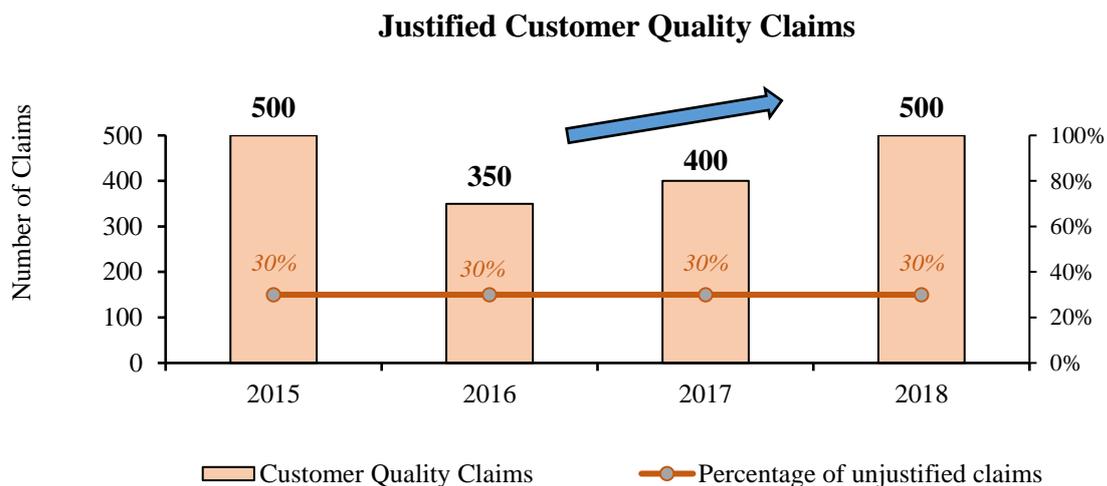


Figure 2: Customer Quality Claims

Figure 2 shows an increasing trend year-on-year since 2016 that signifies a huge risk to the organization. Although no variations were observed in the percentage of unjustified claims, the number of customer quality claims increased due to the increase in the repeated quality problems. Furthermore, the study revealed that the increase in repeated quality problems was mainly due to the non-prioritization and ineffective resolution of the quality claims.

<sup>1</sup> PPM = claimed parts per million sold products.

### 3. Solution:

Although many good problem solving techniques such as 8-D<sup>3</sup>, 6-Sigma, 5-Why, etc. exist to improve the resolution method, no standard technique is available to standardize the prioritization of quality claims in an industrial company. This was the reason for us to develop a unique technique for prioritizing the customer claims by considering various influencing factors for the customer's satisfaction.

#### 3.1 Prioritization Technique

Linder and Schmitt (2015, 591) mention that “Systematic handling and analysis of customer complaints, throughout the whole product lifecycle, has a significant positive impact on future products' quality”. The prioritization of customer quality claims promotes the systematic approach of resolving the customer quality claims, thereby enhancing customer satisfaction. Therefore, the presented study proposes a sequence for prioritization by considering the following critical factors (figure 3).

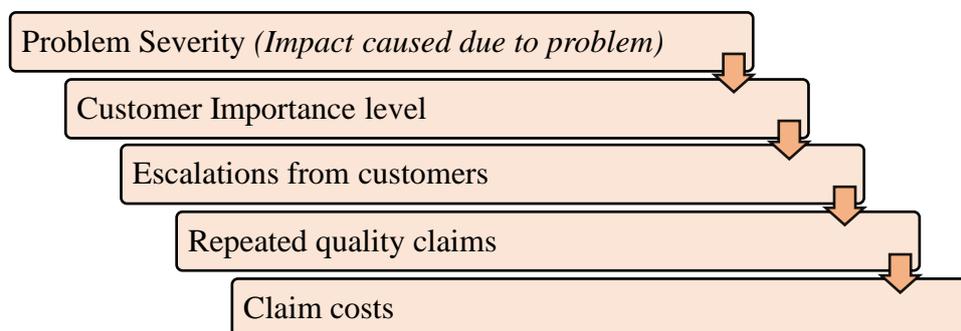


Figure 3: Prioritization Sequence for Customer Quality Claims

Within the proposed sequence, we consider the above five major factors by viewing the prioritization process from a customer's perspective. We derived criteria for each of the above factors and applied the concept of weights. We assume that these weights are generally applicable but companies using our prioritization technique may make modifications by re-assigning the weights depending upon their customer agreements and management decisions.

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<sup>2</sup> 8D = Eight Disciplines problem solving technique

### 3.1.1 Problem Severity

The real case on which the method was mainly based upon is a technical solution provider for customers. It is obvious that it seems essential to consider the severity or impact of problems caused due to the quality failures at the customer side. Nevertheless, this approach is familiar to many companies, as it can be found in a study conducted on Blackberry in which the company failed to understand the impact caused at an individual level to customers due to service problems (Gijsenberg et al 2015). Following this study, the customers of Blackberry started seeking alternatives and the company lost the customer’s trust that it had acquired during many years. For this reason, we assigned the problem severity due to quality failures with higher weights (table 1).

Type of Failure	Points (A)
Non-function of product and safety issue to end customer	40
Production stop due to the failure	20
Non-function of product and non-safety issue to end customer	15
Workability Problem	02
Useable but needs further improvement	01

Table 1: Problem Severity Matrix

### 3.1.2 Customer Importance Level

The well-established concept of ‘Vital Few’ and ‘Useful Many’ by Juran for customer segmentation by assigning weightages was adopted for the customer importance level (Evans and Lindsay 2010). As shown in table 2, a matrix to determine the customer importance level was created. A company can define the various slabs depending upon the sales revenue generated from each customer.

Customer	Sales Revenue (in €)	Points (B)
C1	> XXXXXXXXXXXXX	25
C2	XXXXXXXXX to XXXXXXXXX	20
C3	XXXXXXX to XXXXXXXX	15
C4	XXXXXXX to XXXXXXX	10
C5	< XXXXXX	05

Table 2: Relative Customer Importance Matrix

### 3.1.3 Escalations from customers

The customer quality claims affects the smooth functioning by causing issues in productivity and profitability at customer side. Therefore, escalations from customers are bound to arise in a business scenario. Nevertheless, escalations depends on the customer behavior. A previous study on the banking sector to identify the various types of customer behaviors identified that there are three types of customers. The first type complains but continues the relationship. The second type never complains but switches to competitors at a moment. The third type just complains and does not bother about a real improvement (Sharma and Kumar 2012). Therefore, the best method to tackle the customer escalations is by registering the escalations from each customer and internally prioritizing them based on the customer importance as shown in the matrix in table 3.

Customer	Sales Revenue (in €)	Points (C)
C1	> XXXXXXXXXXXXX	20
C2	XXXXXXXXX to XXXXXXXXXXX	10
C3	XXXXXXXX to XXXXXXXX	05
C4	XXXXXXX to XXXXXXX	03
C5	< XXXXX	02

Table 3: Matrix for customer escalations

### 3.1.4 Repeated quality claims

As customers are dissatisfied on repeated shipment of the defective products, the matrix to prioritize the repeated defects has been established as shown in table 4.

Defect Type	Repeat frequency	Points (D)
Repeated Defect	> 2 times to the same customer	10
	2 times to same customer	05
	Same defect to different customers	03

Table 4: Repeated Defects Matrix

### 3.1.5 Claim costs

The cost incurred due to quality failures affects the profits of a company. Nevertheless, factors such as problem severity, customer importance, escalation and repeated quality problems should be weighed higher considering the customer expectations. Therefore, we assigned relatively low weights to the claim costs as shown in table 5.

<b>Claim costs (in €)</b>	<b>Points (E)</b>
> XXXXXX	05
XXXXX to XXXXX	04
XXXX to XXXX	03
XXX to XXX	02
< XXX	01

Table 5: Claim Costs Matrix

### 3.1.6 Priority Matrix

The well-known Failure Mode Effective Analysis (FMEA) determines risk priorities using the Risk Priority Number (RPN). RPN is the product of three factors i.e. occurrence, severity and detection of a failure (Sharma and Srivastava 2018). Analogous to the concept of assigning weights in the FMEA process using RPN, we developed the priority matrix to prioritize the customer quality claims. The basic idea was to obtain a final priority value for effectively prioritizing customer quality claims by considering of all five critical factors mentioned in figure 1. As shown in table 6, the designed priority matrix used the following criteria:

- The maximum priority value for a customer quality claim is 100.
- The priority value is obtained by the sum of the points of the above matrices.

SI	Claim	Customer	Priority Points					Priority Value $P=A+B+C+D+E$
			Problem Severity (A)	Customer Importance (B)	Customer Escalation (C)	Repeated Defects (D)	Claim Cost (E)	
Ex	abc	C1	40	25	20	10	5	100
1								
2								

Table 6: Customer Quality Claim Priority Matrix

For determining the priority value, an additive method instead of a multiplicative method - as known from the FMEA - was preferred, according to the following arguments:

- In the FMEA technique, the different factors i.e. severity, occurrence and detection are inter-connected to each other in the value chain, making a multiplicative approach reasonable. In contradiction to that, the different factors involved in the Customer Quality Claim Priority Matrix are non-integrated, making an additive approach reasonable.
- Ease of communication between the divisions using simple numbers.

#### 4. Implementation of the prioritization process

As the aforementioned factors for prioritization are non-integrated, their data should be obtained from various sources. We propose the source of inputs and processing options as mentioned in figure 4. Certainly, a company may modify the sources of inputs and processing options depending upon the ease of use and the QMS used for processing quality claims.

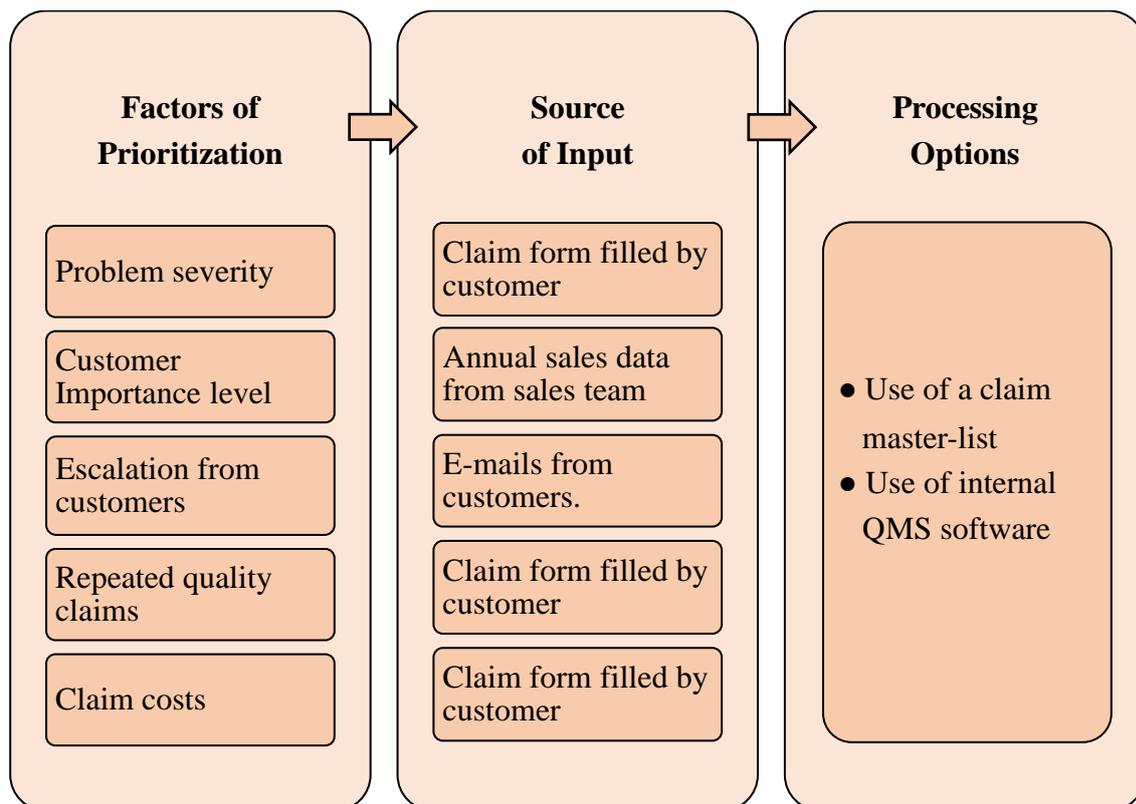


Figure 4: Implementation idea of the prioritization process

#### 5. Constraints

Although the above mentioned prioritization technique has several advantages, there are two major constraints in the implementation of this technique. Firstly, the customer who updates the problem severity in the claim form is assumed to be fair and to possess a minimum of technical expertise. Secondly, the resistance to change is a natural phenomenon among employees. So several divisions including the quality analysts might resist to the implementation of the above technique.

## **6. Conclusion**

This study aims to enhance the customer satisfaction through an improved management of customer quality claims. By analyzing the reasons for customer dissatisfaction, this study provides an option by using a unique prioritization technique for the management of the customer quality claims. This study also focuses on the implementation of the derived solutions by providing an explicit idea for each of the prioritization factors. Furthermore, this study briefly presents the possible constraints during the implementation of the new prioritization technique.

## Literature

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