Kano Model Analysis

The Kano Model of Customer (Consumer) Satisfaction classifies product attributes based on how they are perceived by customers and their effect on customer satisfaction. These classifications are useful for guiding design decisions in that they indicate when good is good enough, and when more is better.

Project activities in which the Kano Model is useful:

- ☛ Identifying customer needs
- ☛ Determining functional requirements
- ☛ Concept development
- ☛ Analysing competitive products

Other tools that are useful in conjunction with the Kano Model:

- ☛ Eliciting Customer Input
- ☛ Prioritisation Matrices
- ☛ Quality Function Deployment
- ☛ Value Analysis

Introduction

The Kano Model of Customer satisfaction (Figure 1) divides product attributes into three categories: threshold, performance, and excitement. A competitive product meets basic attributes, maximises performances attributes, and includes as many "excitement" attributes as possible at a cost the market can bear.

Figure 1: Kano Model

Threshold Attributes

Threshold (or basic) attributes are the expected attributes or "musts" of a product, and do not provide an opportunity for product differentiation. Increasing the performance of these attributes provides diminishing returns in terms of customer satisfaction, however the absence or poor performance of these attributes results in extreme customer dissatisfaction. An example of a threshold attribute would be brakes on a car.
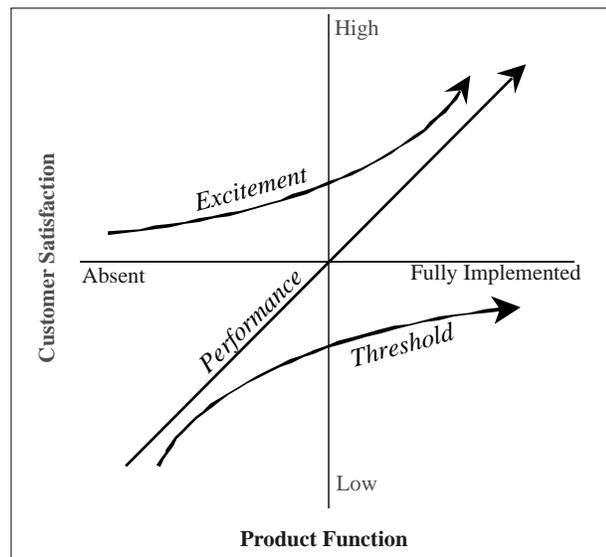
Threshold attributes are not typically captured in QFDs (Quality Function Deployment) or other evaluation tools as products are not rated on the degree to which a threshold attribute is met, the attribute is either satisfied or not.

Performance Attributes

Performance attributes are those for which more is generally better, and will improve customer satisfaction. Conversely, an absent or weak performance attribute reduces customer satisfaction. Of the needs customers verbalise, most will fall into the category of performance attributes. These attributes will form the weighted needs against which product concepts will be evaluated.

The price for which customer is willing to pay for a product is closely tied to performance attributes. For example, customers would be willing to pay more for a car that provides them with better fuel economy.

Excitement Attributes

Excitement attributes are unspoken and unexpected by customers but can result in high levels of customer satisfaction, however their absence does not lead to dissatisfaction. Excitement attributes often satisfy latent needs – real needs of which customers are currently unaware. In a competitive marketplace where manufacturers' products provide similar performance, providing excitement attributes that address "unknown needs" can provide a competitive advantage. Although they have followed the typical evolution to a performance then a threshold attribute, cup holders were initially excitement attributes.

Other Attributes

Products often have attributes that cannot be classified according to the Kano Model. These attributes are often of little or no consequence to the customer, and do not factor into consumer decisions. An example of this type of attribute is a plate listing part numbers can be found under the hood on many vehicles for use by repairpersons.

Application of the Kano Model Analysis

- A relatively simple approach to applying the Kano Model Analysis is to ask customers two simple questions for each attribute:
    1. Rate your satisfaction if the product has this attribute?; and
    2. Rate your satisfaction if the product did not have this attribute?

Customers should be asked to answer with one of the following responses:

    A) Satisfied;

    B) Neutral (Its normally that way);

    C) Dissatisfied;

    D) Don't care.

- Basic attributes generally receive the "Neutral" response to Question 1 and the "Dissatisfied" response to Question 2. Exclusion of these attributes in the product has the potential to severely impact the success of the product in the marketplace.

- Eliminate or include performance or excitement attributes that their presence or absence respectively lead to customer dissatisfaction. This often requires a trade-off analysis against cost. As Customers frequently rate most attributes or functionality as important, asking the question "How much extra would you be willing to pay for this attribute or more of this attribute?" will aid in trade-off decisions, especially for performance attributes. Prioritisation matrices can be useful in determining which excitement attributes would provide the greatest returns on Customer satisfaction.

- Consideration should be given to attributes receiving a "Don't care" response as they will not increase customer satisfaction nor motivate the customer to pay an increased price for the product. However, do not immediately dismiss these attributes if they play a critical role to the product functionality or are necessary for other reasons than to satisfy the customer.

The information obtained from the Kano Model Analysis, specifically regarding performance and excitement attributes, provides valuable input for the Quality Function Deployment process.

References

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