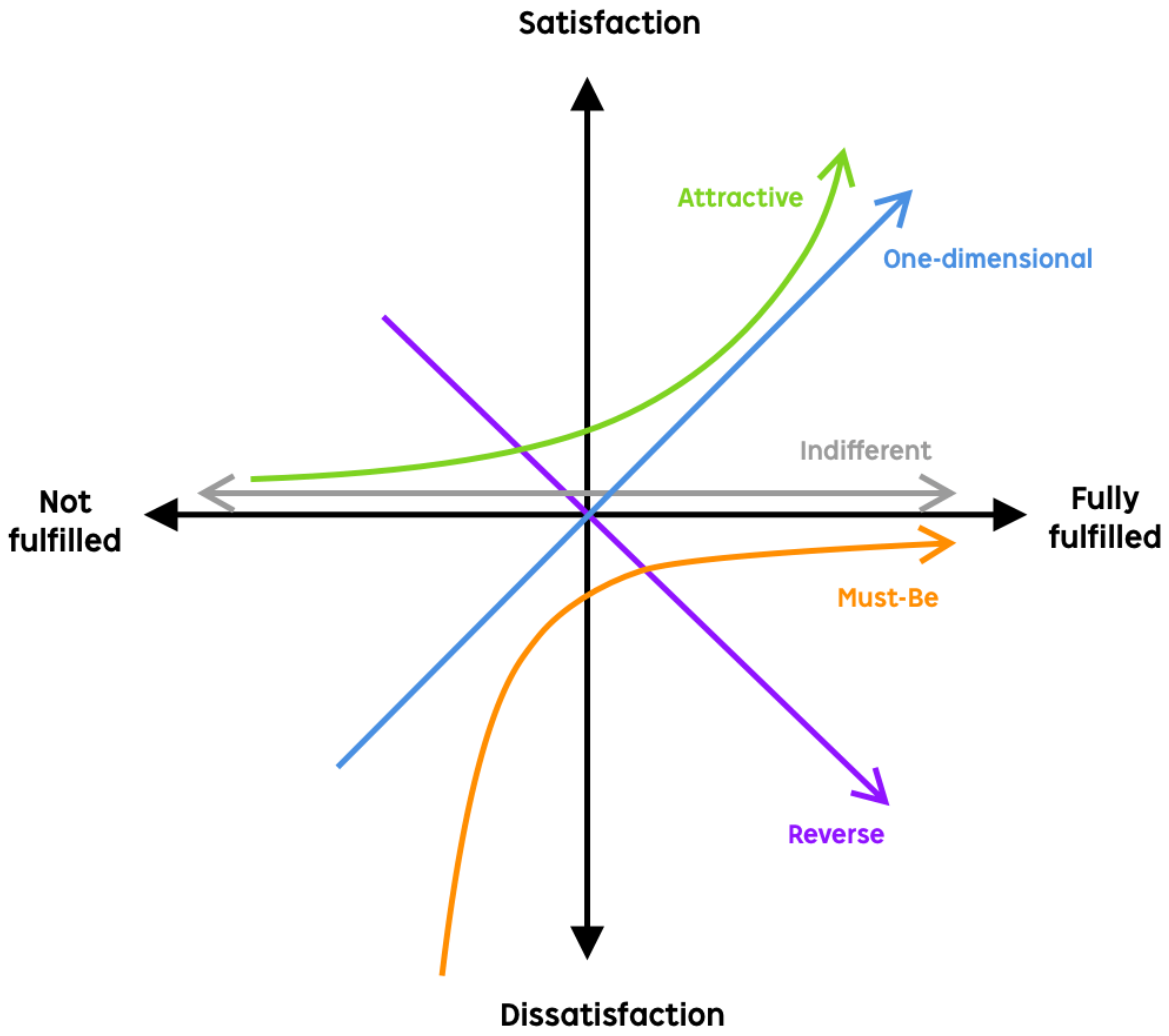
KANO Analysis Model – Value Based Prioritization Techniques

Kano Analysis Model is a Lean Six Sigma tool that helps us prioritization of product features, and we can understand the trend of satisfaction level of our customers. Most of the prioritization techniques are based on business values & over a period of time, almost all features expected by the user will get categorized as a high priority. So ones with medium or low priority will not get a fair chance for development & implementation. The Kano analysis model addresses this concern by looking at perceived customer satisfaction while a user story or a feature gets implemented. Using the model, the product owner and the team are able to prioritize a product feature in one of the five categories mentioned below and expend resources to deliver them.

Kano Analysis Model



Basic / Must-be

- Like the must-haves in MoSCoW, these features must be present in the product for the customer to be able to use them. Hence the customer implicitly expects these bare minimum functions and if they are absent the customer is extremely dissatisfied.
- As a result the project team is expected to pay the maximum attention to these features, even if that means that no significant amount of revenue may be generated by those features.
- Examples of such features are like being able to toggle the channel or volume buttons on a TV remote or being able to search a book from our library management system.
- **Example**: In the early 2000s, the internet and wi-fi connection in a hotel room is an exciting factor, but now we all know it is a must-be factor or a basic need of all.
- As shown in picture by the PURPLE line below the X-axis, the presence of the features do not increase customer satisfaction, but its absence causes a lot of dissatisfaction.

Attractive/Delighters

- These features are neither requested nor expected by the customer, but when delivered lead to business benefits accompanied by a high degree of customer delight and appreciation.
- Organizations and product teams invest effort behind such innovative features because they differentiate their product offering from their competitors, give high perceptions of customer-oriented behaviours, penetrate the market place quickly and increase their profitability.
- As an example, being able to record a favourite TV show or a sporting event is a good attractive feature, as the viewer has an option to enjoy it later in case he/ she missed when the TV channel telecasted the program or simply wants to play back again.
- **Example**: Before one decade the front camera of smartphones is an exciting factor also very few peoples were doing video calls but now a day's front camera is falling under the must-be requirement.
- As shown in picture by the PURPLE line above the X-axis, the presence of the features increase customer satisfaction exponentially, but its absence does not cause any grief or inconvenience as the customer never expected or asked for it.

One-dimensional/Performance

- These features are explicitly requested by the customer. The more (or better quality) of these the greater is the positive impact on customer satisfaction. Conversely if these features are not implemented or function poorly when benchmarked with the product from a competitor, they have an adverse impact of customer satisfaction or retention. These features are analogous to the 'should-have' features in MoSCoW.
- Organizations and product teams invest effort behind such features because they would like to stay competitive in the market and achieve customer satisfaction to retain revenue.

- As an example, consider an online shipper who expects his purchased item to be delivered to his doorstep for free within the promised turnaround time of 3 days. If the item does not arrive by that time, there will be inconvenience caused. In some cases, the customer could also ask for an expedited (say overnight) delivery by paying an extra shipping fee, if that option is provided by the online retailer.
- **Example**: Before a decade smartphones don't have a high-resolution camera but nowadays it's a very high-resolution camera available in smartphones that is a very basic example for easily understand the performance. For better understanding, we can take an example of the Apple phone that is very much famous for its performance compared to any other phone.
- This is depicted in picture by arrow that goes linearly from the bottom-left quadrant to the top-right quadrant implying linear increase of customer satisfaction by implementing needed features.

Neutral/Indifferent

- These are the features that the customer does not care about. So whether they are present or absent does not impact the customer satisfaction directly and so he/she is indifferent about it.
- An example of this is a flight recorder also commonly known as black box in an aircraft. Most passengers on a commercial flight are oblivious about the presence or absence of a black box on the aircraft. But it is a regulatory and compliance requirement by the aviation industry that such a device be very much operational in the aircraft, collecting and recording flight parameters frequently and help in facilitating investigations during mishaps and accidents.

Reverse

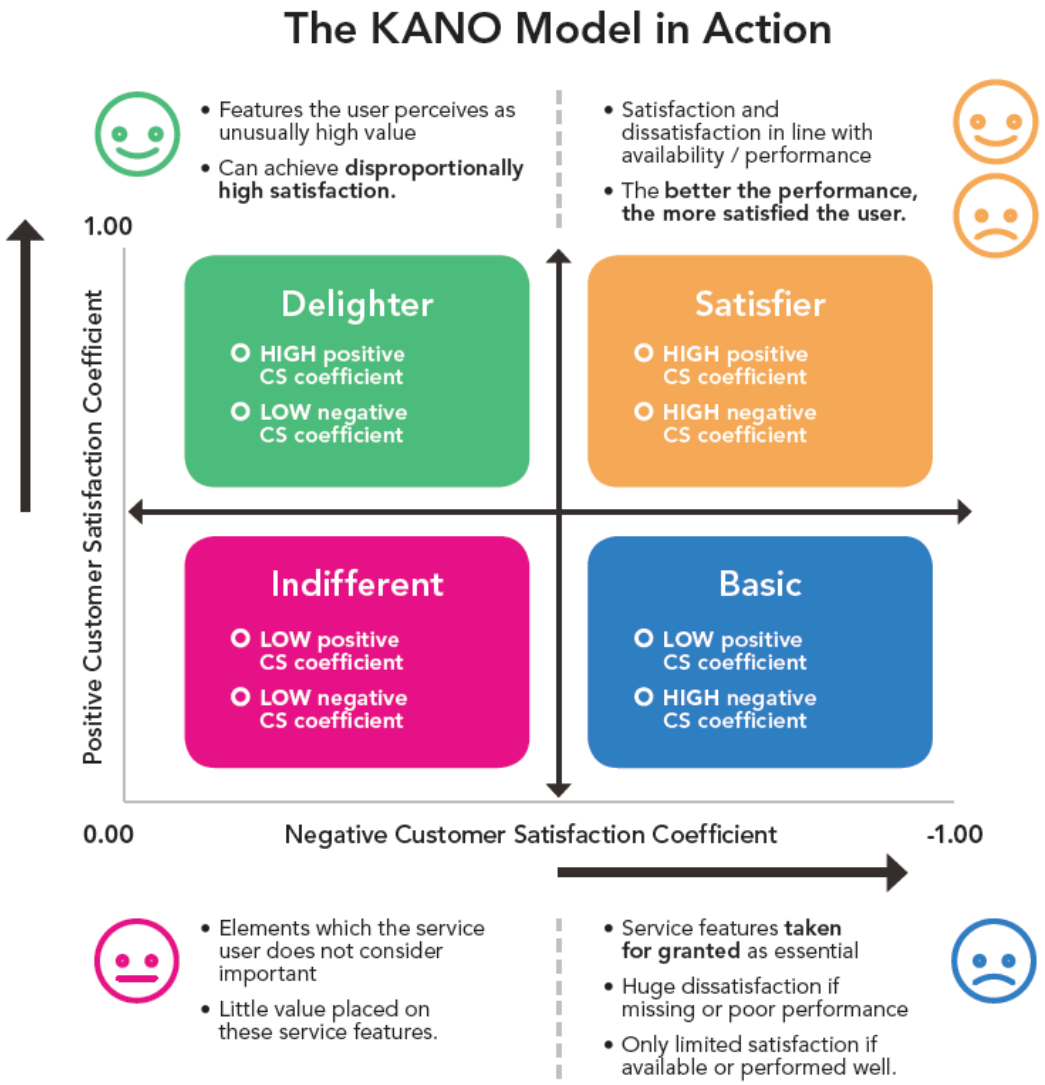
- These set of features when present cause customers to dislike a product and their absence causes dissatisfaction. In most cases, the customer would like to seek alternative and move to another product that does not provide the same set of features that it dislikes.
- Logically this works in the direction opposite to the one-dimensional/ performance category, so the team should make a careful consideration whether to implement them or not.
- This is depicted in picture by a PURPLE arrow that goes linearly from the top-left quadrant to the bottom-right quadrant implying linear decrease of customer satisfaction if 'disliked' features get added.
- An example of this is an old neighbour of mine who still uses the telephone to hail cabs because he doesn't feel comfortable using high-tech smartphones to use app-based taxi services.

Let's take one example to understand how the customer's requirements are changing.

Example: CD/DVD drive in a laptop is a delighter feature at one time, and then it becomes a basic requirement over the period of time. Nowadays, customers expect slim laptops, so laptops' CD/DVD drive become an undesired feature.

Steps – Kano Analysis Model

Let's prepare Kano Analysis Model using below mentioned five steps.



Step 01: Identification of Characteristics

- In the very first step of preparing the KANO model, we need to identify the characteristics of any product or service.
- This step is very important in any Six Sigma Project.
- We need to create a list of features that we need to add to the product or service.
- This requirement might come from customers, management, or the points from the team brainstorming.

Step 02: Conduct Customer Survey

- After listing out the characteristics or features of the product or service, we need to take the opinion from the customers.

- For this, we can divide the survey by asking two different types of questions that are Functional Question, and Dysfunctional Question

1. Functional – How the customer would feel if the product or service had that particular feature?
2. Dysfunctional – How the customer would feel if the product or service did not have that particular feature?

Step 03: Classification of Response

- After taking the review from the customer, we need to classify the responses as per the question types either it is functional or dysfunctional.
- Compare the functional and dysfunctional types to evaluate the type of requirement.
- The requirements might be different types that are mentioned below.

1. Must be Requirement
2. Performance related Requirement
3. Delighters or Wow factors

Step 04: Analyse the data

- After classifying the data we need to analyse the data.
- Refer to this article for understanding about the Different Data Types
- For this, we can summarize all the responses and identify the highest requirement for each category.

Step 05: Prioritize and Implement

- The last step is the prioritization and implementation of the features into the product or service.
- First, we need to focus on the "must be" requirements.
- Secondly, we need to focus on the performance-related requirements that will attract more customers to our product or service.
- After that, we can focus on the delighter features or wow factors based on the budget.
- Also, ignore all features that will not add any value.

Benefits of the Kano Analysis Model

- It helps organizations for understanding the behaviour of customers, If it changes from attractive to must be a requirement.
- Kano Model helps a product development team understanding the customer's requirement and behaviour.
- Kano model reduces the product and service development time by eliminating or adding the features as per customer demand.
- Also, the Kano model predicts the future trend of the product and service such as currently the excitement/attractive features of the product will be the must be a requirement in the future.
- So, businesses can identify the clarity of the future customer's requirement with the help of the Kano Model.

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