

# FAST diagram for Customers Based Process

## – Simultaneous Analytical Methodology for Customers' Emotion

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### Biography

**Sayaka Uchimura** was working for seven years as a manager at the restaurant of Saizeriya who is operating the Italian restaurant chain in Japan. After that, she moved to the Head Quarters and worked on the development of the food menu and the promotion for five years. Then, via a manager of Public Relations, she has been promoted to the head of the VE team to apply VE methodologies through the entire company. Currently, she is focusing on the VE trainings and VE workshops.

### Abstract

In order to improve the customer processes, the customer experience values should be prioritized. However, there was no methodology to describe both the physical process experienced by the customers and the customer emotion in the conventional FAST diagram analysis.

In this paper, the process improvements for customers are distinguished from the conventional process and the characteristics of the customer process are clearly defined. In consequence, the methodology to simultaneously describe the customers' emotion is proposed.

### Introduction

In function analysis, it is possible to involve products, projects and process as objectives. This is one of the big advantages of the FAST diagram analysis to handle not only the projects but the processes. This is one of the reasons why Saizeriya decided to introduce VE.

In the restaurant chain like Saizeriya, it is more likely to choose the process rather than the products as the objectives to improve. Although the product prices consist of three factors (products: food and drinks, customer service, environment.) the products is only one factor amongst them. Other two factors like service in the restaurants are intangible. More than 80% of the VE projects for improvements were related to the customer service and the environment.

In these improvement projects, there were a few difficulties to extract the improvement ideas by the conventional FAST. It was the typical case that the value improvement of the customer experience should be prioritized. When they travel to the countries having the different cultures, it is a quite natural to avoid the fear and the anxiety. Thus, the customers sometimes want to prioritize their emotions in the restaurants rather than food itself. If these emotions are not satisfied, the customers would never come back. Therefore, it is important to analyze the customers' emotion.

In this paper, the processes that the value improvements of the customer experiences are prioritized are defined and distinguished from the conventional processes. From this analysis, the FAST diagram including the customers' emotions is proposed.

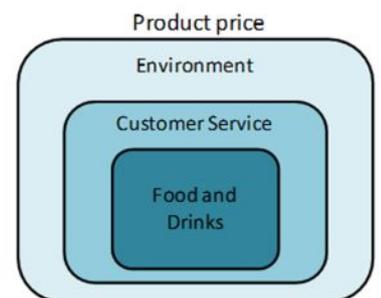


Figure1. Three elements in the price of Food-service product

### Differences between the customer process and the conventional process

First, it is defined what the customer process in which the value improvement of the customer experience is prioritized is. In addition, the differences from the conventional process is described.

#### **Conventional process analysis**

In “Function Analysis Guide (Save International)”, two examples are described in “Over-molded Insert Injection Molding Process” and “Budget and Invoice Process”. Conventionally, function analysis has been relatively focused on the business process.

In these two examples, big benefits are brought to the firms operating the molding process and to the budget managers. Thus, the conventional process analysis is to enhance the value of the business activities and the project scope is set from the business point of view.

### Customer Process Analysis

The customer process is to define the theme and the scope from the customer’s point of view. There are some processes between the business sides and the customers to provide some services and receive them. Hereafter, the customer process is defined as the process that the customers directly experience. However, the entire process between the business sides and the customers is included in the customer process analysis. From the analysis, it becomes clear what the customers are not satisfied with and how much improvements are achieved for the customers.

The differences between two process analyses is described in Table 1. In order to make the differences clearer, the examples at a dentist is explained below.

Table 1: Analysis comparison between conventional processes and customer processes

	Conventional process analysis	Customer process analysis
Subject	<b>Business Process</b> · Machining process · Production process · Operating process	series of events • Between service provider & Customer • Give product and service to customers directly • Include both before and after processes
For what	Streamlining business	Increase the experience value of customers
Scope definition	Manager’s view point	Customer’s view point
Example: dentist	• Medical record management • Maintenance of Therapeutic instruments • Production process of tooth filling	• Treatment process of carious teeth • Prevention of carious teeth • Orthodontic treatment

In the conventional process, the management method of the medical charts, the maintenance process of the therapeutic instruments and the production method of the covering of the tooth have been discussed. No customers shows up in these processes. Even though the processes are carried out in the dentist, they do not directly relate to the customers. Although these improvements may bring some benefits to the customers, the analysis is not carried out from the customer’s point of view.

In the customer process, the customer’s objectives to the dentist are focused. The customer visits the dentist to repair their tooth, to prevent cavities and to visit an orthodontist. Sometimes, it takes just one day, sometimes longer for a few years. The customers spend a lot of time and money to get the value. Although the value may include an artificial tooth and an orthotic, it is not so simple to buy just the products. The customers need to get the therapy by the dentist and the nurse. During this therapy, they utilize the facilities of the dentist and the reservation system. Through the all therapy, the customers accumulate the various experiences and the emotions of the customers may fluctuate. As described above, the values of the customer experience are influenced by the various contact points between the dentist and the customers.

### Critical Points in the Customer Process Analysis

In the customer process, the improvements directly affect the customers’ impression. The evaluation to the improvements is finally made by the customers. For example, the customers of the dentist experience the process through the whole dental therapy or event including the visit. (This may be defined as the customer process.) The customers evaluate the value of each experience and the customer judgement

may be different from that of the dentist.

How do the customers evaluate the value of their own experiences? It is considered that there are three critical points to measure the value of the customer experiences.

**The resources of the customer experiences are evaluated in a subjective manner**

In general, the values are assessed by the balance between functions and resources. Naturally, the values of the experiences are affected by the amount of the resources input by the customers.

The resources influencing the experiences are cost, time, space, risks and so on. These are similar to the case of the business process. It is natural to take time and travel cost to visit the dentist. Also, the customers may take time to collect the information of the dentist to avoid the unnecessary risks of the therapy accidents. The most of them are the physical resources expressed quantitatively.

Normally, in the business processes, only the physical resources are used for the evaluation. However, since the experiences are created by both the human bodies and the emotions, the factors like physical strength, physical load, mental strength and mental load should be considered.

It is extremely difficult to quantitatively express the physical strength and the mental strength for each human. Therefore, the amount of the input resources are determined by the subjective judgement. For the same dental therapy, the stress degree differs for each person. The customers would seek for the function which is equivalent to the degree of their own stress.

In addition, the evaluation results vary with time and customer emotion. Even the evaluation of the physical resources become subjective. It is difficult to obtain the evaluation results with the superficial actions by the customers, since the sensible customers try to control their mind. This is the reason why the judgements of the experience values are difficult.

Table 2: Resources of customer processes

	Conventional Process	Customer Process
Resource	cost, lifecycle cost, time, energy, space, failure point, risk, etc.	cost, time, space, risk, physical strength, physical load, mental strength, mental load
Resource Characteristics	Objective Quantitative	Subjective Evaluation varies with time and emotion

**Physical experience and emotional experience occur simultaneously**

In the processes of machines and managements, the goal can be achieved if the physical connections function in a normal way. However, the human experiences consist of not only the physical aspects but the emotional ones. Therefore, when the human experience is considered, it is required to take both the physical and the emotional experiences into consideration. One example at the dentist is illustrated below.

When the dentist informs the result of the therapy to the customer, the physical and emotional experiences are described. Even in the short event for five or ten minutes like the communication of the dental therapy, the customers may have the emotional experiences. On the other hand, some customers may never realize their own feelings. Even if they do not realize the

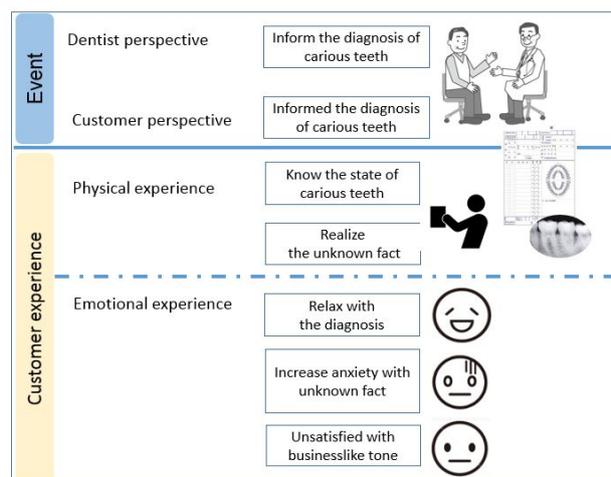


Figure 2: Two customer experiences when the diagnosis of carious teeth is made

feelings and have just the potential anxiety and dissatisfaction at the beginning, they may realize them when they are accumulated. Thus, the customers always keep to have the physical and emotional experiences though they are perceived or not perceived.

Even in the short event for five or ten minutes like the communication of the dental therapy, the customers may have the emotional experiences. On the other hand, some customers may never realize their own feelings. Even if they do not realize the feelings and have just the potential anxiety and dissatisfaction at the beginning, they may realize them when they are accumulated. Thus, the customers always keep to have the physical and emotional experiences though they are perceived or not perceived.

### ***Value judgement is not always rational***

As it is lately said in behavior economics, human judgement is not always rational. In the process of the machines and the maintenance, the managers would want that the machines keep running in a normal manner. However, the humans seek for not only the physical operation.

Technically, more options may help to choose the best. However, humans normally confuse to too many options. Since they tend to avoid the confusion, they unconsciously like to have the limited number of options. Even if they understand to lose the benefit in future, they tend to get the present benefit. Furthermore, they feel anxiety if they keep winning and relax to lose slightly. Thus, human decisions fluctuate emotionally.

Additionally, there is no theory of cause and effect in emotion. There is no rule applicable to emotion(s) and the relation between emotion and action. Also, emotions do not have the continuity and the connection and show up or disappear suddenly when they meet some events.

This particular characteristic in human having emotion affects the judgement for the customer experiences and as a result, some odd judgements are made. However, even though they are the odd judgements, there are many customers who make the same judgements when many customers experiencing the process of service are observed. Therefore, the tendency of the customer judgement affected by their emotions are obtained empirically.

These three points described above are the important points for the value judgement for the experiences through the process of service. They have not been studied in the conventional improvement of the process and are the critical points to evaluate the value of the human experience.

### **FAST diagram of Customer process**

A new FAST diagram would be beneficial to improve the customer process that increase the experience value of the customer considering the above three critical points.

Basically, the FAST diagram is created in accordance in a conventional manner. The subject is set as "A series of process that customers get some services". The scope of the subject is limited in the range of one customer experience. In most cases, the broader range should be set than the service provider thoughts. The reason is explained later.

The example of the FAST diagram at the dentist is shown below. At the dentist, the theme is related to the therapy at the dentist looking from both from the dentist and the customer perspective.

### **FAST Diagram for Treatment of Tooth**

#### **Physical aspect:**

First, diagram the FAST from the customer perspective. The FAST diagram is similar to the conventional process. Since the process meets the physical needs of the customer, the relatively rational functions are derived.

## FAST Diagram for Treatment of Tooth

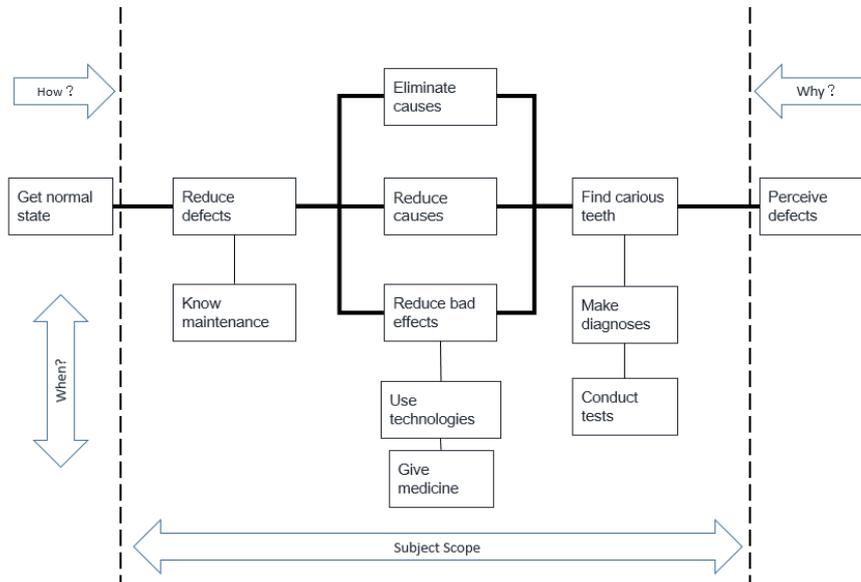


Figure 3: FAST diagram for dental therapy

## Add emotional aspect

As described above, there are both physical and emotional aspects in the customer experiences. All emotions of the customers are added to the FAST diagram of the physical aspects. The emotions felt when the customers want to get the physical functions are listed vertically.

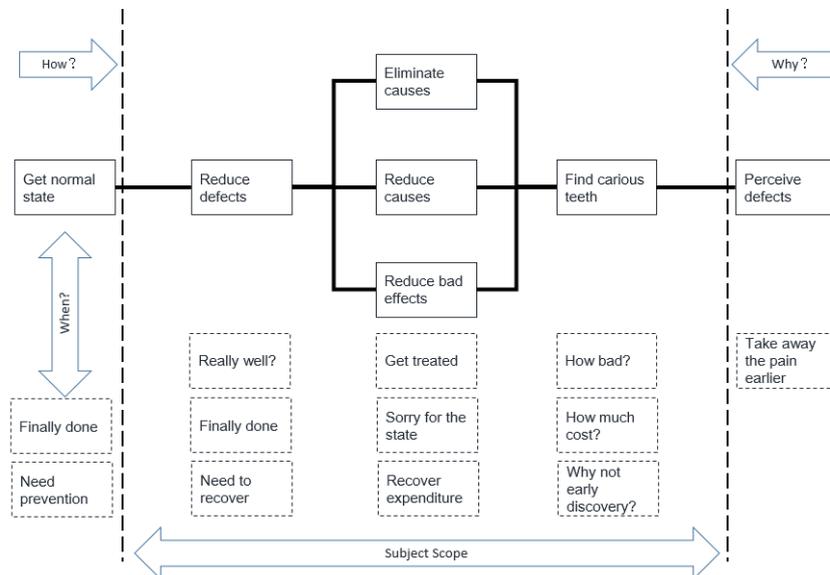


Figure 4: FAST Diagram for dental therapy —add Emotional aspects

## The Description and Scheme of the Emotion on the Diagram

The layout of the diagram is shown below, in order to make the extraction of the improvements easier.

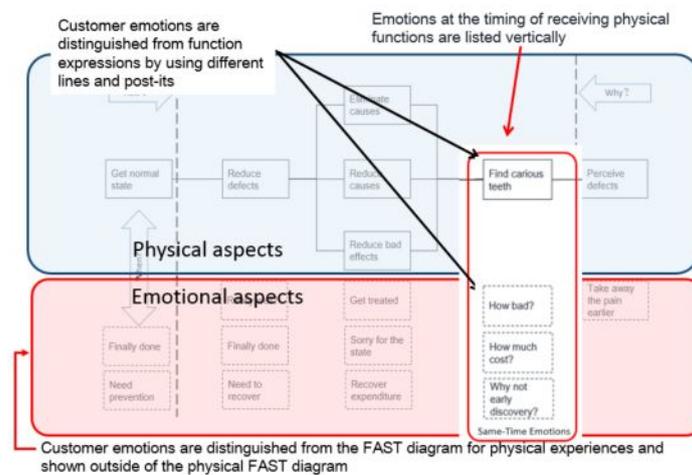


Figure 5: Method to show emotions on FAST diagram

- The customer emotions are distinguished from the function description and the groups and the post-it are changed.
- The customer emotions are distinguished from the FAST diagram of the physical experiences and indicated in the outside of the diagram of the physical functions. Do not insert in the line between the physical functions and the post-it.

## The Description Method of the Emotion

In the FAST diagram of the physical functions, the functions are expressed with “Verb + Noun” as ruled in “Function Analysis Guide”. Most of the physical experiences of the customers are designed by the service providers with some intention. Therefore, they should be expressed by the quantitative nouns and the abstract verbs.

The emotions added to the FAST diagram should be also simply expressed by “Verb + Noun”. In case of the physical functions, it is possible to be close to the root by expressing by the two words. However, in case of the emotional functions, if it is simply expressed by the two words, the analysis result would move away from the root.

For example, if the three emotions highlighted in Fig. 7 are expressed in two words, “Verb + Noun”, the expressions are as follows;

- How bad is this? → increase anxiety
- How much does it cost? → increase anxiety
- Why is it found earlier? → increase anger

The emotions are generally categorized in six (excited, tender, scared, angry, sad, and happy). However, the usage of the expressions differs by person and this should be taken into consideration for the improvement of the customer processes. Therefore, in the emotion expression, the slight difference should become clear.

### Recommended expressions for the emotions

- Not recommended      Increase anxiety
- Recommended      expressions to inform the following points
  - Anxiety for what?      Body/money/human relations/capability/ future???
  - Anxiety caused by what?      Service itself/timing/method/conversation/information???
  - How much anxiety?      Slightly/memorable/impatient

(\*) Do not use the long sentence to utilize the advantages of the FAST diagram

(\*) Not necessary to include all in one expression

### How many emotions should be listed?

Each customer has own emotion to events, even if they expect the same service. However, when the many customers experiencing the same service process are observed, it becomes clear that most customers have the similar emotions. Thus, it is possible either to list one hundred emotions for one hundred customers in the FAST diagram or to list just some common emotions for many customers. So, how are the functions expressed in the FAST diagram chosen?

The answer is determined by the goals of the improvements. It is better to list up the common emotions, when it is necessary to improve the basis of the customer process. If the basis of the process is functioned and the small emotion change is not identified, it is better to extract the emotions of the lost customers and the major customers. If enough number of customers have already been fixed and the value experiences are increased, it is better to extract the potential emotions which are not yet perceived.

It is necessary to pay attention to be insensitive to the potential emotions, since the customer process providers are usually working on the process and loose the sensitivity to the emotions. There are risks that the unkindness to the customers increases gradually, since the sensitivity to the customer emotions are diminished without realizing. The critical emotional points for the loss of the customers should be noticed.

### Prioritize Function for Value

In the last step of the Function analysis, the function with greatest opportunity to improve value is identified. In case of the improvement of the customer process, not only the physical processes but the customer emotions are targeted to improve. As described above, it is appropriate to determine which emotion should be prioritized for each objective of the improvement.

The important thing is not to judge only from the physical resources which are easily qualified. Also, the resources focused by the customers should be taken into consideration. Because, if the customers have had prior expectation or anxiety, the emotion would be fluctuated by the gap. Although the discussion process is similar to the conventional process, the final improvement points with the customer emotions are completely different.

### Case: Experiences of New Products

Although the customer process at the dentist has been discussed up here, other application was studied as well. At the dentist, the factors including anxiety are focused. But, here, the factor including fun is considered.

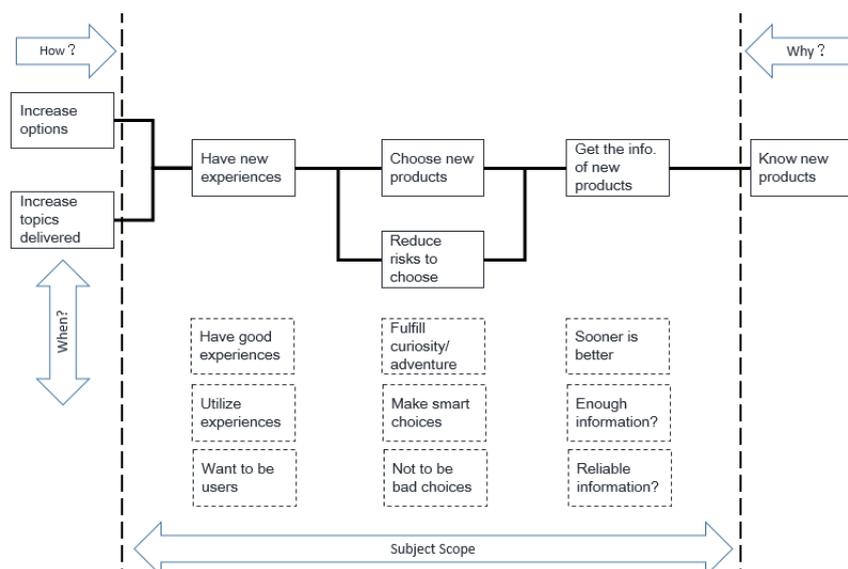


Figure 6: FAST Diagram to order new products

The providers of the new products have tendency to promote only the product information. However, when the emotion is observed in accordance with the customer process, some functions overlooked are extracted. Furthermore, the range of the processes for the providers and the customers are different each other.

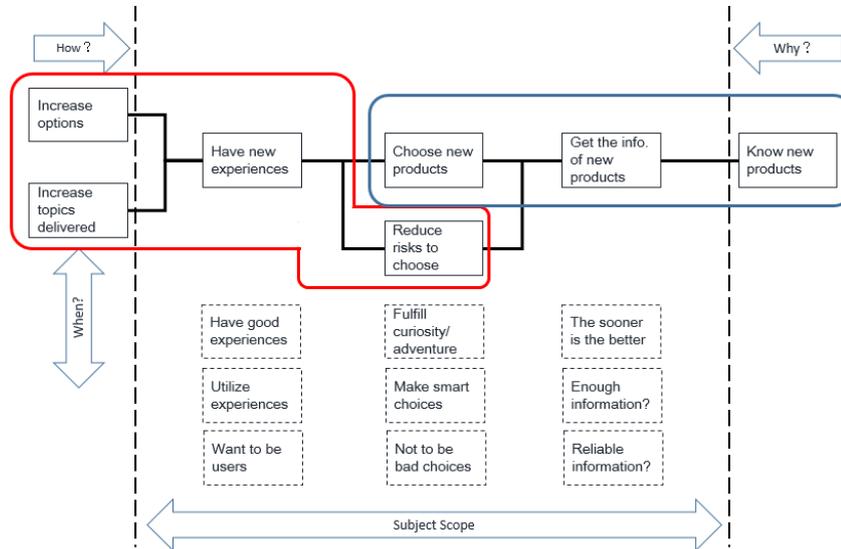


Figure 7: Different points for new product order to be focused

Although the scope of the customer processes should be defined in the range which the customers easily recognize as an experience, the providers tend to look just before and after the product acceptance. Therefore, it is important to define the scope in order to increase the value of the customer experiences.

## Conclusion

In this paper, the difference of the analysis for the conventional process and the customer process was defined. Furthermore, the critical points of the customer process was expressed and it was proposed that the emotion aspect is important when the process is improved.

Based on the idea, the expression method of the FAST diagram for the customer process was proposed. If the sensitive emotion is extracted as well as the connection of the physical functions, it is shown that the steps to be improved become clearer.

By using the customer process for the Function analysis and the FAST diagram, it is assumed that the improvements for the customers are emphasized. The faster improvement should be enabled, by using this method and by increasing the applications and the value of the customer experiences.

## References

- Book: Save International, 2015, Function Analysis Guide, Save International ,USA
- Hisaya Yokota 2016,VE Analyses of through Three Case Studies