

# A Method for Assessing Customer's Confidence in Safety in a Railroad Company

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## ABSTRACT

Users of railroad service have to choose a railroad company. When they choose them, they think about convenience, price, how safe they actually are, and how safe users can subjectively feel. We call the subjective degree of safety users feel confidence in safety (CIS). Some railroad companies need to assess CIS for their branding strategy. Therefore, we propose the assessment method of CIS in this paper.

**Keywords:** Branding Strategy, Safety in Railroad, Confidence in Safety

## INTRODUCTION

Users of railroad service have to choose a railroad company. When they choose them, they think about convenience, price, how safe they actually are, and how safe users can subjectively feel. We call the subjective degree of safety users feel confidence in safety (CIS). Actually, CIS is important factor of choosing a railroad company. In many cases, unless CIS was analyzed quantitatively, most of user evaluate CIS subjectively rather than actual safety to choose railroad company. In fact, users choose a railroad company without researching the number of accidents. In Japan, the number of serious accidents about railroad service has been declining. Therefore, they don't take the trouble to research how safety the railroad company which they will use before using railroad service.

"A Railroad" which is one of the railroad companies in Japan aims at raising a brand of security and safety by evaluating CIS. (Figure1.)(Figure2.)This paper is intended to propose the assessment method of CIS. Then, we assessed the CIS of particular railroad company using some indexes.

- I . Information about the consciousness of the customer
- II . Objection information from a customer
- III. Consciousness about the safe activity of the employee

## The action to satisfy employee and customers



Figure1. Image of raising a brand of safety and security

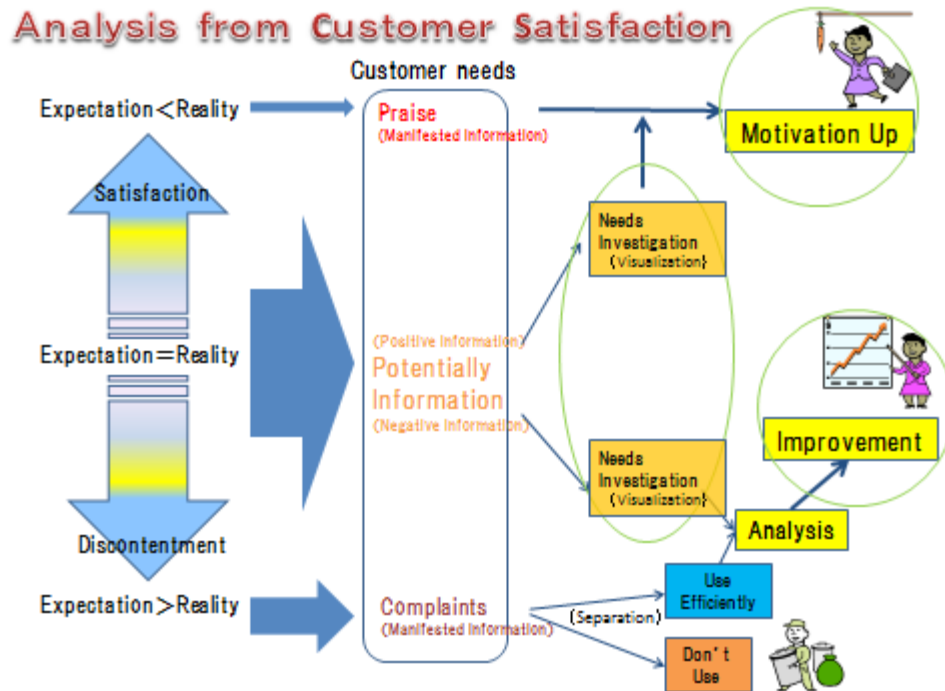


Figure2. Image of using customer information in Railroad Company

## EVALUATIONS ABOUT THE CONSCIOUSNESS OF THE CUSTOMER

We give evaluation standards concretely as follows. We used three standards such as “CIS of the railroad company,” “CIS of station service,” “CIS of train service”.

- ① CIS of the railroad company
- ② CIS of station service
- ③ CIS of train service

### 札幌市営交通のご利用に関するアンケート

札幌市営交通をご利用いただきありがとうございます。  
札幌市営交通に対するイメージや満足度について、あなたの率直なお考えをお聞かせください。

● グラフを参考に、次の各設問に数字(-100~100)でお答えください。

すごく不安
不安
どちらでもない
安心
すごく安心  
すごく不満
不満

満足
すごく満足

-100      -50      0      50      100

◇札幌市営交通「全体」に関するご質問 記入欄

設問1. 札幌市営交通を安心してご利用いただけていますか?

設問2. 札幌市営交通に満足していただけていますか?

◇札幌市営交通の「各部門」に関するご質問

設問3. 地下鉄の「駅」には満足していただけていますか?

設問4. 地下鉄の「運行・運転」には安心していただけていますか?

設問5. 「路面電車」には安心していただけていますか?

● 札幌市営交通の利用状況についてお伺いします。(□にレ点でチェック願います)

利用頻度  週に4回以上  週に1~3回  月に数回  ほとんど利用しない

利用用途(複数回答可)  通勤・通学  仕事  プライベート  その他( )

よく利用する路線(複数回答可)  南北線  東西線  東豊線  路面電車

よく利用する駅(3つまで) ( ) ( ) ( )

● 性別・年齢・ご職業についてお伺いします。(□にレ点でチェック願います)

性別  男性  女性

年齢  20歳未満  20~30代  40~50代  60歳以上

ご職業  会社員  自営業  主婦  学生  無職  その他( )

ご協力ありがとうございました。



 SAPPORO CITY TRANSPORTATION BUREAU 札幌市交通局

Figure3.A sample of questionnaire sheet in Japanese

## FINDINGS ABOUT THE CONSCIOUSNESS OF THE CUSTOMER

We investigated above indexes to 500 customers. Then, we did principal component analysis and correspondence analysis for that. From Figure4 and Figure5, we got knowledge like those.

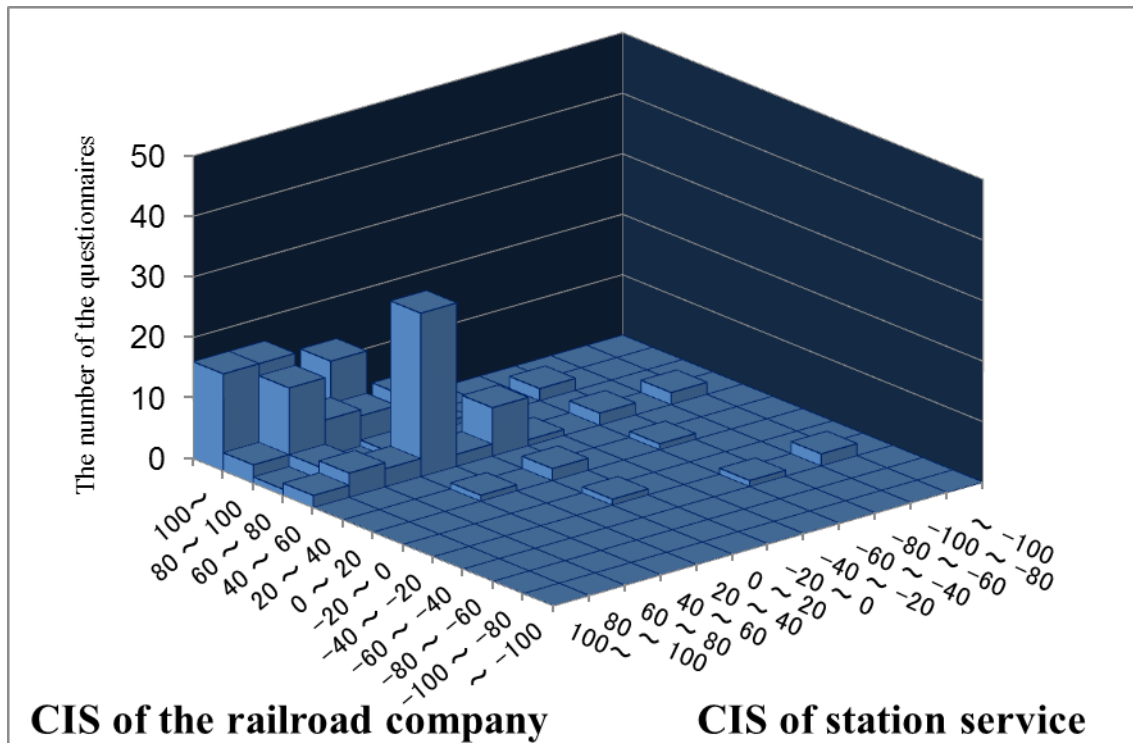


Figure 4. Total results of questionnaire about ① and ②

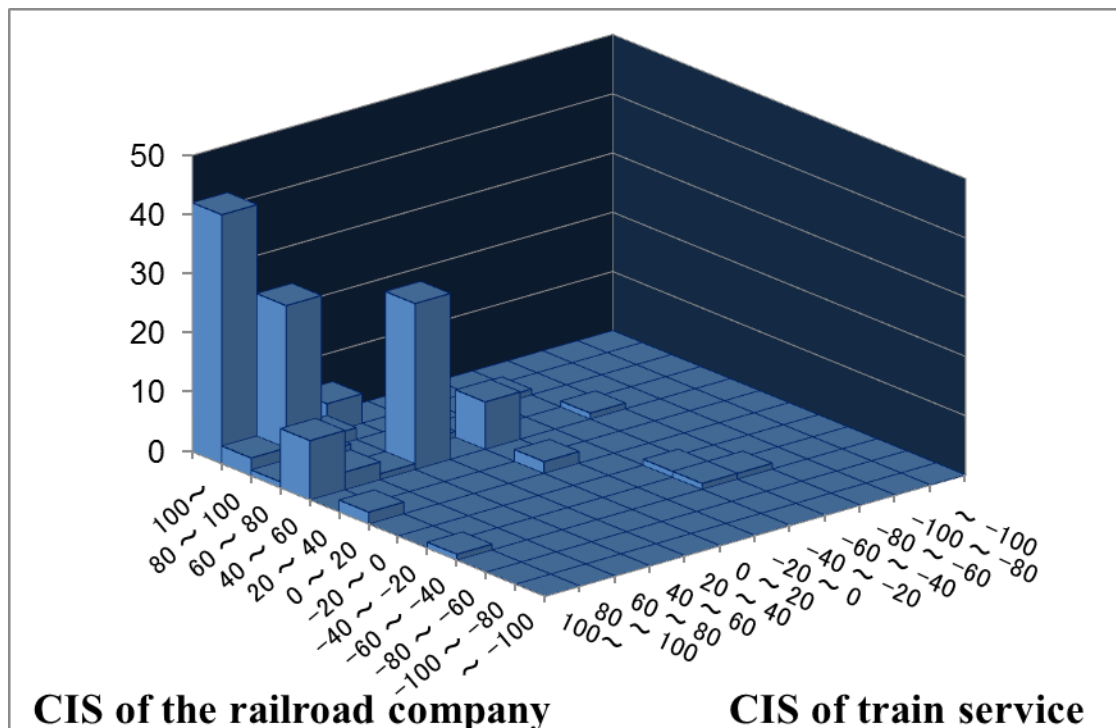


Figure 5. Total results of questionnaire about ① and ③

## ANALYSIS ABOUT THE CONSCIOUSNESS OF THE CUSTOMER

- there were interrelations between subjective evaluation value and CIS
- there were much influence on institution rather than railroad man service about ②
- there were more complaints from people who use rarely rather than frequently

## COMPLAINTS INFORMATION OF THE RAILROAD COMPANY

Then, we performed analysis about complaints information of the railroad company.

## DIVIDING AND COUNTING COMPLAINTS INFORMATION OF THE RAILROAD COMPANY

We analyzed complaints information of the railroad company which was being collected on daily basis. We divided complaints by words and did phrase analysis. Then, we found that those could be divided some groups. First, we divided three groups such as “Danger”, “Anxiety”, “Security and Safety”. Then we divided hardware such as “Facilities”, “Information”, “People” and software such as “Perception”, “Cognition”, “Communication” and “Action”.

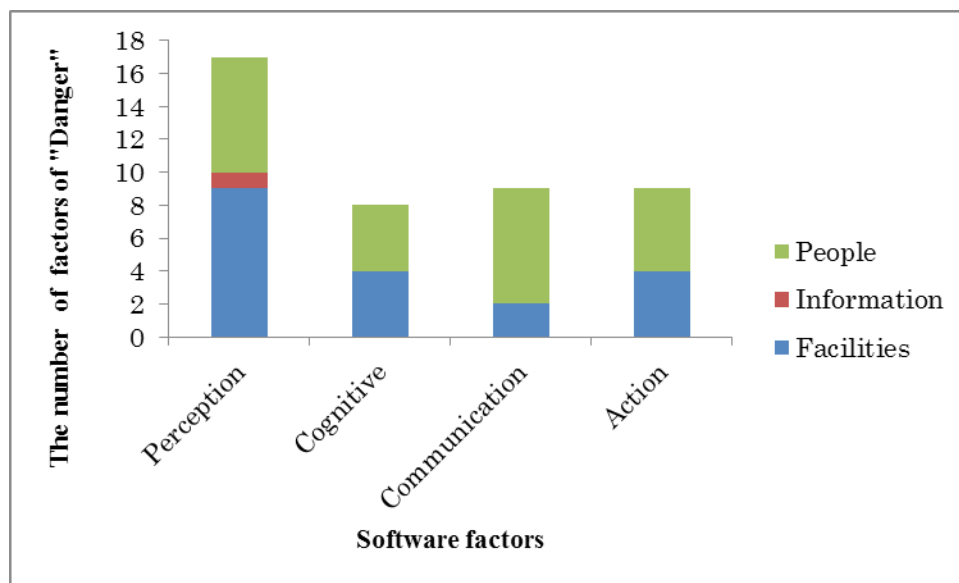


Figure6.The number of factors of “Danger”

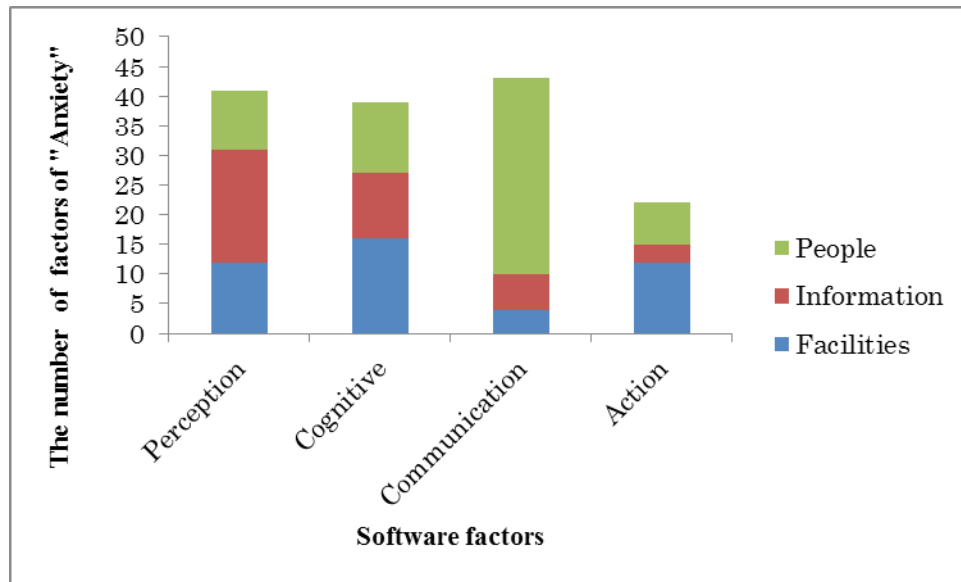


Figure7. The number of factors of "Anxiety"

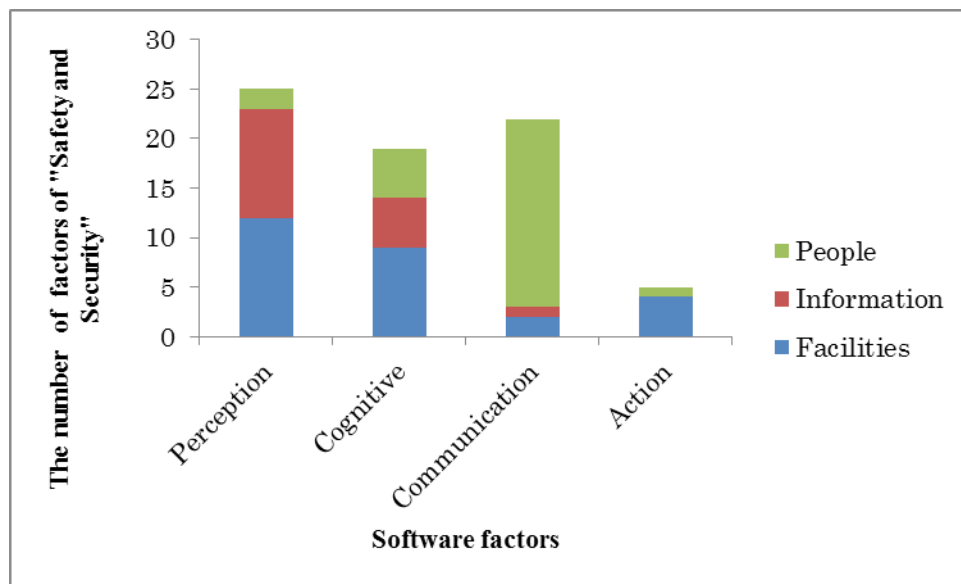


Figure8. The number of factors of "Safety and Security"

## ANALYSIS OF COMPLAINTS INFORMATION OF THE RAILROAD COMPANY

From the above analysis and investigation, we got knowledge like those.

- activation of publicity activity of safety activity for customers (widely known of safety activity)
- there were interrelation between safety activity and assessment of business in general

We let the class of managers of the organization feedback these results and let them deepen the argument about the center of gravity of the significance of developing customer-centered safe activity and the development.

## **CONSCIOUSNESSES ABOUT THE SAFE ACTIVITY OF THE EMPLOYEE**

This company did safety activity positively and they educated employee to do safety activity with customer's point of view simultaneously. We did principal component analysis for investigation results on employee's comprehension degree about safety activity. There was 1600 employee. Then, we found that employee who understands the relation of safety activity and customer satisfaction was particularly increased.

These were cleared by various aspects of investigation about employee's business in general.

As an example,

- The participation in safe activity will is apt to become low so as to go from the head office to the spot.
- This associated with "a tendency to let a cause return to the individual" and "participation in safe activity will" became clear than a multidirectional investigation for the duties activity whole for the employee..

## **CONCLUSIONS**

From analyzing above aspects, we can suppose how security activity carrying out in railroad companies affects CIS of customers. Until now the railroad company has collected various data for three years. We are planning that how to change safety activity to CIS of customers. Also, we are planning to practice that plan in the future.

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