Our proposer, adidas, gave this requirement that we, as a brand, must consider the ways of how to make consumers feel "safety and security" all the time. In addition, they didn't want us to make products which are related with safety and security. When we think how we can make consumers feel safety and security through the brand, the sports products flashed across our mind. Therefore, we struggled how we carry this project forward without making any sports products. At first, we had a man-in-the-street interview. We asked what brand of sports the consumers imagine as the safety and security brand. The reason why we had a man-in-the-street is that we would like to understand whether the customers recognize adidas as the safety and security brand. When they buy products, well known brands and design are important for almost all people. Therefore, we focus the way how we build new brand image.

We first defined the meaning of "safety" and "security". After that, we verified what brand of sports the consumers imagine as the safety and security brand. We propose "Positive Cycle" business model to satisfy the stakeholders' need. There are mainly three points.
Group 9
Group 9’s Theme Proposed by adidas

Theme 8:
ALPS “safety and security” theme title: Brand image creation of safety and security
Proposer Organization’s Name: adidas
Supporter Name and contact info:

There are many activities to define "safe and secure" in sports industry. Here are two typical activities to make consumers feel "safe and secure" about sports brands.

1. Producing products which prevent injuries
2. Creating activities which are directly connected to sports that lead to healthy lives

However, we are not expecting to have such proposals. We, as a brand, must consider the ways of how to make consumers feel “safety and security” all the time other than doing above mentioned activities. We understand that this is not an easy theme to consider, but we strongly expect new approaches we are able to implement in the future.
Group 9

PROJECT TITLE:
“BUILDING NEW BRAND IMAGE OF SAFETY AND SECURITY USING POSITIVE CYCLE BUSINESS MODEL”

Theme:
“Brand image creation of safety and security”

Proposer Organization: Adidas

Proposer Organization’s Supporter: Hiroyuki Ito

Keio Mentor: Nobuaki Minato

Members:
KAGAMI, YUKO
HATA, NAOKI
KAMIYOSHI, SEIJI
KIM, HUNSAM
NAKANO, MARI
ARIKAWA, YOSHIHISA

Graduate School of System Design and Management
Keio University
1. EXECUTIVE SUMMARY

Our proposer, adidas, gave this requirement that we, as a brand, must consider the ways of how to make consumers feel “safety and security” all the time. In addition, they didn’t want us to make products which are related with safety and security. When we think how we can make consumers feel safety and security through the brand, the sports products flashed across our mind. Therefore, we struggled how we carry this project forward without making any sports products. At first, we had a man-in-the-street interview. We asked what brand of sports the consumers imagine as the safety and security brand. The reason why we had a man-in-the-street is that we would like to understand whether the customers recognize adidas as the safety and security brand. When they buy products, well known brands and design are important for almost all people. Therefore, we focus the way how we build new brand image.

We first defined the meaning of “safety” and “security”. After that, we verified what brand of sports the consumers imagine as the safety and security brand.

We propose “Positive Cycle” business model to satisfy the stakeholders' need. There are mainly three points.

- We aim at making a huge profit continuously.
- "Positive Cycle" makes the consumers feel “safety and security”.
- The number of the consumers is going to increase by rotating "Positive Cycle".

This final report shows the process of proposing new business model to adidas in 6 months project.

2. TABLE OF CONTENTS

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5. Design Recommendation
6. Competitive Analysis
7. ALPS Roadmap and Reflections
8. Conclusion and Future Work
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10. References

Annex A: Mindmap
Annex B: Project Priority Matrix
Annex C: Scenario Graph
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Annex M: Design of Variety
Annex N: Quality Scorecarding
Annex O: Net Present Value Analysis
Annex P: Design Structure Matrix
3. PROBLEM STATEMENT

While we are working on this project, we realize that mainly two problems must be solved. We found the following problems;

1. Sports brands and “safety and security” are not related.
2. Making a huge profit and Corporate Social Responsibility (CSR) are incompatible.

We found the first problem while we were having 170 Interviews from teens to sixties. The reason why we had this interview is that we wanted to make sure whether the consumers think adidas is safety and security brand. We asked “what brand of sports do you feel safety and security? NIKE got first place and adidas got the second place as shown in Figure 1-1. The reason why the consumers chose each brand is very important for us to propose the new business model. When they buy products, well known brands and design are important for almost all people. For example, some people said, “adidas is well known sport brand”, other people said, “We love the design of products.”

It all comes down to the fact is that the consumers don’t think about safety and security when they choose favorite sports brand.

For example, FIFA world cup was held in South Africa in this year, but on the other hand in the same country, there are many people who injured by landmine. We are living in this much safe Japan and cannot know such condition, but we want many Japanese know the issue and realize about danger of war.

From the result of questionnaire shown in Figure 1-1, adidas is No.2, but it becomes a big chance for adidas.

From the response on questionnaire, all sports brand is not distinguished in safety & security image. Adidas can make safety & security sports brand by joining to the social issue related to safety & security.

The reasons why we selected demining are summarized below.
- There is a big change from "AS IS" to "TO BE", so we can easily feel our contributions.
- Landmine is a symbol of "fear & danger", so we can send a message that "Speaking of safety & security, it's adidas".
- We can send a message that "This project will make the environment where everybody can play football in all over the world."

This is so called, CSR. Then, how can we realize the balance of CSR and corporate profit?

Since the consumers and companies show their interests in CSR, many companies are grappling with CSR. However, making a profit is hard because the companies donate some parts of profit to NPO and other institutions.

Consequently, we propose "Positive Cycle” to solve these problems. (See Figure 1-2)

4. ANALYSIS AND DISCUSSION OF ALPS METHODS

To solve these problems, we used various ALPS methods for need analysis, requirement analysis, conceptual design and verification & validation. The following various methods are shown in this chapter.

(a) Mindmap
(b) Project Priority Matrix
(c) Scenario Graph
(d) CVCA
(e) Interview, Observation
(f) Scenario Prototyping Rapidly
(g) Value Graph
(h) Function-Structure Map
(i) QFD I
These tools above are mutually related and some tools can be inputs of other tools. The roadmap of our design by using these tools in a half year is shown in chapter 7.

(a) Mindmap

We used this tool when we defined the meaning of safety and security.
It guided us to know the meaning of safety and security.
(See Annex A)

(b) Project Priority Matrix

As we mentioned above, we propose "Positive Cycle" as a new business model. Cost must be constrained in order to increase the number of new consumers. In the mature market, the consumers compared the products of adidas with the products of other brands. If the products of adidas are more expensive than those of other brands, the consumers will shift to the others. Therefore, costs would be constrained in our project priority matrix. Next, function should be optimized. When the consumers buy products, they regard function as the important thing.
We found project priority matrix is very efficient tool because we can first make sure that which should be constrained before we put products on the market.
(See Annex B)

(c) Scenario Graph

Proposers’ requirement in ALPS 2010 theme, Interview with adidas, Mindmap (security & safety, adidas), brainstorming (adidas, Mindmap) are included in Scenario Graph.
By describing the words or phrases in our mind, we could clarify and summarize our thoughts, and could create new ideas. Besides that, we thought the actual scenes and applications, so it was easy to connect between ACTIVITY and WHERE, or between WHEN and WHO. We connected similar ideas by bold lines. By doing so, the connecting lines in Scenario Graph become simple and are very understandable, then our thoughts is obviously described.
(See Annex C)

(d) CVCA

Important stakeholders must be adidas, adidas shop, consumers, NPO, people at the point and mine sweepers. When the consumers buy limited products, some profits are donated to NPO. Then NPO uses these donations to progress the demining. This brings safety and security places to people at the point. This information is going to be given to the consumers at adidas shop.
(See Annex D)

(e) Interview, Observation

We had interviews any number of times in 6 months.

1. We had interviews about safety and security around Hiyoshi station. We had interviews the policemen, the fire fighters and walking people.
Observation from those interviews showed us that peoples feel to be afraid of getting separated their families and friends when accidents or disasters happened.

2. We had interviews the elderly feeling about safety and security. And we understood that their anxiety is losing their health.
That is observation from interviews elderly people.
(See Annex E)

(f) Scenario Prototyping Rapidly

We realized three problems exist in making the prototype of adi-park. We found the following three problems;
1. Profit
2. Initial investment
3. market scalability
We had changed our proposal before ALPS WS#3 because of these problems. Our proposal is called “positive cycle”.
After we made new prototype, we found the following functions;
1. Confirm the progress of landmine elimination
2. Increase the number of repeat consumers
3. Increase the number of new consumers.
(See Annex F)

(g) Value Graph
We used the Value Graph analysis to investigate “What is actual requirement to our project?”, and “How can we satisfy the requirement?”

First, we summarized our thoughts both upward and downward using Value Graph regarding the question of “How can we establish the brand image of Safety and Security on adidas”.

Centering the Initial Thought mentioned above, we tried to introduce the upper root requirements asking “why” into upward. And also we explored the method to realize asking “how” into downward.

It becomes clear by using Value Graph and summarizing our thoughts what is actual requirement and how we can satisfy it. (See Annex G)

(h) Function-Structure Map

At first, we described the Function from Use Case analysis. Then we developed the Structure based on the system design.

This result was transferred into several tools such as QFD I/II, Cost Worth Analysis and FMEA. (See Annex H)

(i) QFD I

Customer Requirements (CRs) were determined based on the result of Interviews (see Annex E) and Use Case Analysis (see Annex W). Our project (Building new brand image of safety and security using positive cycle business model) is not a real product but an activity, so it is important to verify the system on the view point of user’s behaviors.

Engineering Metrics (EMs) should be a measurable attributes. Our system consists of several data base and servers, and we converted those attributes from amount value (G byte, bps, etc.) to user interface (pages, s, etc.). And our originality on this proposal is a feedback system of demining contribution to customers, so we included some measurements of feedback information. Technical targets of EMs were selected as if customers want to see again (renewal time), want to see more details (web pages), and do not feel frustration (access speed) and so on.

Interactions between CRs and EMs were checked several times, in horizontally and vertically on the matrix. Finally, weights were adjusted based on the significance of each CR, so “Photos & Movies of local people (#)” has no grade “9”, for example.

CRs were derived mainly from Interviews of many people, but the statistic data that was obtained from Internet was also significant information. Use Case Analysis was an effective tool to find the relation between CRs and EMs.

Customers requests “Unique product design” and “Frequent design change” at most because they want to be discriminated from others. Engineering aspects, such as “Variety of campaign products (#)” and “Model change cycle of campaign products (months)” are most important.

At first we had expected that demining information was most important for customers and QR code technology was also essential. But as a result of QFD I analysis, we reminded the customers want an originality and a brand new design on the campaign products, so the effort of this campaign should be most focused on the campaign products. And also, new campaign product information should be sent feedback to customers in addition to the demining contribution.

Based on this QFD I result, we performed the QFD II analysis. (See Annex I)

(j) QFD II

Solution Elements (SEs) and relation between EMs and SEs were derived from Function-Structure Map for FMEA (see Annex L).

Correlation matrix was checked several times, in horizontally and vertically, in the same way of QFD I. Weights were adjusted based on the significance of each EM, so some SEs have no grade “9”.

Function-Structure Map is an effective tool on QFD II analysis.

Attributes related to campaign promotion, such as “New product data” and “Campaign promotion data & info” had high scores, and the most effective feedback tool “E-mail” was also found important.

The result was reasonable because customer emphasized on the campaign products at most, and our originality on this proposal was a feedback system. Regarding to the feedback, when demining contribution is informed to customers, new product or campaign promotion information should be attached to it.

Based on this QFD II result, we performed the Cost Worth Analysis. (See Annex K)

(k) Complexity / Cost Worth Analysis

Cost calculation was conducted based on the hardware development cost, and it excluded an operational cost. (Operational cost was considered in NPV analysis, see Annex O) The development cost was derived from the assumption based on the cost evaluation on the similar system of actual project.

“New product data”, “Campaign promotion data & info”, and “E-mail” were evaluated to be cost-effective and should be enhanced more, because those attributes had high scores on the result of QFD II analysis, and also they did not cost so much. On the other hand, “Customer ID data base” should be reduced its cost because it did not worth so much.

Cost estimation is the key factor on this analysis. It will change on the way of project progress, so the analysis should be reviewed repeatedly.
Before we conduct the QFD I/II and Cost Worth Analysis, “New product data” had been assumed as an additional information, but as a result, it had the highest worth score and cost efficiency. This result makes sense when we review that customer requirement focuses on the campaign products. 

Based on this result of Cost Worth Analysis, we should perform the trade-offs on the functions and costs which are required to each elements of system. 

(See Annex K)

(I) FMEA

We realized that some failures might occur when this system starts. Mainly two sources of failures exists. One is the main and data server and second is the demine server.

If the main and data server are broken, personal information cannot be handled by the computers at adidas shops. Moreover, the consumers are not able to buy products there.

If the demine server is broken, the consumers won’t get any information how the demine progresses by shop terminal. Consequently, they do not feel “safety” and “security” through adidas.

As we analyze the sources of failure by working on FMEA, we take steps to cope with the situation. (See Annex L)

(m) Design of Variety

Our project is not an actual product but close to social system, it is hard to derive the Design of Variety directly. But there are some other campaigns realized in our society, so we focused on the activity of campaign and developed the Design of Variety.

First, we summarized how performances would change according to the elements of demining campaign and each variations.

We noticed that there were two groups in varieties. One is changeable group due to the design named design varieties, and the other is independent to the design and is affected by the environment named environmental varieties.

The design varieties are summarized as the variations of campaign product, the number of products, the duration of campaign, ratio of donation to profit and the method of feedback to customers. For example, the variation of campaign products is T-shirt, a pair of socks, Shoes, etc. and the duration of campaign is all year, 3 months per year, 6 months per year, etc. By adjusting those varieties, we evaluated the effect of campaign into the sales of adidas.

The environmental varieties are summarized as the tendency of ordinal people regarding to the safety and security, the level of notice about demining process, the activity of competitor’s CSR campaign. (See Annex M)

(N) Quality Scorecarding

Project objective is to maximize the profit from whole adidas products sales. At this time, we had to evaluate the sales of not only campaign products but also original products.

Here, we adopted “Communication System Dynamics” [1] theory to evaluate transition of customer condition “Y” as a macro model and to introduce transition of customer’s internal process of message “M” as a micro model.

We determined objective factors Y as customer conditions, and project objective is “Biggest Want Holders (Y4)” who will buy the products. Those objective factors were measured statistically from interview.

Control factors X were chosen as Injection Message into each customer conditions, which represented promotion such as commercials. We had evaluated the duration of campaign by changing the value X periodically, and also checked the cost performance of promotion by changing the ratio of X1:X2:X3 to investigate “Which conditions of customer should we focus?”

Noise/Uncertainty factors V were chosen as “Buzz” from other customers, which represented the reputation of the products and could affect both positively and negatively.

Transfer function was derived from the theory, and was modified in the reverse loop of Want Holders to represent that those who bought the products would return to other condition and might be able to buy again if they wanted. By doing so, we established the stable condition of whole system.

At first we demonstrated the current condition of adidas as a steady state condition; however, we assumed some values from the web information because adidas could not disclose the confidential such as annual sales, rate of return, etc. Then we changed the parameter to simulate the condition with campaign. As a result of simulation, we found that this campaign was effective to increase the Want Holders and total sales.

From the view point of Design Of Experiment, we evaluated the effectiveness of campaign duration and optimal ratio of commercial input. (See 4.19) Based on these simulation results, we analyzed Net Present Value Analysis (See 4.17).

The result of simulation was very reasonable, and it was a strong message to our proposer, adidas executives.

Project Objective Y=(Y1, Y2, Y3, Y4) => Biggest Y4
Y1 = Potential Adopters who are not interested in yet
Y2 = Interest Holders who are interested in but not learn yet
Y3 = Need Holders who learn but not want yet
Y4 = Want Holders who will buy products

Control Factors X=(X1, X2, X3)
X1 = Injection Message into Potential Adopters
X2 = Injection Message into Interest Holders
X3 = Injection Message into Need Holders
--Promotions (CM, Direct mail, etc.) for each customers

Noise Factors V=(V1, V2, V3)

5 Copyright © 2010 by Keio SDM ALPS
---Buzz into (Y1, Y2, Y3) from other customers
(See Annex P)
(o) Net Present Value Analysis

Our business model mentioned in chapter 5 can combine corporate profit and CSR. We verified this hypothesis by communication system dynamics and NPV analysis. At first, achievement of the total elimination in 10 years is 6 million square meters. It is as large as 800 football grounds. Next, the achievement of business profit is estimated. Unfortunately, the profit of this campaign alone is only 0.5 billion yen. But "Positive Cycle" generates new consumer segmentation. Then, the total profit by new consumers' purchase of other adidas product is 4.8 billion yen. Detail of this simulation is mentioned in chapter 4(n) and Annex N. (See Annex P)

(p) Design of Matrix

We developed a Task-base Design Structure Matrix (DSM). At first, we constructed a “Project Task Flow” and organized it into matrix. Our proposal system consists of two sub-systems, “Demine Confirmation System (DeCS)” and “Interface System”. DeCS is a core system of this project, so in case of trouble during task E (DeCS Verification) and task H (DeCS Validation), we need to be back to task D (DeCS Design). And also campaign products are essential on this project and its information will be integrated and tested during verification and validation. To keep delivery date, in early stage we should finish task C (Interface design) and G (Product Creation) which are inputs of red boxed tasks (D,E,F (System Integration) and H). Trouble shooting brings an undesirable iteration so it leads schedule delay and cost increases. We should put some schedule margin and appropriate resources for not only “critical path” identified from CPM/PERT but also “critical task” recognized by DSM. Based on this Design Structure Matrix result, we should make a development plan and schedule of this project. (See Annex Q)

(r) Object-Process Methodology

Our proposal is called “Positive Cycle” business Model. This system consists of "Marketing", "Donating", "Demining", "Living Safety" and "Feeling Safety" sub-systems. In "Marketing" sub-system, adidas advertises "Demining Support Campaign" by TV Commercials and cell campaign products on which QR codes are printed. In "Donating" sub-system, adidas donates some parts of the campaign profit to NPO for demining support activities. In "Demining" sub-system, NPO employs people at the point for demining activities as mine sweepers, and they eliminate landmines. In "Living Safely" sub-system, people at the point will live more safely after the mine sweepers demine completely. In "Feeling Safety" sub-system, consumers feel safety after they confirm their contribution through "Demining Confirmation System" Then, they will return to adidas shop in order to contribute more. (See Annex R)

(s) VOX

From the result of Interviews and questionnaires, we summarized several Voice of Customers regarding to adidas and other competitors. And also we reviewed the surrounding condition of sports brand, apparel products, and social issues that were derived from statistical data found on the Internet. As a result, it is found that adidas want to extend the sales of apparel products, not only sportswear, and that brand logo of adidas is a familiar design. Regarding to the social problem, the number of landmines is found to be in several regions, and QR code technology becomes popular among young generation. These results were transferred as an input into several tools such as Scenario Graph, Design of Variety, Use Case and so on. (See Annex S)

(t) Project Charter
Project charter is very useful tool because this clarifies important stakeholders and what they are going to get in win conditions and what could be constrained. And the proposers can easily catch our vision and goals. By making project charter, the stakeholders and we can share the detailed information of our project. (See Annex T)

(u) Use Case

As shown in the summary of Scenario Prototyping Rapidly, our project “Demining support campaign for adidas” was turned out to consist of several customers activities and the originality of our proposal was a feedback system to customers of the contribution information. According to the scenario derived from the above analysis, we summarized Use Case analysis.

At first, Use Case of overall cycle was derived from the main activity shown on the “Problem Statement” section, and then Use Cases of sub cycle were derived. We focused on three sub cycles , “UC-1:Consumers buy campaign products at adidas shop”, “UC-5:Customers knows the progress of demining operation by mobile”, and “UC-6:Customers knows the progress of demining operation by shop terminal” because those Use Cases are inside system of our project.

The result of this analysis was a fundamental of this project and was referred in many tools. (See Annex U)

5. DESIGN RECOMMENDATION

Our project’s goal is “To make a huge profit in a long term by building brand image of safety and security” To achieve our goal, we propose and recommend “Demining support campaign for adidas” by "Positive Cycle" business model.

In general, when people want to support demining, they donate money to NPO as shown in Fig. 5-1. But this general donation business model has too big problems as written in red.

Fist problem is that many people who want join a charitable activity don't join it actually. In fact, 61% people want to join a charitable activity, but 80% of them haven't joined it yet as shown in Figure 5-2.

Second problem is that many people who donate money to NPO are satisfied once they donate it.

To solve these problems, we propose "Positive Cycle" business model as shown in Figure 5-3.

When consumers scan QR code by their mobile phone and access the website, they can confirm their own contribution. Consumers who cannot use QR code can confirm their contribution by a shop terminal. Consumers will return to our shop again by these confirmation systems. And in fact, 82% people answer in our questionnaire that they want to buy products again if they know their contribution. We named this business model as "Positive Cycle".

(a) Do you participate charity?  (b) Why do NOT join charity?

Figure 5-2: Attitude Survey on Charity

Figure 5-3: "Positive Cycle" Business Model
6. COMPETITIVE ANALYSIS
Our business model mentioned at chapter 5 can combine corporate profit and CSR. We verified this hypothesis by communication system dynamics [1] and NPV analysis. At first, the achievement of the total elimination in 10 years is 6 million square meters. It is as large as 800 football grounds. Next, the achievement of business profit is estimated. Unfortunately, the profit of this campaign alone is only 0.5 billion yen. But "Positive Cycle" generates new consumer segmentation. Then, the total profit by new consumers' purchase of other adidas product is 4.8 billion yen. Details of this simulation are mentioned in chapter 4(n) and Annex N.

7. ALPS ROADMAP AND REFLECTIONS
We made Mind map of safety and security. And we got first “Aha”=Adidas-park.
We felt failures when we analyzed by V and V verification. So we felt “Oops”
And we got second “Aha” while we were competing in idea of anything each fellow=Stop land mines by three strips plus one.
We got breakthrough moment when we adapted positive cycle and analyzed and understood its effectiveness. “Eureka” is in the moment.
● We would like to take same roadmap if we could do the project because we can take best means by this roadmap.
● We received feedbacks and comments from Pro. Minato and Mr.Wada, our proposer.
Professor Minato gave us best feedbacks all the time. Sometimes we had a hard time when we had meetings with Mr.Wada, but now we feel that he gave us “presentation-mind” and we thank to him.
We learned very important things from ALPS and ALPS-methods. In the future, we wish every student learn many things from ALPS.
(See Annex V)

8. CONCLUSION AND FUTURE WORK
This paper proposed a new business approach called positive cycle to make the consumers feel safety and security when they consider adidas as a brand. This approach bring a huge profit and build safety and security brand image. Our proposers gave us an opportunity to have a presentation in front of 20 employees. Since we got some feedback from them, we are going to adopt their feedback to our proposal. We found the following future works:
1. We are going to have interviews to the consumers. We can find what they are really interested in now. It helps us to find a good way to advertise to the consumers.
2. Investment and return on investment should be estimated by using actual data which adidas has.
3. Having the Interviews to NPO should be done because NPO is one of the important stakeholders in our proposal.

adidas and NPO should be strongly connected in order to make the consumers get involved in this business model.
The consumers cannot see how their donation are used through the current charity project. Our proposal can be adopted any business. Future works must be done for making the consumers feel safety and security and making profit continuously.

9. ACKNOWLEDGMENTS
First of all, we are deeply grateful to our proposers Mr. Ito and Mr. Wada from adidas Japan K.K. on the support of our project. They advised us appropriately throughout the ALPS lecture, and taught us kindly in several points of view, not only the attitude toward the project but also the method how to explain our thoughts to the audience.
Moreover, we would like to thank our mentor Prof. Minato, and all of other Professors, teachers from the universities of Keio, MIT, Stanford and Delft, and all our colleagues on the active discussions and mental supports.
Finally, I appreciate the executives and staffs of adidas Japan K.K. and those who answered to our questionnaires on the cooperation of our projects.

10. REFERENCES
# ANNEX B
## Project Priority Matrix

<table>
<thead>
<tr>
<th>Function</th>
<th>Cost</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>absolute optimize</strong></td>
<td><strong>permit</strong></td>
<td><strong>absolute optimize</strong></td>
</tr>
<tr>
<td><strong>product development in the mature market</strong></td>
<td><strong>Introduction of new functional market</strong></td>
<td></td>
</tr>
</tbody>
</table>
ANNEX C
Scenario Graph

We, as a brand, must consider the ways of how to make consumers feel “safety and security.”
ANNEX E
Interview, Observation

Quetionee Distribution

Number of Quetionees

age

10 20 30 40 50

Female
Male

0 10 20 30 40 50
Which sport brand has image of "Safety and Security"?

- asics
- Mizuno
- NIKE
- adidas
- others
Function 1
Confirm the progress of landmine elimination

Function 2
Increase the number of repeat consumers

Function 3
Increase the number of new consumers
Annex G
Value Graph

Initial Thought

- Make image of Safety and Security
  - Increase safety place for sports
  - Do demining campaign
    - Campaign to donate a portion of revenue items
  - Produce Safety product
    - Providing demining equipment
  - Produce activity for health
    - Demining personnel dispatch
  - Make ground by lawn
  - Campaign to donate a portion of revenue items
  - Do recycle shoes campaign
    - Demining personnel dispatch
  - Make image of High quality
    - Fashionable Image
  - Sales
  - Rise Brand image
  - Increase adidas's profit

Why? How?
ANNEX H
Function-Structure map

Buy campaign products at adidas shop

Use home PC
- Connects to Internet
- Displays page

Registration
- Reads QR code

UC-1-4
- Know progress of landmine elimination on the Internet

UC-1-5
- See news and blogs about demining operation

UC-1-8
- Register personal information

UC-1-9
- Make relationship with product ID and personal ID

Power supply

Internet

Display

Campaign system
- Main server & Data base
- Campaign promotion data & information
- Data search & process
- Connection to demining NPO's server
- Demining server

Outside of our system

Home PC's function
- Power supply
- QR code reader
- Registration terminal

Customer ID database
- Product ID database

Connection to demining NPO's server

Registration terminal

Power supply

Internet

Display
Use mobile phone

UC-5-1: Know campaign objective
UC-5-2: Confirm individual contribution
UC-5-3: Confirm personal points and level
UC-5-4: Confirm personal information
UC-5-5: Know individual contribution by e-mail
UC-5-6: Know new product information by e-mail

Reads QR code
Connects to Internet
Displays page

Power supply
QR code reader
Internet
Display

Customer ID data base
Product ID data base
Campaign promotion data & information
Data search & process

Landmine data base
Map search
Photo & Movie editor

E-mail
Sales data base
New product data

Main server & Data base
Demining server
Sales & marketing server

Demining Confirmation System for mobile

Outside of our system
# ANNEX I

## QFD I

### Customer Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Customer Weights</th>
<th>Registration time (s)</th>
<th>Variety of campaign products (##)</th>
<th>Info renewal cycle for mobile (day)</th>
<th>Access time by mobile (s)</th>
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### Technical Targets

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### Notes
- Technical Targets
- Customer Requirement
- Customer Weights
- Raw scores
### PHASE II QFD

#### {Demining support campaign for adidas}

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<th>Product ID data base</th>
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<th>Landmine data base</th>
<th>Map search</th>
<th>Photo &amp; Movie editor</th>
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ANNEX K
Complexity / Cost Worth Analysis

QFD Cost - Worth Diagram
(based on "Total Part Cost" as divisor)

- Customer ID database
- Product ID database
- Campaign promotion data & info
- Landmine database
- Map search
- Photo & Movie editor
- Connection to demining
- NPO's server
- E-mail
- Sales data base
- New product data
- QR code reader

Relative Cost vs. Relative Worth graph.
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<th>Actions Recommended to Reduce RPN</th>
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RPN = 8 96 7 84 8 128 7 140 7 105 8 224 8 112
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<td>Know new product information by e-mail</td>
<td>4</td>
<td>6</td>
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<tr>
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<td>Know new product information by e-mail</td>
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<tr>
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<td>1</td>
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<td>6</td>
<td>9</td>
<td>54</td>
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</table>

Copyright © 2010 by Keio SDM ALPS
<p>| few data research and process | 2 | know detail campaign object | know demining progress by shop terminal | 6 | 7 | 84 |
| broken customer ID database | 1 | confirm detail individual contribution | know demining progress by shop terminal | 6 | 8 | 48 |
| broken product ID database | 2 | confirm detail individual contribution | know demining progress by shop terminal | 6 | 7 | 84 |
| no data research and process | 1 | confirm detail individual contribution | know demining progress by shop terminal | 6 | 8 | 48 |
| broken landmine data base | 2 | confirm detail individual contribution | know demining progress by shop terminal | 6 | 6 | 72 |
| few map research | 1 | confirm detail individual contribution | know demining progress by shop terminal | 6 | 8 | 48 |
| no photo and movie editor | 1 | confirm detail individual contribution | know demining progress by shop terminal | 6 | 9 | 54 |
| broken customer ID database | 2 | confirm detail personal information | know demining progress by shop terminal | 7 | 7 | 98 |</p>
<table>
<thead>
<tr>
<th>Issue</th>
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<th>Update Method</th>
<th>Demine Progress Shop Terminal</th>
<th>仓位</th>
<th>数量</th>
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<td>Know demine progress by shop terminal</td>
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<td>49</td>
</tr>
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<td>Confirm overall progress of landmine elimination</td>
<td>Know demine progress by shop terminal</td>
<td>7</td>
<td>8</td>
<td>168</td>
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<td>49</td>
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<tr>
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<td>Know demine progress by shop terminal</td>
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<tr>
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<td>84</td>
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<tr>
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<td>Break Count</td>
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<td>Know Demine Progress by Shop Terminal</td>
<td>Code</td>
<td>Count</td>
</tr>
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<td>--------------------------------------------</td>
<td>-------------</td>
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<td>---------------------------------------</td>
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<td>--------</td>
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<tr>
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<td>3</td>
<td>confirm photos, videos, and episodes of environment and local people</td>
<td>know demine progress by shop terminal</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Broken Photo and Movie Editor</td>
<td>2</td>
<td>confirm photos, videos, and episodes of environment and local people</td>
<td>know demine progress by shop terminal</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>No Connection to Demining NPO's Server</td>
<td>2</td>
<td>confirm photos, videos, and episodes of environment and local people</td>
<td>know demine progress by shop terminal</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Broken Customer ID Database</td>
<td>2</td>
<td>confirm privilege or special product for gold members</td>
<td>know demine progress by shop terminal</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Broken Product ID Database</td>
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<td>confirm privilege or special product for gold members</td>
<td>know demine progress by shop terminal</td>
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<td>8</td>
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<td>confirm privilege or special product for gold members</td>
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</tr>
<tr>
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<td>confirm privilege or special product for gold members</td>
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<td>7</td>
<td>7</td>
</tr>
<tr>
<td>few new product data</td>
<td>2</td>
<td>confirm privilege or special product for gold members</td>
<td>know demine progress by shop terminal</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>
### Design of Variety

#### Design variable

<table>
<thead>
<tr>
<th>Product of variety</th>
<th>T-shirt</th>
<th>socks</th>
<th>shoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Product</td>
<td>1,000,000</td>
<td>10,000,000</td>
<td>100,000,000</td>
</tr>
<tr>
<td>Campaign Period</td>
<td>always</td>
<td>6 months/year</td>
<td>3 months/year</td>
</tr>
<tr>
<td>Contribution rate</td>
<td>5%</td>
<td>10%</td>
<td>$1</td>
</tr>
<tr>
<td>Feedback method</td>
<td>mobile-phone</td>
<td>terminal in shop</td>
<td>TV CM</td>
</tr>
</tbody>
</table>

#### Environment variable

The Safety and Security of interest in Society Campaign of rival (Nike Grind ....)
ANNEX N

Quality Scorecarding

■ Transfer Function

Macro diagram

\[
\begin{bmatrix}
\frac{d}{dt} Y_1 \\
Y_2 \\
\frac{d}{dt} Y_3 \\
Y_4
\end{bmatrix} =
\begin{bmatrix}
-r1 & K_1 & 0 & K_3 \cdot r_p \\
r1 & -r2 - K_1 & K_2 & K_3 \cdot r_i \\
0 & r2 & -r3 - K_2 & K_3 \cdot r_n \\
0 & 0 & r3 & -K_3
\end{bmatrix}
\begin{bmatrix}
Y_1 \\
Y_2 \\
Y_3 \\
Y_4
\end{bmatrix}
\]

Micro diagram

\[r_1 = r \times M_{c1}, \quad M_1 = (M_{a1}, M_{b1}, M_{c1})\]

\[
\begin{bmatrix}
\frac{d}{dt} M_{a1} \\
\frac{d}{dt} M_{b1} \\
\frac{d}{dt} M_{c1}
\end{bmatrix} =
\begin{bmatrix}
-a \cdot V1 - b \cdot X1 & -K_5 & 0 \\
a \cdot V1 + b \cdot X1 & -c \cdot V1 - d + K_5 & -K_4 \\
0 & c \cdot V1 + d & K_4
\end{bmatrix}
\begin{bmatrix}
M_{a1} \\
M_{b1} \\
M_{c1}
\end{bmatrix}
\]

\[r_2, r_3 \text{ is same as above (See Block Diagram of MATLAB model)}\]
Experiments by simulation: Simulation model
Experiments by simulation: Simulation result

CASE 1  Simulate current adidas condition

Potential
All population

Interest
In sports

Need
In sports

Do
sports

Buy products
CASE 1  Simulate current adidas condition

[Graph showing consumer and potential trends over time.

- Red dots represent consumer data.
- Blue dots represent potential data.

Axes:
- Y-axis: [%] from 0 to 100
- X-axis: [Month] from 0 to 36

Data points indicate a gradual increase in consumer potential over the months.]
Experiments by simulation: Simulation result

CASE 2  Simulate new campaign [all time]

- All population
  - Potential
    - New market
  - from questionnaire

- Interest in sports
  - 70%

- Need in sports
  - 50%

- Do sports
  - 80%

- Need in demining

- Buy products

- Interest in safety & security
  - 70%

- Do joining campaign

- Potential
  - New market

- from questionnaire

- 50%

- 80%
Experiments by simulation: Simulation result

**CASE 2** Simulate new campaign [all time]

- **Consumer**
- **Potential**
- **Consumer [all time campaign]**
- **Potential [all time campaign]**

Start campaign

- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100

[Month]

- 0
- 6
- 12
- 18
- 24
- 30
- 36

[Month]
ANNEX P
Design Structure Matrix

Project Task Flow

A
Schedules

B
Contract with System Developers

C
Interface Design

D
DeCS Design

E
DeCS Verification

F
System Integration

G
Product Creation

H
Validation

I
Commercial Creation

J
Start Campaign

DeCS: Demine Confirmation System
Task C and G should be finished early because they are inputs of red boxed tasks (D, E, F, and H).
ANNEX Q
Design of Experiment

Which do you want to target?

Potential Adopters

Interest Holders
(Safety & Security)

Need Holders
(Demining)

Wants Holders
(Demining Campaign)
If we focus intensively promote investment

特别是投资效果①在未开发市场中较高。

롬 「Potential Adopters」 and 「Need Hoders」 is effective. 
→ Especially, investment effect of ① is high in Untapped market.
Increase of annual NET profit [million ¥]

Cost vs Performance view point, Optimum = 6 months

Increase ratio of annual NET profit per campaign investment [%]

Campaign period [Months/year]
Simulate campaign [6 months / year]
ANNEX R
Object-Process Methodology

OPM Level-0

TOTAL SYSTEM

MARKETING

FEELING SAFETY

DONATING

LIVING SAFELY

DEMING

Campaign Product

Fund

adidas Corp

Demining Support NGO

Demining Staff

Citizen at the point

Safe

Unsafe

Landmine

Consumer

adidas

NPO

Purchase

Feel, Safety

Live Safely

Demine
<table>
<thead>
<tr>
<th>Market Trends</th>
<th>Healthy and diet</th>
<th>Running boom especially young female</th>
<th>Cycle sports and outdoor products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources of Change</td>
<td>Want to expand share of sports products other than soccer</td>
<td>Need to differentiate between other sports brand</td>
<td>Enlarge ecological products</td>
</tr>
<tr>
<td>Societal Changes</td>
<td>The number of landmines is still large</td>
<td>Economic growth of emerging countries</td>
<td>ODA budget of Japan is decreasing</td>
</tr>
<tr>
<td>Voice of Technology</td>
<td>Cellular phone, PC, and Internet become popular</td>
<td>Expanding QR code and its reading technology</td>
<td>Expanding IC chip</td>
</tr>
<tr>
<td>Voice of Competition</td>
<td>Brand image of safety and security (Mizuno)</td>
<td>World wide share (NIKE)</td>
<td>Low price apparel (UNIQLO)</td>
</tr>
<tr>
<td><strong>Mission &amp; Vision</strong></td>
<td>Everyone can play soccer in everywhere</td>
<td>Want to increase sales by brand image of safety and security</td>
<td>Ensure the status of No.1 sports brand</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td><strong>Target Market &amp; Customers</strong></td>
<td>Expand markets of middle age</td>
<td>Extend to apparel products, not only sports wear</td>
<td>Expand accessory market (bags, shoes etc.)</td>
</tr>
<tr>
<td><strong>Differentiation &amp; Positioning</strong></td>
<td>Improve brand image</td>
<td>Increase consciousness among citizen</td>
<td>Impression and feeling of safety and security about sports</td>
</tr>
<tr>
<td><strong>Core Competencies</strong></td>
<td>Product quality</td>
<td>Familiar design of brand logo</td>
<td>Improvement cycle of product quality</td>
</tr>
<tr>
<td><strong>Business Model</strong></td>
<td>Cause related marketing (VOLVIC)</td>
<td>Fabless (NIKE)</td>
<td>Low Cost (UNIQLO)</td>
</tr>
</tbody>
</table>
Project Charter

Project Charter for positive cycle

Version 2.0 approved

Prepared by Yuko Kagami

Team 9

2010.09.30
1. Project Description

Our goal is to provide safety and security to the consumers, employees in addition. Our project, positive cycle is going to provide products that the consumers can continue to derive; moreover, we guarantee security of the products. The business opportunity is to improve employment rate and comfort between people living in Japan and people live in the countries where the mines are buried. Through this project, our team makes people feel safety and security when they consider aside as a brand.

2. Business Objectives and Success Criteria

Addicts, as a brand, must consider the ways of how to make consumers feel ‘safety and security’ in our business objective. We are going to determine the success of our project by having the interviews with the users having the Interviews, considering trends in the market, estimating the investment and return on investment by using simulation are main factors to have great impact on achieving success.

3. Group 9 Team members

<table>
<thead>
<tr>
<th>Project manager</th>
<th>Team members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuto Kagei</td>
<td>Seiji Kato, Hitoshi Hashimoto, Yoshihiko Ishida,</td>
</tr>
<tr>
<td></td>
<td>Nobuo Minato</td>
</tr>
</tbody>
</table>

4. Mentor

Professor Nobuo Minato (nobuo@minato.ac.jp)

5. Stakeholders

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Major Benefits</th>
<th>Attitudes</th>
<th>Win Conditions</th>
<th>Constraints</th>
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<tbody>
<tr>
<td>Mr. Wada</td>
<td>Improve brand image</td>
<td>Positive attitude</td>
<td>Increase the number of the consumers</td>
<td>Money, realization</td>
</tr>
<tr>
<td>Mr. Ito</td>
<td>Improve brand image</td>
<td>Positive attitude</td>
<td>Increase the number of the consumers</td>
<td>Money, realization</td>
</tr>
<tr>
<td>Ms. Kaasen</td>
<td>Win the confidence</td>
<td>Positive attitude</td>
<td>Approved this project</td>
<td>Money, time</td>
</tr>
<tr>
<td>The regular customers</td>
<td>Omit limited products, Downscale money to ISO</td>
<td>Positive/possible</td>
<td>Get some feedback</td>
<td>Money word of mouth</td>
</tr>
</tbody>
</table>

6. Vision

For people who are willing to take part in the charity
- The consumers
- The positive cycle
- The business model which people can feel safety and security
- Their health conditions
- Unlike other charities

Our product guarantees; safety to all consumers and makes the users feel safety and security.
## Use Case

### Overall Cycle

<table>
<thead>
<tr>
<th>UC-1</th>
<th>Consumers buy campaign products at adidas shop *</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC-2</td>
<td>Adidas sends a part of profits to NPO</td>
</tr>
<tr>
<td>UC-3</td>
<td>NPO works for demining operation</td>
</tr>
<tr>
<td>UC-4</td>
<td>Local people lives feeling safety &amp; security</td>
</tr>
<tr>
<td>UC-5</td>
<td>Customers knows the progress of demining operation by mobile *</td>
</tr>
<tr>
<td>UC-6</td>
<td>Customers knows the progress of demining operation by shop terminal *</td>
</tr>
</tbody>
</table>

* Main focus of our proposed system
## UC-1: Consumers buy campaign products at adidas shop

<table>
<thead>
<tr>
<th>UC-1-1</th>
<th>Consumer watches Campaign Commercials at TV and Magazines</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC-1-2</td>
<td>Consumer talks with friends about landmine campaign</td>
</tr>
<tr>
<td>UC-1-3</td>
<td>Consumer sees passengers wearing campaign products</td>
</tr>
<tr>
<td>UC-1-4</td>
<td>Consumer knows progress of landmine elimination on the Internet</td>
</tr>
<tr>
<td>UC-1-5</td>
<td>Consumer sees news and blogs about demining operation</td>
</tr>
<tr>
<td>UC-1-6</td>
<td>Consumer goes to adidas shop</td>
</tr>
<tr>
<td>UC-1-7</td>
<td>Consumer buys campaign products at adidas shop</td>
</tr>
<tr>
<td>UC-1-8</td>
<td>Consumer registers personal information</td>
</tr>
<tr>
<td>UC-1-9</td>
<td>Consumer makes relationship with product ID and personal ID</td>
</tr>
</tbody>
</table>
UC-5: Customers knows the progress of demining operation by mobile

Functions of Demining Confirmation System for mobile

| UC-5-1   | Consumer knows campaign objective |
| UC-5-2   | Consumer confirms individual contribution |
| UC-5-3   | Consumer confirms personal points and level |
| UC-5-4   | Consumer confirms personal information |
| UC-5-5   | System informs individual contribution to consumer by e-mail |
| UC-5-6   | System informs new product information to consumer by e-mail |
UC-6: Customers knows the progress of demining operation by shop terminal

## Functions of Demining Confirmation System for Shop terminal

| UC-6-1 | Consumer knows detail campaign objective |
| UC-6-2 | Consumer confirms detail individual contribution |
| UC-6-3 | Consumer confirms detail personal points and level |
| UC-6-4 | Consumer confirms detail personal information |
| UC-6-5 | Consumer knows overall progress of landmine elimination |
| UC-6-6 | Consumer confirms location of landmine elimination by donation |
| UC-6-7 | Consumer confirms photos, videos and episodes of environment and local people |
| UC-6-8 | Consumer confirms privilege or special product for gold members |
Roadmap from ALPS Team No.9
Positive Cycle Project

We knew something for safety and security
We told about image of adidas
We thought about New idea.
We tried second competition
We knew needs of elderly
We saw whole of adi-perk
We knew an object of adi-park
We will change to make something for relief and peace of mind
We will interview a mine action NPO
We could confirm the risk of our systems.
We could calculate earnings to obtain adidas.
We could get feedback from adidas.
We could confirm flow of Positive Cycle
We could confirm the model of adi-perk
We could see the scenario graph
We thought to connect activities and where or between when and who.
We could get feedback from lecture
We will create agreement with Adidas.
We could confirm the scorecarding
We created an object of adi-park
We knew an object of adi-park
We will change to make something for relief and peace of mind
We created agreement with Adidas.
We could confirm the risk of our systems.
We could calculate earnings to obtain adidas.
We could get feedback from adidas.
We could confirm the flow of Positive Cycle
We could confirm the model of adi-perk
We could see the scenario graph
We thought to connect activities and where or between when and who.
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We could confirm the risk of our systems.
We could calculate earnings to obtain adidas.
We could get feedback from adidas.
Group 9’s Final Presentation Slides
Our Goal

Positive cycle

New Brand image

2010

2020

Summary

To make a huge profit in a long term

By building new brand image

Using Positive cycle

A  New Brand Image

Our proposal
Positive Cycle

General CSR

Positive Cycle

CSR: Corporate Social Responsibility

Positive Cycle

Profit by Demine Support Campaign only ¥0.5 billion in 10 years

Profit by New Customer Acquisition ¥4.8 billion in 10 years

See Simulation Results

Positive Cycle

Profit by Demine Support Campaign only ¥0.5 billion in 10 years

Profit by New Customer Acquisition ¥4.8 billion in 10 years

Profit by New Customer Acquisition ¥4.8 billion in 10 years

See Simulation Results

Big rise in profit

CASE 1 Simulate current adidas condition

Potential

Buy products

Interest

In sports

Need

In sports

Do sports

Shop Terminal mobile site

CSR: Corporate Social Responsibility
CASE 1 Simulate current adidas condition

- Consumer
- Potential

CASE 2 Simulate new campaign [all time]

- All population
- Interest in sports
- Need in sports
- Do sports
- Interest in safety & security
- Need in demining
- Do joining campaign

Potential
New market
from questionnaire
70%
50%
80%

Big rise in profit

Cost vs Performance view point, Optimum = 6 months

Increase of annual NET profit [million ¥]

Increase ratio of annual NET profit per campaign investment [%]

Campaign period [Months/year]
Big rise in profit

In 10 years,
- Increases of NET profit: ¥5.8 billion
- Campaign cost (6 months/year): ¥0.4 billion
- Donated money to NPO: ¥0.6 billion

Total profit
¥4.8 billion in 10 years

Summary

To make a huge profit in a long term
By building the brand image of safety and security
Using Positive cycle
Appendix

Are you interested in taking part in the charity?

Do you get information about social issues?

How often do you do exercise in a week?

Does our campaign make you visit the shop again?

Do you get information about social issues?

Are you interested in taking part in the charity?

How often do you do exercise in a week?

Does our campaign make you visit the shop again?
Why landmines?

1. We should make the place where everyone can play soccer.
2. We promote elimination of landmines which are symbols of danger and fear in order to make customers feel safety and security through adidas.
3. The customers can feel their contributions easily because they can see progresses of landmine elimination through our project.

CASE 3 Simulate campaign [6 months / year]

<table>
<thead>
<tr>
<th></th>
<th>[6 months campaign]</th>
<th>[all time campaign]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Customer</td>
<td>Potential</td>
</tr>
<tr>
<td></td>
<td>[6 months campaign]</td>
<td>[all time campaign]</td>
</tr>
</tbody>
</table>

Control flow speed by "VALVE" open/close

Promotion -> "VALVE" open  //  Stay as is -> "VALVE" close