

# The Implementation of Design Thinking Method and Product Development Method on Student Startup Business Soul Sepatu

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**Abstract**—This paper discusses the implementation of the Design Thinking method and product development method on student startup business, Soul Sepatu. Services that offered are shoe wash and repair. The Design Thinking method consists of Empathize, Define, Idea and Prototype, and Test. The Startup business coaching program for 20 students through the PPK Grants from Kemenristekdikti is in the second year. The 20 students are continuing the same program in the first year and continuously building their startup business. The implementation of this method successfully made a net profit of 40 million rupiah each month. The process of creating a startup business in the Faculty of Industrial technology Trisakti University is starting from the next selection process, coaching process, monitoring and evaluation. The product development of Soul Sepatu use design thinking method and product development method. The result of this program are products in the form of organic shoe deodorizer.

**Keywords**—*startup business; design thinking method; product development method*

## I. INTRODUCTION

Stub company, commonly called startups refer to the company that are newly established and in a phase of development. One of the criteria of startup companies is the number of its large and powerful entrepreneurs. One of the government latest efforts to create startup business for economic development is with the program of 1000 Start Up Digital [1].

The students in Industrial Engineering in Trisakti University has participated through the startup business coaching program. The Startup business coaching program for students through the PPK Grants in the second year amounts to 22 students who is continuing the same program from the first

year. The first year program succeeded in driving a student startup business with the total of 20 students.

The process of creating a startup business in the Faculty of Industrial technology Trisakti University is starting from the next selection process, coaching process, monitoring and evaluation.

The purpose of writing this paper is to discuss the application of the design thinking method on 'soul in one' startup and product development.

## II. LITERATURE REVIEW

### A. Startup Company

A startup or start-up is an entrepreneurial venture which is a newly emerged business venture that aims to meet a marketplace need, want or problem by developing a viable business model around products, services, processes or platforms.

A startup is a new business venture designed to effectively develop and validate a scalable business model. Start-ups do have high rates of failure, but the minority that have gone on to be successful includes companies that have become large and influential [2, 3].

### B. Design Thinking

To design a solution, especially those in the form of a product or application, a method is needed that will be the direction in the design and design process [4-7]. However, with the development of the era, the essence of the design process is increasingly changing and evolving. Design is not just making a product or application that will sell on the market, has a beautiful and attractive shape, or easy to make. The present

design is about, creating something that is desired and needed by users or people.

Design Thinking is one of the new methods in the design process. Design Thinking is a problem solving method that focuses on users or users. Design Thinking itself was popularized by David Kelley and Team Brown founder of IDEO - a design consultant with an innovative product design background.

Design thinking has several important elements, namely:

1) *People centered*: In this method, it should be emphasized that every action taken is centered on what the user wants and needs.

2) *Highly creative*: In using this method, creativity can be used freely, there is no need for rules that are too rigid and standard.

3) *Hands on*: The design process requires a direct trial by the design team, not just the making of a theory or an illustration on paper.

4) *Iterative*: The design process is a process with repeated steps to improvise and produce a good product or application.

The process with design thinking method will produce products that can not only be sold or use the most advanced technology. This method combines the needs of users or users, with appropriate technological capabilities, and still makes something that can succeed as a business.

In making a product or application with design thinking method, the following steps will be repeated as many times as needed to produce the appropriate product:

a) *Empathize*: When you know the user or user to be addressed, a designer needs to know the experience, emotions, and situation of the user. Trying to put yourself as a user so that you really understand the needs of users. This can be done by conducting interviews, observing the lives of users, and other ways.

b) *Define*: After the designer understands the needs of the user, the designer needs to describe an idea or view of the user that will be the basis of the product or application that will be created. This can be done by making a list of user needs and using knowledge about the conditions that are happening.

c) *Ideate*: With existing needs, the designer needs to describe the solutions needed. This can be done by evaluating with the design team by combining the creativity of each designer.

d) *Prototype*: Ideas that already existed need to be implemented immediately in an application or trial product. Need to produce a real product and possible usage scenario.

e) *Test*: From the trial product or application that has been created, an experiment will be conducted with the user. From the user experience in using the trial product, it will get input to make a better product and make improvements to existing products [8-10].

### III. DESIGN THINKING

The following is an Image of Design Thinking method

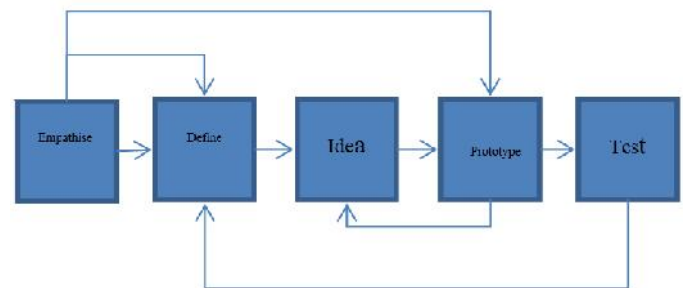


Fig. 1. The process of design thinking.

#### A. Empathize

The first stage of the design thinking process is to gain an empathetic understanding of the problem that tried to be solved.

#### B. Define

During the Define stage, the information that have been created and collected during the problem identification stage are compiled.

#### C. Idea

During the third stage of the Design Thinking process, designers are ready to start generating ideas.

#### D. Prototype

The design team will now generate certain versions of the product or feature that found in the product, so it can investigate the solution of the problem that generated in the previous stage.

#### E. Test

In this stage a complete product test is performed using the best solution that has been identify during the prototype stage. The product development process also applies the same method.

### IV. RESULTS AND DISCUSSION

The following are the process of Soul Sepatu Design Thinking:

#### A. Empathize

Each entrepreneur team consists of 3 students. The team are given assignments to be able to provide solutions for the problems that exist in the community. At the time of brainstorming the problems that occur are pollution, congestion, renewable energy, and the difficulty of providing shoe washing services. The result of brain storming regarding the problem solving business is shoe washing services. This decision is supported by the long process of washing shoe if done by individuals.

### B. Ideate

The idea to create great quality shoe washing services that can fulfilled the consumers need emerged. The name of this washing shoe business is Soul Sepatu, with hope to renew the souls of the broken or dirty shoe that are usually difficult to manage. In addition to washing, the services also offered damaged shoe repairmen and add decoration to make them more attractive.

### C. Prototype and test

For this type of service business, the form of prototype is a business trial for 3 months. The results of the 3-month trial proved the community's interest in this business. In it is first 3 months, Soul Sepatu gets a net profit of 3 million rupiah.

Within 2 years Soul Sepatu has 4 branches with the total of 40 million net income per month. The business development process also begins with the Design Thinking Method.

1) *Empathize*: In the product development process, the Soul Sepatu team is faced with diverse consumer demands. There are several requests for consumer services such as bag repairs, ethnic shoe making, and shoe deodorizer. After the brainstorming process, the team chose shoe deodorizer as the main focus of the services. Shoe deodorizer is appropriate for business development because most of shoe consumers don't have enough time to clean their shoe let alone make it hygienic.

2) *Ideate*: The idea of a great quality shoe deodorizer that satisfied consumers is realized by using natural raw materials that can kill bacteria which causing foot odor.

3) *Prototype*: The process of making prototypes as follows:

Raw materials:

- The pure perfume that has been purchased from the supplier.
- Alcohol content of 70% (Ethanol).
- Chemical measuring cup.
- Unnel.
- Pipette.
- 00 ml spray bottle.

The Experiment results from mixing pure perfume and alcohol as a fragrance strengthening process:

- Pour a pure perfume of 50 ml in a measuring cup using a dropper.

- Add 50 ml of alcohol to a measuring cup that has been filled with the pure perfume.
- The ratio of 50:50 will make a strong and long lasting fragrance, this comparison was found after several experiments to find the best.
- Mix the mixture of perfume and alcohol.
- Pour the mixture into a spray bottle that has been prepared.
- Shake the bottle for about one minute so that all ingredients are completely mixed.
- Let the perfume settled for at least 48 hours. This is done so that the perfume fragrance gets stronger.
- Pour the perfume into the zip lock as the package can protect the perfume bottle.

4) *Test*: The product test process is done by testing it to Soul Sepatu consumers for 3 months with a high satisfaction result. After obtaining positive results from the Design Thinking Method, the next commercialization process can be carried out.

## V. CONCLUSION

Design Thinking Method in Soul Sepatu startup business helps the success of the business in shoe washing services and developing shoe deodorizer.

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