

NAME: TENGKU MUHAMAMAD AIMAN ALIFF BIN
TENGKU AZEEZEE

MATRIC NO: A22EC0283

1. Design Thinking (DT) is described by Brown in [1] as a process that must pass through three spaces. Then, DT has been evolving and become in more refined model as the 5-steps Design Thinking Process shown in the video by InVision. Describe the similarity between the DT process defined by Brown [1] and InVision [2].

The similarities is both Brown and have the same design thinking process but each in different term which is for Brown [1], design thinking started with empathy, integrative thinking, optimism, experimentalism and collaboration. For Invision, design thinking process start with empathize, then define the problem, ideate, prototype and test.

2. The step called 'Empathy' is a very important and crucial part in Design Thinking. Elaborate this 'Empathy' step and explain how it should be executed in order to offer effective solutions.

Empathy step is important because from that, we can find the requirement for our product and how it will help other people. Furthermore, we are notifying the people that we are currently preparing to make a solution to their problem and they will have an interest to help us in the next step which is to prepare a solution. To execute this step, two big questions must be popped out by the solver, 'Why' and 'How'. This questions must be asked during the requirements gathering so that we can go deeper to the problem.

3. Describe how the IDEO Design Thinking team have helped Shimano, the manufacturer of bicycle components, to revisit the Shimano design approach in order to improve the company's growth.

They revisit the recent problem to design the new product. Then, they will divide into several groups and find the suitable material from the same niche company to compare and decide. After that, they start the design process. During this, they try not to make conversation outside of the topic during work hours and then they will criticise each other's idea before they proceed to build the mock up and then combine them to create the product.

4. Share your view on the main difference between the Design Thinking and conventional design approach in designing solutions. Also give your views on the important factors that should be considered in Design Thinking approach to ensure effective solutions can be proposed.

First and foremost, the focus of the business. In DT, the product is built based on human-centred focus which is they want to solve the current problems while conventional design product is built on product-centred focus which is the product they want to create instead of problem to be solved. Other differences include the design process which DT uses iterative approach where for each step, we will have requirement, design and testing. Thus we can revisit each step if we lost in the process. CD uses linear approach where testing only occurs after the overall design is completed.

Several important factors that should be considered are the deep user understanding. To get a deep user understanding in the product, we need to use empathize and make a clear context for our product. Secondly, we need to have a clear problem understanding. If we have a clear problem statement. We will not be halted during our design process.

5. Read [Article \[4\]](#), and based on this article please answer all the questions below:

- (i) Explain what is the main issue that Scania aims to explore in related to Design Thinking approach?

Scania wants to investigate how its IT services ecosystem may be made more innovative through the application of Design Thinking approaches. The emphasis is on how these approaches may enhance user-centric service design, promote innovation processes, and propel digital transformation. The primary concern is how to create services that offer a competitive edge by fusing cutting-edge frameworks like Design Thinking with tried-and-true methodologies like Agile.

- (ii) What has been developed by Google Ventures, and explain how useful it is in the context of providing good product or services?

The Design Sprint is a five-day framework for product design that was created by Google Ventures. By integrating design, prototyping, and user testing, this method assists teams in addressing important business, design, and product challenges. The structure is especially helpful for; producing and validating ideas quickly, improving cooperation within the team, concentrating on user demands and iterative development to speed up the innovation process.

- (iii) Based on this article, please share your opinion on how Design Thinking has provided positive impact in supporting innovation processes in automotive industry especially Scania?

Innovation in the automobile sector has been greatly influenced by Design Thinking, especially for Scania. It has made it possible for the company to evolve from a conventional truck builder to one that offers environmentally friendly transportation options. Design Thinking has aided in the creation of user-focused services by encouraging teamwork, encouraging iterative problem-solving, and smoothly merging with Agile processes. Furthermore, it has aided Scania in quickly developing and improving concepts, encouraging innovation and teamwork, and eventually enhancing its capacity to create and compete.

6. [Figure 1](#) is one of the products by Company A. If you are given the opportunity to improve this product, how you are going to use Design Thinking approach in making this product to become a high sales product?

Understanding the target customers' wants and preferences is the first step in applying the Design Thinking methodology to improve the vanilla cone ice cream product. To find out what customers want—like distinctive flavors, adjustable alternatives, or eye-catching presentation—this entails conducting surveys, interviews, or behavioral observations. Identifying the primary issue, such as the product being viewed as too basic or lacking distinctiveness from competitors, comes next after customer insights have been obtained. The problem statement can, for example, draw attention to the need for greater visual appeal or variety.

Creative solutions suited to the Malaysian market, such adding regional flavors like pandan, durian, or gula melaka (palm sugar) to the ice cream, might be investigated at the brainstorming stage. While the cone might be reinvented with unusual possibilities like pandan-flavored waffle cones or kuih-inspired patterns, customizable toppings could include toasted coconut flakes, crushed peanuts, or jellies inspired by cendol. Then, by presenting these concepts in well-known places like malls or night markets, they can be tested and prototyped. Sales information and feedback from Malaysian customers might help inform improvements to guarantee the product satisfies regional preferences.

Furthermore, a comprehensive strategy is essential. While social media can highlight the product's attractiveness, marketing techniques should concentrate on storytelling and highlight distinctive features like materials that are sourced ethically or aesthetically pleasing designs. Adopting sustainable practices, such as eco-friendly packaging, can draw in eco-aware customers, and operational viability guarantees that modifications are economical. The vanilla cone can be made into a high-selling product that appeals to a wider market by combining customer insights, innovation, and strategic execution.

