

Week 23



Design Thinking 



INTRODUCTION TO DESIGN THINKING

Design thinking is a framework for problem-solving, which is ideal for tackling unknown problems, or problems that aren't properly defined. Because of this, Design Thinking is very effective when addressing multi-faceted problems faced by many businesses today. To run a very successful business, you should always seek new ways to compete in your industry, and Design Thinking is a framework that you can use to achieve this. Design Thinking has many definitions. However, it is a human-centric, iterative, solution-based, problem-solving framework. In this lecture, we will explore what Design Thinking is all about. We will cover the Design Thinking process, including the five stages of the Design Thinking process, which are Empathize, Define, Ideate, Prototype, and Test.



WHAT IS DESIGN THINKING?

1. **Problem-Solving:** Design Thinking is a methodology, which is ideal for tackling complex problems that aren't properly defined, or are unknown. This is because it helps us to clearly understand a problem, challenge any assumptions, and reframe the problem in a way that will help us come up with clear solutions that may potentially resolve the problem.
2. **Human-Centric:** In Design Thinking, you should seek to understand the user, which is the person you're designing your product or service for. The user should be considered at every stage of the Design Thinking process.



WHAT IS DESIGN THINKING?

3. Iterative: In every stage of the Design Thinking process, you should use the results to review, question, and improve any initial assumptions, understandings, and outcomes. This makes the Design Thinking process a non-linear process.

4. Solution-Based: The Design Thinking process provides a complete hands-on approach to solving a problem. In Design Thinking, you will formulate several potential problem-solving approaches, prototype them, and finally test them in the context of the problem you're solving. Due to the iterative nature of the Design Thinking process, you will be able to re-shape and ultimately optimize these approaches until an optimal solution is reached and chosen.

CHARACTERISTICS OF DESIGN THINKING



The Design Thinking process is an "out-of-the-box" thinking process because it encourages you to look for alternatives by creating different and often innovative solutions, which you might not have thought about before. At the same time, Design Thinking focuses on the needs of the user, and thus, it will help you address the problems that the user experiences, and that includes contextual and cultural factors.

CHARACTERISTICS OF DESIGN THINKING



Another important aspect of the Design Thinking process is that it encourages collaborative, multidisciplinary teamwork to leverage the skills, personalities, and thinking styles of different people. This will come in handy in all the different stages of the Design Thinking process. Design Thinking yields innovation by combining these three essential components:

- Technical feasibility
- Economic viability
- Human desirability

CHARACTERISTICS OF DESIGN THINKING



Design Thinking can help you identify needs that have still not been catered for, thus presenting new opportunities. Also, it reduces the risk associated with launching new ideas since the Design Thinking process promotes the idea of failing early and often through prototyping. Finally, Design Thinking generates innovative solutions, rather than adding more to existing ones, and it helps organizations to learn faster.

THE FIVE STAGES OF DESIGN THINKING



The five stages of the design thinking process are used to solve complex problems. The interesting part of this approach is that it starts first with employing diverging styles of thinking to explore as many possibilities as possible. But it also encourages convergent styles of thinking to isolate potential solution streams. On that note, these five stages of Design Thinking are not always sequential and can also occur in parallel and repeat iteratively. Therefore, the best approach to seeing them is as phases, which contributes to an innovative project. The five stages are: Empathize, Define, Ideate, Prototype, and Test.

THE FIVE STAGES OF DESIGN THINKING



1. **EMPATHIZE:** The objective of this stage is to gain an empathetic understanding of your users, their needs, and what they truly care about. To achieve this objective, you need to put aside any personal assumptions that you may have about your users or about the problem you're tackling. You should observe, engage (through interviews), and empathize with your users to understand their experiences, what they value, and what motivates them. Also, it's recommended that you get a feel of the physical environment within which the problem is experienced. This will help you to empathize, which is an important aspect of Design Thinking. This stage will inevitably yield a considerable amount of information that you will need for the second stage of the Design Thinking process.

THE FIVE STAGES OF DESIGN THINKING



2. DEFINE: In this stage, you should define the problem. You should analyze, sort out, and sequence the information you've gathered in the first stage in a way that lets you adequately define the problem you're tackling. If you have conducted interviews in the first stage, you can analyze the answers and highlight any key phrases that relate to the problem. Thus, this stage will bring clarity and focus to your work because you will get to understand what the real problem is. Ideally, it would be best if you write this down in the form of a problem statement. The aim is to define the problem solely as seen from the user's perspective and without any constraints on existing solutions.

THE FIVE STAGES OF DESIGN THINKING



3. IDEATE: Using the problem statement you've written from the 'Define' stage, you can start generating several logical ideas, which seek to resolve the problem. These logical ideas as a result of brainstorming are typically rough. Though they are rough, they should still be valid approaches that can potentially solve the problem being tackled. The important thing here is to think outside the box and to generate several ideas so that there are some options to choose from for prototyping in the next stage. You can sketch these ideas and show them to the users to refine them and simultaneously filter those ideas that are worth further investigation.

THE FIVE STAGES OF DESIGN THINKING



4. **PROTOTYPE:** During this stage of Design Thinking, you and your team should work to generate several inexpensive prototypes to investigate and explore the potential solutions proposed thus far. This stage aims to have something to share, and it will act as a basis of communication with your team members and with other stakeholders, including your users. It is important to remember that you're not trying to identify the right solution here. Rather, you're simply exploring several potentially good approaches to address the problem. Therefore, you shouldn't waste much time thinking about how to prototype or build a prototype. Instead, you should pick up some materials and start from there. Each solution is prototyped, investigated, accepted, improved, and re-examined or rejected.

THE FIVE STAGES OF DESIGN THINKING



5. TEST: In this stage, the best solutions from the prototyping stage are tested in the context of the real product or service. Testing is carried out to evaluate each prototype and assess the degree to which it addresses the problem you're tackling. This is an iterative process since the results from these tests can sometimes be used to refine the problem, the proposed prototypes, and the solutions. This leads to further alterations and refinements of the prototypes being tested, hence moving back to previous stages in the Design Thinking process. Testing also provides an opportunity to understand and empathize more with the users since you're observing and engaging them. This stage will also help you personally to refine the way you've framed the problem and address any remaining pre-conceptions you may still have.

Congratulations!



See you soon 