# **Design Thinking**

### A. Definition:

Tim Brown presented a fantastic definition of Design Thinking:

"Design Thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."

# B. Features/Key Takeaways:

- Design Thinking is a strategy for creative problem solving by prioritizing customers' requirements above everything else.
- ➤ It helps to engage a person in several opportunities like experimenting and creating a prototype model, gathering feedback from customers and redesigning the product using innovative solutions.
- > You can apply design thinking to various fields such as architecture, engineering, business, etc.
- Design Thinking is a solution-based approach where you focus on finding solutions to the problems in contrast to the problem-based approach. The problem-based thinking approach focuses on finding obstacles and limitations on why a problem exists.

# C. Why is Design Thinking Important?

If you think like a designer, it can transform how your organization develops products, services, processes, and strategies. It brings together the *desirability* from the customer's perspective with what is technologically *feasible* and economically *viable*. It also provides various opportunities for people who aren't trained as designers to utilize creative tools so that they can tackle a vast range of problems/challenges.

There are also some essential aspects in which design thinking helps, and they are:

- The main objective is to solve the customer's requirements
- Helps in tackling ambiguous and challenging problems
- Drives people to create innovative solutions

• It helps organizations to run faster with more efficiency

# D. The Four Principles of Design Thinking:

Christoph Meinel of the Hasso-Plattner Institute and Larry Leifer of Stanford University proposed four universal principles of design thinking:



**E. The Five Phases of Design Thinking:** The Hasso-Plattner Institute at Stanford proposed

the five universal phases of design thinking:





Design thinking begins with empathy- to gain an insight into the problem that it sets out to resolve. However, more than understanding the problem, this step is crucial to understand the requirements of the user, to deliver a more customized solution.

### DEFINE

The next step in the process is structuring all the information collected during the previous phase in a coherent manner. This will eventually help you to define the problem statement from a more human-centric perspective.





#### **IDEATE**

This is probably the most crucial phase of all and interestingly, allows a lot of room for creativity. This is when you think radically and prepare for experimentation to champion the user-experience.

### **PROTOTYPE**

Prototyping involves curating your best ideas and putting them into shape. This stage allows designers to test the effectiveness of the solution internally before presenting it for implementation.





### **TESTING**

The final stage of design thinking involves testing the best solutions of the previous stage. Since this is an iterative methodology, the results of this stage are used to refine the end solution further.

# F. Applications of Design Thinking

Design thinking has its applications in a range of professions. In sports, education, study, and research to business and management, design thinking is widely used by several organisations around the world.

#### **Business:**

Design thinking is most popular in businesses. It helps them in optimization processes, especially with respect to product creation, marketing, and contract renewal. Considering that these processes require a good amount of focus on their customers, design thinking proves to be immensely useful in their assistance. In businesses, design thinking helps design thinkers not only develop deep empathy for their customers but also to create solutions that tend to their specific needs.

# **Information Technology**

The IT industry makes a lot of products that require trials and proof of concepts. The industry needs to empathize with its users and not simply deploy technologies. IT is not only about technology or products, but also processes. The developers, analysts, consultants, and managers have to brainstorm possible ideas for solving the problems of the clients. This is where design thinking helps a lot.

### **Education**

The education sector in our economy demands the most when it comes to creative solutions. It essentially can make the best use of design thinking through student feedback. Feedback from students on their requirements, goals, and challenges in the classroom can prove to be useful in easy problem-solving. That is, by working on their feedback, the design thinks can come up with relevant and creative solutions to address their issues.

For instance, Michael Schurr, a 2nd-grade teacher in New York realized that his students would be more comfortable with lowered bulletin boards. He also came up with the idea of creating a comfortable semi-private lounge for working students as a space to study. As a result, his students not only became more engaged with each other but also had a good amount of space to store books and study.

#### Healthcare

Design thinking plays a vital role in the healthcare industry as well. The expenditure in this sector is healthcare is continuing to increase by the day. A major concern of the experts worldwide is about bringing quality healthcare to people at lower costs.

The Venice Family Clinic in Venice, California has managed to come up with innovative solutions in opening a low-cost children's clinic that serves low-income families. A major challenge included the problems of finance and language barriers at lower costs for underprivileged children. Fostering good health along with profits did not entirely sound sustainable. However, using design thinking, the inefficiencies in the system and the perennial challenges were addressed and solved.

1. YouTube video: The Design Thinking Process – Sprouts (3.57 mins)https://www.youtube.com/watch?v= r0VX-aU T8