ASIA PACIFIC UNIVERSITY OF TECHNOLOGY & INNOVATION

DM505–3–M-DT Design Thinking

Topic 3

What Is Design Thinking?

LEARNING OUTCOMES

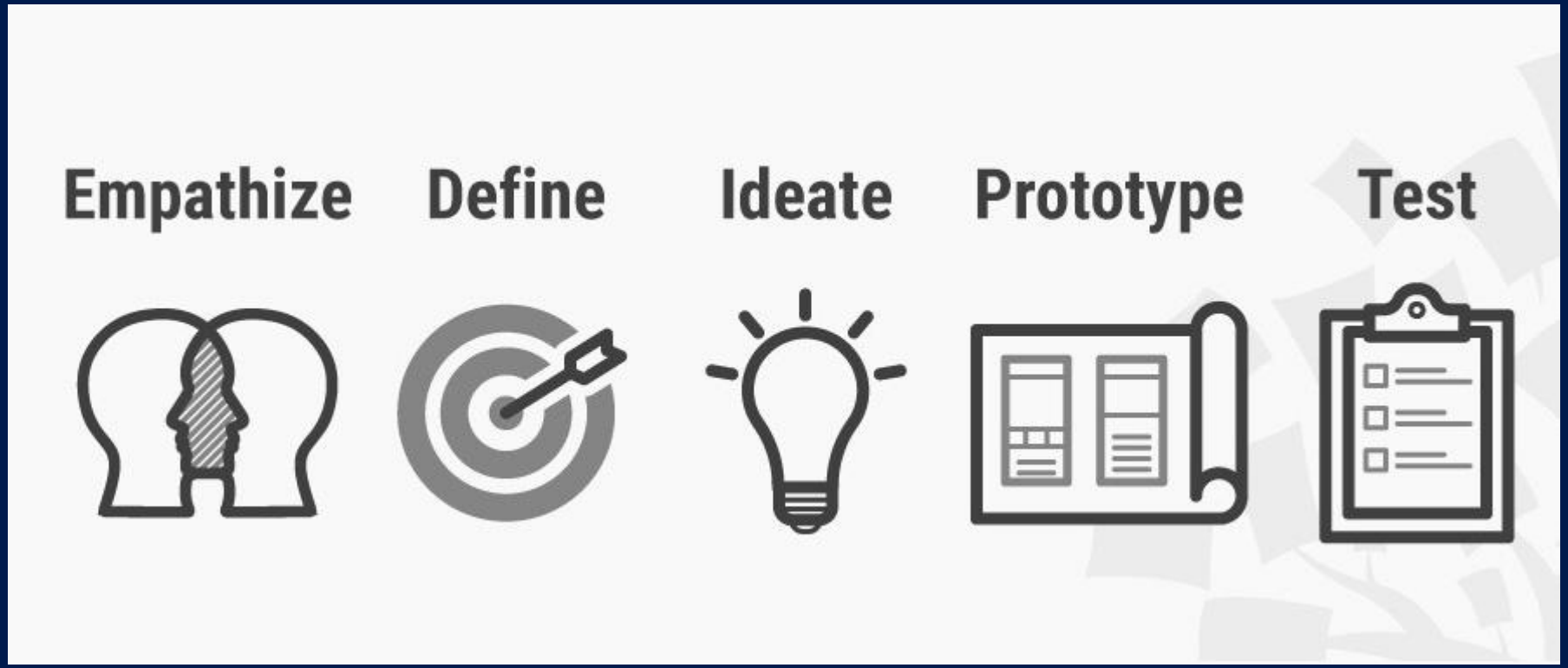
At the end of the lesson, student will be able to:

- Identify what Design Thinking is and its guiding principles
- Discover origins of Human Centred Design and Design Thinking processes
- Explain how Design Thinking is connected to problem solving, as it involves creating solutions that address specific challenges or needs.

INTRODUCTION

Design thinking is a non-linear, iterative process which seeks to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test.

The method consists of 5 phases—
Empathize, Define, Ideate, Prototype and Test -
and is most useful when you want to tackle problems that are ill-defined or unknown.


Empathize
Define
Ideate
Prototype
Test

Why Is Design Thinking so Important in Today's World?

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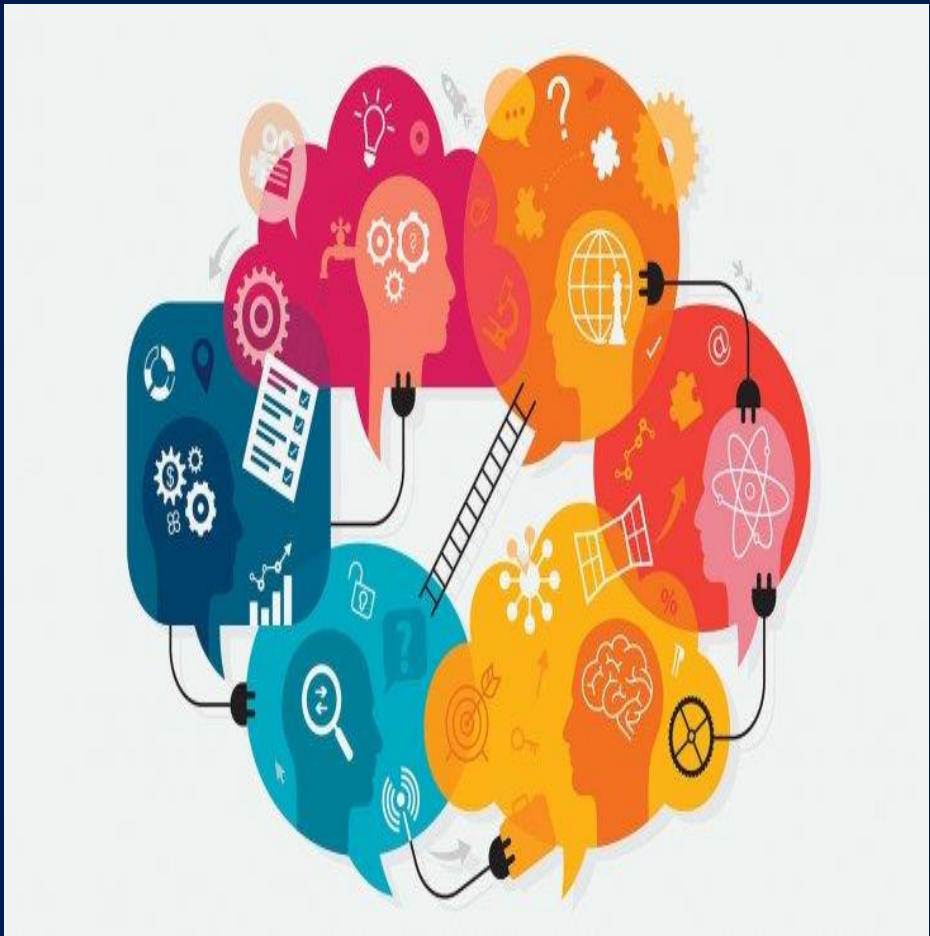
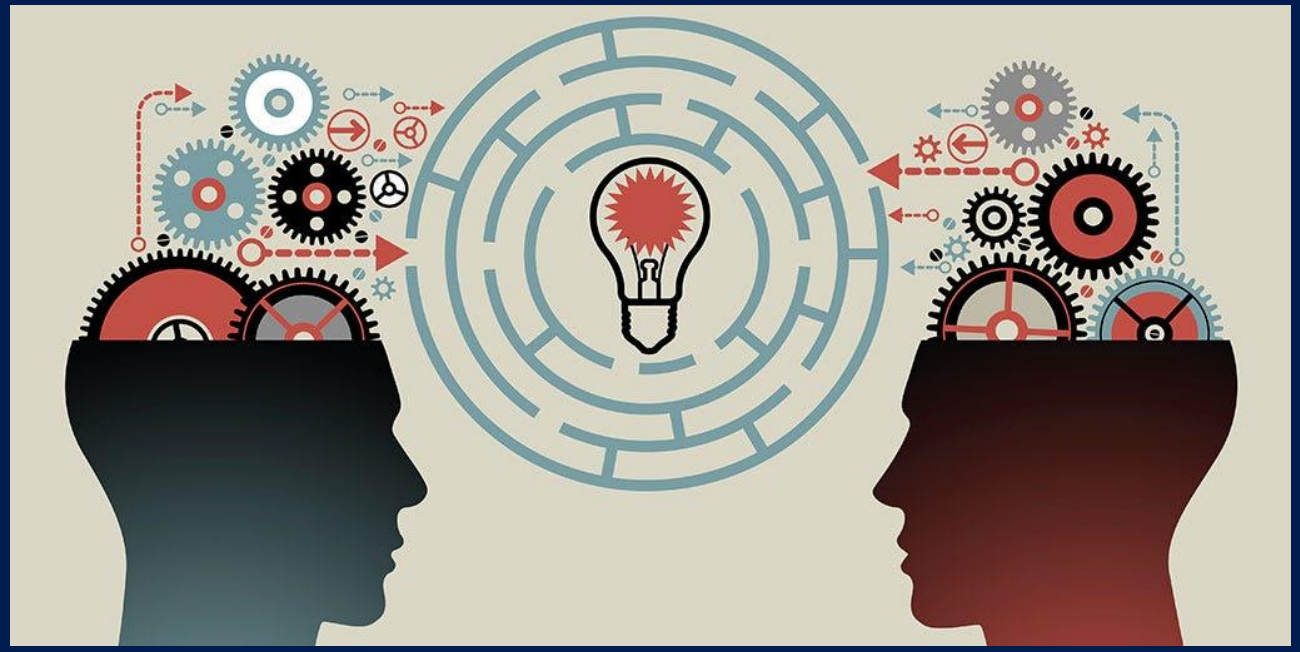


Over recent decades, it has become crucial to develop and refine skills which allow us to understand and act on rapid changes in our environment and behaviour.

Why Is Design Thinking so Important in Today's World?

The world has become increasingly interconnected and complex, and design thinking offers a means to grapple with all this change in a more human-centric manner



Why Is Design Thinking so Important in Today's World?

Design teams use design thinking to tackle ill-defined or unknown problems (otherwise known as wicked problems) because the process reframes these problems in *human-centric* ways, and allows designers to focus on what's most important for users.

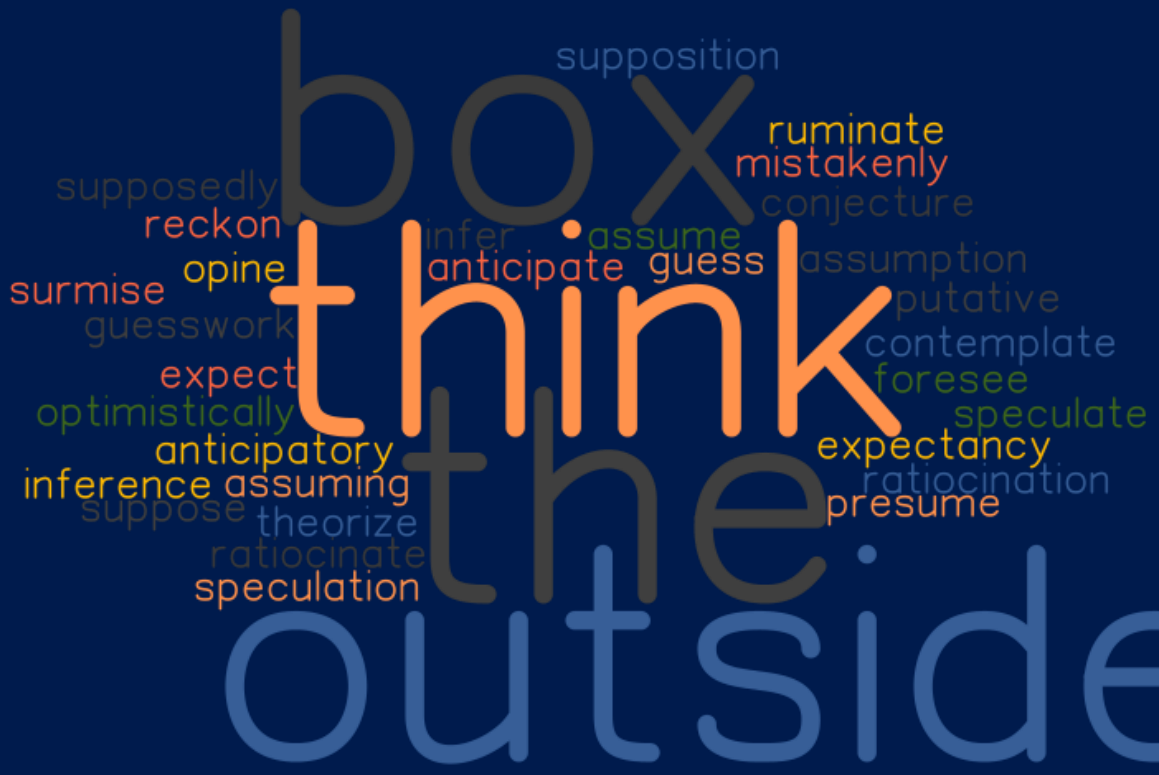
Why Is Design Thinking so Important in Today's World?

Design thinking offers us a means to think outside the box and also dig that bit deeper into problem solving. It helps designers carry out the right kind of research, create prototypes and test out products and services to uncover new ways to meet users' needs

Why Is Design Thinking so Important in Today's World?

The design thinking process has become increasingly popular over the last few decades because it was key to the success of many high-profile, global organizations—companies such as Google, Apple and Airbnb have wielded it to notable effect, for example.

Why Is Design Thinking so Important in Today's World?

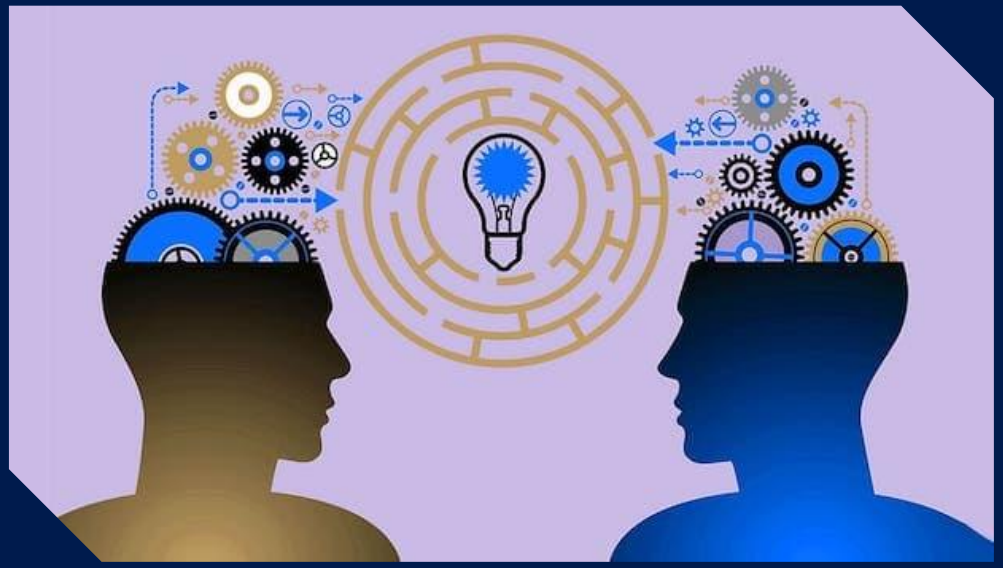


This outside the box thinking is now taught at leading universities across the world and is encouraged at every level of business.

Why Is Design Thinking so Important in Today's World?

Design thinking improves the world around us every day because of its ability to generate ground-breaking solutions in a disruptive and innovative way.

Why Is Design Thinking so Important in Today's World?



Design thinking is more than just a process, it opens up an entirely new way to think, and offers a collection of hands-on methods to help you apply this new mindset.

The 5 Stages of Design Thinking

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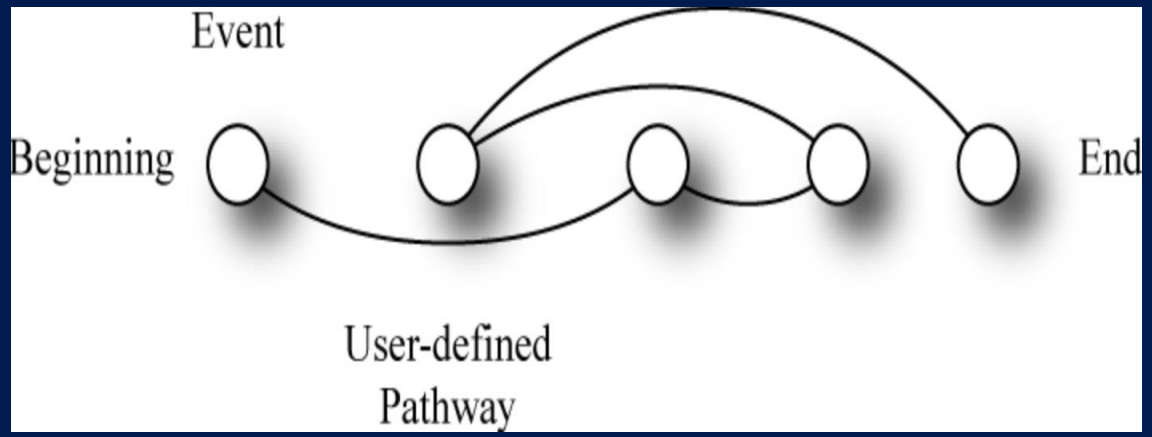
The Hasso Plattner Institute of Design at Stanford, commonly known as the **d.school**, describes design thinking as a five-stage process.

The 5 Stages of Design Thinking

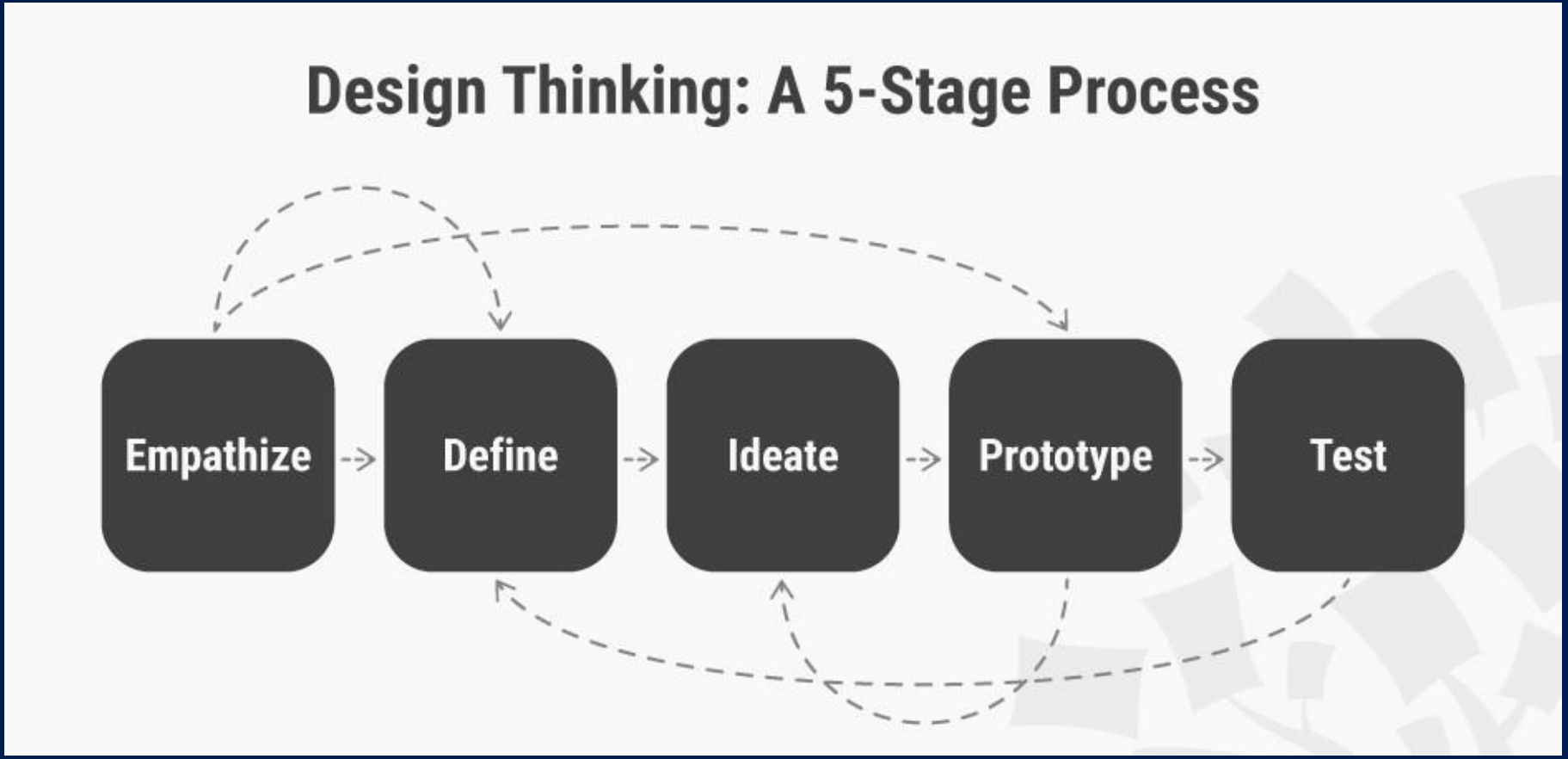


It's important to note these stages are *not* always sequential and designers can often run the stages in parallel, out of order and repeat them in an iterative fashion.

The 5 Stages of Design Thinking

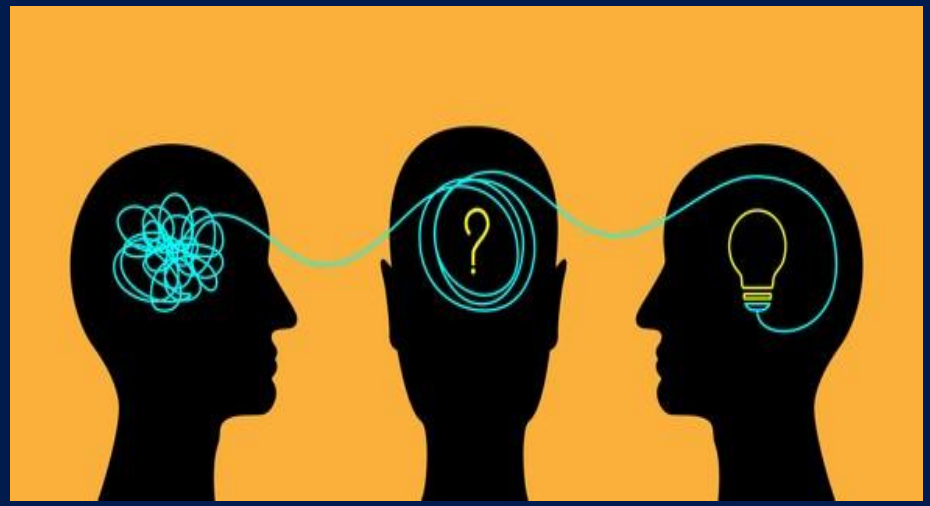
The various stages of design thinking should be understood as different modes which contribute to the entire design project, rather than sequential steps. The ultimate goal throughout is to derive as deep an understanding of the product and its users as possible.

The 5 Stages of Design Thinking



Stage 1: Emphatize – *Research your users' needs*

The first stage of the design thinking process allows you to gain an empathetic understanding of the problem you're trying to solve, typically through user research.



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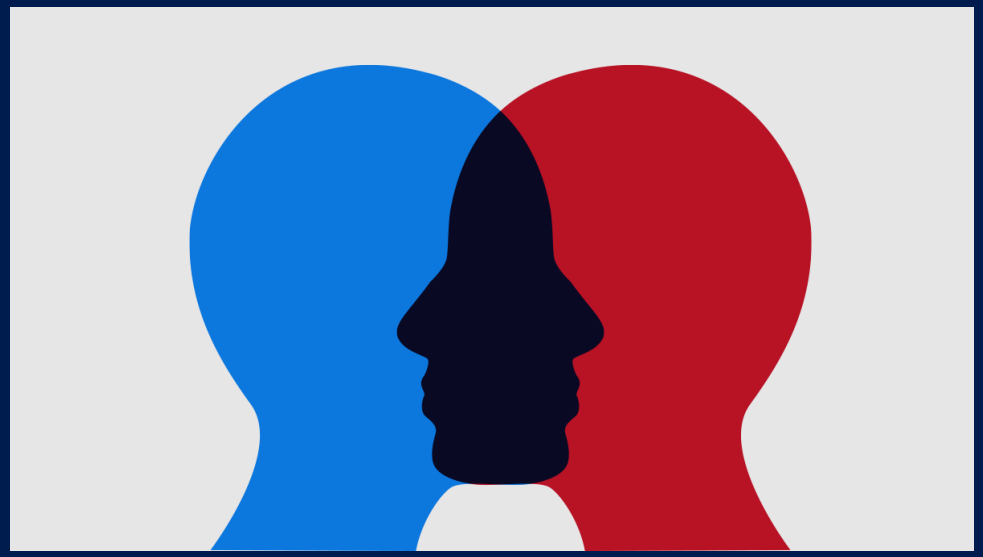
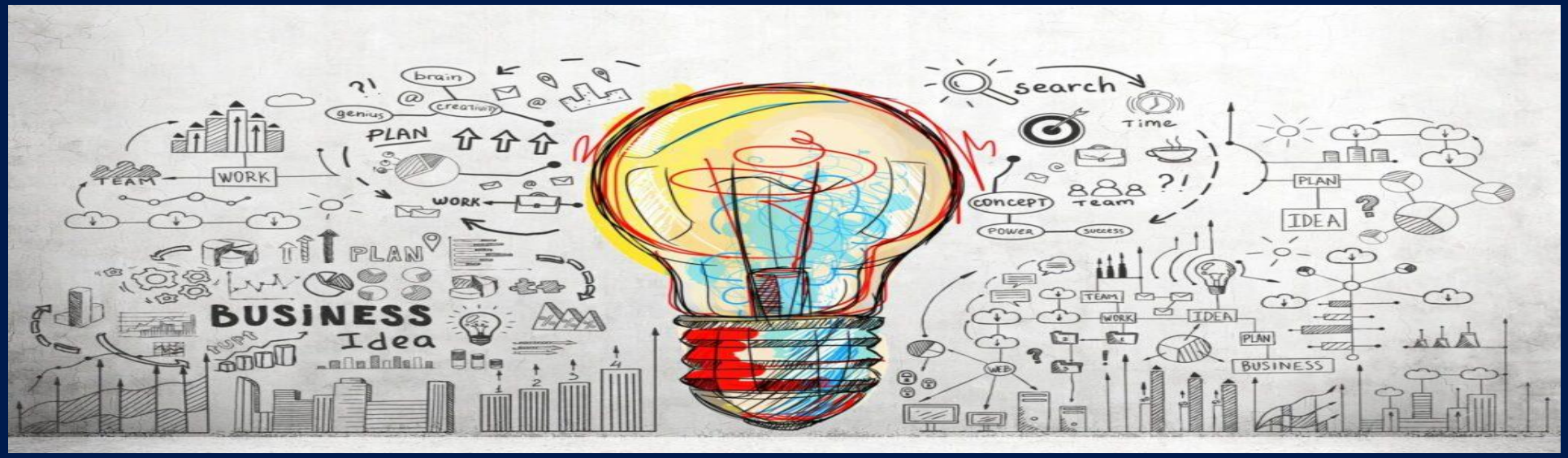


Empathy is crucial to a human-centered design process like design thinking because it allows you to set aside your own assumptions about the world and gain real insight into users and their needs.

Stage 2: Define – *State users' needs & problems*

In the Define stage, you accumulate the information you created and gathered during the Empathize stage. You analyse your observations and synthesize them to define the core problems you and your team have identified so far. You should always seek to define the problem statement in a human-centered manner as you do this.

Stage 3: Ideate – *Challenge assumption & create ideas*



Designers are ready to generate ideas as they reach the third stage of design thinking. The solid background of knowledge from the first two phases means you can start to “think outside the box”, look for alternative ways to view the problem and identify innovative solutions to the problem statement you’ve created.

Stage 4: Prototype – *Start to create solutions*

This is an experimental phase, and the aim is to identify the best possible solution for each of the problems identified during the first three stages. Design teams will produce a number of inexpensive, scaled-down versions of the product (or specific features found within the product) to investigate the problem solutions generated in the previous stage.

Stage 5: Test – *Try your solutions out*

Designers or evaluators rigorously test the complete product using the best solutions identified in the Prototype phase. This is the final phase of the model but, in an iterative process such as design thinking, the results generated are often used to *redefine* one or more further problems.

Stage 5: Test – *Try your solutions out*

Designers can then choose to return to previous stages in the process to make further iterations, alterations and refinements to rule out alternative solutions.

If you have any questions, you can email me at:

idzuan.othman@apu.edu.my.

You can also book a consultation with me or send me a message through Microsoft Teams