

Research on Design thinking process and User/Human Centered Designs

Carry out research on the following topics to have a much more in-depth understanding before the next class. Assignment needs to include definitions and examples related to Design Thinking process, User-Centered design.

- Design Thinking Process
 - Real life examples with descriptions.
- User-Centered Design
 - Real life examples with descriptions.

What is Design Thinking?

Design thinking is a non-linear, iterative process that teams use to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test. Involving five phases—Empathize, Define, Ideate, Prototype and Test—it is most useful to tackle problems that are ill-defined or unknown.

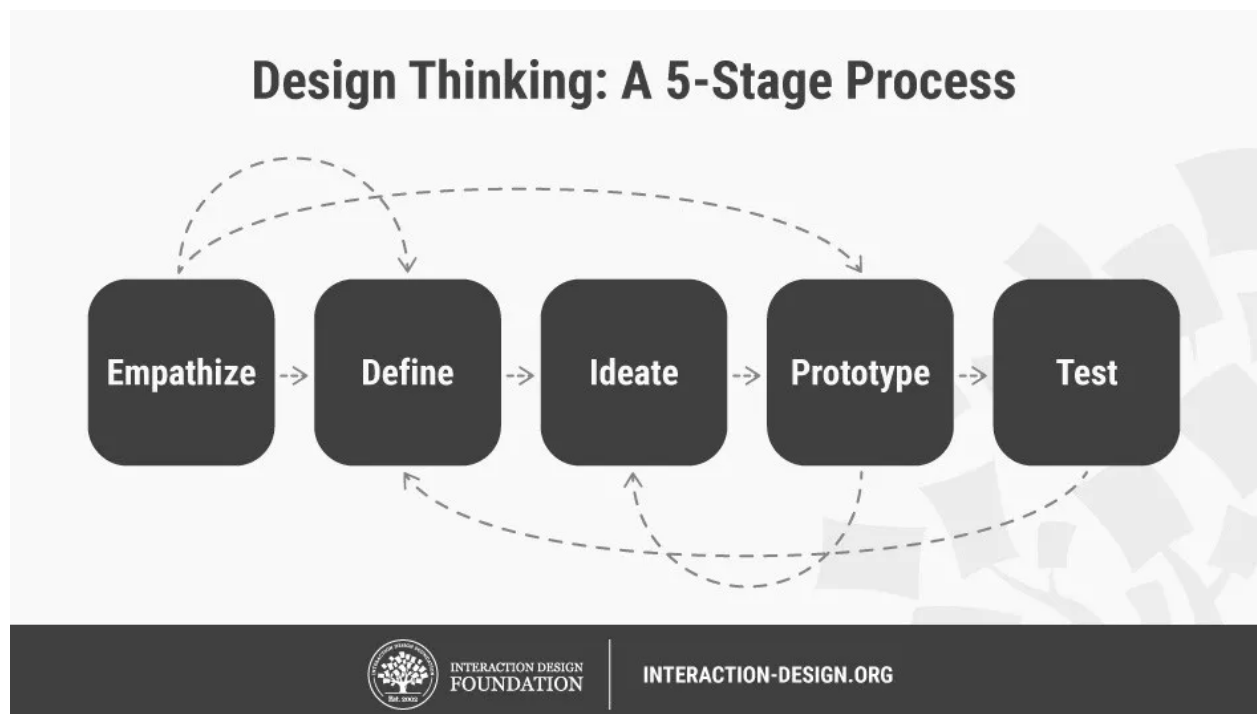


Why Is Design Thinking so Important?

In [user experience \(UX\) design](#), it's crucial to develop and refine skills to understand and address rapid changes in users' environments and behaviors. The world has become increasingly interconnected and complex since cognitive scientist and Nobel Prize laureate Herbert A. Simon first mentioned design thinking in his 1969 book, *The Sciences of the Artificial*, and then contributed many ideas to its principles. Professionals from a variety of fields, including architecture and engineering, subsequently advanced this highly creative process to address human needs in the modern age. Twenty-first-century organizations from a wide range of industries find design thinking a valuable means to problem-solve for the users of their products and services. Design teams use design thinking to tackle ill-defined/unknown problems (aka [wicked problems](#)) because they can reframe these in human-centric ways and focus on what's most important for users. Of all [design processes](#), design thinking is almost certainly the best for "thinking outside the box". With it, teams can do better [UX research](#), [prototyping](#) and [usability testing](#) to uncover new ways to meet users' needs.

The Five Stages of Design Thinking

The Hasso Plattner Institute of Design at Stanford (aka the d.school) describes design thinking as a five-stage process. Note: These stages are not always sequential, and teams often run them in parallel, out of order and repeat them in an iterative fashion.



Real life examples of Design Thinking Process

1. Airbnb

Published in First Round Review, this article — [“How Design Thinking Transformed Airbnb from a Failing Startup to a Billion Dollar Business”](#) — outlines how the famed start-up went from \$200 a week profit to the [“unicorn”](#) it is today.

Design thinking is a part of Airbnb’s success; in particular, they built a culture of experimentation: “It was only when they gave themselves permission to experiment with non-scalable changes to the business that they climbed out of what they called the ‘trough of sorrow.’”



2. PillPack

This [case study](#) describes how PillPack started as a startup-in-residence at IDEO Cambridge. Working with designers and using a human-centered approach, [PillPack](#) refined their brand vision, strategy, and identity across channels.

PillPack was called one of the best inventions of 2014 by [Time Magazine](#) and Amazon bought [PillPack for \\$1 Billion](#) in 2018. I think you could safely say that their design thinking approach was successful.



What is User Centered Design?

User-centered design (UCD) is an iterative design process in which designers focus on the users and their needs in each phase of the design process. In UCD, design teams involve users throughout the design process via a variety of research and design techniques, to create highly usable and accessible products for them.

UCD Considers the Whole User Experience

In UCD, you base your projects upon an explicit understanding of the users, tasks and environments. The aim of the process is to capture and address the *whole* user experience. Therefore, your design team should include professionals from across multiple disciplines (e.g., ethnographers, psychologists, software and hardware engineers), as well as domain experts, stakeholders and the users themselves. Experts may carry out evaluations of the produced designs, using design guidelines and criteria. However, you should bear two crucial points in mind. First, to span the entire user experience, you must involve the users for evaluation. Second, you'll need to ensure *long-term* monitoring of use.

Real life examples of User-Centered Design

1- Samsung Free Style

With Samsung FreeStyle, people can watch movies on their ceiling, on their walls (no matter what color they are because the device can automatically adjust to color according to the wall), change the video, and screen the videos on their desks, listen to the music and so on.

The main idea is that although people have TVs or laptops, a tiny portable device to watch videos on any surface possible is a great solution. Especially so when we consider that people work from their homes and get an education online because of the pandemic



2- Fitbit

Fitbit, definitely has a human-centered design. The designers of fitness trackers recognized people's difficulties in tracking and maintaining exercise goals and devised a long-term solution.

