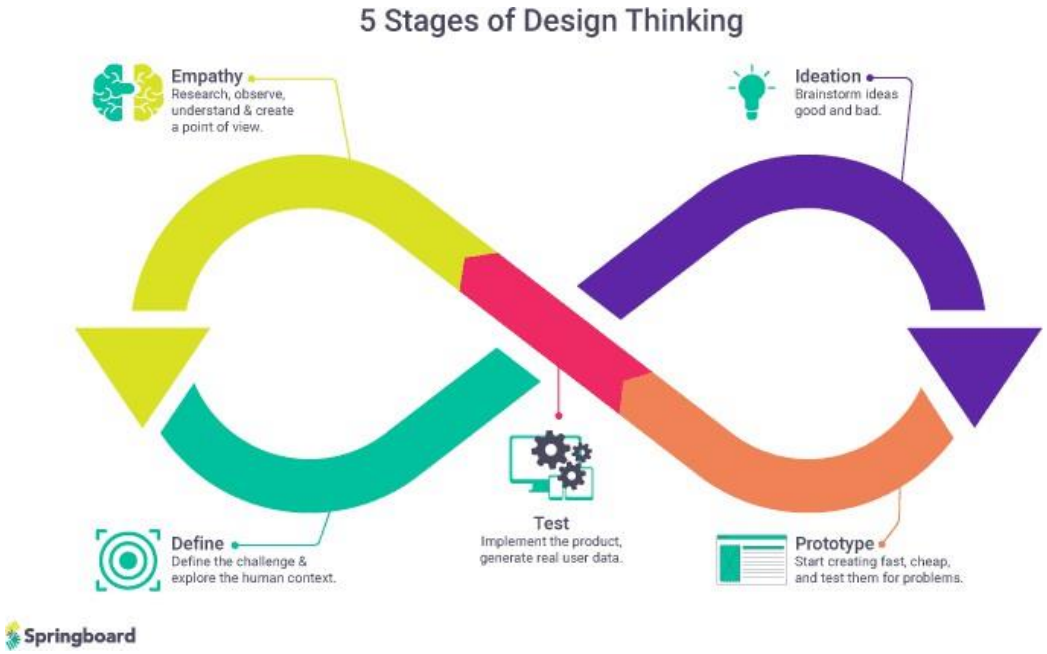
## 1.2 CORE STAGES OF DESIGN THINKING:

### What is the Design Thinking Process?

Design Thinking is a user-centered approach to problem-solving that focuses on empathy, collaboration, and experimentation. It typically consists of five core stages

There are five key steps in the design thinking process: empathize, define, ideate, prototype, and test. One thing to keep in mind is that the process isn't always linear: any one of the five stages of the design thinking process could spark an idea or outcome that leads to repeating an earlier stage. For this reason, the design thinking approach is often referred to as a non-linear, iterative process.




### Origin of the Design Thinking Process

Though the term was originally coined in the 90s by Tim Brown, design thinking traces its origin back to the 1940s and 1950s, when psychological studies on the development and methods of creativity were underway.

In 1973, design theorists Horst Rittel and Melvin Webber coined the term "wicked problem" to describe complex problems that were difficult to define and could not be solved by conventional methods—laying the groundwork for alternative solutions like design thinking.

Almost twenty years later, in 1991, the international consulting firm IDEO was founded. IDEO is largely credited with helping to bring design thinking to the mainstream.

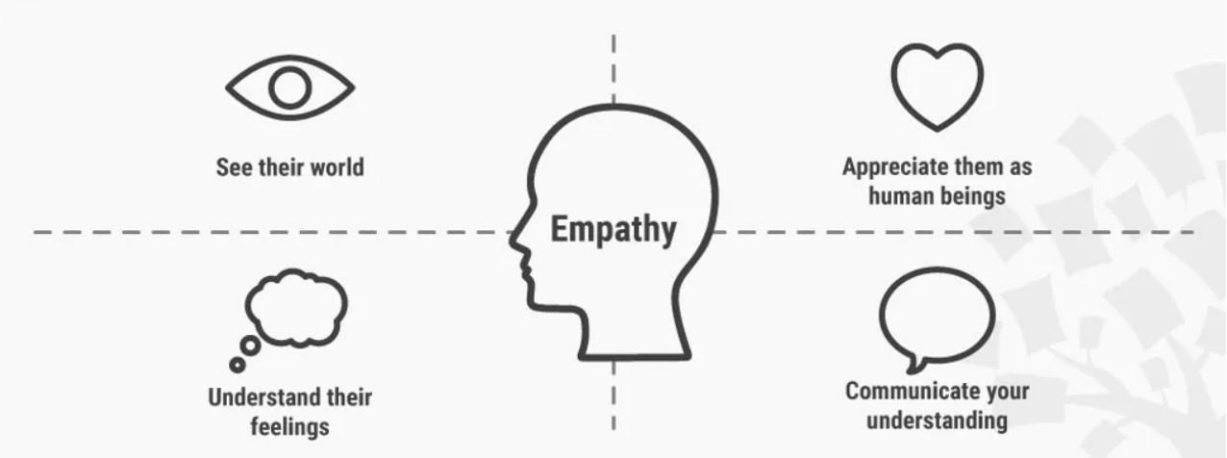
By the start of the 21st century, design thinking had become prominent, with multiple books on the subject having been written, and courses on design thinking being taught at preeminent universities like Stanford.

Today, design thinking remains a popular methodology favoured by some of the largest, most influential companies in the world, including Apple, Samsung, Nike, and countless more.

## The 5 Stages of Design Thinking

Five key steps make up the design thinking methodology: empathy, define, ideate, prototype, and test.

### STAGE 1: EMPATHY




The first stage of the design thinking process is empathy. During this stage, design teams set aside their own biases and work to gain a deeper understanding of real users and their needs —often through direct observation and engagement.

Empathy is one of the most crucial phases of design thinking. After all, how can you hope to solve a user's problem if you don't understand who the user is and what they want? Empathy creates an emotional bridge between designers and target users, one that facilitates the kind of deep user insights at the heart of human-based design thinking.

Some tools and methods commonly used to conduct this user research are:

- **User Interviews:** Talk to users directly to gain insight into their challenges and understand their points of view.
- **Surveys and Questionnaires:** Help identify who your users are, what they currently think about your product, what problems they face, and what their needs are.
- **Observation:** View how users interact with the product and their environment. Observe their behaviours to gain insight into their thoughts and feelings.
- **Empathy Map:** A visualization tool that summarizes a user's thoughts, actions, and feelings.
- **Colour Psychology**: Different colour palettes and uses of brand colours unlock

different psychological effects that can influence how consumers use and interact with your designs.

Example: Imagine you are the owner of a boutique gym, and you want to improve membership retention. In the empathy phase, you would talk to a range of current and past members. You would solicit feedback on what they liked or disliked. You might observe how different members interacted with the equipment or different facilities. You would look for areas of encouragement or discouragement: what makes them happy? What seems to frustrate them? You would keep at these observations until you could truly understand and empathize with your members and their needs.

**STAGE 2: DEFINE**


The second step is to define the problem. In this phase, designers analyse the data gathered during the previous stage to identify and define the issue with a clear and concise problem statement.

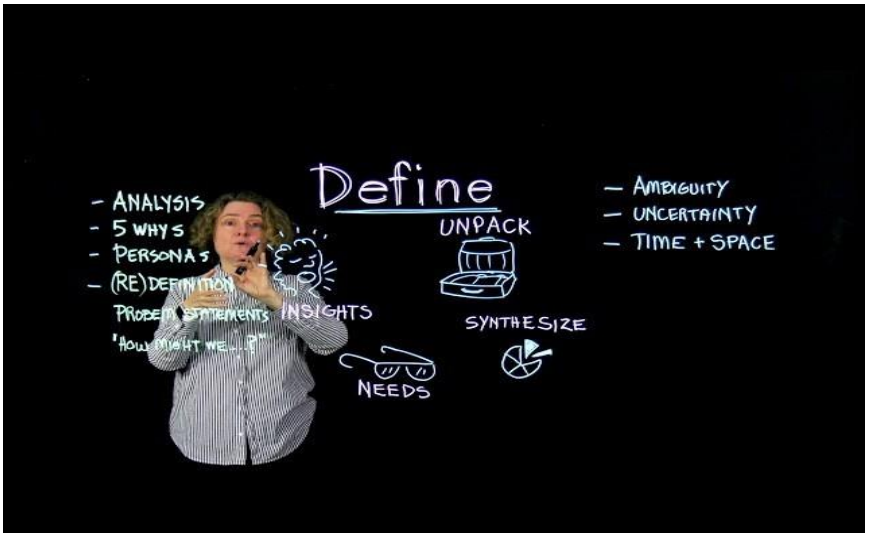
**Creating a Problem Statement**: Develop a clear and concise problem statement that is user-centered. It should define the challenge in a way that guides the design process

Problem statements are particularly important because they outline the challenges the target audience faces and how those challenges can be resolved. Doing so ensures the user's perspective remains in focus (as opposed to the company's) and that a human-centered approach is used throughout the design process.

**Point of View (POV**): Create a POV that highlights the user needs and insights that will guide ideation and solution development.

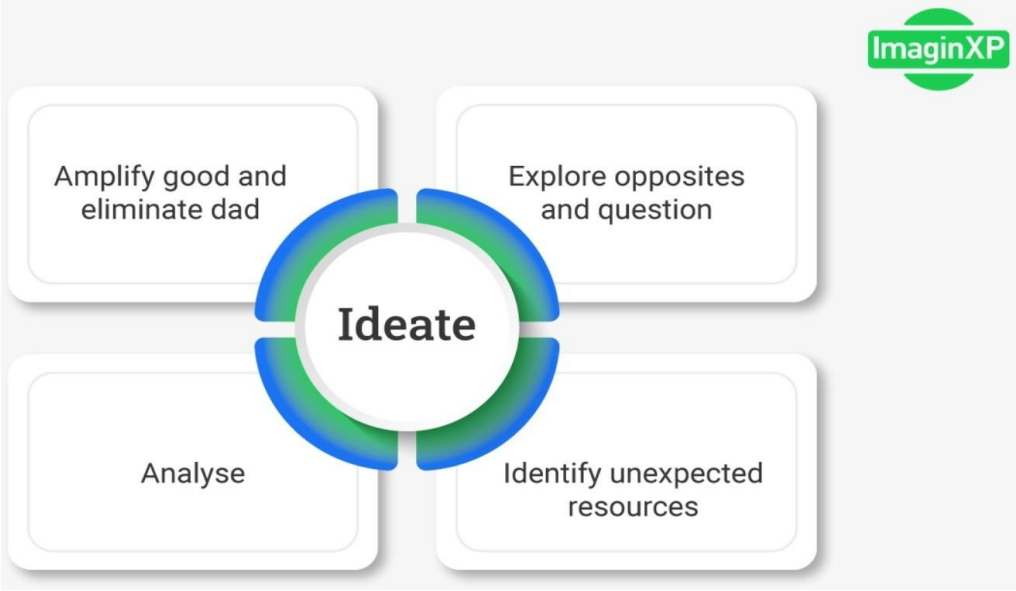
Tools commonly used to achieve in the define phase are:

- **Data Analysis:** Using the data gathered during the empathy stage to identify and define the user's problem.
- **The "5 Whys" Method:** An iterative, interrogative technique used to discover the root cause of a specific problem.
- **Build User Personas:** Using data gathered about users during the empathy stage to build an archetype that represents the needs of your target audience.




Example: Let's continue to use the gym scenario mentioned above. During the define stage, we'll take all our user feedback and observational data and analyse it to determine why some members keep their membership and others don't. We look for common complaints and try to identify possible pain points or unmet user needs. Based on our analysis, we create a problem statement that defines the issue that has the greatest impact on member retention.

**STAGE 3: IDEATE**



The ideation stage is where designers start to explore solutions. Ideas in this stage will ultimately become prototypes that can be tested with your target audience.

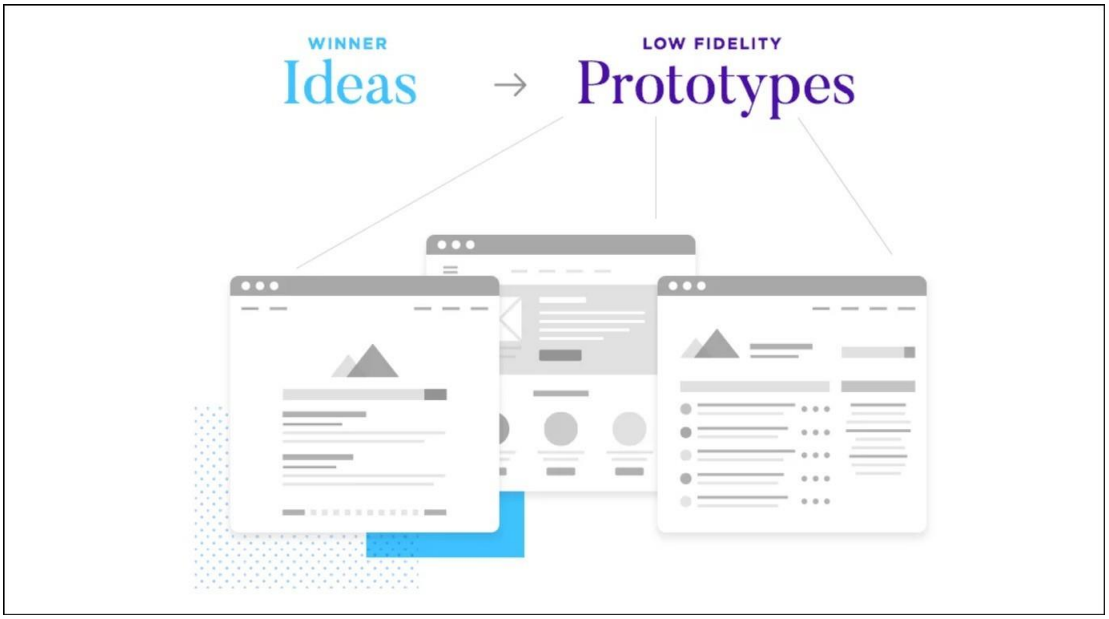
One thing to remember about the ideation phase: leave judgments behind. Design teams shouldn't concern themselves with technical details like budgetary constraints or feasibility. Use creative, outside-the-box thinking to develop as many creative solutions as possible. There are no wrong ideas.

Commonly used ideation techniques include:

- **Brainwriting:** Write down all your ideas on a sheet of paper, then pass the paper on. Whomever you pass it to develops your ideas further, then passes the paper on. This continues until a certain time limit is reached, then the entire team gathers.
- **Sketches:** This is a quick way to visualize ideas without expending much time. If your sketch can communicate your ideas to other team members, it can be an effective ideation tool.
- **Round-Robin Brainstorming:** A collective, two-step approach to brainstorming that begins by soliciting a solution using the "How Might We" prompt, then developing that idea further using an iterative circular process similar to brainwriting.
- **Mind Maps and Flow Chart:** A diagram and visualization tool that shows how ideas are linked, making it easier to classify them and detects patterns.
- **SWOT Analysis:** Used to identify the strengths, weaknesses, external opportunities, and threats (SWOT) of an idea.

Example: Based on user feedback, you were able to identify the number-one issue keeping members from renewing their membership is that there aren't enough open exercise machines. During the ideate phase, you gather your team together and brainstorm ideas. Nothing is off the table. Any idea to resolve this issue is worth considering.

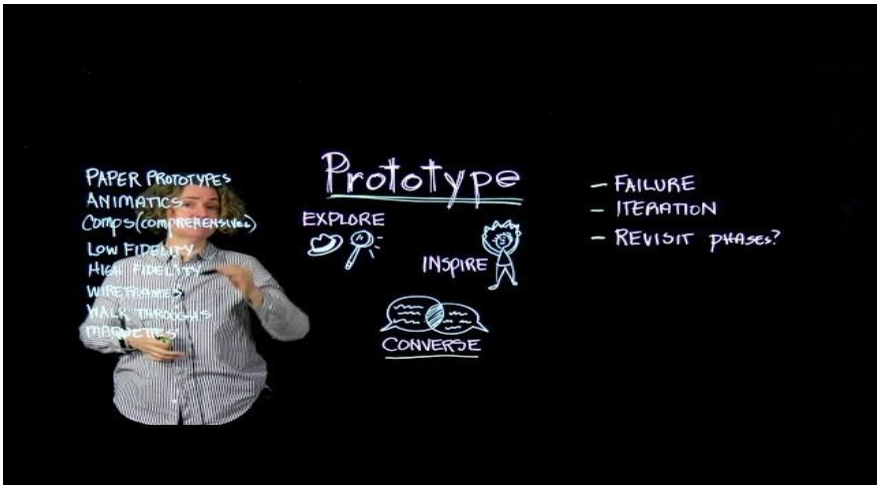
## STAGE 4: PROTOTYPE




During this phase of design thinking, teams will create prototypes of the ideas they generated in the previous stage. Prototypes don't need to be finished products. They are meant to convey a possible solution, not deliver it. Sketches, models, and digital renders are all examples of prototypes: scaled-down versions of the product created during the ideation stage.

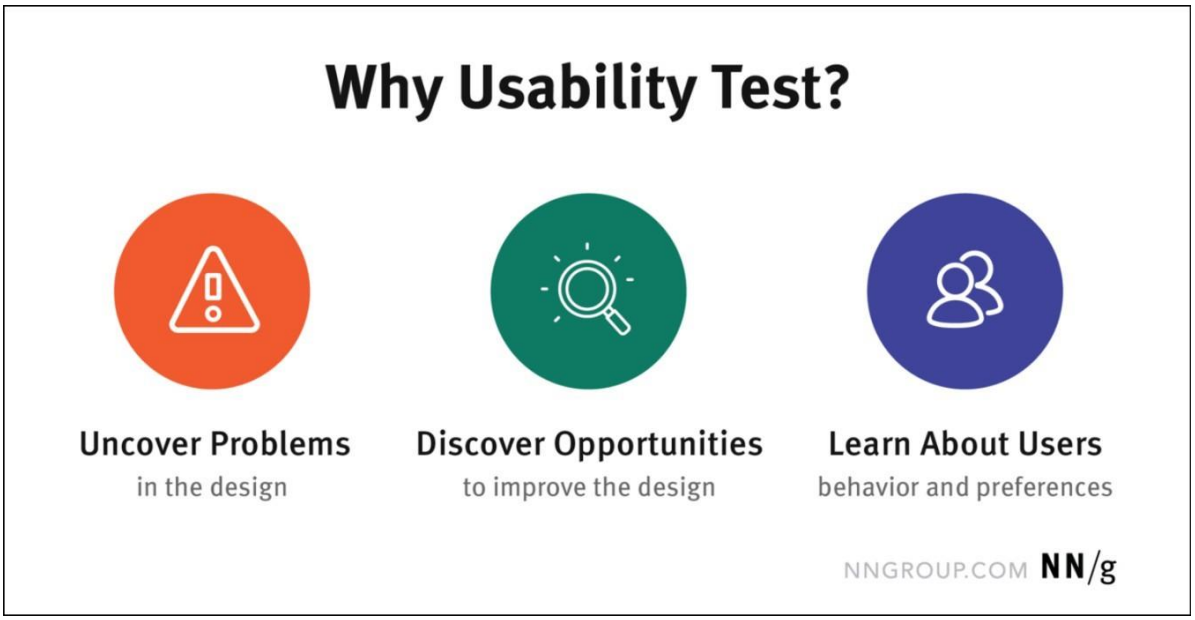
With minimal effort, prototyping can reveal whether the proposed product will work, whether it's technically feasible, and what challenges you will face bringing it to life.
Common tools and ideation techniques include:

- **Wireframes:** Low-fidelity prototype that represents the basic visual layout of an interface or product.
- **Low-Fidelity Prototypes:** These are cheap, quick, relatively simple, and can be used to express broad concepts or ideas. Low-fidelity prototypes require little design skills to produce.
- **High-Fidelity Prototypes:** Realistic designs that look and operate close to the final product.
- **Walk-Through:** A task-specific approach to determine the usability of a prototype.




Examples: Believing that neighbouring pieces of equipment are being used simultaneously by users performing "super sets," your idea is to relocate those machines to opposite sides of the gym. This should prohibit users from occupying multiple machines at once. Your first prototype is a rough sketch of what the new floor layout would be and where the machines would go. Based on feedback from staff members, you prototype it again as many times as necessary.

**STAGE 5: TEST**




The testing phase of the design thinking process involves real users and real user feedback. During this phase, prototypes are given to participants to try out. Design teams observe how participants interact with the prototype and gather feedback about the experience.

Testing reveals what is or isn't working. Don't forget: design thinking is an iterative and non- linear process—that goes for testing, too. Depending on user feedback, changes to the

product might be required. These changes might require you to restart the testing phase or revisit past stages. Feedback from user testing might also inspire new potential solutions or actionable insights.

Commonly used testing tools include:

- **Usability Testing:** A testing tool that gauges the usability of a design with a group of target users.
- **Beta Launch:** Releasing your prototype to a limited pool of users to determine usability, detect bugs, and test whether your product addresses users' needs.

Example: Rearrange the exercise machines and see how customers respond. Does the new arrangement solve the users' problem? Does it create new issues for different users? Solicit feedback from gym members: are they happy with the new arrangement? Based on user feedback, revisit the design thinking stages as necessary.