

## Design Thinking

When you think about innovation, usually the first thing that comes to mind is technology. And, companies like Apple and Google are easily identified as innovative companies. But, the truth is that innovation isn't only for engineers and big tech companies. What makes them able to innovate, both rapidly and profoundly, is their method of innovation. It's called Design Thinking, and it can be applied to any organization or field to solve problems related to products, services, or even internal company strategies. In fact, all great innovators in music, art, science, and business have practiced it, including the world's leading brands. It's origins can be seen as far back as Plato, Parthenon in Greece and the irrigation fields of the Egyptians. Design Thinking is also taught at the world's top universities and has gained in popularity due to successful design thinking programs at Stanford. The good news is that it is simple, easy to implement, and *it works*.

**Design Thinking is a problem-solving methodology** used by designers, such as engineers, to solve complex problems and generate creative solutions. This simple process seeks to understand the user, challenge assumptions, redefine problems and identify alternative strategies and solutions that had not existed before. Design thinking is a process and a set of hands-on approaches, but even more so it is a way of thinking.

**How it works:** Design thinking begins with questioning everything—the assumptions, the true nature of the problem, and the implications. Through questioning and research, the end user is understood and the true problem is identified. Then, ideas are brainstormed, without the constraints of existing solutions. Finally, simple prototypes are developed to test possible outcomes. This rapid prototyping speeds up innovation because we only learn about the quality of our ideas when we test them in the real world.

**What makes design thinking successful?** One of the biggest reasons is that it focuses on the needs of the end user, which most other processes completely miss. It's not just about using good processes, it's about human capital and understanding the context and culture of the stake holders involved.

**Another reason for success is that it encourages openness to failure.** Harvard Business Review states that the benefit of design thinking is that it promotes learning from failure, even though it does not encourage it. It also embraces risk, which is essential to developing better solutions and innovative ideas to problems. Let us face it, most innovative ideas will not go perfect the first time we try them—and in fact most ideas never get implemented due to fear of risk. Design thinking provides a framework that allows you to take risks, learn from any failures, and adapt, leading to long-term success.

**Design thinking is flexible and ongoing.** The steps in the design thinking process we are going to address may appear to unfold one stage to the next, however the truth is that the process is non-linear. For example, more than one stage may be conducted concurrently by different groups within the design team, or the designers may collect information and prototype during the entire

project so as to enable them to bring their ideas to life. Also, results from the testing phase may reveal some insights about users, which in turn may lead to another brainstorming session or the development of new prototypes. The cycle may also need to be repeated several times in order to explore options and narrow down on the best possible solutions.



*The different phases of design thinking are more like modes that contribute to a project, rather than sequential steps.*

1. Empathize: Understanding the needs of and impact on the end user.
2. Define: Re-framing and clarify the problem.
3. Ideate: Openly generate creative ideas in brainstorming sessions.
4. Prototype: Adopting a hands-on approach to rapid prototyping.
5. Test: Develop and implement the identified solution and assess results.