

Design Thinking: Methodology, Toolset, Mindset.

Design Thinking, a methodology.

What is Design Thinking?

Design Thinking is an innovation methodology that can address the process of product, service and process innovation. The name "Design Thinking" is based on the central principle of the methodology: to look at the innovation process as a "designer". The name underscores the idea that nature is the only thing not designed by humans, the rest is designed by us; so if we want to innovate new products or services, we have to think like a designer, like a person who is designing something.

How did this methodology arise?

This methodology emerged towards the end of the 20th century in around the Silicon Valley technology companies, being used by IDEO to develop a wide range of products and services (such as Apple's first computer mouse). Later on, collaboration with the Hasso Plattner Institute established d.schools in Stanford and Potsdam and gradually the methodology became known throughout the world. At present, the most powerful centres for promoting the methodology remain IDEO and HPI.



Figure 1: First mouse prototypes within IDEO Lab, Palo Alto, California
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Tim Brown (IDEO) defines Design Thinking as follows

“Design thinking is a human centered and collaborative approach to solve complex problems”.

This definition speaks of 3 features of this methodology:

- Put the human / user / client at the centre of this methodology
- Collaborative work in a team
- To address complex or ambiguous problems

What makes appropriate this methodology?

This methodology is appropriate whenever we have a product, service, or process that has as a final beneficiary a human being, or humanity as a whole. The main feature of the Design Thinking methodology is that it is a "Human Centered Process". Compared with other innovation methodologies (TRIZ, DEFT, H4X), Design Thinking focuses on the end-user, trying to design the product, the final service according to its wishes. This is one of the fundamental principles of Design Thinking: "Truth" stays with the consumer, with the user, with the client. And we must build on this "Truth".

When is this methodology inappropriate?

Lately, with the spread of the concept of Design Thinking, the emergence of various organizations and societies that promote this methodology, there is a risk that either this methodology can be modified and adapted by losing its essence and content, whether this methodology becomes a panacea universal, being applied to any problems. It is good to be aware that this methodology becomes powerless for non-human-centered innovation processes or where "radical innovation" is desirable, that is, a direction of innovation that cannot even be imagined by the user. In some situations, the right approach is to use certain elements of Design Thinking and to combine them with elements from other innovation methodologies.

What are the Design Thinking stages?

In the sense of the Hasso Plattner Institute, also used by the ICG Integrated Consulting Group, this methodology has 6 stages:

Understand: The innovation team defines the theme of the innovation process and position it in the economic environment. The theme of a Design Thinking process can be extremely diverse, from global impact themes to incremental improvements of a product, service, or process.

Empathise: Through diverse methods and techniques, the innovation team carries out an empathizing process with the end-user, trying to capture his needs, wishes and emotions, and what determines his purchasing or action behaviour.

Define: Starting from the information obtained in the previous empathisation stage, the theme of the innovation process is redefined or decomposed.

Ideate: The innovation team generates a large number of ideas to meet the needs listed in the previous stage. Using different methods or algorithms, the team selects the ideas or trends that will be further developed.

Prototype: Selected ideas are quickly made tangible in prototypes.

Test: Prototypes are tested with end-users and based on their feedback, new prototypes or new ideas or even new end-user empathizing processes are iterated.

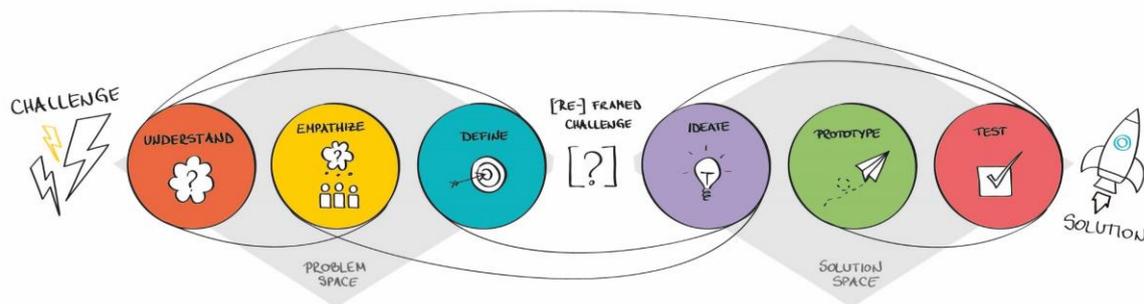


Figure 2: Design Thinking Process (© ICG Integrated Consulting Group)

Design Thinking, a Tool Set.

Over time, both IDEO and Hasso Plattner institutes have developed tools and working templates at each stage of the Design Thinking methodology. These tools are neither mandatory nor exhaustive, but their use increases the productivity of the innovation process and implicitly the chances of getting new products and services at the end of the process.

Instruments can also be beneficial while using Design Thinking methodology, in order to achieve radical or disruptive innovation.

Specifically, tools consist of methods and techniques to capture "Truth" from customers and users, ideas generation techniques, selection of ideas, prototyping methods and testing. For example, within the ICG Integrated Consulting Group, we use a portfolio of over 40 ideas-generating techniques that are used differently, depending on the theme of the innovation process. Similarly, 10 prototyping techniques are at the disposal of the innovation team to make tangible the selected ideas and test them with end-users. Altogether, over 100 tools and methods, along with work templates, are available to support the Design Thinking process.

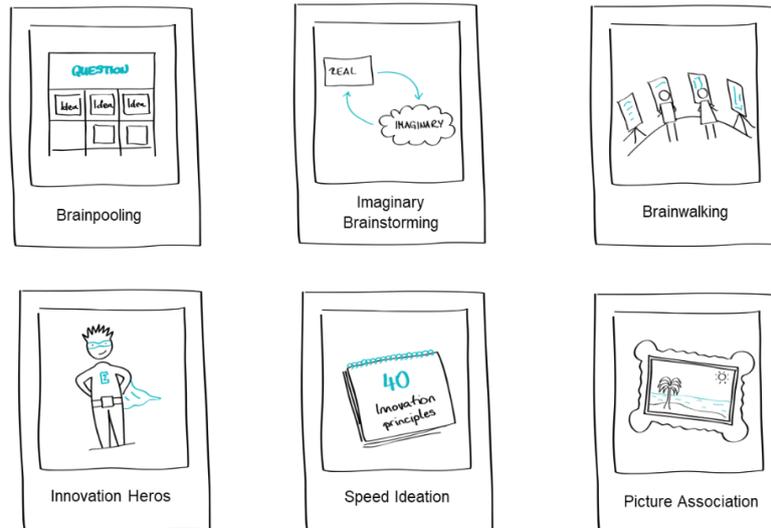


Figure 3: Ideation methods samples (© ICG Integrated Consulting Group)

Design Thinking, a Mindset.

Warning: Using Design Thinking can produce beneficial effects in your organization.

Indeed, as Design Thinking is used by teams in the organization on different themes, there is a mutation in the thinking of these teams, a mutation that occurs gradually within the organization as more and more team embrace its methods and way of thinking.

Concretely, the mutation is manifested by a much more "customer focused" thinking through a prototype availability, testing and iteration, and more generally through greater openness to the concept of New Ways of Working, Design Thinking, Agile, Lean Start -Up - working methods specific to the new ecosystem in which we operate, an ecosystem characterized by interconnectivity and a rapid pace of change.

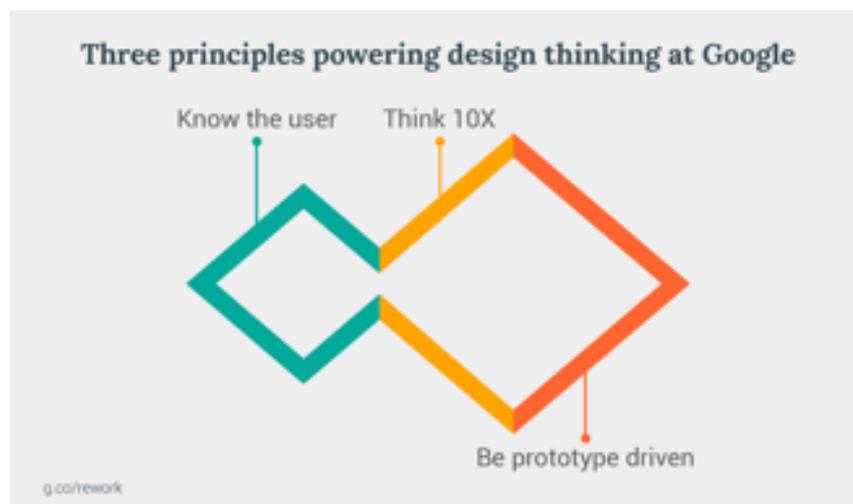


Figure 4: Design Thinking applied at corporate level within Google (© Google reWork)



DesignThinking can also be used to redesign a business or organization, to reinvent it in the context of a new market or new economic situation, or to increase its ability to be "responsive" to changing market needs.

Also, certain steps in Design Thinking can be used in certain processes of organizational innovation or redesign: for example, the Empathise stage can be used to build and start-up a transformation / change management process.

Finally, the mind-set to which we tend to, recurrently using Design Thinking, can be summed up briefly by the phrase:

Focused on Customer: Talk Less, Do More.