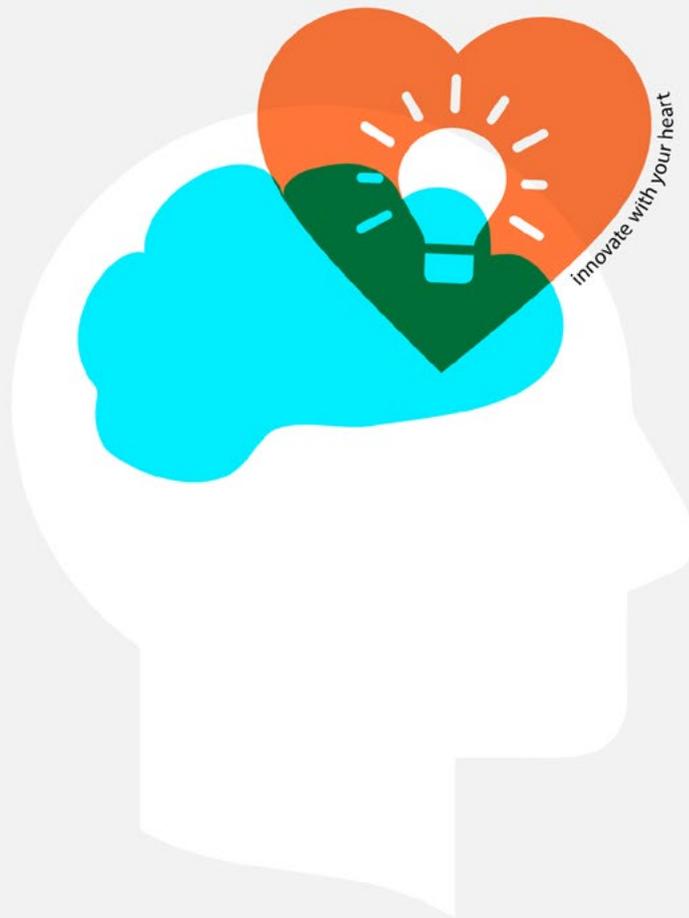


An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge
with the ultimate goal to crack solutions for early intervention!



An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

IDEATE

DEVELOP

About this document

This is a brief introduction to Design Thinking, the mindset and process, why and how it is useful.

The process on the open innovation platform is structured according to the Design Thinking process. Together with this document you will be guided step by step through the design process in your projects. By following the guidelines you will learn the basics of Design Thinking and come up with creative and user-centered solutions to the challenge.

This is a dynamic document which means we will continue adding chapters as we go, and by the end of this journey you will have a complete design thinking guide, yours to keep for future innovation projects!

If you are new to DT: This document will introduce you to the working mode and offer you tools in order to work with this methodology.

If you know it already or are a designer: In this multidisciplinary challenge use the guide to support your team members or to explain to others what you are doing. Either way it can be a resource for you as well.

CONTENT

About this document -
how this document can support you in this project

About Design Thinking -
overview of Design Thinking as mindset and methodology

Understand -
how and why we empathise with users

Define -
How to focus and pinpoint what you trying to solve

Ideate -
How to explore and create as many ideas as possible

Develop -
How to validate and test your ideas with your users

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

IDEATE

DEVELOP

About Design Thinking

Design Thinking has been described in various ways and from various perspectives. In this document we will stick to the way Design Thinking is taught at the D.School Stanford where it is taught since 2005. Design Thinking has its origins – of course – in the Design. Early concepts about the task of design emerged in the 60s, in the 80s significant research investigated the role and tools of the designer in order to understand how Design actually works. In 1987 the term Design Thinking was

used for the first time in literature, describing the work of architectural designers. This background and tools / mindset moved into the approach that was later developed at Stanford University and named Design Thinking. I aimed to enable everyone to be a designer, work with a designers mindset and tools. Here we will deliver a package of such sort – so you can work in a designerly way on this challenge, making the most out of you and your team's expertise.

WHY DESIGN THINKING?

Design Thinking focuses on these principles:

- **User-centered:** Focusing on people (the user) with empathy
- **Constant iteration:** Fail early and fail often to succeed faster
- **Communication:** visual and transparent
- **Experimenting:** Rough and rapid prototyping experiences
- **Collaboration:** Interdisciplinary team process on without hierarchies



An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

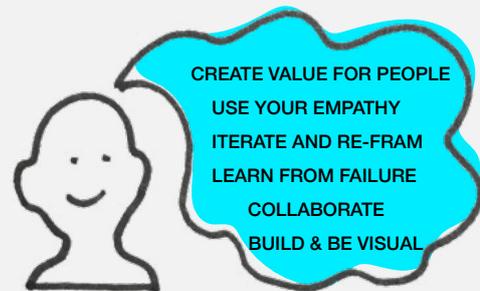
DEFINE

IDEATE

DEVELOP

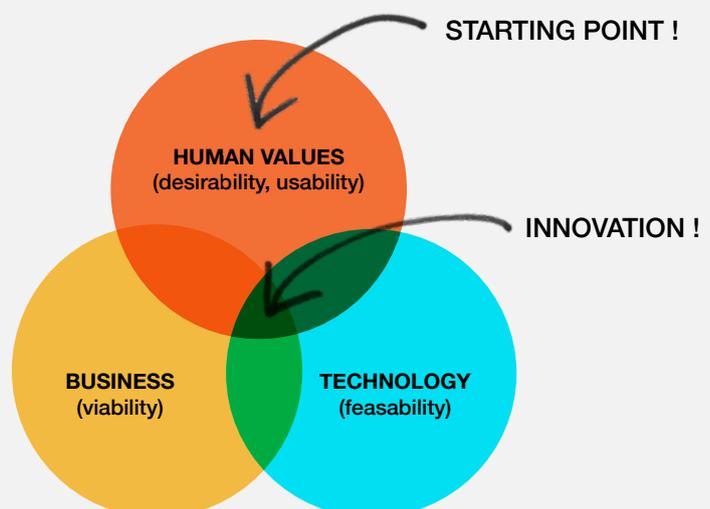
Design Thinking MINDSET

Design Thinking comes with a mindset, which is based on the five previously described principles.



CREATE REAL VALUE FOR PEOPLE

Design Thinking is human-centered. This means as a designer you focus on the people affected by the challenge and users of your solution. It is not only important that a solution is viable and feasible, it also needs to be desired if you want to have true positive impact in a complex world. In fact, the best is to start with understanding humans and their fears, hopes and needs to understand what is really desired. In this way we are able to ensure we are creating value with our solution. We start with the 'front-end' of development in other words. At later stages of development we will shift our focus more towards the technical feasibility and economic viability.



An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

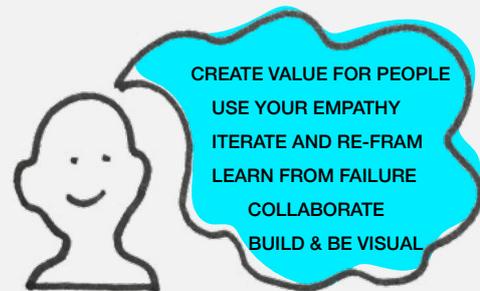
DEFINE

IDEATE

DEVELOP

Design Thinking MINDSET

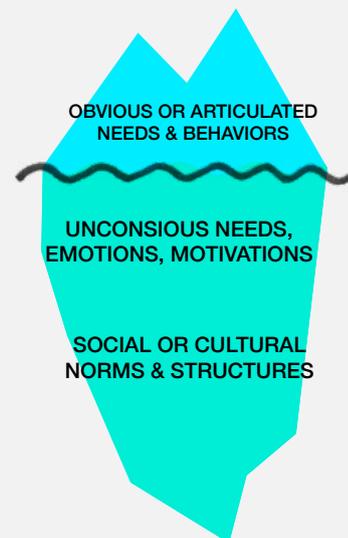
Design Thinking comes with a mindset, which is based on the five previously described principles.



USE YOUR EMPATHY

In Design Thinking we rely on the power of empathy to understand the human we are designing for. Why work with empathy? Business is fast paced and often there is no time and not enough data to quickly draw scientifically reliant conclusions to base our decisions on. But, we have the capacity for empathy, meaning the ability to put ourselves in the shoes of other humans. People often have a hard time voicing their own needs. Needs often lie hidden behind fears and hopes, which themselves often are encoded in words or behaviour. Empathy helps us to uncover and decode what we see and hear to understand the person and her needs. And, we will be better equipped to develop solutions that can fulfill those needs.

By being consciously valuing our ability for empathy and letting it guide us in the innovation process we don't only create better solutions that are truly desired, we also create space for enactment. By immersing into a new context we are challenged to leave behind any prejudice and also enabled to tap into a new sphere of creative possibilities. This is the key to creating real value, and it will also help us to communicate this value to others.



An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

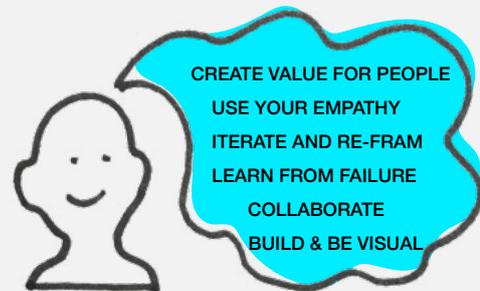
DEFINE

IDEATE

DEVELOP

Design Thinking MINDSET

Design Thinking comes with a mindset, which is based on the five previously described principles.



ITERATE AND RE-FRAME RELENTLESSLY

You might think you know the problem and how to solve it. But, take a step back first. Have you met anybody impacted by the problem you are aiming to solve yet? Are you sure you are solving the right problem? Have you really left the box of your preconceptions creatively with your solution? You will only really know if you immerse into the context of your challenge, meeting your users and co-creating with them. There is so much to learn on the way. You will see that your understanding will develop during the process and you might have to re-frame the challenge/problem again and again during the process. This is something we call iteration. Indeed, a good Design Thinking process lives from experimentation and constant iteration. If you don't get your hands 'dirty' from the start and try out relentlessly to give yourself the chance fail early, you won't succeed in delivering the best solutions. Even though an innovation process using Design Thinking looks linear in the double diamond, it is in real rather moving forward in loops of understanding, defining, ideating and developing.

LEARN FROM FAILURE

"Failure is simply the opportunity to begin again, this time more intelligently" (quote: Henry Ford)

Don't expect to get everything right the first time. As mentioned before iteration is key to a successful Design Thinking process. The best source of insight, to learn more and improve, is to try out together with our users, fail and let them show us why. See feedback as a gift. We can't know everything from the start. Unfortunately, failure is often not seen positively. But, you can be a pioneer by failing gloriously and celebrating it, by embracing and living a new failure culture, where we value that we tried out and learned!

Make sure to have good failure culture in your teams for emotional safety, allowing everyone to experiment and bring out everyone's best creativity.

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

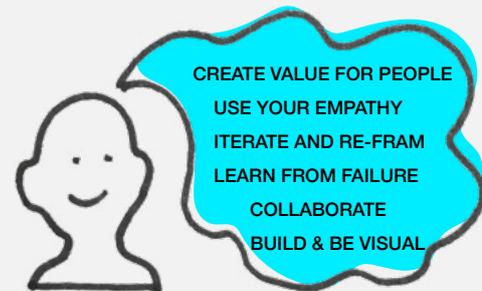
DEFINE

IDEATE

DEVELOP

Design Thinking MINDSET

Design Thinking comes with a mindset, which is based on the five previously described principles.



COLLABORATE

Embracing diversity is an important aspect in human-centered design. With collaboration we mean working together with your users as stated above. But, we also mean collaboration across the borders of cultures and disciplines. In an interdisciplinary team you have different perspectives and knowledge you can draw from. This bares great creative potential and is a valuable resource which is why we encourage it. But, it can also cause tensions and misunderstandings. In order to be at your best, be thoughtful about your differences and similarities and organise your teamwork accordingly.

Make sure everyone is heard and you are working on eye-level. The tools we present in this Design Thinking guide are designed for interdisciplinary teams like you, but don't forget to take time to reflect together on your work. You might for example want to adapt the tools so they work better for you. Another important factor for success is working visually. This means always having a visual representation of the status of your work. The right mindset here is to be prepared to explain quickly and visually what you are currently doing at all times.

BUILD & BE VISUAL

f you want to create value in real-life, you will have to bring your abstractions into real life as early as possible! Make it tangible, whatever the idea and at what stage it is. In Design Thinking we acknowledge the power of creating something tangible, even if it is very simple. The moment you get your hands and body involved in the process, you are opening the doors to another form of creative potential.

Create tangible artefacts or visualizations of your ideas. Bringing your idea to life will reveal much more than mere concept or idea will. You might uncover unsolved crucial questions. You might tap into an aspect of the problem that you had ignored before. Last but not least, the easiest way to make someone understand your idea is but letting the person experience it! You will learn so much more about your work!

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

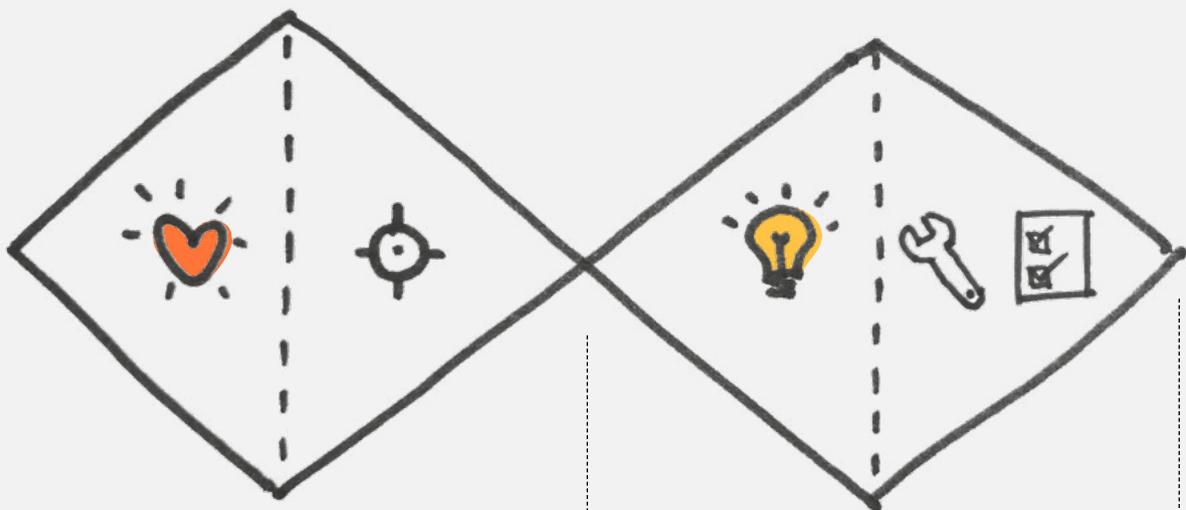
IDEATE

DEVELOP

Design Thinking PROCESS

Design can look different in different contexts, but the processes can be summarized by the double diamond, which was developed by the UK Design Council. The double diamond describes the phases that are inherent for a Design process. They can be described as understand, define, ideate and develop. It also visualizes the mindset a designer adopts in each of these phases. The process might look

linear, and we will be guiding you step by step through each part, but as a practiced designer you might move more fluidly between these phases. The more your project matures, towards the end of this journey, when you start developing your solution further you will iterate, meaning passing through the process several times, revisiting each phase as is necessary and adequate for your project.



UNDERSTAND

This phase is an exploration phase. This is a period of discovery, research and inspiration. By soaking up information and gaining empathy for users, you are truly expansive, tapping into the unknown with open arms and senses. This is why we say this phase is divergent. Important for this part is to be as unbiased as possible. You don't know before where your insights will guide you towards.

DEFINE

After having collected a vast array of information guided by empathy this phase is all about digestion, synthesizing the information into knowledge. This requires the designers to take decisions on what insight, piece of information to act upon. This phase of your process is convergent, meaning you will narrow your focus to one problem and the needs that you want to solve.

IDEATE

This is the fun part. Ideation is all about exploring the solution space to the problem that was defined in the phase before. Different brainstorming methods, rapid prototyping and evaluating solutions are at the heart of this phase. It is again expansive/divergent because it is important to truly explore and experiment, approaching the problem with as much creativity as possible!

DEVELOP

A true exploration will have to be followed by evaluation, validation and testing, and more validation. Iteration is key here. While developing the best and favorite idea to a solution of the challenge and finally prototype the designer goes through several feedback loops and does not forget to let the users needs guide the way.

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

IDEATE

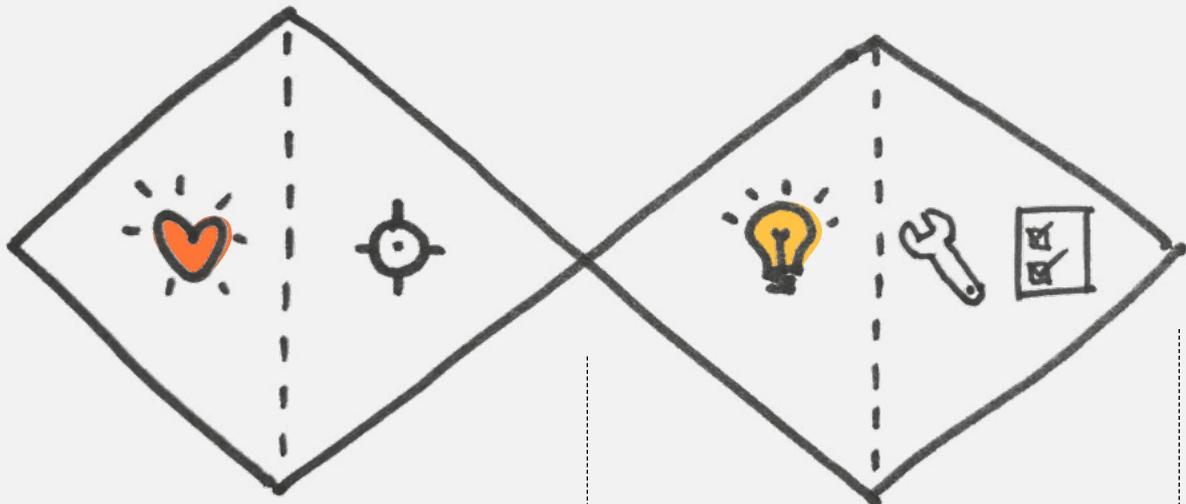
DEVELOP

Design Thinking TOOLS & METHODS

There are several tools you can use for working with DT. In this guidebook we will mention some of them, sorted by the phase they are best used for. There are lots of resources in the internet and descriptions for each method/tool. A good collection can be found in the Bootcamp Bootleg by the D.School Stanford or also on: healthcaredesignthinking.com. They

will be useful during your innovation journey and help you succeed. But please know, these descriptions are not set in stone. You can adapt them for your use and team. Some might work better for you than others. And some might be useful in different stages of your project. Again, experimentation is key here.

EXAMPLE OF TOOLS FOR EACH PHASE:



STAKEHOLDER MAPPING
INTERVIEWS
OBSERVATIONS
WALKING IN THE USERS SHOES ("SERVICE SAFARI")
WHAT - HOW - WHY

STORYTELLING
SATURATE AND CLUSTER
EMPATHY MAP
USER JOURNEY MAP
HOW MIGHT WE

EXAMPLES OF TOOLS TO COME!

EXAMPLES OF TOOLS TO COME!

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

IDEATE

DEVELOP

Understand

OBJECTIVES:

- **Gain insights** about the challenge to guide your further work
- **Get to know** and gain empathy for users
- **Uncover user-needs**, fears and hopes
- **Expand your knowledge** and challenge your perspective
- **Identify work-arounds** - ways in which users deal with a given problem

Now starts a period of discovery, research and inspiration. By soaking up information and gaining empathy for users, you are truly expansive, tapping into the unknown with open arms and senses. This is why we say this phase is divergent. Important for this part is to be as unbiased as possible to be able to stay open for what users tell and show you, which might be surprising if you allow it to. You don't know before where your insights will guide you towards



Important for your work in this phase:

- Assume a curious naive mindset. Your user is the expert!
- Go outside and immerse! Get in contact with people.
- Don't forget to document your research. You can record the interviews but consider that every recording will have to be listened to. Written notes and photos might be enough!
- Be respectful when working with other people and their information! For guidance you can have a look at the Little Book of Design Research Ethics by IDEO. It is short and easy to read!

METHODS & TOOLS (to look up):

Stakeholder Mapping

Interviews and Observations

Walking in the users shoes ("service safari")

What - How - Why

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

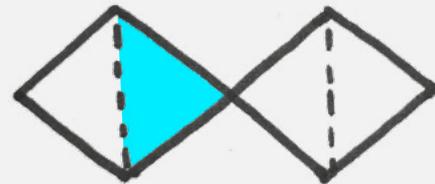
IDEATE

DEVELOP

Define

OBJECTIVES:

- Making sense of the collected data
- Identifying fears, hopes and needs of users
- Focusing and re-framing the challenge according to what you learned from users
- Identifying an underlying problem that you and your team will want to tackle



This phase is all about sharing and digestion, making sense of all the information you gathered. This phase of your process is convergent, meaning you will narrow your focus to one need and problem that you want to solve. This is a critical phase which will define the focus of your further work. It is not about ideas yet, but about the problem! But, how do you decide what insight, piece of information from your empathy work is most relevant to act upon? The empathy you gained for users is an important guide here.

Important for your work in this phase:

- Keep your curious mindset. Your users are still in the center of your work and the ones guiding the process.
- Let the information guide you and not the ideas you might already have. You will have all time to delve in ideation at a later point. Take a brief note of your idea and put it aside for later.
- Describe the problem from your users point of view. For example “Lisa needs to feel she is still in control of her body

in order to trust the doctor” and not “Lisa needs to trust the doctor so that the treatment can work”.

- Try to define a narrow problem space. Even if this might sound counterintuitive, it will help you be creative and explorative in the following ideation phase
- Work visually to be effective. Like this you give everyone in the team the chance to be heard and to follow a clear process of your work. See the whiteboard, or flipchart you are working on as your team brain. If a thought doesn't find its way there, it might be forgotten by the team within a few minutes.

METHODS & TOOLS (to look up):

Storytelling
Saturate and cluster
Empathy map
User journey map
How might we

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

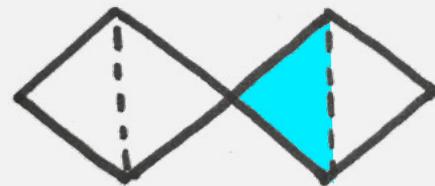
IDEATE

DEVELOP

Ideate

OBJECTIVES:

- **Ask the right questions** so to help you innovate
- **Brainstorm** - explore as many solutions as possible and try to step beyond the obvious solutions
- **Be visual** - make your ideas tangible by drawing or building simple rough prototypes
- **Build on each other's ideas**
- **Evaluate and choose** which ideas to develop further



Ideation is often seen as the most exciting phase in (Design Thinking) process. This is all about sparking off as many ideas as possible, exploring the solution space to the problem that was defined in the previous phase. Different brainstorming methods, visual communication and evaluation of solutions are at the heart of this phase. As the double diamond model indicates, it's back to expansive/divergent thinking again. After having defined what to focus on (e.g. through "How Might We" questions) you let your mind free and truly explore and experiment, approaching the problem or challenge with as much creativity as possible!

At this moment everything is possible, no ideas are bad or silly as they can be the grain for another great and more realistic idea!

In a very first ideation the ideas might be on a pure concept level and will require more work. Making them tangible by drawing or building will help you here. At a later stage of a product/service development process an ideation might only tackle an aspect or feature of the product/service. If you run dry on ideas, try the SCAMPER method or find other fun brainstorming methods in the Stanford Bootcamp Bootleg!

Read more next page! ↘

An introduction to Design Thinking

Supportive document for tackling the Alzheimer's challenge with the ultimate goal to crack solutions for early intervention!

ABOUT THIS DOCUMENT

ABOUT DESIGN THINKING

UNDERSTAND

DEFINE

IDEATE

DEVELOP

Important for your work in this phase:

- Develop “How Might We” (HMW) questions and choose one that helps spark ideas in the best way (wide enough, narrow enough, activating)
- Generate as many ideas as possible, crazy ideas, realistic ideas, simple ideas, the whole range. At this stage everything is possible and there are no limitations that has to be considered. Go for quantity, not quality!
- Set a time limit - this will help you keep a more upbeat pace with more spontaneous thinking (and less consideration of limitations)
- Stay focused on topic letting your HMW question guide you.
- Defer judgment/criticism (“that’s not possible”) and build on each other! Practice “Yes, AND” instead of “No BUT...”
- Be visual - as this will help you think differently and be more communicative with your ideas (picture are more direct). Also, when all ideas are on the wall, you get a better overview.
- One conversation at a time and listen so you can build on each other
- When evaluating and selecting ideas/concepts you can first do a fast voting to check “gut feeling”. You may feel a need to discuss on what criterias you judge your ideas on (realistic vs long shot, richness of possible solutions, wow effect etc.) You decide what you think is relevant. Check out [this page](#) for how to select ideas.

