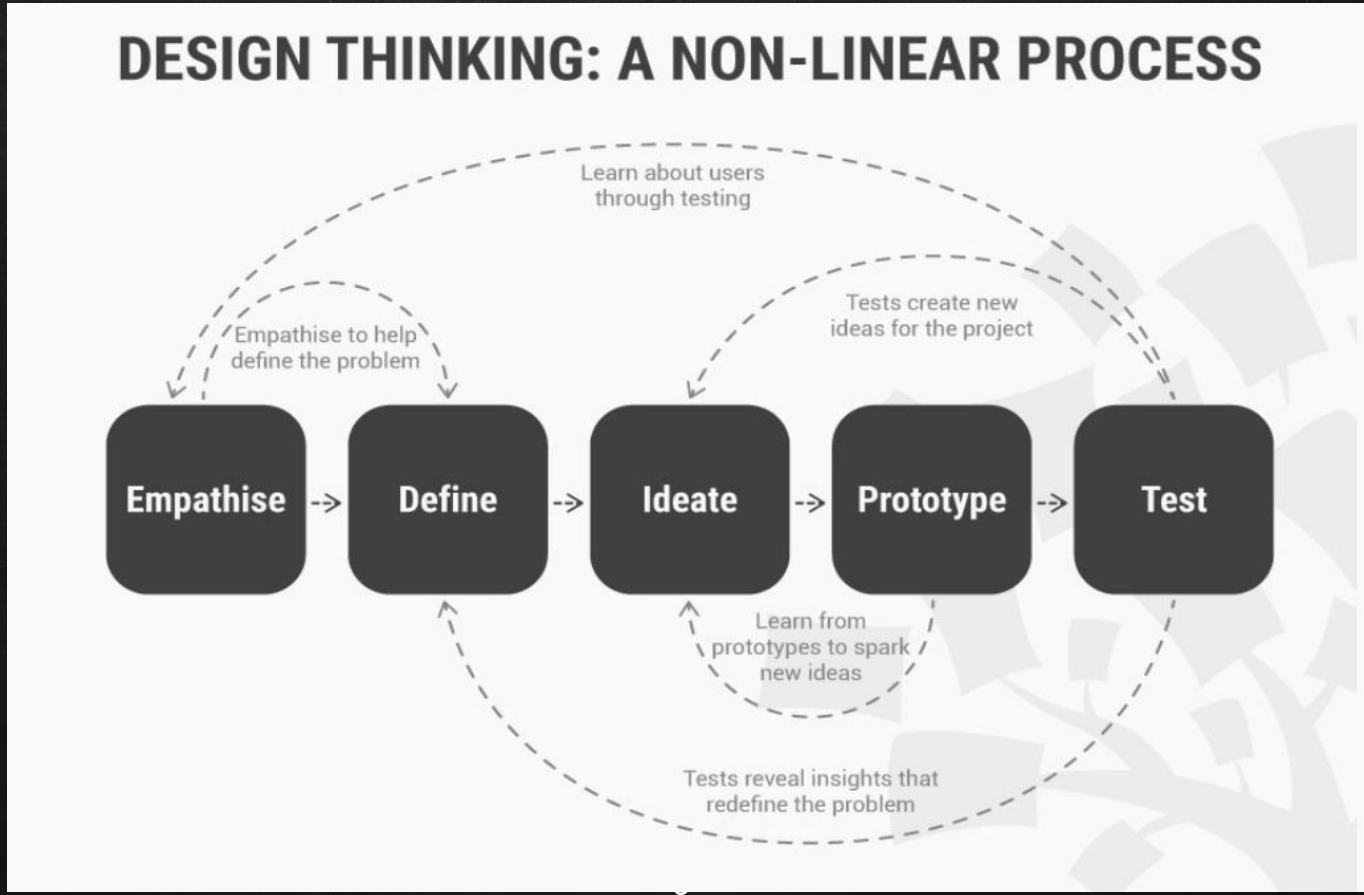
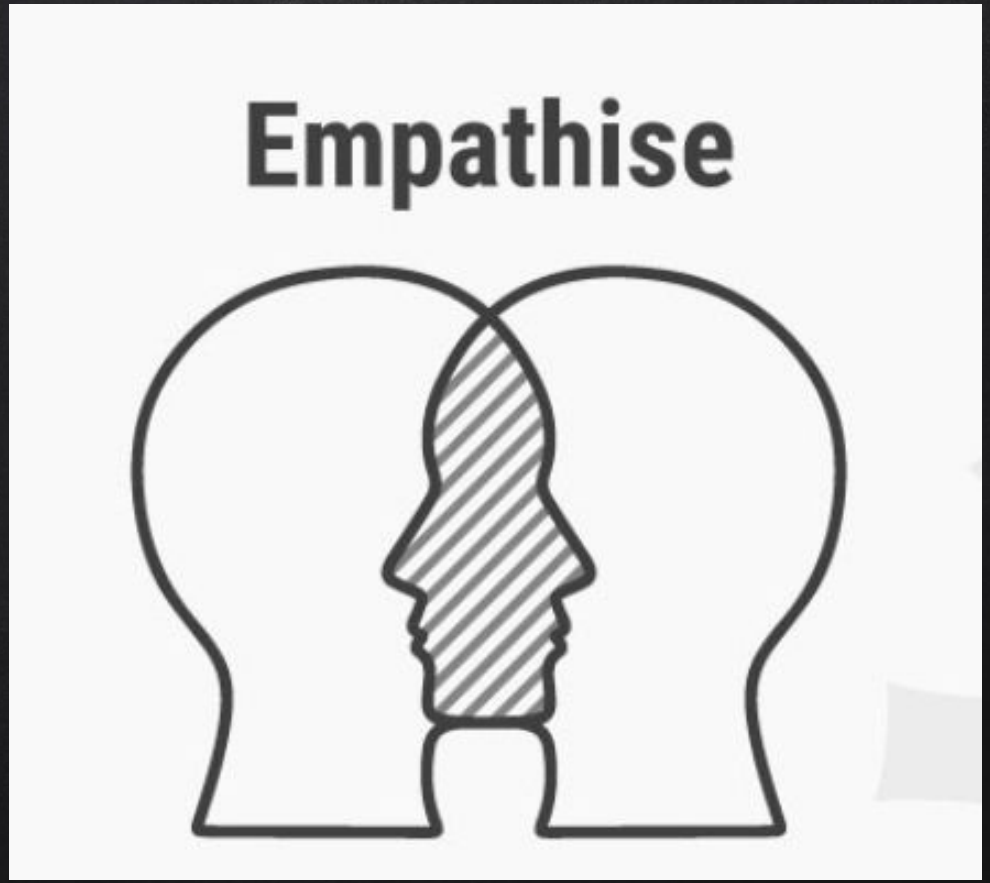
Design thinking

Design thinking is a design methodology that provides a solution based approach to solving problems. It's extremely useful in tackling complex problems that are ill-defined or unknown.

Hasso-Plattner Institute of Design at Stanford (d.school). (1969)




Empathise

EMPATHY

- ✘ Gaining an empathic understanding of the problem we are trying to solve involves consulting experts
- ✘ Observing
- ✘ Engaging
- ✘ Immersing

Empathy allows design thinkers to set aside their own assumptions about the world in order to gain insight into users and their needs

Define

Define (the Problem)

- ✘ Analyse your observations and synthesise them in order to define the core problems that you and your team have identified.

- ✘ Define the problem as a problem statement in a human-centred manner not based on what you want or your company's wishes.

- ✘ Gather great ideas to establish features, functions, and any other elements that will allow them to solve the problems or, at the very least, allow users to resolve issues themselves with the minimum of difficulty.

Ideate

IDEATE

- ✘ Start to think "outside the box" to identify new solutions to the problem statement you've created, and you can start to look for alternative ways of viewing the problem.

- ✘ It is important to get as many ideas or problem solutions as possible at the beginning of the Ideation phase

- ✘ Different methods of gathering ideas: brainstorming, brainwrite,worst possible idea, SCAMPER

Prototype

Prototype

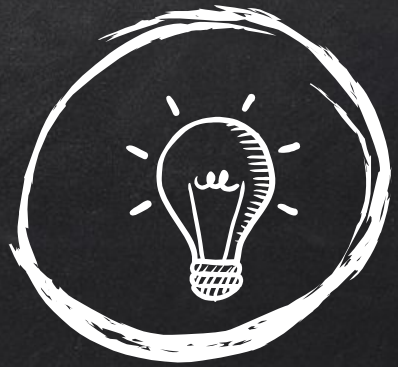
- ✘ An experimental phase
- ✘ The aim is to identify the best possible solution for each of the problems identified during the first three stages.
- ✘ By the end of this stage, designers should have a better idea of the constraints inherent to the product and the problems that are present, and have a clearer view of how real users would behave, think, and feel when interacting with the end product.

Test

Test

- ✘ Results generated during the testing phase are often used to redefine one or more problems and inform the understanding of the users, the conditions of use, how people think, behave, and feel, and to empathise.

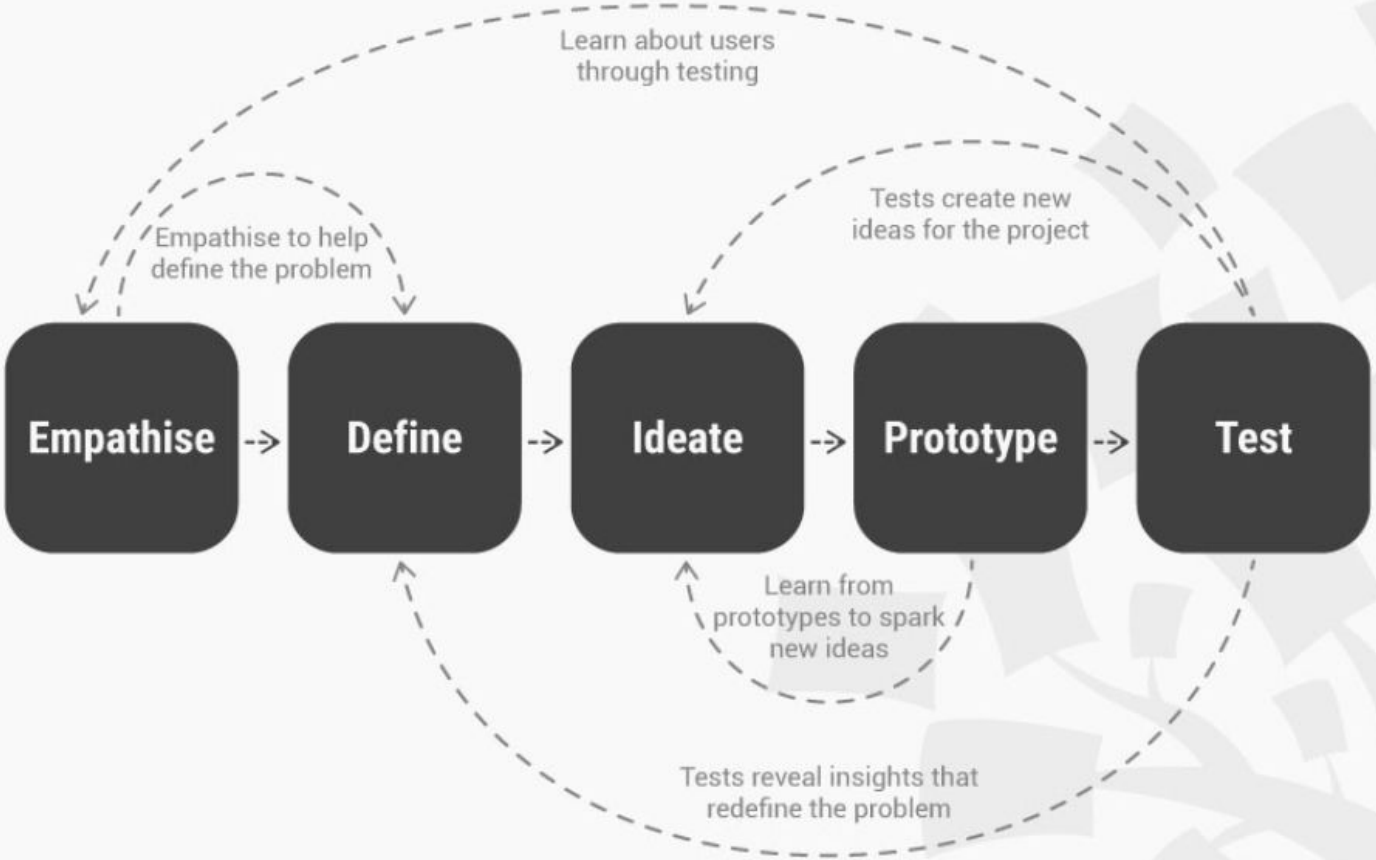
- ✘ Alterations and refinements are made in order to rule out problem solutions and derive as deep an understanding of the product and its users as possible.



Perpetual loop

Knowledge acquired at later stages inform the earlier stages.

DESIGN THINKING: A NON-LINEAR PROCESS

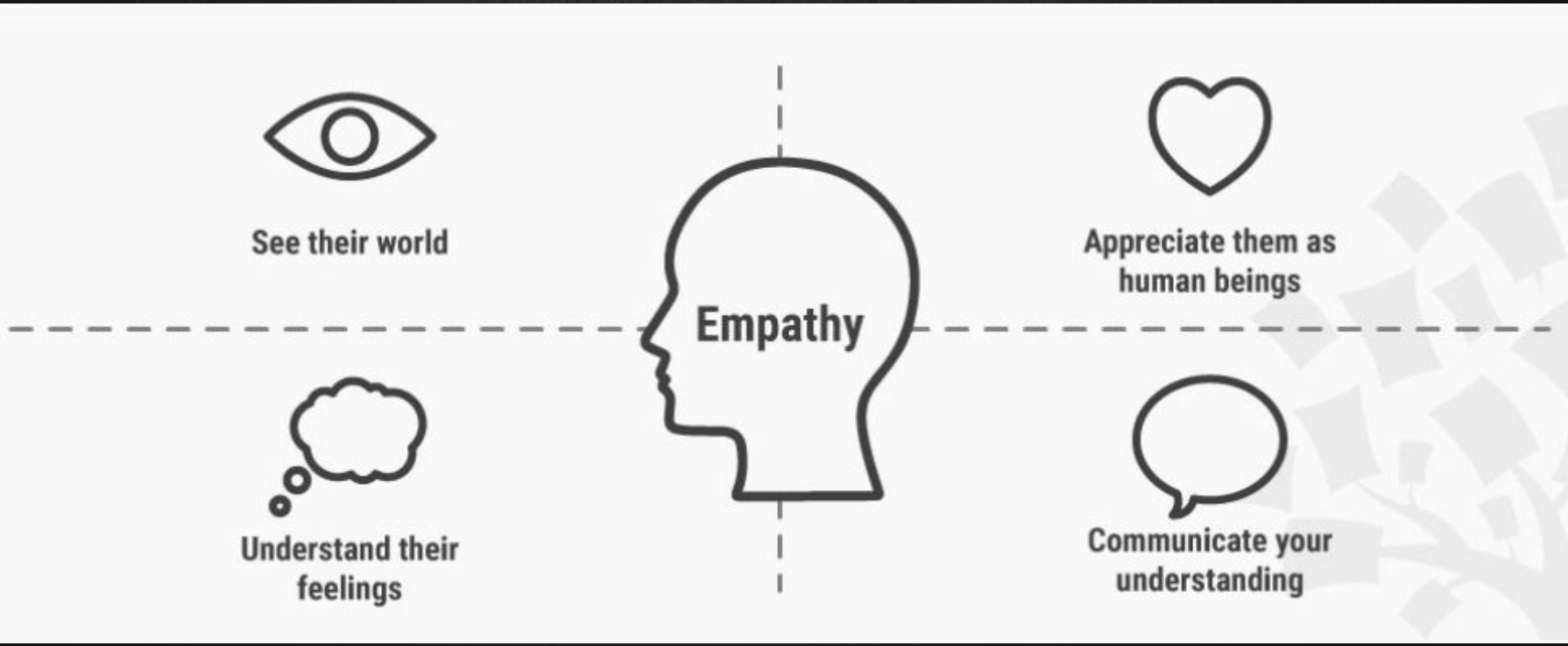


It is important to note that the five stages are not always sequential – they do not have to follow any specific order and they can often occur in parallel and be repeated iteratively

In order to gain the purest and most informative insights for your particular project, these stages might be switched, conducted concurrently and repeated several times in order to expand the solution space, and zero in on the best possible solutions.

EMPATHY

Methods for learning more about people and developing empathy


See their world
Empathy
Appreciate them as human beings
Understand their feelings
Communicate your understanding

Engaging with people directly reveals a tremendous amount about the way they *think* and the *values* they hold. Sometimes these thoughts and values are not obvious to the people who hold them. A deep engagement can surprise both the designer and the designee by the unanticipated insights that are different from what they actually do – are strong indicators of their deeply held beliefs about the way the world is.


ISO
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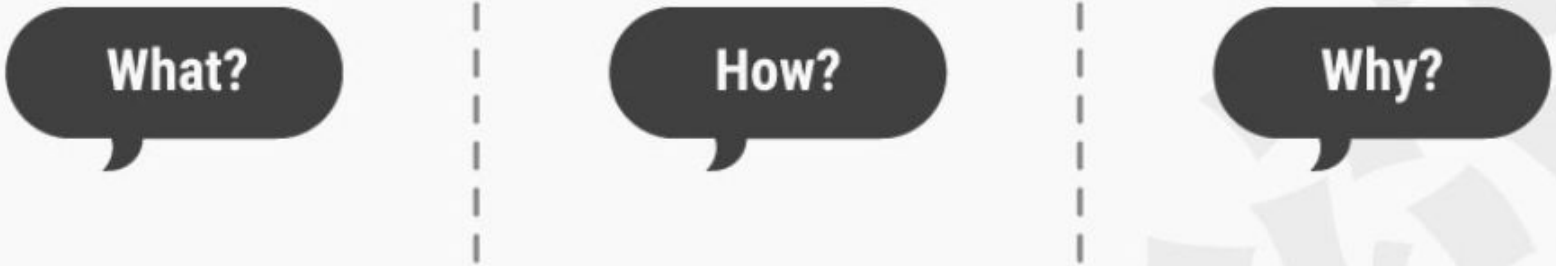
Assuming a beginner's mindset

- ✘ Leave our own assumptions and experiences behind when making observations.
- ✘ Never judge what you observe, but question everything– even if you think you know the answer– and to really listen to what others are saying.

Ask What? How? Why?



Ask what how why

- ✘ We can move from concrete observations that are free from assumptions to more abstract motivations driving the actions we have observed.
- ✘ “What?” – used to record the details of what we’ve observed
- ✘ “How?” – used to analyse how the person is doing what they are doing
- ✘ “Why” – used to make educated guesses regarding the person’s motivations and emotions. We test these with users later.

Photo and Video User-based Studies

- ✘ Help you uncover needs that people have which they may or may not be aware of.
- ✘ It can help guide your innovation efforts, identify the right end users to design for, and discover emotions that guide behaviors.


WAR
child


Safaricom
Twaweza
est 4G+ Network
Kenya's Best

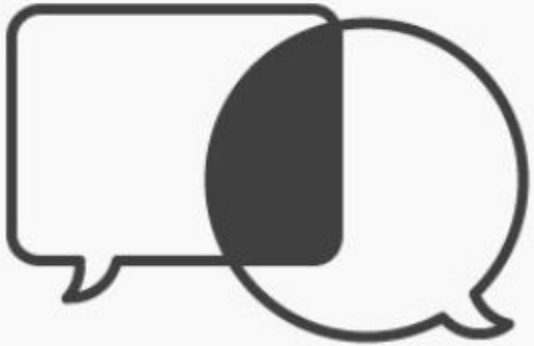
Personal Photo and Video Journals

- ✘ *Advantage*: you don't interfere or disturb the users with your personal presence
- ✘ *Disadvantage*: they will adapt and change their normal behavior slightly as they know that you'll watch the video or see the photo journal later
- ✘ *Disadvantage*: Users are normally not expert photographers or videographers so some of the content might not be usable.

"We use this method to go beyond an in-person Interview to better understand a person's context, the people who surround them, community dynamics, and the journey through how they use a product or service. Photo Journals can help create a foundation for richer discussion as they prime an individual before an interview which means they start thinking about the subject a few days in advance."

– IDEO, Designkit.org, Photojournal

Conducting Interviews with Empathy

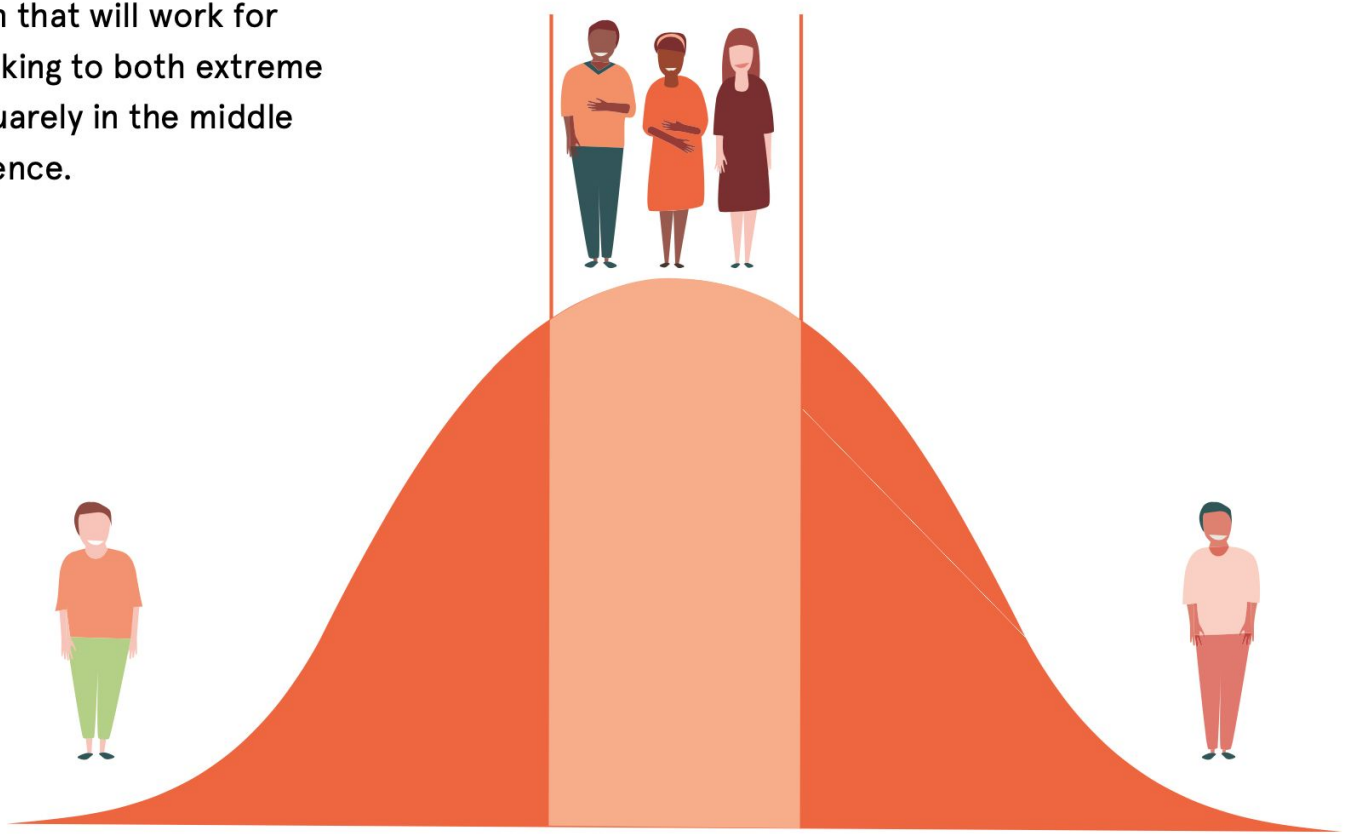


INTERVIEWS

- ✘ Talking directly to the people you're designing for may be the best way to understand needs, hopes, desires and goals
- ✘ Offer the personal intimacy and directness of other observation methods, while allowing the design team to target specific areas of information to direct the Design Thinking process.
- ✘ Structured, questions are generated beforehand with a theme and flow that is smooth.

Extremes and Mainstreams

Designing a solution that will work for everyone means talking to both extreme users and those squarely in the middle of your target audience.



Engaging with extreme users

- ✘ You will find that the problems, needs and methods of solving problems become magnified
- ✘ You must identify the extremes of your potential user base; then, you should engage with this group to establish their feelings, thoughts and behaviors, and then look at the needs you might find in all users.
- ✘ If you can manage to please an extreme user, you should certainly be able to keep your main body of users happy. However, the purpose of engaging with extreme users is NOT to develop solutions for those users, but to *sieve out problems that mainstream users might have trouble voicing*; but needs do overlap for the most part

Sharing Inspiring Stories

Sharing inspiring stories

- ✘ Each person in a design team will collect different pieces of information, have different thoughts, and come up with different solutions.
- ✘ By sharing the stories that each member has observed, the team can get up to speed on progress, draw meaning from the stories, and capture interesting details of the observation work.

Analogous inspiration

- ✘ Using analogies can help the design team to develop new insights. By comparing one domain with another, we as designers can conjure different solutions that would not necessarily come to mind when working within the constraints of one discipline

- ✘ Examples: airlines, hospitals, race track(formula 1). Do these industries have something in common?

Body storming

- ✘ Bodystorming is the act of physically experiencing a situation in order to immerse oneself fully in the users' environment.

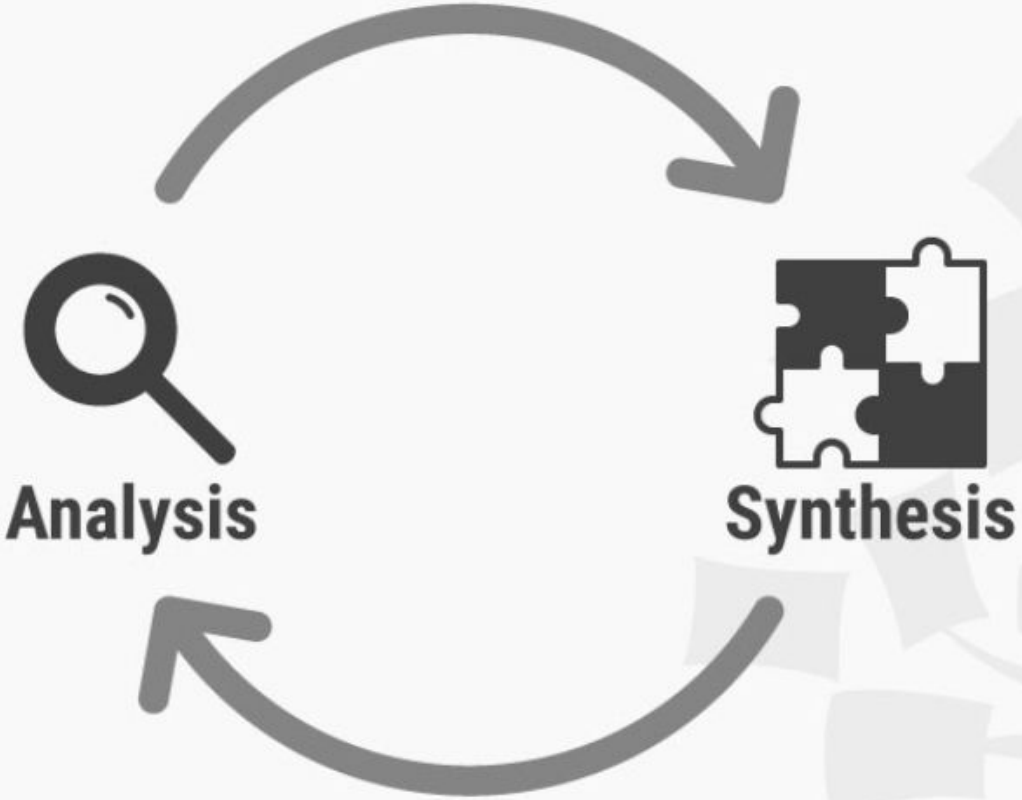
- ✘ Puts the team in the users' shoes, thereby boosting the feelings of empathy we need as designers in order to come up with the most fitting solutions. Having that 'real-life' experience will serve as a reference point for later in the process, enabling us to stop, stand back and ask ourselves: "Remember when we tried being the user? How would this new thing fit in with that?"


RECAP
QUESTIONS?

Define (the problem)

A great definition of your problem statement will guide you and your team's work and kick start the ideation process in the right direction

Analysis and Synthesis



Analysis and synthesis

- ✘ Are both equally important and each plays an essential role in the process of creating options and making choices.
- ✘ Analysis: breaking down complex concepts and problems into smaller, easier-to-understand constituents
- ✘ Synthesis: creatively piecing the puzzle together to form whole ideas

Note: Happens throughout the process. Design thinkers often analyse a situation before synthesising new insights, and then analyse their synthesised findings once more to create more detailed syntheses.

What makes a good problem statement?

- ✗ **Human-Centered:** frame your problem statement according to specific users, their needs and the insights that your team has gained in the Empathise phase.

- ✗ **Broad enough for Creative freedom**: should not be too focused on one method of implementing the solution. There should be room to explore.

- ✗ **Narrow enough to be manageable**: should have enough constraints to make the project manageable. If the goal is too wide, it will be too much work.

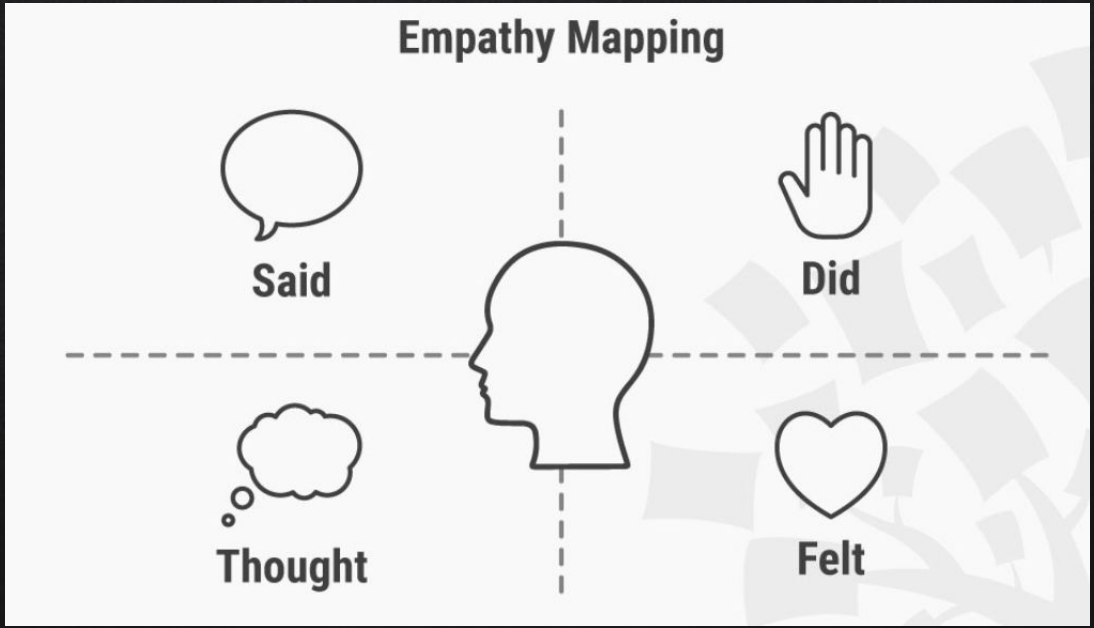
Note: It is helpful to have the statement contain action verbs such as "create", "define", "adapt", to make the problem statement action-oriented.

Define (the problem)

How to define a problem statement

Space saturate and group

Empathy mapping



Point of view problem statement

A Point Of view (POV) is a meaningful and actionable problem statement, which will allow you to ideate in a goal-oriented manner. Your POV captures your design vision by defining the RIGHT challenge to address in the ideation sessions.

You articulate a POV by combining your knowledge about the user you are designing for, his or her needs and the insights which you've come to know in your research or Empathise mode. Your POV should be an actionable problem statement that will drive the rest of your design work.

You articulate a POV by combining these three elements – user, need, and insight.

[User . . . (descriptive)] needs [need . . . (verb)] because [insight. . . (compelling)]

Why-how laddering

During the Define stage designers seek to define the problem, and will generally ask why. Designers will use why to progress to the top of the so-called Why-How Ladder where the ultimate aim is to find out how you can solve one or more problems.

"As a general rule, asking 'why' yields more abstract statements and asking 'how' yields specific statements. Often times abstract statements are more meaningful but not as directly actionable, and the opposite is true of more specific statements."
– d.school, Method Card, Why-How Laddering

"How might we" questions

How Might We (HMW) questions are questions that have the potential to spark ideation sessions such as brainstorms. They should be broad enough for a wide range of solutions, but narrow enough that specific solutions can be created for them. "How Might We" questions should be based on the observations you've gathered in the Empathise stage of the Design Thinking process.

The HMW questions open up to Ideation sessions where you explore ideas, which can help you solve your design challenge in an innovative way.

Ideation

Using creativity and innovation to develop solutions

Ideation will help you

- ✘ Ask the right questions and innovate.
- ✘ Step beyond the obvious solutions and therefore increase the innovation potential of your solution.
- ✘ Bring together perspectives and strengths of team members.
- ✘ Uncover unexpected areas of innovation.
- ✘ Create volume and variety in your innovation options.
- ✘ Get obvious solutions out of your heads, and drive your team beyond them.

Rules for brainstorming

- ✘ Set a time limit
- ✘ Start with the problem statement or design challenge and remain focused
- ✘ Defer judgment or criticism, even non-verbal
- ✘ Encourage weird, wacky and wild ideas
- ✘ Aim for quantity
- ✘ Build on each other's ideas
- ✘ Be visual
- ✘ Have one conversation at a time

THE MINDSETS

1. Creative Confidence
2. Empathy
3. Embrace Ambiguity
4. Make It
5. Learn From Failure
6. Iterate, Iterate, Iterate
7. Optimism

designkit.org/mindsets


RECAP
QUESTIONS?