



DESIGN THINKING



“Design thinking is a human-centred and collaborative approach to problem solving, using a designed mindset to solve complex problems”

**Tim Brown - Designer, CEO and
President of IDEO**





design thinking

#1

USER,
MY LOVE 

Design thinking is user-centred



“

User-centred design means understanding what your users need, how they think, and how they behave - and incorporating that understanding into every aspect of your process.

”

Jesse James Garrett - Information Architect

Design thinking is a design process in which designers focus on users and their needs at every stage.

The users are involved throughout the design process using a variety of research and design techniques, to create useful and accessible products that meet their needs.





design thinking

#2

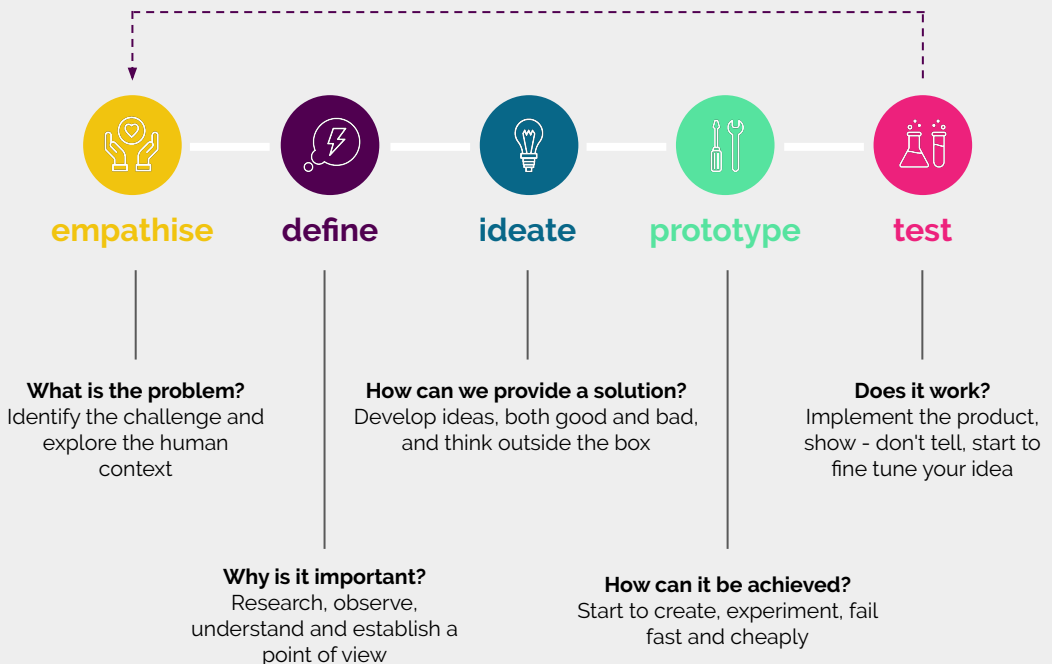
**THE RIGHT
METHOD**

Design thinking is a methodology



Design thinking consists of a succession of 5 chronological steps.

After the test phase, a new iterative loop can be launched.





design thinking

#3

**THE RIGHT
MINDSET**

Design thinking is a culture



A culture that breaks down into in four dimensions



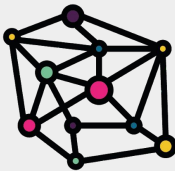
User-centric

Acute empathy
Human needs
Motivations



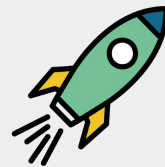
Optimistic

Forward thinking
Organised uncertainty
Open mind



Collaborative

Multidisciplinary teams
Multiple insights
Creative support



Experimental

Permission to take risks
Fast prototyping
Constant iteration



design thinking

#4

**WE BELIEVE IN
THE PROCESS**

Design thinking has a history



Though popularised by Tim Brown in the 2000s, we can trace the roots of design thinking back to the 1960s.

It developed in Silicon Valley, theorised and practised by key figures in the world of design and promulgated by famous universities such as Stanford...

The 1960s

Creation of the first human-centred product design programme at Stanford



Rolf
Faste

The 1980s

Rolf Faste develops the design thinking method
Peter Rowe publishes a book entitled "Design Thinking" at MIT press



Peter
Rowe

1991

Creation of Ideo, the first design agency to use design thinking methods to achieve innovation

d. 2005

Creation of d.school, at the heart of Stanford University



Tom
& David
Kelley

2000-2010

Popularisation of design thinking, publication of books, academic content, conferences, media coverage, and more.



design thinking

#5

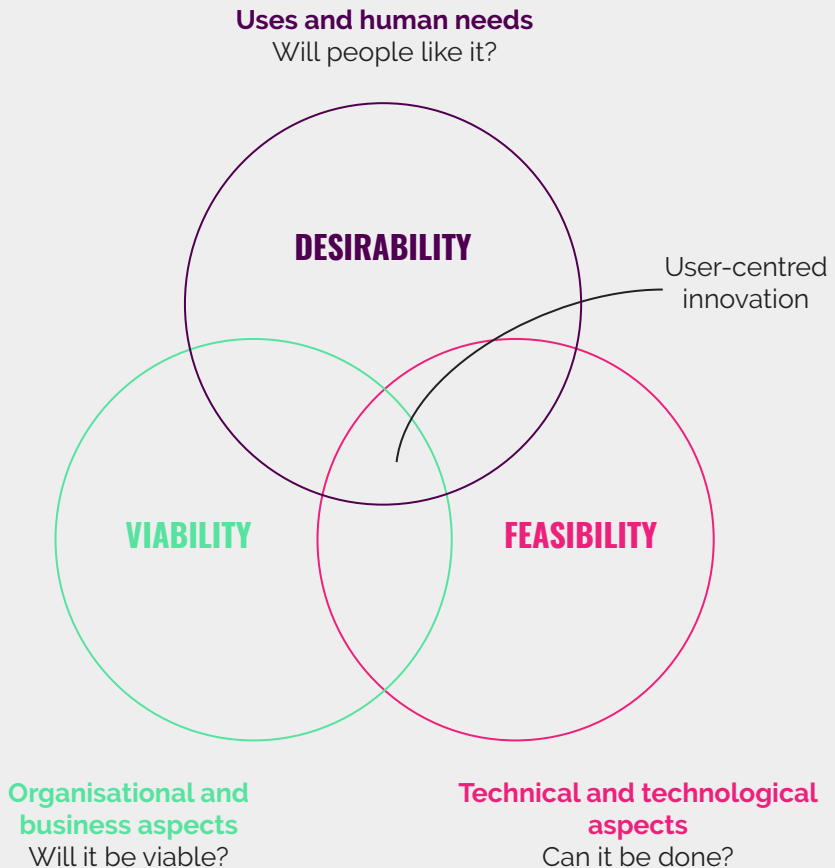
**D.THINKING =
360° VIEW**

Design thinking helps to achieve various goals



To innovate, design thinking draws on three conditions of success:

- **desirability**, the goal of which is to respond in a relevant and engaging way to a given target
- **feasibility**, which requires thinking of physically feasible solutions in line with the resources available
- **viability**, focusing on the economic profitability for the company





empathy

#6

**IN THEIR
SHOES...**

Understand your user

Empathy is the basis of a human-centred design process.

To show empathy, you must:

Observe

View users and their behaviour in their real lives

Engage

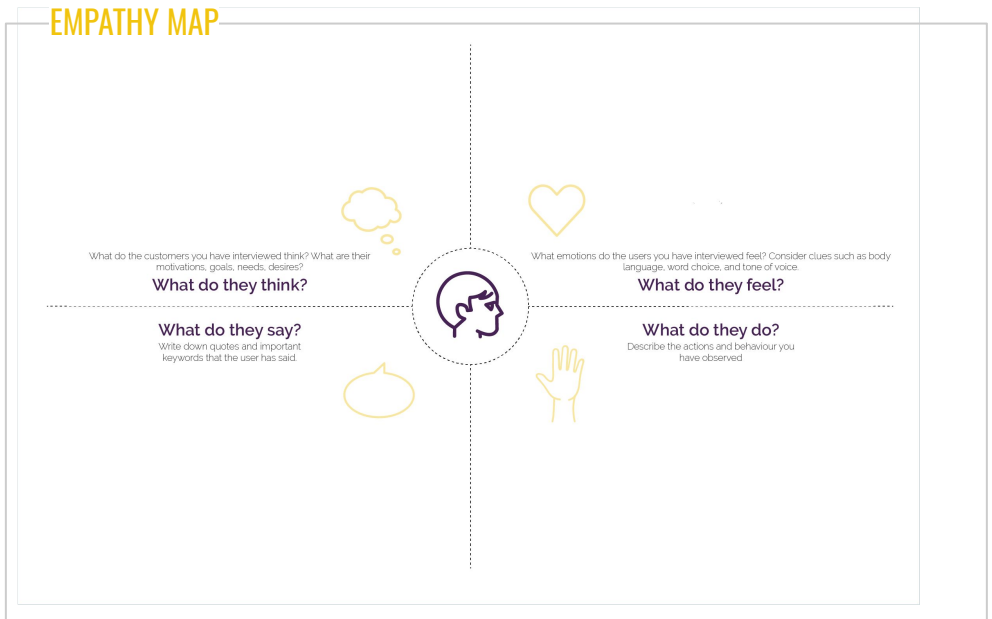
Interview users during scheduled and short "intercept" encounters

Immerse

Experience what your user is experiencing.



EMPATHY MAP





empathy

#7

**BEYOND THE
SUPERFICIAL**

The 5 whys



This simple research method will help you gain insight into the deeper motivations and assumptions that underlie a person's behaviour.

The 5 Whys technique is used to get to the heart of a person's motivations and thoughts. By giving the interviewee the time, space and conditions to look at things more deeply, you will end up identifying key ideas. The results lead to essential answers to complex problems. It can be an excellent method to use to address the root causes of a problem from a human and emotional perspective.

HOW?

1. Start by asking a fairly broad question about the habits or behaviour of your interviewee participant, then ask "why" in response to their answer five times in a row.
2. Keep in mind to always open the dialogue by asking open-ended questions.
You can vary the way you formulate your "why". For example: "For what reason..." or "What drives you to...", etc.
3. Adopt a "funnel" approach: the questions you ask are not aimed at opening the field of possibilities, but to continue to specify and inspect in depth. So rather than "Is there another reason why...", try "And, on this point, could you clarify why...?".
4. Write down what you hear, paying particular attention to moments when you feel you are making progress towards a deeper understanding. Remember that you may not reach the essence of the problem until the fourth or fifth "Why".



empathy

#8

**OBSERVING,
A SKILL IN ITS
OWN RIGHT**

Learn to observe



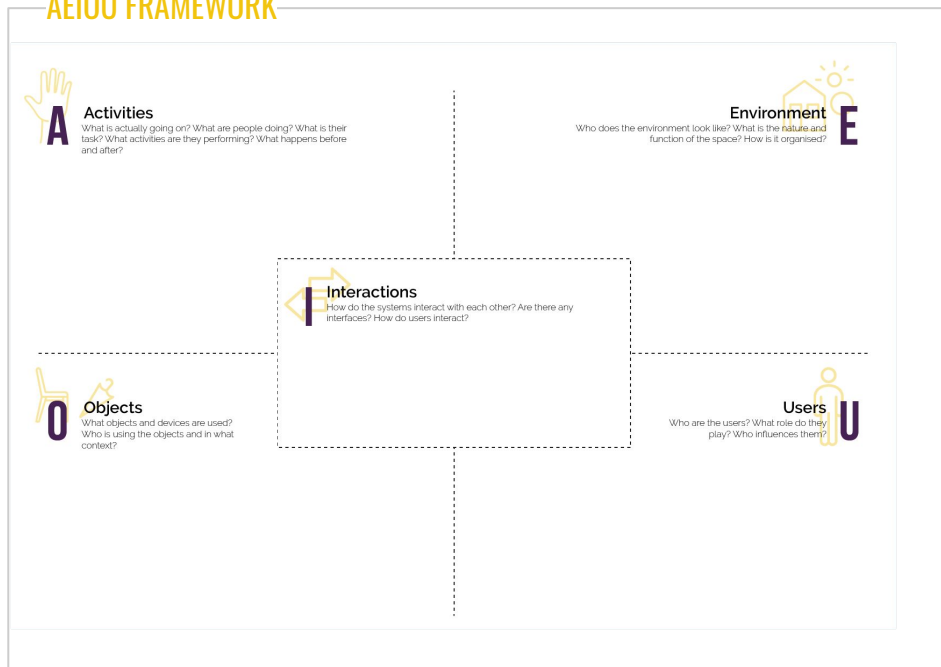
Observation is crucial to empathy, it allows you to detect behaviour that the user is not able to verbalise.

To add to the insights gained from the interviews, observation is used to achieve a more detailed understanding of behaviour that the user can not formulate. The simplest technique is to go to a site where the desired target is present, blend into the background and record their actions.

The important thing here is to document the user's attitudes, the way they use and interact with the product/service/experience when they are faced with it in a real-life situation.

The AEIOU framework is a research framework used to list and categorise the useful points to observe.

AEIOU FRAMEWORK





empathy

#9

**WHO FOR?
WHY?**

Define your audience

Consider the broad spectrum of people who will be touched by your design solution.

Before you dig into your in-context research (once you know your audience), it's critical to know who you're designing for. You're bound to learn more once you're in the field, but having an idea of your target audience's needs, contexts, and history will help ensure that you start your research by asking smart questions. And don't limit your thinking just to the people you're designing for. You may need to consider governments, NGOs, other businesses, or competitors. If you do not know your target yet, you can complete this form at the end of the empathy phase.

HOW?

1 With your team, write down the people or groups that are directly involved in or reached by your challenge. Write all the groups down on Post-its and put them on a wall so you can visualise your audience. Focus on their motivations.

2 Choose a target and fill out a user profile sheet

USER PROFILE	
Name	
Description <small>Who are they? What are their characteristics (age group, place or type of residence, family status, hobbies, social environment, etc.)?</small>	
Values <small>What main things are important to this user? What task does the product/service help carry out? What are their motivations?...</small>	
User journey <small>How, where and by whom is the product/service used? What happens before and after use?...</small>	
Pain <small>How are the current products/services meeting the customers' needs?</small>	Gain <small>What does the customer not like about the current product/service? What are their wishes?</small>



define

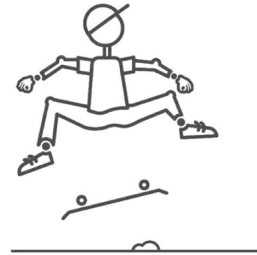
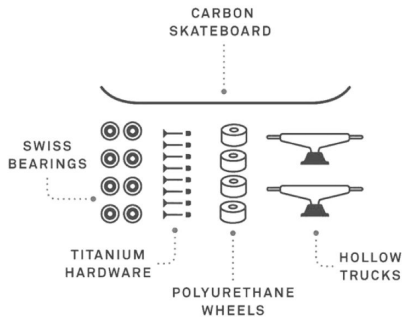
#10

**WHAT'S YOUR
PROBLEM?**

Know how to address the right problem

Even though customers buy this...

...they really want this.



Based on a deep understanding of your users, your goal is to come up with a definition of the problem to be solved.

This problem statement or "point of view" should guide you, focusing on specific users, and the insights and needs you uncovered during the empathy phase.

More than simply defining the problem to work on, your problem statement should be based on the discoveries made during your empathy work.

“

People don't want to buy a quarter-inch drill, they want a quarter-inch hole

Theodore Levitt - Economist, Harvard Professor

”

Rather than concentrating on the act of purchase and its purpose, we focus the user's approach on the expected result and the proposed solution.



define

#11

**SPELLING
IT OUT**

Formulate your problem statement



Every problem is an opportunity for design. By taking a "How might we..." approach to your challenge, you are on the right road to finding an innovative solution!

Having unpacked the lessons from the empathy phase, formulate your problem statement in the form of a question, beginning with "How might we...":
State the action you want to take and address your audience and the goal they want to achieve.

"PROBLEM STATEMENT" FRAMEWORK

HOW MIGHT WE

] action verb
or direction
that you want
to implement

.....

] unit of measure
on which you
want to have an
action

FOR/BY

] the audience you
want to address

WHO WANT

] result expected
by the target audience

E.g. **How might we** save time for large families **looking** for product information in hypermarkets?



ideate

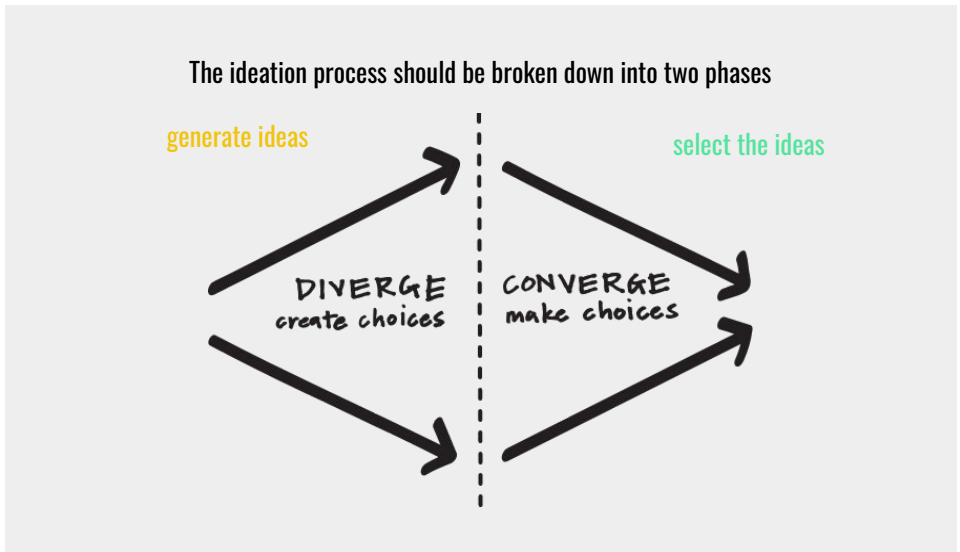
#12

**IDEAS
APLENTY!**

2 distinct phases



Ideate is the mode of your design process in which you aim to generate radical design alternatives. It involves imagining a field of possibilities, "going wide" in terms of concepts and outcomes for the stated need, rather than focusing on a solution: "flaring" vs. "focus".



The ideation process requires an open-minded and non-judgemental approach.

It requires collective thinking that is optimistic, bold and open to others. You must be able to step beyond the obviousness of ideas. Judgement is banned, as is an expert approach (too normative). You should accept everyone's ideas and build on them: "no" is forbidden and instead of "Yes, but", try to use "Yes, and".

The idea-selection phase involves a critical approach, only after generating a sufficient amount of ideas.

And finally you call on the rational part of your brain: among the choices generated in the previous phase, you evaluate the possibilities and choose the best options, based on criteria that you deem relevant (impact of the solution, profitability, attractiveness, innovativeness, etc.).



ideate

#13

A CREATIVE MELTING POT

A multidisciplinary team



Brainstorming is a great way to come up with a lot of ideas that you would not be able to generate by just sitting down with a pen and paper. The goal is to leverage the collective thinking of the group. One of the rules of brainstorming is to build on the contributions of others to create original ideas.

Brainstorming is used to tap into a broad body of knowledge and creativity. Over the course of your project, you should do them with the widest range of profiles possible to gather a variety of points of view: not only with your design team, but also with outsiders (partners, the people you're designing for, creative contributors, etc.).

HOW?

With the project team

Because these are the people are the most familiar with the lessons learned in the empathy phase, and who may also have other data (market, competition, etc.)

For example

For a toothbrush project, this could be...

your project team

With people concerned by the topic

Who will bring a fresh pair of eyes, and approach the subject from a different angle

dentists, manufacturers from the cosmetics industry, ergonomists, wellness professionals, etc.

With creative contributors

Who may be closely or loosely connected to the problem at hand, they will have the ability to step back from the topic and separate ideas

artists, magicians, futurologists, actors, writers, etc.

With potential users

Who are the people specifically affected, and who have strong links to the topic in question

"fanatic" users who pay close attention to their health or take special care of themselves



ideate

#14

**NOT FEELING
INSPIRED?**

Seek inspiration



When preparing a brainstorm, inspiration is key to stimulating creativity.

Rather than starting from scratch, it can be useful interesting to introduce external triggers, such as images, to help brainstorm participants to think differently and make new connections.

Surprising connections are especially useful when your group is stuck trying to generate new ideas or find solutions.

Here are some ways to provide inspiration and spark ideas in a brainstorming session

HOW?

- * Present a **benchmark** of innovative cases or trends in use.
Such cases will be all the more inspiring if they are based on similar issues, rather than taking place in the same industry/sector.
- * Use a **virtual consultant**: address the problem by putting yourself in the shoes of a well-known personality: "How would I solve the problem if I were...".
- * Imagine a solution in **another universe** (in another country, on Mars, in ancient Greece, in the world of Harry Potter, etc.).
- * Use a set of **stimuli** that is completely decorrelated from the subject. These can be **visual** (picture game) or **sensory** (put your hand in a bag of seeds or feathers, for example). This will shift the group's thinking.
- * Solve the problem using **super powers** (flying, mind-reading, teleportation, ultra speed, etc.).
- * Create the **worst case scenario**: start by imagining the worst case scenario related to the experience, then reverse your ideas.
- * **1+1 = 3**, mix up your own ideas: pick two ideas at random, make a new one out of them and try again...



ideate

#15

**A GOOD
BRAINSTORM**

Facilitating brainstorm



To keep your group energised and the ideas flowing, a brainstorm session should be structured and managed using a set of rules.

HOW?

1. Work with post-its and marker pens. Each idea is written on a post-it and then stuck on a whiteboard or a paper on the wall, so that everyone can see.
2. State the problem and give the rules (below), each participant responds individually at first. You can set a tight time frame to start (8 min for 8 ideas, for example).
3. Spark lots of ideas by inspiring participants (see #14).
4. Select the ideas you want to develop by voting (you can use coloured stickers that correspond to your chosen criteria).
5. Enhance your idea by filling out a concept card (what is it, what is it for?).

A FEW RULES

Defer judgement

You never know where a good idea is going to come from. The key is make everyone feel like they can say the idea on their mind and allow others to build on it.

Encourage wild ideas

Wild ideas can often give rise to creative leaps. In thinking about ideas that are wacky or out there we tend to think about what we really want without the constraints of technology or materials.

Build on the ideas of others

Being positive and building on the ideas of others takes some skill. In conversation, we try to use “and” instead of “but”.

Stay focused on the topic.

Try to keep the discussion on target, otherwise you can diverge beyond the scope of what you're trying to design for.

One conversation at a time

Your team is far more likely to build on an idea and make a creative leap if everyone is paying full attention to whoever is sharing a new idea.

Be visual

In live brainstorms we write down on Post-its and then put them on a wall. Nothing gets an idea across faster than drawing it.

Quantity over quality

Aim for as many new ideas as possible. In a good session, up to 100 ideas are generated in 60 minutes. Crank the ideas out quickly and build on the best ones.



prototype

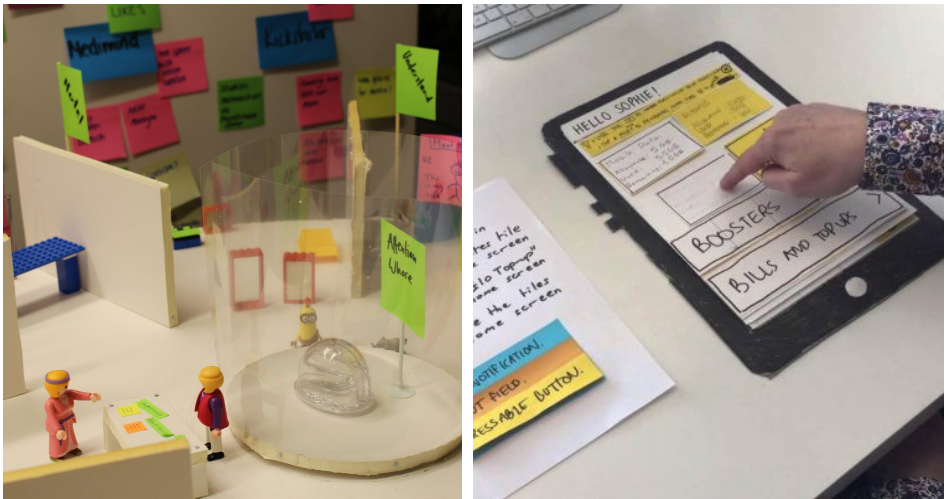
#16

GETTING YOUR HANDS DIRTY

Make it visual and go for volume



Rapid Prototyping is an incredibly effective way to make ideas tangible, to learn through making, and to quickly get key feedback from the people you're designing for.



In prototyping, particularly in early stages, you build to think. That is, you reverse the usual way of working. Usually, you think of an idea then build it. Here, you reverse this way of working and use building as a tool to ideate.

By moving from an abstract idea to a tangible product, you are forced to think of a concrete solution. This is why you mustn't hesitate to make it visual and to reproduce the idea in volume.

At this stage, the prototypes are only intended to convey an idea, not to be perfect.



prototype

#17

~~TELL~~

SHOW

Prototype to test



In addition to helping you fine-tune your idea, the prototype will be your way of presenting your concept to your users and collecting their critical opinions.

Your idea will have many testable aspects. So be clear about what you need to learn from the prototype and the aspects or components that will give you the answers you need. Start with low resolution prototyping. Create simple prototypes not only to save time, but also to focus tests on the most critical aspects. At this point, you should be asking yourself lots of questions about how your idea works. It's the best way to start answering them.

HOW?

1 Start building.
Even if you aren't sure what you're doing, the act of picking up some materials will be enough to get you going

2 Build with the user in mind.
What do you hope to test with the user? What sorts of behaviour do you expect? Answering these questions will help focus your prototyping and help you receive meaningful feedback in the testing phase.

3 Focus your efforts on the things that make your concept stand out.
The prototype should reflect strong messages to be easily understandable by users who are unfamiliar with your concept. The rest of the prototype should be as basic as possible.

4 List the points to test.
You will be able to understand the feelings of the users with regard to these points and challenge your thinking on these.



test

#18

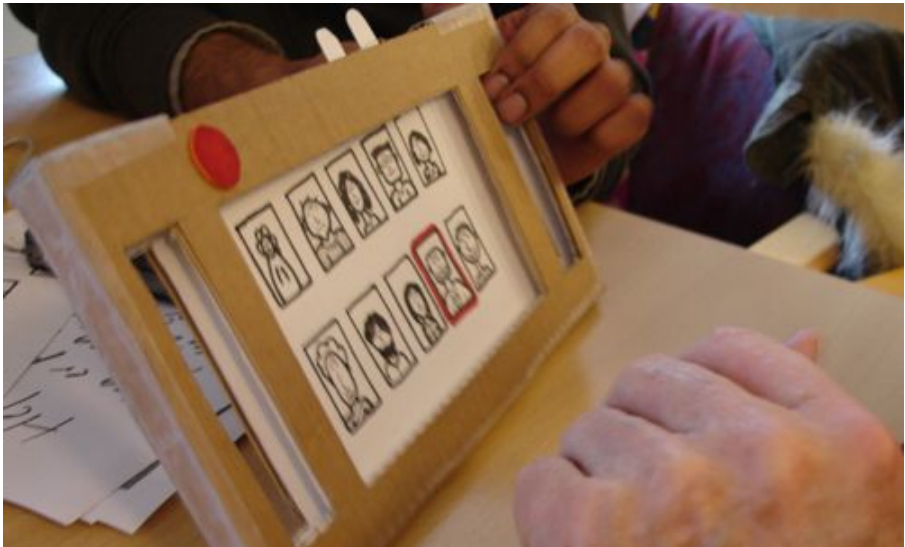
**"IT'S GOOD"
IS POINTLESS**

Test = challenge

Test ≠ validate



Testing is the chance to get feedback on your solutions, refine solutions to make them better, and continue to learn about your users. The test mode is an iterative mode in which you place your low-resolution artefacts in the appropriate context of the user's life.



The key is this: prototype as if you know you're right, but test as if you know you're wrong.

Too often, the tendency to want to "validate" a prototype can distract us from what we're really interested in: the defects of the solution. It translates into our approach and the way the concept is explained to users,

The feedback collected can be:

- positive: in this case, we don't make any changes to the aspect(s)
- negative: in this case, the aspect(s) are re-worked to meet the needs of the users.



test

#19

IN THE WINGS

Prepare your test



Obtaining a genuine user reaction is complex, and all the conditions must be prepared upstream to get the best result.

Before going to see users, you need to prepare your presentation: prepare the points you want to test, choose the target and the context that will give you the best chance of getting meaningful feedback. If the prototype is a scenario, think about how to find the right people (which users are affected by your problem) and put them in the right frame of mind to obtain authentic reactions.

HOW?

1. Prepare your questionnaire. This will allow you to address any areas of doubt and the key topics addressed by your solution.
2. You also need to think about the context and testing scenario you will create to get a meaningful reaction from the user. Test in the context that your solution would actually be used (or simulate the important parts of that context). Some key issues will only emerge in this context.
3. Organise your team: an interviewer is in charge of presenting the concept (in the simplest possible way) and asking the questions, other participants can play a role if needed, and can also be observers. On-the-spot reactions need to be watched by someone focusing on them, or *at least*, must be recorded (photos, videos, audio recording, etc.) to be used after the event.



test

#20

IN FRONT OF THE USER

Gather feedback



Share what you have done with the people you are designing for and see what they think.

Asking for feedback on your ideas and prototypes helps keep the people you are designing for at the heart of your project. It's also one of the most direct ways to design something that these same people will adopt. If the goal of a prototype is to test an idea, collecting feedback from potential users is what gets things moving.

HOW?

1. Let your user experience the prototype.
Show, don't tell. Put your prototype in the user's hands (or your user in the prototype) and give just the minimum context so they understand what to do. Present your concept in the same way for each interview, to collect feedback on the same basis. Don't explain your thinking or reasoning for your prototype.
2. Have them talk through their experience.
For example, when appropriate, as the host, ask "Tell me what you are thinking as you are doing this". »
3. Actively observe.
Watch how they use (and misuse!) what you have given them. Don't immediately "correct" what your user tester is doing.
4. Follow up with questions.
This is important; often this is the most valuable part of testing.
"Show me why this would [not] work for you." »
"Can you tell me more about how this made you feel?" »
"WHY?" Answer questions with questions (i.e. "well, what do you think that button does?"). »).



CONTACT US

Ze Twelfth Player
34 Rue d'Athènes - LILLE
www.ztp.team

EMMANUEL EMERY-DUFOUG
+33.6.11.83.21.01
emmanuel@ztp.team

FANNIE DESPREZ-CURELY
+33.6.65.19.41.41
fannie@ztp.team