

Design Thinking for Mobile Solutions

03.12.2019 / Goethe University Frankfurt / Carsten Hentrich & Michael Pachmajer

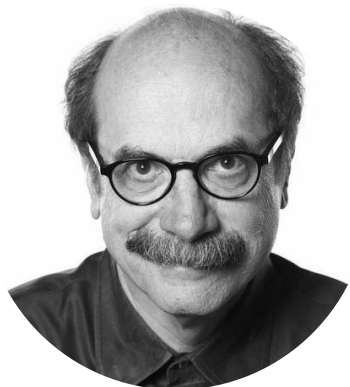
What is
Design Thinking?



Design Thinking is a discipline that uses the **Designer's** sensibility and **methods** to match **people's needs** with what is **technologically feasible** and what a **viable business strategy** can convert into **customer value** and market opportunity.

Tim Brown (IDEO)

Design Thinking is not a new innovation. It has a history of nearly 30 years



IDEO

1991



d. 

2005



HPI

2007



Design Thinking has an increasing relevance for corporate businesses

“Design thinking is an essential tool for simplifying and humanizing. It can’t be extra; it needs to be a core competence.”

Harvard Business Review. Design Thinking becomes of age. September 2015.



Being closer to the customer



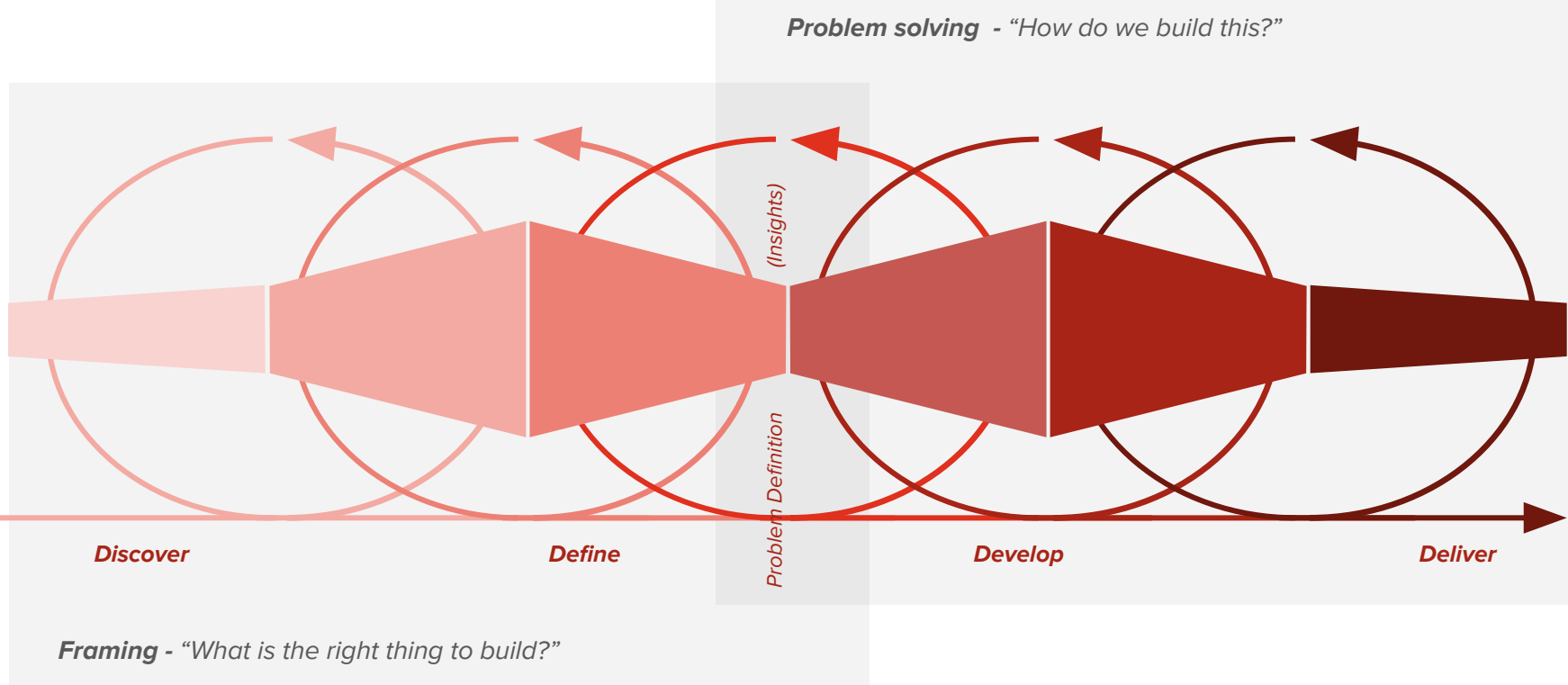
Being faster and more agile in new product & service development



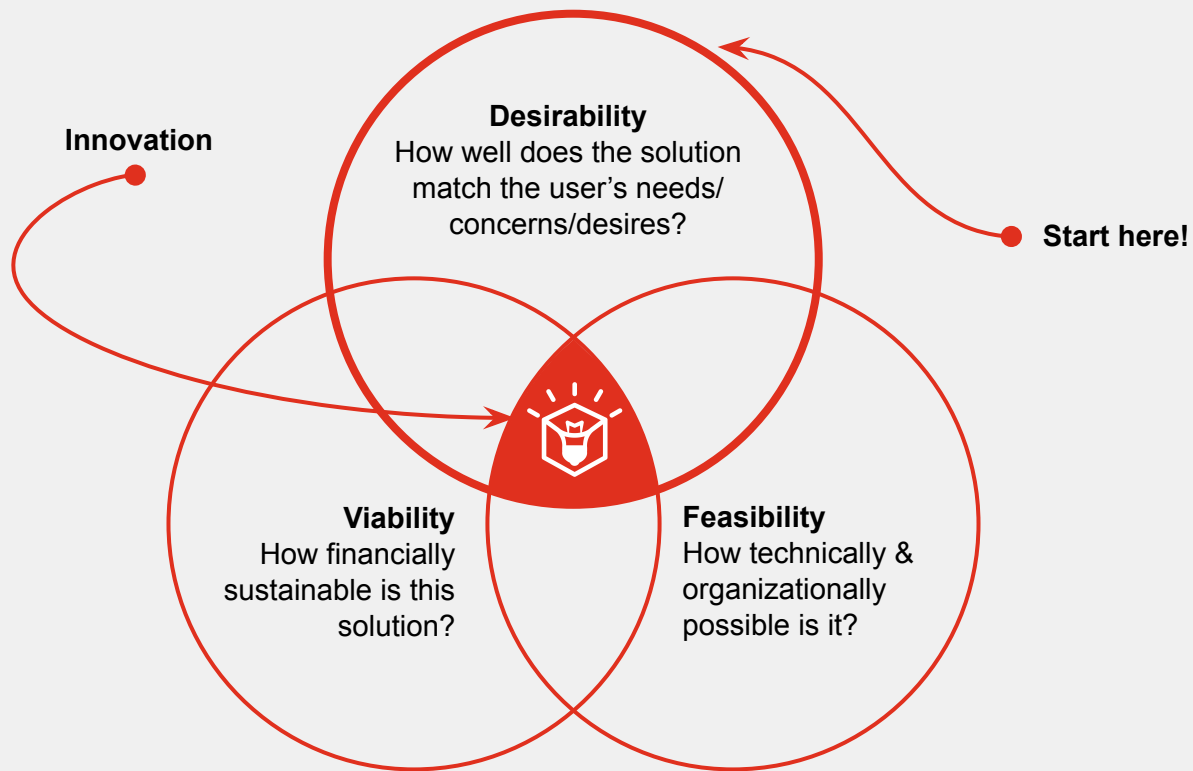
Selling highly relevant products & services



The Design Thinking process can be divided into four phases, each with iteration loops



Design Thinking
considers
three lenses to create
innovations.



Key benefits for companies using Design Thinking



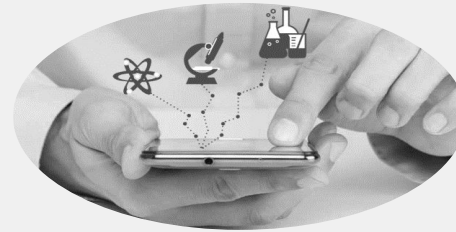
Fast Decision-Making



Interdisciplinary Teams



Relentless Innovation



End-to-End Ownership

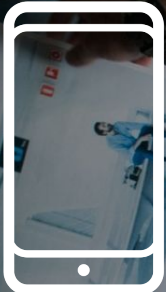


Entrepreneurial/
Start-Up Spirit

In an increasingly digital world characterized by constant changes in markets, businesses and customers, product and service innovation must be fast and agile.

Design Thinking can enable this.

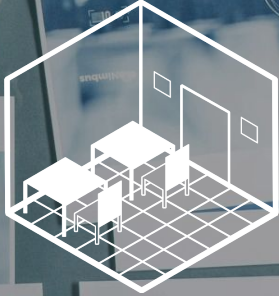
Design Thinking can be used in many areas of application



**Digital Products
& Service**




Processes



Spaces



**Organizations
(New Work)**



Instead of just telling you about ***design thinking***, we want to immediately have you ***jump right in*** and ***experience*** it for yourself.

We are going to do a ***design project*** for about the next hour.

Ready? Let's go!

Your mission: Design a digital wallet that is addressing the spending behavior of the millennials.

Start by gaining empathy.

1. Interview

8 min. (2 sessions x 4 min. each)

Notes from your first interview

Switch roles & repeat Interview



2. Dig deeper

6 min. (2 sessions x 3 min. each)

Notes from your second interview

Switch roles & repeat Interview





The most important part of designing for someone is to **gain empathy** for that person.

Try to dig for **stories, feelings, and emotions**.

Ask 'WHY?' often



Observe & Understand

Description

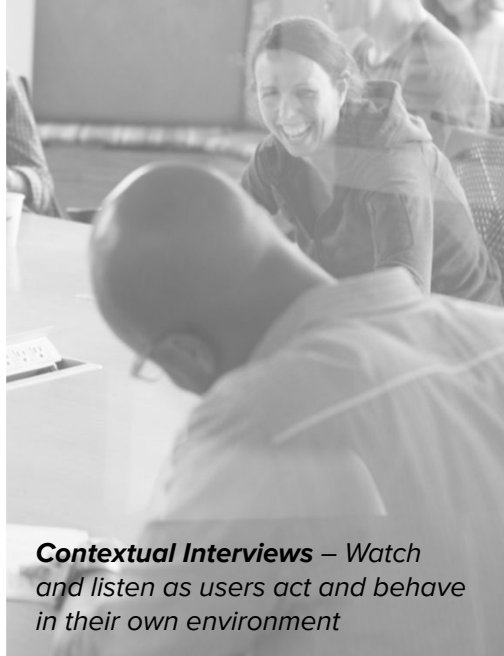
Gaining a clear understanding of the situation **from the perspective of current and potential customers/ employees** of a digital product/service.

Benefit

- Find the **true motivations** behind a customer's/employee's behavior
- Develop **empathy** as a basis for human-centered digital products or services

Prerequisites

- Knowledge about ethnographic research methods
- Interview skills
- Access to customers and other potential stakeholders



Contextual Interviews – Watch and listen as users act and behave in their own environment



Work Shadowing – By accompanying stakeholders implicit problems and wants are revealed



Journey Mapping – Create a visual representation of a customer experience of a service



Cultural Probes – Probes are given to research participants who can then document their daily experiences

Your mission: Design a digital wallet that is addressing the spending behavior of the millennials.

Reframe the Problem.

3. Capture findings

3 min.

Goals & Wishes:

What is your partner trying to achieve?

(Use verbs)

Insights:

New learnings about your partner's feelings and motivations.
what's something you see about your partner's experience that maybe she/he doesn't see? (Make inferences from what you heard)

4. Take a stand with a point-of-view

3 min.



Partner's name/description

Needs a way to

User's need

Because (or „but...“ or „surprisingly...“)

Insight

The background features a large, light blue thought bubble shape. Inside the bubble, there are three small illustrations: a person on a boat at the top right using a telescope, a diver at the bottom left, and a person at the bottom center holding a flashlight. The overall color palette is various shades of blue and white.

Insights are discoveries that you might be able to ***leverage*** when creating solutions.

Take a stand by specifically stating the ***meaningful challenge*** you are going to take on.

This is the statement that you're going to ***address with your design***, so make sure it's ***juicy and actionable!***



Synthesize

Description

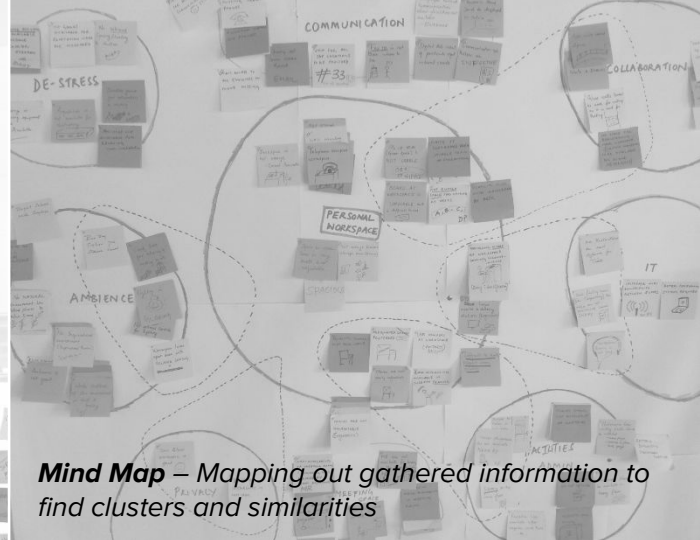
Drawing conclusions from research or prototype testing by sharing observations across the team, cluster the information and finally **condense to insights**.

Benefit

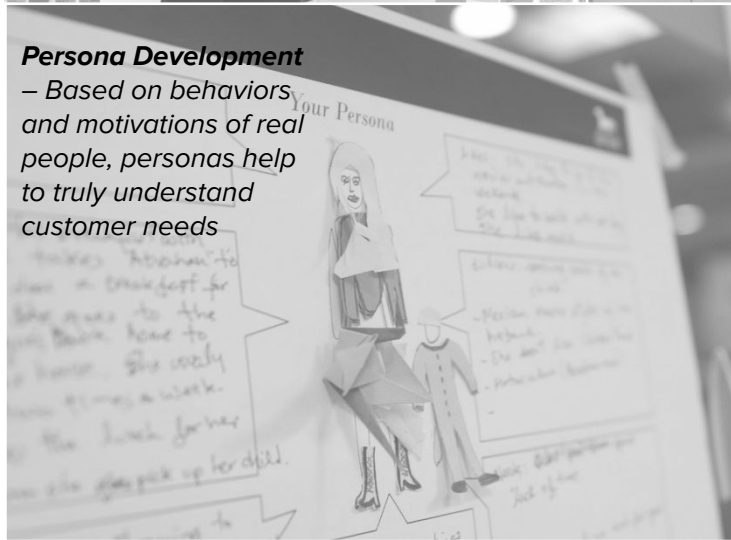
- **Simplify and frame** complex and intangible processes/problems
 - Narrow down to **core content**
-

Needed tools and outcome

- A lot of post-it notes to write down observations, findings, etc.
- Whiteboards
- Outcome: **Point-of-View statement**



Mind Map – Mapping out gathered information to find clusters and similarities



Persona Development

– Based on behaviors and motivations of real people, personas help to truly understand customer needs


Point-of-View statement formulated as hypothesis



Your mission: Design a digital wallet that is addressing the spending behavior of the millennials.

Ideate: Generate alternatives to test.

5. Sketch at least 5 radical ways to meet your user's needs. 5 min.




Write your problem statement above

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6. Share your solutions & capture feedback. 10 min. (2 sessions x 5 min. each)

Notes

Switch roles & repeat Interview





GO FOR VOLUME!

This is time for idea generation,
not evaluation — you can
evaluate your ideas later.

Be VISUAL!

Spend the time ***listening*** to your partner's
reactions and questions.



Ideate

Description

Generating **various solution concepts** of potential digital products or services by combining gathered insights and **facts** with **imagination** and creativity.

Benefit

- Quick and structured idea generation
 - Get to know the **different perspectives** on one topic at once
 - Go **beyond obvious** solutions
-

Setting

- Space for creativity
- Clear rules
- Strict time management



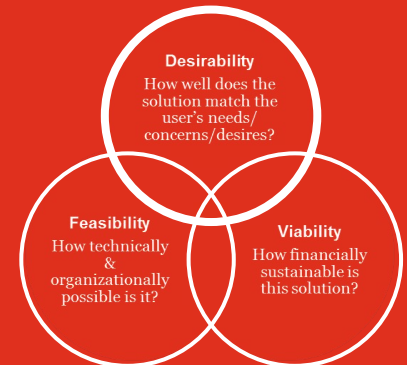
Ideation sessions – Jointly develop a vast amount of potential solutions with different creativity techniques...

“

“It’s not about coming up with the ‘right’ idea, it’s about generating the broadest range of possibilities.”

HASSO PLATTNER INSTITUTE OF DESIGN AT STANFORD

... and subsequently rate them according to the **three lenses of design thinking**



Your mission: Design a digital wallet that addressing the spending behavior of the millennials.

Iterate based on feedback.

7. Reflect & generate a new solution. 3 min.

Sketch your big idea, note details if necessary!





Now, take a moment to ***consider*** what you have ***learned*** both ***about your partner, and about the solutions*** you generated.

From this ***new understanding*** of your partner and his or her needs, ***sketch a new idea.***

Try to provide as much ***detail and color*** around your idea as possible.

Your mission: Design a digital wallet that is addressing the spending behavior of the millennials.

Build & test.

8. Build your solution.

7 min.

**Make something your partner
Can interact with!**

[not here]



9. Share your solution & get feedback.

8 min. (2 sessions x 4 min. each)

+ What worked...

- What could be improved...

? Questions...

! Ideas...



Create a *physical prototype* of your solution.

If your solution is a service or a system, create a scenario that allows your partner to experience this innovation.”

When you test, **LET GO** of your prototype, physically and emotionally.

Your prototype is **NOT PRECIOUS**, but the feedback and new insights it draws out are!



Prototype

Description

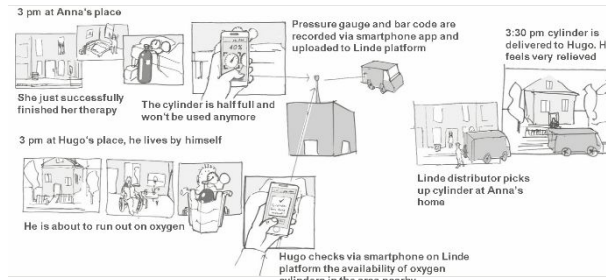
The prototype is an **early model or experiment** to rapidly create solutions to identified challenges and problems.

Benefit

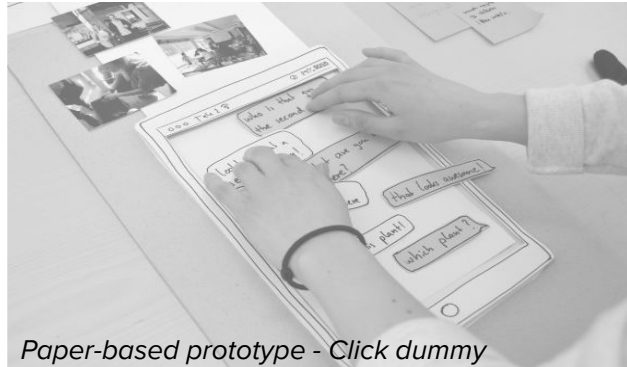
- Make any business model, product or service idea **tangible and visualized**
- **Test** it with the potential customers or employees

Needed material

- Apps like Spark or LEGO® Movie Maker
- Paper & pencils
- Other arts & crafts material
- Divers physical artifacts like
- Others



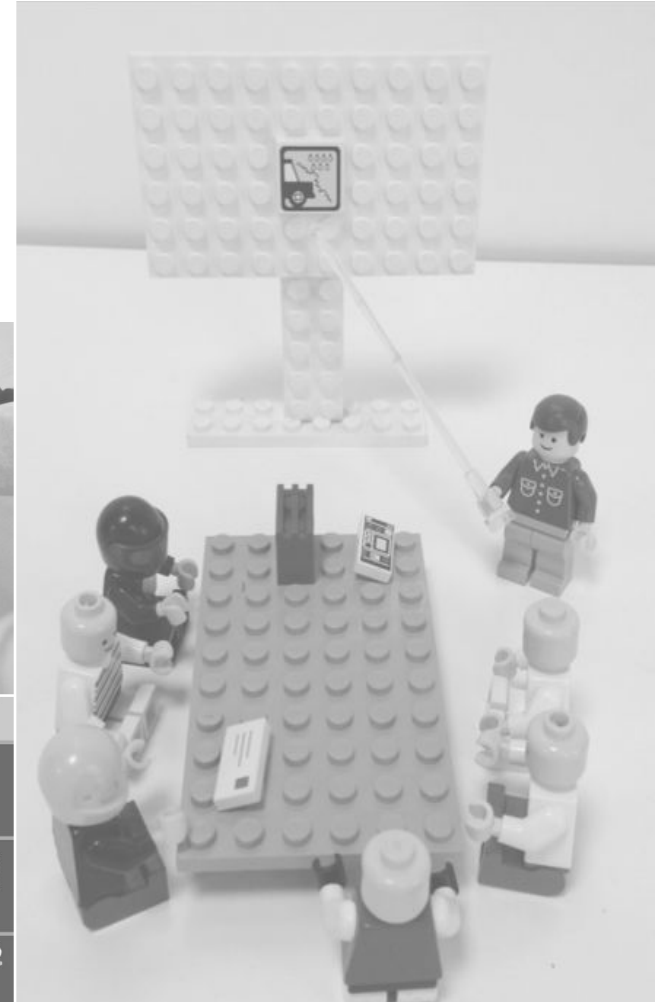
Paper-based prototype – Customer journey



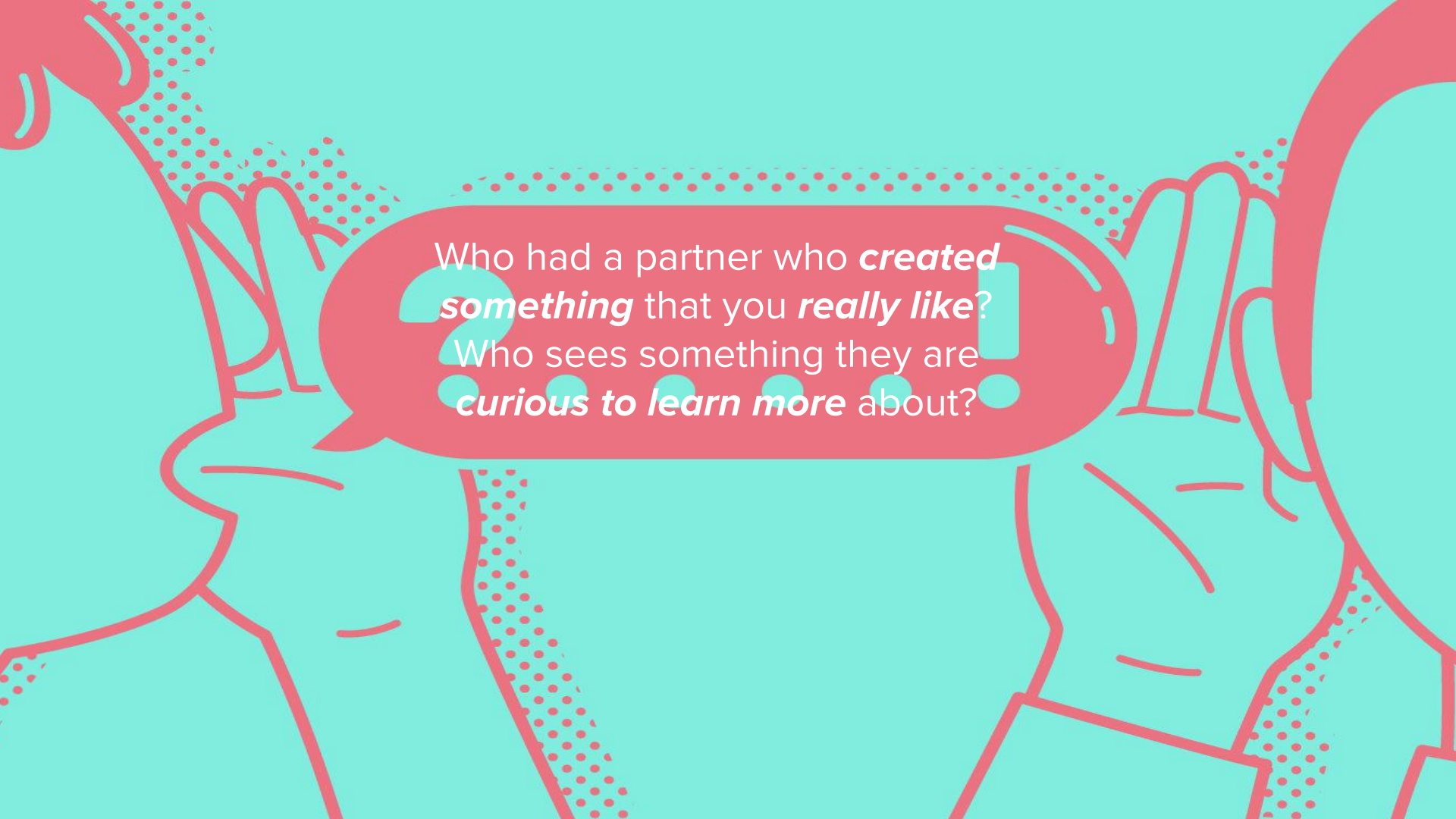
Paper-based prototype - Click dummy



Video prototype - LEGO® Movie Maker



Behavior prototype - Simulation with physical artifacts



Who had a partner who ***created something*** that you ***really like***?
Who sees something they are ***curious to learn more*** about?



Test

Description

Bring prototypes and first ideas **in a context with stakeholders and their environment** for quick evaluations. The context (who and where) is very crucial.

Benefit

- Get **feedback** from people inside/outside the development team
 - Testing allows to find flaws early and improve them in **further iterations**
-

Needed material/tools

- Create prototype to be tested (and device to show with)
- Create a test plan (what exactly to test and how)
- Stakeholders & location to test with

In Context – Prototypes that are presented to real users in context help to get more realistic feedback

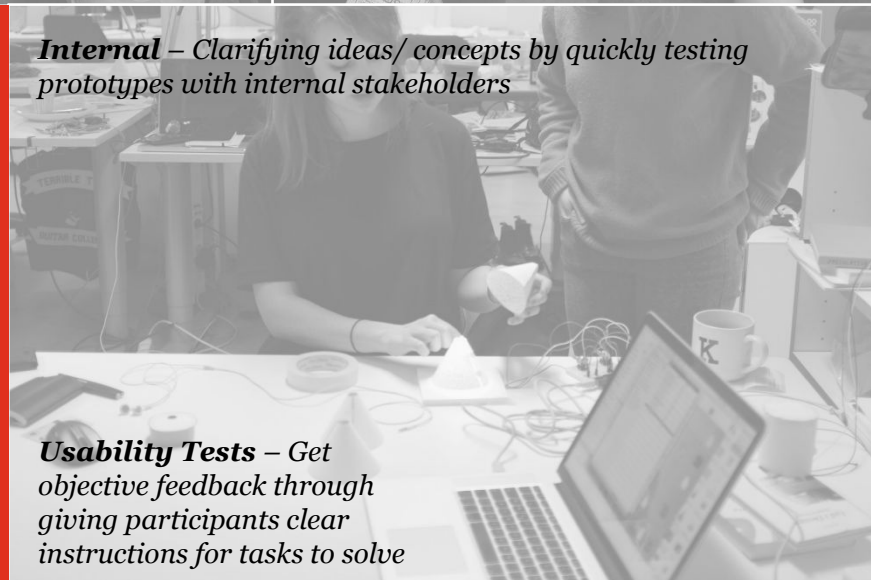


User Experience Testing – Walk through a digital service with users to get an understanding of their impressions

Iterations – Integrate test feedback into the generation of prototypes



Internal – Clarifying ideas/ concepts by quickly testing prototypes with internal stakeholders



Usability Tests – Get objective feedback through giving participants clear instructions for tasks to solve

An agile, iterative approach created the required momentum for digital business model innovation across the company

Transformation Program Approach – Agile Business Development

