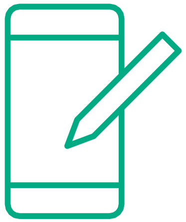
Paper prototyping

1-3 hours - build 1-2 hours - testing

Pens, scissors, glue, paper and a camera for documentation

1-4



What?

Paper prototyping is a method of testing an interface using interactive simulation. The different screens in the interface are recreated as sketches on paper.

Why?

Paper prototypes are produced to obtain user feedback early on in the process. This provides you with an opportunity to explore and understand how the various interfaces interact.

How to build the prototype?

1. Print out the required wireframe templates. You can also draw these yourself.
2. Decide what you want to test on the user.
3. Recreate the first screen that the customer sees in your solution and focus on every single 'click'.
4. Sketch all 'clicks' in the form of interfaces on different wireframes.
5. Each 'click' has to have a new page, so draw them all. All new pages have new 'clicks', meaning you will quickly produce a lot of 'screens'.

How to test the prototype?

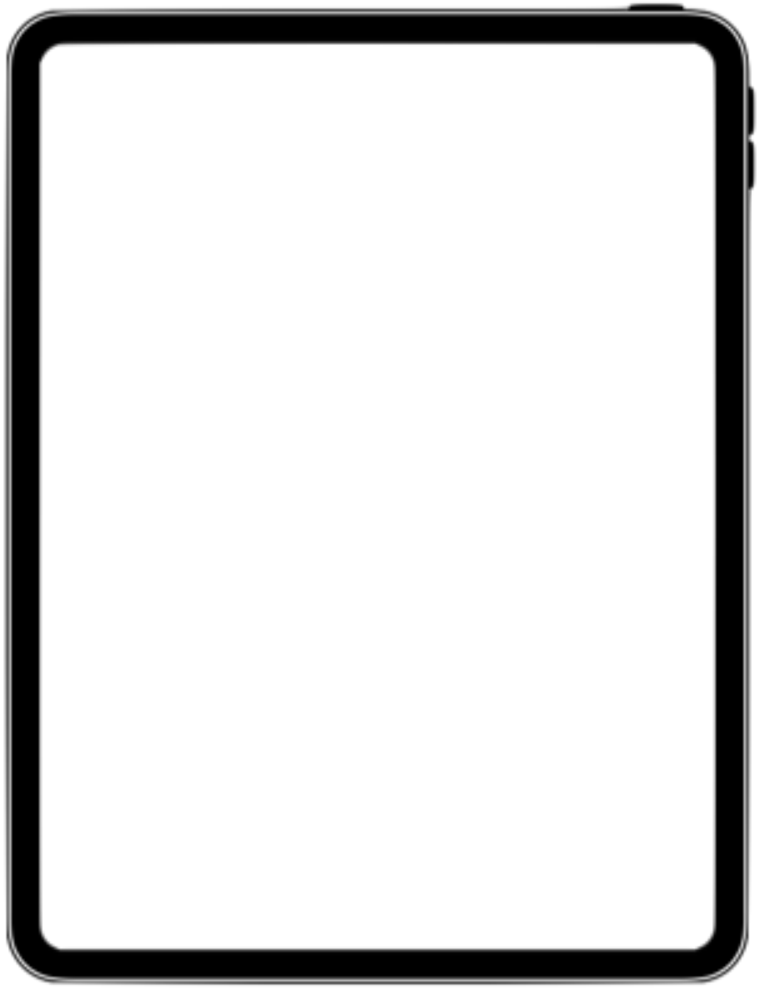
1. Introduce your prototype and explain the procedure (Point to 'click')
2. Ask the user to perform a specific task that you want to test.
3. Each time the user 'clicks' on a 'screen', show him/her the next screen sketch in the sequence. Repeat this process until your test is complete.
4. Throughout the test, you must record what has worked and what has not worked. Preferably take photos to document the test.

What do you get out of this?

Insight, new ideas and decisions on how best to proceed.

Template for building a prototype

Preferably print out several copies of these templates. Draw your solution straight onto the template to create your prototype. The wireframes clearly replicate how you think your solution will appear on a tablet or mobile phone.



Template for building a prototype

Preferably print out several copies of these templates. Draw your solution straight onto the template to create your prototype. The wireframes clearly replicate how you think your solution will appear on a screen.

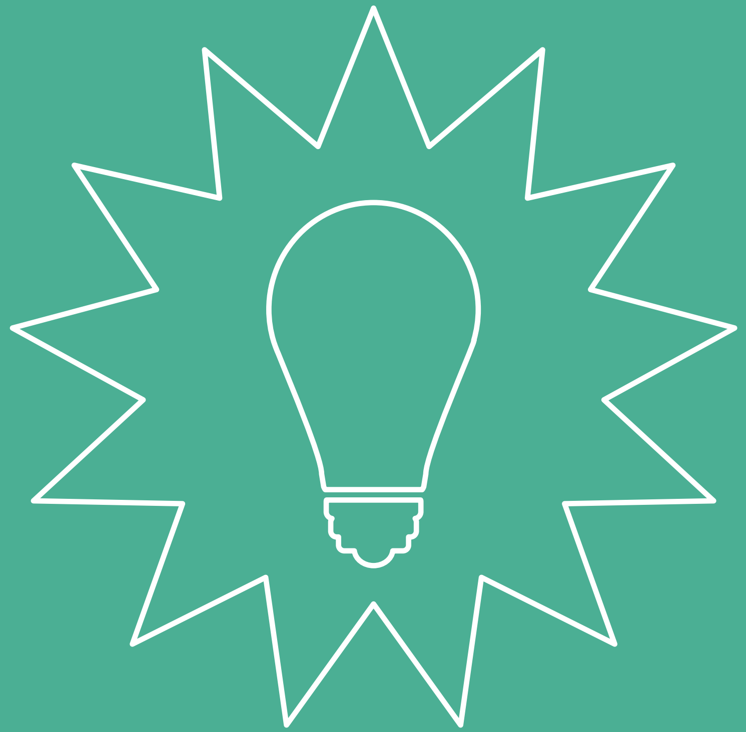
Presentation of new tool

Background

Background to implementation

Start by explaining the background to implementation of the system/the tool:

- Which problem or challenge is solved by the tool?
- Have you identified a new opportunity that is not currently being exploited?
- Have you gained new insight which you think is worth investigating through the introduction of a new system or tool?



Insight

Key insights

Present three key insights as background for your reasons for wanting to carry out the implementation. Here are a few tips:

Preferably use a variety of tools when presenting your insights:

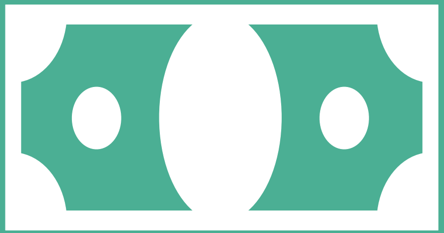
- Quotes from employees and/or customers
- Images that visualise the insight
- Statistics or other types of external or internal data

Hypotheses

Hypotheses for value creation

Present suppositions on why the project will contribute to value creation. Here are a few tips:

- What can you save by introducing the new tool? Time? Money?
- What value will the tool be able to deliver? Employee/customer satisfaction? Efficiency?

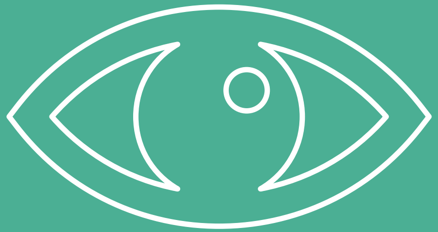


Project costs

Finance

Present the costs for the new tool.

Remember to reiterate investments tied to added value: saving yourself time or improving satisfaction is perhaps more valuable than the cost of the tool in itself.



What is the way forward?

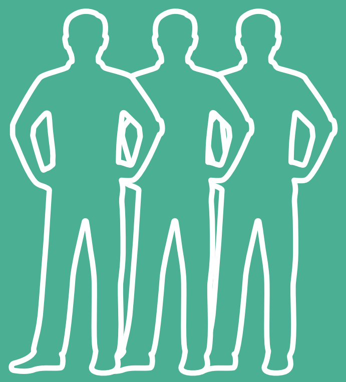
Continued planning

Produce a general description of the key activities that have to be performed if the tool is to be implemented successfully. Here are a few general tips on things to consider:

Roles
Who participates in the implementation?

Timeline
When does the project begin, what are the various phases, and when it is reasonable to assume that the system has been implemented, put to use and is delivering results?

Results
Expected result, and how this is to be measured



Resources for continued work

Resources

Present the types of skills and experience you would like to see used in the project. Here are a few tips:

- Multidisciplinary project group – A range of skills and a variety of experience leads to more and better discussions. It might therefore be important to put together a multidisciplinary project group that will ensure a good process
- Time – Don’t underestimate the value of good preparation and make sure that the project group is given enough time to do its work
- Superuser – Work out early on who in the project group will be a superuser/expert in use of the tool. This can provide both motivation and a greater sense of responsibility.

Target group and the target group's needs

1-4 hours

Pens, paper and post-it notes

The team that gathered the insight

What?

A target group is a current or future customer group that you want to reach with your products and services. This method is used to become familiar with the target group's needs in a given situation.

Why?

The aim is to get a picture of the target group. The objective is to identify the needs and preferred outcomes of the target group, and to simultaneously determine the challenges that the target group faces.

How?

Your starting point is the insight you have gained (from discussions, in-depth interviews, observations, etc.).

1. Define the target group
   Define the target group based on possible variations you came across while gathering insight. Focus on how the target group wants to describe itself, and how it is perceived by others.
   Preferably give the target group a name that indicates its character.
2. Define the target group's objectives [Jobs-to-be-done]
   Describe what the target group wants to achieve in a given situation.
3. Specify PLUS and MINUS
   Specify what challenges or obstacles (MINUS) the target group encounters in achieving its objective, and what it perceives as a positive (PLUS). It is a good idea to use post-it notes or to write directly in the framework on the next page.

Tip:

Once you have gained greater insight (from in-depth interviews, observations, etc.), repeat steps 2-3 of the process.

What do you get out of this?

By identifying a target group, what the target group wants to achieve and what challenges the target group encounters in achieving that objective, you acquire a good starting point for investigating this in more detail through in-depth interviews or other insight work.

Target group and the target group's needs

1. Who is the target group?

TIPS

How does the target group describe itself? How does it want to be perceived by others?

PLUS & MINUS

2. What does the target group want to achieve? [Jobs-to-be-done]

TIPS

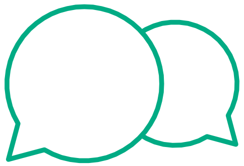
What objectives or jobs does the target group want to achieve or do? In what situations does the target group want to achieve this?

In-depth interview

30-60 minutes per interview

Pen and paper (and preferably a recording device and camera)

As many interviewees as you want



What?

A structured interview with individuals from the target group for the product or service you want to develop or improve.

Why?

In-depth interviews are used to examine in more detail users'/customers' needs, expectations, experiences and challenges. In-depth interviews provide insight into general attitudes and how a user/customer looks at a problem or a challenge, and they take a different approach to market surveys.

How?

Prepare an interview guide suitable for the purpose. Ask open questions that use the question words what, who, when, where, why and how. Your questions should be relevant to the subject you want to find out about and should explore it in depth.

1. Find a place where you can sit undisturbed and with a comfortable atmosphere. Build trust by showing interest and being engaged
2. Remember that it is the person being interviewed (the interviewee) who should talk, not you. Here are some tips to get you started:

   Ask the interviewee to recount stories (Tell me about the first time you...? What happened when you...?)

   Try to identify the root causes of a problem or a challenge (What is the reason for...? Why is that?) Here you can use the '5 Whys' method.

   Don't be afraid of silence. Don't suggest answers yourself.

   Explore feelings and try to encourage personal reflection (Tell me about your best/worst experience of...? How did ... react to that? Why is that (not) important to you?)

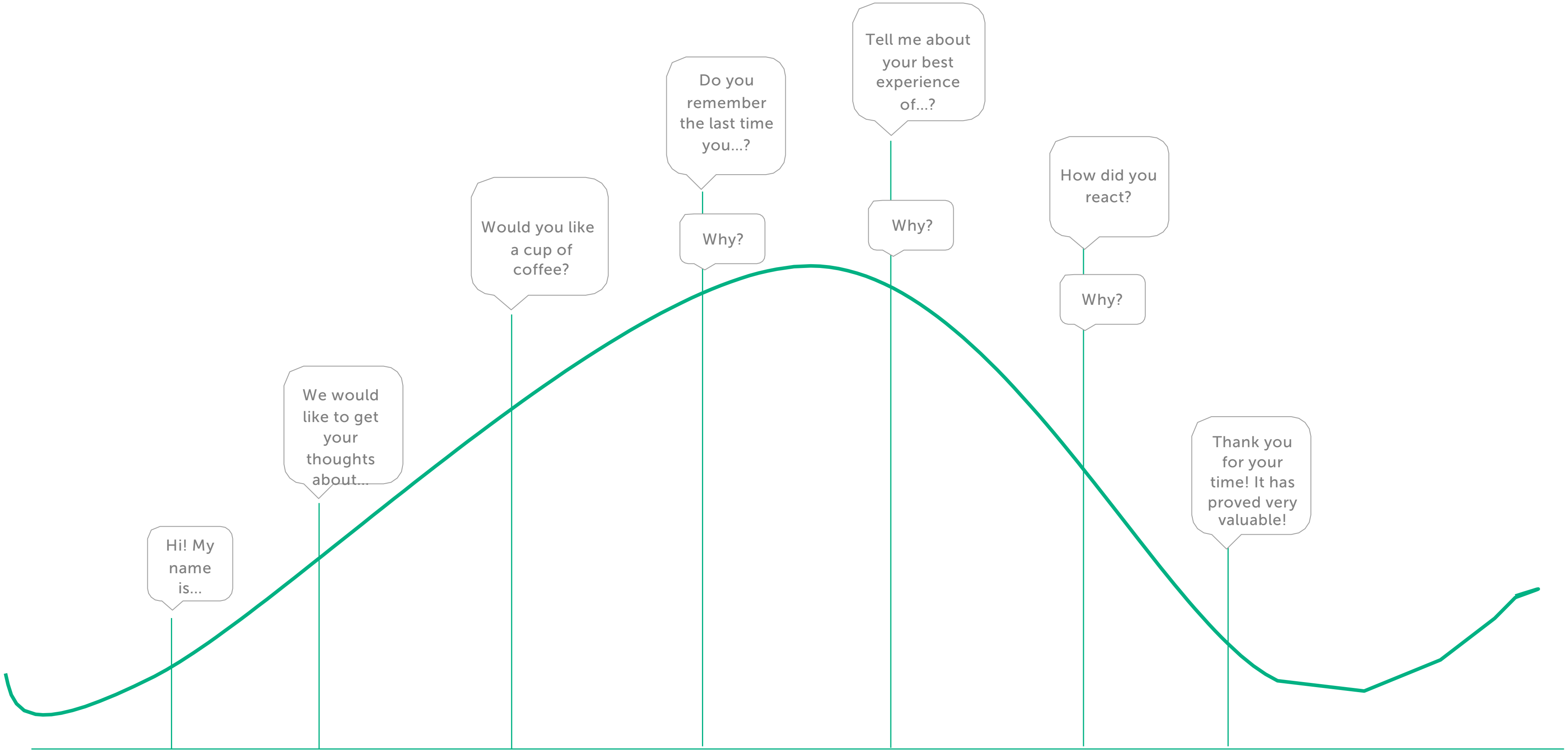
   Ask if something is unclear (What do you mean by that?)

   Explore thoughts using questions such as What do you think about...? Why do you think...?
3. Document the interview. For this you can either use a recording device or have a second person present to take notes. Try to get a photo of the interviewee. You can use this in your summary.
4. Print out questions and answers from the interviews and put together a short summary of the most important answers you received, together with a photo of the person.

What do you get out of this?

Greater insight into needs, challenges and experiences among people in the target groups. This is important in order to understand what you can do for them.

Build up a history

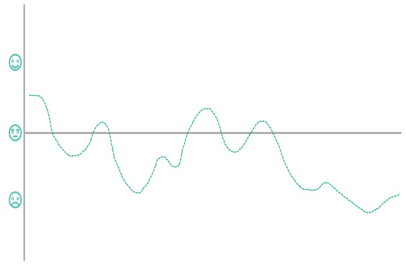


Customer experience

45-60 minutes

Pen and paper

2



What?

An analysis of the experiences of the target group during the process to achieve an objective or get a job done, rated as PLUS (good) or MINUS (challenges). There is particular focus on the experience of customers. This is recorded during an in-depth interview – preferably with the interviewee – or as a quick summary after the interview.

Why?

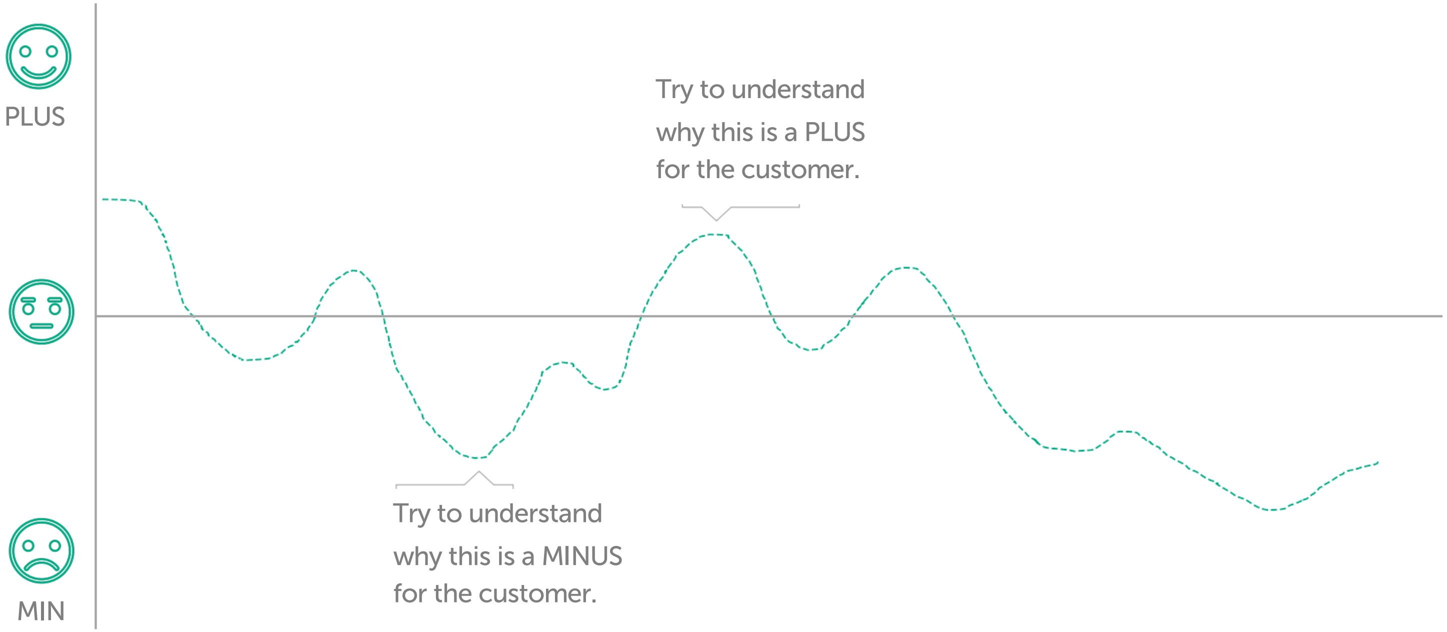
This method can be used to understand the experience of a customer when he/she has had to get a job done, as well as the root causes of a MINUS and the drivers for a PLUS.

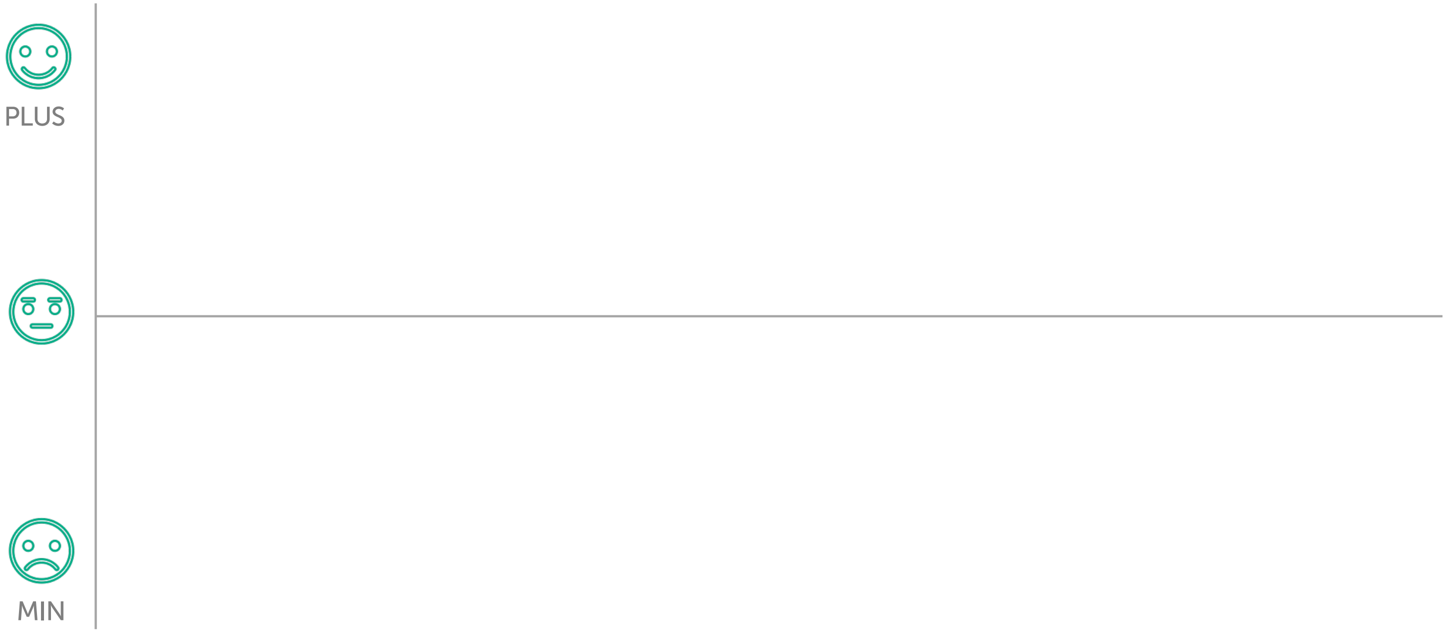
How?

1. Print out the template.
2. Let the interviewee tell a story linked to a specific situation where he/she has had to get a job done or achieve an objective. Encourage the interviewee to talk about the experiences (PLUS and MINUS) associated with this. It is best if you can get away from talking about your own products and services.
3. Focus on the story and the process for the customer. How did the journey start? What happens along the way, and what happens once the objective has been achieved? What is positive (PLUS)? What is negative (MINUS)? Here you have to transfer the interviewee's story to an experience curve.
4. Extract important quotes or points that help explain the experiences. Indicate important points on the curve and note what the experience is at the various points.
5. Try to sum up this insight (PLUS and MINUS) in the method card The target group and the target group's needs.

What do you get out of this?

Understanding of how a customer experiences a process aimed at achieving an objective. This provides a good starting point for understanding what drives positive experiences and the potential causes of negative experiences.


PLUS
Try to understand
why this is a PLUS
for the customer.
Try to understand
why this is a MINUS
for the customer.
MIN


PLUS
MIN

Problem statement & How might we...?

120 minutes

Pens, post-it notes, paper

Group (with invitees from the various phases)

What?

A good problem statement is crucial in determining how to proceed, and is the basis for How might we...? (HMW). HMW is a technique that better prepares you to focus on development work.

Why?

You are not aiming to come up with concrete solutions, but to develop a shared understanding of what the problem actually is and expand the scope for moving forward.

How?

Problem statement

1. Start by looking at the most important PLUS & MINUS experiences identified while gathering insight.
2. Using post-it notes, formulate the problem you want to solve for the customer. Prepare several statements and try yours out with regard to how narrow/broad they are. A good problem statement is broad enough to allow numerous different solutions and narrow enough to provide direction during the idea generation phase.
3. The problem statement should include:
   What does the target group want to achieve?
   In what situation does the target group want to achieve this?
   What MINUSES will the target group experience in achieving this?
4. Choose the problem statement that you want to continue working on.

How might we...? (HMW)

1. Read the problem statement and reformulate it as a question that starts with 'How might we...?' (HMW).
2. Formulate a number of HMW questions. Use one post-it note per question and put them up on the wall.
3. Reach an agreement about the questions you want to continue working on and reformulate as one HMW question.
4. Record the HMW question in the template.

What do you get out of this?

A good foundation for work on developing specific ideas.

Examples

Problem statement

When the farmer wants to water crops on hot summer days [situation], he/she expects the mobile irrigators to distribute the water effectively [what he/she wants to achieve], but they keep tipping over [functional MINUS] and he/she is late home to the children [emotional MINUS].

When the farmer has to water crops at night [situation], he/she expects irrigation to start and stop automatically [what he/she wants to achieve]. He/she sleeps badly because he/she is worried that something will go wrong [emotional MINUS], which could have major financial consequences [functional MINUS].

How might we…?

How might we help farmers to get stable mobile irrigators [linked to functional MINUS], which gives them more time for other things [linked to emotional MINUS]?

How might we help farmers to get an overview of the mobile irrigators [linked to functional MINUS], thereby reducing stress and uncertainty [linked to emotional MINUS]?

Problem statement & How might we...?

1. Formulate the problem

Example:

When the farmer wants to water crops on hot summer days [situation], he/she expects the mobile irrigators to distribute the water effectively [what he/she wants to achieve], but they keep tipping over [functional MINUS] and he/she is late home to the children [emotional MINUS].

2. Formulate HMW questions

Example:

How might we help farmers to get stable mobile irrigators [linked to functional MINUS], which gives them more time for other things [linked to emotional MINUS]?

Crazy 8

30-40 minutes

Paper, pens and a timer

No limit

What?

Crazy 8 is a method that helps a team to develop multiple ideas in eight minutes.

Why?

The aim is to develop as many ideas as possible that can solve a problem. We are not looking at each individual idea in depth at this point, and the emphasis is on quantity rather than quality.

How?

Each person is given a sheet of paper (preferably A3), which they fold three times to make eight similarly sized sections.

1. Set the timer for eight minutes. The idea is to jot down eight ideas during this period – or one idea each minute.
2. Put all the sheets with ideas up on the wall. Everyone can now take five minutes to read and try to understand the outlines. Each person is given five minutes to present their eight ideas.
3. A vote is held to determine the best ideas. Give each person three votes each. Indicate the ideas you want to vote for using a pen, stickers, etc.
4. Identify the ideas that have received the most votes, and arrange them by theme. Discuss the ideas, whittling them down to 1-3 ideas that you feel most confident about. It is possible to combine ideas.
5. If you would like to develop an idea further, you can start the process again, but this time based on what you have already achieved.

What do you get out of this?

Loads of ideas that go beyond the most obvious ones. If a team comprises five people, it's possible to develop 40 ideas in eight minutes.

Prioritise ideas

30-45 minutes

Post-it notes, pens and flipcharts

The team that generated ideas

What?

A matrix that enables you to more easily prioritise ideas that each member of the team has generated (e.g. using the Crazy 8 method).

Why?

The aim of idea generation is to come up with and develop a lot of ideas. The matrix helps the team to organise the ideas by ease of implementation and potential value.

How?

1. Start with the ideas that the team has generated, and write each idea on a post-it note.
2. Discuss and transfer each idea to the matrix.

   How much value does the idea create for the customer? Does the idea solve a problem for the customer? How easy is it to implement the idea?

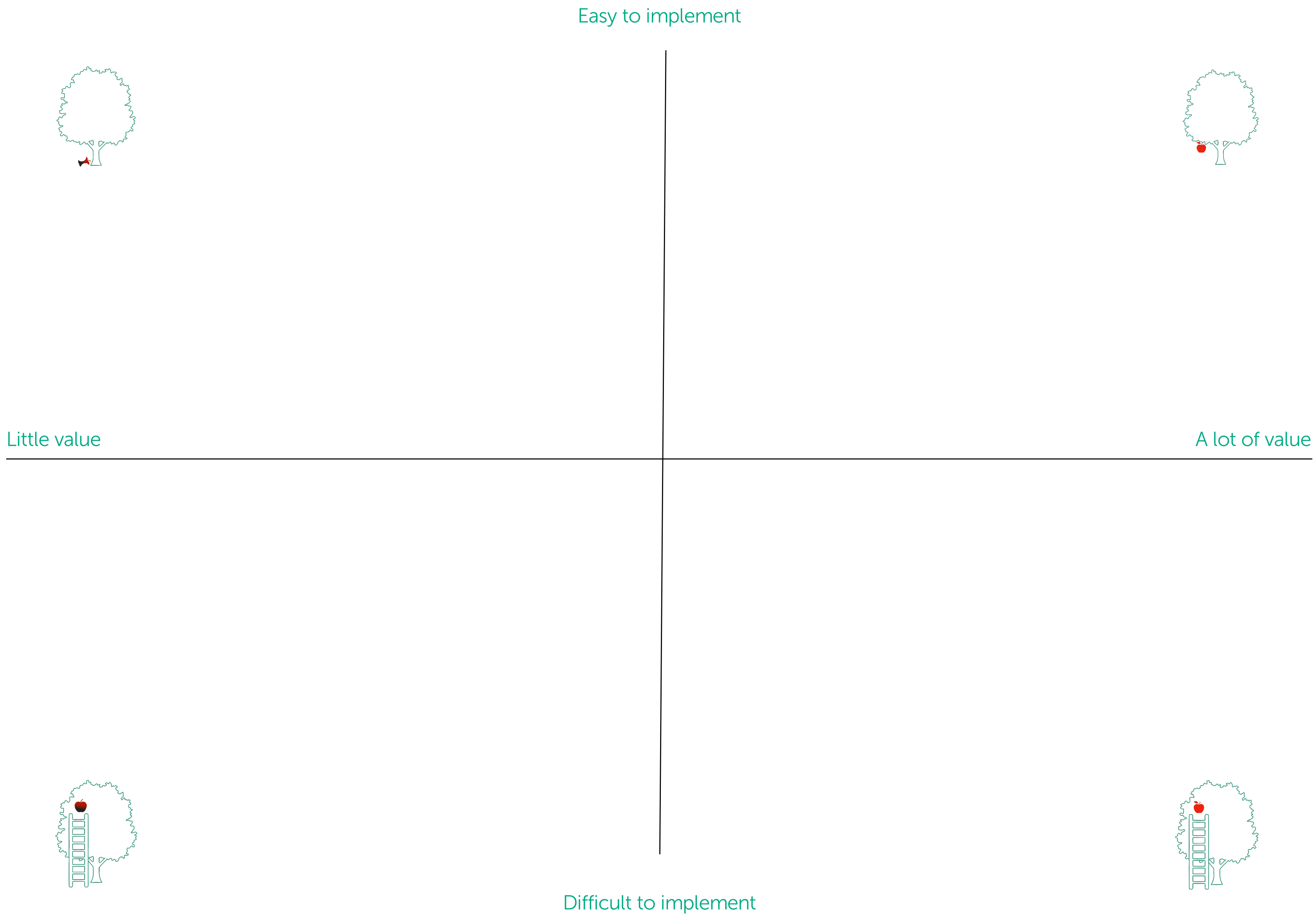
3. Each member of the team is given an opportunity to vote on three or four ideas by marking them in some way (with a pen, stickers, etc.).
4. The ideas with the most votes at the end are chosen.
5. If further prioritisation is needed, repeat 3-4 until the team is left with ideas that are worth pursuing.

TIP 1: Some of the ideas can often be combined or may increase one another's value. Try to combine them during the prioritisation process.

TIP 2: Don't discard ideas that have not been chosen. They may come in useful further on in the process.

What do you get out of this?

Once the team has chosen its ideas, this is a good time to visualise the ideas as sketches for solutions.

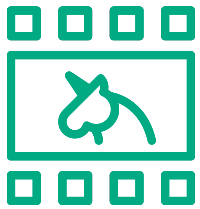

Easy to implement
Little value
A lot of value
Difficult to implement

Storyboard

60 minutes

Pens and templates that you will find on page 3 and 4

Can be done individually, but it's best to work with stakeholders



What?

A storyboard is a future scenario that illustrates how the customer wants to do a job or complete a task by way of various events or stages.

Why?

This method helps you to communicate the ideas for an overall story from start to finish. It indicates various points of interaction between the customer and the parties delivering the service/product.

How?

You use images or sketches of events in a prearranged sequence to explain how you can solve a problem for the customer.

What to do

Visualise events

This can involve simple sketches or images. Visual communication says more than words.

Focus on the customer's experience – positive and negative

For the first event/the first few events, you can focus on negative experiences and those that trigger the need for a new solution. For the remaining events, focus on the positive experiences and how your ideas for a solution create value for the customer. For the final event, focus on how the customer perceives achieving an objective by using the solution.

Add details with a description

In order to add depth to the story, you should describe how the events can be realised. What potential partners are there? What resources are required? Who has overall responsibility – internally and externally?

Tools and tips

We recommend having pens and paper available. You can use the template on the next page or a storyboard that uses the Storytelling method (Once upon a time...).

Use post-it notes. That way you can more easily change elements when conducting tests with customers or other parties.

What do you get out of this?

Visual communication of a customer's experience of a future service from start to finish, as well as where and when key players and products have a decisive role.

Introduce the problem here

Illustrate how the problem affects the customer emotionally and socially

Illustrate how your idea helps the customer in this situation/at this stage. Focus on experiences.

Illustrate how your idea helps the customer to achieve an objective. Focus on experiences.

Business model canvas

1.5-3 hours

Pens, A3/A0 paper, canvas, post-it notes

2-4

What?

An enterprise's business model describes how a business creates, delivers and captures value over time. This can be economic, social or other forms of value. The business model canvas helps you to incorporate ideas, concepts and prototypes into general business logic.

Why?

The object is to use a business model canvas early on in the process to evaluate ideas or prototypes alongside other elements in the canvas. This tool is used to prototype and communicate different business concepts in a dynamic and continuous way, and it is an important tool when you want to communicate ideas and outlines to other employees.

How?

1. Print out the business model canvas in at least A3 size. The best size is A0, as the canvas can then be hung on a wall.
2. Add 9 building blocks to the canvas.
   Fill in the canvas in the following order: Customer segments, Value propositions, Channels, Customer relationships, Revenue streams, Key resources, Key activities, Key partners, Cost structure. Use post-it notes.
3. The value proposition must have a proposed solutio
   If you already have an idea or prototype for a product or service, describe the solution at a general level. If you don't yet have a solution in mind, you must first brainstorm solutions (using Crazy 8, for example) and outline the solutions using a variety of techniques (for example, paper prototyping).
4. Experiment with the various building blocks
   Explore different payment methods, channels, cooperation models, etc. You should come up with at least three prototypes with a set of hypotheses that you test based on insight from various sources.
5. Test with partners
   Once you have decided on a preferred canvas and tested the associated hypotheses, it is important to discuss this with potential partners and other external stakeholders. By reviewing the model with external input, you may identify strengths and weaknesses, which puts the business in a better position to achieve profitability.

What do you get out of this?

It is often easier to develop or communicate a business concept through a business model outline than a business plan.

DigitalNorway

Business model canvas	Produced for	Produced by	Date / Version	DigitalNorway

KEY PARTNERS

co

KEY ACTIVITIES

B

KEY RESOURCES

b

VALUE PROPOSITIONS

ffi

CUSTOMER RELATIONSHIPS

Q

CHANNELS

'o

CUSTOMER SEGMENTS

0 •

COST STRUCTURE(:;)

REVENUE STREAMS (ff)

Value proposition

1 hour

Pens, post-it notes and paper

Group

What?

A value proposition explains how the solution or the prototype solves the target group's problems or improves a situation, while simultaneously delivering specific benefits.

Why?

The value proposition must explain **why the target group should purchase the solution you have developed.**

How?

1. **Start by looking at the solution or the prototype you have designed or developed.**
2. **List the PLUS and MINUS points that the solution contributes to when the target group has a job to do. How does the solution eliminate MINUSES? How does the solution help to create benefits for the target group?**
3. **Develop the value proposition based on the template.**

What do you get out of this?

The value proposition is used to pinpoint the value delivered to the target group by the solution, and is a good tool for securing support for the prototype with the target group, decision-makers and other stakeholders. It is a starting point for evaluating the other components in a Business Model Canvas, and how these are affected by the solution.

The value proposition

We help ______________________ by ______________________ by

The target group — Solving the problem

delivering ______________________ that helps ______________________

solution — Benefit the target group