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1 INTRODUCTION

¹ Dark Horse Innovation:
Thank God it's Monday,
Berlin 2014.

² In the sense of a
young, unknown
horse that gains a
surprise win at the
races.

We are repeat offenders. This playbook is our second venture into the world of the written word. The first time, we wrote about our revolution of the working environment in a book called *Thank God It's Monday*^{*1}. It was the story of 30 people with equal rights from different disciplines who founded the innovation consulting company Dark Horse^{*2} in 2009 and still have not fallen out with each other despite all prophecies of doom; our story. The German business paper *Wirtschaftsblatt* called it the »new bible of the Generation Y.« Our way of working found praise and positive reception: idea sprints instead of meeting marathons, better no hierarchies at all than flat hierarchies, and an error culture worthy of an award.

However, we also read and hear criticism: »This is just a book of fairytales with a nice vision,« people said. Many readers were looking for practical instructions on how to adopt our way of working in their companies. Others were less interested in questions of work culture, but more in the actual contents of our consulting activities: our knowledge, our experiences, and our methods for developing innovations. These two aspects are inseparable, and it is not possible to view them in isolation.

For these people, we have written this book! This is the right book for anyone who invents digital products and services, who improves the existing range of products and services, and who want to make their own work processes more agile. We call these people »doers.« However, this is also a book for managers who want to anchor innovation in their company by user-centric product development. They are called »enablers.«

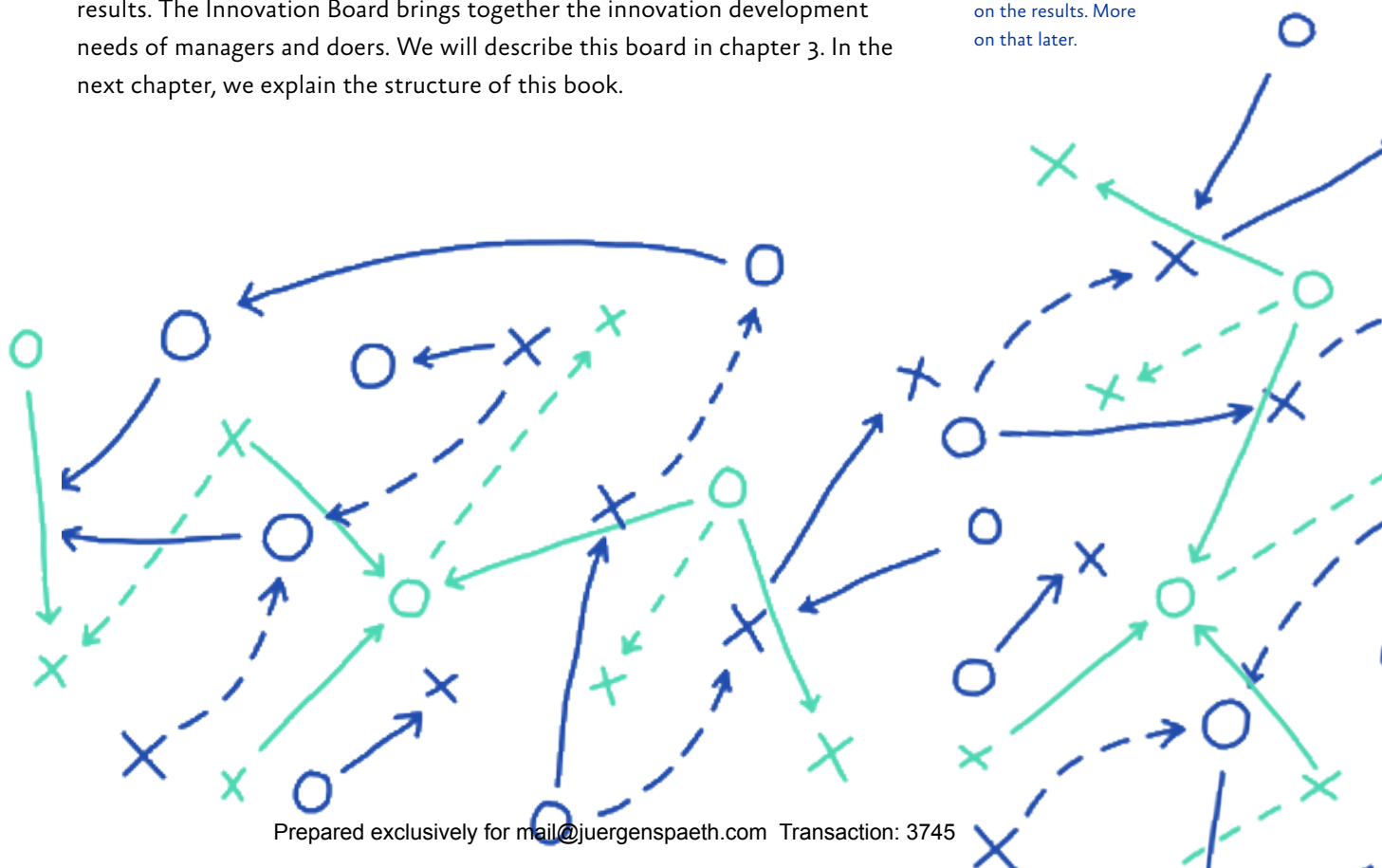
Does it make sense to write a book for both managers and doers? From our methodological point of view, we have to say: definitely! We even think that a book like this is long overdue. During our innovation work in companies, we consistently see mistrust and lack of understanding. Doers and managers communicate on different levels, have different objectives and think in different categories. Communication between them is often dysfunctional. Our response to this problem as external consultants is relatively simple: Find a common language and build trust! With trust and an agreement about the results, successful collaboration is possible. In particular for doers in in-house innovation teams, trust is extremely important, because they are much more closely connected to the company than external consultants and there are strong dependencies. Doers can more easily develop something innovative when there are no

controls and no pre-determined structures. This is where the managers come into play: Resources are provided to the doers by the company, which has a legitimate interest to control the progress and thus to obtain traceable and usable results.

With this book, we want to sensitize both parties to the mutual needs and help them to find a common level of communication. Only then, doers and managers can successfully tackle innovation. For this purpose, we have developed a special tool, the Innovation Board. It is at the heart of this book. For developing this board, we chose the remix approach: We took the best aspects of all current approaches to user-centric designs^{*1} and used them to develop a new framework with its own set of methods—our Innovation Board, which makes any innovation development possible! The Innovation Board not only combines the different approaches but also adds a results layer^{*2} which is indispensable for embedding into the company. It helps doers to get started with any innovation development, irrespective of their institutional framework or the starting conditions. It helps managers to plan innovation projects and to compare results. The Innovation Board brings together the innovation development needs of managers and doers. We will describe this board in chapter 3. In the next chapter, we explain the structure of this book.

¹ Design Thinking, Service Design, Business Model Canvas and Lean-Startup.

² Innovation methods rely particularly on their processes. We always try to focus on the results. More on that later.



2 THE STRUCTURE OF THIS BOOK

1 Speaking of digital, this playbook is a manual for innovation in the digital world. After all, everything is digital: markets and companies, products and services. We all »are« digital, because we move in a digital world. It is a wrong assumption that only programmers and developers have the skills that are required in a digital world. After all, nobody requires an architect not only to design a house but also to build it himself stone by stone. Each of us designs the digital world.

We have organized this book like the playbooks of the head coaches in *American Football* so that the doers can immediately begin with innovation development. For each situation in the game (innovation project) we present a *tactic* (set of methods). *Move by move* (method by method), we get nearer to *victory* (make users enthusiastic about innovative products or services). We have considered every possible movement of a project according to our experiences, and we have collected the most important tools that facilitate successful innovation in the digital world.*1

For managers who have to set up a suitable frame for innovation development in the company, we have written chapter 9 »Frames.« It shows how managers and doers can set up an environment that facilitates innovation and integrates it in the organization process. It also tells us how we can explain to skeptics in the management that loss of control and trial and error are not something bad.

Chapter 3 is equally important for doers and managers. It explains the structure and the use of the Innovation Board, first in general and then with a view on the specific use by doers or managers, respectively. Next, chapter 4 tells doers how they can find the respective suitable starting point for innovation development on the Innovation Board. In chapter 5, we present essential innovation development tools for doers, which facilitate collaboration and are used in every module.

And then, innovation development already begins! Based on the individual modules of the Innovation Board, we present a selection of the best innovation development methods and the situations and purposes for which they are suited. The focus is not on the individual methods; the essential new approach is the execution of the whole innovation development with the help of the Innovation Board and its integration in the company (frame). With our choice of methods, we want to help all our readers to use the Innovation Board in its entirety.

We do not assume any previous knowledge. Therefore, we have also included known methods like e.g. brainstorming. Readers who are already familiar with

a specific method are welcome to skip the respective explanations in the book. This also applies to the basic tools in chapter 5.

During innovation development, we have to make a lot of decisions based on gut feeling as it is not possible to research and to plan everything in meticulous detail. First, we do something, and then we check how good our idea has been by interacting with our users during the whole project. Of course, this only applies before we launch a product or service on the market! Working in this way is liberating and inspiring.

We also cover the insecurities of how to communicate our results in the company contests (and how we make our own work transparent). Every finished module is a milestone of the innovation development. At these points, the Innovation Board and its three modules act as handover protocol for the current state of the innovation development. They ensure good communication between doers and managers during the whole development. To support the exchange between doers and managers, in section 9.3 we also present »construction manuals« for workshops that are used for handing over (intermediary) results.

Our expertise is based on seven years of practical experience with the innovation consulting company Dark Horse. We firmly believe that our playbook lays the best foundations to be creative and innovative. However, we cannot relieve our readers of the last step, i.e. practicing and doing it themselves^{*1}. After all, no quarterback has ever managed to throw a decisive pass in the Super Bowl just because he has read a theoretical treatise on the »3 stop drop.«

A final note on how to use this book: All templates for filling in are provided for download on the accompanying website. The URLs are given below the respective figures in the book.



1 As well as making errors and learning from them.

3 THE INNOVATION BOARD

1 For convenience, you can find a fold-out version in the back of the book.

The Innovation Board^{*1} is the pivotal tool in this book (template 3.1). It accompanies us during the most important steps of digital innovation. It helps us to keep the »score« of our innovation development and to plan the next moves. It is also a means of communication between doers and managers. Using the board is straightforward: We simply write the results from each innovation development phase in the suitable fields. In this way the boards helps us to share ideas with our team members and colleagues and to make the team work and the joint innovation development transparent. Every team member can see the progress and the results at a glance. The Innovation Board consists of the three modules EXPLORE, CREATE and EVALUATE. These are the building blocks of our innovation development. The

EXPLORE

TRENDS & TECHNOLOGIES	POTENTIAL PARTNERS & COMPETITION
FACTS	AREAS OF OPPORTUNITY
USER	NEEDS
INSIGHTS	TOUCHPOINTS
HOW MIGHT WE	

CREATE

IDEA DESCRIPTION	
ADDRESSED USER	
ADDRESSED NEEDS	PROBLEMS
POTENTIAL OF THE IDEA	THE WOW FEATURE
USER VALUE	HIGH-LEVEL CONCEPT
SCALABILITY	
FEASIBILITY	
VALUE PROPOSITION	

EVALUATE

VALUE PROPOSITION SCORE	PRICE POINT & DISPOSITION TO BUY
Activating users	USER EXPERIENCE
Preference over substitute products	
Disposition to buy	
Recommendation	Emotion
ASSESSMENT	CHANNELS
Brand Fit	UNFAIR ADVANTAGE
Market Size	KPI
Investment	REVENUE STREAM
New Customer	
Asset Fit	
Viral Potential	

Template 3.1: digital-innovation-playbook.com/templates/board

¹ This has currently led to much criticism against the Design Thinking process. This process does not consider the starting point of the company that wants to solve a problem. This is the reason why companies fail when they try to implement Design Thinking without adapting it to their own processes.

² In his magnificent book *Reinvention Organizations*, Frederik Laloux describes process thinking as a characteristic of an »orange« organizational culture, which dominated the 19th century but whose paradigms are deemed more and more obsolete.

³ George A. Miller, Eugene Galanter, Karl H. Pribram: *Plans and the Structure of Behavior*, New York 1960.

Innovation Board does not have a defined start or end. Our starting point on the board results from our initial situation and our next objectives. Based on this, we select a suitable role. We call these roles »player types«. They will be introduced in chapter 4.

When we have found our role, we know where to start. During the explanation of the EXPLORE, CREATE and EVALUATE modules in chapters 6 to 8, we introduce more than 30 methods to fill the fields of the Innovation Board with data, facts, ideas and solutions. Each method is self-contained; there are no hierarchies and (nearly) no fixed sequences. We know that this is unusual, but we think that it is not possible to squeeze innovation into strict processes and a rigid corset. We need processes when we already know where to start, which way to go and where to end. However, innovation is characterized by the fact that we do not know the latter. When we do not know the result, we cannot define the process.

Most books on innovation and innovation methods suggest a (linear) process. Design Thinking often puts its process in the foreground. In our work, Design Thinking plays an important role; however, in its current form it causes many connection problems. In Design Thinking, innovation processes always start on a »greenfield,« i.e. in an ideal state where there are no restrictions and no irrevocable arguments against doing specific things. In the last years, we experienced many things but never a »greenfield.«^{*1} In reality, companies have a lot of prior knowledge, many actions have already been started, there are basic conditions, and there have been failed projects no-one wants to talk about any more. No project starts at absolute zero. Our concept for innovation development, i.e. our playbook, lives up to this reality.

According to our understanding, it is an important task to communicate the avoidance of process thinking to our project partners in the companies.^{*2} However, we have to lessen this point somewhat: Of course there is a process; not in the sense of a fixed sequence of actions but in the sense of situational change of thinking modes.

But how does a problem solving process work when it is not a »proper« process after all? For cases like this, science provides the TOTE model ^{*3} (see Fig. 3.2). This acronym represents the steps »task«, »operate«, »test« and »exit.« A

Fig. 3.1

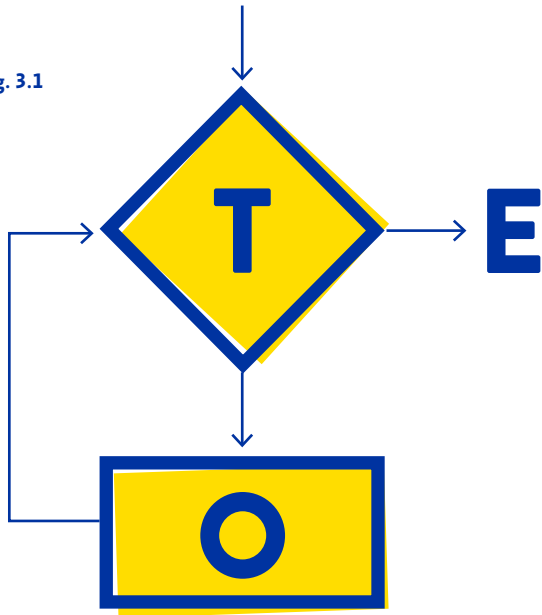
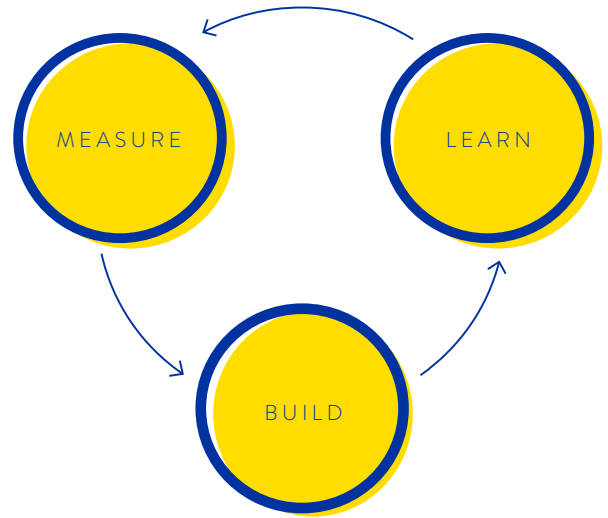


Fig. 3.2



possible action is analyzed, executed and tested, and this is repeated until you get a positive result upon which you can leave the process.

Lean-Startup inventor Eric Ries adapted this to his »Measure-Learn-Build« model (see Fig. 3.2).

However, Ries' model is not suitable for the challenges of our customers and for our projects as it describes the view point of a (single) entrepreneur who already has an idea and wants to test it with a minimum of time and effort. For larger companies, the model is only of limited use. Thus, we use three other building blocks for our innovation development, i.e. the previously mentioned areas EXPLORE, CREATE and EVALUATE. Each of these areas is depicted graphically as a module of its own on the Innovation Board. As all three modules have the same importance and value in innovation development, they also take the same amount of space on the board. Depending on the module, we have different objectives and use different thinking modes. In the EXPLORE module, we take the viewing point of an adventurer who wants to research and to discover new things. In the CREATE module, we want to design new or better solutions for our users. In the EVALUATE module, we play the part of critical minds who adjust and review our solutions and make them usable for our company.

During innovation development, we jump back and forth between the individual modules based on what is currently required by our project. In

doing so, we consciously change the thinking mode for our work. Our way through innovation development may thus resemble the path shown in Fig. 3.3.

Each of the modules produces results. At the end of an innovation development, we have to be able to fill in all of the modules to minimize the residual risk of failure^{*1} for our new product or service idea.

¹ This risk is still quite high. After all, innovations are always risky. It is crucial to balance effort and possible revenue and to determine the real risk as fast and as efficient as possible.

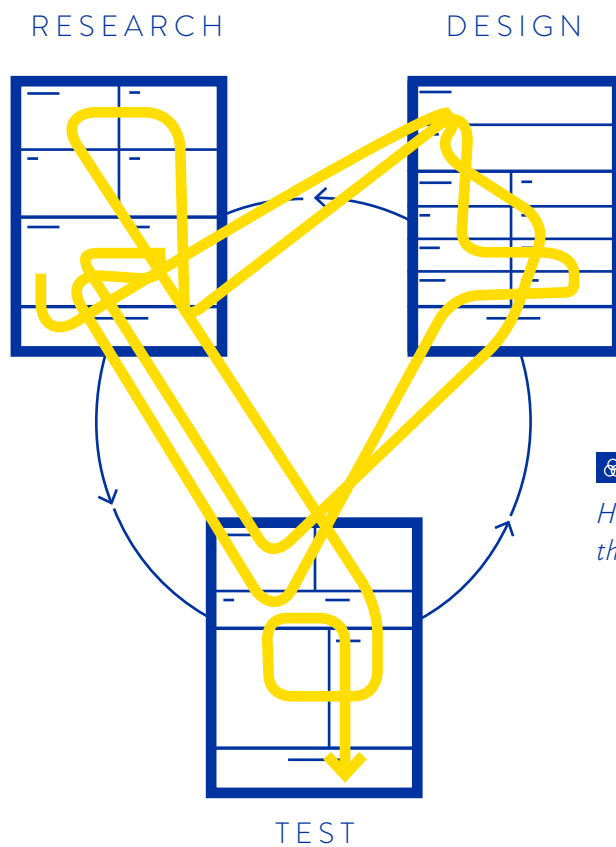


Fig. 3.3
*How we work; i.e.
the process*

3.1 HOW DOERS AND MANAGERS USE THE INNOVATION BOARD

For doers and managers, the Innovation Board is valuable on several levels:



1. Communication

People from different specialist fields often use the same or similar words, but understand or weigh them in a different way. In order to collaborate in a constructive way, a common canon of defined terms is necessary. This is exactly what the Innovation Board provides. Different concepts are placed side by side, delimited, put in a visual context and sorted. In this way, the Innovation Board harmonized communication and ensured that we actually talk about the same thing when we use the same words. Additionally, the clear definition of the methods to reach the results makes it easier for doers and managers to manage their mutual expectations.



¹ This is what an innovation project is per definition.

2. Overview, Plannability and Flexibility

At the first glance, plannability and flexibility look like opposites; however, they are dependent on each other. In order to plan the unknown^{*1}, I have to know the areas on which I have to focus. I also have to know how to answer the questions that need to be clarified in these areas (as far as I do not already know the answer). The Innovation Board provides this overview. Additionally, this non-linear overview helps to design our own processes based on what we already know and what we do not know. As stated before, real-world innovation projects never start completely from scratch. This flexibility has to be accounted for. Unnecessarily rigid processes only lead to superfluous work, inefficiency and frustration.



3. Checkpoints and Well-Defined Handover Formats



Examinations are not a bad thing. From the perspective of the doers, examinations or checks occur with the handover of the responsibility to someone else; if this person is authorized to do the examination. Both parties have their rights and their obligations. Doers have the right to pass on the burden of responsibility, but are obliged to be examined and to disclose information. Managers have the right to examine, but are obliged to decide. The playbook clearly states the points when this can happen: at the project start, at the milestones after completion of the individual modules, and at the end of the project. Between these points, the doers must be allowed to organize themselves completely on their own. Defined checkpoints and handover formats give both parties the required security to fulfill their respective tasks.

The following figure gives an overview of how doers and managers use the Innovation Board.

3.2 OVERVIEW OF BOARD USAGE



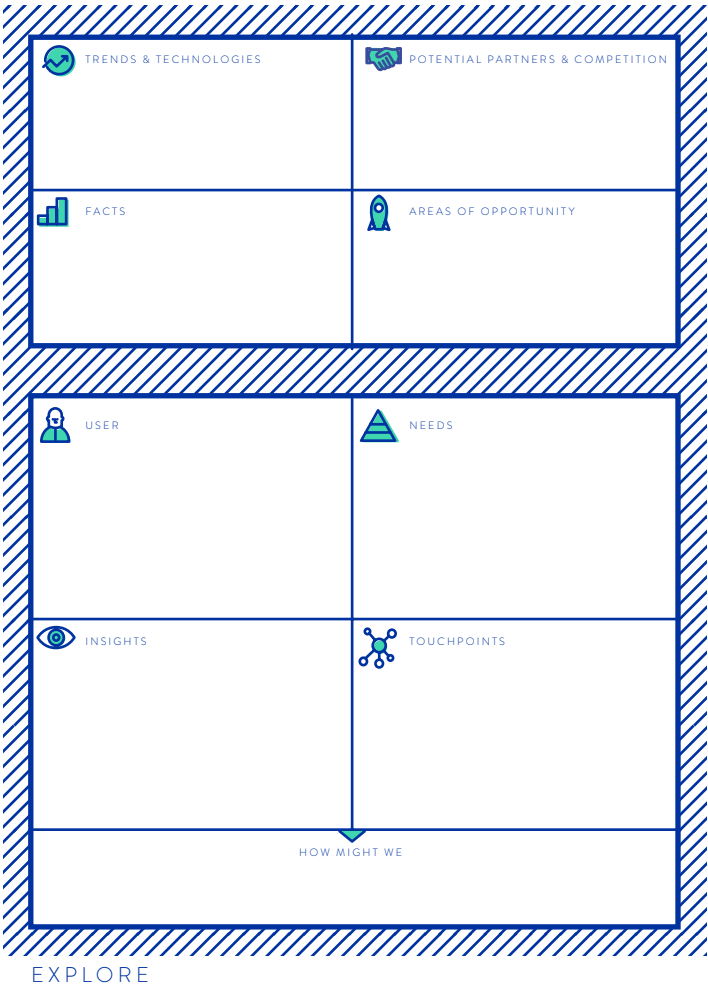
FOR MANAGERS

- Consistent representations and thus comparability of innovation projects
- Project overview and thus understanding of chances and risks

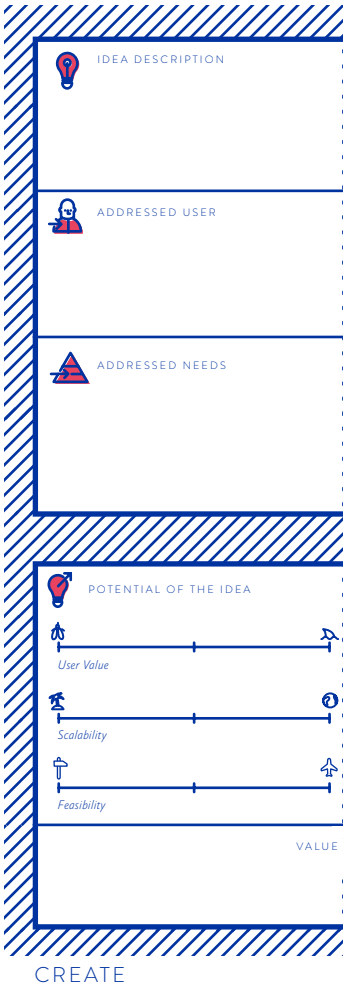
FRAME
BEFORE THE PROJECT

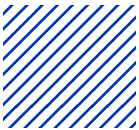
PROJECT START WORKSHOP

FRAME
DURING THE PROJECT



HOW-MIGHT-WE HANDOVER WORKSHOP





FOR DOERS

- Clear objectives and tasks
- Representation of results in comparable overviews
- Freedom and self-organization in reaching these results



FOR BOTH

- Clear milestones specifying which results are controllable
- Inclusion of stakeholders and internal opponents
- Communication tool

PROBLEMS

THE WOW FEATURE

HIGH-LEVEL CONCEPT

PROPOSITION

COMPREHENSION PROTOTYPE HANDOVER WORKSHOP

VALUE PROPOSITION SCORE

010

Activating users

010

Preference over substitute products

010

Disposition to buy

010

Recommendation

PRICE POINT & DISPOSITION TO BUY

USER EXPERIENCE

010

Emotion

ASSESSMENT

Brand Fit

Market Size

Investment

Asset Fit

Viral Potential

New Customer

CHANNELS

UNFAIR ADVANTAGE

KPI

REVENUE STREAM

EVALUATE

INVESTMENT DECISION WORKSHOP

FRAME
AFTER THE PROJECT

Prepared exclusively for mail@juergenspaeth.com Transaction: 3745

15

4 TYPES OF PLAYERS

The starting point of an innovation development depends on the basic conditions of the project. In this chapter, we therefore describe three different types of players: discoverers, designers and evaluators. These types help us to understand the joint innovation project and to identify our own task. Each player type sets out on the project from a different module on the board.



4.1 PLAYER TYPE #1: DISCOVERER



This section is important for players who:

- *Want to develop a new project but do not know where to start.*
- *Have discovered but not completely understood a customer problem and do not know how to address it.*
- *Do not know what user to address.*
- *Have the vague feeling there is potential for innovation in a specific area.*

Every day, we come across new products and services due to digitalization. Well-established companies and groups, inventive medium-sized businesses and agile start-ups all around the world try to win users with new ideas and concepts. They all want their respective business model to win the hearts of the customers and their sales to rocket upwards. The Holy Grail of the industry is to become a »unicorn business.« In the digital industry, a unicorn is a company with a worth of at least a billion Dollars. Snapchat, Uber and Airbnb have reached this goal. These are outstanding examples of innovations that came at the right time to satisfy current needs.

At the first glance, Snapchat seems just to be a chat app. It works similar to WhatsApp or traditional SMS. Snapchat allows you to send short text messages, pictures and videos. However, the developers included a unique feature: messages come with an expiration date. For the audience of very young people, this difference to other chat apps was the key success factor. Snapchat provides them with a safe place where they can test their limits in the online world. Just imagine that every piece of paper that we slipped someone during our school days was stored somewhere and could be retrieved anytime! That is the reality for the youth of today who take videos of their pranks and send digital short messages instead of hand-written messages on paper. The developers of Snapchat responded to this reality.

Uber is another example. This company wants to change the concept of mobility in big cities. At the first glance, this is neither new nor innovative. But image yourself walking along a busy street on a rainy day when you look yearningly at the shadows behind the car windows and think, »They all drive into my direction! Why does no-one stop to give me a ride?« Situations like this are what Uber is all about. When we stand in the rain, we can take our smartphone and check for drivers who will soon pass us and who offer a hitching service for a small contribution.

The third and last example of our unicorn digression is Airbnb. This service allows its users to let rooms, flats or even houses when they are available for a whole day or more. The outstanding characteristic of this service is that most of these accommodations are not designed as traditional holiday lodgings

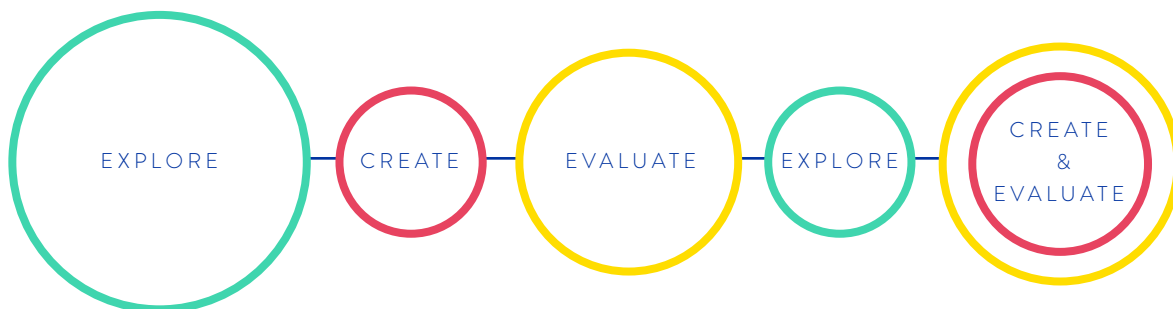
and thus have a completely different atmosphere than a hotel room or a holiday flat. The user should feel like a native and not a tourist. With this service, Airbnb satisfies the need for this life style.

Snapchat, Uber and Airbnb have paid attention to existing markets and products, but they have responded more targeted to particular user needs and crafted a new, tailored product or service for these needs.

Before Snapchat, the short message marked was dominated by WhatsApp, Facebook and traditional SMS. None of these products offered the possibility to set an expiration date for sent messages. Snapchat is not the first short message app but the first one that does not store messages permanently on the receiving device. Uber is not the first broker service for short trips inside a city. Taxis offer this service already since the end of the 18th century. The fact that the Uber business model is very similar to that of regular taxi companies caused legal problems for Uber in many countries. The special characteristic of Uber is that the users are much more involved in the brokering process: Thanks to the app we can always see where the requested vehicle is and how other users have rated the driver.

Airbnb is not the first broker service for rooms and holiday flats but the people behind it were the first to realize that people like to feel at home even in another city, which is something that hotels usually cannot provide.

These three examples also show that digital innovations do not primarily require new technologies. It is more important to create the right added value for users in a digital eco system.



The Challenge

The Innovation Board makes it possible to develop systematically digital innovations that offer added value to their users. By integrating innovation development with the company, we create the conditions for implementing our solutions. Before we as doers can use the Innovation Board to discover the needs of the users and to develop and test solutions for them, we need a starting question and a search space; otherwise, we would have no leads to identify our users. Before we venture out into the EXPLORE module (the starting module for discoverers), we need a starting hypothesis, which is best formulated in a starting workshop together with the managers. This question roughly indicates the direction for innovation and identifies the area and the potential user group for which we will work. We call this starting question the »challenge.« We will describe the corresponding workshop in section 9.3

The EXPLORE Module

After having defined the challenge, we can ask the questions that affect us as discoverers: *How can we recognize the real needs of the users? How do we translate these needs into new products or services?*

These are the questions for the discoverer player type. When we act as discoverers, our best starting point for innovation development is thus the EXPLORE module. It helps us to get to know the users and to recognize their needs, preferences and considerations for decision-making. In section 6.3, we introduce many tools that help us to find a starting point, identify the correct users for our research, and to ask the right questions to gain new insights into the users and their problems.

The EXPLORE module is the essential tool for the discoverer player type. Only after discovering and understanding the real, unsolved problem of the user, we have the foundation for new and good ideas and thus also for innovative products and services. To illustrate this point, let's have another look at the Snapchat example: For the users, sharing or even publishing their pictures and videos without their consent is a real problem, and as soon as the doers had realized this, the idea how to prevent this emerged.

At the end of the EXPLORE module, we define one or more bridging questions, which we call »how-might-we questions.« All our findings from the EXPLORE module contribute to these questions, which bring the challenge to the point and make it more concrete. How-might-we questions summarize the users and their unsolved problem. This constitutes the foundation for our work in the next module, CREATE. Harking back to our Snapchat example, the how-might-me question could be, »How can we prevent that pictures of our young users get published or shared without their consent?«

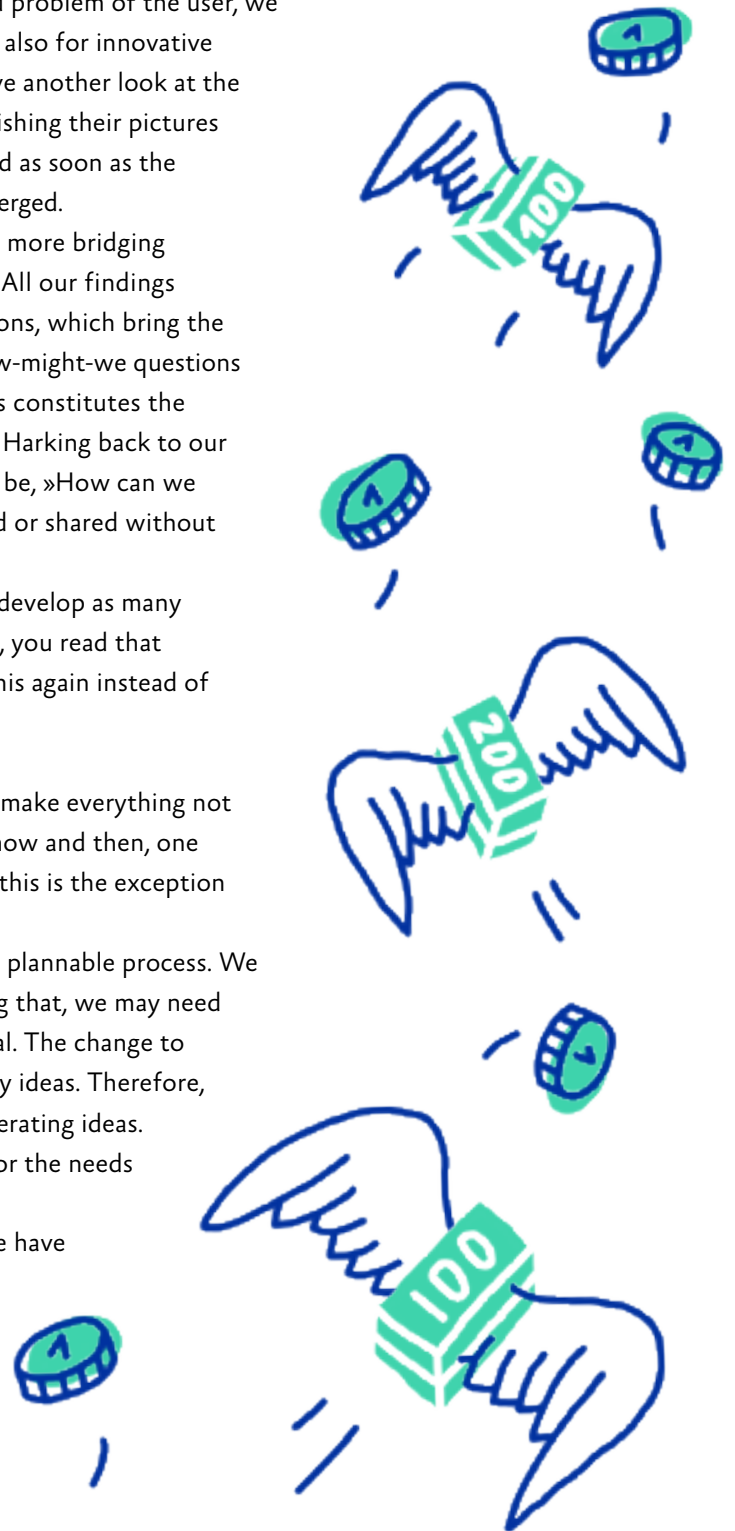
Using the CREATE module, it is now the right time to develop as many solutions for the problem of the users as possible. Yes, you read that correctly: *as many as possible!* Why do we emphasize this again instead of looking for a *really good* solution?

In our experience, it is extremely inhibiting to try and make everything not only good but really good at the first attempt. Every now and then, one of us may have such a special flash of inspiration, but this is the exception rather than the rule.

Like works of art, innovations do not originate from a plannable process. We look into a subject more and more deeply and in doing that, we may need fewer or more attempts to find something substantial. The change to strike gold is usually much higher when there are many ideas. Therefore, the CREATE module provides several methods for generating ideas. These methods help us to develop various solutions for the needs of the users.

At the end of the CREATE module (see section 7.4), we have developed at least one comprehension prototype as well as a solution hypothesis.

How do we know which idea is the right one?
We all know meetings where people sit around a table and debate which idea is the real McCoy. Many arguments are given, but nonetheless we



leave the meeting with a feeling of insecurity. This is perfectly natural! After all, the future user of the product usually does not take part in the meeting. Therefore, it is vital that the new ideas are evaluated, reviewed and at best also amended by the very people for whom these ideas were generated in the first place. For this part of innovation development we have the EVALUATE module.

This module is used to contact our users again and to validate various aspects of the idea with them. Is the idea relevant at all? Does it solve the problem at hand? Would the users use our product or our service? Would they pay for it? All these questions have to be answered for a final evaluation of our idea.

Let's look again at our »unicorns«: In the early days of Airbnb in 2009, the three founders Brian Chesky, Joe Gebbia and Nathan Blecharczyk wondered why their business did not grow. They talked to their users and found out that the pictures in many ads looked *very bad*, to put it politely.

»We noticed a pattern. There's some similarity between all these 40 listings. The similarity is that the photos sucked. It actually wasn't a surprise that people weren't booking rooms because you couldn't even really see what it is that you were paying for,« Joe Gebbia realized one afternoon.^{*1} This was a groundbreaking insight for the further development of Airbnb.

[1 bit.ly/1VoU7B4](https://bit.ly/1VoU7B4)
(06/26/2016)

Gebbia and his co-founders procured a good camera, flew to New York and took new, high-quality photos in the advertised flats. A week later, they noticed first signs of growth after eight months. The earnings from the flats with the new photos doubled. Based on this insight, Airbnb now offers a photo service free of charge for all advertised properties. This example illustrates how important it is to test an idea directly *with the users* so that new insights can influence the idea.

In the digital world, solutions are usually not immediately complete and set in stone, but evolve with the needs of the users. For this reason, we often jump back and forth between the CREATE and EVALUATE modules. In this way, we ensure that the products and services evolve.

The EVALUATE module comprises several methods to evaluate various aspects of an idea. We always recommend focusing on the added value of the idea for the users. Only when the added value is sufficiently tested and evaluated, we look at the development of a business model. Subsequently, we try to find out the correct price point. What use is the best idea when the users cannot afford it?

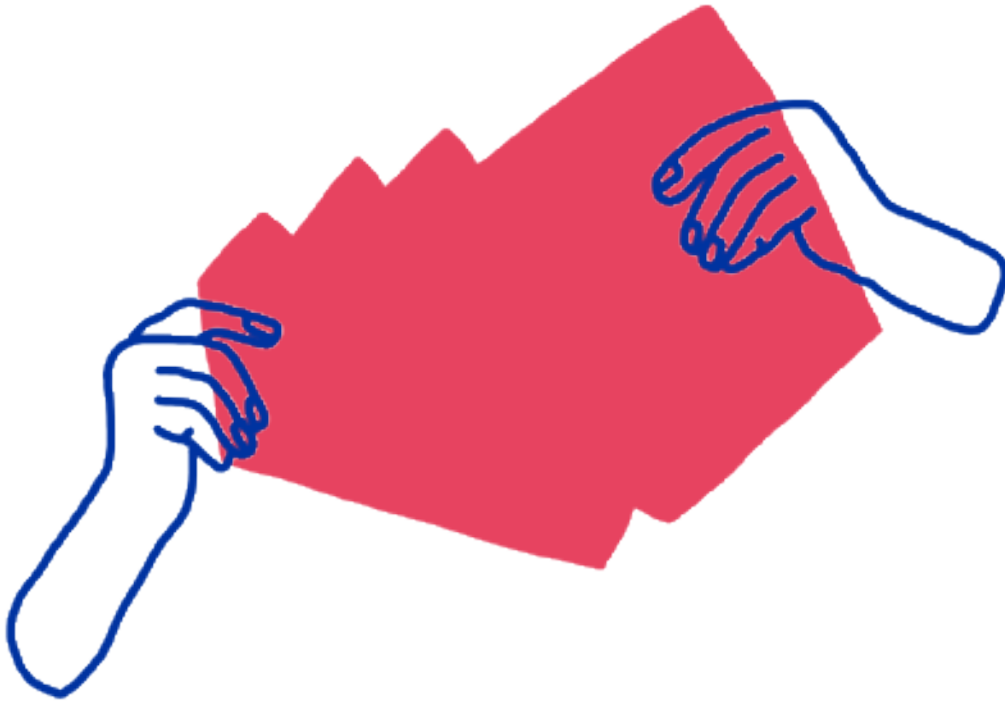
When it comes to the price point, the question is not only if the users *can* afford the product or service but also if they *want* to afford it. Later we will



show a few methods to find the right balance between ability and will. Again, we include the users in the design process. We do not try to do anything without our users.

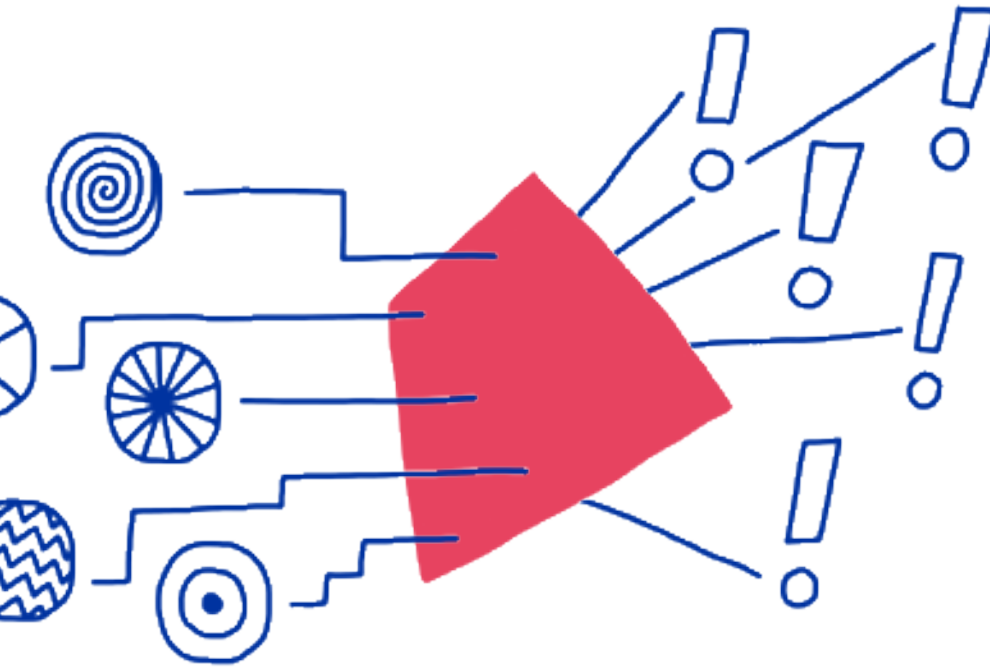
On our voyage through the modules EXPLORE, CREATE and EVALUATE, we may discover many new influencing factors. Therefore, we recommend starting at least a second iteration of the modules. The second time, the weight of the individual steps will usually shift: When viewing the EXPLORE module again, the focus is more on adjusting and amending the existing results to bring the idea and the solution even more to the point. In the second iteration, the EVALUATE module takes center stage.

4.2 PLAYER TYPE #2: DESIGNER



This section is important for players who:

- *Already know their users or their user group.*
- *Already have a well-founded understanding of the problem of the users.*
- *Understand the behavior of the users.*
- *Do not yet have a concrete idea to solve the problem.*
- *Want to develop new ideas for known problems.*

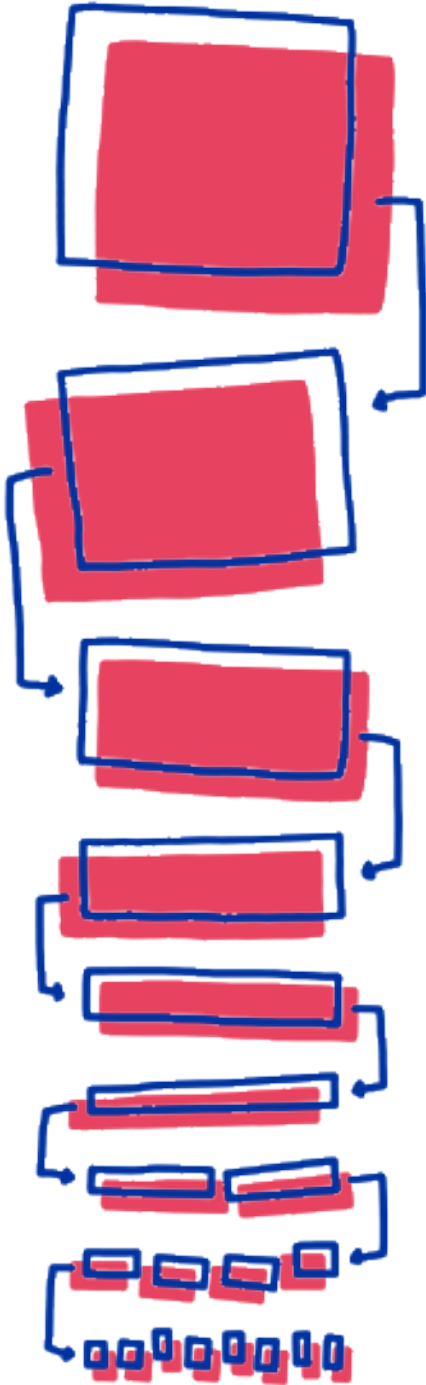


Starting a project from the view point of a discoverer and thinking about solutions without ballast and worries can be very rewarding. However, particularly in large companies we have to view innovative products and services in the context of the whole enterprise. In contrast to many start-ups, innovation developers in companies usually do not start on the greenfield because there are already tapped markets, known customer and user groups and existing products.

Many of our project partners choose us because they have already recognized a problem of their users and have well-founded knowledge about their customers, but do not know how to translate these insights into creative solutions. The basic requirement for developing new solutions for known problems is no big mystery: you have to *really* understand the motivations of the users.

However, this is not as simple as it sounds. Particularly at this point, there are often misunderstandings. Our project partners often equate their problem description with the problems and motivations of the users. But these are not the same things! We do not only have to express the facts, but to understand why users decide in favor of a certain behavior.

Consider the following example to illustrate this crucial point: Using traditional market research, we learn that 80% of users find the reviews in an online shop



not helpful. However, we cannot infer the reasons for this opinion from the information given. There can be many causes for the observed behavior. It is possible that the users do not trust the reviews because they are anonymous. Maybe there are too many entries or too few? The reviews can also be written confusingly, or they may not be clearly visible on the page. We could add to this list indefinitely, because humans can find as many reasons for *not* doing something as for doing something!

Let's assume that we know that our user has a problem with *too many* reviews. This information helps us to clearly define the problem. Subsequently, we can develop various solutions for this specific problem. Amazon solved this problem for their users with a simple feature: customers can mark reviews of others as helpful with the most helpful reviews being shown at the top of the list.

Therefore, we do the »EXPLORE Check« at the beginning of every project: Can we fill in the fields of the EXPLORE module off the top of our heads, and can we really state the motivations of the user in the context of a given problem?

It is not the end of world if we answer one or both questions with no. If that is the case, we recommend the discoverer approached covered in section 4.1. However, if we answer both questions with yes, we can embark on our voyage as designers.

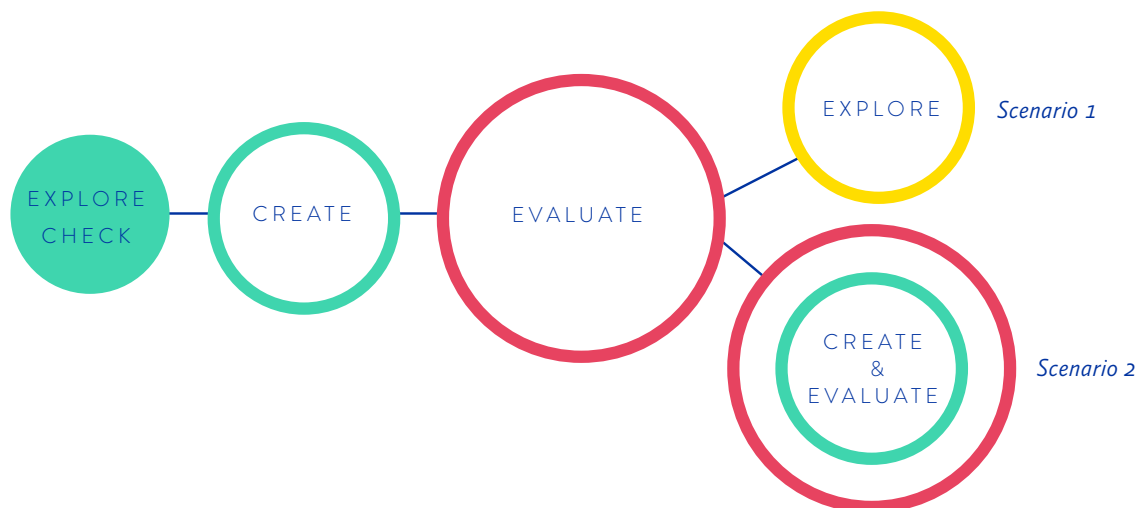
This player type starts at the CREATE module. Our first goal is to develop various ideas and solutions for the problem of our users. As we have seen in the online shop example, it is essential that we are able to clearly express the problem. Therefore, the starting point for designers is the how-might-we question. With this question we define what problem we want to solve for what users. The how-might-we question also helps us to make an abstract problem concrete. This process in turn triggers the solution mode in our brain and helps us with creative ideas generation.

In contrast to many assumptions that we hear in projects and coaching sessions, the ideas generation work in the CREATE module does not take long. The real value of an idea shows itself only in direct tests with the users. Therefore, we always try to get to the next module (EVALUATE) as soon as possible after we have drafted the first solutions in the CREATE module. Evaluation is essential, especially for designers. First, we already started the project with assumption and insights; therefore it is most important that we review these assumptions and insights and determine if they are still valid. Second, we get feedback from our users about our ideas or parts of our solution.

At the end of the CREATE module, a designer has developed at least one comprehension prototype and a solution hypothesis. Both have to be tested subsequently in the EVALUATE module. According to our experience, there are basically two evaluation scenarios for designers:

Scenario 1

During our work in the EVALUATE module, we realize that our insights from the beginning of the project are no longer important. While testing an idea we realize that the problem defined by the how-might-we question—upon which the new solution is based—is not relevant to our users. Actually, they have a different and much larger problem, which we had not recognized before. This scenario occurs every now and then, and thus it should not make designers feel worried. To give you a real-world example: In 1998, the US company Confinity



started out as a software developer for payment methods and encryption for PDAs^{*1}. Only after several months of trial and failure and after the merger with X.com in March 2000, the company, now under the new name Paypal, found its proper business model. Today, PayPal is one of the world's most successful online payment services with more than 170 million users (according to Statista data from 2015)^{*2}.

As designers we try to respond quickly to changes by using agile approaches. When we realize that we got onto the wrong track, we fix this as quickly as possible. In this case, we proceed with the EXPLORE module. It is helpful to evaluate any new insights captured so far in order to identify the right users. We aim to take a second and deeper look at our users and to get a new problem definition, i.e. a new and better how-might-we question.

1 Remember, a so-called »Personal Digital Assistant« was a small mobile computer of the 1990s; in a way, it was the predecessor of our current smartphones.

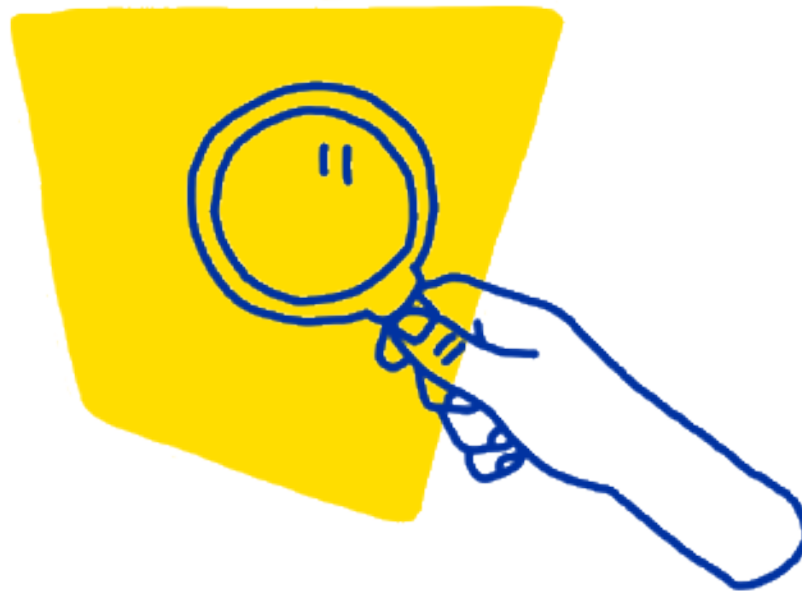
2 bit.ly/1yNOXPg (06/26/2016)

Scenario 2

While testing our idea in the EVALUATE module, we realize that we have basically discovered the right problem. In this case we try to develop our idea further in small iterations so that it fits more and more accurately. In this process, our users provide us with new information and comments on our idea. We can include these comments in further prototypes or in new ideas and execute more testing rounds. Here, we always change between the CREATE and the EVALUATE module. As already stated in the section on the discoverer type, the boundaries between these modules become blurred in the course of time.



4.3 PLAYER TYPE #3: EVALUATOR



This section is important for players who:

- *Know their user and their user group.*
- *Understand the user problem and are able to describe it.*
- *Have one or more concrete ideas to solve the problem.*
- *Want to know how to evaluate the ideas and what potential the ideas offer.*
- *Want to limit the risk before implementing an idea.*

Good ideas are the basis for new and innovative products. But how do we know that our ideas are actually good? In many companies, there is no lack of new ideas, but of evaluation and classification of these ideas. How do we know whether the customers will accept our solutions? How do we know which of our ideas represent the bigger added value for the users? Many of our customers and project partners ask these questions. We can use them as the starting point for new innovation projects when we take on the role of an evaluator. This player type can answer the following questions about the existing solutions with certainty: Who are our users? What problem do we solve for them? Here, we take the Innovation Board and try to fill out the fields of the EXPLORE and CREATE modules. This also helps us as a team to build a common understanding of the initial situation; or to *sync* us, so to speak. When this works, we know that we can start as evaluators with the EVALUATE module, already having one or more concrete ideas at our disposal.

Probably we all know the feeling of leaving a meeting or a brainstorming session with a new and grand idea. We can remember the euphoria that we felt: a new solution at last! Breakthroughs like this belong to the wonderful moments of our daily work. They are the reason why we still address new projects with verve and confidence. But what comes after this moment of euphoria?

At this point in the development, there are only two possibilities for the further life of an idea: Either it gets dumped in a drawer and forgotten for a while or forever, or it finds its way into reality. To achieve the latter, there are a few methods to continue work on the idea as soon as possible. An idea improves only by continual handling, testing and refining. We will take a closer look at the EVALUATE methods in section 8.3.

The following example illustrates how we can find a simple way of testing even more seemingly complex ideas: In his bestseller *The Lean Startup*¹, Eric Ries describes the founding history of Zappos, the largest online retailer for shoes (and the blueprint for its shameless German copycat, Zalando). At the end of the 1990s, Nick Swinmurn developed a plan to sell shoes via the Internet. Instead of busying himself with the supplier network or stock management, he set out to test the real value of his idea. He wondered if customers would accept the new online sales channel.

Nick Swinmurn made the rounds of various shoe stores in San Francisco and took photos of their product range. He posted the photos on a website with a simple design and the descriptive name *shoesite.com*. When a customer ordered a pair of shoes, Swinmurn went to the respective shop, bought the shoes and mailed them.



¹ Eric Ries: *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, New York 2011.



¹ Eric Ries: *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, New York 2011, p. 99.

In this way, he could test his service with real customers, collect data from real users and gain experience with returns management, customer consulting and payment. This approach proved successful. In November 2009, Nick Swinmurn sold his Zappos Company for 1.2 billion Dollars to Amazon.

Stories like this greatly inspire us when it comes to developing a testing scenario. The most important building block for evaluating an idea is the prototype.

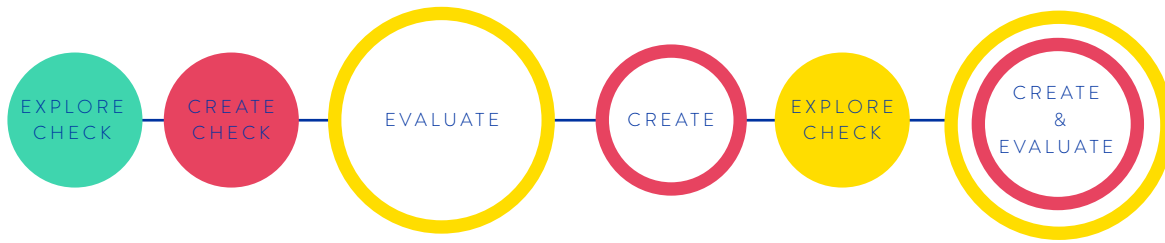
Contrary to common assumptions, this prototype is not a completely designed and fully functioning app or website but a simulation of the most important functions, created with a minimum of effort. In the Lean Start-up movement, the implementation of this working prototype is also called »minimum viable product« (MVP). In the course of the project, the prototype evolves based on the state of knowledge. It gets more and more refined and sophisticated. In our Zappos example, the first prototype was not a fully fledged online shop but just a simple website with photos. In the beginning, only the most important features for establishing contact between potential shoe buyers and Nick Swinmurn were available.

Another example for a good first prototype can be found in the founding history of the filehosting service Dropbox. The US company of the same name started in 2007 with the idea to synchronize data between different computers and mobile devices. In a way, this was the predecessor of the now widespread *cloud computing*. The implementation of this idea requires high investments in new technologies. It would have cost a lot of time and money to develop a working cross-platform prototype to test the acceptance by potential users. What did the Dropbos founders do instead? They made a video to present the idea. This film showed all the features and advantages and looked like the live demo of a real, already available product.

This video attracted a lot of attention. The viewing figures for the company website jumped upwards. Co-founder Drew Houston remembers, »It drove hundreds of thousands of people to the website. Our beta waiting list went from 5,000 people to 75,000 people literally overnight. It totally blew us away.«^{*1}

The early days of Dropbox and Zappos show that a good prototype is not a complete product at all, but only serves to »materialize« an idea in the real world.

As evaluators, we always jump back and forth between the CREATE and EVALUATE modules when we test a prototype and adjust it to the user needs. For bigger changes, using the EXPLORE module for a brief comparison may be worthwhile. Every now and then, we should have a look at the users and determine whether the general direction and/or the target audience have changed.



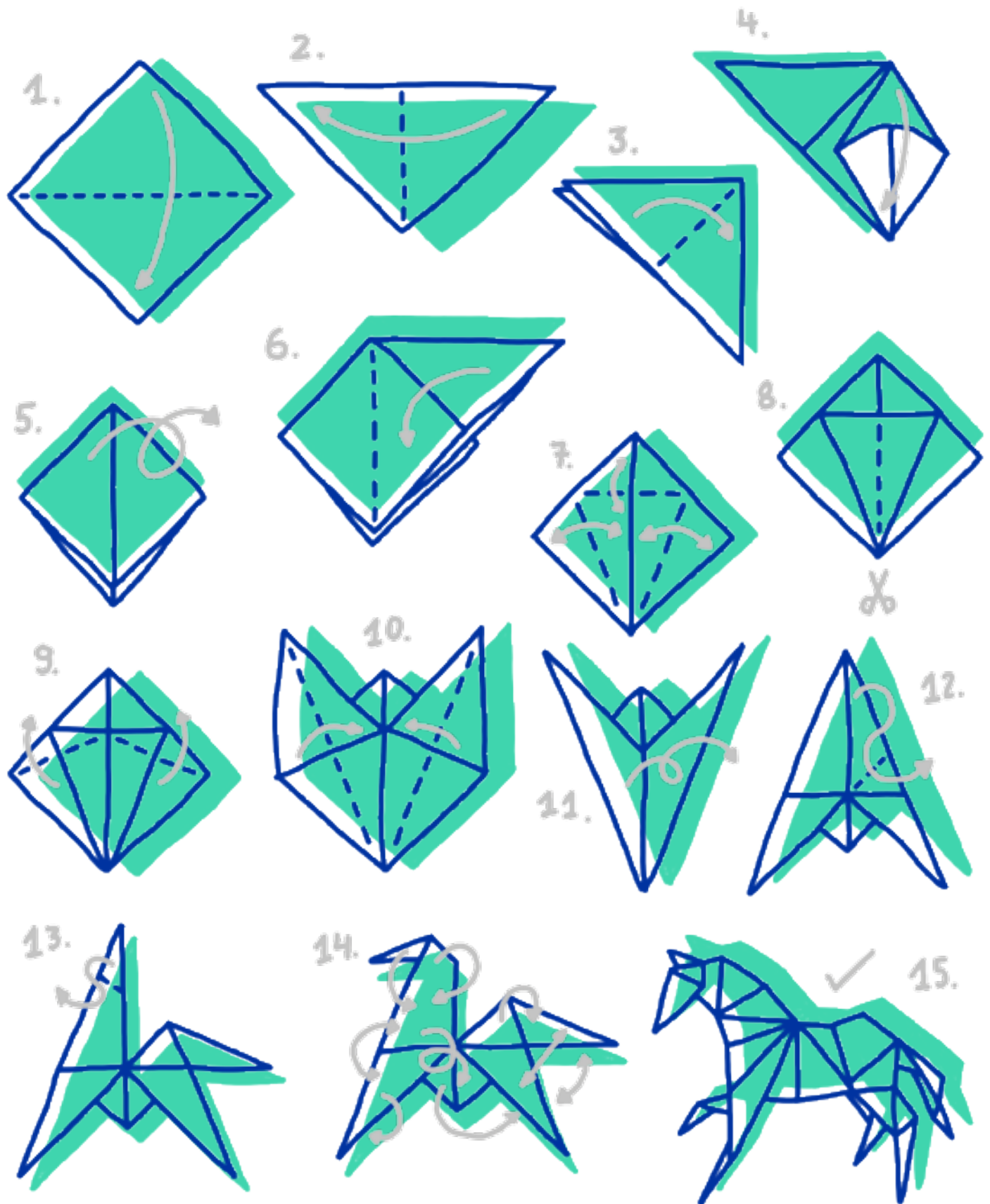
As evaluators, we usually design different prototypes for a project. Each prototype is intended to give us new insights in a part of our idea. The top priority is the evaluation of the added value of our idea and its potential for solving the problem of the users. We will test the users' willingness to buy and the price point last. For these tests, we will again create individual prototypes.

This may sound very costly and laborious. But imagine we want to buy a new smartphone. We ask a shop assistant which model offers the best value for money, but instead of a straight answer, we have to endure a 90 minute lecture on all the features and details of every single model. This would be very tedious, and afterwards, it would probably be even harder for us to decide. A good shop assistant^{*1} would instead respond to us and concentrate on giving the relevant information.

Similarly, prototypes have to be limited to the information that the user needs to understand a situation. In the best case, the prototype even enables the user to amend or change features.

A prototype can also help us to find a direction for our project. Even the failure of an idea can be a success! After all, it helps us to save the time for the development of something that does not satisfy any needs. Instead, we can focus on other ideas and correct our approaches. Should we lack in ideas and approaches, we can take on the role of the discoverer again and start our voyage through the EXPLORE module.

¹ Please do not misunderstand this! In a way, testing is the opposite of selling. You will learn more about that in the EVALUATE module.



5 BASIC TOOLS:

THE MUST-HAVES

Before we really start with innovation development, we have to talk a little about our basic tools.

This particularly relates to using sticky notes and working in a team. At the first glance, a lot of the following may look self-evident or even trivial. However, our practical experience shows that the correct use of our basic tools is not a no-brainer. Without an understanding of the correct use, there is no foundation for efficient work. Not the methods themselves but the use of them constitutes the foundation of good conceptual work. The team that does the conceptual work thus becomes the decisive factor. The »how« is as essential as the »what.«

We go into detail and—yes, we openly admit it—sometimes, we repeat ourselves. This is exactly as it has to be. Our motto is »learning by repeating.« We do not want to play the schoolmaster, but we have to talk about the things that tend to go wrong; even if it is something as trivial as sticky notes labeled in the wrong way.

5.1 BASIC TOOL #1: STICKY NOTES

The small and colorful sticky notes used for creative work are the tools of the trade for any start-up or company of the creative industry. They are used aplenty. Why is that so?

Reason #1: Sticky notes bundle information

Essentially, we use sticky notes like a table of contents: Each of them harbors an *information chunk*. Every team member knows this package. We do not have to spell it out word by word as long as we have told the team what we mean by it. We will soon explain how to label the sticky notes correctly so that this chunking method works.

Reason #2: Sticky notes are flexible

As we are going to produce lots of information, we will need lots of sticky notes. They help us to share our information with the team. This is particularly important as we do not execute every research step and every user interview conjointly. We split up so that we can collect information quickly and efficiently. Later, we share our information with the other members of our project team—by means of sticky notes.

We can arrange the sticky notes flexibly to realize relationships and structures. Sticky notes serve to cross-link and to visualize knowledge.



Four Rules for Labeling Sticky Notes

Rule #1: Five words, large and clear

On each sticky note, there are five large words at maximum. This is not that easy because we have to think how to break down complex information to five (simple) words. But nobody would read a complete novel on a sticky note, and in the heat of the battle, we would not have the time to write it down, anyway.

Rule #2: Visualize

We try to draw something on every sticky note; a quick doodle that represents the content of the sticky note. This does not have to be a piece of art. In most cases, a simple stick figure will suffice.

To give you an example: When we draw a stick figure and write »single« beneath, the whole team knows that this sticky note represents a male single. Probably this is the user for our project; we could write a small »n« above the head at that. It is also possible to use a specific color for all info chunks about potential users. As long as we clarify the meaning with the team, we can do whatever we want.

According to our experience, many people struggle with this visualization. We are no longer used to draw (as long as we do not have a job where drawing is one of the main conditions). »Sticky figures and doodles are ridiculous,« we may think because in our working environment, we have become little perfectionists.

But we can recognize and process visualized information much faster. It always takes longer to process words. Just think of a smiley: Everyone knows this icon and the information packages that it represents (in the given context). Another example is the peace symbol, which represents a whole movement and life style. At the end of our working day, our whiteboards, windows and walls will be pasted with *info chunks* on sticky notes. In order to quickly process this huge amount of data, we need visualizations.*¹



¹ That is exactly what this is all about: From these colorful notes, actions ought to evolve. In order to make this work, we have to stick to the rules.



Rule #3: Everyone writes and draws

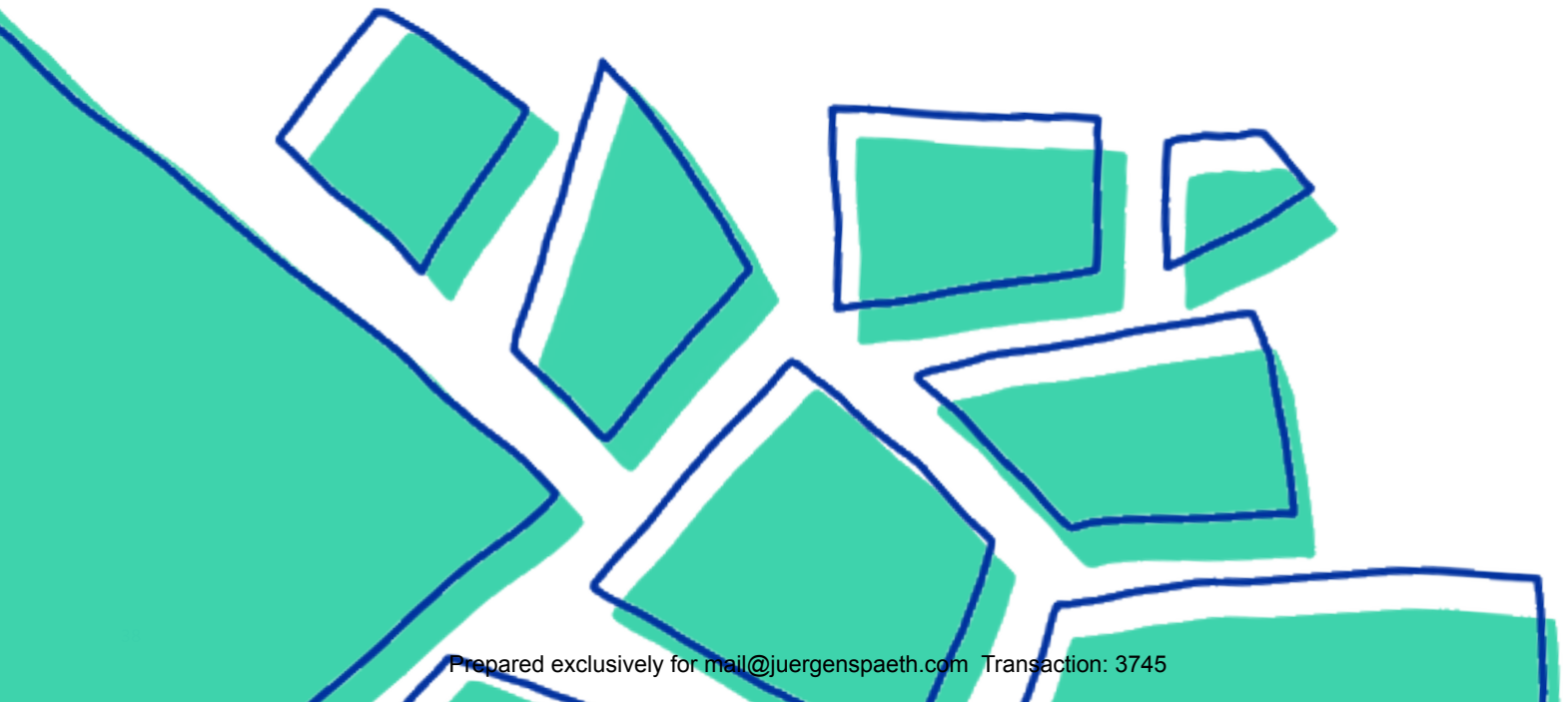
We all have a block of sticky notes and a pen at the ready in order to write and to draw. In companies, it has become usual practice to have a »moderator« who carries out the writing. However, everyone is best suited to express his or her own thoughts. The team is much more efficient when everyone writes.



Rule #4: Write, listen, follow the arguments, and further develop the arguments

We share every sticky note with the team. In do this efficiently, we have to write, listen, follow the arguments and further develop them at the same time. This works, even if we have to get used to it.

When we have missed something because of all the excitement, we are not shy of asking. This is no problem; it *always* happens. With a little experience, it happens *less often*.



5.2 BASIC TOOL 2: TIME BOXING

By »time boxing« we mean a sort of »mini deadline« that we define for our team activities.

Let's face it: we are more effective when we are working under pressure! Time boxing forces us to stop beating around the bush but to act, to make decisions or even to have a creative break, which is particularly important in brainstorming sessions. After all, time is money.*¹

Sometimes we plan for a whole day, but sometimes only for a given period. The time limit acts as a stimulant. This works best when we use the hour as the largest *time unit*. Longer steps have to be broken down to manageable smaller units.

Basically, any timing device is suitable for time boxed, but the simpler and more visual the better. Particularly helpful are special tools that show the time expiring. We use the Time Timer (TM)^{*2} (see Fig. 5.2.1) or the digital Team Timer^{*3} (see Fig. 5.2.2). A red disk shows the remaining time. When the time expires, a signal tone sounds. After all, we do not want to calculate permanently how much time is still left.

Nonetheless, time boxing must not lead to stress. It is very important to set up a realistic schedule that allows to complete specific steps in an orderly manner is important.

With the Team Timer, it is not possible to create a schedule of several months. For this, we have to fall back to the classic method of using a calendar and a felt-tip pen.

¹ This adage was coined by Benjamin Franklin in his *Advice to a Young Tradesman* (1748).

² www.timetimer.com
(07/04/2016)

³ www.team-timer.org
(08/01/2016)

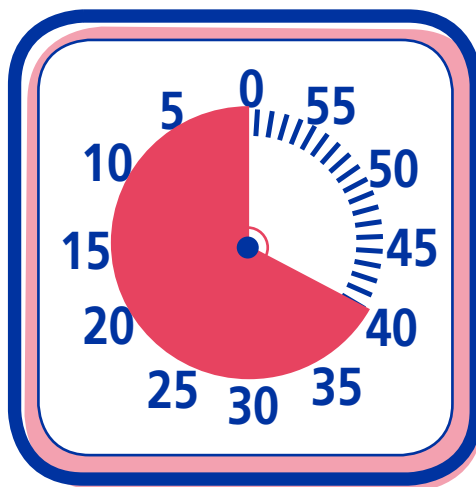


 Fig. 5.2.1

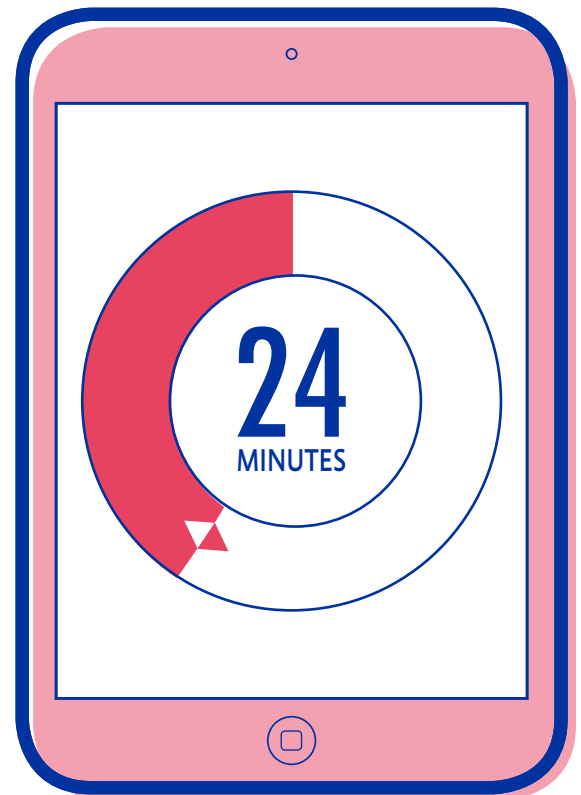


 Fig. 5.2.2

5.3 BASIC TOOL #3: INTERVIEW TECHNIQUES

User interviews are an essential component of innovation development with the Innovation Board.

We also want to find out things that our interview partner does not want to or is unable to reveal. Our interview techniques originate from journalism. They help us to become seasoned interviewers so that we can determine the real needs and problems of our users.

There are lots of interview techniques. The biggest challenge is to use the *right* one for the *right moment* or sometimes even several techniques *at the same time*. But do not worry; we will tackle the techniques one at a time. With a little experience, they will become second nature. We can also test and practice the techniques in our team or with colleagues, friends or relatives. In the next step, we test our new interview technique »on the streets« and conduct short and exploratory interviews. To practice the techniques, we can also think up a test scenario that does not have anything to do with our project at hand.

We will now have a closer look at the most important interview techniques.



The Five-Why Technique

»Why« questions are an essential ingredient of our interview dish. When children set out to explore the world, they ask, »Why?« When we want to explore the *user world*, we also ask, »Why?« The guiding value of five goes back to Sakichi Toyoda, the founder of the company that is now known as the car manufacturer Toyota. His method of asking »Why?« five times brings us to the symptoms and the core of the problem.^{*1}

However, the number five is to be understood symbolically. Toyoda was a master of digging deeper. When he had to ask »Why?« seven times in order to understand a problem, he did so.

¹ See Taiichi Ohno, *Toyota Production System: Beyond Large-Scale Production*, Portland 1988.

Let us look at a good example.^{*1} The problem is that a car will not start. Now we ask:

- 1. Why does the car not start?—The starter battery is empty.
- 2. Why is the starter battery empty?—The alternator does not work.
- 3. Why does the alternator not work?—The drive belt is torn.
- 4. Why is the drive belt torn?—The drive belt has never been replaced.
- 5. Why has the drive belt never been replaced?—The car has never undergone any maintenance.

¹ Ash Maurya: *Running Lean: Iterate from Plan A to a Plan That Works*, Cambridge 2012, p. 191.

We know from experience that people are very bad at describing their own behavior completely. When we always dig deeper, we prompt them to think about their behavior. The first time we repeatedly ask »why« questions, we will feel silly because we ask like little children. However, without asking further, we will never uncover the deeper insights. This is just a matter of practice.

But what if the interviewee feels uncomfortable? This happens because our interview partners are also not used to be questioned in this way. We have to simply tell them the truth, »We want to get to know the backgrounds. After all, we do not know it ourselves!« When we do this, our interview partners will usually understand the reasons for our pushy questioning.

In situations like this, it is also helpful to express not all the questions in the same way but to use varying interrogatives, e.g. »Why is this important for you?«, followed by »For what reason do you do that?« and »On what grounds do you think that this is what helps you?«

The 20:80 Technique

The 20:80 technique controls how much time is allotted to the interviewer and the interviewee: In 20% of the time, we ask our questions, and in 80% of the time, we listen. We want to let our interview partners tell us as much as possible in order to understand them, and if necessary, we dig deeper with further questions. However, over and over again we are tempted to control our interview partners too much, e.g. by recommending answers. This happens particularly often when we like to talk much. In this case, we have to restrain ourselves.

Questions to check our understanding are okay; »why« questions are desirable. But we never provide an answer, and we never use generalizations—no »usually« and no »mostly«—because we want to know something concrete. We also do not ask »what-if« questions because they entice our interview partners to think in terms of solutions.

¹ Tip: When the interviewee pauses, we simply continue to look at him or her expectantly. The interviewee will then take the initiative to try and answer the question more profoundly without us having to ask further questions.

When our interview partners have to think, we do not urge them. We have to endure breaks. Leeway is important. Especially deeper motivations and insights need time to manifest themselves on the thought surface of our interview partner. In everyday life, we never investigate the behavior of others and of ourselves at this level of detail.

In this context, breaks tell us whether we have already advanced deep enough into the backgrounds. As long as our interview partner does not pause, we know that we are still on the surface.*¹



Facial Expressions and Body Language

Communication is a complex phenomenon with many aspects. How we say something is as important as what we say. The former comprises facial expressions and body language. While conducting an interview, we have to observe both. When our interview partner hesitates, shrugs or shakes his head, there is some sort of tension between what is said and what is meant.



Interview partners who do not tell us the whole truth do not lie for lying's sake. In most cases, they first have to figure out the facts themselves. Sometimes they give a socially desirable answer at first, i.e. the answer that they think we want to hear. Sometimes our interview partners are ashamed (regardless of whether this is justified or not) and fears that we condemn them for their views. For this reason, we always have to pay attention to the facial expressions and the gestures. Do they match the statements that we hear? If not, we have to ask further questions.

Open Questions

We ask questions that our interview partners cannot simply answer with »yes« or »no.« These are called »open questions« because they help us to make our interview partners open up so that they talk from the bottom of their heart and share their knowledge.

Without practice, it is not that easy to ask open question. In principle, we can turn any closed question (i.e. any question answerable by »yes« or »no«) into an open question. The trick is as follows: We simply add, »Why?« For instance, »Do you like to ride a bicycle?« and »Ah, and why?« This way, we cause our interview partner to tell us more. Ideally, we should ask an open question in the first place, in this case, »What is your take on riding a bicycle?«



Digging Deeper When Meeting Contradictions or Patterns

Sometimes we note contradictions between what the interviewees say and what they do.

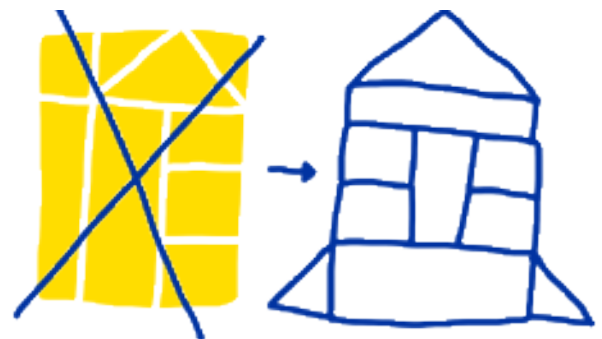
Example: Our interview partner is a staunch supporter of Green politics. He respects the environment, and in the interview he swears by organic food, eco-friendly products and fair trade. However, he also tells you that he would be lost without his car and that he even drives for short distances instead of walking. This should set off our alarm bells. We are on the trail of a hidden insight! Maybe our eco guy uses his car because he fears aggressive youths lurking in his neighborhood. Or maybe the car is the only luxury he allows himself. We can only learn the reason when we ask further questions.

We always take notice when statements do not match each other or the facial expressions and the body language. We also take heed when we notice identical patterns with several interview partners. In such a case, we also dig deeper and ask »why« questions. Ideally, we will learn something surprising that bears the potential for innovations.



Asking Concrete Instead of Abstract Questions

When our interview partners fall back to commonplaces, we have to dig deeper and to ask them for personal experiences. We are as much interested in success stories as in failures, as long as they were formative and meaningful. The interview guideline (section 6.3, EXPLORE method 1) forces us to ask for specific experiences. They form the core of our information. Therefore, we do not only ask, »What makes you angry?« but also »When have you been really angry the last time?« and »Why?«



The Mirror Technique

In mirroring, we repeat the statements of our interview partner in other words. We do this to have the statement confirmed. »Did I understand that correctly? You always take your car to drive to the supermarket around the corner?«

We also mirror when we want to encourage our interview partner to tell us more. Mirror questions help to focus on the essential things. For this reason, they do not have to be asked as open questions. When our interview partner still does not continue to talk, we add, »Why?«

For example: »When shopping, I always try to buy organic products, although they are more expensive. After all, that is what you do, don't you?«

»You always purchase organic food?«

»Yes, fruit and vegetables. Sometimes also poultry. Most of the time, I don't eat meat. I have seen too many documentaries on TV. It's really cruel what we do to the animals.«

At this point we could dig deeper and fathom the emotions of our interview partner during the rare occasions of meat consumption (if that somehow fits into our research topic).



Simple Questions

We ask simple questions that are properly separated from each other. We do not use nested questions comprising several subquestions, because in that case, the interview partner could simply pick the part he or she likes to answer and we would run the risk to lose track of the other subquestions.

When we talk to several people at once (which is generally unfavorable), we address each question to only one person.





Brevity and Precision

We ask brief and precise questions. Short questions are made up of no more than ten words.



Empathy

In our interviews, we will eventually get to a point where our partner reveals personal matters or even quirks. In most cases, they start to do this tentatively and only give us some hints because they do not dare to talk about it. When we notice this, we have to dig deeper gently and empathically. Our interview partners must feel comfortable. They must not have the feeling of being labeled. We show them our understanding and our sympathy, e.g. by revealing something of ourselves that fits the context. This can be anything that helps to bring us and the interview partner on par.

Let us assume our interview partner is a passionate collector and shows as a room full of plush toys. Do not laugh or make sneering remarks like, »Oh, really?« Instead, tell your interview partner about your own unusual hobbies! We only laugh when our interview partners laugh about themselves (which often happens in cases like these). Real empathy is indispensable to learn about personal matters.



For Advanced Users: The »Hierarchy of Needs« Technique

The Hierarchy of Needs technique helps us to understand what we really want to find out, how we ask the right questions and how we ask our questions the right way. Many of us will be familiar with Maslow's pyramid of needs. Based on this, Dev Patnaik, co-founder of the US consulting agency Jump Associates, gave us a wonderful navigational instrument for interview techniques.^{*1} In our interviews, we use a combination of both approaches (see Fig. 5.3.1).

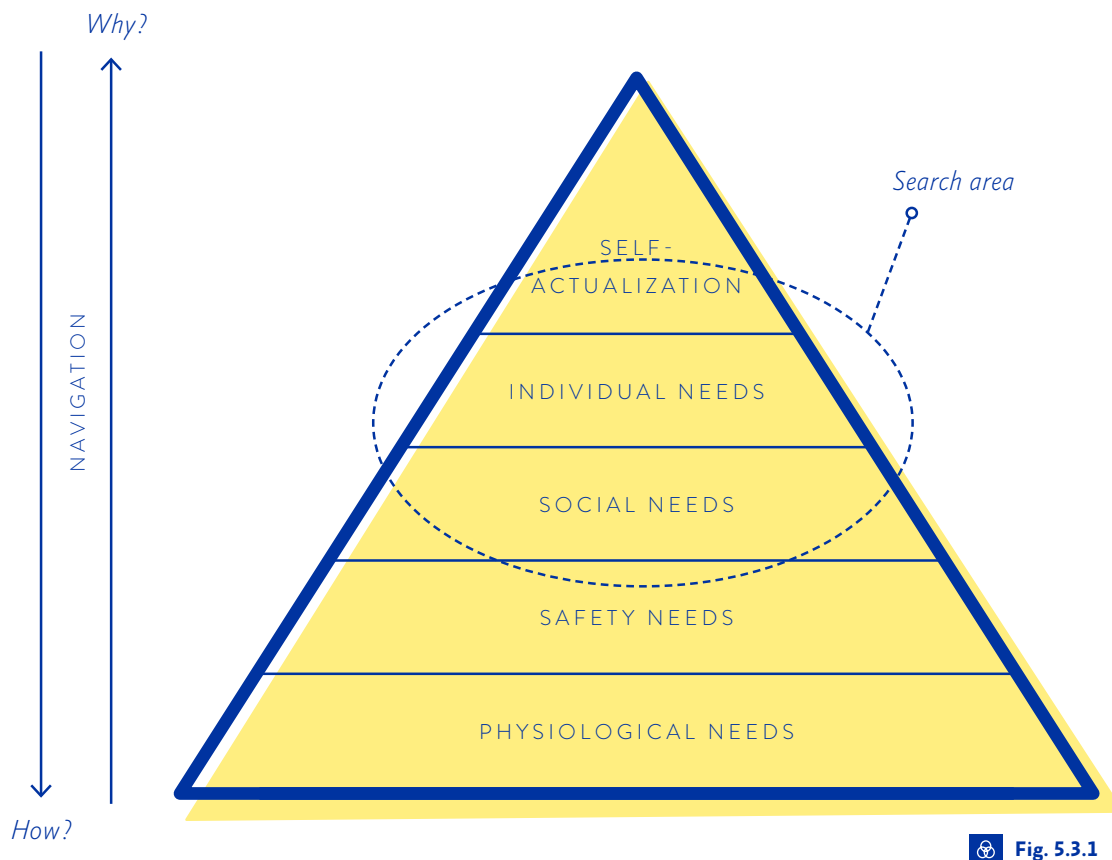
With the pyramid of needs, we can work in two directions.

At the top of the pyramid, we have the need for self-actualization. By this we mean states like »being happy«, »being spiritually fulfilled« etc. The expressions are often too general for us to work with. Every human being

¹ Dev Patnaik: *Wired to Care: How Companies Prosper When They Create Widespread Empathy*, New Jersey 2009.

strives for happiness, satisfaction and spiritual fulfillment (of one kind or another). Thus, we do not want to know *if* our interview partners want to fulfill these needs but *how* they do it and in what context. When we start at the top with the abstract need for self-actualization, we use »how« question to ask *downwards*.

At the base of the pyramid sit the physiological and social needs as well as safety needs. These are the needs that our interview partners usually like to tell us. However, insights from this area are not meaningful enough to start developing a product. When we start our interview at the base of the pyramid, we navigate *upwards* by the use of »why« questions. They help us to understand why and in what context our users have specific needs or requirements.



5.4 BASIC TOOL #4: DOWNLOAD AND STORYTELLING

For organizational reasons and for reasons of time it is not possible that all team members talk to all interview partners. However, we want to interpret the statements and behaviors of the interviewees jointly.

Therefore we need to give our colleagues on the project an appropriate opportunity. Download and storytelling are our tools to share the gathered knowledge with the team when we have split up to conduct interviews, tests or observations. We therefore need these tools both in the EXPLORE and in the EVALUATE module.

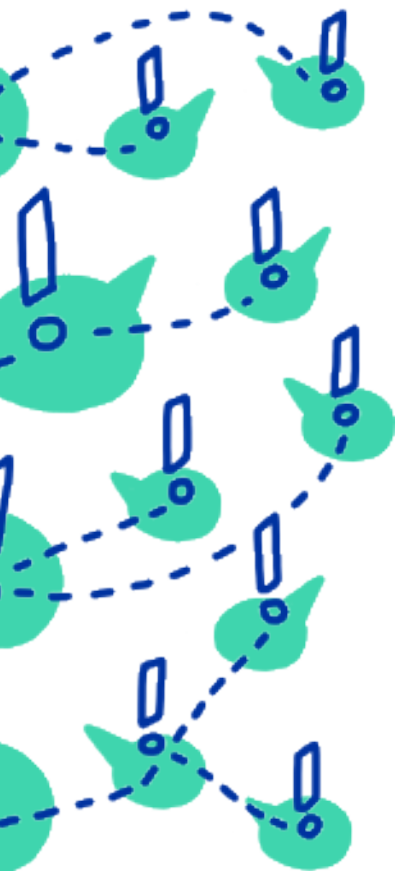
Download is the process of making our knowledge available and comprehensible for the team. The second step, storytelling, describes the way of this downloading process: It happens in the form of a story. Stories transport pictures, context and interpretable information. If we simply handed out a condensed bullet list, the other team members would not be able to retrace the information and to understand the background. In this way, it is not possible to feel empathy for the users!

There are two roles in download and storytelling:

1. The Storyteller

A teller shares his or her knowledge. The task of a teller is to tell the information about the interviewee in form of a condensed story. This information includes who the interviewee is, what this person does, how the person lives, the dreams and dislikes of the person etc. If the teller simply repeated the whole interview, that would be rather lengthy. Only the teller knows which pieces of information are really important and which are not. The teller reports peculiar and surprising answers and insights.

When the teller has shared his or her knowledge, a session is completed. Now the next person in the team shares his or her information.



2. The Writers

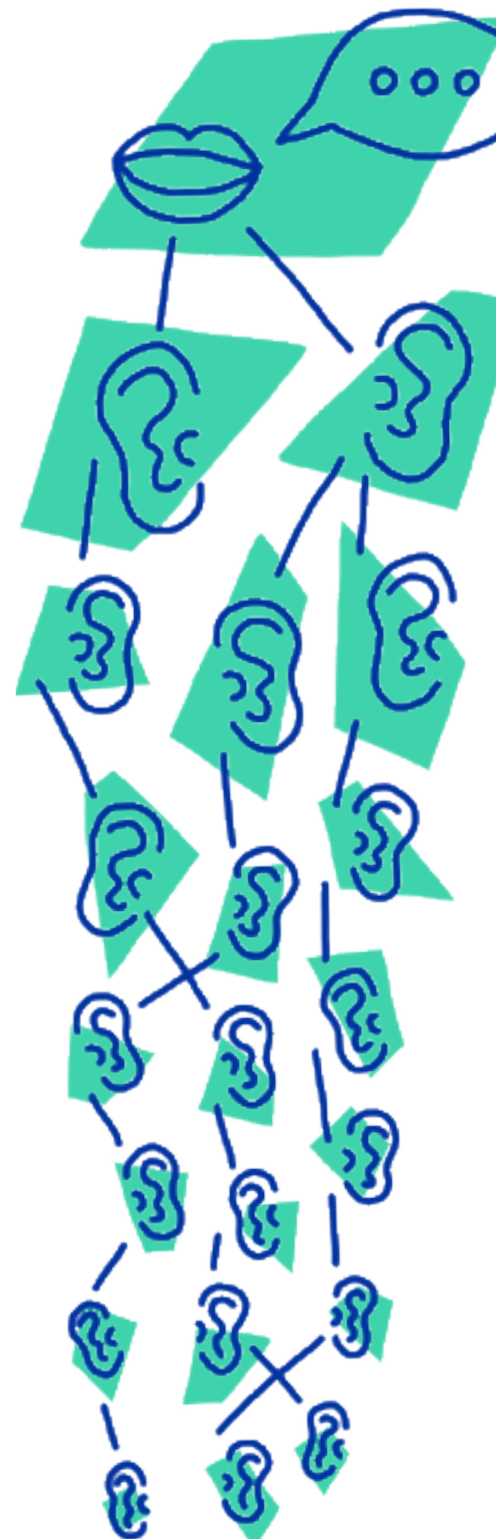
The other team members each note the statements that are most important for them on sticky notes and post them on the working wall. Important information can comprise insights, surprises, needs, motivations, problems, frustration factors and matches as well as contradictions between words and actions. Duplicated sticky notes are a good sign that we are on the trail of important insights. When organizing the information, duplicates may later be deleted.

Questions to further understanding are allowed and welcome; after all, we want to develop a common understanding of the sphere of life of the interviewee. In doing this, the team often uncovers gaps, e.g. missed questions and things that we still have to research.

All members view the story from their own perspective and thus extend our common understanding of the information. This is particularly valuable when our team consists of people from various disciplines.

By means of the time-boxing tool (basic tool #2), we grant every teller the same time to share information. For interviews of two to three hours, we recommend a story telling time of approx. 45 minutes, but not more. Anything that we cannot tell in 45 minutes is not vital for our innovation project.

When all tellers have told their stories, our walls will be covered with unsorted knowledge on sticky notes. Clustering and synthesizing of all this information is a tool on its own, which we will describe in the next section.



5.5 BASIC TOOL #5: CLUSTERING AND FRAMEWORKS

We produce new data on sticky notes nearly on a daily basis, e.g. by interviews, research or user tests. In order to keep track of the information, we have to organize it. When we have collected various pieces of information, e.g. by downloading or storytelling, we look for patterns, relationships and connections between them. We group all the sticky notes with related information and name the respective topic. By this clustering process,^{*1} we improve clarity and conduct a first information synthesis. When there are relationships or overlaps between different topics, we highlight them, too. In order to further evaluate and organize the results of clustering, we use frameworks. These are visual depictions of facts, i.e. diagrams. Frameworks are mostly used in the EXPLORE and EVALUATE modules in order to evaluate and visualize the insights from user interviews. In this section, we will introduce several frameworks.

Journey Map

² See the User Journey method in Section 6.3.

The Journey Map framework helps to visualize linear processes. It is mainly used to create a »user journey«^{*2}, but it can also be used for other things. It is important to define the individual steps that make up a linear process. For instance, imagine that we have talked to our users about producing digital music. Suddenly, we recognize a pattern: Most users first attach the devices to a laptop, then start a recording program followed by a music program, and subsequently begin to play a piece of music on the keyboard. Finally, they save the new track. When we represent this process graphically (see Fig. 5.5.1), we can compare further information to it or consider how to change or improve the process.

2×2

The 2x2 framework helps us to correlate two aspects of a topic and thus to understand the topic better. We plot one aspect on the x-axis and the other one on the y-axis. Each aspect has two values. Thus, we get a four-field matrix, which allows us to recognize interactions and commonalities of the aspects and to draw conclusions.^{*1} As an example, the consultant Christopher S. Penn has applied the 2x2 framework to the topic »visitor numbers of a website« (see Fig. 5.5.2). One axis specifies the number of unique visitors while the other axis gives the number of repeated visitors. Ideally, we find ourselves in the top right field, having many new and repeated visitors. The framework also helps us to find out the reasons for low visitor numbers. Maybe we have a bad website or bad content, or maybe our marketing is bad so that only few people stumble upon our site.

1 Well-known examples for 2x2 frameworks are the portfolio analysis and the SWOT matrix.

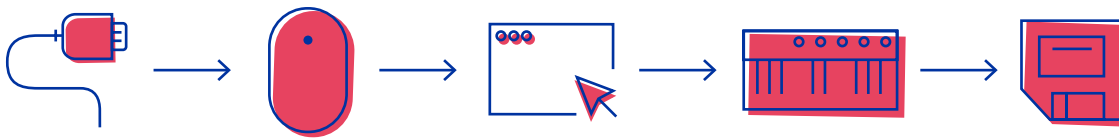


Fig. 5.5.1

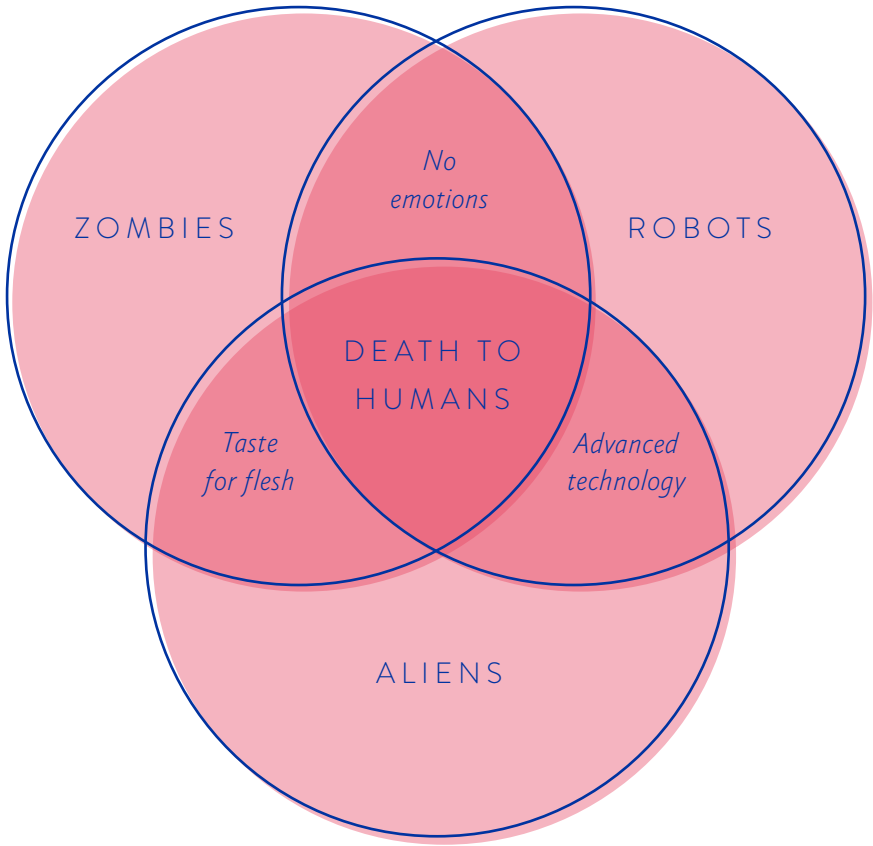


Fig. 5.5.2

Venn Diagrams

Venn diagrams are especially suited to show the distinctive features and/or commonalities of different situations or groups, e.g. user groups. The intersections of the circles contain the respective common features. A very illustrative example was created by the American T-shirt company Snorg Tees. This Venn diagram shows the common features of zombies, robots and aliens (see Fig. 5.5.3).

 Fig. 5.5.3



5.6 BASIC TOOL #6: INNOVATION DEVELOPMENT IS TEAM WORK

Given the wave of »new work«¹, agile development processes and increasing complexity of tasks, teamwork has become a necessity. It is essential to organize and practice teamwork correctly.

¹ Dark Horse Innovation:
Thank God It's Monday,
Berlin 2014.

By »teamwork« we mean the collaboration of people from various disciplines and with various careers. It would be great if we had a real genius among our midst, a real visionary and all-rounder, but that is only very rarely the case. It is much more common that every team member is really good in his or her respective field of expertise. By combining these different strengths, our *team* becomes a *visionary*.

Does this sound too good to be true? It were, if we did not respect a few rules. As a team, we have to merge into one person. We have to think as if we had only one common brain. We will soon have a look at these rules.

It can be extremely difficult to function as a real team, especially when we think differently because we come from many different fields. In the seven years of multidisciplinary work at Dark Horse, we also had to learn *real* teamwork at first. We are sociologists, artists, psychologists, IT experts, economists etc. All in all, we have representatives of 25 different areas. This makes us really feel how differently we think and how differently we address problems.²

² Of course, people also think differently or similarly for other reasons, not only based on their field of expertise.

In the context of companies, this can be compared to cross-department activities for a project. Marketing and product development, IT and design—oh dear, this is where extremely different views clash. Of course it is comfortable to work with people who think in the same way. But in order to become a »team visionary« and to manage complex tasks, it makes sense to gather different types of knowledge, different brains, different disciplines and background. After all, we want to achieve something great; well, at least not the usual with the usual way of thinking. When the teamwork does not work, the best processes, methods and tips will not help. The team determines the output. A badly functioning team produces mostly bad output.

At first, it may be frustrating. Maybe we do not understand certain ways of thinking, maybe we have to ask »silly« questions, or maybe the other guy has to explain seemingly »clear« things. But nonetheless we stick to our view: Teamwork is worth it!



Five Rules for Working in a Team

Rule #1: Be ridiculous and stupid

Normally, we are not allowed to be ridiculous or to ask stupid questions at work (except if we are clinic clowns^{*1}). In the context of innovation development, these things have to be definitely allowed in our team. There are various reasons: Every member of a multidisciplinary team has special knowledge on a specific field of expertise and thus has to explain specific abbreviations or similar things.

We need someone to ask »stupid« questions so that we can work our way forward to the »intelligent« aspects. Besides, a very stupid question or idea may serve as inspiration for an intelligent solution. To give you a striking example: Image it is the year 1943 and we work at IBM. We belong to the innovation team, and one of us suddenly asks, »Hey, what if every private household had its own computer? We could call it *Personal Computer* or simply *PC*. That would be cool, wouldn't it?« Of course, we would think, »What a silly idea!« After all, our boss, Thomas Watson^{*2}, said at the last Christmas celebration, »I think there is a world market for maybe five computers.« Today we know that this idea would not have been stupid at all; albeit not really practical regarding the technology, the product and its marketability at the time. Today, the idea would be nonsensical as nearly everyone already owns a PC or even several devices like laptops, tablets, smartphones or other smart, digital products for specific applications.

To summarize: What seems ridiculous and stupid today can be visionary and intelligent tomorrow. This is especially true in the ever changing digital world. On the way to *new ways of thinking*, we also have to consider the seemingly ridiculous. In order to produce something visionary, we have to push the envelope of our thinking; or even of physics, as Elon Musk^{*3} might say.

Rule #2: Error Culture, not Zero Tolerance

Mistakes are frowned upon in our everyday working life. We all make them, but we like to sweep them under the carpet. Lately, however, »error culture« is mentioned more and more often. There are even public lectures where people who have failed talk about their biggest mistakes while being applauded by the audience.^{*4} Why all this fuss? Who can afford to not only make, but actually admit to, mistakes?

Usually, errors cost money and waste time. But what if mistakes actually save money and reduce risks in the long run? Under those circumstances mistakes would be OK. That is exactly our point. An error culture actually helps us in

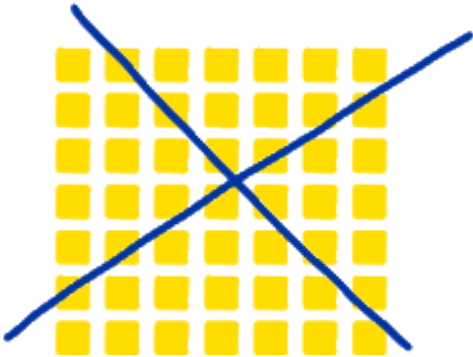


¹ youtu.be/kB91hgza9_g
(26.06.2016)

² Chairman and CEO of IBM from 1914 until his death in 1956.

³ Elon Musk is a visionary and all-rounder, viewed by many as a modern technology superman. A great series of articles about his life and his achievements can be found at bit.ly/1lXGK9
(06/22/2016)

⁴ These events are called »FuckUp Nights.« It is a global movement founded in 2012 in Mexico (according to themselves). In Berlin, these events are organized once per month.
URL: fuckups.de
(06/26/2016)



developing innovations. It helps us to learn. Making errors means to find errors and to eradicate them. It is best to make errors—even to provoke errors!—as early in the development as possible instead of discovering a blunder when we are about to enter the market. The latter is really expensive.

Our job has shown us that we can always discover errors in the drafts for products and services. We cannot consider everything and we cannot foresee everything, in particular it is impossible to know how users will handle the product. However, we can thoroughly test and retest the users' behavior in advance so that our innovation becomes more and more perfect with each test run and each iteration.

Perfection is only the desired *final state*. The intermediate steps do not have to be perfect. They only have to demonstrate a given range of an idea so that we can test it and reject it as an *erroneous development*, if necessary. Thus, errors can help us save time and money.

Working with *intermediate versions* is unusual but it works. We just have to learn to turn our perfectionism switch to OFF.



Rule #3: Trust and no hierarchy

A team that works iteratively, lives by an error culture and whose members are allowed to do stupid things once in a while and to ask silly questions has to be built on trust. Social and hierarchical barriers are fatal for our type of innovation development.

When employees from various departments and decision levels are brought together into a project, the resulting team can only work when hierarchies are completely avoided. The intern must be able to interact on a par with the CEO, the Chief Nerd and the secretary from the HR department. According to our experience, directors do not tend to push themselves to the forefront but are urged into a dominant role by others because this is how it always has been. Therefore, we should always consider in advance how friendly and trusting directors and employees interact in daily life. Is everyone entitled to state their opinion freely? Is everyone respected and taken seriously? When we have a bad feeling about this, we discourage directors from meddling with the team work.

Rule #4: Developing a Good Working Culture in the Team

Working cultures can and have to differ. We all have our own concept of the type of structure that we favor at work. Thus, a functioning work culture can only be developed by stakeholders who jump at innovation development in a team.



Rule #5: Developing a Reasonable Team Schedule

Since we work jointly on our innovation, we also need a common timetable. We have to be honest: Which weekdays can we really use for the joint work? Other fixed dates, meetings and deadlines have to be scheduled for non-project days.

Whole days are better for work on the project. Half days are usually inefficient. When you have finally managed to grasp the task at hand, the appointment is already over and you have to rush to the next meeting. Whole days mean »whole attention.«

The overall schedule also depends on our joint schedule. We break down large projects into smaller time blocks, which we only create a few days in advance. In this way, we also track and analyze our progress. Daily mini-objectives defined in advance are helpful in doing this. Particularly in longer projects that last for a month or more, cooperation in a team becomes more difficult. In most cases, we are not completely free of other assignments and work projects. Thus, we have to allow for time to hand over our work or if need be to instruct our deputies in an emergency. Avoid loading yourself with too many work packages if you know that you cannot deal with them in time. We have to prioritize and be able to say no once in a while. You cannot have your finger in every pie!

Once a week we should take an hour of our time to review the overall picture, to evaluate the status quo and to discover the reasons for delays. The last team work day of the week is a suitable date. This way, we can start the next innovation week with a fresh mind and a clear plan.

What really counts is our innovation project. All team members agree to respect the established periods for the project. This is the foundation. This way, we can get the approval of the management more easily. The management has to respect our innovation periods as well.

Tips for the Right Team Building Structure and Culture



How to create a well structured daily schedule for teams

We use the tools »Team Check-in« and »Team Check-out« and keep an eye on our time budget all over the day.

#1 Team Check-in

Every day begins with a so-called »Team Check-in.« We discuss the current state of the project, the tasks for this day, who carries out which task, and what we want to have done at the end of the working day. Usually, ten minutes will suffice.

#2 The day

However we structure the day, we measure and monitor the time slots by means of our timing device. In this way, we avoid squandering time by chatting and not achieving our daily objectives. We take our time for breaks, though. We plan our breaks and stick to it. Our brain needs a break every now and then, especially on days when we have to handle much information. Breaks help us to revitalize. They are also good for the team.

#3 Team Check-out

Every day ends with a »Team Check-out.« We review the day and we discuss if and how we have achieved our goals for the day, what we have learned for the next time. If there are any special tasks for the next meeting, we can assign them at the check-out. The check-out can also be done in ten minutes.

There are phases when we work independent of each other, e.g. when conducting interviews or tests. In these cases it is particularly important to synchronize with the team at check-out, if need be by phone.

TEAM CHECK-IN

- *Distribute roles*
- *Status update*
- *What do we want to achieve?*
- *Plan for the day*

TEAM CHECK-OUT

- *Special assignments for the next time?*
- *Reflection on collaboration*
- *Reflection on methods*
- *Reflection on contents: Have we achieved what we have planned?*
- *Planning and homework*
- *What do we want to document?*

How to form a SUPER TEAM

Forming a functioning team or developing a common culture is not a no-brainer. The following tools and tips help us in our daily work and our daily relationships:

#1 Super heroes and super villains

We all have our strengths, which we like to put in the limelight, and our quirks, which we only reluctantly reveal and which may trouble the team. In order to use our individual strengths and to diminish the power of our quirks, each of us designs a super hero and a super villain at the start of a project.^{*1} These characters are manifestations of our best and our worst character traits when it comes to working in a team. This takes approx. 30 minutes.

Examples for these super villains might be the »One-Eyed Interrupter«, the »Cruel Critic« or the »Amazing Latecomer« (see Template 5.6.1). When we expose ourselves to our fellow team members in this way, we establish understanding for our quirks and can better handle the quirks of others. Particularly in a crisis, we can confront our super villains on a more humorous level.

Developing a super hero is usually easier for us. The »All-Knowing Organizer«, the »Grey-Bearded Analyst« or the »Playful Queen of Tinkering«—these are all useful super powers for our projects. After all, who is better suited to take on a specific task but someone who likes this type of work and who is good at it? Super heroes and super villains have names and costumes. We do not want them to exist only in our imagination, and therefore we give them a cool name, draw them, show them to the group and put them on display in the team space.

¹ This method originates from the d.school/Institute of Design at Stanford University. We have slightly adapted it to our daily work.

SUPER HERO & SUPER VILLAIN


Name:

Characteristics:

1. _____

2. _____

3. _____



Draw your super hero/super villain!

1 Incidentally, this is the first time that we at Dark Horse Innovation share these rules!

#2 Cultural rules

Every team is unique, and we all have our own ideas and expectations of the joint work. It is imperative to discuss this in advance and to lay down rules for our team culture. To show you how these rules may look, we show you an excerpt of our own Ten Commandments by which we live and work.*¹

- You shall not break your word.
- Before you take part in a project, make sure that you can muster enough time and energy. In for a penny, in for a pound!
- Join the regular team meetings. Make sure that these appointments do not collide with any other ones.
- You shall not waste time.
- Abide by agreements, be reliable and punctual; if you cannot be punctual, then notify the others in advance.
- You shall honor your team and the companionship.
- Glory and dollars are divided equally among the team.
- You shall kill ideas!
- Every team can work the way it wants to work.

When we have agreed on our team rules, we print them and hang them up where they can be easily seen.

#3 Highlights of the week

Once a week, we have an operational meeting. At the end, we always share our highlights of the week. Each of us writes three wonderful and noteworthy incidents of the past week on sticky notes. Subsequently, we present them all. This lightens the mood, facilitates team work and is exciting. Sometimes we have already forgotten what good things happened in the past week. Instead of a highlight, some of us occasionally share a funny failure or a frustrating situation.

#4 Self-denunciation board

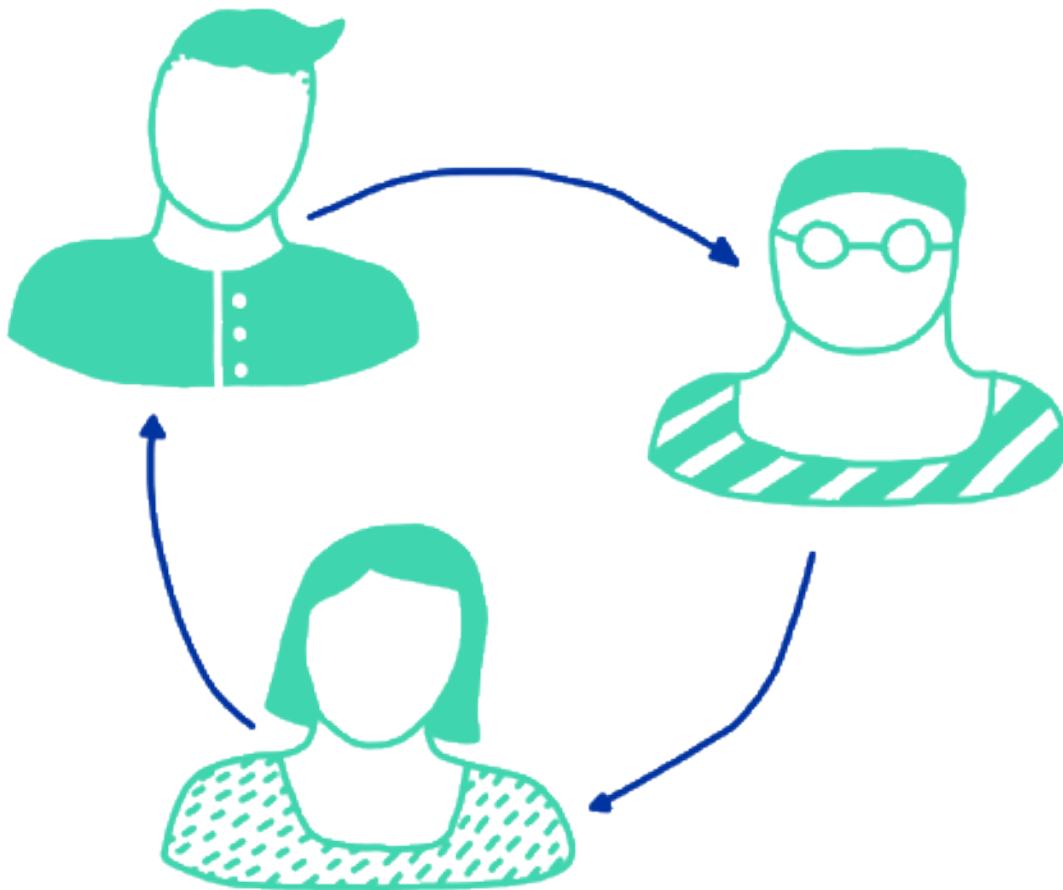
This is a notice board where we post confessions, either anonymous or with our real name, e.g. »I went on holidays to Iceland and used up the bonus miles that I collected with Dark Horse.« The confessions may be small or big. In any case they strengthen complicity in the team, and that is always good.

#5 The same time investment for all

The success of a project can only be a joint success. All team members have to invest the same time share in the project. Free riders are poison to innovation development. We need our collective power. Apart from that, most of the methods on the following pages are hard to be used on ones own.

#6 To understand and to let understand

Especially in multidisciplinary teams, we talk in different »languages« and think in different patterns that others might not comprehend immediately. The only remedy is patience and understanding. This applies to both directions. The one who does not understand something needs as much understanding as the one who explains something needs to keep calm. But it is worth it. Eventually, we will all be in sync.



6 THE EXPLORE MODUL

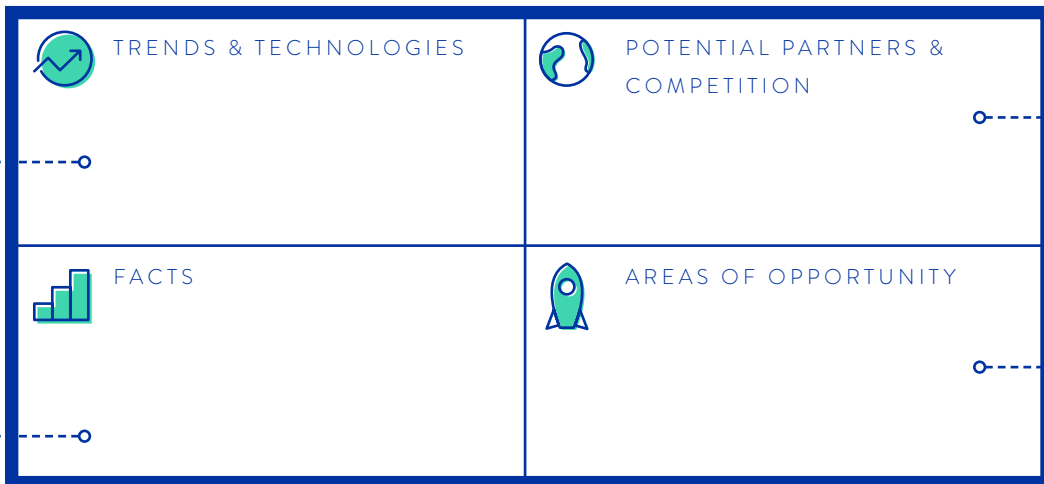
The EXPLORE module helps us to get to know the users and their needs, preferences and considerations for decision-making. Only if we precisely know the users and their problems, we can develop an idea and later a product or a service that convinces and excites the users.

In the *Trends & Technologies* field, we note information about megatrends, socio-cultural trends, consumption trends and zeitgeist trends that (may) have an effect on our project. We also incorporate our knowledge about current technologies and developments. This is especially important in the area of digital innovations.

In a way, the *Facts* field is our joker. Here, we put everything that we cannot assign to other fields but that has something to do with our research topic.

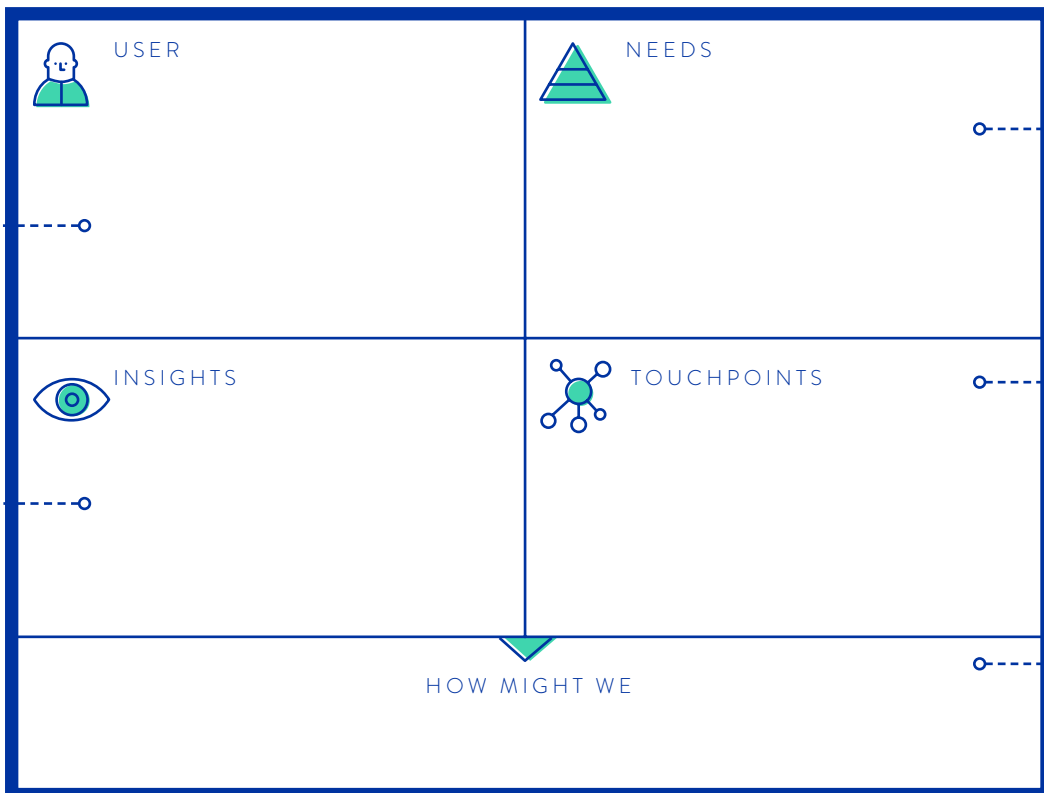
The *User* field contains the characteristics of our future users. As the information in this area is strongly related to our information in the fields Needs, Insights and Touchpoints, these four categories share the largest area of the EXPLORE module.

The *Insights* field contains information about the physical and emotional environment of our users. Here we also note suitable analogies that allow for a new view on our research topic as well as suitable analogies that deepen our empathy for the topic.



The field *Potential partners & competition* contains all information about relevant partners and competitors on the market that we want to renew.

Under the heading of *Areas of opportunity* we note recurring important topics that bother our users. These are the first hints to specific needs. In many cases, they turn out to be the preliminary stages of ideas, which we can later develop by means of the CREATE module and its methods.



What we jot down under *Needs* is what we want to solve with our innovation. The combination of user and need is the benchmark for the development of new digital products and services.

The field *Touchpoints* lists the points of contact between the user and a service or product.

Based on the information about User, Needs, Insights and Touchpoints, we develop a *how-might-we* question to summarize the users and their unsolved problem. We enter this question into this field.

6.1 EXPLORE MODULE: OVERVIEW OF THE FIELDS

The EXPLORE module is our »hard disk« for all relevant information about our users and their needs, but also about the general context of our innovation development. We record the results in the individual fields. Potential competitors and partners may be as important as trends and technologies.



MATCHING METHODS:

- 7 Research Mind Map
- 9 Market Trend Analysis

¹ www.zukunftsinstitut.de
(06/26/2016)

Trends and Technologies

Trends and technologies change rapidly in our digital age. They often cause and affect each other. A trend is by definition an instrument to describe changes and flows in the society. The term emerged at the end of the 19th century in the context of company shares and stock exchange prices. The *Zukunftsinstitut*^{*1} (»Future Institute«) in Frankfurt organizes trends into five areas: megatrends, socio-cultural trends, consumption and zeitgeist trends, product and fashion trends and metatrends. For innovation development, the first three types are the most important.

¹ John Naisbitt: *Megatrends: Ten New Directions Transforming Our Lives*, Warner Books 1982.

Megatrends describe long-term developments that shape all areas of society and economy.*¹ A trend has to fulfill three requirements in order to be classified as a megatrend: a life span of at least 25 years, an impact on several areas of life and global impact.

An example of a current megatrend is the »Silver Society«, caused by an increasing life expectancy and changing behaviors in old age. Traditional old-age roles are diminishing, and many elderly people take part in society more actively than before.

Socio-cultural trends describe medium-term change processes of about ten years. The focus of these trends is on social and technological change. The attitude towards life, the value orientation and the structure of needs of people change.

Consumption and zeitgeist trends are short-term changes occurring in the world of consumption and products. They last for about five to eight years. A current example is the subscription trend.*²

² In the last years, more and more media providers offered their content in the form of a subscription model, e.g. Apple, Netflix and Spotify. Users pay a monthly fee and get access to the product or service. This business model is familiar from newspapers and magazines. It is also known as »advance sales.« Today, many digital products and services use this business model.

Trends provide us with clues about what areas will change in the short, medium or long run and thus may affect our new product, our new service or our user. Here, we do not want to analyze the trend in depth but to get the general idea.

When there are no trends to build upon, all the better! After all, the iPhone established a trend towards touchscreen keyboards while all the people still banged on their Nokia and BlackBerry buttons. Knowing current technologies and developments is particularly important in the area of digital innovation. Both can be the basis for new ideas or act as part of the solution.

These technologies can be crowd sourcing, crowd funding, cloud computing, big data, sharing, Internet of Things, mobile Internet or social media. We are not interested in how these technologies work on the technical level but how they are used and what results they provide. When we talk about social media, we want to know what our users can do with them and why they are using them. These insights can inspire us. Maybe it is worthwhile to translate individual mechanisms to other areas.



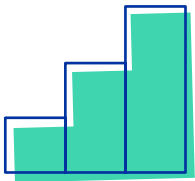
MATCHING METHODS:

- 6 Value Proposition Chain
- 8 Stakeholder Map
- 9 Market Trend Analysis
- 10 User Journey

Potential Partners and Competition

In the digital world, the boundary between partners and competitors can become blurry rather quickly. Many digital services and products nowadays have interfaces (APIs) to other products. For example, Instagram, a social network for sharing photos and videos, uses the integrated camera app of the smartphone OS. Many apps also use the cloud storage service Dropbox for storing data, and therefore Dropbox provides an open interface so that other apps do not explicitly ask for permission.

The number of services and products providing open interfaces increases rapidly. This is one of the reasons for a changing relationship to competitors on a common market. Maybe we can build upon an existing service instead of replacing it? This saves time and gives us access to an existing customer base that otherwise, we would have to build up with much effort for ourselves. We carefully observe the market where we want to offer our new product or service and jot down the relevant vendors. Subsequently, we organize these vendors into three groups, competitors, neutral and potential partners. In the CREATE module, we will later investigate the relation of our solution to the solution of other vendors.

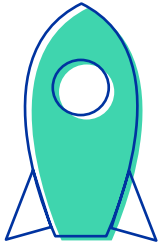


MATCHING METHODS:

- 6 Value Proposition Chain
- 7 Research Mind Map
- 8 Stakeholder Map
- 9 Market Trend Analysis
- 11 Fly on the Wall
- 12 Self-Immersion
- 13 Cultural Probes

Facts

During our research with the EXPLORE module, we will repeatedly find interesting information, facts and inspirations that do not directly match any of the fields provided, e.g. data from quantitative market research, laws or market figures. We can use this information as guidelines or frame conditions, but we never view them as obstructing barriers.



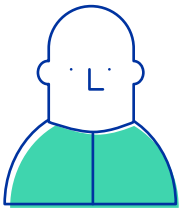
MATCHING METHODS:

- 4 User Motivations Analysis
- 5.1 Persona Synthesis Cluster
- 6 Value Proposition Chain
- 7 Research Mind Map
- 8 Stakeholder Map
- 9 Market Trend Analysis
- 13 Cultural Probes

Areas of Opportunity

Areas of opportunity help us to focus on a specific topic or to gain an overview.

During our research, we will continually find things that somehow bother our users. At first, they may not be tangible. We cannot name a related need. To give you an example from our experience: We once did a project in the area of »smart living.« During our first research we identified several topics of interest for our users. Time and again our discussions revolved around ecological awareness. We talked about saving energy, about comfort and safety. These were areas of opportunity, as ecological awareness itself is not yet a need but more of a meta-topic. We could uncover the specific needs behind this idea by qualitative interviews and other in-depth research methods. Sometimes, areas of opportunity can also coincide with user needs. However, this is not always the case. It is also possible that areas of opportunity overlap. They are not always completely separated.



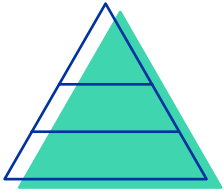
MATCHING METHODS:

- 1 The Qualitative Interview
- 2 Explorative Interviews
- 3 Getting to Know Extreme Users
- 5.1 Persona Synthesis Cluster
- 5.2 Persona
- 6 Value Proposition Chain
- 7 Research Mind Map
- 8 Stakeholder Map
- 9 Market Trend Analysis
- 11 Fly on the Wall

User

The users are the key. All our projects focus on them. We therefore have to get to know our users in their natural environment. This means that we have to leave our usual environment and go outside.

It is not sufficient to describe a faceless group of people as it is done in market surveys. We want to understand our potential users and to meet them empathically. We want to perceive the world through their senses. What motivates them? What prevents them to satisfy specific needs? In our projects, we generally try to interview at least 15 people, grouped into potential users, staunch non-users and stakeholders. We always look out for patterns among different people. However, we do not group our users according to age, gender or income but according to their needs because an innovation satisfies a need and not an income.



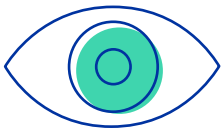
MATCHING METHODS:

- 1 The Qualitative Interview
- 2 Explorative Interviews
- 3 Getting to Know Extreme Users
- 4 User Motivation Analysis
- 5.1 Persona Synthesis Cluster
- 5.2 Persona
- 10 User Journey
- 11 Fly on the Wall
- 12 Self-Immersion
- 13 Cultural Probes

Needs

Uncovering needs is the second most important purpose of our research after identifying users. Only when we have discovered needs, we are able to satisfy them by means of our solution. Imagine you see someone standing at the edge of a gorge. How could we best help this person? Without knowing if the person has a problem in the first place, we cannot even answer this question. Maybe the person simply took a break during a hiking tour and is relishing the view. It is also possible that the person got lost and wants to get to the other side of the gorge. We have to ask in order to discover the specific need. Based on this information, we can think of a solution.

The combination of need and user is the foundation for developing new digital products and services. Needs are signposts for our products. Unsatisfied needs are problems for our users.



MATCHING METHODS:

- 1 The Qualitative Interview
- 2 Explorative Interviews
- 3 Getting to Know Extreme Users
- 5.1 Persona Synthesis Cluster
- 5.2 Persona
- 11 Fly on the Wall
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- 13 Cultural Probes

Insights

When certain pieces of information come up often, appear valuable according to our gut feeling and already inspire us to solutions during research, we call them »insights.« In 2010, we conducted a concept test for the new German ID card on behalf of the Federal Ministry for Economic Affairs. During this survey, we were able to point out the following factual insight: »People mistrust the government as well as the Internet.« This insight had a huge impact on the eventual design of the ID card.

Insights usually come in packs. They are often related or dependent on each other. For example, in another project on the topic »How can we encourage young people to vote?«, we found four types of voters: the conscious voter, the accidental voter, the conscious non-voter and the accidental non-voter. These types are already insights in themselves. During our further research, we discovered that the four types are interconnected in pairs. The conscious voter and the conscious non-voter are both interested in politics and consciously make their decisions, as opposed to the accidental voter and the accidental non-voter. Inside the two groups, there is often a gradual transition from one type to the other. Lots of new insights! At the end of the day, these two groups proved to be the relevant ones for our project.

We therefore always try to correlate important insights. This helps us to identify the real problems and to express them anew. Our young voters projects thus got the new question, »How can we turn accidental voters and non-voters into conscious voters?«

Insights can be organized into the following categories:

- **General insights:** These are contextual insights relating to our users.
- **Functional insights:** These insights are related to user activities. We ask what the users want to achieve and how they achieve their objectives. What solutions do they use, and how do these solutions work for them? Functional insights can also relate to barriers, i.e. circumstances that prevent the users from achieving their objectives.
- **Emotional insights:** These insights are related to the experiences and feelings of the user in handling the product or service. Emotions can be helpful when we conceptualize new solutions, because every time we manage to turn a negative emotion into a positive one, there is a big chance that our users will be enthusiastic about our solution.
- **Social insights:** These insights are related to the social behavior of the users. They often play an important role for digital products and services. Airbnb, Snapchat und Uber are basically services that link people by means of new technologies. Social relationships are central to all three of these services. How do our users interact? With whom do they interact? How do they want to be perceived by other users? Tip: *Social insights are often tightly related to emotional insights.*
- **Analogies:** This is a special category of insights. Analogies are solutions that have been developed for a completely different area but nonetheless offer a relevant solution approach for us. As they have already been evaluated—albeit in a different context—we can learn a lot from them. A good example is car sharing, where many users share a car. This mechanism can be translated e.g. to the housing market, resulting in a service similar to Airbnb. With car sharing, it is already proven that users are willing to share a car. This may be a sign that under certain circumstances, our users could also be willing to share other things.

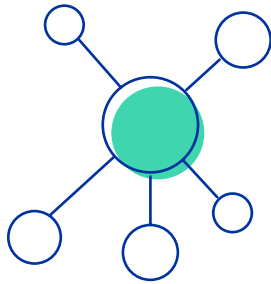
Depending on the project, there may be further categories of insights. Some insights defy categorization, but that is not a problem. The main point is to get an overview of the structures and to simplify things.

Touchpoints

Touchpoints help us to find the correct channels for designing new products for our future users. They plan an important role especially in the case of digital projects. We want to know what media and what devices our users employ, which device is the most important one in which circumstances and why.

The world of tools and devices is ever changing. New devices enter the market in ever more rapid succession.

How quickly the behavior of users can change is illustrated by the example of Bijan Sabet, a start-up investor from the USA. In 2008, he belonged to the first Twitter investors. Last year, he posted the picture from Fig. 6.1.1 with the comment, »My 13year old daughters home screen. OMG.«



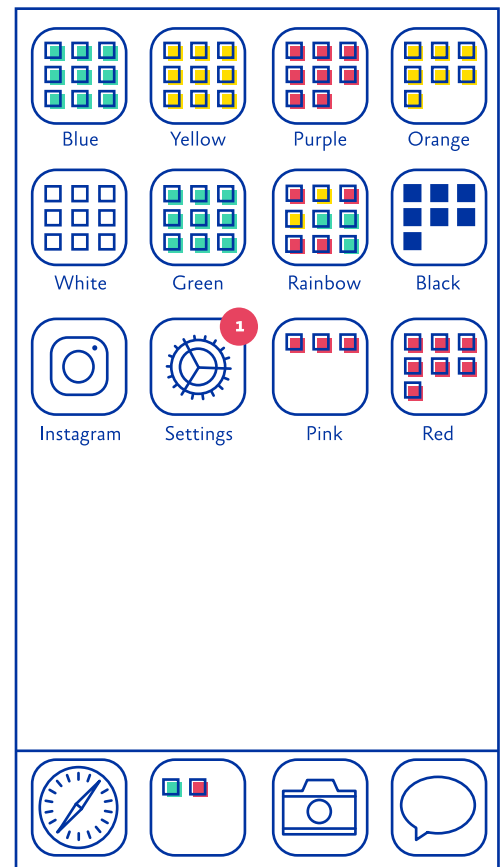
MATCHING METHODS:

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- 5.1 Persona Synthesis Cluster
- 5.2 Persona
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- 11 Fly on the Wall
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At the first glance, you might think that Sabet wondered that his daughter organized her apps according to color. However, the most disturbing aspect is the lack of a phone icon on her home screen! What does this



Fig. 6.1.1



mean? There are obviously new touchpoints and priorities among young people. Music, camera, news and Instagram are more important than the original telephone function, i.e. talking to each other.

If we want to develop a communication app for teenagers, it is worthwhile to have a look at the touchpoints. In this case, a chat app probably makes more sense than a phone service.



How Might We

This field bundles our insights from the EXPLORE module. The how-might-we question describes our problem hypothesis. What user need is still unsolved according to our insights? Only after we have recognized users, needs and problems and put them into a meaningful relation, we are able to develop suitable and innovative solutions. The problem hypothesis is expressed as a question, because questions prompt us to become active. We carry over this hypothesis into the CREATE module as our foundation for further work.

The whole of section 6.4 is dedicated to this important element of innovation development.

A SHORT INTRODUCTION TO EXPLORE METHODS

Now that we have examined the individual fields of the EXPLORE module in the last section, we will now look at the methods that help us to fill these fields with life; or with *information*, to put it less poetic.

Basically, the methods can be organized into two groups: There are »synthesis methods« that help us to classify data and to interpret information, and there are »ethnographic methods« that help us to collect the *correct* data during a qualitative field survey.


These two groups of methods go hand in hand. They are tools for innovation development. We cannot be innovative if we do not use qualitative methods and synthesis methods. It is our responsibility to make the right choice: Each projects needs an individually selected tool set.

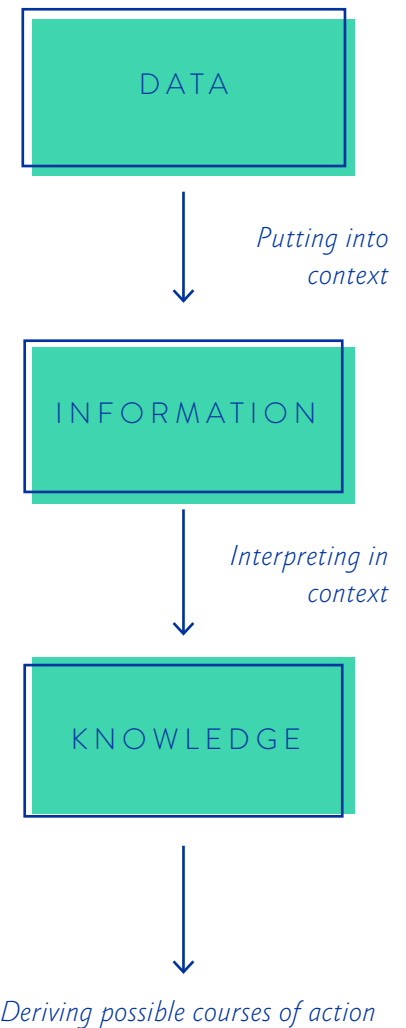
So much for the theory. But how do we use the EXPLORE module in practice? Working with data and information always comprises three steps: capturing, sorting, and interpreting. These steps always occur in this order.

Step 1: First, we have to collect as many data as *possible*. However, data depend on context and do not provide us with new insights from the outset. They only become information by putting them into a context.

Step 2: We therefore need organization schemata to explore and sort our data and to discover exciting information.

Step 3: We have to interpret the sorted data in context. This step is the biggest challenge. Note: *Our knowledge about users is the interpretability of information in context*. We can only develop ideas and possible courses of action when we are proficient in step 3 (see Fig. 6.2.1).

 **Fig. 6.1.2:**
Schema: The relationships between
date, information and knowledge based
on a preliminary study of engineering
designers



Like all processes in this book, the previously described steps of information processing are iterative, i.e. we put the captured data into a context and interpret them in order to get to know what new data from what areas we have to capture in the next steps, and then we sort these *new* data and start to interpret *them*. We do this until we can develop ideas that are *good enough for our professional gut feeling*. This evaluation is then also based on the knowledge from these iterations, which makes us feel more confident. When we later realize that we do not know everything that we ought to know, we can capture further data as necessary.

With increasing practice and experience, we and our project partners become more and more comfortable with the previously described process. This is like learning to ride a bicycle: The steps are the training wheels, which we will no longer need at a certain point.

In the following section, we first describe the methods that we use most often and that produce the most valuable information about our users in the context of innovation development. For this reason, we start with the qualitative interview and cover the more rarely used methods like market trend analysis and self-immersion later. All methods are presented in the form of a profile: First, we list the fields of the module that can be filled with data by means of the method. The section »What and why?« outlines the methods. We discuss which player type uses this method in which part of his or her process and how it is connected to other methods. The section »Modus operandi« gives step-by-step instructions to implement the methods in practice. Incidentally, there are no hard-and-fast rules. We always have the freedom to skip a step or to invent a new one. Our intuition leads the way.

We believe that in addition to the theoretical concepts, the real-life stories from our experience are particularly inspiring. In the section »How does it feel?« we thus spill the beans. These are not only success stories; we best learn from mistakes. When there is more to tell about the theoretical foundations of the methods, when there are cross-references to other methods or just some interesting details, you will find them in the »Good to know« section.

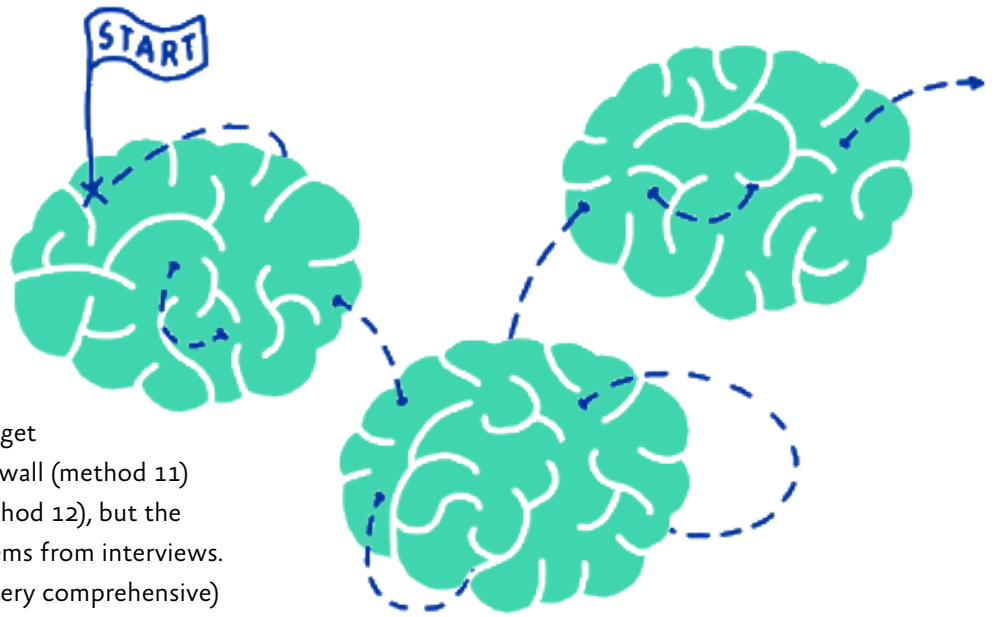
A QUESTION FROM THE AUDIENCE: BUT WHERE DO I START?

Whether we are discoverers and start with the EXPLORE module or we are designers or evaluators and use the EXPLORE module at a later point in innovation development, the answer is always the same: *We begin with what we know!*

Have a look at the fields one by one. It does not matter whether we proceed from top to bottom and from left to right or the other way round. What information about the fields do we already have in our fund of experience? What do we (as part of the company) know about trends and technologies? What do we know about users who use our products and services right now? What do we know about areas of opportunities? What facts do we know that have to be considered in our innovation development? (For example, what has already been tried, where are obstacles in the hierarchy, where are the budget limits, etc.) What do we know about potential partners and competitors?

When we believe our information and assumptions for fields of the EXPLORE module, then we can enter them. Concerning the question of the validity of our knowledge, we trust our gut feeling. What we do not know or what we do not know exactly, we can discover by means of the following methods.

We begin with what we know and proceed to the things that we do not yet know. There are no methods that are *imperative* to use in order to find out what we need to know. There is also no method that has to be used *first*, because every innovation development has its own starting point. However, it makes sense to execute certain methods before other ones because they provide useful preliminary work. For example, it is recommended to conduct the methods 6 to 10 before the interview methods (1 and 2), although this also depends on the circumstances and the existing knowledge in a project. Nearly all fields can be completed with several methods. We intuitively select the one that seems to be the most apt. In case it does not yield the desired results, we try another, similar method. We compile our mix of methods on our own.



However, we want to give you one general advice: When we want to get to know our users in order to make innovations for them, we have to *talk* to them sooner or later. We can get some insights by playing the fly on the wall (method 11) or by conducting a self-immersion (method 12), but the best understanding of our users still stems from interviews. Therefore, we put the important (and very comprehensive) method of the qualitative interview at the beginning of the following set of methods.

One last thing: Innovation development is like jumping in at the deep end—blindfold! The adrenalin level rises, it is exciting, and at first, we do not know where we are and where we will end up. We simply get started. We get used to swimming. We enjoy this situation where everything is possible. Learning which method lets us reach our target faster, better or with fewer obstacles is only possible, when we make our first strokes free of fear. Nothing bad will happen! Even if we swim in the wrong direction for a while, that is not the end of the world. The water is not very deep and there are no sharks wanting to feed on us. We always have time to turn back.

Discoverers begin with the challenge, which ideally has been determined in the Challenge workshop.^{*1}

Designers start with an idea that already exists in the company but they should be able to complete the fields of the EXPLORE module (or to close any knowledge gaps in this module).

Evaluators already have an elaborate concept. They, too, should look out for knowledge gaps in the EXPLORE and CREATE modules and close them

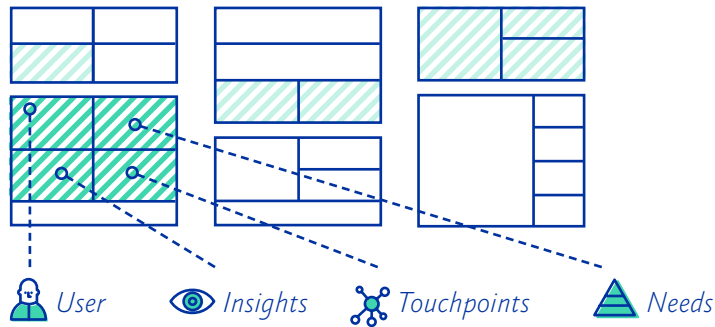
¹ See sections 4.1 and 9.3.



[illegible]

1

The Qualitative Interview



WHAT AND WHY?

The qualitative interview is the silver bullet in our arsenal. Whether we work on the project as discoverers, designers or evaluators, there is no innovation development where we would not at least once use this most common of research methods. We also use it in a slightly modified way in the EVALUATE module.

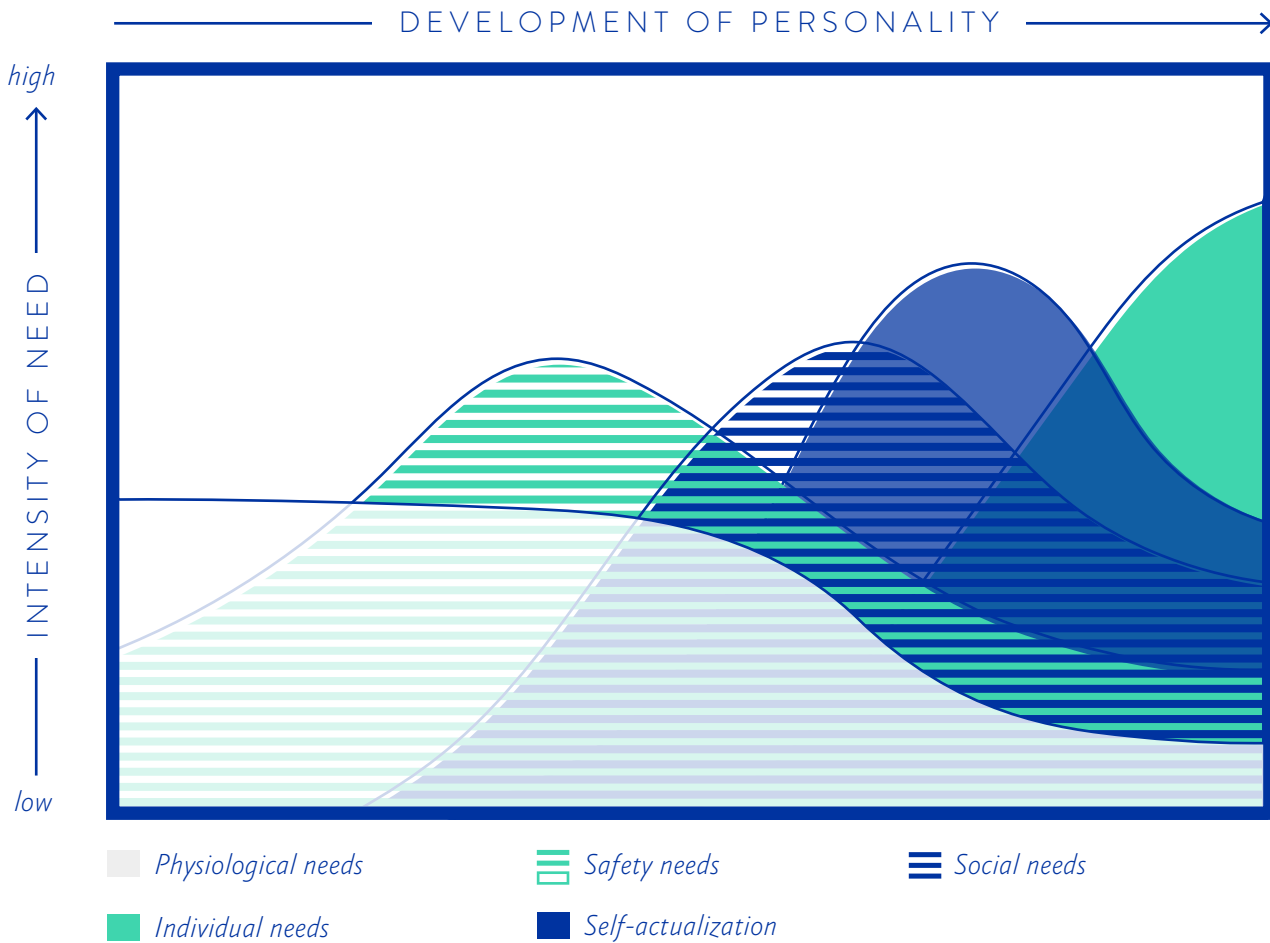
The qualitative interview helps us to capture specific information and to gain true-to-life insights about our users and their way of life. We get to know the users in the home that is their castle^{*1} and we perceive the world through

their eyes. In this way, we can develop empathy for our users, which is the foundation for any further steps. By means of the qualitative interview we try to fathom the needs and *motivations* of the users. Not many people are able to express their motivations off the top of their heads. For this reason we have to support them by skillfully asking questions.

When dealing with human needs we also have to consider the works of Abraham Maslow, the creator of the popular pyramidal »hierarchy of needs.« The US psychologist has defined five

¹ Or at another meaningful location for our project.

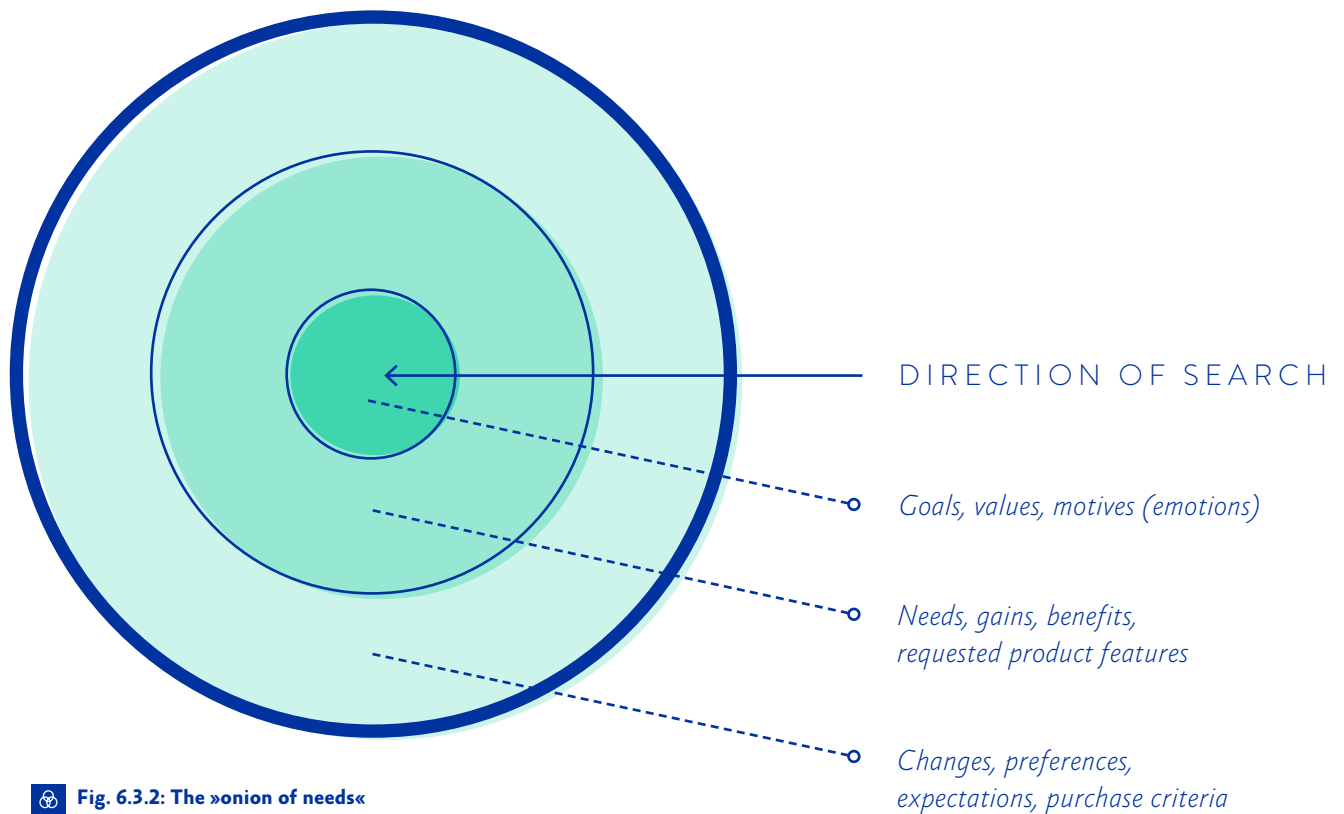
Fig. 6.3.1



classes of needs: physiological, social, safety and individual needs and the need for self-actualization. Despite the popular view that these five classes statically build on each other so that one can only reach one step when one has completely satisfied the underlying needs, the classes are actually in a state of dynamic flow (see Fig. 6.3.1^{*1}). Overlapping is possible. For us, this bears the important insight that we cannot view needs in isolation.

As we use the qualitative interview to probe for needs that are deeply hidden and not yet satisfied, we first have to »ask through« all the needs that are obvious and easy to name for the user. By asking skillfully crafted questions, we have to uncover one layer of needs after the other like onion skins until we reach the core, i.e. the innermost of the interviewee.

¹ Source: Wikipedia,
bit.ly/1VZhCt4
(06/26/2016)



MODUS OPERANDI

1__ We plan our interview appointments (and consider all eventualities)

Planning is essential, particularly as a qualitative interview takes its time. After all, we want to induce our interviewees to talk about things they rarely or nearly never think about: What does motivate them? What do they really want? Why do they decide in favor of something and disapprove other things? According to our experience, a good qualitative interview takes between one and three hours. Hence, we allow sufficient time. *Tip: Allow enough time for moving*

from one place to another and for any unforeseen circumstances!

We often look for users with special characteristics or those who live in interesting circumstances; e.g. people who have just changed their heating system, flight attendants who only work on long-haul flights or senior citizens who still work in retirement. These people are not necessarily free when we are free.

2__We prepare an interview guide

At the latest when we have set an appointment for the interview, we have to determine what information we are looking for or which assumptions we want to check.

Let us have a look at the »needs onion« in Fig. 6.3.2.

Most people can clearly express their requirements and expectations of a product but this is not enough for us. We want to get to know the desires and the deep needs of the users so that we can satisfy them by our solution.

Hence, we are also interested in the world view of the individual users. They can sometimes be important barriers for implementing a solution, e.g. when we discover a hidden technophobia. Maybe the user simply does not understand the purpose of the product because it is advertised with incomprehensible terms. Important information like this probably remains undiscovered when we simply check the purchase criteria.

When the team has agreed upon what we want to know, we prepare an interview guide. It assists us during the conversation with the user and links the various topics of interest. Ideally, it also leaves enough room for new aspects that may appear in the course of the interview. On the one hand, we want to be as open to discoveries as possible, but on the other hand we have a clear idea of what we want to know. With increasing experience, we continuously get better at balancing these needs.

For preparing the interview questions, we use template 6.3.1.

2a__Meta-level

In the central circle of the template we note the various topics that we want to discuss with our interview partner, e.g. sports, food, house and garden etc. They provide the superstructure for the interview. We determine the order in which we want to talk about the various topics and jot it down.

2b__General questions

Every project is unique, and every topic calls for different approaches. Nonetheless, the question types »What does ... mean for you?« and »What do you associate with ...?« are always suitable. We can use them to express our general questions. The particular topic is based on the keywords in the meta-level circle like sports, food or house and garden.

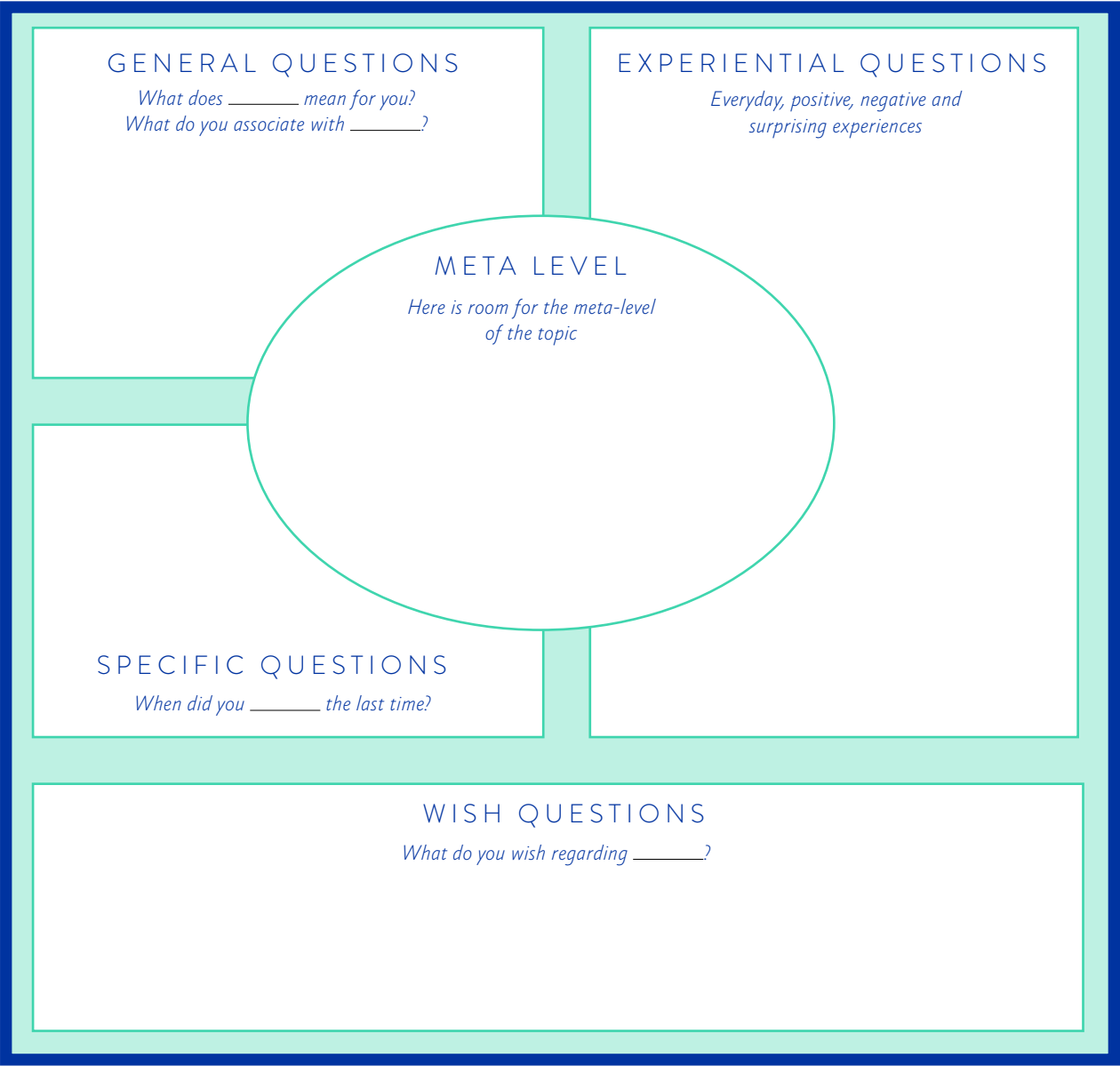
Examples:

What do sports mean for you? What do you associate with sports?

What does home mean for you?

What do you associate with health? What does health protection mean for you?

Usually, these two questions provide a first insight into the thoughts of the user about the topic of the interview. When we want to dig deeper or when the general questions do not yield any results, we proceed with experiential questions.



 Template 6.3.1: digital-innovation-playbook.com/templates/explore

2c ___ Experiential questions

We do not ask directly about problems or needs because our interview partners are only rarely able to identify them correctly and completely. Questions about incidents, stories and experiences are much more productive. They convey unfiltered information that we can later translate into needs and

obstacles (see method 4, User Motivation Analysis).
Experiential questions take up the main part of the interview. As we do not want to miss any information, we ask them repeatedly in varying forms and in various contexts. This also helps to discover contradictions and to dig deeper,

e.g. when the interviewee says that he generally abhors noise but later raves about going to the soccer stadium every weekend in order to cheer up the fans by means of a megaphone.

Examples regarding »everyday experiences«:

Tell me about your experience with ...! Why is ... important for you?

What is so important about it for you? Why is that so?

Examples regarding »positive experiences«:

What bad experiences did you have with ...? Why?

Tell me about your most horrible experience! Why has it been so bad?

What irritates and frustrates you regarding ...? Why?

What failures did you have?

Examples regarding »negative experiences«:

What was your best experience with ...? Why?

Tell me about your most wonderful experience! Why has it been so wonderful?

What are moments of happiness regarding ...? Why?

What success did you have?

Examples regarding »surprising experiences«:

What did surprise you regarding ...? Why?

Tell me about a surprising experience! Why has it been surprising?

Has there ever been something inexplicable regarding ...? Why?

We adapt the questions as needed. We also note »Why?« behind each question as a reminder. After all, we want to get to know the goals, values, motives and emotions of the user.*¹

2d__Specific questions

With these questions, we can ask again about specific experiences or things that are important for our research.

Example:

When did you ... the last time? Why?

2e__Wish questions

We ask questions about wishes only at the end of the interview. Up to now, our interview partner has comprehensively reported about his experiences. If we ask the wish question too early, the interviewee may be tempted to develop solutions on our behalf. This skews the interview and can even render it useless.

Users cannot provide us with solutions, but we can gain inspiration from their wishes. Sometimes the answers to wish questions lead to further needs and problems.

Example:

If you were granted a wish, what would it be? Why?

How do you imagine ... in the future? How does it look? Why?

We jot down everything that we want to know, but we do not freak out when we come up with new questions three minutes before the end of the interview.

Bottom line: When we follow our curiosity, we will notice the most interesting and surprising parts of the interview that we did not think of beforehand. We jump at these spots and ask further questions.

¹ Remember the interview techniques from section 5.3.

3.1__We take on our interviewer roles on-site

A qualitative interview should always be conducted by two interviewers. We counteract this imbalance between one interviewee and two interviewers by clearly separated interviewer roles. It would be fatal if we interrupted each other or if we sabotage the build-up of questions of the other interviewer because our roles are not clearly defined or we deviate from the pre-defined questions of the interview guide.

In our experience, the following role allocation has proven its worth (see Fig. 6.3.3): One of us is the »best friend« who conducts the conversation, responds to the user, tries to explore the user's needs and to completely immerses himself in the user's world view. The best friend tries to muster a maximum of empathy. In doing so, he also scrutinizes the statements of the users with curiosity and (nearly) without doubt; just like a best friend who wants to help.

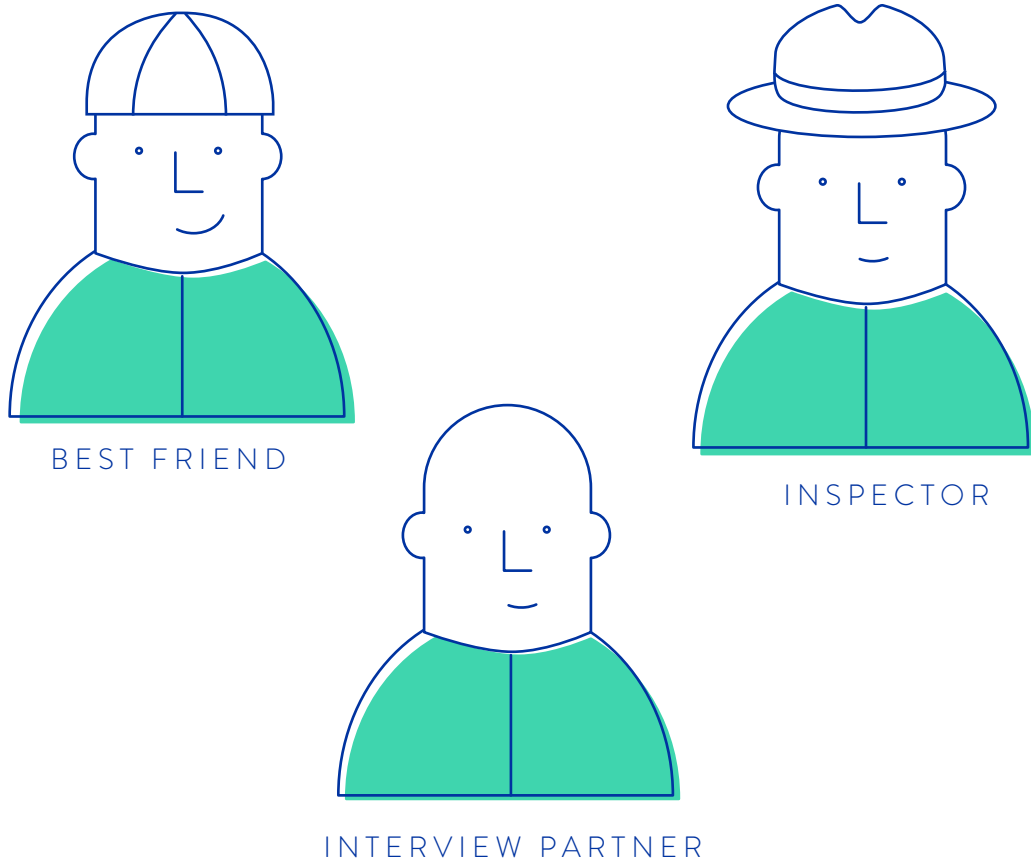


 Fig. 6.3.3

In science, this approach is called the »apprentice situation.« By taking on the role of the best friend, we want to avoid any social hierarchies that may separate us from our interview partner. This also applies to our clothing and our appearance. When we act as authorities, we get different answers as opposed to when we try to blend in with the milieu of our interview partner. We try our best to avoid the effect of »social desirability.« This effect causes our user to give the answers that we *supposedly* want to hear instead those that we *really* want to hear. A good indicator of a »socially compliant answer« is the interview partners referring to themselves in the third person.

If, on the other hand, the interviewee uses the first person and tells detailed stories, we can assume that he or she does not lie to us subconsciously. Should we get a queer feeling nonetheless, we have to try to uncover the contradictions between the individual statements of the user.

Tip to avoid beginner's mistakes as interviewers: Do not use generalizations, i.e. do not say »usually« or »mostly«, because if we are doing this, we will only get generalized answers.

It is the best friend's responsibility to provide a pleasant atmosphere. Ideally, the best friend becomes the accomplice of the user and hears about things that an authority would never find out. For this reason, it is very important for the best friend to control his or her own body language. If interviewees get the feeling that we do not take them seriously or that they

are hassled or mislead, then their statements will not be useful for us in most cases. The interview will end unsatisfactorily and without results.

However, we do not recommend that you grab a guidebook in order to analyze and train your body language. It is easier to control your thinking: When you enter the interview as a best friend with the positive desire to learn something, to like the interview partner and to get to know his needs, then your body language will automatically send the proper signals!

Next to the best friend we have the »inspector.« Do not worry, this is not the »bad cop« role for the interview! The inspector also wants to feel empathy with the user. However, during the interview the inspector behaves as neutral as possible, somewhat like an invisible observer. He takes notes and observes the body language of the user. It is helpful for the best friend to discover interesting contradictions between facial expressions, body language and utterances.

This distance allows the inspector to evaluate the statements of the user much more critically during the subsequent analysis of the interview. In a way, the inspector acts as the quality assurance agent for the analysis.

3.2__We consciously decide how we want to lead the interview

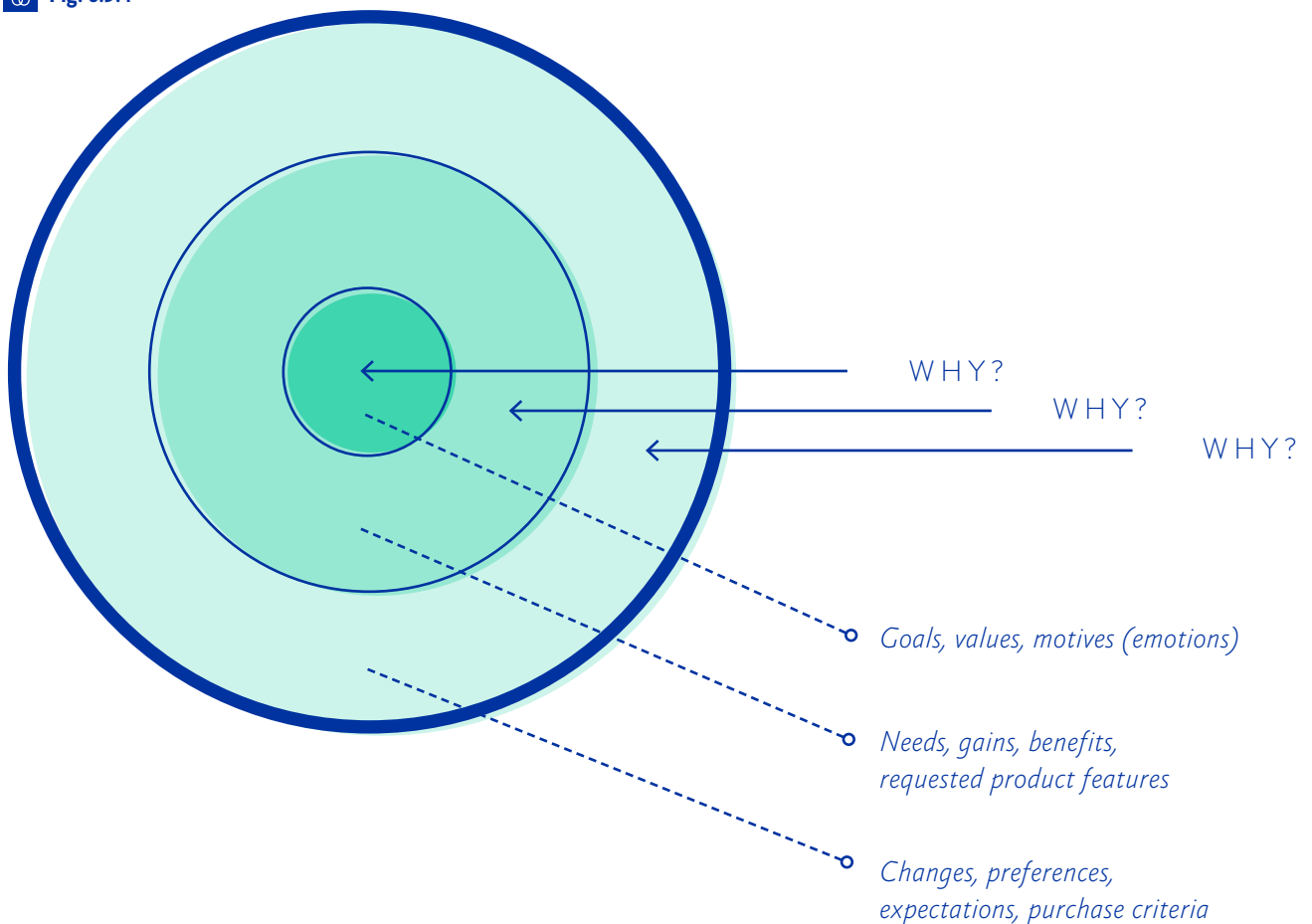
Our interview technique follows simple basic rules previously described in section 5.3. The most important one is, »We leave room for pondering.« It is a bad mistake to bombard the interview partner with questions. Never forget that we are on the quest for the unknown unknowns.


This only works if we ask *open* questions, i.e. questions that cannot be answered by »yes« or »no.« An interview works well when we hear

stories: stories full of details and ratings that tell us more about the person than the content; stories that give us hints to dig deeper and learn something new; stories that we keep going by asking »why« questions.

The more often we ask »why«, the nearer we get to the core of the »needs onion« (see Fig. 6.3.4), where the goals, values, motives and emotions of the user reside.

 Fig. 6.3.4





USER: ...

<i>What caught our eye at once?</i>	
<i>Key sentence?</i>	
<i>Peculiarity?</i>	
<i>Was honest about ...?</i>	

 **Template 6.3.2:** digital-innovation-playbook.com/templates/explore

4__The quick evaluation afterwards

Immediately after the qualitative interview, the inspector and the best friend have to share their thoughts: What impression did the interviewee give? What key sentences were uttered? What was the most impressive thing we witnessed? (See Template 6.3.2.)

The first impressions of an interview that last for one to three hours are highly volatile. Hence it is very important to conduct a first short analysis *at once* and to record the most important points.

When we still have some time, we recap the way we conducted the interview: What went well, what went badly? Which questions did work, which ones didn't? What new questions and topics came up?

This also means that the guideline has to be reworked gradually after each interview. Every new insight and every new clue forces us to modify the guideline and to adapt it to the new situation.

HOW DOES IT FEEL?

We use this method in our work so often that we can no longer count the number of the qualitative interviews that we have conducted. Nonetheless we never came back from an interview in a state of utter irritation because we had not learned anything. People like to talk about their experiences and to tell stories, as long as they are not pressed for time or fear that they are being tricked. Hence we consider in advance what we want to tell the interviewees about our project and the objective of the interview. Honesty works best at this point: *We want to develop something for the needs and problems of our users.* Our interview partners will reward this attitude.

There are also stumbling blocks lurking in an interview but as with the knowledge of their existence and our interview techniques^{*1} we are prepared to deal with them:

The Faster Horse effect

»If I had asked my customers what they wanted, they would have said, faster horses.«
—Henry Ford^{*2}

The real problem of the user is always hidden. Henry Ford did *not* revolutionize the world by means of faster horses but he realized the core need behind the statements of his contemporaries, namely a faster means of transport, and satisfied this need by the invention of the automobile. We call this the »Faster Horse effect«: The users are not able to tell us their real needs; maybe because there is not yet a solution for these needs. They also cannot provide us with the solution for the problem. They simply give clues that we have to learn to decode.

The users will not provide a solution to the problem

As it is so important, we want to repeat it: The users will not hand us our innovative solution for the problem (or our product idea or service invention). No doubt about it! We learned that relatively quickly, and our customers and project partners realize it regularly when they ask for solutions in their first interviews. The answers and ideas of the users are very obvious because their imagination and their desires are limited by their experiences. They usually think along the lines of existing solutions from their everyday life. Furthermore, they are not up to date with every technological development. Remember: Users do not tell us anything that we would not have come up with ourselves.

Humans are badly suited to describe their own behavior

Humans are very contradictory in their thoughts and actions.

They...

...do not always *do* what they *say*.

...do not always *say* what they *want*.

...do not always *do* what you *expect*.^{*3}

Humans do not tell or even know every variable and the whole background of their actions. This is what we have to uncover. The statement of our interview partners are only the tip of the iceberg. We have to realize this and to dig deeper. We also need empathy for the users, because otherwise we were not able to interpret their statements properly and to abstract insights from them. *Insights* are thus the hidden needs and backgrounds that the users cannot name precisely.

¹ See section 5.3, Basic Tool #3, Interview Techniques.

² This quotation is repeated in numerous guidebooks and Internet memes, but there is no certified original source. We like it nonetheless, even if it may just be an invention as the following blog entry states: bit.ly/1SGCT7v (06/26/2016).

³ These statements are based on IDEO and the HPI School of Design Thinking.

Humans align their answers to the expectations of others

Remember our discussion on social desirability. There is no general rule about what is right and what is wrong or how we proceed if we reach this point. We simply have to follow our gut feeling.

Sometimes it is helpful to reveal something about ourselves. We always have to talk to the interviewee on par. If we talk about ourselves, we must not make the mistake to influence our interview partner. For this reason, we also never recommend an answer to one of our questions.

Humans subconsciously accept problems and flaws

When we bluntly ask the users about their problems and needs with regard to a specific topic, there is a high probability that we will later state, »The people did not have any problems. There are none!« This is natural as people do not continually think about problems. Things simply are the way they are. People accept them and do not think about them any longer. In reality, we can find problems and needs everywhere. We only have to ask the right questions.

We do not create interview transcripts

To avoid waste of time, we never create word-by-word transcripts of interview. After all, innovation development is not science but professionally deployed intuition. Any information that we cannot extract from the inspector's rough interview minutes by our gift of interpretation are lost. This is a good thing, because text without voice, actions and any

other context is useless. Transcripts are valuable for scientists, but not for us as innovation developers. Besides, the effort-to-yield ratio is unreasonable.

We use qualitative interviews to look for phenomena unknown to us. According to our experience, there are nearly no new insights to be gathered after 15 to 20 interviews. At this point, we have thus probably already made any relevant discoveries for the solution development in the CREATE module; at least the discoveries that are possible in the current state of the project. For this reason, 20 qualitative interviews are a good upper limit for a balanced effort-to-yield ratio. We only go beyond this limit in rare exceptional cases. A look at the world of science confirms our approach: In sociology, there is the concept of »theoretical saturation«, which happens when a theory is sufficiently verified by quantitative data collection. However, if we re-execute essential parts of the EXPLORE module, we have to conduct further interviews because due to the advanced state of the project we now have more specific questions.

GOOD TO KNOW

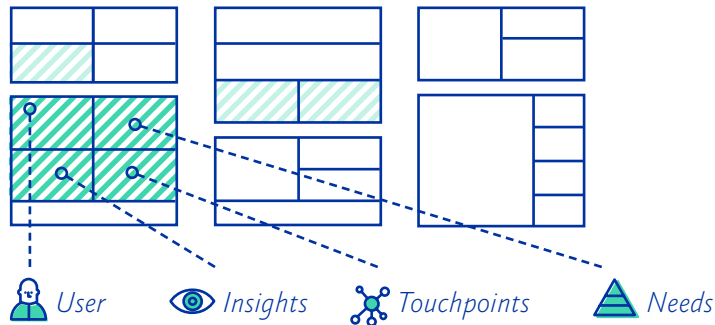
Variations of the qualitative interview can also be found in journalism and in traditional market research, e.g. in focus group investigations. It originates from empirical social research. In the early 1960s, this method was used in Chicago by the founding fathers of the »Grounded Theory«, Anselm Strauss and Barney Glaser, in order to research internal thinking processes about external observations. In a scientific context, all verbal interview techniques are summarized

under the concept of the »qualitative interview.« Their various forms are organized into the following categories: guideline interviews, narrations (narrative or episodic), group procedures, intensive interview and receptive interviews. Jan Kruse from the Institute of Sociology at the University of Freiburg has written a good methodological book on qualitative interview research.^{*1}

¹ Jan Kruse: *Qualitative Interviewforschung: Ein integrativer Ansatz*, Weinheim/Basel 2014.

2

Explorative Interviews



WHAT AND WHY?

In contrast to the planned and elaborate qualitative interview (method 1), the method of the explorative interview (also called »street interview«) provides us with first results, insights and inspirations very quickly. Usually, we only allow one day for this method. In this way, the impressions are still fresh when we evaluate them with our synthesis methods¹ and make them »tangible.« Explorative interviews are spontaneous and usually happen outside or in busy, public spaces. They are also cheap! We use this method especially during longer innovation developments. After our first research phase at the desk², we want to get quick feedback from real human beings about our assumptions and most pressing questions. In doing this it is less important if the interviewees actually belong to the intended users for whom we want to develop an innovation. After all, we do not yet look for solutions in the EXPLORE

module. Our interview partners can help us to validate our starting question, or to focus it if it is too vague or too general. The focus becomes clearer.

For explorative interviews, we also use a guideline, but this one is only rudimentary and is limited to the most important questions. When we later prepare the longer qualitative interviews (method 1) we go into detail and integrate our insights »from the streets.« This method is thus well suited to be executed before the qualitative interviews. Explorative and qualitative interviews complement one another perfectly.

¹ E.g. method 5.1, Persona Synthesis Cluster.

² E.g. method 7, Research Mind Map.

MODUS OPERANDI

1__ We plan

We consider where we meet the people with whom we want to talk. The environment of our explorative interviews depends heavily on the topic of our starting question or the intended user group. As we always want to be open for *surprising* discoveries, it can be smart to address people who are probably not involved in the topic or who may be extreme users (see method 3).

Traditionally, we approach the people in locations where they wait or linger, e.g. in parks, cafés or busy places (maybe tourist attractions) in the city centre.

In rare cases, we have very specific users, e.g. when our innovation development centers around a B2B software for enterprises or hardware for music production. In these cases, we look for employees on-site. If these people do not have the time for a short interview, it is reasonable to start immediately with making appointments for longer, qualitative interviews.

2__ We divide our responsibilities

Interviews are always conducted by two people, at maximum by three. One asks the questions while the other one takes notes. We can swap the roles from one interview partner to the other. We do not only note what is said in the interview but also striking details about the person in question, the way how the interviewee says something, how long he ponders a question of that impression he makes. These insights can be useful later on.

3__ We rehearse the beginning of the interview

Sometimes we have to overcome our reluctance before we dare to address strangers in the streets. A preparation for the beginning of the interview may be helpful. According to our experience, honesty works best. We tell the people what we are doing in the moment and show real interest in the opinions of our interviewees. »We are working on a project about ..., and now we like to hear what experiences you have made with ...« In most cases, people do not want to stop talking to us!

4__ We try to extend the interview

We ask very openly, and we do not have a fixed catalogue of questions. This relieves us (and our interview partners) from time pressure and achievement pressure. Although we are relatively flexible with regard to time, we always try to talk to our interview partner for at least 15 minutes (if he or she proves to be interesting). The longer the interview, the better. Otherwise, the conversation only scratches the surface. If we are asked in advance how long it will take, we state a shorter duration, e.g. five minutes (the classic!) so that we do not scare off the interviewee. We could also say, »As long as you want to talk to us.«

5__ We finish the interview

At the end, we thank the interviewees for taking their time and ask for their name and age, if they have not already stated these details during the interview. If it seems reasonable, we also try to take a picture of the interview partner. It helps us in clustering information and synthesizing insights on the whiteboards (e.g. by means of the methods 4 and 5). We explain this to our interview partners in case they have doubts, »This is just an aide-memoire for internal use.«

Sometimes it is helpful to give a short overview of our project and the innovation development,

encompassing just be an outline and the background. This helps to build trust. For the same reason we hand a business card to the interviewee.

Every so often an interview partner shows interest in the progress of our project. We consider inviting the people to a longer qualitative interview because we have the feeling that they can tell us *much more*.

After the interview, we therefore exchange e-mail addresses for arranging future appointments.

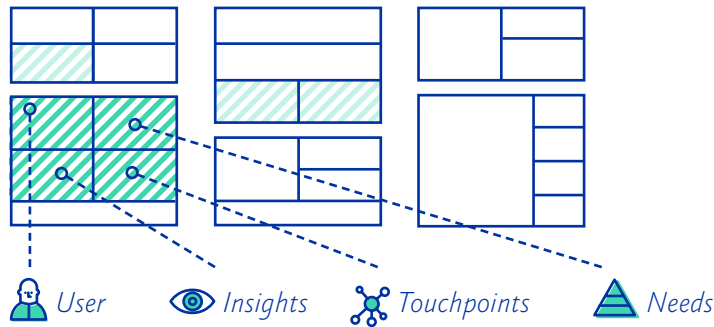
HOW DOES IT FEEL?

The main challenge for us is approaching strangers. When someone addresses *us* in the streets, then this is mostly done for marketing purposes, and we all know how irritating that can be! On the other hand, most people like to talk to us, to share their experiences and to tell their stories. A good introduction to the interview is also helpful.

When we have once mustered the courage to approach other people and to conduct the first 15-minutes interviews, we will soon realize that this method is also *fun*, because we gain many new impressions and insights very quickly. We never experienced that one of our interview teams came back from the streets completely frustrated because *nobody* wanted to talk to them.

3

Getting to Know Extreme Users



WHAT AND WHY?

With this method we can explore the boundary conditions of our user group. Extreme users are those who do something particularly often, intensively or never at all.

The best time to talk to extreme users is the first EXPLORE phase when we walk the path of the discoverer. Another suitable opportunity occurs when we have done the first tests in the EVALUATE phase and realize that we have not learned enough about our users.

This method is therefore an addition and is thus not used on its own in the EXPLORE phase. We also do not assign specific tools to this method. Similar to normal users, extreme users

can be examined by means of all available observation and research methods, e.g. qualitative interviews (method 1), the fly-on-the-wall technique (method 12) or the self-immersion (method 12).

Extreme users help us to abstract what needs and obstacles cause the use or non-use of a service or product. In this way we learn which aspects we have to consider in solution design. When we do it properly, we gather some first solution approaches plus a qualitative estimation of the effort-need threshold^{*1} of the non-users.

¹ Everyone makes a cost-benefit estimation, including our users. The effort-need threshold is the point where we decide to act instead of thinking that the effort is not worth it.

MODUS OPERANDI

1__ We answer the main question:

Who are our users?

We need to have a clear idea of who belongs to our group of potential users in order to be able to define extreme users (see Template 6.3.3).

3__ We think about what the extreme user should disclose

It is not helpful to examine extreme users without knowing what we want to find out. We have to develop concrete questions about the usage of a product or service, e.g. the following:

- Do extreme users modify a specific product or service so that it better serves their needs?
- What need is the reason for this?
- Would the solution also be of interest for a wider group of users?
- What are the reasons for the complete denial of the product or service?
- Is there a pattern?
- Do these things also irritate our »normal« users? Can we build upon this to improve the offer?

Often, the behavior of extreme users highlights the needs of our »normal« users.

3__ We create questionnaires and research plans

At this point we decide what we have to get to know in direct interviews and what we can also learn by timesaving research at our desks. Based on this decision, we select the interview and observation methods listed under »What and why?« or the Market Trend Analysis method (method 9).




HOW DOES IT FEEL?

1 See section 4.1.

2 We reorganize these processes regularly. In order to work in an agile manner, we have to maintain an agile environment.

In every large project that we start as discoverers*¹ we talk to extreme users, namely with two »power users« and two »deniers.« According to our experience, this is sufficient. As mentioned previously, this method is only an addition in order to better understand the world of our user group. A good example is the reorganization of our own operative processes at Dark Horse.*² A company is also a social community. The »extremes« of such communities are e.g.

monasteries, flat shares or communes. These are places where we can learn much about living together. For our research we visited a monastery, a commune and several flat shares in order to learn more about the rules of living and working together that monks and roommates give themselves.

	 EXTREME USER	 USER	 EXTREME USER
<p>Criterion to describe our user. What characteristics of our users are we interested in? Which of them strikes us as somehow »extreme«?</p>			

Template 6.3.3: digital-innovation-playbook.com/templates/explore

GOOD TO KNOW

In step 2, we already mentioned the purposeful search for analogies. We could use this search for analogies also as a method on its own.

Analogies help us to improve our understanding because they are *functional comparisons*: They do not reference something equal but the underlying mechanisms.

Science philosopher John Clement said that analogies put an *original object* into a physical or semantic relation to a *reference object*.^{*1}

These two objects have to share structural or functional similarities. If two objects only share some characteristics or a »mere appearance«, they are not analogies.

Analogies help us in practical innovation development to concretize abstract ideas relatively quickly. To this end we need the following four steps.^{*2} First, we have to create an analogy, either by association or by common basic principle or by a transformation. In the second step, we validate this connection. In the third step we have to understand and solve the analogous problem so that we can transfer the resulting insights to our actual problem in the forth step. Steps 2 to 4 can occur in arbitrary order and in any iteration phase.

This sounds all rather pretentious and abstract and thus like the opposite of what analogies should do for us. In practice, we thus execute the four steps the other way round. We take things that we like and consciously try to find an analogy by analyzing the underlying mechanism and relating it to the initial problem. For instance, we can playfully ask how Batman (who prefers high-tech solutions for everything) would approach a given problem, what the iPod teaches us about our project or how we can user Tinder mechanisms.

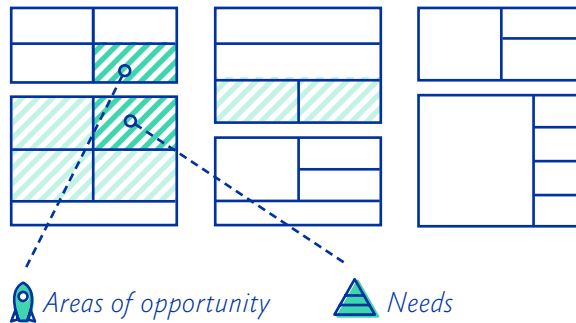
Because of the vast array of possible analogies and the widespread ramifications of their integration in the innovation development, we have decided against describing analogies as a method on its own. For us it is more of a mindset than a method: Discovering mechanisms and modes of operation that we can use for our own projects helps us to change the perspective and to stimulate our creativity. Finding suitable analogies also facilitates the communication with others. For example, when someone asks how our organization with its 30 manager-employees with equal rights works, we can answer: A bit like a monastery.

¹ John J. Clement:
*Creative model
construction in
scientists and students*,
Dordrecht 2009.

² John J. Clement:
»Observed Methods
for Generating
Analogies in Scientific
Problem Solving«,
in: *Cognitive Science*
No. 4, 1988.

4

User Motivation Analysis



WHAT AND WHY?

Together with the qualitative interview (method 1), the user motivation analysis belongs to our most important tools. This method helps us to extract the needs and obstacles from the vast amount of data about the users that we have collected in interviews or during research at our desks. In combination, they form a so-called area of opportunity. This is the area where we will provide innovation by our solution. Imagine we discover that our user wants to do his share for environment protection by separating his household garbage. His need is to protect the environment. However, we also find out that he is confused by the many color-coded garbage bins and does not know which type of garbage belongs into which bin. Thus he is rather negligent in separating the garbage, and eventually he stops it altogether. This is the obstacle that prevents him from satisfying his need of environment protection by waste separation: The system is too

complicated! The area of opportunity that opens up for us is thus, »How can we enable the user to separate his household waste without permanently brooding over the complicated waste separation system?« This is a simple example that is often used in workshops to introduce »user-centric design.« It is not even purely fictitious: In Belgium, many people really are in despair because of the complex waste separation system. There is not even a consistent color-coding system across all regions of Belgium. This causes many Belgians to throw all their garbage into the household waste bin, although they can be fined for that.

But let's go back to our method! The user motivation analysis is a good framework to create pairs of needs and obstacles from our data. With these pairs, we can recognize and express specific problems of our users.

MODUS OPERANDI

1__ We cluster our data according to factors

In order to formulate need-obstacle pairs, we ask so-called motivation or hygiene questions^{*1} (see Template 6.3.4). We examine the statements and data from our interviews and research activities according to the following questions.^{*2}

a) Needs

- How does the user define performance and success? What are his goals?
- What kind of appreciation does the user strive for? Who are the relevant persons for this?
- How does the user measure appreciation?
- With what kind of things does the user like to occupy himself? What does he like to do?
- For what things does the user take responsibility? Why?
- How does the user want to grow? How does he define personal growth?

b) Obstacles

- How is the user compensated for his efforts?
- Who or what controls the user? Where do his »assignments« come from?
- How does this control happen?
- Under which circumstances does the user fulfill his tasks or satisfies his needs? What external conditions are present?
- How autonomous is the user? What kind of support does he get? By whom?
- How are his interpersonal relationships? With whom?
- How safe does he feel? What gives him security?
- What influence does he have? What general conditions does his private life provide?

¹ See the »Good to know« section.

² Not all the questions have to be relevant for every project.

2__ We build pairs

When we have answered the relevant questions from step 1, we consciously build need-obstacle pairs. We select the strongest one (by discussion or simply by voting) and use it as the basis for a persona (method 5.1) or for expressing the how-might-we question (see section 6.4). When there are several equally strong need-obstacle pairs, we develop several personae or formulate several how-might-we questions, which we carry over to the CREATE module.

HOW DOES IT FEEL?

As already stated in the beginning, this method belongs to those that we use permanently. It is always helpful to arrange and interpret our insights and data because only then we know what we know. This may sound trivial, but in the EXPLORE phase we may get the feeling that we know too much or not enough or not what we ought to know. After the user motivation analysis, we have provable facts to get rid of this feeling—or to confirm that our gut feeling was right. The interpretation of the collected data and insights is of essential importance. Human behavior sometimes defies objective value measures. The human nature is a mystery. Our motivation for or against a certain action is often illogical. For this insight and its consequences, the Israeli-American psychologist

Daniel Kahneman earned the Nobel Prize in Economic Sciences in 2002. His »Prospect Theory« says that we humans have an irrational amount of fear of losing and yet abandon any caution when we expect large profits (see Fig. 6.3.5). For this reason, even »rational markets« do not work completely predictable and free of contradictions.

Kahneman's theory describes a type of behavior that we can observe time and again in our user interviews. The perception of profit and loss differs substantially from the actual profit or loss that a person might experience. This knowledge helps us to better assess the needs of our users and their perception of certain obstacles.

GOOD TO KNOW

The user motivation analysis is conceptually based on the two-factor theory (also called motivator-hygiene theory) developed by Frederick Herzberg in 1959 when he examined positive and negative influences on the attitude towards work. He differentiates between motivation factors and hygiene factors. The former relate to the content, the latter to the context of the work. We could also call this intrinsic and extrinsic motivation. With this theory, Frederick Herzberg wanted to define the motivating goals of people. Together with Maslow's hierarchy of needs, it belongs to the most noted content theories

of motivation. Herzberg's most exciting insight was that satisfaction does not simply appear when there are no reasons for dissatisfaction. A high work satisfaction is defined as a high satisfaction with motivation factors (e.g. appreciation, kind of work) and a high satisfaction with hygiene factors (like compensation, nice colleagues).

If you want to learn more about this, read Herzberg's classic *The Motivation to Work*¹. It comprises no more than 180 pages and is an entertaining read.

¹ Frederick Herzberg: *The Motivation to Work* (revised edition), New Jersey 1993.

MOTIVATION QUESTIONS		HYGIENE QUESTIONS	
<i>Need</i>		<i>Obstacle</i>	
1.			
2.			
3.			
4.			
5.			

Template 6.3.4: digital-innovation-playbook.com/templates/explor

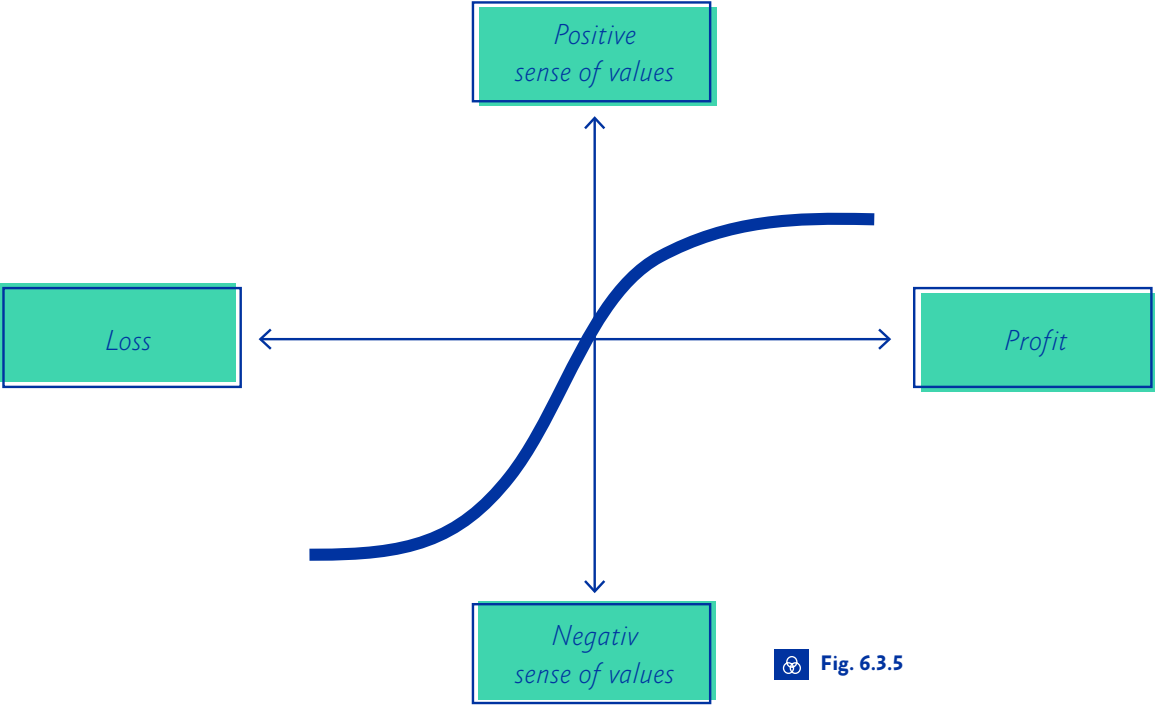
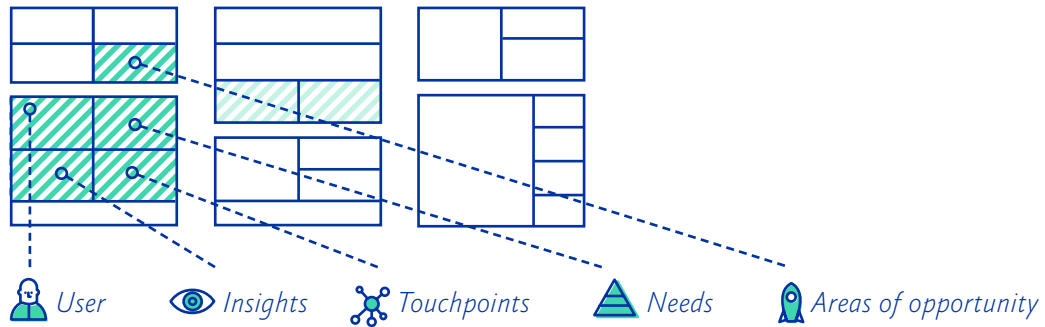


Fig. 6.3.5

5.1 Persona Synthesis Cluster



WHAT AND WHY?

The persona synthesis cluster helps to get early results even in the case of escalating research. It allows for a »reality check«, ideally when the first five to ten qualitative interviews have been conducted and the results of the research at the desk and/or the extreme user interviews are also present. With this method we test whether our initial assumptions are correct and whether we are on the right path. We sort the data by means of the cluster and analyze them based on the pre-defined aspects described in the »Modus Operandi« section below. It is our goal to isolate insights that are particularly interesting. The first insights are fed back into the research and may affect our guideline for the next qualitative interviews (method 1). Additionally, the issues discovered by clustering may help to identify extreme users or new areas of opportunities.

The persona synthesis cluster is a 2x2 matrix comprising the fields Contradictions,

Motivations, Similarities and Surprises (see template 6.3.5). When we look at the users, we examine the collected data specifically according to these categories. According to our experience, this helps us to discover interesting aspects that we might have missed otherwise.

When we have to deal with several users, we search for similarities that we can make visible by means of the cluster. We are also interested in peculiar behaviors that may look contradictory at the first glance. When we have uncovered these behaviors, we can research them to fathom the causes.

In innovation development, we use this method before the user motivation analyses (method 4) and before the persona development (method 5.2).

MODUS OPERANDI

1 ___ We sort the discovered insights in a framework

Our users have told us much about themselves. We now have to sort these insights in our framework, the persona synthesis cluster, in order to disclose the relevant aspects and ideally also to discover new ones.

Contradictions/goal conflicts

We look for contradictions because users often do not tell us the »truth« or because the act differently from what they say. However, this is usually not done on purpose.

When we can identify these contradictions, we can better assess and scrutinize the motivations and needs.

Motivations/preferences

Motivations are our first clues to the user needs. When we can identify the motivations of the users, we have already come very near to identifying the needs. Furthermore, the evaluation of this field results in summarizing user groups (see also the Similarities field).

Surprises

Surprises are too valuable to ignore them. They change our perspective and form the basis of innovation. Any surprise forces us to question our previous understanding and to have a deeper look at the sphere of life of our users.

Similarities/intersections

Similarities and intersections can help us to identify groups of users. When we find a lot of similarities between several users we are on our way to identify and to define a user group that is of interest to us.

2 ___ We check whether we already have enough insights

We use this method only as long as it supplies us with direct and quick results. Have we already collected and clustered enough information? When we have the feeling that this is the case, we can ...

- ... tackle the next method in order to deepen our insights, e.g. the user motivation analysis (method 4) or the persona development (method 5.2); or:
- ... begin to formulate our problem hypothesis, i.e. the how-might-we question.^{*1}

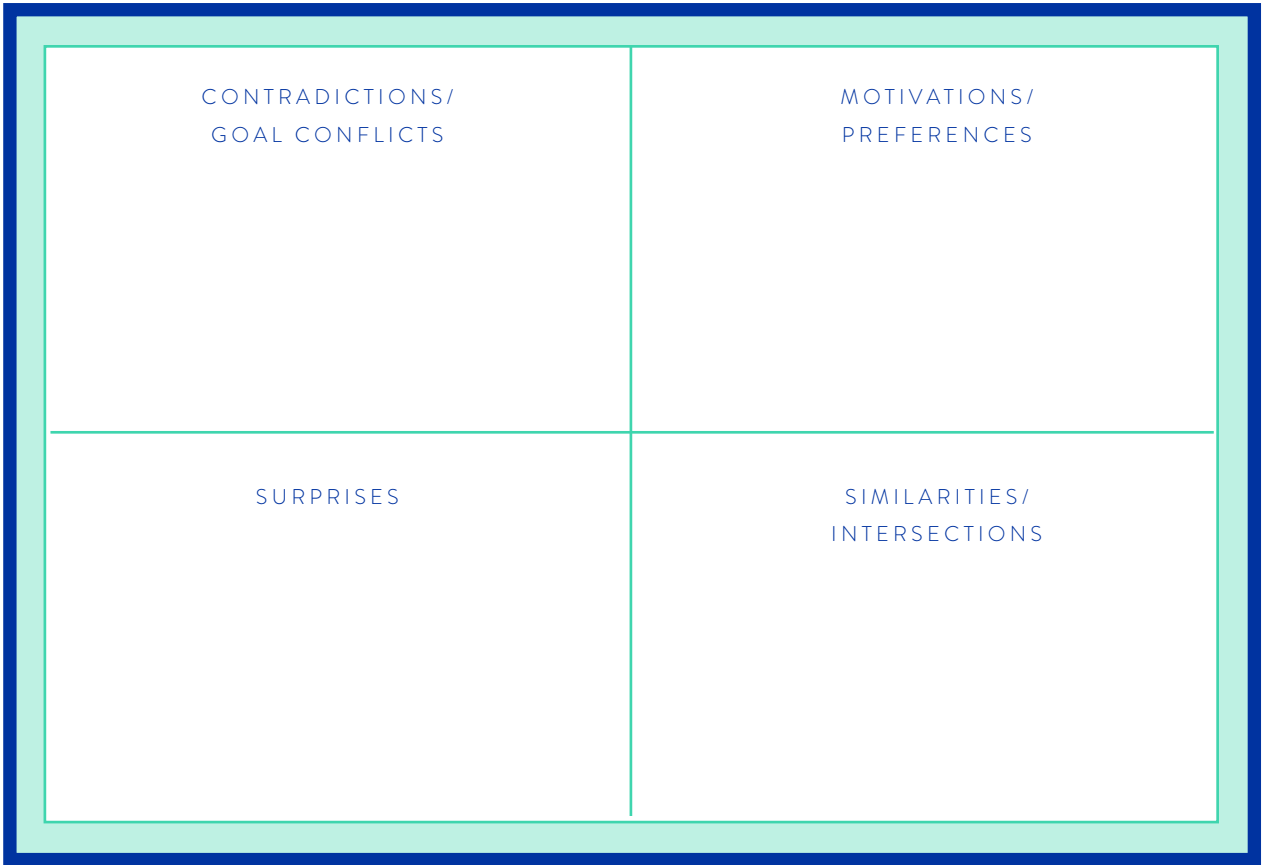
¹ See chapter 6.4.

GOOD TO KNOW

1 bit.ly/1MSRwgc
(including audio
samples, 06/26/2016)

In this short method, we mentioned »clustering« several times. This important concept does not only mean collecting and grouping related data; it is also the name of an exciting experimental German band, consisting of Hand-Joachim Roedelius and Dieter Moebius. In the 1970s, Cluster pioneered electronic music (especially ambient music). The band enjoyed its commercially most viable phase in the years 1977 and 1978, working with Brian Eno. The albums Cluster & Eno and After the Heat made them suddenly known to a larger,

international audience. With interruptions, the band existed from 1971 to 2010. Roedelius founded the successor project Qluster together with other musicians; Moebius died of cancer in 2015. In his obituary, the *Guardian* praised him as »one of the most innovative musicians and composers of our time.«^{*1} Music by Cluster is available on the usual streaming platforms as well as on CD and vinyl records.



 Template 6.3.5: digital-innovation-playbook.com/templates/explore

HOW DOES IT FEEL?

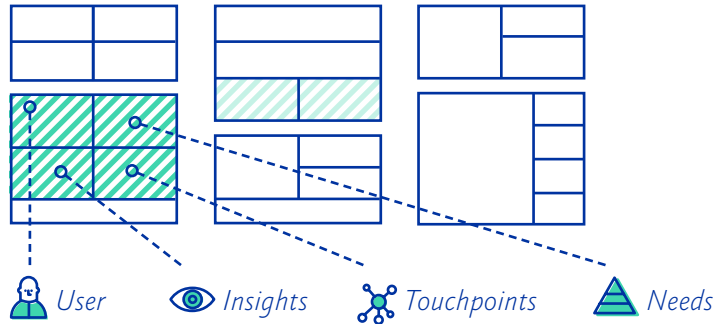
Every so often we feel overwhelmed by stories of the users and the impressions we get during the interview phase so that we begin to doubt if we really have found or will ever find what we are looking for. For this reason, we use this method several times in every large project. When we have gained three telling insights about our users, it is worthwhile to further work on them and to deepen these insights by means of another method.

For a new innovation development, we recommend to start with the 2x2 matrix with the given terms. They help us to set up a starting point and to make the data more tangible. If we get the feeling that there is too much or not enough data in the fields or that the data inside a single field is too varied, we extend the matrix by building subgroups and thinking of new terms.

The cluster is basically *never* completed because it can always be filled with new data and the framework and its terms can be modified. After a few rounds of interviews or user observations^{*1}, we turn to the cluster again and proceed to work with it. We can also set up a new framework. Work with this module is agile and only subject to very few fixed rules. We always have to be pragmatic and to avoid using it as an end in itself. Once we have gained sufficient insights, we proceed with the innovation development.

¹ See method 11,
Fly on the Wall.

5.2 Persona



WHAT AND WHY?

The persona is an instrument to understand the living conditions of our users. A persona has a name, a biography, specific needs, daily joys and challenges, desires and passions. However, it is *not* a specific user with whom we have talked but a composed character that represents our synthesized knowledge about the user group. In this way, the persona is like a prototypical character in a novel with whom we can feel, laugh and suffer. This may sound rather abstract and unfamiliar. The following scenario illustrates the advantages of this method: Imagine we have to develop an innovation for an audience of people from 30 to 40 years of age who earn approx. 30,000 Euros a year, tend to be unaffiliated with any religion and to live in big cities and not in the countryside. How can we satisfy real needs and develop something innovative based on these

specifications? Target audiences with vague descriptions do not give us concrete access to people. They are inanimate and do not trigger feelings clear and strong enough to develop a solution. Enter the persona: *Marie* is 30 years old and lives in Mannheim. She likes to drink green tea and has brunch with her friends every weekend. She tends to leave her keys. For this problem, she has not found a solution yet. She likes to give new technologies a try to organize her home and her everyday life in a smarter way.

Birgit is the 45 year old mother of two pubescent boys. She lives in Berlin and works part-time as a kinesitherapist in a retirement home. In her spare time, she takes adult evening classes in English and silk painting. Once a month she dances at over 40's parties where she hopes to find Mr. Right for the second half of her life.

She also permanently loses her keys. With respect to digital technology, she is still stuck in the pre-smartphone era.


We have to develop completely different solutions for Birgit's key problem than for Marie's!

We can better understand a persona, its feelings and its specific problems. After having developed a persona, we can use every time when we develop ideas and solutions in the CREATE

module. If we are designers who start directly with the CREATE module^{*1}, we have to develop the persona afterwards.

The best time for developing a persona is after conducting the first interviews (methods 1 to 3) and synthesizing the data, e.g. by means of the user motivation analysis (method 4) or the persona synthesis cluster (method 5.1).

¹ See section 4.2.

<p><i>My next vacation</i></p>	<p>DRAW YOUR PERSONA</p>	<p><i>My favorite apps</i></p>
<p><i>This is one of my quirks</i></p>		<p><i>This is my problem</i></p>
<p><i>A typical day</i></p>	<p>DESCRIPTION OF THE PERSON <i>Hair color, height, age, etc.</i></p>	<p><i>These are my goals</i></p>

 **Template 6.3.6:** digital-innovation-playbook.com/templates/explore

MODUS OPERANDI

One last note before we start: Not all our research results will contribute to the creation of our persona. Some insights will be very important, while others will only play a minor role. We may even ignore some insights because we do not view them as vital. It is also possible that there are insights that we think are important but do not match the rest. In such a case we can also create several personae. However, for the beginning we should limit ourselves to a single persona.

1__We determine the parameters

We have to discuss which needs and problems we want to solve. Either we determine them according to our gut feeling and start to develop the persona intuitively, or we base our decisions on the need-obstacle pairs from method 4 or the needs clusters from method 5 (depending on which methods we used previously, if any).

Intuitively developing a persona is a little more difficult for innovation developers without practice. We easily risk to drift into the realms of imagination and to base our persona no longer on actual results and insights. When we have some experience with designing personae, we can start to use the intuitive method. It is always worth a try.

2__We provide the persona with a name and a biography

The persona is the essence of all interviewed users. If we have mostly talked to women, our persona will tend to become a woman. If we have mostly talked to people who have to be careful with every penny, this also has to contribute to the persona.

As we have not only found similarities but also contradictions, we often have to decide between several possibilities. We also have to fill biographical gaps by our imagination. Our professional gut feeling will be instrumental to this end.

We use template 6.3.6 for the persona data.

When we have determined the basic traits of the persona, the remaining characteristics can be designed more easily. We therefore begin with gender, first name and second name, exact age, marital status, job and standard of living. Our persona can be single or married; it can have children or not. If the persona has a family, we will design it, too. The spouse and the children get names and ages. Maybe our persona has a nickname that is used by the family members. We determine what our persona does for a living and where it works. We name the city and determine the

neighborhood and the size of the flat or the house.

We also describe the appearance of the persona. Sketches or photos help us to make the persona more real and tangible. More details result in a life that we can empathize with. The more vivid, the better. Anything that we cannot think of immediately we can add later on.

3__We define the values of the persona

When we know where and how the persona lives, we tackle its inner world. Again, the more concrete we design this, the better. For example, is the persona very tidy? Does it value deep friendships? Is it shy, does it love animals, is it a morning person or not? What brands does it prefer? For what does it spend money? Where does it go on vacation?

Particularly important is the digital world of our persona: What kinds of devices does it own? Is there some striking behavior, perhaps a tendency to use several devices at once? For example, does the persona watch a film on a laptop while using the tablet for shopping and the smartphone for chatting at the same time? Does the persona check the weather on her smartphone before opening the curtains in the morning? The favorite apps and the most used websites say a lot about a person!

The following questions are also important: What does the persona want to do with its life? What does it fear? As we are now also dealing with needs, obstacles and motivations, we must not develop these characteristics without considering our research results (from the methods 4 and/or 5). It is our decision which core needs we combine in the persona.

Sometimes we tend to create a very dramatic persona and to skew our insights so that they no longer reflect reality. When this is the case, we have to restrain ourselves. The persona gives us the focus to solve a real problem that we have discovered during our research. We do not want to solve imaginary problems just because we have created a fanciful persona.

4__We add fields to the template (optional)

As with all templates in this playbook, the categories of this one are not set in stone. Anything that does not serve our needs we can overwrite and fill with our own contents. It only matters that they are beneficial and that we agree on them. Temple 6.3.6b shows some examples for alternative fields.

GOOD TO KNOW

Pierre Omidyar, founder of eBay, is an interesting personality but usually does not seek the limelight. In 2013, the German newspaper *Frankfurter Allgemeine* published a portrait of him when he announced to develop a news portal for investigative journalism.^{*1} The journalist Glenn Greenwald, who prepared and published Edward Snowden’s documents about the NSA scandal, was also on board. In February 2014, *The Intercept* was launched. Additionally, Omidyar had used his media production company First Look Media to finance the Oscar-winning movie *Spotlight*.

¹ bit.ly/1YRPreS
(06/26/2016)

<div><div><div>My preferences and aversion</div></div></div>	<div><div><div>Life style/fashion/products</div></div></div>
<div><div><div>This always annoys me</div></div></div>	<div><div><div>My loveliest product experience</div></div></div>

 Template 6.3.6b: digital-innovation-playbook.com/templates/explore

HOW DOES IT FEEL?

It is not easy for all of us to put full trust in this method at the first time. We might have the feeling that we will only develop something innovative for *a single person* as we have just cobbled together one single persona. But at the core of this persona lies a needs profile that emerged as a pattern during our research. It thus embodies the needs of a whole group of users. The embellishments of the background story serve to feel empathy for the persona. Hence, we sometimes call the persona a »personalized target audience representative.«^{*1} While this does not sound very sexy, it is true.

The success story of the online auction house eBay proves that this method really works. Its founder Pierre Omidyar developed the first prototype of the auction website just for one person, namely his wife, Pamela. But he knew that many other people shared her need, i.e. purchasing and selling hobby products and collectibles without much effort. In Pamela's case, the collectibles in question were PEZ dispensers with the heads of comic characters.

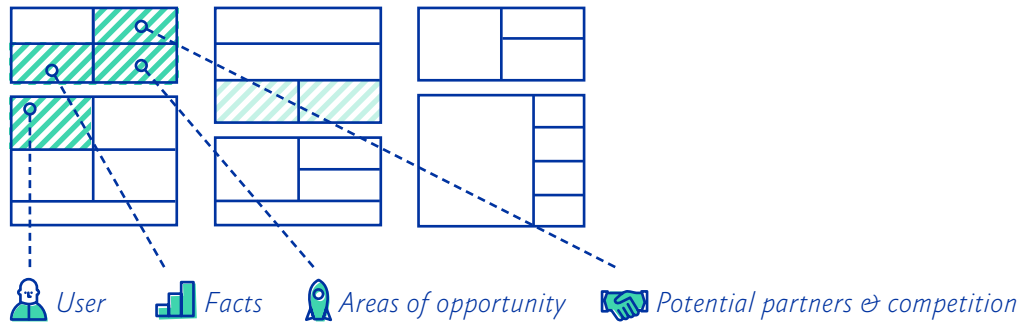
In 1995, dealing or swapping these items cost much time and effort. The rest is history. eBay is also one of the few online companies that survived the bursting of the dot-com bubble in 2000.

The basic idea of a persona can also be found in advertising, marketing and product development. The type of personae used in these areas differs from the one that we use because it is designed to address a wide target group and is thus described only superficially. With all the knowledge that we have collected during research, we sometimes are spoilt for choice and have to pick *one* need out of many. In such a case we focus on the most pressing need, but we keep the rest at the back of our heads. Maybe we will develop a solution for several needs in the CREATE module. However, we must not make the mistake to design a persona with a maximum of needs lest we risk to develop a persona that is far too generic. Such a persona cannot inspire us to »innovative top performance.«

¹ There may be several target groups, but in that case we would develop several personae.

6

Value Proposition Chain



WHAT AND WHY?

The Value Proposition Chain method enables us to do user-centric innovation development in the B2B area. This means that we do not only have to consider one value proposition in developing a solution but several related ones (a chain) because we also have to deal with several users. When we are working on a project for (and thus with) a company, we do not only look out for the end user or customers of the products or services of our project partner but also for relevant players in the company environment who will work with our solution. These are so-called B2B users.

In general, we do not view a company as *one* player but as a network of people in a specific context. This context is comprised by the rules

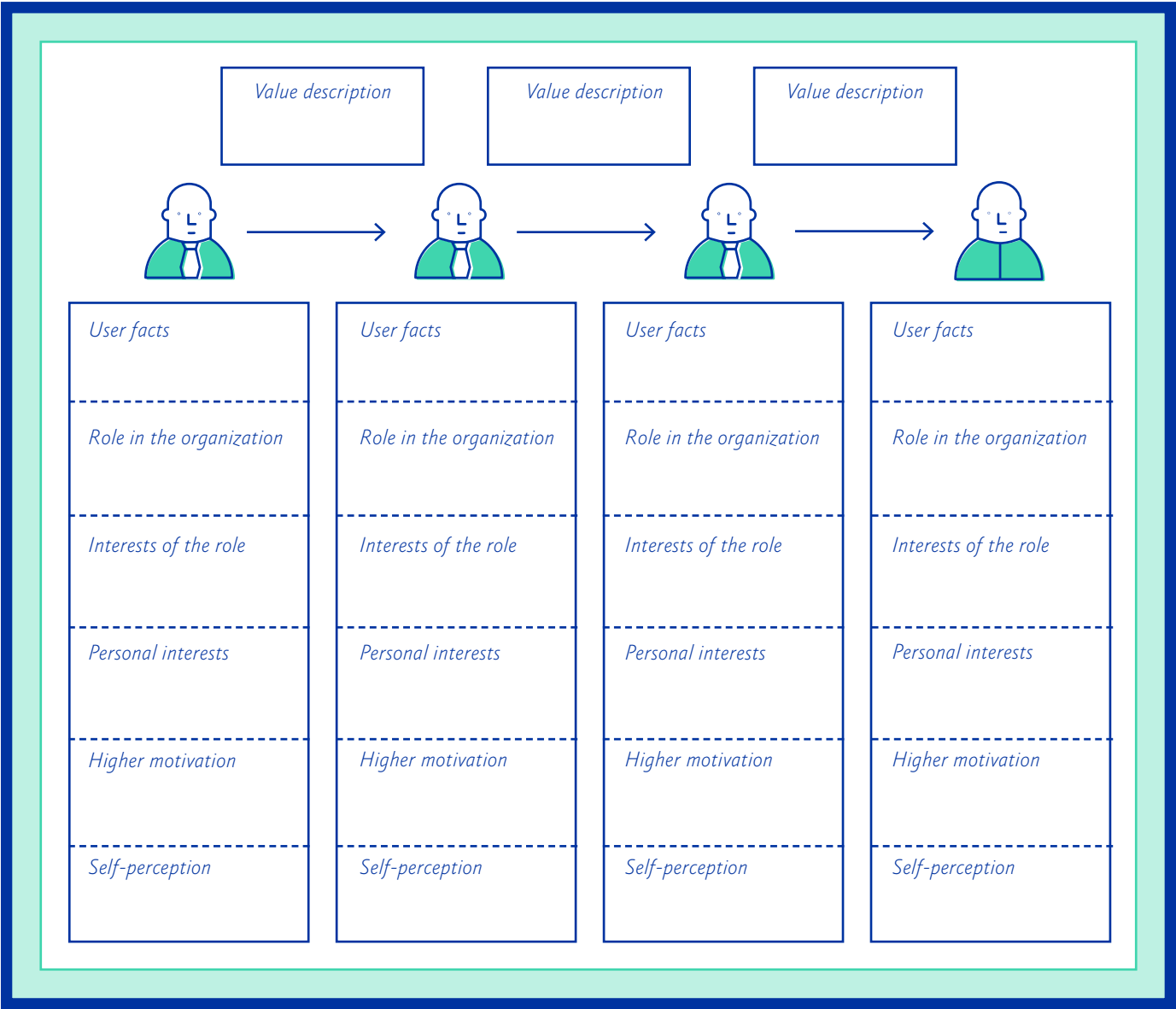
and requirements that the company imposes on the people but also by the internal »political« conditions and by social norms.

There is one fundamental difference between our B2B users and the end users for whom the company sells products or services: B2B users are integrated in the value proposition chain, but they are not the instances where value creation happens. It is possible that the B2B user (and not the end user) is the one for whom we develop our solution. However, it is also important to consider the end customers and their needs, because »the customer of our customer is our customer.« Imagine the following example: In order to develop a good product for a dentist, we have to understand how he

can make his customers as happy as possible (customer = user). Template 6.3.7 shows how the value proposition chain for various users with different needs look like.

By systematically researching the value proposition chain we can also discover what we do not yet know about the chain and still have to find out.

This logic should be employed by all service providers or manufacturers in order to optimize their services or products. In many areas, this is already done unknowingly.



Template 6.3.7: digital-innovation-playbook.com/templates/explore

MODUS OPERANDI

1___ We identify our B2B users

Here, we are interested in all players in the company who are relevant to our solution, i.e. those who use our solution themselves, who influence decisions or are important in another way. These can be department heads, programmers, haulers or suppliers of raw materials, to name just a few.

2___ We search for the »customer« of our user

The customers of our user are all the people for whom our user works, e.g. by offering a service or manufacturing a product. These can be internal customers (internal to the organization) or end customers (where the value creation happens).

3___ We talk to the »customers« of our user

Why have the customers of our user become the customers of our user in the first place? What value proposition do they get from our user? Which of their needs does our user satisfy? We try to discover this by means of a qualitative interview (method 1) or possibly with the fly-on-the-wall technique (method 11) or a self-immersion (method 12).

HOW DOES IT FEEL?

It is very exciting for us to dive into other industries with processes unknown to us, e.g. when we work at an innovative solution for dementia patients in the intensive-care unit of a hospital. Given this example, it is obvious that we do not only talk to the dementia patients but also to the physicians. Basically, we use the value proposition chain to identify all stakeholders of our solution. We look at them in the context of the value proposition of our solution. Stakeholders will be considered in more detail in the Stakeholder Map method (method 8).

However, as with the other methods we must not be content with the obvious and work superficially. We have to look for the things that are not yet known. It is better to dig even deeper when we have gained some information. It is important that we dare to ask questions that our project partner (the B2B user) might view as stupid. Don't feel embarrassed!

GOOD TO KNOW

The term »value proposition« is used for many years in product development. Thanks to the Business Model Canvas^{*1} by Alexander Osterwalder and Yves Pigneur it is now on everyone's lips.

In 2010, Osterwalder published his book *Business Model Generation*^{*2}, where he introduces a framework that visualizes many important elements of a business model on an A4 page. In user-centric innovation development, we use the EXPLORE module to no other purpose than to find a value proposition for a specific user group. Unfortunately, Osterwalder dedicated only a few pages of *Business Model Generation* to this important issue. Later, he corrected this with his book *Value Proposition Design*^{*3} where he collects many examples from the real (start-up) world.

We are big fans of both books. They met the same challenge that we had to face when we wrote this playbook: On the one hand, our readers need a process to shape their way of working, but on the other hand, every innovation process is unique and depends on context. For this reason, any general process specification would be a sham. No innovation process equals the other.

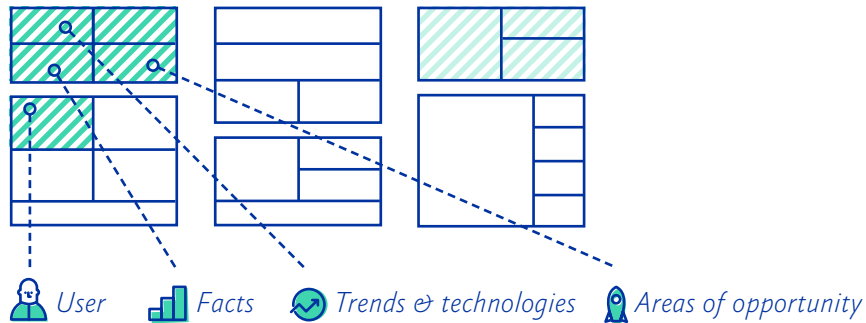
¹ bit.ly/1BxhnMo
(06/26/2016)

² Alexander Osterwalder, Yves Pigneur: *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, New Jersey 2010.

³ Alexander Osterwalder, Yves Pigneur: *Value Proposition Design: How to Create Products and Services Customers Want*, New Jersey 2014.

7

Research Mind Map



WHAT AND WHY?

This method helps us to divide the initial question into handy research fields and to visualize it. Thus it is a good starting point for innovation development and an excellent planning tool. The research mind map also helps to discover areas of opportunity. As the saying goes, one often does not see the wood for the trees, and this often happens when we should pay attention to the interrelations rather than the details. However, if we have to solve a problem in innovation development, we have to examine both the wood and the trees. The research mind map helps us to organize our previous knowledge and to elaborate the details while simultaneously viewing the big picture. The former US Secretary of State Donald Rumsfeld once said in a wonderfully clumsy and yet poetic way, »[T]here are known knowns; there are things we know we know. We also know there are known unknowns;

that is to say we know there are some things we do not know. But there are also unknown unknowns—there are things we do not know we don't know.«¹ The jackpot of any research is finding the »unknown unknowns« mentioned by Rumsfeld, i.e. the things that we do not know we do not know.

Before we proceed with research and innovation development, we have to synchronize as a group: What do we know and what do we want to know? Only in this ways can we discover new things. Using other methods like the qualitative interview (method 1) makes only sense after we have gained this overview.

The research mind map is an intuitive method to sort knowledge. It does not claim to expose the existing knowledge completely. Template 6.3.8 provides a good visualization of the four fields that we use for our theoretical preparatory work.

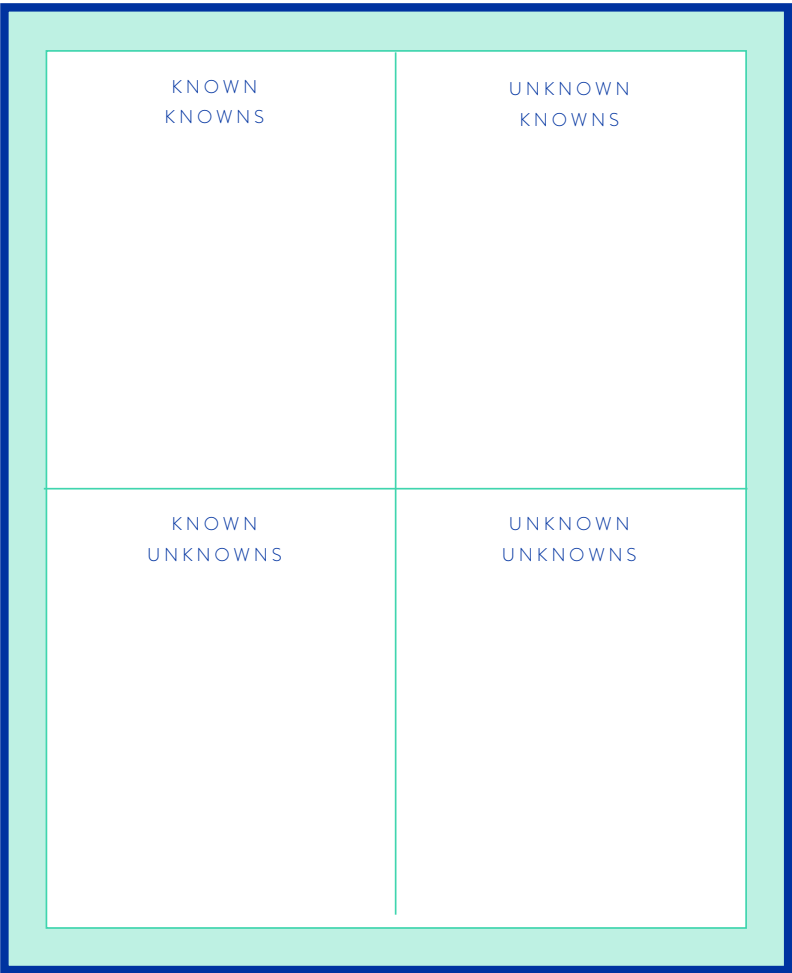
¹ During a press conference on 02/12/2002. A video clip can be found on youtu.be/GiPe1OiKQuk (06/26/2016).

MODUS OPERANDI

The research mind map can also be used for a solo project, but the real potential of this method only shows in a team setting: Together we work on an extensive visualization of all relevant influencing factors pertaining to our initial question, e.g. »How can we enable metropolis dwellers to reconcile urban life with relaxation?« The map can be extended at any time and serves as a reference point for the project approach.

1 ___ We scrutinize every word

Any team innovation development begins with developing a common understanding. Under time and result pressure, this is often dismissed as superfluous luxury, but we believe that a team cannot make a bigger mistake than to forgo *synchronization*. After all, every team member has a slightly different view on the terms used, especially in an interdisciplinary team. Our first step is thus scrutinizing every word: We jot down the alleged problem word by word and then we discuss *every single term* in this expression and define its meaning for us. Taking the example of the previous paragraph, we would ask: What is a »metropolis dweller«? How do we define »relation«? What dimensions does a metropolis have? Do we already have a first idea of »enabling«, i.e. the problem solution? We write down the latter separately in order to keep the solution ideas, which tend to »gum up« the head in the EXPLORE phase, so that we can validate them in the CREATE module *after* research. Subsequently, we collect all the terms relating to our question that come to our mind and sort them in topical clusters (see Template 6.3.8). In this way, we gain a quick overview of all topics that we have to consider to solve the problem.



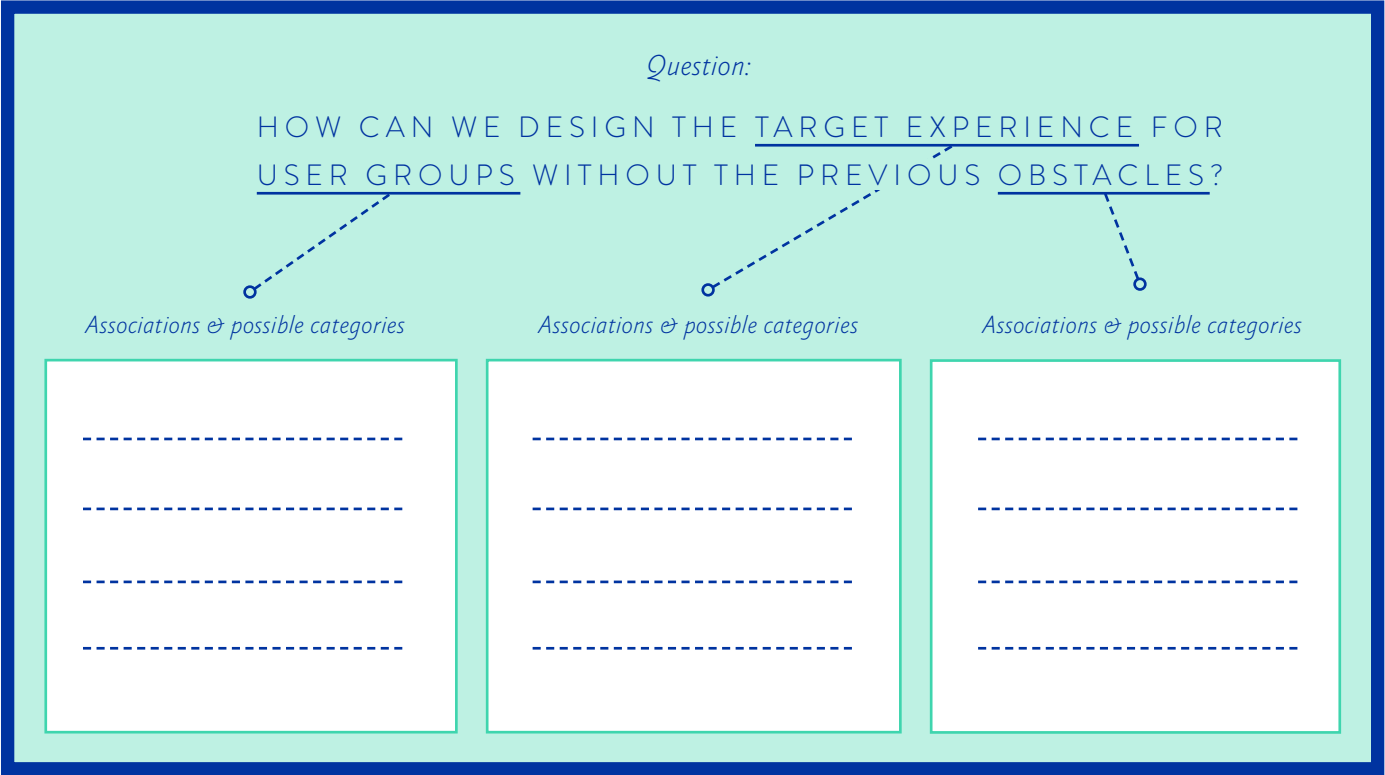
Template 6.3.8: digital-innovation-playbook.com/templates/explore

2___ We sort and prioritize the topical clusters

What user groups are exciting for us? What needs do exist according to *our* opinion? What detailed problem fields do exist? We create a research list (see Template 6.3.9) and prioritize it (see Template 6.3.10). At this point we decide with whom of the relevant users and possible extreme users (see method 3) we want to talk personally (see method 1) and what we want to research at our desk (see method 9).
Remember: All information we have written down in this short time is based on our previous knowledge and our assumption and has thus to be examined in the real world.

HOW DOES IT FEEL?

This method helps us to quickly isolate the topics that we want do examine in more detail. Hours of discussions at the beginning of a project are unsatisfactory. We can avoid them by using the Research Mind Map method.
We *always* use this method in our projects. In doing so, we very quickly develop a common language: Terms are defined by their contents and their distinction from other terms. With the research mind map, we deal with the most annoying part of team work very quickly, i.e. with synchronization. Everyone says what deems especially important for him or her.



Template 6.3.9: digital-innovation-playbook.com/templates/explore

GOOD TO KNOW

We do the prioritizing together, and then we have already found a common language! Caution: Do not spend too much time on this method! We have to maintain a high level of energy. When we have found the relevant categories for the next research step, we move on. Up to now, we only have visualized previous knowledge on our whiteboards. Only research and meeting real users produces relevant knowledge. The research mind map is not a result of the EXPLORE phase but stands at the beginning.

Donald Rumsfeld with his »unknown unknowns« was not the first one who ventured into a philosophical examination of human knowledge. The four aspects mentioned by Rumsfeld can already be found in classic Persian literature. The Persian-Tajik poet Ibn Ymin who lived from 1286 to 1368 wrote that there are four types of men: ^{*1}

¹ bit.ly/1SMTuED
(06/26/2016)

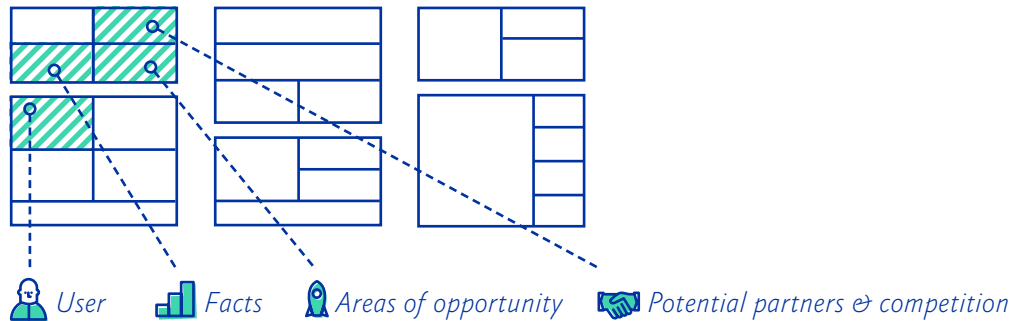
- 1. Those who know and who know that they know.
- 2. Those who know but do not know that they know.
- 3. Those who do not know but know that they do not know.
- 4. Those who do not know but do not know that they do not know.

List of user categories to examine	List of dimensions of the solution to examine	List of potential obstacles to examine
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>

Template 6.3.10: digital-innovation-playbook.com/templates/explore

8

Stakeholder Map



WHAT AND WHY?

With the stakeholder map, we visualize all the people who are involved in the problem or affected by it and who can help us to answer parts of our initial question. This method also allows us to describe the connections and dependencies between the people. This is extraordinarily helpful to avoid losing track. It is also important to mind these connections when we develop solutions in the CREATE module. Sometimes great ideas fail because some dimensions of the world of the users have not been considered.

Example: When we want to think of alternative dwelling forms for pensioners we have also to consider the children of these people as well as the social institutions in the areas of leisure time and administration. Actually, we do not

only have to consider them but talk to them if we want to discover something yet unknown. Chronologically, the Stakeholder Map method hence comes after the Research Mind Map (method 7).

The stakeholder map fulfills several functions for us: First, it gives us an overview. In particular at the start of extensive research, this method allows us to focus on the essential interest group of our project, i.e. the stakeholders. Furthermore, the stakeholder map is still always at hand in the EXPLORE phase. It will be further filled in when new stakeholders or new insights about individual stakeholders occur. We recommend to glue a large map onto the wall or to reserve a whole whiteboard for it. In our experience, a good map with the



STAKEHOLDER

Basic facts

Role in the organization

Interests of the role

Personal interests

Biggest motivator

Self-perception

most important information is as large as two adjacent A0 sheets.

In complex problems, there are often an unknown number of stakeholders who may act openly or covertly. Only by exposing the connections we can avoid the »non-technical failure« early on, i.e. failure because of so-called *political* reasons.

The types of connections between the stakeholders also open up new solution approaches, possible solution requirements and new problem areas. In the further process of the project, i.e. during the CREATE phase, we can use the map to analyze our solution ideas: Which of the stakeholders are important? Who advocates and who fights our idea?



Template 6.3.11: digital-innovation-playbook.com/templates/explore

MODUS OPERANDI

1__ We create a list

Before we draw a stakeholder map on the whiteboard or on the wall, we create a list of potential user groups and the persons and institutions to which they are connected, i.e. a list of our stakeholders.

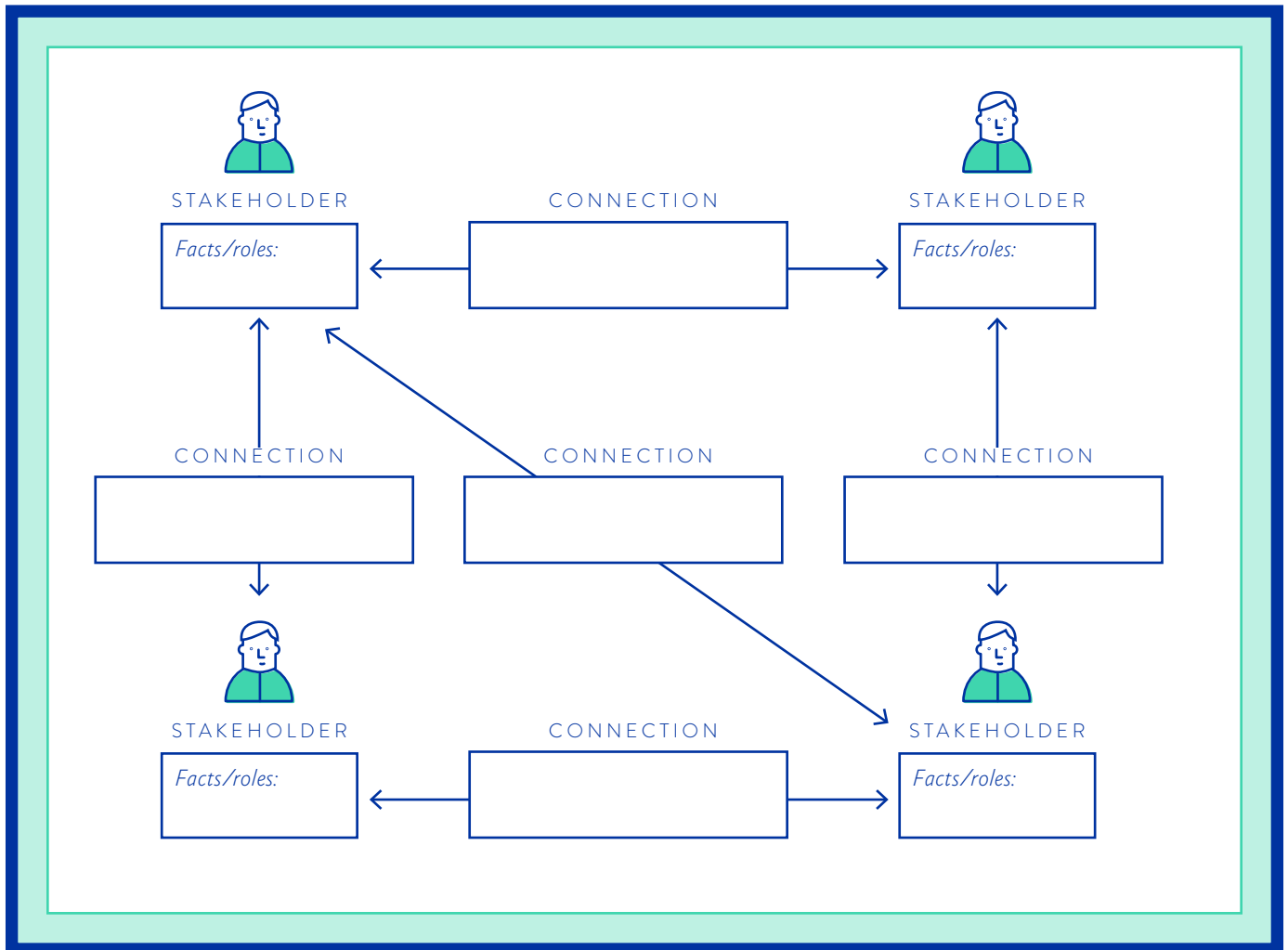
2__ We compile an inventory

After that, we compile an inventory of the motivations, needs and roles of the individual stakeholders. We could ask questions like the following: What position in the company does the stakeholder have? What interests does the stakeholder represent? What personal interests add to this? What personal and what professional self-perception does the stakeholder have? If we do not know something, we simply ask. Template 6.3.11 helps to collect the information.

Another exciting category that we may add to the stakeholder map is »Rules.« Every human being is subject to a multitude of institutional, social and personal rules. This may lead to new insights during analysis, especially when we have to work with many stakeholders from different social, cultural or work-cultural environment. By personal rules, we mean the values and ethics of a stakeholder. Social rules are usually not clearly defined but learned from an early age and thus never questioned by the stakeholder. Institutional rules are the conventions that the stakeholder has to observe because of his role in the organization.



Template 6.3.12: digital-innovation-playbook.com/templates/explore



 Template 6.3.13: digital-innovation-playbook.com/templates/explore

3__We look at the connections

After we have captured warrant-style information about the relevant stakeholders, we analyze their connections. Possible questions are: What common goal do they share? What conflicts of interests do exist? What personal and emotional connections exist between them? Are there any open conflicts or hidden animosities? What do the stakeholders do not tell each other? (See Template 6.3.12.)

4__We visualize a proper map with all connections

We merge the individual »warrants« of the stakeholders and their connections (see Template 6.3.13).

Many of the facts that we uncovered about the stakeholders and there connections are at first unsorted assumptions. For this reason, we now select the assumptions that are relevant for our initial question. We

mark these assumptions individually and formulate them as a question for research (see Fig. 6.3.6). We do not have to stick slavishly to the template. Sometimes stakeholders have many interconnections that force us to add new categories or to drop others, depending on which topics are relevant for solving the problem.

Sometimes it makes sense to draw a separate mini map for the most important stakeholders so that the main map remains uncluttered. In this case we recommend marking the connection arrows by different colors according to the type of connection. Similarly, sticky notes in different colors can refer to different dimensions of information. In any visualization, a clear arrangement is essential.

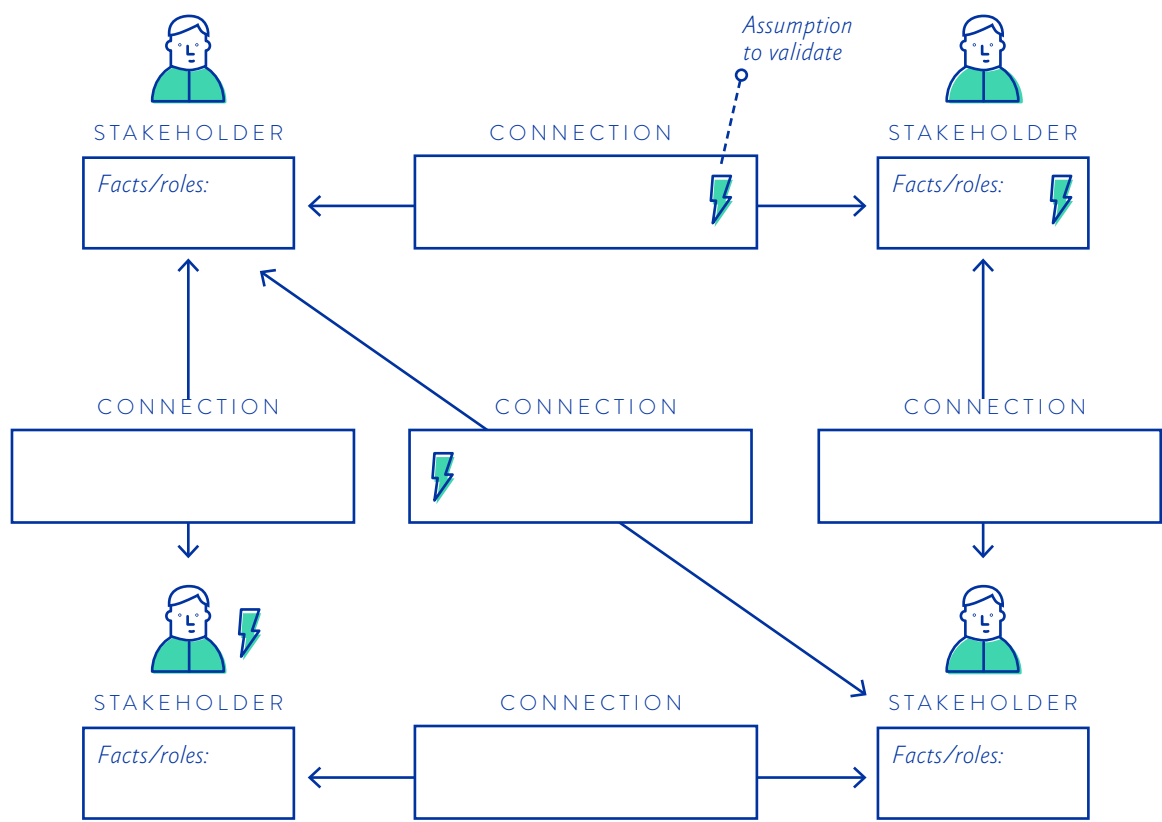


 Fig. 6.3.6

HOW DOES IT FEEL?

The stakeholder map is easy to understand and easy to use. We use it in nearly every large project as it allows us to approach complex issues analytically. This visual method also exposes our knowledge in a very detailed way. In particular at the beginning of a project when we do not really know where we are headed, this method helps us like the research mind map to »warm up the engine« in short time.

According to our experience, the stakeholder analysis can usually be done in two hours.

However, we must not rest on this first little success. The next step in our research is always the more important one! At this point we have not yet created something that is suitable as an innovative solution.

GOOD TO KNOW

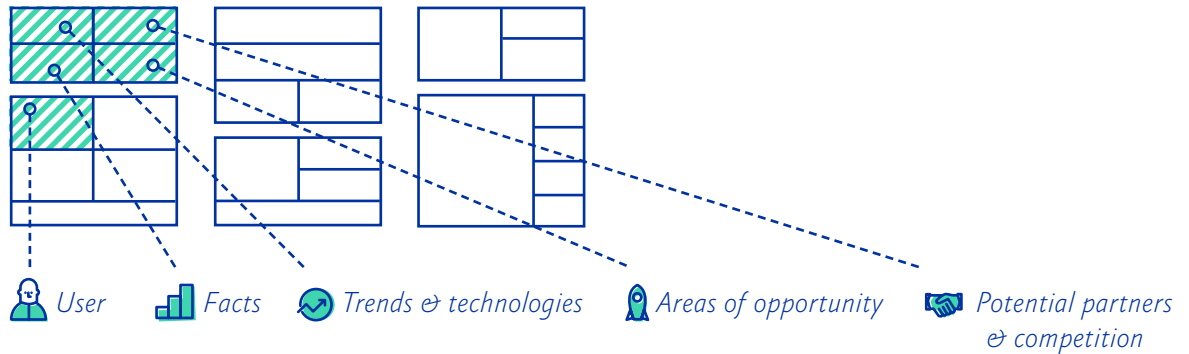
The Stakeholder Map belongs to the set of methods that structure our knowledge. By using it, we approach the overall problem from the viewpoint of the individual stakeholders, which is the main perspective for user-centric design. For this reason, we never enter companies or organizations into the map but individual people who define the pattern of actions in the company or organization. We have already described this way of thinking for the Value Proposition Chain (method 6).

Incidentally, the term »stakeholder« was coined in 1963. It first appeared in an internal memorandum of the Stanford Research Institute. In this note, stakeholders are defined as »those groups without whose support the organization would cease to exist.« In 1984, the American economist Prof. R. Edward Freeman developed the »Stakeholder Theory« based on this concept.*¹

¹ R. Edward Freeman:
*Strategic Management:
A stakeholder approach*,
Cambridge 1984.

9

Market Trend Analysis



WHAT AND WHY?

Any project usually involves a lot of »desk research.« Usually we do not like this type of working. Sitting at our desks behind the computer monitor contradicts our actual intention to *do* things. However, to be able to do something we need a foundation. Most topics have already been handled by many very clever people. It would be really negligent not to use their knowledge and incorporate it into our own. After all, we always try to gain a maximum of insight by a minimum of effort. This gives us more time to develop and to test solutions.

The desktop work of the Market Trend Analysis method happens after creating the research mind map (method 7) but before or during the work on the stakeholder map (method 8). To avoid spending too much time at the computer in the office, we always ask the following questions: What precisely are we looking for? How can we determine whether you already know enough? How do we organize and sort the information? How do we decide what is relevant and what is not?

MODUS OPERANDI

The American economist Michael E. Porter said that a company must fear exactly five things (see Fig. 6.3.7)^{*1}:

- The power of the suppliers
- The power of the customers; in this context, this means e.g. an insufficient distinction from the competitors in the eye of the customers.
- New entrants on the market
- Substitute products that render the own product obsolete^{*2}
- The power of the competition; this is the central fear.

In dealing with products, we are particularly interested in the distinguishing features from the products of the competitors and in substitute products. During trend analysis, we evaluate these areas according to the following criteria: How much do trends influence the possibilities for the design of our products? Is it possible that our product may become obsolete because of changing customer behavior? However, we do not only want to evaluate trends generally but to analyze the influencing factors as precisely as possible. Thus we include our current knowledge about the users and try to approach partners and possible competitors to learn more.

1__We analyze technologies

First, we have a look at the technological development. We ask questions like the following: What technologies can we see in our market and at our competitors? What new technologies that may become interesting for us can we discover? What technologies can render our value proposition obsolete or improve it? Are there

technological developments that may become much more affordable in the near future? What start-up and companies are busy on these areas? Which of them develop into our direction?

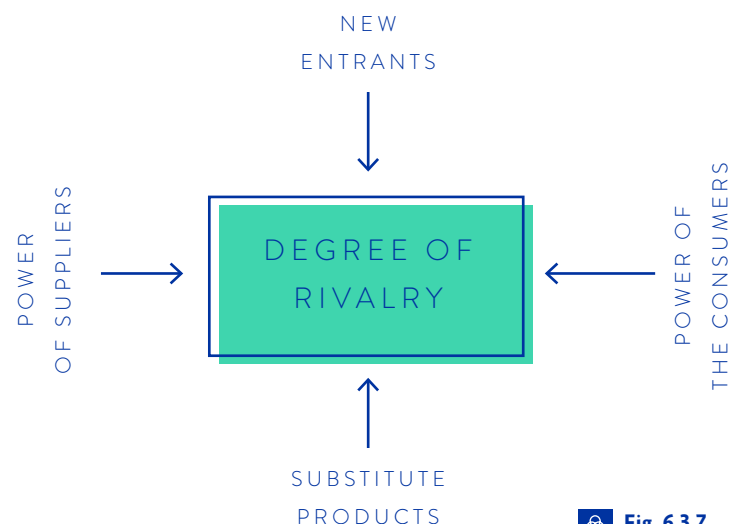
2__We analyze our knowledge about the users

We ask questions from the perspective of a company: What do we already know about our users? What user groups do we reach? Why do we reach exactly these groups? What are the relevant factors for this? Is there some change going on in this area? Do the values and priorities of our users change? Do social changes have an effect? What start-ups or other companies play on these trends? What can we learn from them? What mechanisms do they use?

Good examples relating to this topic are the decrease in car purchases in the young urban class or the trend to organic food.

¹ See Michael E. Porter: *Competitive Strategy: Techniques for analyzing industries and competitors*, New York 1980.

² Kodak and your video rental store of choice can tell you what this means!



 **Fig. 6.3.7**

3__ We analyze the socio-economic dimension of the problem

Socio-economic trends describe the long-term demographic development and are depicted by age pyramids, income distribution and other models. Again, we ask from the perspective of companies: Are we a part of a regulated market? What possibilities for disruptive changes can we spot? Are there regulatory or socio-economic trends that hint at a change? Are we able to use huge social changes or extensive trends like the changes in the working environment or the trend towards platform markets? What developments of interesting companies can we observe in markets that are less regulated or socially different from our home markets?

4__ We get an overview and evaluate our results

An analysis is only as good as the options for actions that result from it. Thus we evaluate our research results and assess the areas of opportunities for our problem. We ask which of the discovered trends, start-up and change processes are most relevant for us. Think back to the Porter categories »power of the customers« and »substitute products« mentioned before: We want to know how the competition and the perception of our competitors by the customers influence our possibilities and if our products or services are threatened by substitute products.

We estimate which trend, which company or which change process will probably have the largest influence on us and plot this on a two-dimensional matrix (see Template 6.3.14). As chances are always risks as well (and vice versa), our evaluation scale does not have positive or negative axes.

On the »potential for differentiation« axis, we plot our estimations of trends, competitors or changes that intensify the competition in the existing market or generate new markets. On the »potential for substitution«, we plot the trends, competitors or changes that have the potential to render our product or service obsolete.

5__ We prioritize

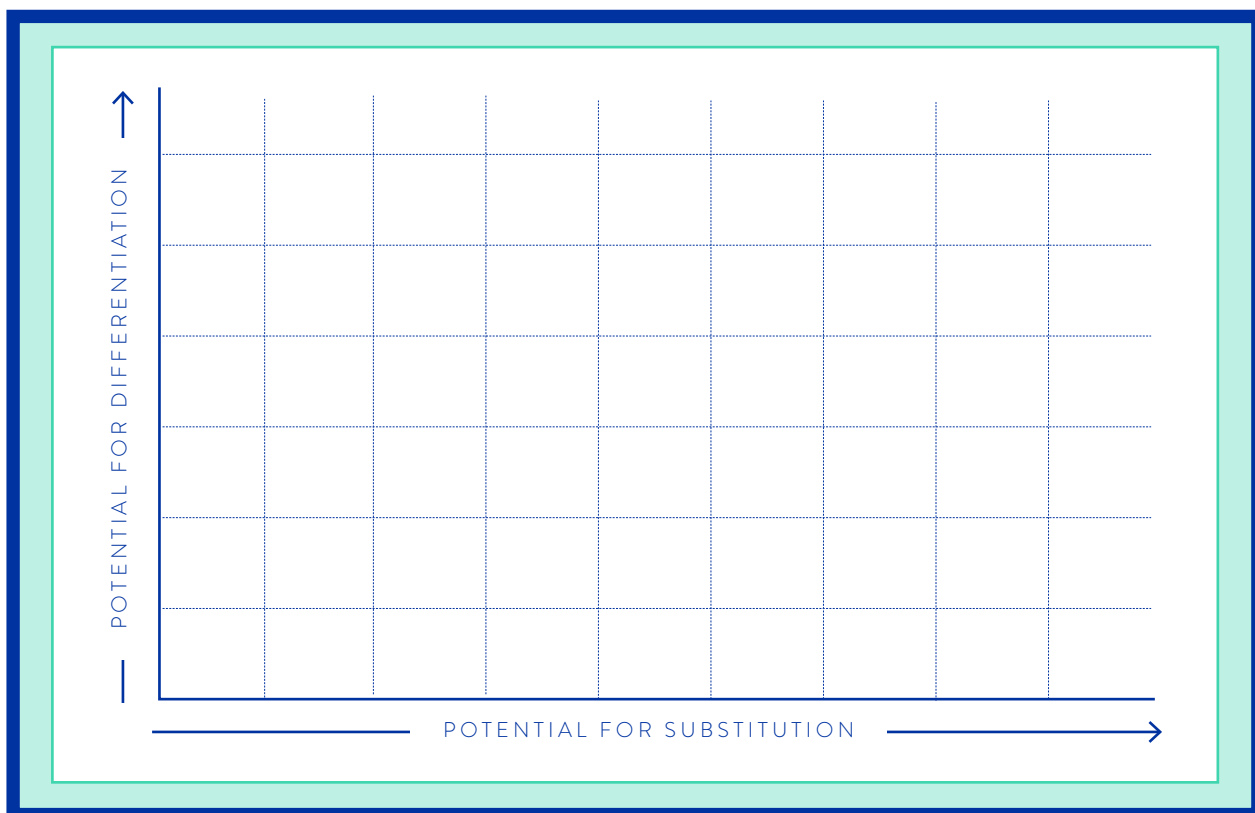
The matrix in step 4 helps us to prioritize. We can quickly select the most relevant fields and then analyze the chosen trends, start-ups or change processes in more detail by a subsequent research (with synthesis). To do this, we leave our office and examine these areas by talking to our users. Only in this way we can learn what influence these fields *really* have and how we can use them for our innovation.

HOW DOES IT FEEL?

Desk work and preliminary research are essential. We know this, but we always try to complete this step at the beginning of a new project as quickly as possible because we want to go outside and gather insights from our users. If we realize that we still have to research some basic things, we can do this later. In this way we also do not risk to research a topic to death before we leave our office for the first time.

GOOD TO KNOW

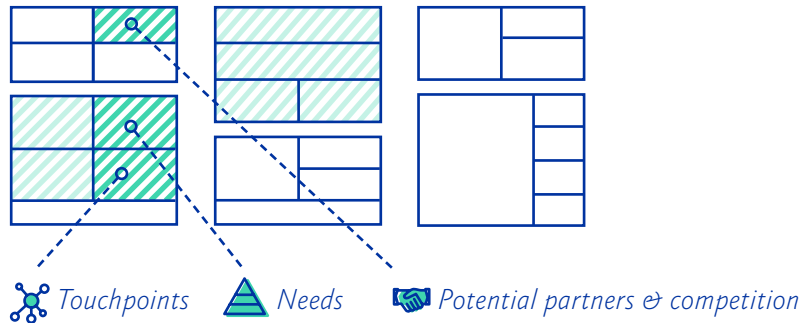
Let us have another look at Michel E. Porter and his industry structure analysis, which he also calls the »five forces« model. The model is based on the theory that the attraction of a market is mainly determined by its structure. The market structure in turn is determined by company strategies, e.g. for competing, which in turn decides about the success in the market. Thus the success of a company always depends on the structure of the market, among others. Porter belongs to the leading management theorists alive. He already developed the five-forces model in the 1980s. His book *Competitive Advantage* is one of the definitive books on management.



 Template 6.3.14: digital-innovation-playbook.com/templates/explore

10

User Journey



WHAT AND WHY?

The user journey guides us through the process that the user experiences with a product or service. By means of the user journey, we get a detailed view on what users feel when they

use a product or how they are guided through a service. We use this method to collect data about the user behavior and to test our solution in the EVALUATE module.

MODUS OPERANDI

1__We define user, context and categories

In order to work with the user journey, we first have to agree on a user. This defines what we want to research where and in which context. We have to go where the interaction between the user and the service or product happens. We also have to know up front which points are the most interesting for us and will play a role in designing a new, improved user journey

for our users later on. For this reason, this is an advanced research method. Take heart; one has to venture into the water in order to learn to swim! In our work, we use the User Journey template (Template 6.3.15) to note our observations and insights.

Usually, we are particularly interested in the following areas of the user journey:

DESCRIBE THE JOURNEY THAT YOUR
PERSONA EXPERIENCES WHEN
EXECUTING THE TASK!



PHASE

STORY				
STAKEHOLDER				
TOUCHPOINTS				
NEEDS & OBSTACLES				

Template 6.3.15: digital-innovation-playbook.com/templates/explore

a) Story

Here we describe what happens, just like the author of a novel. We express in words the individual actions of the users and other important actors, if applicable. We also note *why* the user behaves in a particular way and what his or her reasons are. The word *story* has to be taken literally!

Example: *The user enters the super market and surveys the products on offer. He walks through the corridors and looks at the storage racks. He seems to be forlorn and helpless.*

b) Stakeholder

Here we write down the important actors or any people who are involved passively, including the user. We do this individually for each phase of the process. Similarly to a play in the theatre, we state who enters in the respective act.

Example: *User and shop assistant.*

c) Touchpoints

Here we write down the touchpoints of the user with a service or a product. These points are particularly relevant for us and our subsequent solution as they provide a frame for the user behavior. Example: *Self-service checkout.*

d) Needs & obstacles

In user-centric innovation, we want to understand the users and to relate to them. In order to do this, we have to understand *how* they feel in given situations. That is what we write down in this field. Example: *Is confused, helpless, irritated. Looks for help but cannot find anyone.*

e) Further categories

Of course, we must always adapt the user journey to the given problem. We therefore always think of task-specific categories on which to focus. Example: *Duration of each phase.*

2__We go outside and absorb information

After having had a theoretical look at the individual fields of the user journey, we are going to fill them with information by asking our users in the course of an interview (method 1) or by secretly observing a user (method 11). The difficult question is: Which information can we gather by observing and which by means of an interview? How do we observe the behavior of a user without getting involved too much?

It is possible that we cannot write down information in all the fields. During our practical work, we also may realize that our user journey does not consist of three but of only one or of five or even twelve phases. However, we do not let this discourage us! We write down everything and later on take some time to arrange the information in a system.

In addition to our notebook we also take a camera with us. Taking photos is especially valuable for the User Journey method. In particular with complex services and product interactions, we may not be able to remember every detail or to find the best words for an unambiguous description immediately. Therefore, always remember to bring your camera! If needs be, a smartphone may suffice.

3__We visualize and compare

The user journey appears in all her glory when we put it up on the wall and compare it with the journeys of other users. This also allows us to determine similarities and differences visually and thus rather quickly. In the next step, we combine the pieces of information. We write them on sticky notes. In this way, we remain flexible and are able to stick the process order and the relationships to the wall. At this point, we may also notice that we can sort the information even better when we add a completely new category.

4__We extract insights

Now that we stuck all information to the wall, we can start with a detailed discussion and interpretation of the user journey. We have to answer the following questions:

- What do we not yet know?
- What does our user like in particular?
- What are the problems and obstacles for our user?
- Where does the process work well?
- Where does the process work not so well?
- Where are opportunities for improvement?

WHICH TYPES OF CATEGORIES
MAY WE OBSERVE IN THE
USER JOURNEY?



USER JOURNEY CHECKLIST

☐ *Space; physical setting*

☐ *Actors or stakeholders; the people involved*

☐ *Activities; actions of the user*

☐ *Objects that are used or not used*

☐ *Events*

☐ *Time and durations*

☐ *Goals and intermediate goals*

☐ *Emotions*

☐ *Touchpoints*

Fig. 6.3.8

HOW DOES IT FEEL?

The suggested areas in the template for which we will consciously look out in the user journey will usually have to be adapted to the problem at hand. The checklist in Fig. 6.3.8 shows further categories that we may examine if it seems to be reasonable.

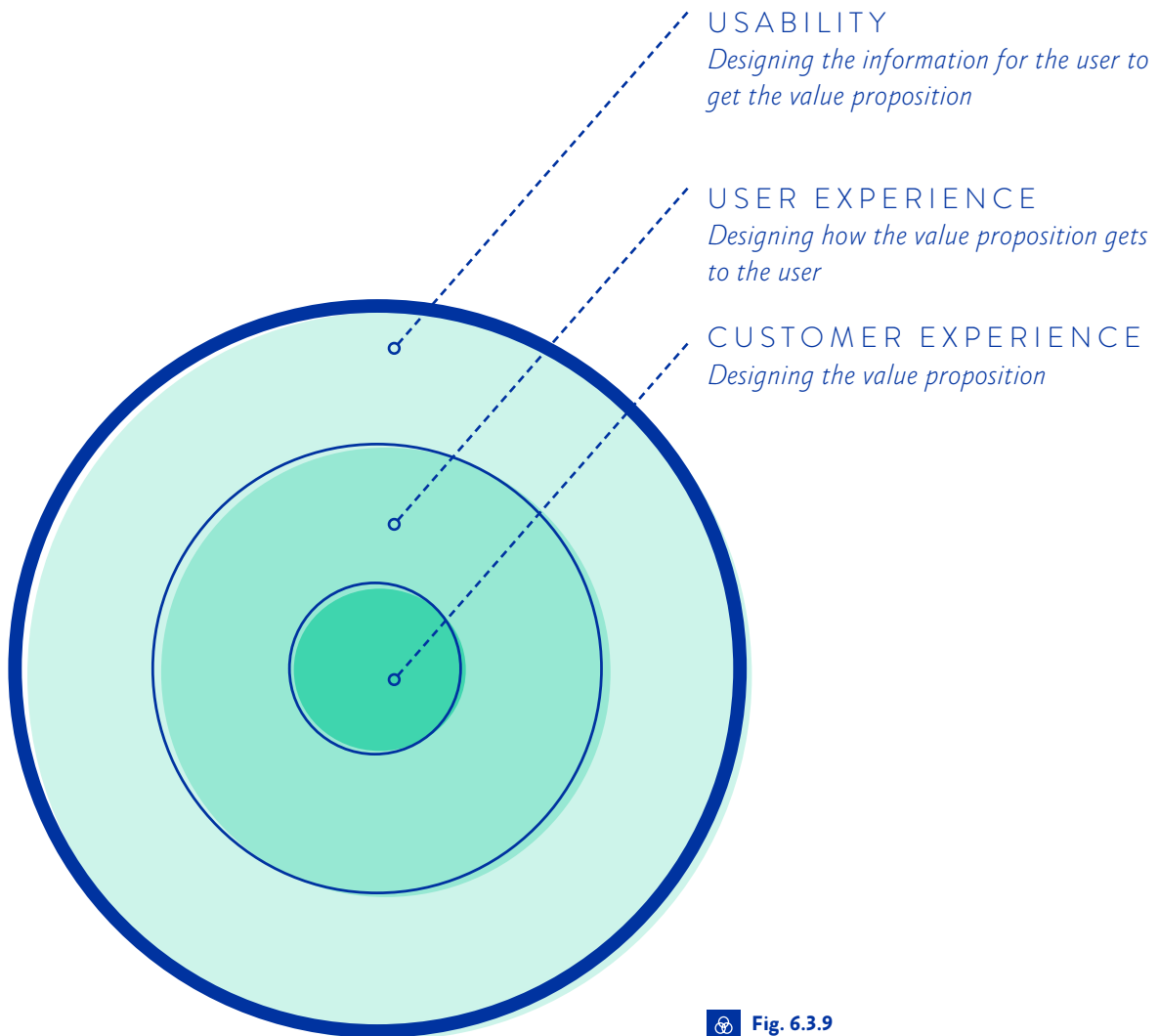
The same rule that applies to other methods also holds true for the user journey: It only unfolds its true potential when it is individually adapted to the user context. When we look for stakeholders or touchpoints where there are none, we waste our time. When we ask the wrong questions or miss important information, we cannot reach our goal. With every method, we can do everything right *formally* and still do everything wrong with regards to the *contents*. For most people, the User Journey method is easy to employ. In contrast to many other

methods, we have a relatively solid procedure as a guideline. Shaped by corporate thinking, we also tend to think in terms of processes. The user journey picks up on this view; however, it introduced an important difference: In companies, we usually view processes from the perspective of objects. We ask for the process regarding to material flow, information flow or the (in) famous value-added chain. The user journey views processes from the perspective of an individual user or a user group. This does not mean that we only look at a single user journey. In some cases, e.g. when analyzing value-added chains, it is reasonable to try and understand the process from the perspective of several users. In this way, we can relatively quickly discover where information gets lost, where stupid detours are taken or where time gets wasted.

GOOD TO KNOW

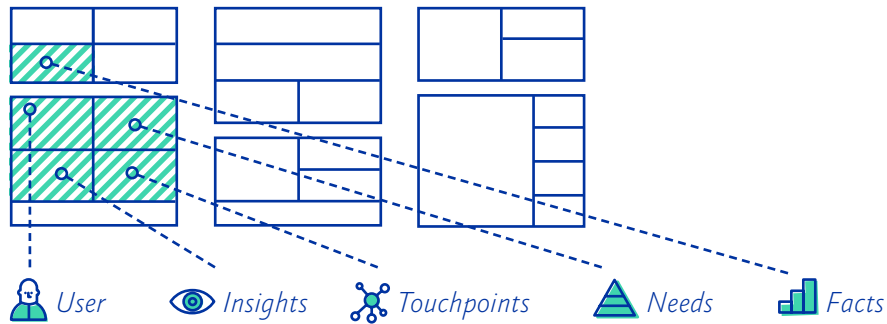
In section 6.2 we talked about the two categories of methods, i.e. synthesis methods, which help us to sort and to categorize information, and ethnographic methods, which help us to collect the *proper* information. In this aspect, the User Journey is a hybrid method. It can be used in various areas and contexts. It is a key method

for the new discipline of service design. When you have to deal with this or with people who work in this area, you surely have already heard the terms »customer experience«, »user experience« and »usability.« The User Journey also fits into this list as it combines them all (see Fig. 6.3.9).



11

Fly on the Wall



WHAT AND WHY?

The name of this method goes back to the Direct Cinema movement at the end of the 1950s. The documentary filmmakers of this school wanted to depict real life. They did not want their camera to attract attention so that the people in front of the camera behaved completely *naturally*. As they wanted to remain unnoticed like a fly on the wall, this approach was soon christened »fly-on-the-wall documentary.«

When using the Fly on the Wall technique, we take on the role of a silent observer. We are on a secret mission to observe the users and

their behaviors in their natural environment, just like a private detective. Most people cannot describe their own behavior sufficiently, especially when it comes to everyday actions. For this reason, we can discover interesting automatisms and subconscious behavior often better when we play the »fly on the wall.« Especially when conducting explorative interviews (method 2), we can have a break every now and then in which we silently observe the users. Then we can confront them with their own subconscious behavior and expose deeper seated needs.

MODUS OPERANDI

1__ We prepare ourselves

Before we start observing, we talk about where and when we can observe many users who are relevant for our topic. We also equip ourselves so that we do not stand out but blend in with the observation environment: in a supermarket, we actually buy some food, and when we enter a fitness center, we always carry sports equipment.

It is best to do observations in teams of two. A single person might miss relevant details, while more than two persons are more likely to attract attention. In any case, we take along a small notebook and a smartphone or a camera to take the odd picture (*this is the fine art of observation!*).

2__ We observe

We call on one station of the supposed user behavior after the other and observe the users thoroughly. In our fitness center example, we start at the reception and visit the changing rooms, the gym, the showers and the juice bar in the same order as our users. When we are in an unknown location and do not know where to start our observations, we discreetly select one person and mirror his or her behavior. If possible, we take some pictures without attracting attention. They serve as a reminder and help to document our experiences when several groups of us have done observations in different locations and situations. When it is not possible to take photos, we sketch important situations in our notebook.

3__ We evaluate and summarize what we have seen

After each round of observations, we synchronize our impressions and those of our partner.

Maybe our companion has noticed more or even something completely different.

At this point at the latest we note everything that deems important so that we can later remember it. Template 6.3.16 helps us to organize our records.

4__ We talk to the people that we have observed previously (optional)

With observation alone, we can only make assumptions. We will recognize repeated behavior patterns as well as surprising and outstanding aspects. But this is just scratching the surface. It is important to go deeper and get to know the real reasons for a behavior. The best possible help for this can be gained from the people we did observe; ideally the actual subjects of our observations or at least similar people. As mentioned in the beginning of this section, the fly-on-the-wall technique is especially suited for mixing with explorative interviews (method 2). Pure assumptions are not helpful in the later steps of innovation development.

HOW DOES IT FEEL?

On our observation missions, we always feel a little like detectives. It is fun, and we really are able to discover peculiar behavior when we take a closer look. However, we have to be careful not to be discovered. We have to become a fly on the wall and to blend in with the observation environment.

To give you an example from our experience: We once did a project for a supermarket chain and observed the customers in one of the stores. Eventually, we caught the attention of security because we did not carry a shopping basket and behaved very suspiciously. We peered out from behind the storage racks and waited for the

customers to take the goods out of the shelves. After we explained our purpose to the security staff, they allowed us to proceed, but it took a while until we blended in with the environment again.

There was one behavior that we relatively quickly discovered: At the chilling cabinet, all the customers reached for the product at the back with the latest best-before date, especially in the case of yoghurt. We later interviewed the customers, and while most of them knew that they would consume the yoghurt at the same day, they still wanted to buy the longest lasting.

GOOD TO KNOW

When the Direct Cinema movement came up in 1958, the first handy film cameras that allowed for more intimate recordings had been developed. In 1960, it also became possible for the first time to record sound and vision simultaneously on location. Before that, filmmakers had to record the sound separately by means of huge, heavy tape machines or to redub the sound in the studio. The documentary *Chronique d'un été* (Chronicle of a Summer) by Jean Rouch is the first known film with synchronous video and audio recording.

Despite the technological progress, it was very hard for the Direct Cinema filmmakers to fulfill their own aspirations of observing the action discreetly like a fly on the wall (actually, it was impossible). They had chosen this approach to record unadulterated reality. Strictly speaking, every decision to hit the record button of the camera and every choice of camera position already constitutes an interference with reality. In any case, the editing results in a constructed reality. To date, there is no documentary that actually shows pure, unadulterated reality.

What did we observe?

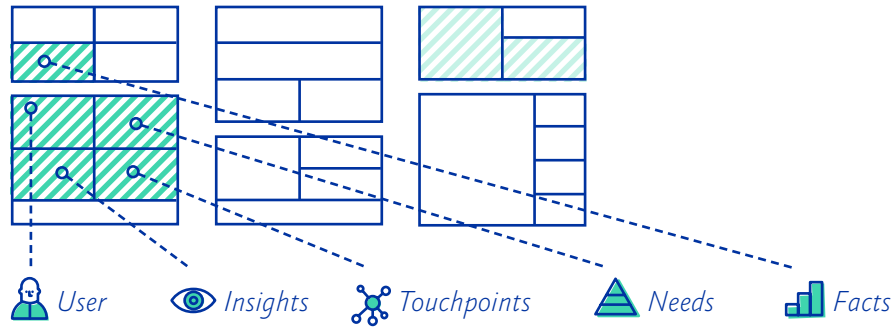
What did we expect?

What did surprise us?

What do we conclude from that?

12

Self-Immersion



WHAT AND WHY?

Nothing is more valuable than experiences of ones own. The self-immersion is a method to immerse ourselves in the topic. For a limited time, we become the user. Imagine we want to come up with an innovation for people with walking disabilities. Spending a day in a wheelchair helps us to develop a better understanding and more empathy for the day-to-day life of our users. When doing a project for an emergency room, we can run through the whole process as a patient. If we want to develop something for

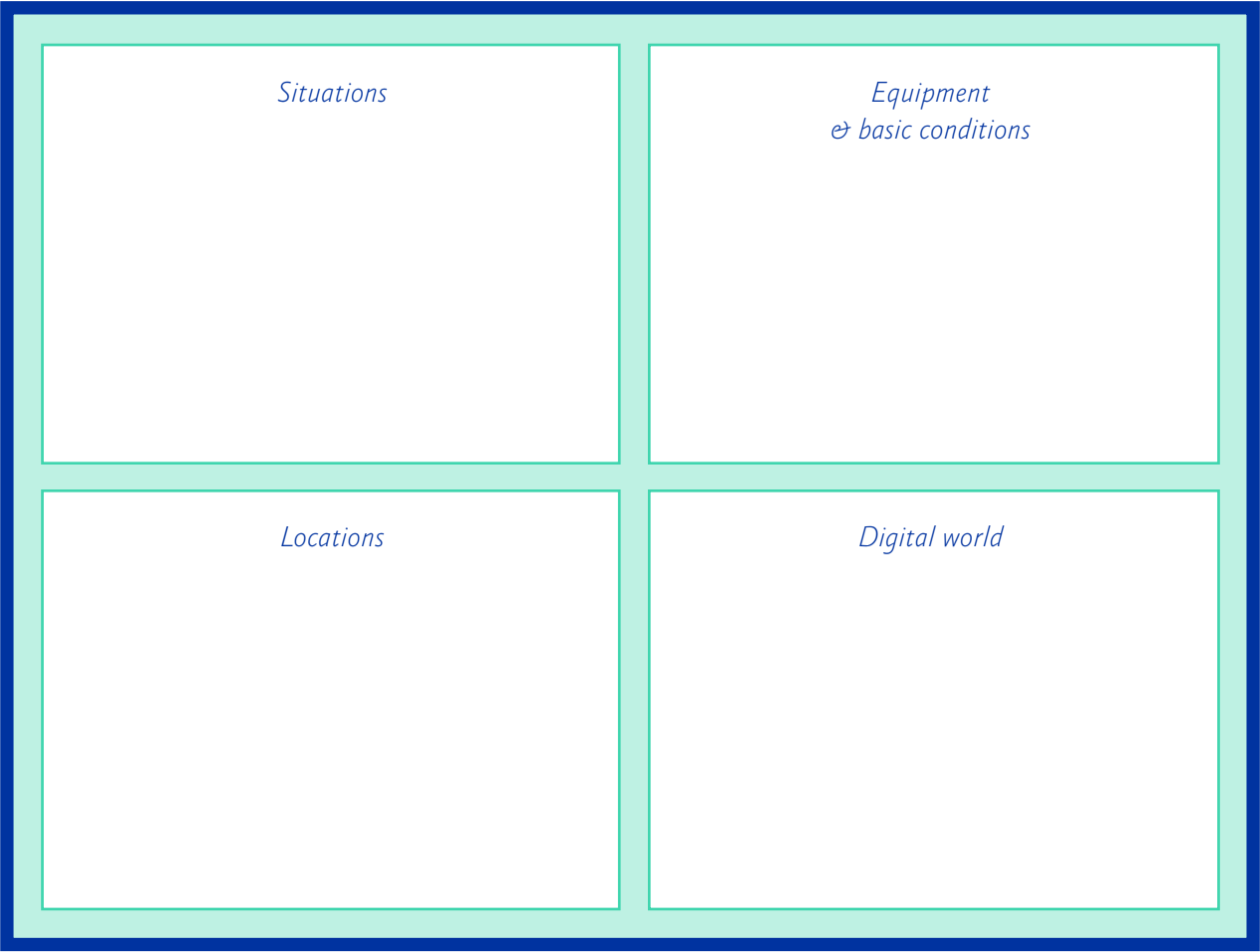
elderly people, we can simulate the decreasing motor functions by wearing gloves and the decreasing eye sight by using spectacles with the wrong dioptric value. We could also move into a retirement home for one day. This method is called »self-experiment« or »self-immersion.« We use this method when we already have an understanding of our users and their basic needs but still want to develop a better understanding and more empathy for them.

MODUS OPERANDI

1__ We plan

Depending on how much time we have at our disposal and how much effort we want to put into gaining first-hand experience, we have to plan in what situations and where we put ourselves in the shoes of our users. Do need some special equipment like a wheelchair? Template 6.3.17 can help with planning.

The self-immersion can be done by a single person and only rarely by two. This also depends on the situation and the topic. Basically, it can be of advantage to immerse oneself in the user world on ones own so that one can better relate to the situation.



Template 6.3.17: digital-innovation-playbook.com/templates/explore

2__We perceive consciously

We carefully observe any positive and negative feelings while we immerse ourselves in the experience. What pleases us? When is it extreme awkward or even unbearable? Ideally, we experience this immersion twice: the first time to let us really in on the experience, and the second time to gather information for our research. If we are already proficient or if we can make the experience only once, we can also collect information during the first pass. This may cause us to jump to a meta-level instead of paying attention to the impressions surrounding us. However, we will remember the really important things in any case.

3__We write down key words

First we perceive and then we take notes. We jot down the most important experiences. The structure of the »emotional map« (see Template 6.3.18) may be helpful. This is a variation of the user journey where we describe the individual moments that we have perceived and mark their relations to each other.

4__We tell others about our experiences

Innovation development is team work; self-immersion on the other hand is nearly always a solo mission. Afterwards, we thus have to tell the other team members the complete story of our immersion. We switch to story-telling mode. The others can re-live and understand our experience. In this very moment, new aspects may emerge that we may already have forgotten. The questions of the other members help us to scrutinize certain situations and conditions.

GOOD TO KNOW

Many actors use a slightly altered self-immersion method in order to prepare themselves for particularly demanding roles. The technical term is »method acting.« This technique was developed at the end of the 1940s by the famous acting instructor Lee Strasberg, who in turn built on the ideas of Konstantin Stanislavsky from the beginning of the 20th century. This method gained world-wide fame by

Marlon Brando and his roles in *A Streetcar Named Desire* (1951) and *The Wild One* (1953). Other master craftsmen of this method apart from Brando are Robert de Niro, Dustin Hoffman and Daniel Day-Lewis.



HOW DOES IT FEEL?

In some cases, self-immersion is a real challenge, while in other cases it is relatively easy. We have experienced ourselves the real-world cases described at the beginning of this section. These experiences have helped us later on during the development of ideas and prototypes in the CREATE module.

When you are using this method for the first time, we recommend to approach it carefully and to test what suits us. Not every one of us

likes to sleep rough for a week only to understand the everyday life of a homeless person, or to spend a night in a women’s refuge as one of us has already done. On the other hand, these extreme cases of self-immersion were those that taught us the most.

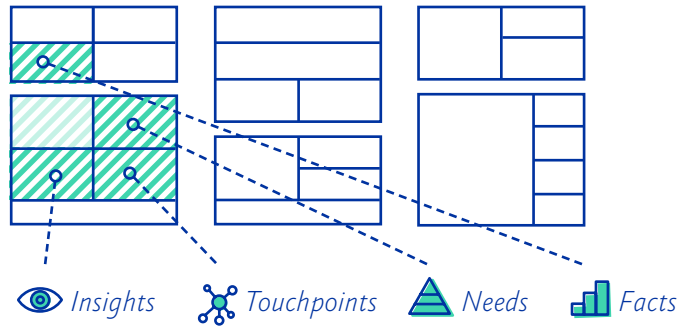
In any case we must never forget to make our experiences purely as users and not as interviewers or researches. We have to feel the experience and let it affect us.

PHASE				
STORY				
TOUCHPOINTS				
<div> EMOTIONS</div> <div></div>				

Template 6.3.18: digital-innovation-playbook.com/templates/explore

13

Cultural Probes



WHAT AND WHY?

Cultural probes are diary-like private studies that the user conducts on his own, usually *after* we got to know him during a qualitative interview (method 1). Cultural probes help us to better understand the user in his everyday life^{*1}, and they help the user to review his own everyday actions he normally performs without thinking about them? What pleases and what frustrates him beyond the things that we already discussed in the interview?

In contrast to other investigation and interview methods, this technique allows the user to give a report on his own. We hand him a so-called »cultural probe kit« and allot him usually a period of approx. a week to conduct the desired private studies. This time should be sufficient to gather deep insights. When it works, we have uncovered more hidden needs.

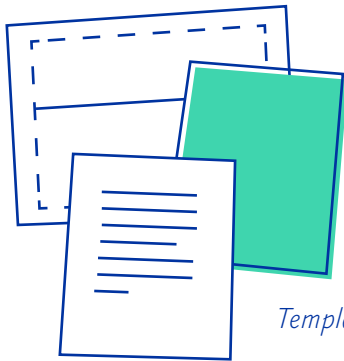
Cultural probe kits can be very dissimilar. The usually contain a diary with concrete instructions and tasks as well as a camera. Often there are also various artifacts like specific templates, postcards, small figurines or mood boards.

¹ After all, we visited him only for approx. three hours during the interview. There is still a lot of *undiscovered* everyday life left!



Diary

Diary: Usually, this is an empty notebook that the user can fill with his observations and ideas.



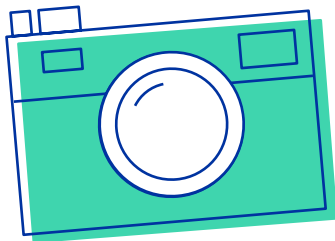
Template

Templates: Templates defined by us^{*1} organize the user's inputs. They can replace or supplement the diary.

¹ E.g. templates for the daily routine or the user journey template from method 10.

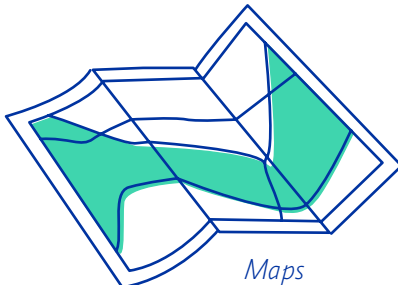
Camera: Users can take pictures or videos to document their everyday life or specific situations. The camera allows us to view the life of the user directly from his perspective. Depending on the user group, we can either put a real camera^{*2} in the cultural probe kit, or we can ask the user to use his own smartphone. The pictures and videos can be shared online or via mail. The important thing is to reduce the effort for the user as much as possible.

² Polaroid cameras come in handy as the photos can be labeled immediately.

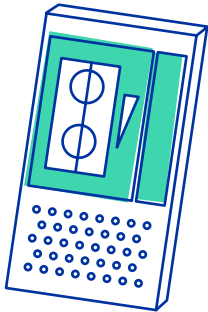


Camera

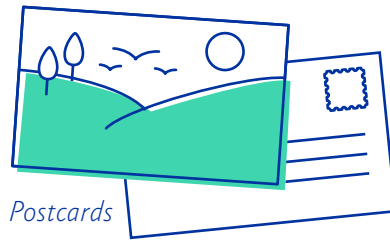
Maps: Maps are helpful when we want to correlate locations and activities, e.g. the way to the working place, routes inside a building or spaces in a building, e.g. the emergency room in a hospital.



Maps



Voice recorder



Postcards



Comment sticker

The artifacts only work when they are accompanied by written instructions. Usually we put the cultural probes kit into a box or bag. We also provide pens and sticky notes; in short, we give the user everything he needs to conduct his private studies. We must not burden the user with any organizational effort; otherwise we risk that we do not receive thoroughly completed cultural probes. By the way, candy and chocolate are legitimate bribes!

When we are unsure whether our cultural probes kit works, we have it tested by known but uninvolved people.

Additional cultural probes artifacts

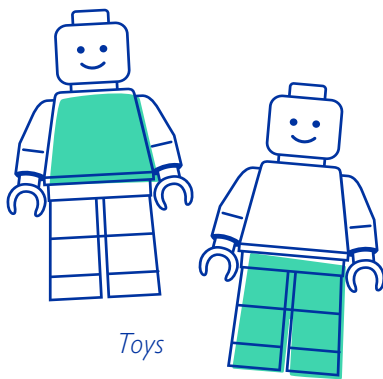
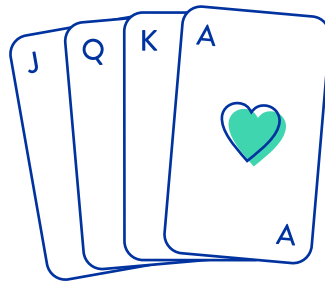
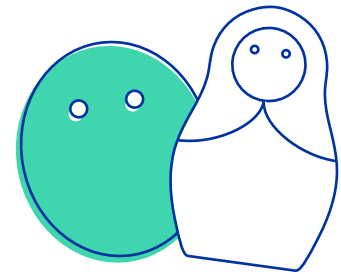
There are basically no limits in designing the artifacts. They only have to match the research topic and the environment of the user, because we have to keep the effort for the user as low as possible. We also should refrain from fitting the kit with too many artifacts as otherwise, the user may feel overwhelmed.

Voice recorder: Audio recorders can supplement or replace the diary. Not every user likes to hear his or her own voice, but some of them prefer talking into a voice recorder to writing.

Postcards: These »postcards« show a picture on the front and questions on the back. These artifacts are a more informal way to learn the user's opinion on specific topics^{*1} than e.g. a questionnaire.

Comment stickers: These are sticky notes in the shape of speech bubbles, thumbs-up or thumbs-down icons. The users are asked to stick them on photos or objects and label them with a short comment. This is a playful method to reveal specific thoughts and opinions.

¹ For example life, culture, environment and technology.

*Toys**Emotion cards**Mini Mes*

Emotion cards: These are cards with a selection of emotions. They can be useful to pick up emotions in a more differentiated way. The respective emotions are then marked by circles or assigned. For example, the user can glue emotion cards into the diary of the templates.

Toys: They are usually very experimental and serve to loosen up. The users are asked to build or knead emotions or situations. We provide the modeling clay or the Lego bricks. At the end, the user takes a picture and describes his work in the notebook.

Mini Mes: These are objects that represent the user, e.g. a painted egg or a Matryoshka made from Styrofoam. It is important that the Mini Me does not have a face because the user is asked to draw his own emotions onto the figurine, e.g. a smile, a frown etc. This artifact is another playful instrument to sample emotions about specific situations, periods or topics.

MODUS OPERANDI

1__ We prepare a cultural probes kit

We have to discuss three important points: What users do we want to get to know better by means of the cultural probes? What exactly do we want to learn? Which environmental factors do we have to consider? For instance, when we want to design an innovation in the area of nourishment, the time of day can become important.

When we understand the context of the investigation, we select the contents of the cultural probes kit. The following combination is always suitable: First questions about the person, then about the daily routine and about emotions, followed by more specific private studies about the research topic. We recommend to use at least a standard set made of a diary, templates and a camera.

Whatever artifacts we use, we always provide the user with information about the extent and the required time for the tasks. The diary should be limited to a few pages so that the users know that they are not expected to write a novel.*¹

¹ We would not have the time to evaluate such a novel, anyway.

2__ We add specific context-related instructions

Imagine our project revolves around the topic of »sports, food and gastronomy.« From the interviews, we already know that our user visits a fitness center. In this case, we can supplement the diary with the following specific instructions and questions:

- Please describe your training program in the fitness center! Write down in the diary how long you do this and how you feel doing it.
- What is important for you when you work out in the fitness center?
- What is frustrating and what makes you happy?
- What do you do after sports? How do you feel?
- How do you organize your sports program? Spontaneously? Not at all? Weekly? Tell us a bit about this!

It is always important to give the users the freedom to write down further thoughts: »Write down your own thoughts on the empty pages of the notebook. Here you are invited to tell us about other things, to draw or to glue in pictures.« This may result in things we have not thought of before.

Instructions for taking pictures may read as follows:

- Please take approx. five pictures per day with your smartphone.
- Please take a picture of your meal. What is important for you? Where do you like to eat and with whom? Where do you go for a meal?
- Show us pictures of your everyday life. What is important for you?

It is also good to provide the user with a means of contact: »When you have any questions or problems, you can simply write an email to hello@questions.com. We will also gladly call you back.«

3__We hand over the cultural probes kit

The cultural probes kits are usually mailed in a box or given to the participant after an interview. The advantage of a personal delivery is that we can brief the user personally and in detail and that we are able to answer any questions immediately. We also enclose a prepaid self-addressed envelope.

4__We evaluate the cultural probes kits

The cultural probes kits are evaluated in the same way as the interviews, i.e. by means of sticky notes, story telling and subsequent clustering of information.

HOW DOES IT FEEL?

When compiling cultural probe kits, we have to include a good portion of playfulness. The users should have fun completing their tasks. On average, we allow them a week for working on the kit. In 99% of all cases we get back the completed kits at the appointed time. Tangible and playful artifacts also help the users to talk about sensitive topics like illnesses or heavy problems.

GOOD TO KNOW

The Cultural Probes method was developed in 1999 by the design professors Bill Gaver, Tony Dunne and Elena Pacenti, inspired by the techniques of the left-wing artist group »Situationist International.«^{*1}

¹ An article from the magazine *Interactions*, Vol. 6, Issue 1 (Jan/Feb 1999) can be found as a PDF file on bit.ly/15f6uBH (06/26/2016).

6.4 THE LAST STEPS IN THE EXPLORE MODULE

EVERYTHING ENDS WITH THE HOW-MIGHT-WE QUESTIONS

In the EXPLORE module, we have collected lots of insights about our users, about markets, technologies, trends and touchpoints. We surveyed our knowledge, and now we can define fields of actions. The problem hypothesis marks the end and the result of the EXPLORE module. We call it the how-might-we question. It leads to the next module of innovation development, the CREATE module.

At the bottom of the EXPLORE module, there is a gray section titled »how might we.« We enter our problem hypothesis in this field. It describes a user need that is still unsolved according to the insights we gained in the EXPLORE module.

Defining *which problem* we want to solve for *which user group* provides us with a foundation to develop solutions. The problem hypothesis is expressed as a question because questions help us to become active. They stimulate our problem solving competence.

One user group and one problem

The how-might-we question is important because it focuses the problem that we want to solve. The question is only good when it concentrates the existing information and our knowledge. (This also means that we do no longer need or use much of our collected information.)

Due to our previous extended research we can develop several problem hypotheses, if reasonable. These hypotheses can subsequently be processed simultaneously or one by one (according to priority) in the CREATE module. If we have identified several user groups and/or several problems, we complete an Innovation Board of its own for each of them.

It is not easy to develop a good problem definition. The how-might-we question helps us in doing so. However, we still need many hours of intensive work in the EXPLORE module until we have defined a problem to which we attribute the potential for a great, innovative solution.

We cannot immediately answer a how-might-we question, and that does not feel good. But if we already had an answer, we would not be on the way to design something new. The tensions that we feel are thus important and good. Sooner or later, they lead us to solutions that are not obvious; solutions that have to be tested (by means of the EVALUATE module); and solutions that may only help us to gain a better understanding of the how-might-we question or even to dismiss it. Even that would be a success.

7 THE CREATE MODULE





*In the **CREATE** module, we look for ideas and solutions for the problem of our users. This is done based on the how-might-we question at the end of the **EXPLORE** module and leads to a comprehension prototype and a problem solving hypothesis.*







In the field *Idea Description* we write down our core idea. This description should focus on and describe a distinct use case. -----

In the field *Addressed User* we enter details and peculiarities about the user group for which we develop our solution idea. -----

In the field *Addressed Needs* we write down the needs of the user group which we want to satisfy by our idea. In the adjacent field *Problems* we enter one to three most pressing problems that pertain to these needs. -----

The field *Potential of the Idea* contains our assessment of the idea using the three criteria *User Value, Scalability* and *Feasibility*. -----

 IDEA DESCRIPTION	
 ADDRESSED USER	
 ADDRESSED NEEDS	 PROBLEMS

 POTENTIAL OF THE IDEA	 THE WOW FEATURE
  	 HIGH-LEVEL CONCEPT
VALUE PROPOSITION	

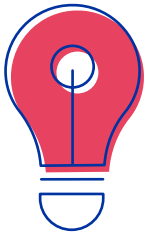
In the field *The Wow Feature* we specify the one feature for which we want to be celebrated by the press.

In the field *High-Level Concept* we jot down a succinct analogy for describing our solution idea.

In the field *Value Proposition* we enter our solution hypothesis. This is the synthesis of the idea, its potential, the users and the

7.1 CREATE MODULE: OVERVIEW OF THE FIELDS

The CREATE module is our »hard disk« for all relevant information about the idea, which we will later test in the EVALUATE module. We use the fields of the CREATE module to write down the user group and the needs which we are concerned of. We also try to make first statements about the potential of our idea.



MATCHING METHODS:

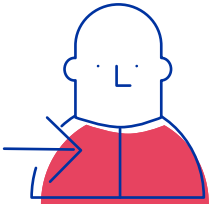
- 1 Brainstorming
- 2 Traditional Brainwriting
- 3 Idea Tower
- 4 Collective Notebook
- 5 Inspiration Cards
- 8 TRIZ

Idea Description

Ideas can have many facets and solve various problems. We have to describe and document an idea thoroughly so that we will be able to test it subsequently by means of different prototypes.

The old design principle of the analog world, »form follows function«, is no longer valid as many digital products have more than only *one* function. Take the smartphone as an example: it is a mini computer, a telephone, a hard disk, a mini TV set, a game console and a photo and video camera all in one. One of the most common mistakes in designing digital products and services is to try and combine too many functions and use cases because there are no longer any physical limits. In most cases, this goes belly up.

Too many functions not only make the product or service unnecessarily complex but also make the design of good test scenarios difficult. Thus we recommend that you always consider carefully if the components of an idea really belong together or if we could split them into several small ideas. The latter also makes testing in the EVALUATE module easier as it allows us to gather feedback more selectively.

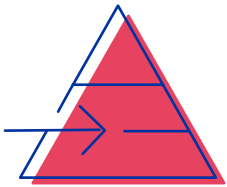


MATCHING METHODS:

- 1 Brainstorming
- 2 Traditional Brainwriting
- 3 Idea Tower
- 4 Collective Notebook
- 5 Inspiration Cards
- 6 Categorizing and Implementing Ideas
- 8 TRIZ

Addressed User

If we have previously worked on the EXPLORE modules, we should already have identified one or more user types. In principle, the addressed user is identical with the user from the EXPLORE module. It is helpful to document the most important special features or details of the user again at this point. After all, we want to use this user group later on for our tests in the EVALUATE module.

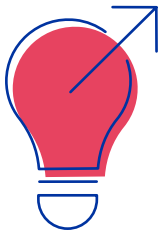


MATCHING METHODS:

- 1 Brainstorming
- 2 Traditional Brainwriting
- 3 Idea Tower
- 4 Collective Notebook
- 5 Inspiration Cards
- 6 Categorizing and Implementing Ideas
- 7 Jobs to be Done
- 8 TRIZ

Addressed Needs and Problems

Our idea has to satisfy specific needs of our users. Here we write down what needs these are. It is also possible that a specific idea is limited to just one specific need. Think back to our Airbnb example from section 2.2, Player Type #1: Discoverer. The idea of Airbnb solves a problem for city tourists who do not like to stay at hotels and for people whose flats are vacant when they go on a journey.



MATCHING METHODS:

- 6 Categorizing and Implementing Ideas
- 7 Jobs to be Done
- 9 Kill Your Company
- Gut feeling

Potential of the Idea

We can make the idea clearer while it is still in an early stadium (before it has been tested and gone through iterations). We understand that this classification can only be very holistic, but it helps to differentiate ideas and supports our gut feeling when we decide which idea we want to use first in the EVALUATE module. At this point, we have a look at the criteria user value, scalability and feasibility. The following frameworks help to give these criteria scale.

User value: Midge bite vs. shark attack

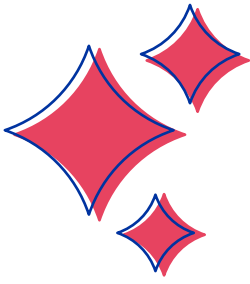
By *user value* we mean the importance of the problem for the user. It is possible to have a great idea that satisfies a real need, while the problem is not that important for the user. In our framework »midge bite vs. shark attack«, the pole *midge bite* represents problems that are irritating but bearable, while the *shark attack* pole describes devastating and life-threatening problems. An idea that tends more to this pole offers a higher value for the user.

Scalability: Robinson Crusoe vs. Australia

In our innovation development, we always look for a problem first and consider scalability later on. Thus it can happen that we develop ideas that provide a solution for just a small, specific circle. This is not necessarily a bad thing as many B2B solutions thrive on solving a specific problem for a limited group of customers. In our framework »Robinson Crusoe vs. Australia«, the *Robinson* pole represents ideas that solve problems of single individuals while the *Australia* pole describes ideas that solve the problems of a huge user group, as it is e.g. done by successful social networks.

Feasibility: Hammer and nail vs. jet engine

Here it is important to check who the sender and the implementer of the idea will be. In many cases this will be the company for which we do our innovation project. How well does the idea match the company? Is it required to develop sophisticated technologies or can we build upon existing solutions? We also estimate whether the new solution represents an extension of the core business or whether it leads onto completely new paths. In the framework »hammer and nail vs. jet engine«, the *Hammer and nail* pole represents simple and easily implementable ideas, while the *Jet engine* pole stands for ideas that require much more innovation by the company.



MATCHING METHODS:

- 1 Brainstorming
- 4 Collective Notebook
- Gut feeling



MATCHING METHODS:

- 1 Brainstorming
- 4 Collective Notebook
- Gut feeling



The Wow Feature

Any innovation has a »wow feature«, which is highlighted in the media and on review platforms, e.g. the right and left swipes in Tinder for »I want to get to know this person« and »No, thank you!«, respectively. What is our wow feature? What constitutes the buzz potential of our solution? Our solution can only become a hit when it does not simply solve problems but also excites the users.

High-Level Concept

The fantasy TV series *Game of Thrones* was pitched by their makers as »the Sopranos in Middle-Earth.« This immediately conjured up a catchy picture in the minds of the program directors of the TV network HBO and thus secured the financing. In the digital world, you could e.g. describe Netflix as »Spotify for movies.« Start-ups often use high-level concepts when they look out for investors and prepare their »elevator pitches.«

Value Proposition

This field bundles the insights gained in the CREATE module. Here we write down the value proposition that our idea bears for the user. The value proposition that we offer our users is the reason for which our targeted user group wants to use our product or service. When expressing this proposition, we always directly and specifically relate to the needs of our users.

Up to now, the value proposition is just an assumption based on our assessment. In the EXPLORE module, we have discovered a user problem, and in the CREATE module, we have worked out a suggested solution for this problem. In the next step we have to find out whether our idea really solves the problem and fulfills the value proposition. We do this in the EVALUATE module. The basis for this is the succinct formulation of the value proposition.

7.2 A SHORT INTRODUCTION TO CREATE METHODS

One of our colleagues always lies down—preferably in the sun—when he wants to be creative. Another one has her best ideas in the morning while showering, while a third one can only think with loud Heavy Metal music in the background. Can we incorporate methods like these into our canon? This question looks strange only at the first glance. After all, in creativity research there is still no real agreement on the question how creativity *works* in the first place.

However, researchers have already found out a few basic methods that make us creative in the short or long run. Experiments show that it is helpful to let our brain indulge in a mindless but concentration enhancing activity, e.g. sorting Lego bricks by color. However, this method to foster creativity in the short term was not convincing enough for us. We were looking for long-term solutions.

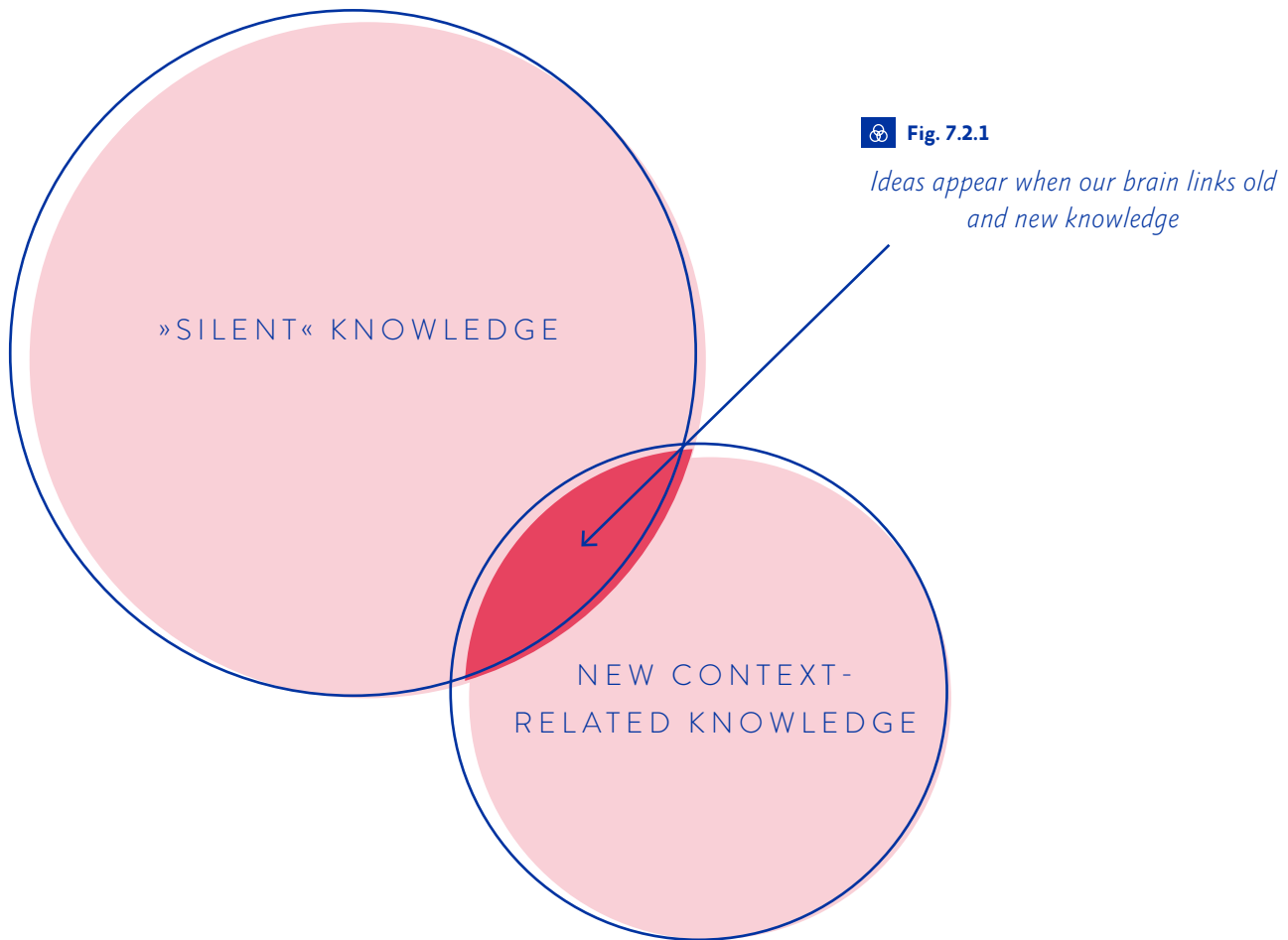
Albert Einstein once said, »I do not have a special talent, I am just passionately curious. But it is entirely possible that I would not have found the solutions without my philosophical studies.«^{*1} Curiosity is thus the foundation of sound creativity; not only because of Einstein's quote.

There are two characteristics that make us creative in the long run. One of them is a broad knowledge of impossible and possible things. The cognition psychologist Dietrich Dörner calls this the »silent knowledge.« It is the whole information ballast that we collected in the course of our life and whose many areas we do not even perceive consciously any longer. The second requirement is a deep understanding of the current problem. Curiosity is helpful for both aspects.

All methods presented in this module are ultimately based on this basic assumption. First, we collect as much information as possible. We look at it from different perspectives, sort them in a new way and interpret it in the context of our existing knowledge in order to develop new solutions (see Fig. 7.2.1). Our brain links the old and the new knowledge. This works best during resting periods (also called incubation phases).^{*2}

¹ See Ulrich Weinzierl:
Carl Seelig, Schriftsteller,
Vienna 1982.

² While sorting Lego
bricks, showering,
playing air guitar
etc.



For this reason we swear by interdisciplinary team work because as a team, we have much more knowledge und more different views of the problem in question (see Fig. 7.2.2). Conversely this also means: The more similar the people are, the more alike are their views and the smaller the pool of their collective knowledge is.

Using a collective pool of knowledge does only work if we succeed in accessing this knowledge really *collectively*. In this module, we thus incorporated only those methods that have already proven to be suitable in this respect according to our experience. But be careful: Any method only works as good as the team. The best method is of no use if the team members dislike each other.

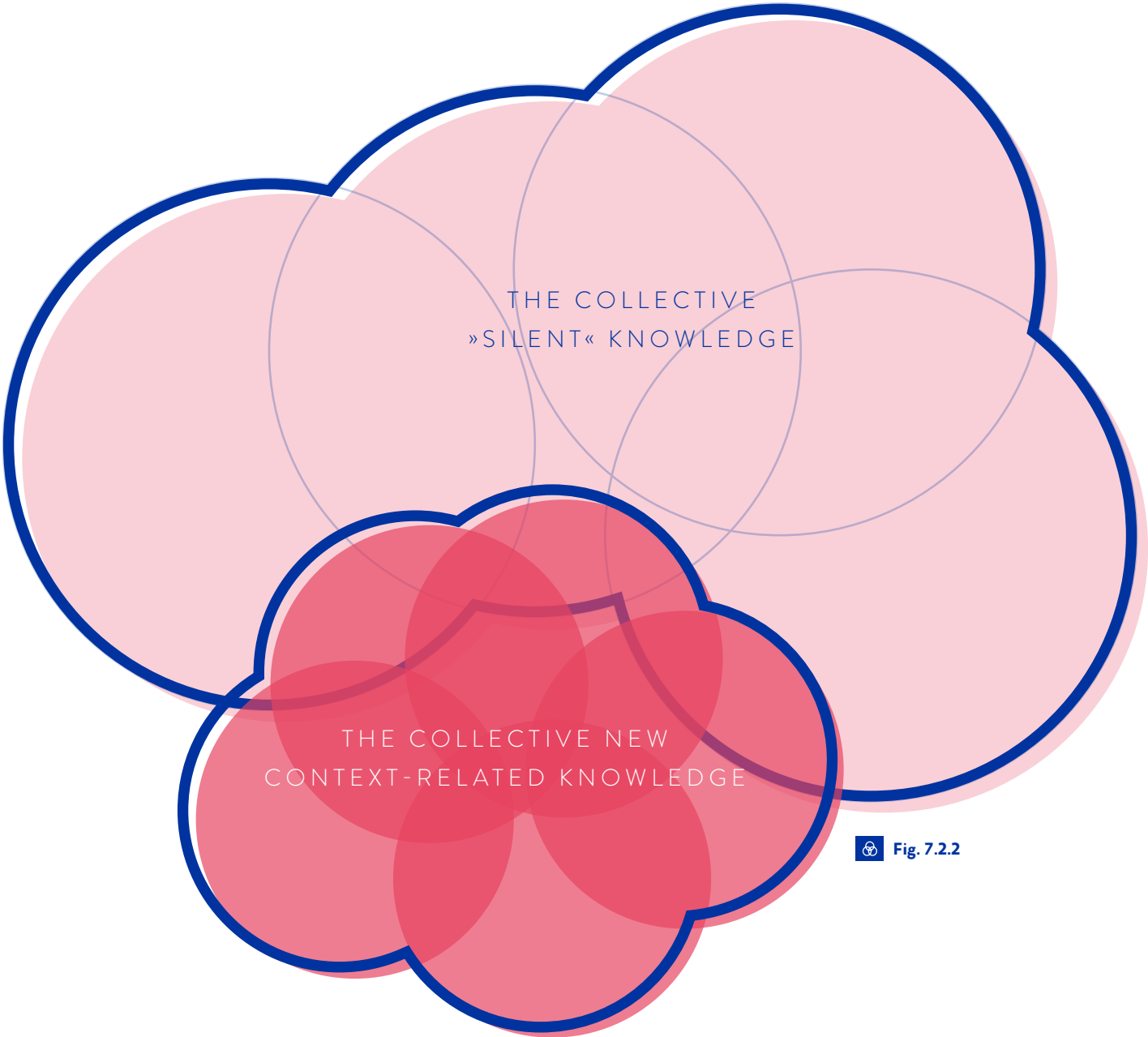


 Fig. 7.2.2

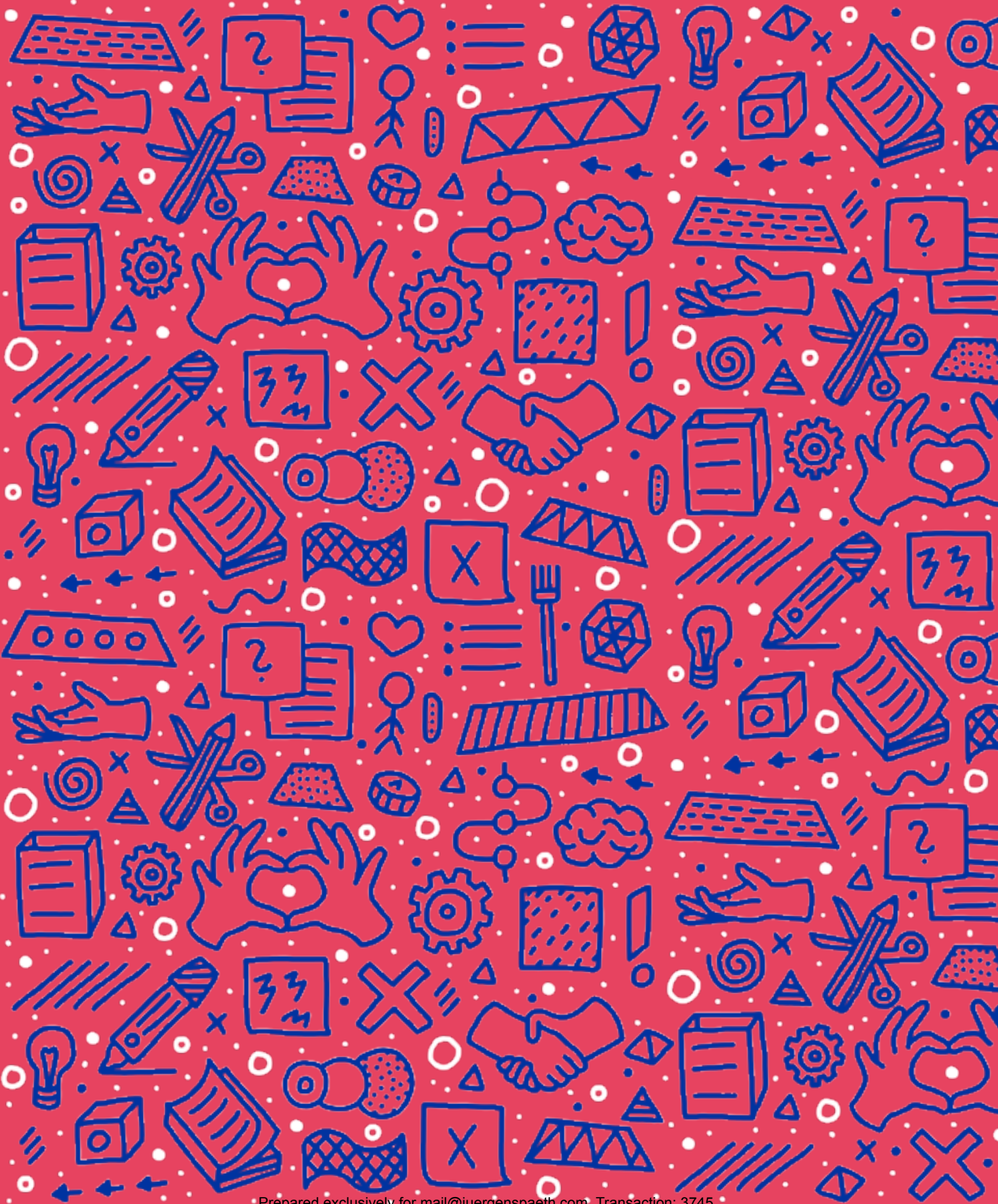
Basically, there are two different types of methods to develop a solution space, namely discursive and intuitive methods. Arguably the most popular intuitive method is brainstorming (method 1). Here we start with a question—in our case a problem hypothesis, i.e. our how-might-we question—and try to use associations to set up a web of ideas, to inspire us mutually and to make the collective knowledge of the team accessible. Other intuitive methods use the same mechanism. They offer the advantage of representing the existing knowledge quickly and with low effort. The direction of the search for a solution solely depends on the team. This renders intuitive methods open-minded and unpredictable.

Discursive methods are the opposite of intuitive methods. They provide a framework up front. An example of such a method in this playbook is TRIZ (method 8). Based on our experience, we provide meaningful categories where we will develop ideas. The advantage of discursive methods is that we know very well what we are looking for. However, this also means that we risk missing new directions.

For this reason we always recommend using a combination of discursive and intuitive methods. Discursive methods help to find a good starting point for the project and to cover the relevant categories, while intuitive methods allow us to think a step ahead and to find things that are not obvious.

After having developed ideas, we have to select the best and to describe them in the form of a solution hypothesis (comparable to the how-might-we question in the EXPLORE module). We also have to build a first comprehension prototype, which we can use to test one or more aspects together with our users. (Testing happens in the EVALUATE module.)

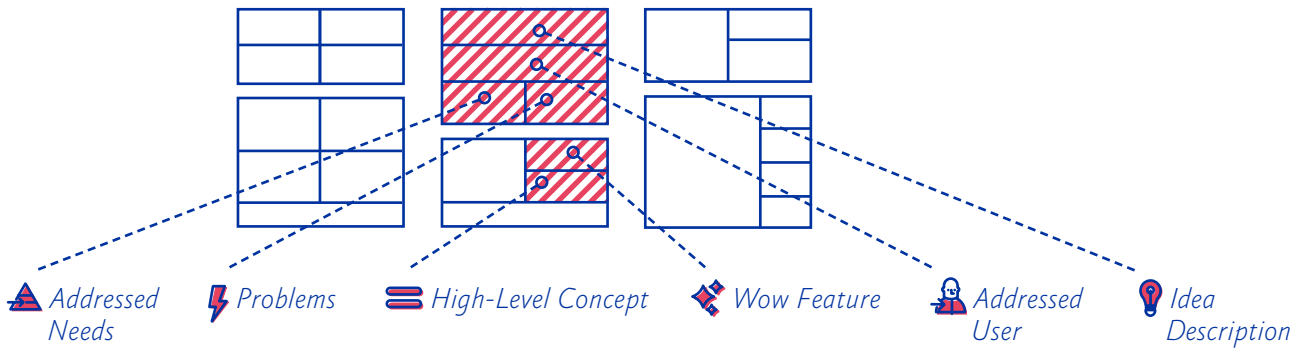
The final steps in the CREATE module are summarized in section 7.4. In this section, you will also find tips for the tricky question of dealing with our gut feeling when selecting the idea for implementation as a comprehension prototype. We also discuss the elements of a convincing »elevator pitch« which we can use to excite partners or managers for our idea before we can present a complete product or service.





7.3 CREATE METHODS

1 Brainstorming



WHAT AND WHY?

Brainstorming is the classic among our CREATE tools. Done properly, this method kick-starts our innovation development and brings us a step closer to our killer innovation. Done the wrong way, however, it causes frustration and only very few over even no useable results at all.

The term »brainstorming« was coined by the American advertising expert Alex F. Osborn who developed this method during his work for the global advertising agency BBDO. Its name describes the objective, »using the brain to storm a problem.« Osborn first presented this method and its basic rules in 1942 in his book *How To Think Up*¹, although at a mere 38 pages it might better be called a brochure.

In contrast to common belief, the essence of brainstorming is not free associations but the rules that foster free associations and avoid creative blocks during team work. For example, one rule prohibits criticizing the ideas of

other team members during the brainstorming session. The method serves to activate the creative areas of our brain in order to explore and extend a solution space and to test its limits. Only in this way can we go beyond the known and usual. In doing so we consider all the knowledge that we have gathered in the EXPLORE module (if we started our innovation development as discoverers). The how-might-we question that we used to finish the EXPLORE module contains the core needs and core problems of the identified users. This is the explicit knowledge, which constitutes the tip of the iceberg in our research.

Everything that is written between the lines of the how-might-we question is of equal importance: the details and backgrounds (e.g. from the development of a persona) and the empathy we developed for the user. This implicit knowledge is the foundation of the research iceberg. Now we use our whole knowledge for the development of a solution.

¹ Only available second hand.

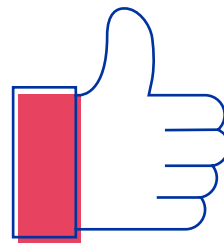
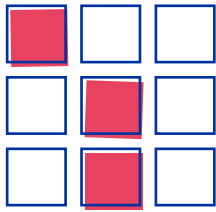


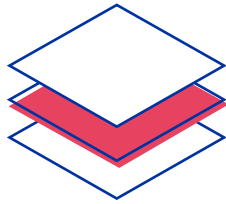
 Fig. 7.3.1

- No »no«
- No »yes, but ...«
- No discussion

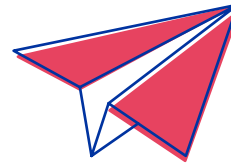
NO CRITICISM



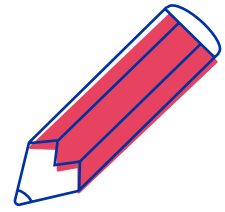
DEVELOP MANY
IDEAS



BUILD ON THE
IDEAS OF OTHERS



ANYTHING
GOES



VISUALIZE
EVERY IDEA

MODUS OPERANDI

Preparation

First we read Chapter 5 about our basic tools. It tells us everything we need to know about using sticky notes, arranging our team space and working collaboratively. Before we can get creative, we also have to devise the proper setting. This includes doing our brainstorming while standing up. Just imagine we sat comfortably around a conference table, sipping from a glass of water. How could we possibly get our brains into gear in such a situation? Sitting means that our brain receives input. Standing, on the other hand, means that our brain has to *deliver*.

1__ We prepare the first brainstorming session

There should be at least four of us because otherwise, the session will drag along and only produce a small output of ideas. We need our brainstorming question, the how-might-we question and—if we have used the related method in the EXPLORE module—also our persona¹. If we have a persona, we put up the persona template in view. A glance at the template sometimes provides a new stimulus. If we have not created a persona, we should at least know for what users we are going to develop our ideas. Either the group members have an image of the user in their minds, or we jot down some quick notes, e.g. on the persona template.

¹ See method 5.2 in the EXPLORE module.

In order to support the activation of our brains we write the brainstorming question in big letters onto our whiteboard or a big sheet of paper that we stick to the wall. In the course of our brainstorming session, we stick our labeled sticky notes around the how-might-we question. During brainstorming, the rules depicted in Fig. 7.3.1 apply.

Rule #1: No criticism (for the time being)!

Criticism is not allowed. No »No, that doesn't work!«, no »Yes, but...«, no »That's silly/that's not feasible/that doesn't suit us/there is no technology for doing this.« Also no non-verbal criticism by rolling our eyes, grunting or dashing out of the team space.

If we do not follow these rules but dissect and discuss every idea, we waste precious time and energy. Furthermore, in such an atmosphere we block the really exciting ideas, and our brainstorming would not get into gear. First, we collect as many ideas as possible. Only afterwards will we examine if they are useful.

Professional tip for evaluating ideas: Instead of »Yes, but...«, we start every sentence with »Yes, and...« followed by a solution (if one comes to mind). In this way we present a solution instead of criticism.

Rule #2: Develop many ideas

We can develop approximately 100 ideas in half an hour. This is not only possible but also makes sense: We will much more likely find one innovative idea among 100 ideas than if we had discussed five ideas to death in the same half an hour.

It is okay to ask comprehension questions. After all, we do not want to hone our own ideas exclusively, but build upon the ideas of our colleagues.

Rule #3: Building upon the ideas of others

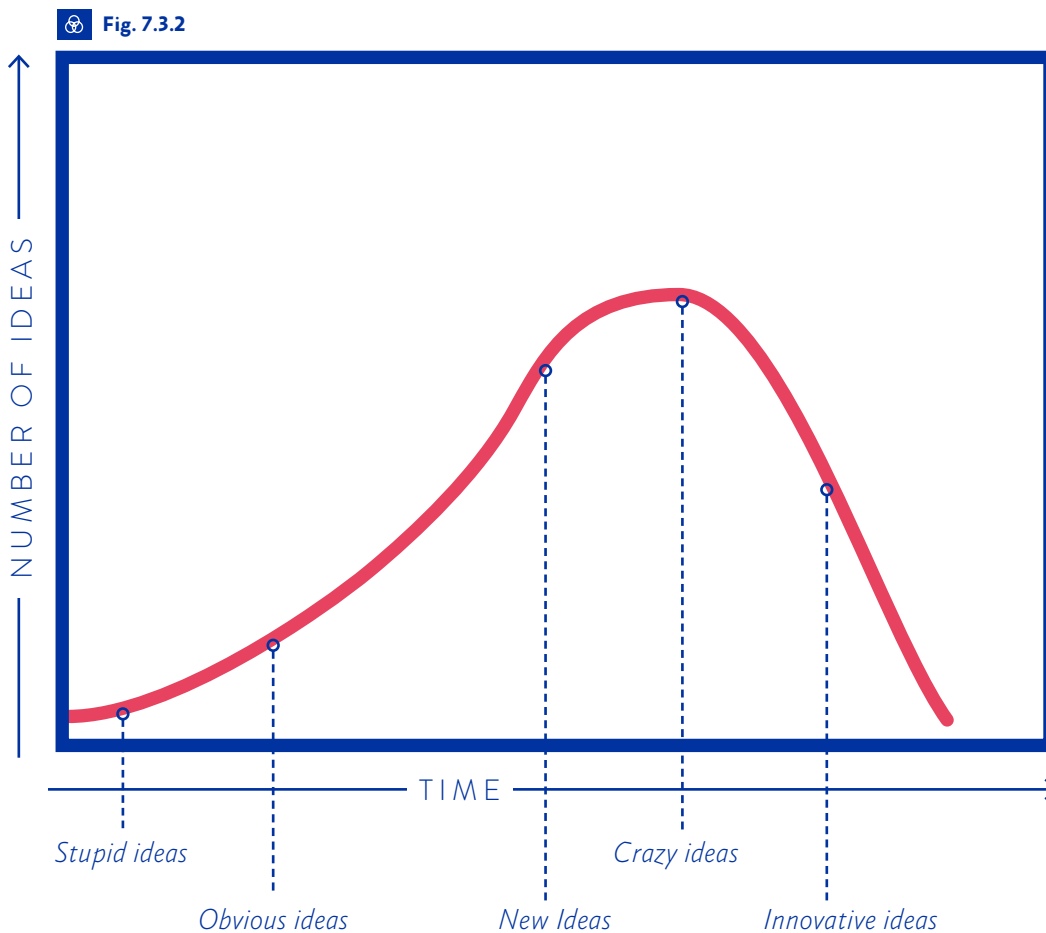
In this rule we assume that we do not take offence when someone modifies our original idea. Many good ideas arise from the interplay of the different perspectives in the team. For this reason, it is important to have a *diverse* team.

Rule #4: Visualize every idea

Pictures inspire us. For this reason, we visualize each of our ideas on sticky notes. Sketches and stick figures suffice. This is not about beauty and perfection, but about mass (see rule #2) and maintaining an overview.

Rule #5: Anything goes

In brainstorming, basically everything is allowed. The traffic lights are always green. We utter any idea that crosses our mind. We *have* to be stupid and crazy, we have to break taboos and to re-design the world order. At least this should be our aspirations if we want to develop a really good solution.



2__ We invite a moderator (optional)

Getting started with brainstorming may become easier with the help of a moderator who simply ensures that the rules are being followed, that everyone has a say and that the mutual is not neglected in the heat of the battle. In a way, the moderator is a nice version of the »bad cop«, but *not* a member of the project team!

3__ We start with the first round

All ideas have to get out—first the obvious ones so that they no longer gum up our head. The stupid, crazy and outlandish ideas follow suit, so that they no longer haunt us. Since we build upon the ideas of our colleagues, even absurd raw ideas have the potential to turn into a useful idea. Crazy ideas also help to extend our range of possibilities and to go beyond its limits. Apart from that, we look for solution ideas that are as specific as possible.

Brainstorming is a bit like making popcorn: In the beginning, there is a warm-up phase until the ideas start to »pop up.« Then we get into flow and suddenly lots of ideas emerge. At the end of a brainstorming session, there will be fewer and fewer ideas. This is wonderfully shown in Fig. 7.3.2.

4__ We sort the ideas—after the brainstorming!

A brainstorming session lasts for about 15 to 30 minutes per question. Afterwards, we sort the ideas. We cluster them according to topics. As a rule of thumb, each cluster contains approx. five to ten sticky notes. When the clusters get too extensive, we create subdivisions.

HOW DOES IT FEEL?

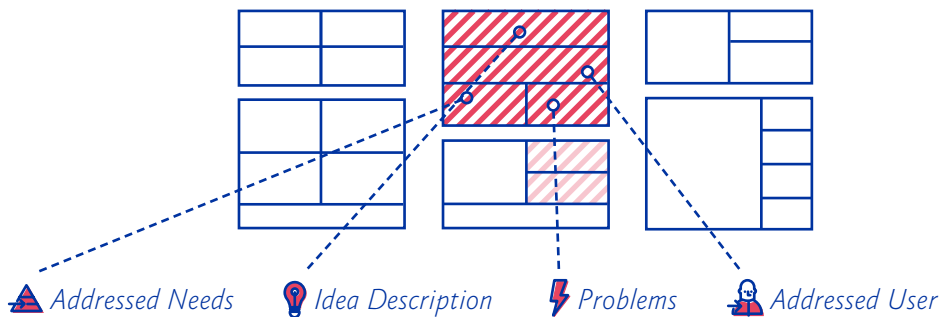
At first, many of us had problems with not being allowed to express criticism during brainstorming. In our everyday life we are used to evaluate and assess actions, suggestions and problems immediately. Thus every now and then during our brainstorming sessions, it happens that a critical half sentence slips out. As long as this occasional and unintended criticism is neither malicious nor offensive, we do not take it amiss.

GOOD TO KNOW

As mentioned previously, brainstorming was invented by Alex F. Osborn. The development into the current form, however, we owe to the American management theorist Charles Hutchison Clark. At this point we want to recommend his classic text *Brainstorming*^{*1}, first published in 1958.

¹ Charles Hutchison Clark: *Brainstorming: The Dynamic New Way to create Successful Ideas*, New York 1958.

2 Traditional Brainwriting



WHAT AND WHY?

Traditional brainwriting is nothing more than silent brainstorming; however, it is not done in solitude but in a team setting. Sometimes capturing and sorting one's own thoughts quietly can work wonders. As in brainstorming, there are also no limitations on the ideas. We write down everything: the obvious, the trivial, the dreamy and the stupid. Criticism is only done after brainwriting.

We recommend combining this method with others as it does not provide the same dynamic for developing ideas as traditional brainstorming. With brainwriting, our possibility space is limited by our individual knowledge horizon because we do not develop our ideas in the team. This method is thus well suited as a prelude to proper brainstorming (method 1).

MODUS OPERANDI

1__We set up our team space

We need at least four people, a team spacer, one poser table, sticky notes and pens, a work wall, a brainstorming question and the persona. Preparation is done in the same way as with brainstorming.

2__We spout as many ideas as possible (on our own and silently)

A brainwriting session usually lasts for five to ten minutes. We note one idea per sticky note. It is our goal to generate as many raw ideas as possible. Everyone writes in silence. When the time is up, we can speak again.

3__We move on to traditional brainstorming

After a brainwriting session, we conduct a brainstorming session (method 1). We shift up a gear so to speak and use our brains, which are still in idea mode, to further develop our individual raw ideas collectively. We only use the most promising ideas from the brainwriting session as a foundation for brainstorming; otherwise we would thwart our efforts.

4__We share all brainwriting ideas after the brainstorming

The remaining brainwriting ideas that we have not refined in the brainstorming can be explained to the team after the session. If applicable, we may even incorporate some of them in the pool of ideas with a potential.

5__We sort and cluster

We are already familiar with this process from other methods: At the end, we cluster our ideas according to topics.

HOW DOES IT FEEL?

Sometimes, traditional brainwriting can slow down the development of ideas instead of inspiring it. We may fall in love with an idea that we have made up on our own and further think about it to make it perfect, while in lively brainstorming, things may get tough. We have to relinquish our claim of ownership. An idea becomes really valuable only when it is examined from all view points and refined by the team.

In principle, we can also do brainwriting as required between brainstorming sessions or at the end of a brainstorming session. However, all our ideas are usually already exploited after

a traditional brainstorming. For this reason, we use a preliminary brainwriting phase to come up with our first ideas.

People are different. Some prefer spontaneous brainwriting sessions when they get stuck during solution development. Some combine brainwriting with a period of relaxation, e.g. a stroll or something similar. If we want to conduct brainwriting sessions repeatedly during a longer period, we can combine this approach with the use of a collective notebook (method 4).

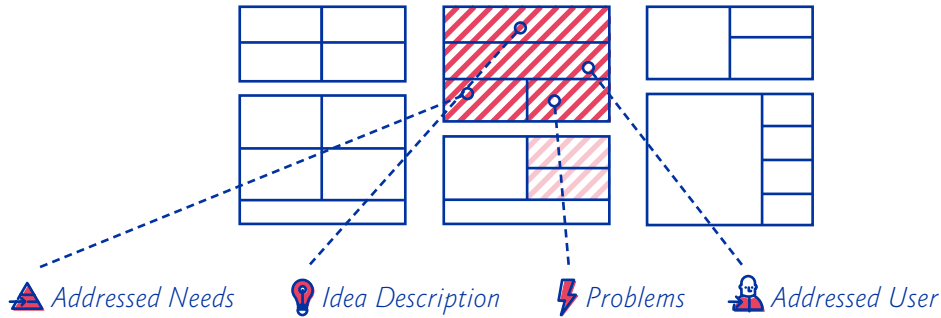
GOOD TO KNOW

»Brainwriting« is the generic term for several methods that each have a given set of rules to develop ideas by means of silent group work. One of them, the idea tower, will be introduced next (method 3). Like the brainwriting variants »idea pool«, »ring ideas« and »6-3-5 brainwriting«^{*1}, the idea tower is subject to its own set of rules.

¹ Bernd Rohrbach:
»Kreativ nach
Regeln – Methode
635, eine neue
Technik zum Lösen
von Problemen«, in:
Absatzwirtschaft 12
(1969), issue no. 19,
pp. 73—76.

3

Idea Tower



WHAT AND WHY?

We use the Idea Tower method to further shape our best ideas. We take turns in adding new elements and ideas in order to erect a »tower« of ideas, so to speak. This method is used after traditional brainstorming (method 1) because we need lots of raw ideas that we can develop further. This method is an alternative variant of traditional brainwriting (method 2) because it is also done mostly as silent work.

MODUS OPERANDI

1__We select the idea that we want to amend

From the many ideas that emerged from a previous open brainstorming session and/or silent brainwriting, each of us selects one inspirational idea devised by another team member. All members now glue the sticky note with their initial idea on their respective template (Template 7.3.1).

2__We write, pass on and pile up ideas

Now each of us adds further elements and ideas to the initial idea on the template. For each of these additions, we put a sticky note in one of the empty fields. As usual we describe our ideas with no more than five words and try to visualize them.

Similar to traditional brainstorming, everything is allowed! We can add a complete new and different idea or a refined alternative of the initial idea. We continue to add elements and ideas until we cannot think of any more. Then we pass on the template clockwise to the next team member. When we can think of something relating to our new template, we add it to the existing ideas. If we do not get any inspiration, we simply pass on the template.

Adding and passing on usually happens in a fast-paced rhythm with cycles of one minute or less. However, when we happen to be in a creative flow, we do not rush it. The templates that have already been handled by every team member are piled up in the middle of the table. At the end of the session we have thus erected a tower of ideas.

STICK ON INITIAL IDEA		
Stick on additional idea	Stick on additional idea	Stick on additional idea
Stick on additional idea	Stick on additional idea	Stick on additional idea
Stick on additional idea	Stick on additional idea	Stick on additional idea

 Fig. 7.3.1: digital-innovation-playbook.com/templates/create

3__We provide new initial ideas (optional)

When we run idle because our neighbor needs more time or because there are not enough templates in circulation—as the pile in the middle of the table is growing larger—we can replenish the supply. Surely we can find another good initial idea.

4__We do not overdo it

Idea tower sessions can be of very different lengths. It depends on the number of initial ideas, the size of the team and our form on the day. As we already know, inspiration and creativity are reluctant visitors. Usually, a session lasts up to 30 minutes.

We finish working with this method when we run out of ideas that we can amend, even if we have not yet used up every initial idea from brainstorming because that is not the purpose of this method. The idea tower serves to improve the best ideas, which we select based on our gut feeling.

At the end, we share the idea tower templates among the team so that everyone is up to date with every idea. We do not yet discuss the ideas because we are still in no-criticism mode! The discussion happens at the end of the CREATE module when we select the best ideas for incorporation into the comprehension prototype (see section 7.4).

¹ The lotus blossom technique was developed by Yasuo Matsumura. We write down an idea in the center of a piece of paper. Then we draw a circle and empty petals around the initial idea. Later we will fill these petals with elements and additions to our initial ideas. According to our ability to draw, the picture can resemble a lotus blossom. In the next step, each of the additions becomes the centre of a new lotus blossom, so that we can gather additions to the additions to our initial idea.

HOW DOES IT FEEL?

The Idea Tower method fosters inspiration and team spirit. Basically, it can be used whenever the brainstorming fades out and we merely develop superficial ideas. The idea tower helps us do dig deeper again.

Alternatively, we can use the idea tower also as a conceptual design tool after selecting the best ideas. Before using the method in this way, we should get familiar with it during our regular quest for ideas.

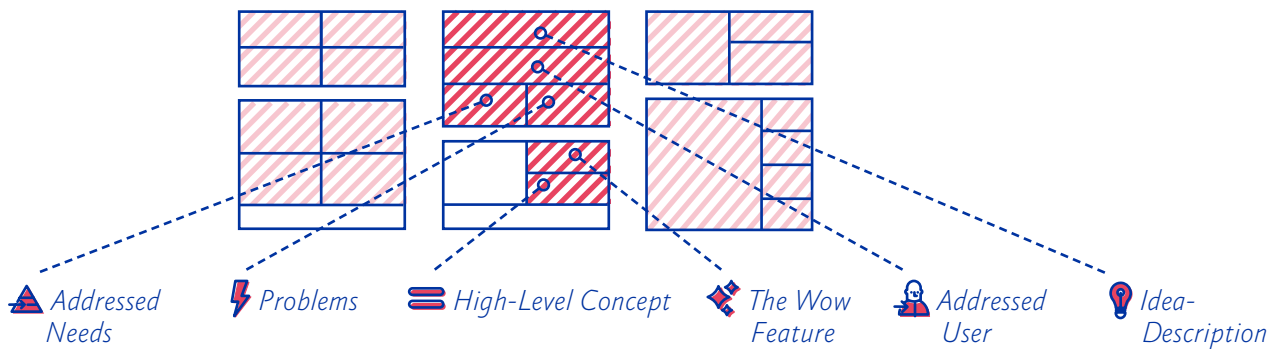
GOOD TO KNOW

The idea tower is a well-tried refined variation of traditional brainwriting. It is very similar to the lotus blossom technique^{*1}. These methods can also be combined to draft ideas. We can also experiment with other brainwriting methods like idea pools, ring ideas or 6-3-5 brainwriting.

As far as we know there is no technical book focusing exclusively on brainwriting variants, but there are numerous books about various creative techniques, which may also cover brainwriting.

4

Collective Notebook



WHAT AND WHY?

The Collective Notebook creativity technique belongs to the brainwriting methods. As the name implies, it is basically a notebook where we collect our ideas, either individually or collectively as a project team.

While this is a method from the CREATE module, the collective notebook can also be used in the other innovation development modules to gather thoughts, insights and ideas continually. We use it as an additional instrument for developing ideas. It does not work as the sole method for this purpose. At least we need traditional brainstorming (method 1).

The collective notebook allows us to hone our ideas irrespective of time and place. It is a suitable receptacle for creativity surge, and it also enables us to share our thoughts

subsequently in a much faster and more organized way. There is nothing worse than having a flash of inspiration slipping through our fingers just because there is nothing at hand to write it down.

Our recommendations concerning the type and size of a collective notebook are simple: Everyone selects what he or she can best use. The notebook must be of a reasonable size, i.e. not too large and not too small, since handling the notebook should not be cumbersome.

During the project phase, the notebook is our best friend and confidant. When we approach the method with this attitude, it can give us valuable support. If you want, you can use the suggested areas in template 7.3.2.

MODUS OPERANDI

1__ We take notes

The collective notebook is our personal space for creative experiments. Here, we can enjoy complete freedom. We put in everything that frees us, inspires us or triggers a change of perspective, even crazy and stupid things since we never know whether they might spark a light-bulb moment later on. We note down thoughts und insights that we deem relevant and that our environment washes into our conscious mind. However, we do not only write. This methods works best when we use is visually, i.e. when we sketch and draw and paste in pictures and collages.

2__ We discipline ourselves to use the collective notebook daily

Ideally we enter something into the notebook every day. Sometimes we only have five minutes for this, but that is okay. The important thing is that we occupy ourselves with our thoughts. In the beginning, it may be helpful to schedule a set time for the daily entries. In the course of time we will catch ourselves pulling out the notebook every now and then. This will eventually become second nature like the coffee in the morning or the cigarette break at the windows (or other less harmful rituals).



 **Template 7.3.2:** digital-innovation-playbook.com/templates/create

3__ We compare notes

There is no such thing as *the* proper time to share the insights and ideas that we wrote down. Of course we tell others in the team immediately when we have an important insight. Sometimes it can be valuable to show each other our notebooks regularly as a source of inspiration. However, this works only based on mutual trust. Our notes can also stimulate

brainstorming sessions (method 1), but only if we do not stand in front of the group, wielding our notebook and process our ideas in a bureaucratic way.

To prevent that anything gets lost, we can schedule a last session at the end of the CREATE module where all team members once again comb through their notebooks to add final ideas.

HOW DOES IT FEEL?

As mentioned at the beginning of the description of this method, the collective notebook can basically be used in all innovation development modules.*¹ In the EXPLORE module, we can use it to collect and condense insights. We can also set up a »parking lot for ideas« where we store would-be groundbreaking solution ideas. The expression »would-be groundbreaking« is deliberately provocative because in our experience, these ideas can be trumped easily later on in the solution mode of the CREATE module when we work collectively on innovative solutions.

In the CREATE module, we can use the notebook to relax and extend our creative thoughts over a longer period, like some sort of long-term individual brainstorming. If we are shy about sharing crazy ideas in open brainstorming (method 1), we can test them on our own in the notebook. But do not overdo this! Innovation development is teamwork. Solo solutions, as convincing as they may seem on paper, usually turn out to be a flop in the real world.

In the EVALUATE module, the notebook is useful to note down further thoughts and ideas like in the EXPLORE module.

¹ Especially for longer projects, we recommend to use the collective notebook as a basic tool like the sticky notes, the clock and the team space.

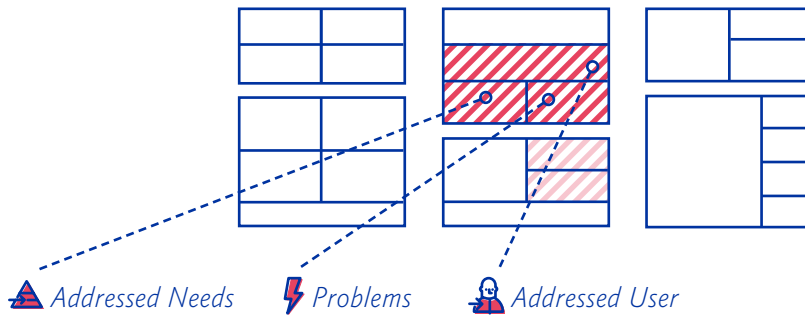
GOOD TO KNOW

Authors use a similar tool to the collective notebook, namely the writing diary. Virtually all authors use it to note down thoughts, ideas for stories, observations of people and parts of

conversations overheard. For this reason, every creative writing seminar begins with the suggestion to start a writing diary.

5

Inspiration Cards



WHAT AND WHY?

Inspiration cards can help us when we get stuck in traditional brainstorming (method 1). They are meant to inspire us and to point us to new directions.

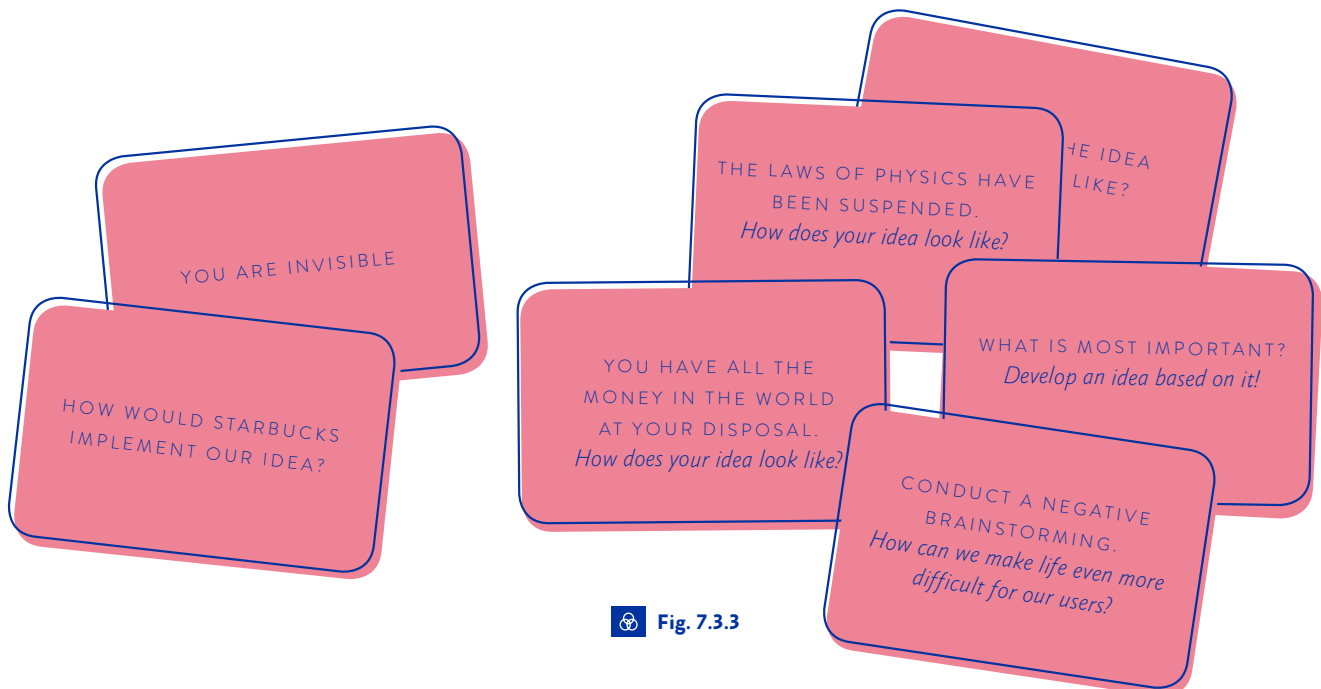


 Fig. 7.3.3

MODUS OPERANDI

1__ We prepare ourselves

As this method is used during traditional brainstorming, the preparation is the same. One of us shuffles the cards and puts the deck face-on in the middle of the table. The usual brainstorming rules apply (see method 1): no criticism, producing as many ideas as possible etc.

2__ We start a brainstorming session with inspiration cards

One of us draws an inspiration card and reads it aloud. We others use the card as an inspiration. We write and draw our ideas, explain them briefly and put our sticky notes on the whiteboard. Most inspiration cards contain what-if questions. A little imagination helps to put ourselves in the specified situation. To do this, we need a little time. Therefore, we should not stop the process too early. When we can no longer think of new ideas related to the card, we draw the next one. Used inspiration cards are put away.

We do not mechanically process the cards one by one but use them as sources of inspiration. It is entirely possible that some cards do not inspire us to develop new ideas. At any time it is also allowed to write down ideas that are not inspired by the current card.

Example cards:

a) You have all the money in the world at your disposal. How does your idea look like?

Granted, these ideas are often unrealistic, e.g. »ordering a yacht like a Uber taxi.« That is complete nonsense! Or is it? It could be possible to rent a yacht at Uber albeit not at a discount price.

b) Exaggerate your idea. How does your most extreme idea look like?

What if there were no physical or technological limits? Sometimes it can be helpful to consider the impossible first and then to think about transferring this idea into the realm of possibility. There is a reason why science fiction novels, movie and TV series of the past have become an inspiration for real products. For instance, the concept of the in-ear headphones was invented by Ray Bradbury in his dystopian novel *Fahrenheit 451* as early as 1953. It took nearly 50 years until this concept became real thanks to Apple and the iPod. Only twenty years ago, the world of today with its smartphones, tablets and smartwatches would have looked like science fiction.

c) Role cards

How does the idea look like from the perspective of a child?/You are Superman. What will you do?/How would Apple do this?

We put ourselves in the position of real or fictitious people or brands. The team members can even add similar cards according to their preferences. How would an idea by Lady Gaga look like? Or by Barack Obama? Or Angela Merkel?

d) Conduct a negative brainstorming.**What is your worst idea?**

In the first step of a negative brainstorming, we develop ideas that make the problem of our persona even worse. We stick these ideas to a separate part of the whiteboard.*¹ Afterwards, we turn the negative ideas into positive solutions. This does not mean that they have to be exactly the opposite.

Sometimes it is easier for us to make something worse. We do not know why; maybe because it is liberating for a short while. We can kid around, and that often makes us more creative.

¹ Nicht, dass sie plötzlich unter den echten Ideen auftauchen ...

² For example method 6, Categorizing and Implementing Ideas, or method 7, Jobs to be Done.

3__We finish

A brainstorming session with inspiration cards lasts for 15 to 30 minutes, depending on the team dynamics and our form on the day. When the ideas begin ebb away and the energy level drops, we take a break. If need be, we can start a new session. At the end, we cluster the ideas and further develop them by means of other methods*².

HOW DOES IT FEEL?

We use inspiration cards in traditional brainstorming every time we want to give it new impetus. Of course, we do not use the same cards each time. Instead, we shuffle them vigorously, put away those that are unproductive and often invent new ones. The important thing is not to view the deck of inspiration cards as a list of tasks that we have to work through. After all, not every inspiration card is suitable for the problem of our persona. The cards simply serve as sources of inspiration in one way or another.

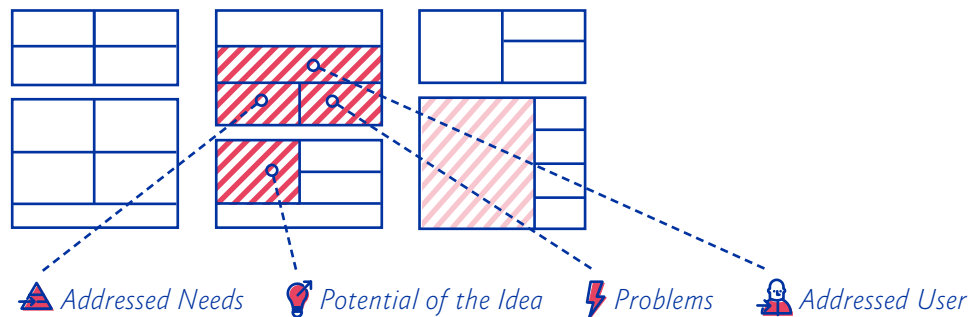
³ bit.ly/23X1eKu (05/18/2016)

GOOD TO KNOW

The Inspiration Card method is similar to the brainstorming constraints in Design Thinking. IDEO designer Beto Lopez has written a good outline*³ of this topic. Allegedly constraints are helpful in *every* project.

6

Categorizing and Implementing Ideas



WHAT AND WHY?

Suppose we have gathered a lot of ideas, e.g. by means of brainstorming (method 1). Now we have to find a way to evaluate them. How large is the potential for actually implementing the innovation idea? The more we can hark back to existing resources and capabilities, the easier it is usually to enforce ideas internally (assuming that we did not accidentally stir up a political hornet's nest or even cannibalized our own achievements).

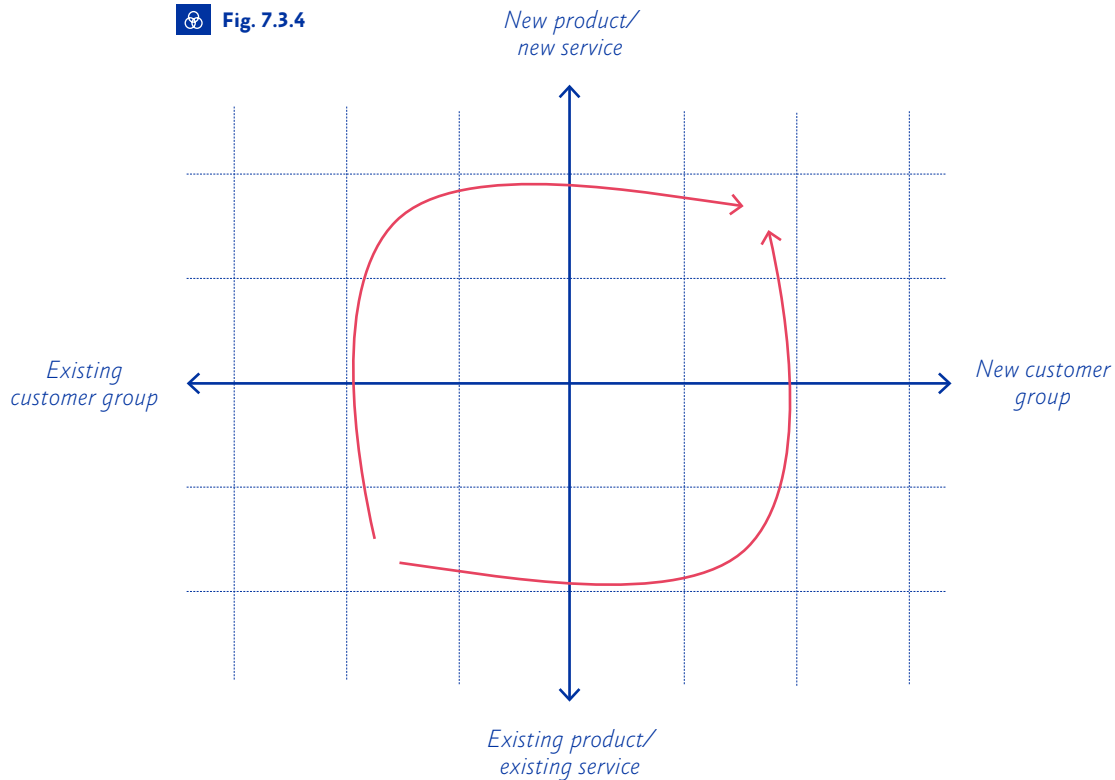
In order to estimate the height of the innovation hurdle for our own company and to make different ideas comparable, we use the simple framework from Fig. 7.3.2^{*1}.

It is very important that this framework is not supposed to be used for evaluation^{*2} but only to clarify the positioning of the ideas among the various fields. Each field comes with its own organizational hurdles that have to be dealt with in implementation. We will have a closer look at these hurdles in Chapter 9.

The framework is based on the following idea: There are four different approaches to gain growth. The first is to improve our own product or service (field 1). We could also use the capabilities of the company to address new customer groups (field 2). Another possibility is to use the access to the existing customer group purposefully to set up new products and services (field 3). The most ambitious approach is to tap a new market with a new product (field 4).

¹ We can also use this framework to organize our brainstorming and to develop new ideas with a more targeted approach.

² For this, we use the EVALUATE methods in section 8.3.

**Fig. 7.3.4**

MODUS OPERANDI

In order to compare our ideas, we enter them in the following fields:

Field 1: Existing customer group—Existing product/existing service (bottom left)

This is the field for ideas that are supposed to improve the existing product or service. Normally, we have hundreds of those. In addition to the methods in this playbook, the traditional »in-house ideas management« or in-house idea platforms for employees can also supply us with contents for this field.

When we only develop improvement ideas, there is something fundamentally wrong. If

we have not yet used the EXPLORE module (chapter 6)—maybe because we started the project as a designer or an evaluator—we should do it now at the latest. If we can only think of improvement ideas despite already having used the EXPLORE module, we have to intensify our research. In order to come up with revolutionary thoughts—and that is what this is all about—we have to keep our thoughts off the daily business. Sometimes one day will be sufficient.

Field 2: New customer group—Existing product/existing service (bottom right)

The ideas in this field address new customer groups. Our knowledge about these customer groups and their needs (gained e.g. in the EXPLORE module) allows us to adapt our existing products and services to these groups. For many companies, this is everyday business.

Field 3: Existing customer group—New product/new service (top left)

Normally, we already know our customers very well and have a good understanding of their needs. Our access to these customers is of invaluable advantage.^{*1} When we have written ideas into this field, we have to prepare ourselves mentally for internal opposition. »We already tried that in the past« and »The management did not want that« are among the classical objections that we hear at this point of time and again. This defensive attitude is understandable as the many ideas in field 3 show that we not yet made the most of the existing customer contacts. In addressing this problem, we certainly tread on someone's foot and expose the mistakes of the past.

Field 4: New customer group—New product/new service (top right)

This is the pinnacle of innovation development. Start-ups usually face exactly this challenge as they start with a new product idea on an unknown market to which they have not yet access. In the implementation, everything has to match, otherwise a failure is very probably.

In particular older companies look with envy at the courage and steadfastness that start-ups exhibit when they enter the fray. We want and we have to be like this, the management then proclaims and prescribes »innovation provisioning measures.« This may work sometimes, but usually it does not. This is because the implementation of a fourth-field idea in the company within the constraints of the regular project structure overburdens most of the stakeholders; at least according to our experience. But we can help, and we like to refer you to Chapter 9 (Frame).

It is worth noting that tapping completely new markets may not be reasonable for every company. When the core business gets watered down, this often affects the company in a negative way.

¹ Working (distribution) channels to the customers are also very helpful in the EXPLORE module. They show us the ideal starting points for our user research.

HOW DOES IT FEEL?

We use this method only to provide a structure so that we can draw conclusions and plan the next steps. For this reason, we do not spend much time on it. Nonetheless we feel that this method is very helpful for evaluating our ideas, especially when we have more than one promising idea. Furthermore, this framework is a good instrument to get potential decision makers on our side. After all, any interference with the product range of the company also has a political dimension. When we know early on what hurdles we have to expect during implementation, we can better evaluate our ideas and plan our subsequent course of action.

GOOD TO KNOW

¹ Heinz-Georg Baum, Adolf G. Coenenberg, Thomas Günther: *Strategisches Controlling*, Stuttgart 2007.

² bit.ly/1Ty2uyd (06/26/2016)

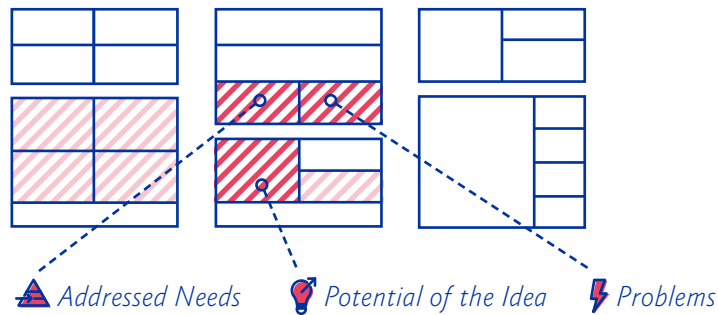
Four-field matrices are very popular to sort, communicate and evaluate contents. A famous example is the BCG matrix developed by the Boston Consulting Group, which allows companies to arrange their products within a typical life cycle. The fields are »Question Marks« for new products, »Stars« for promising products with a high market share in growth markets, »Cash Cow« for products that provide a steady turnover and »Poor Dogs« for non-performing products. Each field is assigned to

a strategy. More information on this topic can be found in the textbook *Strategisches Controlling*^{*1}. It contains many real-world examples.

Some of you may also know the Eisenhower principle named after president Dwight D. Eisenhower who is said to have prioritized decisions according to »importance« and »urgency.«^{*2}

7

Jobs to be done



WHAT AND WHY?

The Jobs to be Done method is based on a framework by the American economist Clayton M. Christensen who teaches at the Harvard Business School. It helps us to find out why users decide in favor of a specific product. We examine the circumstances surrounding the decision from a functional, emotional and social point of view and ask what »job« the product is supposed to do; hence the name of the framework.

In traditional surveys, the users are often asked why they bought a specific product. This question often leads to generic answers, which cannot really inspire us. Jobs to be Done helps us to proceed in a smarter way. When we know the »job« of the product, we can more easily determine who our real competitors are and how a new solution for the user problem could look like.

Christensen gives the example of a fast-food chain that sells milk shakes. According to research, a huge part of the milk shakes is sold early in the morning. In interviews with the customers Christensen found out that many of them were commuters for whom the milk shake was supposed to do several »jobs.« First, it was used as a satiating replacement for breakfast. For many of the customers, it also served as a diversion during the boring drive to work. From a functional point of view it was thus important that the milk shake fitted the cup holder in the car and was easily to consume.

This point of view suddenly revealed other competing products than the milk shakes of other company, e.g. bananas, chocolate bards or bagels, as these products do a similar »job« for the users.

¹ <https://youtu.be/BsXXIfqbnRk?t=21m49s> (06/26/2016)

² See section 6.4.

Netflix CEO Reed Hastings shares this point of view. According to him, his service does not compete with Sky Go, Amazon Prime or Watchever but with a visit to the restaurant, work, hobbies or a wine party with friends.*¹

We use Christensen's Jobs to be Done framework in a slightly modified form in order to find new ideas or to further develop existing ideas. Based on our how-might-me question*², we formulate job statements and begin with our brainstorming (method 1).

MODUS OPERANDI

1__We set up our team space

We need a team space suitable for brainstorming, a how-might-we question (that we created at the end of the EXPLORE module) and the type descriptions of our user group (or a persona if we created one with the EXPLORE method 5.2). Preparation is exactly the same as with brainstorming.

2__We rephrase our might-we-question as a job statement

We focus on the »job« that has to be done from the perspective of our user group. Let us consider the dating app Tinder as an example, which saw the light of day in 2009. If we had developed it at the time, our how-might-me question might have been, »How can we enable singles to find a matching partner?« A job statement consists of object, context and action. We express the statement from the perspective of our users. In the Tinder example, it would read as follows: to find (action)—a partner (object)—online (context).

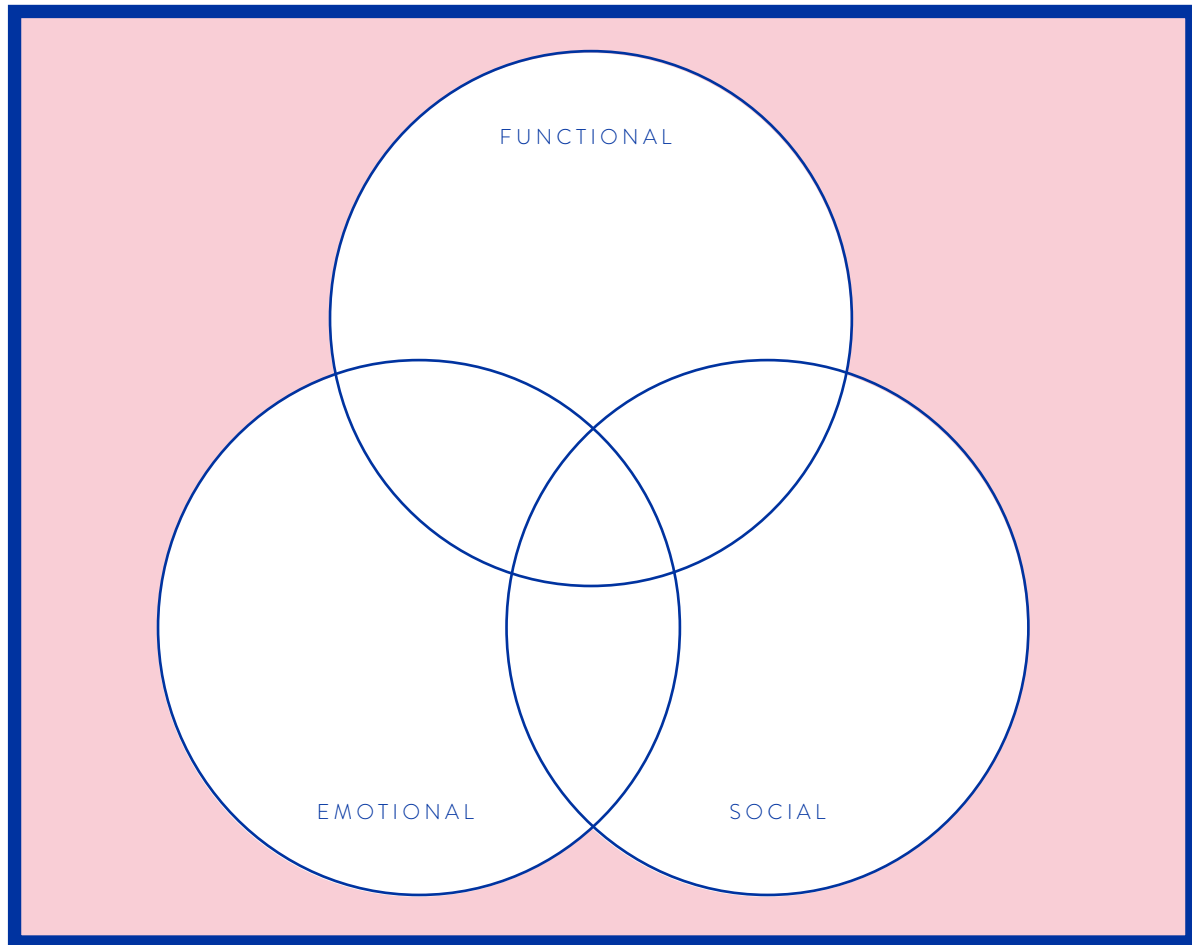
3__We conduct a brainstorming for the components of the job statement

The section on method 1, »Brainstorming«, explains in detail how we can do this.

4__We arrange our brainstorming ideas in the Jobs to be Done framework

We cluster our ideas according to the categories »functional«, »emotional« and »social«. For this we use Template 7.3.3 where we paste our sticky notes.

Functional ideas are those that describe a function. Social ideas imply social interaction. Emotional ideas affect the emotional state of the users. We divide our idea into these categories. If an idea applies to two or all three categories, we place it in the respective intersection.



 Template 7.3.3: digital-innovation-playbook.com/templates/create

HOW DOES IT FEEL?

The process will feel familiar if we have already developed a how-might-we question. The job statement might look redundant given the already existing how-might-we question, but the change of perspective can inspire us to develop new ideas. We use the Jobs to be Done method when our previous ideas do not seem sufficient.

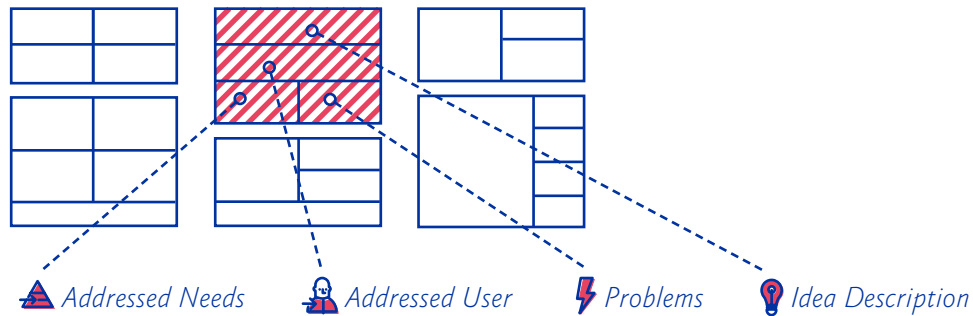
GOOD TO KNOW

The Jobs to be Done framework is heavily focused on marketing and lends itself very well to analyzing existing products and identifying real competitive products, but we use it instead for gathering ideas. If you want to know more about Clayton Christensen and Jobs to be Done, we recommend his book *The Innovator's Dilemma*¹.

¹ Clayton M. Christensen, *The Innovator's Dilemma: When New Technologies Causes Great Firms to Fail*, Brighton 1997.

8

TRIZ



WHAT AND WHY?

The TRIZ method originated in engineering. It was devised by Genrich Altshuller, Rafael Borisovich Shapiro and Dmitri Dmitrijevich Kavanov in the 1950s and eventually became the foundation of a new branch of science. The acronym TRIZ is short for the Russian phrase »teoriya resheniya izobretatelskikh zadach«, meaning »theory of the resolution of invention-related tasks.« Altshuller and his colleagues wanted to create a consistent theory of innovation as a foundation for the reproducible design of new things.^{*1} For this purpose they examined 300,000 patents and sorted them according to the degree of innovation. Based on this data, they were able to abstract principles and mechanisms that support innovation.

However, this form of deductive ideation never gained broad popularity. This is because it is easy to derive abstract mechanisms from concrete solutions, but difficult to derive concrete new solutions from abstract mechanisms. Nonetheless this method can help us to find new ideas. It complements brainstorming (method 1) very well when we get the feeling that did not come up with really innovative solutions. After all, Winston Churchill, the God of Aphorisms, once said, »An expert is a man who can precisely tell you afterwards why his prognosis was wrong.« On this note, let's start!

¹ Genrich Altshuller, *And Suddenly the Inventor Appeared*, Worcester 1990.

MODUS OPERANDI

1__We imagine an ideal solution

We try to imagine the ideal solution for our problem. This »idealization« is a universal principle in TRIZ. Let's have a look at an example to illustrate this:

The ideal solution for communication would be telepathy, because sharing our thoughts would be the simplest possible way to communicate. Since this is not possible at the moment, we gradually step back from this ideal solution and in doing so look out for new ideas. From the dawn of time we humans have tried to make communication ever more simple and comprehensible, beginning with the development of speech, followed by writing and then pictures and moving pictures. We try to approximate an ideal form of communication.

As another example, take the development of mobility, which is characterized by striving for speed and individuality. The ideal solution would be teleportation. While this may look like an unattainable goal today, our infrastructure is steadily developing towards instantaneously available, individual forms of mobility.

2__We try different TRIZ mechanisms

TRIZ is a collection of numerous mechanisms and principles. Not all of them can be transferred to the non-technical issues on which we usually focus, but we have selected eight suitable mechanisms for us (which we will also use in template 7.3.4):

- **Segmentation and separation:** Can we segment our existing solutions or can we separate a part of it?
- **Adjustment to the location:** Can we think of adaptations for specific local conditions? How would our solution look like in extreme locations (e.g. Sahara, North Pole, rain forest, airtight chamber)?
- **Asymmetry:** We usually think in terms of symmetrical solutions. What if we consciously tried to look for and enhance asymmetrical aspects? What parts of our solution are symmetrical? How could we change that?
- **Coupling and integration:** With what things could we couple our solutions? Where would this result in completely new opportunities? What can we attach that at first does not belong to the solution?

QUESTIONS	IDEAS
Segmentation & separation: Can we segment our existing solutions or can we separate a part of it?	
Adjustment to the location: Can we think of adaptations for specific local conditions? How would our solution look like in extreme locations?	
Asymmetry: We usually think in terms of symmetrical solutions. What if we consciously tried to look for and enhance asymmetrical aspects? What parts of our solution are symmetrical? How could we change that?	
Coupling & integration: With what things could we couple our solutions? Where would this result in completely new opportunities? What can we attach that at first does not belong to the solution?	
Functional reversion & dynamization: What would happen if we reversed the previous solution? What if we had a dynamic instead of a static solution?	
Additional dimensions: Can we use an additional dimension—the third spatial dimension or time as the fourth dimension?	
Converting harmful things to useful things: What causes the most harm? Can we use this purposefully? Can we use it for something else?	
Feedback: Can we use feedback effects? What will happen if we feed back the result?	

 **Template 7.3.4:** digital-innovation-playbook.com/templates/create

- **Functional reversion and dynamization:** What would happen if we reversed the previous solution? What if we had a dynamic instead of a static solution?
- **Additional dimensions:** Can we use an additional dimension—the third spatial dimension or time as the fourth dimension?
- **Converting harmful things to useful things:** What causes the most harm? Can we use this purposefully? Can we use it for something else?
- **Feedback:** Can we use feedback effects? What will happen if we feed back the result?

We try out each of these mechanisms for ten minutes each. Maybe they cause us to come up with new ideas or maybe they point us into a new direction. In any case, we use up the scheduled ten minutes instead of giving up earlier because we cannot think of something.

With TRIZ mechanism, we can generally observe the same phenomenon as with other creative techniques: When the ideas start to flow immediately, then they are mostly boring and obvious ideas. Thus it is a good sign when the first minutes pass rather slowly and without results.

HOW DOES IT FEEL?

Contradictions are the central topic of TRIZ. Genrich Saulovich Altshuller believed that innovations arise by overcoming contradictions. To give you an example: Usually people are paid for the time they spend working. Using their working hours without compensation would pose a contradiction. The innovation of Wikipedia consisted in resolving this contradiction.

This thinking in contradictions is very interesting for us. We use the same mechanism in the User Motivation Analysis^{*1} when we create the need-obstacle pairs. Contradictions cannot only be found in technical problems.

While designing our own organization, Dark Horse, we worked with pairs of contradictory goals. For instance, we wanted to make fast decisions, but we also wanted to always include every member of our company. Agility versus participation—every usual innovation consultant would veer towards the former. After all, these two poles are seemingly irreconcilable. Well, »seemingly« ...

We managed to do it nonetheless by discovering the principle of »coupling.«^{*2} In most companies, decision making and implementing these decisions happen in two separate processes. This makes it easy to block decisions—after all, they might

¹ Method 4 in the EXPLORE module (section 6.3).

² Dark Horse Innovation: *Thank God It's Monday*, Berlin 2014.

1 Anomy is a state of missing or weak social norms, rules and order. Anarchy, on the other hand, is the absence of authority. Dark Horse is thus per definition an anarchic entity since we all are the bosses and no person is placed above the other. People tend to confuse these two terms..

eventually turn out be negative—and thus to maintain the status quo. For the faint at heart, changing nothing is usually the more comfortable alternative. But by this, they also block the people who want to do something and who need decisions to be able to work. For this reason, we couple decisions and their implementation at Dark Horse. The people who implement things

also make the decisions. In order to avoid falling into anomy*¹, we use a feedback system. Everyone at any time is allowed to put forward arguments against a decision and to stop it. However, this person is then in the same boat and has to participate in the implementation of the new decision. *Having a say* also means *participating*.

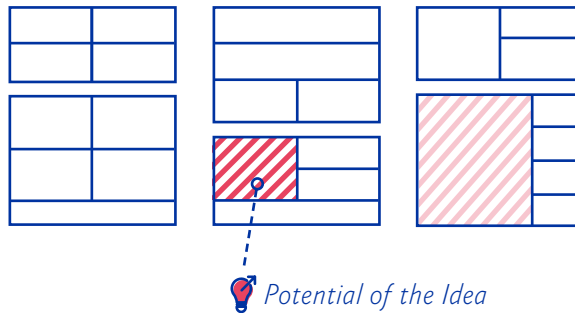
GOOD TO KNOW

Arguably the best known TRIZ mechanism is the S curve. It belongs to the standard repertoire of innovation management and is used in many textbooks to describe the life cycle of a new technology. Any new technology is invariably less efficient than the existing one because the latter has already been refined and improved in numerous hours of work and has thus reached maximum efficiency. The new technology on the other hand is not yet completely understood and hence its potential

is not yet completely exploited; just consider the area of virtual reality or the electrical motors of the Tesla company. These segments count on the technology of tomorrow. Tesla speculates—or trusts the S curve—that the potential of electric motors is higher than that of combustion engines so that the investment will be worth it in the long run.

9

Kill Your Company



1. WHAT AND WHY?

We do not know who invented the Kill Your Company method, but our experiences with this method have always been good. We allow a time frame of four hours at maximum to answer the following question: If we were a start-up, how would we attack our own company in order to snatch its market shares? The playful approach of this method helps us to ignore all barriers inside our company. There are no politics, no compliance rules, no legal hurdles, no objectors or other departments that interfere with our work. We are completely at liberty.

This also means that we as a start-up do not have any access to our supporting company resources, e.g. for marketing or distribution. Since we would like to have the know-how of these departments, we incorporate some of the representatives in our team. In the playful context and without the barriers between departments we can work together without having to respect any sensitivities.

MODUS OPERANDI

1__ We look for weaknesses

In the first step we specifically look for vulnerabilities. What do customers complain about? Ideally we have already used the methods of the EXPLORE module and know the needs of our customers very well. This step might be a little dangerous because the people responsible for the deficiencies are in the same room. We thus have to highlight the playful nature of this method. After all, it is entirely normal that there are deficiencies and that they are not rectified immediately. In any company, the rule »urgent before important« applies. We use template 7.3.5 to gather the weaknesses.

2__ We select

In the next step, we create a list (see Fig. 7.3.5). We prioritize the identified weaknesses and sort them intuitively according to the room for improvement that we perceive. Some points will be discarded because they are not implementable or not interesting for a start-up.

3__ We create a killer service or a killer product

Based on our insights, we now create a competitive offer for our customers. For this we need a customer profile^{*1} and the statement which problem we want to solve for the customers, expressed in the form of a how-might-we question^{*2}. After having defined the offer, we use one of the intuitive methods of the CREATE module, e.g. brainstorming (method 1), to quickly come up with many solution ideas. We preselect the ideas and translate them into a comprehension

¹ Ideally we use the data from the interviews in the EXPLORE module. However, assumptions about the possible customers made according to our gut feeling are also sufficient for this method.

² See section 6.4.

³ See section 7.4.

LIST OF PRIORITIES

1.

2.

3.

4.

5.

6.

 Fig. 7.3.5

prototype^{*3} to be able to communicate the solution. Note: Using this method, we rush through many other methods at a breakneck pace. The time pressure is there for a reason as it forces us to focus on the essentials.

4__ We transfer our insights

We consider how we could use the comprehension prototype of our start-up successfully in the context of our own company. Maybe it contains some components that we can implement? Remember: The smart thing is to include the objectors and inhibitors in creating the comprehension prototype. This can cause some light bulb moments and make things possible that were deemed impossible before.

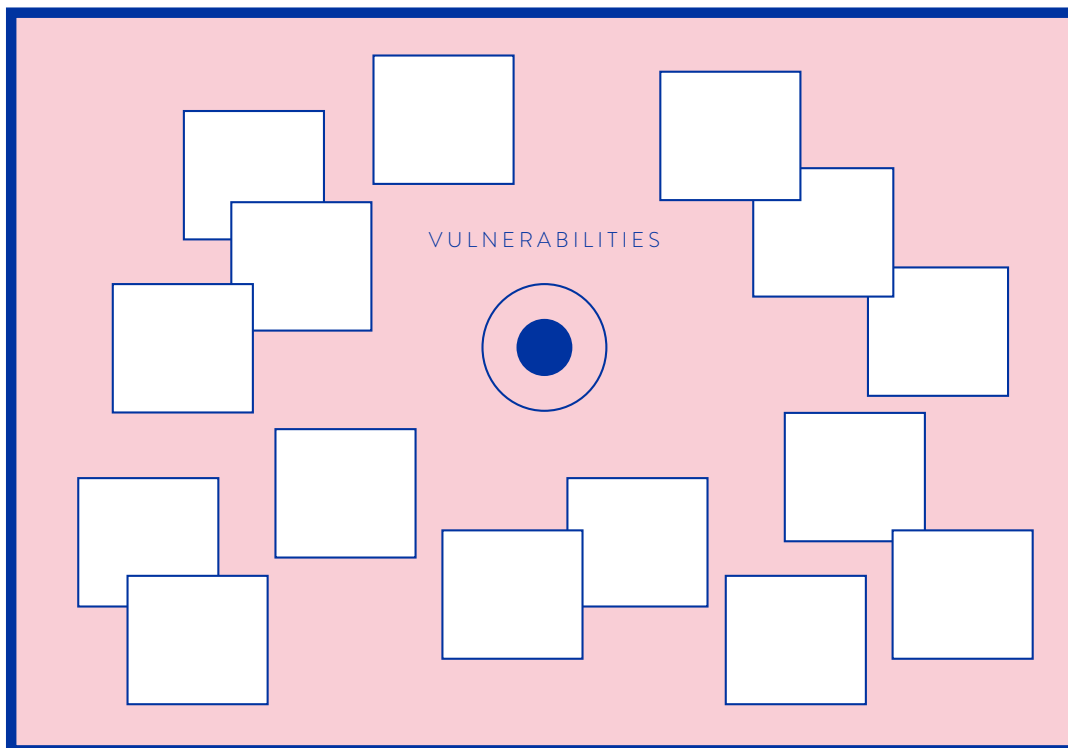
HOW DOES IT FEEL?

Hopefully easy! It also is a lot of fun. In joint projects with companies, we sometimes use Kill Your Company to kick off the proper project. This method is also suited as an overture to the work in the EXPLORE module. All this does not change the value of this method in the CREATE module. This role-playing game helps us as a team to get easily into a mode of wild thinking without adhering too much to the often obstructing realities. This is also a good opportunity to invite external participants for a few hours, e.g. trainees who not yet have much expert knowledge and have a different view on the problems at hand.

GOOD TO KNOW

When you are interested in the topic of »killing your company«, you can find some inspiration in the book *How to Kill Your Company* by Ken Kirsh¹. It is entertaining, and at a mere 80 pages, it does not demand much of your life time.

¹ Ken Kirsh: *How to Kill Your Company: 50 Ways You're Bleeding Your Organization and Damaging Your Career*, Bloomington 2012.



 Template 7.3.5: digital-innovation-playbook.com/templates/create

7.4 THE LAST STEPS IN THE CREATE MODULE: COMPREHENSION PROTOTYPE AND EVALUATION MATRIX

In the CREATE module we have adopted the mindset of a designer: We have created solutions and adapted them to the needs and problems of our users. We have viewed difficult conditions as challenges and not as daunting problems.

What next? Having ideas and developing solutions from these ideas are two very different things. At the end of the CREATE module, we thus have to use two more methods in order to evaluate and concretize our ideas, namely the »comprehension prototype« and the »evaluation matrix.« In the EVALUATE module we will then transform our ideas into complete concepts and test them based on prototypes.

Usually we develop so many ideas in the CREATE module that we cannot decide which one we should select to proceed. Fortunately, the arrangement of the CREATE module already gives us a format for documenting an idea. *Each completed CREATE module on the Innovation Board represents a single idea.* The module contains any relevant information pertaining the idea, summarized briefly. The module should enable everyone who is involved in the innovation to present the idea in the form of a short »elevator pitch.«

An elevator pitch is the oral presentation of the most important facts about an idea, a product or a service plus the related value proposition. This presentation typically takes 30 seconds to two minutes, the average duration of an elevator ride. (According to our measurement, our Dark Horse elevator takes 1:45 minutes; the ideal duration for a pitch.)

But how do we evaluate the ideas? Are they good enough to proceed? Which idea do we use to proceed? To answer these questions, we have to make our idea more concrete. The best way to do this is building it in form of a comprehension prototype. It helps us to better understand our own ideas and to recognize more details.

a_The Comprehension Prototype

The comprehension prototype is mainly an instrument for communicating within the project team but also with outsiders (within the company). It clarifies our ideas, exposes the details and helps us to continue the work on our ideas in a concrete and constructive way. The comprehension prototype is generally the *first prototype* that we create. Very often it is a small paper model or even just a drawing, although we prefer the former.

An outstanding characteristic of a good problem solver is the ability to switch between abstract and concrete thinking.*¹ Collectively developing concrete objects or visual representations helps us to bring the abstract ideas into the real world. The comprehension prototype forces us to reach the same level of comprehension. Today there are lots of scientific works that highlight the importance of working visually in a team.

The comprehension prototype reveals the aspects of our ideas which we have not thought through sufficiently. A good idea usually starts in our head, but our imagination tends to »lie« to us. We fall in love with our idea and become dazed and blinded. The prototype helps us to ground ourselves and to think about our idea in detail. We recognize what is still lacking. New ideas arise.

The comprehension prototype is the starting point for the testing loops (or iterations) in the EVALUATE module. The more detailed the prototype is, the easier the assumption can be tested. Our experience shows that the design of the comprehension prototype should nonetheless not exceed an hour.

We choose a very pragmatic approach and begin our work on the comprehension prototype with the aspects that the team understands best. Subsequently, we add more and more aspects and details so that we create our communication tool bit by bit. If we want to design the prototype in such a way that it can be experienced, we create a list: We note down all aspects of the prototype that should be present in the eventual solution.

¹ Gerhard Pahl:
»Denk- und Handlungsweisen beim Konstruieren«, in: *Konstruktion* 51 (1999), pp. 11—17.

Our views on how the prototype should look like or how it should be developed differ. We can not always be sure if specific aspects of the prototype are really important. Furthermore, there are often several possibilities for constructing certain aspects. We have to be careful not to get carried away in discussions. After all, the aspects and the related assumptions still have to be tested. For this reason, we should not spend too much time on the prototype of our solution. It will change substantially in the course of the iterations in the EVALUATE module, anyway.

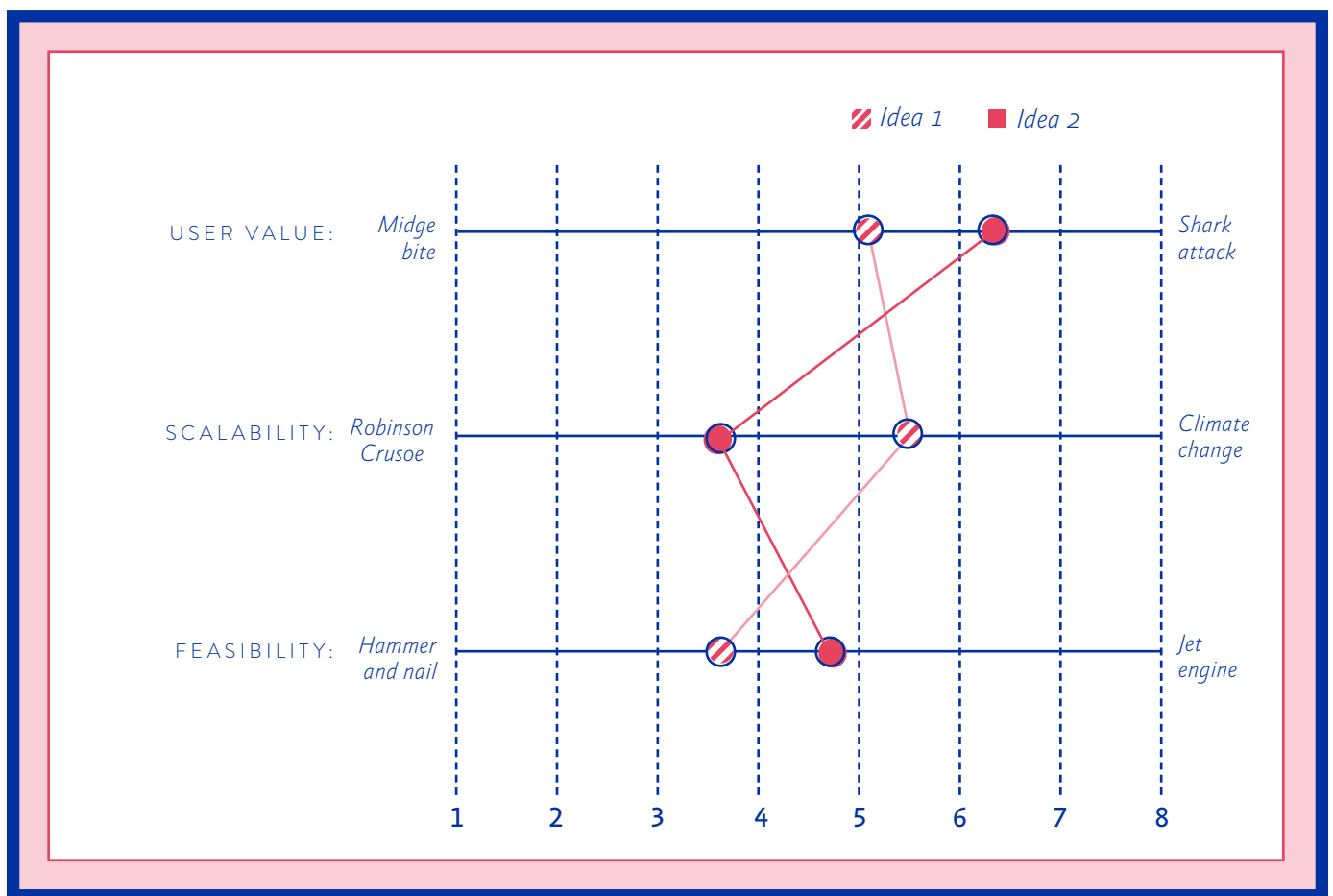
It is more important that the prototype helps us to develop a common understanding of the implementing of the idea. It is worthwhile to split up the team in order to work faster in solitary work or in smaller groups and to build prototypes of the various aspects individually. We can select from the visualized alternatives, or we can leave them as they are until they are tested.

¹ Also known as the
inventor of the Design
Thinking method.

The US innovation company IDEO^{*1} postulated the following sensible rule: Never enter a meeting without a prototype! This is so easy and so important, and yet it is ignored so often! Language is a horrible medium to convey innovative ideas. For this reason, we try to communicate as visually and as tangibly as possible. A prototype can be everything that enables or improves communication and concretely shows the object.

b_The Evaluation Matrix

After we have agreed upon a common comprehension prototype, we can conduct a first tentative evaluation of our idea. The completed CREATE module of the Innovation Board represents one documented idea. It allows us to go back to the idea at any time and to work on it without running the risk that important information has vanished. We must keep this in mind, because we will use the Evaluation Matrix method to reduce our many good ideas to a few reasonable ones. Any ideas that do not end up on the short list may still prove to be testworthy later on.



 Template 7.4.1: digital-innovation-playbook.com/templates/create

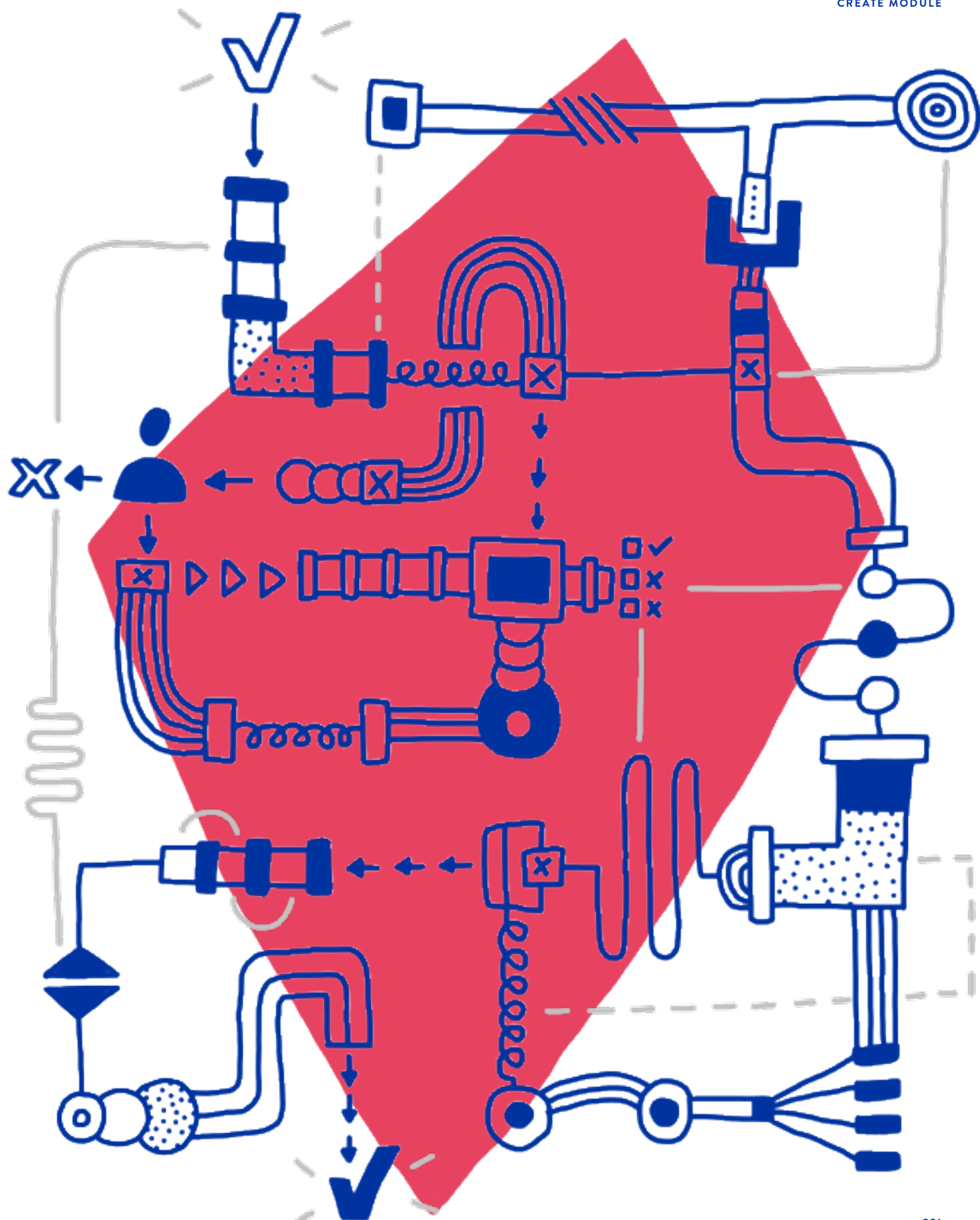
The few ideas that we eventually select are built as prototypes and carried over to the EVALUATE module. »Few« means one to three ideas at most. But how do we select the right ideas? We compare them according to user value, scalability and feasibility. We base these decisions on our gut feeling and use them to place the ideas in the evaluation matrix (Template 7.4.1).

When we have placed all ideas in the matrix, we examine them according to various criteria:

- First, we look for the idea with the highest feasibility and the highest user value. These are the ideas that best approximate a »Minimum Viable Product« (MVP)^{*1}.
- Second, we select the idea that has the most points on average in all three dimensions.
- Third, we select the idea with the highest user value and the highest scalability.

These criteria help us to select ideas. Twenty ideas are reduced to three for which we build a comprehension prototype in the next step. It may happen that an idea does not perfectly fit into the framework or that we have to discard an idea that convinces us personally and that we want to test by all means. When there is time, we carry over such ideas to the EVALUATE module to check if our gut feeling was correct.

¹ This is a product with minimal requirements and a maximum of use. Remember the founding history of Zappos from section 4.3: The first website that Nick Swinmurn put online to test his idea was an MVP. It only contained photos of the available shoes and a contact form. Nothing more was necessary.












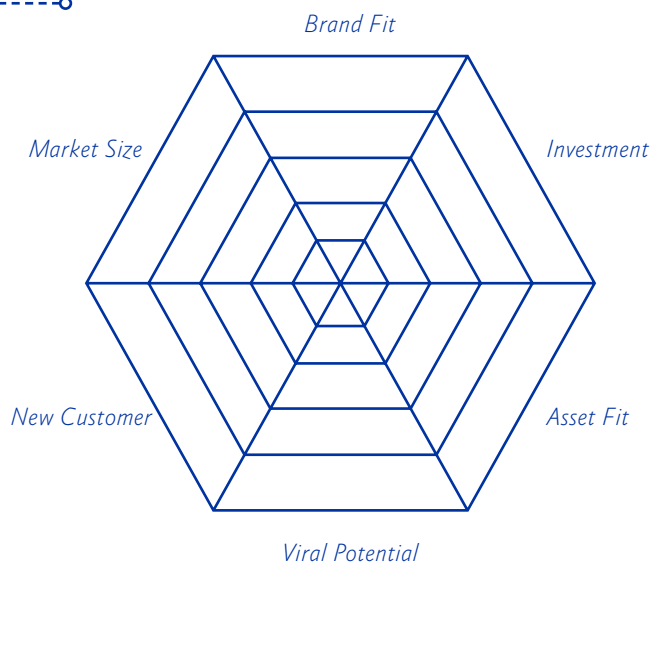




8 THE EVALUATE MODULE

We use the EVALUATE module to test our ideas with our users, e.g. by means of prototypes. In this way we answer the questions whether the idea actually solves the user problem and what the users are prepared to pay for product or service. Furthermore, the module provides us with first insights about competition, strategically integrating our solution with the company, marketing, turnover rates and costs and the business model. At the end of the module we are able to evaluate our idea comprehensively.

In the Value Proposition Score field we evaluate the value proposition of our idea. -----

The Assessment field (Brand Fit/Investment/Asset Fit/Market Size/New Customer/Viral Potential) contains our assessment of the aspects in parentheses based on discussions with experts in our company. -----

 VALUE PROPOSITION SCORE    	 PRICE POINT & DISPOSITION TO BUY  USER EXPERIENCE 	<p>In the <i>Price Point & Disposition to Buy</i> field we note down the price span that our users are prepared to spend on our solution.</p> <p>In the <i>User Experience</i> field we roughly enter the experience of our users when interacting with our solution.</p>
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 ASSESSMENT 	 CHANNELS  UNFAIR ADVANTAGE  KPI  REVENUE STREAM	<p>In the <i>Channels</i> field we describe the channels by which we want to reach our users.</p> <p>In the <i>Unfair Advantage</i> field we note down the aspects of our solutions that are hard or impossible to copy.</p> <p>In the <i>KPI</i> field we enter the indicators that allow us to measure the success of our solution.</p> <p>The <i>Revenue Stream</i> field contains our specification of how we want to earn money by means of our solution.</p>
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8.1 EVALUATE MODULE: OVERVIEW OF THE FIELDS

The EVALUATE module is our hard disk for all relevant information about our tested solution idea. We keep the results of the module in the fields. In case we have carried over several ideas from the CREATE module, each of them gets its own EVALUATE module. Later we will use this module to hand over and present our solution to superiors, other important departments or the executive management.

At this point we can see an important development: The EVALUATE module is stuffed with pieces of information that are viewed side by side. The CREATE module begins to focus and thus allows us a first tentative evaluation. When completing the EVALUATE module, we have already done all the relevant user tests. Now we need visual representations to share the collected knowledge. To this end we merely draw diagrams of the test results on the various levels for which we gained insights. There are also some additional fields related to the business module, which we complete in writing.

¹ More information on this can be found in section 8.2.

The fields Value Proposition, User Experience and Price Point & Disposition to Buy contain our statements about the desirability of our solution for the user.*¹



MATCHING METHODS:

- 2 Wizard of Oz
- 4 Pre-Mortem
- 5 Card Sorting
- 7 Context Prototypes and System Prototypes
- 8 Quantifying the Value Proposition
- 9 Test Grids

² See also method 8, Quantifying the Value Proposition, where we will describe the relevant methods in more detail.

Value Proposition Score

We have already seen this field in the CREATE module. However, in the CREATE module we phrased the value proposition for the users (expressed as an assumption); now that we have the results of our user tests, we can evaluate it. To this end, we plot the dimensions of the value proposition on a scale. In this way, we can quickly and easily compare several ideas on an abstract level. For a more detailed assessment, we consider the following criteria*²:

Activating Users: We can only activate our users if they are sufficiently interested in our value proposition. We enter the extent of their interest into this field.

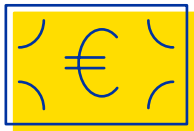
Preference over substitute products: Our future customers will always compare us with competing products, in particular with those that fulfill a similar value proposition. For example, a bicycle competes with a car. Here we enter how well our idea performs in comparison with similar value proposition, seen from the perspective of the users.

¹ See also Price Point & Disposition to Buy.



MATCHING METHODS:

- 1 Wireframes, Storyboards, Paper Prototypes & Mock-Ups
- 2 Wizard of Oz
- 4 Pre-Mortem
- 6 Appearance Prototype
- 7 Context Prototypes and System Prototypes
- 9 Test Grids



MATCHING METHODS:

- 4 Pre-Mortem
- 5 Card Sorting
- 8 Quantifying the Value Proposition
- 9 Test Grids

Disposition to Buy: Even if we could not determine a specific price point during our tests,^{*1} we can always have a good guess at the general disposition to buy. That is what this field is for.

Recommendation: Here we assess the recommendation potential of our value proposition but not the viral potential of the complete tested concept. (The latter we will do in the Viral Potential segment of the Assessment field.)

User Experience

As soon as the value proposition for our users is proven, we look at their interaction with our product or service. What is most important for them? Do they have any priorities? The resulting user experience is an essential factor for designing digital products and services. As we cannot yet write down a complete user experience at this point, we qualitatively evaluate our impressions and insights from the tests and plot them on a scale.

Price Point and Disposition to Buy

Are our users willing to pay money for our solution? If so, how much? We enter the results of our tests in this field. It is also possible that our solution is a gratis or »freemium« offer. In such a case we indicate this in the Price Point field and later use the Revenue Stream field to state if and how we want to generate additional revenues, e.g. by upselling or advertising.

A freemium offer means that you can get the basic product or service at no cost while you have to pay for the full version and/or extensions. Popular examples are the music streaming service Spotify, the networking platform Xing or the cloud storage service Dropbox.

¹ More information on this can be found in section 8.2.



MATCHING METHODS:

- 2 Wizard of Oz
- 3 Business Plan
- 4 Pre-Mortem
- 6 Appearance Prototype
- 10 Talking to the Experts

² Staff, premises, capital investments, facilities, know-how, existing customer relationships etc.

The fields Unfair Advantage and Assessment contain our statements about the viability of our solution in the context of our company.*¹

Assessment

This field tells us if our solution makes sense from a strategic point of view. In this field we enter our respective evaluations for the various aspects.

It is difficult to find exact figures or percentages as we are still at the beginning of our new solution. For this reason we use T shirt sizes like XS, S, M, L and XL for evaluation. This results in a matrix that gives us a vivid picture of how well our solution fits strategic aspects.

We consider the following aspects:

Brand Fit: New concepts and new solutions are often supposed to approach new customer groups. However, it may happen that the new product idea does not match the existing brands of the company. This does not necessarily mean that our solution is bad or does not bear any potential, but it can have a strategic influence on its implementation. In this field we thus record how well the solution fits our company.

Investment: Here we assess the size of the investment in money and time that will be required to implement our solution.

Asset Fit: Does the idea match the existing assets*² of our company? Have we laid the proper foundations for implementing the idea? For instance, have we already developed a technology that we can use in our idea or can we directly profit from other existing assets of our company?

Market Size: How big is the market for our new product or our new service?

New Customer: What are the chances to gain new customers by means of the solution? Here, we differentiate between existing customers who will *also* by the new product and *completely new customers*.

Viral Potential: How much viral potential does our solution have, i.e. how much chance is there that our users recommend it to others? A huge viral potential allows us to save money on the marketing budget. But beware that 99% of all ideas planned to become »viral« turn out to be nonstarters.



MATCHING METHODS:

- 4 Pre-Mortem
- 10 Talking to the Experts
- Gut feeling

Unfair Advantage

These factors often relate to the brand and/or the assets of our »sender company.« When we are aware of our »unfair advantage« we can try to extend it gradually. This is particularly important to discuss when it comes to the strategic integration of the new product or service with the company.

The fields Revenue Stream, Channels and KPI contain our statements about the feasibility of our solution in the context of our company.*¹

¹ More information on this can be found in section 8.2.

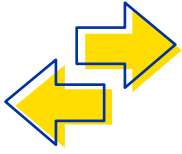


MATCHING METHODS:

- 3 Business Plan
- 4 Pre-Mortem
- 10 Talking to the Experts

Revenue Stream

The »revenue stream« refers to our sources of income. Here we write down whether our solution generates income through subscriptions, individual purchases or by other means.



MATCHING METHODS:

- 3 Business Plan
- 4 Pre-Mortem
- 5 Card Sorting
- 6 Appearance Prototype
- 10 Talking to the Experts



MATCHING METHODS:

- 3 Business Plan
- 10 Talking to the Experts

Channels

This field relates to distribution channels as well as marketing channels. We look at the whole process from gaining the attention of the customers to the purchase to the follow-up or reactivation of the customers.

KPI

How can we measure the success of our solution? We think about what we want to achieve and define it in the form of a key performance indicator (KPI), e.g. »units sold.« We specify the indicators for measuring our future success and their required values for continuing with the project.

8.2 A SHORT INTRODUCTION TO THE EVALUATE MODULE

¹ See section 6.4.

² See section 7.4.

³ UX means the user experience while using our solution.

Each of the modules is distinguished by the prevailing mindset. In the EXPLORE module, it is curiosity. We want to discover everything and to explore the unknown. This module helps us to discover a user problem that we want to solve. We develop a problem hypothesis that we express in the form of a how-might-we question.^{*1}

In the CREATE module, we give free rein to our creativity and focus on creating something new. This module ends with the production of one or more comprehension prototypes based on ideas we selected from our decision matrix^{*2}. At the end of the module we think that we have found solutions for the problem of our users. As these solutions are not yet tested, they are only solution hypotheses. Our comprehension prototypes are basically solution hypotheses made touchable.

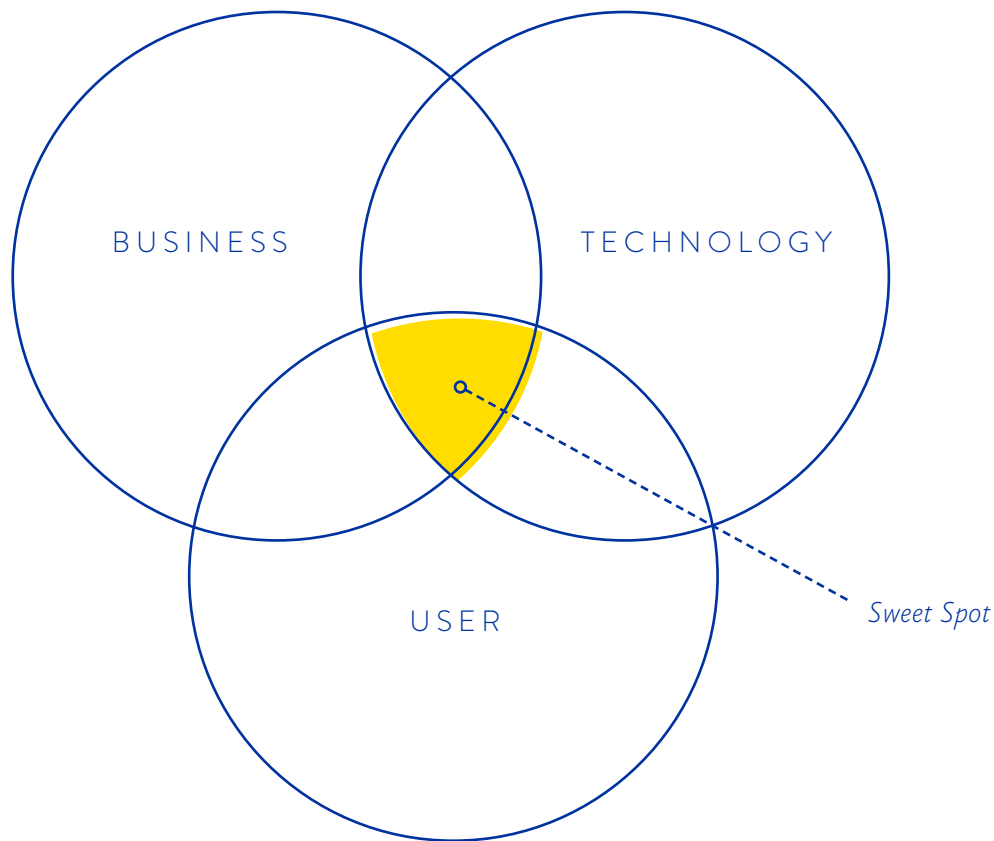
In the EVALUATE module, we conduct experiments and systematically test our solution hypotheses. We break them down in smaller testable units, which we also express as hypotheses. You will soon see why we do this. The more concrete we make our big solution hypotheses by means of the tested hypotheses, the nearer we approach the real solution. We have a solution when we have come up with a value proposition that binds the users to us; when we know exactly how to solve the problem of the users; and when we have designed all points of interaction in a way that is suitable for the requirements of our users, as shown in Fig. 8.2.1^{*3}. (The solution equation in this figure is simplified and shows only the areas that we can control during innovation development. Further important components of a solution are marketing plans, freed production budgets etc.)

SOLUTION HYPOTHESIS *is the answer to the* PROBLEM HYPOTHESIS

TESTED SOLUTION HYPOTHESIS = SOLUTION

SOLUTION = VALUE PROPOSITION + MODE OF OPERATION + UX

 **Fig. 8.2.1**

 Fig. 8.2.2


This viewpoint is consistent with the framework^{*1} presented in the book about Design Thinking and shown in the Venn diagram of Fig. 8.2.2.

¹ Designed by Tim Brown, president and CEO of the design company IDEO.

The Venn diagram illustrates that a successful product has to be strong in the three categories User (desirability), Business (viability) and Technology (feasibility). The sweet spot is the yellow triangle in the center. It contains solutions that the customers want to have, that our company can implement and that are economically sound. This is where we want to arrive with our solutions.

Desirability

¹ Or to other people with similar characteristics.

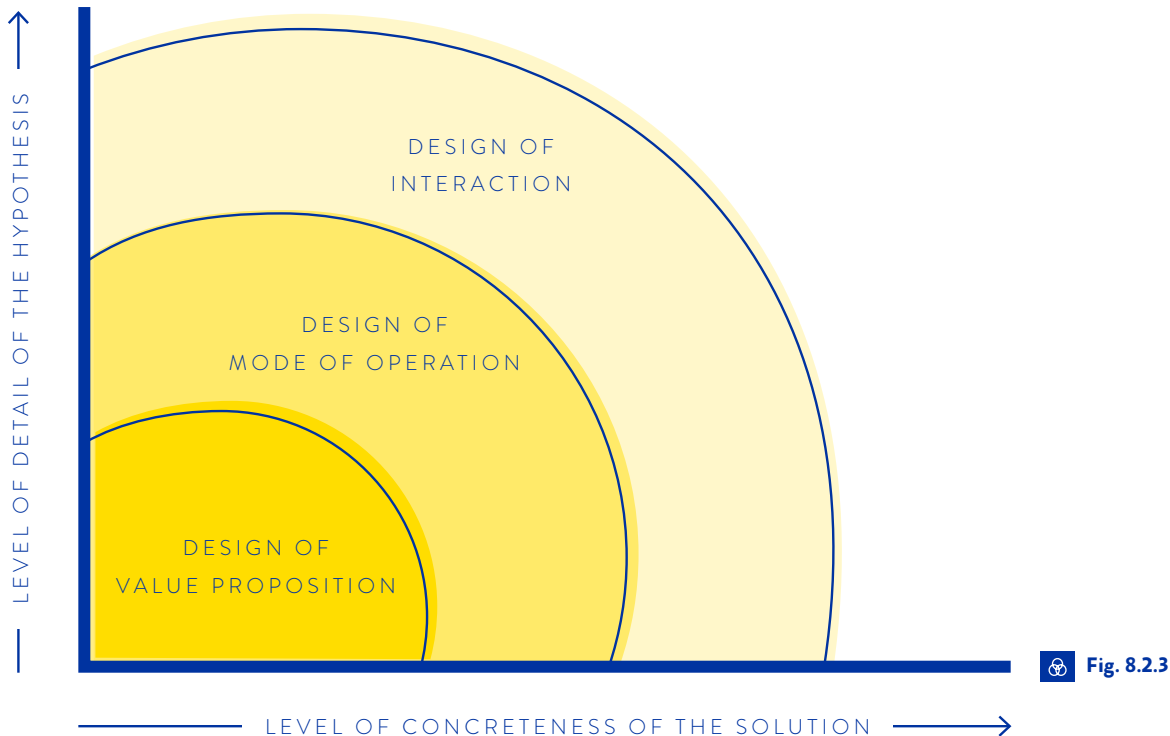
We test the desirability of our solution together with our users. After we got to know them in the EXPLORE module, we now come back to them^{*1} and find out if our product or service offers real added value to them in the context of their life situation. No study can provide us with this information, only real tests with real people in their real life (as opposed to a test in a lab). We roughly differentiate between three levels of results (see Fig. 8.2.3):

² See section 6.4.

a. The value proposition itself. We have to check if our problem hypothesis^{*2} is really true and if our solution can really solve the problem of our users. Take Facebook as an example: It is not the value proposition of Facebook to be a platform or a Web service. People do not use Facebook because they like Facebook but because they like their friends. Facebook connects us with our friends—at least that was the initial value proposition in 2007.

b. The mode of operation. We have to find out if the way in which we solve the problem is really appropriate for the user. Products often fail because of the manageability, not of their value proposition. The start-up company Number26 is a good example for an appropriate mode of operation. It offers its customers a checking account in the form of an app. Number26 was the first financial service provider that used the »mobile first« approach. The value proposition was, »We open your new account within eight minutes.« The mode of operation, the intuitive usage, the immediate visibility of transfers and the straightforward opening of an account by means of a video call caused established banks to copy the Number26 approach frantically.

c. Interaction: Here we find out in which way information and possible actions have to be designed so that the users can reach their objectives. In our Number26 example, this could be the question, »Do we need an authentication procedure per video or per mail to determine the identity during account opening?«



We systematically work our way from the important to the less important questions. In the beginning it does not matter how beautiful the app is designed as long as we do not know if it offers added value for the customers in the first place. With each iteration, our solution hypothesis becomes more concrete. Conversely, the more clearly we know how our product will eventually look and what it can do, the more detailed we can test it.

Caution: These different result levels only apply to us! The users do not differentiate between them but experience the product as a whole.

In section 8.3 we will introduce several methods to test various aspects of our solution systematically.^{*1} They relate to the three result levels as shown in Fig. 8.2.4.

¹ We often claim to work completely unscientifically. This may be true to a certain degree, but we are guided by metascientific methods. In the EXPLORE method, we develop new theories by inductively processing a data base. We postulate connections and develop a model of the real world. From this model, we deduce new solutions that fulfill the needs of our users from a logical perspective. This happens in the CREATE module. In the EVALUATE module, we test the assumption behind the solution. Like scientists, we develop test procedures that have to fit the theories.

Although we adhere to this process, we consciously ignore the scientific requirements for empirical validity, objectivity and reliability. In contrast to the truth-seeking sciences, we think in terms of cost and value. We always walk the middle ground between maximum insight and progress and minimal risk. Unfortunately, these things are opposed to each other. Only experience and learning from bad decisions can help us in these circumstances. We are not scientists, but entrepreneurs. The only relevant criterion is market success.

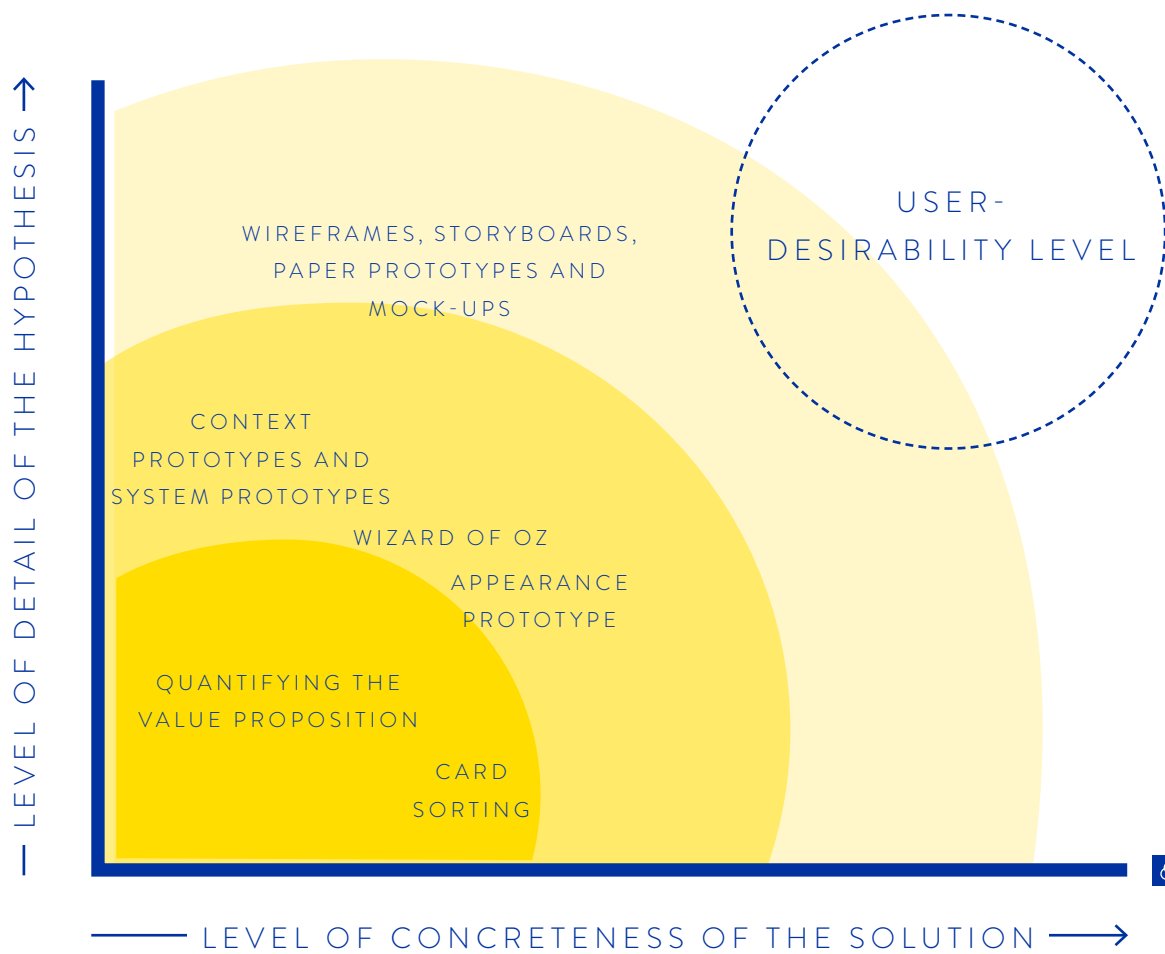


 Fig. 8.2.4

WIREFRAMES, STORYBOARDS, PAPER PROTOTYPES & MOCK-UPS	<i>Designing the information flow Designing the order of information Abort criteria</i>
CONTEXT PROTOTYPES & SYSTEM PROTOTYPES	<i>Testing context & system Stop motion video, video, comic, Lego</i>
WIZARD OF OZ	<i>Mode of operation and interaction Knowledge and ability</i>
APPEARANCE PROTOTYPE	<i>Trigger/reason, look & feel/brand perception/customer relationship, channel, form; fake ad, flyer, photo montage, screen visuals</i>
QUANTIFYING THE VALUE PROPOSITION	<i>Landing page, Facebook ads, Facebook group, collecting Instagram likes, starting Crowdfunding, sales pitch, price test, anchor points</i>
CARD SORTING	<i>Weighing aspects/features/functions</i>

Important: Every aspect requires its own type of prototype, which is *not* identical to the comprehension prototype at the end of the CREATE module.

Viability and Feasibility

In order to test viability and feasibility, we talk to experts, whom we usually find inside our organization. In most cases we have to show them some »proof« to gain relevant information. For instance, we may have to prove to them that we can find enough customers in the wild who have the needs that we have tested. After that, the experts can help us to answer the following questions: Is the product good enough so that customers pay money for it? Is it possible to create a profitable business case from it? Can we reach the target group in the first place? Do we have good marketing and distribution concepts? Does the product fit the strategic direction of the company? Does the company have the capabilities to implement all this?

These questions are extremely important and will come up many times during innovation development. Answering them safely is only possible after our solution hypothesis has reached a certain degree of concreteness (see method 10, Talking to the Experts). Our focus is clearly on the viewpoint of the users. After all, we can only have market success when we build a product or a service that offers real added value for our customers.

HYPOTHESIS GENERATION IS ESSENTIAL!

Hypothesis generation always happens before *each* test! This is a prerequisite for working with the EVALUATE module. In contrast to the EXPLORE module, we can only gain insights from this module if we know *what* we want to gain insights about.

Hypothesis generation helps us to set up tests in a structured way. We use it to identify the aspects that we do not yet know exactly but about which we already have made quite specific assumptions. The hypothesis does not have to be more concrete for our purposes. It is simply a sufficiently plausible (gut feeling!) assumption expressed in such a way that we can test it (see template 8.2.1).

Most of us should be familiar with making and testing assumptions. After all, we work like this every day! It really helps us to become conscious of these processes, especially in teamwork. We then realize how many assumptions we make each day without ever questioning them. We all have made this experience in our vacations in foreign countries or during intercultural projects: Suddenly, we are surprised about different approaches to everyday tasks.

In order to generate hypotheses, we first note down our assumption. In doing so, we have to be very critical towards ourselves: What do we really know? What can we say with certainty, and where are we lacking our professional gut feeling?

Next, we develop a test scenario. To do so, we ask ourselves how we can get an answer to the hypothesis. The test scenario can sometimes be very simple but sometimes also very difficult. It depends on what we want to find out. In the various EXPLORE methods on the following pages we will describe in more detail how we can test different aspects of concepts. *Normally, every aspect requires its own test scenario and its own prototype.* It becomes difficult when we cannot separate the various aspects properly.

Before we write down the results, we have to answer the following questions:

1. How do we define success? 2. How do we decide after the test in which dimensions we evaluate our results? We have to clarify these points because we tend to be in love with our own solutions. Having hard and fast criteria makes it more difficult to sugarcoat our results.

ASSUMPTIONS	TEST	RESULTS
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 Template 8.2.1: digital-innovation-playbook.com/templates/evaluate

SEVEN BASIC RULES FOR SUCCESSFUL USER TESTS

Rule #1: Do not explain the prototype

We design the test scenario as realistic as possible because we want to gain equally realistic information without influencing our users. When the solution is on the market, there will be no-one who explains the product or the service to the users. By not explaining the prototype we can determine what confuses the users and into what problems he may run when employing our solution.

Rule #2: The prototype has to be self-explanatory

This rule is a direct consequence of the first one: Since we do not explain the prototype, it has to be self-explanatory. We can consider how the user in the real world will get to relevant information and how we can integrate this information into our prototype. When our solution idea is a service, a brief introduction may appear in the app. Digital services are often bound to analog products. With a car sharing service, relevant notes may flash up on the dashboard: Please log in; the key is in the box at the left door; ignite and go!

Rule #3: Our motto: we fail as early and as often as possible

In the context of a test scenario, the purpose of a prototype is to discover problems and errors. The earlier we discover them, the faster we can fix them. The more errors we discover, the more perfect the solution gets. The earlier we can complete a test scenario, the earlier we can start a new iteration cycle based on our new insights.

Rule #4: The »kill your darling« mindset

This rule is connected with the previous one: As a team, we have to expect that our solution idea (or parts of it) fails in the test scenario. This happens especially at the beginning of the iteration cycle. We can accept the failure of our idea much easier if we have not yet invested too much time into it. But even if we have fallen in love with our idea, we have to be prepared to discard it when the test results show that it will fail. We call this the »kill your darling« mindset.

Rule #5: Never defend the prototype!

The rule is based on the previous ones: When we accept failure as the normal case, we are not tempted to defend our prototype. We do not even want to defend or sell our idea and the prototype; we want our eventual solution to be so well thought-out that it sells itself.

When our test user asks questions or discovers problems, we should not take offense because this provides us with valuable information and insights about scenarios and needs we did not think of. Not defending our idea is difficult for most of us, especially when verifying it in the EVALUATE module for the first time. We are used to sell our ideas and to put them in a positive light. For the tests we have to overcome ourselves. »The user is too stupid«, is not the proper attitude. Instead, we ask, »How can we communicate our idea in a better way without using words?«

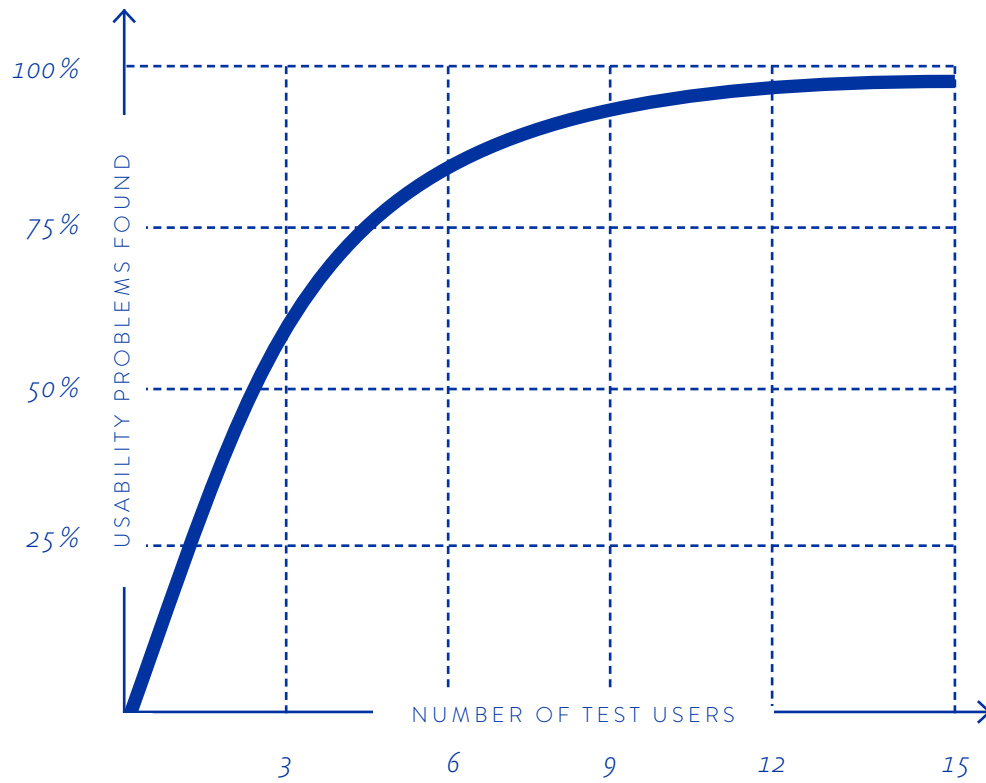
Rule #6: Answer questions with questions

Most questions of our test persons will be answers relating to the process. We answer these questions with counter questions. In this way we guide the test person to work out the solution idea on his or her own. For instance, we can answer the question, »How can I log in?« by saying, »How would you try to log in if I weren't here?« In doing so we learn which aspects of our solution idea are not yet clarified.

Rule #7: We do not need many users in order to see what does not work

We test our idea in several ways. Our goal is always to better understand our users and to further develop our solutions. As soon as we have a question or feel insecure, we design a test and involve our potential users. We do this fast and focused, and we only need a few test persons. The authors of *Sprint*^{*1} refer to a study by Jakob Nielsen. He wanted to find out how many problems are found in usability tests after 10, 20 or more interviews. It transpired that 85% of the problems were found by tests with only five persons (see Fig. 8.2.6). Since we do not only want to test the usability but also other aspects of our solution, we evaluate our idea in most cases with 10 to 15 persons. However, the study by Nielsen shows that more tests are not necessarily better. One little exception is the price point. It is best determined statistically based on a larger sample.

¹ Jake Knapp, John Zeratsky, Braden Kowitz: *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days*, New York 2016.

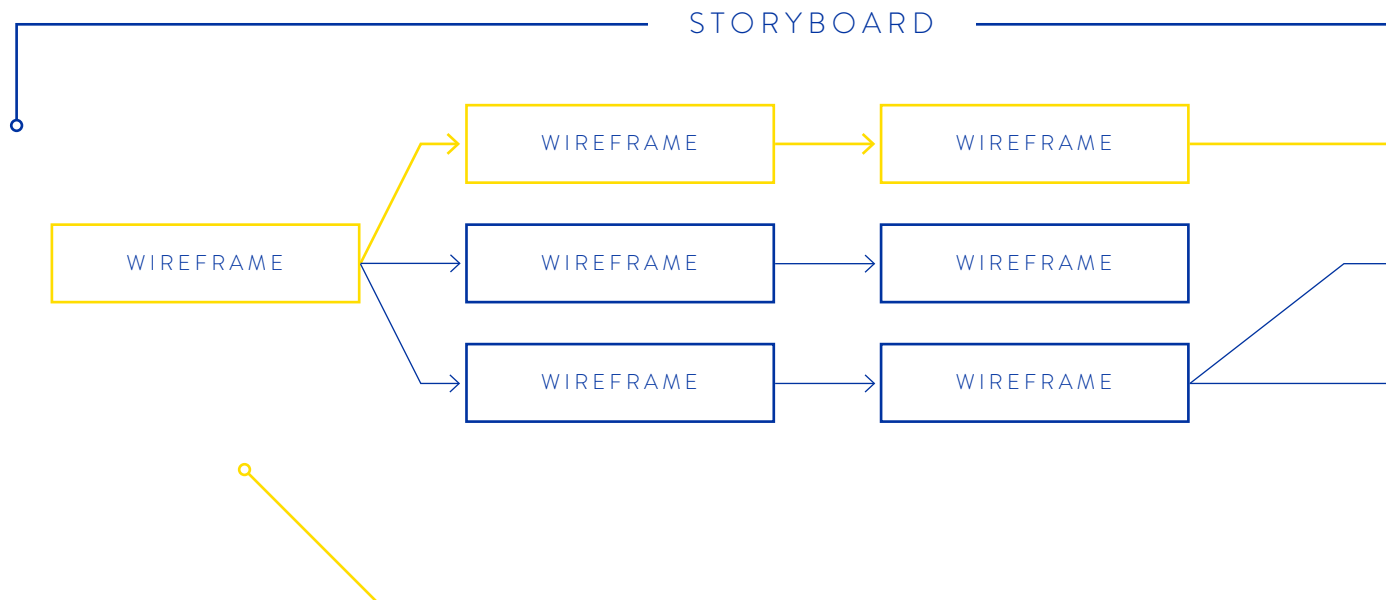
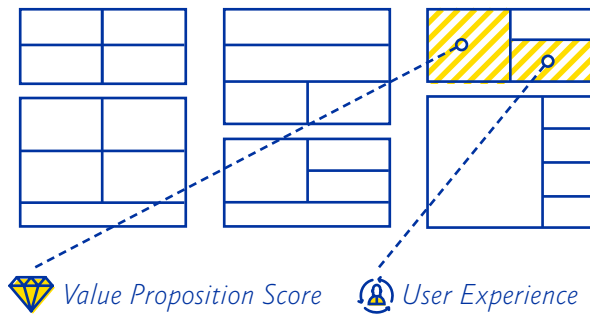
 **Fig. 8.2.6**



8.3 EVALUATE METHODS

1

Wireframes, Storyboards, Paper Prototypes & Mock-Ups



WHAT AND WHY?

The term »wireframe« is mainly used in Web design. It refers to the arrangement of packets of information on a screen. When we put several wireframes one after the other, we get a »storyboard«^{*1}. It guides us through the sequence of several wireframes including any possible branches. Most branches are use cases of their own, i.e. a specific way of using our solution.

In the case of an innovative service that we want to distribute by means of a Web site or an app, wireframes and storyboards help us to visualize and work out the information design of this solution. Information design includes among others the number and type

of functions that our solution offers; the relative dependency and value of these functions and the information; and the way the information is presented.

When we have a clear understanding of the flow of information, we test its graphical implementation. If we want our test persons to participate in the design, we can do this using a paper prototype. We could also build a mock-up that looks like the completed solution. We then test whether the users interact with our solution in the way that we have planned in the storyboard. This means that we test our solution idea on several levels.

1 Storyboards are also used in the movie industry. In this context the term refers to a pre-visualization of the script in form of a strip cartoon. However, this is something different from our Storyboard method.

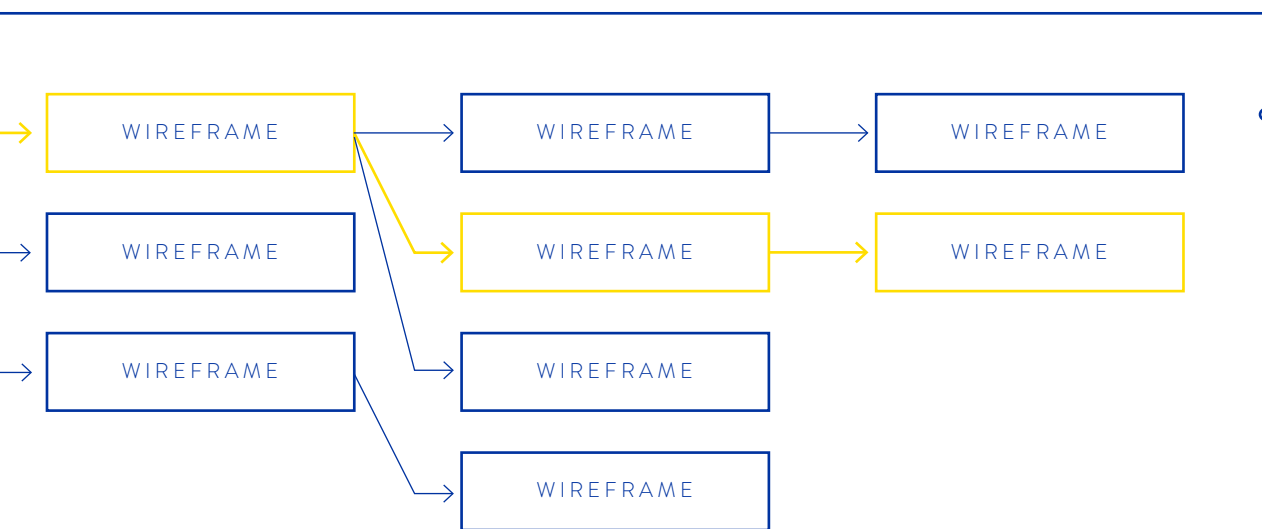


Fig. 8.3.1

MODUS OPERANDI

1__ We create wireframes

1 Or sticky notes, which we can rearrange quickly.

Wireframes can be created quickly. They are nothing more than a few boxes^{*1} that represent blocks of information. We label them by hand. In the Internet you can find many programs that allow you to create wireframes on the screen. For the first phase, however, pen and paper are sufficient. After all, we only want to get an overview of how the pieces of information relate to each other and what possibilities we have to prepare them. It is often useful to split up the team and do some solitary work at first. Each of us has to get a clear idea of what information has to be incorporated in the prototype and what connections they have to each other. This temporary breakup always went very well in our experience.

2__ We connect the wireframes to get a storyboard^{*1}

2 Also called »user flow.«

In the next step, we connect the wireframes. We track the individual steps through the screens and thus produce a storyboard. Every branching is a possible path for the user to click through the solution. We can also put headings to these various paths.

3__ We test

It is not possible to test all conceivable variants, but that is not even our objective. Instead, the objective of this test is to learn whether the users understand the information in the way that we imagined. Do the users interact with the wireframes as planned? Do they follow the paths through the storyboard as intended? If not, why not?

4__ We deal with the design

Of course it is not possible to separate information and design completely, especially not from the viewpoint of the user. Since design is always linked to effort, our wireframe prototype goes through an evolutionary process. We start with pen and paper and draw a simple sketch to determine the flow of information together with our users. This prototype does not look in the least like the eventual solution but more like the cabling under the hood.

When we have clearly worked out the flow of information, we deal with the graphical design of the information. We can also test this with the users by using paper prototypes. The user sees that our solution is not yet completed and thus dares to participate in the design and even to change the prototype.

Next, we build a »click prototype« based on the photos of the paper model. Now is the first time to visualize the whole process on the computer and beautify it in order to observe even more authentic user reactions.

In the last step, we can refine the design yet more by building a mock-up of our solution as a realistic representation. We lead the user to believe that our solution already exists as a completely designed product or service. In this way we can also test if the users interact with the solution in the way we have planned in the wireframes and the storyboards.

It is important to define abort criteria for the test. Where does the user fail to understand something, where does he get impatient, and what makes him abort the process? In order to learn whether our solution may work, the user experience has to be completely positive on all sensual levels.

HOW DOES IT FEEL?

5__ We follow up

The fact that the user has conducted all steps does only mean that he understands the solution. But does he also understand that the solution can fulfill his needs? Possible test scenarios in this case are qualitative interviews, a comparison with substitute products or quantitative questionnaires.

In addition we also have to find out if our user is also able to use the solution outside the test environment. Does he own devices that can run the solution? How does he experience the product as a whole?

Working with wireframes is a popular method because it is easy to understand. We all know apps and Web sites and are familiar with a certain type of information design. Repeated testing of the information design helps us to get rid of superfluous elements and to incorporate the things that we missed. When we have established the information that our solution has to provide to the users, we often better understand the solution. Of course, wireframes, storyboards, paper prototypes and mock-ups can also be created for analysis. When we face the challenge of e.g. designing the touchpoints of an existing service, we can try to retrace the current path in order to understand how the service works, which information is given at which point etc.

GOOD TO KNOW

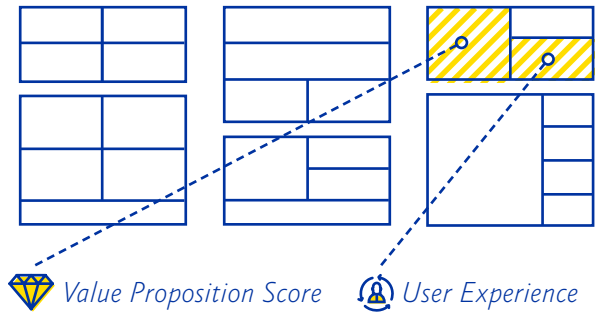
Paper prototypes are extremely efficient and accelerate the development cycle. We not have to start coding in order to see what does not work. Shawn Medero called paper prototypes a tactically important tool as the interfaces get more complex and the development cycles get shorter. User experience guru Jakob Nielsen^{*1} also swears by them: According to him, you only need five users and paper prototypes to discover 85% of all usage problems of a service. Studies^{*2} also prove that paper prototypes are as effective for gaining insights as high-quality Web prototypes coded on a computer.

¹ In 2010, the *Bloomberg Businessweek* included Nielsen in its list of »World's Most Influential Designers.« Furthermore, in 2013 the SIGCHI awarded him the »Lifetime Practice Award« for this numerous studies.

² For example »High-fidelity or low-fidelity, paper or computer? Choosing attributes when testing web prototypes«, published in 2002 by Miriam Walker, Leila Takayama and James A. Landay; see bit.ly/1r2D7gt (06/26/2016)..

2

Wizard of Oz



WHAT AND WHY?

Wizard of Oz is the most flexible prototype in our set of EVALUATE methods. Basically, we use this method to simulate the functions of our solution by human intervention—as the wizard of Oz^{*1} did. With this method we can test substantial functions that contribute to the added value of our innovative product or service idea.

The following example illustrates how we can use this method: Our solution idea is an app

that allows the user to order a given Amazon wish list by clicking on a button. Our Wizard prototype must really enable the test person to trigger the ordering process by clicking on a button. In the background, one of us actually orders the goods. We could also design the test scenario in such a way that our test person can only order goods that we happen to carry with us. There are no limits to the design of Wizard test scenarios.

MODUS OPERANDI

As the Wizard prototype completely depends on the functions of the solution to be tested, we cannot provide generic instructions. We need to use our creativity. First, we have to

consider what we want to simulate and how we want to do it. The basic guidelines for tests apply: a precise definition of our hypothesis, low effort and a maximum of insights.

¹ L. Frank Baum: *The Wonderful Wizard of Oz*, Chicago 1900.

HOW DOES IT FEEL?

One of our customers wanted to know whether an app might be successful whereby mothers could document their daily work for their families. In order to find out if such an app would really be relevant for mothers, the Wizard of Oz is the suitable testing method. Our hypothesis was that sharing information about their activities for the family would earn the mothers so much appreciation that they would put up with the effort of documenting their work.

Building a mock-up of this app would have been the wrong way to test it as a mock-up could not have told us anything relating to our hypothesis. Instead, we asked 20 mothers to send us photos of each activity via WhatsApp. In this way we could test if the effort of taking photos of every little thing outweighed the benefit, i.e. a visual representation of the activities and praise by us via WhatsApp.

Surprisingly we got up to 40 photos per day by many of the mothers. Did this confirm our hypothesis? Yes—and no. The mothers were really diligent, but only for the first three days. After that, the sending of photos ebbed rapidly. The test taught us that the app idea would not work as a continuous service. The Wizard method allowed us to test our hypothesis with a minimum amount of time and money.

GOOD TO KNOW

One of the best-known anecdotes^{*1} about the power of simulation is the exact opposite of the Wizard of Oz method. In 1966, Joseph Weizenbaum, one of the fathers of artificial intelligence, published the computer program ELIZA by which he wanted to show that natural communication between humans and computers by entering words on a keyboard is possible. The program is based on an algorithm that picks up the main terms from the input sentences and »answers« them by pre-defined boilerplate text. ELIZA is even able to simulate various discussion partners, the most famous of which being a psychotherapist.

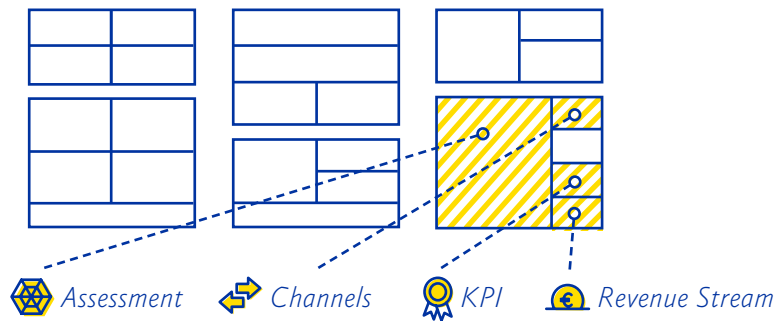
Some time after publishing the program, Weizenbaum realized that his secretary and other non-technical staff members of his department at the MIT actually believed that they talked to a computer therapist who understood their problems. When he told his secretary that he had access to the log files of her conversations with the computer, she was offended and felt that this was a breach of her privacy.

This is a wonderful example of how easily we can be deceived by well designed illusions. In this case, the computer takes on the role of the wizard as opposed to what we really want to do.

¹ url: bit.ly/25yomSg
(26.06.2016)

3

Business Plan



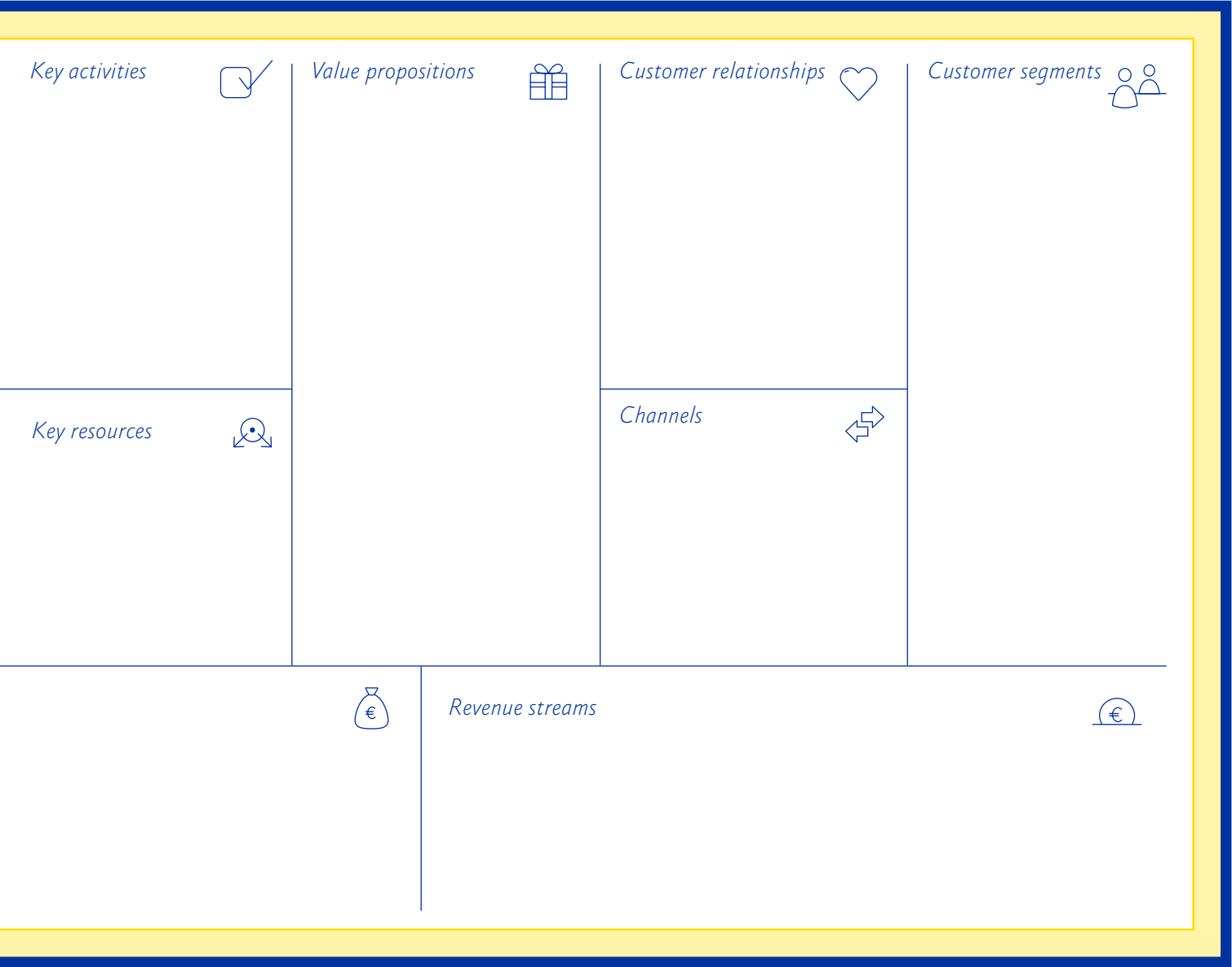
WHAT AND WHY?

The business plan is the dream and the nightmare of every entrepreneur. Numerous books have already been written about this topic. Google spews out an impressive 222 million hits when we enter it a search term. In the last years, many brave entrepreneurs have started out to call the world's attention to the contradiction in terms of »business plan.« As nice it would be to plan our business down to the finest details, it is simply not possible. We can control our own costs, but what happens on the sales front is in the hand of the users and customers. Nonetheless every entrepreneur needs a measure of planning.

Key partners



Cost structure



We also create business plans for our business ideas; however, we treat this method as what it really is, i.e. an abstraction of the real world that represents our current knowledge about the foreseeable costs, turnovers and required investments. For this reason, we do not produce long reports but instead an Excel work sheet that we can adjust any time. There is also a new and quite pretty way to get out of the plight of having to create a business plan, namely the Business Model Canvas^{*1} by Alexander Osterwalder. Thanks to this Swiss business theorist, the business plan has been demystified during the last years. The Business Model

Canvas is a qualitative representation of a business model with the focus on its general functionality. This makes the canvas an excellent tool for pondering our business model, coming up with alternatives and deciding about them or letting the management decide. Using the canvas does not free us from our obligation of producing figures. For this reason, we see the creation of a qualitative and a quantitative business plan to be interconnected methods. We have to know how our business model looks like in general in order to translate it to robust figures.

¹ www.businessmodelgeneration.com/canvas/bmc
(08/02/2016)

MODUS OPERANDI

1__We complete the canvas to visualize our business model

The Business Model Canvas consists of nine fields, which describe the most relevant areas of a business model from an internal perspective (see template 8.3.1). On the left you will find the required cost structure to implement the business model as well as the required activities, relevant partners and required resources. On the right-hand side we have the sources of income. The center contains the value proposition of the new product or service, the related customer segment—i.e. our users—and the relationships of these customers to our company. We also define the channels by which we carry our value proposition to our customers.

2__We estimate market potential and turnover

In the next step we estimate how many potential customers exist for our idea. How many of them can we reach and in what time? Here at the latest our alarm bells should ring because we work on assumptions. As we want to convert all our assumptions into a hypothesis that we can subsequently test, we also have to do this for our assumptions on the market potential of our idea.

Traditionally, one would commission a market survey. But that is expensive, and one might ask if it is really reasonable given the costs or simply a measure to pacify internal objectors and to conceal our own insecurity. The decision is made by the management.

We also have to determine how much the customers are willing to pay for our product. Ideally, we have already tested this thoroughly. Because of the huge uncertainties this is usually done with the help of several scenarios.

3__We capture the costs

We are interested in various forms of costs. Be aware that we are no accountants or controllers. We only consider the costs in order to gain a realistic picture. This means that although we work properly we do not focus too much on the accuracy of individual figures. It is important to keep an eye on the effort and the value of the insights gained. Hence, we once again use our »professional gut feeling.«

First, we write down the investment costs. This encompasses costs for buildings, equipment, machines, development/programming, design services and rights. The depreciation list is usually much too detailed for this purpose. Another cost factor consists of the fixed expenses. In this area, we capture the labor costs (including any social costs that might apply) as well as material costs like marketing, technology, licensing, external service providers, customer support etc.

The last cost factor is made up by the indirect costs, which are associated with producing any product or service. The more units of the product I sell, the more costs arise in production. In the area of digital products, these costs are supposed to be nearly zero.

4__We check profitability and liquidity

We compare turnover and costs. When the turnover exceeds the costs, we have gained profitability. This does not necessarily mean liquidity. There is a delay between invoicing and receiving money, and this delay can be lethal for companies. Fortunately, this is irrelevant in large companies where we usually have big budgets. But even in such a company we have to stay within our budget, which can be seen as comparable to liquidity.

5__We describe performance figures

Nothing is better than short and concise sentences that sum up the important figures. This summary does not only have to be easily comprehensible, but also fit the language of the company. This means that we produce performance figures that tie in with similar performance figures of the company. In this way our performance figures become comparable.

HOW DOES IT FEEL?

The books by Alexander Osterwalder are very popular in management circles. His Business Model Canvas for designing a business model is superficial and yet all-encompassing—a real all-rounder. We can use it as a communication tool to share our thoughts, to hand over results or even to structure the working process and even to align the whole innovation process. It is very clearly laid out, and with proper usage it also provides much complexity and depth.

For many people, creating a business plan is an excruciatingly dull feat. But labeling elements with numbers can open our eyes for aspects of our idea that we have not yet realized. It may be that at this point, all our solutions turn out to be unprofitable. In such a case we have to go back to the CREATE module and think in a completely different direction. Maybe we only fail because we cannot carry our solution to the streets efficiently on our own. In this case, partnerships may come in handy.

As an example, the Virtual Reality developer Oculus has not yet come up with a profitable business model for its Oculus Rift VR glasses, but has participated in the development of the Samsung Gear VR glasses as a technical partner of Samsung. In March 2014, Facebook bought Oculus. This resulted in new strategic opportunities for both parties. In our experience the involvement of in-house experts of our project partners in developing a business plan has proven to be useful. First, we get better information; second, we make the internal controllers our accomplices and thus get the internal objectors onto our side.

We always have to remember that a business plan does not contain any final truths. It is an instrument that enables us to view our idea from a certain perspective. It can neither tell us if the relation of costs, effort and revenue is reasonable nor if there are any hidden risks^{*1}.

¹ For this, we can use the Pre-Mortem method (method 4).

GOOD TO KNOW

In his lectures, the mathematician and innovation visionary Gunter Dueck gives the following advice for dealing with business plans and managers: If the plan promises an increase in turnover of 10%, the managers will think, »Ah, but I can do that myself!« If it promises an increase of 25%, the manager fears to look bad because they must have worked badly if something new is so much better. Thus the plan should always promise an increase in turnover of 15%. This is the golden mean that no-one can reject.

Of course, this is not meant to be completely serious. Gunter Dueck also is by far not the only one who jokes about business plans. The so-called »hockey stick« has nearly become an epitome of the unintended unreliability of business plans. It describes the traditionally expected increase in turnover, which all too often looks exactly the opposite in the real world (see Fig 8.3.2). We must never forget that every product has a life cycle. Hence it must be permanently extended, adapted and maybe even completely renewed.

Many IT companies calculate the so-called customer lifetime value (CLV), which describes the »value« of a customer by looking at the ratio of the marketing costs for the customer and the money that we can earn from him while he is a customer. The type of business model plays a big role in this. Examining the CLV only makes sense for a product that is regularly used or consumed.

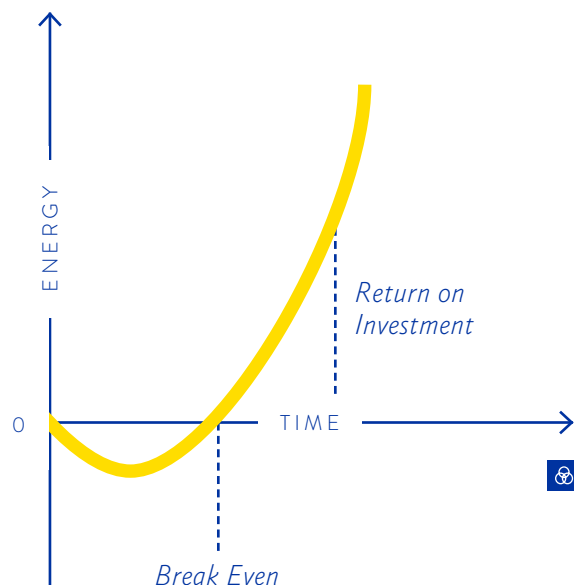
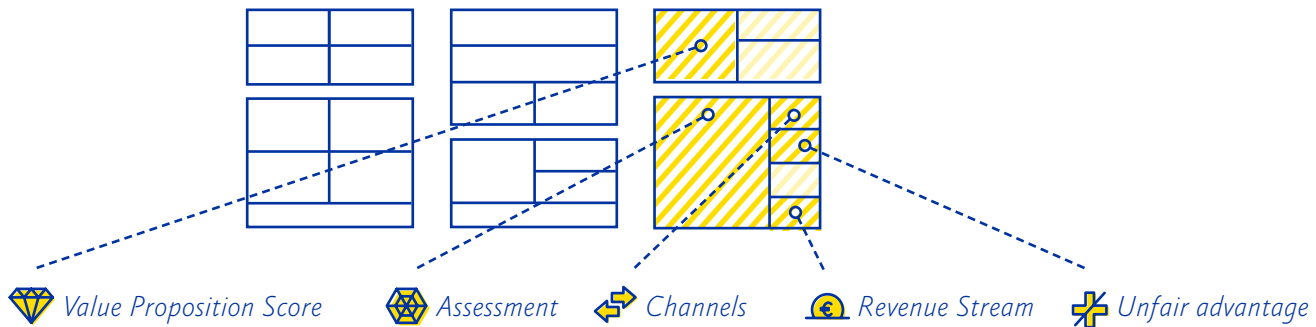


Fig. 8.3.2

4

Pre-Mortem



WHAT AND WHY?

We love to fall in love with our ideas, and this is actually a wonderful thing. An idea we do not fall in love with is a bad idea. But love is also blind.*¹ We all know this, and later we wonder why we did not recognize the many signs of failure but instead headed faithfully and naively towards disaster. There is another common reason for sticking to our ideas: When we already worked on a project for several weeks or even months, the politic pressure increases. Projects have to be pitched internally. As overtly self-critical attitude can easily be interpreted in a negative way, we try to play down the risks. This eventually leads to failure in a later stadium when the risks get obvious and the deciders stop the project. Approximately 70% of all projects fail because of such »non-technical causes.« The effects of organizational

influences on the success of a project can not be overstated. In order to avoid this in our solutions, we use the playful Pre-Mortem method, which the American psychologist Gary A. Klein invented in 1998.*² It helps us to discover hidden risks systematically (see Fig. 8.3.4). This also substantially improves our project planning!

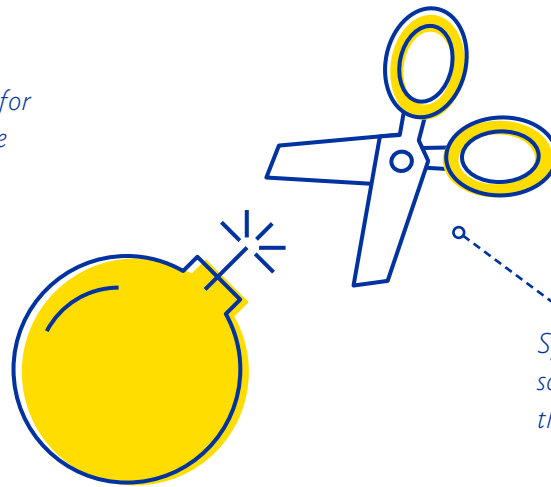
In the course of this method, we bind internal stakeholders and objectors emotionally to our project. We make them our partners and take their concerns seriously. Thus they help us to design a better solution.

¹ bit.ly/1Ws6sPC
(06/26/2016)

² Gary Klein:
»Performing a
Project PreMortem«
in: *Harvard Business
Review* 85 (9):
18—19, 2007.

 **Fig. 8.3.4**

Identify reasons for possible failure



Systematically develop test scenarios for minimizing the risks

MODUS OPERANDI

1__We invite critics and objectors

We call them internal critics, skeptics or objectors. They belong to the group of relevant stakeholders for our projects. For this reason we invite them so that they collaborate with us. However, we do not want to sit together with more than ten people because otherwise we could no longer work productively. If needed, we split up into several smaller groups.

2__Our critics write the history of our failure

The participants get the following instructions, »It is exactly one year in the future. We all sit together and have to admit the failure of our project despite our optimism one year ago. Tell us the story of our failure! Write down in detail why our project failed. What happened? What unexpected events took place? Why did it not go as expected?«
Every participant has 15 minutes to write his story on his own.

3__Our critics read out the stories of failure

While all the participants read out their stories one after the other, one of us captures all reasons for the failure on sticky notes and pastes them in plain sight on the whiteboard. During this phase we do not yet discuss if the reasons are valid or not. We just listen. Only comprehension questions are allowed.

4__We discuss and prioritize the reasons with our critics

Which are the largest risks? If we cannot agree on an answer, the participants may vote. The participants get three voting points each, which they can distribute to their discretion. In this way we quickly come up with an intuitive definition of the priorities as a group.

5__We work collectively to solve the critical points

During this step it is worthwhile to split up into small teams of three people to work on different suitable solutions. In this phase the objectors help to develop solutions against which they could not possible objects themselves. Our initial question for developing solutions is always, »What test scenarios can

we develop to examine the risks and reasons for failure? Are there cost-efficient possibilities to minimize the risks?«

Depending on how many people are involved and how concrete the solutions are supposed to be, this step takes approx. two to three hours.

HOW DOES IT FEEL?

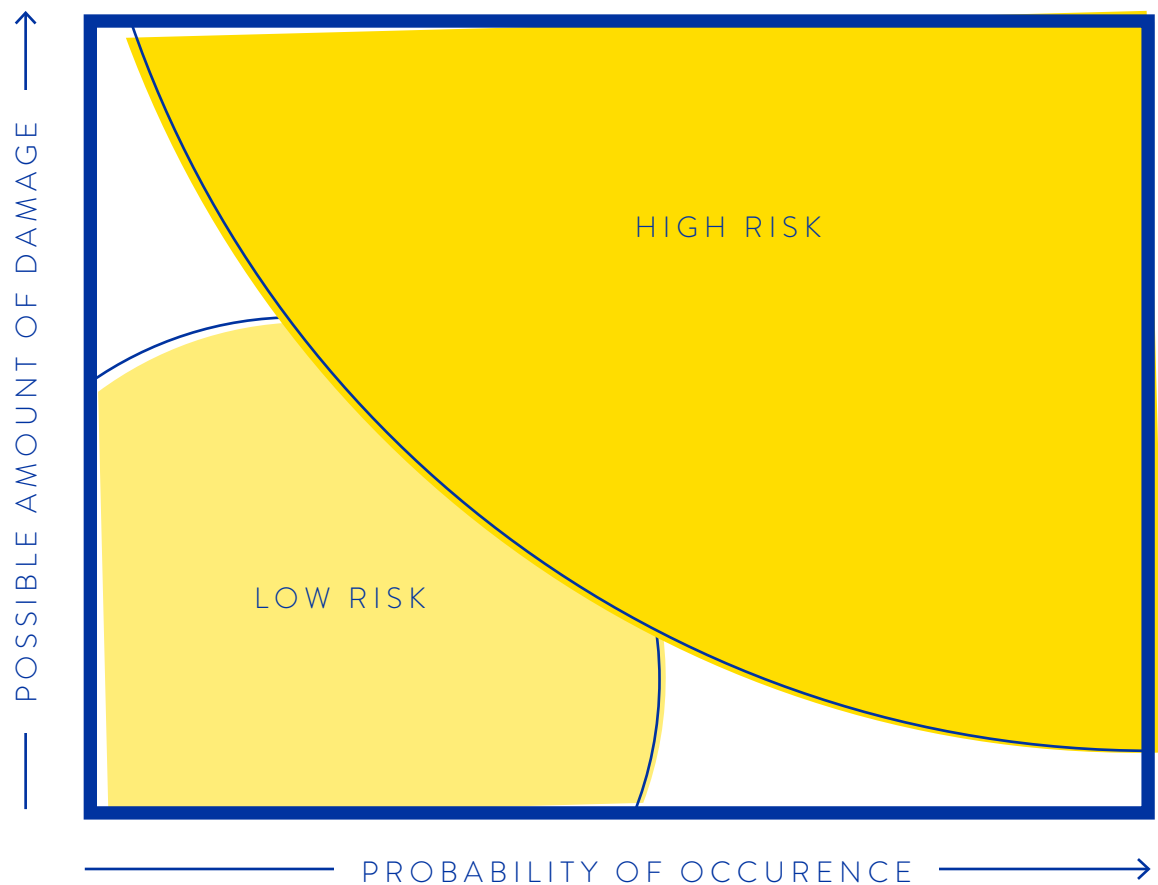
Here we approach a topic that is unpleasant for all of us, namely the failure of our own idea and our own project. But we all know too well that we tend to sugarcoat things. Pre-Mortem has a liberating effect for the idea generators as well as for the objectors. In a playful setting, they can utter detailed criticism without risking a negative effect on the level of personal relationships. Good moderation is essential. Every doubt has to be viewed as legitimate. All participants must feel free to express their doubts. The composition and moderation of the teams during solution development in step 5 is equally important. In playful procedures like this, it is always good to take on various roles as it enables us to develop a new perspective of the topic in question. The playful context also frees us from possible conflicts of interest. Other well-known methods that purposefully use a switch of perspective are e.g. the Thinking Hats of de Bono^{*1} or the Walt Disney Strategy^{*2}.

GOOD TO KNOW

We must never forget that risks always have two dimensions. By way of definition, risk is the product of the possible amount of damage and the probability of occurrence. Lawyers do not ask, »Is it legal?«, but, »How much will it cost if it goes wrong?« We may disagree about the moral implications of this view but it is justified. In particular during risk analysis in the context of the Pre-Mortem method, we can systematically try to evaluate individual risks by means of a framework (see Fig. 8.3.4).

¹ Edward de Bono: *Six Thinking Hats: An Essential Approach to Business Management*, Boston 1985.

² Robert B. Dilts: *Strategies of Genius. Volume I: Aristotle, Sherlock Holmes, Walt Disney, Wolfgang Amadeus Mozart*, Capitola 1995.



 **Fig. 8.3.4**

5

Card Sorting

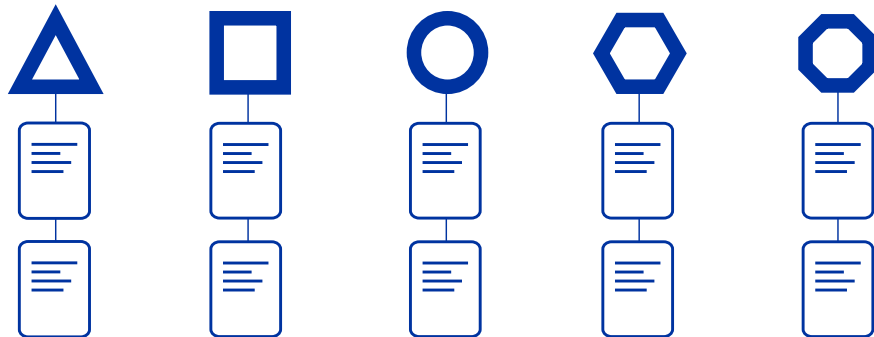
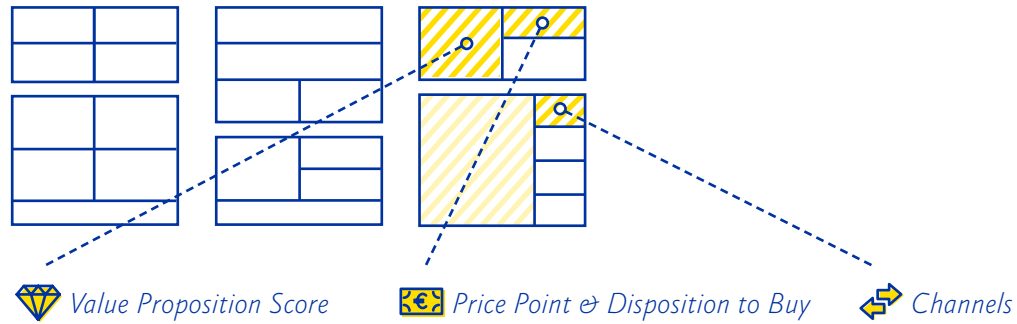


 Fig. 8.3.5

WHAT AND WHY?

The Card Sorting method helps us to find out how the users decide on priorities when they have to select between various aspects, features or functions of a solution idea. It also allows us to determine the general willingness to pay. The prototype in this case is comprised of printed cards visualizing the options—just to avoid misunderstandings.

To give you an example: If we want to publish a new service for digital house management, we want to test what components the service should encompass according to the users, e.g. a flat rate for the lock and key service, automatic heating control via an app or a replacement oven in case the heating fails.

MODUS OPERANDI

1__ We prepare the cards

We represent the components of our solutions (the options) as icons (optionally with a short text) and print them on cardboard boxes. Then we have to decide on our roles because it is imperative to conduct the Card Sorting methods with two testers: One of them directs the test and asks for the motivation behind the decisions, while the other one takes notes.

2__ We ask the test person to prioritize

We spread out the cards in front of the user. His task is to sort the cards while »thinking aloud.« The sorting categories are »I absolutely need this«, »This would be nice, but it is not essential« and »I do not need that.« Optionally, we can assign the cards (identical or different) money values and grant the user a budget for selecting the cards. We can also bundle some cards, i.e. we say, »When you take X, you also have to take Y.« The pay-TV service Sky works this way.

Pro tip: Always carry some blank cards in case our test person thinks of an option that we have not considered.

3__ We evaluate

When we have conducted Card Sorting with several users, we gain insights about general preferences. We also consider extreme opinions as long as they seem to be reasonable. Even inconsistent results can be very helpful. In this case, our service may be too generic or too homogeneous.

HOW DOES IT FEEL?

We use Card Sorting quite often. There is not much preparation to do, and we can gain a lot of insights. This is especially true when we work on a complex service with many different components.

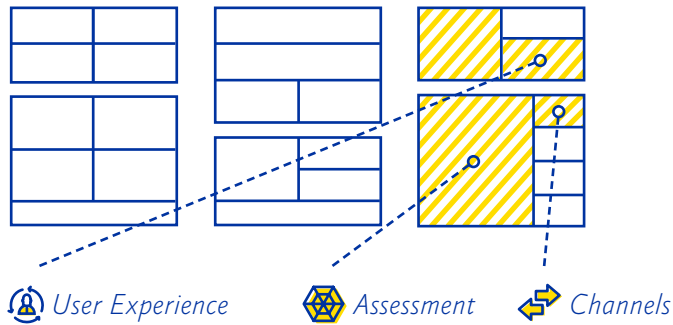
GOOD TO KNOW

In the last years, more and more books about the Card Sorting test method in various contexts have been published. Among others, we can recommend the informative article »Usability Testing With Card Sorting« by the Web designer Kayla Knight, published on the Six Revisions web site.^{*1} It covers the topic of Card Sorting for usability tests in the area of Web design, including some case studies from science and economy.

¹ bit.ly/22vfSJu
(06/26/2016)

6

Appearance Prototype



WHAT AND WHY?

An appearance prototype looks like the proper product, but is actually just an empty shell that pretends to be the completed product. This is completely sufficient for testing purposes.

MODUS OPERANDI

1__What do we want to find out?

The appearance prototype can help us to examine the following aspects:

a. Trigger/reason

We need a trigger or a motive for using a product or a service. Sometimes this can be the value proposition, but sometimes we also need something different. The value proposition^{*1} of

contacting a nearby taxi by means of an app within ten seconds maybe interesting in general, but it is not critical as long I do not have a specific reason to use a taxi at all, e.g. an urgent appointment.

Thus we test the reasons that cause our user group to use our product or service as well as the obstacles to this »activation« of our users. What contexts and situations arouse a special interest in our value proposition?

¹ See method 8, Quantifying the Value Proposition.

Let us look at an example: Some time ago, a good friend of our company wanted to establish a dating portal. His basic idea was simple and plausible: People meet at a party, at a disco or in a bar and are attracted to each other, but for some reason they fail to exchange contact information. The next morning they get hopping mad at themselves. This is a really intense user problem, and nearly everyone can tell a very emotional story about this from his or her own experience. The trigger for this idea was a real problem: Every day, nearly 200 desperate people call the public transport service in Berlin because they met someone in the bus or the streetcar and want to make contact. This is just *one* channel^{*1} and *one* city, but each of these desperate people is a »unique user.« Extrapolation yields 1.5 million search requests per year in the whole of Germany. Our friend thought that this might be a good basis for business, but he misjudged the reason. The problem of this business model is that two

things have to occur in combination. There are obviously many people who have an urgent reason to use such a service, but they also have to know about this offer. Targeted marketing for the group of people who will have a chance encounter in the next time is impossible. Furthermore, we cannot test how impressive the flirt must have been to motivate the user to look for such a platform.

When testing the trigger, we develop a test scenario to see what reason is required to motivate the user to look for a permanent solution for his problem, and how often this reason has to occur. Our friend would have had to find out how often people (to wit *both* partners) actually search online for someone they met by chance. A test scenario would have involved e.g. flirting actively in the streetcar and then conducting qualitative interviews with the person in question.

¹ That we will shortly test separately.

b. Knowledge/ability/channel

When the user is faced with our solution, our most important question is: Does he understand that our value proposition can fulfill his needs? The simplest way of testing this is to create one or more product descriptions. This allows us to test which description or visualization of the value proposition appeals the most to the user and which reasons may keep him from using our solution. In order to understand the motivation of the user, we have to follow up with a qualitative interview^{*1}.

The information gained gives us a hint on what type of channel we have to use in order to reach our users and to sell our solution. Each user group is different in this respect, although many channels are well-known and »learned.« For example, we usually buy our cereals in the supermarket, hence a supermarket is our preferred channel to purchase the product.

For many customers, Amazon is the preferred channel for many products. This makes Jeff Bezos' company so powerful. He who owns the customer relationships can control what can be bought and what cannot. The same power can be seen at Google or at the Apple App Store. The channels for reaching the customers are very broad and deep in these cases. The power of Amazon et al. puts us solution providers into a weak position when we want to use their channels to reach our customers. For this reason we have to test which channels are best for our solution and our company.

This also relates to traditional marketing. Ideally, we involve the in-house marketing experts of the company as soon as possible and let them

suggest channels. Subsequently, we test all the relevant aspects of these channels, e.g. capacity, flexibility, reliability, cost-value ratio etc.

We also test the needs that our users associate with each channel, and the obstacles that the channels may present for communication between our users, our solution and us.

c. Brand perception/customer relationship

While developing a solution, we already have an idea of how we want to position it. A premium service must feel like a premium serve in any of its aspects. At first, the positioning is only based on our assumption. Only the users can tell us whether the brand fits our solution and whether our company is a credible sender. Many design decisions depend on this.

It is best to test this by means of advertising. It does not matter if our solution already exists as a physical product or a real service or if it is still just in our heads. We^{*2} can create a few claims and advertising media for our solution and test them with our users. In doing so, we also ask directly if the brand and the product or service do match. Proper follow-up questions also tell us what kind of customer relationship is required and what the customers expect.

d. Form

The appearance of the product is a very important aspect. In most cases, we decide based on our visual impression within fractions of seconds. Again, we^{*3} can quickly and easily create look-alikes, e.g. a Photoshop picture or something we built. The main thing is that this model looks realistic.

¹ See EXPLORE method 1, the Qualitative Interview (section 6.3).

² Or the experts in our company.

³ Or the experts in our company.

2__We elaborate the test scenario

Our appearance prototype is always embedded in the test scenario. We want to approach the users in those situations where we imagine them to meet our product or our service in the real world. If we want to develop an app, we let our users browse a realistic App Store simulation where we have placed our app icon^{*1}. In this way we get a situational reaction from our users, which we can determine more clearly by asking questions. The same holds true for fake ads, products flyers and screen visuals.

In the test scenario, we do not only specify the prototype but also clarify which test persons we will interview, which one of us will guide the test scenario and whether there will be a workflow plan or any questionnaires.

¹ In such a case, this would be our appearance prototype.

3__We conduct the test

Remember the two roles for the qualitative interview^{*2}, namely the »inspector« and the »best friend.« Both have to evoke a good mood in order to find out hidden and previously undiscovered things. In the EVALUATE module, we always take on the role of the »investor.« We want to know if it is really worthwhile to work on the intended solution for weeks or even months. Thus we have to be suitably critical of our solution, and the user has to feel that lest he will give us the answers that he thinks we want to hear. In fact, we are looking for critical users who help us to make our product »bullet proof.«

² See EXPLORE method 1, the Qualitative Interview (section 6.3).

HOW DOES IT FEEL?

The test of the appearance prototype can cause our solution to fail. Seeing this happen to our pet idea is not a pleasant experience. It takes some practice to accept this as a part of the development process. In the course of time it gets much easier. We must never forget that we have to conduct many tests and thus have to develop many prototypes. Putting all eggs in one basket has seldom proven to be a cunning strategy.

Sometimes our customers ask if someone else could do the tests. This would avoid the problem of social desirability, which would improve the test results. However, many insights from our tests are intuitive and are only visible to us because we have done all the previous development work. For this reason we cannot hand over our responsibility for the tests.

GOOD TO KNOW

The respected economy theorist B. J. Fogg has devoted some work to the term »trigger.« Since the 1990s he researches the relatively young field of Persuasive Computing, a subdomain of behaviorism^{*1}, at Stanford University. In the course of his research, he has published his book *Persuasive Technology*^{*2} in 2003, in which he describes »Fogg's Behavior Model.«^{*3} This model tells us that we always have to consider three dimensions in the design of products or services: the motivation of the customer to perform an action; the capability to actually do so; and the trigger so start the action (see Fig. 8.3.6). An action can only be expected if all three dimensions are fulfilled. In order to make our products or services successful, we have to consider these three dimensions in the design. If you want to know more about this topic, read Fogg's seven-page abstract »A Behavior Model for Persuasive Design.«^{*4}

¹ Fogg researches the assumption that computer technology is able to determine and to influence evaluations and decisions of humans.

² B. J. Fogg: *Persuasive Technology: Using Computers to Change What We Think and Do*, San Francisco 2003.

³ behaviormodel.org (06/26/2016)

⁴ bjfogg.com/fbm_files/page4_1.pdf (06/26/2016)

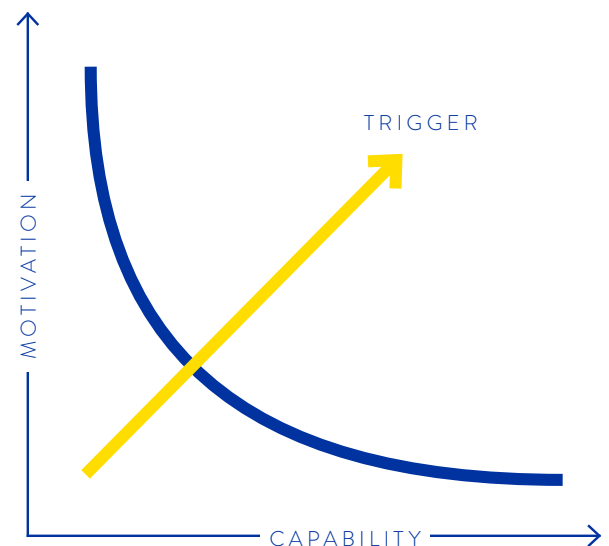
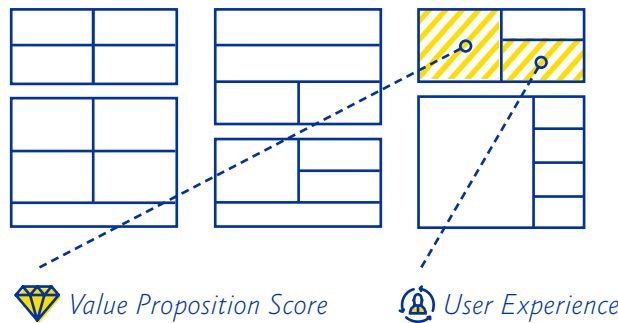


 Fig. 8.3.6

7

Context Prototypes and System Prototypes



WHAT AND WHY?

In our test scenarios, the context is often of essential importance. We can never now in advance what influence the surrounding circumstances have on our users, and therefore we have to test the context. With this type of prototype we want our test person to test our solution in a context that is as authentic as possible. This can be e.g. the working environment when the user has to test a new calendar for collaborative work. When we want our users to experience information about paintings via an innovative Augmented Reality solution, we can set up the test scenario in a gallery.

System prototypes are similar. In most cases these are very visual representations of the

connections and qualities of systems. We use them to further develop an idea together with our users. Imagine we want to develop new complex transport logistics software. We can build various system prototypes with different system boundaries where the shipments happen. Each of these prototypes results in a different concept for possible actions, which we can test for consistency in terms of contents by talking to the relevant stakeholders. We can only start to devise the software when the system is clearly defined. In particular we rely on system prototypes when our solution has to take place in a specific social system. At the same time, we use these prototypes to test the context and the value proposition of our solution.

MODUS OPERANDI

1 Ideally in the environment where the story takes place.

2 See section 7.4.

The best way to explore, understand and test contexts and systems is to tell stories by means of our prototype. The exciting question of how our product or service integrates with existing contexts and systems can thus be tested very well by the use of media: When we create a film, a stop-motion animation, a comic strip or a Lego model that illustrates aspects of our solution idea for the sake of the user test, we also have to incorporate the context and the surrounding systems. To do this, we develop the specific image of a situation, a character, a physical or social environment. The medium

forces us to proceed in a less abstract way. When we show the users the media representation of the prototype^{*1}, we can obtain valuable and honest feedback from them. They can imagine themselves in the situation and exhibit authentic reactions.

The videos, comic strips or models are still very useful afterwards. They represent an update of our comprehension prototype^{*2} and are an excellent tool for internal communication. The videos can also be used for a crowd funding campaign or a landing page.

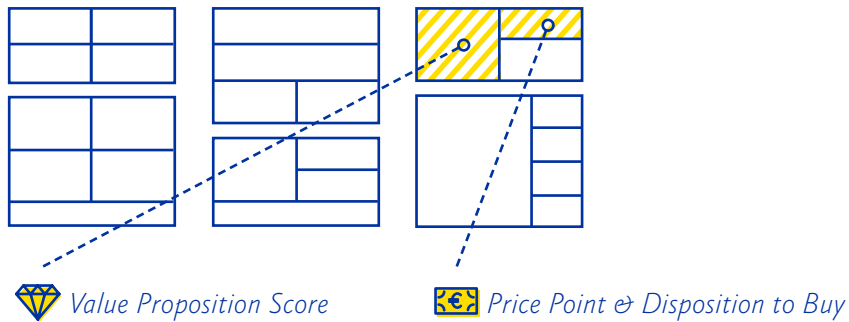
HOW DOES IT FEEL?

The objective of context prototypes and system prototypes is always the interaction with the user. Once we were tasked to design a new working environment for the employees of a big customer. 400 employees had to move to a smaller building, while the department structures were reorganized. The misgivings of the employees manifested themselves in resistance against the move. In order to mitigate them, we conducted many qualitative interviews with the employees and researched their needs and their requests for the new rooms. We then build our first context prototypes and system prototypes from Lego bricks in order to develop the interior design and functionality of the

rooms together with the employees. As it would not have been possible to involve 400 people in the process, the departments and teams elected representatives who decided for them. These decision makers met for final talks about the design of the new working environment, using the Lego models that they had previously build with our help. By means of the models it can be easily shown that a few square feet more at one place means a few square feet less at another place. This allowed the decision makers to come to an agreement. All the employees had the feeling that they were in control of their own fate. The move thus became a positive experience.

8

Quantifying the Value Proposition



WHAT AND WHY?

The value proposition is the solution of the user problem.

For example, the value proposition of McDonald's is that fast and palatable food tastes the same in every restaurant of the chain. This is the answer to the user need for fast and palatable food that tastes the same everywhere.

The value proposition is the reason why the users want to use our service or product. But how can we know how strong our value proposition really is? We have to test it, and we also have to test the needs that our user group associates with the value proposition as well as any obstacles that may prevent the fulfillment of the value proposition.

MODUS OPERANDI

- 1 Or »trigger«; see EVALUATE method 6, Appearance Prototype.
- 2 We refer to our Swiss army knife, the qualitative interview (EXPLORE method 1).
- 3 See the Zappos example in section 4.3. Zappos founder Nick Swinmurn testes his services by means of a website that only included the bare minimum of features.
- 4 The important thing is that we later see where our clicks come from.

Value propositions can be categorizes in four levels (see Fig. 8.3.7):

- 1. The value proposition is good when it can activate*1 the users. To this end it must solve a relevant problem for them.
- 2. The value proposition is better when it solves the user problem continuously.
- 3. The value proposition is even better when the users are willing to pay for it; the more money, the better.
- 4. We have a really strong value proposition when the customers are so excited about our value proposition that they even recommend it.

1__We test if the value proposition activates our users

It is possible to test the lowest level of our value proposition by talking to the users*2. However, people often do as they say. We therefore have to think of means to test if the people really do what they say, ideally without appearing in the foreground.

The wonderful possibilities of the Internet may come to our aid. We use extremely simple websites, which can be created and put online in a matter of a few hours.*3 Add to this a few Facebook ads, Google Ads or something like that*4, and we can see if there is any interest and how many of the users that we reach with

LEVEL OF THE VALUE PROPOSITION

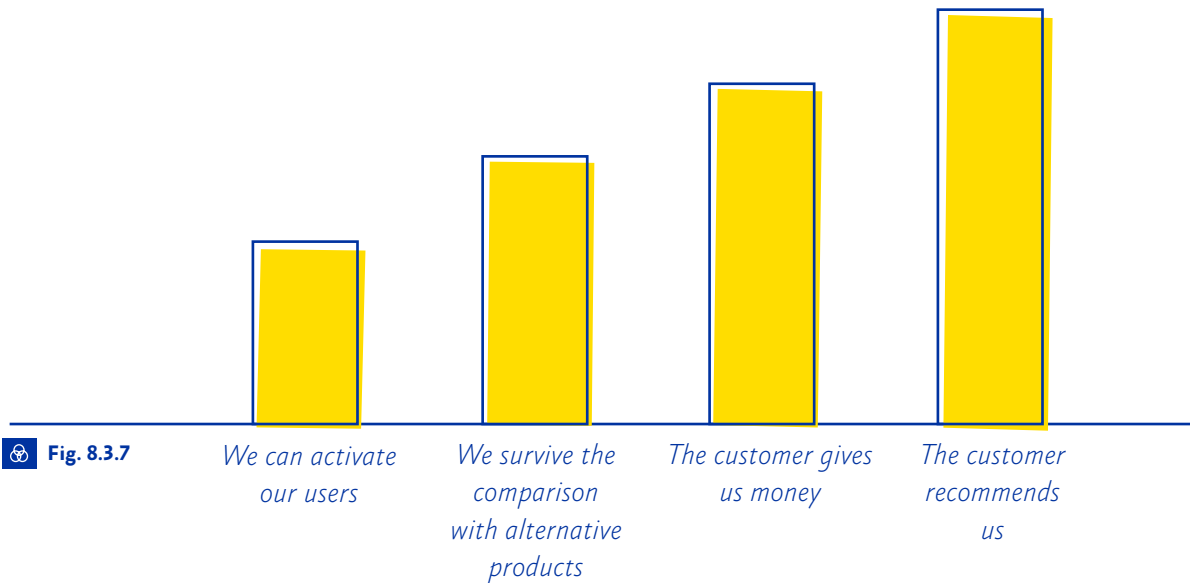


Fig. 8.3.7

our advertisements actually visit our site. This also works outside the Internet: We could send SMS advertisements^{*1} or distribute flyers.

2__We test if the value proposition causes our customers to select our solution

Customers compare solutions. That is appropriate for them and important for us. However, we want to know with whom or what the users compare us or whereby they »anchor«^{*2} us. One of the most famous examples of »anchoring points« relates to Steve Jobs. When we introduced the first iPhone, he did not compare it to other telephones. Instead, he said something like, »Hey, you get a full-blown computer for no more than 500 dollars!« In this way, he put the anchor »iPhone compared to a computer« in the minds of the customers and thus enhanced the status of the iPhone.

But even without slogans by Steve Jobs, we as customers are permanently influenced by anchors that determine our willingness to pay. This is the cause of the strange fact that we are prepared to pay 50 dollars for drinks in a bar but hesitate to buy a T shirt for 30 dollars. We compare prices only within each area but not between the areas. When we cannot find a comparable product, we have a look in a similar area. Spotify is a benchmark for many users when it comes to online services. They ask what the service in question offers for the price that they pay monthly for Spotify; just because Spotify is also an online service. The customers are not interested in the conditions surrounding our solution or the effort that we put into it. We may see this as unfair but we have to accept and to consider it. It is only possible to get to the

next level of our value proposition if we pass the comparison by the customers.

We can find out all these things in direct interaction. Again, we switch on our landing page. When we then see users registering with our website, we know that we have not failed the comparison. Conducting qualitative interviews with the registered users can give us deeper insights.

3__We test if the value proposition causes our customers to pay for our solution

Now we know that the user has a general interest in our value proposition, even in comparison with competitor products. But how strong is this interest? Is the user prepared to pay for our solution or is he only interested as long as it is free of charge?^{*3}

In order to test this we have to make the user believe that our solution can already be purchased. In direct interaction, a test sales talk is the proper approach. When we succeed in that, it is highly probable that the users want to purchase our solution if it is adequately advertised.

During this sales talk we also get to know what deficiencies our product still has and what price may be adequate. But be careful: Sales talks are always manipulative. We have to remember this instead of believing that we can convince anyone. In this regard, the online world is a little more honest: We could try to collect money for our solution by crowd funding. This gives us unfiltered feedback by our users. By their investment and their comments they tell us what they think about our service or our product. If our solution is refused, we can

¹ We should know the people personally whom we pester by SMS; or they should at least be acquaintances thrice removed.

² bit.ly/29bZsRX (06/26/2016)

³ When you want to know more about the strange human behavior in relation to »gratis offers«, we recommend Dan Ariely's studies and his wonderfully entertaining book *Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions* (New York, 2010). An example from this book: Who of us would not prefer to get a \$10 voucher free of charge instead of purchasing a \$20 voucher for \$7?

examine whether the reason for this is the solution itself or the company that we represent. We also have to consider that there are many trolls in the online world who malign everything just for the sake of maligning. Not every solution can be presented as a purchasable product in the Internet but we can always resort to the (analog) sales talk.

4—We test if the value proposition causes our customers to recommend our solution

We already mentioned crowd funding. This method can also tell us something about the potential for excitement of our solution. Is the value proposition so good that users recommend our solution? Do we get links? Is our idea mentioned in blogs? Crowd funding is based on the principle of word-of-mouth advertising and recommendations. When this happens with our solution, we have reached the highest level. But this outcome is extremely rare, and we should not despair when it does not work out as expected.

HOW DOES IT FEEL?

Selling something is very difficult. At this point we can see if we really solve a relevant problem of our users. The nice thing, however is that failure at this stage is cheap because we have not yet put much effort into designing or even defining the product in detail. We have not lost much of our working time but instead gained valuable insights about our users.

GOOD TO KNOW

In 1978, Prof. Noriaki Kano of the University of Tokyo derived his Kano model from the analysis of customer requirements (see Fig. 8.3.8). This model is known all around the world and has become a classic. Kano found out that fulfilling the basic requirements for a product or service only causes the customers not to be dissatisfied. Fulfilling the quality requirements or the performance requirements that the customers expect or articulate on inquiry can substantially increase the customer satisfaction. In order to hit the jackpot, our product or service must excite or delight the customer. The customers

themselves are unaware of the features that cause delight. They do not expect them and cannot name them on inquiry.

If we only ask for the requirements of our customers and align the development of our product or service to these requirements, we will have satisfied customers at best. But if we use the Innovation Board properly, chances are that our solution provides the customers with something that they do not yet know and that excites them. Customers actually do not know what they really want. That is our chance!

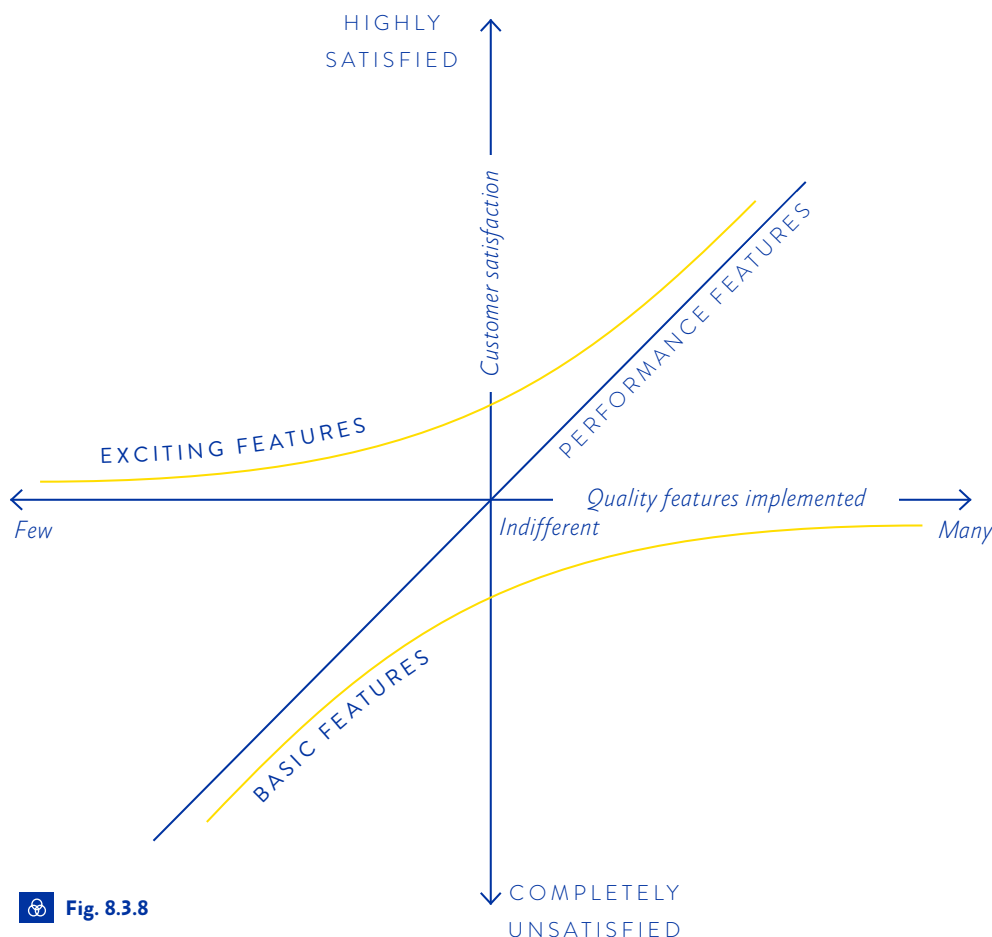
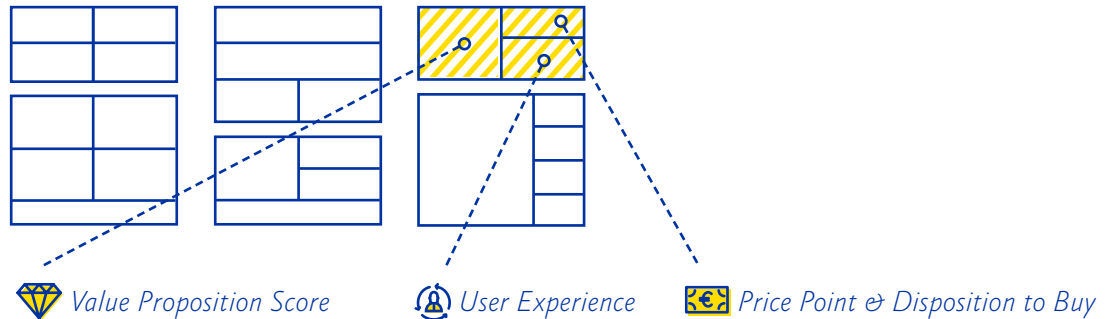


Fig. 8.3.8

9

Test Grids



WHAT AND WHY?

¹ We want to say it again as it is so important: We work with several prototypes. Each of them is based on a specific test hypothesis and differs from the others. (See section 8.2, Hypothesis Generation.)

² John D. Arnold: *Art of Decision-Making: Seven Steps to Achieving More Effective Results*, New York 1980.

When testing the prototypes^{*1} with our users, we use simple evaluation sheets to write down and to assess the results. In this section, we introduce two example frameworks, which can help us to structure our evaluation sheets in a meaningful way. We always recommend you to extend these frameworks as needed, to further develop them or to use them as blueprints for completely different ones.

Incidentally, we do not only let the users try out our prototypes but also use this opportunity to observe the users from another perspective. Maybe their behavior can give us some clues to a possible modification of our solution.

MODUS OPERANDI

Framework 1: Goal Grid

Template 8.3.2 shows the Goal Grid developed by Ray Forbes, John Arnold and Fred Nickols.^{*2}

1__Preparation

In the first step we consider what our prototype is supposed to achieve—and what not. We write these aspects on sticky notes and paste them onto our template. For this purpose we evaluate our prototype as unbiased as possible according to the four criteria of the framework.

2__Execution

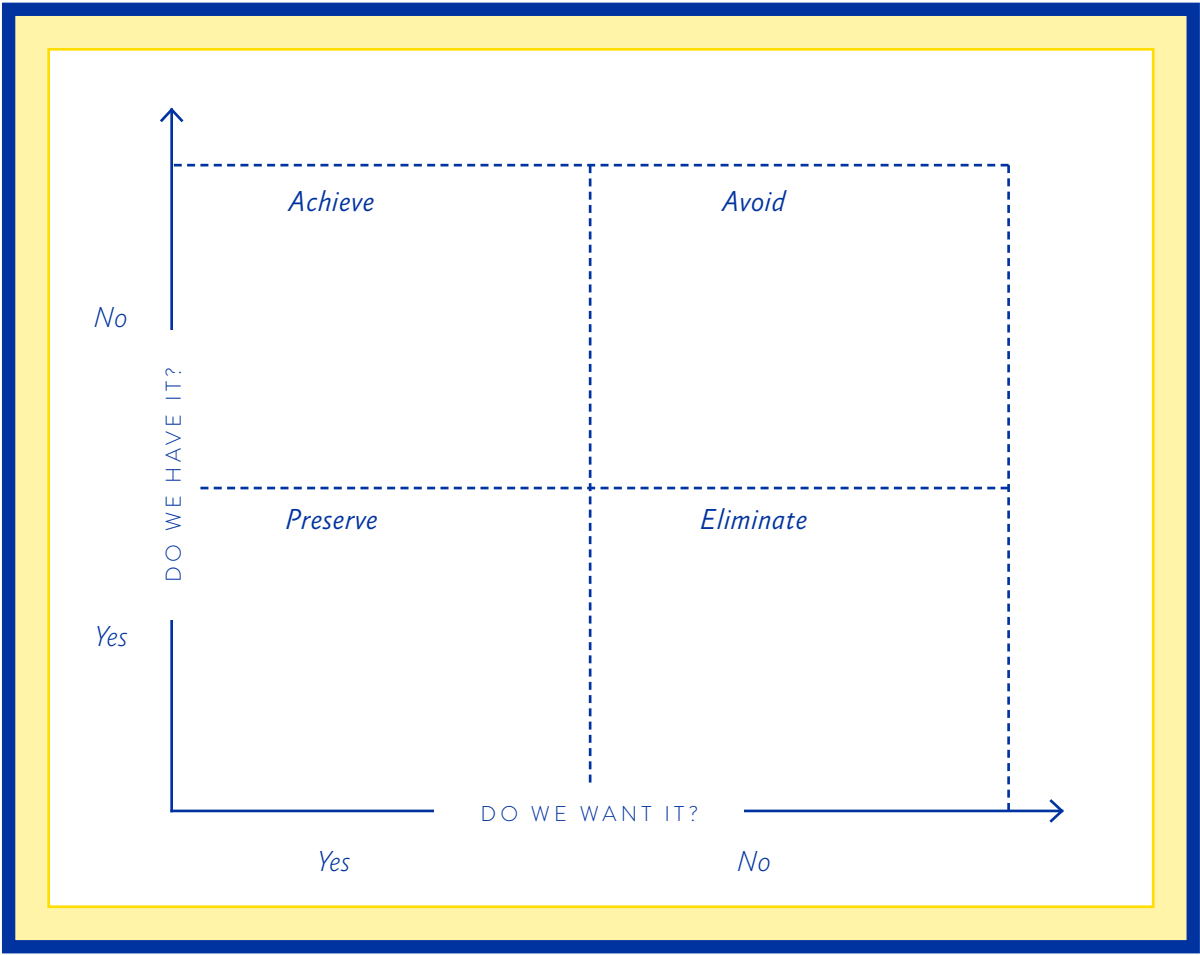
During or after the test we note down the user behaviors that the prototypes really cause. We write these insights on sticky notes of another color, which we also paste onto the template. In this way we can see at a glance if and how much our prototype matches the requirements and if it causes the expected behavior in the customers.

3__Evaluation

When there are many sticky notes in the bottom left field, we have done our job very well. These are the features that we have achieved and want to retain. The field above contains the requirements that our prototype does not yet fulfill but which we do not want to abandon. In the top right field we have the features that our prototype does not provide but that our users did not demand during

the test, either. The field below shows the features that we want to get rid of in the future.

The Goal Grid is a very simple method to evaluate any type of product or service very quickly. It shows us what we have already achieved, what we have to add, what we have to remove and what we have to continue to avoid. Now the next iteration loop can begin.



Template 8.3.2: digital-innovation-playbook.com/templates/evaluate

1 stanford.io/1smroL4
(06/26/2016)

Framework 2: Test Grid

Template 8.3.3 shows the Test Grid, which is based on the Feedback Capture Grid*¹ of the Stanford d.school. The Test Grid is not as systematic as the Goal Grid but its use is very straightforward.

1__Execution

While the users test the prototype, we use the top fields of the template to jot down what they liked and what they criticized. However, we know in advance that in a test, we do not only find out what we have expected. For this reason we have the two bottom fields. Here we write down new ideas that we had while observing the interaction of the users with the prototype as well as new problems of our users, if applicable.

2__Evaluation

The evaluation of the individual fields confirms our prototype or forces us to modify it. Afterwards, we initiate the next iteration cycle.

<i>What was good?</i>	<i>What was bad?</i>
<i>New ideas?</i>	<i>New problems?</i>

 **Template 8.3.3:** digital-innovation-playbook.com/templates/evaluate

HOW DOES IT FEEL?

We can make our evaluation frameworks as complex as we want to, e.g. when we accompany a test user on a user journey to try out a new service idea^{*1}. In this case it would be appropriate to use the User Journey framework of the EXPLORE module^{*2} as it represents the relevant categories. Depending on which aspects of which touchpoints we are interested in, we create our own matching framework.

Many companies conducting user tests have built a lab where the users can interact with a product under supervision of an interviewer. In order to eliminate the (subconscious) effect of social desirability, the interviewer is often a project member without any emotional ties to the prototype. The project team can observe

the test via video transmission and write down everything. Test labs like these are a nice add-on but they also influence the users by the simple fact that they are in a lab and know that they are observed. Even in a very authentic environmental simulation, this discomfort cannot be completely eliminated.

Our experiences with »field tests« have been positive. Similar to the research in the EXPLORE module, we venture out into unknown territory, i.e. the whereabouts of our users. We always want to see how the users interact with our solution in their natural environment, i.e. together with their friends who do not wish to talk to us, in the streets among strangers who might give them curious looks, and surrounded by all the distractions of daily life.

¹ Mind you, in the form of a prototype!

² EXPLORE module, method 10: User Journey (section 6.3).

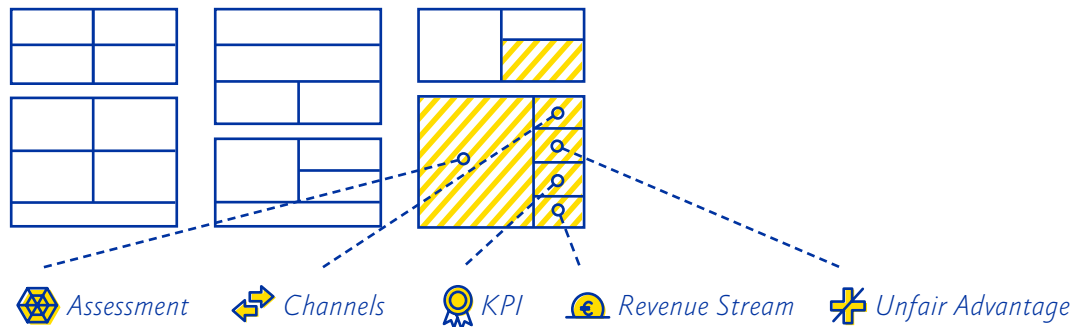
GOOD TO KNOW

The use of evaluation frameworks as introduced in this method bears many advantages for companies. We can use them to ensure »process safety.« But we have to be careful as process safety diminishes the openness that we need in our test scenarios. We do not always know in which direction the users will point us. Balancing process safety and openness gets

easier with experience. It is therefore basically correct to create a list of the aspects in which we are interested. Another good tip is to conduct the tests with three of us. In order to ensure a maximum of both openness and process safety, the third person should not be involved in the preparations.

10

Talking to the Experts



WHAT AND WHY?

When our company does not want to produce and sell our solution idea, we will fail, no matter how brilliant our test users think our idea is.

In order to test the viability and feasibility^{*1} of our solution idea, we have to ask the experts in our company. After all, there are many questions about marketing, distribution or the strategic direction of our company that we cannot answer sufficiently or even not at all. The users also cannot help us to answer them. In the context of a company we do not enjoy as many freedoms in innovation development as a start-up. Using the existing expertise in our disposal instead of tediously acquiring the relevant knowledge by ourselves bears many advantages.^{*2}

In companies, many things happen by means of informal teamwork: networks are tied, and decisions are prepared long before the relevant meeting and then simply rubber-stamped. Managers rely on their confidants. The final

approval usually depends on the reputation of the people involved in the innovation development. In our experience it was always worthwhile to prepare the discussions with the experts thoroughly and to act them out as mini workshops. The experts fill our knowledge gaps. In order to enable them to do this, we have to prepare our knowledge for them. We want to involve the organization for which we develop the innovation, but we do not want the experts to discuss our results to death. After all they are only experts in their area and not in customer needs^{*3}. For this reason, the timing of our expert discussion is very important. The later in EVALUATE process we conduct these discussions, the more inclined the experts will be to pick our final result to pieces.

¹ See the Venn diagram by Tim Brown (IDEO) at the beginning of section 8.2.

² This topic is covered in Chapter 9. How can we be as innovative, agile and radical as a start-up when our innovation development is part of a complex company with many decision processes and decision makers? The Talking to the Experts method touches several times on this topic.

³ We are the experts in customer needs, as we can say with self-confidence.

Possible expert topics:

1. Business Case

We cannot reliably evaluate and quantify the profitability of a new business model that we develop. Management insiders who know the figures may help us. Our business plan^{*1} is a good foundation to evaluate whether there is a reasonable ratio between the risk and the potential.

2 Brand experience

Does the new product or service fit our brand? This is an important question as the success of our solution depends heavily on the perception of the customer. Is it necessary to move the new product to a new brand? Or are there interesting synergy effects between the »old« company and the new innovation? Questions like these often exceed the competence and authority of innovation developers.

3 Strategy

Brand experience and business case are tightly connected with the overall strategic direction. Is the company just experiencing a phase of consolidation? Or does it expand by developing new business models of its own? Does it acquire products and services? We can support the adequate integration of our innovation with the company by specific suggestions on people and responsibilities and by elaborate project plans.

4 Usability

We are only marginally interested in the usability of our digital innovation. The main concern in innovation development is user experience design, while interface design^{*2} is done by the relevant experts in our company. These terms are often used in a misleading way. Together with the design experts in the company we have to define where our work as innovators ends and where they introduce their special knowledge to the implementation of our solution.

5 Scaling

It is nice to see that the customers like our innovative product or service. However, we also have to consider the required effort for »manufacturing« our solution. In the best case, the effort does not grow proportionately with the number of sold products or services, but instead we can profit from the economy of scales. In the digital world, we often think that the effort remains mainly unchanged irrespective of the number of sold units. But even here we have to consider capacities and the underlying infrastructure.

6 Unfair advantage

Silicon Valley entrepreneur Eric Ries introduced the concept of »unfair advantage« in his wonderful book *Lean Startup*^{*3}. We are looking for an advantage of our solution that cannot

¹ See EVALUATE module, method 3.

² The design of the user interface for the interaction between the user and the product or service.

³ Eric Ries: *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to create Radically Successful Businesses*, New York 2011.

be copied so easily. This may e.g. be a unique piece of program code. One »unfair advantage« of Dark Horse against its competitors is the fact that the projects are actually executed by the partners and founders of the company. Another one is our unique foundation history, which gives us much credibility in the area of »new working cultures.« When we are aware of our »unfair advantage«, we can try to increase it

gradually. Depending on the type of innovation development, there are numerous other topics that call for asking the experts. Experts can convey valuable and import views on our solution. It is our task to align the opinions of the experts with the user needs. In cases of doubt the user needs are more important than expert opinions.

MODUS OPERANDI

1__We write down our questions

First, we have to define what we want to know. We write down our questions in template 8.3.4. Behind them, we put our current assumptions that we want the experts to pull apart or to confirm. We also note down the expected answers. In this way we can learn to improve the assessment of our own assumptions. It also helps us to better understand our way of thinking in hindsight. During the discussion we use the template to jot down the answers of the experts. We do not only want to receive an answer but also understand the reasons. Thus we also think in a »hypothesis-driven« way during these discussions. Afterwards we evaluate our notes and write down what follows from the discussion and what course of action we can derive from it.

¹ See section 7.4.

² This also counts as a comprehension prototype. A comprehension type is basically everything that facilitates the common understanding.

2__We prepare our comprehension prototype

It is essential to have one or more comprehension prototypes^{*1} in order to work in a really constructive way. We never conduct an expert discussion without having prepared a prototype. The prototype allows us to ask much more specific questions, and hence we receive much more concrete answers. Preparing the comprehension prototype costs some effort but it saves us uncertainties and infinite loops and allows for quick and concrete decisions. For example, if we want to ask the controller, we take along our business plan scenarios^{*2} if we want to ask the marketing department, we take along several Corporate Identity prototypes.

3__We conduct the expert discussion

Although no-one knows more about the user needs and our solution than we do, vanity on our part is inappropriate. With regards to the topic of the discussion, we are the learners. We thus ask carefully and grant the experts the necessary time for their answers^{*1}. In this way we involve them in our solution. We want the experts to become convinced of the feasibility of our product so that they support it. It is important that we understand the reasons given by the experts, and that we have concrete

courses of action at our disposal at the end of the discussion. The motto of the discussion should be, »Together with the experts, we work with and on the comprehension prototype.« The discussion should last for one or two hours. We apply strict time boxing so that we really reach our objectives in the given time frame. When we realize that we cannot finish at the scheduled time, we better agree on a 30-minute follow-up appointment a few days later instead of overrunning.

¹ See section 5.3 on questioning techniques and section 6.3 on EXPLORE method 1, the Qualitative Interview.

<i>What do we want to know?</i>	<i>What are our assumptions?</i>	<i>What answers do we expect?</i>	<i>What is the answer? What is the reason for it?</i>	<i>Derived course of action</i>

 Template 8.3.4: digital-innovation-playbook.com/templates/evaluate

HOW DOES IT FEEL?

It feels odd and requires much effort to prepare a conversation with colleagues in such an intensive manner and to conduct it as focused as a user interview. The results, however, facilitate the subsequent work, and the political aspect of a successful discussion should not be underestimated. Good preparation also includes a prototype. It affects the discussion positively. The better it is, the better the expert can understand and help us. If we only use verbal descriptions during this meetings, things get complicated. Chances are that we are talking at cross purposes. This results in more work and insecurity.

GOOD TO KNOW

At the beginning of the description of this method, we mentioned the difficulty to find the right moment for the expert discussions. An expert whom we involve too late may not understand what we are doing and thus let us fail out of ignorance or vanity. An expert whom we involve too much may lose the critical distance, fall in love with our solution and view the figures through rose-tinted spectacles.

There is no universal answer to the question of the proper moment. The greatest secret of good innovation may be finding the right balance between »accepting criticism« and »ignoring fault-finders.«

At any time of the innovation development and for any question, we have to know where we can best find which information. Experts can provide us with information about their respective fields, but they cannot tell us whether the users will love our product. Only a test can reveal this.

8.4 THE LAST STEPS IN THE EVALUATE MODULE: PREPARING THE HANDOVER

We record the results of the EVALUATE module in the Innovation Board.

After having completed all the fields, we now know:

- that our value proposition works.
- how eagerly our future users want our solution.
- how our solutions will look and work as a product or service.
- how our users are supposed to interact with our solution.
- the situations where our solution is of use for the users.
- which features are particularly important for the users to make them purchase our solution.

As already mentioned, we have to complete one Innovation Board each for the different user groups. For example, if we design a so-called multi-sided business model^{*1}, we have different user groups with different needs and hence we also have different solutions. An important task of the innovation team is to merge these different perspectives conceptually. The Board helps us to separate the perspectives of the various customer groups and to design any compromises in such a way that both groups are served in an optimum way.

On completion of the EVALUATE module for our solution, we also have gained first concepts and clues about:

- how we can market the solution.
- how the solution integrates with the strategic direction of our company.
- the risks and the competition.
- the life cycle and the expected turnover and cost.
- the business model.

Having a final concept, we can now implement our idea in the real world. The many tests and the user inquiries have given us an excellent overview of how we can start. In the next chapter we describe us how to hand over the idea to the company so that it can be introduced on the market.

¹ All known platforms represent business models of this kind. For example, Amazon Marketplace connects vendors and customers and thus has two different groups of users. This means that we have to complete two Boards to represent both perspectives.

9 FRAME

Companies are implementation machines. Their basic function is to implement a business model that someone devised sometime. Requirements and changes in the surrounding world force companies to break out of this *implementation mode*. Strategically speaking, this case is a huge challenge for most companies because it is not well incorporated despite its importance. We can see this when we have a look at the three most important functions of a company:

#1: Implementing

This is the core function of a company.

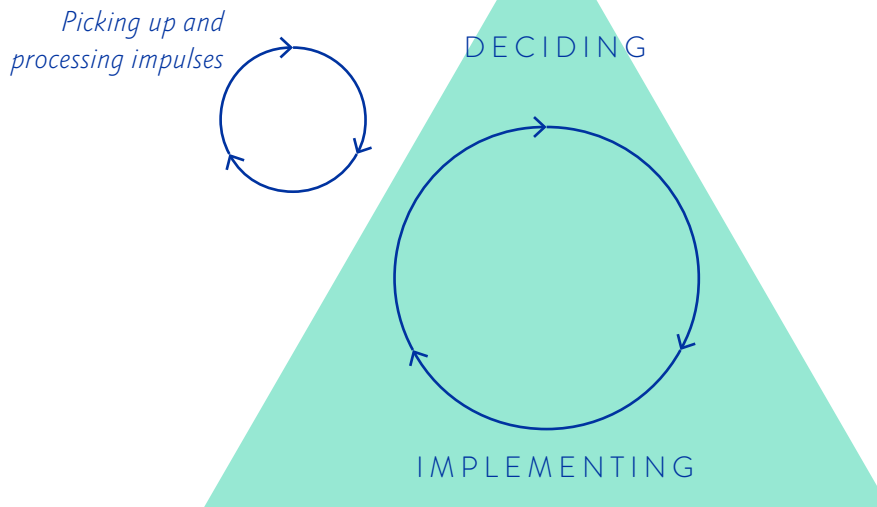
#2: Deciding

Because of permanent change, companies have always to make decisions. Modern management has devised many decision steps and then complains about the prolongation of decision processes and the bloated bureaucracy, so that every few years a new orientation towards »flat hierarchies« and »more empowerment« is mandated. The time wasted on readjusting processes that got out of hands could easily be spent in a more productive way.

#3 Processing impulses

Companies have to react to important changes on the market in order to remain sustainable. Hence they have to innovate. In most cases, it is not clearly defined which department is responsible for innovation. The management as the deciding authority is always responsible in some way. However, the managers are usually too engrossed in daily processes and also not very interested in having their fingers burnt. For this reason, external agencies and consultants are brought on board to prepare proposals that have to be decided upon. A working internal innovation development with clearly defined roles and good communication can help to save much time and money—while getting better results at the same time.

 **Fig. 9.1**



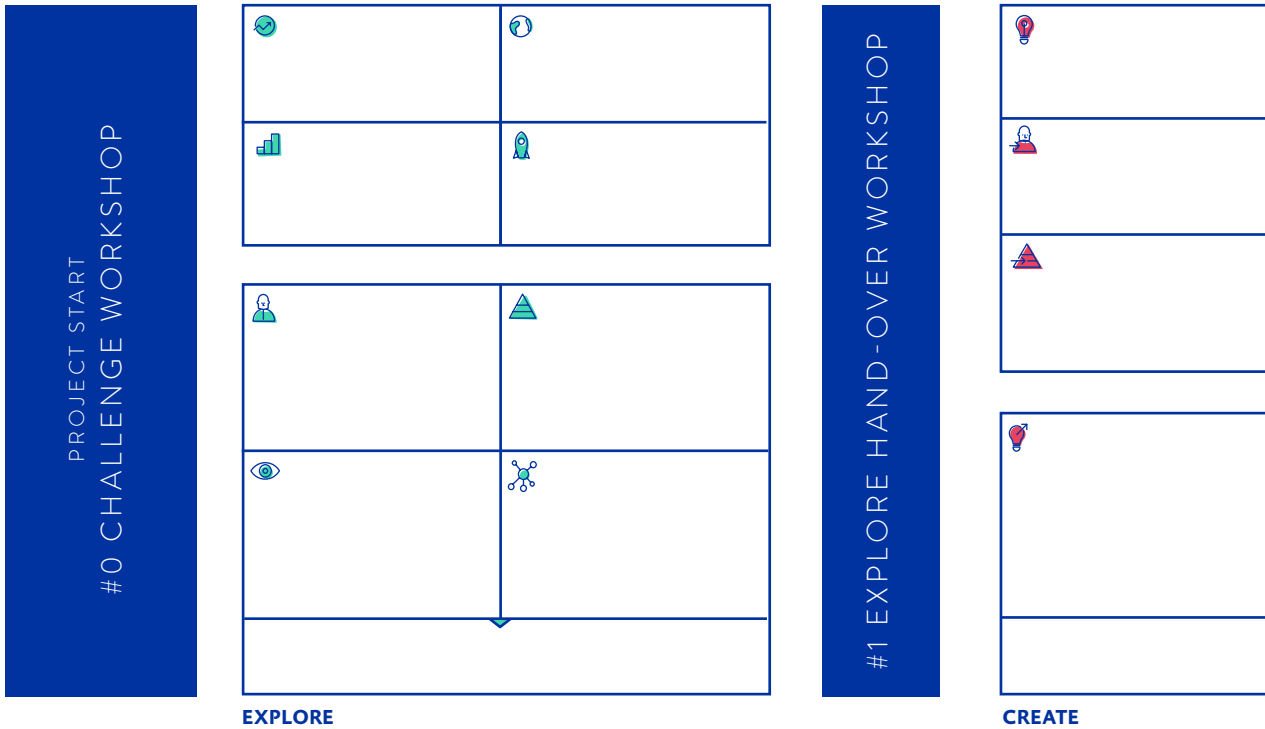
One thing should be clear now: innovation^{*1} does not belong to the core functions of a company. Everyone talks about companies having to be »innovative in some way«, but the fact that companies are *implementation machines* contradicts the systematic search for innovations. The disproportion of implementation and innovations also become apparent in the spending of the company for the so-called value-adding units and the administrative tasks. By minimizing the administration, we stay near our core activities and can be very efficient. But if we want to brace our company for future challenges so that we can adjust ourselves to the ever-changing market, we have to invest in employees who have the sole task to build for the future; without direct pressure from above and the constant requirement of demonstrating their work. This will cost time and money and requires trust. Only very few companies can successfully balance implementation and innovation in the long run. These few companies are usually molded by exceptional leaders who think in an entrepreneurial way and balance the discrepancies by their personal commitment. But we want to help all companies to get their innovation activities up and running! For this reason we do not only describe how to enable innovation development by the use of our Innovation Board and our methods, but we also give some hints from our own experience on how to integrate the innovation activities with the rest of the company so that the results do not get filed away for good (see Fig. 9.1).

¹ Not to be confused with Research & Development!

9.1 DOERS AND ENABLERS

According to our experience, innovation development is often not properly integrated with the company and thus done the wrong way. After all, it is a big challenge to do it the right way. Often the doers, i.e. the members of the innovation team, do not speak the same language as the managers who have to provide the basic requirements for the project team and eventually decide about the implementation of the results. There is frequently a lack of mutual understanding of the different work processes.

In the previous chapters we have extensively covered the role of the doers in innovation development. In this chapter, we want to transform the managers to enablers. The term »frame« describes the frame conditions or basic requirements that the enablers have to provide for successful innovation. If we talked about soccer, the »enablers« would be the trainers, the sports director, the manager, the functionaries and the club president, i.e. basically all the people who commit themselves to the victory of the team without actually acting as players on the field.



Milestones in the form of workshops to hand-over and align results and to make decisions

Providing the basic requirements is one of two essential responsibilities for us as enablers. The other one is making decisions. However, in this context we like to use the term »co-decisions.« After all, the other half of the decision is made by the users who in the course of innovation development are represented by the doers.

There are three essential points in time when the enablers make decisions (see Fig. 9.1.1): at the beginning of a new project, during the project when converting the research results into solution ideas that have to be tested, and at the end when implementing the idea as a product or service. On the following pages, we will discuss these points in time and the related main topics to facilitate innovation development as a whole.

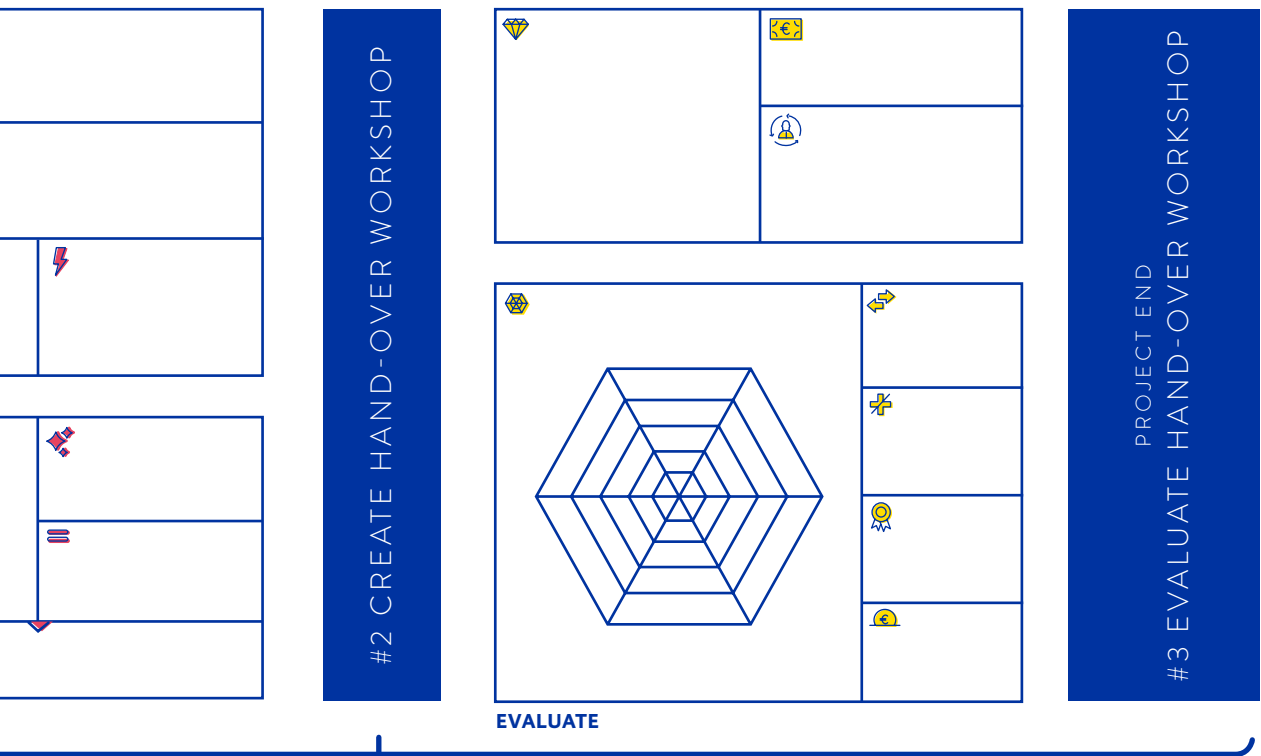


Fig. 9.1.1

9.2 HOW MANAGERS ENABLE AN INNOVATION PROJECT

The beginning of an innovation project confronts enablers with many management tasks.

In particular, we have to:

¹ Also called the »challenge«, see section 4.1.

² See sections 9.2b and 9.3.

- Decide on the initial question^{*1} that we want to answer, the objectives of the project and the indicators for success.
- Decide on the suitable formats for reaching the objectives and furthering the innovation development.
- Decide on the right people for the project, the size of the team (sourcing) and the roles that we have to establish in the company (mentor, facilitator, sponsor, entrepreneur etc.).
- Provide rooms and a budget and give the doers free rein to the design.
- Allow self-organization but set dates for the hand-over workshops^{*2} and create a project schedule allowing for iteration loops.

In order to make the best possible decisions, we cover them one by one. We begin with the challenge as this is the most important point. It is the roughly phrased initial question that we use to start the project.



a) Initial Question

In our innovation process, we differentiate between three essential starting points. We already have to make decisions in this early phase.^{*1} As we have already described the starting points in Chapter 4, we just want to add the managerial view. Each of the starting points has its unique question:

¹ Also called »steering.«

Player type »discoverer«: Doers have the objective to develop new products or services for existing or new customer segments. However, they do not have many specific clues for their work.

In this case, we have to define the so-called »challenge« collectively.^{*2} This is a hypothesis that roughly indicates the direction for innovation and identifies the area and the potential user group for which the innovation team will work.

² This happens in a workshop described in chapter 9.3.

Player type »designer«: There are specific clues from previous research and projects as well as a clear-cut hypothesis.

In order to check whether the existing results from previous research and projects are sufficiently specific, the doers should complete the EXPLORE module of the Innovation Board. When the enablers are content with that, the doers start the innovation project by working in the CREATE module.

The doers use a how-might-we question^{*3} as their starting point. This is the problem hypothesis for which the team wants to develop solution ideas. The how-might-we question bundles our knowledge and our context information from the EXPLORE module.

³ For more information on the how-might-we question, see section 6.4.

Player type »evaluator«: We already have one or more ideas that have not yet been tested with the users.

Every new idea is a solution hypothesis.^{*4} Based on this, innovation development starts with a comprehension prototype that the doers present to the enablers. Subsequently, the individual aspects of the solution hypothesis are tested. To do this, the doers use prototypes to get feedback from the users until the solution hypothesis has become a solution that offers real value to the users

⁴ Covered in more detail in sections 7.4 and 8.2.

b) Formats

After we and the doers have defined our initial question as a challenge, a how-might-we question or a solution hypothesis, we have to decide on a format to reach the objectives of our innovation development. Driven by the notion of efficiency, we as managers unfortunately tend to select formats that are too short or to set up unrealistic goals. A frequent example for this behavior can be seen in workshops. To be clear, workshops are useful, and we often work with this format. But we also know what can be achieved in a few days and what cannot. Thus we use workshops only for specific objectives, e.g. the hand-over between modules. Basically, we use four different formats with different time frames, result levels and objectives. In the following description, they are sorted from shortest to longest duration:

#1 Workshop

This is the shortest format that we use. Workshops usually last for one to three days. They are well suited to work intensively on *one problem* with *one question*. A workshop can be used as the kick-off meeting to provide the initial inspiration. With this format, we can involve employees from various departments. These people can provide the doers with new perspectives on the topic.

Another use case for a workshop is the alignment between the individual modules of the Innovation Board. There is a proper process for these hand-over workshops or steering workshops, which we will cover in section 9.3.

¹ As such it is unsurpassed.

In general, a workshop can only ever be a bridge format^{*1}, situated at the beginning, in the middle or at the end of innovation development. This is logical because in a period of two days, the doer team cannot gather enough data to make valid statements or to design a complete result. Workshops therefore need preparation and follow-up.

Time frame: 1—3 days

Participating teams: 1—8

Objectives: Define the challenge, kick-off, determining responsibilities, learning methods, specifying the facts, handing over results, alignment

Possible uses for workshops:

- Common understanding; visualizing/specifying facts
- Creating and sharing ideas
- Defining projects
- Determining responsibilities and the next steps
- Sharing knowledge in the organization, connecting employees

Limits of workshops:

- Working out a deeper understanding of the market and the users
- Working out a new user-centric perspective (in a workshop, we can only synthesize the various internal views)
- Developing prototypes and testing them with the users (in a workshop, we can only develop a comprehension prototype; the possibilities for tests are limited)

#2 Sprint^{*1}

The sprint format is very well suited to explore a topic in more depth. We recommend sprinting to those who already have gained some experience as this format shows its full potential only when the innovation team is already a bit more confident.

Imagine for example that the innovation team has already finished work in a module, but at the last moment, new hypothesis or assumptions have emerged. Now the team can use a sprint to react specifically to the new insights, dedicating the efforts to an individual area. A variant of the sprint is the »fast forward« where the team rushes through all three modules of innovation development to get a first impression of the obstacles and problems to be expected, but also to gain some initial inspiration. This is worthwhile if the innovation project is scheduled to run for several months.

A sprint is usually too short to develop a new product or service but we can examine the facts, gain some inspiration, solve smaller problems and get a better understanding of the bigger problems.

Time frame: 5—15 days

Participating teams: 1—4

Objectives: Kick-off, clarifying open questions, testing hypothesis, solving small problems, better understanding big problems

¹ We want to use the opportunity to recommend the excellent book *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days* by Jake Knapp, John Zeratsky and Braden Kowitz (New York 2016). It is highly recommendable for getting quickly up and running with innovation development. In particular, the authors describe a process for solving a question in one week. This can be combined very well with our Innovation Board.

Possible uses for sprints:

- Determining specific user needs
- Creating and checking initial solution concepts
- Checking the importance of specific topics for the users and the company
- Solutions for »small« problems in the standard format

- **Limits of sprints:**

- Working out product concepts that are well thought-out and tested in all aspects
- Establishing the connection to the company

#3 Project

The project format is at the heart of this playbook. The Innovation Board only takes full effect when used in this format. The duration of a project is approximately two to three months. This timeframe enables the team to work iteratively and to react to new insights. It also gives the team members enough time to make themselves familiar with the methods.

At the end of a project we always have a prototype, which illustrates the functionality of the idea as well as the EXPLORE and EVALUATE results recorded in the respective modules. Our goal always consists of a completed and tested concept. This concept shows how the solution looks like, what it can do and how it should be implemented. Marketing, development and other implementation tasks do not belong to the project.

The working time for a project amounts to four to five days per week. It is a good thing when there is one day per week where the team members can attend to tasks that are not directly connected to the project. It is also possible to conduct projects with two working days per week. We call this a »50% project.« However, this model requires much discipline lest the »daily business« sabotage the project. The total duration of such projects extends to four to six months.*¹

The project format is the basis for many products and services, in particular innovative ones. It can be combined very well with workshops and sprints.

¹ We authors do all our work in a compact project format. We are aware that this is not possible in most companies. But why should it not be possible? Probably in 30 years people will laugh about the way we work today.

Time frame: 2–3 months

Participating teams: 1–8

Objectives: Innovation development, connection innovation development in the company

Possible uses for projects:

- Working out and implementing solutions for specific problems
- Translating user needs to new ideas
- Developing products, services and business models
- Testing existing ideas and concepts

Limits of projects:

- Carrying out organization development to become a »user-centric agile organization«
- Establishing user-centric design in the company

#4 In-house incubator

Incubators are programs that provide ideal conditions for start-ups. For compensation, the incubator gets company shares which will become valuable when the start-up rockets to success.*¹

We use the incubator format within the context of our company and hence call it »in-house incubator.« This describes a protected space where employees can work on new products and services in various teams. These teams are supported by consulting and facilitation. All teams work in the same module cycles. This causes a valuable exchange of knowledge and increases the speed of the individual teams.

The internal incubator format can help us to publicize new methods in the company in a viral way. We recommend this format for those who want to change the innovation culture on a large scale.

¹ The best-known incubator is the Y Combinator based in Silicon Vally. It supports and co-funds Dropbox and Airbnb, among others, and has established the world-wide standards for the incubator format.

Time frame: 2–3 months

Participating teams: As needed, depending on infrastructure

Objectives: Advancing innovative solution ideas of start-ups until they are ready to market

Possible uses for projects:

- Conducting several projects simultaneously and in a coordinated way so that they stimulate each other in terms of contents and methods
- Establishing and strategically integrating innovation and a user-centric mindset in the company
- Having a format for continuous innovation
- Building spin-ins and spin-offs

Limits of projects:

- Implementing the developed products and services
- Replacing the enablers
- Developing products and services far outside the core business of the company

*c) Team*

»We set up the processes, now they just have to be put into practice.« Most managers will have heard external consultants saying this. The error in reasoning that manifests itself in this sentence is so obvious that it hurts. When you want to enable innovation development, you have to address the »team« topic the other way round and to accept a paradigm shift.

When we want to do innovation projects, we need people who are keen on collaborative work and who have ideas that they want to implement. First, we have to identify and recruit these people in our company, and then we start building the supporting processes and structures for their innovation work. When the processes and structures turn out to be fitting and successful, we can formalize them for future projects. One of the most important responsibilities of enablers is thus to form the innovation team.^{*1}

¹ Incidentally, this is also a commonplace of the start-up world, »It's the team, not the idea.«

Who belongs to the innovation team? Let us first talk about the most important members, i.e. the doers. They make up the team core. The doers come from various disciplines or departments. Our task as enablers is to provide them with a working environment where they can interact as equals. The doers control the innovation development. When they need input or knowledge, they can turn to experts in or outside the company. In a way,

these external experts form the »bench« of the team. We can also fill this bench with people who want to participate in innovation work but are not keen on working in a team. Their expertise can be highly valuable.

It can always be worthwhile to include further company members in the innovation development. They are comparable to trainers and medical attendants and support the doers as sponsors, mentors, coaches as well as in other roles that we will cover later. At the most important points, the enablers make decisions to start the next step of the innovation development. We clear away hurdles and take care of the »politics.«^{*1}

¹ Every now and then, innovation projects get undermined by not-so-well-meaning characters in the company. One of our most important responsibilities for the team is to recognize such developments in advance and to counter them.

#1 The players

In section 5.5, we have already described how the individual doers can come together and work collaboratively and successfully as a team. It is most important that we in our role as managers let the project team free rein. The team members have to organize themselves. We only take corrective measures at the hand-over points. It is not easy for all of us to trust the process but it is a must!

*#2 The bench^{*2}*

Which experts belong to the bench or to the core team of doers depends on the topic and the strategy for innovation development. In some cases the team needs a certain expertise, and in other cases this expertise could prevent the team to think off the beaten tracks. We have to consider this when we accompany the innovation project. Internal experts are there to help and not to block.

During the work in the modules of the Innovation Board, it is sometimes apt to involve internal experts. In the EVALUATE module, these can be designers, IT or business experts, while research and marketing experts are valuable in the EXPLORE and the CREATE module. In general, we have a look at all departments in order to find valuable addition players.

² Winning the championship is only possible with a strong bench.

#3 The sponsors

They approve the project, and at the most important milestones, they decide on the further direction. The Innovation Boards shows them the results of the completed modules and provides them with a basis for their decisions. In longer projects, it is beneficial when the sponsors have a look at the innovation project more often than only during the hand-over workshops so that they can develop a deeper understanding of it. This does not cost much time. It is sufficient to call at the »team space«^{*1} or to accompany the team selectively at interviews or tests. However, this has to be done in concordance with the doers.

¹ See section 9.2.

In large companies with various hierarchy levels we think of formats and possibilities to involve all decision makers. Often projects fail because not all of the important decision makers have been involved appropriately.

#4 The trainers and attendants

This comprises all additional people in the company that we want to involve as advisors or sources of knowledge or to prevent political or interpersonal barriers. New knowledge and new perspectives are always helpful. The members of this group do not need be experts as we can also gain inspiration and new input simply by having lunch with our colleagues.

If we realize that the members of the core team separate themselves too much from the remainder of the company, we should encourage them to get out of their bubble and to open themselves to the other departments. By permanently pitching to our colleagues the great things that we build, we enhance the value proposition of our solution idea. Moreover, this is good training for pitching your ideas to the decision makers.

The trainers and attendants can take on various roles:

The mentor acts as a liaison and a sparring partner. He is well versed in the topics and knows the team. He establishes the contact with the remainder of the company and acts as a »buffer« against undue interference from »above.« Ideally, the mentor is well connected and does not have his own agenda. This could be a respected member of the upper management.









The coach guides the team through the innovation process. This person has already gone through the process at least once. The coach challenges the team with regard to the topic in question and prepares the members for emotional blows. He provides methodical support that gives the team orientation and structure for their daily innovation work. In the long run, it may be sensible to train and appoint in-house coaches.

The entrepreneur*¹ is an experienced founder who has internalized the processes and working products of product development. Similar to the coach, he leads the team, but he also adds unique capabilities, e.g. knowledge about the scaling of business models. In the long run, it may be sensible to hire »entrepreneurs in residence« for this job. The challenge is to define the terms of their assignment and the phases in which they should be consulted.

The facilitator is someone like the location manager at a film set. He handles administrative duties, ensures that the required materials are in place, coordinates deadlines and takes care of all the little woes and sorrows.

Before starting the project, we assign the roles during a project set-up (see template 9.2.1). We do not start until we have clarified the roles in the team. This also includes answering the question how often and when the team members with the given roles have to meet outside the team.

¹ We can scout candidates for this role specifically for a given project. The team needs some personalities who bring with them an exceptional spirit. If we cannot find them, we can bring them in from the outside.

<i>Problem to be solved</i>			<i>How can we recognize that the project team is successful?</i>	
<i>Why is this relevant and difficult?</i>			<i>Boundary conditions that must not be changed</i>	
<i>Project team</i>	<i>Name/role/department</i>	<i>Why is he/she important?</i>	<i>Name/department</i>	<i>Date</i>
			 <i>Mentor</i>	
			 <i>Sponsor</i>	
			 <i>Facilitator</i>	
			 <i>Coach</i>	

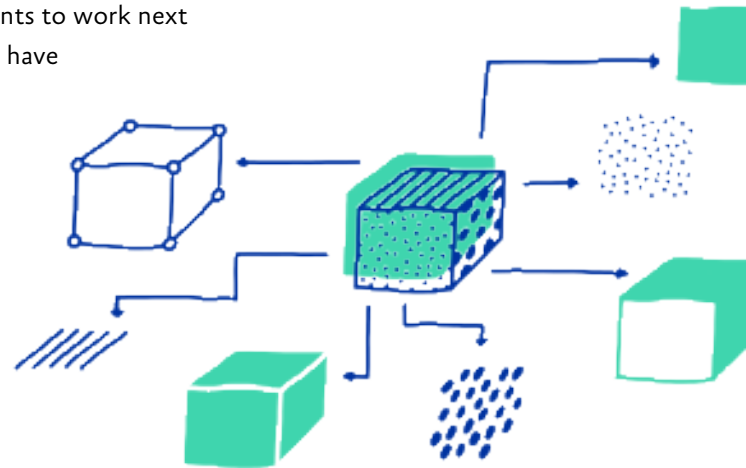
 **Template 9.2.1:** digital-innovation-playbook.com/templates/frame

d) Rooms, Organization and Equipment

The working space supports the flexibility of the doer team during innovation development. This room is more of an inventor's workshop than a representative meeting room. It is not without reason that many famous technology companies originated in the workshops of Silicon Valley. Roughness beats high gloss because the ideas and prototypes of the doers also remain rough until they are tested. Only afterwards they are polished to high gloss and brought to market.

As managers, we allocate a budget for the project space where the team can work undisturbed. It will become loud and wild. There are movable walls covered with sticky notes and there is a lot of building material for prototypes lying around. It is out of the question that the team shares a room with another department. That would only create bad blood. Who wants to work next to the wild inventors, anyway? However, it is possible to have several innovation teams working side by side in one room as long as there is sufficient space.

Furnishing the room is up to the innovation team. After all, it is their room! As a general rule, it should be cheap and simple.



A new type of location for a new way of thinking

The team space is also a place to linger and to internalize knowledge. This does not work when the usual daily work is lurking outside and waiting to penetrate the innovation room. Our experiences with setting up a new working space outside the usual environment were really good. In hindsight, many of our project partners also called this one of the most important factors for success.

There are basically three working modes for the innovation team. Each mode needs its own area in the room. We also have to allocate a budget for this.

#1 Team work: The team space is the heart of the room. Here, the team spends much team at posser tables and working walls, armed with pens, sticky notes and arts and crafts material.

#2 Silent work: For research and for preparing the hand-over workshops, the teams need computer workstations and possibly also a small inspirational library where e.g. this playbook can be stored.

#3 Playwork: An innovation project is tough mental work. Especially when the team has to process compact units of knowledge, it needs scheduled breaks and rest periods to get back to work again in an effective way. Playing is an effective and fast method to relax the mind. It also facilitates team work and thus success. In the play area, anyone is allowed to be loud. It may contain couches, a playstation or table soccer. During team work, the team members stand up; here they can relax.

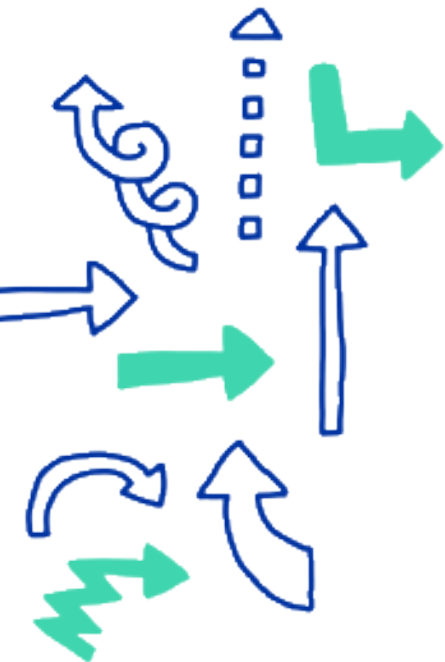
Daily business

One of the greatest dangers for the doer team is the »daily business«: colleagues who write emails all the time; meetings with other departments; or frequent phone calls for the doers. In order to enable efficient innovation development, we have to ensure that small interruptions like these do not interfere with the processes time and again. There are three possibilities to contain the disruptive daily business. In agreement with the management, the doers have to decide on one of them.

#1 The odd hour: Every morning, there is an hour when every doer can tend to tasks that are not related to the project. The other colleagues in the company know that this is the only time when they can phone or meet the project team members.

#2 The odd Friday: This follows the same principle as the odd hour; however, the time set apart for non-project duties is bundled and comprises the whole Friday. On this day, no work on the project is done. Which of these solutions (hour or Friday) is more suitable depends on the structure and the processes of the company.

#3 Full ahead: The third and best variant relieves all members of the project team from all other duties during the whole course of the project. This increases the flexibility of the team and facilitates focusing on the project.



Stimulating helpers

Sweets, nuts and fruits are small and cheap lifesavers for the doers. We see to it (or assign someone who does) that a sufficient supply is always available. Similar to stocking the working place with tea and coffee, this often gets neglected.



Furnishing the room

There is no need for extensive planning or building to furnish a good working space. The budget thus stays within reason.



Per innovation team:

- ☐ 1 x poser table approx. 65" x 25"
- ☐ 1 x bar stool per team member
- ☐ 2 x mobile whiteboard
- ☐ 1 x cube seat approx. 18" x 18" x 18" per team member

General equipment:

- ☐ IKEA KALLAX shelf with drawers
- ☐ A3 or Ledger color printer
- ☐ Projector
- ☐ Projection screen
- ☐ Wi-Fi loudspeakers
- ☐ Computer
- ☐ Digital camera
- ☐ Couches

Paraphernalia

We need to allocate a sufficient budget for working materials or better still, provide a basic supply. The teams will always require the following items:

- ☐ Sticky notes
- ☐ Thick pens
- ☐ Even thicker pens, e.g whiteboard markers or flipchart markers
- ☐ TimeTimer or Team Timer app
- ☐ Alternative material to use for working walls: EasyFlip foil (electrostatic foil) or white packaging paper
- ☐ White A4 or Letter printer paper
- ☐ Scissors, staplers
- ☐ Adhesive tape, masking tape

Material for prototypes

The doer team needs the proper materials for building prototypes. This could basically be anything that can be used to build something. There is no right or wrong. The following list gives an overview of typical prototype material:

- ☐ Paper, colored (A4/Letter)
- ☐ Cardboard, colored (A4/Letter)
- ☐ Stiff cardboard or foamboard
- ☐ Aluminum foil, wrapping foil
- ☐ Colored chenille stems (pipe cleaners)
- ☐ Balls, rings etc. made from styrofoam in different sizes
- ☐ Popular building materials: Lego, modeling clay, straws, plastic boxes, feathers
- ☐ String, wool and wire for binding
- ☐ Styrofoam and a styrocutter
- ☐ Duct tape, rubber band, glue, hot glue and hot glue gun for fastening
- ☐ Android or iOS tablet computer

e) NDAs and Other Legal Stuff

We do not want to venture too far into legal territory at this point. However, there is one important point: Interviews and tests with the users often collide with the usual rules of many companies, but both are essential for user-centric innovation. Thus we have to clarify in advance whether the doers need non-disclosure agreements (NDAs) and how these agreements have to look like, if applicable. Talking about the legal requirements when the project is already started would throw a spanner in the works.

f) Costs

Budgeting is always a touchy subject. Innovation projects are seldom no-budget projects. We have already covered the cost factors *room, equipment and materials*. They generally pose the highest investments before the project start and require a significant organizational effort. The next time, however, we can do this faster.

The costs for the members depend on the selected format and the number of teams. For larger projects, we recommend starting with two to four teams as this may generate synergies. A facilitator can care for several teams, and the costs for materials and rooms can be divided.

Another possible cost factor is the *recruiting of interview candidates* by market research agencies. This may or may not be reasonable. Depending on the innovation project, it may not be easy for externals to recruit the proper people according to the specification by the teams. It may be more suitable to use channels of your own to recruit people for user interviews or tests. We cannot take it for granted that people spend their time to deal intensely with the questions of the innovation times. Therefore we also allow for money as compensation or for presents.

Interviews and tests also cause *travel costs* for the team depending on where we can find suitable candidates.



During a project, other costs may occur which we cannot plan in advance despite our most careful efforts. For this reason we recommend the management to allocate approx. \$ 1000 per team that the team members can freely use. According to our experience, this budget is rarely exhausted, but it frees the team from possible organization effort.

g) Project Planning and Milestones

Good time management is essential, and this also applies to innovation development. The doers organize themselves, comparable to start-ups. It is our duty as managers to determine the time frame of our innovation development. The doers help us in creating the project schedule because they know how much time they need for the individual work packages like conducting user interviews, building prototypes etc. We should always allow some buffer for project management, internal agreements and parallel administrative work. Without providing a buffer, it is nearly unthinkable that an innovation development meets the deadlines. A good rule of thumb is to provide a buffer of two weeks for a two-month project.

The larger the topic and the innovation project, the more prominent are the dynamics that can cause unforeseeable changes. When creating the schedule, we also have to estimate if there may be delays caused by external factors. Every now and then we can get to a point where we have to depend on the actions or the organization of someone else. There is often a bit of jarring at the interfaces. Every company has its unique rhythm. We plan for this in advance. We extend the project duration so that we are able to shift appointments for user interviews, conversations and workshops with experts and decision makers. For this, we allow twice the regular buffer, i.e. for weeks for a two-month project.

In a very confusing situation where we have to expect many interruptions and delays, we use small and manageable blocks of one to two weeks; from one milestone to the next, so to speak. This gives the doers time for additional iterations and development cycles. After all, we cannot foresee every problem. The final deadline is of no use when it does not consider the reality and the conditions. A schedule of this kind is also recommended when we start our very first innovation project because we do not yet have gained any experiences.

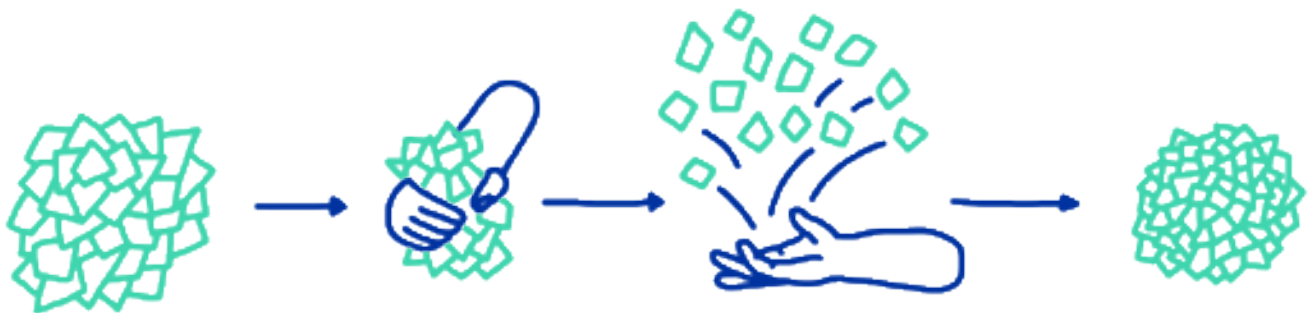
After having completed a block, we examine our time management and the team's time management and adjust the following steps of the project. A good analysis of the completed project block helps us to schedule future projects.

During a running project we have to consider the following aspects:

Respecting milestones: Our Innovation Board prescribes the milestones. With completing each of the modules, we reach a milestone. These are the points where we as enablers may intervene in the innovation development. During the rest of the time, the doers should to their development work undisturbed. Milestones are always hand-over workshops and not meetings or PowerPoint slides sent via email.

Steering adjustments: The doer team has to carry out and communicate adjustments every time when the priorities, the conditions or the project objectives change. This can happen when team members have to squeeze in some urgent work package that is unrelated to the project or when the research results point us in a direction that we had not anticipated during the planning stage.




We as enablers should adjust the plan jointly with the doers. However, we should give them free rein in case a short-term adjustment is necessary while we cannot make a decision, e.g. because we are busy with another project. We have to agree on this with the doers in advance, and we should also nominate deputy decision-makers for cases of emergency. These must be people on whom we can rely.



Milestones

The Innovation Board determines the result levels. We as enablers have to decide which results have to be present at what time and which have to be processed by the innovation team in the first place. For this we use template 9.2.2. This template also determines the starting point of the project.^{*1} At the milestone, the so-called *steering workshops* or *hand-over workshops* give us the opportunity to control and to monitor the team. In these workshops, the team hands over the complete Innovation Board module and presents its intermediate or final results.

¹ See section 9.2a,
»Initial question.«

Cost center ↔ budget												
Result level	Date for steering workshop	Participants										
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 Template 9.2.2: digital-innovation-playbook.com/templates/frame

9.3 SUPPORTING AND FACILITATING INNOVATION PROJECTS AS MANAGERS

When we say »self-management«, we actually mean it. As managers and enablers, we want the members of the innovation teams to work effectively and fast, and that means that they have to be allowed to design the working processes on their own. Between steering workshops, we shield and protect the teams against external influences. After all, the members have to focus on their tasks. We act as communicators and as contact persons for any problems, and we deal with any hurdles that might deter the team from working.

When the company has a steering committee for operations, it is our duty as enablers to stay in touch with this committee, to moderate the steering workshops and to involve all the stakeholders. Skilful communication is the key to achieve the best possible results for our company.

In the steering workshops, we work as concretely as possible on the continuation of the innovation. To make this possible, the proposals upon which we decide have to be readily understandable. This is something that our Innovation Board accomplishes. On the following pages, we give theoretical as well as practical insights into the challenge workshop and the three steering workshops during the course of an innovation project. The practical instructions for the workshops are just our recommendations; enablers can adapt them to the requirements and conditions of their respective companies. However, our suggestions comprise some guidelines that proved to be very useful in our experience.

In general, steering workshops should not last longer than two to four hours. Decision makers are much sought-after, and their time is precious. We enablers thus have to prepare the steering workshops very well, but we should not invest more than half a working day in this preparation. After all, we want to remain efficient, and we only show the results that the innovation team has already prepared, anyway.

A steering workshop comprises fixed time slots for presentation and explanation as well as for questions and decisions. We have to discipline ourselves to stay within the time frame, and we also have to ask the participants in advance to grant us the right to interrupt lengthy discussions.

There is one mistake that we must never make: walking into a decision meeting without having a specific proposal to decide upon. It is not possible to work out suggestions in a large group. When, during the analysis of the proposals, we realize that they are not sufficiently specific, the innovation team has to do some re-work. Remember: *No discussion without specific proposals!*

#0 Challenge Workshop

At the beginning of a project, we always ask what topic we have to attend to and what we want to achieve. Although in the beginning we do not yet know what our customers need or how the product will eventually look like, we still have to provide a rough outline of the work to be done. It is therefore important to phrase an initial question with strategic relevance for the company. This workshop is used to develop the challenge jointly and to establish a common understanding by all stakeholders.

The challenge has to be phrased in such a way that the doers are able to start the project immediately after the workshop. It should comprise the identified problem, the targeted user group and the situation where the problem arises. Any constraints that are already in place, e.g. having to develop the solution in the form of an iOS app, must also be mentioned in the definition of the task at hand. The task can be expressed as a question or as an assignment.

Bad example:

We need an app that athletes can use to track themselves. Our competitor already has something like this.

Good example:

We want to help professional athletes to achieve their goals in the future.

The first draft of the challenge does not have to be perfect as we will refine it in the workshop, but it should already contain the most important points.



Overview

Goals

It is our goal to develop a challenge. At the end of the workshop, all participants should have a common understanding of the question and agree on the aspects that are critical for success.

Schedule

- ☐ 1. Presenting the challenge (10 min)
- ☐ 2. Charretting (20 min)
- ☐ 3. Alternatives (20 min)
- ☐ 4. Break (10 min)
- ☐ 5. Formulating the final challenge (20 min)
- ☐ 6. Success criteria (10 min)
- ☐ 7. Mind map (20 min)

Participants

This is a workshop for the team and the manager(s) only. In some cases it can be reasonable to involve the sponsors as well.

- ☐ Manager(s)
- ☐ Team
- ☐ (Sponsors)

Place and materials

The room should easily accommodate all participants. We recommend working at a whiteboard while standing up. Additionally, we need the following equipment:

- ☐ Sticky notes (different colors)
- ☐ Thick pens
- ☐ Very thick pens, e.g. whiteboard markers or flipchart markers (different colors)
- ☐ Timer
- ☐ Alternative material to use for working walls: EasyFlip foil (electrostatic foil) or white packaging paper
- ☐ White A4 or Letter printer paper
- ☐ Adhesive tape

Process

Presenting the challenge

To start the workshop, the manager presents his or her draft of a challenge to the team by writing it to the whiteboard. The team can then ask comprehension questions and write them down on sticky notes.

Charretting

In this part of the workshop, we thoroughly investigate each word of the challenge. We underline each word that we still have questions about or that need to be defined more precisely. For this purpose, we use three different colors for the following aspects:

- Anything relating to the users
- Anything relating to the problem
- Anything describing the context or the situation

After having underlined the essential points, we deal with them one by one. We take sticky notes in a similar color to the lines and write down everything that lies behind the words in the challenge.

Alternative challenges

Based on the charretting, we jointly develop various variations on the challenge by adding or replacing words. In this way we create several challenges with different focuses and different degrees of abstraction.

Formulating the final challenge

Every participant explains in one minute which challenge he or she prefers and for what reason. Subsequently, the final challenge is selected or phrased based on the alternatives.

Success criteria

Now that the most important goal of the workshop is achieved, the challenge is defined and the project can start, we have to define and to agree on success criteria. According to our experience, it is important that all participants understand that we work with hypotheses only and that the users have a large influence on the results. In the next workshop (after the EXPLORE module), we will have the first insights and can better understand how precise our assumptions have been.

Research mind map^{*1}

At the end of the workshop, the participants create a mind map where they enter all the thoughts that are running through their minds. These can relate to various aspects, e.g. the following:

¹ See EXPLORE module, method 7.

- People to involve
- Interesting contacts for interviews
- Possible difficulties
- Required support
- Articles or papers that might become useful

In this way, we define the actual starting point for completing the EXPLORE module.

#1 Explore Hand-Over Workshop

This workshop is more like a presentation but it is also used to involve experts and to make decisions about the further direction of the project. This is the first opportunity after the project start where all the stakeholders meet and the team presents the first results. This is a very important interface because we have gained new information from the users, clearing or modifying our initial question. The innovation team creates several how-might-we questions that describe the new problem hypothesis. During the presentation, we can then bring forward the how-might-we questions together with the related personae, context information^{*1} and areas of opportunity. We involve the decision makers in selecting a how-might-we question so that the innovation team can share the burden of deciding on the problem hypothesis with which to proceed. In most cases, the innovation team cannot make this decision on its own, anyway, because choosing the direction for innovation development is also a strategic decision.

¹ E.g. data, trends and user anecdotes.

In the presentation, the team has to point out precisely what problem for what group of customer was found and why this problem is relevant for the company. The proposal basically consists of the initial problem (i.e., the challenge) broken down to several specific how-might-we questions.

If at the end of the workshop the decision on the future direction cannot be made by the person who commissioned the original question, we can let the other participants of the workshop vote. One possibility is to hand three adhesive dots to each participant so that they can mark their favorites. We can then directly elect the winner by simple majority or use the outcome as a foundation for a subsequent discussion that leads to a decision.



Preparation for this workshop comprises two important tasks. First, we have to find and involve the relevant experts. At this point of the process, we do not yet deal with budgets and the feasibility of the product. The central topic of this workshop is the user. For this reason we recommend to involve experts from market research and marketing. Sponsors can also participate in this workshop. The second important task is managing the expectations of the experts. This workshop is all about constructive criticism, open questions and comprehension questions. It is also reasonable to inform the experts about the new approach to work, e.g. by letting them read the introduction to this book.

The preparation is mostly the duty of the team. It is responsible for representing the results from the EXPLORE module briefly and concisely. The board provides us with a structure for this task. It is important to design the presentation as vividly as possible. Thus we use many pictures and try to avoid text deserts and bullet-point deserts. It is advisable to communicate only one point per slide. Approximately half of the presentation should focus on the users.

Preparation for the presentation should not take up more than one day. All our insights were gathered by many hours of work with the various methods. If possible, we try to show the intermediate steps briefly to give the participants an idea of the work that has been done. In order to perform the presentation fluently within ten minutes, it is sensible to rehearse it. For this purpose we usually invite a colleague who is not involved in the project to give us feedback. This is extraordinarily helpful.

Overview

Goals

The goal is to achieve a common understanding of the results of the EXPLORE module and to involve the experts for the first time. We also want to decide which of the how-might-we questions we want to pursue.

Schedule

- ☐ 1. Presentation of the results of the EXPLORE module (10 min)
- ☐ 2. Q&A (10 min)
- ☐ 3. Decision session (10 min)
- ☐ 4. Next steps: expected steps in the CREATE module; fixing a date for presenting the results from the CREATE module (20 min)

Participants

This workshop serves to present the results of the EXPLORE phase to the managers and sponsors and gives the experts on the specific topic the opportunity for feedback.

- ☐ Team
- ☐ Managers
- ☐ Sponsors
- ☐ Experts (market research, marketing)

Place and materials

The room should easily accommodate all participants. We recommend a small auditorium with seating for all participants. The team usually stands while giving the presentation. As the results are presented digitally, we need a huge TV set or a projector. The following equipment is required:

- ☐ Projector/TV set
- ☐ Cables, adapters
- ☐ Timer
- ☐ Pen and paper for the audience

Process

Presentation of the results of the EXPLORE module

The team presents the results of the EXPLORE phase. This may be done as follows:

- 1. Initial challenge (1 min)
- 2. Overview of the interviews (how many and with whom) (1 min)
- 3. Trends/facts (1 min)
- 4. User types/persona(e) (1 min)
- 5. Needs (per persona) (2 min)
- 6. Insights (per persona) (2 min)
- 7. Areas of opportunity (1 min)
- 8. How-might-we question (new challenge) (1 min)

Q&A

Managers, sponsors and experts can ask questions and give feedback to the contents of the presentation. One of the participants should moderate the feedback session. It is important that everyone stays on topic. If anyone wants to give extensive feedback, it is advisable to make a special appointment with the team. Any feedback should be appreciated.

Decision session

If there is more than one how-might-we question, we have to decide which one is of most interest. This decision is usually made by the managers and/or sponsors.

#2 Create Hand-Over Workshop

¹ This could also be up to three comprehension prototypes. However, more than three would be counterproductive.

This workshop is similar to the EXPLORE hand-over workshop. The advantage, however, is that we have the comprehension prototype^{*1} as a very specific basis for decisions. The better and the more understandable the team has prepared the prototype, the easier we can make clear-cut decisions. The prototype should be recognizable as a product or service. Nonetheless, making decision is still a touchy business when it comes to ideas. It can be very difficult to differentiate between good and bad ideas. Additionally, a member of the team might be bound emotionally to specific ideas. This makes analytical and rational decisions in the workshop difficult. With respect to this matter, we enablers have to take on a special role, namely the role of reputedly neutral mediators between the steering committee and the innovation team. For this reason it is essential to clarify the roles before the start of the project: if we are not only enablers but also sponsors and decision makers, our different interests may become a problem.

The innovation team presents the comprehension prototype in the form of brief »elevator pitches.« In doing so, the team also outlines the problem that we want to solve (i.e. the how-might-we question) and the related solution hypothesis. The committee members now get some virtual money (Monopoly money or voting chips), which they can covertly distribute to the solutions presented. The process can be varied as needed, e.g. by additionally evaluating individual criteria. Based on the amounts of virtual money, we come up with a democratic investor decision.

There are often similar solutions, which do not get full support but can create synergy effects in testing when combined with other solutions. It is worthwhile to keep an eye on these solution ideas although they did not get selected and to carry them over into the EVALUATE module.

A large part of the preparations is again dedicated to the presentation. In this case, we can build on the previous presentation. At the beginning of the presentation we give a brief summary of the EXPLORE module so that all members of the audience share a common understanding. Then we introduce our solutions by means of the comprehension prototype. It is important to look again at the Innovation Board. For every new solution, we describe the associated users and explain how the solution solves their problem. Again, preparation should not take up more than one day. We take the most important templates with us so that we are able to answer detailed questions.



Overview

Goals

The goal is to achieve a common understanding of the results of the CREATE module and to involve the experts. We also want to decide on the ideas and to clarify how we want to continue our work.

Schedule

- ☐ 1. Presentation of the ideas (10–15 min)
- ☐ 2. Q&A (10 min)
- ☐ 3. Next steps (10 min)

Participants

This is the proper time to involve experts on products and financing. We can also bring in experts from marketing and market research. Sponsors can also participate in this workshop. It is again very important to make it clear that we only present a quick and simple visualization of the idea. After all, we want to work fast and in an agile way and not put a month's worth of work into an untested prototype just so that we have something impressive for presentation.

- ☐ Team
- ☐ Managers
- ☐ Sponsors
- ☐ Experts (market research, marketing, products, financing)

Place and materials

The room should easily accommodate all participants. We recommend a small auditorium with seating for all participants. The team usually stands while giving the presentation. As the results are presented digitally, we need a huge TV set or a projector. The following equipment is required:

- ☐ Projector/TV set
- ☐ Cables, adapters
- ☐ Timer
- ☐ Pen and paper for the audience

Process

Presentation of the comprehension prototype

The team presents the results of the CREATE phase. This may be done as follows:

- 1. Brief recap on the EXPLORE module (1 min)
- 2. Presentation of the personae and their problems (1 min)
- 3. How-might-we question (1 min)
- 4. Presentation of max. 3 solutions/prototypes (2 min)
- 5. Decision: What has to be tested and with whom? (1 min)

Q&A

Managers, sponsors and experts can ask questions and give feedback to the contents of the presentation. One of the participants should moderate the feedback session. It is important that everyone stays on topic. If anyone wants to give extensive feedback, it is advisable to make a special appointment with the team. Any feedback should be appreciated.

Decision and next steps

If there is more than one idea, we now have to decide which one we want to further evaluate. We recommend continuing with no more than two ideas. The decision is usually made by the managers and/or sponsors.

#3 Evaluate Hand-Over Workshop

In the EVALUATE module, we have thoroughly tested our solution, reworked it with the help of internal experts and developed a specific plan to implement it. The last hand-over workshop is about the actual investment decision. The innovation team presents the solution in the form of a start-up pitch^{*1}. The members also sketch the path from the problem hypothesis (the how-might-we question) via the solution and the »proofs« gained during testing to the planned strategic direction and implementation.

The decision makers in the workshop then define the implementation. This includes the requests of the innovation team: What resources have to be freed for implementation? Do we need new staff? What risks do we see?

According to our experiences, the following simple framework that balances chances and risks is good foundation for discussing and evaluating the proposal (see Fig. 9.3.1). 9.3.1

¹ More information can be found in section 9.4.

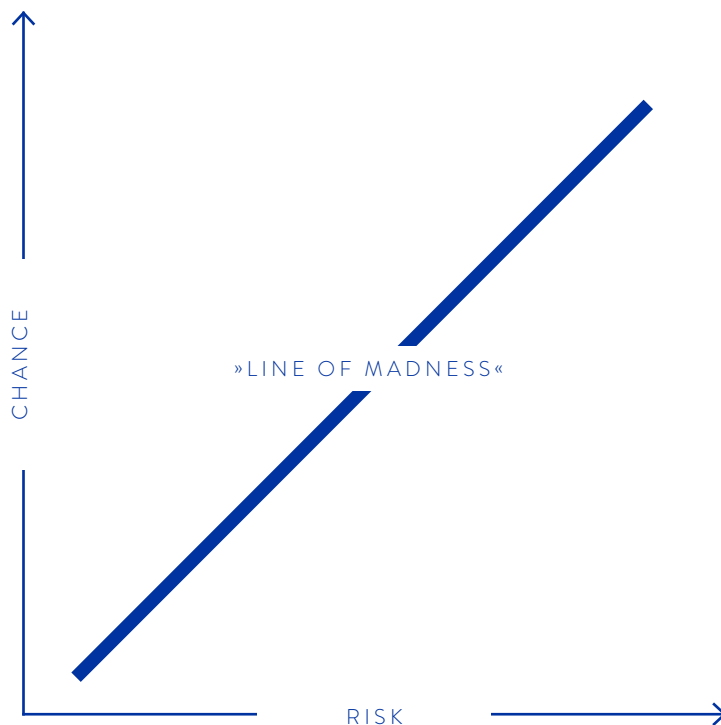


 Fig. 9.3.1



1 We named the »line of madness« according to the »line of scrimmage« in American Football. This is the line beyond which a team has to take the ball in order to keep it. This analogy once again illustrates that we want to think iteratively and in small hops.

Under »risk« and »chance«, we can summarize various criteria, which the decision makers can define and evaluate individually and depending on the context. We print the diagram in a large format, and the decision makers use it to plot their evaluations. If an evaluation point lies above the »line of madness«, the chances predominate; if it lies below the line, there are too many arguments against implementation.*¹ When all decision makers have plotted their evaluations, we have a very good basis for discussion. All stakeholders can clearly see how the solution is evaluated as a whole. Thus we avoid talking at cross-purposes.

We should also consider investments step by step. Every start-up has to jump over so-called funding thresholds continually. This is how we should view our innovation project in the company.

The *concept funding threshold* that we have to deal with in the EVALUATE hand-over workshop is only the first of many investments. A product needs continuous investment in order to succeed on the market and to improve. At the end of the EVALUATE hand-over workshop, we therefore need a road map in order to evaluate the required future investments. We must not keep quiet about this but have to make these investments transparent.

The road map summarizes the required investments and the results that have to be achieved before the next investment is made.

At this point, the character of our presentations usually changes. We have to convince as many people in the company as possible of our idea. In the three phases of the process, we have gathered many arguments in favor of our concept. In order to have the concept implemented, we now have to summarize our insights with a good presentation. We model the presentation on the classical start-up pitch deck. The presentation should not exceed 15 minutes.

Overview

Goals

The goal is to achieve a common understanding of the results of our innovation development and to design the transition to implementation (for this, we also need the buy-in of further employees).

Schedule

Part 1

- ☐ 1. Presentation of the results from the EVALUATE module (15 min)
- ☐ 2. Q&A (15 min)

Part 2

- ☐ 1. Discussing adjustments to the presentation (30 min)
- ☐ 2. Discussing the next steps (30 min)
- ☐ 3. Creating the implementation roadmap with responsibilities, budget and investment thresholds

Participants

The participants of the first part of this workshop can be a motley crew of stakeholders. It is important to include the managers, sponsors and experts. In the second part of the workshop, only the following parties should be present:

- ☐ Team
- ☐ Managers
- ☐ Sponsors

Place and materials

The room should easily accommodate all participants. We recommend a small auditorium with seating for all participants. The team usually stands while giving the presentation. As the results are presented digitally, we need a huge TV set or a projector. The following equipment is required:

- ☐ Projector/TV set
- ☐ Cables, adapters
- ☐ Timer
- ☐ Pen and paper for the audience

Process

Presentation of the results

The team presents the concept, a prototype and the most important insights from the EVALUATE module. This can be done as follows:

- Short introduction of the team
- What is the purpose of this meeting?
- Introducing the challenge
- Introducing the user (persona)
- Presenting the most important insights
- Introducing the problem
- Introducing the how-might-we question
- Presenting the idea/solution
- Business model design
- Market data
- Risk
- Suggestions and further course of action

Q&A

Employees, managers, sponsors and experts can ask questions and give feedback to the contents of the presentation. One of the participants should moderate the feedback session. It is important that everyone stays on topic. If anyone wants to give extensive feedback, it is advisable to make a special appointment with the team. Any feedback should be appreciated.

Discussing adjustments to the presentation

The team, the managers and the sponsors discuss how to handle the feedback to the presentation and whether the presentation has to be modified.

Next steps

We jointly discuss the next steps for implementation. If important data or information for the further course of action is missing, we can appoint someone who is responsible for acquiring this information. It is important to fix the dates for further meetings. We have to keep at it!

Visually representing the results in the Innovation Board and working out assessments and objective criteria for further investment decisions are motivating challenges for the innovation team. If applicable, we can also use the results to motivate other innovation teams who work in parallel. However, we should not overdo competition; after all, the teams should enable and help each other and learn from each other. It is our responsibility as enablers to find the proper mix of competition, ambition and team spirit.

In general, we enablers should consider us to be protectors of the team, if needs be even against the steering committee. However, the committee should not be the enemy of the team but its partner. It takes on responsibilities that the team could never shoulder.

9.4 FINISHING AND DELIVERING INNOVATION PROJECTS AS MANAGERS

The end of the projects is also a new beginning. Our goal is to translate the concept for our product or service to the real world. In order to do this, we have to support the concept quantitatively. The innovation team has completed the project with a specific solution and several prototypes to illustrate the solution. It has also generated the first marked data and developed an implementation roadmap.

In the next step, this concept backed by calculations has to be presented to the right people in the company so that they accept and implement it. It is reasonable to focus at first on those members of the company who are involved with the solution and who also have extensive authority.

We model the presentation on the classical start-up pitch deck.^{*1} It is important to design the presentation as vividly as possible and to avoid text deserts and bullet-point deserts. It is worthwhile to develop an emotional story together with the team because the team members can contribute details and stories from research and testing.

The rough structure of the presentation is as follows:

¹ Similar to the EVALUATE hand-over workshop; see section 9.3.

Part 1—duration: 10 minutes

- ☐ Brief introduction
- ☐ What is the purpose of this meeting?
- ☐ Introducing the challenge
- ☐ Introducing the user (EXPLORE module)
- ☐ Presenting the most important insights (EXPLORE module)
- ☐ Introducing the problem (EXPLORE module)
- ☐ Introducing the how-might-we question (EXPLORE module)
- ☐ Presenting the idea/solution (CREATE module)
- ☐ Evaluating the idea from an entrepreneurial perspective (EVALUATE module)
- ☐ Suggestions for the further course of action

Part 2—duration: 20 minutes

- ☐ Q&A

After the presentation, the implementation of the innovation project ensues; or the »inclusion in the portfolio«, to coin a phrase. This is one of the most difficult tasks. Unfortunately, it is also the one that we cannot describe in detail since every company features its very own individual structures. Implementation also heavily depends on the solution in question.

A mentor who, thanks to long years of experience, can open doors and get people is always very helpful^{*1} because any innovation can be prevented by political machinations. Innovations are always speculations in the future, even if they are well tested, meaning that they cannot be evaluated by traditional tools. There are always risk and unverifiable factors. This makes innovations more lengthy and difficult as they would have to be. Enter our selling skills! When we cannot evaluate every detail, our personal credibility has to beat the doubts. We have to sell our solutions to the internal objectors. It does not matter how much power we have as managers; selling skills are an essential aspect of leadership.

¹ See section 9.2c, Trainers and Attendants.

Furthermore, the people who see to the implementation of the solution must be credible and enjoy the confidence of the innovation team. Why else should the team hand-over its solution? The enablers are the link between the doers and the implementers. This shows that the success of an innovation does not depend on structures and processes but on trust and credibility. The people at the important interfaces for implementation are the key factor that determines whether the implementation will work or not.

For the implementation of digital products and services, there are important roles, which we have to consider. Depending on the subject area and the complexity of the solution, we need product managers, front-end and back-end developers, UX designers etc.

Particularly in large companies, new solutions and concepts are always related to the existing business. It is worthwhile to have a closer look at these relationships as our solution may generate synergy effects.

Speaking of the »existing business«, we want to look briefly at the strategic overall scope of our innovation development. The book *The Alchemist of Growth*^{*1} provides us with the Three Horizons diagram (see Fig. 9.4.1).

¹ Mehrdad Baghai, Stephen Coley, David White: *The Alchemist of Growth: Practical Insights for Building the Enduring Enterprise*, New York 2000.

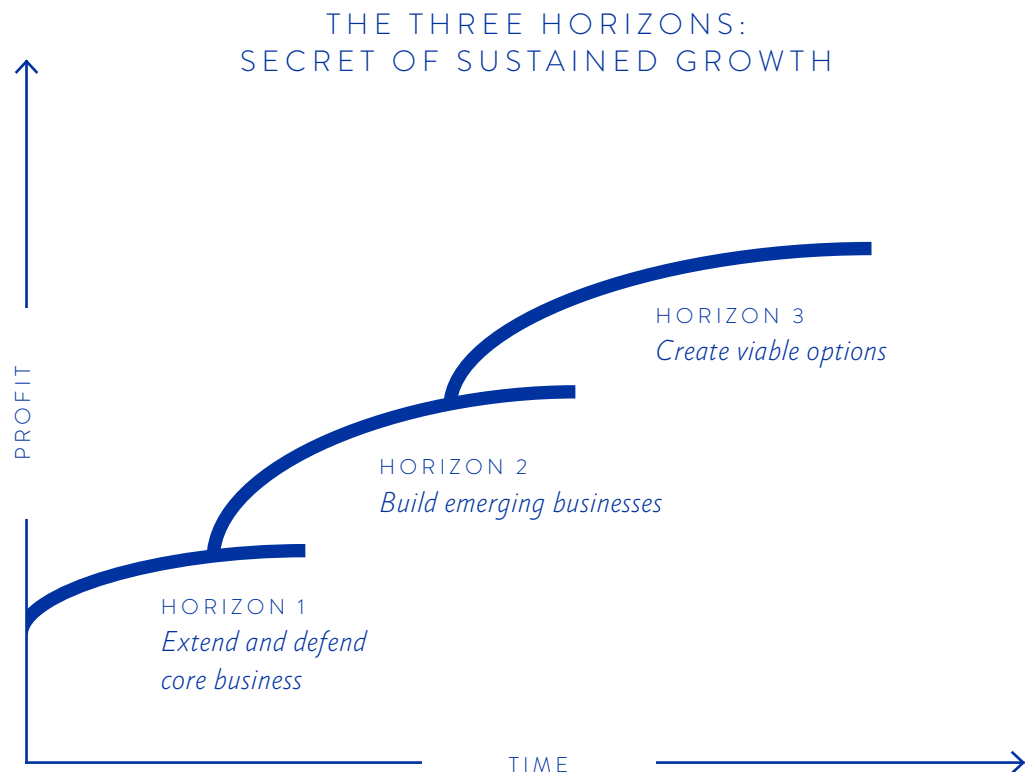


 Fig. 9.4.1

The authors use this diagram to arrange new ideas in three categories (horizons):

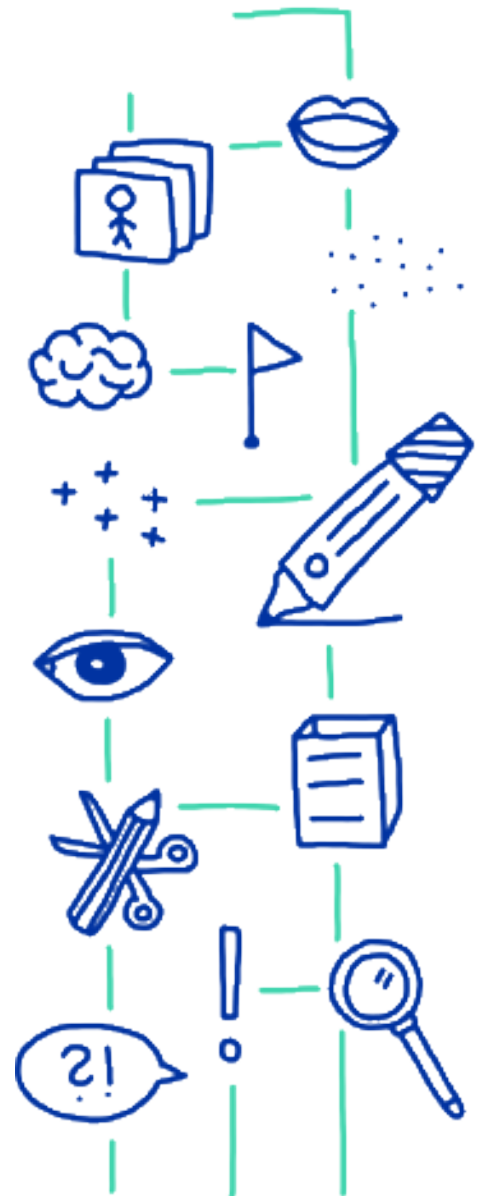
Horizon 1: The core business that comprises most of the turnover and the profit of the company

Horizon 2: Business areas extending the company

Horizon 3: Solutions that provide viable options for future business areas

As entrepreneurs, we have to decide how much we want to invest in the individual horizons. This diagram helps us to avoid viewing solution ideas in isolation. If we have ten solutions in horizon 3 but only want to furnish this horizon with 10% of our investments, it is only possible to implement a small part of these solutions.

This takes us back to the tasks that all managers are familiar with. Innovation development, on the other hand, is now completed successfully.



10 CONCLUSION

We already said it quite often, but maybe not often enough: *innovation development is team sports!* The managers a.k.a. enablers and the people around the core team, which we have met in section 9.2, are as important for the innovation project as the doers a.k.a. players. We all are tied to a giant network of people, dependencies and conditions. Like the substitutes on the bench or the equipment manager (who are often overlooked after an important final win), the enablers are decisive stakeholders even if they do not act as players on the field of innovation development. The same applies to the activities of a company as a whole. Often successful entrepreneurs are in the limelight all alone although they usually owe their success to a huge number of tireless and competent associates who all contribute to the achievements.

Often, people are deemed to be »good managers« when they aggressively and publicly enforce their opinions and vociferously attribute the success of projects to themselves. However, our unsung heroes are the enablers who smooth the way for the doers. They do not attribute the doers' success to themselves but try to achieve the best for the company together with other people.

So much for the individual people contributing to innovation development. Let us now step back and take a look at the big picture. If you have read the whole book, you will already know the five basic principles of innovation development:

#1 The user and the user experience are at the center of innovation development. Always! All products, services, strategies, processes and structures have to be based on the user experience.

#2 We put down our blinkers and switch to »Why not?« mode. Generally, nothing is impossible. No idea is too stupid, too silly or too embarrassing. Why should it, anyway? When we want to invent the future, we have to leave behind old habits and truths. The hands-on mindset and the fast development cycles represent the largest difficulties for the companies that work with us. Both contradict their usual approach, i.e. discuss, create plans, unfreeze budgets and work for years behind closed doors.

#3 We always view innovation as a system. The user sits in the middle and is tied to a complex network of conditions, stakeholders and needs. In order to create something new, we have to properly understand and interpret this system.

#4 Collaboration fuels innovation development. The methods introduced in this book only take full effect when we use them in a team so that we can learn from our colleagues and get to know their perspective. Empathy with our colleagues is thus as important as empathy with the users.

#5 Learn from Sherlock Holmes. We are looking for the underlying needs, which we want to satisfy by innovative products or services. We can only discover these needs if we learn to observe thoroughly and to ask persistently.

In the past years, our shelves filled up with lots of books praising new methods for developing products, services and business models. These books put the people in the center; not as passive consumers but as actors who take part in shaping the market. The *Age of the Producer* has come—thanks to the Internet, which lowered the entry threshold for putting a viable product or a functioning service on the market. The resource-centered approaches of the »old economy« do no longer work as smoothly as before. The methods of marketing^{*1} have also reached their limits.

The textbook bestsellers of the last years all originate from areas of »user-centric design«: the Business Model Canvas^{*2}, the Lean Start-Up movement^{*3}, Design Thinking^{*4} and Service Design^{*5}. The various approaches differ in their respective focus, but their core aspects are very similar and they extend each other: All of the approaches promote quick testing with low-fidelity prototypes, involving the user as the starting point of all considerations, and a pragmatic course of action. Their main differences lie in their respective genesis. This has a large influence on how the approaches view themselves and how they can be used in the context of a company.

As already mentioned in the introduction, this playbook is also a remix. Our Innovation Board combines the best of the current approaches of user-centric design and links it to the results level. This is illustrated in Fig. 10.1.

¹ Telling the customers what they have to love/buy/desire.

² Alexander Osterwalder, Yves Pigneur: *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, New Jersey 2010.

³ Eric Ries: *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, New York 2011.

⁴ Tim Brown: *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*, New York 2009.

⁵ Stefan Moritz: *Service Design: Practical Access to an Evolving Field*, London 2005.

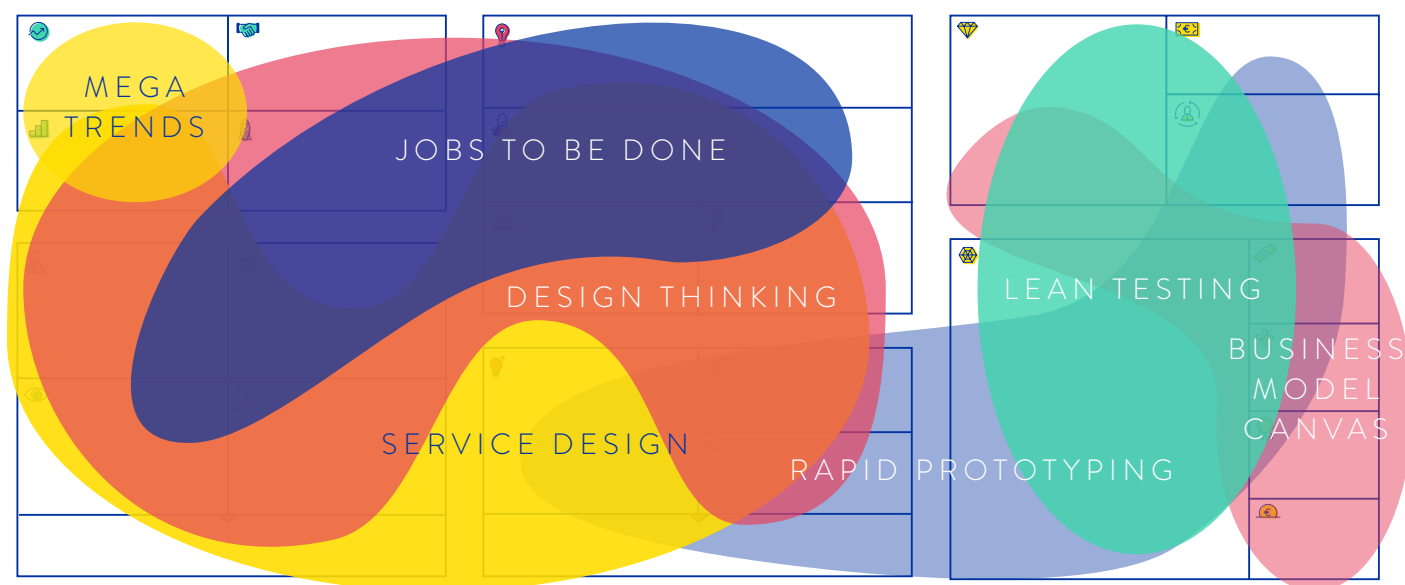


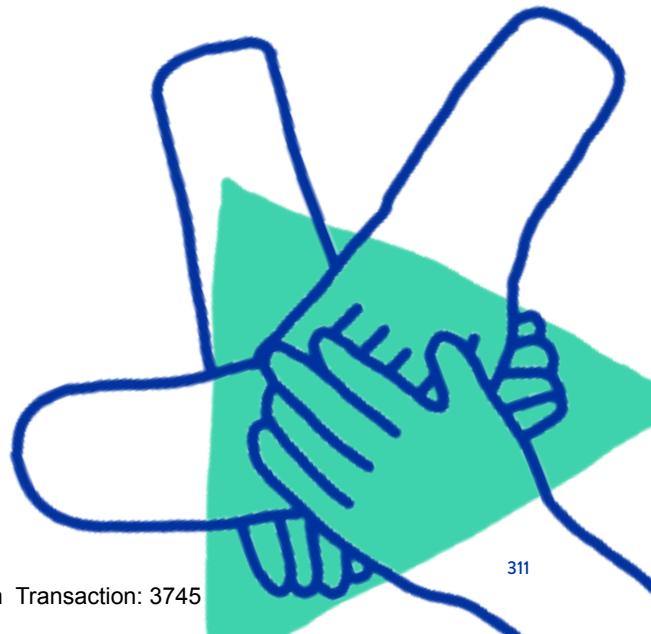
Fig. 10.1

Similar to music remixes, our Innovation Board pays tribute to our precursors. Our work would not have been possible without their work.

While writing this book, people looked at us in disbelief. »How can you explain your methods and show the customers how to do it? You destroy your own business model!« they said. Well, we do not share this opinion. After all, knowledge does not diminish when being shared.

User-centric innovation development only takes its full effect with increasing experience. Like a good handyman, we get better and faster with every problem that we solve. Thus we have to practice, to practice and to practice—until the methods and modules become second nature to us. Of course we harbor the selfish wish that this book may facilitate the future collaboration with our project partners. A large part of our energy is always used for communicating results and for »holding hands« in order to reduce fear. Managers who realize that they lose control often start to micromanage. But nothing is less efficient and productive! We hope that, by means of this book, we can eliminate this displacement activity once and for all; at least in the context of innovation development.

But we are not the only ones who have to deal with these problems; there are also all the people who try to advance innovations in their respective companies. We have the unselfish hope that this book may facilitate their work. We provide the Innovation Board as a means of communication between doers and managers. The consistent terminology and the standardized modules make ideas and solutions comparable and thus help the unsung heroes. These are the people who work on new ideas in the evening and »below the radar«. These are the people with whom and for whom we want to work. They are at the heart of Dark Horse.



Dark Horse Innovation

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