DESIGN THINKING DOING

METHODS & TOOLS

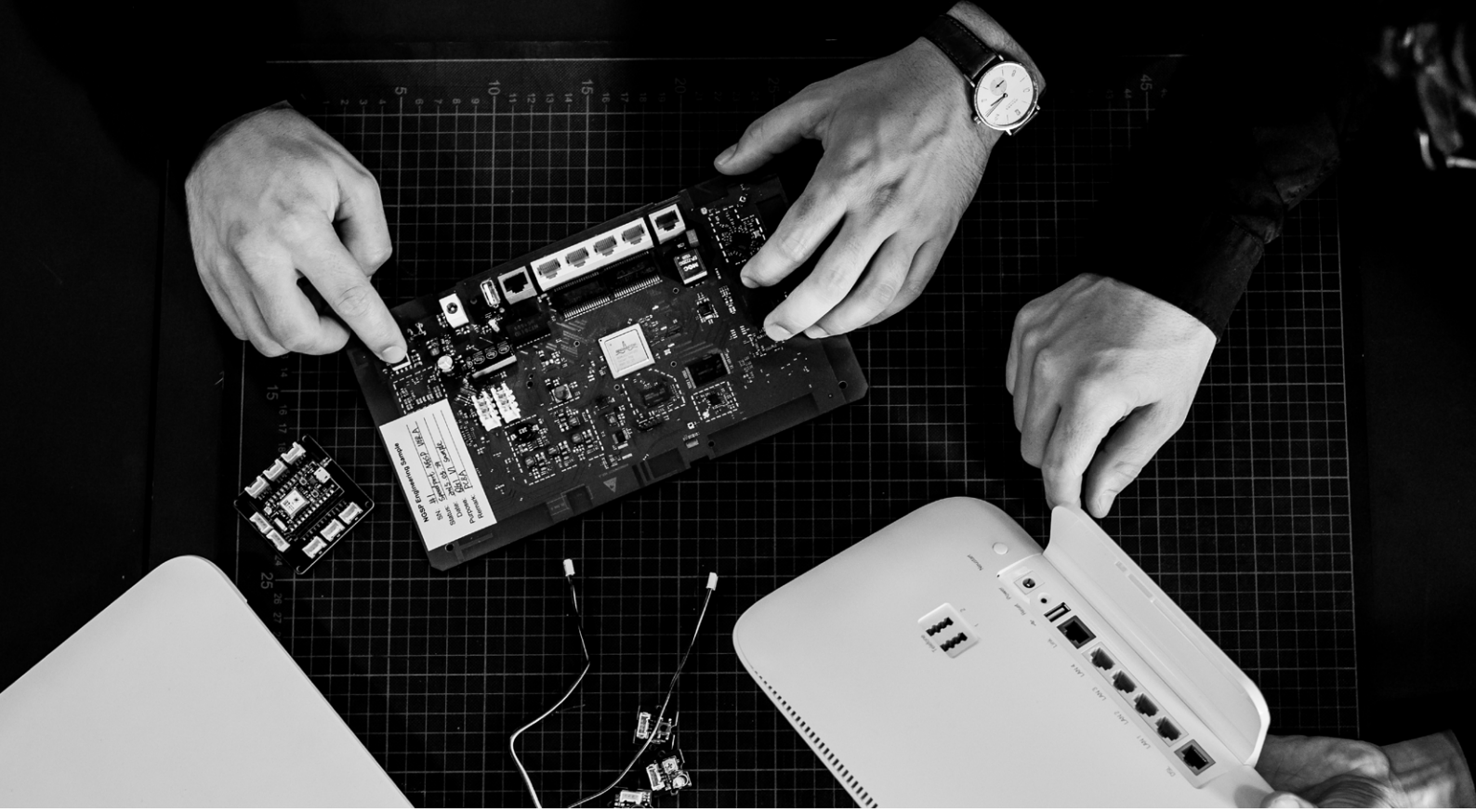


TABLE OF CONTENTS

Introduction	3
The Changing Role of Design	4
About the Publishers	6
Our Design Process	7
UNDERSTAND	**8**
Competitive Benchmark	9
Trend Analysis	10
Personas	11
Explorative Research Methods	12
Customer Journey Mapping	23
Jobs to be Done	26
Creative Briefing	29
IDEATE	**32**
Ideation Methods	33
Elevator Pitch	38
CREATE	**41**
Experience Target Picture	42
Wireframing	45
Prototyping Methods	47
Validation Methods	51
Product Personality	55
Customer Experience Camp	58
DEVELOP	**61**
Applying Design Standards	62
ROLL OUT	**65**
Communication Planning	66
References	69
Imprint	70

INTRODUCTION

By Christian von Reventlow, Chief Product & Innovation Officer

Design is a driving force in the product and innovation strategy of a large company. Only with innovations and creativity can new business models be configured and existing ones expanded. Digitalization in particular leads to a comprehensive change in products, services, processes and business models.

The product and innovation strategy of a company is facing the challenge of developing customer-oriented innovations that require market acceptance in order to create competitive advantages. Many companies in the telecommunications and entertainment industry are outperforming their competitors because of their outstanding product and service innovations. They have learned a lesson: At the heart of digital transformation is the customer. This belief is based on the fundamentally changing expectations of direct, authentic communication, in which the customer takes center stage and has uncomplicated and ubiquitous access to digitally networked products and services. This is why customer centricity is the key criterion for innovation management.

Designers can make a significant contribution to the implementation of customer centricity in product development. Designers have a fine sensor system for trends and for the needs of consumers.

They also have access to the comprehensive innovation process of a company and are able to use sophisticated instruments and tools to thoroughly and deeply determine the needs and problems of the customers.

It is therefore no coincidence that innovation management of in large companies is increasingly using the methods of Design Thinking to better understand the markets and to develop successful business strategies. In the course of digitalization, the design, combined with the classic instruments of corporate management and strategy development, ensures rapid realization of ingenious ideas and accelerates the market readiness of new products and digital services.

THE CHANGING ROLE OF DESIGN

By Philipp Thesen, Lead Design

The digitalization of economy and society determines our future. Designers know the fears, wishes and needs of the people. Consequently, the design discipline must take on its major responsibility of humanizing technologies.

The rise of artificial intelligence determines the future of humanity. But, will it serve or control us? This is all a question of design. Where limitations between virtual and material in industry and everyday life disappear, there will be all new questions for the design that sets people in relation to their things and their environment. Design has once again arrived at a crucial point and must take responsibility for shaping the environment, also in a new digital age. The designer is an important mediator between technology and living environment. Redefining the role of design for the digital age, we as designers will first have to precisely describe the unique world in which we live. Digitalization concerns us all, transforms economy, society and democracy. Digitalization determines how we will live and work in the future.

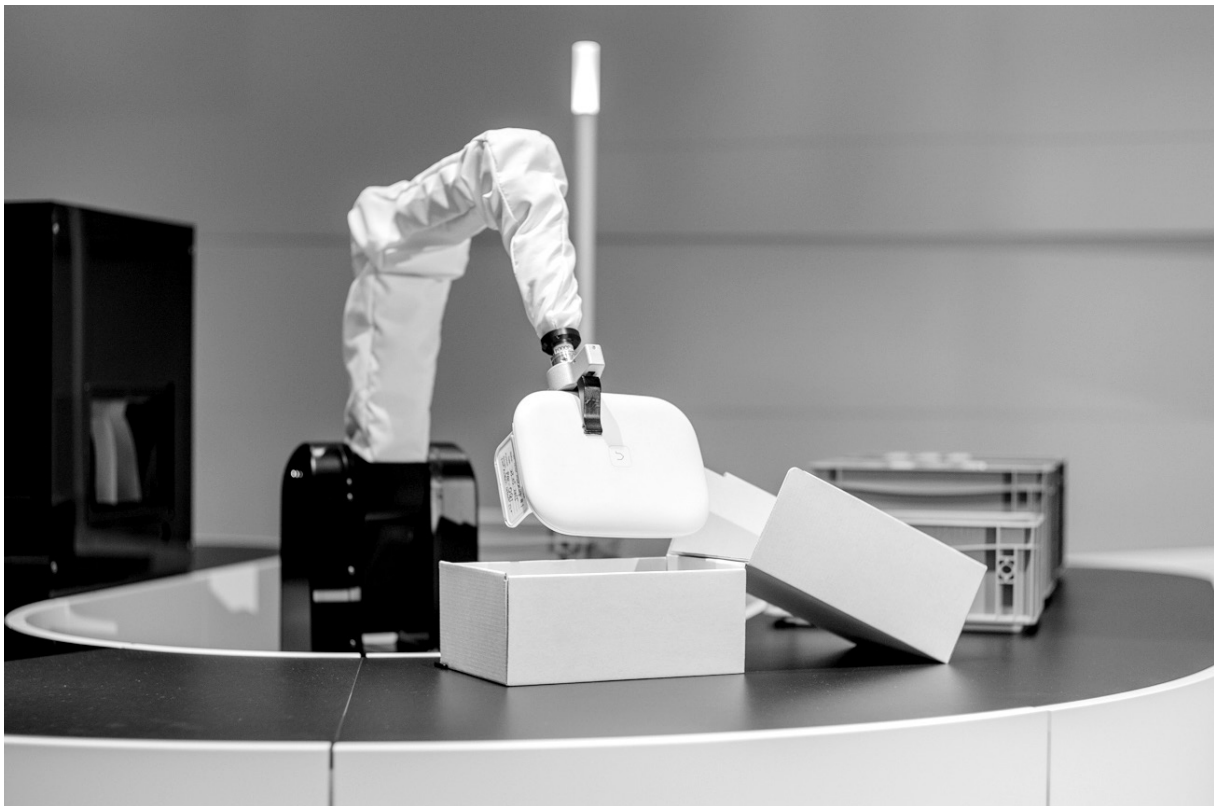
It is obvious what digital transformation means for the economy – it is on the brink of the fourth industrial revolution and the situation is therefore historical. Driven by the Internet, the real world and the virtual world are growing together. Yet the topic is about more than just the transformation of analog markets into digital markets, innovative products, services and business models, or technological progress bearing unknown chances for new economic growth and more life quality. It is also about the immediate area of action in human life.

With an increasingly versatile man-machine-interface that will go far beyond today's usage of devices such as smartphones and tablets, humans will be ultimately connected with the virtual world of things, data, and services. Given the fact of increasingly intelligent devices and products as well as new rules of interaction, designers and creative must create much more than only the surface. Designing products and digital services requires a profound knowledge of the customers and underlying technological infrastructures and therefore a broad competence profile as well as the close collaboration in interdisciplinary teams.

Empathy is necessary for this. Meaning intuition, trend consciousness, and cultural sensitivity as well as a profound understanding of the true wishes and needs of target groups. The task of the designer is to mediate between technology and living world. The design consumer needs a powerful partner again. In every customer oriented company a designer should be fighting for the consumer and his best customer experience – to make truly enthusing products and services.

Today, design is indispensable for the systematic management of customer experience and complex innovation processes within large organizations that still mainly work in isolated silos. It is not only about product design anymore, Design Thinking as an integral part of the corporate strategy, but about the creation of complete business ecosystems. Design as a cultural change agent enables organizations to inspire all employees for innovation, to give them the scope and the tools to dare to think creative, disruptive, and to be open for change as well as taking the risk to fail.

Design Thinking has made this cultural change agent available for corporations and it has taken a leading function for business strategies of innovation driven corporations like Deutsche Telekom.



DESIGN FOR DIGITAL TRANSFORMATION

How does a group with the scale of Telekom manage to not only think from a technological and infrastructural perspective, but to also establish principles of design within the entire company in order to sustainably improve customer experience collaboratively? At Telekom, one of the largest German design divisions is working persistently on a gentle revolution in all business units and can show initial success as well as numerous awards.

»We believe: Design Thinking is not a specialized discipline for designers only.«

PHILIPP THESEN

Deutsche Telekom is in the midst of a spectacular transformation process from a company with a traditional infrastructure to a front-runner of digitalization. Telekom has set itself the objective to accompany its customers in an increasingly complex digital world. This naturally includes first-class network quality and excellent service as necessary conditions. However, the crucial task is to sustainably simplify our increasingly mobile everyday life and enhance lives through experiences in the digital space.

DESIGN THINKING DOING

Listening exactly to what the customers really want is only a first step for the development of valuable solutions. Designers at Telekom have developed a strategic process of Design Thinking that is not only being put to action in their own unit, but also has been made available with an entire framework of methods and tools for all colleagues of the group.

We believe: Design Thinking is not a specialized discipline for designers only, but must interfuse with the entire company strategy. Because, every employee has immediate responsibility for the customer experience.

This handbook “Design Thinking Doing” provides all common Design Thinking methods, processes, and tools that can be adapted for standardized product development processes at large organizations. We hope that this little book also provides inspiration for you.

ABOUT THE PUBLISHERS

CHRISTIAN VON REVENTLOW

Christian von Reventlow, Chief Product & Innovation Officer (CPIO) at Deutsche Telekom, is in charge of the Group-wide innovation strategy, product development and partnering as well as corporate research & development.

Before joining Deutsche Telekom in March 2015, he held several executive positions, most recently as SVP Core platform at Nokia's map service and navigation system subsidiary Here.com. At Here.com, he supervised the development of the first real-time cloud backbone for high-resolution maps in connected vehicles. At Intel, he was responsible for the software development of the first and second generations of Windows 8 and Android tablets; at Avaya he managed the relaunch of the 'Avaya Flare' videoconferencing solution.

PHILIPP THESEN

Philipp Thesen is currently Lead Design at Deutsche Telekom and responsible for the design of products and digital services. Furthermore, he is responsible for the design strategy as well as the global realization and implementation of design principles. Under his leadership, the Telekom Design team received more than 100 design awards and became the first corporate design unit that has been included in the German creative industry ranking in 2016.

After numerous stops in agencies, Philipp Thesen began his career at Telekom in 2009. Next to his work in the industry, Philipp Thesen also holds lectures on the topics of design-driven digital transformation. He is member of the Art Directors Club Germany.

OUR DESIGN PROCESS

UNDERSTAND

DISCOVER CUSTOMER NEEDS AND INNOVATION OPPORTUNITIES.

- Competitive Benchmark
- Trend Analysis
- Personas
- Explorative Research Methods
- Customer Journey Mapping
- Jobs to be Done
- Creative Briefing

IDEATE

TURN INSIGHTS INTO IDEAS.

- Ideation Methods
- Elevator Pitch

CREATE

EXPLORE AND VALIDATE DESIGN CONCEPTS.

- Experience Target Picture
- Wireframing
- Prototyping Methods
- Validation Methods
- Product Personality
- Customer Experience Camp

ITERATE

DEVELOP

TRANSLATE CONCEPTS INTO SOLUTIONS.

- Applying Design Standards

ROLL OUT

LAUNCH THE SOLUTION.

- Communication Planning

Our design process consists of several phases with appropriate Design Thinking methods. These methods allow you to take the customers' perspective, come up with solution ideas, and learn how to get customer feedback.

The methods vary in their levels of expertise, effort, and duration. Some are cornerstone methods which you can apply multiple times during the development of your product or service, such as personas, prototyping, and validation. Since there is no one-size-fits-all solution, get to know the framework, find inspiration, and try out the methods included. This design process is adaptable to any product or service development project.

UNDERSTAND

Discover customer needs and
innovation opportunities.

The understand phase is about familiarizing yourself with the problem you are trying to solve. The following methods help you to collect insights, conduct expert interviews, study customers, and identify their problems and needs. Use the methods to **get qualitative customer insights that lead to innovation and business opportunities.**

COMPETITIVE BENCHMARK

Compare your competitors' products and services.

The competitive benchmark clearly shows strengths and weaknesses so you can find the right measures towards the best customer experience.

WHO CAN DO IT?
Anyone. Analytical skills are beneficial.

FOR HOW MANY PEOPLE?
1–3

DURATION
Up to 1 week

YOU WANT

... to identify strengths and weaknesses of your product or service.

YOU GET

... a multi-perspective comparison of your and your competitors' products or services. Competitive benchmarks help you to identify areas of improvement and come up with new ideas.

COMPARE
YOUR COMPETITORS' PRODUCTS

The competitive benchmark is the collection and analysis of information about competitors' products and services. It shows how well a product or service compares against its competition, clearly revealing highlights and lowlights in the customer experience. This method helps you to identify where to invest for a competitive advantage.

DEFINE THE SCOPE

Choose the right perspective for your benchmark: You might want to look at the brand perception, the positioning of the competitors in the market, etc. Typical product or service benchmarks compare properties like usability, quality of customer experience, or the feature set.

Decide on the scope of your benchmark. Choose which aspects you want to compare. You might want to find out what contributes to a best-in-class experience, or see what the baseline for a product offering is, or find out where your competition's offering is stronger/weaker than your own. Formulate a benchmark question, such as: "What and how many steps are needed during the mobile checkout process compared to our competitors?"

»Poor firms ignore their competitors; average firms copy their competitors; winning firms lead their competitors.«

PHILIP KOTLER

Next, pick a set of direct competitors. Depending on your scope, include companies that are not direct competitors but whose offerings have some overlap to your own, or that provide analog processes and services. Begin with only a handful of companies. Increase the number later on.

BENCHMARK YOUR COMPETITORS

Gather information about your competitors and their offerings, depending on your method and scope. You can try out the products and services yourself and map your findings, interview customers, user research data, etc.

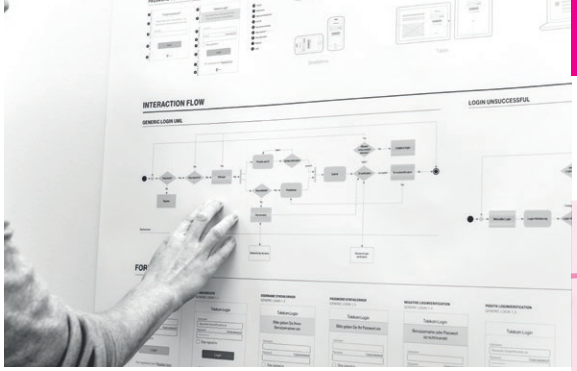
After a first round of insight collection, start to map out the insights for one or two competitors. Then, add your own solution. The customer journey map can be a good framework for this. Evaluate the level of detail and increase or decrease the granularity, if necessary. If you detect knowledge gaps, gather the missing information. Visualize the results of your benchmark and structure the supporting data for reference.

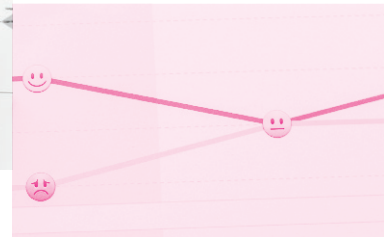
USE THE RESULTS

Describe the highlights and lowlights and summarize your findings for each solution in a few sentences. Correlate these to your own solution: Point out the biggest areas of improvement and features that will provide a competitive advantage. Rank product lowlights based on their impact on customer satisfaction and on difficulty to implement changes. Identify quick wins: Tackle those first which contribute to a high level of customer satisfaction and are relatively easy to fix.

KEEP GOING

Benchmark your solution and your competitors' at regular intervals to see whether you are improving and where the competition is moving as a whole. Create a score card for your own and your competitors' performance. Summarize your findings on it. Use it to notice changes and to communicate the overall performance.



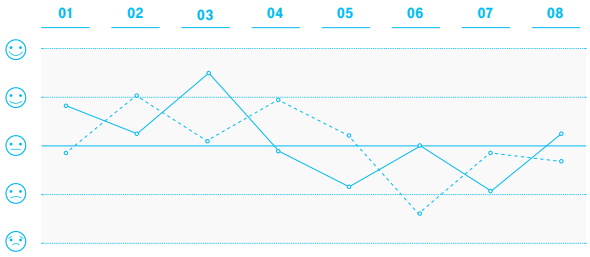


SELECTED BENCHMARK METHODS

CUSTOMER EXPERIENCE BENCHMARK

Evaluate the customer journey.

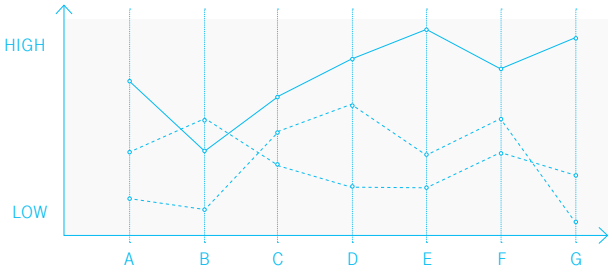
Choose a common customer journey and map it out for each competitor. You can use an additional set of heuristics, such as Nielsen's 10 Usability Heuristics, or your own product or benchmark specific set, and track them for each step of the journey. Focus on features that cause problems or delight.



USABILITY BENCHMARK

Evaluate the efficiency, effectiveness and user satisfaction.

Choose a set of common interactions customers will perform. Run user testings with real customers or let usability experts do an expert review. Find out about the ease of use and task adequacy, list the number of severe usability problems, gather customer feedback, etc.



FEATURE COMPARISON

Compare product features.

Evaluate how different features compare against each other. First, define a feature set and check each offering. If you want to go beyond "yes/no" lists, rank the features' importance and rate how well they support the customer, both based on customer feedback.

	COMPETITORS							
CRITERIA	1	2	3	4	5	6	7	8
DECT BASE	✗	✓	✗	✓	✗	✓	✗	✓
POWERLINE	✓	✓	✗	✓	✗	✗	✓	✓
LTE	✓	✓	✓	✗	✗	✓	✗	✓
QIVICON	✓	✓	✗	✓	✗	✓	✗	✗

TREND ANALYSIS

Predict the future.

Exploring future trends helps to get one step ahead of your competitors.

WHO CAN DO IT?
Anyone. Experience in translating trends into opportunities is preferable.

FOR HOW MANY PEOPLE?
1–5

DURATION
Hours to weeks

YOU WANT

... to understand what trends will impact your products and services in the future.

YOU GET

... a trend overview that will help to identify future risks and unveil opportunities. Trend analysis is a valuable source of inspiration for product innovations.

PREDICTING
THE FUTURE

Trend research helps to understand how customers, technologies, competitors, business models, products, and services will change over the next month or years. It is not an exact science, but a structured approach to what will happen in the future. It encourages you to think about future effects and/or risks for your products and services.

TYPES OF TRENDS

Trends can be short, medium, or long-term changes that will influence and change the status quo. They are derived by observing current events. Trends can be found for all areas of life and can be clustered into five trend areas:

- **Macro trends:** major long-term changes affecting societies, e.g. aging population
- **Technological trends**: changes brought on by research and development which open up new opportunities, e.g. artificial intelligence
- **Market trends**: future developments within our core industry, e.g. virtual network operators combining several access networks like Google Fi
- **Customer trends**: changes in customer behavior, e.g. shift from voice to text-based communication
- **Lifestyle trends**: short-term changes affecting mass market, e.g. trend colors for next season

DEFINE YOUR RESEARCH OBJECTIVE

Trend analyses are usually conducted at the beginning of a project. Start by defining the objective of your trend research: Should the research provide input for the innovation strategy and help with selecting the right market? Or did you already select a market and you now want to scan it for new and arising solutions? It is important to define the field of study in order to be able to search for relevant trends. This includes the topic for which you want to find trends - whether it's market, product, service, industry, etc. - but also the timeframe in which you are interested. Be as precise as possible.

»It is far better to foresee even without certainty than not to foresee at all.«

HENRI POINCARÉ

CHECK YOUR PERSONAS' FUTURE

If you have already selected one or more personas, check out their future layer as a starting point. The future layer is a forecast of how trends might impact the future life of the personas. Take this information into account when defining the objective of your research. The results of your trends analysis can enrich the future layer of your personas later on in the process.

COLLECT RELEVANT TRENDS

Once you know your scope, start researching. Begin by identifying relevant trends based on secondary research. Use trend portals and databases that collect and forecast current trends as well as existing Telekom sources within the Brand & Design portal.

Start with the trend area that is most relevant to your project, e.g. with technology trends when you are planning a technology-driven project. To gain a broader perspective, take a look at the other four trend areas, since they might influence your trend area. Look for patterns in order to identify key trends.

List as many trends as possible and also look at adjacent topics. Write down up to 10 key trends in your own words as a summary of your research. Use short trend statements describing what and how something is significantly changing. Note down the underlying hypothesis for each trend to explore how this trend might develop.

DOCUMENT AND REFINE TRENDS

Collect examples of current products, services, or projects to illustrate your key trends. Combine them with facts, statistics, and other information, and create trend boards summarizing the outcome. Trend boards show combined information, e.g. for one lifestyle trend, and should contain a short summary, illustrating graphics, images, statistics, best practice examples, and relevant sub-trends.

Discuss each trend and how it is relevant to your current product or service. Compare the trends to see how they are related. Look for patterns, cluster them, e.g. in a trend map, and discuss how they might point to future directions of the project.

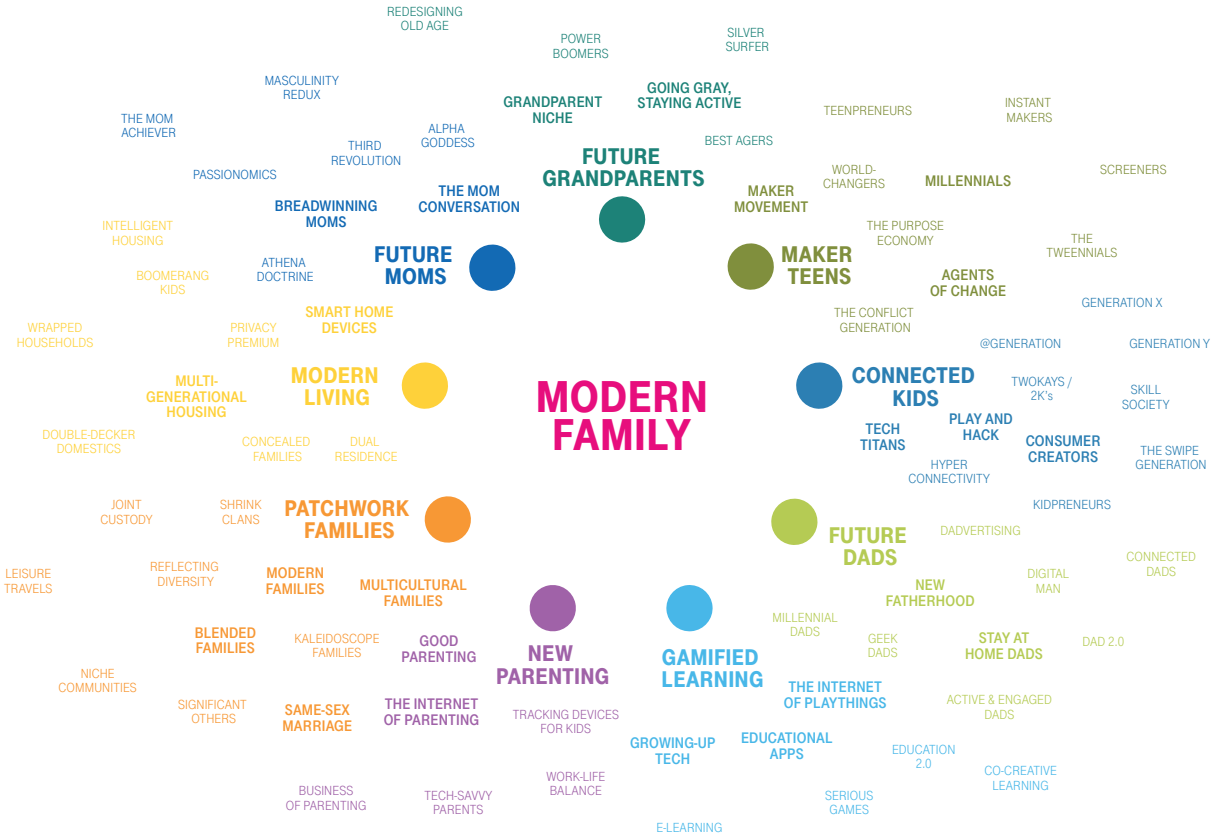
APPLY THE INFORMATION

Trends can hint at future developments and be a source of inspiration. Look at each key trend and consider how it could impact your customers' behavior, your product or service, etc. Combine trends to come up with new solution ideas.

MACRO TREND MAP

MODERN FAMILY 2016+

A visual overview of the trend landscape around modern family set-ups. The socio-demographic changes of the traditional model manifest themselves in nine micro trends, e.g. patchwork families or gamified learning.



PERSONAS

Give your customers a face.

YOU WANT

... to understand who your customers are, what they need, what they want, and what motivates them.

YOU GET

... a concise description of user archetypes. With personas instead of target segments, you can make better decisions regarding design, propositions, roadmap, or customer care.

Personas simplify communication about your customers and their needs. They provide you with a reference point for making product decisions.

PERSONAS
GIVE CUSTOMERS A FACE

Personas represent typical customers that combine shared characteristics of a customer segment. They are no work of fiction but based on empirical research data. Use personas throughout the design process or for any other customer-centered topic to never lose sight of your customers.

SELECT PERSONAS

Telekom Deutschland has a detailed and aligned set of personas that is based on their customer segmentation in the German market. It includes the name, age, and profession of a persona, their portrait picture, typical activities, their characteristics and behaviors, relevant trends, and a collection of their pocket inventory. It also provides information on demographics and the customer segment. For all other countries there are typical persona blueprints to fill in. Look at the included 'Persona How-To' to get started.

»[Personas are] a distillation of what you've learned based on your field research of actual users, it's a way to express what those users' actual goals are [...].«

ALAN COOPER

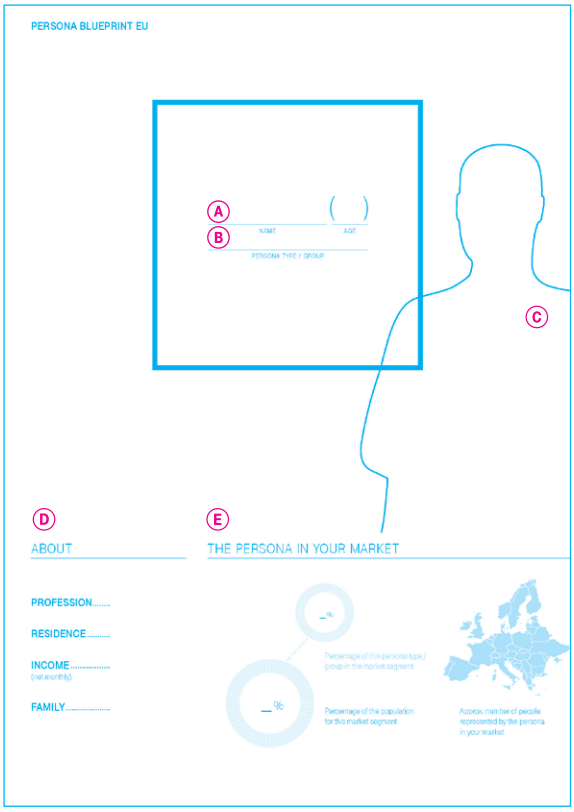
Begin by choosing the market segments you want to focus on in your project and select three to five matching personas. Consider additional personas beyond your primary customers, e.g. a sales person.

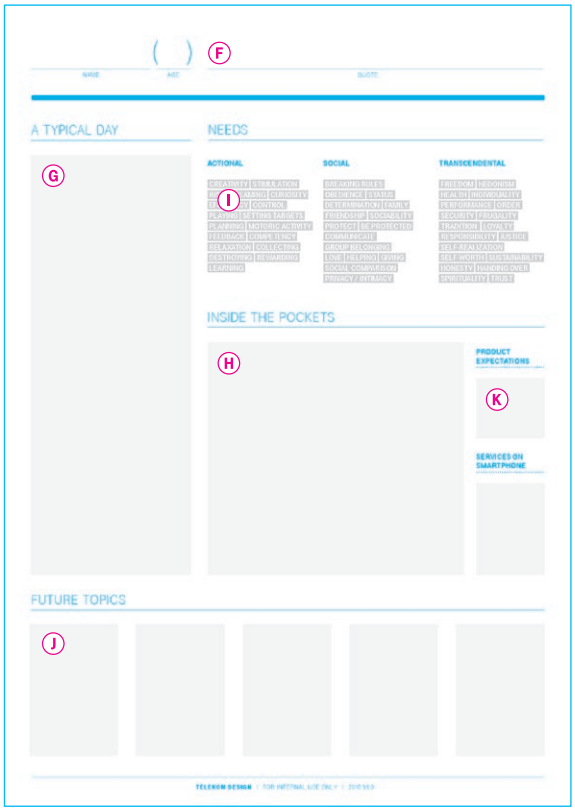
ENRICH YOUR PERSONAS

Enhance your personas according to your specific project. Explorative research methods, like interviews or user observations, will give you more profound insights into your persona's life. Find real customers matching your persona and market segment and get to know them and how they approach problems related to your project.

USE PERSONAS IN YOUR PROJECT

Personas are a powerful tool when used in combination with other methods. Especially suitable are jobs to be done or customer journey mapping.





Ⓐ Give your persona a name and an age.

Ⓑ Define a demographic cluster and needs type.

Ⓒ Make your persona personal by adding a photo of a real person.

Ⓓ State the key demographics for your persona.

Ⓔ Visualize what percentage of the population your persona represents.

Ⓕ Formulate a quote that describes your persona's core belief or perspective.

Ⓖ Describe a typical day in your persona's live.

Ⓗ Make a collage of objects that are important to your persona.

Ⓘ Define your persona's needs.

Ⓙ Define which trends will be relevant for your persona and when they will gain momentum.

Ⓚ Define your persona's product expectations and communication behavior.

EXPLORATIVE RESEARCH METHODS

Gain deeper insights into customer needs.

We can only make a difference, if we know what people feel, think, and need.

WHO CAN DO IT?
Anyone. Research skills are beneficial.

FOR HOW MANY PEOPLE?
2–6

DURATION
2–10 days

YOU WANT

... to develop products and services that make a difference in people's lives.

YOU GET

... qualitative insights that describe your customers' true needs and desires.

GAIN DEEPER INSIGHTS
INTO CUSTOMER NEEDS

This is a set of qualitative research methods. You observe, interview, and follow your customers to unveil their needs and desires. The analysis of your observations will let you derive innovation ideas that directly address the customers' needs.

PREPARE

Thorough preparation is essential for the outcome of your exploration. Start by defining your target group and choose three to five personas that are suitable for your project. Formulate a clear research topic, for example: How do your customers experience the unpacking and installation of their router?

Select one or multiple fitting research methods from the method set. Ⓐ

COLLECT INFORMATION

Gather relevant information for your research project. There are various sources available: existing research, database, trend databases, scientific journals, online sources, or literature.

»People might tell you they are excited about your new product, but when they are in buying situations, their behavior might be totally different.«

ALEXANDER OSTERWALDER

Put yourself in your customers' shoes. Experience your product or service for yourself and try to get a feeling for pain points or highlights. Use methods like mystery shopping as described in the method set.

ANALYZE YOUR FINDINGS

Collect and record as many observations as possible. Ⓑ Group your observations based on the underlying causes and **cluster** similar ones. Ⓒ A customer journey map can help you structure your observations.

Treat similar observations as insights. Summarize them in a concise statement, such as jobs to be done statements, desired outcome statements, or as constraints.

Prioritize your insights and **enrich** them with quotes, sketches, or photos. Ⓓ This makes your results more tangible and easier to understand.

Ⓐ THE METHOD SET

THE CUSTOMER'S VOICE
- Service Safari
- Cultural Probes
- Diary Studies
- Interviews
- User Observations

SELF-EXPERIENCE
- Mystery Shopping

GO OUTSIDE
- Service Safari
- User Observations
- Mystery Shopping

ANALYZE YOUR FINDINGS

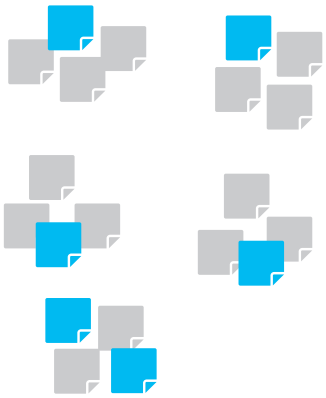
Ⓑ

COLLECT

FILTER

Ⓒ

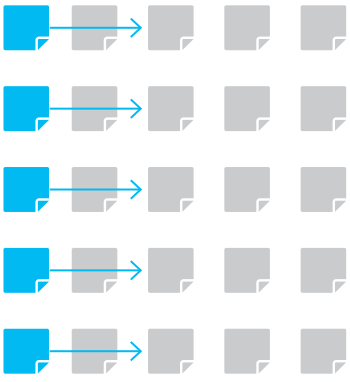
CLUSTER



UNDERSTAND

Ⓓ

PRIORITIZE



ENRICH

THE METHOD SET
FOR EXPLORATIVE RESEARCH

DIARY STUDIES

... let participants record their impressions when using a product or service. Diary studies allow you to gather information as to how customers use a product or service over an extended period of time. They help to understand the context of use.

HOW TO USE

Start by defining the topic of your study. Specify how long and how frequently you want the participants to record their feedback. Decide when and how often you want to conduct check-ups. Ask the participants to document their experiences. Make clear what kind of feedback you are looking for and how they should log their experiences, e.g. in paper diaries or by e-mail. Analyze the diaries. Look for usage patterns and common issues. Conduct follow-up interviews to clarify any open questions. The benefit of this method is that the feedback is given during or right after the interaction with a product or service.

TIPS & TRICKS

- Provide your participants with straightforward documentation tools, allowing them to focus on the experience and not on the documentation process.

CULTURAL PROBES

... are customer-made expressions, such as collages, scrapbooks, or sketches, about their feelings, opinions, and experiences of a product or service. They reveal values or emotions which are sometimes hard to express verbally.

HOW TO USE

Start with a creative session in your team to determine what you want to learn from the participants and define tasks for them. Send your participants cultural probe packages which allow them to document experiences. A pack can contain pens, scrapbooks, postcards, a camera or audio recording devices. Participants can use them to document their feedback. Ask them to complete the tasks within a certain period of time. Afterwards, conduct follow-up interviews to gain deeper insight.

TIPS & TRICKS

- Preparing cultural probes is highly complex. Do not underestimate the preparation required.
- As there is no direct contact between designers and customers, make the probe packages inviting and inspiring.

MYSTERY SHOPPING

... means experiencing a service first-hand. This method allows you to experience the quality of service and discover current problems and hurdles by using the product or service yourself.

HOW TO USE

Step into your customers' shoes and experience any service or interaction first-hand, e.g. by visiting a shop or calling the customer hotline. Try out different scenarios, such as buying a product, contacting customer service, or returning a product. Carefully document everything you observe, e.g. aspects you find frustrating, inadequate, or delighting. Later on, verify your assumptions by interviewing real customers.

TIPS & TRICKS

- Choose a time when your selected location is highly populated to gather sufficient insights.

THE METHOD SET
FOR EXPLORATIVE RESEARCH

SERVICE SAFARI

... involves taking the project team into the field to interview potential customers. It allows you and your team to gather first-hand information about the customers, their views and expectations.

HOW TO USE

A service safari provides the opportunity for your team to get in contact with real and potential customers and listen to their experiences first-hand. It will build empathy towards your customers. During a service safari, you speak with people in public, e.g. on the street or in a shopping mall. Prepare questions in advance and practice the interview situation with colleagues. During the safari, ask people about their opinion of a product or service, let them recount good and bad experiences, collect improvement ideas, etc. Take a note pad and pen, a camera, and/or a dictaphone for documentation.

TIPS & TRICKS

- You can create highlight videos from the recorded interview sessions.
- Pick different locations for your safari to be able to talk to different types of people.

INTERVIEWS

... are structured dialogs with customers. They help you to gain a better understanding of customer behavior, motivation, and their everyday challenges and needs.

HOW TO USE

Come up with a list of key questions about whatever you need input for from your customers. Start with general and easy topics such as product usage and experience. Then continue with detailed questions. Use open questions starting with why, how, where, etc. Listen actively and try not to speak for more than 25 percent of the interview time. Take notes and write down memorable quotes. You can also record the interview in order to better concentrate on the interview itself. Afterwards, analyze your transcripts and suggest improvements.

TIPS & TRICKS

- Your interview should be open enough for new, unprepared aspects. But make sure you get clear answers to your key questions.
- Do not ask leading questions, as you want to obtain genuine answers.

USER OBSERVATIONS

... allow you to record and study how customers behave in real-life situations in their home environment. You can see what problems customers face and how they approach them. You can also experience the context of use.

HOW TO USE

Define the objectives of the observation and decide if you need more than written notes for documentation, i.e. audio or video recordings. User observation takes place in the field and allows you to observe what customers do in context. Observations can either be direct, with an investigator present, or indirect, e.g. via a video camera. Afterwards, write down your impressions. Be careful not to be biased towards the customer's behavior. Ask the participants clarifying questions afterwards.

TIPS & TRICKS

- Try to be as unobtrusive as possible – like a fly on the wall. Do not interrupt or steer the customer's actions.

CUSTOMER JOURNEY MAPPING

Visualize how customers experience our products and services.

Customer journey mapping creates a perfect overview of what the customer sees across our internal silos.

WHO CAN DO IT?
Anyone. Cross-functional groups are ideal.

FOR HOW MANY PEOPLE?
1–5

DURATION
1 day

YOU WANT

… to understand how our customers experience our products and services over a period of time and across touch points.

YOU GET

… an overview of customer interactions and their perceived quality along the customer journey. The customer journey map draws a clear picture of existing problems and areas of improvement.

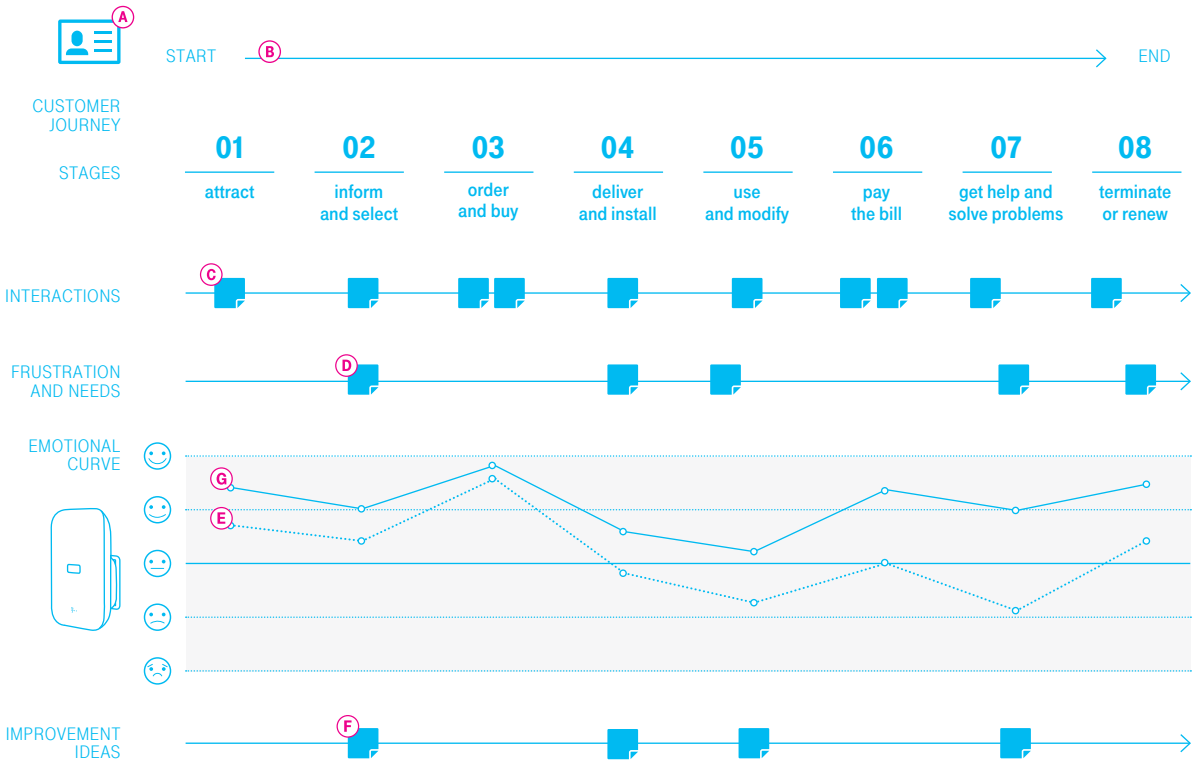
VISUALIZE
THE CUSTOMER EXPERIENCE

Customer journey maps describe the emotions, goals, interactions, and barriers a customer goes through while experiencing a product or service. They are usually created at the beginning of a project and serve as a powerful support tool throughout the design process.

DEFINE THE SCOPE

Customer journey mapping is done with personas. (A)
Select a persona matching your target customer segment. Then customize your journey: Decide on the **starting and end points** and list all touch points in-between. (B)

CUSTOMER JOURNEY MAP



MAP THE CUSTOMER JOURNEY

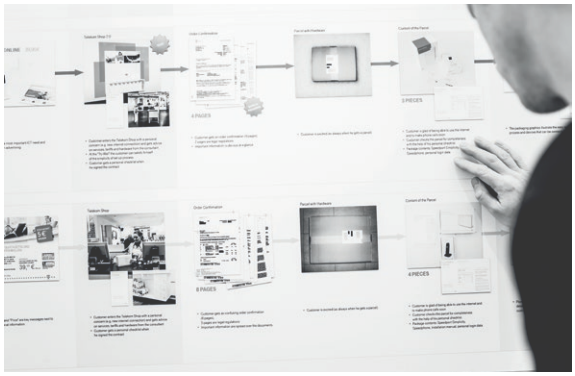
Collect information on the customer segment and their user experience. Start with the persona information provided and complete your picture with additional sources, such as market research, complaint reports, etc. It is fine to start with desktop research. For more profound insights, apply explorative research methods.

»It takes twelve positive experiences to make up for one unresolved negative experience.«

RUBY NEWELL-LEGNER

Start with mapping out **customer interactions** for each touch point in the journey. Ⓒ Document them with scribbles, photos, and screenshots. Then, write down the customers' **frustrations and needs**. Ⓓ You can accomplish this task either by yourself or within a team session.

With the development of the Speedport Neo, customer journey mapping facilitated a simplified experience: Our customers now need fewer steps to bring the router into service – with only one cable.



The customer journey shows how many steps a customer has to take in order to bring a router into service: Unpack, read the user manual, sort cable, hook up, and install.

EVALUATE THE JOURNEY

Map the current performance and customer satisfaction on an **emotional curve** to reveal highlights and lowlights. Prioritize critical experiences, such as pain points and service gaps. Ⓔ

Gather **improvement ideas** that address customer needs, remedy pain points, and fill the experience gaps you detected. Ⓕ Map out your target customer journey to highlight the areas of improvement.

You can document the implications of your target journey with additional rows. This allows you to match improvements to concrete measures and to identify stakeholders. Differentiating between frontstage improvements, that are visible to the customer, and invisible backstage improvements, such as infrastructural changes, helps to set up an implementation plan. Also consider impacts on related internal and supporting processes. You usually create a customer journey map at the beginning of a project, but it is also useful throughout the design process.

ADDITIONAL STEPS

INTEGRATE COMPETITIVE BENCHMARK

Use customer journey mapping to benchmark the experience of your competitors' products and services.

MONITOR PROGRESS

Monitor and communicate the improvement progress with the customer journey map. Ⓖ

POST-LAUNCH REVIEW

Evaluate the project results by comparing the actual with the targeted experience. Measure the progress you have achieved.

JOBS TO BE DONE

Uncover the needs of your customers.

» Customers want to ‘hire’ a product to do a job [...] the job, not the customer, is the fundamental unit of analysis for a marketer who hopes to develop products that customers will buy ... «

CLAYTON CHRISTENSEN

WHO CAN DO IT?
Experts and specialized agencies.

YOU WANT

... to understand the underlying tasks customers are trying to solve when using your product or service, and how they evaluate the outcome.

YOU GET

... a list of customer tasks, job(s) to be done, relevant constraints, and the desired outcomes. These outcomes allow you to identify areas of improvement and to come up with innovative ideas.

UNCOVER THE NEEDS
OF YOUR CUSTOMERS

The jobs to be done method takes a different perspective towards finding sensible innovation measures. Instead of looking at products or services, it helps to understand what needs customers have and what goal they want to achieve by using a product. In short: what jobs they actually want to get done.

FIND OUT NEEDS AND JOBS

First, you need to interview and follow customers to understand which jobs they want to get done. Select the customer segment and pick personas to define what customers to interview. You can also use other explorative research methods, such as cultural probes, user observation, or customer journey mapping, to find out about jobs to be done.

DESCRIBE JOBS

Use your findings to uncover associated jobs. The **job canvas** will provide you with a pattern for describing it accurately. A **job** combines behavior and its context – a triggering event (when and where), needs (what) and goals (why).

Use the following sentence structure to state a job:

WHEN _____ I WANT _____ SO I CAN _____ .

Here's an example job statement from **MyWallet**:
When I go out for dinner, I want to leave my wallet at home, so I can carry as little stuff as possible.

After listing the jobs to be done, uncover the underlying motives. Jobs have functional, personal, and/or social goals. Try to identify and document these roles:

- A **functional goal** is to complete a task or solve a problem (e.g. pay everywhere without card). Ⓐ
- A **personal goal** applies if the customer seeks a personal emotional state (e.g. feeling free and secure). Ⓑ
- A **social goal** covers how customers want to be perceived by others (e.g. appear competent and up-to-date). Ⓒ

In addition, capture **current behaviors** and **constraints**: Ⓓ

- How do the customers currently solve the problem?
- What prevents customers from getting jobs done satisfactorily or adversely impacts the outcome?

JOB CANVAS

JOB TITLE

JOBS TO BE DONE

DESIRED OUTCOME

FUNCTIONAL ROLE Ⓐ

PERSONAL ROLE Ⓑ

SOCIAL ROLE Ⓒ

CURRENT BEHAVIOR Ⓓ

CONSTRAINTS

BREAK DOWN THE CORE JOB AND CREATE A JOB MAP

Deconstruct the job into smaller steps to better understand in detail what customers are trying to get done. The result is a so-called **job map** which lists the core job and smaller steps of the core job. The job map provides an overview of the different jobs and the steps a customer currently takes to complete a job. (E)

UNCOVER OPPORTUNITIES

Next, you want to identify and document the **desired outcomes** a customer expects for each job and its steps. (F) Desired outcomes provide a foundation for improvement and innovation.

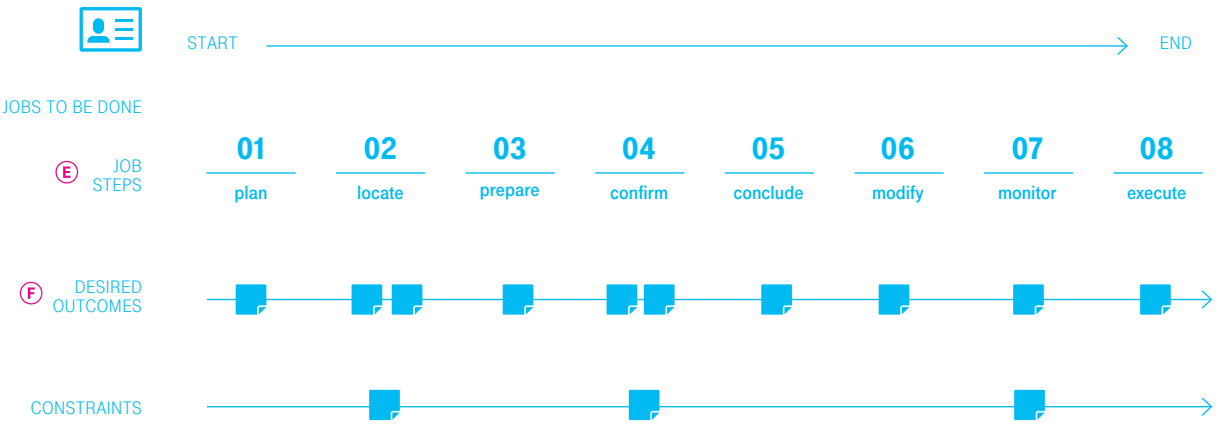
In order to prioritize jobs to be done, ask customers to rate the importance of each job and desired outcome, and how well your current offering fits in their view. If a job is common, important and people are dissatisfied with the products they currently use for the job, then the job presents more of an opportunity.

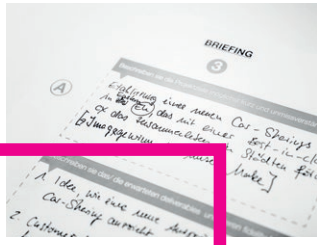
In addition, ask yourself the following questions:

- Are there job steps not yet addressed by existing products or services?
- Is it possible to eliminate one or several steps?
- Can the job be executed more efficiently?
- Are there similar jobs in a different context? What can I learn from that context?
- Do some customers struggle more than others? If so, why?

With the customer research results and your own assessment, you will find a set of areas for improvement. This will help you to come up with new, relevant use cases to add to your solution, and/or new ideas that are based on desired outcomes.

JOB MAP





CREATIVE BRIEFING

Define and document
your project's objectives.

The key to effective briefing is to provide a simple insight that can be communicated memorably. Know exactly what you want. Then tell the agency as clearly as possible.

WHO CAN DO IT?
Project owners

FOR HOW MANY PEOPLE?
As many as required

DURATION
1–2 days

YOU WANT

... to communicate your project's scope to design partners.

YOU GET

... a document summarizing the project scope and all information your design partners need. The brief also helps you to stay focused during the design process.

DEFINE AND DOCUMENT
YOUR PROJECT'S OBJECTIVES

Creative briefing is a means of communicating to your project partners what results you expect and how you plan to achieve these. There is no one-size-fits-all format for creating the perfect design brief. However, there is a list of key facts a useful creative brief should include. It should be concise and to the point, and it should be no more than a couple of pages long. Even though a creative brief is addressed towards design partners, it is also applicable and relevant for other project partners. The following steps will help you to create a clear and informative brief.

OUTLINE THE PROBLEM

First, collect information related to your project. A creative brief should outline the challenge to its recipients and explain why you are asking them to find a solution.

»The creative brief is a blueprint, a guide, a source of inspiration. It details our objectives, audience, message, timing, and budget. In short, the what, who, where, when.«

EDWARD BOCHES

Specify the target customer group and what the solution should offer them. Also explain the associated business objectives, the strategic relevance of this project, and your market. In doing so, you will help your design partners understand the broader context of the project. Next, try to summarize the problem by creating a simple and concise problem statement. Clearly state what the solution should achieve – but without anticipating a specific solution. Answer the WHO, WHAT, and WHY parts to outline the problem.

DEFINE THE OUTCOME AND THE WORK MODE

Next, answer the HOW and WHEN aspects of your brief. Describe in detail what you need from your design partners. The provided input can include concepts, wireframes, visual design specifications, key screens, prototypes, etc. Last but not least, define the project plan: include clear objectives, validation criteria, timelines, feedback loops, and roles.

GET STARTED

Select the internal or external design partners. Kick off the project in a meeting or workshop with all involved parties. Ask partners to deliver a debrief to ensure that you have a mutual understanding.

QUESTION YOURSELF

Ask yourself the following questions to reassess your brief:

- Can someone who is not employed at Deutsche Telekom understand your brief?
- Which guidelines do the partners need to follow?
- What constraints do partners need to be aware of?
- What tools do you need for collaboration?
- How involved do you want to be in the process and how do you want to get involved?
- How will you judge the output?
- What is not in scope? What are not 'to dos'?

FRAME THE PROBLEM

WHO?

- What is the target customer segment?
- Which personas do I focus on?
- Why do my (potential) customers want/need this?
- What are their assumed problems?

WHAT?

- How should the solution help our customers?
- What are the customers' problems?
- What is the expected outcome of the project?
- What are measures of success?

WHY?

- What are the business objectives of this project?
- What is the strategic relevance of this project?
- What are competing solutions?
- What differentiates us from our competition?

DEFINE THE OUTCOME

HOW?

- What deliverables do you expect from your design partner?
- What level of fidelity do you expect from them?
- What is needed when for validation?
- What are the mandatory formats, specifications and guidelines?
- What platforms, environments, frameworks shall be used?
- What people are involved? What are their roles?
- What is the budget situation?

WHAT?

- What is the time line and project plan?
- What deadlines are there?
- What working mode do you expect?
- When do you plan review cycles?

IDEATE

Turn insights
into ideas.

The ideation phase is about translating customer, business, and technology insights into relevant ideas. The following methods help to come up with new ideas and to explore and evaluate them. Use the methods to b**rainstorm and to think outside the box to find answers worth exploring.**

IDEATION METHODS

Encourage creativity
to generate great ideas.

Good ideas don't come from nowhere. They are the result of methodical and collaborative work.

WHO CAN DO IT?
Anyone.
Interdisciplinary teams are ideal.

FOR HOW MANY PEOPLE?
3–10

DURATION
Half a day

YOU WANT

... to find ideas and solutions.

YOU GET

... a number of ideas which are sorted, evaluated and combined to create a set of possible solutions.

ENCOURAGE CREATIVITY

Ideation methods offer a structured and coherent approach to unfold creativity.
They help to generate ideas and sort, consolidate, and refine them into possible concepts.

PREPARE

Start by specifying the problem you want to approach. Review the associated insights and customer needs. Provide background material, for example the results from methods like customer journey mapping, jobs to be done, etc.

Summarize the problem in one or two sentences, so you can always refer to it and verify whether you are on the right track.

»Regular brainstorming is as critical to an organization as regular exercise is to your health. It creates a responsive, innovative culture.«

TOM KELLEY

IDEATE

Pick one or multiple ideation methods from the method set. Generate as many ideas as possible in the beginning without criticizing the results at this stage – you can refine them afterwards. Choose the best ideas during refinement. (A)

EVALUATE AND REFINE RESULTS

After collecting a set of ideas, start evaluating and narrowing down the selection. Choose those that address your problem best. Let each team member explain his or her ideas to the whole group, so that everyone gets a common understanding.

As a next step, sort the ideas. Try to identify common themes and categorize them. Arrange the sticky notes in **affinity diagrams** for a better overview. (B)

Discuss how the ideas and their associated categories help to solve the stated problem. Use evaluation criteria to rank and prioritize the ideas, for example fit to the problem, feasibility, or the customer need. You can use a rating matrix or dot voting to narrow down your selection and to remove inapplicable ideas.

Rating matrix
Rank ideas on a scale of one to five for each of the defined evaluation criteria.

Dot voting
Have participants pre-select ideas with the highest priority or which best meet the evaluation criteria. Vote on those ideas using a limited number of sticky dots (i.e. votes) that have been handed out to each participant.

Once you have a prioritized list of ideas, start making them tangible, e.g. through prototyping. You can also try to combine and alter this set of ideas to come up with new ones.

(A) THE METHOD SET

BRAINSTORM IDEAS
- Brainwriting
- Laddering
- Attribute Listing
- The Anti-Problem

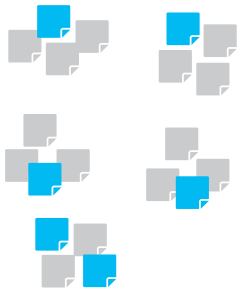
REFINE IDEAS
- SCAMPER

EVALUATE IDEAS
- Six Thinking Hats

Use sticky notes to document your ideas. For better results, consider the IDEO brainstorming rules.

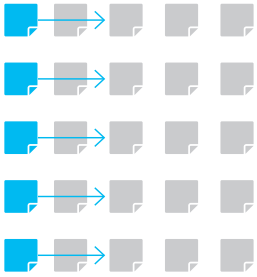
1. Defer judgment.
2. Encourage wild ideas.
3. Build on the ideas of others.
4. Stay focused on the topic.
5. One conversation at a time.
6. Be visual.
7. Go for quantity.

AFFINITY DIAGRAM Ⓑ



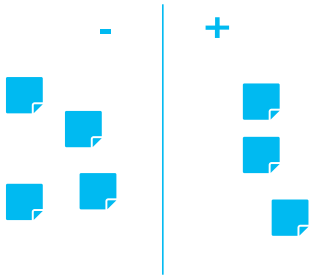
AFFINITY GROUPS

Cluster similar ideas. Give each affinity group a clear title describing the overall concept.



ELABORATE CONCEPTS

Elaborate and refine each affinity group with supportive ideas into concepts. Separate actionable from vague ideas.



PITCH AND SELECT

Present your concepts, e.g. in an elevator pitch format. Evaluate and select the most promising concepts, e.g. via dot voting or rating matrix.

THE METHOD SET
FOR EXPLORATIVE RESEARCH

BRAINWRITING

... is a method used to generate ideas with a number of participants in a group setting. It allows those included to improve and build upon each others' ideas.

HOW TO USE

Define a topic for brainwriting. Then select 4–8 participants and let them write down their ideas for a short period of time. Afterwards, let them pass on their notes. The ideas in front of them now serve as inspiration for creating new ones. This process can be repeated several times, usually until each set of ideas has been visited by each participant. Pick the most promising ideas with the group afterwards.

TIPS & TRICKS

- Quantity leads to quality. Tell the participants not to hold back.
- A well known variant is the 6-5-3 method: 6 participants have 5 minutes to generate 3 ideas each. Afterwards, they pass their ideas around. Each round has the same set-up: 5 minutes for 3 new ideas.

ATTRIBUTE LISTING

... is a creativity technique which uses a list of descriptive attributes. It allows you to come up with ideas for improving existing solutions.

HOW TO USE

Start by naming or describing a product or service you want to improve. Then collect a list of attributes that describe the targeted improvements. List as many attributes as you can. Understand the benefit of each attribute and pick the most interesting or important ones. Next, brainstorm ways to make these attributes become real. Think of possible modifications or alternatives to achieve these improvements. Combine them to enhance the current solution or create alternative concepts.

TIPS & TRICKS

- Use a competing solution to come up with more differentiating attributes.
- Try randomly chosen combinations of attributes to find new perspectives.

LADDERING

... is an interview technique that uses a predefined set of questions. It allows you to find out what positive and negative associations participants have with a product or service. Laddering can be done with team members or customers.

HOW TO USE

Start by explaining a product or service to the participants and interview them afterwards. Use the laddering questions to structure the interview:

1. What is it (the product or service)?
2. What does it do?
3. What benefit do you get from it?
4. Why is this important to you?
5. What personal value(s) does this tap into?

Validate your assumptions, based on what you hear. Ask yourself what insights can be derived from the participants' answers. Afterwards, brainstorm how to translate findings into improvement ideas.

TIPS & TRICKS

- For the fifth question, prepare a list of universal values (such as peace of mind or trust).

THE METHOD SET
FOR EXPLORATIVE RESEARCH

SIX THINKING HATS

... is a method of discussing ideas by looking at them from different perspectives. It helps to examine an idea in depth and lets you check how convincing it is.

HOW TO USE

Choose six participants and conduct a group discussion in which each participant assumes a different role. The roles are usually represented by different colors:

- Management (blue)
- Information (white)
- Feelings, intuition (red)
- Creativity (green)
- Advantages (yellow)
- Warnings (black)

Explain the discussion topic. Each role contributes a different angle to the discussion. This method helps you to take a perspective you might not have taken and uncovers arguments you might otherwise have missed.

TIPS & TRICKS

- Don't be afraid to remind people of their role if they 'slip out of character'.

SCAMPER

... is a structured idea evaluation method that uses a simple checklist. It allows you to build upon existing ideas and to come up with new, alternative ideas.

HOW TO USE

Start by stating the problem you want to improve or change. Break down the idea into smaller chunks and look at them one after the other. Then use the SCAMPER questions

- **S**ubstitute something
- **C**ombine it with something else
- **A**dd something to it
- **M**odify or magnify it
- **P**ut it to some other use
- **E**liminate something
- **R**everse or rearrange it

These help you think differently about your problem.

TIPS & TRICKS

- Go through questions sequentially or stay on one question until you have generated as many ideas as possible.

THE ANTI-PROBLEM

... is a method of finding new ideas by turning an existing problem upside down. It helps you to think outside the box by reversing the initial question.

HOW TO USE

Start to outline the challenge you want to address, e.g. increase online sales. Invite a group of participants. Ask them to solve the problem that is the exact opposite to the initial challenge, e.g. how to keep customers from buying online. Give them about 30 minutes to find a solution. After the brainstorming session, let the participants share their ideas and discuss the results. Identify which solutions for the anti-problem offer a new perspective on the initial question or provide approaches to solve it.

TIPS & TRICKS

- Do not hold back: The more extreme the ideas, the better.

ELEVATOR PITCH

Convey an idea in a nutshell.

The clarity of the elevator pitch helps to get quick stakeholder buy-in.

WHO CAN DO IT?
Anyone. No prior knowledge required.

FOR HOW MANY PEOPLE?
1–5

DURATION
30 minutes to one day

YOU WANT

... to create a short and concise summary of your product or service idea.

YOU GET

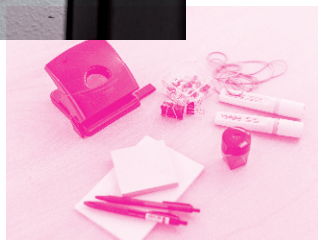
... a short summary of your idea and its value proposition. It enables you to convey your idea to stakeholders in the shortest possible manner.

CONVEY
AN IDEA IN A NUTSHELL

An elevator pitch helps you to condense an idea to its core by focusing on the target customers and their key needs. It uses a simple checklist which contains all relevant aspects of your idea.

PREPARE

First establish a good understanding of your idea by using explorative research methods and ideation methods. Summarize the key findings such as customer needs, opportunities, risks, etc. Consider your target audience: What drives them? What's their angle?



FOCUS ON THE ESSENCE

Be clear: An elevator pitch needs to be understood by anyone. Use the elevator pitch template to define both the identified problem and a potential solution. Start with the problem definition. Who are the target customers that are frequently facing the problem? Describe the problem and the context in which the problem occurs in a few words. Based on your insights, state what a good solution should be able to offer to your target customers. Continue with describing your solution. What are its benefits and the key differentiators? Also mention competing solutions and their shortcomings. Last but not least, describe the differentiating factor of your solution: In what way is your solution better than that of the competition?

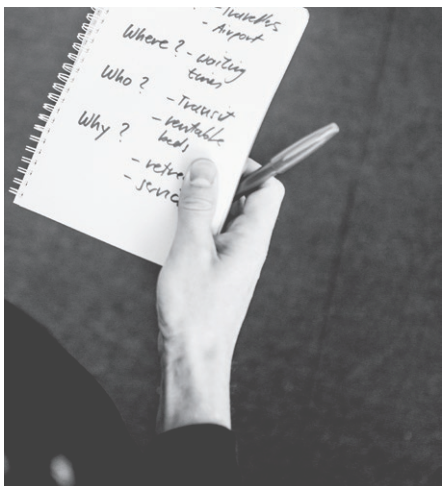
»Ideas alone are not scalable. Only when an idea is put into words that people can clearly understand can an idea inspire action.«

SIMON SINEK

Check the strength of your elevator pitch:

- Does it address an urgent need?
- What are competing ideas?
- Can you prove your assumptions?
- Is it specific to your field or industry?

After you have formulated your statement, get feedback on your idea to identify where you can be more precise. Refine and iterate it a few times. You want it to be as unambiguous and to the point as possible.



PROBLEM DEFINITION

OUR

TARGET CUSTOMERS/PERSONAS

HAS THE PROBLEM, THAT

PROBLEM DESCRIPTION (A)

IN

CONTEXT

A GOOD SOLUTION SHOULD ACHIEVE THAT

IMPROVEMENT/BENEFIT FOR CUSTOMERS (B)

AND AT THE SAME TIME THAT

OBJECTIVE/BENEFIT FOR TELEKOM (C)

SOLUTION IDEA

OUR SOLUTION TO ADDRESS THIS PROBLEM IS

DESCRIPTION OF SOLUTION (D)

UNLIKE

PRIMARY COMPETITIVE ALTERNATIVE (E)

OUR SOLUTION IS

STATEMENT OF UNIQUE DIFFERENTIATION (F)

(A) What is the problem?
(B) What would help the customers?
(C) What are customer and business benefits?

(D) What is our proposal to solve the problem?
(E) In what way is our solution better than the competition?
(F) What makes our solution unique/competitive?

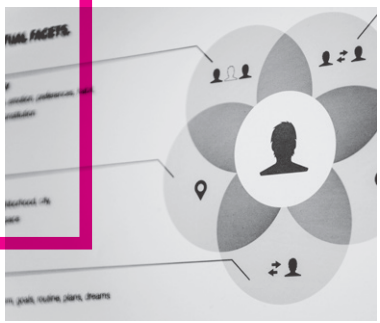
CREATE

Explore and validate
design concepts.

The creation phase is about defining and validating design concepts. The following methods support you in transforming ideas into tangible prototypes and designs. Use the methods to **turn your ideas into tangible and verifiable concepts.**

EXPERIENCE TARGET PICTURE

Create a tangible design concept.



The experience target picture illustrates what can and should be achieved.

WHO CAN DO IT?
UX designers

FOR HOW MANY PEOPLE?
3–4

DURATION
2–8 weeks

YOU WANT

... actionable customer insights to derive the target experience of your product or service.

YOU GET

... key findings based on customer insights and customer requirements. The target picture captures the design rationale and gives you first concept ideas which can be presented and evaluated.

CREATE
A TANGIBLE DESIGN CONCEPT

The experience target picture summarizes the research findings of the Understand phase. It describes targeted customers, current situation, market trends and insights, the company strategy for this project, and key findings. Furthermore, this method explains the proposed design solution. The target picture offers orientation for the Create and Develop phases. A target picture can describe a singular product or service, a product family, or even the interplay of several services.

RESEARCH

Meet your customers and conduct explorative research studies. Do not rely on market studies and quantitative research results only. Analyze the current customer experience of your product or service and sum up your industry's trends. Take the Telekom strategy into account and see how it can be applied to your product or service. Ⓐ

DOCUMENT YOUR INSIGHTS

Document the findings and insights in six posters to cluster the information. Each poster focuses on a single topic:

- Status quo and problems today
- Customer needs and insights
- Trends, drivers, and attractors
- Market and industry insights
- Company strategy and targets
- Key action points and experience targets

The posters will help you identify any knowledge gaps you might still have. Use the customer, market, and Telekom insights to describe the current situation. Find a common theme, formulate a problem, and use the insights to suggest a solution. The posters will provide an accurate derivation of how you came up with your idea.

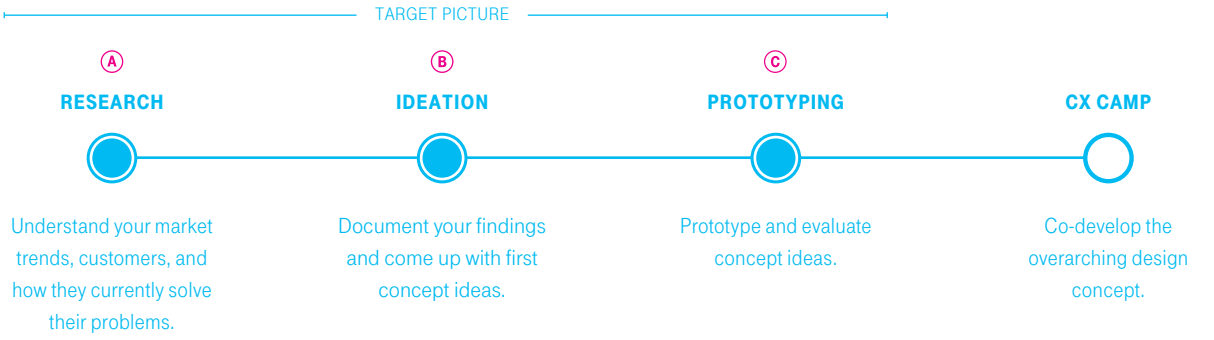
»You will never be able to hit a target that you cannot see.«

ROBIN SHARMA

COME UP WITH A CONCEPT

Create a concept to showcase your solution idea. Use one or multiple ideation methods to visualize your concept and to make it tangible. Identify the most essential customer journeys and show how a customer will undertake them in the future. Explain how your solution will solve the customers' problem. State design principles that will help to guide the design process. Ⓑ

STEPS TO CREATE A TARGET PICTURE

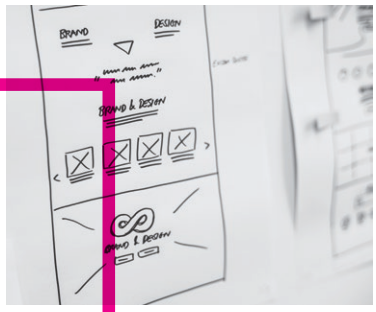


MAKE IT TANGIBLE

Develop a demonstrator to showcase your concept. Make the envisioned customer experience tangible. Use real hardware and software but try to ignore current limitations that are based on current systems and processes. ©

Share the target picture with others. Explain your design rationale and present your concept.

Invite experts to review and comment on your solution with their domain knowledge. Put the posters on the wall for everybody to see them and to get additional feedback. Test the demonstrator with real customers to find out whether your assumptions and suggestions were correct. Find areas of improvement and reiterate.



WIREFRAMING

Structure and define user interfaces.

Wireframing enables you to explore and compare the user guidance of several concepts and options.

WHO CAN DO IT?
UX designers

FOR HOW MANY PEOPLE?
1–3

DURATION
Depends on the complexity of the solution

YOU WANT

... to explore and define the content, structure, and behavior of your product's or service's user interface.

YOU GET

... an overview of the screen flow and the dependencies of the different screens. Wireframes give you a clear understanding of how the user interface will work.

STRUCTURE AND DEFINE
USER INTERFACES

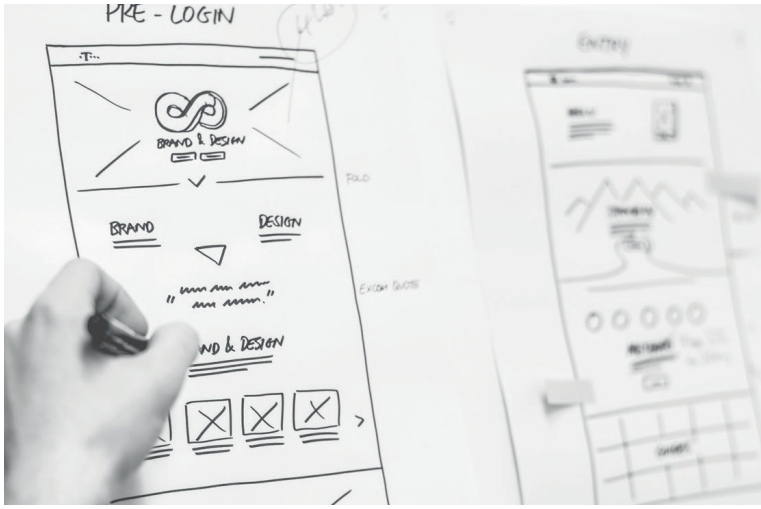
Wireframes depict the layout of a user interface by describing the structure, content, and behavior of a screen – or parts of it. They show the relationships and hierarchy of page elements, explain interactive elements, their relationships to each other, and how the user will get feedback. They also contain some of your product's or service's content. Its visual design is not in focus.

CREATE WIREFRAMES

Sketch wireframes by hand, use graphic software or employ prototyping tools. The level of fidelity depends on your available time and goals. In the beginning, use wireframes to:

- explore design alternatives for a single screen
- provide an overview of different screens
- show a screen in different stages (during an error, with new data, etc.)

Later in the process, use wireframes to specify your solution's user interface in more detail.



Wireframes define the key elements for a user interface.

USE WIREFRAMES

Wireflows allow you to visualize the steps a customer needs to take for a specific use case. Explore and show how the user interface behaves with customer interactions, displays errors, etc. Create wireflows by combining several wireframes, highlighting the interactions, e.g. mouse clicks or gestures, and the response of the user interface by pointing to the next wireframe.

<FULL NAME>

Click dummies or mock-ups let you showcase and explore the user interface of your product or service before development has started.

Turn wireframes into interactive prototypes with dedicated prototyping software. Define interactive areas and elements and link wireframes together. Try out prototypes directly on the target device, e.g. a mobile phone. Use interactive prototypes for user tests and coordination with the realizing departments or suppliers.

User interface specifications are often a key deliverable in software projects. Use prototyping software, like Axure, that allows you to turn your wireframes into specifications.

Wireflows provide an overview of how multiple wireframes are connected. They illustrate one or multiple paths through the user interface. Wireflows highlight what interface elements are used and how the system responds.

PROTOTYPING METHODS

Make ideas tangible.

Prototypes help to understand the problem in analysis, to visualize in creation, and to improve in validation.

WHO CAN DO IT?
UX designers

FOR HOW MANY PEOPLE?
1–4

DURATION
Depends on the ideas

YOU WANT

... to find feasible solutions for a high-level product or service idea.

YOU GET

... a tangible representation of your ideas. Prototypes let you explore, discuss, and evaluate your different concepts.

MAKE
IDEAS TANGIBLE

Prototypes can be anything from a first rough sketch to visualize an idea, over a click dummy, to a physical hardware mock-up. Prototypes allow you to understand, evaluate, and present a concept. The earlier you turn your idea into something tangible, the better you can evaluate it. Thus, prototyping should be performed throughout the design process.

FIND SOLUTIONS

Early in the design process, you want to understand the problem you are trying to solve, work towards a solution, agree on the scope of the project, or manage expectations. Later on, you want to test your concept with users for feedback, get a decision on the general design direction, or present the targeted experience.

Use prototyping methods as:

- a research tool: explore different design alternatives.
- a presentation tool: communicate the basics of your concept.
- a concept assessment tool: validate your design directions from the start.

APPLY

Form and fidelity of prototypes vary according to their requirements. They can be rough outlines of a concept or mimic the target functionality and visual design of the product or service. Use low-fidelity prototypes early in the process since they are quick and easy to create. Begin with sketches, illustrations, or storyboards and scale up the level of fidelity later on in the process.

»You can use an eraser on the drawing table or a sledgehammer on the construction site.«

FRANK LLOYD WRIGHT

A **combination** of hardware and software, such as smart devices or fixed line phones.

If your prototype still looks rough and like an initial concept, it will invite people to give feedback. Later on, use prototyping methods like paper prototyping or storyboarding as described in the method set. Ⓐ

PREPARE

First, decide on what you need to understand, express or validate: Formulate a goal and list your assumptions. Ask yourself what the essential areas are that you wish to explore, include and communicate. Your goal is to get feedback on your concept and to identify areas of improvement based on the feedback. Decide what visual representation and what level of interactivity will yield the best results. Think about the target audience: What are their expectations and levels of knowledge?

Ⓐ THE METHOD SET

LOW FIDELITY

- Paper Prototyping
- Sketching
- Prototyping

HIGH FIDELITY

- Click Dummies
- Storyboards
- Video

SHOWCASE CONTEXT

- Storyboards
- Service Prototyping
- Video
- Prototyping

THE METHOD SET
FOR PROTOTYPING

STORYBOARDS

... are sequences of sketches or photos that show how a product or service is used. Storyboards illustrate key interactions, the highlights and lowlights of the usage and thus help to communicate a concept. They are well suited to illustrate how customers encounter different touch points of a service.

HOW TO USE

Use the customer journey map to define the scope of your storyboard. Focus on one customer and on how he or she interacts with your solution. Use the storyboard to show key interactions and highlight typical problems. Additionally, show the context of use and point out social, environmental, and technical factors impacting the customer. Annotate your sketches with explanations if needed. Use storyboards to explain customer problems and to build empathy with the customer's situation. Storyboards can be used throughout the design process to explain, explore and evaluate your concepts and solutions.

TIPS & TRICKS

- Do not think your drawing skills are insufficient. Your storyboards do not need to be fancy.

SERVICE PROTOTYPING

... allows you to play out how a service works. Service prototyping lets customers interact with a service. It can be used to visualize and evaluate different steps of the customer journey to find areas for improvement.

HOW TO USE

Place the prototype where it will actually be used and test it there, e.g. in a shop. This allows you to see how external factors interfere. If the setting is complex or cannot be used, recreate it on a miniature scale. Re-enact the steps of a customer journey with figurines. Gather participants' feedback on the service. If you are holding a customer workshop, let the participants play out scenes and allow them to make adjustments to tailor the setting to their needs. Film how the service works and show the movie to colleagues, project members, and stakeholders to gather feedback.

TIPS & TRICKS

- Creating a playful environment helps to engage participants.

PAPER PROTOTYPING

... helps you to quickly and cost-efficiently present and evaluate your concepts. Paper prototypes allow you to get customer feedback with minimal effort in a small amount of time.

HOW TO USE

Sketch your ideas on paper or print out your concept. Focus on the most important use cases and don't go into too much detail. Instead, show the structure, the content, and the basic interactions of your concept. Present your paper prototypes to customers and ask them to comment. You can even encourage them to modify them, e.g. sketch improvements. Use the findings to enhance your concept afterwards. Paper prototypes are very useful early in the project, when you want to quickly explore different user interface variants.

TIPS & TRICKS

- Some people might have difficulties with abstracting the paper prototype. Therefore, make sure that the prototypes are easy to grasp.

THE METHOD SET
FOR PROTOTYPING

SKETCHING

... means thinking visually with pen and paper. Sketches allow you to visualize your ideas and concepts. They are inexpensive, easy to create and the fastest way to explore ideas and to make design concepts tangible.

HOW TO USE

Sketching helps to understand a problem and to come up with a feasible solution. It allows you to explore different options in little time. Sketching also lets you reflect your ideas and present ideas to others. Use sketches to visualize a design concept, a user interface, or parts of them. Sketch different design options and discuss their pros and cons. If they look rough and incomplete, they encourage others to give feedback, and also communicate that you are still in an early development stage.

TIPS & TRICKS

- Don't make your sketches too neat – they are good enough when they enable you to convey your idea.

CLICK DUMMIES

... show parts of a user interface and contain interactive clickable elements, such as links or buttons. Click dummies allow you to try out and showcase a user interface during the concept phase.

HOW TO USE

Begin by defining customer journeys that should be part of the click dummy. Use wireframes or existing screens and make them interactive by using dedicated prototyping software. Depending on your goal, choose the level of fidelity for your click dummy. Wireframes are good enough for some purposes, while for others the final visual design is appropriate. Use click dummies to present your concept to stakeholders and customers. Walk them through the click dummy, or you can let them explore the click dummy by themselves.

TIPS & TRICKS

- Don't spend too much time on building the click dummy, as it is likely to change based on your findings.
- Avoid placeholders and fake text, as they are distracting. Realistic data will give more accurate results.

VIDEO

... is an excellent means of conveying the aspects of a concept. Use it to visualize the customer problems and challenges or to explain possible solutions.

HOW TO USE

Begin by deciding on a purpose for your video. Would you like to highlight an existing problem or present a solution? Think about the audience and their prior knowledge. What do you need to explain in the video, and what is already known? Write down a handful of key messages your video should convey. Use these to draw up a storyboard. Focus on the customers and how they experience products or services. Include customer feedback you collected in previous interviews. Before creating the video, show the storyboard to peers and check if your story and its messages are understandable.

TIPS & TRICKS

- Take a cost-saving approach, e.g. use your smartphone to shoot short video sequences and test the response before booking an entire film crew.

VALIDATION METHODS

Evaluate ideas and design concepts to ensure customer centricity.

YOU WANT

... to validate assumptions about your customers or solution concepts during the design process.

YOU GET

... findings and suggestions to improve early concepts as well as existing products or services.

Validation helps to avoid mistakes that would be expensive in the long run.

WHO CAN DO IT?
Validation experts

EVALUATE
IDEAS AND DESIGN CONCEPTS

Validation needs to take place throughout the design process. Start with validating assumptions about customer needs and expectations. Later, review concepts, drafts, and prototypes. At the end of the design process evaluate how well your solution fits the problem. Note, if you don't test your solution before a launch, you will test it with real customers.

DEFINE QUESTIONS

Begin by collecting and formulating questions to be answered, for example about your customers, the problem you are trying to solve, or your (envisioned) solution. This can be done by yourself or together with other stakeholders. Use input from the following methods: personas, jobs to be done, customer journey mapping, trend analysis. After you have compiled a list of questions, prioritize them from critical to least critical.

CHOOSE VALIDATION METHODS

Next, you need to define how these questions can best be answered. There are various validation methods allowing you to validate assumptions, identify and mitigate risks, as well as discover potential for improvement. Some of them need expert support; some of them can be done by anyone. Some require customer participation while others can be done without. Qualitative methods yield insights about underlying motivations and reasons of your customers, while quantitative methods allow you to get statistically significant information.

»Your customers are the judge, jury, and executioner of your value proposition. They will be merciless if you don't find fit!«

ALEXANDER OSTERWALDER

Start with methods that will provide quick results, especially early in the design process. Choose more extensive methods later in the process. Select the best suited validation methods from the method set. Prepare test material, such as prototypes or interview guidelines. Ⓐ

EVALUATE

Keep an open mind during validation. Look for areas of improvement and gather new insights – especially when customers are involved in the validation session. Test different concept variants to find out which aspects work best. Document your findings and ideas for improvement.

TURN ASSUMPTIONS INTO INSIGHTS

Present and discuss the findings in a meeting with stakeholders to get a common understanding and to define next steps. Adjust your assumptions if needed. Improve your concept or solution based on the findings. If possible, re-evaluate several times throughout the design process. Finally, share your findings with colleagues as input for similar products or projects.

Ⓐ THE METHOD SET

INVOLVE CUSTOMERS
- User Testing
- Expert Reviews
- A/B Testing

EVALUATE IDEAS AND CONCEPTS
- Focus Groups
- RITE Testing
- Expert Reviews

EVALUATE FINISHED SOLUTIONS
- Online Survey
- A/B Testing

THE METHOD SET
FOR VALIDATION

FOCUS GROUP

... is a qualitative research method where people from your target group take part in a guided discussion. Focus groups allow you to understand the opinions, feelings, and attitudes of your customers.

HOW TO USE

Use focus groups to collect insights, to pitch ideas, and to get customer feedback on concepts. Prepare the focus group by identifying the main objective and developing corresponding questions. Carefully select the participants based on your previously defined personas and target segments. The group size is usually 6-12 people. The power of focus groups lies in the group dynamic under the guidance of an experienced moderator. During the focus group, the moderator asks the prepared questions, facilitates discussion, and ensures that each participant has a chance to answer questions.

TIPS & TRICKS

- Use mock-ups or high-fidelity prototypes to stimulate the discussion and gather insights for further improvements, e.g. workarounds currently used by participants.

USER TESTING

... involves interviewing and observing customers to evaluate how well a product or service fits customer needs. User testing allows you to measure effectiveness, efficiency, and customer satisfaction. You can see how users perceive a product before, during, and after using it.

HOW TO USE

Define a number of tasks. Describe them in an interview guide which is used by a moderator during the interview. Select a number of participants based on your personas. During tests, monitor how each participant interacts with the solution. Let them verbalize their feedback throughout the session to understand what goes on in their mind. Invite team members and stakeholders to observe tests. Seeing customers struggle with the solution is often more convincing than just reading a summary. Create videos from the user test sessions to capture highlights and lowlights. Document your findings and suggest improvements.

TIPS & TRICKS

- Use quantitative research methods to obtain a statistical validation of your findings.

EXPERT REVIEWS

... let experts take the role of customers. They help to quickly and cost-efficiently identify areas of improvement, issues or what is missing in the current solution.

HOW TO USE

Let usability experts evaluate concepts, prototypes, or live products. An expert review can be complementary to user testing, since it is a fast and inexpensive way of gathering feedback. Provide the usability experts with your personas to guide their review. This results in richer feedback. Use the findings to identify areas of improvement. Keep in mind that experts aren't typical users; therefore cross-check the findings with real customers.

TIPS & TRICKS

- Ask usability experts to use common heuristics, such as Nielsen's interface heuristics or the DIN ISO 9241 dialogue principles.

THE METHOD SET
FOR VALIDATION

ONLINE SURVEYS

... allow you to verify assumptions and get feedback from a large group of customers. They can be used to get customer feedback on various topics.

HOW TO USE

Choose participants based on your target group(s). Prepare a questionnaire: Use either a standard questionnaire or create a project-specific one. Online surveys can provide feedback about mock-ups, prototypes, or live products. Show design variants to find out which one customers prefer. Since surveys generate quantitative results, use qualitative methods to understand the reason for the gathered feedback.

TIPS & TRICKS

- Online surveys also allow the cost-efficient comparison of design variations or your competitors' solutions.
- Several standard questionnaires are available, such as SUS (Simple Usability Scale), or NPS (Net Promoter Score). Use the NPS questionnaire to measure your product's success over a period of time.

RITE TESTING

... is an iterative testing method where prototypes get updated during the testing cycle. RITE Testing allows you to iterate and improve the prototype based on participants' feedback.

HOW TO USE

In a RITE (**R**apid **I**terative **T**esting and **E**valuation) test, you update the prototype based on the findings of the previous sessions. After a fixed number of test sessions, you discuss within the project team which aspects to change for the next test sessions. At first, change things that are easy to update, e.g. wording or colors. Later, alter larger parts of the prototype, e.g. workflow and behavior. This method is best used early on in the design process as it allows you to shape the concept based on customer feedback. Note that RITE testing is not a surrogate for validation tests later in the process.

TIPS & TRICKS

- Some changes might not yield the expected results. Prepare to fail and to learn from your mistakes.

A/B TESTING

... allows you to compare the performance of two or more design variants in relation to a predefined outcome, e.g. click-rate.

HOW TO USE

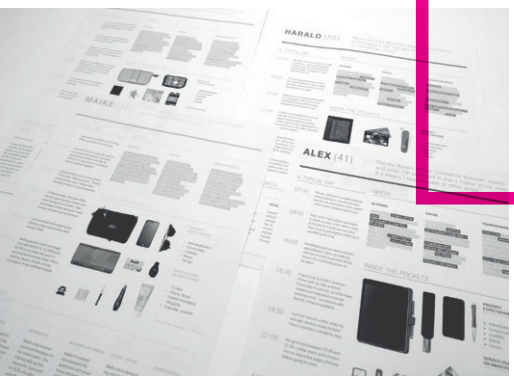
The following can be easily validated with A/B tests: alternative features, price, wording, packaging, website variants, etc. Create or select two or more versions of a solution, e.g. a landing page, which differs in one aspect. Direct a similar number of customers to the variants and compare the performance of each option. For live websites, A/B tests are an important means of validating how changes affect conversion.

TIPS & TRICKS

- Since A/B testing only yields quantitative results, use qualitative methods additionally.

PRODUCT PERSONALITY

Characterize your product.



YOU WANT

... to define how your product or service addresses your customers and how they should experience its character.

YOU CREATE

... a set of attributes that characterizes your solution. These attributes help you to define what your product personality should be like.

Product personality is the emotional bridge between our products and our customers.

WHO CAN DO IT?
UX designers, together with specialized partners

CHARACTERIZE
YOUR PRODUCT

Every product or service has a personality. Just like a person's, it can be blunt, cheerful, helpful, serious, etc. A consciously defined and implemented product personality makes your solution recognizable and unique. It defines how your product or service will be experienced by your customers.

DETERMINE EMOTIONS AND MOTIVES

One way to define the product personality is to use a motives map. It allows you to describe the characteristics of your solution's personality as a set of attributes. The motives map represents the spectrum of human emotions and motives. It segments the human emotional systems into three dimensions and maps values and motives between them.

The motives map helps you to analyze emotional needs and derive value-related attributes. You can use them to come up with a product personality. Since it is a highly complex approach, it should be done with the support of specialized experts or agencies.

»Everything which triggers no emotions is worthless for our brains.«

NORBERT HANS

First, determine what emotional needs your targeted customers have and what type of product personality meets their expectations. Start by reviewing the personas you selected for your project and locate them on the motives map. Ⓐ

Next, position your product or service on the motives map. For this, ask yourself the following questions:

- What are the characteristics of your product or service? How does it feel?
- What emotion do you want to trigger when the product or service is being used?
- What is the usage context?
- How do you meet your customers' expectations?

DERIVE CHARACTERISTICS

Next, look for an area on the map where the values correspond with your answers and your selected personas' locations. Highlight these areas on the map and write down the corresponding values. Summarize the product personality using the values from this area of the motives map. Add additional attributes to enhance the personality. Ⓑ

MAKE IT TANGIBLE

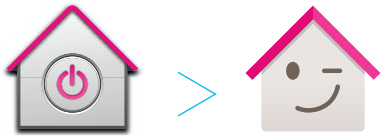
Last but not least, think about how the personality can be conveyed within your solution and in advertising.

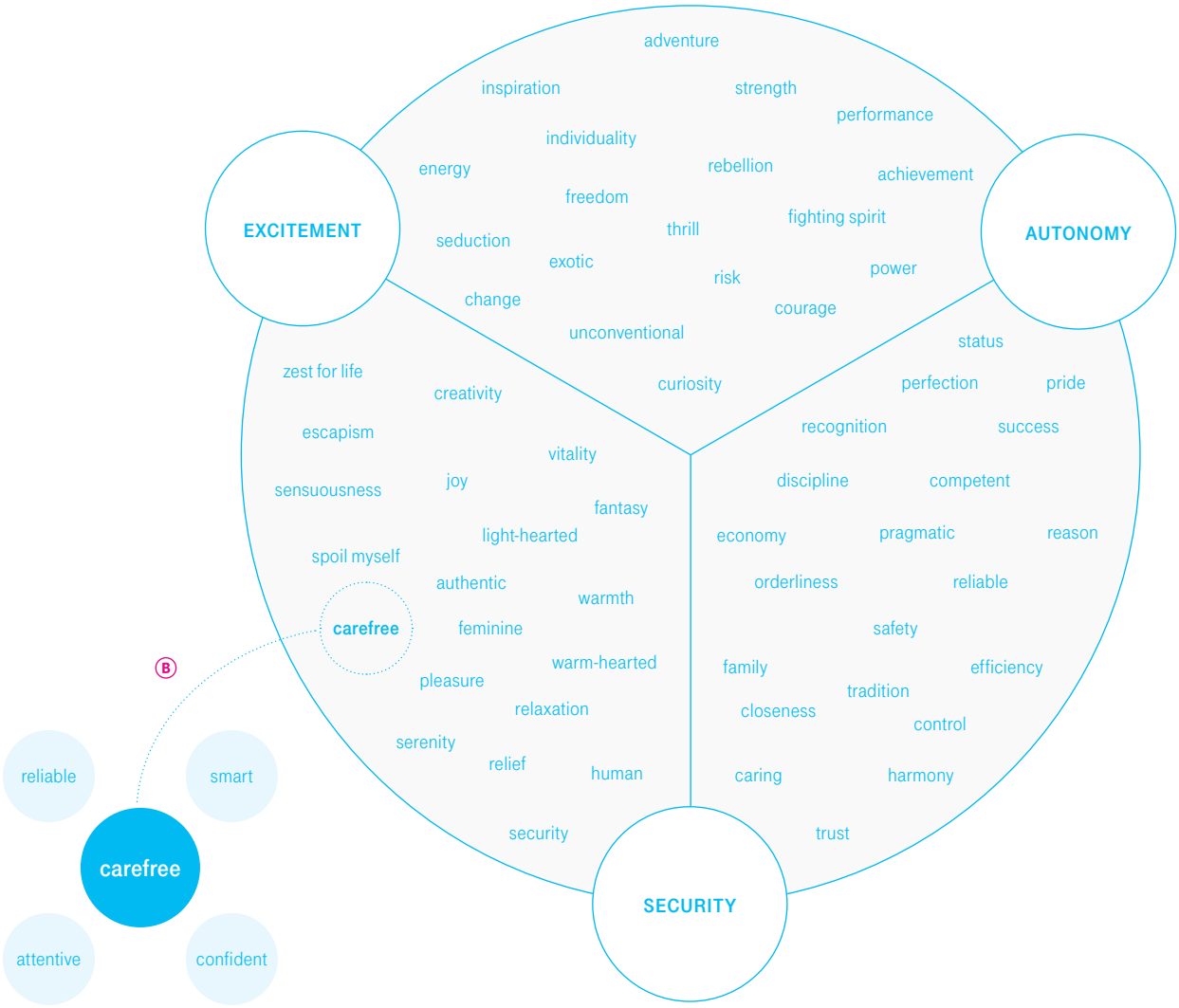
- How can these attributes be translated into product or service characteristics?
- How should the user interface behave and react to convey the personality?
- How does the solution address the customers?
- How can the attributes be used for communication?

Often, the product personality is not consciously defined but rather emerges from its features. Thus, the experience can be ambiguous and unclear. A well-defined product personality also works as a guiding light; it helps to make decisions throughout the Development and Roll-out phases.

Ⓐ MOTIVES MAP

In the **Smart Home,** the product personality was defined as 'carefree'. For more depth and clarity, it was enhanced with four attributes. The **Smart Home** icon was updated to reflect the chosen personality traits.





CUSTOMER EXPERIENCE CAMP

Team up to create an overarching product or service concept.

The CX camp provides vision, focus and direction for superior CX quality. It allows you to get an aligned target picture fast.

WHO CAN DO IT?
A team of cross-functional experts and stakeholders

FOR HOW MANY PEOPLE?
2–4 designers
2–3 participants from other disciplines

DURATION
8–12 weeks

YOU WANT

...to develop an aligned concept for a project within a short period of time.

YOU GET

... a collaboratively developed prototype that makes the target experience tangible. It showcases the key customer journeys, the visual design direction and experience requirements.

TEAM UP
FOR AN OVERARCHING CONCEPT

A Customer Experience (CX) Camp is a collaborative workshop where the overarching concept of a project is defined and prototyped. By discussing, sketching, and prototyping various solution approaches together with other project members and stakeholders, you define and agree upon one solution, its functionality and look. The resulting concept will consist of the key customer journeys, the design direction and experience requirements. In addition, you get a prototype to validate and to showcase functionality.

PREPARE

Use the insights and key actions of the experience target picture as input. But unlike the target picture, where the status quo as well as technical and operational limitations are ignored, the CX camp is about coming up with a feasible and realistic concept. Ideally, it shows how to bring the target picture to life. It lays the groundwork for the subsequent Develop phase.

FORM THE CORE TEAM

Hold a kick-off meeting to explain the purpose and scope of the CX camp. Invite all departments that have an interest and a stake in your project. Explain the format, the skills needed, the requirements (four to seven people working together for eight to twelve weeks), and the expected results. Present the findings of the experience target picture to create a common understanding. Let the participants nominate members for the CX camp.

»Nothing is more effective than walking over to a colleague, showing some work, discussing, sketching, exchanging ideas, [...] and reaching a resolution on a thorny topic.«

JEFF GOTHELF

You will need two to three participants from the departments involved in the project, plus several designers, to form the core team. The CX camp team ideally covers the following roles:

- product owner, business owner, product manager
- marketing
- IT and system design
- process design
- customer service
- conception, visual design, creative coding
- project management
- For support: Invite experts and stakeholders regularly

AGILE WORKING

The CX camp applies agile principles:
It is time-boxed and it requires a co-located, cross-functional, and interdisciplinary team.

DEVELOP THE CONCEPT

Organize a room where the team can sit together. Minimize external influences such as meetings or calls. Start by reviewing and discussing the existing input. Use your knowledge about the status quo, the project scope and the key action points from the experience target picture to define the concept's scope.
Next, define the key customer journeys and the necessary customer touchpoints that your concept should cover. Collect a list of customer experience requirements that your concept should meet, e.g. derived from weaknesses in existing solutions.

Based on your scope, create a first set of sketches, wireframes, and wireflows, to show how your customers will experience your product or service. Identify key features and use them to illustrate and explore the visual design direction.

Describe the overarching structure of your concept in more detail, i.e. in an information architecture (IA). This helps you to identify and organize different types of content and to develop interaction principles.

Use prototyping methods to build prototypes of increasing fidelity for the customer journeys at different stages during the CX camp to iteratively evaluate and present your ideas and concepts. Present your prototypes to potential customers to get their feedback and input. Invite stakeholders to review your intermediate results and provide feedback in weekly review meetings. Ask domain experts to present topics and to answer specific questions related to the project.

Document the visual design with a set of key visuals. Use the IA and the customer experience requirements to validate your concept and view it from different angles. Optimize and adapt it if necessary. Create a final prototype based on your results that allows you to explain and showcase your solution concept.

USE THE CONCEPT

The concept summarizes and documents how the targeted customer experience can be implemented. It captures the team's understanding as well as customer and expert feedback. It also provides guidance for the realization. Use it to create a detailed scope, project plan, and timeline.

FROM TARGET PICTURE TO REALIZATION

CREATE A TANGIBLE DESIGN CONCEPT

Gather key findings and capture the design rationale. Create concept ideas.

CO-CREATE THE OVERARCHING CONCEPT

Identification of key customer journeys. Definition of information architecture and customer experience requirements. Prototype to showcase functionality and visual design.

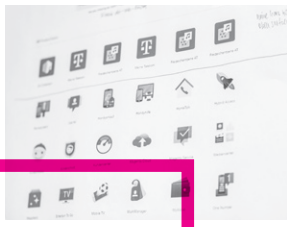
TURN THE CONCEPT INTO A SOLUTION

... using different levels of Telekom Design support.

DEVELOP

Translate concepts
into solutions.

The development phase is about turning the design concept into a finished product or service. The following methods show you how to accompany and support the development process. Use the methods to **make products and services ready for launch.**



APPLYING DESIGN STANDARDS

Ensure design consistency.

Using the Brand & Design tools has improved our product quality and made development so much faster.

WHO CAN DO IT?
Copywriters, developers, visual and UX designers

YOU WANT

... to realize a product or service that follows the Telekom design language.

YOU GET

... components and guidelines for building best-in-class products and services. These tools enable you to speed up the development process and ensure quality and cost efficiency. Yet, they leave room for translating the Telekom standards into unique customer experiences.

ENSURE
DESIGN CONSISTENCY

Applying design standards happens at the beginning of the Development phase, and after the product concept, target picture, and product personality. Design guidelines and standardized components will not only speed up the development process but also provide a consistent Telekom experience, ensuring recognizability and orientation for our customers. Design standards won't, however, take the place of designers and developers actually creating a specific product or service.

SEE WHAT'S AVAILABLE

When you are developing a product or service, you don't have to start from scratch. Get to know our brand strategy and other design principles that are relevant to your project. Dive into the relevant touch point guidelines and collect useful templates and assets. Get an overview of existing tools that will be helpful with your design inspired by best practice examples.

USE WHAT'S THERE

Be efficient: Don't waste time on designing and specifying existing components. Ready-to-use components save time, cost, and nerves, with regard to design, specification, development, and quality assurance. These components support known habits and patterns and will offer your customers a familiar and usable environment. Reuse as many components as possible. Consider the relevant guidelines along the way.

»We must eliminate confusing design elements and [...] establish design standards for every important website task.«

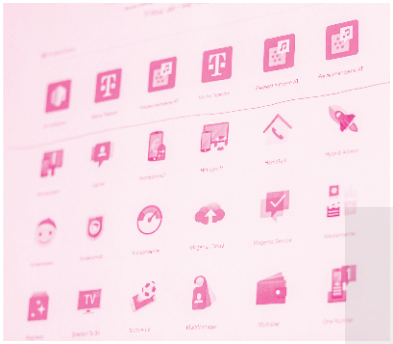
JACOB NIELSEN

MAKE IT "WOW"

The components and guidelines given will help you to work more efficiently, but the real work starts after applying our design standards: individualizing and detailing the product or service. Define the core functionalities, derive concepts inside the given framework, and develop your own user experience according to your individual product personality.

DEVELOP DESIGN SPECIFICATIONS

For documentation and for further development, design specifications are often a key delivery. Find out the necessary level of detail. Start with overarching screen classes, key screens and previously defined wireframes. Provide descriptions of details, exceptions, error cases, notifications, etc. Hand these over to the realizing departments or agencies. Review their progress frequently to ensure that your concept is implemented properly and in compliance with your design specifications.



SINGLE TOUCH POINT FOR BEST-IN-CLASS CUSTOMER EXPERIENCE

The Brand & Design portal makes brand and design strategy, customer experience principles, design guidelines, and ready-to-use components available for developing our specific Telekom appearance for products, services, and communication. The contents convey concepts, methods, rules, and standardized components for developing consistent brand and user experiences across all touch points and media. Brand & Design is the central point of contact for the whole Deutsche Telekom Group.

Telekom suppliers and employees can register here:
www.brand-design.telekom.com

ASSETS AND DOWNLOADS

BRAND ELEMENTS

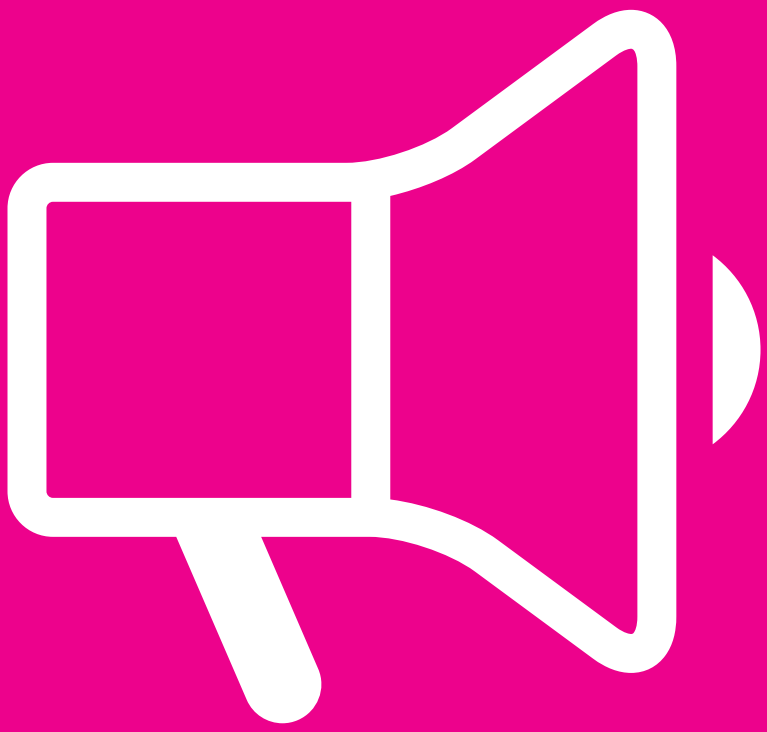
UI ELEMENTS

ICONS

LANGUAGE ELEMENTS

HTML COMPONENTS

Ready-to-use assets and downloads ensure an overall consistent and brand-typical appearance – and thereby simplify your production process.



ROLL OUT

Launch solutions and get feedback.

The roll-out phase is about making sure the completed product or service is effectively communicated and the customer response is properly tracked. The following methods show how to communicate your solution's benefits and track the response of your customers. Use the methods to **make your product market-ready and to get customer feedback.**

COMMUNICATION PLANNING

Tell one product story
across all touch points.

YOU WANT

... to ensure a coherent story across customer touch points and communication channels.

YOU GET

... an overview of planned cross-channel activities along the customer journey.

Communications planning helps to consistently deliver the product story at relevant touch points.

WHO CAN DO IT?
Anyone.
Cross-functional teams are ideal.

FOR HOW MANY PEOPLE?
2–6 people

DURATION
2–5 hours

PLAN YOUR
COMMUNICATION ACTIVITIES

A communication plan helps you to ensure that the benefits and features of your product or service are communicated consistently to your customers when rolling out your solution. For this, you will need an overview of the different customer touch points and communication channels. Ask yourself how and where the customers will interact with your solution and what media you can use to address your customers. Use the customer journey map as a basis. This way, you can make sure to deliver a coherent story about the benefits of your solution.

PREPARE

First, define your communication message: What are the key benefits for your customers? What are differentiating factors of your solution? Look at the personas and their needs to address them properly. Use the jobs to be done map to review the benefits of your product or service. Review the elevator pitch to identify the unique selling proposition of your solution. Use these sources to come up with a coherent message for your product or service. You might want to stress different aspects of your solution for different personas and customer groups.

FOLLOW THE CUSTOMER JOURNEY

The customer journey map you created for your product or service will give you an overview of the different touch-points and channels. Put yourself in the customers' shoes and 'walk' through each step of the customer journey while asking yourself the following questions:

- What are the touch points and channels involved?
- What part of the message is relevant to your customers at this point?
- How can you best reach your customers at this step?
- What is the best time for which channel?
- What would only disturb and distract?
- How can you make sure your message gets through?

IDENTIFY AND TRACK COMMUNICATION ACTIVITIES

Use this exercise to identify activities for individual touch points or channels. Turn them into work packages and add milestones, priorities and owners for each of them. Use this as a tool to monitor and review the communication activities during roll out.

OMNI-CHANNEL MATRIX

Overview of planned touch point activities and alignment of workstreams.

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