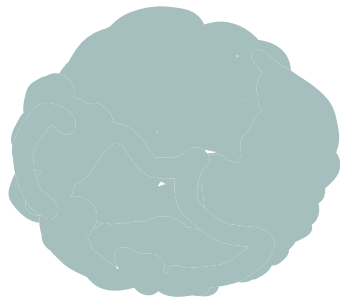


**Explore: The Flexible Search Engine**  
Designing a more sophisticated way of  
searching

Zori Kotzeva





## **Author**

Zori Kotzeva

Msc. Strategic Product Design

## **Supervisory Committee**

Chair: Dr. Price, R.A.

Mentor: Dr. Laurey, N.

Company mentor: 't Hooft, B.

## **Delft University of Technology**

Faculty of Industrial Design Engineering

Landbergstraat 15

2628 CE Delft

The Netherlands





# PREFACE

Dear reader,

This graduation project is the last part of the two-year master's program in Strategic Product Design at the Delft University of Technology. After finishing all the courses of this master's program, it was time for my next and final challenge in this program, this graduation project.

After a few weeks of working on the project, I found out that it was not going to be as easy as I thought. Working through the challenges along the way, made me discover the strategic designer that I wanted to be and it made me learn a lot about how I design. Looking back at the project, I think it is safe to say that this part of my master's was the part I learned the most from. I would really like to thank all my supervisors for challenging me, guiding me, and inspiring me throughout this journey. Thank you all for the inspiring and enjoyable meetings.

First of all, I would like to thank Bas, for the opportunity of doing a project within the airline. Doing this project for the airline was a very educational experience and I learned a lot from it. I would really like to thank you for all the valuable feedback and guidance throughout my project.

Rebecca, I would really like to thank you for challenging me and inspiring me throughout the whole project. Asking the right questions at the right times, triggered me to think creatively. You really helped me discover what kind of strategic designer I am. Helped me reflect on the more challenging moments of this project and to learn from them and become a better designer along the way.

Natalja, I learned a lot from you about qualitative research and pushing my boundaries within this type of research. Starting from creating a comfortable feeling when approaching people to interview them within a company and the target group. Because of this, I discovered how interesting it is to talk and learn from people's experiences. Furthermore, thank you for showing me that academic writing is a great tool for organizing my ideas and thoughts, rather than just text on a screen.

I would also like to thank all the participants in the activities of this project, like the co-creation workshop, and all the employees from the airline for sharing their knowledge. Lastly, I would like to thank all my friends and family for their support.

I hope you enjoy reading!

Zori Kotzeva

# READING GUIDE

## **The Airline**

'The airline' will be used to address the company this project is done for. The company is an airline.

## **Brainstorm**

A brainstorm is a process in which ideas are generated. A characteristic of this process is that quantity is more important than quality. A brainstorm can be done alone or in a group. During a brainstorm, the participant or participants generate as many ideas as possible without judgment. The quality is accessed later on in the process. There are different methods to brainstorm (Zijlstra, 2020).

## **Ideation**

The ideation creative process is the process in which ideas and/or solutions are generated. A brainstorm can lead to idea generation for example, but other methods could also be used to generate ideas (Interaction Design Foundation, 2020).

## **Co-creation workshop**

Co-creation workshop is a collaborative and interactive workshop. The purpose of the co-creation workshops is to involve the stakeholders in the design process (Sanders & Stappers, 2013).

## **Target group**

The target group is the group that is chosen based on literature research. Based on the literature this group will fit this research best. This group was used to find participants for the interviews, observations and to test the ideas and concepts.

## **Innovation**

Innovation has multiple definitions. For this project it is chosen to use the definition by Urabe (1988): innovation is never something done only once. It is a process that takes time and decisions made within organizations are needed to make it work. Part of innovation is the generation of ideas up until the implementation within the organization (Kogabayev, 2017).

## **Preliminary codes**

When qualitative researchers have collected data, this data can be analyzed after. The first part of coding is the preliminary codes. Preliminary codes are the first links between the raw data and the coding. These codes should be descriptive codes from the data (Saldana, 2021).

## **Second round codes**

The second round of codes is the second cycle of coding, where the researcher tries to notice patterns and is the first step to answering the research question. This is the round where the researcher categorizes the codes (Saldana, 2021).

# EXECUTIVE SUMMARY

The airline industry is a complex industry. It has geographically spread employees, safety threats, partnerships with regional firms and other airlines, changing government regulations, sustainability, and flight shaming (Deloitte, 2016). Next to these complexities, the airline industry is very competitive and commoditized. The commoditization results in customers often making price-driven choices and the high competition makes it hard for airlines to differentiate.

This graduation project focussed on how customers make choices during the travel journey. This process starts from the moment customers decide they want to travel up until the moment just before they purchase the airline tickets. This project will focus on how to influence the way customers make choices by designing to improve their overall experience.

The approach used in this project is the double diamond (Design Council, 2019). The double diamond is a design method with five phases. In this project the five phases were: discover, define, develop and deliver.

In the first part of this project, the assignment is introduced and background information is given. In the first phase, information about how people make choices and the future context is discussed. In the second phase, the insights from the qualitative research with the target group and employees from the airline were presented and discussed. In the next phase, the requirements were set and the design direction was chosen. In the fourth phase, the idea generation took place, resulting in one concept. This concept was presented and iterated in detail in the last phase.

The final design is a new type of search engine, which fits the needs of the customers of today, creating a better online experience and triggering customers to make experience-

driven choices. Customers will be stimulated to make these choices because, they will imagine the emotions they will have during their vacation. Furthermore, the concept makes the searching experience easier and more enjoyable. This in turn will stimulate customers into affective forecasting of their future vacation, making the search experience also an emotional activity rather than mostly rational.

Lastly, implementation is discussed step by step. With this implementation plan, the airline will be able to implement the concept step by step, making the concept feasible for the airline in 10 years.

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# Chapter | 1

## **Prepare**

In this chapter, the preparation phase will be discussed. In this phase, the initial problem and scope will be set. Next to that, some background information will be given about the airline industry. Further, the methods and the design approach will be discussed.

# 1.1 PROJECT BACKGROUND

**This paragraph will give general information about airlines and their stakeholders. It will give a short explanation of the background of airlines; information about the complexities of the airline industry, and new developments in the industry. Furthermore, information will be given about the stakeholders of airlines.**

## AIRLINE INDUSTRY

In the Cambridge dictionary an airline is defined as a business that offers the service to carry passengers or goods, from one place to another, with air travel in airplanes (Cambridge Dictionary, 2022).

The airline industry provides travel possibilities to every country in the world and has had a great positive impact on the global economy (Belobaba et al., 2015).

The airline industry is a complex industry. First of all, airlines have geographically spread employees, safety threats, partnerships with regional firms and other airlines, changing government and regulations (Deloitte, 2016).

Secondly, airline industries are one of the most polluting industries. This industry has to work hard to

Thirdly, the airline industry is a highly commoditized industry, making it hard for airlines to differentiate (IBM, 2020).

Furthermore, competitors keep on increasing. Other industries that offer alternatives for air travel are becoming more and more attractive for customers. For example, train travel is a real threat for airlines, since it is a more sustainable option (IBM, 2020).

Lastly, recent developments like the pandemic, rising oil prices and inflation are creating more difficulties for the airline industry.

## STAKEHOLDERS

Airlines have a few stakeholders that play a role in their strategy and decision-making. Furthermore, these stakeholders also influence on their customers. The most important stakeholders are partners, OTAs, aggregators, passengers, airports, and regulators. These will be discussed in the following text.

### *Partnerships*

Airlines are often partnered up with other airlines. These partnerships are called alliances. Airlines make these partnerships because this way they can share resources, extend the routes they travel to new destinations, and let customers earn miles when flying within these alliances. It is important for airline companies to consider these partnerships when innovating.

### *OTAs*

OTAs are both online and offline travel agents. OTAs are companies, which offer different airline flights to customers. These travel agents can be online travel agents and offline travel agents. With online travel agents, customers can compare different airlines online with each other. This comparison is often based on the prices of tickets. On the other hand, there are also offline travel agents. Offline travel agents are companies that offer offline help to plan customers' vacations. The offline travel agents can advise people about which airline they should choose, but they can also advise customers on their destination, transport abroad, and stay abroad. Online and offline travel agents have certain agreements with different airlines and other travel companies. When airlines are innovating, they should keep in mind the agreements they have with OTAs. Furthermore, airlines do not always have all the power to change the way they are displayed through these OTAs. With OTAs, customers can directly buy their tickets through the OTAs.

### ***Aggregators***

Furthermore, airline companies and OTA's can be found on aggregator's websites. These websites offer a platform on which customers can compare the different OTA and airline companies. Once the customer chooses which ticket they want to buy, they are redirected to the website of the airline or the OTA. So, customers cannot buy their tickets directly through the aggregator. Examples of aggregators are Google Flights and Skyscanner.

### ***Passengers***

Next, passengers of airlines are an important stakeholder. Airline passengers are the customers that are flying with the airline on the airplane. Passengers can be leisure and business passengers (Dresner, 2006).

### ***Airports***

In addition, airports are hubs, which are in between ground transport and air transport (Classen et al., 2017). Airports are one of the most important stakeholders that influence the development of airlines. Airports are responsible for passenger and cargo developments. Airlines have partnerships with airports. This means that different airlines and airports have agreements with each other that they have to follow (Belobaba et al., 2015).

### ***Regulators***

In the Netherlands, there are national laws in the Act on Aviation. Airlines need to follow these regulations. Furthermore, these laws follow international and European rules. These are laws that Dutch airlines, personnel, aircraft, air traffic control, airports, and military aviation need to follow. The international and European rules come from the International Civil Aviation Organization (ICAO) and the laws set by the European Union, which are guided by two specialised agencies: the European Organisation for Air Navigation and European Aviation Safety Agency (government.nl, 2022).

# 1.2 PROJECT ASSIGNMENT

**This paragraph will discuss the problem and scope of this project. Next, the assignment will be introduced.**

## THE PROBLEM AND SCOPE

The airline industry is a commoditized industry. Customers often make price-driven choices when they are comparing different airlines and decide to purchase an airline flight. This is no surprise, because a lot of airline websites and online travel agents focus on comparing airline ticket prices. It would be of great value for the airline if it was chosen with other motives than economic motives.

This is why this graduation project will focus on how customers make choices during the process that leads to purchasing flights. This process starts from the moment customers decide they want to travel up until the moment just before they purchase the flight. This project will focus on how to influence the choices of these customers in a way that they are encouraged to look beyond economic motives when choosing the airline and are willing to consider and pay for the flight of this airline. This concept should be designed for the year 2032.

## ASSIGNMENT

This problem led to the following initial assignment for this project:

**Design a strategy for the airline, which will help the airline reach customers that want to choose the airline and are triggered to choose certain flights that the airline offers, independent of economic motives. These customers will make these choices because of the improved customer experience.**

In order to complete this graduation project the problem was divided into three sub-research questions:

- (1) When and how do customers make important travel decisions?
- (2) How can these travel decisions be influenced?
- (3) In which context will the airline industry be in 2032?

These questions will be answered in chapter 2 and 3 of this project. These chapters are the 'discover' phase and the 'define' phase of this project. These phase will be explained in paragraph 1.4.

## 1.3 METHODS

The methods that are used during this project will be discussed in this paragraph. First of all, the methods will be introduced and the set-up will be explained. Lastly, the goal of these methods within the project will be discussed.

### DOUBLE DIAMOND

As an approach for this project, the double diamond method will be used (Design Council, 2019). With this method, the project will be divided up into five phases: discover, define, develop and deliver.

This method was used because, the different phases of the method can help shape the project. Also, using the double diamond will help to diverge and converge information in a more systemic way. This method will be used, but leaving room for iterations along the way, thus it will not be a linear process.

First of all, in the 'discover phase' the goal was to understand the problem and context of the problem and to answer the sub-research questions. Secondly, in the 'define phase' the requirements, future vision and design directions were defined from the found insights.

Thirdly, the 'develop phase' is used to develop the ideas, concepts and prototypes. The prototypes are in turn used to test and validate the concepts. Lastly, in the 'deliver phase' the final design will be discussed in detail. Also, implementation and final recommendations will be discussed.

### DEPEST METHOD

The DEPEST research method is used to analyse the external environment. This is done by analysing the future trends and developments. With the DEPEST method six important factors are taken into account. These six factors are: demographic, economic, political, ecological, social and technological.

First of all this method is used to understand the future context in 10 years and create a future vision.

Secondly, this method should help create a concept that will fit the future context.

### INTERVIEWS WITH EMPLOYEES

Furthermore, interviews were done with employees from the airline.

The interviews had three main goals. First of all, the interviews would help to gather information and create an understanding about the airline and how the different departments and employees work within the airline. Secondly, to gather information about certain problems that the airline is facing. Lastly, this information would help to create a theory, which will be used to for creating a design direction and during the ideation phase.

The interviews with the employees were semi-structured interviews. The reason this was done, was because the different employees were all from different departments, which meant they were specialised in different topics within the airline. So, it should be possible to ask different questions to different employees to be able to generate a deeper understanding of their work, knowledge and vision. Also, it was important to have a natural flow in conversation when doing the interviews.

#### *Sampling*

In table X one can see the employees, the department they work for and the duration of the interviews. The employees were chosen based on the department they work for. First of all an employee from 'offer management' was of importance for this project because this employee has knowledge about the booking tool and flight offer that is sold. Secondly, 'e-commerce' was important to gather information about how the airline sells the flights. Thirdly, 'digital experience' was chosen because information was gathered on how the digital part of the experience was innovated, which touch points were important and if there were bottlenecks. Lastly, 'customer experience' was chosen because the project will be improving the customer experience, thus it is important to find out how the airline is innovating and

Type of data	Type of informants	Duration
1. Interview	Director Offer Management	67 min.
2. Interview	E-commerce	34 min.
3. Interview	Digital Experience	27 min.
4. Interview	Customer Experience	61 min.

Table 1: Overview of the conducted interviews

staying relevant for their customers.

## INTERVIEWS WITH TARGET GROUP

Next, interviews were done with the chosen target group to gather in-depth information. The goal of these interviews was to develop a theory, according to the Grounded Theory Approach (Glaser, 1967). This theory will help understand the target group, understand the problem, and find an opportunity gap. The first step was transcribing the interviews into raw data. Then, the raw data was coded into preliminary codes. These preliminary codes were categorized and the final secondary codes were created with these categories. From the final codes, a theory was developed by looking back at the literature and comparing it with the insights found. During this process, gaps and unanswered questions from the literature were answered and filled with insights from the interviews.

The interviews with the target group were structured interviews. The interview questions can be found in appendix I. To make sure there was a natural flow in the conversations, sometimes extra questions were asked during the interviews, resulting in more questions than the written questions that can be seen in appendix I.

Overall, the structure of all the interviews was the same. There were three main questions that I wanted to find out during the interviews:

*Q1: How do people make choices during all the phases?*

*Q2: What influences people to make these choices?*

*Q3: How does the target group experience all the phases of their travel journey?*

It is also important to mention, that the travel phases of the customer journey that were found in literature and from the airline were not mentioned in the interview questions, to make sure that interviewees are not influenced.

### *Target Group*

First of all, the target group is people going on leisure vacations, because these are the people that have to make more choices, rather than people going on business vacations. Furthermore, the chosen target group is people that have work, because this group of people is probably less price-driven than people without jobs. Lastly, the target group is millennials. According to research done by Sofronov, millennials are the group of people that travel the most out of any other demographics and don't mind spending money on travel (Sofronov, 2018).

In total 12 people were interviewed. These people were found with convenience sampling and with snowball sampling. The people can be seen in table 2.



## OBSERVATIONS

Next to that, observations were done. Three people were observed during their process of booking a flight.

This method was used because a more deep understanding was needed about the process of booking. By observing people, deeper knowledge could be gathered. This led to knowledge that people are not aware of and did not talk about during the interviews (F. Sleeswijk Visser et al., 2005). Furthermore, the way people used the booking tool and website could be observed and gaps could be identified (F. Sleeswijk Visser et al., 2005).

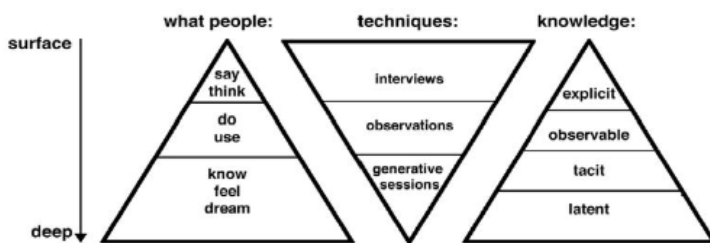


Figure 1: Knowledge depth (F. Sleeswijk Visser et al., 2005).

Type of data	Type of informants	Date	Duration
1. Interview	Female, 27	10 April 2022	24 min. 10 sec.
2. Interview	Female, 28	10 April 2022	30 min. 08 sec.
3. Interview	Male, 29	12 April 2022	39 min. 03 sec.
4. Interview	Female, 30	12 April 2022	15 min. 31 sec.
5. Interview	Female, 27	13 April 2022	23 min. 30 sec.
6. Interview	Male, 28	17 April 2022	19 min. 15 sec.
7. Interview	Female, 26	19 April 2022	29 min. 42 sec.
8. Interview	Male, 29	22 April 2022	27 min. 33 sec.
9. Interview	Male, 26	22 April 2022	23 min. 07 sec.
10. Interview	Female, 28	23 April 2022	29 min. 37 sec.
11. Interview	Male, 28	24 April 2022	30 min. 27 sec.
12. Interview	Female, 26	24 April 2022	25 min. 30 sec.
13. Observation	Female 27	20 May and 30 May	-
14. Observation	Female, 27	24 May	-
15. Observation	Male, 30	27 May	-

Table 2: Overview collected data

## CUSTOMER JOURNEY

Next, a customer journey was made. First, the customer journey was made before the interviews, then the customer journey was improved after the interviews and lastly, the customer journey was improved one last time after the observations.

The customer journey was made to visualise the findings from the literature, interviews, and observations. This way the customer journey can be used as an inspiration for the brainstorming of ideas and it will be easier to see certain patterns or bottlenecks within the journey.

## DESIGN FOR HAPPINESS

Design for Happiness deck (Desmet et al., 2013) was used for ideation and brainstorming.

The reason 'Design for Happiness' was used is because the goal was to design a positive emotional experience.

With the Design for Happiness deck of cards, 6 positive experiences were chosen, based on the research done. These experiences were used for ideation and brainstorming as inspiration.

The deck of cards was used during the personal brainstorming, ideation, and co-creation workshop.

The experiences that were chosen are entertainment, desire, surprise, exploration, belonging, and bodily sensation. Based on the research findings these six experiences were chosen. In paragraph 4.1 it is explained why exactly these experiences are chosen.

## CO-CREATION WORKSHOP

A co-creation workshop was organized with employees from the airline and one Strategic Product Design student. The employees were from two different departments: customer experience and distribution.

During the co-creation workshop, the six chosen experiences from the Design for Happiness deck were used as a guideline for the workshop. The attendees were asked to brainstorm about each experience and they were asked to try and let go of their role within the airline and the design direction and purely focus on how to create this experience.

The co-creation workshop was organized because the results from the workshop were used as inspiration for the ideation process.

Type of data	Type of informants	Date
1. Rapid test	Female, 28	24 May 2022
2. Rapid test	Female, 28	24 May 2022
3. Rapid test	Female, 29	25 May 2022
4. Rapid test	Female, 30	26 May 2022
5. Prototype testing	Male, 31	13 Juni 2022
6. Prototype testing	Male, 30	14 Juni 2022
7. Prototype testing	Female, 28	14 Juni 2022
8. Prototype testing	Female, 27	20 Juni 2022
9. Prototype testing	Female, 26	22 Juni 2022
10. Prototype testing	Male, 28	23 Juni 2022
11. Prototype testing	Male, 28	24 Juni 2022

Table 3: Overview collected data prototype testing

## RAPID PROTOTYPING

Rapid prototyping was done to help choose one of the concepts. From the idea generation, three concepts were first chosen as most valuable.

The rapid prototyping was done by creating low-fidelity wireframes for the three ideas and testing them on four participants. After this, the participants were asked to evaluate the use of the ideas through questions. The rapid prototypes can be seen in figures 12 up until 14.

## PROTOTYPING

The second round of prototyping was done to improve the current chosen concept. This prototype was a high-fidelity computer and mobile screen. The prototype was tested with the chosen target group, from the interviews. Iterations were made based on the results of the testing.

Furthermore, the prototype was used to test the five set assumptions.

There were two rounds of prototype testing. In the first round, there were 8 different interfaces. The target group was asked to sequentially choose one interface or another and to explain why. The interface that was chosen was again compared to another interface, after which the target group again had to choose one interface. The experiment went on until one interface was left over.

The second round of testing was done with more detailed interfaces. These interfaces were improved based on the iterations from the first round of testing. The new interfaces were shown to the target group, after which they were asked to evaluate the use of the search engine prototype and give feedback. In total there were 7 participants. 3 participants in the first round and 4 participants in the second round.

# 1.4 PROJECT APPROACH

In this paragraph, the approach of this project will be discussed. The approach used is the double diamond. The project is divided up into phases.

## DOUBLE DIAMOND

In this project, the double diamond method will be used (Design Council, 2019). This method exists out of the following four phases: discover, define, develop and deliver. The double diamond that is used in this project can be seen in figure 2. During the project, the process is not linear, but iterations can take place where needed. This means that during the process one can go back and forth between the phases, so there is no strict order.

The problem is subdivided into three research questions. These questions will be explored in the discover phase. These questions are:

- (1) When and how do customers make important travel decisions?
- (2) How can these travel decisions be influenced?
- (3) In which context will the airline industry be in 2032?

## PREPARE

First of all, during the preparation phase, the problem and scope were set. Secondly, background information about the airline industry and the stakeholders was gathered and explored. Lastly, the project assignment is set in this phase.

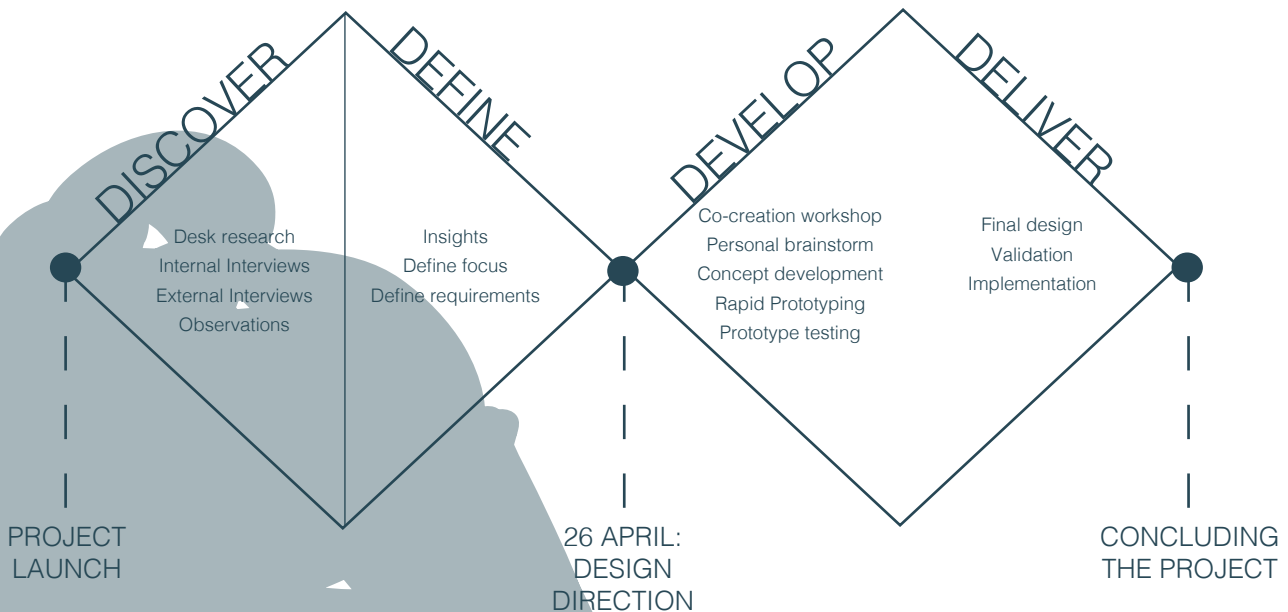


Figure 2: Double Diamond of this project



## **DISCOVER**

During this phase, information was gathered about the problem, context, employees of the airline, and the chosen target group. The goal of this phase was, to understand the problem and the context. This information was gathered through different methods. These will be explained underneath.

First of all, literature research was done. This research was gathered following the DEPEST method, to explore the context of the problem and to be able to set a future vision later on. Furthermore, literature research was done on how people make decisions and choices. Lastly, the customer journey as it is now was explored.

Next, empirical research was done. First of all, employees of the airline were interviewed. Secondly, a target group was chosen and this target group was also interviewed. This way, in-depth information about the needs of the target group could be gathered and the way this target group makes choices throughout their customer journey. Lastly, the target group was observed.

## **DEFINE**

The goal of the define phase is to set the focus of this project.

First of all, a future vision will be defined. This future vision will be defined with the explored context in the discover phase.

Secondly, requirements are set. These requirements were found as a result of the literature research that was done in the discover phase. These requirements helped to choose three ideas later on in the develop phase of this project.

Lastly, with the insights and information found in the literature research, a design direction was created. This design direction must fit within the

future vision and it must comply with the set requirements.

## **DEVELOP**

During the develop phase ideas were generated. The goal of this phase is to develop as many ideas as possible and at the end of this phase, one concept will be chosen.

First of all, the ideation started with a co-creation workshop within the airline. This co-creation workshop was used as an inspiration for the personal brainstorming session.

After this, three ideas were chosen and developed into concepts. The three ideas were chosen with the set requirements. From these three concepts, one concept was chosen as the final concept with rapid prototyping.

## **DELIVER**

During the last phase of the double diamond, the final concept will be worked out in detail. Furthermore, the concept will be tested with a target group, followed by iterations and validation of the concept. Lastly, an implementation plan will be made in this phase.



## CHAPTER 1

# INTERIM CONCLUSION

From the industry analysis it was found that the airline industry is a complex industry. It is highly commoditized, with high and growing competition, a growing number of regulations, and problems that it has to deal with. From this chapter, it could be concluded that the airline has to keep on innovating and improving the customer experience, to stay relevant. Economic motives will always be important for customers, so changing the way customers think is not possible. Rather, triggering customers to want to pay more for the airline and choose the airline will be something this project will focus on. Finding out when this should happen within the customer journey and how customer's choice can be influenced is something that will be researched further on in this project.



Chapter | 2  
**Discover**

## 2.1 DECISION-MAKING

**In this chapter, the decision-making process is discussed. First of all, it will be discussed why decision-making is important for this project. Secondly, it will be explained how people make decisions. Lastly, it will be explored and discussed how decision-making can be influenced.**

For this project, it is important to analyse how people make choices because customers make choices throughout the whole customer journey. From the moment they have their first idea to travel up until the moment they purchase an airline flight. Examples of choices made are the destination of flying, the activities they will do, the airline they will travel with, the people they will travel with and the type of ticket they will purchase. Secondly, it is also important to understand how people make choices because, later on in the project the design should positively influence how people make choices during the process. Understanding how people make choices are the first step in influencing people's behavior.

### DECISION-MAKING

Within the decision-making theory, there are two systems identified which explain how people make choices. These will be discussed in more detail. According to research done by Evans and Stanovich (2013), people make both automatic decisions and analytical decisions. Later on, this theory is also discussed in the book "Thinking Fast and Slow" by Daniel Kahneman. The two ways of decision-making in the research of Stanovich and Evans and the book of Kahneman are based on two systems: System 1 and System 2. These systems are the basic theory of deci-

### SYSTEM 1

First of all, system 1 is associated with quick and automatic responses. These responses are choices or decisions with no control or very little control. Also, often these choices are not voluntary (Kahneman, 2011). System 1 is often associated with intuition and pattern recognition. The patterns are based on experiences of the past, which seem similar to experiences happening now (Tay et al., 2016). System 1 is also often linked with emotional responses (Kahneman, 2011).

### SYSTEM 2

System 2 is the slower decision-making process. Usually, it is more analytical and dominated by reason. This part is more associated with the frontal and parietal cortex, the parts of the brain that are responsible for analytical thinking (Camerer, 2005). This thinking is seen as slow thinking because usually, people take some time for reasoning. System 2 requires people to pay attention and give effort, and if people stop paying attention or giving effort this system is disrupted (Kahneman, 2011).

In conclusion, both systems do not work apart from each other, but rather in collaboration, thus they are both important for making choices and cannot be seen apart from each other. (Kahneman, 2011). This means that both systems work simultaneously.

### INFLUENCING BEHAVIOUR

Influencing behaviour has a long history of research. In the literature, two potential ways of influencing behaviour were found, which might be significant for this research. The first way is the MINDSPACE framework (Dolan et al., 2012). and the second research was done by Karl et al. (2021), about affective forecasting. Both of these ways of influencing behaviour will be discussed.

First of all, the MINDSPACE framework by Dolan et al. (2012) refers to the nine most influential effects on behaviour, according to this framework. The nine elements are messenger, incentives, norms, defaults, salience, priming, affect, commitment and ego. The categories that are relevant for this project and will be used for the ideation process will be discussed (Dolan et al., 2012).



## **INFLUENCING BEHAVIOUR - MINDSPACE FRAMEWORK**

### *Incentives*

Different types of incentives can motivate people to do something and to make decisions. One incentive that might work to influence customers' choices during travel decisions can be 'living for today at the expense of tomorrow'. So, customers would choose pay-offs they receive at the moment over pay-offs in the future. Similar choices are made by customers if they have trade-offs at the moment, for pay-offs in the future. In this situation, they would rather put off the pay-offs in the future (Dolan et al., 2012).

### *Salience*

Attention is an important part of the behaviour of people. It can be voluntary but also involuntary. There is so much information and impulses around us that people tend to filter out some of that information. This filtering of information is done unconsciously. The type of information that is more likely to get registered by people is novel information, accessible information, and simple information (Dolan et al., 2012).

### *Affect*

Meaning experiencing emotions, is one of the more powerful tools to influence decision-making. These emotions can be provoked by for example words, images, videos, events, or other visuals. Emotions are fast and automatic, which means that people are often not aware that their choices are influenced by emotions because emotional evaluation might take place before the cognitive evaluation takes place (Dolan et al., 2012).

### *Ego*

People often compare themselves with others and want to have a good self-image, which often happens automatically. This stimulates people to act in a certain way, to fit in with a group which they identify themselves with (Dolan et al., 2012).

## **INFLUENCING BEHAVIOUR - AFFECTIVE FORECASTING**

Next, from the research done by Karl et al. (2021), it was found that with travel decisions people often have to predict in the present how they will feel in the future. By predicting how this experience is going to be, they can decide to buy a flight or book a vacation.

This imagining of the scenario which will happen in the future beforehand is called episodic future thinking. Affective forecasting is the effect of episodic thinking (Karl et al., 2021).

Affective forecasting is how people think they will feel and which emotions they will have during these predictions (Karl et al., 2021). These emotions are not how people will feel, but rather a prediction of how they think they will feel. If these emotions are emotions people would like to have, they will be triggered to make a decision (Karl et al., 2021). Figure 3 is a visualisation of episodic future thinking and affective forecasting.

The reason affective forecasting works well with vacation experiences is because they are not tangible experiences, and predicting them perfectly upfront is hard (Karl et al., 2021). Research done by Miloyan and Suddendorf (2015) shows that affective forecasting does affect behaviour, no matter how certain these feelings are or will be.

Next, customers might be price-driven because they have to pay money when purchasing a flight, which is a loss in the present in exchange for a positive experience in the future. This is the previously mentioned incentives. Helping customers experience this episodic future thinking is a way to trigger them to make a decision now because episodic future thinking can broaden their horizons and increase their perceived value of the future (Sze et al., 2017).

Furthermore, the research done by Bulley et al. (2019) may even decrease how far away people think the future is, decreasing the power of incentives.

Lastly, the research done by Karl et al., (2021) shows that affective forecasting will work well for influencing decisions in planning and booking holidays because these types of decisions are often also based on uncertainty.

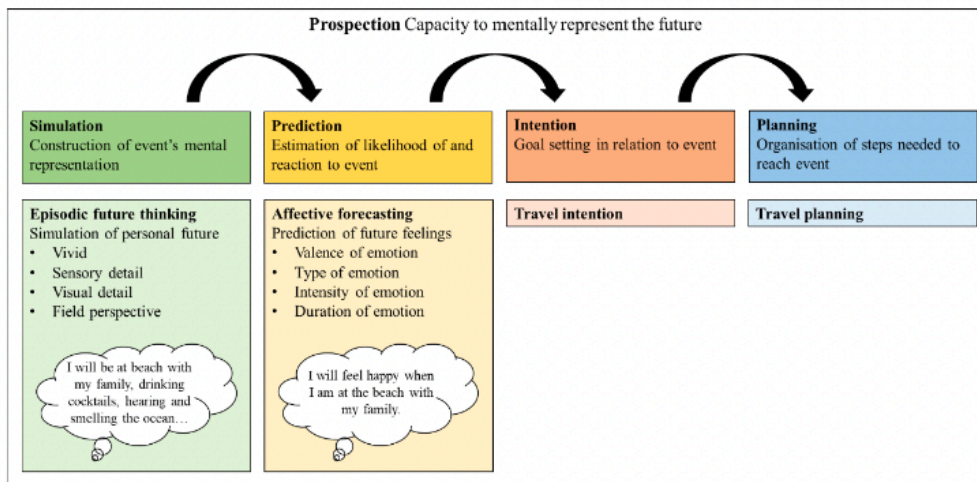


Figure 3: Episodic future thinking and affective forecasting (Karl et al., 2021)



## 2.2 CONTEXT EXPLORATION

**In this chapter, the most relevant trends and developments will be discussed. The analysis is done with the DEPEST method, to make sure all the important categories of trends and developments will be discussed. This method includes technology, ecological, economic, social, political, and demographic trends. The insights will help define the future vision and requirements.**

### TECHNOLOGY

#### *Digitalization*

Travel has a romantic vision of building human connections with customers. These interactions have been real-life interactions between customers and employees. Real-life interactions are still an important part of the customer experience, but the importance of interactions has shifted to more digital interactions (Mckinsey & Company, 2021).

Sinds a few years there has been a blurring between the digital and physical experiences. But, with COVID-19, this transition had accelerated even more. Even generations that were less accustomed to digital products and services, had to learn to interact and use them. People are relying more on digital services, which is putting pressure on existing businesses to truly deliver good digital experiences to their customers (Mckinsey & Company, 2021).

Digital transformation is an opportunity for aviation companies to improve their cost structure, and security and gain a competitive advantage in a very competitive industry (Heiets, 2022).

#### *Data*

Furthermore, because of digitalization, companies have a lot of data that can be used to improve their service and products (Abdulsamie, 2021).

Big data can also help companies understand their customers better.

For companies to make use of these opportunities, they have to master two other processes first, namely data management and data analytics. For data management, companies need to invest in appropriate technology to store and prepare the data. On the other hand, companies need to invest in techniques to analyze the data. With this analysis companies have the opportunity to research great amounts of data and find patterns within this data.

At the moment, most airlines are not making full use of the opportunities of big data. There are two

main reasons this is happening. The first reason is the lack of technological resources and skills. Airlines have also not yet developed the correct infrastructure within their companies. Examples of technological resources and infrastructure that airlines are missing are: systems to analyze, store and secure the data, but also time, tools, and systems to collect the data (Izzo, 2019).

For airlines, big data can bring multiple opportunities if managed and analyzed correctly. Examples of these opportunities are optimization of operations, customer intelligence, innovating of already existing products or services, more personalized offering, and improving pricing and cost reduction (Abdulsamie, 2021).

Thus, when airlines are able to collect data, there is a possibility to improve services and products or use the data to design new services and products. These innovations will improve customer experience and loyalty (Abdulsamie, 2021).

#### *Metaverse*

The metaverse is a 'world' where physical reality and digital virtuality come together. It is not just one environment, but multiple environments. Furthermore, the metaverse does not exist from only one specific type of technology, but rather different types of technologies that together enable it. Examples of these types of technologies can be virtual reality, augmented reality, and mixed reality. But, also social media or the internet. The metaverse is a platform, which enables social communication. It started with virtual games where players could transport from one virtual place to another and interact with each other. But, this does not mean that the metaverse in the future will look like this (Mystakidis, 2022). How the metaverse will evolve is not yet clear, but it is clear that it will influence companies in some way. Big companies like Nike are already investing in the metaverse. So, it is important for companies to start investing in the metaverse already, to make sure they do not lag behind in the future (Mckinsey Digital, 2022).

## SOCIAL

This is the moment for airline companies to build good customer relationships. After COVID, people cannot wait to travel again, after staying home for 2 years. Non-price factors have also become more important for customers. Customers seek to be comfortable with all the touchpoints of the customer journey (Skift, 2020). So, airlines should learn all about the whole customer journey and design a positive customer experience for the whole journey (Skift, 2020).

### *Personalisation*

Furthermore, it is important that the airlines understand their customers as microsegments. They should not look at customers as one impersonal group. When customers are traveling, they have a personal experience (Skift, 2020). Customers desire an individualized treatment. This can be in the form of a personal offer, a recommendation, or customizable tickets (McKinsey & Company, 2021). Airlines have a lot of data, which gives companies the opportunity to create a very personal experience connected experience (BCG, 2019).

### *Information Overload*

Next, we are living information age, where people are experiencing an overload of information. This information overload is the consequence of the internet and social media, which resulted in a rapid increase in information (Roetzel, 2019). Too much information can have consequences on people, namely less creative thinking, people becoming more unhappy, and the way people make decisions. There is a point where more information will lead to worse decision-making quality and a bad experience for customers (Roetzel, 2019) (Peng, 2021).

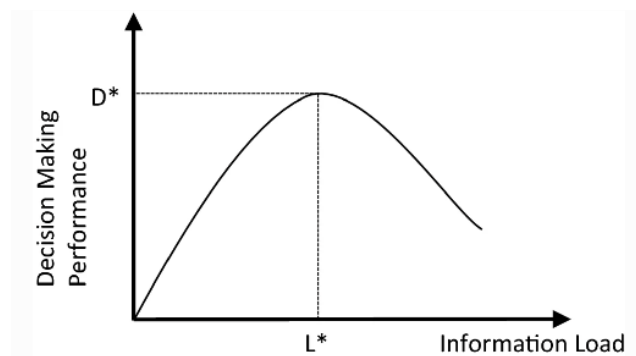


Figure 4: Information overload and decision making performance (Roetzel, 2019)

### *Experience Society*

Lastly, we are living in a world where people prefer experiences over products or things (Sofronov, 2018). They also expect that the experiences that companies offer them should be on point, as it is very easy to compare companies with each other and switch (Yeoman, 2019). So, focussing on the experience the airline offers might be an opportunity. For example, what kind of experience do customers have in the airplane and what kind of experience are customers looking for in their vacation overall?

## ECONOMICAL

During the pandemic, after every variant appeared in society, airlines were the first ones to feel the impact. Governments reacted to these variants with lockdowns and banning air travel, creating an impact on the travel industry. Because of the widespread restrictions, losses of the airline industry in 2020 exceeded 137 billion dollars. Government support was needed for the survival of some airlines. But, even though airlines suffered during the pandemic, they seemed to react with resilience. (KPMG, 2022)

The airline also received financial support from the Dutch government, because the airline is one of the most important economical drivers in the Netherlands. Because of COVID-19, a lot of airplanes were not allowed to fly, as a result, the airline was hit hard by the crisis. Due to these restrictions, there was less income, but costs were still running, like fleet and labour costs. Because the airline receives financial support from the government, it is dependent on the government and there are agreements that should be followed. Furthermore, the airline is in a great financial crisis and one of the requirements of the financial support of the government is that the costs of the airline drop by 15 percent (Rijksoverheid, 2021). The other agreements can be seen in the paragraph 'Political'.

Furthermore, now that the industry is finally able to start recovering after the pandemic, the rising oil prices will influence on the airline industry. As a result of the invasion of Ukraine by Russia, the oil prices are rising, and this might influence airline ticket prices. Although, there might be some restraints by the airlines, to keep the prices in control. The question that airlines are going to have to ask themselves is if they will pay more debt or will their customers have to pay for the higher prices, knowing that their customers are very price sensitive. (Forbes, 2022)

## ECOLOGICAL

The aviation industry is one of the most polluting industries. Even though research is done on ways to make this industry more green, these solutions might take some time before they are realised (Winter, 2021).

Customers are becoming more aware of this crisis and they are becoming more critical of the aviation industry, resulting in flight shaming. The start of flight shaming has come from environmental activists, resulting in a bad environmental impact on the aviation industry. The term flight shaming appeared in Europe, after the Swedish 'flygskam', but has quickly spread also outside Europe. This has led to climate change-conscious people searching for alternatives to flying, as flying is seen as the most polluting option (Winter, 2021). This results in options like trains, becoming new competitors in the already highly competitive market of the aviation industry. (Deloitte, 2016)

Even though passengers are more aware of the environmental crisis and its consequences, the prices of tickets are still the main priority when booking. One reason might be that airlines have not yet built up their businesses around sustainability and people think they have less of an impact on the environment when they are flying at the moment, because they have not flown a lot during the pandemic, resulting in a smaller personal carbon footprint. Still, research done by Mckinsey & Company in 2022 shows that 40 percent of the people are willing to pay more for a carbon-neutral ticket and that 36 percent of the people are planning to fly less in the upcoming years (Mckinsey & Company, 2022).

## **POLITICAL**

The European Union has set regulations and goals for airlines for the upcoming years. With these regulations and goals, the European Union hopes to eventually achieve zero emissions in 2050. These regulations are set on the 14th of July 2021. By 2030 airlines should meet at least a 55% of net reduction in greenhouse gasses and climate neutrality by 2050.

Furthermore, the airline has personal agreements with the Dutch government, because it receives financial support from them. These are the requirements they have:

- Employees of the airline will receive less salary.
- As long as the airline receives financial support, there will be no bonuses.
- The airline should maintain the quality of the network from Schiphol.
- The airline has to reduce the number of night flights from 32,000 to 25,000.
- The CO2 emissions of the airline will be reduced by 50 percent per passenger kilometer by 2030.
- From 2030, 14 percent of the airline's fuel will be sustainable.

(Rijksoverheid, 2021)

## **DEMOGRAPHIC**

Millennials are the generation seeking experiences rather than products. And now that millennials have more money to spend, they will be willing to pay more for unique experiences. (Forbes, 2019)

Furthermore, according to research done by Sofronov (2018), millennials are the generation that travels the most. Furthermore, they are the generation that searching for experiences (Sofronov, 2018).

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### PARAGRAPH 2.3

## KEY TAKEAWAYS

This paragraph provides a better understanding of the future context of the airline industry. Understanding this future context will first of all help create a concept that will fit this future context. So, this future context was used to create a future vision and the final concept was designed for this future vision. By analysing the future context one research question could be answered:

### *In which context will the airline industry be in 10 years?*

By trying to sketch a future vision, some requirements for the final design could be identified. The first takeaway of this paragraph is for example important to keep in mind during the project and will be used to formulate requirements in chapter 3.

The first takeaway is making sure that the final design will not work against the regulations and agreements the airline has with the government. So, for example, keeping the climate crisis in mind and the financial help the airline is receiving, is an important part of the requirements.

The other three takeaways helped create the future vision, other requirements, and part of the design direction of this project. These can be seen in chapter 3.

First of all, some opportunities were found when analyzing the context. People are experiencing an information overload, and according to the findings from the previous paragraph, this information overload can make customers filter out information. Furthermore, information overload can cause a decrease in decision-making quality and it can lower the customer experience. So, it is important to find out if customers are experiencing this information overload, and if this is the case, how this problem can be solved. This will be researched during the interviews in paragraph 2.4

Next, it was also found that we are living in an experience society. Customers are looking for experiences rather than products or services. These findings will also be researched further during the interviews. It will be researched if the target group is also looking for experiences, and if this is the case, what kind of experiences are they looking for? Furthermore, it will be researched how these experiences can influence target groups' choices.

Lastly, it is important to keep digitalization in mind. This is also happening to the airline industry. Digital and physical customer experiences are becoming equally important for customers, so having a good digital customer experience might improve the overall experience of customers. So, from these findings it was chosen to focus on the digital touch points of the customer journey, since improving these parts of the customer journey, will also improve the overall customer experience.

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## 2.3 INTERVIEW INSIGHTS

In this chapter, the insights of the interviews with the employees of the airline and the chosen target group will be discussed.

### INTERVIEWS EMPLOYEES

First of all, from the literature research, it was found that the airline industry was always a very competitive industry, but because of the pandemic and regulations, it has become even more complex. Even though the airline industry is having a rough period, there might be an opportunity to win customers over, because the pandemic is just over and customers all cannot wait to travel. Secondly, there is a blurring between digital and physical customer experience. This means that the digital experience has become more important for the overall experience of customers (McKinsey & Company, 2021).

To understand and find out how the airline is dealing with these complexities and opportunities interviews were done with employees from the airline. These are the findings that will be discussed:

**1. Technology, system, and website are depreciated. The airline is looking for more sophisticated systems.**

**2. At the moment a lot of focus is on the physical customer experience, but less research on the digital customer experience.**

**3. It is important for people to log in, this way more data can be collected.**

**4. The airline is looking for ways to change the order of certain flows, to improve the customers perceived information and experience.**

These findings will be discussed in the following text:

**1. Technology, the system, and website are depreciated. The airline is looking for more sophisticated systems.**

To begin, part of the website and the interaction on the website with customers is depreciated. The system and technology behind the website of the airline is also depreciated. There are some changes and improvements taking place, but these changes are small and employees say more needs to happen. So, the airline is seeking ways to make the system more sophisticated and up to date, because employees do acknowledge that this is important. The director of offer management said:

“Waarbij een technologie ook een hele grote rol speelt. Het zijn allemaal best wel ouderwetse systemen. Als je die ticket filet? we zijn geen coolblue waar je een product koopt en die heeft gewoon een prijs en doe een ander product erbij, he combineer het even. Maar technologie staat inmiddels toe om bij aankoop een pakketje te maken, waar je kan zien waar de koffer is, korting kan geven etc. Het kon van oorsprong niet echt, moest het gefiled worden in het systeem, dus technisch zijn er ontwikkelingen geweest waardoor we niet afhankelijk zijn van alle oude systemen. Doe ik een stoel erbij, bagage erbij, hup, voor persoon X korting. Dat is dan je product. Dat is dan ook een nieuwe element, wat ook interessant is. Uiteindelijk willen we artificial intelligence, dat als je inlogd, sofistication hebben in wat je offert.”

...

“Technology also plays a major role. They are all pretty old-fashioned systems. If you file the ticket? We are not coolblue where you buy a product and it just has a price and add you can add another product, or combine it. But technology now allows you to make a package when you buy it, where you can see where the suitcase is, give a discount, etc. Originally it was not really possible, it had to be filed in the system, so technically there have been developments that allow us to be less depend on old systems. If I add a chair, add luggage, go, and some discount for person X. That is your product. So that's a new element, which is also interesting. Ultimately, we want artificial intelligence, so when you log in, there is more sophistication in what you offer.”

As the employee explained, the system and technology of the airline need improvement to make sure they stay relevant to the customers. This is a great opportunity to make the experience for the customers even better. But, to improve the experience of the customers, the airline first of all, needs to find out which part of the system needs to be improved. Secondly, how this part needs to be improved. Lastly, multiple departments need to be involved in this process.

As the employee mentioned, an example of a part of the system that needs improvement is the ‘product’. With the product, the employee means, the flights and the ancillaries or attributes of the flight. So, for example, economy flights or business flights, together with the ancillaries which are part of these flights like the chair, food, lounge, etc. The way these attributes are presented to the customers; the way the customer can buy these attributes and the system behind these attributes is depreciated and needs improvement.

Sometimes there is a lack of evidence from one department to another for changes and innovations that need to be made:

“Want bij revenue is het even heel genant gezegd, geld geld geld, we don't care about the klant. En bij marketing kwam ik binnen en daar waren ze bezig met geef klant een gratis upgrade, apple gaat geen Iphone geven gratis, maar dan is die helemaal blij. nou nee daar kunnen we ook geld aan verdienen. die werelden praten niet met elkaar, hele andere mindset. revenue management slaat door. laatste stoelen heel duur maken.”

...

“Because with revenue it is all about the money money money, we don't care about the customer. And when I worked in the marketing department, they were working on giving customers free upgrades, but Apple is not going to give iPhones for free, because customers will become happy because of this. Well no, we can also make money from that, so those worlds don't talk to each other, they have a completely different mindset. Revenue management can overdo. making the last seats very expensive for example.”

An example of the lack of evidence is how certain changes are going to bring more money in the end. Without this evidence, they do not see why the changes need to be made and the changes just don't happen. In conclusion, the airline is seeking ways to make these depreciated systems and technologies more sophisticated.

## 2. At the moment a lot of focus is on the physical customer experience.

The airline researches how customer experience their flight when they travel with the airline. This research is mainly done about the inflight experience, so the physical experience. Overall, people are positive about the in-flight experience of the airline. The airline does not research the digital experience of their customers, so they are not completely sure if this is positive or negative. Furthermore, this makes it also harder to make innovations within the systems and technologies. Employees do know this is an important part of the overall experience. One employee mentioned they did understand this was very important since this is the moment that customers choose the airline. An employee explained:

“UX van digital is daar mee bezig, welk plaatje waar komen te staan, die knop van KLM holidays waar moet die staan? Dat is inderdaad meer functioneel. Maar inderdaad als we willen kijken naar hoe kunnen we de ervaring van mensen die op de site komen nog meer bijzonder maken dan weet ik niet of mensen daar mee bezig zijn, vanuit CX niet.”

...

“Digital's UX is working on that, which picture will be placed where, where should the KLM holidays button be placed? That is indeed more functional. But, if we want to look into making the experience of people who come on the website even more special, I don't think people are working on that, CX is not anyway.”

The conclusion of the interview with the customer experience employee was that the airline should also focus on the digital experience and innovating and researching this experience because at the moment this is not done and the digital or flight experience is almost as long as the in-flight experience. The airline sees opportunities in innovating this digital experience. Creating a better digital experience will improve the overall customer experience. This was also found in the literature research, namely that the digital and physical customer experience are equally important (Mckinsey & Company, 2021). So, because the airline is not yet radically innovating its digital customer experience, this might be an opportunity.

## 3. It is important for people to log in, this way more data can be collected.

Lastly, the digital department of the airline does some research on the booking process and looks into how to improve this process. This department looks into when people drop out during their booking process. Furthermore, they also research how people experience the website by using surveys. These surveys pop up on the website. Changes from these surveys take some time to get implemented and are often small changes. This is what the employee explained:

“Wij doen vooral surveys. Ook op de website, waarin we mensen vragen stellen. En die survey dus die sturen naar een kleiner aantal mensen.”

...

“We do mostly surveys. Also on the website were we ask people some questions. The survey we send to a small group of people.”

Next, the digital department is working on ways to make sure customers login, when they are on the website and when they are in the booking process. The employee mentioned that it is of importance for customers to log in, because this way they can gather

“Dus dat idee is, we hebben nu de IT page voor de ancillary bio, en we willen dus eigenlijk, er is een grote vraag vanuit een aantal collega's, hypothese is dat klanten niet begrijpen dat je dan daarna ineens dingen kan kopen, maar dat is een mogelijkheid dat we dingen zouden willen testen. Want daarom willen we eigenlijk ook dat mensen ingelogd zijn, want als je daarna pas gaat inloggen.”

...

“So that idea is, we now have the IT page for the ancillary bio, and so what we actually want, this is a big demand from a number of colleagues, hypothesis is that customers don't understand that you can suddenly buy things afterwards, but that's a possibility that we would like to test things. Because that's why we actually want people to also be logged in, because if you only log in afterwards.”

First of all if customers log in, they will have their travel history of that customer. This will give them a better overall image of their customers. With this data, they can make more personal products and recommendations.

Furthermore, they then can send for example e-mails with recommendations. Also, the airline wants to become more data-driven, since they are looking for ways to implement data in their website and app. Within the airline, there are employees that have started to work on ways to gather data and implement this data.

So, the airline sees opportunities with using and collecting data and is researching at the moment how this will be done.

#### **4. The airline is looking for ways to change the order of certain flows, to improve the customers perceived information and experience.**

Lastly, it could be seen in the previous quote that the airline is looking for new ways to present its information on the website and app. For example, in the booking flow, it would be nice if there is a change of order, since people now sometimes experience the airline's products as advertisements, while they are just part of the booking process. Because they come after filling in all the personal information this is experienced as an irritation. This is in line with the literature found since this information can be experienced in an irritating and less novel way. In addition to the literature, findings are that it is also the order of giving information that might change the way people perceive the information.

So, the airline is looking for other ways to order the booking flow, so this process is experienced less as an advertisement and more as a part of the booking flow and exploring the airline experiences.

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## **PARAGRAPH 2.4 - EMPLOYEES**

### **KEY TAKEAWAYS**

By talking with employees of the airline it became clear that the airline is already working on digitalization and they think it is an important part to improve, but there is still more focus on the physical customer experience. Systems and technology are depreciated and the airline is looking for ways to improve these systems and technologies. Adding more value to a part of the digital experience or digital touchpoints is something that the airline is looking for. Furthermore, the airline is aware of the fact that the way information is presented is an important part of influencing customers to make choices, so from this paragraph, it could be added that not only the type of information presented is important but also the order of information can help with attention and the way it influences people. To conclude, the part of the digital experience and touchpoints will be the focus of this project to innovate and improve. Furthermore, it will be researched how this order can influence customers's choice.

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## INTERVIEWS TARGET GROUP

Secondly, the target group was interviewed. These interviews were done to find out how people make choices, and how these choices are influenced and how the target group experiences their travel journey.

These are the most important findings:

**1. Searching for genuine and unique experiences and information.**

**2. The online experience is considered part of the overall experience of going on vacation.**

**3. Fitting experiences and activities can influence decisions for vacation.**

**4. Social interaction and other people are decisive for travel decisions.**

**5. The target group searching for a flexible way to find the vacation and flights they are looking for and they are searching for new ways to filter out information that is not important for them.**

The following findings will be discussed on the following pages.

### 1. Searching for genuine and unique experiences and information.

- **People searching for surprising and unique experiences.**
- **People want genuine experience.**

First of all, the overall experience in the airplane and on vacation has to be or seem genuine to the target group, for them to choose it. Also, the experience on the website should feel genuine. One participant mentioned:

"Ja dat alles een beetje in scene is gezet. Dat je uuuh, het voelt minder authentiek aan. Een beetje een Disneyland gevoel krijg je van die websites."

...

"Yes, everything is a bit staged. That you uuuh, get the feeling that it is less authentic. A bit of a Disneyland feeling I get from those websites."

Furthermore, the target group enjoys being spontaneous and being surprised. They are looking for experiences that are unique and not seen by everybody. As one participant mentioned, they are looking for the hidden gems:

"benieuwd wat je een beetje of the beaten track kan doen."

...

"I am curious about something you can do off the beaten track."

Activities with a lot of tourists and destinations are not something they are looking for:

"Uuuh jaa, ja als ik een voorbeeld kan geven, we gingen dan naar Marteniek, en toen heb ik dus wel gelezen dat Sint Lucia dicht bij is en dat dat toch iets minder toeristisch is en dan gewoon meer, uh adventure en dat heeft doen besluiten dat je dan toch naar zo'n eiland wilt."

...

"Uuuh yes, yes if I can give an example, we went to Marteniek, and then I read that Sint Lucia is close by and that it is a little less touristy and then just more, uh adventure and that made us decide that you want to go to such an island."

Even though there is a lot of information that could be found online, for example with Google or Social Media, from the interviews it could be concluded that the target group would rather not follow or visit these places and listen to this information, they would rather visit and find places that are not too touristy and that are not visited by too much people. They like being surprised and exploring places and destinations which are not overcrowded and well known. They are looking for hidden gems.

## 2. The online experience is considered part of the overall experience of going on vacation.

- **The target group experiences the research part of their journey as part of the vacation.**
- **The target group experiences the booking part as part of their journey and vacation.**

Next, the target group does not only experience the destination they are flying to and their flight as part of their vacation, but they also already experience the online experience as part of their vacation. Interviewees enjoy this part of their journey and do not mind if it takes some time:

“dus het duurt wel even, Maar ik vind dat juist wel leuk dat het ook geen haast heeft. In oktober zijn de komende 6 weken gewoon elke week nog een klein dingetje uitzoeken.”

...

“so it does take a while, But I think that is the fun part, that it does not have haste. In October the upcoming 6 weeks we just have to figure out some small stuff every week.”

This online experience is the part where the target group is gathering inspiration, ideas, researching, and booking their tickets. Some interviewees also mentioned that they enjoyed this part of the journey if everything went smoothly:

“ik vind een groot en leuk deel van de vakantie ook echt de voorbereiding. Met dat Argentinië in ieder geval.”

...

“I think a big and fun part of vacation is also really the preparation. Anyway with Argentina that is the case.”

So, the target group does see the digital part of their vacation as part of their overall vacation experience. If this online part is not experienced positively this might influence their overall experience of the airline. This is an example of the blurring between digital and physical experiences. Because of this people are relying more on digital services, so truly delivering good digital experiences to their customers is becoming more and more important (Mckinsey & Company, 2021).

In conclusion, there is not only a blurring between the digital and physical customer experience (Mckinsey & Company, 2021), but dreaming, searching, planning, and buying flights is something that the target group sees as part of the vacation, so the online experience of airlines should be already a positive and enjoyable experience of the target group.

## 3. Fitting experiences and activities can influence decisions for vacation.

- **Activities on vacation important for choices**
- **A fitting experience influences choices**

Furthermore, the type of experiences the target group is searching for can influence their decisions. First of all, the target group explained that it was not a destination or flight they were looking for in their vacation, but rather what they will experience during the flight or at the destination:

“Ik zou wel zeggen dat de activiteit wel uitmaakt, en dan ga ik inderdaad research doen, en kijken wat is er te doen en dan ga ik boeken.”

...

"I would say that the activity does matter, and then after I would do the research, and see what there is to do and then I will book."

The experiences they were talking about were often the activities they could do. For example, a certain sports or the possibility to learn a language or have a road trip. One example of the target group was searching for a place to kitesurf:

"Ja, na ten minste ik wil goed leren kitesurfen, dus graag een plekje waar ik dat goed kan leren."

...

"Yes, after at least I want to learn to kitesurf well, so I'd like a place where I can learn to do that."

Next, the target group is searching for experiences that create the feeling they fit them personally. So, they are looking for fitting experiences. The vacation and what they will do during that vacation should fit their personal preferences:

"Past het bij je persoonlijke voorkeuren als je het op internet invult en opzoekt, ja matig, dus ja niet bij die vakantie."

...

"Does it match your personal preferences if you fill it in and look it up on the internet, yes not really, so not with that holiday."

From literature, it was found that people today do prefer experiences over products and things (Yeoman, 2019). From the interviews, it could be concluded that people do not only prefer experiences over products and things but that the experience at the destination or on the flight is also more important for them than the destination itself. The experience at the airplane and on the destination should fit their needs. This would influence their decision.

So, focusing and showing the experience that certain destinations, flights, or airport bring might be an opportunity for the airline, rather than just naming the destination, or flight attribute.

#### 4. Social interaction and other people's decisive for travel decisions.

- **Similar people influence the choices of the target group**
- **People with 'experience' influence the choices of the target group**
- **Positive information from other people influences the target group, more than negative information.**
- **People influence the choices of the target group more than internet or social media**

Next, social interactions and other people are decisive for making decisions for the target group. First of all, the target group prefers and believes information given by other people more than information found on the internet. This information in turn also influences their choice more than the information found on the internet. As an interviewee said:

"Nee, dan heb ik liever eigenlijk, vind ik het leuker om het van iemand te horen, want dan heb je nog meer informatie, en ook de persoonlijke eraan."

...

"No, I actually prefer, I prefer to hear it from someone because then you have even more information, and also the personal to it."

Furthermore, the type of people that give the information is important for how much influence this information will have on the choices of the target group. From the research done by Dolan et al. (2012), it was already proven certain people can influence people's decisions. In this research, it was found that people might be influenced by others in a way if they want to fit in the group if these people identify themselves with this group. From the interviews, the target group explained that people with who the target group identifies themselves as similar to them would influence the target group's decisions:

"Misschien, ja wat je eigenlijk dan zou willen is: dit is dan een persoon die ik ben dan he, de persoon die je bent oke, wat is dan met dat profiel wat hebben die mensen dan daar gedaan en wat vonden ze leuk."

...

"Maybe, what you would actually like is that: I can look at the person that I am, my profile and how I am, and then a person that is similar to me what did that person do there and what did they like."

Also, the target group explained that other people that have experience might influence their travel choices. The type of experience in this

situation having been to the destination or has done certain activities in the destination:

“Uuumh ik vind het heel belangrijk en waardevol als mensen er al geweest zijn. Ik vind het heel waardevol, je bedoelt in mijn directe omgeving? Ja, nee alle mensen dus! Niet alleen die je kent. of directe omgeving.”

...

“Uuumh I think it is very important and valuable if people have already been there. I find it very valuable, but do you mean that I have to know the people? Yes, no all people! Not just those you know. or your direct environment.”

Also, locals or people who lived there would influence the target group much more than information online:

“Er zijn een aantal mensen die hebben daar gewoond of die zijn er net geweest en die hebben lekker tips ofzo. Maar ik zie dat meer als iets positiefs als daar niet heen gaan ofzo door negatieve verhalen.”

...

“There are people who have lived there or who have just been there and they have good tips or something. But I mostly listen more the positive than not going there or because of negative stories.”

Next, the positive information given by people seems to influence the target group more than when people give negative information. This information can be both information given by people online or offline:

“zo word het wel beïnvloed door mensen. Uhm, jaa vaak in een positieve manier, dat mensen zeggen je moet er een keertje heen en dan ga je kijken.”

...

“so it is influenced by people. Uhm, yes often in a positive way, that people say you have to go there once and then you go and look.”

Lastly, people often travel together, thus the target group explained that their choices depend on the choices of people they travel with. Today, a lot of travel experiences and products created by airlines target people as individuals, while the social aspect is also very important for travel choices. So, it could be concluded that messengers or people do have an influence on the target group and their travel decisions, but these people should not only be people with authority as seen in the research done by Dolan et al. (2012), but also people with experience, fellow travelers and locals. Furthermore, positive information seems to be more influential than negative information.

## 5. The target group searching for a flexible way to find the vacation and flights they are looking for and they are searching for new ways to filter out information that is not important to them.

- Information overload on the websites.
- People want to search with other things and in other ways than airports. They want to search in a flexible way.

Finally, there is a lot of information on the internet. When the target group is looking for inspiration and ideas or planning a vacation, they search for information on the internet. They use a lot of different websites to gather all the needed information and inspiration to help them make choices. The target group uses different types of websites, like for example Google, airline websites, OTA websites, blogs, etc. When doing research online, the target group indicated that they often encounter an information overload. This results in the target group filtering out the information they think is important to them (Dolan et al., 2012). Some interviewees indicated that this information overload was experienced as frustrating or too much to take up.

“Maar dat is dan informatie, ja eigenlijk too much voor mij, dus dan vind ik het eigenlijk juist heel chill om tips te krijgen van bekende. Sites is een informatie overload”

...

“But that information is actually too much for me, so I think would prefer to get tips from people I know. Sites are an information overload”

Looking at the literature, information overload can lead to worse decision-making quality and a bad experience for customers. (Roetzel, 2019) (Peng, 2021).

Furthermore, the target group is looking for other ways of searching. The target group is very flexible. When planning and researching their vacation they are often very flexible in dates, duration, and places they want to travel to. For example, one interviewee indicated that they are very flexible in dates:

“Natuurlijk ontzettend flexibel, want zolang je maar vroeg van tevoren bent, maakt het ons niet uit of je in week één of twee van oktober weggaat.. Maar ik kan altijd vakantie nemen. Ik heb geen specifieke data en Eline moet gewoon vroeg van te voren aangeven, dus zij kan niet zomaar over twee maanden weg, maar ze kan ook eigenlijk altijd gaan.”



...

Of course very flexible, because as long as you are early in advance, we don't care if you leave in week one or two in October. But, I can always take a holiday. I don't have any specific dates and Eline just has to indicate early in advance, so she can't just leave in two months, but she can actually go anytime.

There are certain characteristics of the flights and vacations that the target group finds decisive for their travel decisions. This is information that the target group has to filter out themselves from all the information they receive on websites. For example, the target group mentioned that the time that the flight arrives at the destination is very important for their choice, and they are willing to pay more for these flights. Furthermore, having a stop and how long this stop is, is also influential for their choice.

Further, the target group is often flexible about the country or place they want to travel to. They are not searching for flights to a country, but rather countries where they can do certain activities. Examples of these types of activities are for example sailing or a wine culture. One interviewee mentioned:

Activiteiten als je gaat zeilen of, kiten of wielrennen, dat is dan de hoofdzaak. En dat doe je dan op de leukste plek die er dan is. En dan vervolgens is iedereen snapt dan dat je naar die zelfde bepaalde plek wil.

...

Activities like if you go sailing or, kiting or cycling, that is the most important. And you have to do that in the nicest place. And then everyone understands that you choose that specific place.

At the moment, the target group experiences a great information overload on most websites. This information overload is experienced in a negative way, as could also be seen in the research done by Roetzel et al. (2019), which will eventually also lead to worse quality of decision making. From the interviews it could also be concluded that the target group has to filter out this information themselves, leading to possible filtering out of information that might be fruitful to them.

Furthermore, the way the target group is searching for information at the moment does not fit the current searching engines, as the target group is often very flexible, but might also have

certain characteristics they are looking for in their vacation of flight. At the moment, the target group is not able to filter information from the airline website and other airline websites and search for the characteristics of their flight or vacation that are genuinely important for them. So, the target group is looking for a new way of 'searching' and filtering information that will fit their needs.



## 2.4 CUSTOMER JOURNEY - OBSERVATION

In this chapter, the customer journey of the target group will be discussed. This customer journey is created as a result of online research, research from the airline, interviews with the target group, and observations with the target group.

First, the customer journey was based on online research, information gathered from interviews with the airline employees, and adaptations made after the interviews with the target group. This customer journey can be seen in figure 5.

### *Weighing Possibilities*

When the target group has gathered enough information, during the exploring phase, they start weighing the possibilities and choosing which vacation characteristics are most important to them.



Figure 5: First customer journey

### *Inspiration*

The journey starts for leisure customers by having the need or the first idea to go on vacation. They start daydreaming, talking to people, and looking on the internet for small ideas and inspirations about what kind of vacation they would like. Sometimes, they already have a small idea of what their goal is of the vacation. Some examples from the interviews for these goals are: learning to kite-surf, hiking, and relaxing.

### *Explore*

Next, the target group starts exploring and gathering more information on different websites. In this stage, the target group is also gathering information from people. This part of the journey can be fun if they end up finding the correct information directly, but often online there is an information overload and they have to visit a lot of different websites to find the correct information.

### *Confirming*

After researching which combination of characteristics they find most important for their vacation, the target group chooses and confirms these characteristics. They set these requirements for the vacation. They often do not only individually choose these characteristics but they also confirm them with other people they are traveling with.

### *Comparing*

When the target group knows the characteristics they start comparing the destination they want to travel to or if they already know the destination they start comparing airlines. They look on the websites of the airline, OTAs, and aggregators for flights.

### *Booking*

Lastly, the target group chooses one airline, goes to the website of the airline, and books the flight.

### Observations

After the observations, there were two important findings. These findings led to adaptations in the customer journey. First of all, during the observations, it was clear that the journey is not a linear process. People can go from research to booking, the dream phase, and back to booking again.



Figure 6: Customer journey after observations

There is also no clear start during the journey. For example, the target group might start their journey on the site of an airline, go through the booking process, and then stop and go to another airline's website. This can be seen in figure 6.

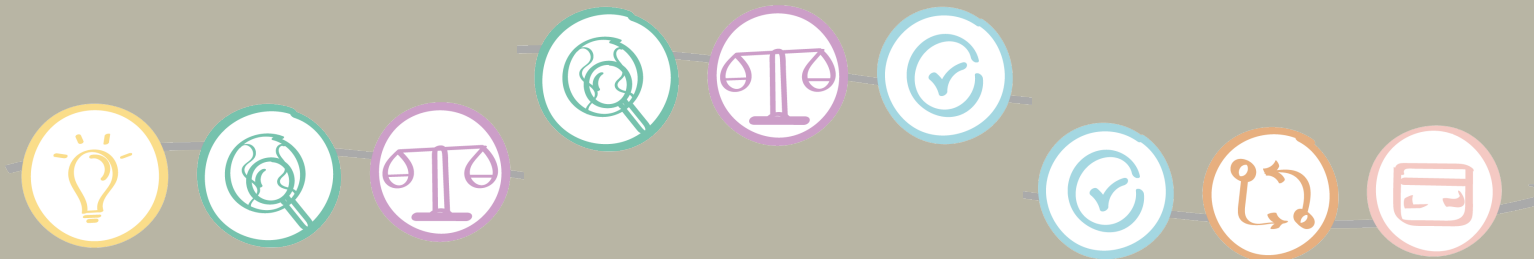


Figure 7: Customer journey after observations

Secondly, it is rather a process that takes place on multiple moments, which can be different days, weeks, or even months. This can be seen in figure 7. Also, the journey is influenced by other people who are traveling with the target group.

## 2.5 TYPE OF TRAVELLERS

From the interviews and literature research, it could also be concluded that there are three types of travelers. These travelers will be discussed in this chapter. The three types are fixed travelers, partly flexible travelers, and flexible travelers.

From the interviews done with the target group, two types of travelers were found: flexible travelers and partly flexible travelers. Furthermore, the third type of traveler is the fixed travelers, identified by the airline. All the types of travelers will be explained underneath. Next, both flexible travelers are rather experience-based than product or destination

based. This means they are looking for certain experiences that are felt or can be done during the flight, at the airport, or at the destination.

The three types of travelers will be used to help during the designing of the concepts.



FIXED

### *Fixed travelers*

First, there are fixed travelers. These travelers know exactly where they would like to travel to when they are on the airline's website. Often, they also know at the beginning of their customer journey where they want to go. Reasons they now are for example because they are traveling back home or they are traveling for work and have to be in a certain destination.



PARTLY  
FLEXIBLE

### *Partly flexible travelers*

Next, there are the partly flexible travelers. These travelers have some idea where they going or what kind of experience they are looking for. So, they use these ideas and experiences to find their perfect vacation. An example of these ideas or experiences that they are looking for in their vacation can be a luxury vacation, family vacation, hiking, or kitesurfing.



ENTIRELY  
FLEXIBLE

### *Flexible travelers*

Lastly, there are entirely flexible travelers. These travelers are completely flexible, meaning they know they want to travel or have a vacation, but when, where and what type of vacation they are looking for is completely unclear. So, they are still gathering information and looking for inspiration for this vacation.





## CHAPTER 2

# INTERIM CONCLUSION

From the literature research, interviews with the employees, and the chosen target group, enough information was gathered for the discover phase, to enter the define phase. With this information, the three research questions were answered. In the define phase, the focus of this project will be defined by creating a design direction. Furthermore, the findings in this chapter will also help with setting a future vision and requirements, which will in turn help during the ideation phase.

It could be concluded, that travel decisions can be influenced in three ways. First of all, experiences are an important part of decision-making. Customers are looking for experiences, rather than just a destination or flight. These experiences should fit customers, and be genuine or unique.

Furthermore, other people are decisive for customer choices. Not only people who have experience with the destination or flights but also people who are similar to customers or fellow travelers can have a great influence on the choices that customers make and should be considered.

Next, customers, are looking for flexible ways to search that fit their needs and requirements. The way people search at the moment is deprecated. Also, presenting information in the wrong way on the digital touchpoints can have great influence on how this information is perceived and the choices of people. So, the airline is also interested in other ways to present this information.

Lastly, this project will focus on the digital touch points of the airline and on creating emotional value, since digital touchpoints are becoming equally important for customers and emotional value can influence customer's choice.

In the following phase of this project, it will researched how to combine these findings to create a clear focus. This focus will be set with the design direction of the next chapter.

In this chapter, the define phase will be introduced and discussed. In this phase, the literature research and the insights from the interviews will be used to set a future vision, requirements, and the design direction.



Chapter | 3  
**Define**

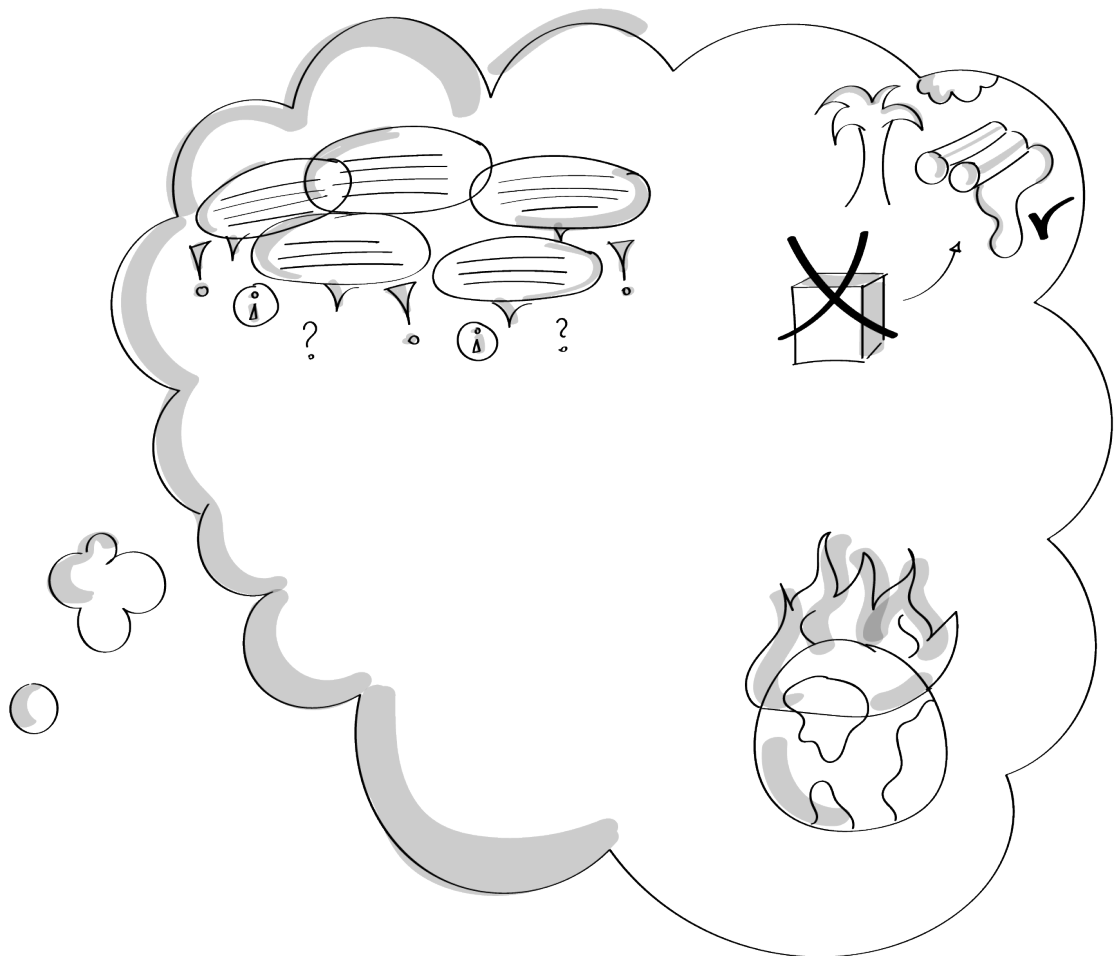
## 3.1 Future Vision

**In this paragraph, the future vision will be introduced and explained. The future vision is created from the literature research.**

From the context exploration in chapter 2.2 a future vision was created. This is the future vision of the airline industry in 10 years. It highlights the most important developments and trends within society, technology, and regulations which will have an impact on the airline industry.

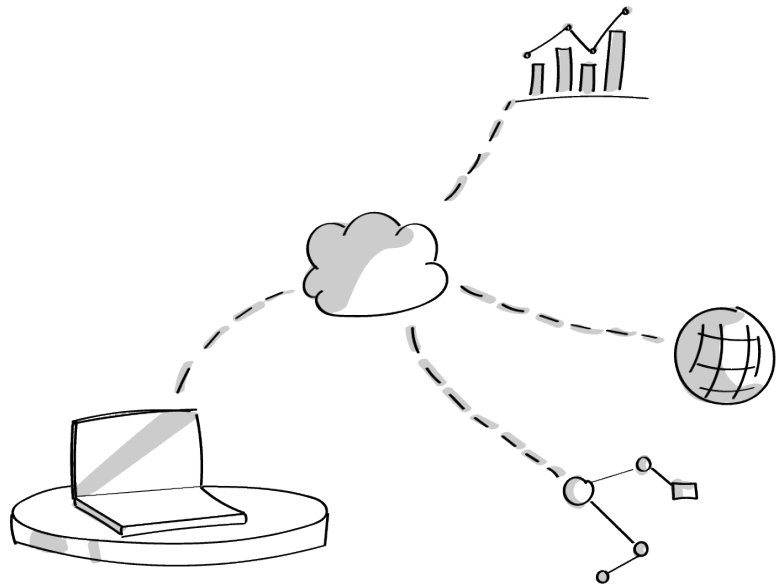
This future vision will be used further on in this project. First of all, it will help create the design direction.

Secondly, it will help set the requirements that will help during the ideation phase. The design direction can be seen in chapter 3.2 and the design requirements can be seen in chapter 3.3.



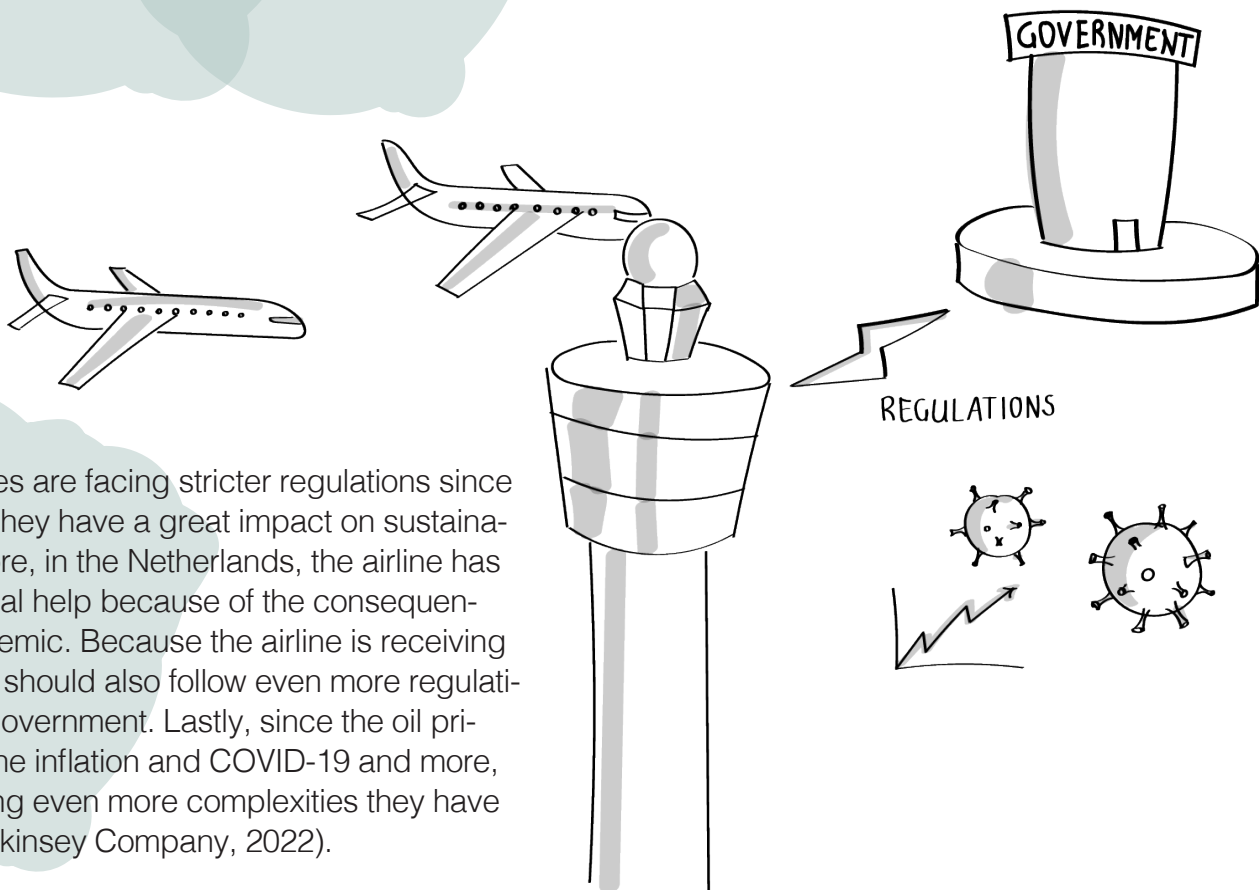
### Social

First of all, the world is becoming more and more digital, leading to more information being available online for people. Because of all this information, people are experiencing an information overload. It is getting harder for people to filter out the important and relevant information for them. This information overload can result in a bad quality of decision-making and a bad experience (Roetzel, 2019). Furthermore, people are becoming less materialistic and rather focussed on experiences. So, the experience that people have because of a product or service is more important than owning this product or service. Also, the destination one is flying to is less important than the experience people will be having there (Sofronov, 2018). Also, people are looking for experiences that really fit their needs, since they have access to more information and can compare these experiences more. Lastly, people are coming more aware of climate change, and this is also becoming more decisive for their choices to fly with the airplane (Mckincey & Company, 2022).



## Technology

Most companies are going through digitalization since the digital and physical worlds are blurring. People are not only looking for a good physical experience but also good digital experiences (Mckinsey & Company, 2021). Airline companies need to adjust to these changes too, especially since the airline industry is highly competitive. Because of this digitalization, companies can gather more data and use this data to personalise and improve the experience of people based on their needs (Abdulsamie, 2021). Using this data to get to know your customers can bring benefits to companies that are not doing this yet. This data can also be a first step towards the preparation of the upcoming metaverse.



## Regulations

First of all, airlines are facing stricter regulations since it is known that they have a great impact on sustainability. Furthermore, in the Netherlands, the airline has received financial help because of the consequences of the pandemic. Because the airline is receiving financial help, it should also follow even more regulations set by the government. Lastly, since the oil prices are rising, the inflation and COVID-19 and more, airlines are facing even more complexities they have to deal with (Mckinsey Company, 2022).

## 3.2 Design Direction

In this paragraph, the design direction will be discussed. First, the design direction will be explained. Secondly, it will be discussed how this design direction came about from interviews, observations, and literature research.

### *Design Direction:*

Improving the online journey by adding a **digital experiential component** that will add **emotional value** to the overall customer experience.

Based on the future vision; the gathered information about how people make choices and the insights from the interviews and observations a design direction is created. This design direction can be seen at the top.

### *Digital experience*

First of all, the design direction should be digital because there is already a blurring between digital and physical experiences. This means that people expect a good physical customer experience, but also a good digital experience. Digital experiences have become even more important after the pandemic. So, it is important for companies to have both a great digital and physical customer experience (Mckinsey & Company, 2021). This digital customer experience will also help the airline make the first steps in the direction of the metaverse.

Looking at figure 9, the current situation is shown at the top. The digital part, being the website and app, are the touchpoints with which customers can book, view, check-in, or adjust their flight.

From the interviews it was found that the online experience is already considered part of the journey, so adding an experiential component to this digital part, can create a better overall customer experience.

Furthermore, people are searching for experiences rather than a product or destination. So, the experience they will have with the product or at the destination is decisive for their choice.

In conclusion, the experience customers have are more important than products or destinations and these experiences already start during their online journey. So, adding a positive digital experiential component to the online experience will contribute to the overall customer experience.

### *Emotional value*

At the moment with the digital touchpoints of the airline, customers are making mostly rational choices, making the digital experience mostly rational. From the research done by Karl et al. (2021), it could be concluded that also triggering emotions with these digital touchpoints will influence the customers to choose the airline.

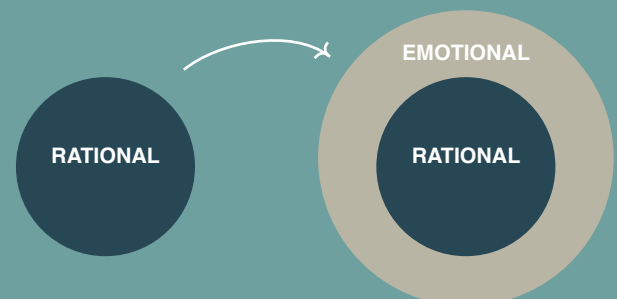
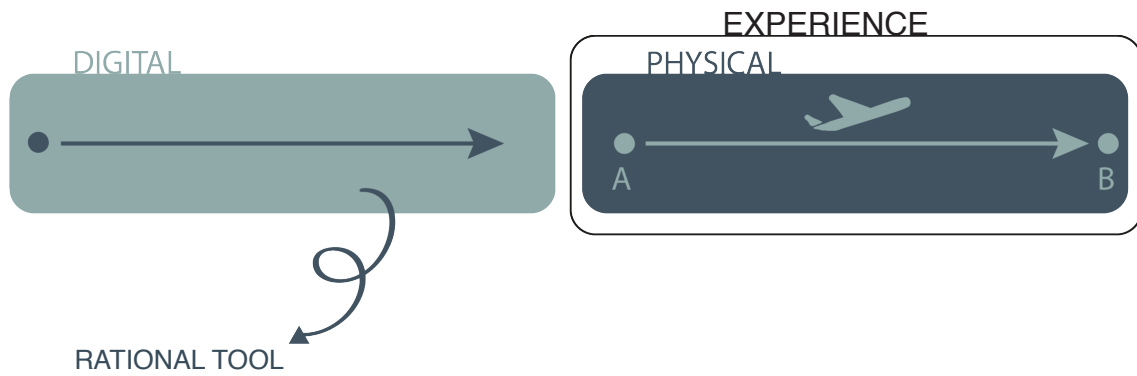


Figure 8: Adding emotional value to the mostly rational digital touchpoints.

**From:**



**To:**



Figure 9: Experience how it was and how it should be

### *Design direction*

Currently, the digital touchpoints of the airline are mostly rational tools. These tools are not designed to be part of the experience, but rather a place online to compare and make a rational choice to buy a flight. These touchpoints are the app and website of the airline. On the website and app, customers can now look for flights from one airport to another. After searching for the airports, and setting the date, number of people, class of flight, and type of trip (round, one-way, or multi-trip), customers can search different flights for the set dates and compare them. This comparison is at the moment mostly based on the price, stops, and flight length.

This is not only the case with the app and website of the airline, but also other airlines have digital touchpoints which are not part of their overall experience, but rather a way to compare different flights based on price, length of flight, and stops. Only after choosing one of the flights, the customer can see some flight attributes and ancillaries in bullet points. Not all of the ancillaries and attributes are presented at this point.

From the interviews, customers explained they often did not read this list of ancillaries and attributes, since they were more focussed on the price, which was a bigger font. Furthermore, the

ancillaries and attributes of the flights that appear later on in the booking process are seen as advertisements.

As explained earlier in the text, the digital part of the customer experience is already seen as part of their vacation experience, so adding an experiential component to this part of the journey will improve how customers experience the digital touchpoints. Also, adding emotional value to these touchpoints might trigger people to stay longer on the website and app of the airline and trigger customers to decide to choose the airline.

## 3.3 Design Requirements

In this paragraph, the design requirements which will be used further on in the project will be presented.

From the created future vision in paragraph 3.1, the set of requirements was created. These requirements will be used further on in the project to choose the three best ideas.

Furthermore, these requirements will be kept in mind during the development of ideas to concepts and the validation of the concept.

### Feasibility

- The solution should be realistic to be achieved in 2032.
- The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

### Viability

- The solution should be innovative.
- The solution should fit the future vision.

### Desirability

- The solutions should make the airline more attractive to the target group.
- Should bring benefits to the airline, within a cost-sensitive market.
- Should be profitable for the airline, within the European and Global market.
- The solution should be desirable for all types of travelers.

### How

- Bringing emotional benefits to the customers.
- Help the airline to make full use of the data they already have.
- Generate more data.



### CHAPTER 3

## INTERIM CONCLUSION

The goal of this chapter was to set a focus for the rest of this project. This focus is set by creating a design direction: ***Improving the online journey by adding a digital experiential component that will add emotional value to the overall customer experience.*** With this design direction, three findings became the foundation for the rest of this project. First of all, the focus will be on improving the online journey, so the digital touchpoints of the airline. This includes the first-time customers who are on the website until the moment customers purchase a ticket. Next to that, the ideas should be an experience or focus on experiences. Lastly, the ideas should evoke positive emotions. Further on in this project choices will be made about exactly which part of the digital touchpoints will be innovated.

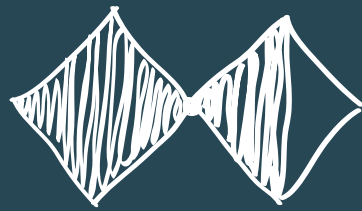
This design direction will be used to create ideas during the brainstorming sessions in the following phase. The requirements and future vision will be used to make sure the correct ideas are chosen to work out in more detail.

In addition to the design direction, other important findings like the social component, flexibility, and order of information will still be used as inspiration for the brainstorming sessions.

# Chapter | **4**

## **Develop**





Chapter four is the develop phase. In this phase, first the ideation phase will be discussed, including the co-creation workshop and the individual brainstorm session. Secondly, the ideas will be discussed. Thirdly, from the last three chosen concepts, one concept will be chosen with rapid prototyping.

## 4.1 CO-CREATION WORKSHOP

**In this paragraph, the first steps towards ideation are taken, namely the co-creation workshop. The co-creation workshop insights will be discussed. Furthermore, it will be discussed how the insights were used for the ideation process.**

### *Set-up*

During the co-creation workshop, employees from two different departments were involved. Furthermore, one student from TU Delft took part. In total there were six participants. The goal of this co-creation workshop was to use the outcome of the co-creation workshop as an inspiration for the idea generation.

### *Design for happiness*

For the workshop, the 'Design for happiness' framework was used, created by Desmet et al. (2013). This framework is used to design for happy emotions. The co-creation workshop results will be later on used as inspiration for ideas. The reason this framework was used for the co-creation workshop is that the ideas should be experiences that evoke positive emotions. Within the Design for Happiness framework, there is a deck of 72 cards with experiences that would evoke happiness: 24 'pleasures', 24 'goals', and 24 'character strengths'. From these 72 cards, 6 were chosen. The 6 chosen experiences were chosen because they best fit the design direction and the airline industry. The 6 experiences that were used for the co-creation workshop were: entertainment, desire, surprise, exploration, belonging, and bodily sensation. Surprise and desire were chosen as experiences because these are experiences that can cause people to want something, so to make a decision. Entertainment, exploration, and bodily sensation were chosen because customers experience these emotions during the use of the final design, they might enjoy the experience at that moment and would want to come back. Lastly, belonging was chosen, because it was found that other people and belonging to a group can be decisive in decisions.

For these 6 experiences, a brainstorm was done on how to create these experiences, during the co-creation workshop.

### *Insights*

In figure 10 one can see one of the results of the brainstorm session. This was the result of "how to create an entertaining experience?". The other brainstorm sessions can be found in appendix 4. The ideas from the brainstorm sessions within the co-creation workshop were a wide range of ideas, which did not have to do with the airline industry. The reason this was done is that these ideas could, later on be used as a source of inspiration for the personal brainstorm session, and by creating this wide set of ideas, inspiration could be sought from unexpected corners. from unexpected corners.

### *Conclusion*

There were a lot of ideas at the end of the co-creation workshop. Three ideas from the co-creation workshop ended up being an inspiration for ideas in the personal brainstorm session.

The first chosen idea that was used as a metaphor for inspiration was the campfire. The campfire can be a place where people who do not know each other come together and share stories with each other. This way a feeling of community is created. The idea that was inspired by the meaning of this metaphor was the 'Airline community'.

Secondly, the Christmas calendar and music are chosen together as an inspiration for one of the ideas. The reason they are chosen was because the Christmas calendar creates the feeling of excitement and creating a desire for a special day. Music was chosen as an inspiration because it can be an emotional trigger. The idea that was inspired by the Christmas calendar and music was the 'Teaser' idea.



Figure 10: Co-creation workshop, entertainment

## 4.2 IDEATION

In this paragraph, the ideas will be introduced and it will be explained how three ideas are chosen.

From the personal brainstorm session, six ideas were created. These ideas will be explained shortly. For this project, three ideas were chosen based on the set requirements in chapter 3.

### **1. Personal Tickets**

With the 'Personal Tickets' idea, people will make their own profile on the airline's website, and they would have to fill in information. Examples of this type of information are activities they would like to do at the destination; what type of destination they would like to visit etc. The type of destination could be with sun or outside of Europe for example. After some time people would receive personal three tickets with a personal discount, which will fit their filled-in information.

This idea is based on the findings from the interviews. People are often flexible about the destination they want to go to. The activities they can do there are more important. With this idea, the airline will help them to do the activities they love and discover new destinations.

### **2. Flexible Search Engine**

With the flexible search engine, customers can search in a more flexible way. A way that fits their needs. At the moment most airline search engines are based on searching based on airports and exact dates.

This idea is based on findings from the interviews with the target group and observations. First of all, the target group is flexible in destinations they want to go and in the way they want to search. Often they do not have an exact date or place in mind when they start doing research. Next, the target group is searching for experiences rather than places or flights.

### **3. Hidden Gems**

The hidden gem is an addition to the airline's ticket. With this addition, customers receive three places that are off the beaten track. These places are found by other customers that are similar to the customer themselves. The customer can also create hidden gems for others to find.

With this idea, the airline can work together with other companies like "AllTrails" or "Strava", because the hidden gems can be found with certain activities which the customers love to do. These places are not sent to everybody, but only the people that are similar to each other, so the places stay unique.

This idea is based on findings from the interviews. People are searching for unique experiences and activities that can be done on vacation are decisive for their choice to go to certain destinations. Furthermore, people like sharing their special and unique moments.

### **4. The Teaser**

"The Teaser" is inspired by ideas from the co-creation workshop, namely the advent calendar. It is also based on some findings from the interviews. Like an advent calendar, when a customer purchases a ticket from the airline, they will receive every month a small experience, making them familiar with the culture they will be visiting and making them excited about the vacation. These small experiences can be for example the top 2 songs from the destination; some important words; places to visit or recipes.

One type of experience was also an inspiration from the co-creation workshop. This type of experience was music. Music can be a positive emotional trigger and can be part of a culture. From the interviews, the target group was searching for cultural experiences.

### **5. Travel Together**

Next, “Travel Together”, is an idea, which is a service. This service is part of the airline’s app. With this app, people can create their perfect vacation together, from a distance. They can save all the changes and updates. People have a common area on the app where they can add or remove properties of their perfect vacation. Like this, the perfect vacation and flight are created.

This idea is based on findings from the interviews and observations. These findings are that people often travel together and that the decisions made during their journey are very much influenced by all the people traveling.

Furthermore, people have to meet up multiple times, to research and book their destination and flight. This takes a lot of time. Furthermore, every time they meet up again, they have to start their search again almost from scratch.

### **6. Airline community**

With “Airline Community”, passengers become part of an online platform when they purchase a flight to a destination. It is an advanced seat map, where people can choose to be anonymous or share information. This information can be for example tips, a list of sights, and restaurants. Other passengers can read and save this information.

This idea is inspired by the metaphor of a campfire, found during the co-creation workshop. Furthermore, the idea was inspired by findings from the interviews. First of all, people like to share their expertise and help others.

Secondly, people are searching for genuine information from people that have experience because they have been there or are locals from the destination they are flying to.

Lastly, by sharing information and receiving information these passengers might have the feeling of togetherness and belonging.

### **Conclusion**

The six ideas were all evaluated with the set requirements. The three ideas which were not chosen met the least of the set requirements. This evaluation can be seen in appendix 3. The three ideas which were chosen are the Flexible Search Engine, the Hidden Gems, and the Airline Community.

## 4.3 THREE CONCEPTS

In this paragraph, the three chosen ideas are worked out in more detail.

### **Concept 1: Airline Community**

#### *What is it?*

The Airline Community is part of the airline app, which customers get access to after purchasing a flight. Later on, in horizon 3 the app will also be accessible with virtual reality, so one can see where people who have shared information are seated. This is optional.

#### *What does it do?*

With the Airline Community, passengers become part of an online platform when they purchase a flight to a destination. It is an advanced seat map, where people can share information with each other. This information can be for example tips, a list of sights and restaurants. Other passengers can read and save this information.

#### *How does it work?*

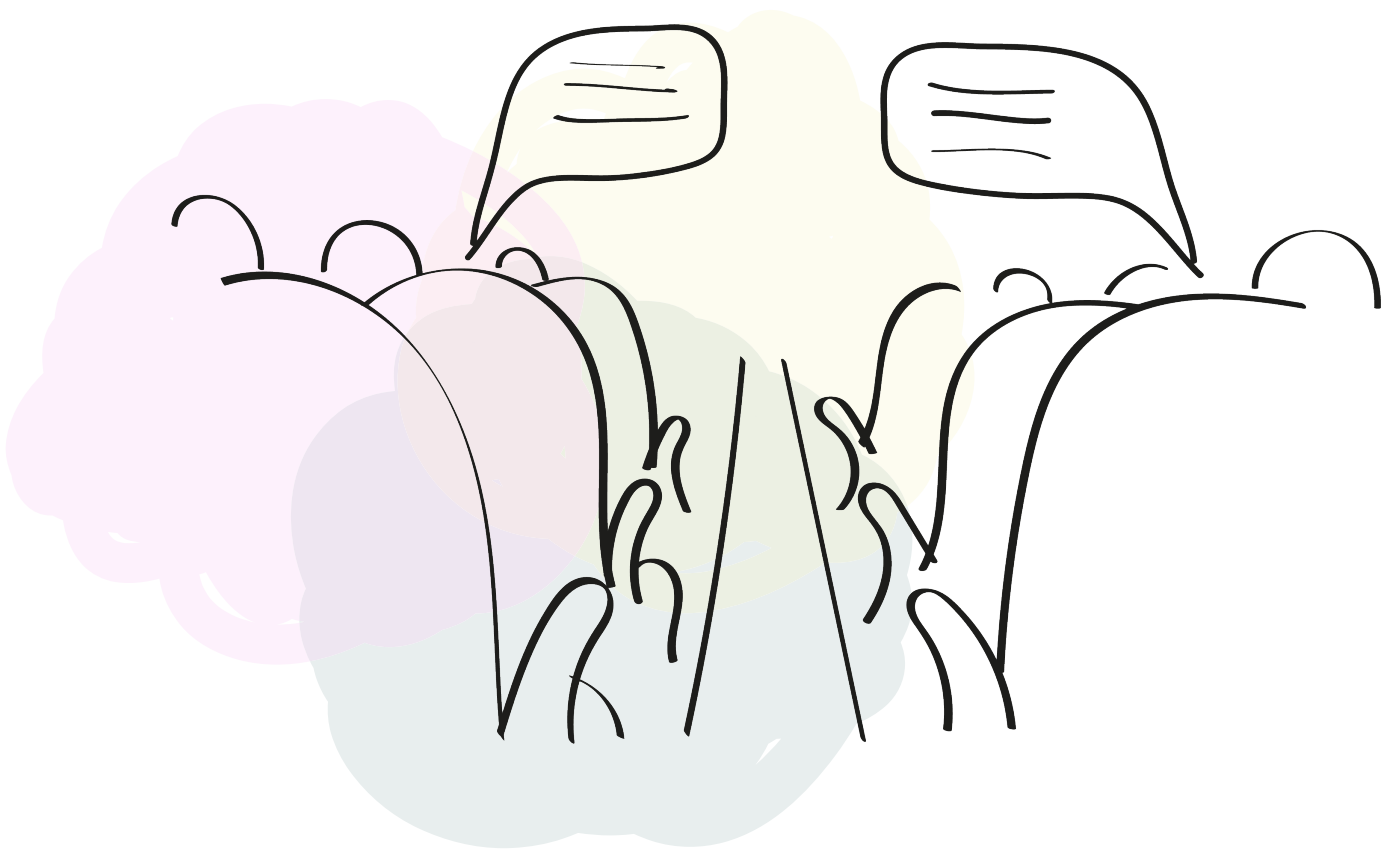
Passengers can enter this platform through the app.

They can choose to stay anonymous or share their name. They can also choose to share information or only read the information of other passengers.

First of all, people are searching for genuine information about the destination they are going to from people that have experience because they have been there or people that are locals from the destination they are flying to.

#### *What problem does it solve?*

Secondly, passengers are not always completely comfortable with the other passengers they are flying with, while they have to stay long hours with these passengers on the same flight. By sharing information and receiving information this uncomfortable feeling might be turned into a more comfortable feeling of togetherness.



## Concept 2: Flexible Search Engine

### What is it?

The Flexible Search Engine new type of search engine.

### What does it do?

With the flexible search engine, customers can search in a more flexible way. A way that fits their needs.

### How does it work?

The search engine will be found at the beginning of the booking tool. It will make searching more easy and more fun for the customers.

### What problem does it solve?

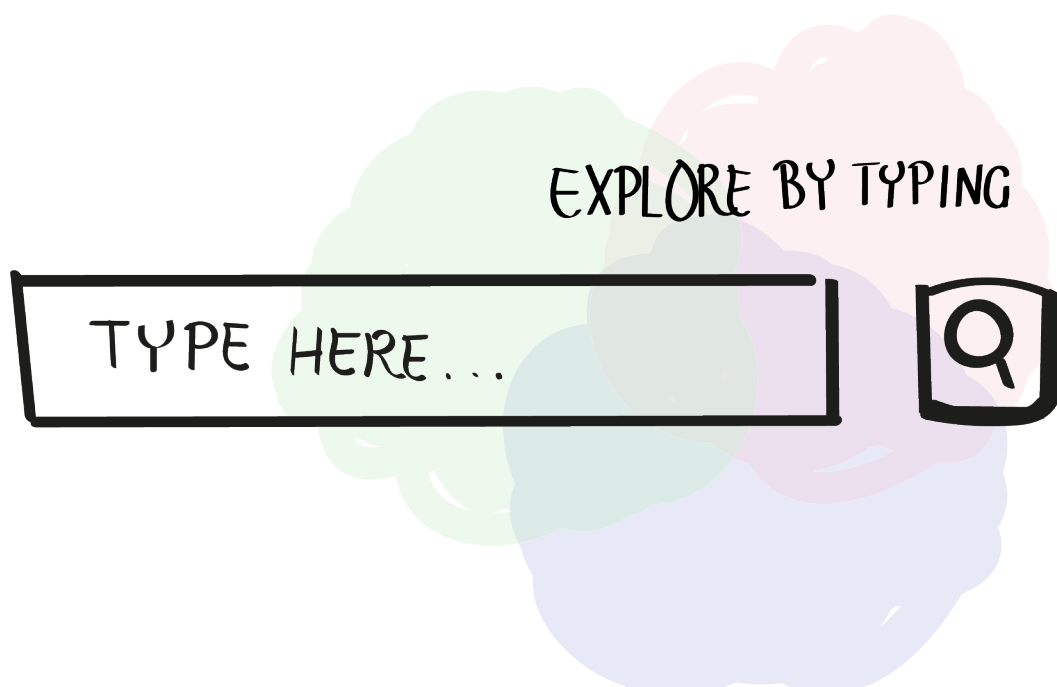
This idea is based on findings from the interviews with the target group and observations. First of all, the target group is very flexible. Often they do not have an exact date or place in mind when they start doing research. At the moment airline search engines are based on searching based on airports and exact dates.

Next to that, during the observations, people were looking for other destinations or experiences to travel to than the name of the airport. Because they were only able to fill in the airport in the current search engines, it took them a lot of additional time to find out which airport they had to fill in, in the current search engines.

Other findings from the interviews were that activities or cultures for example were decisive for the place people wanted to travel to. So, people were searching for ways to find out where these activities or cultures could be found.

Lastly, from the observations, it was found that people thought that the total budget of the vacation was more important than the costs of the flight. Because, the target group was very flexible, the place to travel was not that important, rather the total budget could be decisive for them.

In conclusion, people are searching for another new way of searching, which will fit their needs. The current searching engines do not fit their current needs of flexibility, extensiveness, and ease.



### **Concept 3: The Hidden Gems**

#### ***What is it?***

The Hidden Gems is an addition to the airline ticket that customers purchase.

#### ***What does it do?***

With this addition, customers receive three places or sights which are off the beaten track or/and hidden gems.

#### ***How does it work?***

These places are found by other people that are similar to the customer. The customer can also create hidden gems for others to find. With this idea, the airline can work together with other companies like "AllTrails" or "Strava", because the hidden gems can be found in certain activities that the customers love to do. These places are not sent to everybody, but only the people that are similar to each other. In this way, the places stay unique.

#### ***What problem does it solve?***

This idea is based on findings from the interviews. People are searching for unique experiences and activities that can be done on vacation which are decisive for their choice to go to certain destinations.

Furthermore, people like sharing their special and unique moments.



## 4.4 RAPID PROTOTYPING

**In this paragraph, the process of rapid prototyping will be discussed. Rapid prototyping was done to choose one of the three concepts. With rapid prototyping, feedback could be gathered from the users in a fast way.**

### *Goal*

With the rapid prototyping, the goal was to test all the ideas rapidly, so conclusions can be made about the way these ideas are experienced by people. From this rapid prototyping, the most valuable idea was chosen. For the rapid prototyping, low-fidelity wireframes were made. These can be seen in Figure 12 up until 14.

### *Approach*

Three minimum valuable products in the form of wireframes were made to test the three concepts. These wireframes were tested with four participants. The participants can be found in table 3, in paragraph 1.3. For every concept, the most important and essential features were added to the wireframes, so this could be tested with participants. These features will be discussed further on in the text for every concept. The wireframes were tested with four participants. The wireframes were simple and the design was similar for all three prototypes, so it would not influence the opinion of the participants. All the participants tested all the concepts.

Before they started testing, a short explanation was given for the concept. Next, they were asked to think about their next vacation and talk out loud about how they would imagine using the concept. All the testing was done in their living rooms. There were two main questions that were important to find out for the concepts:

*1) How much value does this concept bring to your experience?*

*2) Would you use this concept? Why?*

By answering these questions, one concept could be chosen at the end of the tests. The results can be read in paragraph 4.5.



Figure 11: Participant testing the wireframes



## Concept 1: Airline community

### Most important features

The most important part of the 'Airplane Community' concept is sharing and receiving information from other passengers. Also, the feeling of community that should be triggered from the sharing and receiving of information is an important characteristic of this concept. So, in this wireframe, the sharing and receiving of information were represented. This can be seen in figure 12.

### Test conclusion

From the test, all the participants indicated that the concept did not give them a community feeling. The intended positive experience of creating a community within the airplane was not there. Furthermore, three participants indicated that they would not use the concept or choose the airline because of the concept. It would provide some useful information, but this information does not have to come from the people they are traveling in the airplane:

“de tips die ik hier lees over plekker of restaurants bijvoorbeeld kan ik ook uit blogs of vlogs krijgen. Ik hoef dit niet per se te bespreken met de mensen in het vliegtuig.”

...

“the tips I read here about places or restaurants, for example, I can also get from blogs or vlogs. I don't necessarily need to discuss this with the people on the plane.”

This means that the concept would not add enough value to the overall experience of the participants.

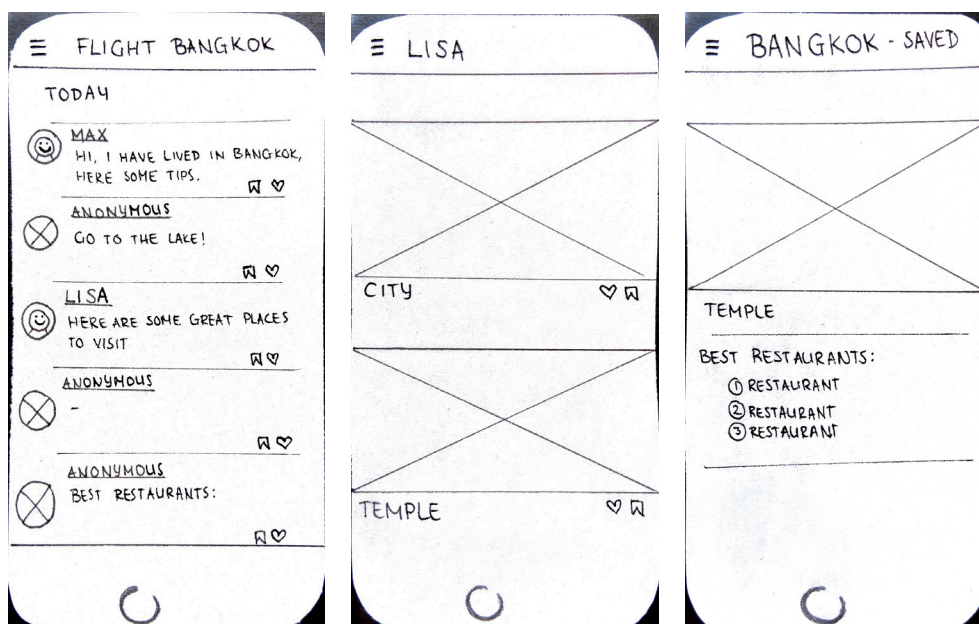


Figure 12: Airline Community wireframes

## Concept 2: Flexible Search Engine

### Most important features

The most important part of the 'Flexible Search Engine' is giving people the freedom to search in the way that fits their needs. So, not only being able to search from one airport to another but also being able to search certain activities or set the travel dates or time flexible for example. The wireframe of this concept can be seen in figure 13.

### Test conclusion

From the test, the participants indicated that this concept will make their searching experience much easier since at the moment they often have to use multiple websites to find the exact airport they would like to fly to. Next to that, one participant indicated that having more flexibility is good because she is flexible when going on

vacation with dates and places.

In conclusion, all the participants would use the concept as it will make their search experience easier.

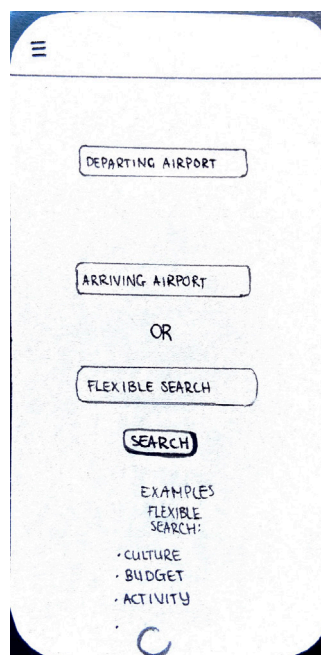


Figure 13: Flexible Search Engine wireframe

### Concept 3: Hidden Gems

#### Most important features

Lastly, the most important part of the 'Hidden Gems' concept is having the possibility to explore unique places in destinations people are flying to. These places cannot be seen by everyone. People who find these 'hidden gems' can indicate what type of people can see these places. This information was also communicated to the participants since it was not possible to explain this through the wireframes only. The wireframes of the 'Hidden Gems' can be seen in figure 14.

#### Test conclusion

First of all, the 'Hidden Gems' concept brought overall positive experiences. One participant said:

"Ik zou het denk ik wel gebruiken. Het is wel leuk om nieuwe plekken te ontdekken die niet iedereen kent."

...

"I think I would use it. It's nice to discover new places that not everyone knows."

Participants would use the concept, but three participants did mention that they could also search for these places on their own or ask people at the destination, so the concept does bring a positive experience but it does not bring benefits and value to all the participants.

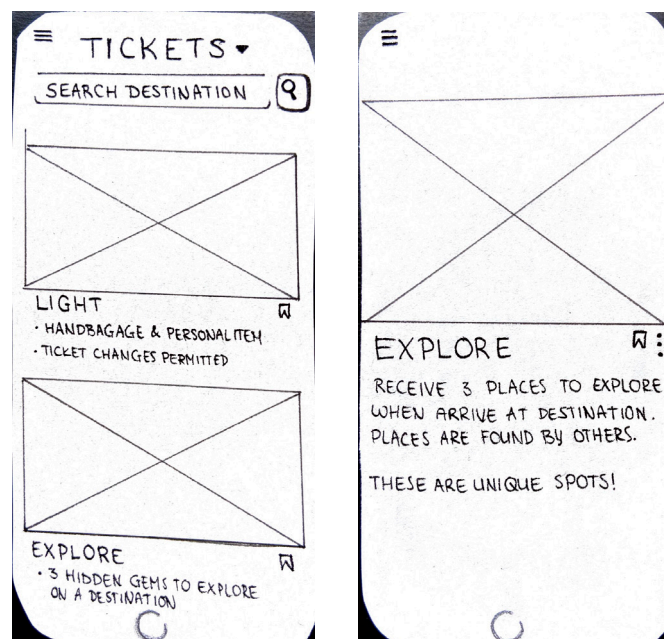


Figure 14: Hidden Gems wireframes

## 4.5 CONCEPT CHOICE

**In this paragraph, it will be concluded which concept was chosen from the three concepts and an explanation will be given.**

To decide which of the three concepts will be chosen and developed further, rapid prototyping was done and tested with four participants. Information about this process and how the participants were tested can be read in paragraph 4.4. The results from the rapid prototyping will be used to decide which concept is most valuable to continue with. The two main questions that were asked to participants for every concept were:

*1) How much value does this concept bring to your experience?*

*2) Would you use this concept? Why?*

From the testing, it could be concluded that the concept 'Flexible Search Engine' would bring the most value. There are a few reasons why this is the case. First of all, the participants thought that the flexible engine will bring the most value to them because at the moment they have to visit multiple websites to find their perfect destination and the flexibility during searching was valuable. They explained that the airline community did not give them a feeling of community and 'Hidden Gems' would be of value to them, but they could more easily talk to people who have been to the destinations or locals about 'hidden gems'.

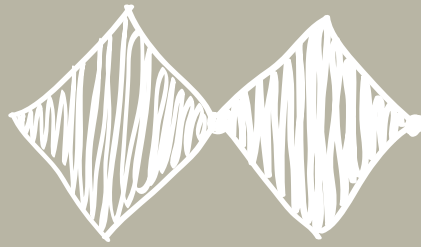
Secondly, most participants saw themselves using the flexible search engine most over the other two concepts because they did not feel the need to share and receive data from people inside the airplane. They could also share and receive this information through websites. Next, the Hidden Gems concept they would use, but they explained that they would like to explore the hidden gems of the destination themselves rather than receiving them beforehand.

## CHAPTER 4

# INTERIM CONCLUSION

In this chapter, it could be concluded that the flexible search engine brought the most value to the participants and that most of the participants see themselves using the flexible search engine. The flexible search engine is the concept that has the most potential to make customers choose the airline, as the search engine is the first moment customers are in contact with the airline's website or app to find a flight. The search engine is a great opportunity for the airline to help its customers find an experience that fits their needs. By helping customers imagine parts of their vacation experiences, the flexible search engine can trigger affective forecasting, leading to positive emotions within customers. Next to bringing value to the target group and fitting the design direction, this concept also fits with some of the other important findings, like flexibility and order of information presentation.

In the following phase, it will be explored how the flexible search engine will look exactly; how flexible customers want it to be and how to evoke affective forecasting within customers. At the same time, it will be researched how this search engine will also bring value to the airline.



Chapter five is the deliver phase. In this phase, the concept which was chosen in the previous chapter will be discussed. The concept will be tested and validated. A prototype will be used to test the concept and iterate. This prototype will be tested with the target group and employees from the airline. Lastly, the implementation plan will be discussed.

Chapter | 5  
**Deliver**

# 5.1 THE FINAL DESIGN - INTRODUCTION

In this paragraph, the final design will be introduced. It will discuss which problems the final design solves. Furthermore, the business needs and user needs the final design satisfies will be discussed.

### What is it?

The final design is an innovation of the current search engine of the airline. It is a search engine that enables customers to search in a way that fits their needs, helping them find their perfect vacation, by focussing on the experience they are looking for.

### How does it work?

This search engine can be found on the website of the airline or when customers are using the app. Customers can choose to search for flights from one or multiple airport(s) to one or multiple airport(s). Furthermore, customers can also search places. They can play with dates and time to search more flexibly.

Next to that, customers can explore the type of experiences they are looking for in their vacation. By choosing certain characteristics of these experiences, they can search for flights and destinations that really fit their needs.

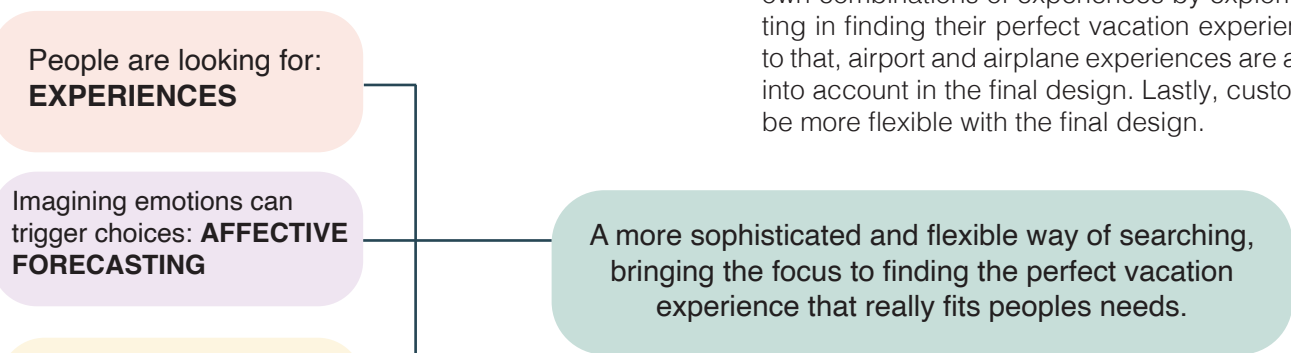
Lastly, they can also discover flights and destinations in preset experiences. This is explained in more detail in paragraph 5.4.

### The opportunity gap

From the research, it was found that people are looking for experiences. Also, people were looking for more flexible and easy ways to find these experiences. From these findings, an opportunity gap was identified to design a more sophisticated search engine for the airline, which will fit the needs of the users by being flexible and by enabling them to make combinations of experiences, to find their perfect vacation experience. At the moment, airline websites and their search engines are not flexible or only have 1 or 2 flexible options. Furthermore, the searching on these websites is not focussed on searching experiences as a starting point.

### Competitive advantage

First of all, the final design will bring a competitive advantage to the airline, compared to other airlines,



because it will make the search experience much easier for the customers. Customers will be able to find the airline's flights that really fits them and the experiences they are looking for. Furthermore, during the searching people will inspire themselves and they will be stimulated to imagine their vacation experience. This will help them imagine the feelings they will have during their vacation experiences. This will add emotional value to their online experience, by triggering affective forecasting and improving the digital experience of the airline even more.

There are two competitors who also have experience on their websites, but these cannot be compared with the final design. These two competitors are Airbnb and TUI.

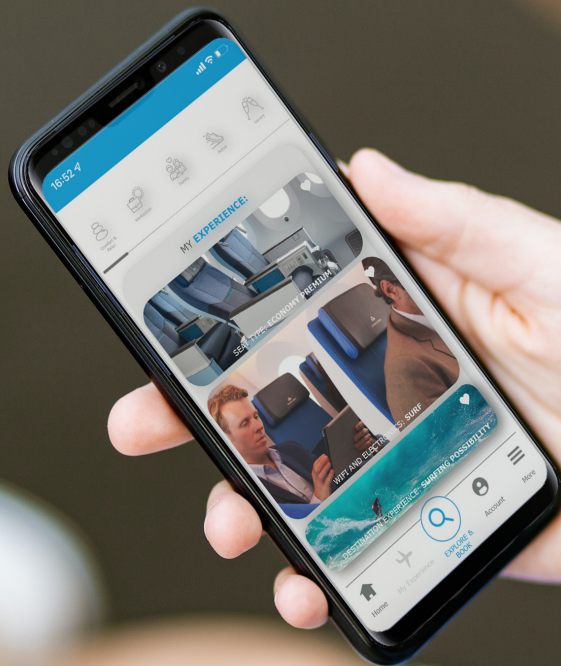
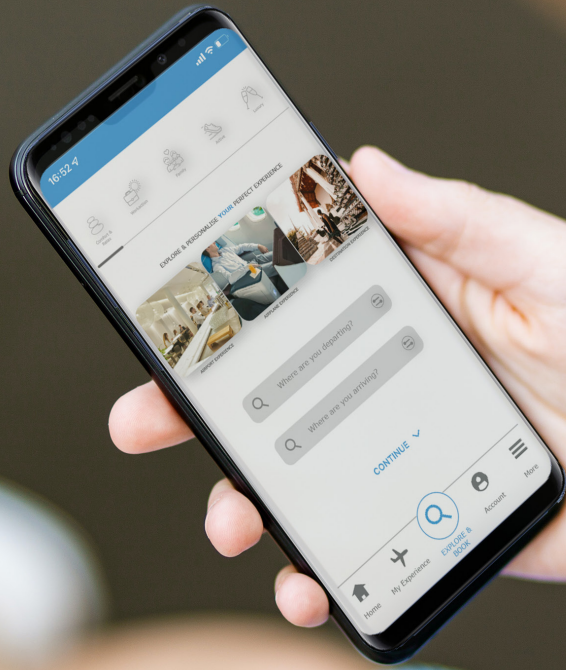
First of all, Airbnb also focuses on searching with the starting point of experiences, but they focus on accommodation experiences and online experiences, rather than the airport, airline, and destination experiences. Furthermore, combining experiences to find the perfect vacation is not possible with Airbnb.



Figure 15: TUI 'experiences'

Next, on the website of TUI, customers can also search with some flexibility. Also, customers can choose between some overall and preset vacation experiences. These can be seen in figure 15. But these experiences are not the same as the experiences customers can explore with the final design. First of all, there are only five comparable experiences namely: ski & snowboard, lakes & mountains, weddings and Disney holidays, tours, and cruises. The other 'experiences' are only names of destinations or transport, without really showing the experience customers can have there. Next, with the final design customers can make their own combinations of experiences by exploring, resulting in finding their perfect vacation experience. Next to that, airport and airplane experiences are also taken into account in the final design. Lastly, customers can be more flexible with the final design.





### **Which business needs are met?**

First of all, with the final design, because customers can choose multiple experiences they are looking for, the airline will be able to gather more information about what type of experiences customers are looking for. This means the airline will be able to gather more data. Because this data is a wider range of data, this creates the possibility for the airline to learn even more about their customers.

Secondly, with this data, the airline will be able to sell their flights and ancillaries which really fit with the journey of the customers. The airline will be able to make combinations of flights and types of tickets that fit the type of vacation that customers are looking for. These recommendations will fill more genuine since they fit their customer's needs.

Next, with this data, the airline will be able to create more personalised advertisements, which fit the customer's needs, since the airline has gathered this information from their search.

Further, focussing on the total experiences of customers and making them imagine this experience is also beneficial for the airline because from research it is shown that 'episodic future thinking' can influence travel decision-making (Karl et al., 2021).

Also, by creating an easy and fun experience for customers, this will trigger them to stay longer on the airline's website and create a more positive image of the airline in their minds.

Lastly, bringing the experiences to the front of the app and website will shift some of the focus from price to experience, as customers will focus on finding their perfect experience, rather than only looking at prices.

### **Which problem(s) does it solve for customers?**

First of all, from the observations and the interviews it became clear that people are searching for other ways to 'search'. People have become more flexible, having other requirements than only airports, they want to travel to. For example, the date or place is less important than the activity or culture. So, the final design makes the search experience more flexible, so it can fit the needs of every customer.

Secondly, people are looking for experiences rather than a destination or a product, so focussing on experiences or characteristics of vacation experiences that customers are looking for, this online journey of searching and booking could be made more easy and fun for the customers

Next, this way of searching will help customers deal with information overload, which will lower their satisfaction of customers and decrease their decision-making qualities. So, by helping customers filter and find their perfect vacation experience, this satisfaction will increase.

Lastly, people make decisions in their travel journey, when they imagine themselves going on vacation. This is called episodic future thinking, which will lead to affective forecasting. If this affective forecasting is positive, it will trigger customers to make decisions. When customers are exploring possible vacation experiences, they are triggered to imagine and think about what kind of vacation they are looking for. This in turn can trigger episodic future thinking.

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<b>Business needs</b>	<b>Customer needs</b>
<ul style="list-style-type: none"><li>• With the final design, the airline will be able to gather more rich data about the customers.</li><li>• With this data, products and flights can be sold to customers that really fit their needs and personally fit them.</li><li>• With this data, future customers can be targetted with fitting advertisements for example.</li><li>• By creating 'affective forecasting' people can be triggered to choose the airline.</li><li>• Because of the positive experience, the airline will stay in a positive way in the customer's mind.</li><li>• Bringing experiences to the front of the app and website will shift the focus from price-driven choices to experience-driven choices.</li></ul>	<ul style="list-style-type: none"><li>• The search process is made easier for customers and it fits customer's personal needs because they can adjust the search engine based on their needs.</li><li>• Searching becomes a fun experience for the customer, as they can start imagining their vacation along the way.</li><li>• The need for a flexible search engine, which the target group was searching for is met, creating less overload of information.</li><li>• The need for customers to find a fitting vacation experience (rather than just a flight for example) is met with the final design.</li></ul>

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Table 4: business needs and customer needs

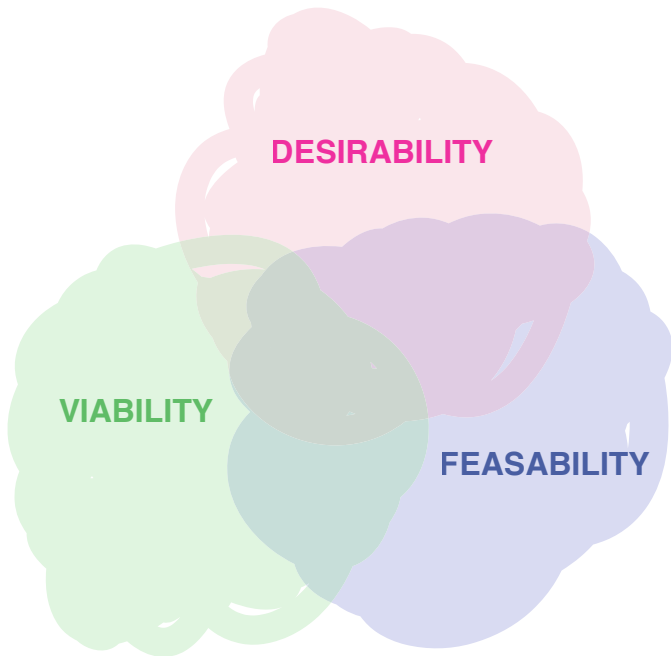


Figure 16: Desirability, viability, feasibility sweat spot

The three types of criteria were used to choose concepts and improve the final concept. Underneath will be discussed how the final design has come to be desirable, feasible, and viable.

#### ***Why would customers use it? - Desirability***

First of all, the final design makes the experience of searching easier. Customers will be able to combine and search for different characteristics of their perfect vacation experience all on one website or app. Secondly, the final design will help customers with minimising the information overload that they normally will encounter on the internet. The search engine will filter already some of this information for them. Lastly, the search engine will help customers find destinations and flights which really fit their needs. The search engine will help customers discover a wider range of vacation possibilities than they would if they were searching on multiple websites.

#### ***Can it be done? - Feasibility***

The airline already has part of the information needed to create the search engine. The airline has a travel guide, with which customers can filter destinations with some 'activities'. The activities are 17 activities. They contain both sports, sights, and type of vacations. Customers can also already filter out regions. The regions in the travel guide are continents and countries. This is a great starting point, as this information can be integrated into the flexible search engine as a starting point. Then the airline should start gathering more information and adding it to the search engine. At the same time, the airline can start gathering information about the other features of the flexible search engine. A lot of the information and features are there, so it is about presenting this information at the right time to the customers and letting customers explore the experiences in combinations that fit them. The airline has to invest in technology that will make the interface possible on the airline's website and app.

#### ***Will it survive in the longer term? - Viability***

As the search engine also has a 'typing' search bar the airline can learn which features customers are searching for, and add them to the flexible searching engine if they still do not exist. So, the airline can keep on improving and learning from the search engine. Later on, artificial intelligence will be used to learn from customers searching experiences. Also, if certain recommendations worked for certain customers, these recommendations will also be used on similar customers. By gathering more data and improving the search engine, the airline can create more personalised offers and learn what type of vacation experiences and flight experiences their customers are really searching for.

## 5.2 THE FINAL DESIGN - GENERAL STEPS

In this paragraph, the final design will be introduced. It will discuss which problems the final design solves. Furthermore, the business needs and user needs the final design satisfies will be discussed.

### 1A. EXPLORE

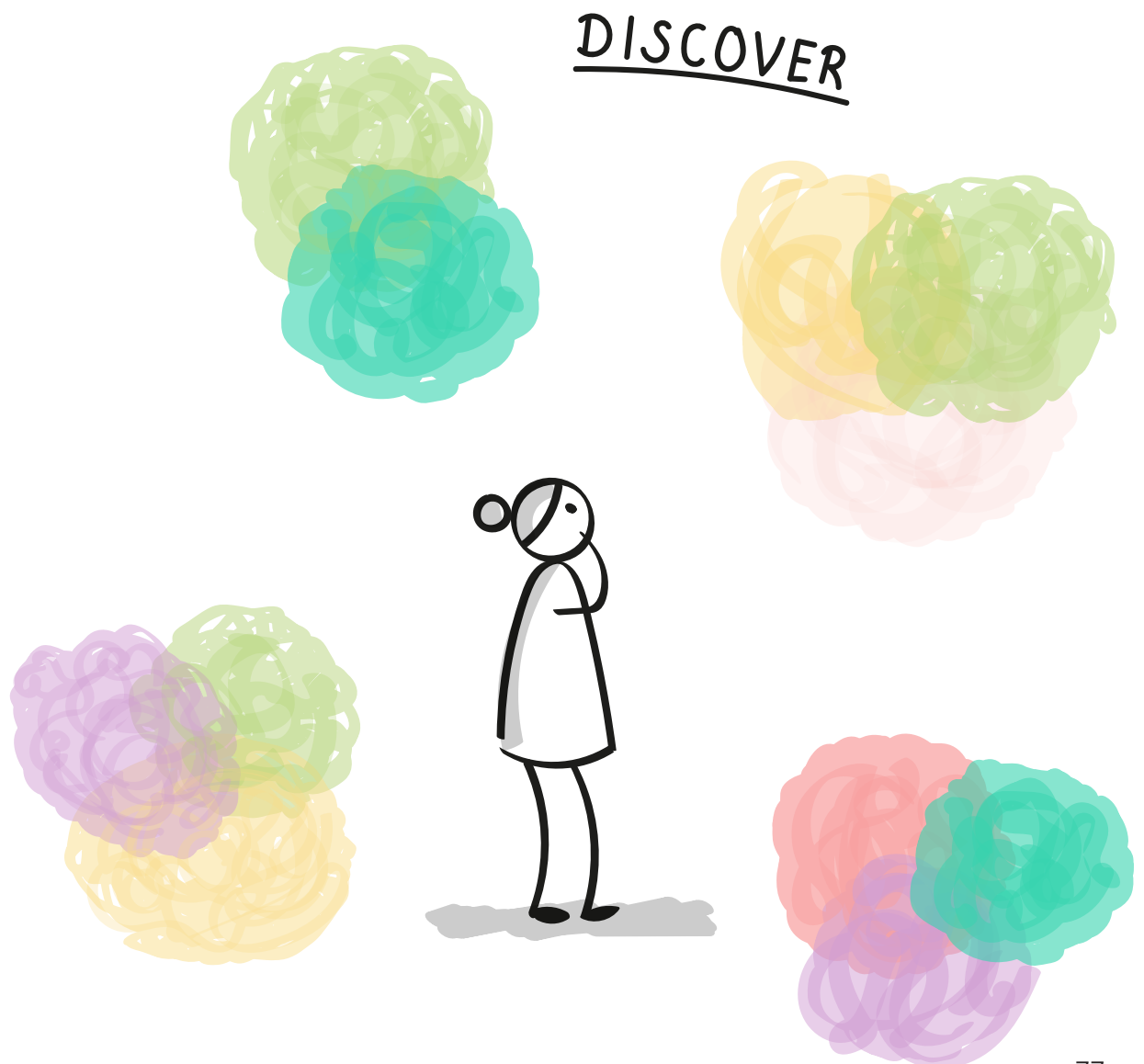
First of all, when customers arrive at the airlines website or open the app, they will have the option to explore different types of experiences. The type of experiences they would be able to explore are airport experiences, airplane experiences, and destination experiences. By choosing the experiences they are looking for in their vacation they will add and filter certain flights and destinations according to their needs. So, customers can combine different experiences and in this way explore and create their perfect vacation experience. An example of a combination of vacation

experiences is airports with lounges, sunny weather, comfort chair, and places where people can swim.



## 1B. DISCOVER

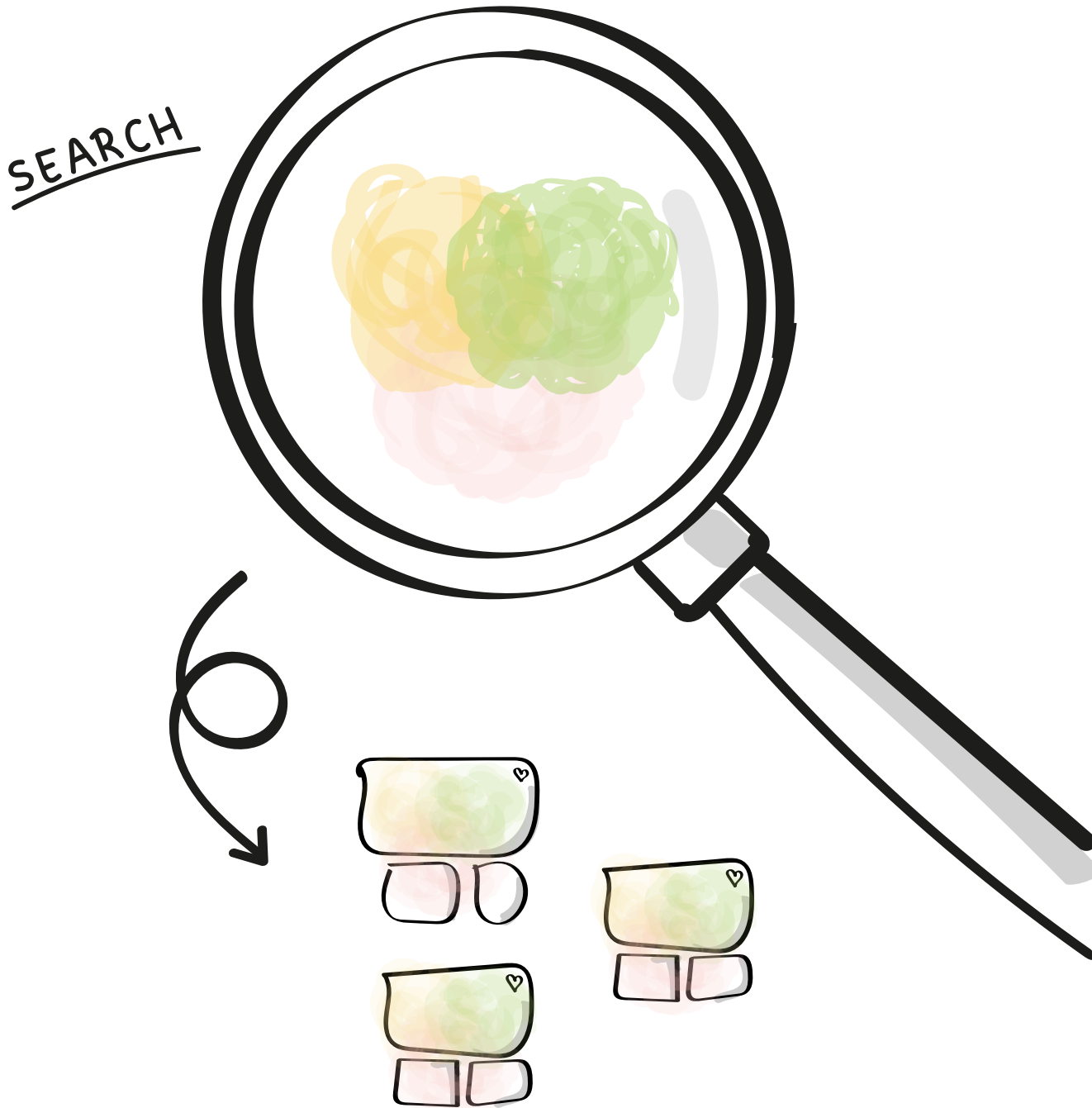
Furthermore, customers can also choose to discover preset vacation experiences. These preset experiences are already combined airport, airplane, and destination experiences, which fit together and together make up a type of overall experience. Examples of these type of overall experiences can be luxury experiences, family experiences, relaxing experiences, or workation.



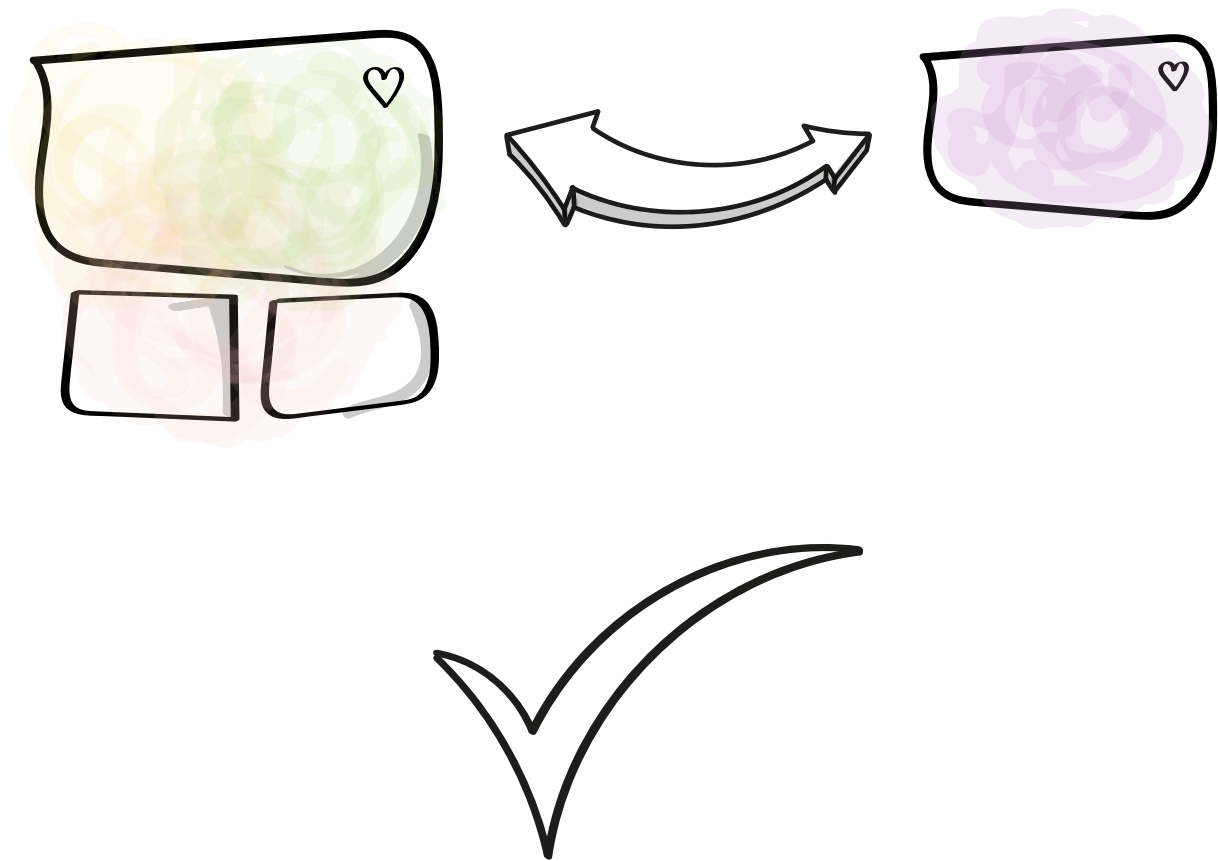
## 2. SEARCH

After customers choose all the experiences they are looking for in a vacation or they choose a preset overall experience, they can start searching for flights and destinations. These flights and destinations fit exactly within the chosen experiences they are looking for in a vacation. Customers can search with these chosen experiences by clicking on the search button.

On the other hand, customers can also type in destinations or airports and search flights for these destinations or airports. They can type in multiple destinations and airports. Furthermore, the time and date can be set in a flexible way, so their search becomes flexible.



## ADJUST AND CHOOSE



### **3. ADJUST AND CHOOSE**

Lastly, when customers see a flight they like, they can choose this flight. If part of the flight does not suite them, for example, the type of seat they can already adjust the experience at this point of their journey.

## 5.3 VALIDATION - TARGET GROUP

In this paragraph, it will be explained how the concept is validated with the target group. The setup of this validation will be discussed followed by the iterations done when the concept was tested.

To validate the final concept on desirability, it was tested with the target group. The same target group was used as in paragraph 2. To do this, high-fidelity screens were made as prototypes. There were two rounds of testing with the target group. After the first round of testing, the findings from the test were used to iterate the concept. These changes can be seen in [appendix X](#). During the second round, new prototypes that included the iterations and changes were used for the test. In total there were 7 participants, 3 in the first round and 4 in the second round.

There were five assumptions that had to be tested with the prototype. The goal was to validate and iterate the concept if this was needed. The five goals to be tested were:

- > **Flexibility:** the concept is based on searching in the most flexible way. This way the search engine will fit most customers' needs. But, it had to be tested, how much flexibility customers would really want.
- > **Ease:** will the concept make the searching experience really more easy for the customers?
- > **Login:** Would customers want to log in when using the final concept?
- > **Features:** which search features do the customers want? Are the examples given enough or are customers looking for more and other search features?
- > **Positive emotions:** Does the final concept evoke positive emotions and create value when the customers are using it.

### *Iterations and validations*

From testing the prototypes, the goals and assumptions could be tested. From the testing iterations were made on the concept and validations could be made. These can be read in the following text.



### **Example option: Explore**

First of all, from testing participants indicated that they would like examples of vacation and flight characteristics they could search, adjust and filter in a flexible way. The concept started off as two search typing bars where people could type. One bar was the departure bar and the other bar was the arrival bar. Both bars were flexible, so customers did not have to fill in an airport.

Some participants indicated that they wanted examples of ways to explore and filter information and experiences in a flexible way, but others indicated that they did not want the typing search bar to completely disappear, as it could also make the searching experience more fun and easy if they already have a list with requirements of characteristics for their vacation or flight, and being able to type might make searching in their situation easier.

So, the choice was made to have both a bar where people can type and search and exploring option. This explore option is characteristics and examples of experiences, like for example: the beach, hot weather, wine culture, and economy comfort seats. With the explore option, customers don't have to think of these options themselves, but explore which experiences are possible.

### **Search**

Next, it became clear that the participants were looking for a place to type as well. First of all because sometimes they would know exactly where they are going and other times they would know part of the experience they are looking for. So, the final design has a flexible searching bar. With this bar, customers can search destinations and airports in a flexible way. Furthermore, while exploring, there is another search bar, with which customers can also search for experiences if they just want to find an experience immediately that they already have in mind.



### **Ease of use**

Furthermore, when testing, the participants indicated that the prototype would make their experience of searching easier, as it will save them time. They indicated that instead of having to search on multiple websites and compare and filter information themselves, to find the perfect vacation, they would rather use the flexible search engine.







### Adding features

Further, during the test, there were new features added to the flexible search engine. These features were a result of certain search options and examples that the participants were missing in the current concept. These search characteristics were based on how they would search at the moment, thinking about their upcoming vacation. Examples of search characteristics that came up from the test were: cultures, languages, and time. All the search characteristics can be seen in figure X.



### Adding multiple flexible search terms

Further, participants indicated while testing the concept that they would like to choose multiple experiences and make combinations of these experiences. They indicated that they would like to search flights and destinations, based on these combinations of experiences. So, the option was added that customers could save multiple experiences, and search based on these chosen experiences.



### Saving search

During the tests, participants indicated that because they would like to explore more flights, with different combinations, and compare them next to each other, it would be of benefit they could save combined experiences. This is where the idea of having a personal profile or group came about.



### Excitement for vacation

When testing the prototypes, some participants indicated that because they were thinking about what their list of requirements was for a perfect vacation and flight, this made them excited about the vacation itself. They also mentioned that because they could explore options, the search engine brought value to them as it could inspire them and they could search for their perfect vacation in a way that fits their needs. It made them excited about this future experience of going on vacation.



### Logging in

As the concept included participants or future users having to log in, it was important to find out if participants would log in and what they thought about having to log in. As feedback, most participants said that they do not mind logging in, if they do not have to fill in bank accounts yet and it is not too much of a hassle because they have to give too much information. They explained that it is understandable for them, that they have to log in if they would like to make a group or profile to save their search combination of experiences and flights they found.

## 5.4 VALIDATION - EMPLOYEES

In this paragraph, it will be explained how the concept is validated with two employees from the airline. The setup of this validation will be discussed followed by the iterations done when the concept was tested.

Furthermore, two employees from the airline were asked to evaluate the final concept. The goal of these evaluations was to find out what their perspective was on the final design and to receive feedback. It was important to find out how valuable they thought the design was. Their recommendations were used to further develop the final design. The perspective and recommendations of the employees could be read further in the text.

### > Features

*Adding more airport and airplane experiences as a features*

First of all, the most important iteration made was adding more airplane and airport experiences to the final concept. The main experiences that the airline offers are the airplane and airport experiences, which are an important part of the overall experience that customers have with the airline.

### > Data and Personalisation

*Flexible search engine good way to collect data and personalise offer*

Secondly, from the evaluation, it became clear that the final concept was seen as having the potential to gather more data from customers. With this data the airline could learn more about their customers, creating the opportunity to offer more personalised offers. First, the offer could be personalised, and second, there was also the opportunity to personalise the website or app, based on people's data.

### > Engagement customers and website/app

*People stay longer on website airline*

Thirdly, it was recognized that it could be of benefit if customers would stay longer on the website of the airline. Customers would use the final concept and be triggered to explore and stay longer on the website or app. The benefit of this can be that the longer customers stay on the website, the better the experience can be, and the greater the chance might get that the customers choose the airline.

### > Privacy

*Personal data and privacy*

Next, it is important to consider the privacy of customers, since the airline will be gathering more data. It should be considered how to make sure this data is really kept private and that the customers have the feeling their data is kept private.

The recommendations of journeys due to the new data should feel genuine and not forced.

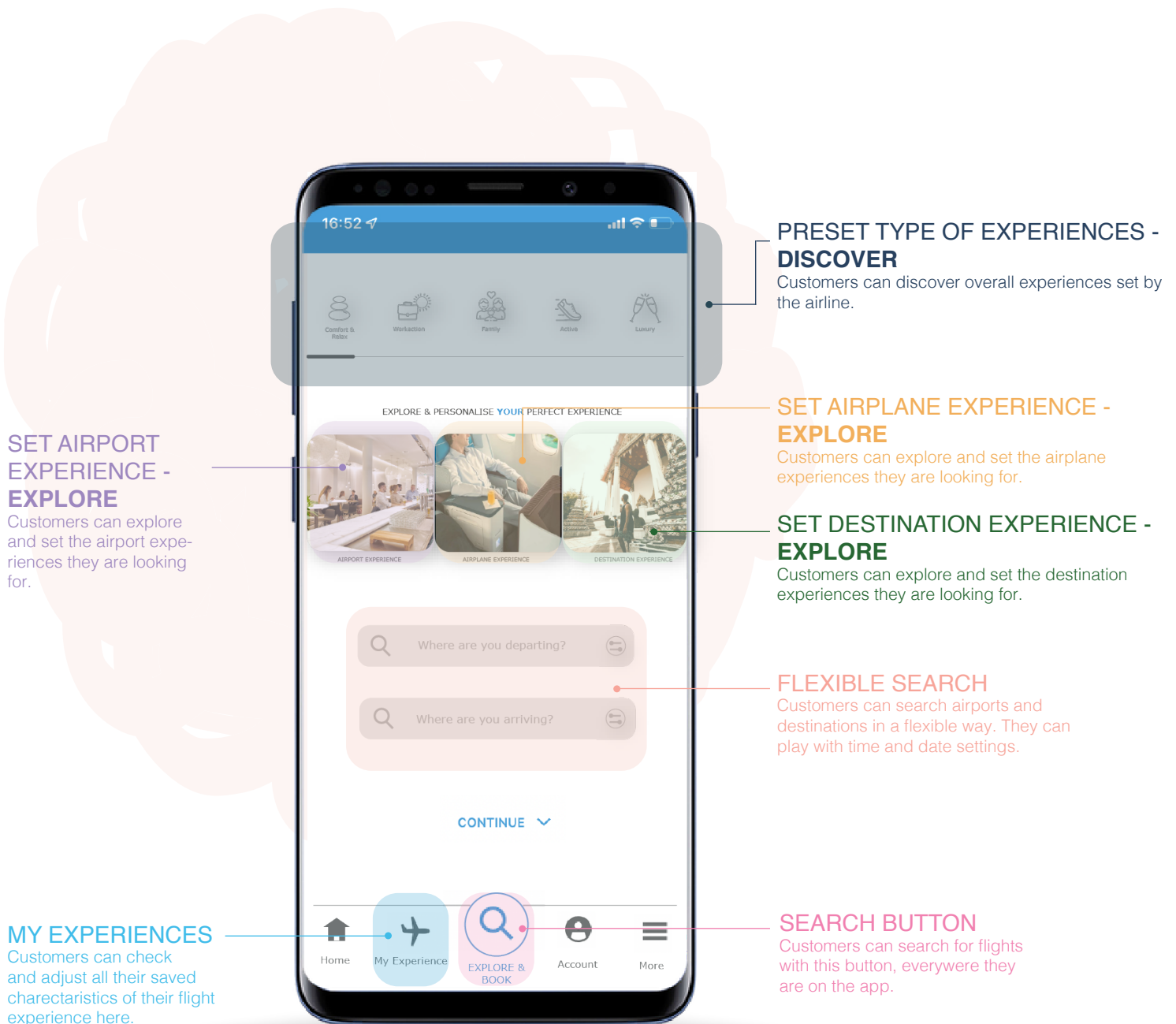
### > Feasibility

*Technology and feasibility*

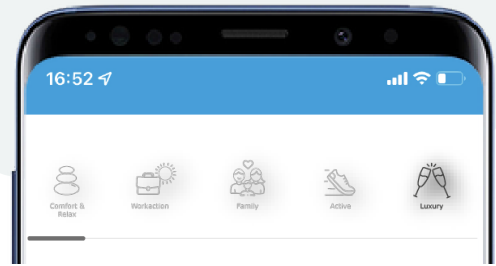
The airline already has some of the information that is needed for all the features of the final design. It will be good to have an overview of the features and information that the airline already has and the information that the airline still has to gather. But, it would be possible to create this information, since some of the information is already available through for example the travel guide, which already can be found on the website of the airline.

## 5.5 THE FINAL DESIGN - DELIVERY

In this paragraph, the app of the final design will be explained in detail. First, an overview is given and then all the options will be discussed.



# PRESET TYPE OF EXPERIENCES



The 'type of experiences' option can be found on the top of the app or the website. With this option, customers can discover combinations of airport, airline, and destination experiences which together form the preset type of experiences. These combinations are combined by the airline. The combinations are based on type of vacations customers might be looking for. The combination of chosen airline, airport, and destination experiences can be adjusted.

**List of preset type of experiences:**

- Comfort and relax
- Workaction
- Family
- Active
- Luxury
- Backpack

- Roadtrip
- Honeymoon
- Active
- Nature
- Friends
- Business
- Party

By choosing these preset experiences customers will be able to discover combinations of destination, airplane, and airport experiences that fit the chosen experience.



Figure 17: Type of vacation: luxury.

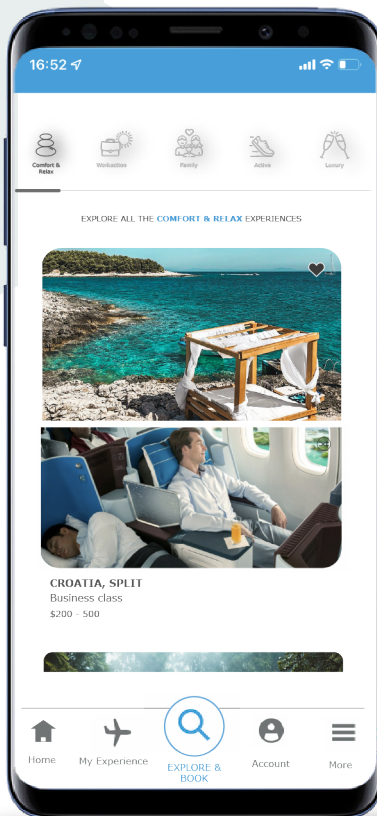
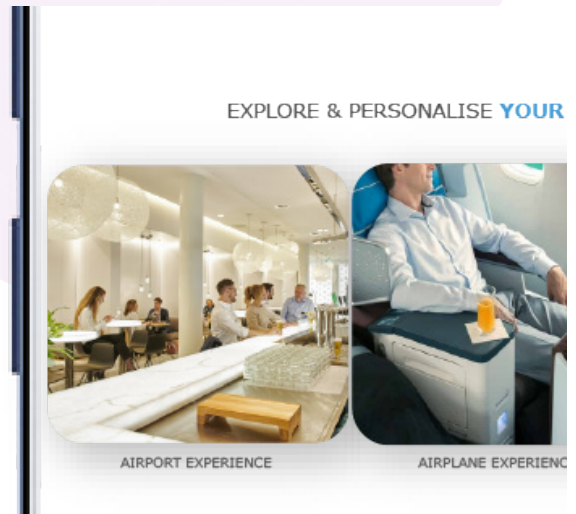


Figure 18: Type of vacation: comfort & relax.



Figure 19: Type of vacation: comfort & relax, changing seat type.

## SET AIRPORT EXPERIENCE



One of the experiences that customers can explore and set is the airport experience. At the airport, customers can find multiple types of experiences.

First of all, they can choose to enjoy the lounge. By setting the lounge, customers will fly to and from countries that have these lounges. In the lounges, they can enjoy food, beverages, and relaxation. If customers choose the lounge experience, they can also add an experience within the lounge, namely a sleeping cabin.

Next to that, customers can choose to have sky priority. If they have sky priority, they will enjoy faster security, access to priority boarding, different check-in desks, and priority with their baggage.

### *Airport experiences:*

- Lounges without sleep cabin
- Lounge with sleep cabin
- Priority

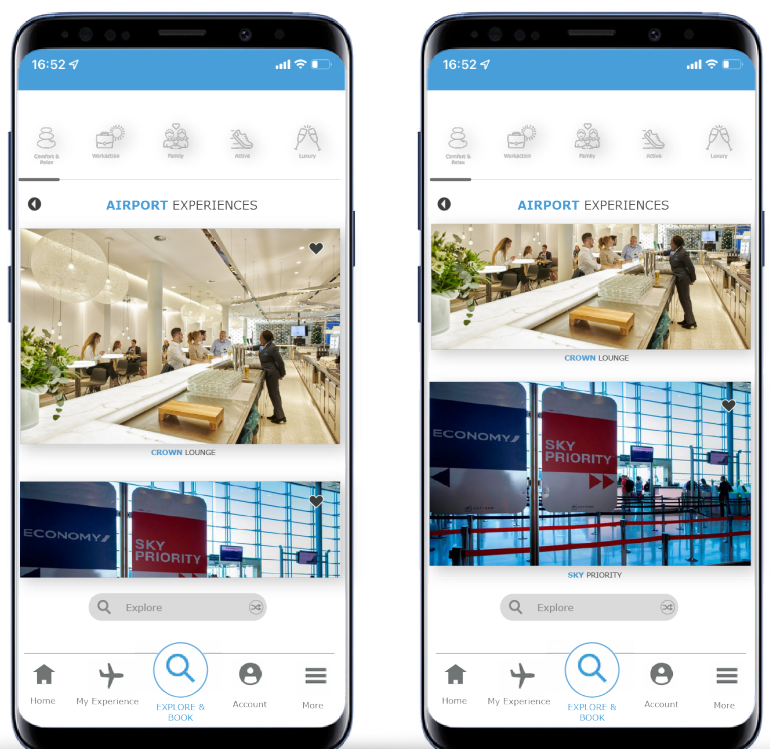


Figure 20: Airport experience

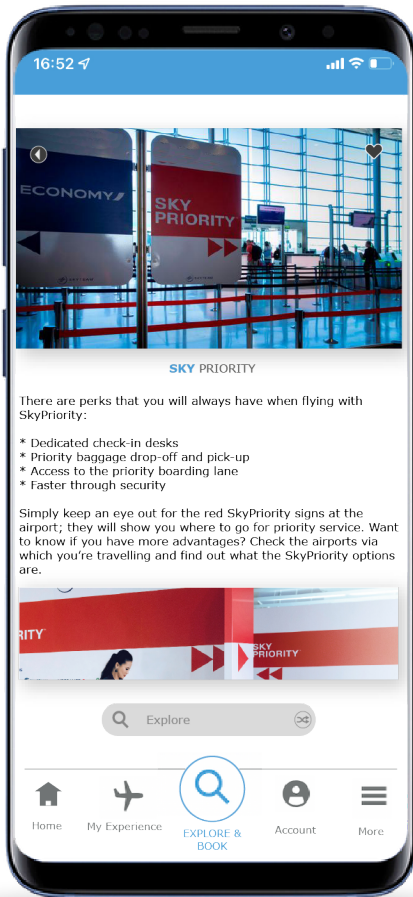


Figure 21: Sky priority experience

### Priority

Part of the airport experience that customers can choose, is the SkyPriority experience. With this experience, customers can enjoy for example faster security, priority baggage, and more. This type of experience can be chosen by customers who for example get stressed out during airport obligations. With sky priority, they can have a less stressful airport experience.

### Lounges

There are multiple possibilities in different places to have a lounge experience at the airport:

- Crown lounge at Schiphol
- Crown lounges in Schengen countries
- Non-Schengen crown lounges
- Worldwide lounges with partners

First of all, customers can have the lounge experience at Schiphol. But, they can also choose to have the lounge experience in other airports. Based on the destination flying, customers can choose to experience a Crown lounge or other lounges from partners.

Furthermore, customers can additionally choose to add a sleeping cabin as an experience, for example, if their stop is long.

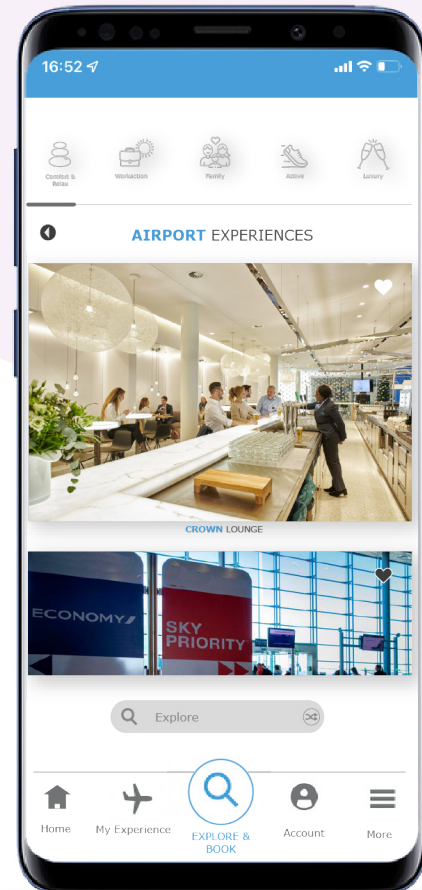
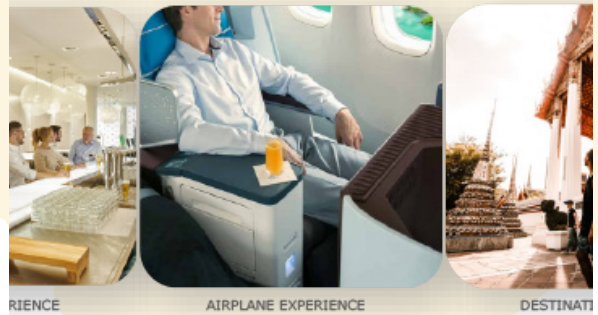


Figure 22: Lounge experience

# SET AIRPLANE EXPERIENCE

EXPLORE & PERSONALISE YOUR PERFECT EXPERIENCE



The next type of experience that can be explored and set is the airplane experience. The airplane experience has three main experiences:

- Seat experiences
- Inflight experiences
- Flexibility experience

These can be seen in figure 23.

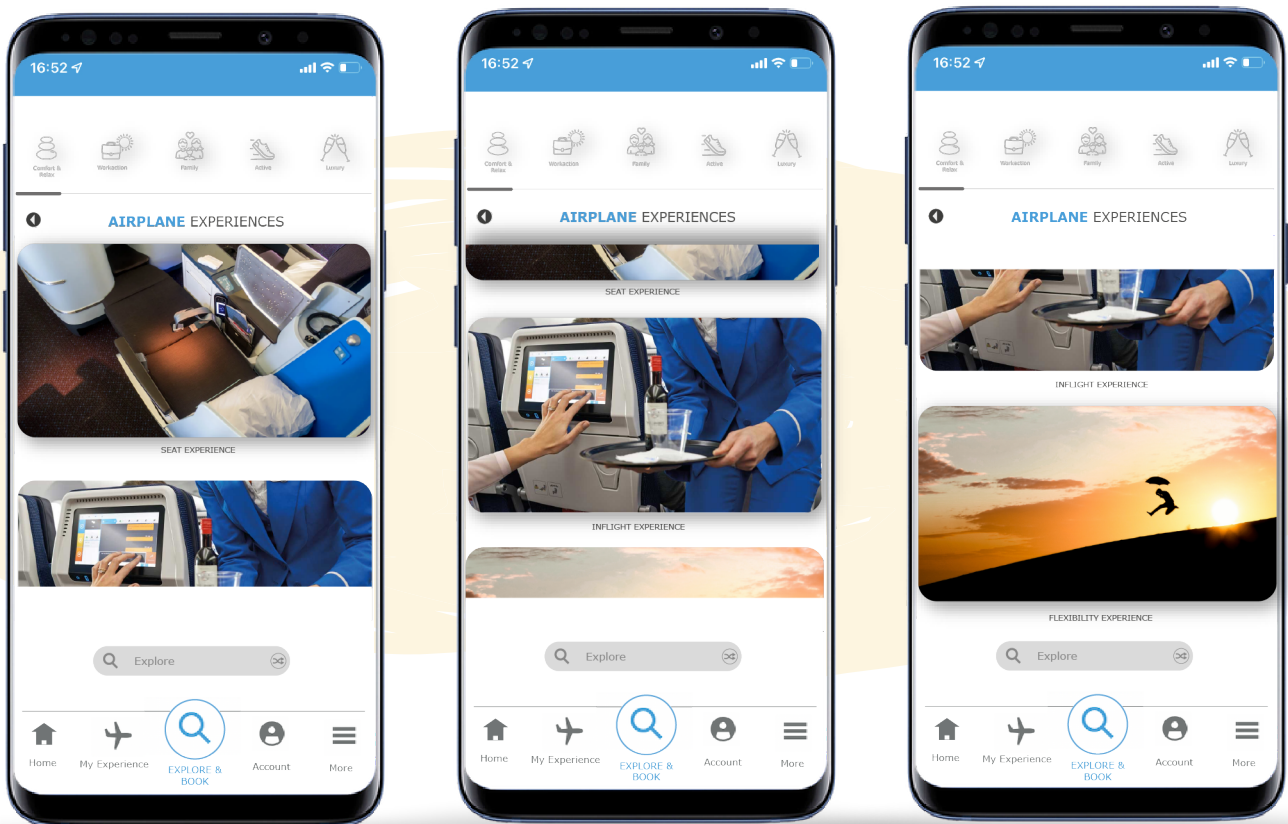


Figure 23: Airplane experiences

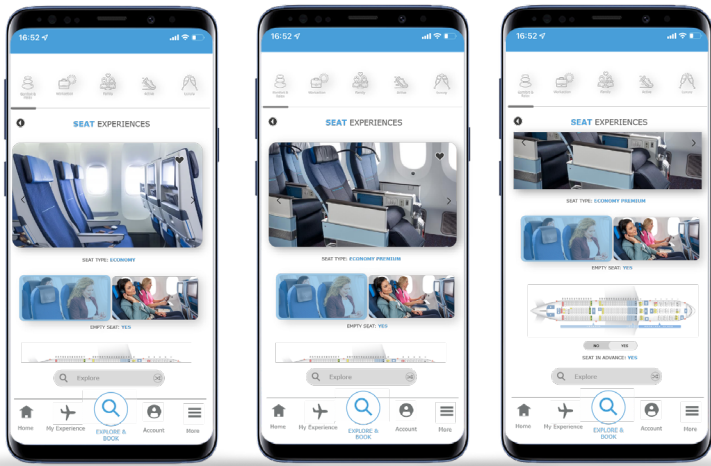


Figure 24: Seat experience

## Seat Experience

Customers have multiple seat experience options. There are the seat types and the seat places. With the seat types, customers can have bigger and more comfortable seats. Furthermore, customers can have more legroom for example.

## Seat Type

Within the seat experience customers can explore and set the type of seat and space they would like to enjoy during their flight. They can choose different types of seats:

- Economy class
- Premium economy class
- Chair with extra space
- Business class



Figure 25: Seat Type

## Seat Place

Based on the width and pitch of the seats that customers are looking for, they can explore and choose a type of seat. Furthermore, customers can choose a type of seat based on features that these seats have, like for example electronics. Also, customers can also choose to set the place of their seat:

- Window seat
- Aisle seat
- Middle seat

Lastly, customers can choose to buy an empty seat next to them, if they want to enjoy more privacy.

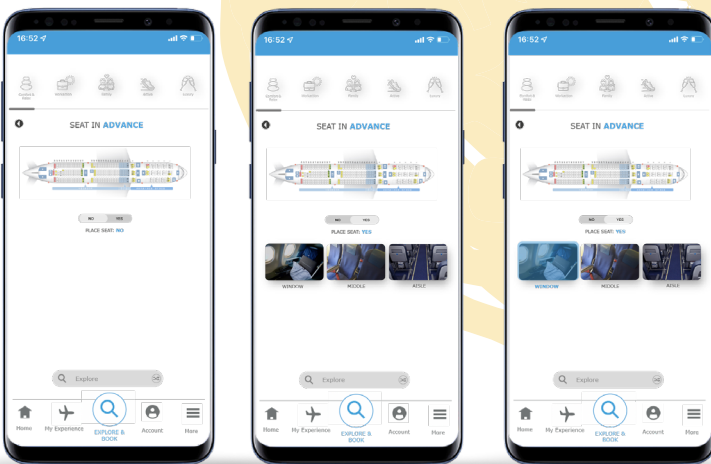


Figure 26: Seat Place

## Flexible flights

Customers can also choose to purchase flexible flights. These flights are refundable if travelers cancel the flight before the first flight. This way, customers can experience less anxiety if something is going to happen.

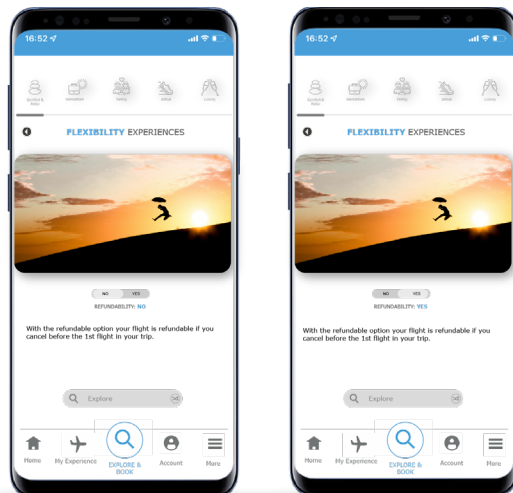


Figure 27: Flexibility flight



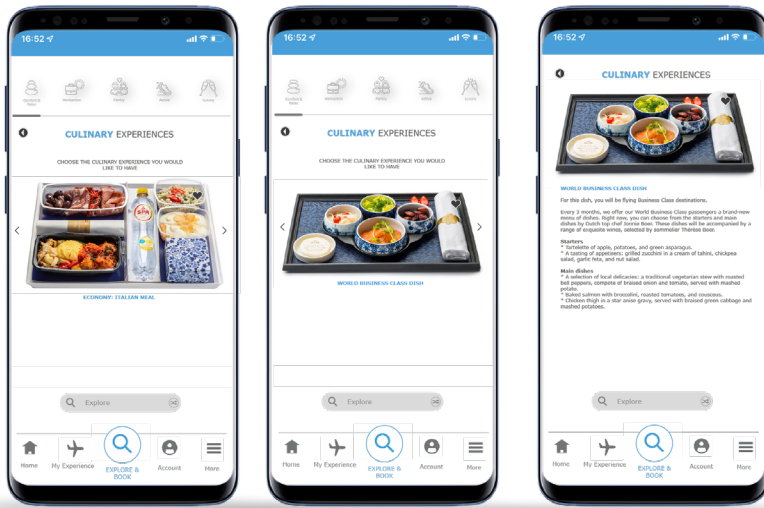


Figure 28: Meal experience

### Meal Experience

Furthermore, customers can explore and choose meals depending on the type of destination they are flying to and the type of experience they are looking for. They can choose between:

- Italian meal
- Indonesian meal
- Vegetarian meal
- Celebration meal
- Ocean meal

### Beverage Experience

Next, customers can explore and choose beverages. Depending on the type of experience they are looking for they can choose the type of beverages they would like to drink and if these beverages are included in their flights. Examples of beverages they can drink are:

- Welcome drink: champagne or fresh orange juice
- Wine and beer
- Non-alcoholic drinks



Figure 29: Beverage Experience

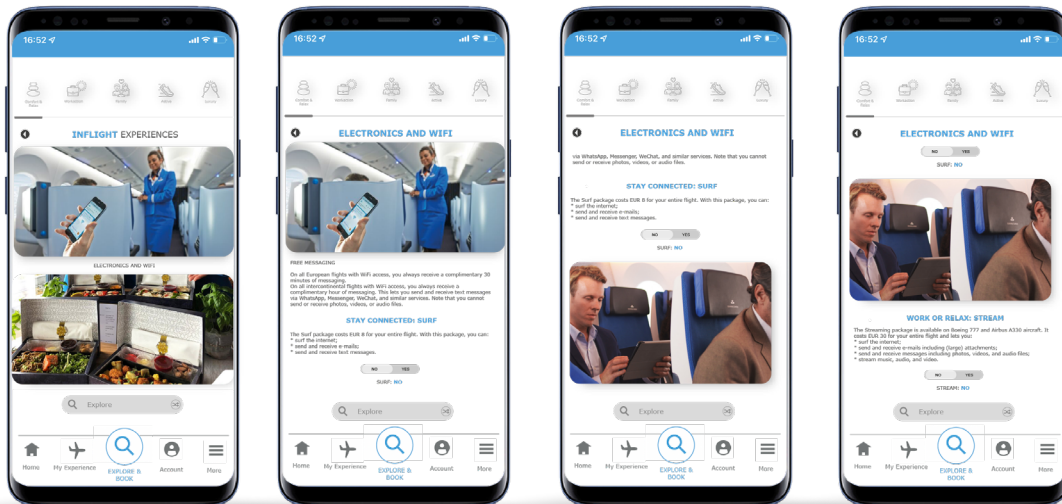


Figure 30: Electronics and Wifi Experience

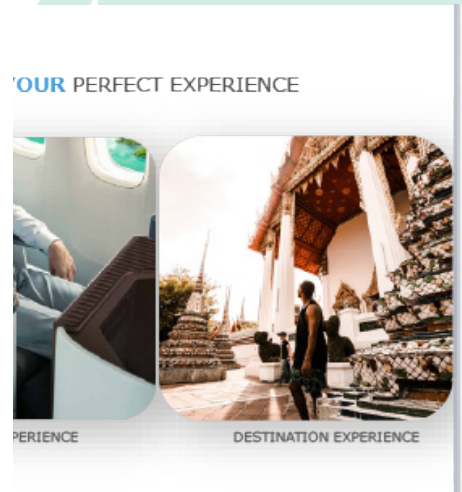
### Electronics and Wifi Experience

Lastly, customers can explore and set the type of wifi and electronics experience they are looking for during their flight. They can choose how much they would like to be connected during their flight:

- Surf
- Streaming

Furthermore, customers can explore and choose the type of electronics possibilities they are looking for during their flight. This can be electronics in their seats like a power supply in the chair. Furthermore, some flights and seats contain entertainment possibilities, so customers can choose the flights that fit their needs best.

## SET DESTINATION EXPERIENCE



Next, customers can explore and set the type of destination experiences they are looking for in their vacation. First of all, they can set and explore three main types of experiences:

- Activities
- Cultures
- Geography

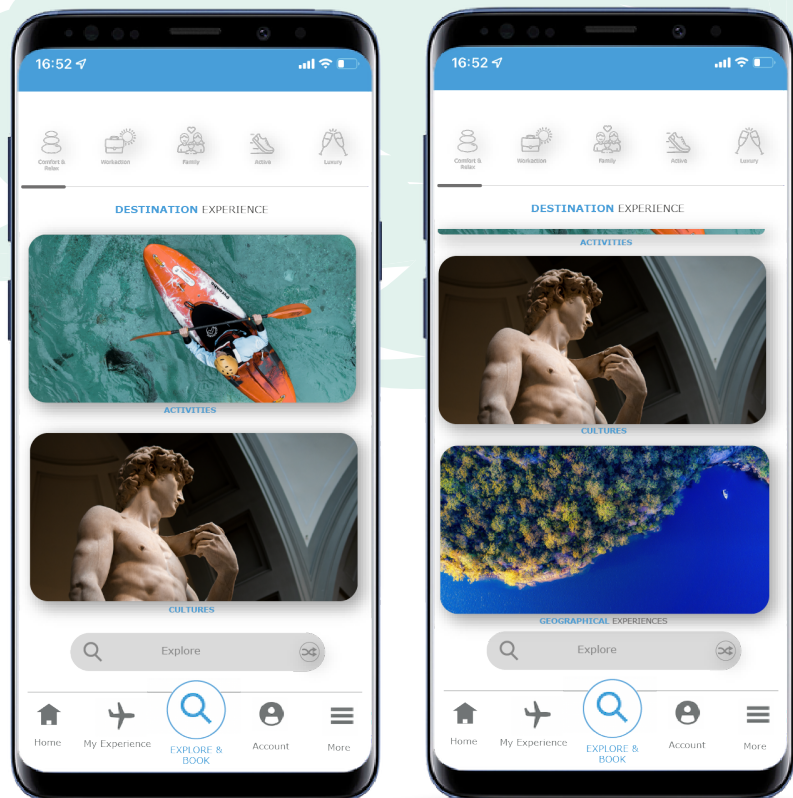


Figure 31: Destination Experiences

### Activity Experiences

Within activities, customers can explore and choose the type of activities that should be possible at their destination. Like this, customers can rather explore and search all the destinations with these activities than search what they can do in one destination. There are two types of activities that can be explored:

- Active activities
- Other activities

In both of these categories, customers can explore a lot of different activities. These are the lists of both categories:

Active activities:

- Kayaking
- Wave surfing
- Kite surfing
- Diving
- Hiking
- Skiing and snowboarding
- Rafting
- Golf
- Climbing
- Swimming
- Bungee jumping
- Sky diving

Next, there is a list of other activities customers might be looking for in their vacation:

Other activities:

- Wine culture
- Food culture
- Modern architecture
- Old architecture
- Art

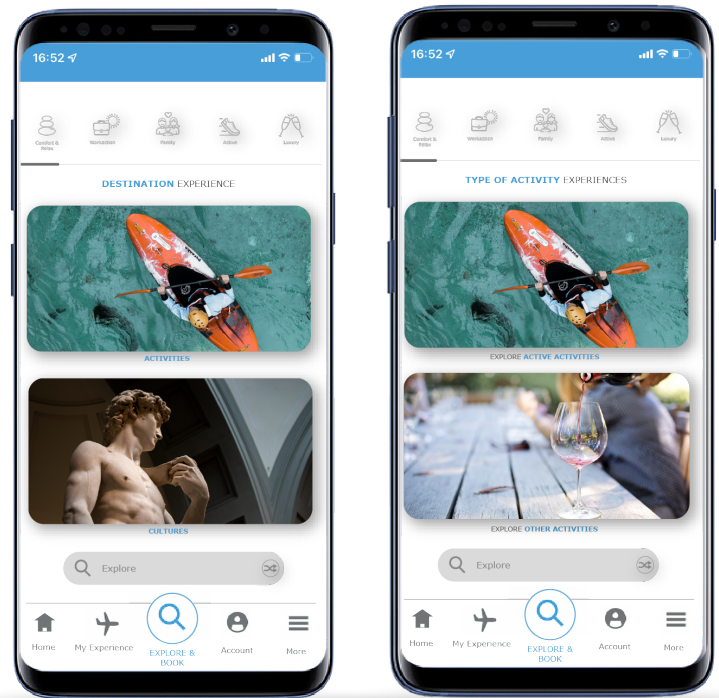


Figure 32: Activity Experiences

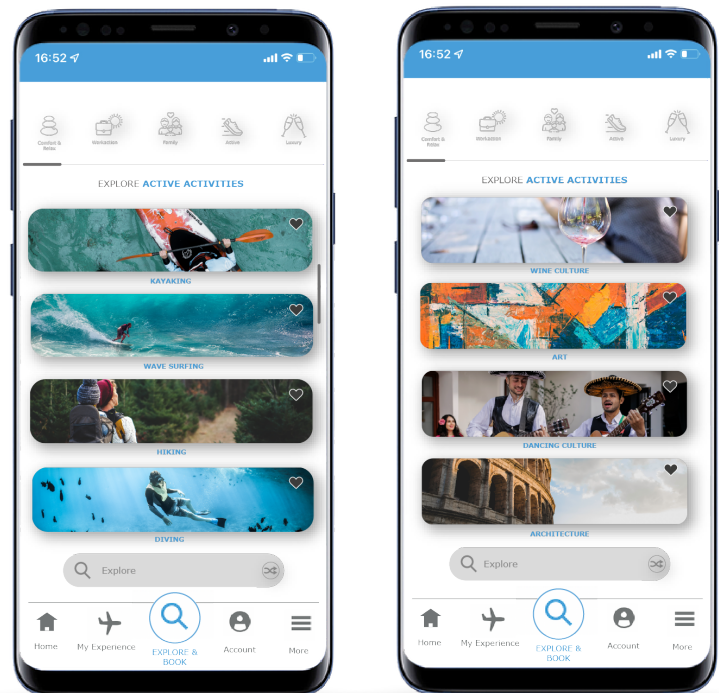


Figure 33: Active and other activities

### Culture Experiences

Next, customers can explore characteristics of cultures they are looking for in their vacation. Some of these characteristics overlap with the activities that customers can explore. The type of cultures customers can explore are:

- Old architecture
- Modern architecture
- Art
- Dancing culture
- Food culture
- Wine culture
- Musea
- Outside culture

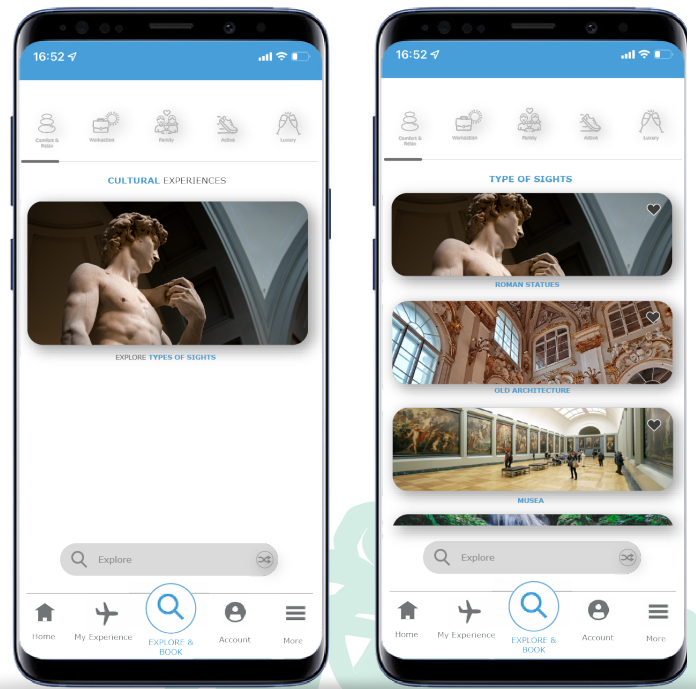


Figure 34: Culture Experience and Type of sights

### Geographical Experience

Lastly, customers can explore destinations by exploring and setting different geographical characteristics. The different geographical characteristics that can be set are:

- Languages
- Landscapes
- Type of destinations
- Type of weather

Customers can set the type of destinations they are looking for. These type of destinations can be for example: continents and countries.

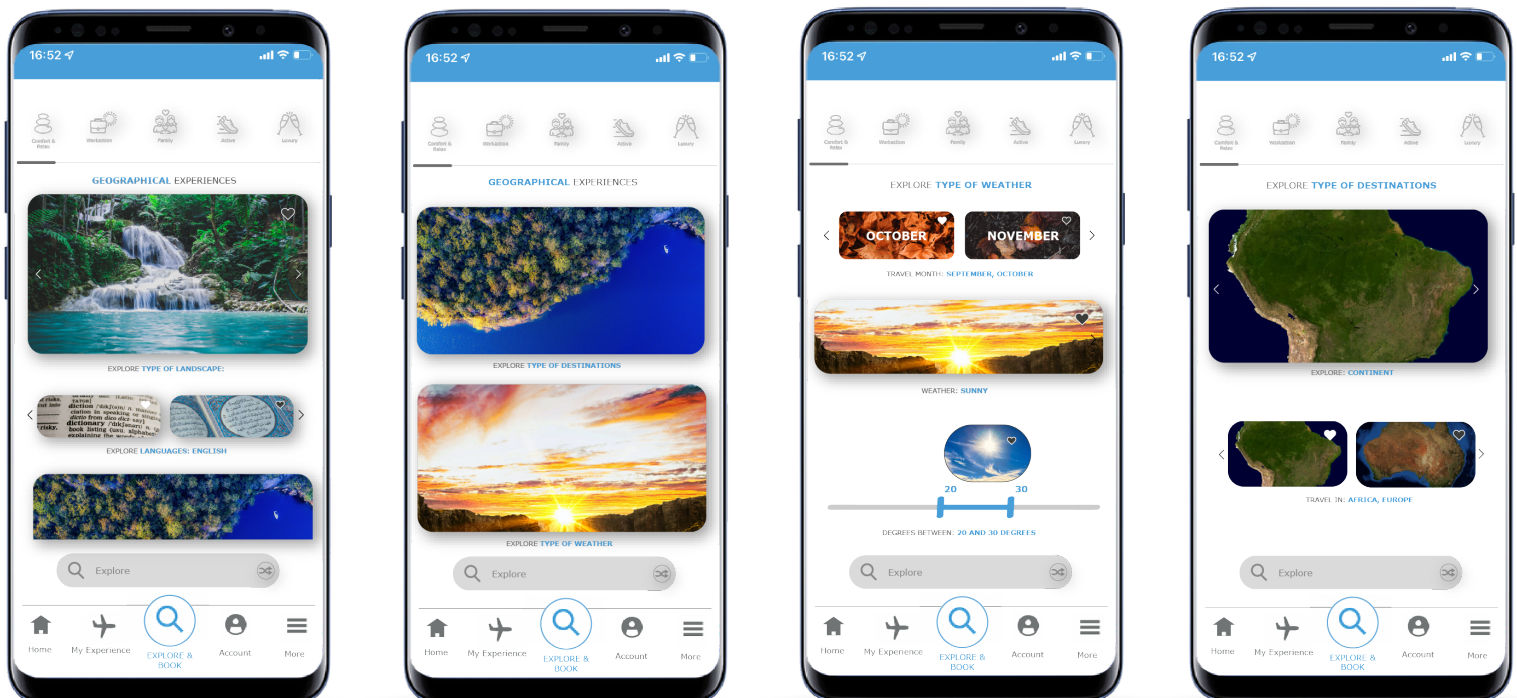


Figure 35: Geographical Experiences

# MY EXPERIENCE AND SEARCH

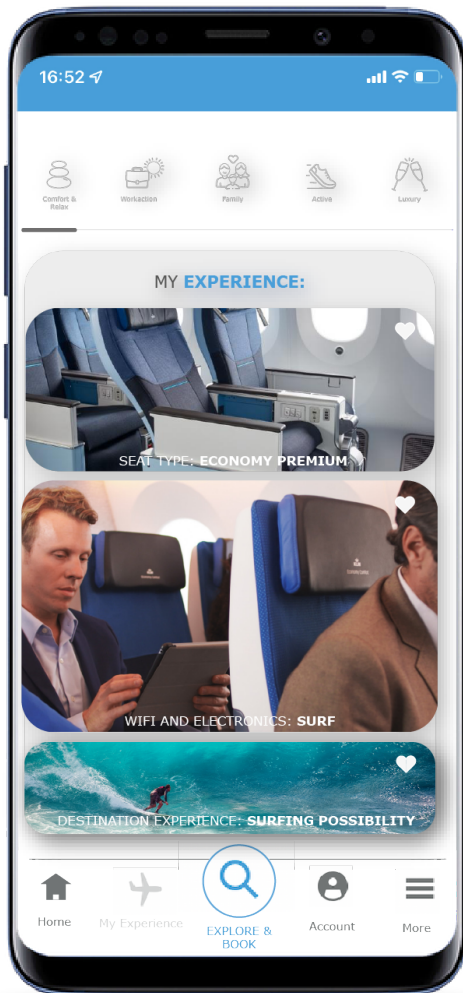
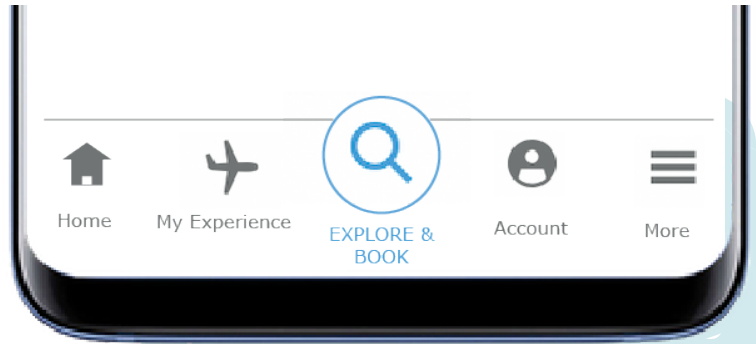


Figure 36: 'My Experiences'

## My Experience

Next, all the experiences that are saved can be seen in the option "My experience". Here, customers can see and adjust the experiences they have saved. This can be seen in figure 36.

Customers can save experiences by clicking on the heart at the top right and delete experiences by clicking once more on the heart. If the heart is white, the experience is saved.

## Search Button

With the search button, customers can search flights with the chosen experiences. The search button can be found at the bottom of the app and at the top of the website. The search button is always visible so, customers can search anywhere in the app.

## Saving Combination and Log in

Customers can choose to save the combinations of experiences they are looking for or make multiple combinations of experiences. To do this they have to log in.

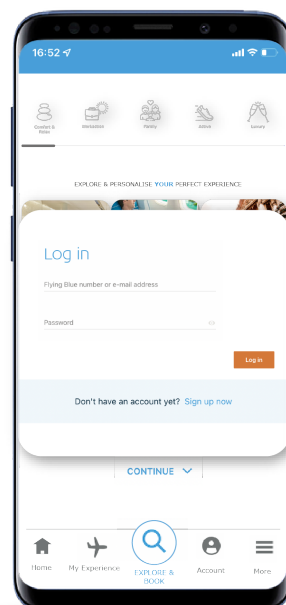


Figure 37: Log in

## FLEXIBLE SEARCH

Where are you departing?

Where are you arriving?

There are two ways people can search. The two options are:

1. Searching with the chosen experiences
2. Searching places or airports

### **Searching with the set experiences**

First of all, customers can select all the experiences they are looking for in their vacation and click on the search button. They will then be able to explore destinations and flights which fit their chosen experiences.

### **Searching places or airports**

Secondly, with the search bars, people can still search for airports and places. They can choose one airport or place or multiple airports and places. Searching places is also flexible since customers can for example search all destinations in South America. They do not have to name one airport or country.

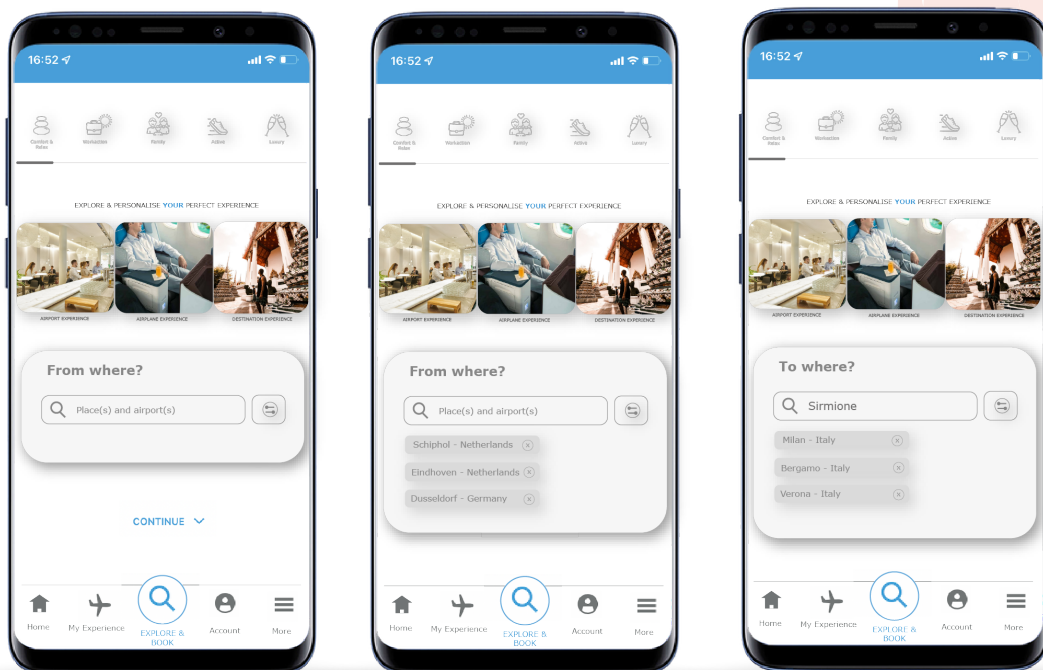


Figure 38: Search option

They can also choose the option to make the dates and times flexible. This can be seen in figure 39.

The flexibility in time is:

- Direct or indirect
- Time of departure
- Time of arrival
- Duration of flight

The flexibility of date is:

- Choosing one month or multiple months to travel in
- Setting a duration of the vacation

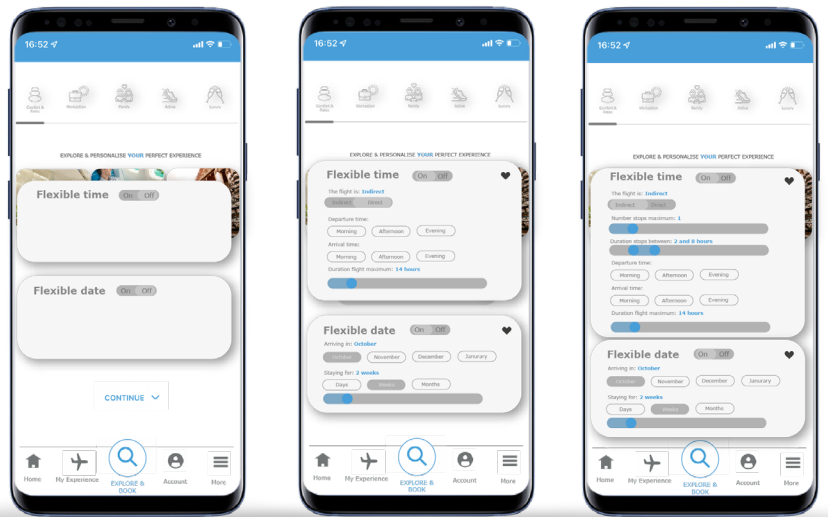
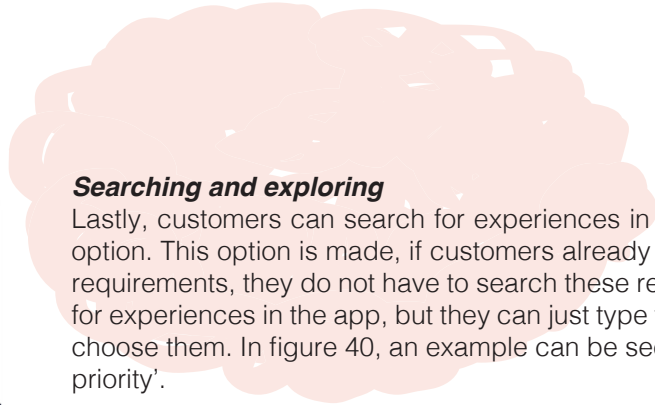


Figure 39: Flexible search option



### Searching and exploring

Lastly, customers can search for experiences in the explore option. This option is made, if customers already know some requirements, they do not have to search these requirements for experiences in the app, but they can just type them in and choose them. In figure 40, an example can be seen with 'Sky priority'.

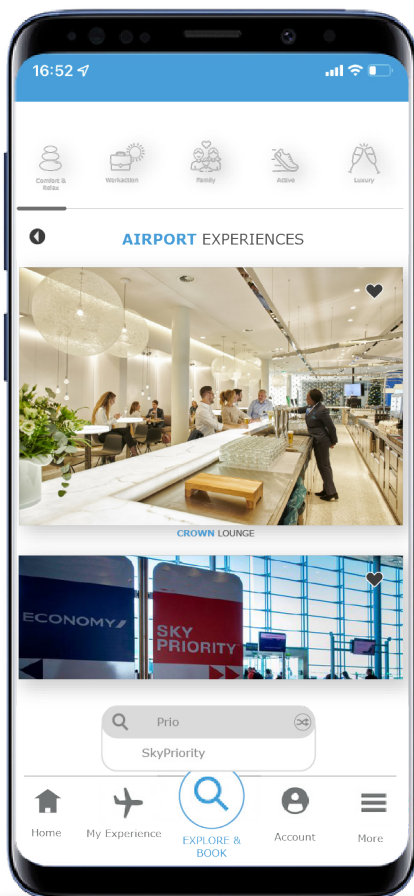


Figure 40: Search and explore option

## 5.6 IMPLEMENTATION STEPS

In this paragraph, the implementation plan will be discussed. As implementation plan a step-by-step approach is chosen.

To help the airline with the implementation of the final design it was decided to make a step-by-step plan. This decision was made because with this step-by-step plan it would be clear which steps should be taken and in which sequence, in order to create the final design at the end. These steps will be changes to the app and website. These steps will be discussed in this paragraph. This is an overview of the steps that need to be taken:

Step 1: Adding the “search” and “my experience” buttons and bring the experiences that already exist to the front.

Step 2: Bringing the search engine to the first page of the app and making it flexible.

Step 3: Expanding the experiences.

Step 4: Adding the preset experiences at the top.

These will be discussed on the following pages.

### **Step 1: Adding the “search” and “my experience” buttons and bring the experiences that already exist to the front.**

First of all, the core of the concept is all about searching based on experiences that customers are looking for, so the first step should be bringing the experiences to the front of the app and website. To do this it is important to first add the tool to see all the experiences that people save which is the “my experiences” button on the bottom of the app and on the website in the top left.

Secondly, people should be able to search based on these saved experiences, so the search button will be made bigger and more striking in the app, and on the website, there will be a new search button. In the app, “My trip” will be found in “More”. These changes can be seen in figure 41 and the changes on the website can be seen in appendix 42.

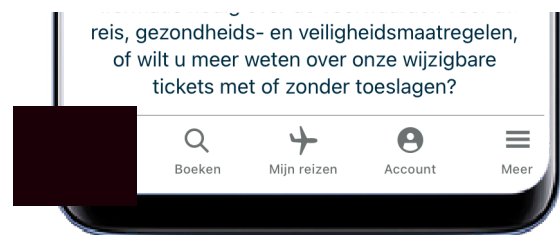


Figure 41: Bottom part current app

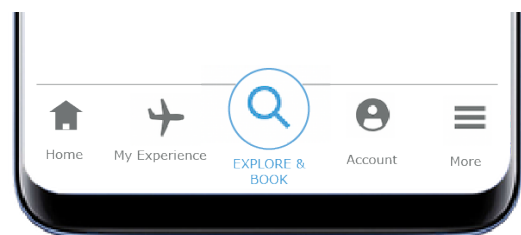


Figure 42: Bottom part final design

Next to that, the airport, airplane, and destination experiences that customers can explore will be moved to the front of the app and website. The airline can start by adding the already existing knowledge of the experiences within these options. The airplane and airport experiences already exist, so they have to be moved to the front. The destination experiences already partly exist in the travel guide, so this information can be used already in the destination experiences and has to be moved to the front of the app and website. The travel guide page can be seen in figure 44 and the airport, airplane, and destination experience buttons on the app can be seen in figure 43.



The airline already has the information about the airport and airplane experiences and as a first step, the airline can start by adding the destination experiences they already have. These are the destination experiences the airline already has and the matching experiences with the final design can be found in table 5.



Figure 43: Airport, airplane and destination experiences

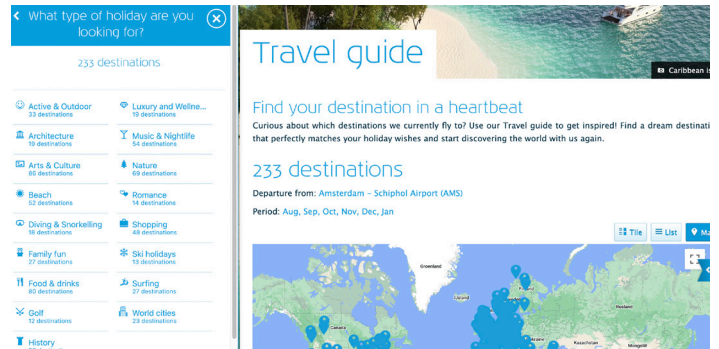


Figure 44: Current travel guide of the airline

<b>Travel Guide</b>	<b>Final Design</b>
Active and Outdoor	<b>Active activity</b> - Hiking and rafting
Architecture	<b>Culture</b> - new architecture
Arts and Culture	<b>Sights</b> - art, galleries, paintings, musea <b>Culture</b> - dance culture
Beach	<b>Geography</b> - beach
Diving and snorkeling	<b>Active activities</b> - diving and snorkeling
Family fun	<b>Preset experiences</b> - Family experience
Golf	<b>Active activities</b> - golf
History	<b>Culture</b> - old architecture
Luxury and wellness	<b>Preset experiences</b> - Luxury and relax
Music and Nightlife	<b>Preset experience</b> - Party <b>Culture</b> - music culture
Nature	<b>Geography</b> - landscape, animals
Romance	<b>Preset experience</b> - honeymoon
Shopping	<b>Other activities</b> - shoppen
Ski holiday	<b>Active activities</b> - Skiing
Surfing	<b>Active activities</b> - surfing
World cities	<b>Preset experiences</b> - city trips

Table 5: Experiences the airline already has

**Step 2: Bringing the search engine to the front and making it flexible**

The next important part of the final design is making searching even more flexible, so customers experience ease when they are on the airline’s website and app.



Figure 45: Current search bars



Figure 46: Search bars final design

So, the second step of changes should be making it possible to search multiple airports and also being able to search multiple places.



Figure 47: Flexibility search bars

Secondly, time and date flexibility and filter should be added to the search bar, as can be seen in figure X. At the moment, there are some filters already, like departure and arrival time and duration of the flight. But, these filters should be extended with the filtering possibilities which can be seen in figure 48 to both the app and website, giving the customers even more search flexibility. These date and time possibilities are:

- Flexible date and length of vacation
- Indirect and direct flights
- How much stops
- How long the stops should take

These are the time filters that do exist already on the website of the airline are:

- Departure time
- Arrival time
- Duration flight

These filter can also be seen in figure 49. The filters can already be brought to the front of the app and website, making the search more flexible, instead of having these options after searching.

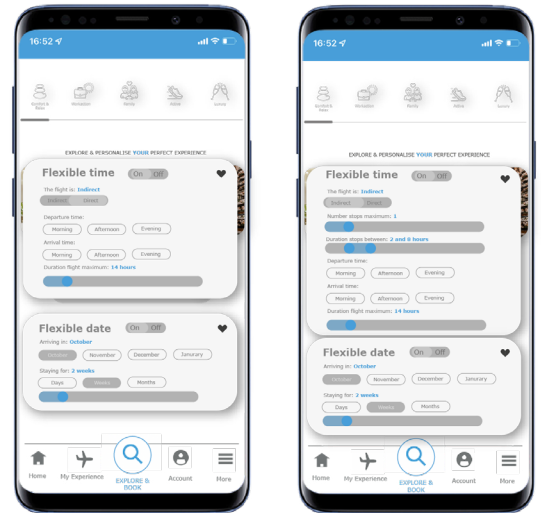


Figure 48: Flexibility search bars

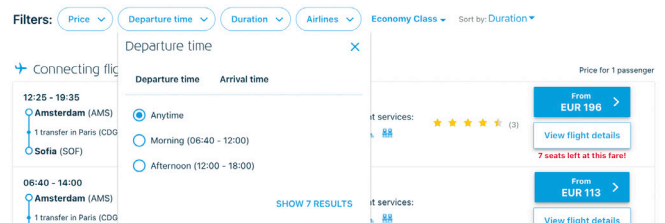


Figure 49: Current filters the airline

**Step 3: Expanding the experiences**

The third step is to add the missing experiences. The destination experiences that the airline does not have still need to be researched and added to the current experiences. For example, the airline already has destination information for example surf destinations, but all the experiences that are not named in table 5, still need to be researched.

**Step 4: Adding the preset experiences**

Lastly, the airline can start researching and creating the preset experiences option. The preset options can be found on the top and they are combinations of all three experiences: airplane, airport, and destination experiences. Some of the information for the destination part of the preset options is already found by the airline, this can be seen in table 5. But, these destination experiences still need to be combined with airplane and airline experiences and the missing preset experiences need to fully be made. The whole list of preset experiences can be found on page 48.

Chapter | 6  
**Discussion**



## 6.1 RECOMMENDATIONS

In this paragraph, the recommendations for the airline will be discussed.

### ***Research fitting experiences***

The airline has some knowledge about the type of experiences that customers are looking for, but to use the final design to its full potential, the airline has to invest in knowing exactly which experiences customers are looking for. The needs of customers might be changing and new experiences might appear. Thus, the airline should keep on improving and researching this.

### ***Investigating in more 'preset experiences'***

The airline should keep on investing in finding combinations of airport, airplane, and destination experiences that really fit their customer's needs. Customer's needs can change and customers might have new experiences they are looking for.

### ***Bringing even more emotional value***

At the moment, there are mostly pictures, which show the experiences. These pictures are taken from the current airline pictures, which already exist. It might be of value to research and make new pictures and videos. By testing which type of pictures or videos bring the most emotional value to customers, the emotional value and affective forecasting might be triggered even more.

### ***Personalizing the front page and app***

When gathering data from customers, the airline might learn more about them. For example, the airline will know what type of experiences they were looking for in the past. Personalizing and showing these types of experiences or similar experiences when they are on the app or website of the airline might trigger customers to choose these experiences again or choose the airline again.

### ***Privacy***

Furthermore, it was found that privacy is something important to consider since the airline will have more data with the final design. Keeping this data safe is something that still needs to be researched, as the airline already has some privacy security, but because of the new data, it should be researched if more security is needed, or if the current systems are enough.

## 6.2 LIMITATIONS

### ***No website screens***

Unfortunately, there was no time to also make the website screens. Although these screens would look similar to the app screens, it would have given a better image of the final design. This could be something to be researched and created in the future.

### ***Social component***

The social component is not taken into account with the final design. This might be something that will improve the experience and decision-making even more.

## 6.3 CONCLUSION

In this paragraph, the project will be concluded.

During this graduation project, the initial design brief was: **“Design a strategy for the airline, which will help the airline reach customers that want to choose the airline and are triggered to choose certain flights that the airline offers, independent of economic motives. These customers will make these choices because of the improved customer experience.”** From the start, this design brief was divided into three research questions that were answered throughout the project. By answering these research questions and doing literature and qualitative research the initial design brief was reframed to: **“Design a more sophisticated way of searching.”** This in turn led to solving the right problem and the final design.

Further on in this text, the conclusions of the research questions will be discussed. The questions were:

*(1) When and how do customers make important travel decisions?*

*(2) How can these travel decisions be influenced?*

*(3) In which context will the airline industry be in 2032?*

The conclusions of all three questions will be discussed and at the end, the overall conclusion will be discussed.

*When and how do customers make important travel decisions?*

Customers make multiple travel decisions during their customer journey. Their journey is not linear, meaning there is no strict order of going through the journey. Furthermore, the digital part of the travel journey often takes place on multiple days. Sometimes, customers make some of their travel decisions more than once, since their customer journey can start all over again the next day.

Because the journey is not linear, the final design should aim to keep the customers on the website or app or let them be triggered to return. In this project, this is done by creating a positive experience and by making the customer's search experience easier.

Next to that, knowing when and how customers make travel decisions was important for this project because this helped identify which part of the customer journey the project will focus on. From the research, it could be concluded that for this project the focus should be on the digital touchpoints of the airline since these are the moments that customers are first in touch with the airline.

Furthermore, from the literature research, it was found that people make both rational and emotional decisions. These decisions often work simultaneously. From these findings, it could be concluded that in this project both types of choices should be taken into account.

Lastly, how and when the information is presented is an important part of the decision-making process. The first step in choosing something is noticing something. What kind of information is presented, how the information is presented, and the order of this information are all an important part of how the customers will make decisions and will be explained further during the next research questions.

*How can these travel decisions be influenced?*

It was important to know how to influence people's decisions for this project because the final design had to influence customers' decisions to choose the airline and the airline's flights.

As explained in the previous question, customers make both rational and emotional choices, but it was also found that adding emotional value to experiences might trigger customers to choose the airline. Since the airline's website and app are more rational, it was decided from the findings to add emotional value to the app and website. It was also decided to add this emotional value through affective forecasting since this would also minimize the burden of paying now for something you will experience in the future.

Furthermore, from the interviews and observations, it was found that people are looking for experiences and that searching and finding these experiences can be decisive for customers. So, adding an experiential

component to the final design was the second part of the final design which would influence customers to choose the airline and the airline's flights and the experiences they offer.

Combining both of these findings led to the final design since this emotional value is added to the website and app with the final design by stimulating customers to imagine their vacation. Customers can explore different vacation experiences and find their perfect experience. By doing this, customers can start imagining which emotions they will have during these experiences. This is called affective forecasting and is a form of emotions. Affective forecasting is known to influence customers' travel decisions.

### *In which context will the airline industry be in 2032?*

Lastly, it was important to find the context in which the airline industry will be in 2032, the year the final design was made for.

From the research, it could be concluded that the final design should help the airline gain a positive customer experience and help the airline have a competitive advantage since the airline industry is very complex and has a lot of problems and complexities it has to deal with, so it should not make these problems worse.

Furthermore, customers experience an information overload and are in a need of a way to filter out the information they do not need. This will make their digital experience easier. Customers are more flexible. Different customers want different characteristics of the vacation experience. Helping customers discover their personal experience that really fits them and what they are looking for will help them improve their online experience.

Finally, with the final design, the airline will improve the digital customer experience, by helping customers discover which experiences and characteristics of their vacation are really important for them, enabling customers to search in a more flexible way and discover destinations, airplane, and airline experiences that fit their needs and which will otherwise be harder to discover. By enabling them to imagine their emotions during these experiences, they will be triggered to choose the airline and the experiences the airline offers. Next to that, the final design can challenge and inspire the airline to try and sell their products with experiences as a starting point, rather than something that comes up at the end. By changing the order of the presented information, the information will also be perceived in a new and positive way.



## 6.4 PERSONAL LEARNING OBJECTIVES

### *Objective 1: Get comfortable doing a project for a company*

During this graduation, I had to work within a company for the first time. I worked on getting comfortable talking with people inside the company. I have interviewed multiple people from the company. The first time it was scary, but after doing it a few times, it became easier and also fun to do. I was not scared to openly e-mail someone to have a coffee with me and to ask them to have an interview. Next, I organized a co-creation workshop within the airline. After organizing this workshop I could say that I have become comfortable doing a project for a company.

### *Objective 2: Learn to communicate with drawings*

Secondly, I tried to express visually my idea of the future direction scenario. Also, the final concept is drawn to explain how it works. This was done to make it easier to communicate and to learn how to communicate through visualisation.

### *Objective 3: Improve academic writing skills*

After the midterm, I had two extra weeks to start writing. This was the first time I learned how effective it was for me to have written during the process. When I started writing, I immediately also started ordering my thoughts about the project, which was very helpful during the second part of the project. After that, I started writing every week, making sure my thesis is as much as possible up to date. So, the midterm was a big learning moment for me.

### *Objective 4: Work on time management*

During the midterm, I still had to start writing the thesis draft. From that point on, I learned to keep up with my writing. Next to that, I started making smaller deadlines for myself, so I would more easily keep up with time management, which did help during this process.

## 6.5 PERSONAL REFLECTION

### *The project*

When I started the project, I could not have imagined how much I would learn. Doing a project on my own, made me realize what my strengths and weaknesses are and made me think about how I could improve during more challenging times of the project.

First of all, it made me realize, that time management was hard for me in the beginning, since making decisive decisions for my project was something I was scared to do and in a group you made the decisions together, which seemed less scary. When I had to do this on my own, it seemed much harder and I started to postpone making these decisions. What I learned from this is that creating personal deadlines, was something that helped me make these choices, since the choices that had to be made after these smaller deadlines were less 'impactful'.

Next to that, I had some challenging moments in the beginning of this project. From these moment I learned that even in the challenging times I did not give up. During the project, the more challenging it became, the more I did not want to give up. This does give me the strength to take on other challenging projects in the future, knowing that no matter how hard it is I will get motivated and work through it.

### *Designer*

During the project, it became clear to me which part of designing are the most interesting for me.

First of all, doing the interviews and talking to people were moments that I really enjoyed the project. Learning from people, and their experience was very interesting and inspiring. Because of this project, I found out that this is something that I would love to do in my future job.

Next, I enjoyed the ideation process. I found out during this project that brainstorming out of the box ideas was one of the more fun parts of being a designer. Being able to brainstorm all the ideas, with no ideas being too strange or bad was an enjoyable part of the project and I would enjoy doing this in my future professional job.

# Chapter |

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# Chapter | **Appendices**

# APPENDIX II

## ***The Teaser***

The Teaser is based on the metaphor of an advent calender. It is inspired by the co-creation workshop and based on some findings from the interviews.

Like an advent calender, when a customer purchases a ticket from the airline, they will receive every month a small experience, making them familiar with the culture they will be visiting and making them excited about the vacation. These small experiences can be for example: top 2 songs from the destination; some important words; places to visit or recipes.

The type of experiences were an inspiration from the co-creation workshop. For example, music can really be a positive emotional trigger.

Lastly, from the interviews, the target group was searching for cultural experiences.

## ***Personal Tickets***

With idea 5, people will make their own profile on the airlines website, and they would have to fill in information like which activities they would like to do on the destination; what type of destination they would like to visit etc. The type of destination could be with sun or outside of Europe for example. After some time people would receive personal three tickets with personal discount, which will fit their filled in information.

This idea is based on the findings from the interviews. People are often flexible about the destination they want to go to. The activities done there are rather important. With this idea, the airline will help them to do the activities they love and discover new destinations.

## ***Travel Together***

Travel Together, is an idea, which is an app and service. This service is part of the airlines app. With this app, people can create their perfect vacation together, from a distance. They can save all the changes and updates. People have a common area on the app where they can add or remove properties of their perfect vacation. Like this, the perfect vacation and flight is created.

The sixth idea is based on findings from the interviews and observations. These findings are that people often travel together and that the decisions made during their customer journey are very much influenced by all the people travelling.

\*research or numbers how often people travel together\*

Furthermore, people have to meet up multiple times, to research and book their destination and flight. This takes a lot of time and everytime they meet up again, they start almost all over again.



# APPENDIX III

## 1. PERSONAL TICKETS:

**Feasibility**

- ✓ The solution should be realistic to be achieved in 2032.
- ✓ The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

**Viability**

- ✗ The solution should be innovative.
- ✗ The solution should fit the future vision.

**How**

- ✗ Bringing emotional benefits to the customers.
- ✓ Help the airline to make full use of the data they already have.
- ✓ Generate more data.

**Desirability**

- ✗ The solutions should make the airline more attractive to the target group.
- ✗ Should bring benefits to the airline, within a cost-sensitive market.
- ✗ Should be profitable for the airline, within the European and Global market.
- ✓ The solution should be desirable for all types of travelers.

## 2. FLEXIBLE SEARCH ENGINE:

**Feasibility**

- ✓ The solution should be realistic to be achieved in 2032.
- ✓ The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

**Viability**

- ✓ The solution should be innovative.
- ✓ The solution should fit the future vision.

**How**

- ✓ Bringing emotional benefits to the customers.
- ✓ Help the airline to make full use of the data they already have.
- ✓ Generate more data.

**Desirability**

- ✓ The solutions should make the airline more attractive to the target group.
- ✓ Should bring benefits to the airline, within a cost-sensitive market.
- ✓ Should be profitable for the airline, within the European and Global market.
- ✓ The solution should be desirable for all types of travelers.

## 3. HIDDEN GEMS:

**Feasibility**

- ✓ The solution should be realistic to be achieved in 2032.
- ✓ The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

**Viability**

- ✓ The solution should be innovative.
- ✓ The solution should fit the future vision.

**How**

- ✓ Bringing emotional benefits to the customers.
- ✗ Help the airline to make full use of the data they already have.
- ✗ Generate more data.

**Desirability**

- ✓ The solutions should make the airline more attractive to the target group.
- ✓ Should bring benefits to the airline, within a cost-sensitive market.
- ✓ Should be profitable for the airline, within the European and Global market.
- ✗ The solution should be desirable for all types of travelers.

## 4. THE TEASER:

**Feasibility**

- ✓ The solution should be realistic to be achieved in 2032.
- ✓ The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

**Viability**

- ✗ The solution should be innovative.
- ✗ The solution should fit the future vision.

**How**

- ✓ Bringing emotional benefits to the customers.
- ✗ Help the airline to make full use of the data they already have.
- ✗ Generate more data.

**Desirability**

- ✗ The solutions should make the airline more attractive to the target group.
- ✗ Should bring benefits to the airline, within a cost-sensitive market.
- ✗ Should be profitable for the airline, within the European and Global market.
- ✓ The solution should be desirable for all types of travelers.

## 5. TRAVEL TOGETHER:

**Feasibility**

- ✓ The solution should be realistic to be achieved in 2032.
- ✓ The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

**Viability**

- ✓ The solution should be innovative.
- ✓ The solution should fit the future vision.

**How**

- ✗ Bringing emotional benefits to the customers.
- ✗ Help the airline to make full use of the data they already have.
- ✗ Generate more data.

**Desirability**

- ✓ The solutions should make the airline more attractive to the target group.
- ✓ Should bring benefits to the airline, within a cost-sensitive market.
- ✗ Should be profitable for the airline, within the European and Global market.
- ✓ The solution should be desirable for all types of travelers.

## 6. AIRLINE COMMUNITY:

**Feasibility**

- ✗ The solution should be realistic to be achieved in 2032.
- ✓ The solution should be in line with the regulations of the Dutch government and the European Union, as the airline receives financial support from the Dutch Government.

**Viability**

- ✓ The solution should be innovative.
- ✓ The solution should fit the future vision.

**How**

- ✓ Bringing emotional benefits to the customers.
- ✓ Help the airline to make full use of the data they already have.
- ✗ Generate more data.

**Desirability**

- ✓ The solutions should make the airline more attractive to the target group.
- ✓ Should bring benefits to the airline, within a cost-sensitive market.
- ✓ Should be profitable for the airline, within the European and Global market.
- ✗ The solution should be desirable for all types of travelers.

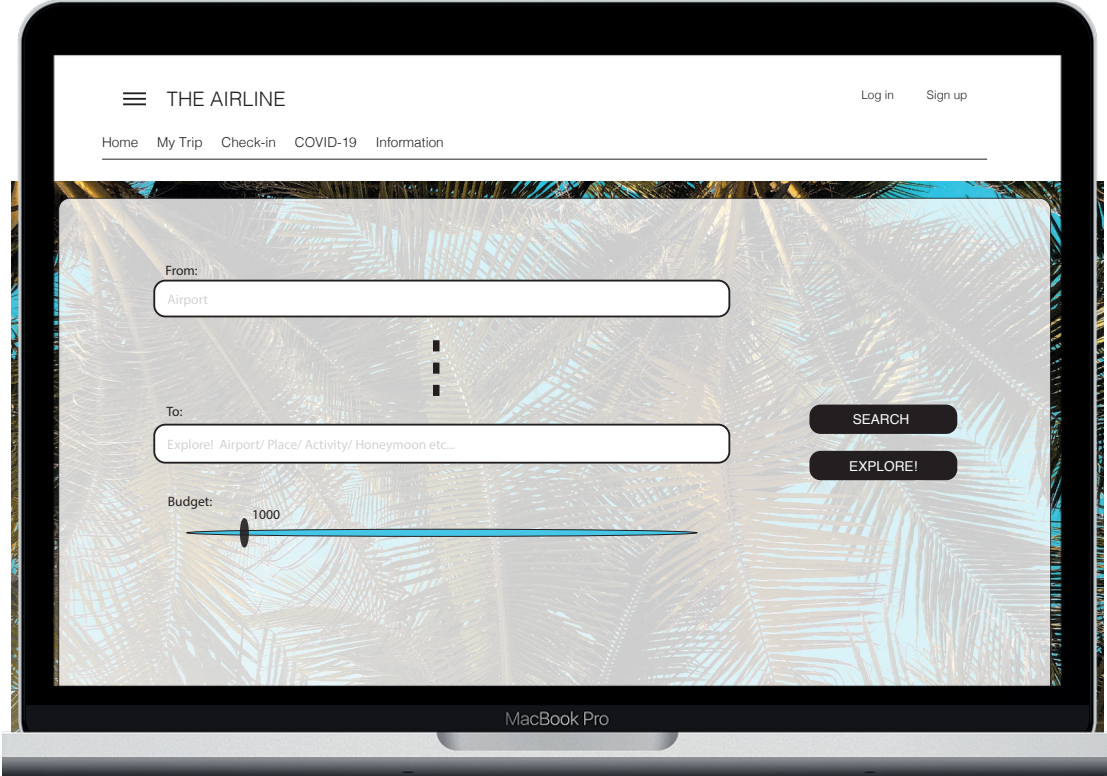
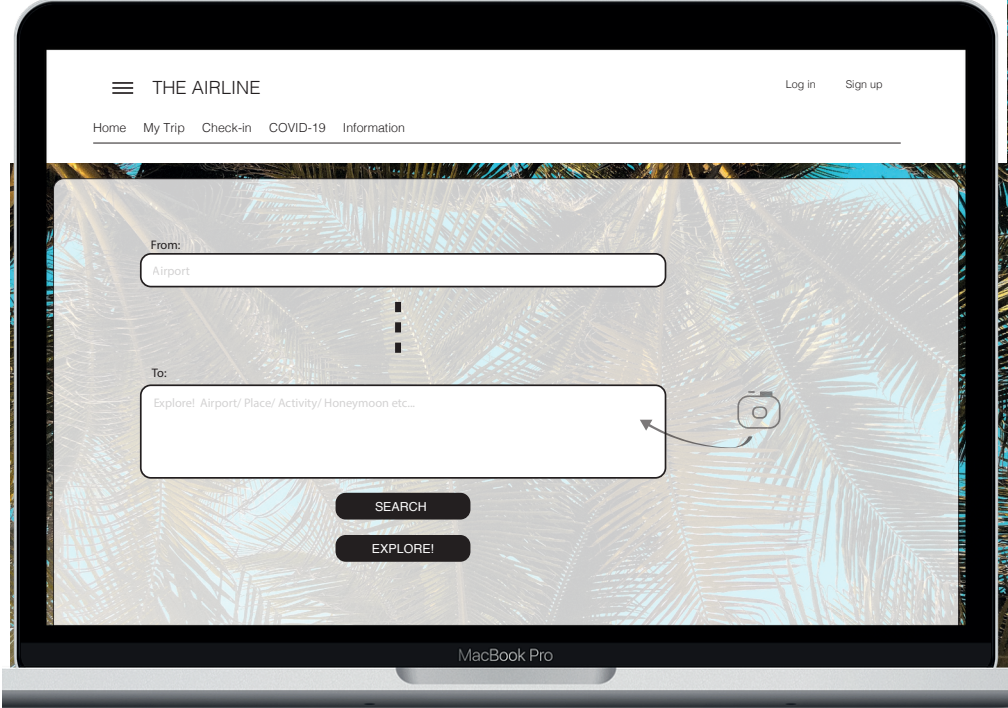
# APPENDIX IV

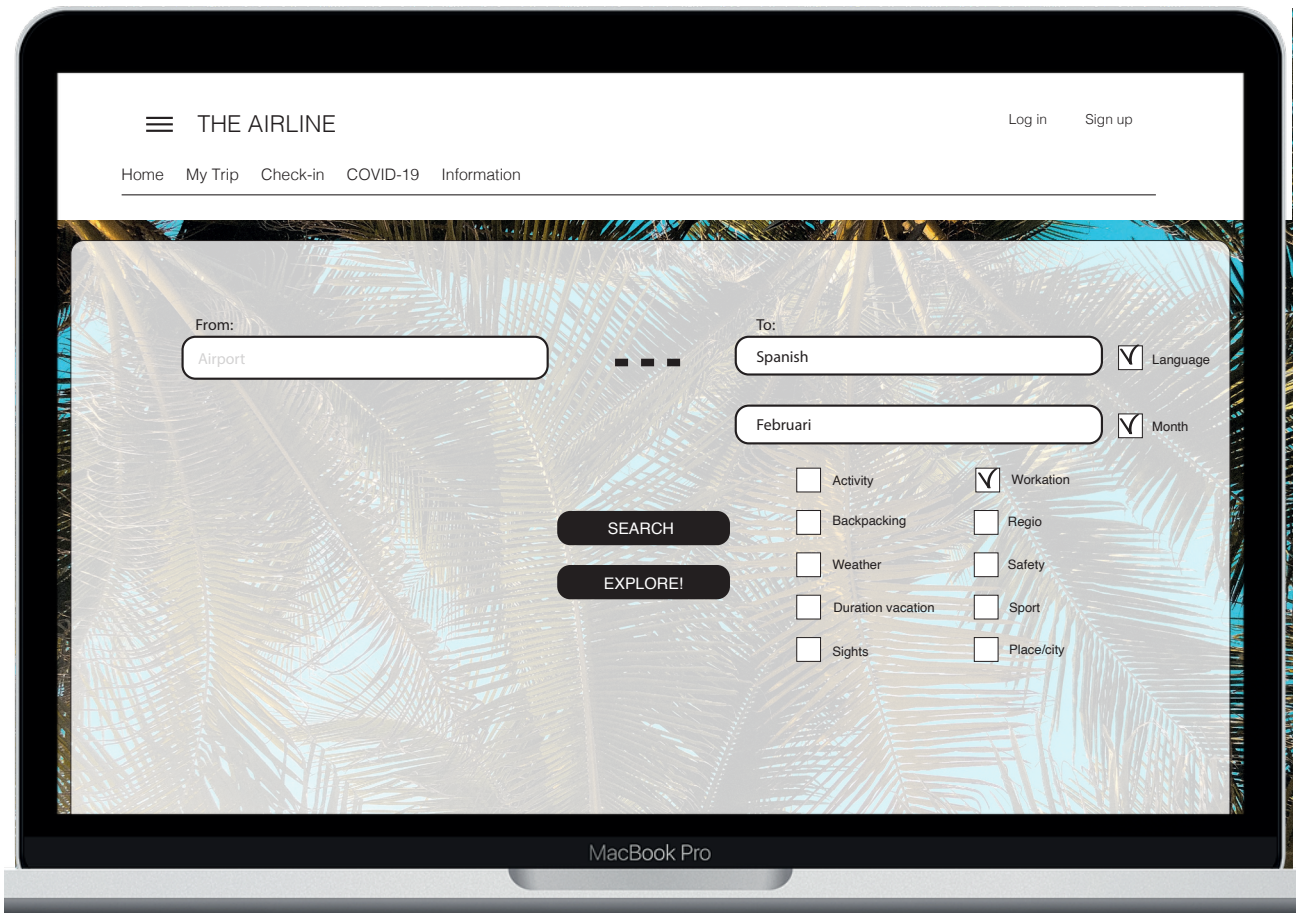
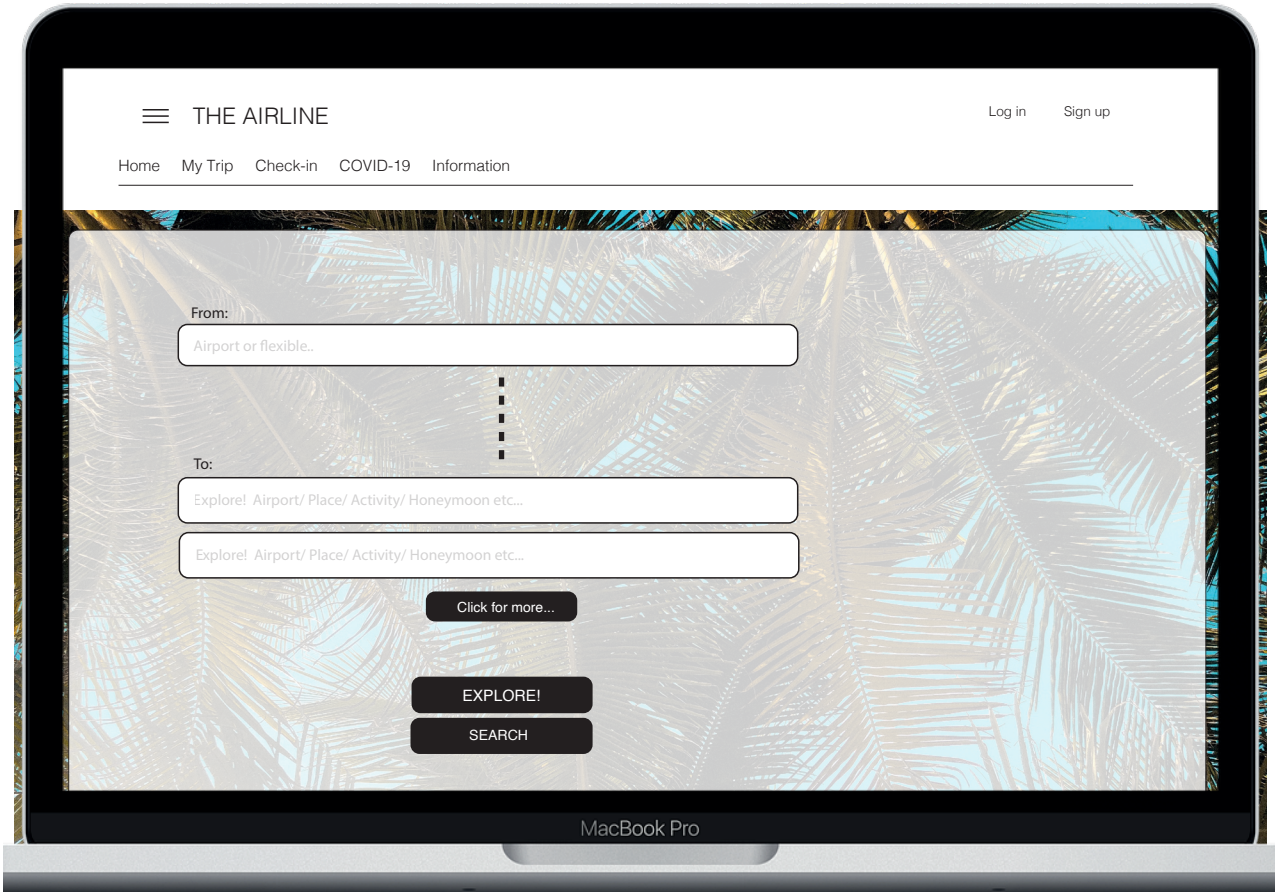






# APPENDIX V





From:

Airport

To:

Explore! Airport/ Place/ Activity/ Honeymoon etc...



EXAMPLES:

TYPE OF VACATION

BACKPACKING

FAMILY

HONEYMOON

BLEISURE

SEARCH

EXPLORE!

MacBook Pro

From:

Airport

To:

Explore! Airport/ Place/ Activity/ Honeymoon etc...



EXAMPLES:

TYPE OF VACATION

LUXURY

PLACE

TOTAL BUDGET

ACTIVITY

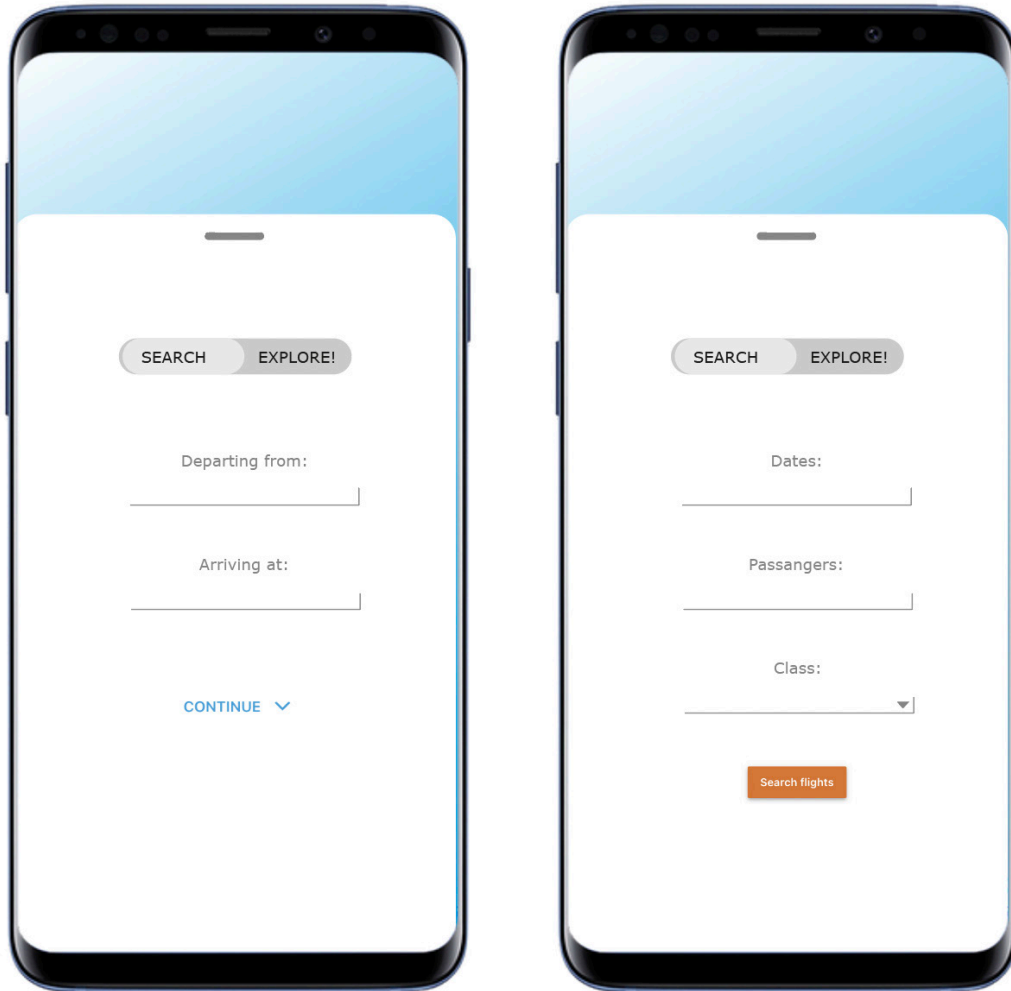
SPORTS

SEARCH

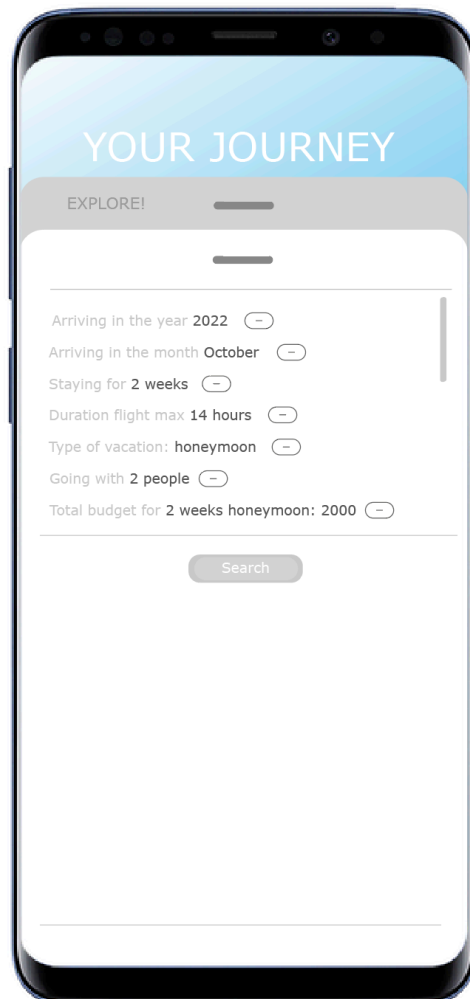
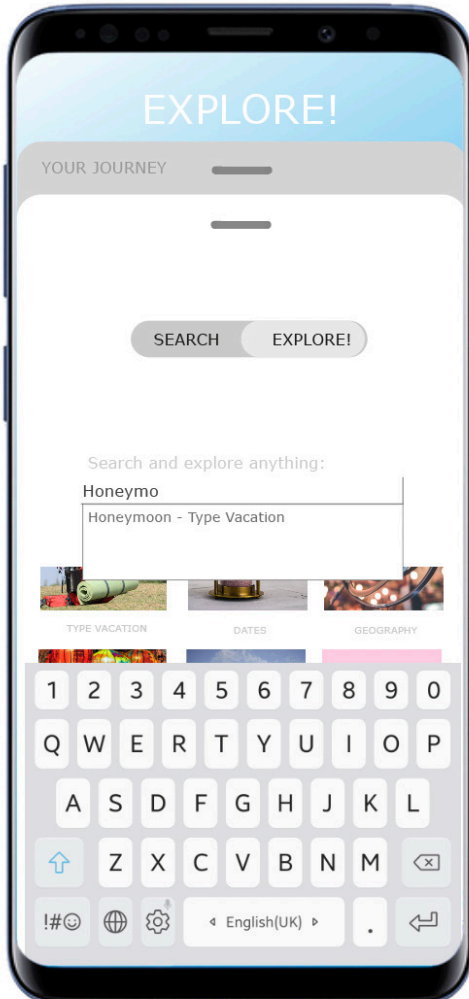
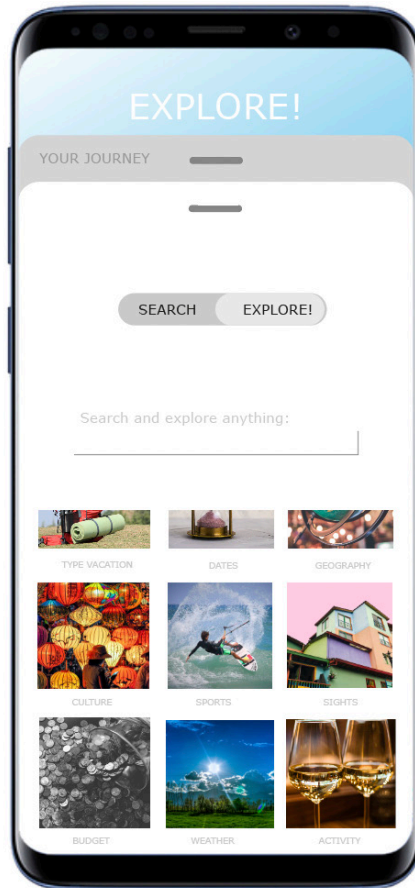
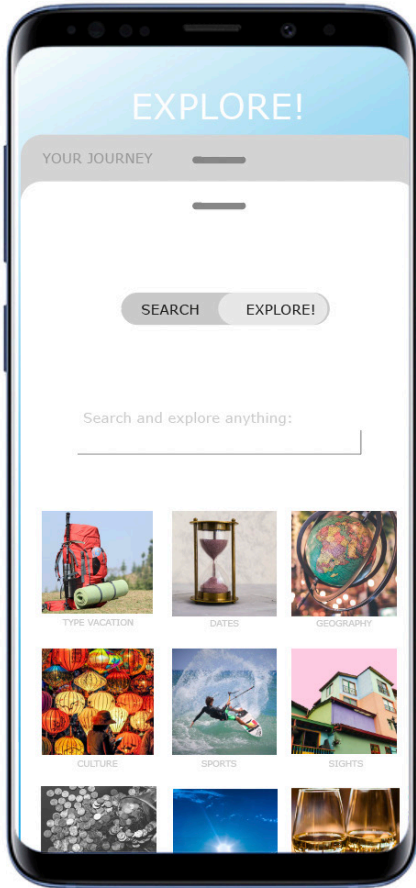
EXPLORE!

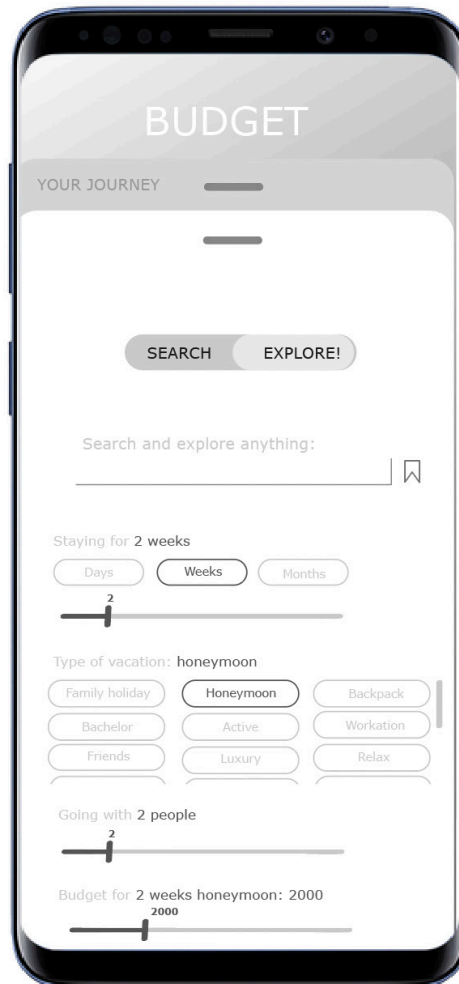
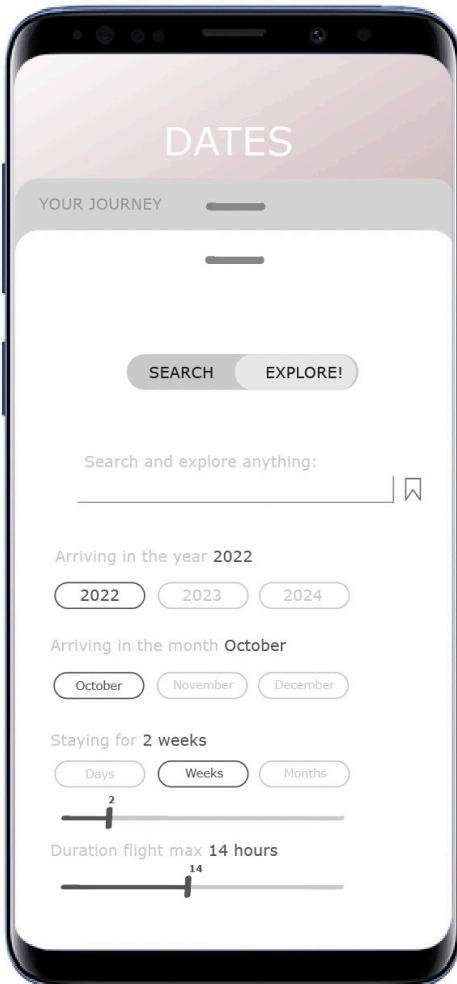
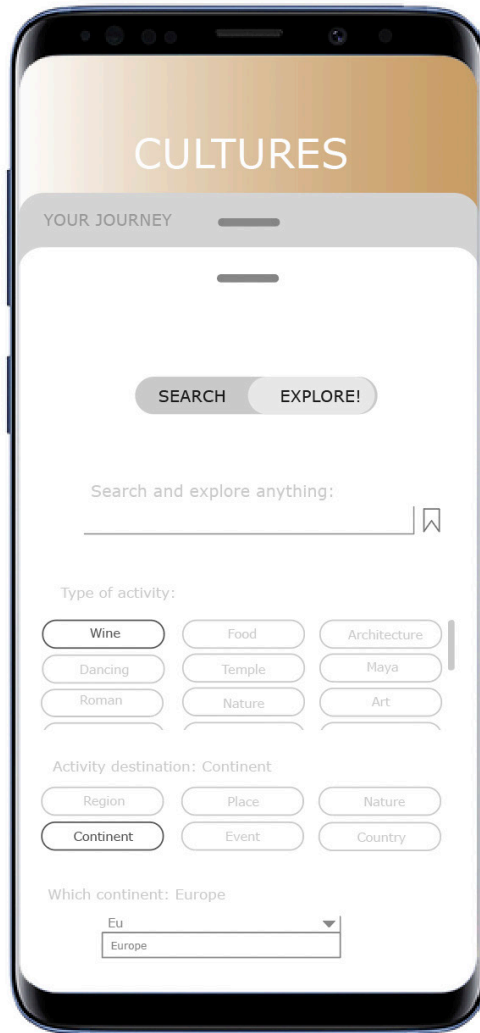
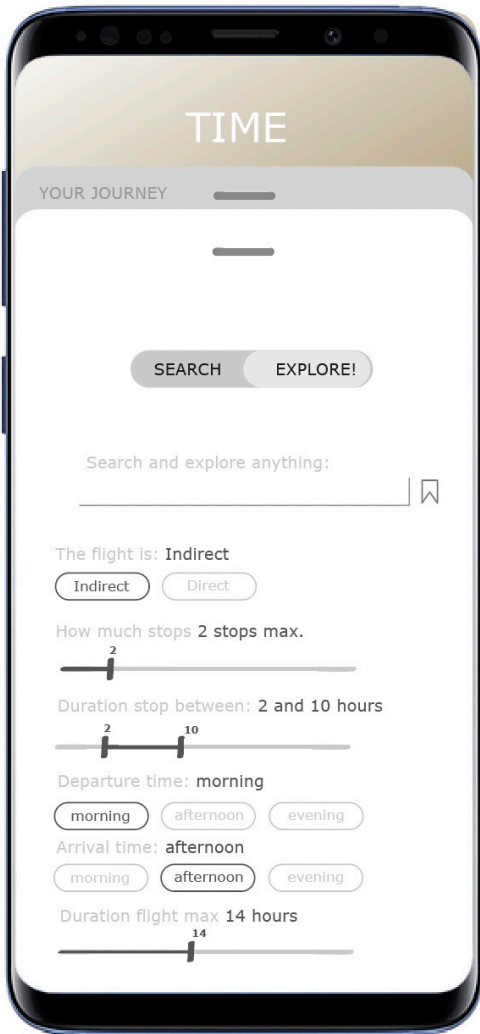
MacBook Pro

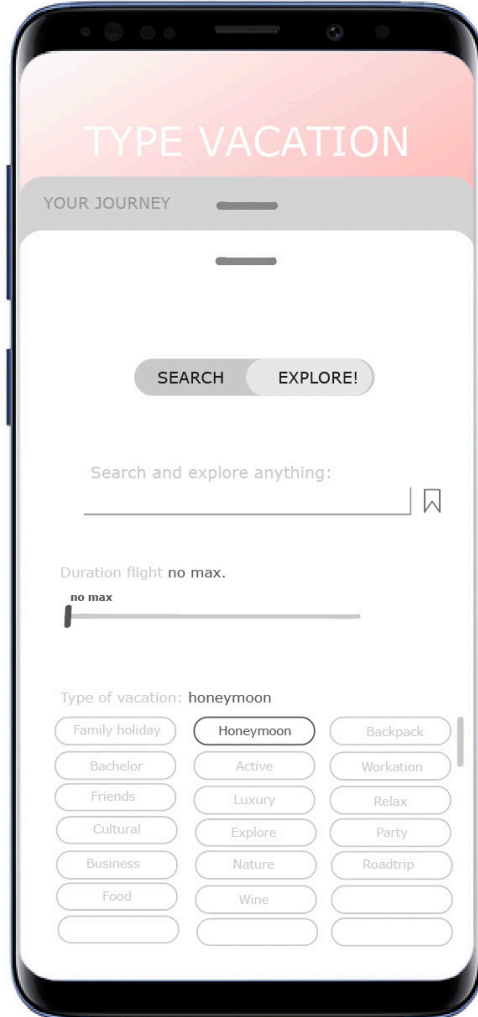
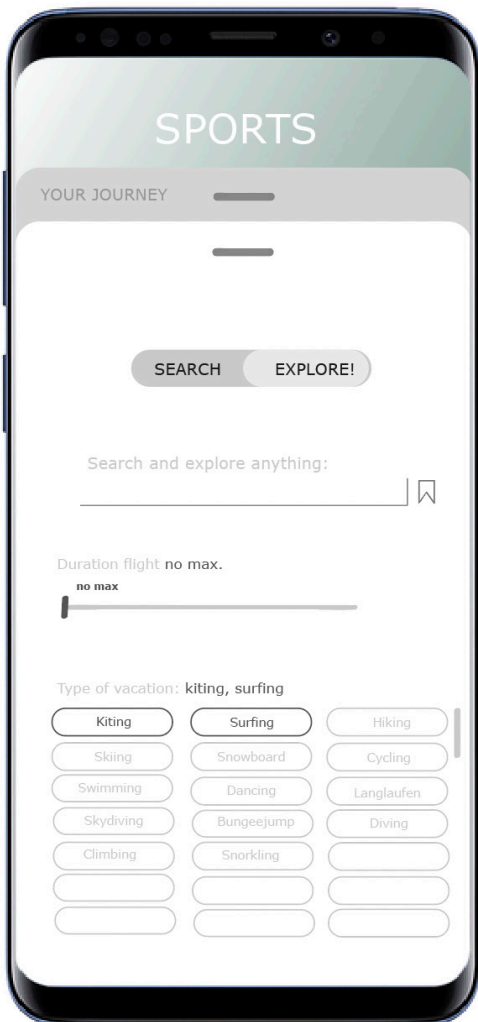
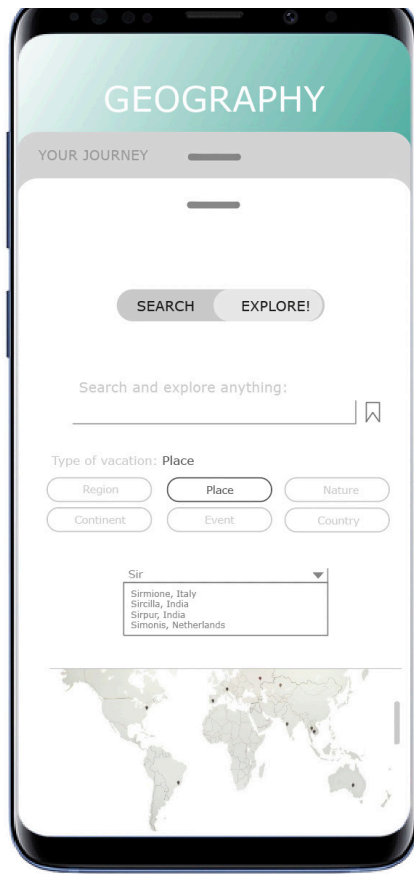
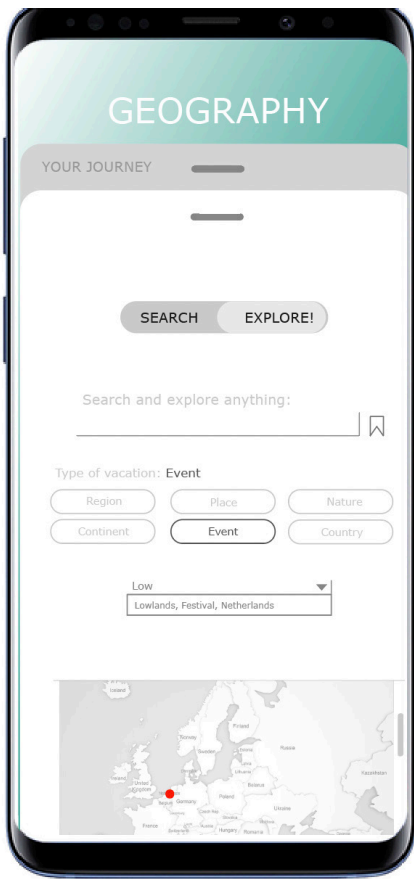
# APPENDIX VI

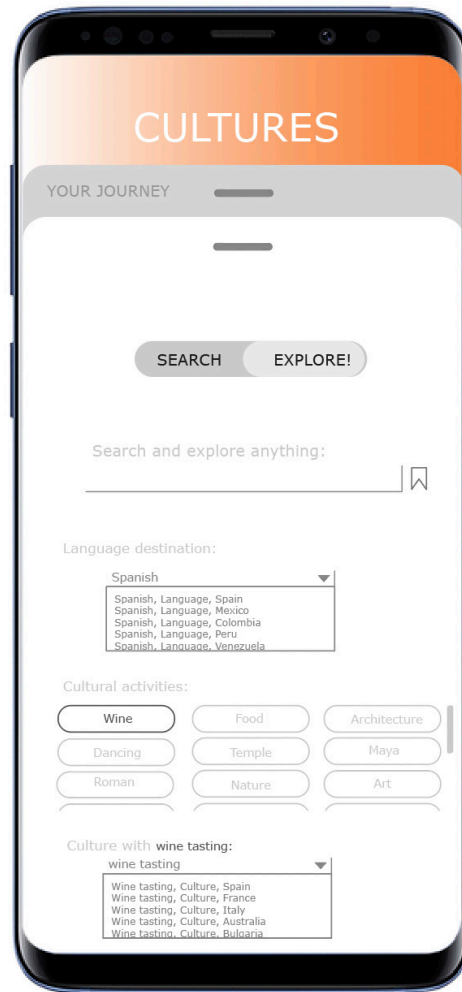
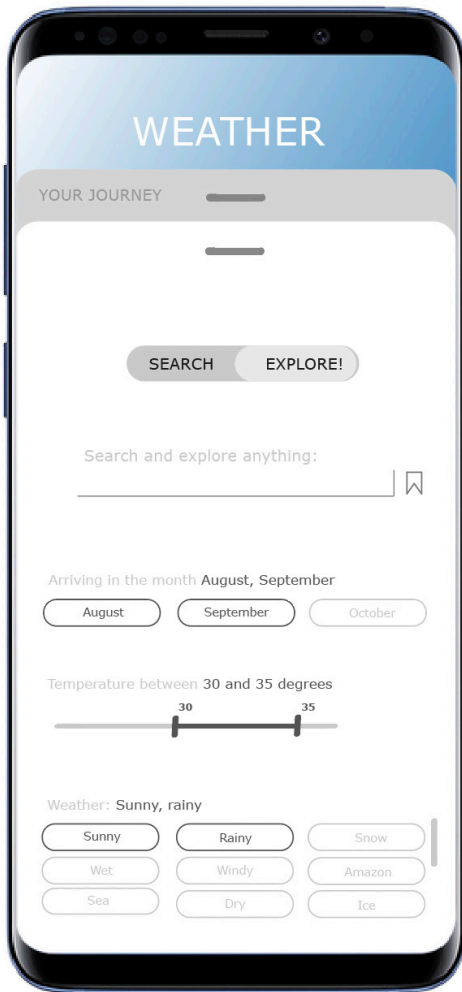














## IDE Master Graduation

### Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

#### ! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

#### STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief\_familyname\_firstname\_studentnumber\_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name Kotzeva  
initials Z.V. given name Zornitza

Your master programme (only select the options that apply to you):

IDE master(s):  IPD  Dfl  SPD

2<sup>nd</sup> non-IDE master: \_\_\_\_\_

individual programme: - - (give date of approval)

honours programme:  Honours Programme Master

specialisation / annotation:  Medisign

Tech. in Sustainable Design

Entrepreneurship

#### SUPERVISORY TEAM \*\*

Fill in the required data for the supervisory team members. Please check the instructions on the right !

\*\* chair Rebecca Price dept. / section: MCR

\*\* mentor Natalja Laurey dept. / section: MCR

2<sup>nd</sup> mentor Bas 't Hooft

comments  
(optional)

Even though Rebecca and Natalja are members of the same section, they can both help me with this project. Rebecca has knowledge about aviation and Natalja can help with the qualitative research, which I am planning to do.

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..



Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

**Procedural Checks** - IDE Master Graduation

**APPROVAL PROJECT BRIEF**

To be filled in by the chair of the supervisory team.

chair Rebecca Price date - - signature \_\_\_\_\_

**CHECK STUDY PROGRESS**

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: \_\_\_\_\_ EC

Of which, taking the conditional requirements into account, can be part of the exam programme \_\_\_\_\_ EC

List of electives obtained before the third semester without approval of the BoE

YES all 1<sup>st</sup> year master courses passed

NO missing 1<sup>st</sup> year master courses are:

name \_\_\_\_\_ date - - signature \_\_\_\_\_

**FORMAL APPROVAL GRADUATION PROJECT**

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked \*\*. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content:  APPROVED  NOT APPROVED

Procedure:  APPROVED  NOT APPROVED

comments

name \_\_\_\_\_ date - - signature \_\_\_\_\_

Shaping the future of airline travel choices project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 01 - 03 - 2022 end date 28 - 07 - 2022

**INTRODUCTION \*\***


Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).



The aviation sector has always had challenges with customer loyalty because it is a price-sensitive market, which means that customers mostly choose their tickets based on the airline that offers the lowest price. Because of this, the airline sector is very competitive and looking at the larger market share it is not always feasible for airlines to play the pricing game creating dynamic prices (Banerji et al., 2022). See figure 1.

Even though the aviation sector is still a price-sensitive market, this industry has been affected by the COVID-19 crisis, creating changes in this sector. Research done by Skift and Mckinsey (2020) has shown that nonprice factors have also become important to customers. Customers need to feel comfortable with all the touchpoints in the customer journey. Thus, understanding their customers has become even more important for airlines and travel agents, creating opportunities to improve customer experience and loyalty.

Furthermore, airlines have a lot of customer data, which creates the opportunity to learn about and really know their customer. According to a research done by Deloitte (2016) airlines can find out what customers really value, which customers have these values and which risks come with these customers. By finding these patterns and analysing them, airline companies can create and design customer experiences that will create profit for the company.

The focus of this project will be on the journey that customers go through to purchase an airline ticket. How can this journey and process be improved, so customers get triggered to choose  which part of the customer journey is the best part to approach the customers.

space available for images / figures on next page



introduction (continued): space for images

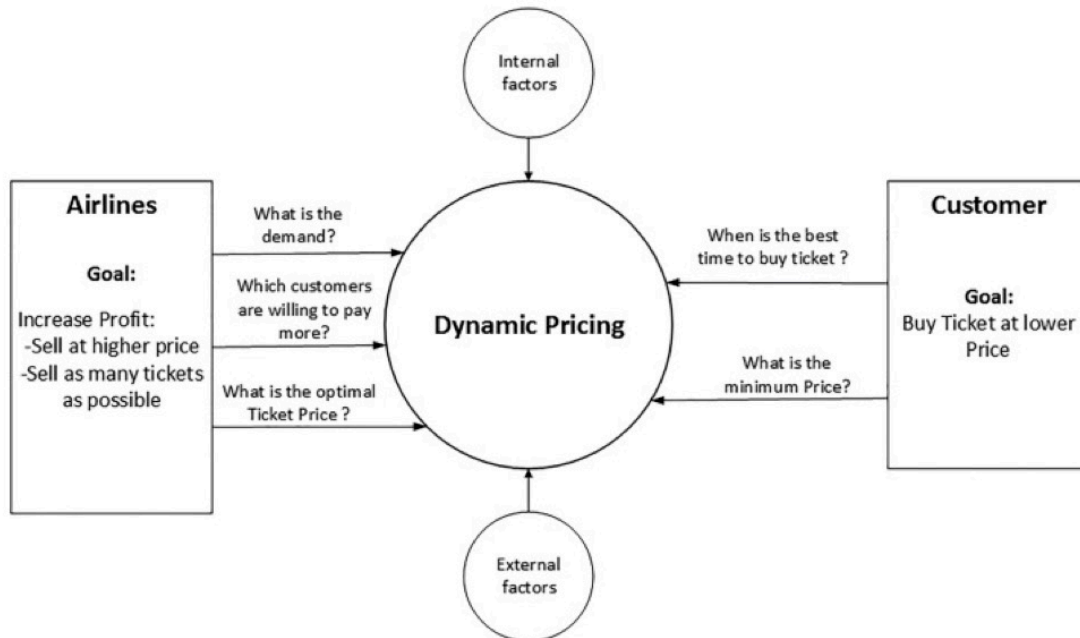


image / figure 1: Dynamic pricing (Abdella et al., 2021)

**TO PLACE YOUR IMAGE IN THIS AREA:**

- SAVE THIS DOCUMENT TO YOUR COMPUTER AND OPEN IT IN ADOBE READER
- CLICK AREA TO PLACE IMAGE / FIGURE

**PLEASE NOTE:**

- IMAGE WILL SCALE TO FIT AUTOMATICALLY
- NATIVE IMAGE RATIO IS 16:10
- IF YOU EXPERIENCE PROBLEMS IN UPLOADING, CONVERT IMAGE TO PDF AND TRY AGAIN

image / figure 2: \_\_\_\_\_

**PROBLEM DEFINITION \*\***

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

The airline industry is a commoditized industry. Customers often make price-driven choices when they are comparing different airlines and decide to purchase an airline ticket. This is no surprise, because a lot of airline websites and online travel agents focus on comparing airline ticket prices. It would be of great value for airline companies if they are chosen with other motives than economic motives.

Therefore this graduation project will focus on how customers make choices during the process of purchasing airline tickets. This process starts from the moment customers decide they want to travel up until the moment just before they purchase the airline tickets. This project will focus on how to influence the choices of these customers in a way that they are encouraged to look beyond economic motives when choosing an airline. We are willing to consider and pay for the flight experience and attributes.

**ASSIGNMENT \*\***

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... . In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

Design a strategy for [redacted] which customers that want to [redacted] triggered to choose [redacted] instead of economic motives. The [redacted] make these choices because of the improved customer experience.

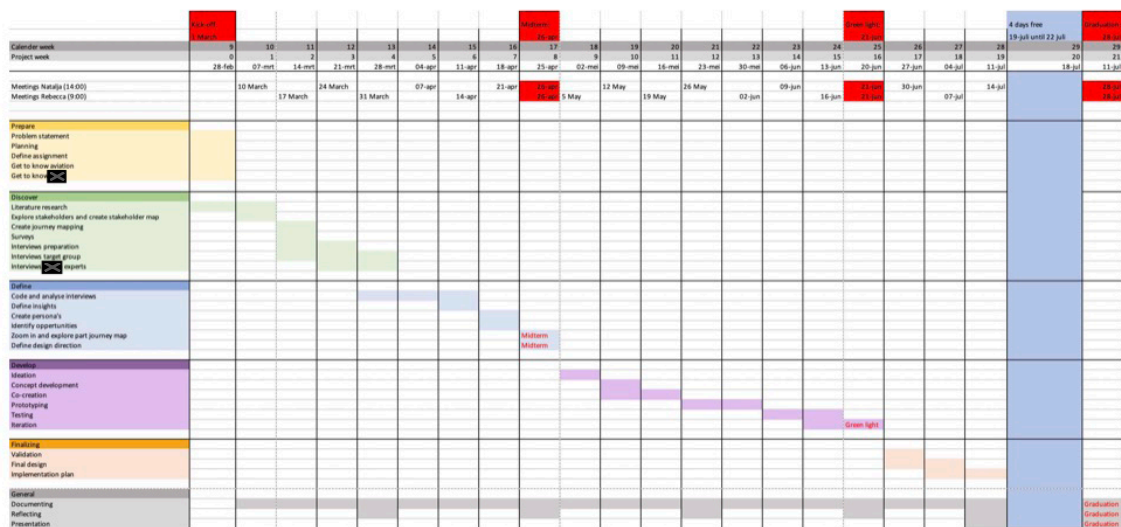
In order to complete this master graduation project I will first start of by researching the customer journey, before the customers make the choice to buy a certain airline ticket and choose a certain airline. I will research how this process evolves. This will be done by doing online literature research and extensively interviewing the target group. Furthermore I will also interview experts [redacted] knowledge about this process. By analysing this information I will use the insights to generate [redacted] solutions will be tested and validated.

At the end I will deliver a strategy which [redacted] customers to choose [redacted] to making these customers willing to pay for the experience and attributes of the flight itself. [redacted] helping [redacted] next moment during the customer journey to reach these customers.

**PLANNING AND APPROACH \*\***

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 1 - 3 - 2022 28 - 7 - 2022 end date



There will be a meeting every week with one of the supervisors. These meetings will take place on Thursdays.

The milestones of this Graduation Project:

1. Midterm Evaluation (26th April 2022): During the midterm, the discover phase and define phase will be completed. This means that the literature research will be done and interviews will be finished and analysed. Insights and opportunities will be found. The design direction will be set.
2. Green Light Meeting (21st June 2022): During the Green light meeting, the development phase will be completed. Idea's and concepts will be developed and tested with prototypes. The final concept will be chosen.
3. Graduation (28th July 2022): During the Graduation, the final design (strategy) will be done and presented. The thesis will be done.

**MOTIVATION AND PERSONAL AMBITIONS**

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... . Stick to no more than five ambitions.

During my studies I have never done a project for a company, thus I wanted to use this opportunity to do a project for and learn about a big experience is something that I learned more, during my courses I learned that customer experience is something that I learned why this Graduation Project seemed like a fitting project for me.

There are a few learning objectives that I would like to work on during this Graduation Project:

1. First of all, I would like to learn how it's like to do a project for a company and get more comfortable to work together with and for a client. Get more comfortable to talk to people inside this company and reach out to people in the company.
2. Secondly, I would like to get better in communicating through visualization. I would like to learn how to express my idea's and thoughts on paper more clearly (in a visual way). I think visually, so improving this will be helpfull in the future.
3. Thirdly, I would like to improve my academic writing skills.
4. Lastly, I would like to improve my time management skills. How to manage this project and the stakeholders of this project. Including all the activities like weekly meetings, midterm and green light.

**FINAL COMMENTS**

In case your project brief needs final comments, please add any information you think is relevant.