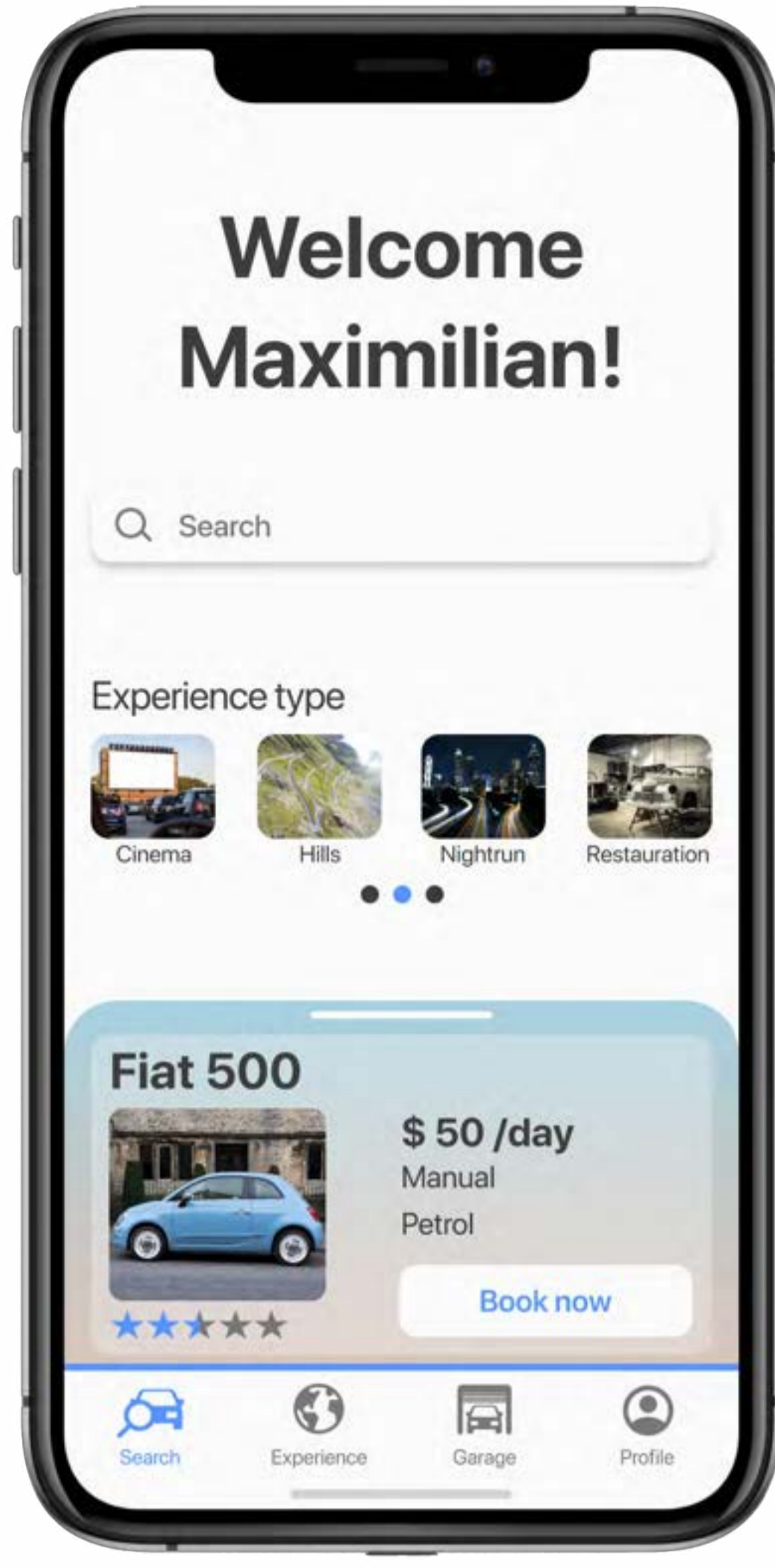


# Facing the transportation problem

In 2019 - transportation in the city of Stuttgart was a big issue. Overcrowded, delayed and long detours in public transport, long traffic jams, insufficient parking solutions...

Our goal was to solve a part of this problem, and find a suiting solution. Maybe a too ambitious goal? You'll see, later.



## THE CHALLENGE

The first part of the project was maybe the most difficult in retrospective. Facing a global problem with many big competitors can be very unsettling. The original premise was simple: Make the peoples lifes more easy with a **new** mobility solution. However, we quickly realized, this won't be this easy, as we thought it would be.

### Our main goals were:

- Adress our target user group, the digital natives with modern but timeless design.
- Design, inspired by state of the art design elements, with strong focus on ease of use to archieve an environment, the user is familiar with.
- Finding a new solution that doesn't existed before and that helps the end user in his daily life.

## THE START

After long research and brainstorming sessions in the team we collected the problems and divided them in the existing mobilty solutions to get a better overview.

### Public Transportation

Not available  
limited to certain scheduled times  
crowded (COVID-19)  
bad price performance  
not fast enough

### Own Car

bad price performance  
finding parking spots  
too much traffic  
most of the time alone in car  
not economic  
no multitasking possible

### Taxi

very expensive  
bad order process  
often just one passanger

## PERSONAS

To adress our target user group, we first had to "define" our target user group. To always have in mind who we are designing for, we developed our personas. You will find them often through the rest of the project. This helped a lot, because it was easy to have a look at the pain points and other important informations while discussing some points of the later on design. By personalizing our target group we had a much better understading of our audience.

**USER PERSONA**  
**Monica Dyson**

**ABOUT**  
Monica is a Mobile Media Student at HdM in Stuttgart. Ever since she was a child, she loved to play with computers or design new things in her mind. Due to her passion for design, she decided to pursue a Bachelor's degree in Mobile Media and learn more about User Experience (UX) and how she can become a better programmer to build her own apps.

**GOALS**

- Want's to get as fast as possible to the university (longer sleep)
- Don't want to pay the expensive student ticket

**NEEDS**

- Looking for a cheap transportation option
- An app that makes calling an car easy and fast

**PAIN POINTS**

- There are too many providers with very inefficient apps
- To much traffic in Stuttgart on her way to the university.
- Very crowded public transportation makes it risky in times of Covid-19.

**PERSONALITY**

Introvert ————— Extrovert  
Analytical ————— Creative  
Busy ————— Time rich  
Messy ————— Organized  
Independent ————— Team player

**Persona Monica**

**USER PERSONA**  
**Günter Hermann**

**ABOUT**  
Günter Hermann is a young and aspiring self-employed architect, who runs his own architecture office. He is married and has two sons. He works a lot and travels a lot too because of his job as an architect. As architecture is his big passion, he also likes to view architecture in his free time. But he also likes to spend time together with his family. So he likes travelling in his free time but when it gets to his job he needs an efficient way of transportation through the city.

**GOALS**

- Easy access to mobility
- Wants to be able to see architecture while travelling

**NEEDS**

- Get around the city as fast as possible
- Be able to get around with his whole family

**PAIN POINTS**

- His car is not always the most suitable mean of transport although he likes it
- Train and bus are not efficient enough for him
- Taking time to manage transport through the city

**PERSONALITY**

Introvert ————— Extrovert  
Analytical ————— Creative  
Busy ————— Time rich  
Messy ————— Organized  
Independent ————— Team player

**Persona Günter**

## COMPETITORS

Our goal with the competitor analysis was to get a picture of the current market situation. With listing the pros and cons of the other apps, we wanted to learn from their issues and create an overall superior product. Without considering other countries besides germany, we practically came up with the same idea as "Uber" just with autonomous driving cars. As an unique selling point is essential for the success of any app, we decided to drop this idea and came up with a new one. This completely changed our view on the topic mobility and public transportation. So we repeated the whole process including the competitor analysis with a completely new mindset.

	JOCHEN SCHWEIZER	SIXT	SHARE NOW
<b>strengths</b>	<ul style="list-style-type: none"> <li>Strong UI</li> <li>Big variation</li> <li>Good onboarding</li> <li>Fun experiences</li> </ul>	<ul style="list-style-type: none"> <li>Simple design</li> <li>New cars</li> <li>Different booking options</li> <li>Subscription model avail.</li> </ul>	<ul style="list-style-type: none"> <li>Easy booking</li> <li>Good visibility of car details</li> <li>less than 0,50€ per min</li> </ul>
<b>weaknesses</b>	<ul style="list-style-type: none"> <li>Expensive price</li> <li>Bad booking process</li> </ul>	<ul style="list-style-type: none"> <li>No explanation</li> <li>Expensive</li> <li>Long booking process</li> </ul>	<ul style="list-style-type: none"> <li>Cluttered navigation bar</li> <li>Too many vehicles visible when zoomed out</li> </ul>

## SOLUTION

By evaluating the different problems again and thinking about how we could fix them properly and combining this with our personas we came up with this new solution:

A **rentalservice** where you can **rent cars from other people** using the App. You can use it at home **for transportation** purposes or in the holidays if you want to be **flexible**.

**Based on AI** recommendations you get location **suitable cars** and the best pricing option.

You can also book **special experiences** with your desired cars to enjoy it even more and **make it unforgettable**.

## SCRIBBLES

After creating a content table with all the necessary Information, we thought about the information architecture. By evaluating the pros and cons that come with a tab bar or the navigation via a hamburger menu, we discovered that our app could be easily seperated into 4 main areas. With that knowledge the decision was easy and we chose the tab navigation, because we wanted a clear and fast navigation process for the user and an indicator for the current location. With those things in mind we decided the basic structure of our app, aswell as the rough layout.

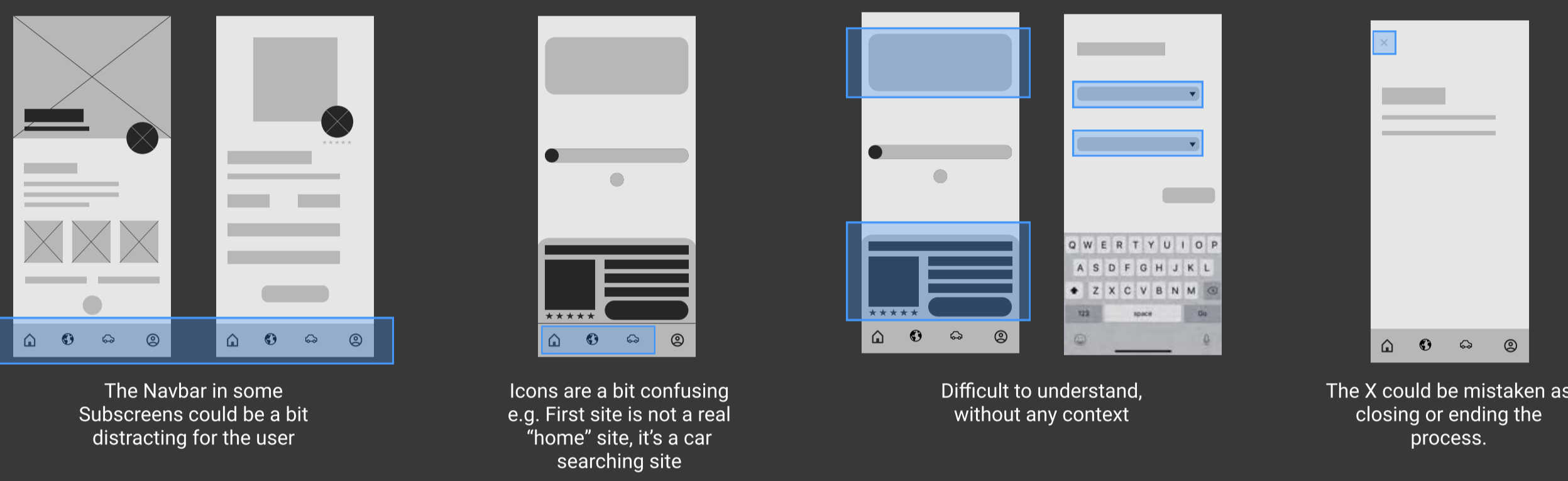


Scribbles Main Screens

## Wireframes

With the basic structure and design in mind we started with the Lo-Fi Wireframes. In our first approach we only used basic shapes - even for the later on headlines or textboxes - to get a better understanding of the space and alignment. With this very Lo-Fi wireframes we built our first scenarios, to work on the user flow. To get a second thought on our progress, we met up with another team and collected their thoughts on our project so far and gained some very interesting, external insights.

### before



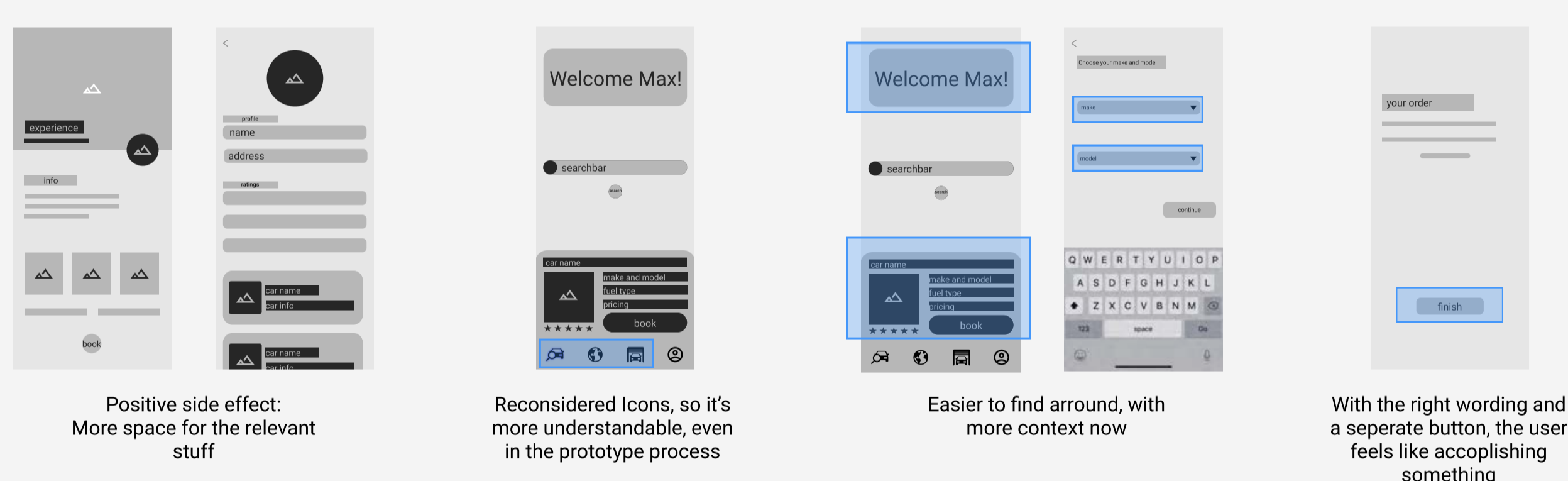
The Navbar in some Subscreens could be a bit distracting for the user

Icons are a bit confusing e.g. First site is not a real "home" site, it's a car searching site

Difficult to understand, without any context

The X could be mistaken as closing or ending the process.

### after



Positive side effect: More space for the relevant stuff

Reconsidered icons, so it's more understandable, even in the prototype process

Easier to find around, with more context now

With the right wording and a separate button, the user feels like accomplishing something

Wireframe Evaluation

## First Evaluation

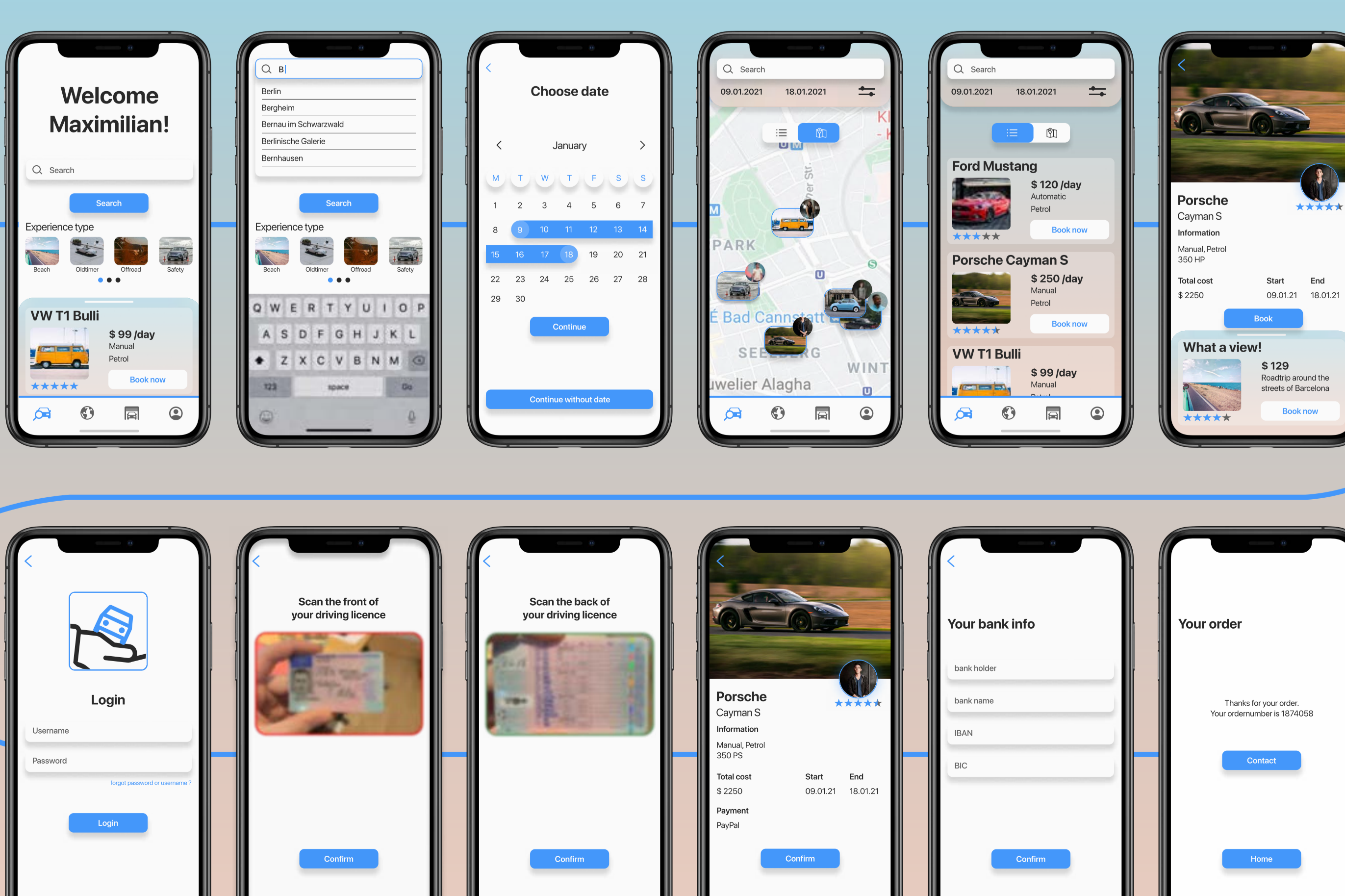
As you can see in the graphic above, we decided to make the wireframe more understandable, by adding more context by replacing meaningless rectangles, with meaningful headlines. This did not only help other people to understand our prototype and its visual hierarchy in this early stage, it also helped us a lot later on in the project, to work more efficient, because we didn't had to always think about, what exactly the rectangle meant. We also rethought our tab bar icons and the tab bar itself. In some cases the tab bar was not necessary, or it was even distracting the user from the real content, so we removed it in some screens. In times of the icons itself, we decided to change the "home" icon, to a more suiting one and also made the function of the garage more understandable, through replacing the car icon, with an icon of a garage. The last change of this evaluation was to reconsider the last step, the user had to make, after successfully booking a car. Instead of closing it with a simple "closing X" what could be mislead with abortion of the process, he now can press a button, with the right wording, so he feels that he accomplished something.

## User Flow Wireframe



Userflow Wireframes

## User Flow High-Fidelity

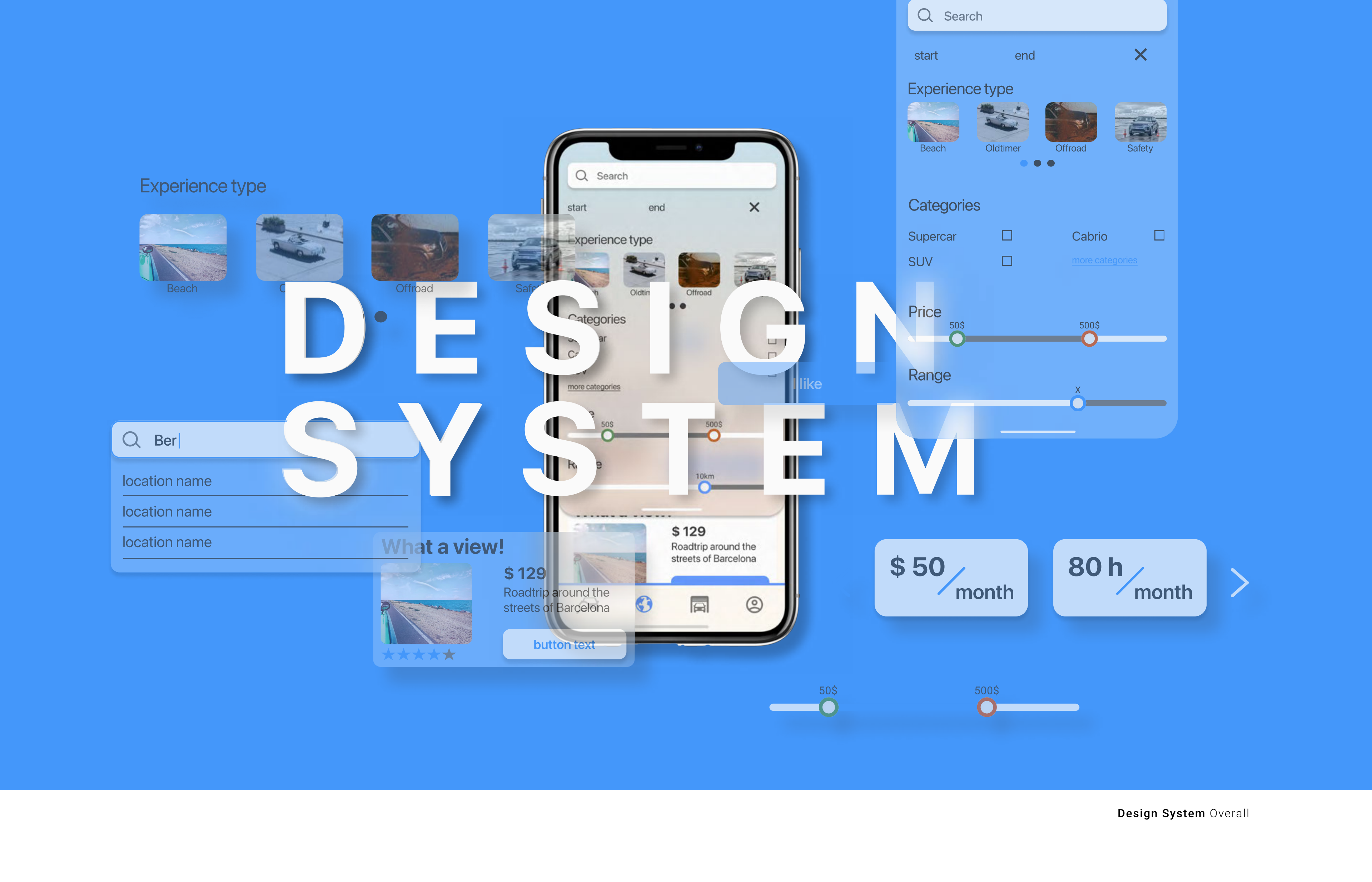


Userflow High-Fidelity

Both User Flows, describe the process of looking for a car and finally booking it. In direct comparison you can see, that we stucked to our previous Wireframe. The whole logic of the order process didn't change at all, but the design, did clearly. You already can see, that we didn't want the user to login/register at the very beginning, but rather later on in the booking process, when it is actually needed. With this decision we wanted to comfort the user using our app and not discourage him, right away.

## Design System

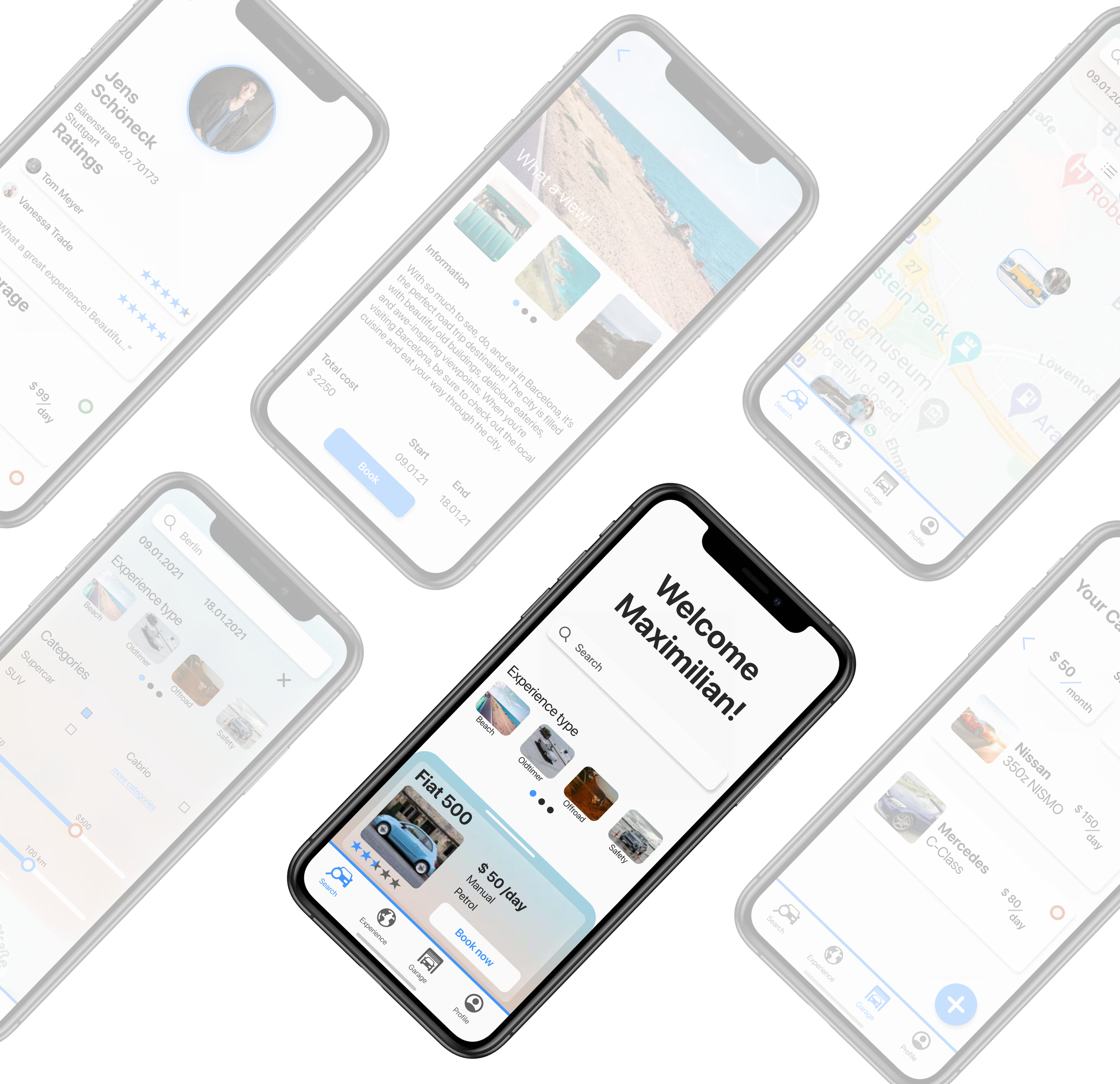
After applying all the important changes to our early Lo-Fi Wireframes, it was time to build a design system, before we could start with the High-fidelity Wireframe. The design system was very important, to build a consistent and easy adjustable Prototype. Of course a design system takes some time and effort to create but in retrospective, it was more than worth its developing time. Through the usage of it, we were able to build the Hi-Fi Wireframe in a modular way and every later on adjustment was just a few clicks away and the whole design globally changed. This really changed the way we were working, not only in this project, but in total.



Design System Overall

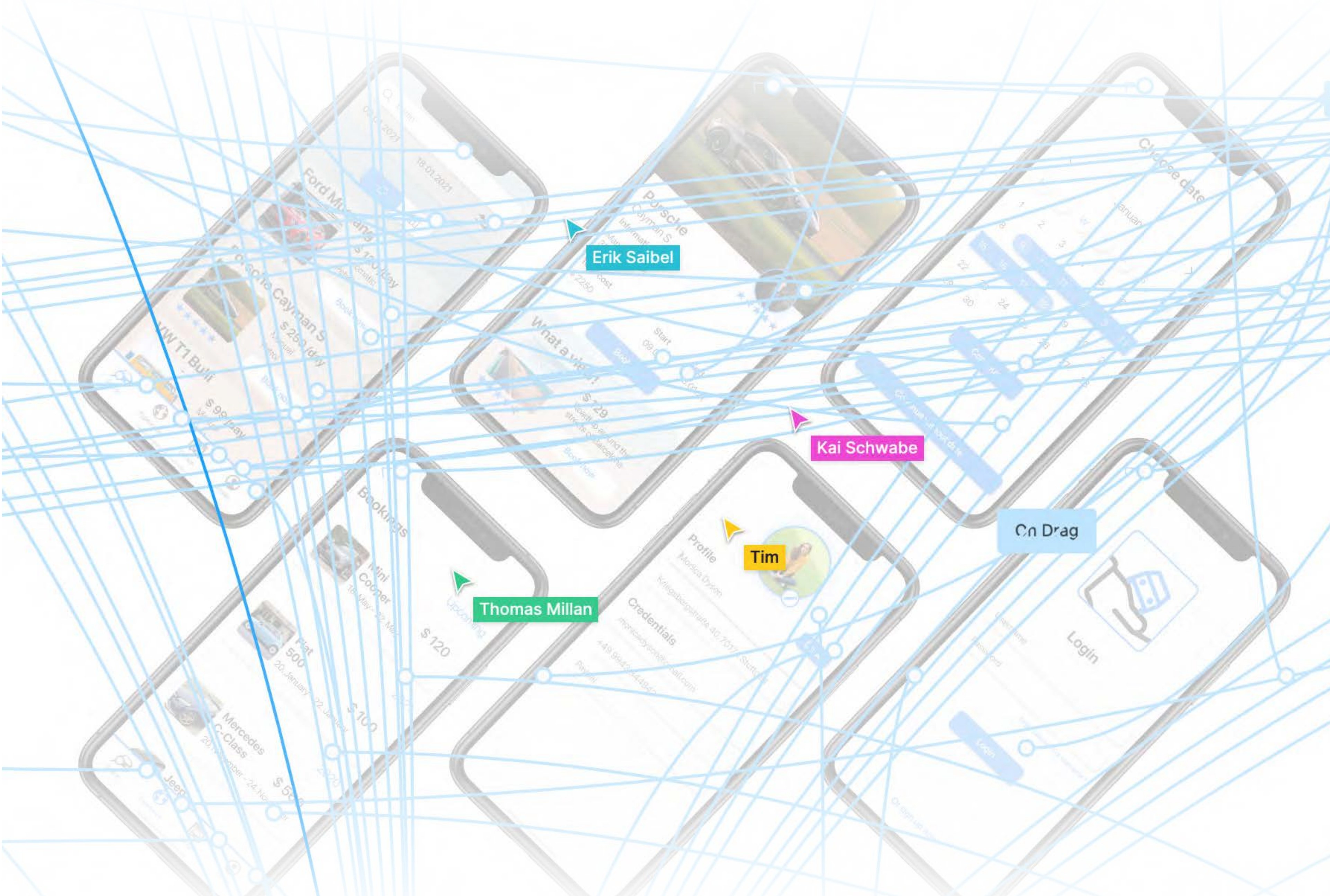
## High-Fidelity

With the final version of the design system, it now was time, to put it all together. In this phase of the project we were facing a few problems. The idea of a modular system in theory works perfect, but in reality, there always will be a missing headline, image or just another variant of a button. Occasionally we needed to adjust the design system, as well as some individual screens. Our design system made it possible to focus mainly on the layout because all design elements were already done. With our pre-defined layout grid, we made clear, that every screen has the same margin and gutters between the elements. With the consistent usage of our primary and secondary color, we wanted to establish a clean and harmonious look.



## Final Prototype

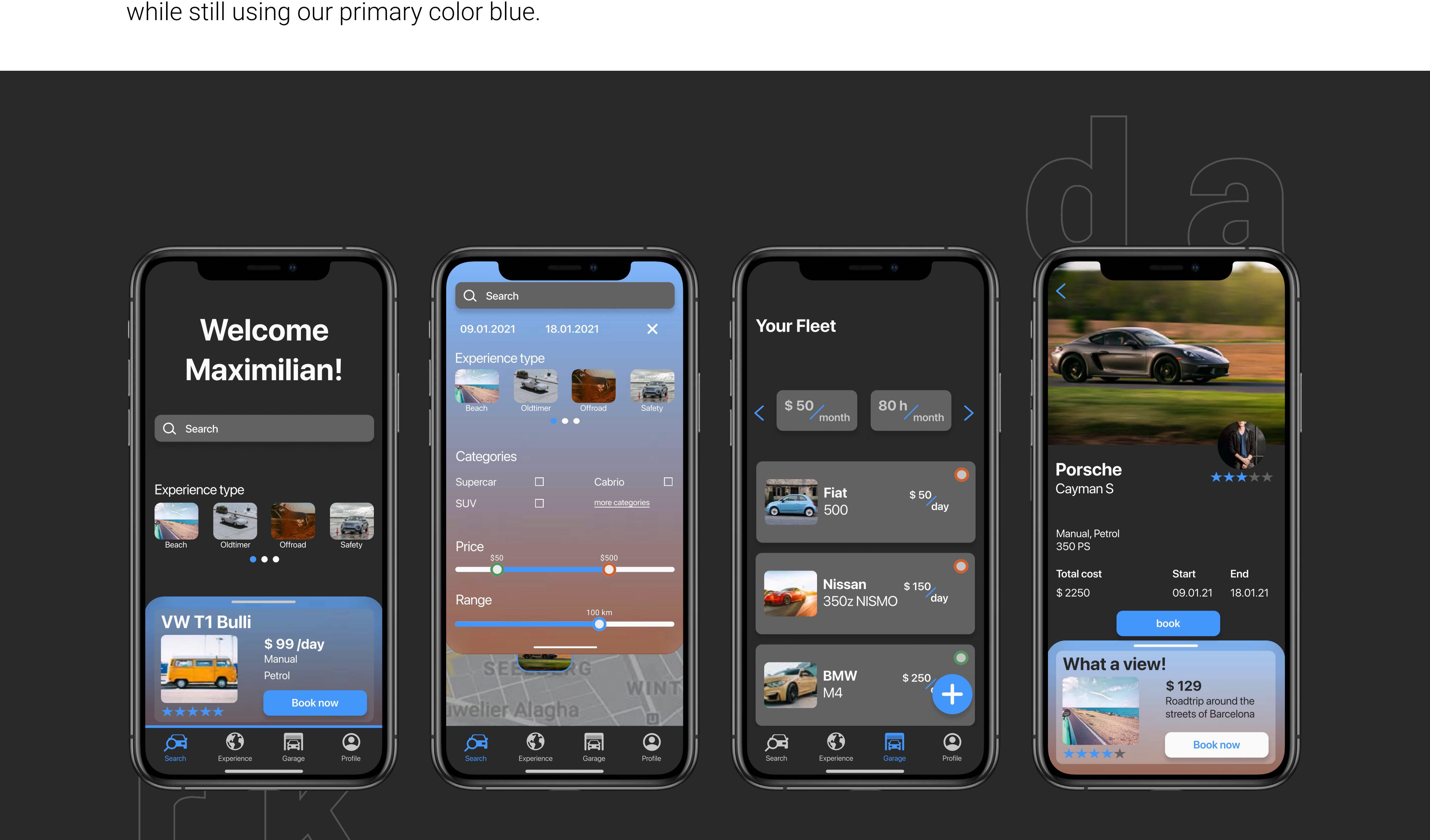
Building the prototype, was probably the most time consuming part, of the whole project. We already had round about 40 to 50 screens after the high-fidelity phase. Thanks to prototyping, we even had to add a lot more of them, to realize all the animations. We spent a lot of time choosing fitting animations and intuitive navigation patterns. E.g. by tapping the search bar it extends by the top 5 locations and the keyboard automatically moves in, from the bottom. All high-fidelity screens are fully connected, even the exemplary dark mode can be accessed, via the switch on the home screen. The switch is only for representative purpose, in a real app environment, the dark mode would adapt by the user settings.



Prototyping Process

## Dark Mode

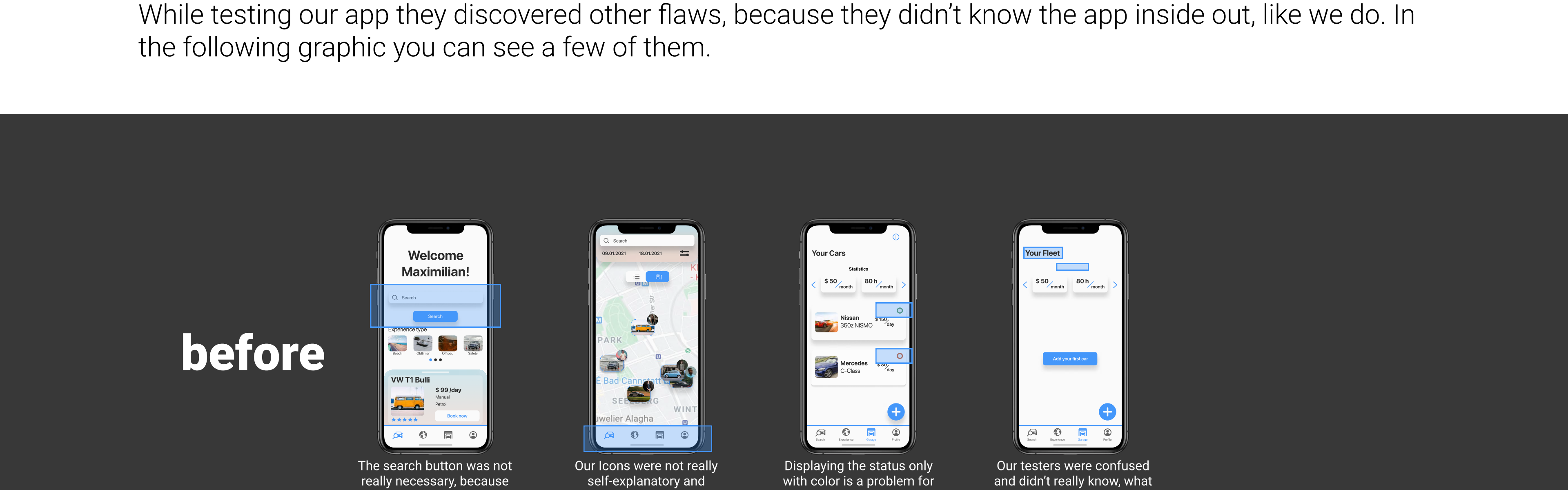
As dark mode became more a necessity instead of a possibility or choice of design, it wasn't debatable that we had to make a dark mode version of our app. Because we designed all the elements in our design system before, the dark mode was only a few color adjustments away. We simply had to create "dark" variants of our already existing components. Instead of just using negative colors, we managed to maintain a high contrast while still using our primary color blue.



Dark mode prototype

## Second Evaluation

It is extremely important to do evaluations from time, to time to prevent tunnel vision. Regular external insights were very helpful and important in our design process. It helped us to understand malfunctions and problems, the end user might have. The other group treated the prototype differently in comparison to us. While testing our app they discovered other flaws, because they didn't know the app inside out, like we do. In the following graphic you can see a few of them.

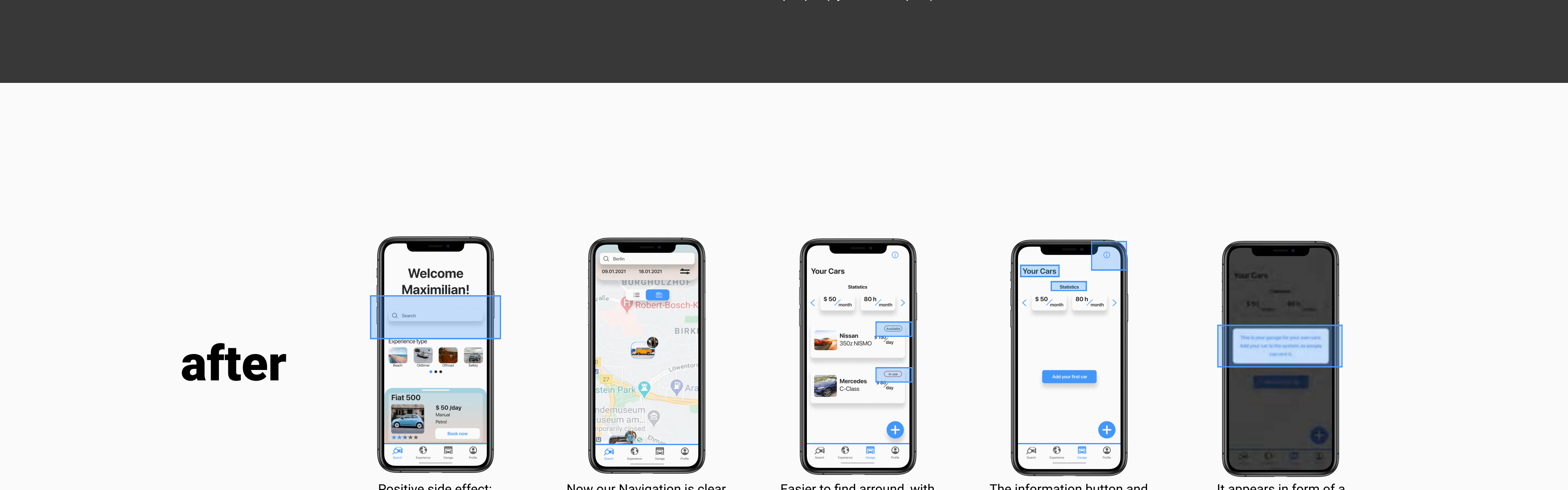


The search button was not really necessary, because it is already on the keyboard

Our icons were not really self-explanatory and needed some text

Displaying the status only with color is a problem for red-green color blind people (dyschromatopsia)

Our texters were confused and didn't really know, what this screen was for



Positive side effect: More space for the relevant stuff and less distraction

Now our Navigation is clear for everybody

Easier to find around, with more context now

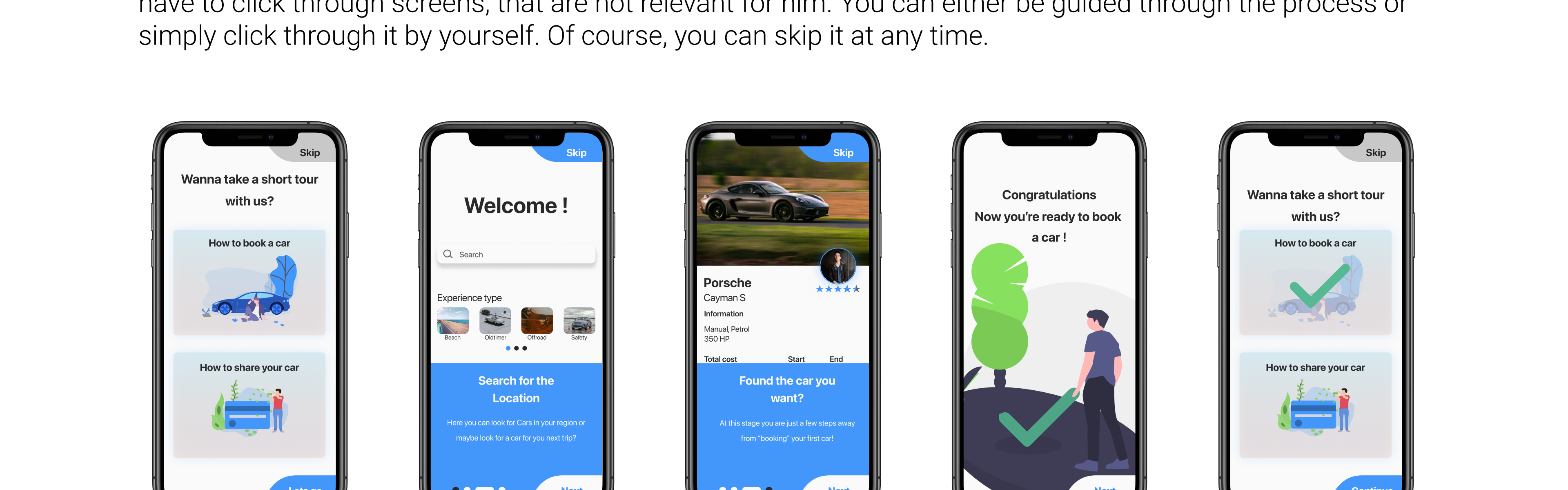
The information button and the Statistics Headline provides a quick explanation

It appears in form of a popup

High Fidelity Evaluation

## Onboarding

The Onboarding arose from the feedback. The user can choose between two scenarios, in the beginning. It's separated into the two main categories, "book a car" or "share your car". This was done, so the user doesn't have to click through screens, that are not relevant for him. You can either be guided through the process or simply click through it by yourself. Of course, you can skip it at any time.



## Reflection

Considering this was our very first big design project, we put in much effort and time to achieve this result. It was exciting to work in a new environment (Figma), Especially in times of COVID-19, it was very helpful to be able to work together on the project in real-time, with almost no delay. We learned a lot of new things throughout the complete process, such as the importance of working as a team and splitting up the different tasks. Another thing we learned was the benefit of using a design system.

In conclusion, we are very happy with the outcome of our work, even though we had a few setbacks like rethinking our basic idea due to the unique selling point. In the next project we should consider to put more time into the process of building our information architecture, to prevent navigation or logic casualties later on.

