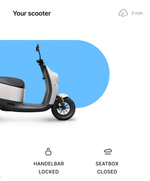
Scooter without keys

Providing a way for customers to turn a scooter on and off using nothing but their smartphones



Key customer pain

Based on our user research, customers don't find the key card very practical. It's easy to damage and lose, and pulling it off of their pockets and wallets slows them down. This project is an alternative to the key card.

Context

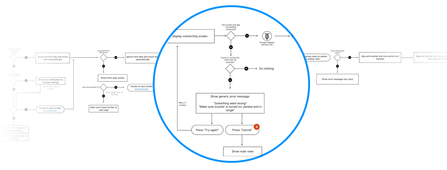
This use case was made for unu GmbH during Q1 2022, that produces electric scooters, designed and engineered in Germany. This scooter is connected to the cloud and supported by an app that offers access to smart features. For this project, I worked closely with a Product Manager and an external app development agency.

Check prototype

Try here

Process

Once I took over from the Design Lead assigned to the project, I started by mapping out the underlying flow on top of which this capability would lie: the existing Bluetooth pairing flow between the scooter and the customer's device. The goal was to leverage my awareness about the opportunity space, uncover unknowns and ambiguity, and to frame the insights from the user research mentioned before.



Challenges

One of the biggest challenges was to understand the Bluetooth technology and all the different states the devices can have.

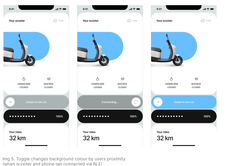
Another challenge was to ensure that the new feature design worked efficiently, without being disruptive for the existing customers.

Decisions

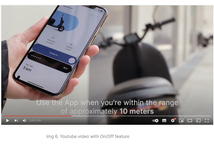
I'm a designer that is able to adapt design solutions to tech limitations but in this specific usecase I wanted to show the devices connectivity despite tech limitations. I believed this would improve the experience and enable the user to always know if the scooter is or not connected and able to turn scooter On/Off (img. 5).

We decided to use a toggle as a design element because we wanted to make sure the user turns the scooter on/off with an obvious and intentional gesture. We couldn't allow the user to turn it on/off by accident with a simple touch. The toggle is also a known pattern in the mobility market, for example for sharing vehicles.

To support this decision usability testes were also conducted internally and externally with customers.



Img 5. Toggle changes background colour by users proximity (when scooter and phone get connected via BLE)



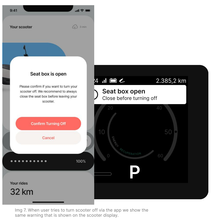
Img 6. Youtube video with On/Off feature

Marketing video

I also made a video to showcase the new feature for the entire team that later was used for marketing purpose. You can see it here.

Learnings

We are continuously improving the experience by adding some error modals based on cases that have been recently found or reported.



Img 7. When user tries to turn scooter off via the app we show the same warning that is shown on the scooter display

Conclusions and impact

At the end, the team and myself were happy with the final solution that was developed. I was able to design a complex behaviour hidden behind a minimal UI.

This feature was launched in April 2022 and well received by our customers. We got a lot of positive feedback and verify that 80% of the customers are using the on/off feature in the app. A later research in 2023 shows that this is the most used feature in the App.

Thank you,

Fabienne Pimenta
hello@fabi.pt
fabi.pt