CUX PRO

Change your daily routin with Smart Heating App

Check ECO Control
Start
Welcome to ECO Control!
Your new heating control app

Real Client - CUX pro · 12 weeks · Smart Product · 2 Designers · Mobile APP

About the Project

CUXpro's mission is to create a new heating control application for its customers that meets user needs and provides them with value.

Problem Statement

Many homeowners **struggle** with maintaining a comfortable temperature in their homes while also **trying to reduce energy consumption and cost**. Traditional thermostats can be difficult to program, resulting in wasted energy and discomfort. Additionally, many people lead busy lives and **may forget to adjust their thermostat before leaving the house or going to bed.**

Project Overview

Project Length	My Role	Context	Stakeholders
12 weeks (October - December 2022)	UX Researcher UX Design UI Design	Internship program: my teacher, Christiane Moser from Talent Garden	CUXpro

Platform	Tools	Outcome
Mobile app		Clickable interactive prototype with over 20 screens

Our Journey Together

Sprint 1

- Research
- Competitor Analysis
- Interviews
- Extending Personas
- HMW & Jobs To Be Done

Sprint 2

- User Story Map
- User Flow
- Our Design Principels
- Sketching
- Testing Paper Protoype
- Redisigning Prototype

Sprint 3

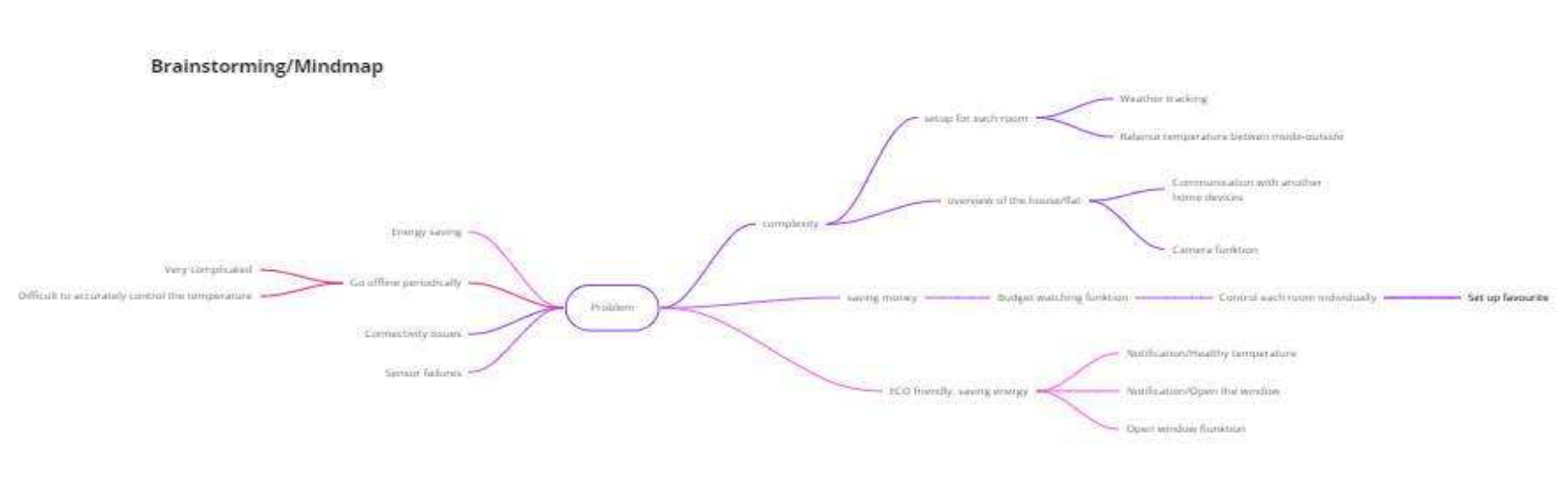
- Hi-Fi Prototype
- Usability Test
- Final Revision (User Test key Findings analysis implement the changes)

What I did.......

- Based on the results of the interviews in German and English, we prepared a survey in order to reach as many respondents as possible
- During my studies in journalism, I acquired the knowledge necessary to conduct quality interviews, which I implemented in this project
- Based on the main features I discovered, I created the clickable prototype
- Highlight: I found 4 people with smart heating products to interview (still hard to find people with smart apps)

Mindmap/Brainstorming

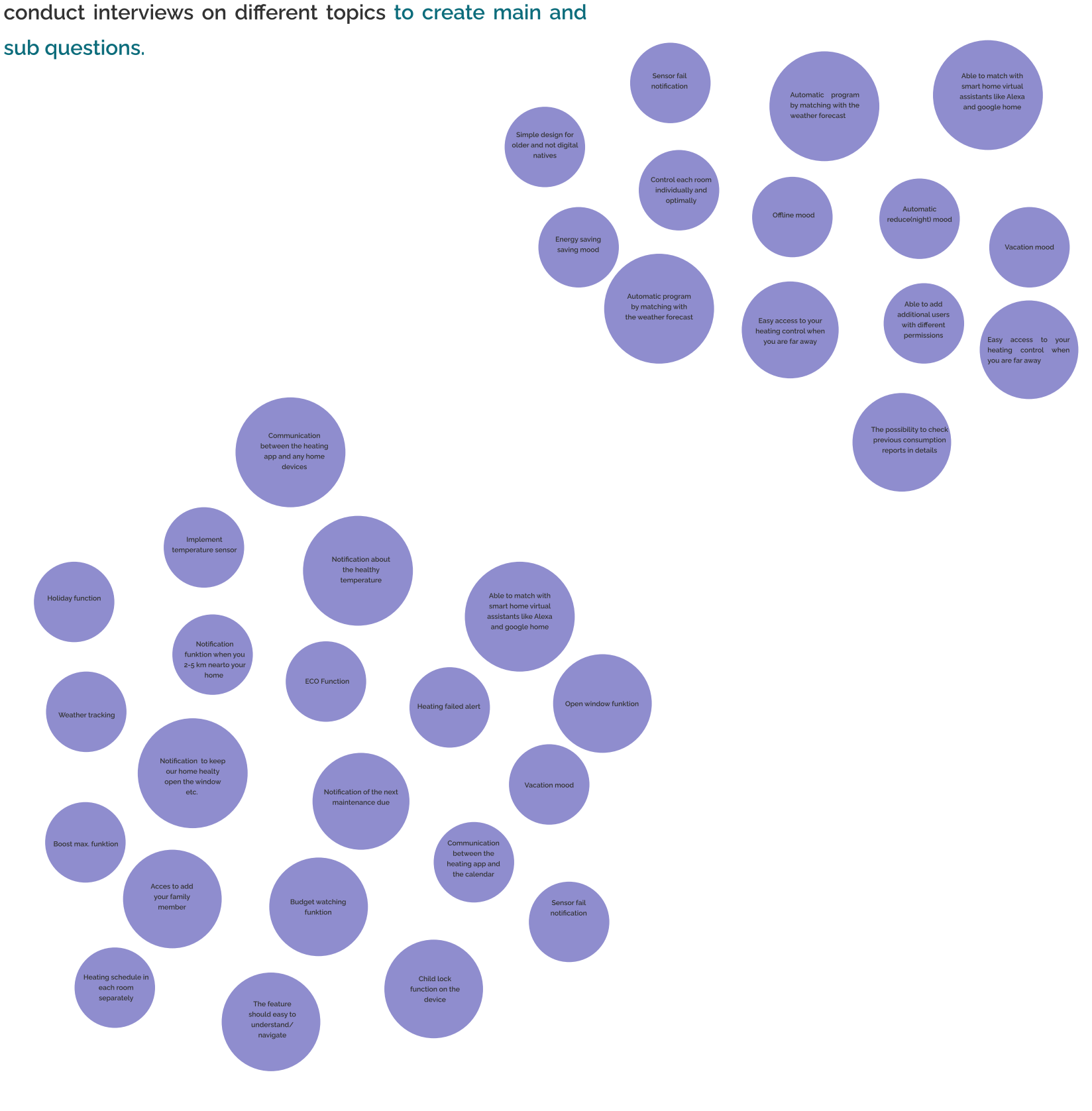
Before we started the empathy phase, we created a mind map to collect all the thoughts related to our topic. Creating the mind map allowed us to link and show relationships between the products and the actions our users would want to take.


Brainstorming/Mindmap
Problem
Energy saving
Go offline periodically
Very complicated
Difficult to accurately control the temperature
Connectivity issues
Sensor failures
complexity
setup for each room
Weather tracking
Balance temperature between inside-outside
overview of the household
Communication with another home devices
Camera function
saving money
Budget watching function
Control each room individually
Set up favourite
ECO friendly, saving energy
Notification/Healthy temperature
Notification/Open the window
Open window function

The advantage of mind mapping is that I can learn new things and develop actionable plans. In our case, energy saving and complexity, which we can think about more.

Shower Thoughts / Idea Wall

We drew ideas from the shower thoughts to be able to conduct interviews on different topics to create main and sub questions.


Sensor fail notification
Automatic program by matching with the weather forecast
Able to match with smart home virtual assistants like Alexa and google home
Simple design for older and not digital natives
Control each room individually and optimally
Offline mood
Automatic reduce(night) mood
Vacation mood
Energy saving saving mood
Easy access to your heating control when you are far away
Able to add additional users with different permissions
The possibility to check previous consumption reports in details
Communication between the heating app and any home devices
Implement temperature sensor
Notification about the healthy temperature
Holiday function
Notification funktion when you 2-5 km nearby your home
ECO Function
Heating failed alert
Open window function
Weather tracking
Notification to keep our home healty open the window etc.
Notification of the next maintenance due
Boost max. funktion
Access to add your family member
Budget watching funktion
Communication between the heating app and the calendar
Sensor fail notification
Heating schedule in each room separately
The feature should easy to understand/ navigate
Child lock function on the device

Interview Questions

To create the interview questions, we decided not only to focus on who has an app, but also on those who don't have an app, to find out what their relationship or previous experience with the smart heating product is. What would they need in this case and what are the obstacles to using the product.

Difficulty: Even in 2022, smart heating control is still rare in homes, and it wasn't easy to find someone using the app. Of these 9 participants, 4 had a smart heating product.

1	9	17	11
Week	Participant	Questions	11 Key Findigs

Affinity Map

9 Interviews
11 Key Findings
Saving Energy
Cloud based
Long duration
Easy to set
Vacation mode

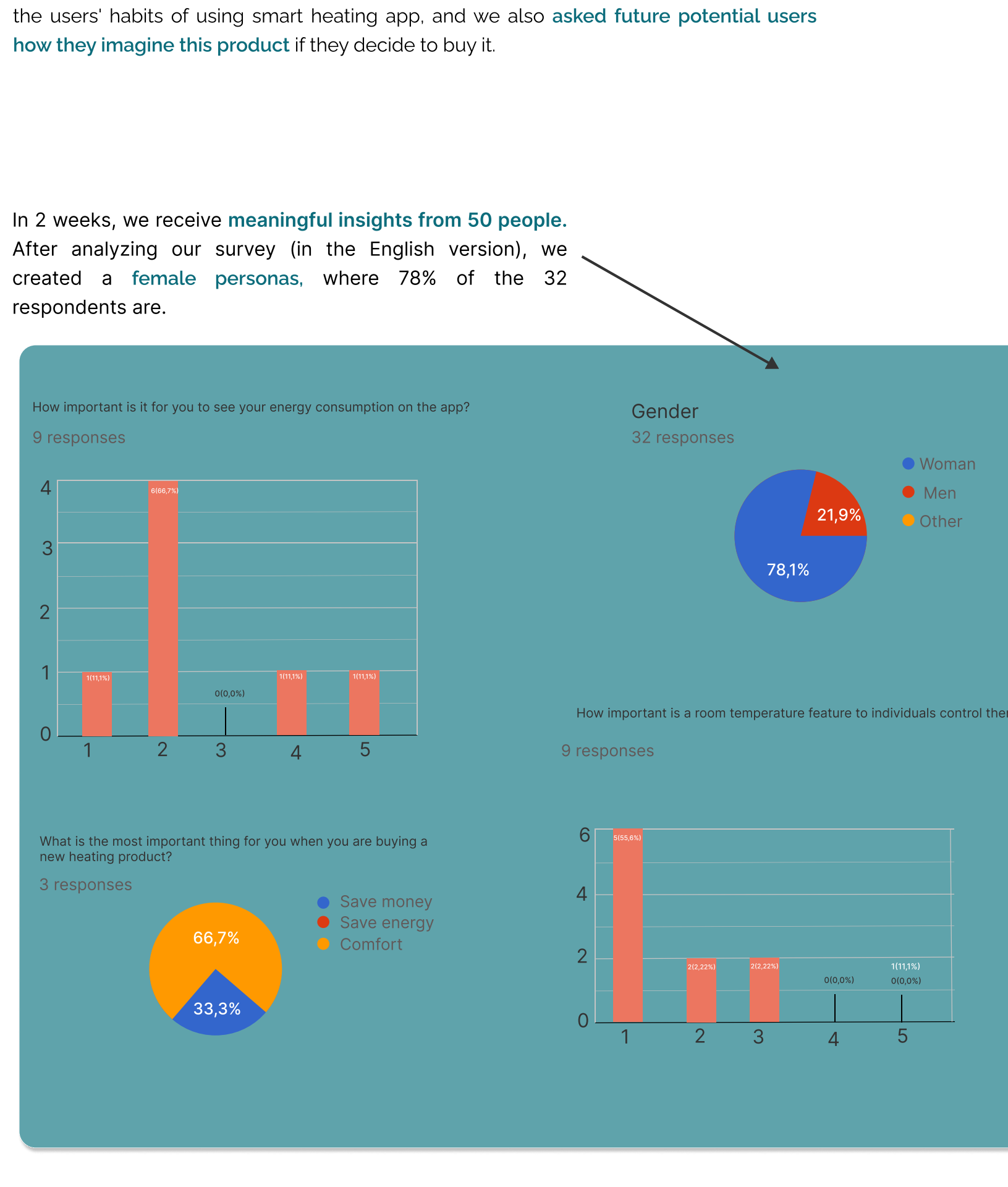
Key Insights

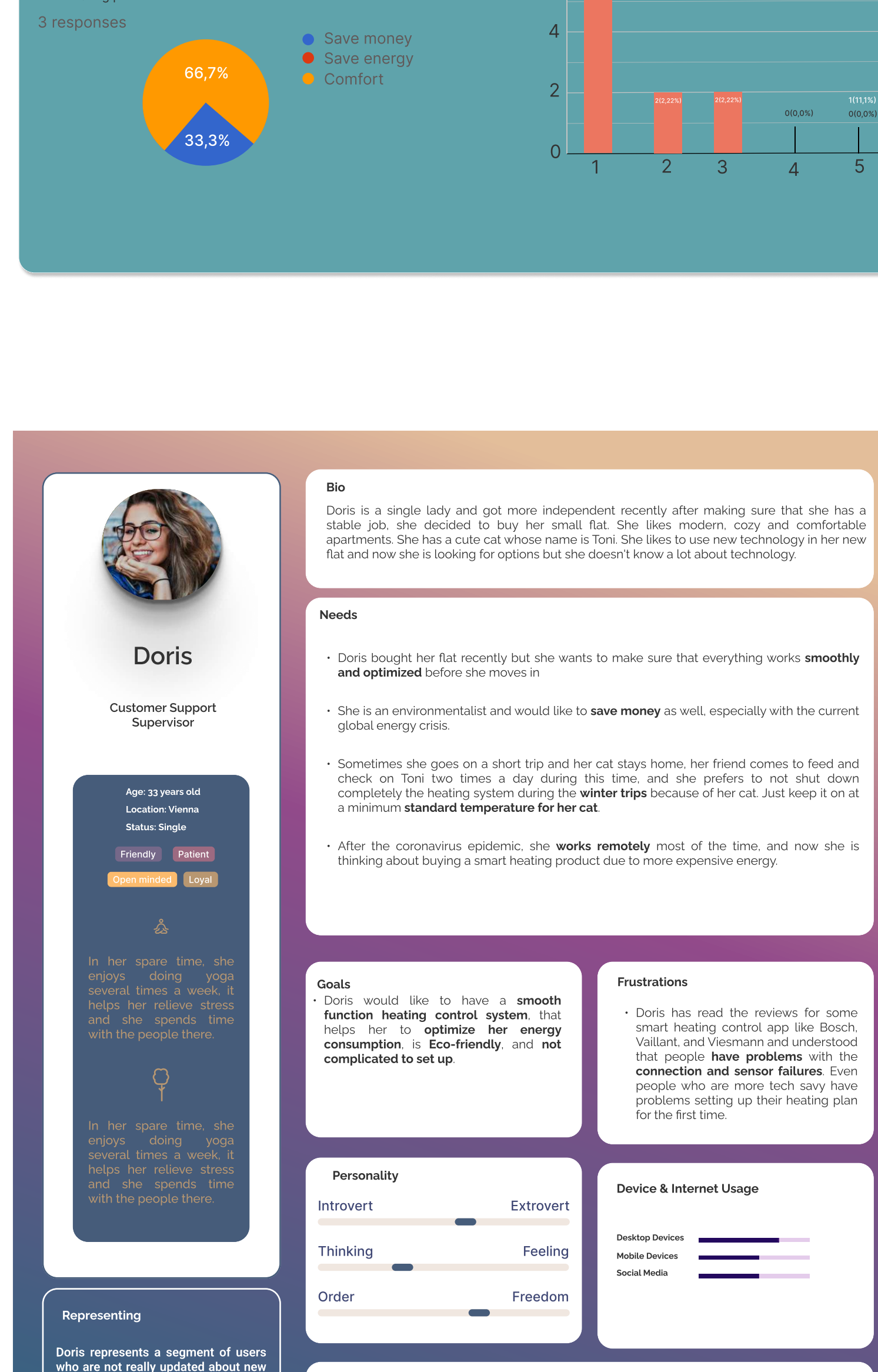
- One of the key features of the app should be the ability to set schedules and adjust the temperature based on the user's daily routine. To make this process as easy as possible,
- Another important finding is the ability to monitor energy usage and provide users with real-time information about their home's temperature.
- To ensure that the app is accessible to as many users as possible, I followed best practices for accessibility and designed the app to be compatible with a wide range of devices.

Survey

Based on the interviews, we created a survey to get as much feedback as possible about the users' habits of using smart heating app, and we also asked future potential users how they imagine this product if they decide to buy it.

In 2 weeks, we receive meaningful insights from 50 people. After analyzing our survey (in the English version), we created a female personas, where 78% of the 32 respondents are.





Doris

Customer Support Supervisor

Age: 33 years old
Location: Vienna
Status: Single

Friendly · Patient · Open minded · Loyal

In her spare time, she enjoys doing yoga several times a week, it helps her relieve stress and she spends time with the people there.

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Representing

Doris represents a segment of users who are not really updated about new technologies, but they are open to using technologies that help our ecosystem. On the other hand, because she is not a tech person she tries to avoid complicated digital products.

Bio

Doris is a single lady and got more independent recently after making sure that she has a stable job, she decided to buy her small flat. She likes modern, cozy and comfortable apartments. She has a cute cat whose name is Toni. She likes to use new technology in her new flat and now she is looking for options but she doesn't know a lot about technology.

Needs

- Doris bought her flat recently but she wants to make sure that everything works **smoothly and optimized** before she moves in
- She is an environmentalist and would like to **save money** as well, especially with the current global energy crisis.
- Sometimes she goes on a short trip and her cat stays home, her friend comes to feed and check on Toni two times a day during this time, and she prefers to not shut down completely the heating system during the **winter trips** because of her cat. Just keep it on at a minimum **standard temperature for her cat**.
- After the coronavirus epidemic, she **works remotely** most of the time, and now she is thinking about buying a smart heating product due to more expensive energy.

Goals

- Doris would like to have a **smooth function heating control system**, that helps her to **optimize her energy consumption**, is **Eco-friendly**, and **not complicated to set up**.

Frustrations

- Doris has read the reviews for some smart heating control app like Bosch, Vaillant, and Viesmann and understood that people **have problems** with the **connection and sensor failures**. Even people who are more tech savy have problems setting up their heating plan for the first time.

Personality

Introvert — Extrovert
Thinking — Feeling
Order — Freedom

Device & Internet Usage

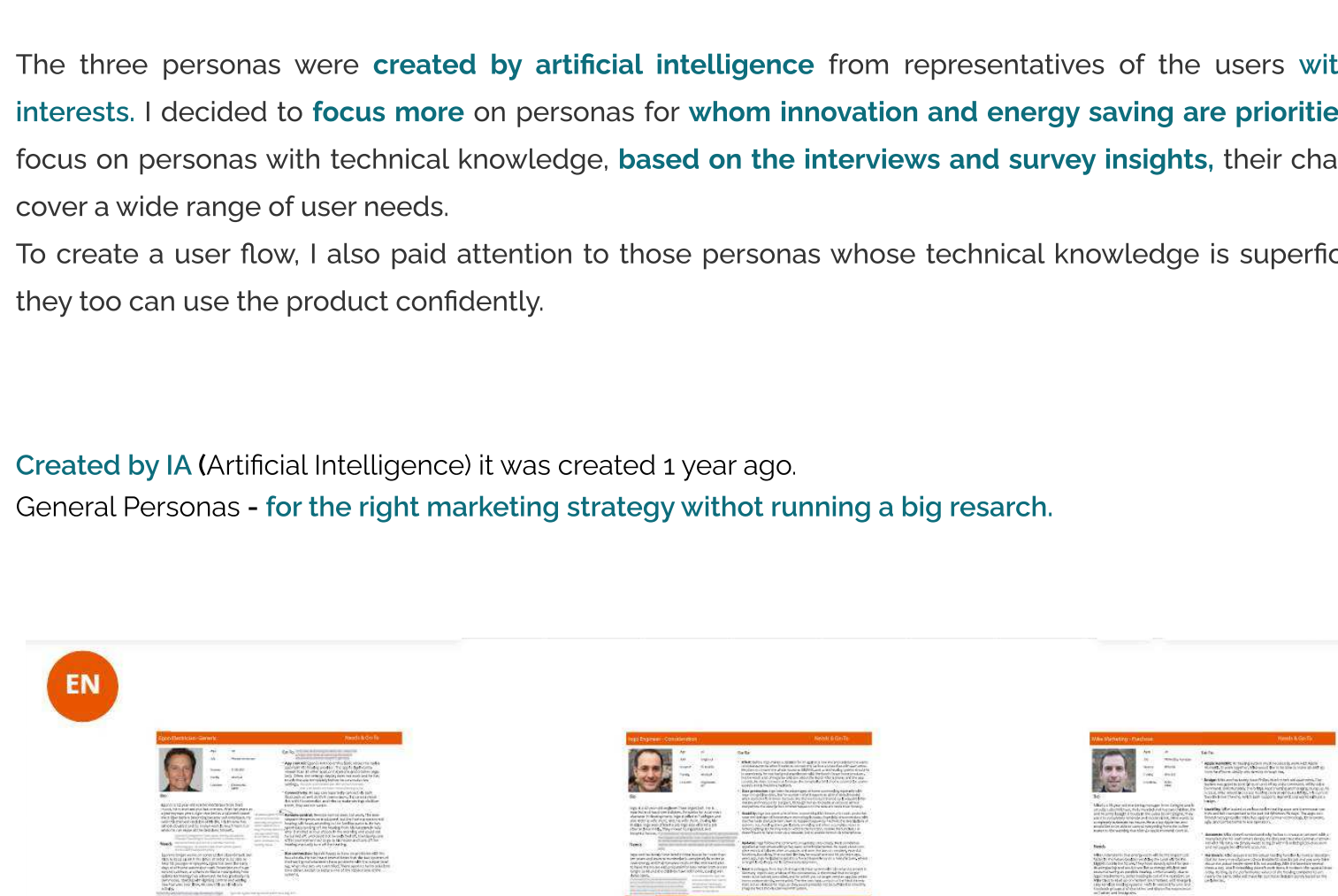
Desktop Devices
Mobile Devices
Social Media

- **Simple set-up:** Because Doris is not that updated about new digital products, she wants a heating control app that is not complicated to set up, and she can set or change her heating plan and schedule by herself without any problems.
- **Environmentally-Friendlly:** Doris is enviromentalist. She believes that people need to save more energy. It is her first priority always when she wants to buy a product that is environmentally friendly or not. And for the heating control app, she wants a product maybe suggest some preset plans according to her flat data and heating habits to save more energy. Or even the possibility to see her energy consumption on the app.
- **Adoptability with outside temperature:** Doris thinks it would be good if the heating system can be adaptable to the upcoming weather cast and reduce the temperature in warmer days automatically.
- **Usability:** Before buying a heating product, she talked to her cousin who maintains radiators and looked around the Internet to read as many reviews as possible about which product would be best for her.
- **Customer Support:** Before she make a decision, she want to make sure that what she is buying is easy to set up from the start, and she can get support from customer support if you get stuck.
- **Accessibility:** Hopefully it won't take long to experience the app's features, so for a short while I'll just be using room scheduling to get the desired home temperature.

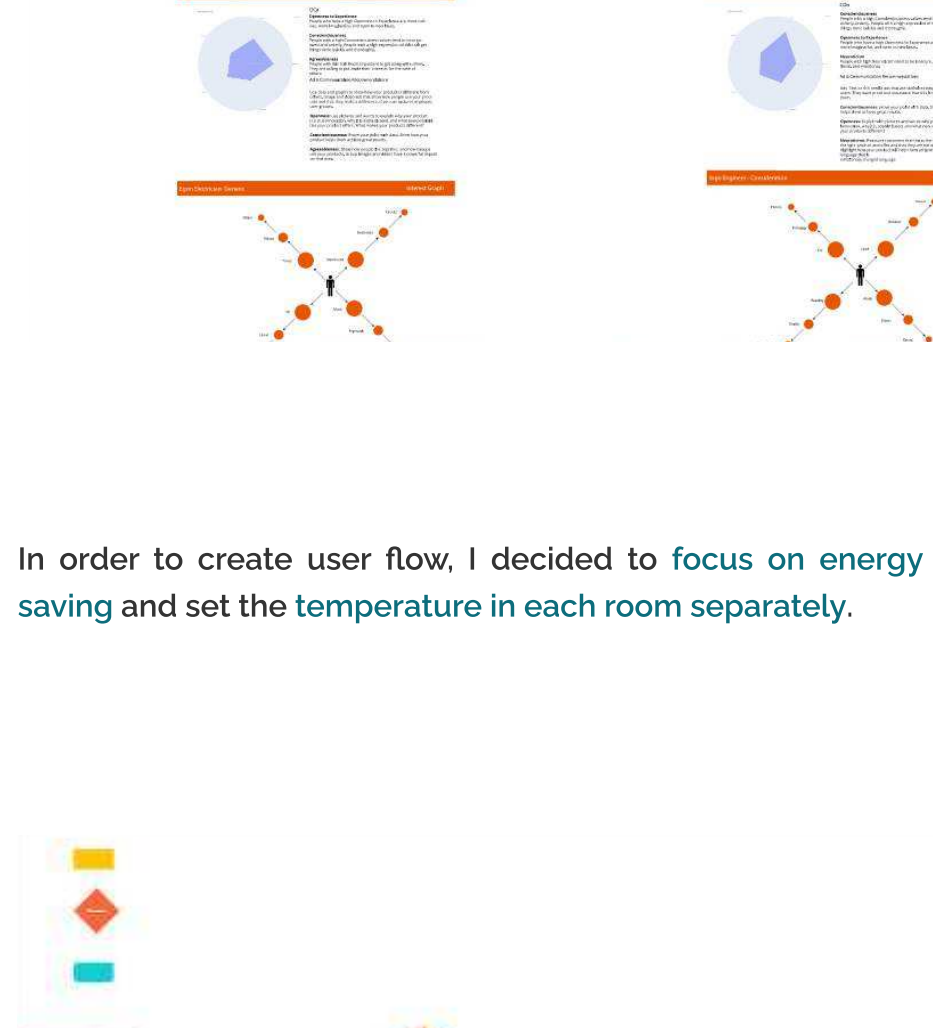
User Personas & User Flows

The three personas were created by artificial intelligence from representatives of the users with different interests. I decided to focus more on personas for whom innovation and energy saving are priorities. My main focus on personas with technical knowledge, based on the interviews and survey insights, their character best cover a wide range of user needs.
To create a user flow, I also paid attention to those personas whose technical knowledge is superficial, so that they too can use the product confidently.

Created by IA (Artificial Intelligence) it was created 1 year ago.
General Personas - for the right marketing strategy withot running a big resarch.



In order to create user flow, I decided to focus on energy saving and set the temperature in each room separately.



The App should...

The app should be user-friendly and easy to navigate, with clear instructions and an intuitive interface. Users should be able to easily set up and customize their heating schedules, view current and upcoming temperature settings, and make adjustments as needed.

Users perspektive

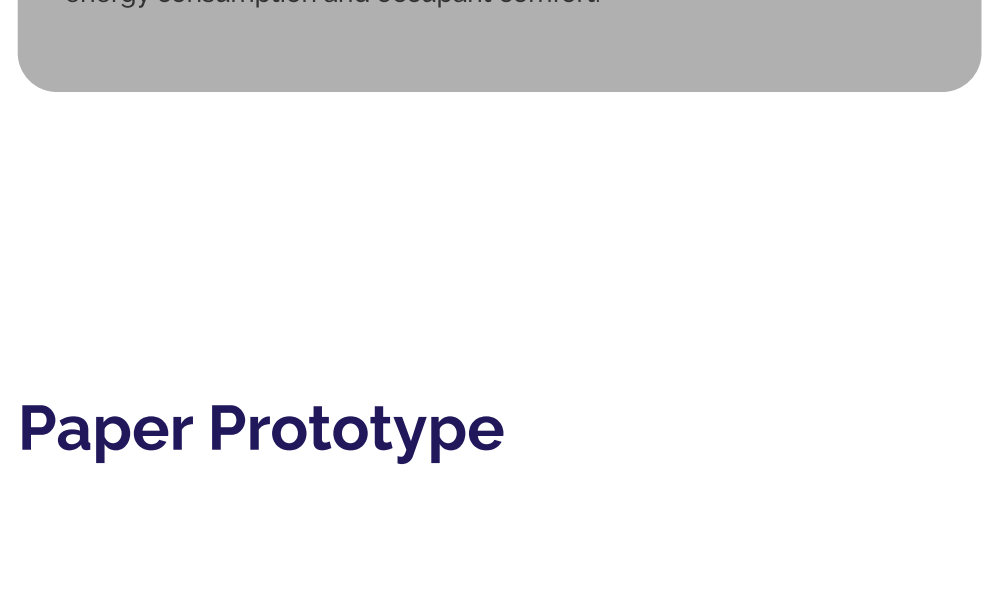
The app should promote energy efficiency and sustainability by enabling users to optimize their heating schedules and reduce energy waste. The app may also provide educational resources or tips to help users reduce their carbon footprint and make environmentally conscious choices.

Environmental perspektive

The app should offer features such as remote control, scheduling capabilities, and data analytics that allow them to monitor product performance and identify areas for improvement. Additionally, the app should help them meet regulatory requirements and sustainability standards by providing us with accurate and reliable data on product energy consumption and occupant comfort.

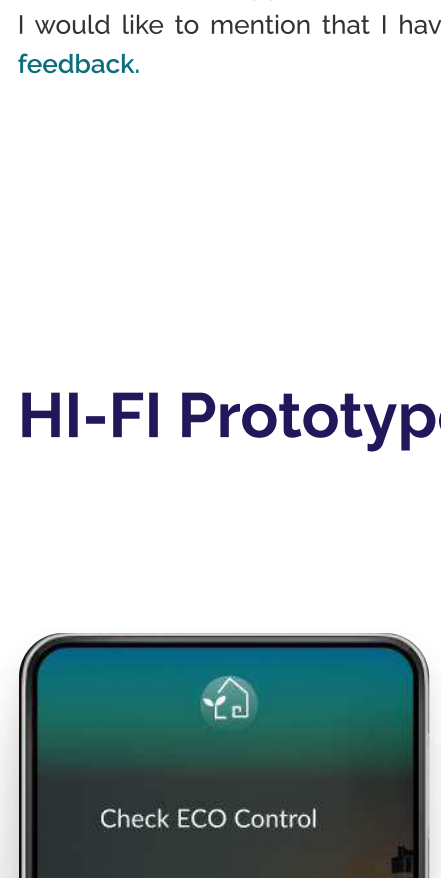
For Manufactures

Paper Prototype



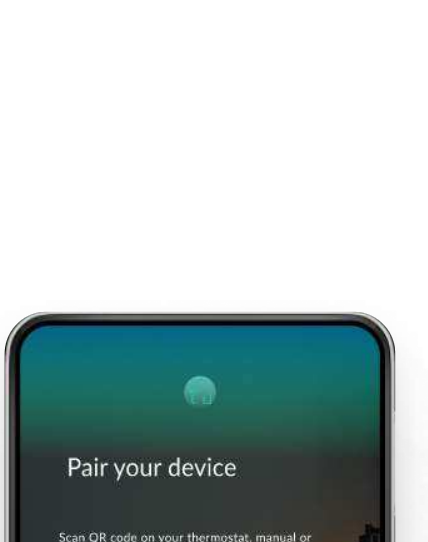
The paper prototype helped to visualize the collected information, during the test phase I realized that I need to pay more attention to the setup function than users can easily connect to their thermostat to the app.
I would like to mention that I have created a profile but I didn't inplemented based on the users feedback.

HI-FI Prototype


Check ECO Control
Start

Set up page

Reminding users of the connection between the thermostat and wifi

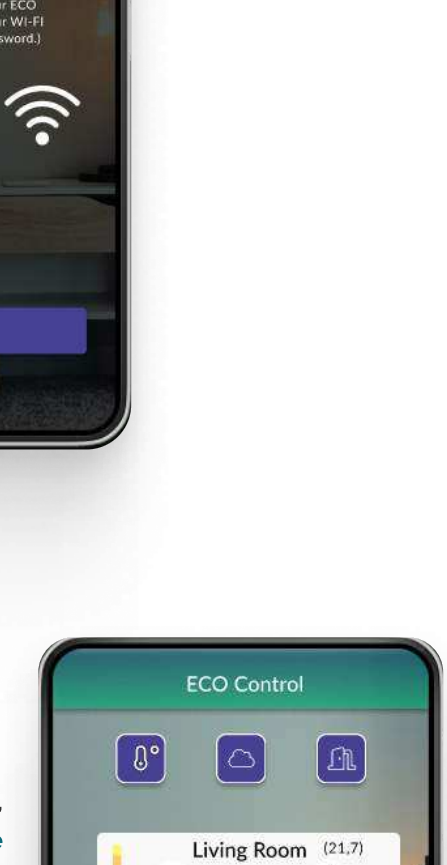

Pair your device
Serial number
Access code
Start

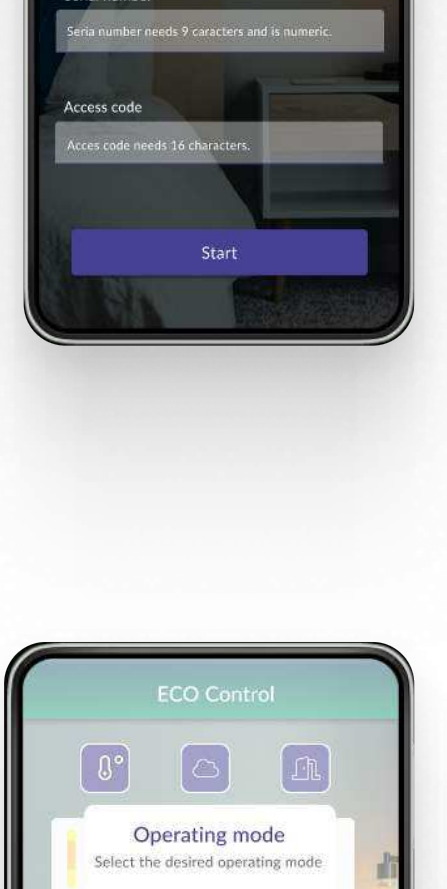
Set up page

Give the possibility to register with a QR code or manually

Home page

From the home screen, users can easily change the temperature without going to the side of the room


ECO Control
Living Room
+22 ° C
Bed Room
+19 ° C
Childen Roo
+22 ° C
ADD ROOM
Home
Overview
More

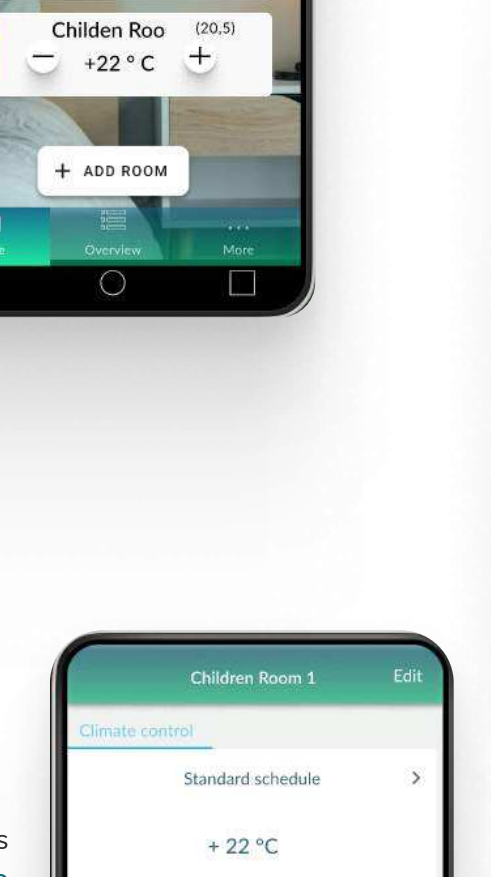

ECO Control
Operating mode
ECO
Automatic
Holiday
The automatic mode is activated
OK

Quick action funktion

You can quickly change the desired function from the home screen

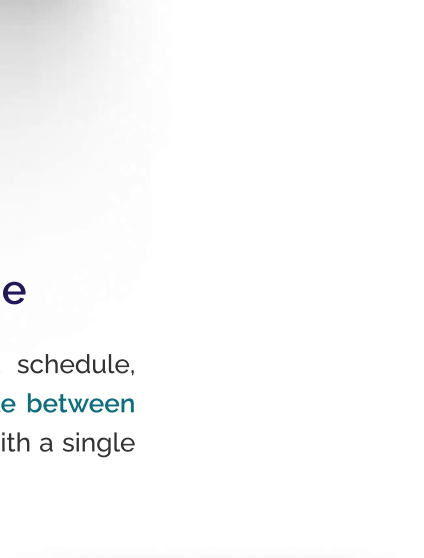
Room Page

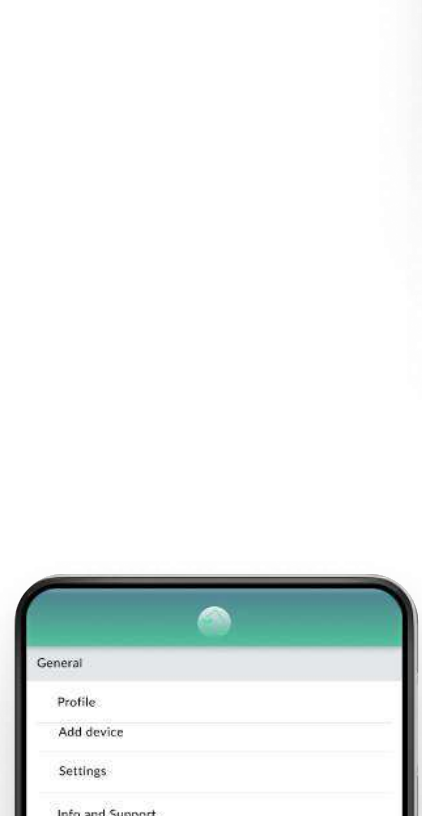
From this screen, users can also adjust the home temperature and increase the room temperature with a single click


Children Room 1
Edit
Climate control
Standard schedule
+ 22 °C
BOOST
Devices

Room Page

In the standard schedule, you can navigate between special needs with a single click


Children Room 1
Edit
Climate control
Standard schedule
ECO schedule
Manually
Party mode
Cancel
BOOST
Devices

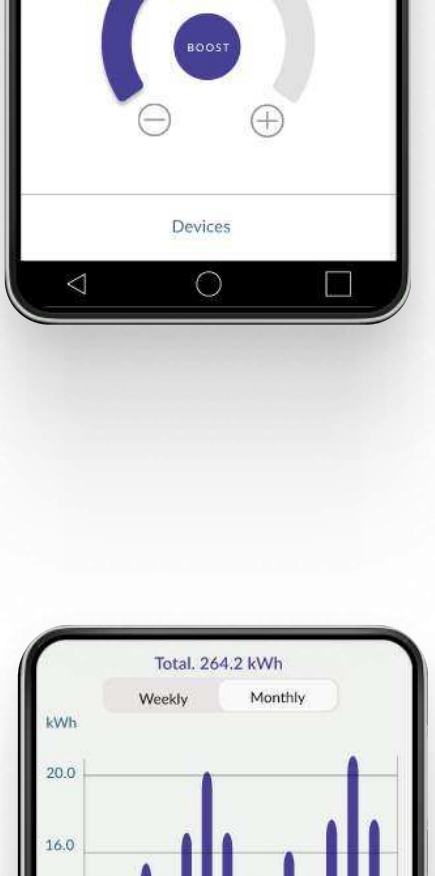

General
Profile
Add device
Settings
Info and Support
Climate Control
Add device
Settings
Info and Support
Home
Overview
More

More page

Users can change details such as profile settings, support, and set different temperatures in rooms every day if needed.

Energy consumption page

They can check their energy consumption weekly or monthly and view the previous period as well


Total. 264.2 kWh
Weekly
Monthly
kWh
20.0
16.0
12.0
8.0
4.0
0.0
5
10
15
20
25
30
December/2022

Main Takeway

- I am glad that I had the opportunity to create a smart heating application in the ui/ux perspective with my teacher, who has a senior experience in this field and helped me focus on the small details, such as creating a sub, and on the main questions. Intreviews to not make assumptions, not to be biased, and how to make my user interface more user friendly.
- During the survey, I realized how important it is to ask the right questions in order to collect all the information that I can implement during my planning.
- As I mentioned in my previous study case, it is very important to get feedback at an early stage to avoid wasting time and energy and to provide easily understandable functionality.

Next Steps

- Conduct user testing: Gather feedback from users on my app's usability, functionality, and overall user experience. This could help me identify any areas for improvement before launching the app.
- Refine the design: Use the feedback from user testing to make any necessary tweaks to the app's design. This could involve adjusting the layout, color scheme, or typography to improve the app's visual appeal and ease of use.