

## Abstract

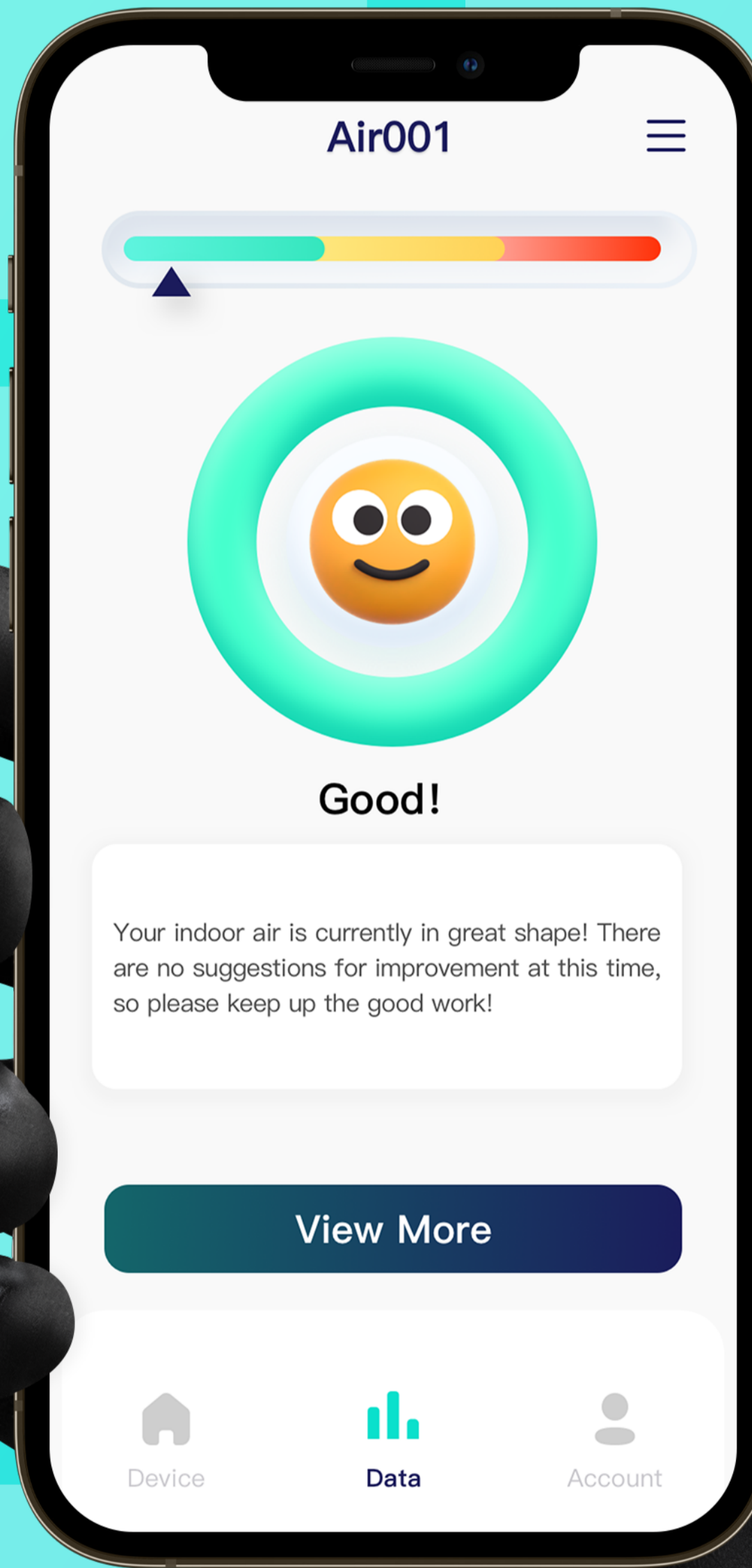
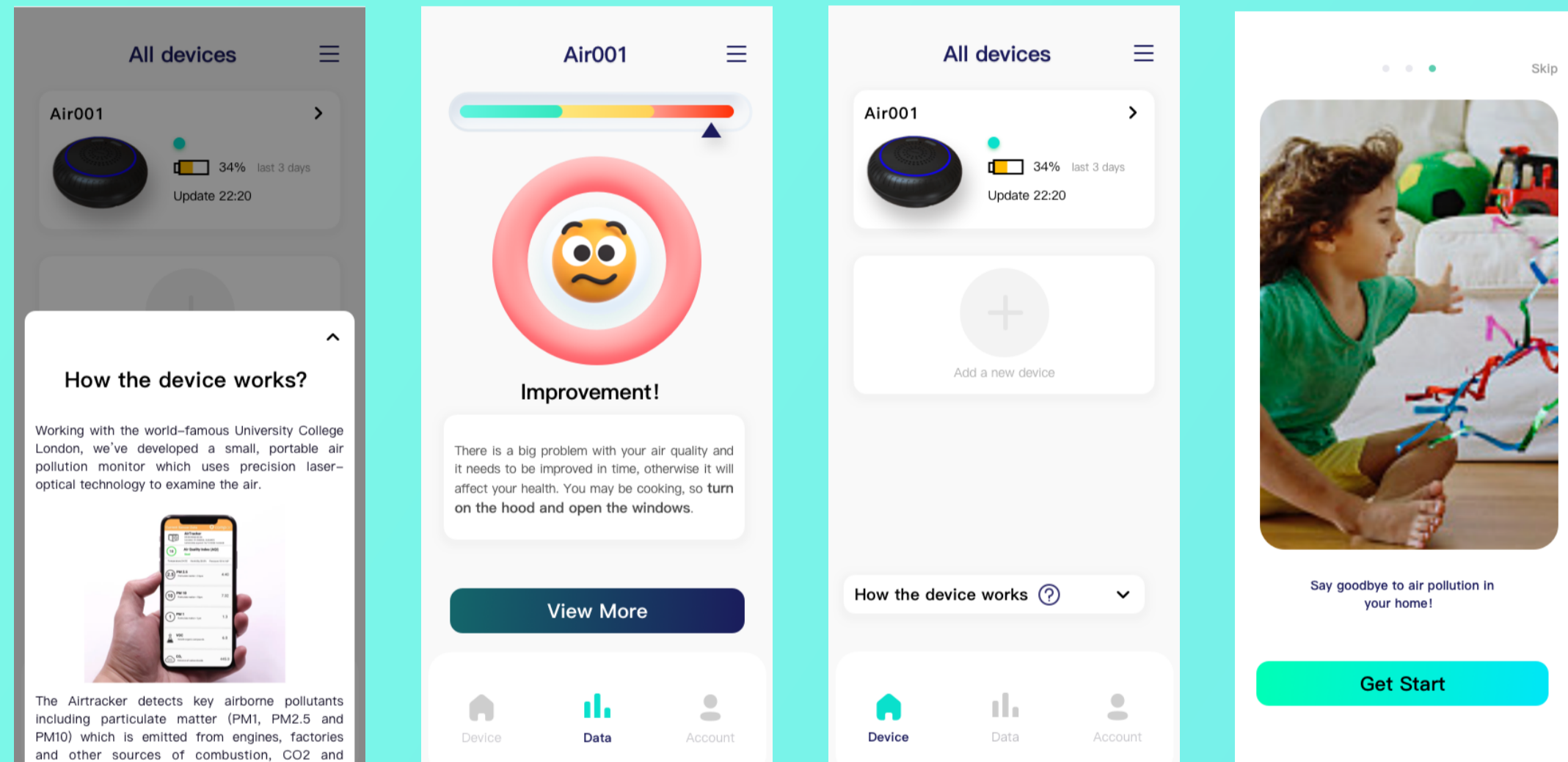
The aim of this project is to help residents of social housing to better understand air quality data. A human-centred design concept was adopted and the study was carried out following a two-diamond design model. The result is an effective way to help residents understand the data through expressions, colours and graphs.

## Introduction&Background

The project is a field project between the school and Compair. Compair has developed a portable air monitor that monitors a wide range of substances in the home in real time, including PM1, PM2.5, PM10, NOX, CO, CO2, VOCs, Temperature, Humidity. They are currently working with a client **who lives in social housing** and wants to help residents **breathe healthier air**.

But air quality data is **complex and varied**, making it difficult for users to understand the data and make further improvements. My project is to help residents to **better understand the air quality data** and to develop habits.

## Diagram/Design



## Study Method

- 1 Literature Review
- 2 Questionnaire
- 2 Interview
- 2 Competitor Analysis
- 2 Persona

- Who is users
- The needs of the user
- The painpoint of the user

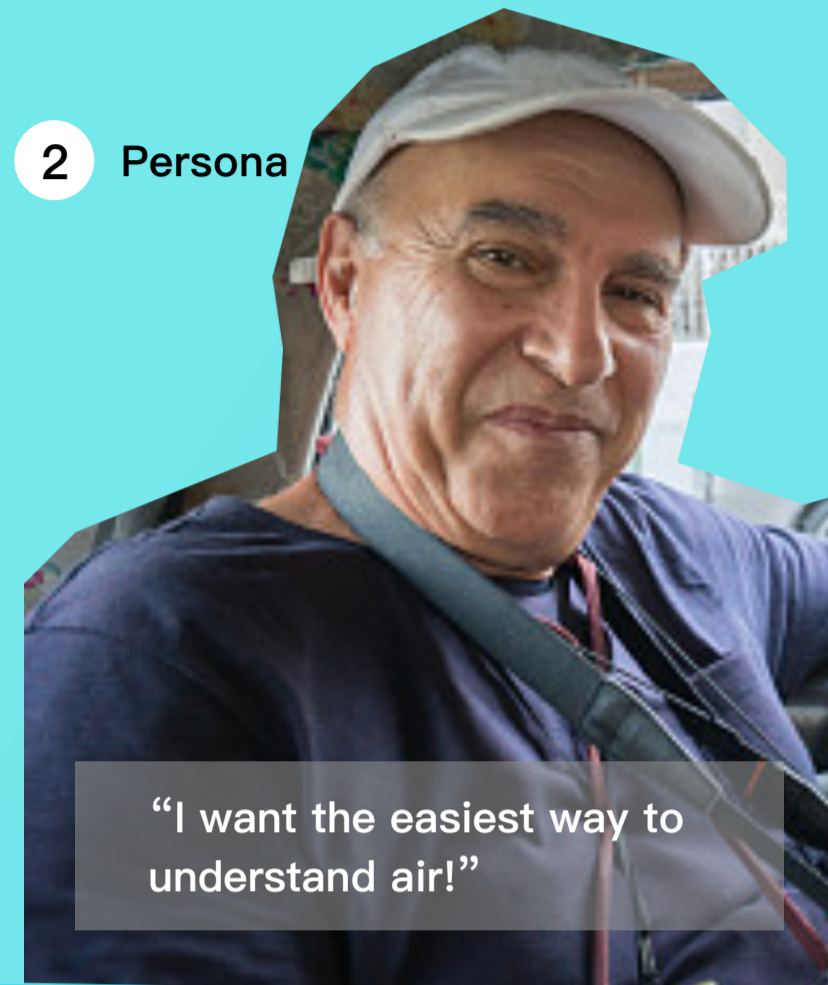
The majority of participants are well aware of the need to improve indoor air quality.

Poor understanding of indoor air quality data by participants.

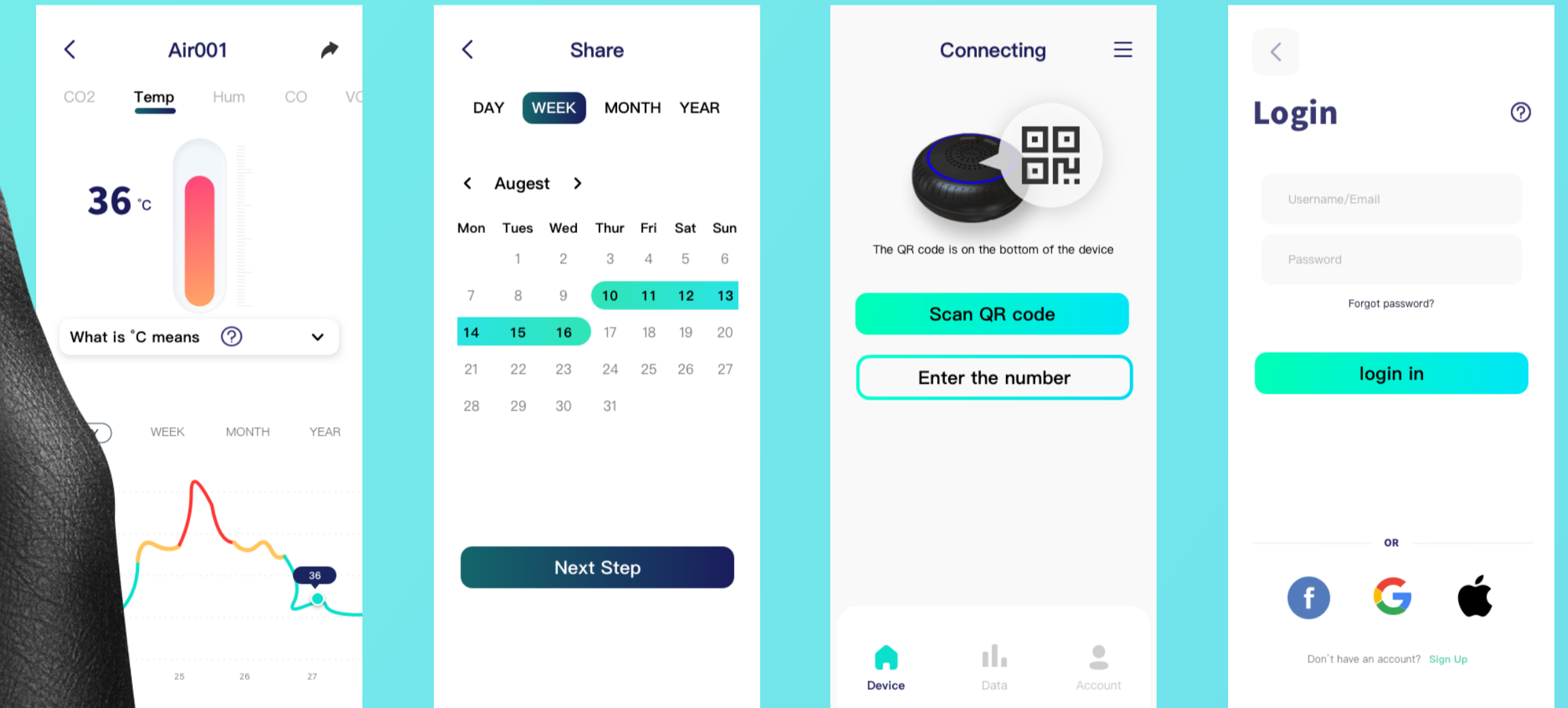
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The interviews were conducted with 8 users, including people living in social houses, students, people living with their families and people living with the elderly. Seven users were interviewed online and one was interviewed offline.

The user interviews identified 7 requirements for an air monitor app, and the competitive analysis will analyse the data visualisation pages of each product and whether they meet these 7 requirements. The results show that the majority of users' needs are not being met. There was also a very poor user experience when connecting the device for the first time.



"I want the easiest way to understand air!"



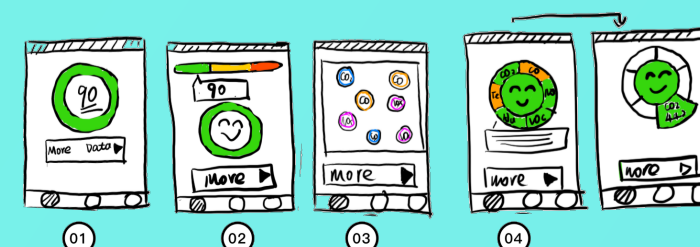
## Testing&Evaluation

- 1 Information Architecture
- 2 Multi-version testing
- 3 Task testing/SUS Scale

Test the clarity of the information architecture by setting two tasks. The problem with task 1 was that the sharing function was too deep, because "Devices" and "Data" were both on the same level, which made the structure unsuitable.

So in the subsequent design, the three first level pages of the app were changed to: Devices, Data, Me.

Multiple versions have been designed for different functions. A version test was carried out in order to find the solution that was easiest for users to understand the air data.



I recruited 10 users for the flow test, asking them to complete 5 tasks and fill in the SUS usability scale at the end of the test. This was used to test the usability of the app.

It is calculated that the project app meets the usability requirements of the users

## Future Work

- 1 Landlord side
- 2 Knowledge of air

The current design only makes sense of air quality data for residents. To connect with landlords, we have designed a function to share data. In the future, more thought will be given to how the landlord's app needs to manage the data in the room, and how the landlord and tenant can exchange information more easily.

At present we have a section for each substance, for users to learn more about each substance. More details will be considered later, such as how to relate air quality data to the health status of each inhabitant. Personalised knowledge recommendations will be implemented.