Using Web 3 technologies to improve global warming

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Abstract

This project aim to focus on improving global warming by building an application based on Web 3.0 technology, utilising the advantages of Web 3.0 technology such as token incentives to encourage users to actively participate in low-carbon activities to improve global warming.

Introduction & Background

The Internet has advanced to the Web 3.0 stage, and since the implementation of Web 3.0 technology will create a new paradigm that **protects the interests of every Internet user, offers privacy protection and decentralisation benefits**, and uses a token mechanism, this project will take advantage of this development and apply it to the climate sector in order to **motivate users to improve global warming**.
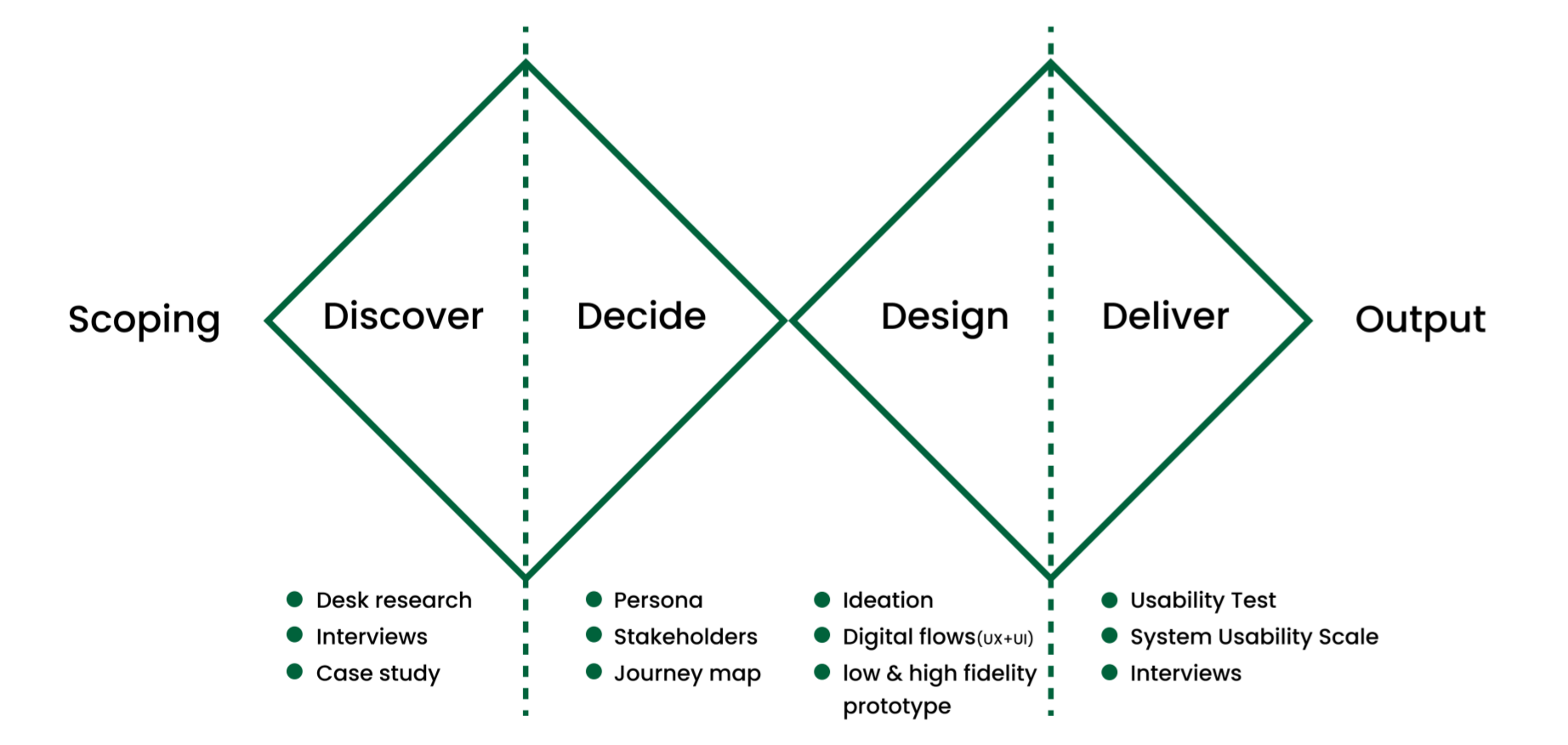
Research question

How can **Web 3.0 technologies** be used to **improve global warming ?**

Purpose

Incentivise users to **participate actively** in **low-carbon activities**

Methodology

Scoping — Discover — Decide — Design — Deliver — Output

- Desk research
- Interviews
- Case study

- Persona
- Stakeholders
- Journey map

- Ideation
- Digital flows(ux+ui)
- low & high fidelity prototype

- Usability Test
- System Usability Scale
- Interviews

Using a variety of research methods, I explore how Web 3.0 technologies can be used to motivate users to improve global warming. So the following were explored and researched

- To understand Web 3.0-based applications and the relationship between Web 3.0 and global warming.
- To understand technologies related to Web 3.0 technologies and global warming.
- To provide users with a platform for Web 3.0-based applications to improve global warming.
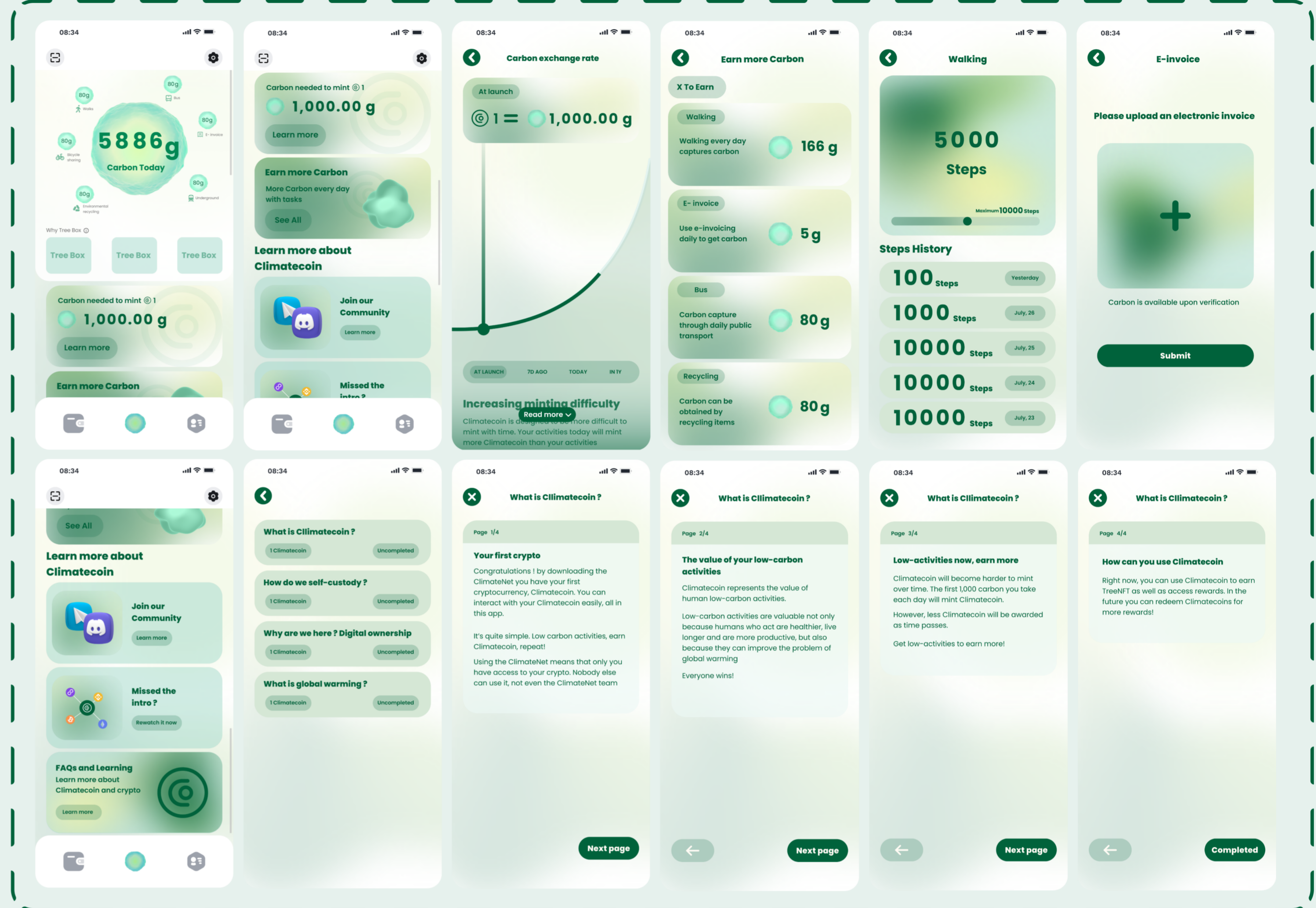
Design

Cover & Onboarding
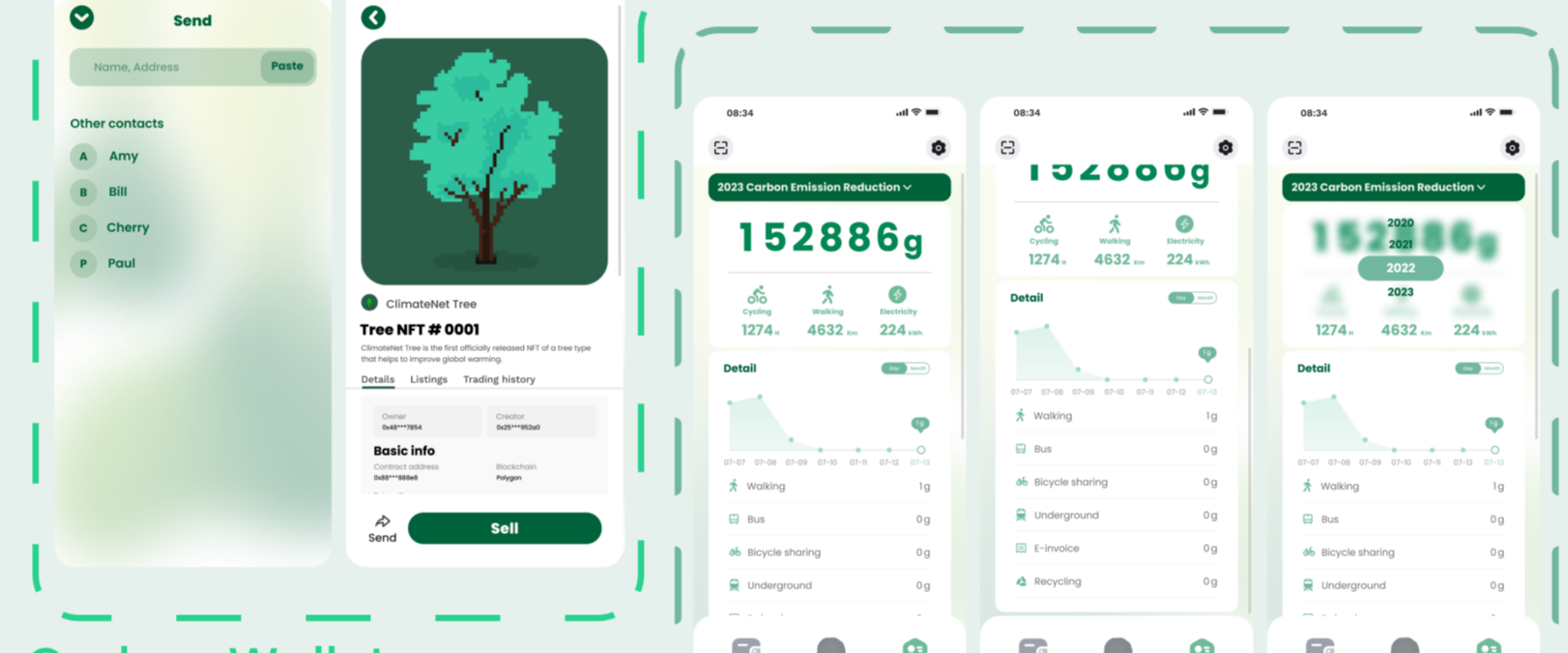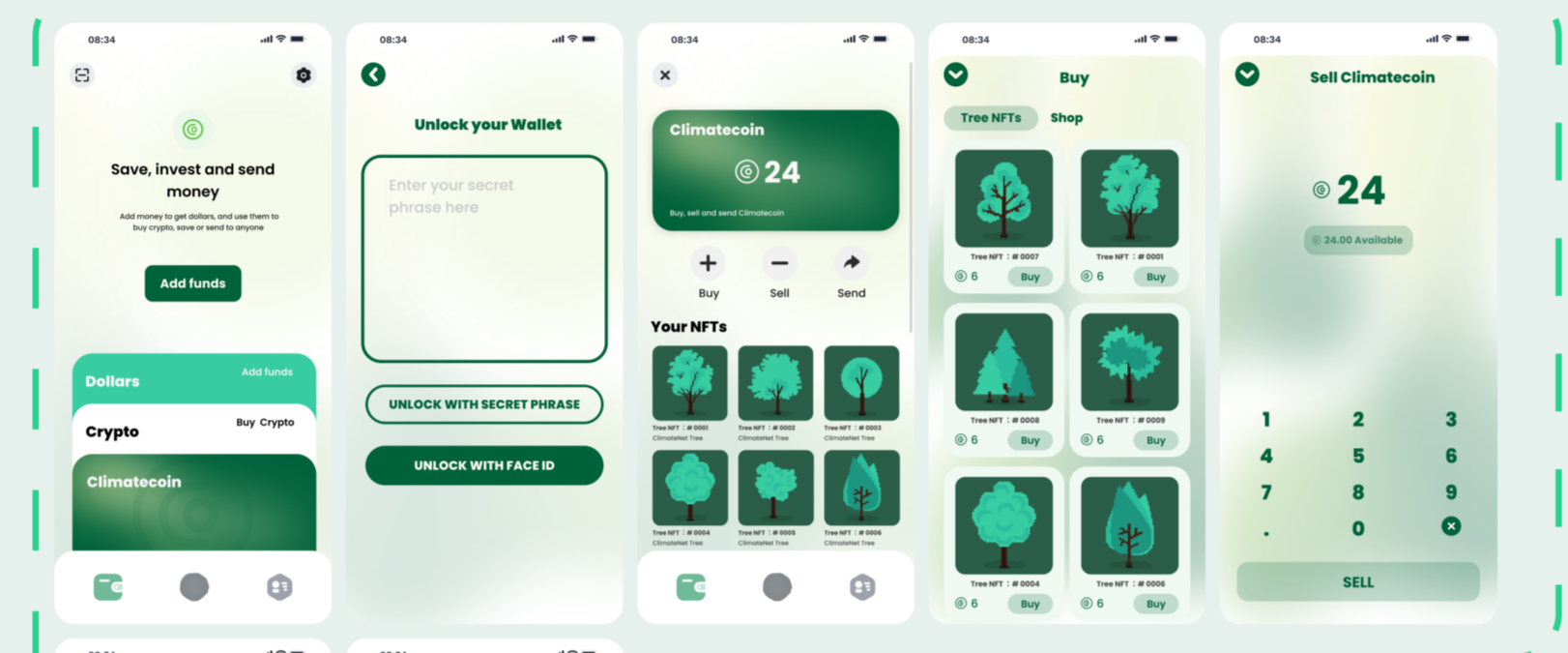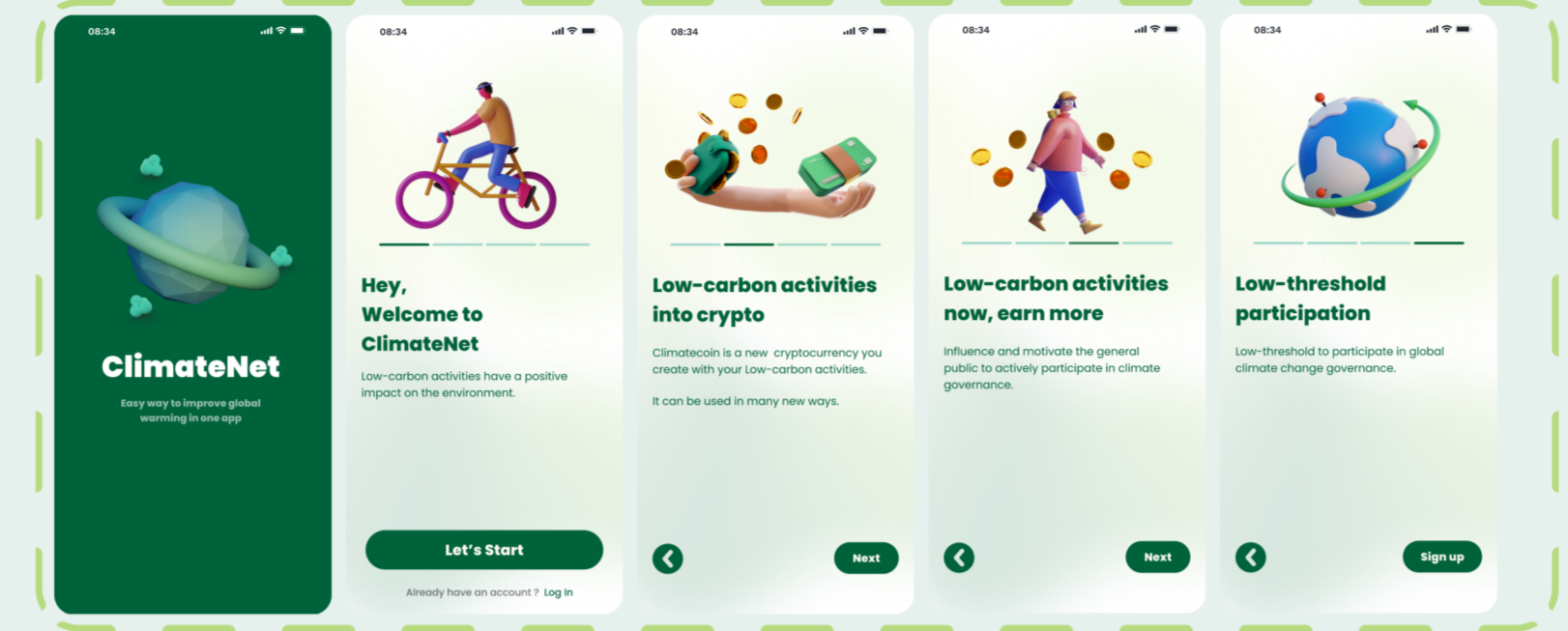
Carbon (Home page)

Carbon Wallet

Carbon Account

Prototype :

The final design of the ClimateNet user interface was based on the results of user research and has been iteratively modified. **The incentive of tokens encourages users to engage in low-carbon activities that will improve global warming.**

Research Results

Semi-structured interviews

Aiming to understand users' views, experiences, attitudes and perceptions of global warming and web 3.0.

Lack of motivation
Knowledge of global warming issues but lack of motivation to do so

Lack of perseverance
Those who will engage in low-carbon activities will not do so in the long term because they are purely self-motivated.

Lack of knowledge
Lack of understanding of the causes of global warming and the advantages of web 3 technology for global warming

Lack of direction
Want to improve global warming but don't know exactly how to do it

Persona

A deeper understanding of **the key characteristics, needs, goals** and **behavioural** of users can provide valuable information during the definition phase of a design.

Information Architecture

The functionality of the application was **consolidated and rearranged**, redundant information was merged and arranged in order of interaction.
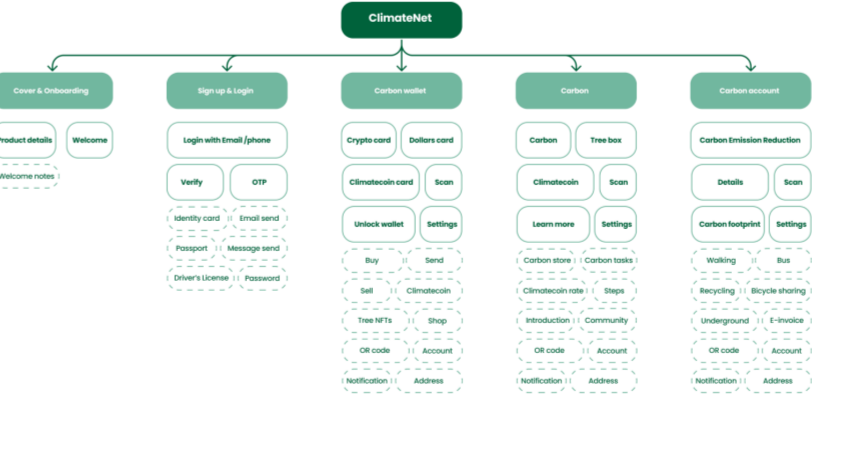
Usability Testing

In order to validate the design solution The user usability testing will be conducted **using a combination of SUS and user interviews.**

Participants **15**

Interview questions **4**

Feedbacks **15**

User Testing Process

Step 1 Familiar with application related functions and pages

Step 2 Execution of assigned tasks

Step 3 Completion of the SUS questionnaire

Step 4 Interview

SUS score ranges
- 61-100
- 0-60
74% / 26%

74% users consider the usability and user experience of the user interface to be at **a good level.**

Does the app improve global warming ?
- Agree
- Sceptical
- Disagree
90% / 10%

Almost all agree that the solution is effective in improving global warming, but **one** thinks it **needs to be sustained** over time to be effective, and **no one disagree.**

Conclusion

As the Internet quickly transitions to **Web 3.0**, its related **technologies** may be utilised to address issues that Web 2.0 was unable to address as well as **offer fresh approaches to the major issue of climate change. Crypto may be used as rewards and incentives to encourage people to take action**. In this study, we created an application based on Web 3.0 technology where **users are rewarded with tokens for low-carbon activities** that can be used within the platform or cashed in for profit to **motivate users** to achieve **the goal of improving global warming** and at the same time, increase **users' awareness and experience with Web 3**.

Future work

Number of tokens

In the future, users will increase, and the number of tokens needs to be considered in the ecosystem.

Token Ecosystem

The scope of token use has not yet been fully developed and will involve cooperation with third-party institutions.