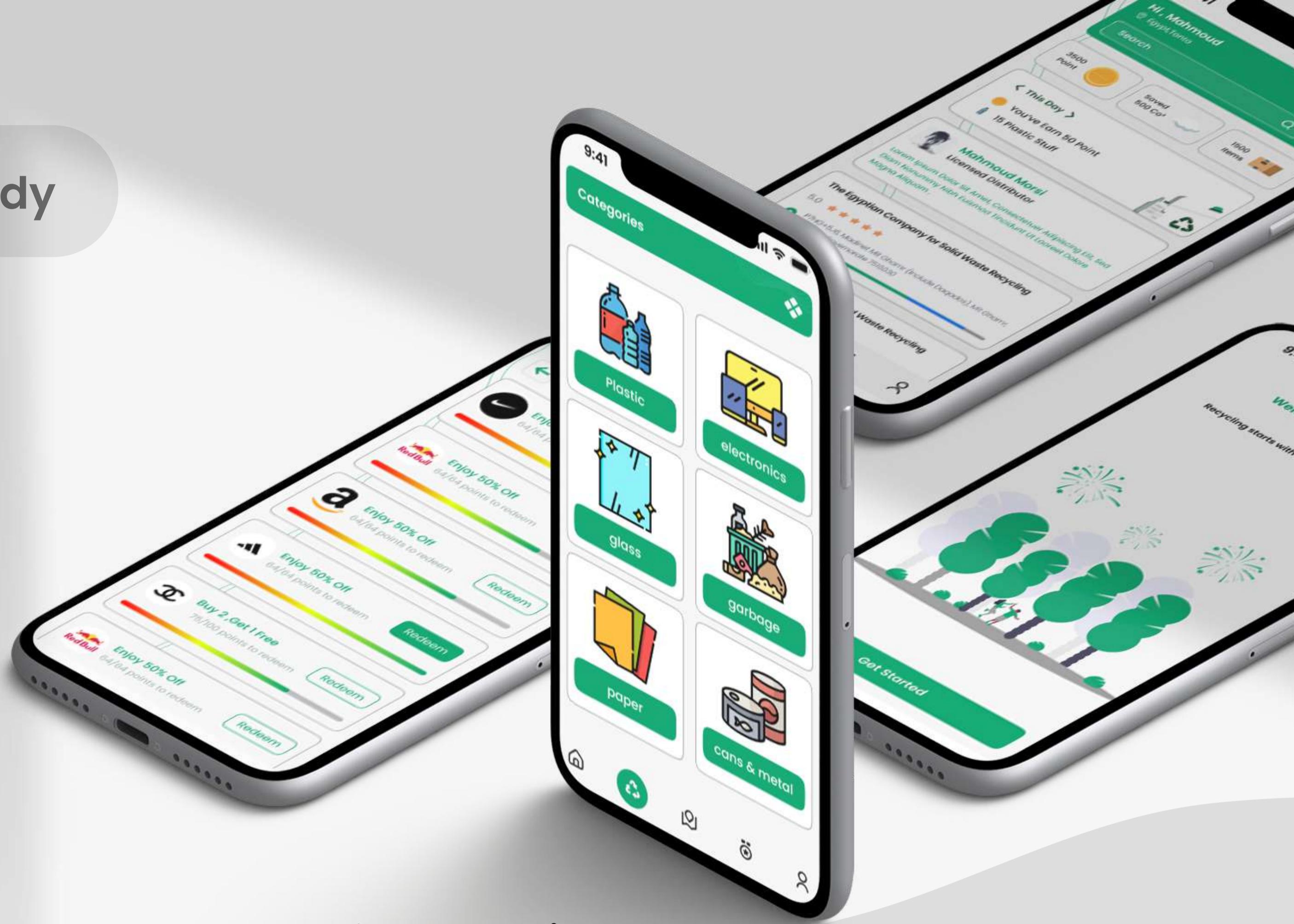


# UI/UX Case Study



ReNewIT

## Recycling App



## Tools Used



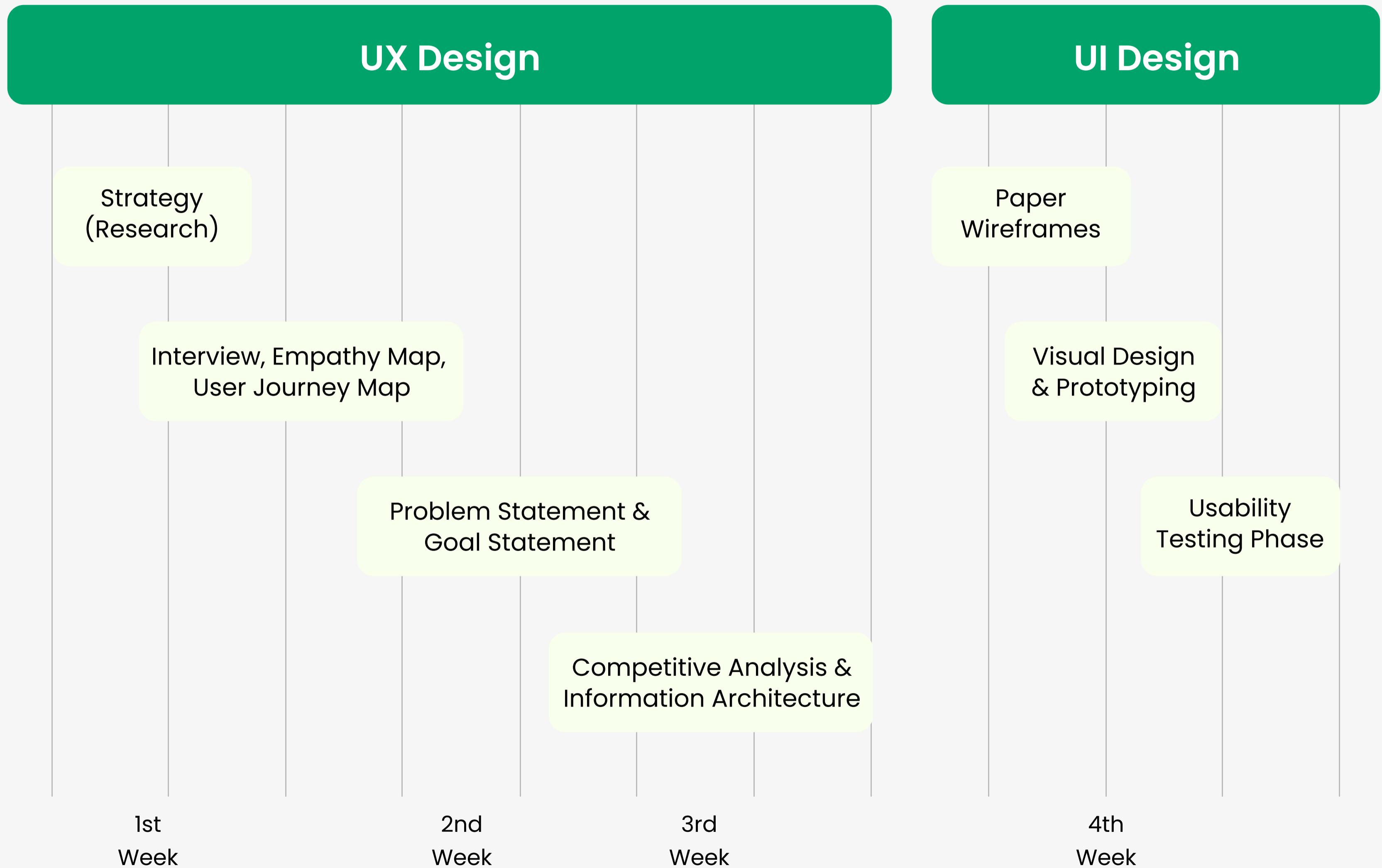
Figma    Illustrator    photoshop    Microsoft teams    PowerPoint    Canva

## project Duration

4  
weeks

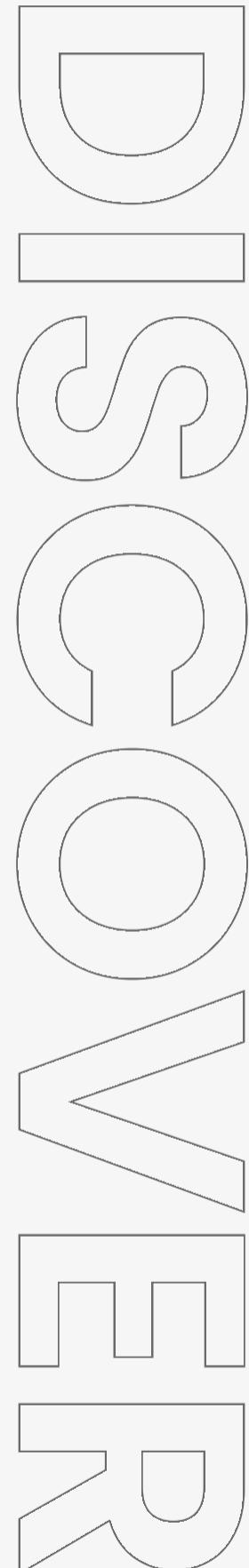
85+  
screens

# Project Timeline



## problem statement

As urban populations grow and consumption patterns change, cities face increasing challenges in managing waste efficiently. Many municipalities struggle with rising waste volumes, inadequate recycling rates, and limited public awareness about sustainable practices. This results in overflowing landfills, environmental degradation, and wasted resources.



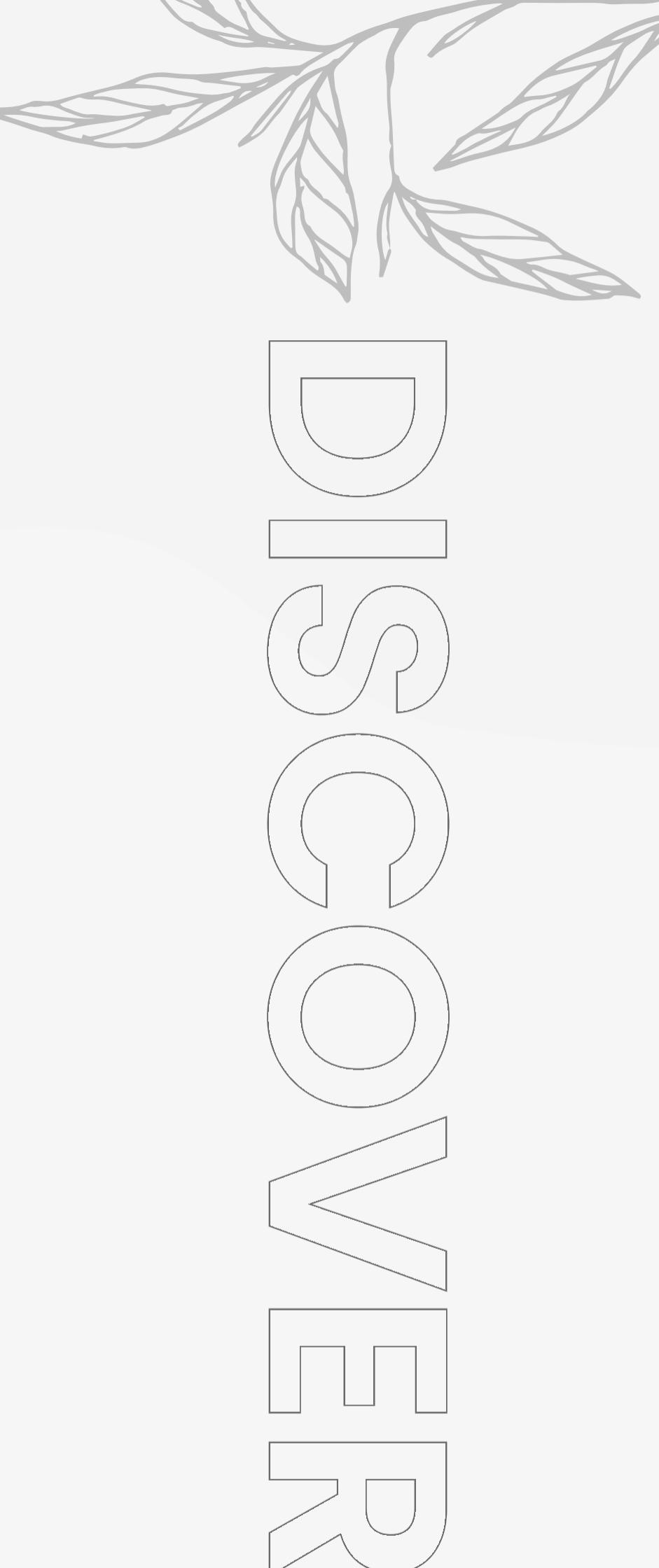
# problem solution

**1-Users know where to find nearby recycling facilities:** This encourages residents to participate in recycling by providing clear information and easy access to recycling facilities.

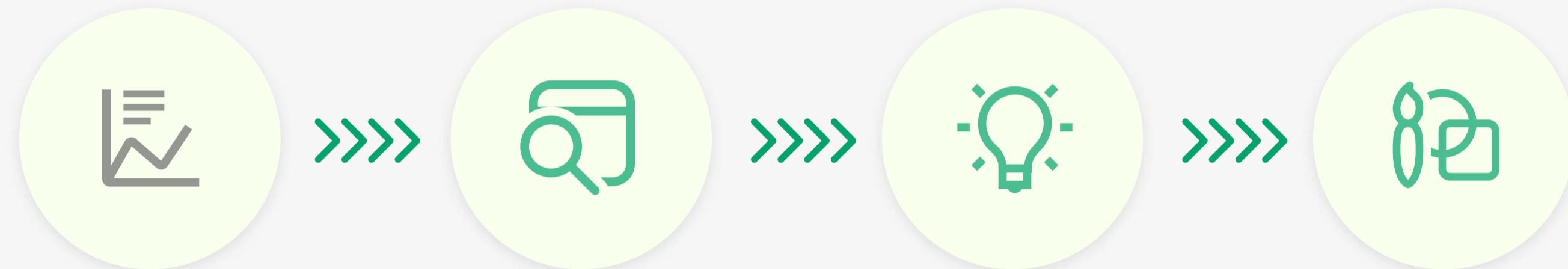
**2-Reduce pollution:** Educate users on proper recycling practices to minimize environmental pollution through simple educational content that teaches them how to recycle a simple item at home.

**3-Real-time tracking:** Leverage GPS technology to allow users to track waste collection schedules and receive notifications, ensuring timely waste disposal and encouraging participation.

**4-Collect points:** Implement a reward system that incentivizes users to properly recycle and reduce waste, encouraging continued participation and sustainable behavior



# Design Thinking Process



## Emphasize

Qualitative Research  
Competitors Reviews  
User Interview  
Stockholder Interview

## Define

User Persona  
Empathy Map  
User Journey Map  
User Story

## Ideate

Card Sorting  
User Flow  
Site Map

## Design

Wireframes  
Design System  
Visual Design  
Prototype

# QUICK "QUESTION

## Which Items We Can Recycle ?

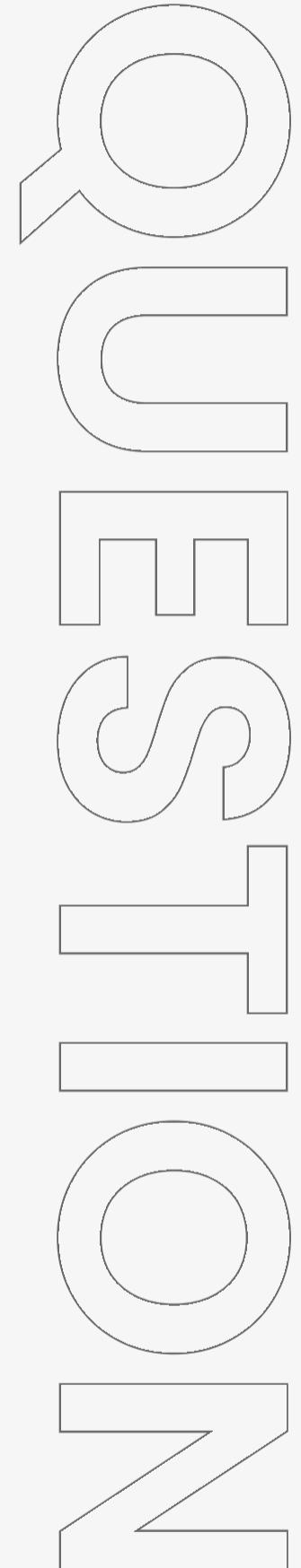
**1- Paper And Cardboard :** Newspapers, Magazines, Office Paper, Cardboard Boxes.

**2- Plastics :** Bottles And Containers Marked With Recycling Codes

**3- Metals :** Aluminum Cans (Like Soda Cans) And Steel Cans (Like Food Cans).

**4- Glass :** Clear, Green, And Brown Glass Bottles And Jars.

**5- Electronics :** Old Phones, Computers, And Appliances .



# Qualitative Research

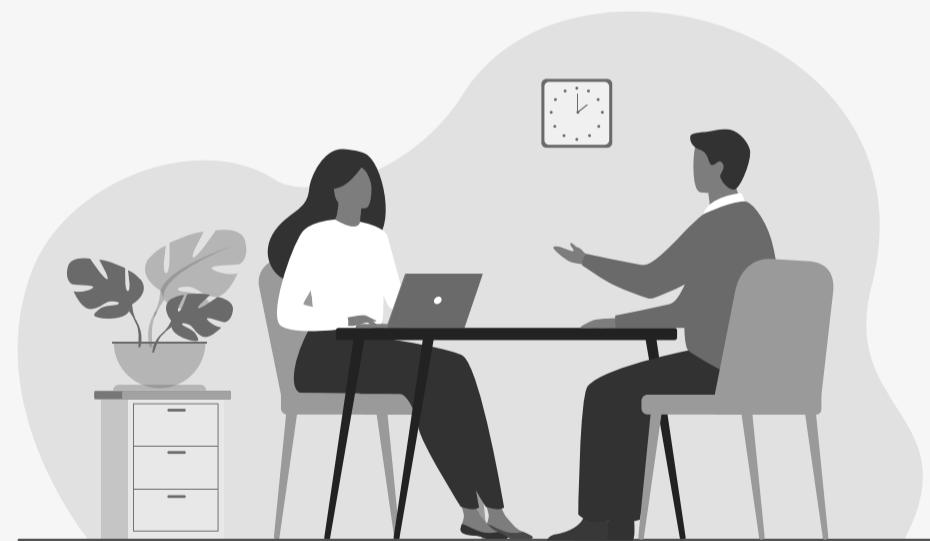
This "Qualitative Research" section explores factors influencing recycling behavior. Interviews and focus groups revealed key motivators, such as environmental responsibility and community influence, alongside barriers like unclear guidelines and limited access to recycling facilities. Insights from these perspectives emphasize the need for clearer information and more accessible resources to encourage consistent recycling habits.

## Interview Questions

- How Much Do You Know About The Importance Of Recycling?
- What Is Your Opinion On Recycling?
- Do You Consider It Essential For Society?
- Do You Think Recycling Can Have A Positive Impact On The Environment?
- Are You Currently Recycling?
- What Materials Do You Usually Recycle?
- Would You Like More Information On How To Recycle Properly?
- What Challenges Do You Face When Recycling?
- What Motivates You To Recycle More?

## Key Insight Derived

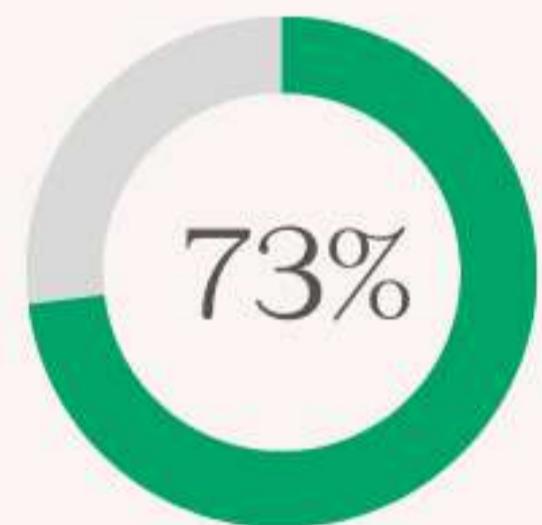
- Recycling Awareness Levels
- Most Commonly Recycled Materials
- Perceived Importance of Recycling
- Challenges in Recycling Participation
- Current Recycling Habits
- Demand for Recycling Education



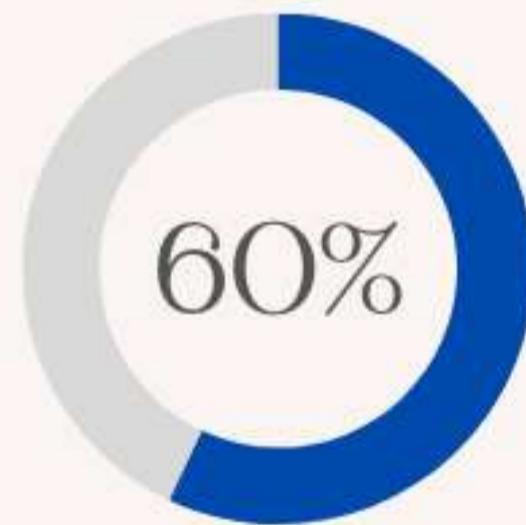
## ● Quantitative Research

Recycling is essential for saving natural resources and reducing waste. By reusing materials like plastic, paper, glass, and metals, we can lower pollution and protect the environment. Promoting awareness about recycling encourages communities to work together for a cleaner planet. This quantitative research aims to explore what motivates people to recycle and its positive effects on the environment.

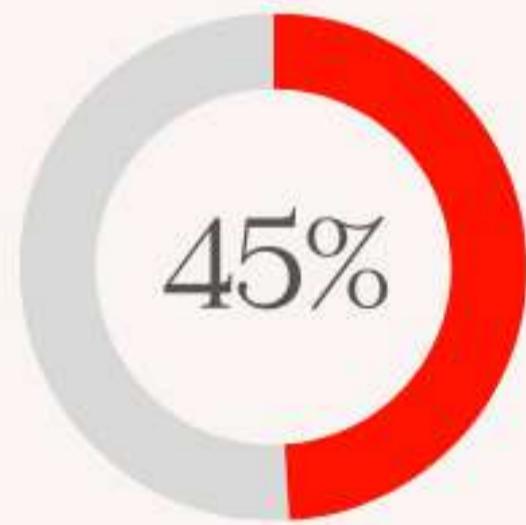
How much do you know about the importance of recycling?



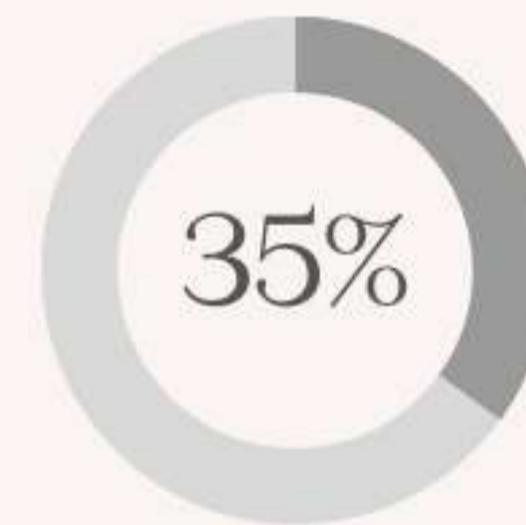
Good



limited



Very Good



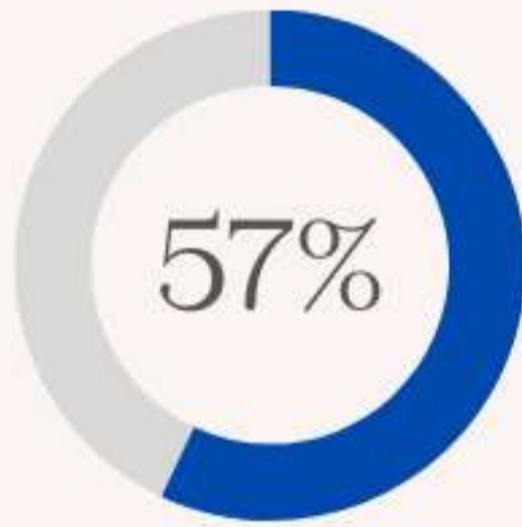
I don't know  
much



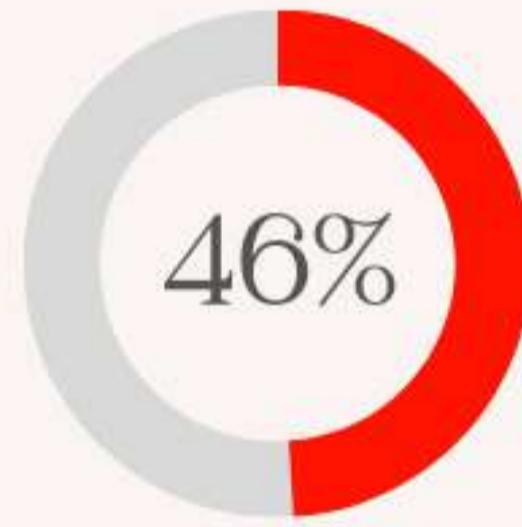
## What challenges do you face when recycling?



The lack of nearby  
recycling centers



The lack of  
incentive



The lack of nearby  
recycling centers

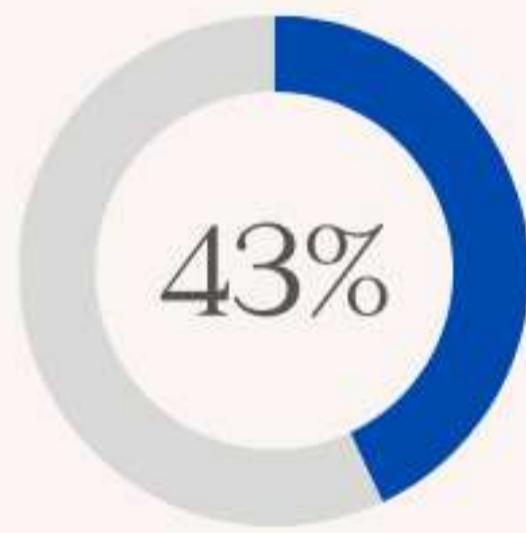


And the lack of  
space to store  
recyclable  
materials

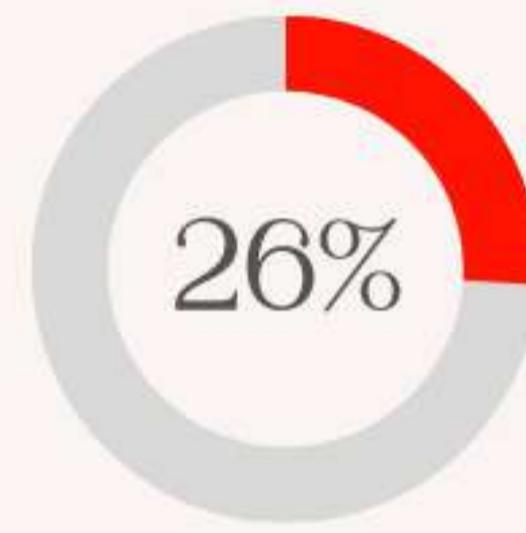
## What materials do you usually recycle?



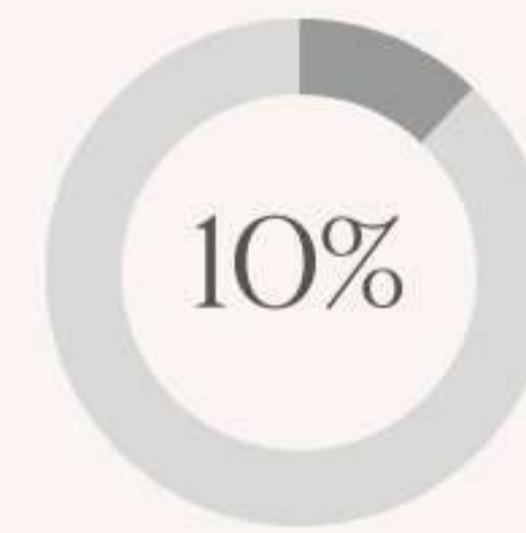
Plastic



Paper



Glass



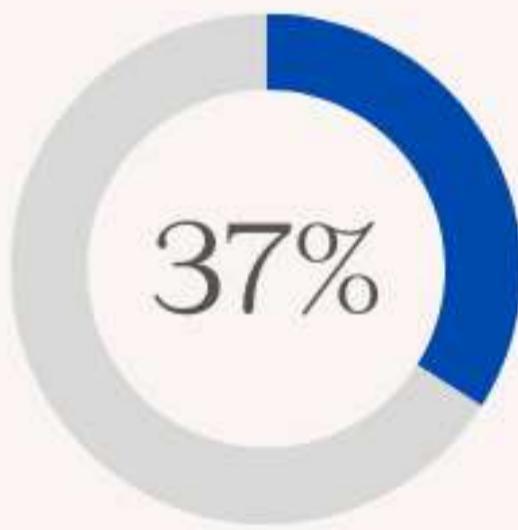
Other



## Are you currently recycling?



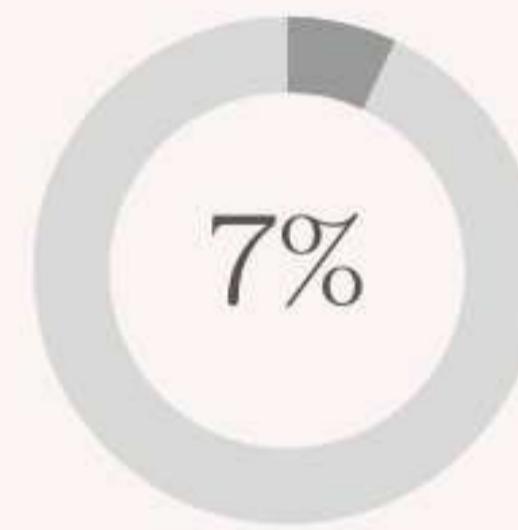
Rarely



sometimes



No, never



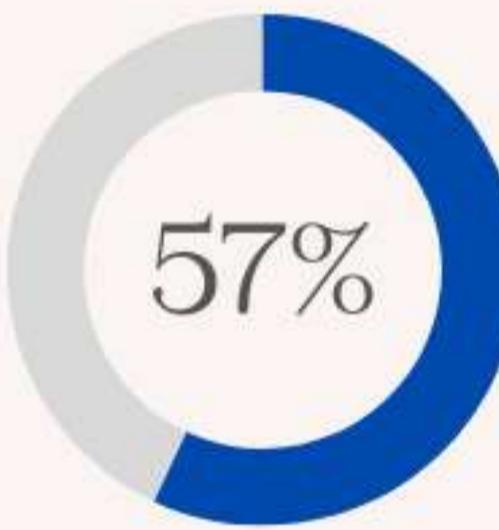
yes



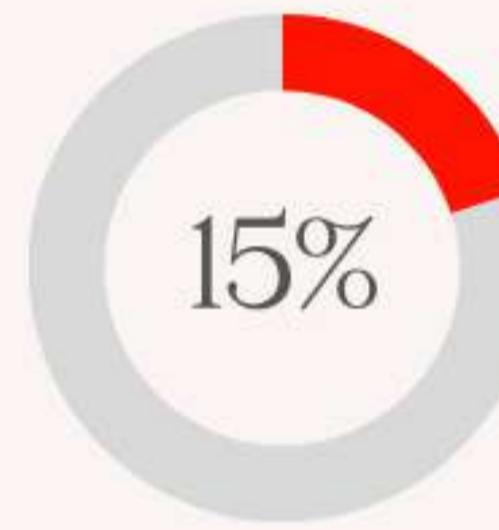
What is your opinion on recycling? Do you consider it essential for society?



Yes, very  
necessary



Yes, somewhat  
necessary



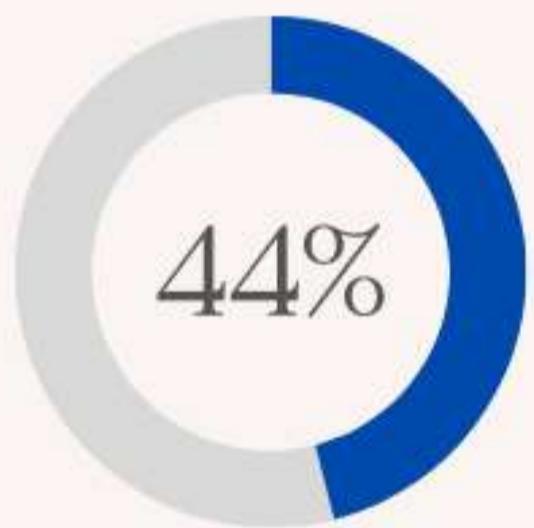
Not very  
necessary



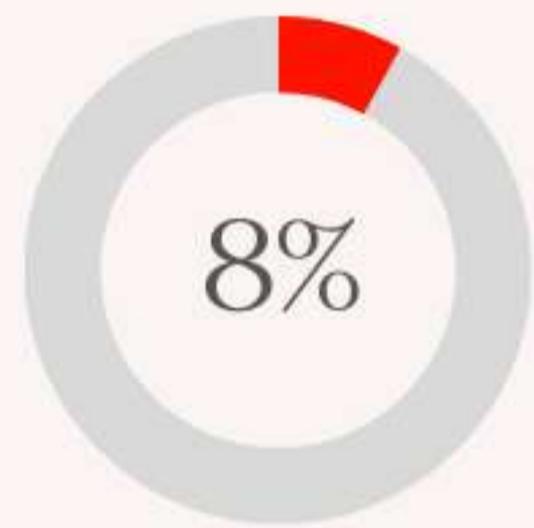
Would you prefer to have more information on  
how to recycle properly?



Yes



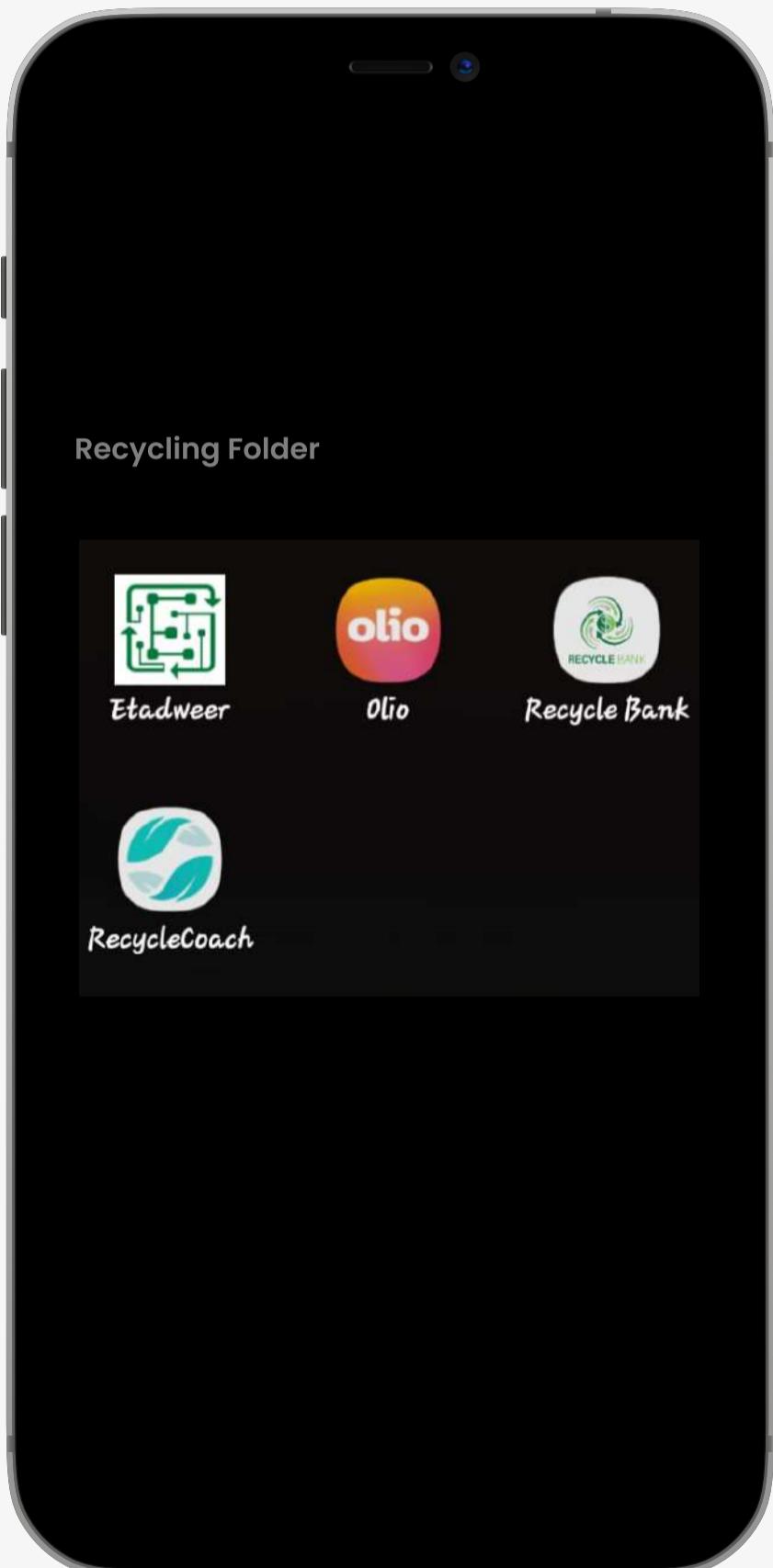
I'm not sure



No



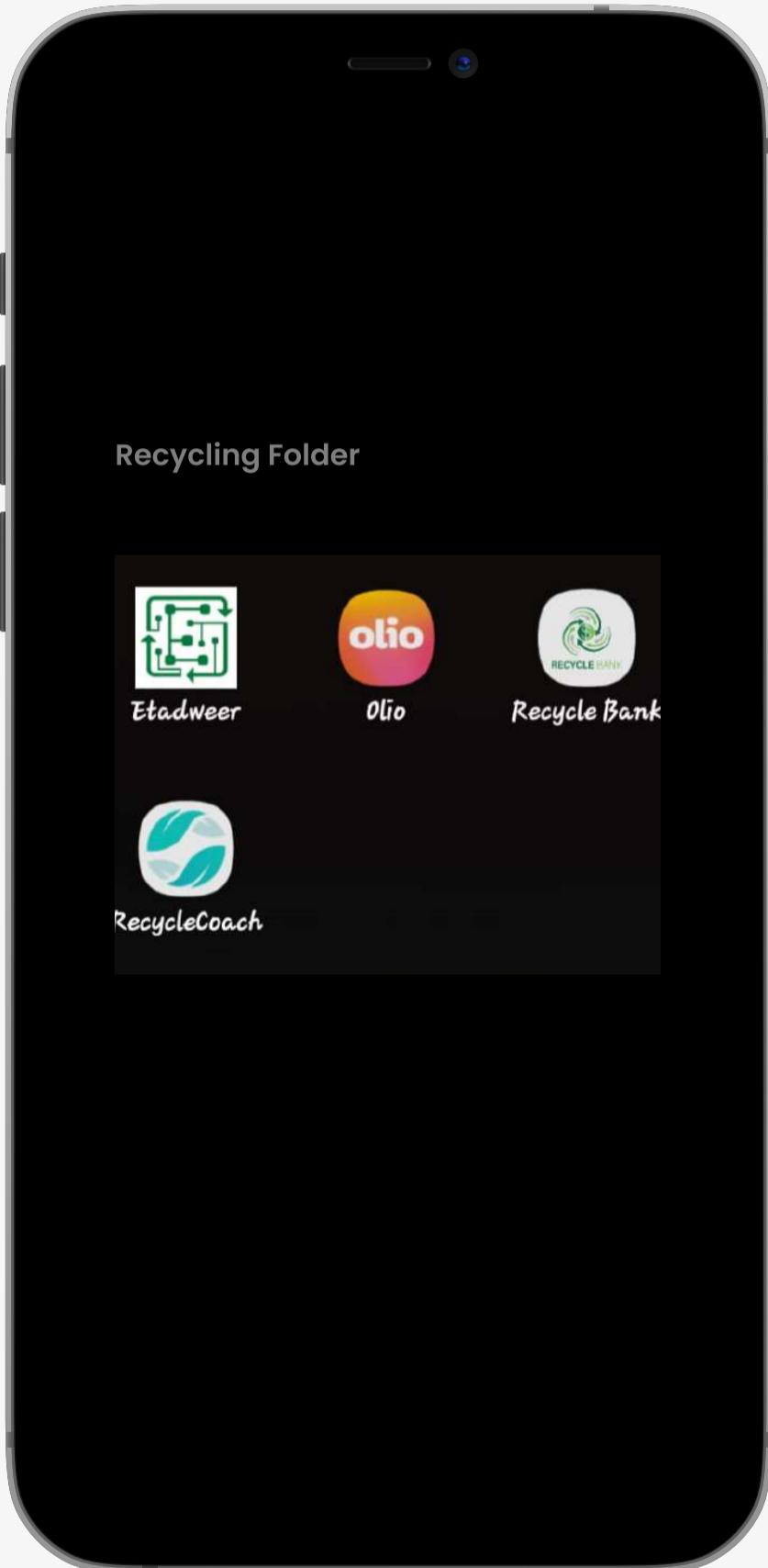
# 1- Competitors Reviews



## Positive Points

- 1- All Apps Encourage Recycling, Reducing Environmental Pollution By Encouraging Users To Recycle Used Cooking Oil, Which Can Be Hazardous To The Environment If Improperly Disposed Of.
- 2- The Apps Help Turn Waste Into Resources By Ensuring Proper Disposal And Recycling Of Cooking Oil, Which Can Be Reused In Biodiesel And Other Products.
- 3- Users Can Receive Rewards Or Points For Recycling, Which Can Be Converted Into Cash Or Discounts, Encouraging More Participation.

# 1- Competitors Reviews



## Negative Points

- 1-Some Users Experience Delays Or Issues With The Collection Service, Especially In Remote Or Less Urbanized Areas.
- 2-The Reward System May Not Be Large Enough To Incentivize All Users, Which May Reduce Participation Over Time.
- 3-While The App Focuses On Used Cooking Oil, It Could Be More Useful If Expanded To Include Other Recyclable Materials Beyond Its Current Scope.
- 4-Limited Language Options May Reduce The Accessibility Of The App For Non-Arabic Speakers Or Users With Different Language Backgrounds.

## 2- User interviews



- How often do you recycle?
- What types of waste do you typically recycle?
- Are there any specific items you find difficult to recycle?
- Where do you usually find information about recycling?

- How do you currently keep track of your waste collection schedules?
- How familiar are you with recycling centers in your area?
- How easy is to find recycling centers that accept the items you want to recycle?

- What features would you like to see in a recycling app or platform?
- What factors would make a recycling app easy to use for you ?
- How do you feel about gamification elements in recycling apps such as badges, rewards ?

- Do you have any specific goals related to recycling or waste reduction ?
- How do you currently track your progress towards these goals ?
- Would you like to receive feedback or recognition for your recycling efforts ?

- How do you stay informed about environmental issues and eco-friendly practices ?
- Are you involved in any recycling or environmental groups or communities ?

- How do you currently manage information about your recycling center such as operating hours, accepted materials, and location details ?
- How do you collect and manage user data, such as contact information and recycling preferences?



## 2- Stackholders interviews

### 1-What key features would you like to see in a recycling app?

"I would like to see clear instructions on what can and cannot be recycled, a map of nearby recycling centers, and reminders for collection days."

### 2-How do you currently manage recycling, and what challenges do you face?

"I separate waste at home but I often find it difficult to find information about proper waste disposal methods. Sometimes I don't know where to take certain items such as electronics."

### 3-How likely are you to use the recycling app regularly? What would motivate you to continue using it?

"I would use it regularly if it was easy to navigate and gave me useful information. Incentives such as rewards or points for recycling could motivate me to keep using it."

### 4-Would you find the reward system (such as points and discounts) for recycling through the app motivating?

"Yes, definitely. Rewards will encourage me to recycle more regularly, especially if they are linked to environmentally friendly products or services."

### 5-How important is it for the app to provide real-time information on recycling collection schedules and updates?

"It is very important because collection schedules can change. I need reminders and updates to ensure I don't miss collection days."

### 6-What kind of notifications or reminders would you find useful from the recycling app?

"Reminders for collection days, alerts for changes in schedules, and notifications about local recycling events or promotions."

# 1- persona



**Amira El-Sayed**

35 year

Homeowner

Cairo, Egypt

Busy professional with a household

## GOALS

Easy-to-use waste collection scheduling, find recycling centers quickly.

## PAIN POINTS

Inconsistent collection schedules, hard-to find recycling information.

## NEEDS/CHALLENGES

Easy-to-use waste collection scheduling, find recycling centers quickly.

## PREFERRED FEATURES

Easy-to-use waste collection scheduling, find recycling centers quickly.



**Ahmed Mostafa**

29 year

Environmental Enthusiast

Cairo, Egypt

Recycling Volunteer

#### GOALS

Track personal impact  
on waste reduction,  
stay informed in eco-  
tips.

#### PAIN POINTS

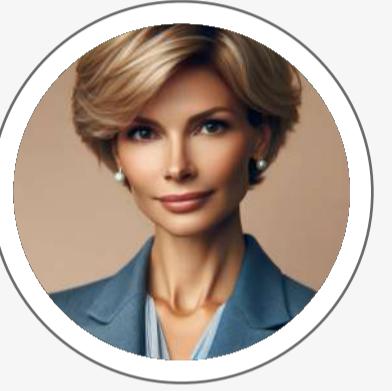
Lack of insight into  
recycling  
progress, no feedback on  
actions.

#### NEEDS/CHALLENGES

Achievements, badges  
personal impact  
tracker.

#### PREFERRED FEATURES

Gamification (badges,  
rewards), personalized  
tips.



Fatma Rashid

48 year

Recycling Center Manager

Cairo, Egypt

Works in Semi-Rural Egypt

#### GOALS

Manage recycling center information effectively, keep users updated.

#### PAIN POINTS

Outdated user data, hard-to-use admin interface .

#### NEEDS/CHALLENGES

Simple tools to update schedules, direct contact with users.

#### PREFERRED FEATURES

Admin dashboard, quick updates for operating hours.

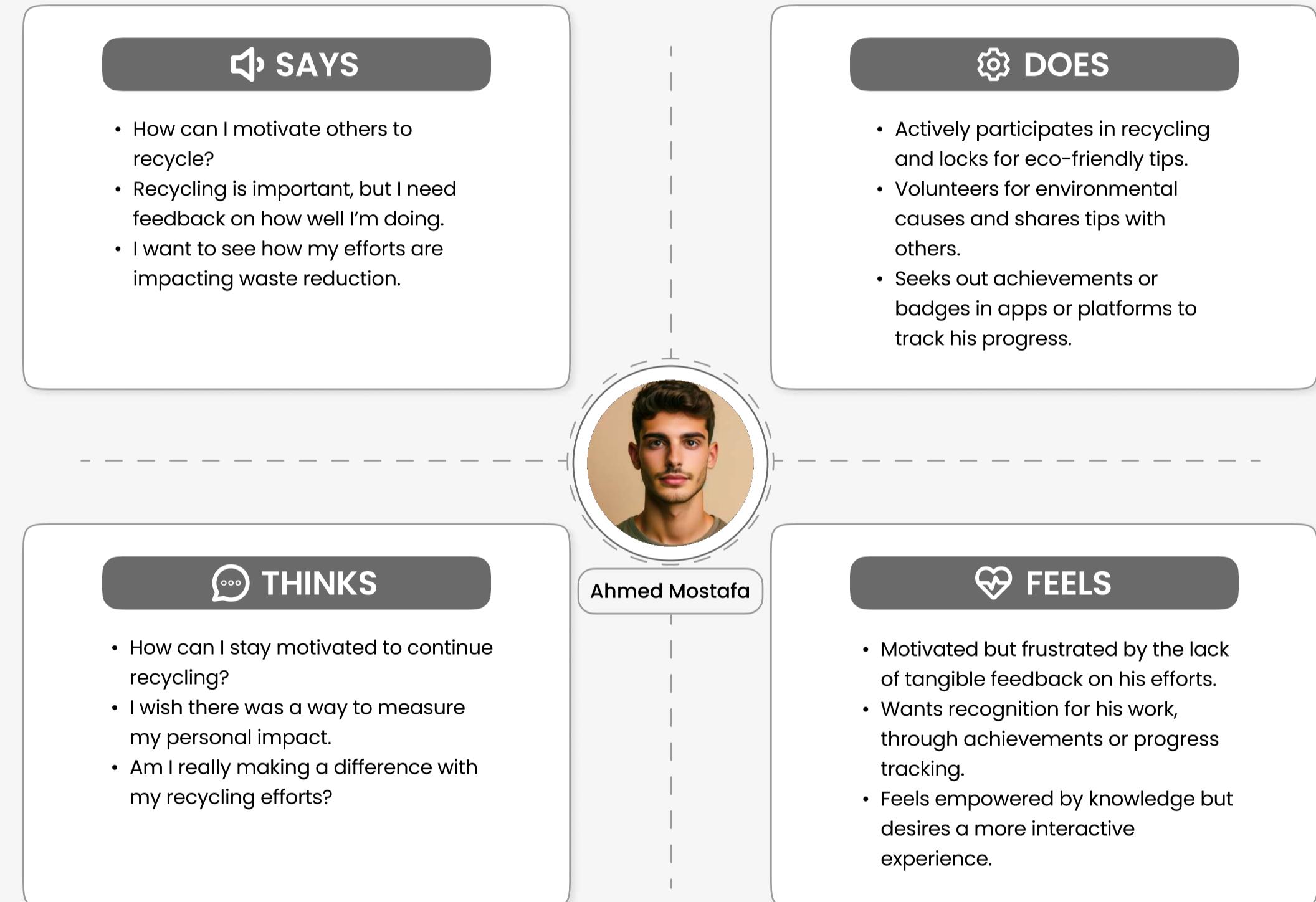
## 2- empathy map



1



2



# 3

## ↳ SAYS

- How can I quickly inform users about changes in schedules or operating hours?
- I need better tools to keep information updated.
- It's difficult to manage user data with this clunky admin interface.

## ⚙️ DOES

- Struggles with outdated systems to manage user data and recycling schedules.
- Seeks better ways to manage operations but is constrained by the available technology.
- Looks for simple, effective communication channels to keep users informed.

## 💬 THINKS

- . I need a quicker way to update information and contact users directly.
- . If I had better tools, I could manage operations and communicate with users more efficiently.
- . It shouldn't be this hard to keep the center running smoothly.



Fatma Rashid

## ❤️ FEELS

- Frustrated with the inefficiency of current system.
- Pressured to keep every thing running smoothly despite outdated tools.
- Eager for improvements that would streamline operations.



# User Stories

- As a resident, I want to identify recyclable items quickly so that I can dispose of them properly without confusion.

- As a resident, I want to locate the nearest recycling center so that I can dispose of non-curbside recyclables easily.

- As a resident, I want to receive notifications about the recycling collection schedule so that I never miss the pickup day.

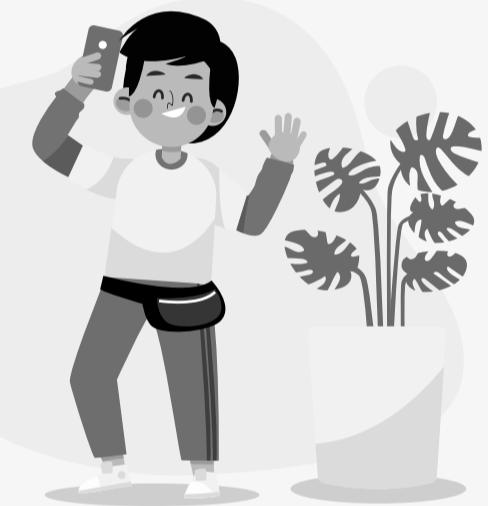
- As a resident, I want to scan items to find out if they are recyclable so that I can avoid accidental contamination of my recycling bin.

- As a resident, I want to learn how to prepare items for recycling so that I can contribute to the recycling process effectively.

- As a resident, I want to receive rewards or incentives for consistent recycling so that I stay motivated to recycle regularly.



## Story Board



### Ahmed's Story

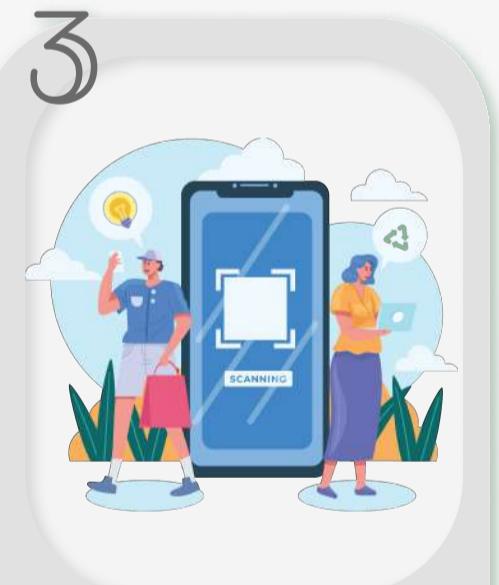
Ahmed is a busy photographer living in Maadi, Egypt. He cares about the environment but finds recycling difficult to manage.



Ahmed has a large collection of bottles and cans and isn't sure how to properly dispose of them.



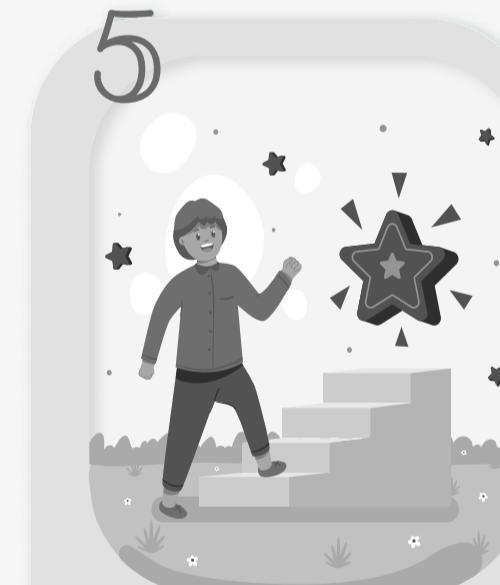
One day, Ahmed finds the (...) app, which promises to make recycling easier.



With the app, Ahmed scans his items like plastic bottles to check if they're recyclable.



Ahmed uses the app's map feature to find a nearby recycling center for his old electronics, like his broken phone.



Ahmed tracks his progress and points in the app, seeing how much waste he's kept out, which makes him feel good about his efforts.



Encouraged by his success, Ahmed shares the app with friends and family, helping them recycle and keep Egypt cleaner.

# 2-User Journey Map

Journey steps		Awareness	Research	Action/participation	Reward/Feedback	Advocacy
 <p><b>Ahmed Mohamed</b> 29 year   <span>Employee</span>  <span>Cairo, Egypt</span>  <span>Works in Semi-Rural Egypt</span>   <b>Motivation</b>            Wants to contribute to environmental sustainability by recycling effectively.   <b>Pain Points</b>            Confusion over what can/cannot be Recycled, lack of nearby facilities, inconvenience.         </p>	<p><b>User actions</b></p> <p>Sees ad/post on the importance of recycling.</p> <p>→ Receives a pamphlet or email from the city government.</p> <p>• Visits app store to understand what items are recyclable.</p> <p>• Searches for local drop-off points or learns about pickup services.</p> <p><b>Goals and experiences</b></p> <p>Learn about recycling options and benefits.</p> <p>Understand how to recycle properly (what, where, how).</p> <p>Start recycling consistently.</p> <p>Feel a sense of contribution and encourage continued behaviour.</p> <p><b>Pain points</b></p> <p>Lack of clear, easy-to-understand information.</p> <p>Confusing rules, inconsistent information across sources.</p> <p>Inconvenience of sorting or limited space for bins, transportation challenges for drop-offs.</p> <p><b>Opportunities</b></p> <p>Provide educational material, use engaging content like infographics.</p> <p>Offer a user-friendly, informative website/app with recycling guidelines, FAQs, and maps for nearby recycling points.</p> <p>Make recycling bins widely available and provide reminders for collection days.</p> <p>Implement gamification elements in the app, provide clear impact reports.</p> <p><b>Feeling and thoughts</b></p> <p>Curious</p> <p>Interested</p> <p>Slightly inconvenienced.</p> <p>Motivated</p> <p>Engaged</p>	Awareness	Research	Action/participation	Reward/Feedback	Advocacy

# Card Sorting



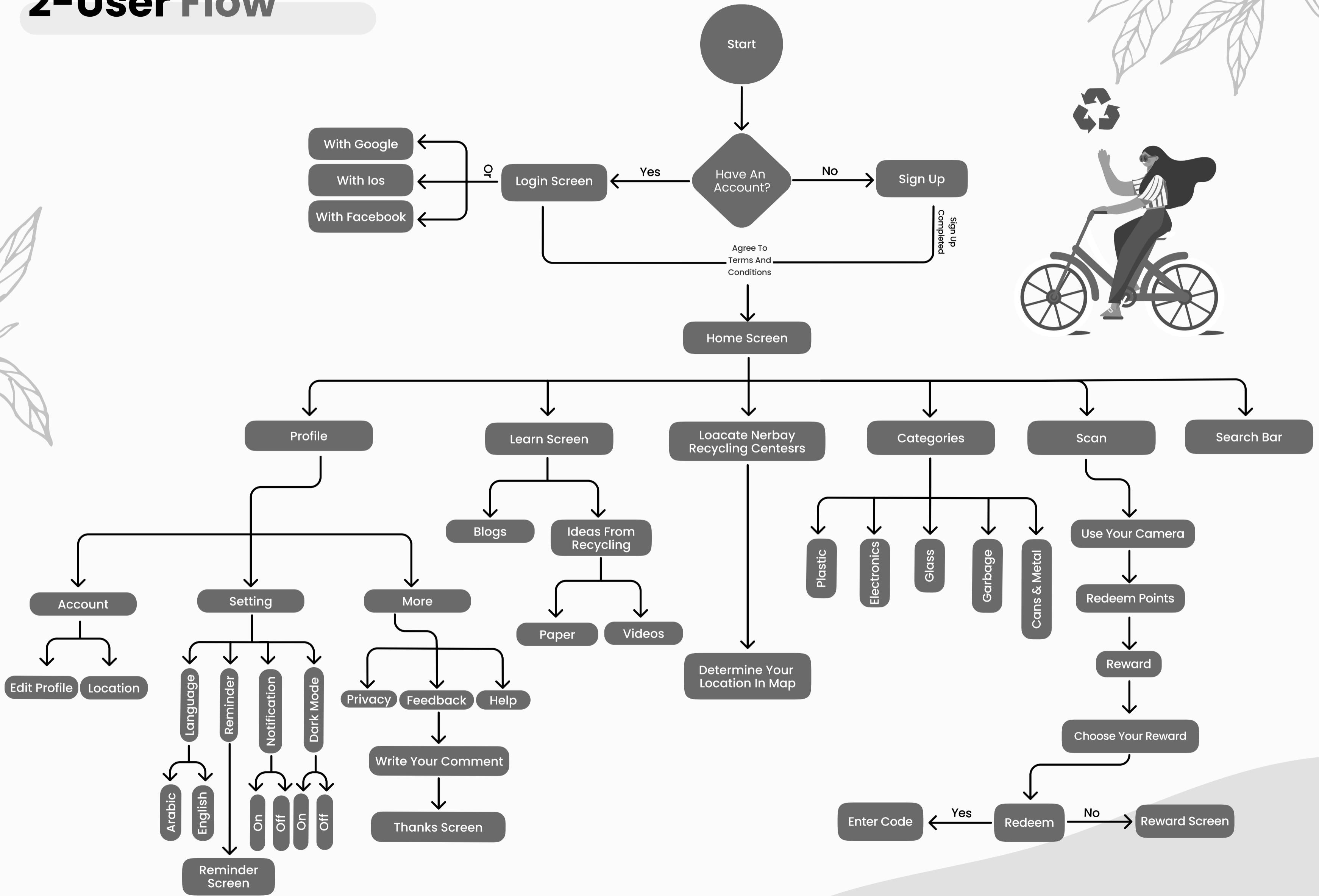
## Profile

- Edit Profile
- Turn Your Location
- Language
- Reminder
- Notification
- Dark Mood
- Help

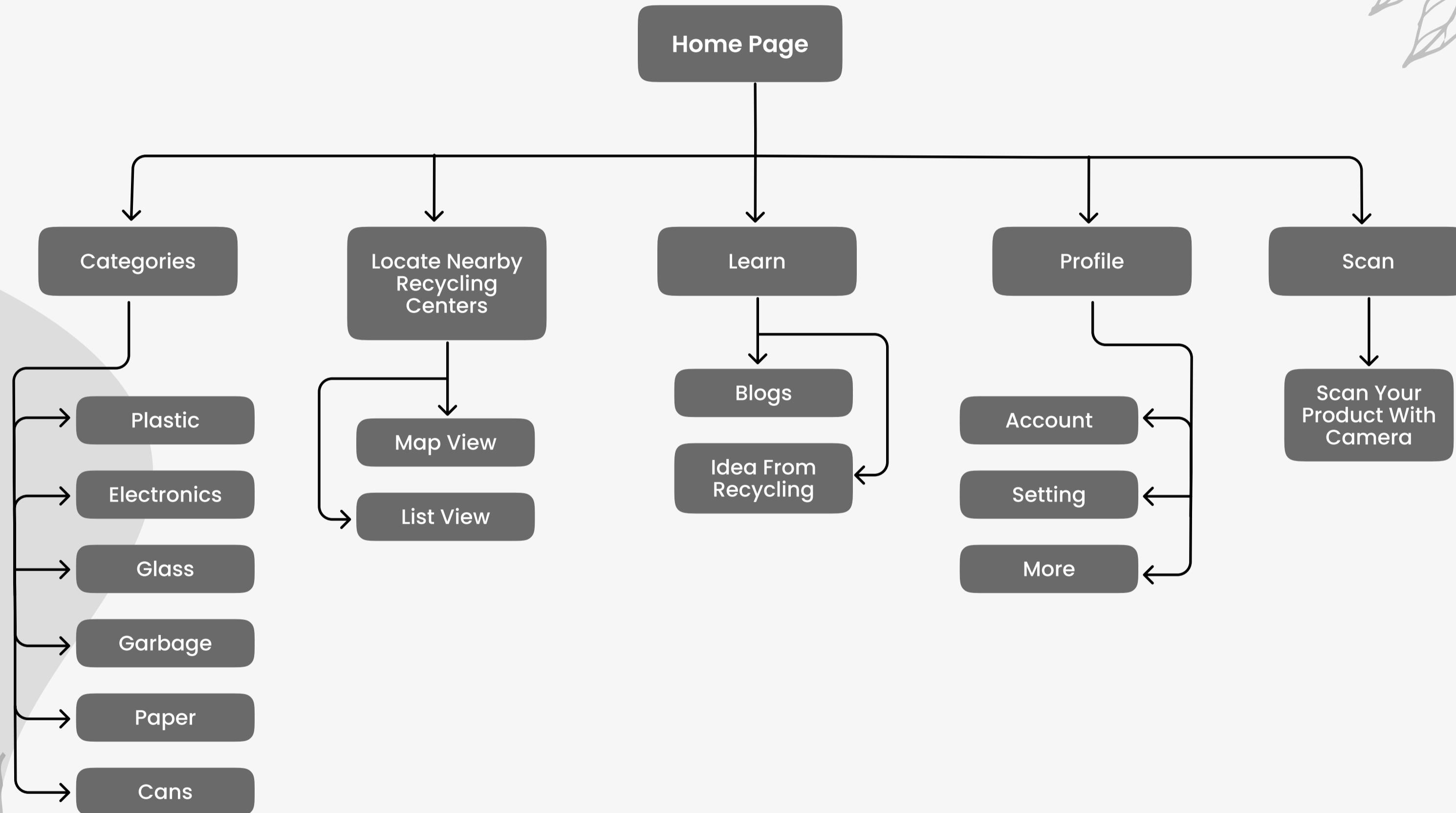
## Sign Up

- Email-Phone
- Password
- Password
- Login(button)
- With Google
- With IOS
- With Facebook

# 2-User Flow



# 3-site map



# Low-Fidelity Wireframes



# Design System

## Colors

**Primary color**  
#00A36A

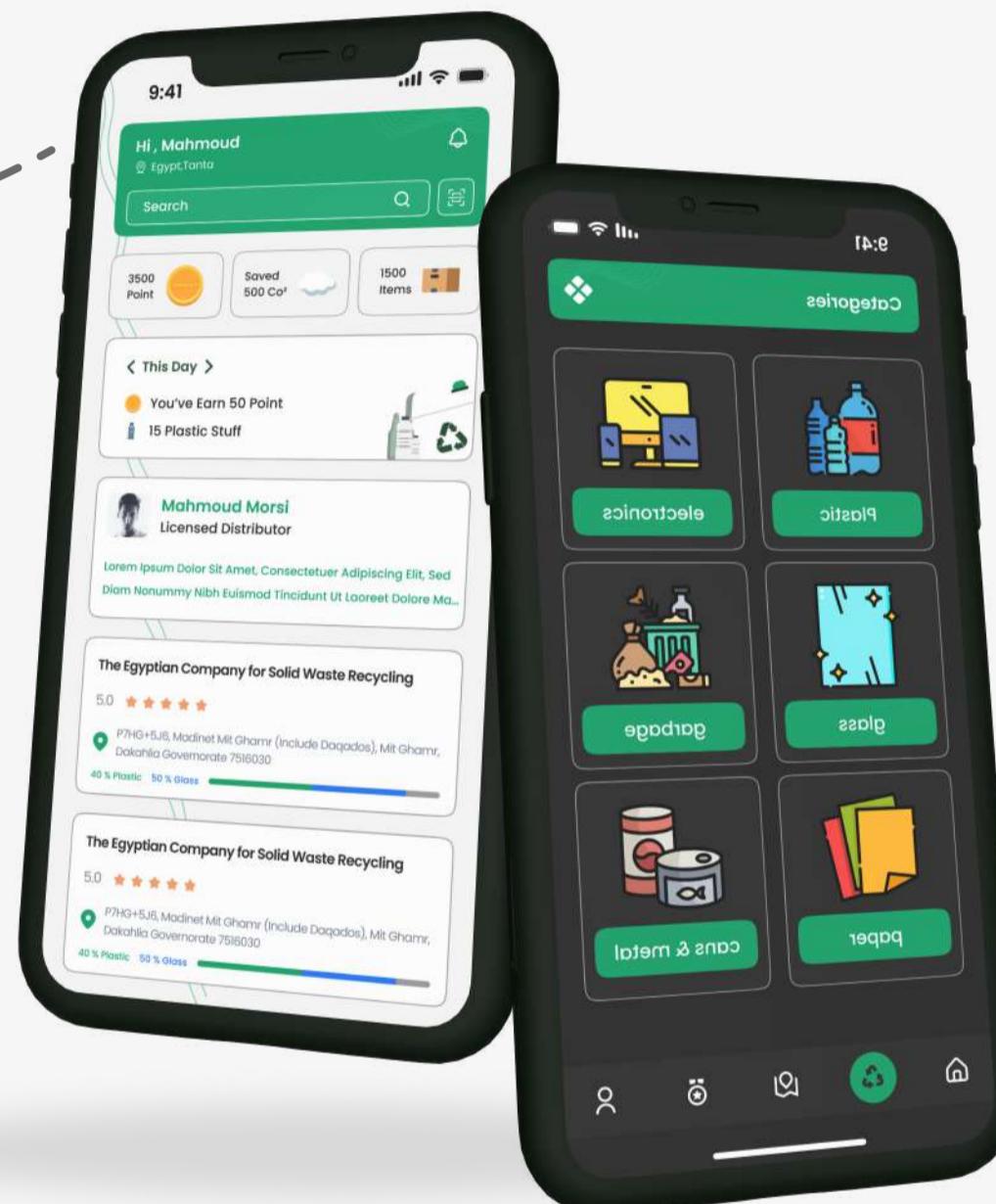
**Secondary color**  
#1B1B1B

**Background**  
#F6F6F6

**Stroke mid gray**  
#9A9A9A

**White**  
#FFFFFF

**Text mid gray**  
#99ABAB



**Background**  
#212121

**Light Black**  
#292929

**Error**  
#FF0000

## Typography

# Poppins

Regular   Medium   Semibold   **Bold**

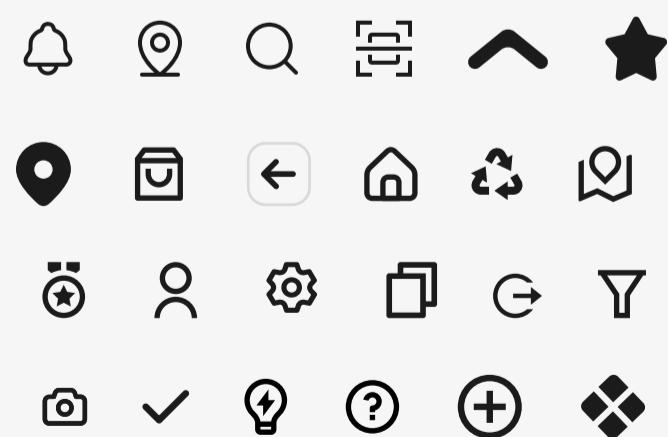
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

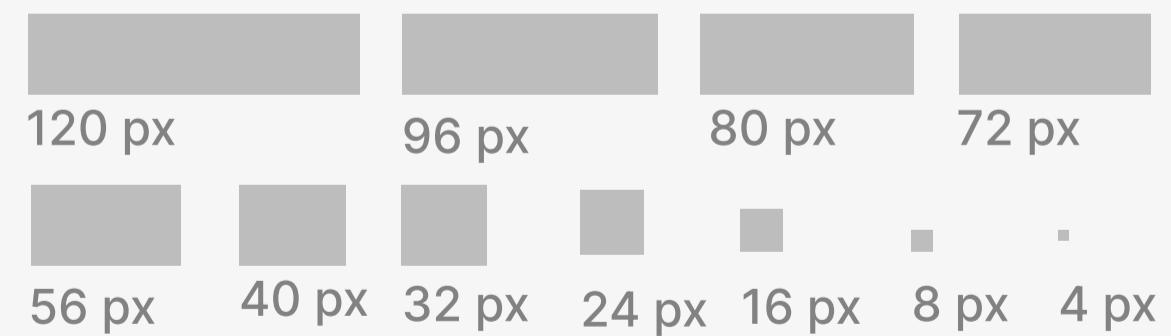
0 1 2 3 4 5 6 7 8 9

<b>Title</b>	<b>20</b>	
<b>Subtitle</b>	<b>16</b>	<b>Body1</b> 12
<b>Button</b>	<b>16</b>	<b>Body2</b> 10
<b>Caption</b>	<b>14</b>	<b>Body3</b> 8

## Icons



## Spacing

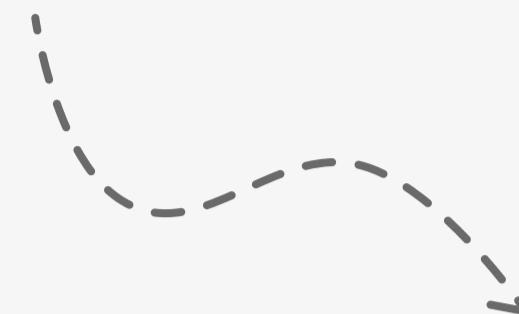
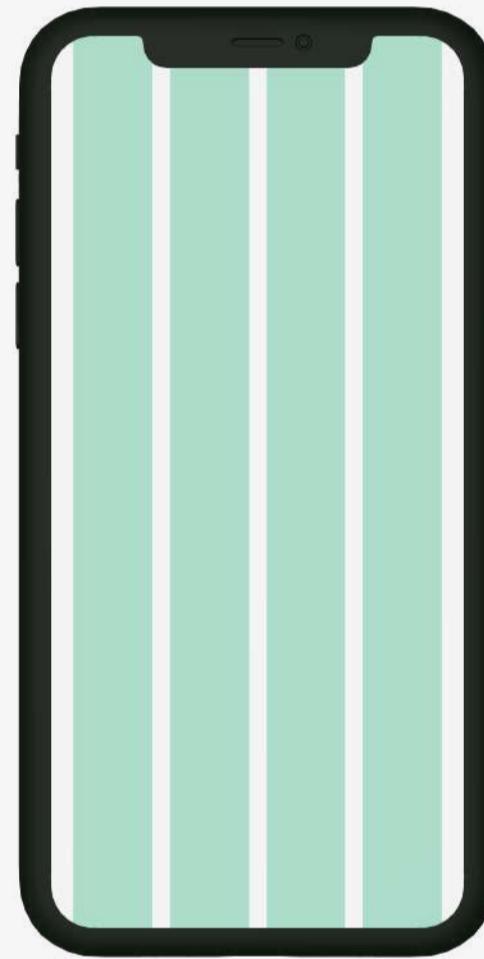


## Grid

**Columns: 4**

**Margin: 20**

**Gutter: 16**



## Elements

### Buttons

Primary button

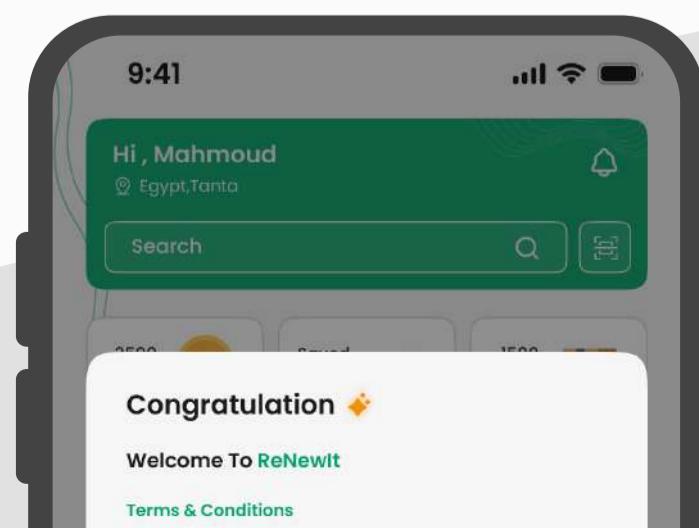
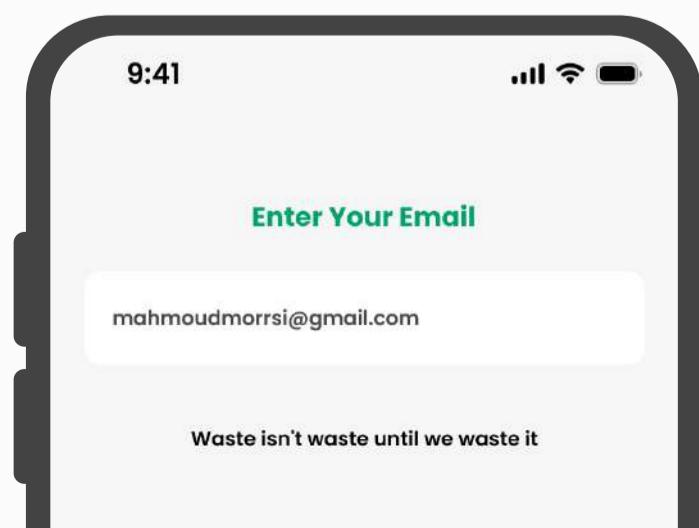
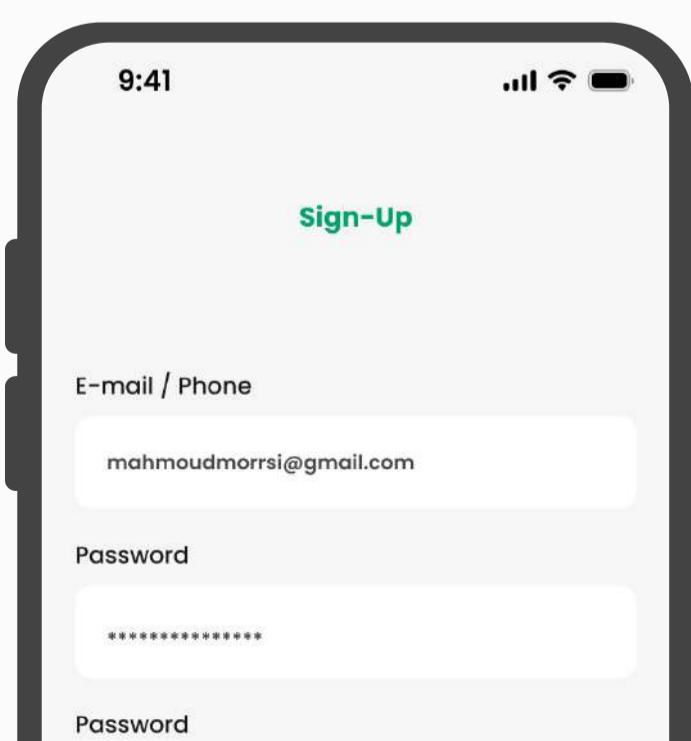
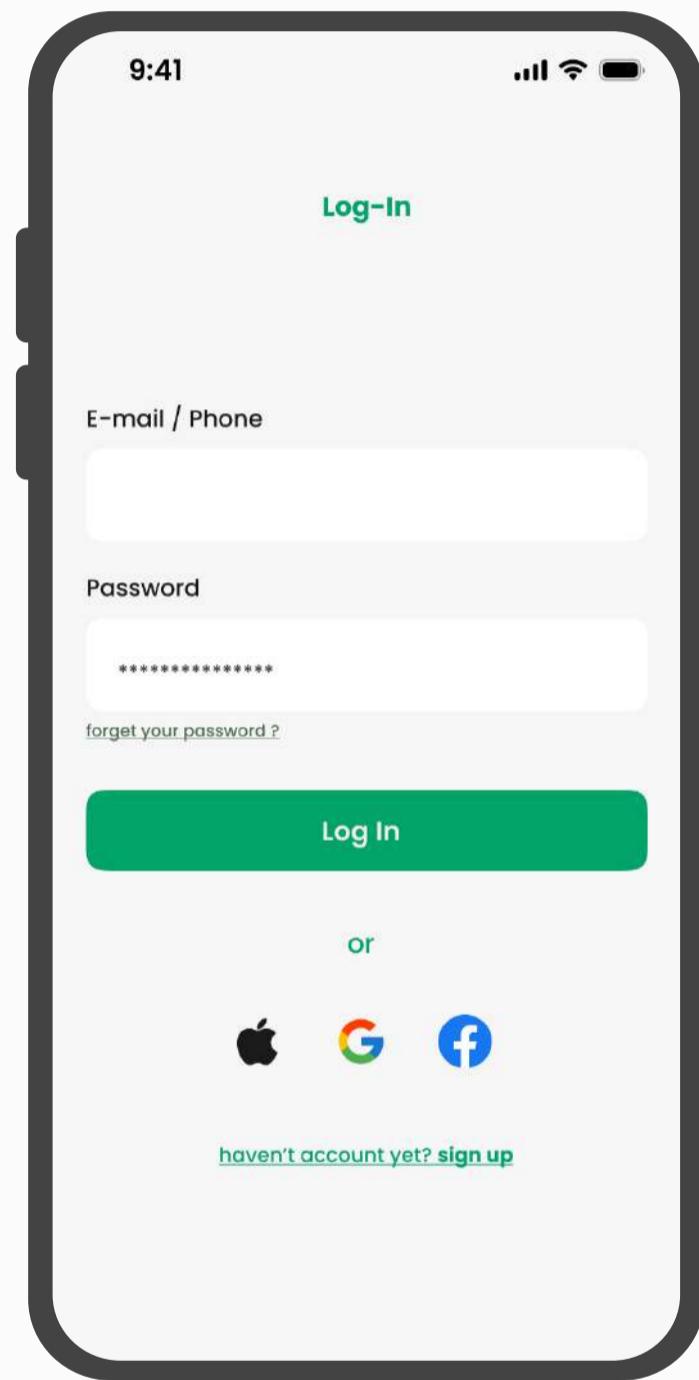
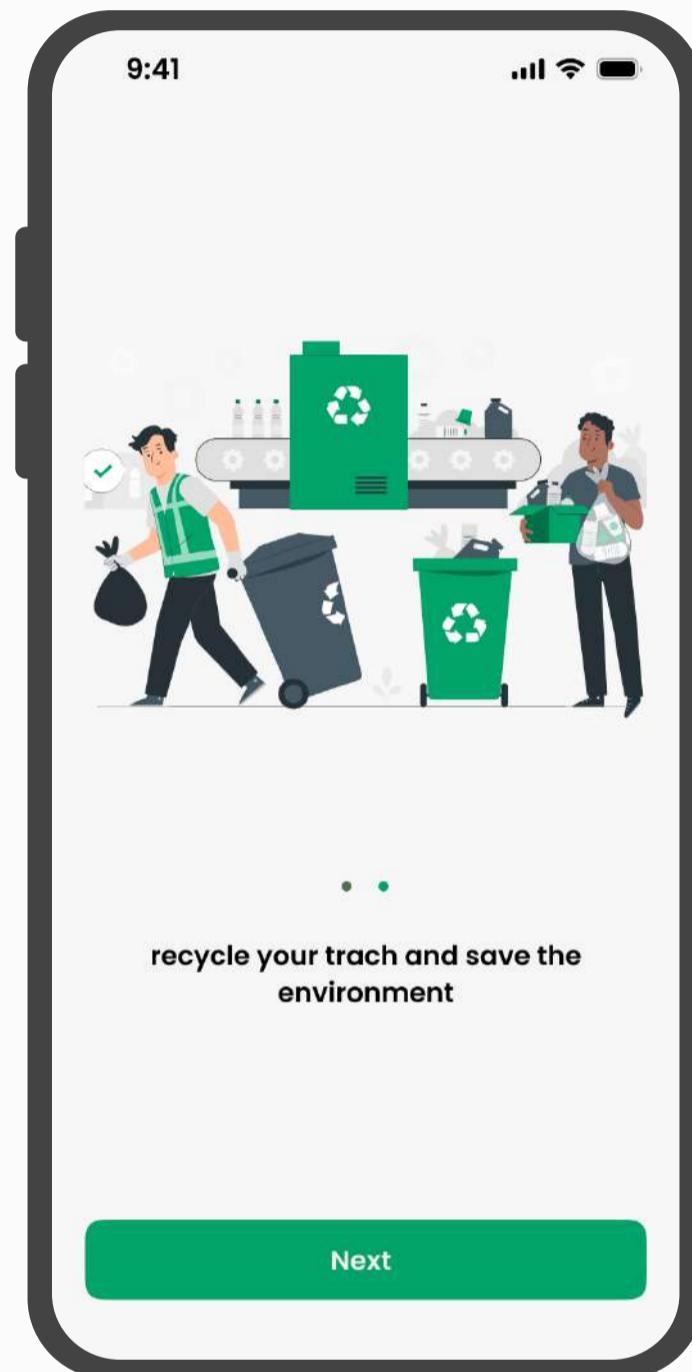
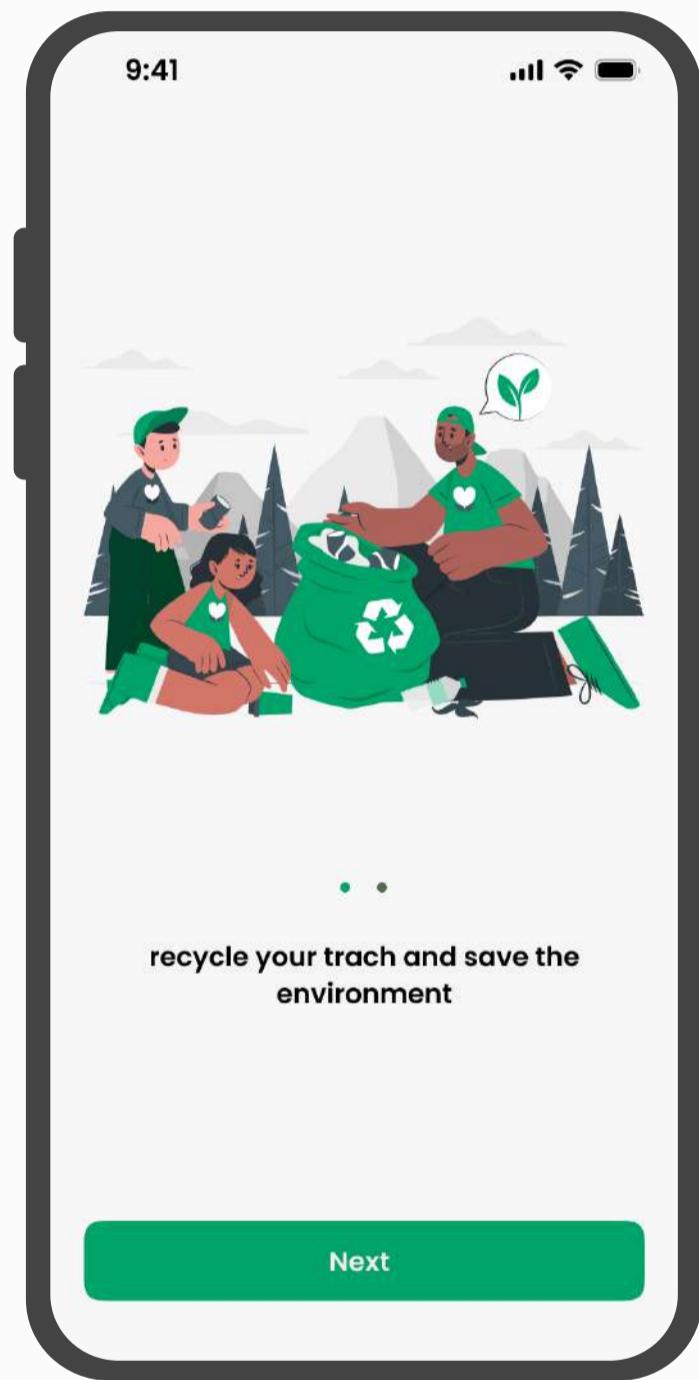
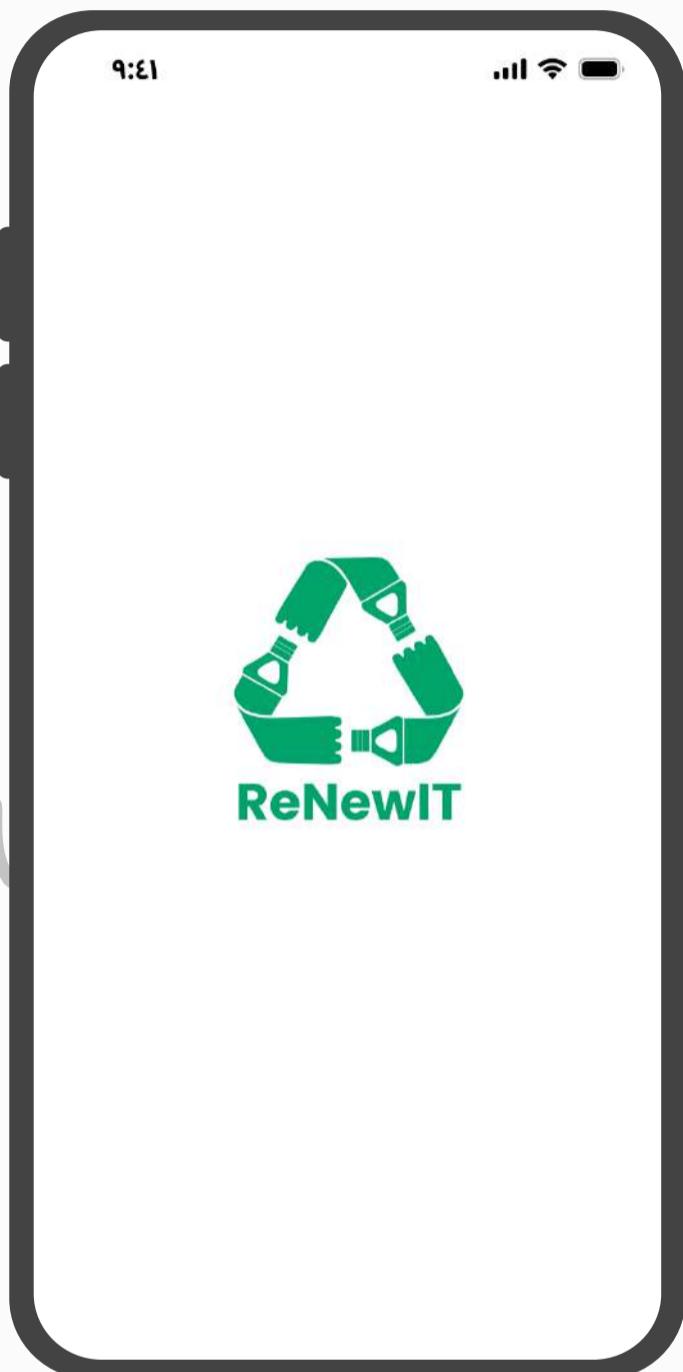
Secondary button

### Inputs

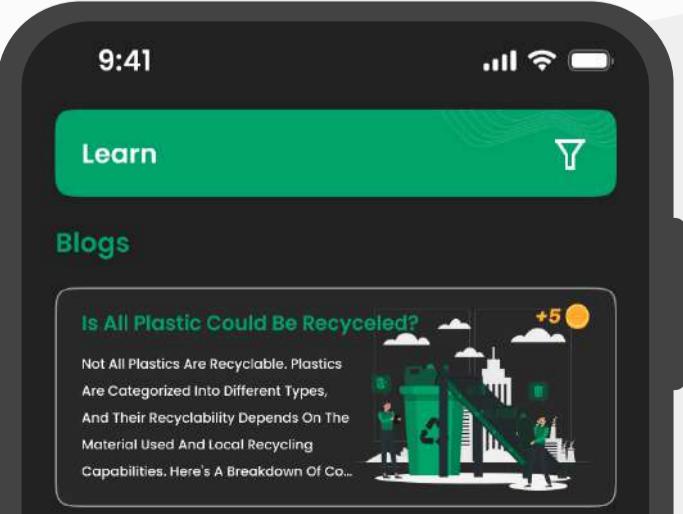
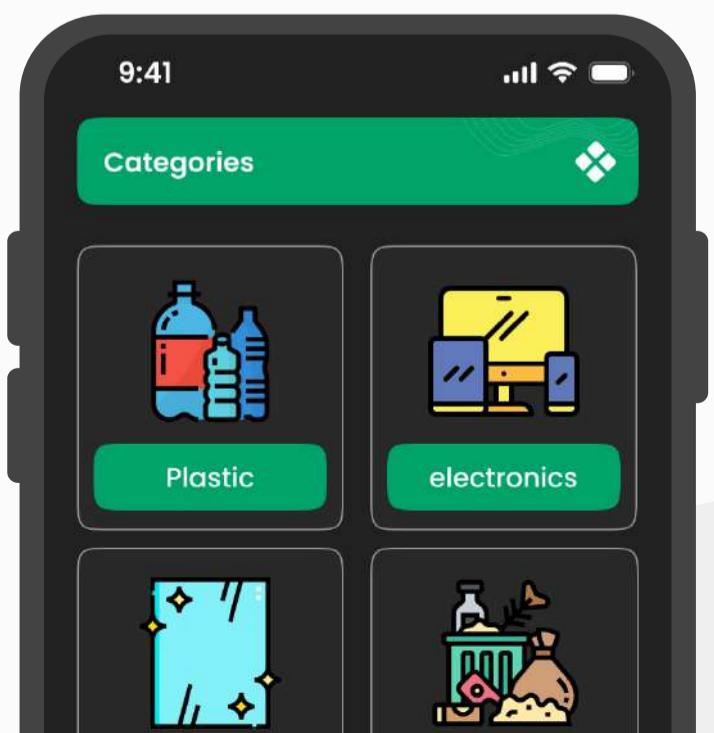
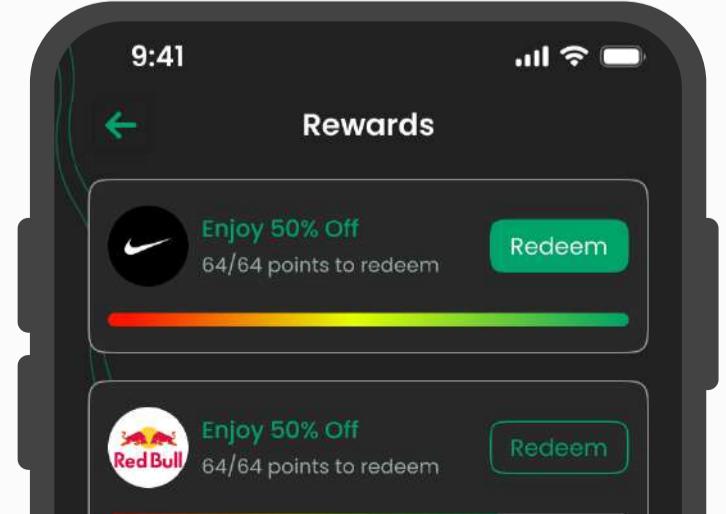
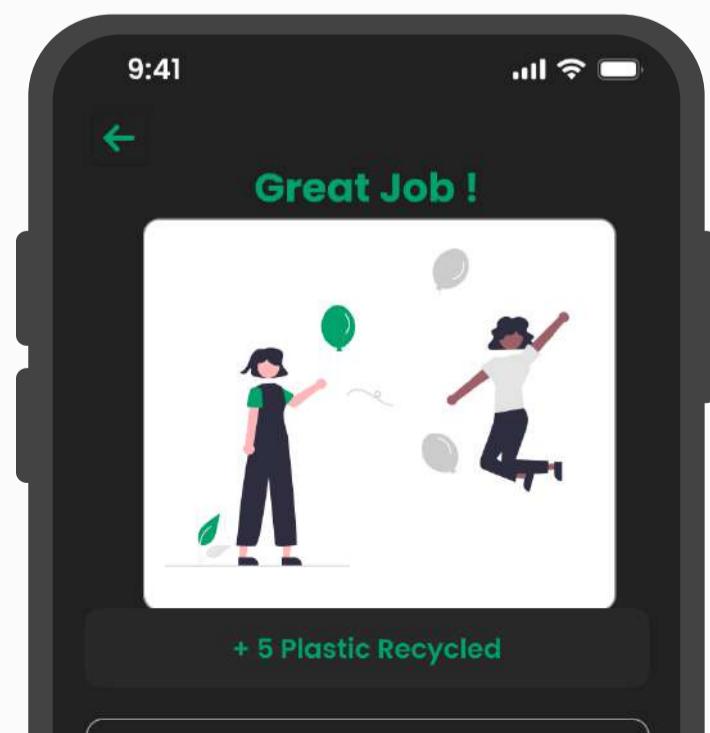
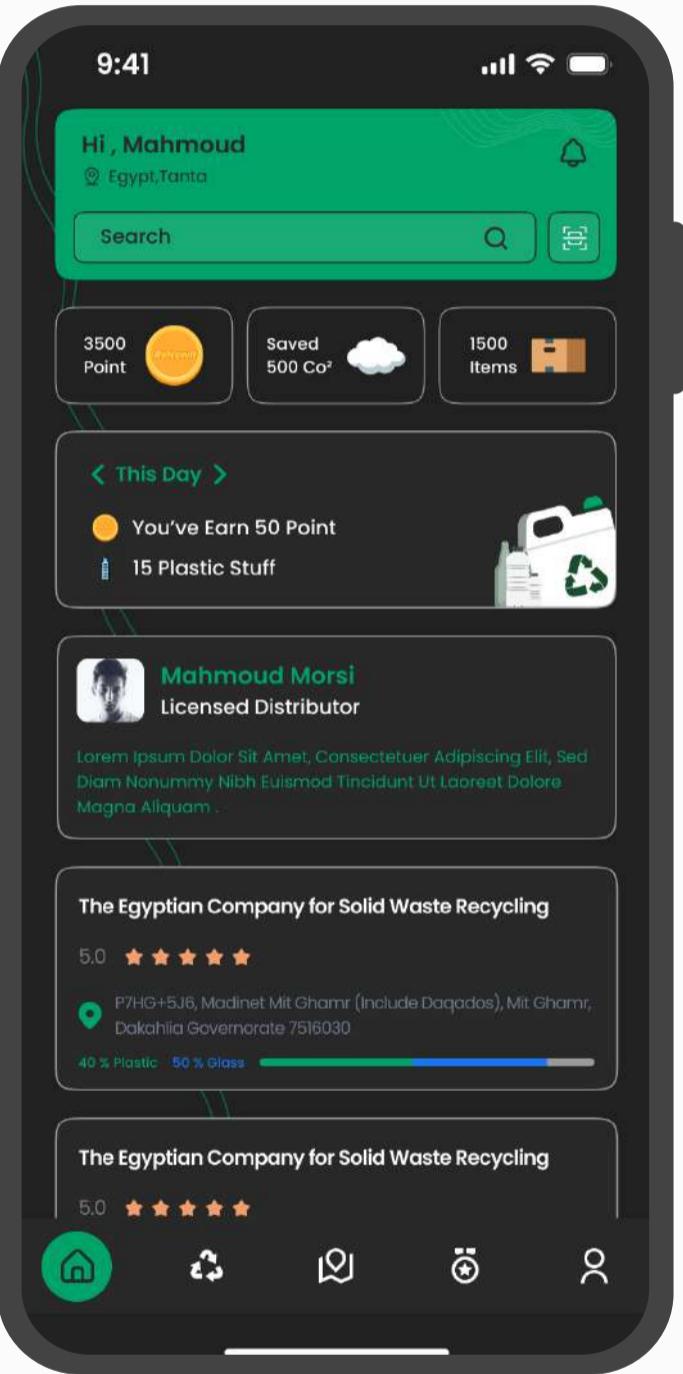
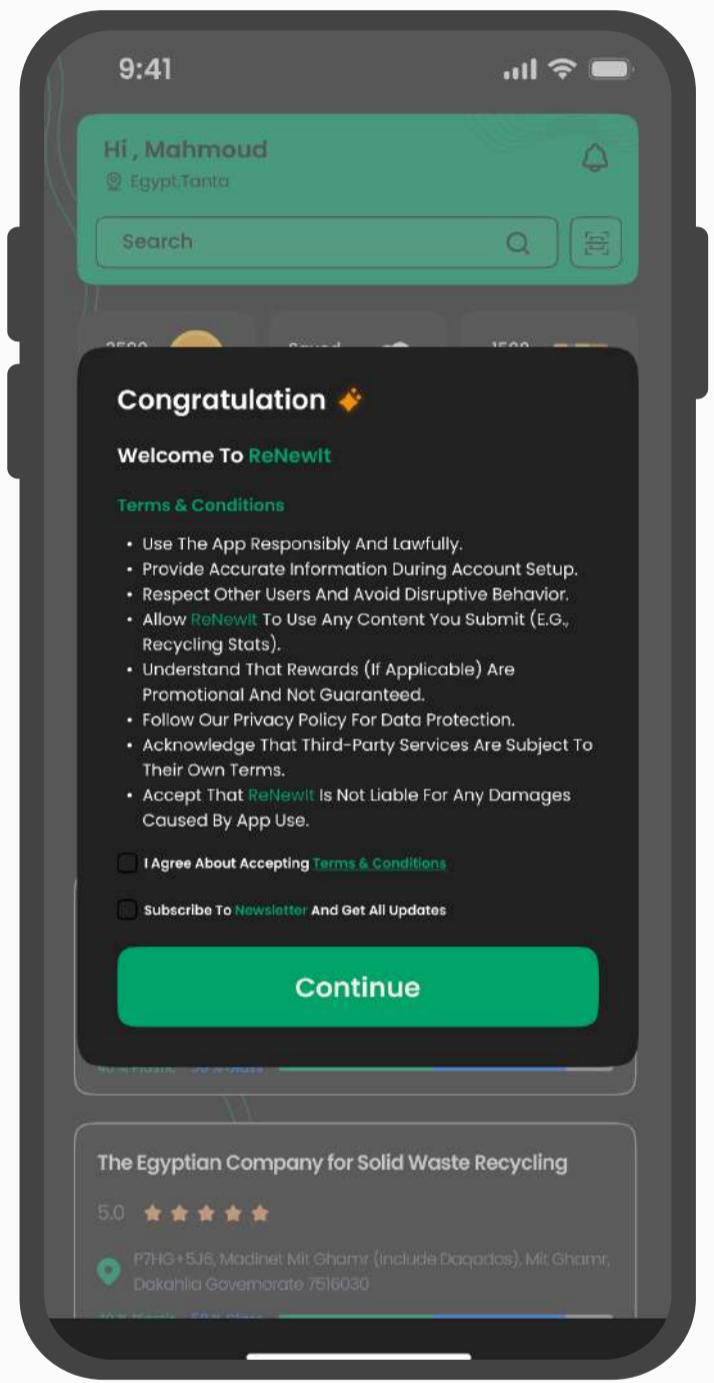
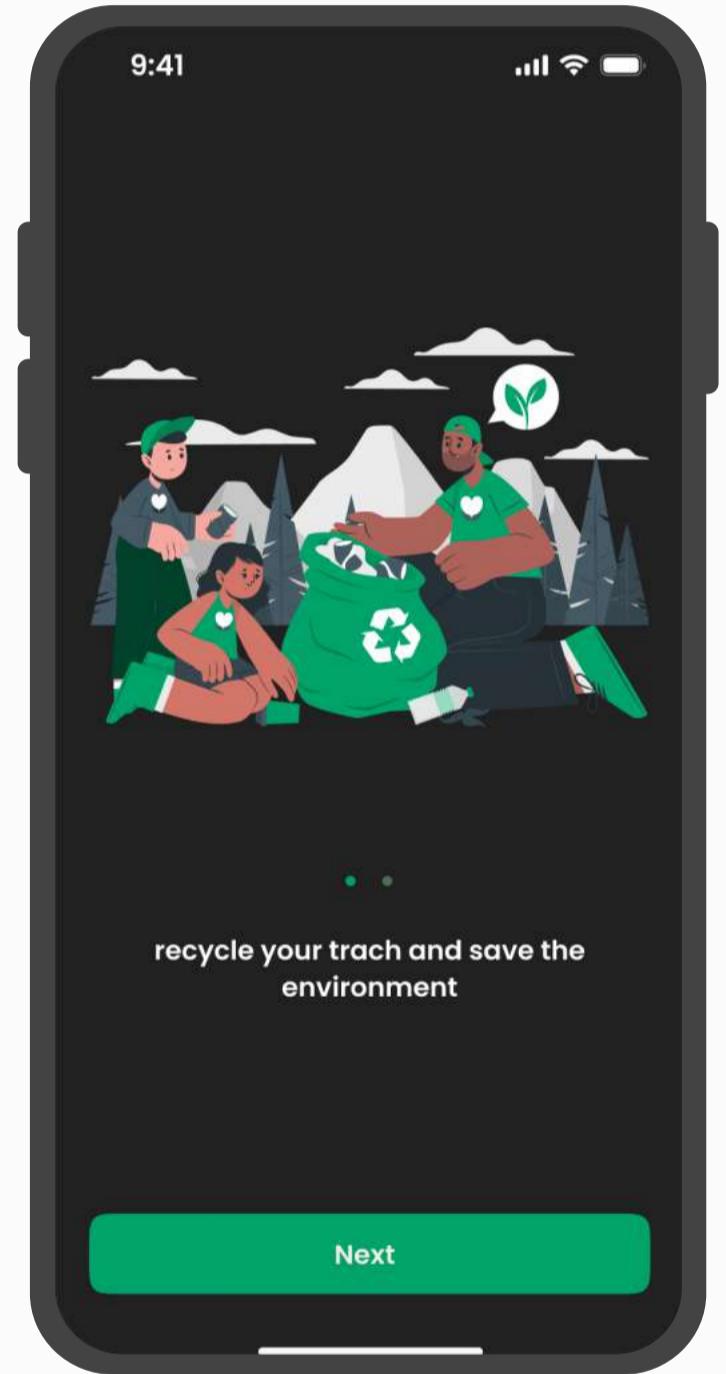
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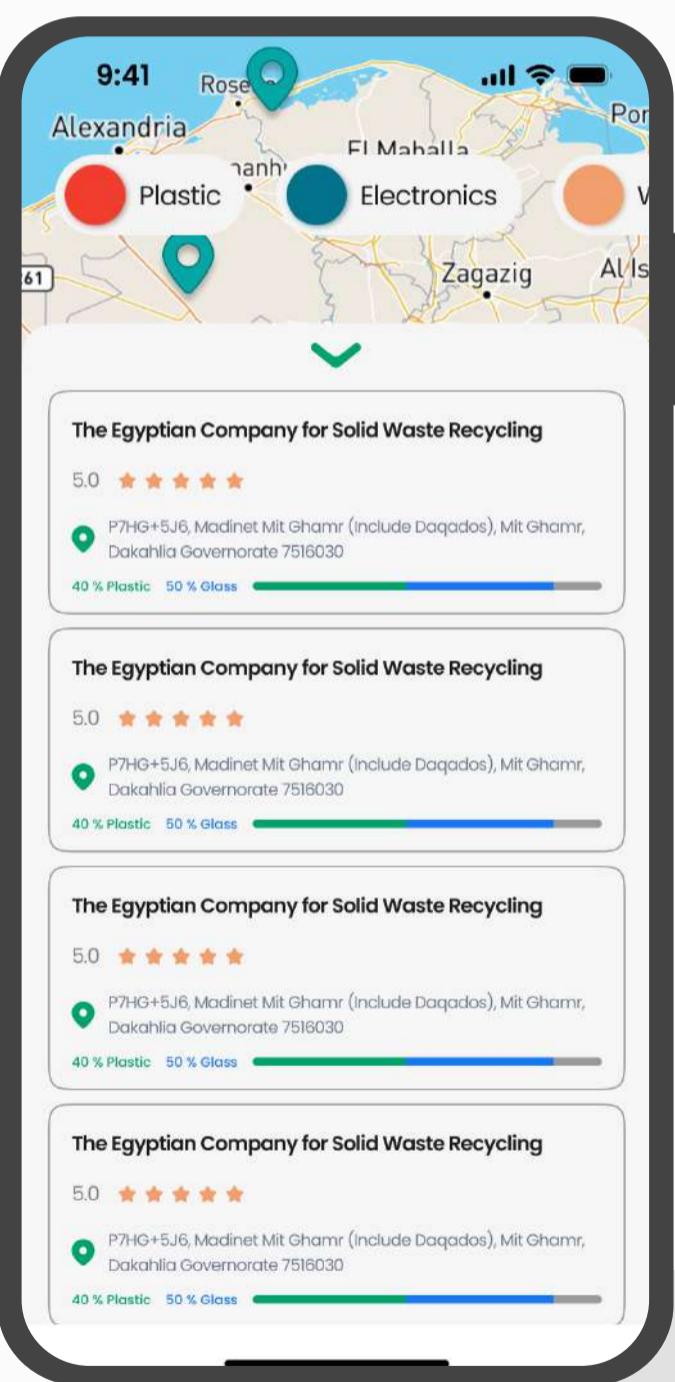
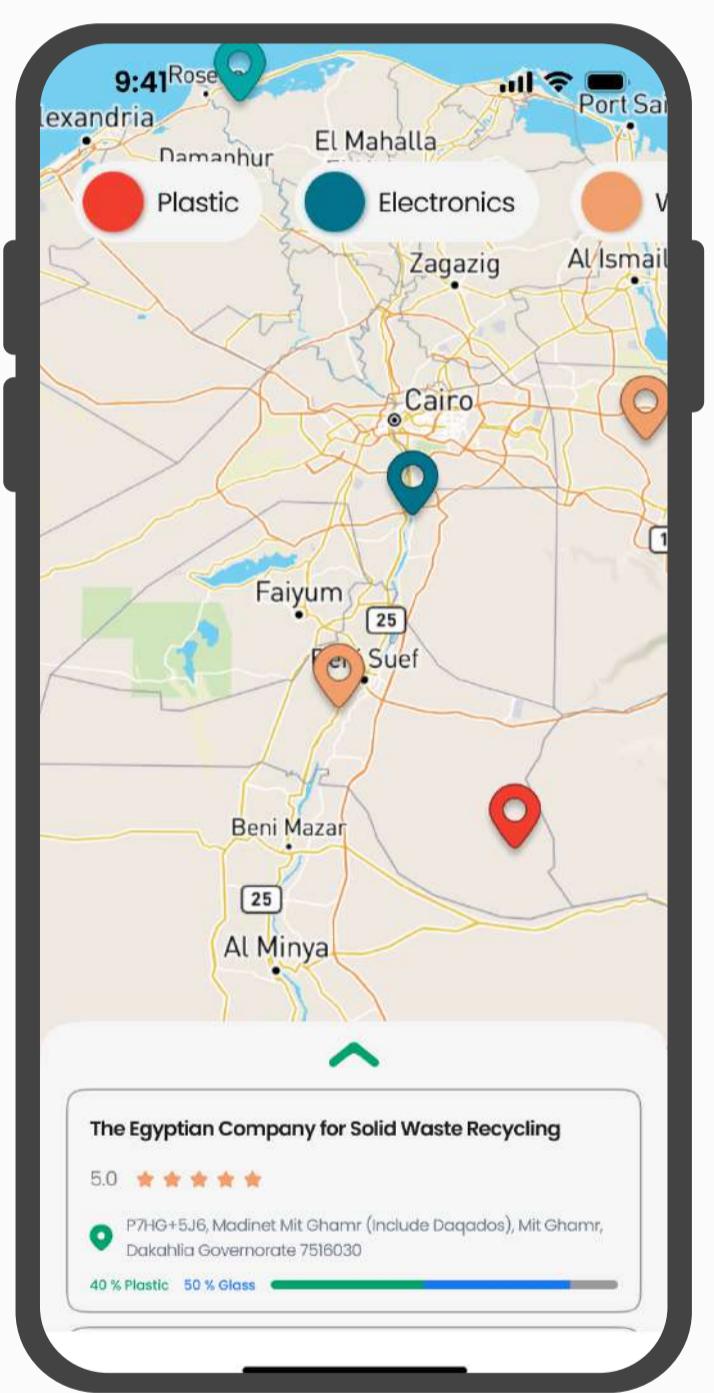
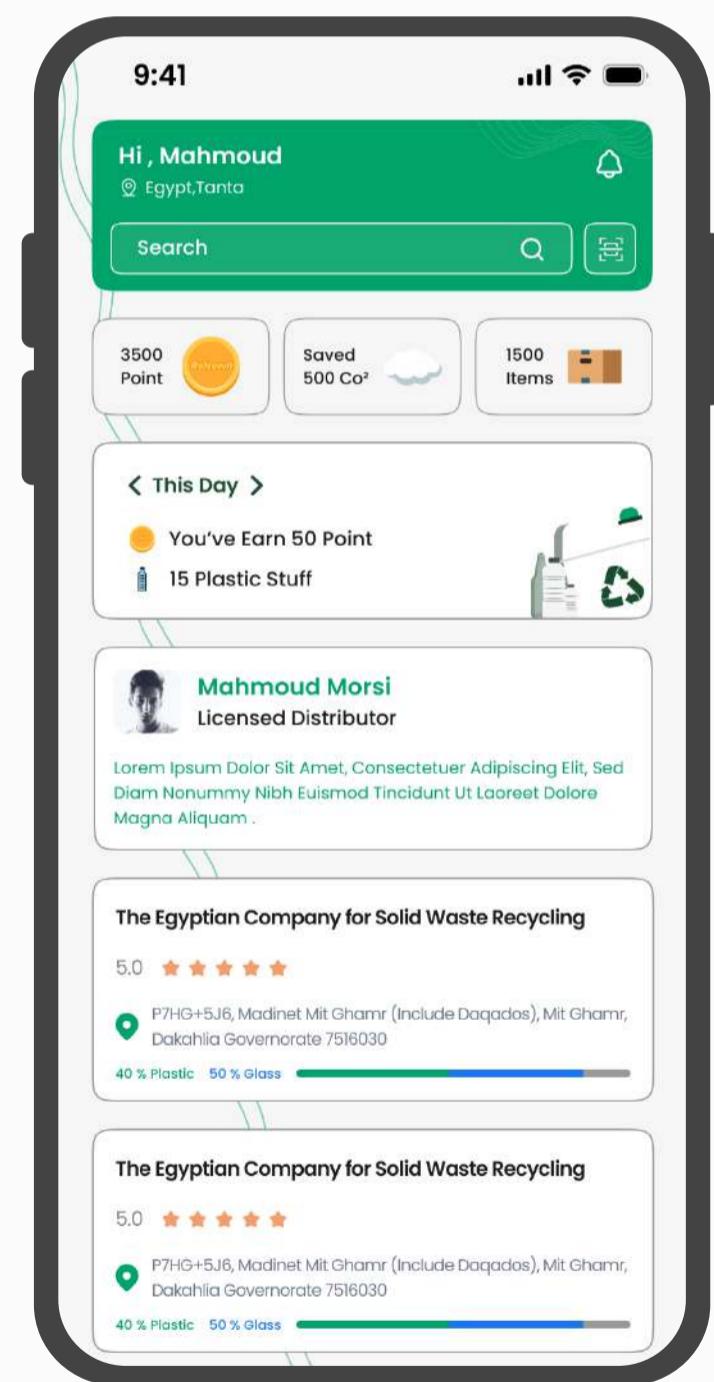
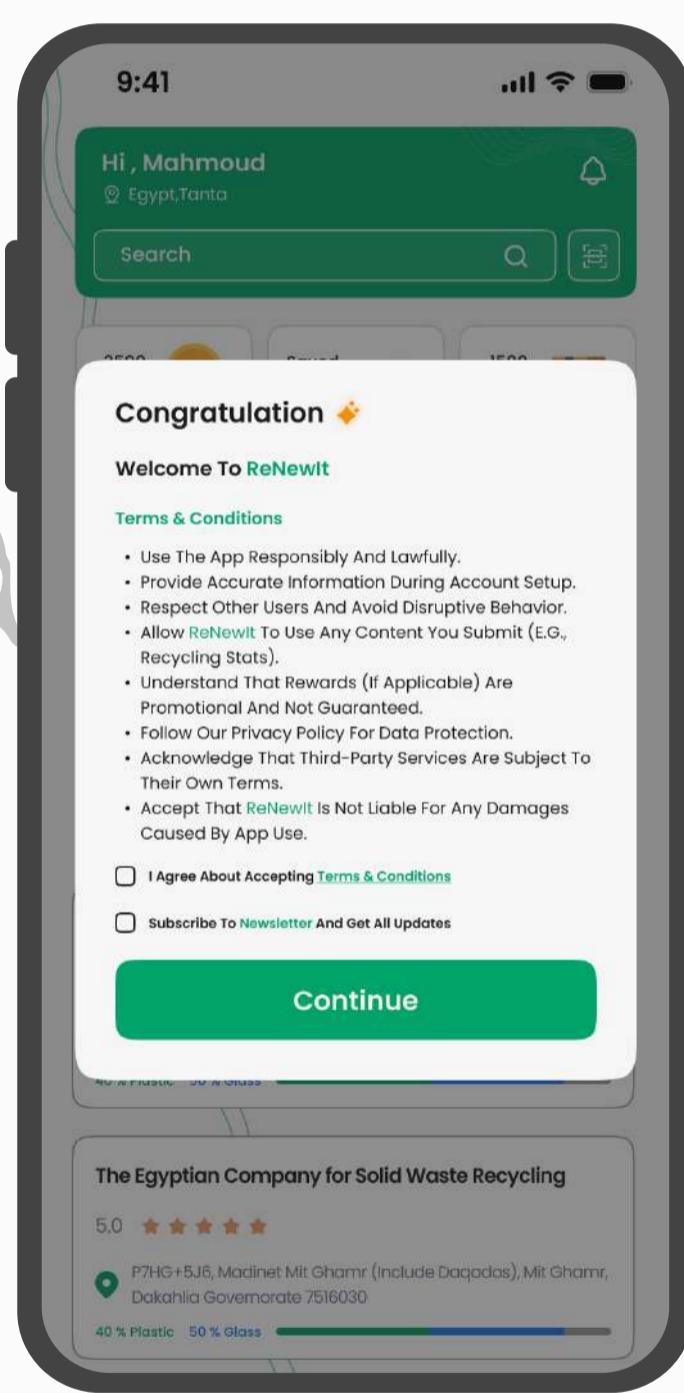
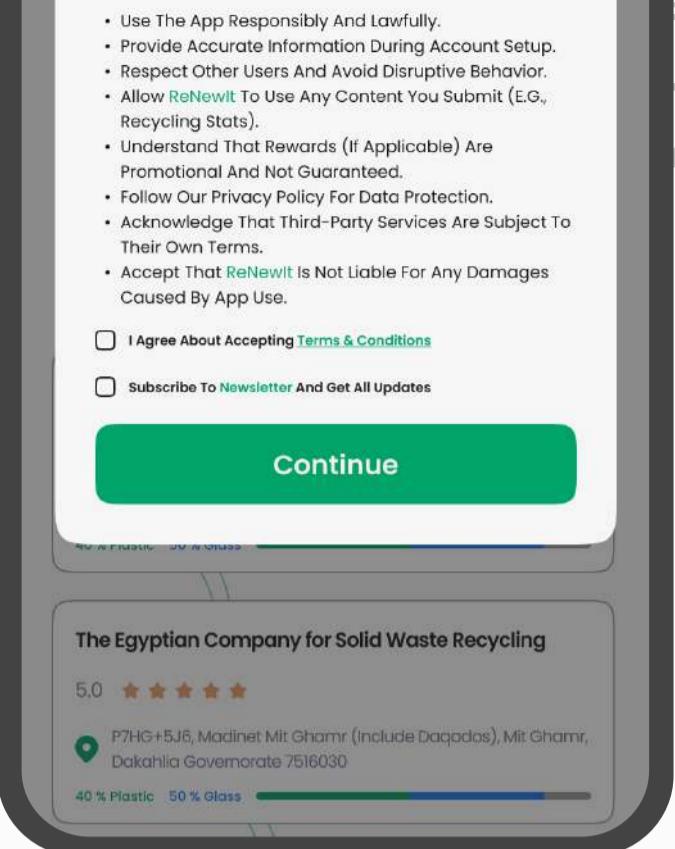
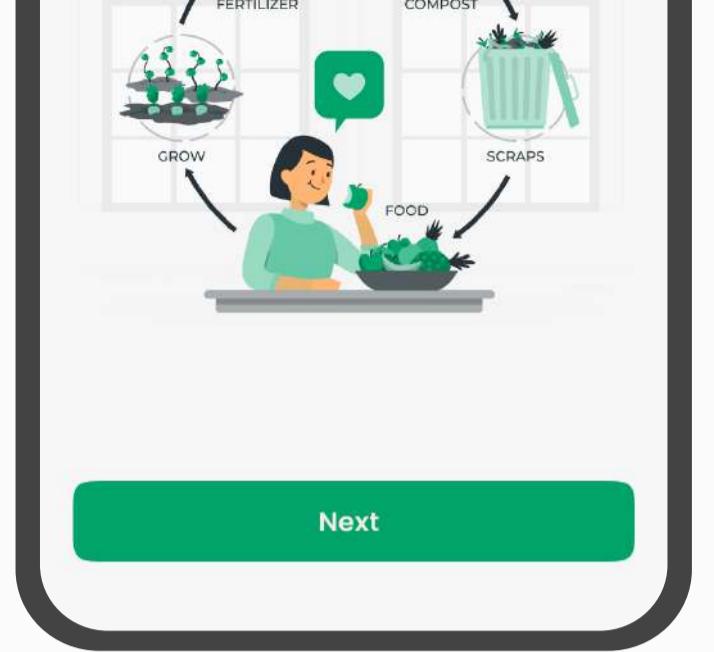
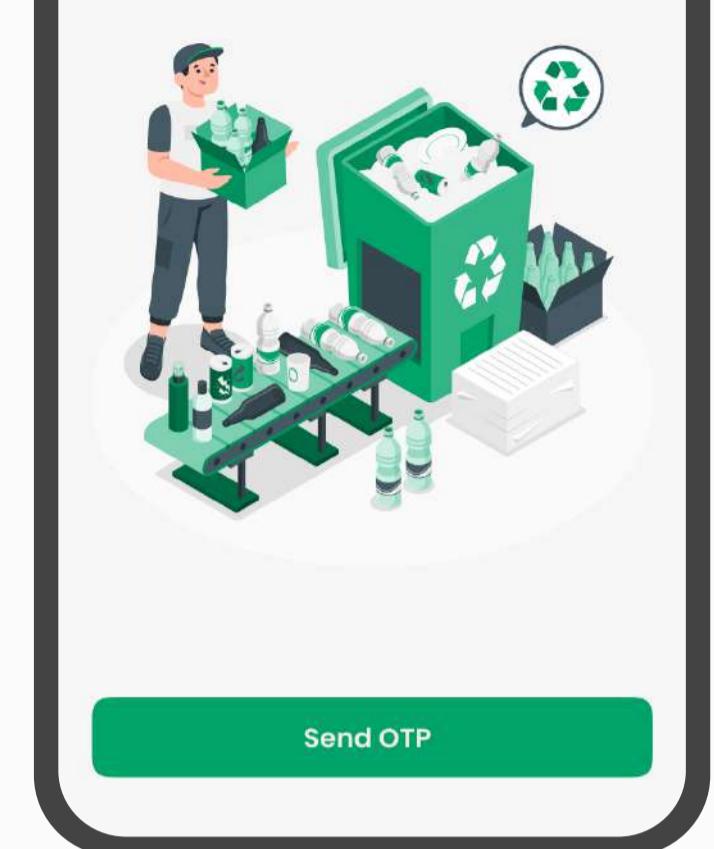
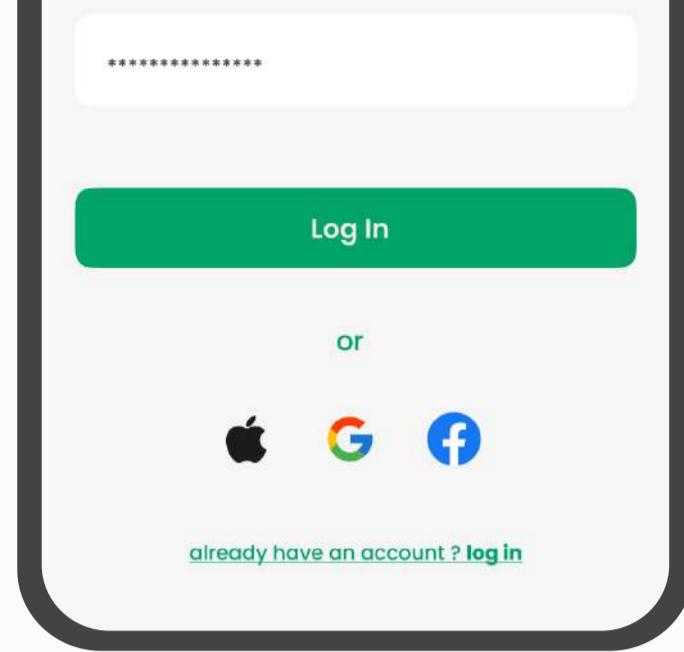


# Visual Design

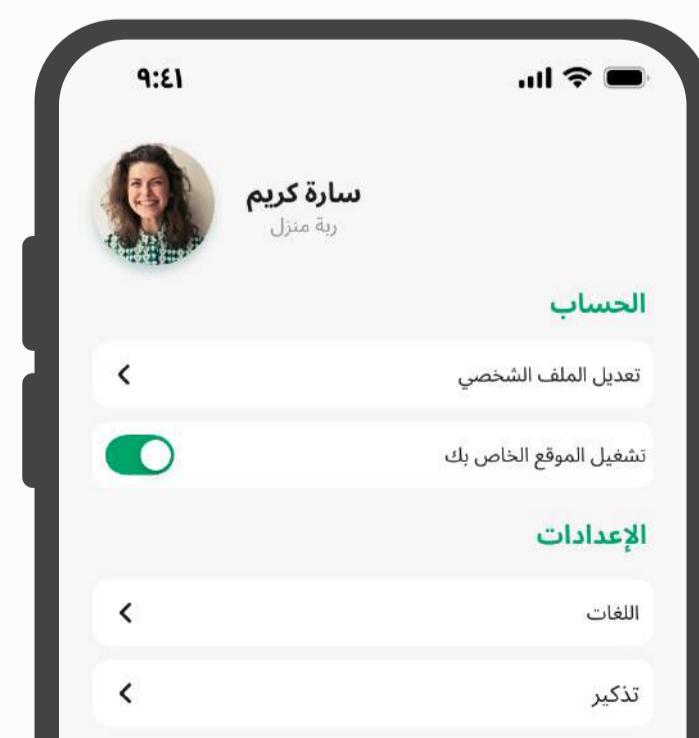
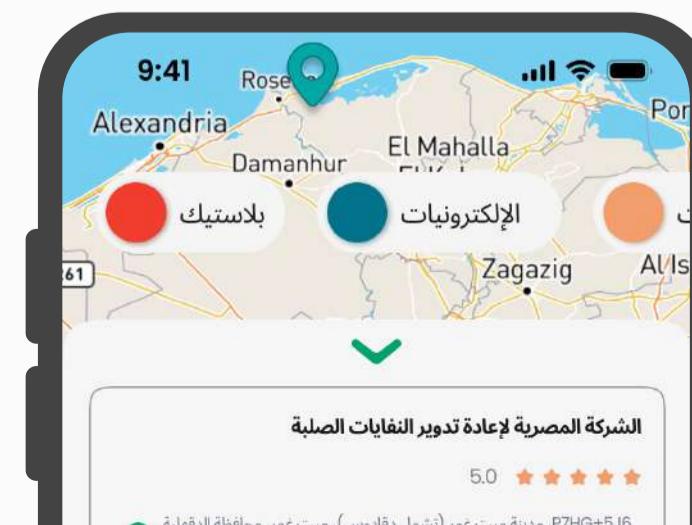
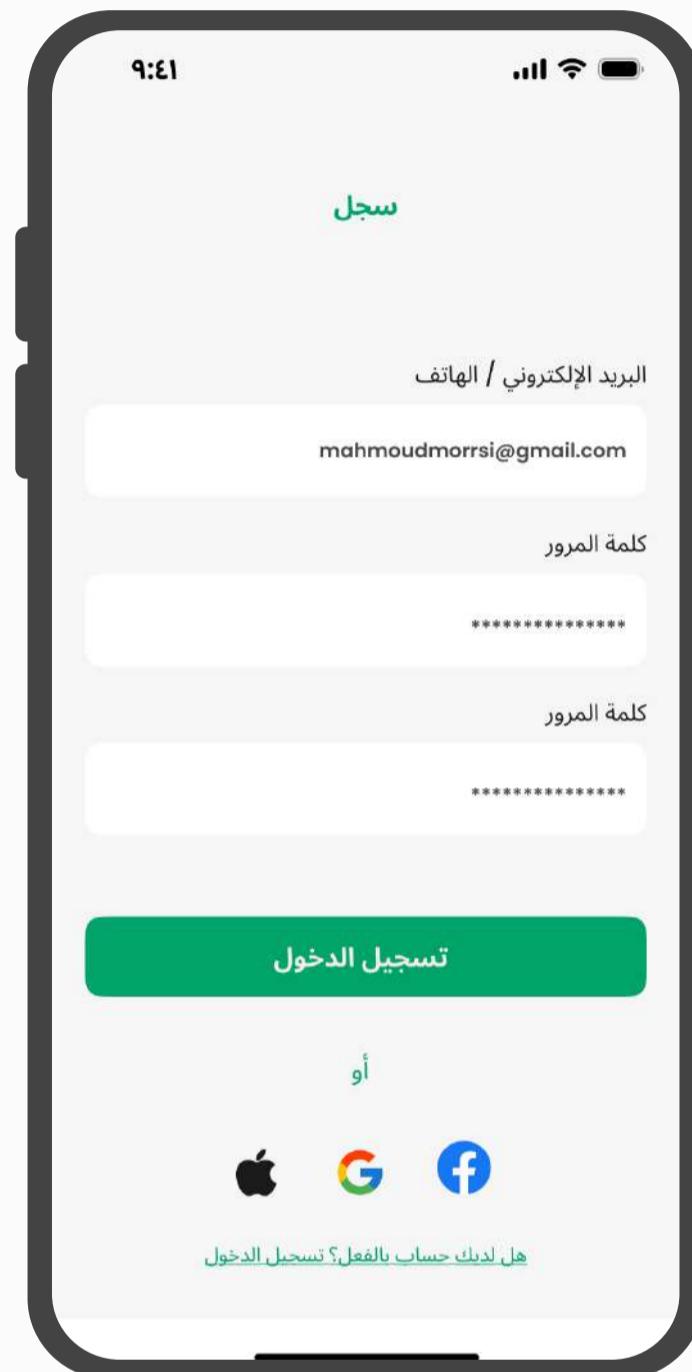
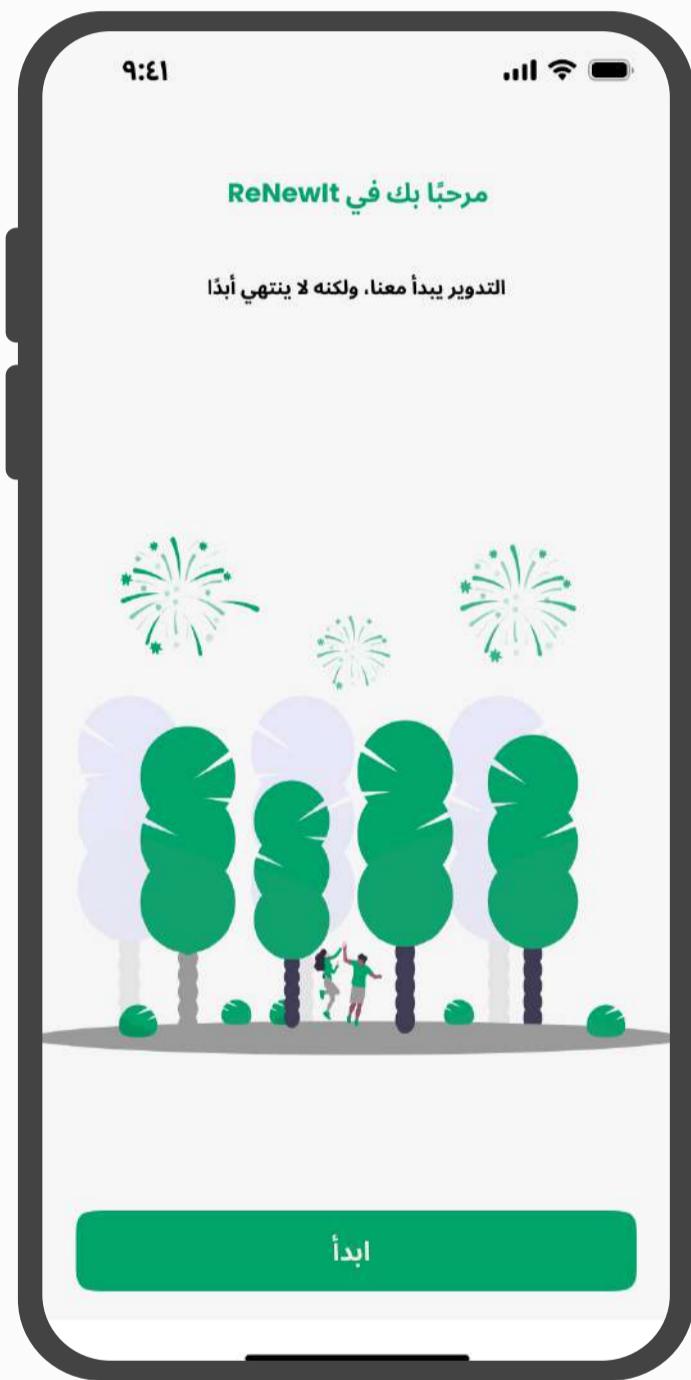


# Dark Mood

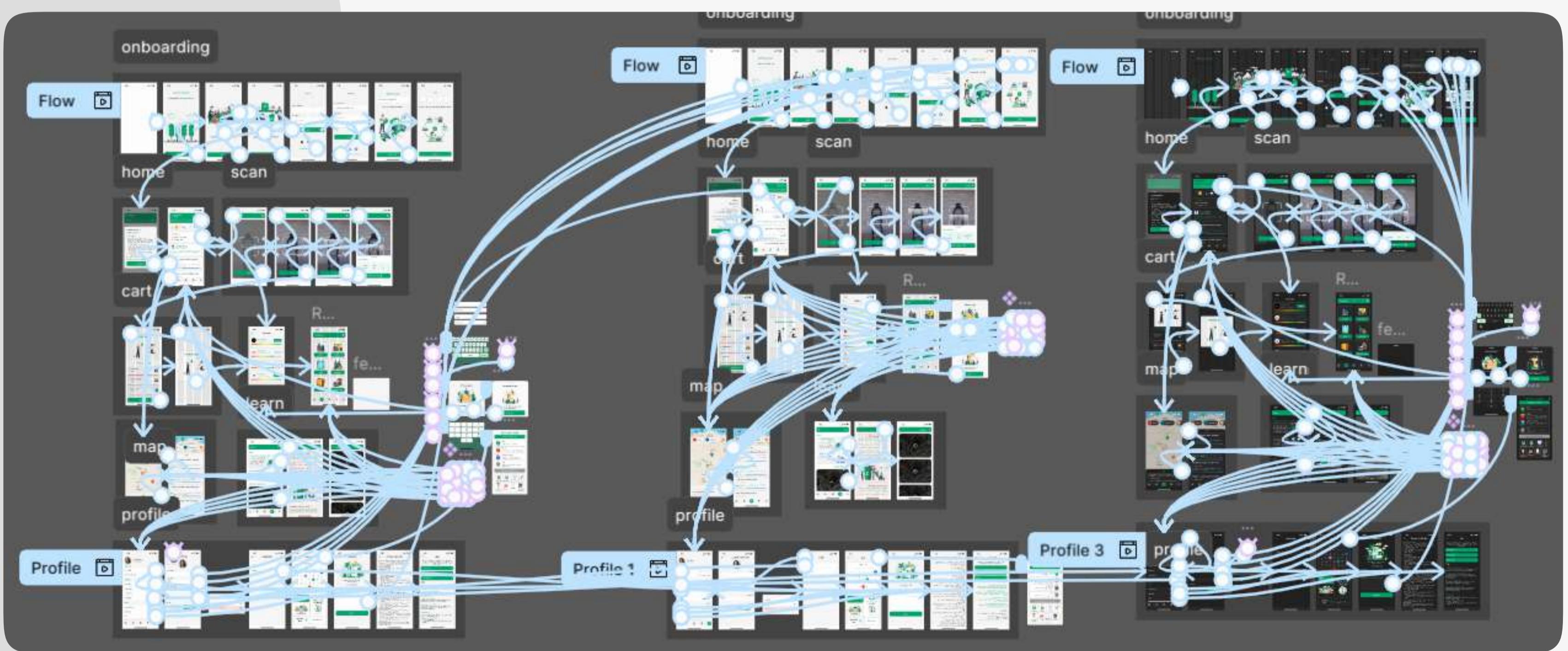




# Arabic feature



# Prototype



*At The End*



*ReNewIt*

*yAS\_247\_Champions Of Digital Art\_UI-UX\_Design\_Final\_Project*

*Thank You For Watching*