

V E L O V I B E





BACKGROUND

With the acceleration of urbanization and sustainable development in China, more and more urban residents will pay attention to cycling in the city to improve their own health. In my investigation, I found that urban residents, especially urban families, are willing to collectively rent shared bicycles for sports and enhancing the relationship between couples and parents. However, the sports performance and interaction methods of ordinary shared bicycles have certain limitations, and the overall user experience does not meet the cycling needs of **future urban residents**.

Solutions



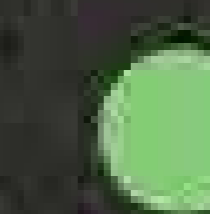
service
design



excellent
interaction



intelligent
sys

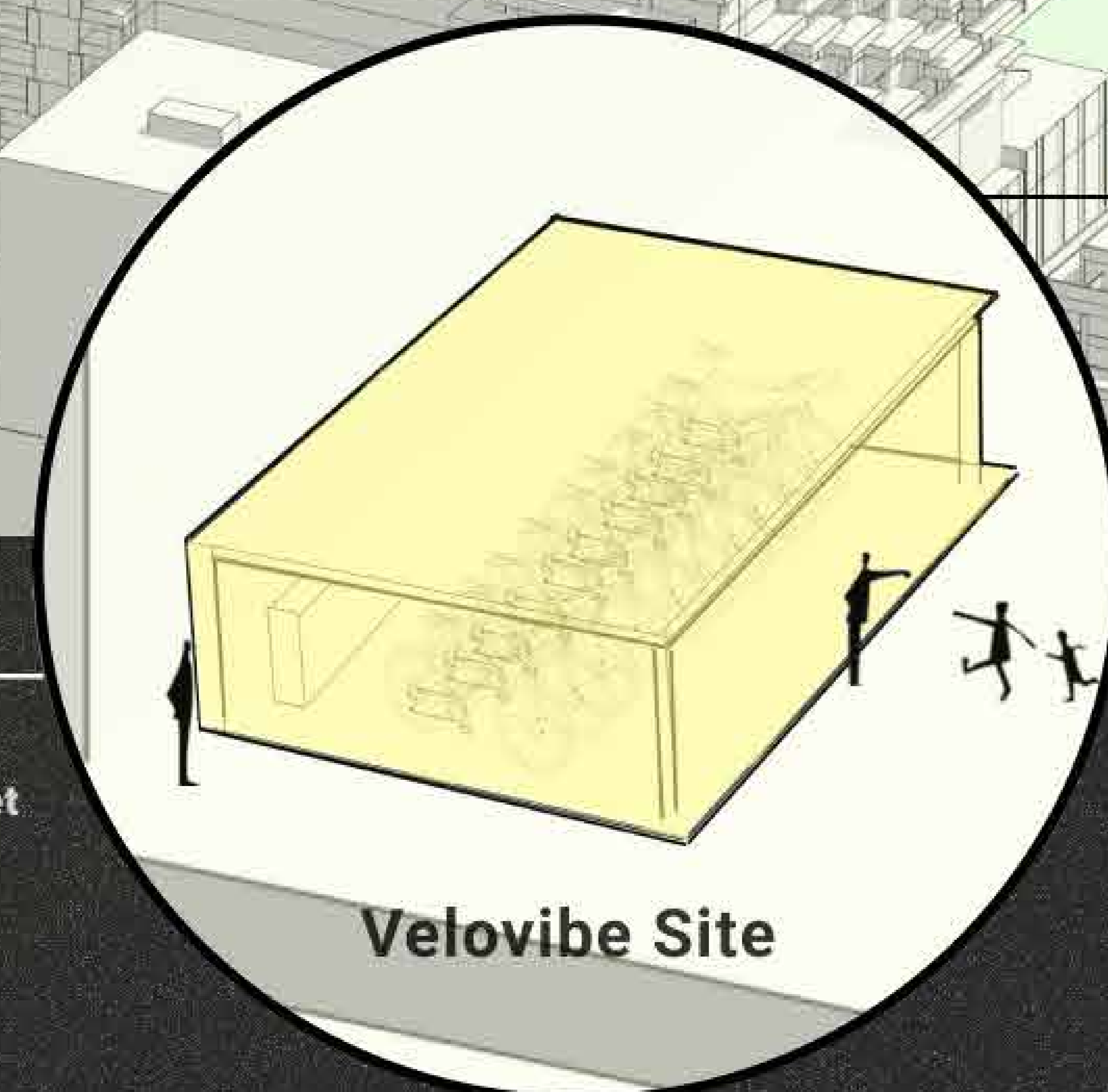
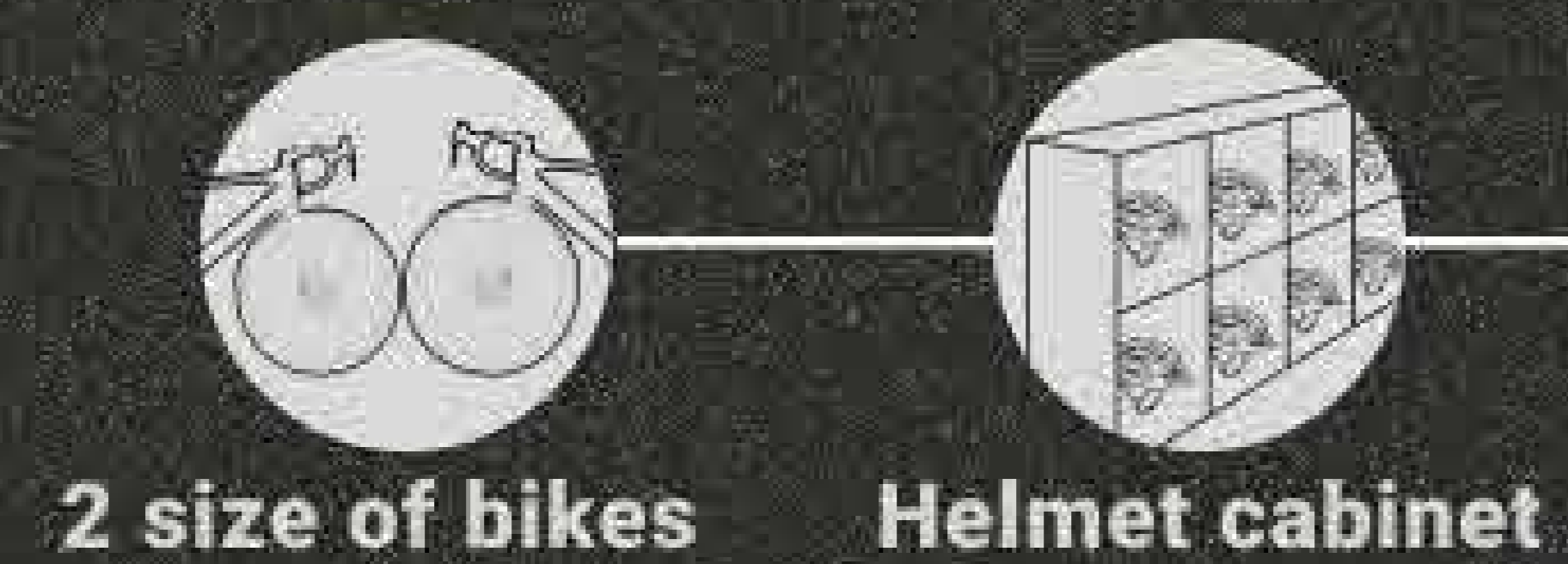
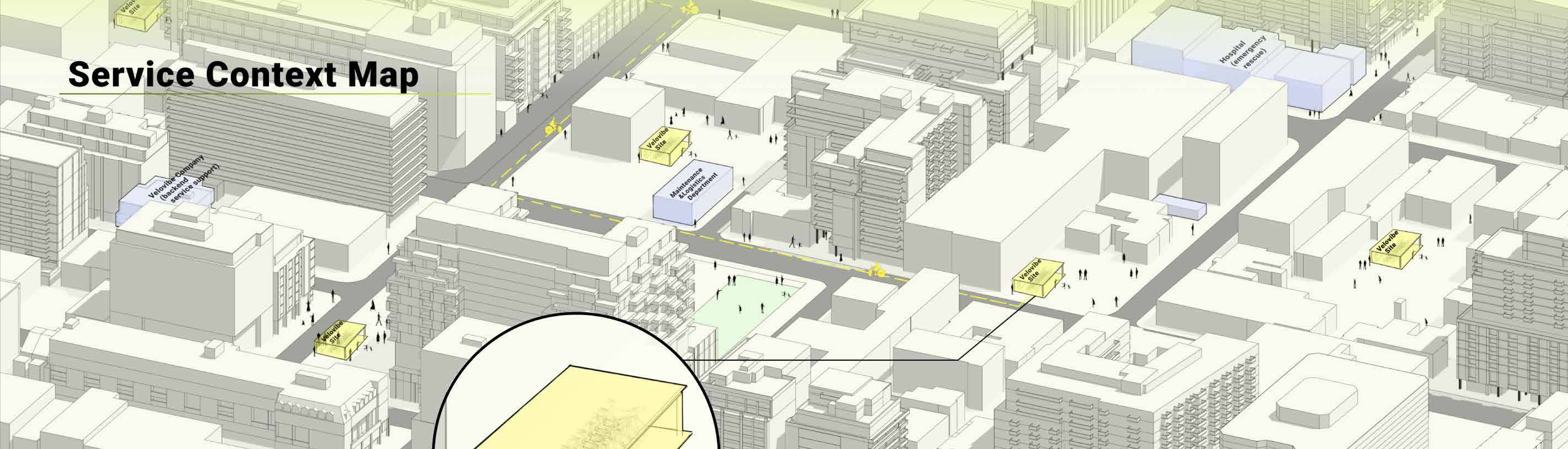


departmental
collaboration

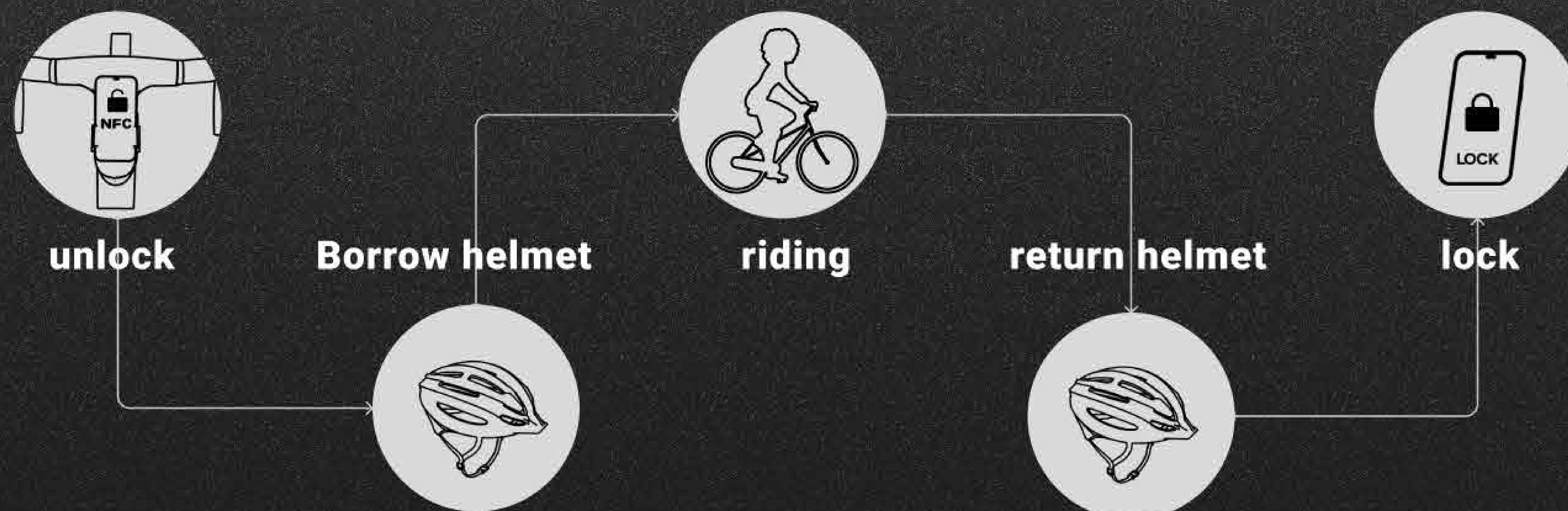
sustainability

Sports oriented shared bicycles should refer to the architecture of professional sports bicycles. The improvement of user experience not only requires improvements to the bicycle itself, but also research on the entire bicycle service system, designing from aspects such as intelligent systems, human-computer interaction, service processes, and multi departmental collaboration, ect. Besides, Sustainability needs to be given special attention.

Service Context Map



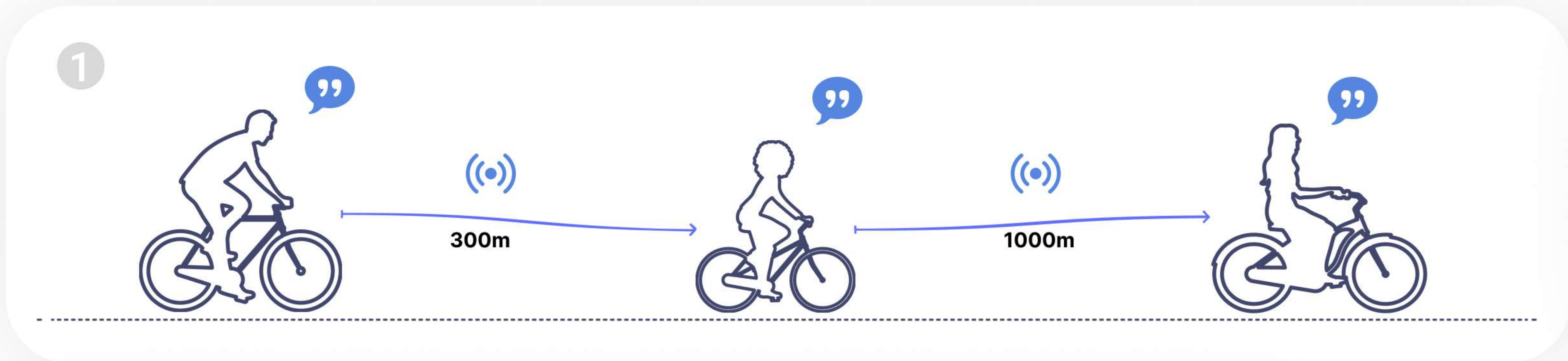
Use Process



Product Concept

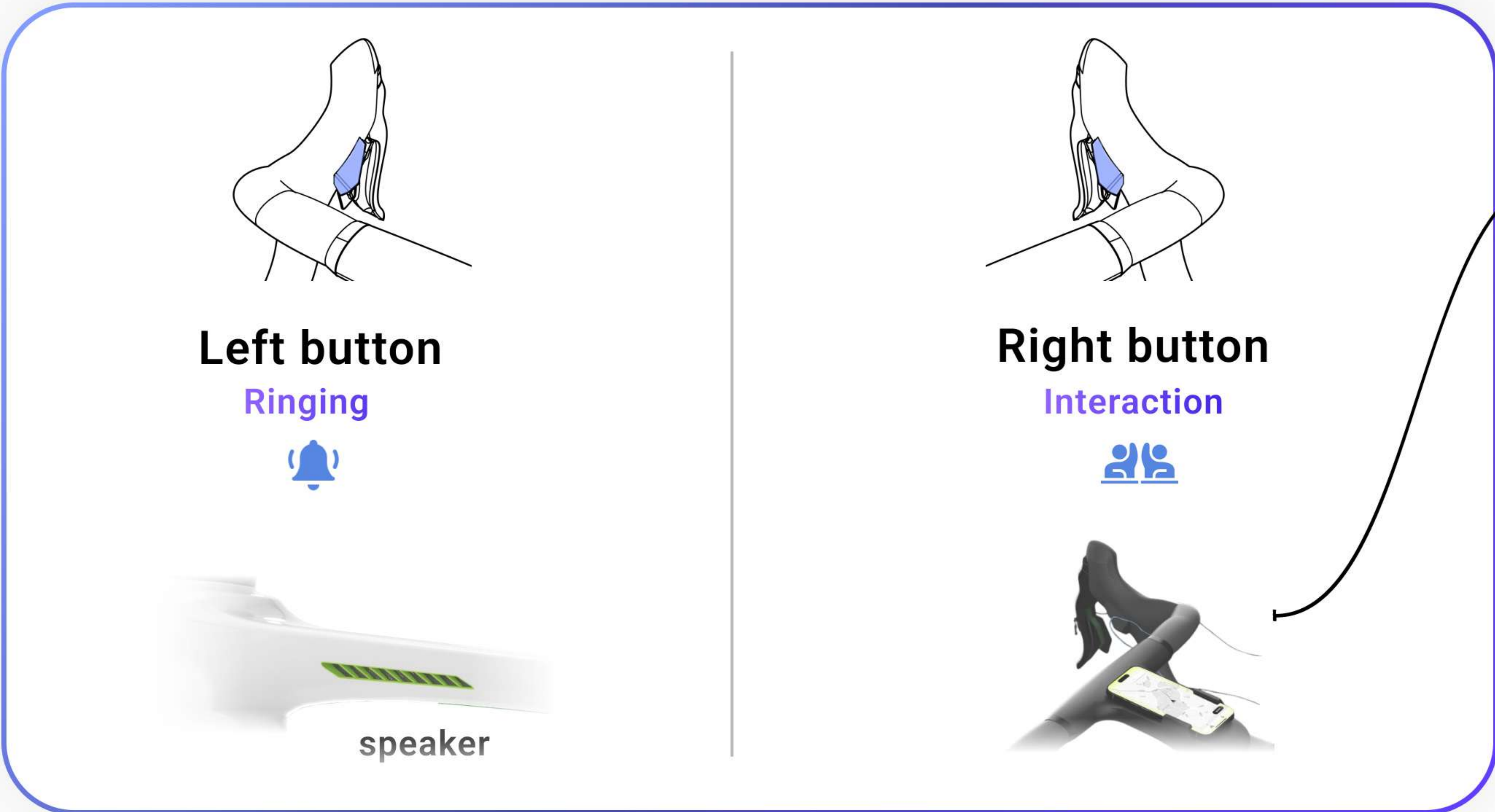
Velovibe is a shared bicycle designed for urban residents based on cycling sports. The overall architecture is designed based on road bikes and mountain bikes, and the bike has been redesigned from the perspective of individual user experience and interactive experience in family riding scenarios. Combined with intelligent systems such as FastNFC unlocking, weather and route prompts, vibration and voice interaction, the overall usage process is smooth and fun, making it more suitable for family cycling sports.

Scenario&Function



Real-time Chat
& Interaction

The best part of riding with families or friends are sharing your feelings with each other. And we always want our companions to sense our existing in this process no matter how far. Yet when you ride too far, your companions are no able to hear you for the Wind speed and distance.



INTERACTION BUTTON USAGE

Short Press

Make the companion's bike handle vibrate for reminder or interaction


Auditory accessibility

Long Press

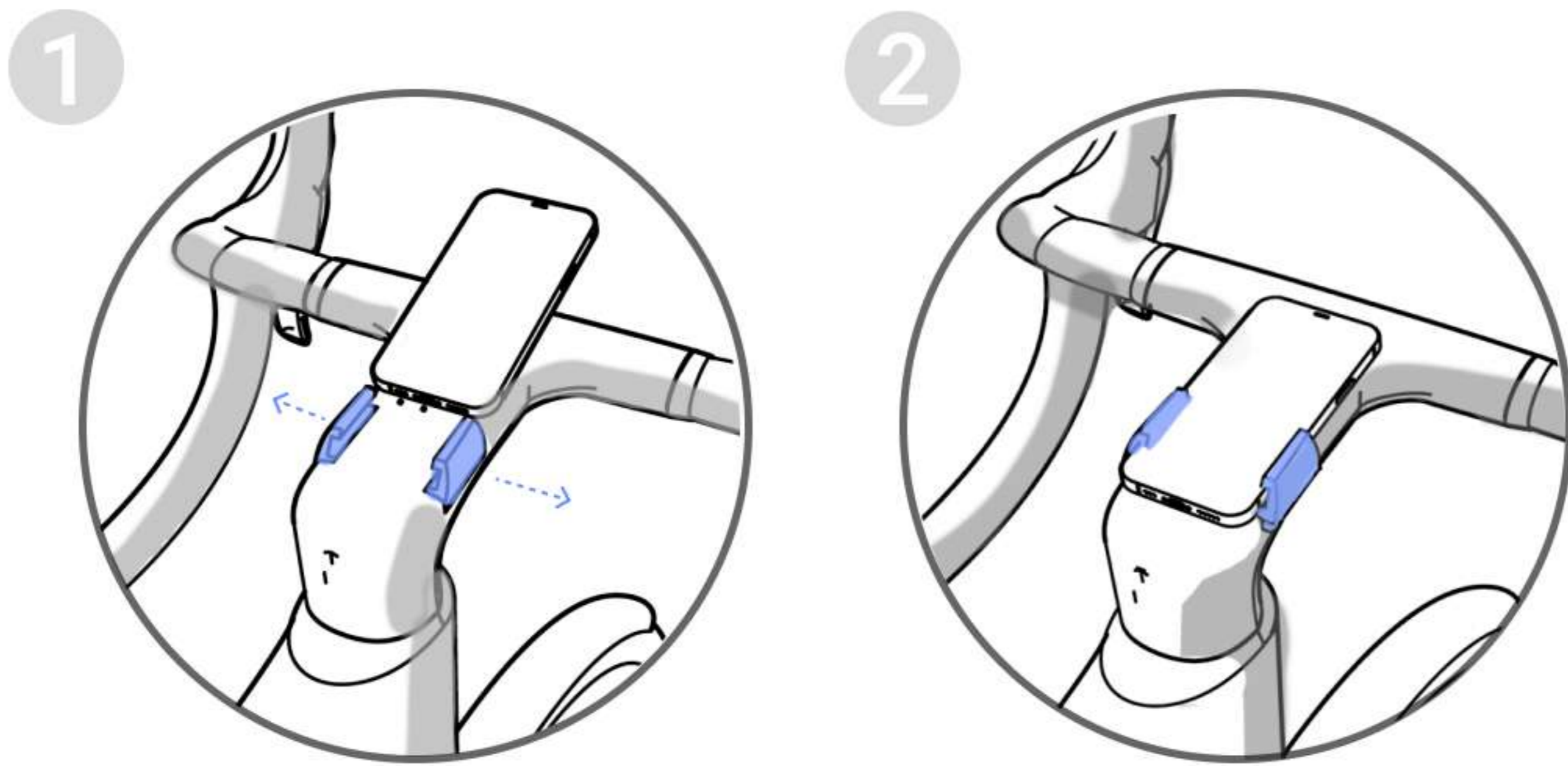
Triggler the voice function, having real-time chatting.

Auditory accessibility
(App will transfer the voice to texts automatically for Users with hearing difficulties)

Scenario&Function



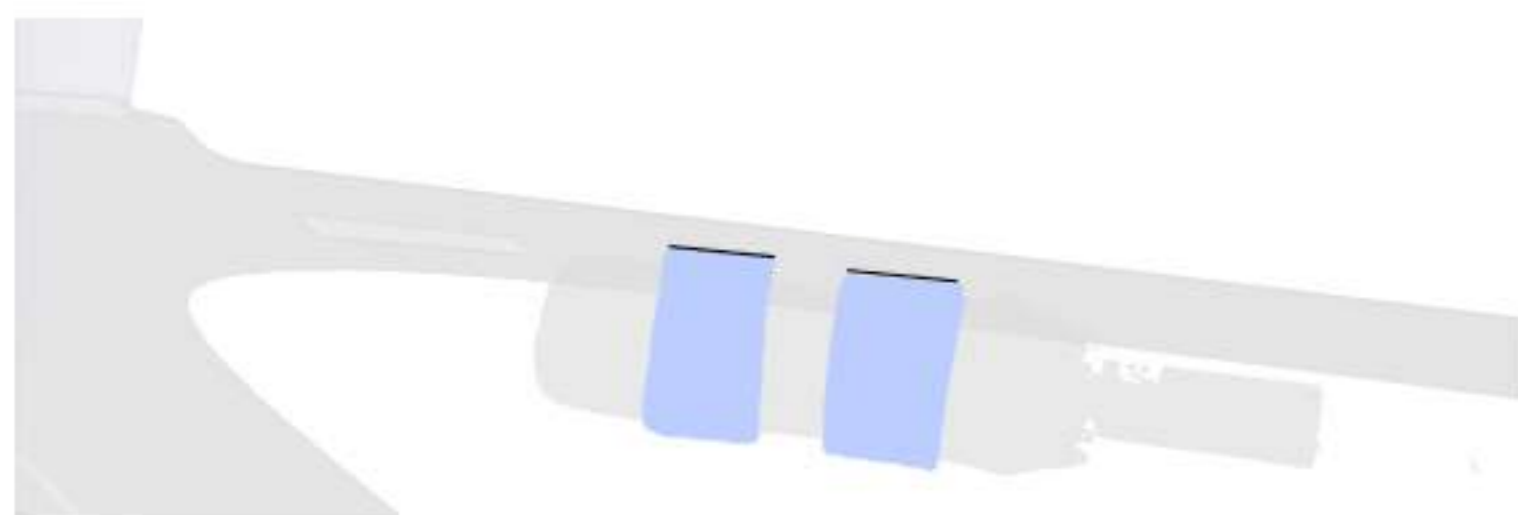
NFC FastUnlock



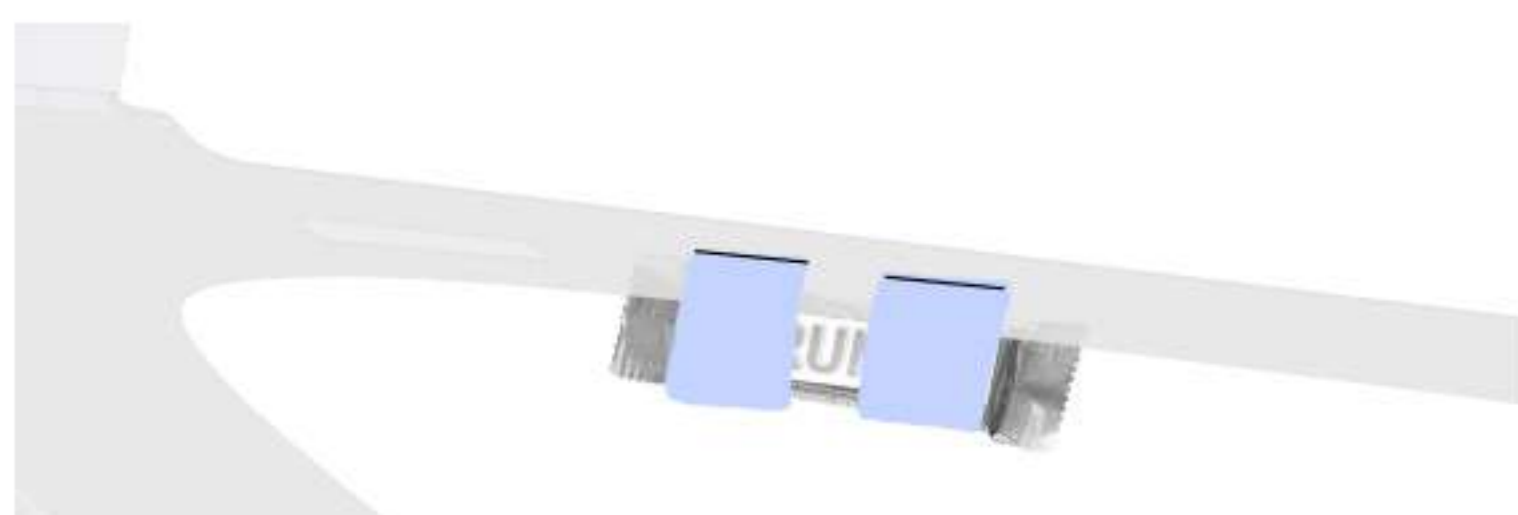
1 2

The bicycle head seamlessly integrates the **phone holder**, with two support arms equipped with springs that automatically retract when inserting and removing the phone.

Front Part



umbrella



chocolate bar

With the elastic nylon strap made of mixed cotton and linen materials, users can bring some lightweight items they need for the journey, such as an umbrella and a chocolate bar.

Strip



Mid Part



RADAR SECURITY MONITORING

RADAR LIGHT COVER CAMERA

With built-in radar monitoring, any cars or bikes behind approaching this bike can be detected. Once detected, the system will notice the user and show how far between, also its relative speed and position.

Back Part

Quick Display




navigation

direction

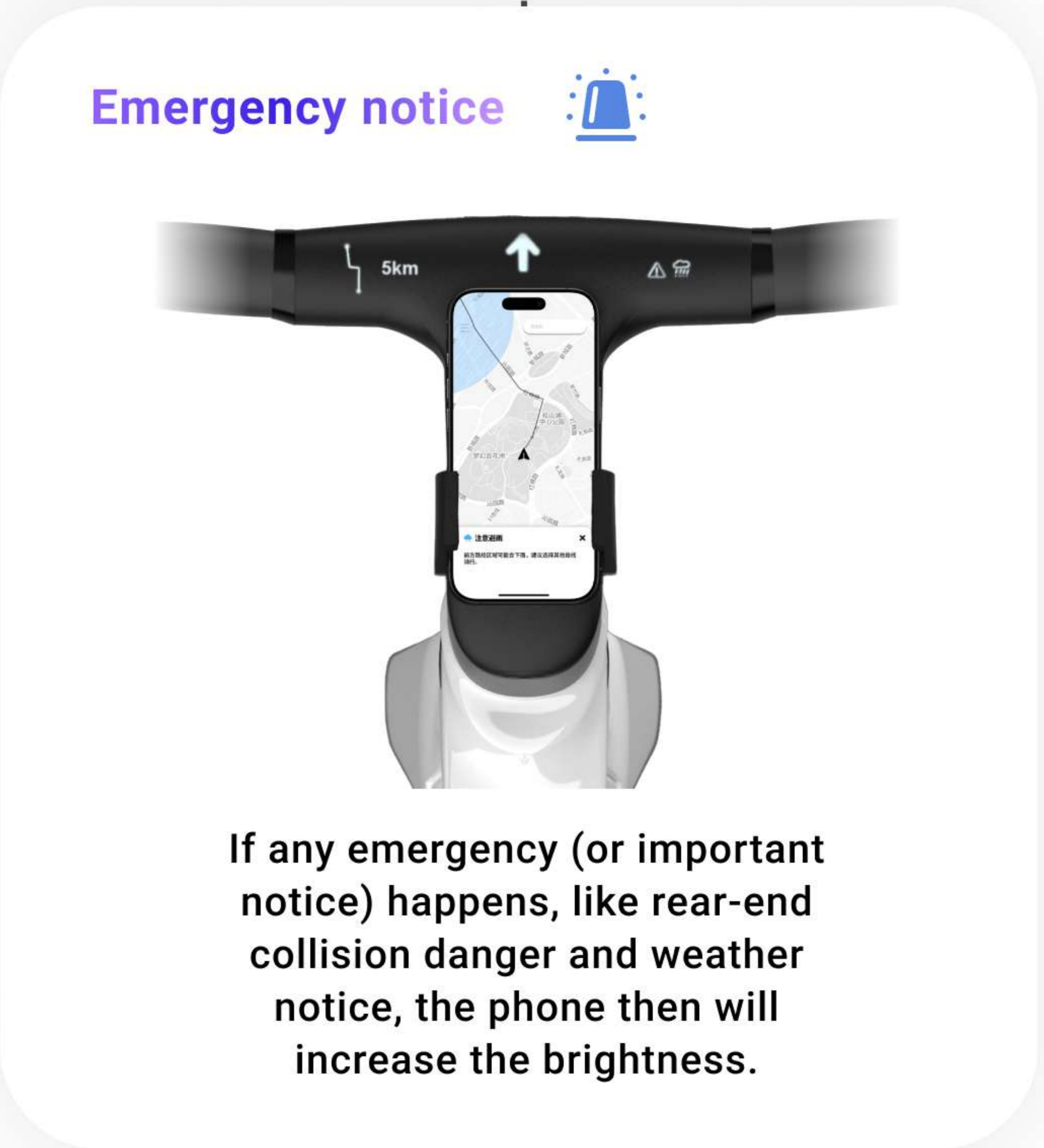
events

Power saving



Velovibe displaces important riding informations (connected to your APP) on the screen of the bike, while the phone will decrease the brightness to save power.

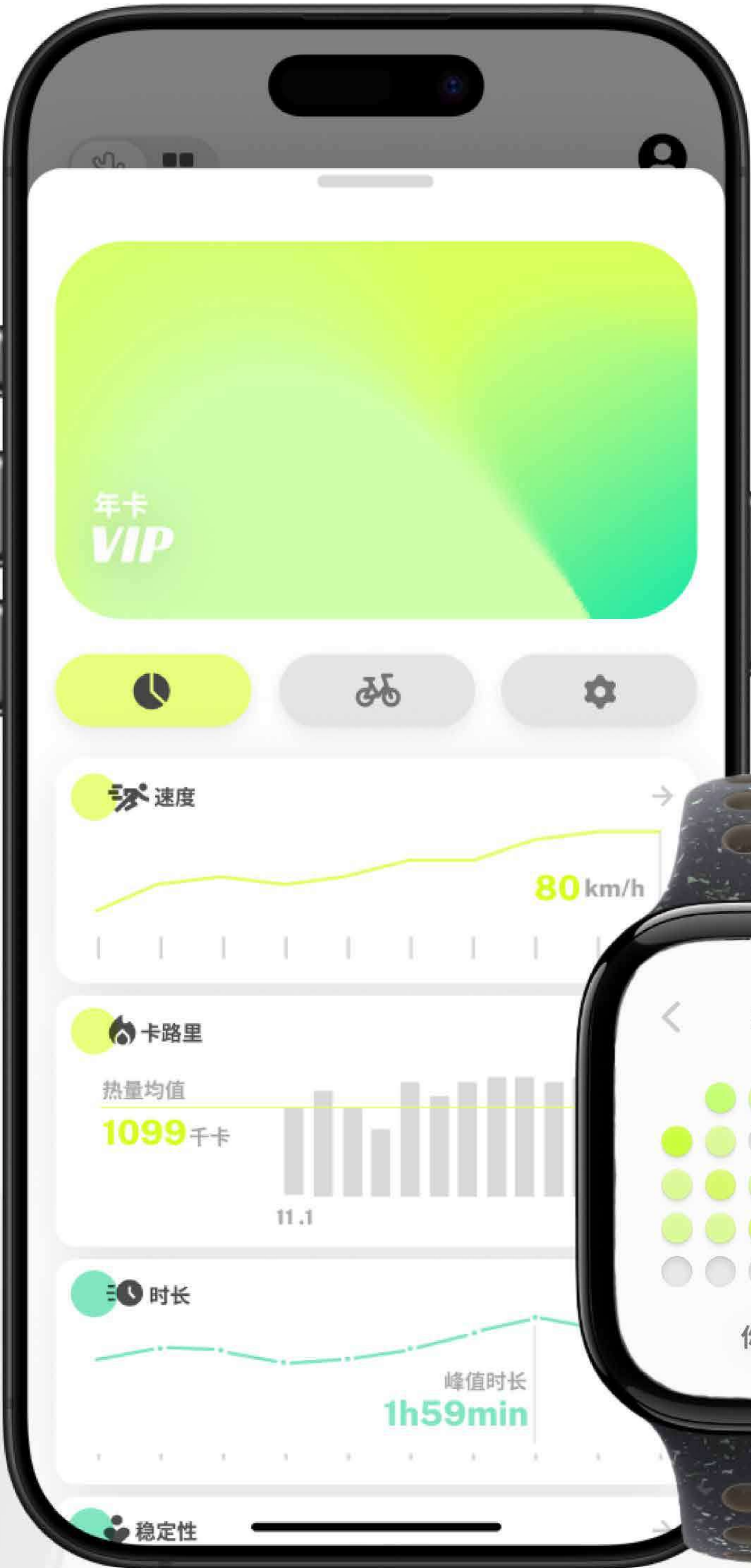
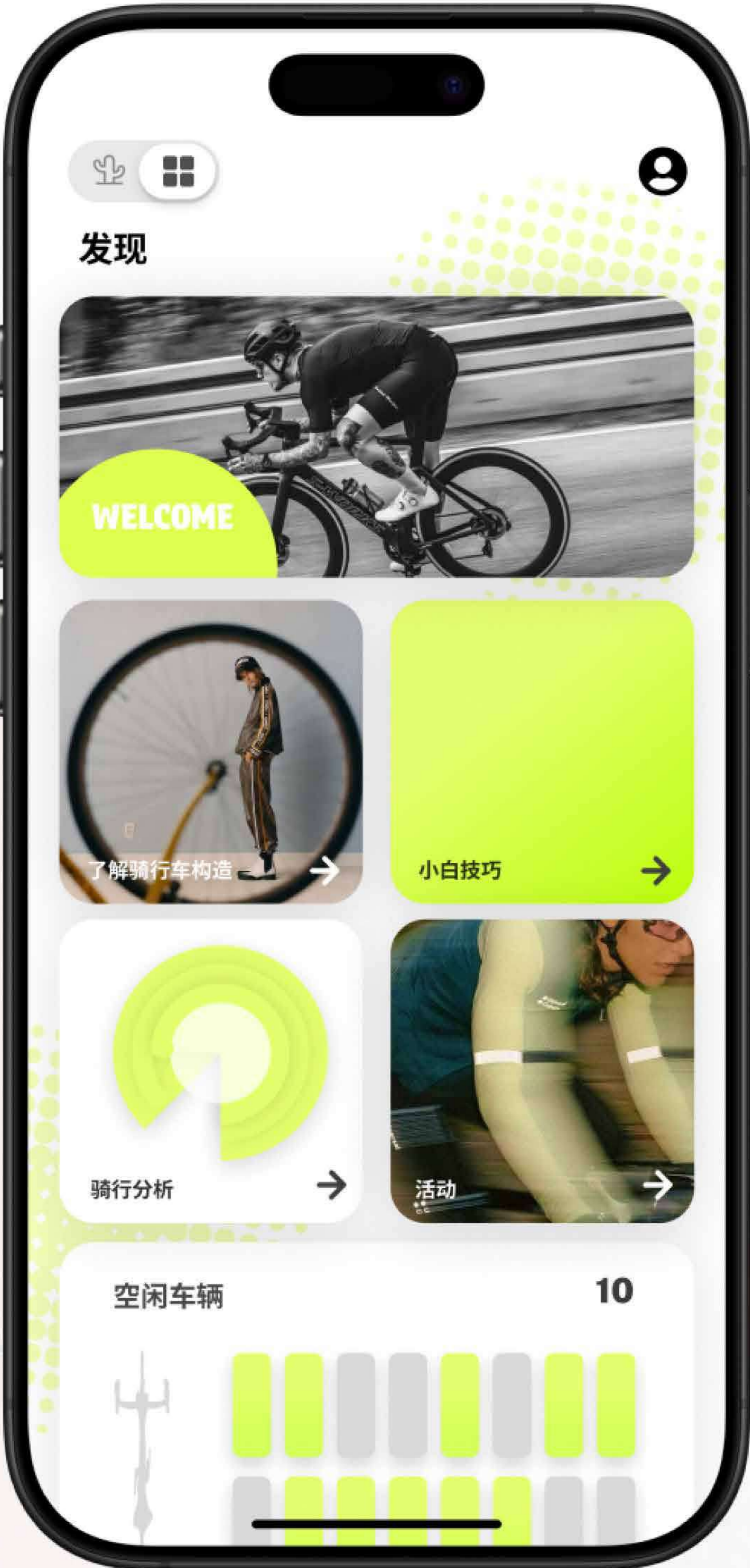
Emergency notice



If any emergency (or important notice) happens, like rear-end collision danger and weather notice, the phone then will increase the brightness.

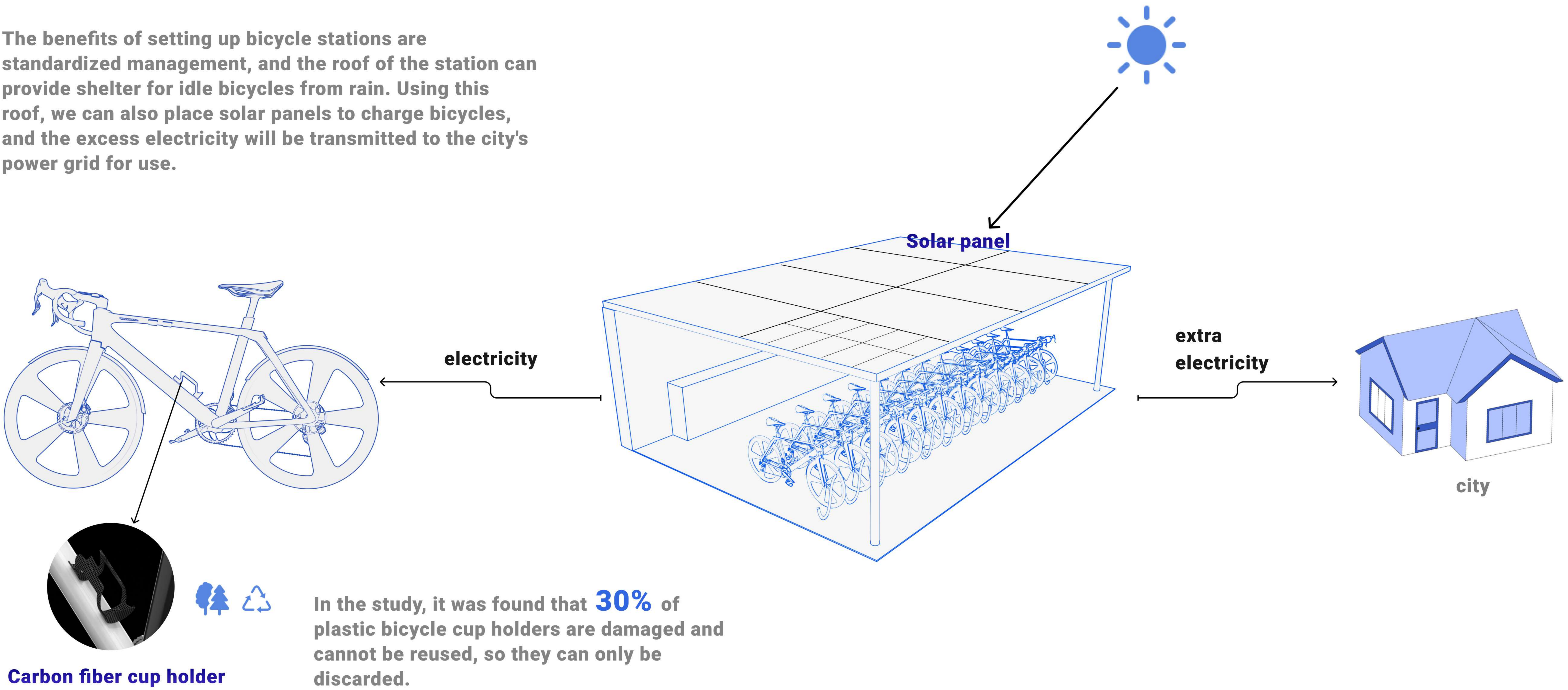
Health Data Analysis

With the help of velovibe application, users are able to browser all features and see their own riding data, letting them check their riding conditions such as Calories burned, cycling speed, cycling stability, duration of endurance and so on.



Sustainability

The benefits of setting up bicycle stations are standardized management, and the roof of the station can provide shelter for idle bicycles from rain. Using this roof, we can also place solar panels to charge bicycles, and the excess electricity will be transmitted to the city's power grid for use.

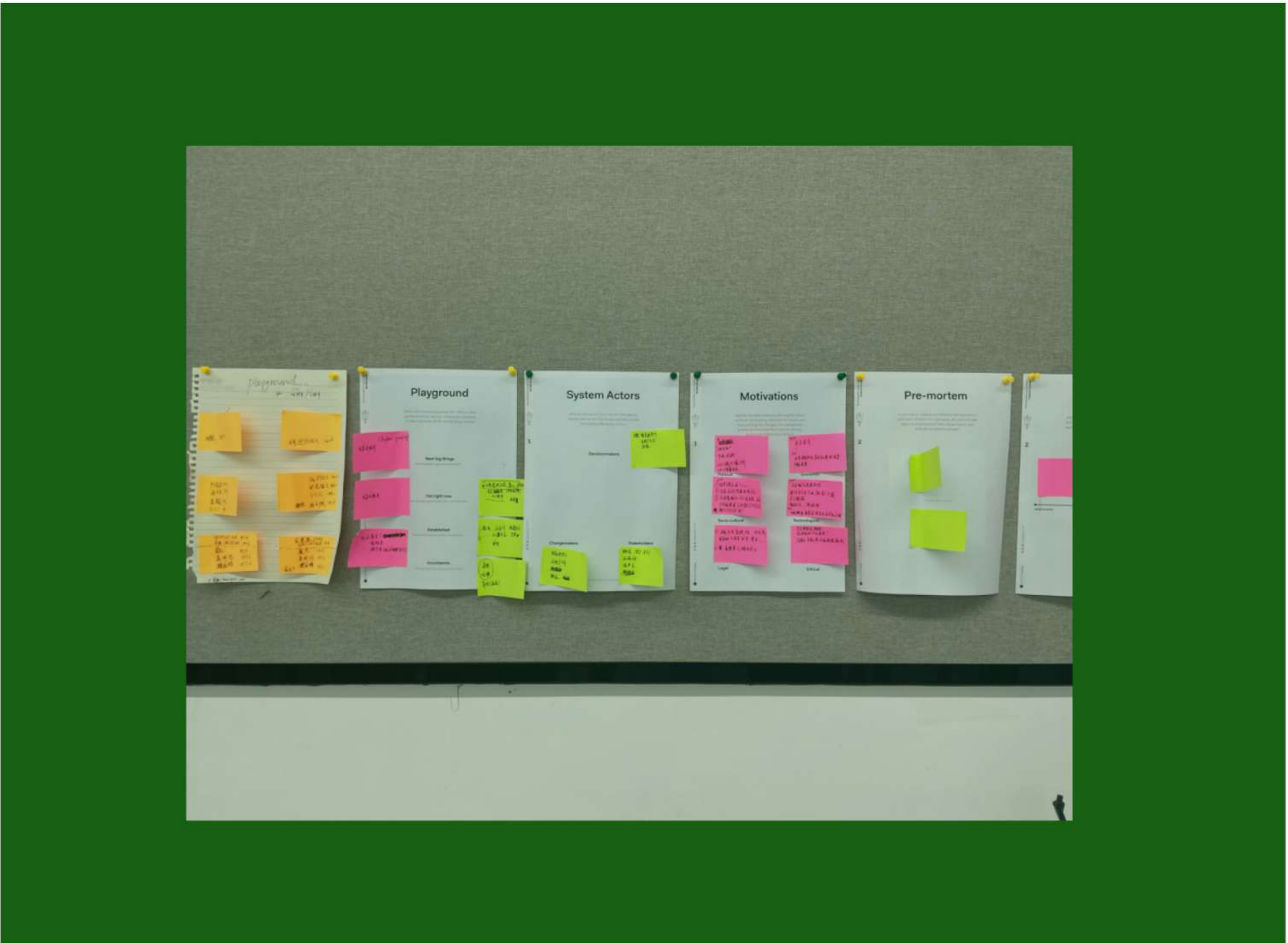


Research

trend

-  **City:** Urban expansion will require more diverse modes of transportation
-  **Economy:** The sharing economy enhances resource utilization and brings significant economic and social benefits
-  **Social Concept:** Sustainable development concept, increasing demand for green travel
-  **Culture:** Cycling culture is getting hot in China, and the demand for outdoor play has been increasing in recent years
-  **Experience:** Users' demand for personal experience has increased

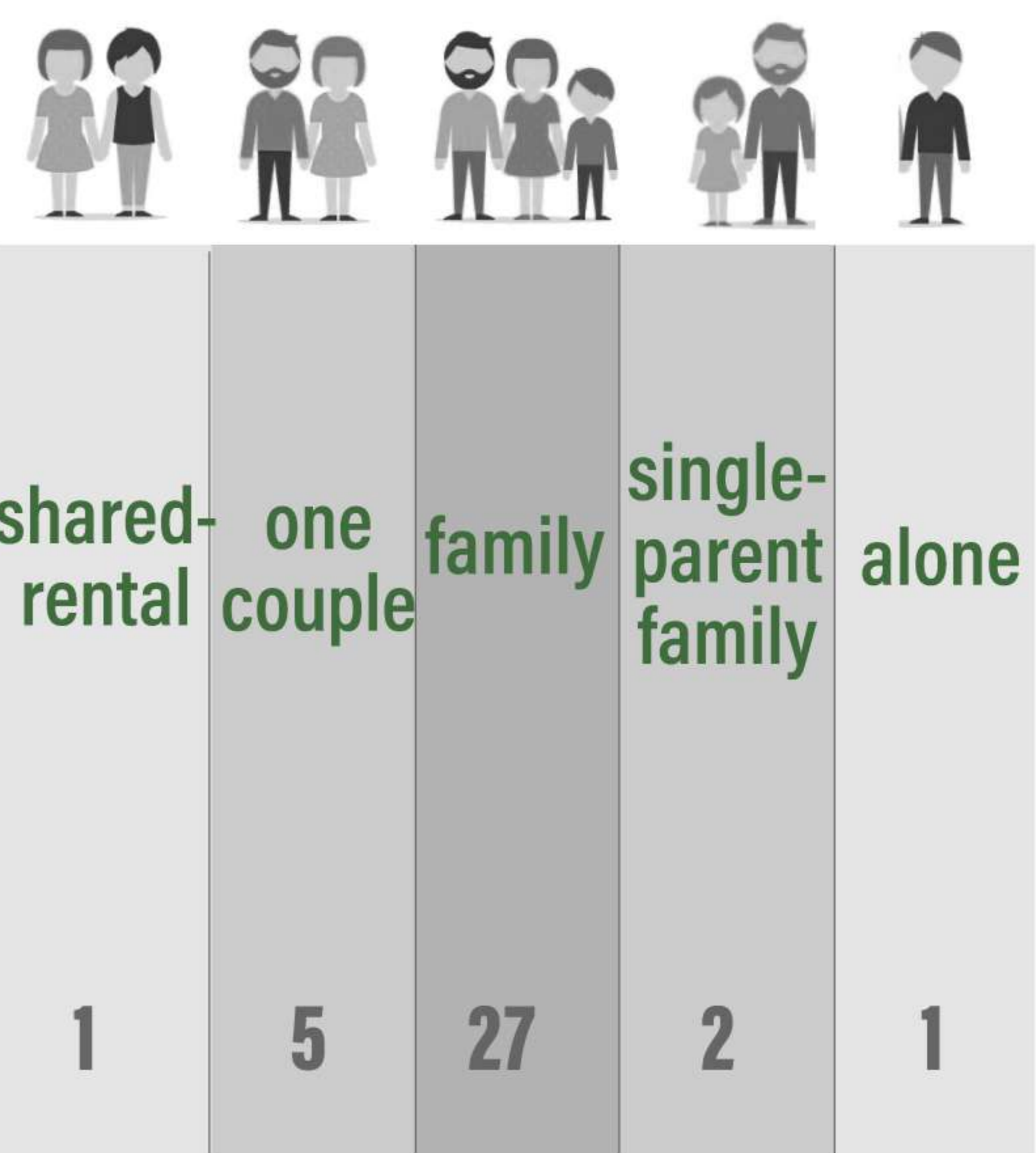
future actional analysis



user research

To get the real situation of how does different structures of residents think of bikes also their painpoints of using a bike, I analysed 32 native residents from a long list of questionnaire. Here is part of the result.

Residential structure



The main structure is FAMILY.

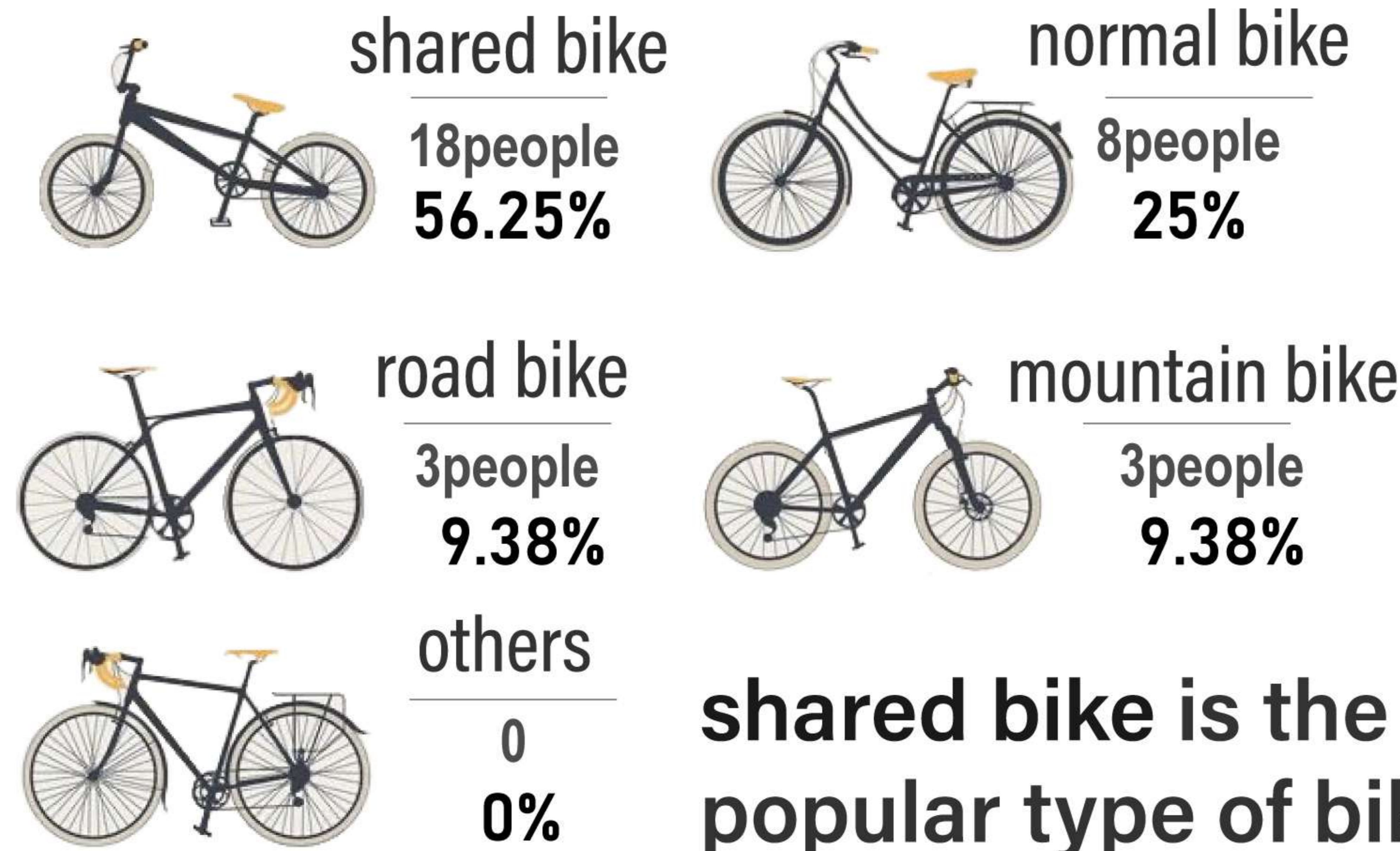
user Interview



Mr.Zhao age 35
what do you think of shared pro-bike?

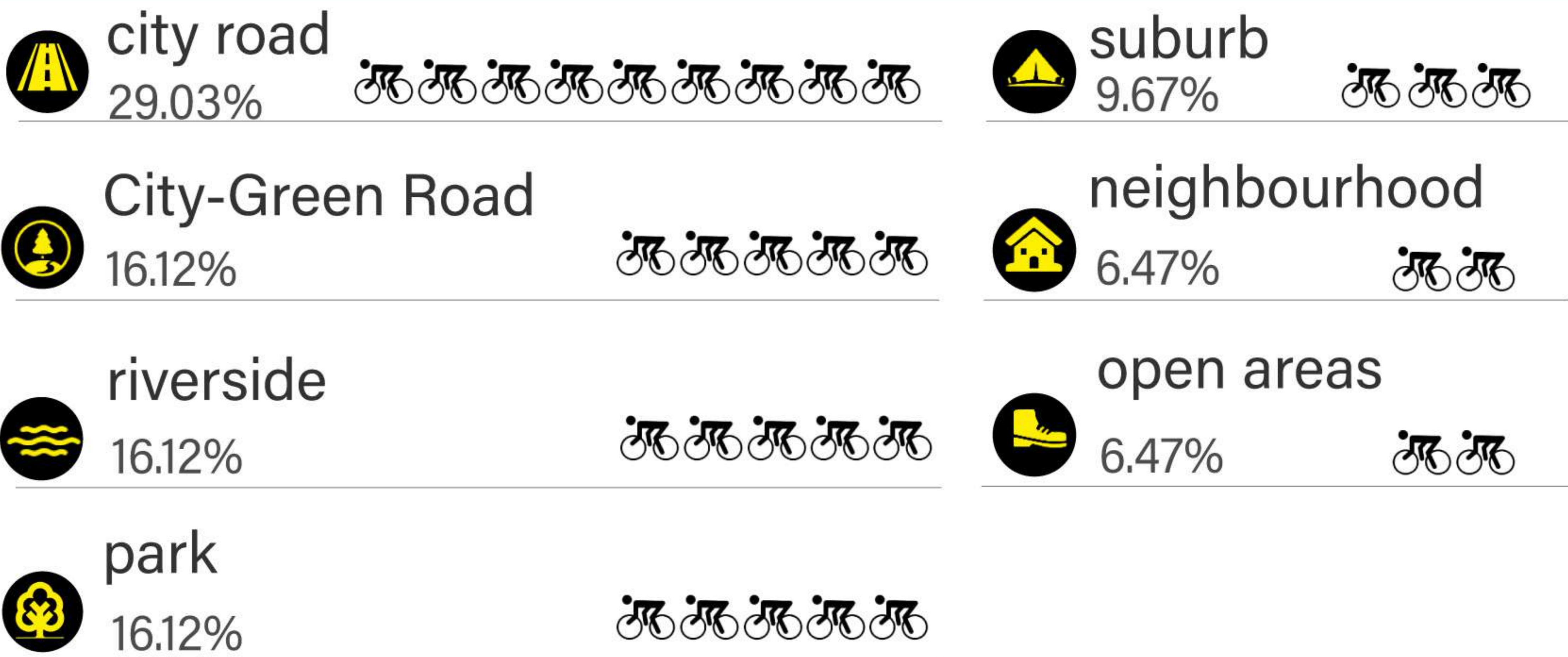
I would like to try for sure, road bike is light and fast, it borns for sports. and I really want to ride bikes with my kid,you know just to increase the connection between us . But also I would worry about its safty and is it easy to use.

bike type



shared bike is the most popular type of bike.

riding locations



people actually love riding in citie road which also prove that the roads in the city are suitable for everyone to ride on

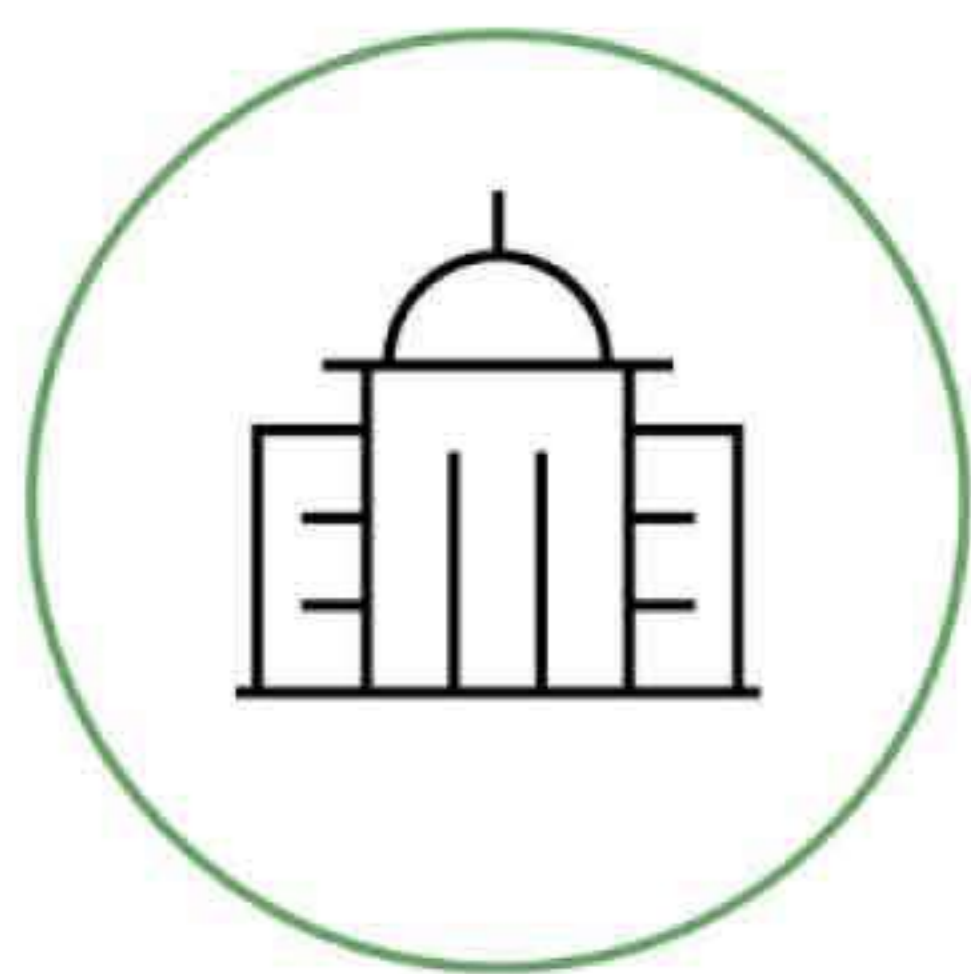
It turns out most of the residents have the experience of using shared bike. Only few part of them ride pro bikes and mountain bikes. It's not because the other dont want to, **actually they really want to give it a try**, but they have worries about it.

why most residents want to try pro bikes but ending up not buying one

- price
- think it's not easy to use
- safty

service system construction

market prediction



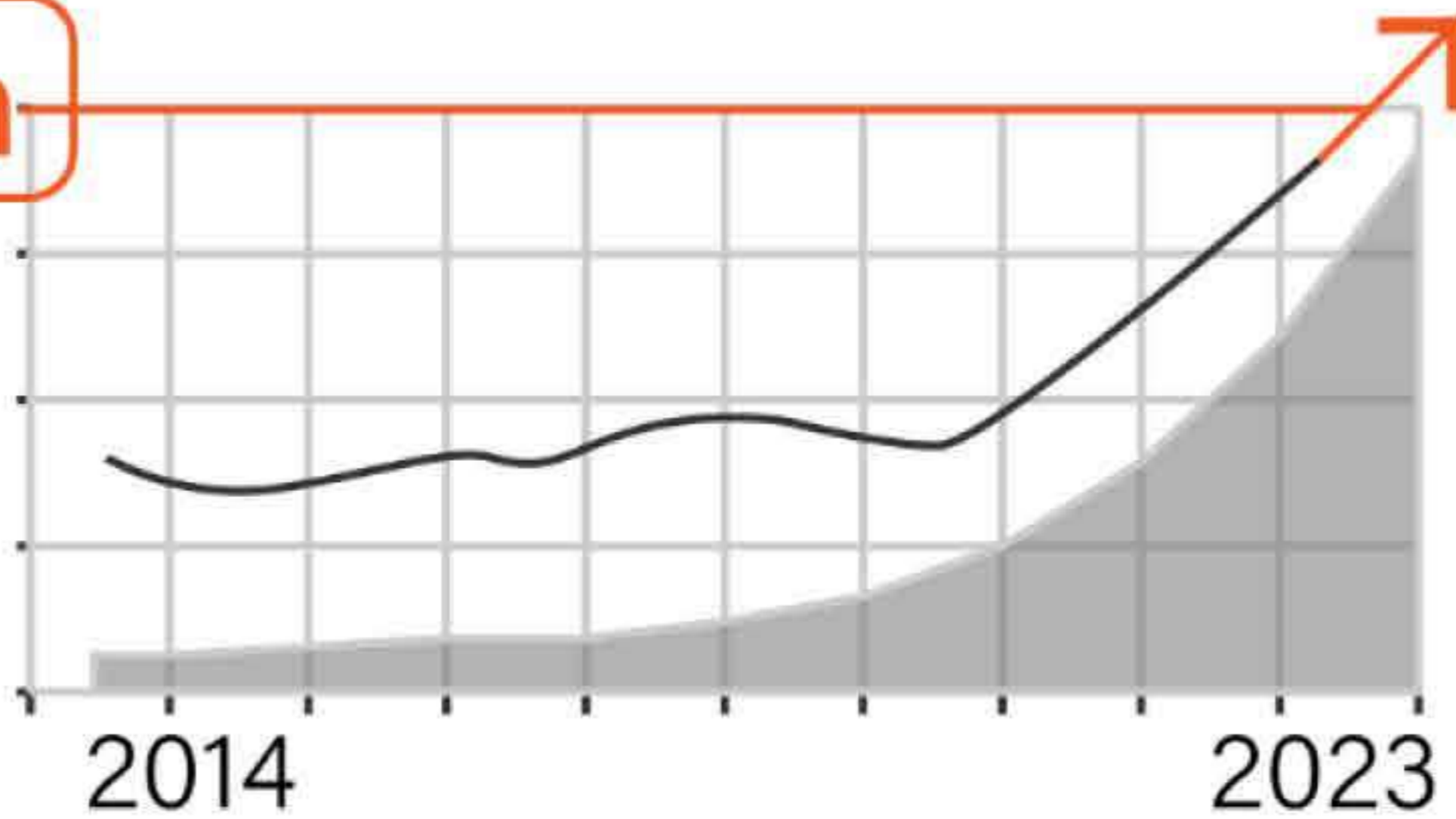
Government
long-term plan
support

example

"GuangZhou **520KM**
mountain and sea cycling
road construction"

Industry growth

1.6million



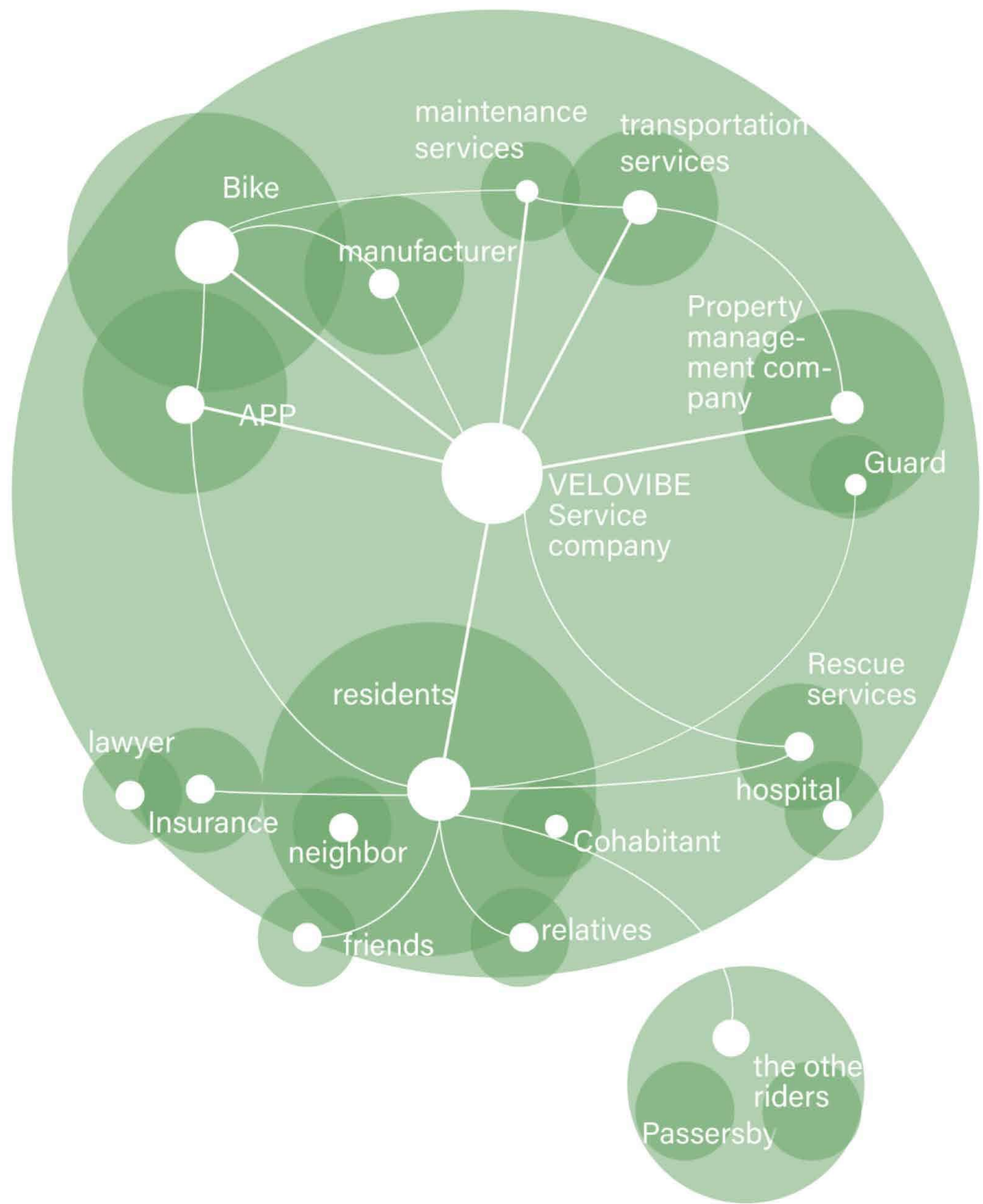
— Year on year growth rate
■ New company registration

User growth

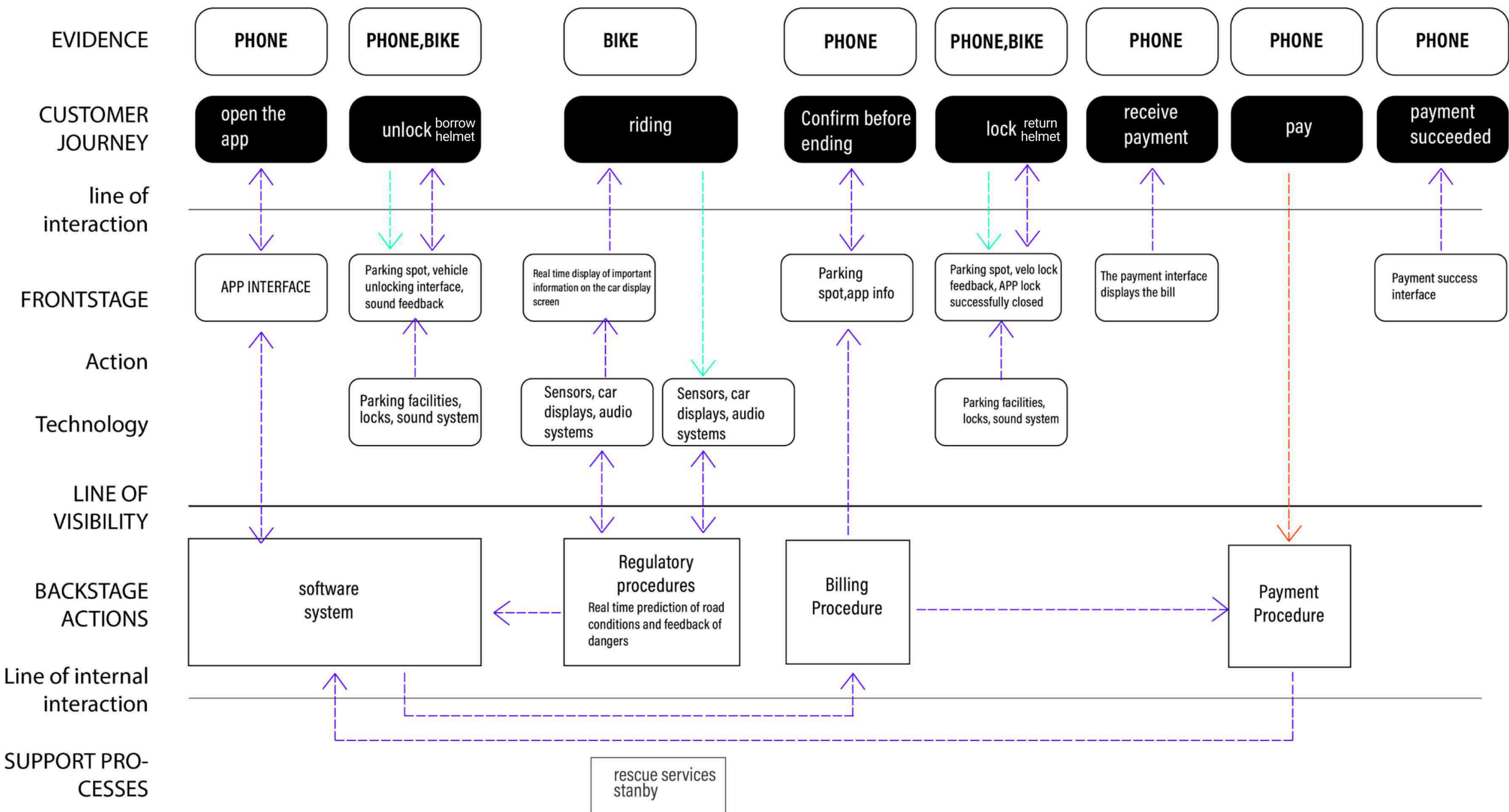
urban residents population

926 million people Now
1.0 Billion people 2030
1.26 Billion people 2050

stakeholders eco system



service blue print



Research

actual usage situation of shared bikes and pro bikes



Almost every professional bicycle is equipped with a **plastic cup holder**, but among the large number of cup holders seen, **30% are damaged and unusable**



There will be many **components** on the rider's bike, which are used to store their phones, wallets, and so on.. However, these things **increase the overall maintenance cost and also appear burdensome.**



In the south or some places where it often rains, cyclists are accustomed to **carrying umbrellas before traveling**, but when they don't have backpacks, they can only put umbrellas on cup holders. Once an umbrella is placed, the cup cannot be filled with water.



In China, shared bicycles are very common and can be seen on almost every street, but in many cases, they have problems with **improper management**. This has caused chaos in some areas of the city, even affecting the normal flow of streets.



Shared bicycles come with **rain shields**, while professional bicycles generally require self installation, which is not user-friendly for ordinary users.



The **unlocking of shared bicycles is slightly slow**, especially when encountering problematic bikes. It is very cumbersome to change bikes and unlock again. Some users may feel frustrated because of the slow unlocking

opportunity

- 1 make the cup holder more firm and sustainable
- 2 A place should be provided on the bike for storing water, umbrella, and other personal belongings
- 3 Optimization of unlocking method to make the process faster&easier
- 4 To assist users in perceiving their surroundings while cycling and avoid accidents even to avoid raining route.
- 5 Assist users in quickly understanding bike functions, such as how to shift gears
- 6 It is necessary to maintain a sense of interaction between two or more people
- 7 reconsider the place for mobile phone, for people sometimes need to look at navigation while riding

