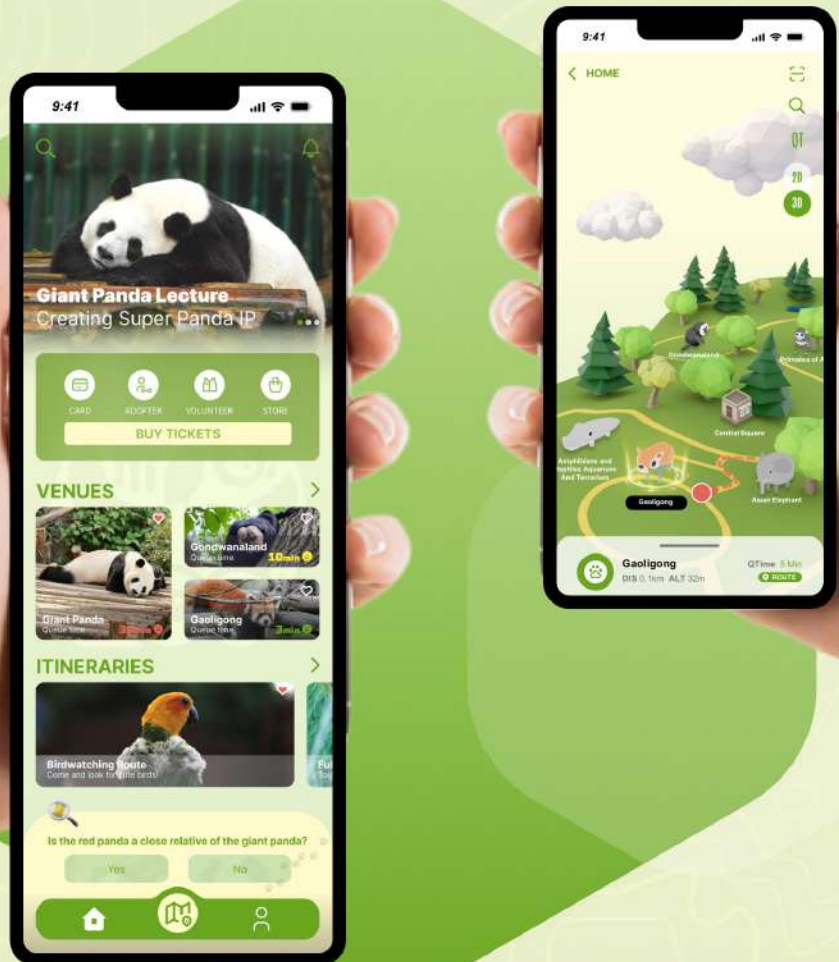


HONGSHAN FOREST ZOO APP

A GAMIFIED MOBILE APP FOR THE ZOO



INDIVIDUAL PROJECT

DIRECTION/
UIUX Design
APP Design

TIME/
2024.03-2024.05

Background

ABOUT THE ZOO

Nanjing Hongshan Forest Zoo spans 68 hectares in northern Nanjing and features an 85% green coverage. With a focus on "educating the public and contributing to society," the zoo engages in wildlife conservation, animal rescue in Jiangsu, and local ecological protection. As a national science education base, it promotes public awareness and appreciation for nature, serving as a key showcase for the ecological civilization of Jiangsu Province and Nanjing.



Exclusive Stamps and Merchandise

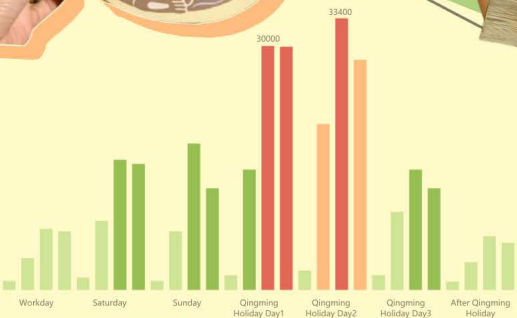
- ✓ Beautifully designed, seasonal or limited-edition products reflecting animal habits.
- × Popularity can result in long queues.

Hand-drawn Signage

- ✓ Charming illustrations inform about animals' names, relationships, and behaviors.
- × However, they are expensive to produce and maintain, and lack digitization and interactivity.

New Exhibits

- ✓ The zoo evolves with new sections featuring a diverse range of animals in engaging displays.
- × Some signs are not updated promptly.



≥5 million visitors annually



Competitive Analysis

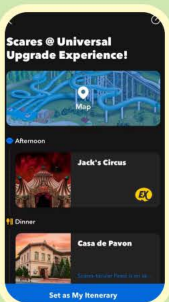


Disney Resort APP

My Favorite Function:
Zootopia In Your Paw

Engaging features like personality tests and character dress-ups

Lack of integration into the profile



Universal BJ APP

My Favorite Function:
Itinerary

Personal itineraries with location

Visualization of queue length

Commercialization, lack of intimacy



WWF Together APP

My Favorite Function:
Touch Interactions

Interactive gestures for animal science content

No integration with zoo tours

Literature Research

Focus Shift:
The original intent of animal advocacy and public education is overshadowed by a trend-driven visitor agenda focused on social media and shopping.

Limited Engagement with Educational Material:
Though people may notice the beautiful signatures, few of them read the exhibit information or seek to understand animal behaviors. Instead, they take photos and post them on social media.

Overcrowding:
High volumes of visitors create a chaotic environment, which makes it much harder to read the animal science content.

Actual Visitor Behavior

Pre-established Visitor Behavior

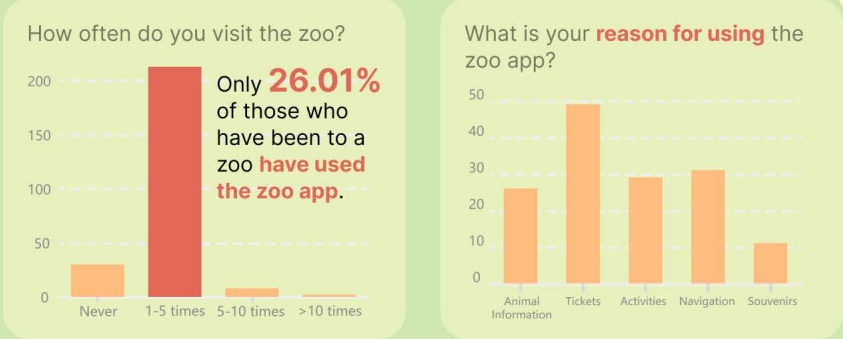
Crowded Giant Panda Venue

SOUVENIRS

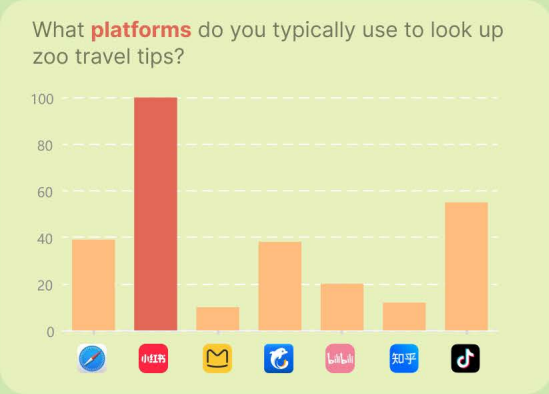
Questionnaire

DATA ANALYSIS

The data is collected from **253 questionnaires** about visiting the zoo.

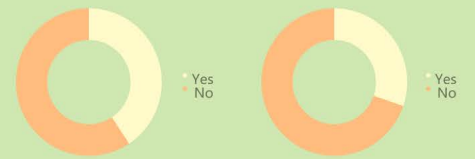


61.88% of respondents reported that they have the habit of **browsing itinerary recommendations** before visiting the zoo.



Do you **make a travel plan** before visiting the zoo ?

Do you **strictly follow the travel plan** to visit the zoo ?



[Conclusion] People prepare for a trip to the zoo, but they hate tedious preparation and enjoy the randomness of the visit.

Interview

SAMPLE

The interview was recorded from **an one-time visitor** from another city.

Why did you choose Hongshan Forest Zoo?

I saw it was **popular on Xiaohongshu** and thought their **animal treatment was advanced**, so I wanted to experience it while in Nanjing.

Will you follow the planned itinerary?

Mostly according to the plan, but if there is a special animal that I want to see, I will **adjust it a little bit**.

What appeals to you most about the zoo?

I enjoy **looking for** some of the animals or **watching the feeding**.

Will you share your experience after the tour?

Yes, I will take photos and **share** them with my friends.

WORD CLOUD

It is compiled from the interviews of **an one-time visitor**, **2 zoo regulars** and **a volunteer**.

Queue chaos

Animal conservation

Animal-friendly

Facility issues

Ecological environment

Unruly visitors

Venue renovation

Animal hiding

Dispersed layout

Natural habitat

Educational activities

Navigation difficulties

Advanced practices

Cultural products

Community belonging

High foot traffic

Persona



Jefferson
22
Zoo Regular

"I go to Hongshan every month. I'm supposed to be an animal expert."

PAIN POINTS

- Multiple visits to the zoo **without incentives**
- Too many visitors affect the experience, lack of **queuing visualization** system
- Repeatedly looking at **the same science display boards** creates fatigue.
- You can only know the real-time situation of the animals through live broadcast or zoo tour.
- The road signs are not updated in time, and there is a lack of **updated information** about the venues.

DEMANDS



Animal digital collections to get incentives



Queue visualization, avoid crowded venues



More diversified, game-oriented science content

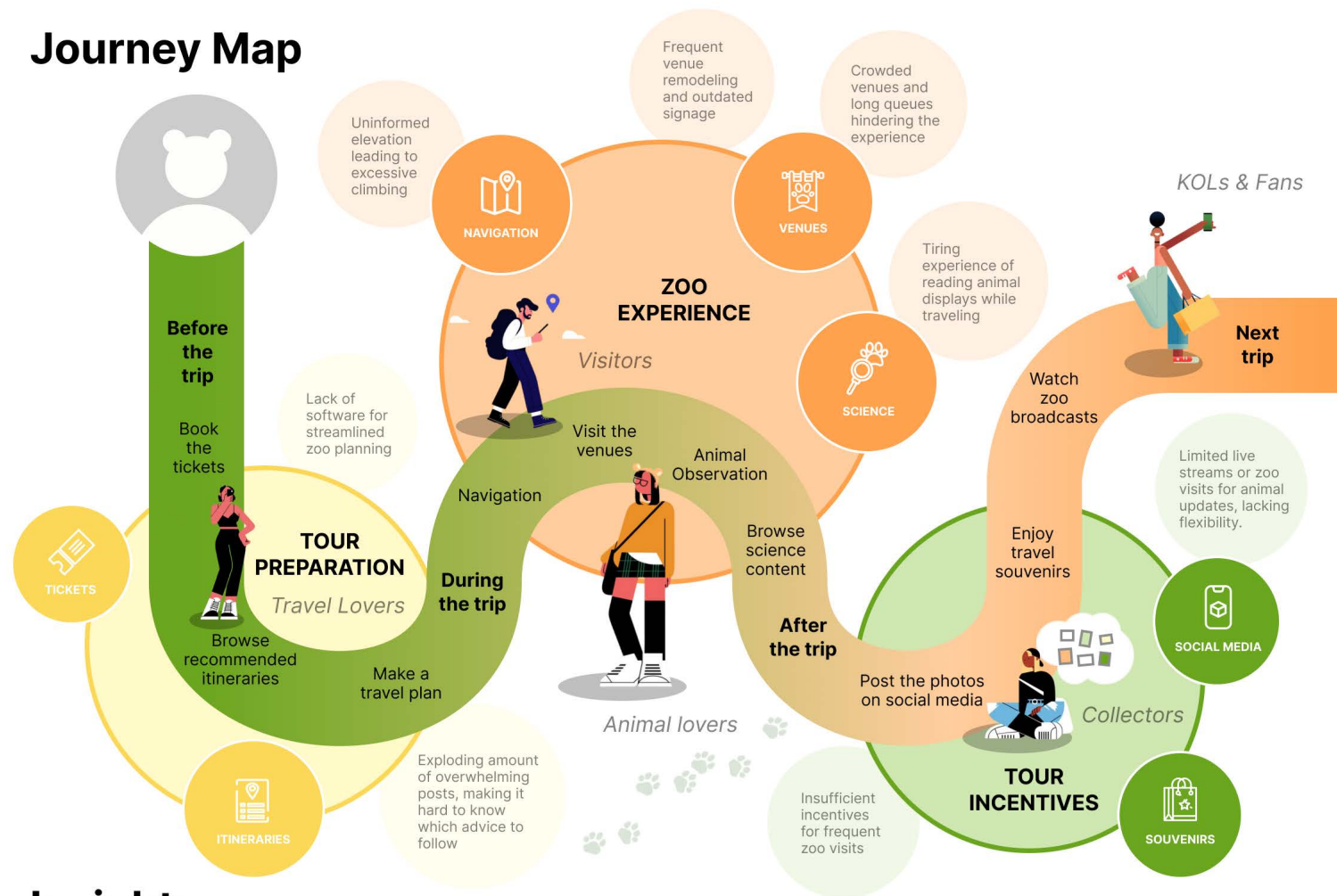


Animal photo community, updated animal news



The latest venue renewal information on the map

Journey Map



Insights

We want to enhance user interactivity, engagement, convenience, and accuracy through the following methods.

01

GAMIFIED SCIENCE

Use gamification to enhance educational outreach.

02

ANIMAL PHOTO JOURNAL

Updates of animal photos foster intimacy and familiarity.

03

ITINERARY CUSTOMIZATION

Simplify route planning for a more convenient tour experience.

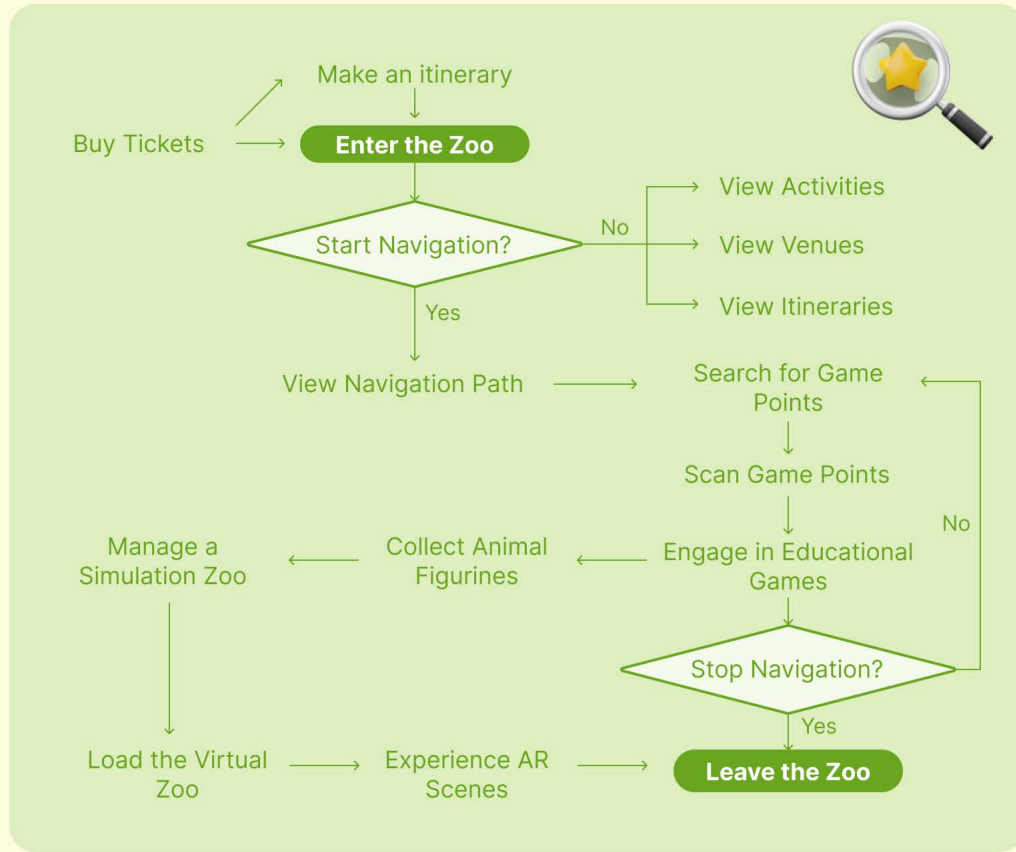
04

3D MAP WITH CROWDING VISUALIZATION

Avoid the crowds, manage your elevation, and explore with ease.

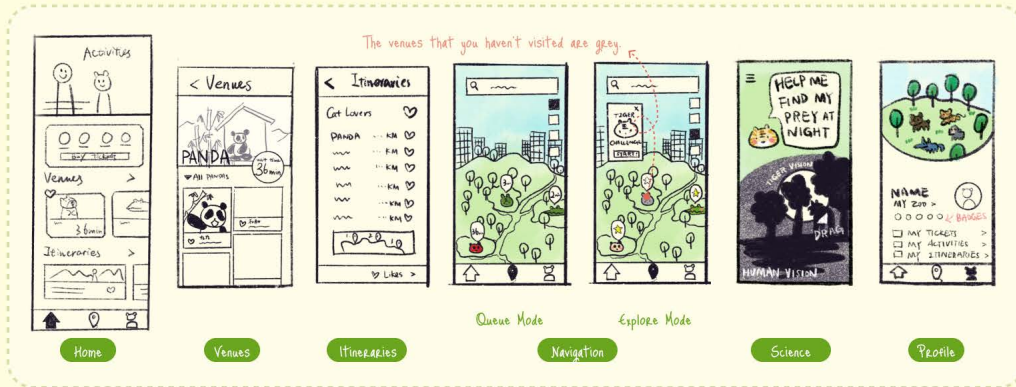
Flow Chart

Then, I summarize the flowchart of app usage based on journey map and insights.



Design Sketch

Here are parts of the design sketches that represent the tour flow.

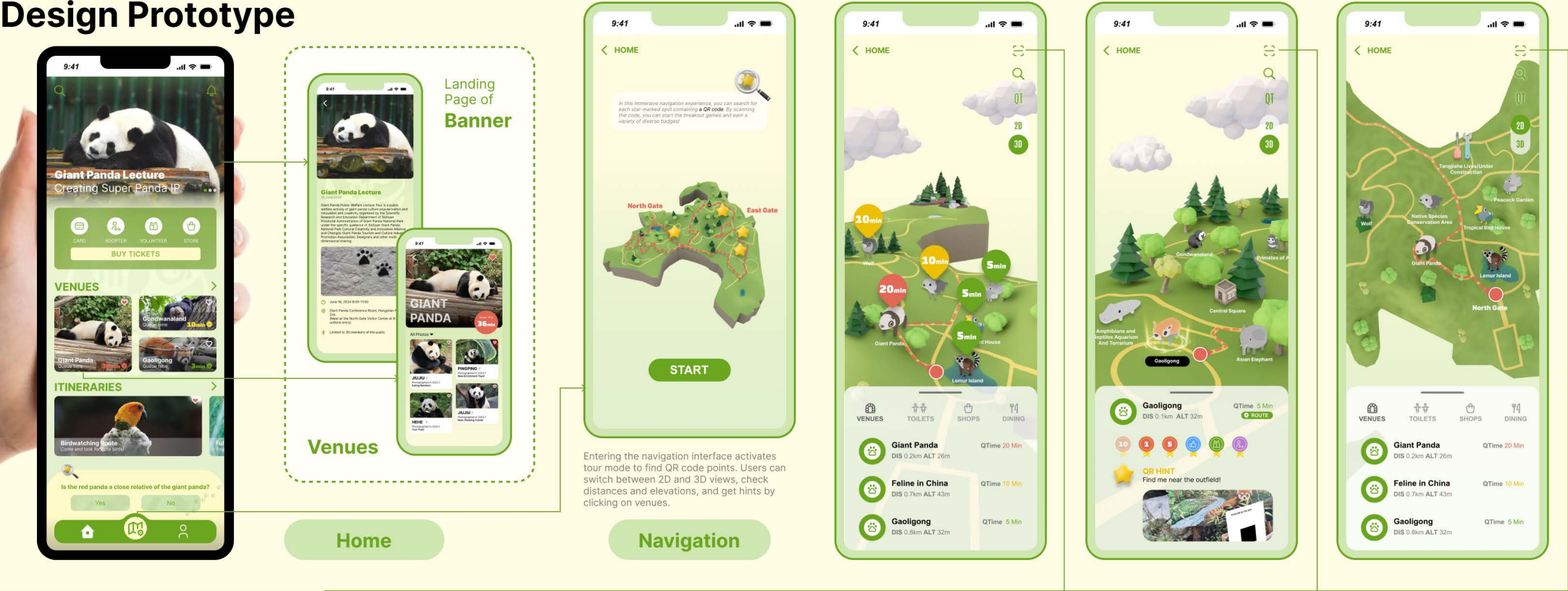


Story Board

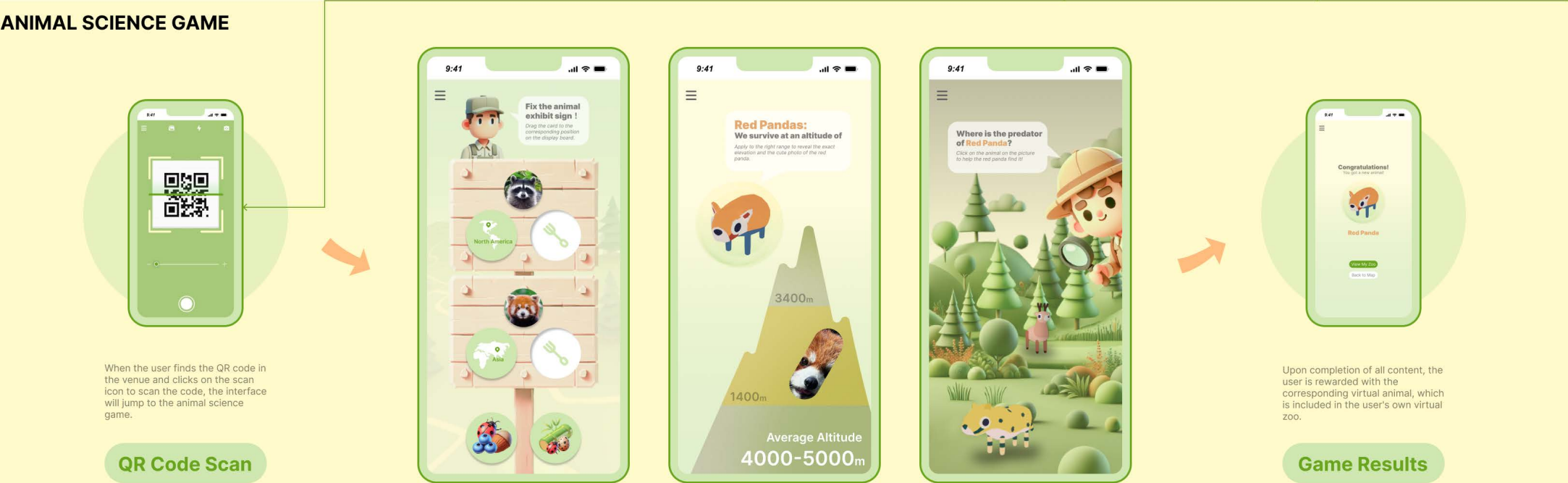
This story board shows the gamification of the app's usage.

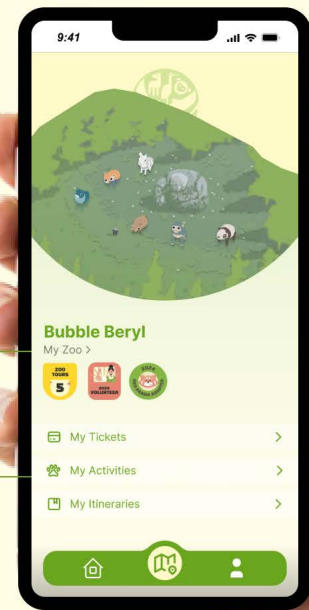
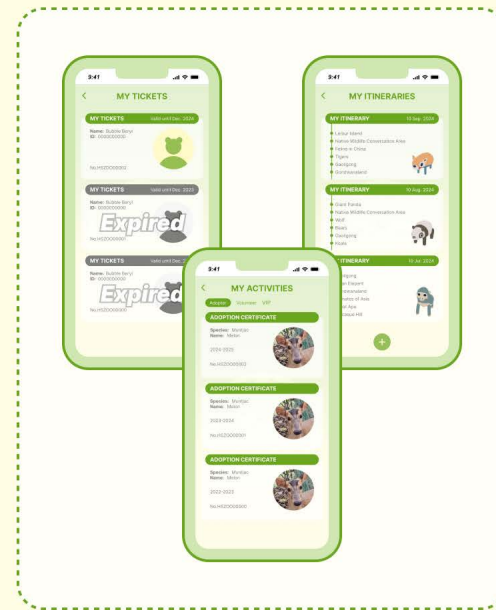
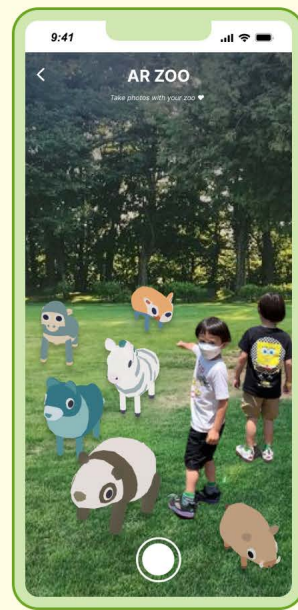
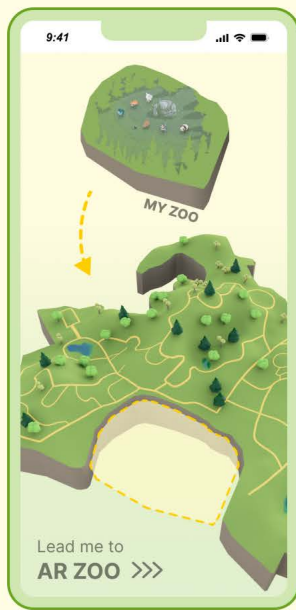
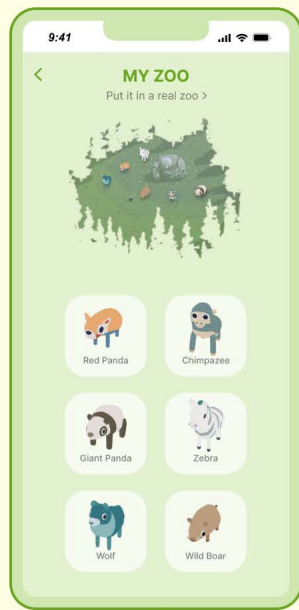


Design Prototype



ANIMAL SCIENCE GAME





My Zoo

Users can place their virtual zoo in a map scene and use navigation to come to a designated location to interact with their virtual animals in AR.

My List

Profile

User Testing

This is interesting! **Collecting animal badges** really motivates me. It's also quite helpful to **check queues**, allowing me to avoid crowded venues.

However, I'm not sure this would truly solve the queue problem, as some people might **get stuck midway through the collection process**.

As a collector, an app like this could greatly increase my motivation to go to the zoo! Additionally, I think I could **do some zoo visit planning** with this app. Best of all, I think the 3D maps help me **understand the specific elevation of each venue**, and if I want to save some energy, I know how to plan routes to be able to go more downhill.

This exploration feature allows me to **discover niche venues** and **collect animal badges**. The **scientific format** is also more engaging, helping me to **gain in-depth knowledge** of the animals instead of just walking around looking at them. I'm looking forward to it **adding more AR games** to enhance the interaction between virtual and reality.