

# 02

## Collector

Time: 2019.09-11

Type: Individual work

This is a system design allows visitors to customize their own experience in Nanjing Museum.

It contains three touchpoints: the AR trigger; your mobile phone and the interactive digital signage.

## Background

Nanjing Museum is one of the three biggest museums in China, which is as ancient as the Palace Museum and the Taipei Palace museum. However, it is not famous as the other two, nor the evaluation as highly as the other two. Therefore, I want to explore whether there are any space to improve that makes Nanjing Museum more popular.



Nanjing Museum



Taipei Palace Museum



the Palace Museum

## Research

### Contextual inquiry



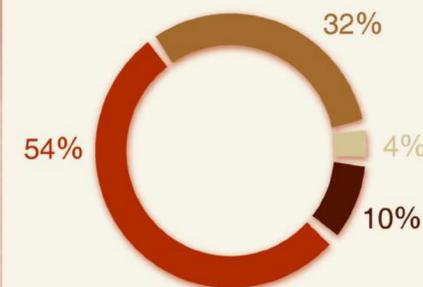
- It is difficult to stay and watch the collections carefully because there are always too much visitors.
- Visitors are not highly engaged in the museum, many people even play their mobile phones in museums.

- Sometimes there are too much reading for visitors to read, people are easily distracted and absorb limited knowledge.
- Although there are some interactive screens most of them can only be clicked simply, which is not attractive.



## Questionnaire

Reasons for people coming to Nanjing Museum



- Desire to take a pleasant journey
- Expect for more intuitive education to children & students
- Personal curiosity
- Motivated by specific knowledge-related goals

How do you get to know Nanjing museum?



Age distribution of visitors



Conclusions

- Most of visitors are young.
- People go to museums mainly for entertainment.
- Few of visitors are very familiar with the history and collections, they just have a general impression.

## Interview



I interview 5 museum staff about daily flow and visitor adhesion of the museum. I also chat with them about some scenesthey observed at work.

I interview 15 visitors about their feelings and experience when visiting museum. And I recorded some of their quotes.



### Statistics and other key facts

3.3million visitors in 2017 in total	can contain 20 thousands of people at most in a day	the maximum passenger flow is 16 thousands	About 85% of the visitors go to the museum with partners
over 42 thousands of collections	cover an area of over 13 thousands square meters	built in 1948, has a history of 70 years	Most of the visitors do not like much readings in the museum
act as the education base of many of universities in Nanjing	act as the second classroom for many junior and high schools in the whole country	effort to enhance public awareness of relics protection	Most of people go to museums less than 3 times a year
social education	free for minors and college students	hold cultural events regularly	

### Personal observations and insights

guideposts are unclear	Get very crowded with tourists, it's inevitable to cause congestion	Lack of interactions	Visitors used to use social media to share their feelings after visiting the museum
Too many interactive screens or displays, but their effect is very limited. It only includes some pictures and videos.	Interactive effects are too easy and rough	It is difficult to observe details of antiques	Few of visitors are willing to come again
Because of the lack of background knowledge, visitors would rather skip the introduction and go straight to the main area.	There are some fragment of antiques, wish to see the restored porcelain	The number of commentators is not enough, and the price is too high	The introduction or background knowledge of the antiques are too short to get a better understanding of antiques
Some regular exhibitions are not sufficiently publicizing	collections are mostly behind the scene and used by researchers		

### User quotes

"It is really difficult to find a clearer exhibition hall when finishing visiting the current one."	"There are always too many people gather around the antiques, I have no idea to watch the antiques and the introductions carefully."	"I was excited when I find some devices can interact, however, I could only click screen, which is not attractive and interesting."
"What if there is a magnifier so that I can watch the details of these antiques."	"I am here expecting to see the Antiques exhibition, however when I am here, I found that they are not on display."	"I am excited to see the treasure of the museum, however when I am here, I found that they are not on display."
"Some showcases is too tall for me to watch!"	"We can hardly achieve the museum's thoughts."	

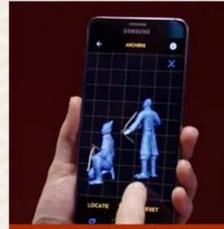
# Affinity diagram



# Case study



More and more museums use technology to optimize the visit experience. Among all these technologies, augmented reality (AR) technology has attracted the attention of researchers and commercial companies. it is considered to stimulate the strong sense of presence of the experiencers and effectively trigger emotional reactions.



The Franklin Institute

The Franklin Institute uses AR technology to explain how the sculptures, weapons and objects of Terracotta Warriors were produced more than 2,000 years ago.



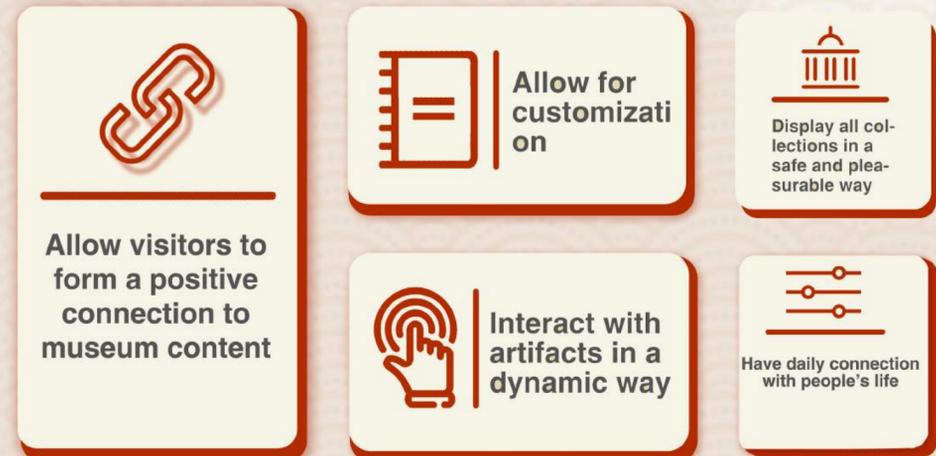
The Detroit Museum of Art

Visitors can use the mobile phone to "penetrate" the sarcophagus and display the mummy with a scan

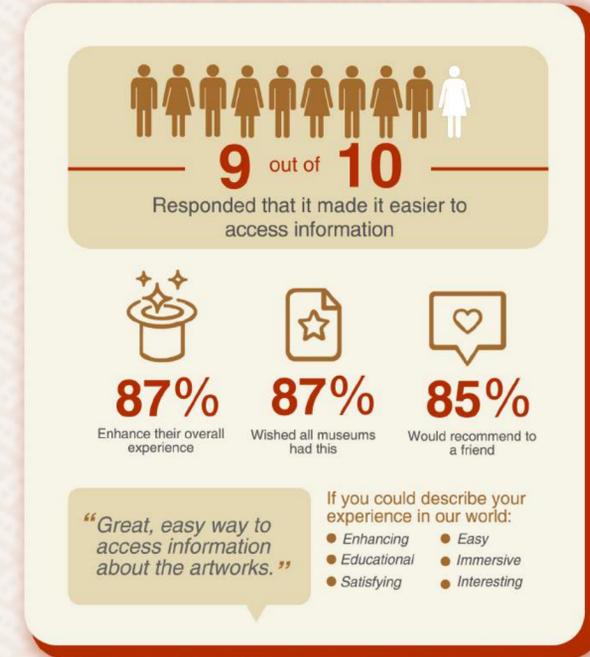
Disney has developed a technology that creates AR images in real time. Users can change the colors of artwork by their phones

# Insights

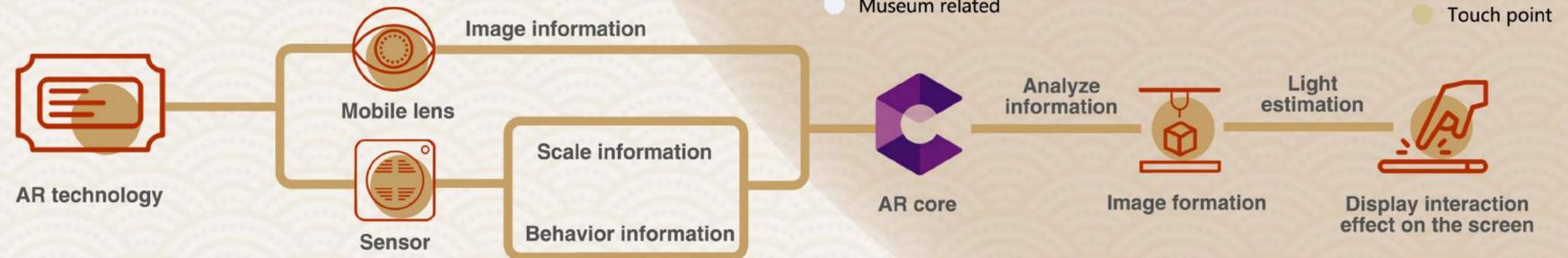
How might Nanjing Museum...



# Survey on museum AR experience



# Technology support



# Persona

**Andrew**

**Quotes**

"I was frustrated when I saw my son soonly lost his interest in the museum. I tried to tell him stories behind each collection, but it didn't work well."

**Bios**

He took his son to Nanjing museum for outdoor education last weekend. However, he found his son showed little interest in collections and soonly lost patience with the lengthy sound explanations.

**User experience goals**

- Able to enjoy the sight of all the collections
- Establish longer-time connections with Nanjing museum

**Susan**

**Quotes**

"The most unpleasent experience was I had to speed up my visit because of the huge visitor flow. On average, I could only watch about 30 seconeds for each collection."

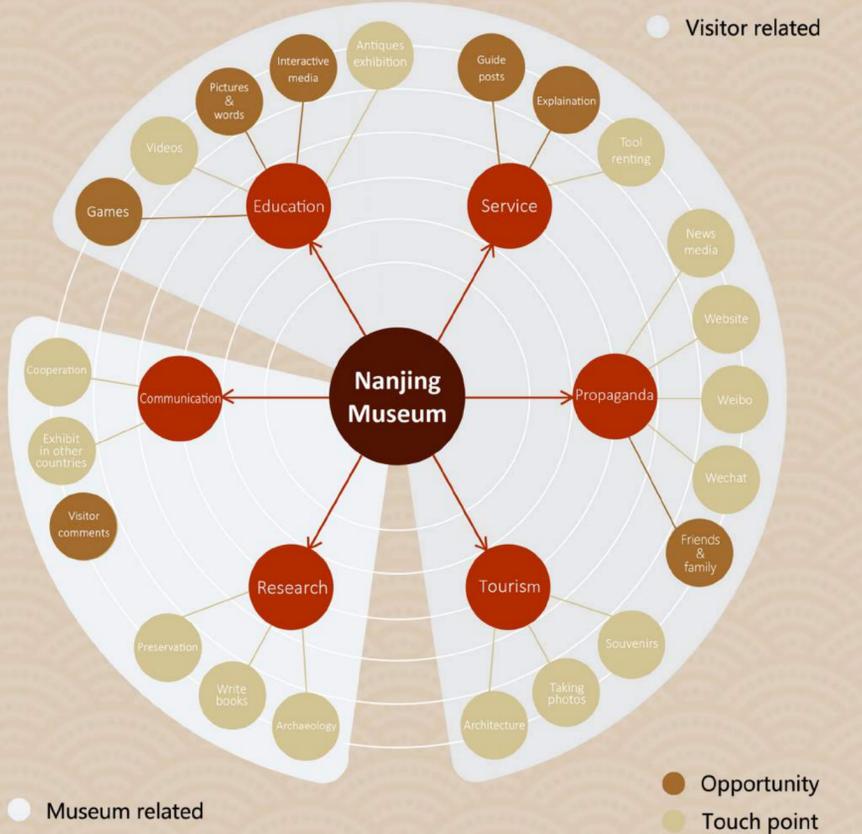
**Bios**

Last summer vacation, she came to Nanjing museum for a visit. Because of the huge visitor flow, she can't watch collections carefully. Moreover, the gallery of culture was renovated at that time, so she missed the collections she wanted to watch most.

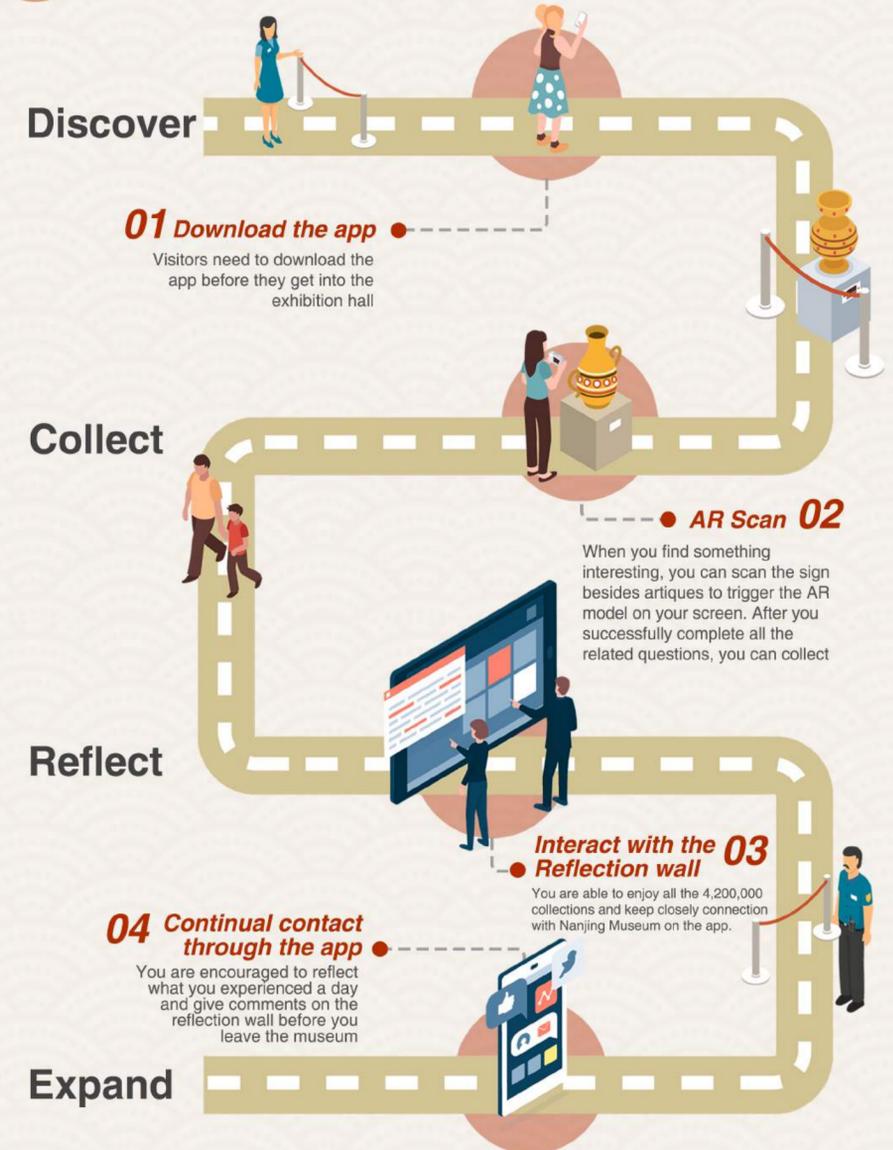
**User experience goals**

- Able to enjoy the sight of all the collections
- Establish longer-time connections with Nanjing museum

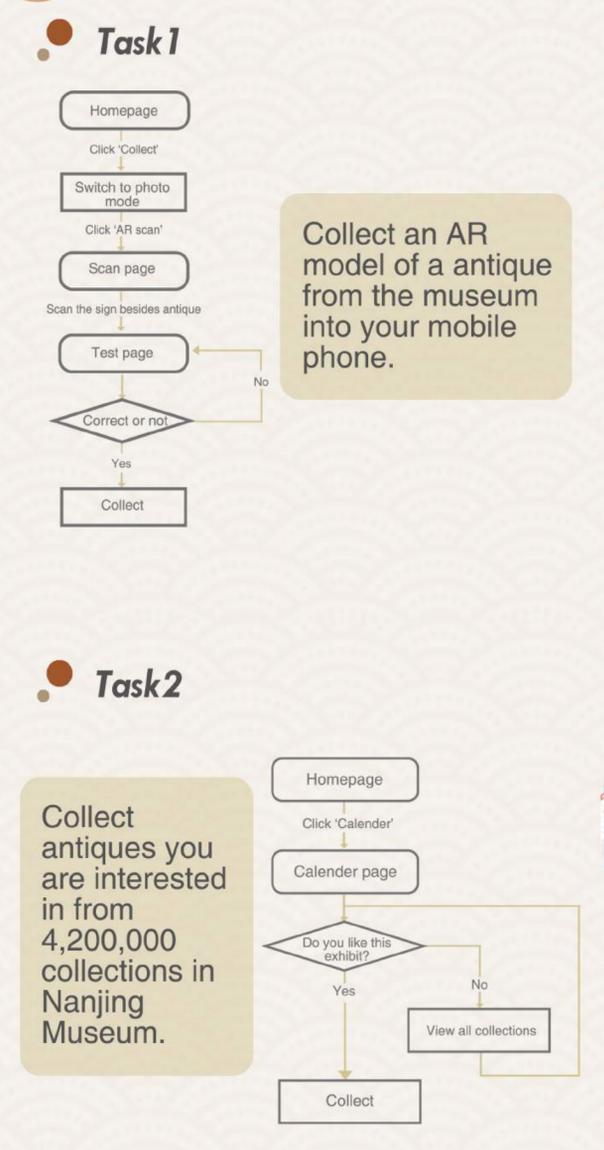
# Mindmap



# Concept



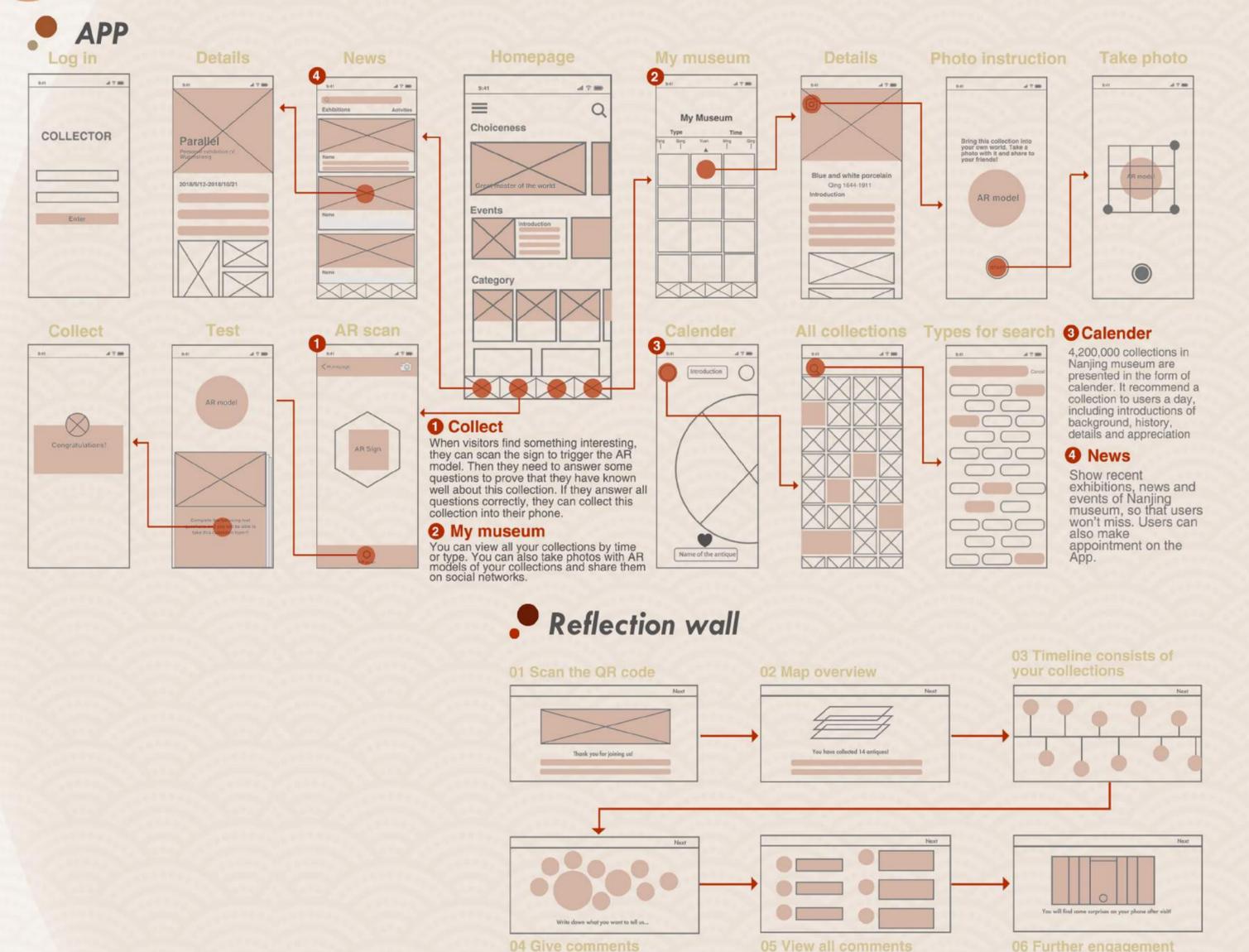
# User flow



# Structure



# Wireframes



# Discover

## Step1

### AR trigger



As visitors view the collections, they will find AR triggers besides most of the collections. Visitors can scan them with their phone camera, then the AR models will display on their screen.

# Collect

## Step2

### Scan the AR trigger



After scanning you will see the AR model on your screen. You can zoom or rotate to see the details of the antique. You can also listen to the phonetic explanations to help you better understand.

### Take a test

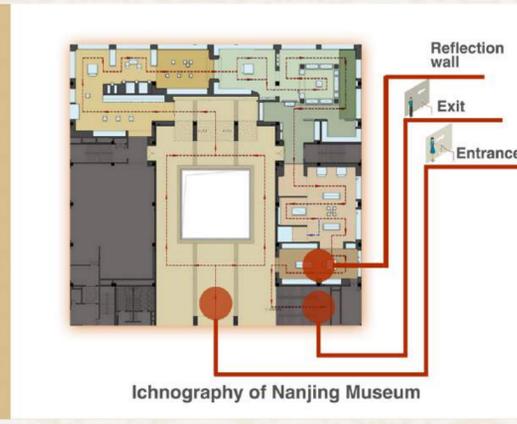
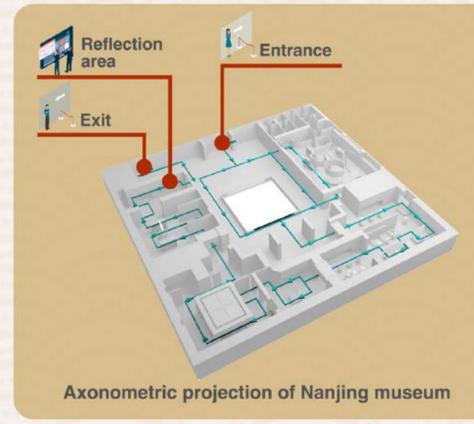


Before collecting the antique, you need to take a test about this antique. If you answer all the questions correctly, you have collected this antique successfully.

# Reflect

## Step3

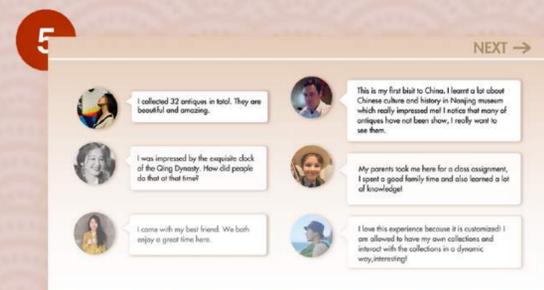
### Position of the Reflection Wall



### Rendering of the Reflection Wall



### Interface of the Reflection wall



- 1 Scan the QR code
- 2 Map overview
- 3 Timeline consists of your collections
- 4 Give comments
- 5 View all comments

# Expand

Step4

- Design elements
- Logo design

Collector  
Collector

- Cornice**  
A kind of traditional Chinese architecture structure
- Discovery**  
Discover collections of interest in the museum.

## Color choosing



## Font choosing

Aa Bb Cc Dd Ee  
Helvetica regular

## Icon design



## UI design



- 1 Homepage
- 2 Welcome page
- 3 Calendar page
- 4 Collect page
- 5 My museum page
- 6 News page

## 'Calendar' function



All collections are arranged in the order of dates. Users can search keywords to find the collections they are interested in

By recommending a collection ever day, users can see the collections anytime and anywhere. In this way, the relationship between people and museum become more closer

# Evaluation

- Feasibility test**  
Steve | 24-year-old Student  
Location: Nanjing museum  
Task: Trigger and interact with the AR model
- Improvement**  
Realize the whole AR technology in 'Collect'
- Museum staff can get more information about user's preferences through the data from reflection wall and the app

