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2 to 3 years old is one of the important stage for children to develop their cognitive ability, especially the expressing emotions. Previous research demonstrates that children during this age range are more likely to experience emotion abuse.

In this project, Moji is an interactive, educational and open-ended building blocks powered by the machine learning model trained by the database, "EMOTHAW". It allows children to express their emotions through playing and drawing. Moji aims to build smart-emotion detect system and guide parents to help their children with negative emotions.

Timeline: June - August, 2022 Individual Project

HCI|UI/UX | PRODUCT DESIGN | CHILDREN DEVELOPMENT | MACHINE LEARNING

BACKGROUND

CHARACTERISTICS

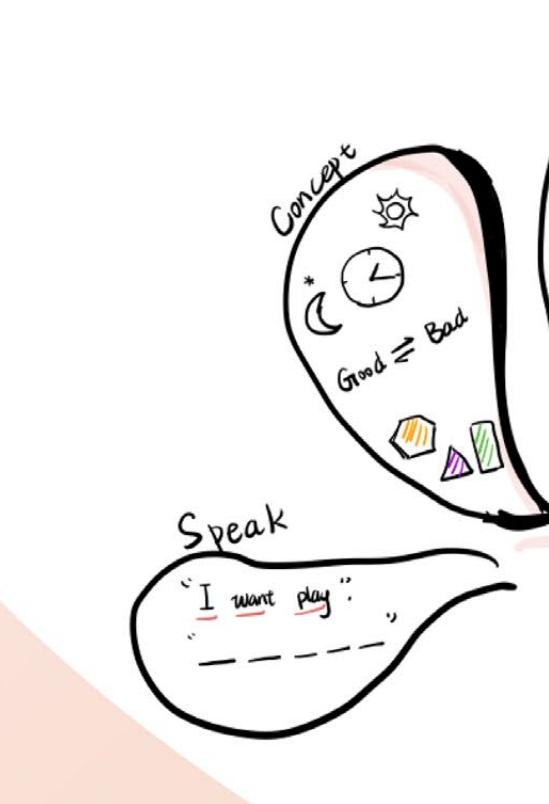
Emotional:

Children from 2 to 3 years start to develop the idea of "individuation".

- Experience huge thinking, learning, social, and emotional changes.
- Possessiveness "mine" and negativism "no" emerge.
- Unable to express verbally 'big' emotions like frustration, etc.
- Lack of the self-regulatory ability: temper tantrums, cry, biting, hitting to express their emotions.

Physiological

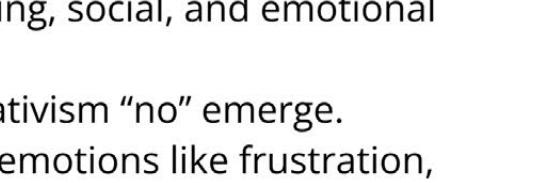
- Use sentences of 3-5 words, or even more.
- Start to understand concepts like time, opposite, shape and colors.
- Imitate the others' actions
- Running and Balancing.
- Able to follow two- or three-step commands.



ANALYSIS

Cognitive:

1. Vocabulary



Factor:

The second year of life is the period for the fastest language acquisition.

Significance:

3-year-olds' vocabulary size significantly predicted their scores on future standardized tests of language skill.

Factor:

The brain keeps growing to about 80% of adult size by age 3.

Significance:

A child's developing brain depends on secure attachments and serve-and-return interactions between children and parents.

1. Abuse

Factor:

Parents overestimate children's self-regulatory ability, while underestimate their emotional complexity.

Significance:

Children are more likely to experience abuse and neglect during their first three years of life than at any other age.

Factor:

Parents' engagement of the positive emotional give-and-take early interactions.

Significance:

Children learn healthy and constructive self-regulatory skills through interactions.

2. Brain



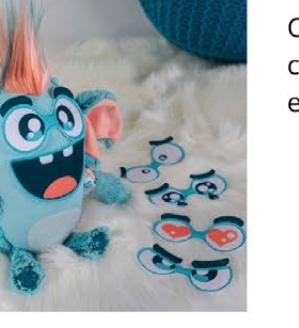
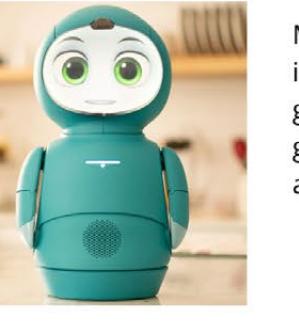
Emotional: parents' influence

2. Interaction

Factor:

RESEARCH

COMPETITOR ANALYSIS

Abstract	Form	Evaluation	Pros	Cons
	Children decide to put modules fitting in different categories based on illustrations.	Engagement Logical training Interaction with parents Emotional expression Efficiency	<ul style="list-style-type: none"> High affordability Strong educational meaning Easy accessible 	<ul style="list-style-type: none"> Poor engagement Low efficiency Lack of interaction with parents Low interest
	Children change and combine facial expression modules to learn and express different moods.	Engagement Logical training Interaction with parents Emotional expression Efficiency	<ul style="list-style-type: none"> Cute and comfortable appearance Physical interaction High affordability Flexibility 	<ul style="list-style-type: none"> Low educational meaning Low efficiency Limited interaction with parents
	Children chat with the robot. The robot guide the children to express their emotions and gives proper sessions or activities	Engagement Logical training Interaction with parents Emotional expression Efficiency	<ul style="list-style-type: none"> High interaction Scientific and broad educational knowledge and ways High efficiency Personalized 	<ul style="list-style-type: none"> Low affordability Limited ways of interaction Lack of emotions and warmth Feel cramped Lack the interaction with parents
	Children interacts with the game map to enter different stories. They answer questions to define and regulate emotions.	Engagement Logical training Interaction with parents Emotional expression Efficiency	<ul style="list-style-type: none"> High interaction and engagement to keep children interesting High efficiency Free download 	<ul style="list-style-type: none"> Lack of interaction with parents

Conclusion

- Tools or platforms in the current market are limited to unidirection interaction. They ignore the correlation between parents' behaviors and children's emotion expression and regulatory ability.
- The interaction forms are relatively singular for these products.

RESEARCH PLAN

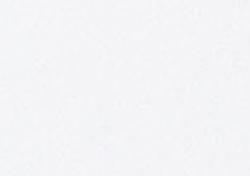
The study consists of two major parts :

- An interview with parents + A behavior observation.

Participants:



• Child A: Lily
3 year-old, girl



• Child B: Jojo
2.5 year-old, boy

Interview

In order to know some background information about children, I asked their parents to describe their children (e.g. personalities), and if there are any issues faced in nurturing healthy emotions.

- Q1: Please, describe your kid.
Q2: Recall some ways your kid employed to express emotions.
Q3: Have you ever faced any changes in nurturing healthy emotions?

Extroverted, outgoing.

Words, Gestures, Drawing, express her emotions by colors...

Lily could express her emotions by simple words. But when it comes to more complex situations, she just stops herself and does not show how sad she is. We want to help her handle it, but have no ideas what we should do...

Introverted, a little shy.

Crying, Hitting, Smiling...

The biggest challenge for me when nurturing is that Jojo quickly gets bored. He always cries or hits his father or me to express his negative feelings. Sometimes, he just cries without saying anything. For example, he says he is hungry when in reality, he is tired...

Jojo's Mom

Lily's Mom

Observation

After knowing their background information, I asked parents to record their children's behaviors secretly within 4 different emotional scenarios :

- 2 positive scenarios: Satisfied / Pride
- 2 negative scenarios: Frustration / Jealous

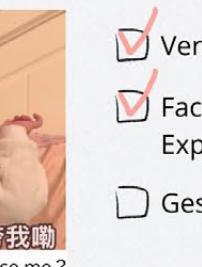
I evaluated their emotion expressions in 3 ways : Verbally, Facial expression, Gestures.

Positive scenarios

#S1: Satisfied



#S2: Pride



Negative scenarios

#S3: Frustration



#S4: Jealous



Avoiding, Throwing, Hitting, Smiling...

Verbally, Facial Expression, Gestures

Conclusion

1 Hard to interpret

Based on interviews, I found that although it seems that children had varying levels of success in employing comprehensive methods to express their emotions, parents still had trouble interpreting their child's emotional state.

Positive > Negative

After observing, I found that children are more sufficient to express their feelings in the positive scenarios than the negative scenarios. In the negative scenarios, children are more easily to express these feelings in unhealthy manners such as hitting, avoiding, throwing, etc.

PERSONA

Steffen, 2.5 yrs

Preschooler

Bio:

Steffen is an only child in his family. Family is the most essential part of his life. He enjoys the time interacting and sharing his thoughts with his parents. Steffen feels pride and satisfied whenever he could do something individually.

Pain Points:

- Parents misunderstand of his feelings and thoughts.
- Unable to express himself exactly.

Traits:



2.

Bio:

Eveline is Steffen's mother who works as an accountant. Despite her busy schedule, she takes Steffen's development both physically and mentally very seriously. In order to help Steffen better prepare for the kindergarten, Eveline has bought lots of educational books, toys, applications, etc.

Pain Points:

- Hard to understand her son's feelings.
- Lack of knowledge to educate her son for better development.
- Struggle to maintain a balance between work and family.

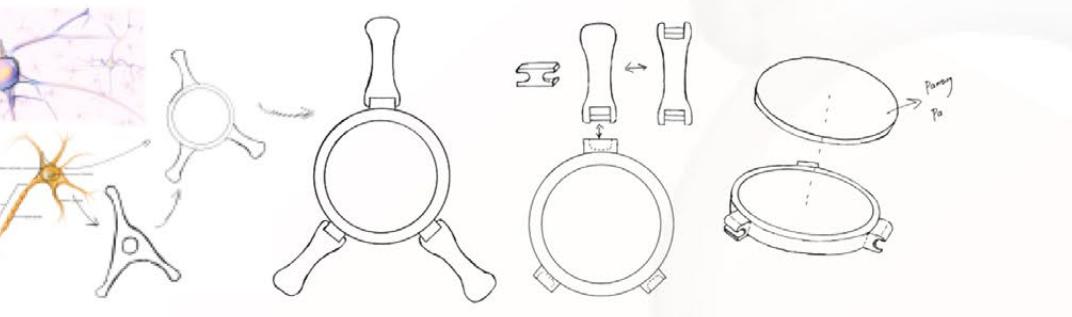
Traits:



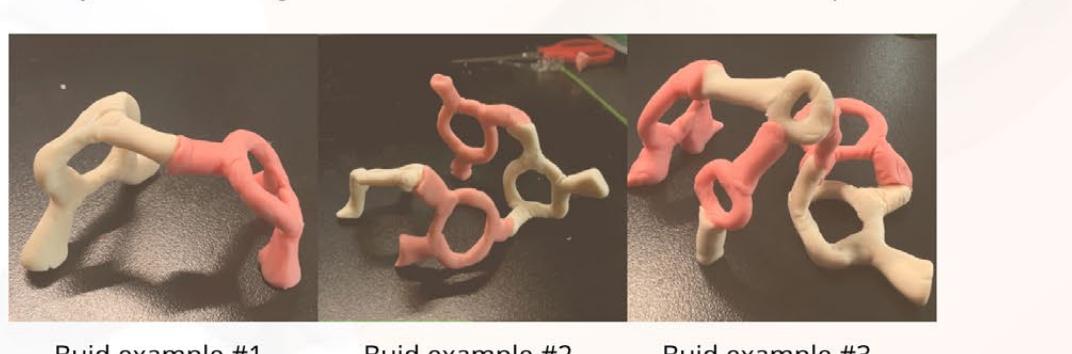
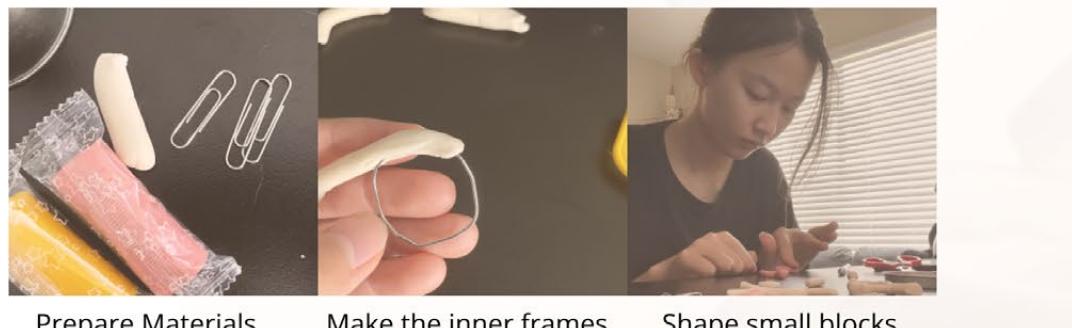
Buiding Blocks

Prototype

A Sketch



B Model Buiding Test



Conclusion

- The structure is feasible
- Change colors to all white since pink somehow impacts people's emotions leading to the inaccurate prediction.

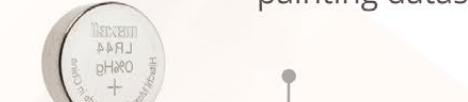
Structure Diagram

Wifi-module



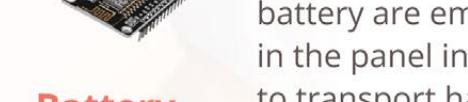
Wifi module and battery are embeded in the panel in order to transport hand-painting datas.

Battery

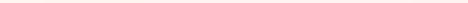
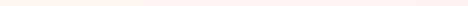
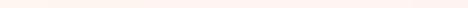
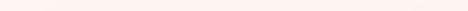
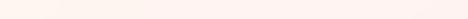
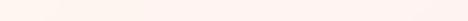
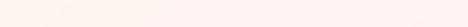
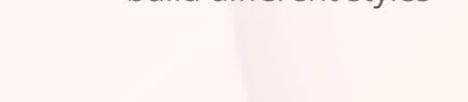
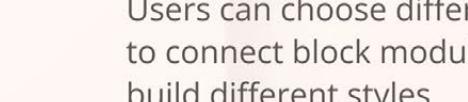


Battery

Drawing panel



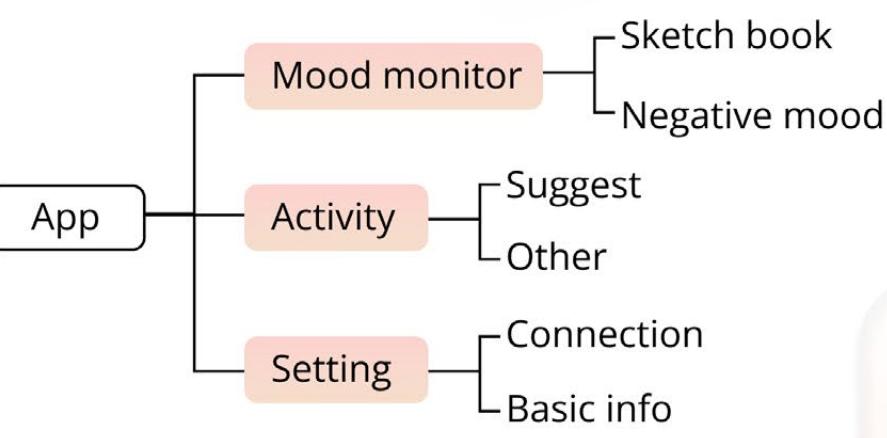
Users can draw on the panel. The pannel will detect and collect hand-painting datas.



FINAL DISPLAY

Mobile App

Site Map

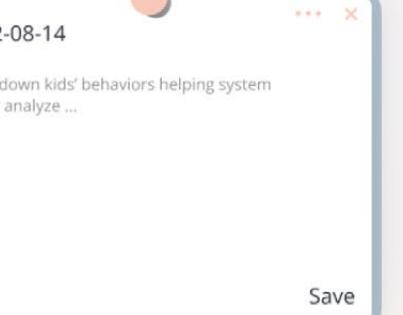


Color Scheme



2 Mood Track

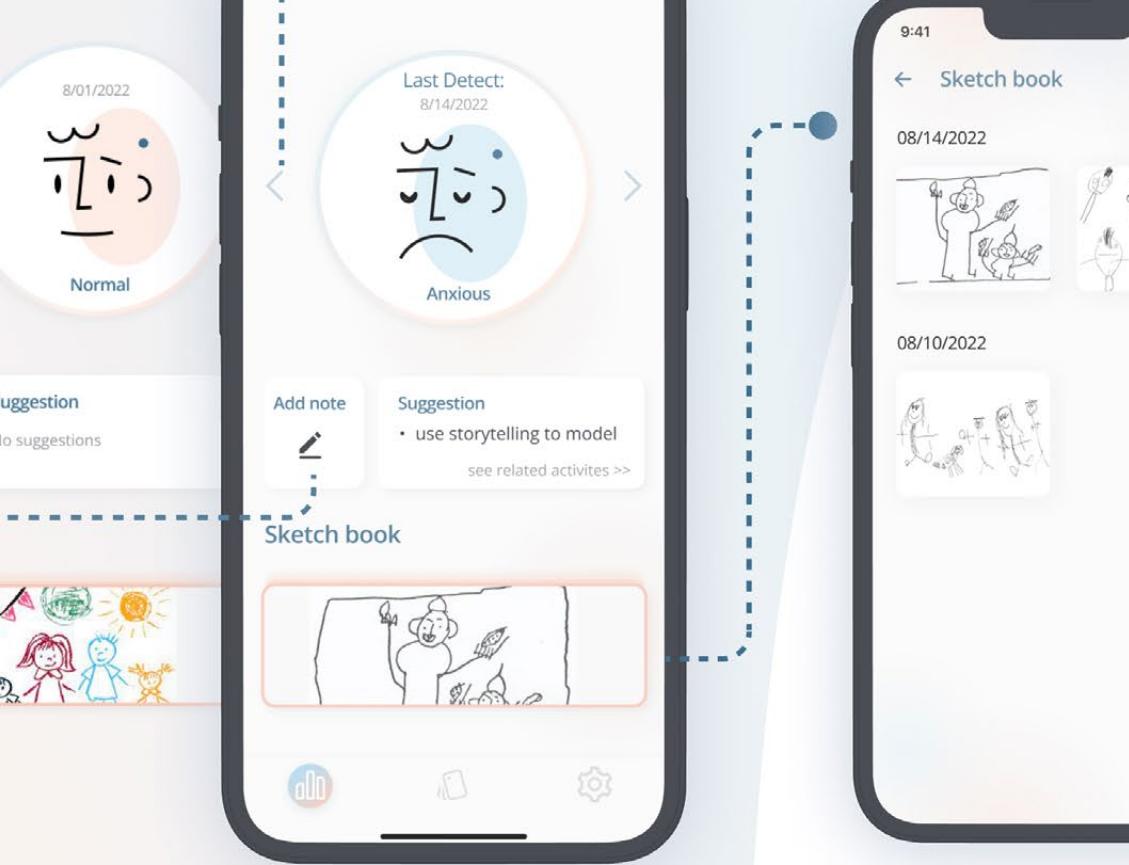
Mood history



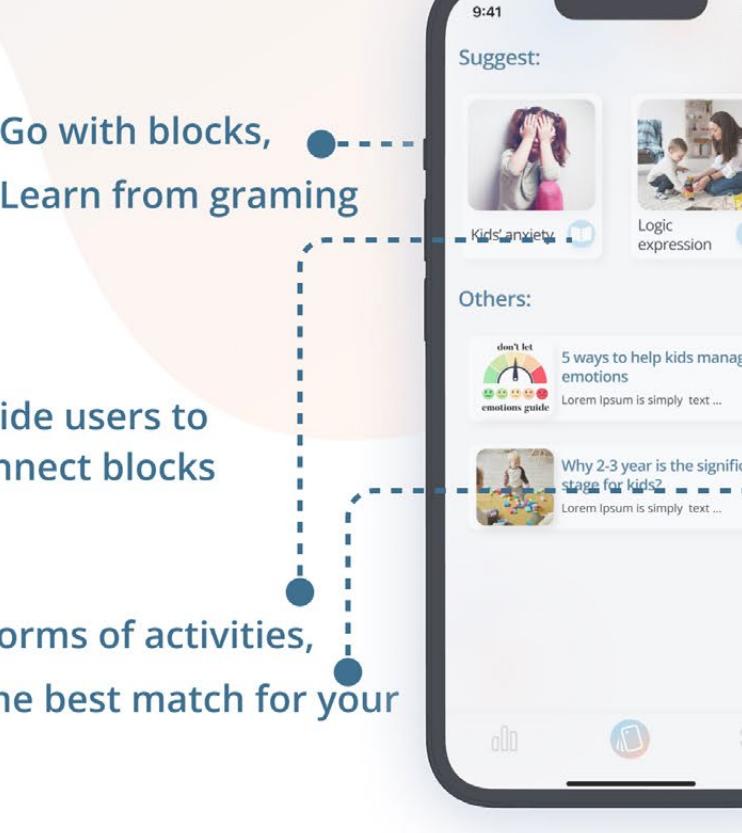
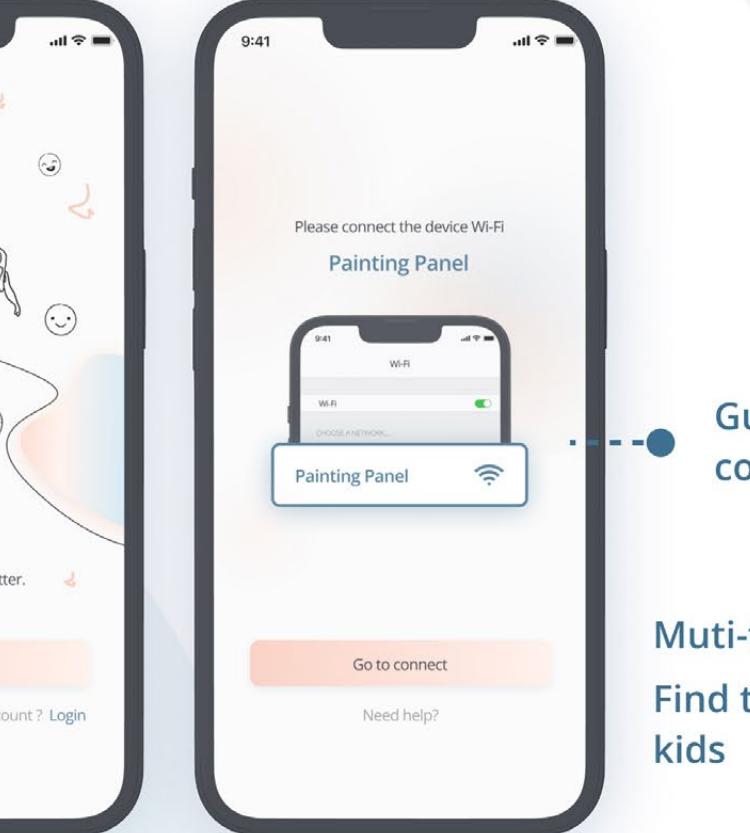
Add notes

help the system better analyze the mood

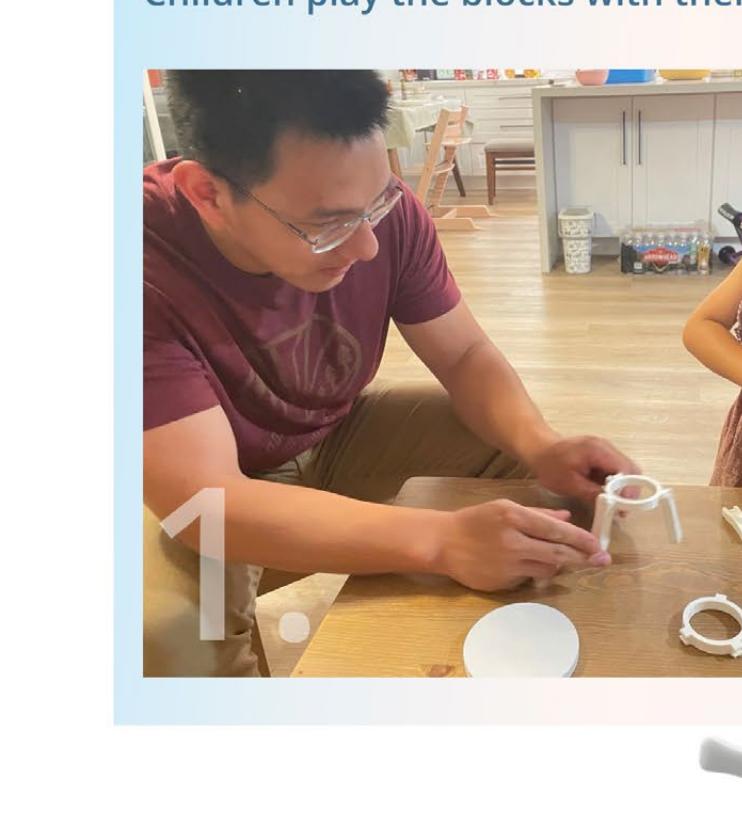
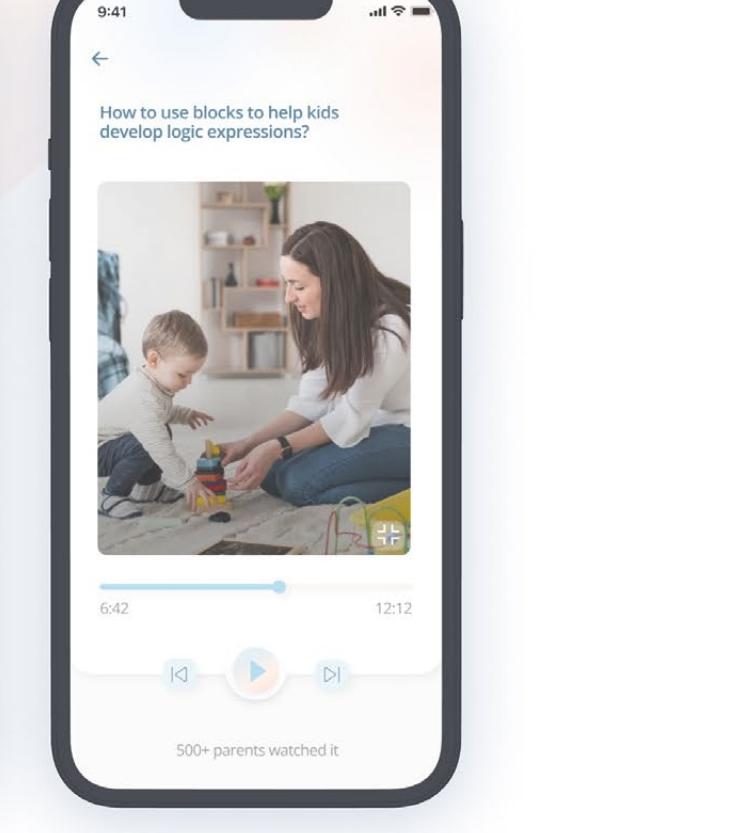
Sketch gallery



1 Wellcome



3 Activity



Children play the blocks with their parents



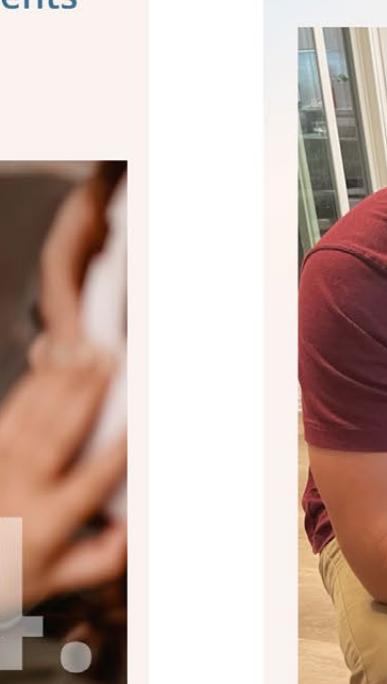
Children draw paintings on the panel



Parents get notifications from the app



Parents communicate/interact with children following the instruction



Parents view the detect result and add some notes

Based on the app suggestions, parents watch instructions to help solve children's negative emotions

Parents communicate/interact with children following the instruction

SCENARIOS

Future Work



Finalize the database

Collect more data related to positive emotions, so I can use this database to train machine learning model for both positive and negative emotions, providing more comprehensive emotion report for parents.



Select material

Find more comfortable and children-friendly materials for the building blocks.



Business Plan

Target group :
Parents who have 2-3 years-old kids

Short Term

Main Tasks:
• Cloud funding
• Software develop
• Find industry to produce blocks

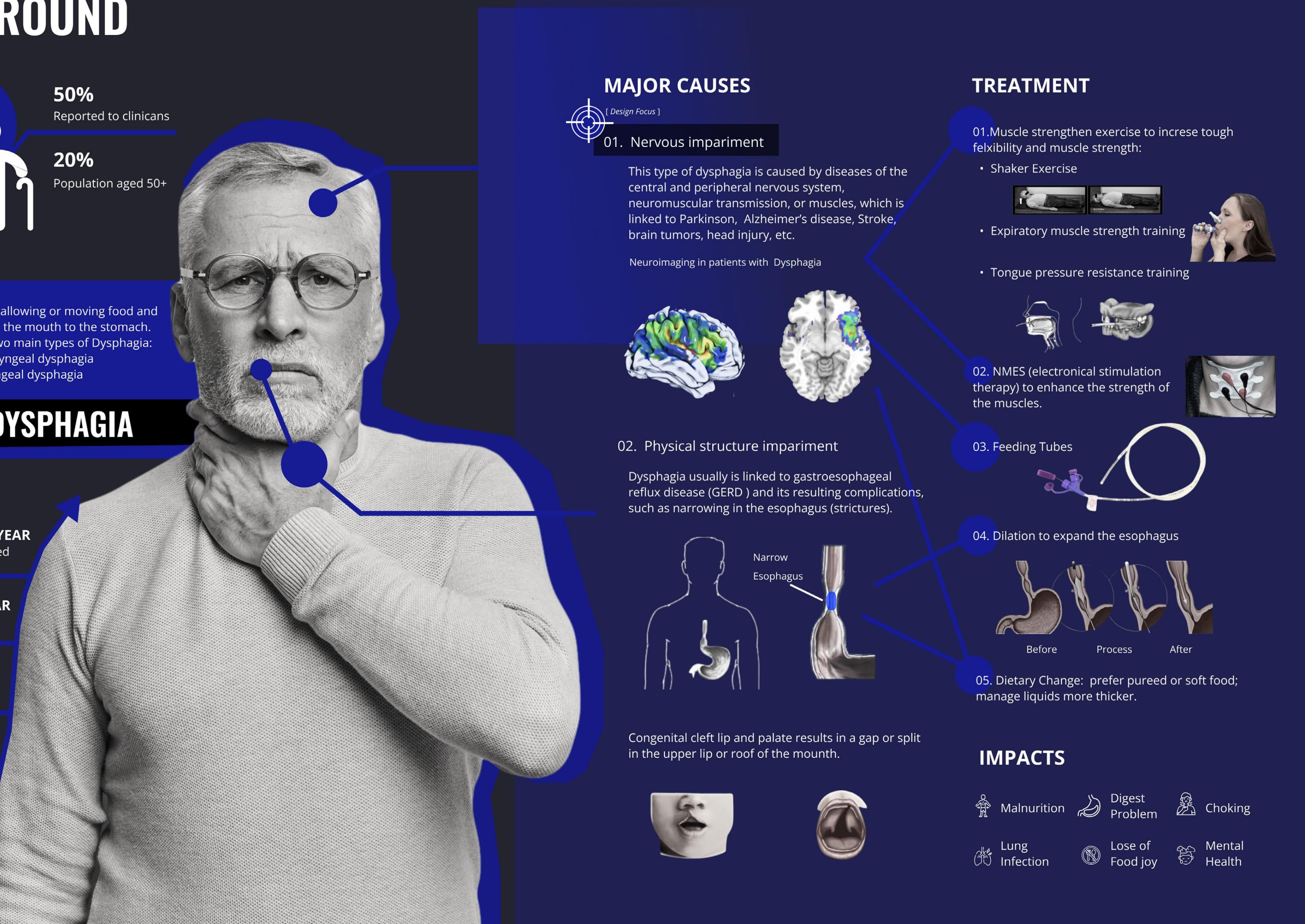
Mid Term

Main Tasks:
• Advertisement, establish brand image
• System upgrade

Long Term

Main Tasks:
• Form a closed loop of production including upstream and downstream industries

BACKGROUND



IDEATION

COMPETITORS ANALYSIS



"Visualize swallowing anytime, anywhere with Mobile-T"

Abstract

A under-neck sensor and mobile application help patients and clinicians to visualize swallowing. Through visualizing swallowing, users get the synchronous feedback and share their progress with clinicians.

Insights

- Visualizing the training process helps both users and clinicians to get better ideas about recovery.
- Small and portable devices provide convenience for customers.

"Finally! Dysphagia therapy SLPs can trust"

Abstract

Ampcare uses ESP combines the most effective electrical stimulation parameters with resistive exercises.

Insights

- The combination of electronic stimulation and resistive exercises helps maximize the recovery effects.
- research supports are important for treatments.

THICK IT



"Visualize swallowing anytime, anywhere with Mobile-T"

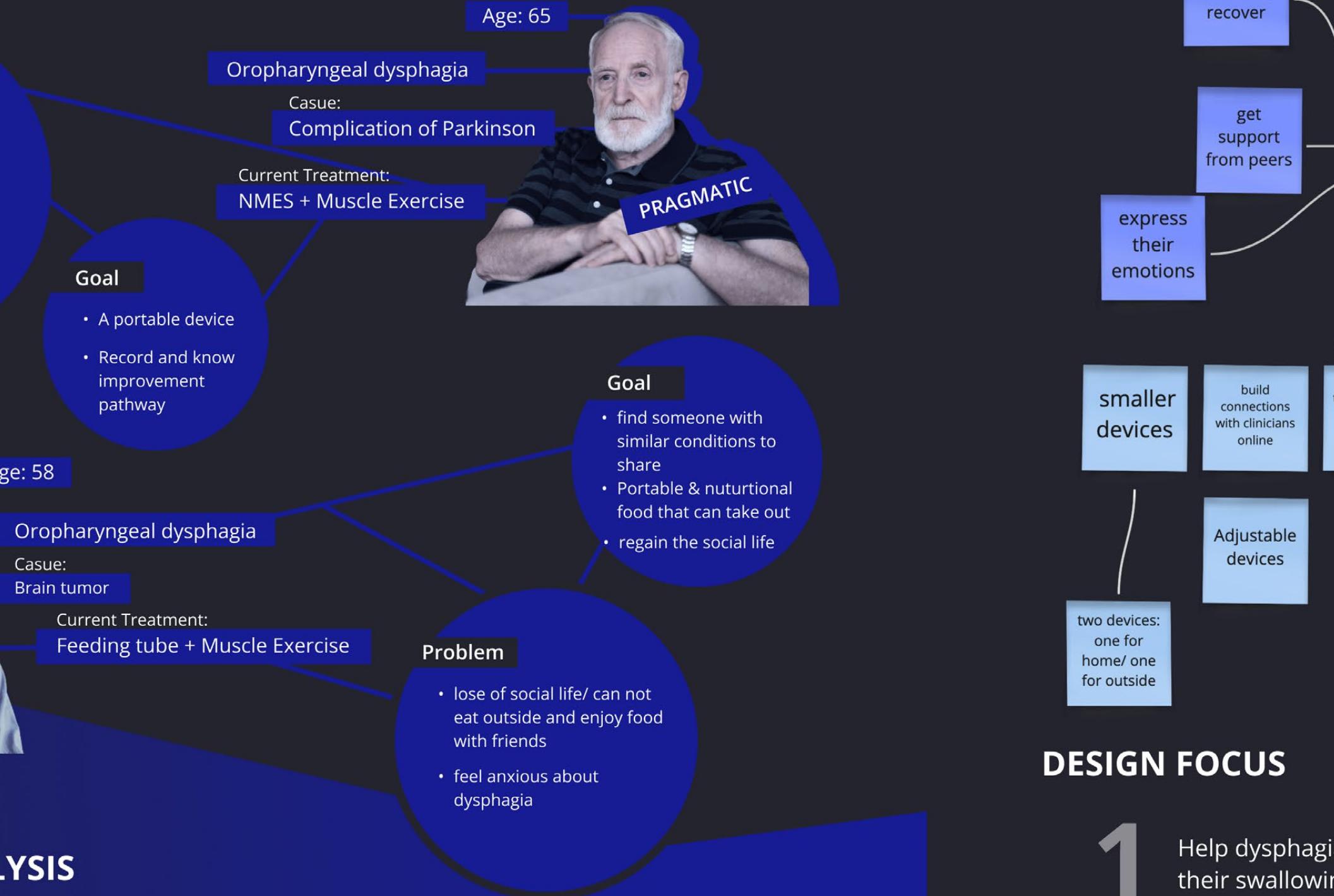
Abstract

The Thick-It® brand is aim to simplify life with a swallowing disorder by developing foods, beverages, and thickeners that are safe, nutritious, and satisfying.

Insights

- In the current market, most types of dysphagia food are limited to beverages or cans.
- How to design more enjoyable and portable food for customers is another big challenge.

CASE STUDY



PROBLEM ANALYSIS



Problem 01: Inconvenience

Phenomenon:

- People spend a lot of time going therapies for the resistive exercises.



Problem 02: Isolation

Phenomenon:

- Patients feel difference between themselves and others when eating public.

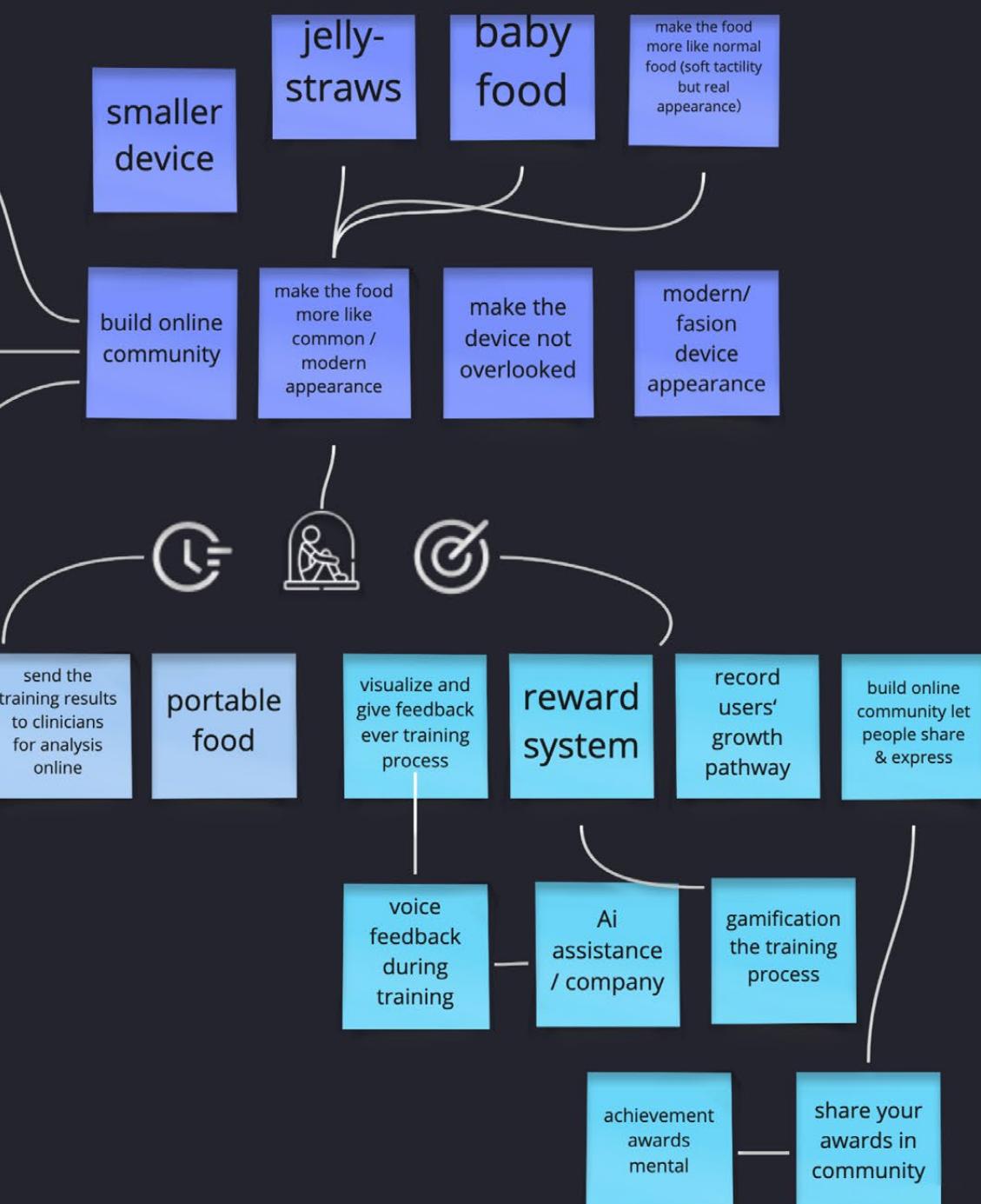


Problem 03: Motivation

Phenomenon:

- Patients feel depressed and anxious since they are not aware their improvement.

BRAINSTORM



DESIGN FOCUS

1

Help dysphagia patients caused by nervous impairment to recover their swallowing ability.

- This project aims to design portable electrical stimulation devices + matched app which builds up feedback & reward systems and an online community for patients.

2

Help dysphagia patients eat.

- Create a more portable and convenient food package for dysphagia patients. Based on the case study, how to eliminate the feeling of difference or even shame when eating dysphagia dietary food is another focus of this project.

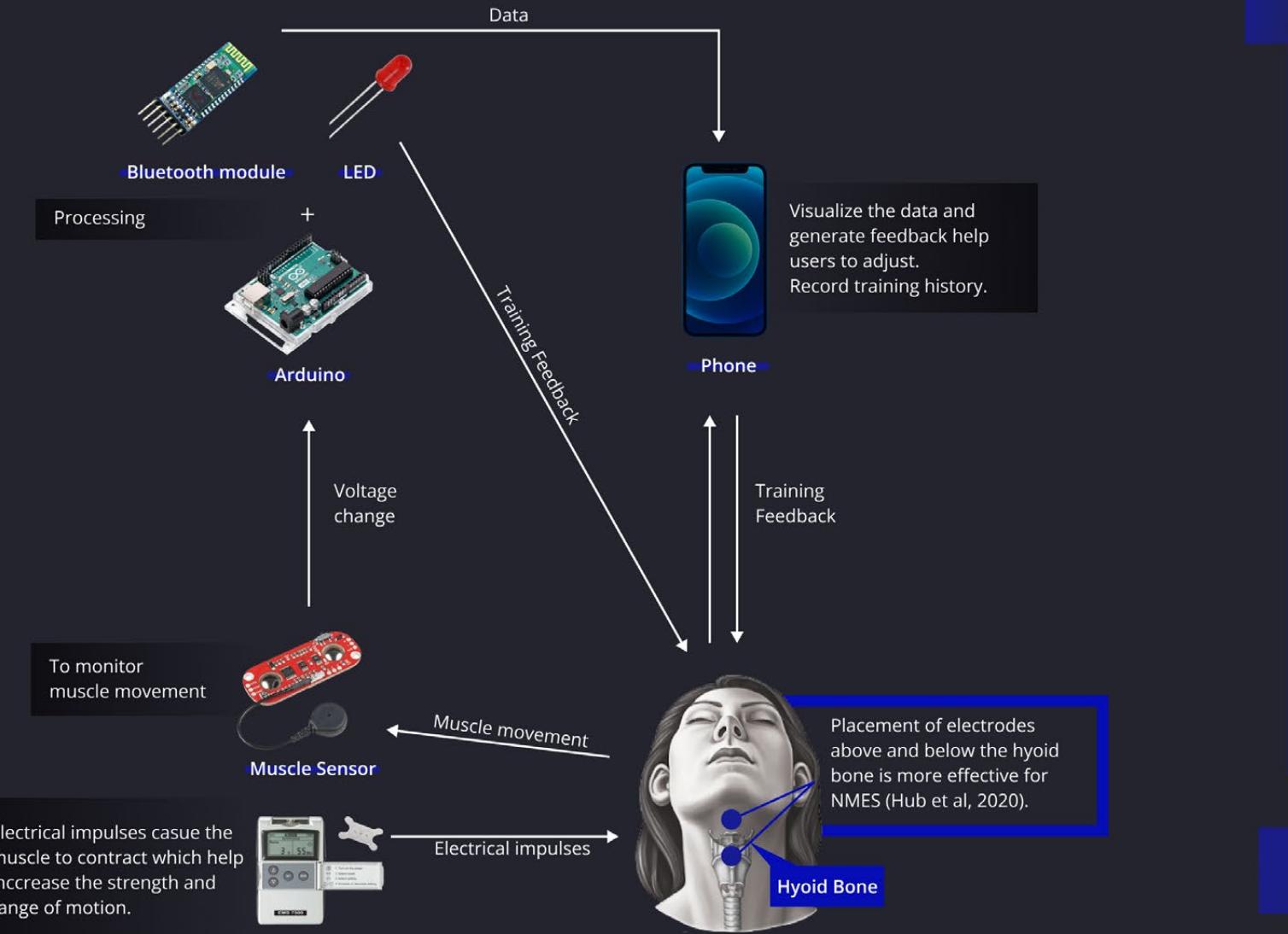
VALUE FLOW

User ——— Warehouse ——— Clinicans
APP ——— Hardware ———

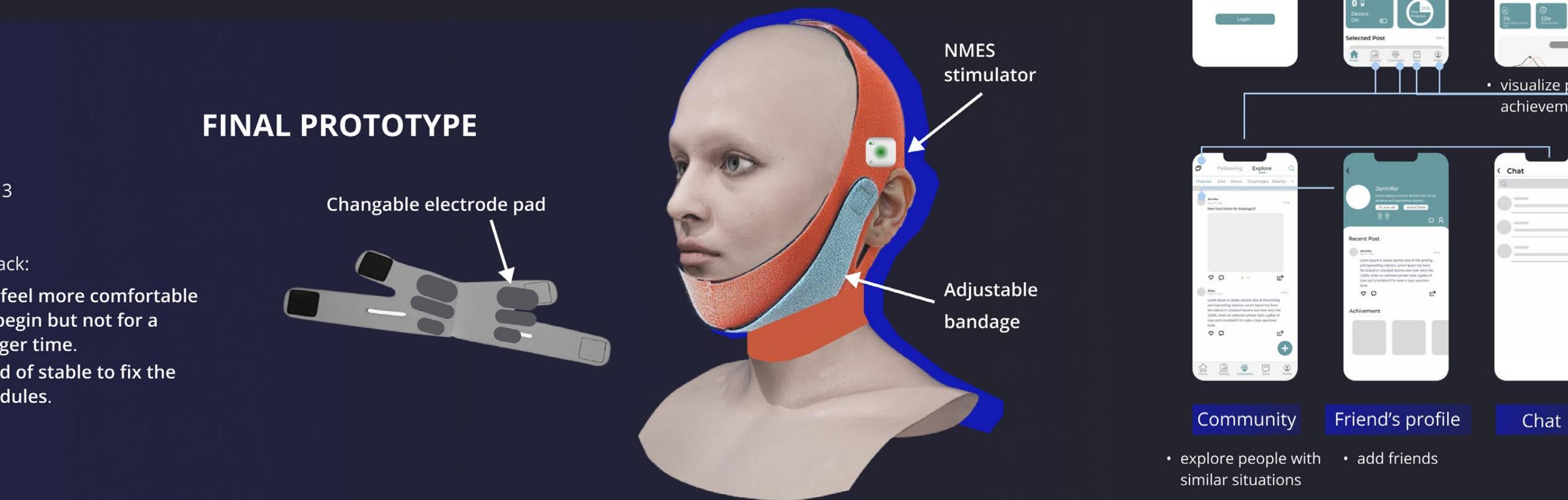
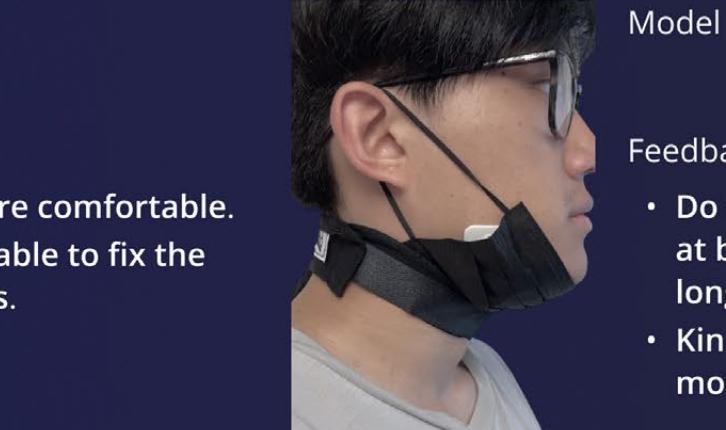


HARDWARE

TECHNOLOGY FLOW



USER TEST



Experiment

PROCESS

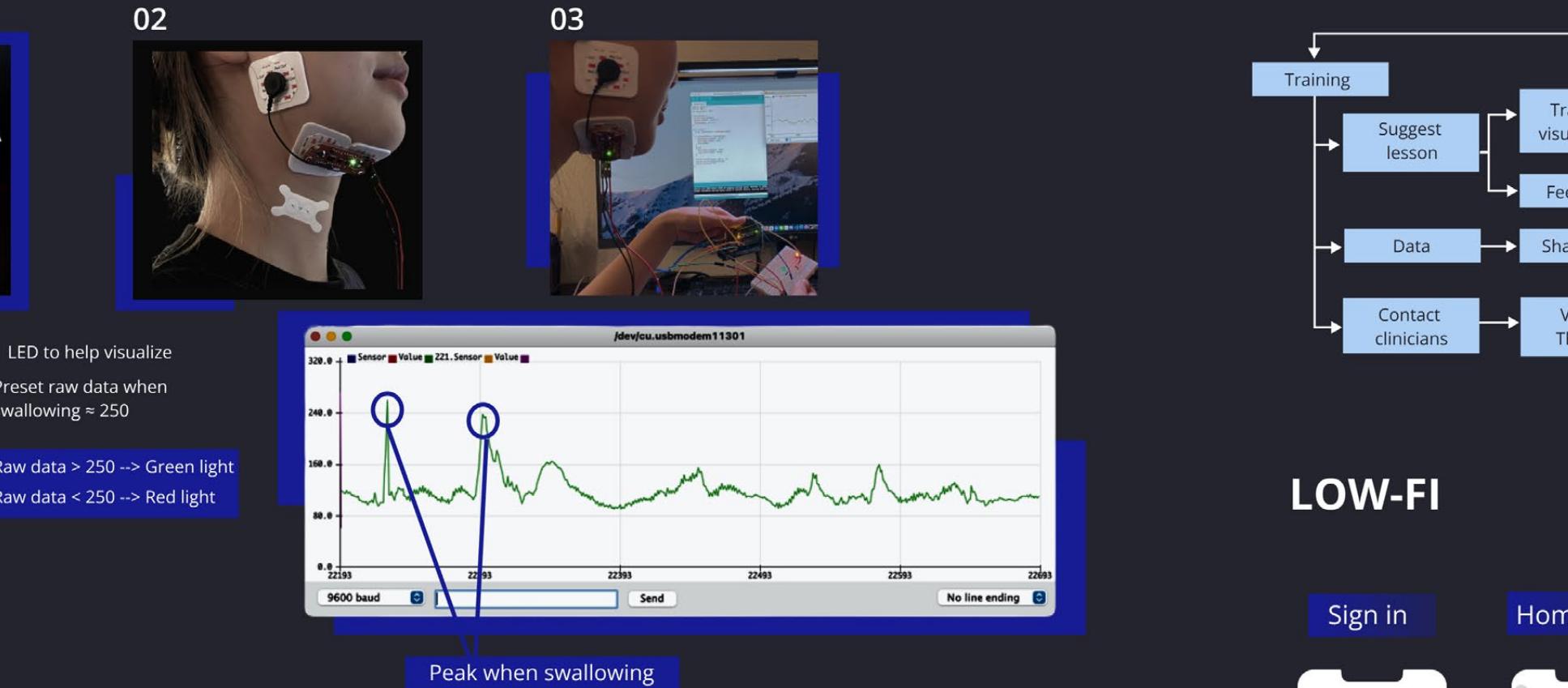
```
#define GREEN 2
#define RED 4
int threshold = 250;

void setup() {
    Serial.begin(9600);
    pinMode(GREEN, OUTPUT);
    pinMode(RED, OUTPUT);
}

void loop() {
    float sensorValue = analogRead(A0);

    if(sensorValue > threshold){
        digitalWrite(GREEN, HIGH);
        digitalWrite(RED, LOW);
        delay(500);
    }
    else{
        digitalWrite(GREEN, LOW);
        digitalWrite(RED, HIGH);
    }

    Serial.print("Sensor Value: ");
    Serial.println(sensorValue);
    Serial.println("");
}
```



FEEDBACK

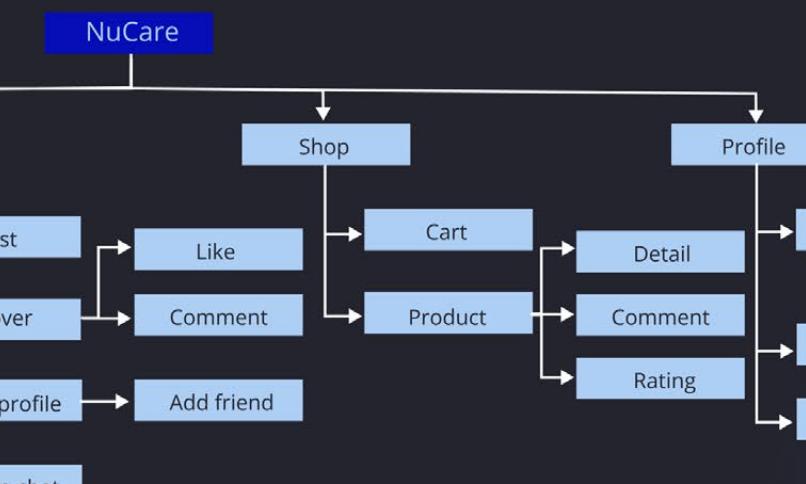
Modules are hard to fix and fit in the right positions which leads to some deviations for muscle detections. For the further plan, I will try to use bandages to help fix modules. At the same time, it should also consider the comfort and convenience of the device.

FINAL PROTOTYPE

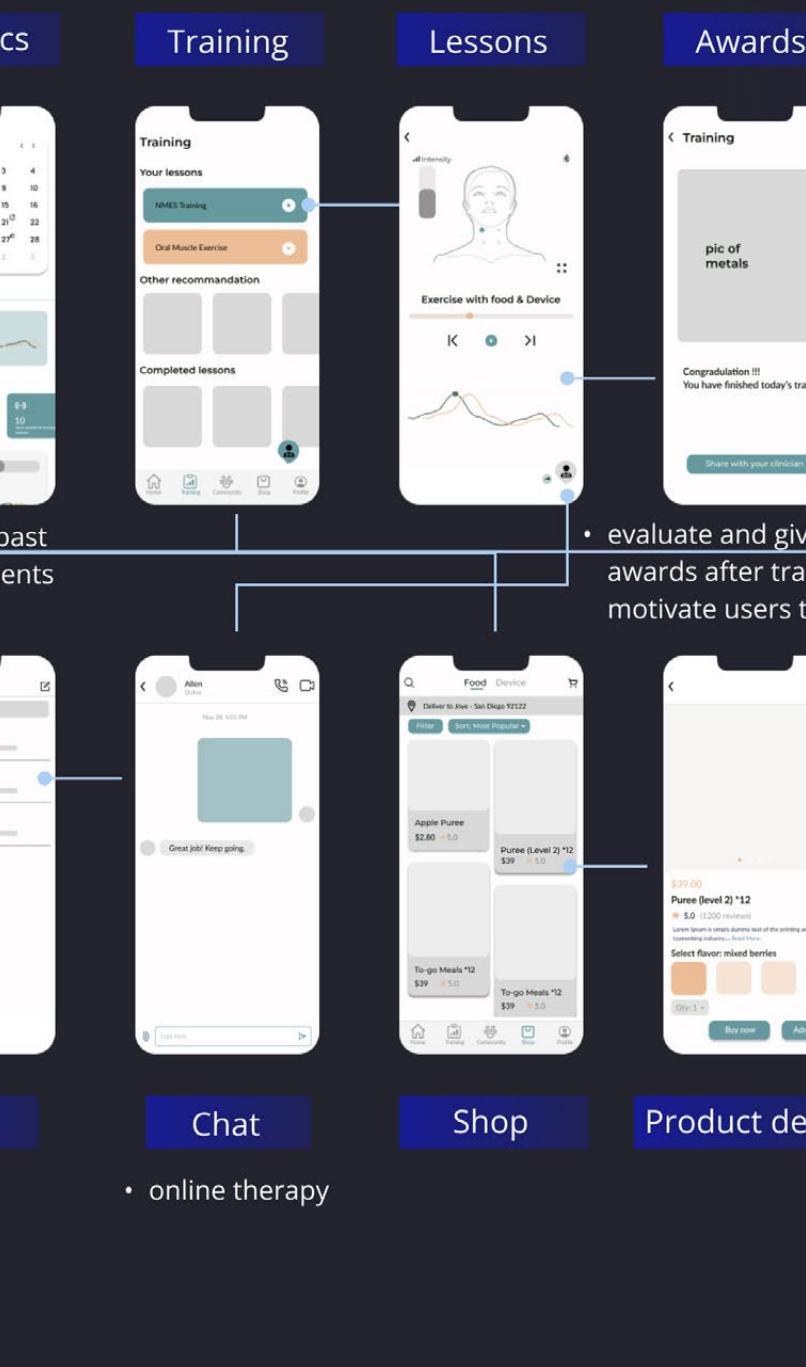
Hardware

INTERFACE

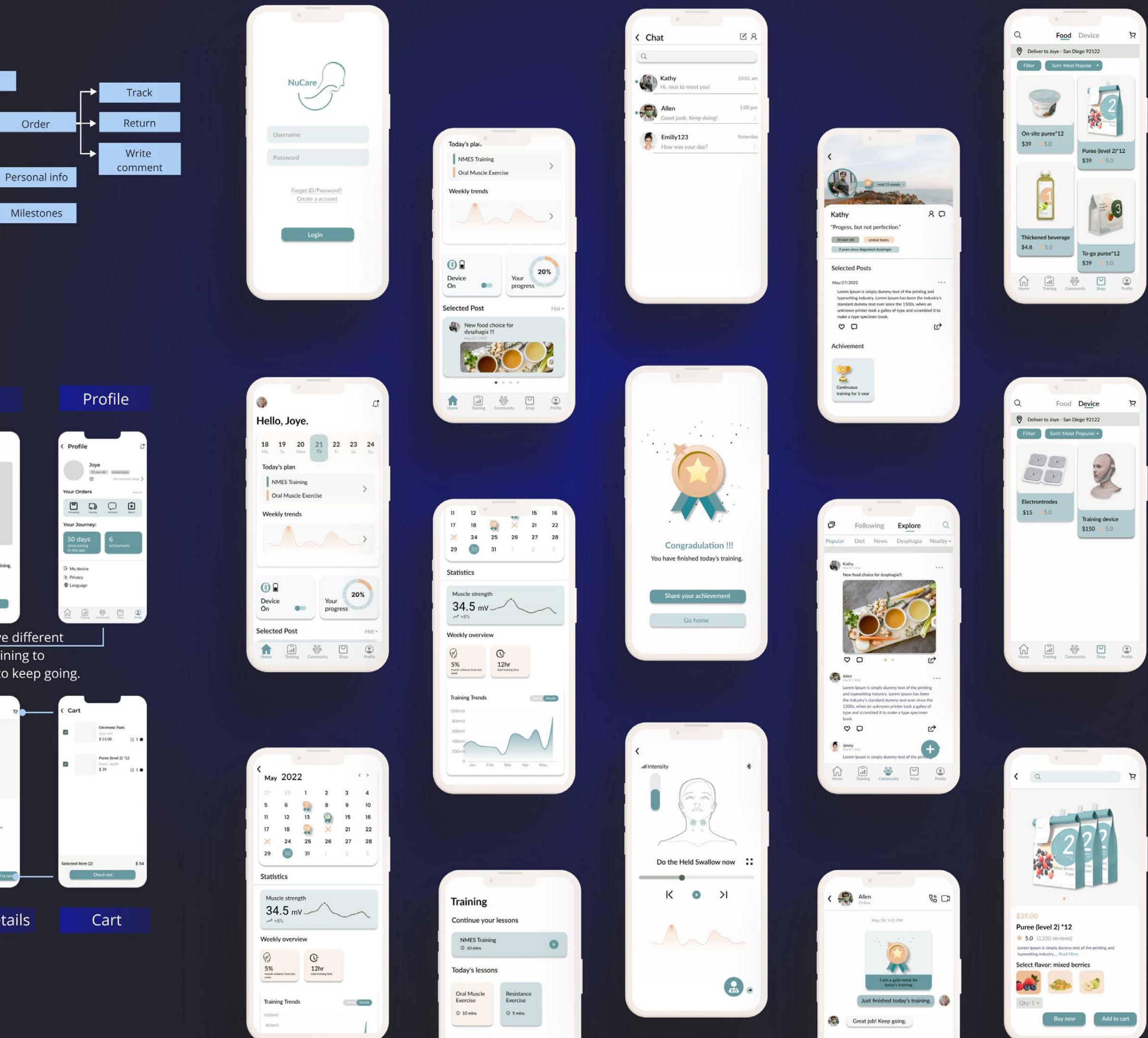
SITEMAP



LOW-FI



HI-FI

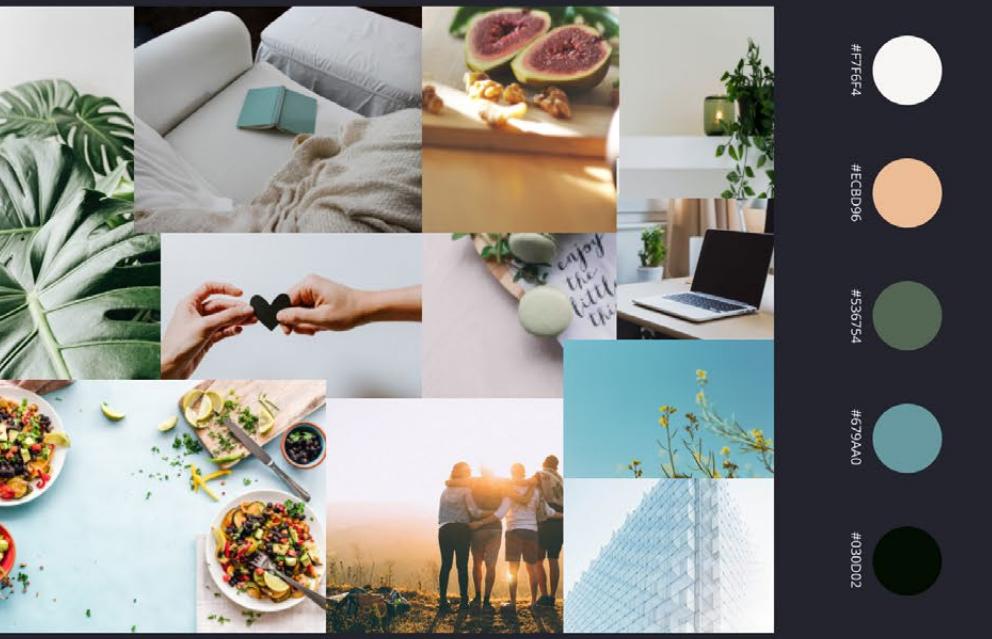


Interface

FOOD

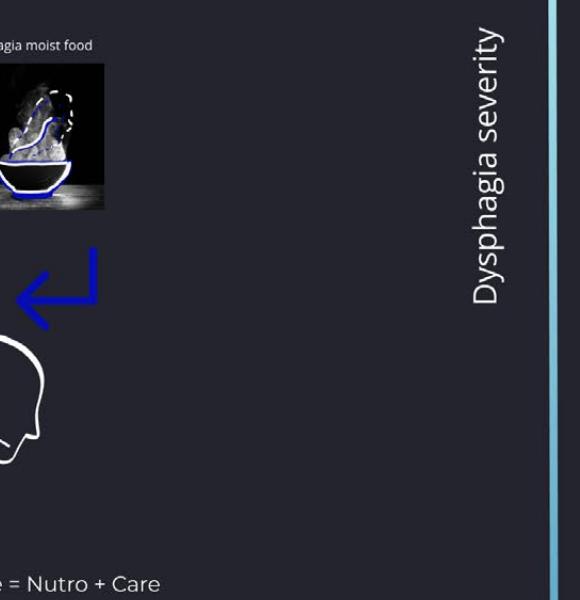
MOODBOARD

Healthy
Portable
Modern
Nutritive
Safe
Supporting
Minimal
Trustworthy
Friendly



LOGO

idea processing

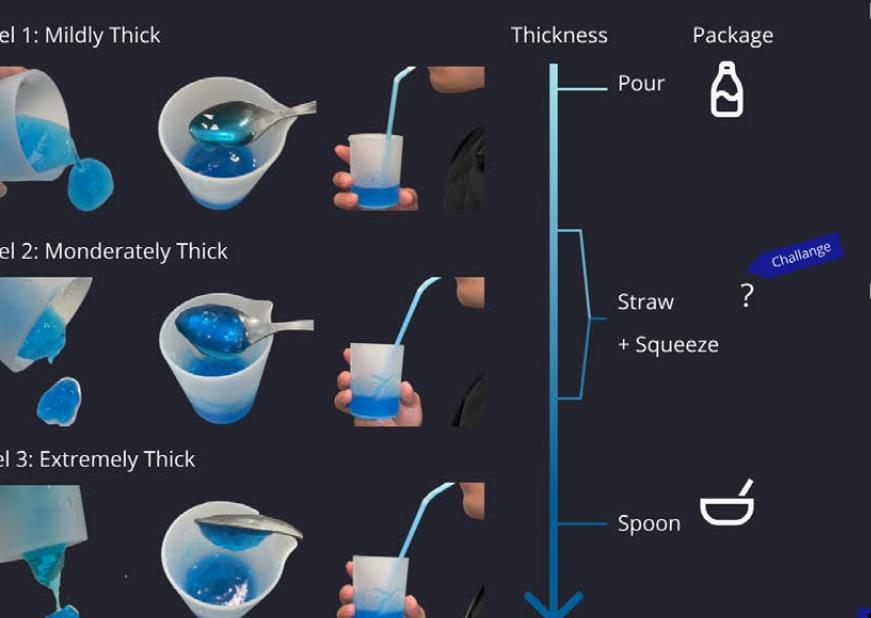


PRODCUT EXPERIMENT

01. THICKNESS TEST

- To find the most suitable way to eat, I simulated 3 different levels of thicknesses for dysphagia patients' diets, and tried 3 feeding ways: straw, spoon, and directly pour out.

Test Result



- Due to the muscle weakness of dysphagia patients, using straw may be hard to them and even cause some harms. I decided to use **squeeze** rather than **straws**.

03. CONCLUTION

- After considering the portability and ergonomics, I choose model 3 for level 2 thickness package and model 4 for level 3 thickness package.

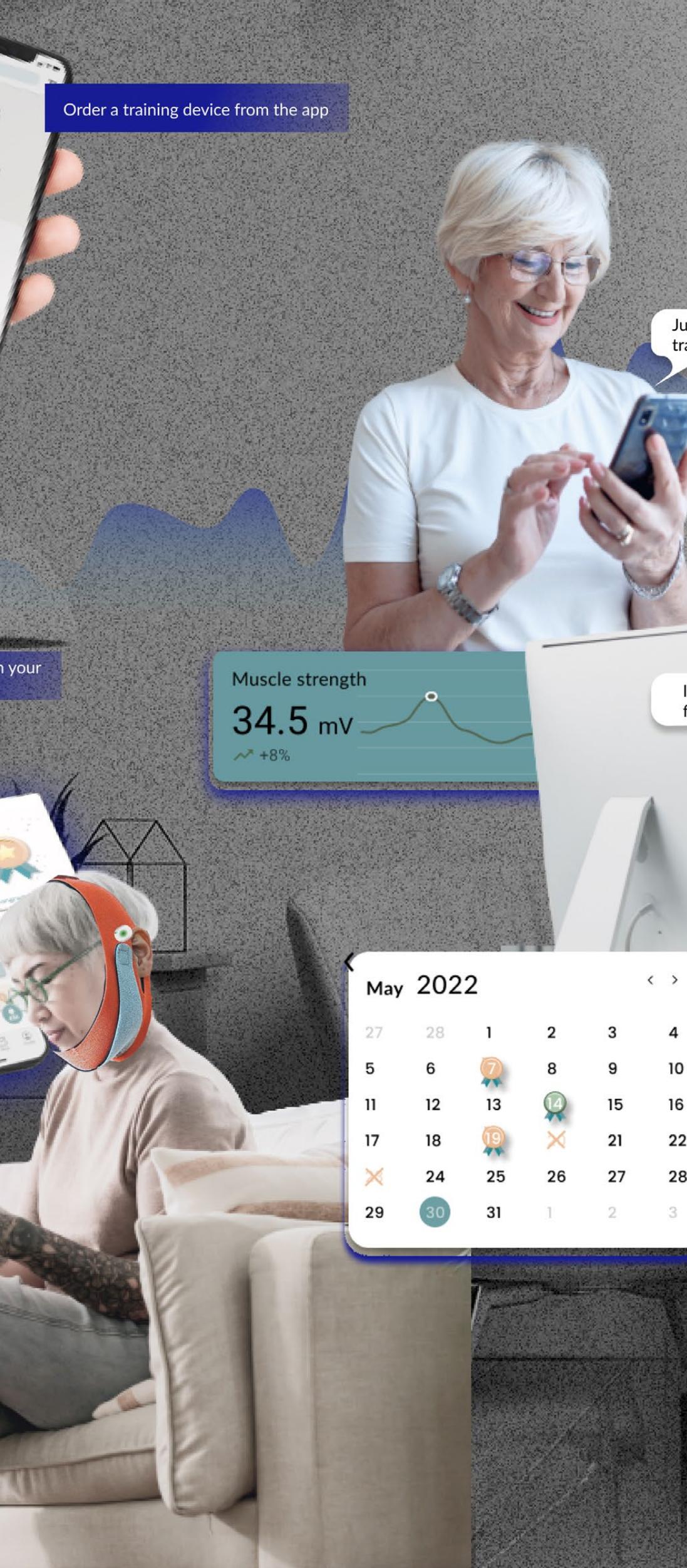
FINAL PRODUCT

Dysphagia severity

Food



Food



SCENARIOS



BACKGROUND

INSPIRATION



RESEARCH

CHINESE LOTTERY

There are total **370,000** lottery stores in China.
In 2021, the sale income of Chinese lottery stores is **3732.85** billion yuan.

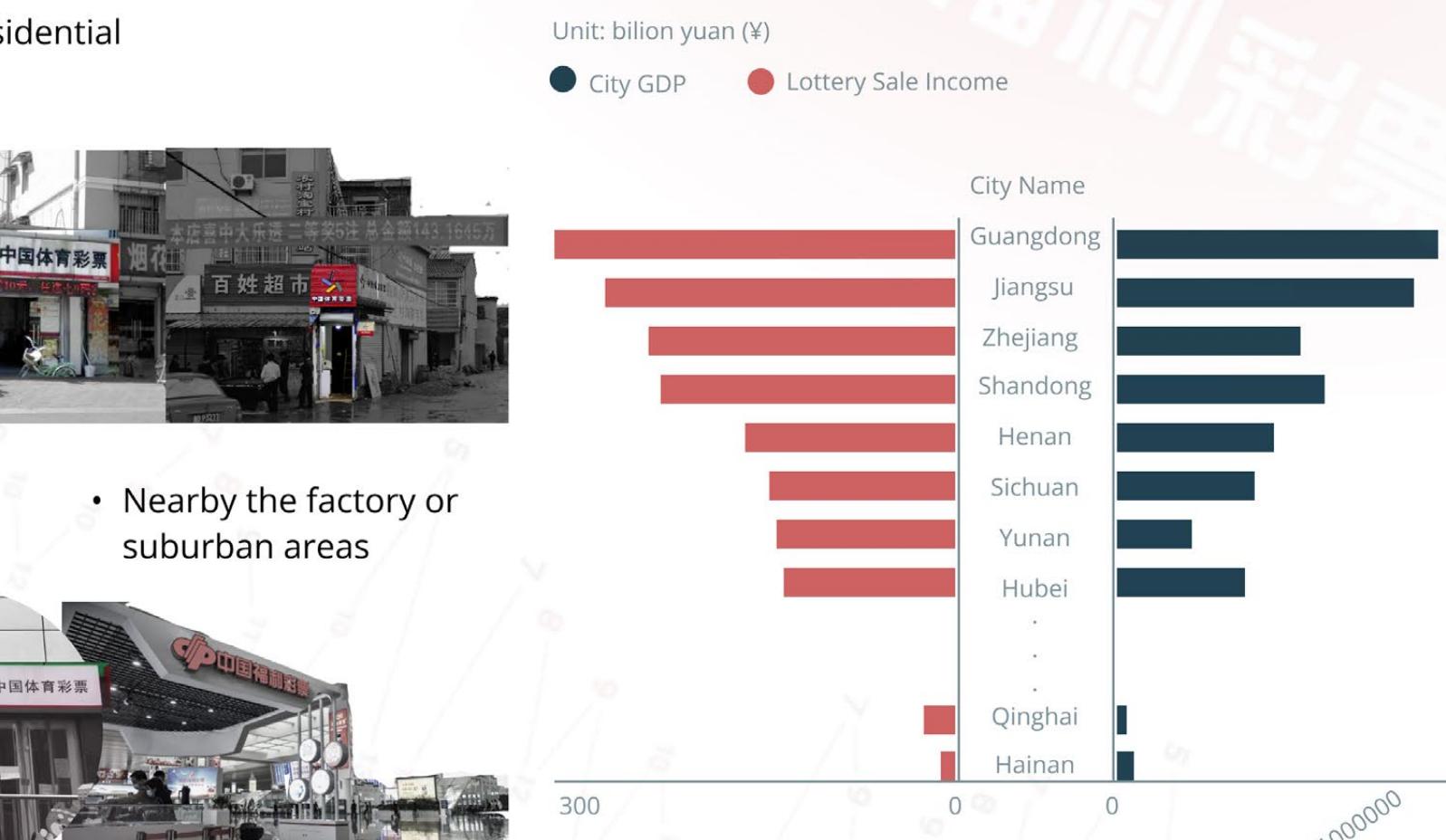


Features of Site Selection

- Nearby residential areas
- Nearby the factory or suburban areas
- Nearby the crowded places (e.g. grocery market, shopping mall, subway/bus station)



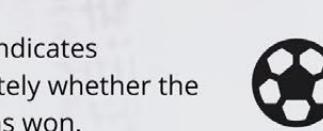
Lottery Sale V.S GDP



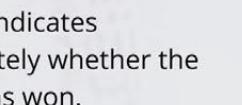
Based on the diagram, there is the positive correlation between lottery sale income and city's GDP.

Main Types

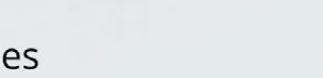
- Instant Games
- Toto Games
- Lotto Games
- Keno Games



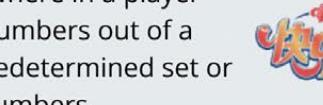
A game indicates immediately whether the player has won.



A game in which the outcome of a bet is determined by the result of a certain contest.

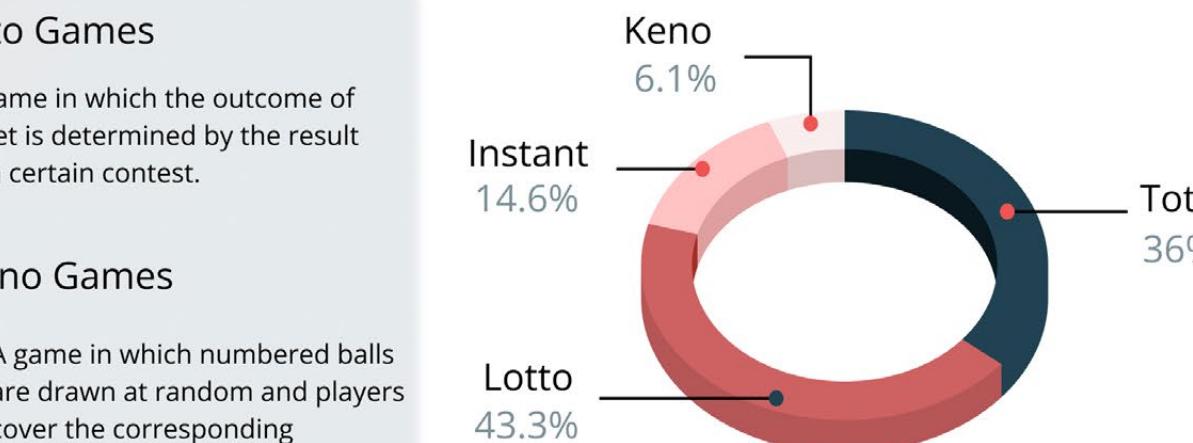


A game where a player selects numbers out of a larger predetermined set or sets of numbers.



A game in which numbered balls are drawn at random and players cover the corresponding numbers on their cards.

Sale Distribution



IDEATION

RESEARCH

Population



Field Observation

- A wall full of predictions / tips of winning.



- Inspirational slogans / banners are everywhere.



Interview

What makes you persist buying lotteries?

The fortun-teller told me that I will become a millionaire and I almost made it several times. Thus, I believe as long as I keep doing, **I WILL WIN**.

What do you think the lottery means to you?

It is more like a habit to me, an inseparable part to my daily life. I knew lots of friends there.

Have you ever re-visit the lottery store after you win?

Only once. I don't know how to face people in the store. Kind of embarrassed, hard to describe.

What triggers you to buy the lottery?

At the beginning, I just wanted to try. Maybe one day, I could win a big prize like someone in the news.

How do you feel when you buy the lottery?

So excited that I can temporarily forget my pressure.

After winning, do you feel any changes in your life?

Definitely, yes. I even stopped work for a while to let myself do whatever I want. But recently, I started feeling lost. It seems that my life is renewed due to the lottery, but I don't know what is the next step.

Conclusion

Although people have different triggers for buying lotteries, they all think it brings them hope.

Buying lotteries is more like a daily habit. People have the emotion bonds with the lottery store.

Nearly all people firmly believe they are different and will be the winner, regardless the tiny possibility.

Wining lottery is positive but with it comes the unknown.

What triggers people, especially the disappointed to develop emotion bonds within lottery stores ?

INSIGHTS

1 The loop of Hope and Dream

Reflection:

Lottery provides people with endless hope. The lottery store is the starting point.



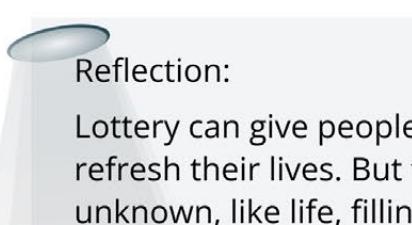
Reflection:

Lottery provides people with endless hope. The lottery store is the starting point.

3 Lottery & Life

Reflection:

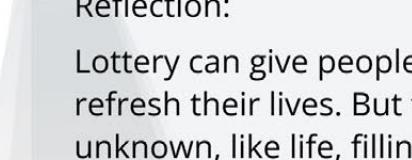
disappointed people form social circle since they have the union goal—winning the lottery. The winner will be kicked out.



4 The League of the disappointed

Reflection:

Lottery can give people a chance to refresh their lives. But the end is still unknown, like life, filling with possibilities.



MINDMAP

Relationship

Emotion bond

Hope

PLACEBO

Dopamine

Sunk costs

Luck

Desire

Gambler's Fallacy

Possible Cognition effects

Bias

Illusion

Denominator neglect

Decision pathway

Belief

Life

Hiding from reality

Personal fable

Availability bias

Relationship

Emotion bond

Hope

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Illusion

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Decision pathway

Belief

LOTTERY & H5

FINAL PLAN



DESIGN PROCESS

Installation

Users interact with installation to experience the social circle based on the lottery.



Technology

I use the arduino to realize the sound detecting function.

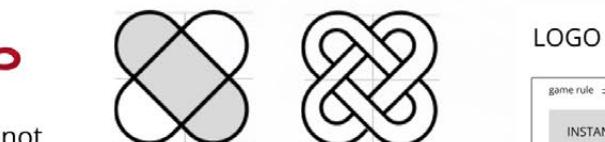
When users talk to the microphone, the LCD screen will count 1 and show total counted numbers.

Lottery

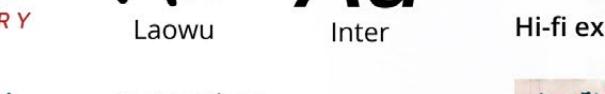
After interacting with installation, winners can get their life lottery from lotto balls inside the lottery machine.

Logo

Idea:



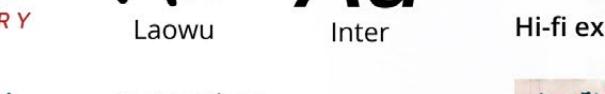
Final:



Drafts:



Fonts:



Wireframe:



Instruction:

Life and lottery are all unknown, like the variable "X". Chinese knots stand for emotional bonds among people. Due to lottery, people form bonds with each other, like multiple "X" crossing and passing through their lives.

H5

Lottery

Users can scan the QR code on the lottery and input what shows after scratching off. The website will generate their corresponding luck "personal fable".

Intro:



Low-Fi:



Hi-fi examples:



• After scratching off, users can get special rewards based on types of lotteries.
• In the back, users can see life mottos.

LOTTERY DESIGN

I mainly designed 3 different types of Lotteries: **Money Bonus, Career, and Destiny**.

- When users open the lotto ball from the lottery machine in the installation, they will see one of these 3 lotteries.

Front side



Back side



H5

To complete the interaction flow, I designed a mobile website which users can enter by scanning QR code on the lottery and unveil their "personal fables" as results of their life lottery prizes.

- The fable will be generated by AI to simulate the randomness of life experience.
- The fable will be highlighted how luck shapes and affects their lives.

Technology

Base

GPT-3

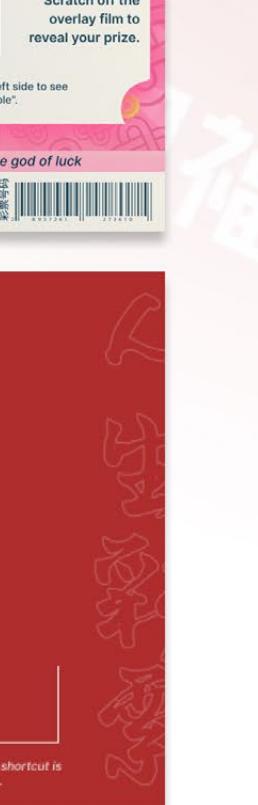
Generative Pre-trained Transformer 3 (GPT-3) is an autoregressive language model that uses deep learning to produce human-like text.



OpenAI
see more info: <https://openai.com/api/>

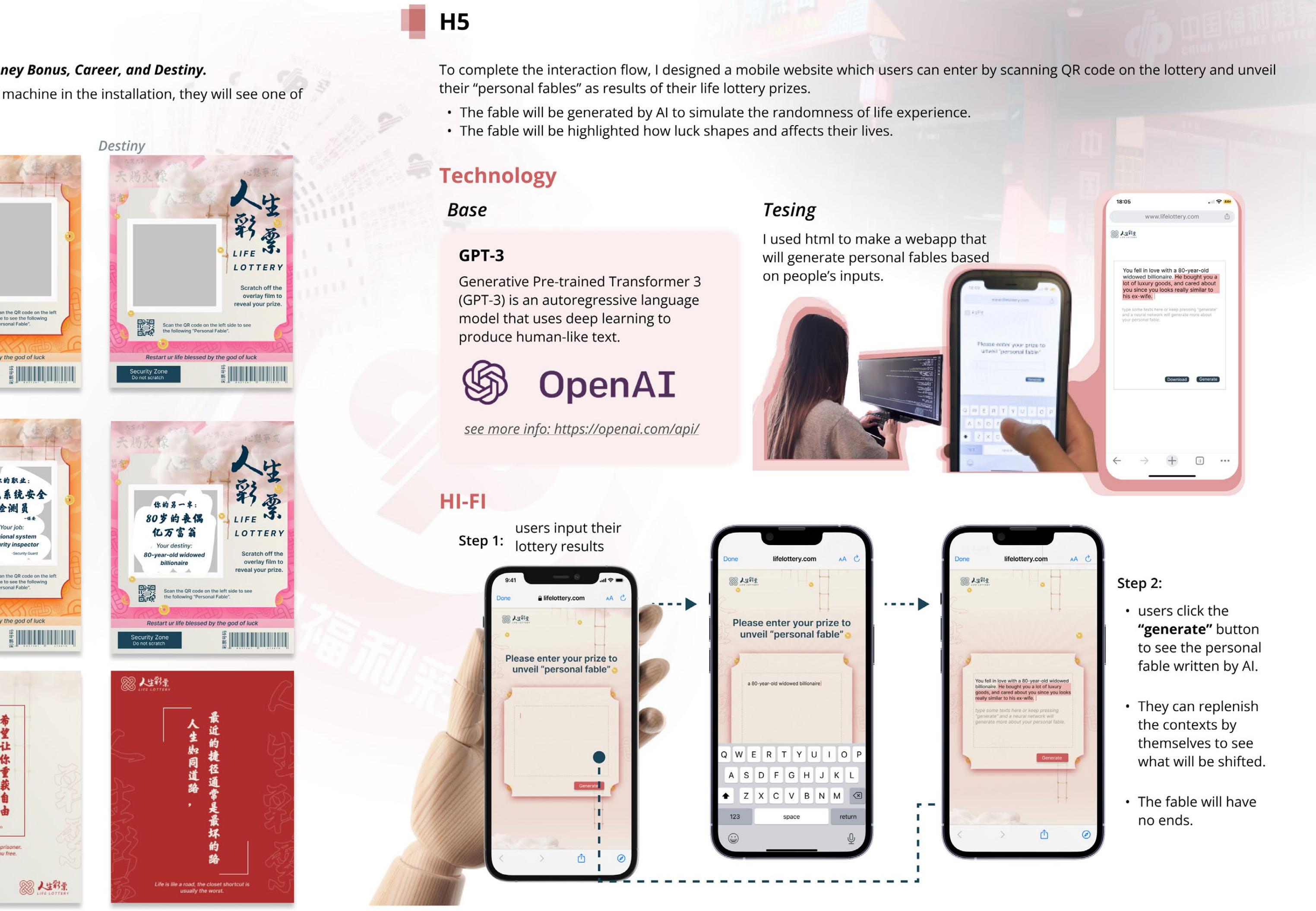
HI-FI

Step 1: users input their lottery results

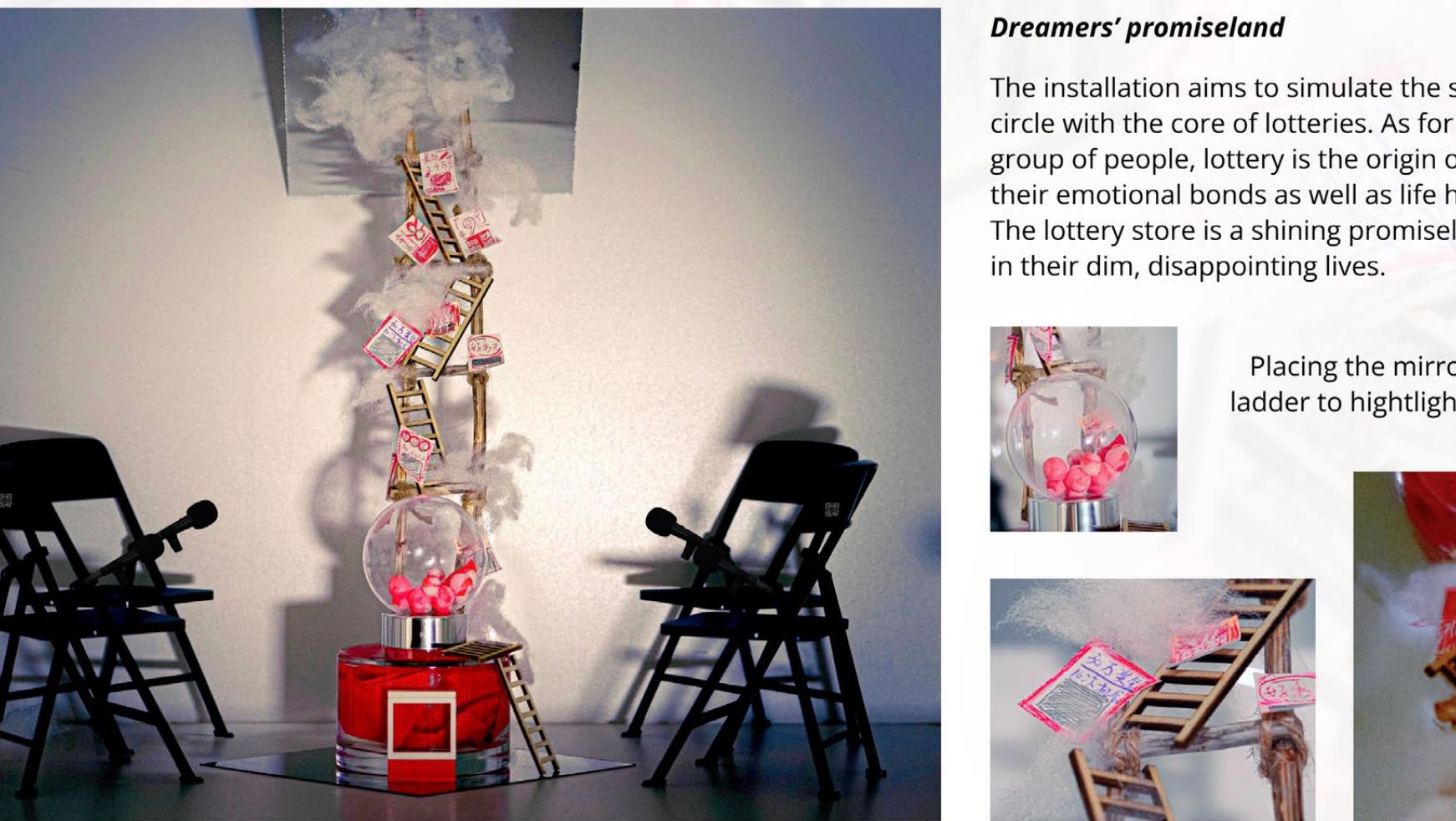


Step 2:

- users click the "generate" button to see the personal fable written by AI.
- They can replenish the contexts by themselves to see what will be shifted.
- The fable will have no ends.



INSTALLATION



INTERACTION



REFLECTION

Before this project, I had a bias of lottery that lottery was the root of the failure of daydreamers. After researching, I realized that lottery tickets are actually the salvation of their dim lives, where holds the hopes and provide a promisland for the disillusioned. Every lottery draw is a challenge to this small social circle. Just like in the reality, people always trade-off their social circles when they get into different life stages. The lottery of life never stops with the jackpot, and everyone is constantly unveiling their own personal legends.

Dreamers' promiseland

The installation aims to simulate the social circle with the core of lotteries. As for this group of people, lottery is the origin of their emotional bonds as well as life hopes. The lottery store is a shining promiseland in their dim, disappointing lives.

Placing the mirror at the top of the ladder to highlight the endlessness.



SCENARIO



Step 1:
People look at the installation

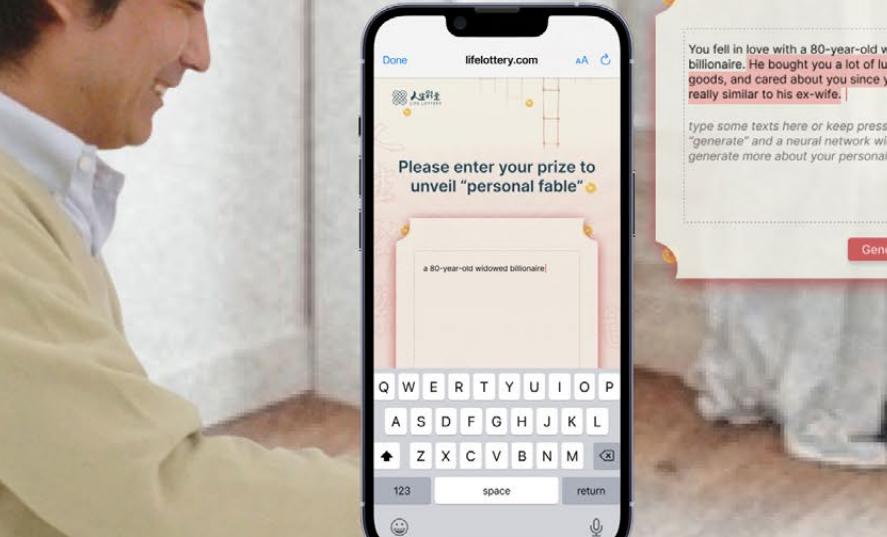
Step 3:
The winner will get the lottery ball from the machine.

Step 2:
The machine guides people to talk;
After that, the system will pick a winner

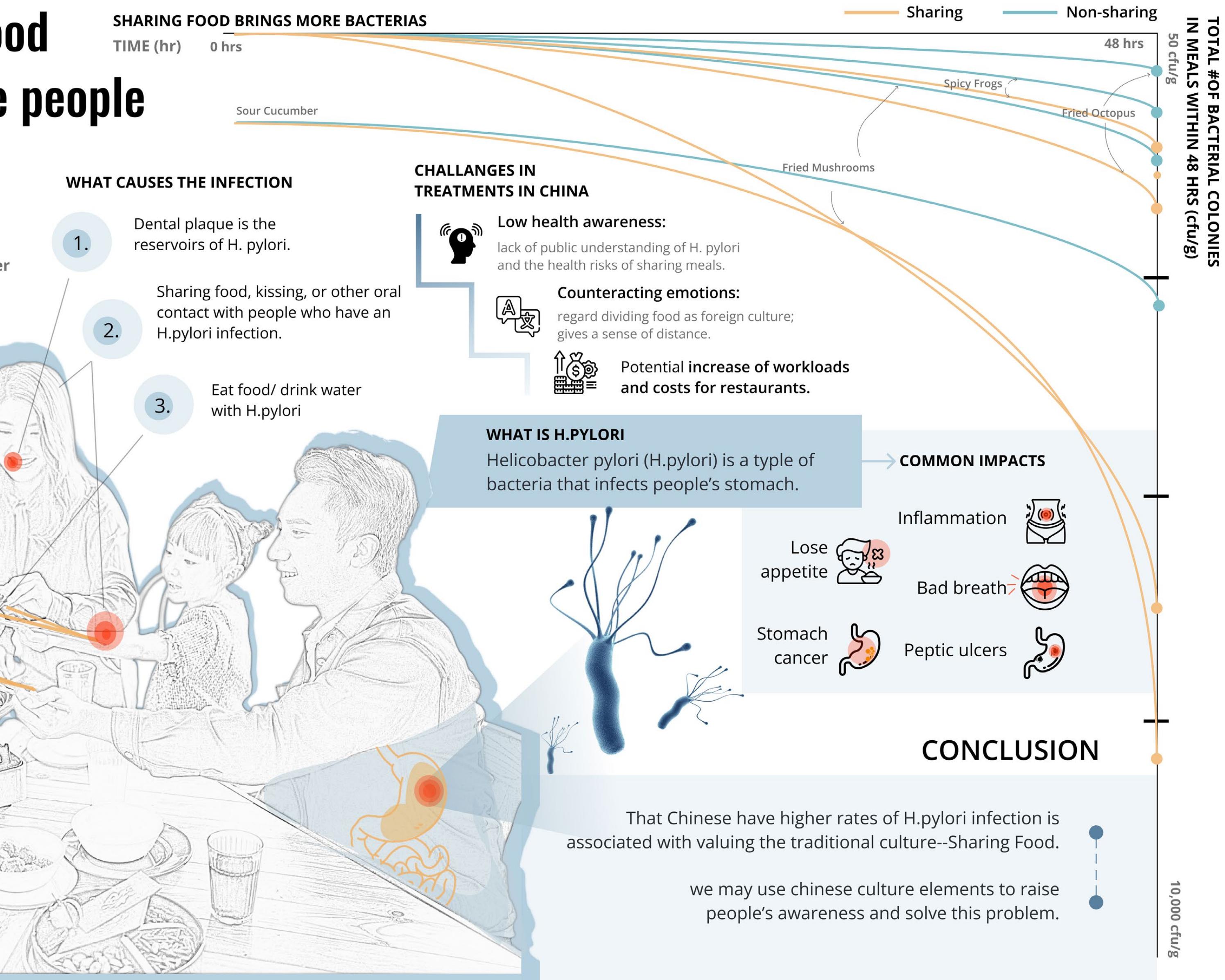
Step 4:
The winner will get the life lottery from the ball.



Step 5:
Scan the QR code to reveal the corresponds personal fable.



Step 6:
Manually input your reward or info to see how it compose your fable



INTERVIEW

GOAL

- Learn about how H.Pylori current or previous patients treat with H.Pylori in daily life.
- Evaluate their awareness toward H.Pylori and the correlation with sharing food.
- Understand specific & major challenges they faced due to H.Pylori or H.Pylori treatment.



"I often forgot to take my medication which makes my condition erratic."
----Aiping, age 45 (2 yrs with H.pylori)



"At first, my family was angry with me due to serving chopsticks. They think I treat them like strangers."
----Shuhua, age 25 (H.pylori healer)



"After the infection, I always subconsciously avoided my partner's kisses, and even talk with others."
----Jiameng, age 21 (1 yrs with H.pylori)



"After diagnosing, I insisted on using serving chopsticks. I don't want to infect my family."
----Jiazheng, age 29 (H.pylori healer)

RESULT

Major Impacts Caused by H.pylori

Bad Breaths make me embarrassed when talking	Infect other family members	Low appetite
Bitterness in the mouth	Stomach inflammation	Vomiting

Serving Chopsticks

Not practical at home	Feel wired & non-conformity especially at home	inconvenient
Forget to take pills on time & in order	Hard to avoid sharing food	Relapses frequently

Major Challenges During Treatment

Side-effects caused by pills	change medicine overtime due to resistance	not effects; disappointed
Know the severe impacts	Little knowledge about why cause infection	Lack of awareness for sharing food

4/4

0/4

INSIGHTS

- **Bad Breath** is the most troubling to all of users.
- **Forgetting to take pills** is the major challenge for them during treatment.
- **Lack of the knowledge** on why they get infections.
- **Using serving chopsticks at home** is a challenge for them.
- All users show the concern to infect other family members, especially kids.

INSPIRATION



The ancient Chinese chewed cloves to fresh breath.

Since the Han Dynasty (206 B.C -220 A.D), when court officials met the emperor, they held clove pills in their mouths to avoid giving the emperor a bad impression.

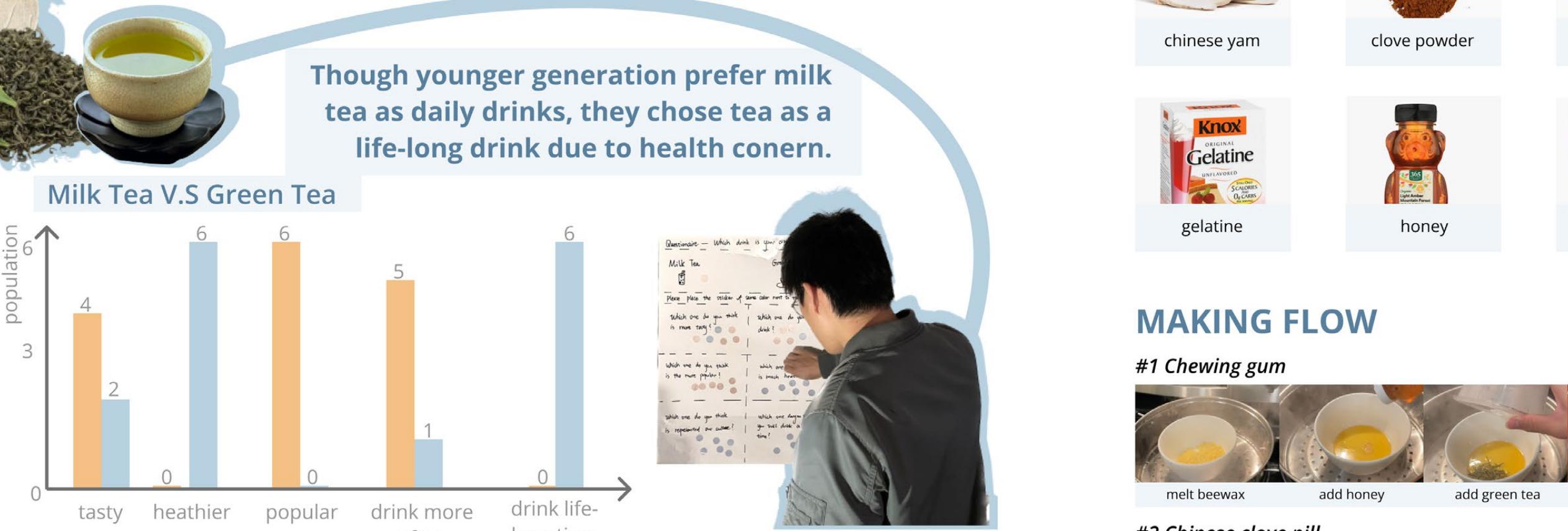


The ancient Chinese used green tea to rinse mouths.

Documentation from the Song Dynasty (960-1276)

According to the *Dongpo Collection*, using tea to rinse mouths could prevent dental plaque.

Tahereh & Leila (2020)



We may implement the **ancient wise use of green tea** and other nature resources to treat on H.pylori infection in modern Chinese society, and at the same time, **advocate the green tea culture among the younger generation**.

DESIGN ASSUMPTION

MATERIAL EXPERIMENT

GOAL

Exploring 3 forms of dental-plaque cleaning snacks with the mixture of different particle sizes of green tea.

- Chewing gum / Chinese clove pills / Gel

MATERIAL



large particle



Medium particle



Small particle



Small particle



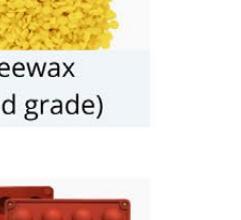
Medium particle



Large particle

Taste Test

Let two users try these chewing gums and give feedback.



chinese yam



clove powder



beewax (food grade)



gelatine



honey



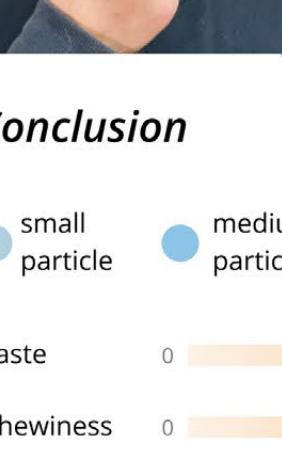
silicon mold

MAKING FLOW

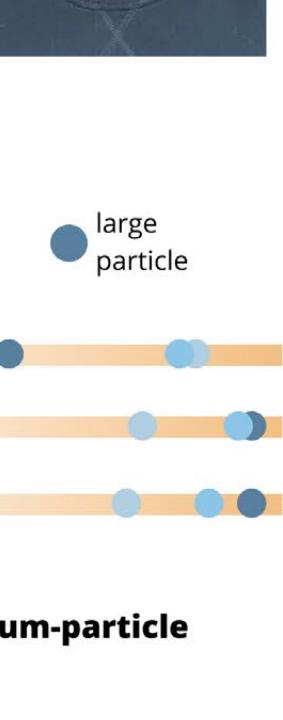
#1 Chewing gum



#2 Chinese clove pill



#3 Gel



Conclusion

Reflection

Too bitter

Reduce the amount of green tea powder in base flavor.

Unsmooth surface

Make the surface smoother to improve taste.

Unstable structure

Green tea fall slightly when pick it up. The top part is easily to break. Rethink about how to combine the gum with green tea.

Best choice: ● medium-particle

Conclusion

Reflection

small particle

medium particle

large particle

small particle

medium particle

large particle

Taste

Chewiness

Fresh ability

Unstable structure

Easy to swallow

Fresh ability

Uneven appearance

Best choice: ● medium-particle

Best choice: ● medium-particle

CHINESE CLOVE PILL

Mix with different-particle sizes of green tea.



Taste Test

Let two users try these chewing gums and give feedback.



chinese yam



clove powder



beewax (food grade)



gelatine



honey



silicon mold

Conclusion

Reflection

small particle

medium particle

large particle

Taste

Chewiness

Fresh ability

Unstable structure

Easy to swallow

Fresh ability

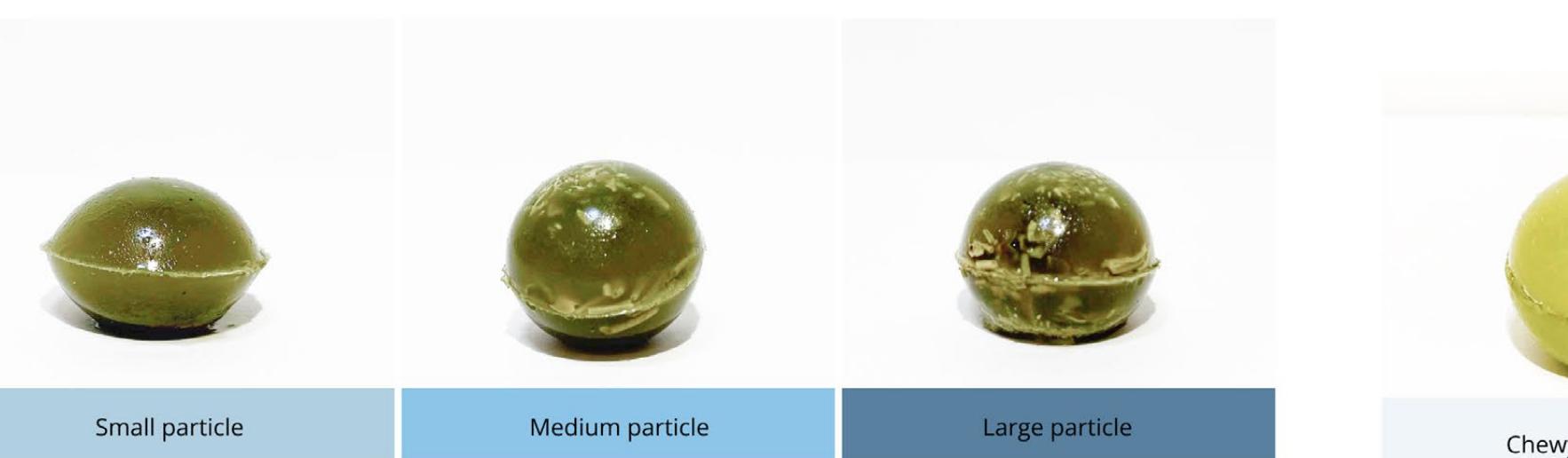
Uneven appearance

Best choice: ● medium-particle

DESIGN CHALLENGE

GEL

Mix with different-particle sizes of green tea.

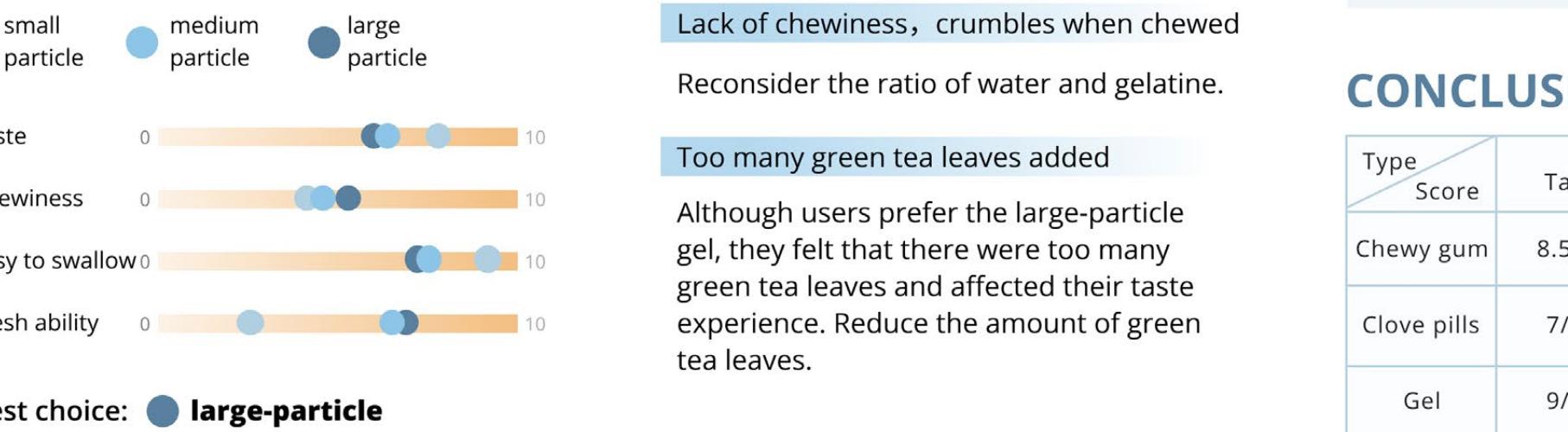


Taste Test

Let two users try these chewing gums and give feedback.



Conclusion



FINAL VERSION

iterated 3 best choices for each type.



CONCLUSION

Type	Score	Taste	Chewiness	Fresh breath	Remove plaque	Pros	Cons
Chewy gum	8.5/10	9/10	8.5/10	8.5/10	chewy & tasty, noticeable effects	can't swallow, limited to certain situations	not that tasty, not very easy to swallow
Clove pills	7/10	8/10	10/10	9/10	immediated & long-last effect, can swallow / spit out	easy to swallow, appropriate for all situations	not that tasty, not very easy to swallow
Gel	9/10	8.5/10	7/10	6/10	easy to swallow, appropriate for all situations	slow effects	

I want to participants get the H.pylori tests to examine their direct effects on H.pylori.

DENTAL-PLAQUE TEST

Let 3 users to eat these snacks for 3 month, and used the dental-plaque disclosing tablet to examine their effects.

old plaque

new plaque

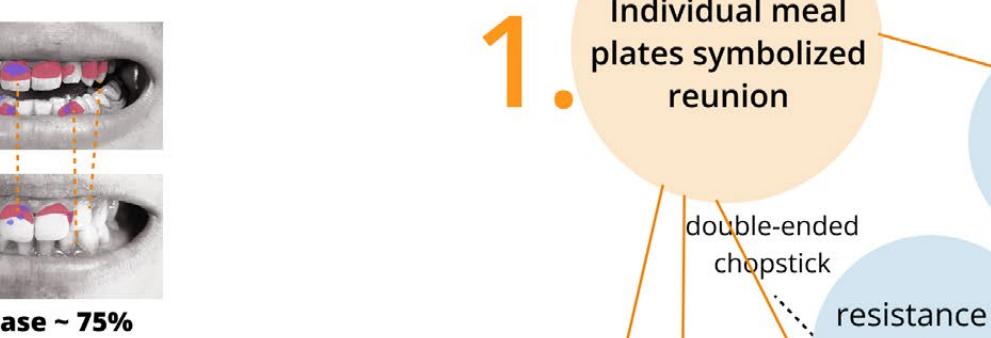
Chewy Gum



Gel



Clove Pill



Future Plan

More Participants

The dental-plaque test has a limitation that the result may be affected by the individual difference. More participants will help with reducing this bias.

Get H.Pylori Test

I want to participants get the H.pylori tests to examine their direct effects on H.pylori.

Compared to the western countries, Chinese people start to attach great importance to the oral health late.

How to make products meet Chinese culture and persuade them to eat dental-clean snacks and stop sharing food?

Chinese people feel uncomfortable with serving chopsticks at home, but sharing food increases the risk of H.pylori infection.

BRAINSTORM

Design opportunity

1. Individual meal plates symbolized reunion

2. Green tea dental-clean pills

3. Traditional calendar as a package of pills, with H.pylori tips in the back

culture

Chinese traditional calendar

Future Plan

More Participants

The dental-plaque test has a limitation that the result may be affected by the individual difference. More participants will help with reducing this bias.

Get H.Pylori Test

I want to participants get the H.pylori tests to examine their direct effects on H.pylori.

CONCEPT DEVELOPMENT

MOON PLATES : INDIVIDUAL MEAL PLATES SYMBOLIZED REUNION

Inspiration



- In Chinese culture, moon represents "Reunion and Family connections".
- I decided to design a set of individual tablewares with different shapes of moon. While people use the individual meal plates, they can feel the symbolic meaning of the moon: they still connect with the entire family.

I try to split the full moon into different parts based on other shapes in the cycle. So the dishes can be built into a full moon when they put together.

Sketch

- crescent



- quarter



- gibbous



- other



Clay Model



Conclusion

Too shallow
I will double the volume.

Hard to find how to put together
Users responded they had hard time to imagine how to build these parts together.

In the future stage, I will try to figure out a intuitive way to mark out the combination method.

PROTOTYPE

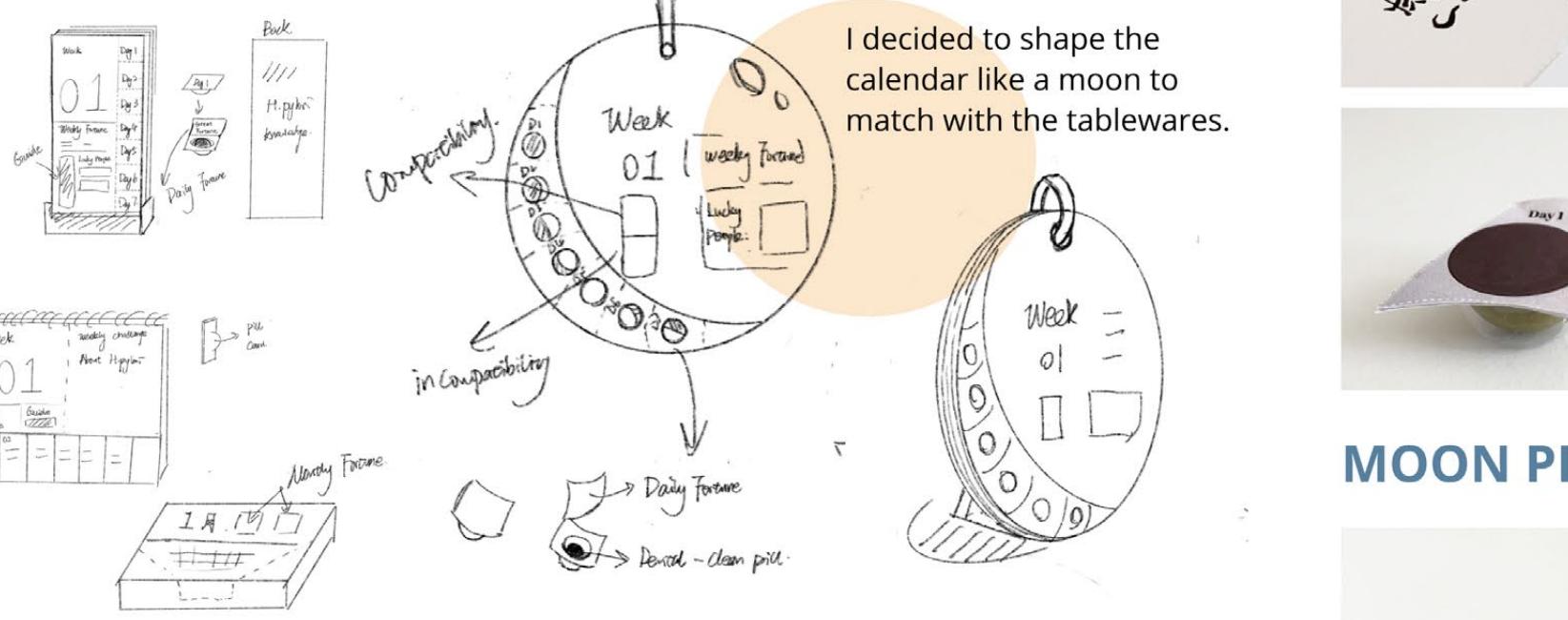
TRADITIONAL CALENDAR : TO REMIND PEOPLE TO CHEW THEIR PILLS ON TIME.

Inspiration

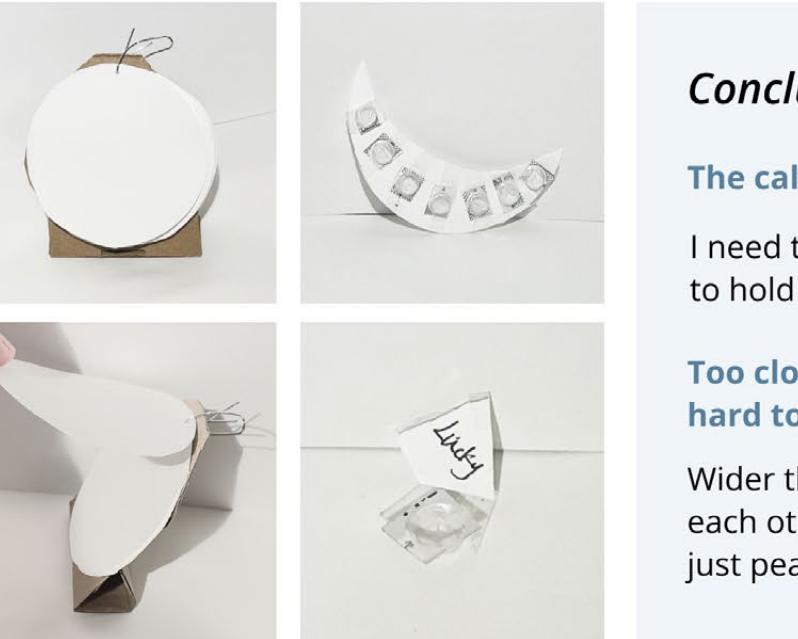


- The traditional calendar is a lunisolar calendar, which states the daily fortune for people.
- Thus, I wanted to combine the pill package design with people's daily habit, checking the fortune, to remind people of eating dental-clean pills and advocate the knowledge of H.pylori.

Sketch



Paper Model



Conclusion

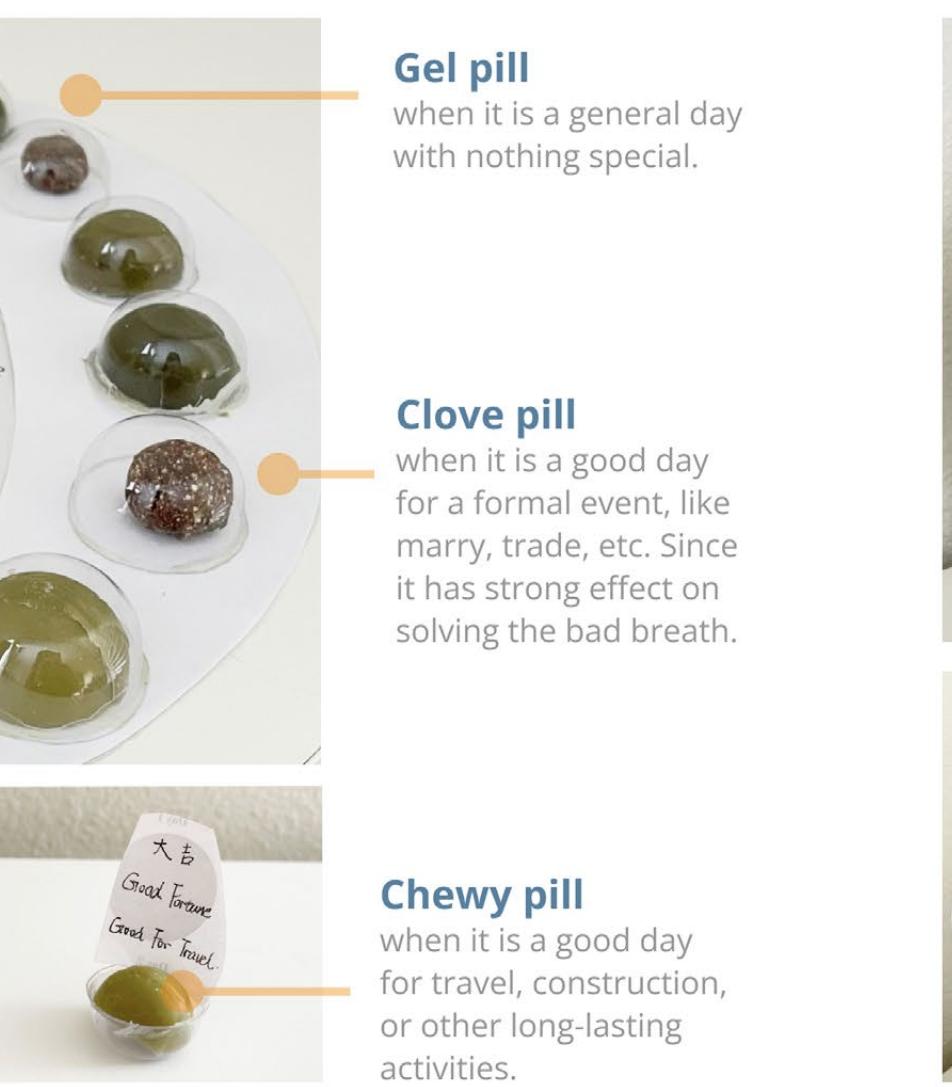
The calendar is over tilt

I need to figure out a more stable way to hold the main body of the calendar.

Too close to each other making hard to pear one pill

Wider the gap between one pill and each other to make sure it is easier for just pearing one pill at a time.

DENTAL-CLEAN PILLS



Gel pill
when it is a general day with nothing special.

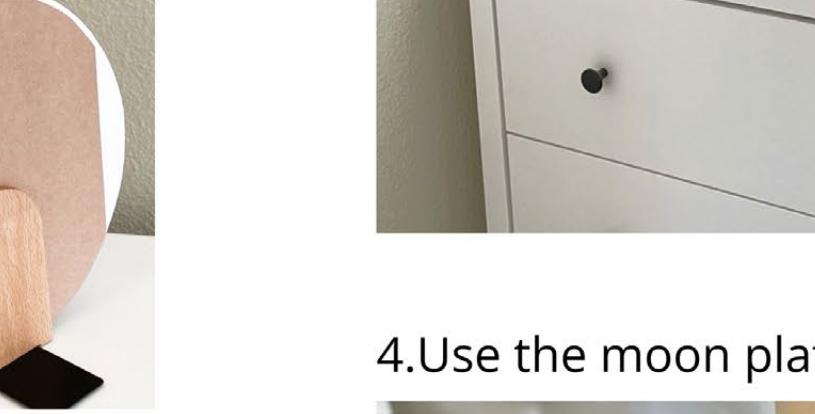
Clove pill
when it is a good day for a formal event, like marry, trade, etc. Since it has strong effect on solving the bad breath.

Chewy pill
when it is a good day for travel, construction, or other long-lasting activities.

MOON PLATES



CALENDAR



SCENARIOS

1.Check the daily fortune



2.Notice the pills



3.Eat the pill



4.Use the moon plates



5.A safe meal-sharing design, but one that feels like we're still close.

