

PHYSICAL INTERFACES

FINAL

‘ANAJO’ APP & PHYSICAL PROTOTYPE

INTERACTION DESIGN | April 23rd, 2021
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01

CONCEPT

ANAJO Means

About ANAJO



ANAJO Means

'ANAJO' means 'hug me' in Korean

About ANAJO

ANAJO is a hugging pillow with arms that is a great solution to connect with your friends and family. You can send the pressure of a hug to your loved ones when you're far apart.

Highlights

Virtual Hug

Bluetooth

Air pressure

Self-mode

02

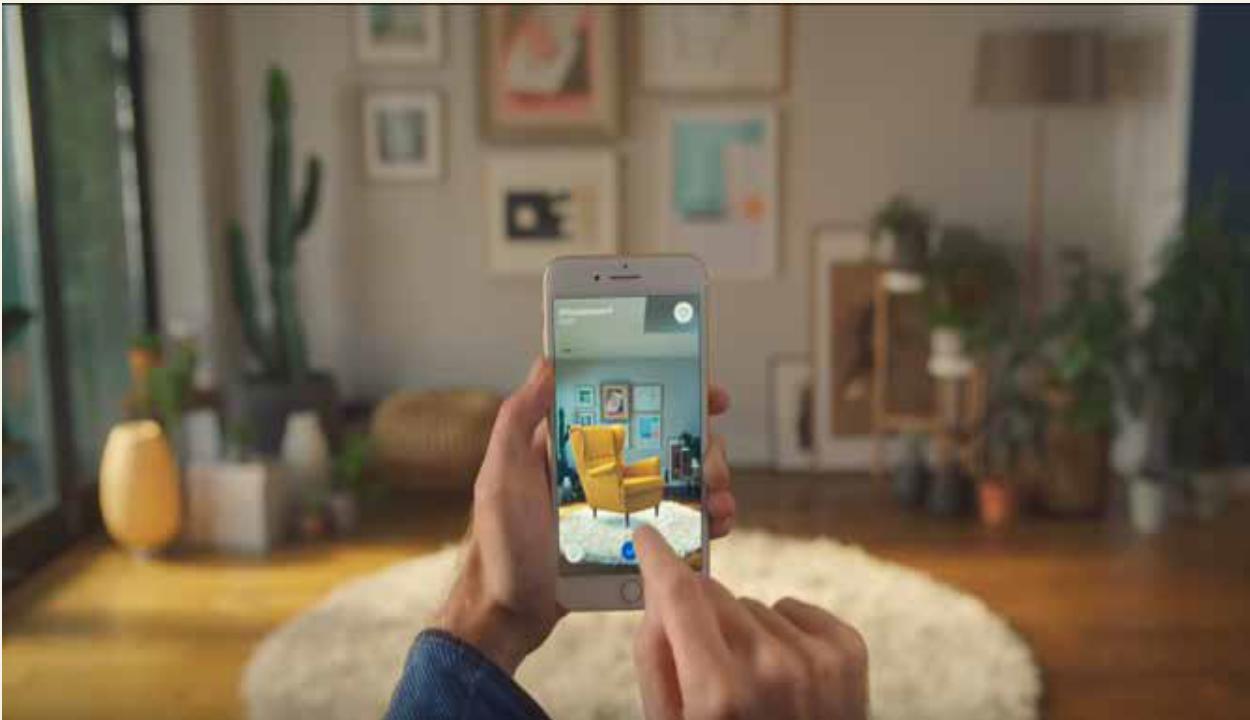
BRAINSTORMING

Precedents

Inspo Board

Moodboard

PRECEDENTS



INTR2013 PHYSICAL INTERFACES

IKEA Place

Description

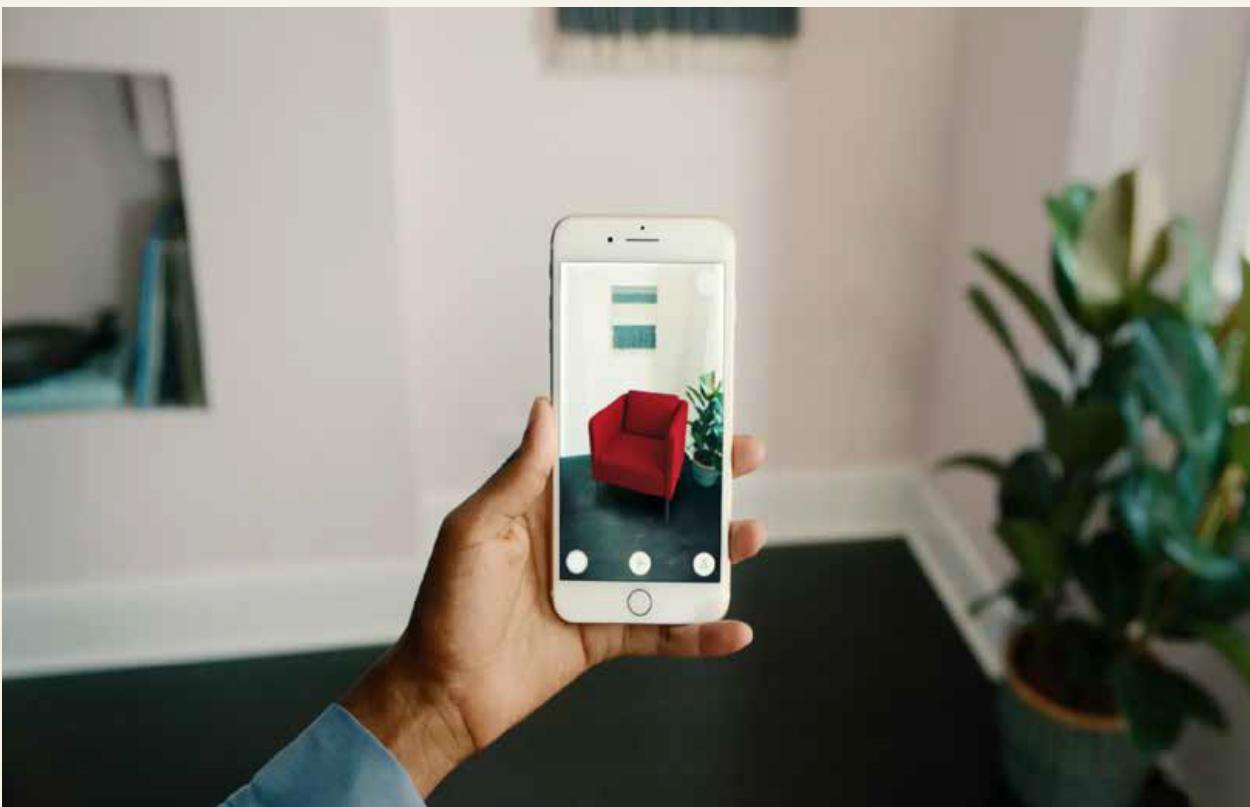
- a. Name IKEA Place
- b. Year 2017
- c. Status Commercialized product

Creator/builder/artist/designer's intent for the project, why this technology was developed

The IKEA Place app presents a unique and convenient AR experience where the user can try out different pieces of furniture in various colours and lighting situations, to find the best furniture for their home in real time and with true to scale 3D models.

What does the user experience? How does it make people feel?

IKEA customers will find that this app makes trying out furniture a much smoother process. This makes customers a lot less worried with how the furniture will look once it is actually inside their home and there is no need to measure to see if the furniture will fit, since the 3D models displayed using AR technology will be true to size.



References

- https://www.youtube.com/watch?v=4jrhw_ZRjV4
- <https://www.ikea.com/au/en/customer-service/mobile-apps/say-hej-to-ikea-place-pub1f8af050>

PRECEDENTS

INTR2013 PHYSICAL INTERFACES



Kissenger

Description

- a. Name Kissenger
- b. Year 2016
- c. Status Commercialized product (application and device)

Creator/builder/artist/designer's intent for the project, why this technology was developed?

Many long distance couples struggle from lacking physical intimacy. The creator of Kissenger wanted to give them a chance of physical interaction with their partners even with a distance.

What does the user experience? How does it make people feel?

Instead of just blowing a kiss through a video call, Kissenger allows the users to send their actual lip movements by using its attached device. The device uses pressure sensors to measure the pressure from one's lips, then it replicates the pressure to the other side simultaneously. The device transmits the pressure data bi-directionally, so the users can feel each other's simulated kiss at a real time. People can have a tangible bonding experience to their partners through Kissenger even when they're far apart.

References

- https://www.youtube.com/watch?v=5sfMBc7vVV0&ab_channel=TheGadgetShow
- <https://www.theverge.com/circuitbreaker/2016/12/28/14105688/kissenger-message-kiss-app-device-abroad>
- <https://interestingengineering.com/kissenger-the-first-mobile-kiss-messenger>

PRECEDENTS



INTR2013 PHYSICAL INTERFACES

Van Gogh Immersive Exhibition-Toronto

Description

- a. Name Van Gogh Immersive Exhibition-Toronto
- b. Year 2020
- c. Status Art installation

Creator/builder/artist/designer's intent for the project, why this technology was developed

Let the visitors feel like they're stepping into the works of Vincent Van Gogh's earliest sketches, to his most famous masterpieces, the works are projected along the walls, columns, and floors of the space.



What does the user experience? How does it make people feel?

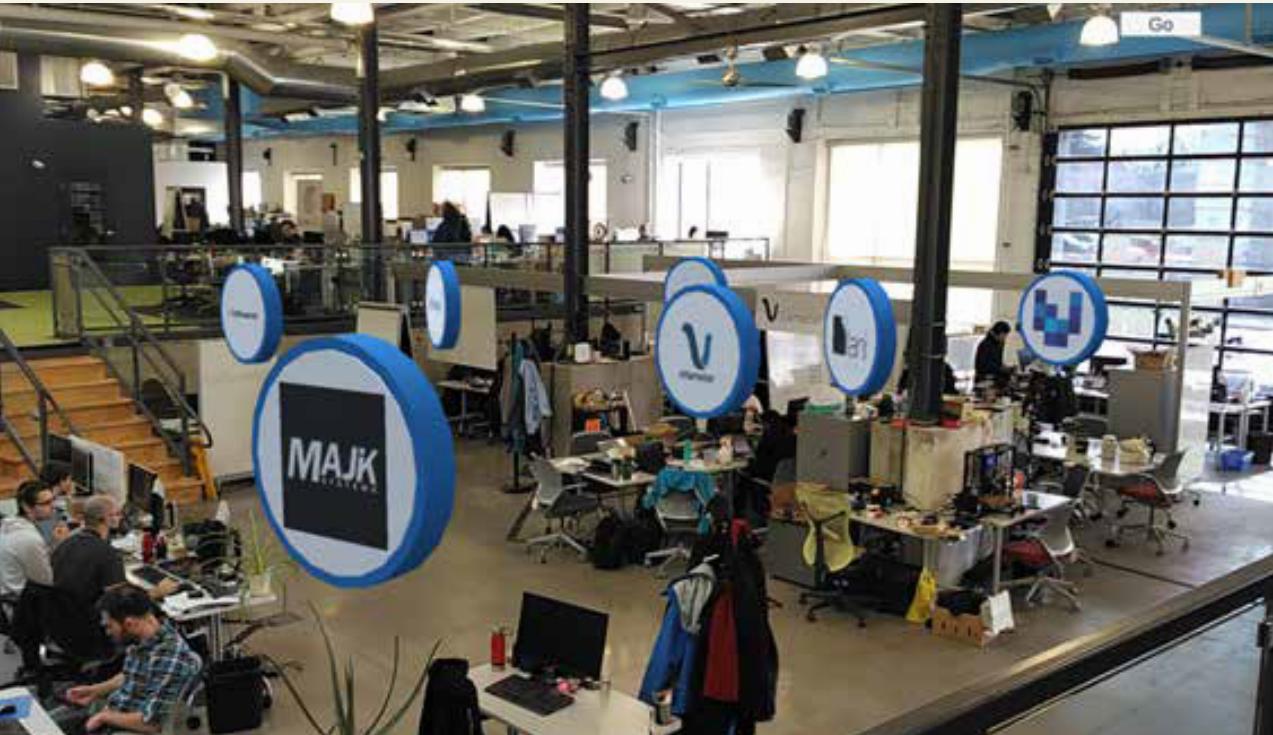
Visitors to the immersive Van Gogh exhibition do not move while living artworks move around them. The accompanying soundtrack allows visitors to participate more. The animation of each piece allows them to blend in smoothly. Combined with the soundtrack, the exhibition has a cinematic feel that contributes to the overall cohesive narrative. The scores combined with the speed of various images lead the viewer to a strong emotional response to each picture.

References

- <https://vangoghexhibit.ca>
- <https://toronto.ctvnews.ca/massive-drive-thru-van-gogh-exhibit-opening-in-toronto-1.4988385>
- <https://www.cbc.ca/news/canada/montreal/imagine-van-gogh-montreal-immersive-art-1.5387285>

PRECEDENTS

INTR2013 PHYSICAL INTERFACES



AR Velocity Tour

Description

- a. Name AR Velocity Tour
- b. Year 2017
- c. Status Commercialized product

Creator/builder/artist/designer's intent for the project, why this technology was developed?

This AR experience was created by the startup, Vertical. The intent behind the self-guided tours with Julia the robot is to take advantage of the possibilities of AR technology and to bring the Velocity start-up garage at the University of Waterloo to life.

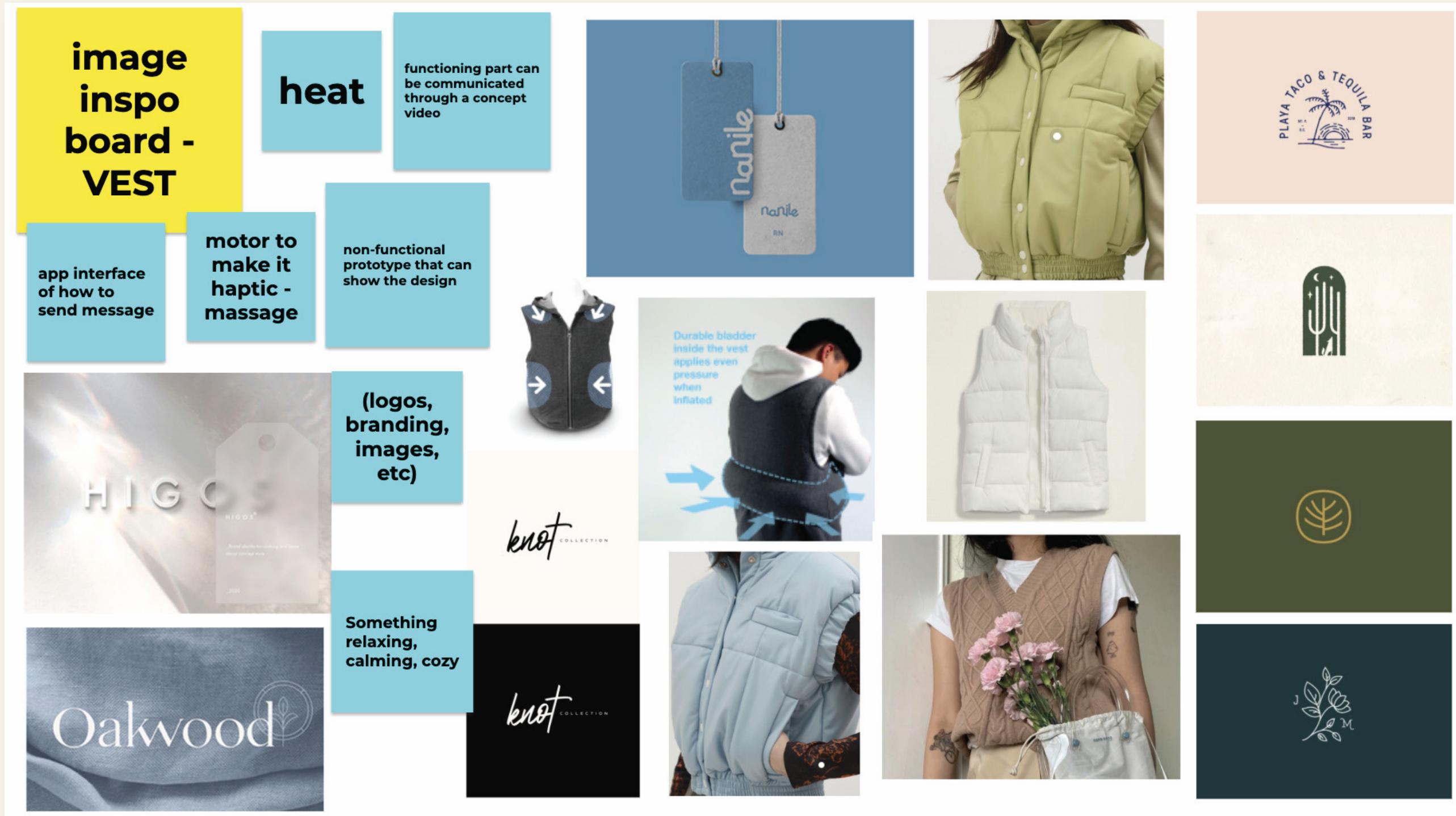
What does the user experience? How does it make people feel?

This AR experience is handy and convenient for the user because they can get started with the tour once they pick up a tablet from the reception. In addition, they can take the tour at their own pace as they progress through the tour without feeling like they're inconveniencing an actual tour guide person. AR technology also enhances the environment, such as showing the logos of the various companies housed in Velocity Garage.

References

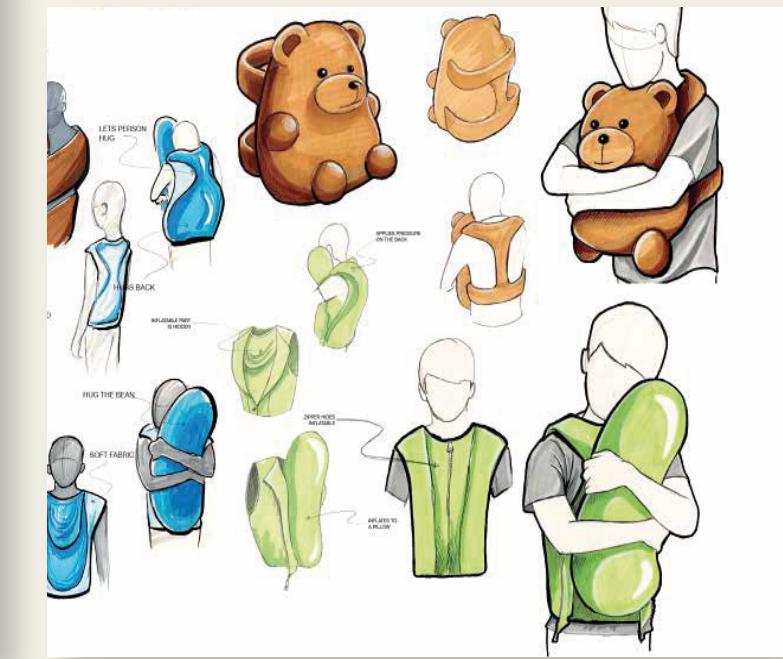
- <https://www.youtube.com/watch?v=kPQCTkBDWGI>
- <https://startuperatoronto.com/type/startup-news/vertical-bringing-velocity-garage-life/>

INSPO BOARD

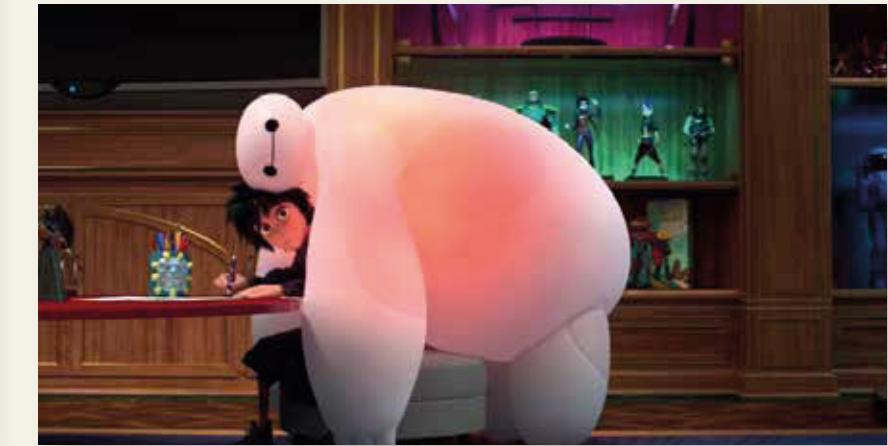
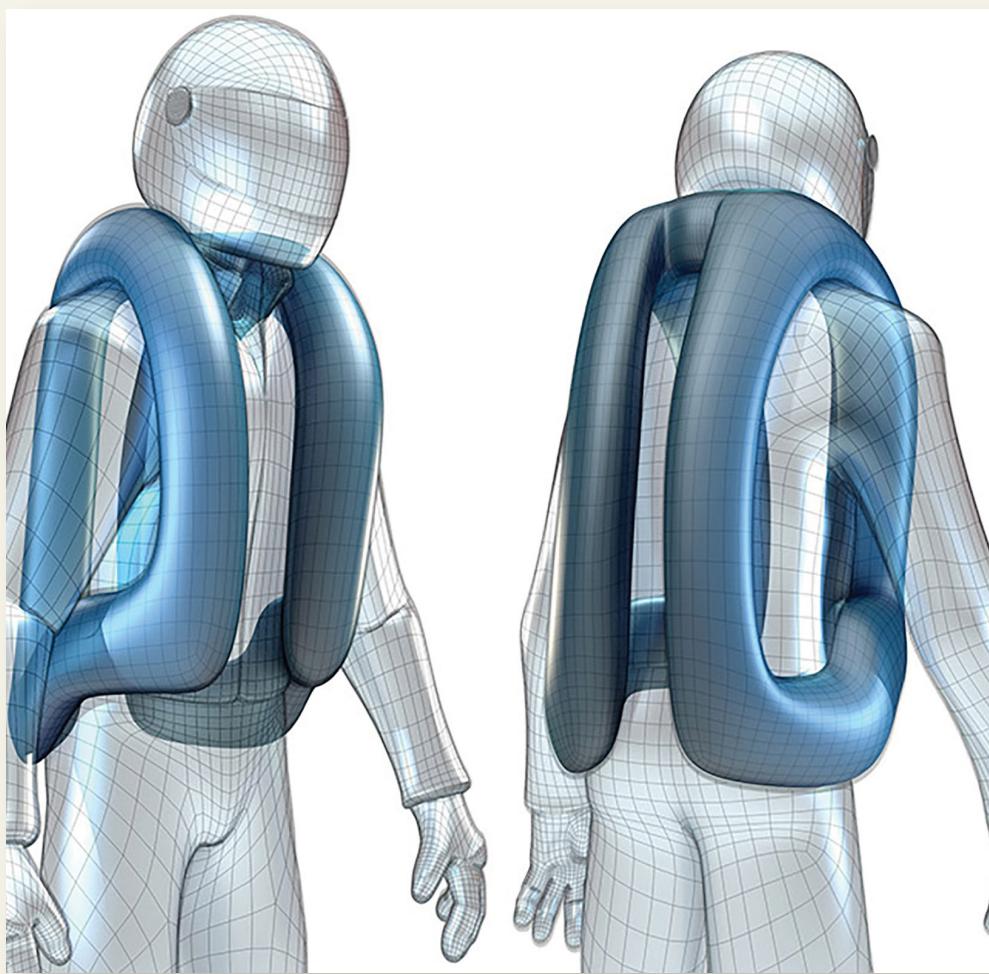
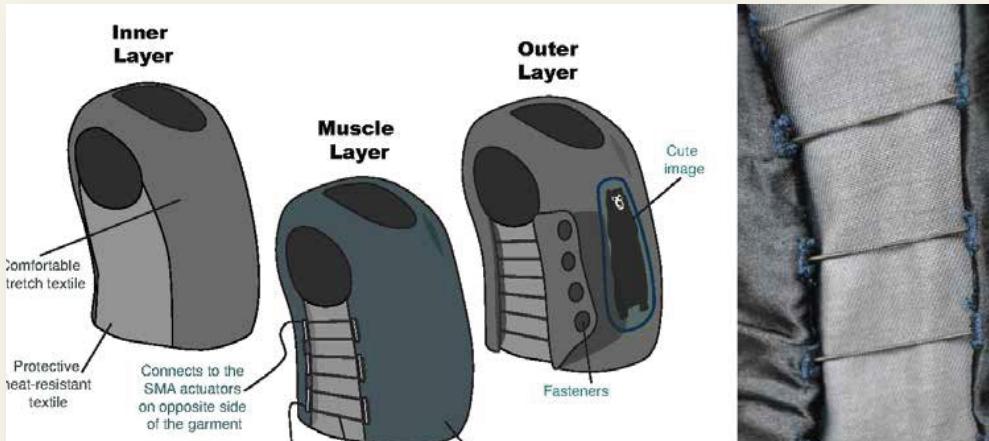


MOODBOARD

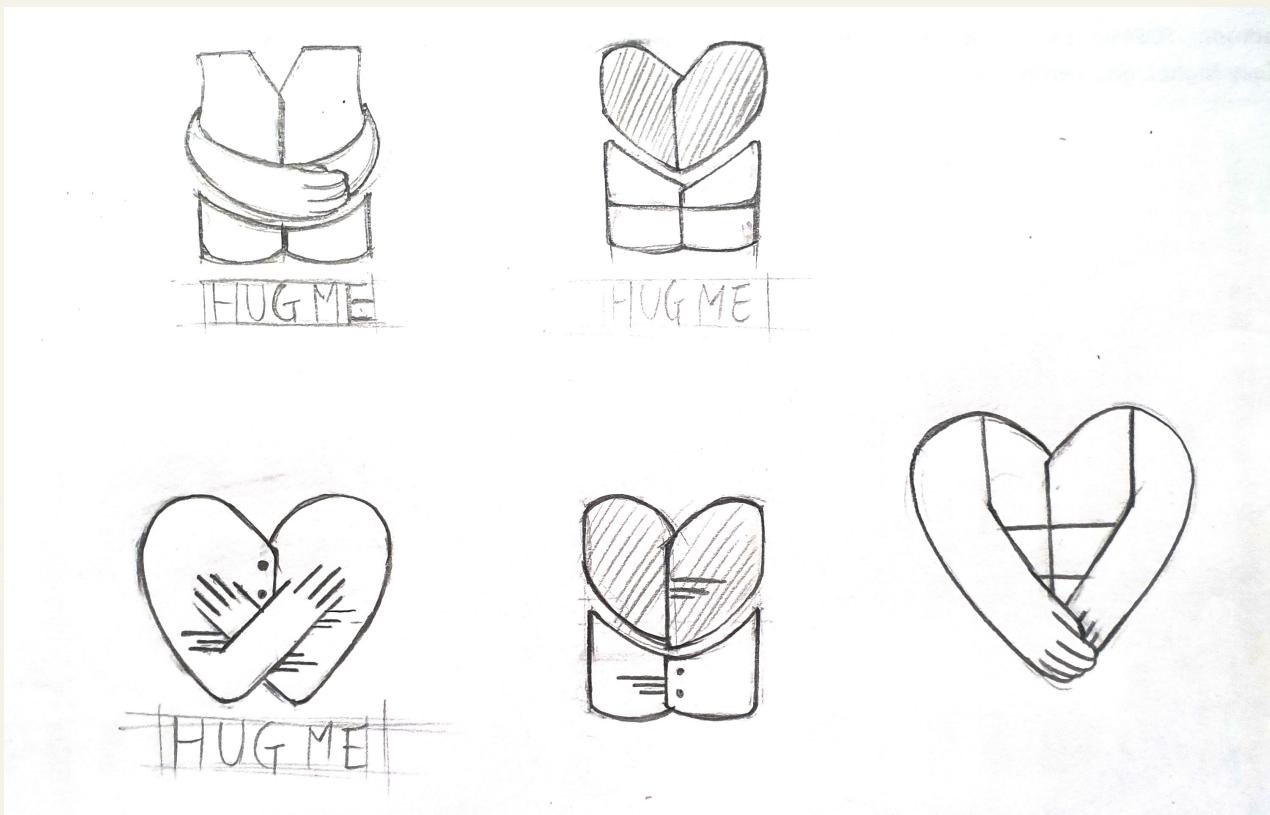
: DESIGN & STYLE



MOODBOARD : TECHNOLOGY



LOGO



03

UX FEATURE

Persona

User interview & Result

Journey Map

Storyboard



UX Designer

Chris Nielsen

*"It's difficult to meet my family and friends.
I miss going out with them."*

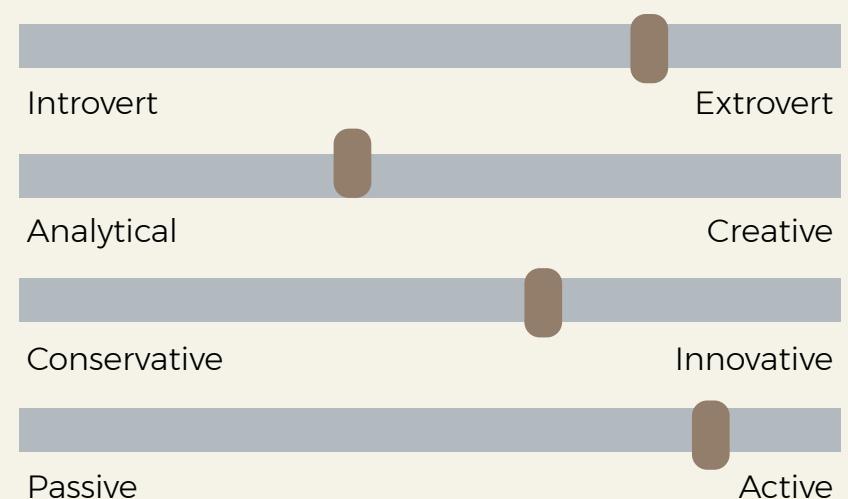
ABOUT

Chris lives by himself in Toronto and his family lives in Mississauga which is just a half hour drive away. However, it hasn't been easy for him to visit them in a while because of the province-wide Covid-19 lockdown. He still chats with them through video calling but what he misses the most is giving them a big bear hug!

NEEDS

He feels isolated at home while in social distancing so he hopes to interact with his loved ones somehow. He needs something that is a closer way than just video calling.

PERSONALITY



AGE	28
GENDER	Male
INCOME	90K
EDUCATION	Bachelor's
LOCATION	Toronto
MUSIC	Jazz, R&B

GOAL & EXPECTATIONS

Chris hopes to be able to:

- Interact with loved ones
- Feel like he's not as lonely with the warmth, air pressure, and haptic massage features
- Relax/de-stress with the vest when he is alone

MOTIVATIONS





Student

Sydney Jones

"I haven't been able to see my boyfriend in-person for a long time. It's hard because he always hugs me when I'm feeling sad."

ABOUT

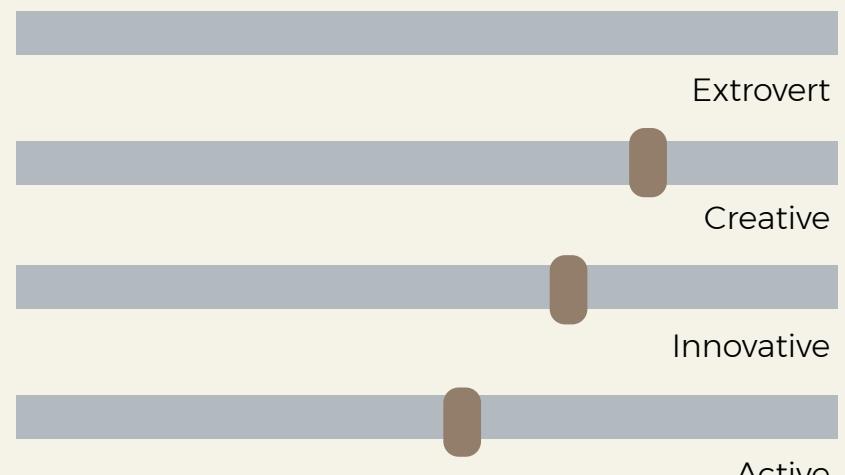
Sydney is in a long-distance relationship and it's hard for her and her boyfriend to feel each other's company since they live far away from each other. Voice calling and video chats are only options they have to interact with each other and that's not enough.

AGE	21
GENDER	Female
INCOME	N/A
EDUCATION	Currently in B.A
LOCATION	Toronto
MUSIC	Lo-fi, Soul, Pop

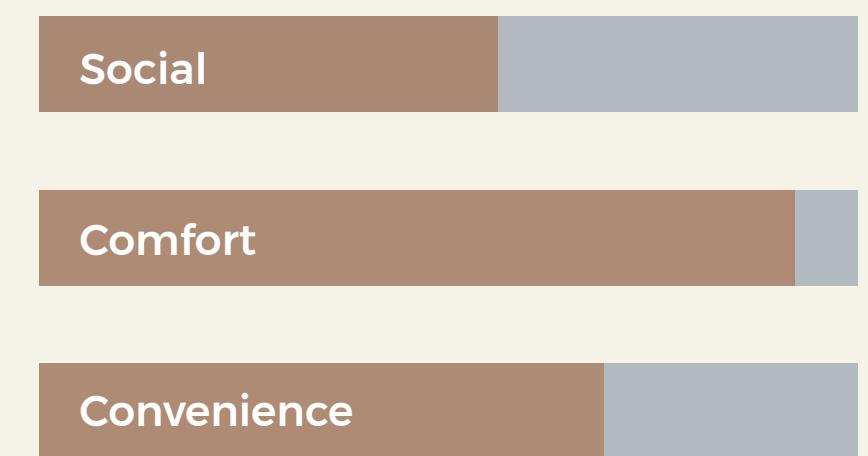
NEEDS

Sydney's biggest need is the physical affection with her boyfriend. She is looking for various ways to express her love to him so that they could feel the intimacy even while they are far apart.

PERSONALITY



MOTIVATIONS





Lawyer

Jessica Lee

"I feel guilty when I have to leave my daughter alone, but I need to try my best to work and provide for her."

ABOUT

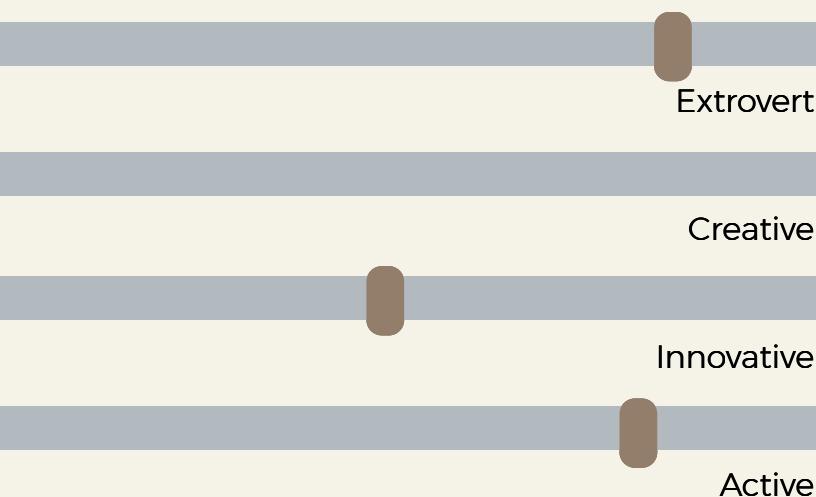
Jessica has a 7-year-old beautiful daughter but she is too busy to spend much time with her because of work. Her daughter is always seeking for her company but it's not easy to balance work and being a mom.

AGE	45
GENDER	Female
INCOME	120K
EDUCATION	Bachelor's
LOCATION	Toronto
MUSIC	Jazz, Dance

NEEDS

Jessica wants to make her daughter feel like she is always there for her. She thinks the physical interaction between a mother and a child is very important, so she needs something that could connect her and her daughter physically.

PERSONALITY



MOTIVATIONS

Social

Comfort

Convenience

INTERVIEW QUESTIONS

1. What is your age?
2. What is your occupation?
3. In what scale do you describe yourself in terms of being social?
 Very not social Not social Neutral Social Very social
4. What means do you use the most to socialize with others? (Please select the top 3)
 In person
 Voice calling
 Text messaging
 Social media (i.e. Instagram, Facebook, Twitter, Snapchat, etc.)
 Virtual meetings (i.e. video calling, online classes, etc.)
 Games (i.e. online games, mobile games, video games, etc.)
 Others:
5. Did the pandemic change how you socialize with others? If yes, how?
6. How often do you find yourself feeling lonely during the pandemic?
 Never Rarely Sometimes Often Always
7. What is your most favourite form of physical affection?
 Holding hands
 Hugs
 Kisses

Hypothesis

Most people preferably socialize with others through social media nowadays.

Result

The answers for the most used means of socialization was vary for each one of the participants.

Hypothesis

There are many people who experienced feeling isolated or lonely during the Covid-19 pandemic lock-down.

Result

No matter if they are usually social or not, almost every interviewee has experienced feeling lonely while social distancing.

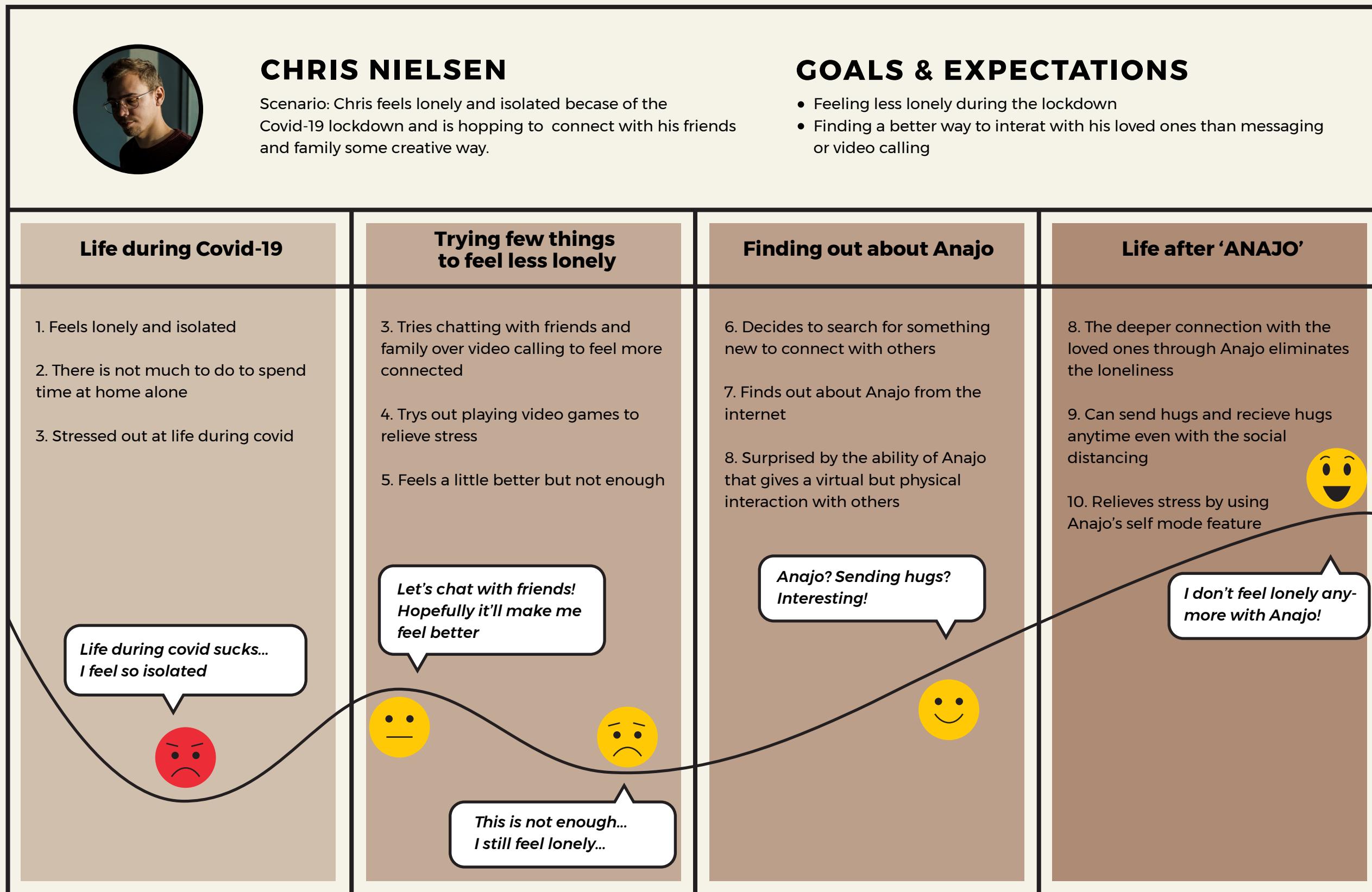
Hypothesis

Most people's favourite form of physical affection is hugging.

Result

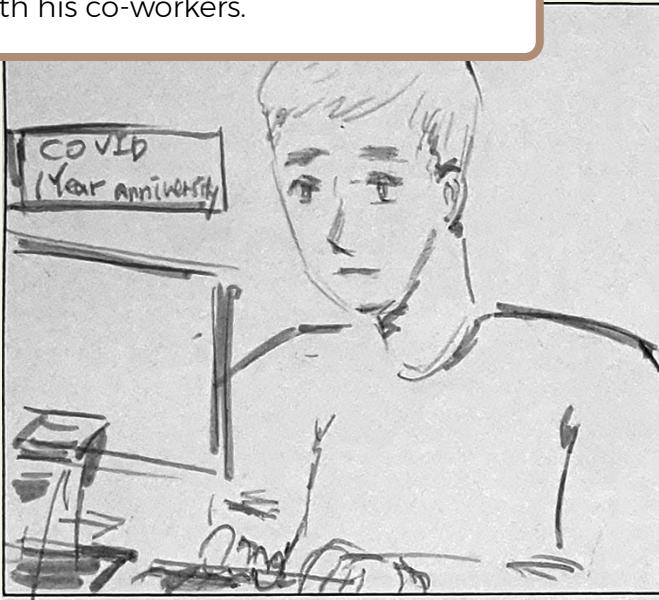
Many participants had a hard time choosing one among three options, however the most selected answer was "hugs".

JOURNEY MAP

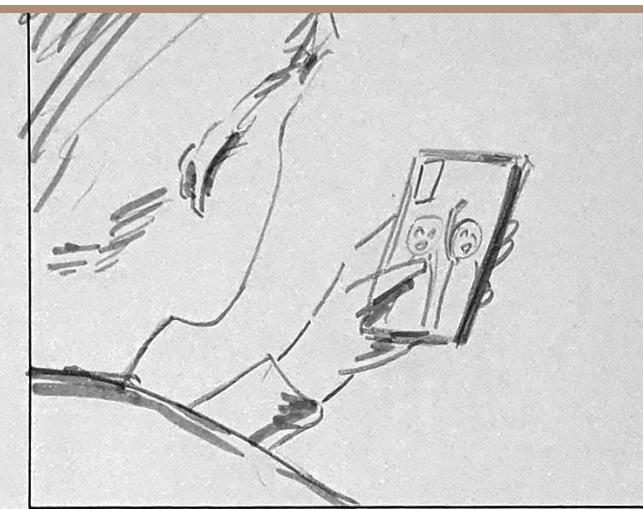


STORYBOARD_PREVIOUS

Chris has been feeling isolated and lonely due to COVID-19. His family and friends live far away and are also isolating. He has been working at home as a UX designer, but doesn't have many opportunities to socialize with his co-workers.



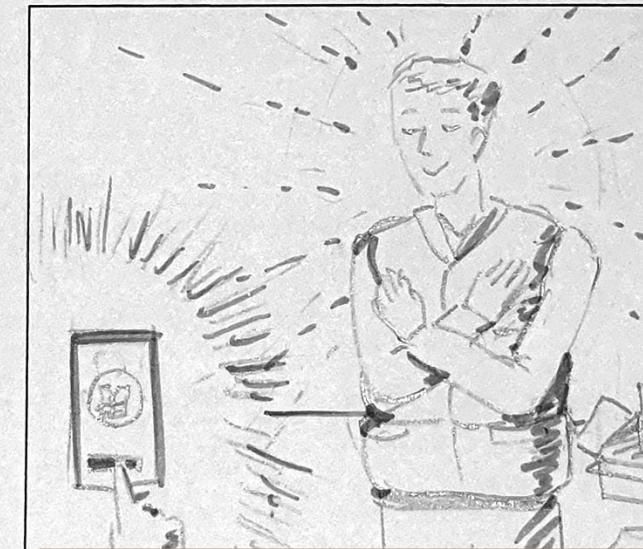
Chris tries to feel less lonely by playing video games online and video calling his family. However, he misses the times when he was able to go out and eat and go out to the movies with his friends and family. He feels like the pandemic has taken away the physical contact that he had with his loved ones and makes it harder for them to connect with each other.



Chris still feels lonely after trying out those methods. The physical component is missing and staring at screens for long periods of time makes his eyes feel strained. He continues to look for other options.



Chris researches products that can help him feel less lonely. While searching, he discovers the Anajo hugging vest. He is really intrigued by the bluetooth features and the ability to send the pressure of a hug and decides to order one and give it a try.



The Anajo hugging vest arrives in the mail and Chris follows the manual to set it up. He also ordered vests as a gift for his family and friends to use. Chris finds it a really fun way to communicate and appreciates the physical contact that the vest can provide.



Chris feels a lot happier ever since he started using Anajo! He really enjoys using the vest whenever he feels lonely. His friends have fun sending audio messages with their hugs as well. Chris has also been using the self mode to relieve stress after work.

STORYBOARD_UPDATED



04

APP PROTOTYPE

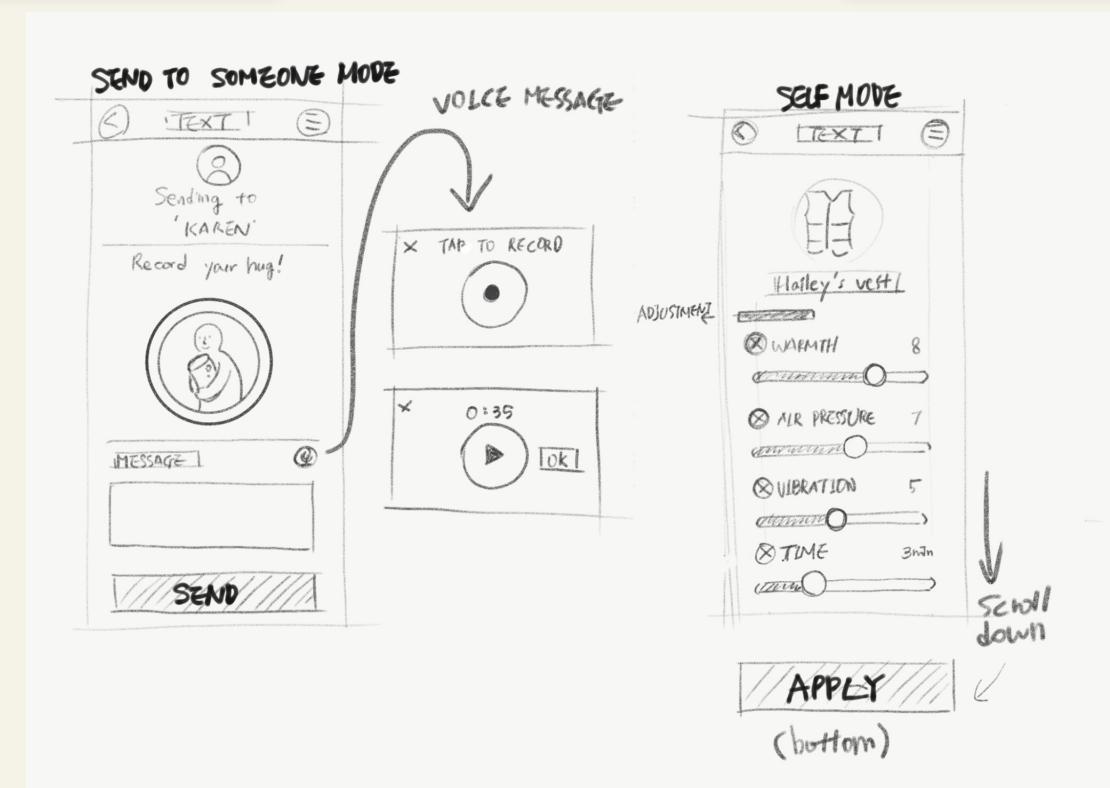
Sketch

Low Fidelity Prototype

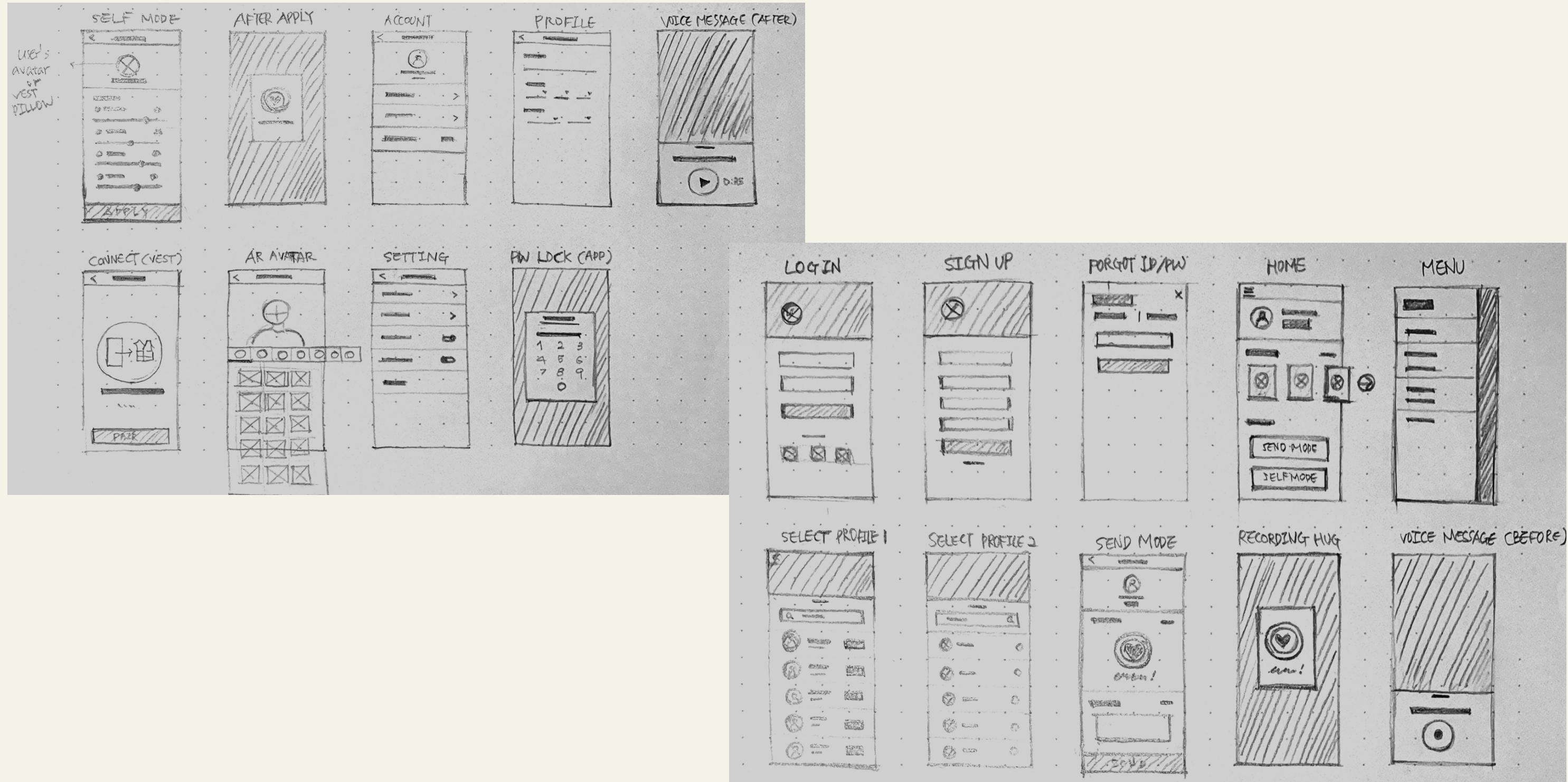
High Fidelity Prototype

PROTOTYPE

SKETCH



PROTOTYPE SKETCH



PROTOTYPE

LOW FIDELITY PROTOTYPE

LOGO

Username

Password

LOG IN

LOGIN

LOGO

E-mail

Username

Password

Confirm password

SIGN UP

SIGN UP

Welcome
Chris !

My Recordings

Storage

20210301_1

20200705_2

Mode

SEND TO SOMEONE

SELF MODE

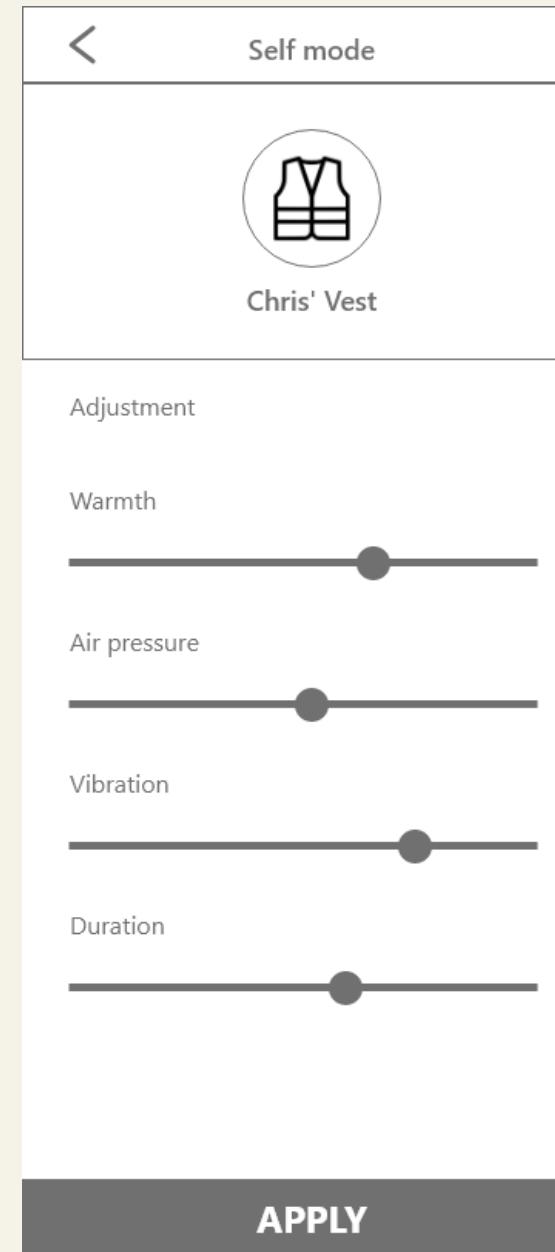
HOME

PROTOTYPE

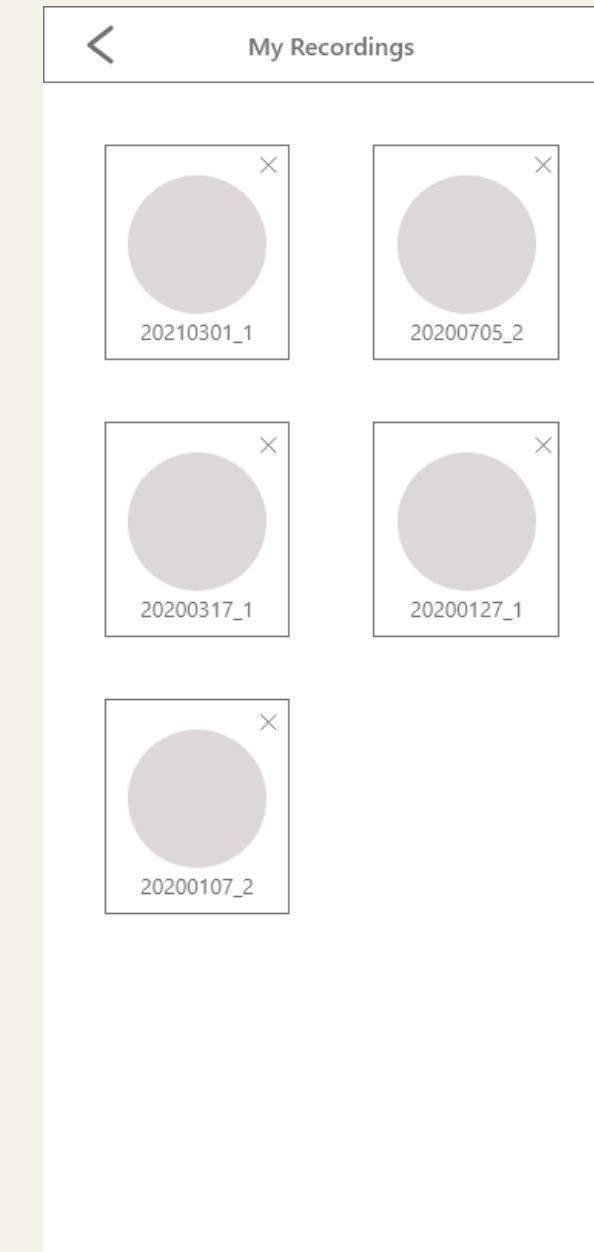
LOW FIDELITY PROTOTYPE



SEND MODE



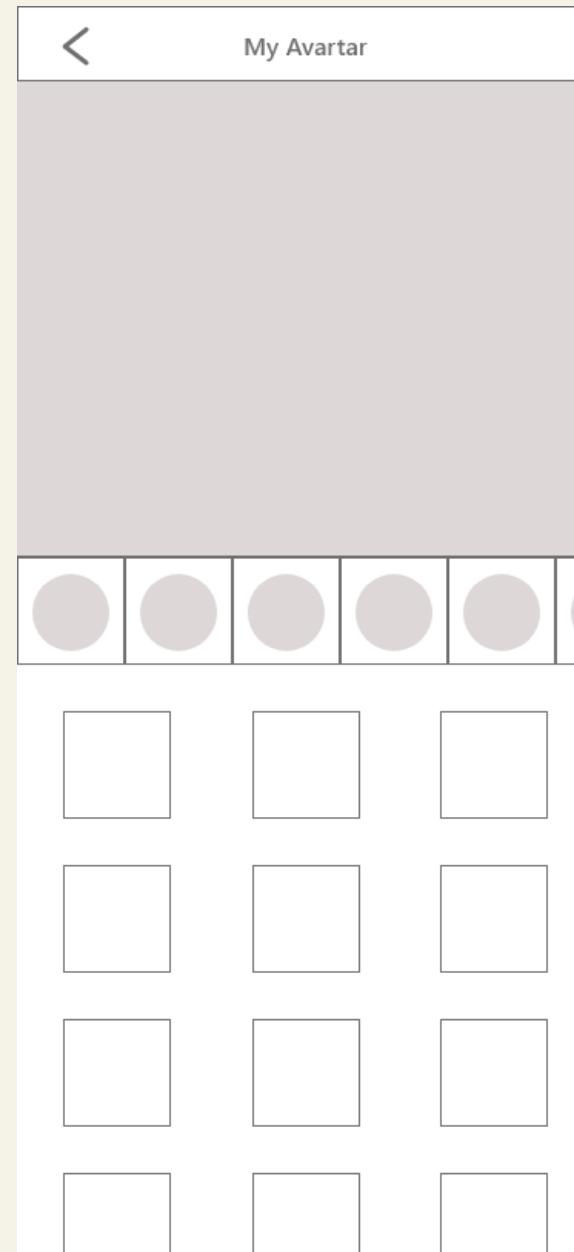
SELF MODE



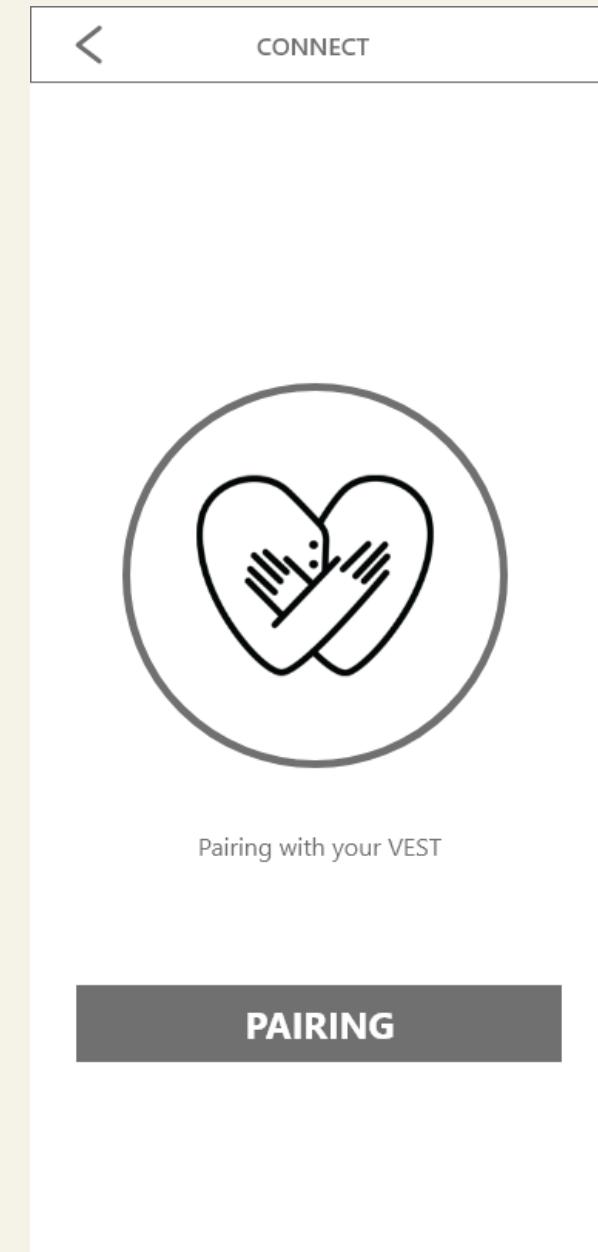
RECORDING
STORAGE

PROTOTYPE

LOW FIDELITY PROTOTYPE



AVATAR
CREATION

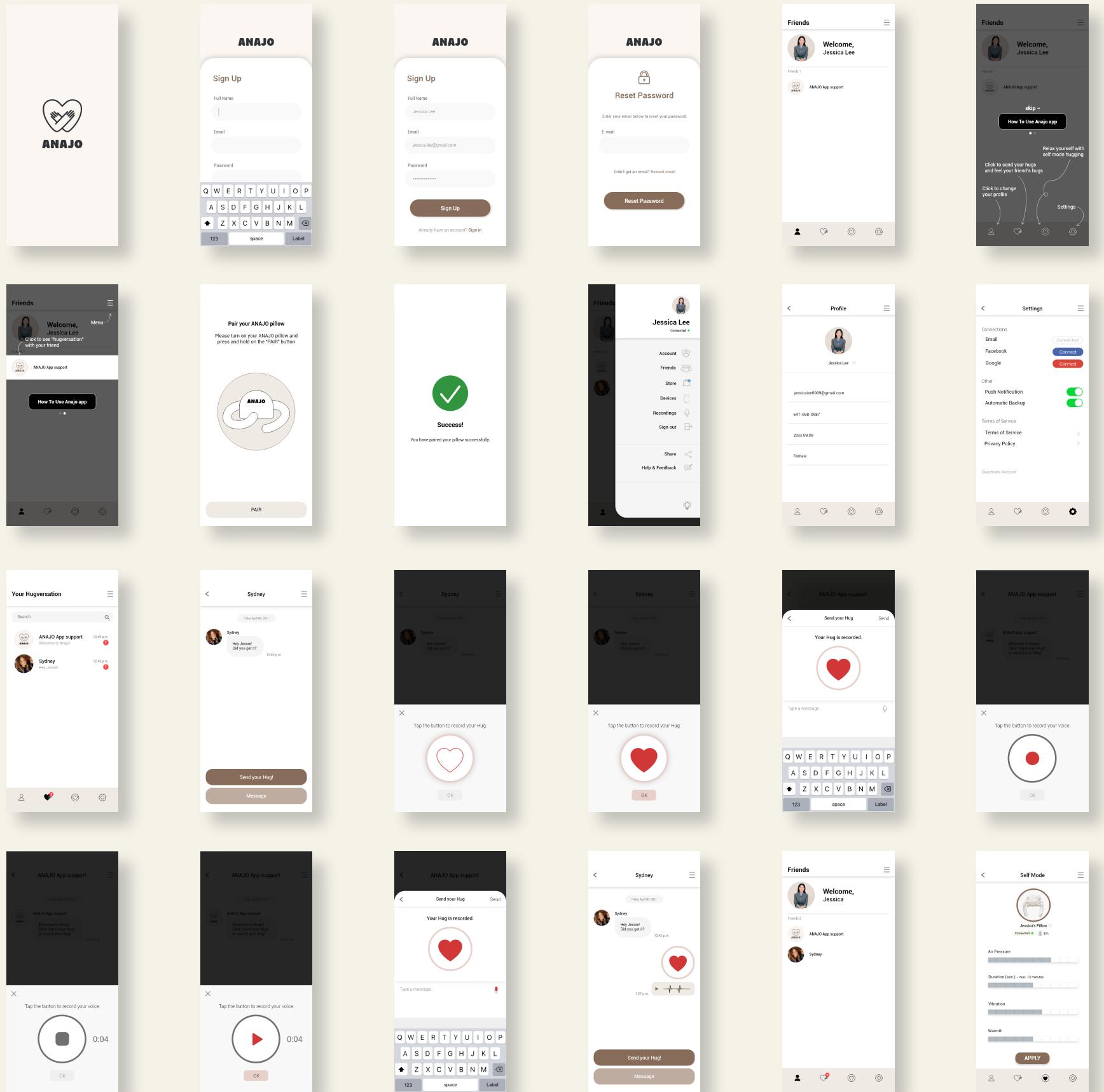
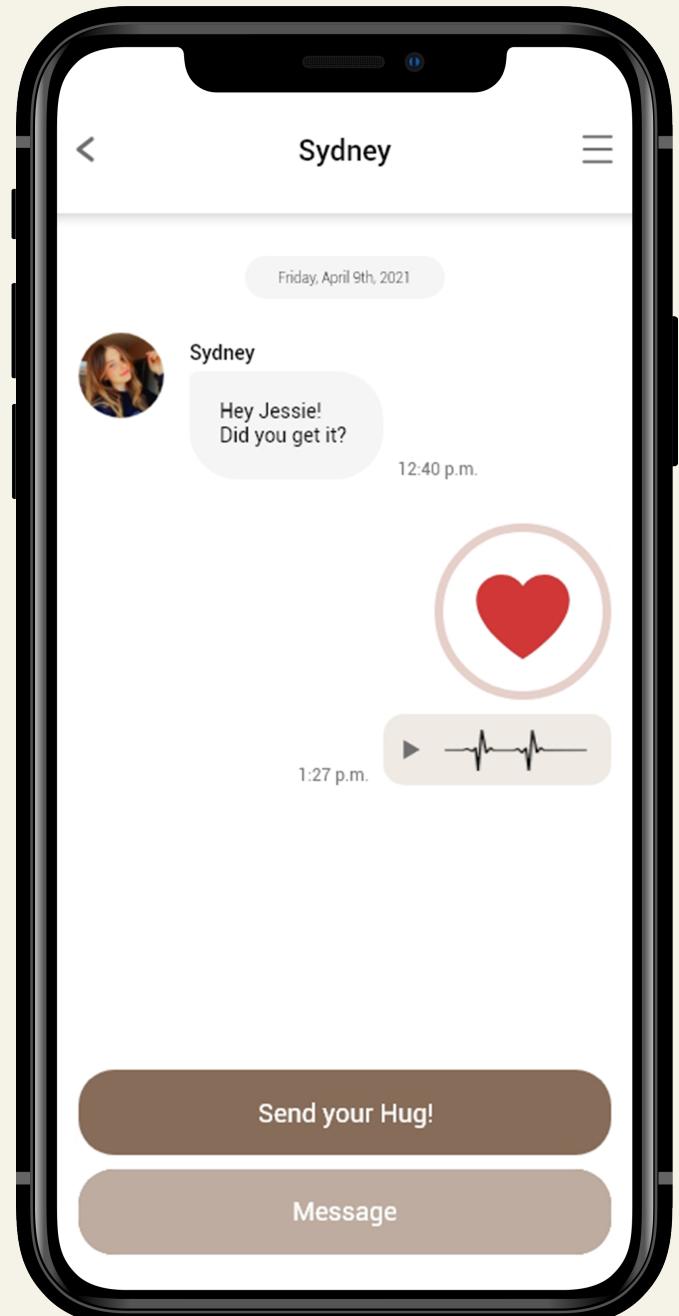


CONNECT
& PAIRING

The app prototype after this slide has changed from our low fidelity prototype because we changed our product from a vest to a pillow

PROTOTYPE

MOBILE APP



PROTOTYPE

MOBILE APP



SPLASH

The SIGN UP screen displays the ANAJO logo at the top. Below it is a rounded rectangular input field labeled "Sign In". Inside this field, there are two input fields: "Email" and "Password", each with its own input placeholder. At the bottom of the field is a brown "Sign in" button. Below the input field is a link: "Forgot your password/ID? Click here".

SIGN UP

The SIGN IN screen is identical to the SIGN UP screen, featuring the ANAJO logo at the top, a "Sign In" field with "Email" and "Password" inputs, a "Sign in" button at the bottom, and a forgot password link below.

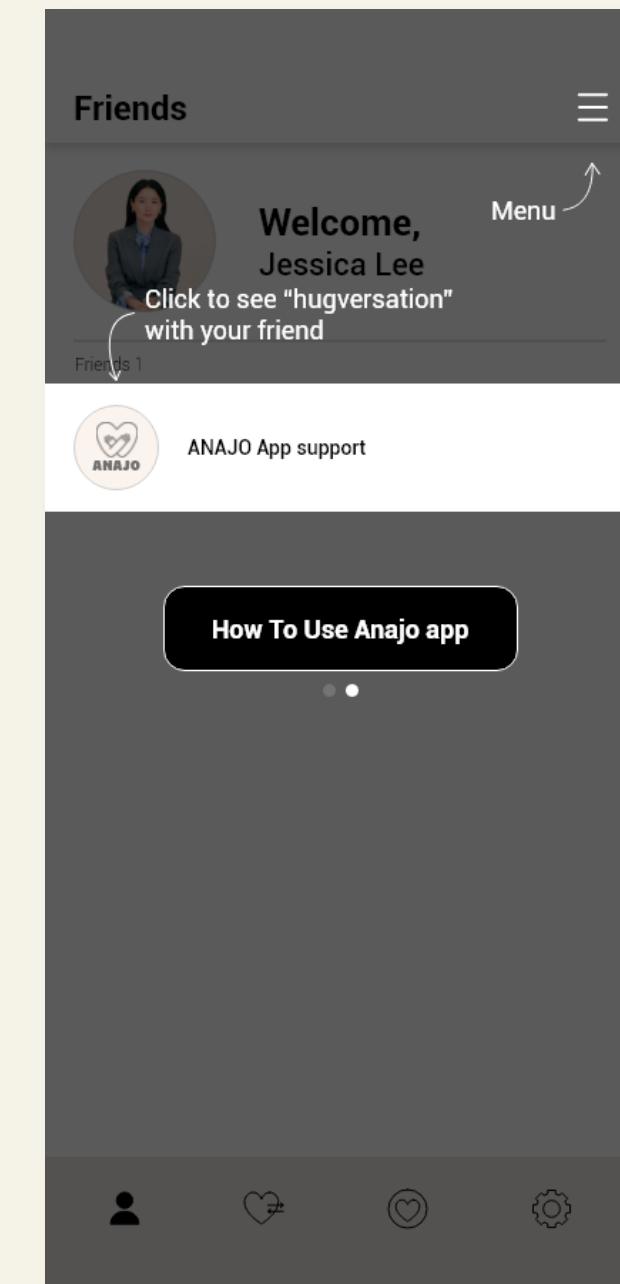
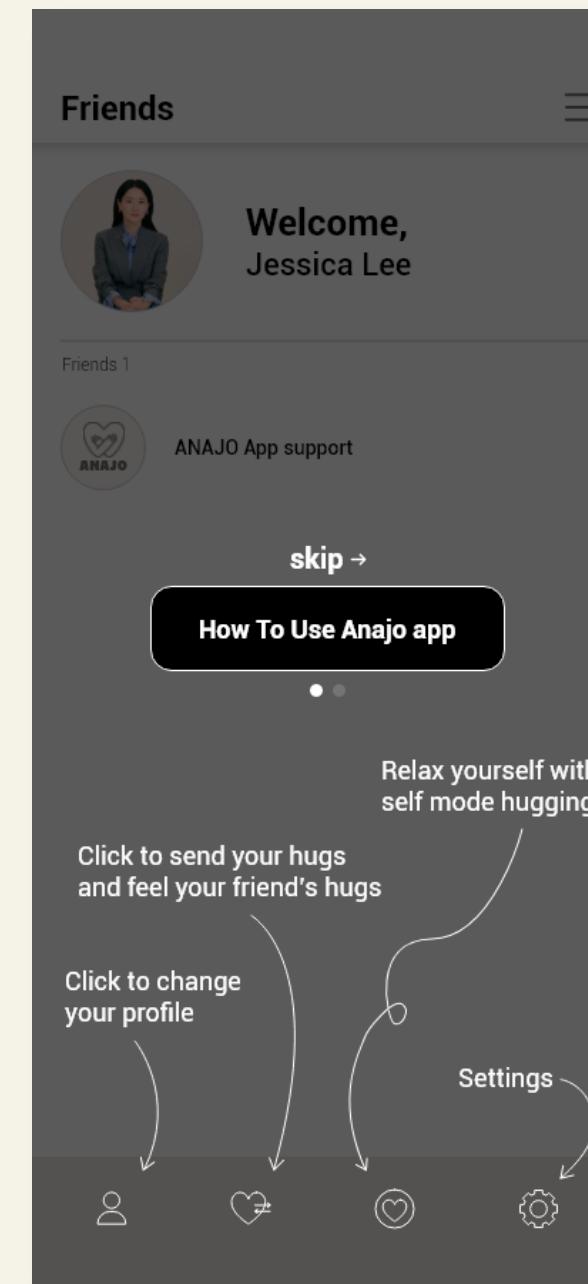
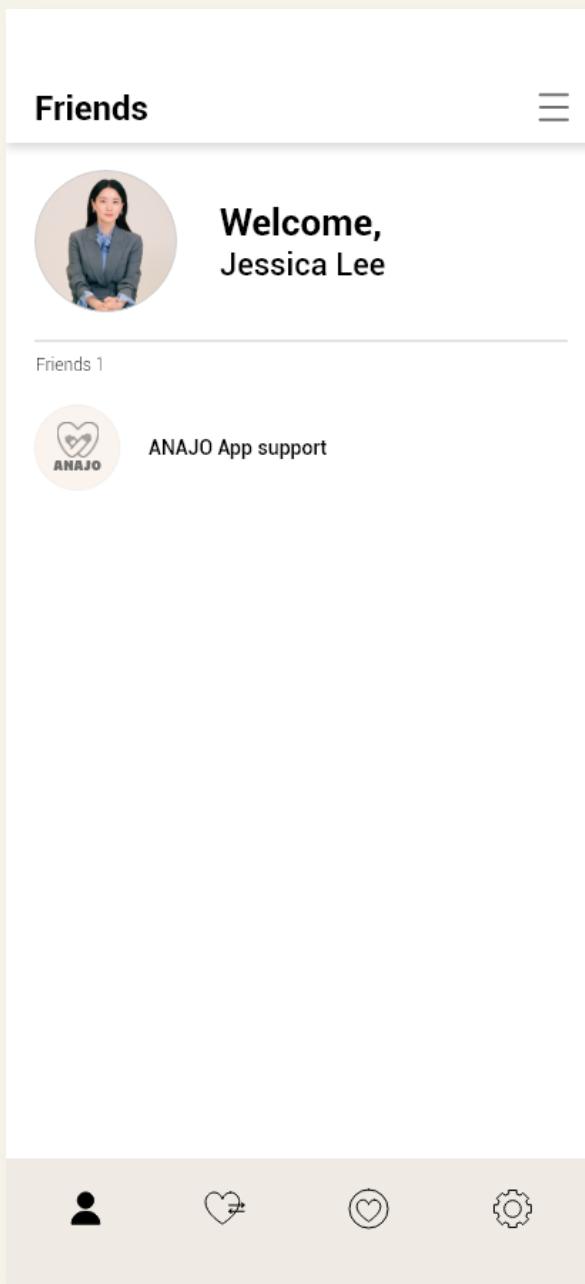
SIGN IN

The FORGOT ID/PW screen features the ANAJO logo at the top. It includes a lock icon and the title "Reset Password". Below the title is a descriptive text: "Enter your email below to reset your password." A single input field labeled "E-mail" is provided. At the bottom is a brown "Reset Password" button. Below the button is a link: "Didn't get an email? Resend email".

FORGOT ID/PW

PROTOTYPE

MOBILE APP



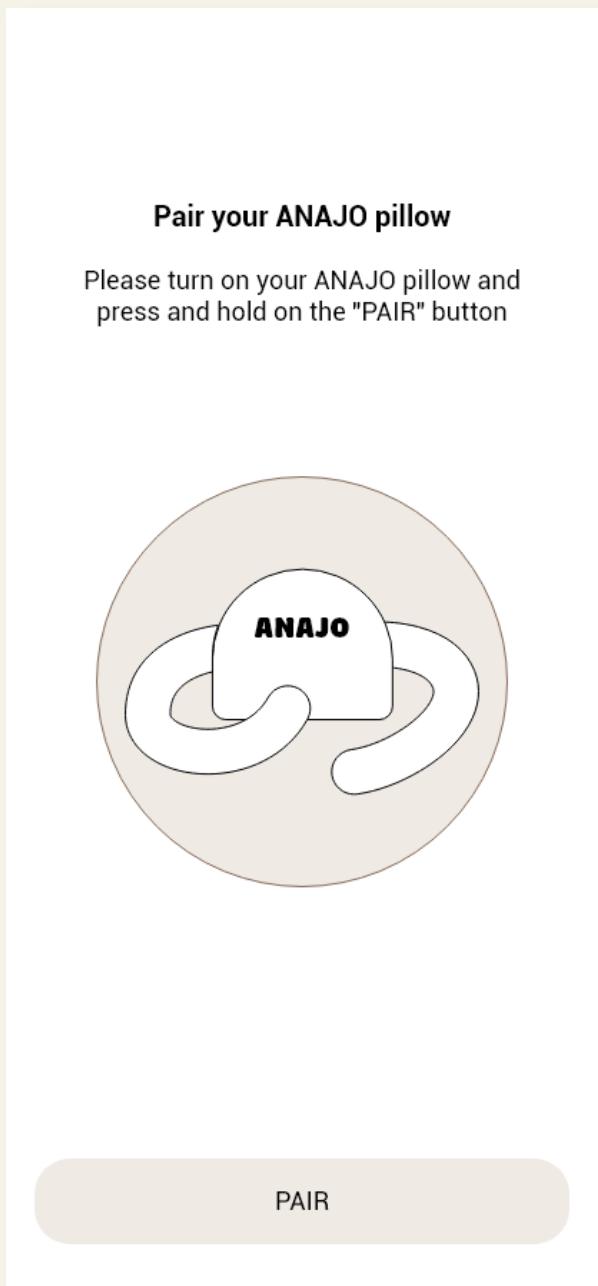
HOME

TUTORIAL 1

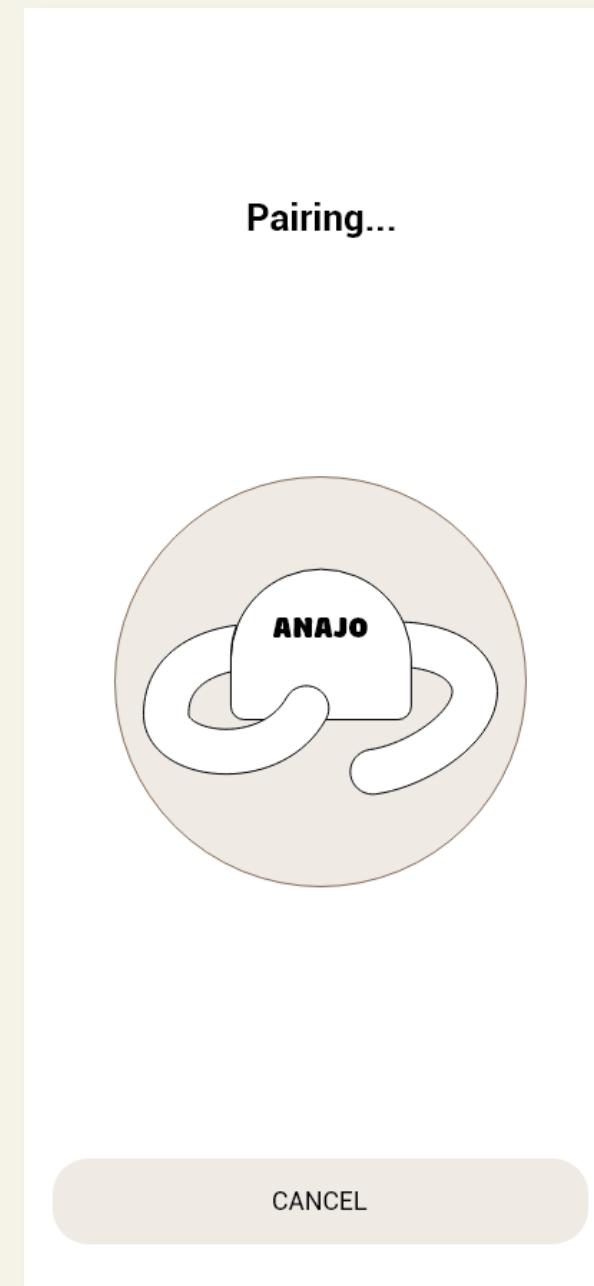
TUTORIAL 2

PROTOTYPE

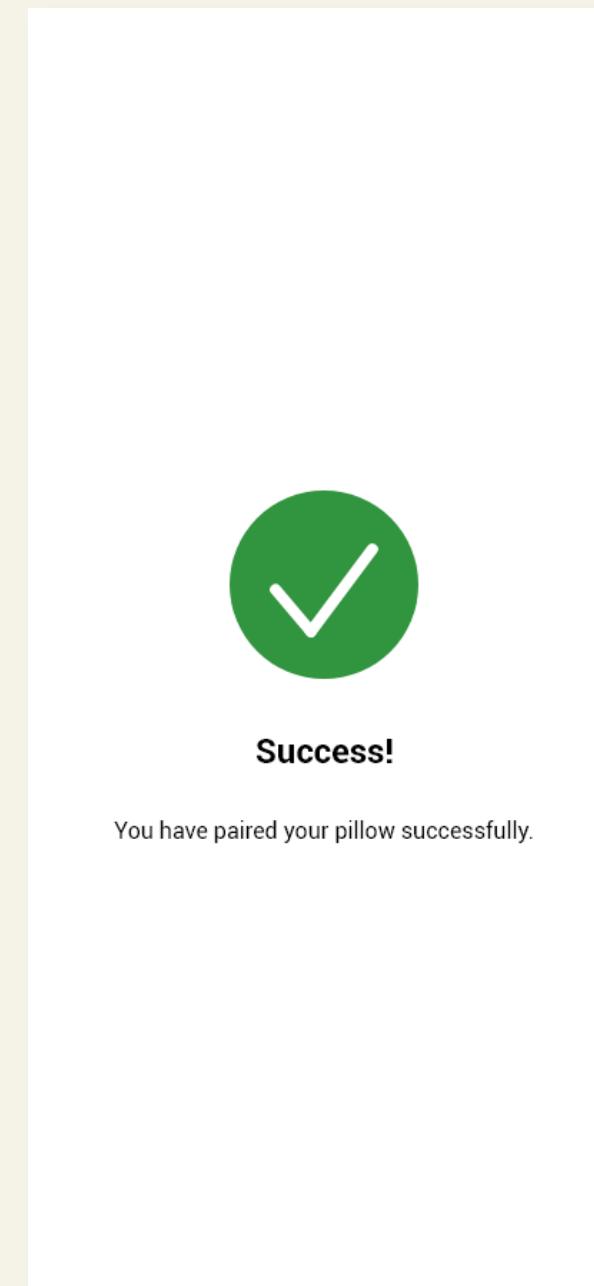
MOBILE APP



PAIRING 1

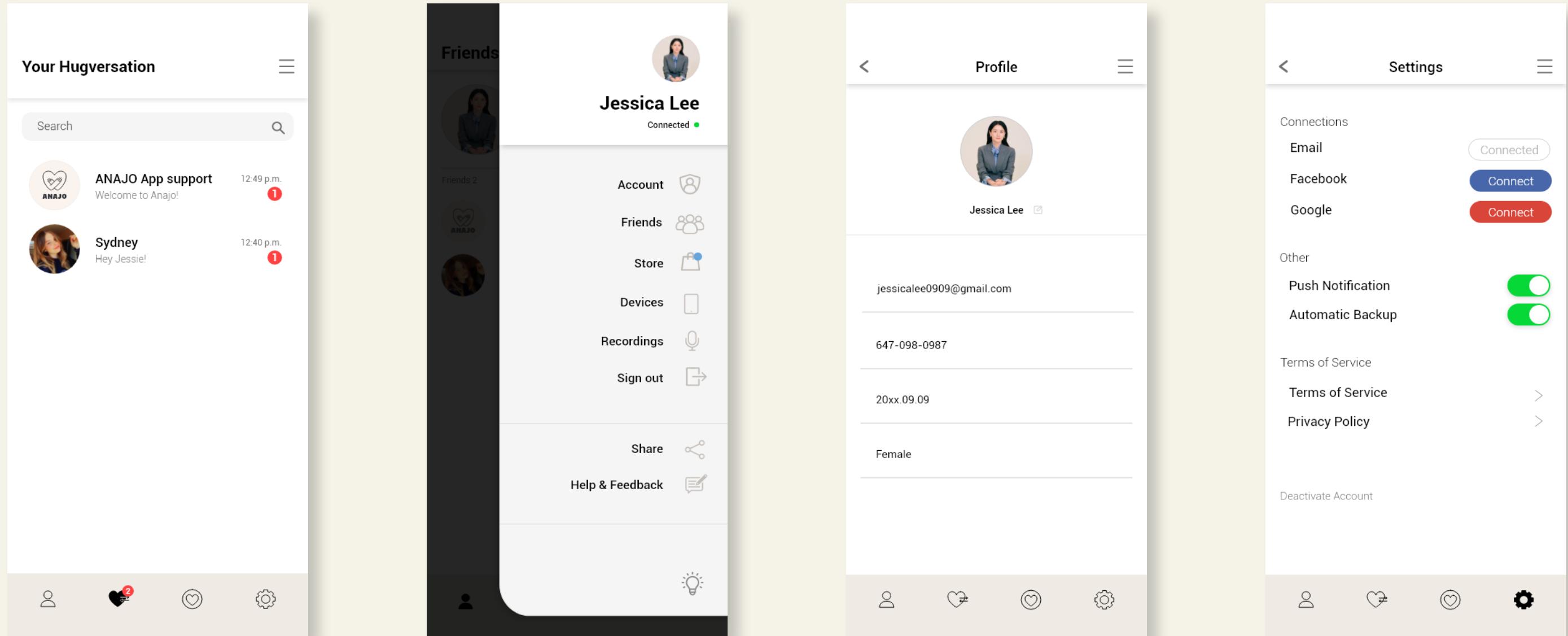


PAIRING 2



**PAIRING
SUCCESS**

PROTOTYPE MOBILE APP



SEND HUG
- LIST

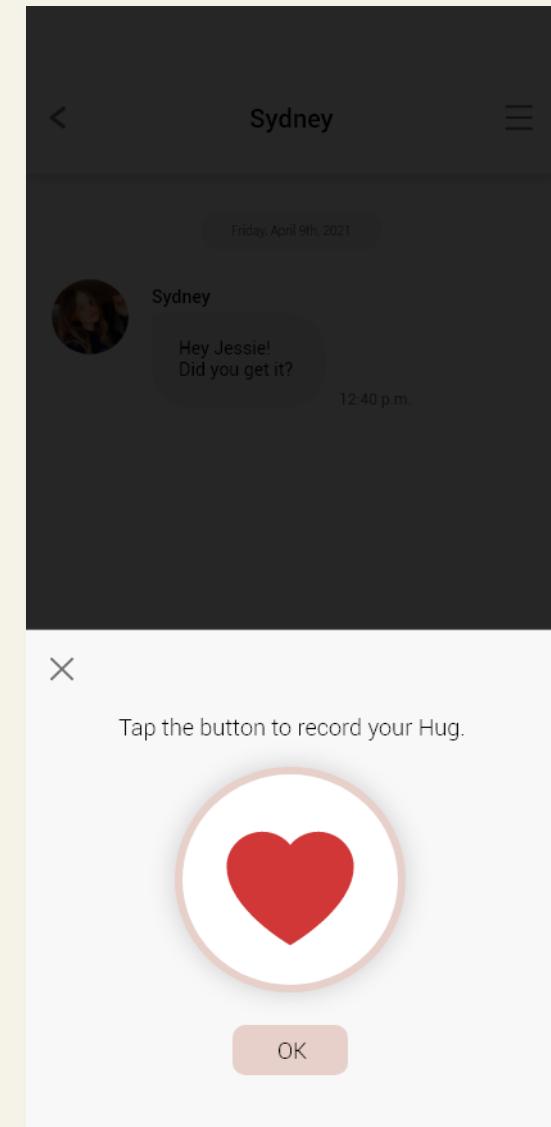
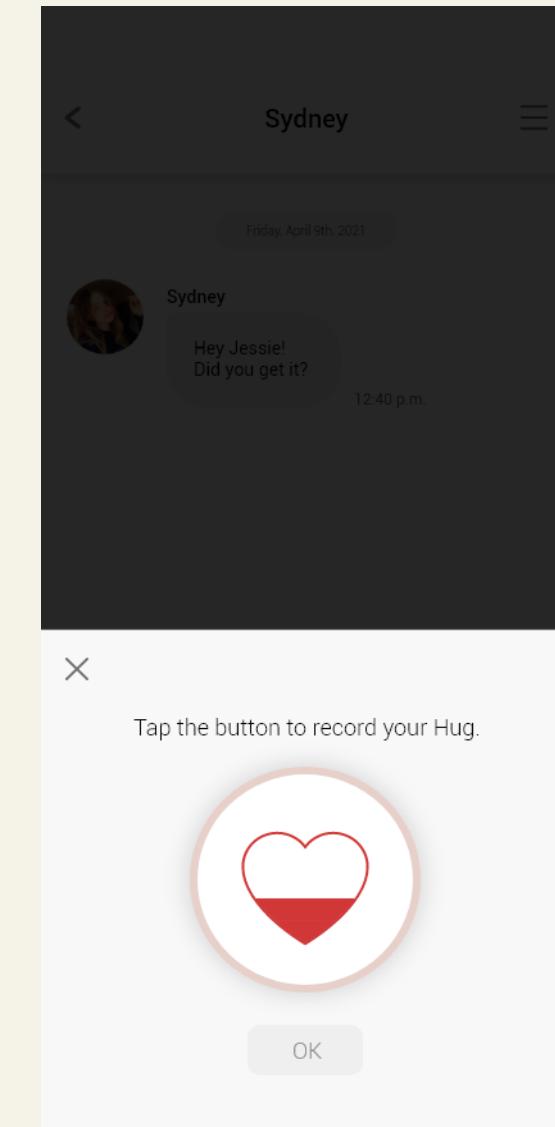
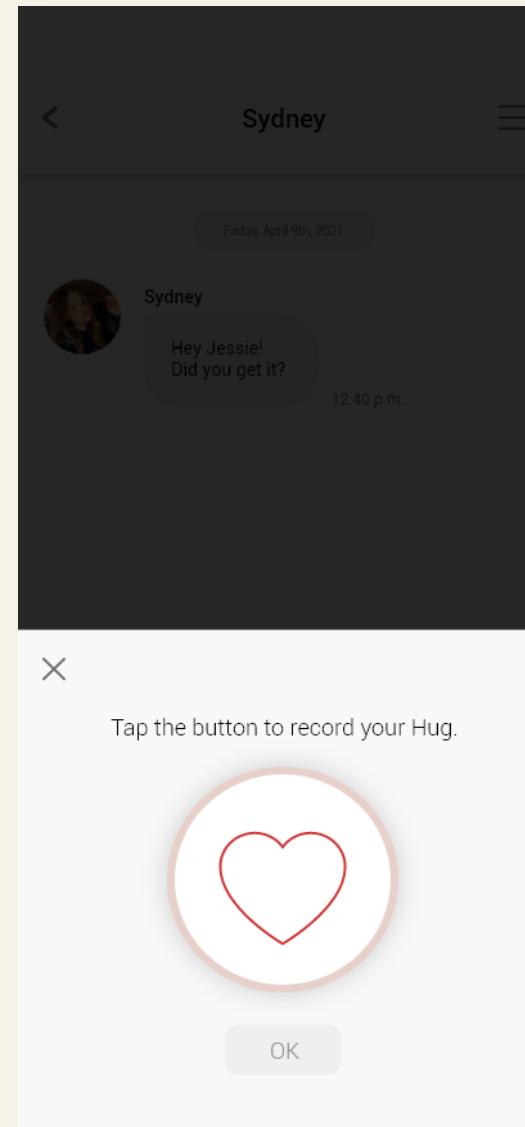
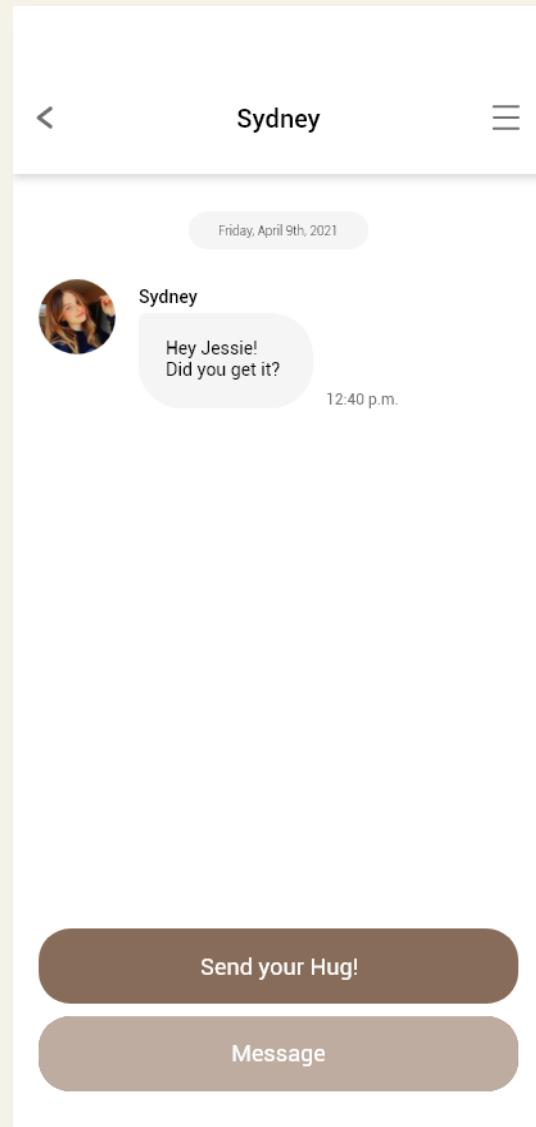
MENU

**EDIT
PROFILE**

SETTINGS

PROTOTYPE

MOBILE APP



SEND HUG
- HUGVERSATION
ROOM

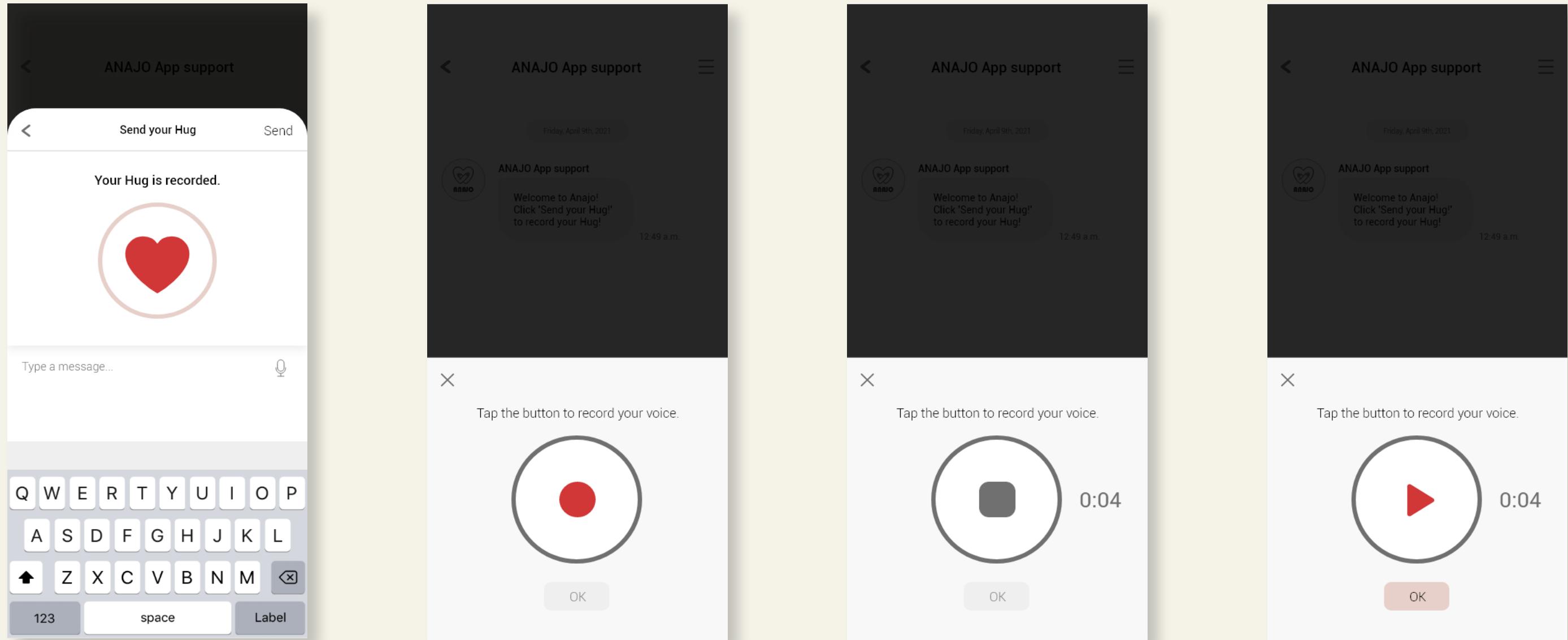
RECORDING HUG
- STARTS

RECORDING HUG
- HALF WAY

RECORDING HUG
- FULL

PROTOTYPE

MOBILE APP



**BEFORE
COMPLETE SENDING
- OPTION FOR
MESSAGES**

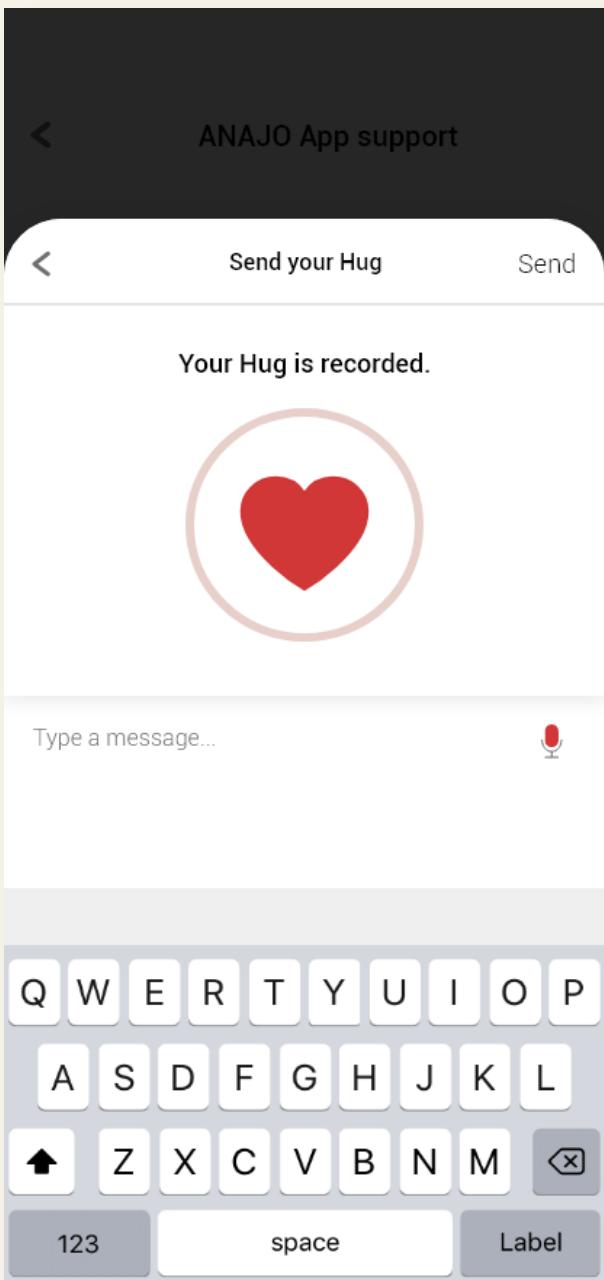
**VOICE
MESSAGE**

**VOICE
MESSAGE**

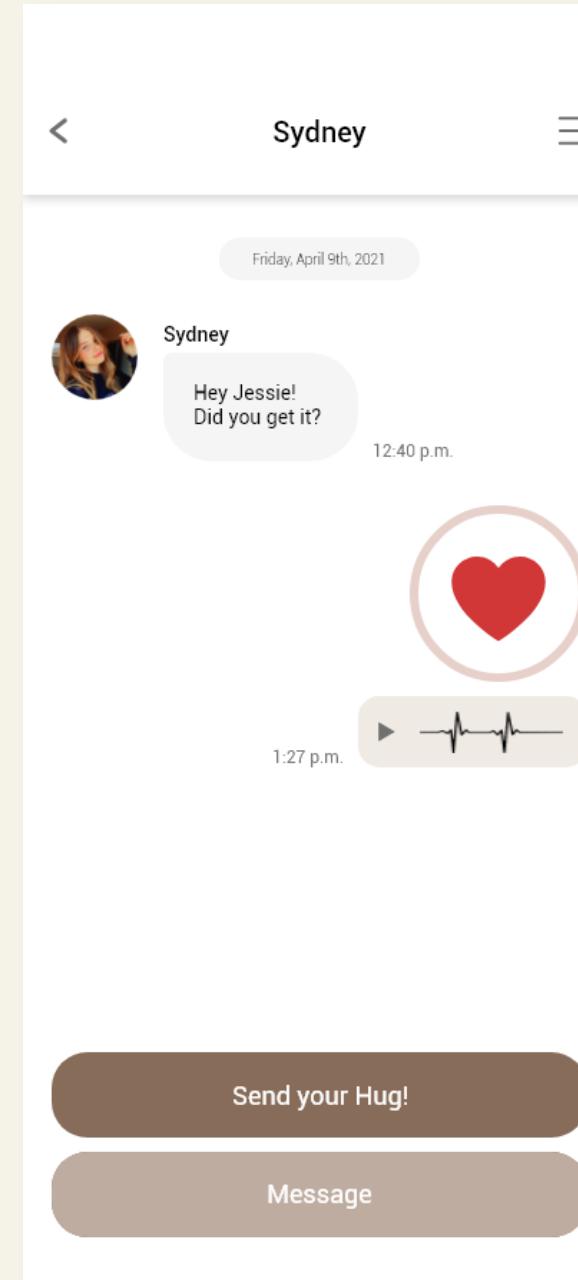
**VOICE
MESSAGE**

PROTOTYPE

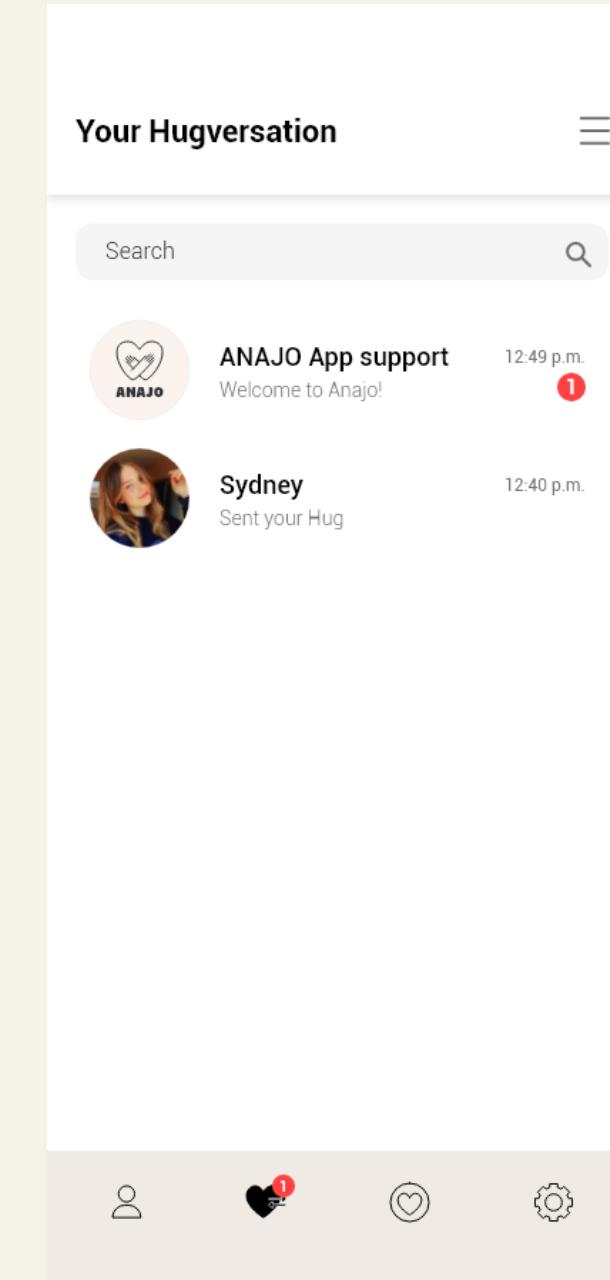
MOBILE APP



VOICE MESSAGE
RECORDED



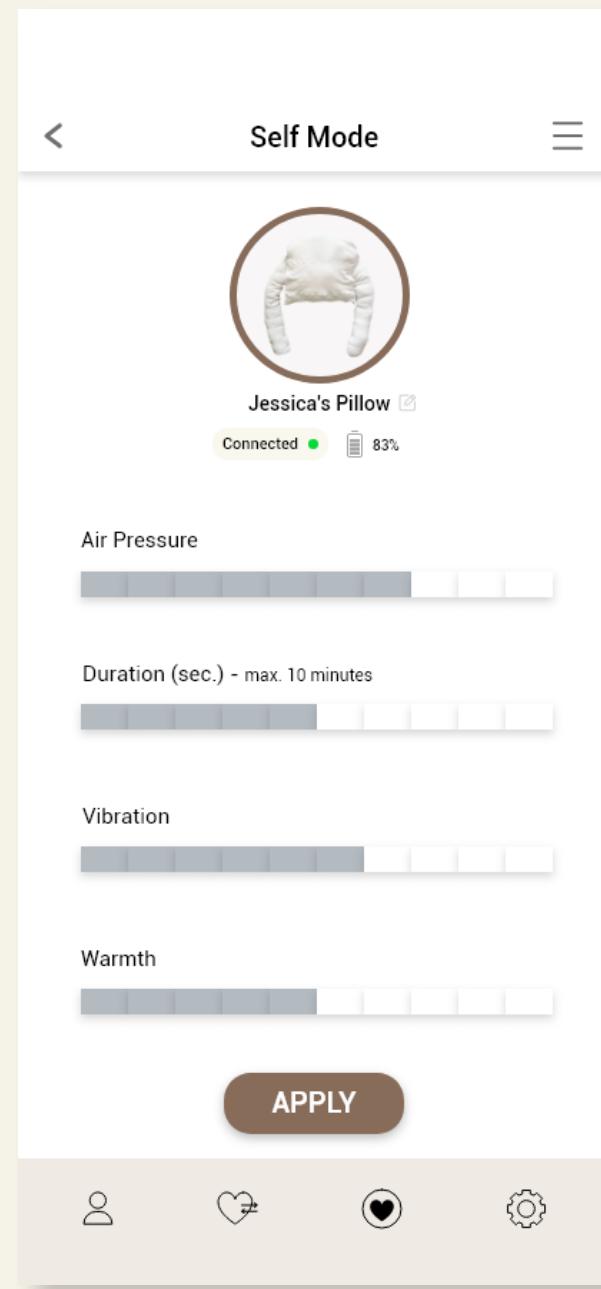
SENT HUG



AFTER SENDING
HUG

PROTOTYPE

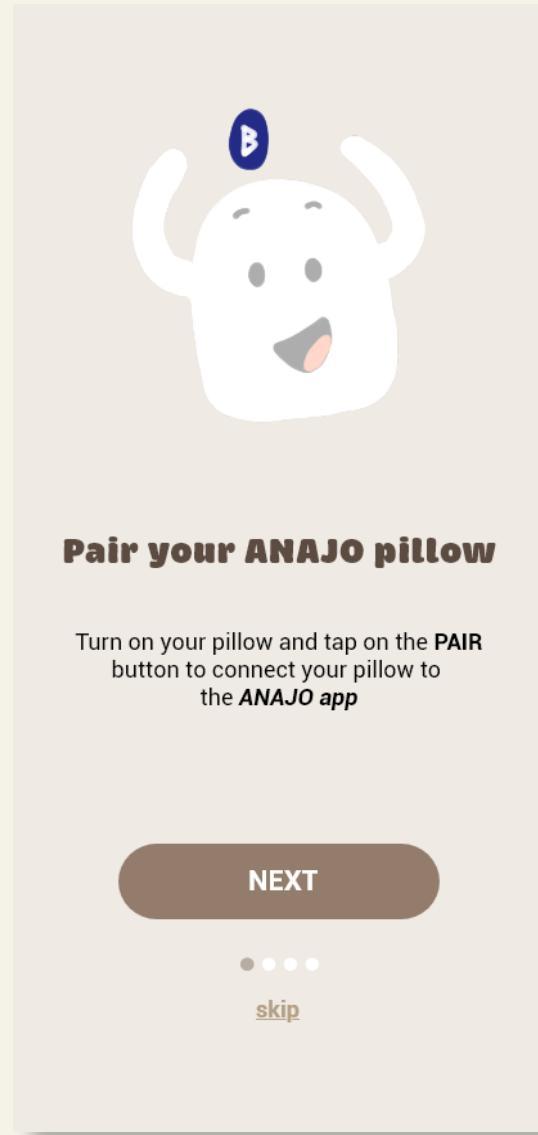
MOBILE APP



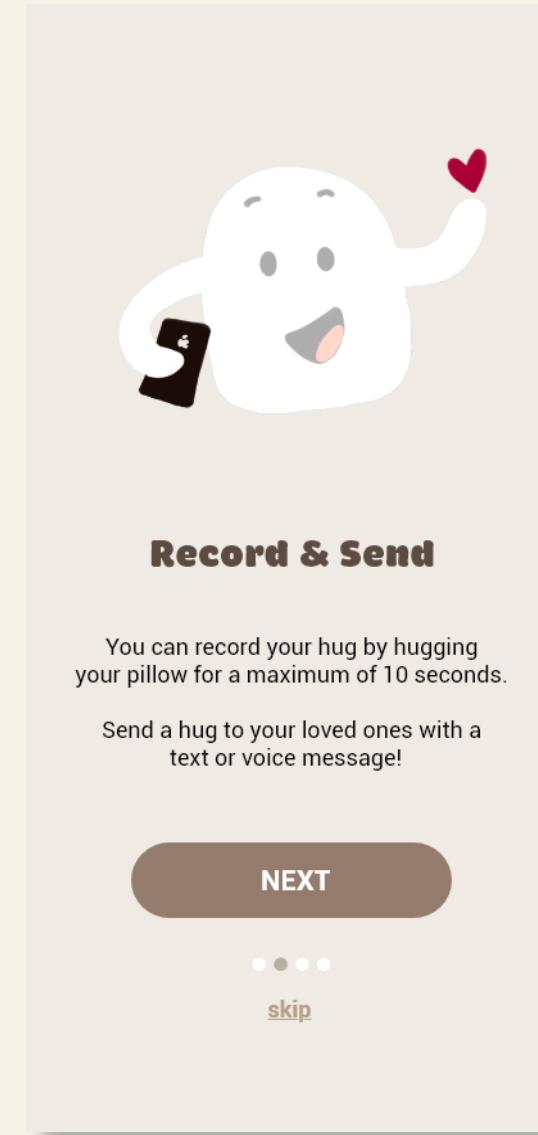
SELF MODE

PROTOTYPE

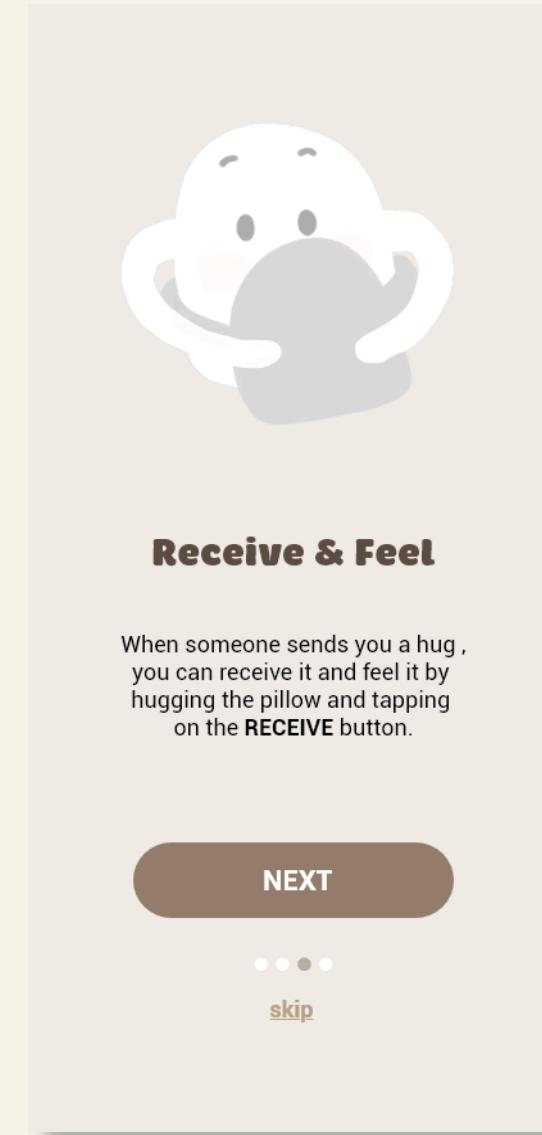
MOBILE APP



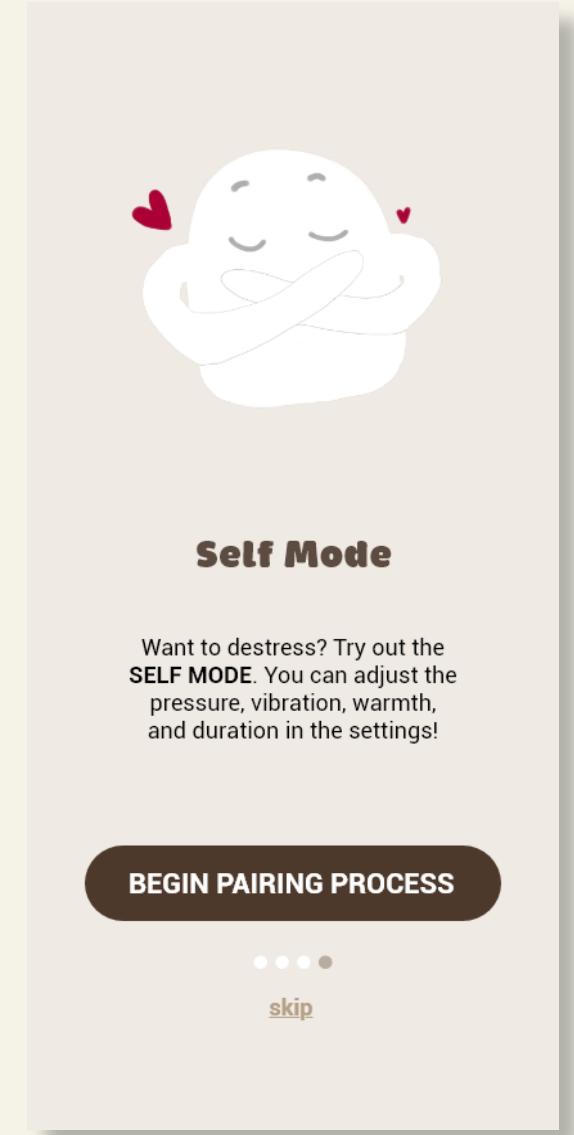
PAIR



RECORD & SEND



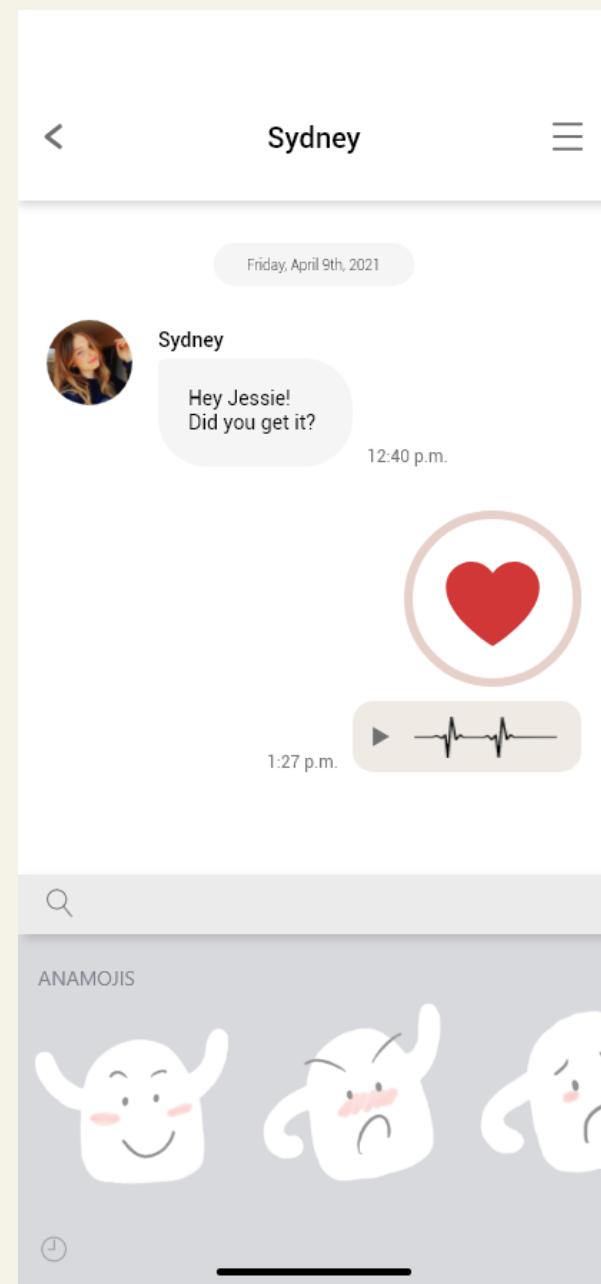
RECEIVE & FEEL



SELF MODE

PROTOTYPE

MOBILE APP



EMOJI

05

PHYSICAL PROTOTYPE

User Manual

Features

Technology

Material

Video

PHYSICAL PROTOTYPE_VEST

(Physical prototype is a quarter scale model)



Using a doll as a model for our small scale model



Creating the puffiness of the vest for the parka-like look

PHYSICAL PROTOTYPE_VEST

(Physical prototype is a quarter scale model)



Open and closed views of the jacket itself



Front, side, and back views of
the vest on the model



After presenting prototype 1, we decided to change our product based on the feedback we got about our vest + pillow being too complex.

Our new product is only a pillow, with the same features we had planned for the vest. All the slides from this slide forward will be focused on the new Anajo hugging pillow concept.

We kept our previous moodboards and inspiration boards the same to show how we refined our idea after the initial ideation process.

ANAJO PILLOW & APP

USER MANUAL

1. Charge the **Anajo pillow (1)** via the charging port on the bottom left of the pillow. Connect the charging port to a power supply using the **supplied USB cable (2)**. Charging will be complete when the charging light is green and has stopped flashing.
2. Download the Anajo Connect app from the App Store or the Google Play Store. Create an account and begin the pairing process.
3. Begin the pairing process by pressing “PAIR” in the app and press and holding down the power button on the pillow, located to the left of the charging port. When the pairing light turns blue the pairing process is successful. If pairing is unsuccessful, turn off the pillow and restart this step.
4. Secure the **Anajo pillow (1)** to your body and adjust the fit using the velcro on the arms. Next, test out different air pressures and warmth levels and set your desired/default pressure settings. These can be changed any time under the settings section of the app.

We recommend setting a lighter pressure when you are first trying out the **Anajo pillow (1)**. Feel free to adjust accordingly after the initial try-on.

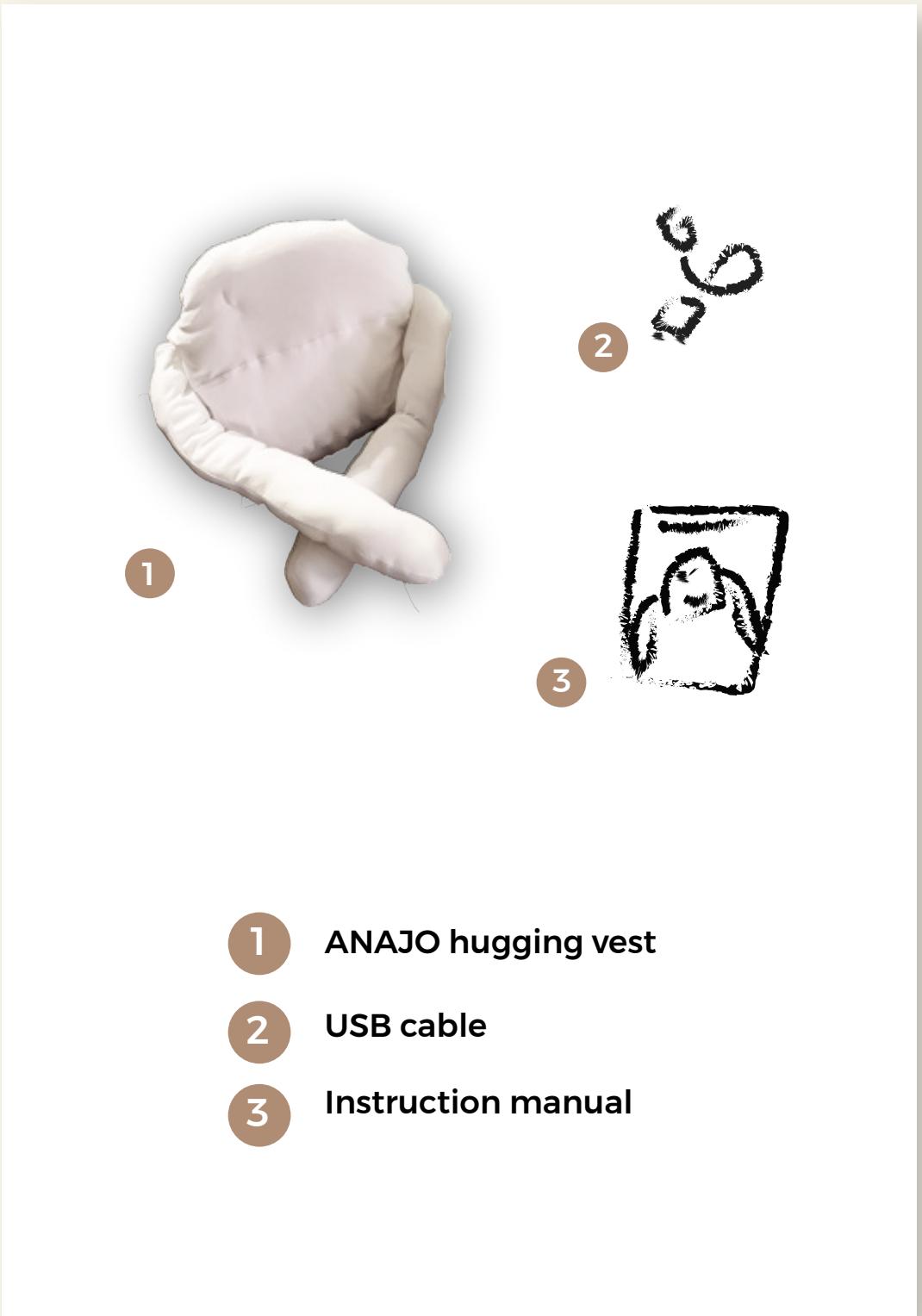
5. Add friends! The **Anajo pillow (1)** when used with friends is a whole new experience. You can add friends via connect codes or through searching up their username.

ADDITIONAL TIPS

Two modes are available: self mode and send mode.

With self mode, you can use the pillow alone and relax! Adjust the settings for a relaxing pillow buddy that can ease your stress.

With **send mode**, connect to your loved ones by sending the pressure of your hug or a haptic massage to let them know you’re thinking about them. The option of a text or audio message is also available. When you send your hug, your customized avatar will appear and the other user has an optional AR option to view your messages using that method.

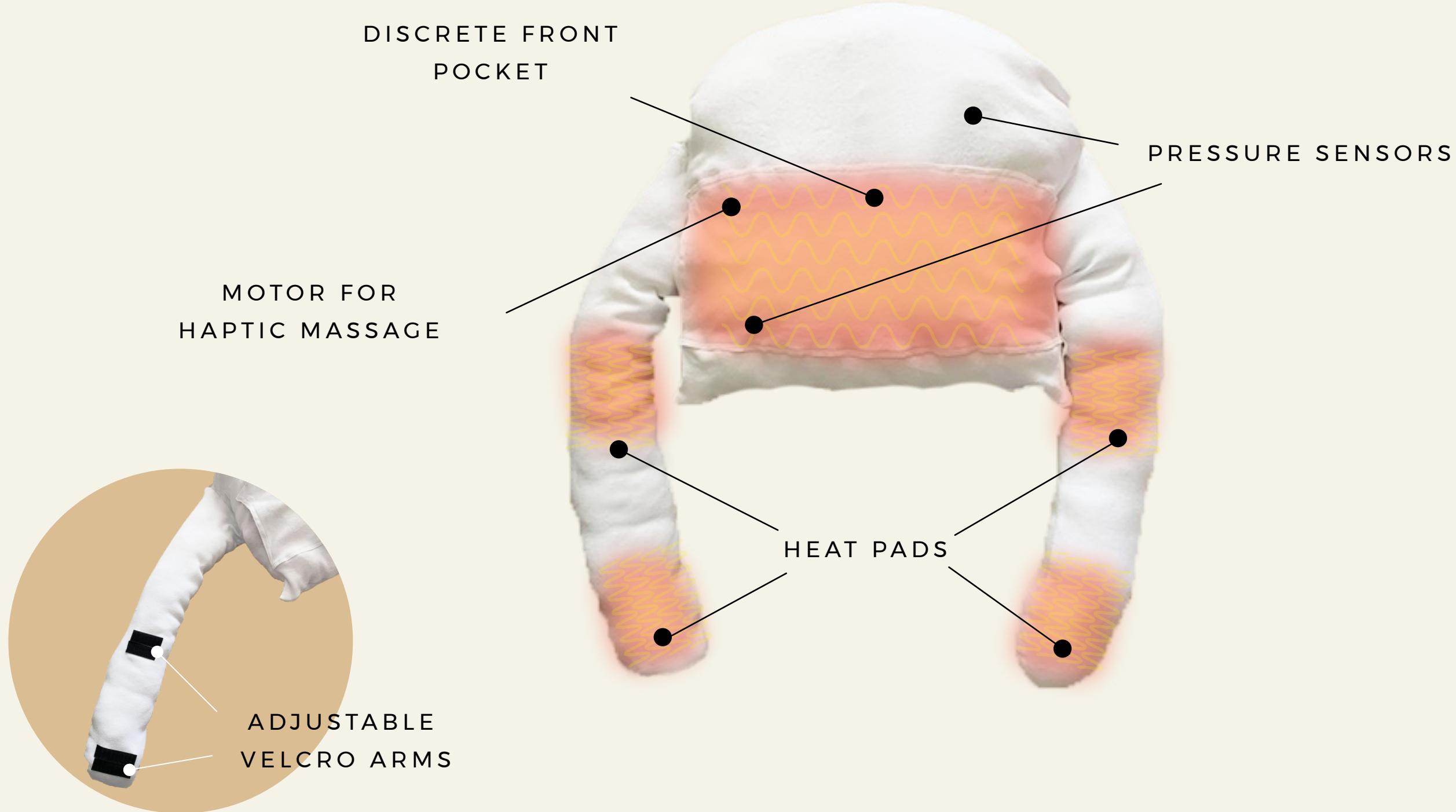


1 **ANAJO hugging vest**

2 **USB cable**

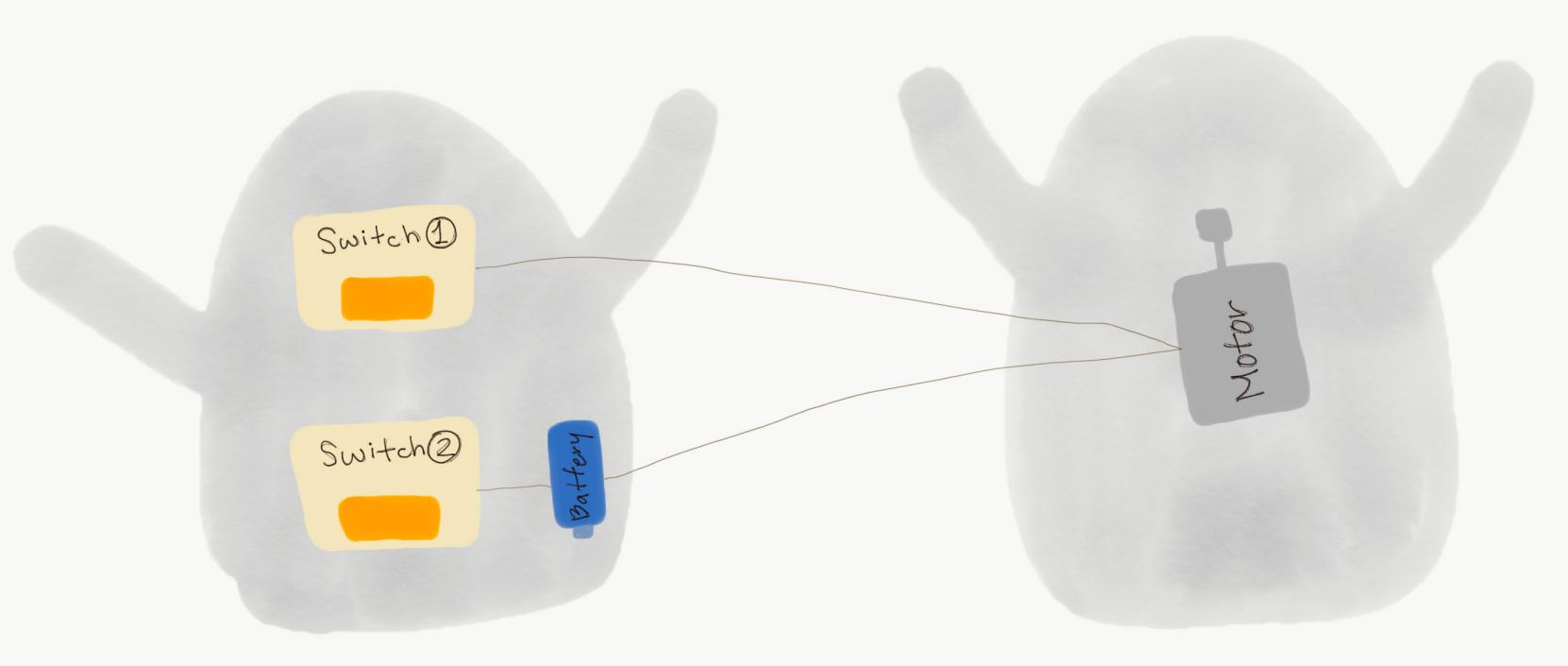
3 **Instruction manual**

FEATURES & TECHNOLOGY

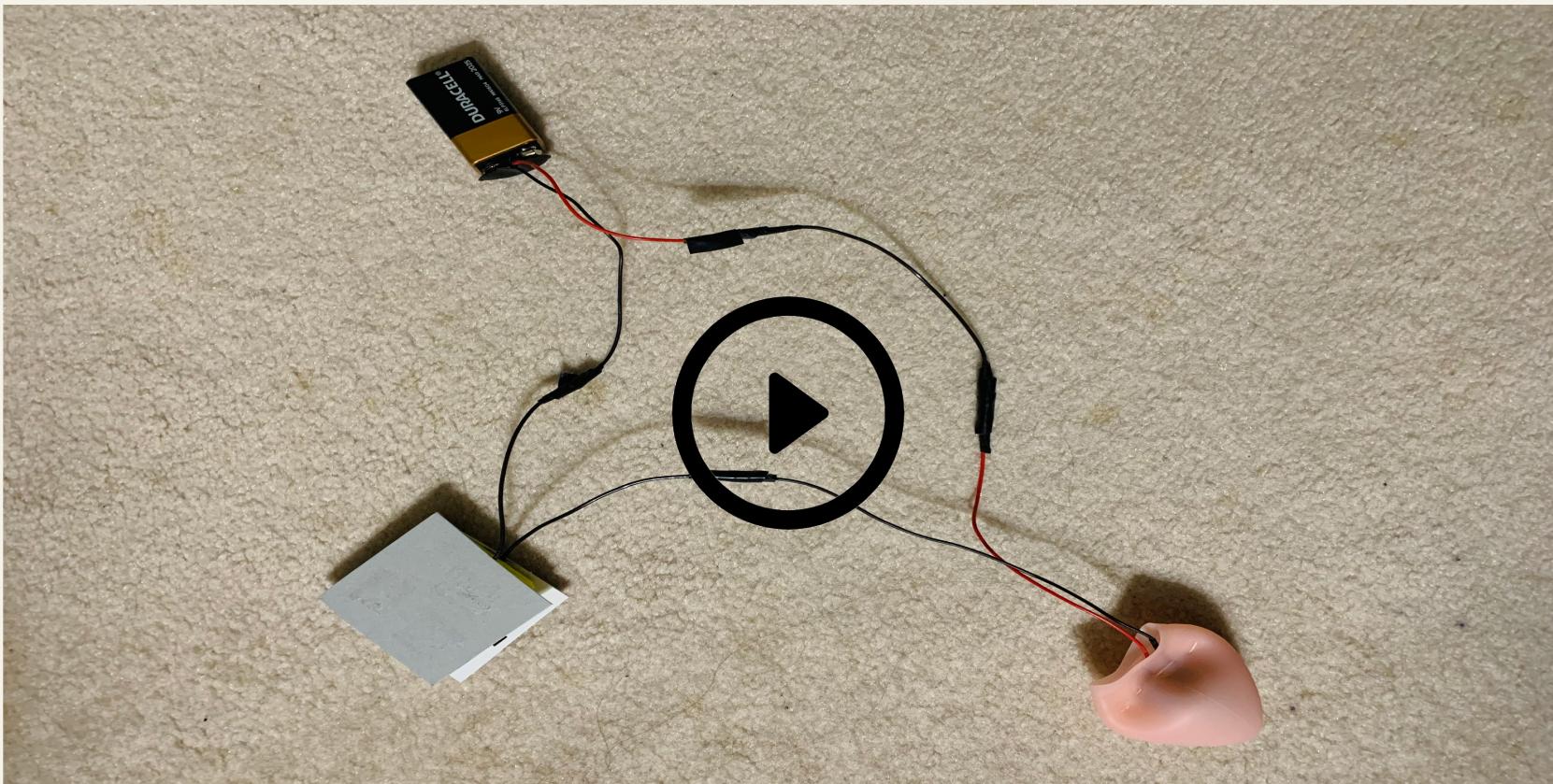


TECHNOLOGY

Sketch of technology



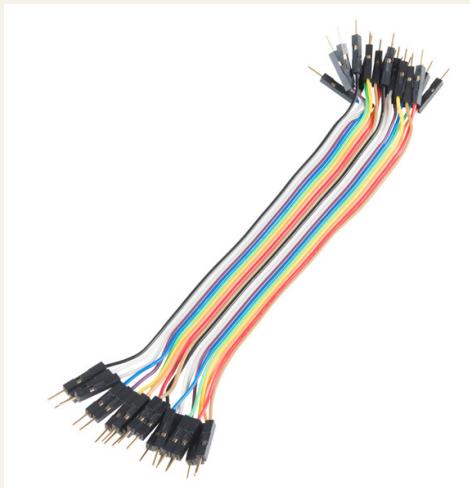
Prototype of technology



MATERIAL



Motor with Gear



Jumper Wires



Super Glue



Electrical tape



9V Battery



Cardboard



Foam

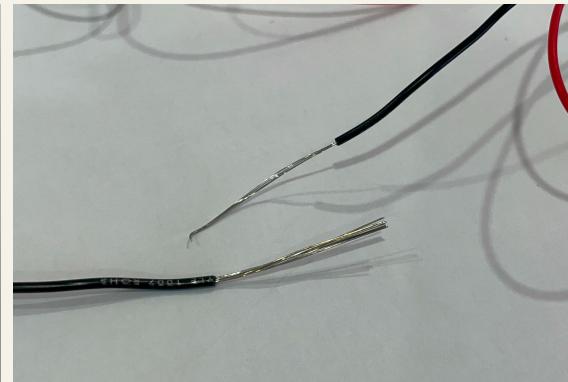
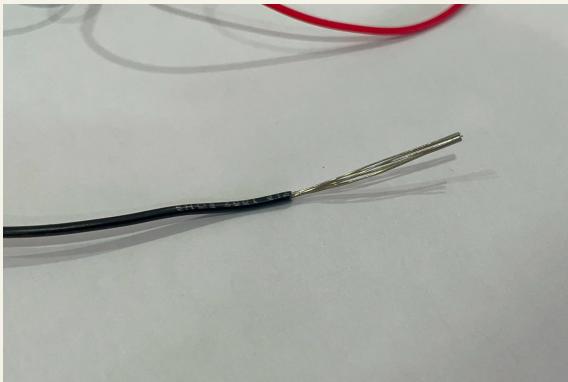


9V Battery Snap



Foil

TECHNOLOGY



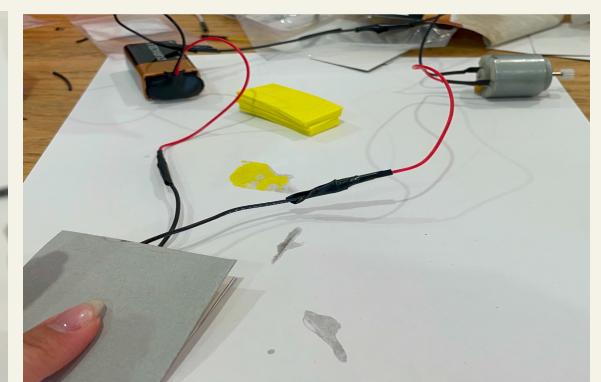
Strip off the surrounding rubber

Pull off the rubber ONLY

Make the other wire in the same way to connect

Twist the stripped wires

Cover the stripped wire part with the electrical tape



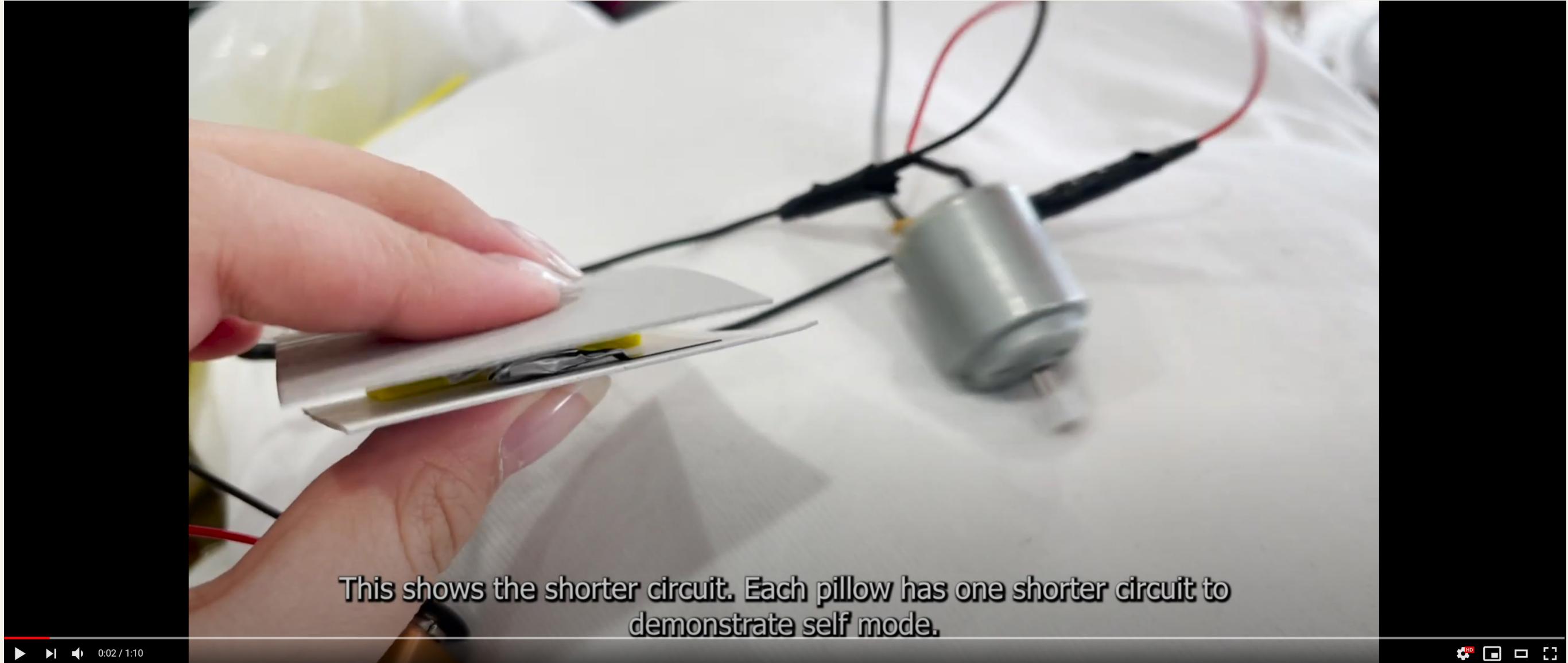
On the two end point of wire cover with the foil

Paste the cardboard on foil covered wires

Add thick foam to have distance between the two side

Paste the two side to make switch

Tape to make the motor work



This shows the shorter circuit. Each pillow has one shorter circuit to demonstrate self mode.

▶ ▶ 🔍 0:02 / 1:10

⚙️ 🔍 🔍 🔍

TECH PROTOTYPE VIDEO

LINK: <https://youtu.be/Qjs4epmq8FA>

COLOURS & PATTERNS

COLOURS



PATTERNS

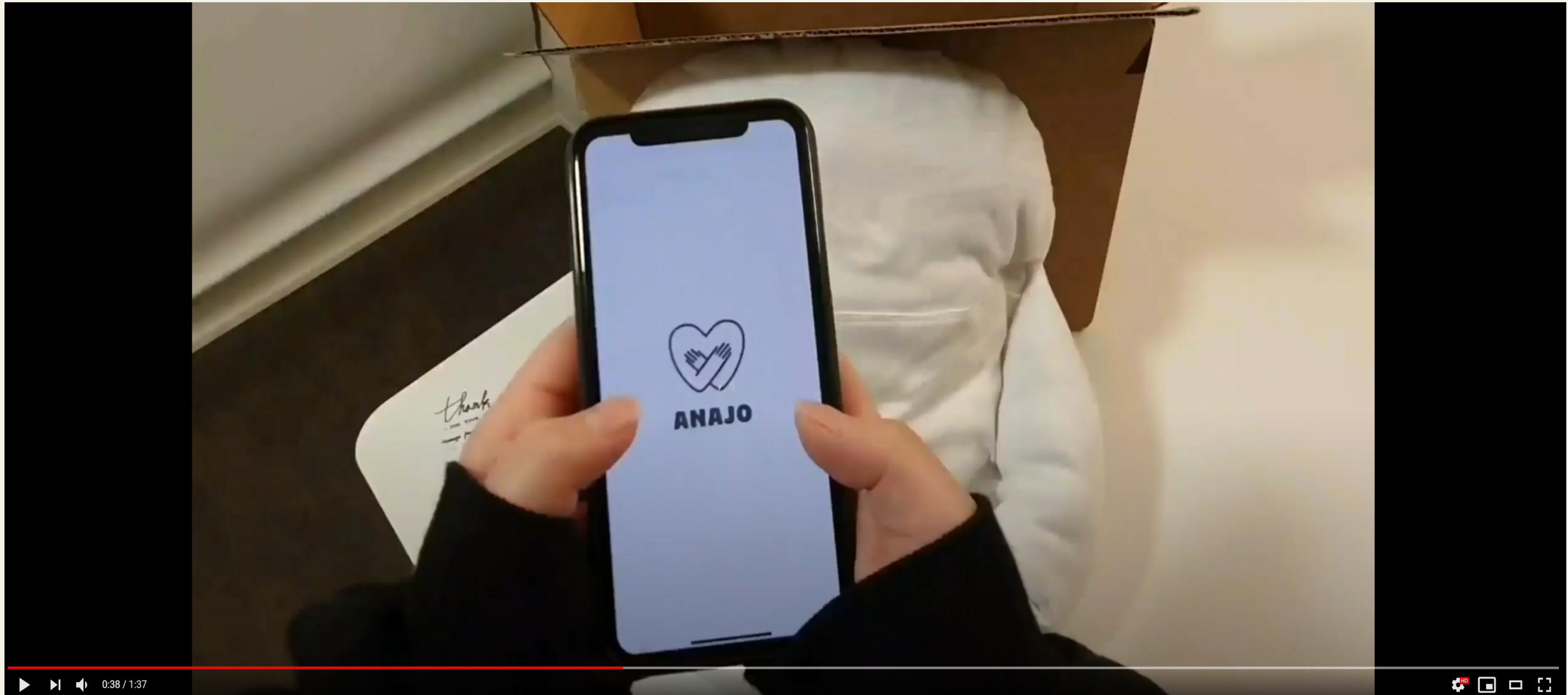


06

BRANDING & MARKETING

ANAJO Marketing Video

ANAJO MARKETING VIDEO



ANAJO MARKETING VIDEO

LINK: <https://youtube.com/playlist?list=PLrvD9EaCDwTjIH6AZYvfcYIiNvheReYdF>

07

MEMBER
CONTRIBUTION

MEMBER CONTRIBUTION

ROLES

ADRIENNE

Storyboard
User manual
Moodboards
Inspo board
Background research
Physical Prototype
Feature Diagram
User Manual
Storyboard
App Prototype

DA IN

Slide Design
Personas
Persona interviews
User journey map
Moodboards
Inspo board
App Prototype
Video
Brand Name Creation

HANWOOL

Slide design
Sketches
Wireframes
Storyboard
Moodboards
Inspo board
Storyboard
App Prototype
Video

DABIN

Construction of physical prototype
Moodboard
Inspo board
Background research
Physical Prototype
Colours & Patterns
App Prototype
Emoji Design

PHYSICAL INTERFACES

THANK YOU!

‘ANAJO’ APP & PHYSICAL PROTOTYPE

INTERACTION DESIGN

Adrienne Cheng, Da In Park, Hanwool Ryu, Dabin Yoon