



iCollar

STAY CLOSER TO YOUR DOG

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01

BACKGROUND

We'll go over our motivation and goals, review the literature, and present existing technologies.

02

DESIGN PROCESS

We'll present on our user research, problem definition, ideation, and prototyping.

03

CONCLUSION

We'll talk about our design implications, how we met our goals, and our future direction.

A photograph of a stack of books. The spines of the books are visible, showing various colors and patterns. In the center, the word "BACKGROUND" is printed in large, white, sans-serif capital letters.

BACKGROUND

A close-up photograph of a dog's face, focusing on its left eye and ear. The dog has brown and black fur. The eye is dark brown with a visible pupil. The ear is partially visible above the eye. The background is blurred.

OUR MOTIVATION

As pet owners ourselves, we know how frustrating it can be to leave your dog at home. Our goal is to design a solution, not only to assure dog owners that their dog is doing okay when left unattended, but also to allow owners to actively impact the behavior and emotions of their dog.

Our problem space transitioned from finding a method to remotely train dogs to figuring out how to address the needs of users who wish to both remain updated on their dog's behaviors and emotions, as well as interact with their dog.

LITERATURE REVIEW

Symptoms of separation anxiety in dogs include oscillation between manic (barking/destructiveness) and depressive (subdued actions- usually sleeping) states (Schwartz 2003), as well as drooling and attempts at escape (Horwitz 2000).

Treatment options for separation anxiety in dogs include Clomicalm/Fluoxetine drug treatment (Horwitz 2000; Simpson et al 2007), and providing distractions and chew toys (ASPCA).

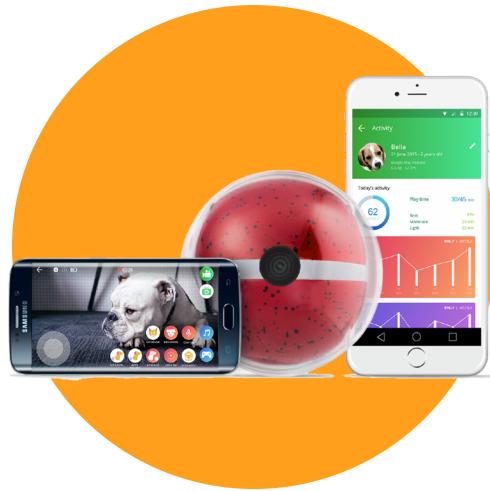


EXISTING TECHNOLOGIES



PLAYDATE

Remote-controlled ball that allows owners to watch and play with their pet from afar



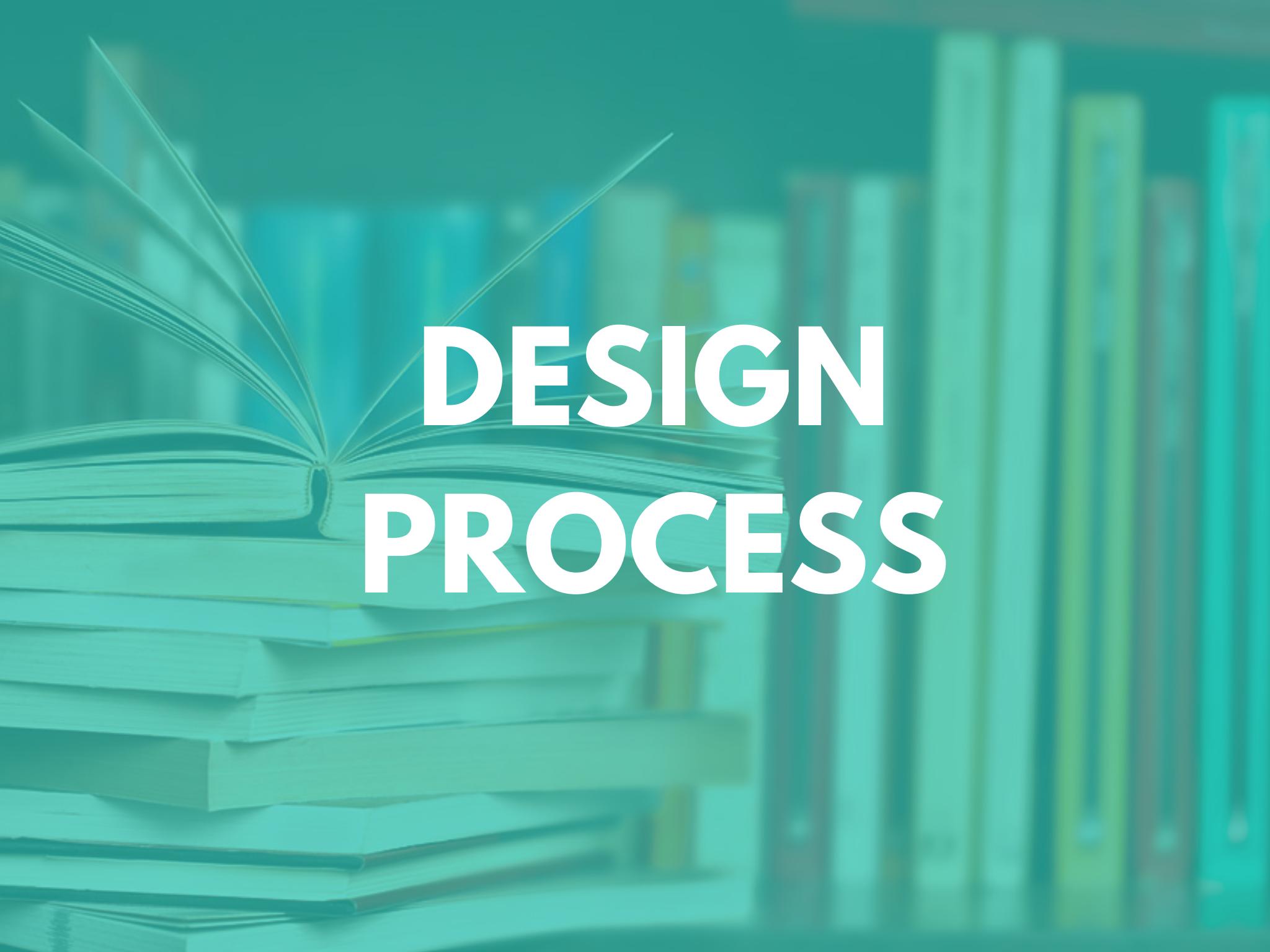
PEBBY

Motion-sensing collar and remote-controlled ball that allows owners to monitor their pet's activity and interact with them



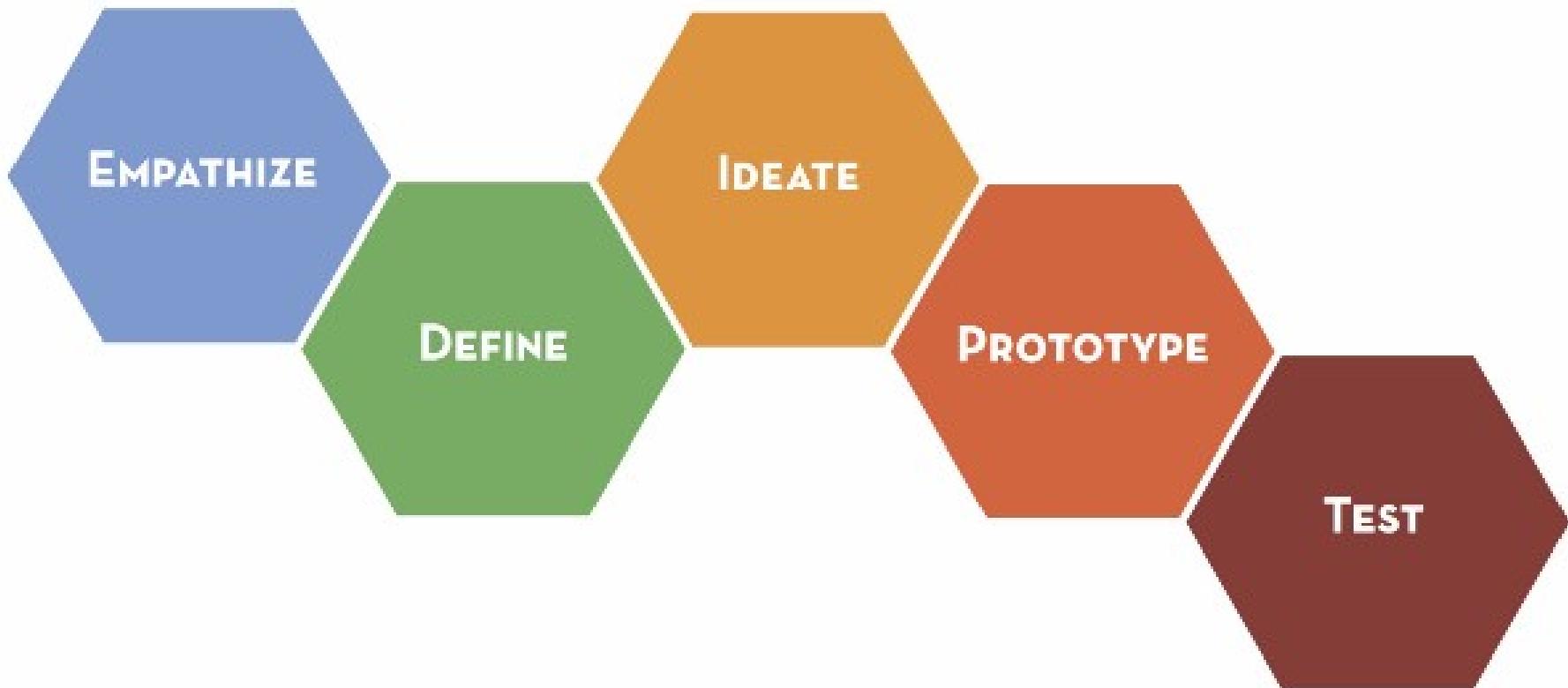
FURBO

Camera and treat-dispenser that allow users to see their pet and give them treats

The background of the image is a soft-focus photograph of a stack of books. One book is prominently open in the foreground, revealing its white pages. The spines of the books in the background are visible, creating a vertical pattern of colors ranging from light blue to dark teal.

DESIGN PROCESS

OUR DESIGN PROCESS



1. EMPATHIZE

with our users

1. EMPATHIZE

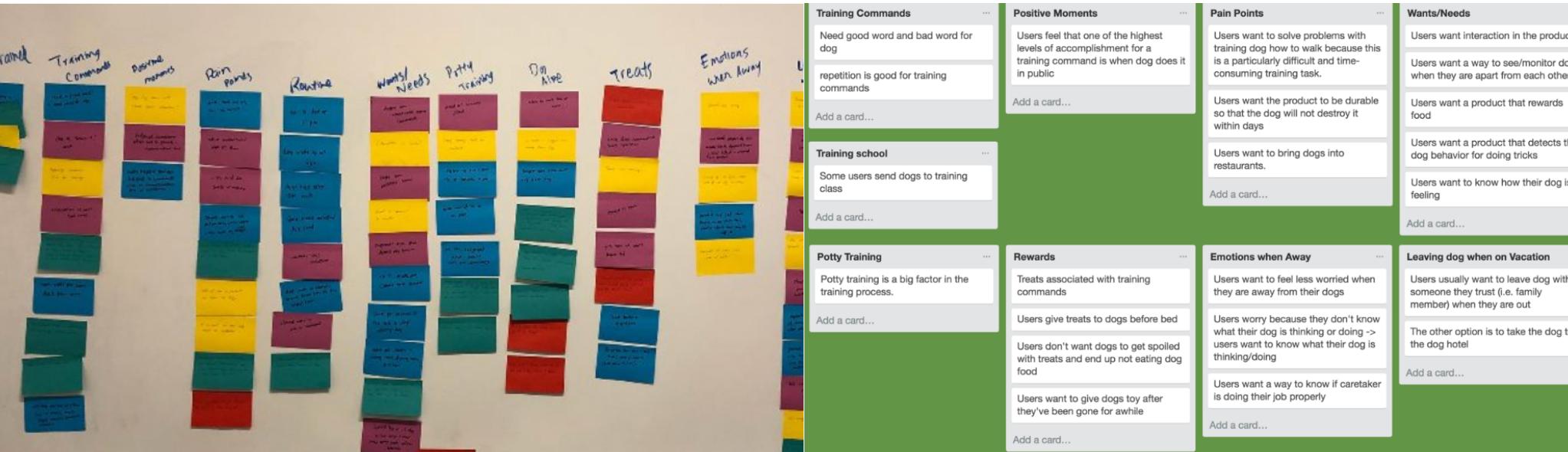


"How do you feel when you're away from your dog?"

Our goal of this preliminary user research was to discover user needs regarding training process and long-distance contact.

We conducted six contextual interviews in total, and asked each user eleven questions.

1. EMPATHIZE



We each picked out data points from our individual interviews, then combined all of our data points, and organized them into categories.

We then combined repeating data points, and summarized our interviews through a more concise affinity map

A woman with blonde hair is sitting at a desk, looking down thoughtfully with her hand to her chin. The desk is covered with numerous orange sticky notes, some of which have small icons like a lightbulb or a gear on them. In the background, there's a computer monitor showing a dashboard with various graphs and charts, a keyboard, and a cup holding several pencils.

2. DEFINE

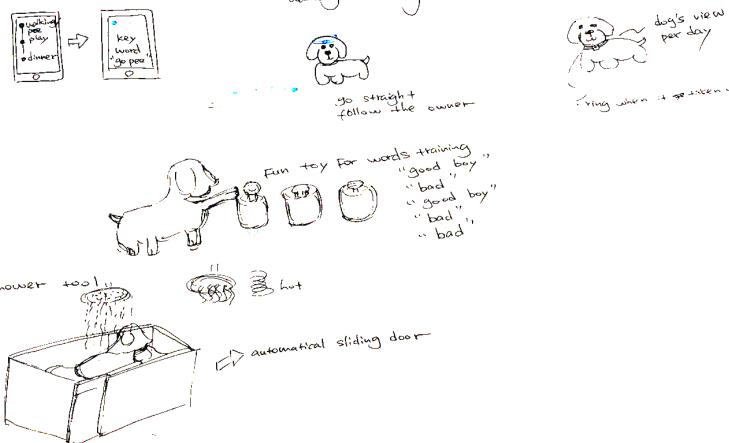
our problem

PEOPLE PROBLEM

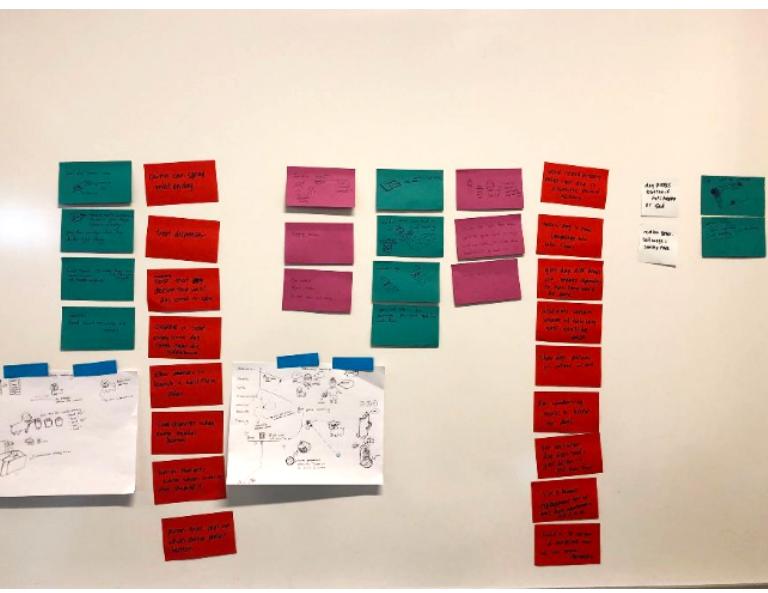
WHEN PET OWNERS ARE AWAY FROM THEIR DOGS, THEY WANT TO ASSESS THE DOG'S SITUATION AND ACTIVELY INTERACT WITH THEIR DOG, SO THEY CAN FEEL LESS WORRIED.

3. IDEATE SOLUTIONS

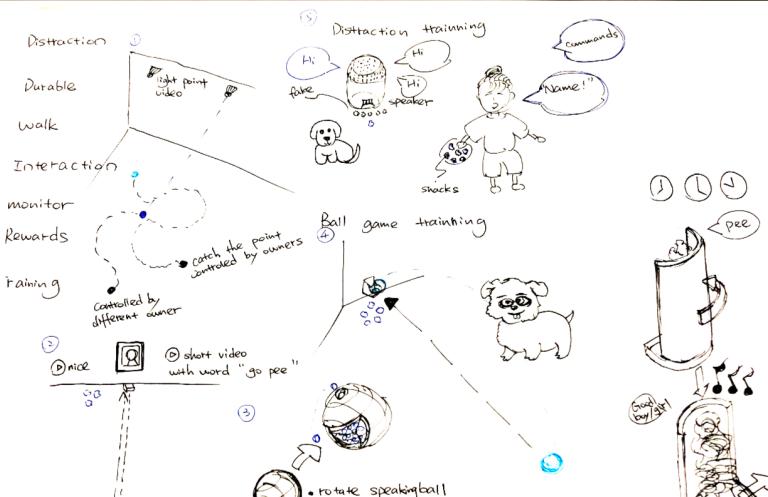




HOW MIGHT WE MONITOR OUR DOGS?



HOW MIGHT WE COMMUNICATE OUR INTENTIONS TO DOGS?



HOW MIGHT WE LET OWNERS INFLUENCE DOG'S EMOTIONS OR BEHAVIORS?

PARTICIPATORY DESIGN



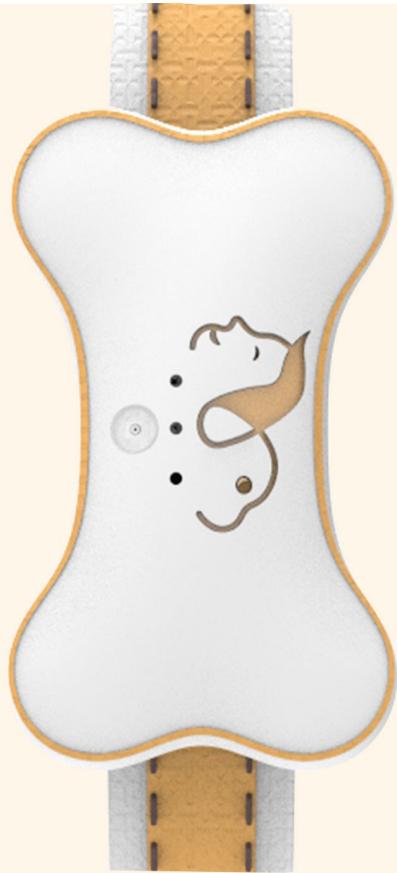
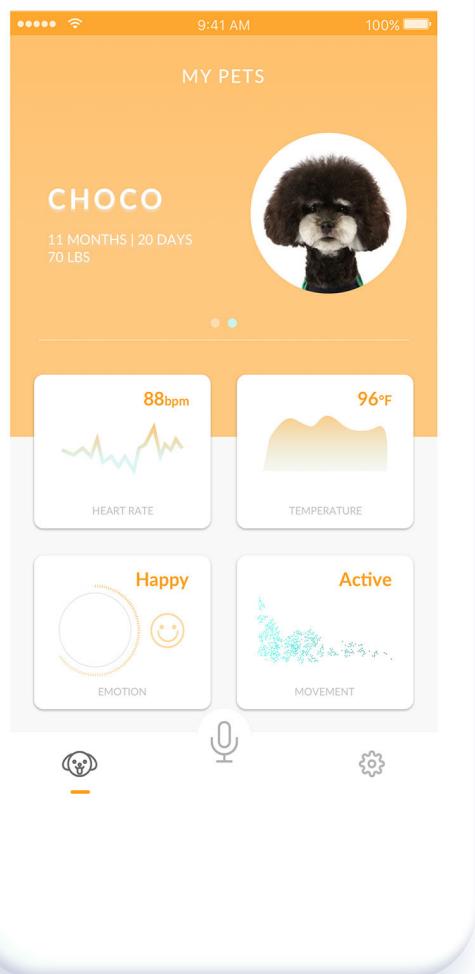
Users are especially interested in alleviating negative emotions that their pets experience.

We discovered that users are not only interested in assessing their pets' behaviors, but also in taking action in the case of any negative emotions.

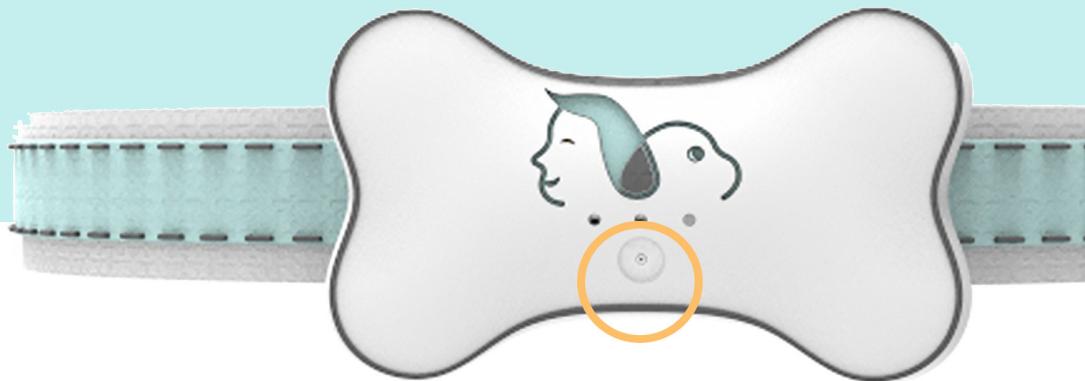
We also found out that users feel that the best way to calm their dog down is either through scent or via the owner's own voice.

4. PROTOTYPE

DESIGN



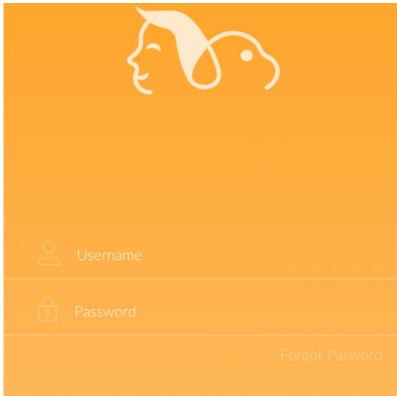
nozzle



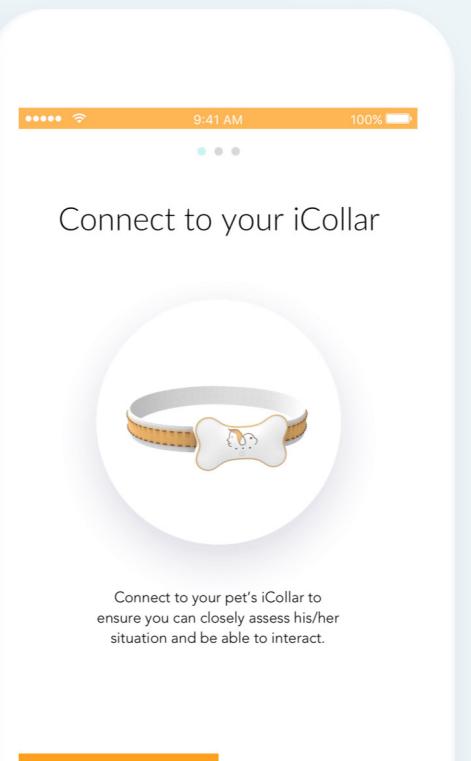
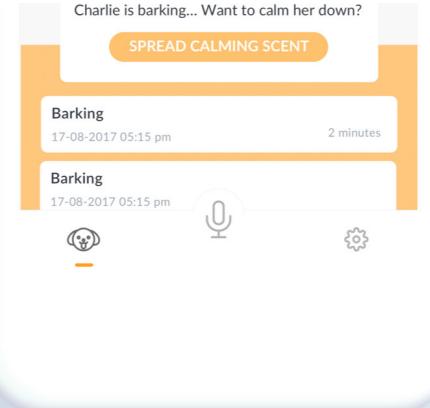
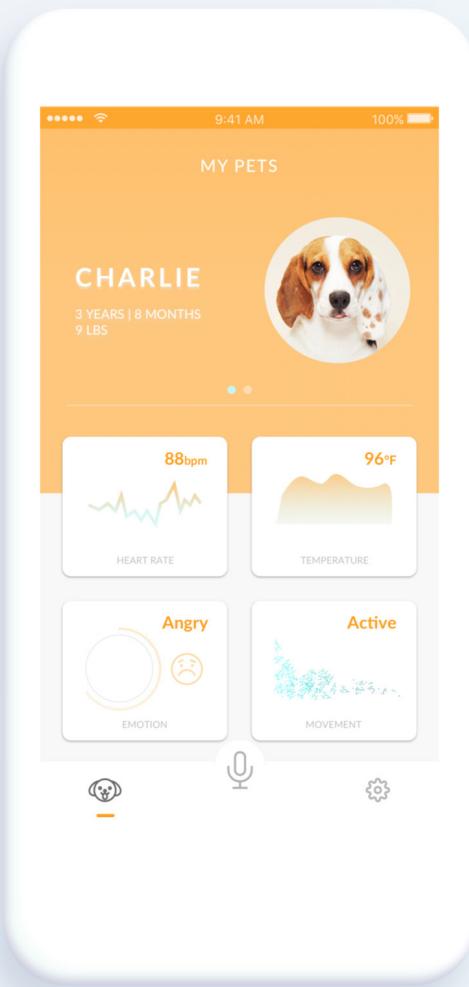
speaker

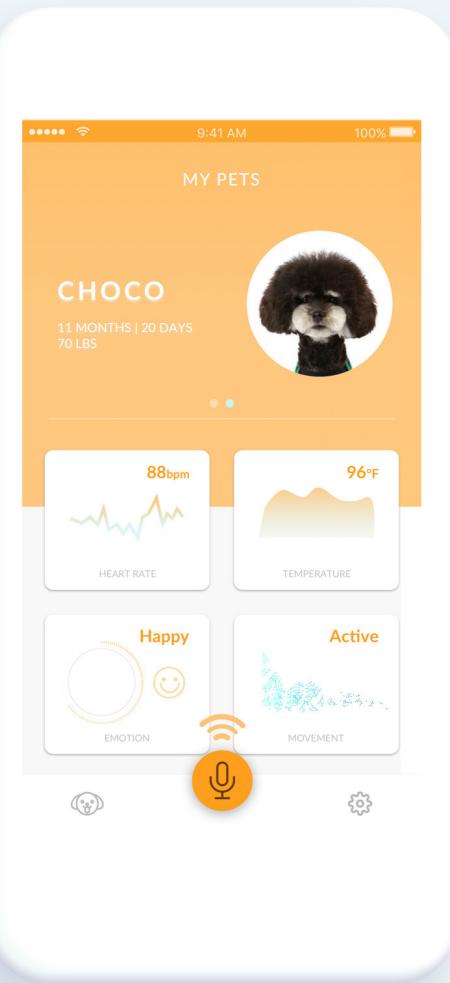


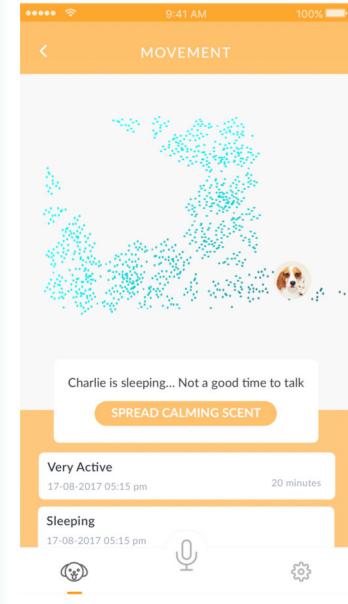
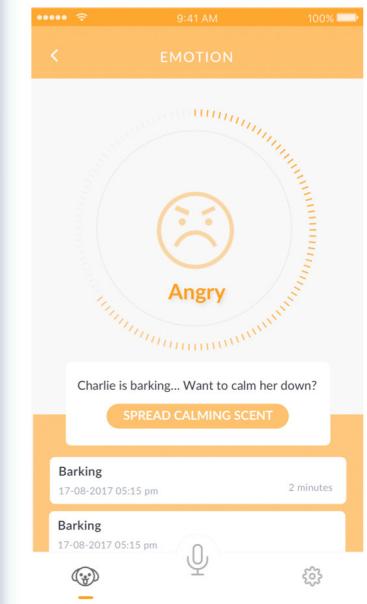
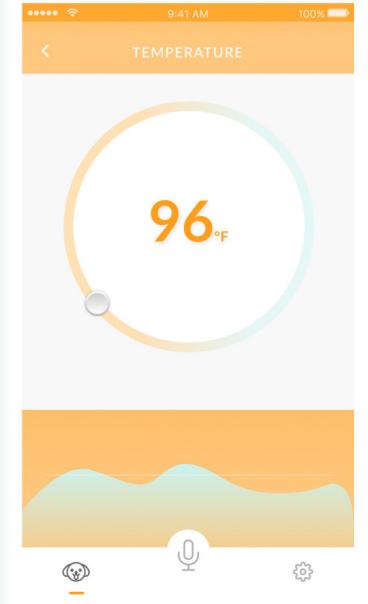
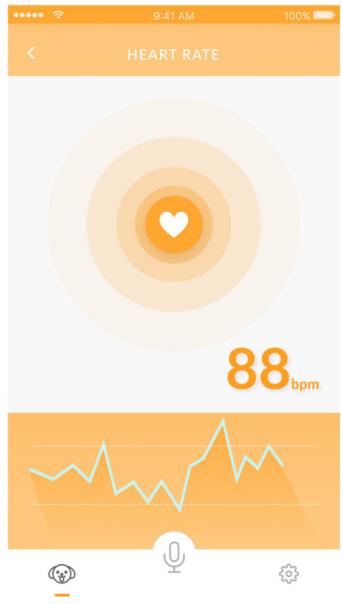
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CONCLUSION



IMPLICATIONS

Our goal was to design a solution, not only to assure dog owners that their dog is doing okay when left unattended, but also to allow owners to actively impact the behavior of their dog.

The temperature, heart rate, and movement map features of our product address the issue of behavior assessment, while our microphone and scent features address the issue of long-distance interaction.

FUTURE DIRECTION

We would like to think that our project has contributed to the HCI field by designing for a unique problem space within the pet-owner community.

We have developed technology for human-pet interaction and wearable computation, setting the precedent for the methodology to be used in these areas.



THANK YOU

for listening!



I-COLLAR