



CASE STUDY: PETGUARD

MY ROLE

User Research
User Interviews
Journey Mapping
Sketching
Wireframing
Screen Flows
Visual Design

PLATFORMS

Mobile app
Smart Collar

YEAR

2018

TEAM

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User Survey
User Interview
Brainstorming
Competitive Analysis

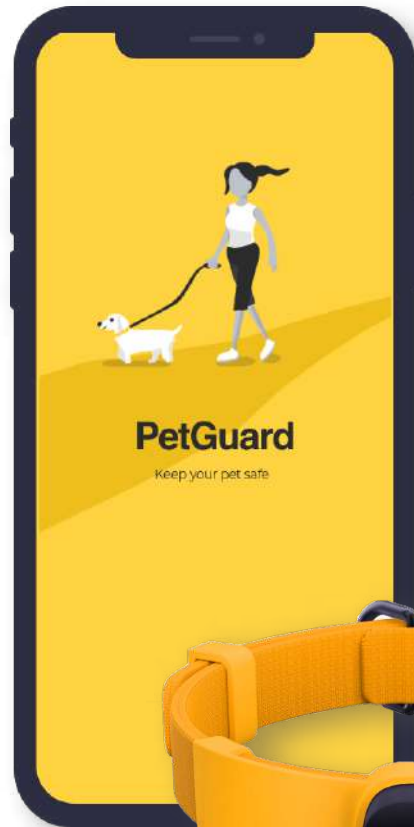
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PetGuard

Keep Your Pet Safe



Will your pet be safe if a natural disaster strikes or in case of emergency?

Many people think of pets as family members and worry when pets are alone at home in the event of an emergency or a natural disaster. About **40,000 pets** die in residential fires each year, most from smoke inhalation, and **500,000 pets** are affected overall. How to save pets in the emergency when you are away from the house? If your home is on fire and you can not go home soon, how should you get your pet?

62%

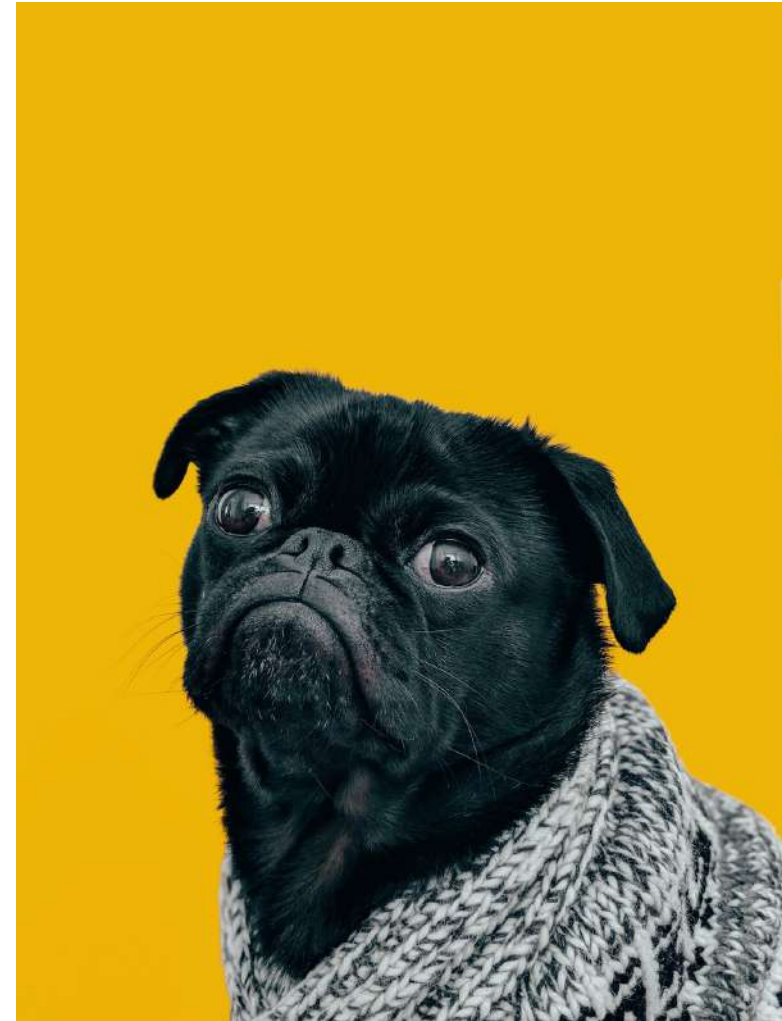
of Americans
have pets

90%

Consider their pets
members of their family

40,000 pets

Die in residential fires each year,
mostly from smoke inhalation, and
500,000 pets are affected overall





PETGUARD – DISCOVERY

Target Audiences
User Interview
User Survey
Affinity Map
Competitive Analysis



Primary Target

Pet Owners



Secondary Target

Pet walkers(Sitters), Other PetGuard Users

If disaster happened nearby your area, would you willing to help?

| | |
|-------|-------|
| Yes | 78.9% |
| No | 0% |
| Maybe | 21.1% |

How important is your pet to your life?

| |
|-------------------------------|
| Important |
| Very important |
| Important as others in family |

Are you willing to risk yourself to save your pet in a disaster situation?

| | |
|-------------------------------|-----|
| Willing to take the high risk | 90% |
| Can take a minor risk | 10% |
| Won't take any risk yourself | 0% |

Have you ever worried that your pet would be dangerous?

- Yes, Usually my dog stays at home alone, I always worry about him.
- If there is some hazard that's enough open to them In my absence, I would be worried
- Yes when we lock her in the house

Are you interested in learning how to deal with pet emergency situations?

- Yes, wants to learn how to prepare for an emergency for dogs.
- I would like to learn more about it.

What is the biggest disaster that can happen when a pet is at home?

| | |
|---------------|-----|
| a. Gas leak | 30% |
| b. Fire | 40% |
| c. Lost | |
| d. Earthquake | |
| e. Everything | 30% |

Key Findings through survey and interviews

- **Emergency**
- **Contact List**
- **Pet's Health Status**
- **Safety**

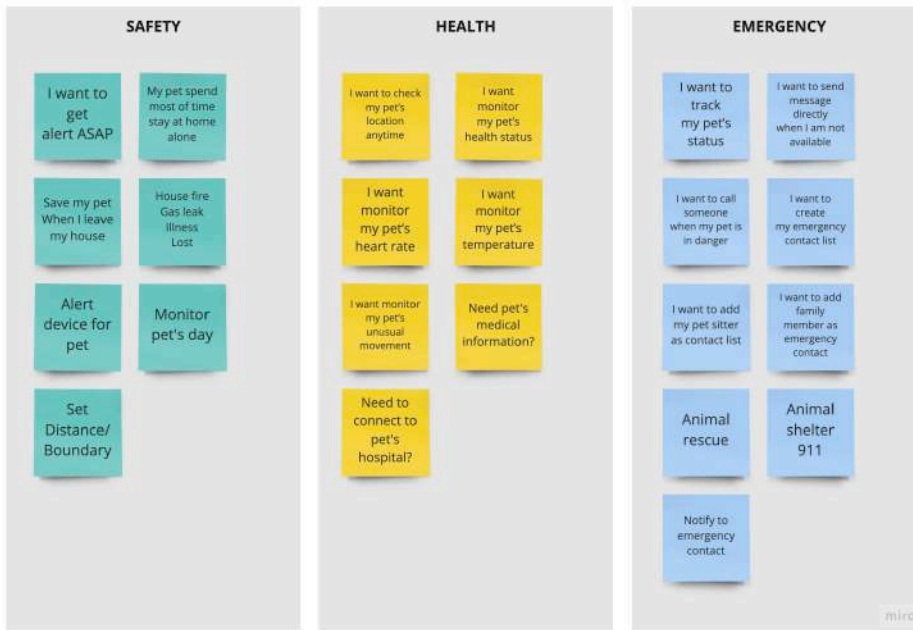
Interview method

- Google form survey
- In-person interview

*Google form <https://forms.gle/A6KyFAKkfjGPrL5A6>
In-person Interview with petowners




| How important is your pet to your life | Where does your pet spend a lot of time? | If pet is at risk in a disaster situation | where to ask for help when pet is in danger? | What is the biggest disaster can happen to pets? |
|--|--|---|--|--|
| Important | Home | I can take a high risk of saving the dog. | No, not specifically, maybe animal rescue? | Fire, Illness, Lost |
| Very Important | Home | I would make as many efforts I can. | No. But I would like to learn more about it. | Gas Leak |
| She's our family member very important | Home | I can take a high risk of saving the dog. | No | Everything |
| Important | Home | I can take a high risk of saving the dog. | No, not specifically, maybe animal rescue? | Fire |

In-person interview (4 Responses)



* Affinity mapping method in team meeting

Based upon data from in-person interviews, surveys, I organized my observations and categorized them using an affinity map. They think their pets as a family member and willing to take a risk to save their pets in case of emergency, also not only their pets but also would like to save the neighbor's pet. Pet owners worry about their pet threaten by house fire or gas leak. According to information, We can narrow down features that need most.

| Brand |  |  American Red Cross |  |
|---------------|--|---|--|
| About | <p>Launched in February 2003, Ready is a National public service campaign designed to educate and empower the American people to prepare for, respond to and mitigate emergencies, including natural and man-made disasters. The goal of the campaign is to promote preparedness through public involvement.</p> <p>www.ready.gov</p> | <p>Pet First aid app puts veterinary advice for everyday emergencies in the palm of your hand. Users get the app and could be prepared to act when called up on. With videos, interviews quizzes and simple step-by-step advice it's never been easier to know Pet First Aid.</p> <p>www.redcross.org</p> | <p>The smarter way to keep tabs on your pet's location and activity levels when they're living it up, at home, in the park or on the run.</p> <p>www.whistle.com</p> |
| Features | <ul style="list-style-type: none"> - They help you be informed through tools on their website - Make prior plans for pets and find shelter for them - Provides Tips to build Pet kits by downloading a PDF for your pet in disaster situation | <ul style="list-style-type: none"> - Convenient toggle between cat and dog content - Simple step-by-step instruction guide - Everyday emergencies check - Prepare and protect your pet's health with advice on - Administering medication | <ul style="list-style-type: none"> - Location Alerts : Get email, app or text notifications - Custom Safe Places - Set multiple Places using Wi-Fi - Track your dog's daily activity and rest - Set custom goals and receive notifications if there are significant changes to their activity or sleep patterns |
| Pros | <p>They have direct links to Shelter homes for Pets www.gopetfriendly.com</p> <p>They provide good tips for all pet types and also Kit building pdf's</p> | <p>Very categorical regarding pet's disease this could be useful with very basic concerns or questions related to my pet's health</p> | <p>Fast geolocation</p> <p>Customizable safe zones and profiles</p> <p>Activity monitoring</p> <p>Long battery life</p> |
| Cons | <p>Limited help for pets</p> <p>More focused on human evacuation</p> <p>No app for pet rescue</p> <p>No video, just a descriptive kit manual</p> | <p>It is not for disaster</p> <p>There are just information, not communication</p> | <p>Wi-fi connection is must to activate tracker.</p> <p>Works only with AT&T network</p> <p>Power save mode doesn't work within safe-zones</p> |
| Usability | ★ ★ ★ ☆ ☆ | ★ ★ ★ ★ ☆ | ★ ★ ★ ★ ☆ |
| Functionality | ★ ★ ☆ ☆ ☆ | ★ ★ ★ ★ ☆ | ★ ★ ★ ★ ☆ |
| Simplicity | ★ ★ ★ ★ ☆ | ★ ★ ★ ☆ ☆ | ★ ★ ★ ★ ☆ |
| Accessibility | ★ ★ ☆ ☆ ☆ | ★ ★ ☆ ☆ ☆ | ★ ★ ★ ★ ☆ |
| Fun to use | ★ ★ ☆ ☆ ☆ | ★ ☆ ☆ ☆ ☆ | ★ ★ ★ ★ ☆ |



PETGUARD – DEFINE

Persona A

Persona B

Mind Map

Key Findings

User Journey Map

User Scenario

SWOT

Solutions

Features – App

Features – Smart Collar

How it works



Maria Batson

City: SF

Age: 27

Occupation:

Product
manager

Status: Single

About

Maria lives in SF by herself. She is a product manager and because of her work schedule and work pressure she doesn't stay at home much. She works late and usually gets home by 10 p.m but due to the project deadline she has to be at work even are late. She has a dog named Jack. The dog she owns is a two year old corgi. She doesn't spend too much time home seeing her dog. Maria lives near mid-Market in a one bedroom apartment. There had been a fire in her neighbourhood and she is now scared of her dog being involved in such a emergency even when she has a part time dog sitter.

Goal

- To observe her pet in real time whenever she wants or in emergency situation
- Track Jack's health condition

Frustration

- She does not sure that Jack has enough exercise
- She is too busy to take care of her dog well nowadays



Jacob Davis

City: SF

Age: 25

Occupation:

Architecture student

Status: Single

About

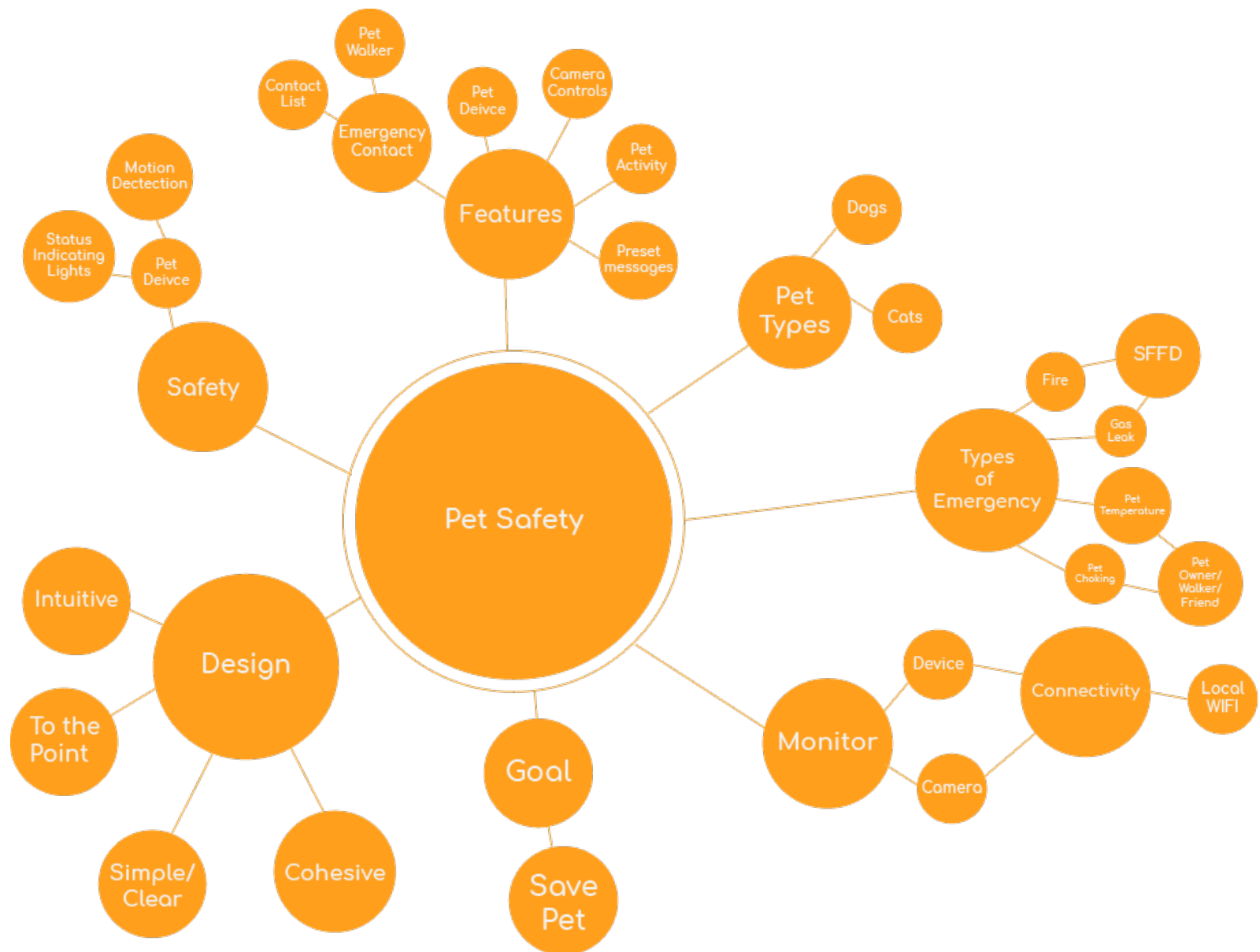
Jacob studies architecture design in San Francisco and also works as an intern. He has a dog and loves to spend time with him. Jacob and Bobby have been together for 10 years. Jacob has very less time on weekdays to spend with his pet as he has college and works both to attend. He uses Petguard app for a few months and keeps track of his dog bobby through it. He gets home usually by 9.00 pm and makes sure he plays with his dog before he goes to bed. He has to leave for work early in the morning.

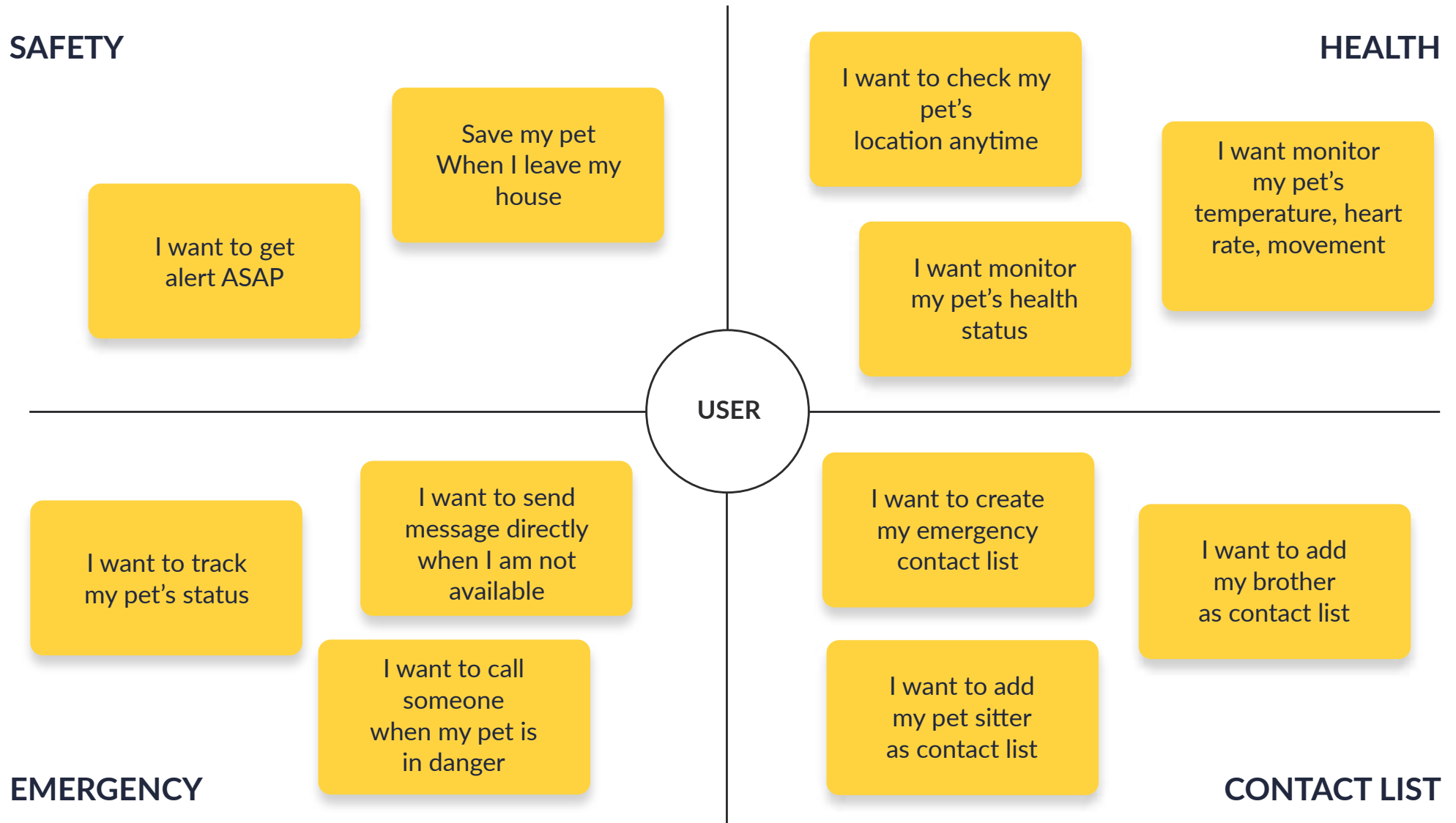
Goal













- To keep Bobby safe in any kind of danger situation
- Ask for help if he can't reach bobby in time

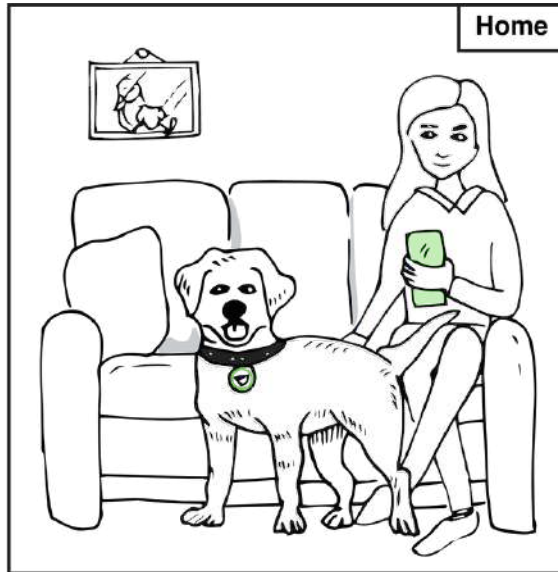
Frustration

- Bobby is old and can't run very fast for escape
- His busy schedule during weekdays





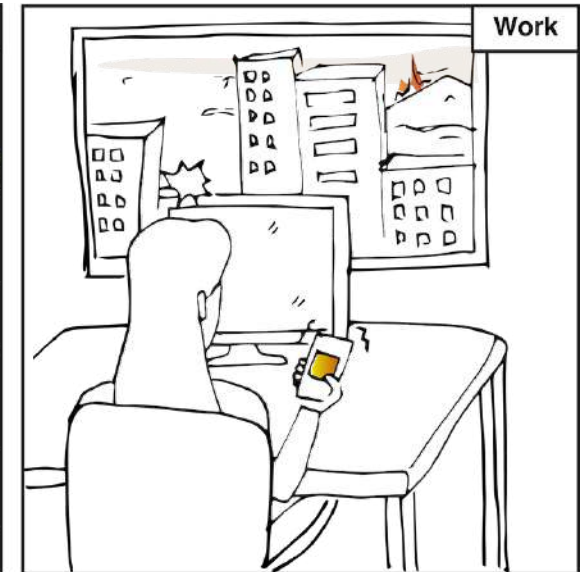
| STAGE | | AWARENESS | DISCOVERY | EXPERIENCE | | | | FOLLOW UP |
|-------------|-----------|---|--|---|---|---|---|---|
| ACTIVITIES | Pet Owner | Seeing the news that a pet died because of a house fire | Hear from friends, see online Ads | Pet owner watches indoor camera to monitor his dog. He is busy all day, he couldn't watch a camera. After work he come home, found his dog is sick. He bring him to hospital if he arrives little late, his dog will be die. Pet owner frustrate and feel guilty. | | | | - Send a request to rescue the pet - Send an invitation to contact |
| | Pet | No Activities at this point | No Activities at this point | Stays at home all day. At noon, pet walker stop by to take a dog for a walk. Fell down from table and break a leg. Feels scary and painful. | | | | - Send alert when emergency |
| TOUCHPOINTS | Pet Owner | Word of mouth, social media | Social media, online/ offline store | Mobile app Camera Smart collar | Mobile app Camera Smart collar | Mobile app SMS Phone call | GPS Camera | Mobile app Camera Phone call SMS Social media, online/ offline store Word of mouth |
| | Pet | No touchpoints at this time | Smart collar | Danger Detected | Send an alert (by collar) | Hide | Saved | Smart collar detects Health, Safety Real time Everyday |
| FEELINGS | Pet Owner |  Frustrated, Curious |  Interested |  Afraid or Anxious |  Frustrated |  Worried |  Relieved | Pet owner can check their pet's status in real-time, don't need to worried or nervous |
| | Pet |  Happy |  Happy |  Frightened |  Scared/Painful |  Scared/Painful |  Relieved, safe | Smart collar can track pet's condition |
| THOUGHTS | Pet Owner | Pet owner always worry about his pet while he is away from home | Monitoring his pet makes him relief | Get alert from PetGard monitor his pet, he sees high temp in home | want to check and make sure pet is okay | Send message to his pet walker to check on the pet and save him | Hear and watch pet walker save the pet | PetGuard allows monitor my pet and also notified me in case of emergency in real time Relief even away from home |
| | Pet | Stay at home waiting owner all day | — | Feels hot, started nervous | hiding under the table | painful from fire heat | Relieved see pet walker | if something happen, owner can save me |



1. Maria and her dog Jack, they live near mid-Market in an one bedroom apartment.



2. Jack is usually at home alone, and a pet walker stops by to walk around her in the afternoon. One day a fire broke out near the house, and Jack began to bark.



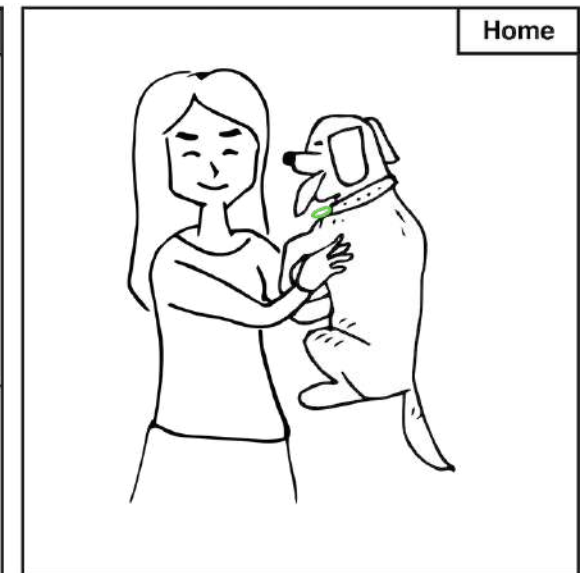
3. Maria receives notifications from PetGuard and checks his status in real time with the petguard app through her home camera.



4. Jack's pet walker Sam is also notified in PetGuard and guide to Jack's location through the app.



5. Sam finds Jack and take him outside safely.



6. Maria can check the Jack from time to time through the PetGuard app so she doesn't have to worry about him anymore.

STRENGTHS

Never miss the Golden time: Device and mobile app work in real time and alert pet owners in case of emergency

Smart IoT device: Work with indoor camera and smart collar

Customized emergency contact list: Let user add their emergency contact list from family and friends

Area Growth: Expand business model with pet industries such as pet hospital, animal rescue organizations

Working with families: Not only for PetGuard users but also works with their families

OPPORTUNITIES

WEAKNESSES

Not work with every indoor camera

Need to get permission from contact before add them as emergency contact

In case of serious emergency, call 911

Competition: Some of competitors sell similar product, smart collar for pet's condition

Safety Issue: Not for professional rescuers, people can injury if in case of serious emergency

Privacy Issue: Multiple cameras work with others can create privacy issues

THREATS

Solutions

1. REAL-TIME

Pet owner can check the pet's condition such as movements, temperature, heart rate and unusual activities via indoor cameras. Even if user don't have a camera, they still can check their status through smart collar.

2. HEALTH & SAFETY

Pet owner gets notification if the smart collar detect unusual activities on their pet. And also send a message or call to someone from contact list, it could be a pet walker or their friends and family member. In situations where the user cannot be reached, the preset message is sent directly to the contact.

3. PET RESCUE COMMUNITY

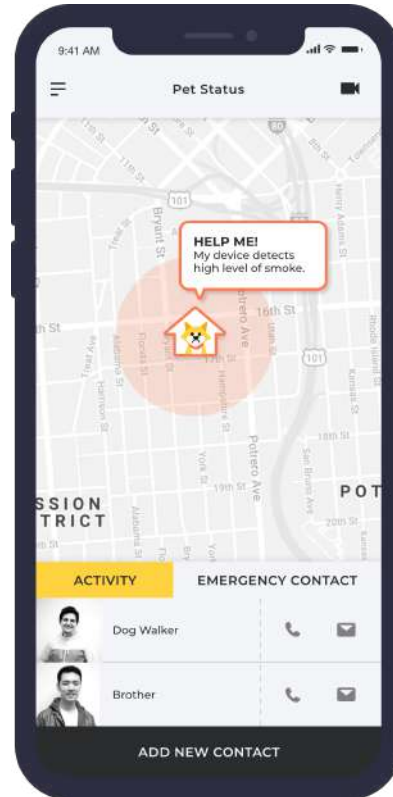
Create new community for pet owners, pet rescue facilities, pet hospitals, family and friends.

NOTIFY



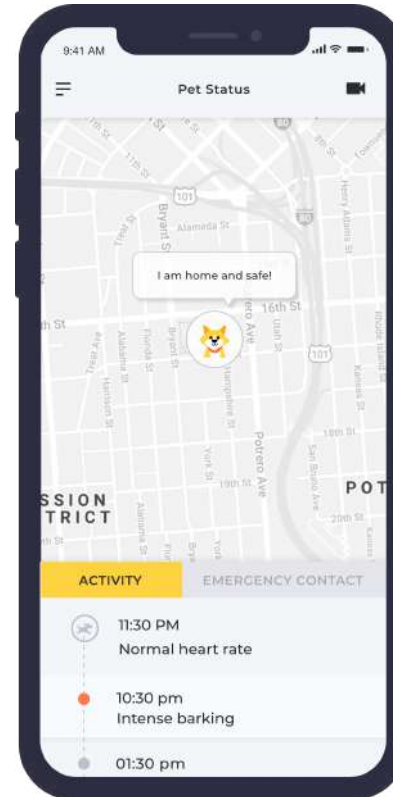
- Pet owner
- Pet sitter
- Favorite contact
- Preset message (send help directly)

EMERGENCY



- Make a phone call
- Send a message

NORMAL



- Movements
- Body temperature
- Heart rate





No Danger ●



Warning ●



Danger ●

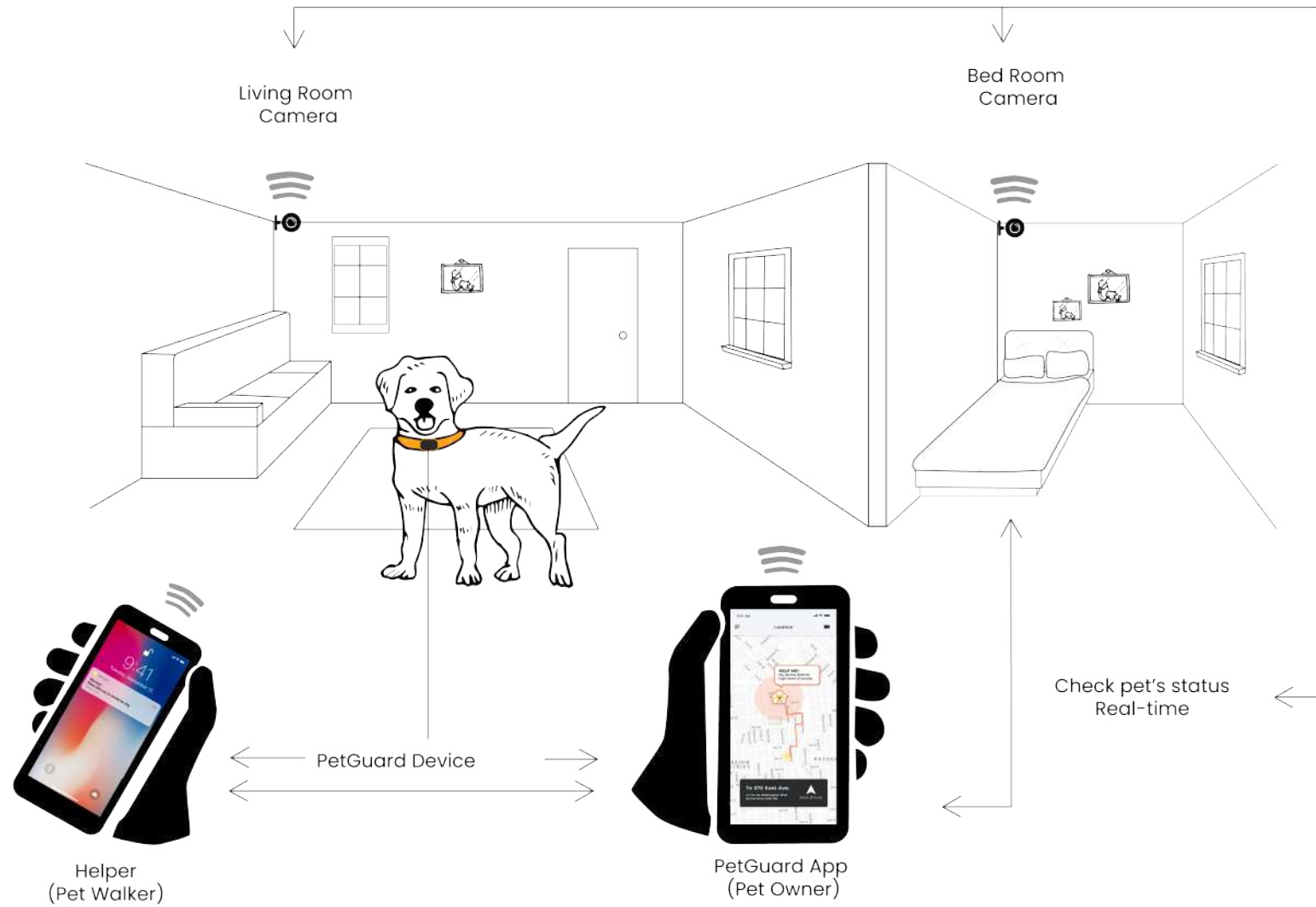
Track and Monitor

- Continuous monitoring pet's status and notify to pet owner or contact list who added by owner

Health: Temperature of pet, Blood pressure, heart rate

Activity level: Steps, Respiration

Safety level: Gas leakage, temperature in home





PETGUARD – DESIGN

Sketches

Sitemap

User Story A

User Flow A

User Story B

User Flow B

Low-Fidelity Wireframe

User Testing

Refine Design

UI Design – Registration

UI Design – Pet Owner

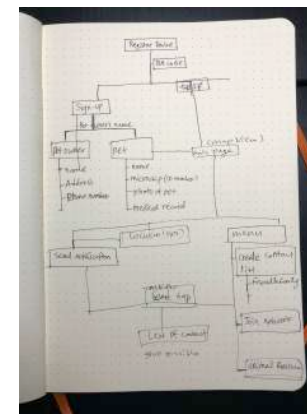
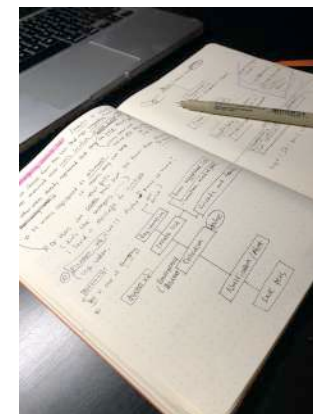
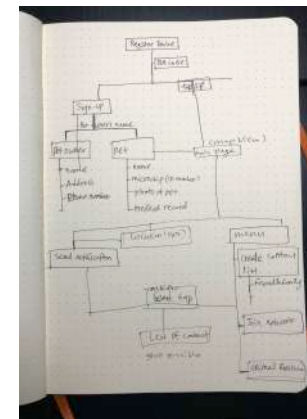
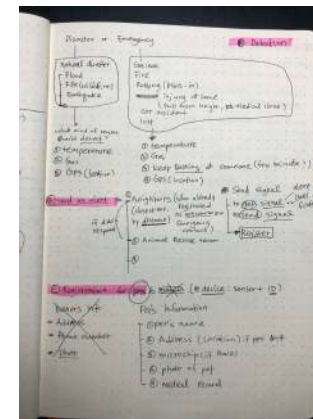
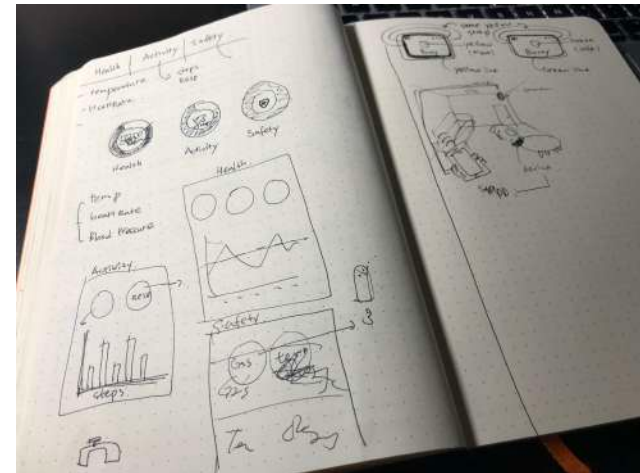
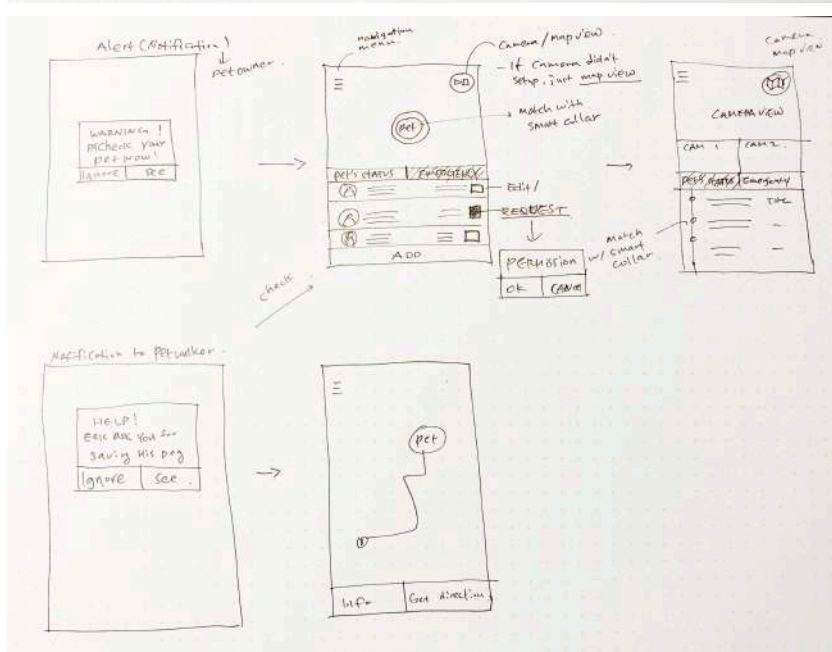
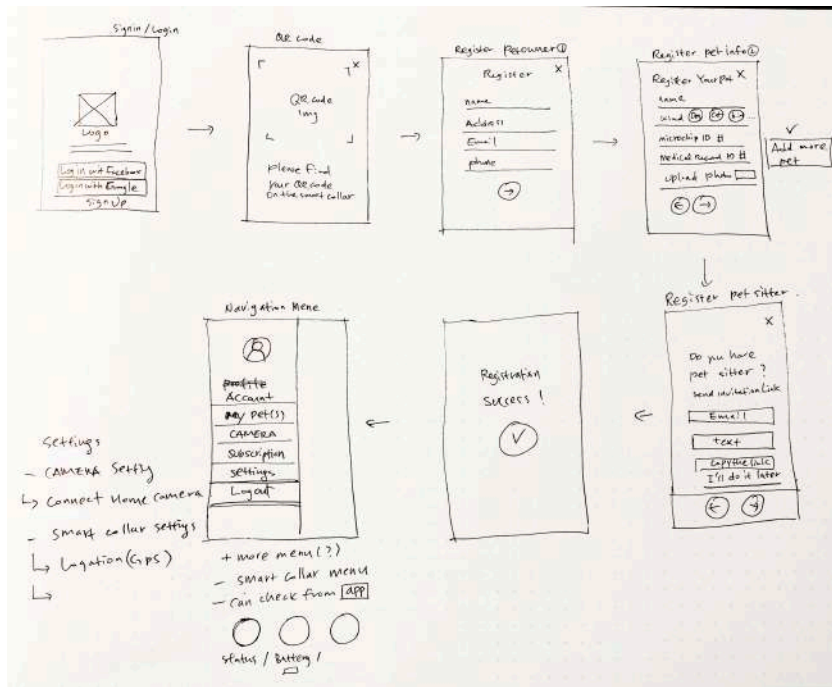
UI Design – Pet Walker

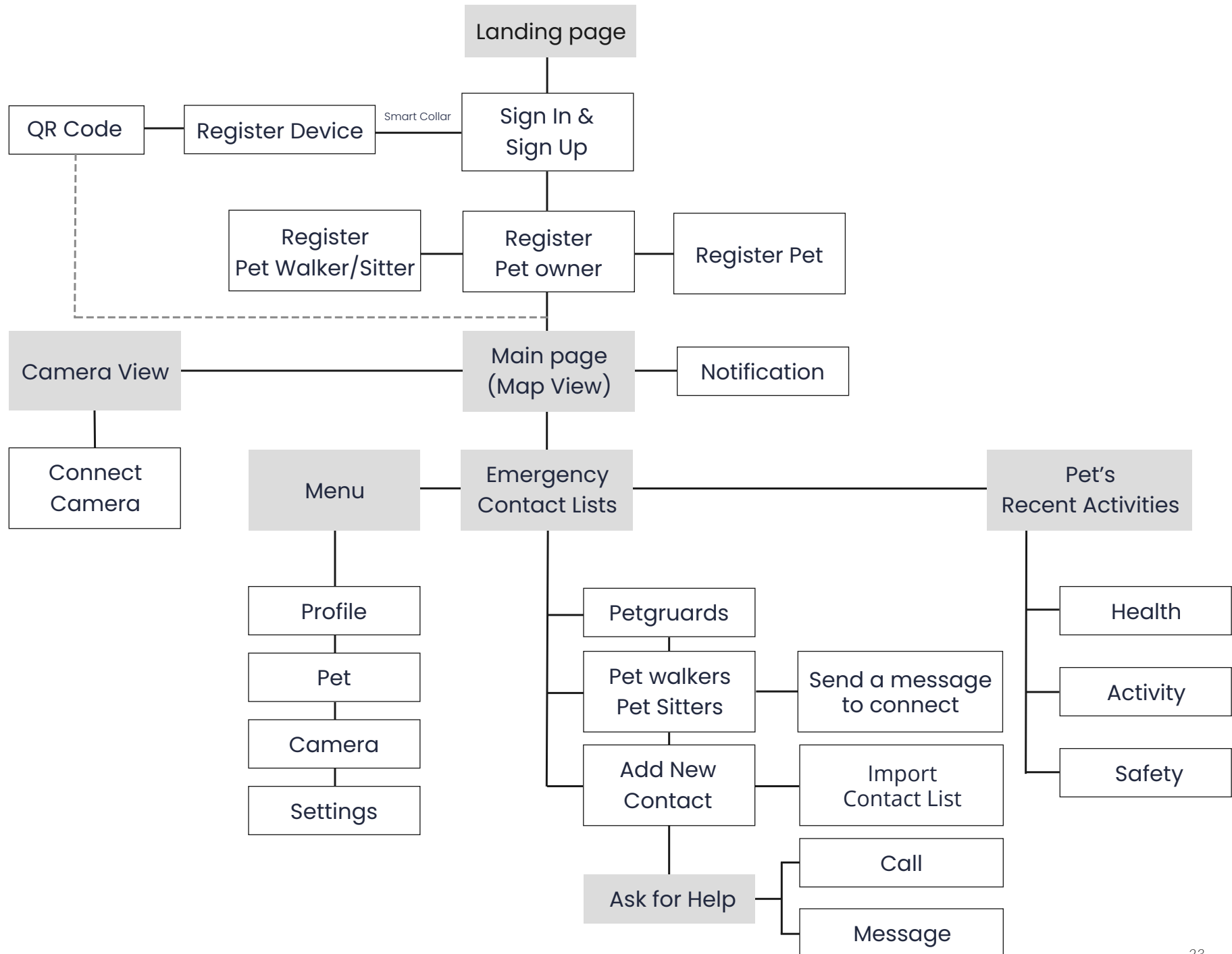
Visual Design – Logo Construction

Visual Design – Logo Usages

Visual Design – Iconset

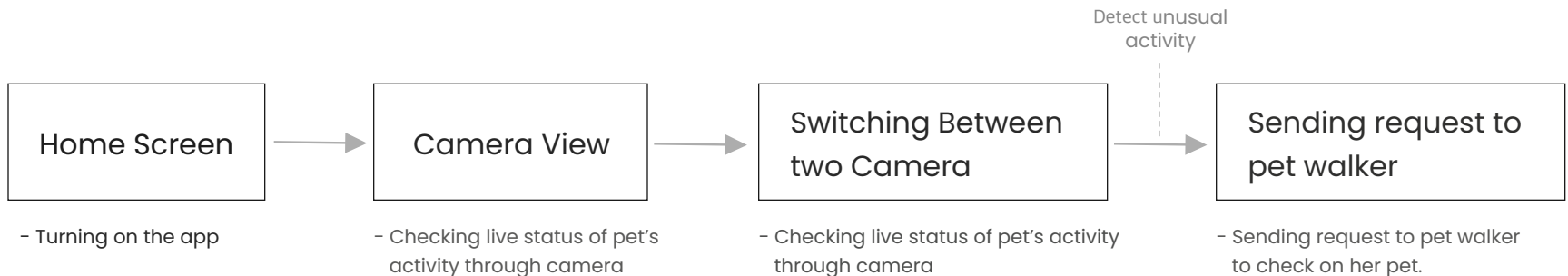
Visual Design – Typography & Color Theme





User story A – Maria (Pet owner) & Jack(Pet)

- **Task :** Checking multiple cameras to monitor pet's activity
- **Result:** Maria can check her pet anytime, anywhere

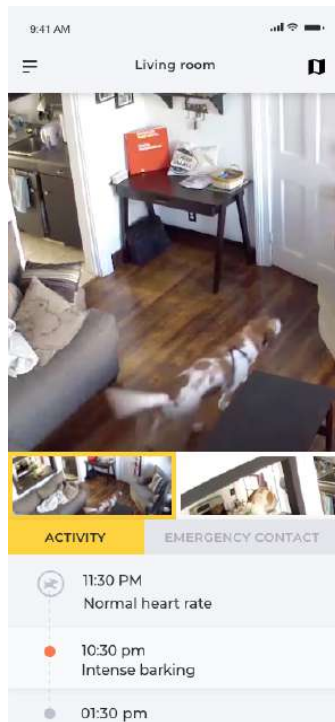


When Maria got the app she also installed two cameras to keep a track on her dog one for the living room and one for the kitchen. She felt the feature where you could give the custom name to cameras was cool. She named her cameras as LIVING RM CAMERA and KITCHEN CAMERA. After that one day she was traveling out with her friends and she wanted to check her dog's activity. She opened the app and she saw the map denoting the camera name because the collar sensor locates the nearest camera to the collar. Then she swiped and saw the pet was playing in the bedroom.

User story A - Maria (Pet owner) & Jack(Pet)

- **Task** : Checking multiple cameras to monitor dog's activity
- **Result**: Maria can check her pet anytime, anywhere

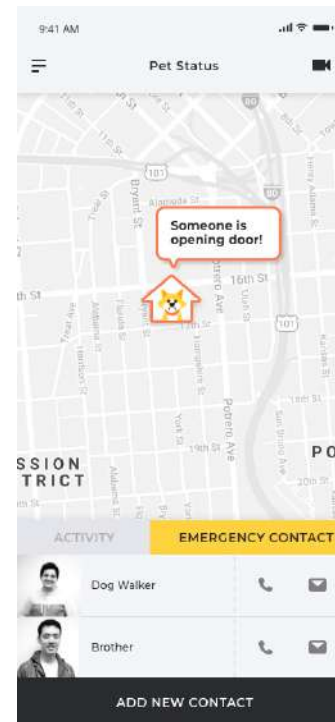
Camera View: Living rm



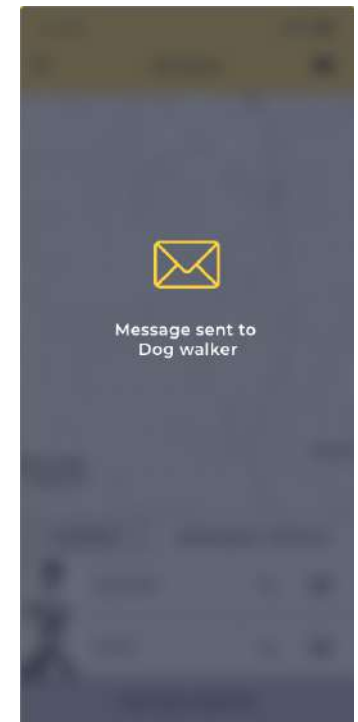
Camera View: Kitchen



Emergency Contact



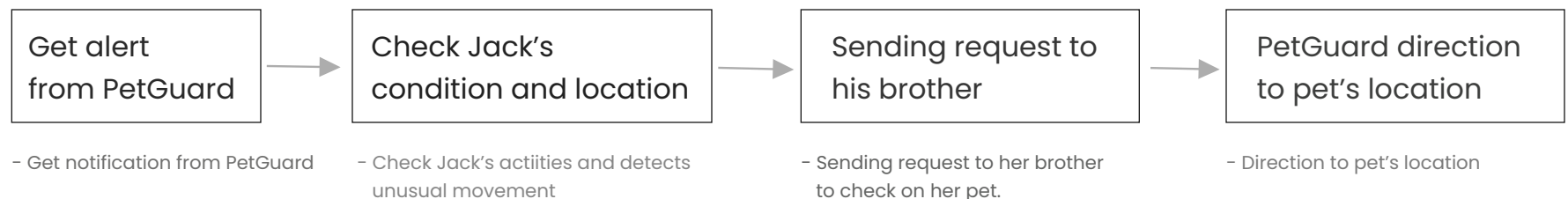
Send message to pet walker



[Link to Prototype : Registration to check pet's status](#)

User story B – Maria (Pet owner) & Bobby (Emergency contact)

- **Task :** Get the alert from the PetGuard and send a message to emergency contact
- **Result:** Save her dog from the danger

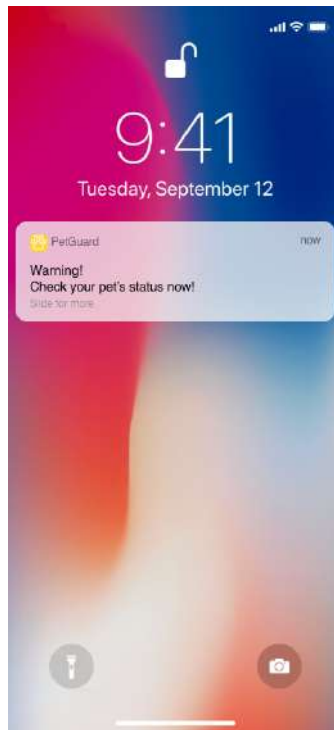


Maria was at work and had a product launch presentation to finish which was due the next day. She was in office but checked on her dog every 1 hour. She was looking at the camera and made sure that Jack was doing okay and kept checking his activity history for his regular updates. At around 2:30 pm she looked at the activity log on the app and noticed Jack was still for quite a while. She ignored and thought that he might be sleeping. After 1 more hour when she checked she didn't notice any movement and checked the camera and was shocked to see that Jack hasn't moved even then. She was a little concerned now and quickly before going to another meeting quick texted her mother from the application with a preset message saying "Please check! Attention needed". As soon as she sent that her brother who lived a few blocks away rushed to Maria's place and checked on jack and noticed he had a bit of temperature rise and took him to the vet.

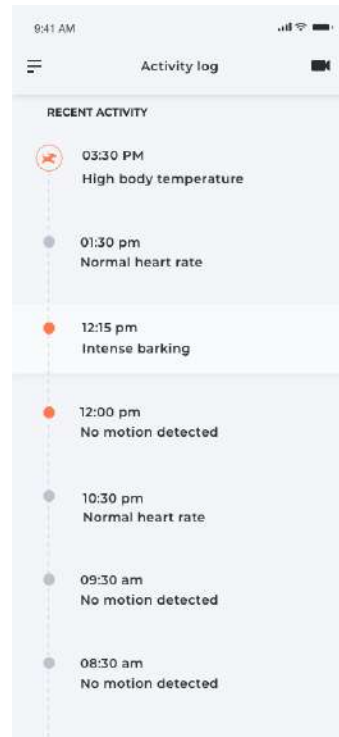
User story B – Maria (Pet owner) & Bobby (Emergency contact)

- **Task** : Get the alert from the PetGuard and send a message to emergency contact
- **Result**: Save her dog from the danger

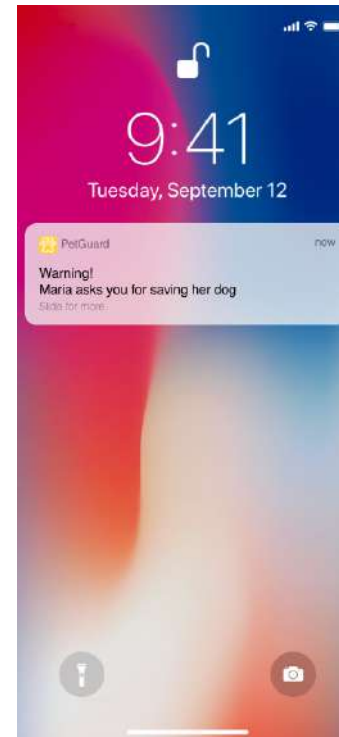
Notify to pet owner



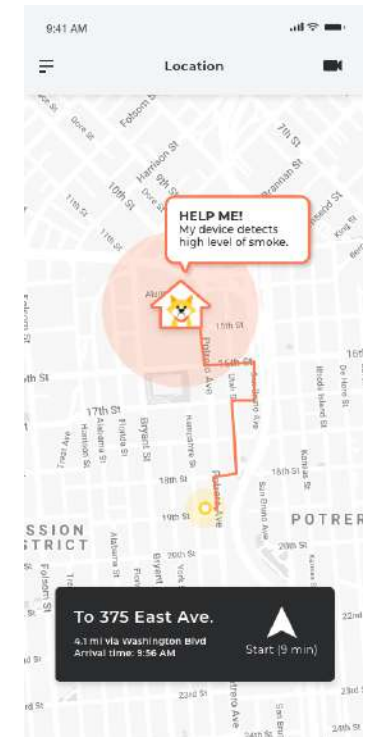
Check pet's activities



Notify to Emergency contact



Direction to pet's location



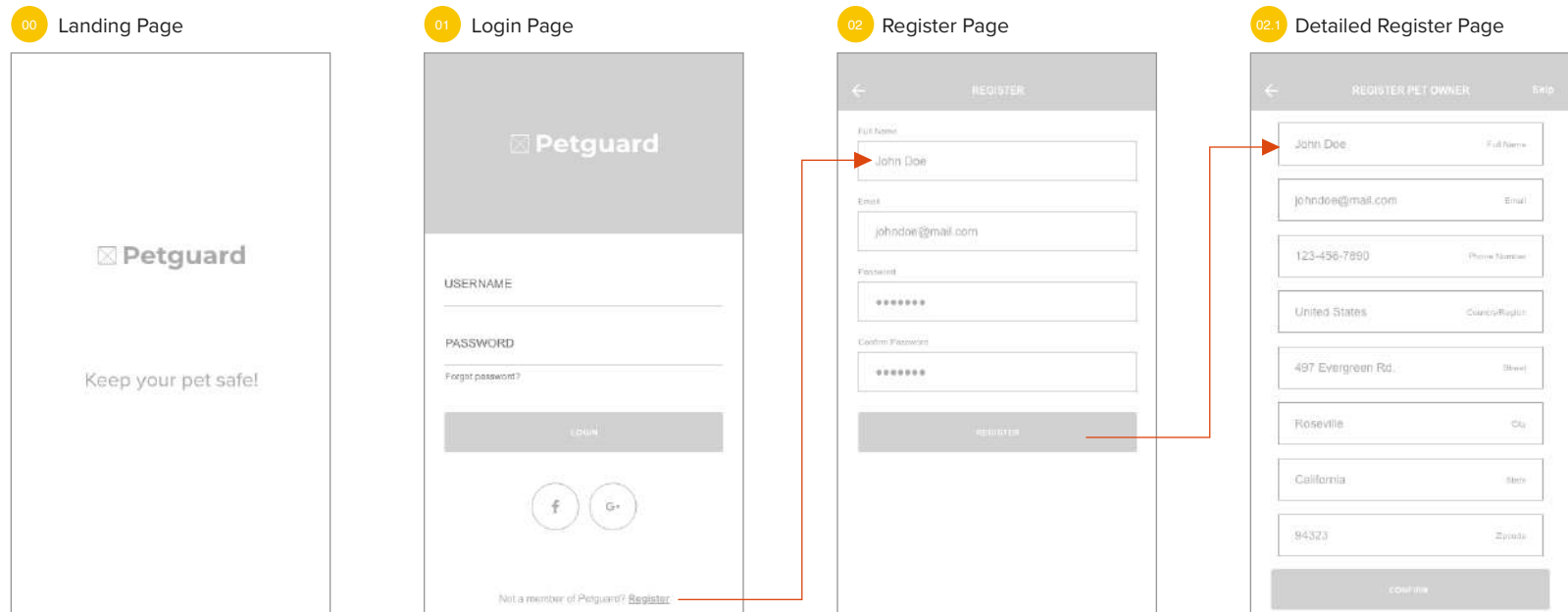
[Link to Prototype : Pet walker get notification](#)

Register Pet owner

Splash pages allow users guide app at first time and gives general idea of app

Easy setup and register with social media and email address

More detailed information will be optional and can be added later in the account menu



Register Device and Pet(s)

Smart collar can be added via bluetooth or scan a QR code on the back of device

Register pet's information that general and medical information

Register pet walker or sitter if owner has and send an invitation to them

02.2 QR Code

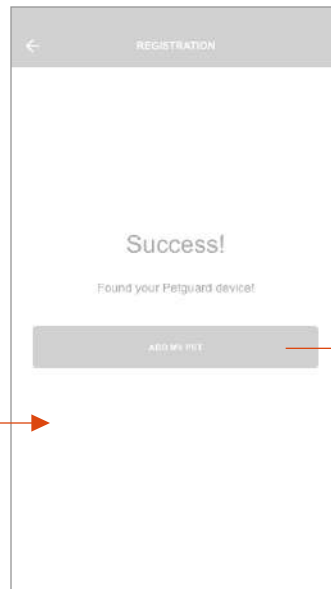


ADD NEW DEVICE

QR CODE

PetGuard QR Code found on the back of your Petguard!

02.3 Device Register Success



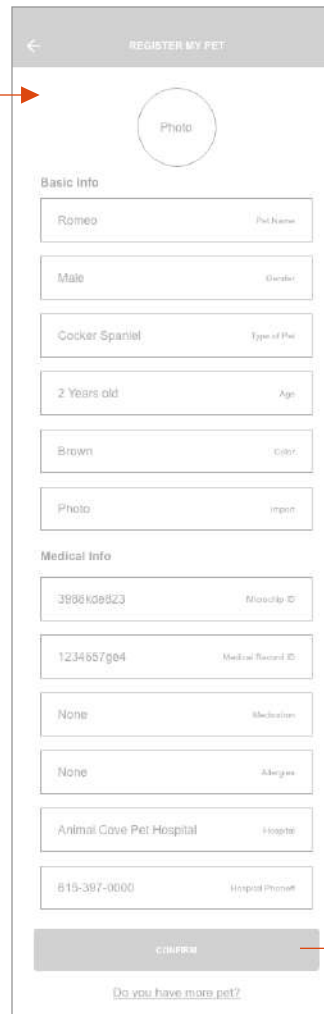
REGISTRATION

Success!

Found your Petguard device!

ADD MY PET

02.4 Register Pet Information



REGISTER MY PET

Photo

Basic Info

Romeo Pet Name

Male Gender

Cocker Spaniel Type of Pet

2 Years old Age

Brown Color

Photo Import

Medical Info

3898 hce523 Microchip ID

1234567890 Medical Record ID

None Medication

None Allergies

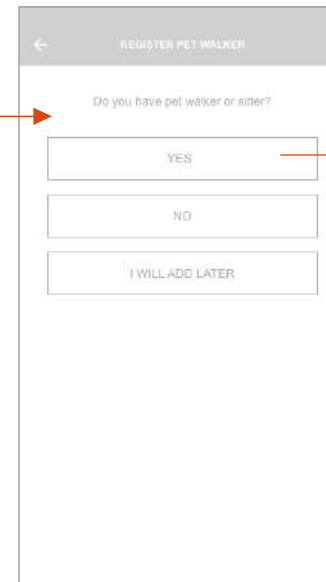
Animal Cove Pet Hospital Hospital

615-397-0000 Hospital Phone#

CONFIRM

Do you have more pet?

02.5 Register Pet Walker



REGISTER PET WALKER

Do you have pet walker or sitter?

YES

NO

I WILL ADD LATER

02.6 Send Invitation to Pet Walker



REGISTER PET WALKER

Send an invitation link

Email

Text message

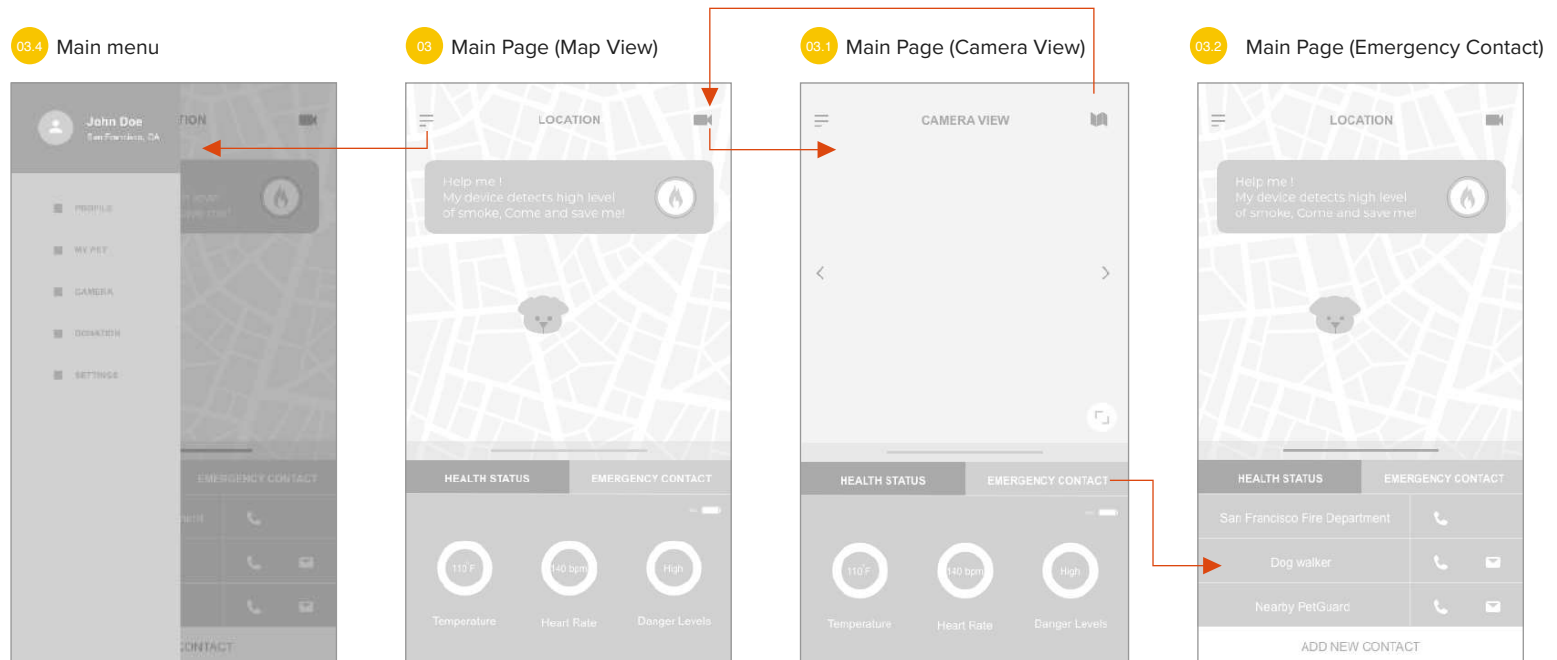
Copy the link

Main page for Pet owner

Pet owner can check pet's status via connected indoor cameras

Map view and camera view can be switch screen

Pet owner can send an message or call to emergency contct on the list



Main page for Pet walker or Emergency contact

Pet walker or emergency contact get notification

Pet walker can check pet's status

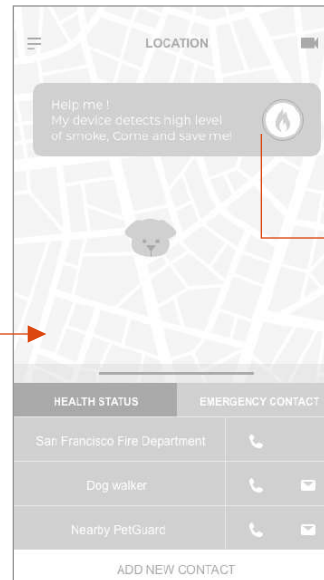
App guides to navigate to pet's location

Pet owner can get a status real time that pet walker on his way in the map view

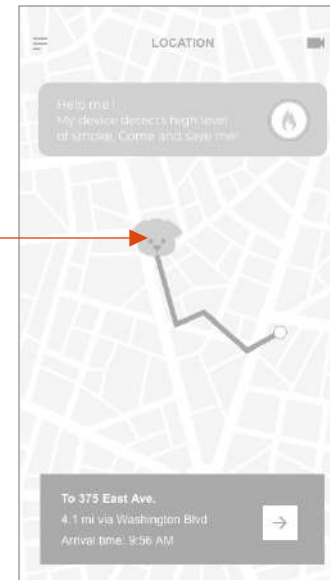
04. Recieve an Alert



04.1 Pet Walker's Main Page



04.2 Get Directions



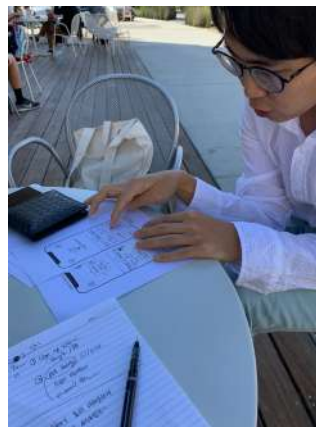
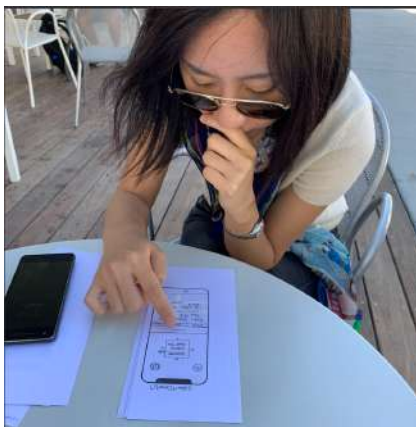
User Testing Overview

Three primary tasks

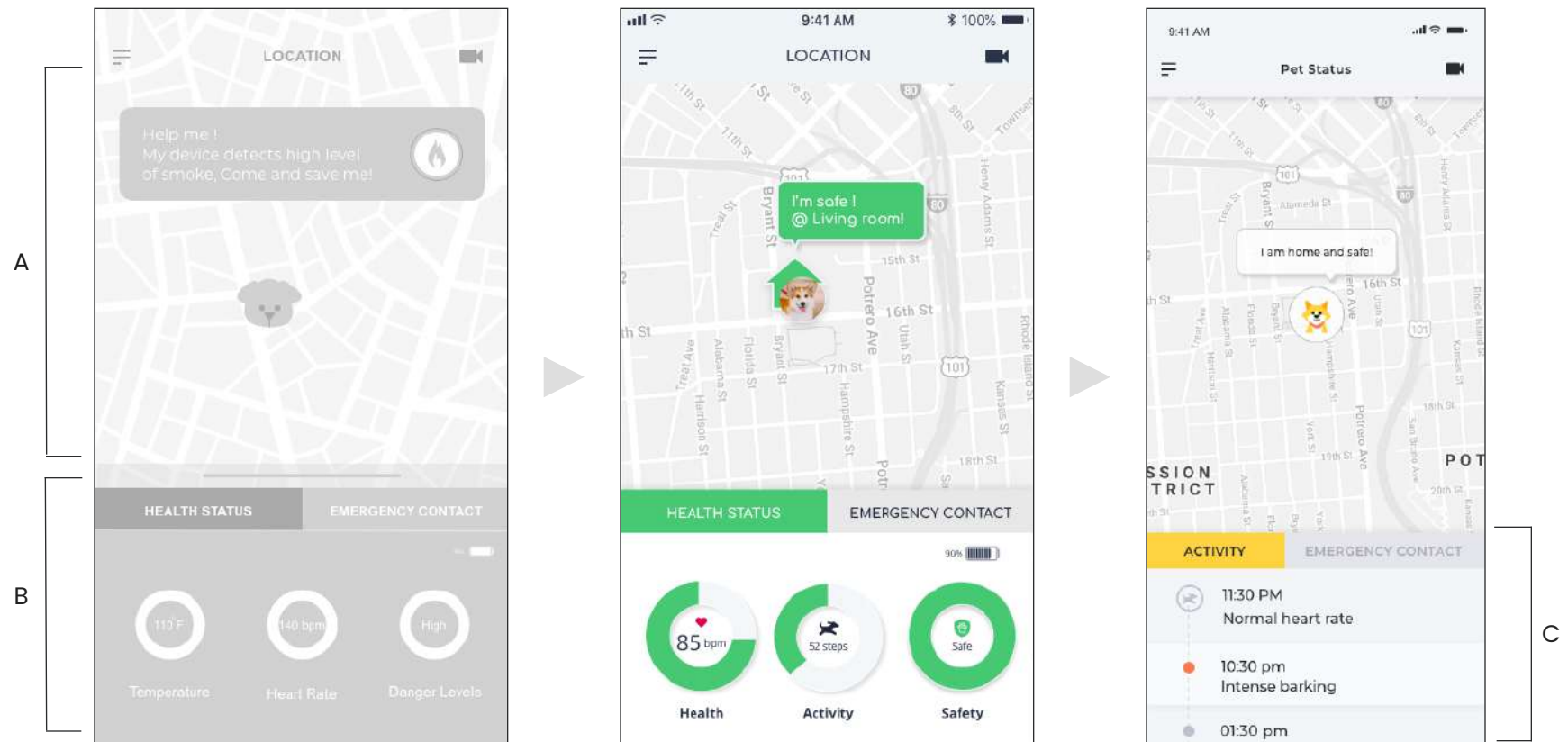
1. Sign up and register the smart collar for the app "PetGuard"
2. Get alert from her dog and send "Ask for help" to Pet walker
3. Get the alert from the Pet walker and she goes to rescue her dog

Key Feedbacks and Outcome

1. Change the homescreen to show "Details" page first and show relevant icons
2. Add the detailed health status and replace text with icons
3. Clarify main home screen to check pet's condition instantly



[Prototype Link for User testing](#)



A. Initial status of pet:

Too much wording, need to know pet's status intuitively
Give different color to see pet's condition right away
User can add pet's photo

B. Information:

Charts were difficult to read
data and user didn't want to see details of health conditions
Safety menu not necessary
Change the menus to activities and emergency contact

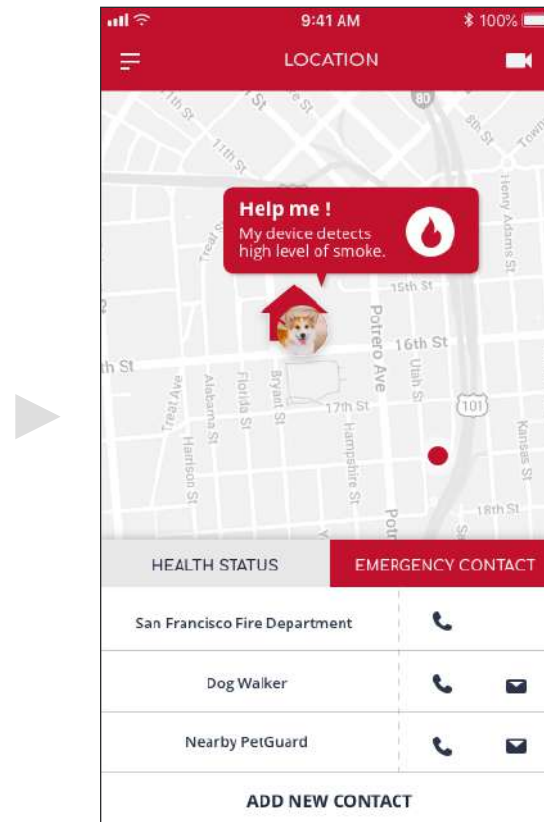
C. Visual Design:

App is for pet's safety, color need to clean and focus on pet's initial status
User can notice pet's status by color system



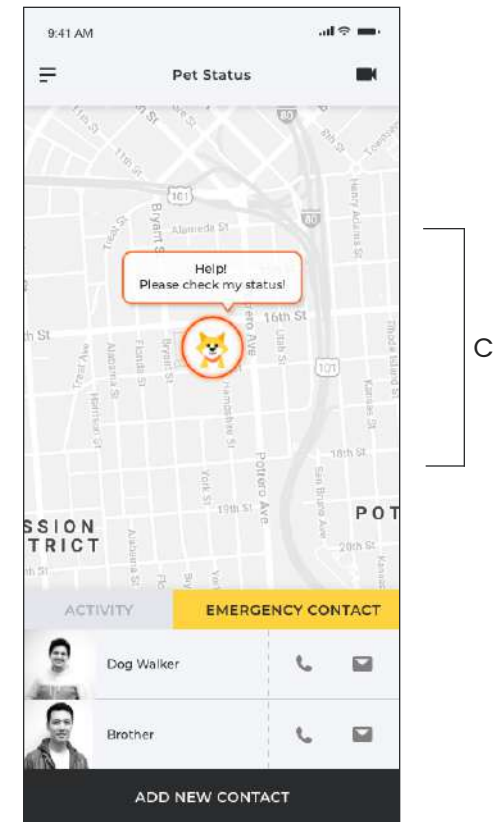
A. Emergency situation:

Use too much of color
Need to focus on pet's status



B. Emergency contact:

Deleting SFSD contact and nearby users on the list
User want to add their family and friend as an emergency contact



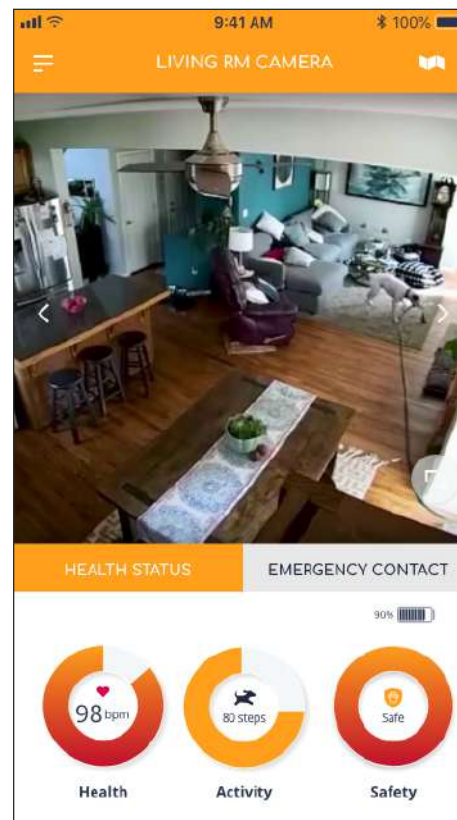
C. Visual design:

Simplify over screen using neutral color
Main color for yellow(warning), orange(alert), gray(normal)



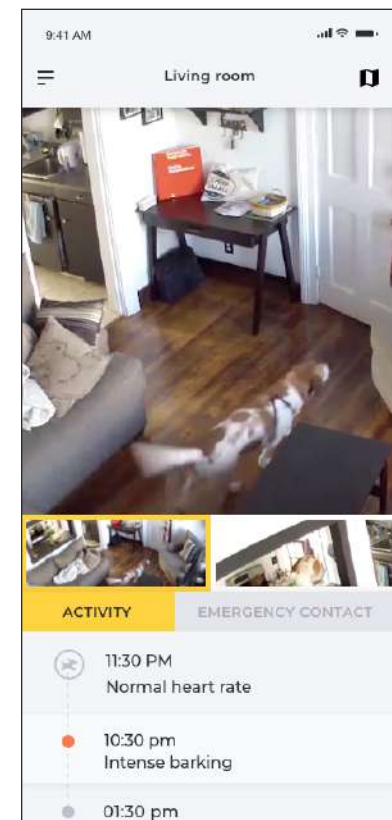
A. Camera view:

Devided camera view for multiple camera uses
Easy to switch camera view
Full view can be difficult to change the view

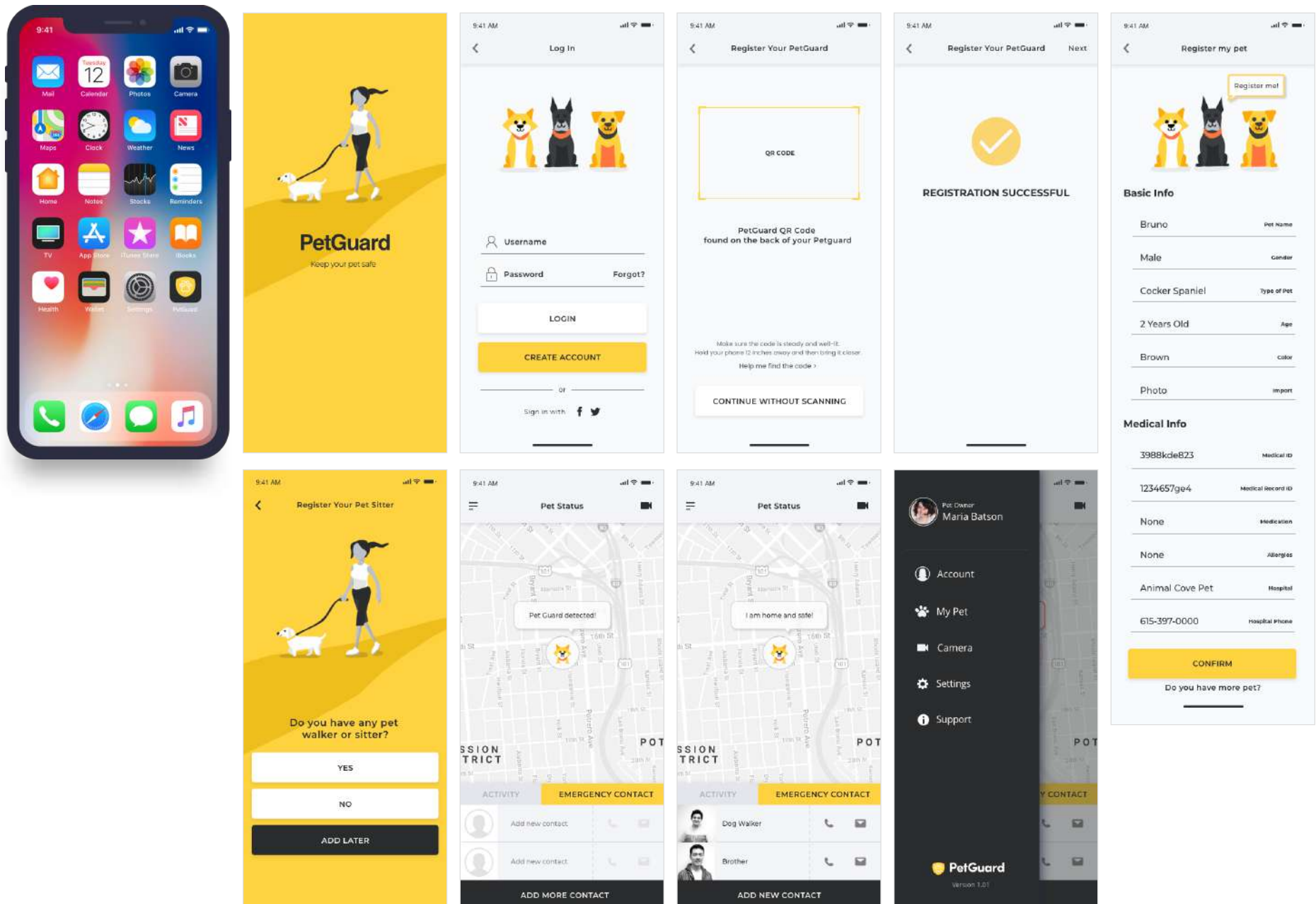


B. Initial camera view:

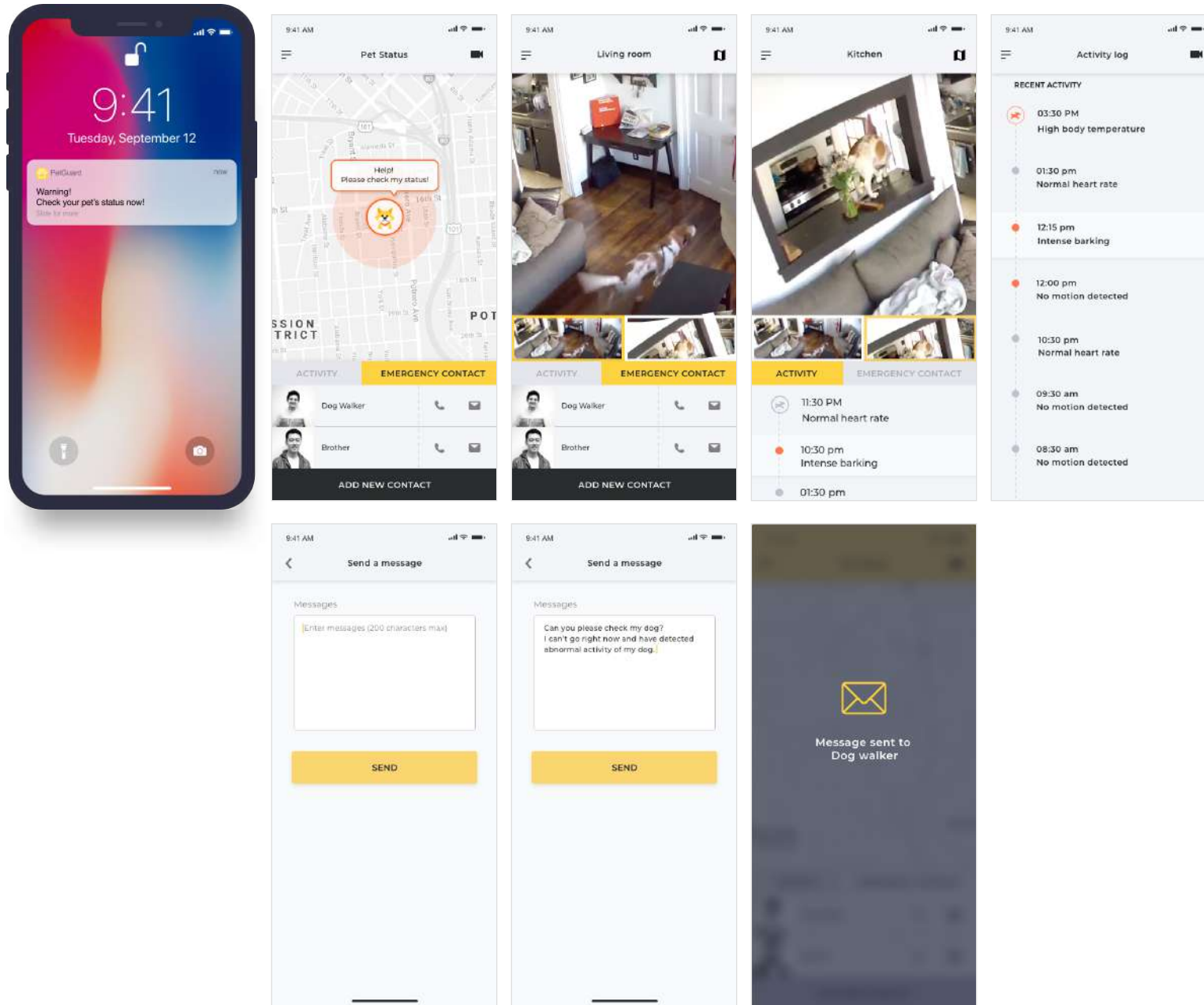
Initial camera view for real-time response



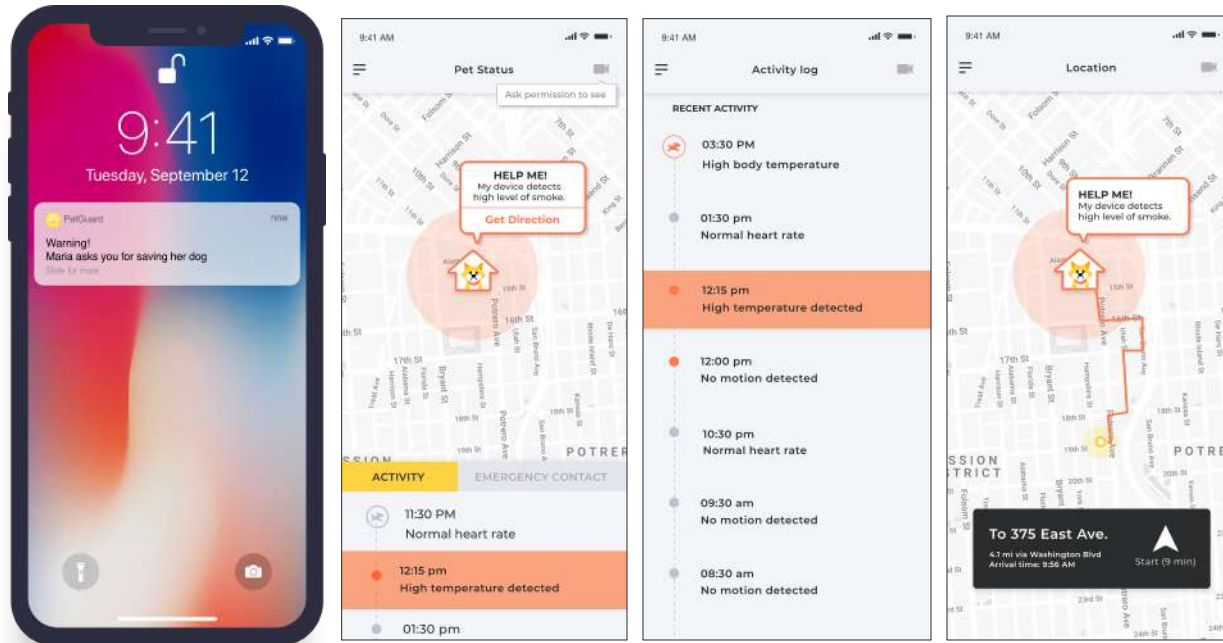
Registration



Pet Owner



Pet Walker/Helper



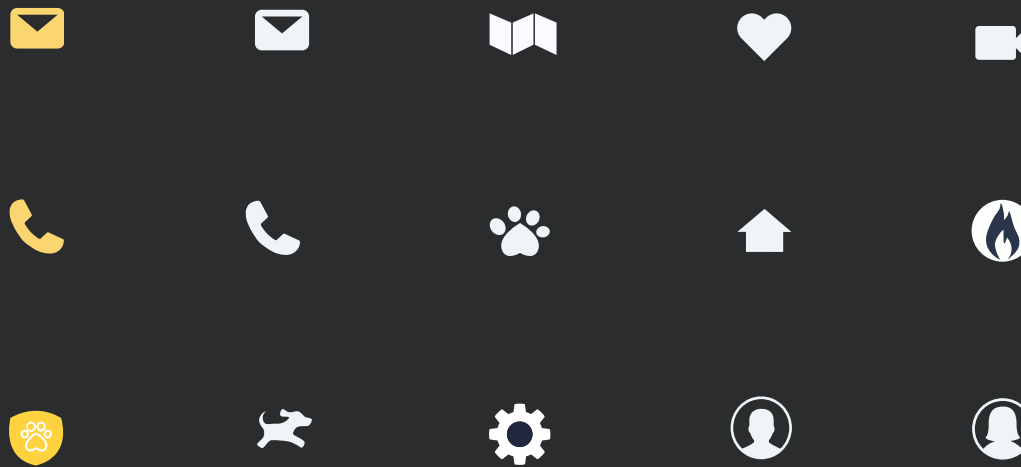


Logo Horizontal



Logo Vertical





Iconset

Typography

Comfortaa

Header, Title, Logo

Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Open Sans

Subtitle, Body text, Button text, Description

Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Light

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Color Theme

CMYK 11, 9, 0, 76
RGB 33, 40, 62
HEX #2B2C2D

CMYK 51, 0, 33, 21
RGB 71, 201, 116
HEX #47C974

CMYK 0, 0, 0, 0
RGB 255, 255, 255
HEX #FFFFFF

CMYK 0, 38, 89, 0
RGB 255, 159, 28
HEX #FAD570

CMYK 0, 38, 89, 0
RGB 255, 159, 28
HEX #FA9070

“ Things I’ve learned in the team project and next step”



Through this team project, I’ve learned a lot in various ways. It was challenging to unite the four opinions into one design. However, from the research to the final design, the app was almost completed in a very short amount of time. It was challenging but also exciting and good exercise that listen to others’ opinions. For the project, I can develop more on in details such as how to connect with each home cameras and how to increase awareness about pet’s safety.



THANK YOU

Resources

<https://phys.org/news/2017-09-pets-natural-disaster.html#jCp>

<https://www.gopetfriendly.com/>

<https://www.redcross.org/get-help/how-to-prepare-for-emergencies/pet-disaster-preparedness.html>

<https://www.ready.gov/pets>

<https://unsplash.com/>