

D RIP

IOT Presentation

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You love your stuff, right?

There are those pictures of your days in college, that table that Aunt Suzie gave you for your first home, your laptop with hours and hours of work stored on it.

What would you do if it all got destroyed?

Or...

What would you do to keep it safe?

We need water in our homes to make our lives easier, but it can really be a hazard to our stuff and wallets. Between the threat of flooding, mold and water leakage, it's a surprise we can even sleep at night...

The Problem

It's every homeowners nightmare. You leave for a couple days on a well-deserved vacation, only to come back to a house full of water. So much stress and worry over something so simple as a leaky pipe.

Or worse, one day you are just making the rounds of the house. You smell something a little musty. What could that be? Black mold.

It's so simple, you almost would think someone would have fixed it by now.



It Won't Happen to Me

A campaign reports that there are

650 water main
breaks per day

Source: American Water Resources (http://www.awrusa.com/american-water-resources/about-us/news/articles/6_Questions_Every_Homeowner_Should_Have_About_Water_Pipes.html)

Resulting in an average cost of repair between

\$500 – \$10,000
to replace tile, clean up water,
and eliminate black mold

Source: American Water Resources (http://www.awrusa.com/american-water-resources/about-us/news/articles/6_Questions_Every_Homeowner_Should_Have_About_Water_Pipes.html)

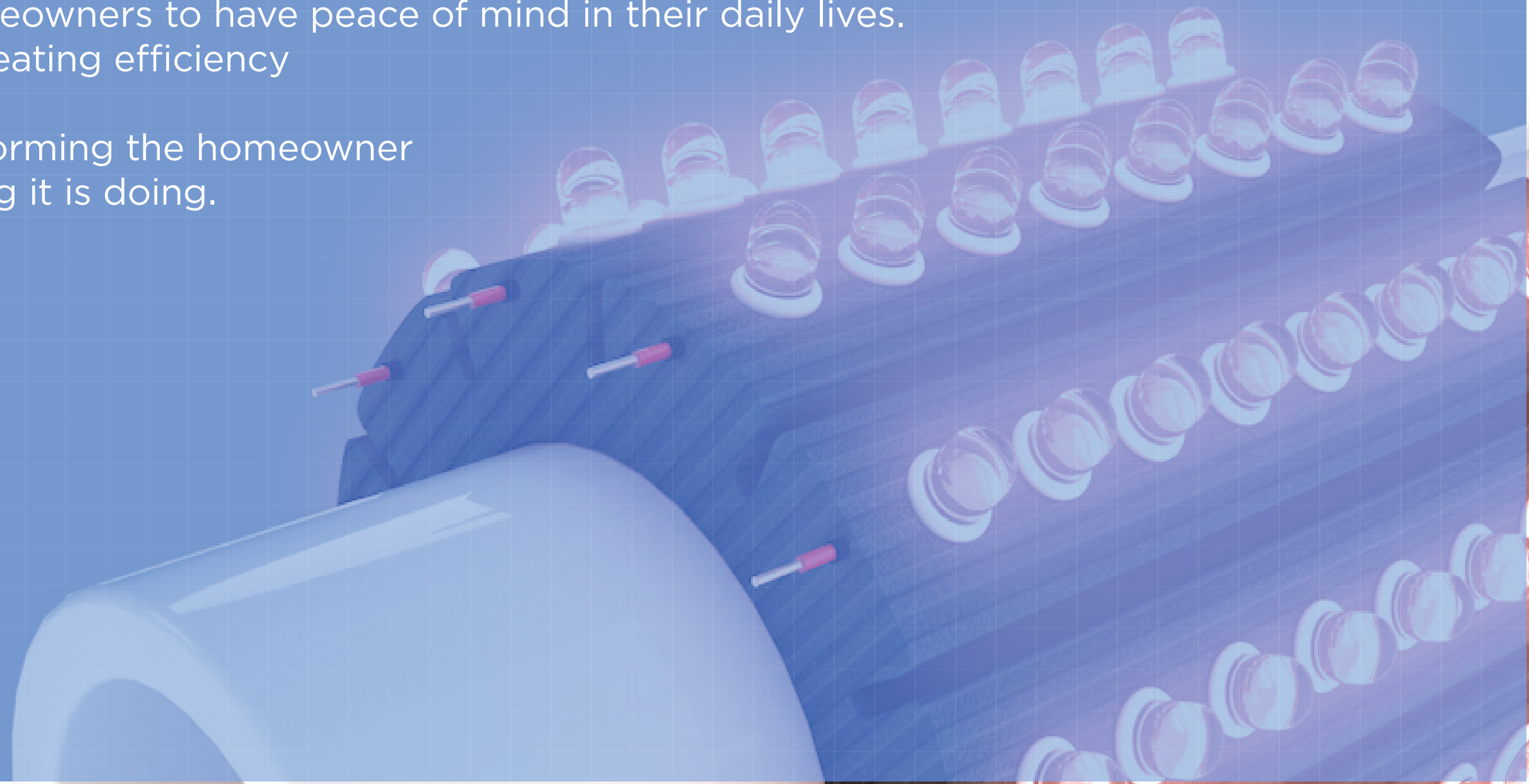


The Solution

Drip will:

- Eliminate the threat of water damage and black mold.
- Allow homeowners to have peace of mind in their daily lives.
- Increase heating efficiency

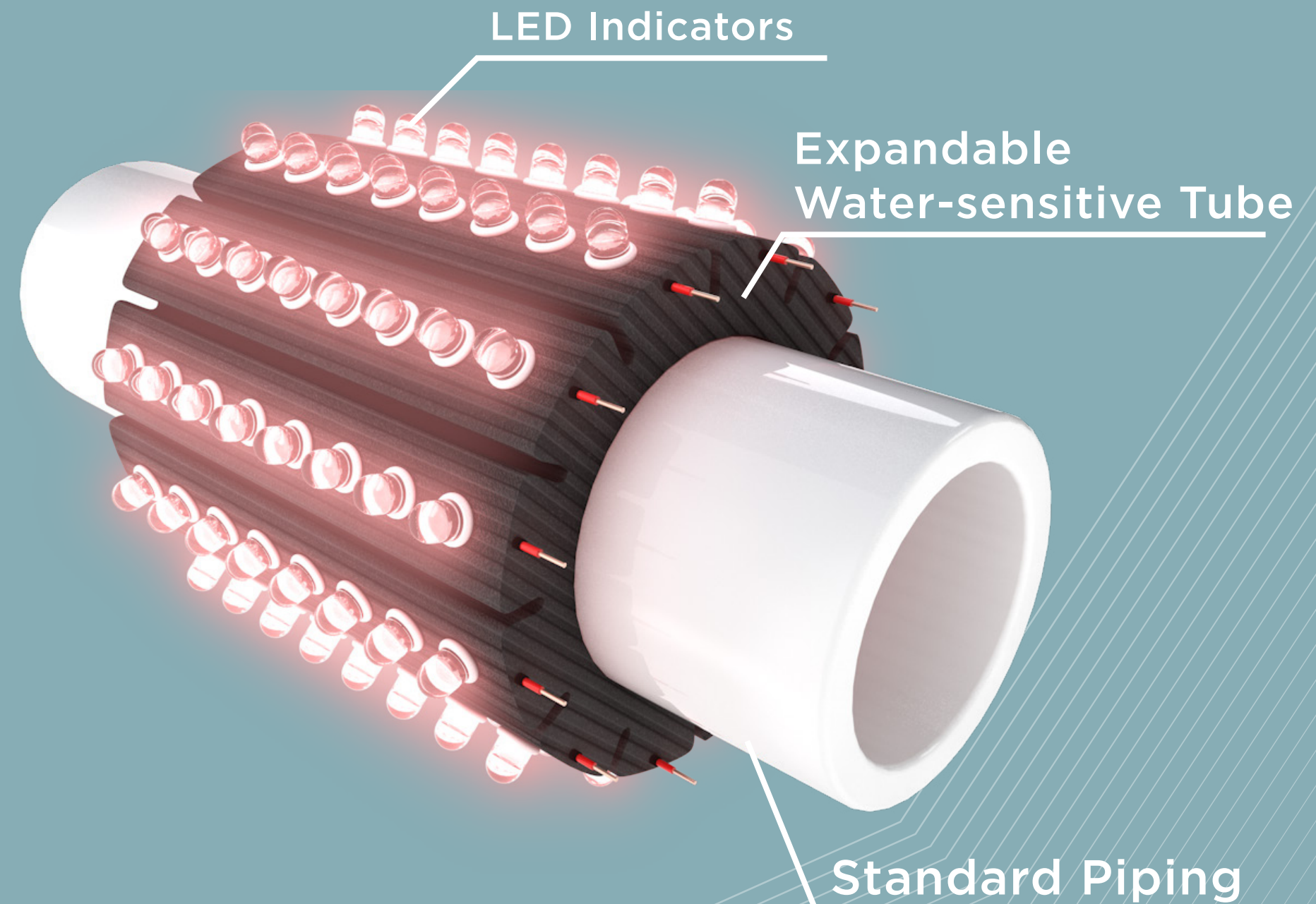
All while informing the homeowner of everything it is doing.



Let Me Explain

The main component to our system is a tubing which is slid around water pipes during the installation process.

The tubing flows naturally into the process as it is created to be put together exactly as the pipes themselves are installed. All the workers have to do is simply add this into their regular flow as a last step.



Who Else is Doing This?

Notion

- Smart home system with wide range of abilities.
- Water leak detection limited to a sensor placed on ground which activates when water touches it.



OnSite Pro

- Smart valve which pairs with existing smart-system and pipes.
- Water leak detection based on drop in water pressure beyond the programmed norm.



Water Hero

- Smart valve which pairs with external sensors to detect pressure drop as well as existence of moisture outside pipes.
- Unit will send homeowner and plumber an alert.



Jimmy Milford

Age: 29

Income: \$150,000/yr

Mechanical Level: Can Fix a Lightbulb

Jimmy loves to travel. As a Senior User Experience Director, he often travels to different countries to work with different companies. Jimmy likes to have his own space at home that he can change to fit his needs. His greatest worry about owning a home is that he is responsible for maintaining and fixing it if necessary. He is so often away from home and when he is there he doesn't have the time or energy.

“I don't want to have to worry about it.”



Persona Use Case Scenario

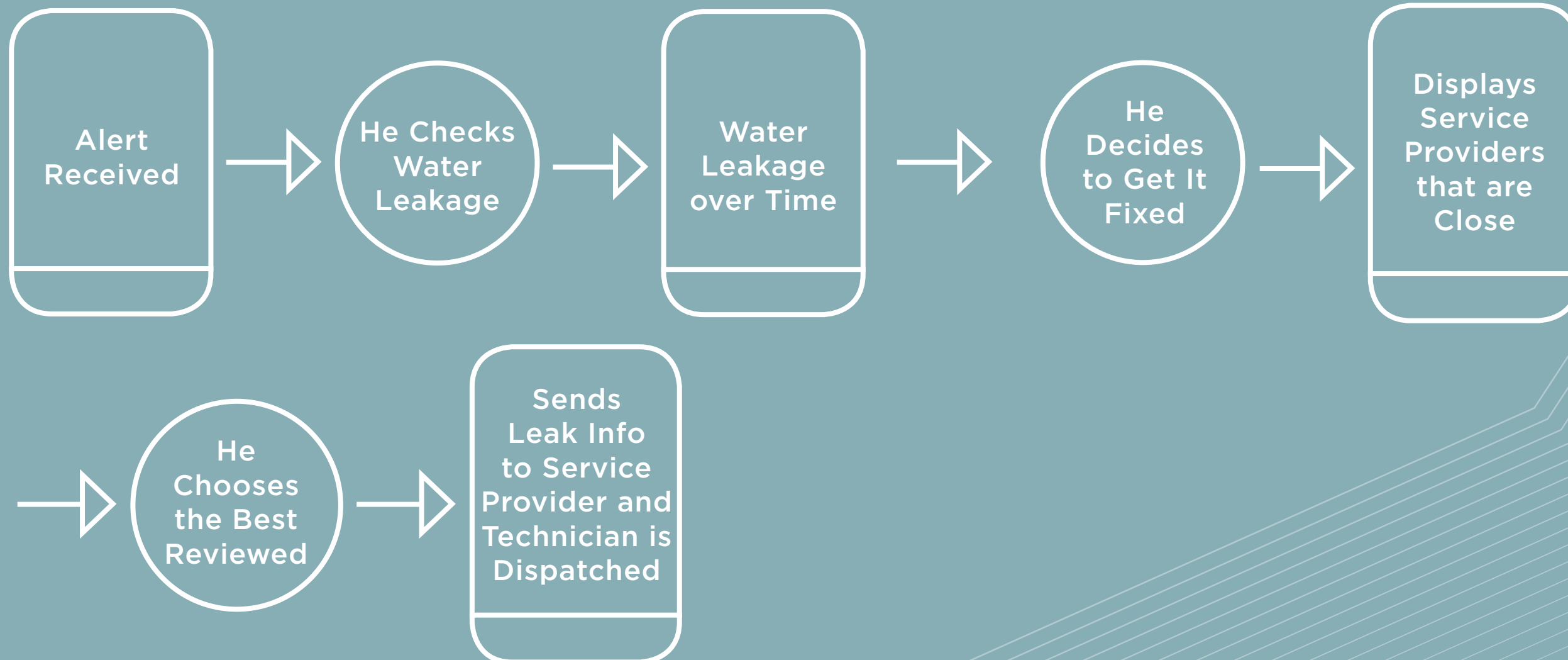
Jimmy is on vacation with his wife in London. He receives an alert that there is a leak in his smart homes basement. Next, he needs to decide whether he needs to get it fixed immediately or if he can wait until they return home. Lastly, if needed, Jimmy needs to find a service provider near his house to respond to the emergency.



Device Interaction

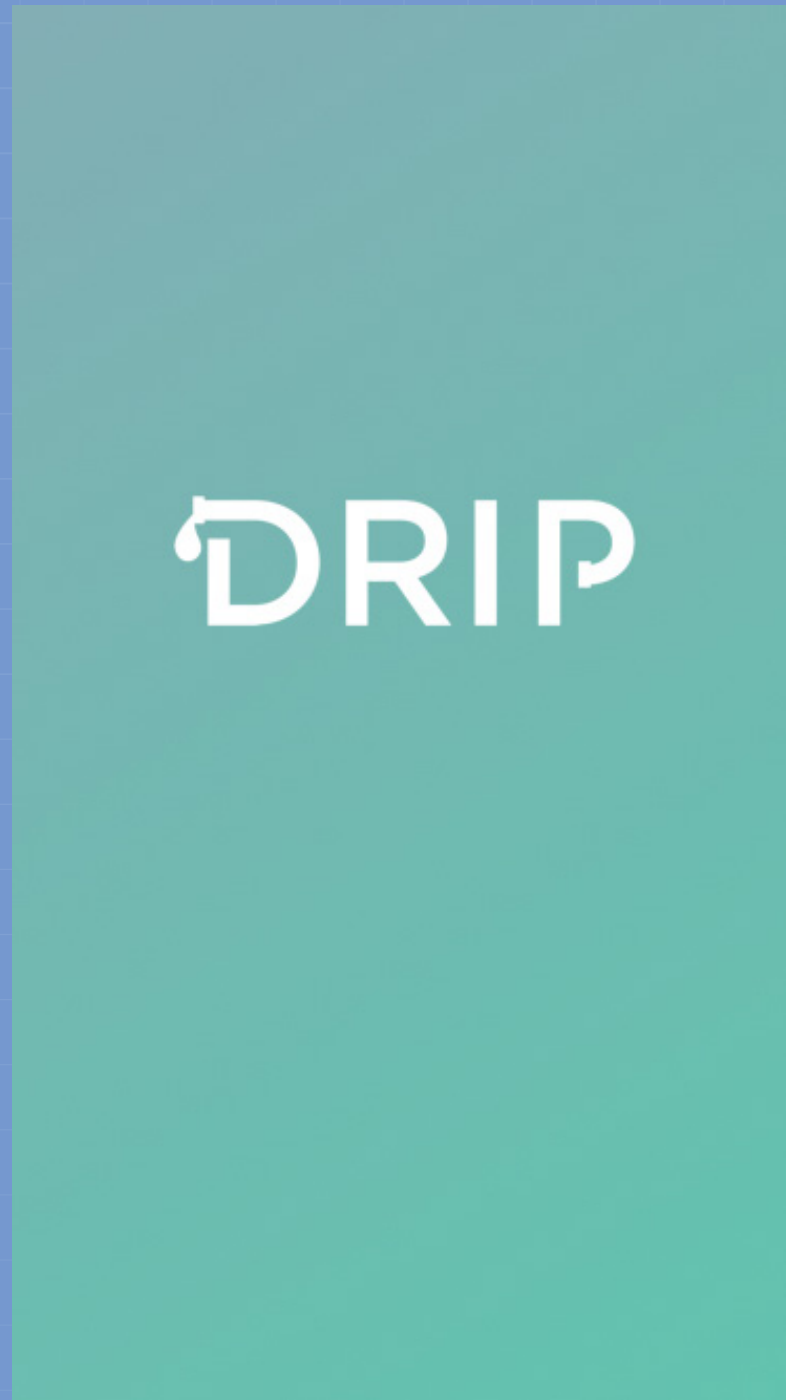


Decision Made

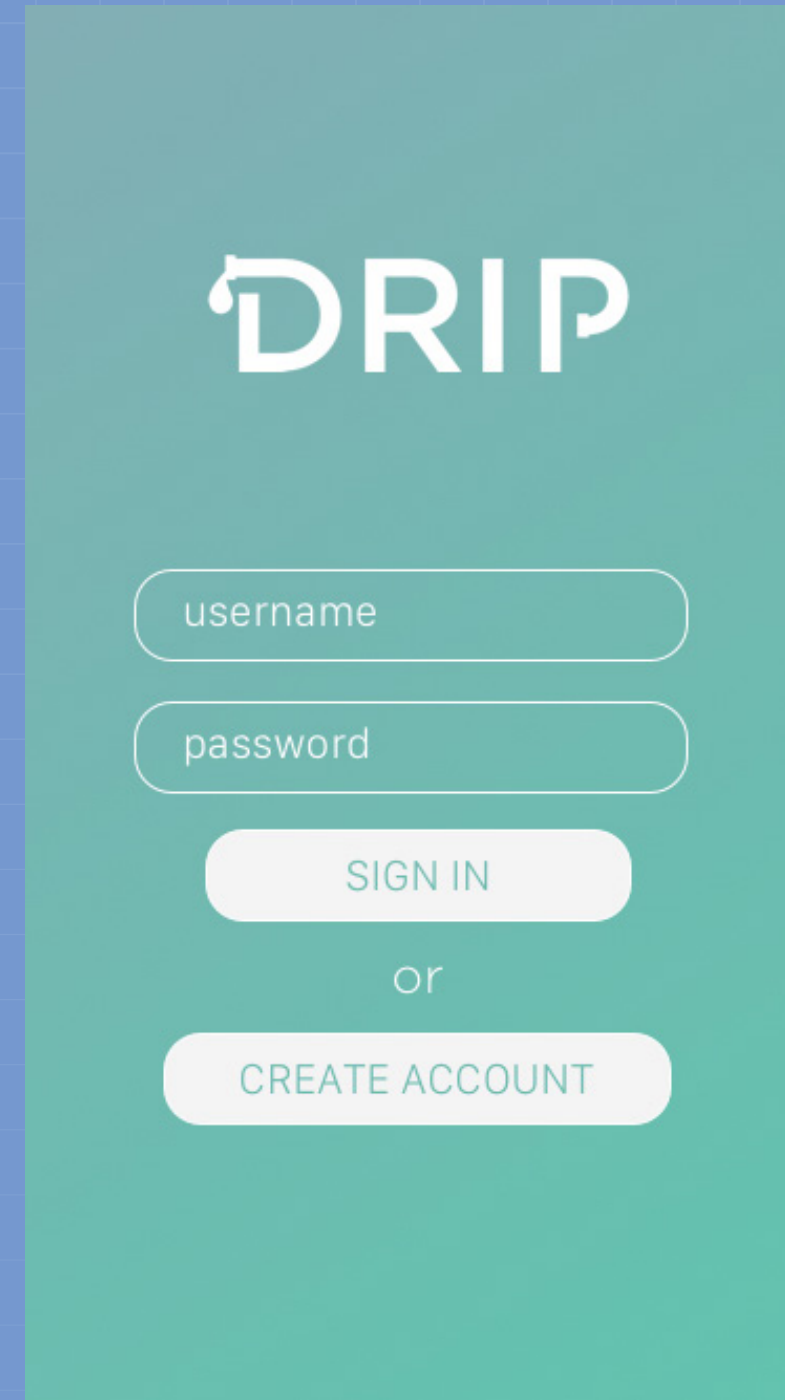




Landing Screen



Loading Screen



Onboard Screen 1

Welcome to
DRIP

TELL US A LITTLE ABOUT YOURSELF

Hi, my name is
insert name

You can reach me at
insert phone

You sound awesome!

NEXT STEP

○ ● ●

Onboard Screen 2

DRIP

YOU SOUND AWESOME, BUT TO KEEP YOUR HOME SAFE, WE NEED A FEW MORE THINGS

First, we need to know which house you live in
home address

Second, we have to pair your system with our app
home serial number ⓘ

OK, we're almost there!

NEXT STEP

● ○ ●

Onboard Screen 3

DRIP

FINALLY, WE NEED TO KNOW WHO TO CALL IN CASE SOMETHING DOES HAPPEN

Landlord contact
phone number

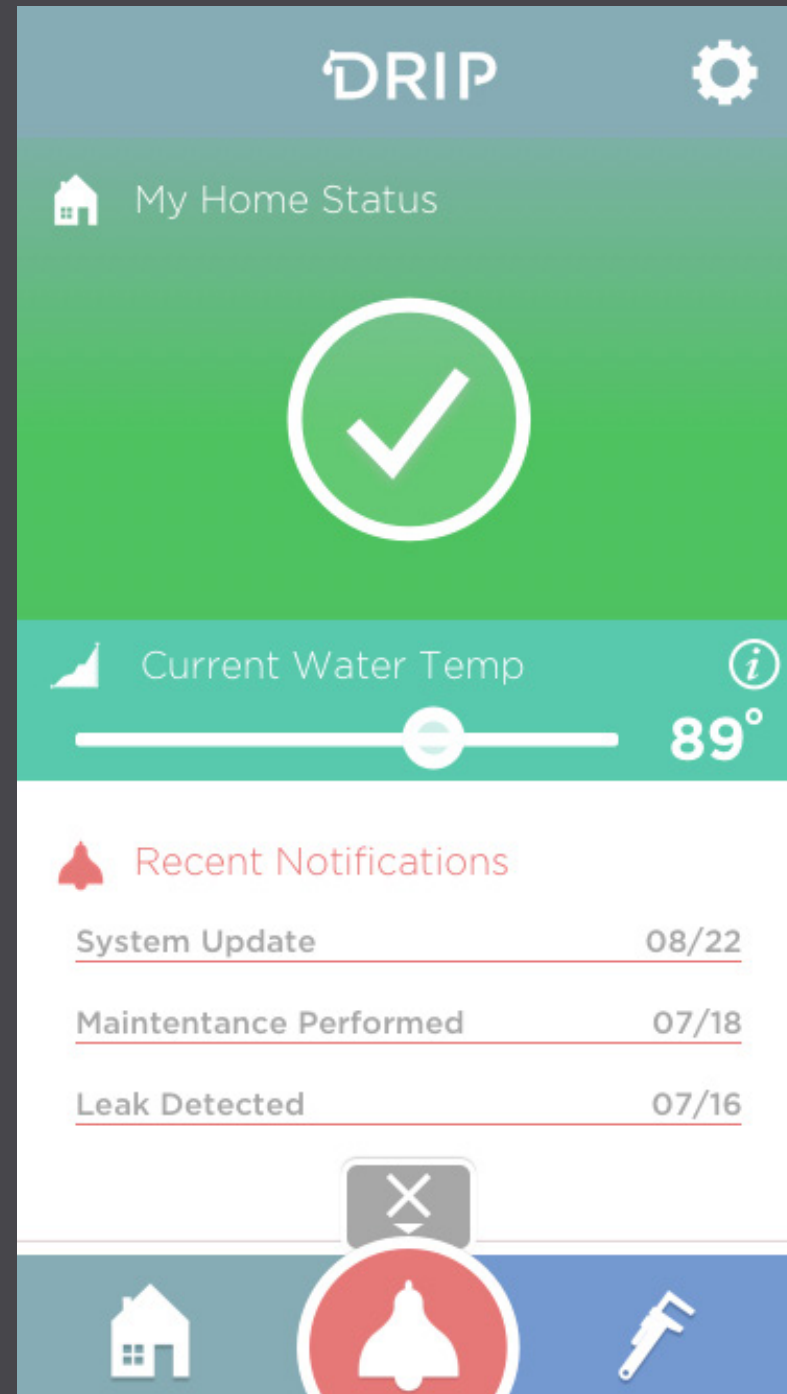
Pick the plumber you want us to call

Map List

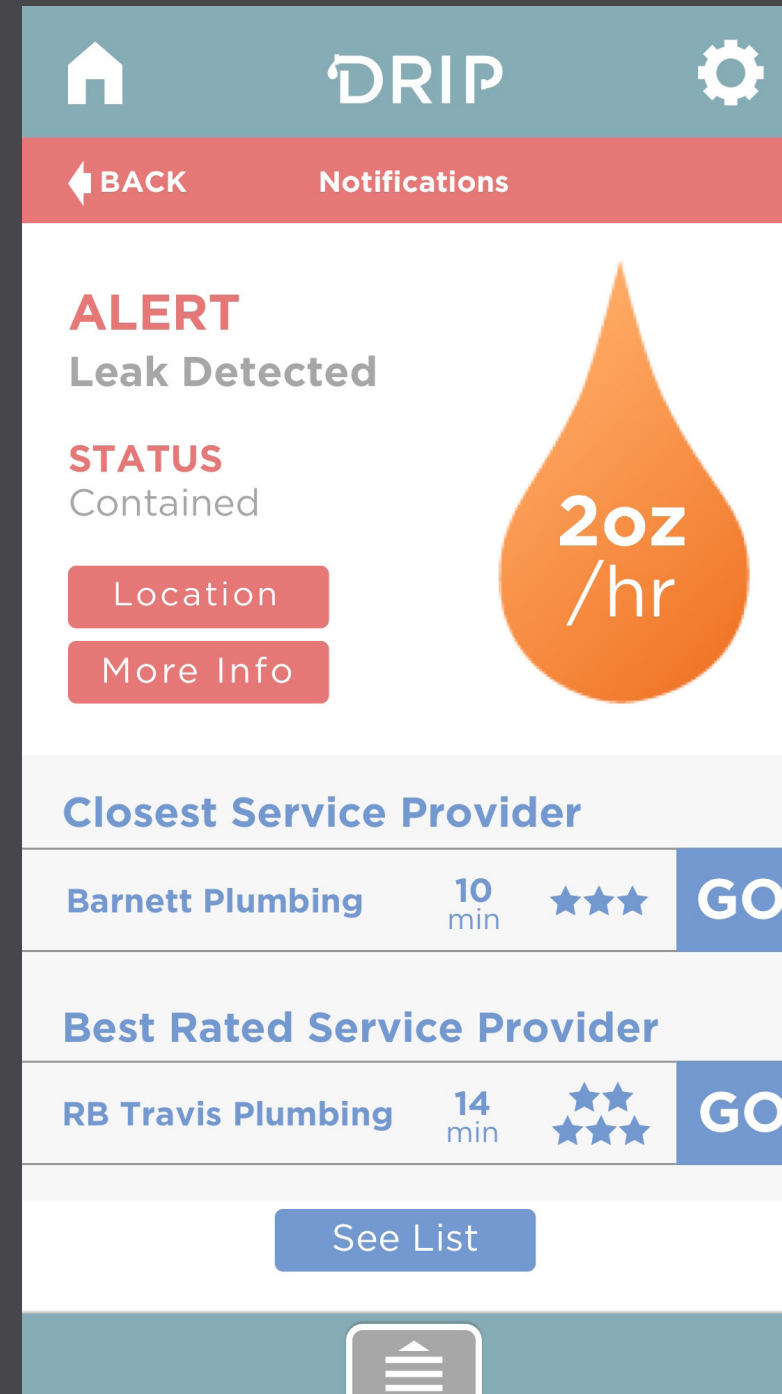
FINISH

● ● ○

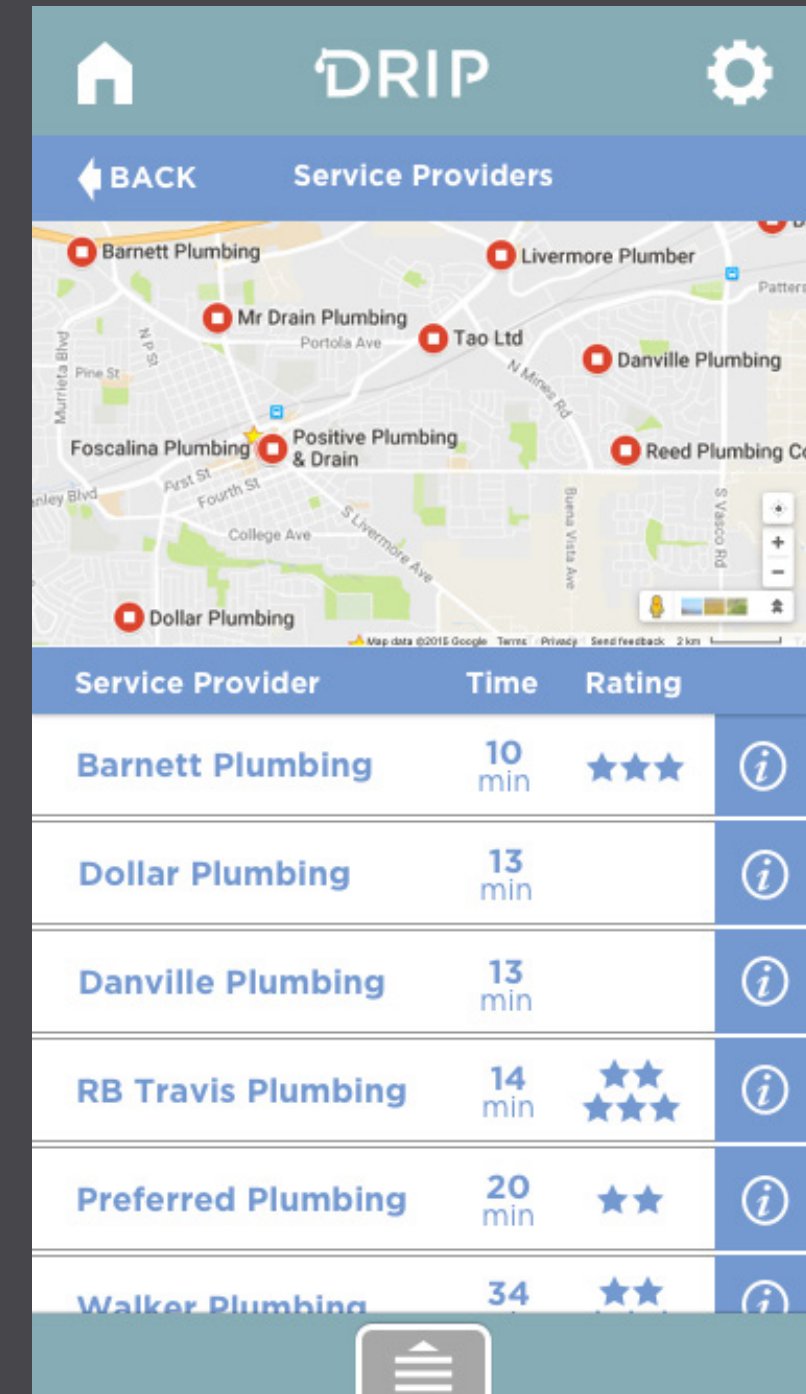
Home Screen



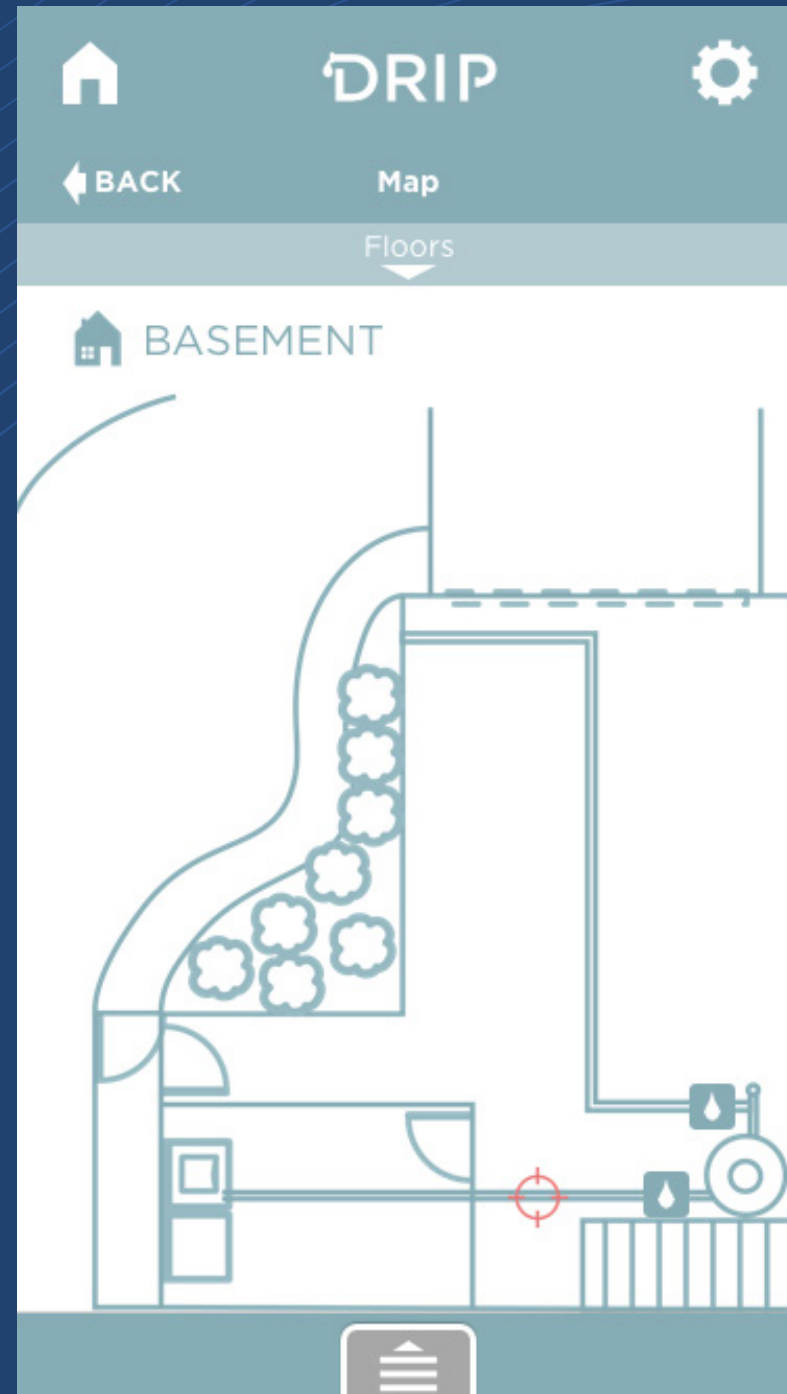
Alert Screen



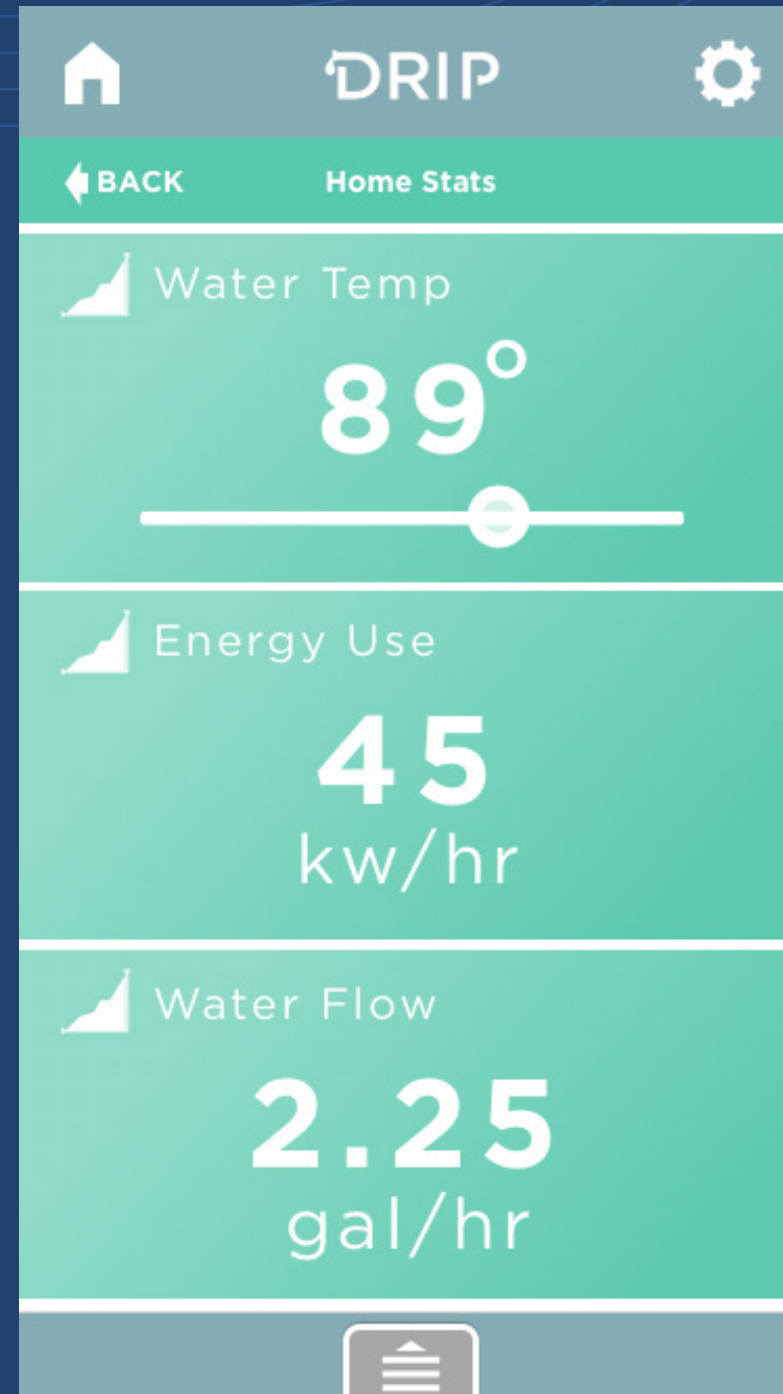
Providers Screen



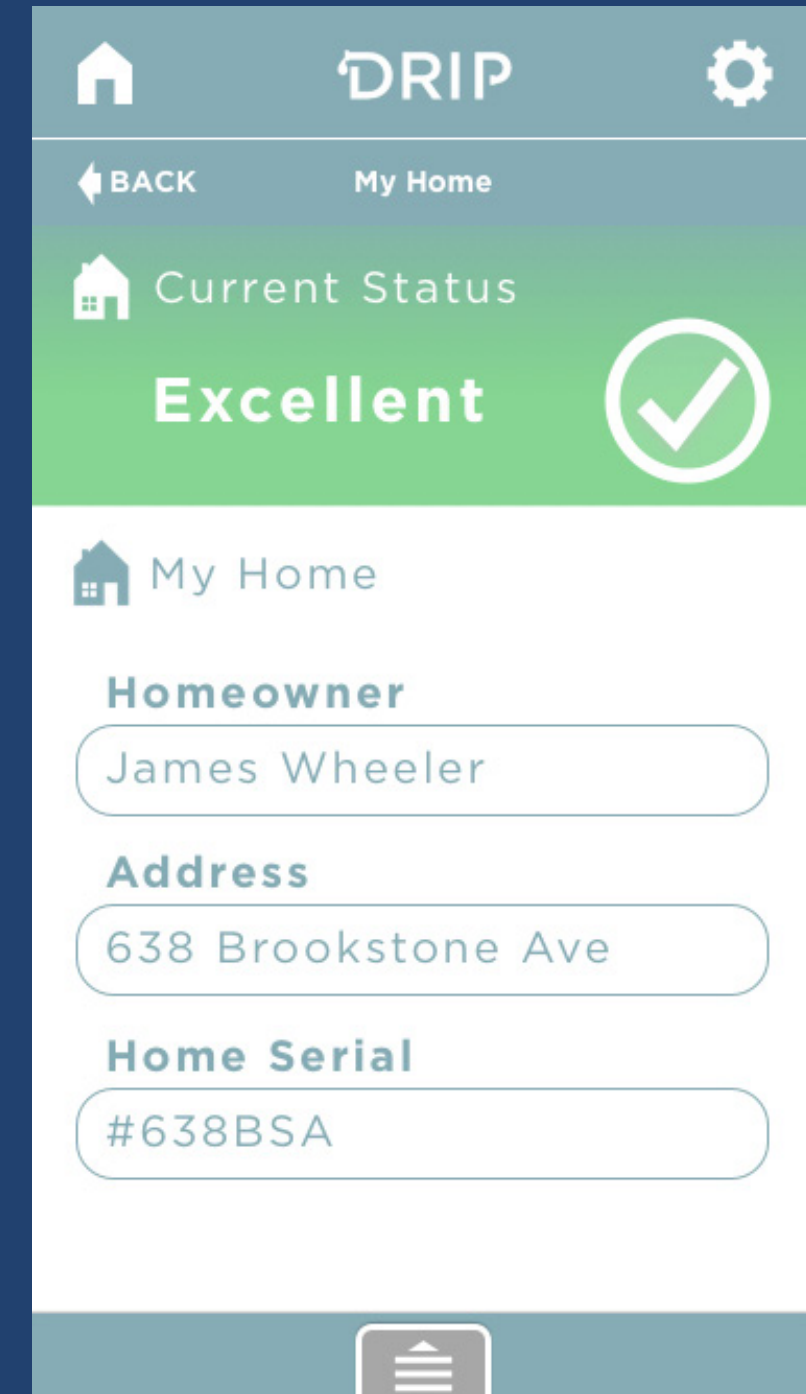
Map Screen



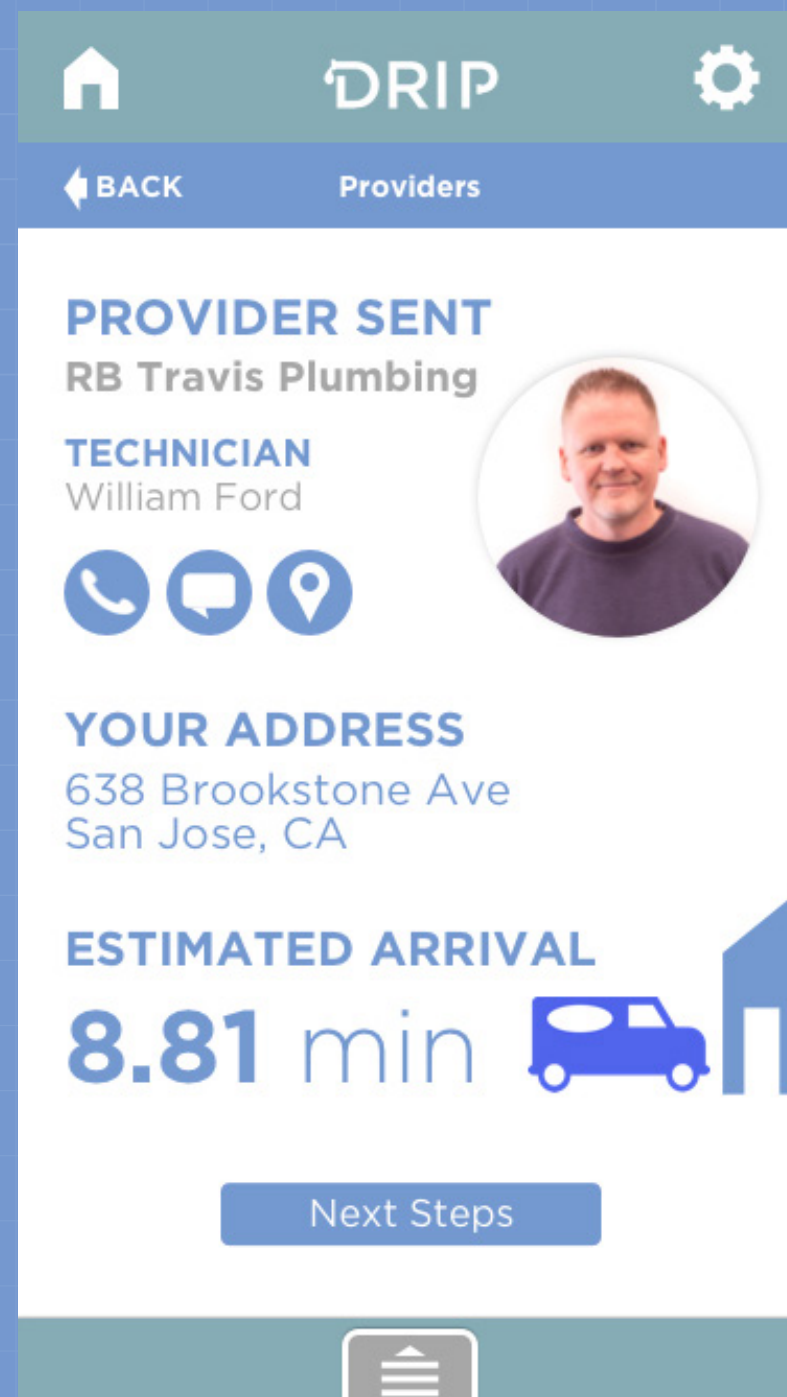
Energy Stats Screen



My Home Screen



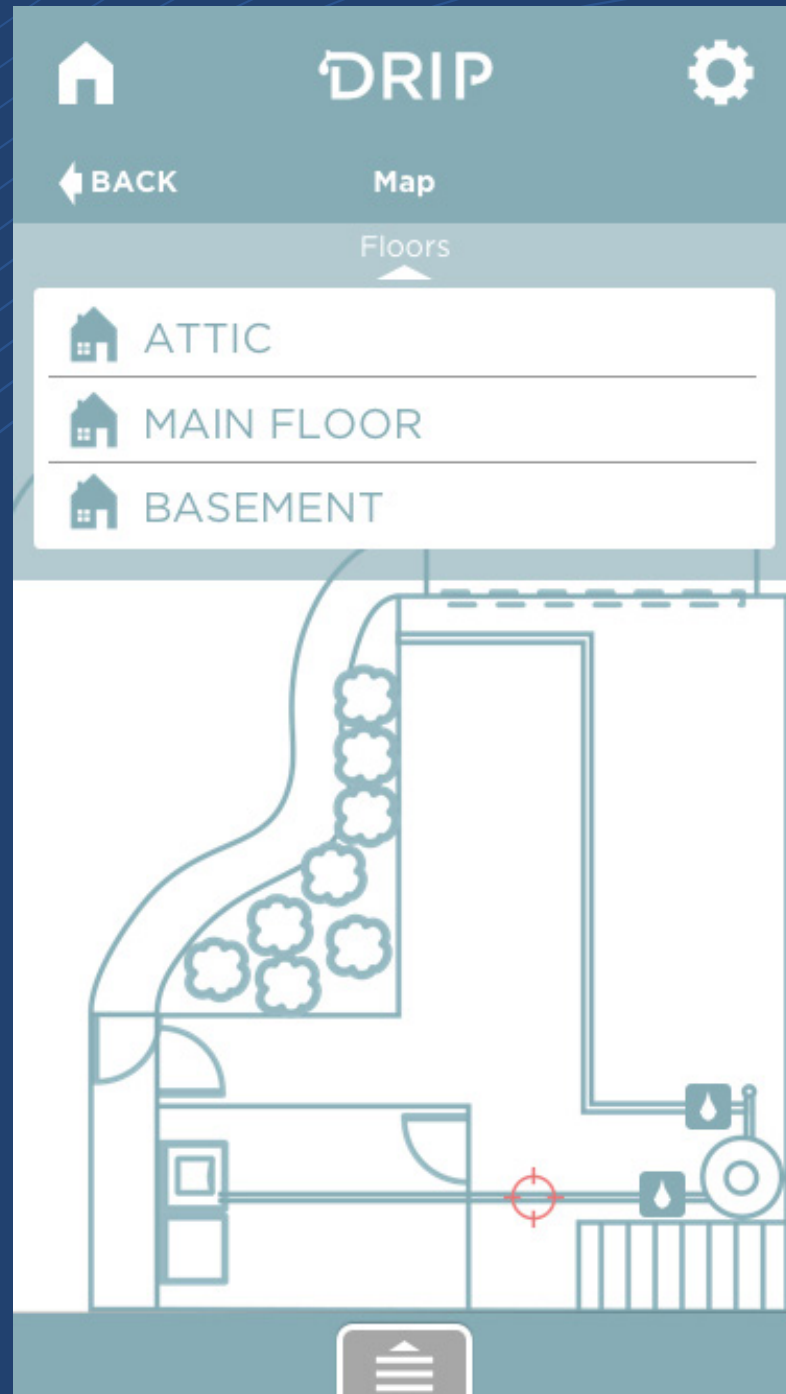
Response Screen



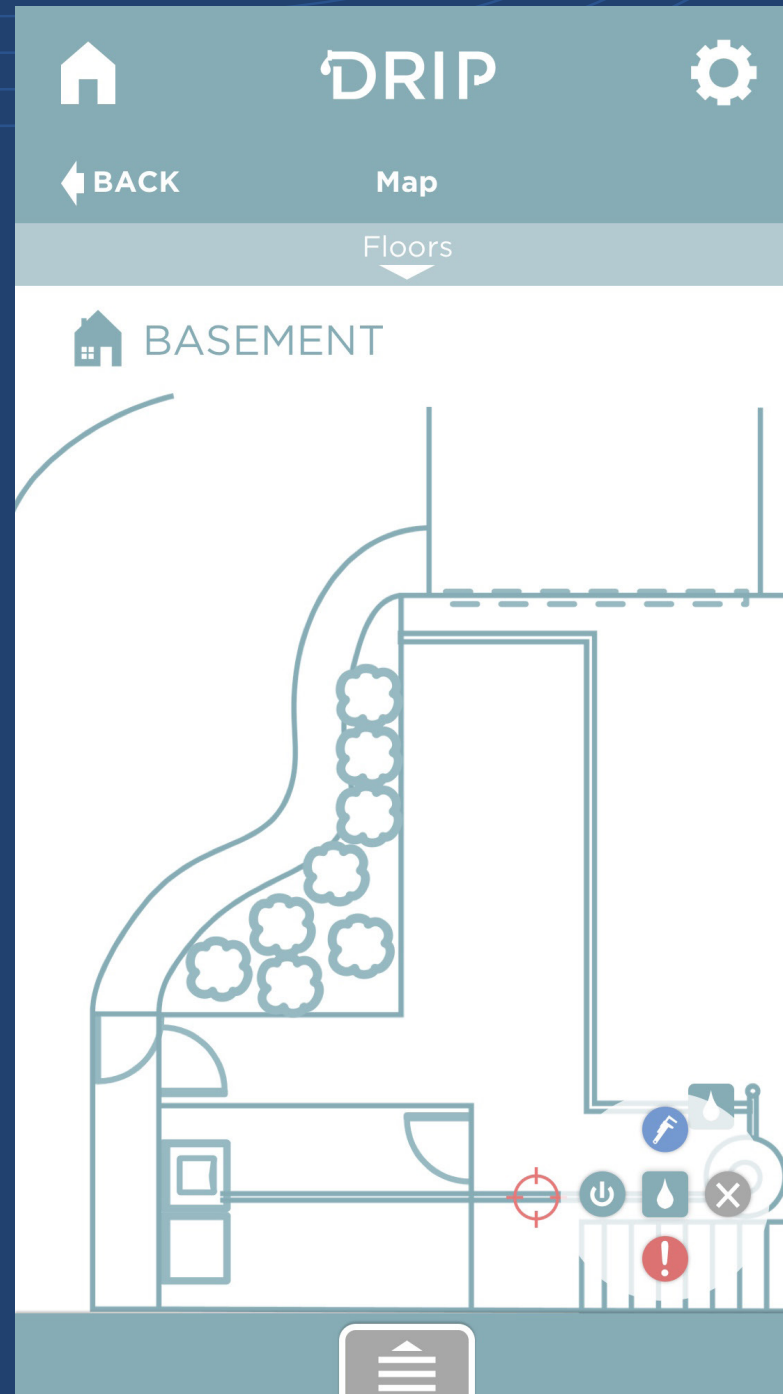
Next Steps Screen



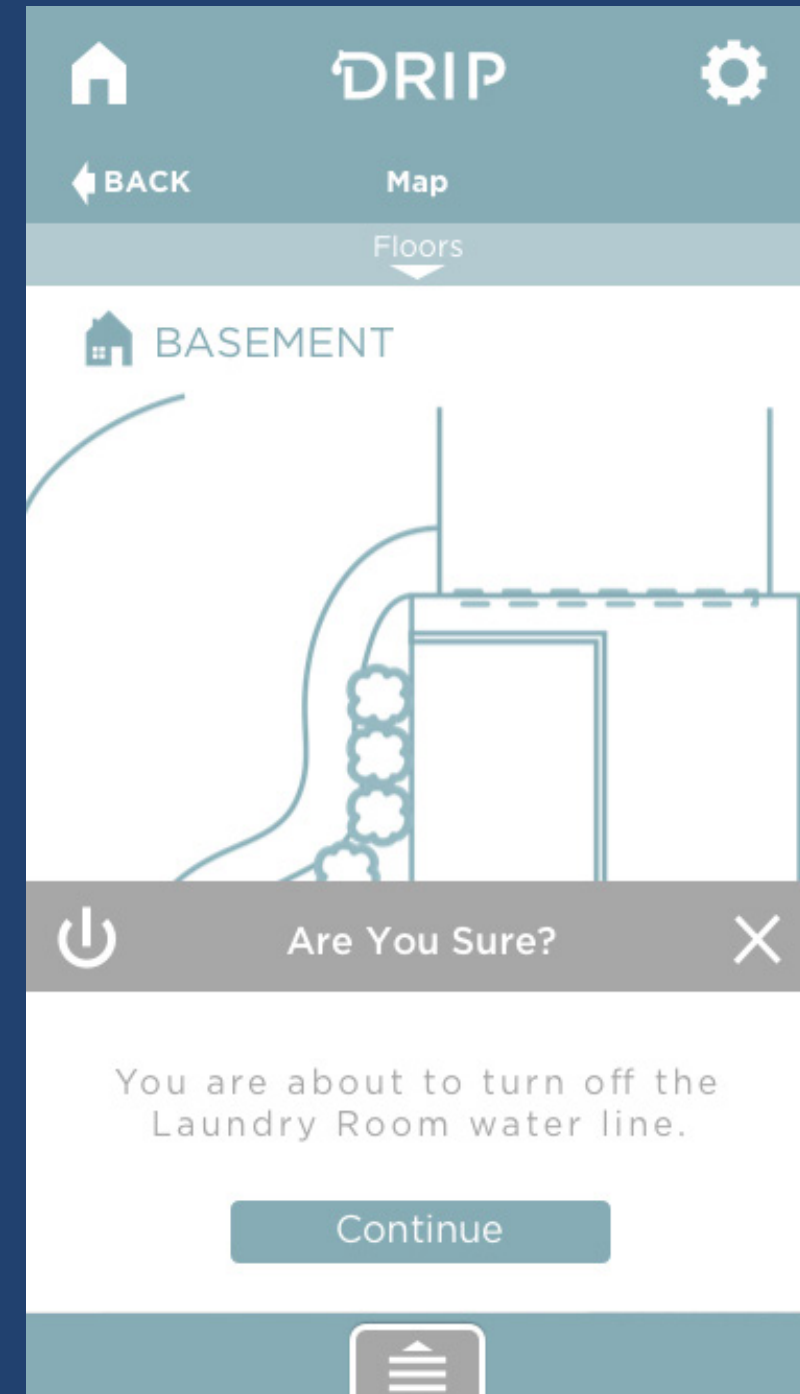
Map Interaction



Energy Stats Screen



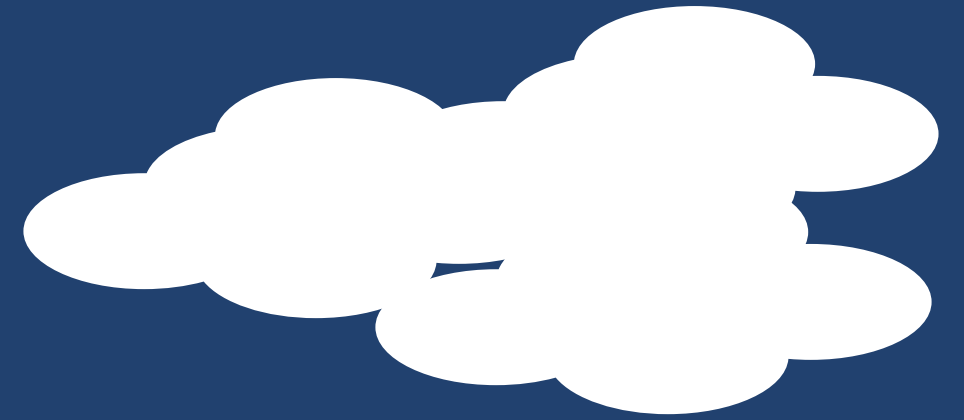
My Home Screen





**Click Here to See
interactive Prototype**

INTERACTIVE PROTOTYPE



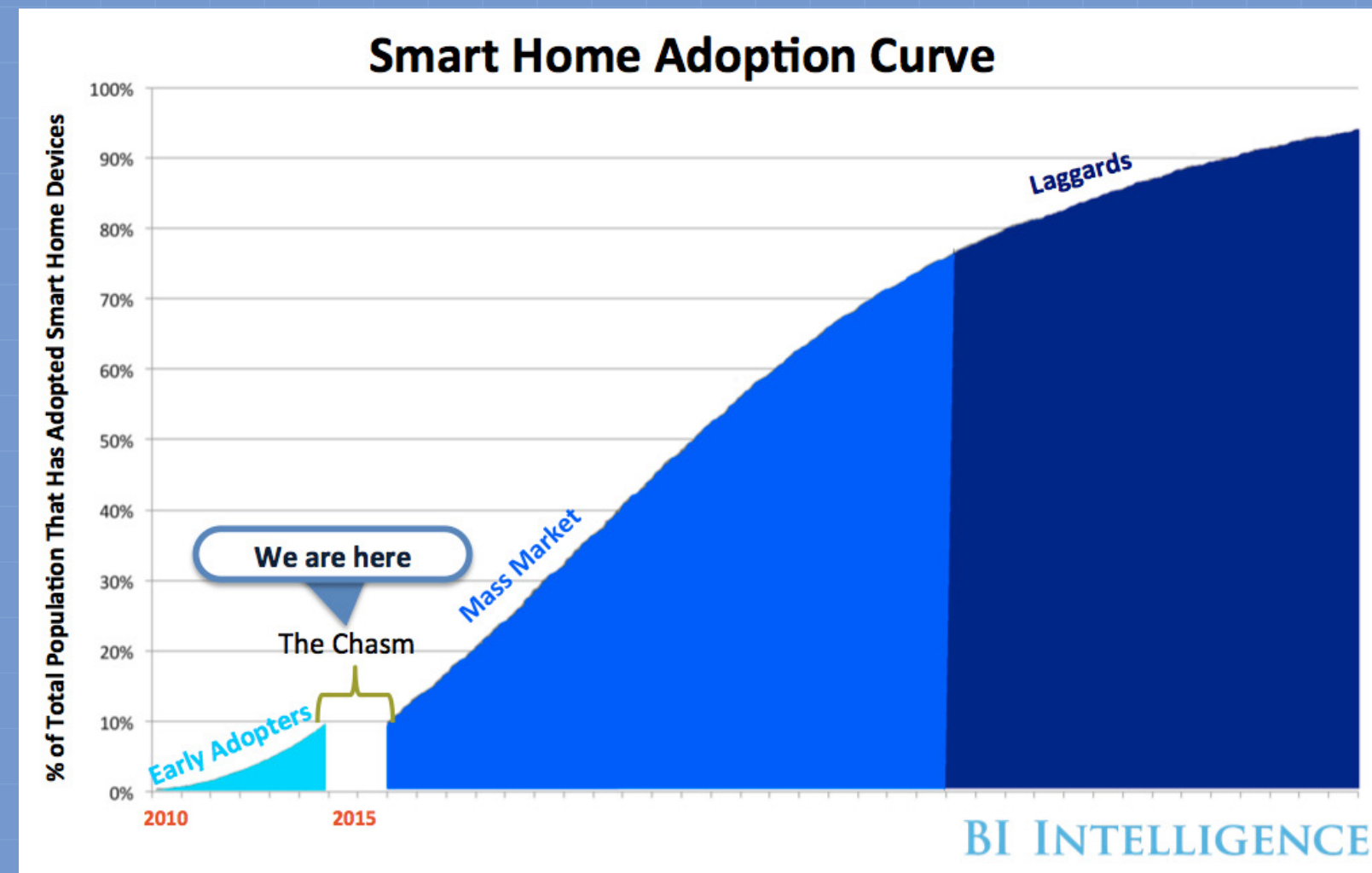
Thank You



Proposal Appendix

Are People Interested?

According to Business Insider, the market for smart-home development is on the rise. With smart-home technology on the market since 2010, the Early Adopters are out and we are currently in “The Chasm”. Right now is an integral time in determining whether the smart-home will take off or just be a fad. Business Insider suggests that if enough features make smart-homes interesting enough to consumers, the market will begin to rise around 2017 and continue until around 2030.



Source: Business Insider (<http://www.businessinsider.com/the-us-smart-home-market-report-adoption-forecasts-top-products-and-the-cost-and-fragmentation-problems-that-could-hinder-growth-2015-9>)

Who are Those People?

According to a 2015 report by Icontrol, the age range which is most interested in smart home technology are people ages 25 - 34.

What are They Looking For?

Security

90%

Savings

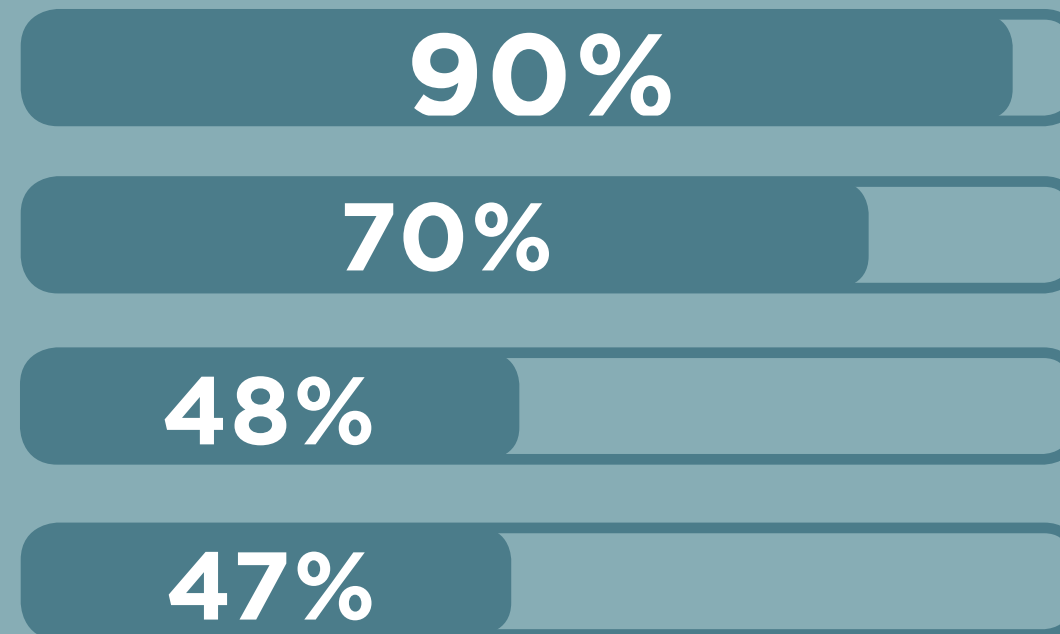
70%

Maintenance

48%

Environment

47%



Experience Strategy Design Points

- Help users to feel confident that their homes won't flood.
- If something does happen, make dealing with the issue manageable and simple.
- Engage users with information that they can comprehend.

Experience Strategy Components

The Tube

- Senses leak
- Contains leak
- Illuminates leak location
- Tracks leak flow over time
- Tracks heat and flow efficiency

The App

- Notifies user of leak
- Prompts user to respond
- Provides list of qualified service providers
- Allows user to turn water on and off
- Shows leak location on house schematic
- Provides service provider with list of potential parts required

The Hub

- Serves as valve to shut off water to leak location
- Contacts chosen parties (ie: home owner, chosen service provider, etc.) with leak information

What do They Look Like?

Primary Target Market

- Perspective First-time Homeowners
- Ages 25 - 35
- Upper-middle class income (\$150,000 - \$300,000/year)
- Technologically savvy and not mechanically inclined
- Interested in having a home which interacts with them as much as their smart devices do



Secondary Target Market

- High-end Smart home Developers
- Selling condos, apartments, or homes which are smart enabled and wanting to add more features
- Technologically and millennial market savvy

Word List

Ease-of-Use

Security

Safety

Peace of Mind

Friendly

Work Free

Informative

Simple

Trendy

User-Centric

Eco-Friendly

Compatible

Efficient

Flexible

Smart

Intelligent

Connected

Worry Free

Waste Free

Away Mode

Cost Effective

Engaging

Easy to Learn

Keywords:

Easy

Intelligent

Peace of Mind

Brand Names

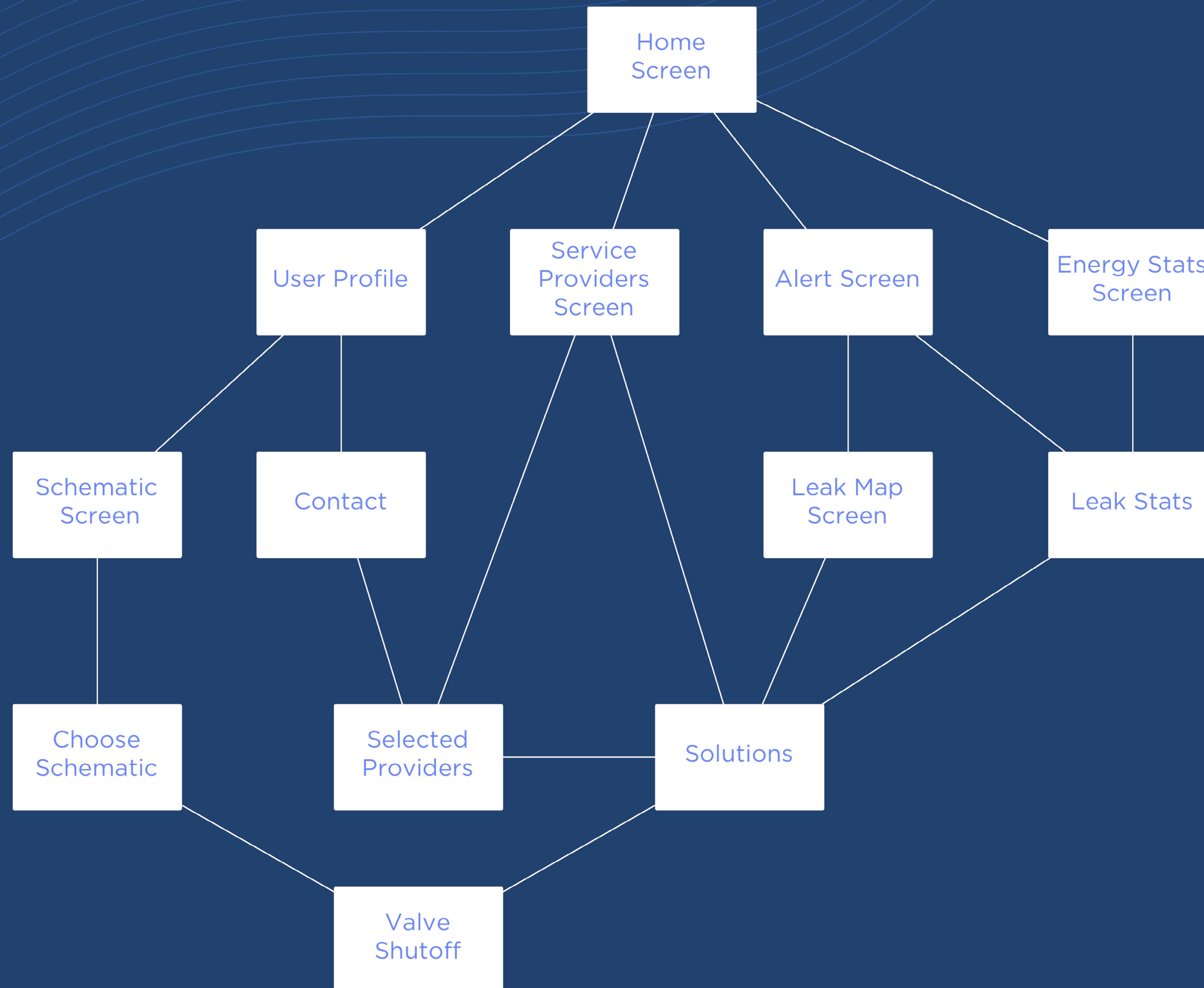
Drip Point

Leak Detect

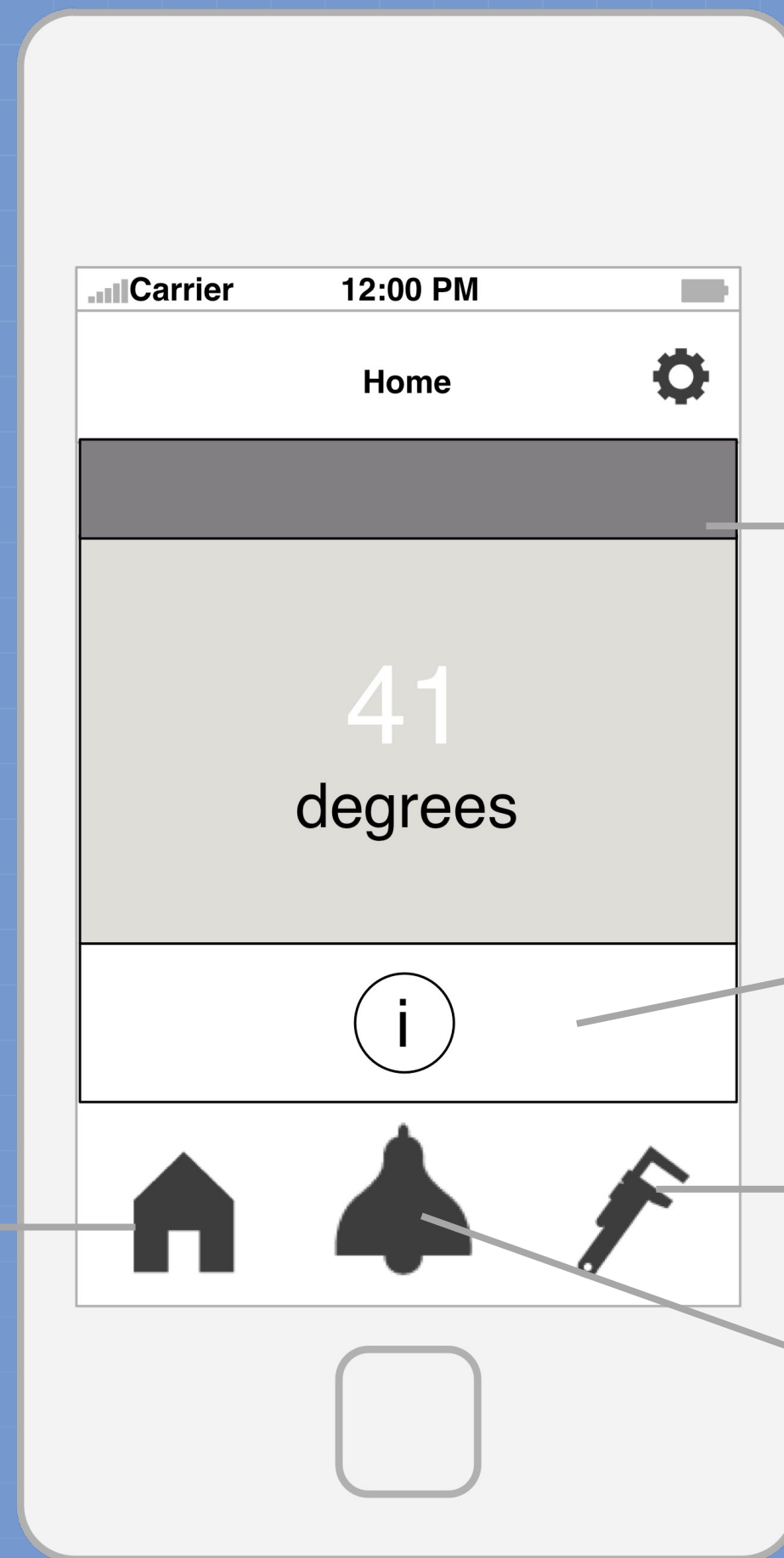
Sense

Drip

INFORMATION ARCHITECTURE MAP



Home Screen



Status

Green = OK

Yellow = Leak

Red = Burst Pipe

Quick Info

Home Profile

Service Providers

Home Notifications

Leaks

Maintenance

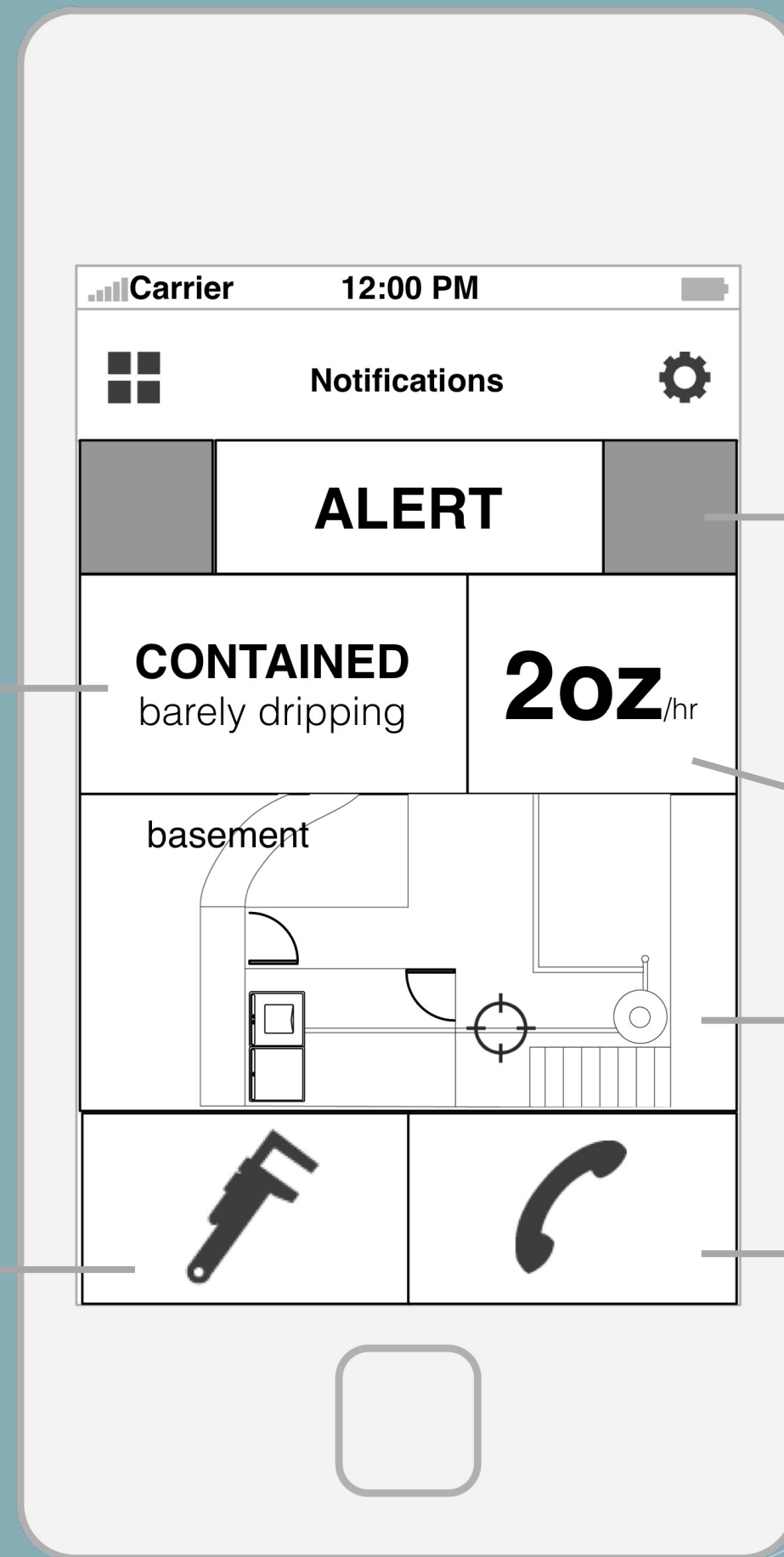
Temp Out of Range

Notifications Screen

Leak Status

Contained by pipe
Actionable Info

Service Provider List



Severity

Yellow = Issue
Red = Critical

Flow Rate

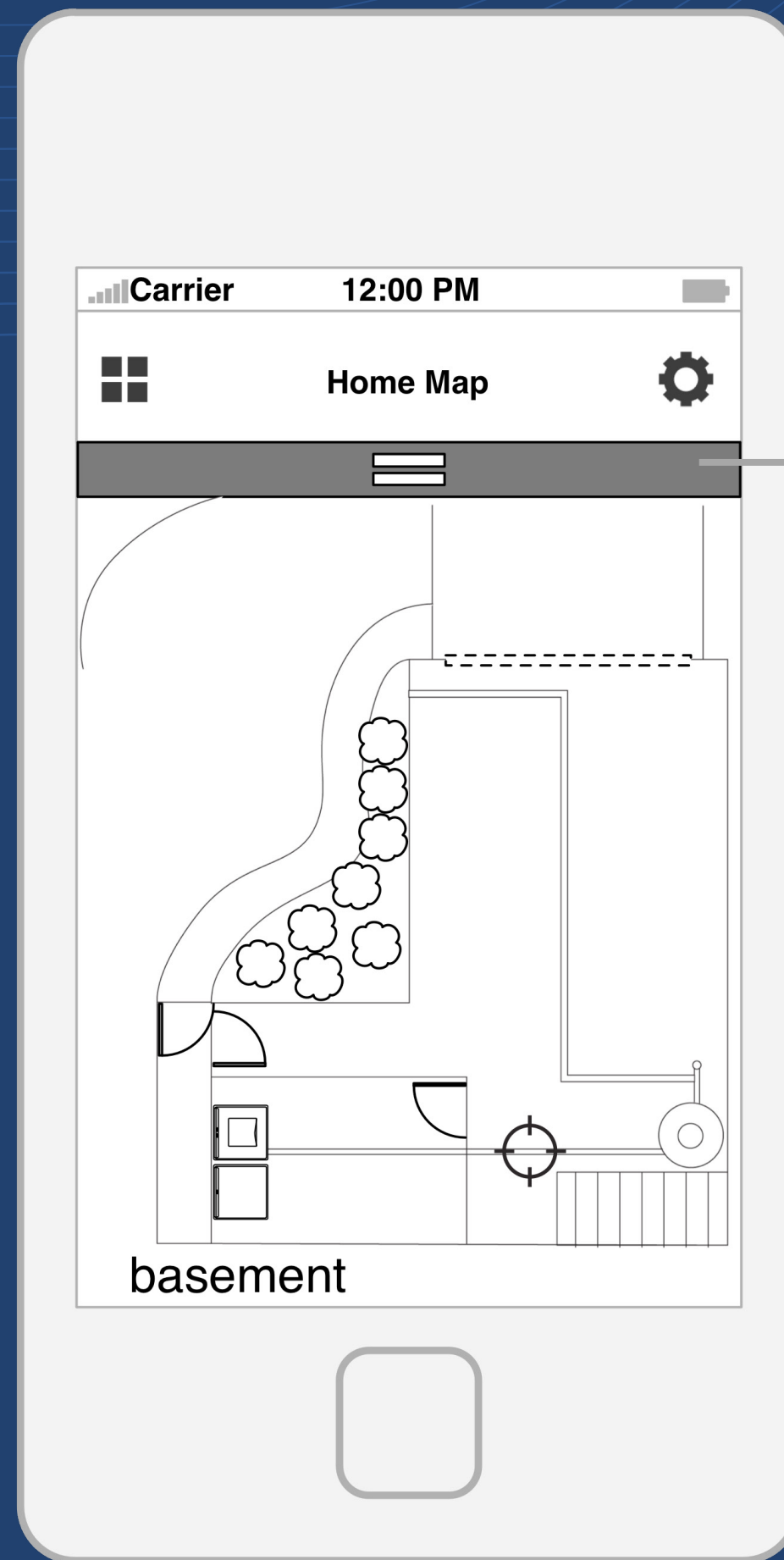
Leak Location on House Schematic

Call Selected Provider

Map Screen

UI Animation

1. User pulls down on handle
2. Menu opens to reveal floors

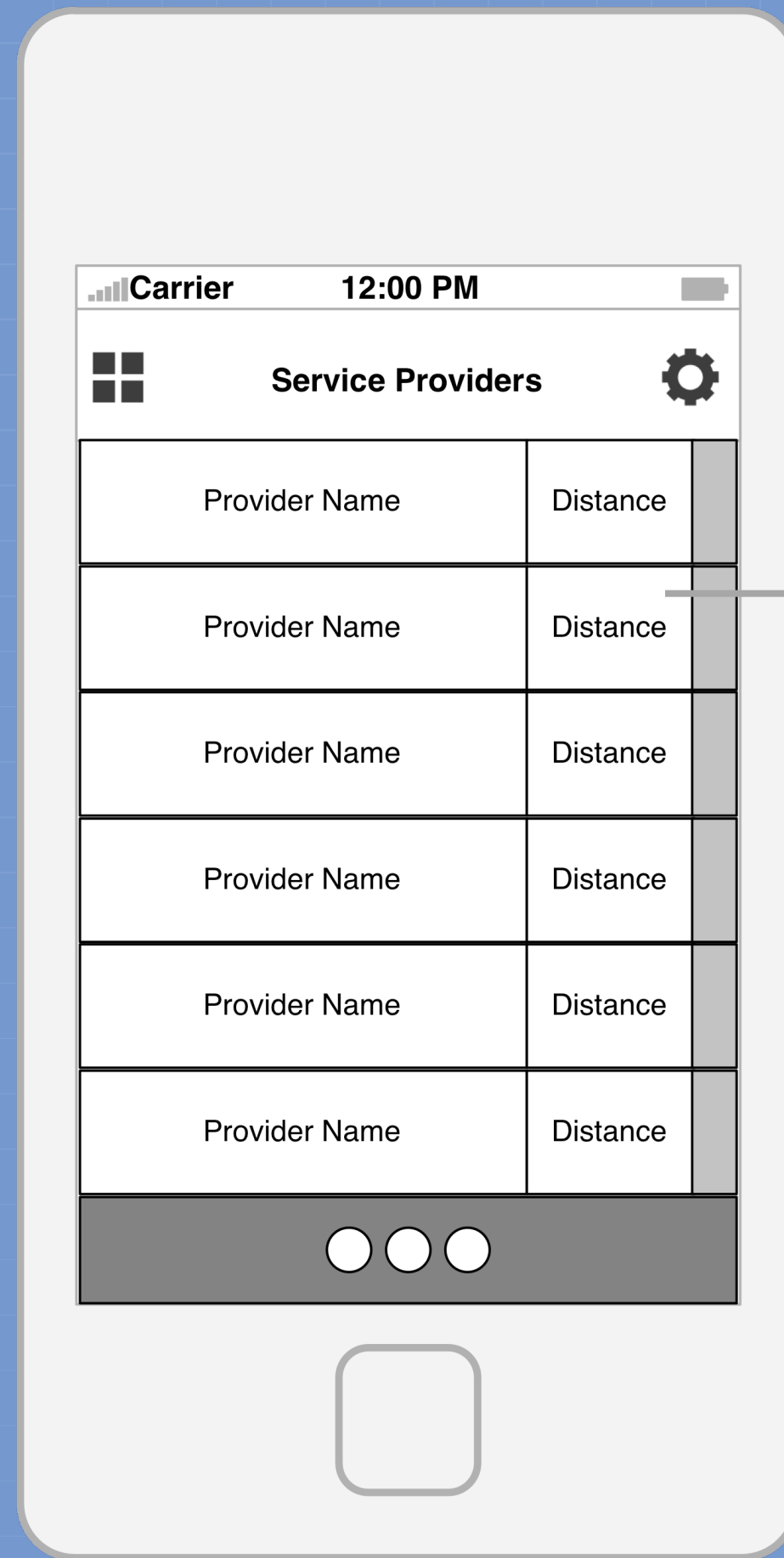


Floor Selection

Service Provider Screen

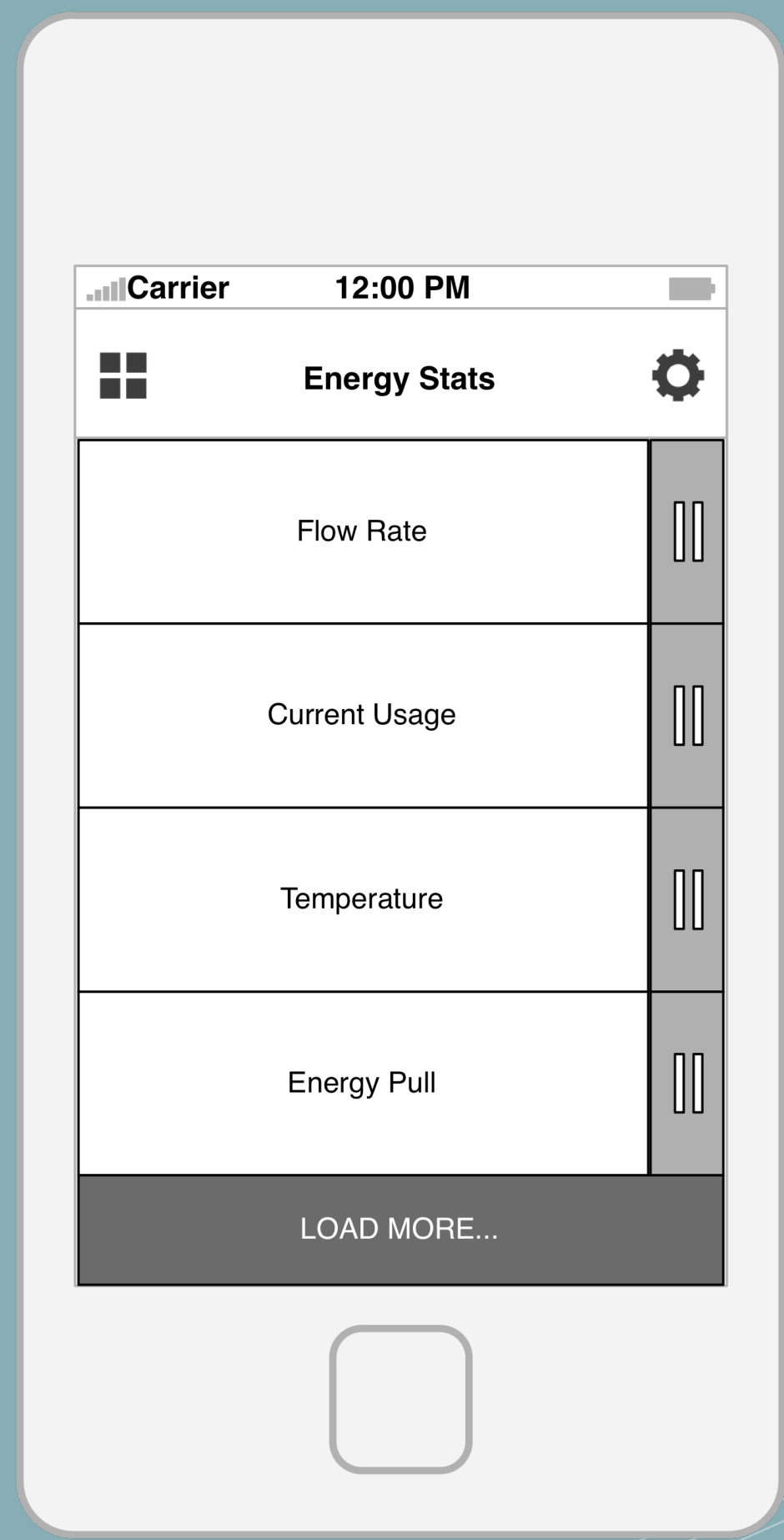
UI Animation

1. User swipes left on provider name
2. Name slides left to reveal call button

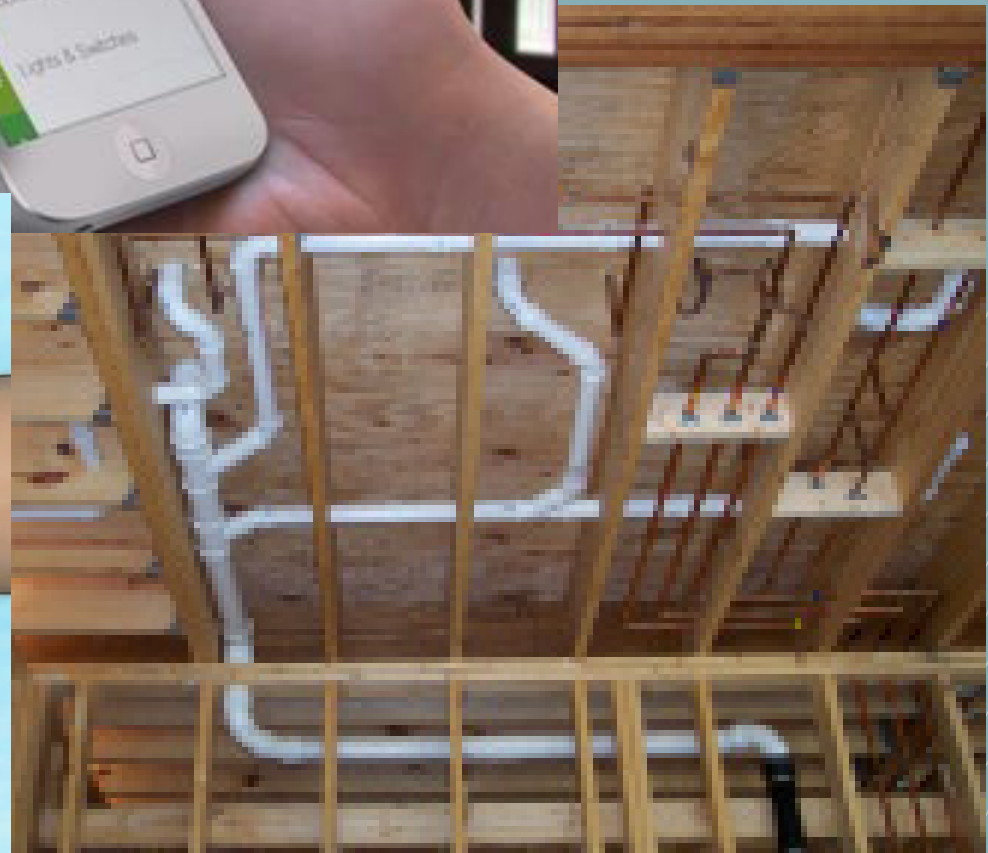
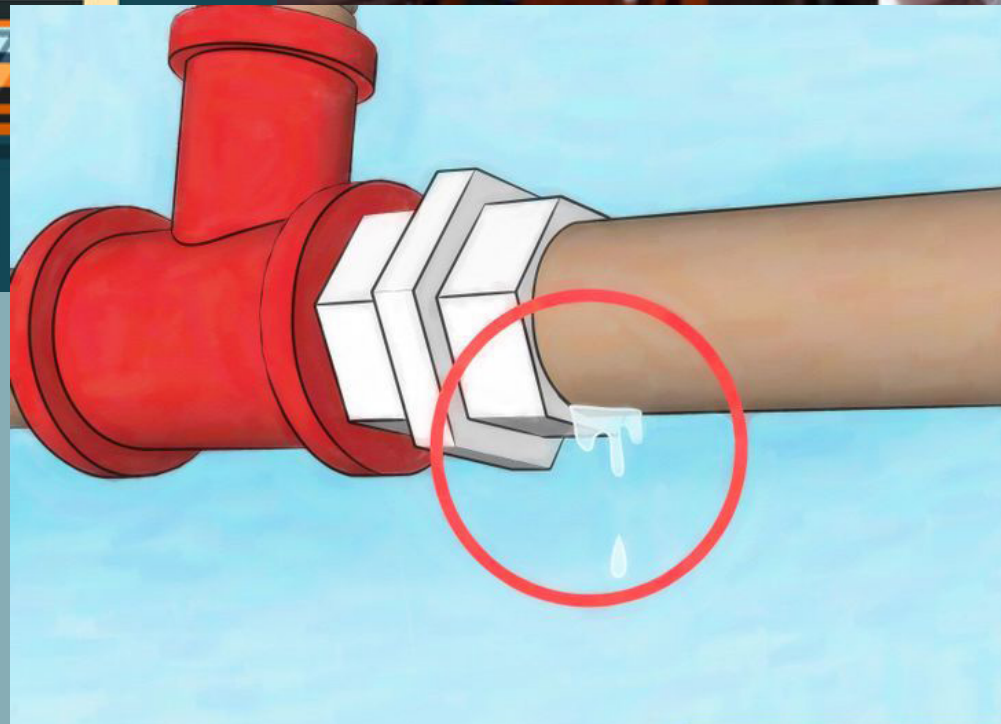
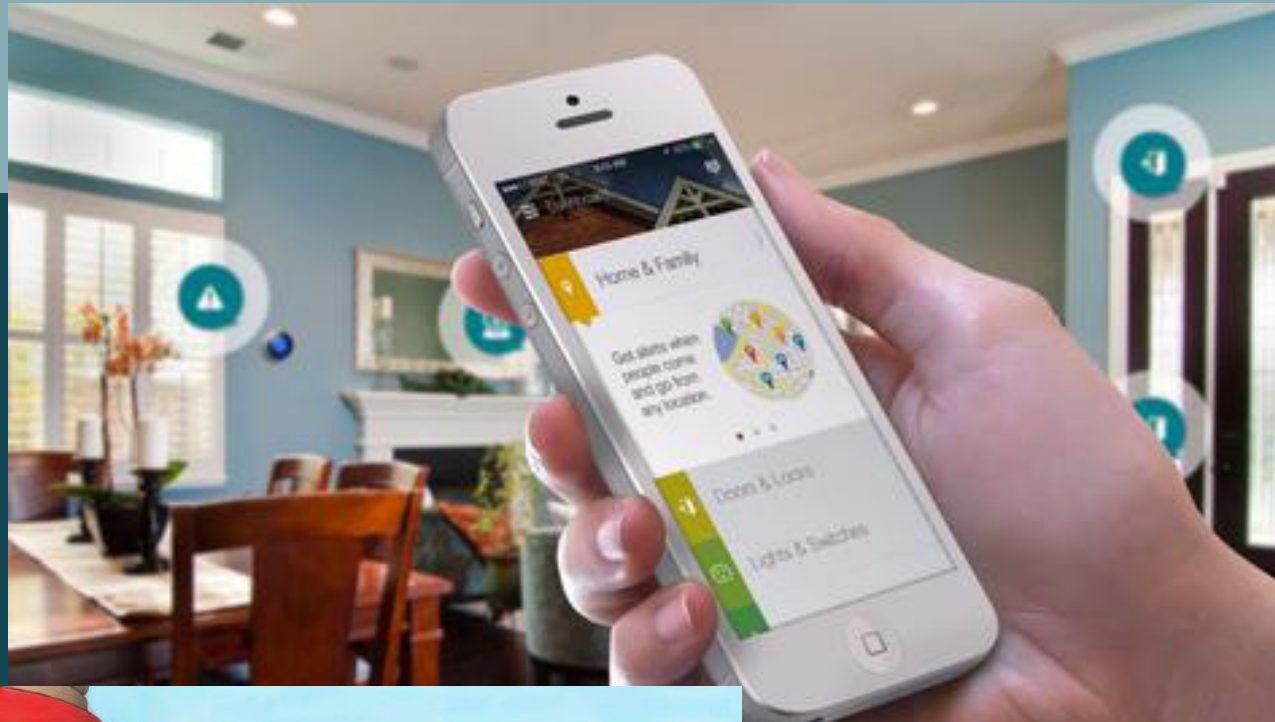


Service Provider by Distance

Energy Stats Screen



Moodboard



Branding Elements

Logo

Drip

Type

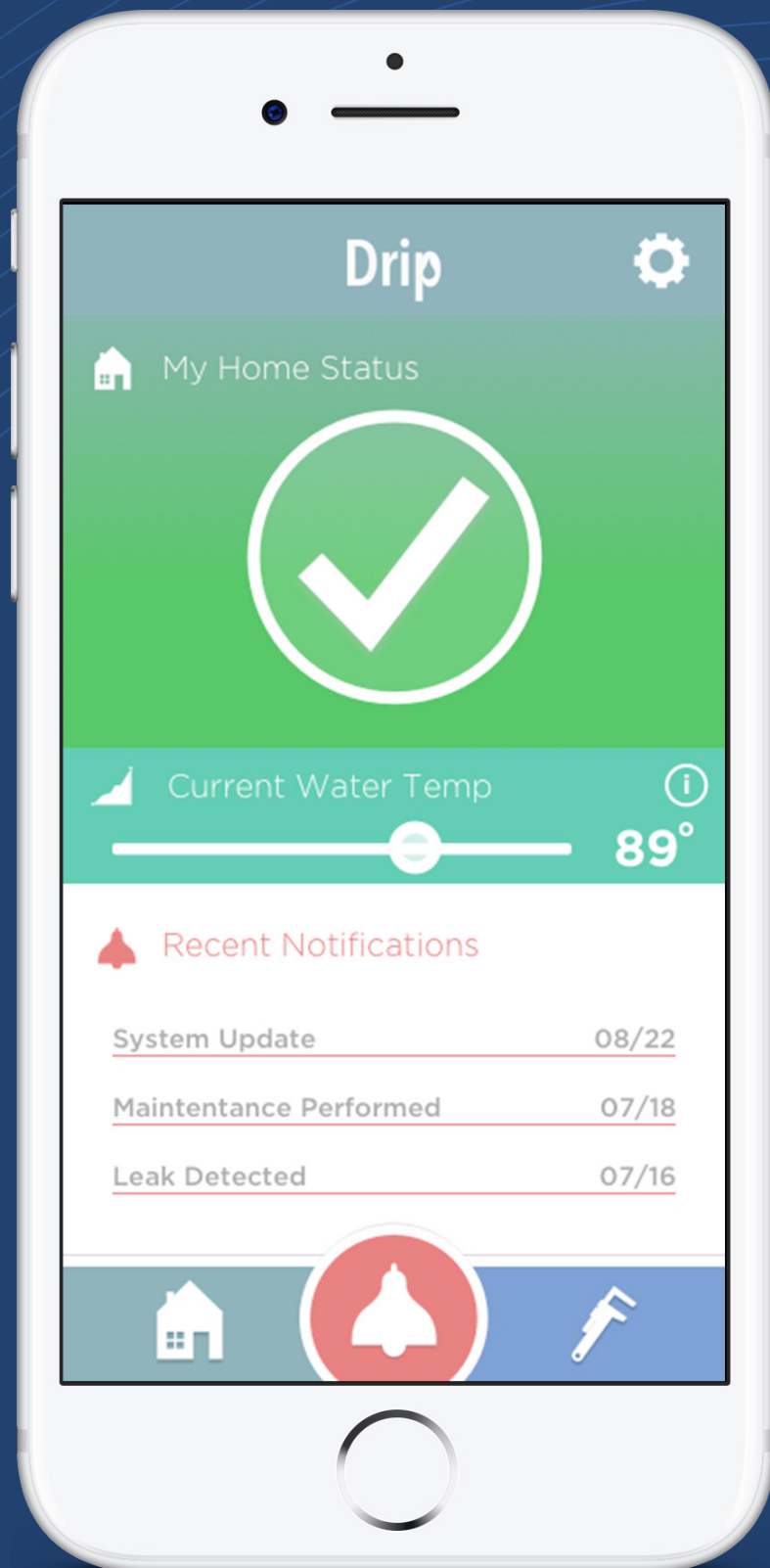
GOTHAM

Gotham XNarrow

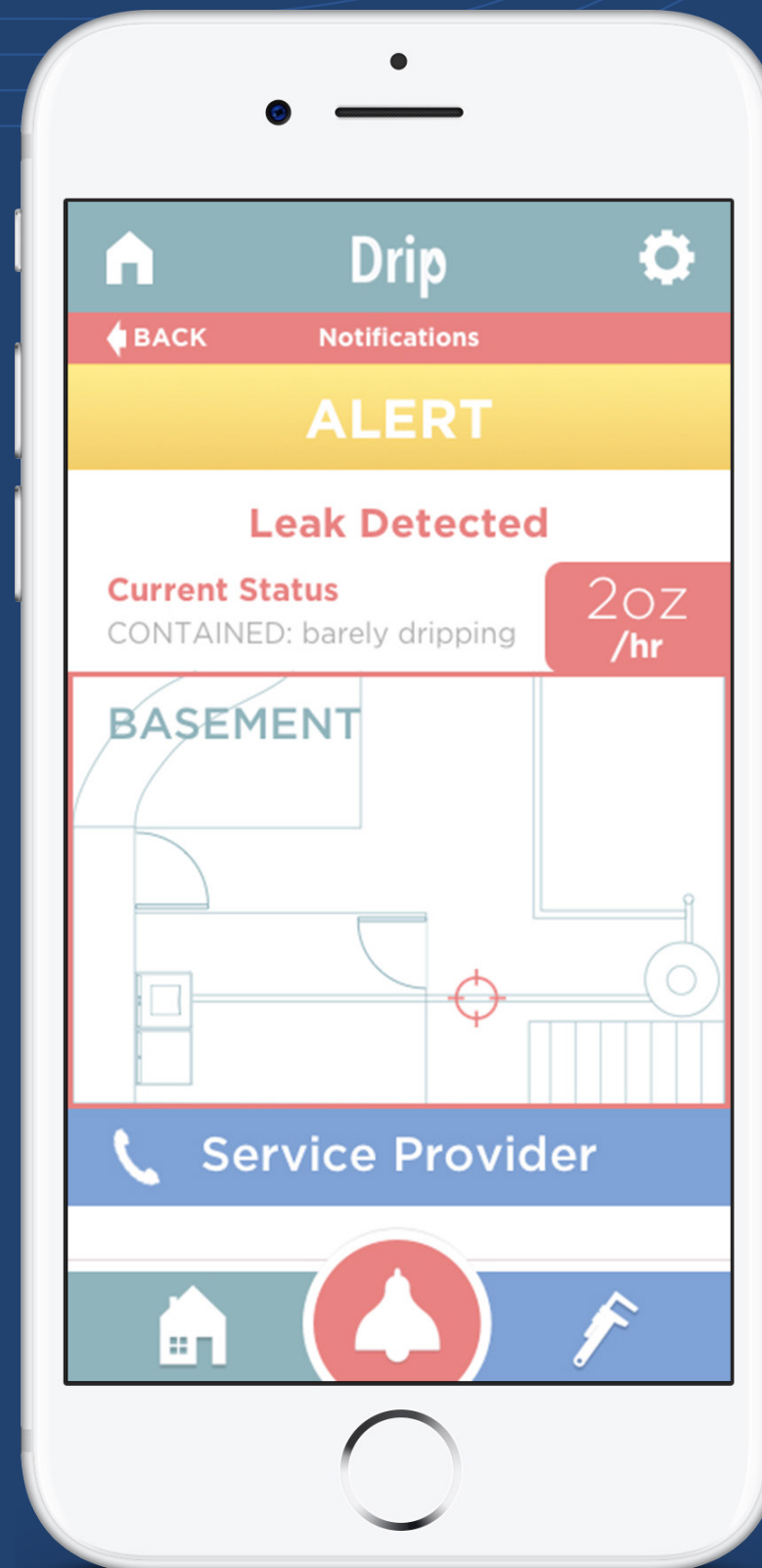
Color Choices



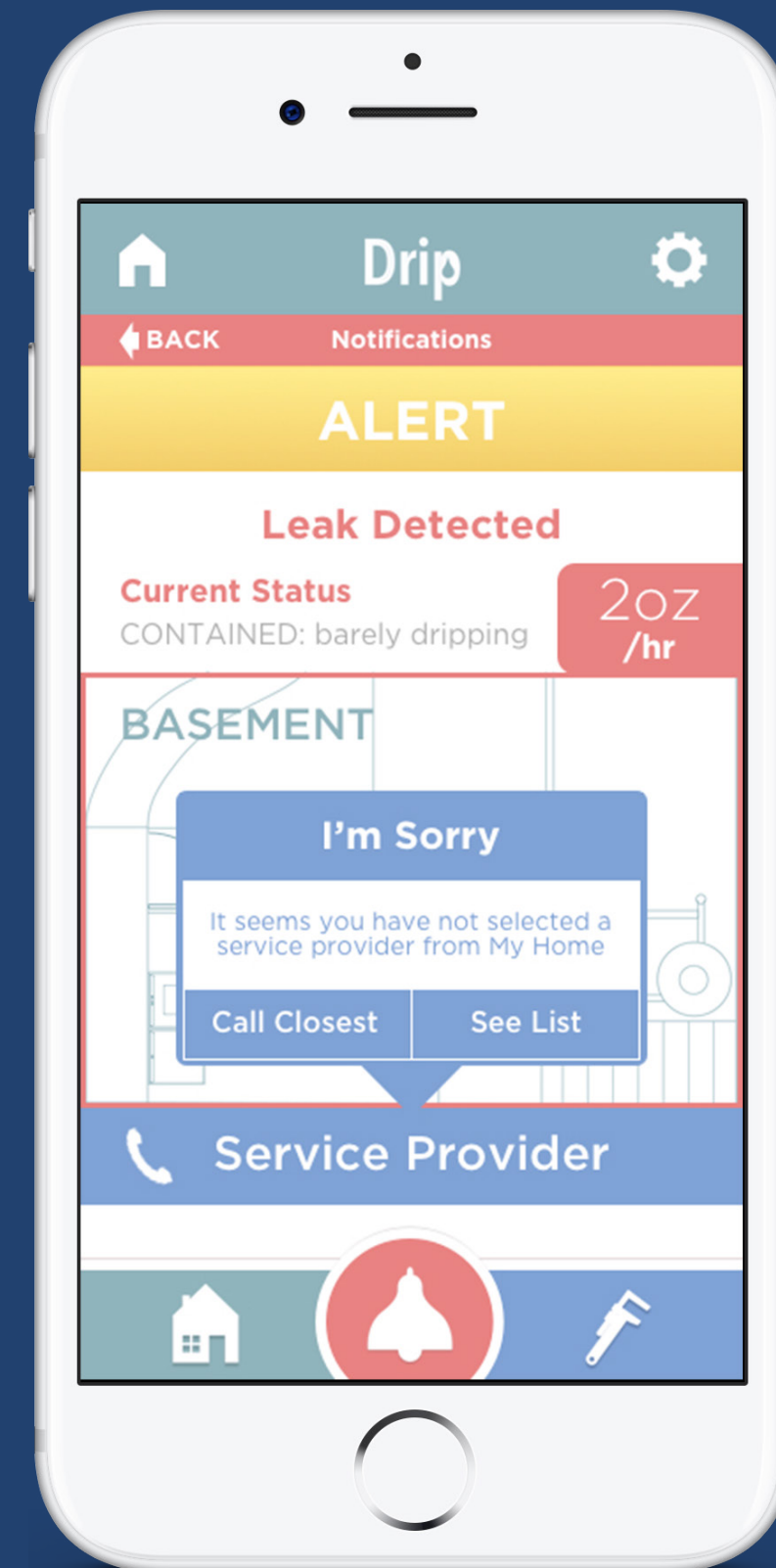
Home Screen



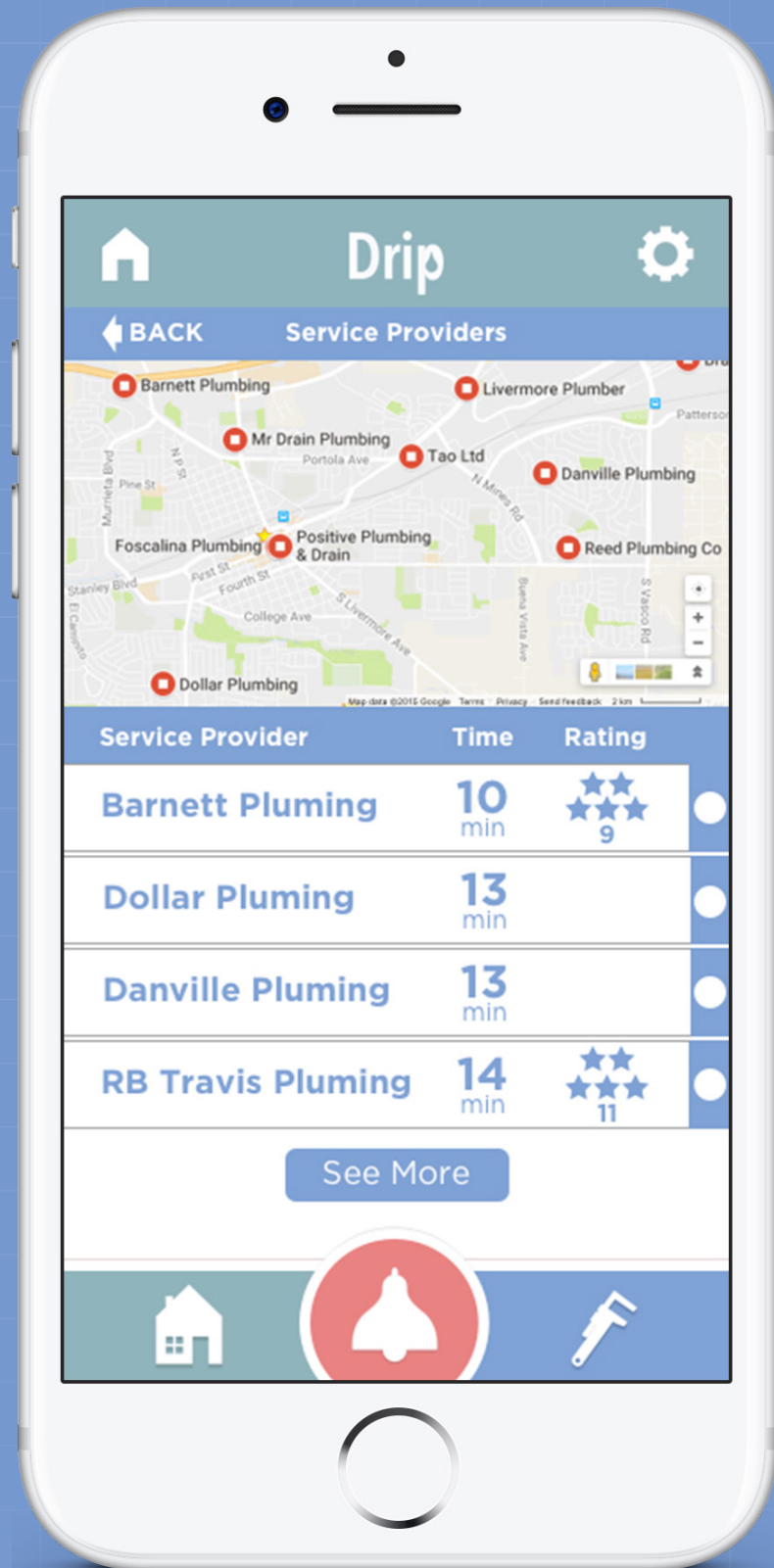
Alert Screen



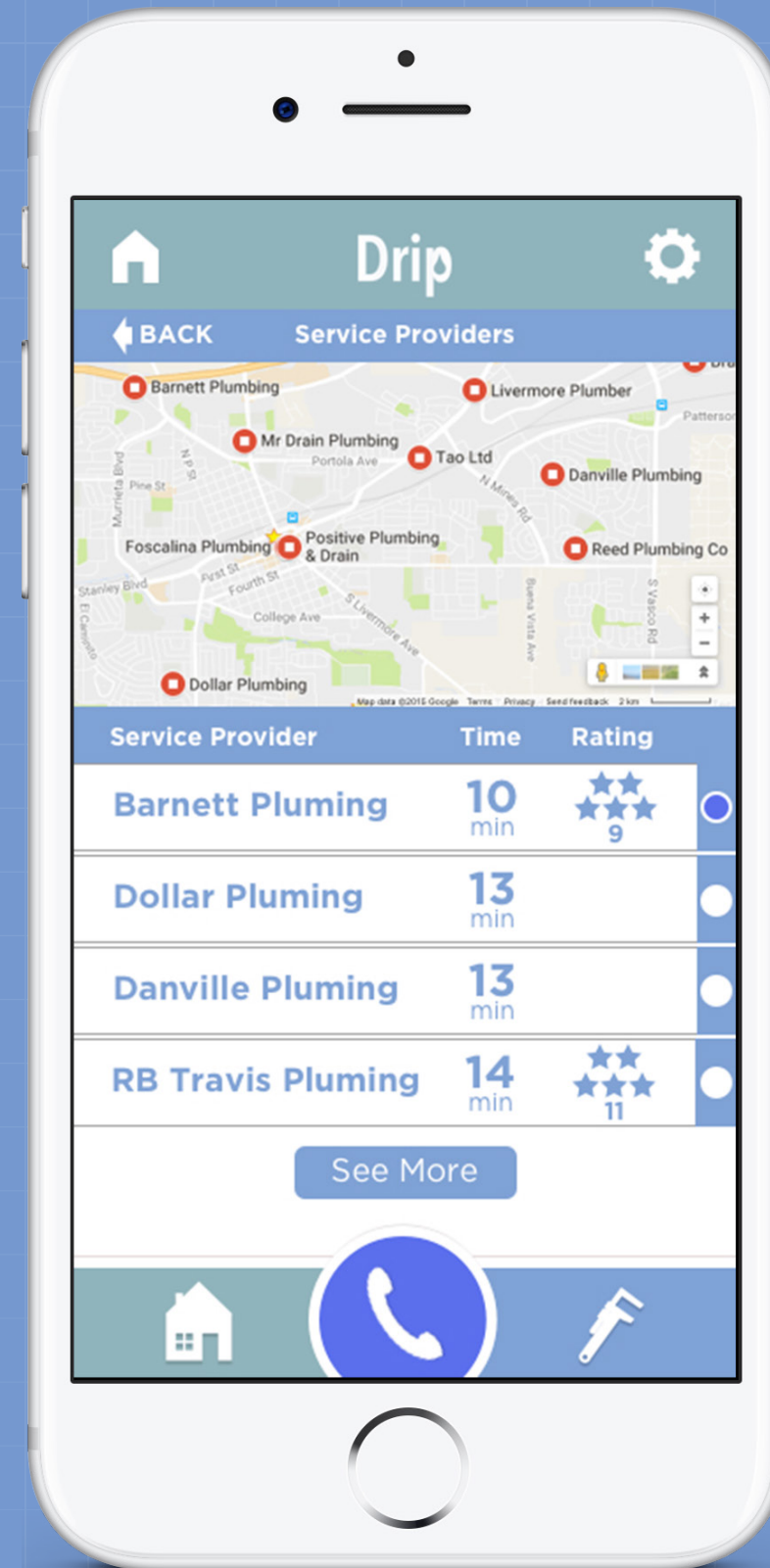
Alert Interaction



Service Provider Screen



Service Provider Interaction



Testing Plan

Session Date: Thursday October 6, 2016

Session Duration: 5-10 mins/each

Environment

- Living room of Participant's house, as it is an informal setting which will make the subjects more comfortable.
- Device Setup
 - 2012 Macbook Pro
 - 1440x900 screen
- Interactive Prototype
 - High-fidelity Mobile Prototype
 - Invision.com
 - Setup for Persona A
 - use case scenario

Study Goals

- Determine whether users can perform primary use case scenario
- Determine if users understand the language used and can make decisions based on it
- Determine whether iconography and color usage accurately describe app usage.

Participants



Sher Zannifer



Gabriella Iacovetti



Sara Agee



Michael Nannini



Participant Tasks:

- **Initial Scenario**

“You are on a vacation and you receive a notification that your house has a leak in it. You need to respond by calling a plumber. How do you do it?”

- **Testing Variables**

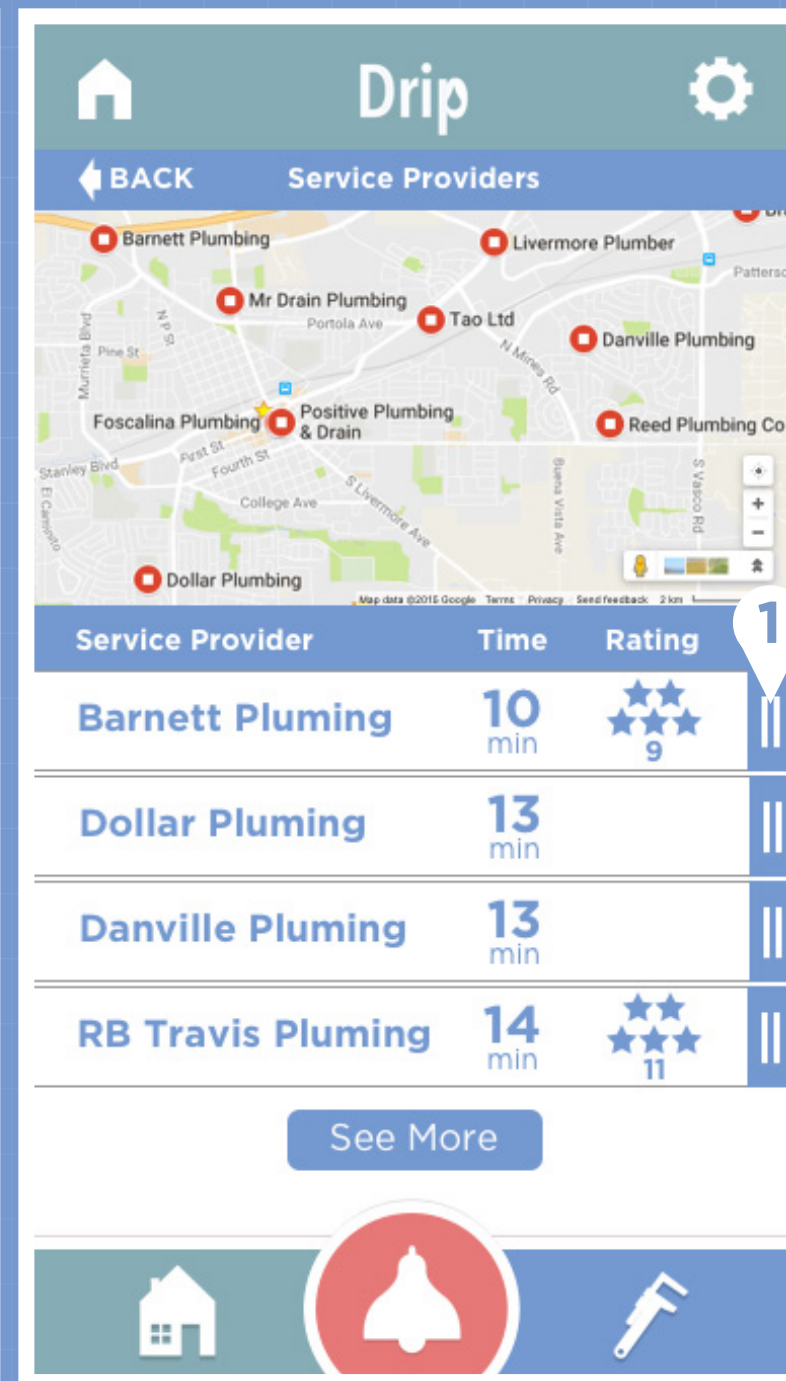
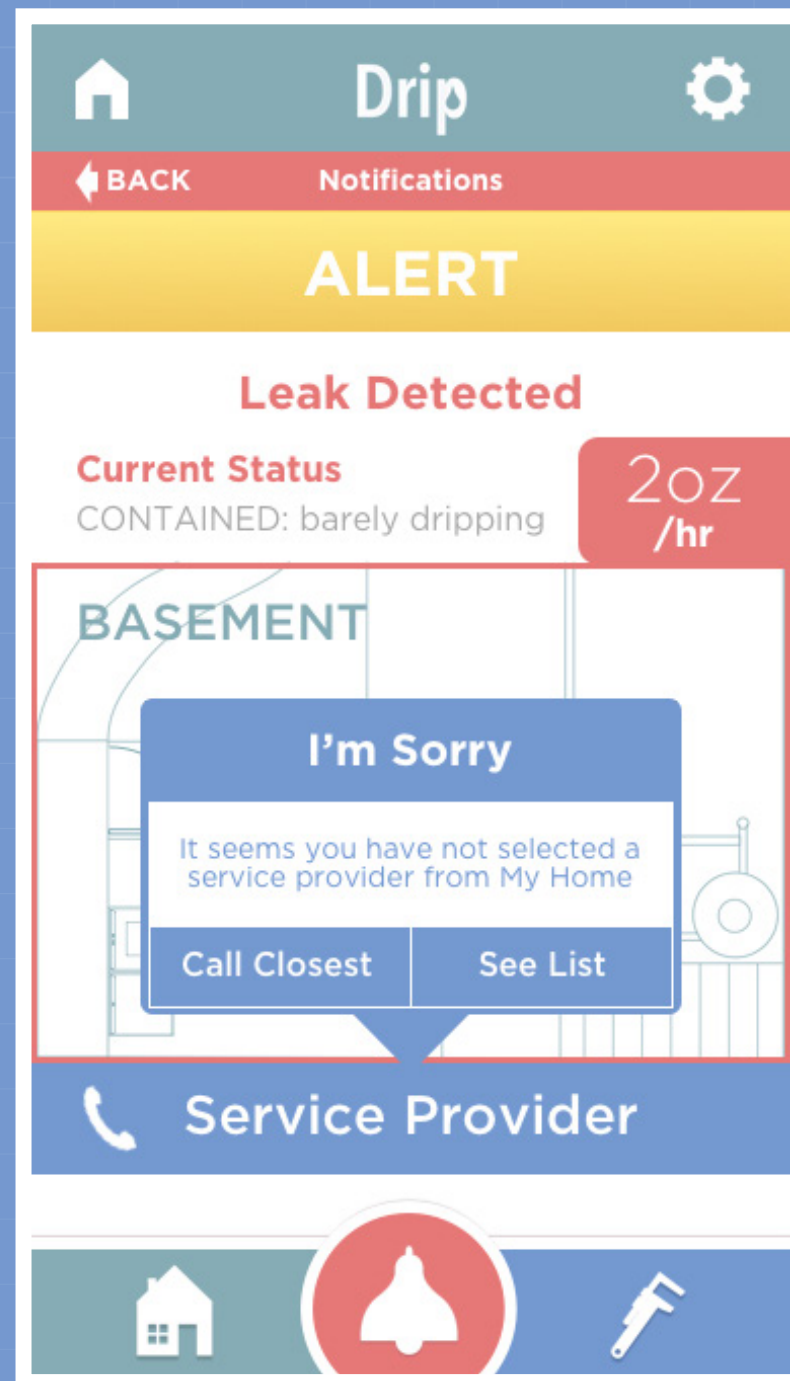
If participant chose to “Call Closest”: Redirect to “See List” to see if they could navigate that screen.

- **Iconography and Color Scheme**

Did you find particular significance to the colors in the design?

Initial Scenario

“You are on a vacation and you receive a notification that your house has a leak in it. You need to respond by calling a plumber. How do you do it?”



75% of participants got stuck on the Service Providers page because they didn't understand the meaning of the double bars. 1



Call Closest Plumber = Pass
Call Plumber picked from list = Fail



Call Closest Plumber = Pass
Call Plumber picked from list = Fail



Call Closest Plumber = Pass
Call Plumber picked from list = Fail



Call Closest Plumber = Pass
Call Plumber picked from list = Pass

Testing Variables

If participant chose to “Call Closest”:
Redirect to “See List” to see if they could navigate that screen.

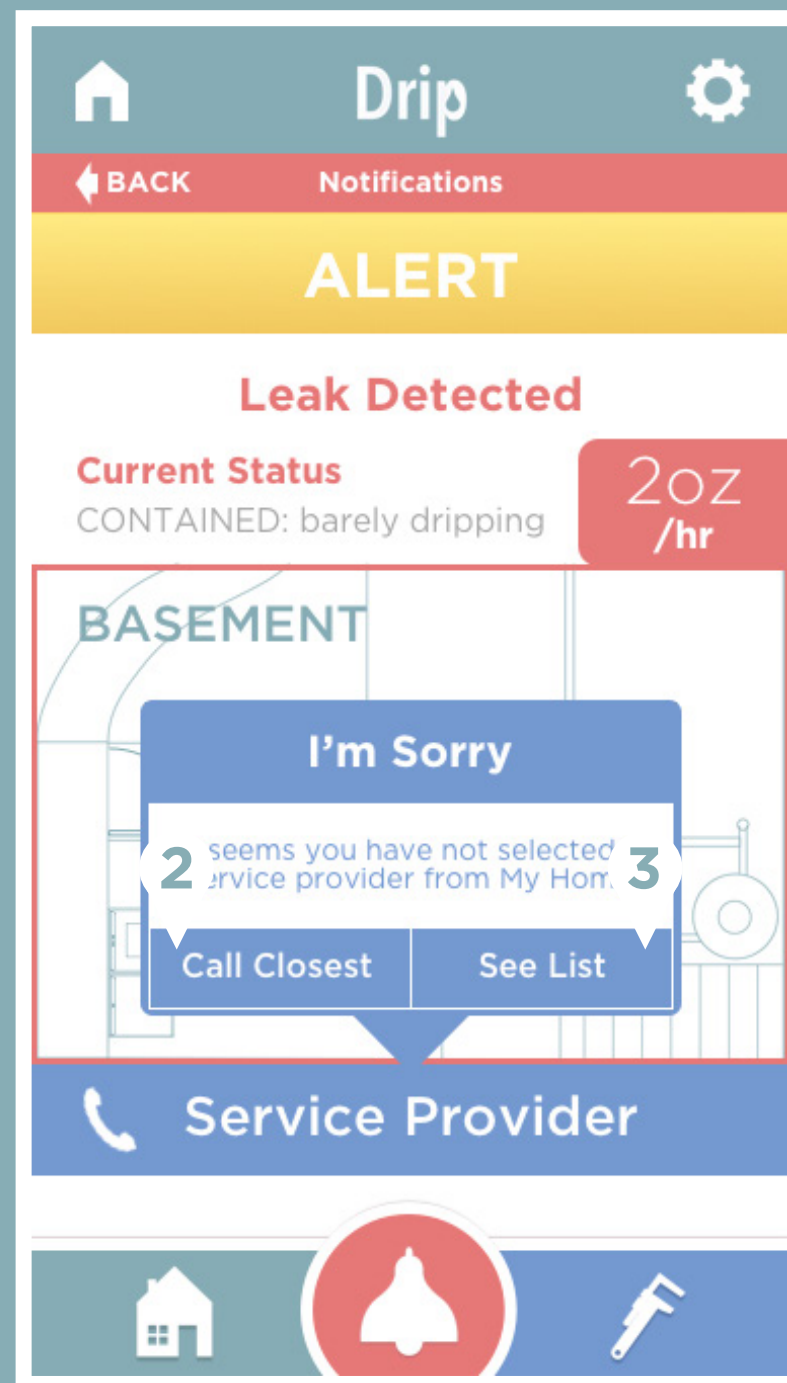
50% of participants chose to call the closest plumber while the other chose to see a list

“...I wouldn't know what to look for in a plumber anyways...”



2

“It just seemed easier...”



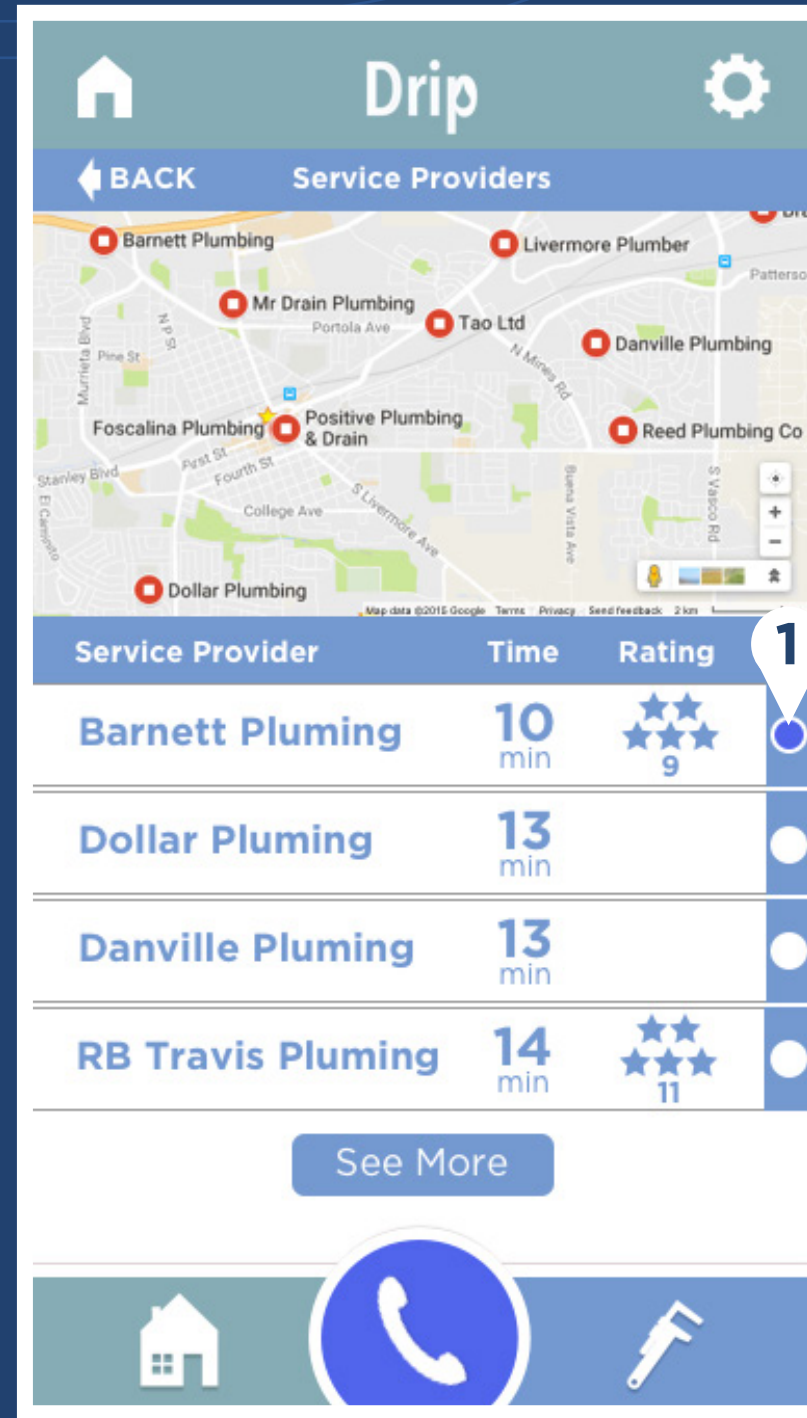
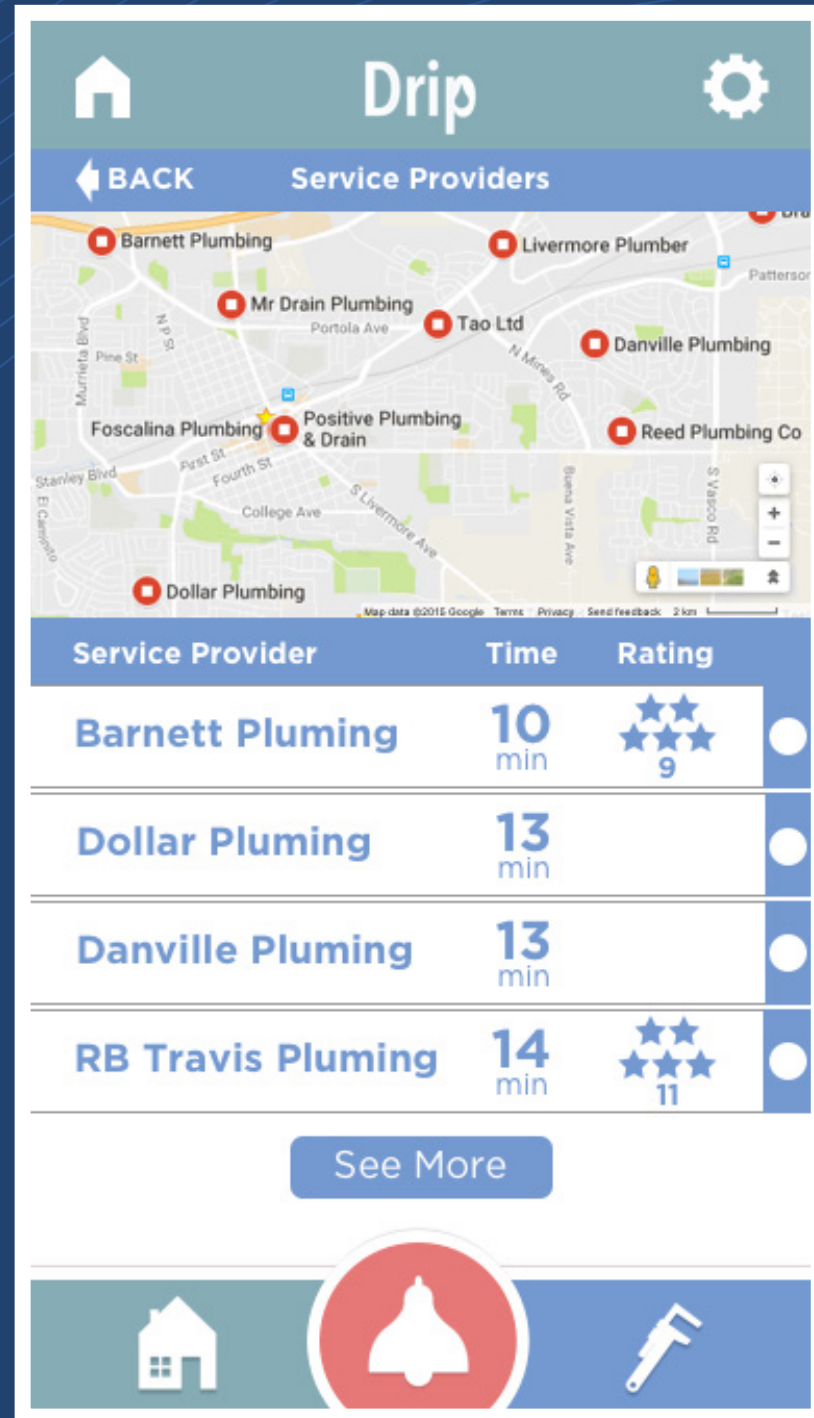
3

“I want to know exactly who is in my house...”



“It said the leak was contained, so I wanted to make sure I got the best plumber.”

Design Improvement



Design Feedback

75% of participants got stuck on the Service Providers page because they didn't understand the meaning of the double bars.

Design Decision 1

New design allows users to select which service provider they want to call. The center button changes based on the action at hand.

Iconography and Color Scheme

“Did you find particular significance to the colors in the design?”



The color scheme is lively and fun.



The double bars on the Service Providers screen didn't make her think they did anything.



She wasn't sure which of the buttons was the right one until she read the label.

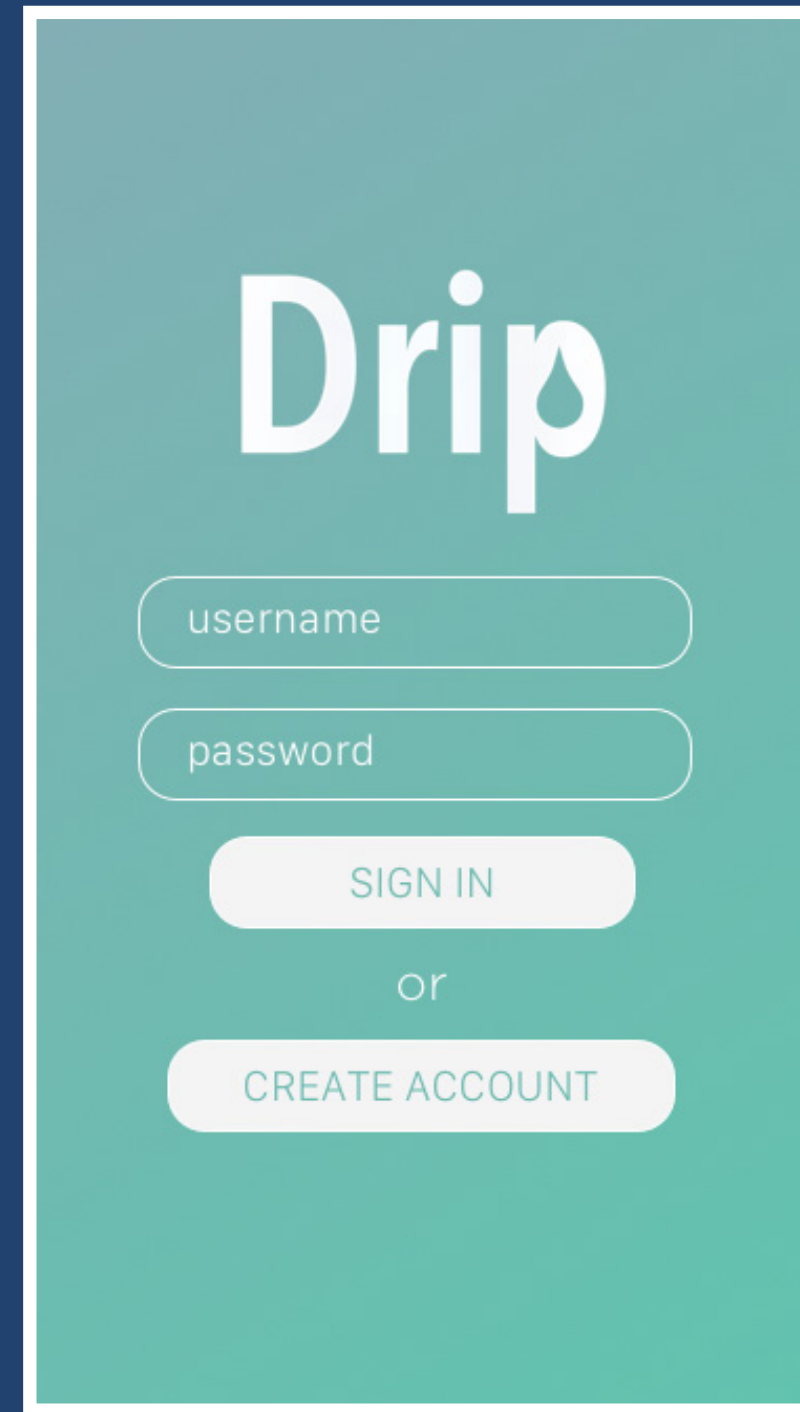


He realized that everything with a color background was clickable. This allowed him to realize that the double bars was a button.

Landing Screen



Loading Screen



Onboard Screen 1

Welcome to
Drip

TELL US A LITTLE ABOUT YOURSELF

Hi, my name is
insert name

You can reach me at
insert phone

You sound awesome!

NEXT STEP

○ ● ●

Onboard Screen 2

Drip

YOU SOUND AWESOME, BUT TO KEEP YOUR HOME SAFE, WE NEED A FEW MORE THINGS

First, we need to know which house you live in
home address

Second, we have to pair your system with our app
home serial number ⓘ

OK, we're almost there!

NEXT STEP

● ○ ●

Onboard Screen 3

Drip

FINALLY, WE NEED TO KNOW WHO TO CALL IN CASE SOMETHING DOES HAPPEN

If a leak occurs, who do you want us to contact besides yourself?

nearby plumbers ⇄

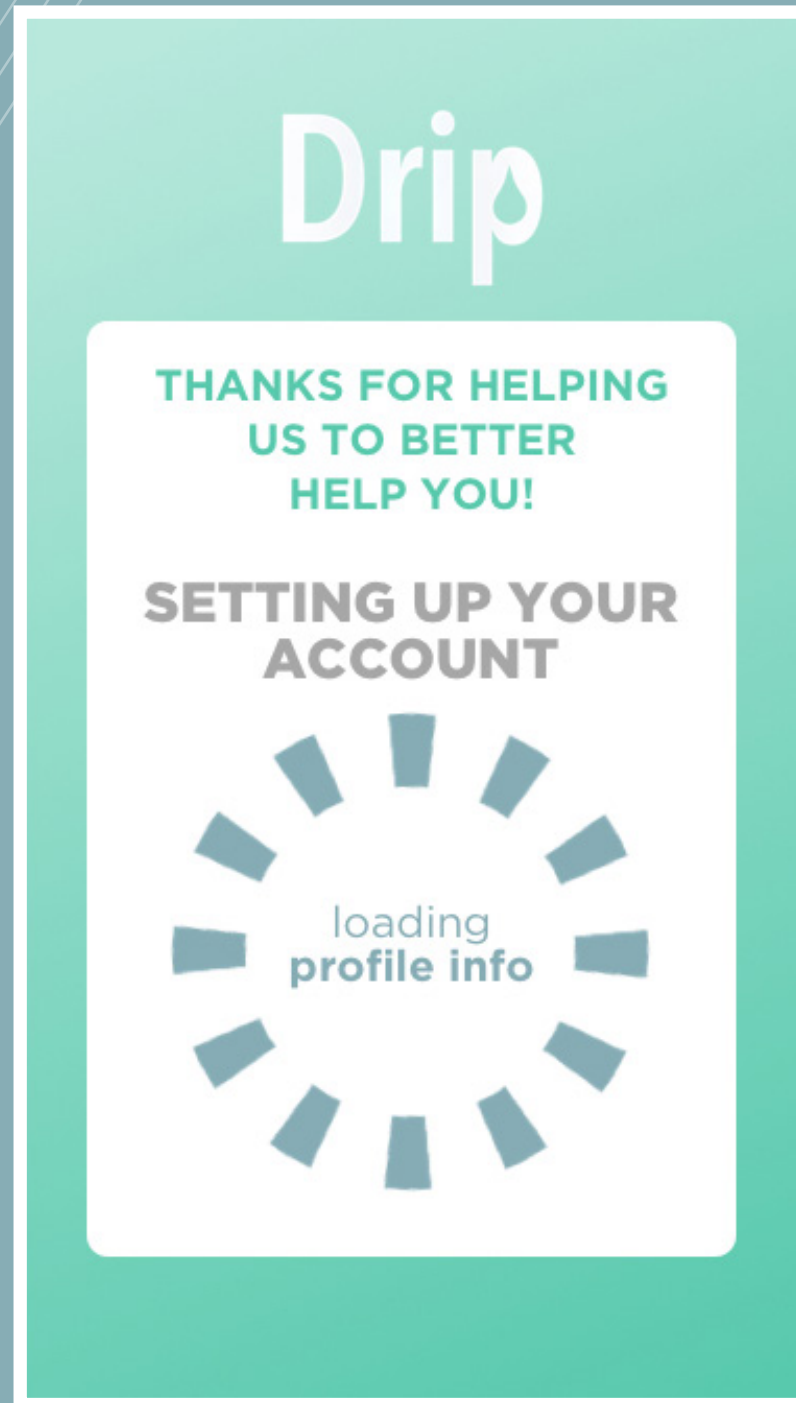
Map List

landlord contact

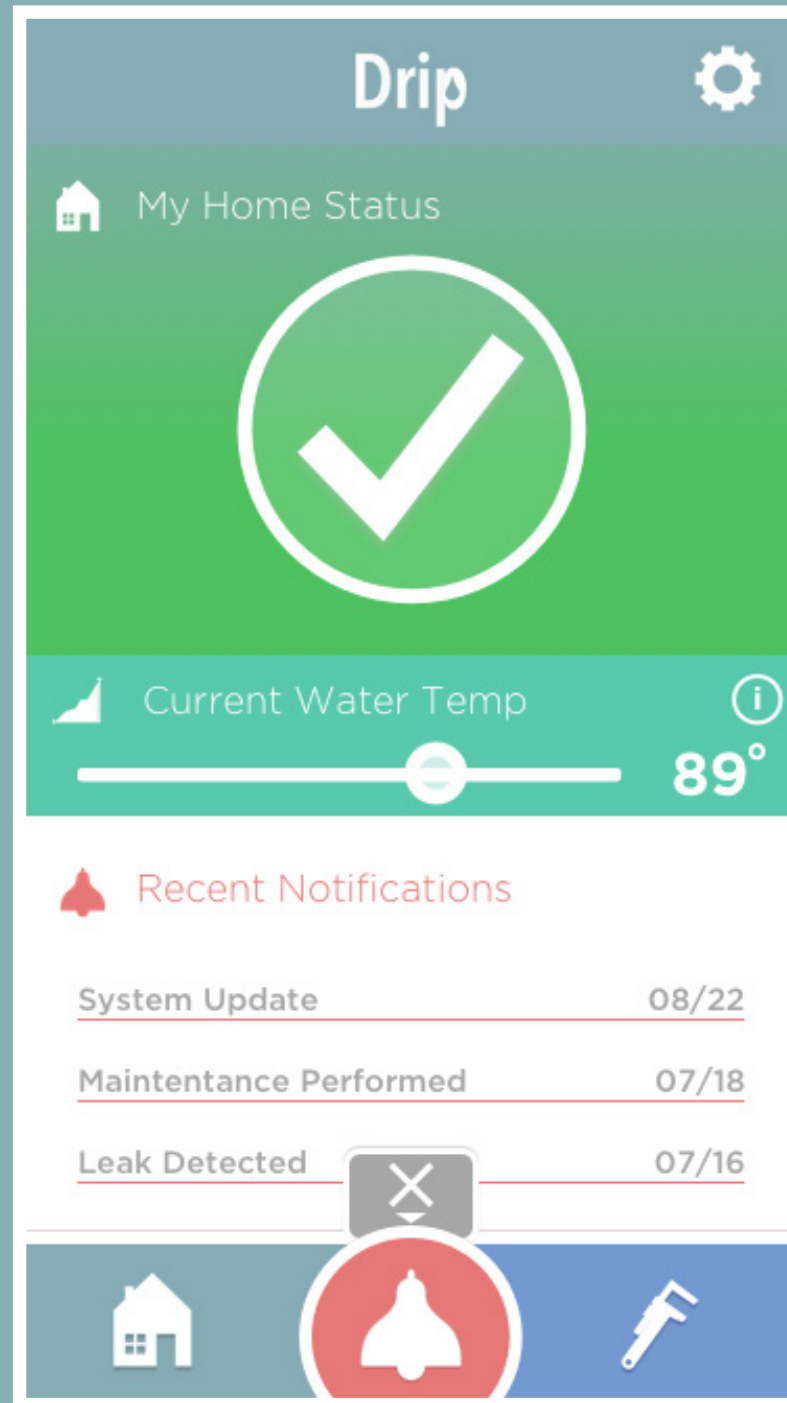
FINISH

● ○ ●

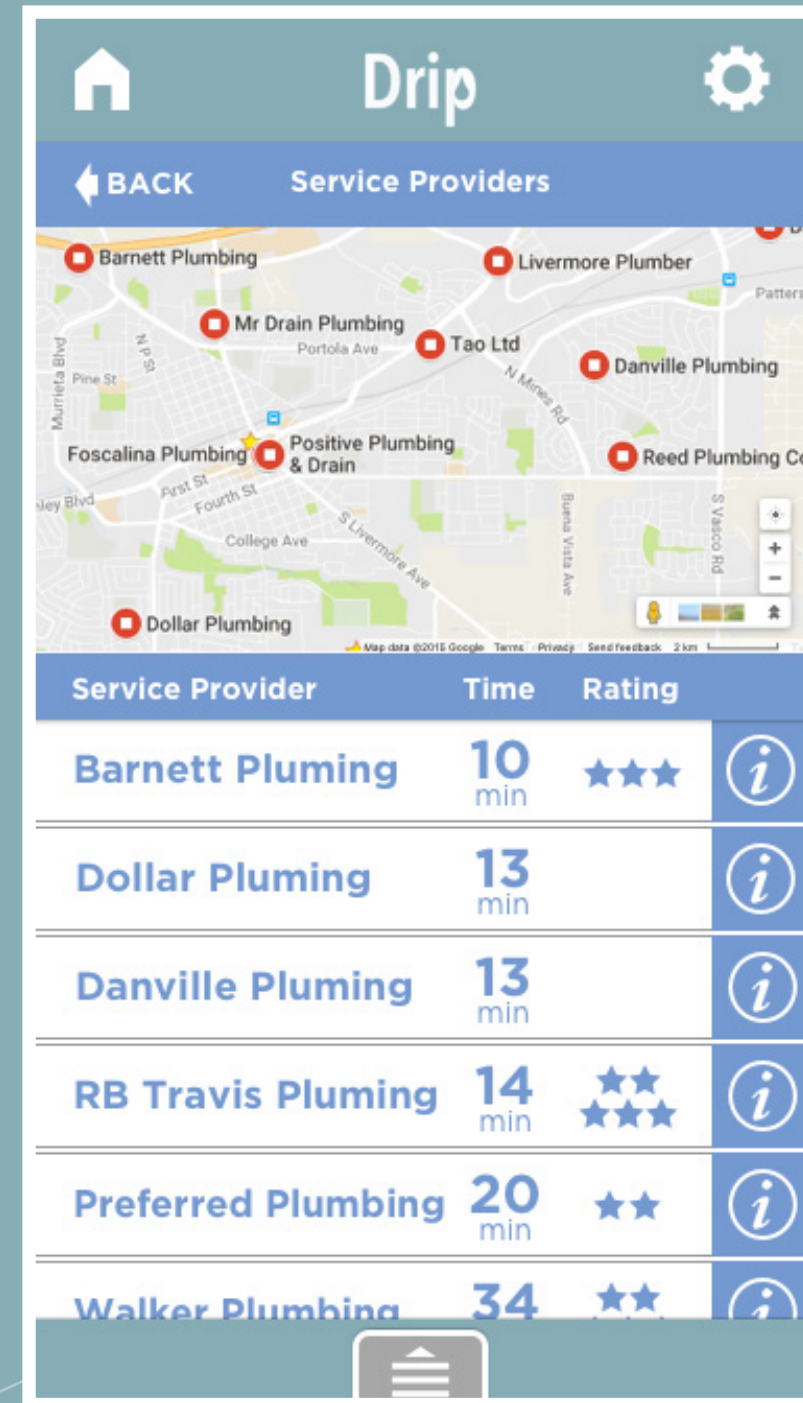
Onboard Success



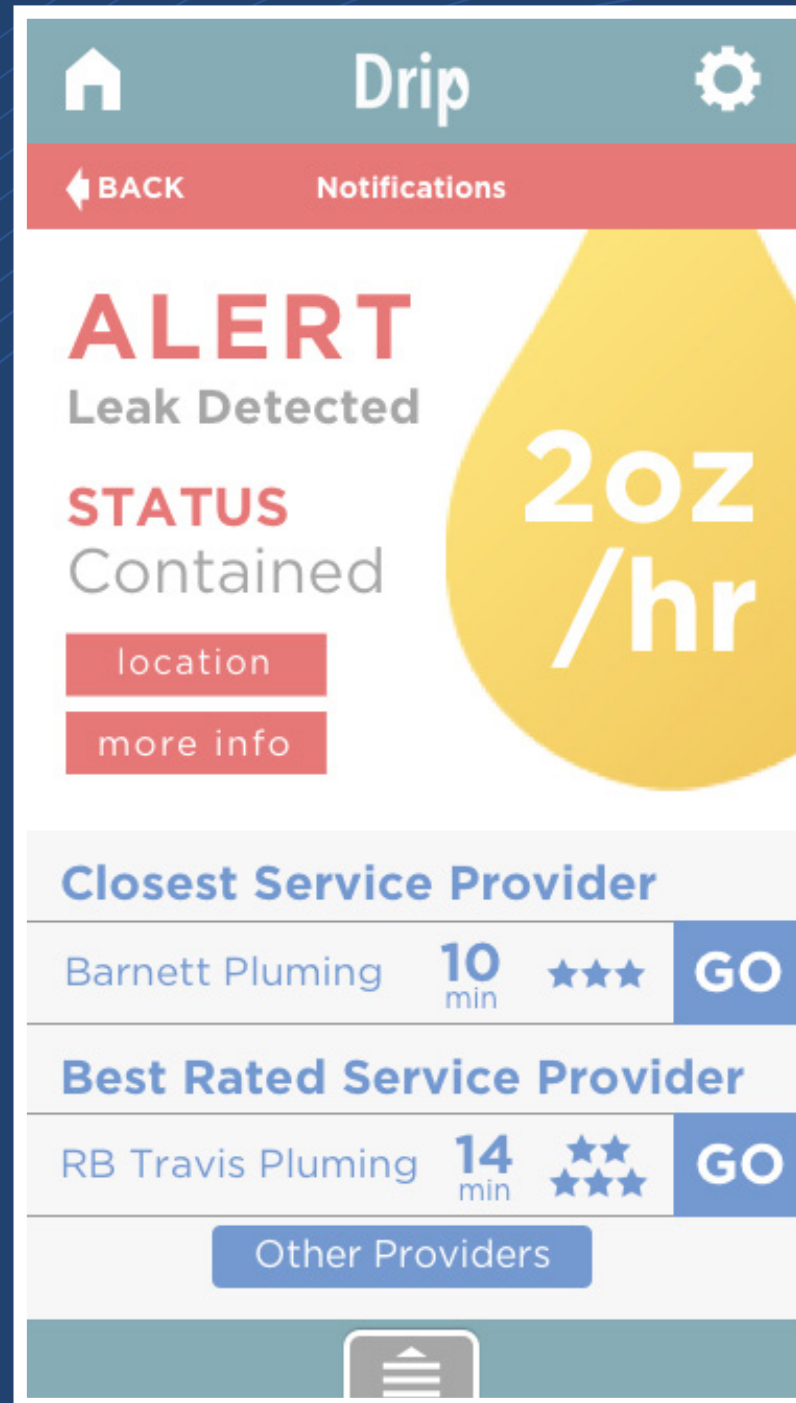
Home Screen



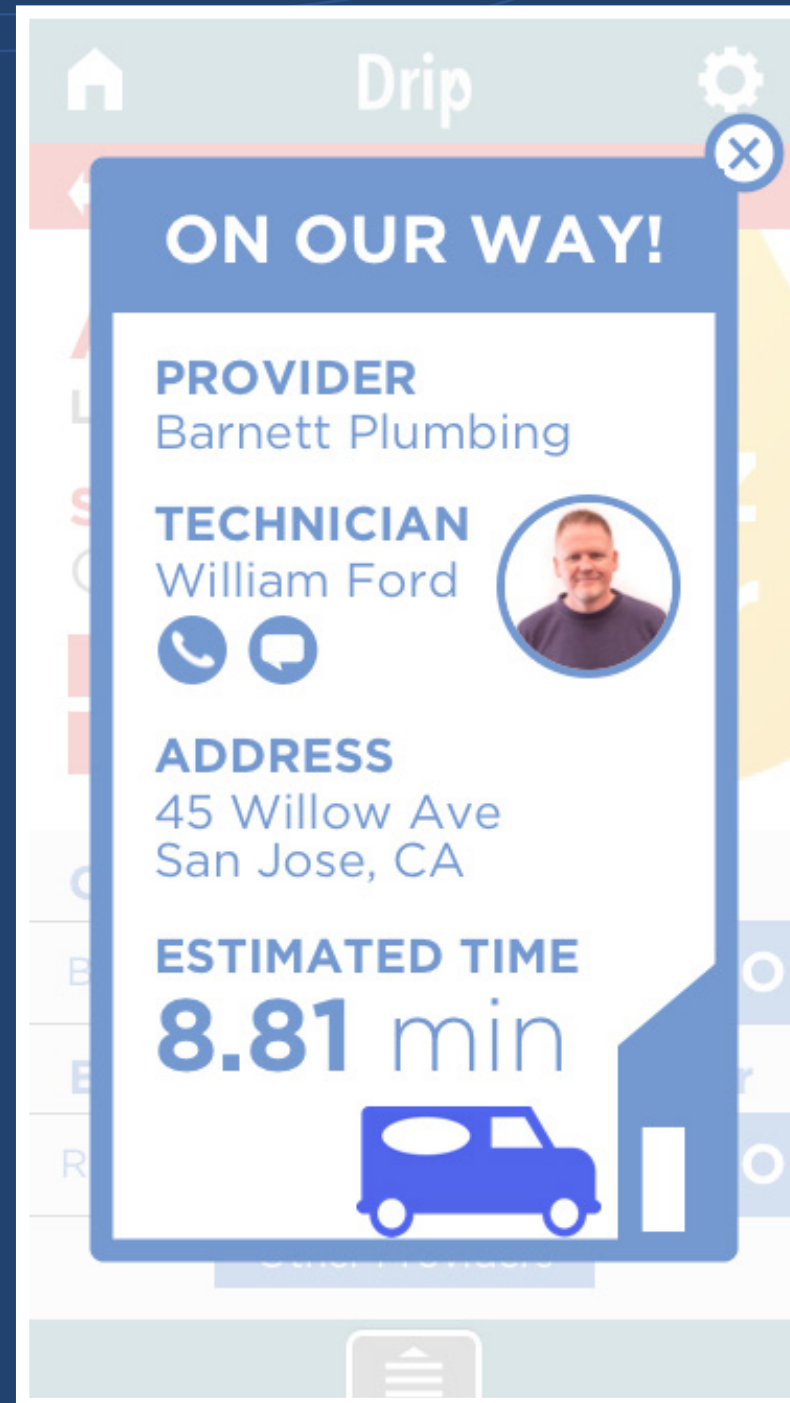
Providers Screen



Alert Screen



Contact Overlay



Map Screen

