CASE STUDY

Beckett

ABOUT BECKETT

Beckett Corporation is an older conservative company founded in 1937. They build gas and oil burners— devices that convert oil/gas into heat for commercial and residential usage. These burners are attached to tanks.

WHAT WAS THEIR VISION?

Their vision was to take the company and bring it to the 21st C. They were interested in making their devices “smart”. They wanted to make an app that would control their oil gauges, tanks, and burners.

THE PROBLEM

In order for a burner to work it needs oil, diesel fuels, or gas to convert energy into heat. Usually a tank should last about 18-25 months if it's stored correctly without decaying. However at this point, users didn't easily know how much oil was left in the tank causing users to often be left with no heat until the supplier is notified and thus sent over.

MY ROLE

It was my job to **research** & **design** a mobile interface that would allow users to most easily be able to monitor the status of their hubs the connectivity of the hubs, the wifi etc which were attached to the tank and also monitor how much oil was in the tank.

THE SOLUTION

Beckett installed IOT sensors on their gauges and added communication “hubs”, so that I was able to create a mobile application in which users would be able to **control** and **monitor** their oil devices from anywhere.

TOOLS USED

Sketch

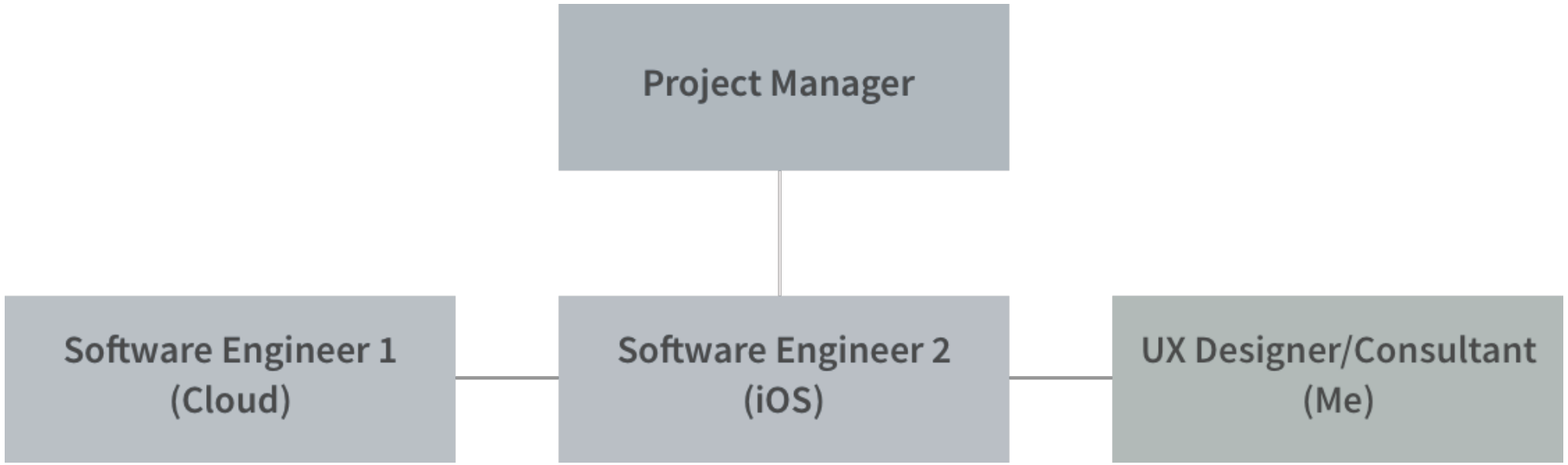
Adobe Photoshop

Survey Monkey

UsabilityHub

Invision

THE APPROACH


Project Manager
Software Engineer 1
(Cloud)
Software Engineer 2
(iOS)
UX Designer/Consultant
(Me)

CREATING A REQUIREMENTS DOCUMENT

I was able to group the system in 3 main objects that users would need to be able to observe and track

The Tank: The physical tank filled with oil/gas

The Gateway Hub: the WiFi enabled device that would connect to the cloud (via WiFi) and to local sensors (via Bluetooth)

The Sensors: The actual Bluetooth enabled devices installed in the tanks that would be able to measure usage and monitor levels

THE RESEARCH

USER SURVEYS

Focus of survey was to find out what information the users would like to see in the application.

Key Results:

App should not only allow the user to monitor and interact with the device, but should also ***notify*** the user when the system was in specific and alarming states such as:

- **Low tank levels**
- **Low transmitter battery**
- **Maximum fuel usage**

We found that homeowners weren't really concerned with the concept of "sensors". We decided to abstract away the concept of "sensors" to the "tanks" as that was the physical object the user cared about.

USER INTERVIEWS + INITIAL A/B TESTING

Building off the results from the survey, user interviews & initial A/B testing was conducted regarding notifications.

It was concluded that users wanted:

- A seamless interface that would easily allow them to monitor levels of the oil left
- An application that would update anywhere in the world
- **Push notifications** on their phone as soon as their oil levels would be low
- They wanted to individually control notifications of each device from each device setting page

INDUSTRY SPECIALISTS

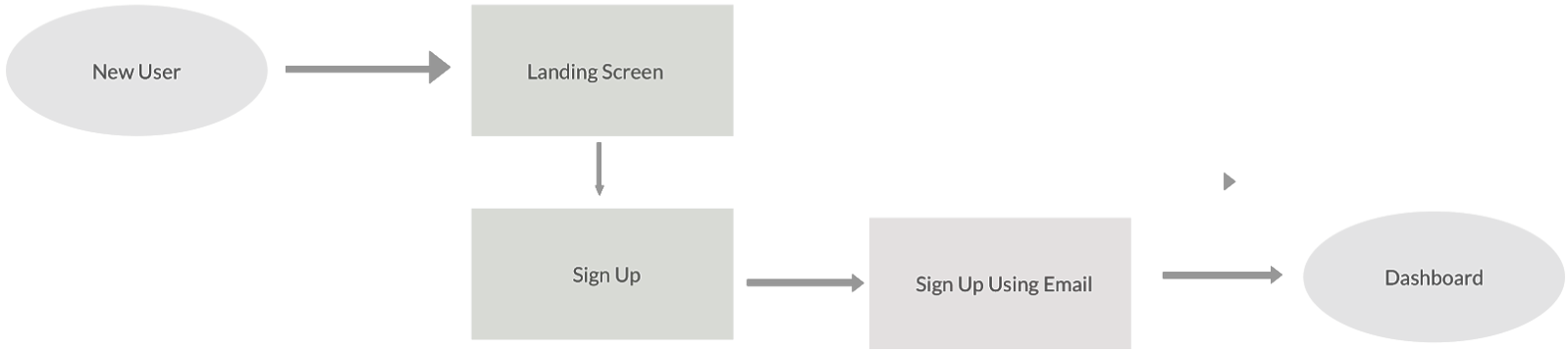
After talking to safety engineer experts in oil gauges at Beckett, we also were able to come to the conclusions that users would also want to be notified for **“freeze alarm”/low temperature** states as they prevent the oil from being stored in a safe and efficient manner.

USER STORIES

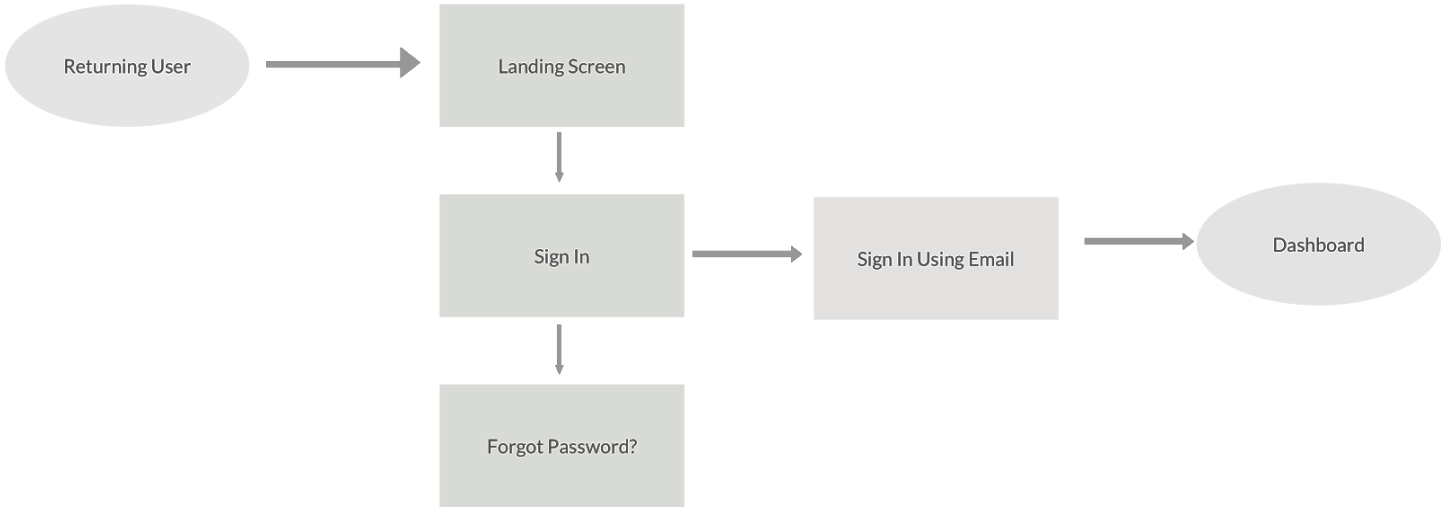
As a user	**I want to link my hub**	**HIGH**
As a user	**I want to be able to see how much oil is left**	**HIGH**
As a user	**I want to be able to get notified when my oil is low**	**HIGH**
As a user	I would like to get onboarded using my email address	HIGH
As a user	**I want to know how much battery is left on my hub**	**MEDIUM**
As a user	**I want to choose which size tank I own**	**MEDIUM**
As a user	I want to be able to choose different options to view how much oil is left	MEDIUM
As a user	**I want to get notified if it is too cold for my tank**	**MEDIUM**
As a user	I want to create shared folders	MEDIUM
As a user	I want to see the signal strength of hub	MEDIUM
As a user	I want to be able disconnect my device	LOW
As a user	**I want to see my usage history**	**LOW**
As a user	I want to see how long my warrenty is	LOW
As a user	**I want to be to edit the name of my hub**	**LOW**
As a user	I want to be able to see history of my hub	LOW

USER FLOWS

New User Sign Up To Dashboard

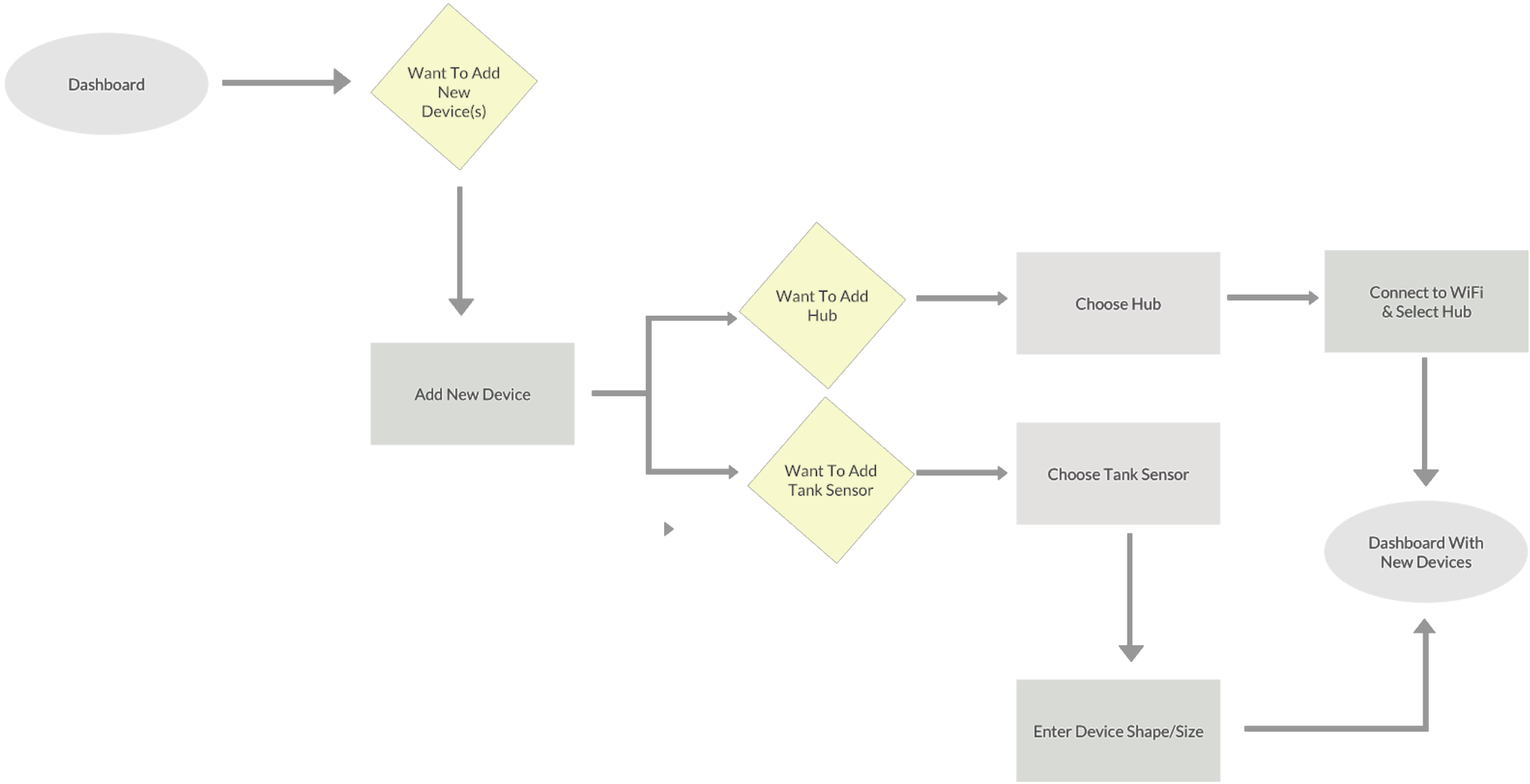


Returning User Sign In To Dashboard

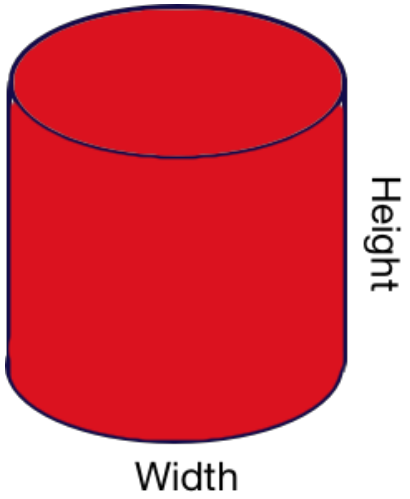


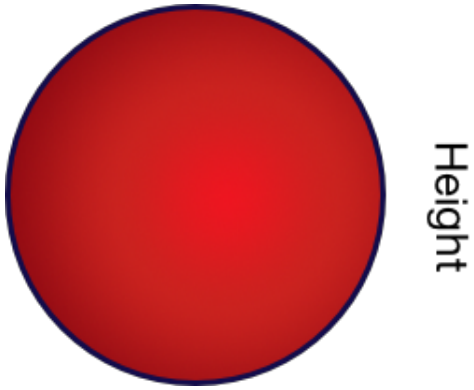
USER FLOWS

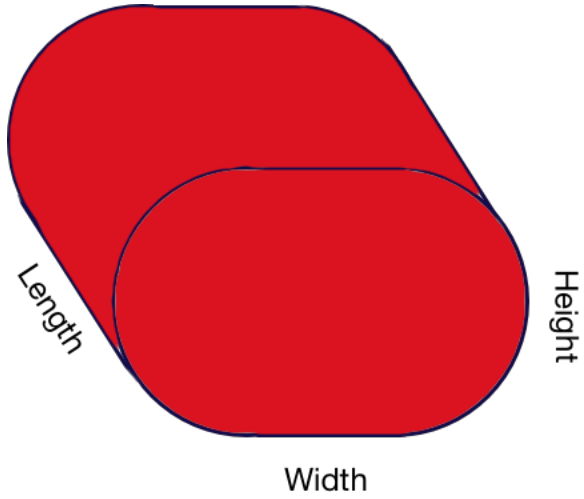
Dashboard to Entering Device Information

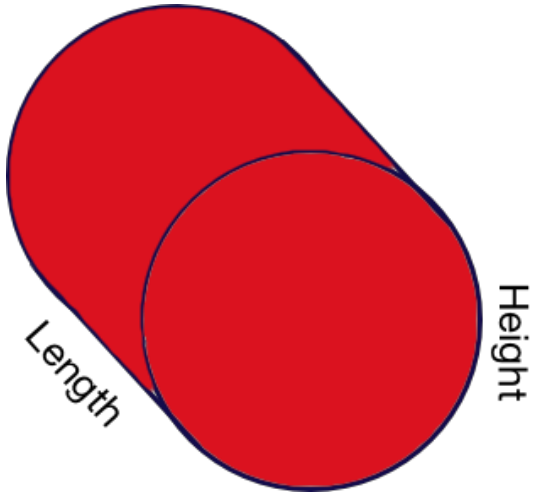


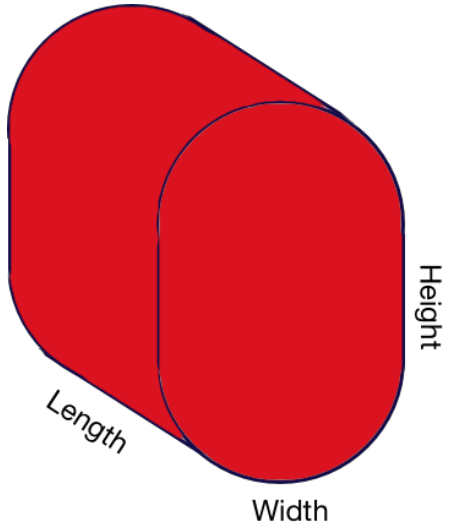
RESEARCHING THE TANKS

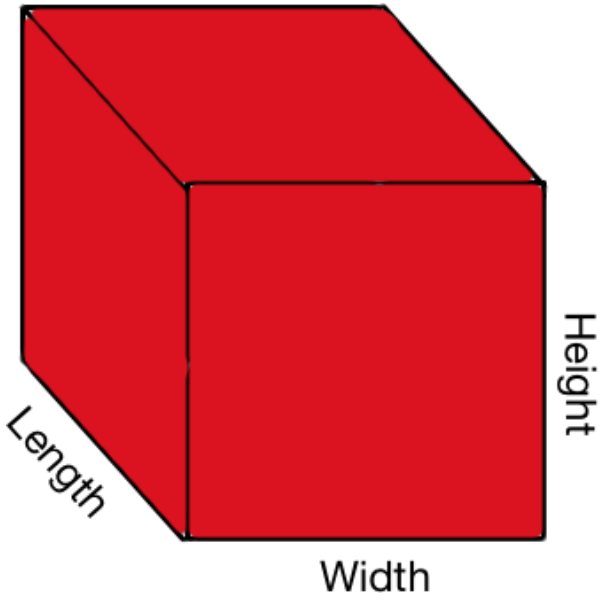












THE DESIGN

BRANDING + STYLE GUIDE

▼ Beckett Brand Elements

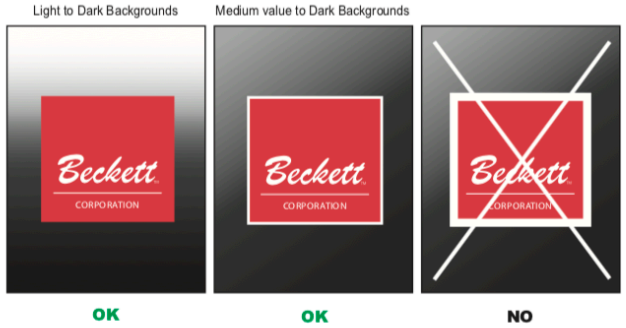
Logo Styles

The Beckett logo is an icon of the brand itself and is our company's primary identifier. Regardless of where the logo is being used, there are only three approved versions of the Beckett Corporation logo: formal, freestanding style 1, and freestanding style 2.

It is preferred that outlines not be used for these logos, but when logos are placed on medium to dark valued backgrounds, outlines are permitted. In such cases, they should be white in color and be very thin. No other colors are permitted for outlines.

Formal Logo

The formal logo consists of a red square with the Beckett text in Brush Script MT font, Corporation text in Myriad font, and then a white line in-between. Text must be white. The square may be grayscale for applications where black & white printing is required.



▼ Color Pallete

Color Usage & Palette

For in-house copier printing - Print in either black & white or color.

For outside reproduction services - Specify whether the logo should be printed in black and white or color using the color numbers shown below. The Pantone, Matching System color, or PMS, is the industry standard 'palette' for color accuracy.

RGB (red, green, and blue) is the color designation for electronic applications, such as Powerpoint presentations or web content. CMYK (Cyan, Magenta, Yellow, Black) is the color designation for printed material and is typically referred to as four-color process printing.

Pantone 185
R-232, G-17, B-45
C-0, M-91, Y-76, K-0

Pantone Black
R-0, G-0, B-0
C-75, M-68, Y-67, K-90

Pantone White
R-255, G-255, B-255
C-0, M-0, Y-0, K-0

Typography

Like color, typography is a cornerstone of the company's identity. Selecting the correct typeface can make the difference between words across a page and a statement that makes an impact on the reader.

The primary font family used in Beckett correspondence should be: "Times New Roman" when using a Serif font. When using a Sans Serif font "Arial" or "Helvetica" should be used.

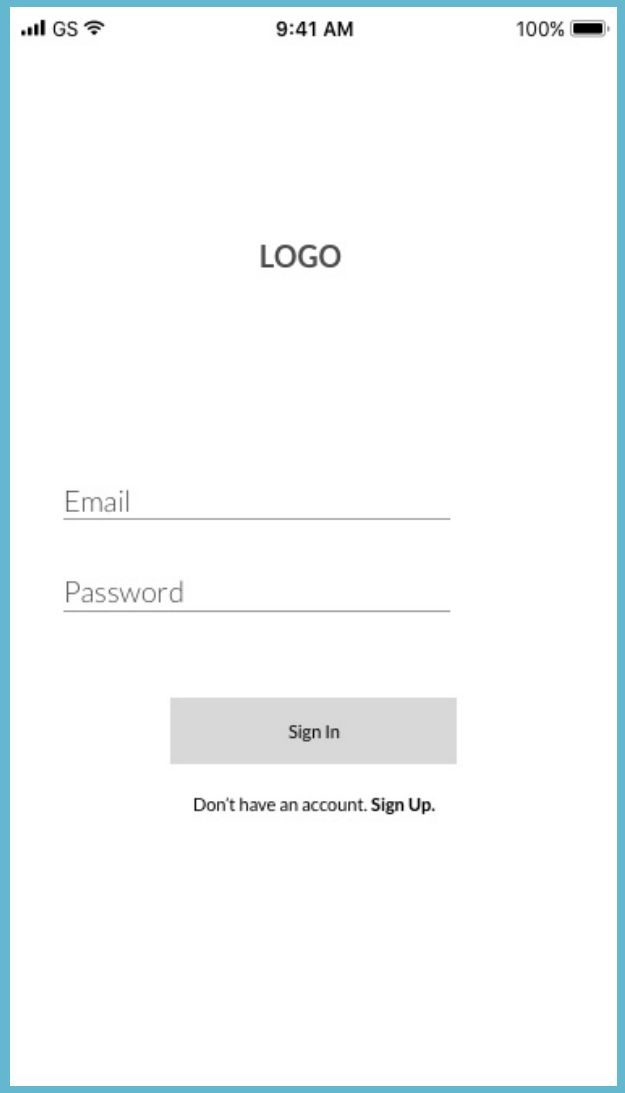
Examples of type face:

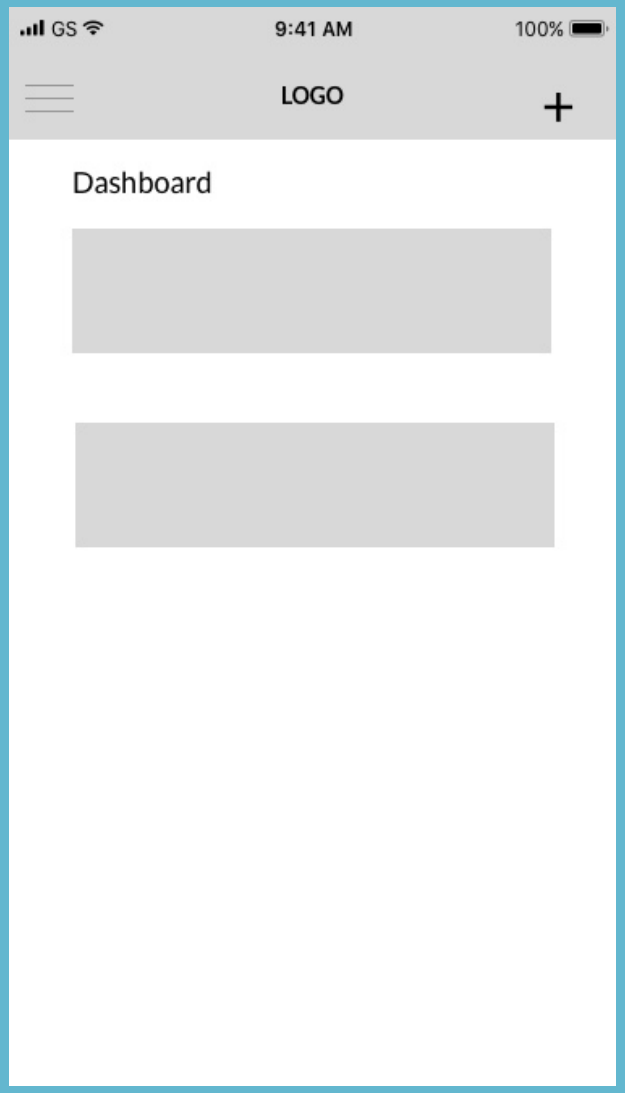
Times New Roman
Times New Roman

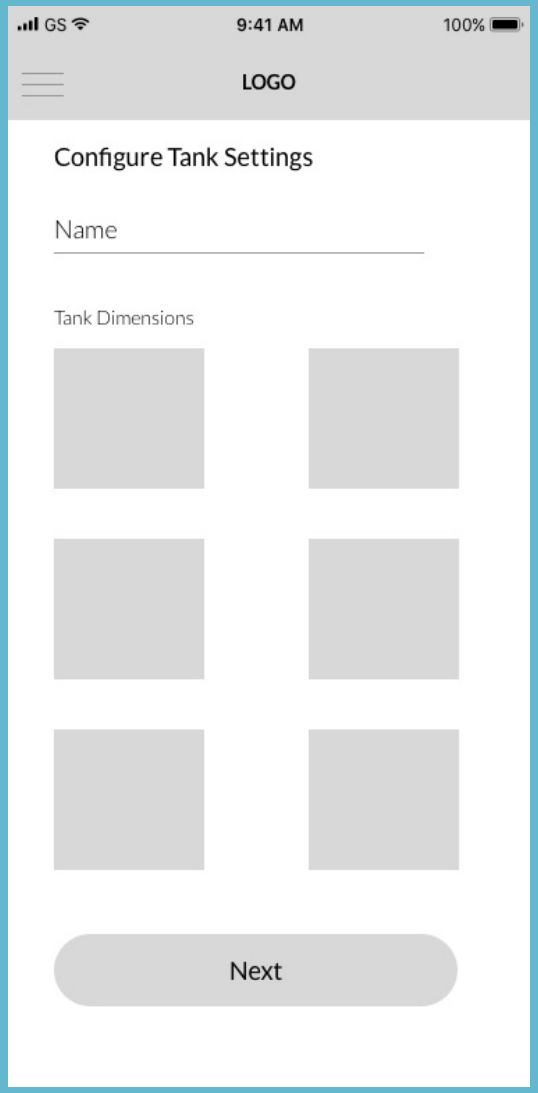
Arial
Arial

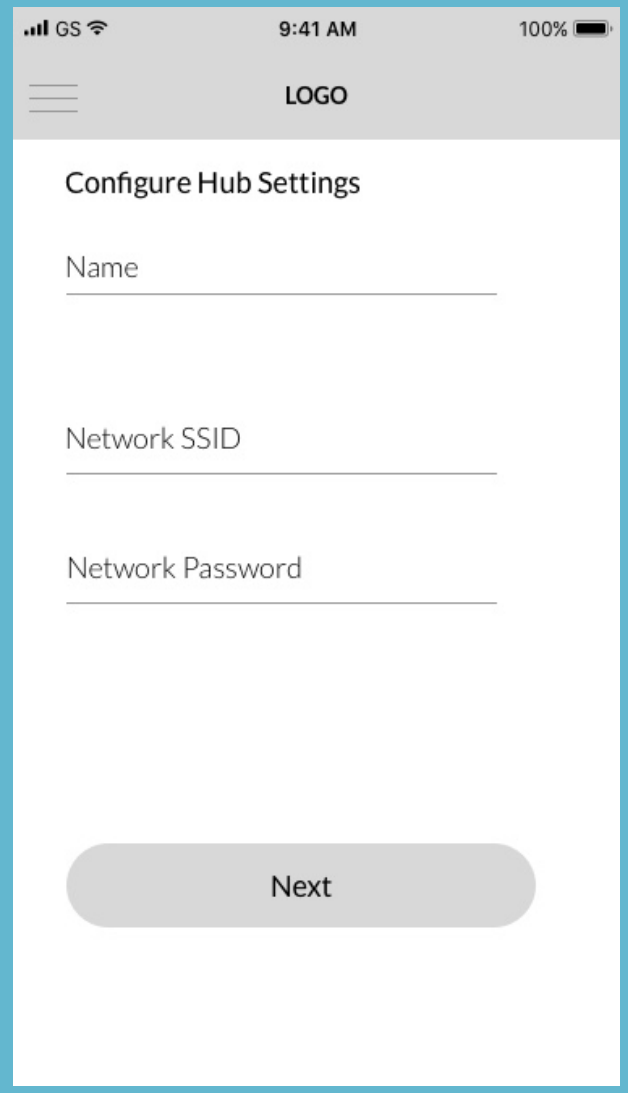
Helvetica
Helvetica

WIREFRAMES


GS
9:41 AM
100%
LOGO
Email
Password
Sign In
Don't have an account. Sign Up.


GS
9:41 AM
100%
LOGO
Dashboard


GS
9:41 AM
100%
LOGO
Configure Tank Settings
Name
Tank Dimensions
Next


GS
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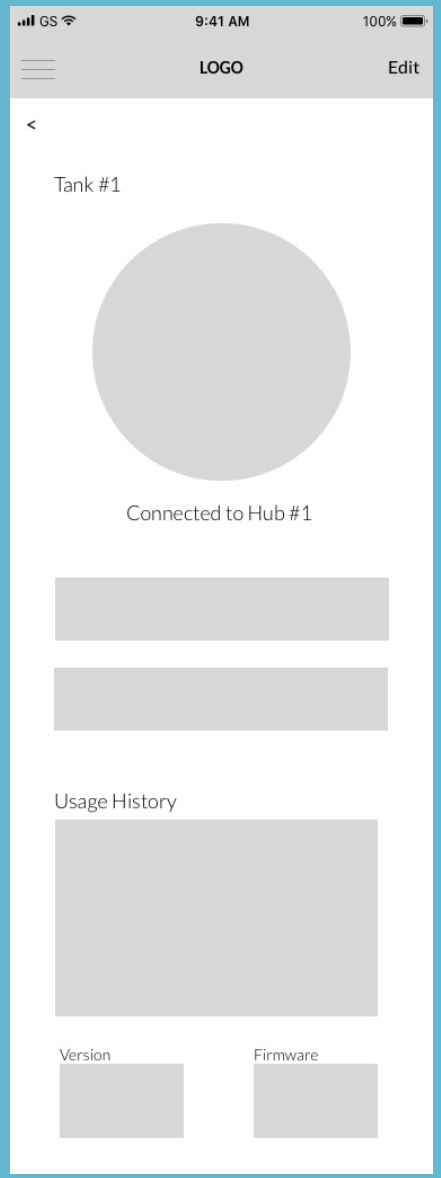
100%
LOGO
Configure Hub Settings
Name
Network SSID
Network Password
Next

WIREFRAMES


GS
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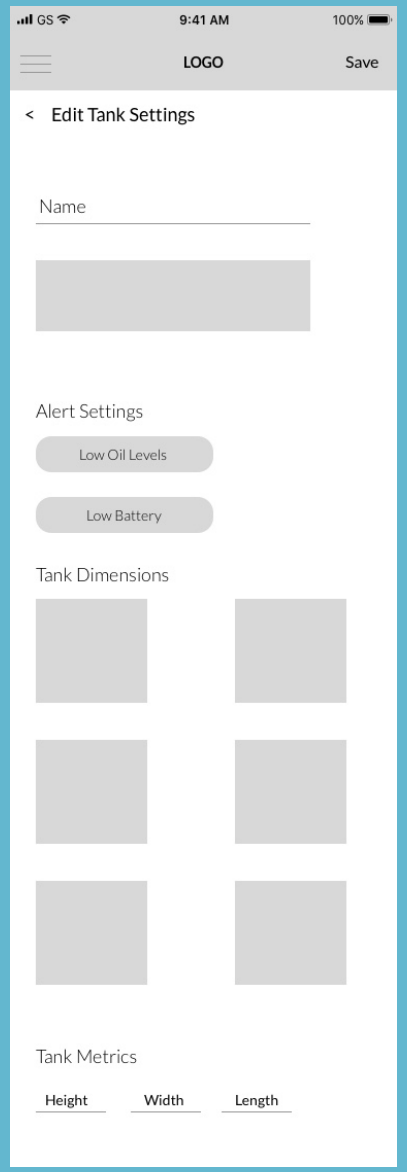
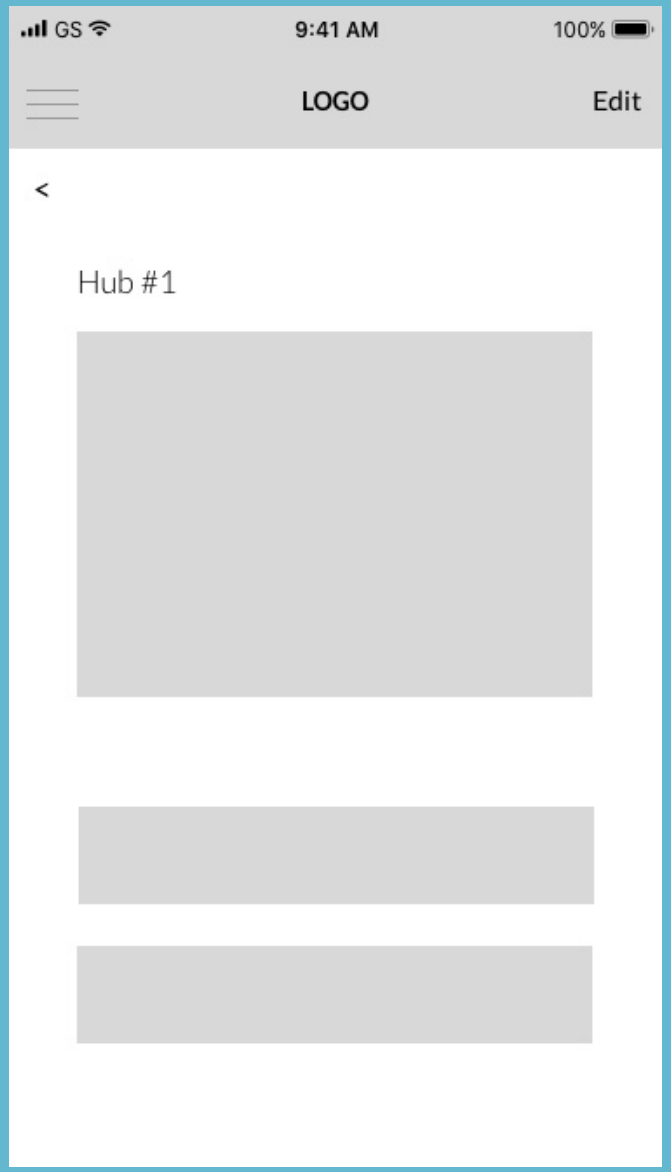
LOGO
Edit
<
Tank #1
Connected to Hub #1
Usage History
Version
Firmware


GS
9:41 AM
100%
LOGO
Save
< Edit Tank Settings
Name
Alert Settings
Low Oil Levels
Low Battery
Tank Dimensions
Tank Metrics
Height
Width
Length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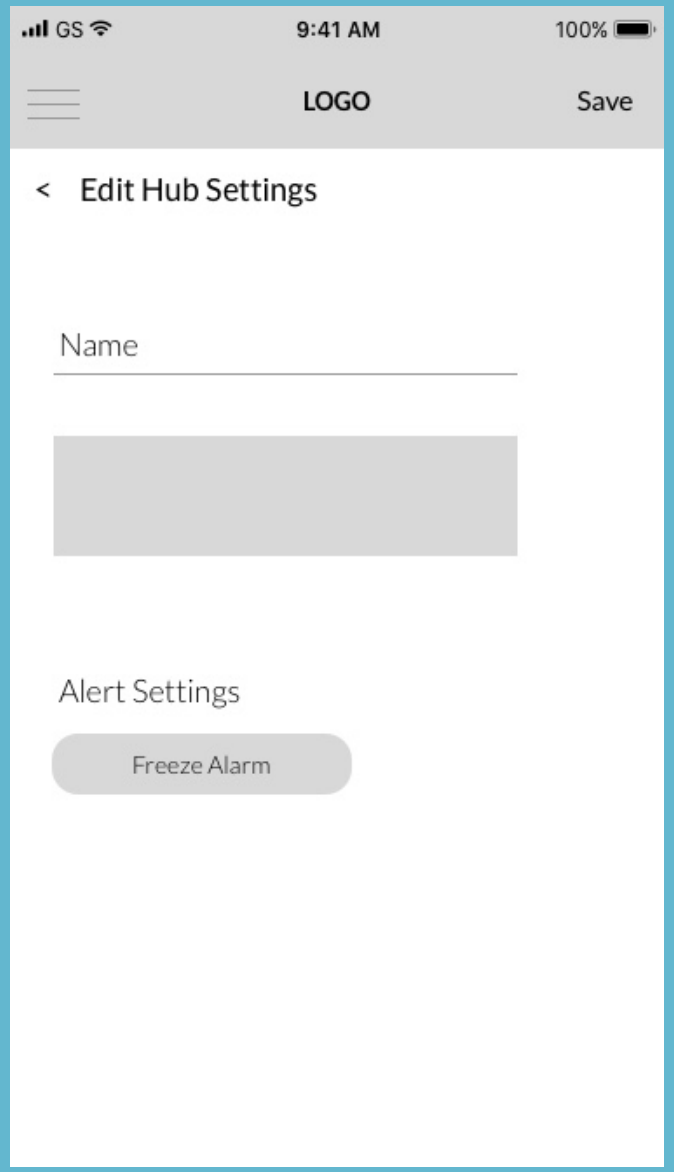
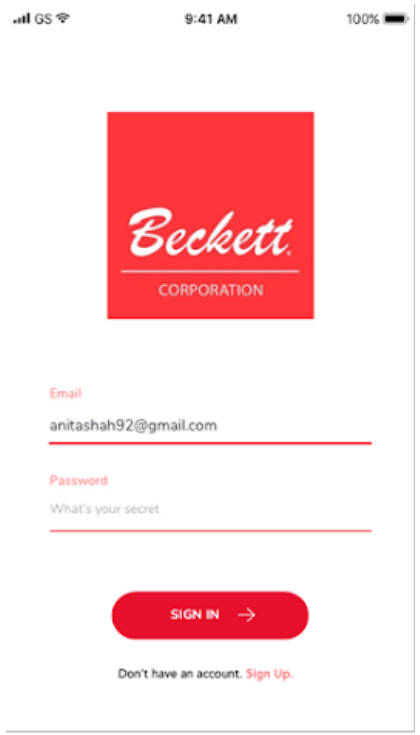
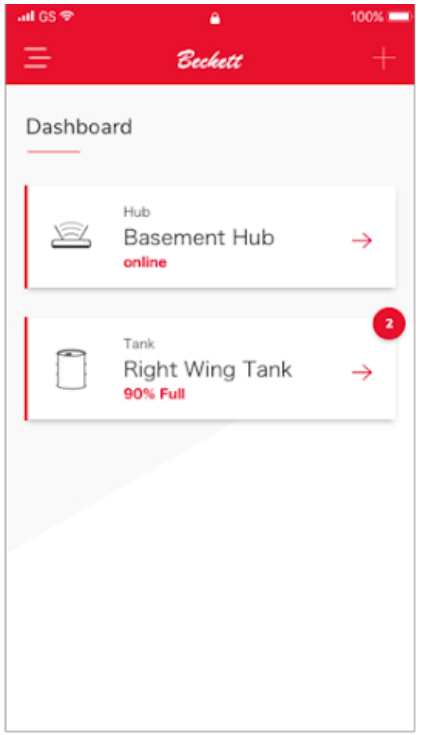
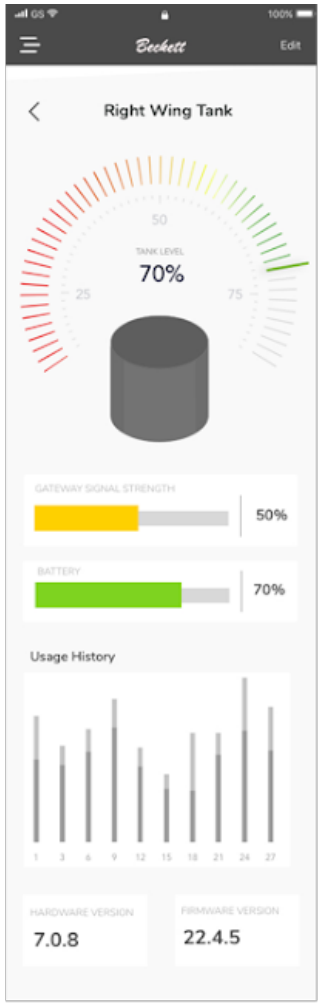
LOGO
Edit
<
Hub #1

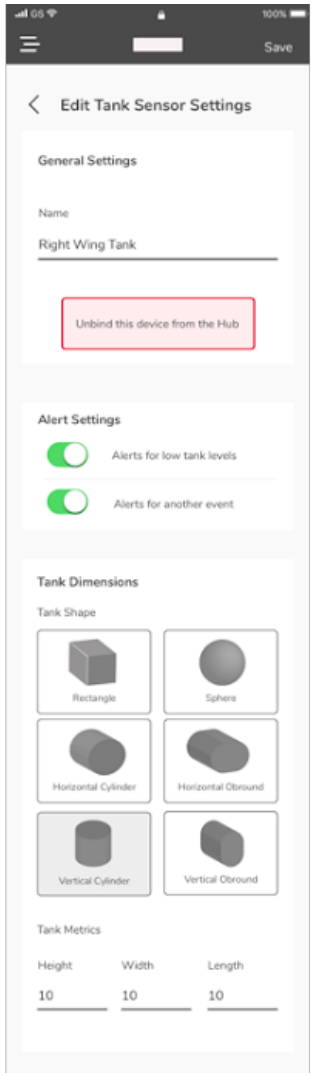

GS
9:41 AM
100%
LOGO
Save
< Edit Hub Settings
Name
Alert Settings
Freeze Alarm

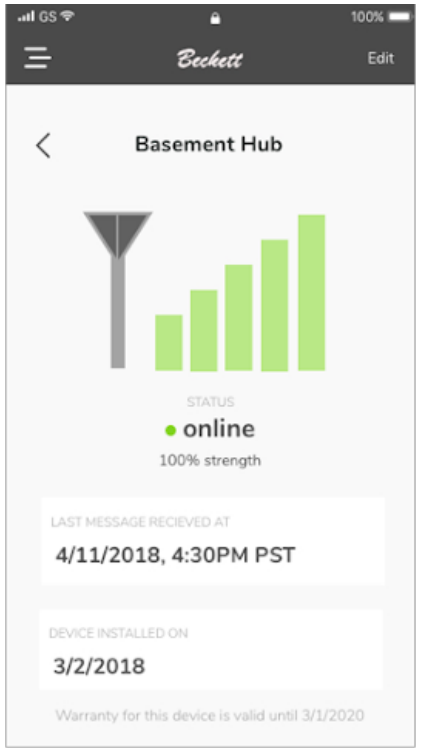
INITIAL HI-FI MOCKUPS



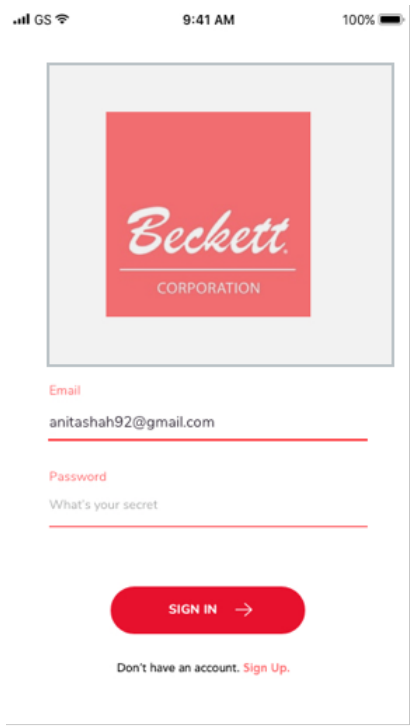


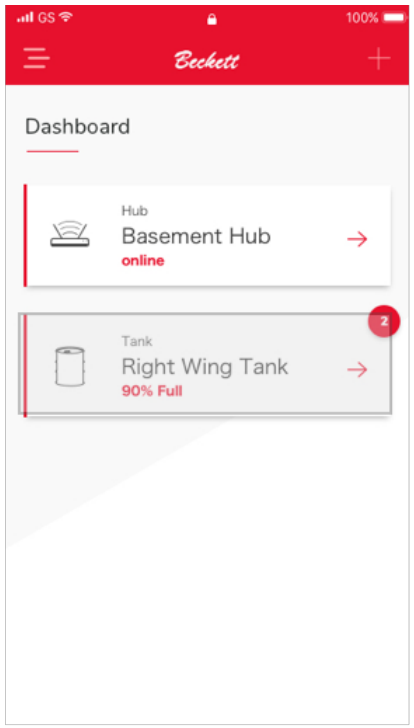


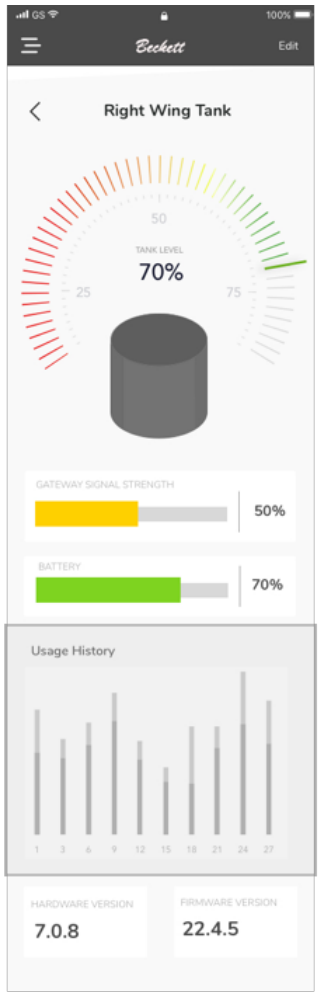


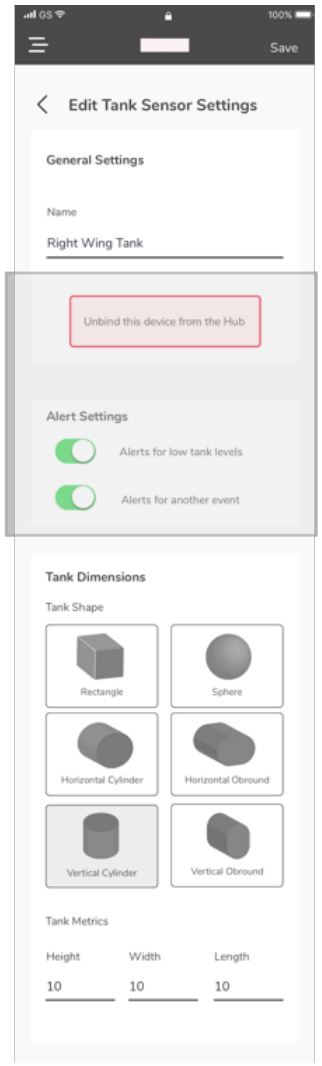


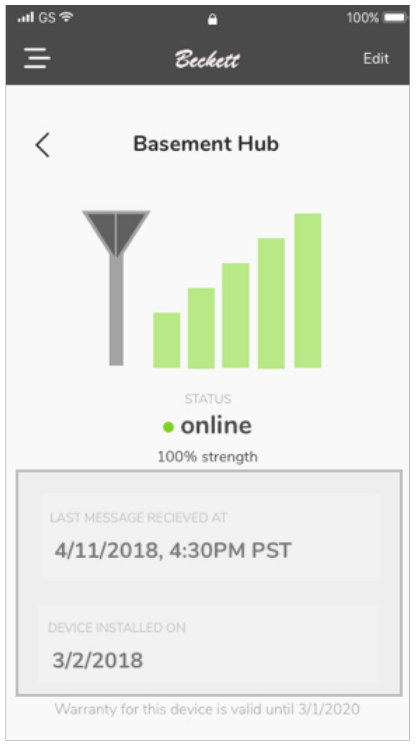
FEEDBACK: INITIAL HI-FI MOCKUPS

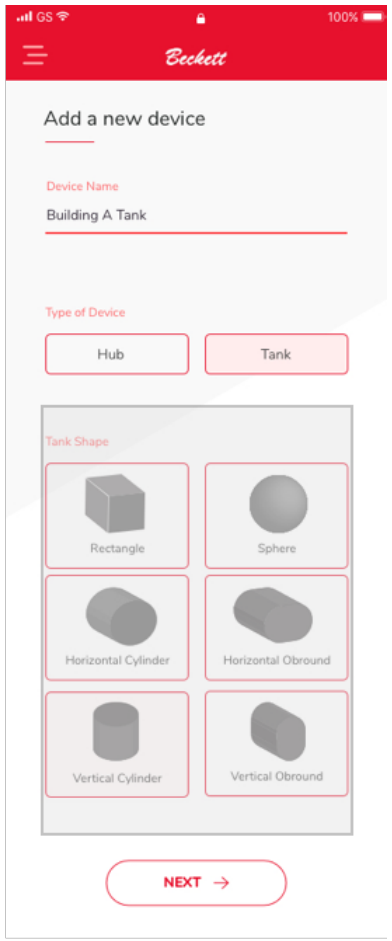








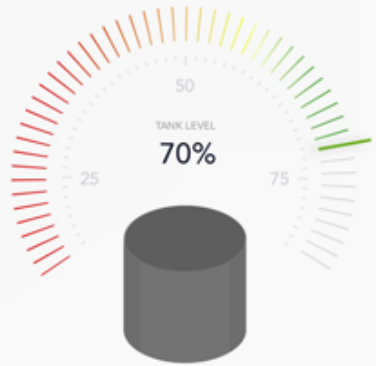




GS 100%

Edit

Right Wing Tank



connected to
Basement Hub

GATEWAY SIGNAL STRENGTH

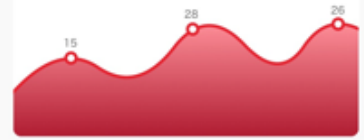
50%

BATTERY

70%

Usage History

view more details



HARDWARE VERSION

7.0.8

FIRMWARE VERSION

22.4.5

DEVICE INSTALLED ON

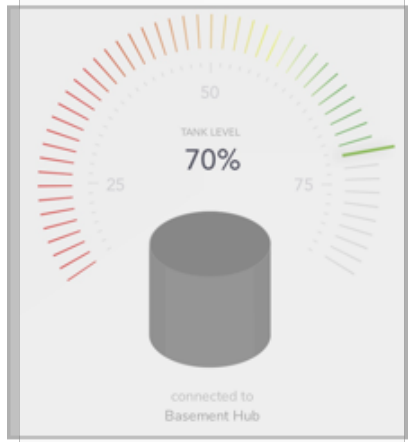
3/2/2018

Warranty for this device is valid until 3/1/2020

GS 100%

Edit

Right Wing Tank



GATEWAY SIGNAL STRENGTH

50%

BATTERY

70%

Usage History

view more details

HARDWARE VERSION

7.0.8

FIRMWARE VERSION

22.4.5

DEVICE INSTALLED ON

3/2/2018

Warranty for this device is valid until 3/1/2020

GS 100%

Beckett

Add a new device

Device Name

Building A Tank

Type of Device

Hub | Tank

Tank Shape

Rectangle

Sphere

Horizontal Cylinder

Horizontal Obround

Vertical Cylinder

Vertical Obround

NEXT →

GS 100%

Beckett

Add a new device

Device Name

Right Wing Tank

Type of Device

Hub | Tank Sensor

NEXT →

GS 100%

Beckett

Configure Tank Properties

Pick the shape that best represents your tank.

Tank Shape

275 gal
Vertical Obround

330 gal
Vertical Obround

275 gal
Horizontal Obround

275 gal
Rectangle

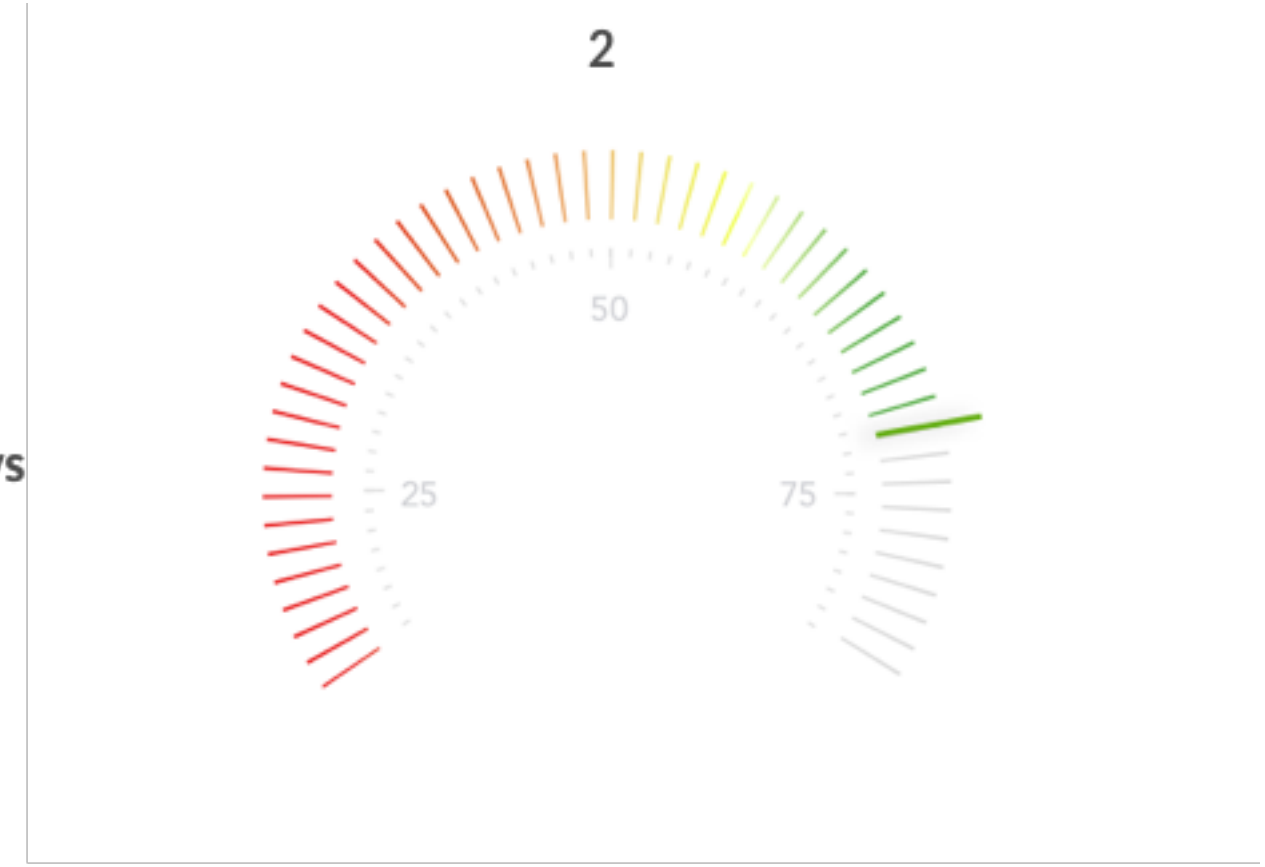
300 gal
Horizontal Cylinder

Custom Shape and Volume

NEXT →

PREFERENCE TESTING

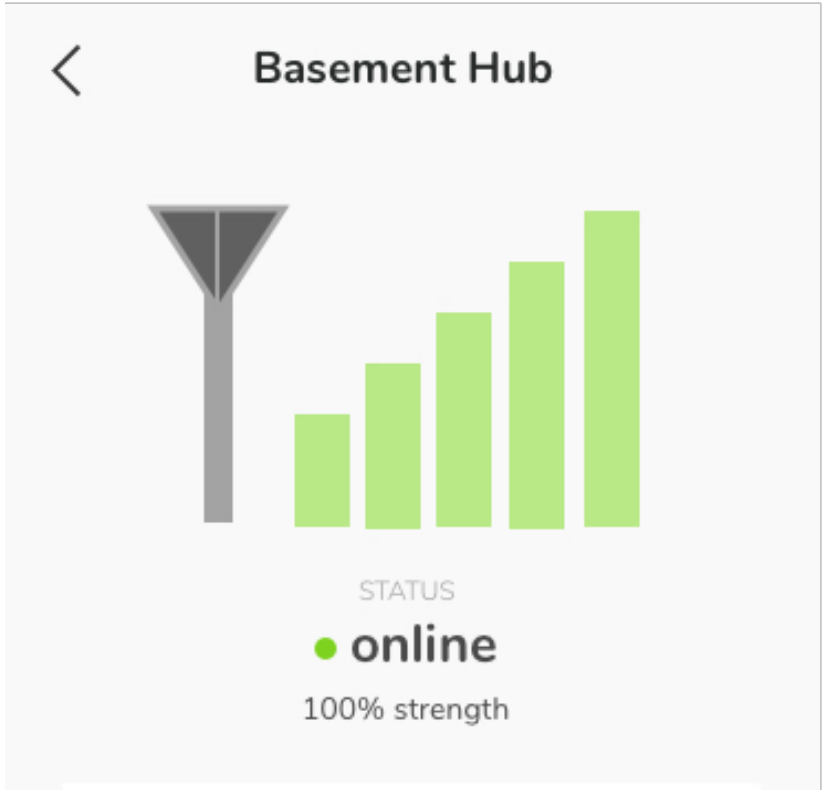
VS



PREFERENCE TESTING

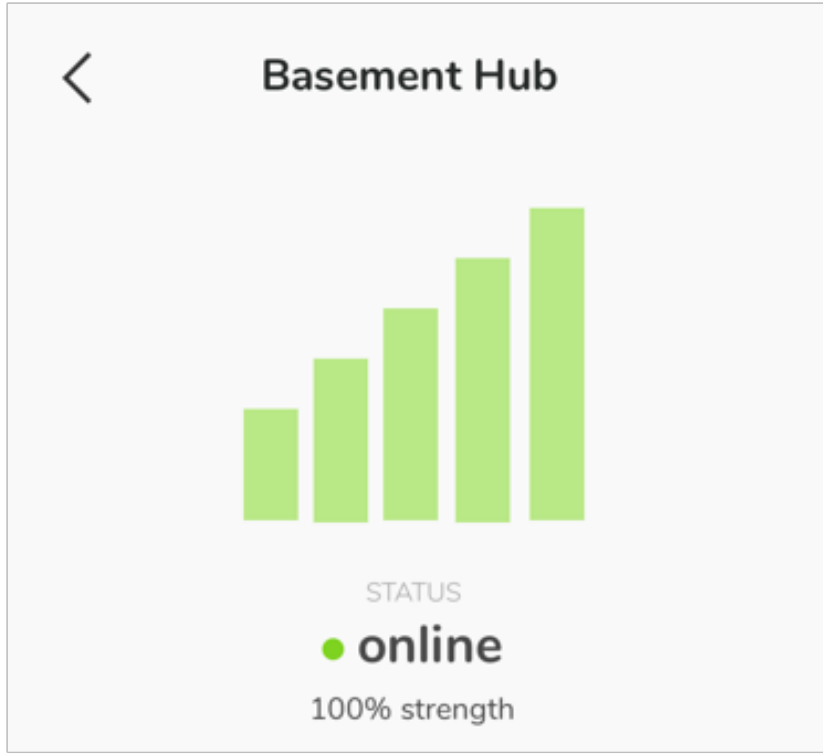
PREFERENCE TESTING

1



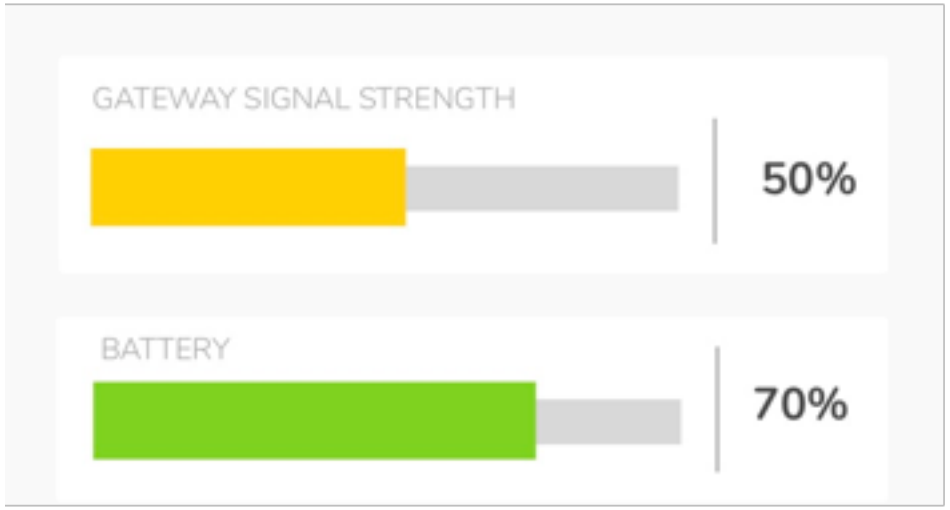
vs

2



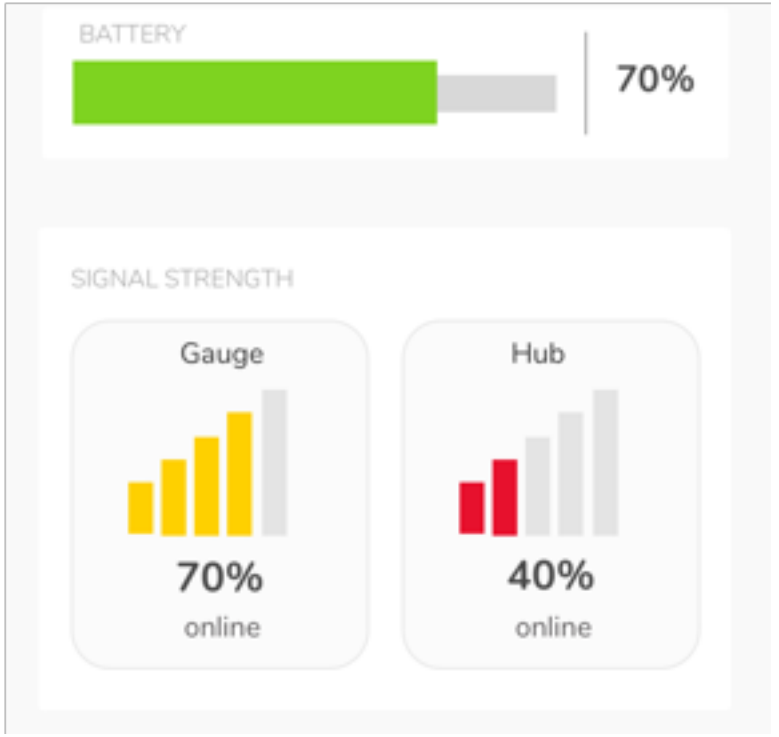
PREFERENCE TESTING

1

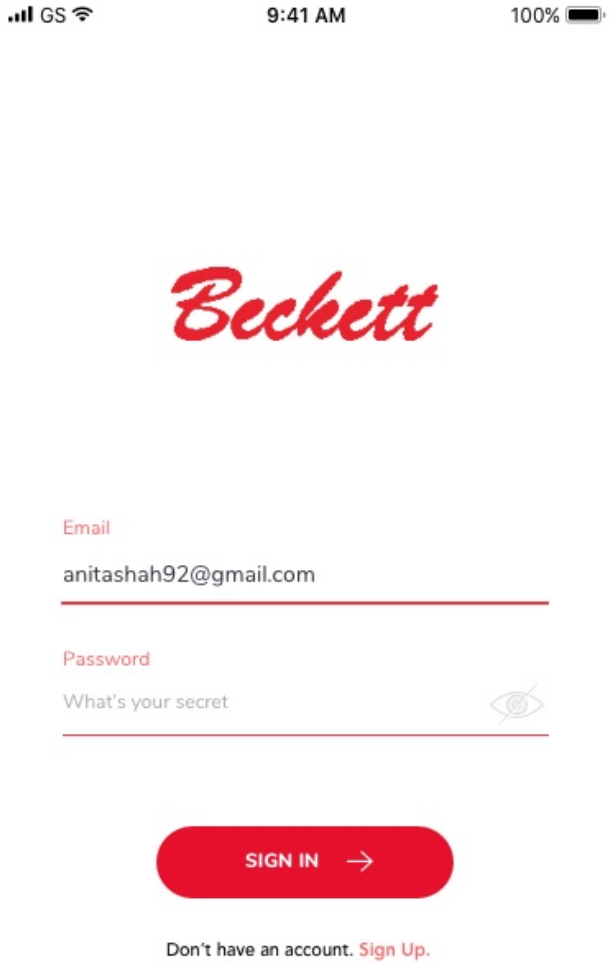


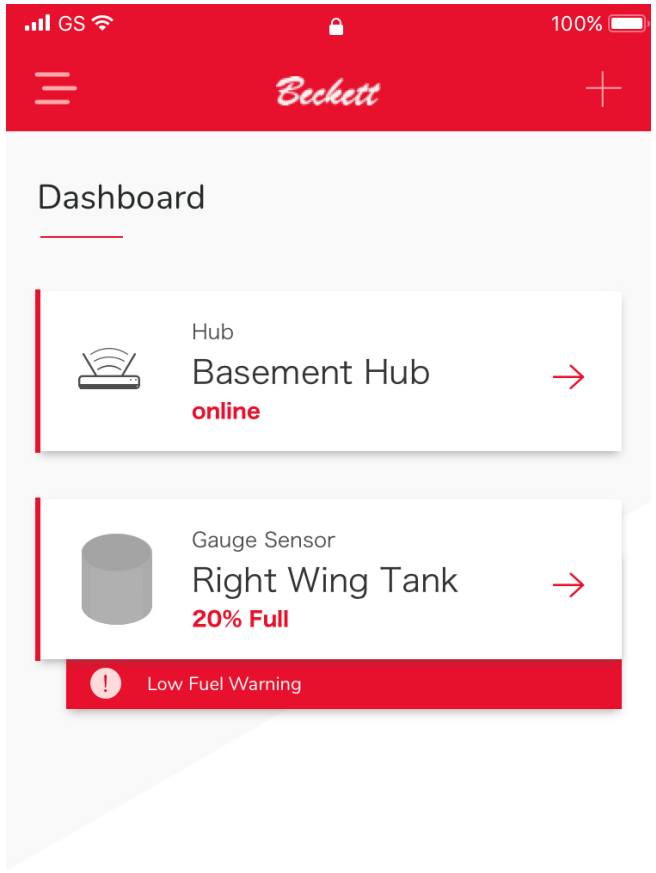
VS

2



FINAL HI-FI MOCKUPS





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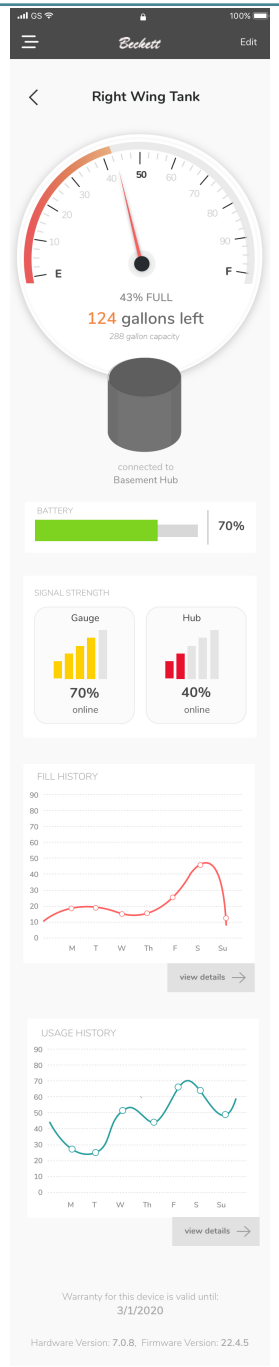

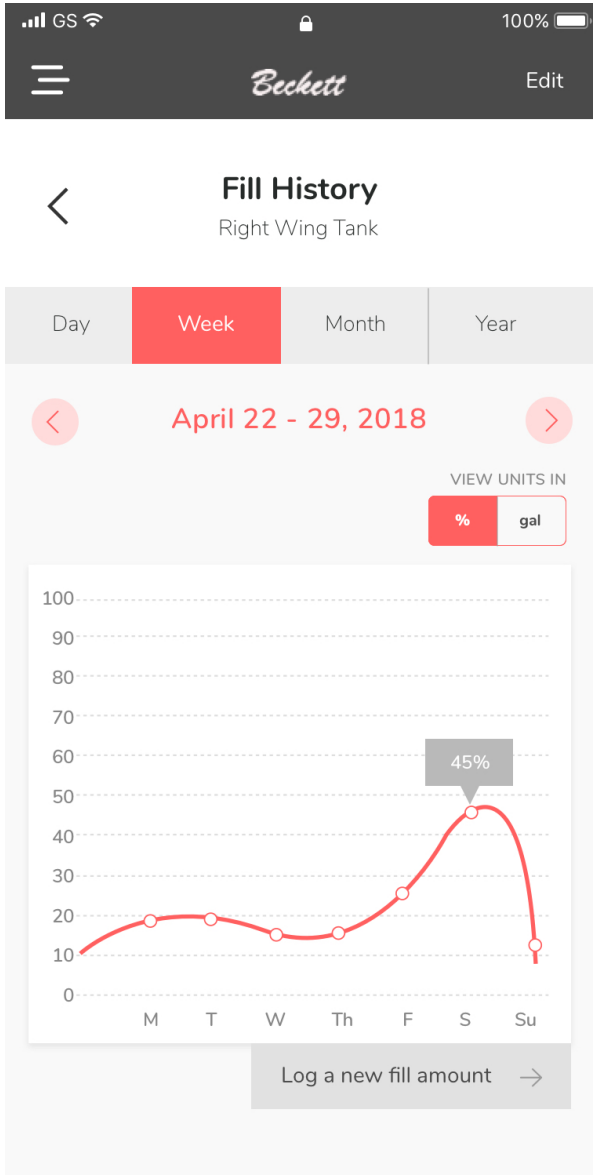

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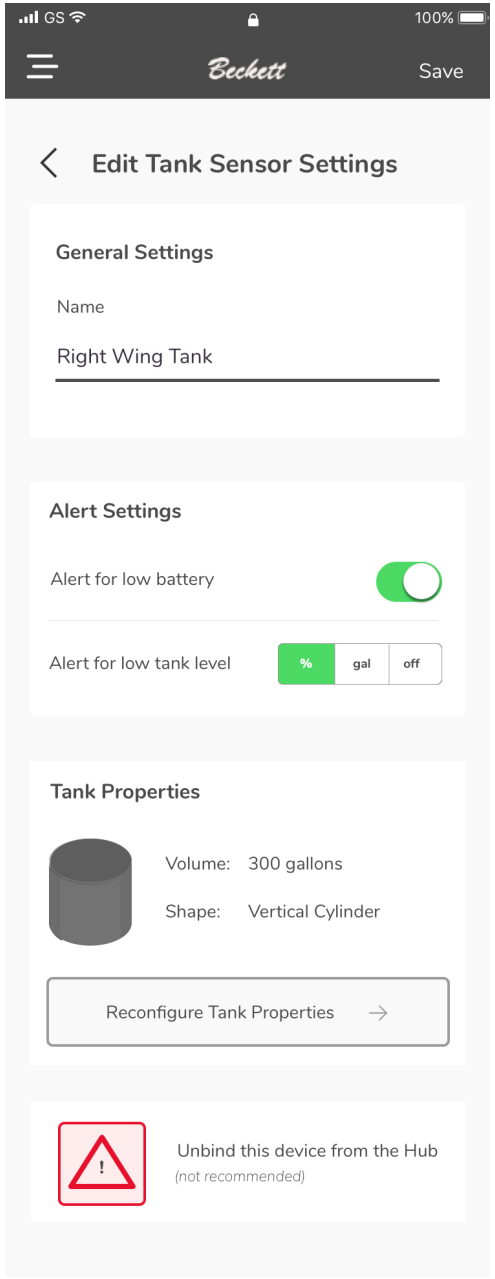
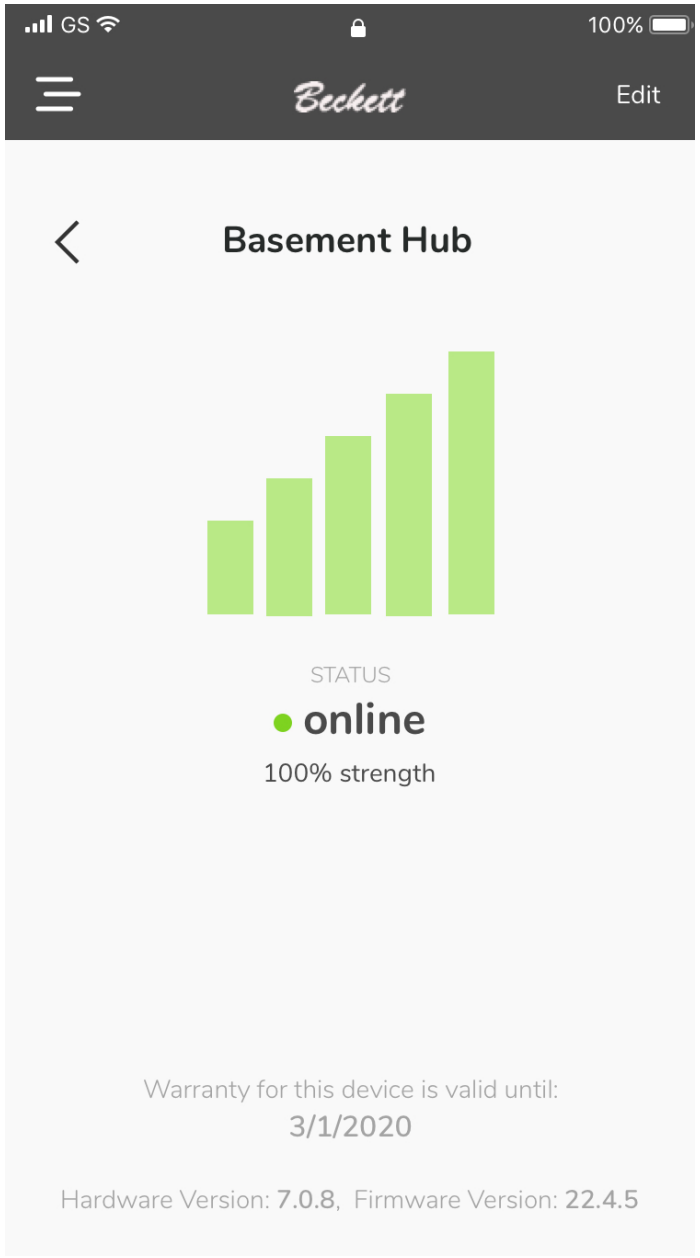
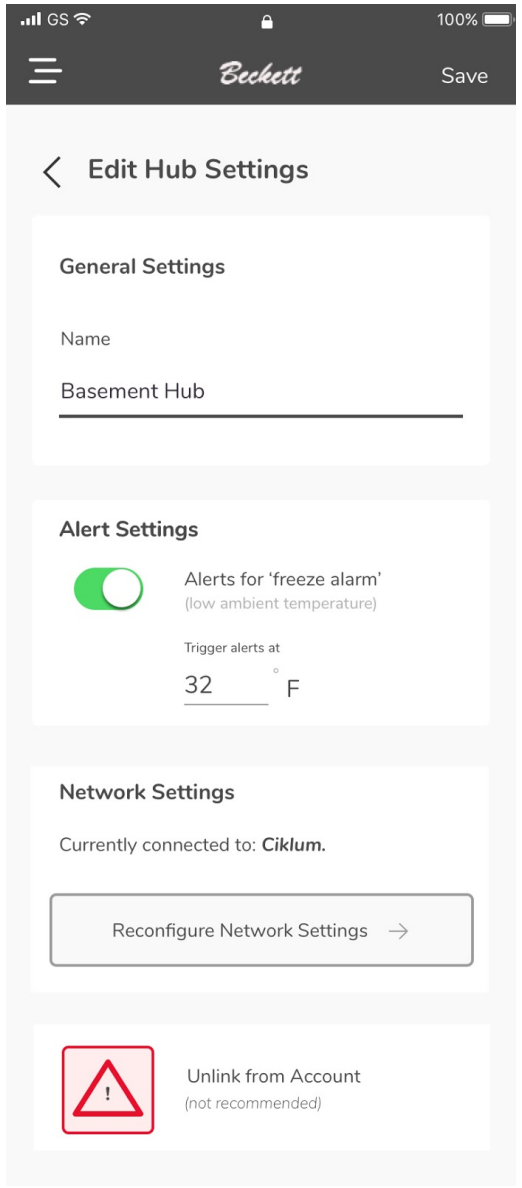
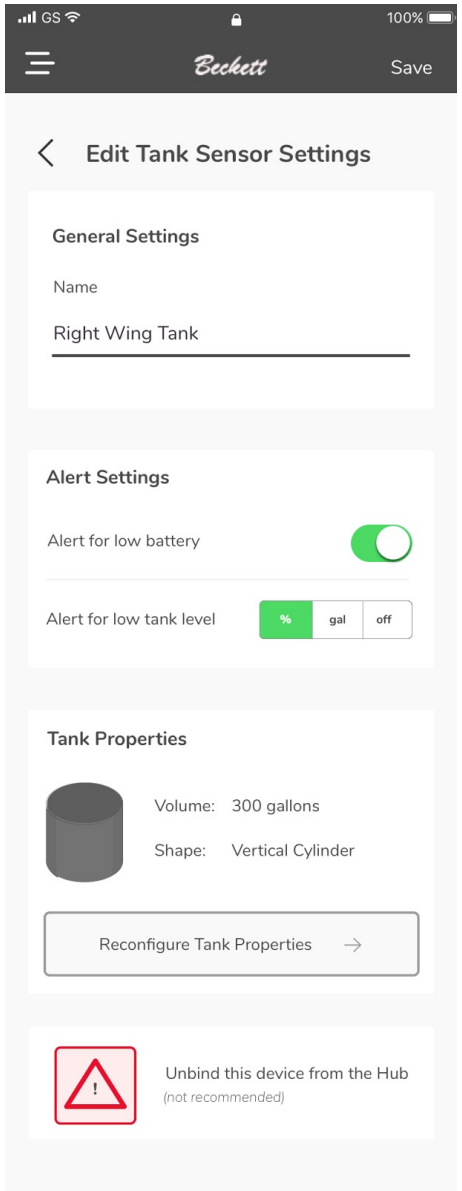




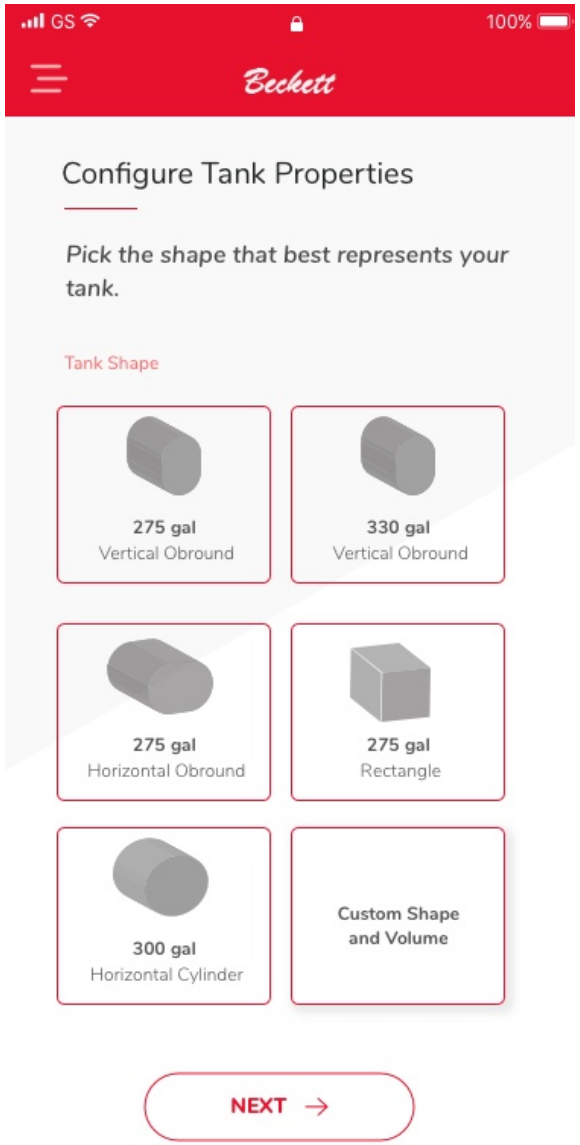
DESIGN DECISIONS: GRAPHS

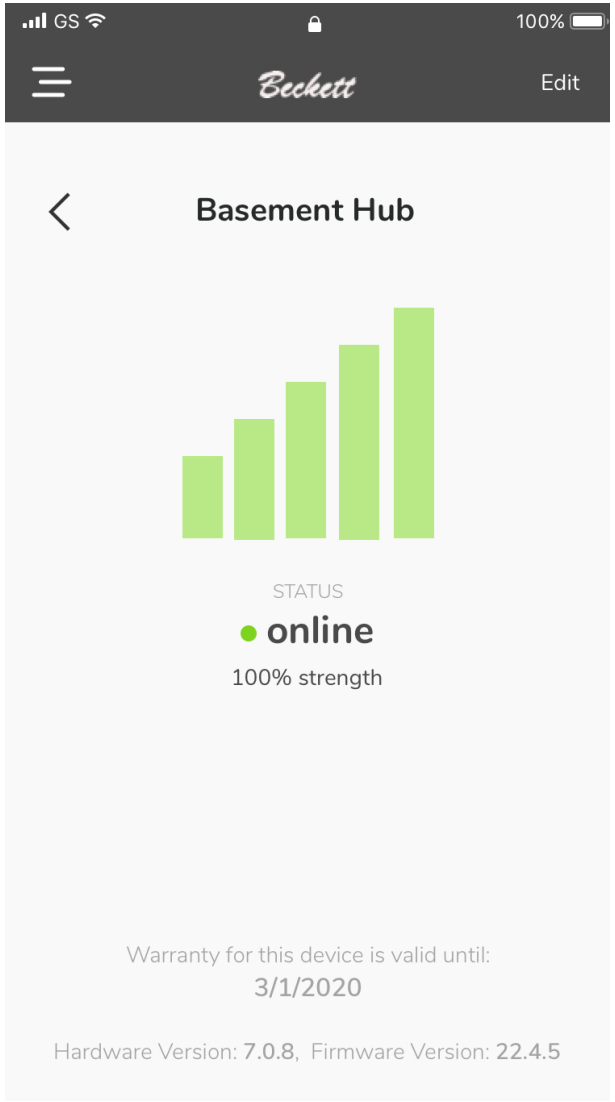
DESIGN DECISIONS: ALERTS/NOTIFICATIONS

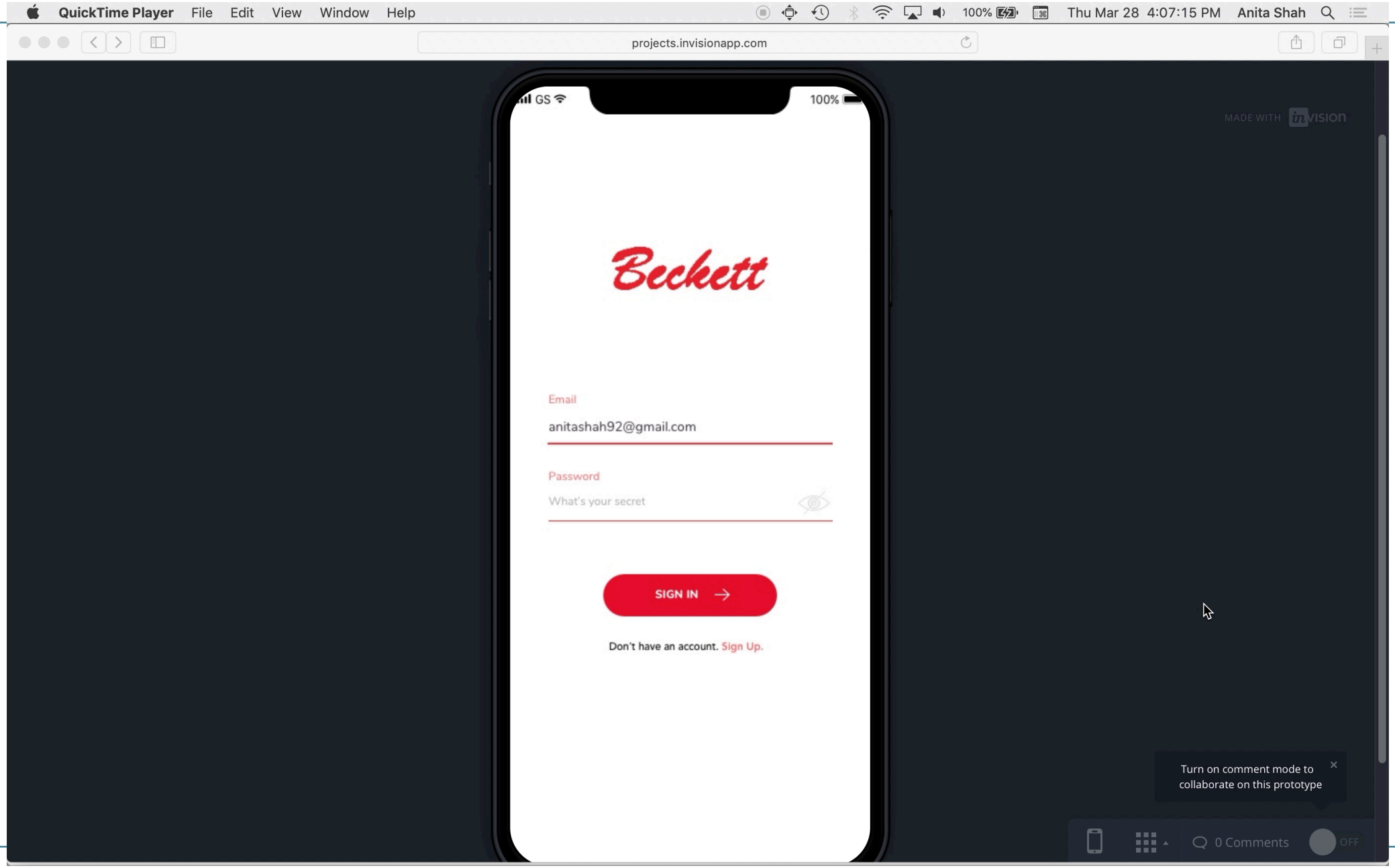




DESIGN DECISIONS: RED VS GREY



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Turn on comment mode to collaborate on this prototype
0 Comments
OFF

FRUSTRATIONS

The client was an older conservative company. They weren't always open to listen to the feedback from the users and research findings. They also weren't up to date on current design trends. As a result, I tried my hardest to make sure the client was happy as it was their product and also take the feedback from the users into consideration.

TAKEAWAYS

I had initially designed a whole step-by-step process to “Add a new device”. However, technically this would take much longer for the development team to implement. So I re-purposed the tank settings page for setup, reducing the total amount of screens needed

This was an **iterative** process, and I had to take into account what users wanted and what the client wanted. It was a balance of the two.

MORE TIME

I would have created a FAQ/help page in the application

I would have created screens for users to directly be able to get in touch with Beckett through the app.

I would have designed how the push notifications show up on the mobile device

THANKS