

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

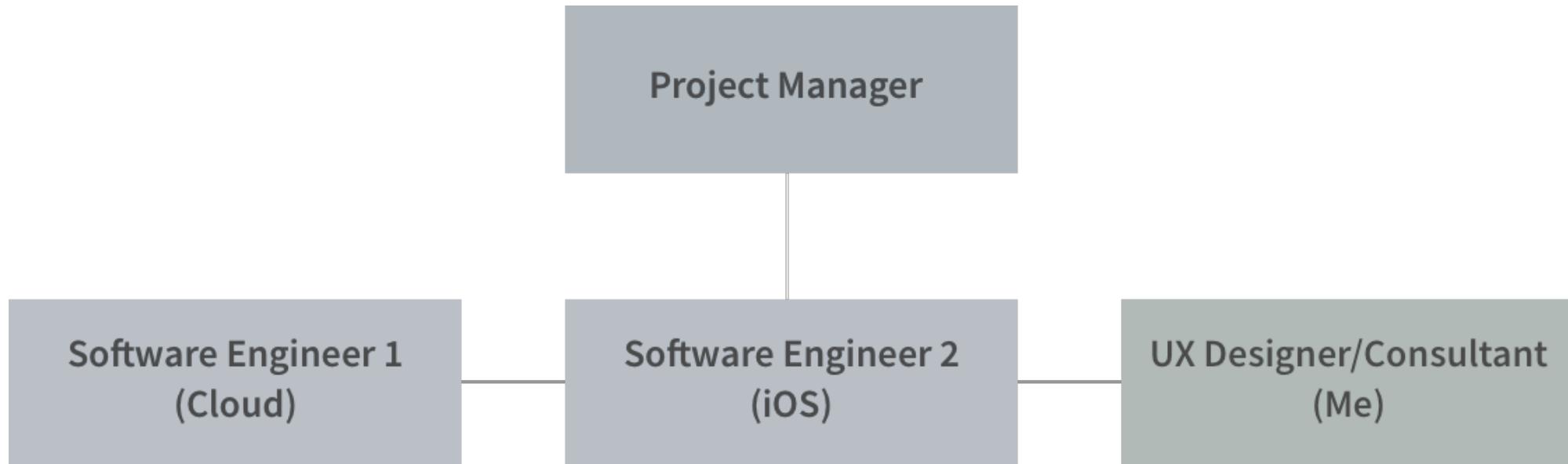


UsabilityHub



Invision

THE APPROACH



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

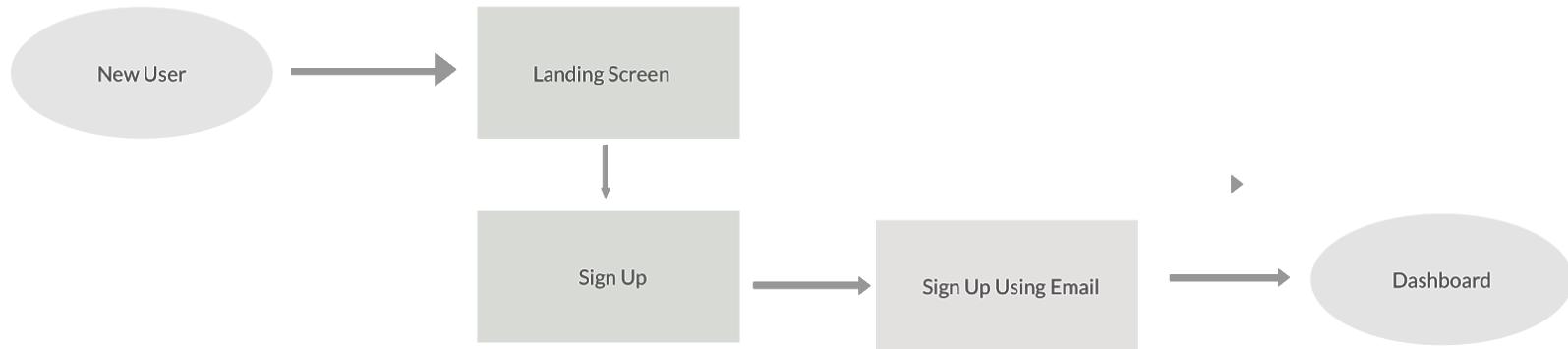
After talking to safety engineer experts in oil gauges at Beckett, we also were able to come to the conclusions that users would also want to be notified for "**freeze alarm**"/**low temperature** states as they prevent the oil from being stored in a safe and efficient manner.

USER STORIES

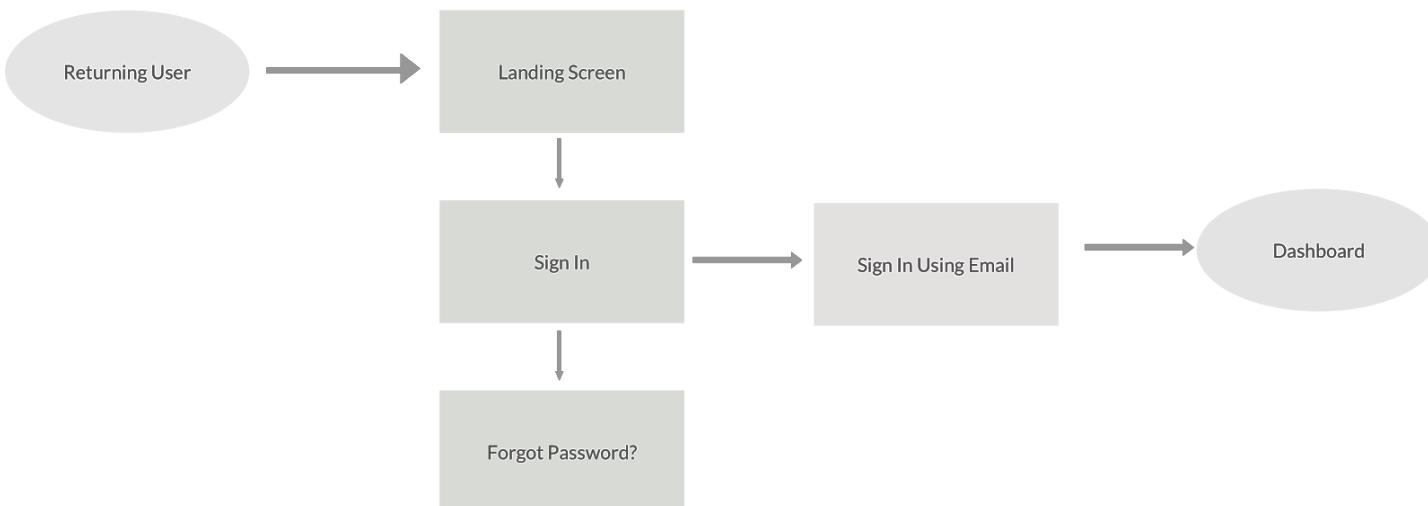
As a user	I want to link my hub	HIGH
As a user	I want to be able to see how much oil is left	HIGH
As a user	I want to be able to get notified when my oil is low	HIGH
As a user	I would like to get onboarded using my email address	HIGH
As a user	I want to know how much battery is left on my hub	MEDIUM
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

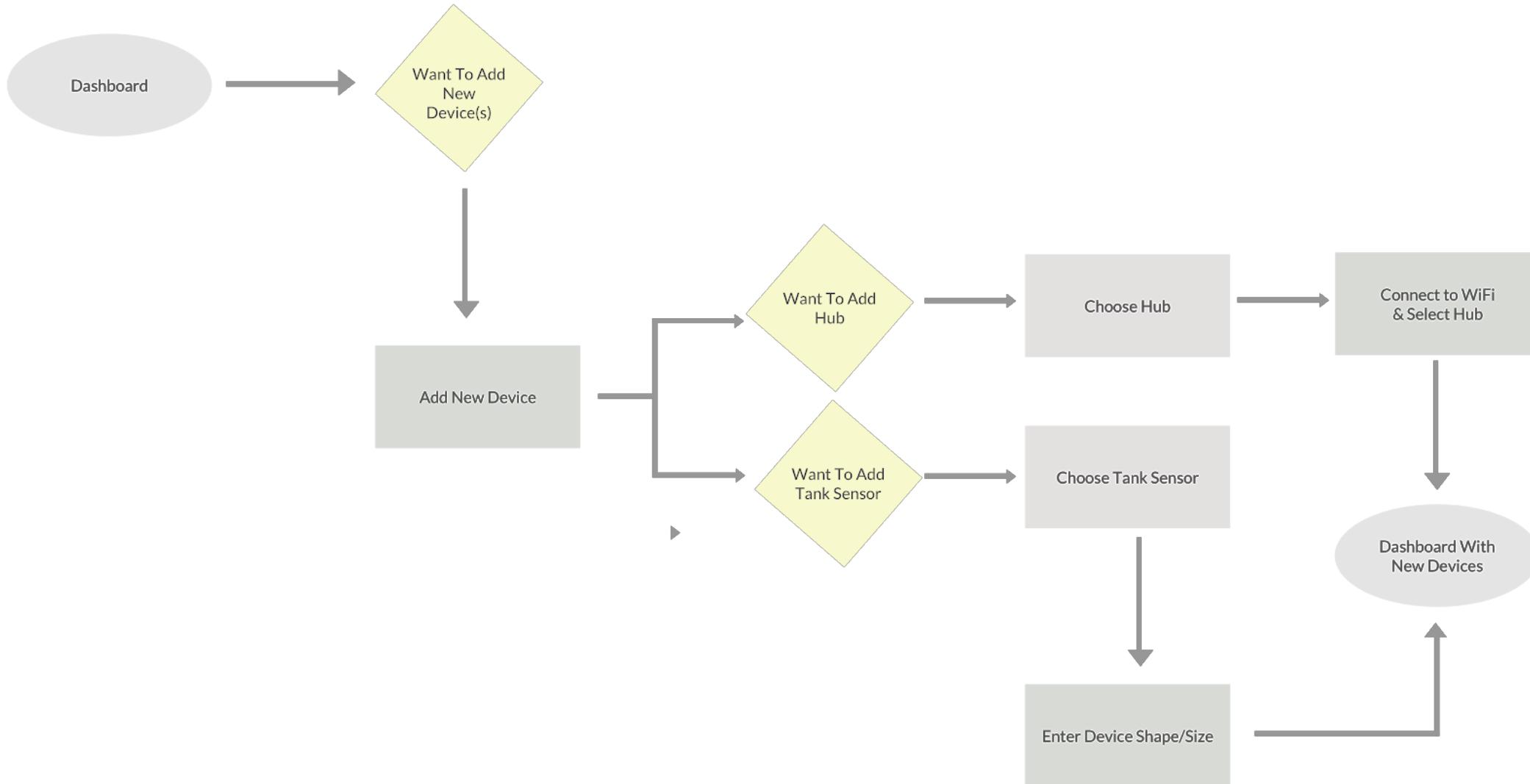


Returning User Sign In To Dashboard

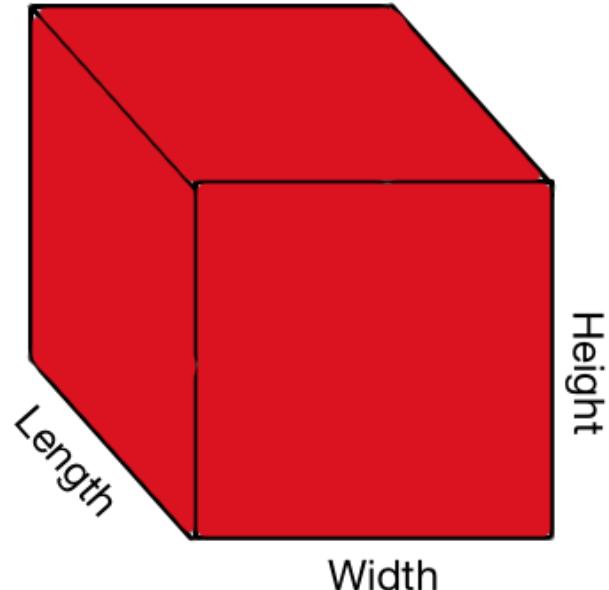
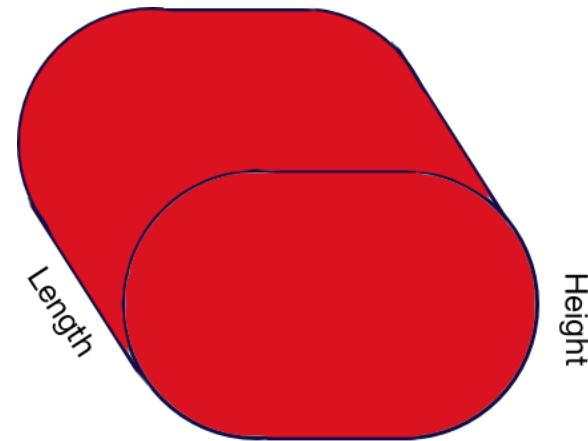
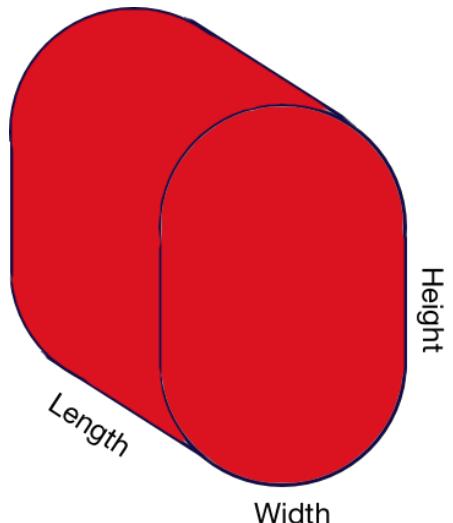
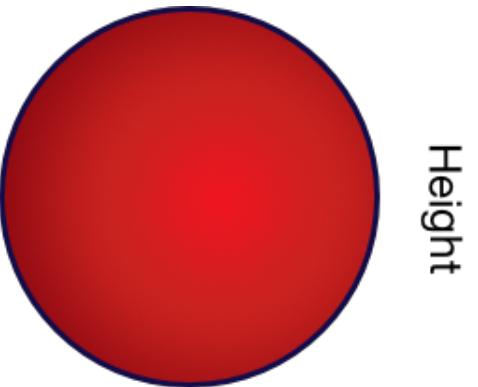
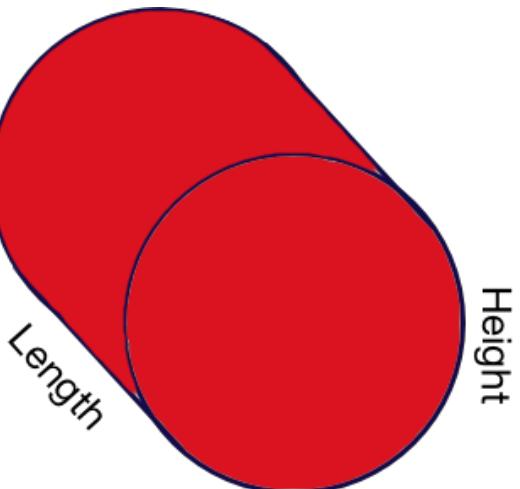
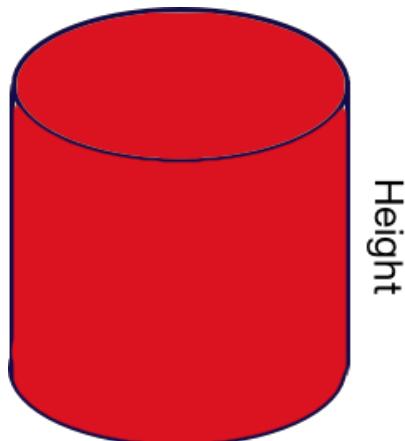


USER FLOWS

Dashboard to Entering Device Information



RESEARCHING THE TANKS



THE DESIGN

BRANDING + STYLE GUIDE

▼ Beckett Brand Elements

Logo Styles

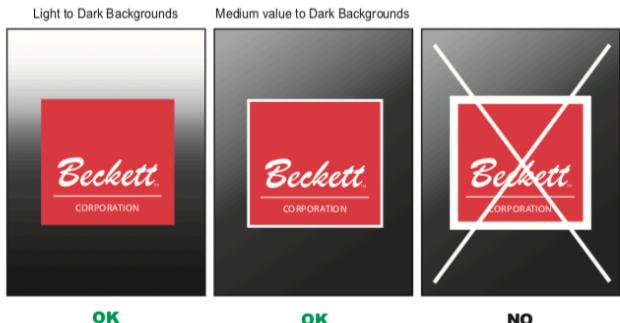
The Beckett logo is an icon of the brand itself and is our company's primary identifier. Regardless of where the logo is being used, there are only three approved versions of the Beckett Corporation logo: formal, freestanding style 1, and freestanding style 2.

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

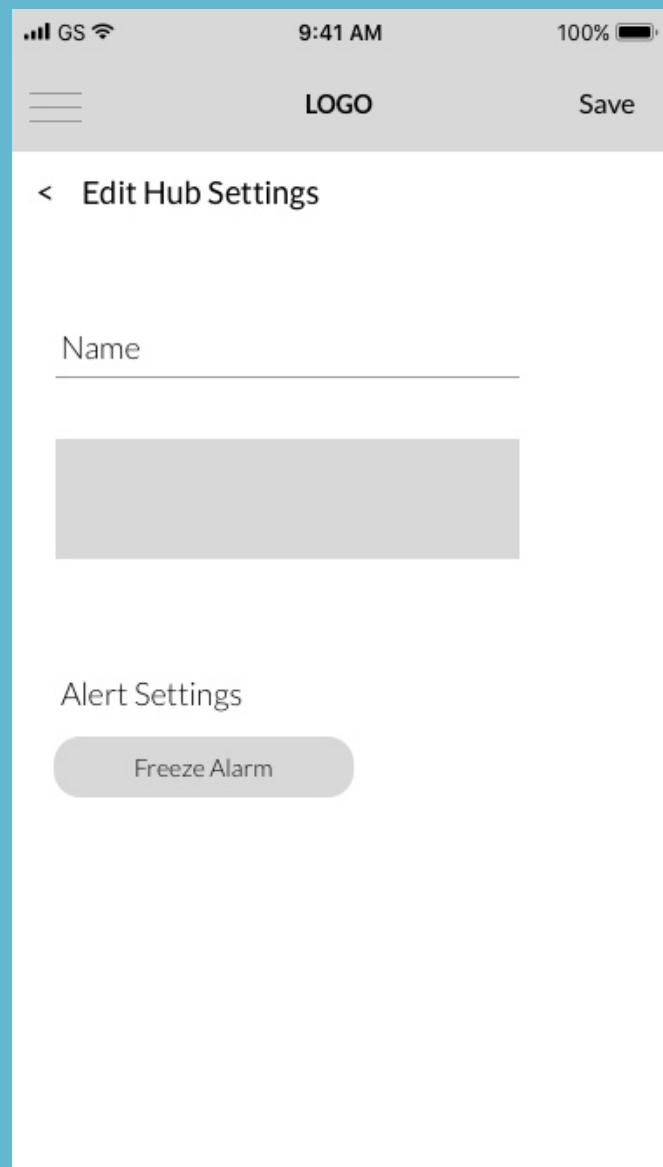
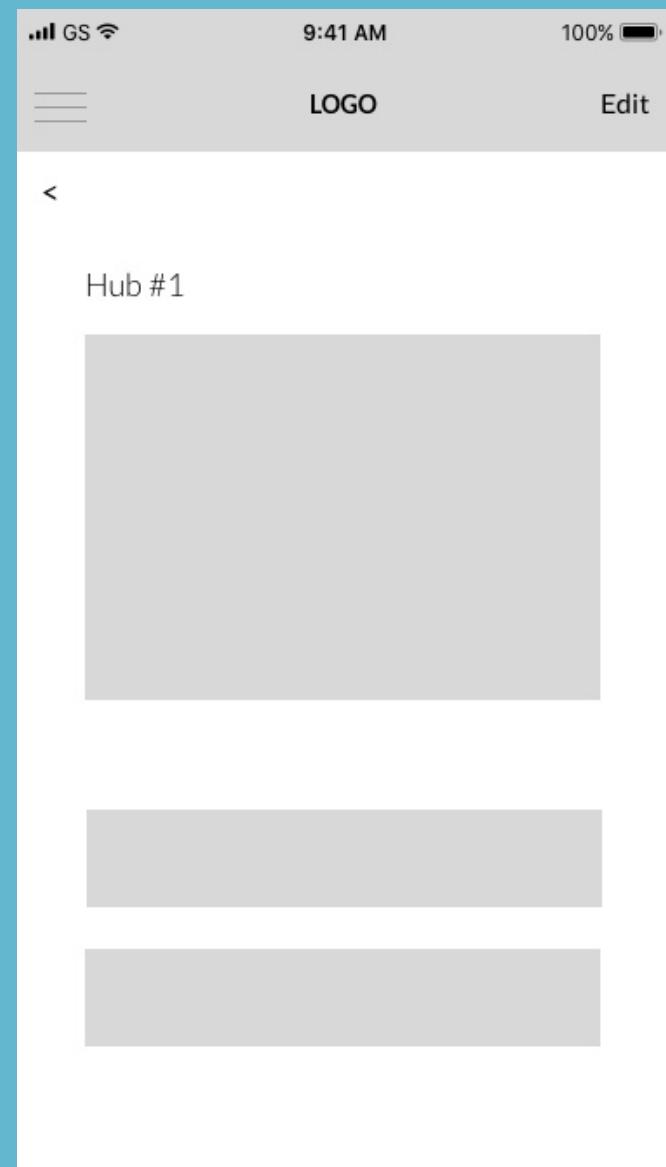
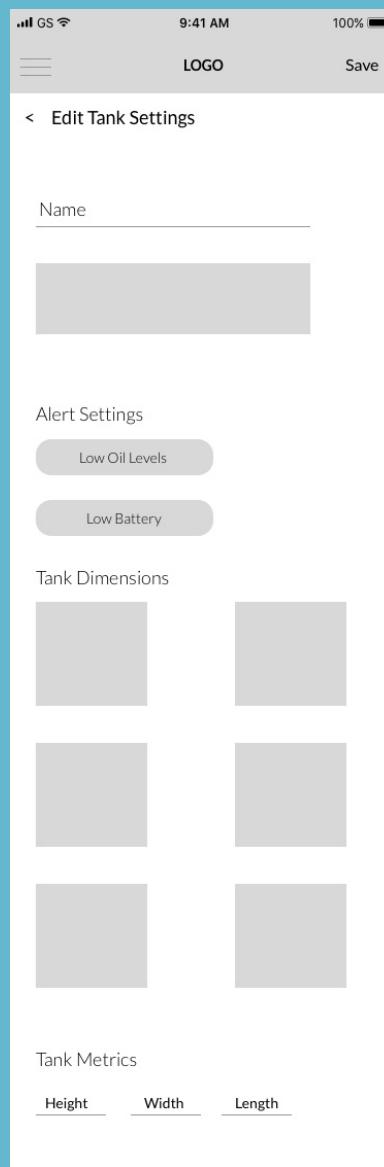
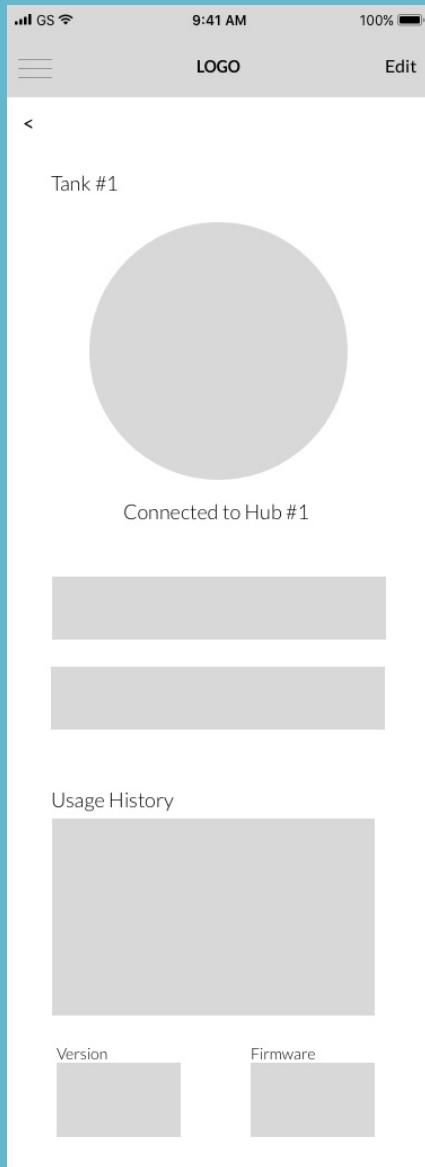
Helvetica

WIREFRAMES

The image displays four wireframe prototypes of a mobile application interface, arranged horizontally. Each prototype includes a header bar with signal strength, time (9:41 AM), battery level (100%), and a central logo placeholder.

- Login Screen:** Features a large "LOGO" placeholder at the top. Below it are input fields for "Email" and "Password", followed by a "Sign In" button. A link "Don't have an account. [Sign Up.](#)" is located at the bottom.
- Dashboard Screen:** Shows a "LOGO" placeholder at the top. The main area is titled "Dashboard" and contains two large, empty gray rectangular placeholders.
- Configure Tank Settings Screen:** Displays a "LOGO" placeholder at the top. The screen is titled "Configure Tank Settings". It includes a "Name" input field and a "Tank Dimensions" section containing six smaller gray square placeholders arranged in a 3x2 grid. A "Next" button is located at the bottom.
- Configure Hub Settings Screen:** Shows a "LOGO" placeholder at the top. The screen is titled "Configure Hub Settings". It includes a "Name" input field and sections for "Network SSID" and "Network Password", each with a corresponding input field. A large "Next" button is located at the bottom.

WIREFRAMES



INITIAL HI-FI MOCKUPS

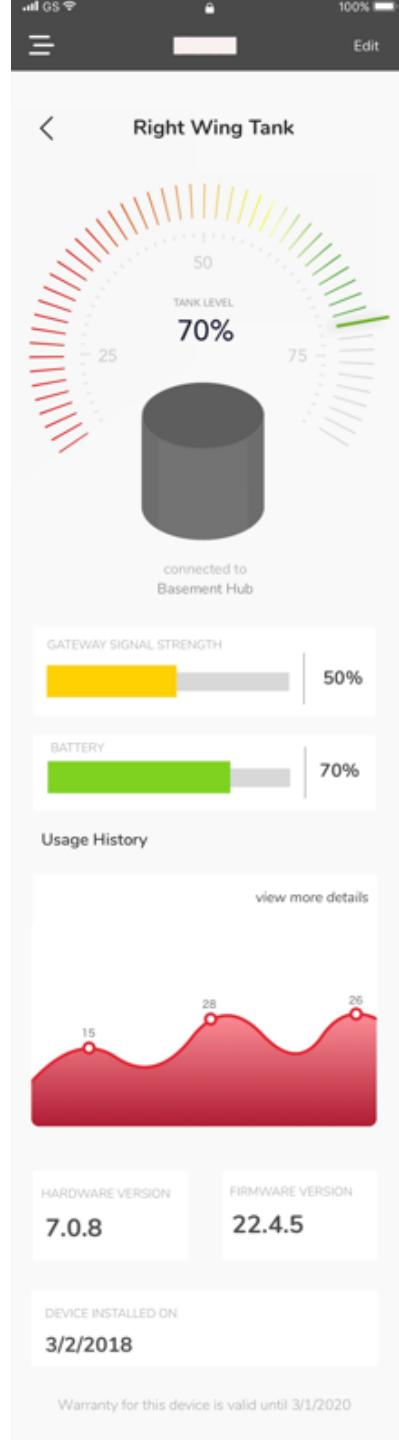
The image displays six mobile application screens for Beckett Corporation's device management platform, arranged horizontally.

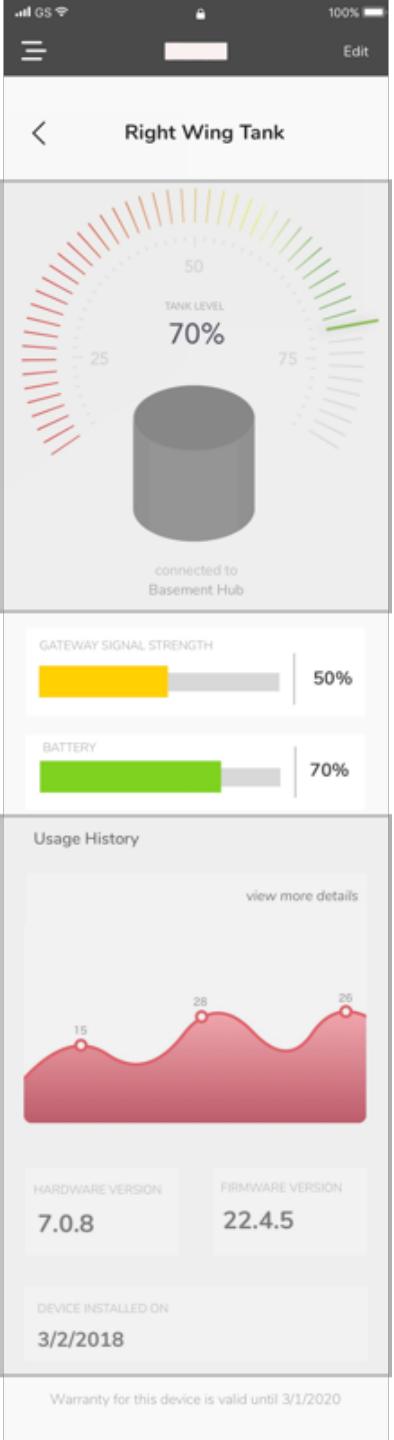
- Login Screen:** Shows the Beckett logo and a red header bar. Below the header are fields for Email (anitashah92@gmail.com) and Password (What's your secret). A "SIGN IN" button with a right-pointing arrow is at the bottom, followed by a note: "Don't have an account. [Sign Up](#)".
- Dashboard Screen:** Shows a "Beckett" header and a "Beckett CORPORATION" logo. It lists a "Hub" (Basement Hub, online) and a "Tank" (Right Wing Tank, 90% Full). A red circular badge with the number "2" is visible on the tank card.
- Device Detail Screen (Right Wing Tank):** Shows a circular gauge indicating a tank level of 70%. Below it are sections for "GATEWAY SIGNAL STRENGTH" (50%) and "BATTERY" (70%). A "Usage History" chart shows data points from 1 to 27. At the bottom are "HARDWARE VERSION" (7.0.8) and "FIRMWARE VERSION" (22.4.5).
- Edit Tank Sensor Settings Screen:** Shows a "General Settings" section with a "Name" field set to "Right Wing Tank". A red-bordered button labeled "Unbind this device from the Hub" is present. Below are "Alert Settings" for "Alerts for low tank levels" and "Alerts for another event".
- Device Detail Screen (Basement Hub):** Shows a funnel icon and a bar chart indicating 100% strength. The status is "online". Below are sections for "LAST MESSAGE RECEIVED AT" (4/11/2018, 4:30PM PST), "DEVICE INSTALLED ON" (3/2/2018), and a note about the warranty valid until 3/1/2020.
- Add a new device Screen:** Shows a "Device Name" field with "Building A Tank" entered. Below are "Type of Device" buttons for "Hub" (selected) and "Tank". A "NEXT" button with a right-pointing arrow is at the bottom. To the right, there are icons for different tank shapes: Rectangle, Sphere, Horizontal Cylinder, Horizontal Oblong, Vertical Cylinder, and Vertical Oblong.

FEEDBACK: INITIAL HI-FI MOCKUPS

The image displays six high-fidelity mobile application mockups for a device management platform, likely for industrial tanks. The interface is clean with a white background and a red header bar.

- Login Screen:** Shows the Beckett logo and "CORPORATION". Includes fields for "Email" (anitashah92@gmail.com) and "Password" (What's your secret), and a "SIGN IN" button.
- Dashboard:** Shows a "Hub" (Basement Hub, online) and a "Tank" (Right Wing Tank, 90% Full). A notification badge indicates 2 new messages.
- Device Detail Screen (Right Wing Tank):** Displays a circular gauge showing "TANK LEVEL" at 70%, a "GATEWAY SIGNAL STRENGTH" bar at 50%, and a "BATTERY" bar at 70%. Below is a "Usage History" chart with bars for days 1, 3, 6, 9, 12, 15, 18, 21, 24, and 27. Hardware version is 7.0.8 and Firmware version is 22.4.5.
- Edit Tank Sensor Settings:** Shows "Edit" and "Save" buttons. Device name is "Right Wing Tank". Includes "Unbind this device from the Hub" and "Alert Settings" (switches for low tank levels and another event).
- Basement Hub Status:** Shows a funnel icon, a bar chart with four green bars, and the status "online" with 100% strength. Includes a message box: "LAST MESSAGE RECEIVED AT 4/11/2018, 4:30PM PST" and "DEVICE INSTALLED ON 3/2/2018". A note says "Warranty for this device is valid until 3/1/2020".
- Add New Device:** Shows a "Beckett" header and "Edit" button. Fields include "Device Name" (Building A Tank), "Type of Device" (Hub or Tank selected), and a "NEXT" button. Below are "Tank Shape" options: Rectangle, Sphere, Horizontal Cylinder, Horizontal Oblong, Vertical Cylinder, and Vertical Oblong.





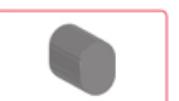
Beckett

Add a new device

Device Name
Building A Tank

Type of Device

Tank Shape

 Rectangle	 Sphere
 Horizontal Cylinder	 Horizontal Obround
 Vertical Cylinder	 Vertical Obround

NEXT →

Beckett

Add a new device

Device Name
Right Wing Tank

Type of Device

NEXT →

Beckett

Configure Tank Properties

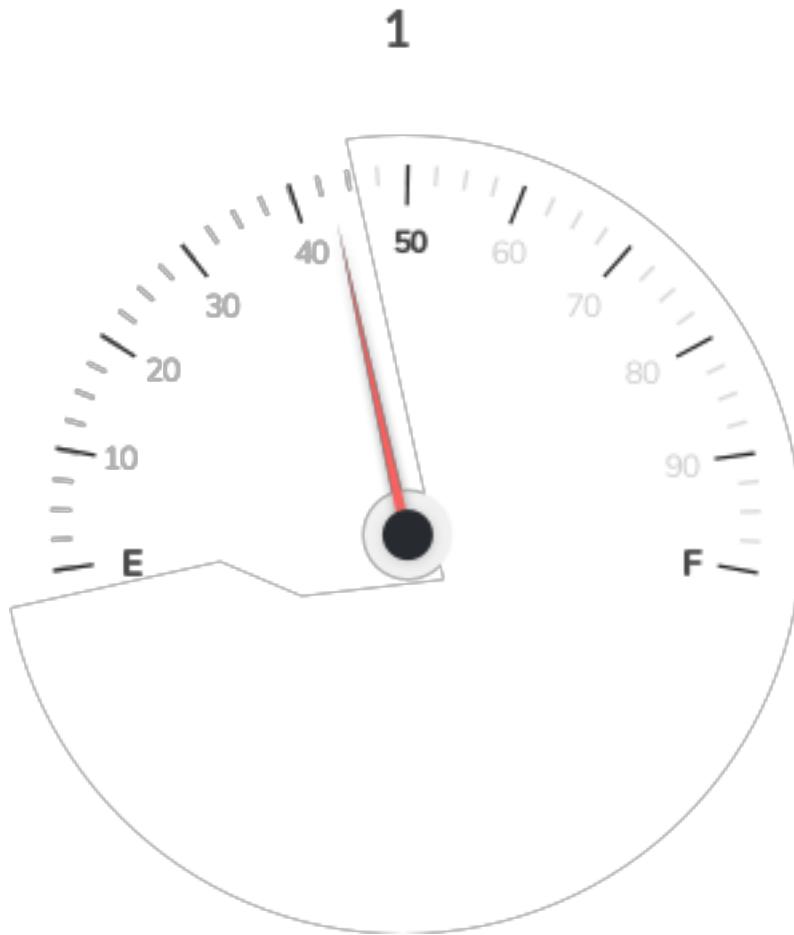
Pick the shape that best represents your tank.

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

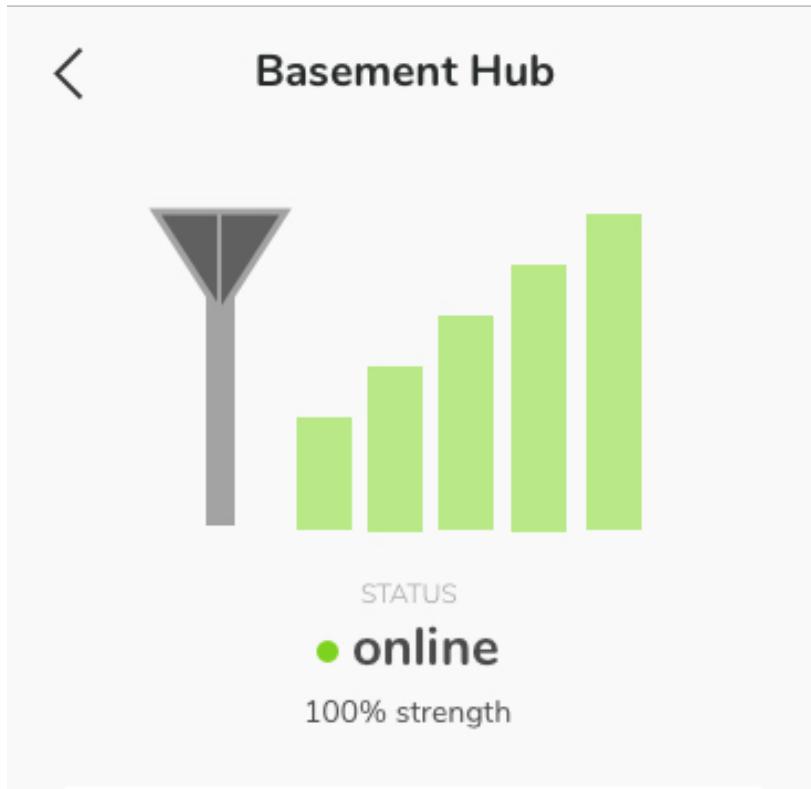


PREFERENCE TESTING

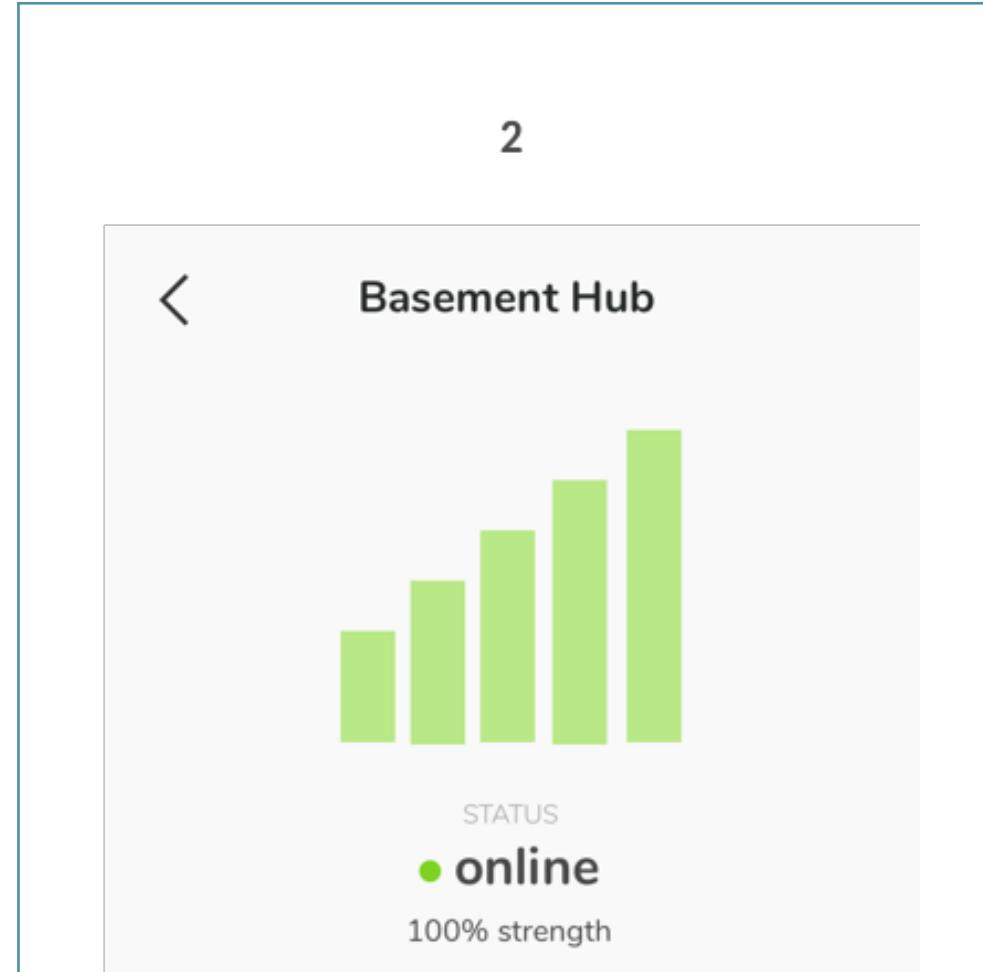


PREFERENCE TESTING

1



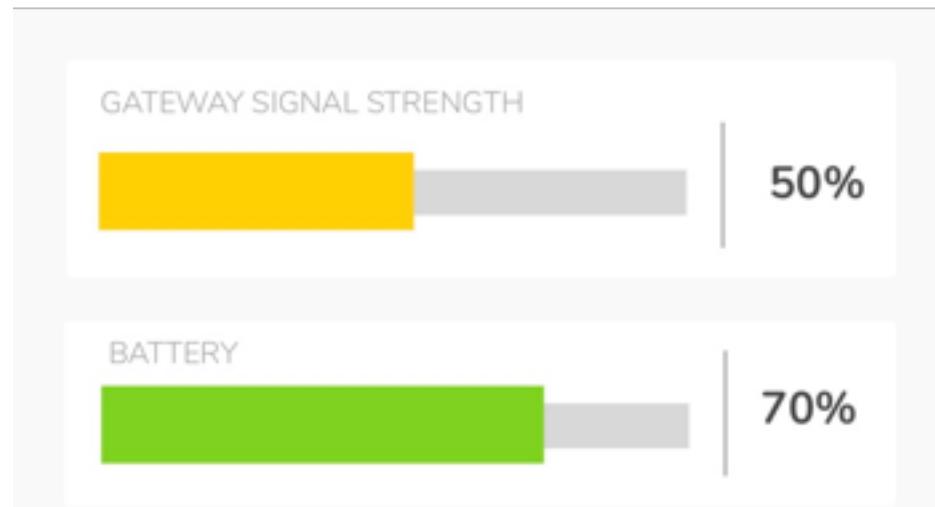
2



vs

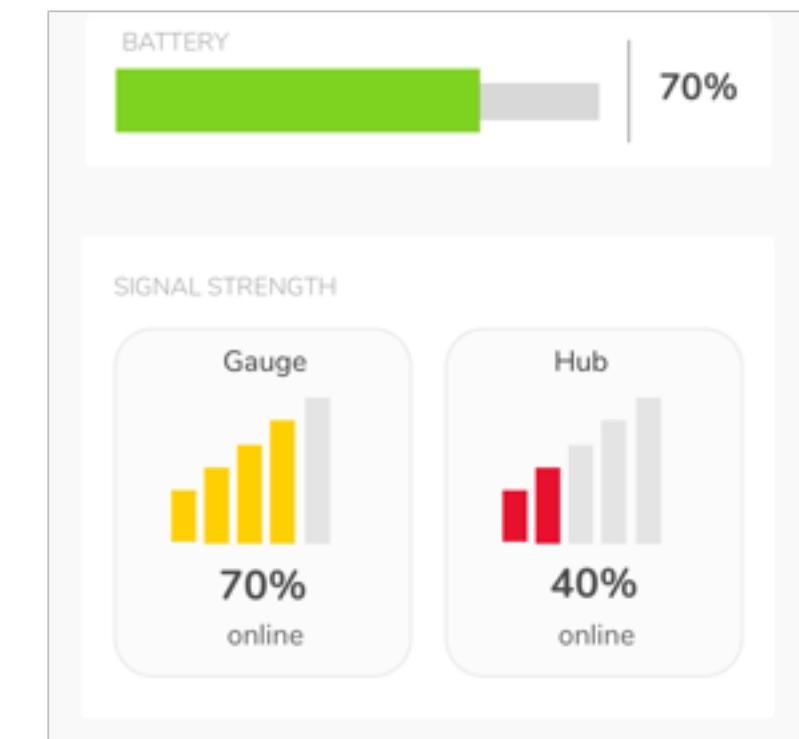
PREFERENCE TESTING

1



VS

2



FINAL HI-FI MOCKUPS

The image displays two side-by-side mobile phone screens, both showing the Beckett app interface.

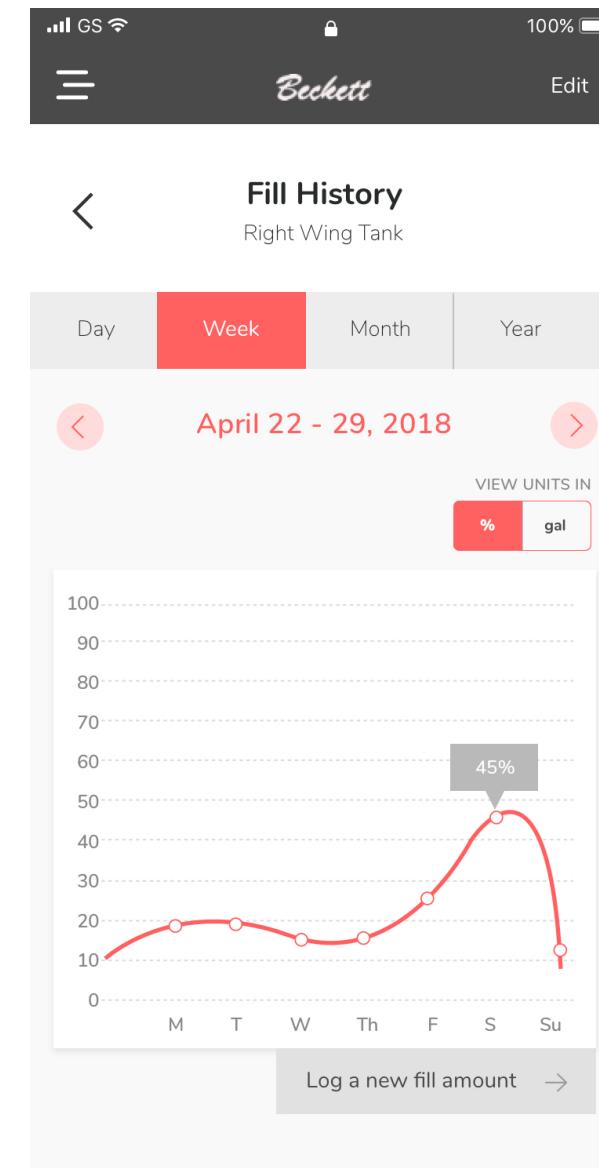
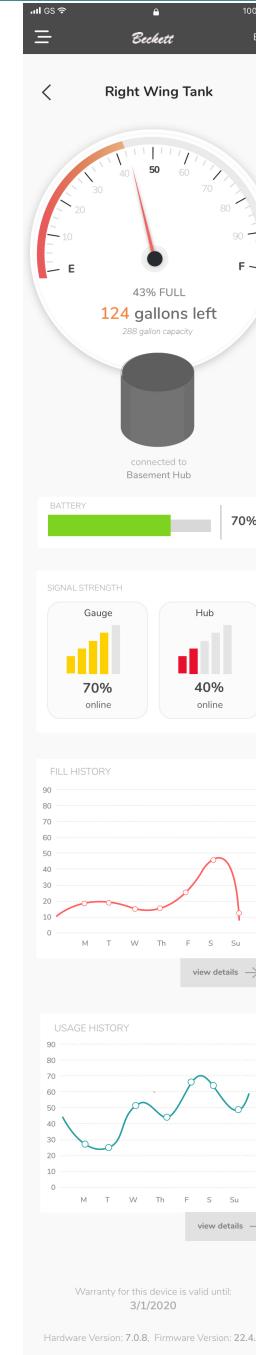
Left Screen (Login Screen):

- Top status bar: Signal strength, GS, 9:41 AM, 100% battery.
- App header: "Beckett" in red script font.
- Form fields:
 - Email: anitashah92@gmail.com
 - Password: "What's your secret" with an eye icon.
- Sign In button: "SIGN IN" with a right-pointing arrow.
- Text at the bottom: "Don't have an account. [Sign Up.](#)"

Right Screen (Dashboard):

- Top status bar: Signal strength, GS, 100% battery.
- App header: "Beckett" in red script font.
- Navigation: Hamburger menu icon, "+" icon.
- Section title: "Dashboard".
- Card 1: "Hub" icon, "Basement Hub" text, "online" status, red "→" icon.
- Card 2: "Gauge Sensor" icon, "Right Wing Tank" text, "20% Full" status, red "→" icon.
- Alert: "Low Fuel Warning" with an exclamation mark icon.

FINAL HI-FI MOCKUPS



FINAL HI-FI MOCKUPS

The image displays two final Hi-Fi mockups of a mobile application interface.

Edit Tank Sensor Settings Screen:

- Header:** Shows signal strength, battery level (100%), and the device name "Beckett".
- Title:** "Edit Tank Sensor Settings" with a back arrow.
- General Settings:** A section containing a "Name" field with the value "Right Wing Tank".
- Alert Settings:** Includes an "Alert for low battery" toggle switch (on) and an "Alert for low tank level" switch with options "%", "gal", and "off".
- Tank Properties:** Displays a cylinder icon, "Volume: 300 gallons", and "Shape: Vertical Cylinder". A "Reconfigure Tank Properties" button is also present.
- Warning:** A red warning icon with an exclamation mark and the text "Unbind this device from the Hub (not recommended)".

Basement Hub Screen:

- Header:** Shows signal strength, battery level (100%), and the device name "Beckett".
- Title:** "Basement Hub" with a back arrow.
- Status:** Shows a bar chart with five green bars of increasing height, labeled "STATUS".
- Online Status:** A green dot followed by the text "online".
- Warranty:** Text stating "Warranty for this device is valid until: 3/1/2020".
- Hardware Info:** "Hardware Version: 7.0.8, Firmware Version: 22.4.5".

DESIGN DECISIONS: GRAPHS

DESIGN DECISIONS: ALERTS/NOTIFICATIONS

The image displays two side-by-side screenshots of a mobile application interface, likely for a smart home or monitoring system named "Beckett".

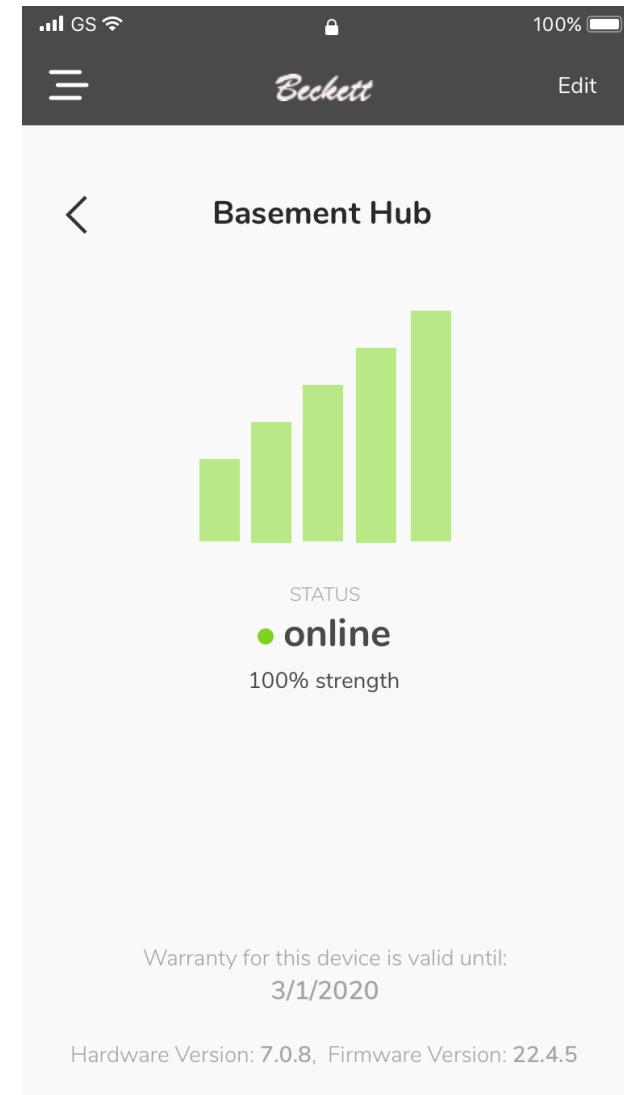
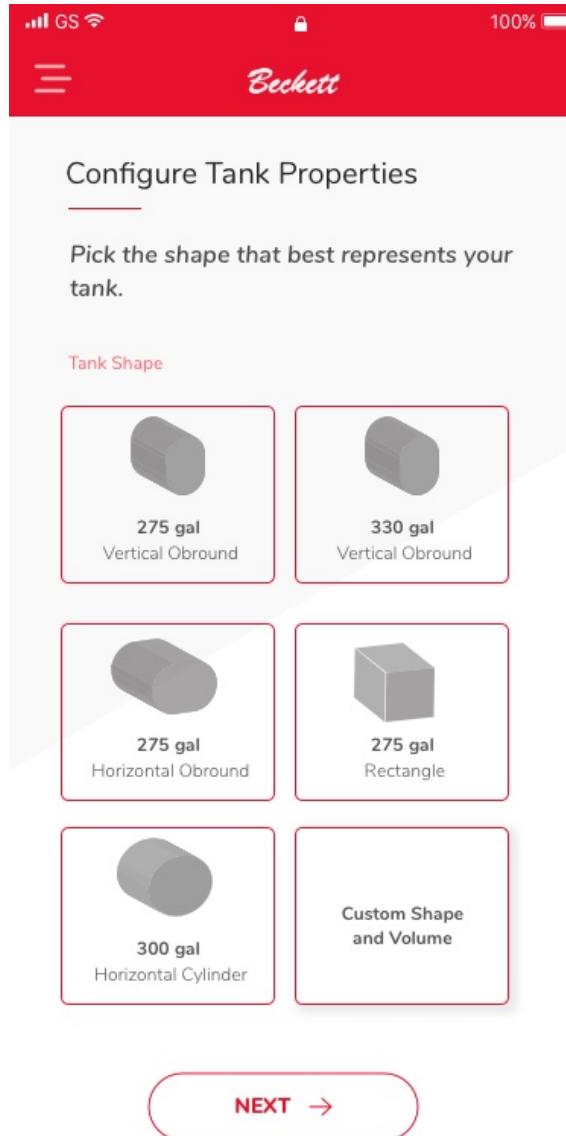
Screenshot 1 (Left): Edit Hub Settings

- General Settings:** Name is set to "Basement Hub".
- Alert Settings:** A green toggle switch is turned on, labeled "Alerts for 'freeze alarm' (low ambient temperature)". Below it, a slider is set to 32 °F.
- Network Settings:** Shows "Currently connected to: Ciklum." with a "Reconfigure Network Settings" button.
- Unlink Options:** A red warning icon with an exclamation mark and the text "Unlink from Account (not recommended)".

Screenshot 2 (Right): Edit Tank Sensor Settings

- General Settings:** Name is set to "Right Wing Tank".
- Alert Settings:** "Alert for low battery" is turned on (green switch). "Alert for low tank level" is set to 0% (green switch).
- Tank Properties:** Volume: 300 gallons, Shape: Vertical Cylinder. Includes a "Reconfigure Tank Properties" button.
- Unbind Options:** A red warning icon with an exclamation mark and the text "Unbind this device from the Hub (not recommended)".

DESIGN DECISIONS: RED VS GREY





QuickTime Player File Edit View Window Help



100%

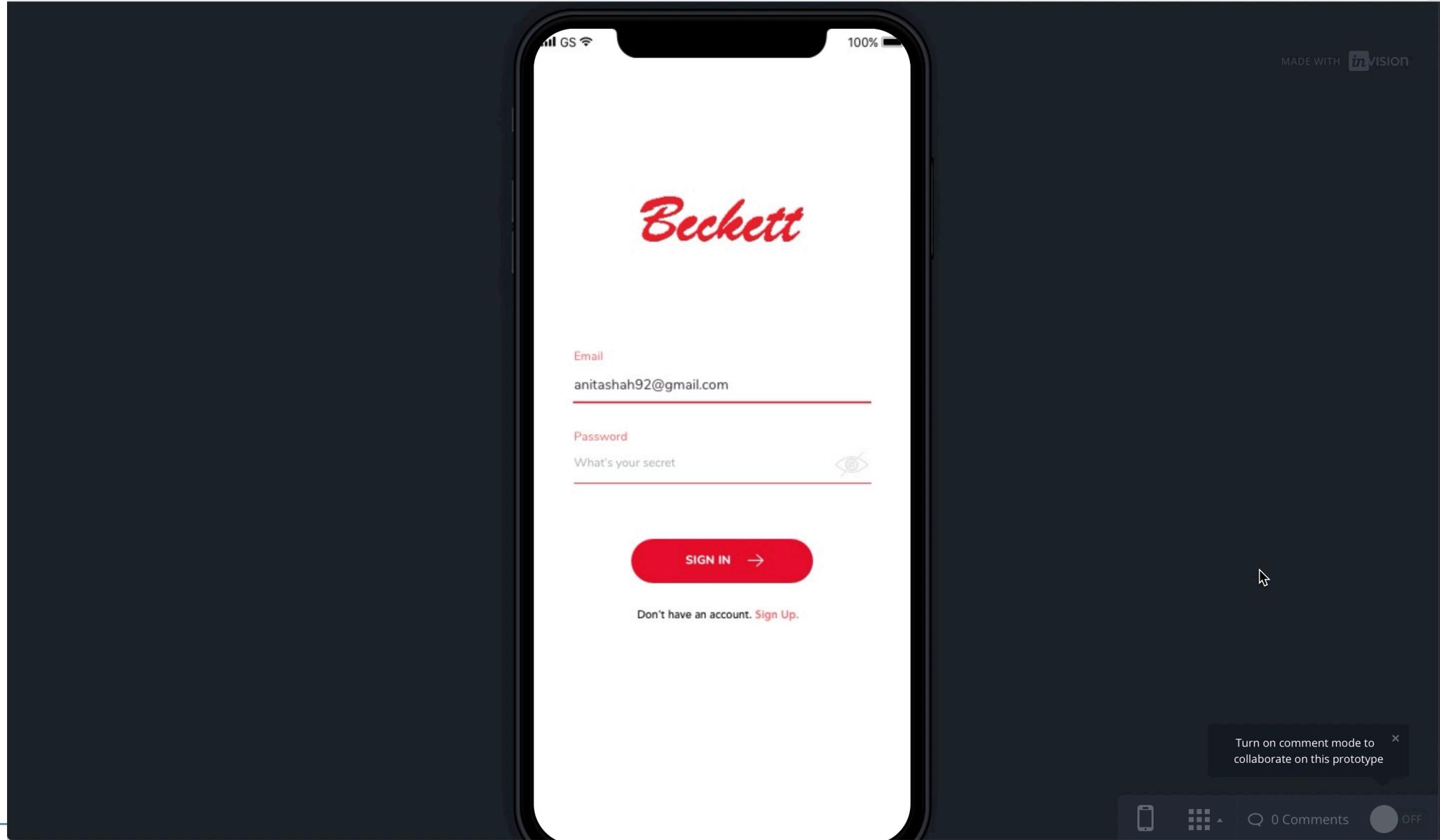


Thu Mar 28

4:07:15 PM Anita Shah



projects.invisionapp.com



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