Mask Pouch

Form & Behavior Specification

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Background

Amid the COVID-19 pandemic, sterile face masks have rocketed in utility and need, but storage options to keep these masks clean on the go have not been able to keep up. The Mask Pouch is a convenient way to store, carry, and clean masks. The aim of this product is to empower users to both express themselves with a fun stylish accessory, but also have the means of staying clean. Furthermore, this product is rooted in sustainability. By using low-energy UV bulbs to sterilize masks, we have eliminated the need for harsh chemical cleaning treatments or excessive water use to keep masks clean. Plus, encouraging fabric masks eliminates countless waste as caused by disposable mask usage. As a bonus, you can monitor your environmental impact and control your Mark Pouch directly from the companion app.

Thus far, we have conducted extensive user research to determine which aspects of the Mask Pouch resonate the most with users. With our finding of convenience in mind, we delved into developing a marketing plan to reinforce these findings in our user experience. Now, we have outlined the specifics of the Mask Pouch and the final design specifications, from the sizing to the fabric options. From here, using these specifications, we will send the mask pouch to be assembled for a prototype. Also, we will send our design specifications from our mobile app to a software developer. We will likely resume user research with prototypes to ensure users find these products to be useful and seamless. Then, we can take this research and our marketing information to potential retailers to justify selling partners. We can secure orders with these major online retailers to solidify funding for a bulk order and start distributing. At this point, the logistics, marketing, and details of the product are finished, but that is not to say the road ahead would be easy or fast. Securing a distributor hinges on the research findings of our users. But, we have made good progress in the preliminary stages of product development.

The philosophy behind the Mask Pouch is to ensure sustainable stylish safety for all. Through details like strap hooks and a soft fabric exterior, all while staying light and portable, the Mask Pouch is suitable for anyone trying to stay safe on the go.

Personas and Critical Requirements

Personas are hypothetical users of a product or service that help to identify various functionalities that the product should include in its design. These consist of profiles that attempt to accurately describe a person that may be using. Their main purpose is to portray how various users with different wants and needs will interact with the product or service in the real world. In our document, we introduce four different personas, Sally Stillwell, Harris Reede, Susan Klawitz, and Sean Clarke. Each of them is representative of key requirements that we are looking to implement into the mask pouch.

Our first persona, Sally, is an environmentally concerned individual that takes the current situation imposed by COVID-19 very seriously. She works at a non-profit organization that aims to reduce environmental waste and is always looking to benefit the community. Therefore, in order for the mask pouch to successfully suit her needs, there must be components to clean masks for the purpose of reuse and cut down on disposable mask usage. In addition, Sally is very proactive in spreading the use of the mask pouch with her friends so the mask pouch must also feature an easy-to-use interface along with the companion app.

The second persona is Harris Reede, a college student that aims to do his part in stopping the spread of COVID-19 while also staying stylish. For Harris, the mask pouch is another accessory that he carries with him daily on frequent trips around campus and therefore, customization of the mask pouch is a necessity for him. He is very fond of the dual-purpose that the mask pouch serves as both a safe-to-use sanitation device and a piece of art to add to his wardrobe.

Susan Klawitz, our third persona, is a single mom of three children that wants to take advantage of the mask pouch's powerful cleaning capabilities. Since her description involves

caring for the masks of four people at once, the mask pouch must provide various size options that suit the needs of both individuals and groups-alike. The mask pouch should also be able to handle larger cleaning "loads" so that multiple masks could be cleaned at once. With these needs satisfied, a real person like Susan may find the mask pouch adequately suited to their daily life.

The last persona, Sean Clark, is a negative persona. The inclusion of this type of persona helps to identify places where the current design of the mask pouch may be lacking so that it could be improved in future iterations. Sean's profile describes him as being a busy individual that often carries around a lot of gear for his various hobbies including photography. With this, the mask pouch must be flexible enough so that it can be stored when not in use and could also feature clips that could easily be attached to the outside of a pack.

Figure 1 – Sally Stillwell, Harris Reede, Susan Klawitz, Sean Clark respectively
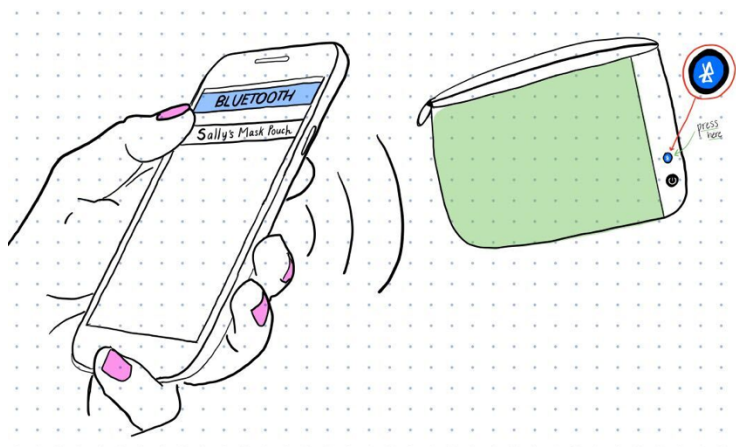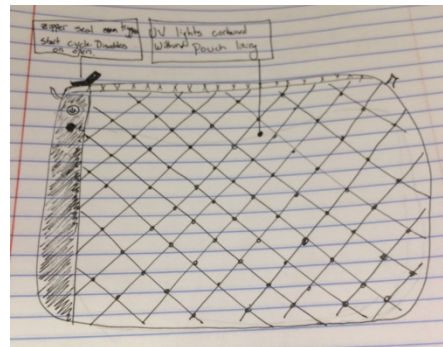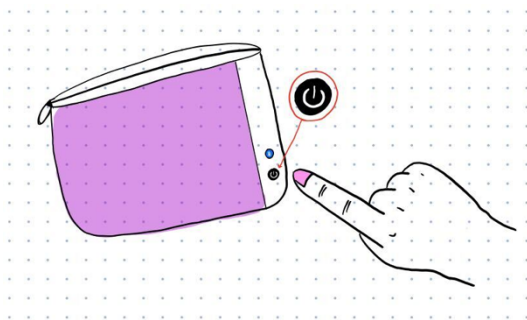
Scenarios

Scenarios are situations that we thought of, of various things that might happen when users interact with our device. Visualizing these stories and scenarios of what might happen when our device is used, gives a better understanding of what problems users may run into, or what features they might like. This helps us refine the design of our product to fit the users' needs.

Beside scenarios helping us in designing our product, they also helped us come up storyboards. Storyboards are simple illustrations that the users can look at and get a better understanding of how they can use our product. It also helps them understand the key components of the product and may give instructions of how it's used.
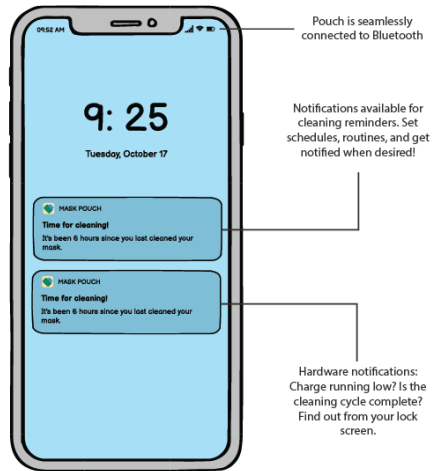
Below are the original storyboard drafts, and our modified final storyboards:

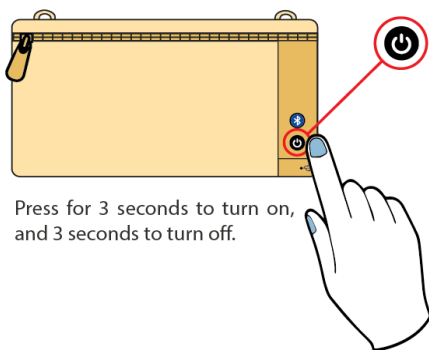- Original storyboard drafts:

Final storyboards:

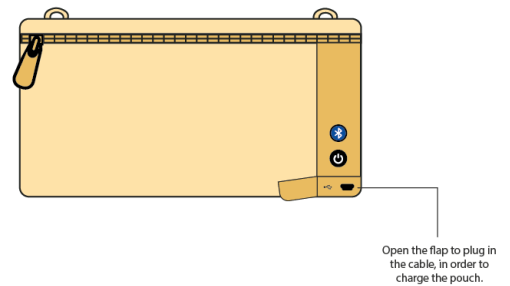
Notifications from Mask Pouch

Pouch is seamlessly connected to Bluetooth

Notifications available for cleaning reminders. Set schedules, routines, and get notified when desired!

Hardware notifications: Charge running low? Is the cleaning cycle complete? Find out from your lock screen.

Checking Usage Reports

Choose to check the info about a specific pouch, or all of them.

Swipe through to show info from the current day, week, or month.

Turning on your pouch

Press for 3 seconds to turn on, and 3 seconds to turn off.

Charging the pouch

Open the flap to plug in the cable, in order to charge the pouch.

Activating the LED lights
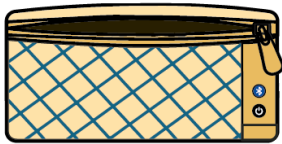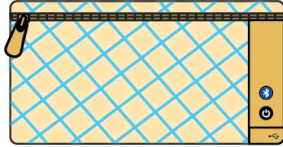
Connecting your pouch to your phone
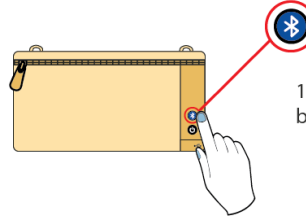
The pouch must be turned on, and the zipper must be fully closed in order for the LED lights* to turn on.

1. Press the bluetooth button for 3 seconds.

Whenever the zipper is open, the LED lights* won't work.

2. Go to the bluetooth setting on your phone, and connect to the pouch once it shows up.

* The LED lights are not visible wether they are on or off, because they're incapsulated in the insulating pouch. The blue lights depected in the pictures are just for visual represenation.
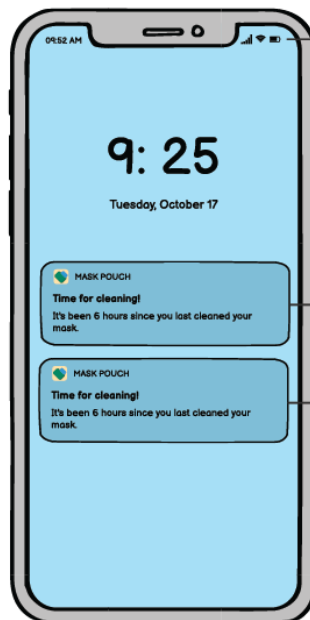
Notifications from Mask Pouch

9: 25

Tuesday, October 17

MASK POUCH

Time for cleaning!
It's been 6 hours since you last cleaned your mask.

MASK POUCH

Time for cleaning!
It's been 6 hours since you last cleaned your mask.

Pouch is seamlessly connected to Bluetooth

Notifications available for cleaning reminders. Set schedules, routines, and get notified when desired!

Hardware notifications: Charge running low? Is the cleaning cycle complete? Find out from your lock screen.
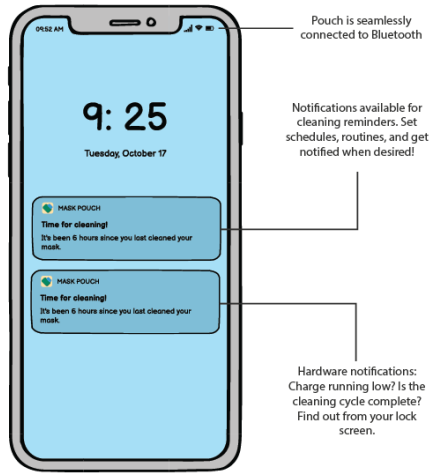
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Interaction Framework

Our app has 4 main screens, and we count the pouch itself as another, making it five areas for interaction in total. A major event in our app is the navigation of the parallel workspace in the form of the home and settings buttons on the bottom of the screen. The data needs for our app include having a cleaning cycles tracker and personalized reminders. For the pouch, we emphasized our one data need: portability.
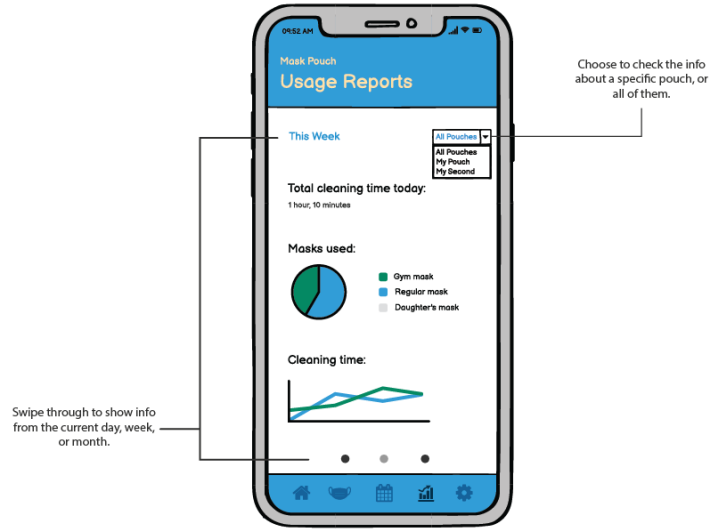
The first screen you pull up on the app and our first main screen is the home screen. Here, we show the user how much time is left in their current cleaning cycle, allow them to stop and start cycles, and give them access to the schedule and the usage report. From the home screen, users can access the schedule screen. There they can set new reminders on dates of their choosing to clean their masks or charge their pouch. They can also see previously made reminders and edit them. Users can also access the usage report screen which allows them to view statistics based on their use of the app and pouch. The last main screen in the app is the settings screen. It and the home screen are accessible at all times via the home and settings buttons on the bottom of the screen. There, users can view the battery life of the pouch, see how many uses they have until they will need to charge again, adjust general settings, and view the environmental impact they have had by using the mask pouch. Lastly, the pouch itself has limited interaction. Directly from the pouch, users can stop and start a cycle without having to open up the app. Users can also press the Bluetooth button to connect the pouch to a smart device and see about how much battery life is left by looking at the battery light.

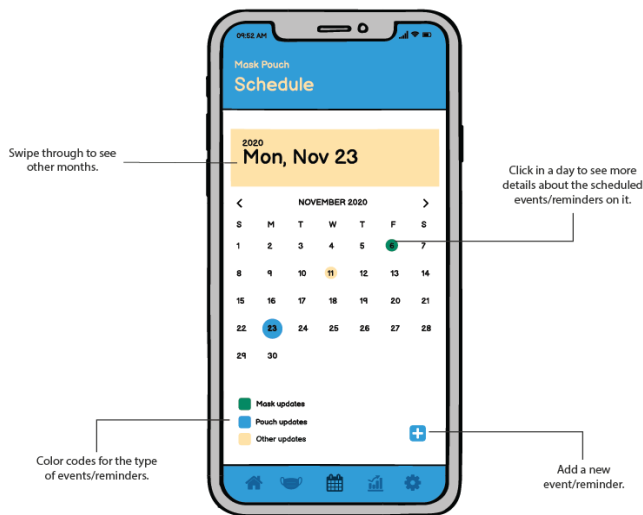Below are storyboards that help to illustrate different key interactions between the user and the product/app:
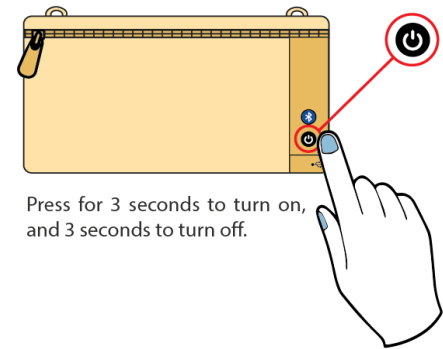
Notifications from Mask Pouch

Pouch is seamlessly connected to Bluetooth

Notifications available for cleaning reminders. Set schedules, routines, and get notified when desired!

Hardware notifications: Charge running low? Is the cleaning cycle complete? Find out from your lock screen.

Checking Usage Reports

Choose to check the info about a specific pouch, or all of them.

Swipe through to show info from the current day, week, or month.

Managing Schedule

Swipe through to see other months.

Click in a day to see more details about the scheduled events/reminders on it.

Color codes for the type of events/reminders.

Add a new event/reminder.

Turning on your pouch

Press for 3 seconds to turn on, and 3 seconds to turn off.

The pouch must be turned on, and the zipper must be fully closed in order for the LED lights* to turn on.
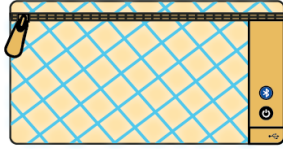
Whenever the zipper is open, the LED lights* won't work.

* The LED lights are not visible wether they are on or off, because they're incapsulated in the insulating pouch. The blue lights depected in the pictures are just for visual represenation.

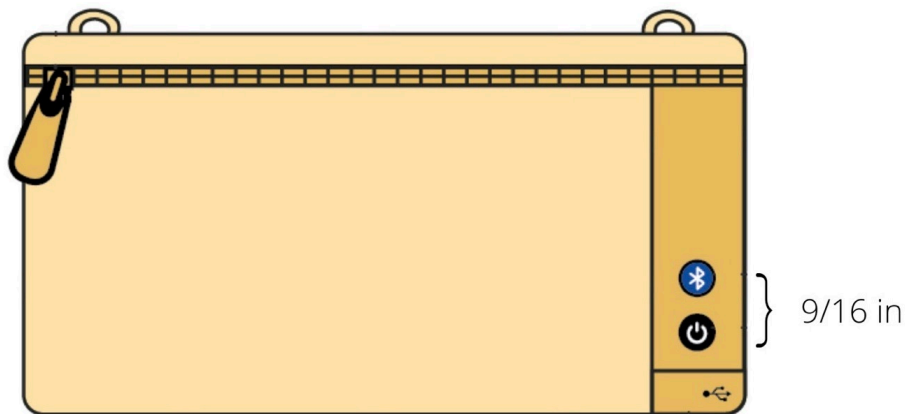Open the flap to plug in the cable, in order to charge the pouch.

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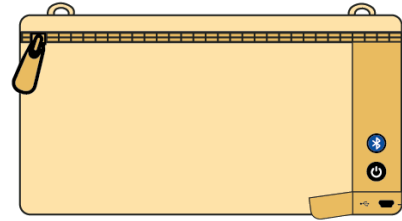
Visual Properties

Final Product Design

Key Measurements

4 1/2 in x 8 1/2 in x 1 1/2 in

9/16 in

The product's dimensions were selected based on the max size of face masks to make sure any type of face-covering fits the Mask Pouch properly. This gives everyone equal utility regardless of the size of their mask. Additionally, the measurements are also intended to make the product portable and comfortable to carry. Lastly, the button sizes were carefully chosen to facilitate usability as well as their visibility.

Mask Pouch Color Availability

The Mask Pouch is available in a variety of colors to satisfy and meet customer's preferences. These colors were designated as the most popular in the fashion industry in 2020, therefore we envision they will attract more buyers and give more value to the product.

Key Icons

Bluetooth button
On/off button
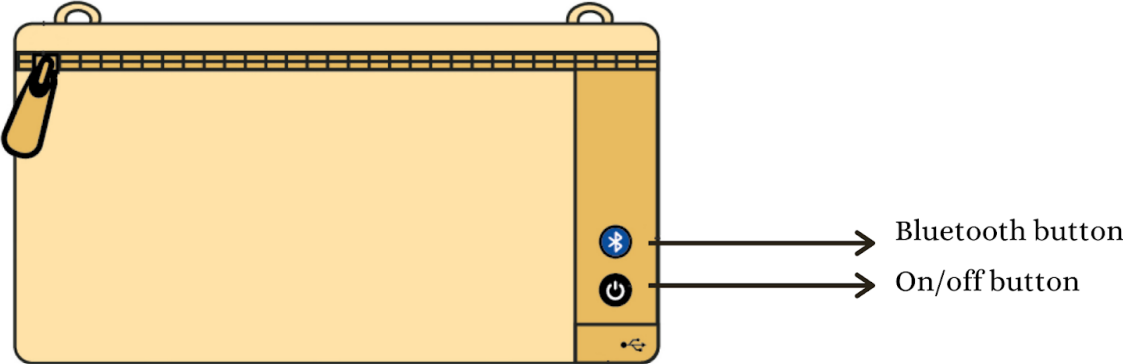
The face mask pouch has two buttons only: Bluetooth and On/Off. This minimalist interface design makes the customer experience easy and smooth. It doesn't require much effort to understand nor use, boosting the quickness and effectiveness our product provides.
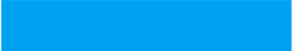
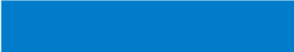## Digital Interface

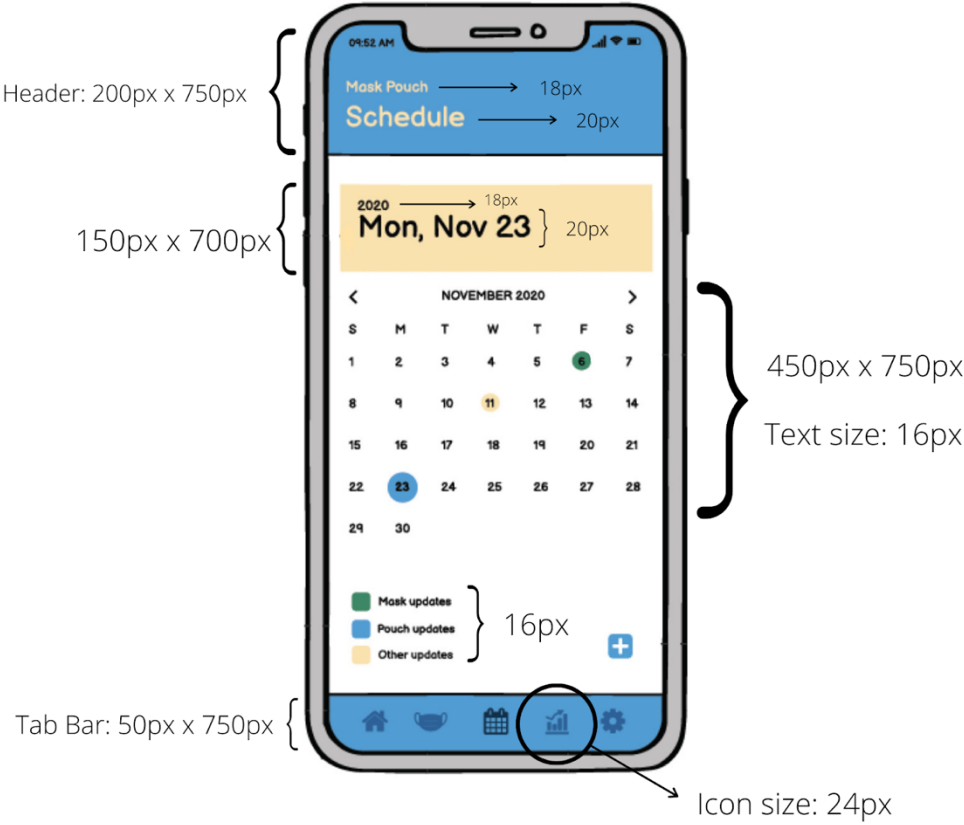## Final Mobile App Icon

1024x1024 px

HEX #2A6B43

HEX #00A1F1

HEX #007CCB

HEX #f0e3a2

Key Measurements

Header: 200px x 750px

150px x 700px

450px x 750px

Text size: 16px

16px

Tab Bar: 50px x 750px

Icon size: 24px

The text, icon, header, and tab bar sizes were strategically placed to enhance readability and prevent eyestrain. They also make scrolling or tapping a more comfortable experience. The application follows the recommended guidelines for mobile app development as well to make sure the app is adaptable to any screen size.

Colors

HEX: #55ACEE

HEX: #292F33

HEX: #66757F

HEX: #CCD6DD
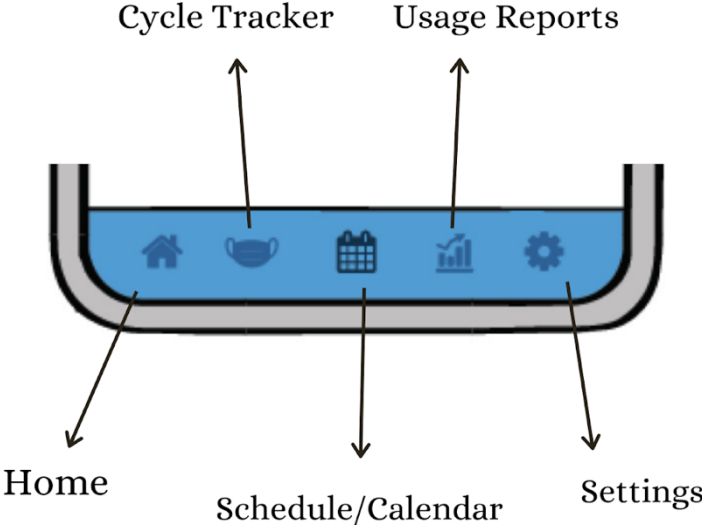
HEX: #E1E8ED

HEX: #FFFFFF

HEX: #00A1F1

HEX: #0F7DC2

HEX: #006E51

HEX: #ffead

The colors presented above are used on the Mask Pouch mobile app, which goes hand in hand with the brand's logo palette. The team picked to showcase congruence between the logo and the app to strengthen the brand's identity from a marketing perspective.
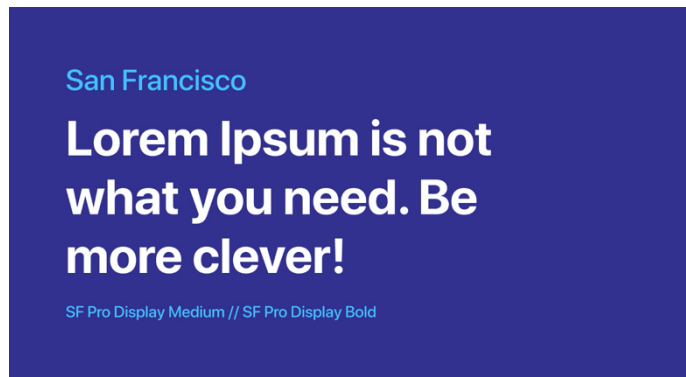
Key Icons

The tab bars are composed of 5 unique icons: Home, Cycle Tracker, Calendar, Usage Reports, and Settings. Each icon was designed to represent the main functions of the mobile application in one touch. This means users will easily assimilate the small image with the action they wish to pursue. Moreover, the icons also allow customers to switch between page to page in one single tap from any place on the app.

Fonts, Typefaces, and Styles

Proxima Nova

San Francisco

San Francisco

Lorem Ipsum is not what you need. Be more clever!

SF Pro Display Medium // SF Pro Display Bold

The text fonts picked are widely used around the mobile app development world, meaning smartphone users are most likely to be familiar with them. Therefore, to make the user experience is comfortable, the team opted for these fonts.

Physical Properties

The most unique feature of our product is the LED UV lights in the pouch which disinfect its contents. These lights are necessary for the design since they are what cleans the masks put into the pouch. These lights turn on and off based on different interactions, like the user starting a new cycle in the app. The pouch itself is part fabric, part plastic. A small portion of the pouch is plastic to encase all the technology making the pouch work. The plastic houses the on/off button, Bluetooth button, battery light, UV lights, and more. This is required to keep the design both outside and inside the pouch clean. In terms of cost, we are aiming to stay fiscally viable and convenient, and that is reflected in our component choices. For charging, the charging port is a standard micro-USB charging port. There is flexibility in terms of electronic space within the hard plastic shell, so there is ample space to house a Bluetooth sensor and portable battery. This shell is not designed to be opened by the user, and all components will be permanently housed inside, unless destructive action is taken by the buyer. Overall, the physical body of this product is intentionally simple and minimalistic, and the majority of interaction stems from the mobile app which by nature has more flexibility.

Colophon

Alondra
- Managed the Visual Properties section
- Created respective slides and recording
- Engaged in peer review of slides and submission document

Ben
- Managed the Cover Page and Background section.
- Created respective slides and recording
- Engaged in peer review of slides and submission document

Besmelh
- Managed the Scenarios section
- Created respective slides and recording
- Engaged in peer review of slides and submission document

Jodie
- Managed the Interaction Framework and Physical Properties sections
- Created respective slides and recording
- Engaged in peer review of slides and submission document

Kevin
- Managed Components section
- Created respective slides and recording
- Engaged in peer review of slides and submission document