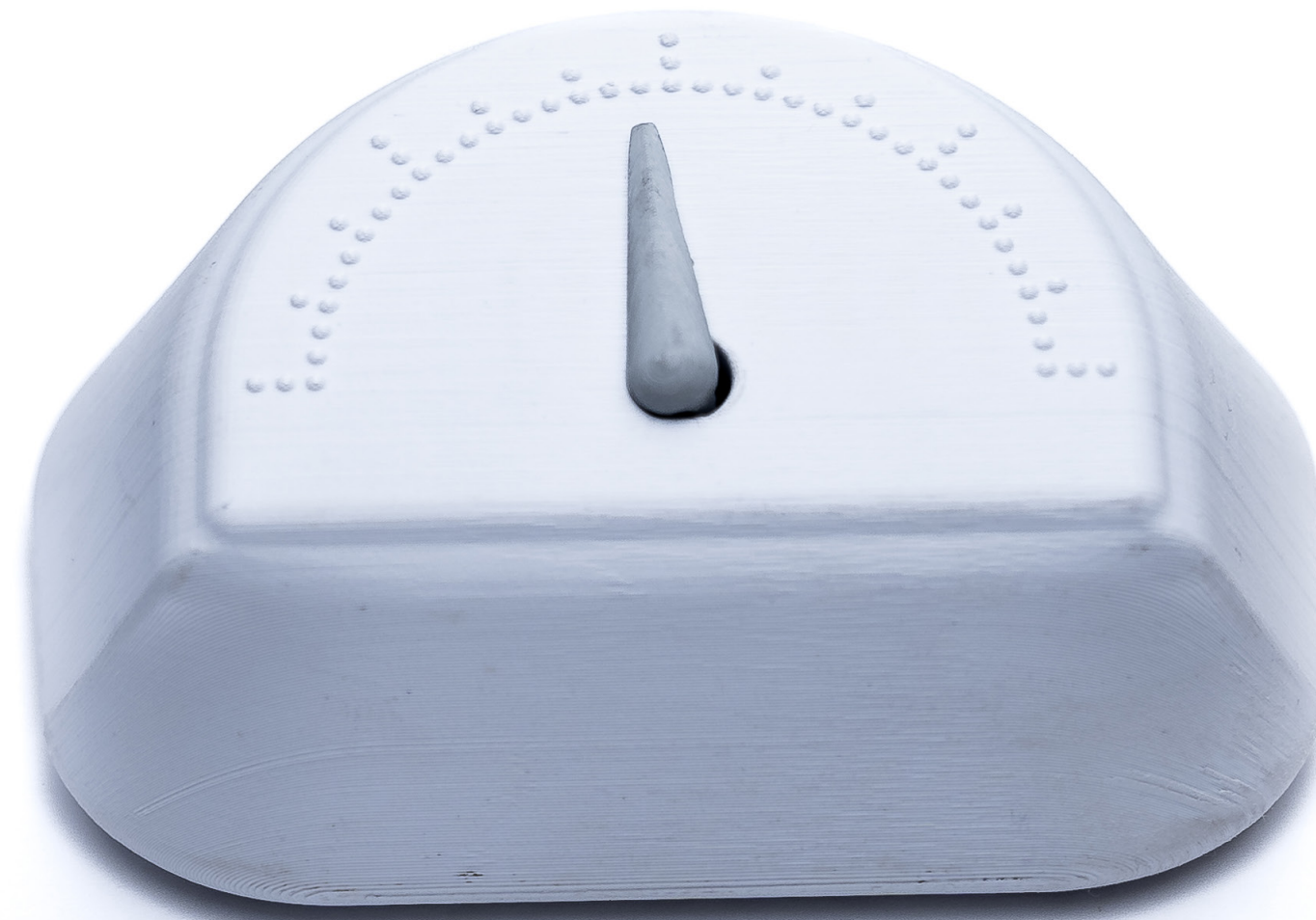


**Eleanor Mayes**  
Engineer & Designer

*An Accessible Tool for Dynamic Data Display*

# **Skrōl**



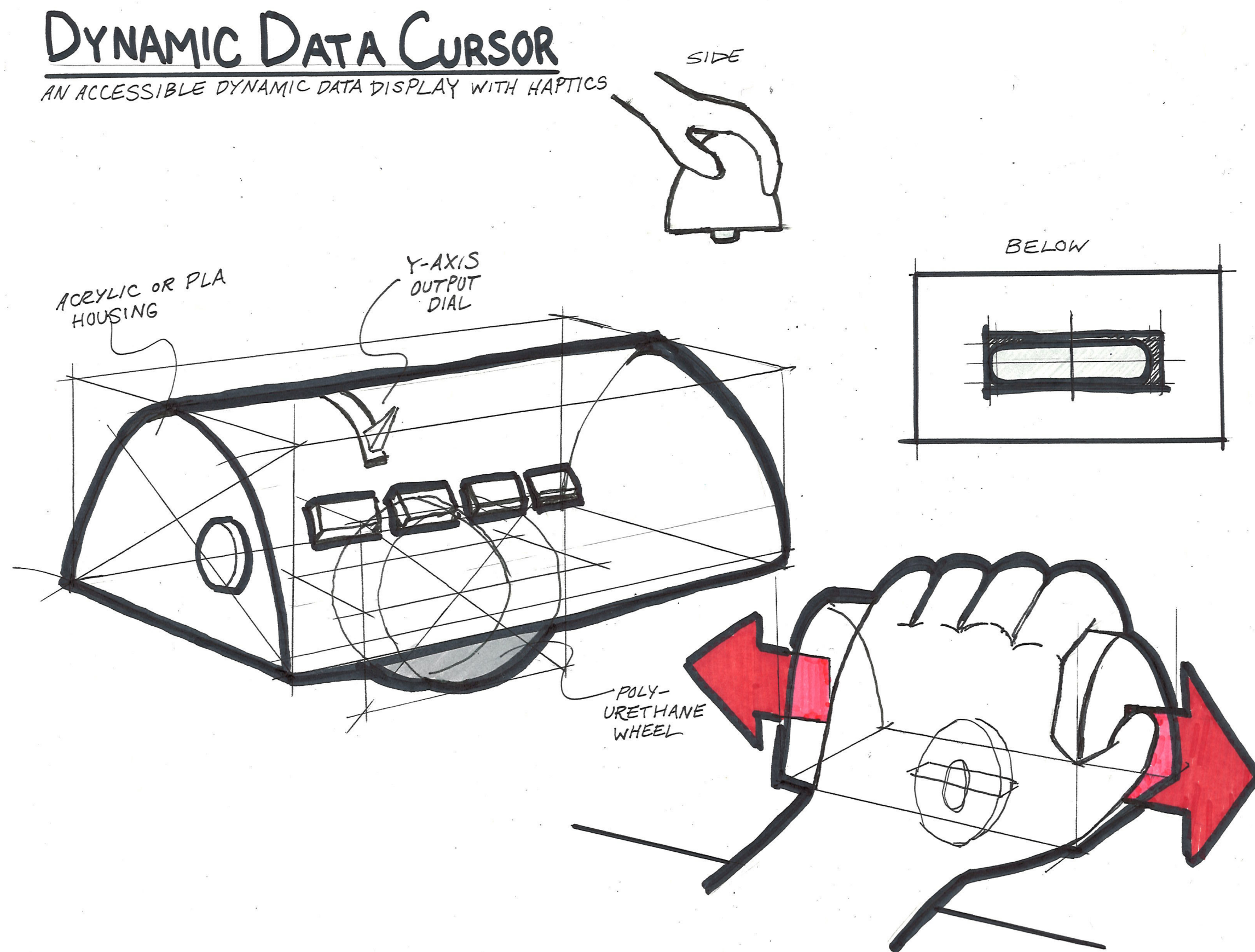


# Prior Work

Previously, I worked on a series of dials with braille gradation which when used in tandem with a servo motor, provided tactile data output. With user feedback, the form evolved.

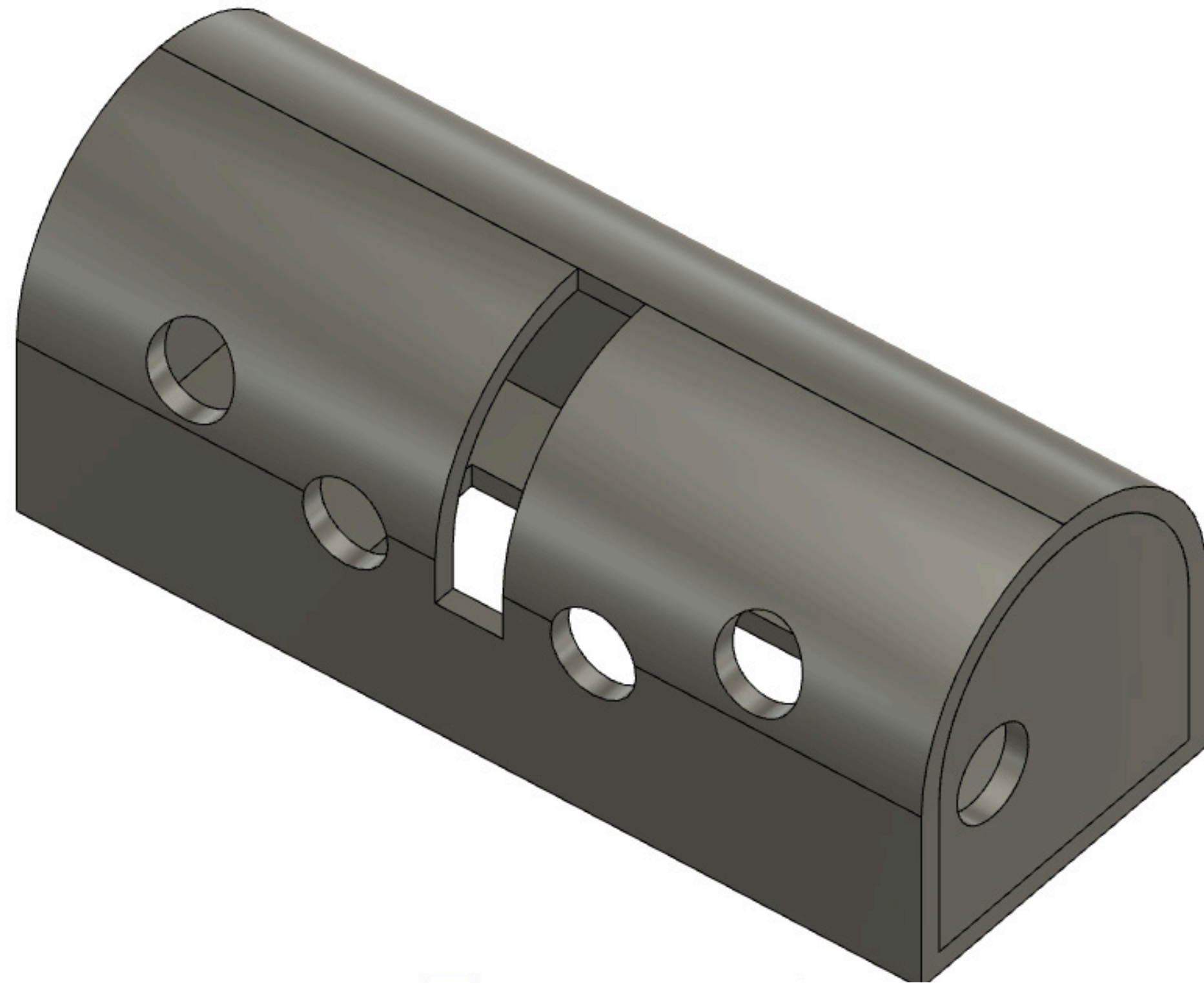
# Ideation

it was important to create a tool that could span a range of interaction types. I tested a variety of multisensory output. Indicating parameters as well as providing flexibility in use was a balancing act.



# Prototype

At first I developed a design that had features on the ends of the housing, but these ended up making the housing handed, instead of ambidextrous, which was a quality I was looking to include in the final design.



# EIDOS

Reducing Food Waste

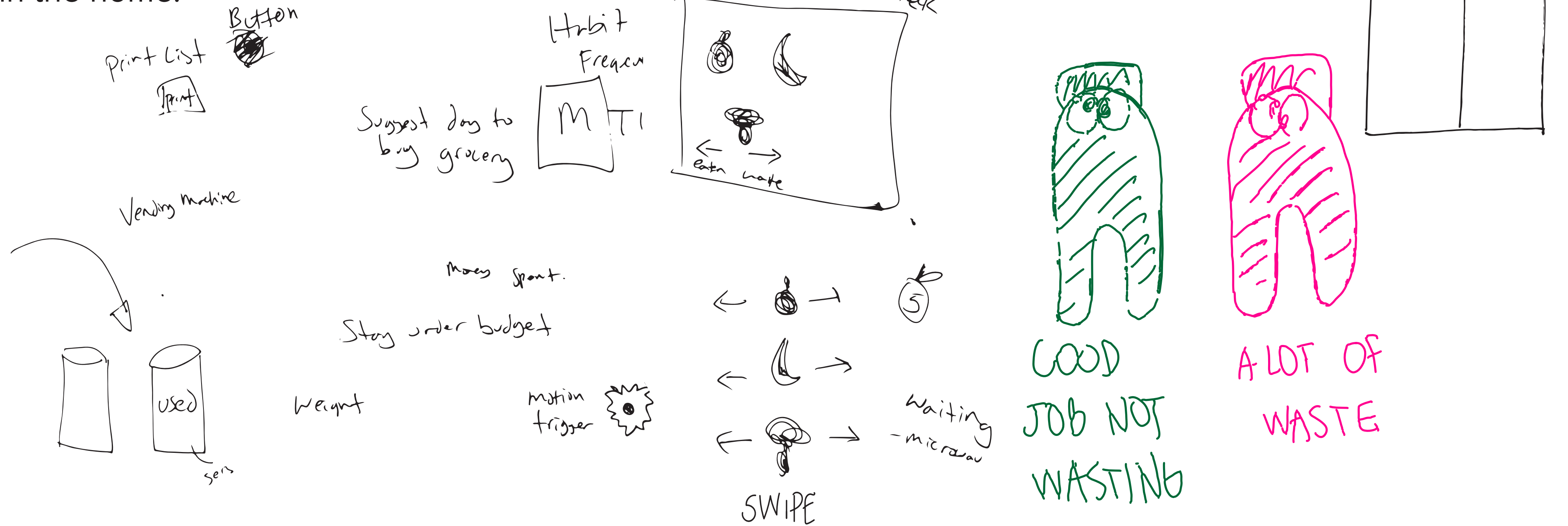
*An ambient  
reminder*

EIDOS Prototype mounted on Refrigerator. Design by Eleanor Mayes, Akash Mahajan, Debbie Yuen, Lula Duloup, and Roland Saekow



# Ideation

This project involved focusing on an area of social impact; our choice was food insecurity, specifically food waste. After speaking with local businesses and food pantries, we found that these larger entities had existing systems in place to reduce waste. Consequently, we focused on reducing food waste from individuals in the home.



# Prototype

We prototyped an in-fridge notification system, a smart trash compost bin, and a game about proper food storage. Feedback indicated the fridge notification was the most popular and viable idea.

For the food notification system we considered illuminating food with different colors by expiration date, a rotating shelf to orient expiring food at the front, and a mounted display that tracked food consumption and expiration.





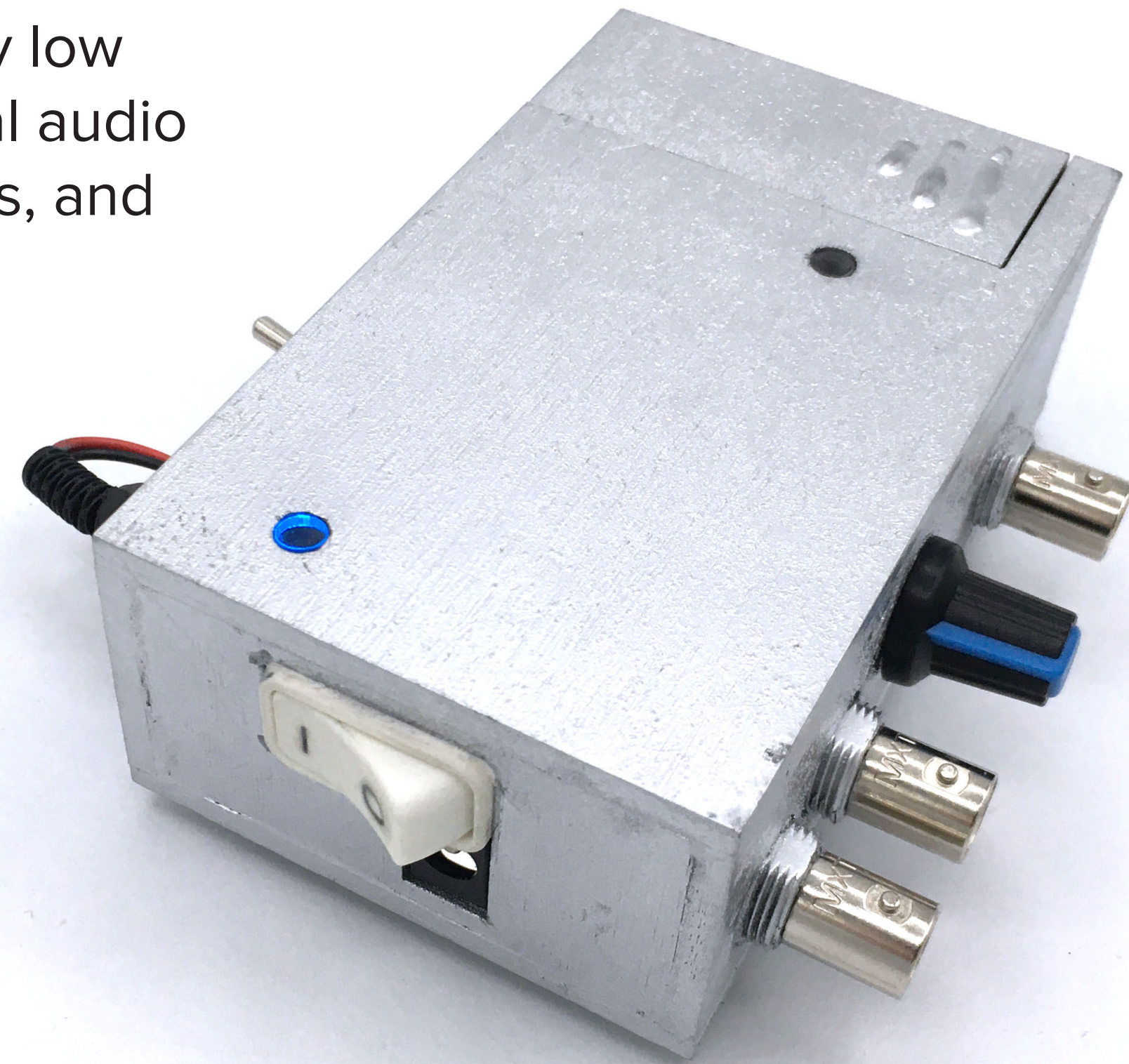


# VLF Radio

*Listening to Very Low  
Frequency Atmospheric*

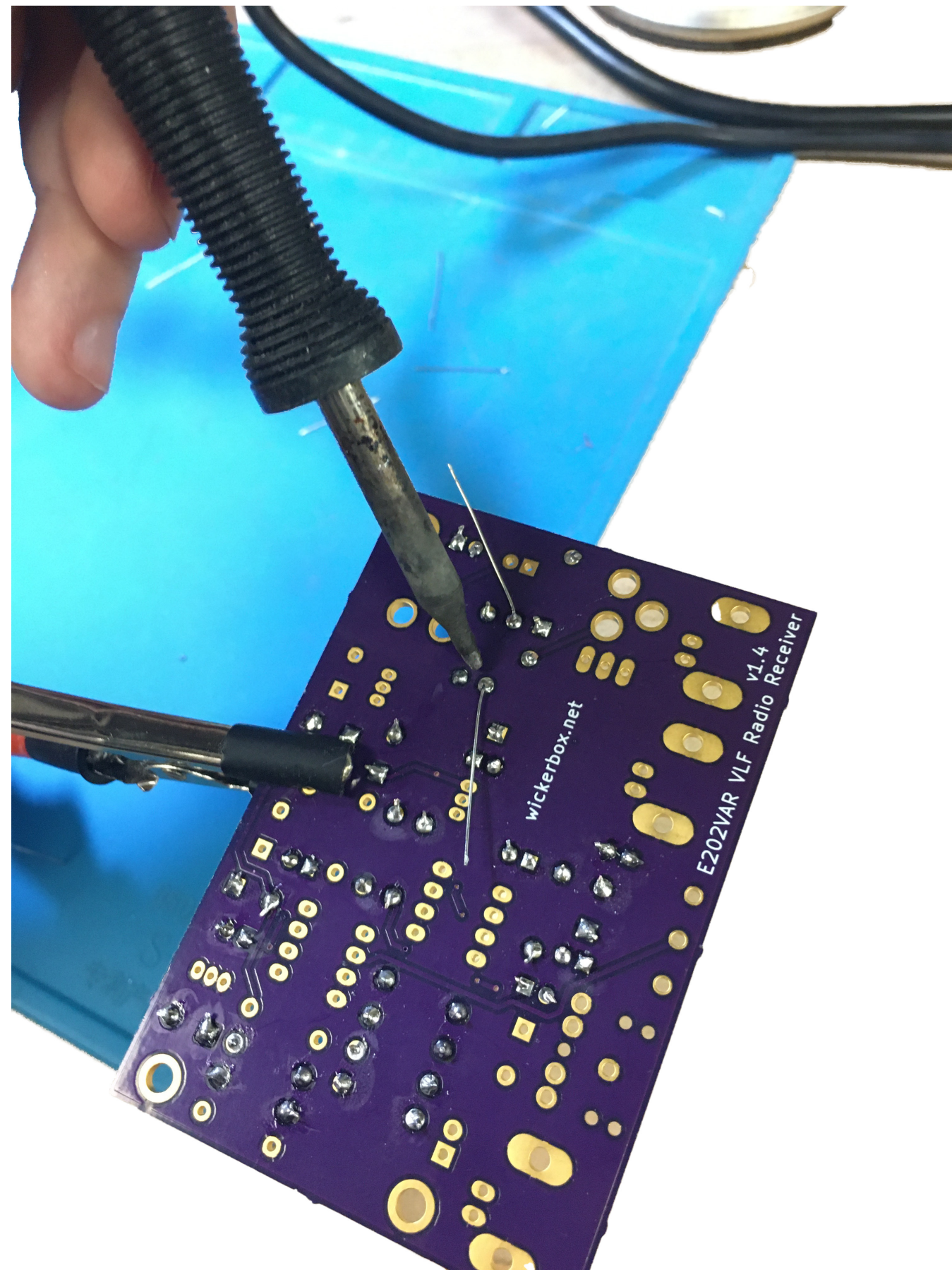
# Scope

I worked with Joshua Miele, a local blind inventor and MacArthur recipient on a variety of projects including building a VLF (very low frequency) radio that we will use in a future project for binaural audio at a massive scale. This will project will span hundreds of miles, and work in collaboration with artists, scientists, and community.

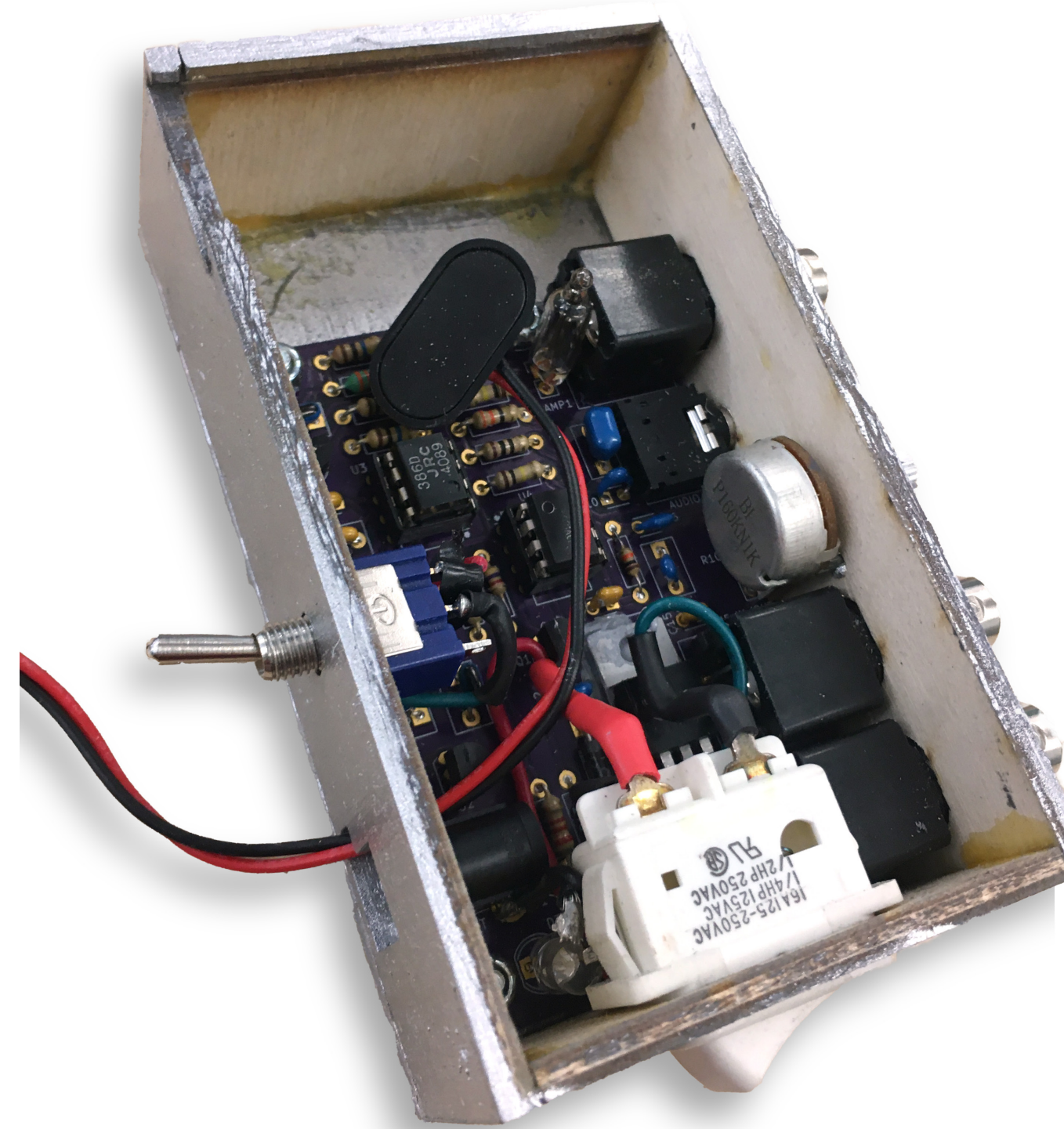


# Fabrication

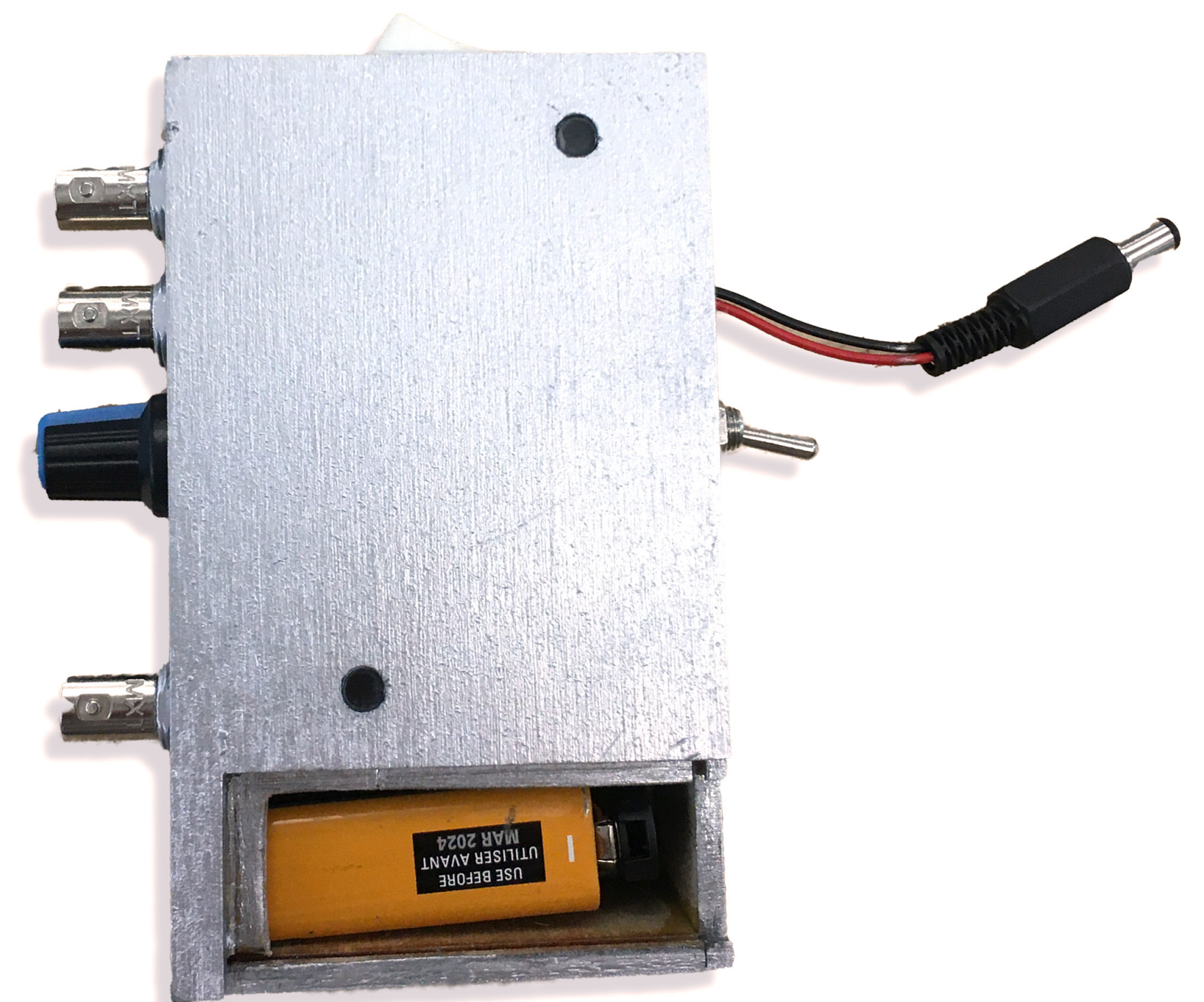
Soldering components to the board



Place board into laser cut box



Insert battery into carved slot





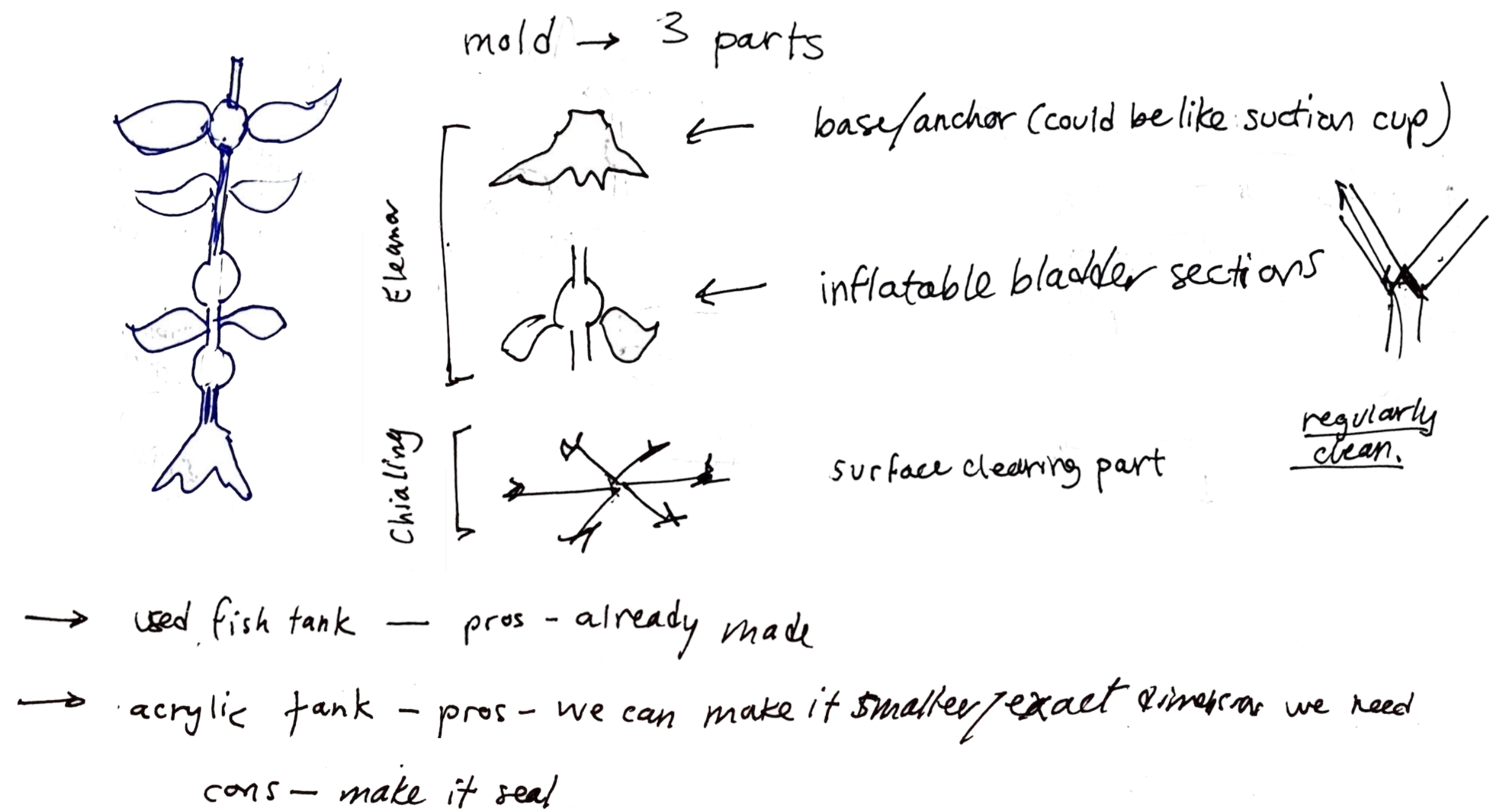
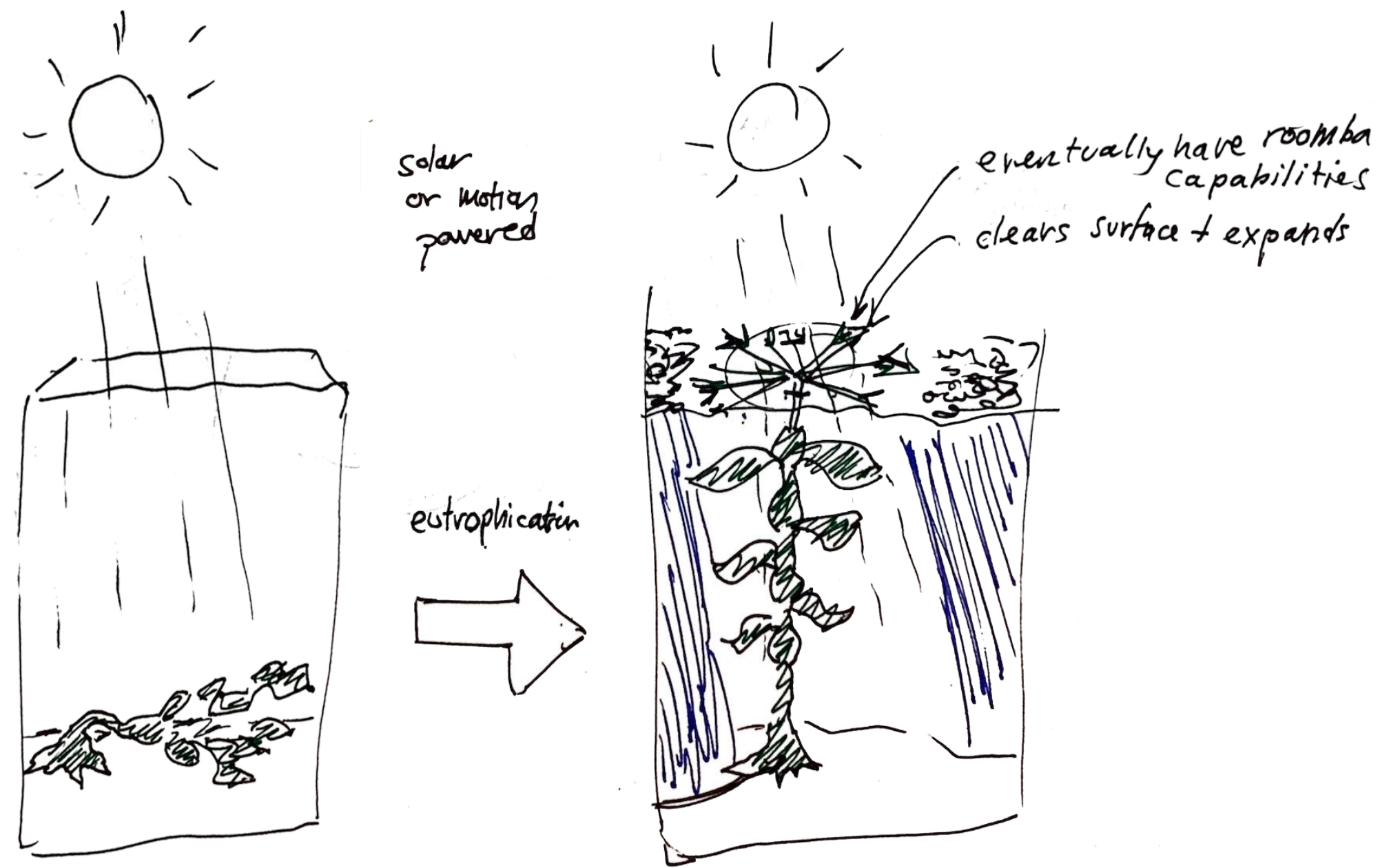
# Future Habitat

*Using feral design to  
speculate on the  
future of our oceans.*

*— with Chia Ling Chen*

# Sketches

Air bladders of giant kelp and seaweed provided inspiration. We wanted to **create a model of speculative infrastructure** when humans live underwater from sea level rise. We thought about how the physical environment and infrastructure could support human activity in a way that did not disrupt the environment. We re-designed streetlights to emulate giant kelp. They inflate and illuminate only when humans pass by.



# Fabrication

The main challenge we faced during fabrication ensuring that our silicone cured with a consistent thickness. This determined how the kelp looked when it was inflated.

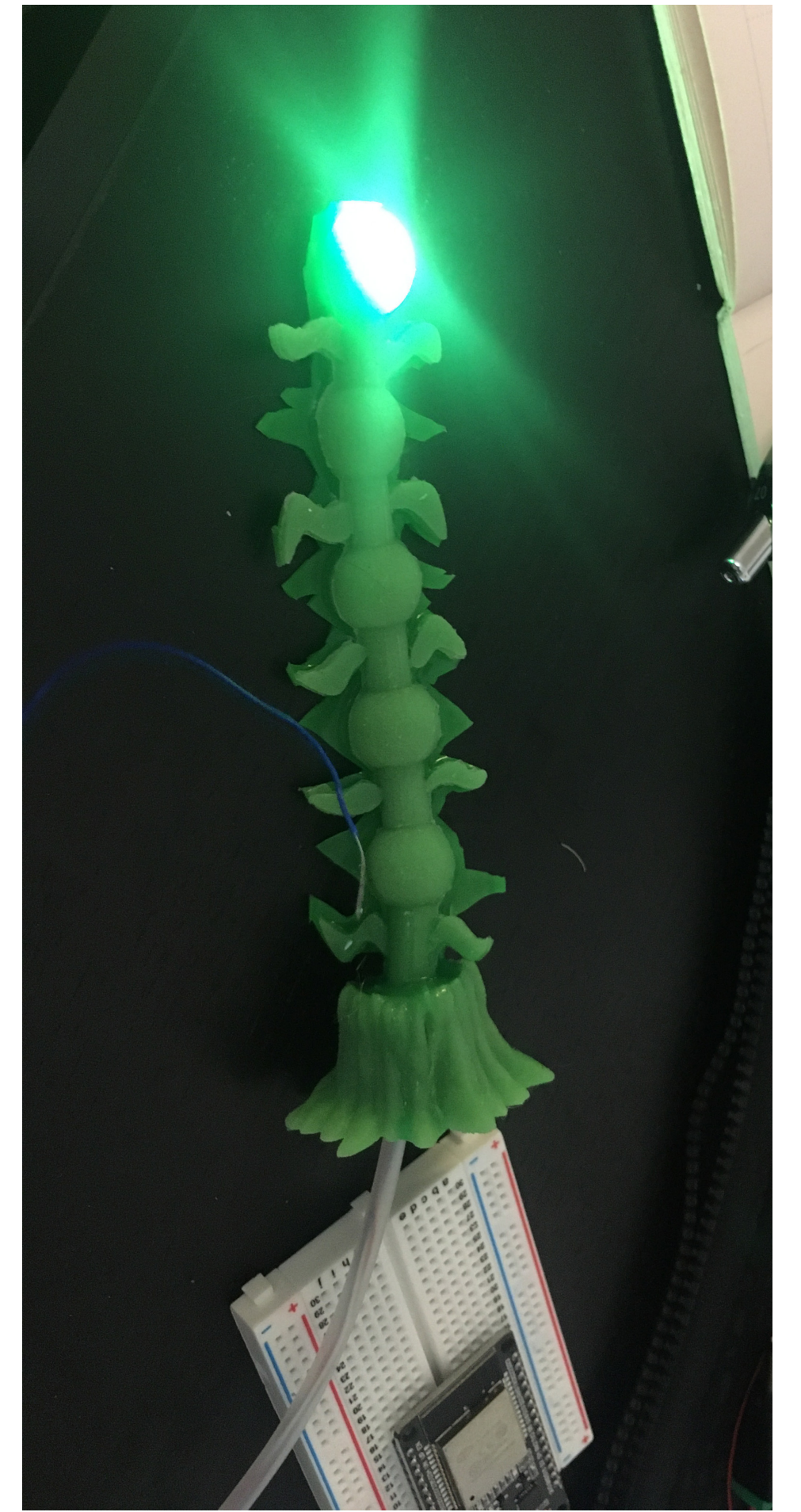


Pouring silicone into the first mold iteration I designed.



Second iteration: three part mold

Completed kelp



After embedding the neopixel LEDs into the silicone, I designed the electronics to inflate and light up the kelp stalks in sequence using an arduino uno with mini air pumps and solenoids.