

XIA RYDER

2022
Industrial Design Portfolio

PROJECTS

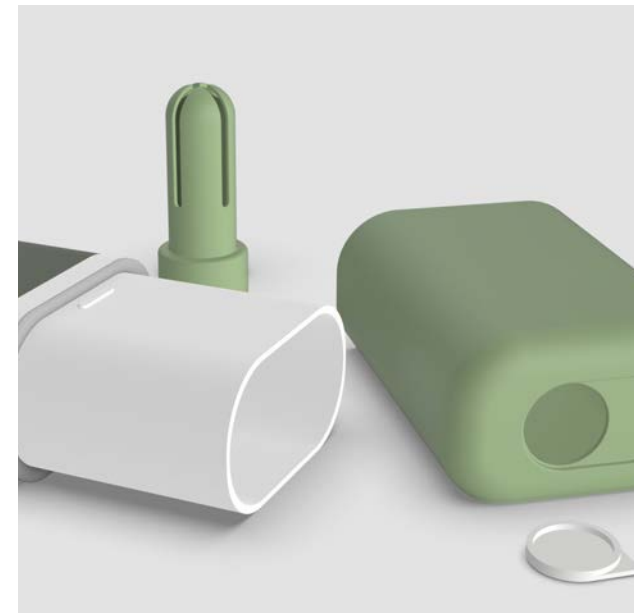
A collection of projects I completed during my time as an Industrial Design student at San Jose State University.



01 | KiKi Hamper
Inclusive Laundry Hamper



02 | VIS Exercise
Redesign of Gym Equipment



03 | EcoVida.
Sustainable Period Product



04 | Posto
Children's Therapy Tool

01 PROJECT

KiKi Hamper

3rd Year | 4 Months | 2021



CHALLENGE

Identify and design a solution for an underserved group whose needs are currently not being met.



WHO

There are almost 2 million people in the US who have lost a limb due to various reasons - the most common being vascular diseases, trauma, and cancer.

More than 80% of upper limb amputees prefer not to wear a prosthetic, which means they are operating with a single arm or hand in day-to-day life.



THE PROBLEM

For many upper limb amputees, completing laundry is a time exhaustive activity due to them having to transfer and sort each article of clothing individually.



EMPATHETIC USER REASEARCH

Holding one arm behind my back, I completed multiple loads of laundry in order to gain a better understanding of what one handed individuals experience.



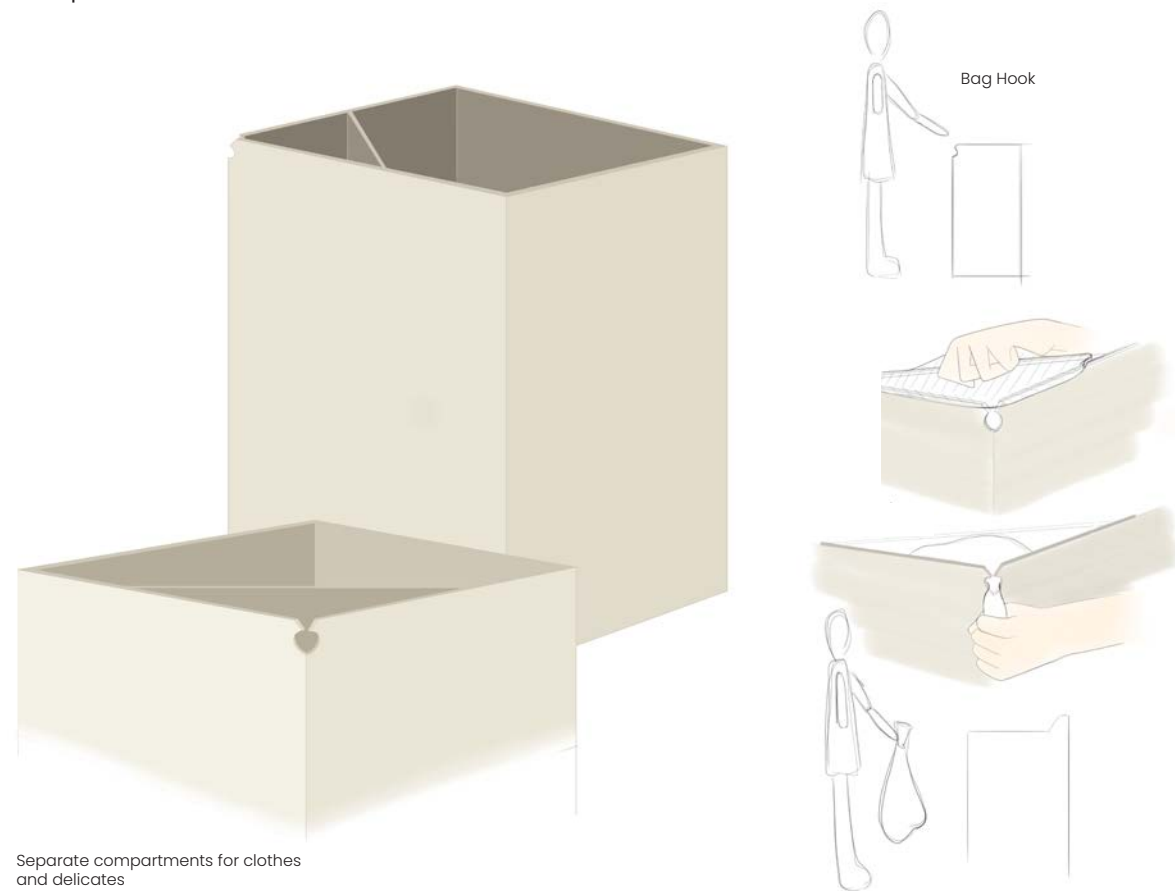
PAIN POINTS

- Loading and unloading washer and dryer
- Transferring from washer to dryer
- Back pain from repetitive bending over

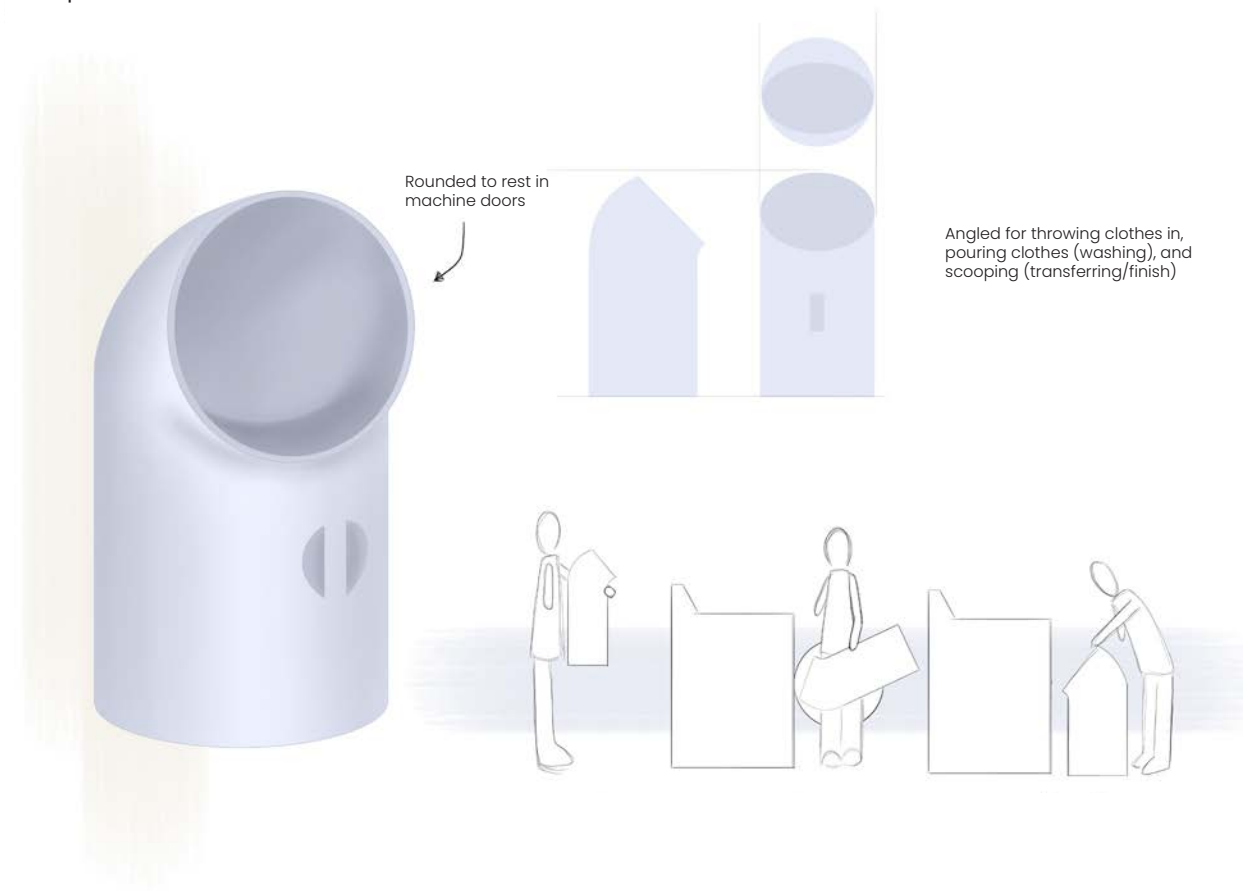
INITIAL CONCEPTS

What might solutions or aids to the pain points look like?

Hamper 1



Hamper 2



REFINEMENT GOALS

Form Inspiration driven by the desire for a harmonious, subtle, and balanced laundry hamper.



movement
rhythm
clean
balanced
subtle



intentional
cooperative
harmonious



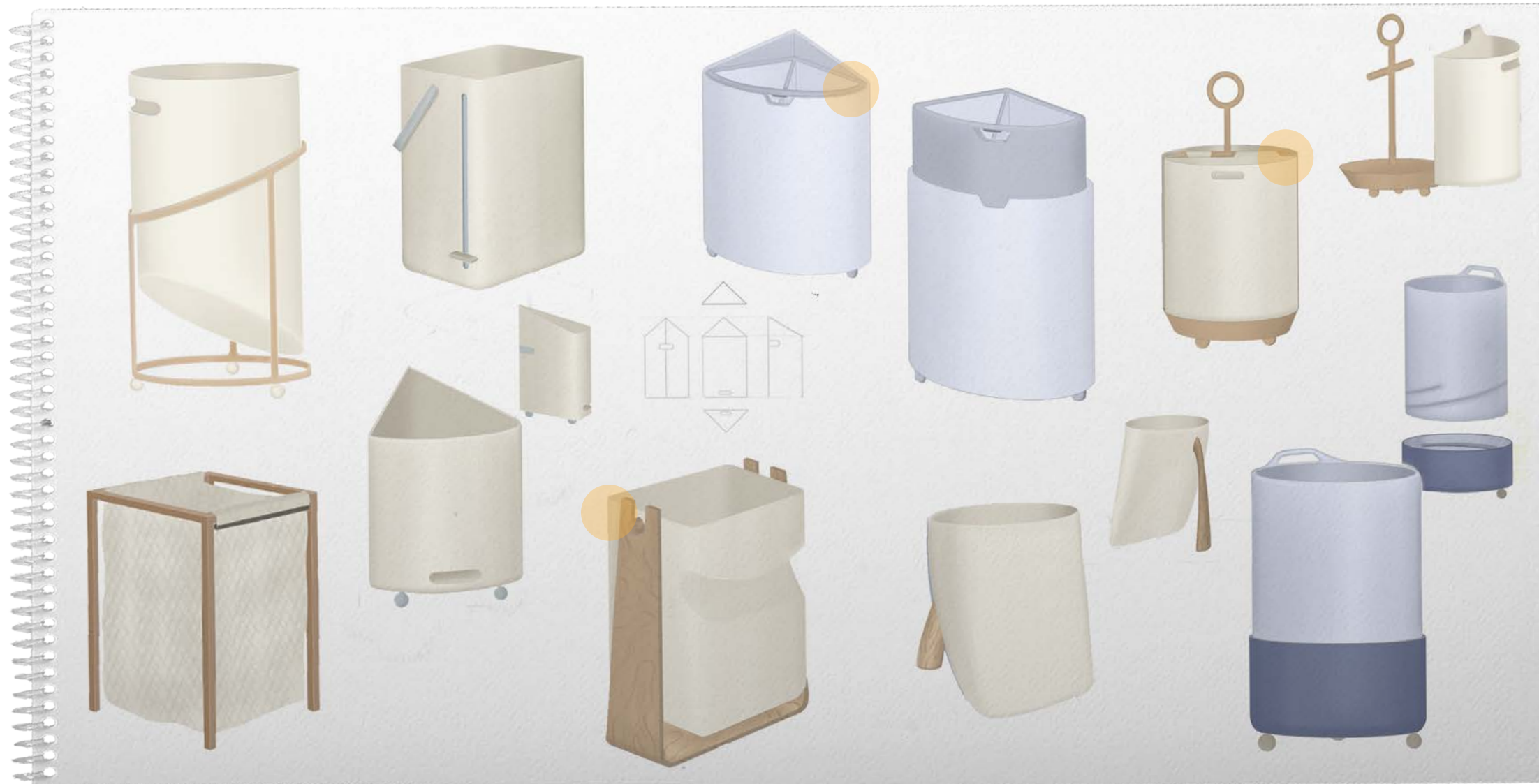
CMF GOALS

The CMF was steered by the appeal of having the product become a part of the consumer's home. Guided by the words: natural, fluid, & decorative.



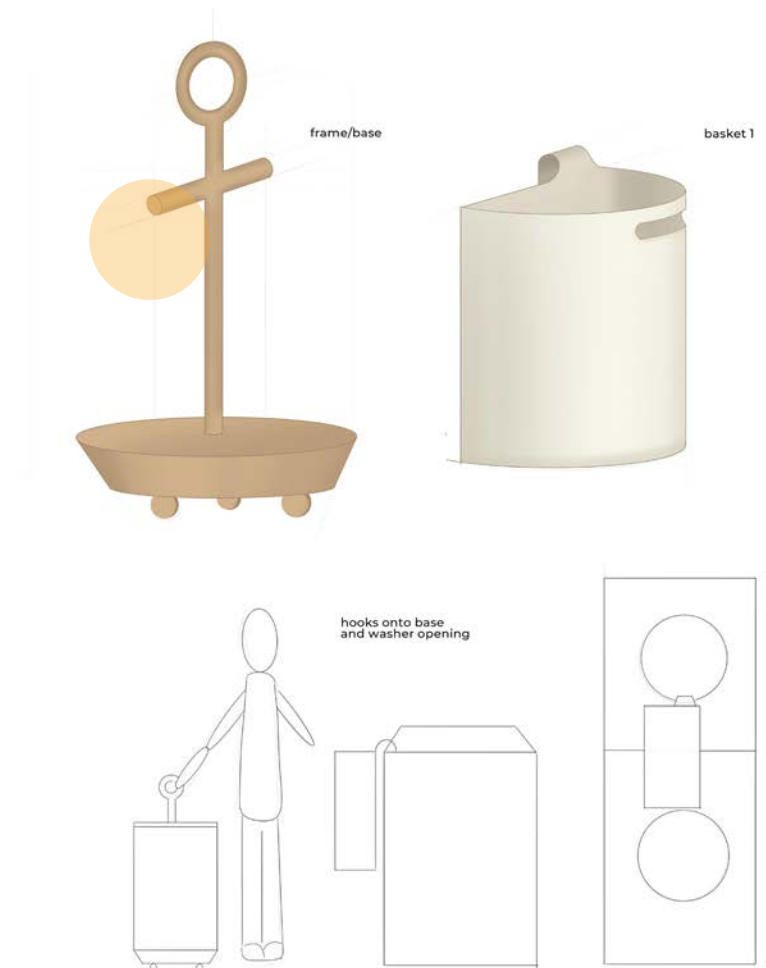
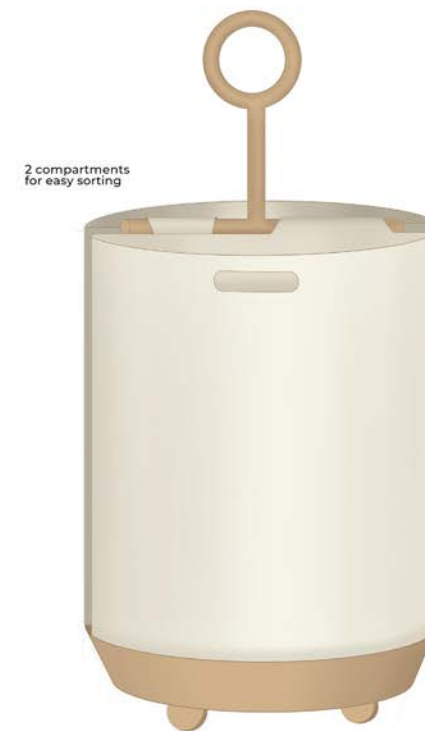
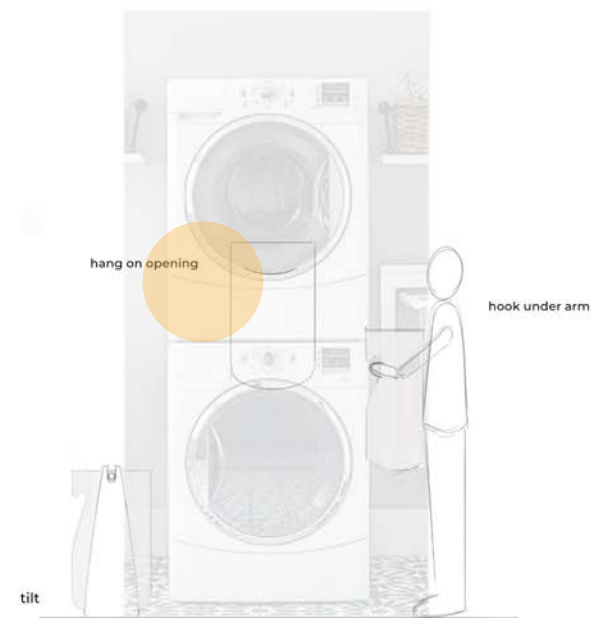
REFINED CONCEPTS

Reframing the problem: how many ways might we get the laundry at the right height of the machines for easy loading/unloading?



REFINED CONCEPTS

Driven by the goals to reduce back pain and create a more efficient laundry experience, I concluded that the top 2 features the hamper needs is sorting compartments for clothes and a hook for the machine.



REFINEMENT: DETAIL EXPLORATION

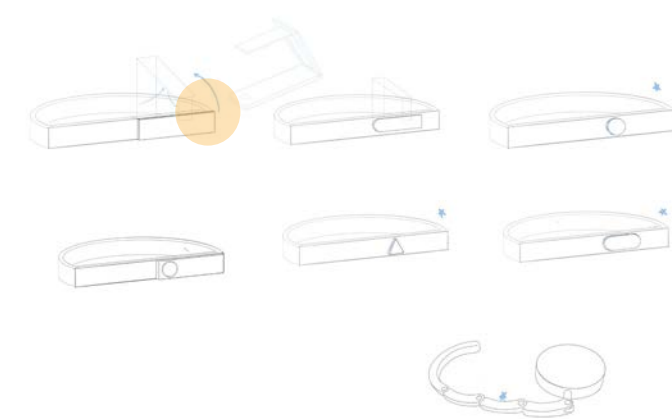
What are the important interaction points of the hamper?
How might we address the ventilation of the dirty clothes?
What if the hamper's shell shape were to change?



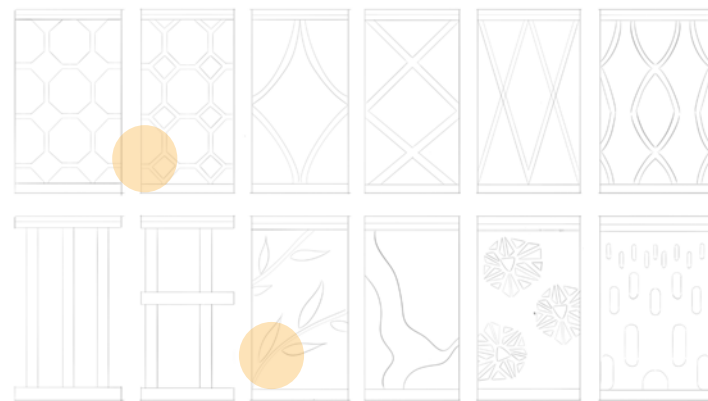
Handle



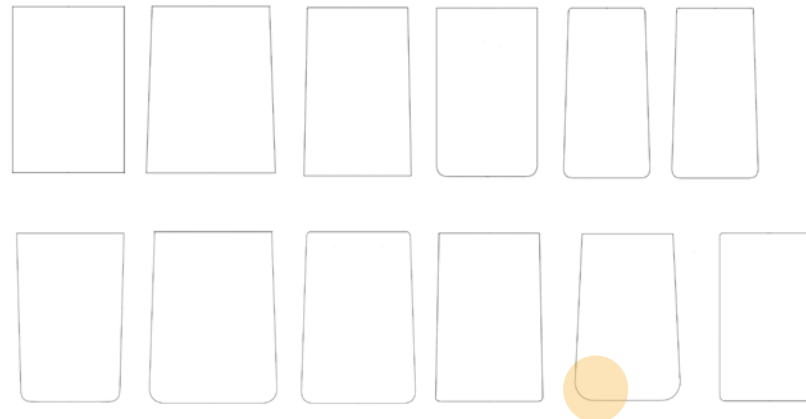
Hamper Bag Interaction Points



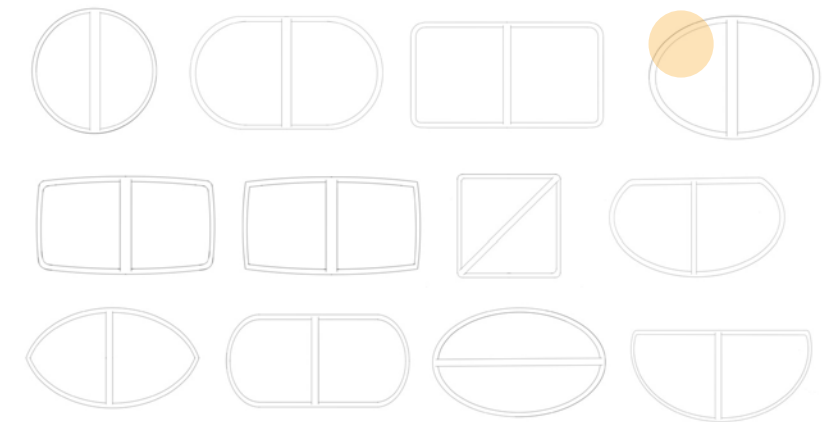
Hooks



Ventilation Patterns



Hamper Shell Profile



Hamper Compartments

THE KIKI HAMPER

LAUNDRY'S HELPING HAND

The Kiki Hamper is a stylish hamper designed to aid one armed users with their laundry.



COMPONENTS & DETAILS



Hamper Bags
Double lined and reinforced
to ensure pain free lifting and
transferring of bags & clothes



Shell Handle
Larger and rounded at interaction
points for easier management/use



3-Part Hook

Handles (3 in total)
allows for modular system and
personalized laundry experience

**100% Cotton Canvas
Hamper Bags**
allows for painless separation of
clothes and is easily washable

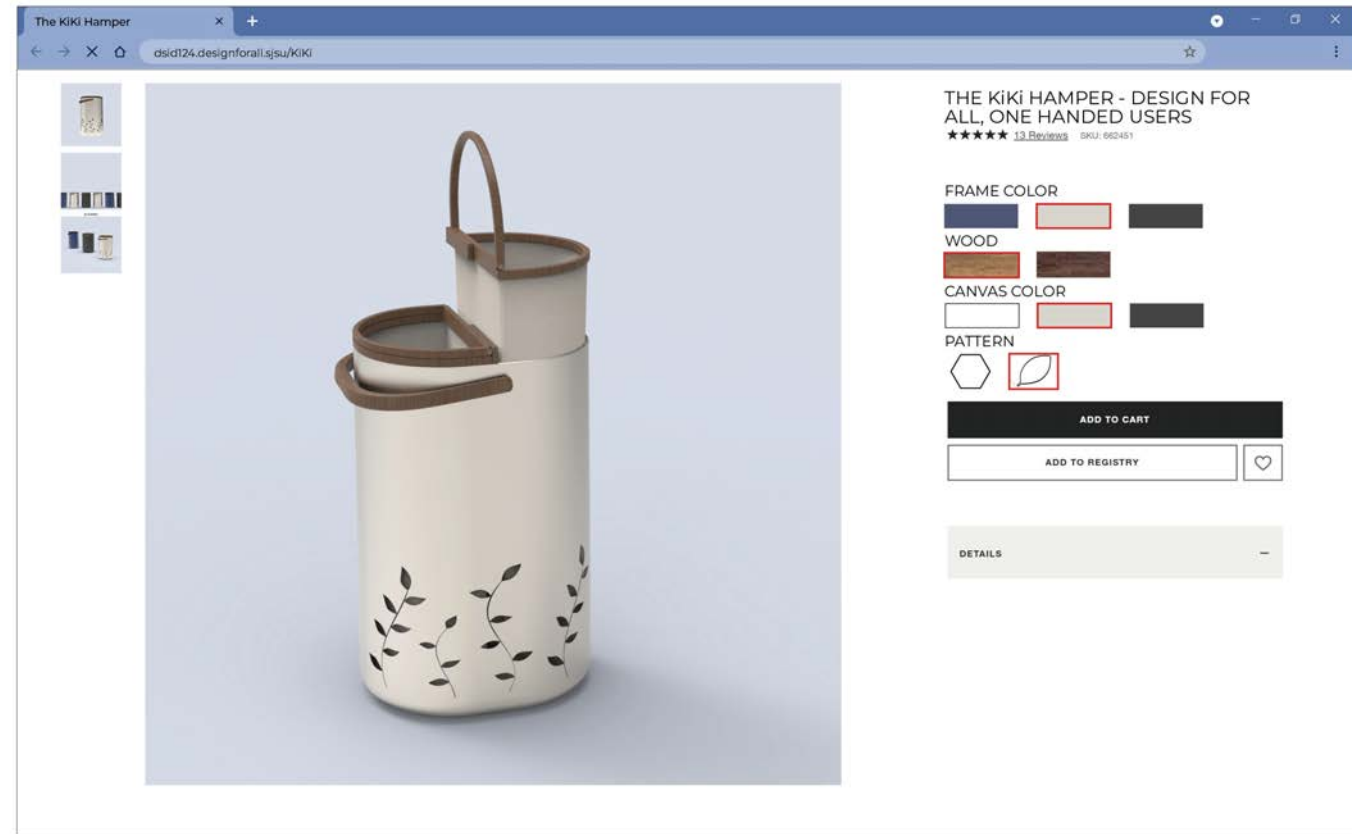
Stamped Aluminum Shell
a lightweight, durable, and stylish exterior
to allow for efficient transportation

Die Cut Patterns
allows for increased ventilation of dirty
clothes

Antislip Ring
allows for increased stability and prevents
unwanted movement or scrapes on floors

FIT FOR YOUR HOME

Designed to be seen, The KiKi Hamper is customizable with the user being able to build their own hamper based on their own preferences and home.



FIT FOR YOUR HOME

Choose between 3 shell colors, 2 wood stains, & 2 ventilation patterns to build a hamper that fits in your home!



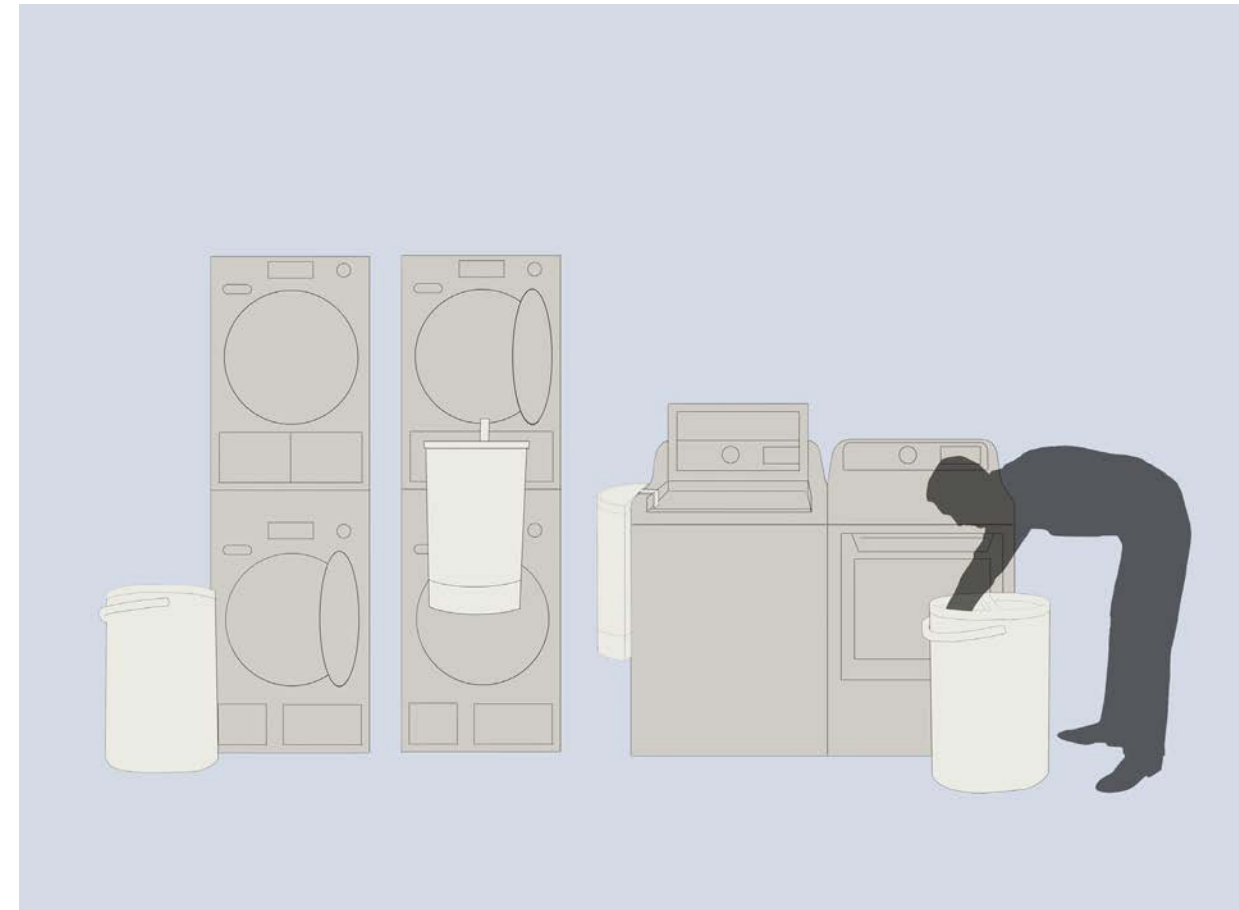
HOW TO USE

1. Use the hamper as normal
2. Transport whole hamper with main handle
3. Pick one hamper bag with the bag's handle
4. Transfer the hamper bag
5. Extend the hamper bag's hook



HOW IT HELPS

- User is able to sort clothes as they are dirtied
- Hampers can be used with stacked or side-by-side machines, front loading machines, and top loading machines
- Hooks bring the hamper bags and clothes to the machines for the user & reduces the amount of bending



THE KIKI HAMPER

LAUNDRY'S HELPING HAND



02 PROJECT

VIS Exercise

4th Year Group Project | 4 Months | Reworked Individually 2022



CHALLENGE

Update gym equipment in order to encourage healthy habits and daily exercise with a more comfortable and welcoming gym experience.



THE PROBLEM

Typical gyms are crowded, dark, and intimidating environments. This plays a large role in many people not getting the 30 minutes of daily exercise that is recommended.



OUR SOLUTION

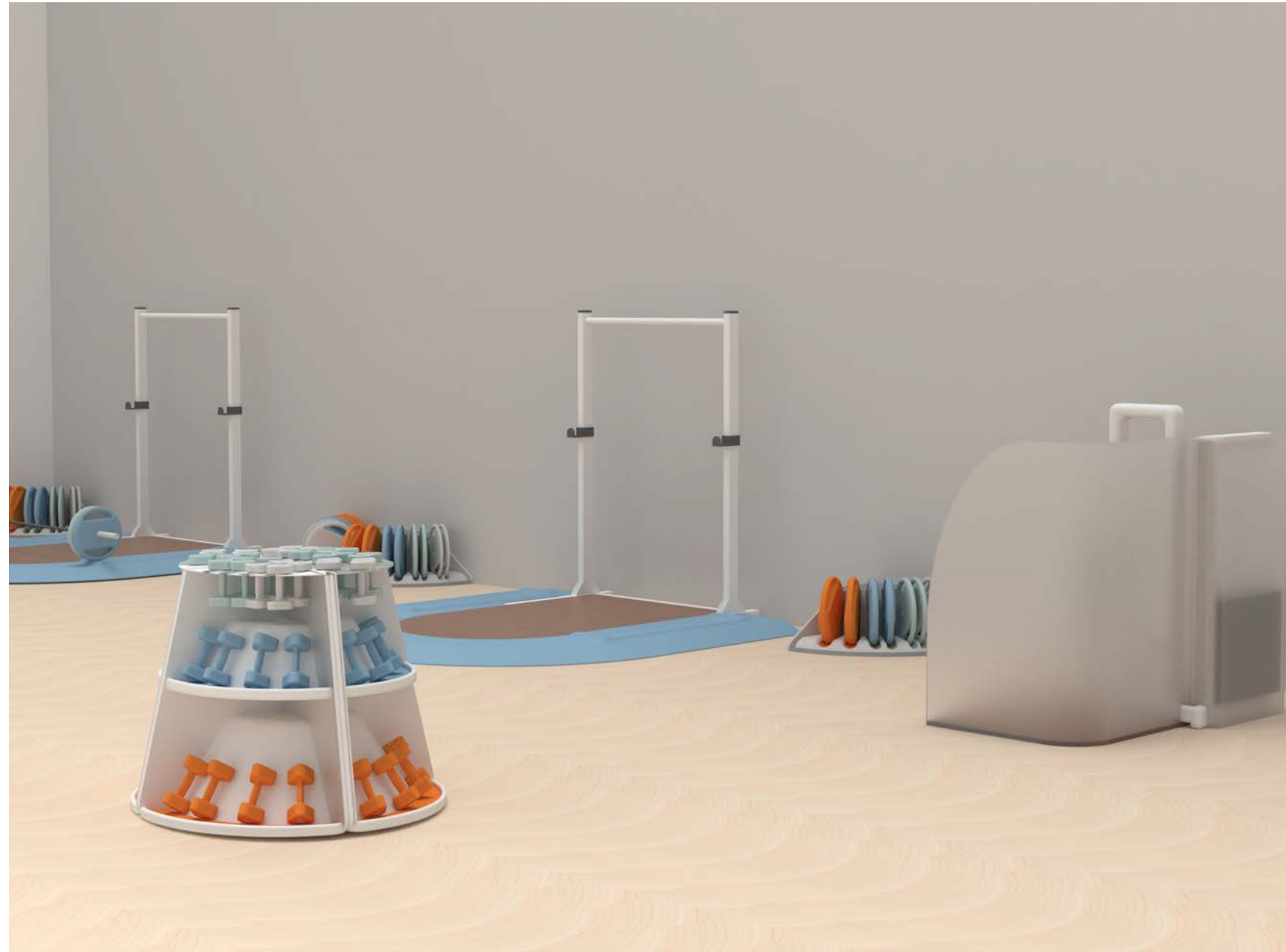
A 6 Piece Gym Collection with updated forms and CMF to achieve an updated environment and create a welcoming gym.

3 Staple Pieces of Equipment

- Bumper Plates + Bumper Plate Rack
- Lifting Platform Mat
- Dumbbells + Dumbbell Rack

3 Foundational Machines

- Leg Extension Machine
- Lat Pulldown Machine
- Chest Fly Machine



DESIGN GOALS

Fluid

Approachable

Soft

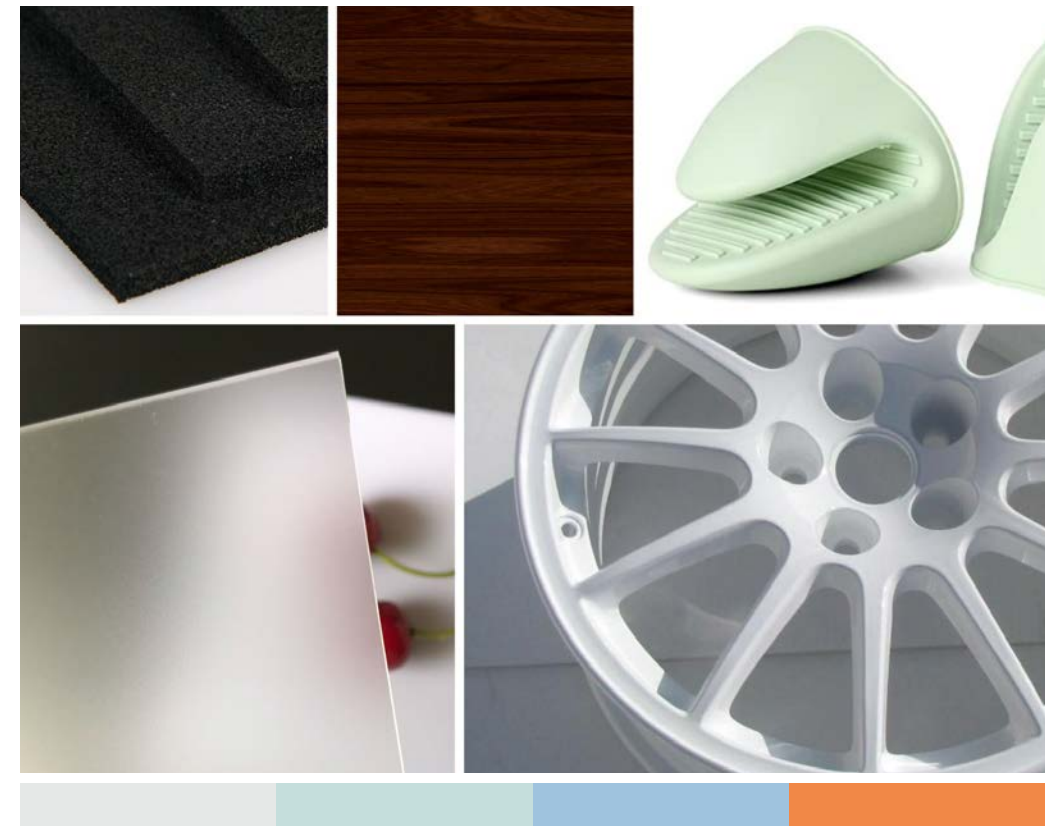


CMF GOALS

Energetic

Clean

Durable



THE MACHINES

Frosted Acrylic Shields offer the user protection from external eyes so that they can explore and learn to navigate new machines in private.

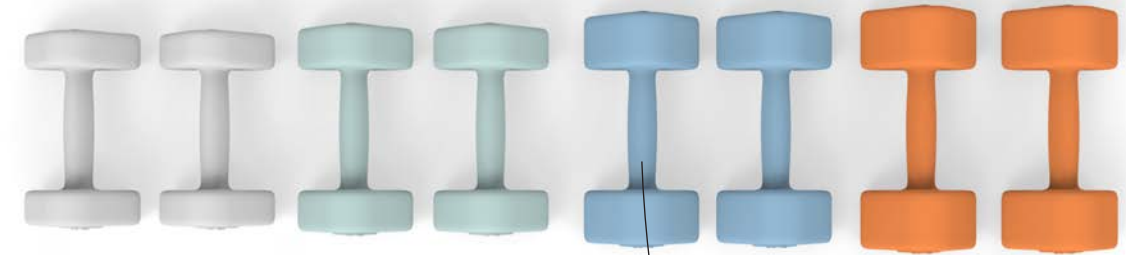


THE DUMBBELLS

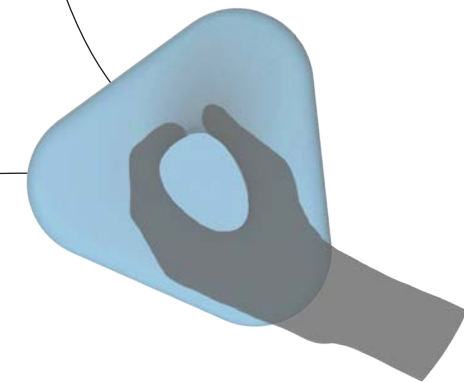
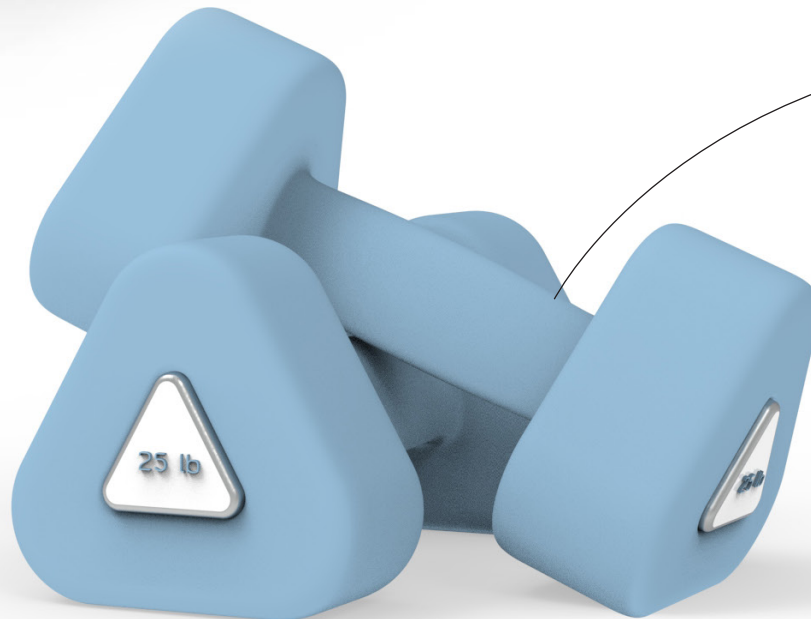
Asymmetrical handle profile “can be helpful and very versatile when you adjust in your hand for different exercise.” – Personal Trainer



Triangular End Shape
Prevents dumbbells from rolling away,
making them easier to manage



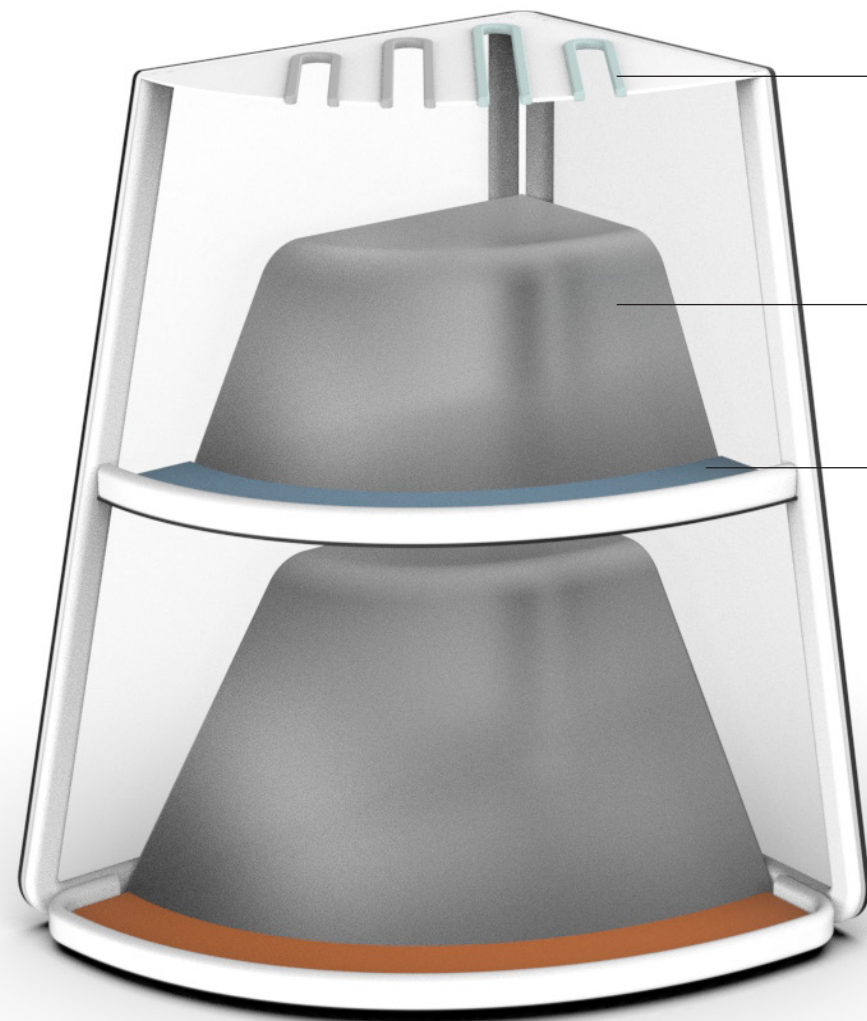
Distinct Colors Indicating Weight



Handle Profile
Fits naturally into closed grip
Tested with 20+ individuals

THE DUMBBELL RACK

Hanging Rack + Angled Shelves offer a more familiar motion to new gym goers, much like pulling out a drawer or hooking something.

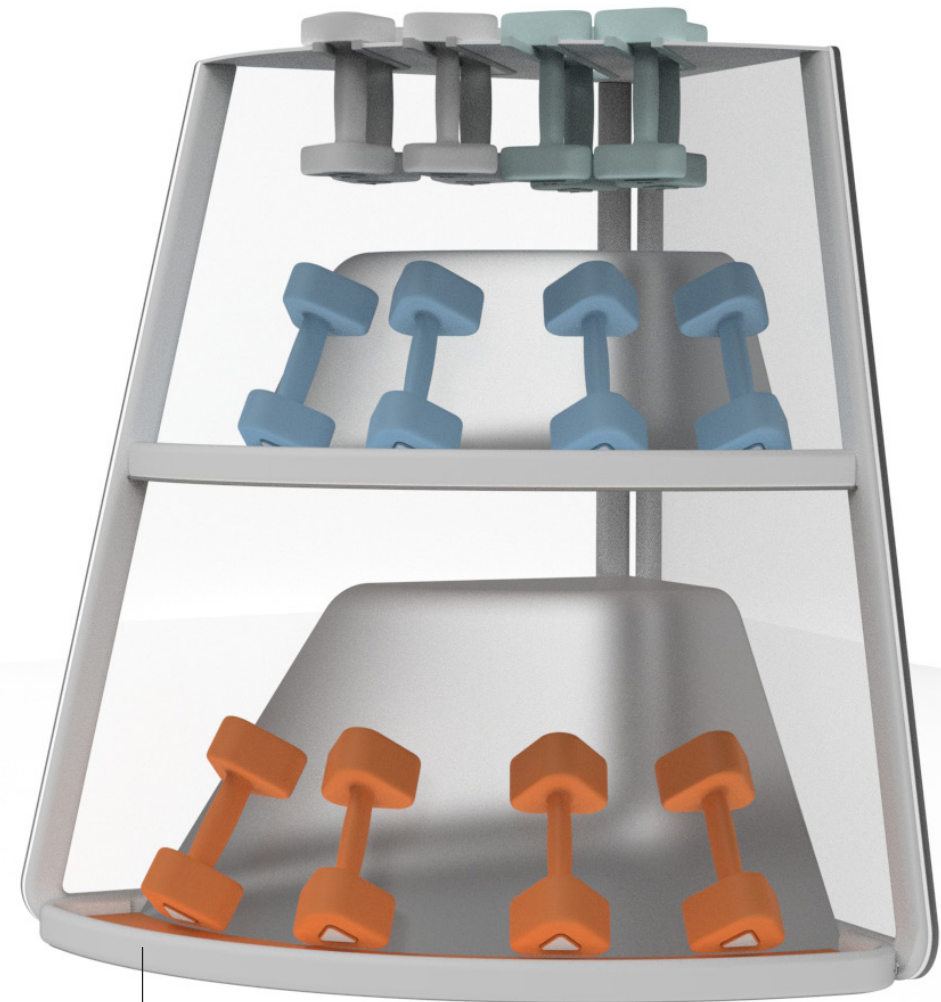
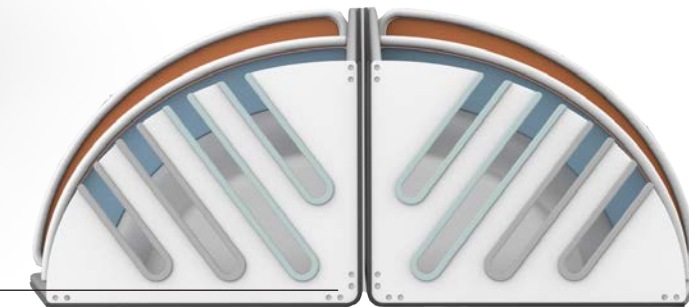


Coordinating colors with dumbbells to indicate where equipment should be

Shelves angled towards users

EPDM Lining creates softer placement and color prompts for where equipment should be returned to

90° back permits multiple configurations of the racks



Rounded Edge makes the rack more approachable and accessible to multiple people, eliminating the stress of waiting or pressure to finish using equipment

HOW VIS EXERCISE HELPS



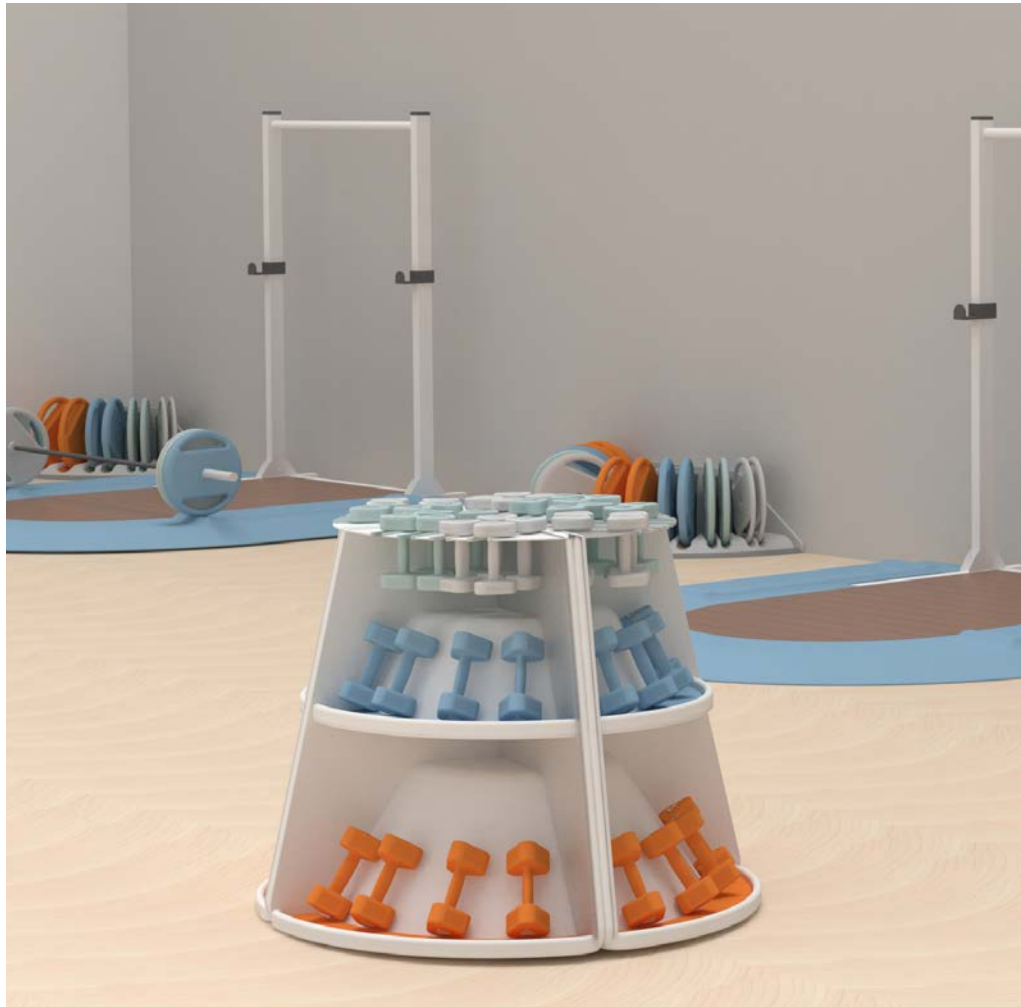
Weights are easy for user to manage and versatile for any exercise
Rounded rack edge promotes accessibility and inclusivity
Tiered, angled shelves allow for easy retrieval and storage



Frosted acrylic shields offers the users privacy
Blurs the user while still alerting people that the machine is in use
Creates a smaller, more manageable environment for user

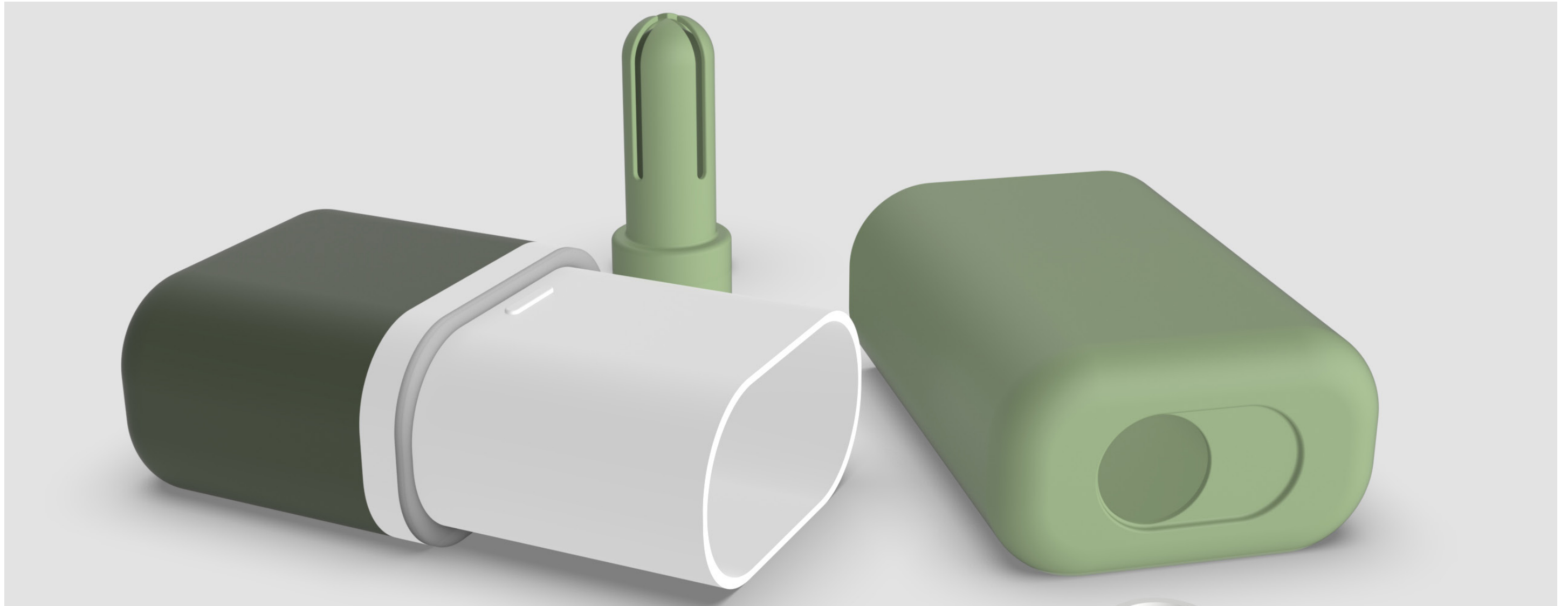
VIS EXERCISE

VIS Exercise is a redesigned gym collection with the intent to decrease anxiety in new gym-goers through a more open and welcoming setting with added privacy.



03 PROJECT **EcoVida.**

4th Year | 4 Months | 2022



CHALLENGE

Using the Okala EcoDesign Strategy Wheel, reduce an existing product's environmental impacts.

How might we make feminine hygiene products, such as tampons, more sustainable while maintaining the user's comfort?

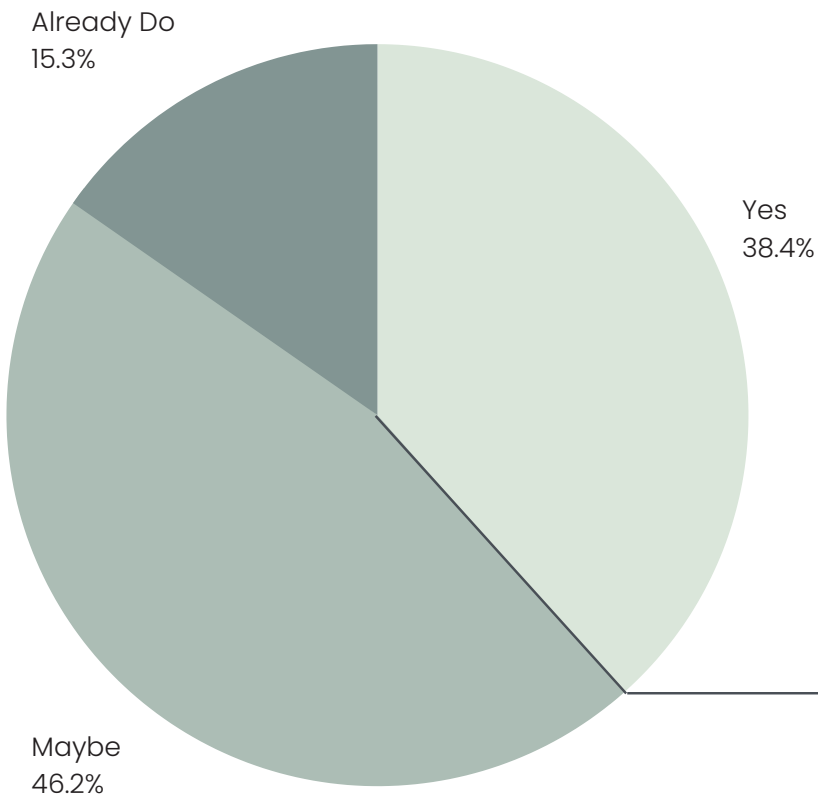


THE PROBLEM: TODAY'S PERIOD PRODUCTS

- 90% Plastic
- Single-use sanitary product takes up to 500-800 years to decompose
- 45 billion menstrual products end up in the landfill each year

STAKEHOLDER RESEARCH SURVEY

Would you consider using reusable period products?



0%
Survey participants are against using a reusable period product

If 0% are against reusable products, why are they not already using them?

“Sanitation.”

“If it’s easy to keep **clean** and use often then yes.”

“It depends on **the way they can be stored** when you’re out.”

“I think the only thing that holds me back from using reusable period products is just **the cleanup process** afterwards.”

“I don’t know which to try or **how to use it.**”

“I am worried I cannot **properly clean** [the reusable product].”

“I would if they were **similar to what I use now.**”

CONCLUSION: MAIN CONCERNS

- Sanitation
- Familiarity
- Storage

WHY TAMPONS?

88% of the tampons sold in 2015 were ones with a non-bio-degradable plastic applicator

Sales of cardboard applicators significantly declining

60% of users prefer tampons with applicators



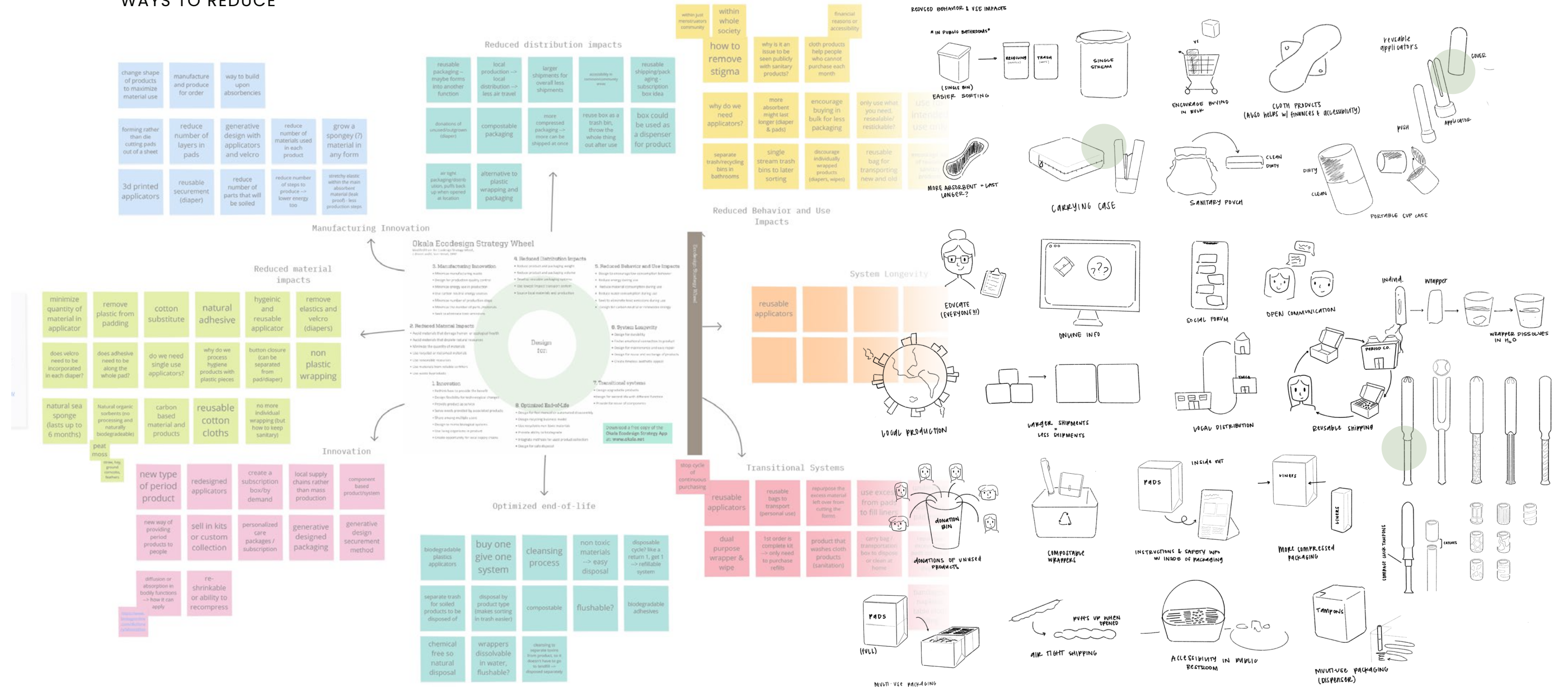
FOR?

People who menstruate and are on their journey to living greener and reducing their environmental impact, looking for more ways to reduce their waste production.



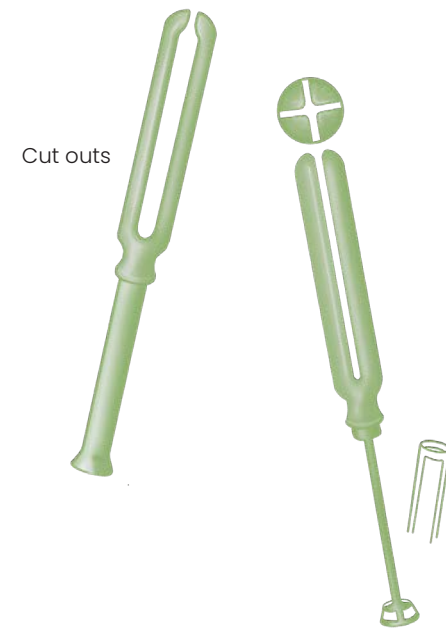
BRAINSTORM

WAYS TO REDUCE



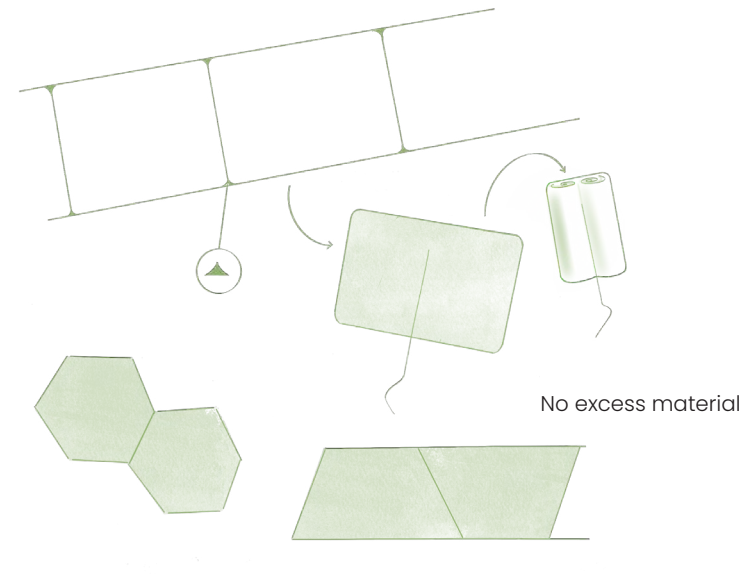
EXPLORING CONCEPTS

3 DIRECTIONS



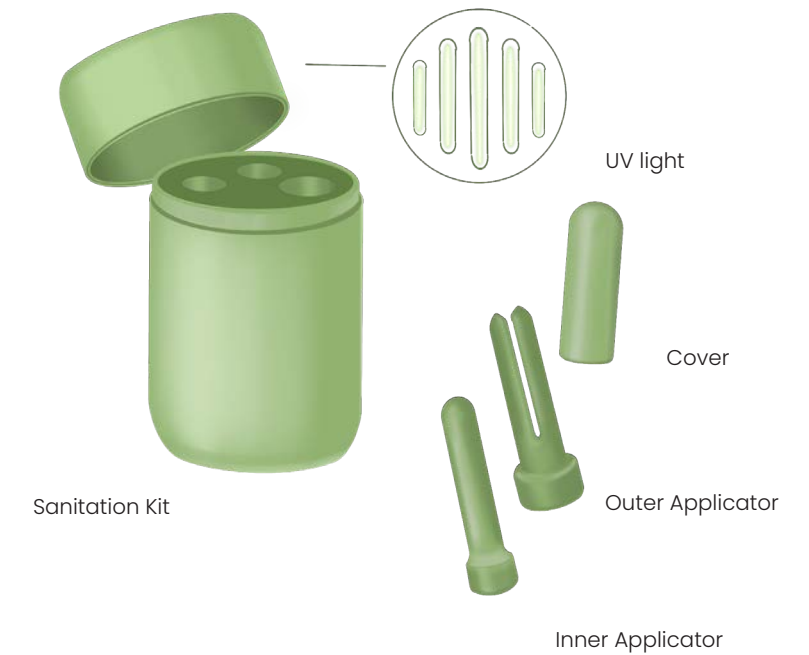
New Single Use Applicators

- Reduces material impacts
- around 47% of women use tampons (US)
- 3-6 products per day x 7 days x 12 vs. 1 applicator per year



New Die Cut Manufacturing Shape

- Optimizes material use
- Reduces material waste



Sanitation Kit for Reusable Period Products

- Over half of survey participants are interested in using reusable period products
- Main concern: sanitation of the product before/after

ECOVIDA. PROPOSED SOLUTION

Designed for the comfort and functionality of all menstruators, EcoVida. is a reusable tampon applicator with an on-the-go sanitation case that doubles as storage for unused tampons.



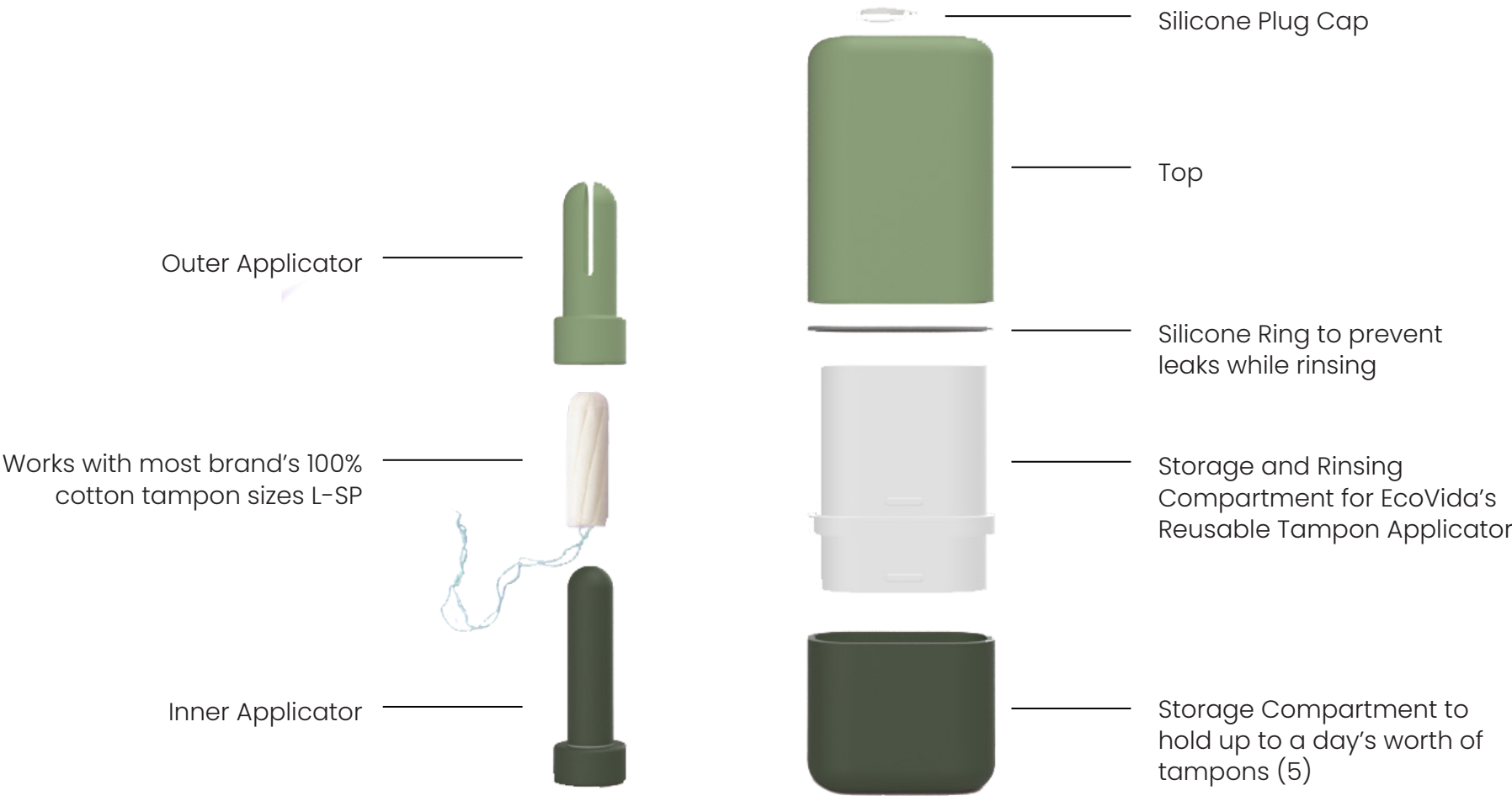
COMPONENTS + MANUFACTURING

Reusable Applicator

Biocompatible, non-toxic and non-leaching antimicrobial Sanipolymers Injection
Molded ABS

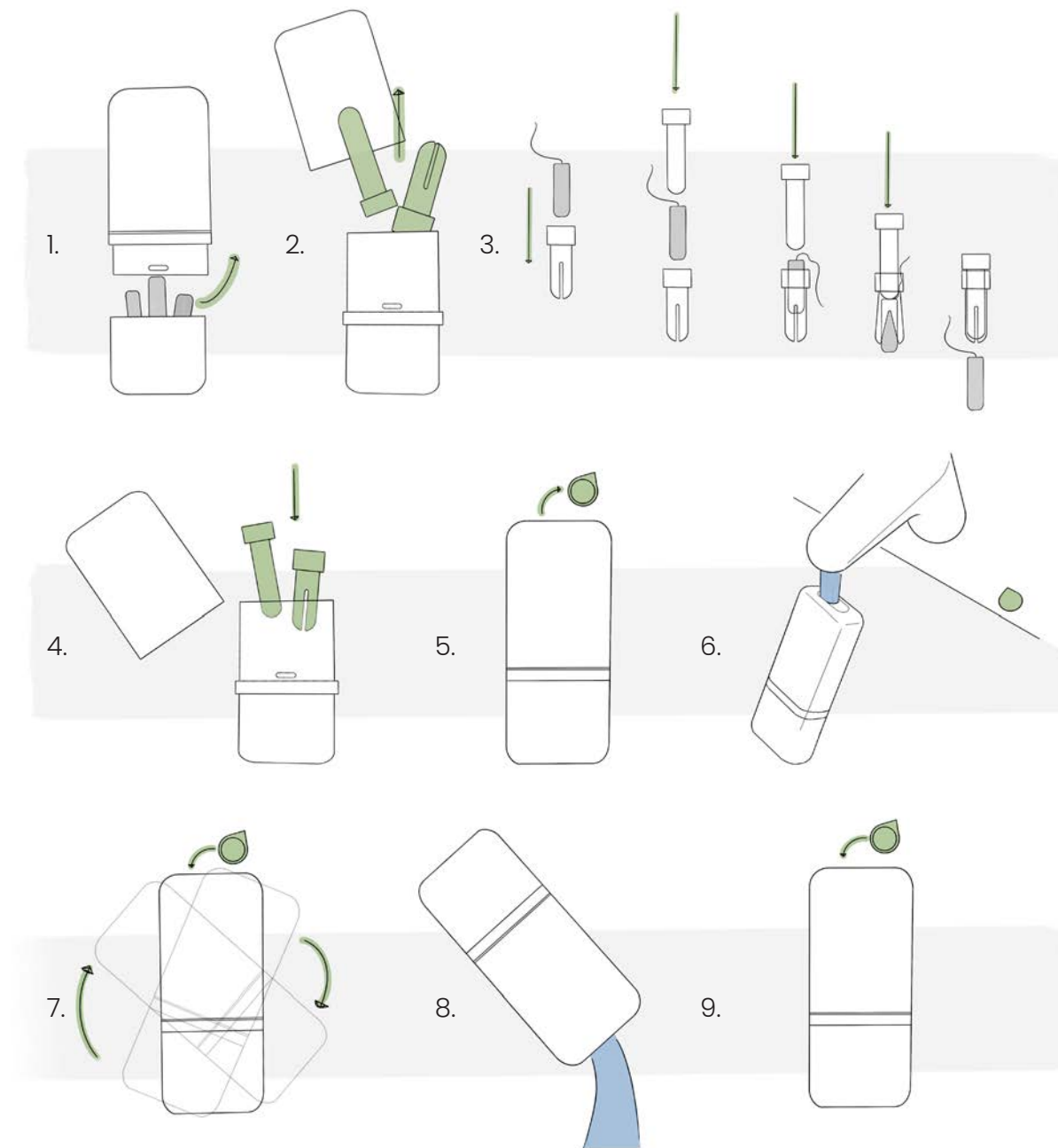
Sanitation + Carry Case

Injection Molded Secondary
ABS + Silicone



HOW IT WORKS

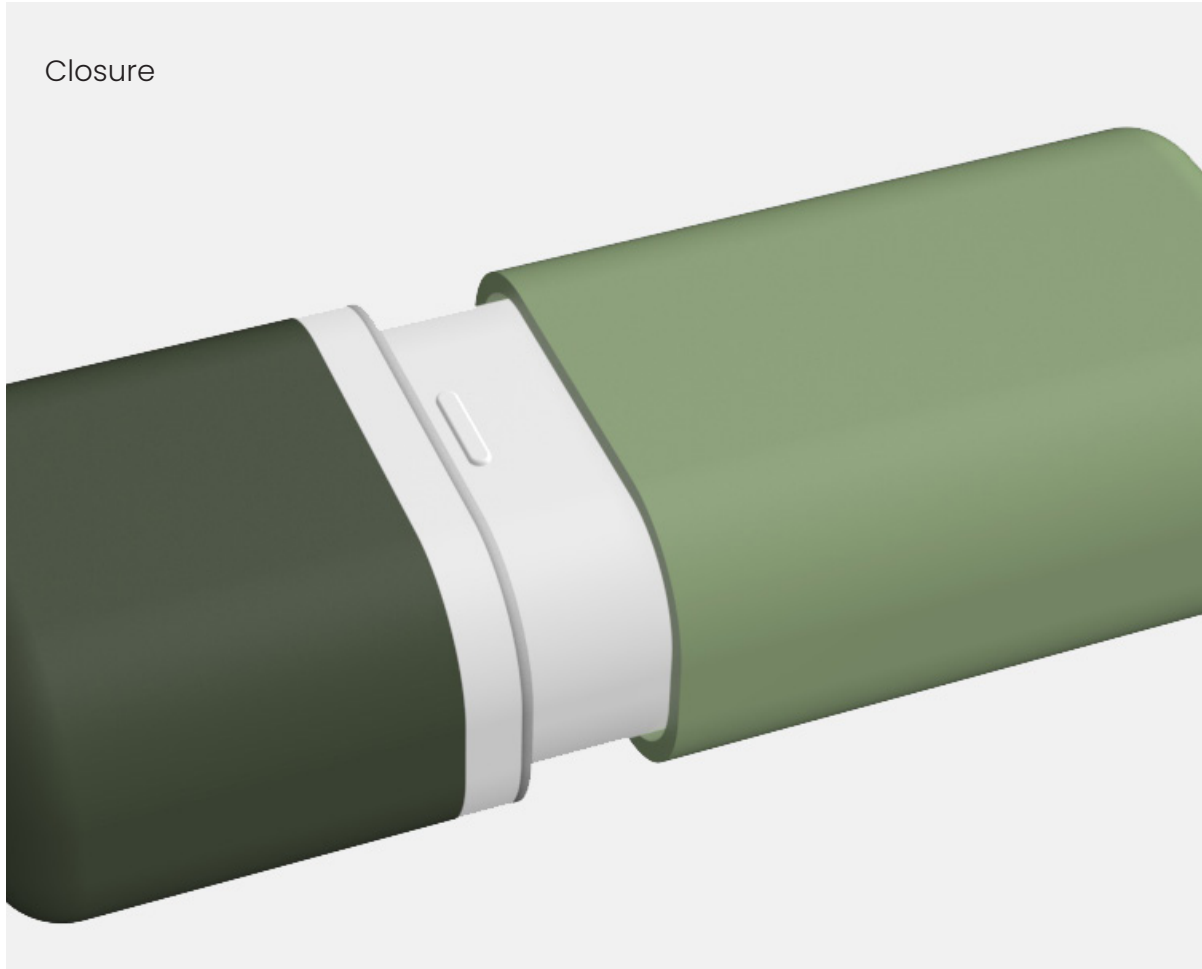
1. Retrieve a tampon from storage compartment
2. Retrieve reusable tampon applicator
3. Load tampon in outer applicator, use inner applicator to push, and insert as you would with a disposable applicator
4. Return applicator to washing compartment
5. Remove plug cap
6. Fill with water
7. Rotate + Rinse
8. Pour out
9. Replace plug cap



ECOVIDA.

60% of menstruators, prefer tampons with applicators,
EcoVida. eliminates 1500+ single use applicators per user.

Closure

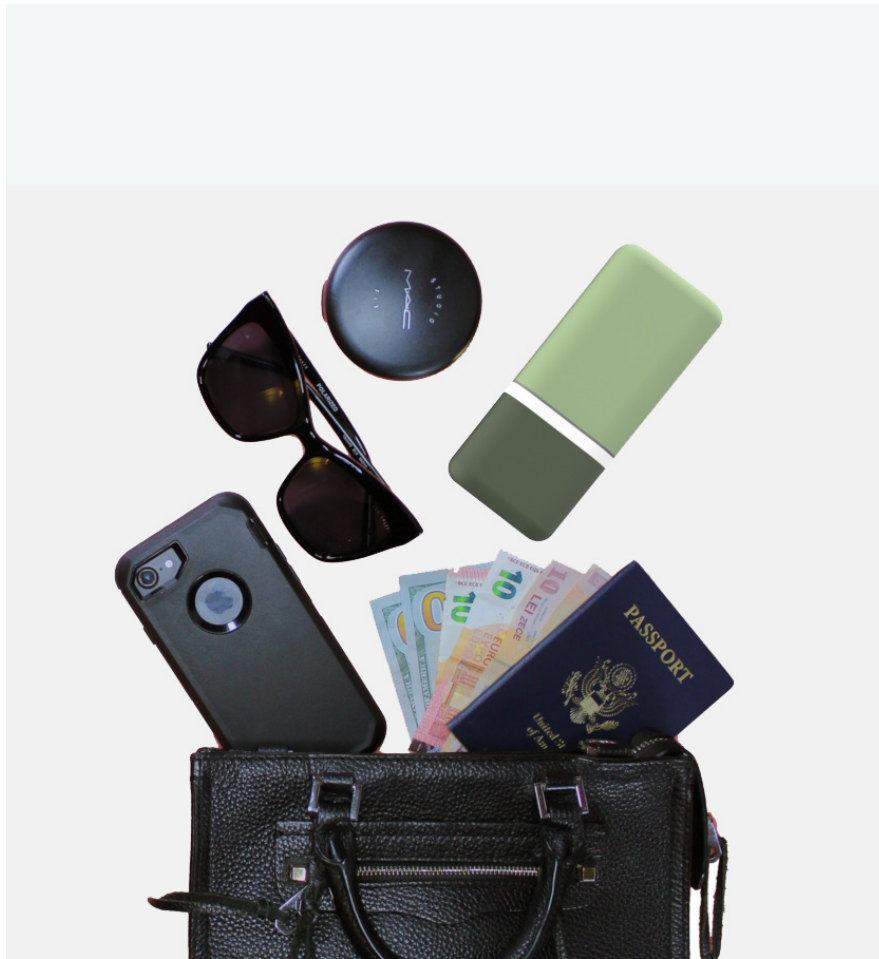


Rinse, pour, + go



ECOVIDA.

The familiar and compact design allow menstruators to decrease their avoidable contribution to the landfill while maintaining the comfort and cleanliness they are used to.



04 PROJECT

Posto

4th Year | 9 Months | 2021-2022



CHALLENGE

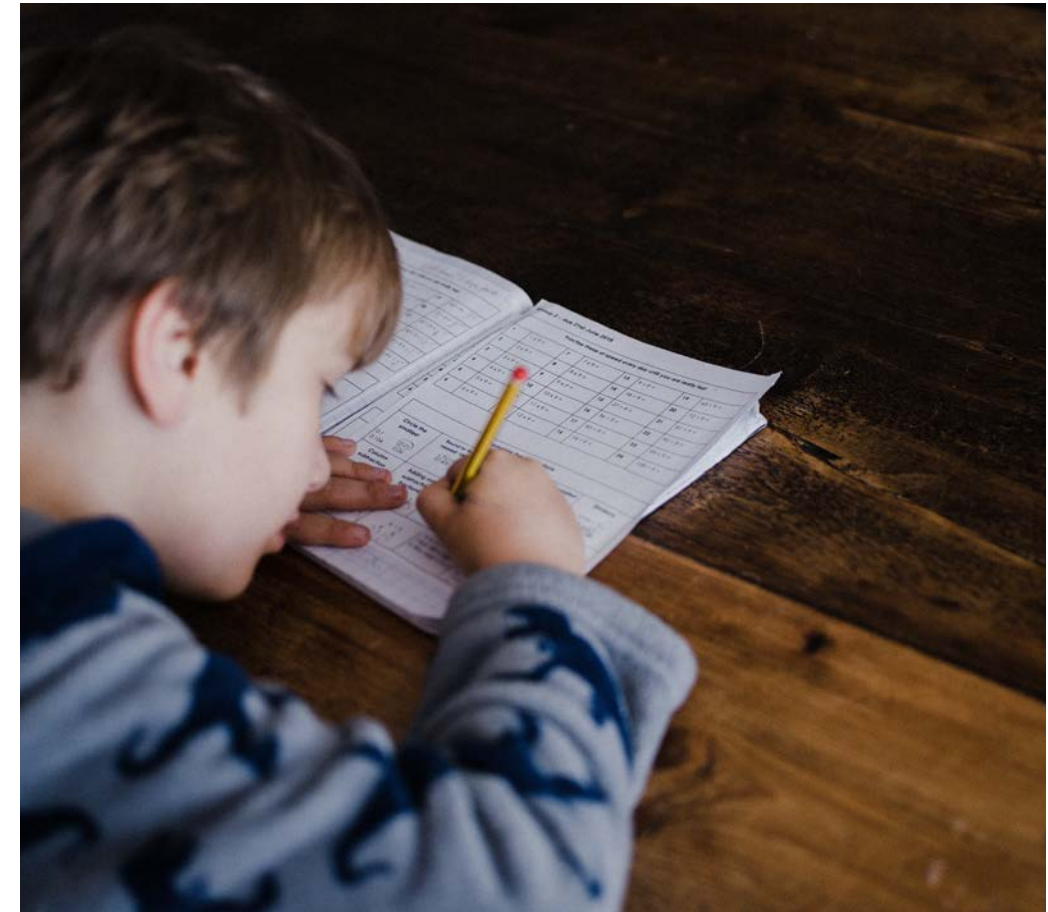
Utilizing the principles of play therapy, design a product or system that helps youth build trust with their therapists to promote more productive sessions.



SOCIAL ANXIETY

THE PROBLEM

“The COVID-19 Mental Disorders Collaborators conclude that, throughout 2020, the **pandemic led to a 25-6% increase in cases of anxiety disorders.**”



IMPACTS

Due to quarantine, many young children did not get the socialization they need. This had resulted in many children experiencing social anxiety which may result in **trouble developing and maintaining friendships**

CHILDREN'S THERAPY

THE PROBLEM

1 in 5

children experience a mental, emotional, or behavioral disorder

45%

of kids leave therapy because they feel their treatment is not effective



PLAY THERAPY

THE SOLUTION

Better suited for kids as it **removes the seriousness** of traditional therapy.

**“ACCEPTING AND
VALIDATING THE CHILD’S
FEELINGS IS KEY TO
BOTH TO MAINTAINING
THE RELATIONSHIP AND
HELPING PATIENTS.”**

– PLAY THERAPIST, 9+ YEARS



TARGET USERS

Grade School Age Kids

Learning to read and write

Exposed to increased unknowns and anxieties

Children's Play Therapists

Keeps therapist informed

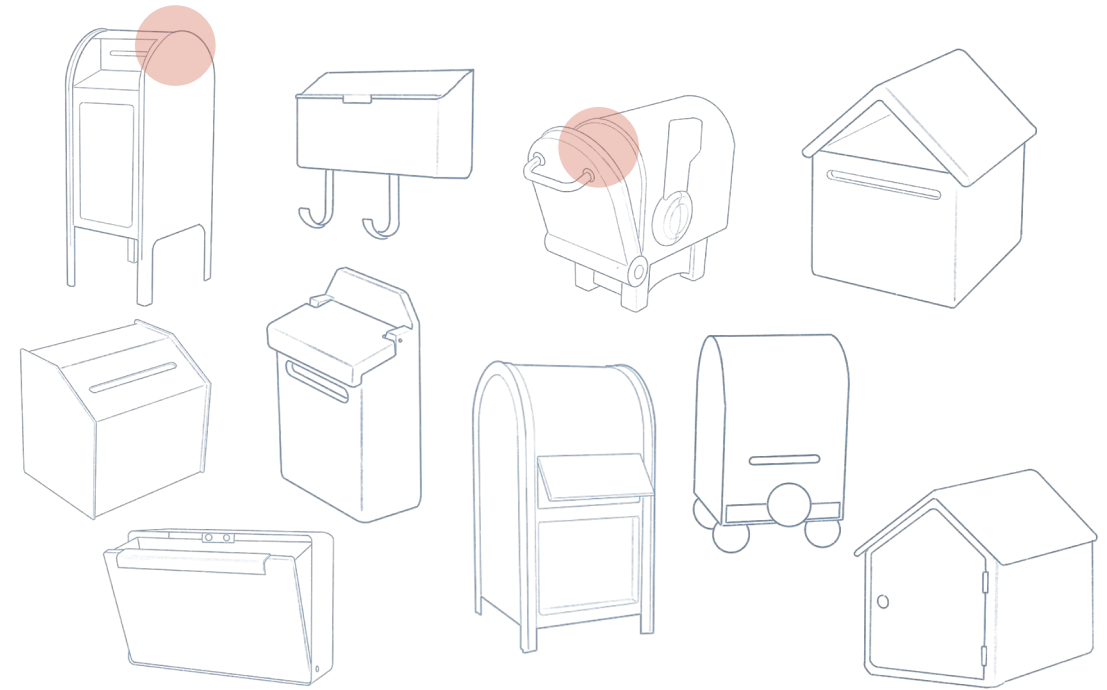
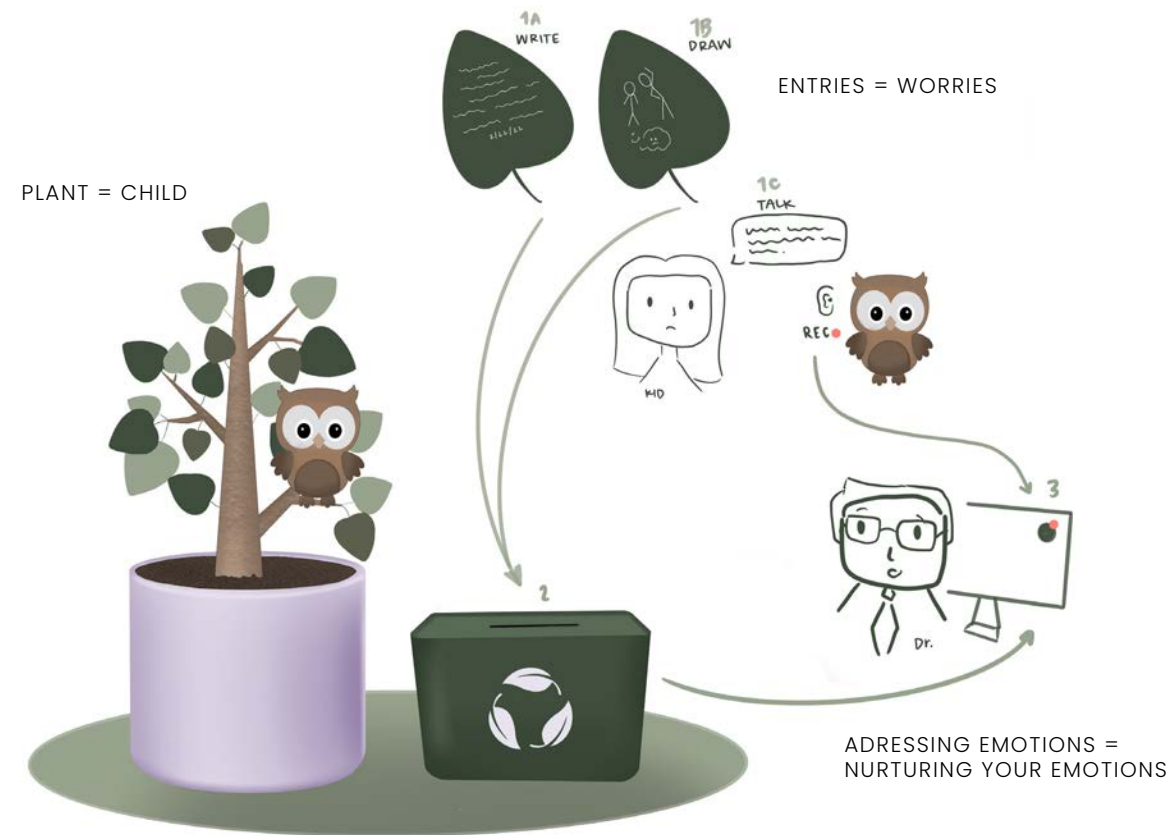
Helps guide therapy for more productive sessions



CHOOSING A DIRECTION

I concluded that having a tangible product for the child to interact with would be the most successful.

Combining two concepts that both **taught kids how to nurture and attend to their own emotions** - one that came in the form of a house plant and one that was a digital journal - I ended up with **two part system**.



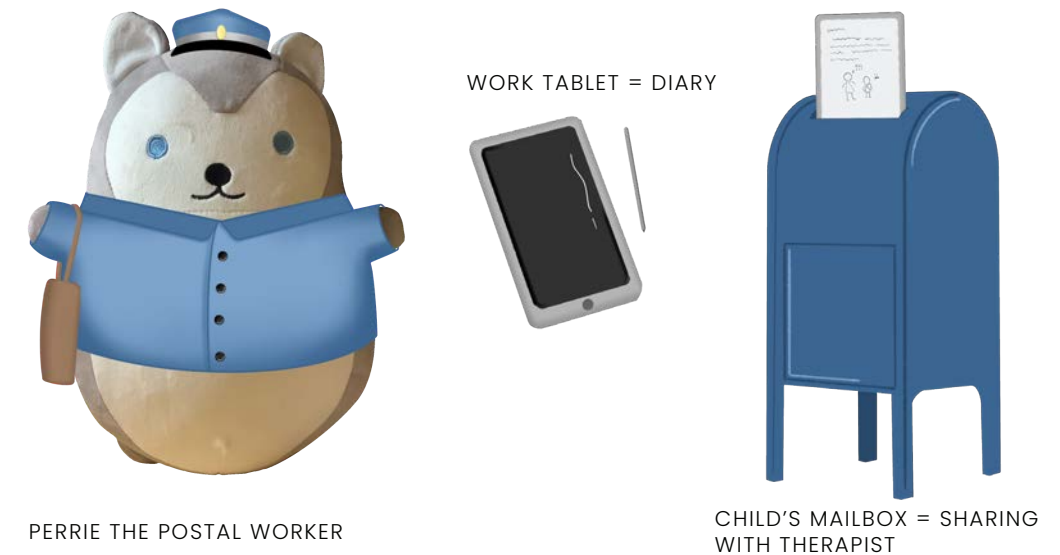
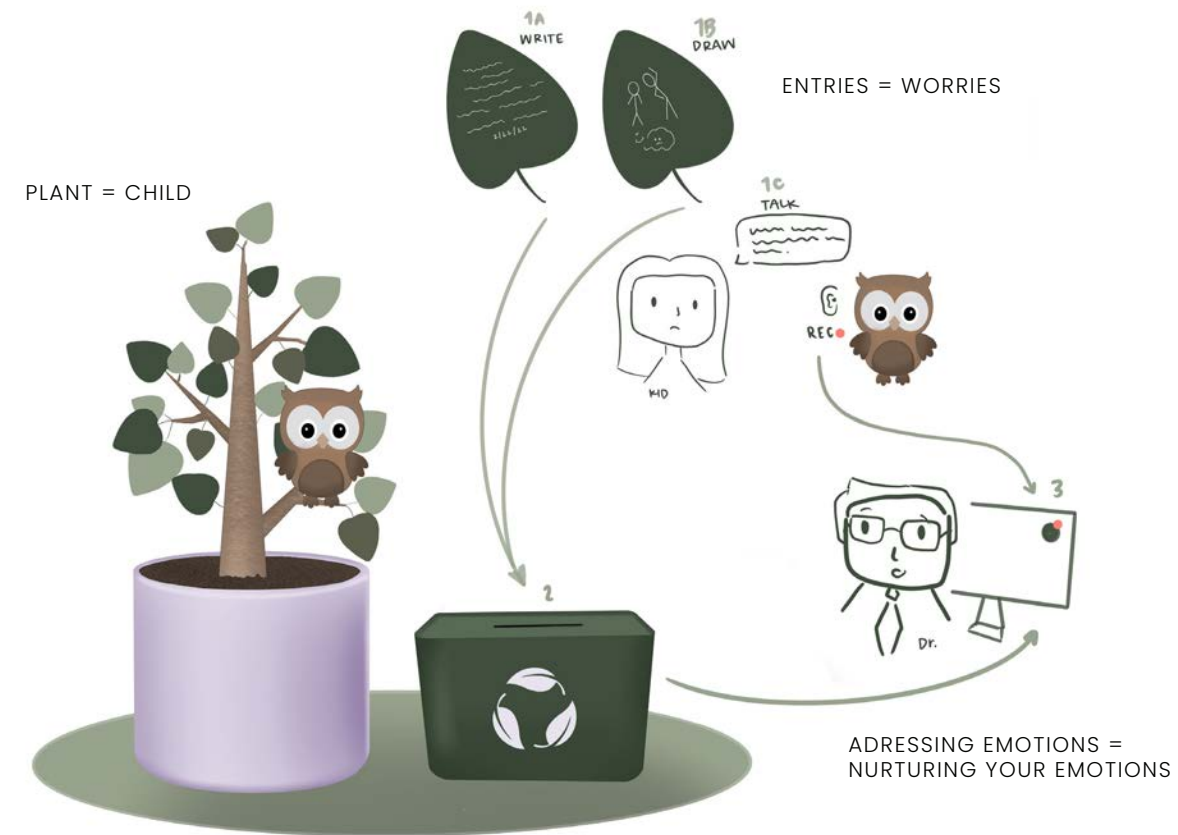
CREATING THE THEME

Developed the system to resemble the postal system for a more **cohesive theme of communication and sharing** information.

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CREATING THE THEME

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REFINING THE FORM:

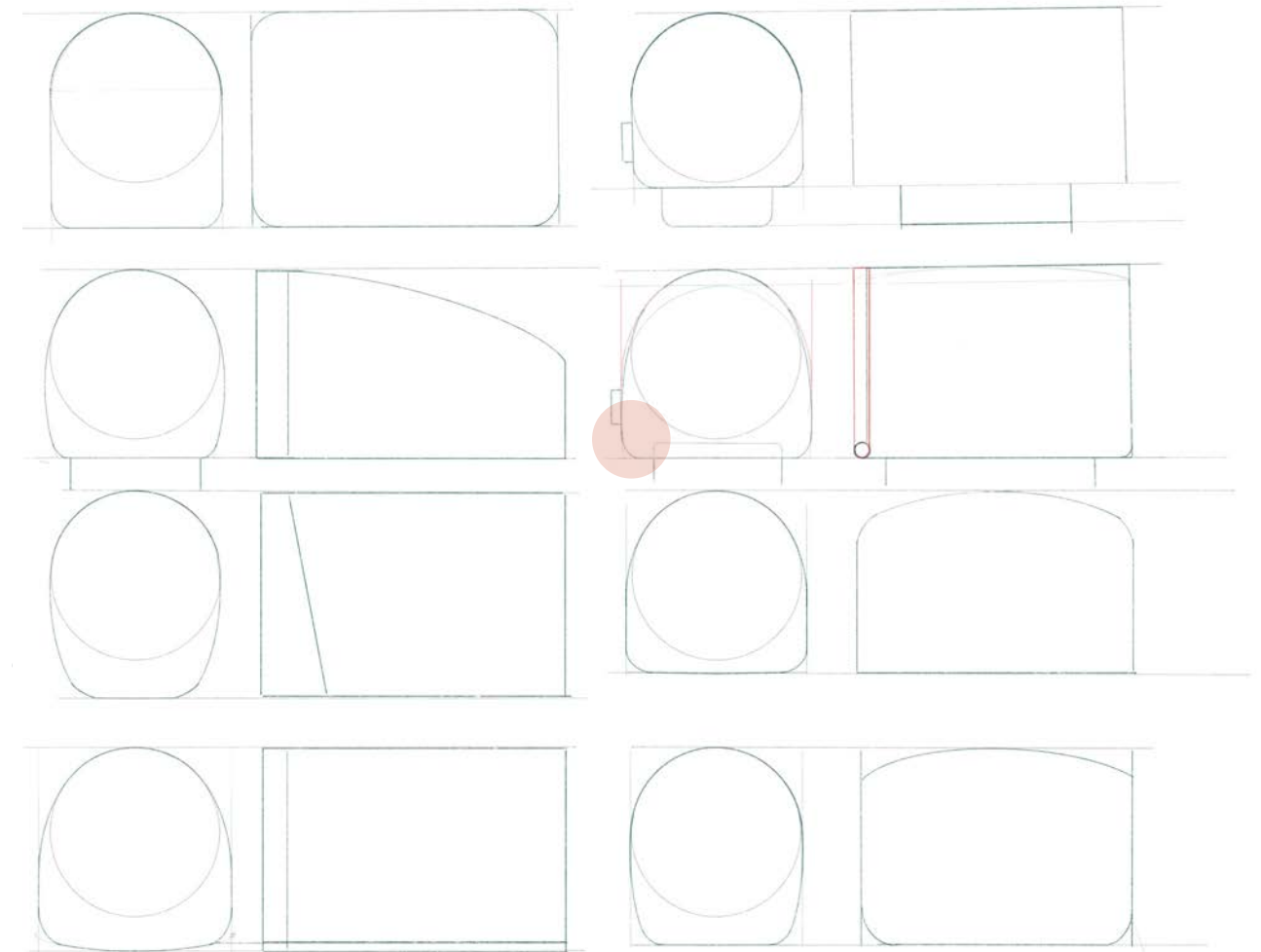
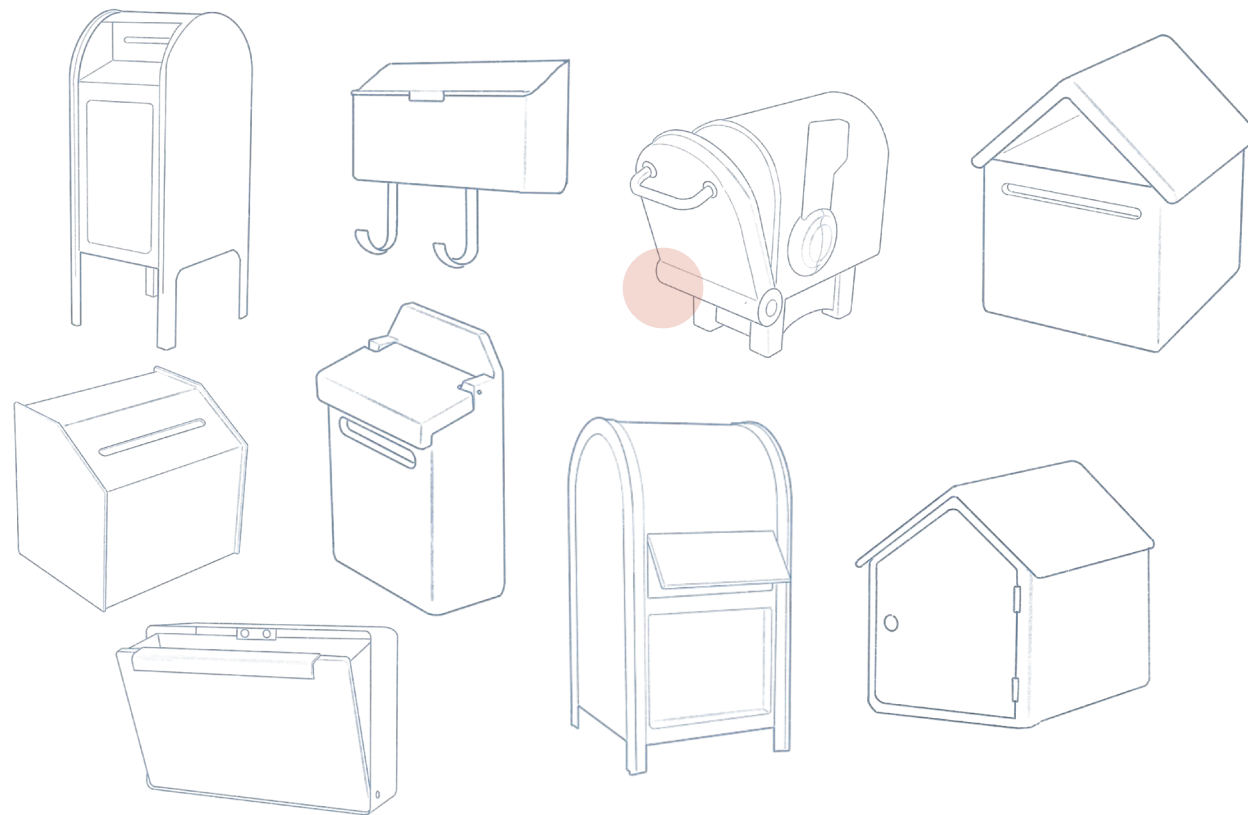
FINDING THE CHILDLIKE AESTHETIC

Inviting
Soft
Minimal
Interactive



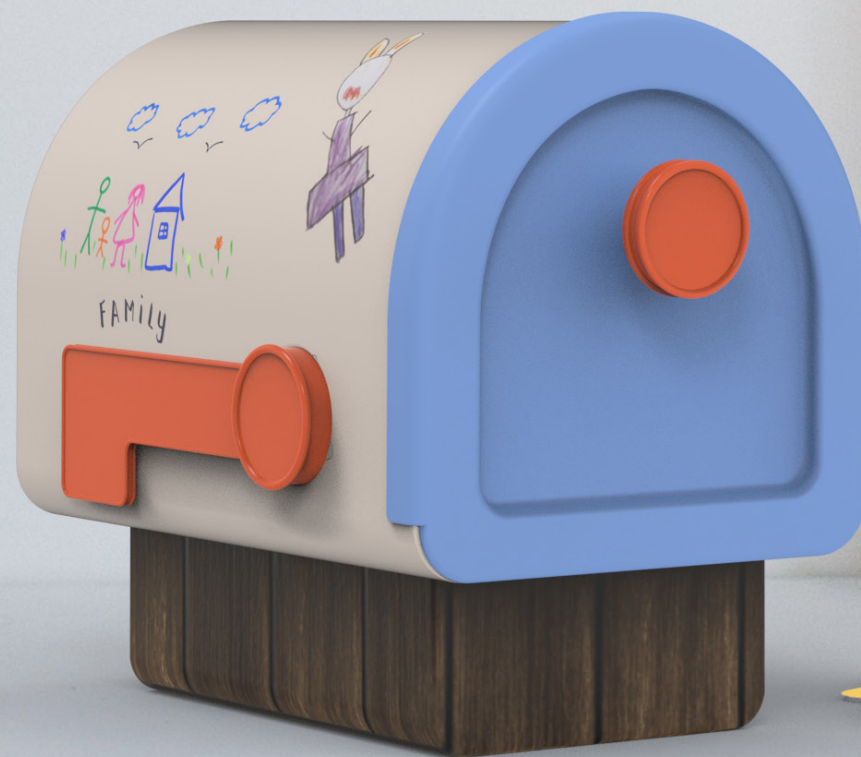
FINDING THE FORM

Finding the best form and combination of proportions to achieve a playful, yet purposeful product that invites the child to interact and play with the toy.



POSTO

A customizable postal service themed communication device for children and their therapists to encourage open communication and assist in building trust.



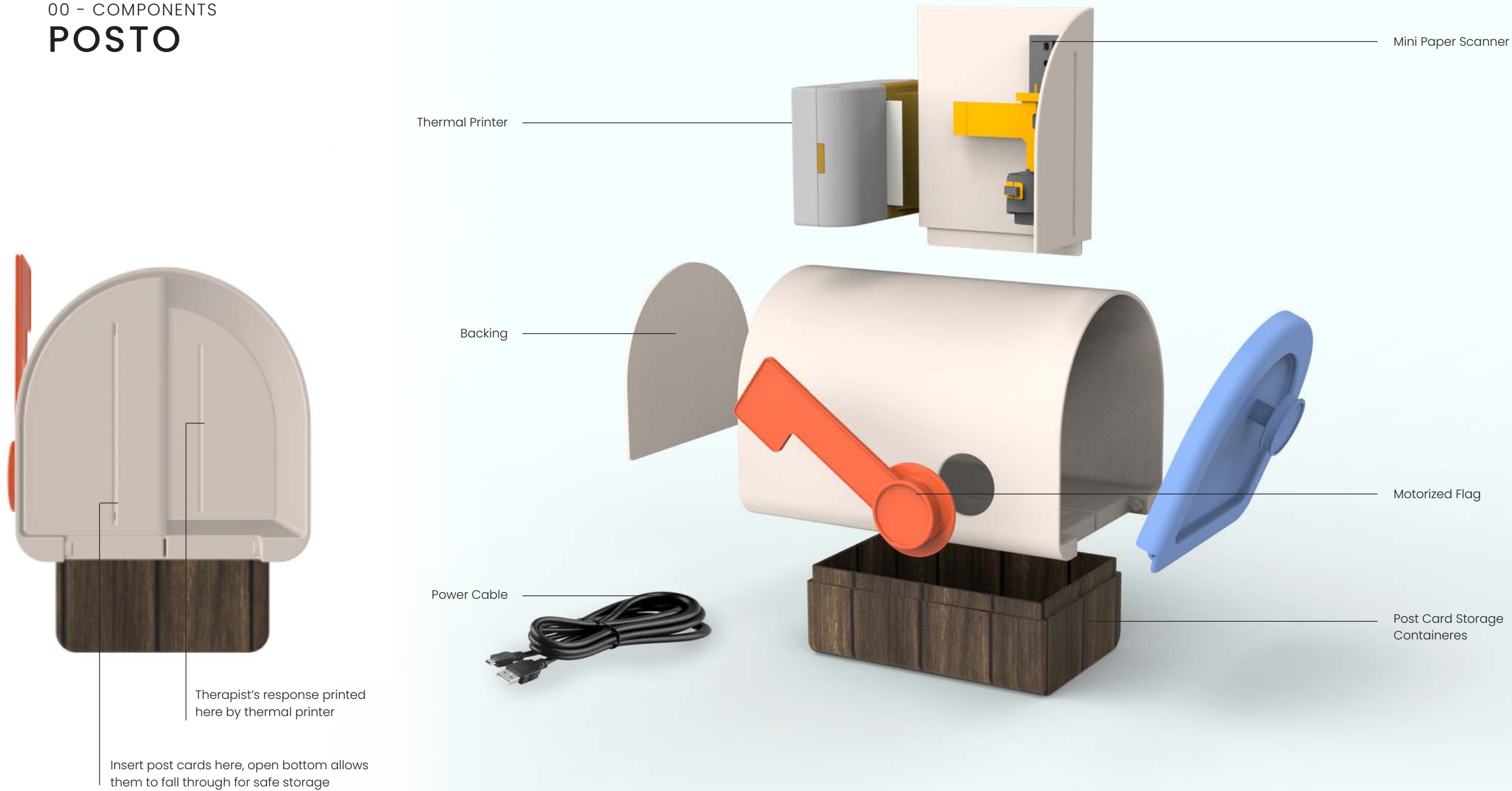
00 - CUSTOMIZABLE

POSTO

Neutral body shell color allows customizability for the children to paint, draw, or decorate their mailboxes which cultivates an ever stronger connection to Posto.



00 - COMPONENTS
POSTO



01

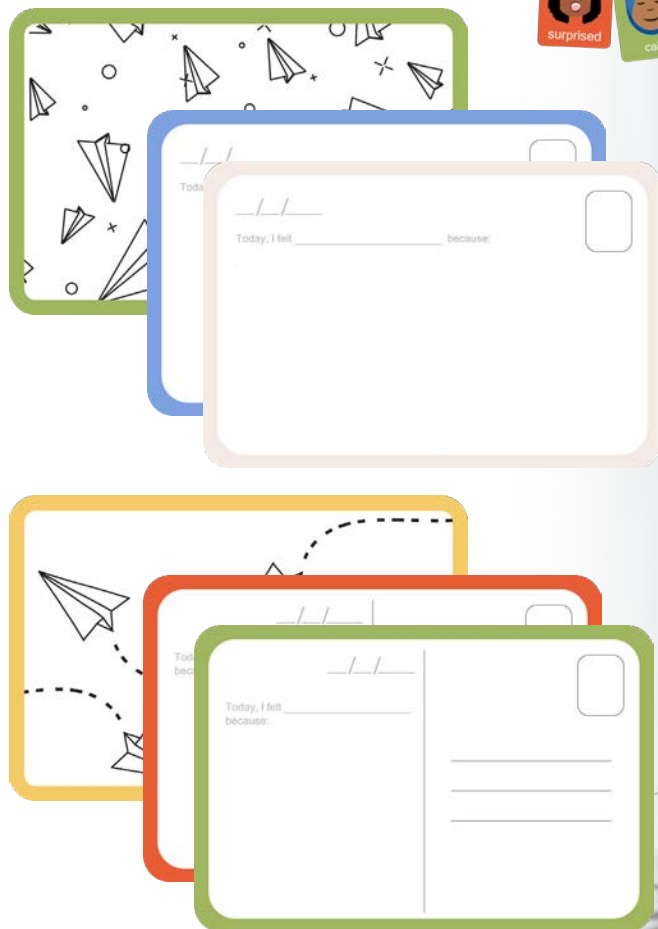
WRITE A MESSAGE

ON THE POSTO POST CARDS, START WITH A MOOD STAMP, AND THEN WRITE OR DRAW A MESSAGE TO YOUR THERAPIST. GIVES CHILD TOOLS TO IDENTIFY THEIR EMOTIONS ON THEIR OWN.

Mood Stamps



Posto Post Cards



02


DISPEL WORRIES

CALM ANXIETIES BY ACKNOWLEDGING, WRITING, AND THEN PUTTING THEM AWAY BOTH PHYSICALLY AND EMOTIONALLY

5/17/22

Today, I felt mad
because:

My mom
didn't let
me stay home
from
school :-)

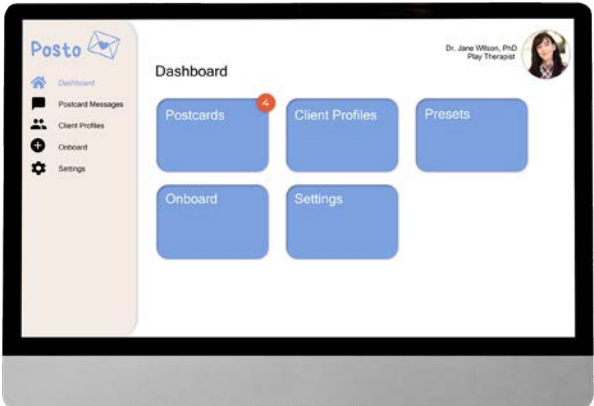




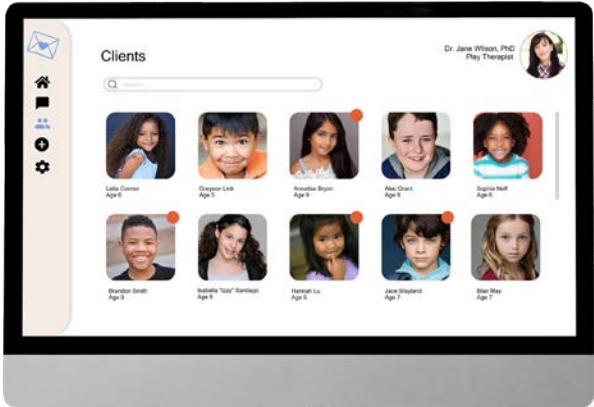
03

ACKNOWLEDGMENT

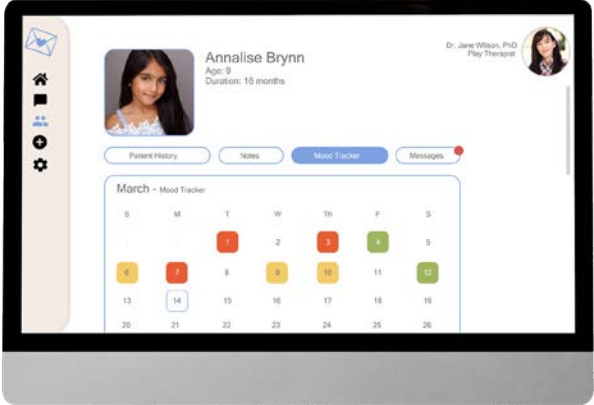
POSTO INBOX PROGRAM WHERE THERAPISTS CAN SEE POSTCARDS, PATIENT LIST, AND CLIENTS' MOOD TRACKERS.



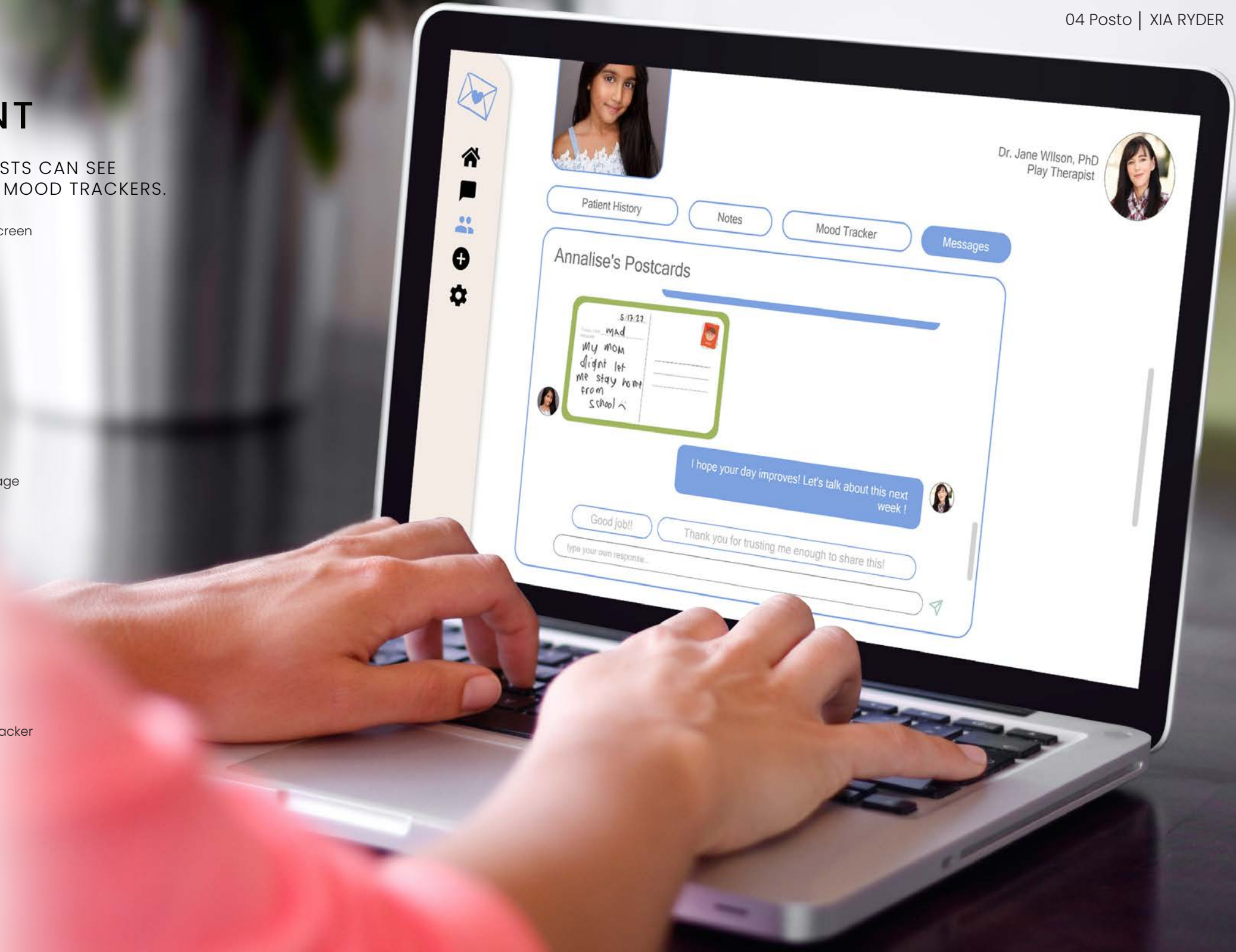
Home Screen



Client Page



Mood Tracker



04 CONNECTION

THROUGH WRITING TO THEIR THERAPIST THROUGHOUT THE WEEK, THE CHILD FEELS CONSTANT CONNECTION AND BUILDS THEIR RELATIONAL PERMANENCE.



CONTACT

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THANK
YOU