



MATTHEW UNGER

5 N Federal Ave. Mason City IA

847.767.0096

ungermatt99@gmail.com

mattunger.design

RESUME

EXPERIENCE

Winnebago Industries - Industrial Designer (2018 - Present)

- Created exterior and interior drawing concepts
- Administrator of company 3D printer. Use 3D printer to develop prototypes and models
- Facilitate user interviews and prototype mock-up demo's
- Develop automotive CADD surfaces and collaborate with engineering team weekly.

Marquette University - HEIR Lab Intern (April 2016 - March 2017)

- Industrial Design Consultant / Intern
- Worked with design partner researching, need finding, and conceptualizing a robot prototype
- Developed CADD model iterations with multiple internal components
- Learned about Raspberry Pi's and Human computer interaction.

MIAD Information Technology Assistant (2015 - 2018)

- Technology Assistant - Help Support Desk
- Provided technical support for customers on all operating systems
- Monitored / maintained service desk queue
- Provided support for mobile devices, tablets, and software applications

EDUCATION

Milwaukee Institute of Art and Design (2014-2018)

- B.F.A. in Industrial Design
- Dean's List all years present
- 3.5 Average GPA

William Rainey Harper College (2011-2014)

- Associates in Science
- Associates in Arts
- 3.5 Average GPA
- Volunteered setting up gallery space

SKILLS

Software:

- Solidworks
- Rhinoceros
- Adobe Photoshop, Illustrator, InDesign, XD
- Microsoft Office

- Android
- Autodesk Sketchbook
- Invision
- Keyshot
- Agile methodologies

Technology:

- 10 years P.C. Desktop building Experience
- 3D Printing (Hardware and Software)
- Raspberry Pi / GPIO Experience
- HCI & HRI design

Hands on:

- 5 years woodworking and modeling experience
- Computer repair
- 3D printing and printer maintenance

Currently Learning:

- Adobe After Effects
- Siemens NX

ACHIEVEMENTS

Projects:

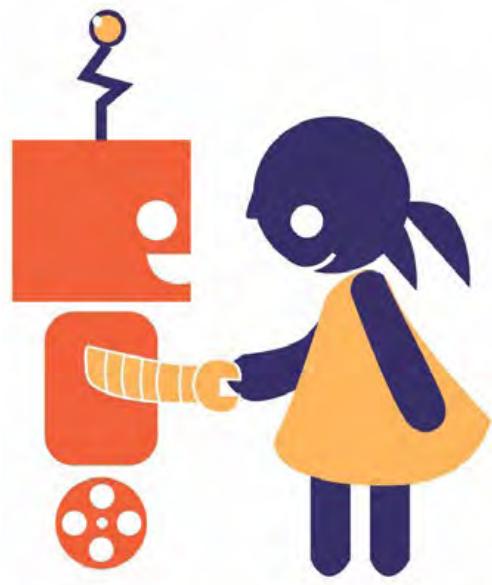
- Accepted paper / design in 2017 HRI conference @ Vienna, Austria
- 2016 Masterlock Sponsored project 2nd place
- 2015 Fiskars Sponsored Project 2nd Place

Certifications

- AdvancedTek Certificate of Achievement
- Microsoft AX Training

Volunteering:

- Urban Ecology Center (Early 2016 - Mid 2016)
- Community Service For Roselle Police Explorers Volunteer (2009-2011)
- Volunteer for Friendship Village elderly home (2009-2010)



Designing a Low Cost STEM
Education Robot

Wouldn't It Be Nice If A Robot...

- Could carry things for you
- Catch your mistakes before you can
- **Act as a tutor / companion**
- Enhance virtual experience / Be a "camera" robot, and implement virtual reality with 360 video
- Can mesh UX/UI/Hardware in an effective way
- Can catch the user's attention and vice versa
- Was as social as its user's age group
- Recognized its user based on past experiences
- Had a body that was modular with any device
- Had expressive, yet abstract graphics to display emotion
- Helped kids with homework (Homework Helper)
- A robot could engage students with creative freedom / healthy competition
- **Do one thing well**

Questions : 3/23

- How much is this robot going to be dependent on ipad/iphone etc
- Can we make it smarter ? Socially?
- Should we consider 360 video ?
- How customizable should the robot be?
- How can we make it so that it stands as an asset to the classroom, but does not replace the tutor/teacher?
- What grade level / Who's the user?
- How can we make the user a hero?

Empathy Study

Hear

- Brother took course: assumption that she will be fine
- Went over test problems, used pen and paper
- Game centered activity
- Cross Cultural
- Teaching structured units

Think

- Needed help and went in to get it
- Thought about why she was doing what she did : deeper understanding behind her problem solving methodology
- Relationship with kids was important
- Adjusting to multiple personalities
- Children had trouble memorizing things

See

- Realization that other students were attending tutoring sessions / struggling
- Flashcards were helpful
- Relating to how some things were difficult.
- Field Trip Friday
- Students like teaching other students
- Students liked using Scratch Programming
- Drawing pictures for understanding
- Audio Listening

Feel

- Feelings of insecurity, shame, pressure because she was not as good at chemistry
- Reassurance by other students and teachers
- Tutoring has negative connotations
- Feeling frustrated led to reluctance to asking for help.
- Felt more confident about working and asking for help
- Sad when students didn't know the answers / realizing that parents could have helped more
- Liked being looked up to
- Created a "safe space"
- Bad behavior was brought to school
- Enjoying the "Aha!" moments

Market Inspiration

"Kirrobo"



"CodYbot"



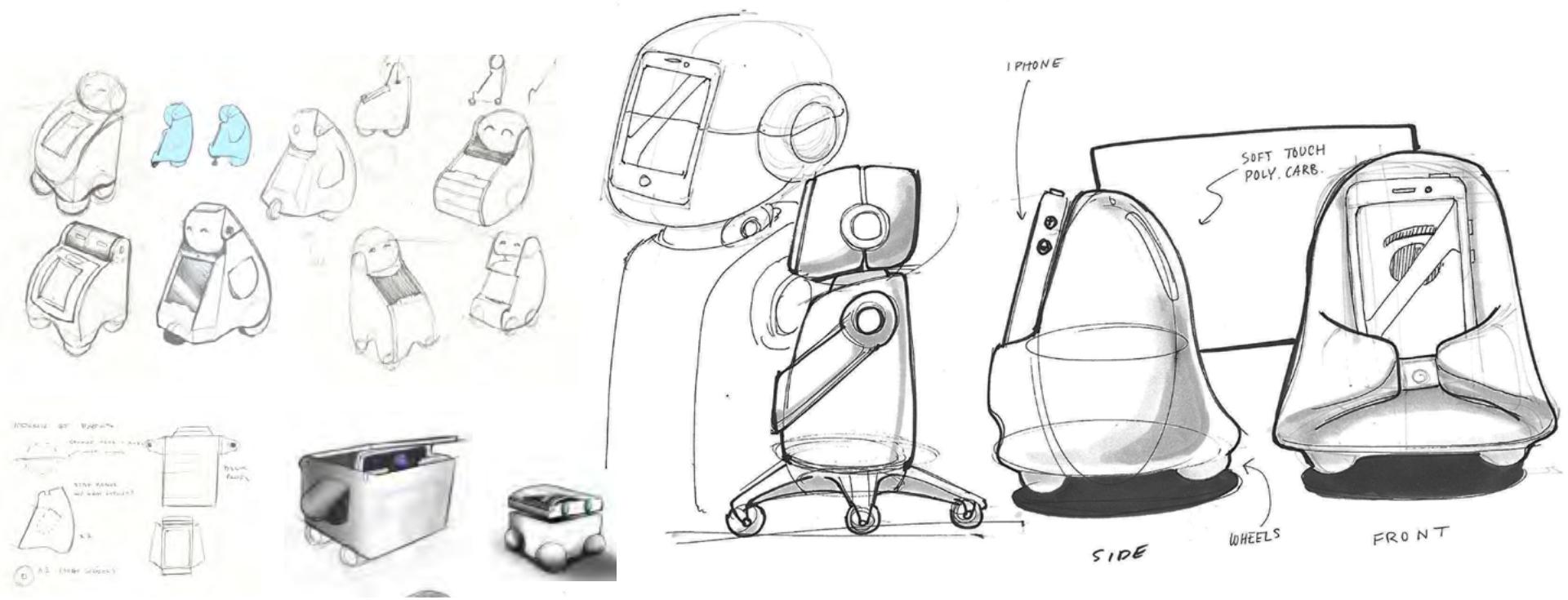
"JIBO"



"YUMI" - Omate



Ideations



Movements



Model refinement



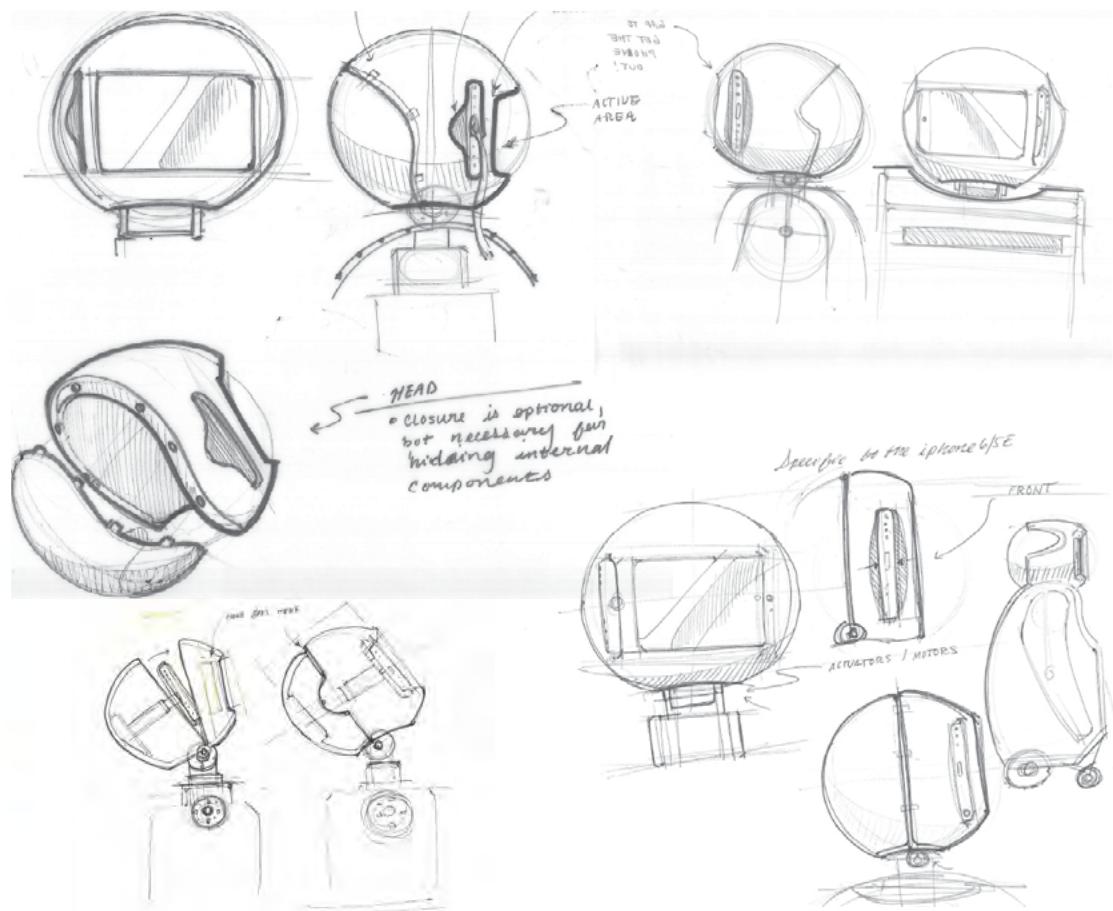
Back shelf



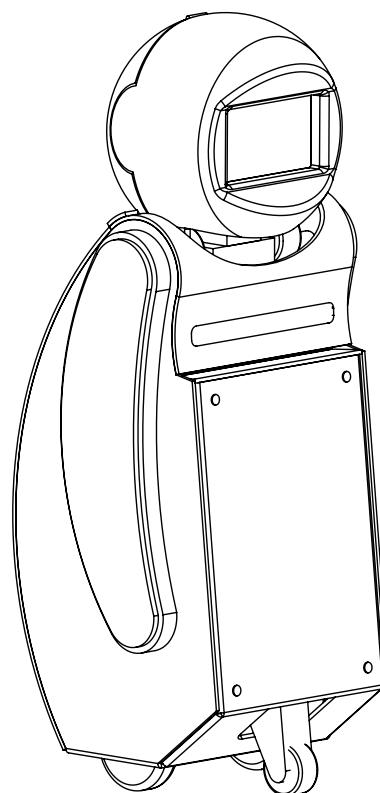
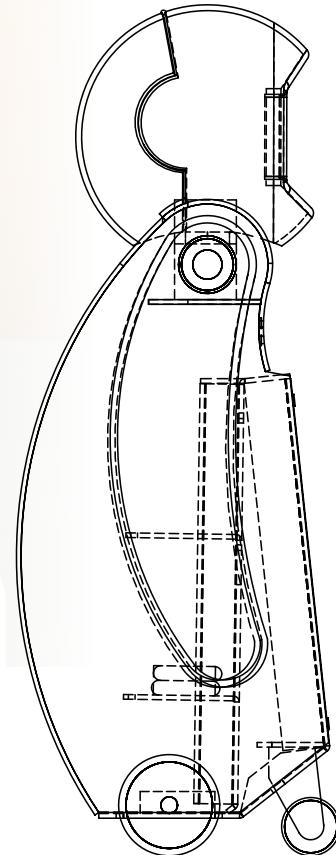
Velcro IPad



Exploded View



1/4 Scale Mockup



Awake



Happy/excited



Angry



Sleeping



Confused/Surprised



Sad

Internal Components



iWatch



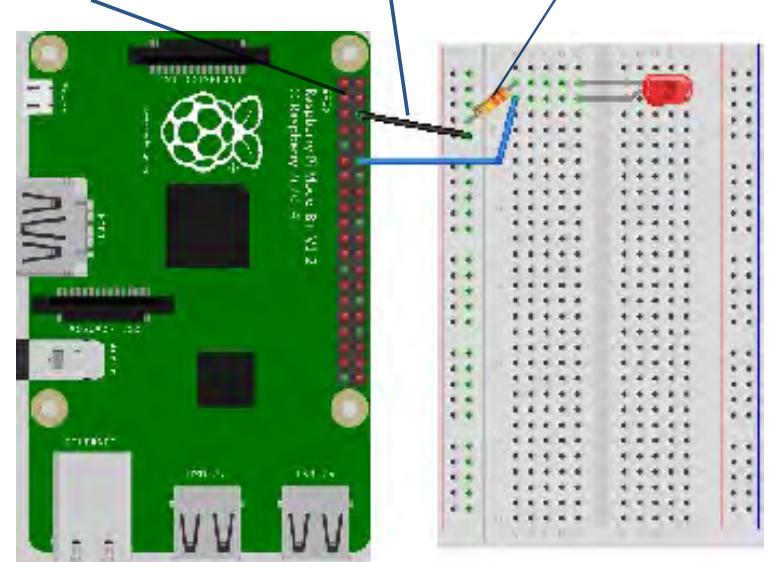
Raspberry Pi 3



Lithium Ion Battery



Servo



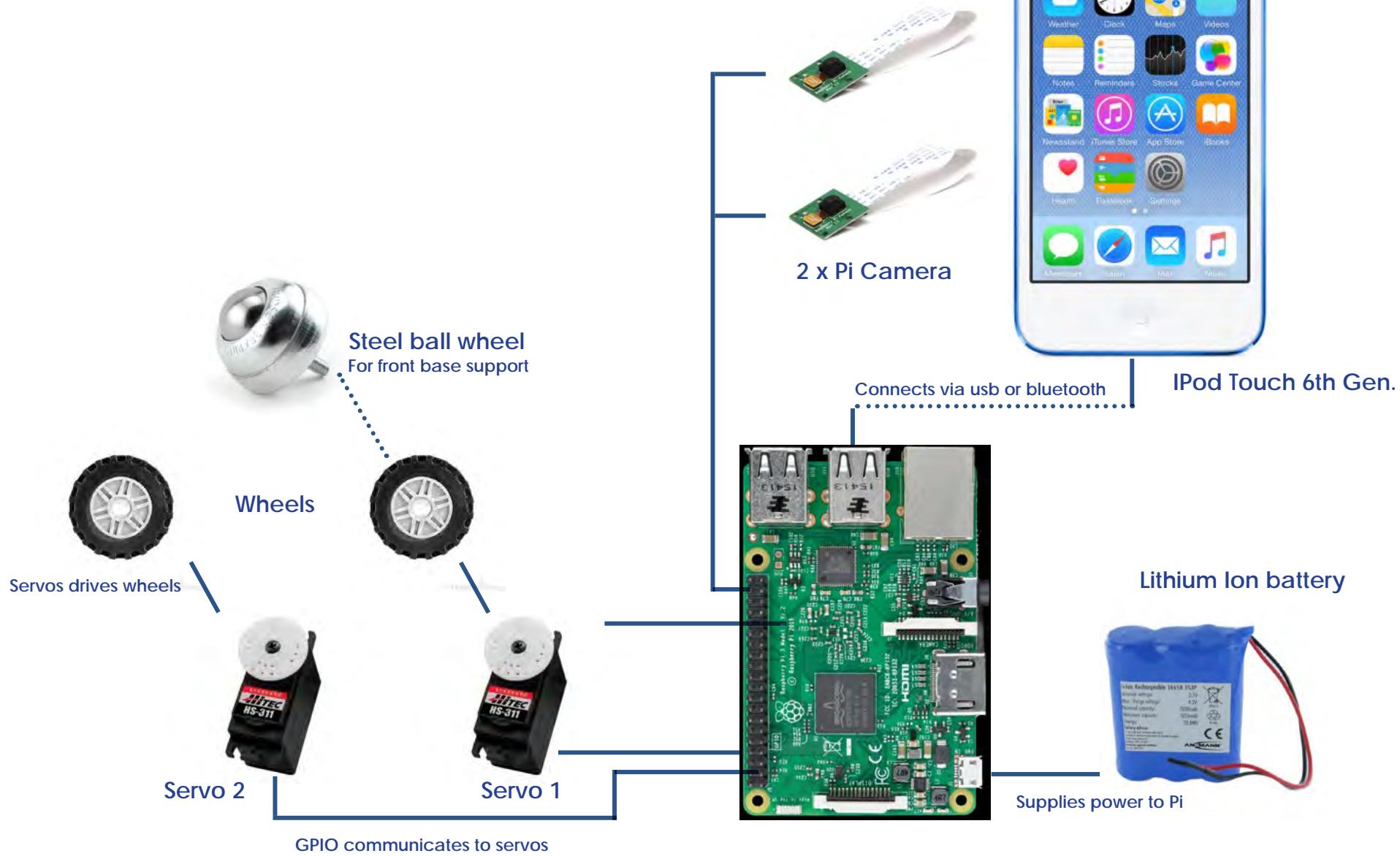
Raspberry Pi

Breadboard

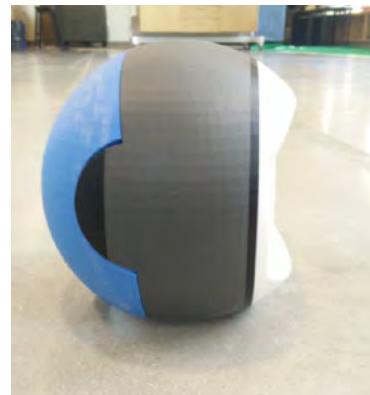
```
import RPi.GPIO as GPIO ## Import GPIO library  
GPIO.setmode(GPIO.BOARD) ## Use board pin numbering  
GPIO.setup(7, GPIO.OUT) ## Setup GPIO Pin 7 to OUT  
GPIO.output(7,True) ## Turn on GPIO pin 7
```

Python code to make LED light up

Componet Layout



Large ProtoTpye



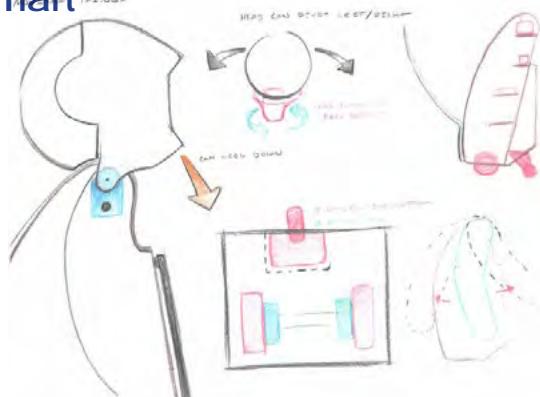
Small Prototype



iPad display mounts to chest

Head houses iPhone /smart phone

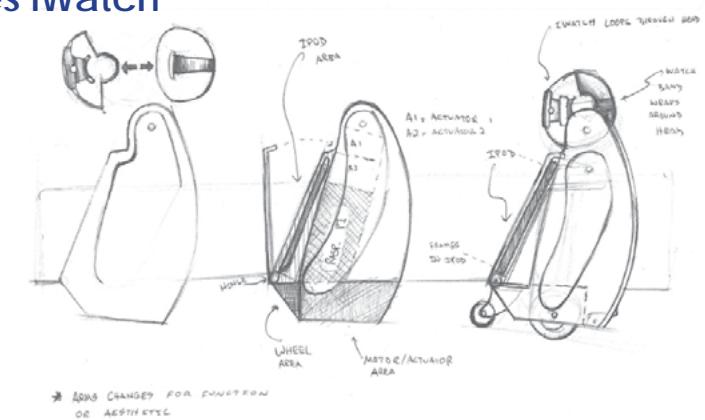
~5 servos



Front flips open for Ipad touch

Head houses iWatch

~3 Servos



User experiences

PRO'S

- Cute and friendly looking
- Reminiscent of "EVA" from Walle or "Big Hero Six"
- Likes colors in head
- Smaller robot perceived as more for kids
- Big Robot is good for people with low vision
- Smaller = More

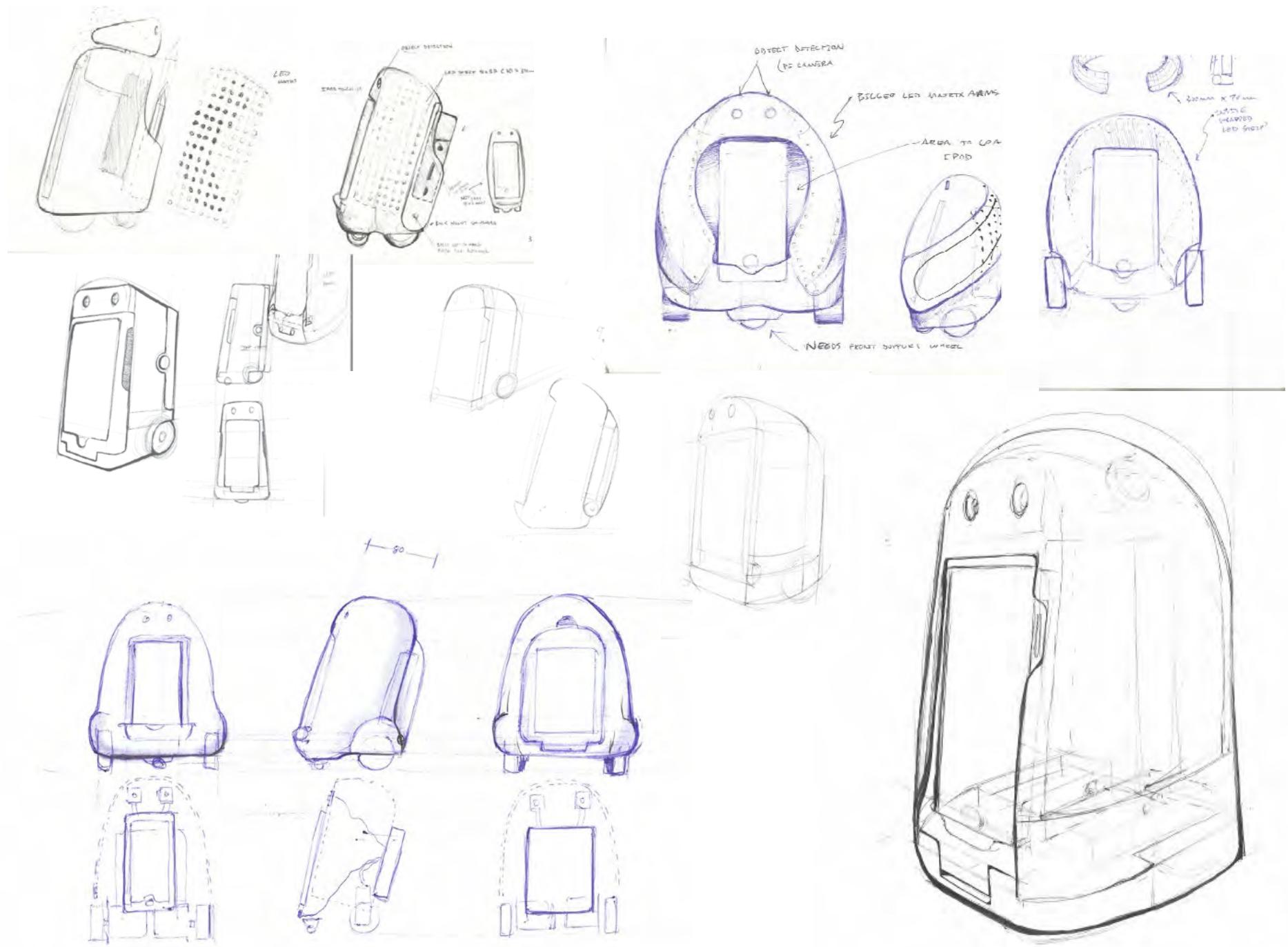
CON's

- Big robot is easy to tip over.
 - Confused about large object detection slot
 - Arms do not function
 - Tempted to tamper with robot
- Did not like material, makes form look bulky.

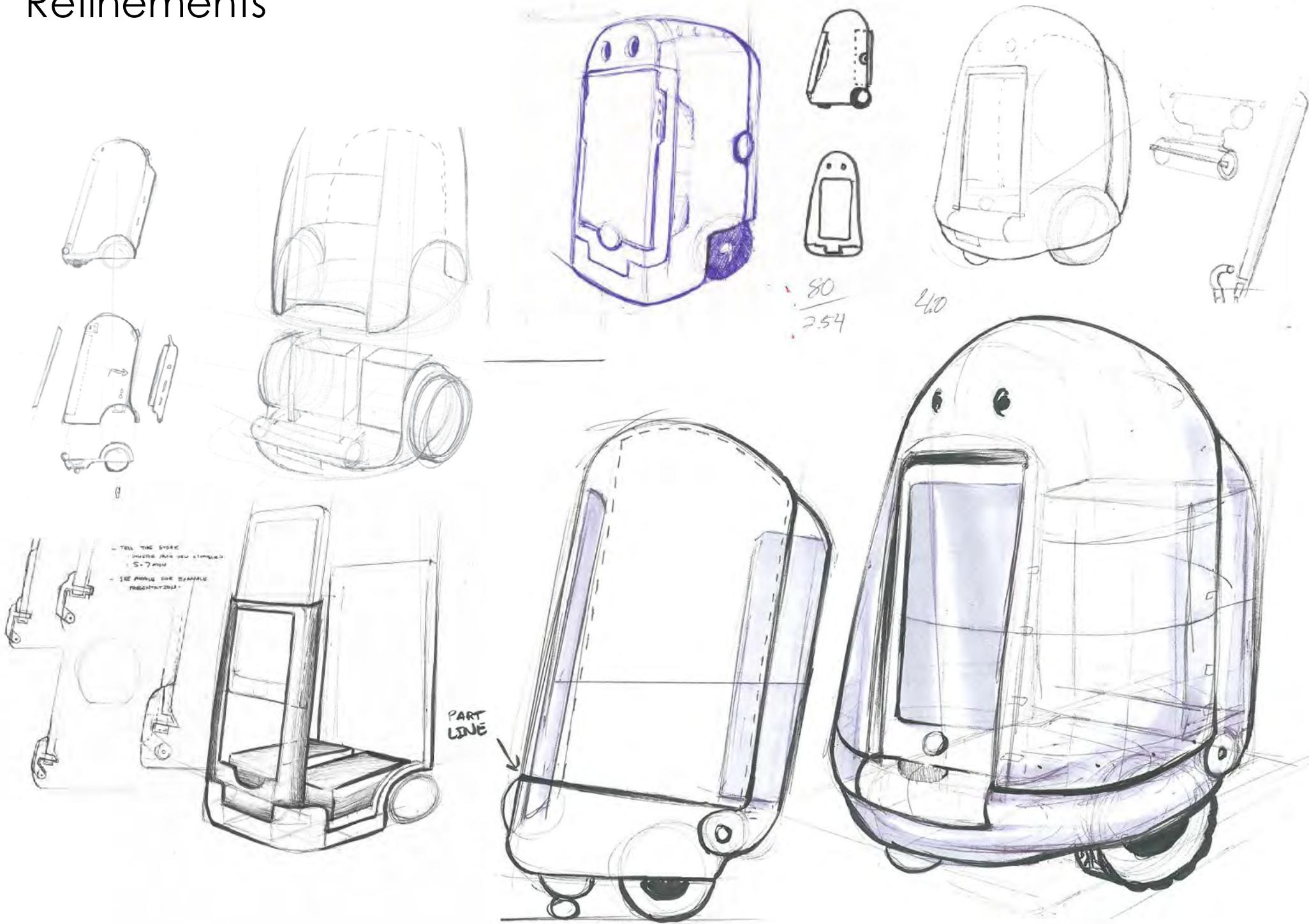


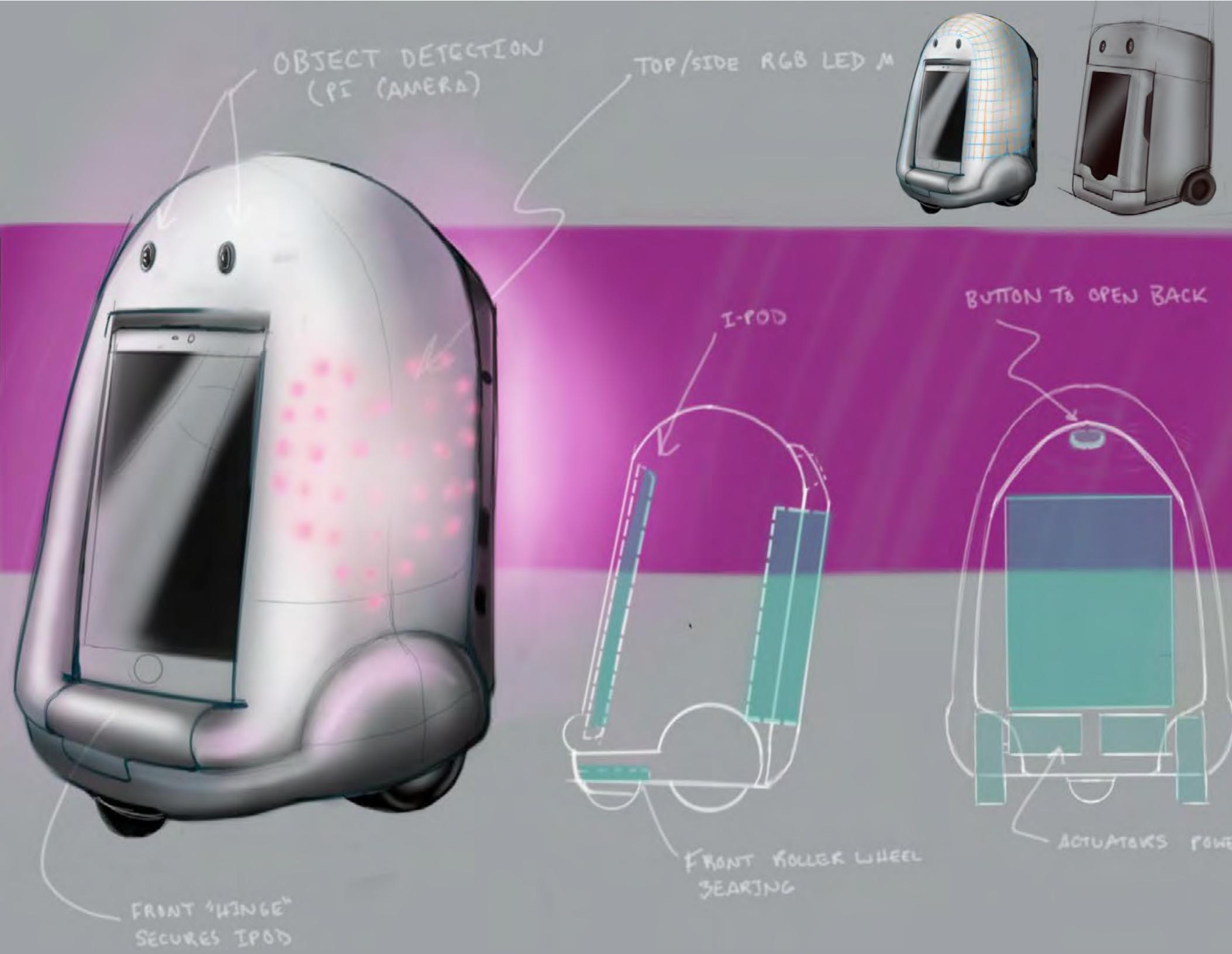
Take-away: Kids want a fun element and need to immediately see it initially. Want something more like a toy. What if kids do not have watch or iPad? Robot not moving as much is a let down.

More ideation



Refinements





LOW-COST SOCIAL ROBOT FOR TEACHING CHILDREN STEM

Dr. Andrew B. Williams, John C. Williams, Tiffany Do, Matthew Unger

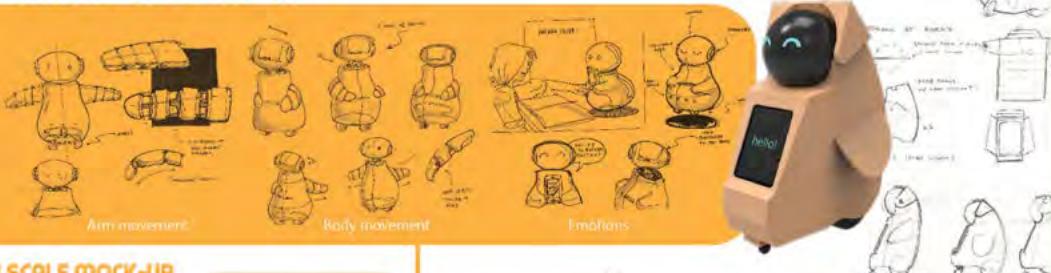


RESEARCH

Empathy Study



FORM AND MOVEMENT



1/4 SCALE MOCK-UP



A scaled down model was built out of foam core and cardboard to better understand the robot's form and the components inside. Building the scaled model for the first time helped visualize the robot 2D layout.

INSIDE COMPONENTS



Human-Centered Design of a Low-Cost Social Robot for Teaching Children STEM

Andrew B. Williams
Humanoid Engineering Intelligent Robotics Lab
Marquette University
Milwaukee, WI USA
andrew.williams@marquette.edu

Matthew Unger
Milwaukee Institute of Art and Design
Milwaukee, WI USA
matthewunger@miad.edu

Tiffany Do
Milwaukee Institute of Art and Design
Milwaukee, WI USA
tiffanydo@miad.edu

John C. Williams
Mathematics, Statistics, and Computer Science
Marquette University
Milwaukee, WI USA
john.c.williams@marquette.edu

ABSTRACT

This paper describes our ongoing efforts to use a human-centered design methodology to create a low-cost social robot to help children learn science, technology, engineering, and mathematics (STEM). In this project, we interviewed students and teachers to discover learning needs and preferences, sketched potential robot designs, created storyboards of human-robot interactions, developed prototypes, and received user feedback. Our proposed human-centered design approach for social robot design seeks to develop emotion and conversation interfaces suitable for interactions with children.

2 HUMAN-CENTERED DESIGN OF CHILD-INTERACTION ROBOTS

For a child friendly robot designer using the human-centered design process, the designer begins by investigating the needs of the child user through interviews and observations [2] [1]. The designer uses these expert opinions and insights to determine the archetypal child user and frames the problem for further investigation. The design team uses this problem statement to begin creation of solutions to the problem. For robot designers, sketching the potential robot and storyboarding interactions between the robot and the user provides the basis of a prototype [4].

KEYWORDS

Robotics, child-robot interaction, learning, education, STEM

ACM Reference format:
Andrew B. Williams, Tiffany Do, Matthew Unger, and John C. Williams.
2017. Human-Centered Design of a Low-Cost Social Robot for Teaching
Children STEM. In *Proceedings of HRI Workshop Child-Robot Interactions*,
Vienna, Austria, March 2017 (HRI'17). 3 pages.
DOI: 10.1145/xxxxxx.xxxxxx

3 NEEDFINDING

In needfinding, the designer conducts interviews and observations of the user to determine the pain points or opportunities to provide a gain of some sort. This section describes what we uncovered in our interviews. We started our user centered research by interviewing several students who were involved with tutoring—either tutoring others or being tutored themselves. During these interviews, we compiled empathy charts and particularly paid attention to contradictions, surprises, and tensions that each person felt during the traditional process of tutoring. This step is important in the design research phase, as it helped with framing the problem at hand. From our research we found that students who felt insecure about their own skill set in a specific subject was less likely to go to a tutor for help. There are also negative connotations that are linked with tutoring. However, the most important thing we concluded from our user interviews was that people all learn differently, and that people learn better when in a group-led exercises. Times where students were able to empathize with each other, showed us that learning in a group environment were more poignant experiences. From





Hunab Ku

An Ancient Maya timepiece
showcasing the complexity of their
writing and history.



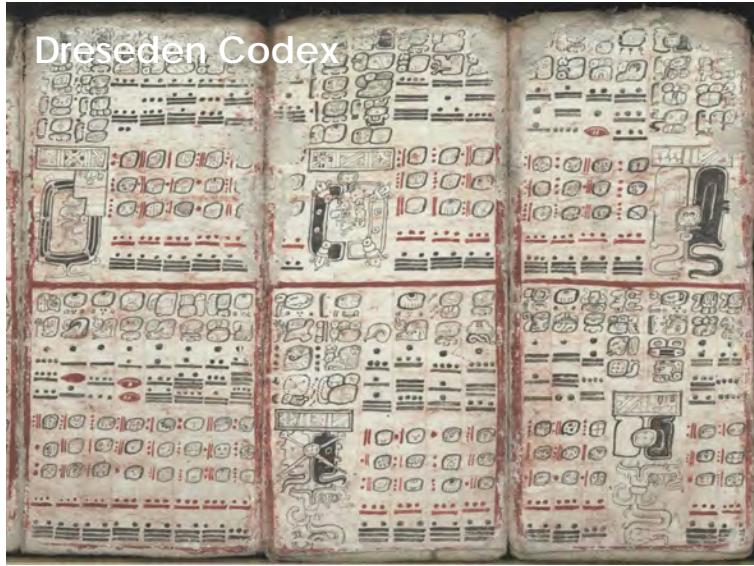
Ancient Maya Writings

Diego de Landa

De los pueblos otros y mas cercanos a Saborio en su fundacion de uno se podian ver en el momento mencionado. Los quinientos diez leza y casas con el pais corriendo le con sus casasas uniendo las misiones. Se ha observado que con las bocas lo convivian ellos conviviendo a la apariencia de la fe. Lo vacante que nacido de si reca y en esto no faltaron numerosos ejemplos. Los que vivian ellos de su comision del ejemplo.  despues al cabo lo regalan la parte grande de que quisieron sacar agua por la boca tiene o lo manda dotti lo pone ellos al principio con el gran cabal de la manzana. Tambien lo convivian a proximidad de la otra y mas cerca. De modo que no faltaron numerosos ejemplos para dar muestra de las malas de la gente. Muchadas quisieron dejar no tener ellos la comision a pesar de la           



Copán relief



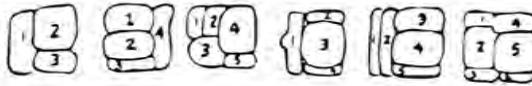
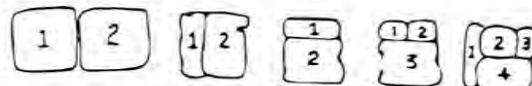
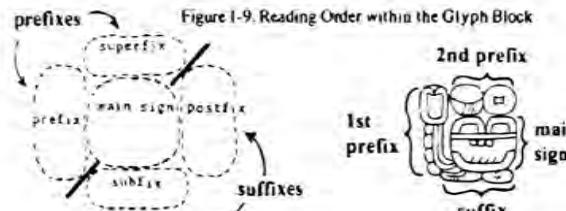
Dresden Codex



Stelae in Tikal

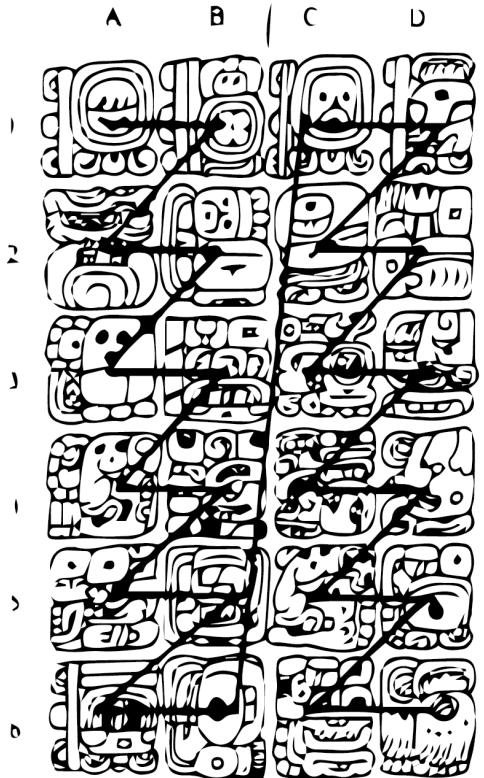
NO TOCAR
NO CÁMARAS

How to read



A B | C D

	b	ch	ch'	h	k	k'	l	m	n	p	p'	s	t	t'	ts	ts'	w	x	y	vowels
a																				
e																				
i																				
o																				
u																				

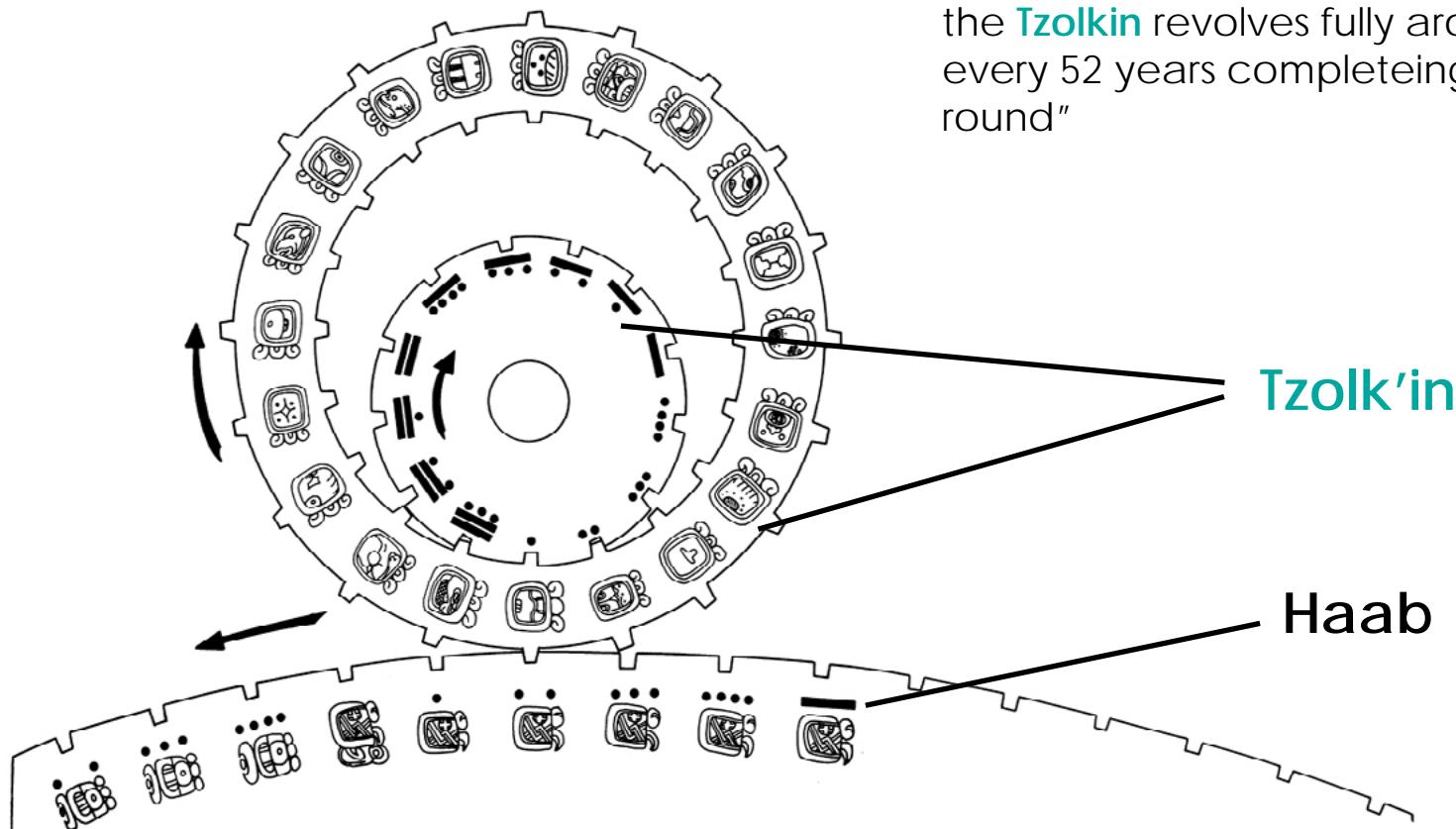


the ancient Mayans had **2** main calendars

the **Tzolkin** and the **Haab**

know as the **sacred calendar** of the mayans. It is a **260 day** calendar. there are **20 "weeks"** that each have a distinct meaning. The days are numbered 1-13, however the days are not numbered in order.

know as the **solar calendar** of the mayans. it is a **365 day calendar** that was used for the tracking of seasons and cultivation. There are **18 months that each have 20 days**. There is also an added **5 days of "Bad luck"**to account for 365 days a year. The days are numbered in order.

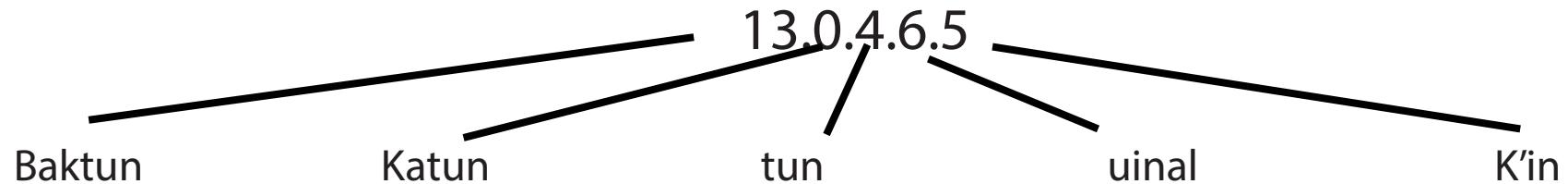


the **Tzolk'in** revolves fully around the **Haab** every 52 years completing the "calendar round"

Long Count



0	1	2	3	4
	•
5	6	7	8	9
—	—	—	—	—
10	11	12	13	14
==	==	==	==	==
15	16	17	18	19
====	====	====	====	====



KIN= (1 day)

uinal= (1 uinal = 20 kin = 20 days)

tun= (1 tun = 18 uinal = 360 days = approx. 1 year)

katun= (1 katun = 20 tun = 7,200 days = approx. 20 years)

baktun= (1 baktun = 20 katun = 144,000 days = approx. 394 years)

13.0.4.56.5, 9 Chikchan, 2 Pop

is

April 4, 2017

Haab symbology ---



Pop
Mat



Wo'
Black Conjunction



Sip
Red Conjunction



Sotz'
Bat



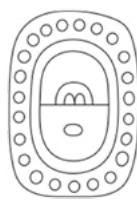
Sek
Death



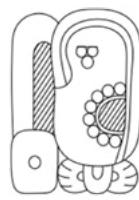
Xul
Dog



Yaxk'in
New Sun



Mol
Water



Ch'en
Black Storm



Yax
Green Storm



Sak'
White Storm



Keh
Red Storm



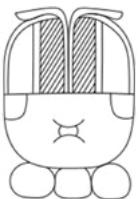
Mak
Enclosed



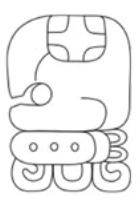
K'ank'in
Yellow Sun



Owl



Pax
Planting Time



Turtle



Kumk'u
Granary



Wayeb'
Five unlucky days
(added to balance the year)

Tzolk'in symbology



Imix'
Waterlily,
Crocodile



Ik'
Wind, Breath,
Life force



Ak'b'al
Darkness,
Night



K'an
Net, Sacrifice



Chikchan
Cosmological
Snake



Kimi
Death



Manik
Deer



Lamat
Venus, Star,
Maize seed



Muluk
Jade, water,
offering



Ok
Dog



Chuwen
Howler
monkey



Eb'
Rain



B'en
Green,
young, seed



Ix
Jaguar



Men
Eagle



Kib'
Wax



Kab'an
Earth



Etz'nab'
Flint



Kawak
Rain Storm

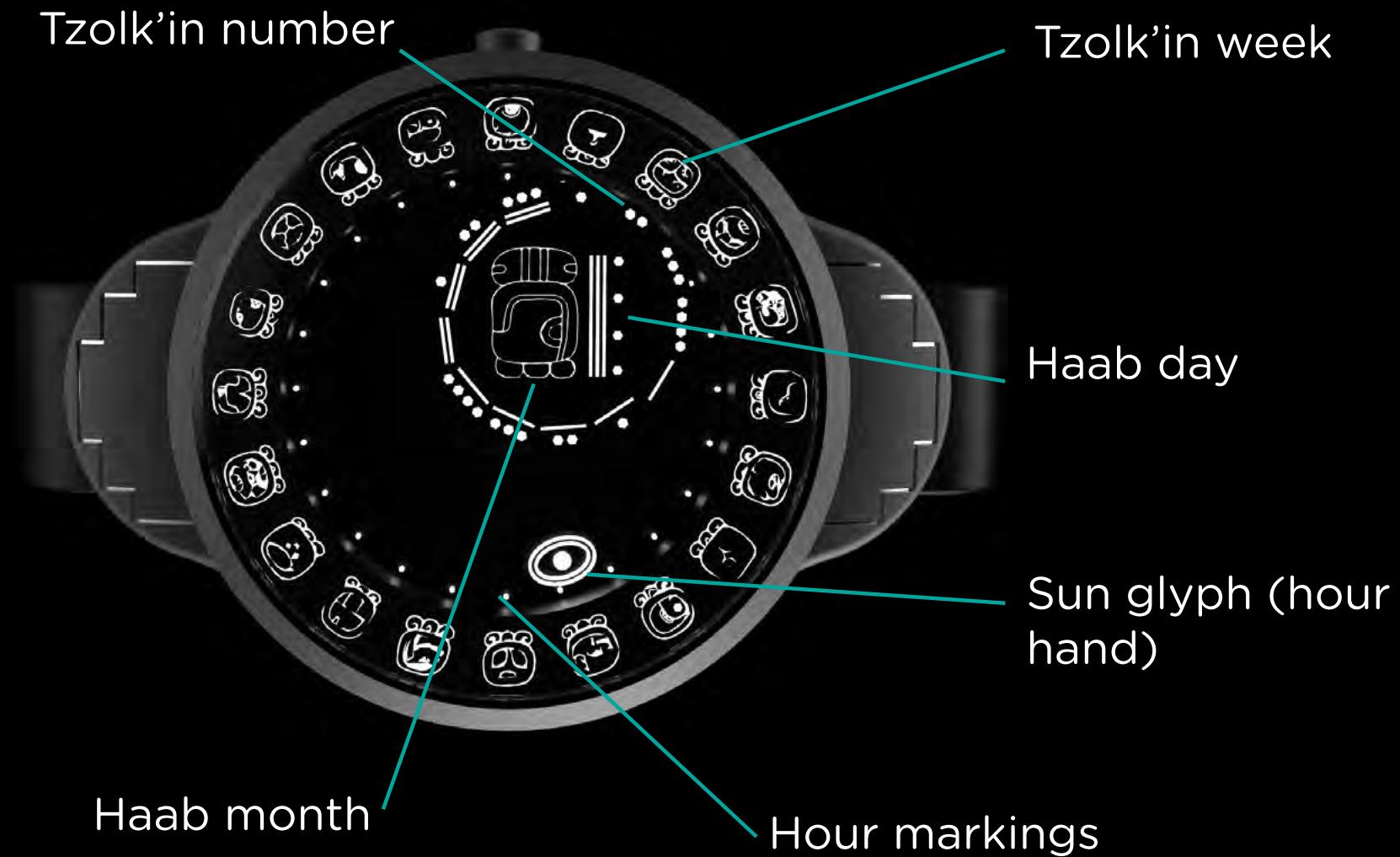


Ajaw
Lord, ruler, sun

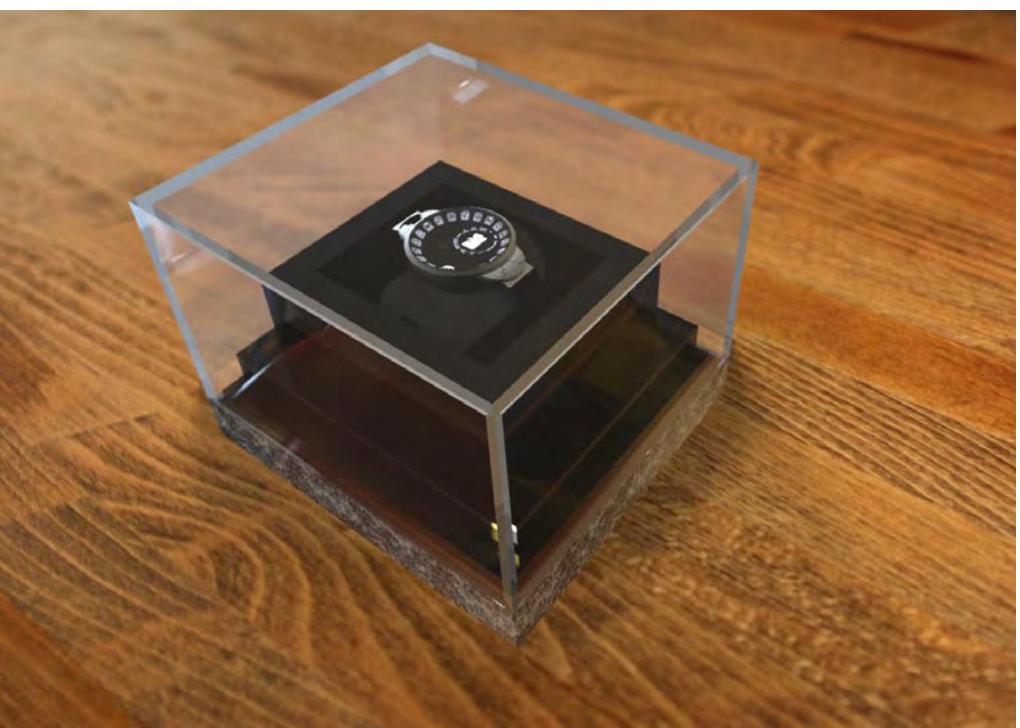


Chuwen

Howler Monkey



Hunab Ku





SPIRA

Next generation
shape cutter for craft
consuming



Users



Yolanda
Age: 61

- custom paper cards
- uses stampin' up primarily
- likes the stamps so much that she uses all thier tools
- works on a card table
- the punches that push down on a table don't work well on her table, not sturdy enough



Danielle
Age: 27

- DIY party decorations
- wall hangings, banners
- mostly uses scissors and printed out templates
- doesn't want to invest in tools because they are more for scrapbooking



Katie
Age: 24

"Die Cutting Machines are king"

- Layering (this is huge). Scrapbooking is all about layers.
- Has been scrap booking for 8 years, got more serious when she got a die cutter machine
- no manual tools besides x-acto blades, straight cutters and a circle cutter.



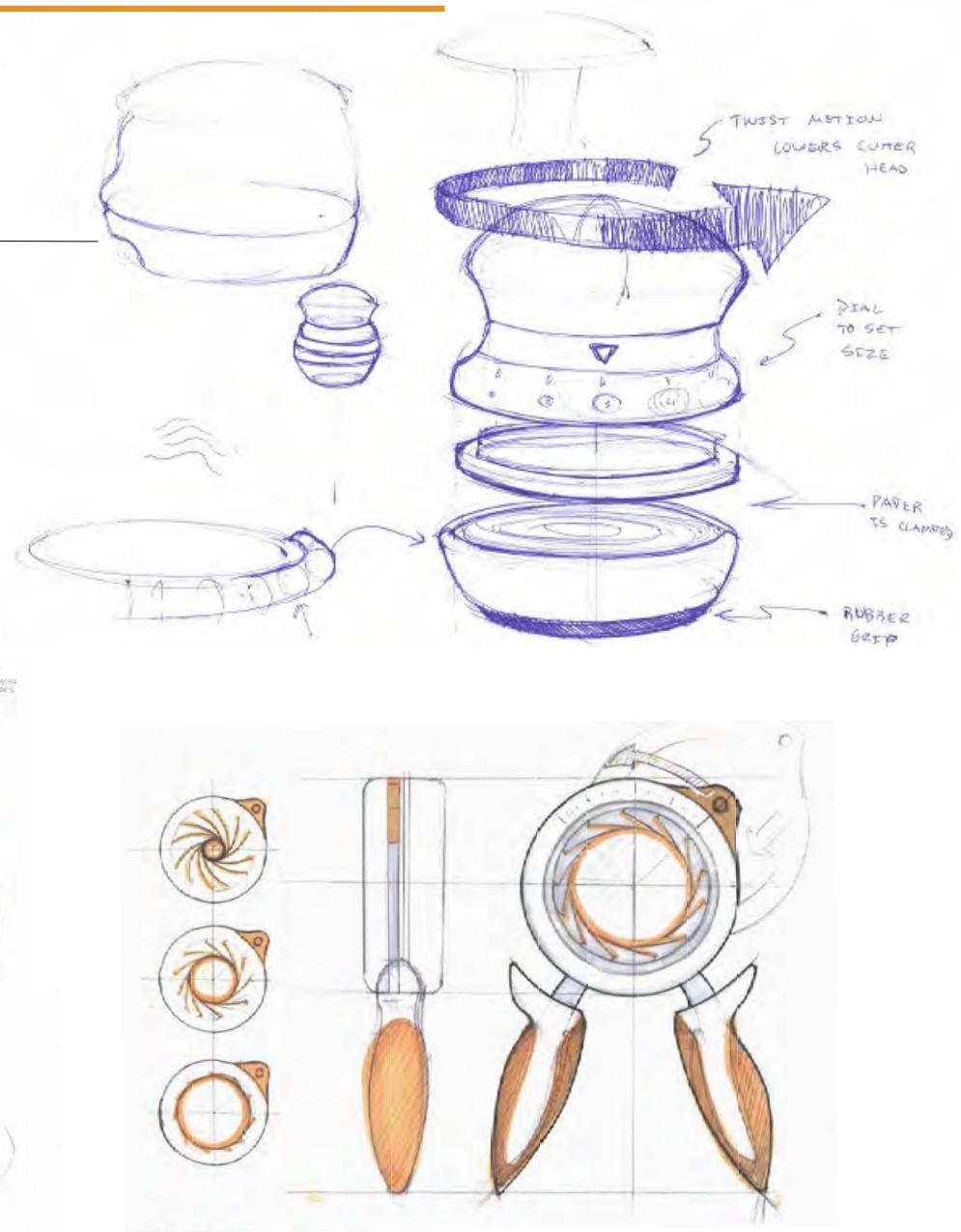
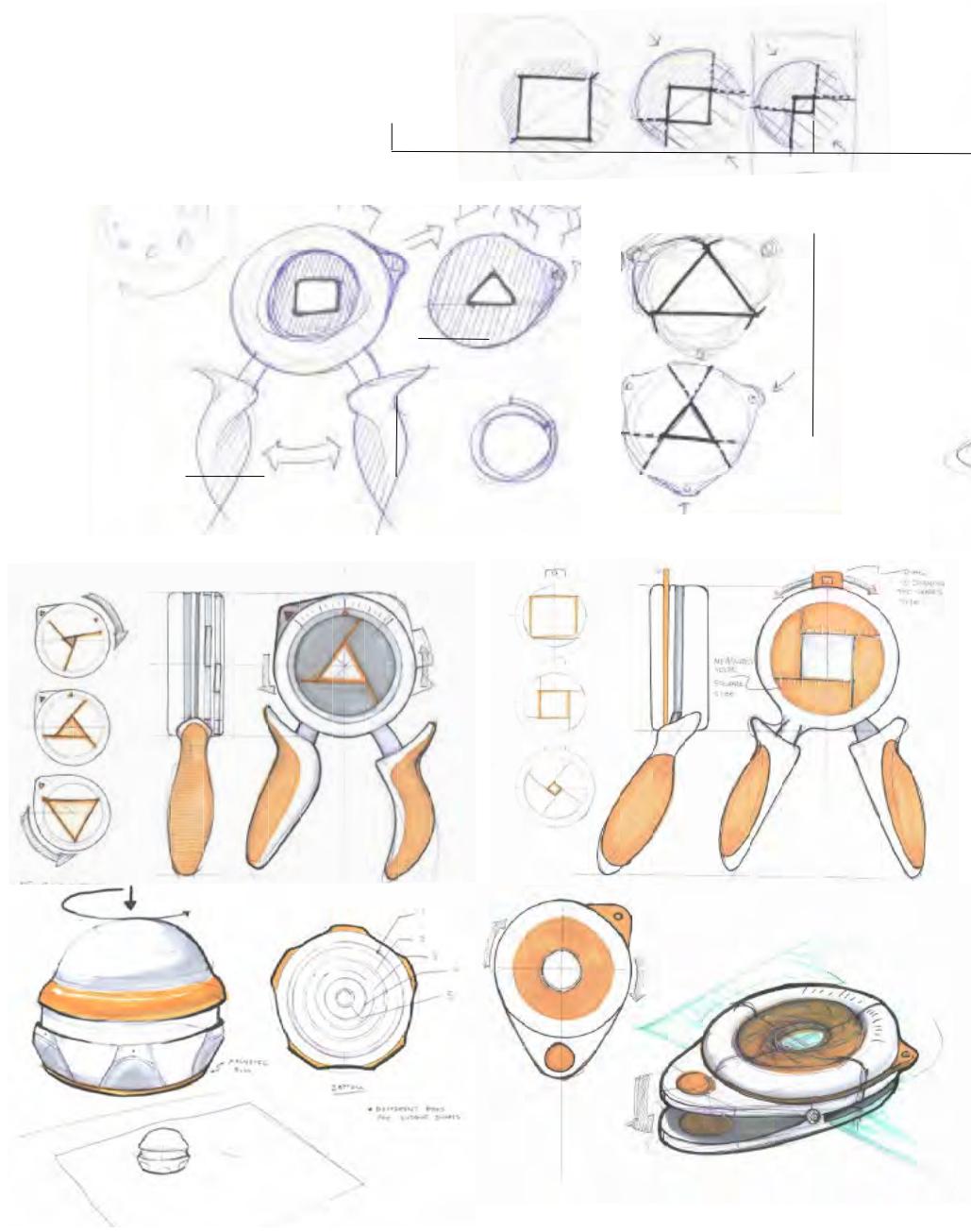
Testing



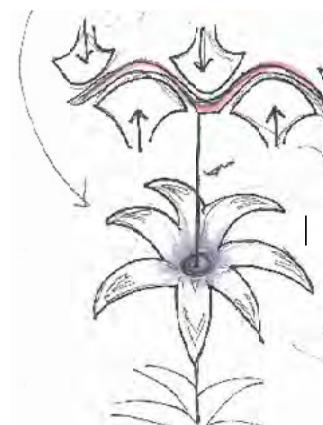
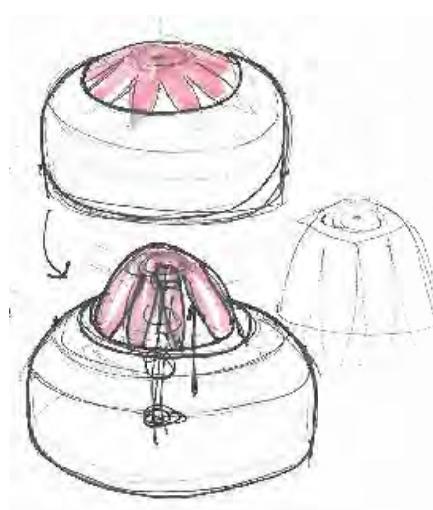
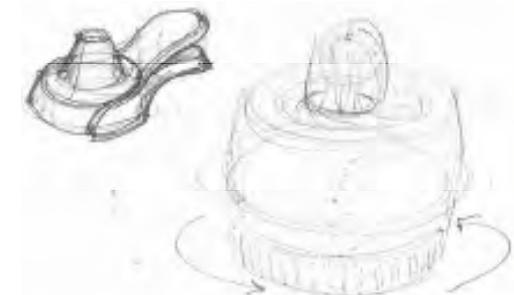
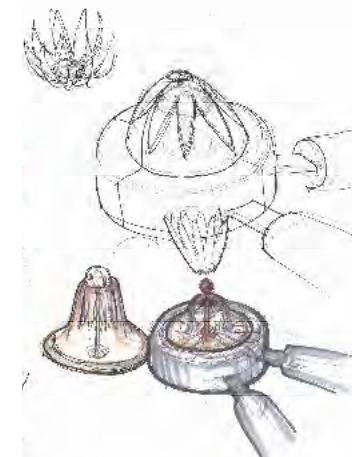
Market Gap



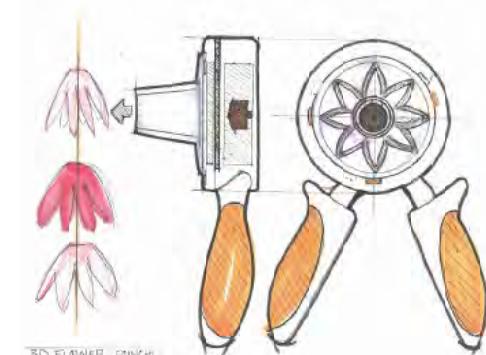
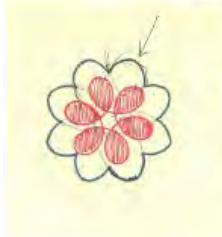
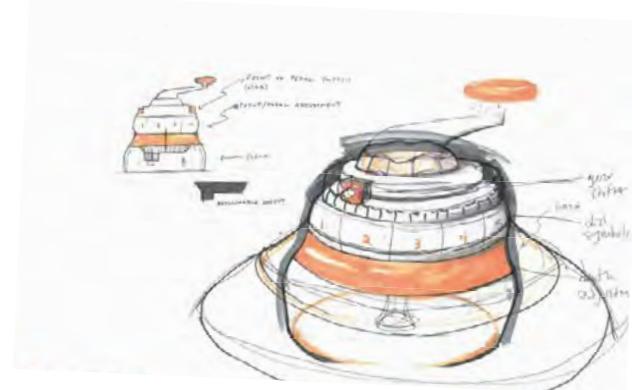
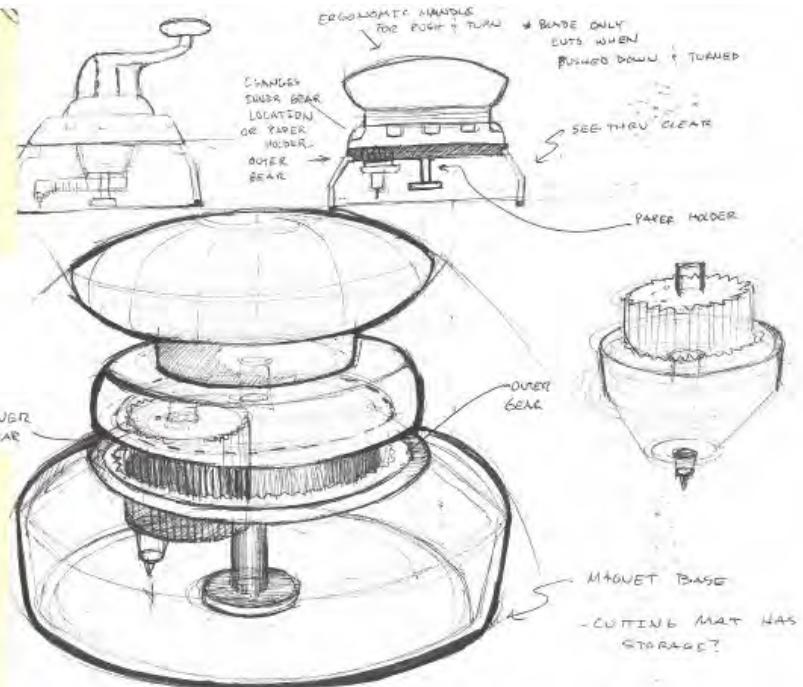
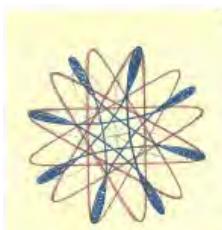
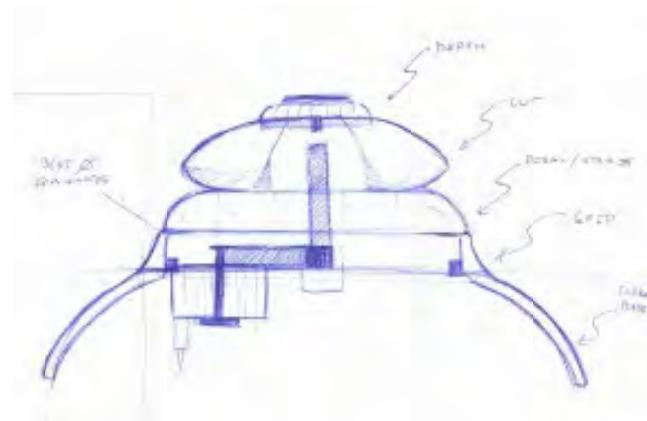
Phase 1 Concepts



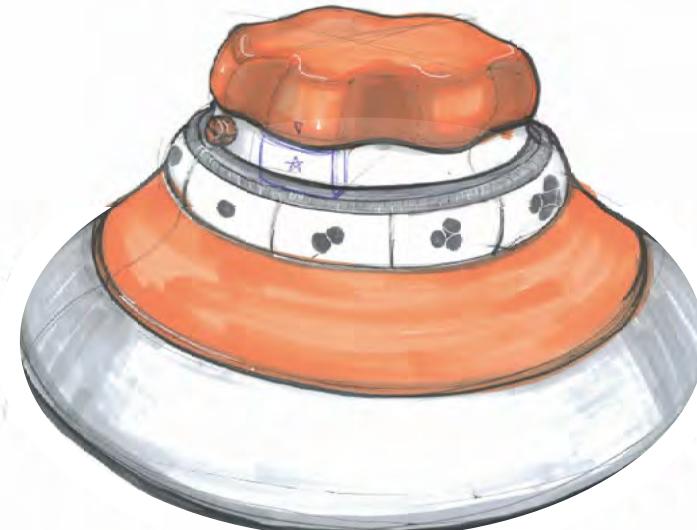
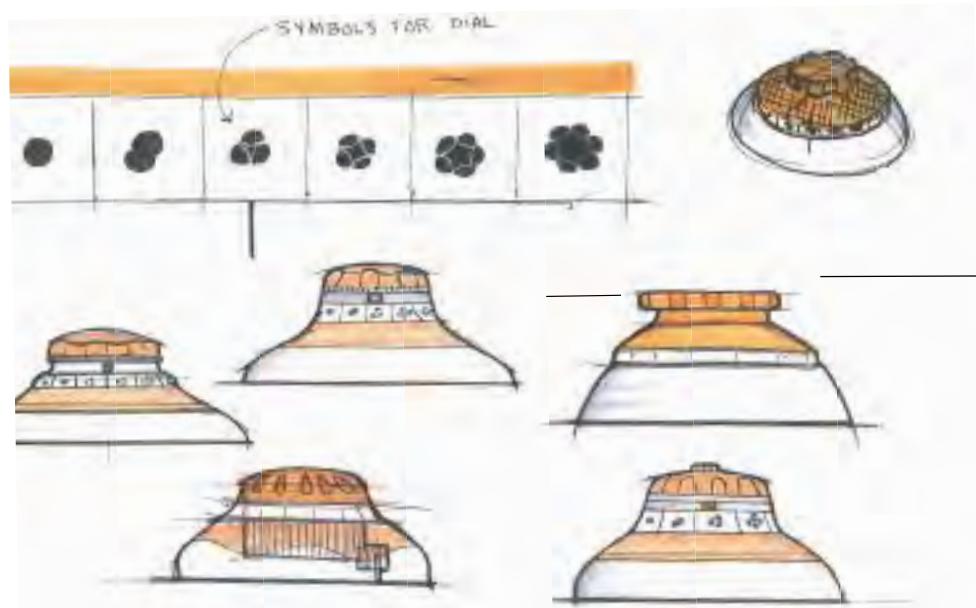
Trends



Phase 2 Concepts



Variations and CAD



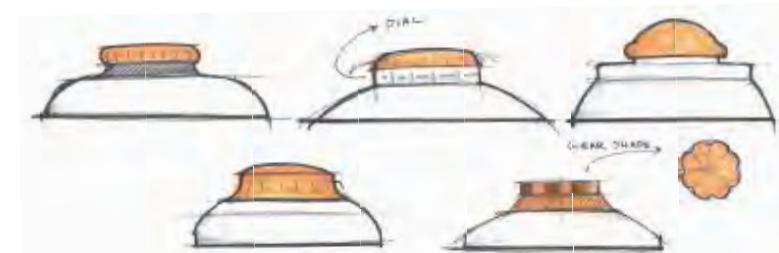
Blade height
adjustment

Hand dial

Star/Flower
shift

Number dial

Hand grip



Steps





A planter for beginning bonsai enthusiasts

Every Plant Needs.

Soil



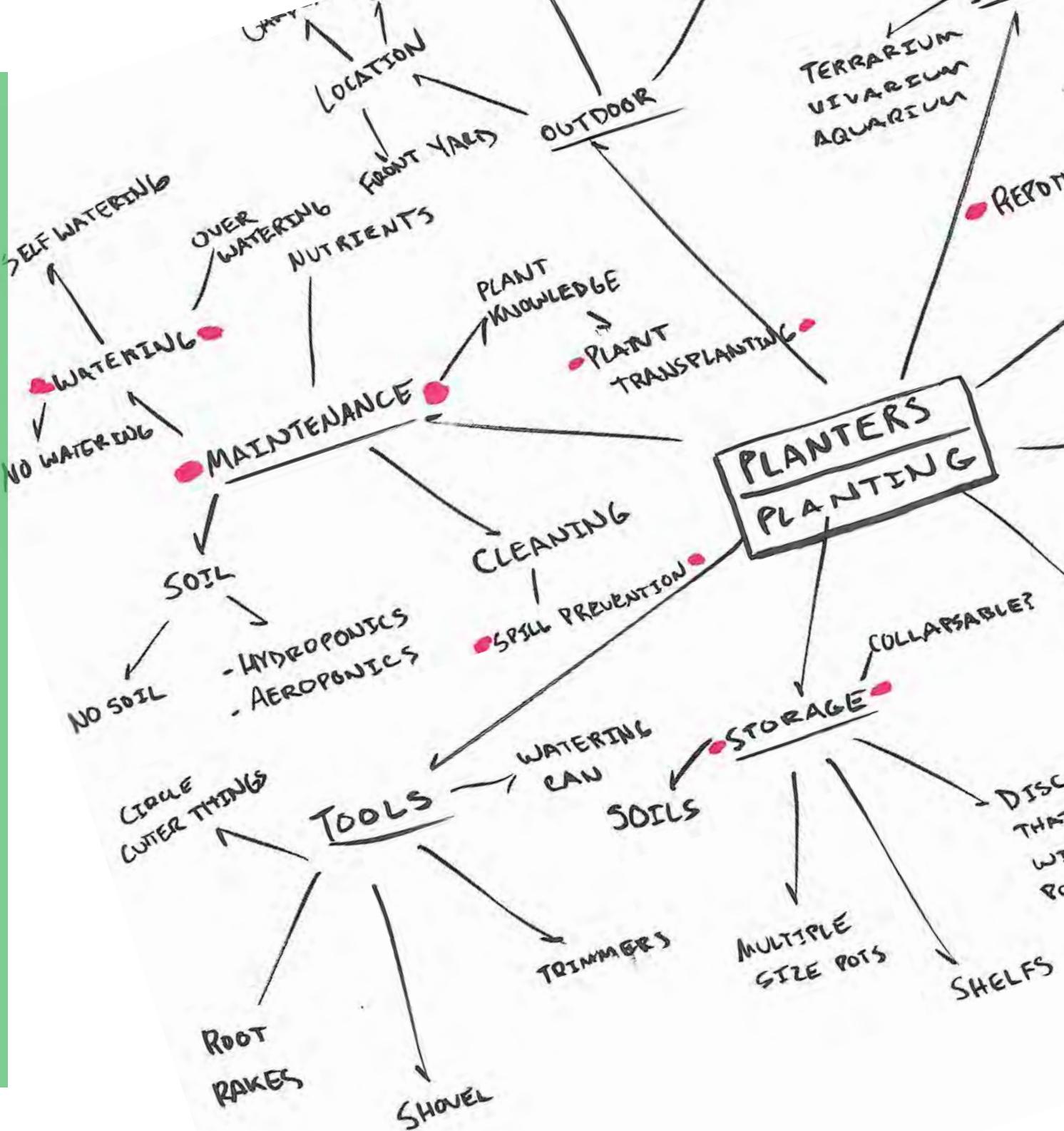
Water



Air



A surplus or lack of any category is not ideal



User and Market Research

Michael (28)

Has perennial plants in the house to "Clean the Air" and for decoraton.

His biggest struggle is repotting plants so often because they do so well

Considers himself the "average user" Doesent have trouble keeping plants healthy

Jenny (21)

Really loves plants and to put in unique pots.

Her cat will eat and kill the plants, or even worse, knock the plant over, breaking the pot.

Loves a variety of plants, but finds it hard to keep track of the SPECIFIC care they need.

Crystal (26)

Wants to be more into planting and gardening (something she can do while working and being a mom)

Claims to "kill every plant" and that one plant even "committed suicide"

Would buy more plants if she could just keep them alive.

+ Pros

	+ Pros	- Cons
 Plastic pot	<ul style="list-style-type: none">-Plastic is neutral to soil-Variety of color-Low cost	<ul style="list-style-type: none">-Little aeration-Hard to tell if watered-Harder to store
 Smart pot (PET)	<ul style="list-style-type: none">-Easy repotting-Best aeration-Washable	<ul style="list-style-type: none">-Fabric can tear-Leaks from bottom-Can dry out faster
 Clay pot	<ul style="list-style-type: none">-Clay regulates heat well-Traditional-Semi-porous	<ul style="list-style-type: none">-Clay can break if tipped-Heavy-Expensive
 Hanging pot	<ul style="list-style-type: none">-Can be hung on ceiling-Good for hanging plants-Saves ledge space	<ul style="list-style-type: none">Harder to waterNo bottom drainage-Hook in way of plant

Main Problems

Remove plant without damaging roots



Adjusting dirt level to the according to size of plant



Pack dirt into pot, securing plant



Cleanup



Plant knowledge



Space to plant



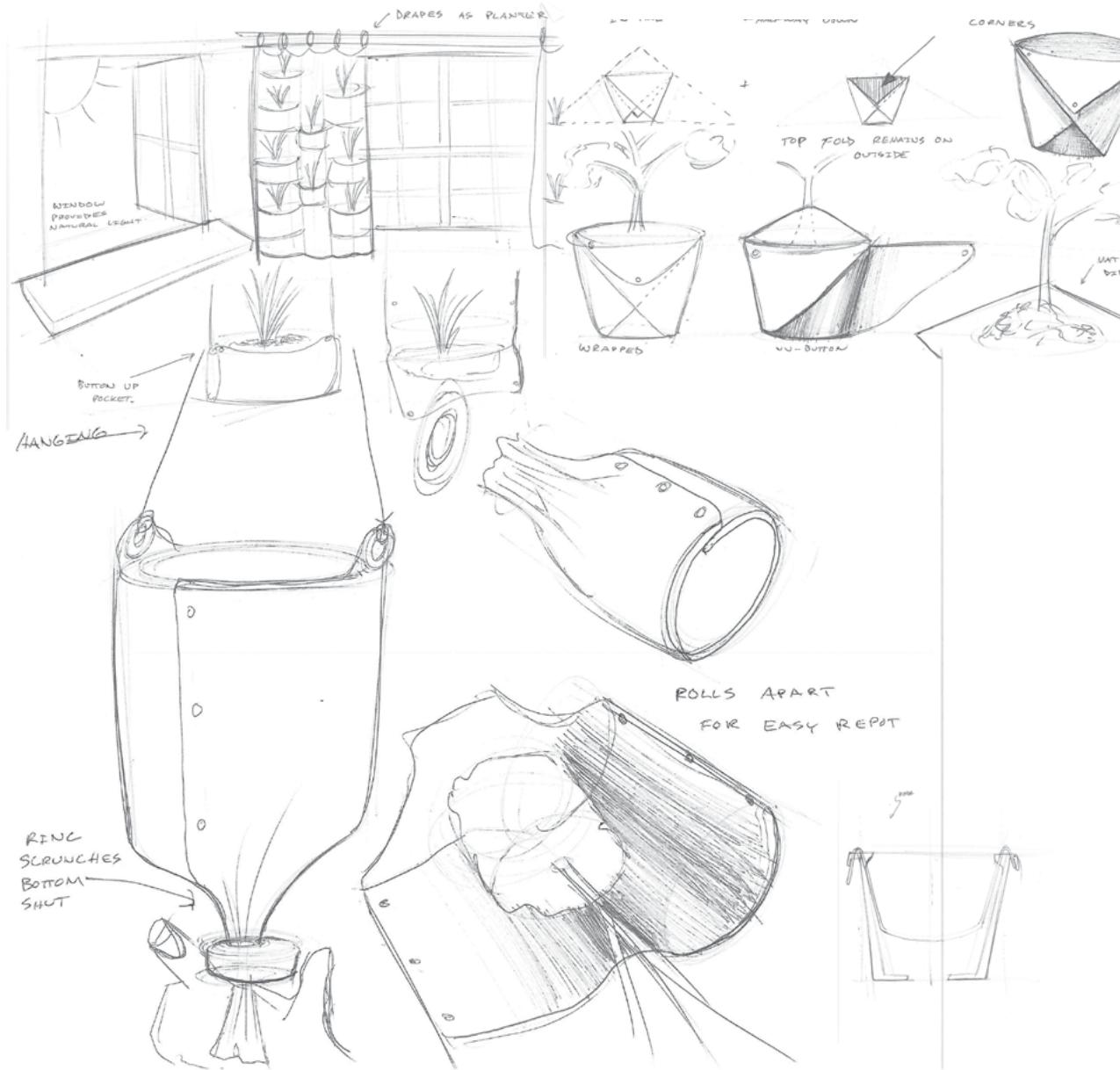
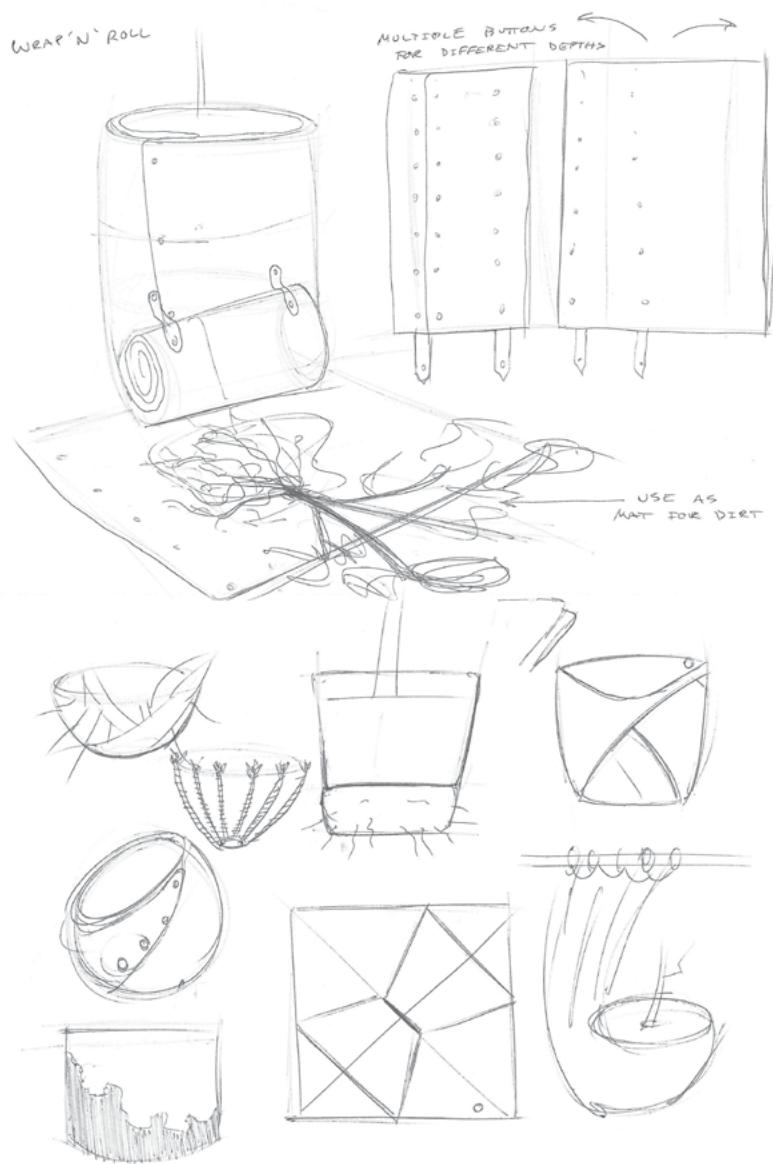
Maintenance & Cleaning



Benefits of P.E.T. Plastic

- Better root development
- Can loosen dirt for repotting
- Stays more cool in heat
- Can visually see when to repot
- Harder to overwater

Ideation - Focusing on cloth planter

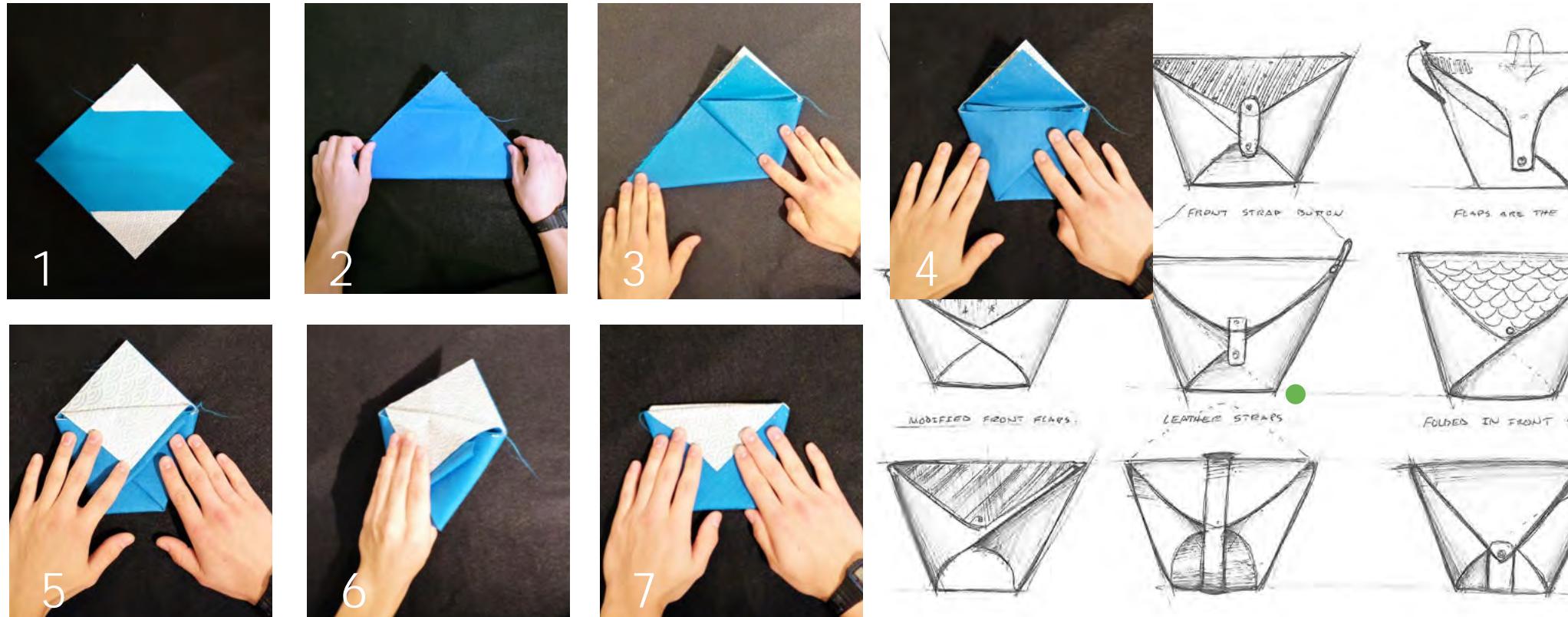


Prototyping - exploring adjustable fabric

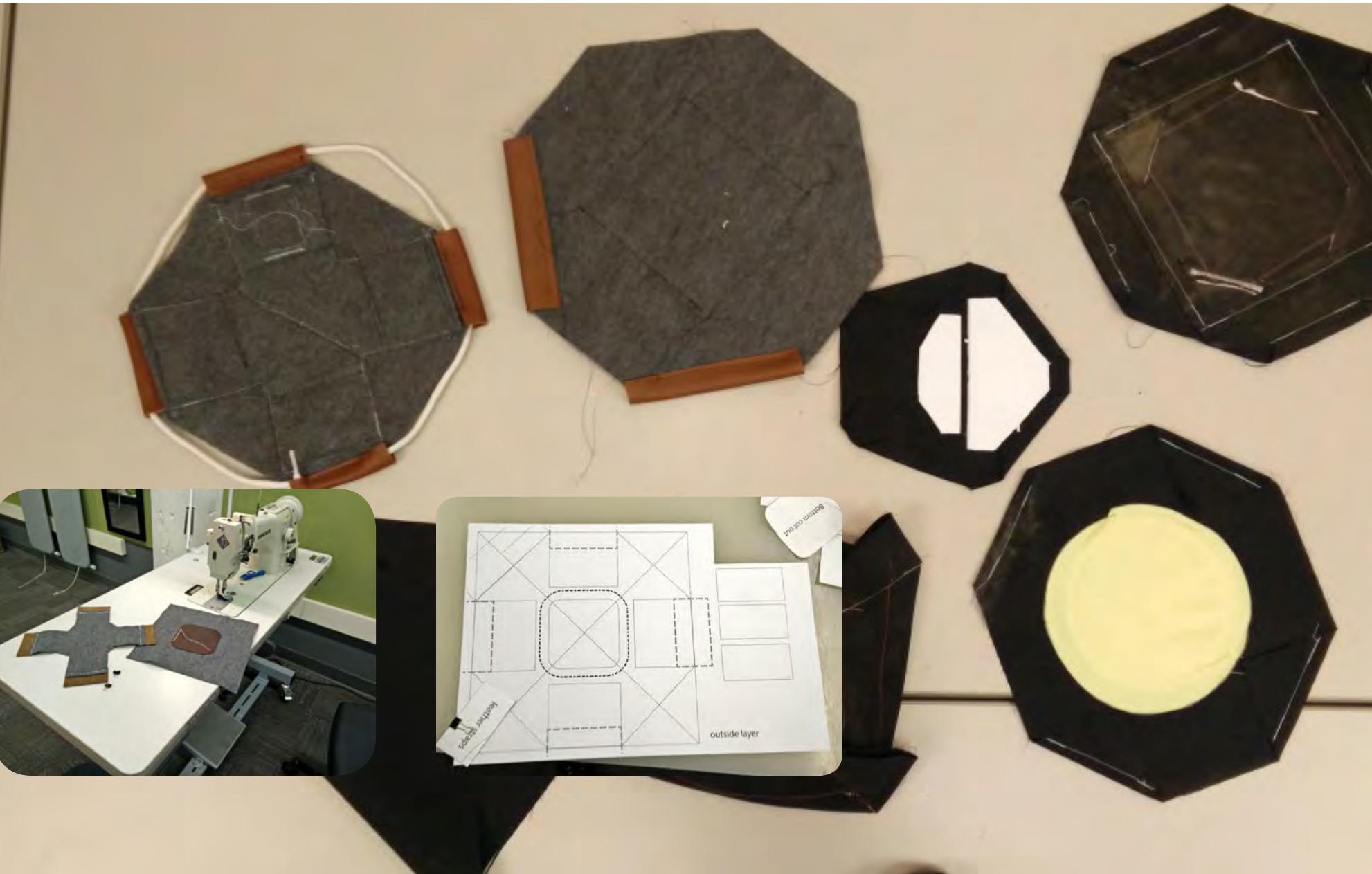
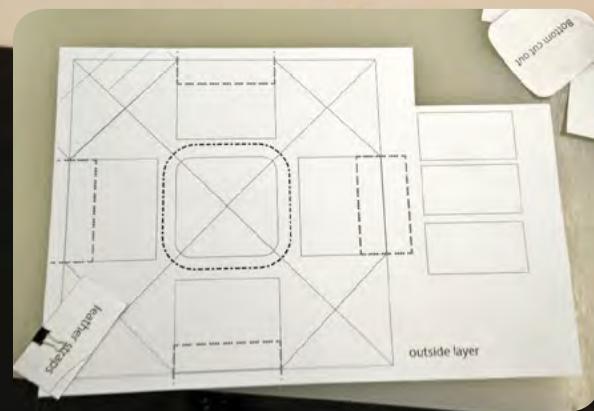
Mockup 1



Mockup 2



More Prototyping



How to use



Unfolded layout



Placing plant



Tightening pot



Side pouch for string



Internal hook
for string



String hangs planter



Button sides to
secure



b·o·n

This product is apartment dwelling planter tool.
By utilizing fabric, users are better able to care
for and monitor their plants

G-Tube feeding device

*A Marquette / MIAD collaboration
with Bio-engineering students*



Research

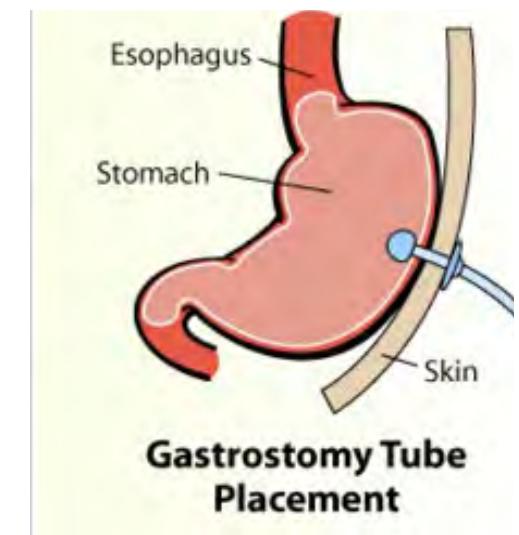
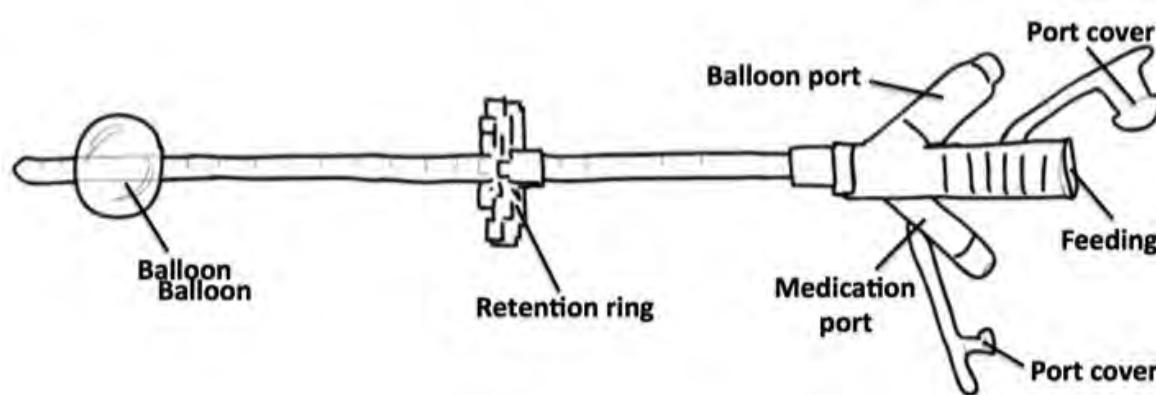
G-Tube Bolster must keep tube perpendicular

There is no standard way to bolster a G-tube

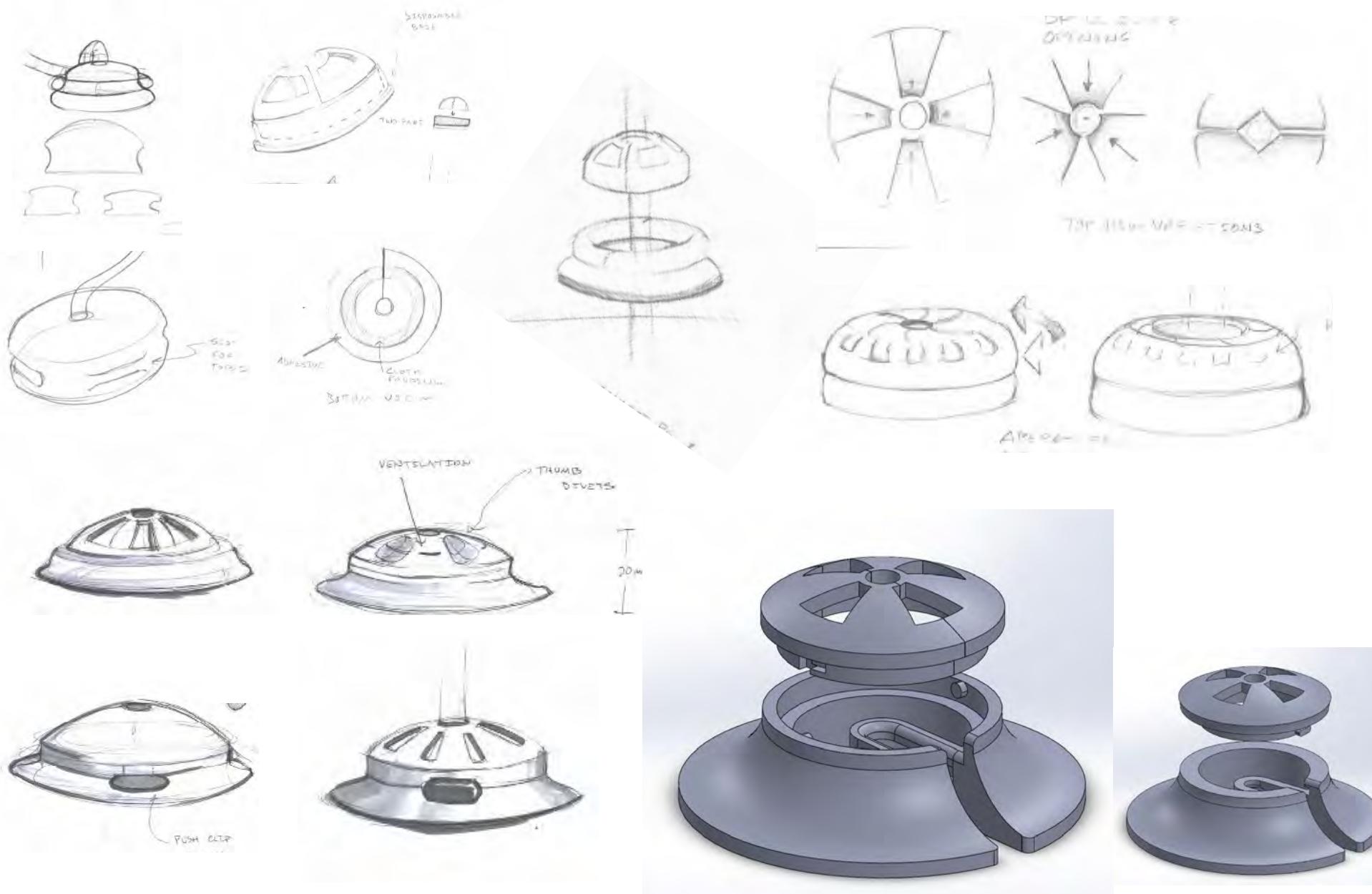
Must maintain integrity of site

Over half of parents bought externals supplies for G-tube

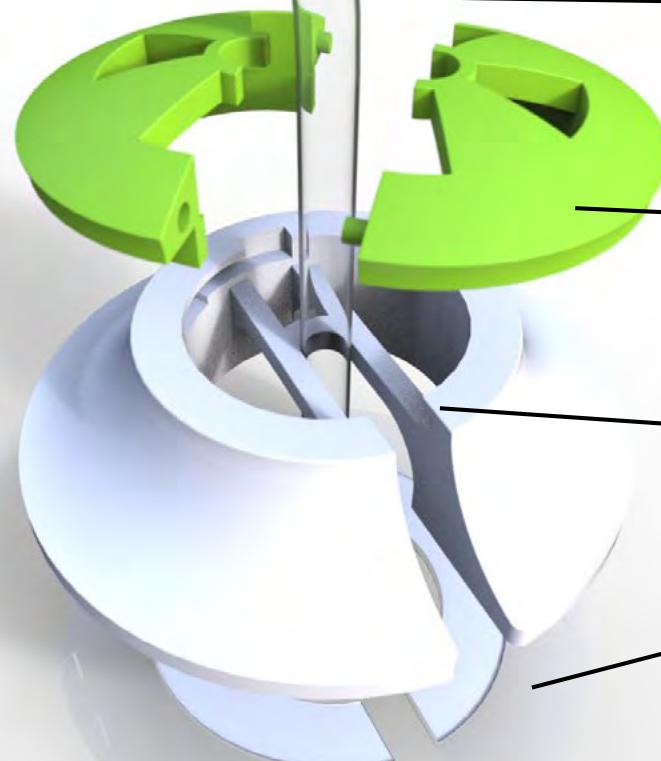
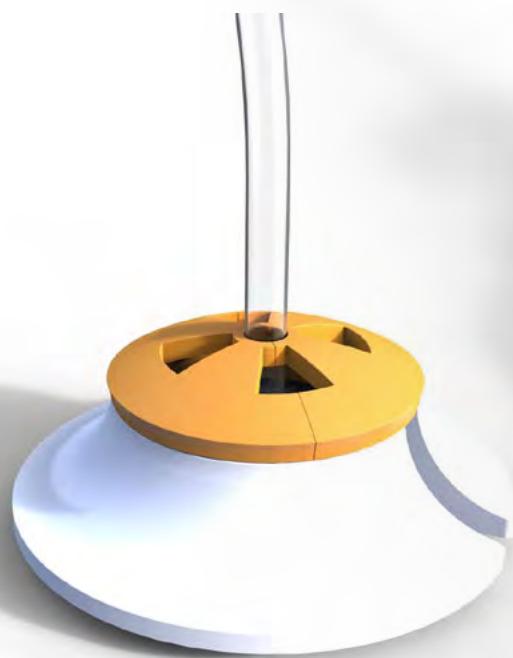
Existing solutions



Ideation



Final Concept



Tubes

2 part top half

Support base

Adhesive Sticker

Exploded view





BIO-LOGIC



User and Market Research



Peter and Sharon

- Licensed plumber
- Owner of 4 cats
- Uses hand shower to warm feet in winter
- 2.5 GPM
- Rather spend the money on good showerhead
- Plastic rings crack during installation



Victoria

- Only uses hand shower when she has the time
- Hand shower is mostly used for cleaning
- Dog Owner
- Likes "raindrop" type of flow
- Cheaper the better
- Hard pressure



Andrew

- Uses hand shower daily
- Cleans hair after a haircut
- Cat owner
- Wants a hand shower that has a "forceful" massage
- Student
- Annoyed with cord
- Wants better grip

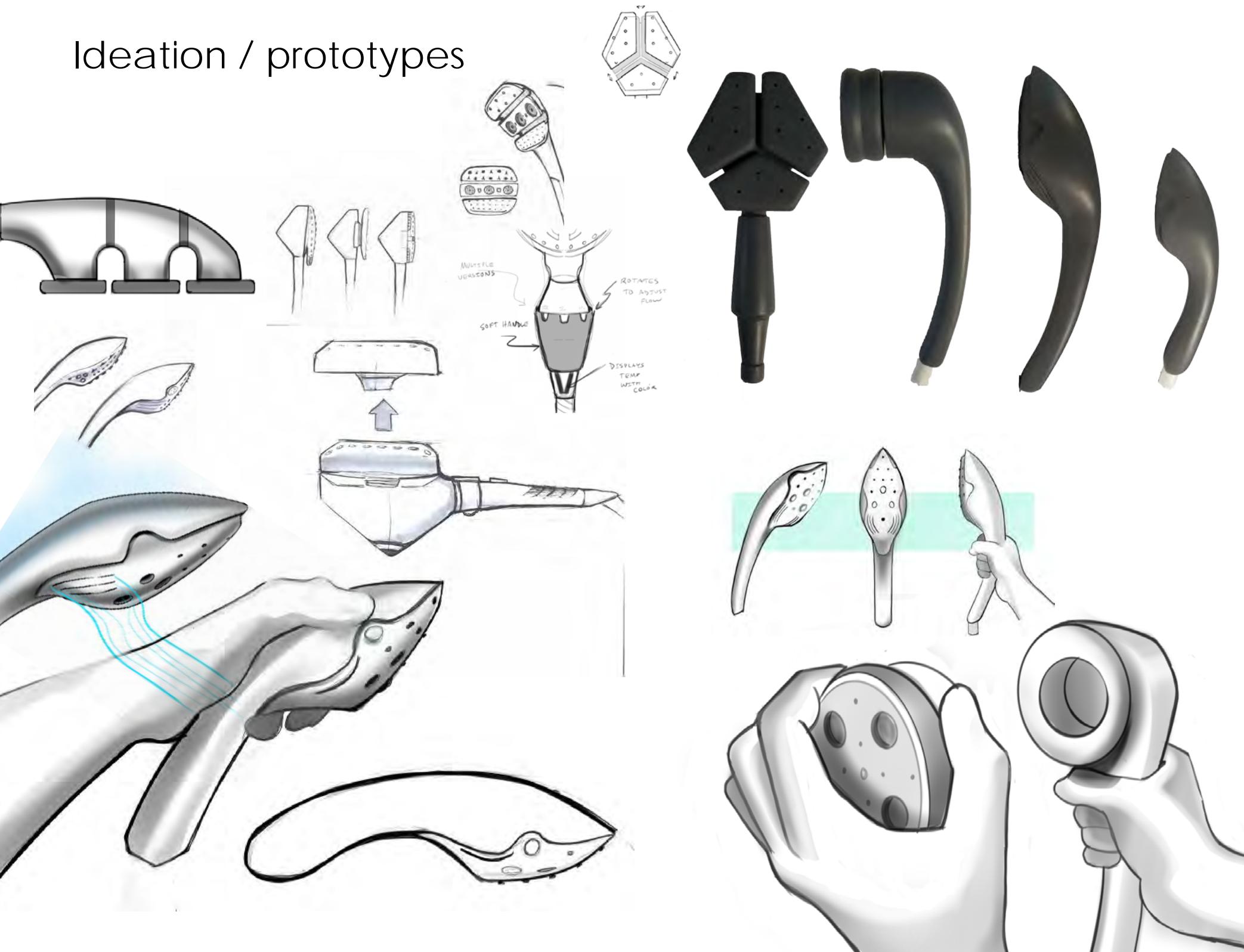


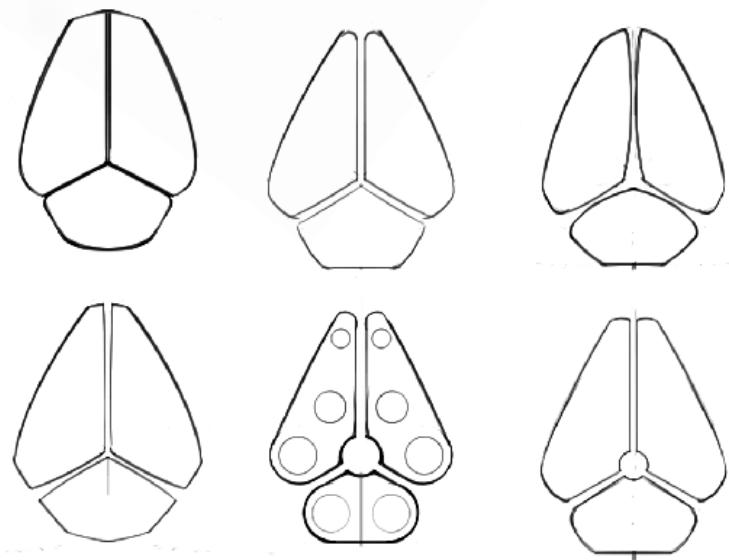
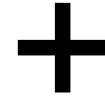
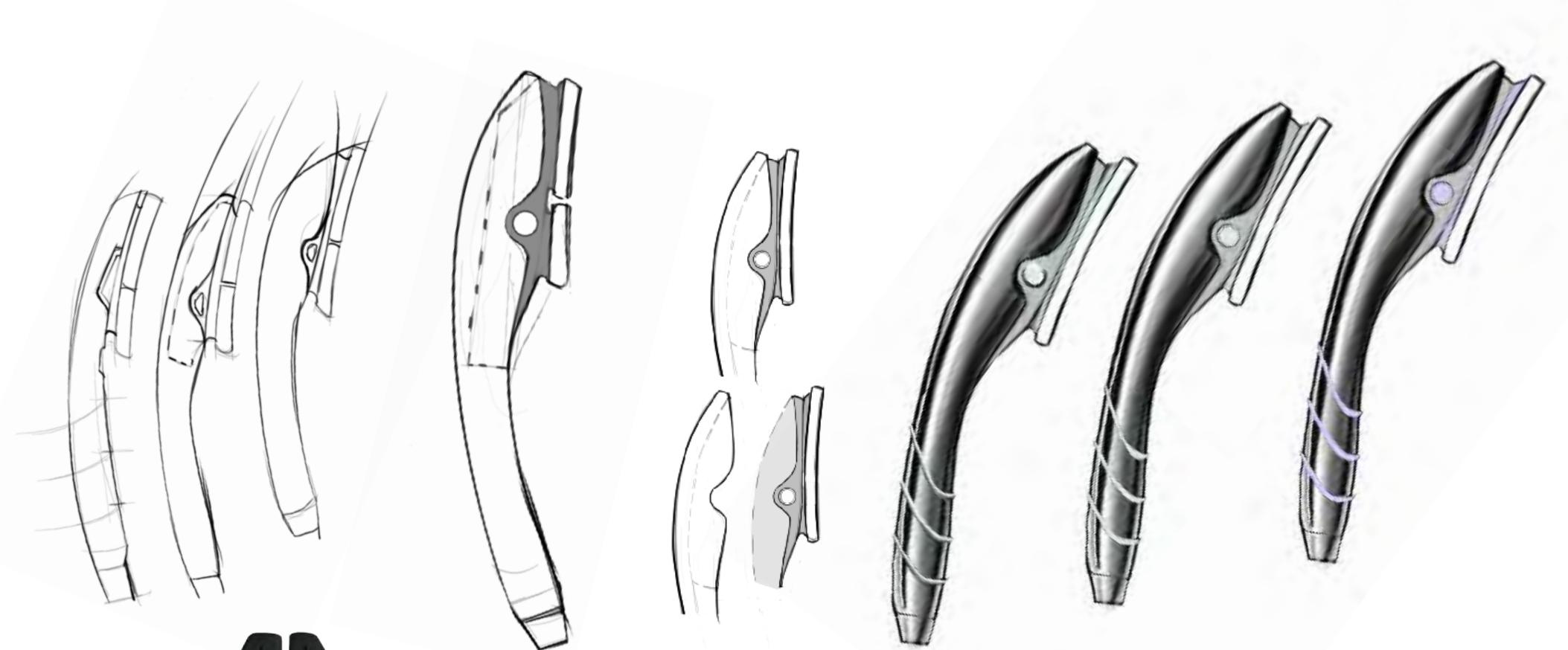
Pete

- Uses hand shower for cleaning
- Wants new features
- Dog Owner
- Hard pressure
- Wants an easy button to shut off water
- "Bored" with current hand shower features



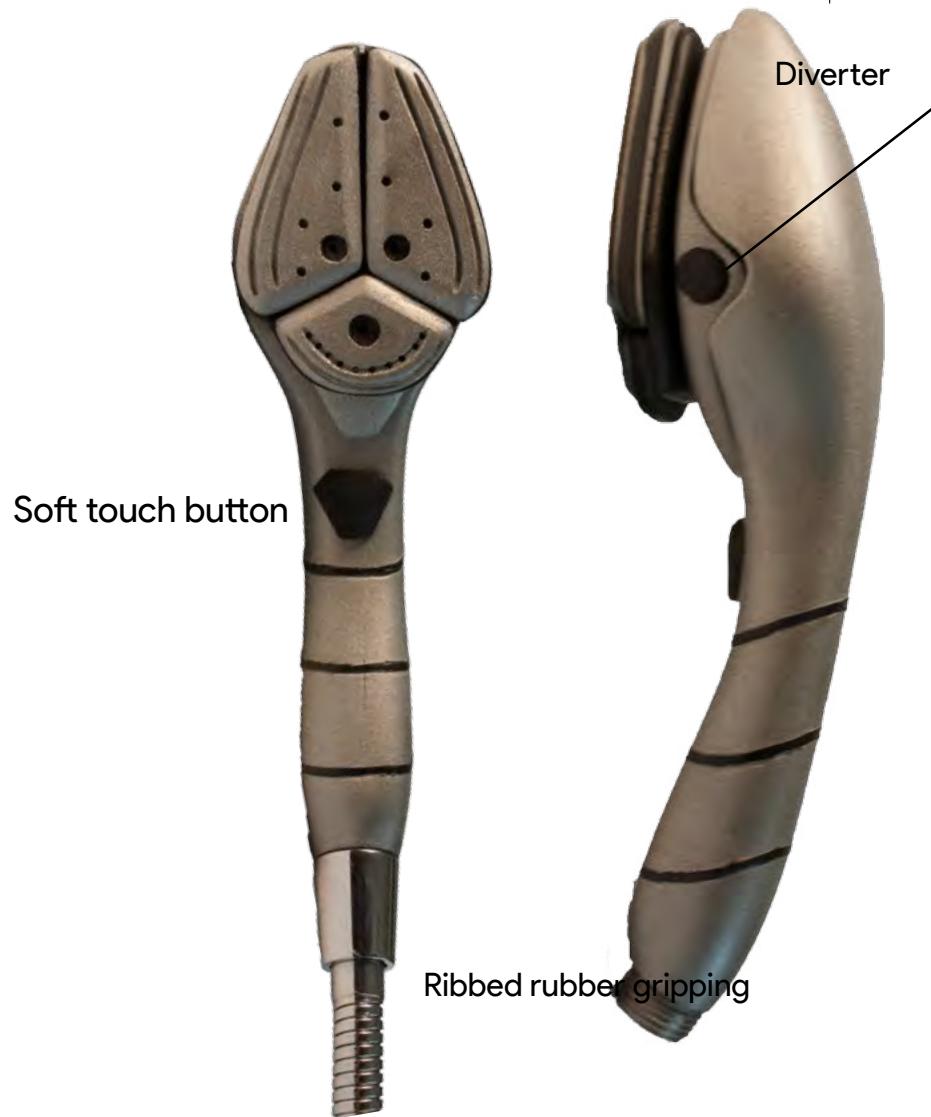
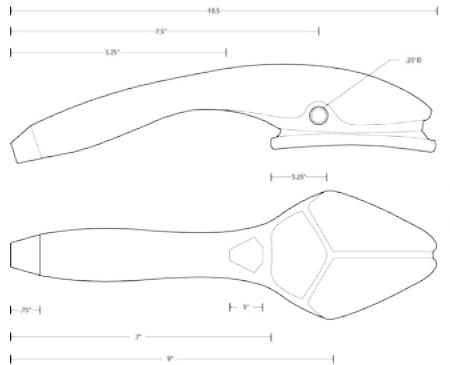
Ideation / prototypes





Concept lock

Prototype model



Waterfall

Utilizes gill shaped sprayers giving a unique waterfall pattern. Front face is tilt-able, angling spray direction



Rainfall

An extra wide spray head that mimcs rainfall. The face can expand, revealing hidden H2O kinetic jets.



Massage

The massage head uses soft rubber jets combined with pivoting peices to conform to the body.



ASSURE

Home Security Medication Device



Problem

People need a way to secure their medications. It can be **dangerous** when ingested by the unintended user.

7 in 10 Americans take prescription drugs.

Prescription drug abuse causes the **largest percentage of deaths** from drug overdosing.

Young adults ages **18 - 25** are the biggest abusers of prescription medication.

2007 & 2011, **9,500** U.S. children 6 and under were hospitalized after getting a hold of family members' medication.

<http://www.drugfreeworld.org/>

Casey Bonath, Matthew Unger, Tonya Charles

The Master Lock Company 

Solution/Opportunity

People need a way to secure their medications. It is important to understand if there is a market for this type of product and what features & benefits are most desired.



Market Research

While there are many products out there for organizing and securing medications, it was clear that there is not a product that addresses the need of organizing & security while maintaining the aesthetic of the home.



HERO dispenser \$600



First- Alert Cash box \$13



Livefine auto pill dispenser \$60



Maya \$39.99



Safer Lock \$15

Product testing

To understand the security of existing products, we "tested" the Safe Space to determine how easily an intruder can access contents.



Safe Space was smash tested.



It took 2 hits with a hammer to break the Safe Space.



The results of smashing the Safe Space.

System analysis - Brainstorm

Who, what, where, when and why
this product might be used? Things to
consider?

Who will use this product?

- Grandparents
- Parents with teens/children
- Caregiver
- Senior living
- Assisted living
- Students

Why will this product be used?

- Alerts and alarms
- Reminders
- Easy access
- Biometric
- Key and lock
- digital keypad
- App

System Analysis

Consider

- Price
- Size
- Aesthetics
- Usability
- Refrigeration
- Portability
- Manufacturing

What will this product be used for?

- Secure medication
- Peace of mind
- Safety
- Organize medication

Where and when will this product be used?

- Kitchen
- Bathroom
- Cabinets
- Kitchen Table
- Private place
- Traveling

User Interviews

A broad range of users between the ages of 21 - 80 were interviewed to identify problems and needs for medication safety.



Carol



Karsen



Dawn



Julie



Jenny



Christine



Louise



Sarah



Aaron



Jennifer



Shelly



Carol

Key points from users - must haves vs nice haves

Key points that were highlighted by users to better understand what features were wanted throughout the design process.

- Technology vs. Price
- Portability option
- Organization and size
- The elderly and technology
- Audio and/or visual reminders
- Quick access and security (emergency situations)
- Simplicity/easy usability/ light weight/movable
- Non-obtrusive presence (blends with environment)
- Storage options for various sized medications (syringes, bottles, etc.)

Target Market

After interviewing a variety of people, these target markets showed the most need for this type

Household with Teens/
Children



Assisted/Senior Living

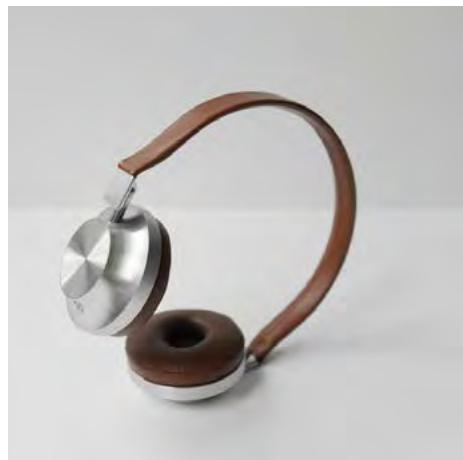


Caregiver of a loved one



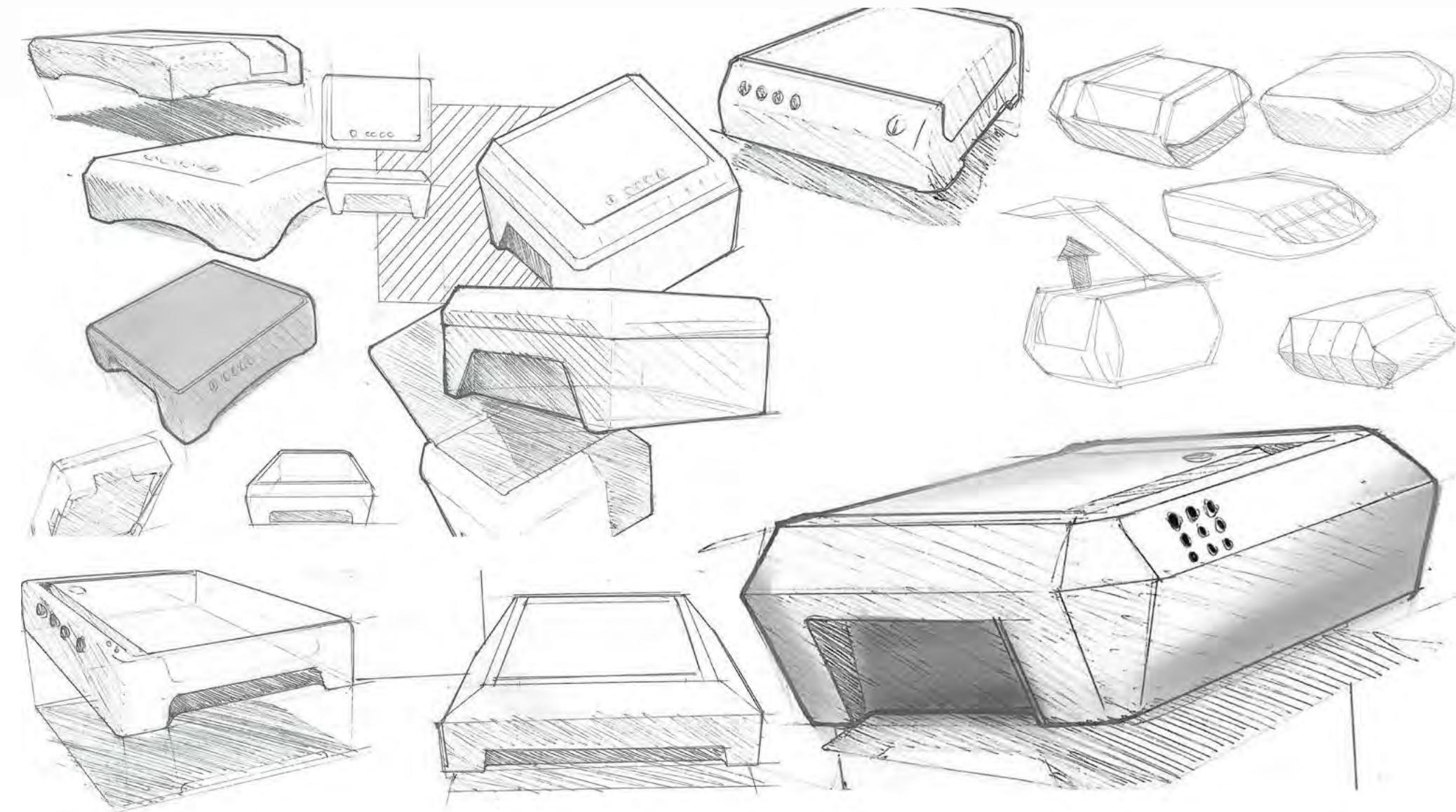
Mood board

Images to reflect a sleek and simple aesthetic that easily blends with environment.



Ideation

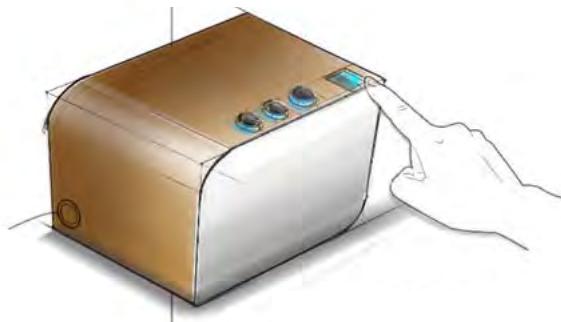
Ideation concept development. This process starts to direct us on what this product might look like.



Concept Development - Sketches

In collaboration with the Master Lock team, three concepts were chosen, to further explore and refine.

Natural



- LED visual alarm (reminders)
- Biometric
- Key override
- Button pass code
- Blends with environment
- Stores other medication

Emit



- Electable travel pod
- Two door entry
- Biometric
- Button pass code
- Key override
- Stores other medication

Medi - Chest



- Lock and key
- Erase board material
- Simple Key and Lock

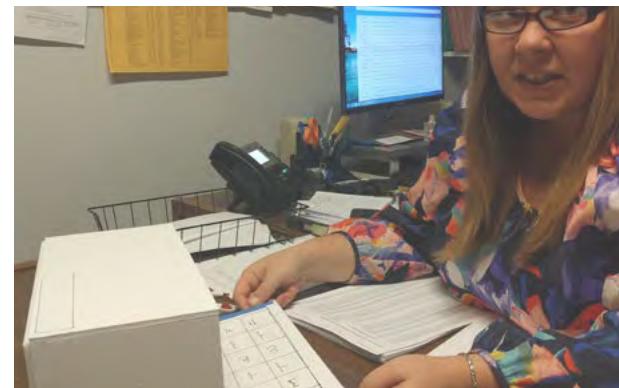
Concept Development - Models/User Feedback

Rough models were taken to users to better understand size, form and features.

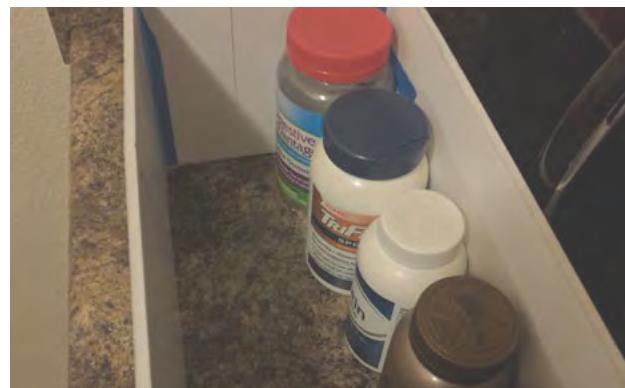
Size/Scale



Tray travel pod system



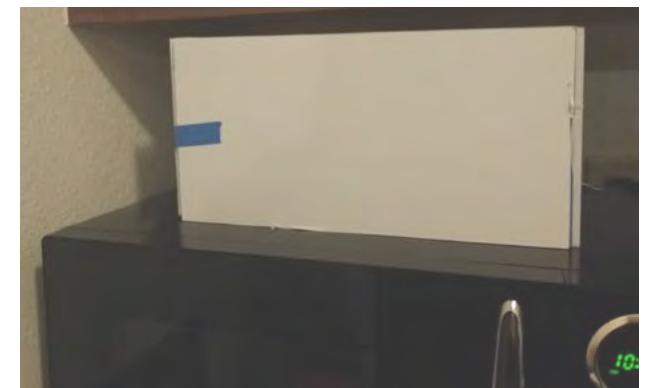
Combination lock



Alarms



Clock interface



Blends with environment

Concept Development

Features from the matrix were used to develop new concepts to take back to users for feedback.

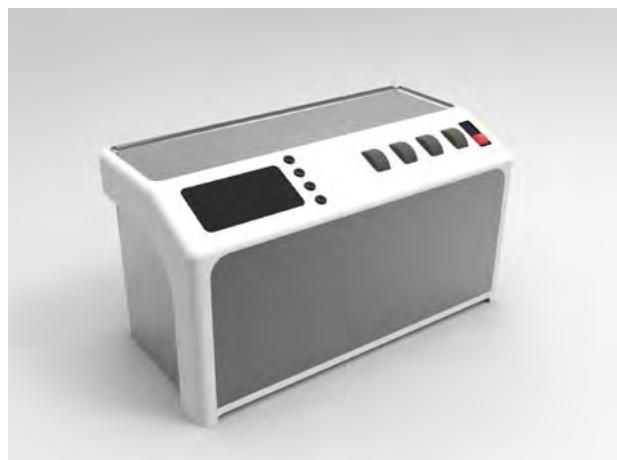
Concept 1



Concept 2



Concept 3



Concept Direction

Further concept refinement confirmed aesthetics. Features include combination lock, clock interface, pill tray organizer and a travel pod system.



Concept direction - Usability issues

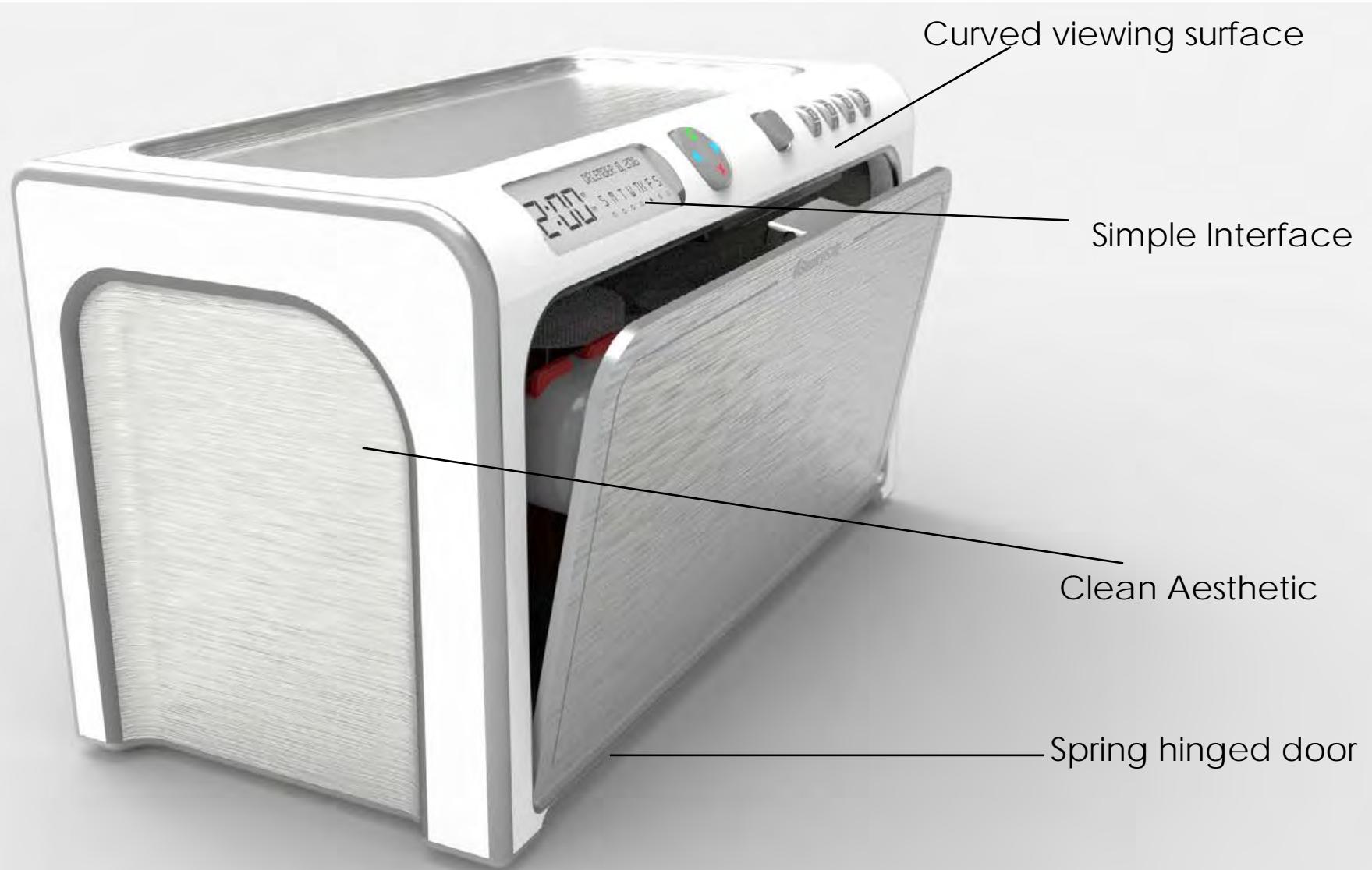
Initial concept direction had interface visual impairment. How can we make this product easier to use?

- Visual issues to operate
- Bending to view front interface
- Users in wheelchairs



Design Changes

The final concept retains the aesthetic that was preferred by users while addressing the problems with usability.



Final Concept

Further concept refinement confirmed aesthetics. Features include combination lock, clock interface, pill tray organizer and a travel pod system.



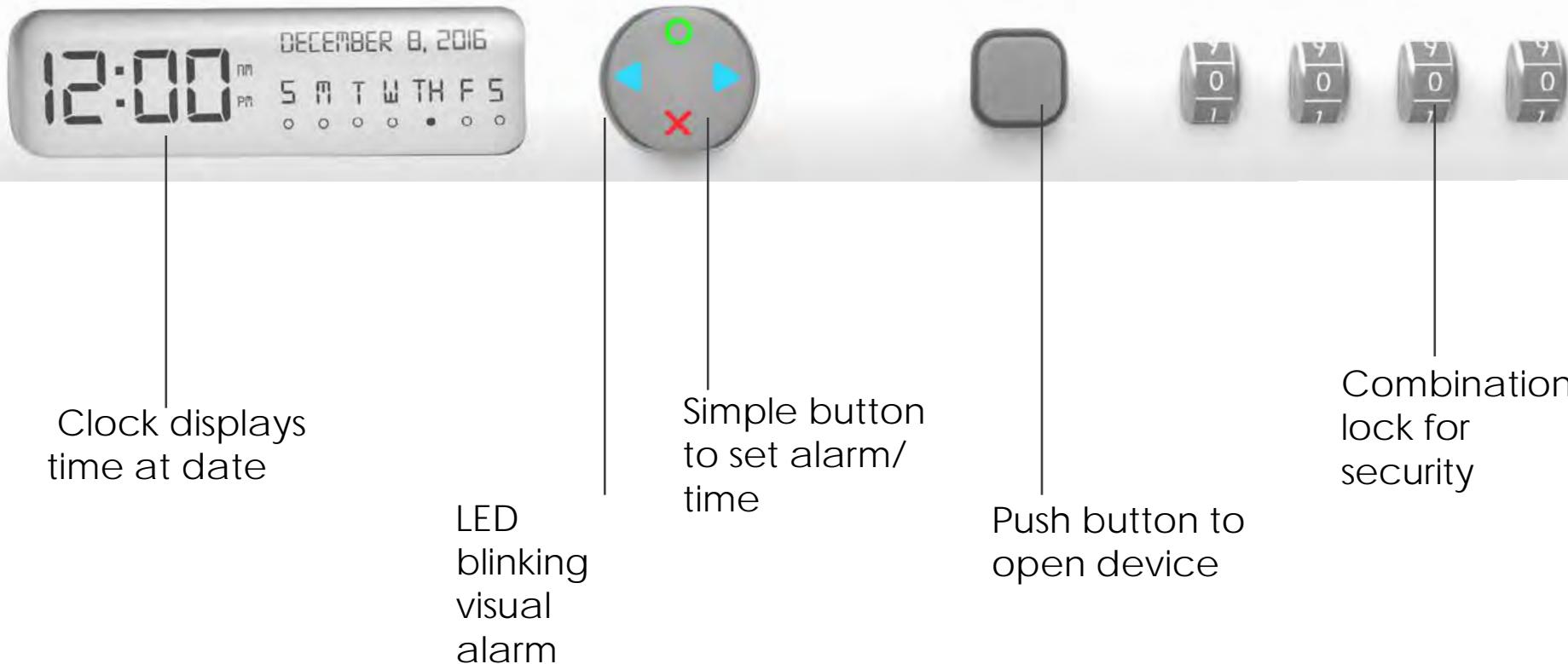
Product Features

Assure is light weight and easy to move around while combining plastic and steel to finish the aesthetic appeal.



User Interface

The final concept features a simple interface where user can set a reminder to take medication.



Dimensions/Materials

Final concept showing overall dimensions.



—6 inches—



Steel



Plastic



Rubber



—6.5 inches —



Technology/Internals

Existing technology and internals similar to the technology used in Assure.

Slim Indoor Digital Timer

This easy to use timer when set will activate an electrical device at the same time every day

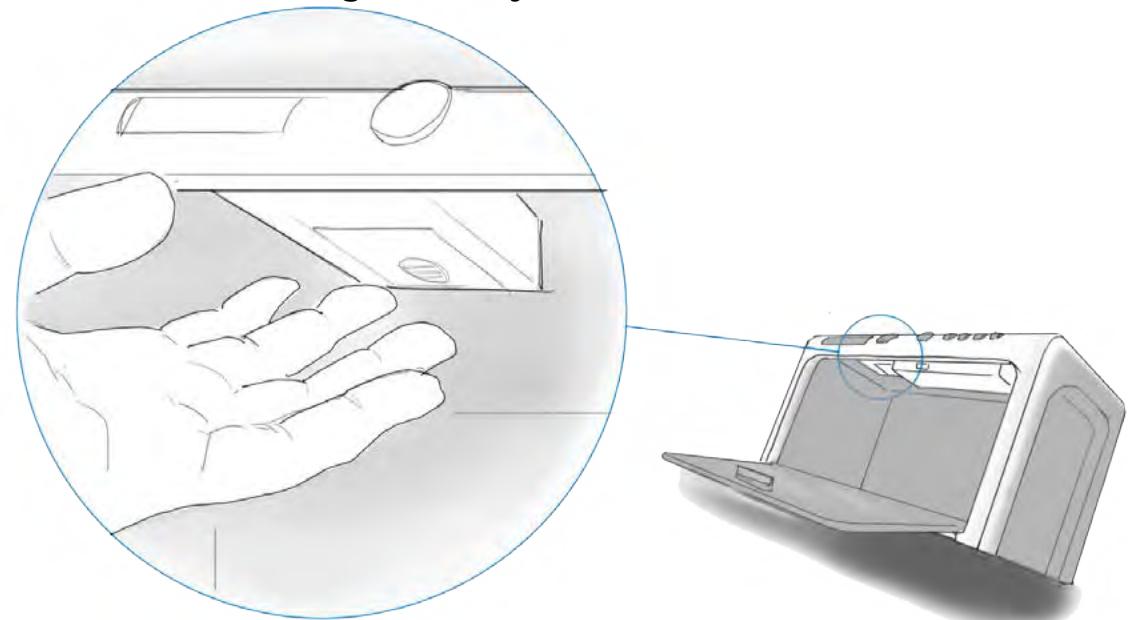
\$9.99



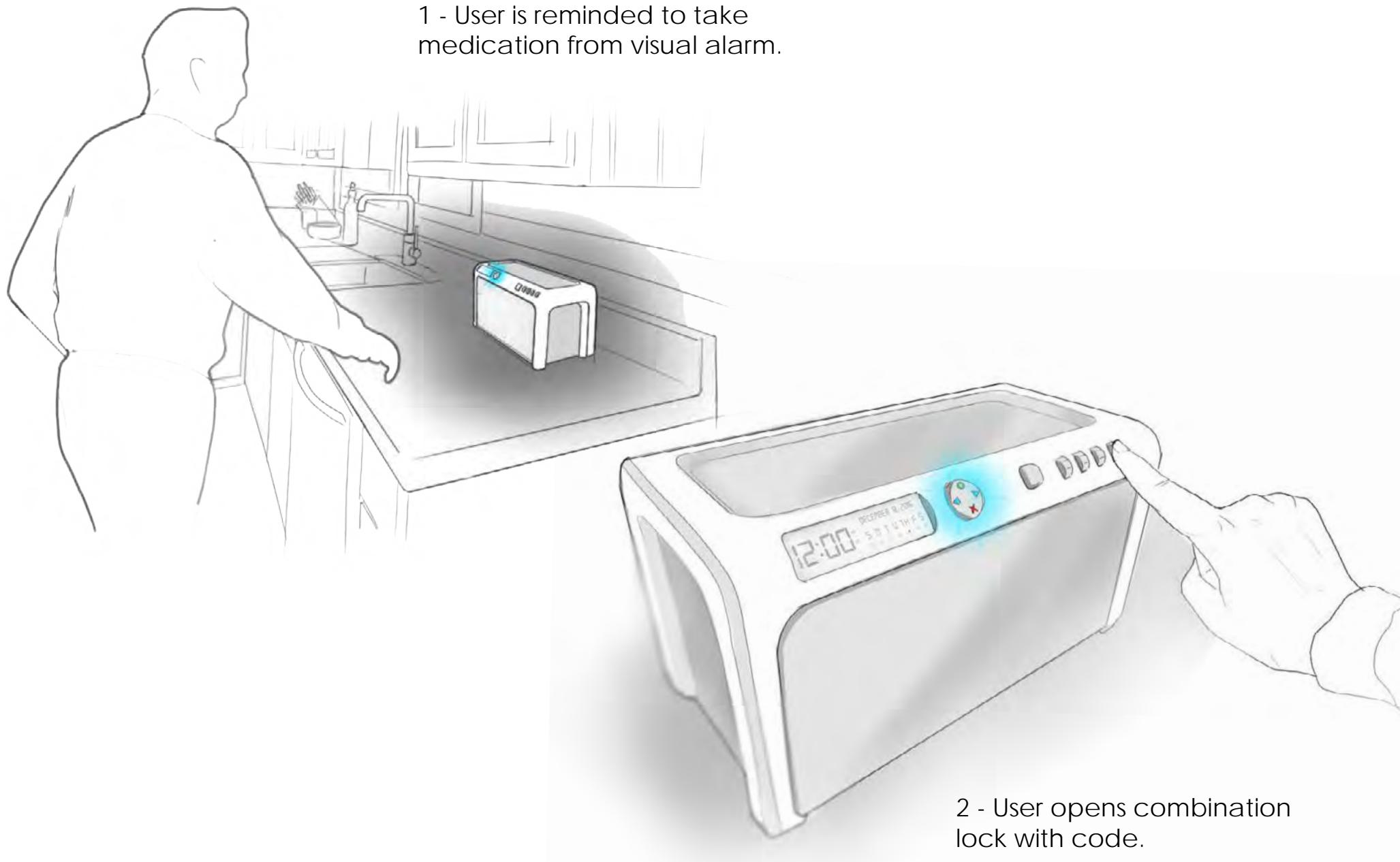
Coin Cell Battery last up to a year



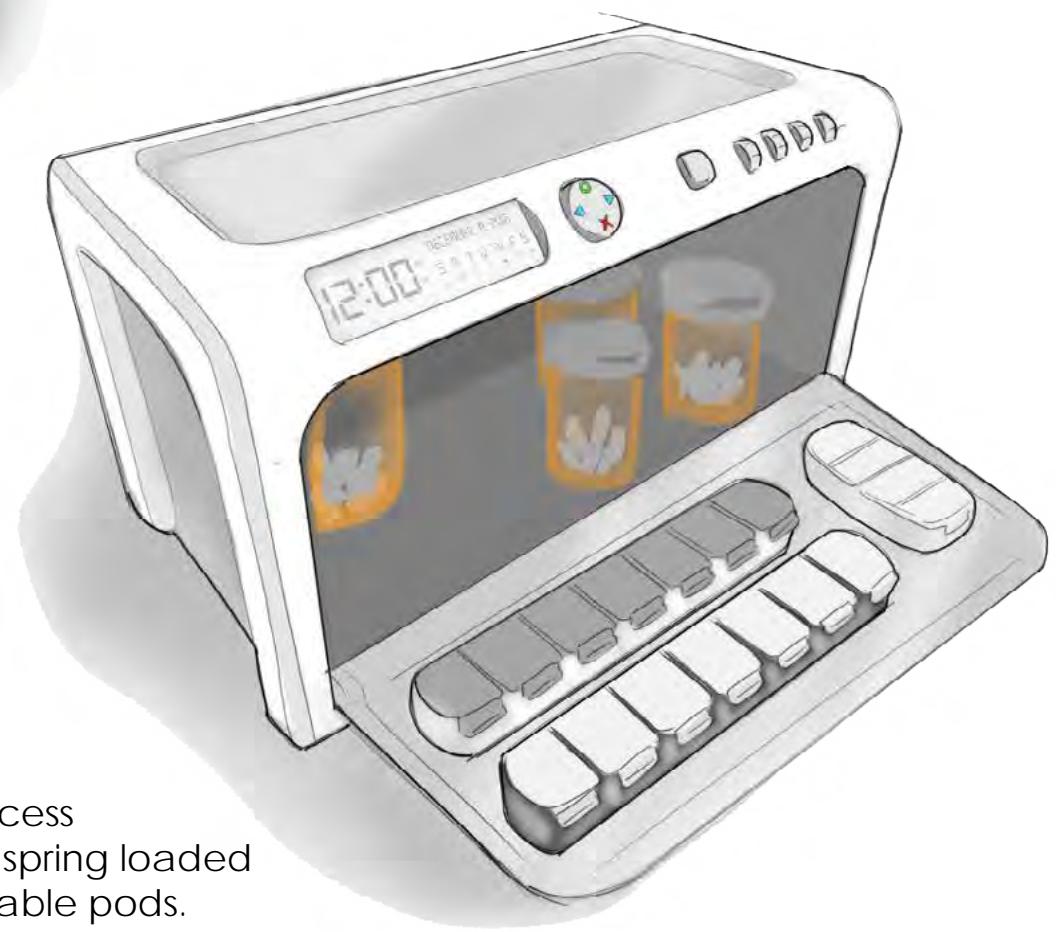
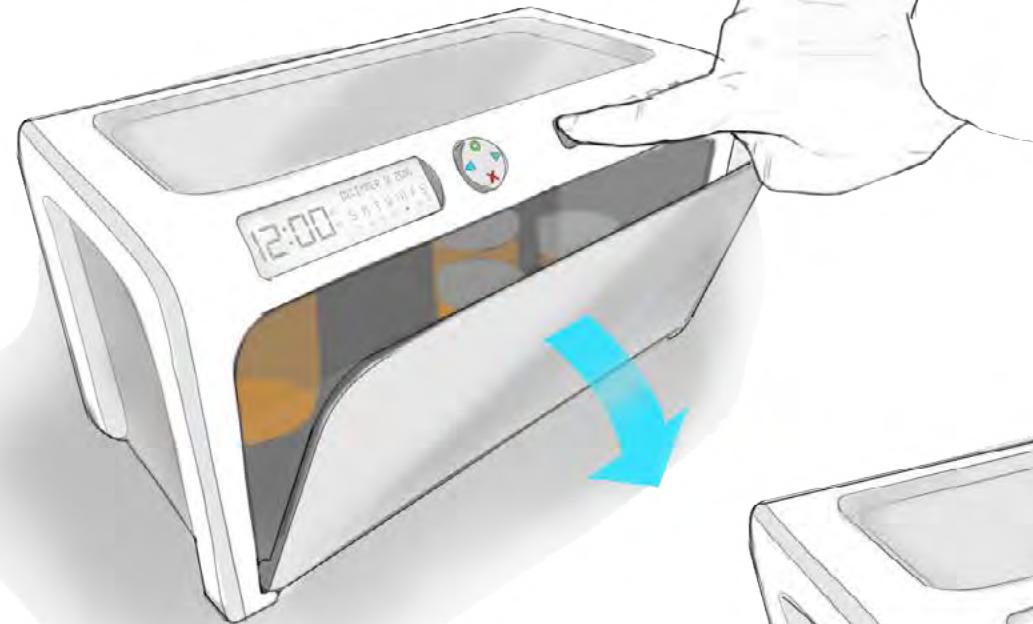
How to change battery



Final Concept - How product will be used



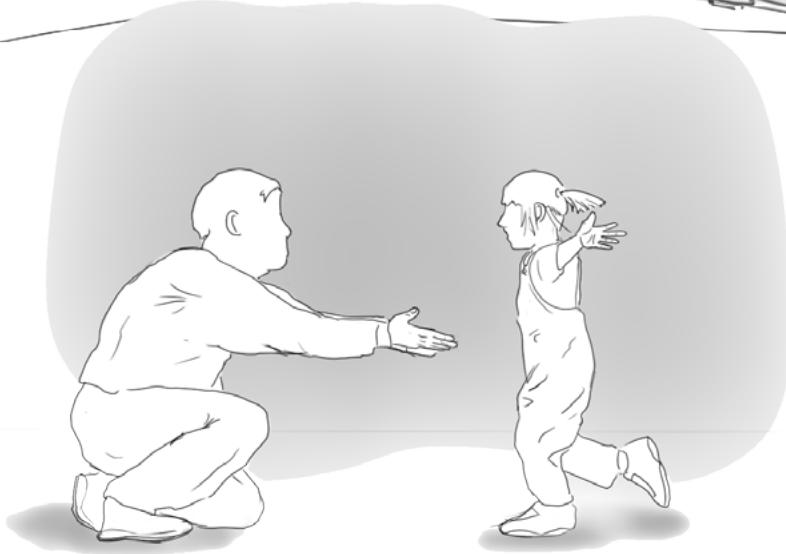
3 - User opens front lid by pressing square button on face.



4 - User easily access
medication with spring loaded
door and removable pods.



User can easily take medication and move device around when needed. For example when grandchildren are over.



Final Concept - Environment

Final concept direction is shown in the kitchen where it blends with the aesthetics of the home environment.

