



RAFIF SANTOSO

industrial design portfolio 2017

A portrait of a young man with dark hair, wearing a red t-shirt with 'RIT TIGERS' printed on it and large headphones around his neck. He is smiling slightly and looking towards the camera.

HI! I'M RAFIF.

OBJECTIVE

internship in industrial/product design related field for summer 2017

Half or full year **co-op** for fall 2017,2018..

EXPERIENCE

Design Intern at Karsa, Jakarta, Indonesia

A custom and commercial furniture company.
July-August 2016

Designed and rendered a collection of teak stools in Solidworks and Rhino that embraces Karsa's Scandinavian aesthetics through research of furniture and support systems.

Certified SolidWorks Modeler, SEACAD

Technologies Pte Ltd, Singapore
June 2016

Attended a certified two-week course for product and mechanical designing in Solidworks. Topics covered included Assembly Modelling, Drawing, and Advanced Part Modelling.

Art Curator at Jakarta Cultural Center Art Gallery, Indonesia

May-June 2015

Completed 2 joint art exhibitions in a Local gallery with artists from Indonesia, India, Philippines, Papua, and Laos. Directed, publicized, curated, marketed, and coordinated both events.

EDUCATION

Rochester Institute of Technology -

Industrial Design BFA, Rochester | New York.
Expected graduation May 2019
Dean's List for Spring and Fall 2016
GPA: 3.80

Gandhi Memorial Int' School -

Int' Baccalaureate Diploma (IBDP), Visual Arts and Commerce | Jakarta, Indonesia.
May 2015
Visual Arts Higher Level 6/7
GPA:4.0

Maryland Institute College of Art -

Graphic Design Pre-College Programme | Baltimore, Maryland
May-June 2014
Grade achieved: A

Bali Center for Art and Creativity -

Summer Painting Programme | Ubud, Bali
May-June 2013
Studied line, color theory, and figure under English painter Bruce Sherratt.

SKILLS

Languages

English - Native
Bahasa (Indonesian) - Native

Computer skills

Photoshop
Illustrator
InDesign
SolidWorks
Rhino
Keyshot
SketchUp

Technical-Based skills

Laser cutting
Power tools
Plaster molding
Silicone Molding

THAT'S JUST ME.

I AM..

▲ HARDWORKING

▲ DISCIPLINED

▲ OPTIMISTIC

▲ CHEERFUL

▲ RESPONSIBLE

travelling..

museum visits..

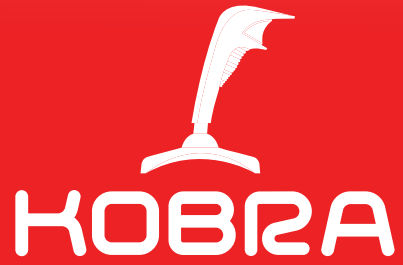
bowling..

electronic music..



CONTENTS





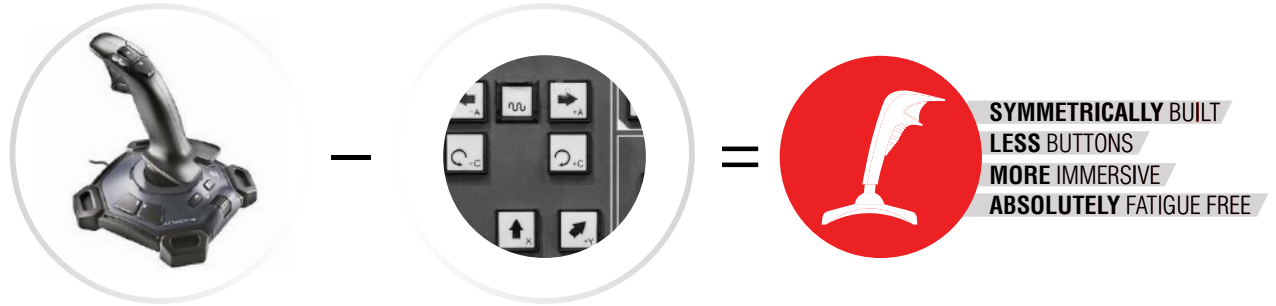
FORM CLASS // Joystick
3rd Semester - duration: 4 weeks

“ **ENRICH YOUR GAMING EXPERIENCE –**
WITH AN AMBIDEXTROUS JOYSTICK. ”



**LEFT OR RIGHT HAND –
IT DOESN'T REALLY MATTER.**

Kobra is a joystick that accomodates hands of all sizes while still provides a futuristic feel through accentuated form and organic surface. Symmetrically built, Kobra can be used by both left and right handers without the need to feel awkward due to uncomfortable hand positions. Kobra aims to recreate the standard of existing pointing device.

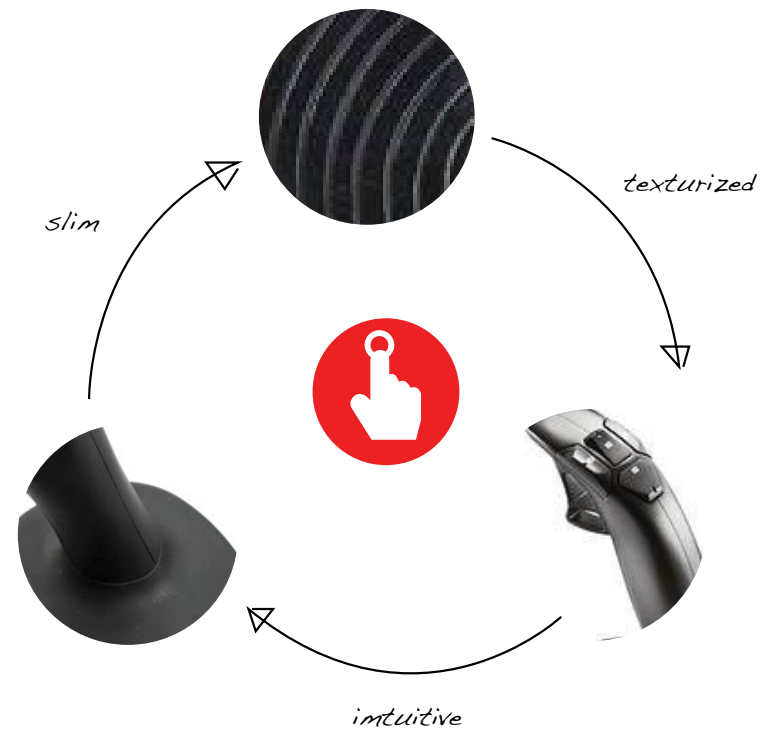


**THERE IS ALWAYS
ROOM FOR IMPROVEMENT.**

The joystick should look..



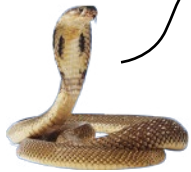
The joystick should feel..



INITIAL CONCEPT

I began with exploring hand positions and grip form. Fluid strokes and color help me create the ideal joystick shape. I proceed with adding the finer details with human factors taken into consideration. Creating a joystick that provides long-lasting comfort is the ultimate goal.

my inspiration!





**FINAL
CONCEPT**

Color coding components and giving them different texture and finish serves as a final touch to give the joystick a distinct personality. The linear texture on the front grip assimilates the outer skin of the vicious animal.



COSTUMIZE YOUR

KOBRIA



Angklung

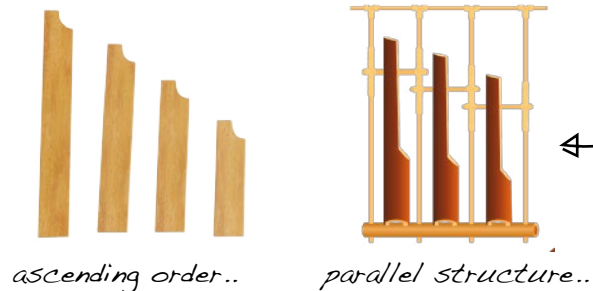
FORM CLASS II // Chair
3rd Semester - duration: 4 weeks

“ **MODERN LIVING AND SEATING**
WITH A TOUCH OF TRADITIONAL CLASS. ”



EXTRA EMPHASIS ON MODERN AND TRADITIONAL

Since I come from Indonesia, a place where not many Americans are familiar with Indonesian heritage, I wanted to promote and showcase a small piece of my culture. Fortunately, there are wide variety of traditional elements that I can take inspiration from.



ORGANIC FRAME
105° SEATING
CURVED PLATE
DOUBLE TUBULAR SUPPORT

TRADITIONAL LIFESTYLE



ANGKLUNG
traditional musical instrument
played in groups.



WAYANG
theatrical performance with
puppet dancers.



BATIK
colored designs on textiles
made by wax dyeing.



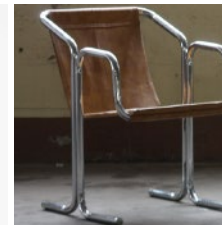
PENDET
dance from Bali to purify
temples.

Indonesian heritage..

MODERN INFLUENCE



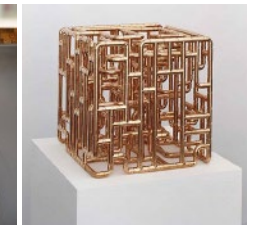
SHIVEN 2
released by Varsa Home
Furnishings



SPLENDID
made by American artist
Jerry Johnson in 1960



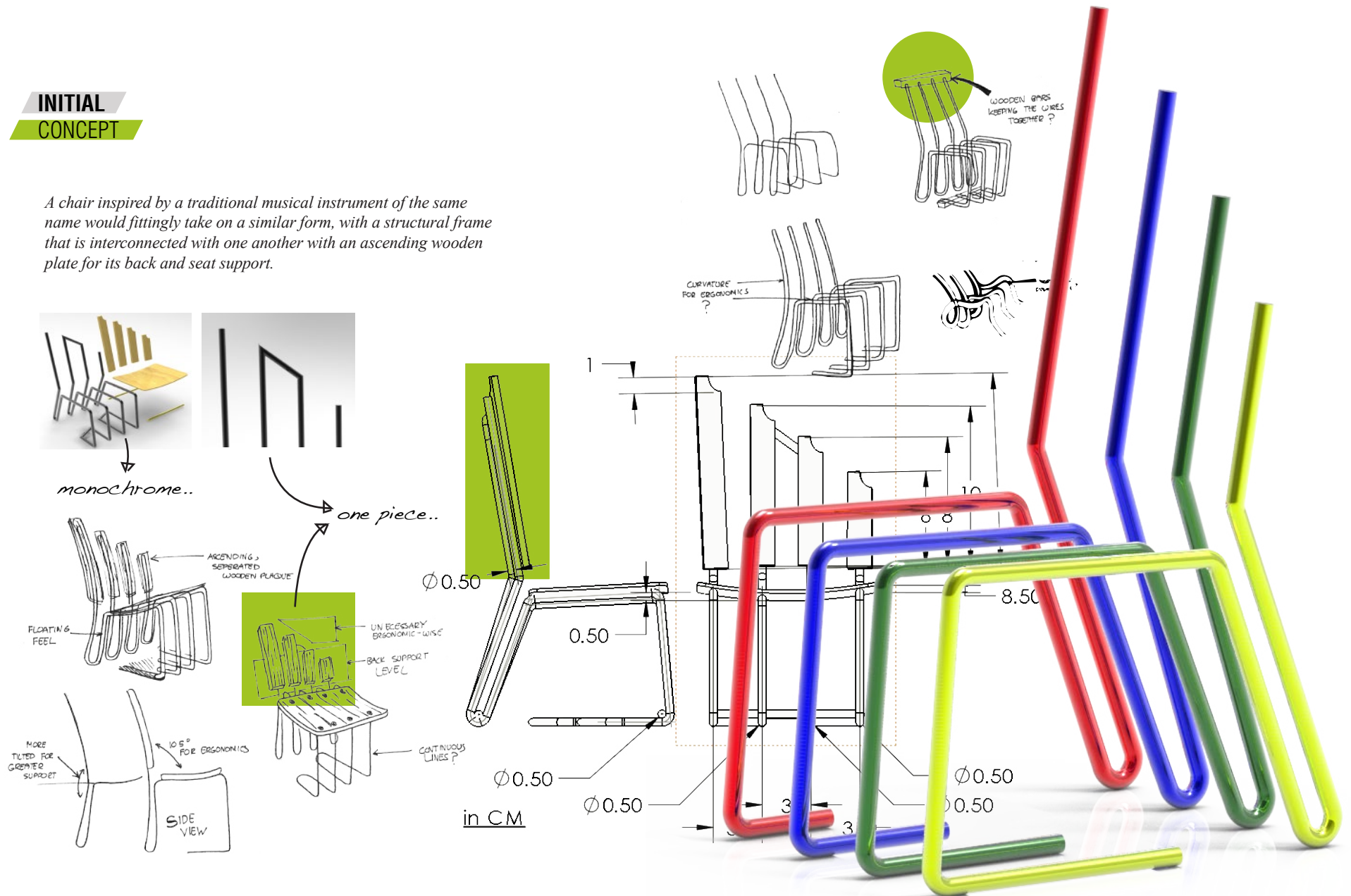
WOOD COMPOSITES
coconut-oak used for home
flooring.



COPPER PIPING
2007 piece by Vancouver
artist Steven Shearer

INITIAL CONCEPT

A chair inspired by a traditional musical instrument of the same name would fittingly take on a similar form, with a structural frame that is interconnected with one another with an ascending wooden plate for its back and seat support.

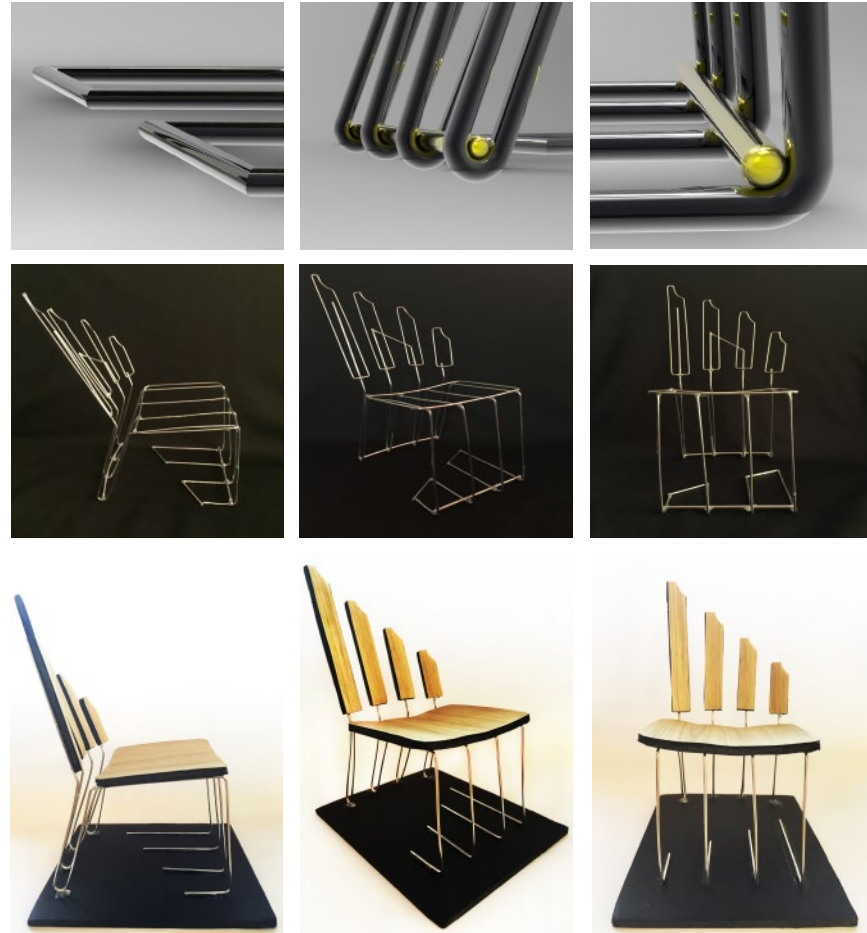


FINAL TOUCH

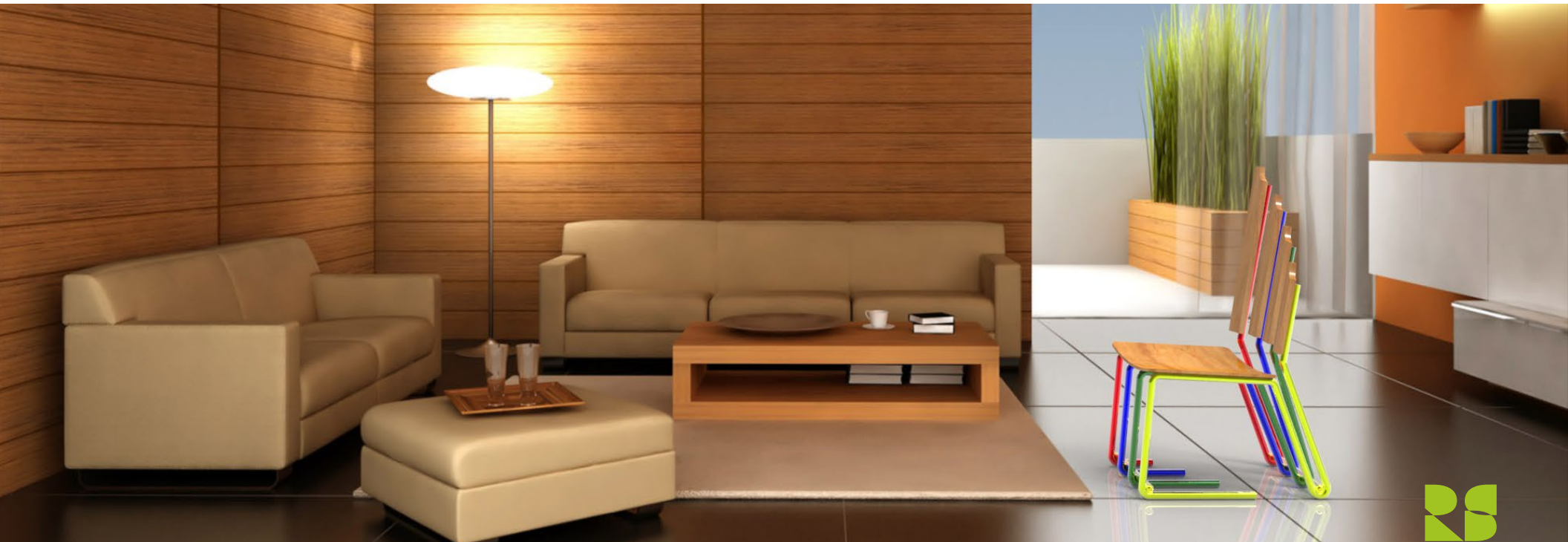
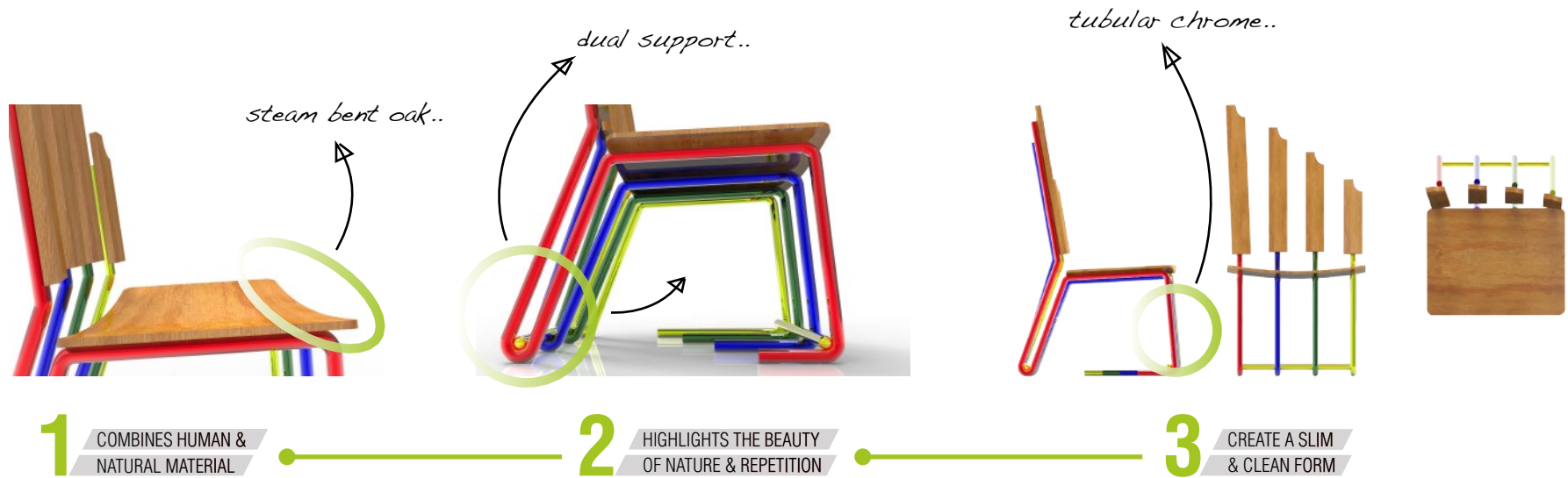
The idea of using parallel structure for the frame is further developed using thin strips of wire with foamcore for base/cushion and back support. Small details of the Angklung chair are taking the shape of the traditional instrument as a way to pay homage.

Angklung aesthetic..

Seperate pieces..



KEY
FEATURES



THE MUSIC
TO YOUR EYES





STUDIO CLASS // Clothespin
3rd Semester - duration: 3 weeks

“ **A CONVENIENT SOLUTION**
TO YOUR LAUNDRY NEEDS. ”



LINE DRYING

IT'S GOOD FOR YOU AND THE ENVIRONMENT.



SAVE ELECTRICITY BILLS



FRESH AIR & EXERCISE



CLOTHES LASTS LONGER



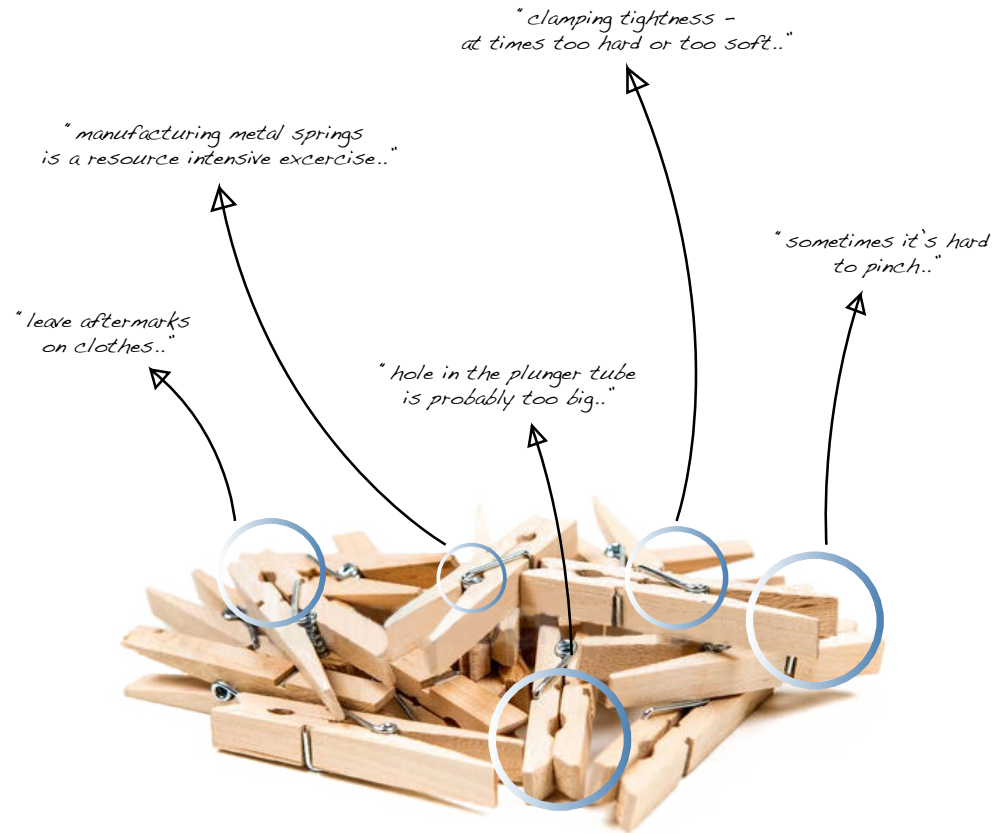
REDUCE CARBON WASTE

and 1000 other great benefits..



BUT IT'S A HASSLE!

NOBODY WANTS THAT..

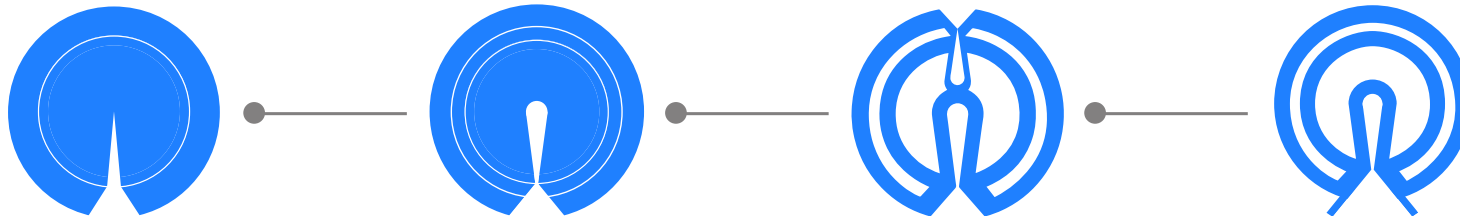
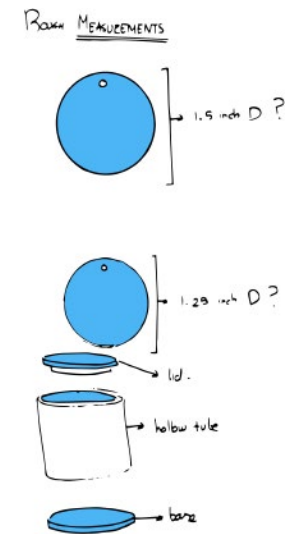
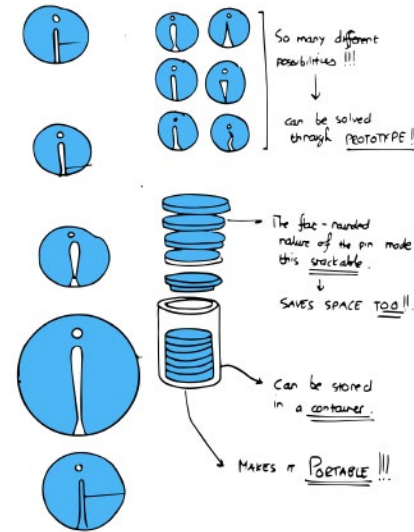
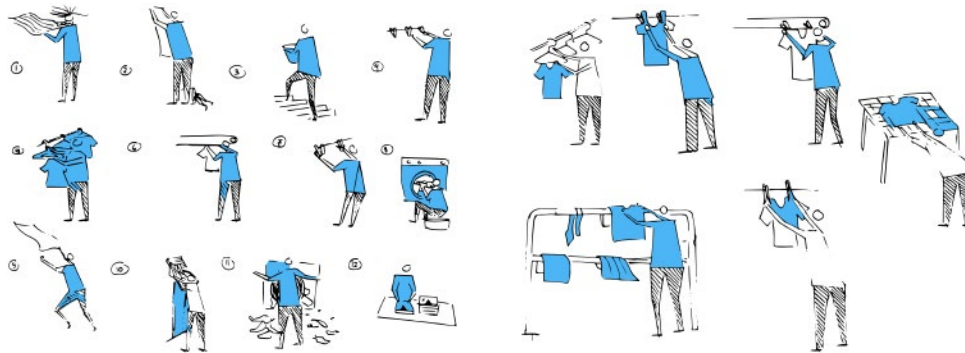


IDEATION

PHASE

The direction regarding the overall form was very clear;
Having a circular shape really capture the essence of the clothespin's simplicity.

my inspiration!



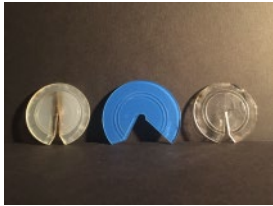
PROTOTYPE PHASE

The use of band saw and heat gun were considered, however laser cut decreases time significantly which allow more prototypes to be made. Creating the right length for the opening requires partly trial and error to make sure the clothes snug right in.

1 EXPERIMENTING WITH ACRYLIC



2 MULTIPLE FAILURES WITH BURN MARKS



3 SWITCH MATERIAL TO PLEXIGLASS



4 MORE RESISTANT BETTER FINISH



5 ENGRAVING FOR ADDED GRIP



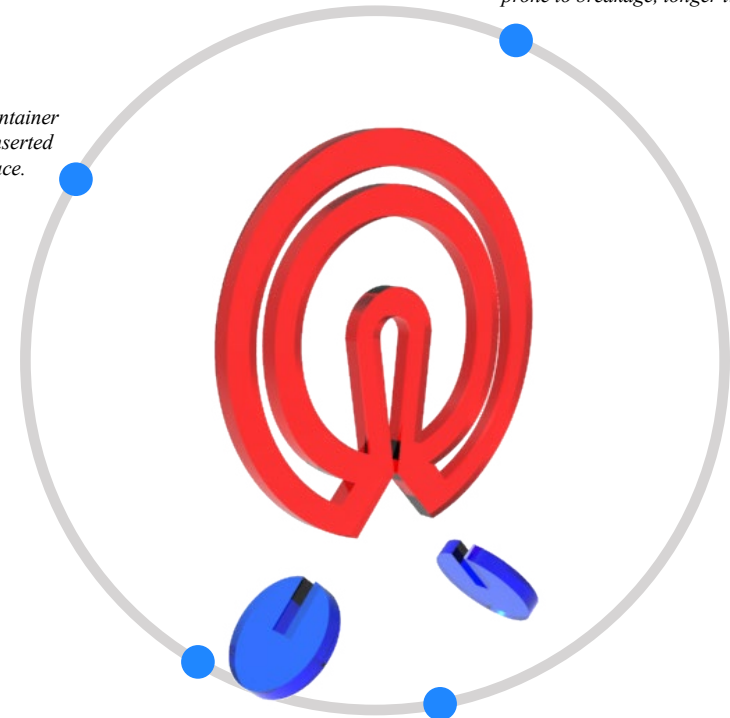
6 SWITCH TO OPAQUE PLEXIGLASS



THE COMPONENTS

The teardrop container will hold the inserted sheets in place.

Extruded cut on the inner and outer ring acts as a stress reliever, decreases prone to breakage, longer lifespan.

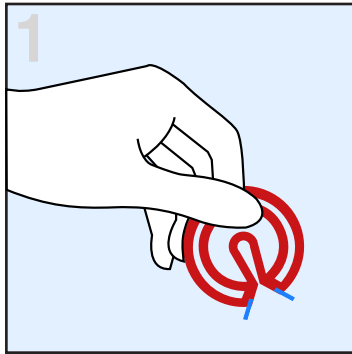


The 'mouth' of halo allows the user to be clumsy as it guides the sheet into the narrow opening.

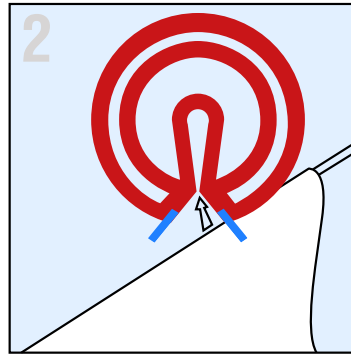
The acute edge in the opening helps to keep the clothes together.

HOW HALO

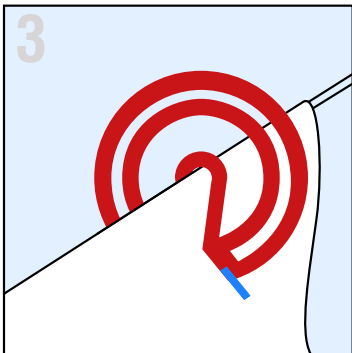
WORKS



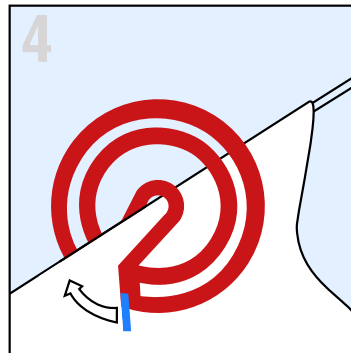
1
HOLD HALO BETWEEN YOUR THUMB
AND INDEX FINGER



2
SLIDE HALO INTO YOUR HANGED CLOTHES.
THE CIRCULAR MOUTHS ACT AS GUIDE.



3
THE TEARDROP CONTAINER HOLDS
THE CLOTHES TOGETHER



4
THE TWO CIRCULAR MOUTH ALSO ACT
AS BARRIERS TO PREVENT CLOTHES
BEING BLOWN AWAY BY WIND.

The halo clothespin is intended for the domestic setting. It can be used to dry garments, sheets, and towels to increase the lifespan of laundered items. Due to the menial task of drying garments, clothespin are considered cheap and replaceable by most, evident by the many varieties available in the market. Halo strives to be more than just a clothespin, which began with incorporating idea of stackability and storage into its design.



SLIM
LIGHT
PORTABLE





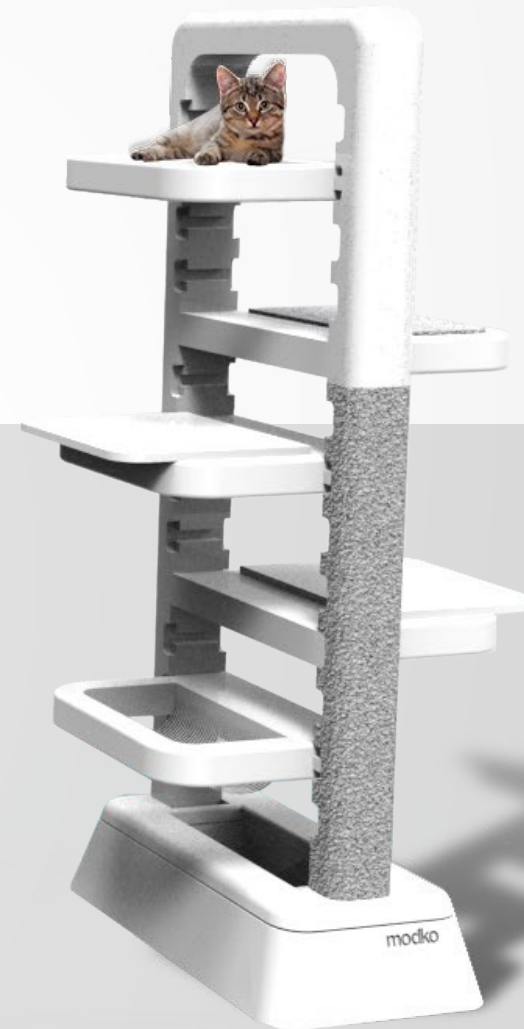
modkcreate

MODKO // Cat Tree

3rd Semester - duration: 1 week

Rafif - Hannah - Sarah - Alexa

“ **AN ALL-IN-ONE STOP**
FOR YOUR MODERN COMPANION. ”



YOUR CAT'S HAPPINESS, IS YOUR HAPPINESS.

Cats have their own personality and individuality, and they show their happiness in many different ways, just like we do. But more often than not, we are pretty clueless as to what they are feeling. We can analyze their vocal clues, body language, eating habits, and a million other vague cues, but we will never come close to knowing their true sense. Why spend countless hours analysing our pet – when we know the one thing that will make them happy.



it's playtime!

FOR CATS, WORK IS PLAY.

And that is why they need their own playground..



i love trees.

OUT WITH THE OLD..

However, existing cat trees are..



IN WITH THE NEW..

And we certainly want our cat tree to harmonize with the rest of Modko's family of product..



ERGONOMICAL



SEAMLESS

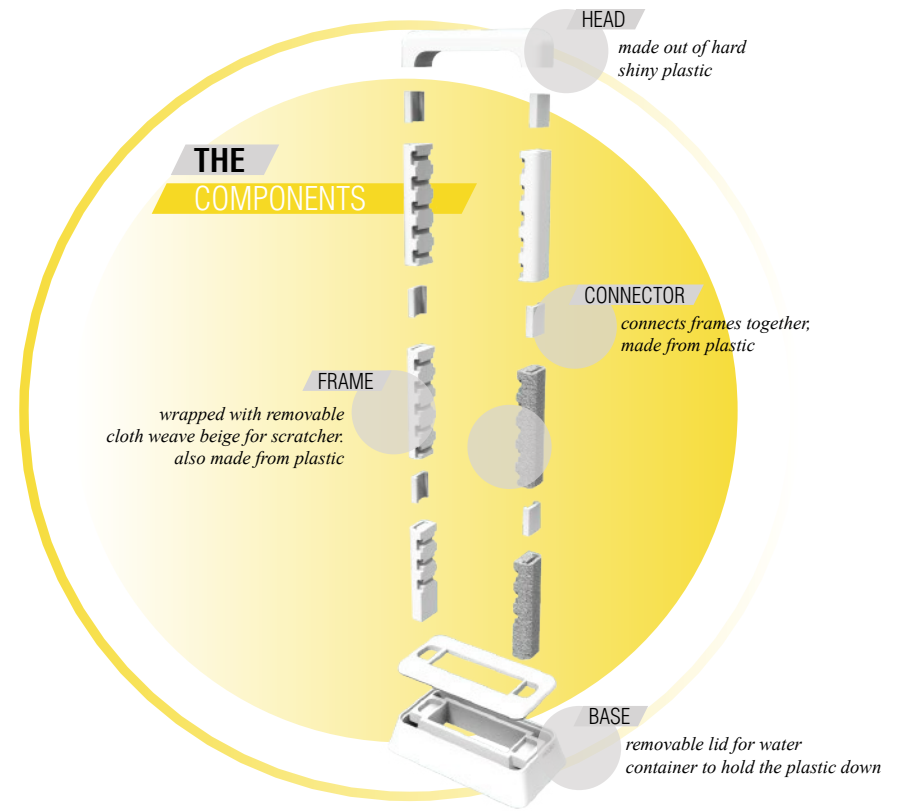
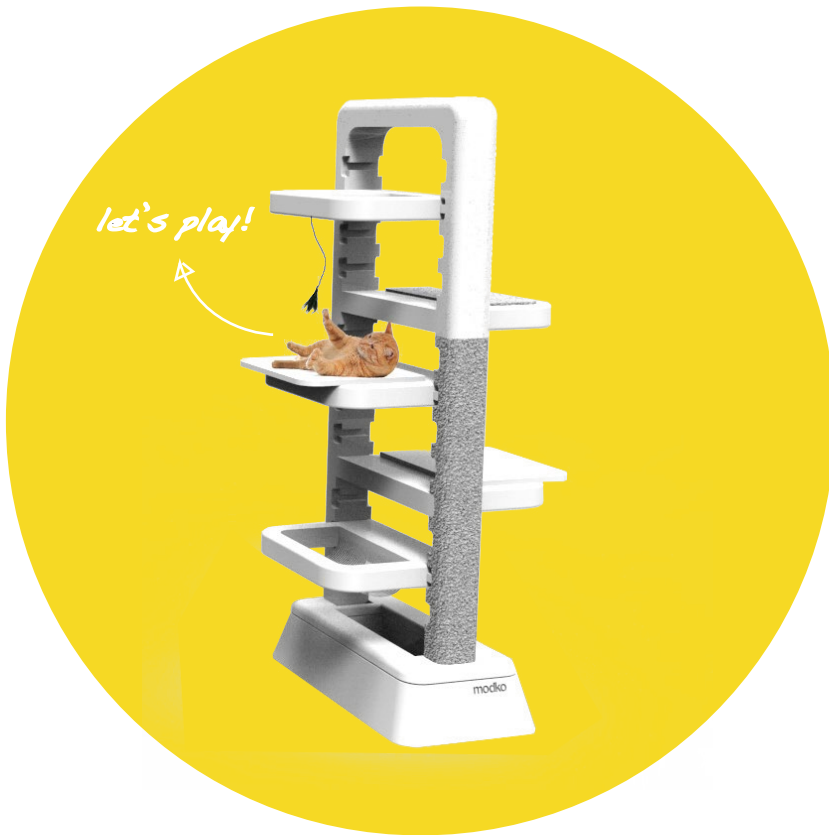


THOUGHTFUL



OUR SOLUTION

We want to make a cat tree that is truly modern, something that blends in well with the rest of Modko's aesthetics. Aside from the importance of appearance, we are also striving for customizability that allows the user to have greater options, something that is not available in the current market.



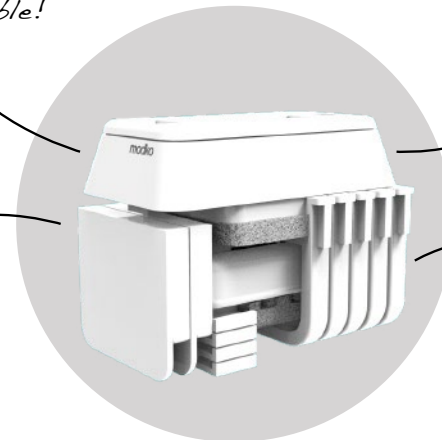
IT'S HUMAN-FRIENDLY

*it's fun and
easy to assemble!*

*takes up
less space!*

easy to wipe!

*fit for your
modern life!*



AND IT'S DEFINITELY
CAT-FRIENDLY.

*sturdy and safe,
owner's number 1 priority*



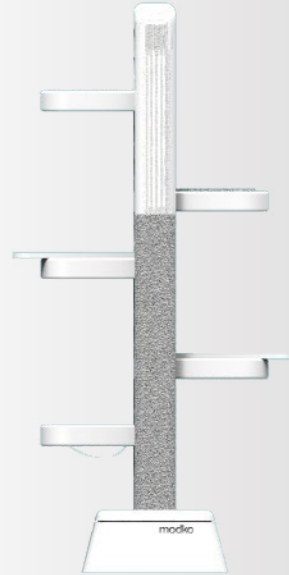
*scratching surface helps
trim claws*



*modular - customizable
to fit the cat's personality*



*water fountain to
satisfy cat's thirst*

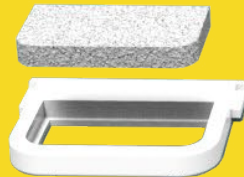


COSTUMIZE
YOUR PLATFORMS

HALF-OPENING



SCRATCH MAT



PLAIN



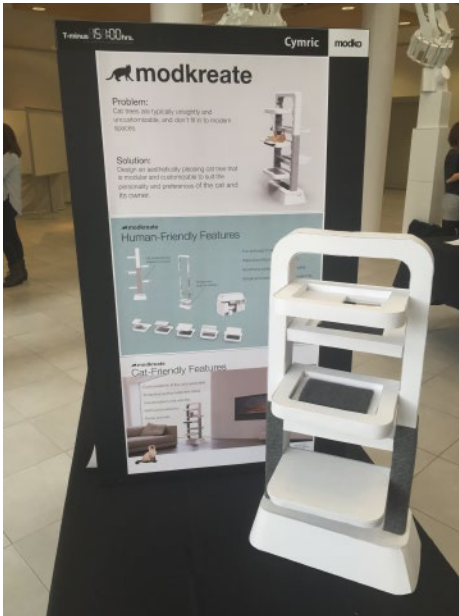
TINY HAMMOCK



FULL OPENING



GROUP PHOTO



URBAN.

MODULAR.

COSTUMIZABLE.



in cooperation with
modko



T-WATCH

MATCO // Tire Pressure

3rd Semester - duration: 4 weeks

Rafif - Nathaniel - Lydia - Sumin

“ **MONITOR YOUR TIRE'S EVERY MOVE –**
EVEN WHEN YOUR HANDS ARE FULL. ”



PROBLEM STATEMENT

"Working in a team of 4, design a tire pressure gauge for use by automotive technicians."

The gauge project builds on past project experience of hand holding and ease of use while adding more technology. Design will be rooted in primary research through personal experience combined with interview of a mechanic. Idea will be submitted to Matco's 'made by idea program'.

*analyzing
user experience..*



*direct contact
with persona..*

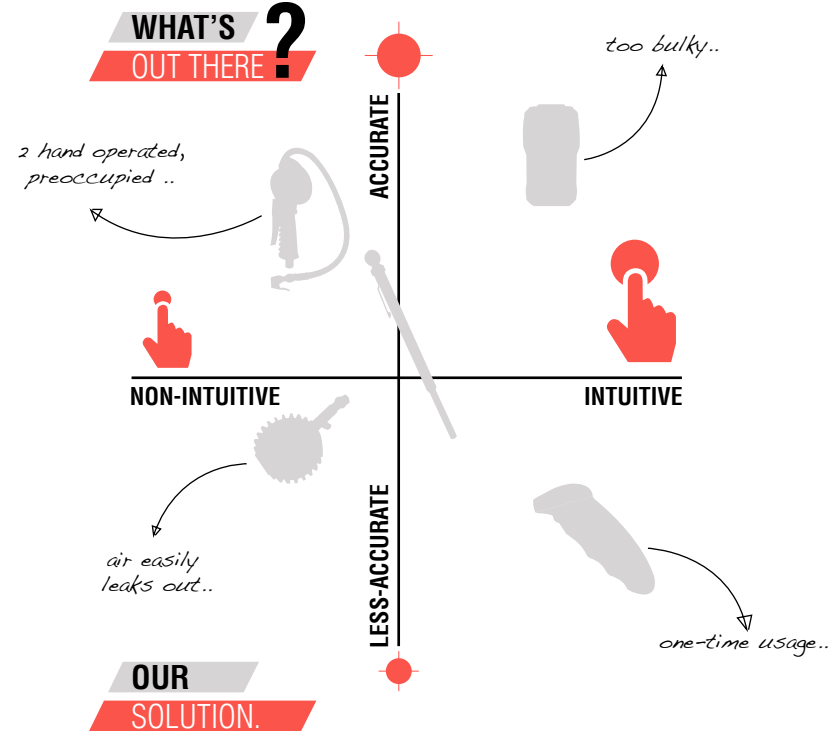


MEET TODD.

HE'S NOT YOUR AVERAGE MECHANIC.

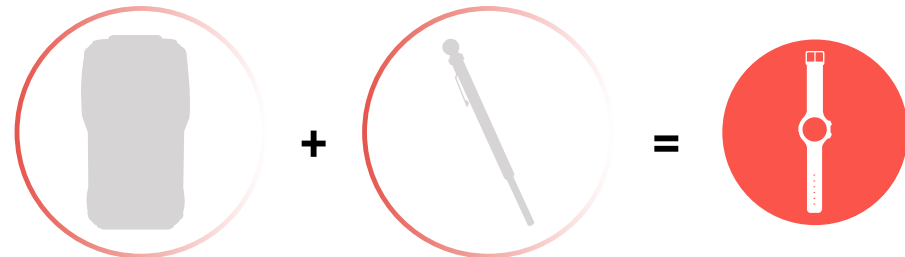


WHAT'S OUT THERE?



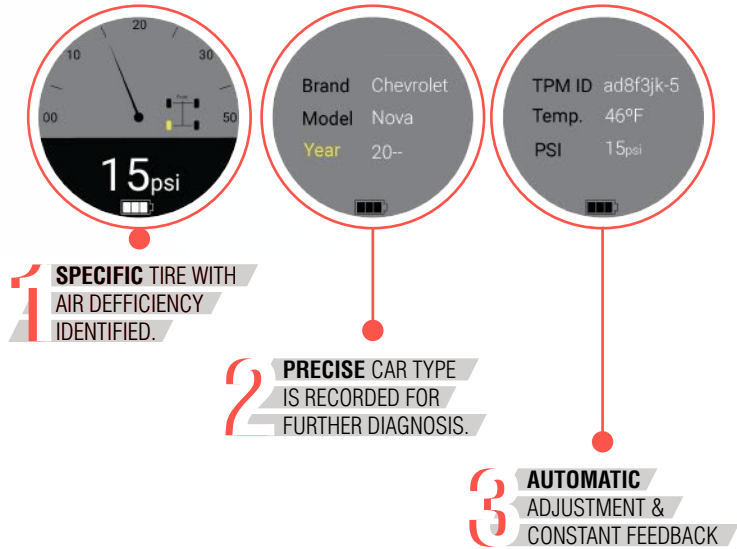
OUR SOLUTION.

While most people prefer digital over traditional tire gauge due to its ease of use, mechanics in Shamrock Service Center still rely on pen gauges for its reliability on accurate reading. Although the pen gauge is not as reliable as the more technologically advanced digital TPMS, their readings rarely fluctuate (1-2 psi) and they are closer to the exact measurements of tire pressures



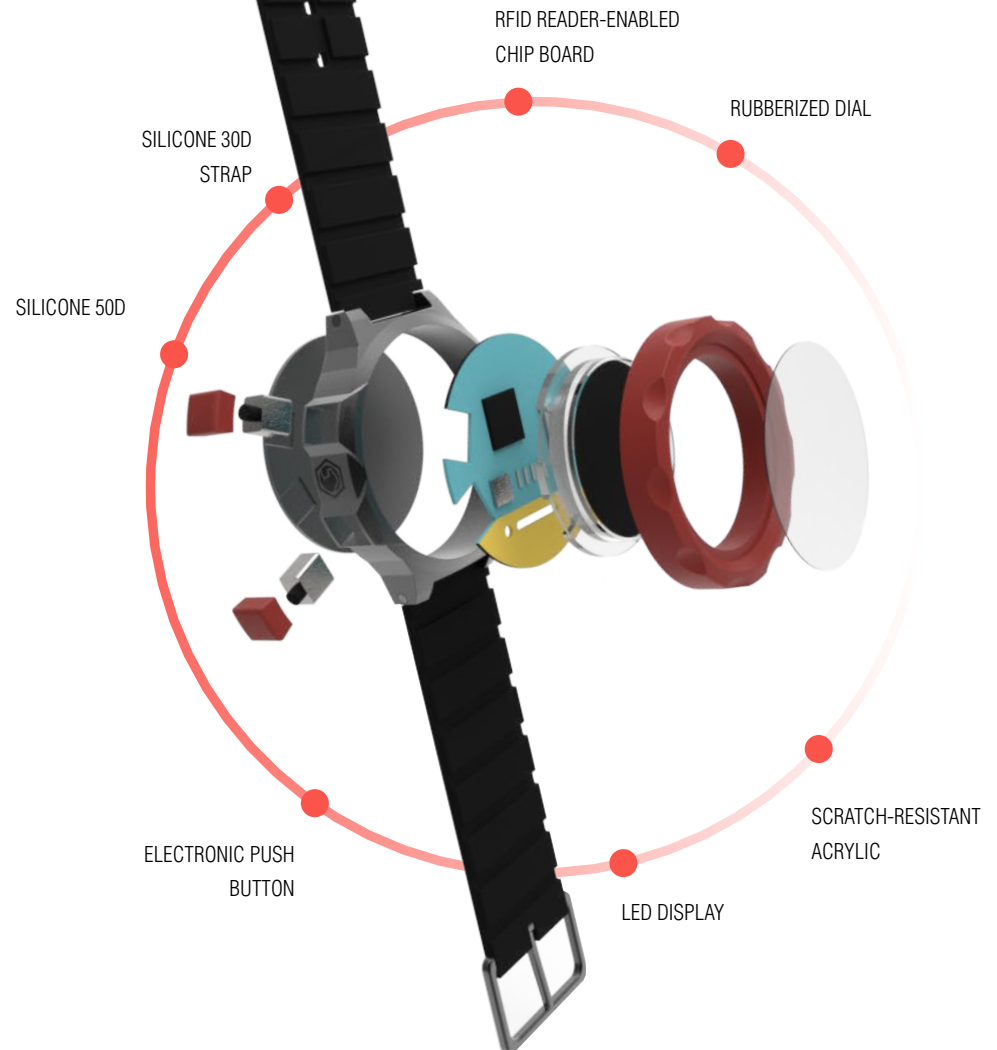
HOW IT WORKS & USER INTERFACE.

Digital TPMS uses RFID (Radio-Frequency Identification) to read chips that constantly monitor the pressure of all 4 tires. This way, mechanics are able to simultaneously check tire pressure and work with both of their hands.



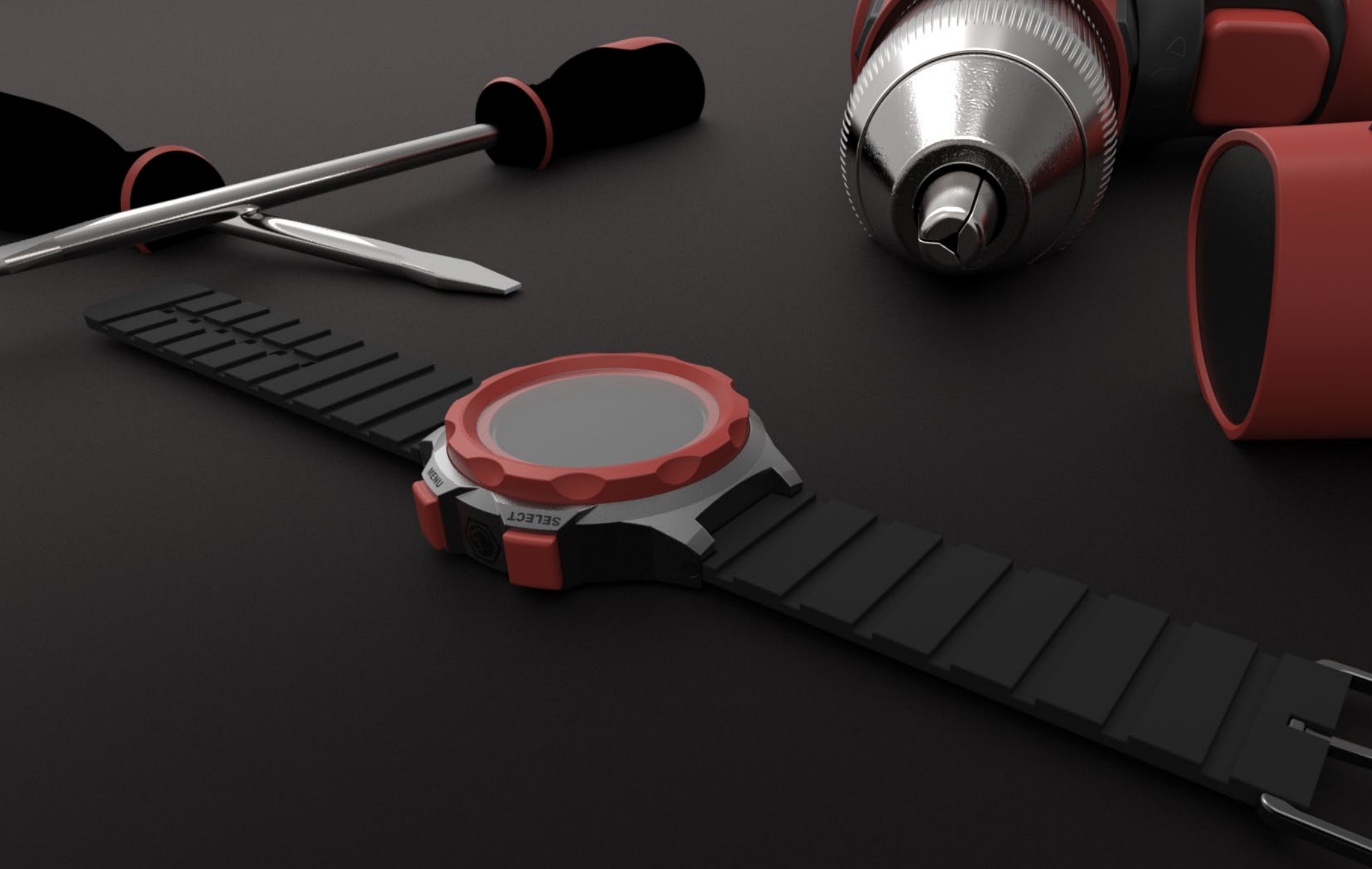
**HANDS-FREE
PORTABLE
EASY TO USE
PERSONALIZED
SMART**

THE COMPONENTS



SEAMLESS
INTEGRATION.





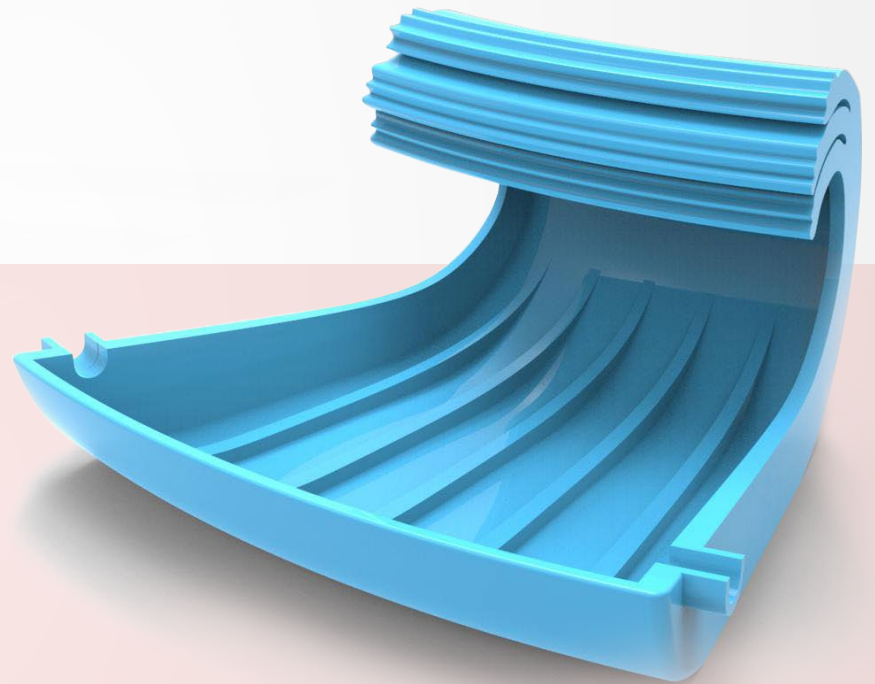
WAVE

IDEALAB // Assistive Plate

3rd Semester - duration: 3 Days

Rafif - Tanvi - Doug - Maitreyee - Kaining - Mono - Elmie

“WHO SAYS EATING
HAS TO BE A CHORE?”



WHO ARE WE DESIGNING FOR?

Cerebral palsy, one of the many major disorders, can affect a person's balance, posture, as well as the ability to perform daily routines, including eating.

AGE 20-50



DECREASED STRENGTH



NO FINE MOTOR SKILLS



POOR ENDURANCE

WE NEED TO FACE THE REALITY.

Their inability to properly eat and drink are also due to other various setbacks. This can affect the behavior, their ability to do things for themselves, to sleep and their social relationships in a deeper context.

1 IN 10

HAS A
SEVERE
VISION
IMPAIRMENT



1 IN 4

IS UNABLE
TO TALK



3 IN 4

EXPERIENCE
PAIN



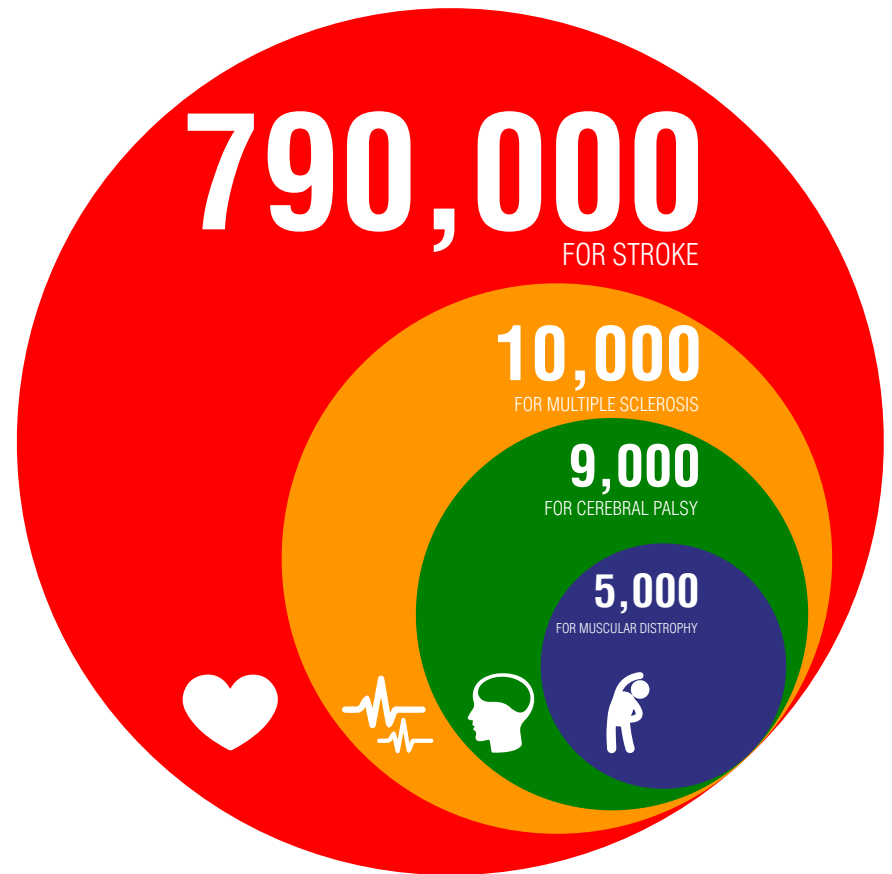
1 IN 2

HAS AN
INTELLECTUAL
IMPAIRMENT



THEY ARE A BIG PART OF OUR SOCIETY.

Not only cerebral palsy, the number of people diagnosed each year with illnesses listed below can also cause weakness and limited movements in hands and arms.



EXISTING SOLUTIONS

Patients who suffer from Cerebral palsy often have their fine motor skills impacted and as a result many are unable to grab or hold on to cooking and eating utensils. As a result, food on the plate often spill and eventually gets thrown away. This also further creates frustration on the person due to his/her inability to perform simple task.



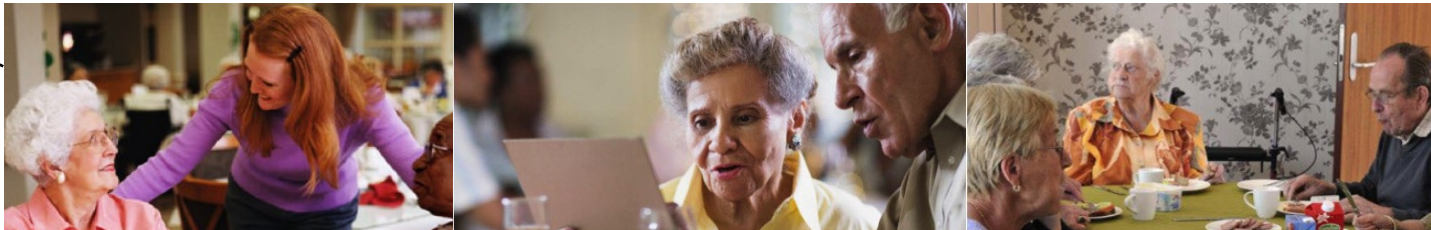
PLACE OF USAGE

CAREGIVING FACILITIES

RESTAURANTS

HOME

constant
assistance..

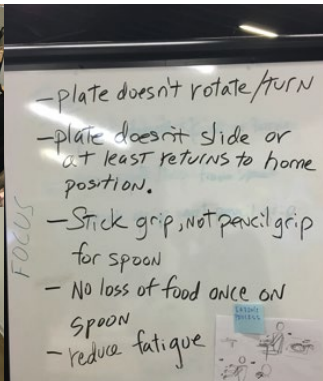


demand independence..

UNRESOLVED ISSUES



IDEATION

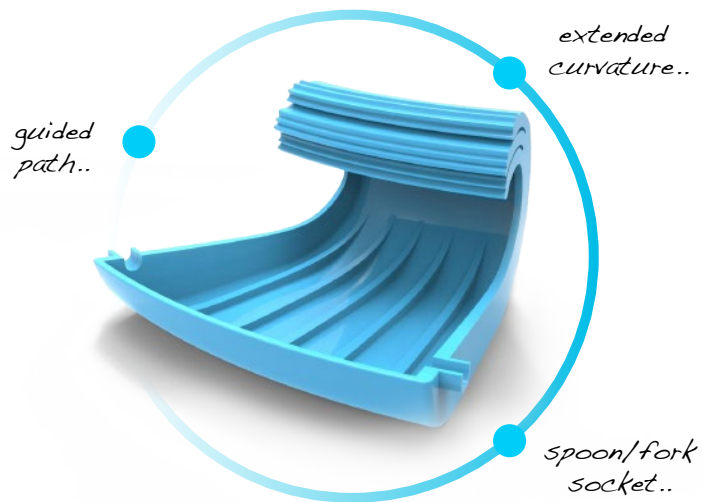


PROTOTYPE

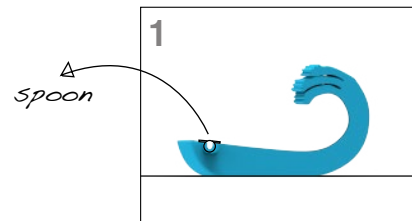


FINAL DESIGN

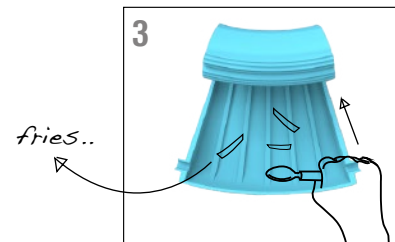
We incorporate existing solution of having the gap border raised with added features of our own.



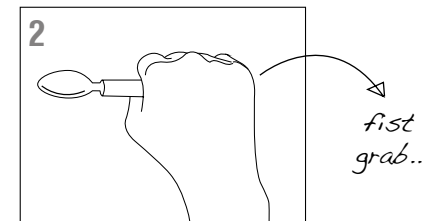
HOW IT WORKS



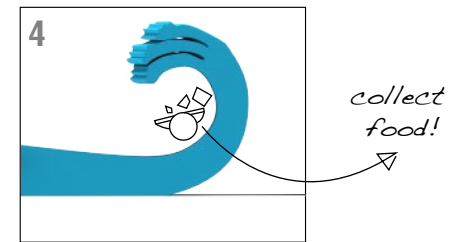
Wave houses the elevated spoon and fork on the bottom corner of the plate. All the user has to do is grab them with both hands.



Linear frame strips along the Wave help the user push down the spoon to minimize over-control which can cause him/her to lose balance.



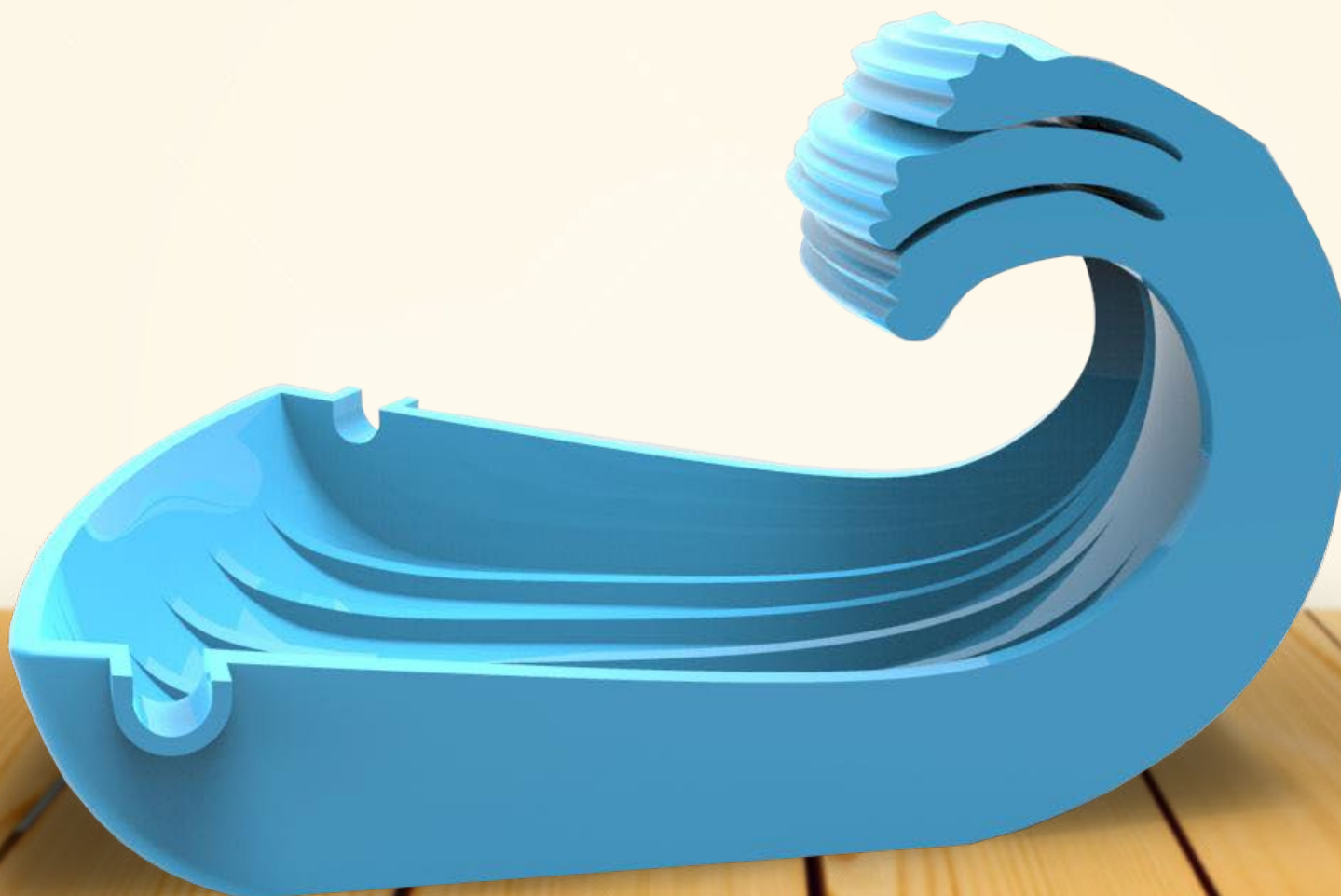
The user then grabs the spoon with a clenched fist for greater control. Wave encourages user to perform familiar action with more efficiency.



Rolling inclination of Wave will collect food as the pieces slowly roll over where the 'wave' ends.



A PLEASANT
FEAST.



in cooperation with
IdeaLab
RIT



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