

SURAK
AKADEMİ
PORTFOLIO



CV

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+90537 512 52 40

education

Middle East Technical University
Industrial Design
2013-2019

Politecnico di Torino
Design Sistemico
Erasmus Student Mobility Fall
2017

Pertevniyal High School
2009-2013

skills

3D Modeling and Rendering

Blender
Rhinoceros 3D
Tsplines
Keyshot
Autodesk 3Ds Max
Vray
Autodesk Inventor

Visualization

Adobe Illustrator
Adobe Photoshop
Adobe After Effects
Free Hand Drawing

Prototyping

Arduino
Processing
3D Printing
Woodworking

experience

Duravit AG

Production Internship
2016 - 1 month

Alimex Aluminum

Product Design Internship
2016 - 2 Months

Robotel Türkiye

Graduation Project
2018 - 4 Months

language

Turkish

Native

English

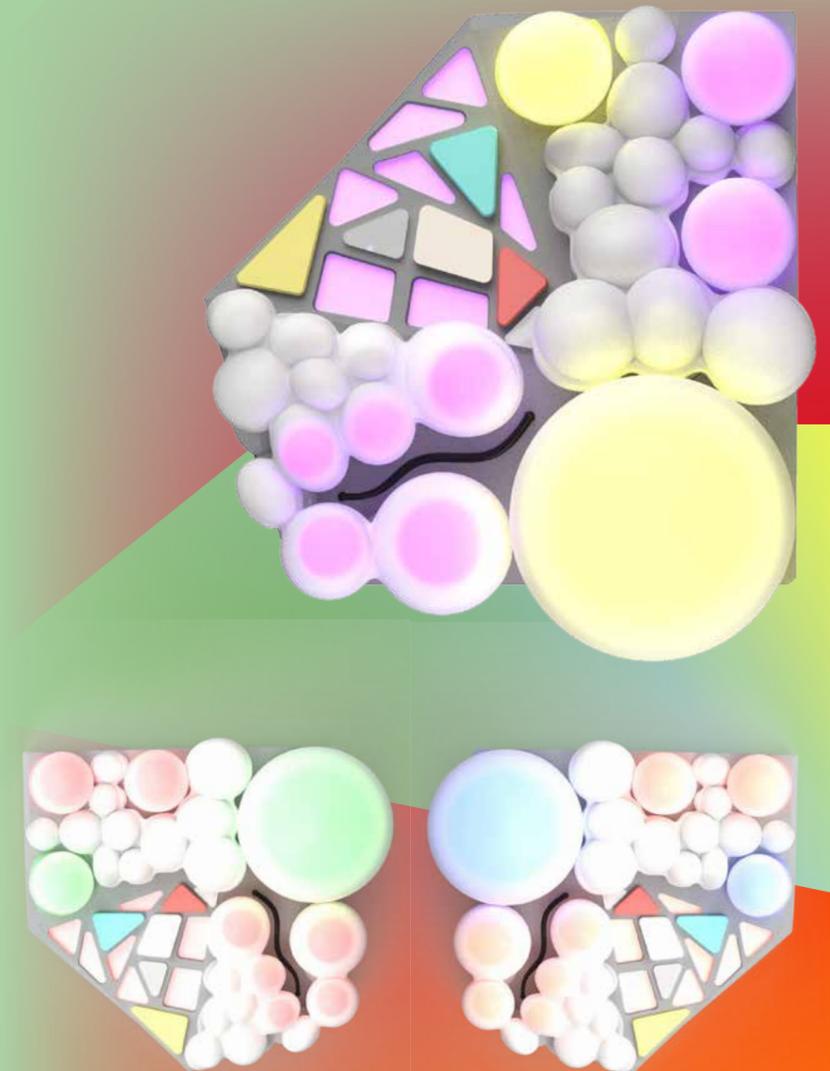
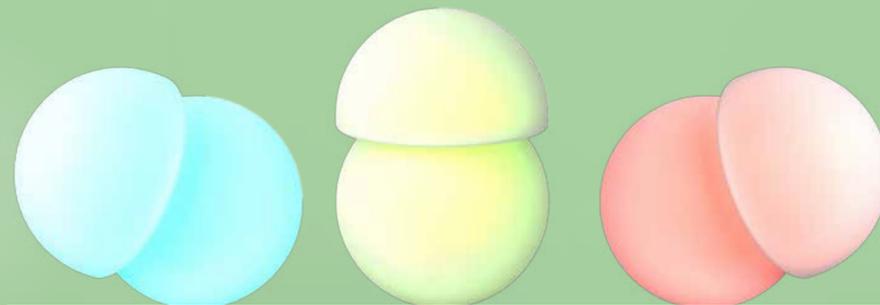
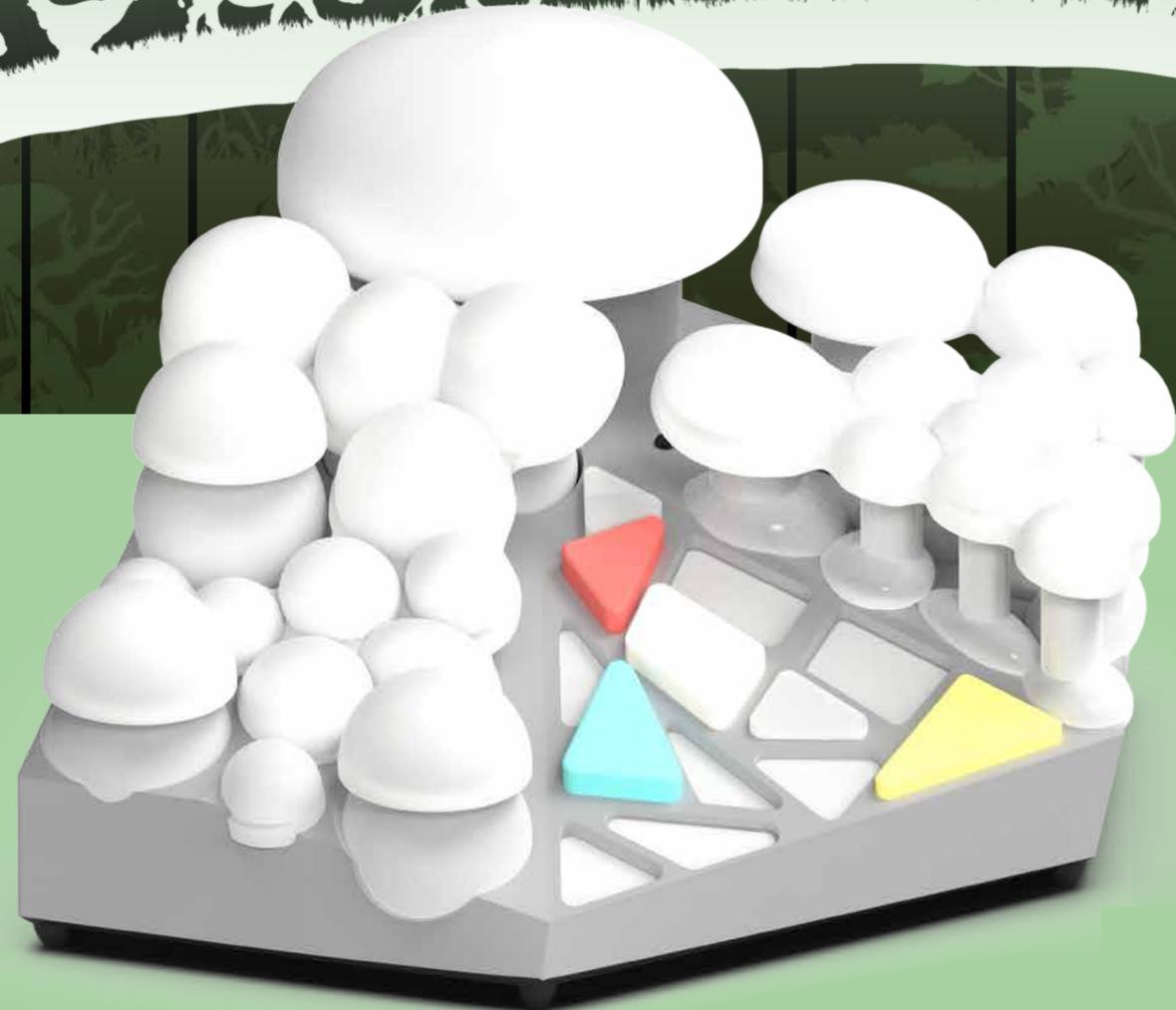
Advanced

Italian

Beginner

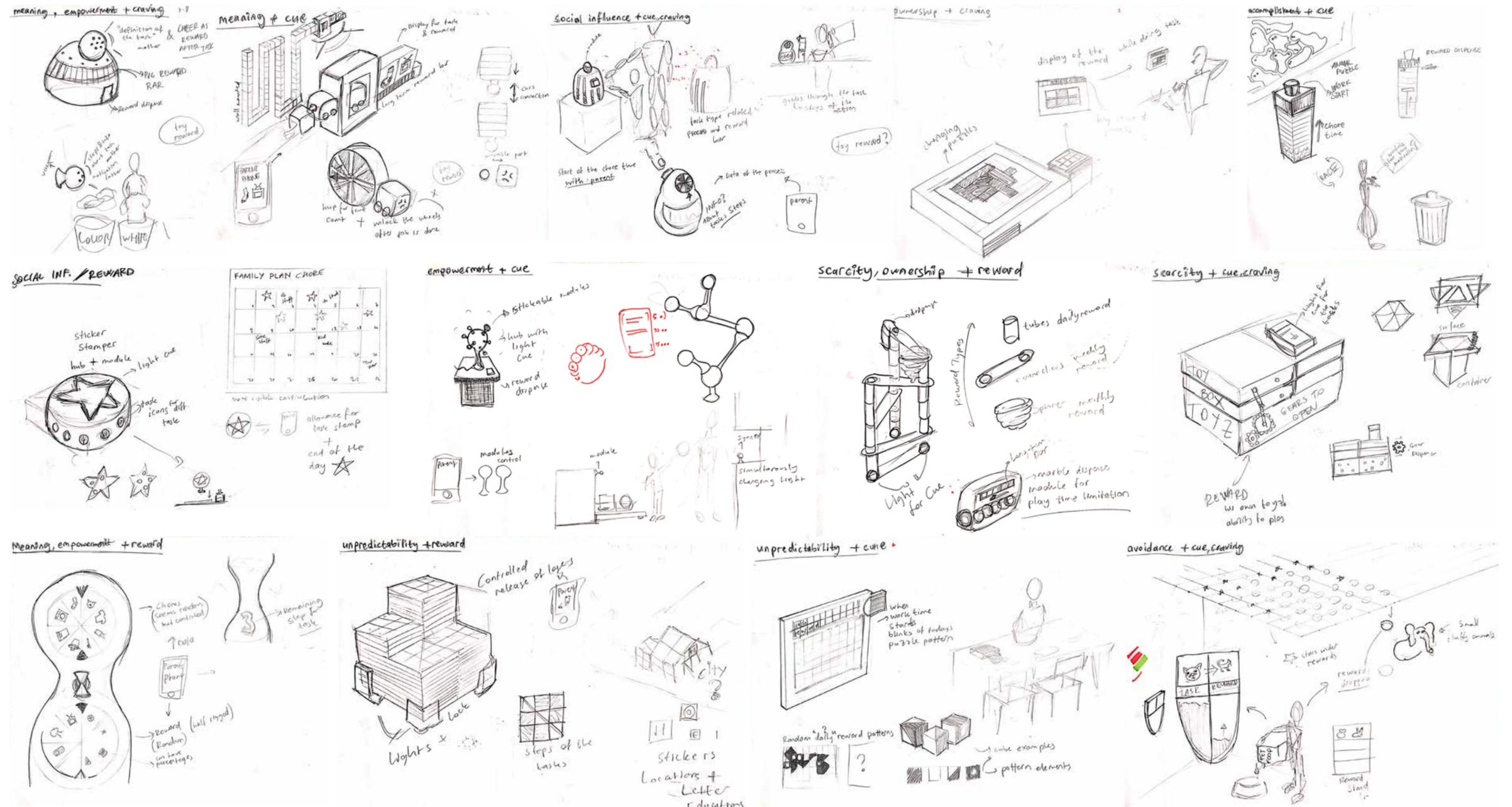
MUSH

Encourages children aged 4-6, to do household chores daily, with the guidance and help of their parents to adapt beneficial habits for their future life.



Design Process

Adapting to the responsibilities at living environment in adult life could be a challenging process for younger generations. To ease this process in the future, in other words, prevent the problem before it starts; Mush helps kids to develop healthy living habits through creating a cue, craving and reward circle that is supervised by parents.

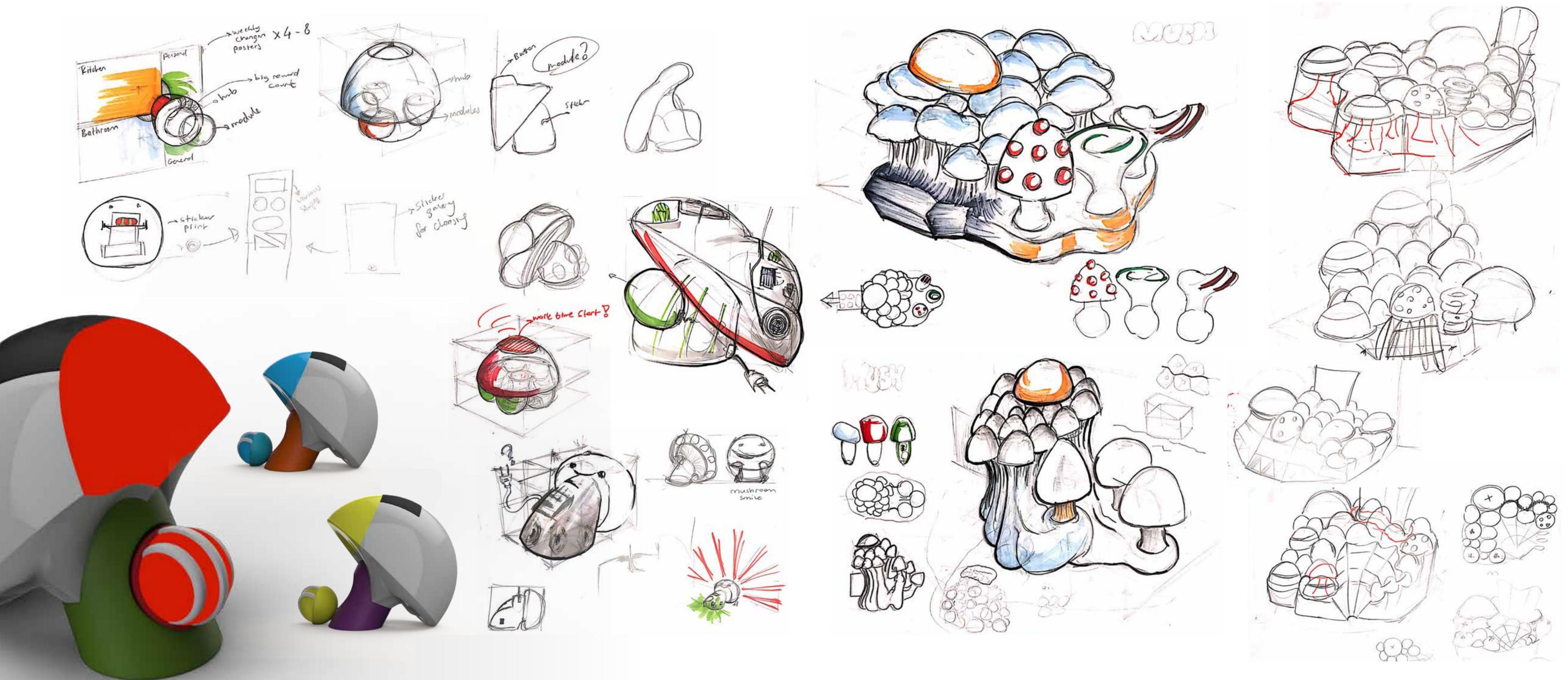


Idea generation matrix; referenced from, habit loop and gamification elements that would increase kids motivation to participate.

Form Study

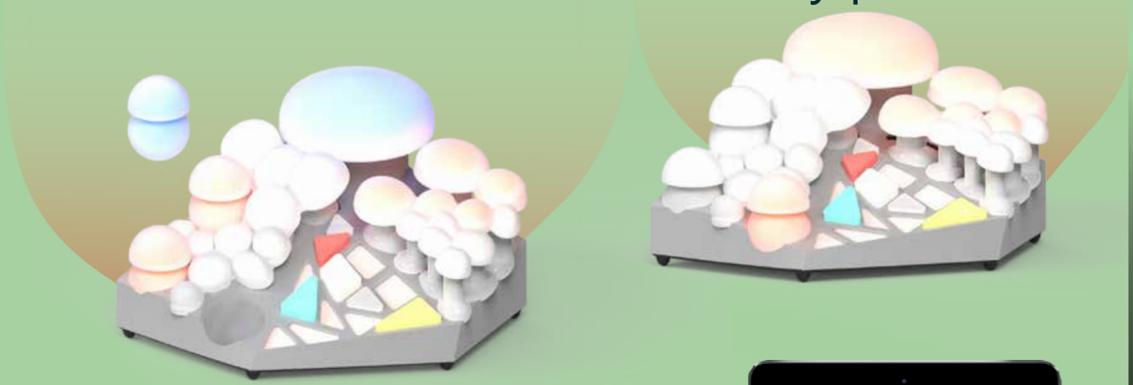
Adapting to adult life could be a challenging process for younger generations. Changes in hue and contrast of the color indicates the relationship between idle and active phases.

MUSH

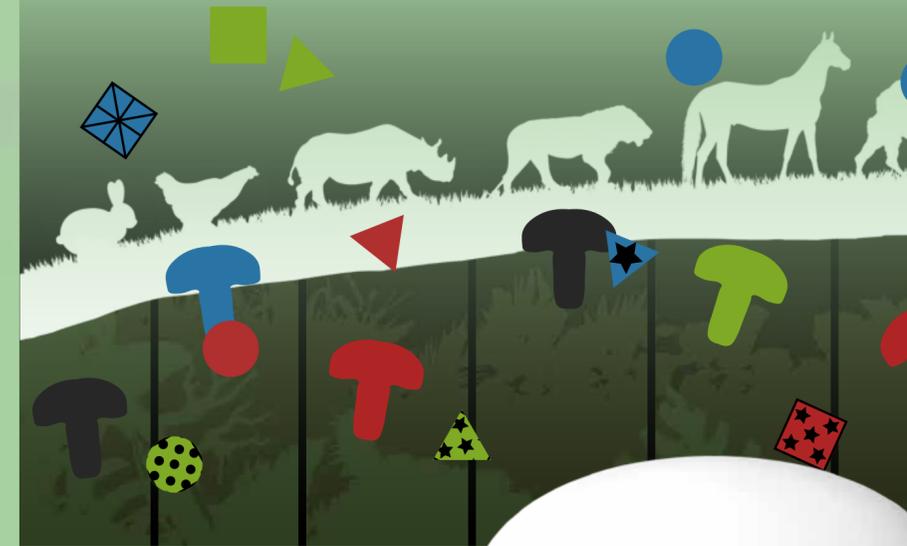
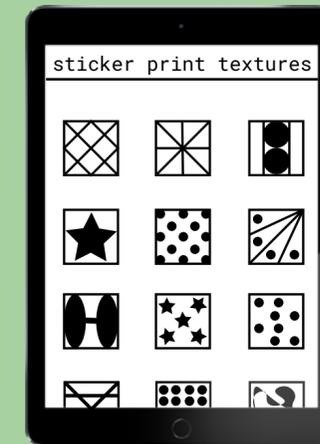


MUSH

The mushroom analogy is supported through forest and animals themed posters. These posters keep track of kids' progress through designated mushroom stickers, which are later conducted by parents for selected reward to be awarded.



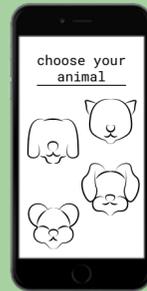
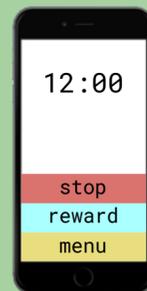
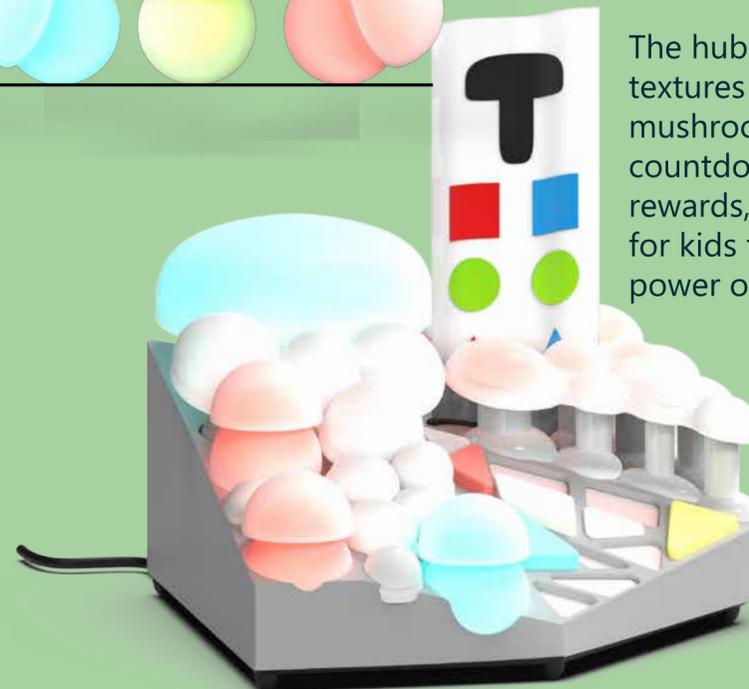
To get kids' attention, big mushroom and designated module in relation to them illuminates contrast color to the reward color when the selected work type started. The modules are charged wirelessly while attached to the hub and inform kids about chore's completion time by slowly changing their color to the color of chosen reward color.



Color difference between products is achieved thanks to rgb leds that are inside of child safe silicone covers. Mush's app offers guidance to parents through suggesting chores that are appropriate for the age group and enabling them to manage parental rewards that would be suitable for the desired habit formation.



The hub prints stickers with textures chosen by kids. While big mushroom stickers represent the countdowns for the parental rewards, small stickers are there for kids to stick for enhancing the power of rewards.

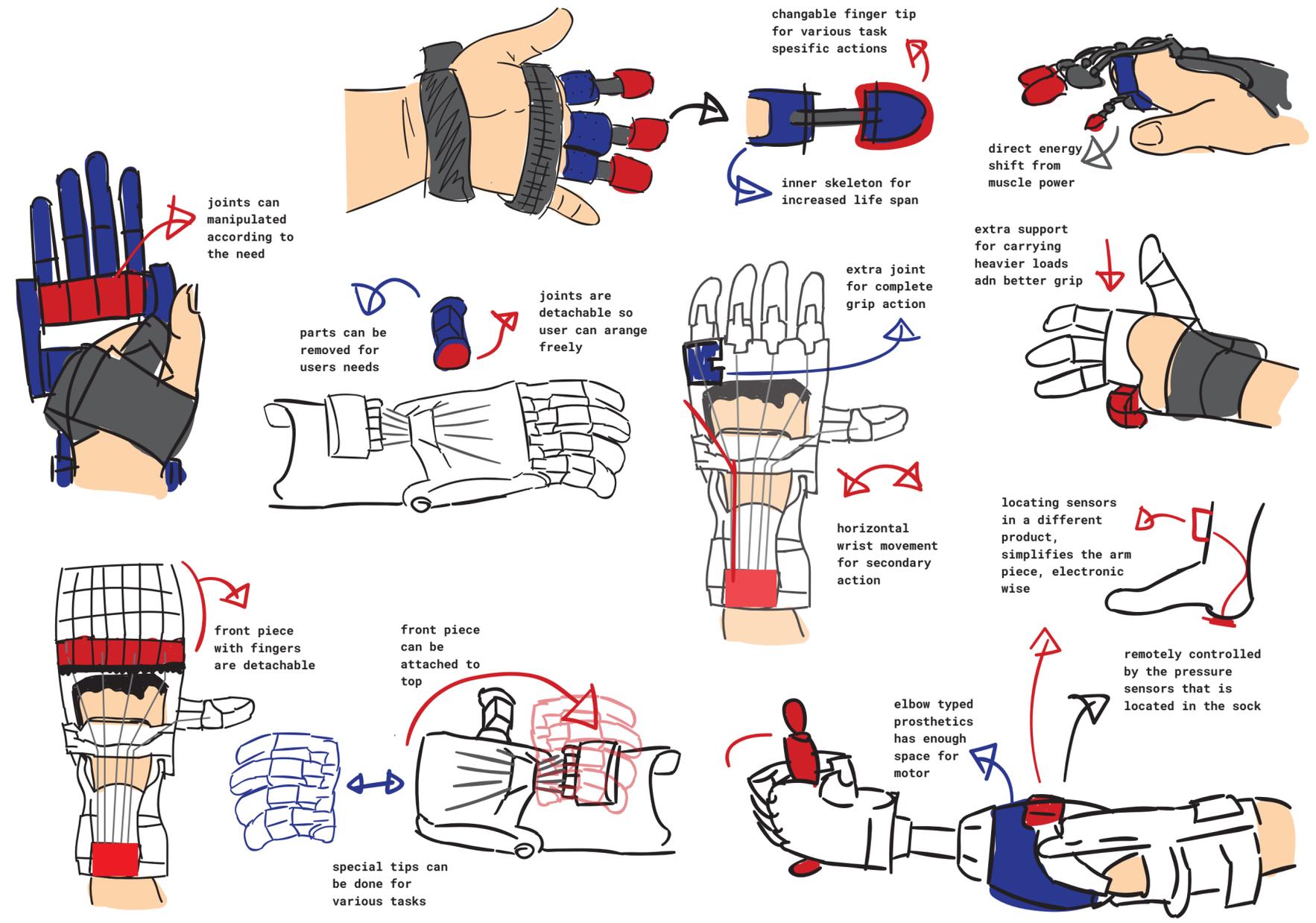


MUNCH

3D printed, mechanical prosthetic hand with interchangeable parts for attaching various task specific accessories to enhance usability in different actions for children with ABS.

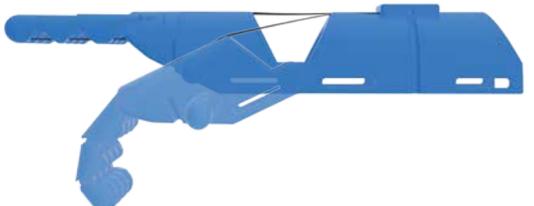


Design Process



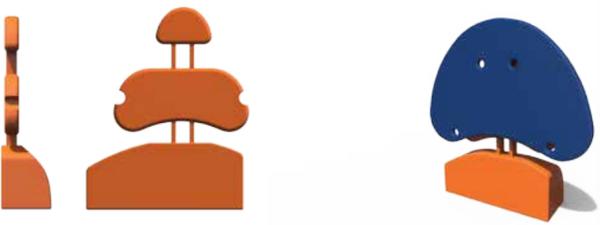
Attachment Suggestions

regular usage



Munch works with conventional mechanism; for gripping, user turns their wrist and the power is transferred to fingers through the strings. The system stays tense with elastic band while not being stretched.

swimming



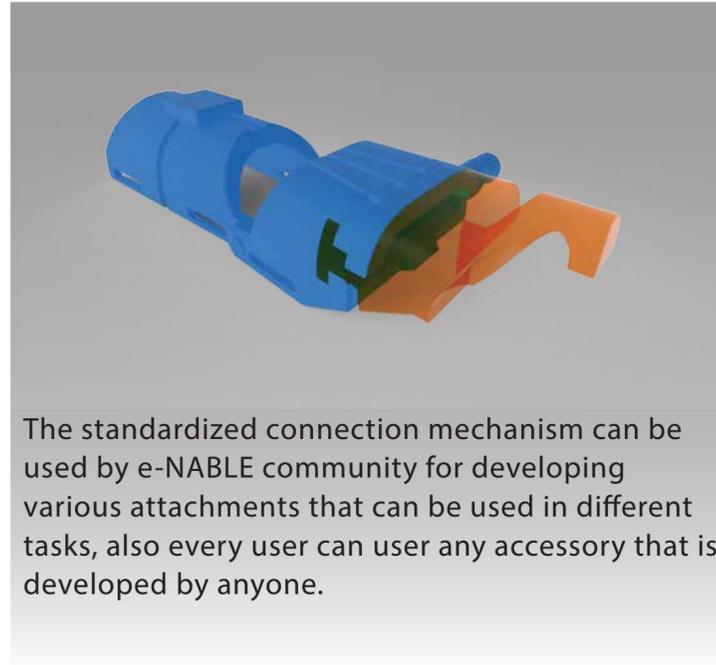
Swimming accessory is for giving children more balanced experience. It is specialized for children's swimming paddles for having same surface in both hands while they are swimming.

biking

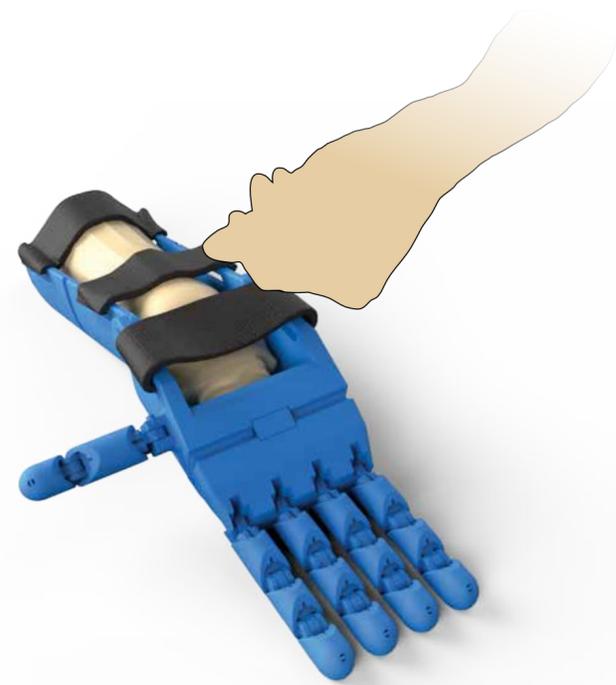


Biking accessory is for preserving sturdy grip at the handle while being able to use breaks with it. Asymmetrical shape of the handle allows gripping securely while preventing injuries from accidents.

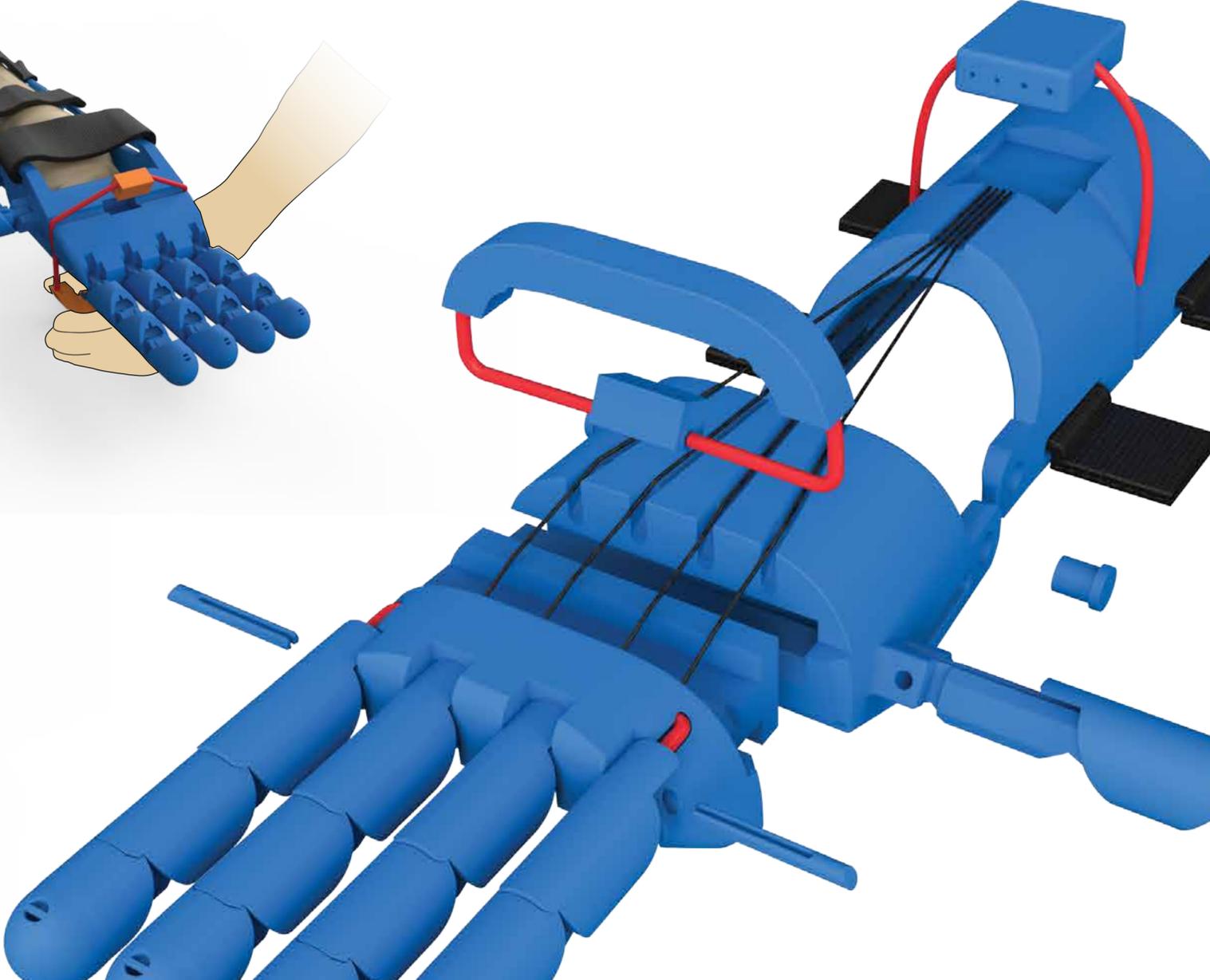
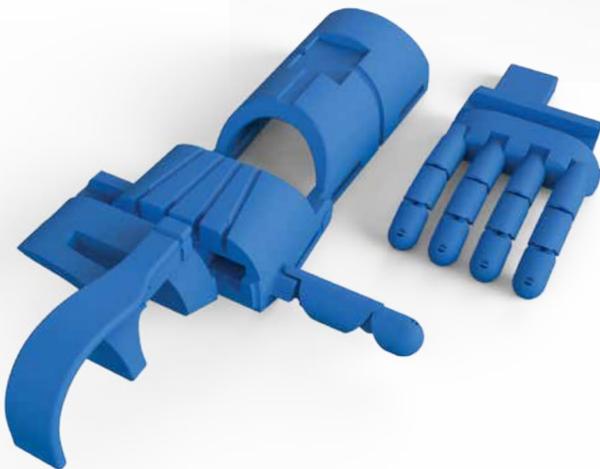
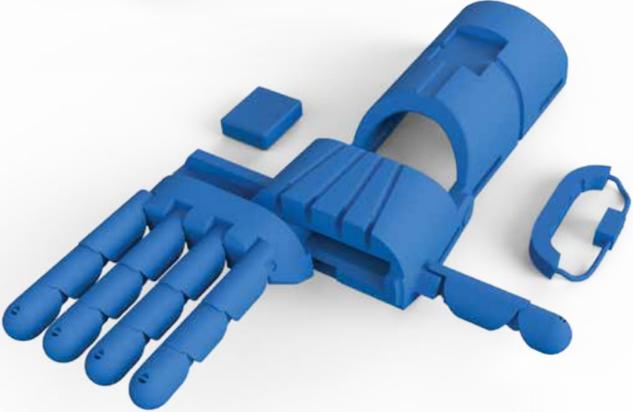
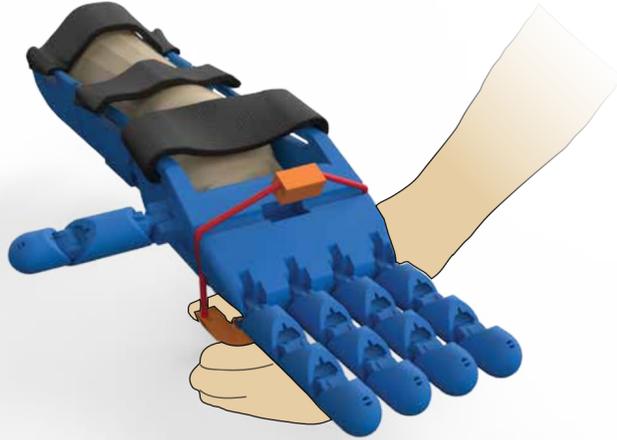
framework



Usage

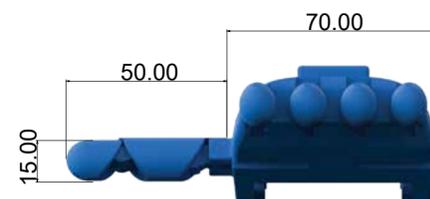
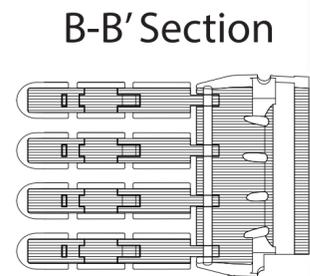
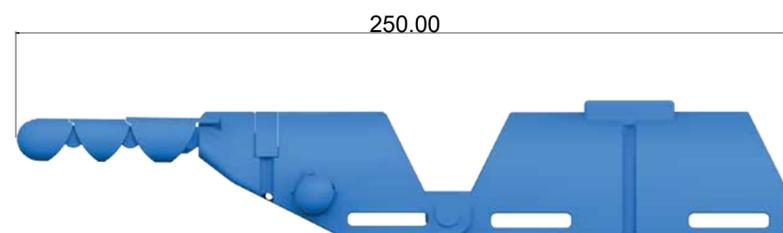
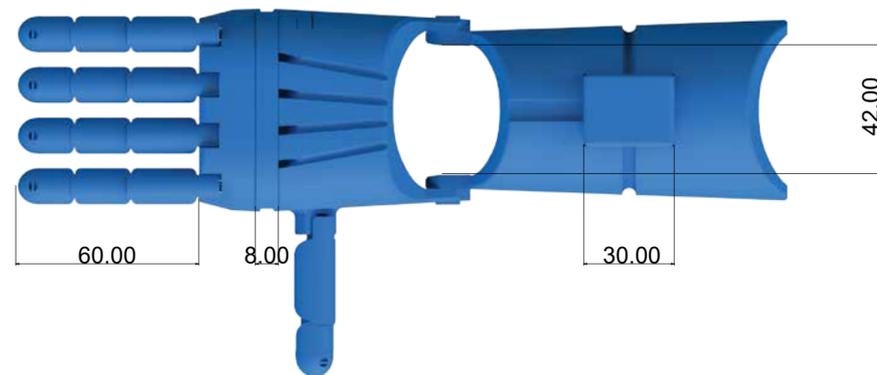


User attaches hand with velcro straps and front part can be changed after taking lock bracelet out.



Production

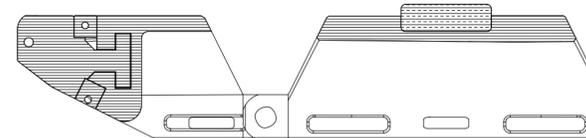
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Layout on the standart 3D printerboard

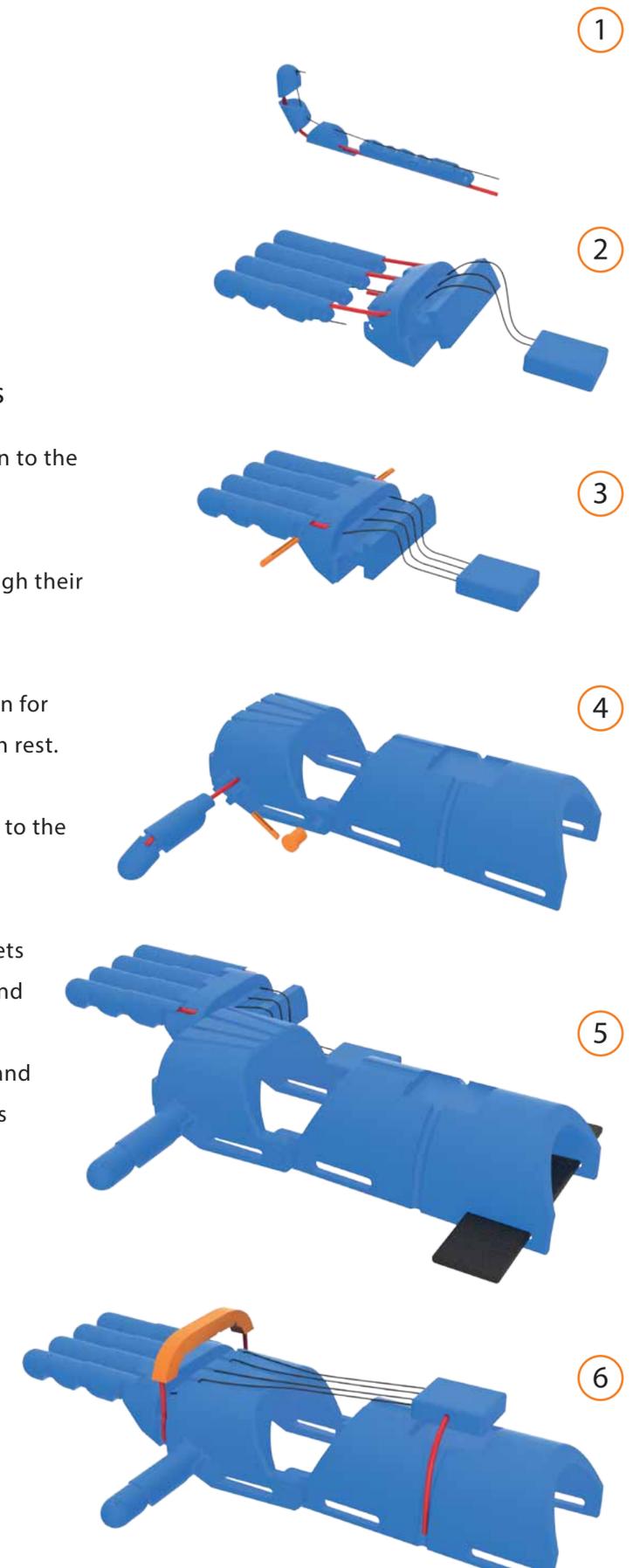


A-A' Section



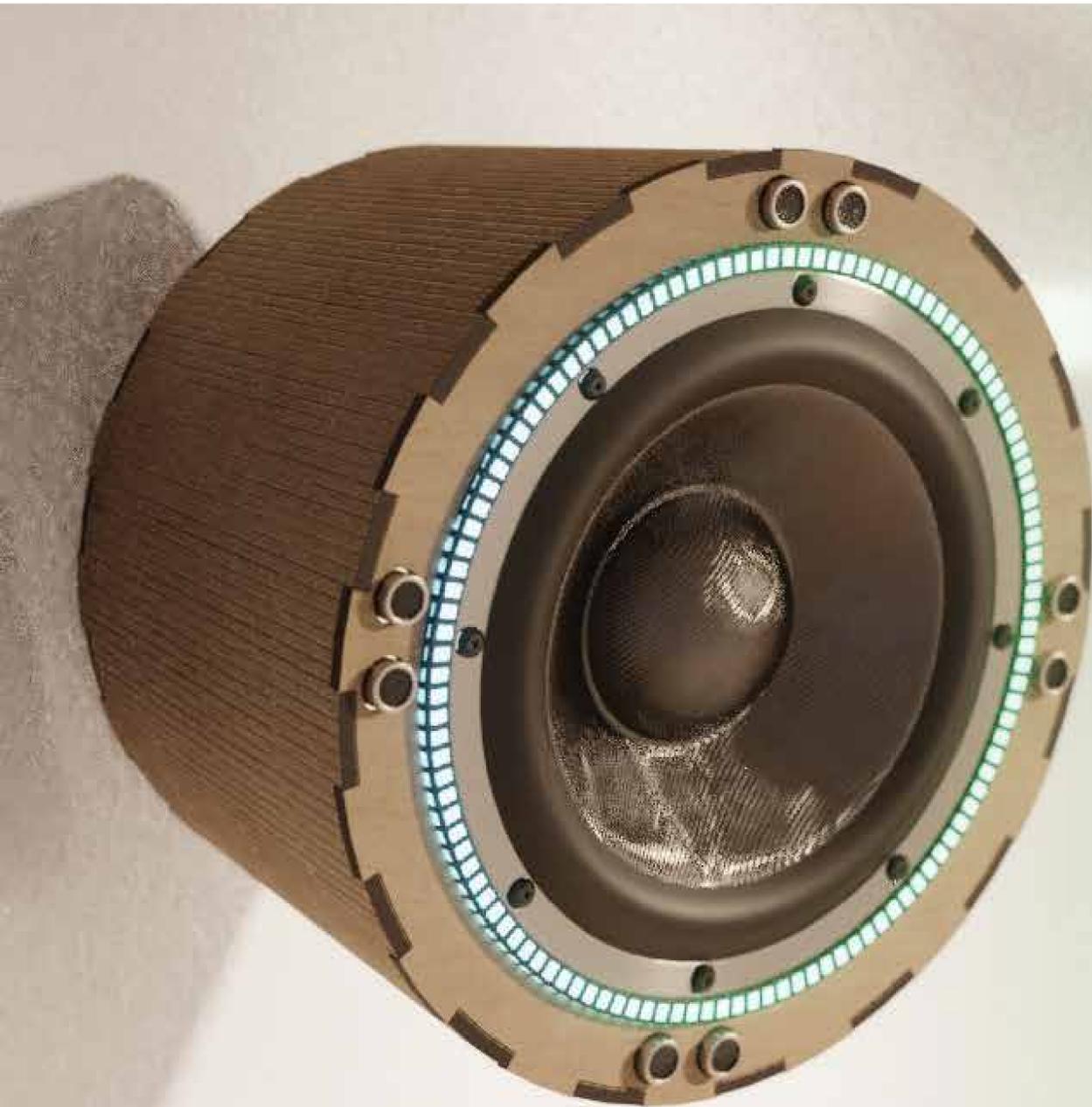
Assembly Process

- 1- Strings are tied down to the tip of the fingers.
- 2-It will continue through their own holes.
- 3-Two pins are putted in for connecting fingers with rest.
- 4- Thumb is connected to the main hand part.
- 5- Velcro and fingers gets connected with the hand
- 6- The locking bracet and string connector comes together in the end.



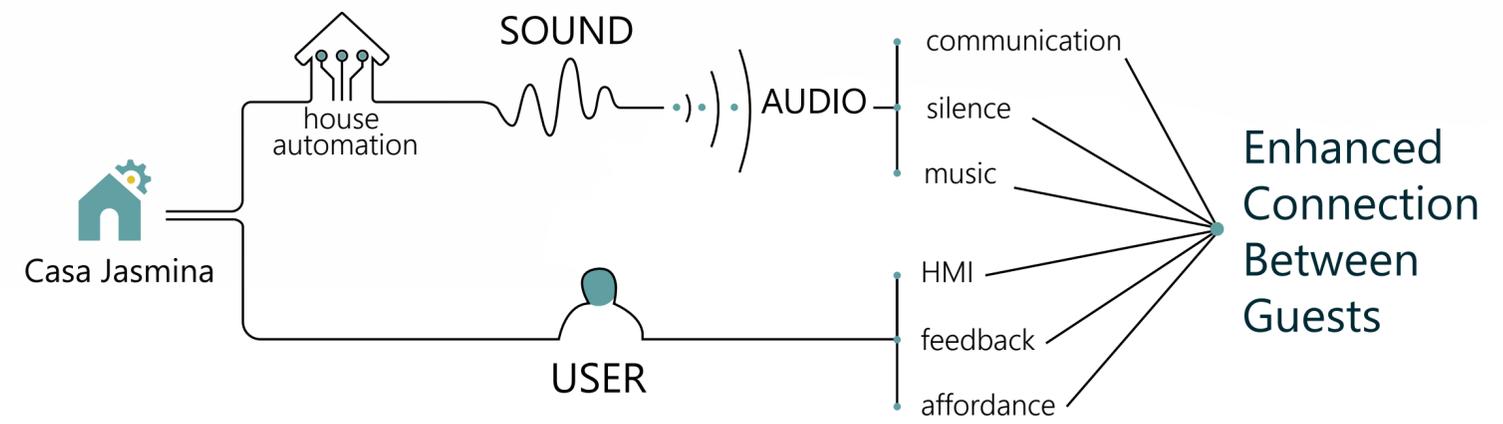
SANDBOX

A modular audio system that is designed as a tool and an entertainment device for the guests of FABLAB Torino's Casa Jasmina.



Collaboration with:

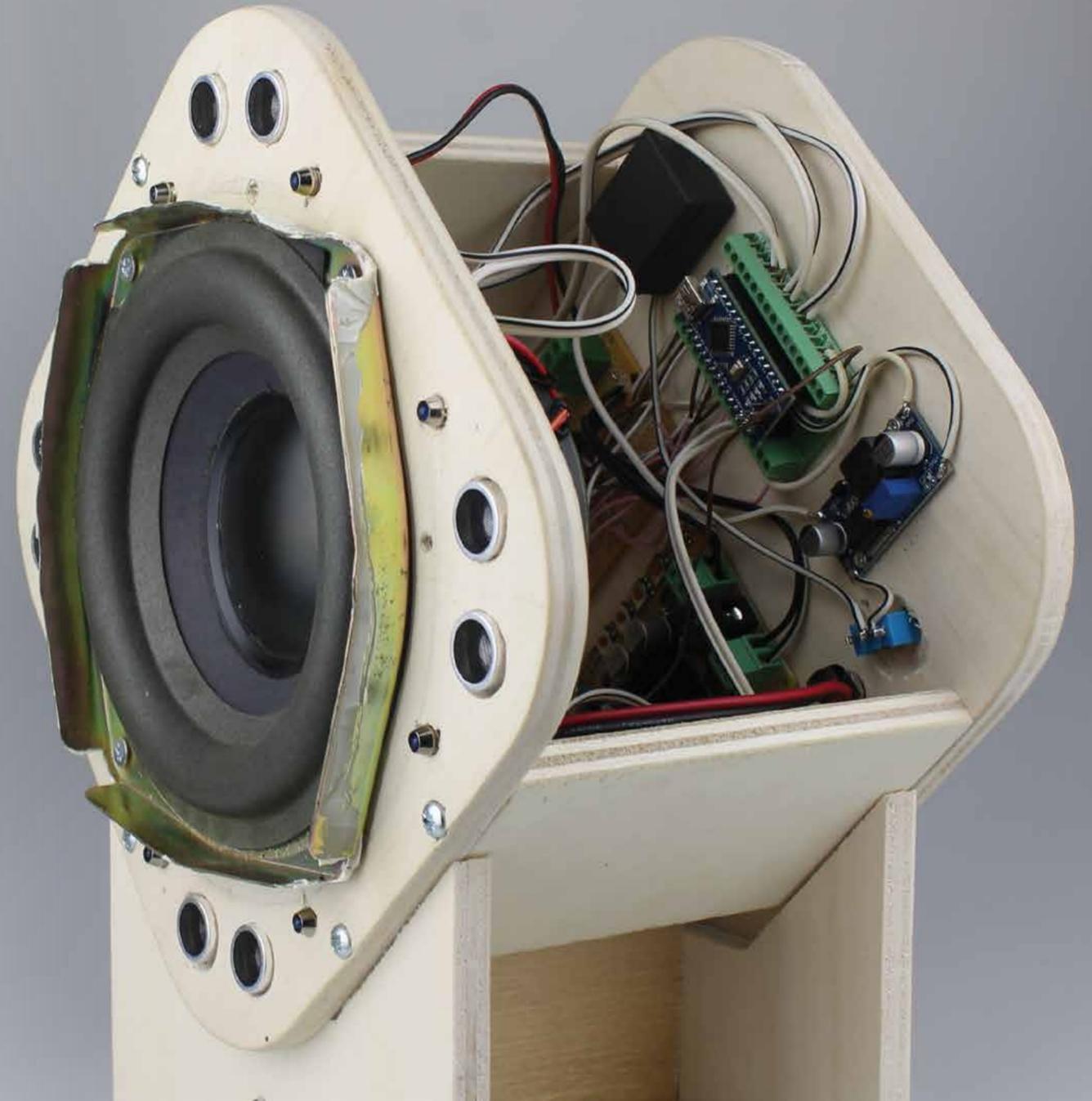
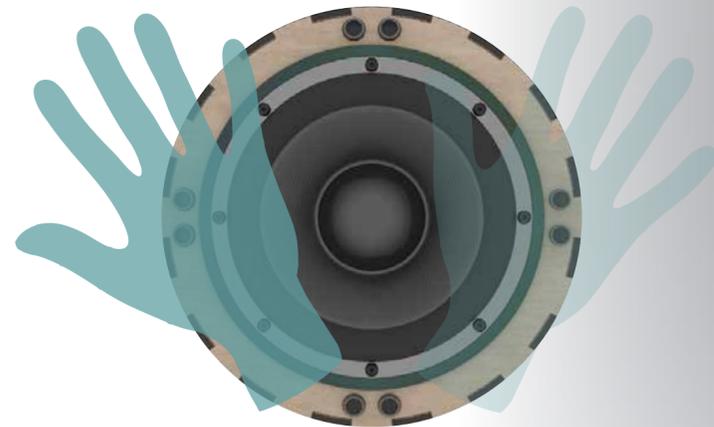
Team Members: Tommaso Dell'edera
Emanuelle Ingrosso
Julia Robin
Zhao Shuyi



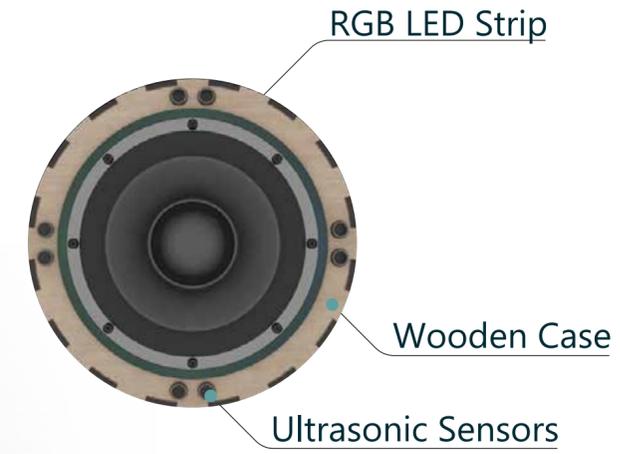
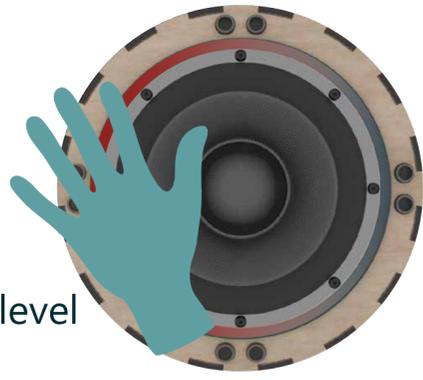
Designed as a tool for **developers** that they can adapt as they need and as an entertainment device.

It will offer different functions like **noise cancellation** and **positional sound**.

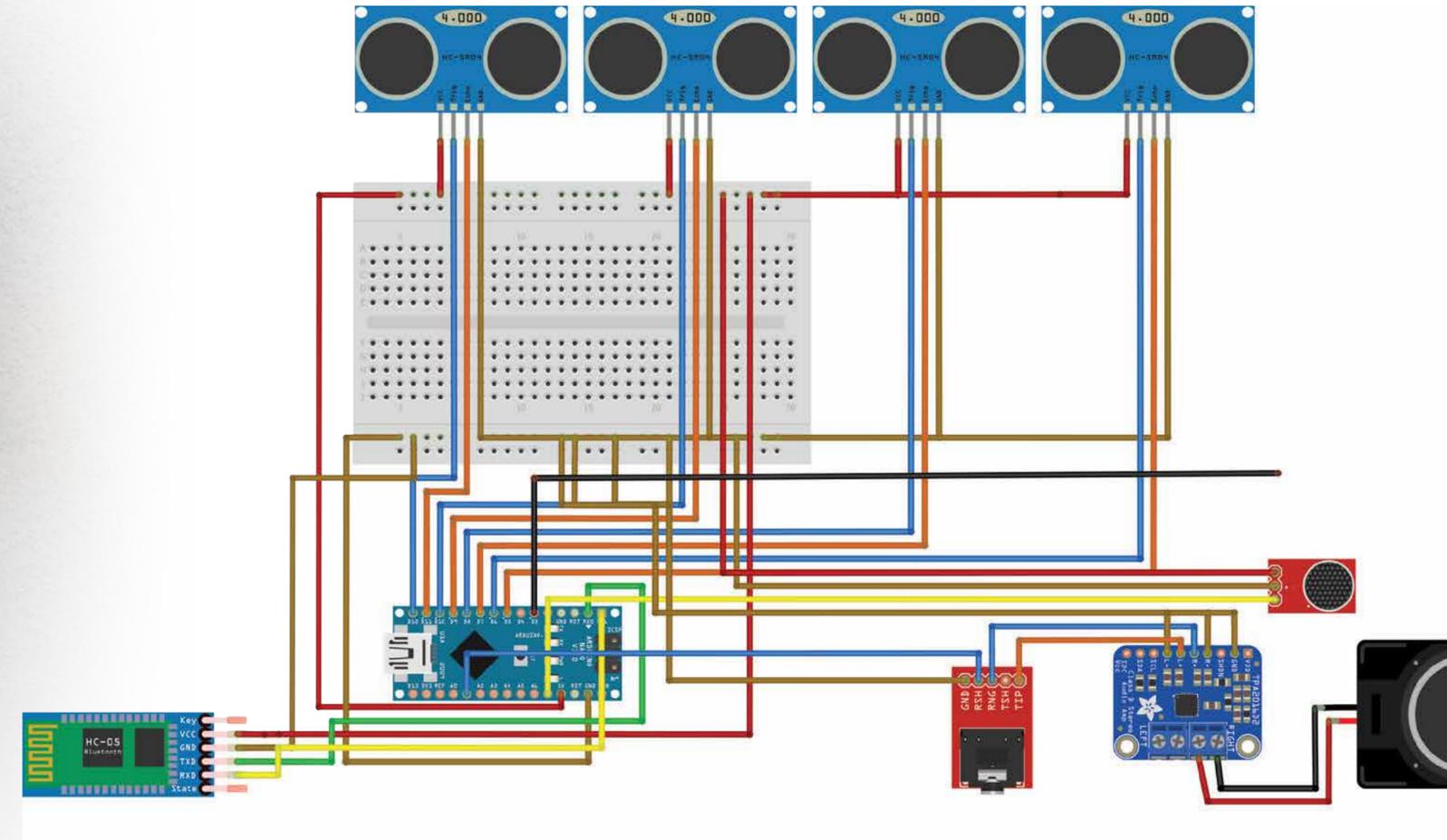
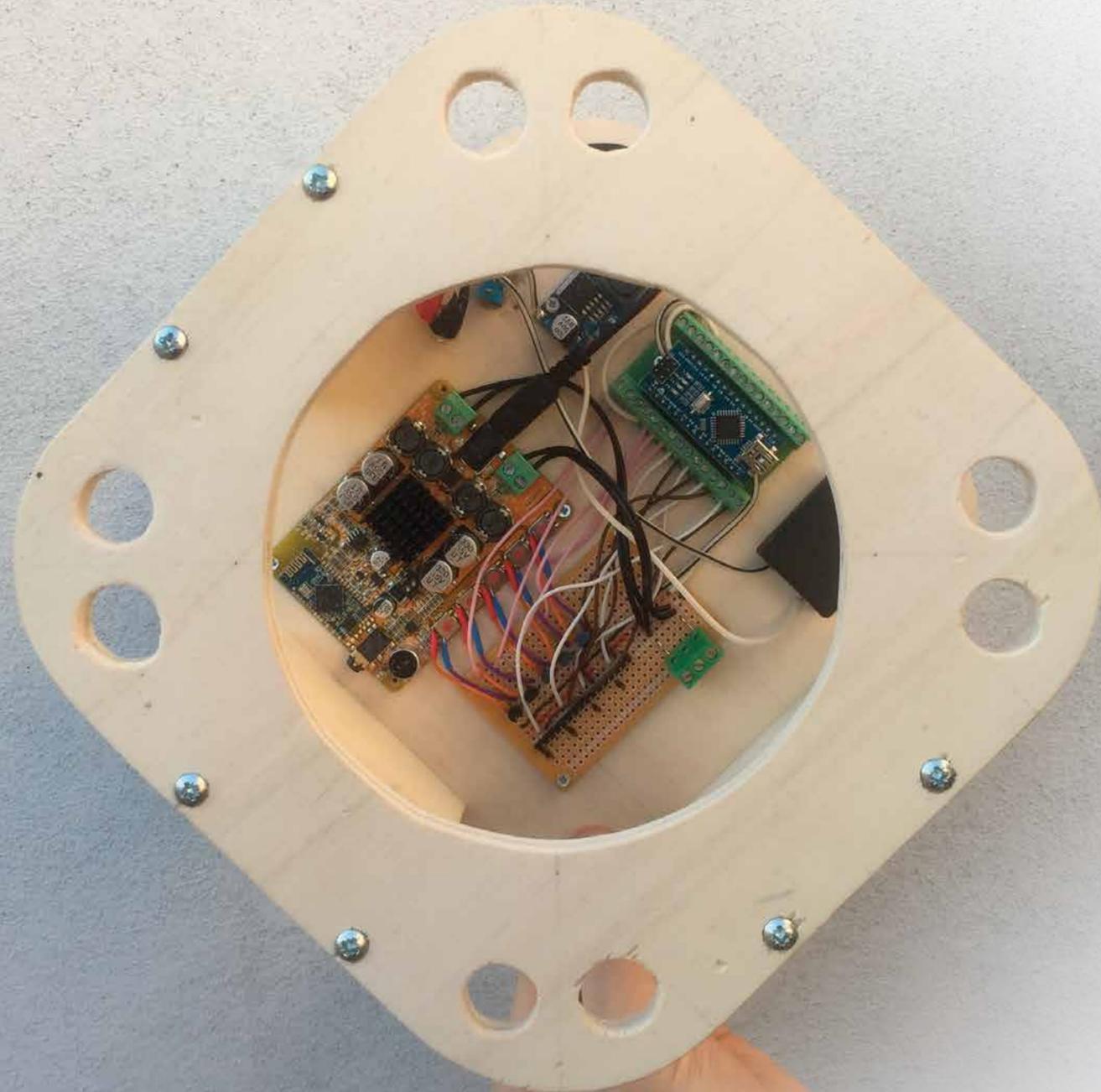
It will be controlled with **gestures**, making the interaction accessible and entertaining.



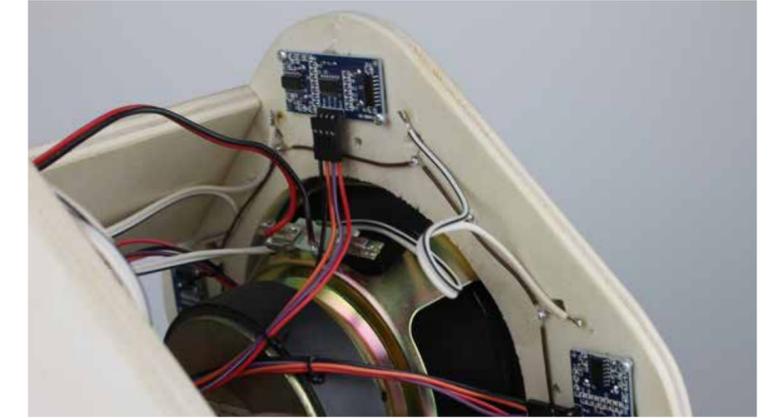
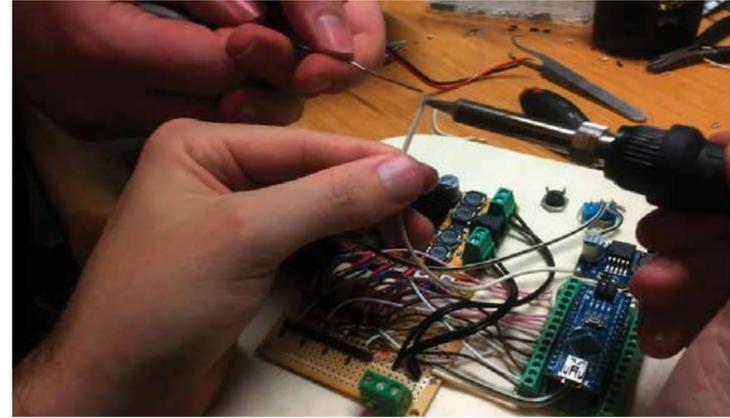
Circular light feedback for gestures, sound level and connection.



The arduino computing module is both extremely related with the user group and open to **upgrades and improvements.**

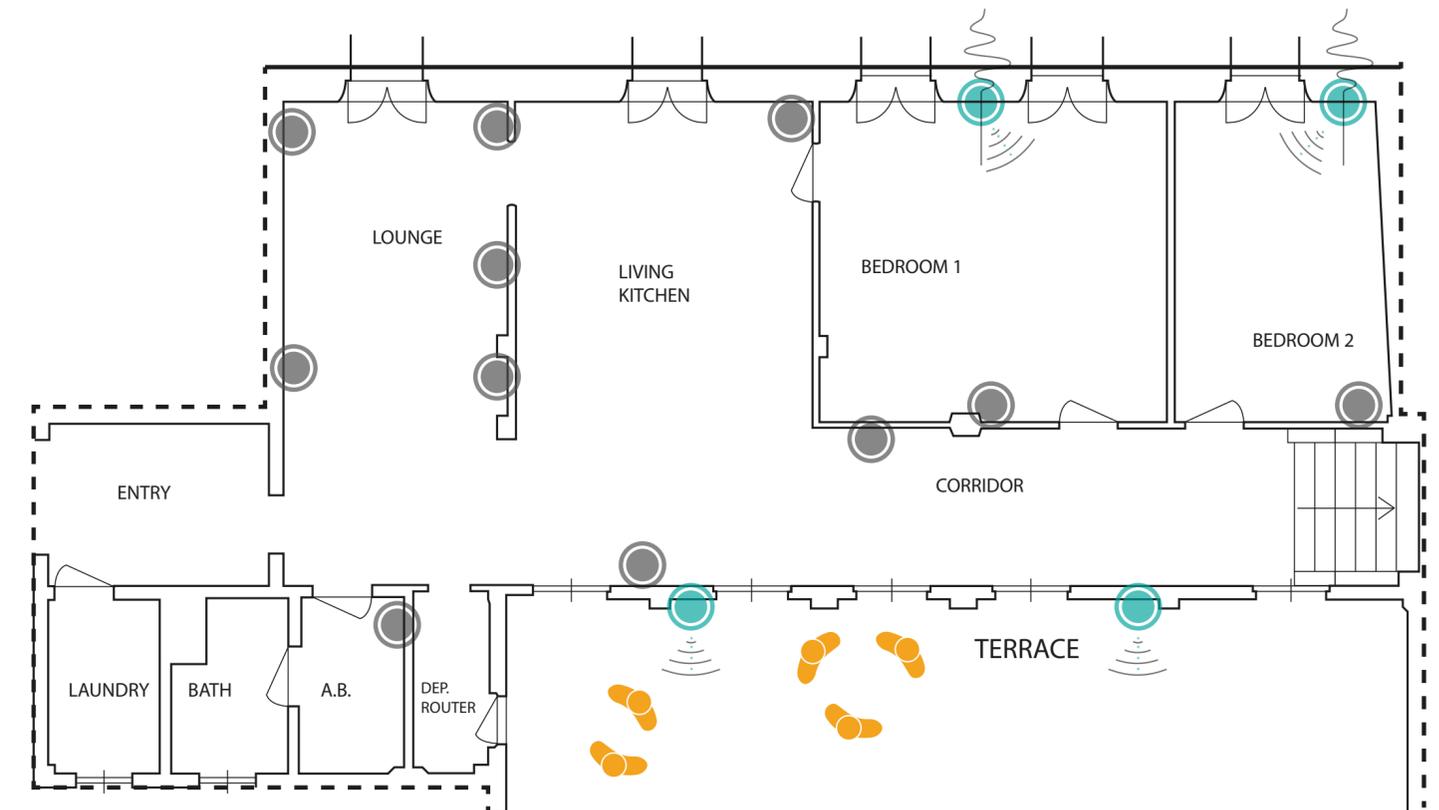


Making Process



The prototype is built on wooden case. The product can be produced by simple **maker tools**.

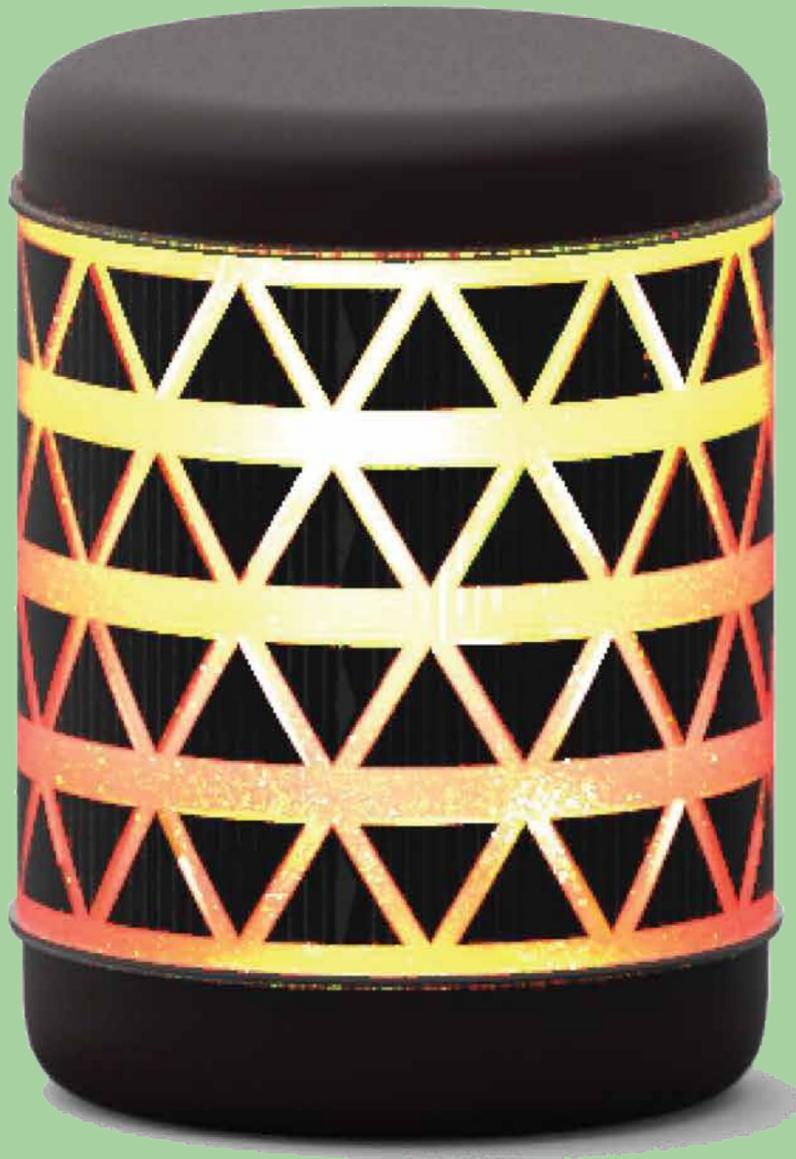
We also organized locations in the Casa Jasmina for the different functions of the product.



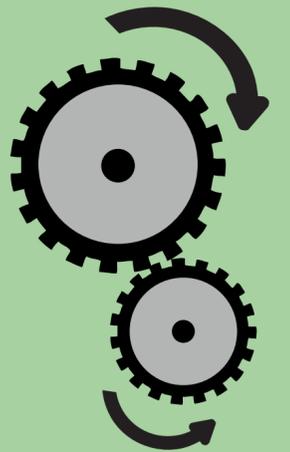
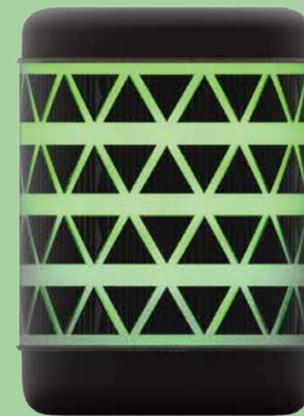
BUMEN

Bumen is a home entertainment product that can be assembled by simple maker processors.

Collaboration with: Yaşar Egemen Ada

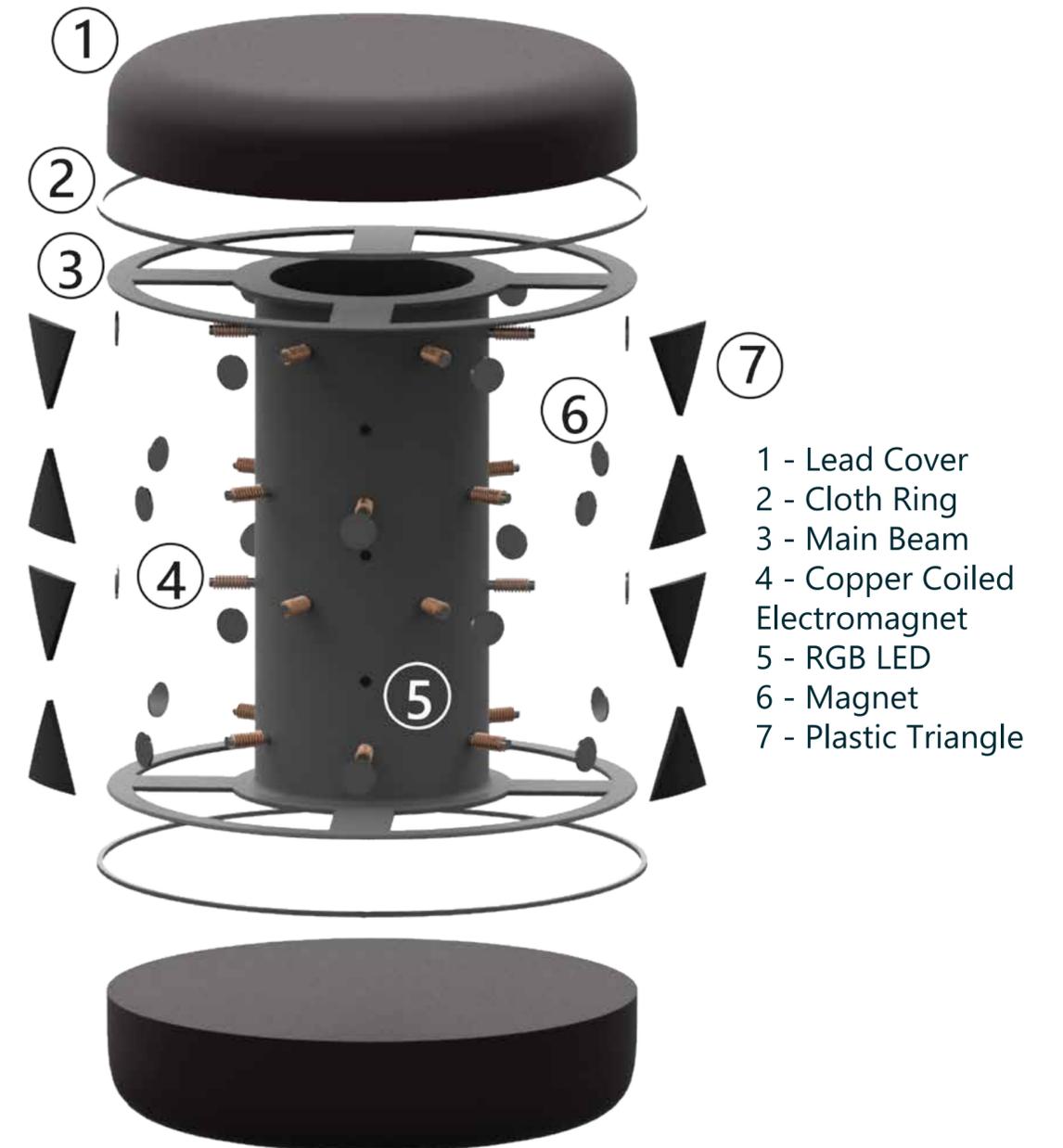
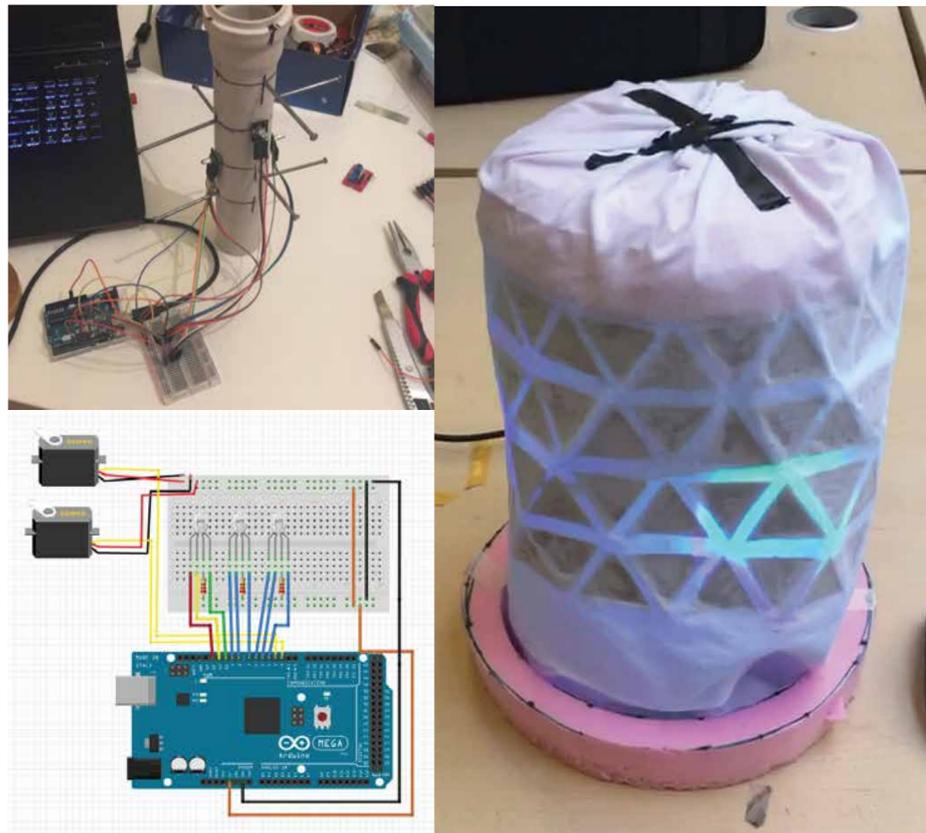


Bumen visualizes a song with **light** and **motion**. It turns music into harmony of sound and display, creates an ambiance suited for the user.



User can use Bumen by connecting their phone via Bluetooth. The magnets and RGB LEDs create a visual entertainment synchronised to the music with light and motion.

The working mechanism for movement and lights are prototyped with arduino.



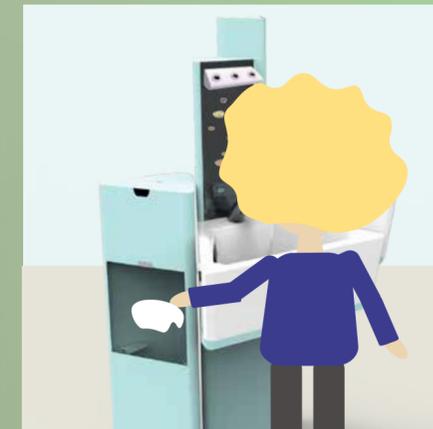
KIDS WASHBASIN

This kids washbasin is for kids aged 7-11. The design is focused on increasing childrens tooth brushing habits with creating a social activity.

Scenario



Hand washing



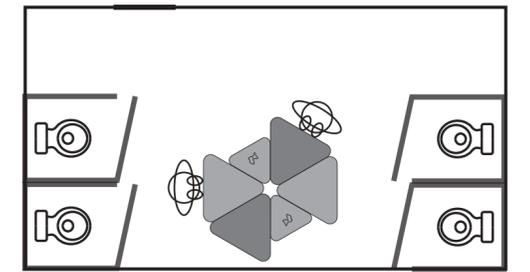
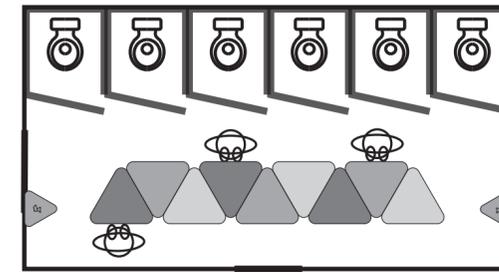
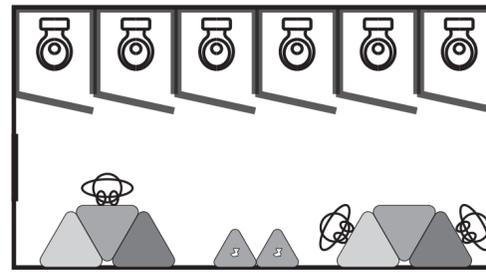
Hand-drying



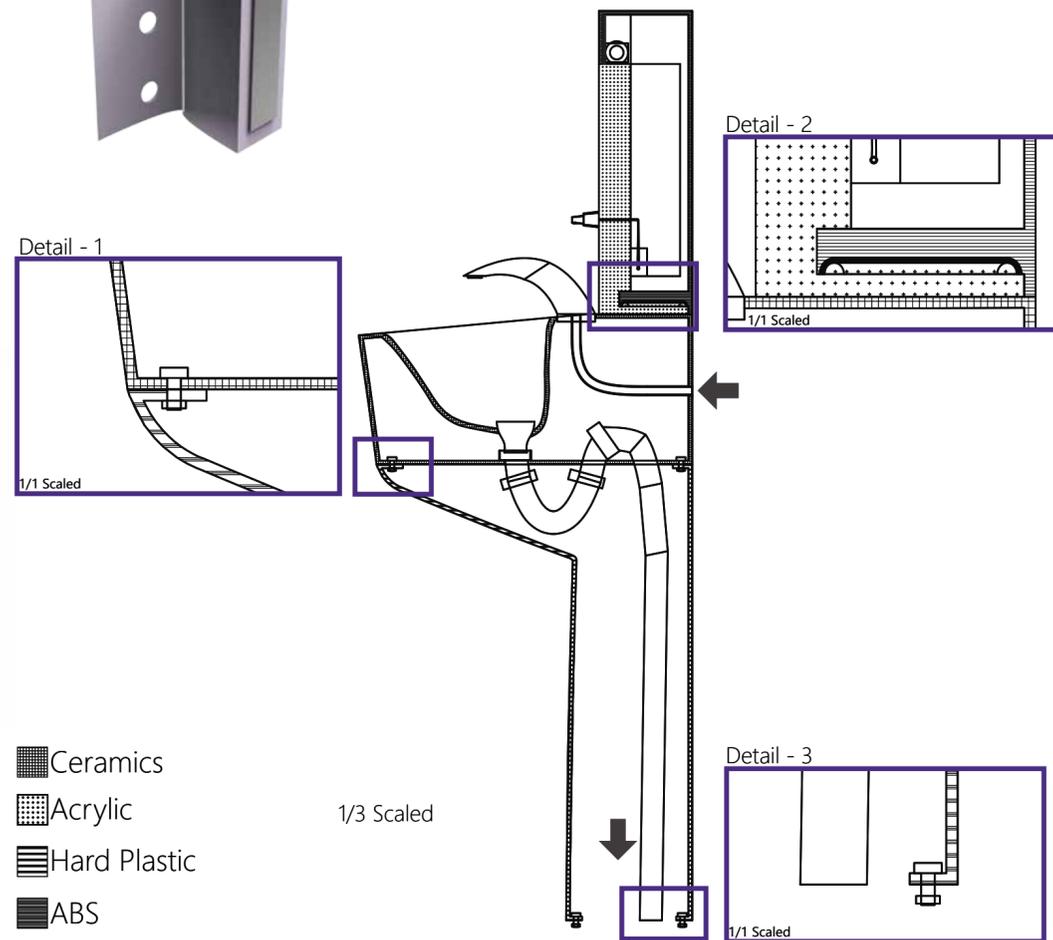
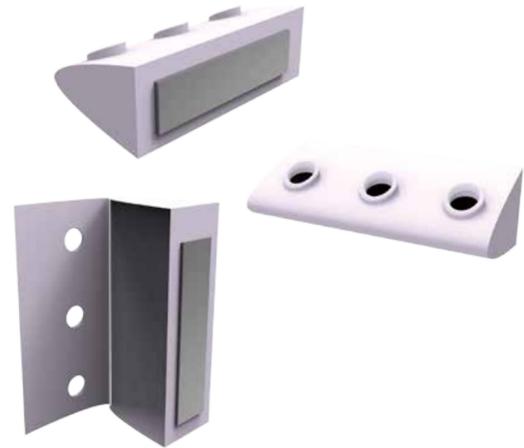
Brushing teeth

Collaboration with:  **Kale**

Team Members: Cemresu Kavalalı
Dilmin Yanık
İpek Erkan



The toothbrush container can be connected to the washbasin and starts the fish action for timer.



This kids washbasin is for kids aged 7-11. The design is focused on increasing childrens tooth brushing habits with creating a social activity.

The fish mechanism indication is inside the triangle cover. The shape is for easing connections.



VERTICAL OVEN

The vertical oven is a product that changes conventional oven door system with a vertical one. Due to that space usage and energy loss decreases.



Collaboration with: 

Team Members: Berkay Ercan
Hasan Burak Barlas
Rümeysa Tontuş



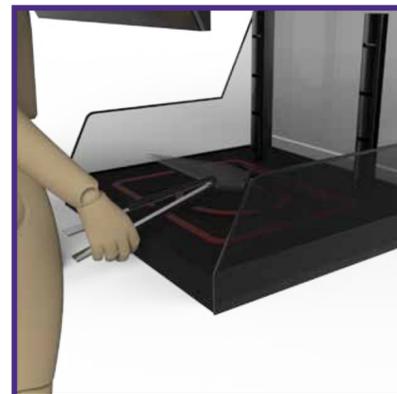
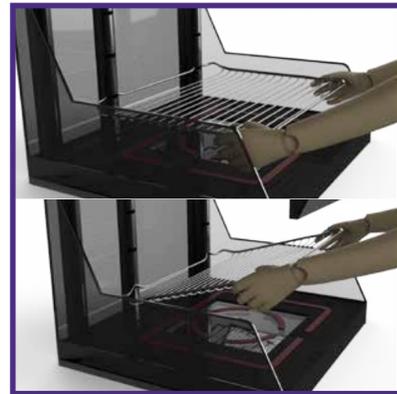
Interface

It has an classical graphic style to increase the retro feeling for the oven. Also the food can be checked from the camera.



Front panel

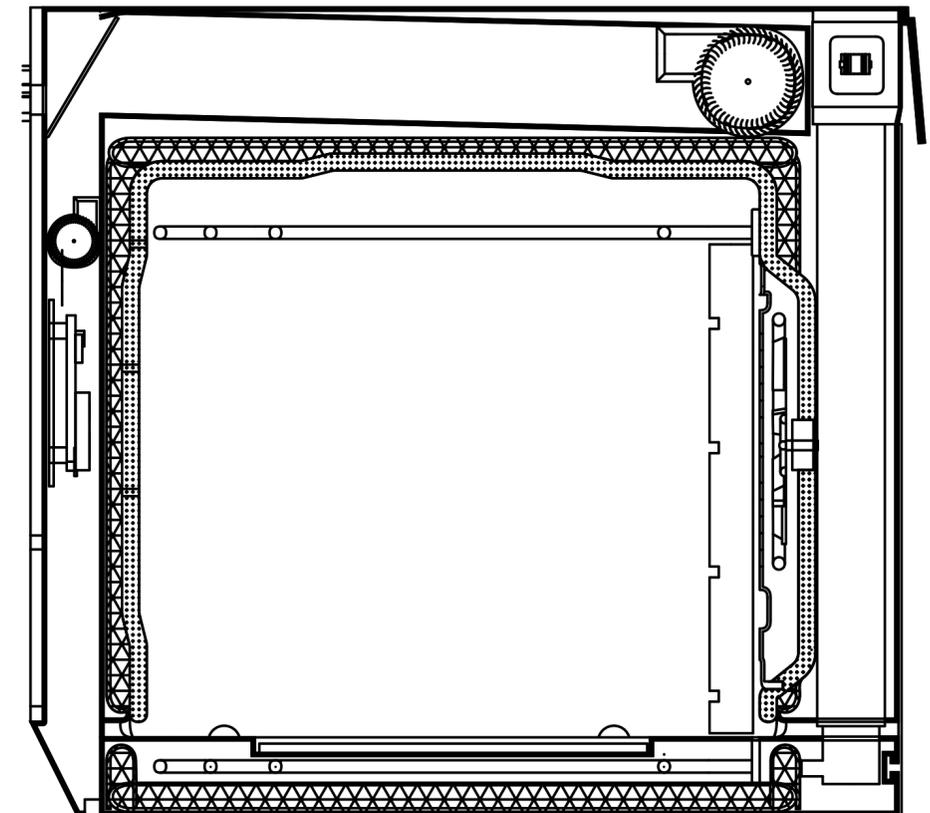
The front panel can be changed for blending in with built-in kitchen.



The bottom part is specialized for grill usage. Parts that needs to be cleaned regularly are detachable.

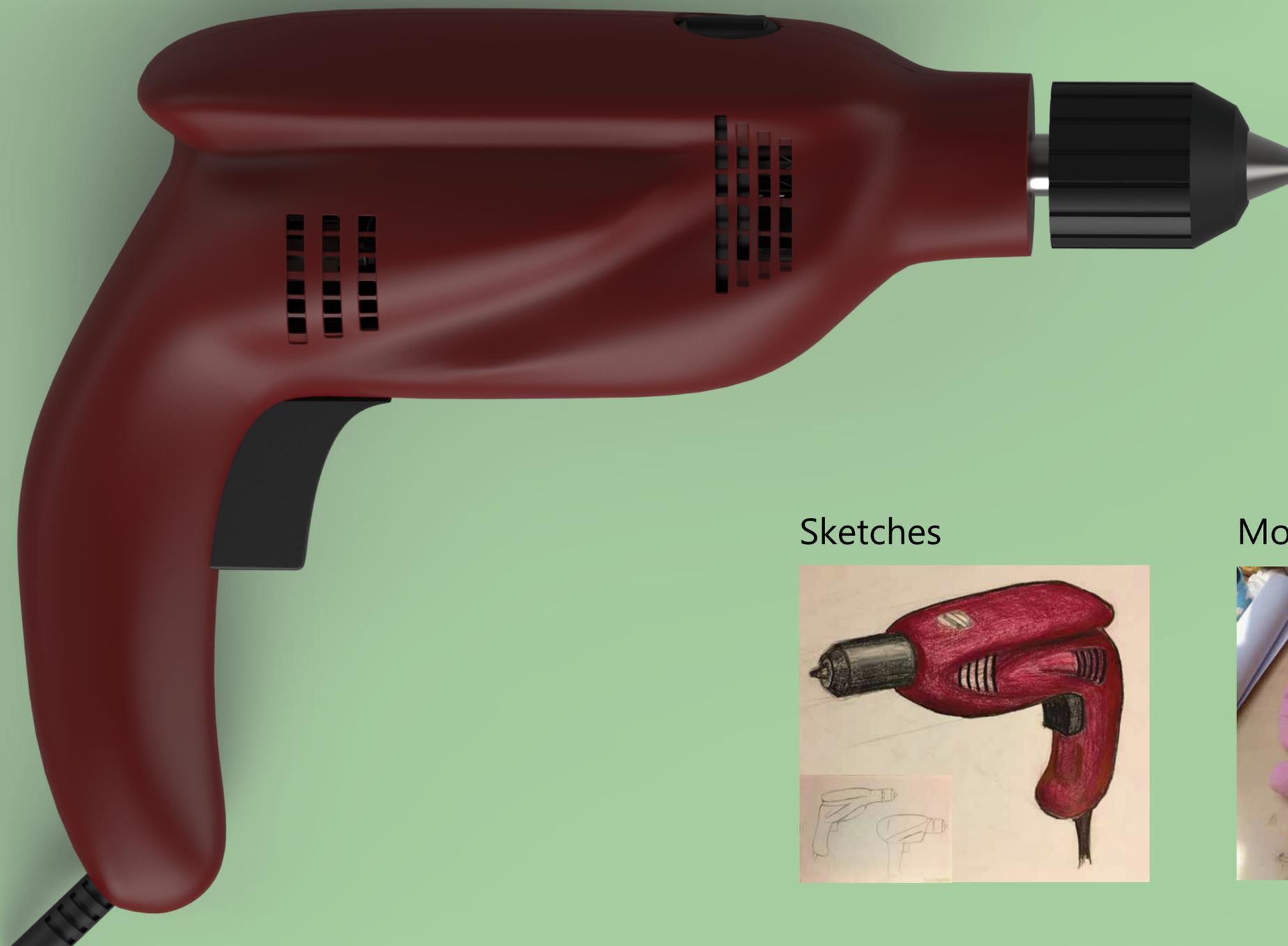
Section

Due to the change of the conventional usage, the section of the oven changed a lot. But, any changes about the materials is not needed.

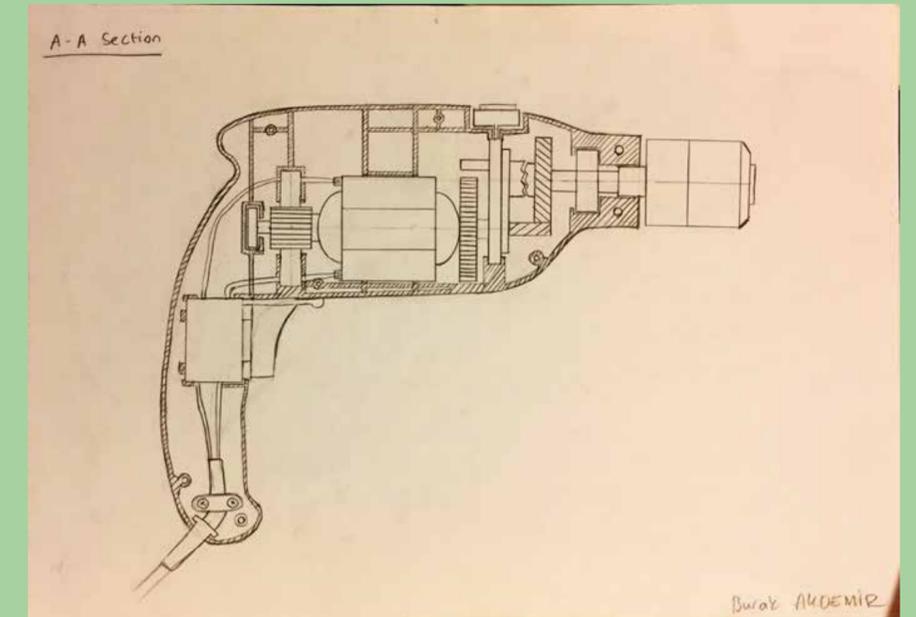


THE DRILL

The drill is a product that designed for daily users. The form of it specialized for creating different ergonomic approaches for the drill usage.



Section



Sketches



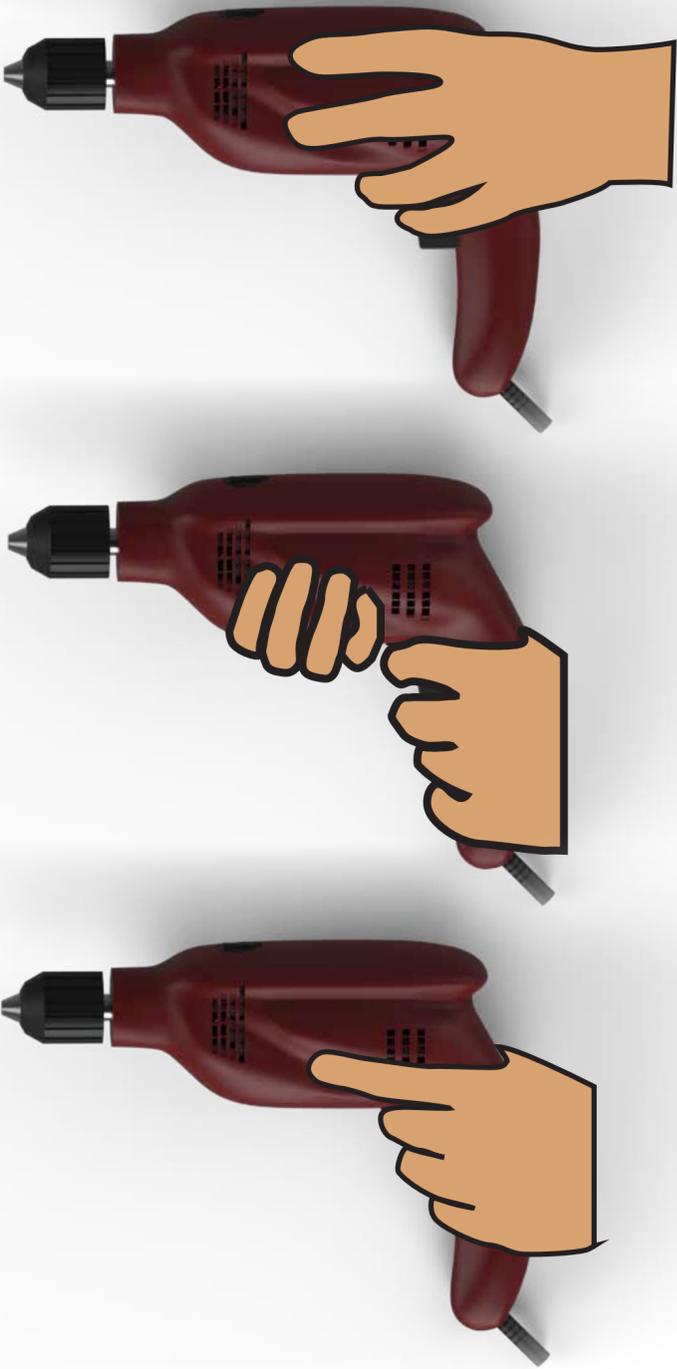
Mock-ups



Final Model



The drills design gives users different usage options.
Moreover, shape of the outer shelf suits the inner organization.



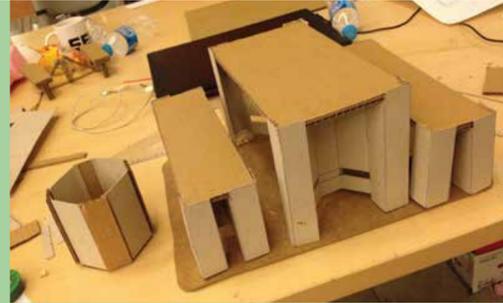
SITTING UNIT

Team Members: İdil Aydoğdu
İrem Karden Öztop

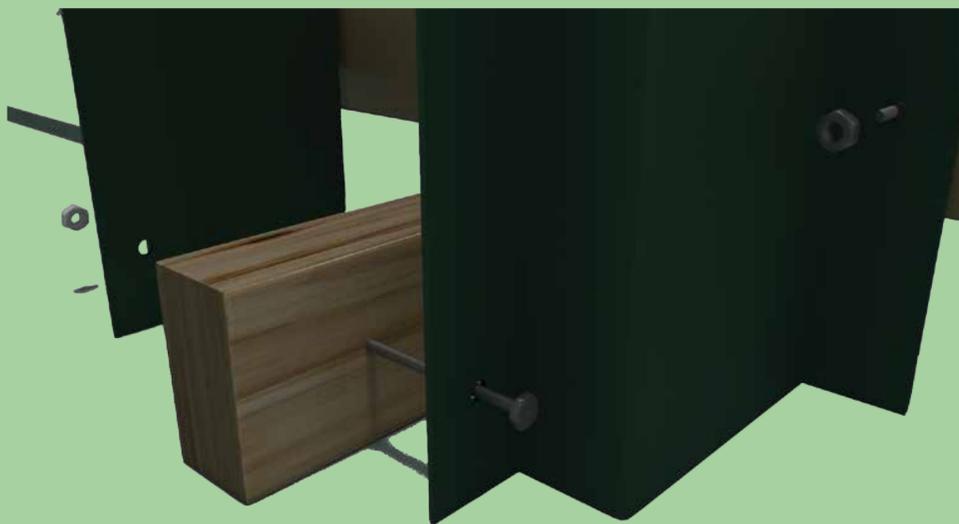
Sitting unit for the courtyard of architecture faculty. It consist repetitive pieces that are specialized for mass manufacturing. The connection details, structure and wooden pieces are standartized as well. The model is still being used at the courtyard.



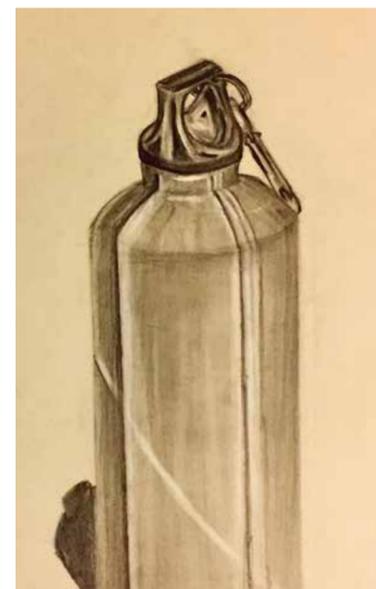
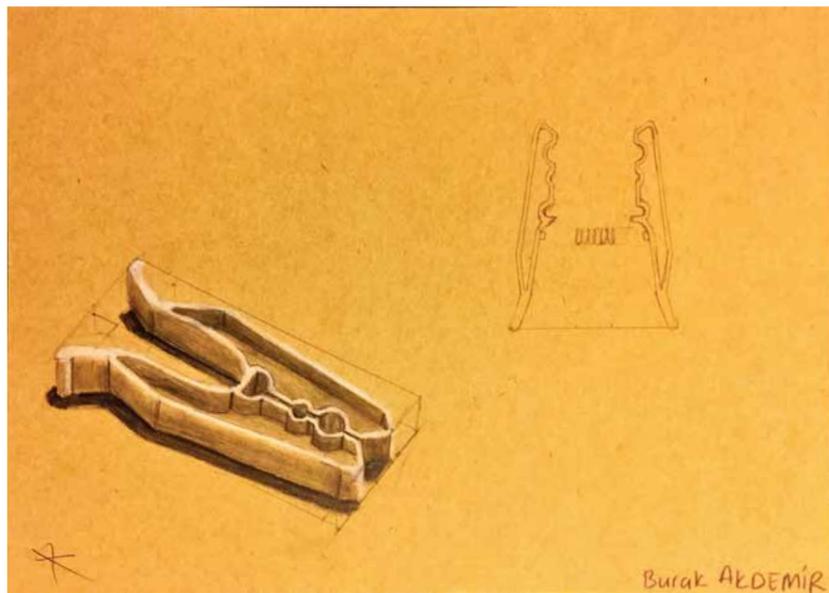
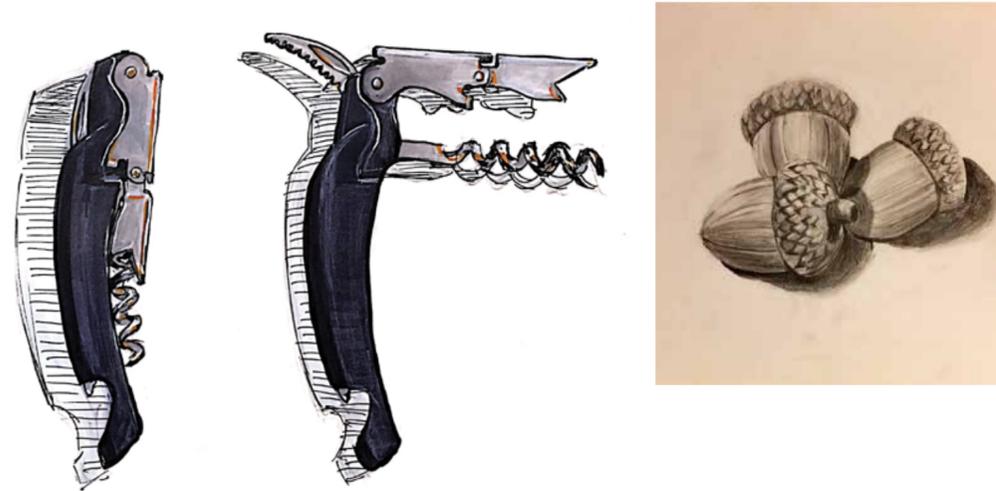
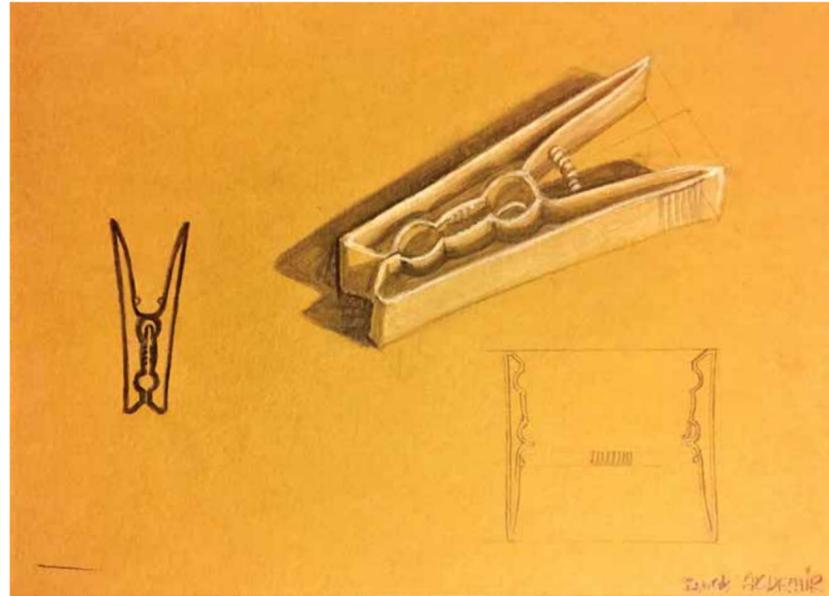
Design Process



Assembly Process



SKETCHES



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