



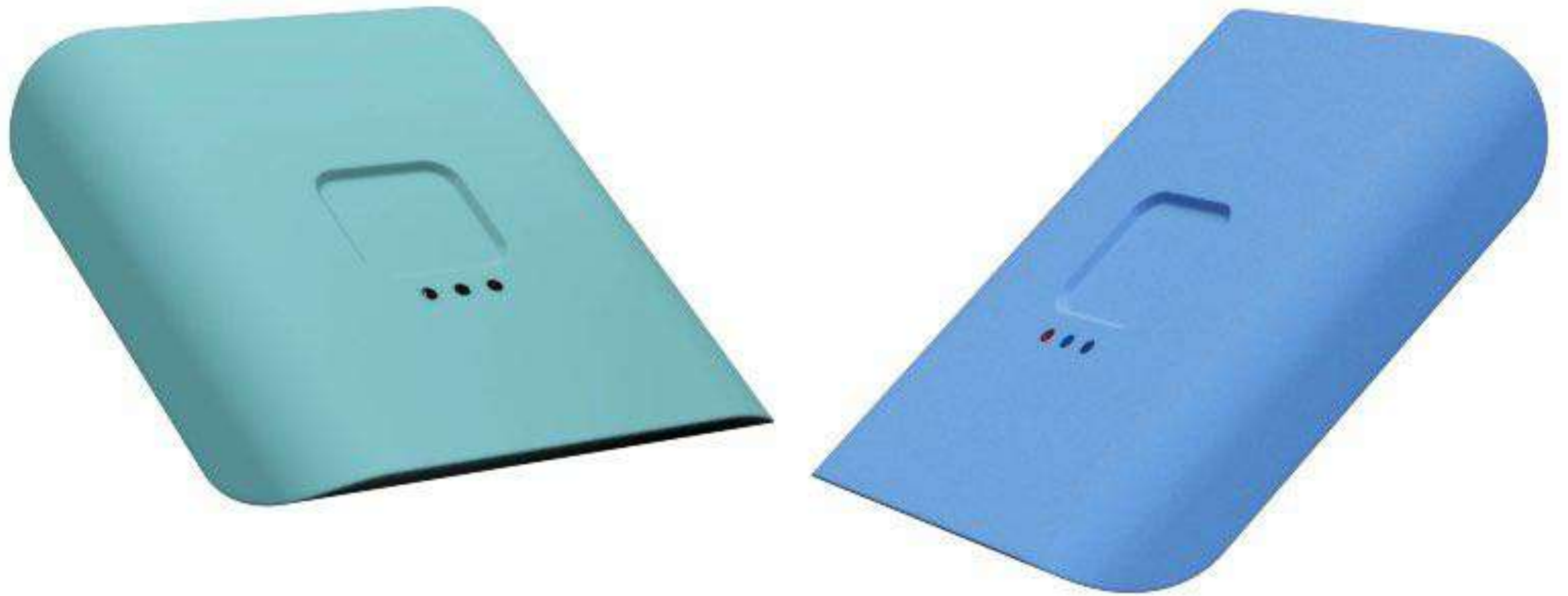
Hemang Parekh

Industrial design Portfolio

tracko

An IOT enabled tracking device that alerts the user when the desired railway or bus stop is reached, so they don't miss the station/stop.

Can also act as a silent morning alarm such that it can be kept in the pillow



Understanding the context of the Indian railways

People always used soothing the rest their head on something while mostly a bag they are carrying or inflatable pillows.

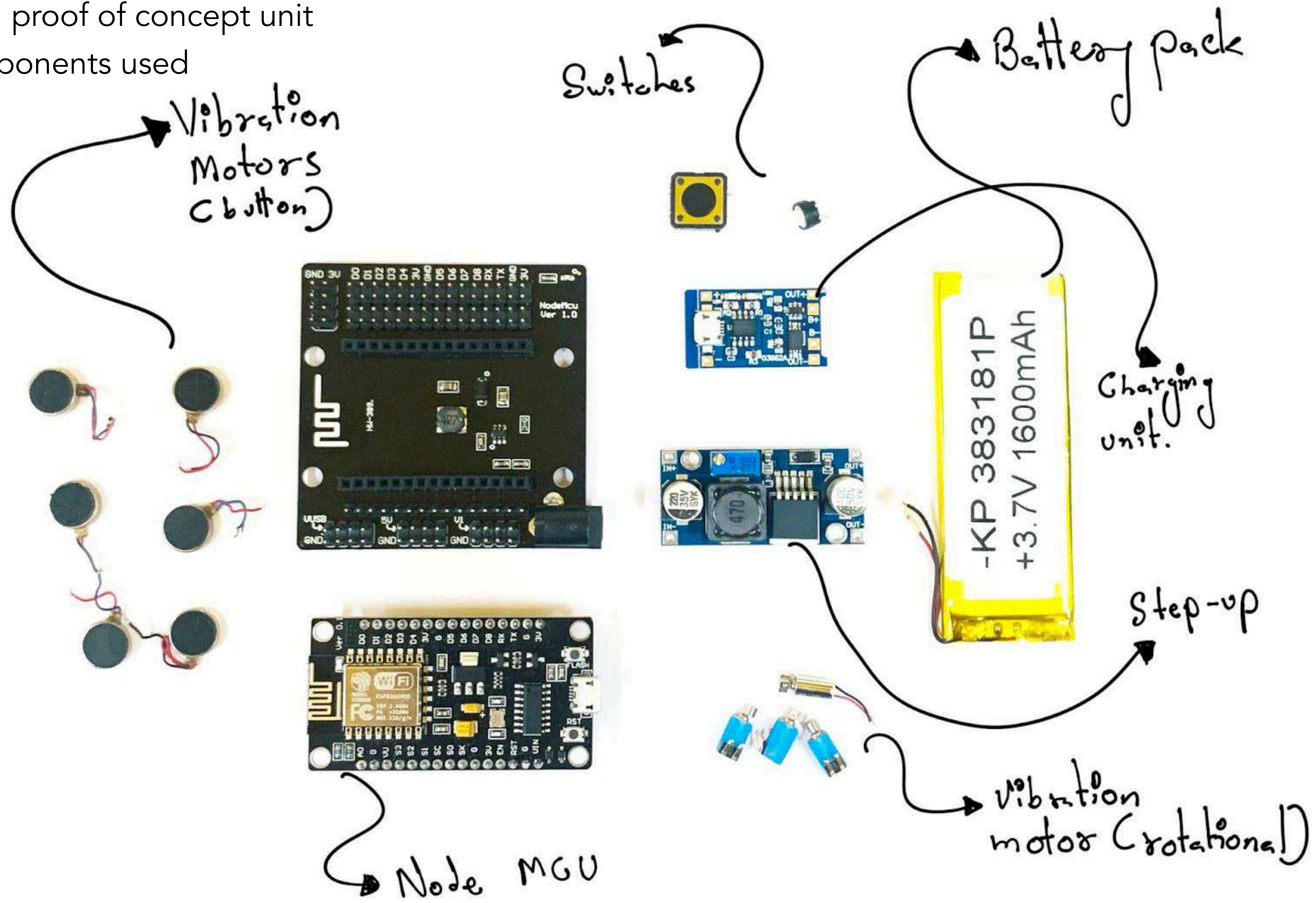
They always tell their fellow passengers to wake them up when their destination station.

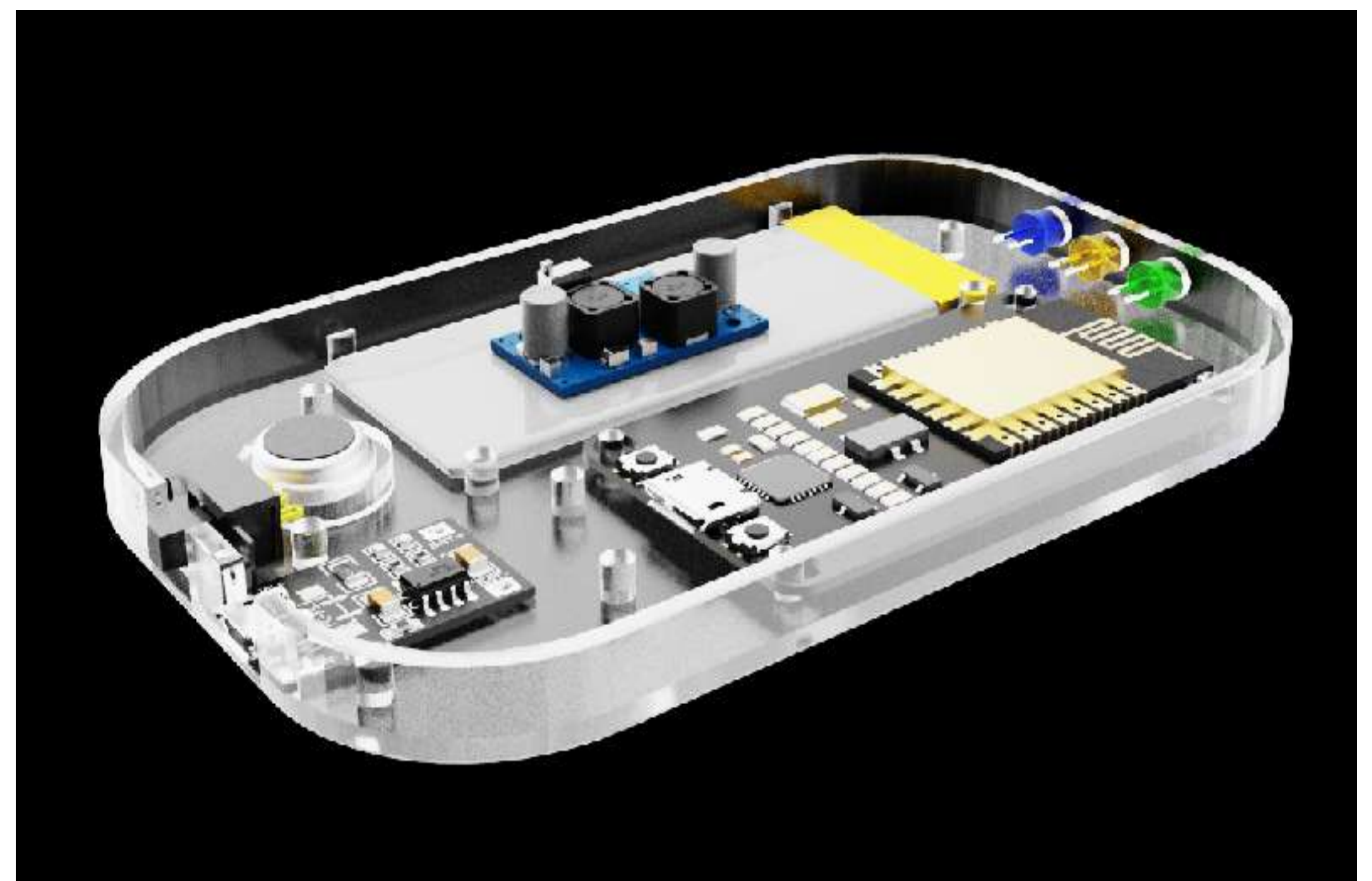
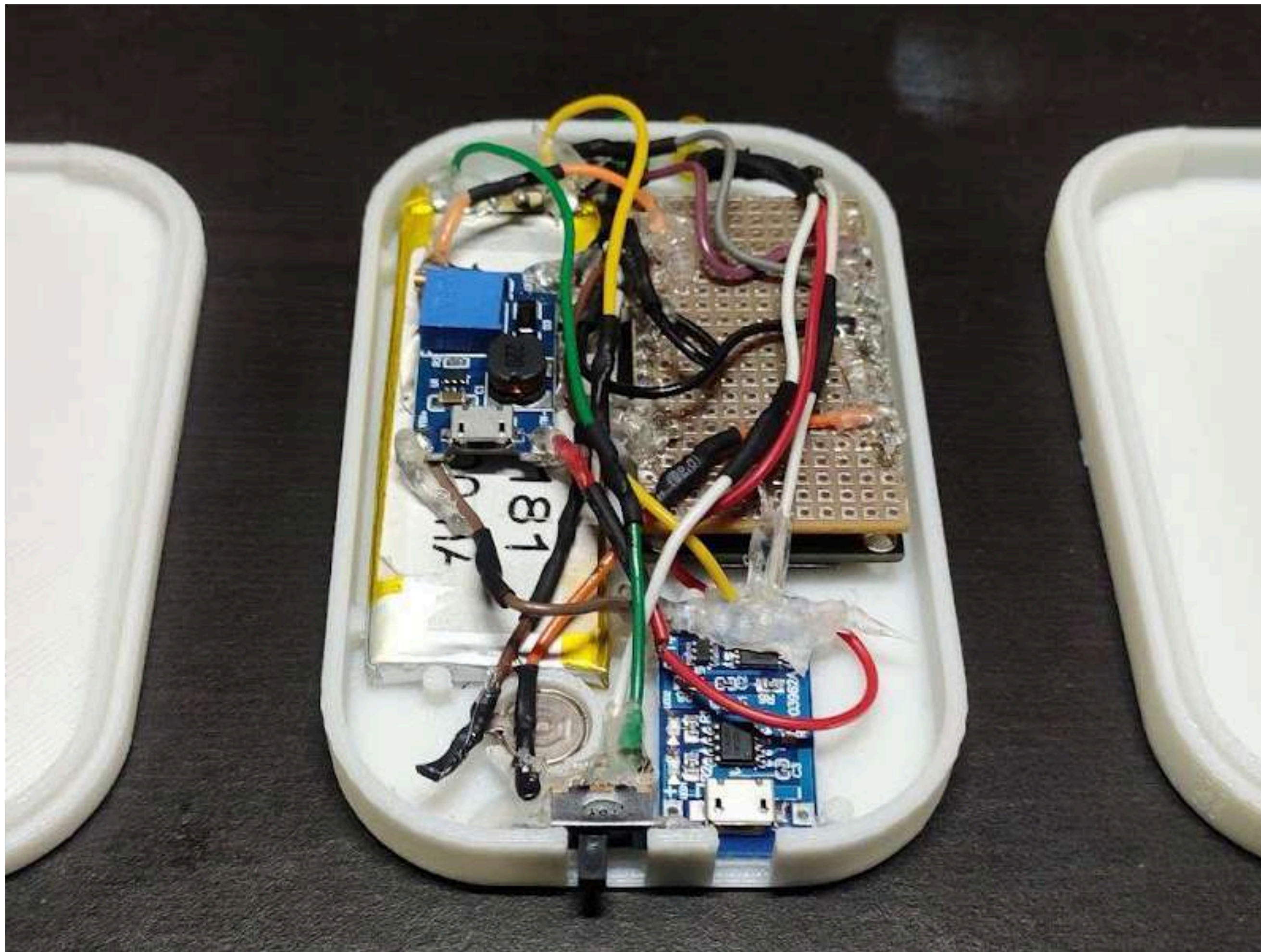


Design brief

How might we design an IOT based alarm for people on long journeys that will wake them up before the station arrives based on the GPS location and not time.

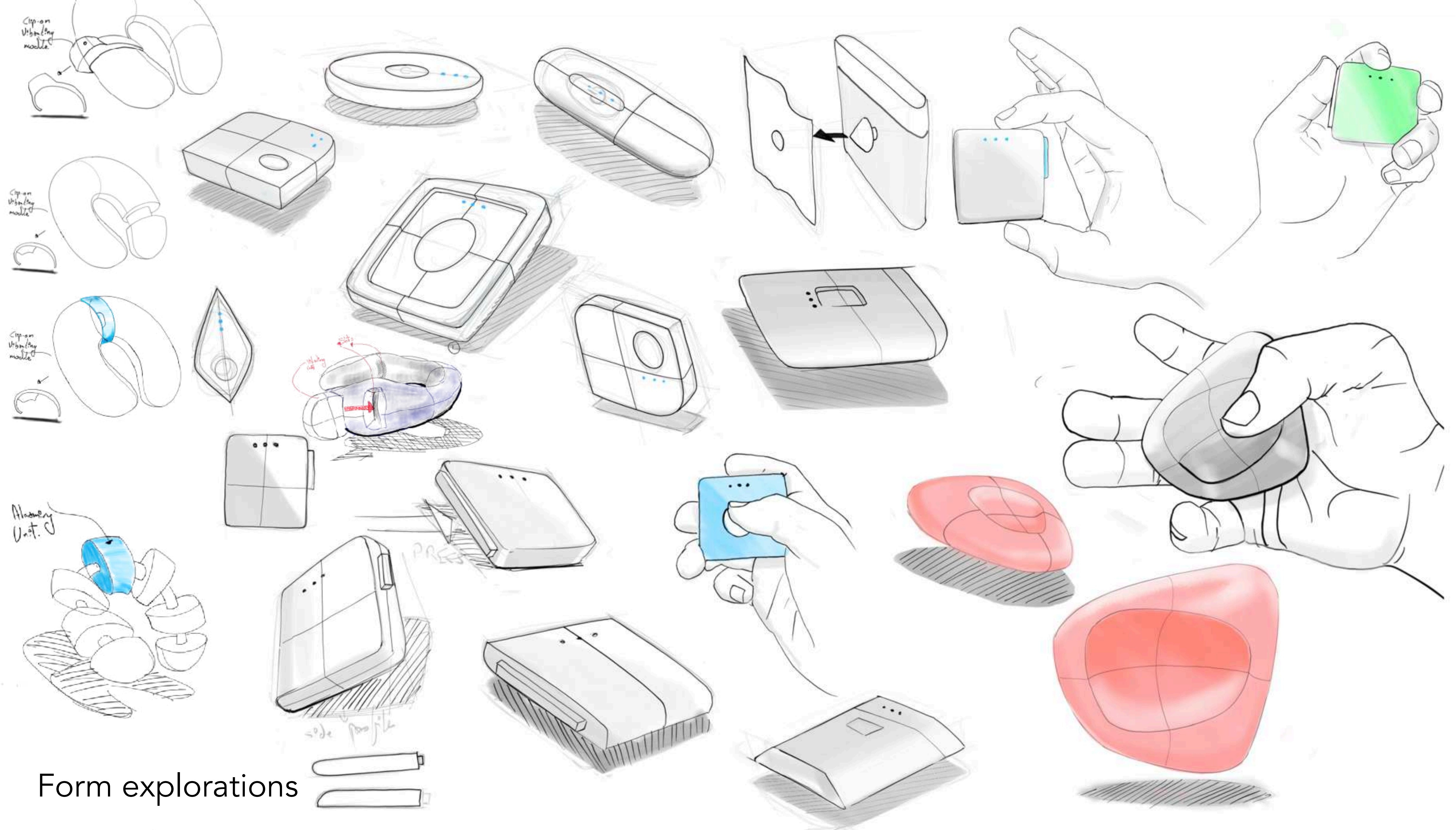
Making a proof of concept unit
The components used

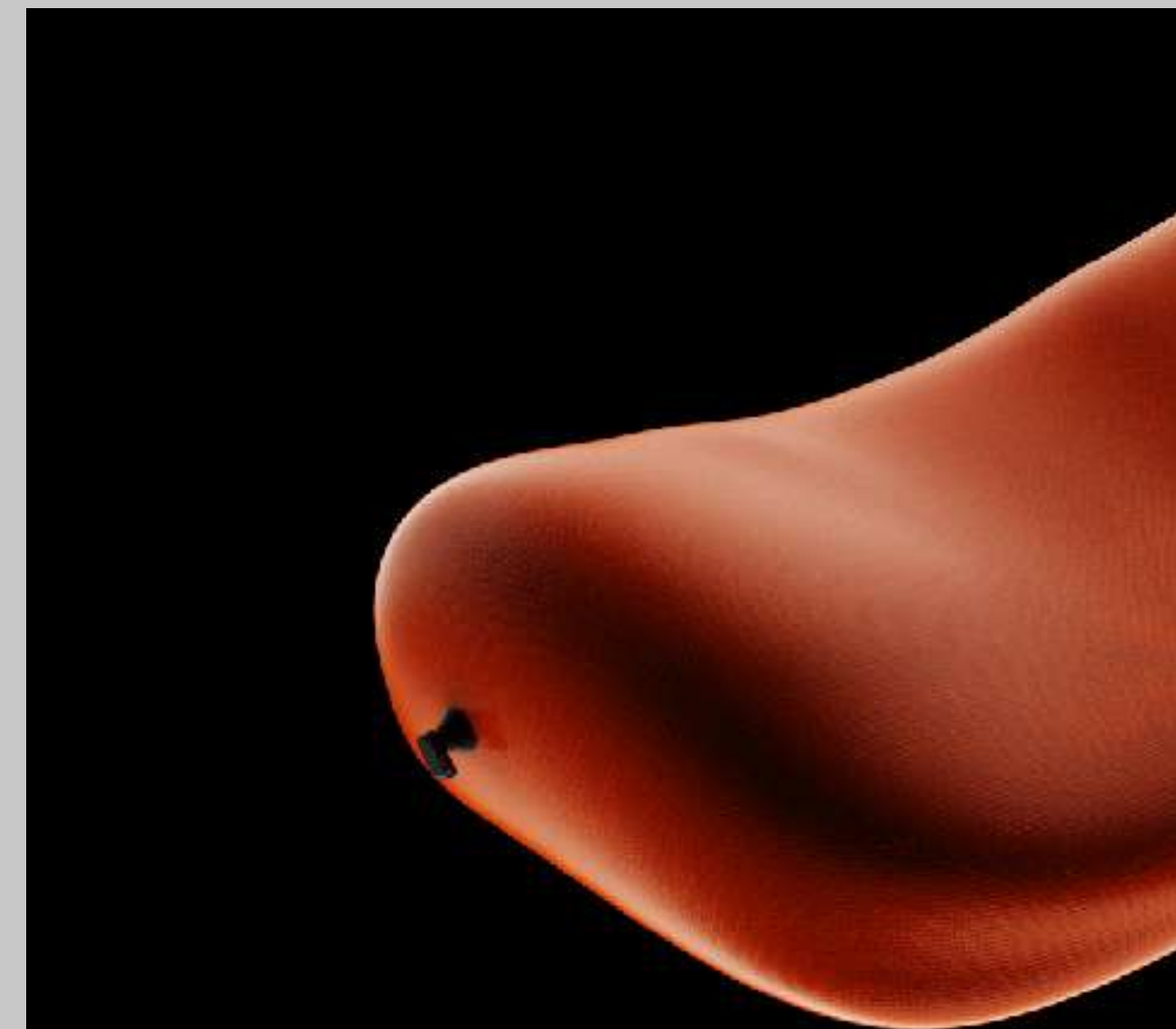
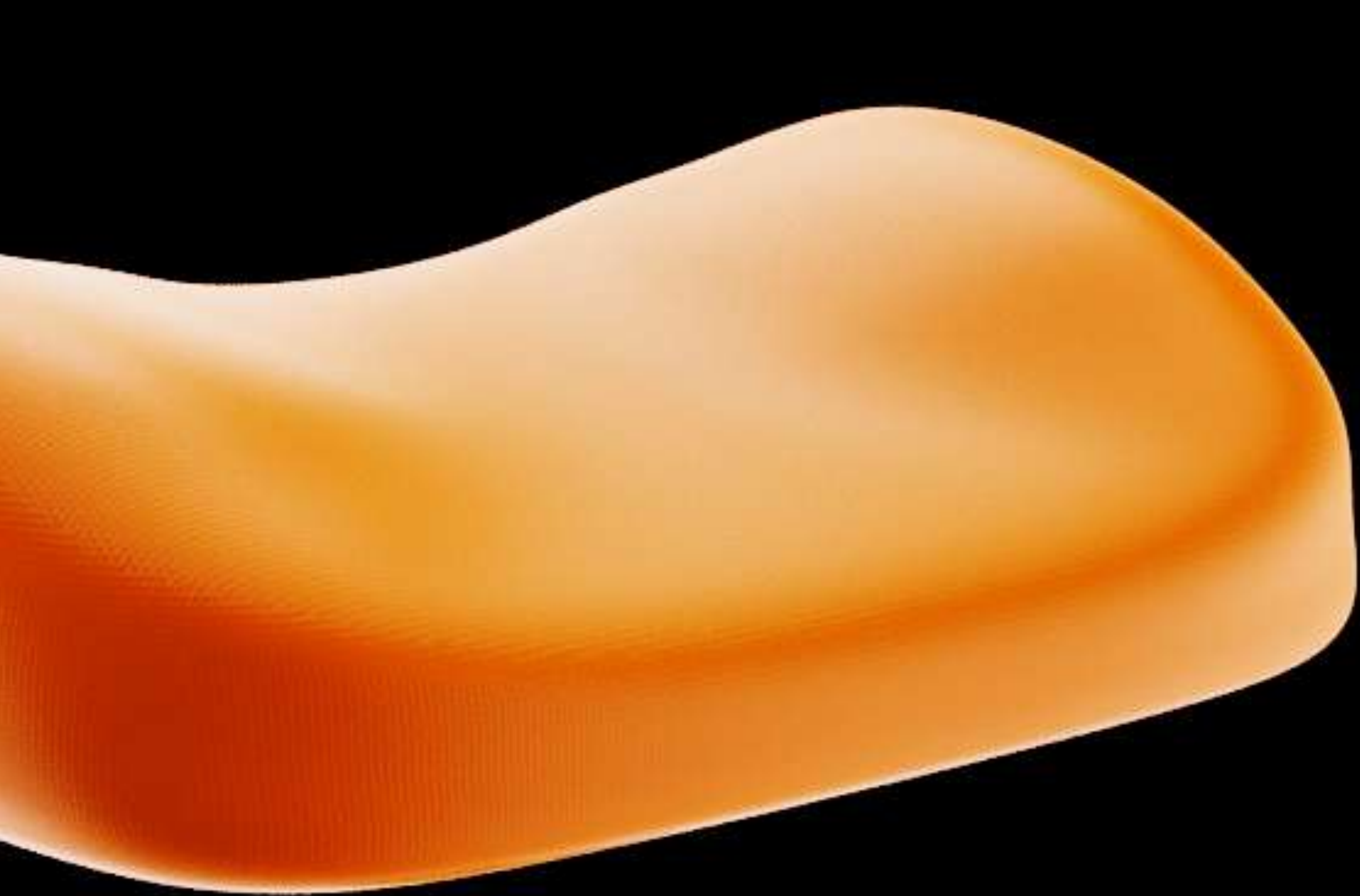




The final proof of concept unit

Used the existing components such as the bluetooth module and battery the production models will be shrank to the 1/3 the size







Visualizing the forms in 3D



Final Selected form





Medi Go

An health kiosk designed for urban space and corporate offices which helps the user to keep in check the basic health parameters such as blood pressure, BMI, blood oxygen

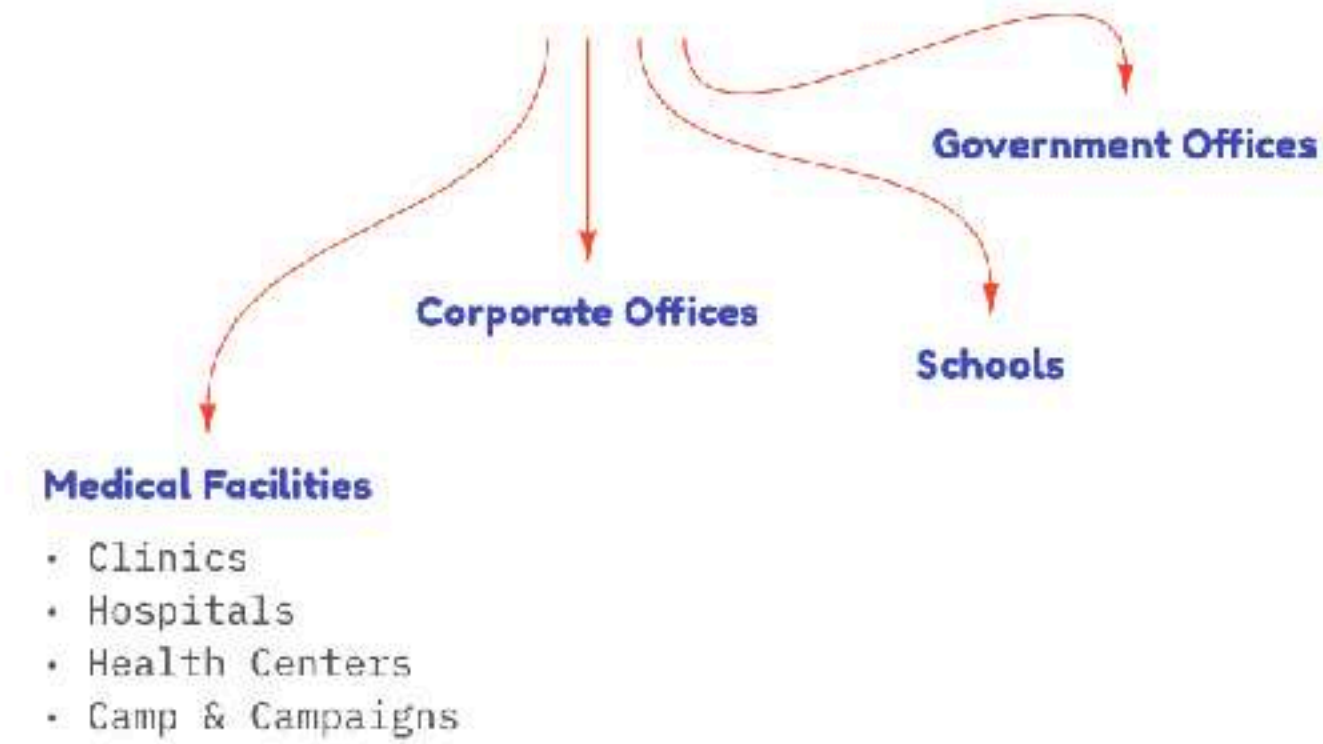
Project with: Srujal Tawade and Shardul Dugad

Why क्यों

Gaps

- Not conveying emotion, hope & comfort to patients
- Data and hardware security
- Public spaces don't have kiosks
- Not user friendly
- Weakening support overtime
- People getting anxious in public environment
- Extreme cost
- Bulky & ugly
- Human Attention required
- Tedious process & complex UI

Locations कहाँ



What क्या

Health checkup

- User record and health analysis
- Suggestions to patient
- Vaccinations
- Mental Health
- Day to Day checkups
- Order Medicines
- Get prescriptions

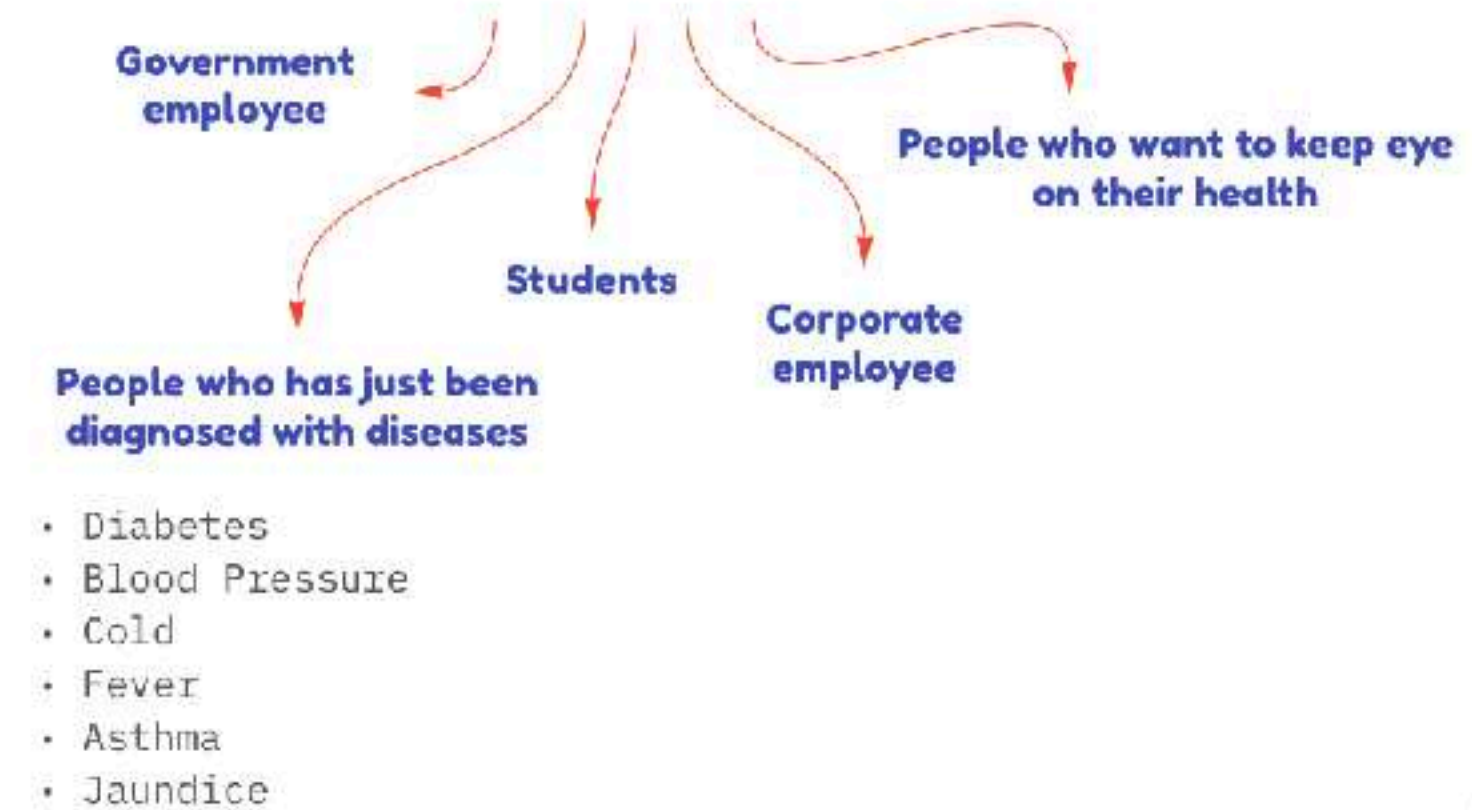
Health kiosk

How कैसे

SMART

- APP - To get notification for regular health checkup
- Get online certificates , Prescriptions & medicine suggestions etc.

Users कौन



Why place it in corporate offices?

The biggest reason for heart related problems is high blood pressure and high blood pressure is caused due to high stress level in day to day life in offices and unhealthy eating habits.

And high/low blood pressure if neglected can convert in to other deadly health problems and but if kept in check and proper preventive steps are taken it can very well be avoided. All, one has to do is keep regular check on their basic health parameters.

In today's busy life filled with deadlines no one really gets time to go to a doctor for regular test and also do not want to pay for the fees.

Hence, if the process of checking basic health vitals easier and much more approachable it will help promote a healthy lifestyle among the employees

About **33% urban and 25% rural Indians are hypertensive. Of these, 25% rural and 42% urban Indians are aware of their hypertensive status.** Only 25% rural and 38% of urban Indians are being treated for hypertension. One-tenth of rural and one-fifth of urban Indian hypertensive population have their BP under control.

Stress involved

- Nervousness
- Fear of Awareness in process
- Remembering Security keys
- Remembering Data Shared

Experience

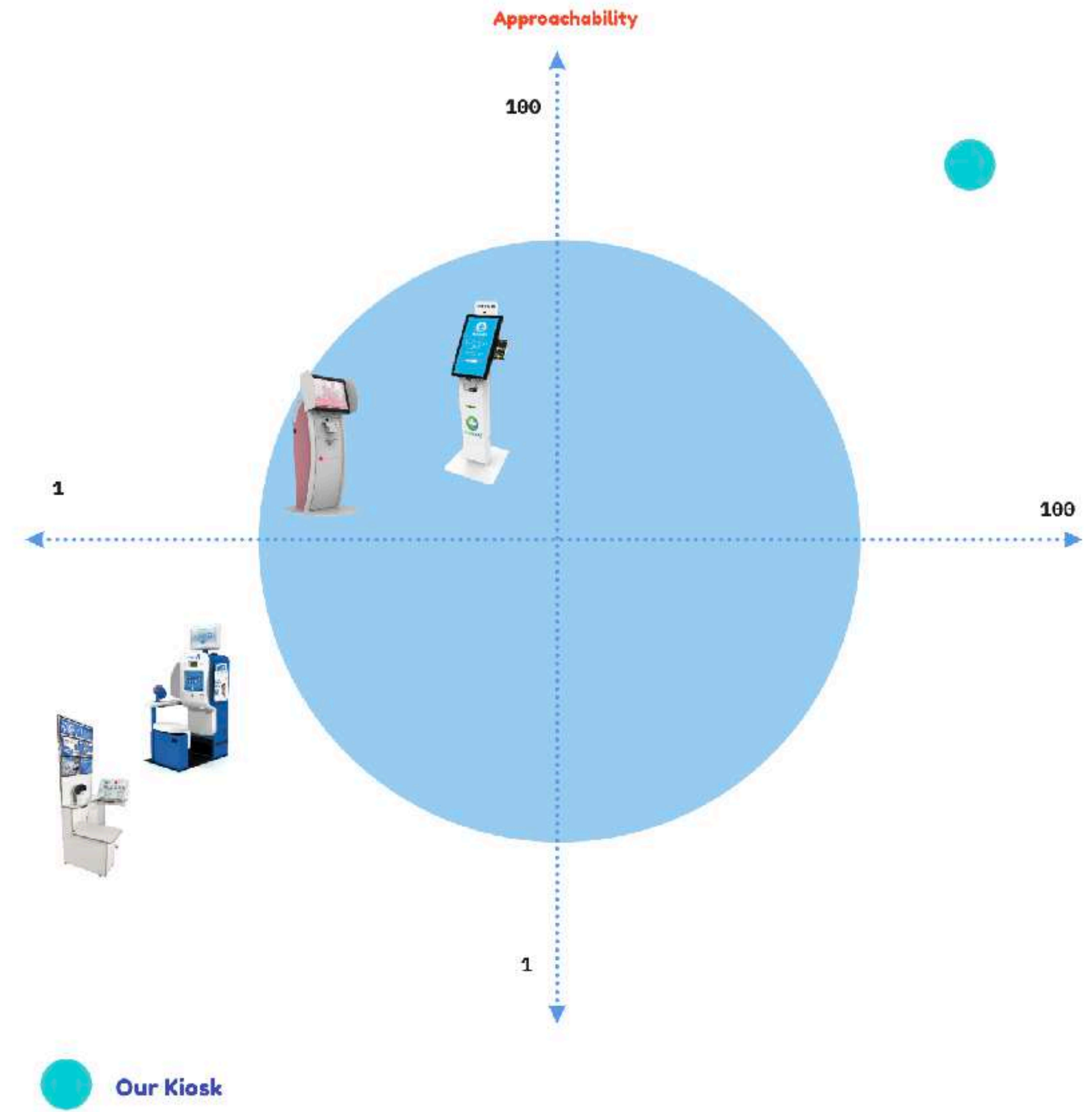
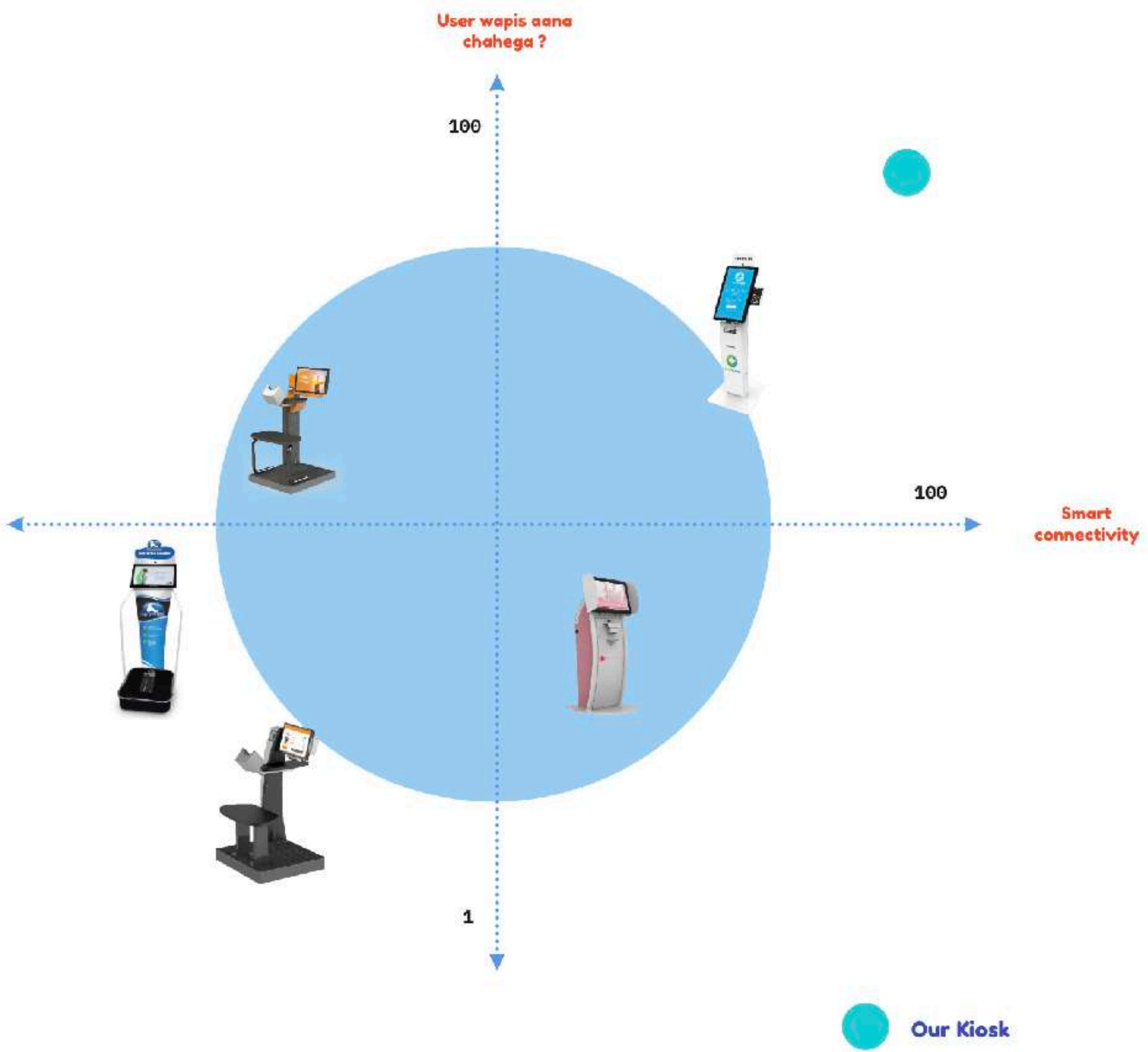
- Hassle Free
- Involves Hope & Emotion
- Easy to navigate

Potential User

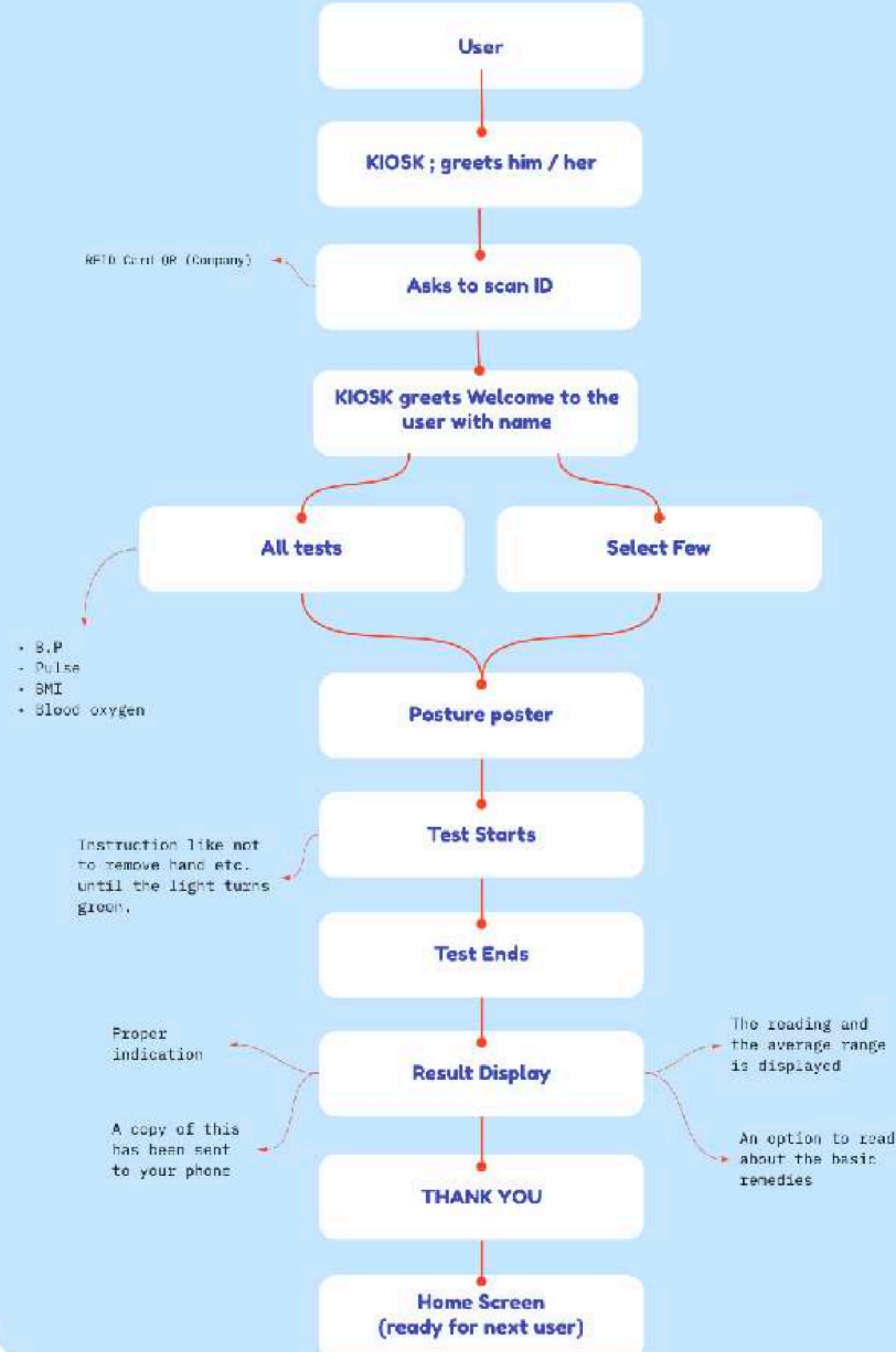
- Employees of any institution
- Students on campus

Efficiency

- Enhanced experience
- Quick & Crisp Process
- Smart connectivity
- Accuracy of info

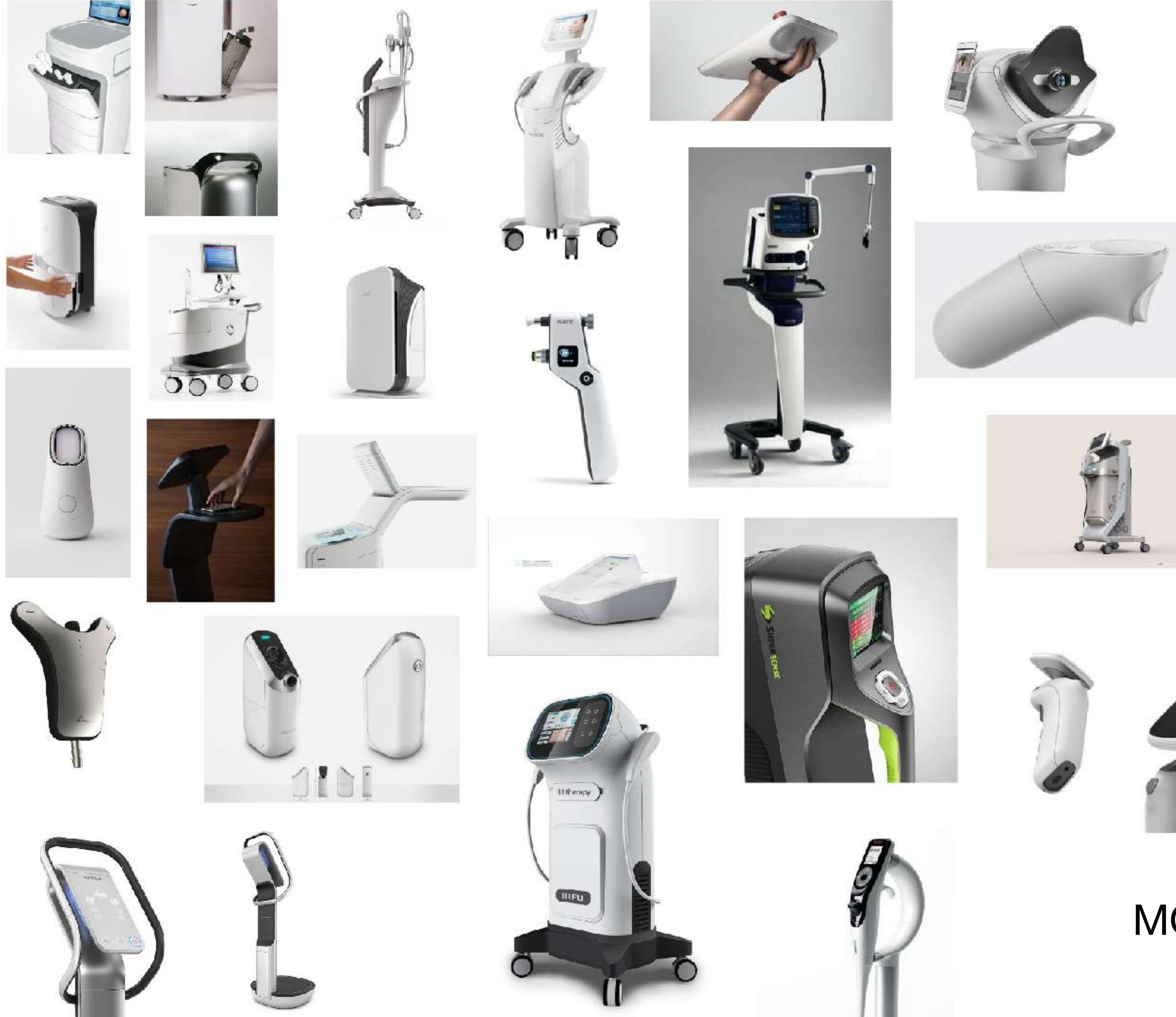


PROCESS

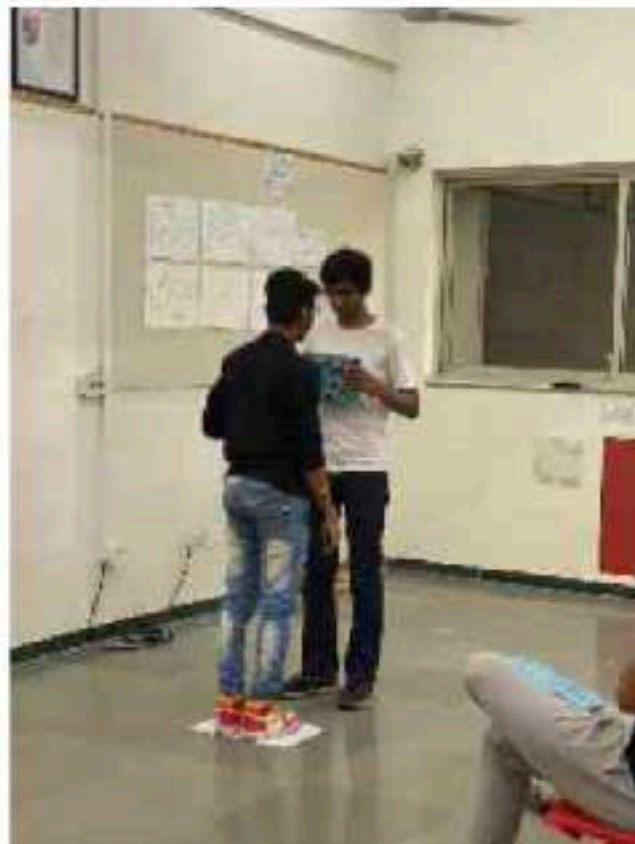
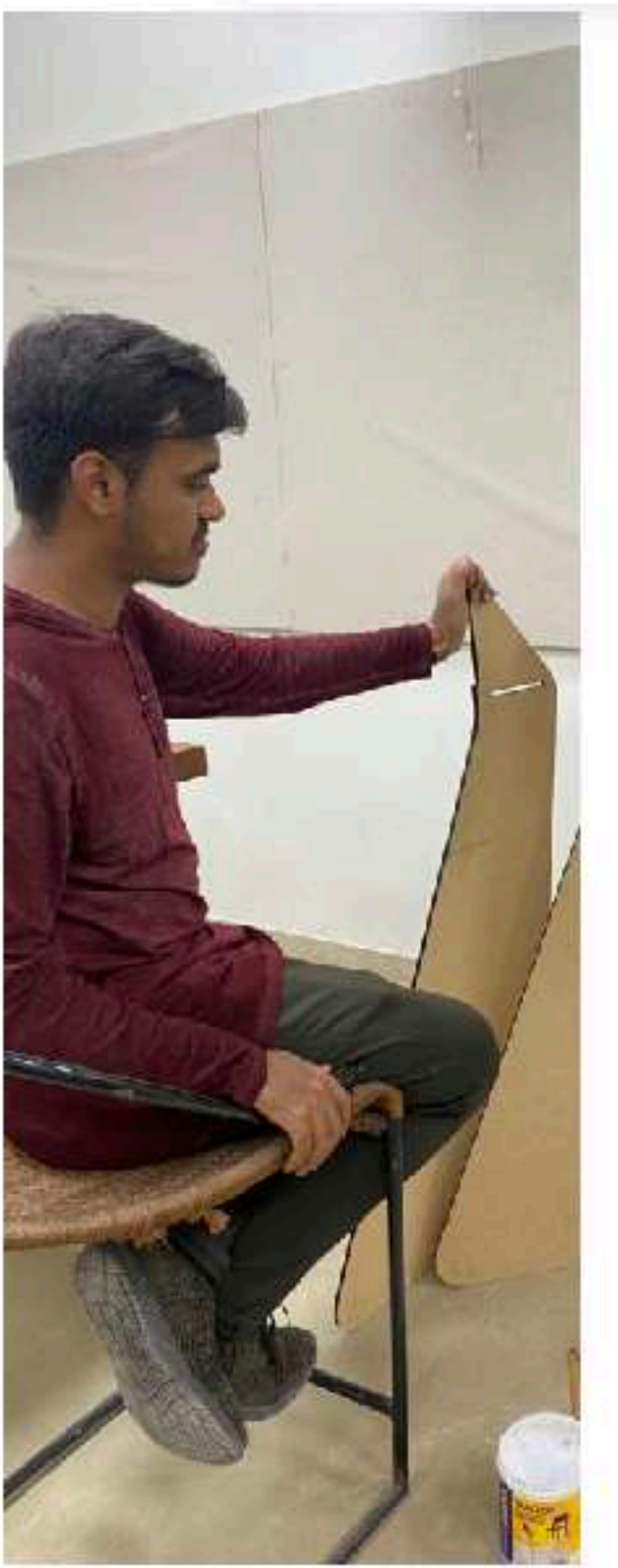
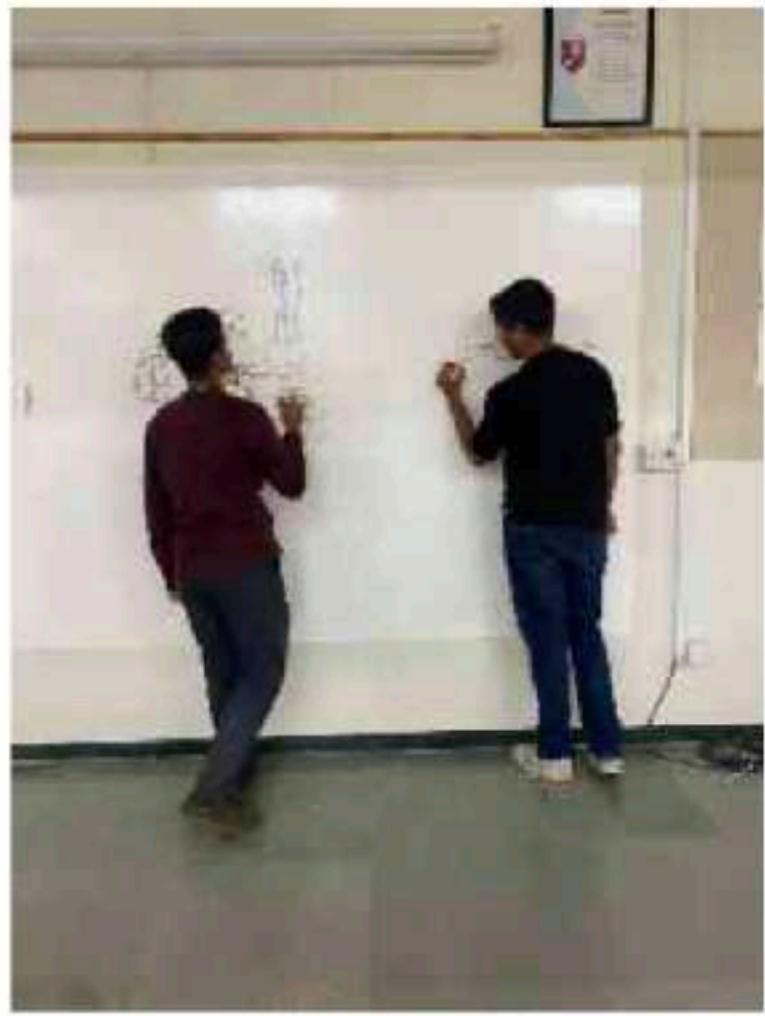


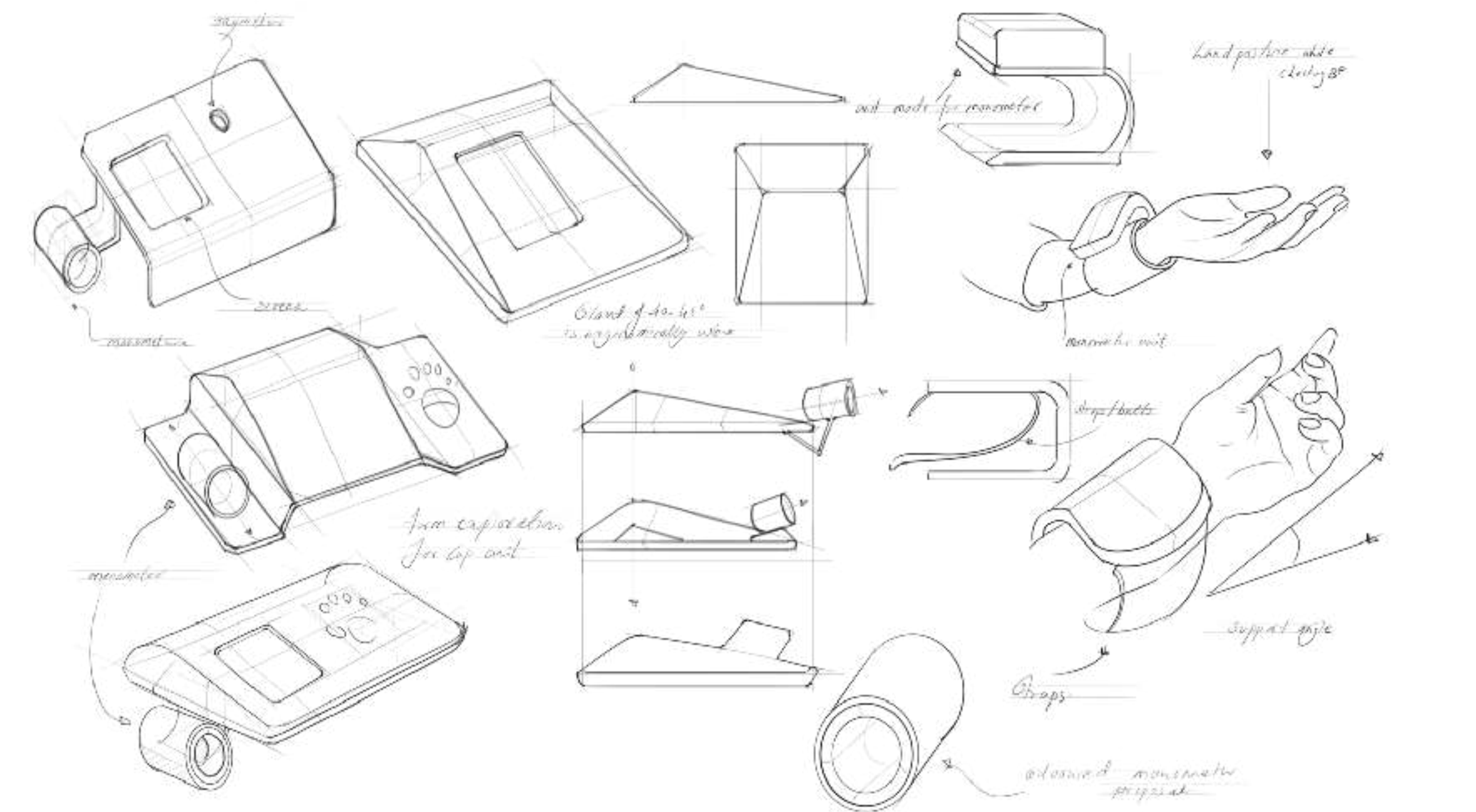
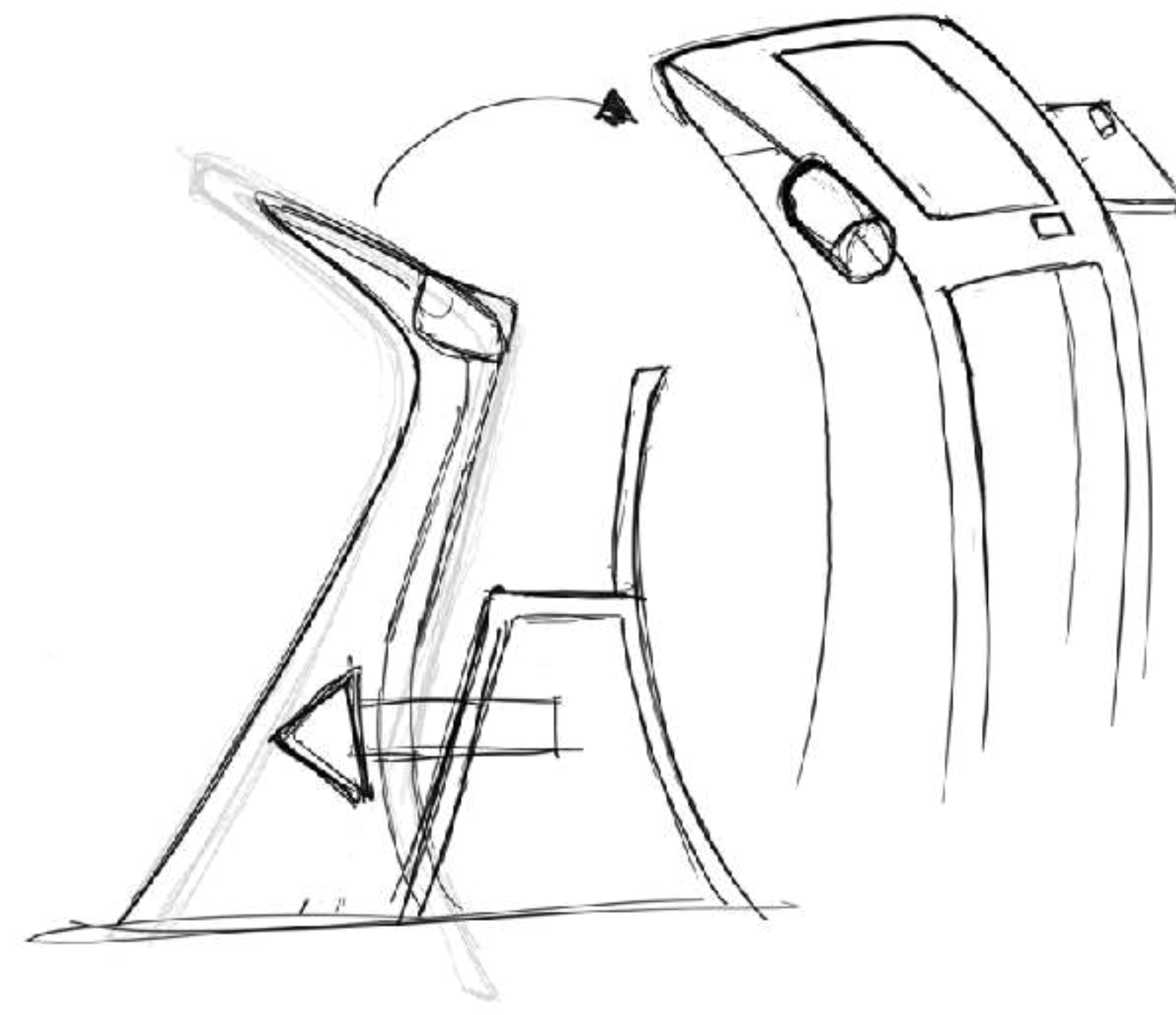
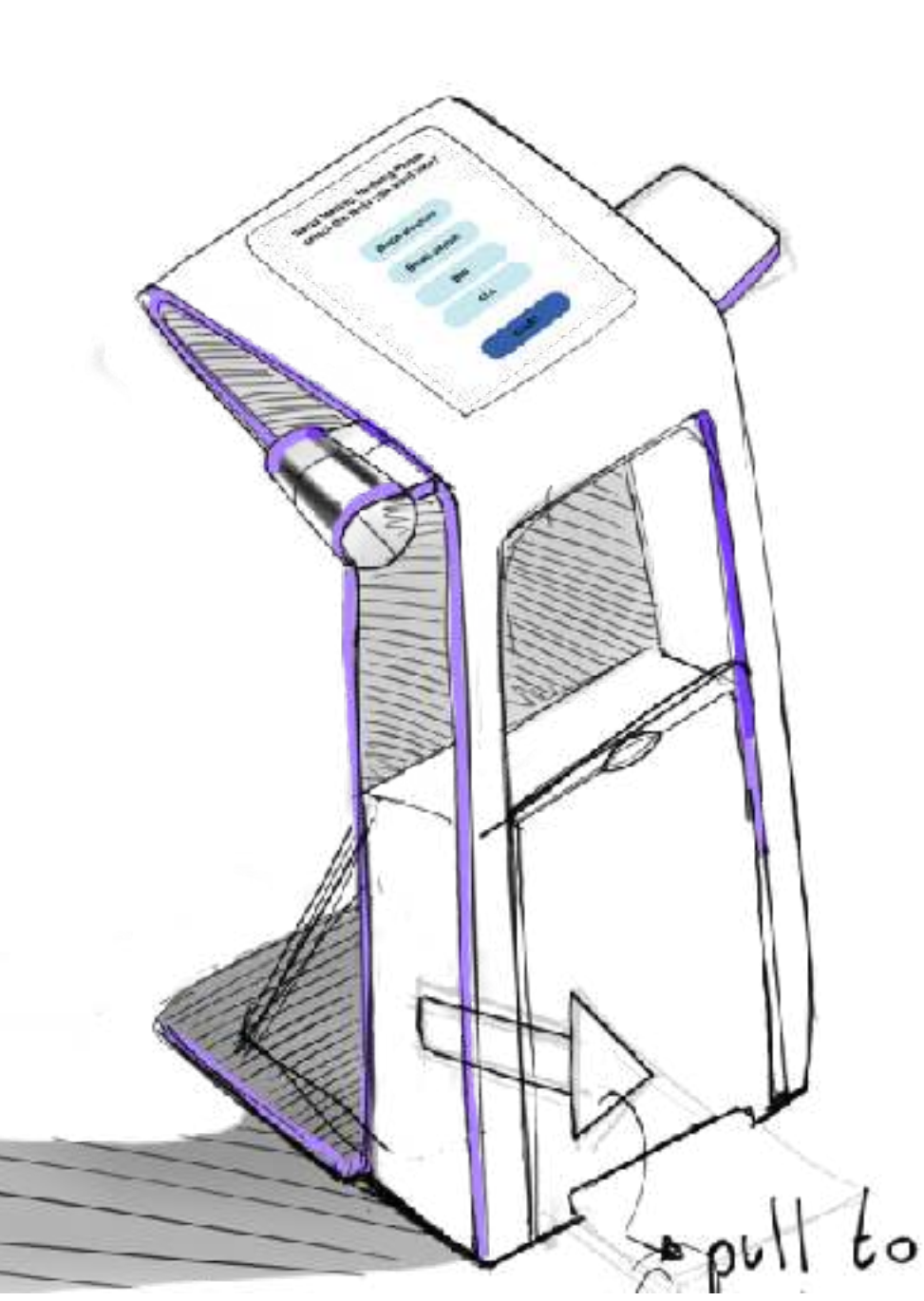
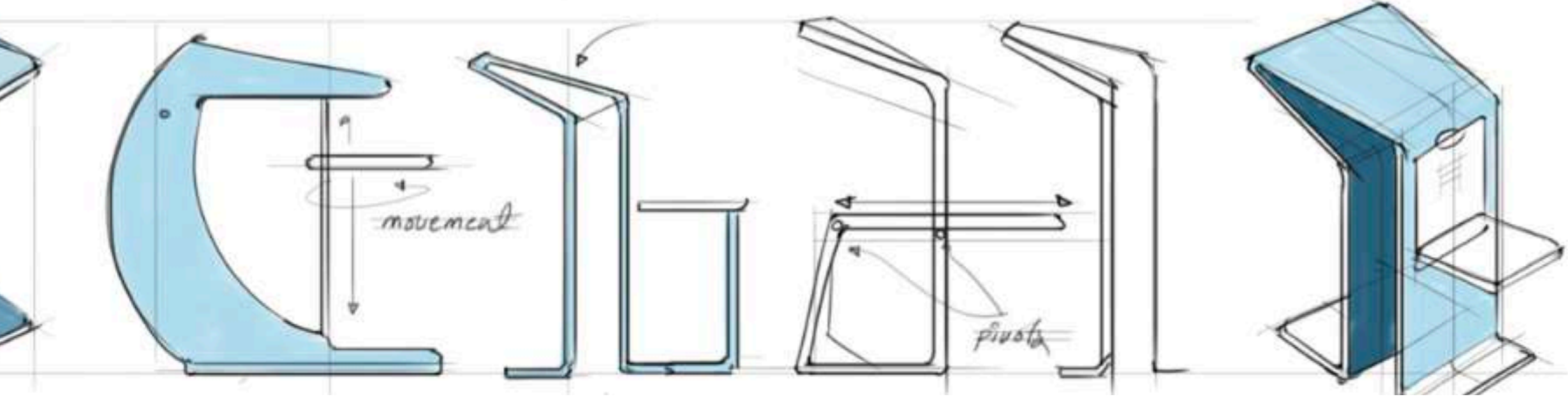
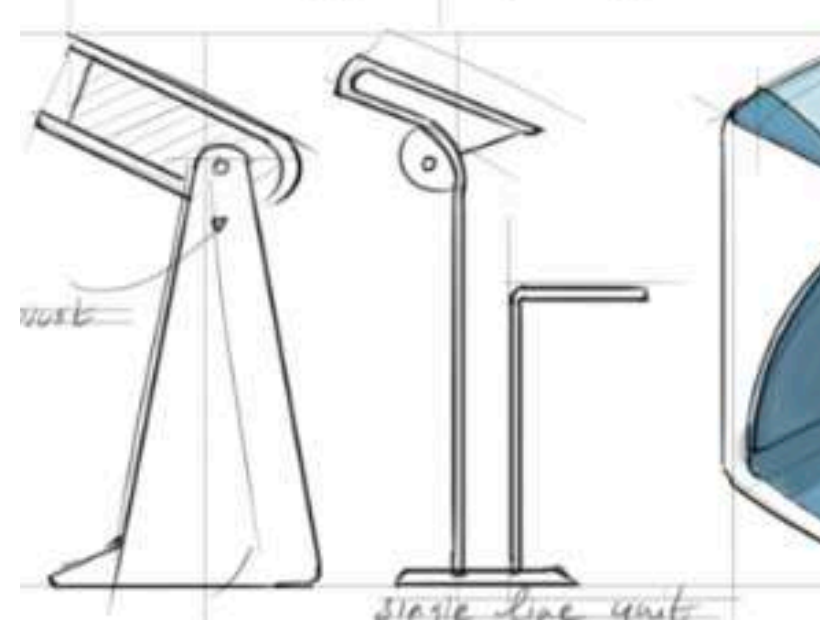
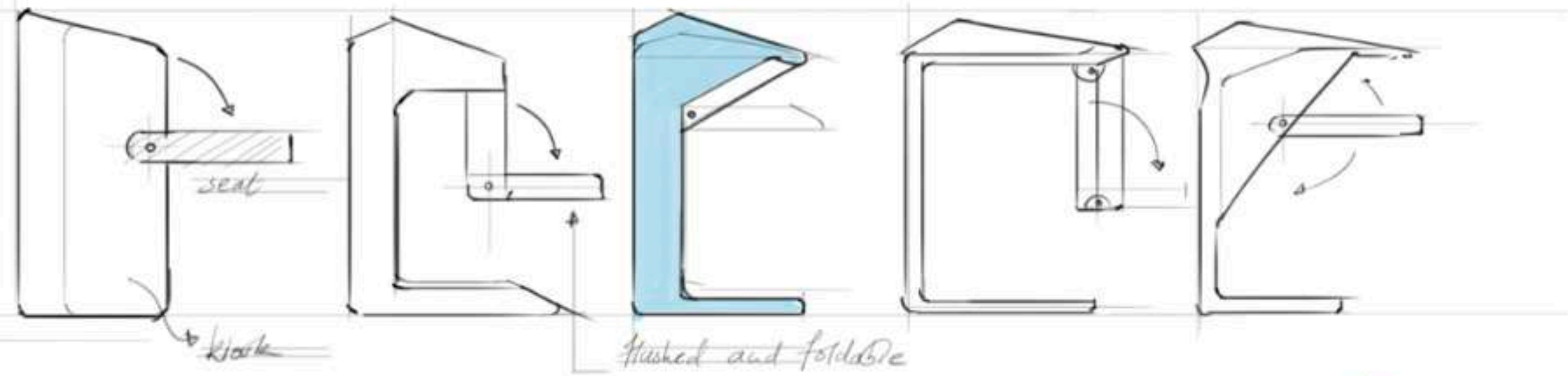
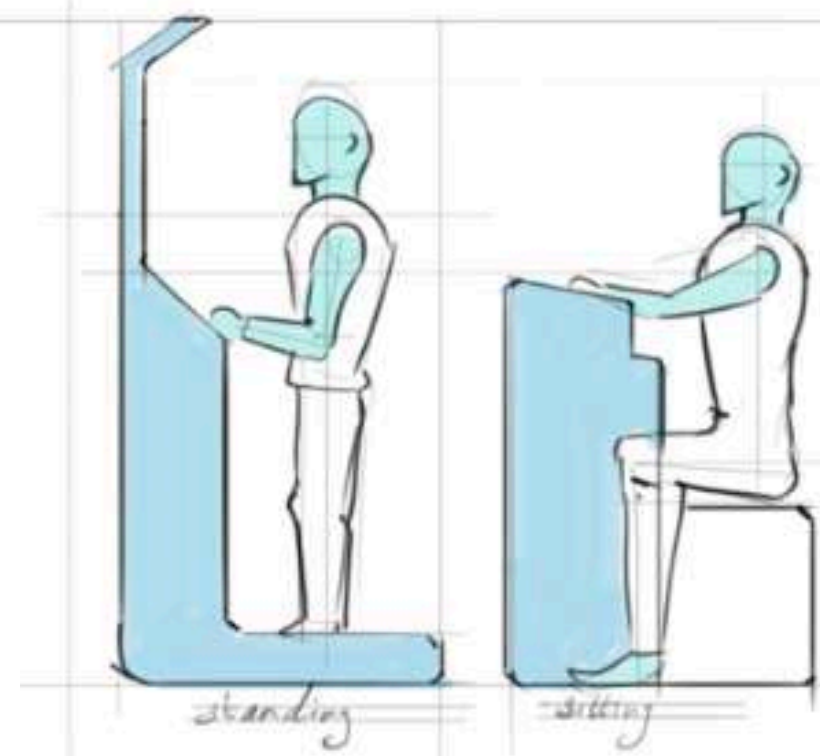
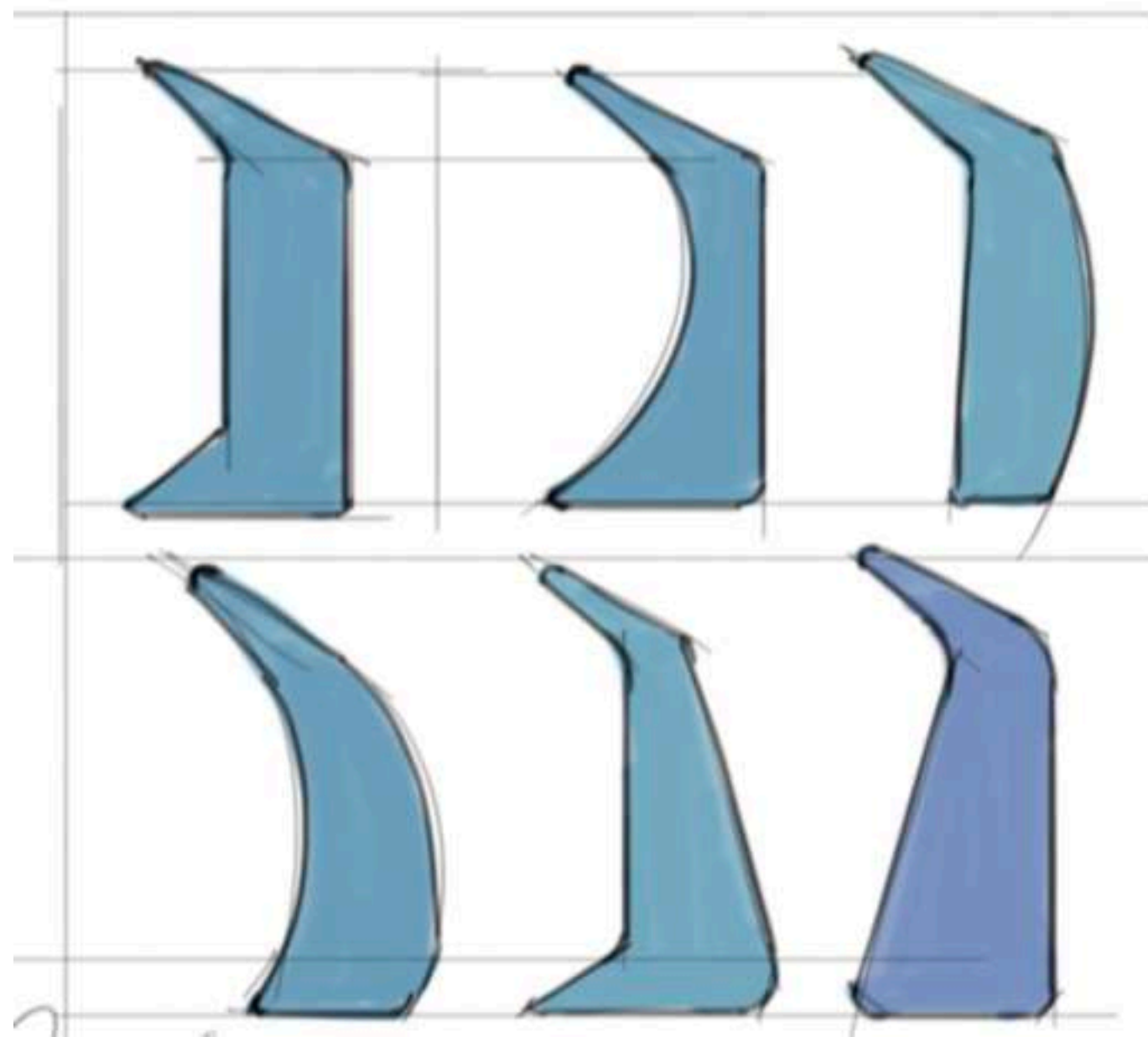
Medi Go Features

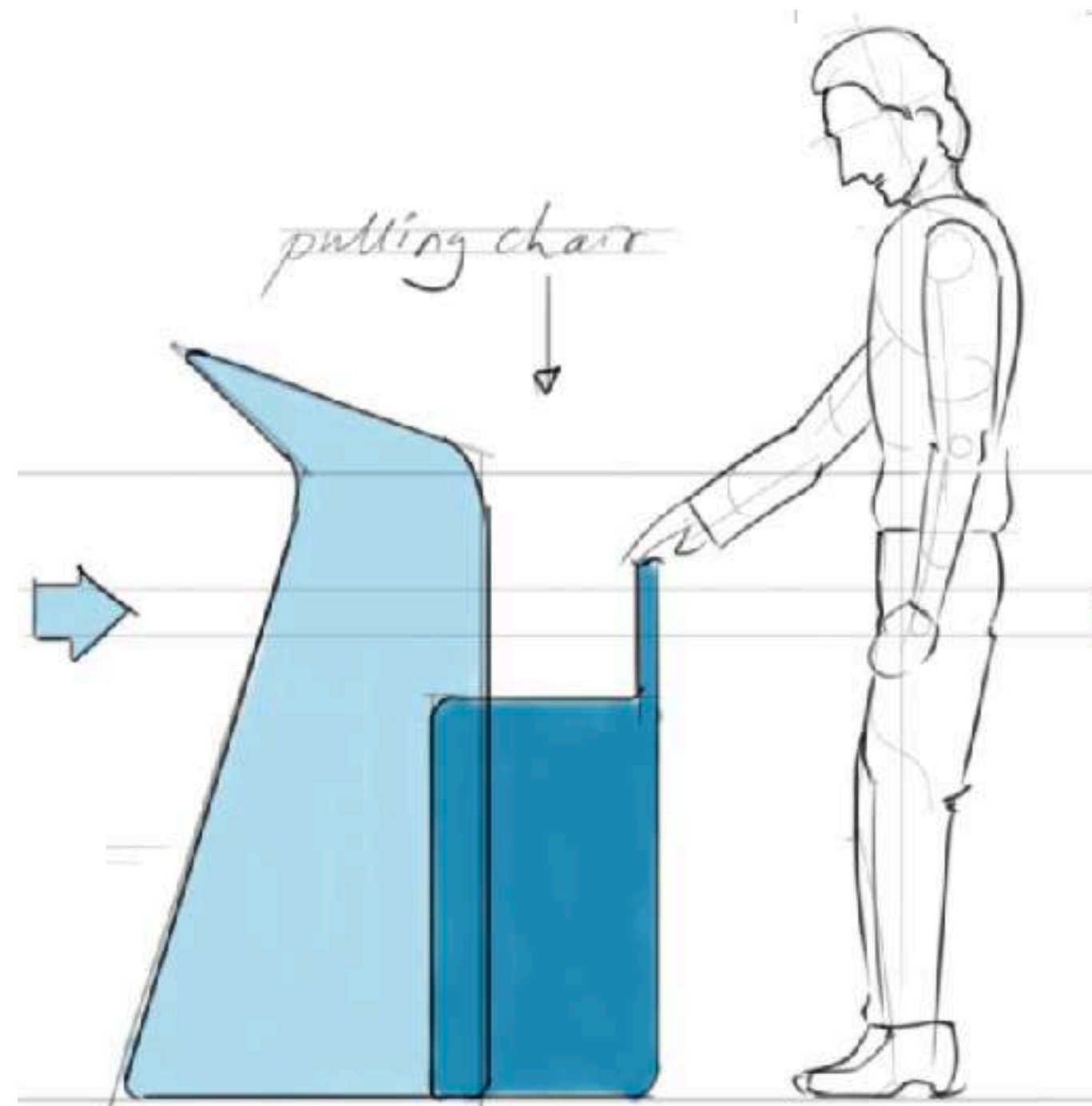
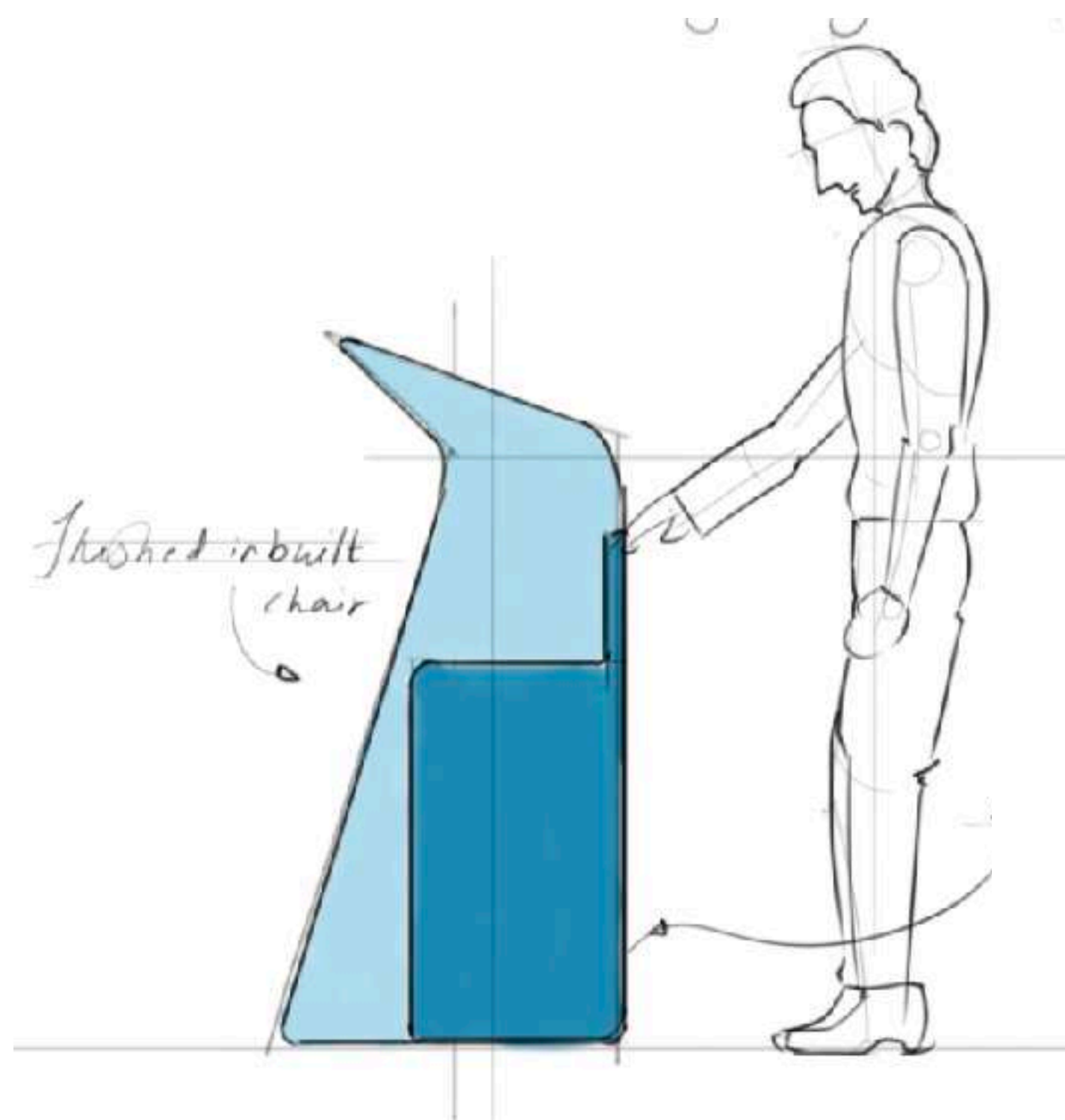
- Medical History
- Self Assessment
- Remote consultation
- Patient registration
- Feedback
- Accessibility
- Efficiency
- Safety
- Discrepancy in prescription
- Quick and cost efficient



MOOD BOARD







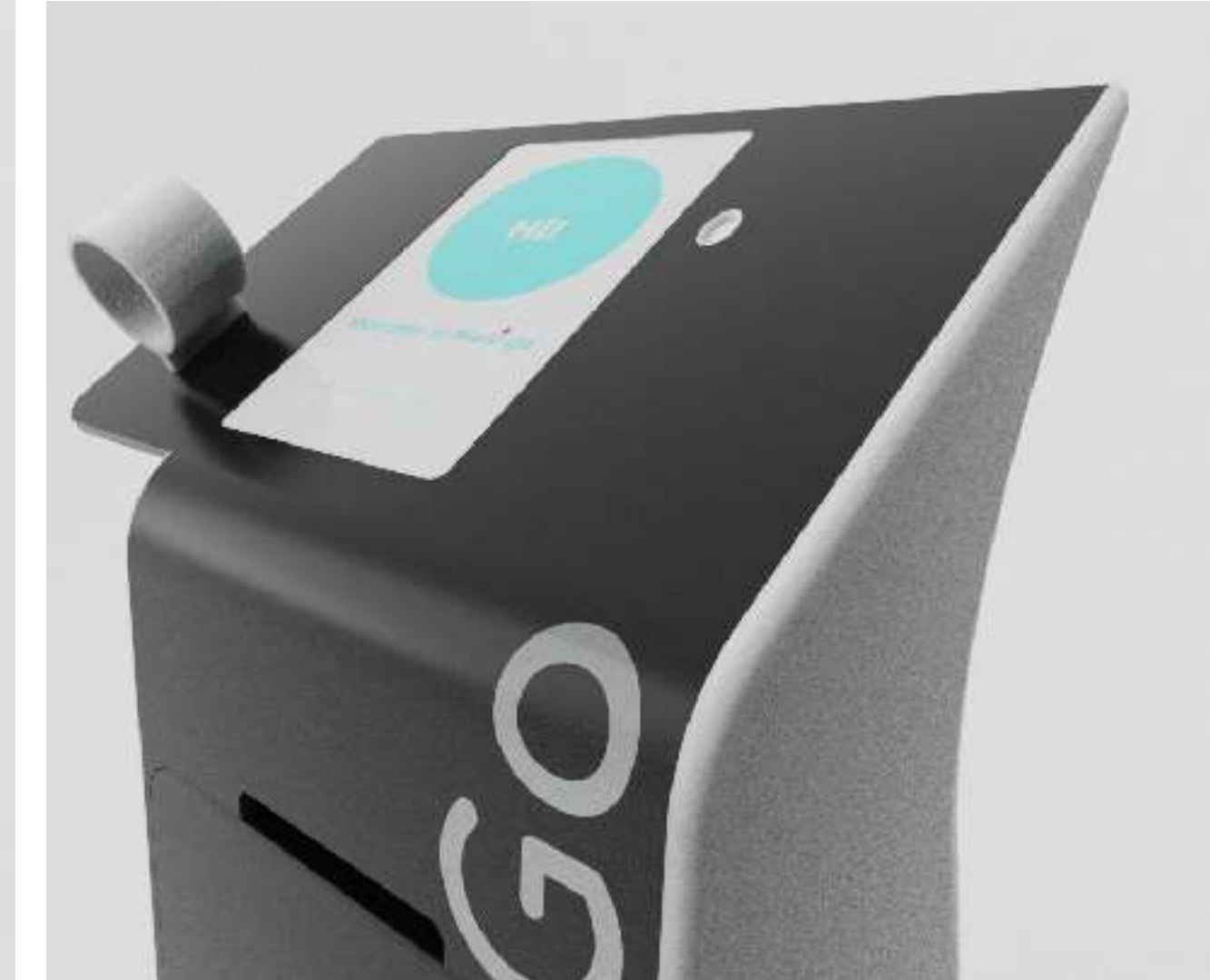


1st Prototype

To understand the form and ergonomics better we made the prototype out of 8mm laser cut MDF and acrylic sheet which we bent to give it a seamless curve ion the front and spare paint the whole unit we tried to get as close as our proposal unit



Final proposal sketches





Furniture design

BANC

A horizontally stackable bench for open lecture areas in Nirma University to ease the process of everyday cleaning.

१ क्या

How might we design furniture (seats) to make everyday cleaning of lecture areas effortless for the cleaners

२ क्यों

To make the cleaning process quicker and easier.

३ कैसे

Na rahegi bas na bajegi basuri.

४ कब

Everyday in the morning when the cleaners clean the class.

५ कौन

For cleaners kaka and kaki
Age- above 30

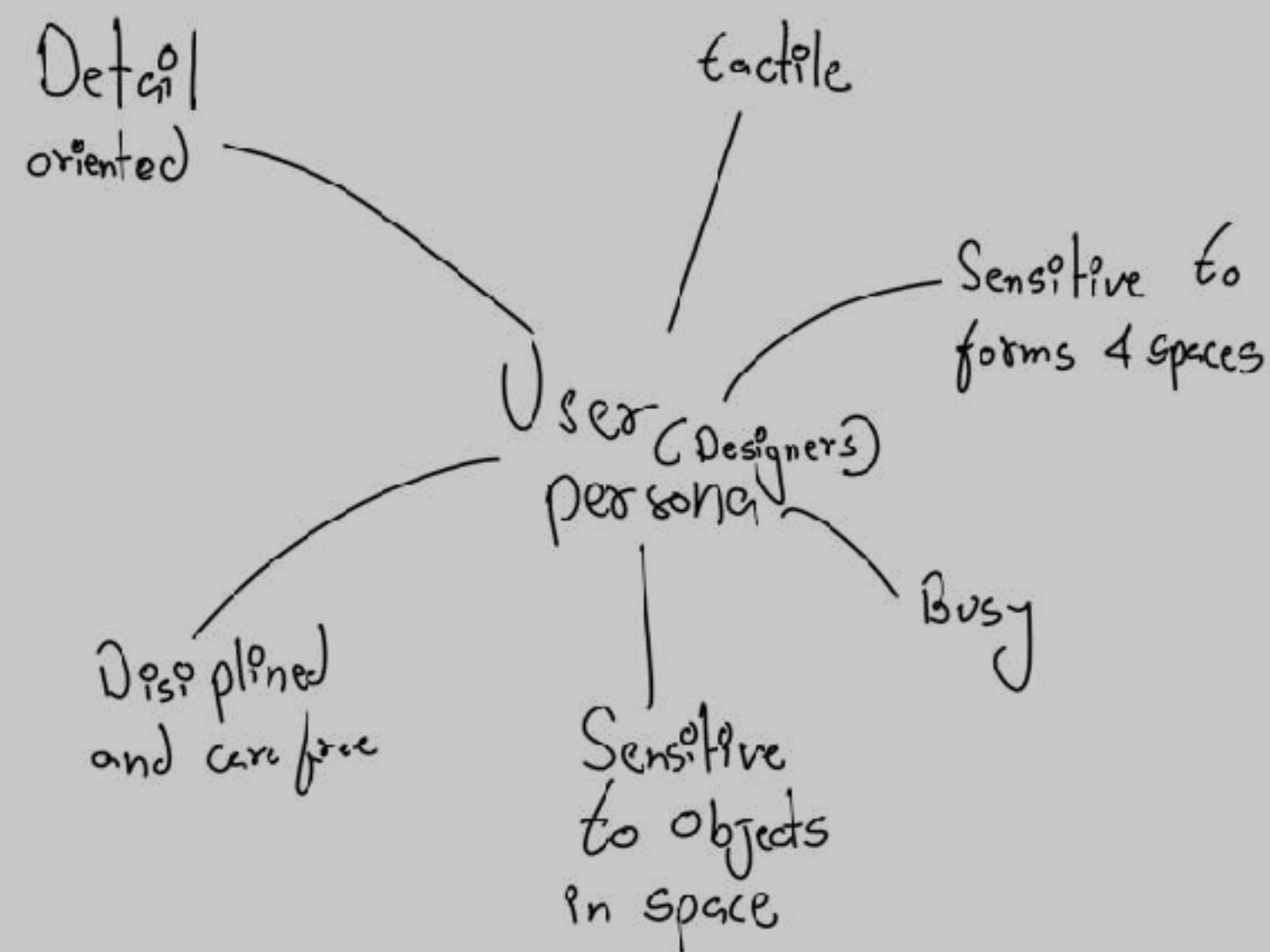
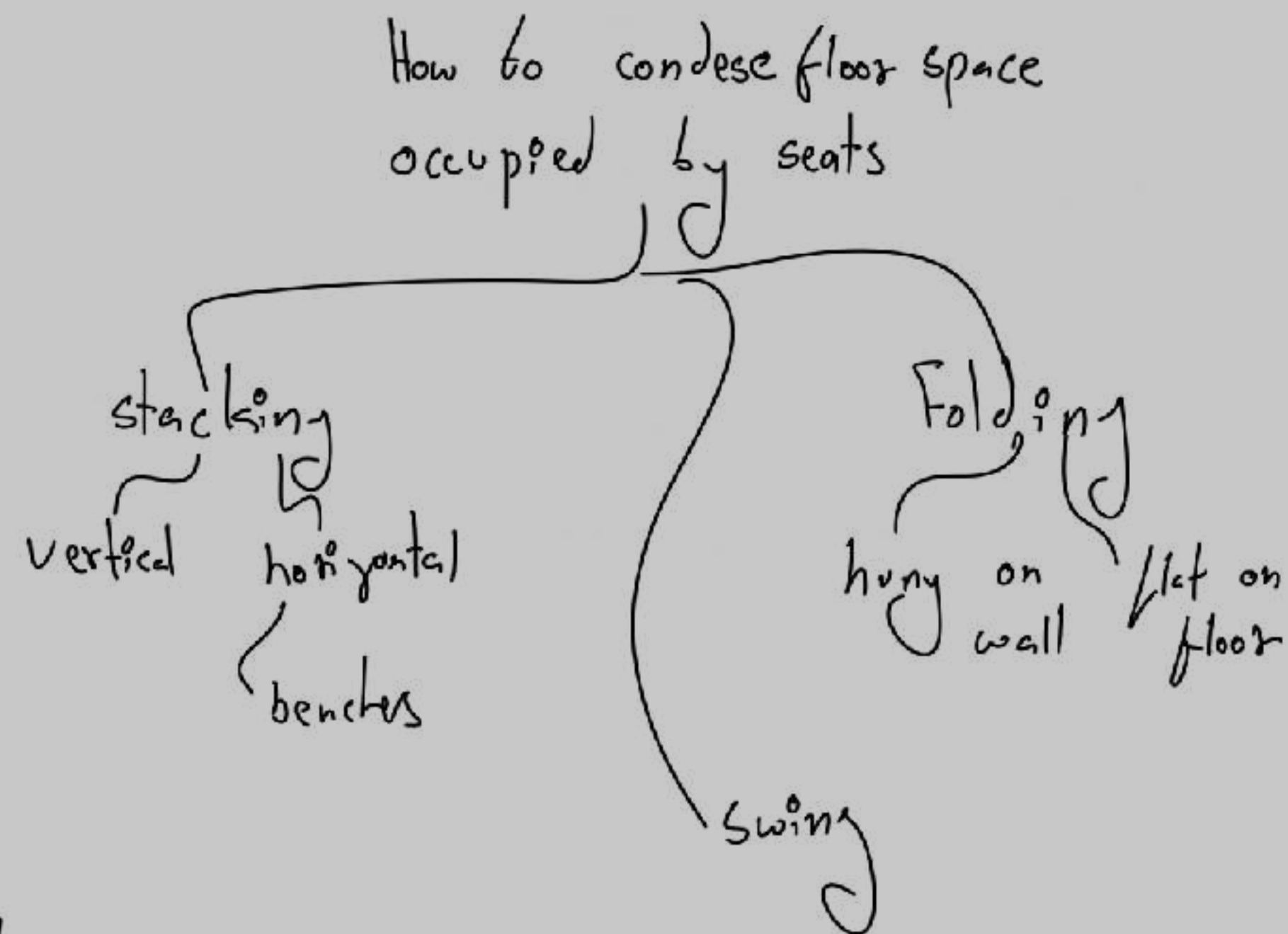
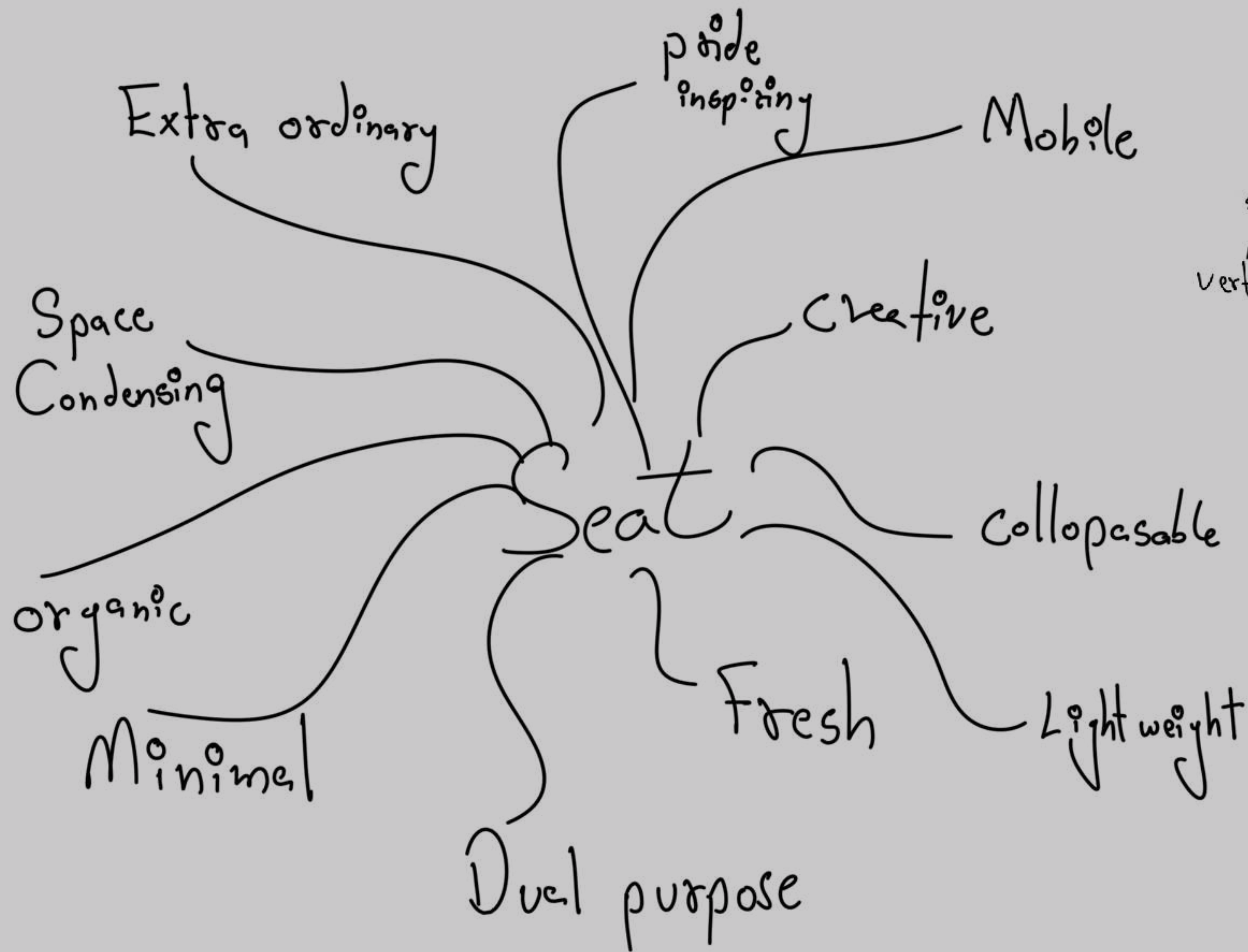
६ कहाँ

In design studios , classrooms and lecture area

७ कितना

Enough to accommodate 40-45 Students







Looking at things that stack and why?

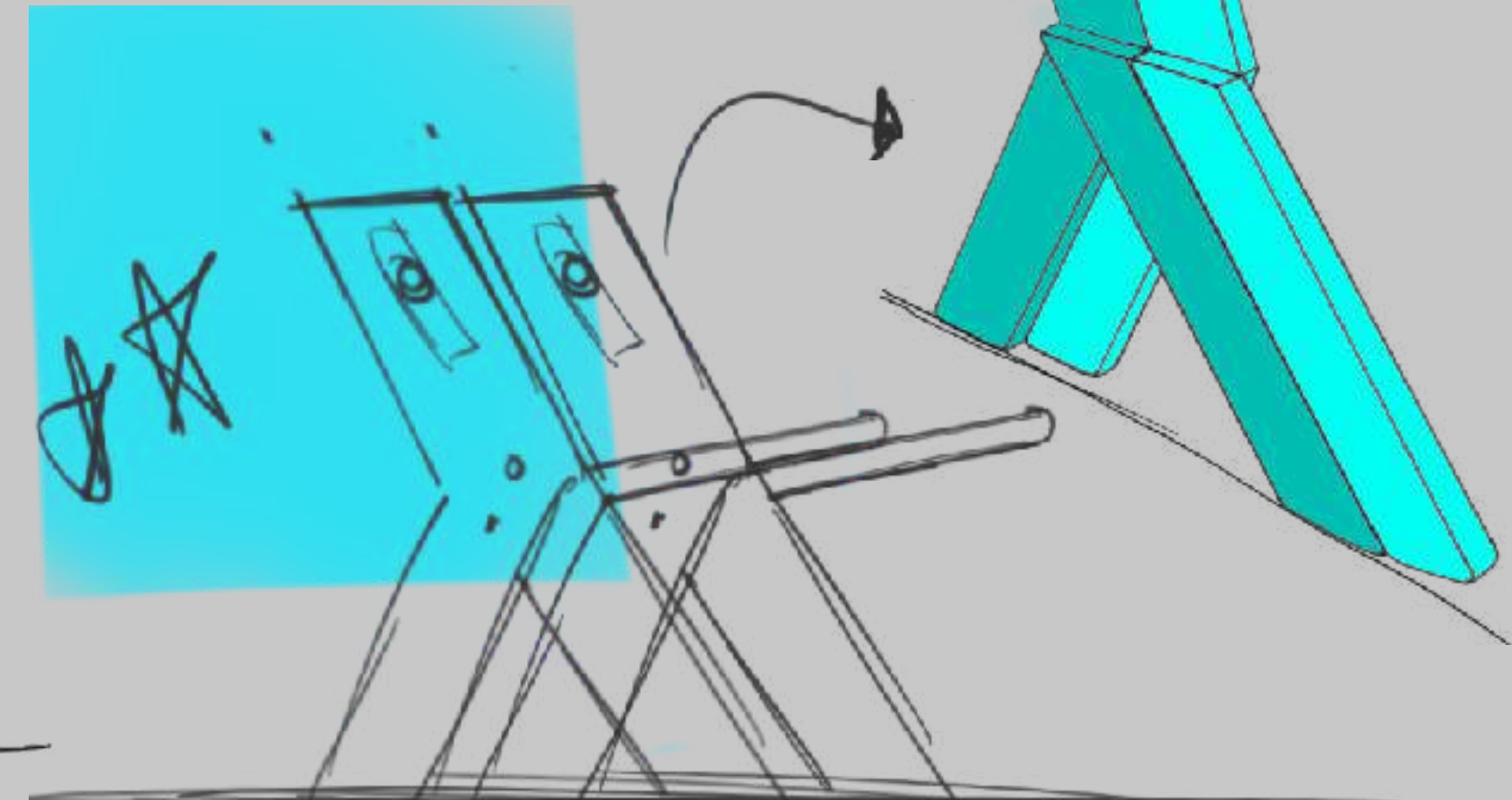
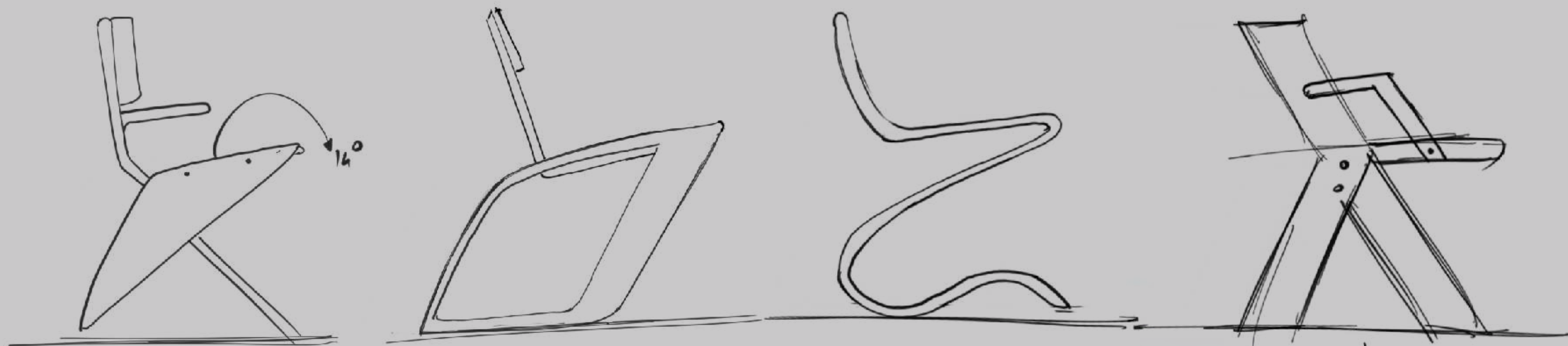
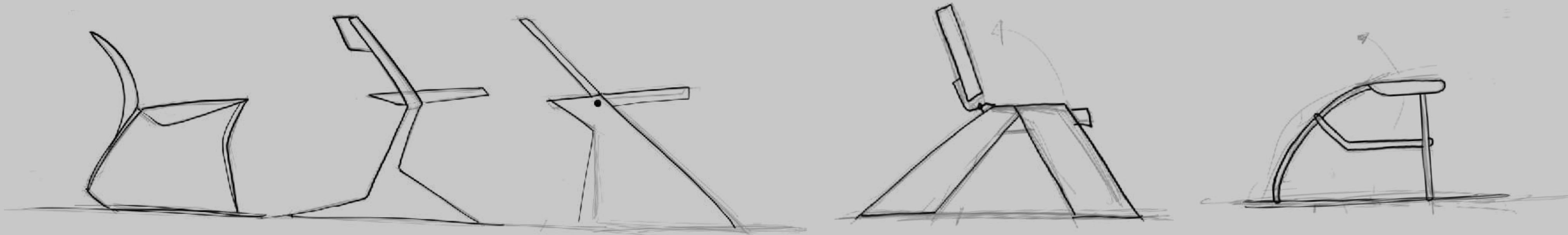
Either the legs have to be in different planes

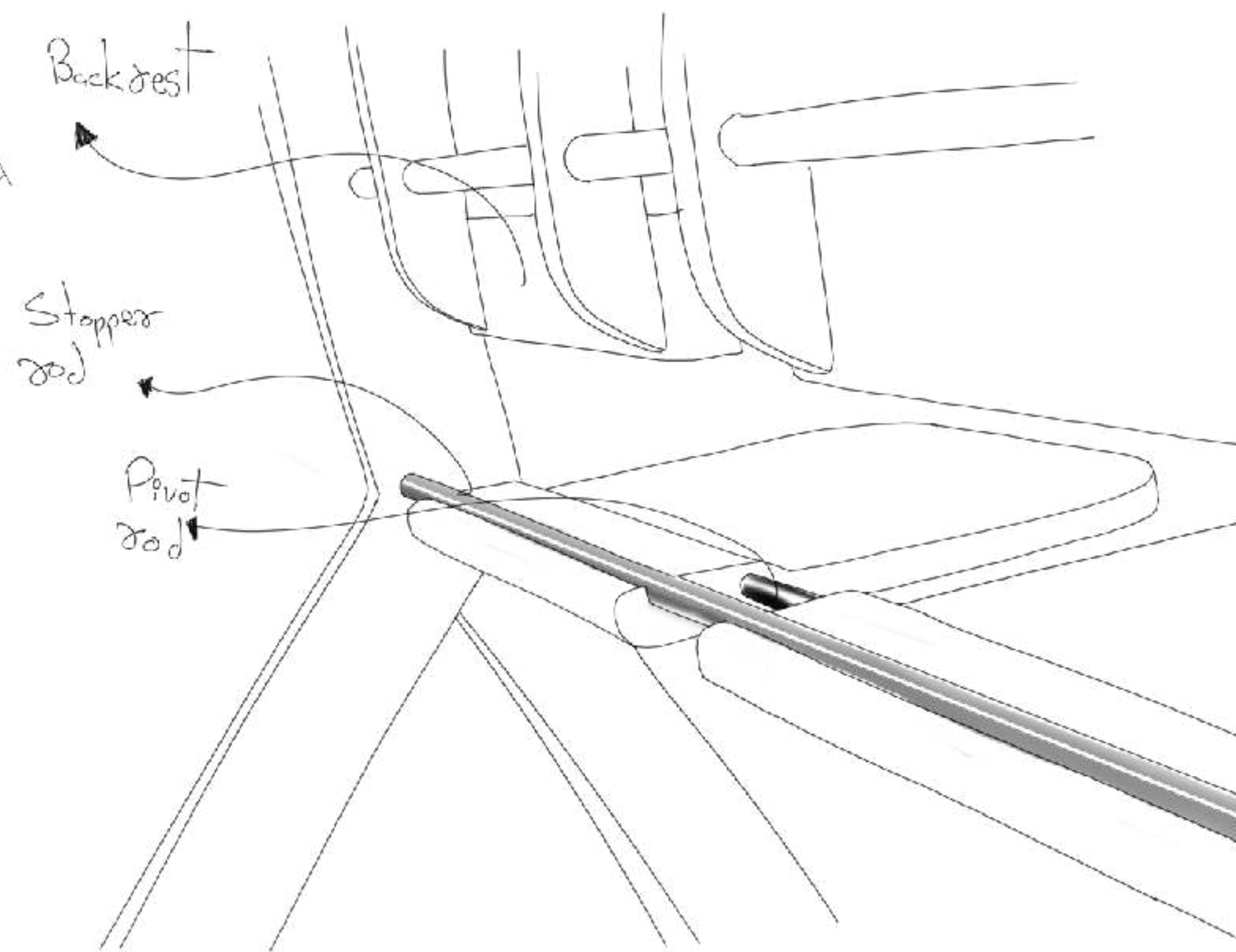
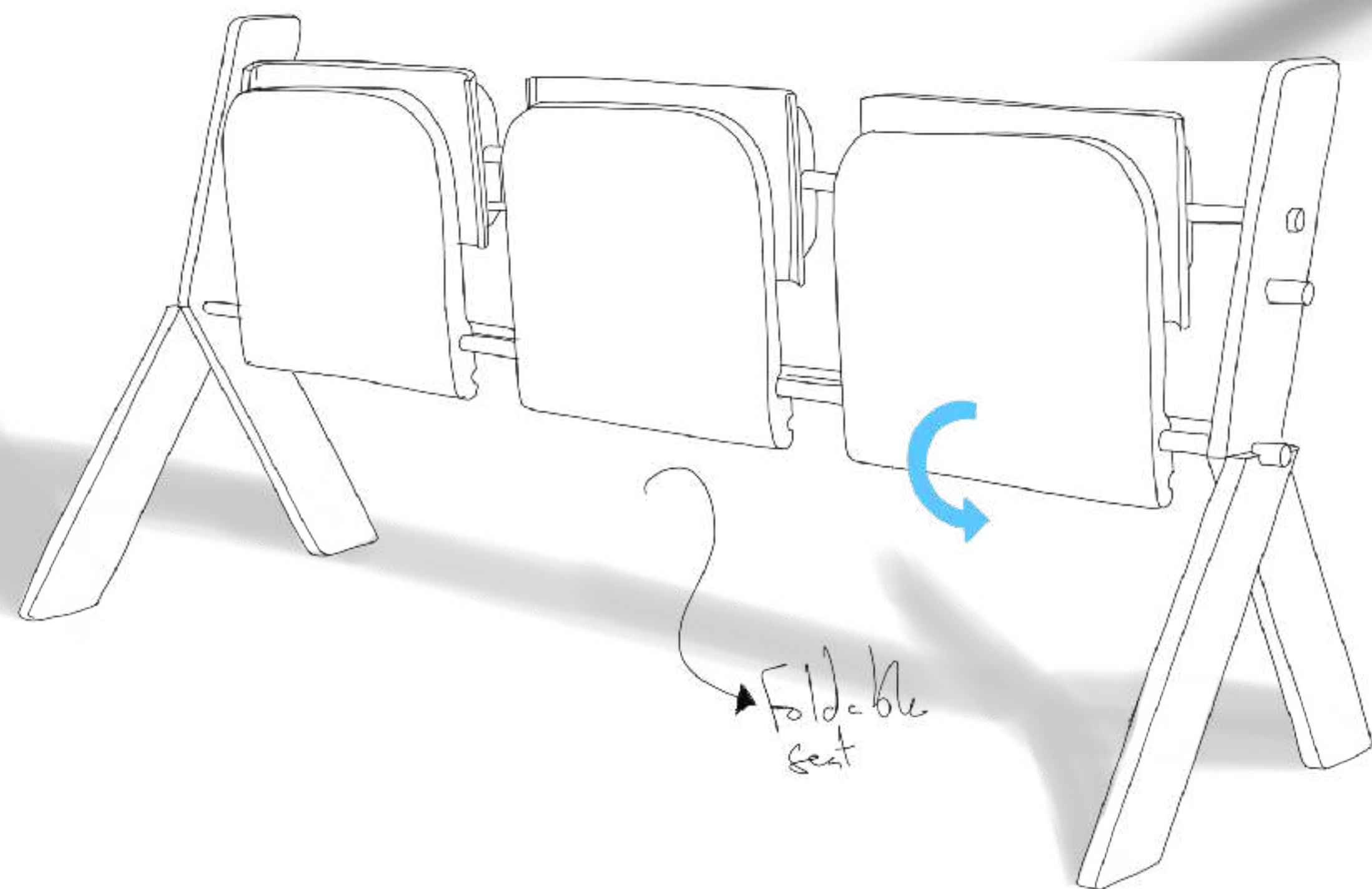
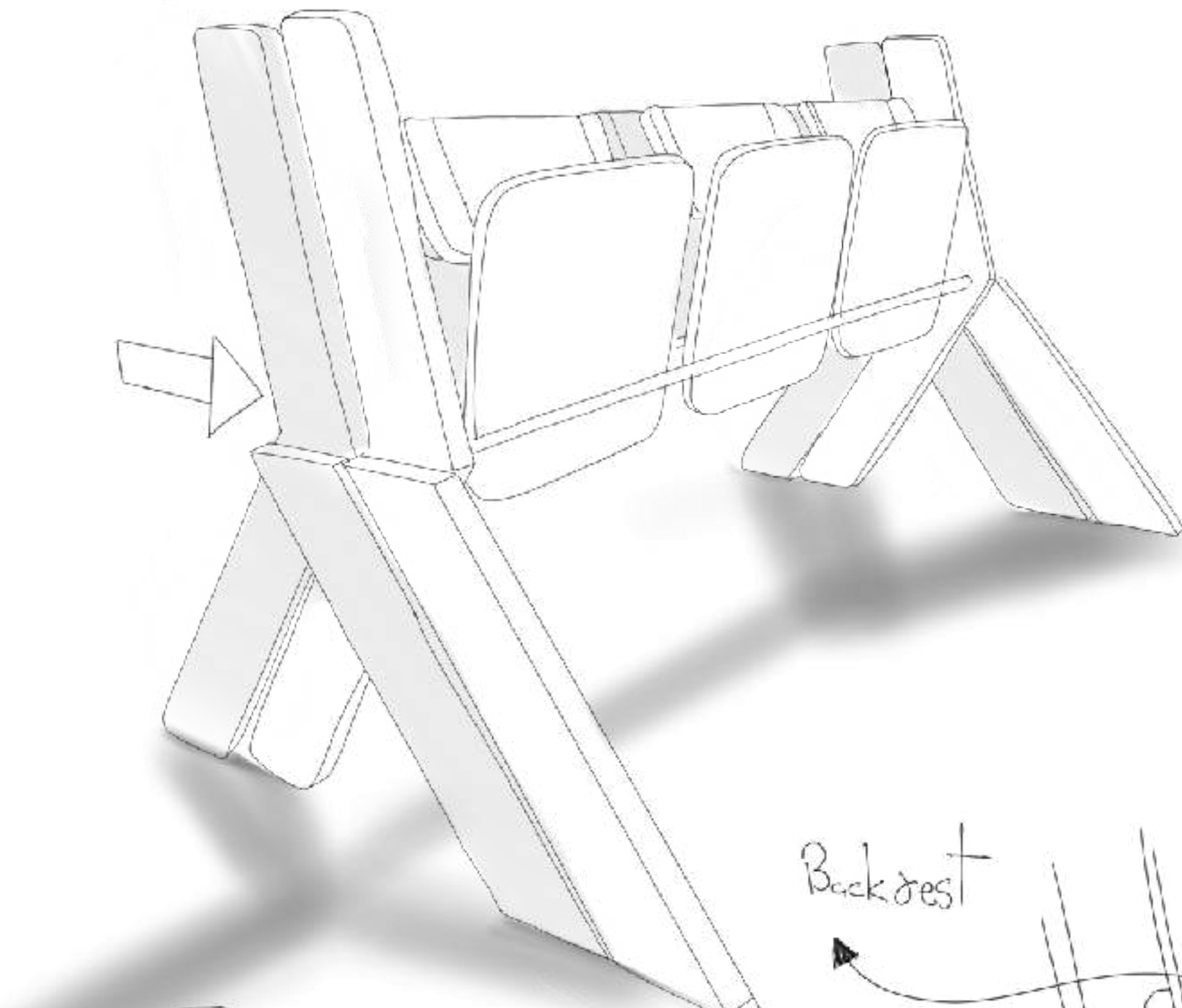
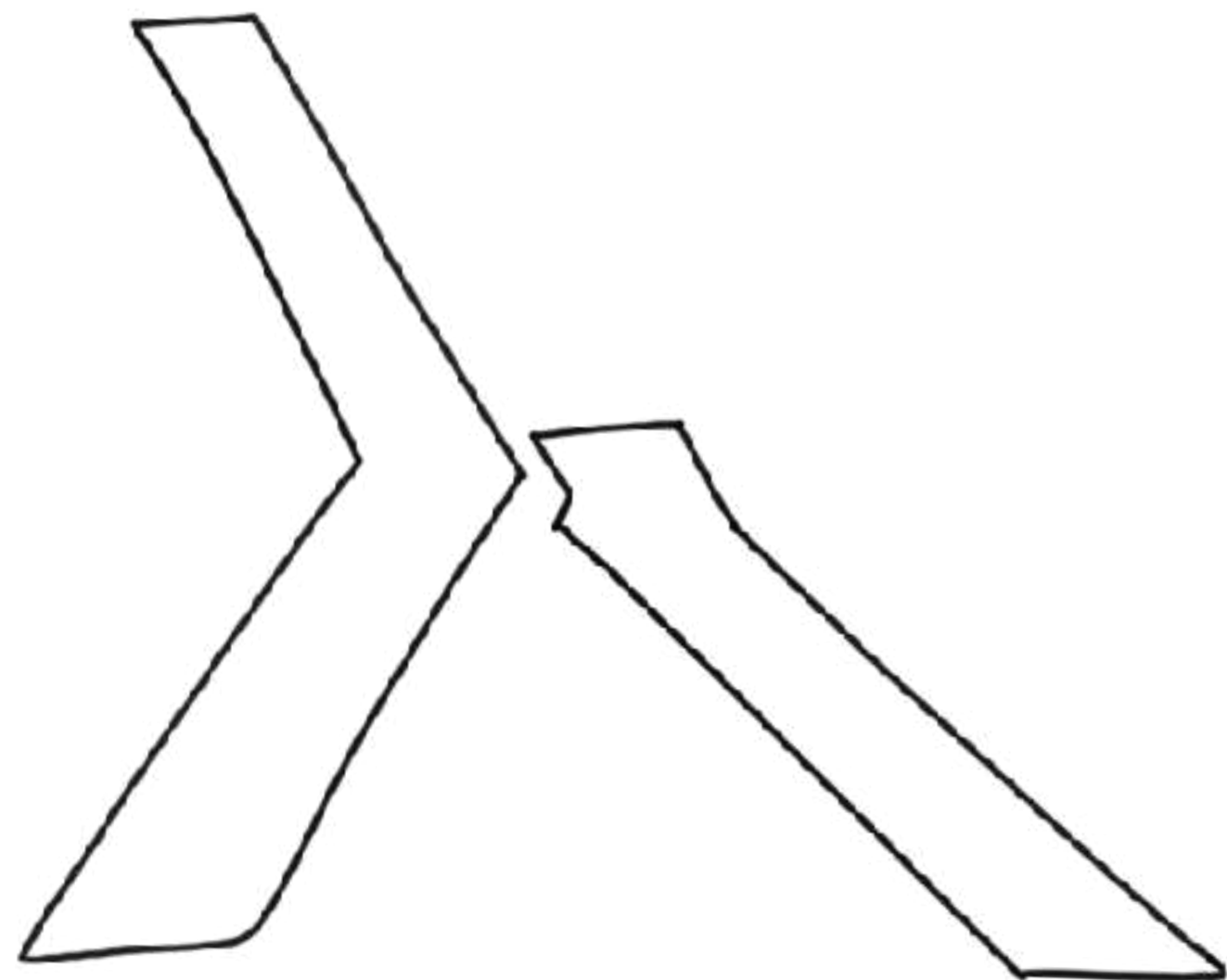
Or the legs have to make trapezium





for maximum
space condensing
the seat has to
go up or be
at an angle of
 14° minimum











Repurposing Discarded PVC pipes on Nirma University campus

We used the discarded pvc pipes and taking the advantage of in being a thermoplastic we remolded it into an array of usable products which can be easily manufactured and do not at all look like are made from discarded pvc pipes

Discarded PVC pipes



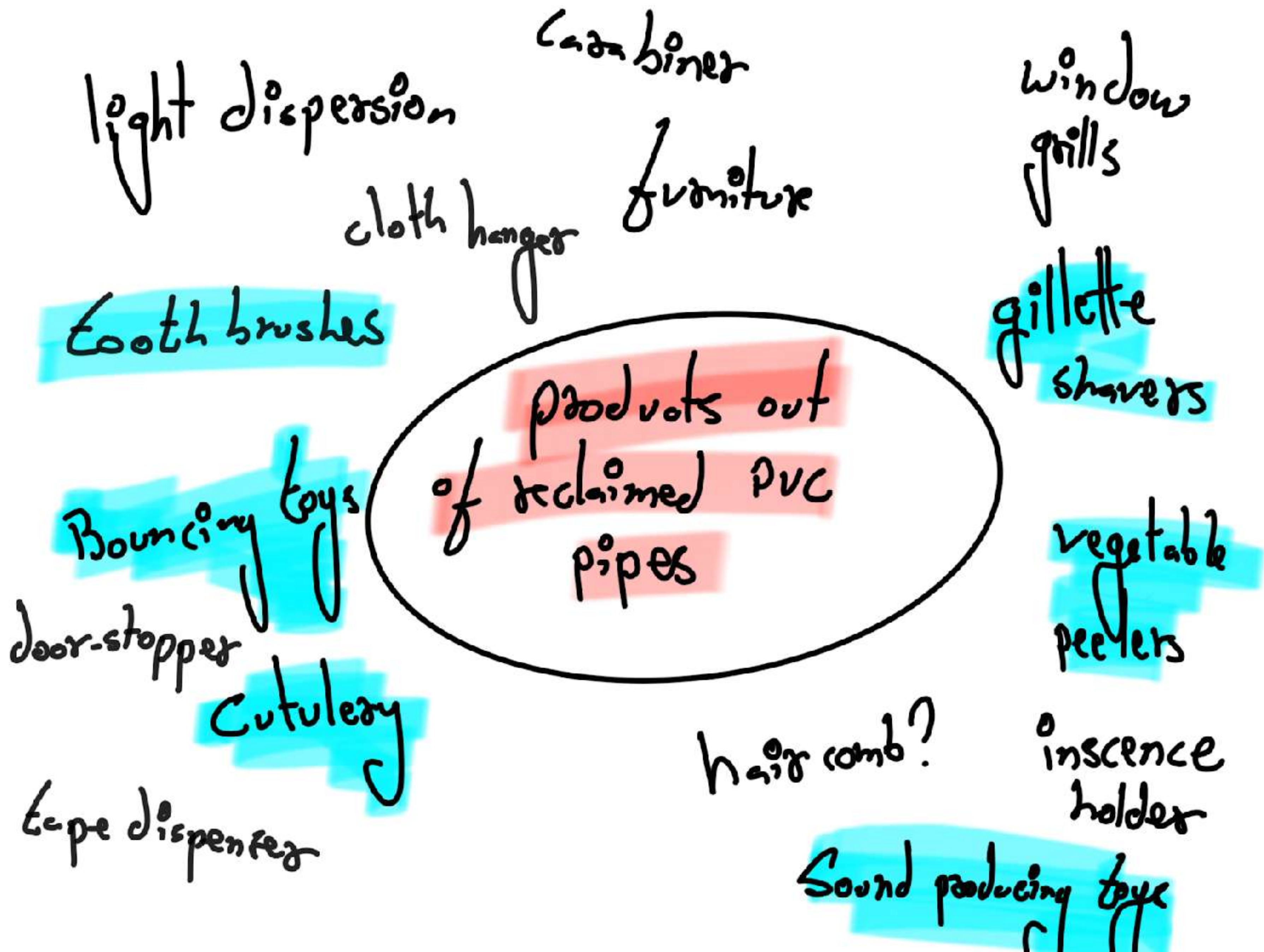
The main reason for discarding PVC pipes are punctures or blockage which cause leakage and hence an entire section (3-4 feet) has to be discarded and replaced.

We saw an opportunity here and wanted to reclaim the material and repurpose it into some other product and reduce PVC going to landfills

Exploring the material



Bending the flattened pipe according to the design. The type of PVC pipe used was **PVC - O** which was softer and melts at lower temperature as compared to other types of pipes. As seen in the video after bending the pipe upon being exposed to the heat again it tends to go back to the original form.



Making jumping toys



Cutting the PVC pipe vertically



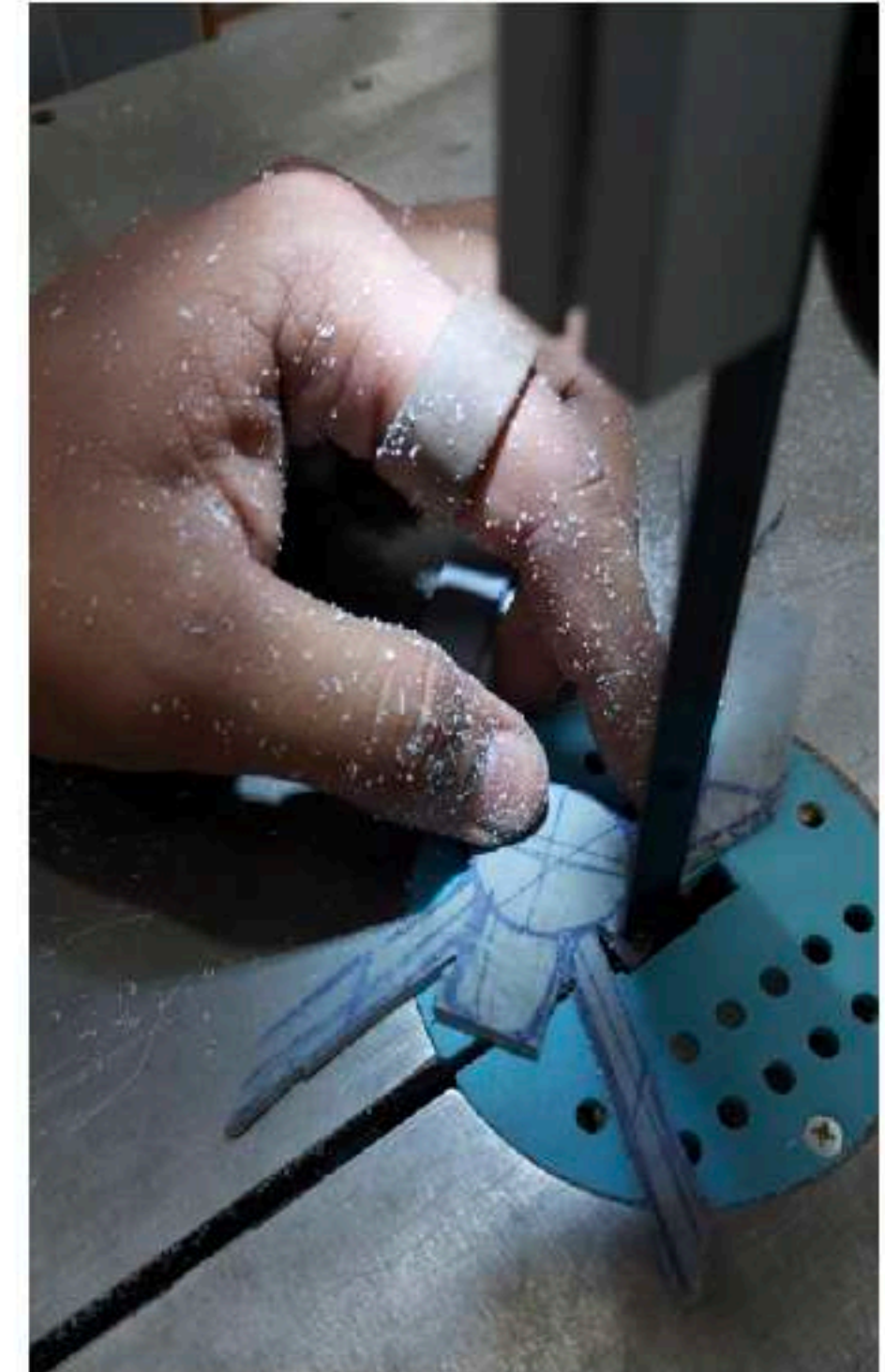
Heating up the pipe



Flattened pipe



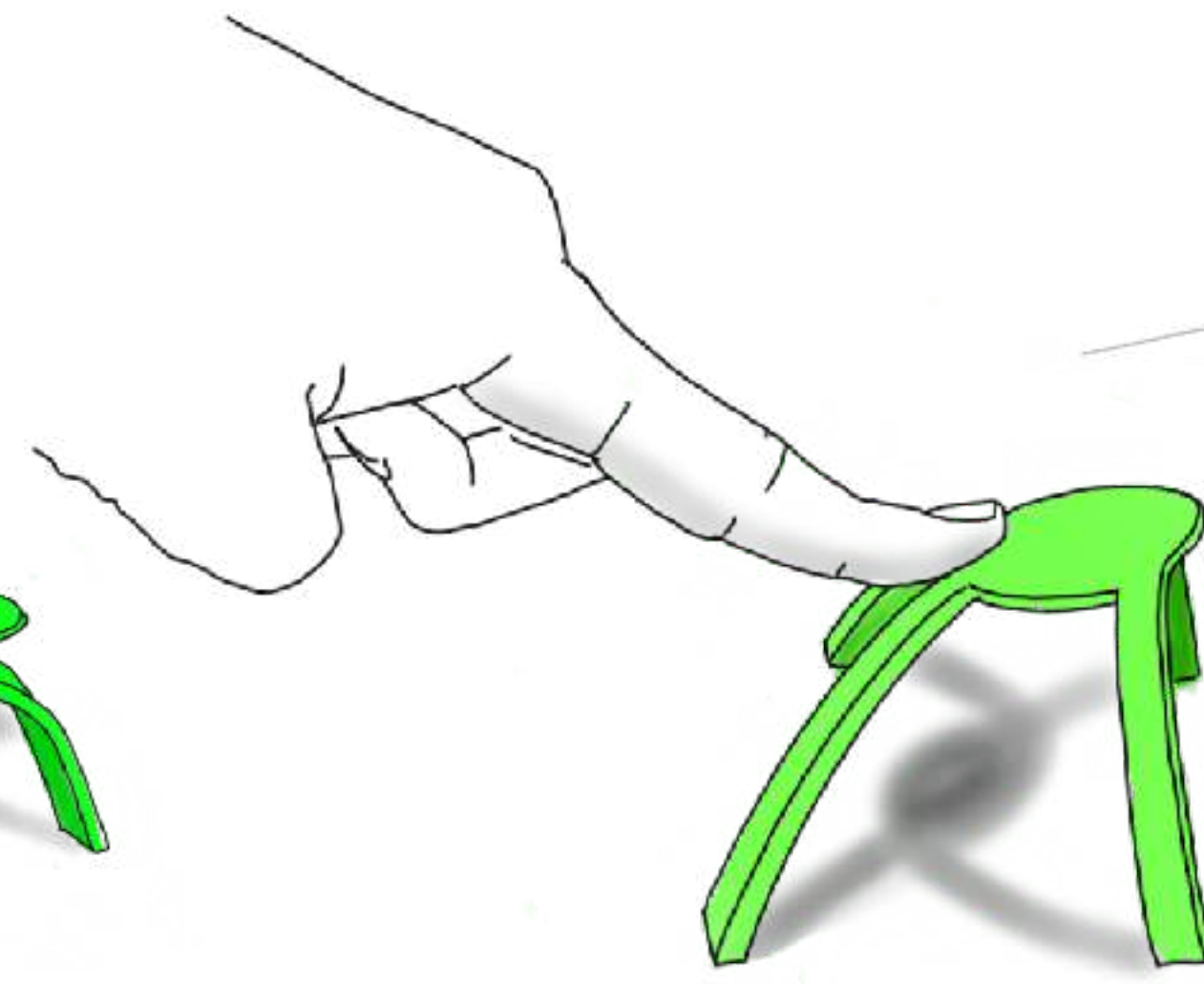
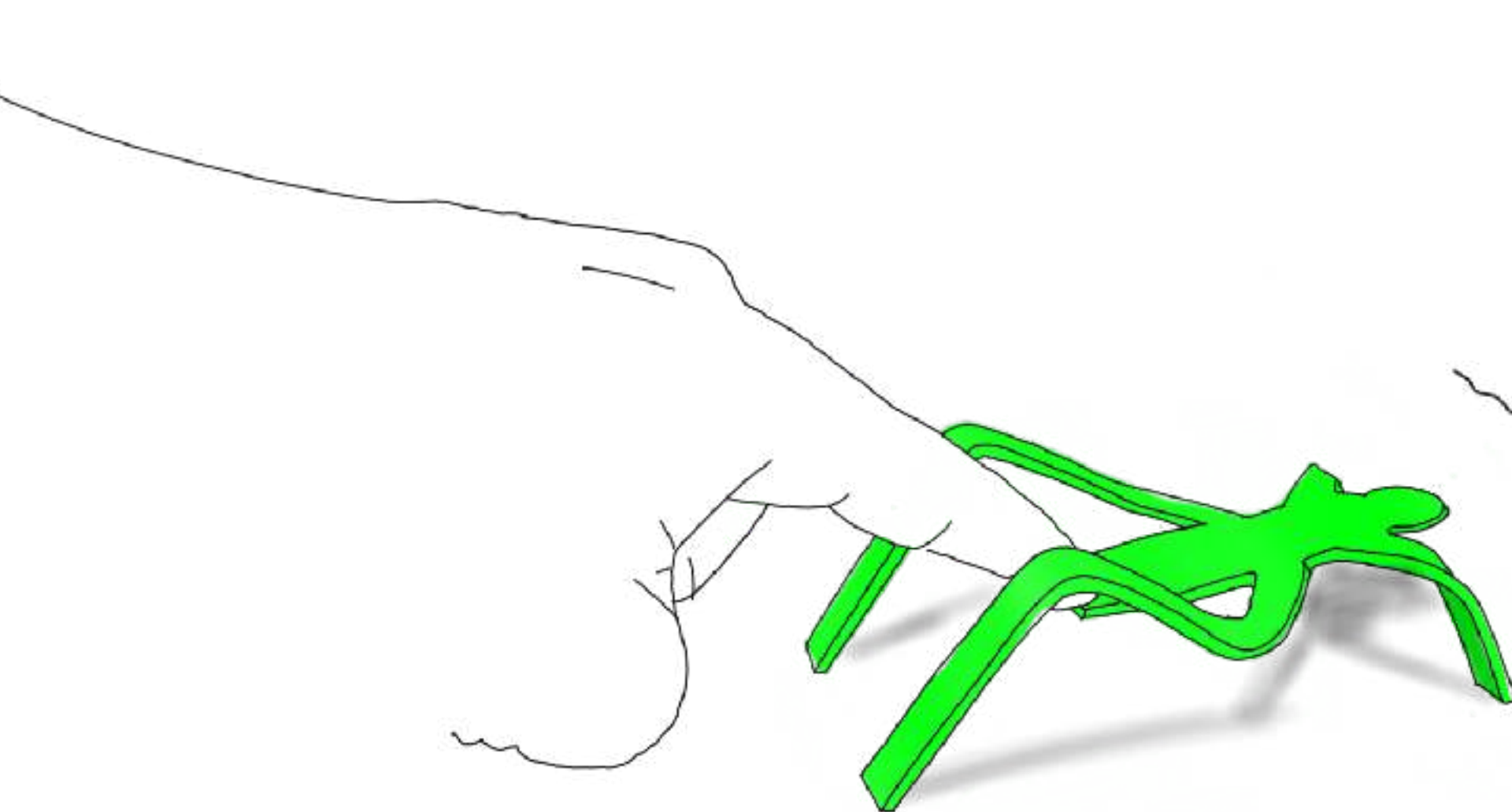
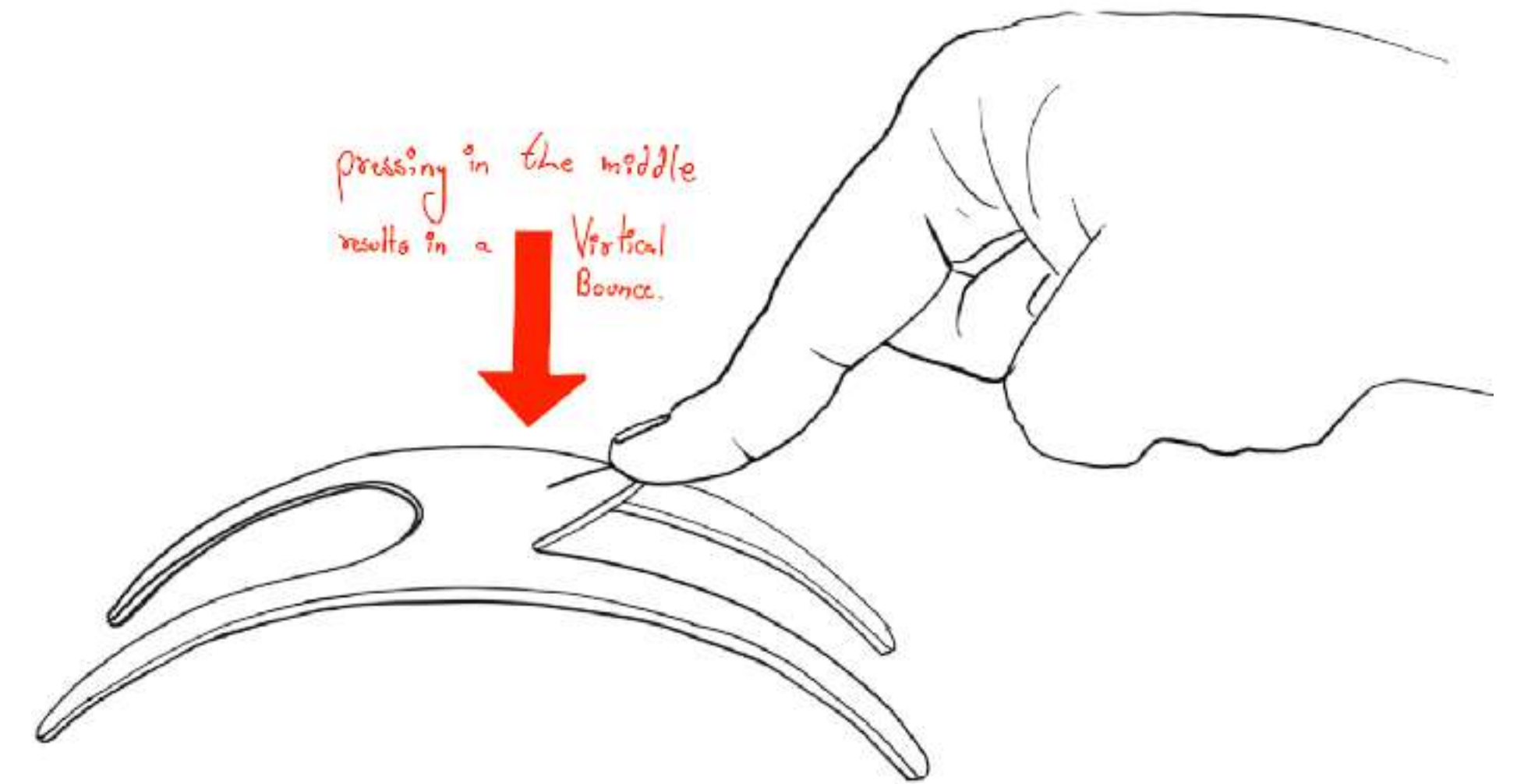
Laying out the design



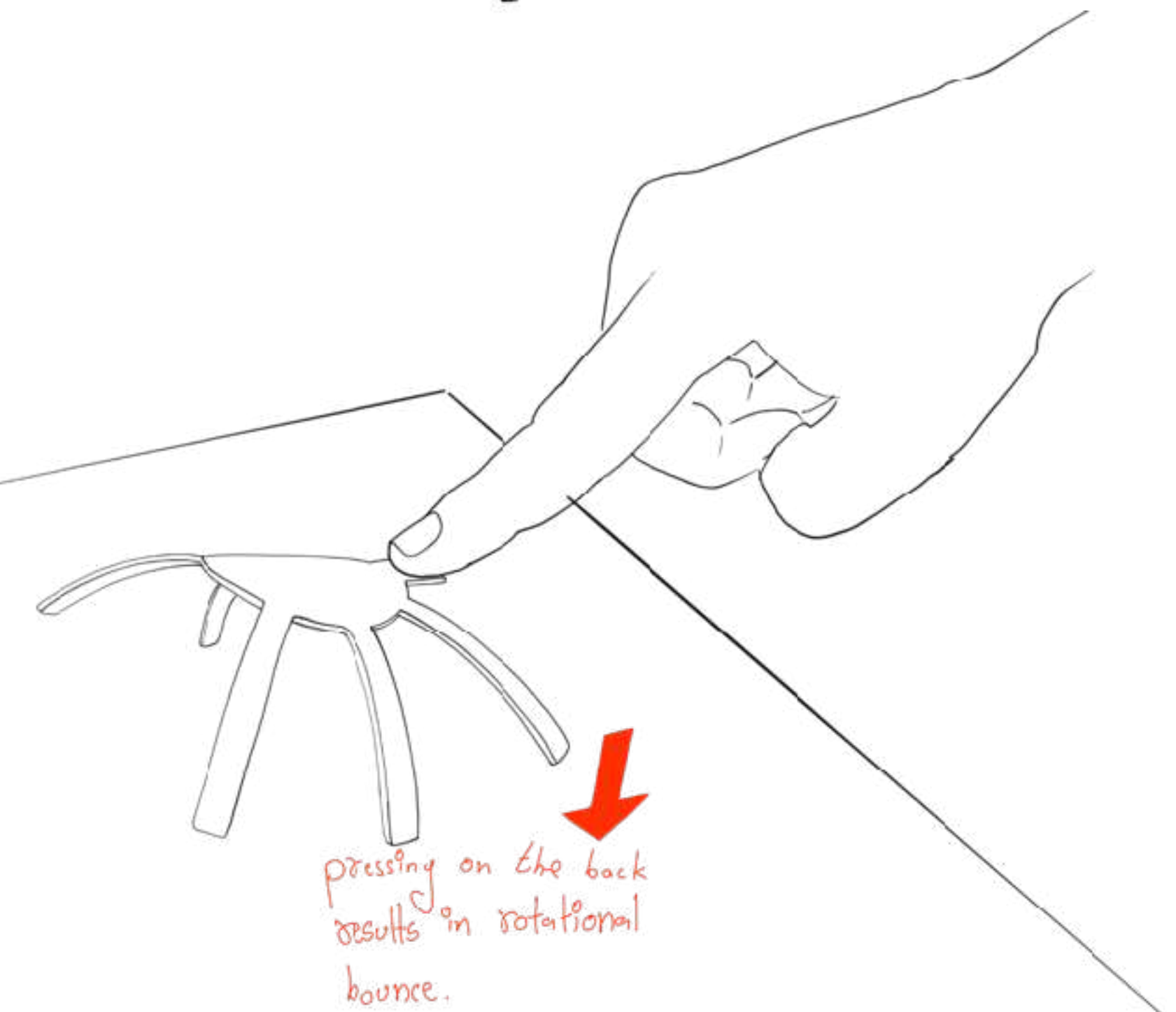
Cutting the design

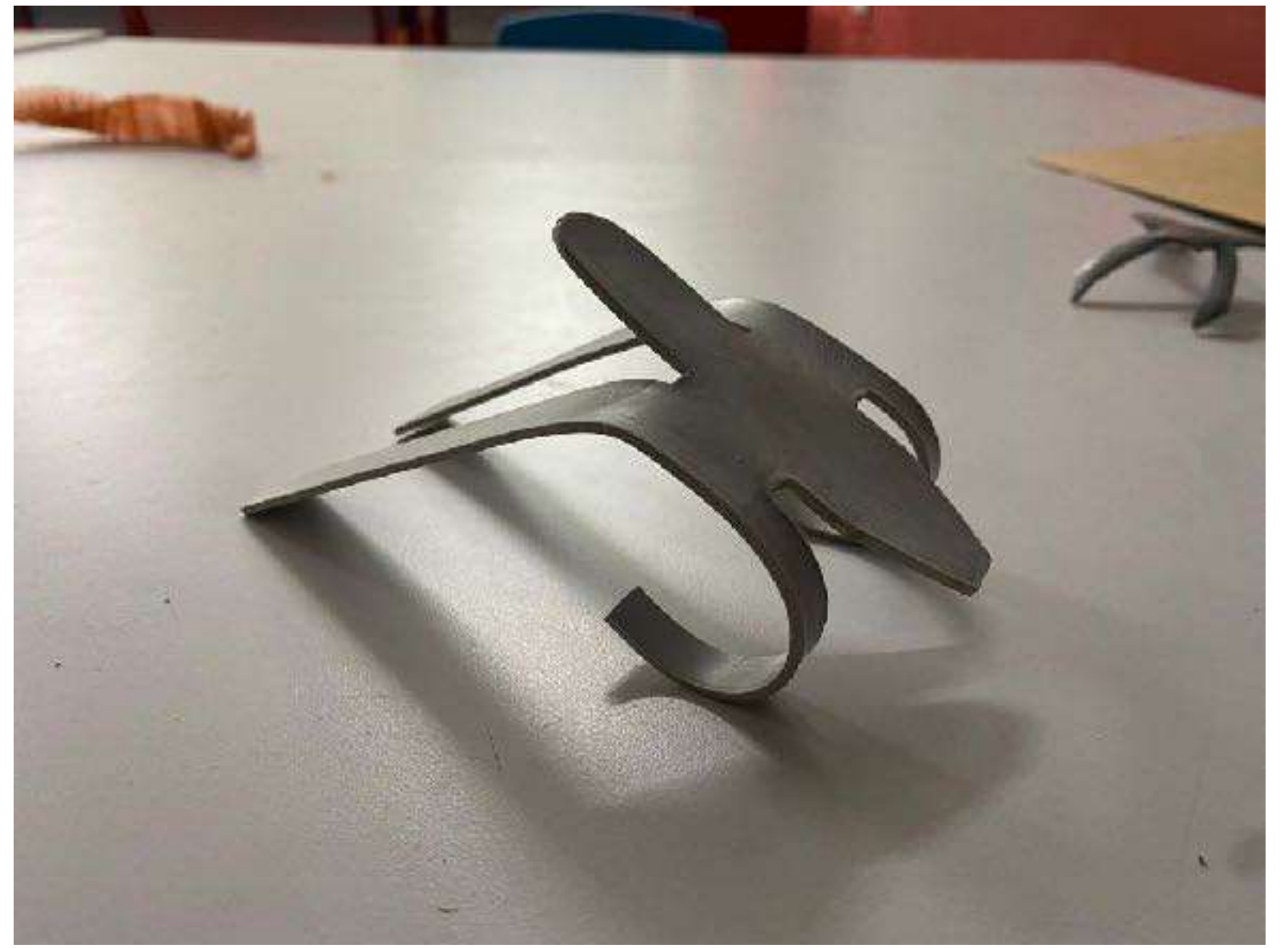
Understanding jumping patterns

We learned that the jump depends on the design and the point of pressing such as if it were to be pressed in the middle it would bounce vertically upwards and if pressed at the back it tends to bounce ahead and front flip as shown in the next slides



Pressure at $\frac{1}{4}$ length makes the toy hop forward like a FROG





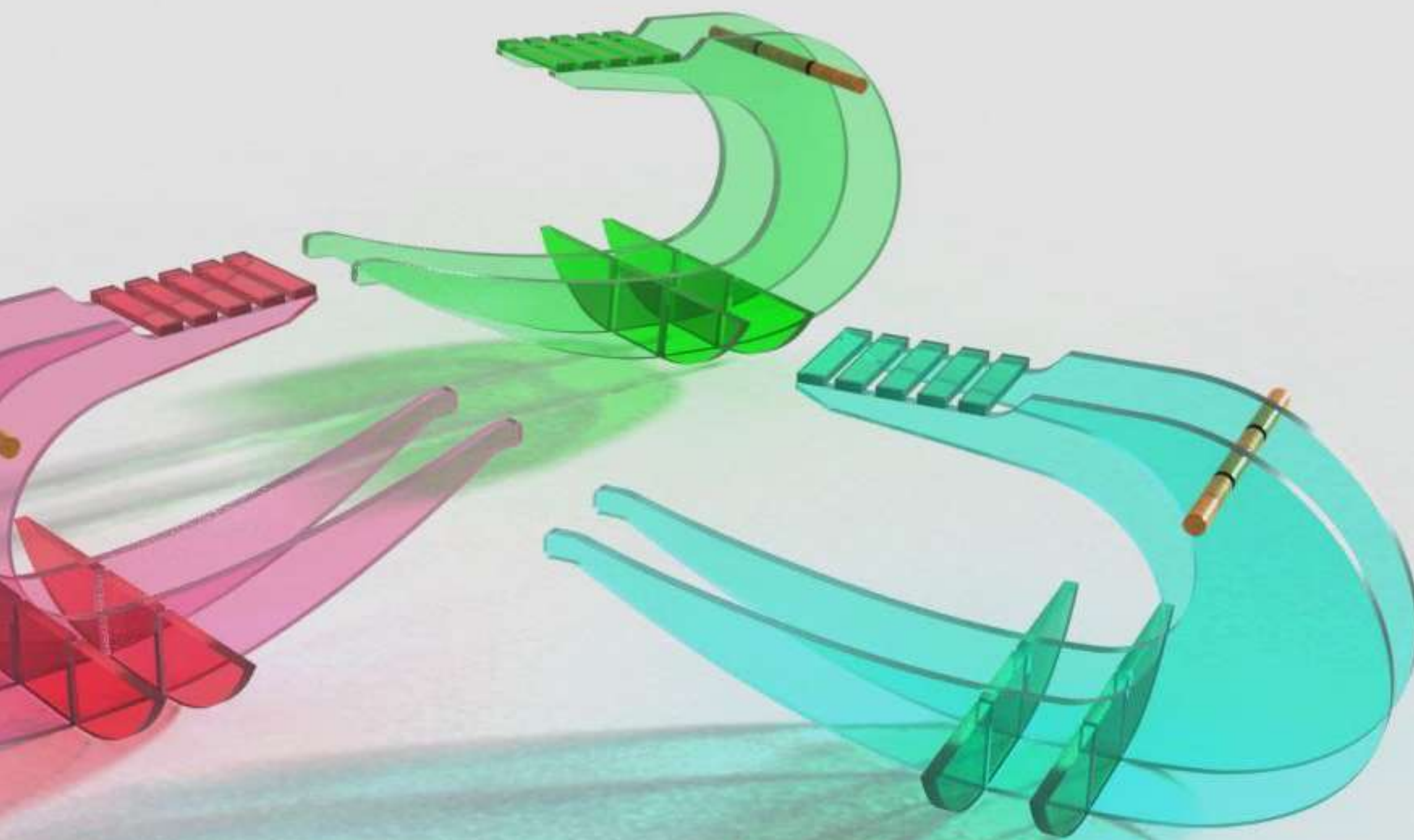


Final painted toys



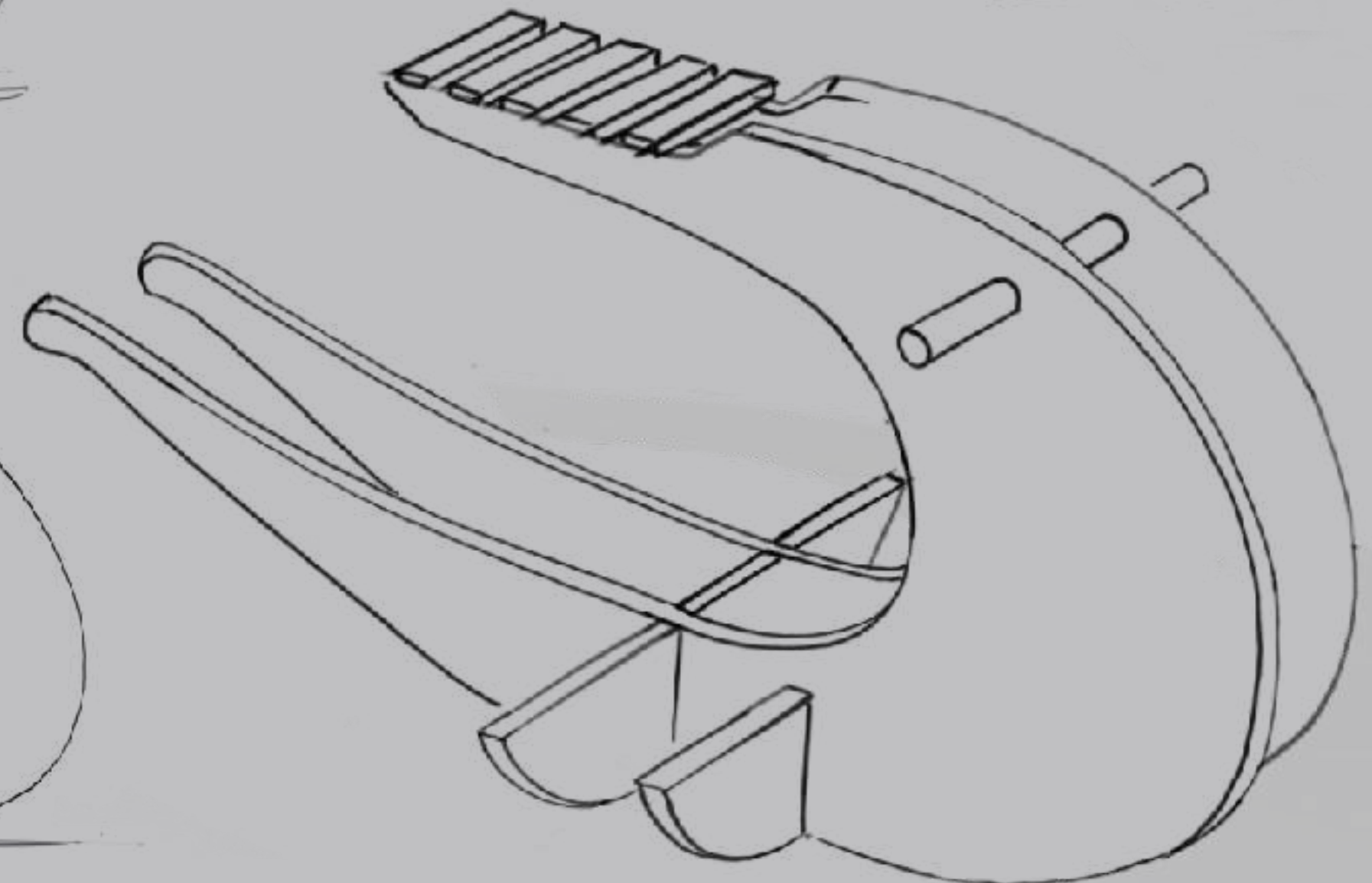
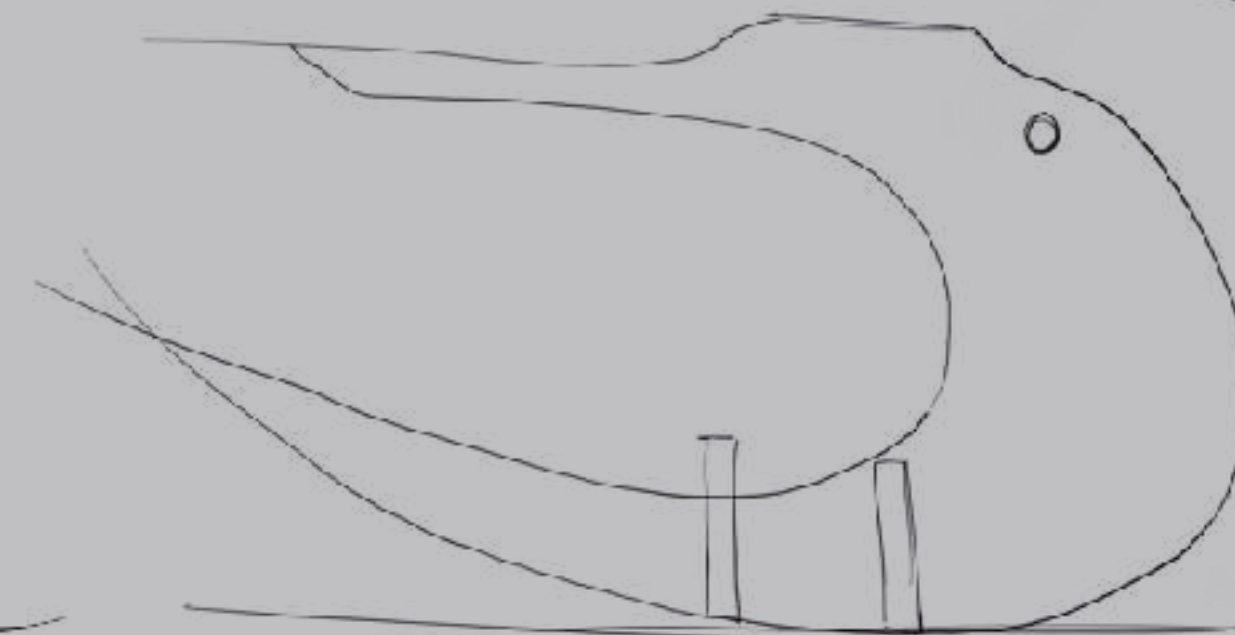
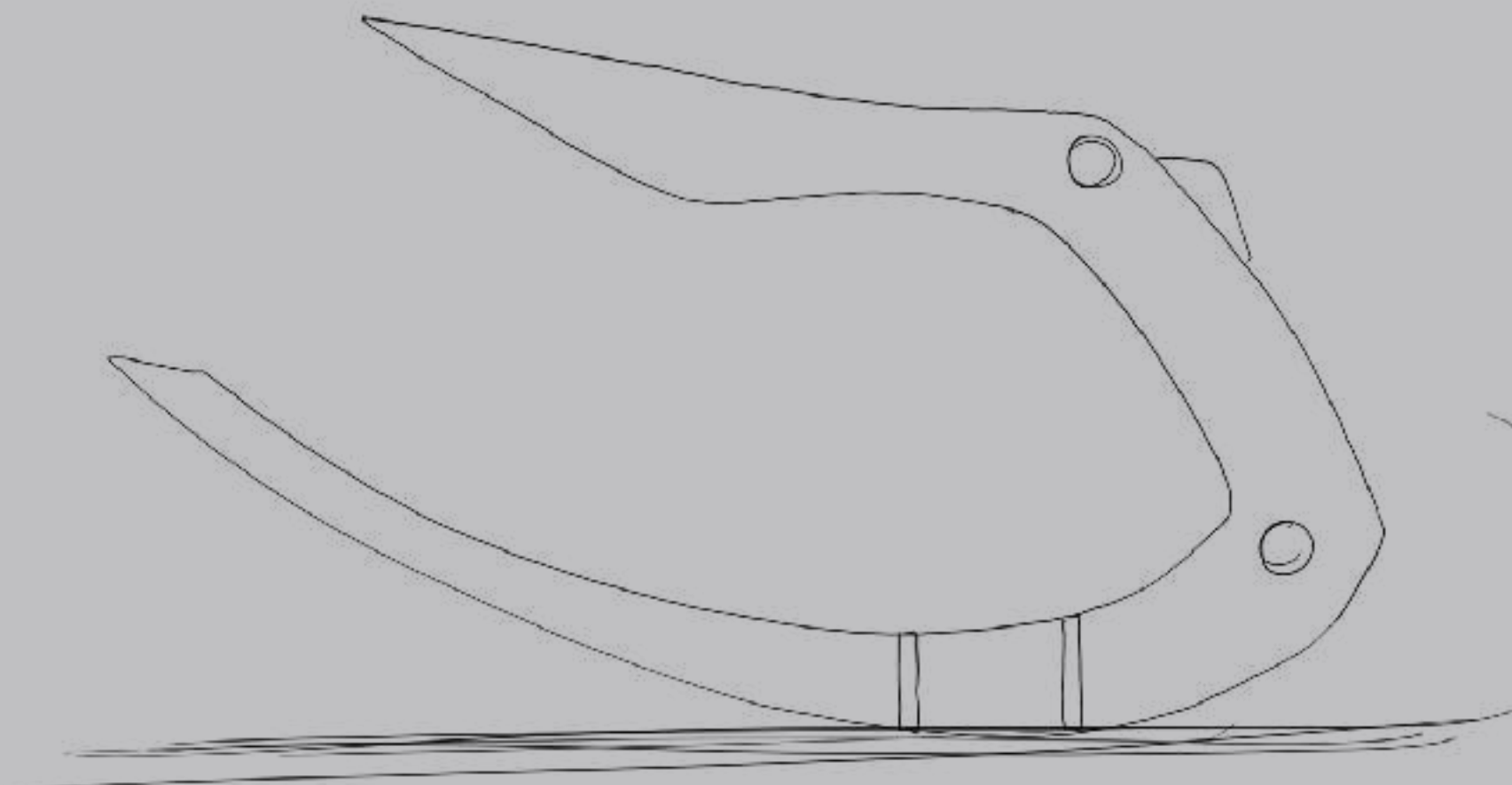
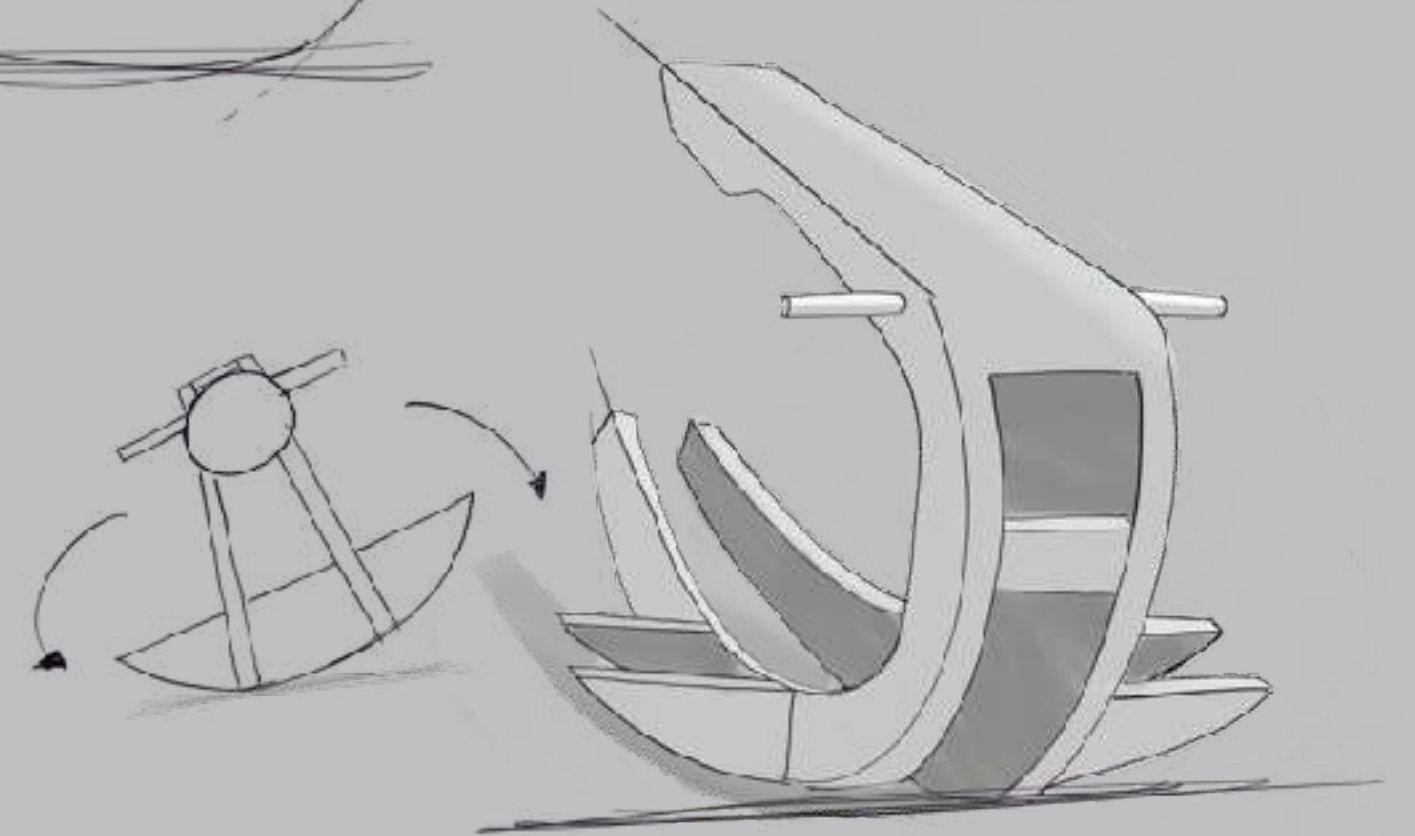
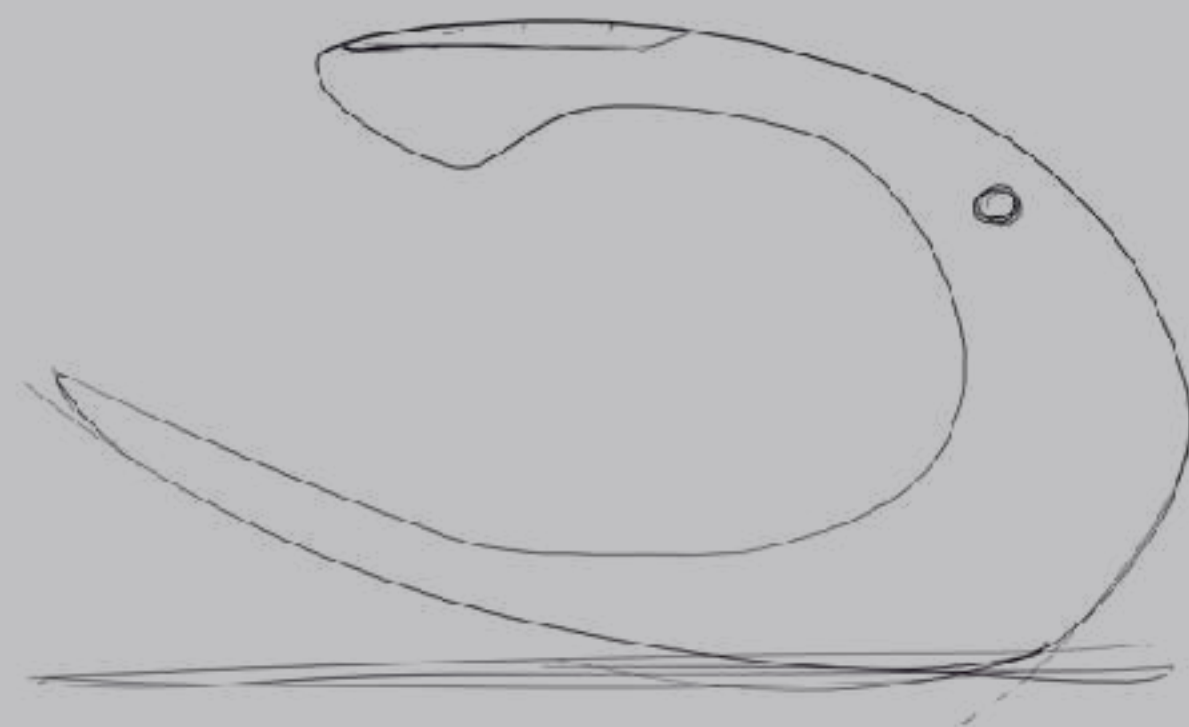
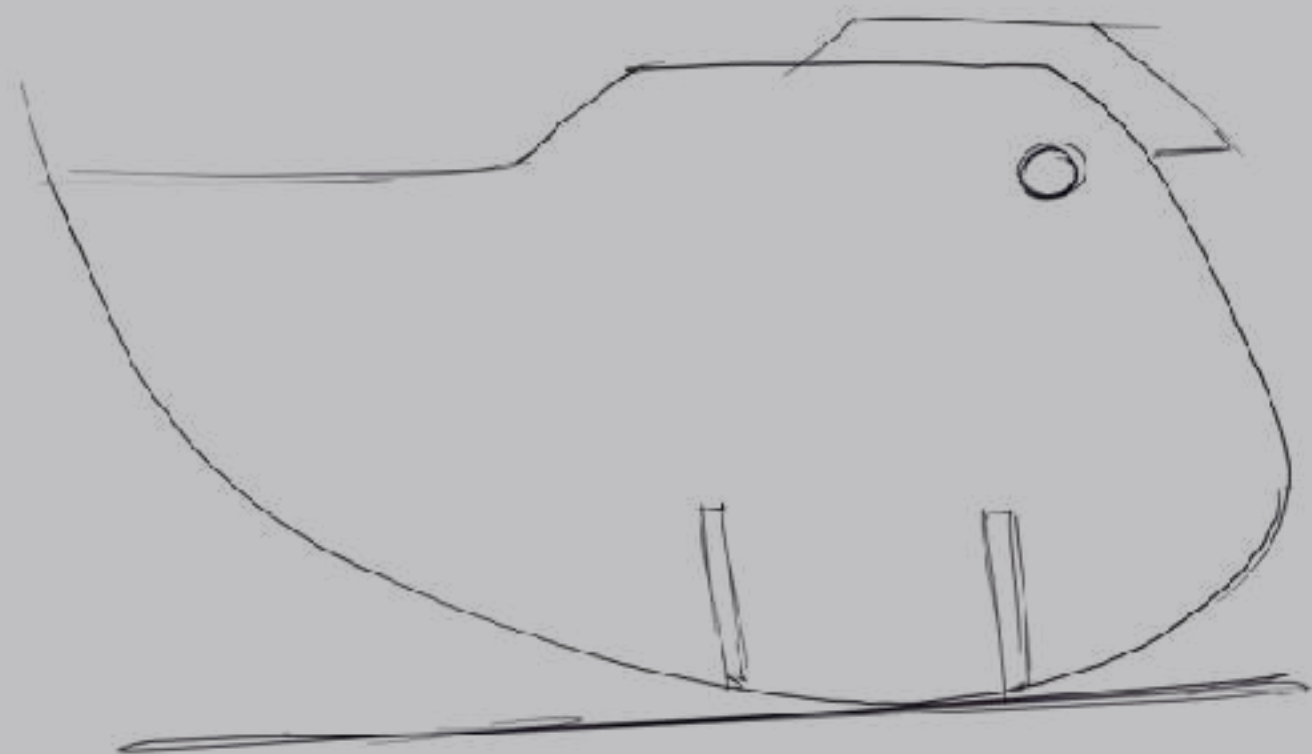
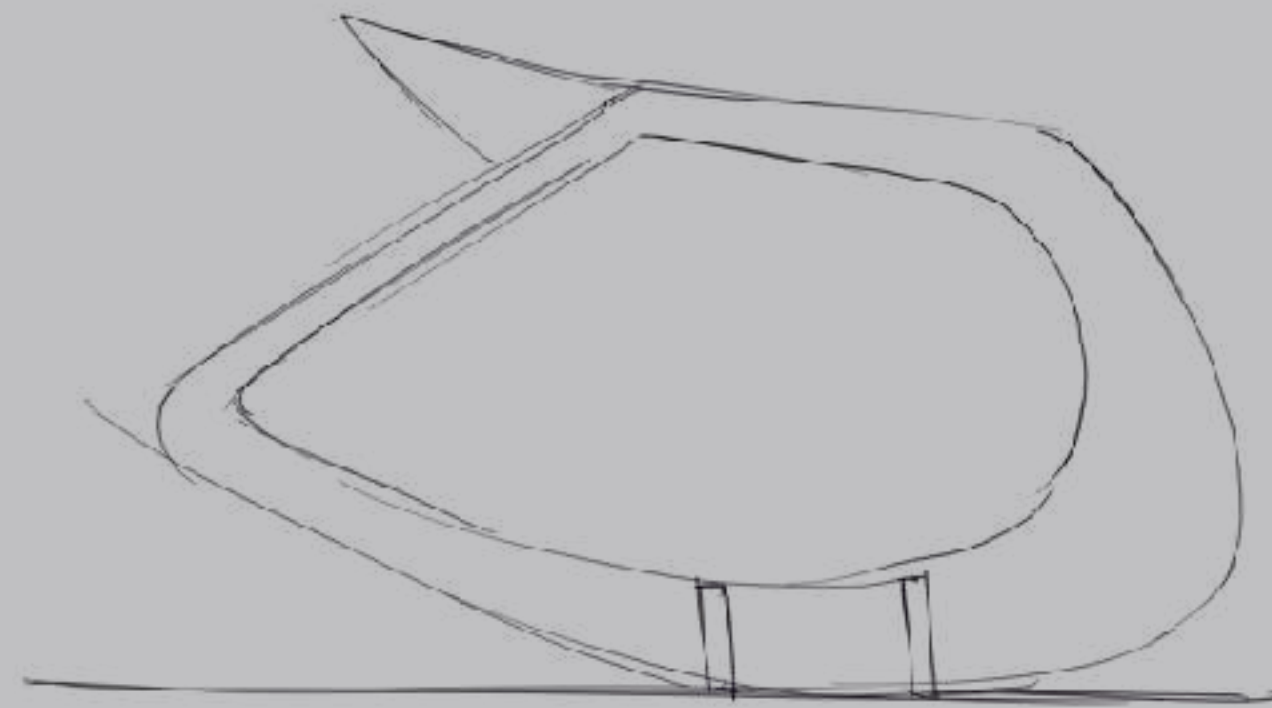
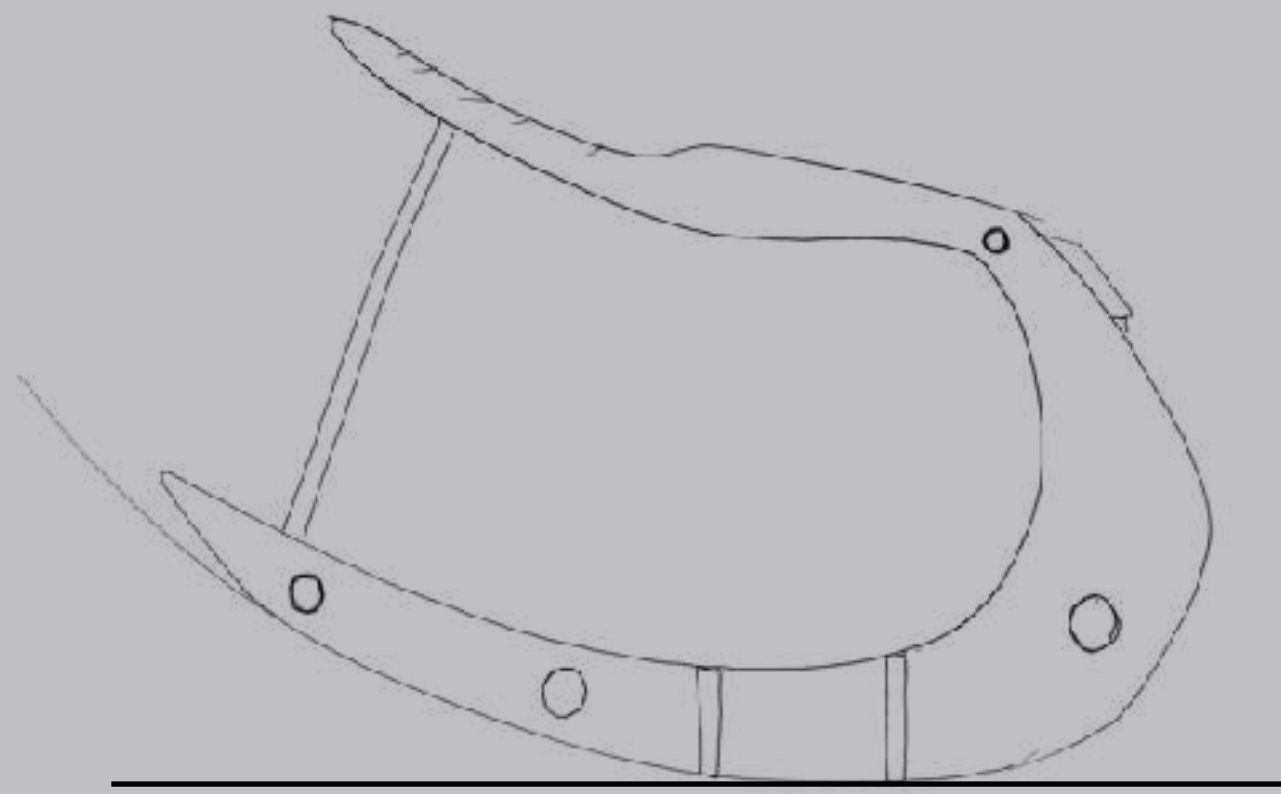
Making a competitive game for kids of age 4-6

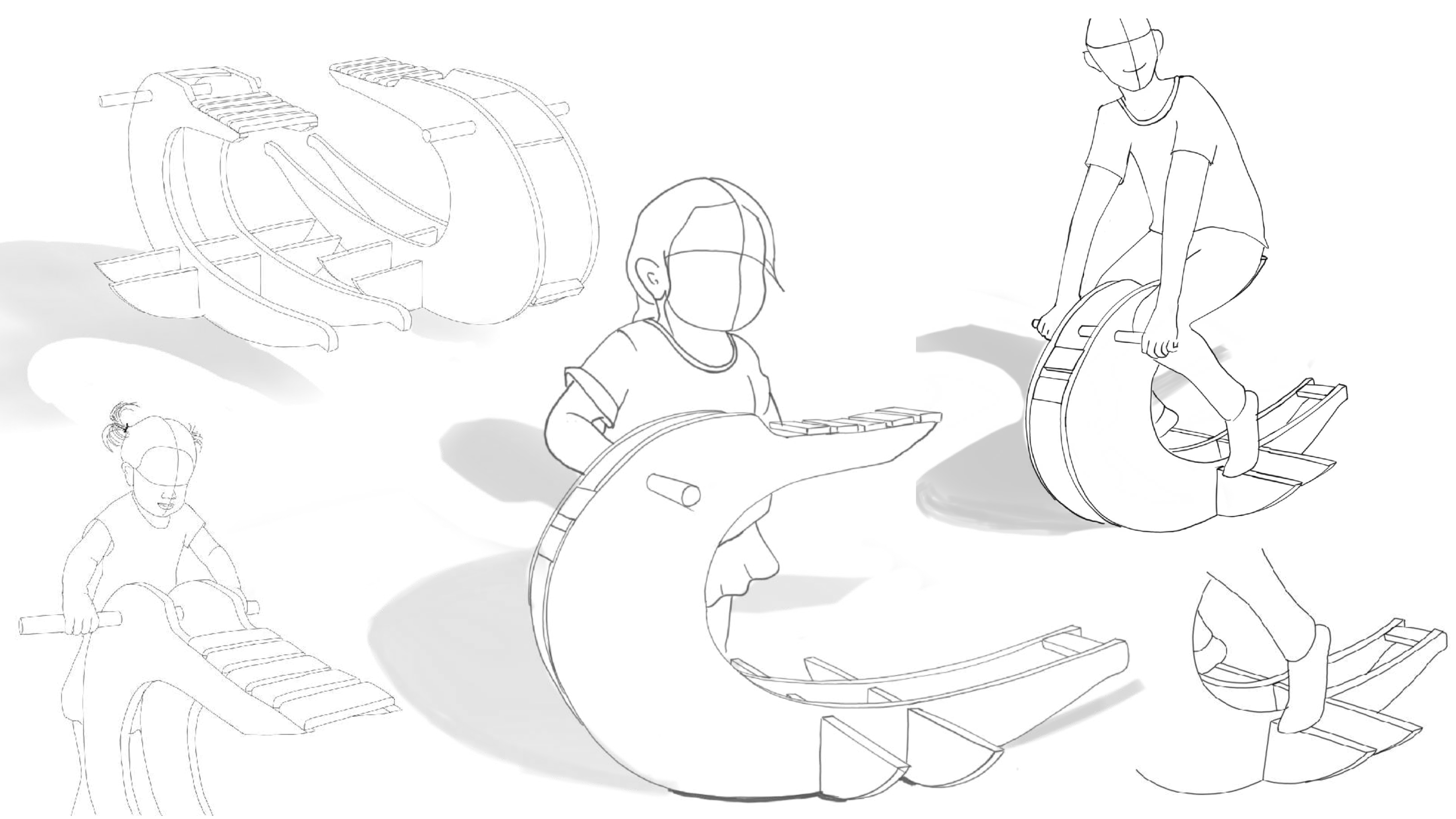


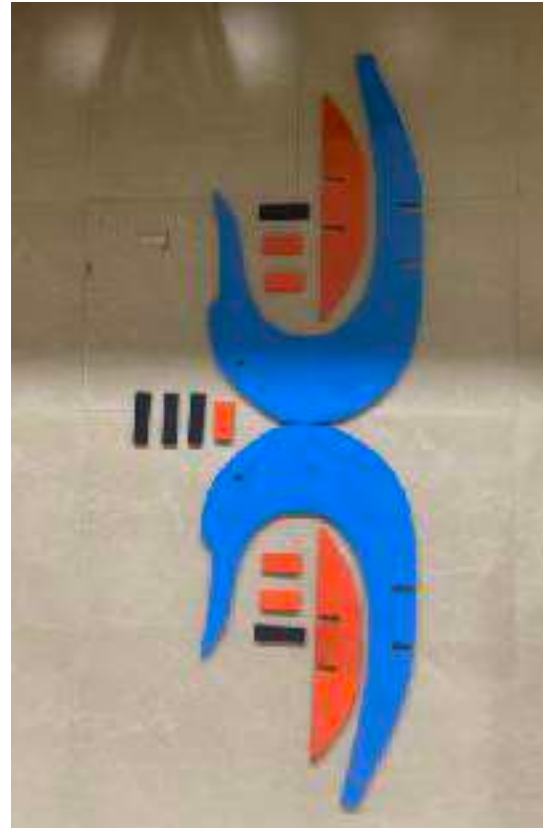


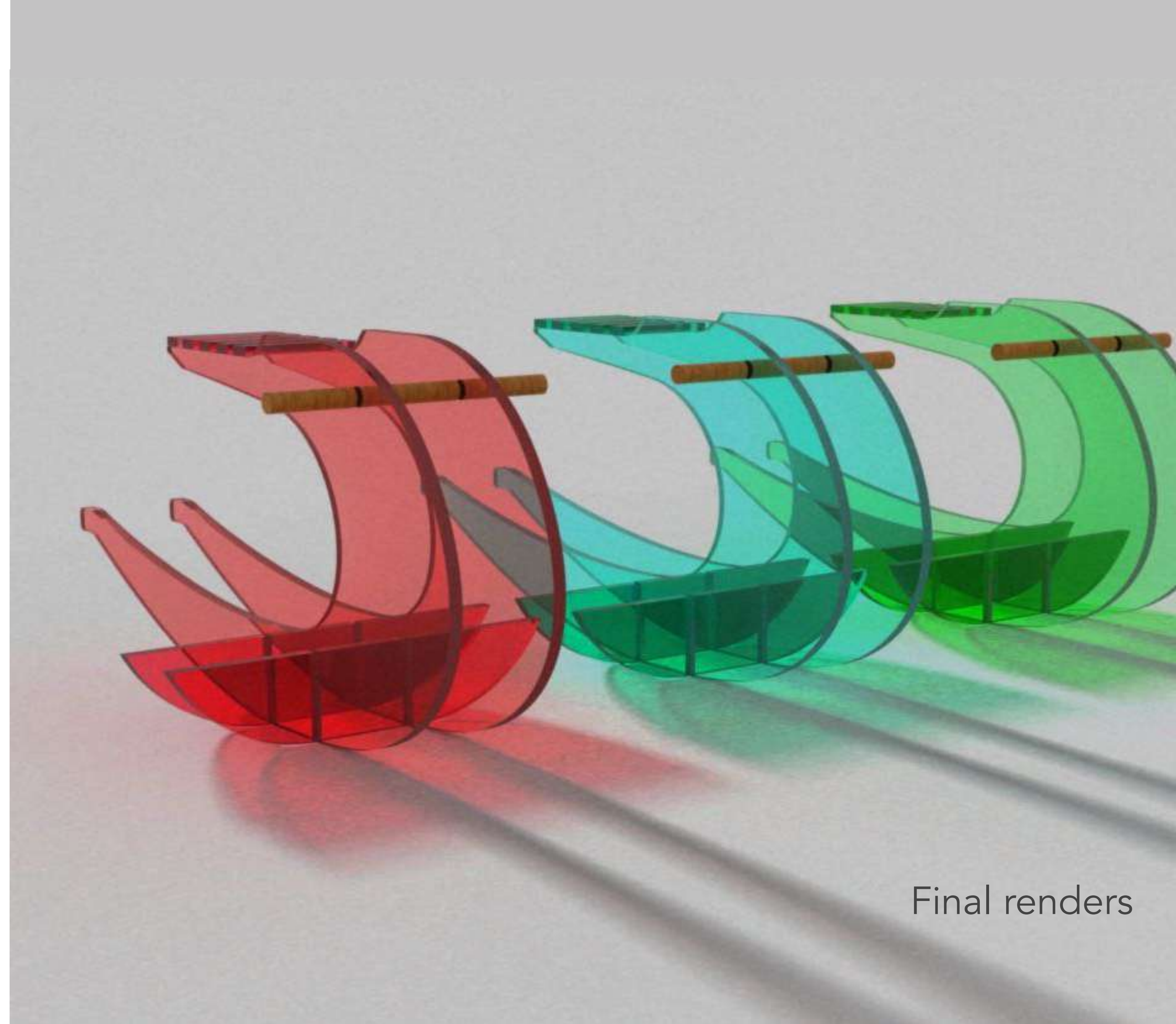
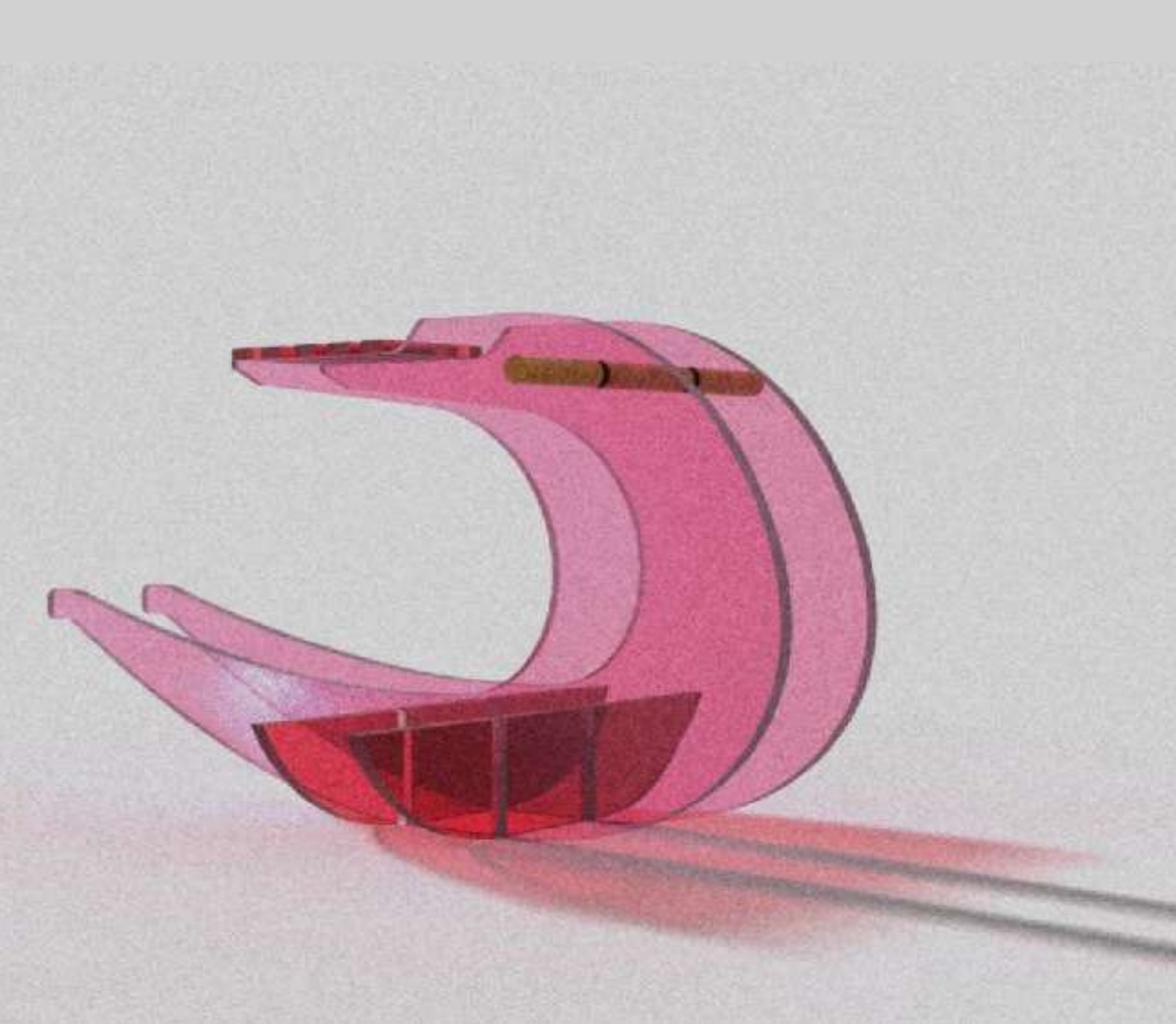
RIKE

Rike is a revisit to one of our favorite toys as kids and combining it with the fun of riding bikes around the corners leaning just like on a arcade bike with the freedom of leaning side to side.









Final renders



HEMANG PAREKH

Thank you !!!

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