



Tech Toys for Good

MARI
PINHEIRO

Design for social
& environmental
well-being

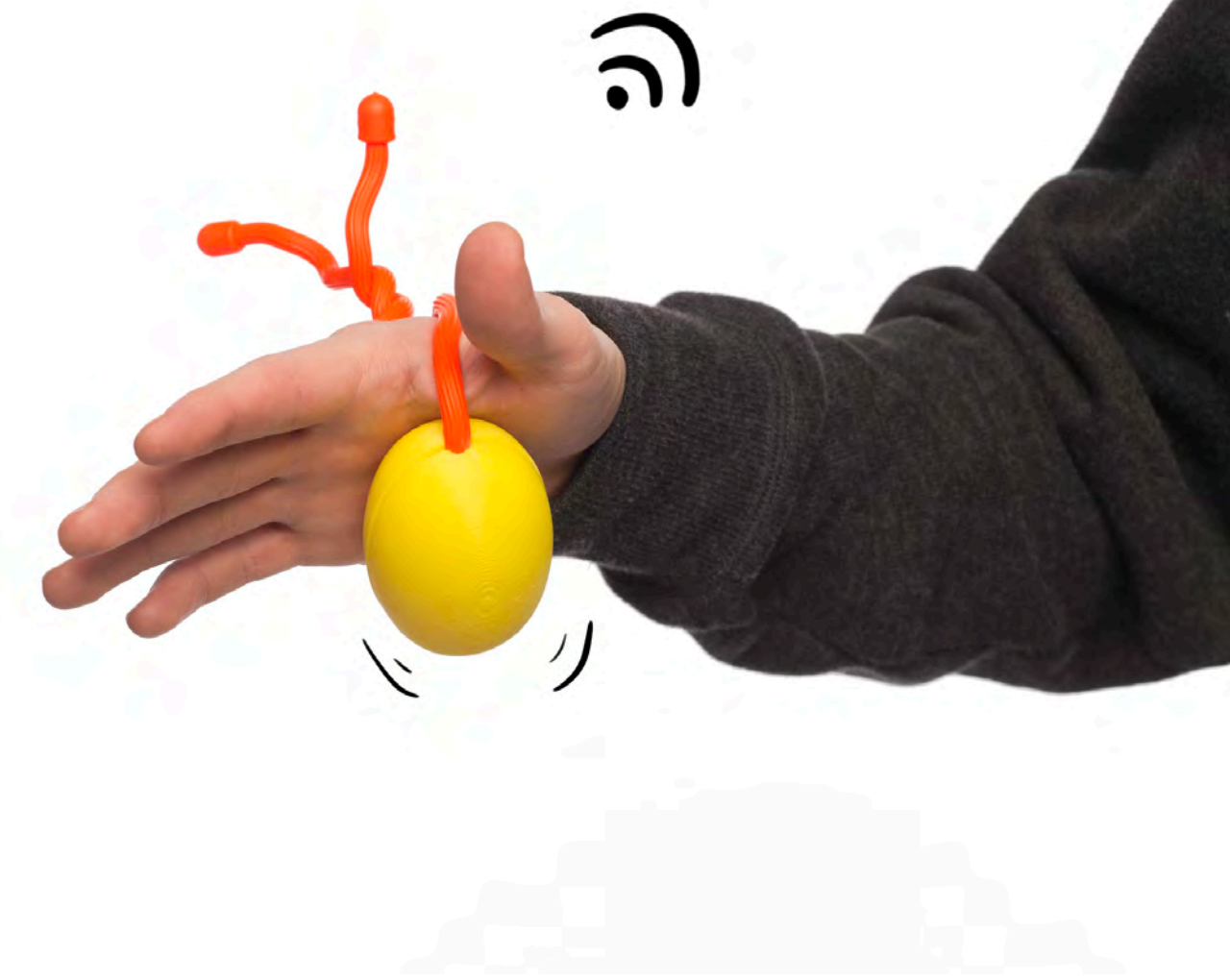
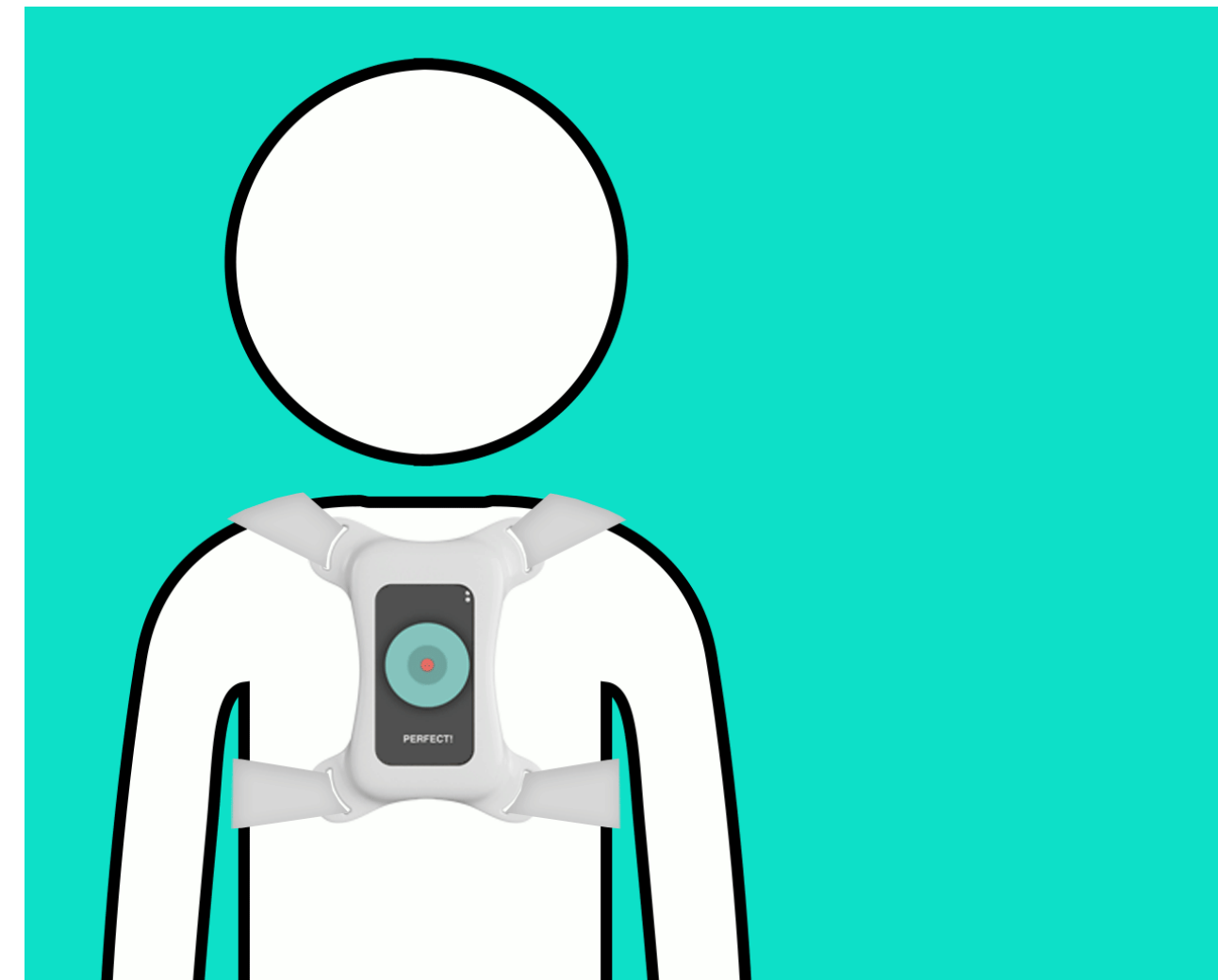
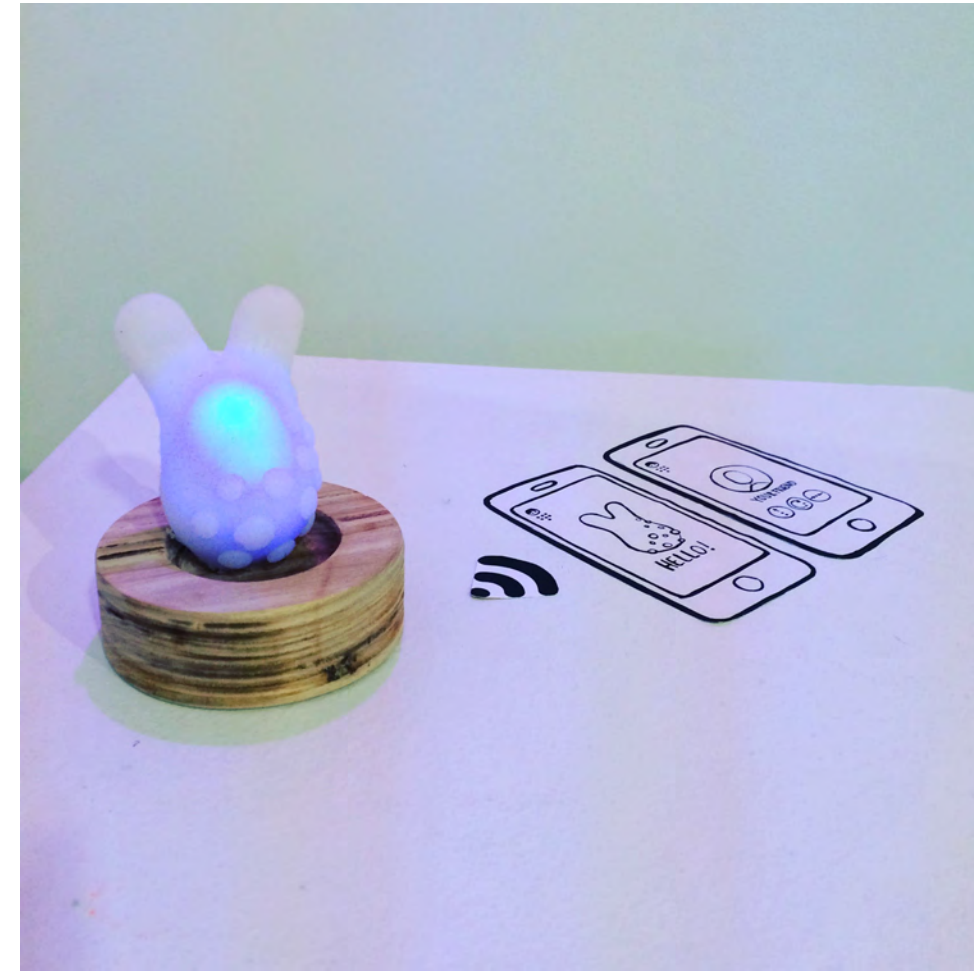




2006 - 2010
BFA Product Design
UFN - Brazil

2012 - 2013
Specialization in Surface Design
UFSM - Brazil





2014 - 2016
MFA Industrial Design
Rochester Institute of Technology - USA





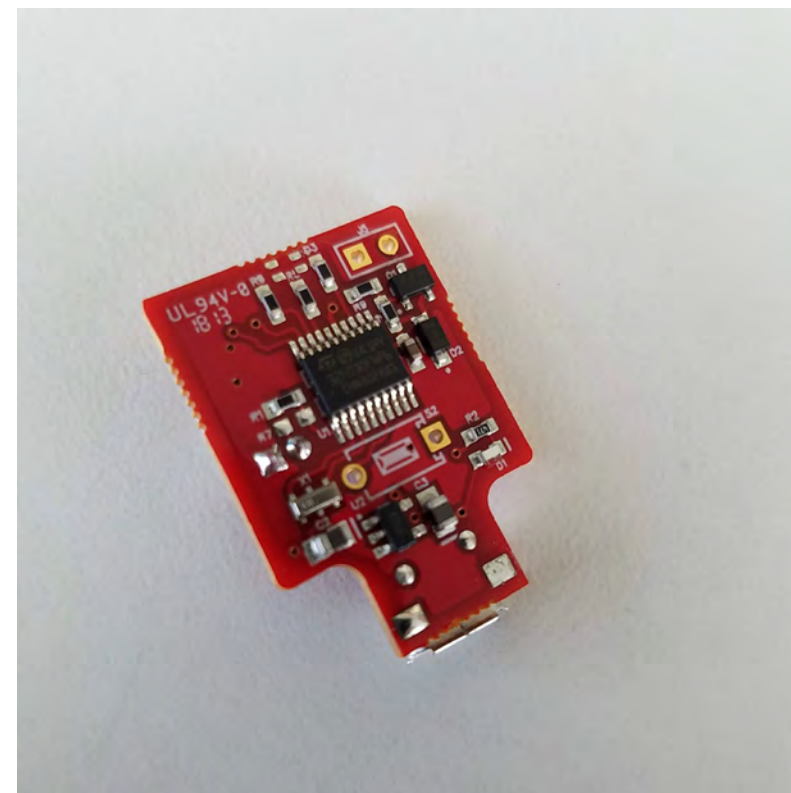
2016

Access Technology Prototyping Lab
Rochester Institute of Technology

2016

Student Incubator Coach
Rochester Institute of Technology





THE ALBERT J
SIMONECENTER
FOR STUDENT INNOVATION & ENTREPRENEURSHIP



2015 - present
Startup Breathe Buddies
Rochester Institute of Technology & D3 - Montreal

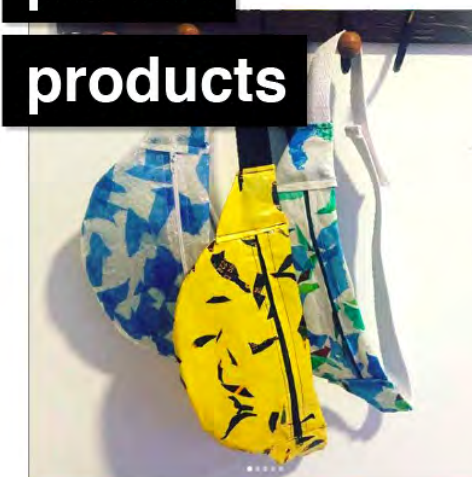




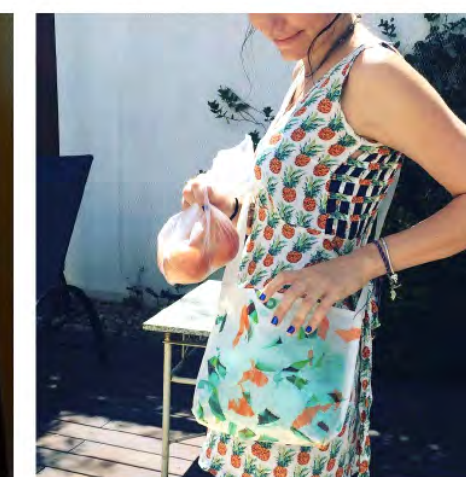
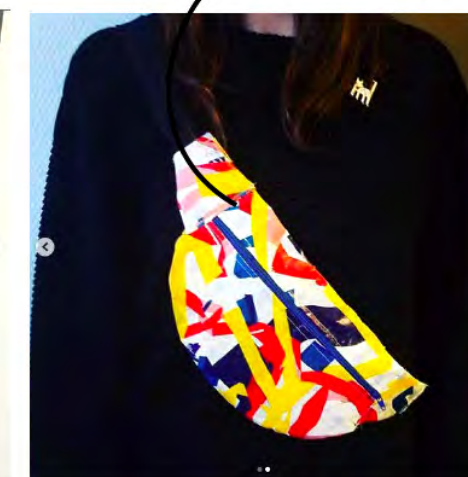
the
community



plastic
products



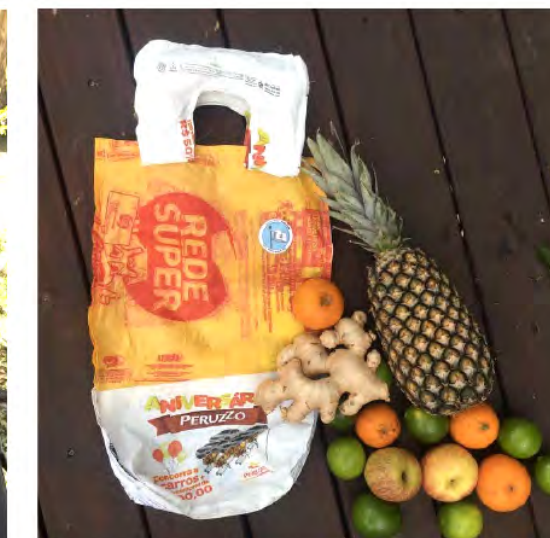
fanny pack made
from plastic bags



keychain made
with bottle caps



crochet from
plastic bags



2018 - present
Precious Plastic Santa Maria
Santa Maria - Brazil





Linear Economy

Extract

Make

Use

Dispose

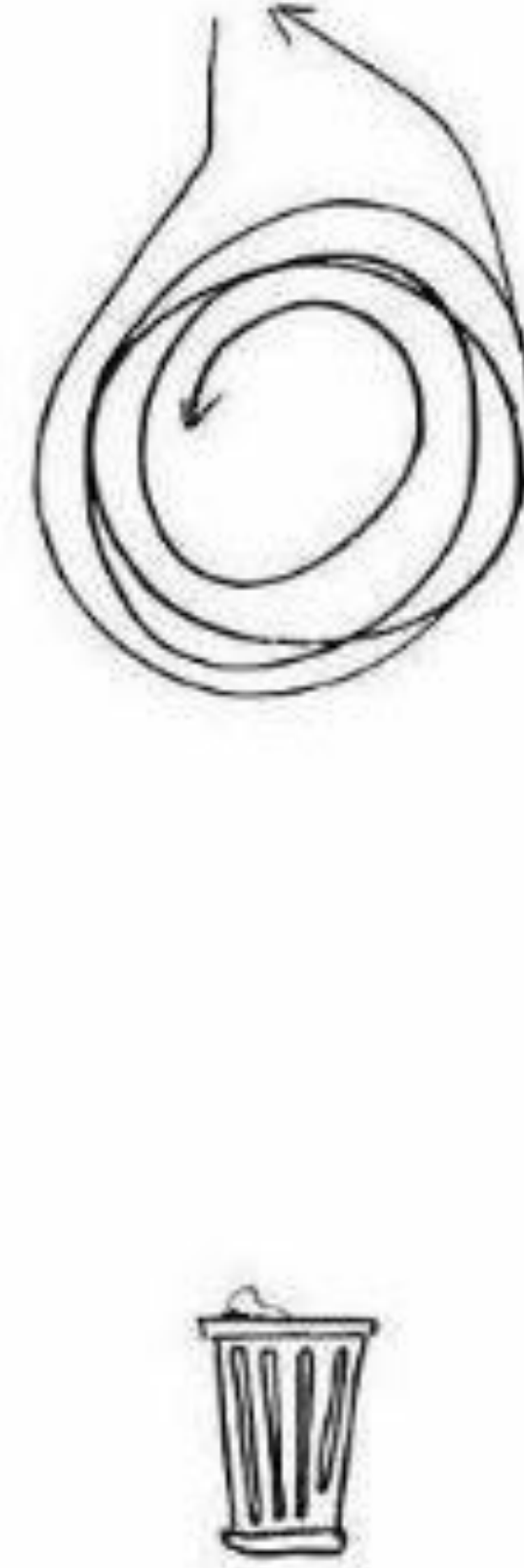
LINEAR ECONOMY



RECYCLING ECONOMY



CIRCULAR ECONOMY



Levenslopen van verpakkingen – bron: Story of Stuff



Circular Economy



Data
Meets
Dirt



2019

IoT Meets Plant (Data Meets Dirt!)
Digital Society School - HvA - Amsterdam





**Circular
Design**

+

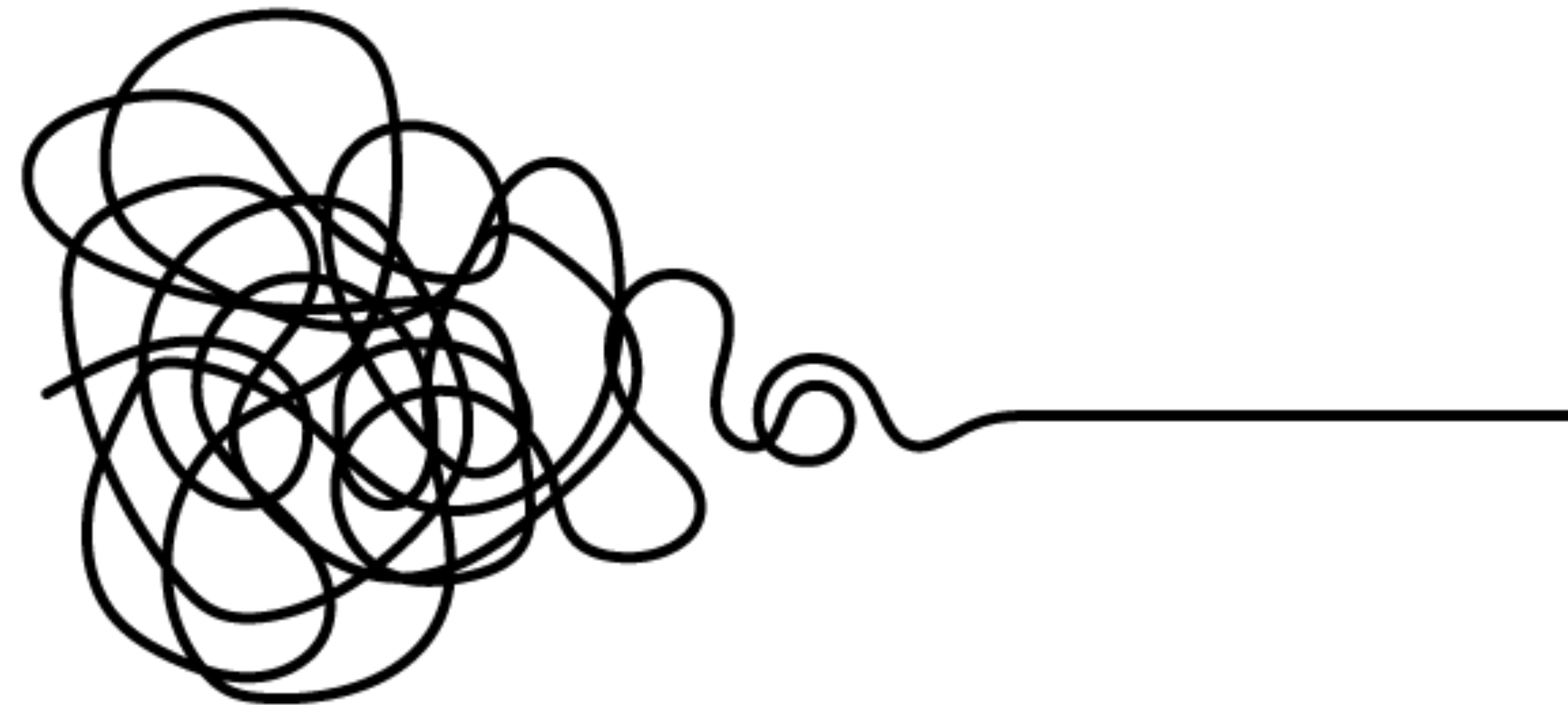
IoT





Accessibility
Circular Design
Social & Environmental Good
IoT & Big Data

The Design Process



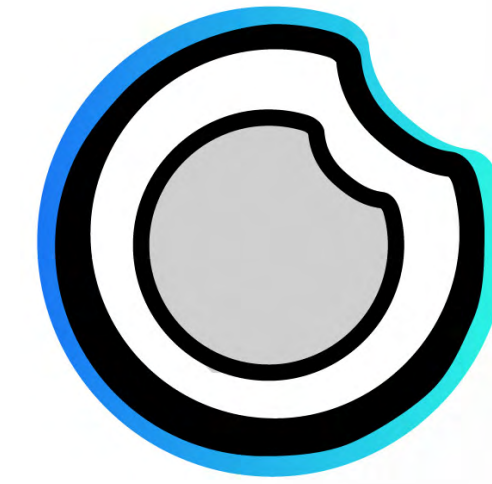
Discovery

Design

Delivery



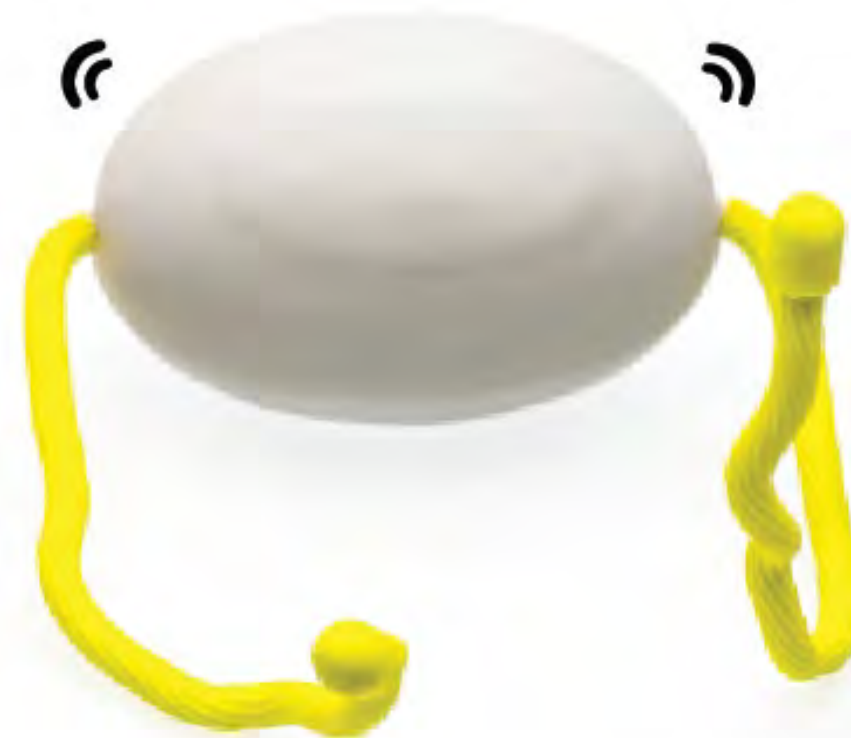
Tech Toys for Good



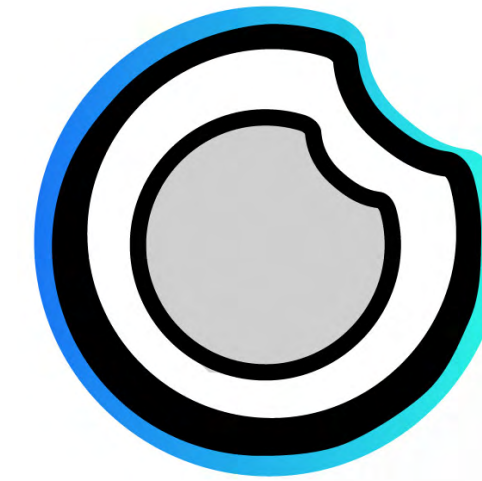
MOON
PADS



BandToy™
adaptive series



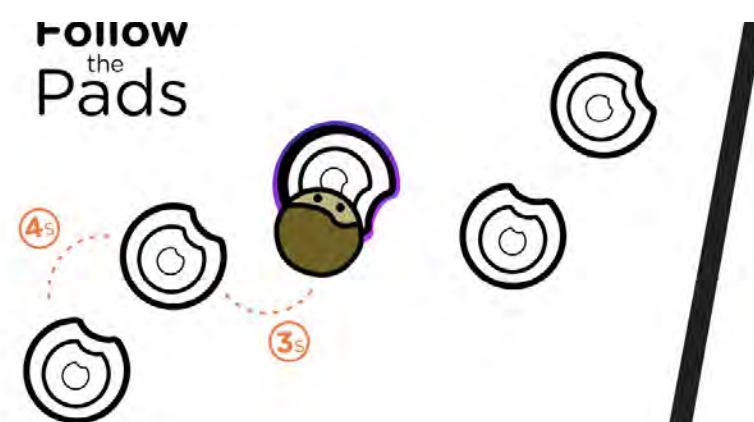




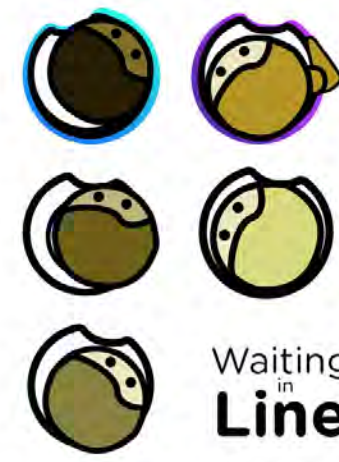
MOON
PADS



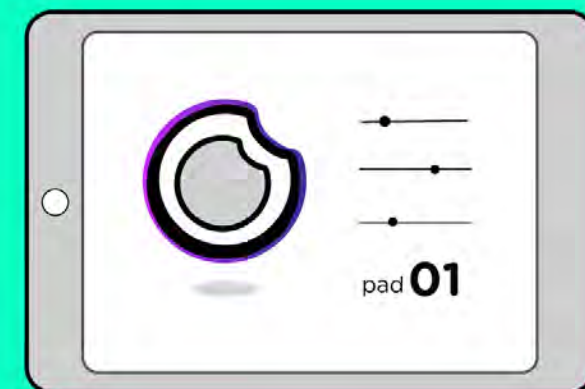
FOLLOW
the
Pads



Collaborative
Games

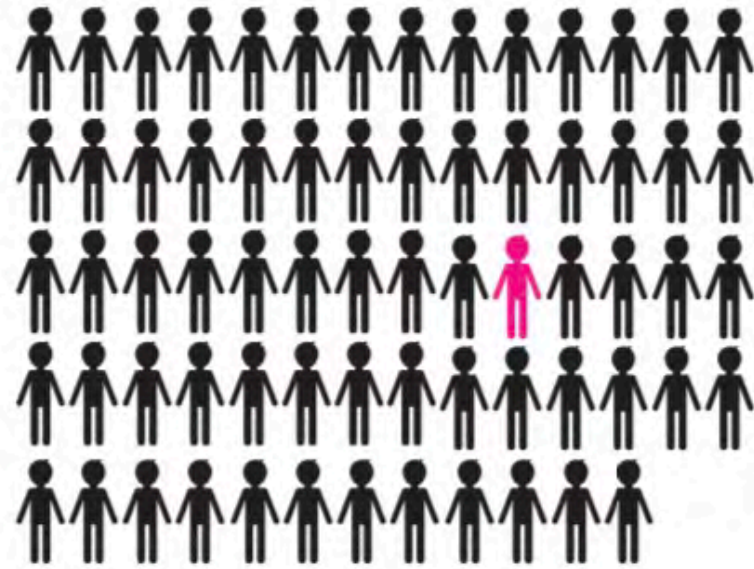


Waiting
in
Line



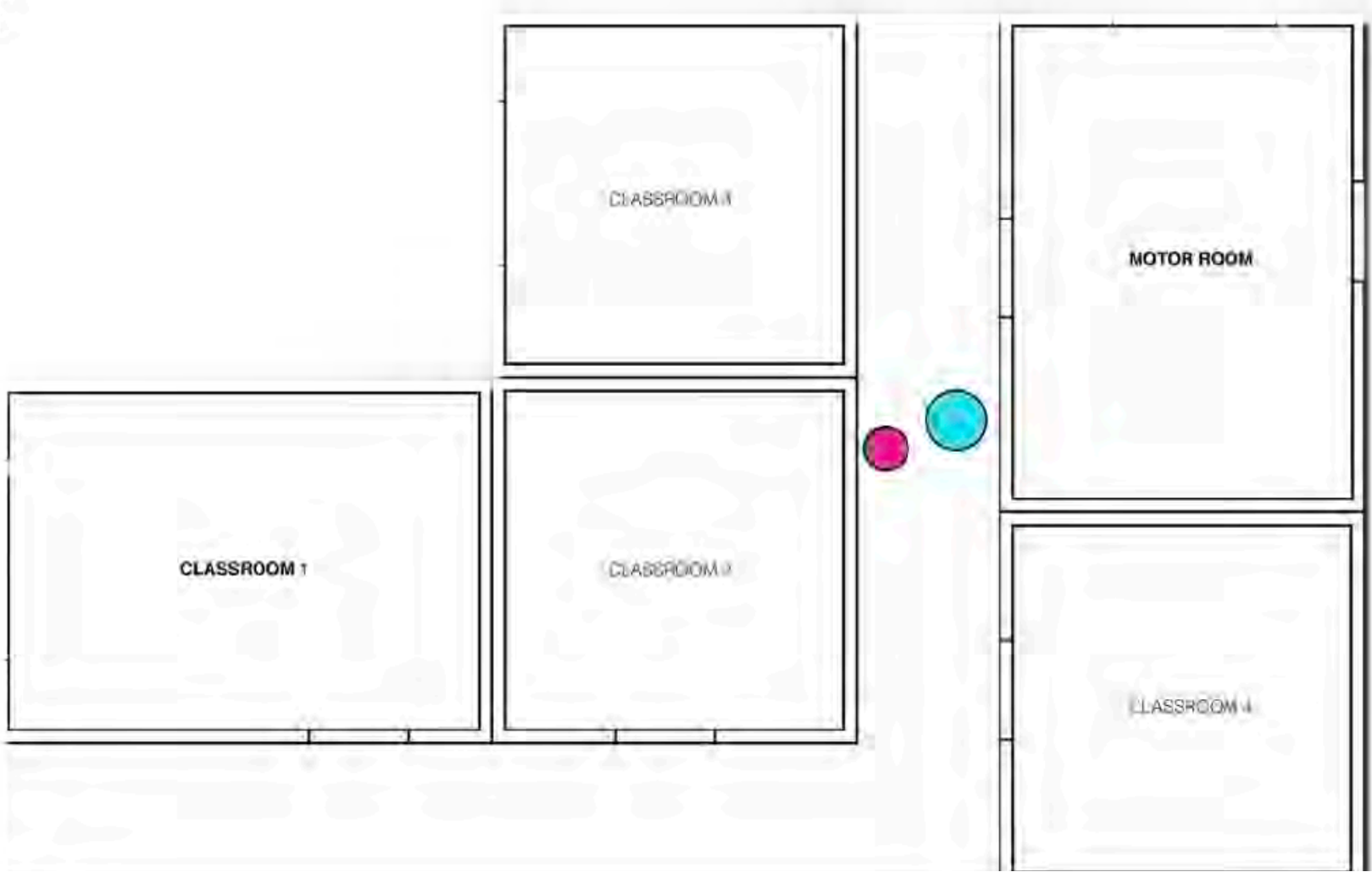


Problem



1 in 68 U.S children have **autism**

Children with Autism have the tendency to get easily distracted during everyday activities such as navigating from one room to the next.

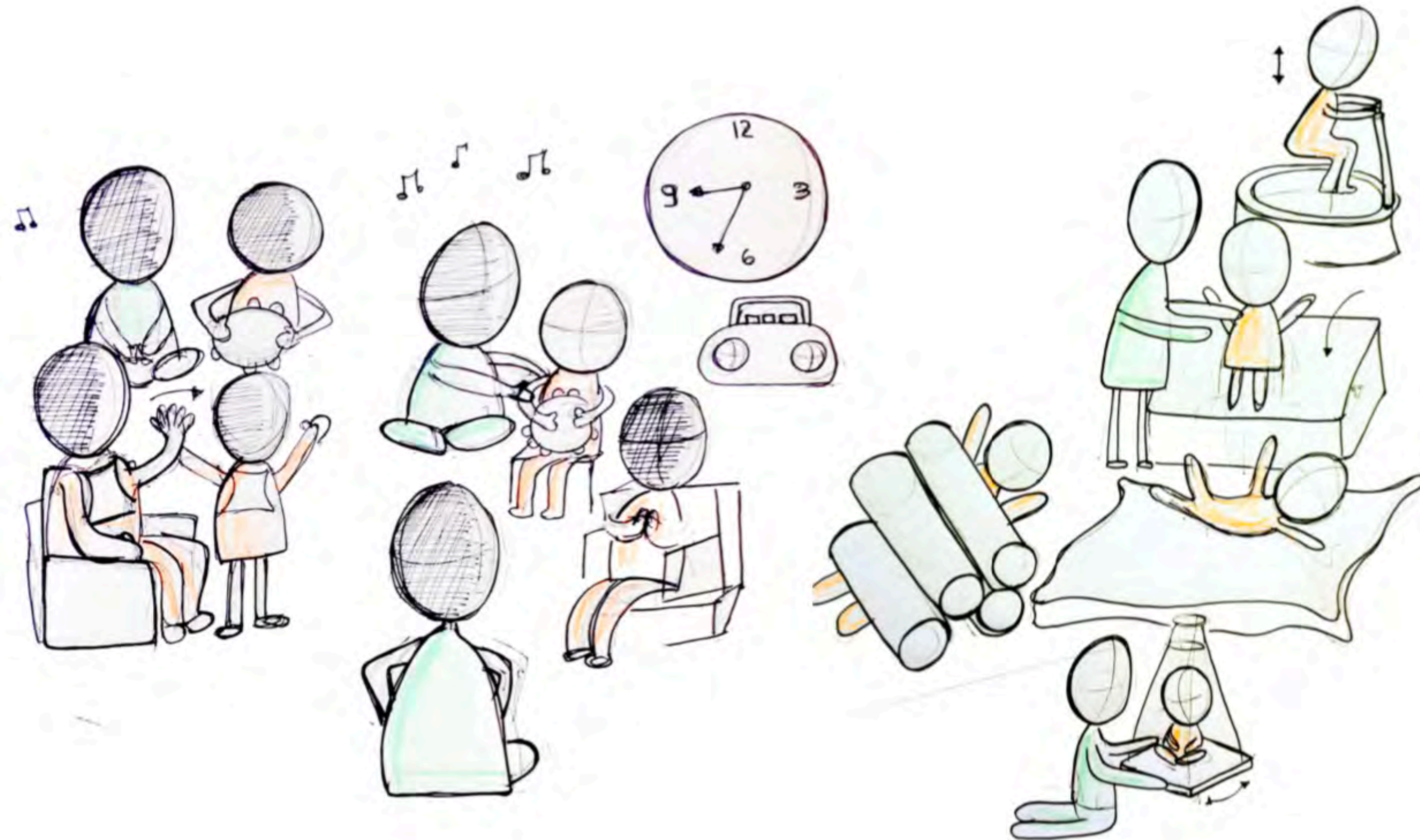


Where will the product be used?

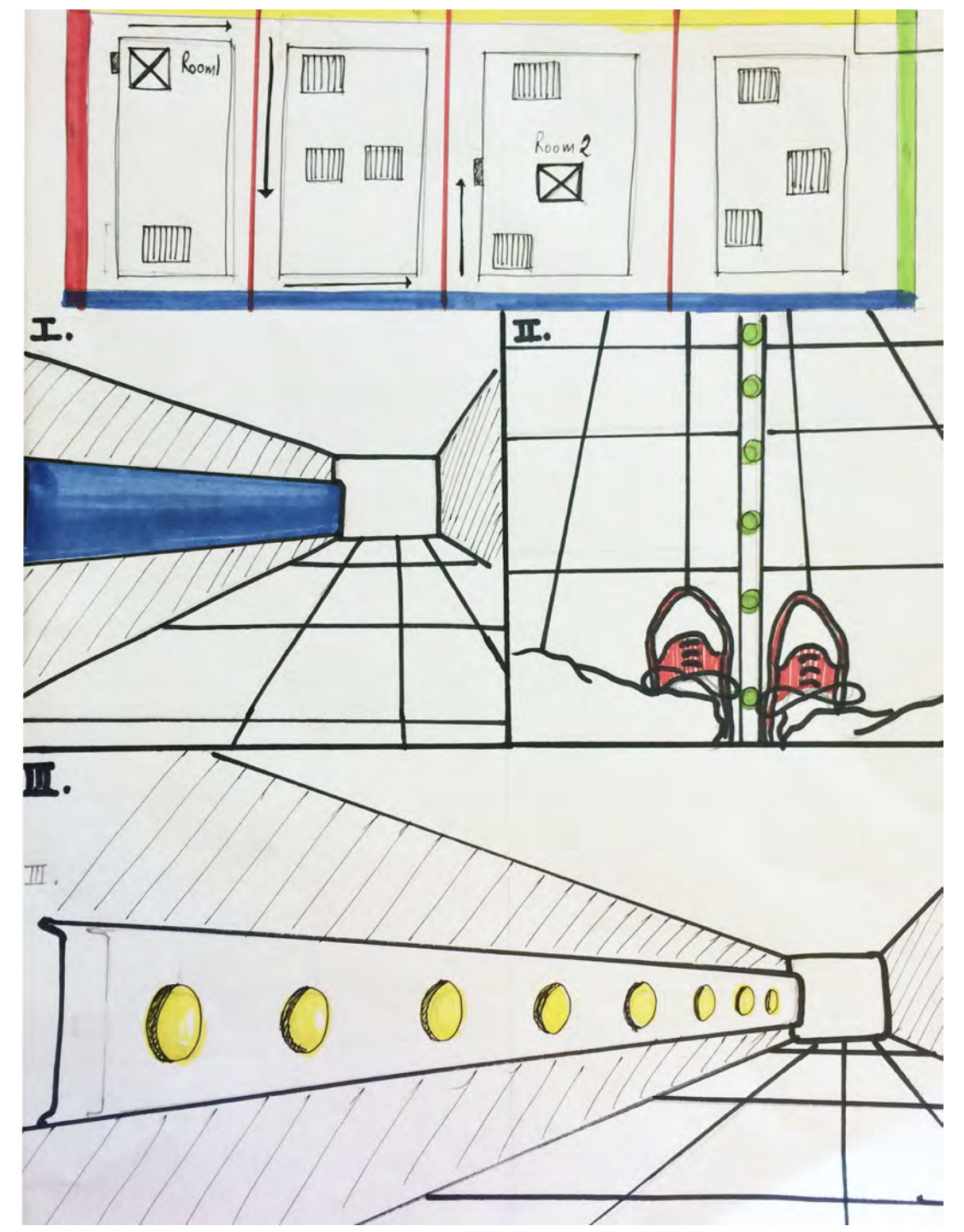
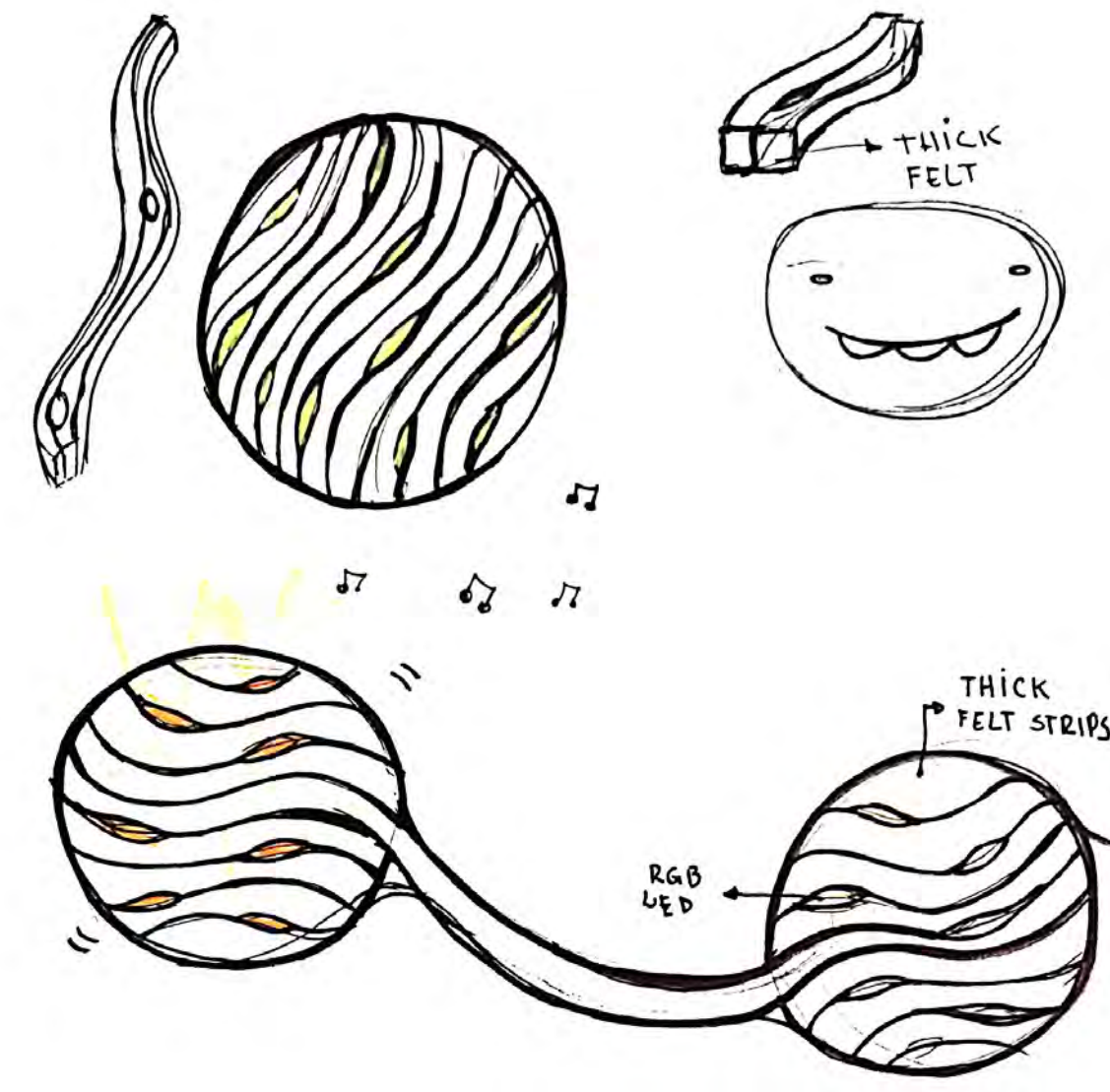
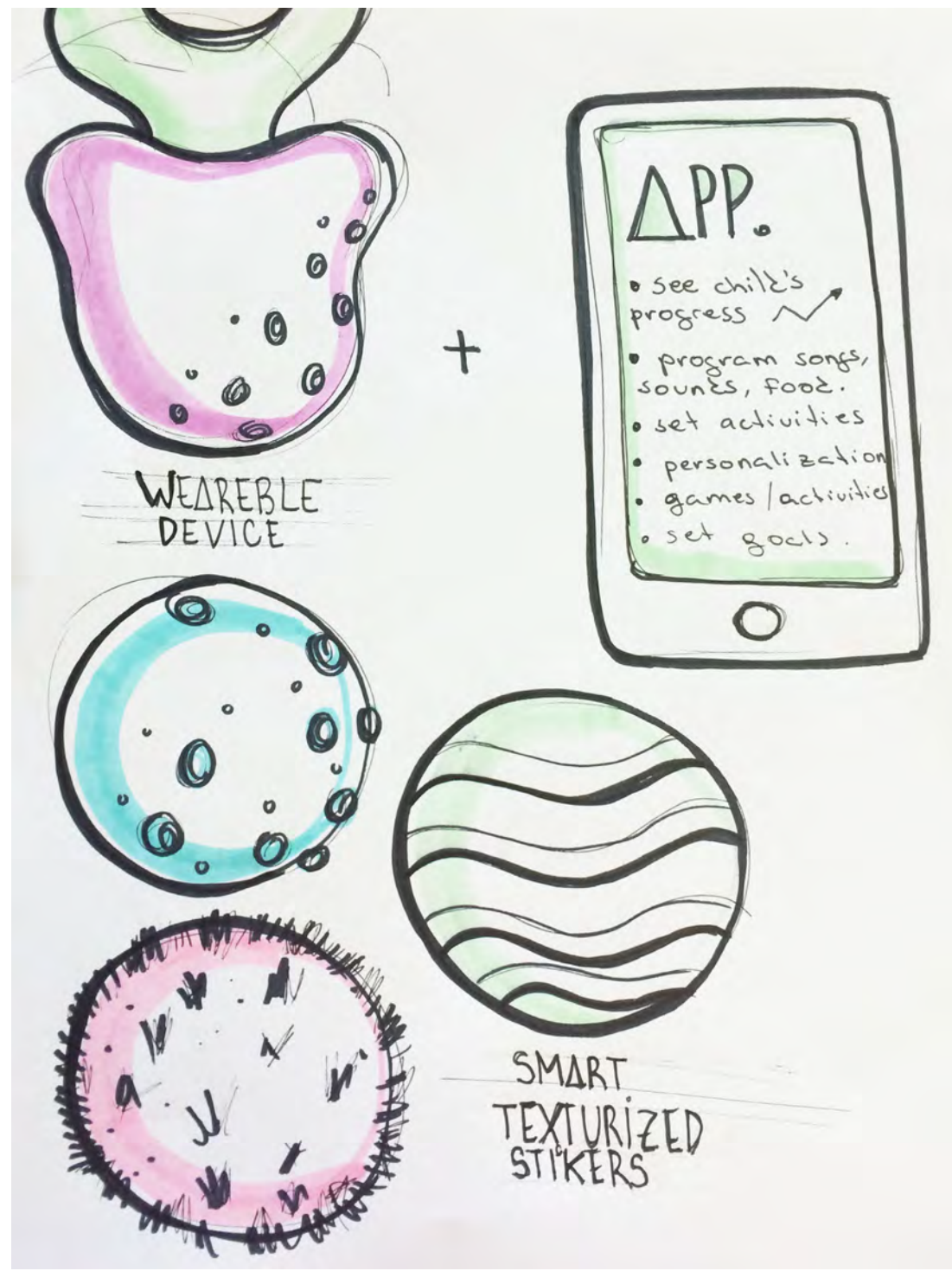
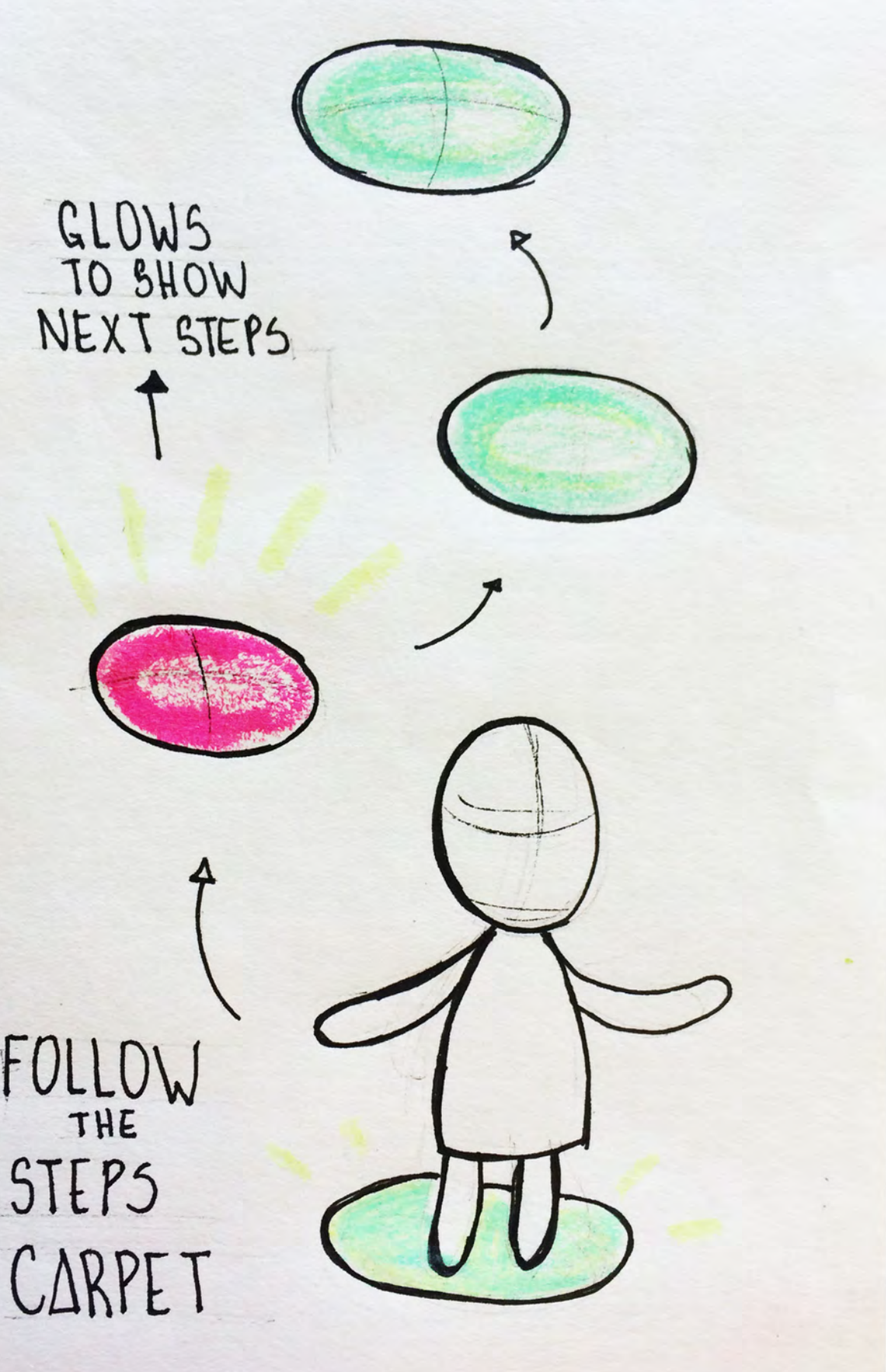




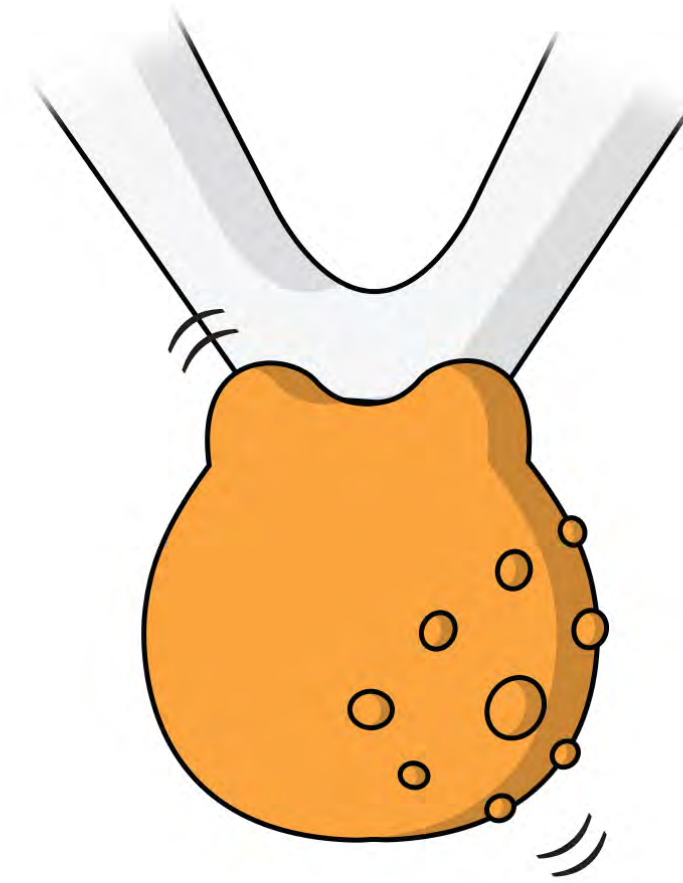
User discovery and observations



Ideation

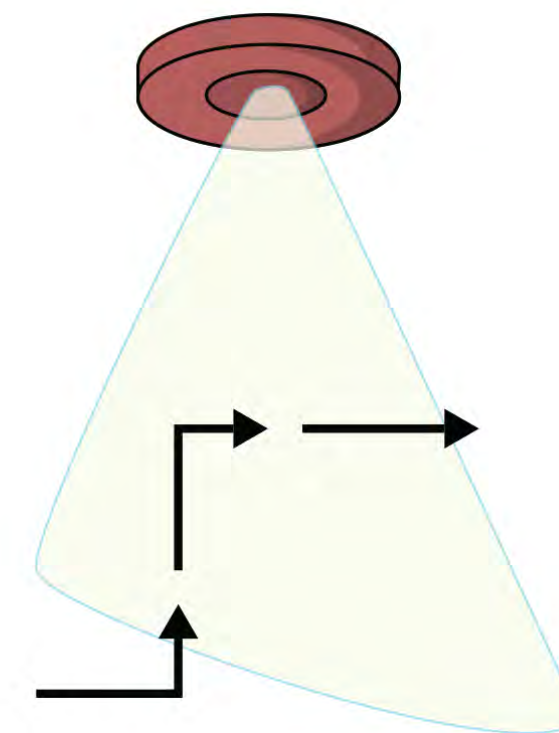
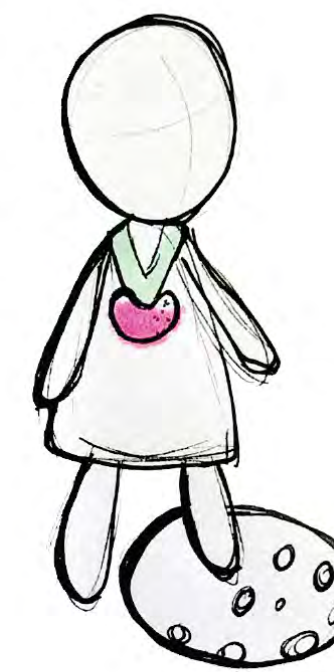


First Concepts



SMART STICKERS

Stick it to the **walls** and **floor** to create paths
Lights up the way
Different **textures** to feel along the path



INTERACTIVE PROJECTOR

- Projects interactive **paths**, **activities** and **games**
- Senses kid's **location**
- Projects **individual** paths

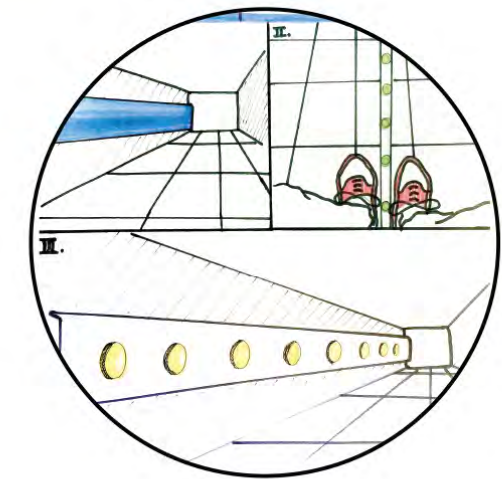
THE APP

Sends feedback to **teachers** and **parents**
Keeps track of **movement**
Sets **activities** and **goals**



WEARABLE DEVICE

- Recognizes kid's **location**
- **Vibrates** to catch attention to activities
- Good to **squeeze**
- Tactile **textures**



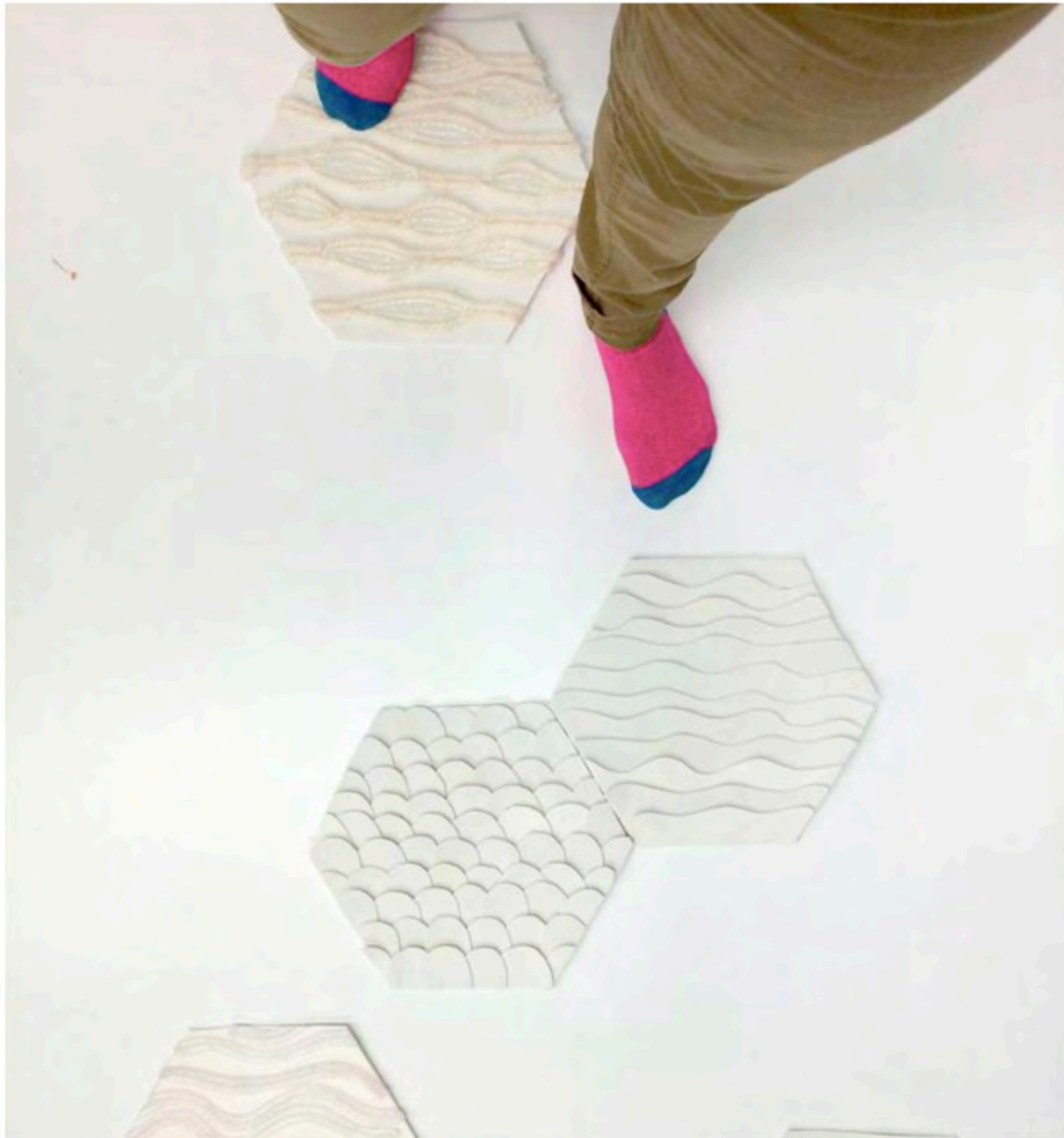
First Prototypes



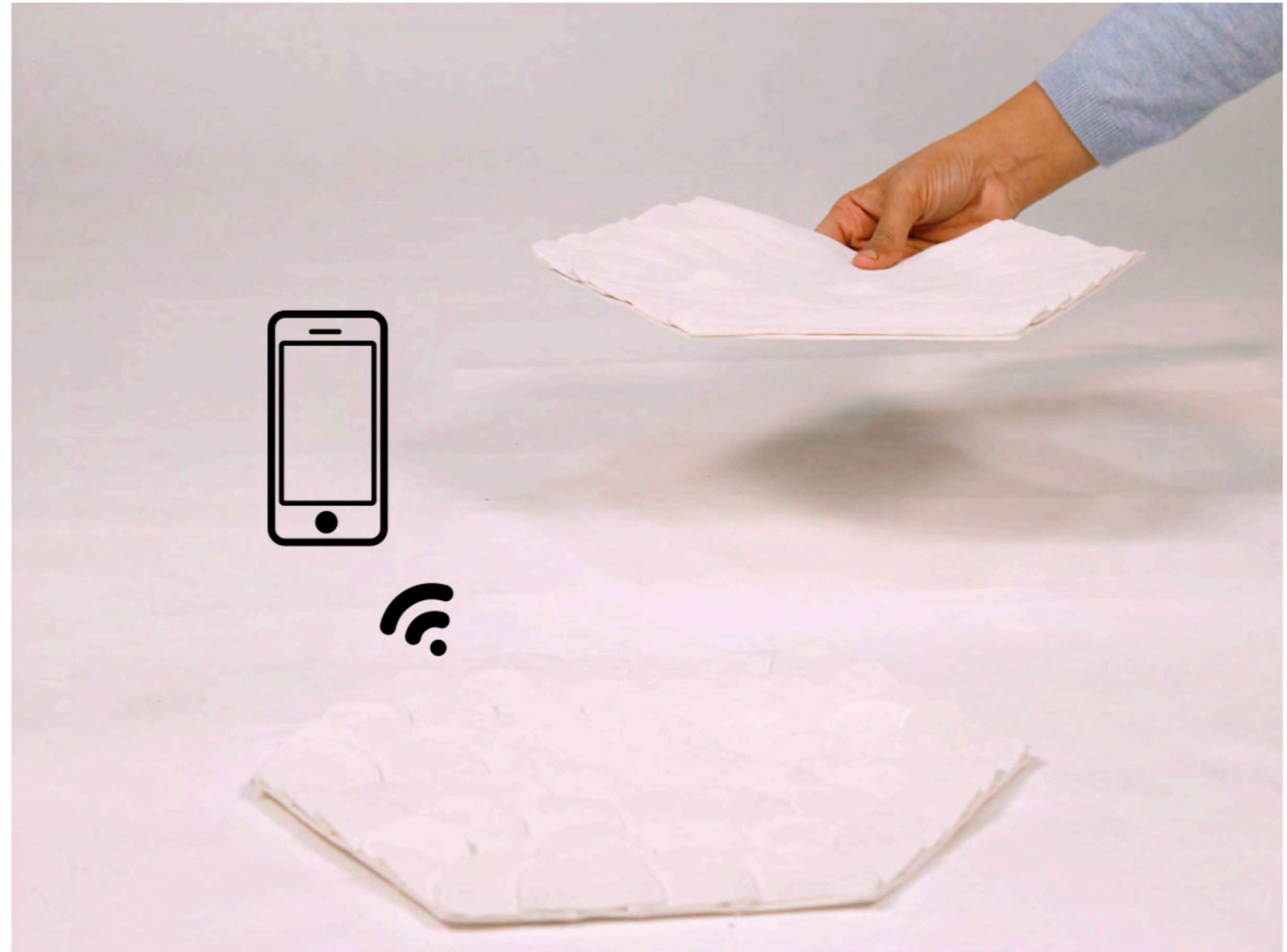
Studio 2.0 - Industrial Design - RIT - Fall 2015



SMART RUG

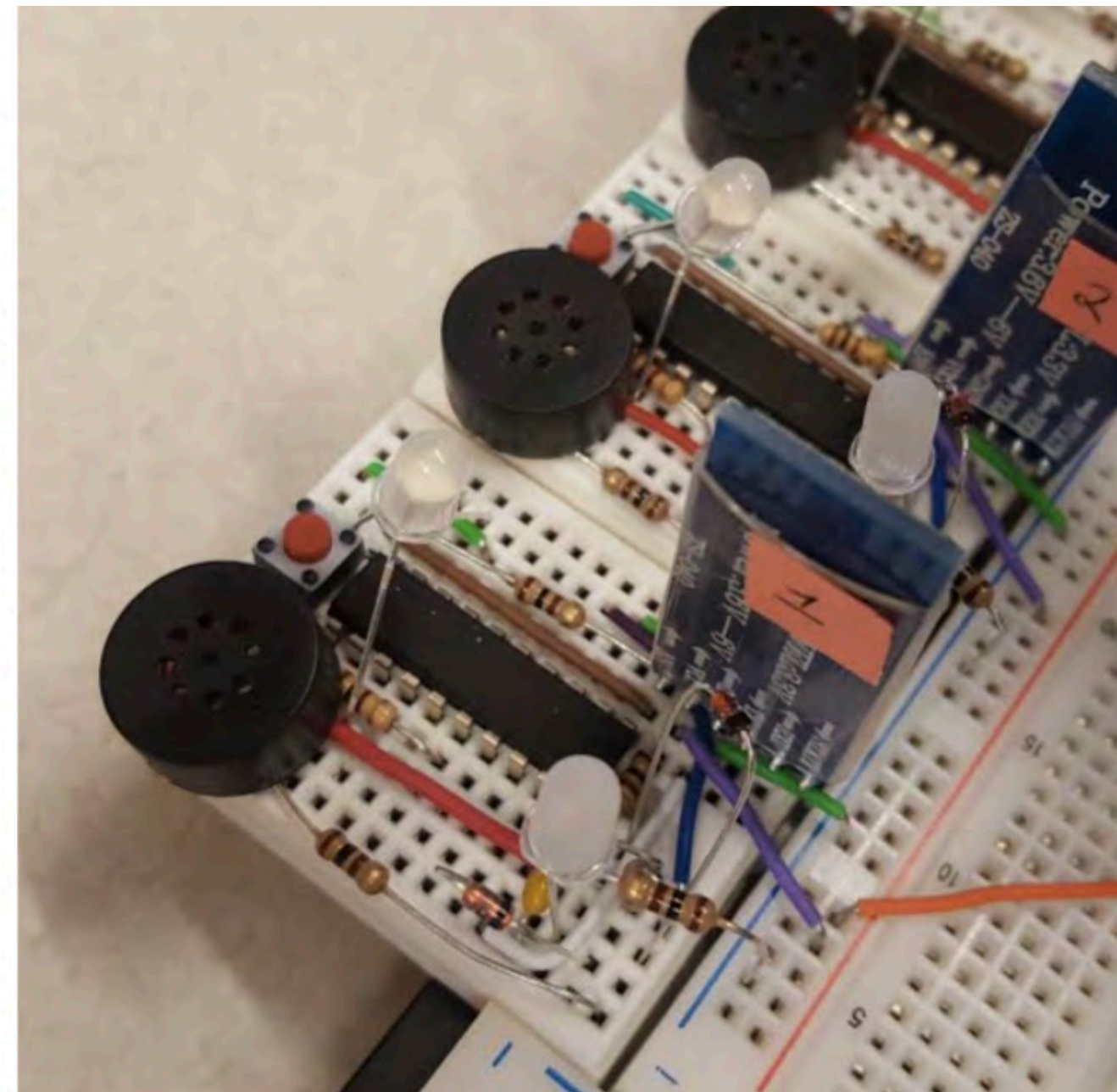
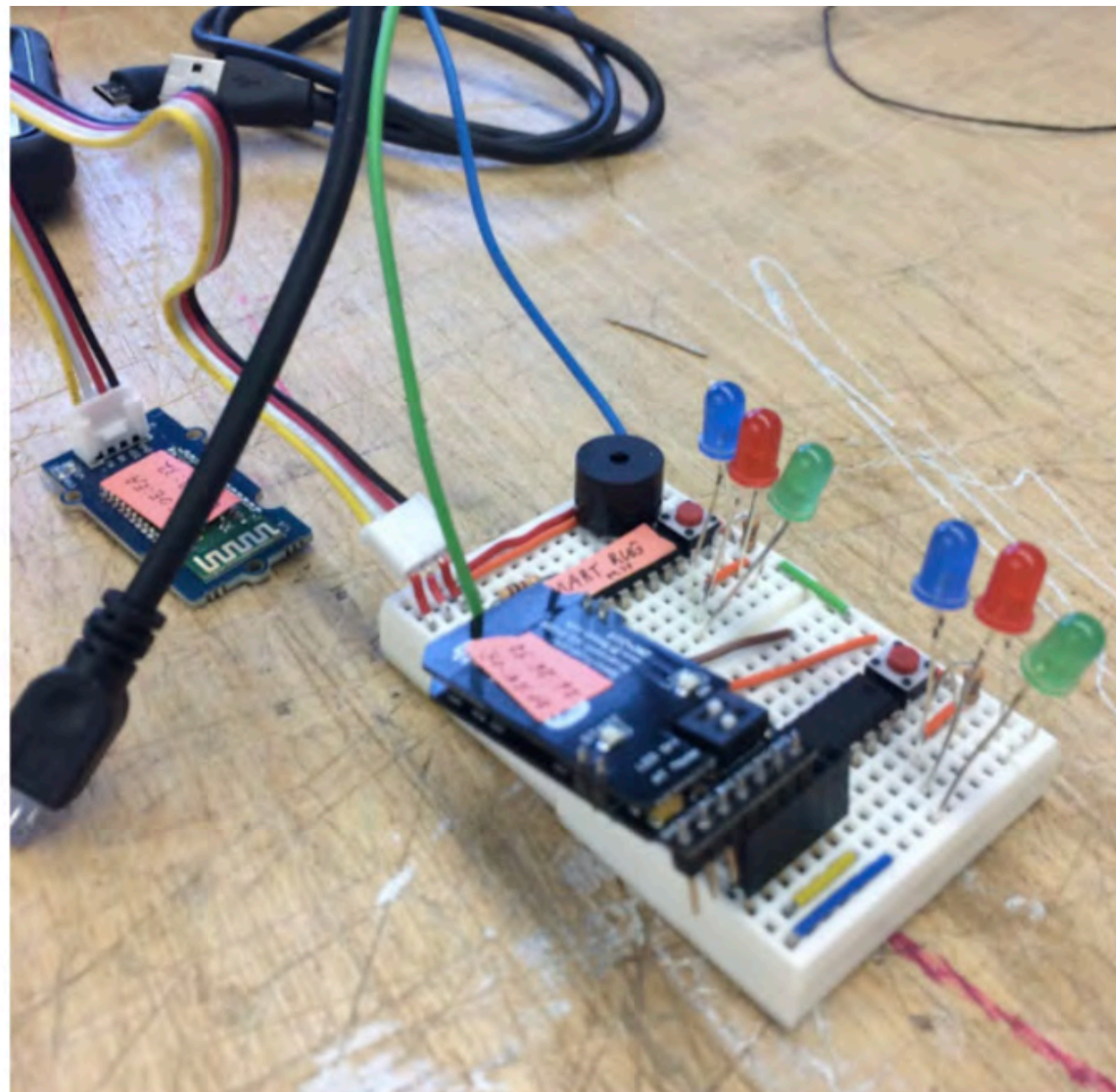


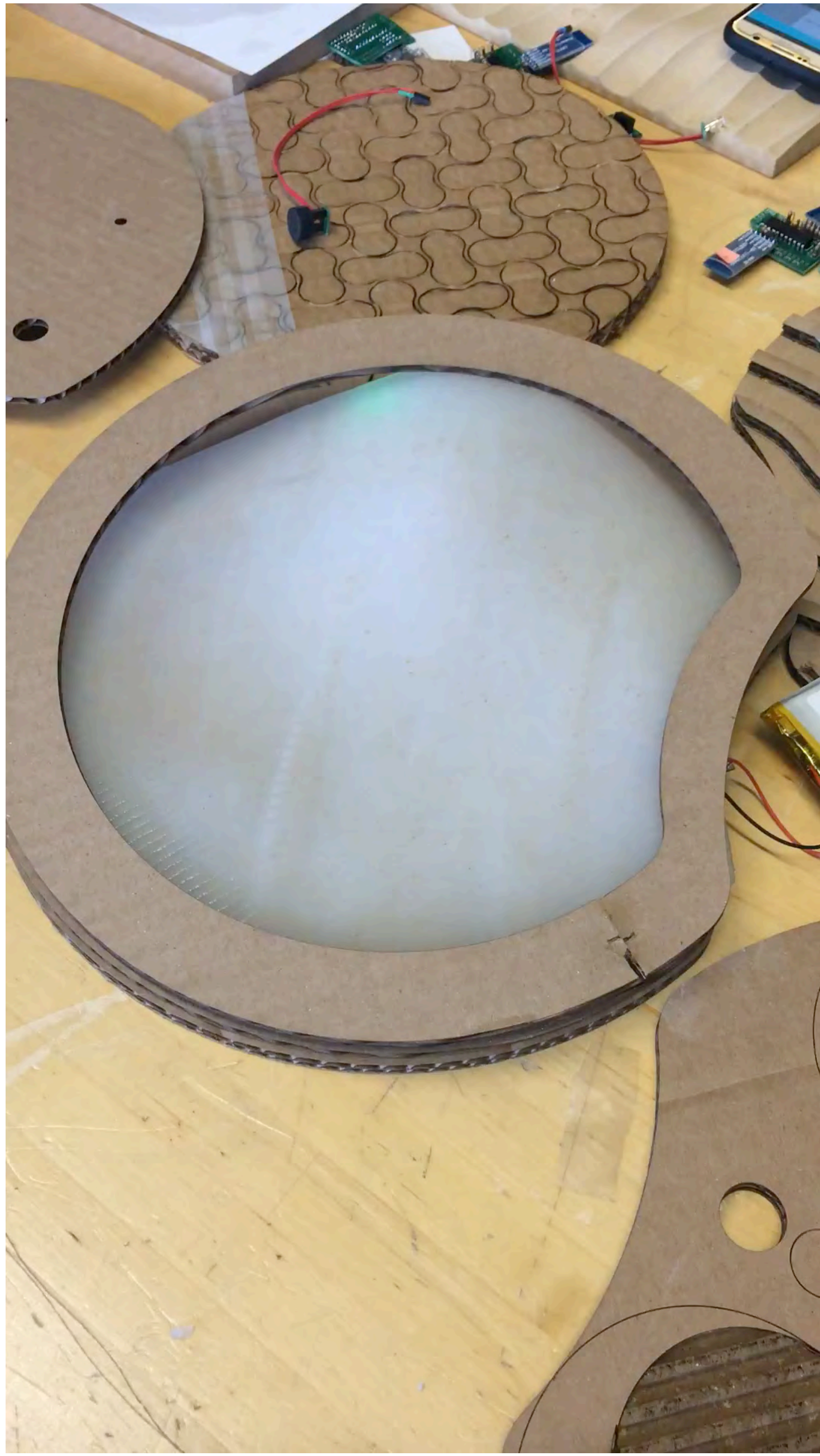
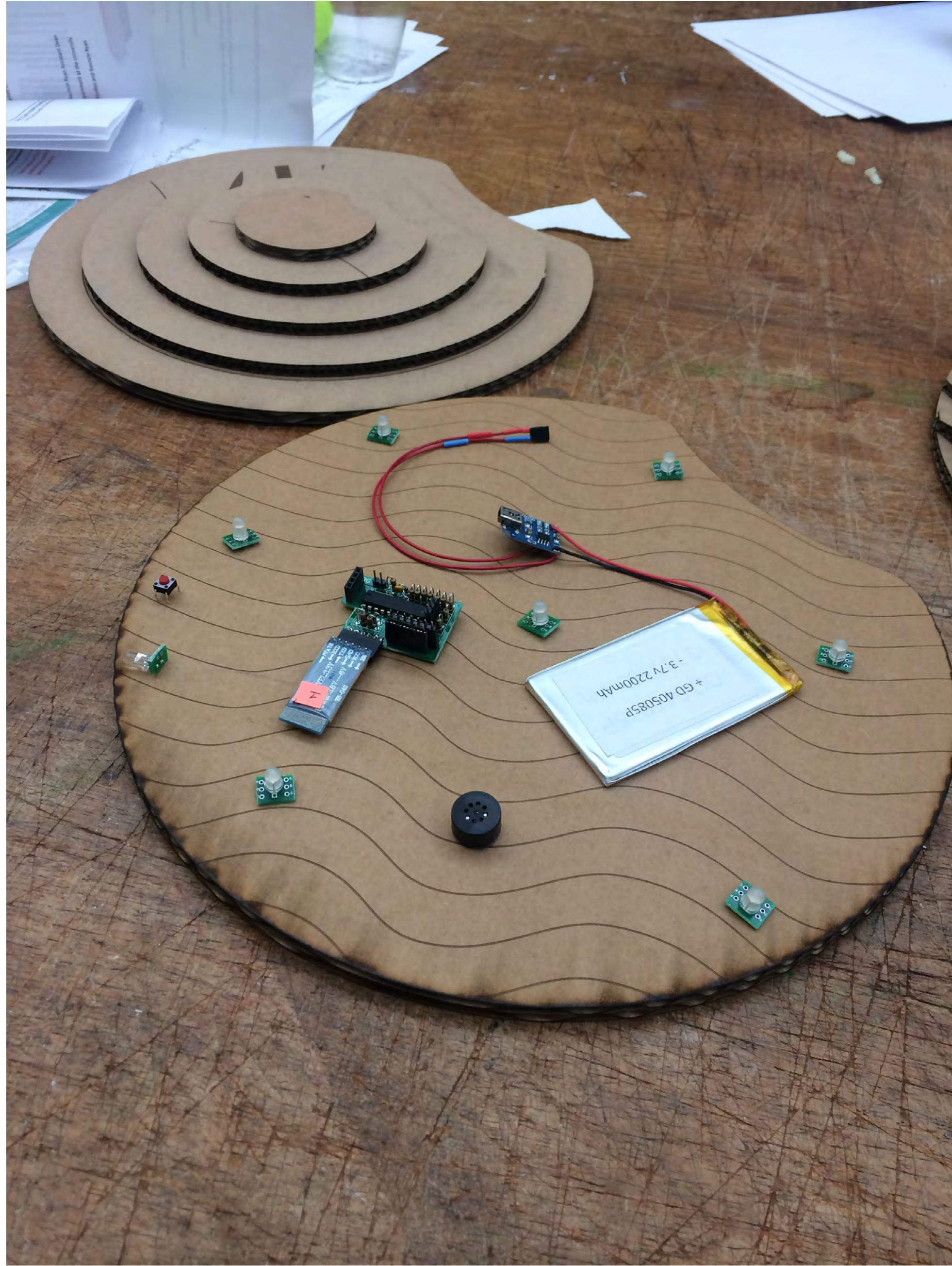
Studio 2.0 - Industrial Design - RIT - Fall 2015



Studio 2.0 - Industrial Design - RIT - Fall 2015

Evolution of Design





Design of functional Prototype



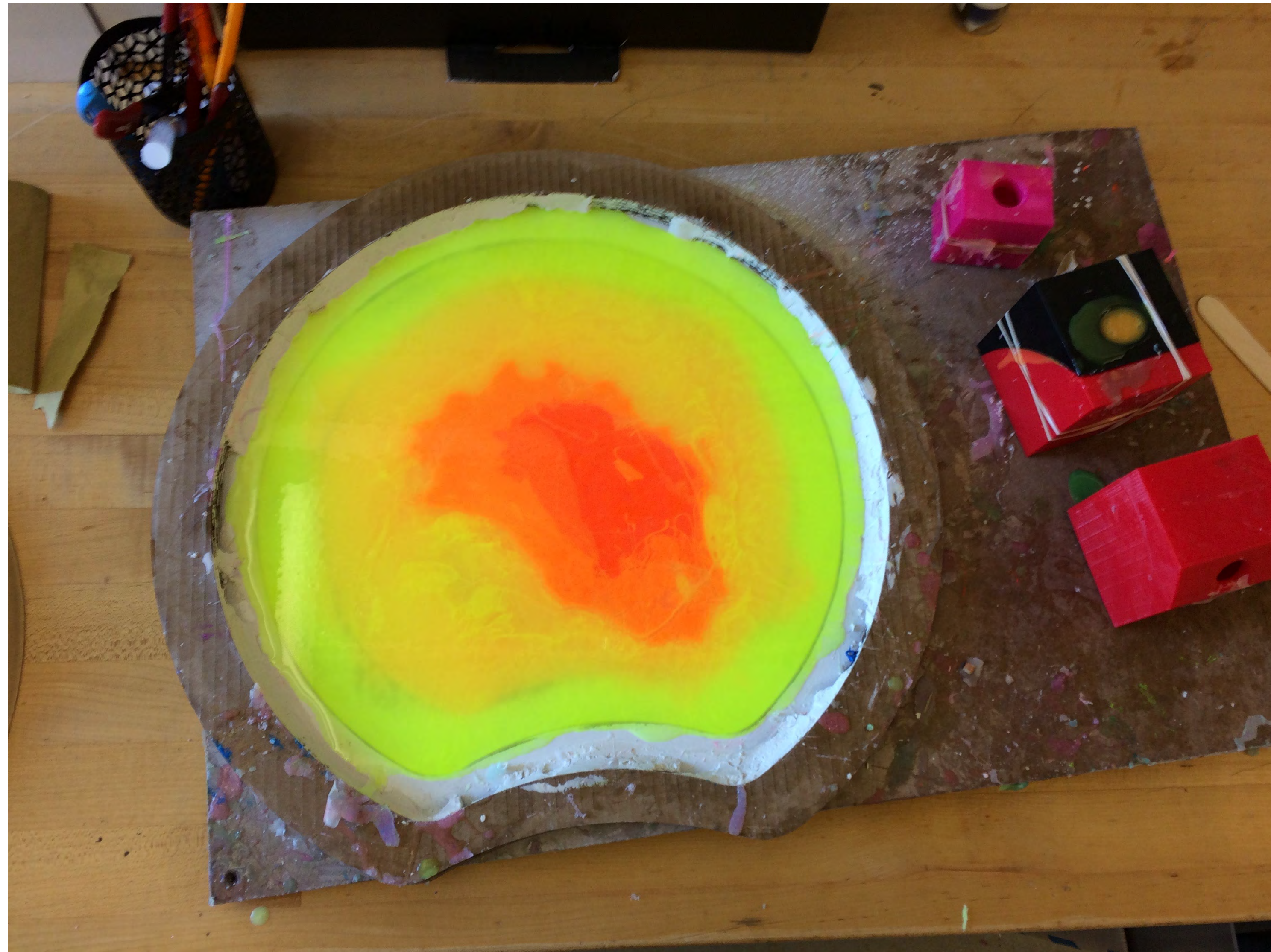




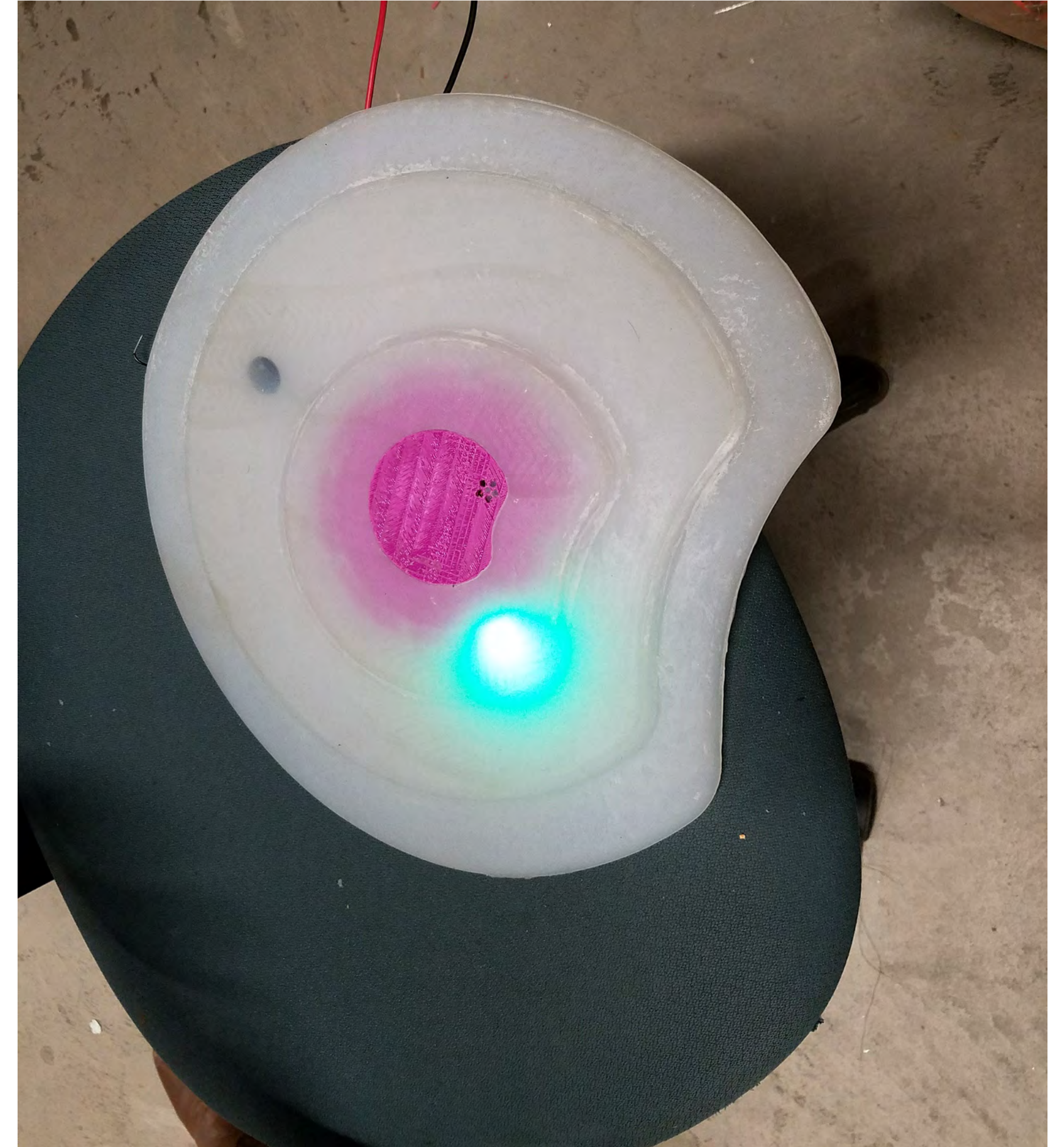
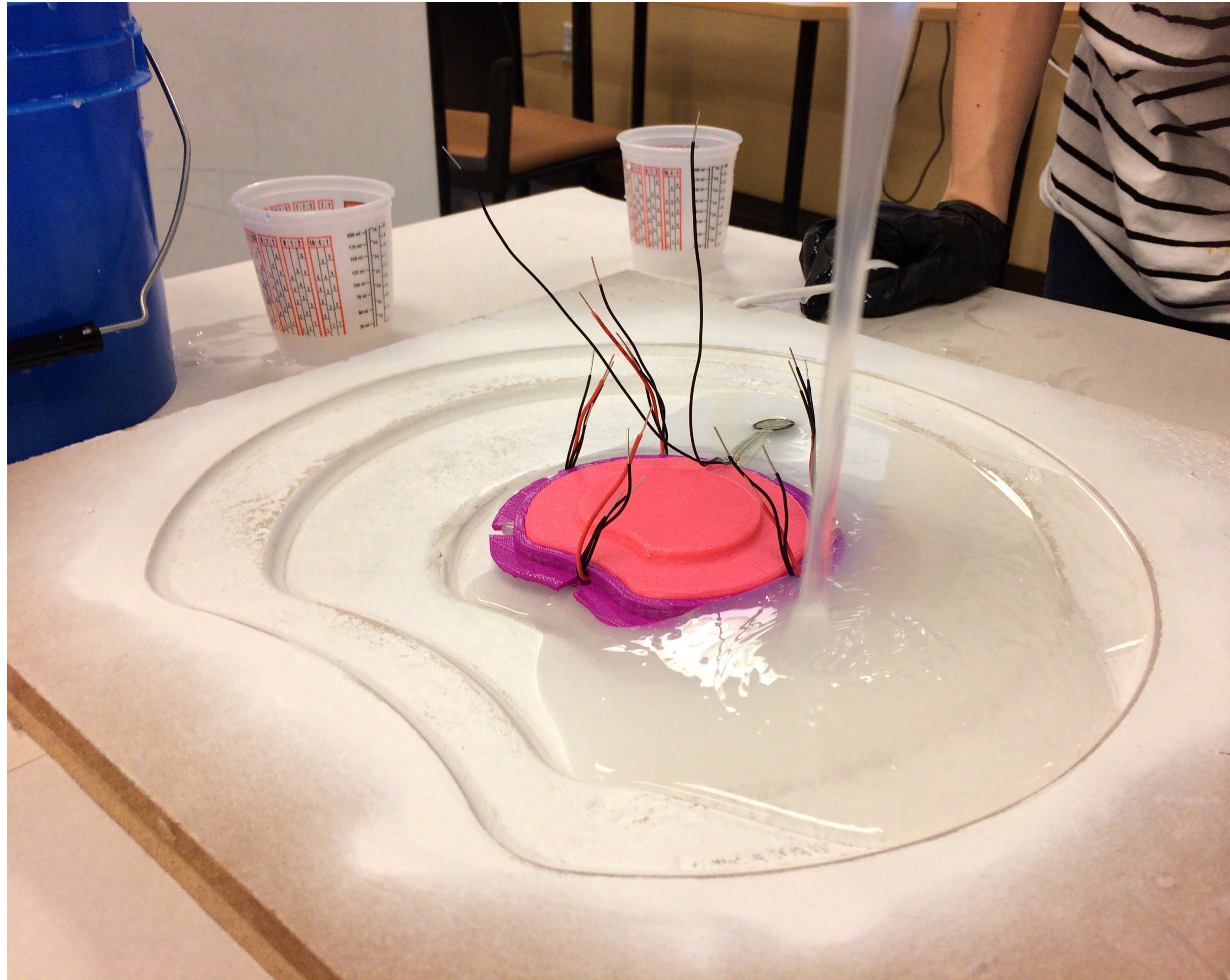
User Testing



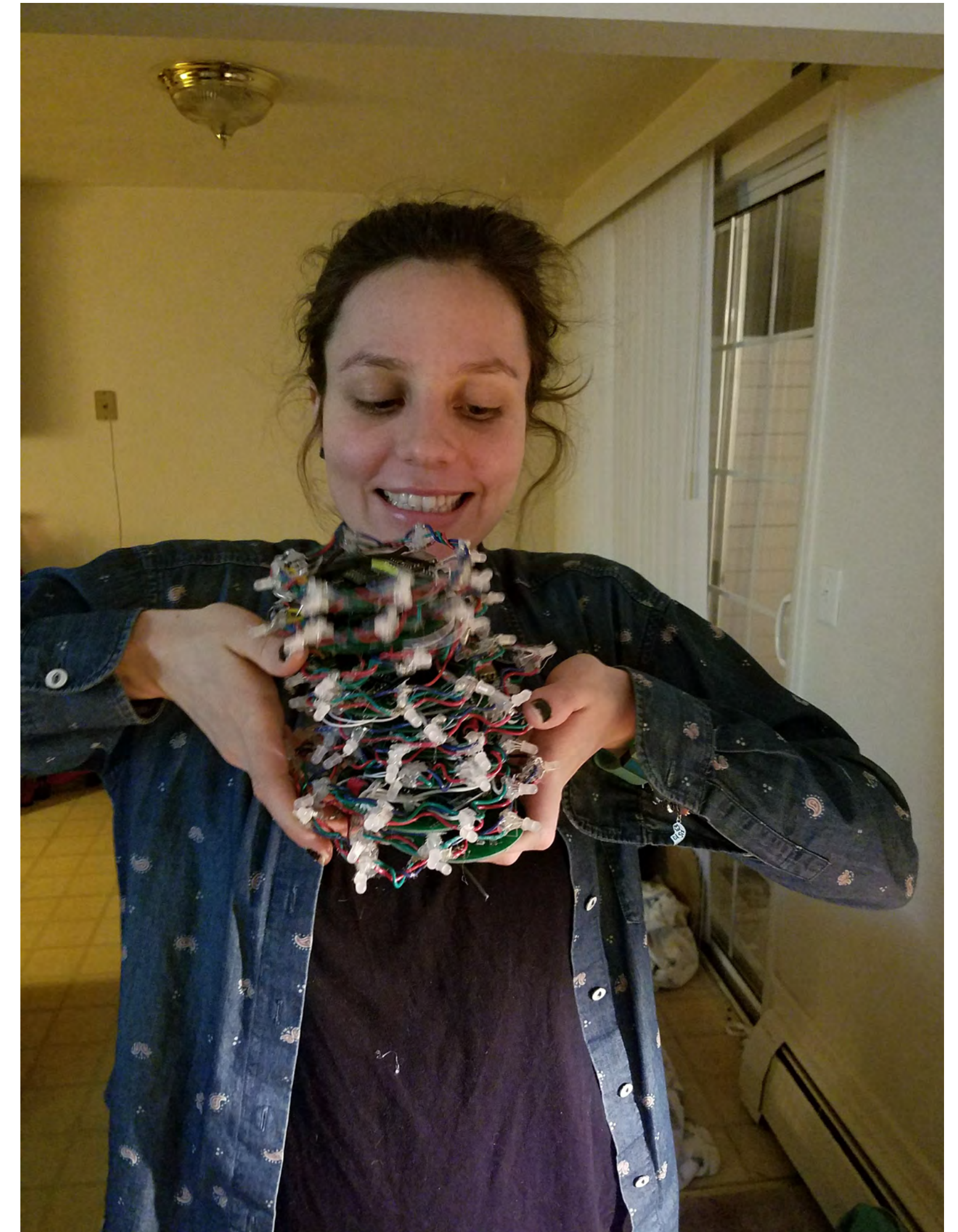
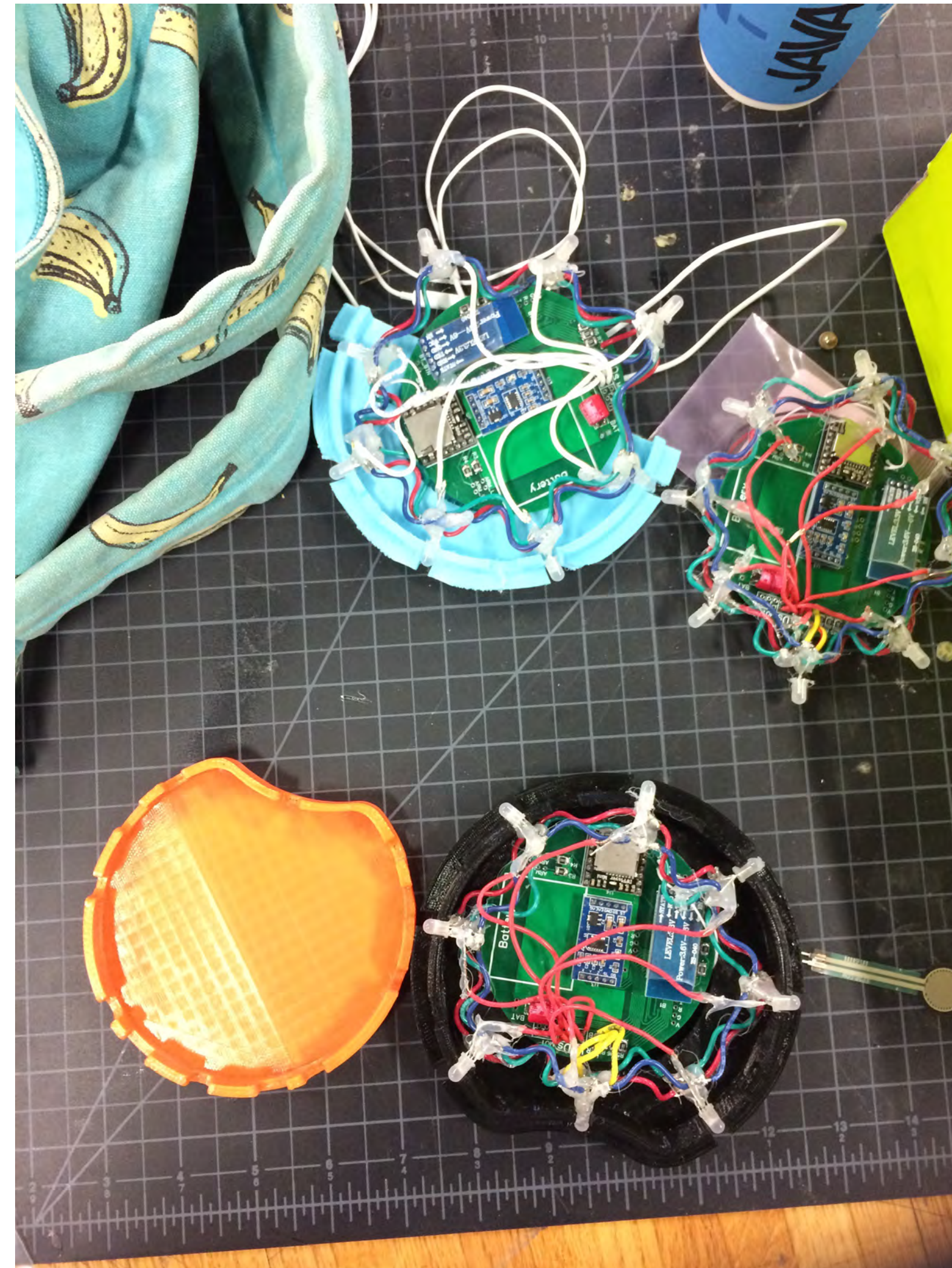
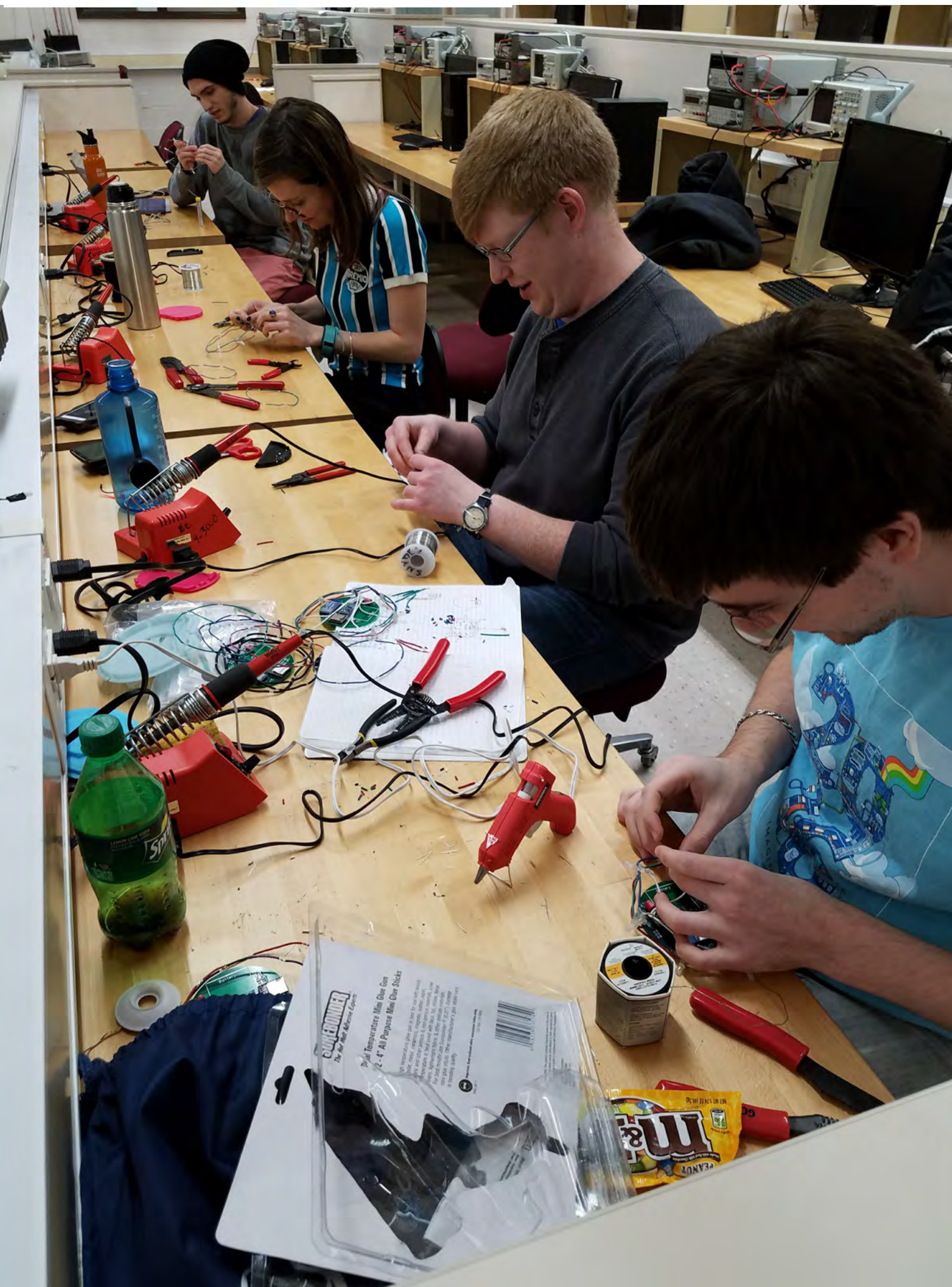
Evolution of Design



Evolution of Design



Scale-up



Scale-up



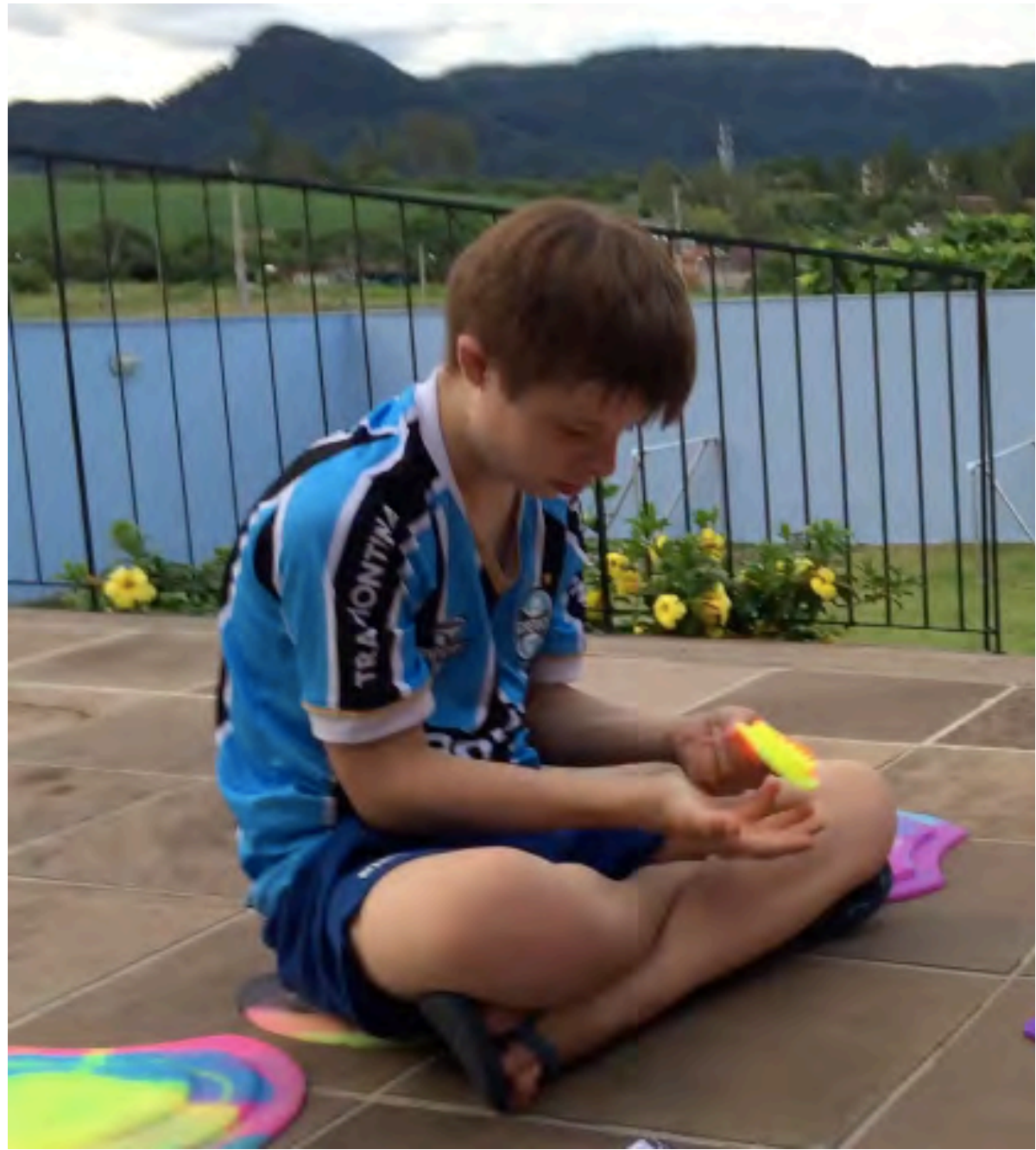
**Deliver to
Community**



Open-Source

kids
miracle
making
club™







Open-Source

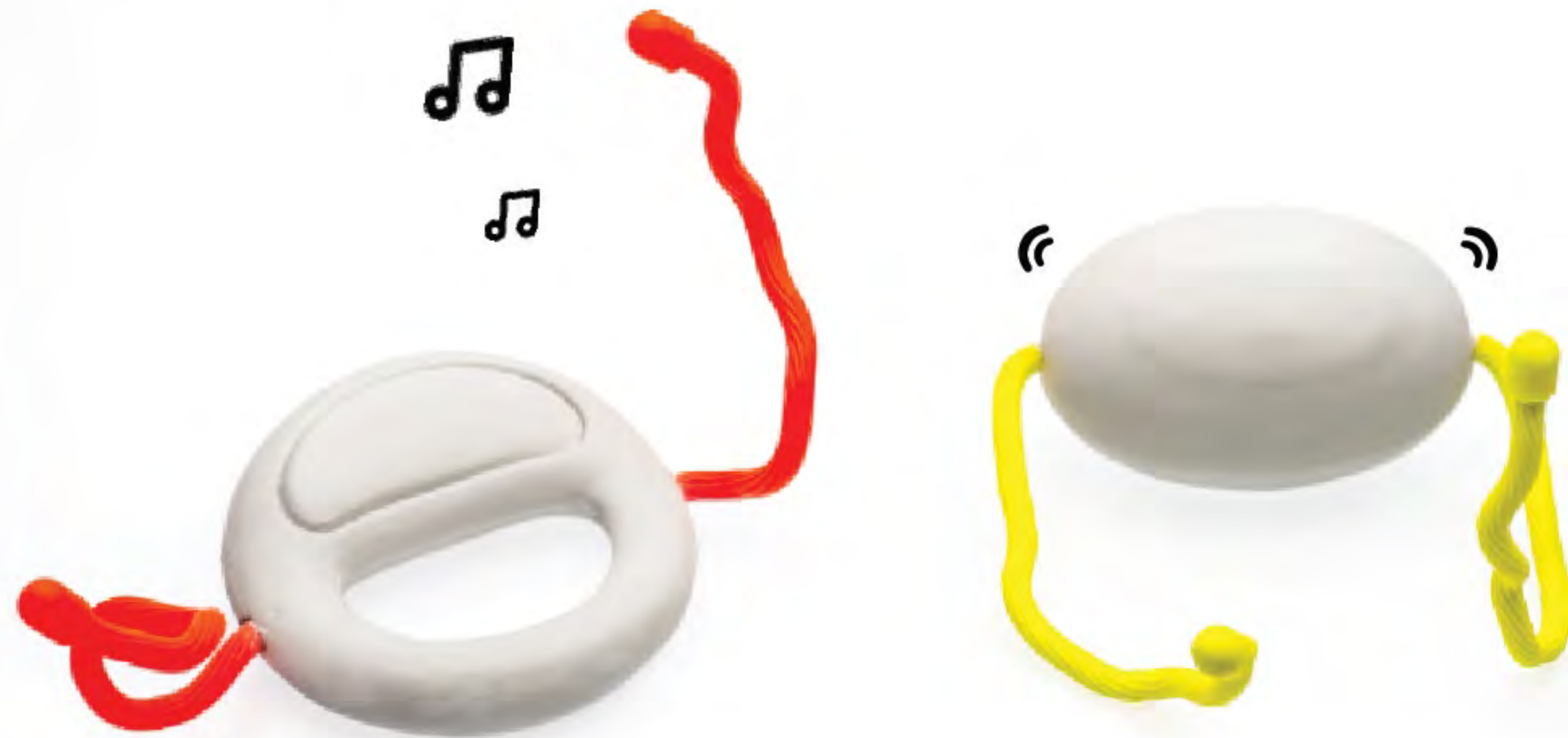


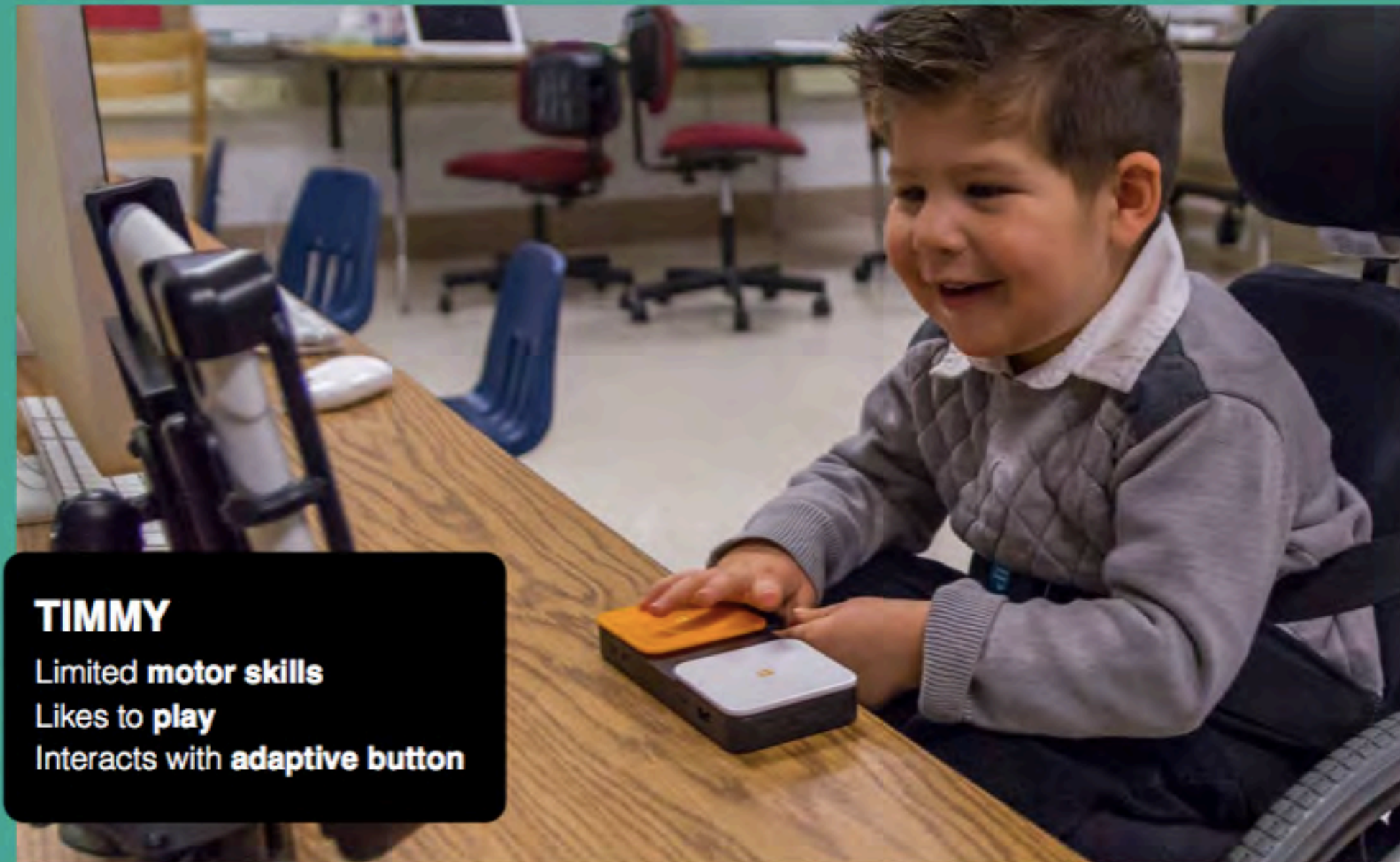
Silicone Pad CNC mold
3D print component box
Hardware upgrades
Game development
Software development
Data Collection & Analysis



BandToy™

adaptive series





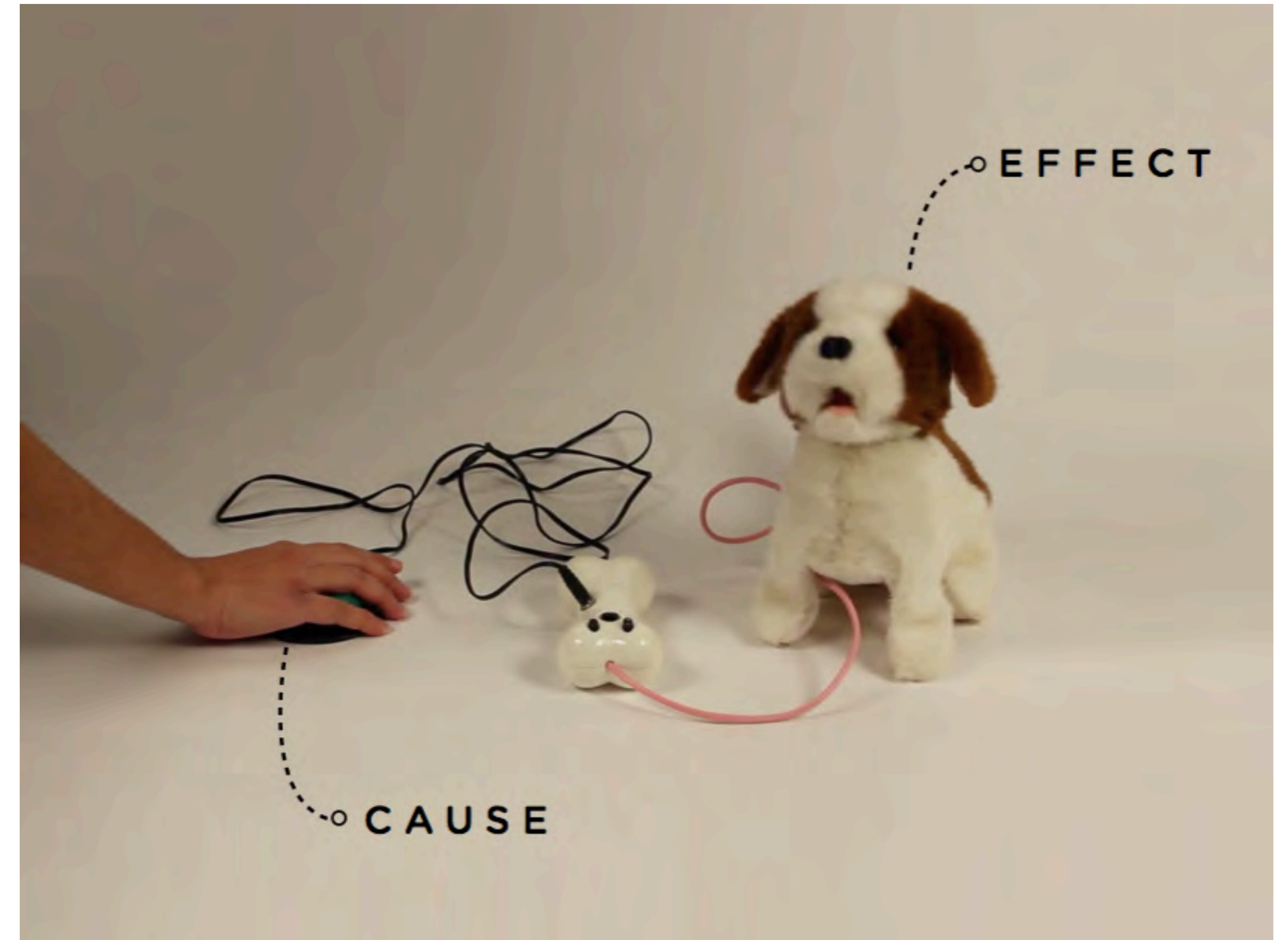
TIMMY

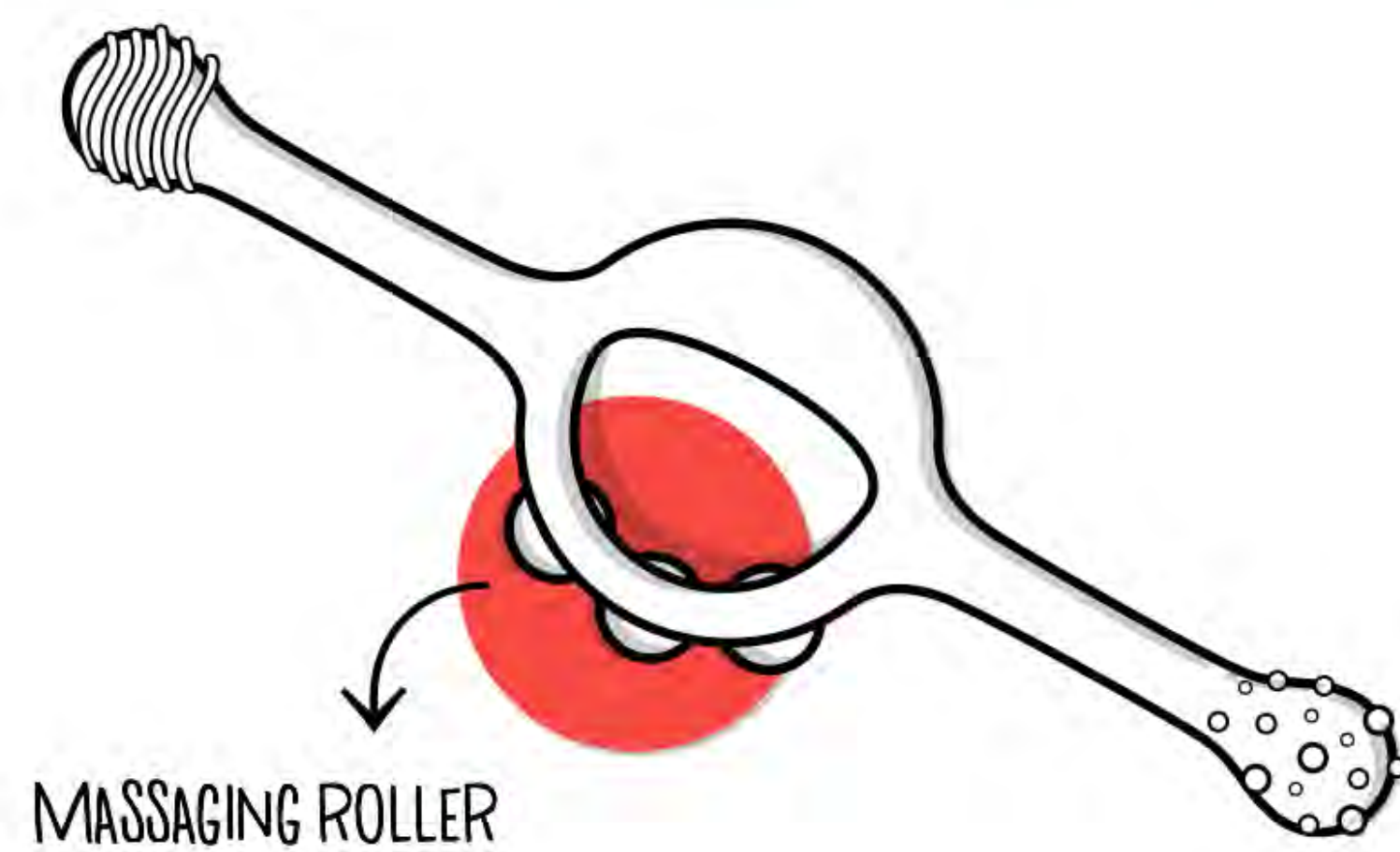
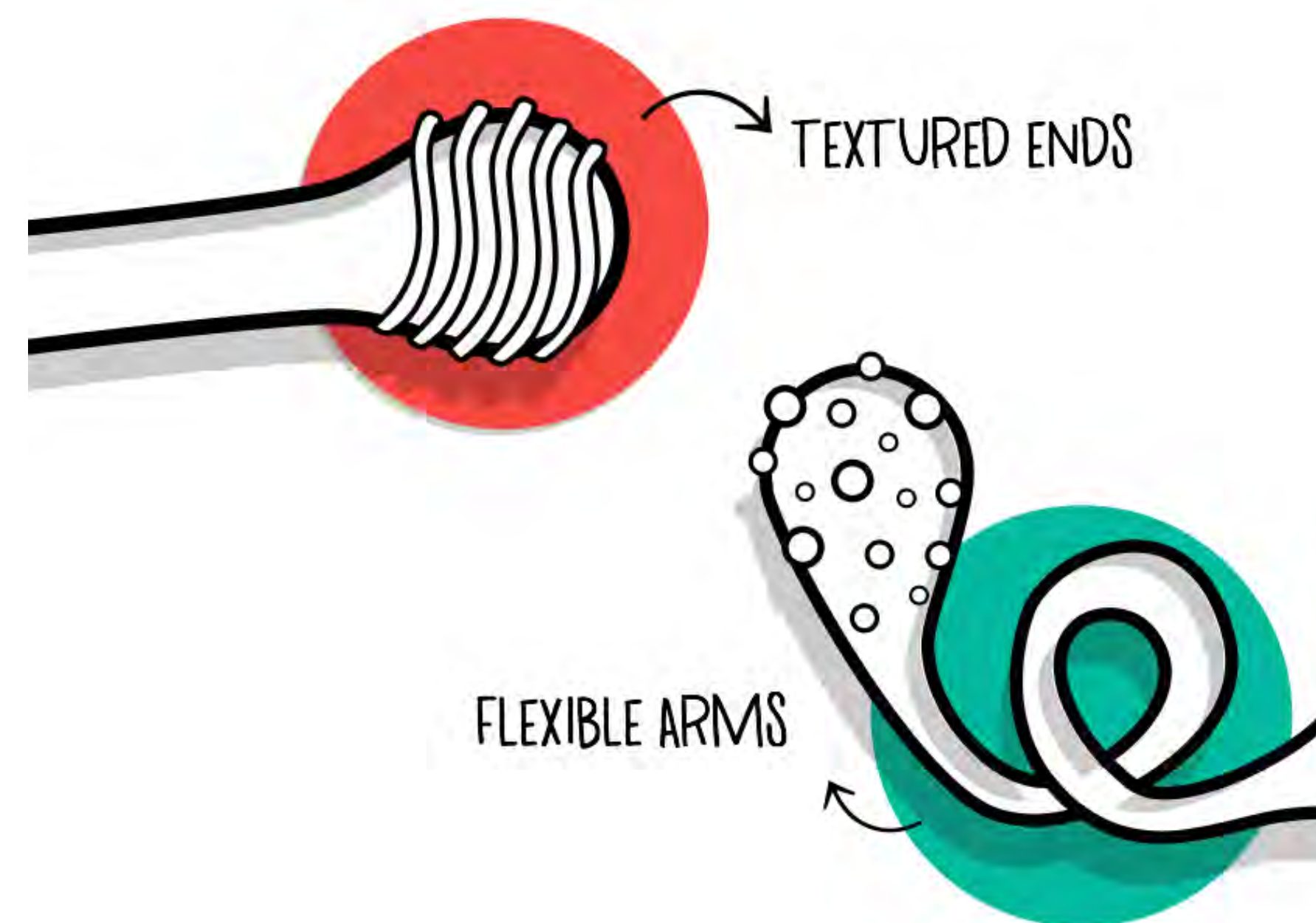
Limited **motor skills**

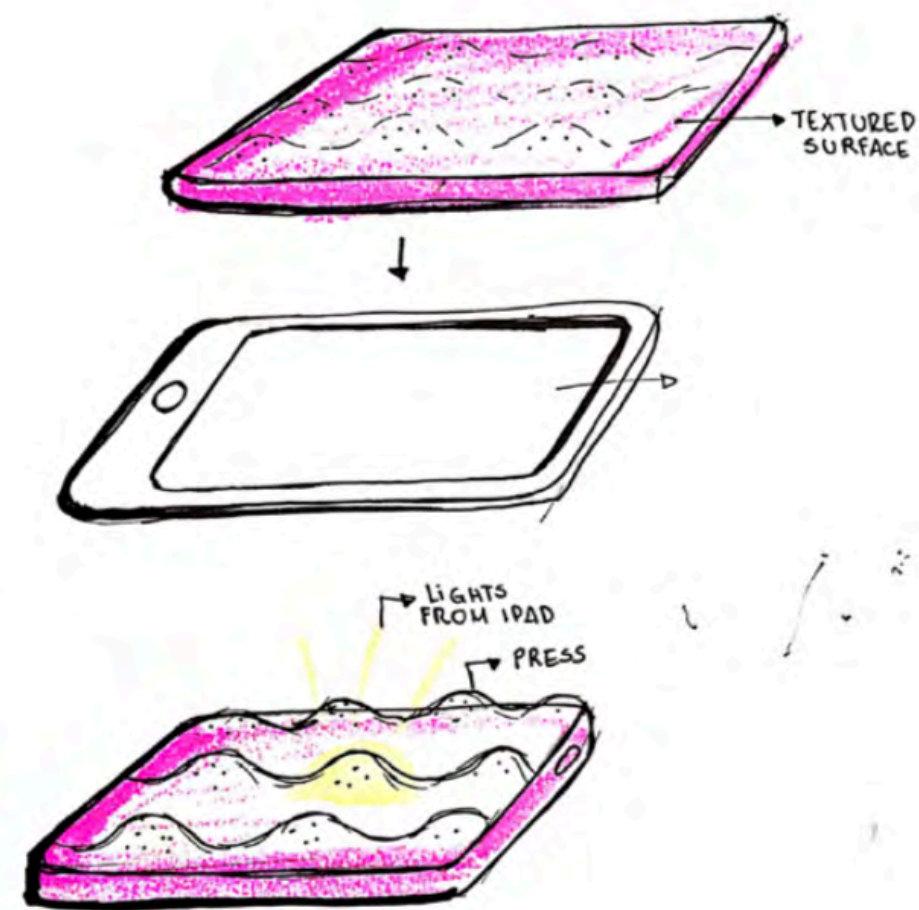
Likes to **play**

Interacts with **adaptive button**

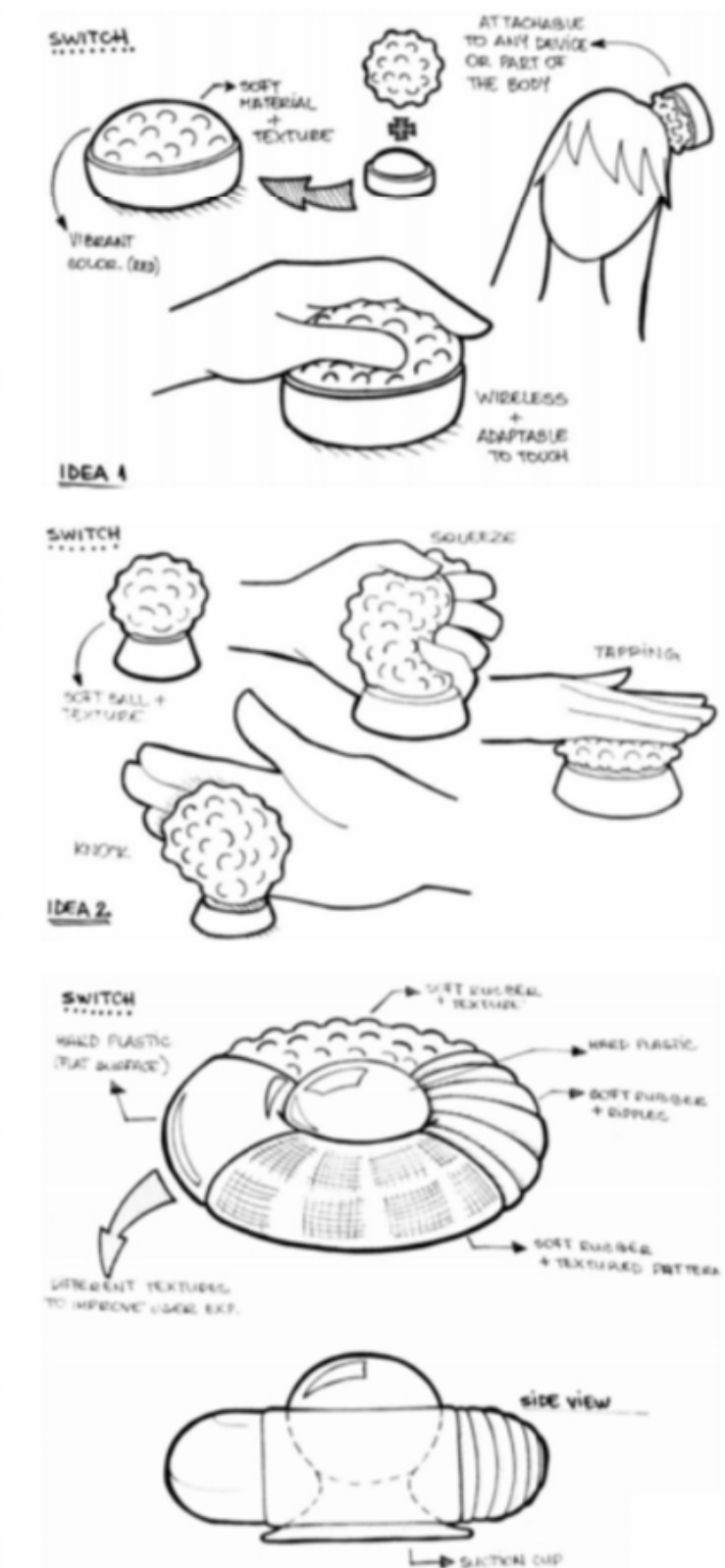
https://sites.duke.edu/dukeatclinic/files/2015/06/Blue2_iPad_Access-9832.jpg



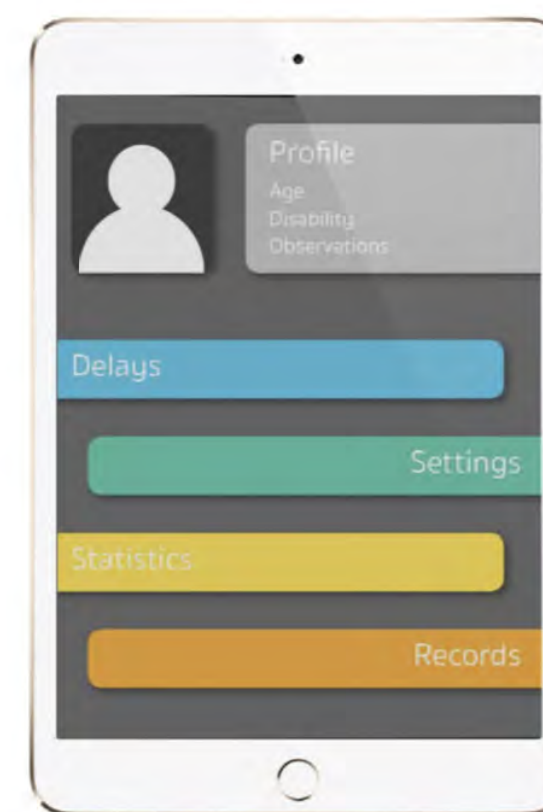
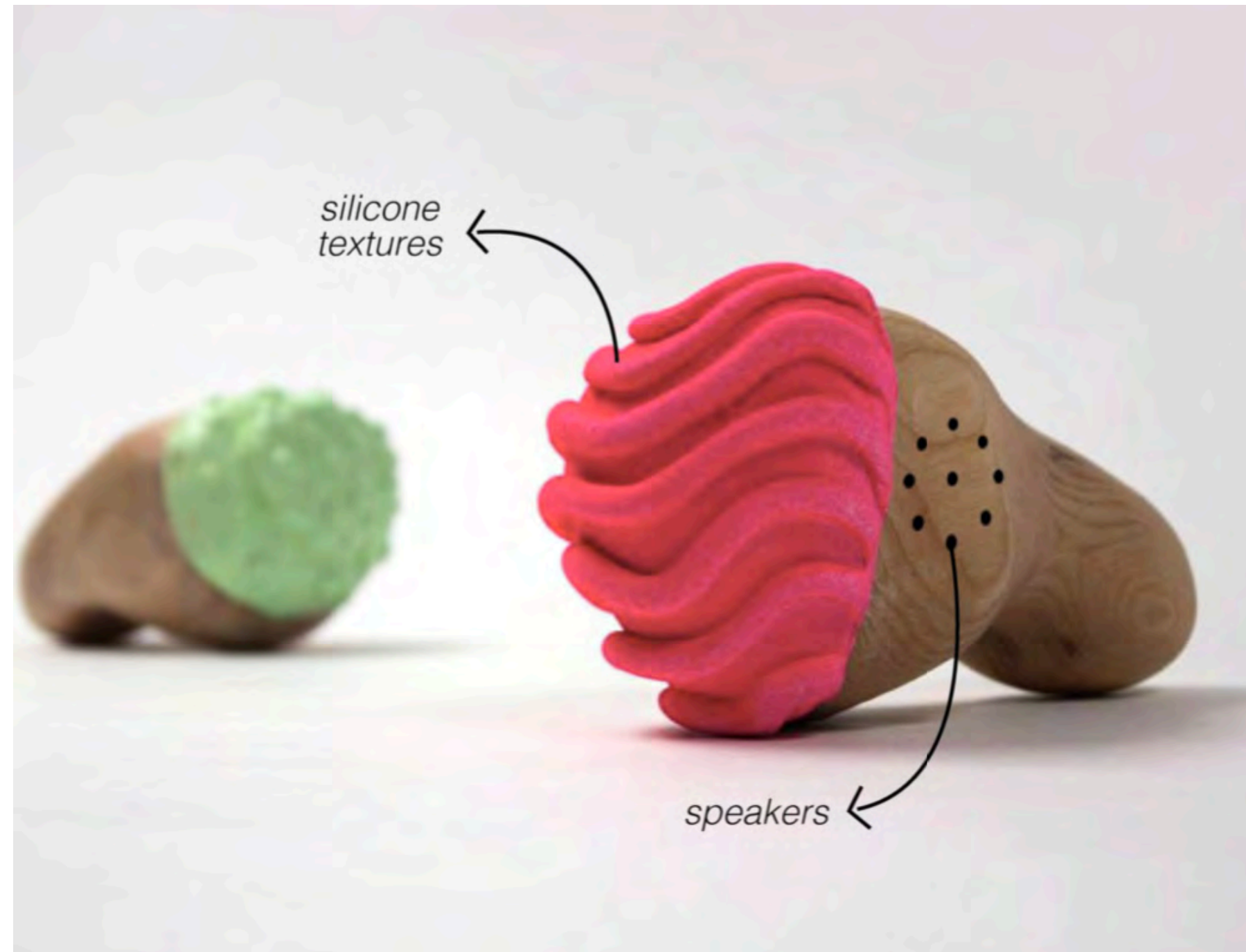




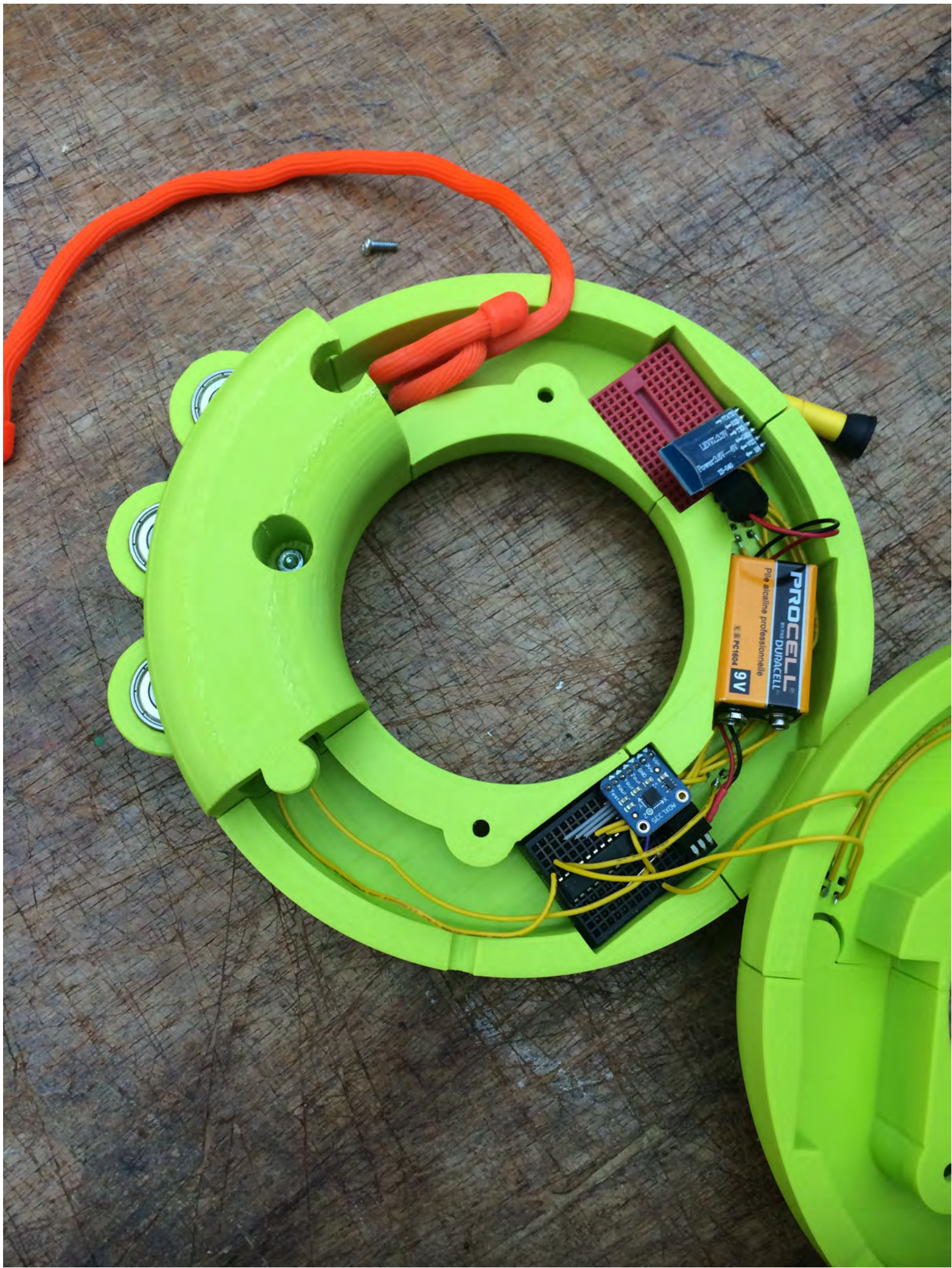
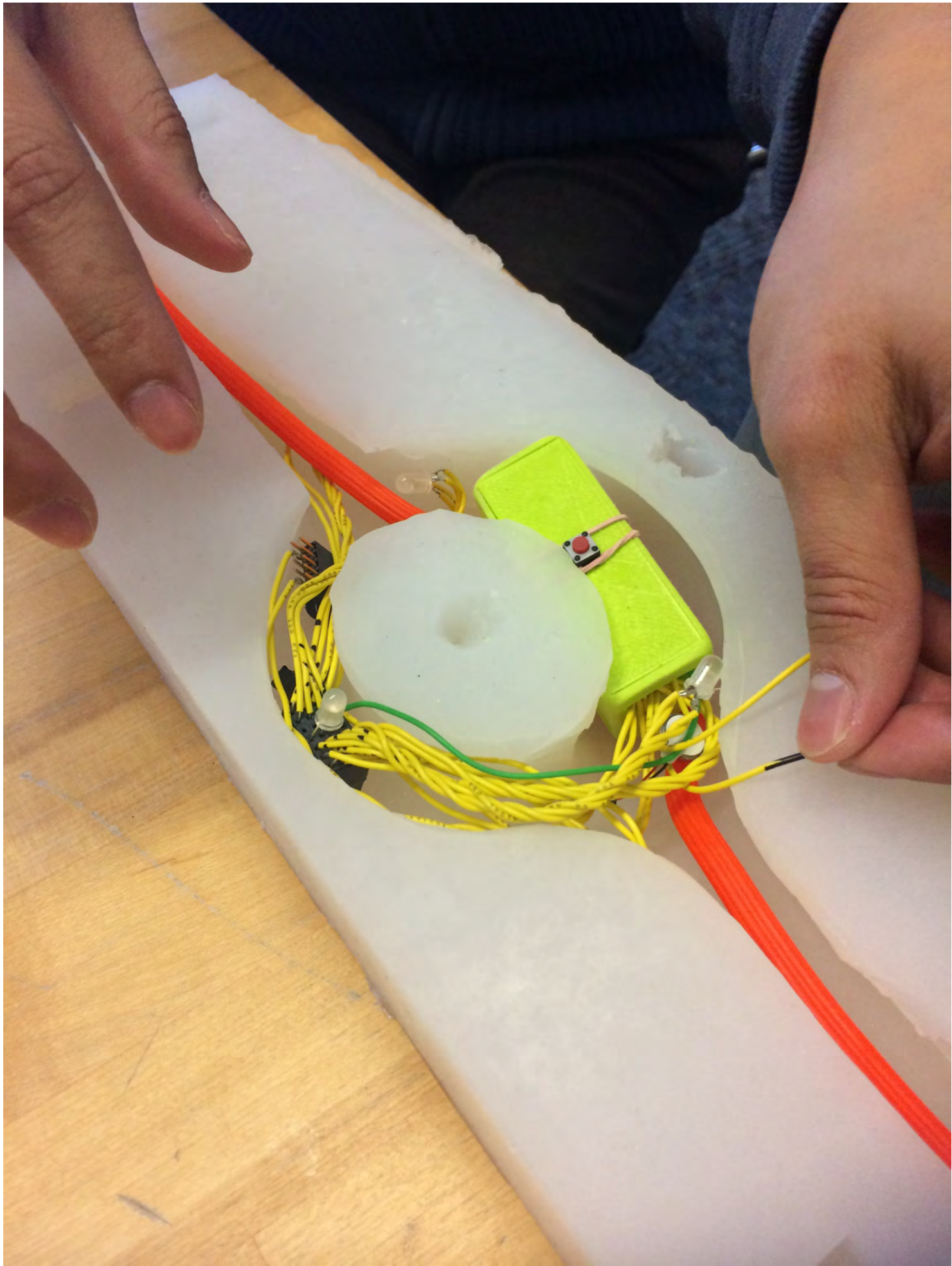
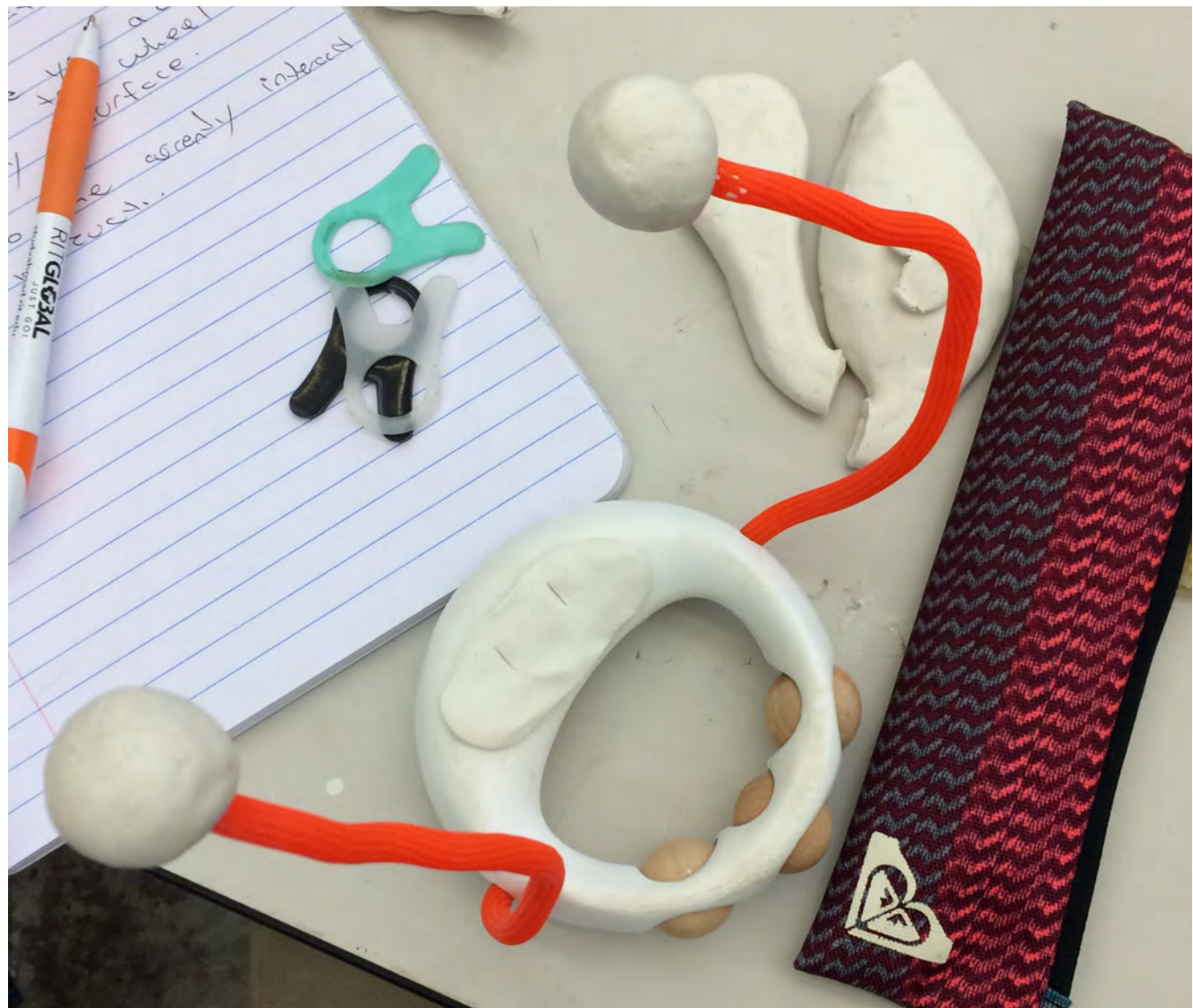
Studio 2.0 - Industrial Design - RIT - Fall 2015

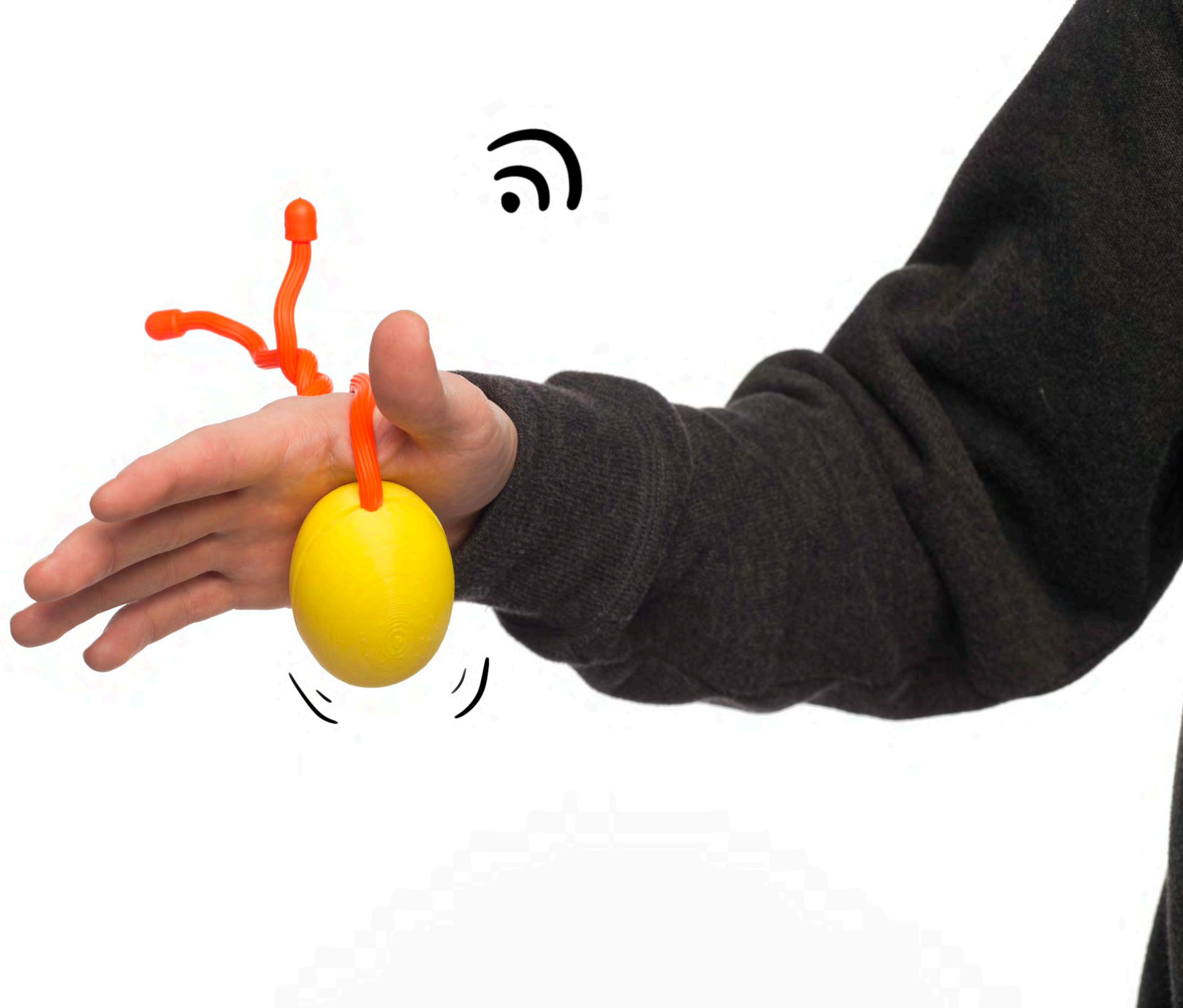


Mary Cariola - **Discovery program** - Summer 2015

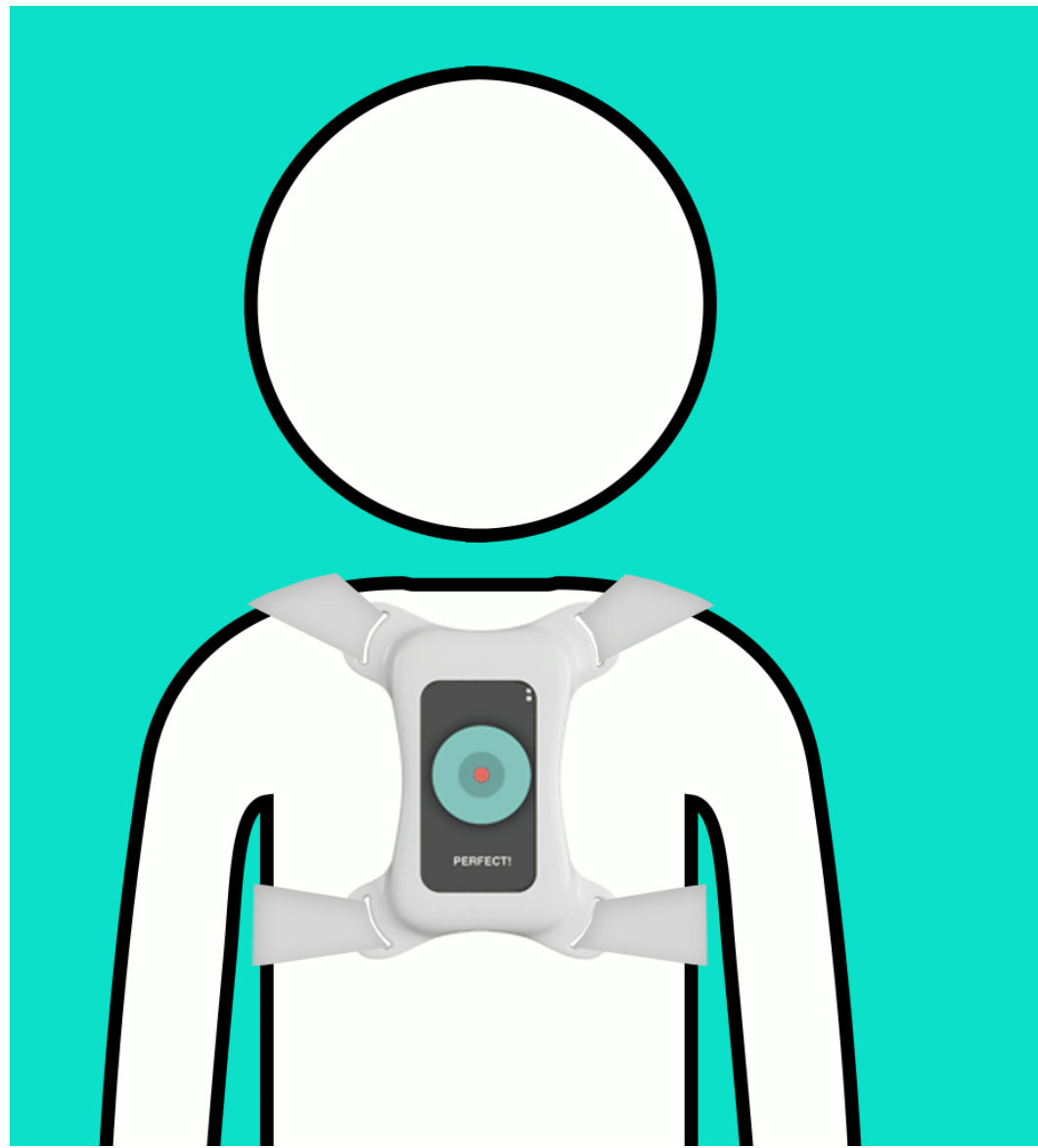
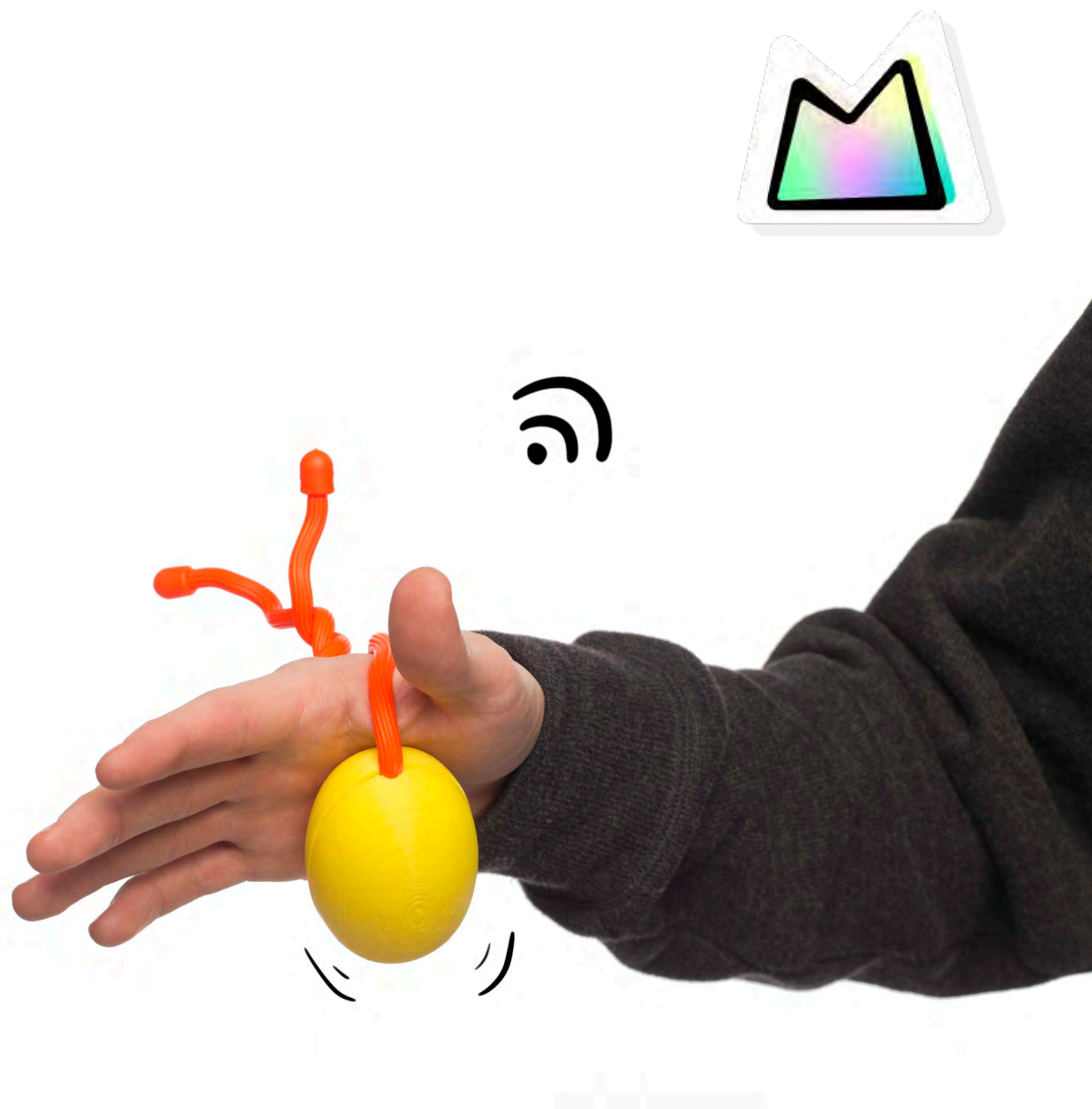


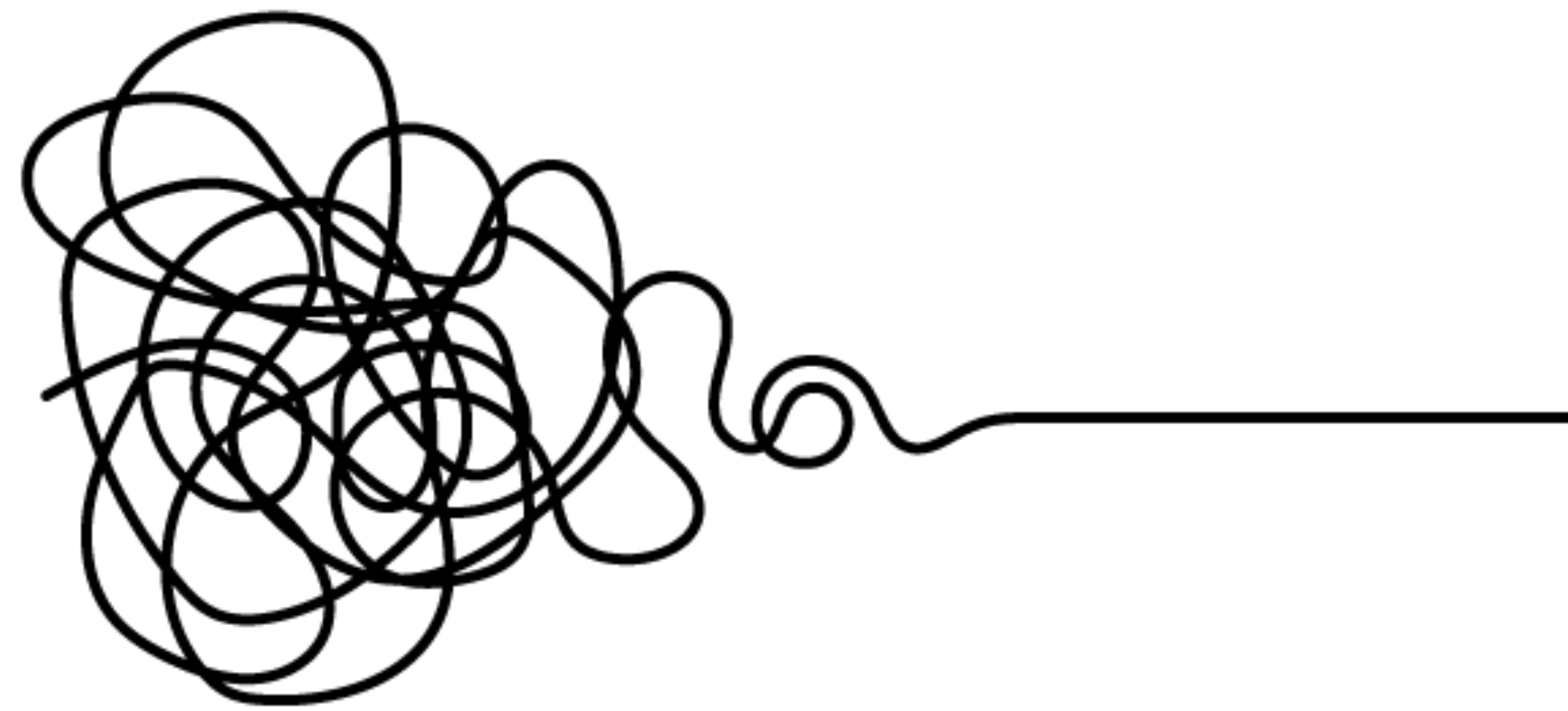












Discovery

Design

Delivery

CIRCULAR
ECONOMY



MARI
PINHEIRO



mari-pinheiro.myportfolio.com

m4ri.creations@gmail.com