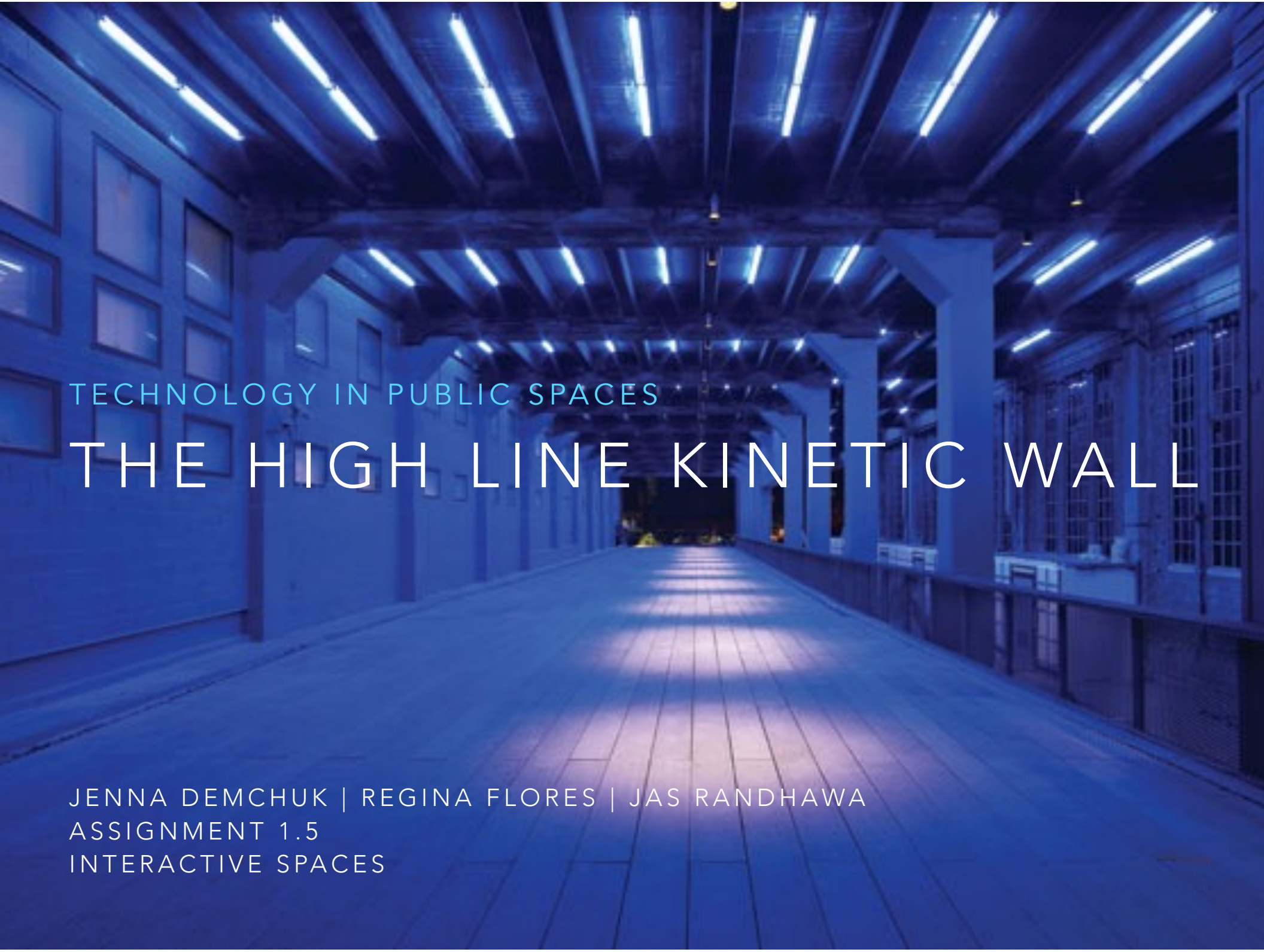


TECHNOLOGY IN PUBLIC SPACES

THE HIGH LINE KINETIC WALL

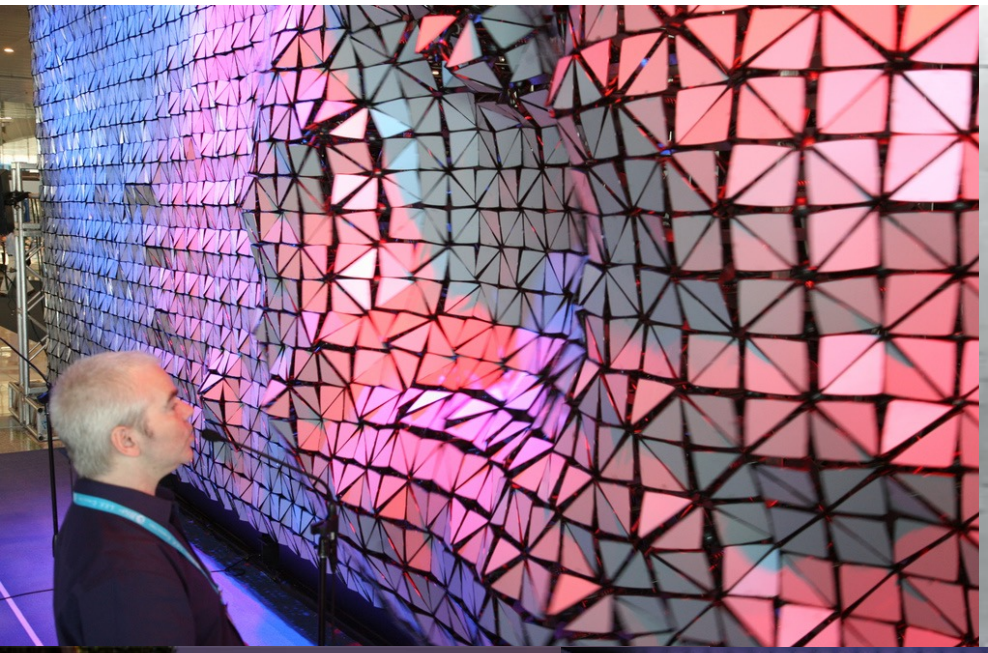
JENNA DEMCHUK | REGINA FLORES | JAS RANDHAWA

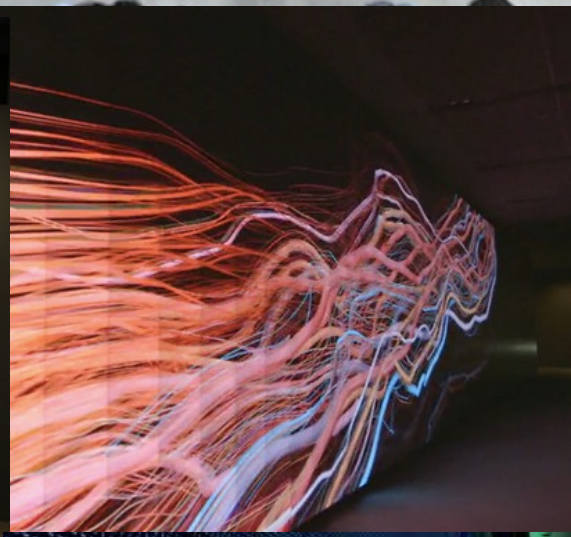
ASSIGNMENT 1.5

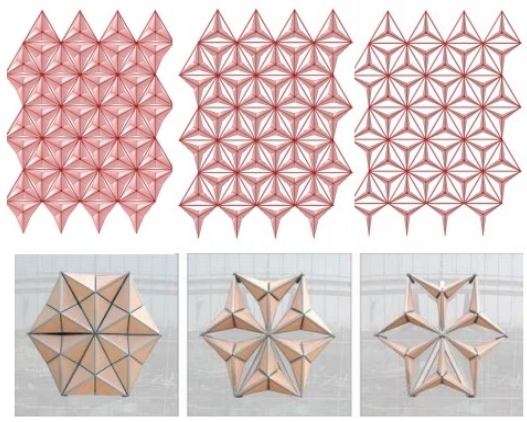
INTERACTIVE SPACES

REFINED IDEA: KINETIC WALL

- The High Line Kinetic Wall is an interactive installation that will attract visitors to the High Line at night.
- Using LED lights and motion sensors, we will create a wall that reacts to the movement of passersby.
- The wall will be covered with geometrical shapes. Each shape will be responsive to the users movement. It will “open” as the user gets closer and “close” as the user goes farther away.



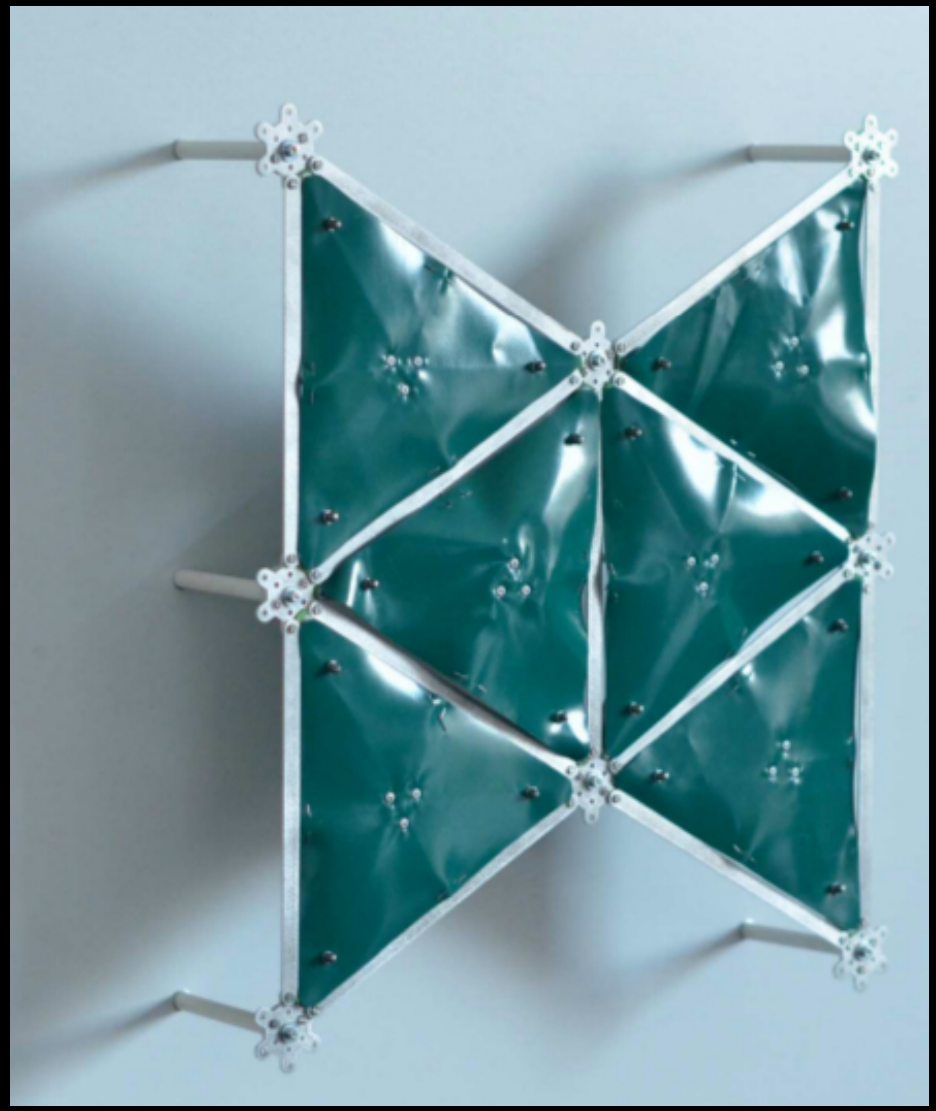


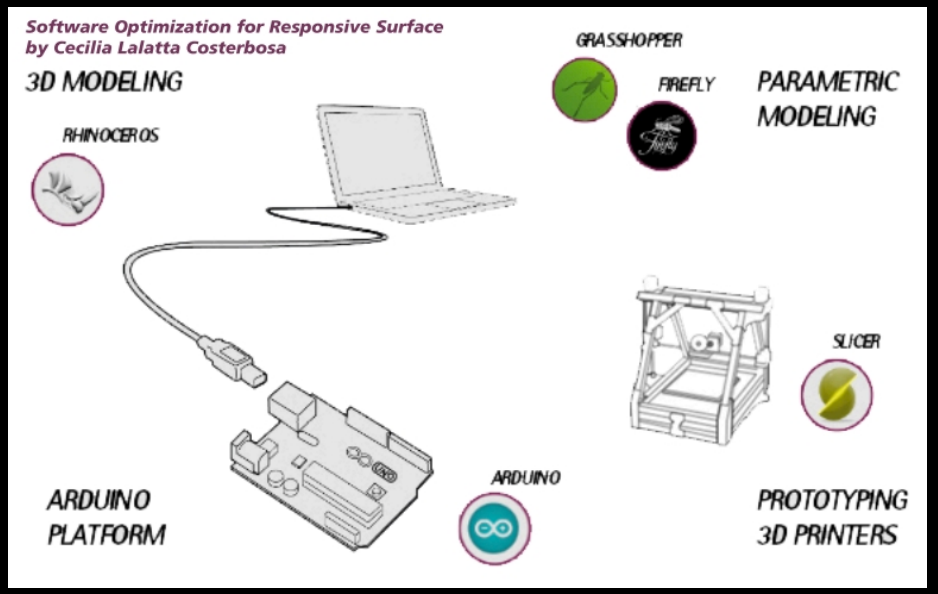


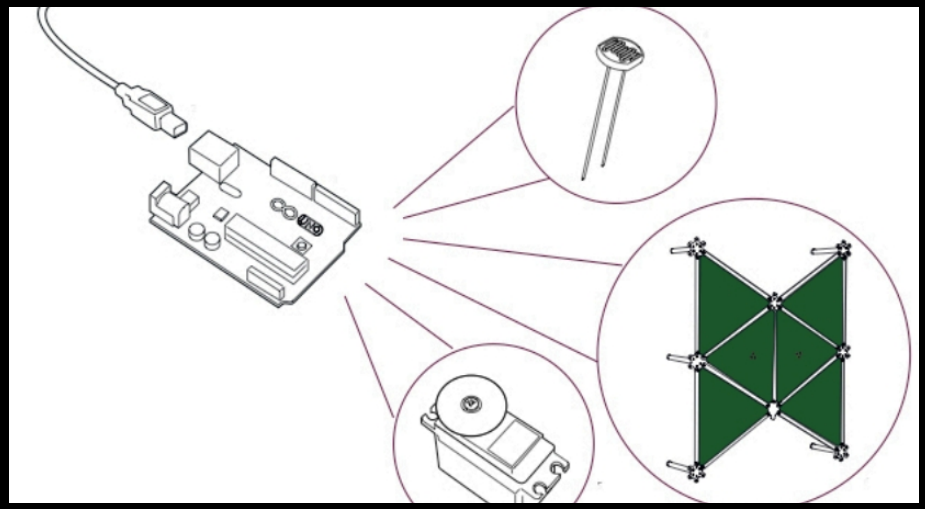
PRECEDENT: "KINETIC WALL" FROM THE 14TH INTERNATIONAL ARCHITECTURE BIENNALE

https://vimeo.com/97429450

PRECEDENT: MAKER FAIRE PARAMETRIC HYBRID WALL



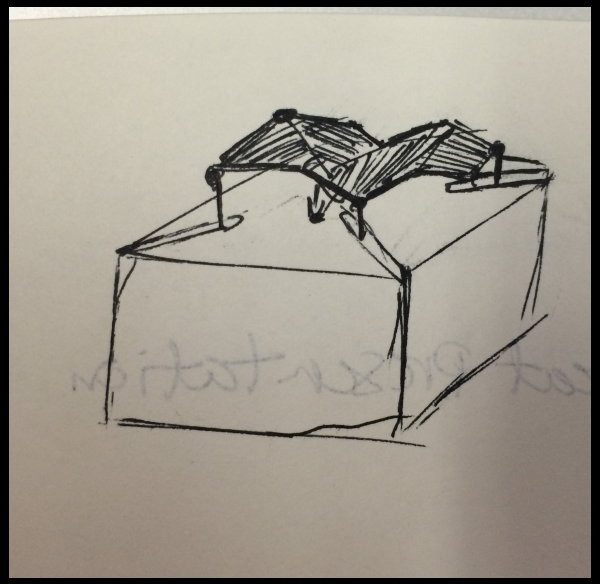


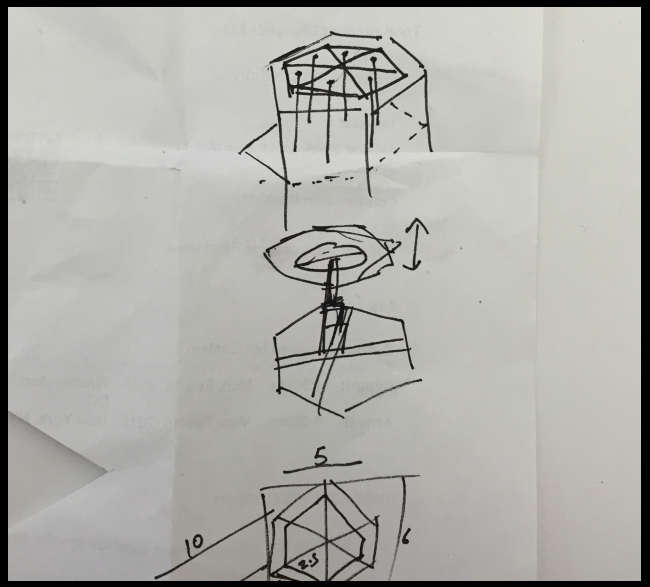


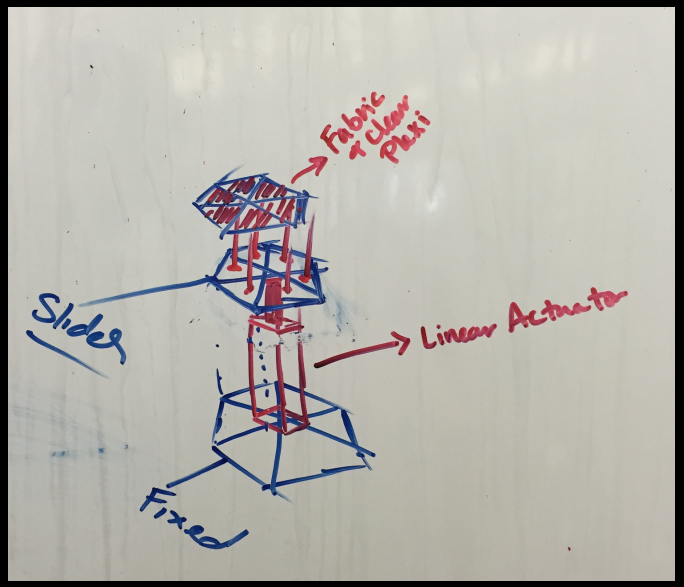
CHALLENGES: TECHNICAL & EXPERIENTIAL

- How will the panels move on the wall? Linear or rotary motion?
- Will the components of the wall be 3D Printed?
- Can we make this wall interactive to other types of movement? For example, reacting to users touch?
- How can we make lights responsive to users interaction/ motion?
- How can we create lighting that is flat rather than point source?

SKETCHES: HEX POD DESIGNS





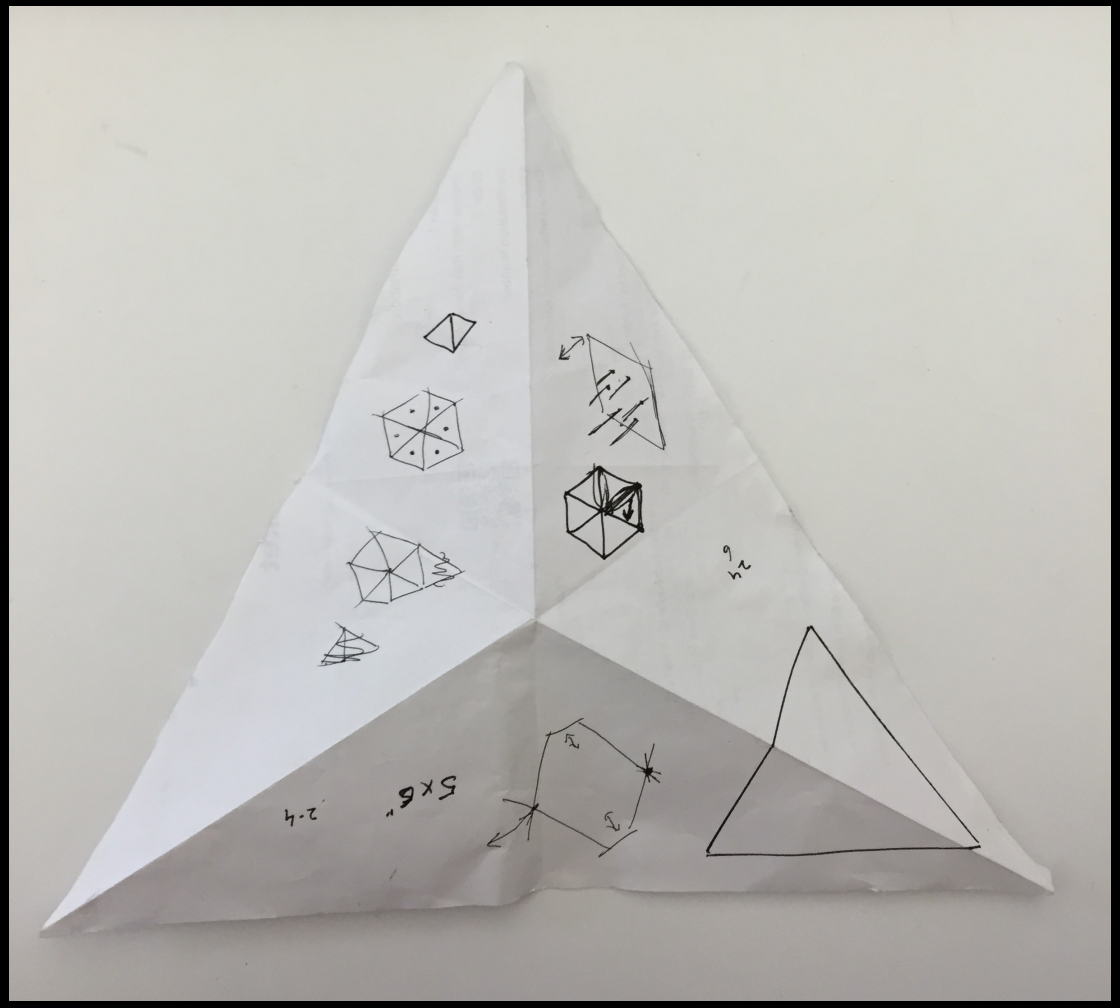


PAPER PROTOTYPE I

WE BEGAN WITH SIMPLE PAPER PROTOTYPES TO EXPERIMENT WITH DIFFERENT GEOMETRICAL SHAPES TO SEE HOW THESE SHAPES MOVE

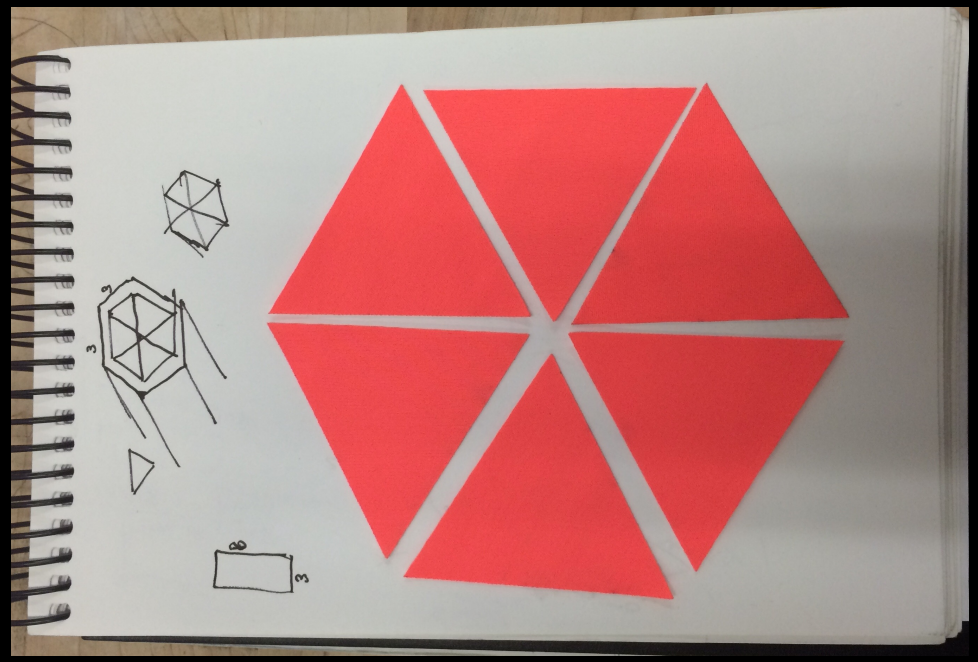
PAPER PROTOTYPING II

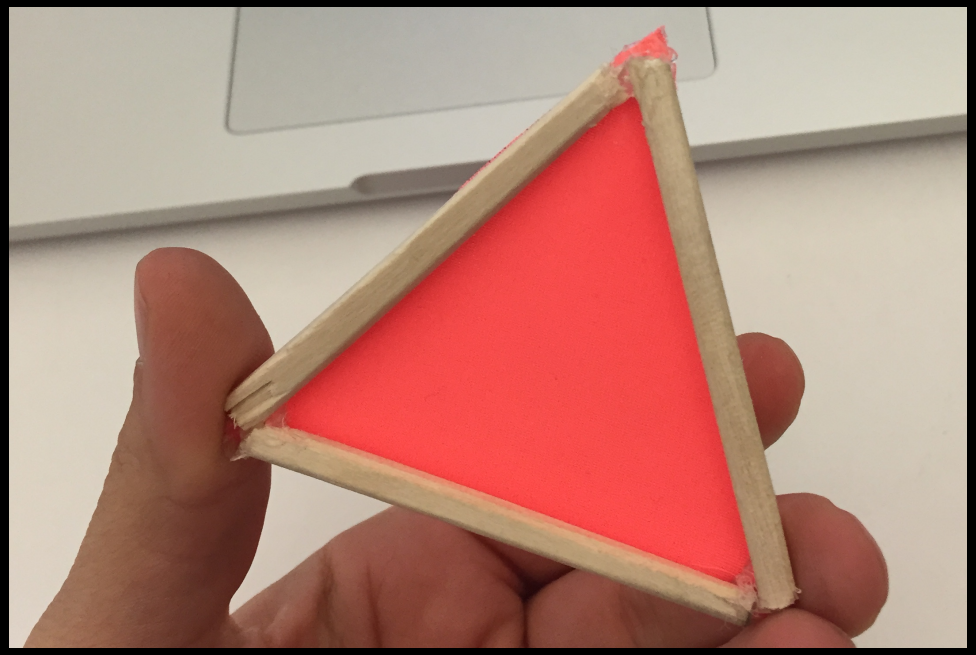
THE FINAL PAPER PROTOTYPE BECAME AN EQUILATERAL TRIANGLE THAT WILL BECOME 1/6 OF A HEXAGON. THE FOLDS OF THE TRIANGLE CAN BE PUSHED UP AND DOWN IN A LINEAR MOTION.



PHYSICAL PROTOTYPE I

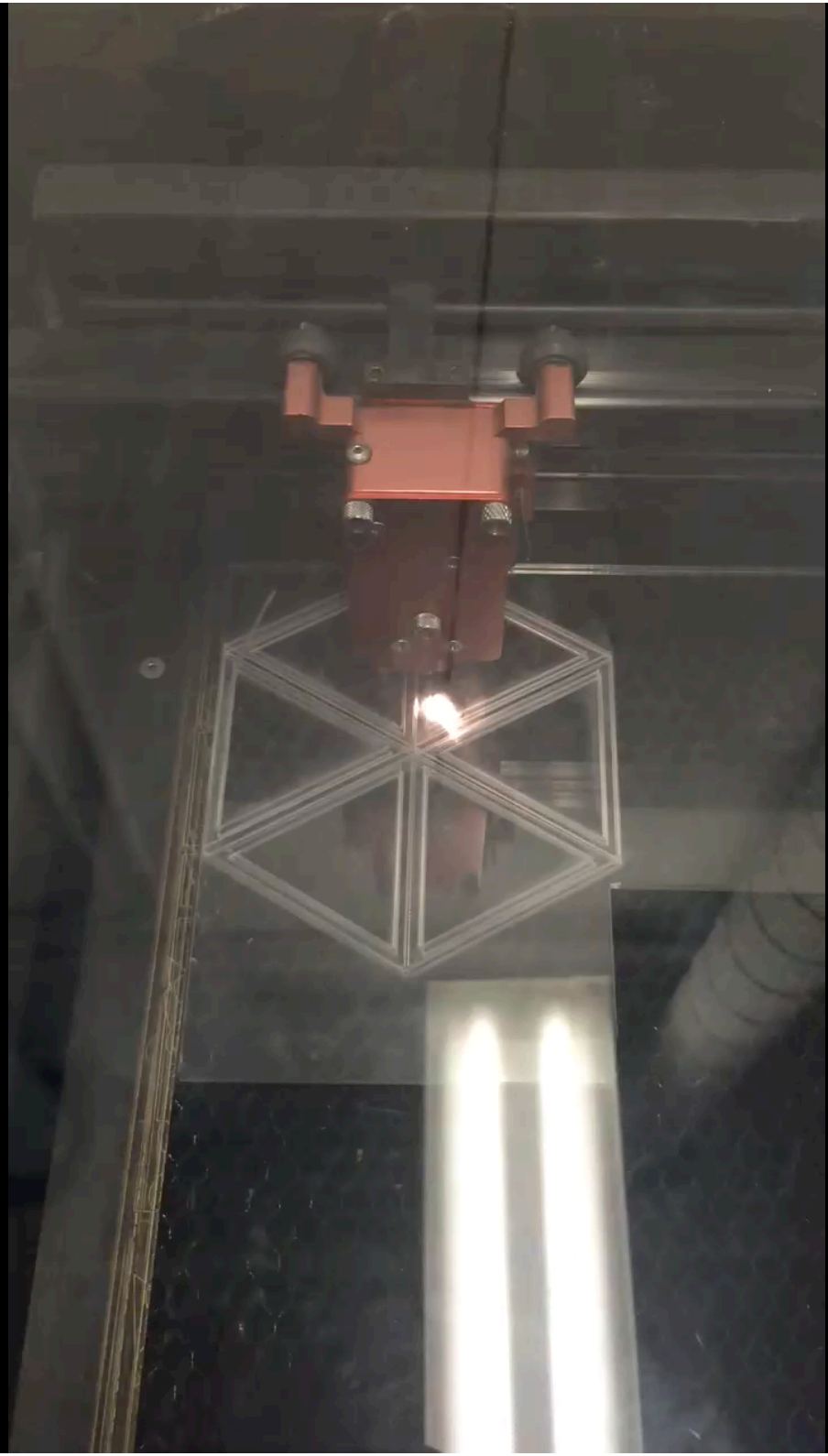
WE DECIDED TO USE FABRIC FOR OUR NEXT PROTOTYPE AND CHOSE A STRETCHY NYLON MATERIAL THAT WOULD ALLOW FOR MOVEMENT WITH OUR ELECTRICAL COMPONENTS





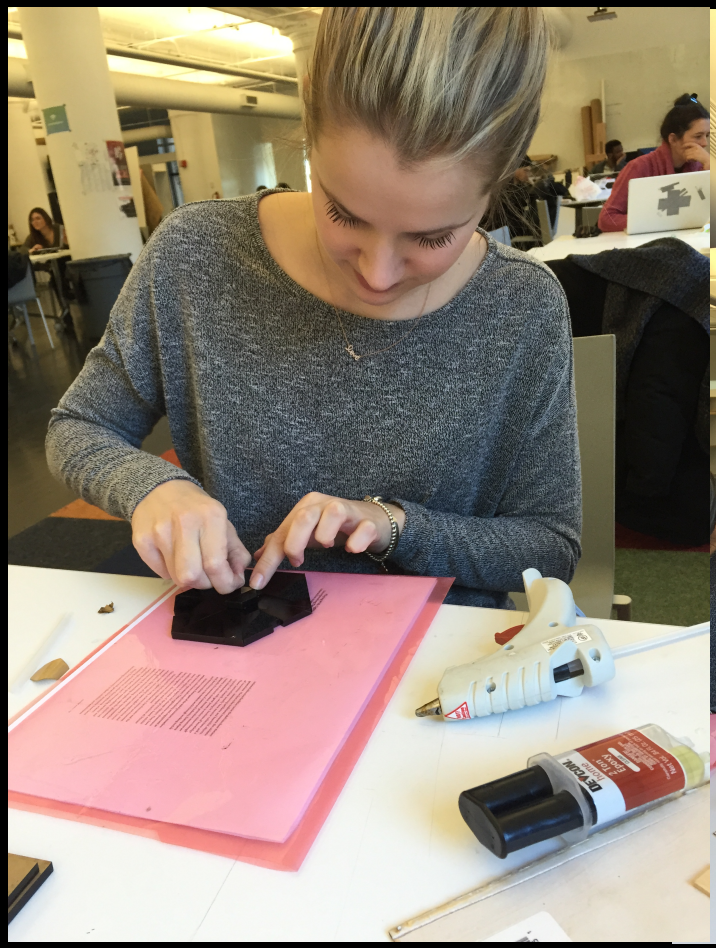
PHYSICAL PROTOTYPING II

USING THE LASER CUTTER WE CUT PARTS FROM PLEXIGLASS TO BUILD THE FINAL PROTOTYPE. EVERY COMPONENT IN OUR FINAL PROTOTYPE WE MADE AND CONSTRUCTED USING A LASER CUTTER.

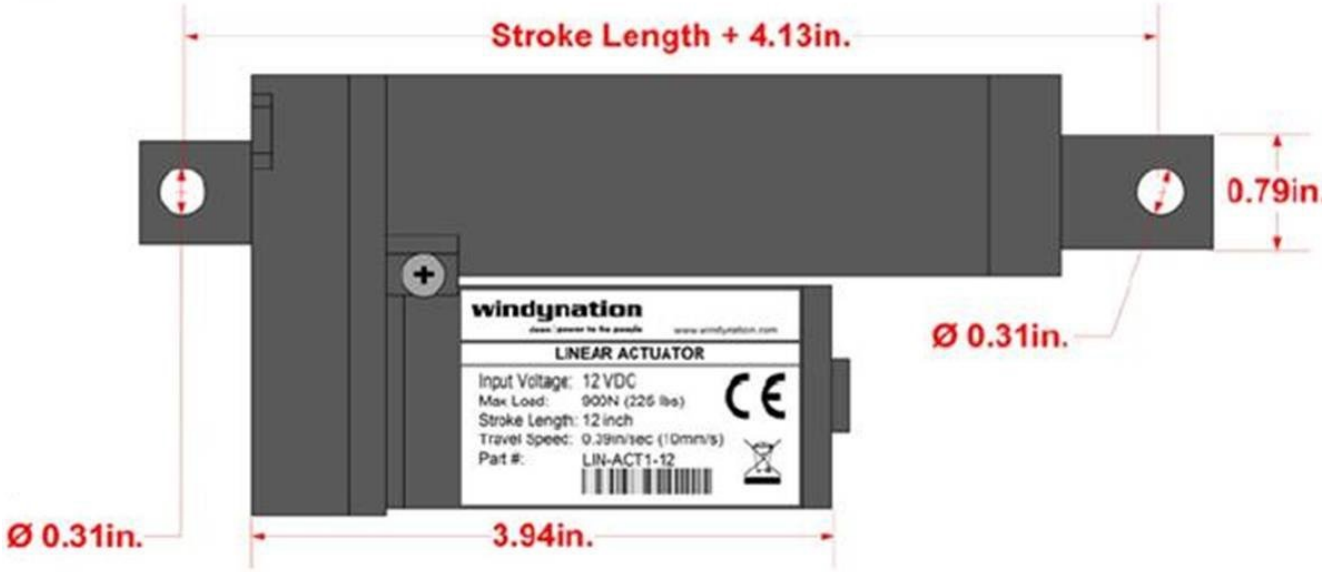


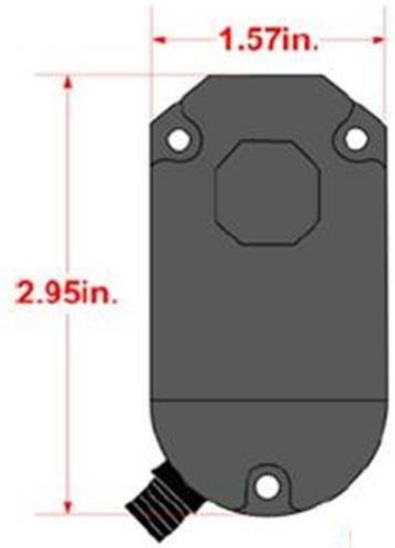

DEVCON.
home
2 Ton
Epoxy
CLEAR

CONSTRUCTION PROCESS



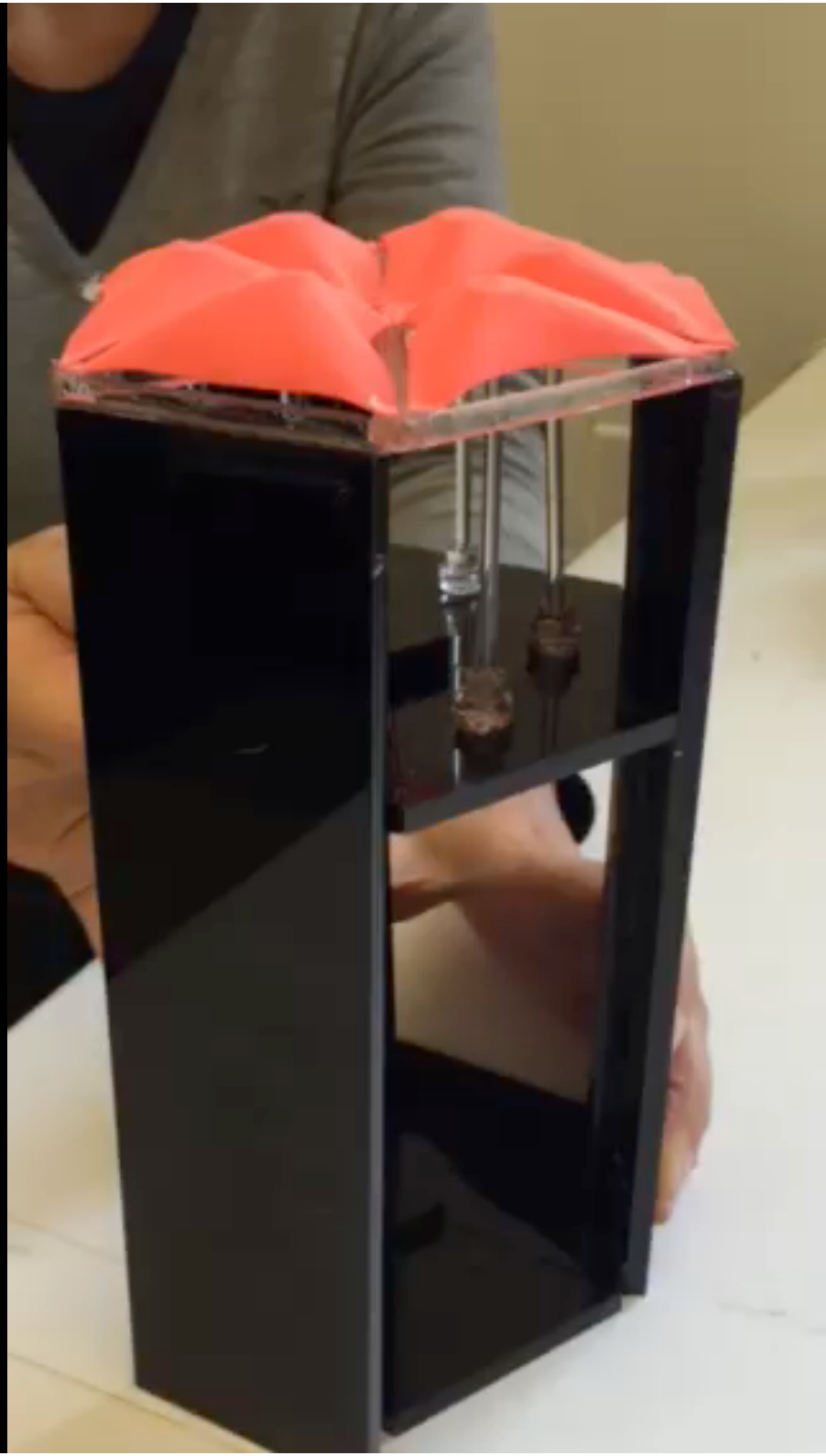
LINEAR ACTUATOR SPECS





FINAL PROTOTYPE I

USING OUR HANDS WE HAVE SHOWN A PROOF OF CONCEPT FOR OUR FINAL PROTOTYPE



NEXT STEPS

- Develop plan for physical computing component to get the linear actuator and LED's working in the housing unit
- Test actuator and LED's in the unit
- Finish attaching final side panels
- Reassess materials selection and iterate design in order to make additional units to complete wall