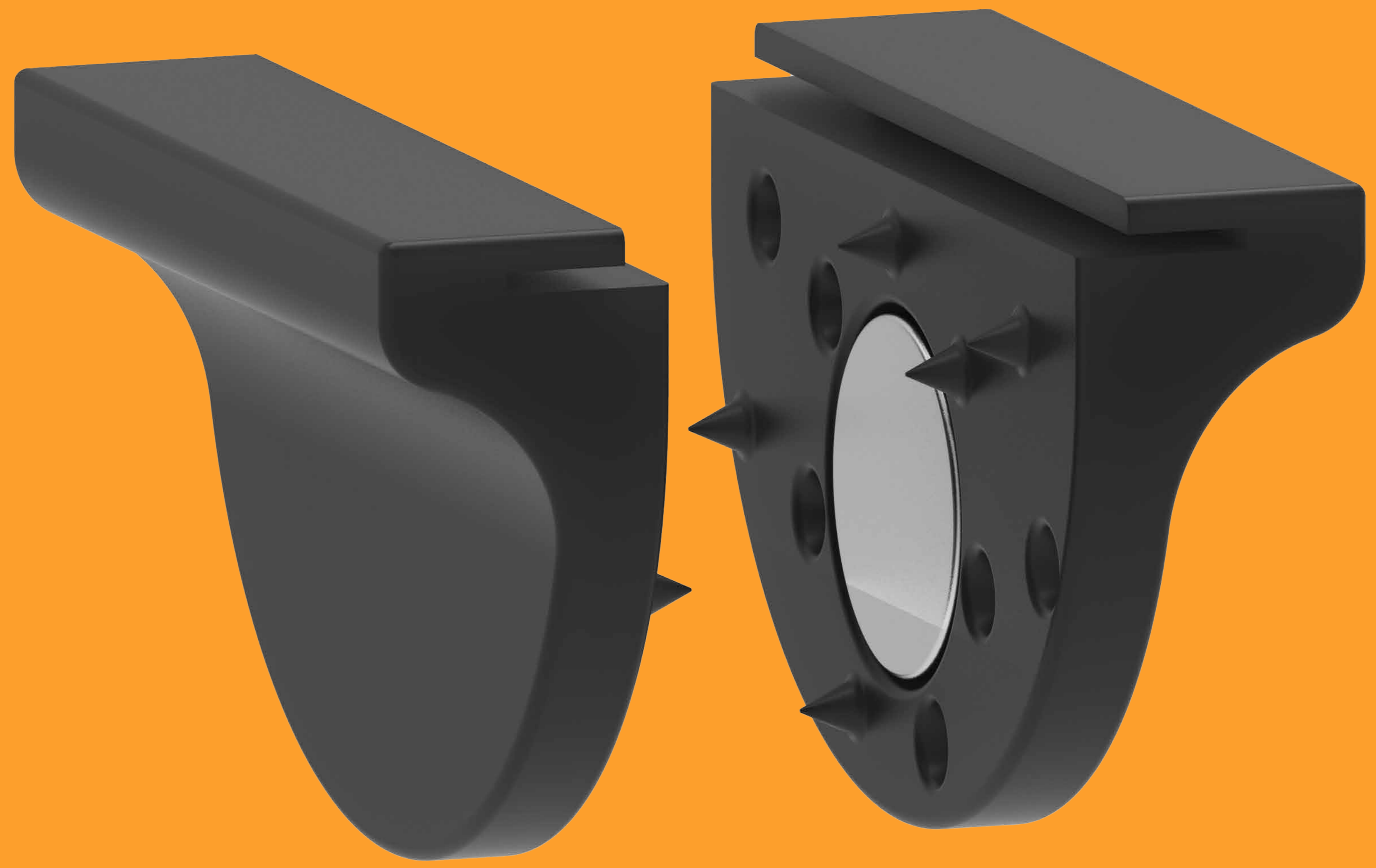


DIVI

AU22, Design 5101 & 5200, Sébastien Proulx
Mychajlo Johnson  



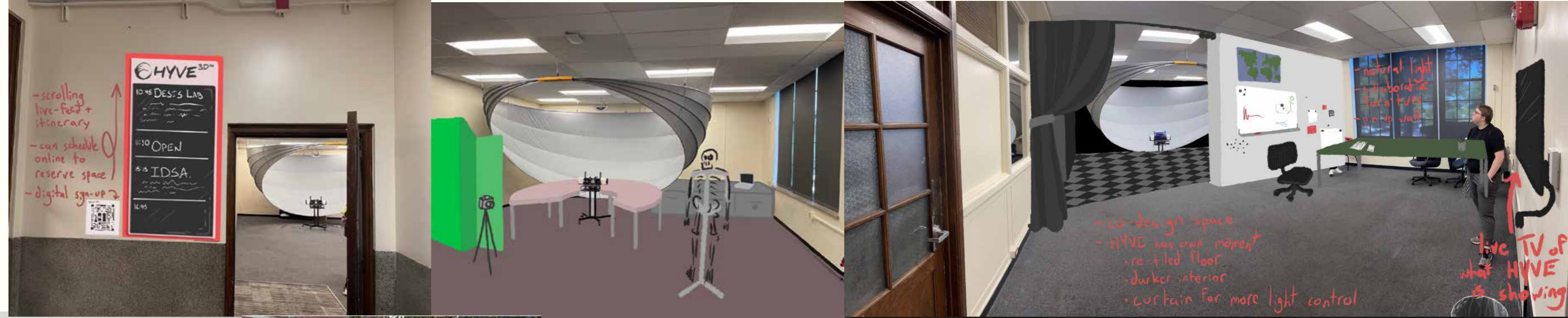
Partnered with DESIS Lab and hosted in Dominion Middle School, the HYVE-3D is an immersive alternate reality experience.

In 15 weeks research, design, and synthesize a solution that creates a nonintrusive room division system capable of creating dynamic space. The result should be a cost-effective and minimally involved environment creation tool that can be easily put up and taken down. It is aimed at event organizers, educators, and coordinators who may be working independently. Solutions should retain the spirit of the client's visual brand language.

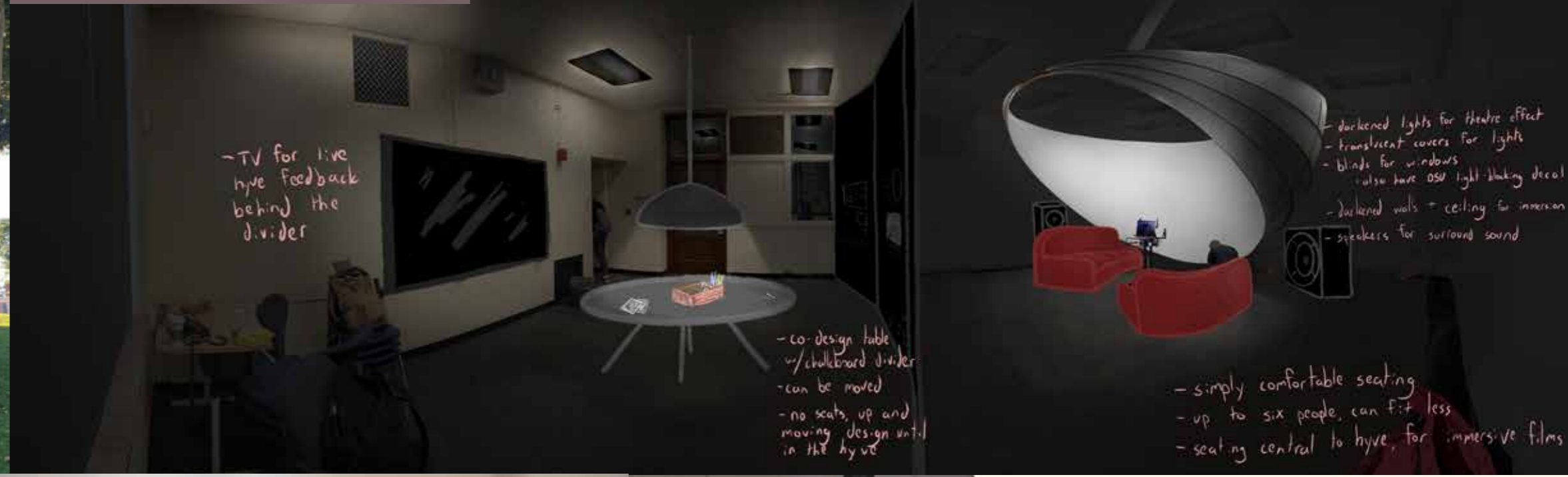
Newspaper

Before research began, exploration and documentation of articles within four subcategories (science and tech, focus, business, and art), helped create a series of conjectures and a summary op-ed culminating in a pre-research newspaper.

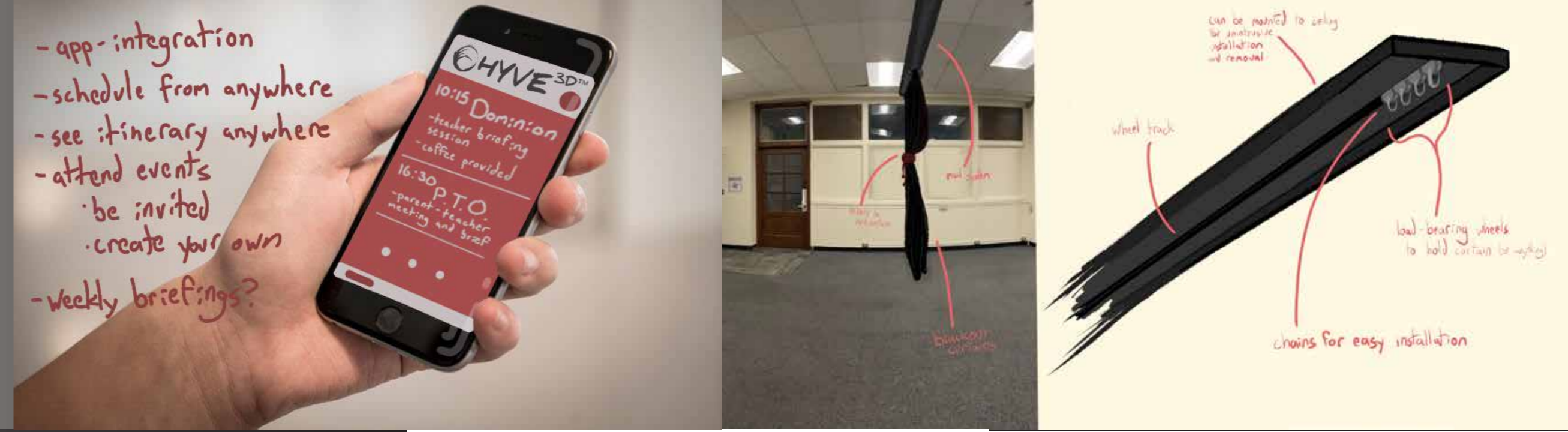
Science & Tech



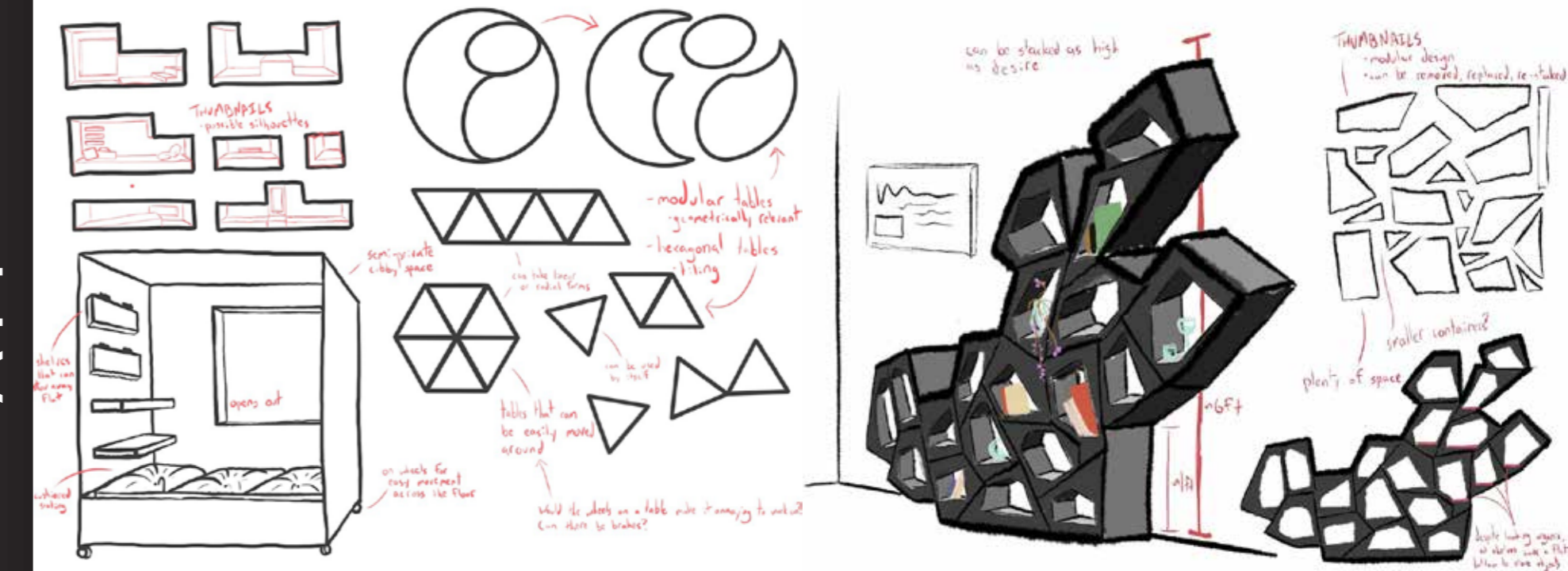
FOCUS



Business

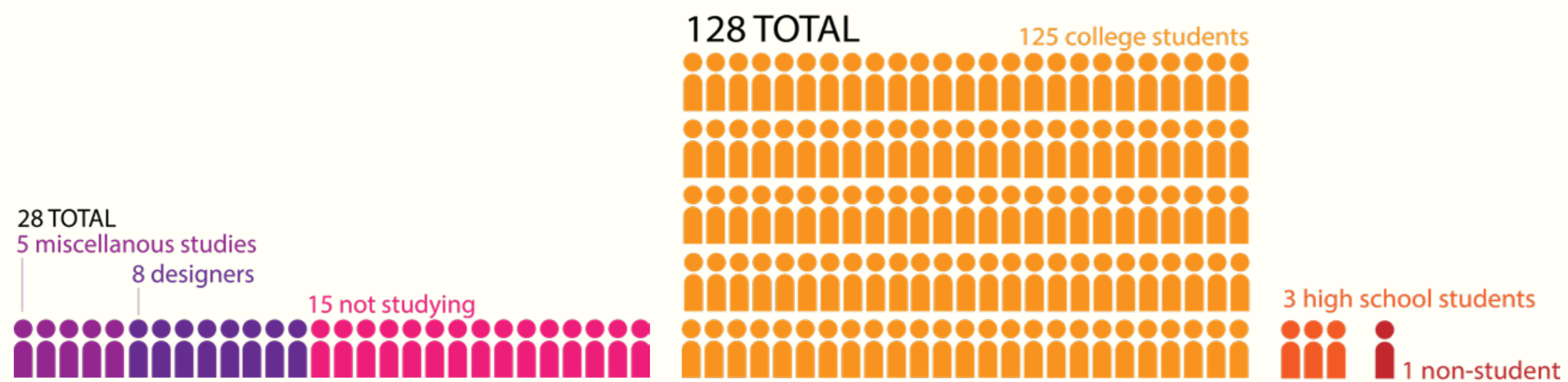


Art

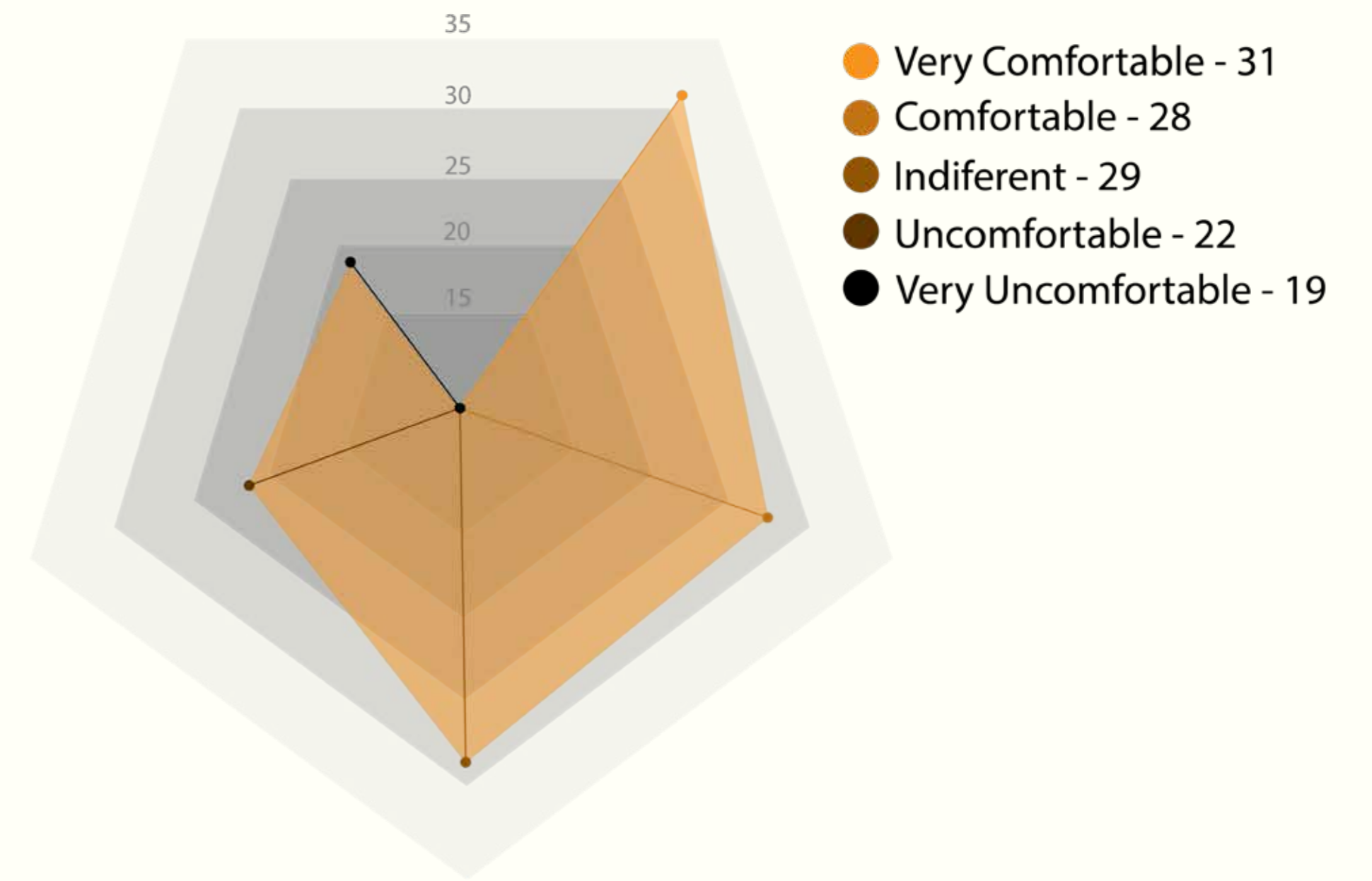


Research Phase I

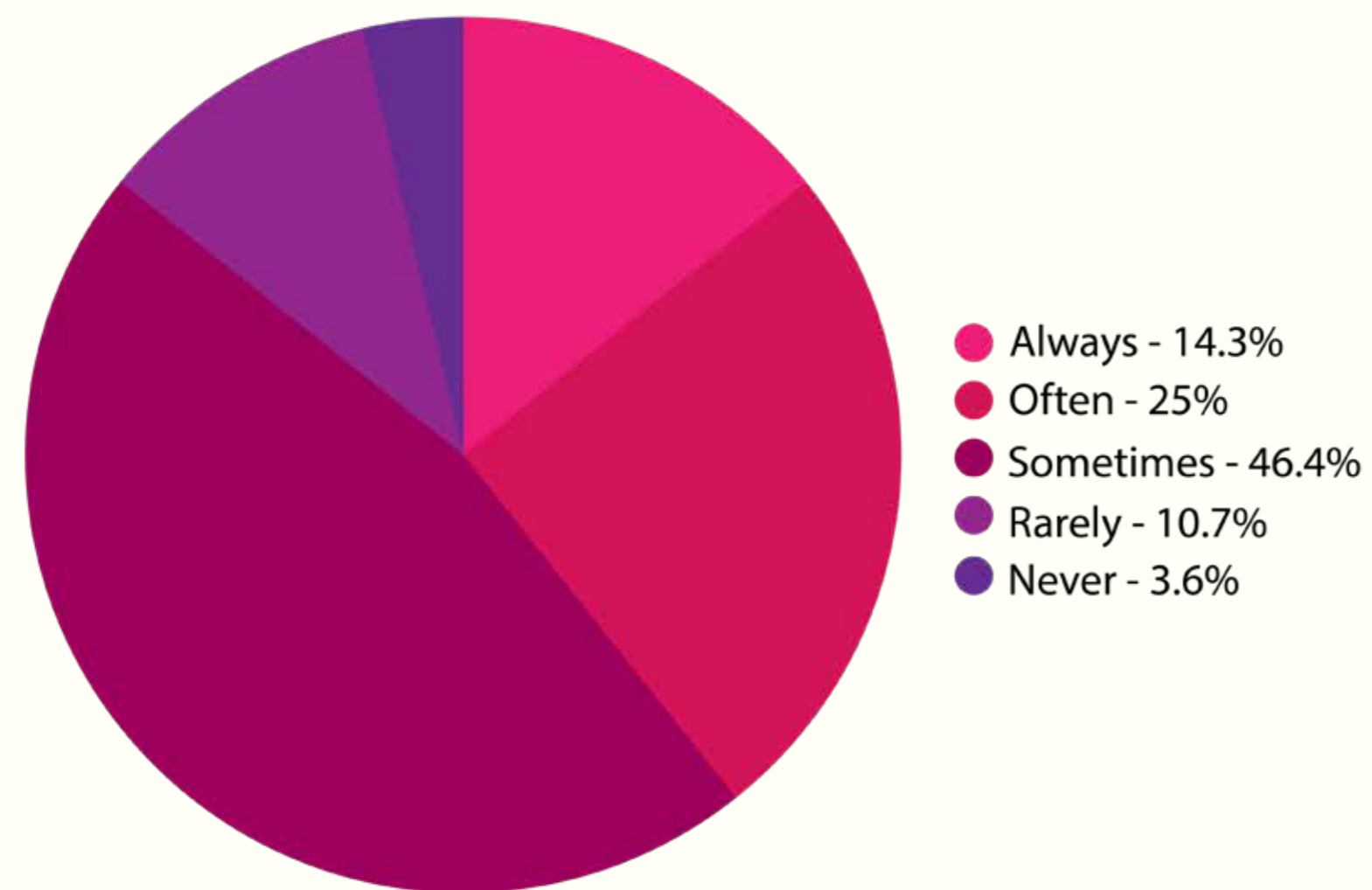
Two surveys were sent out to gather data on group dynamics. With a total of 156 responses, the data collected helped inform future research plans.



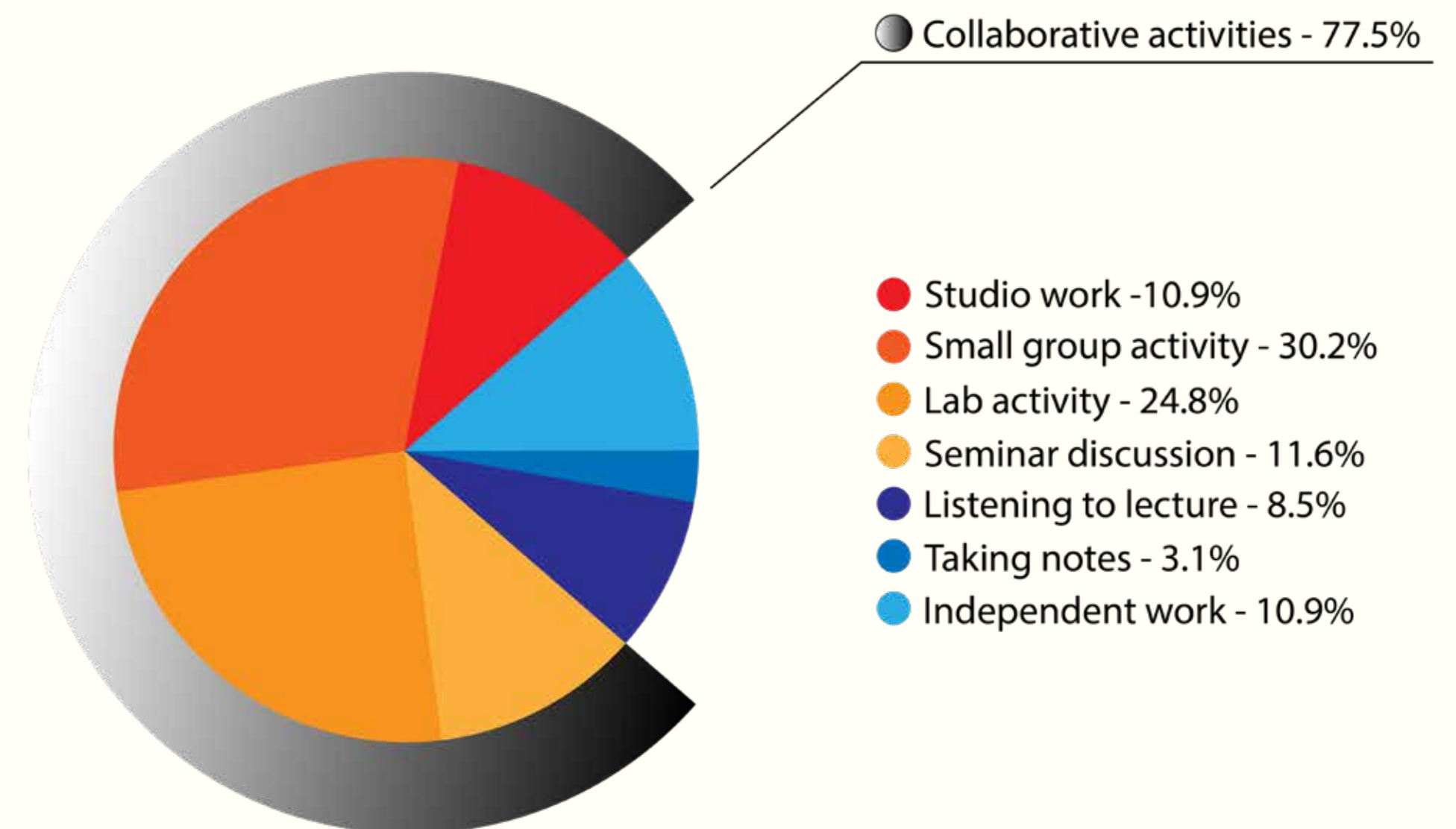
How comfortable would you be exploring new technologies such as Virtual Reality or Augmented Reality?



How often is distraction a roadblock for you to complete complex projects?



Remember a class activity where you felt very engaged. What activity were you doing?



Research Phase I

A primary research plan was created and a series of co-design activities (take-home work, provotypes, conversations, and collective visioning) were completed with OSU design and architecture students. Additional versions of the take-home activities were also created for the communities directly involved with Dominion Middle School, but were unsuccessful in getting their response.



DESIS Lab Take-home
Johnson 2643 | Stefanski 24 | Stozinsky 3

QUESTIONNAIRE
After watching the video of the HYVE-3D, list three ways you imagine yourself using the HYVE.

Please fill out the following:

1. _____
2. _____
3. _____

SKETCHING ACTIVITY
Please sketch according to the prompt: What should collaboration feel like?

RESPONSE
Please describe how you would create a lesson plan involving the HYVE-3D.

SKETCHING AREA

RESPONSE
Please create your ideal maker's space within this floorplan:

DESIS Lab Primary Research Plan

Mychaljo Johnson • AU 2022 • DESIGN 5101 & 5200

INTRODUCTION

This document is a step-by-step outline of the research methods planned to be utilized in the preliminary phase of a to-be senior thesis. The document includes:

- Preliminary research
 - primary and secondary
- Participatory design methods and experiments
 - questionnaires, surveys, and take-home work
 - first-hand user observations
 - interviews and conversations
 - collective visioning
 - the dollhouse exercise
 - small and large scale space mapping
- Anticipated deliverables
- A timeline of events

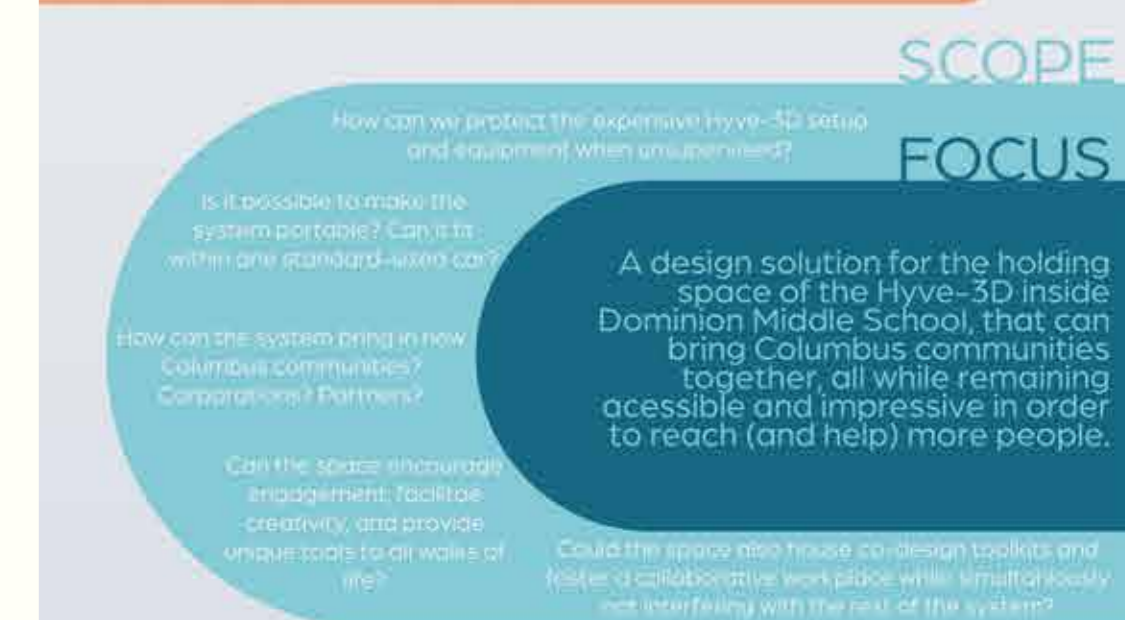
TOPIC

The plan aims to gain a deeper understanding of the involved stakeholders in creating a design-oriented space centered around an immersive sketching tool, the Hyve-3D. Located inside Dominion Middle School, the project aims to involve a diverse set of communities from around Columbus.

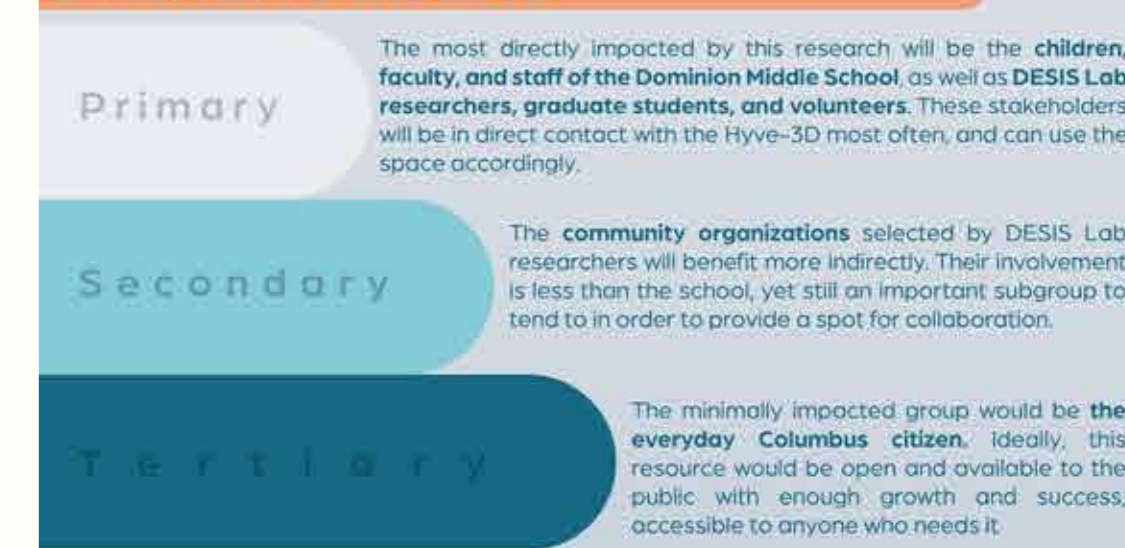
GOALS

- Discover how best to design a space that will encourage people to engage with the space in a beneficial way.
- Create an accessible, enchanting, and safe space around the Hyve-3D in Dominion Middle School to be used by various communities around the Columbus area as a place of collaboration, exhibition, and gathering.
- Keep the budget under \$2,500.

SCOPE & FOCUS



STAKEHOLDERS



RESEARCH METHODS



Research Phase I

The results of the activities illuminated many pain points within the Hyve-3D system as well as minor improvements and major suggestions to help streamline the experience.

With this knowledge, a C-K map was constructed to segue into the second phase of research.

DESIGN GOALS

- create division of space to facilitate HYVE use, as well as a variable space
- high control from large windows
- installed in Dominion room 109
- cannot damage site in any way
- furnish the room effectively and accessibly for young and older audiences
- inspire use for community members

ROUGH IDEAS

- a room-dividing system that can be rearranged by children and adults
- individual work-pods or space-pods
- stretchy-to-stiff curtain/wall systems
- filling walls/plastic sails (on wheels?)
- moveable rooms and spaces

SOLUTIONS

- dividing space while remaining free and open
- have a variety of open/clear space and private spaces
- storage in an empty, open room
- design/presentation/storage spaces

REQUIREMENTS

- Sound
- OSHA noise/work ratio
- sound proof reduction?
- amplification system?
- ergonomic
- materials weight
- ease of use/mobility
- SAFETY
- ADA compliance
- multi-sensory data visualization
- soft
- aesthetics
- how to think space
- light how will that work?
- distribution of vision/visibility

DESIS Lab Take-home

Johnson,7643 Stefanski,24 Strazinsky,3

QUESTIONNAIRE

Please fill out the following:

Architecture
Studio Art
20 Junior
Penelope Hartley, 266

- To display renders of a design
- To sketch out a design on a site
- to design an interior

SKETCHING ACTIVITY

Please sketch according to the prompt: What should collaboration feel like?

RESPONSE

Please create your ideal maker's space within this floorplan:

HYVE 3D™
The HYVE-3D is installed here. It cannot be moved.

mini student lounge

Partition

Pre-sentation space by on wall

for use by several classes with storage underneath + lockers

Modular, small round chairs for student use, or presentation

Below window Open supply storage/ printer on top

High storage + resource cabinet

standing / stool collaboration tables

Quiet Labs

Open

HYVE

Hyve Side

Dark lounge

Comfortable

Light & Bright

Collaborative

Hands-on

Modern

Bright

collective

design research

theory-driven

innovation

technology

Note Taking

collaboration

Sleeping

Lounging

Inspiri-g

Computer area

Mixed use tables

Phase II

Phase III

Post-Research

After research is complete and presented, feedback will be incorporated into a plan to move forward with the creation of my thesis.

THE PLAN

Pre-Research	Phase I	Phase II	Phase III
In addition to supplementary secondary research being collected, contact will be established with Dominion Middle School and participants (adults and children) will be recruited as consenting volunteers from the school, Columbus communities, and my personal life. Willing participants will receive a survey and a take-home packet with small responsibilities to get them into the correct head space for Phase I.	Participants will be asked to fill out a survey and required to complete a take-home packet that will be returned before the start of Phase II. This will be on their own time, virtually.	Observations of participants blindly using the Hyve-3D will be conducted in-person. Using the data collected from Phase I, a series of conversations and interviews will be conducted with the participants post-Hyve-3D exposure. The group will then collectively vision together.	Participant children enrolled at Dominion Middle School will be given a dollhouse toolkit, and their solutions recorded. Adult participants will be given an option of a large or small scale space mapping, depending on their resources. Responses from Phase I, Phase II, and Phase III will then be organized, analyzed, and compiled into a Research Dossier.
The information gathered in this phase will inform much of the next.		This phase will be heavily documented and facilitated as to not miss important information.	

SCHEDULE

Week 1	Week 2	Week 3	Week 4
<ul style="list-style-type: none"> Introduction to class Begin Research Dossier Begin Pre-Research 	<ul style="list-style-type: none"> Complete Research Dossier Begin Phase I Test methods Adjust methods Adjust methods 	<ul style="list-style-type: none"> Begin Phase II Test methods Adjust methods Continue Phase I 	<ul style="list-style-type: none"> Begin Phase III Test methods Adjust methods Continue Phase II Continue Phase I Create Pecha Kucha Presentation
<ul style="list-style-type: none"> Conclude Phase II Continue Phase III Present Pecha Kucha Presentation Organize data 	<ul style="list-style-type: none"> Conclude Phase III Analyze data Visualize data Create Research Presentation 	<ul style="list-style-type: none"> Present Research Presentation Incorporate feedback 	

ANTICIPATED DELIVERABLES

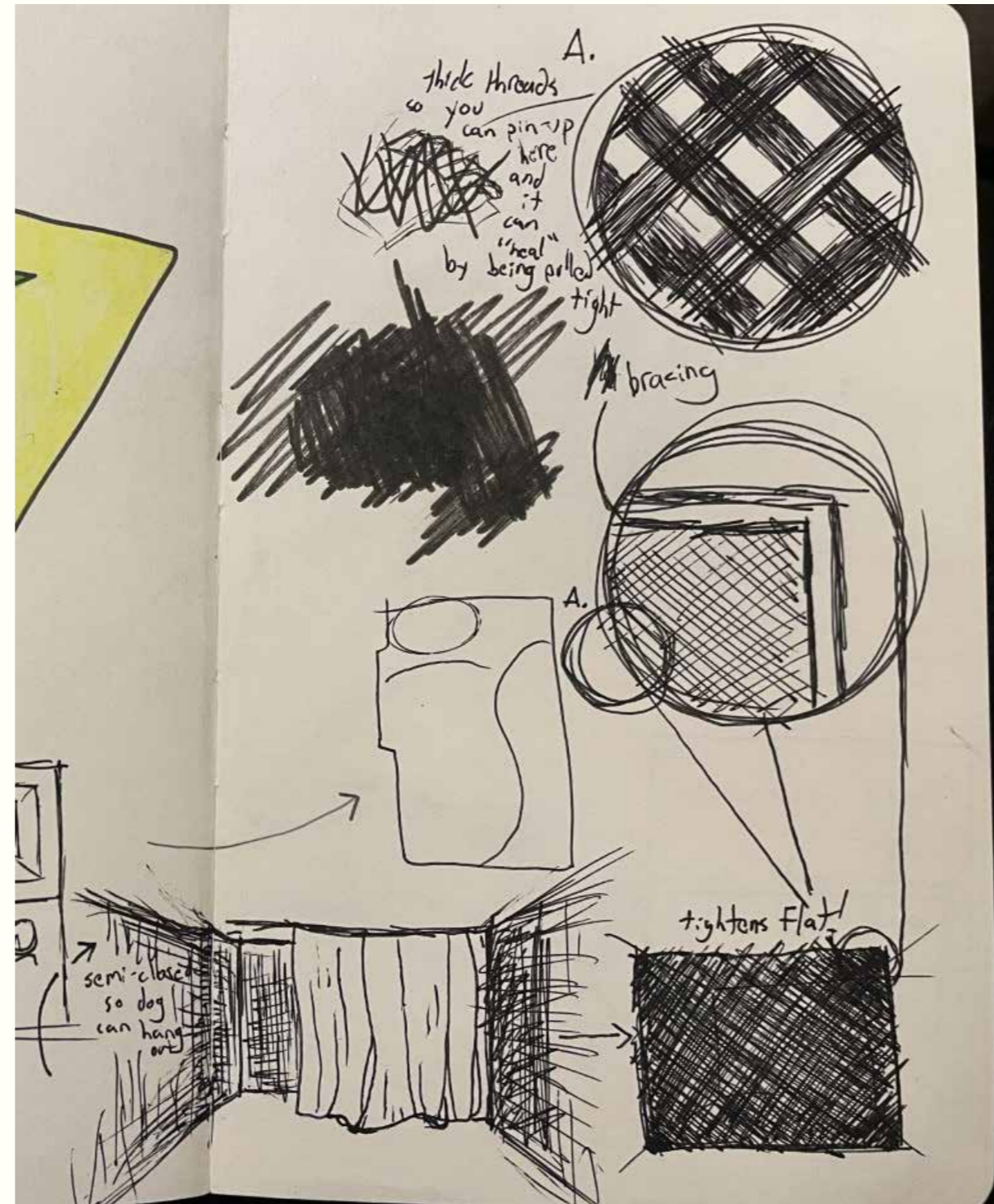
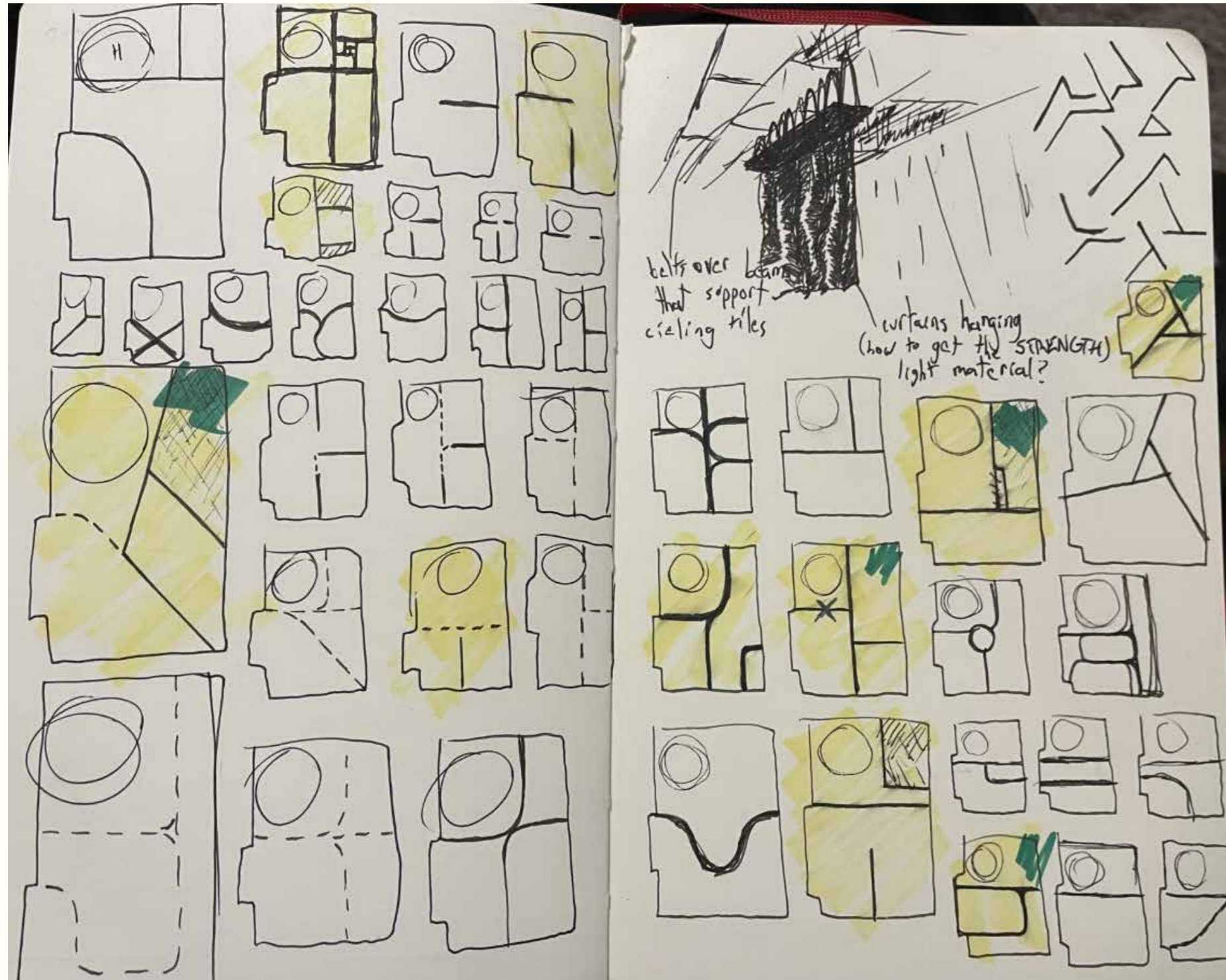
- Research Presentation
- detailed account of plan
- Pre-Research
- secondary research
- participant recruitment
- Phase I
- data collected and organized
- Phase II
- documentation on methods
- data organized and analyzed
- Phase III
- deeper analysis
- visualization
- Post-Research
- incorporate feedback
- start working on thesis
- present
- Budget
- cost of materials
- cost of software

CONCLUSION

This project has co-design deeply, integrated into both the problem and the solution. To create a collaborative space that brings people in while balancing the limited capacity of the Hyve-3D is a challenge, not made any easier by inclusions of finer details like flashiness, a strong visual brand language, and above-and-beyond accessibility. Over the course of the next seven weeks as this research unfolds, working with the client is of utmost importance, not only to access the space and get our hands on the technology, but to deliver an exemplary result.

Research

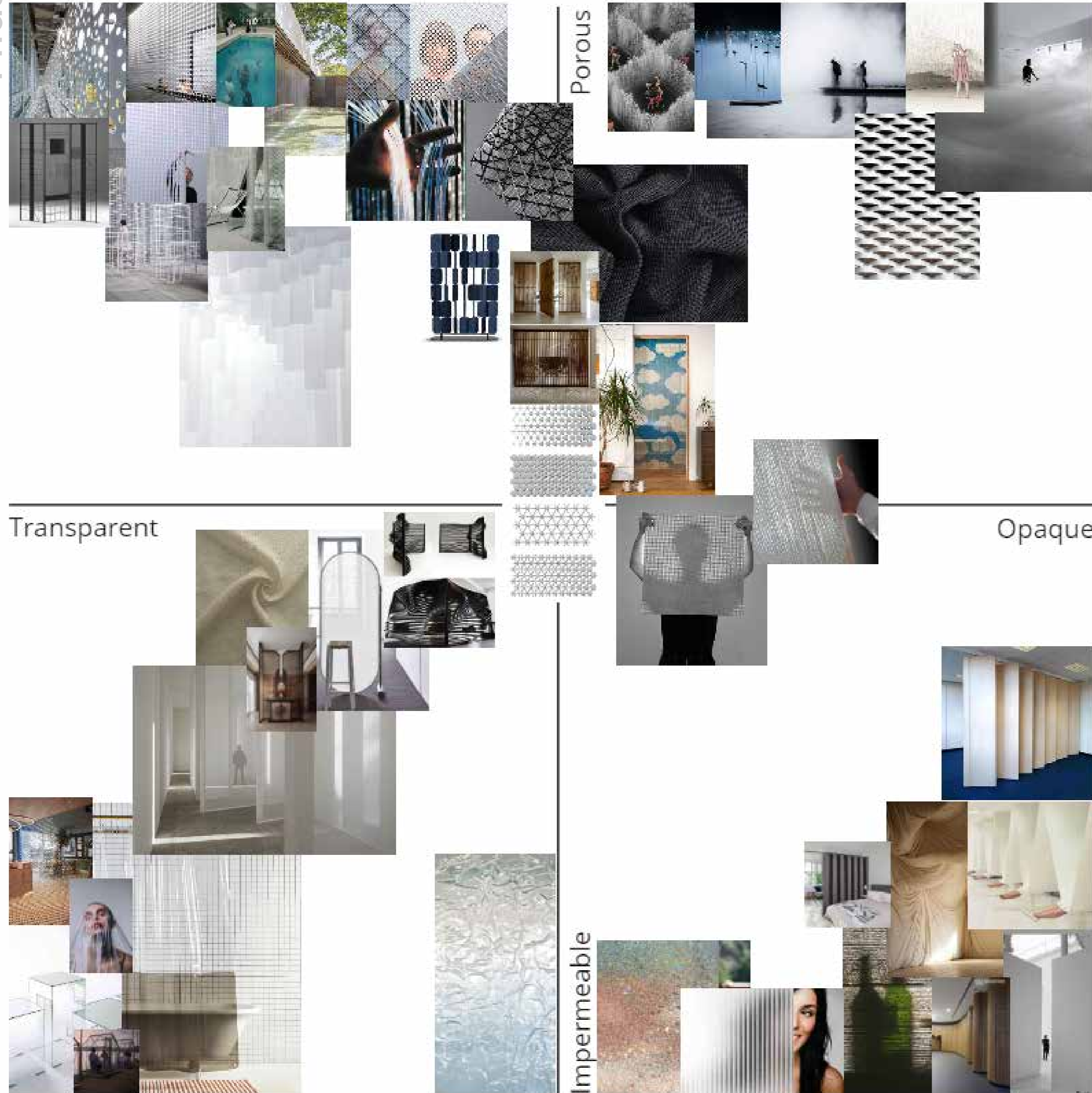
Phase II



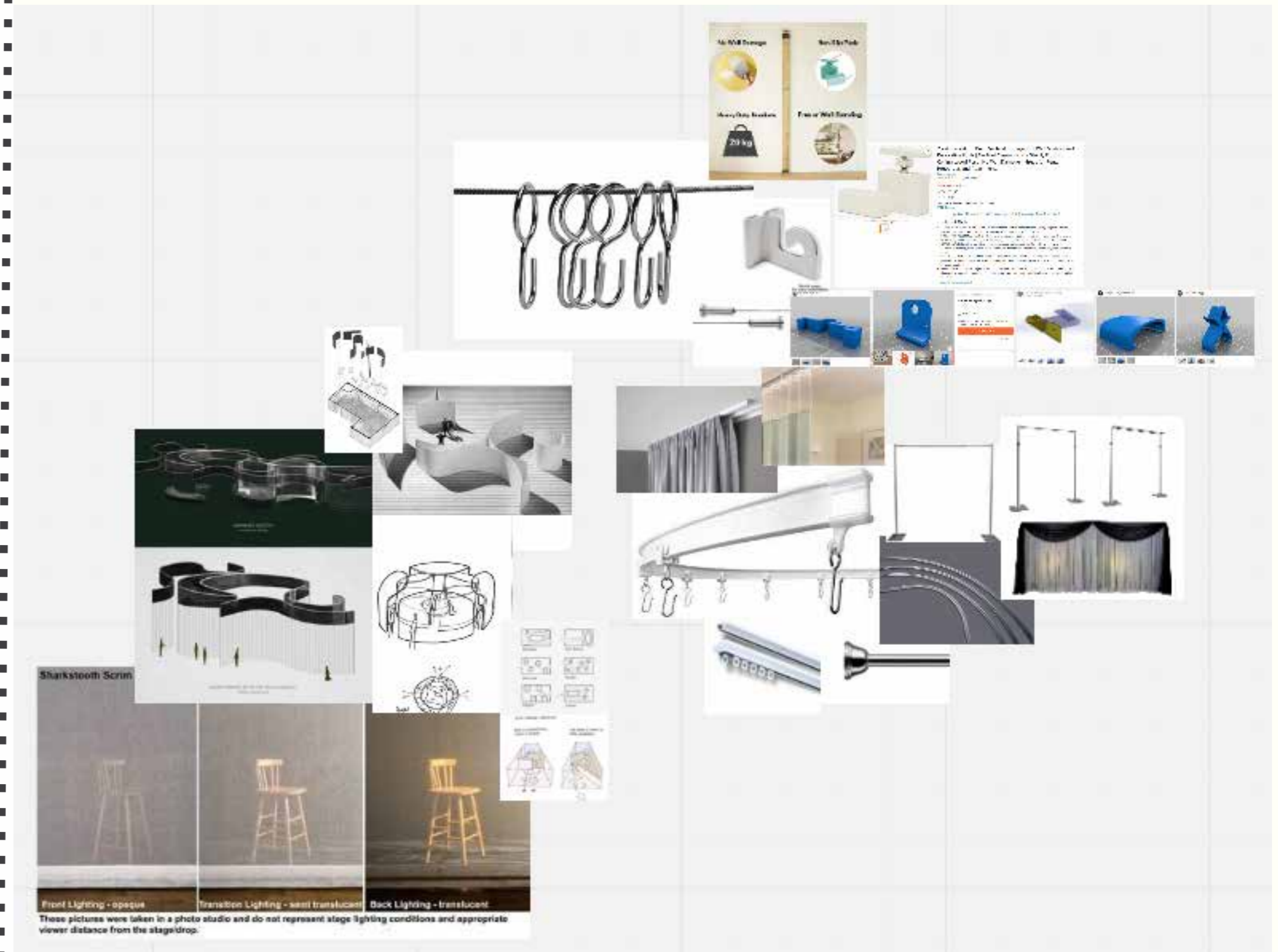
Iteration and scale models illuminated the various possibilities of room layouts. Instead of picking a permanent solution, the client opted for more freedom in setting up the space however they saw fit.



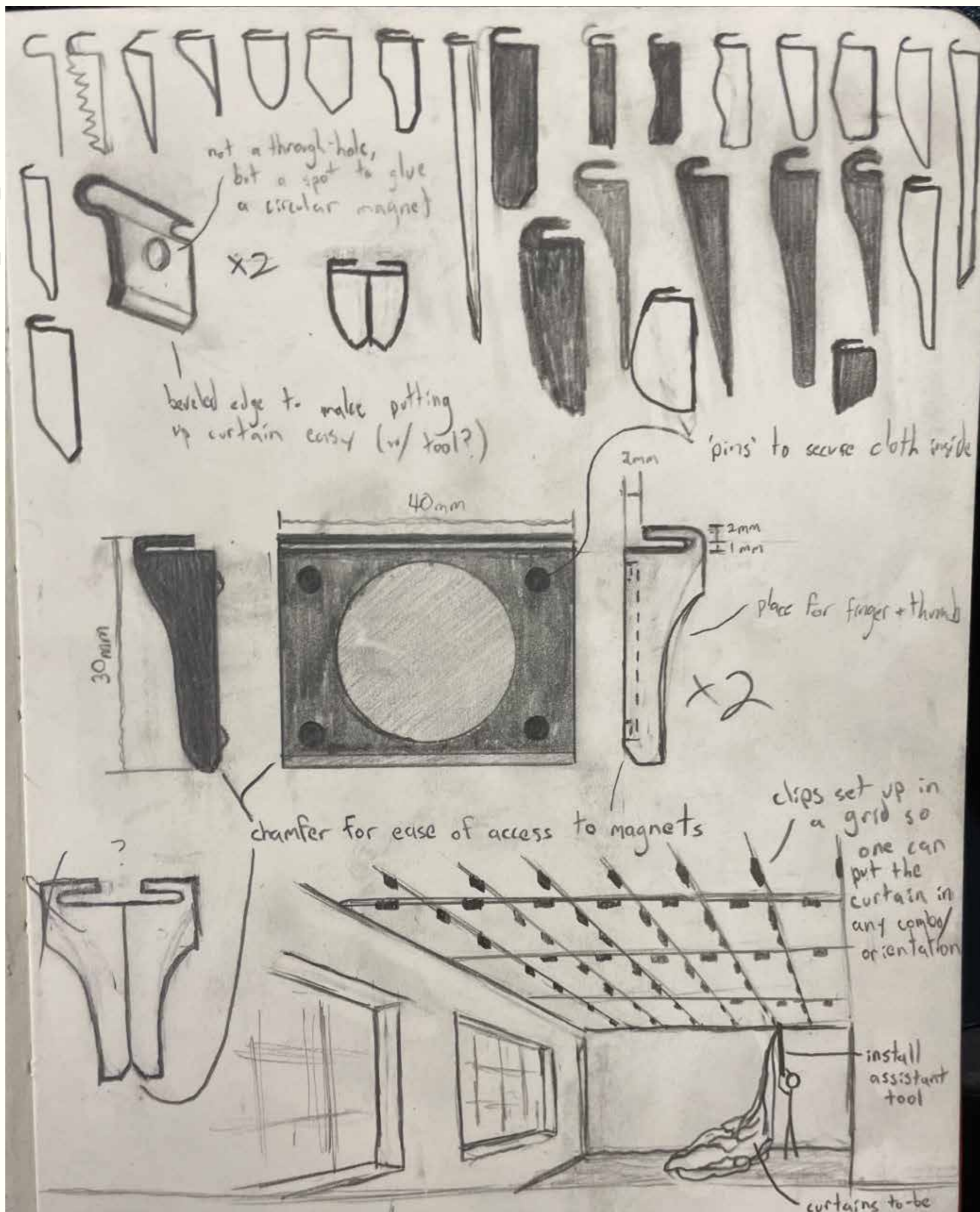
Research Phase II



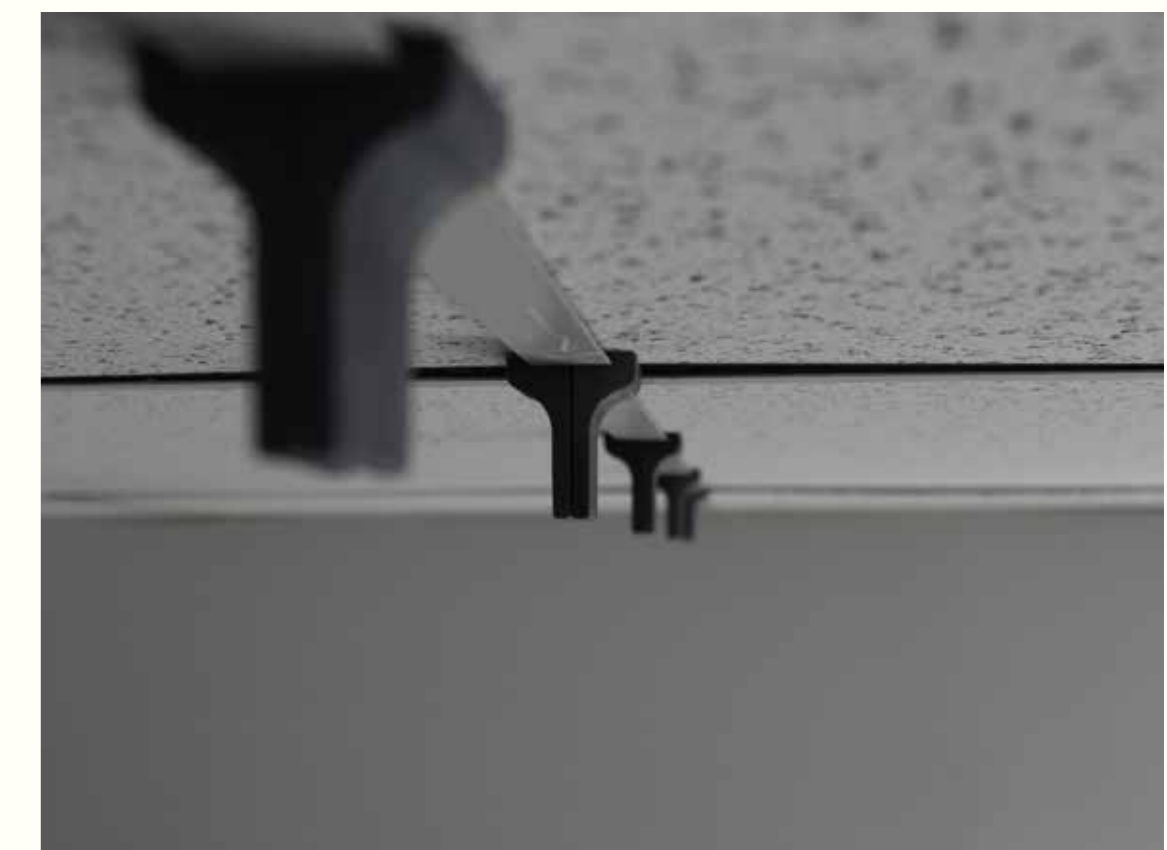
Explorations of materials and suspensions systems were taken into consideration before moving into conversational interviews with Brad Steinmetz and Chad Mahan, two design and entertainment tech faculty in the OSU Theatre Department.



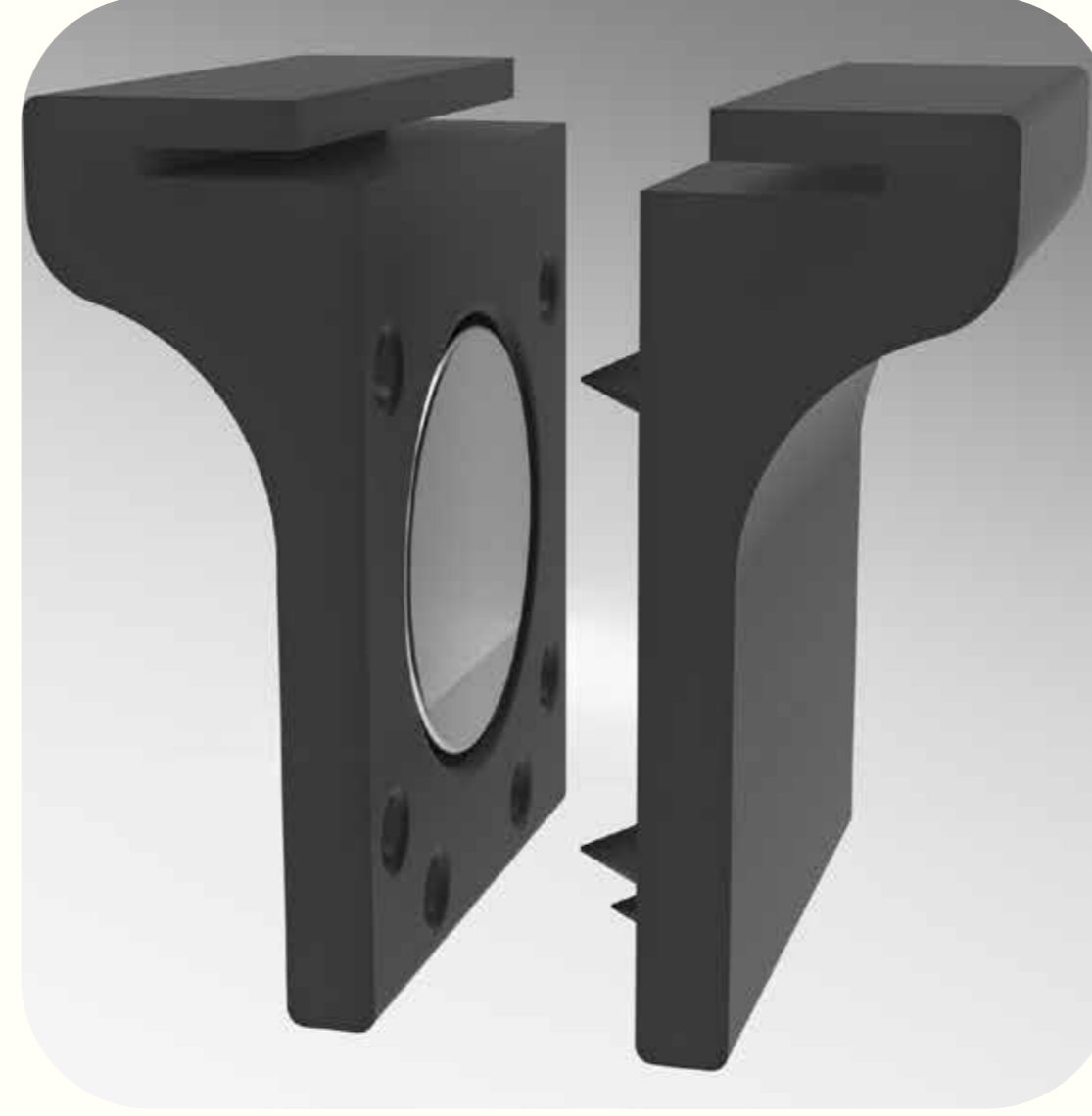
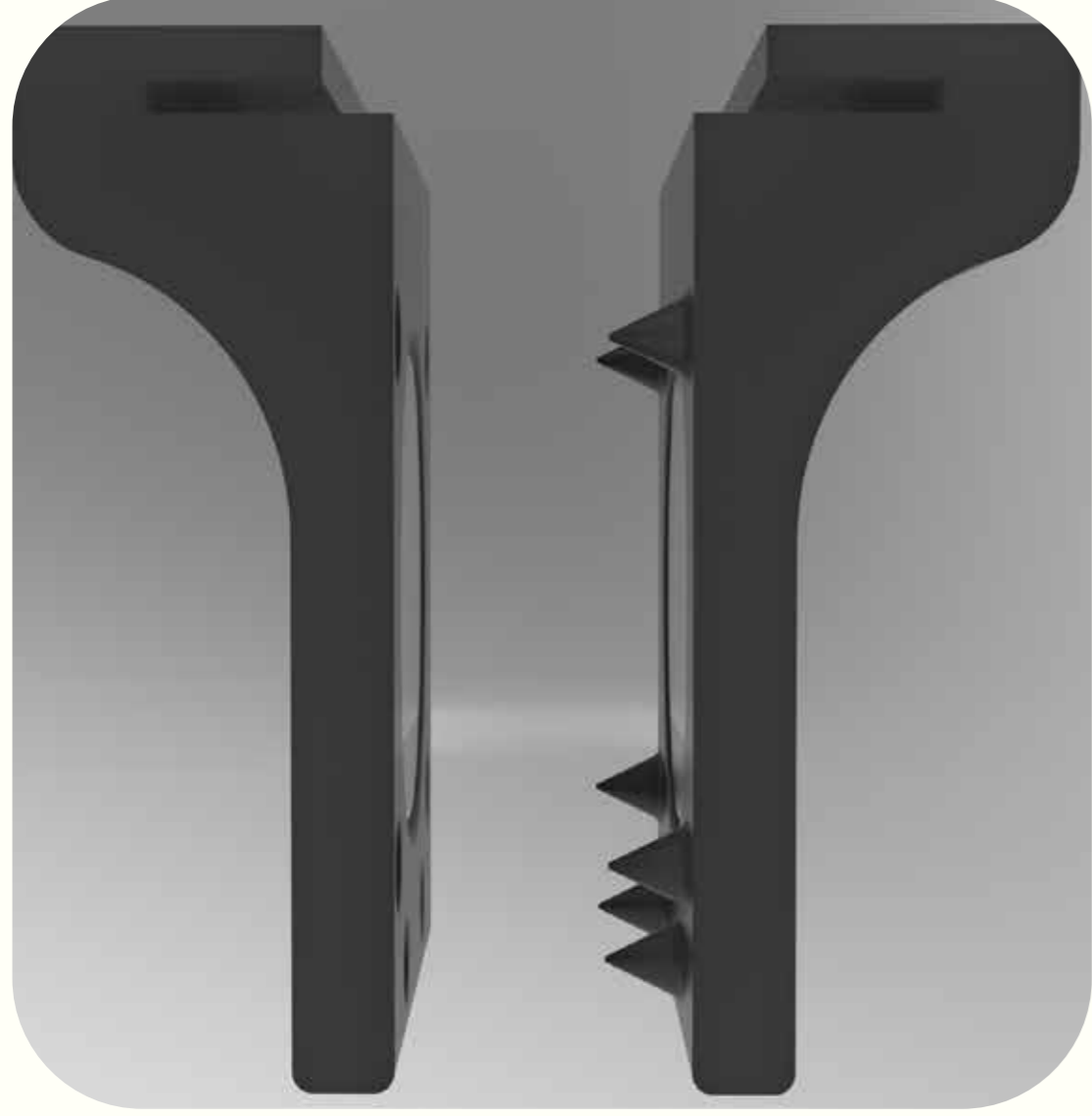
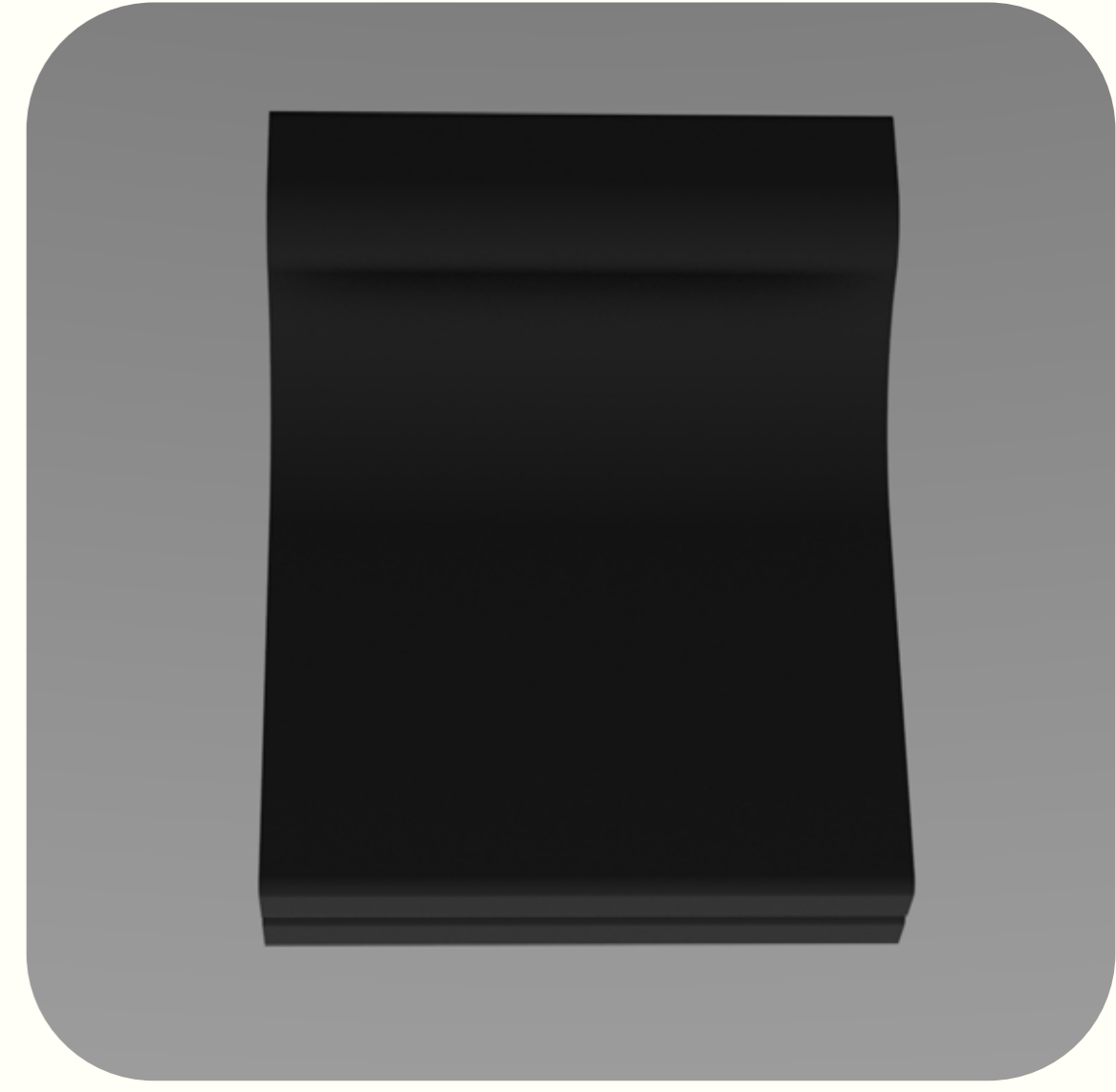
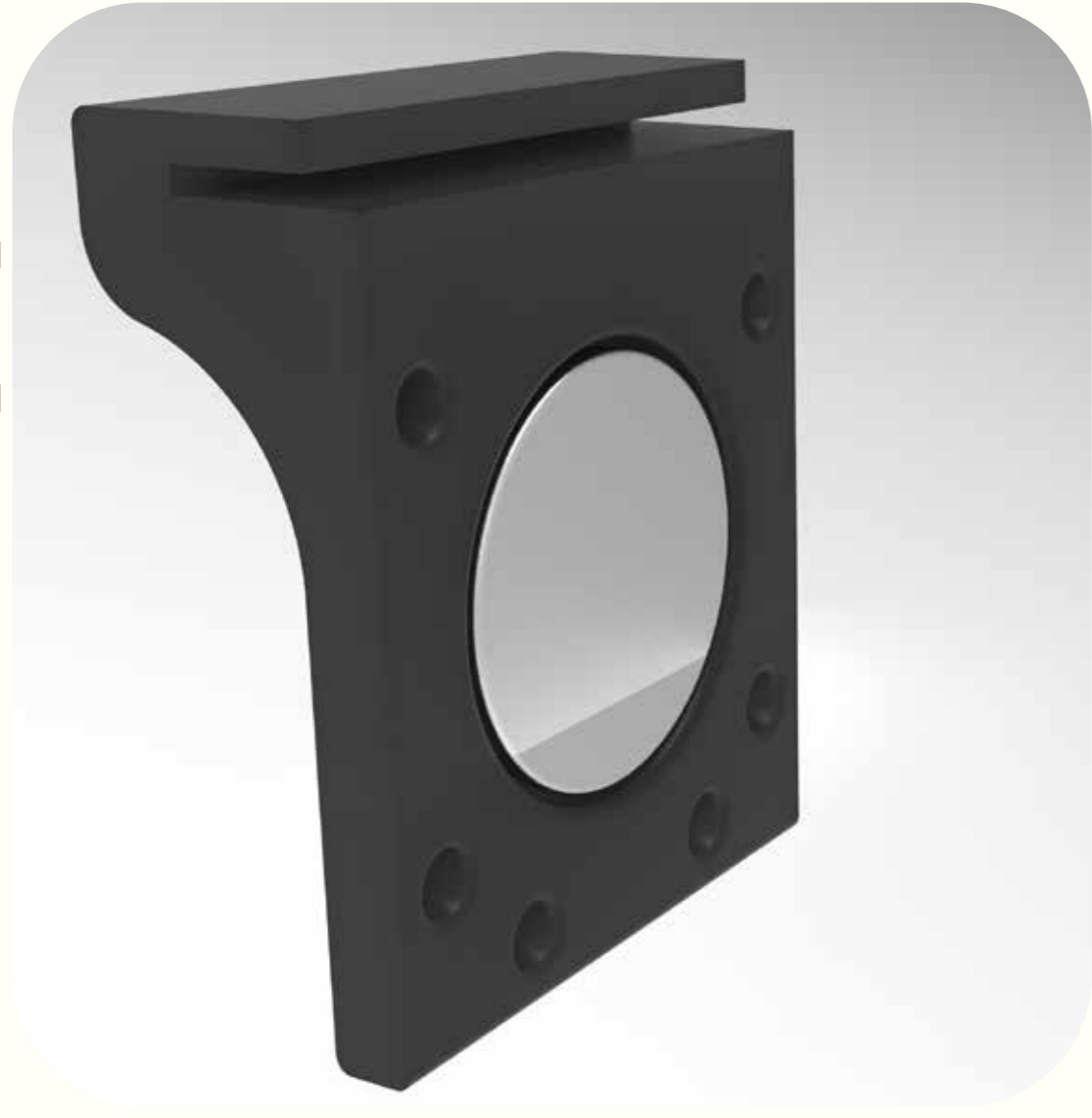
Prototypes

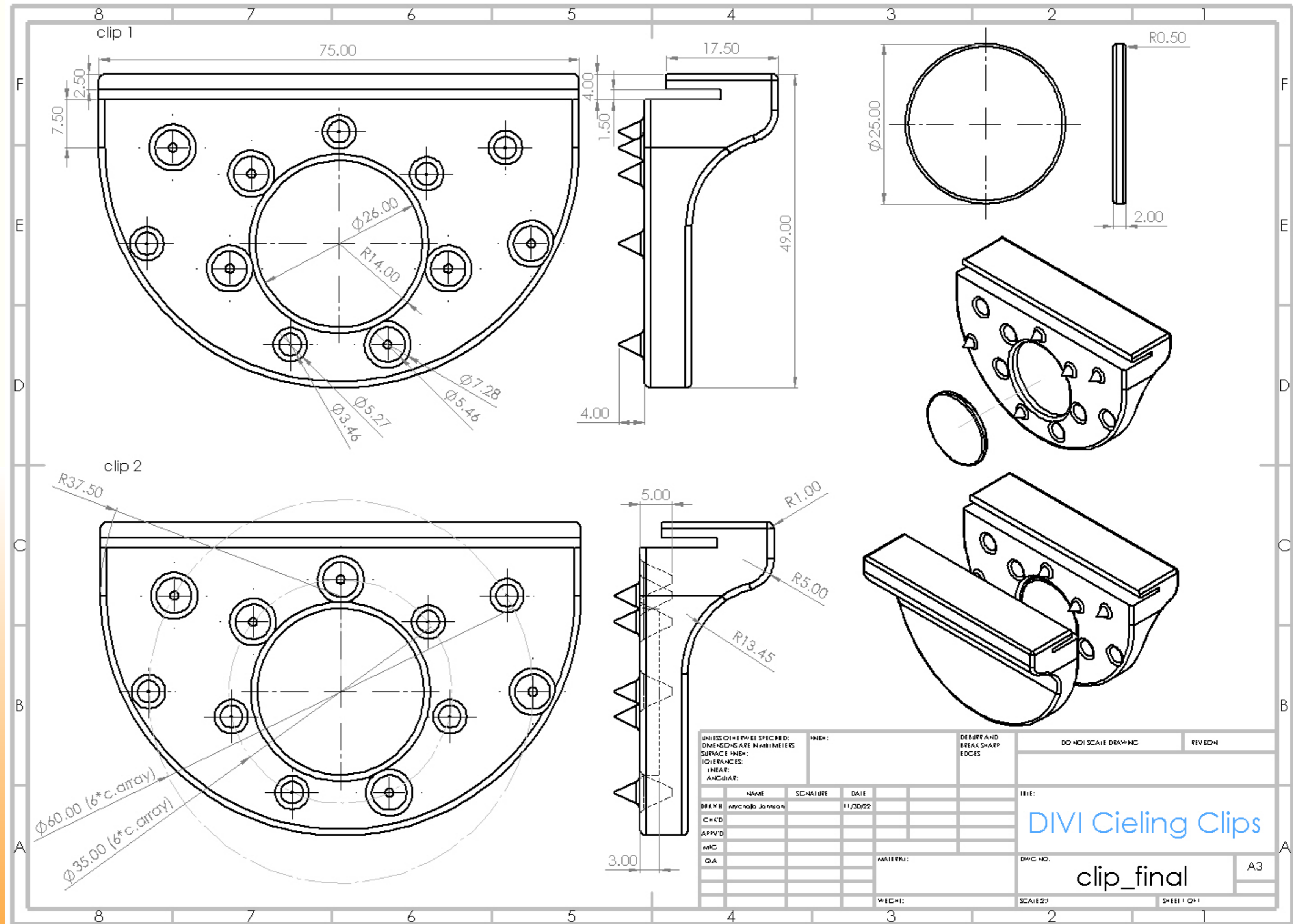
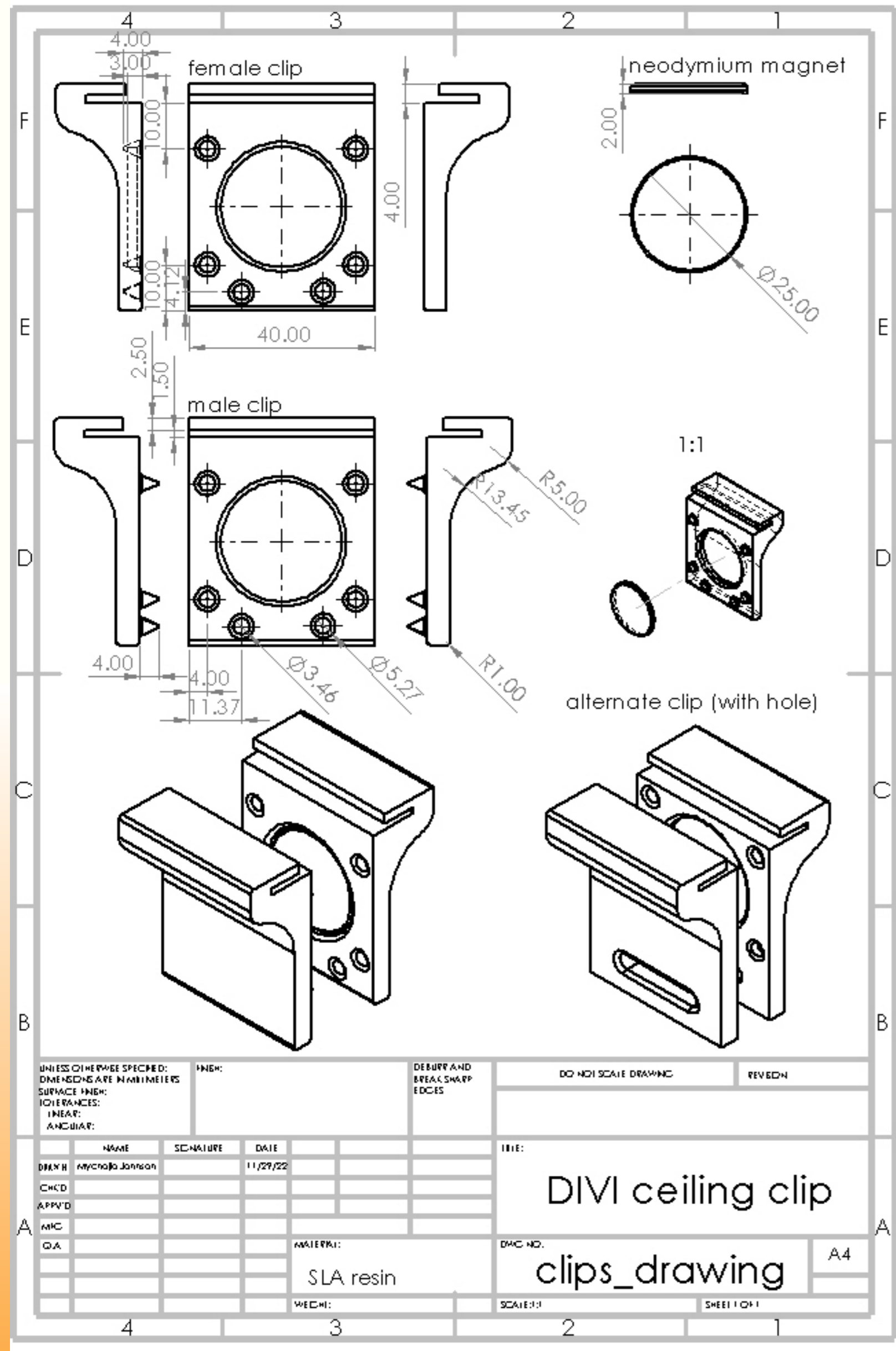


After meeting with the client and discussing research, DIVI began to take shape and early prototypes were 3D printed, tested in space, and improved upon until reaching a more finalized design.



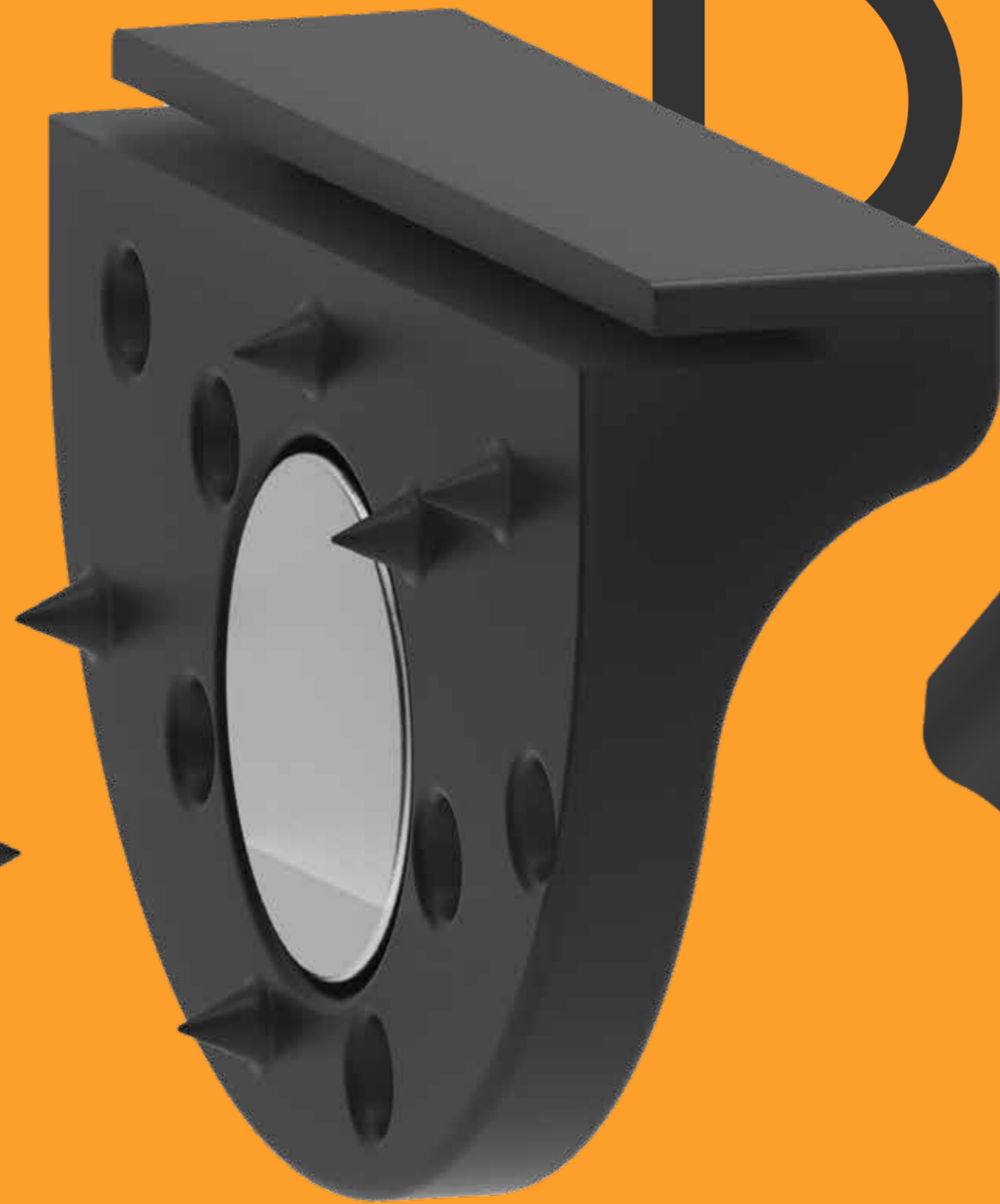
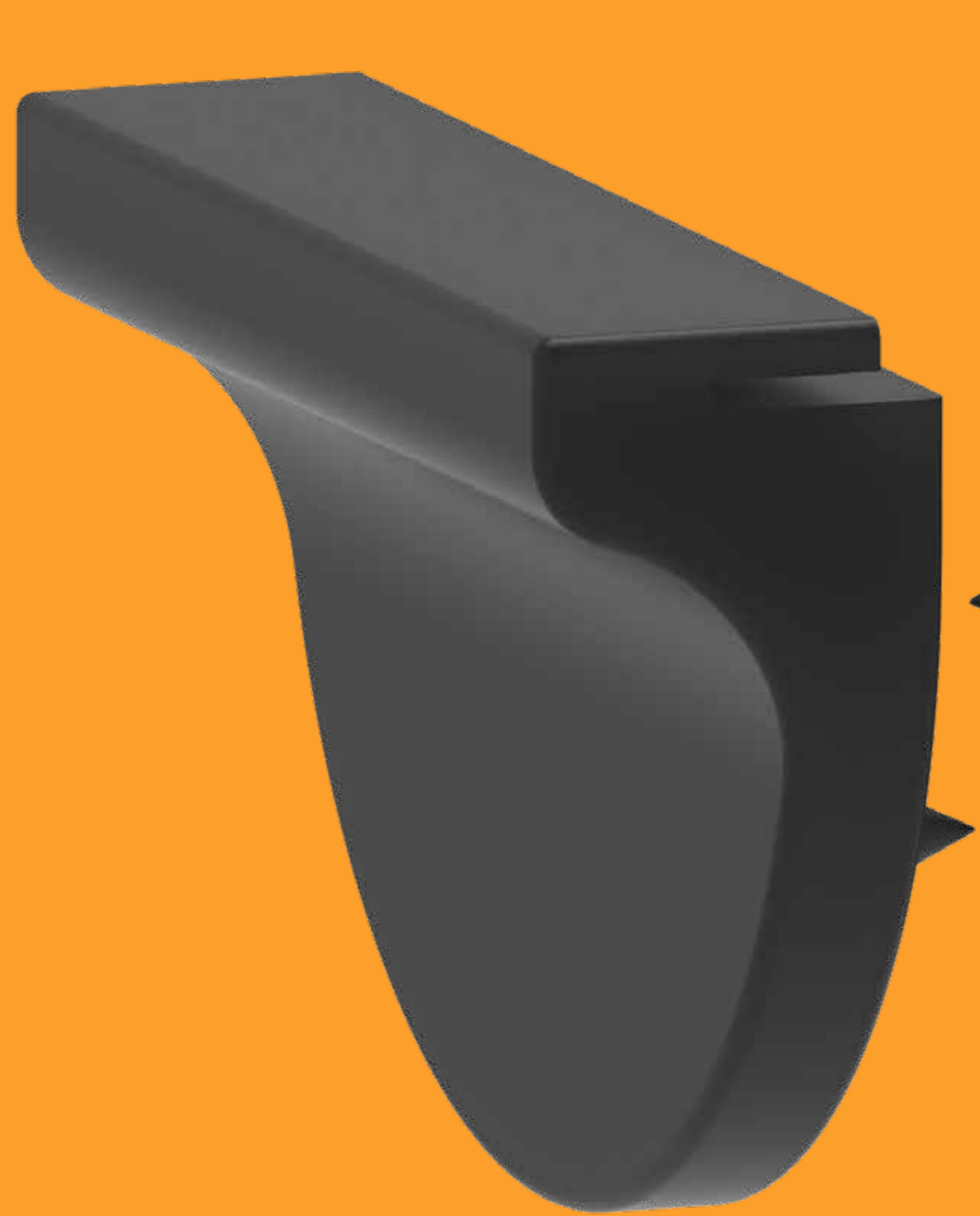
Prototypes





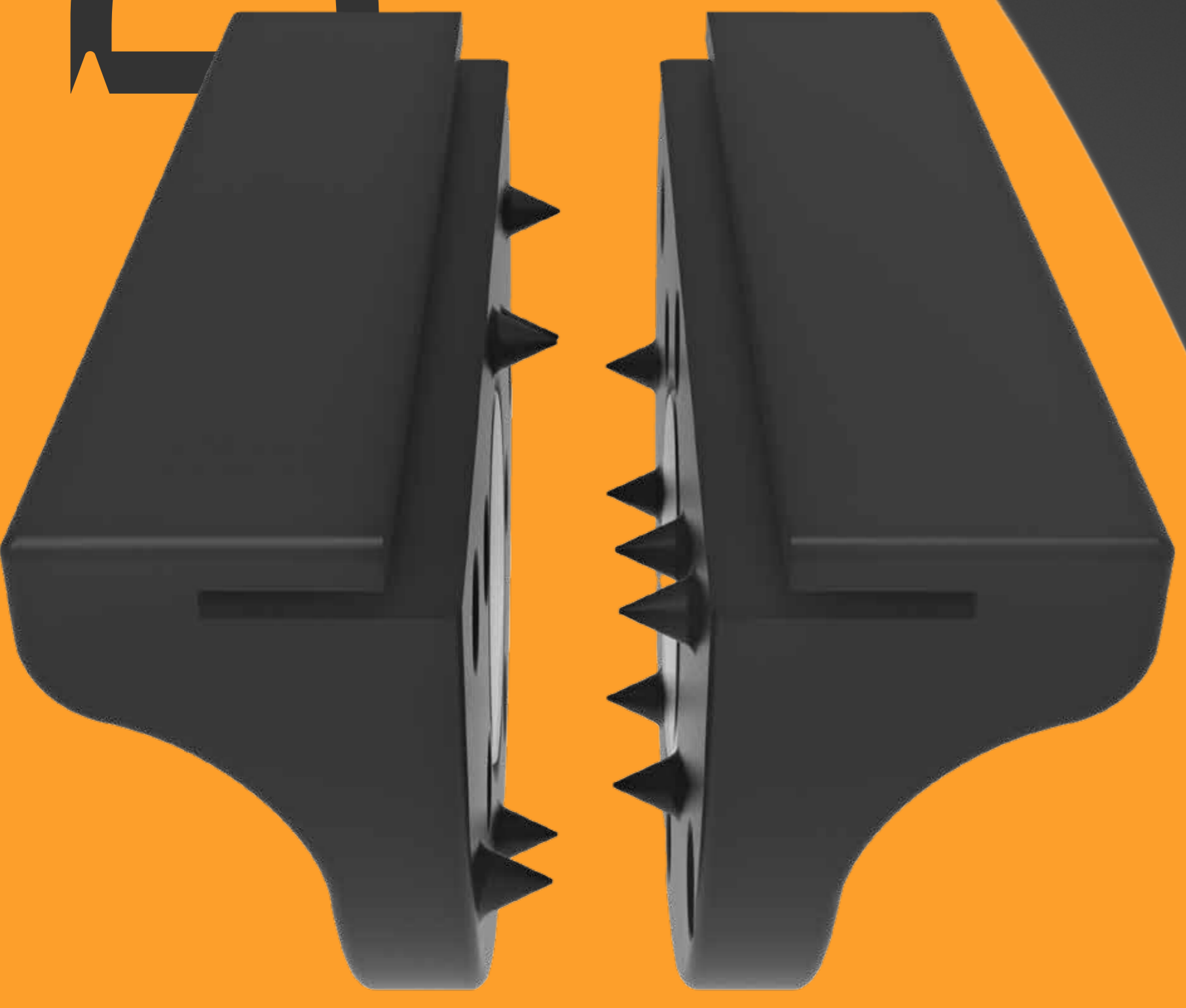


DIVI





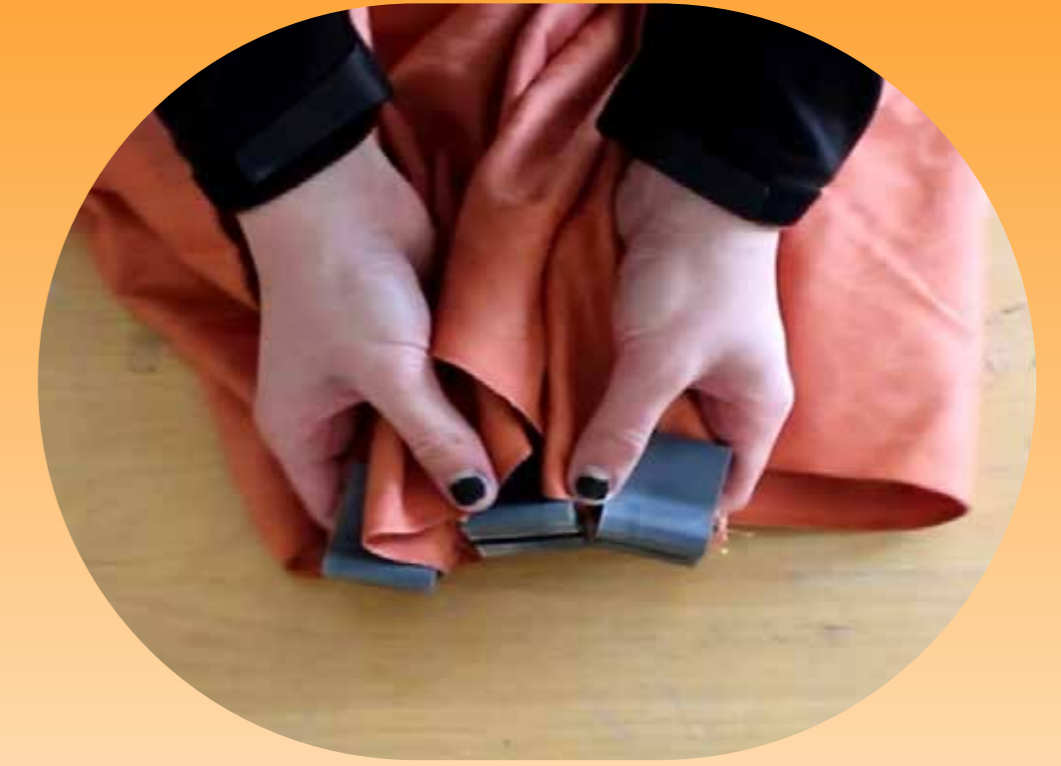
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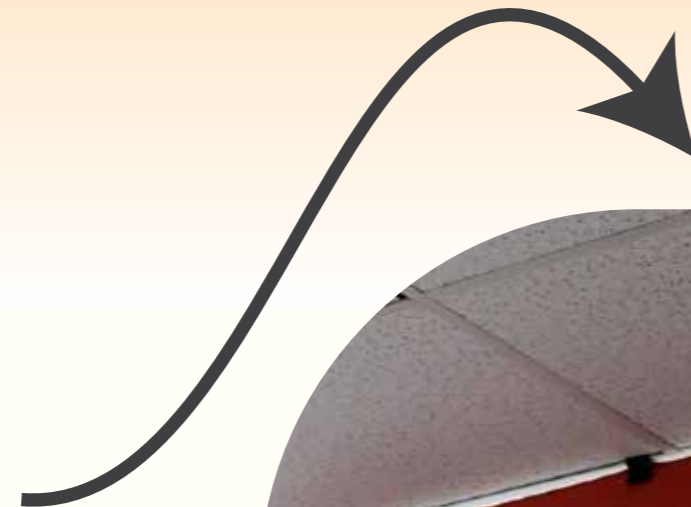
User Journey



clamp clips onto
desired material



install onto any drop ceiling



any material,
any weight
any space



curtains can be removed
and DIVI left installed
for easy and painless
set-up, tear-down, and
material switching

