JOSHUA DYCUS

FURNITURE / PRODUCT DESIGN

I create objects that are honest by design, succinct in use, and subtle in form.

2016

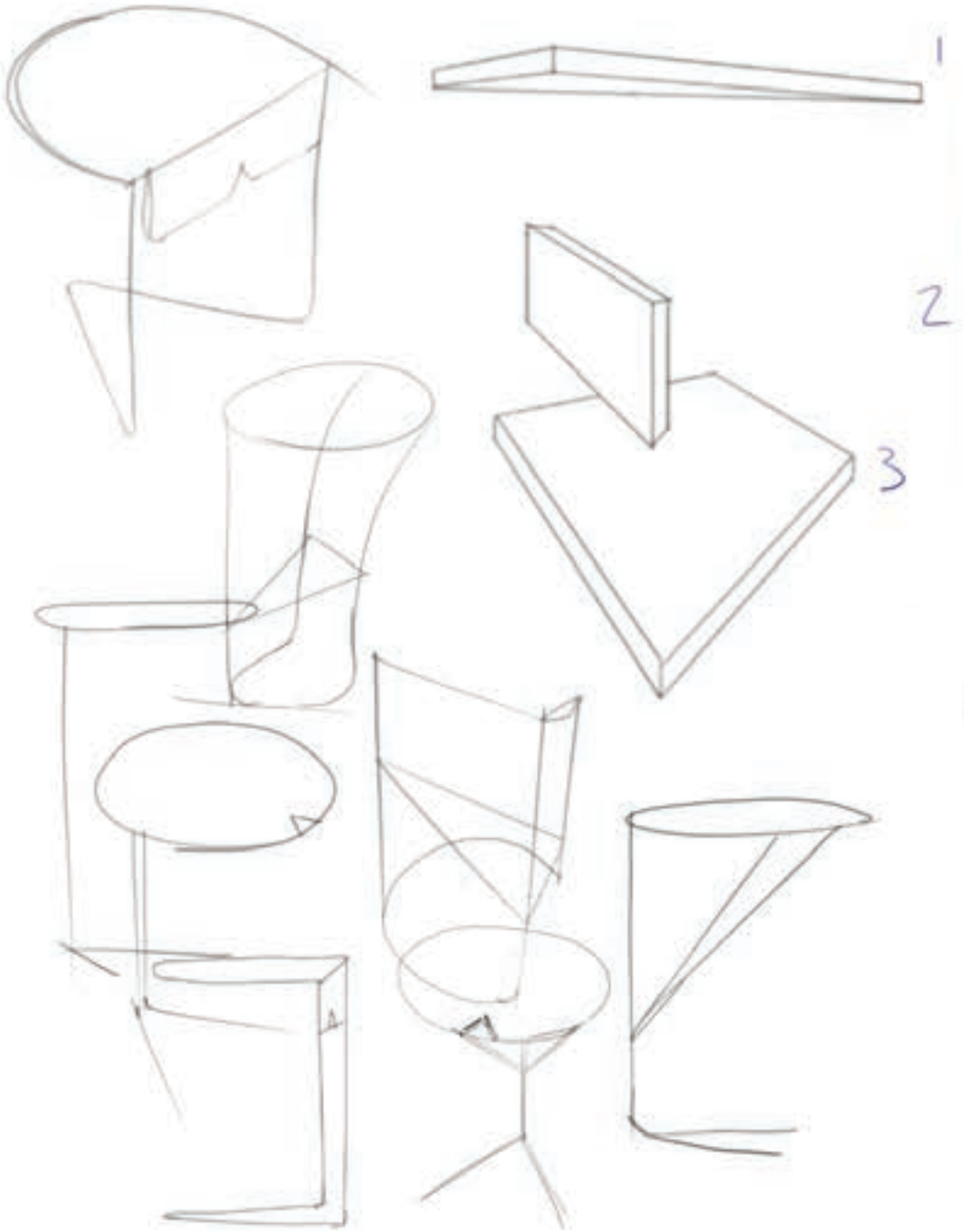
TRE

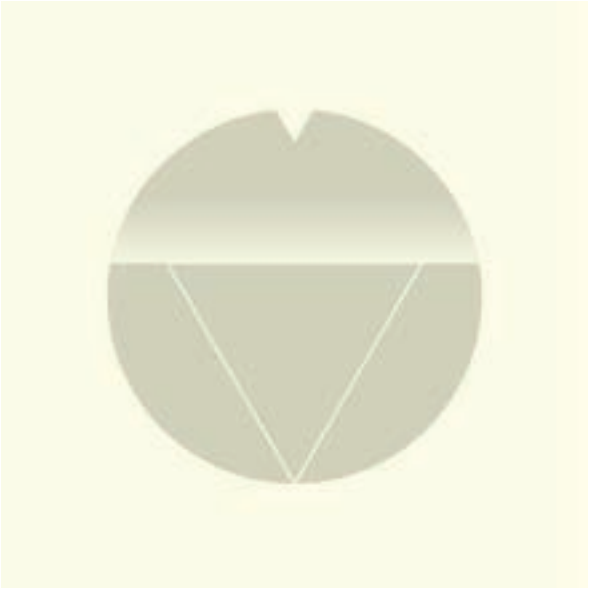
"How could graphics bound by two dimensions be interpreted in the form of a tangible object?"

I started my design process by developing a series of artworks that explored depth within a two dimensional context. This allowed my form language to grow organically throughout an exploration of shapes, colors, and graphical compositions.

Series 1

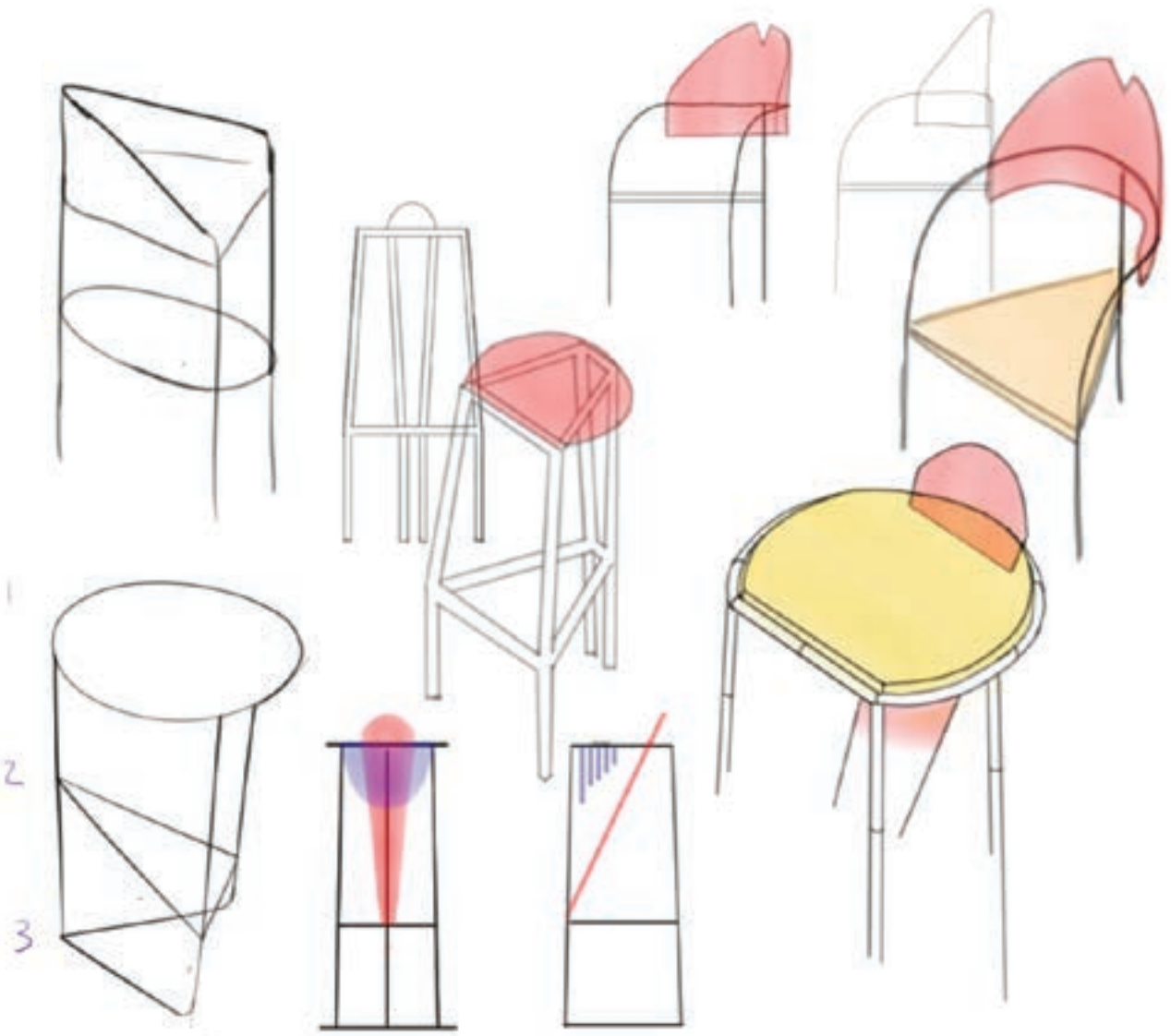
Series 2

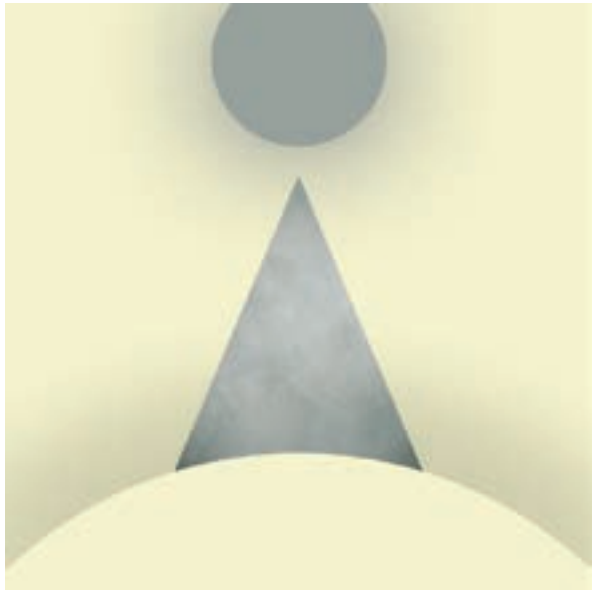




Series 3

Series 4





Series 5

Series 6

Bottom ⌀ 17.75 - Circumference : ~56

Length: 42.47 in

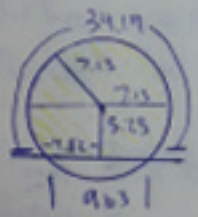
8.88 · 1.4 = 7.48

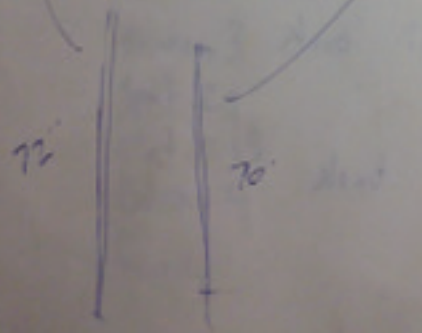
Top ⌀ 14.25 - Circumference : ~ 45

12

57

Length: 34.19





HARDY: MATL'S

5/8 or 1/2 ?

~60" ~45"

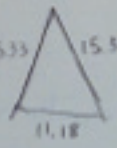
STEEL: TOPBASE: 14.26⌀ + 9.63 = ~ 24"

BASE: 17.70⌀ + 0 = ~ 18"

LEG 1+2: 30.05 x 2 : ~ 61"

REARLEG: 30.05 : ~ 31"

MIDSUPPORT:



: ~ 42"

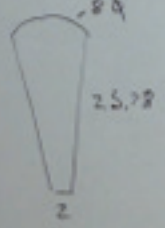
~180" (15")

WOOD: SEATPAN: 15" Square 1 - 5" x 6" 5/4 Ash ?

ACRYLIC: BLUE: SAME AS MID SUPPORT

12" x 20" sheet 1/4" thk

RED



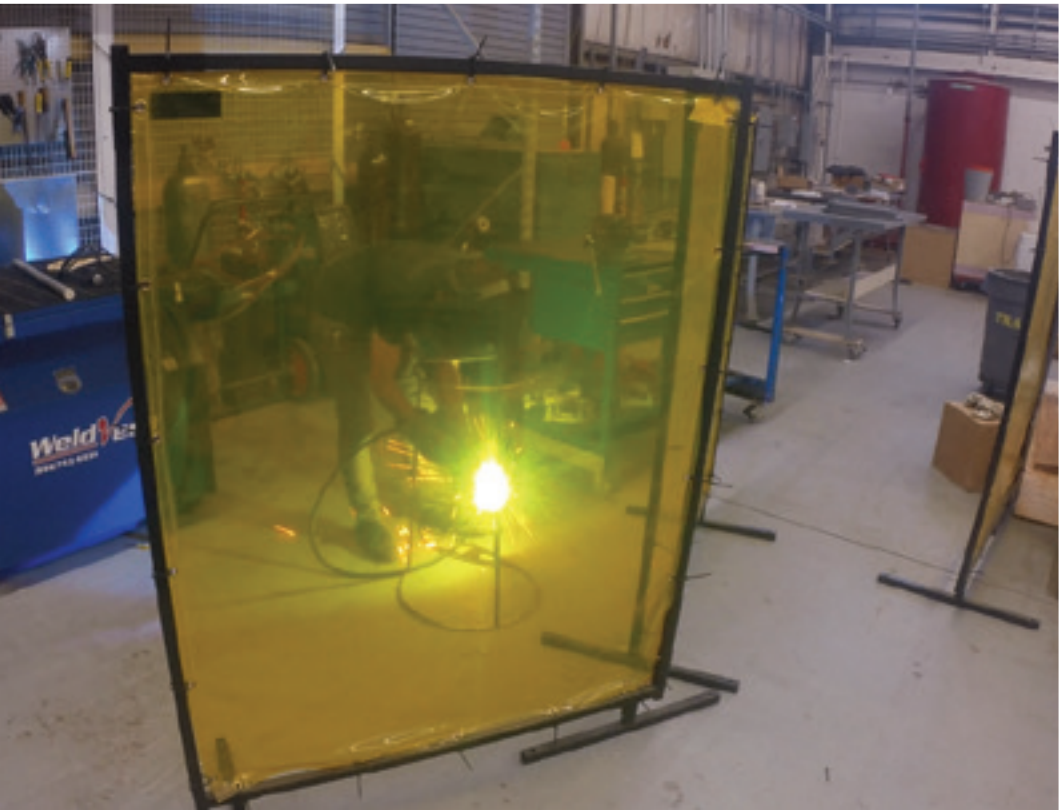
30" x 10" sheet 1/4 thk

Laird: Waiting for call back

Piedmont: Nope

Calsak: Waiting for call back

Air: Nope



TRE - Stool

Powder Coated Steel / White Ash

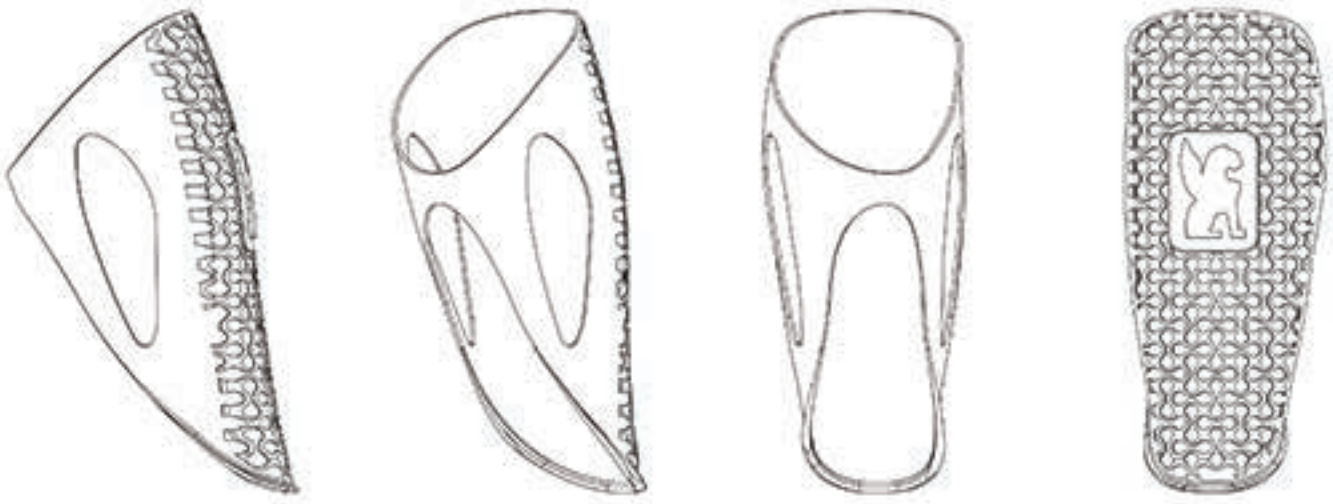
H 35" x W 15.5 x D 13.5" x Seat H 31"

2016

COBRETTI

"Design a product modeled directly from a 3D scan to perfectly fit the complex geometry of the human body."

Cobretti is a bespoke wearable cycling fender modeled directly from a 3D scan of someones leg. The scanning is done on-site at a bicycle shop, then manipulated using multiple CAD programs. The final product is a 3D printed sleeve that fits snuggly to the complex geometry of the the users lower leg.



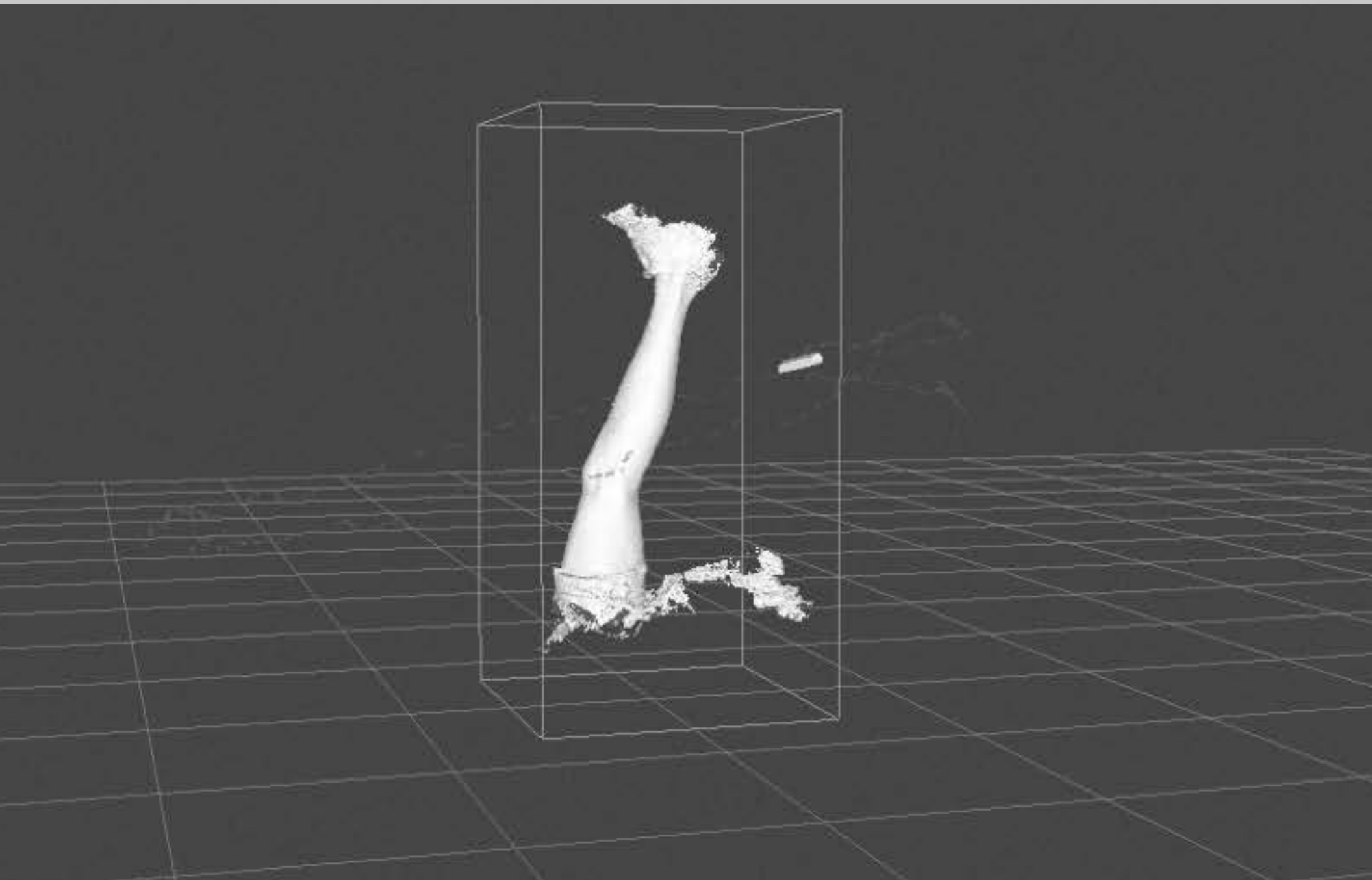
THIS IS A PORTABLE 3D SCANNER

(connected to an ipad)

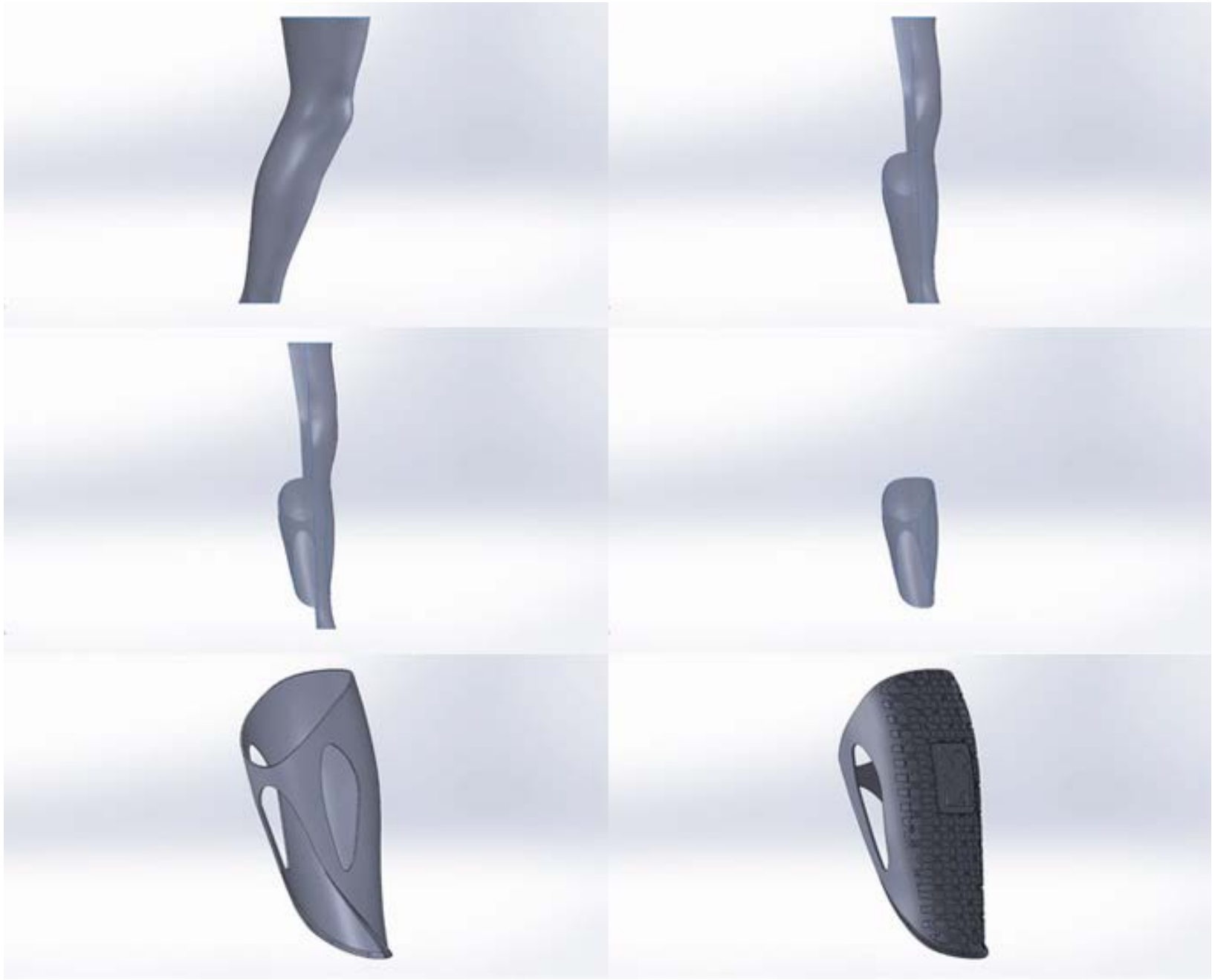
THIS IS THE BACKROOM OF A BIKE SHOP

(where I was able to quickly and easily scan a friends leg)

AND THIS IS RAW DATA FROM SAID SCAN.

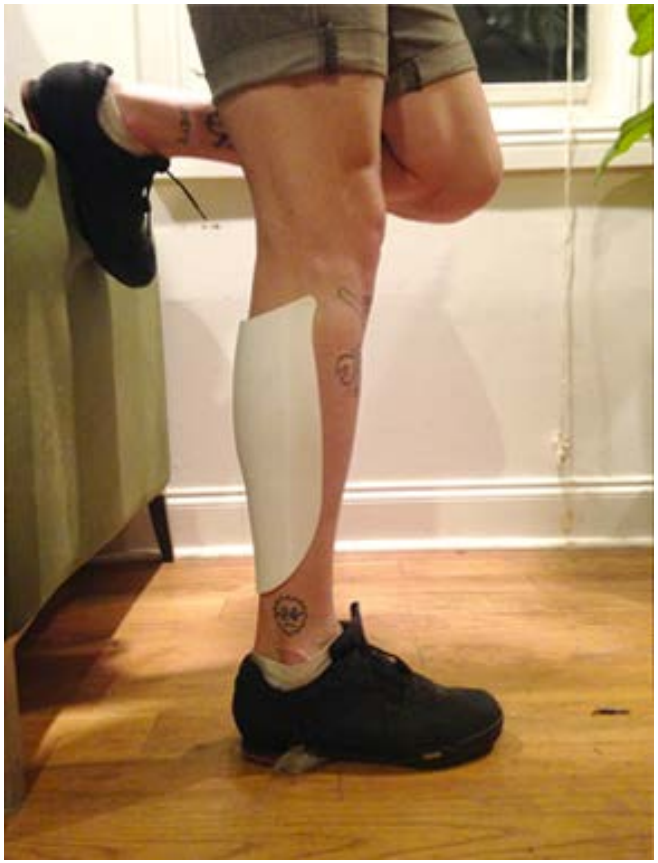


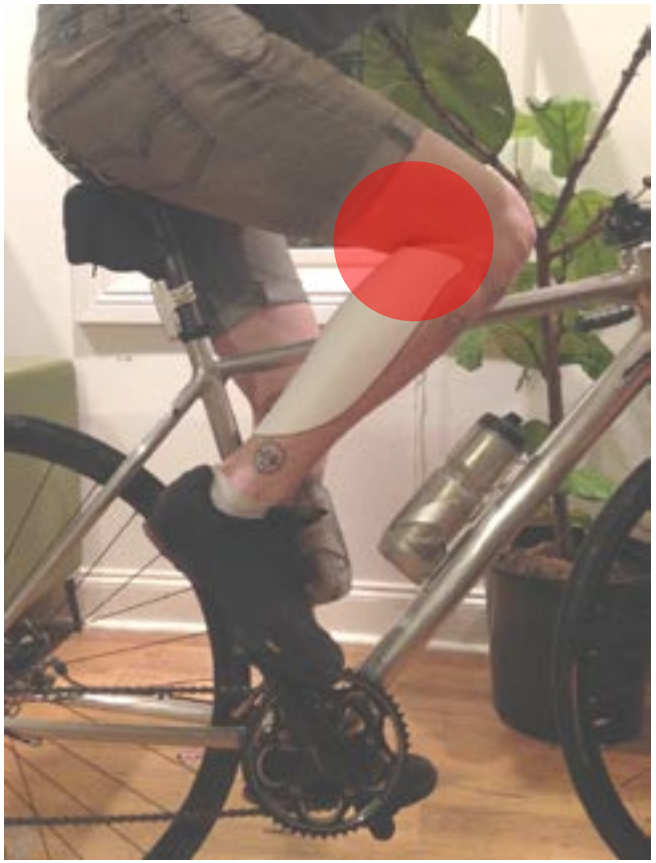
Within a few days time I had scanned my friends leg at a bike shop and attained raw data with which I could then manipulate within Solidworks to refine a design for a bespoke wearable cycling fender.



Of course it wasn't as easy as 6 screen grabs. The design went through multiple iterations which were 3D printed at 1/6th scale to test for aesthetic and fit qualities.

Full scale prototyping allowed me to really see where fit issues would arise during a use case scenario.



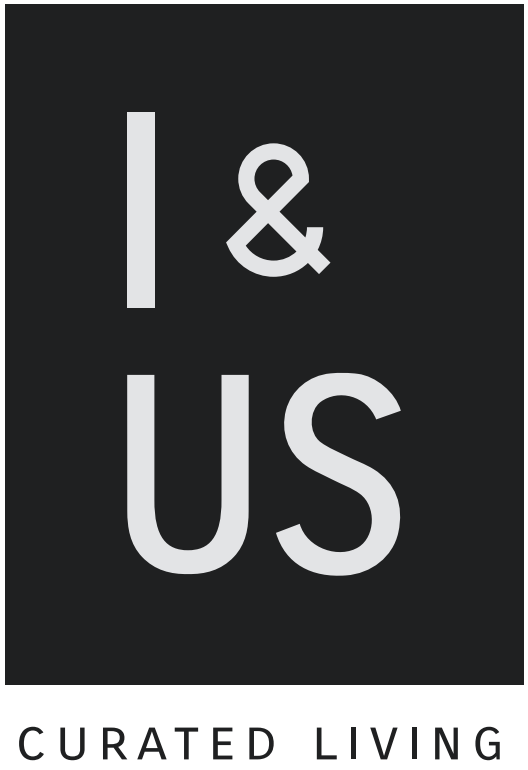


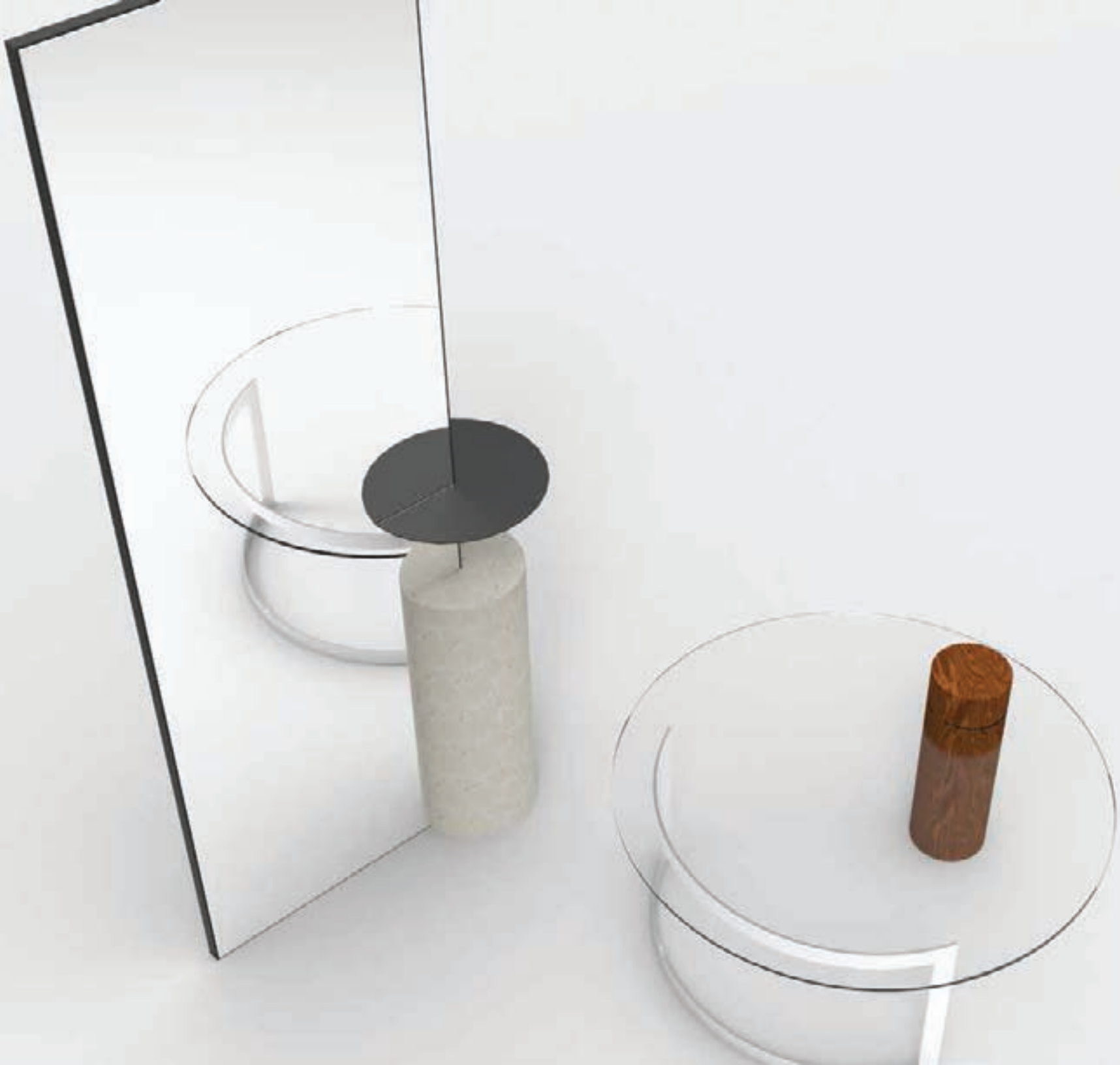
2016
Group project done alongside friend and classmate Mathew Gregory. All work and words shown are my own.

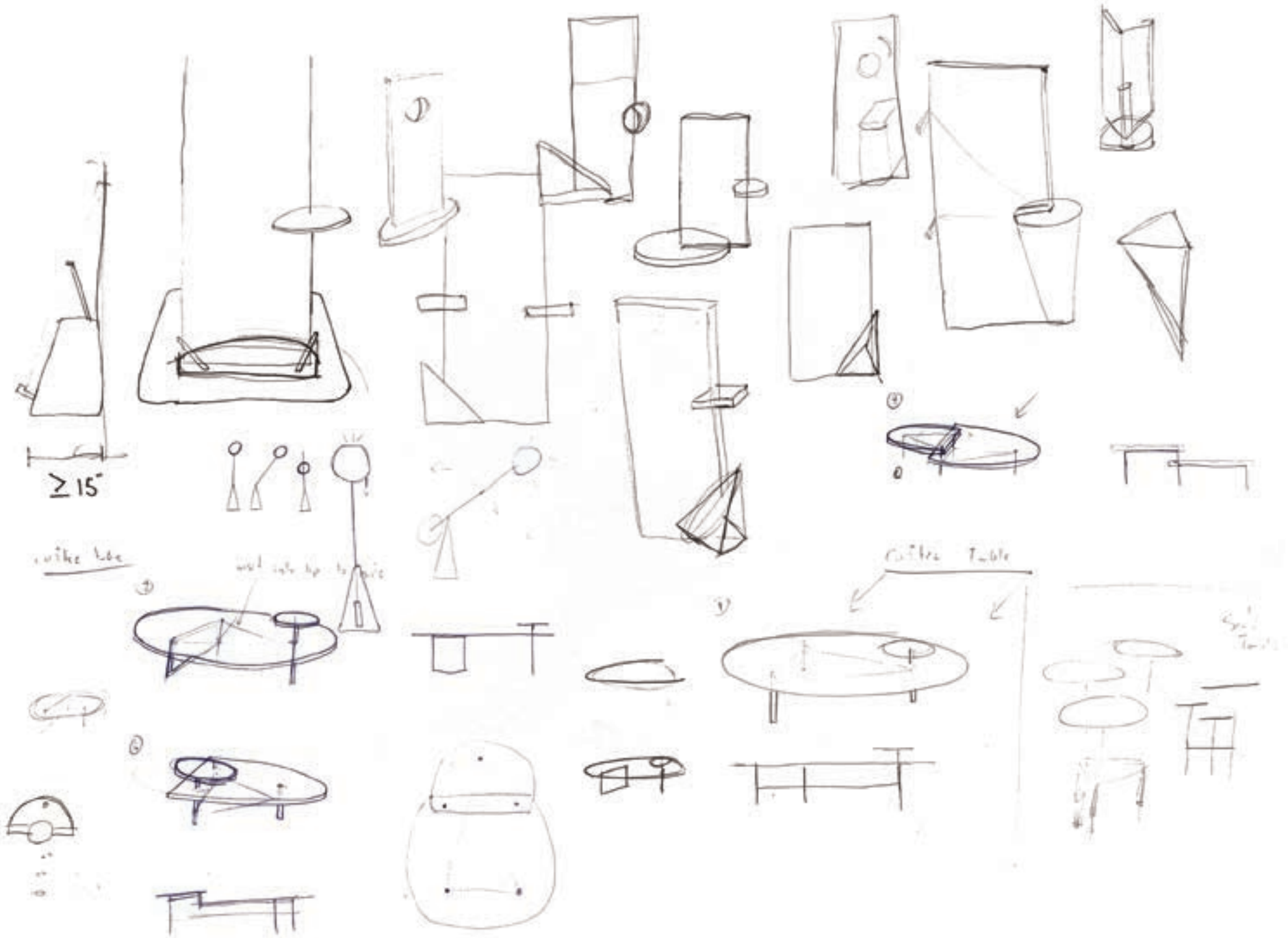
I&US

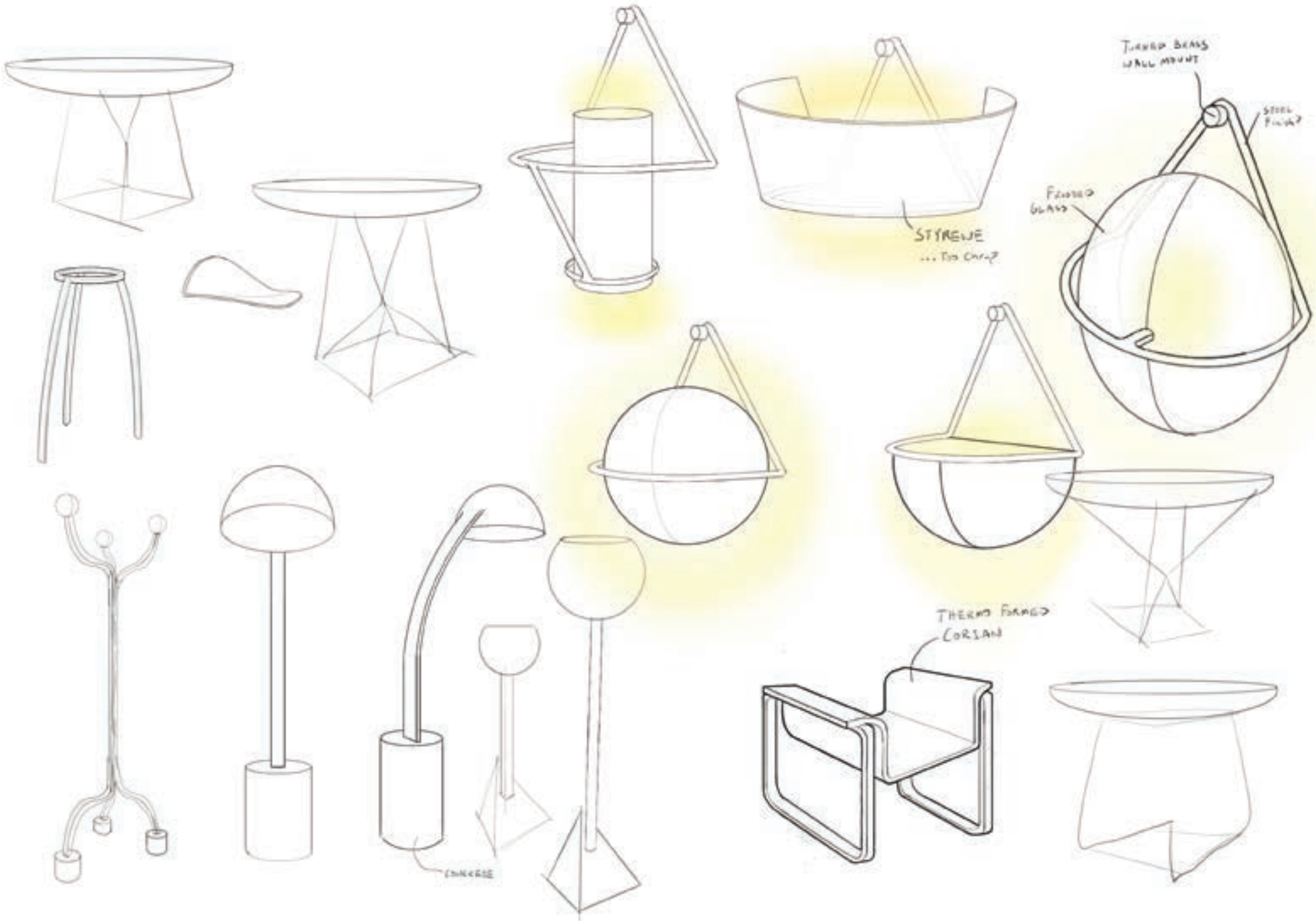
"Create the branding and launch a home furnishings design and build studio."

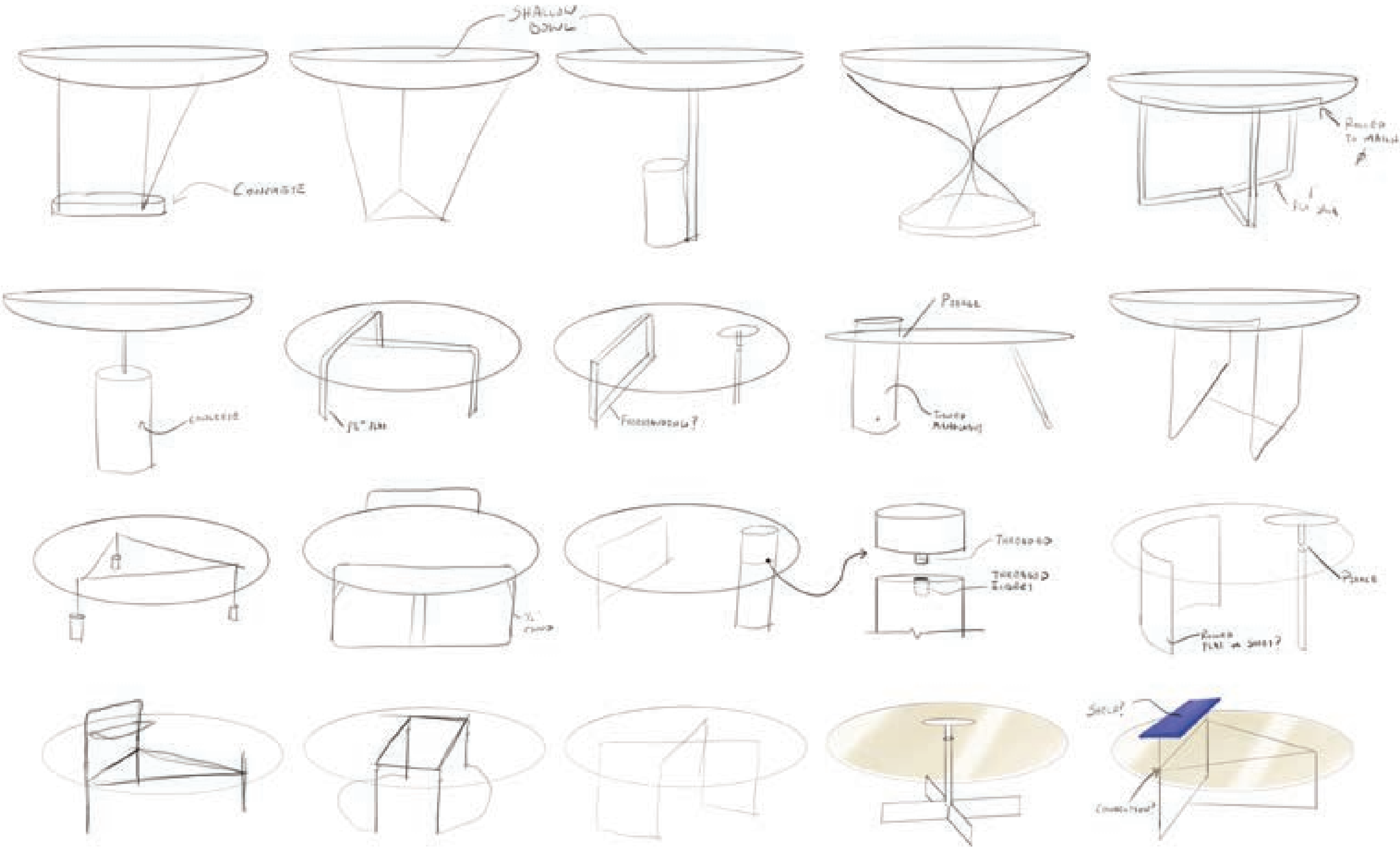
The studio was born from the playful juxtoposition of simple geometric shapes and the beauty inherent to their subtle forms. By using contemporary furniture as the vessel and everyday moments as the narrative, I&US creates objects to curate your living.

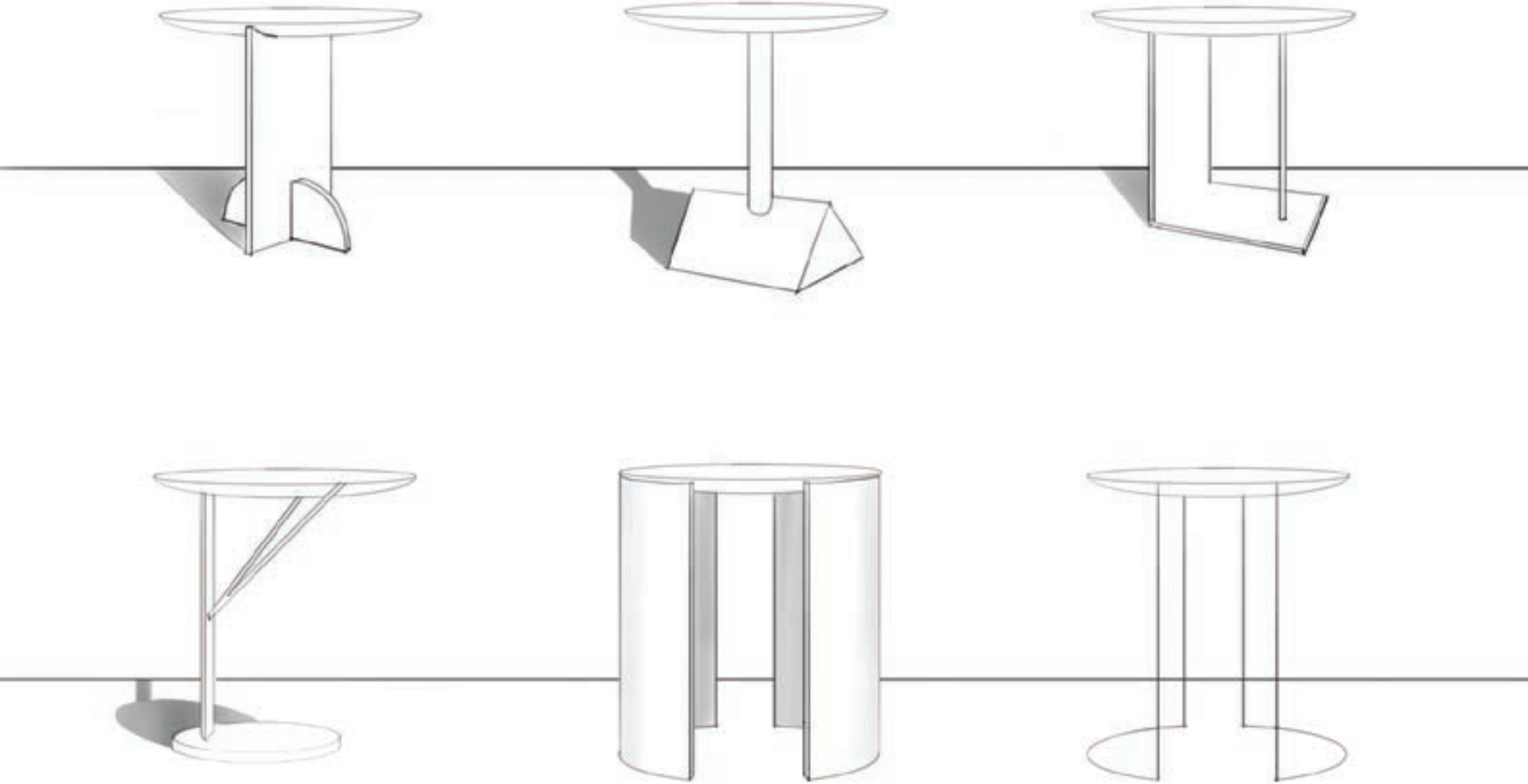


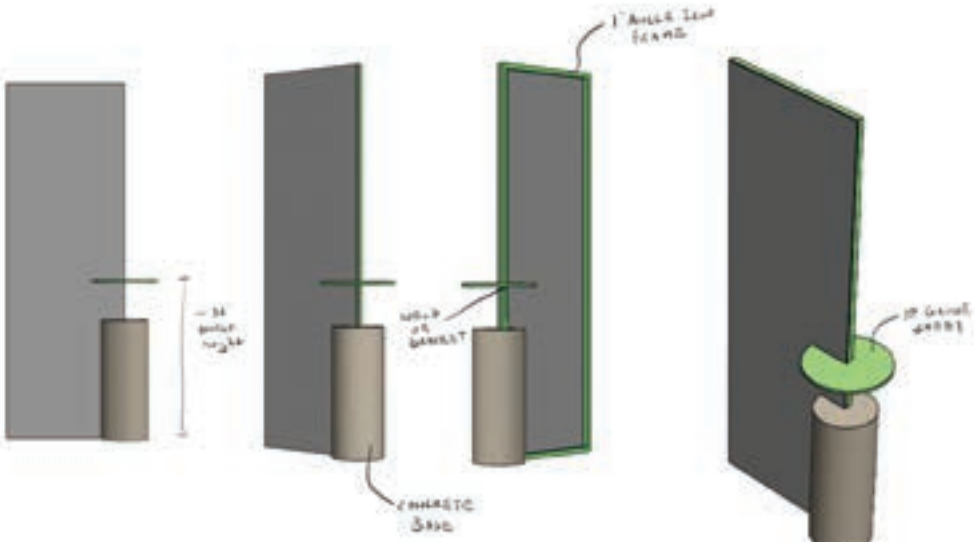


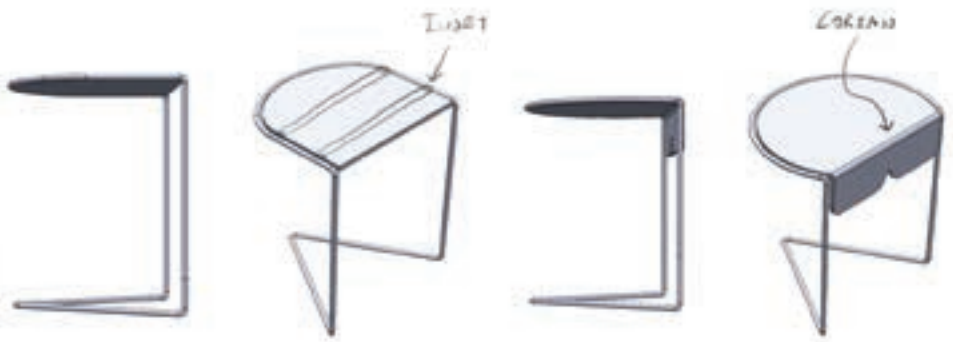

≥ 15°

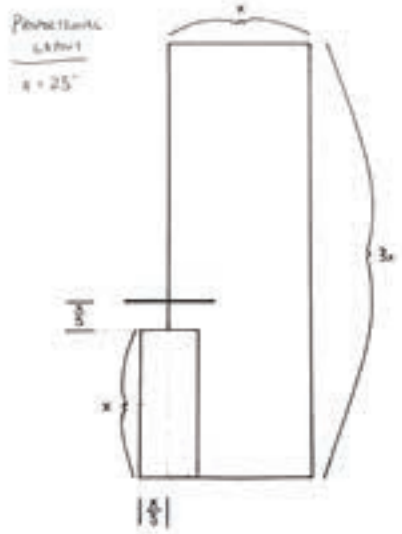

STYRENE
... TO CHECK
THERMO FORMED
CORIAN

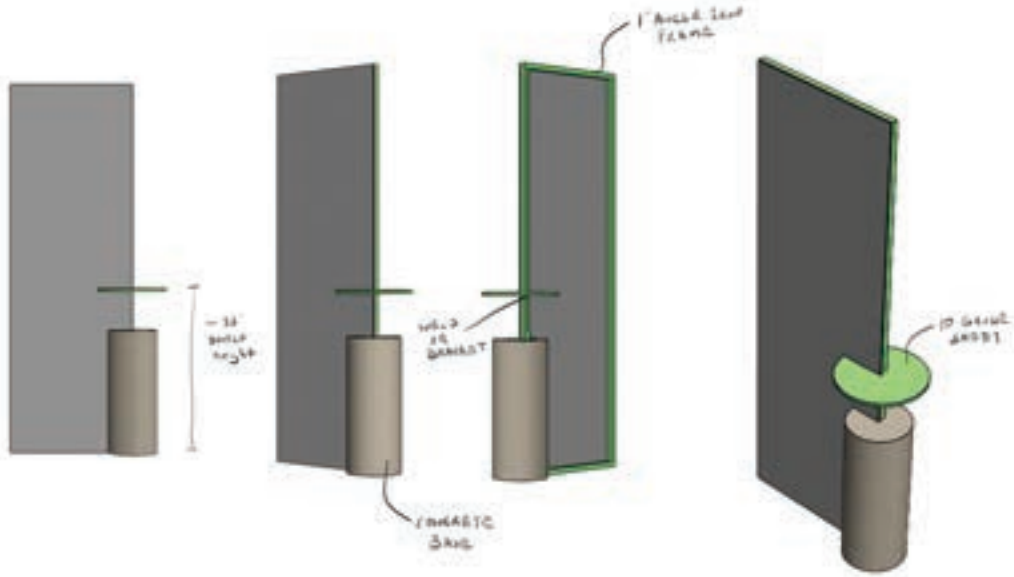

SHALLOW BOWL
CONCRETE
THREADED
THREADED INSERT
SHELF?
CONNECTION?

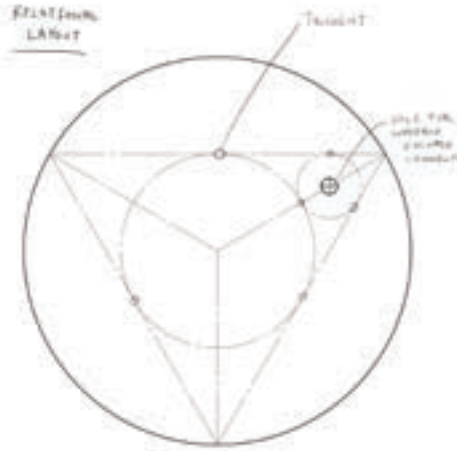


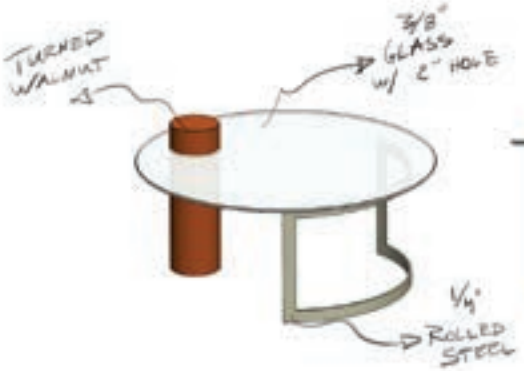


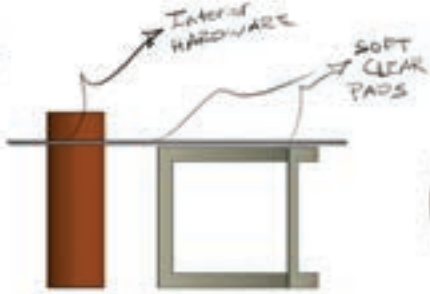



PROPORTIONAL LAYOUT
x = 25"


1" ANGLE IRON FRAME
MAGNETIC STRIP


RELATIONAL LAYOUT
TRIANGLE


TURNED WALNUT
3/8" GLASS w/ 2" HOLE
1/4" ROLLED STEEL


INTERIOR HARDWARE
SOFT CLEAR PADS

Mercedes - Coffee Table

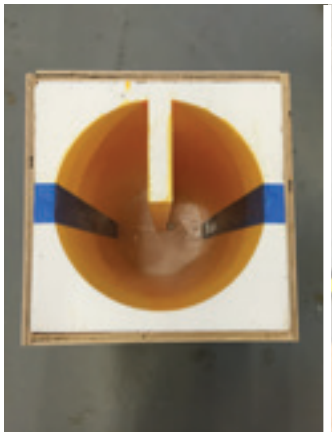
Glass / Chromed plated Steel / Walnut

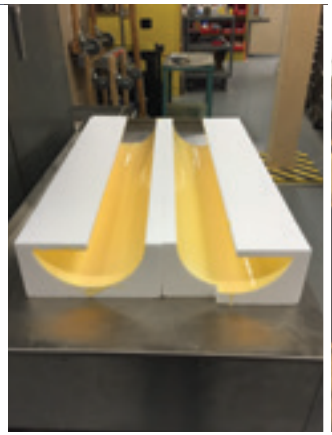
36″ ∅ x 15″ H

Float - Free Standing Mirror

Mirror / Blackened Steel / Concrete (shown) options: Marble, Walnut

H 75" x W 25" D 12"









Float, Prototype

Mercedes, Prototype

Carrois Gothic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Pantone Coated Neutral Black C
CMYK : 94, 77, 53, 94
RGB : 34, 34, 35

Pantone Uncoated 7541 U
CMYK : 7, 1, 3, 0
RGB : 221, 228, 230

Pantone Coated 7516 C
CMYK : 11, 72, 92, 36
RGB : 153, 85, 43

Web and Print Primary

Web and Print Secondary

Furniture Tag Branding

2015

BLNK

"Develop branding and launch a jewelry product."

3D modeling and rapid prototyping allowed me to produce multiple test prints for form and fit development. This process ensured that the final result was exactly as I had intended — and only takes a fraction of the time that traditional prototyping (making molds, forging by hand, etc.) would take. Once the final form has been found, the file is sent off to be 3D printed and produced in metal; resulting in a beautifully finished product ready for market.

BLNK

FORGO FASHION

BLNK - Poster Advertisement

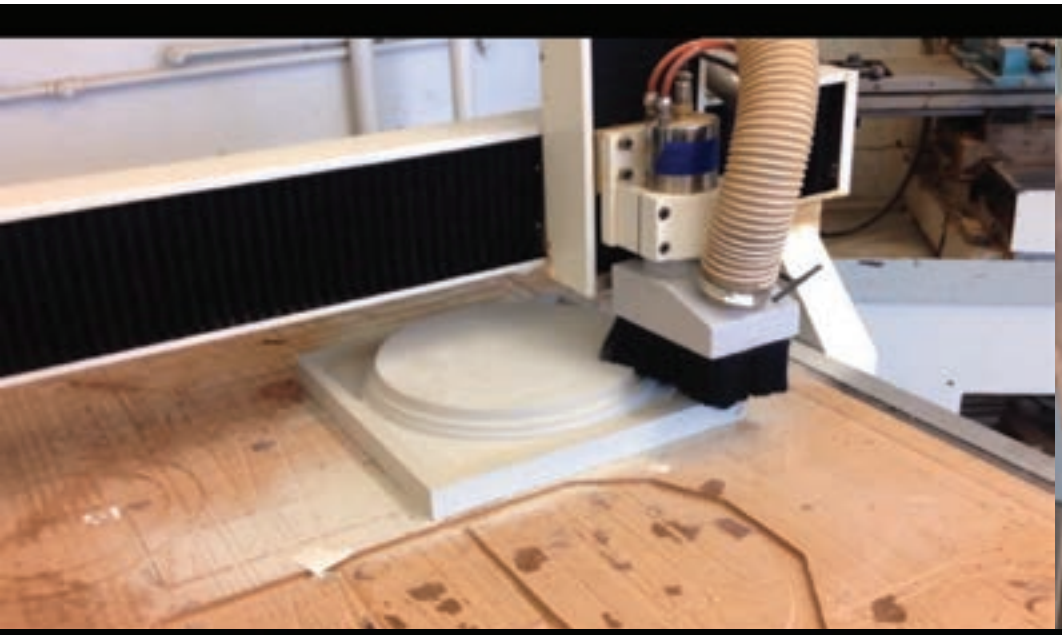
BLNK - Poster Advertisement

2015

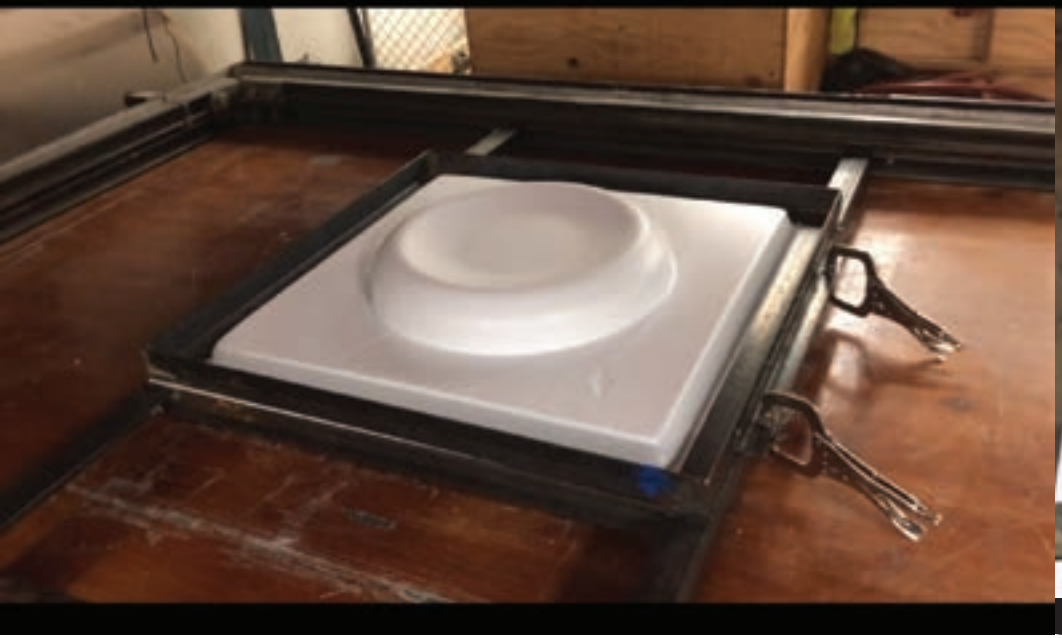
TRI REPETAE

"An experiment in materials and processes"

I wanted to challenge myself by choosing a single material with which to manufacture a piece of furniture from. Plastic — being a material I was least familiar with — suited the project well. The resulting stool is a harmonious conglomeration of processes including: CNC routing, vacuum forming, sawing, milling, turning, 3D printing, casting epoxy, and sanding.




DANGER



Tri Repetae - Low Stool

Plastic

13″ ∅ x 20″ H

2015

PROPT

"The juxtaposition of graceful curves and rigid lines"

The warm wooden curve of Propt gracefully grows from the ground to invoke a sense of ease, while the cold steel legs give the impression that the curve was being "propped" up against rigid lines.

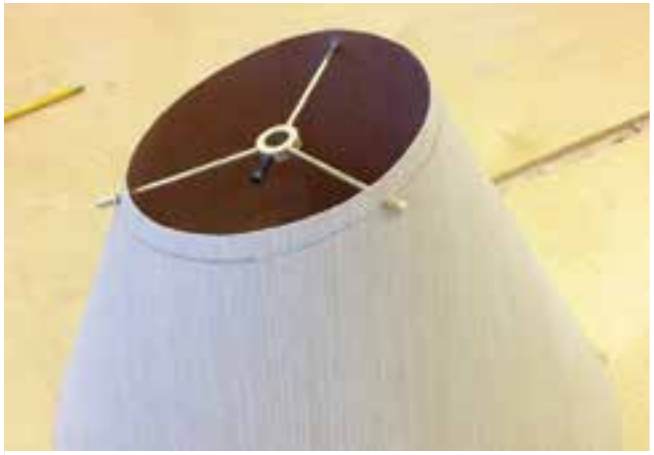
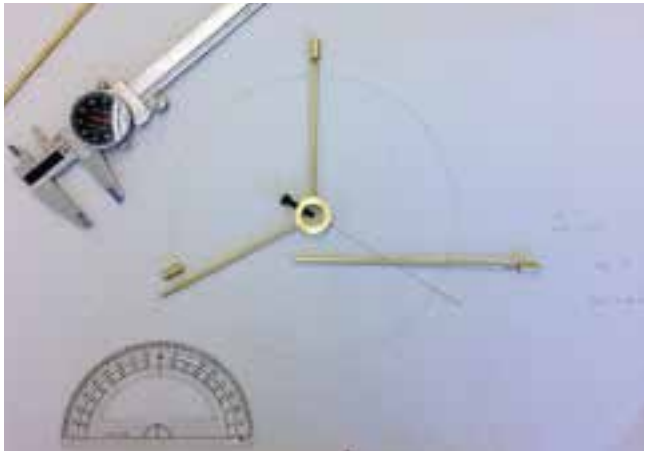
Propt - Floor Lamp

White Oak / Blackened Steel / Brass Accents

H 63" x W 53" x D 20"

Propt is powered on and off simply by touching the brass switch embedded into the top of the curve.





2015

DIANTER

"A dialectic conversation between user and experience."

A tea set designed to challenge the user's expectations through material and form decisions — forcing the user to interact with the objects in a specific manner.

Dianter - Cup, Saucer, Spoon

Aluminum / Walnut / Glass

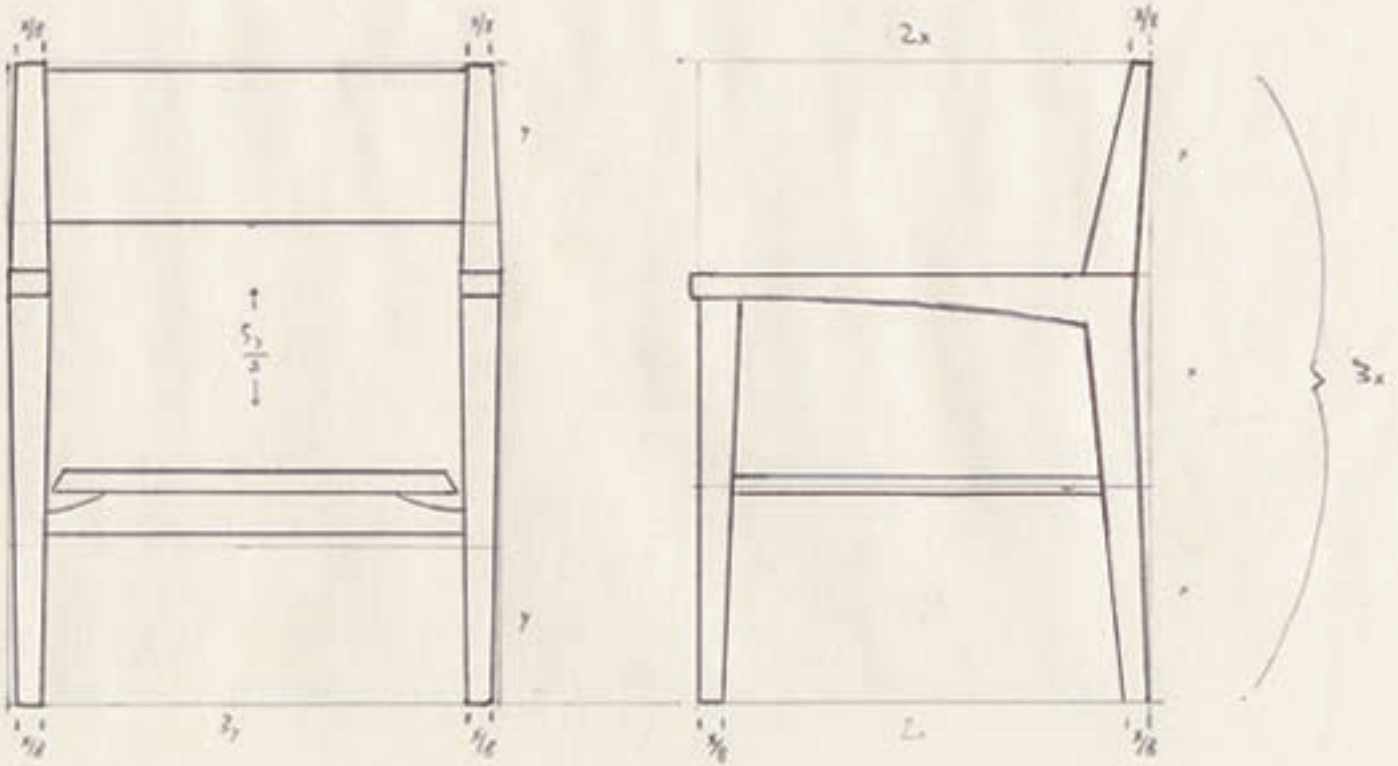
H 2.75" x W 5.5" x D 3.5"

2015

Chaool

"Convertible furniture for small space living."

Often times apartment dwellers in cramped living situations will attempt to save space by buying "2-for-1" furniture. The problem with current convertible furniture is that none of the products on market are wholly one thing or the other, they are an awkward combination of both. That's where Chaool steps in. Chaool is a convertible piece of furniture that is designed first and foremost as a chair, then secondly as a step stool.



Chaool - Convertible Furniture

White Ash / 3D Printed switch

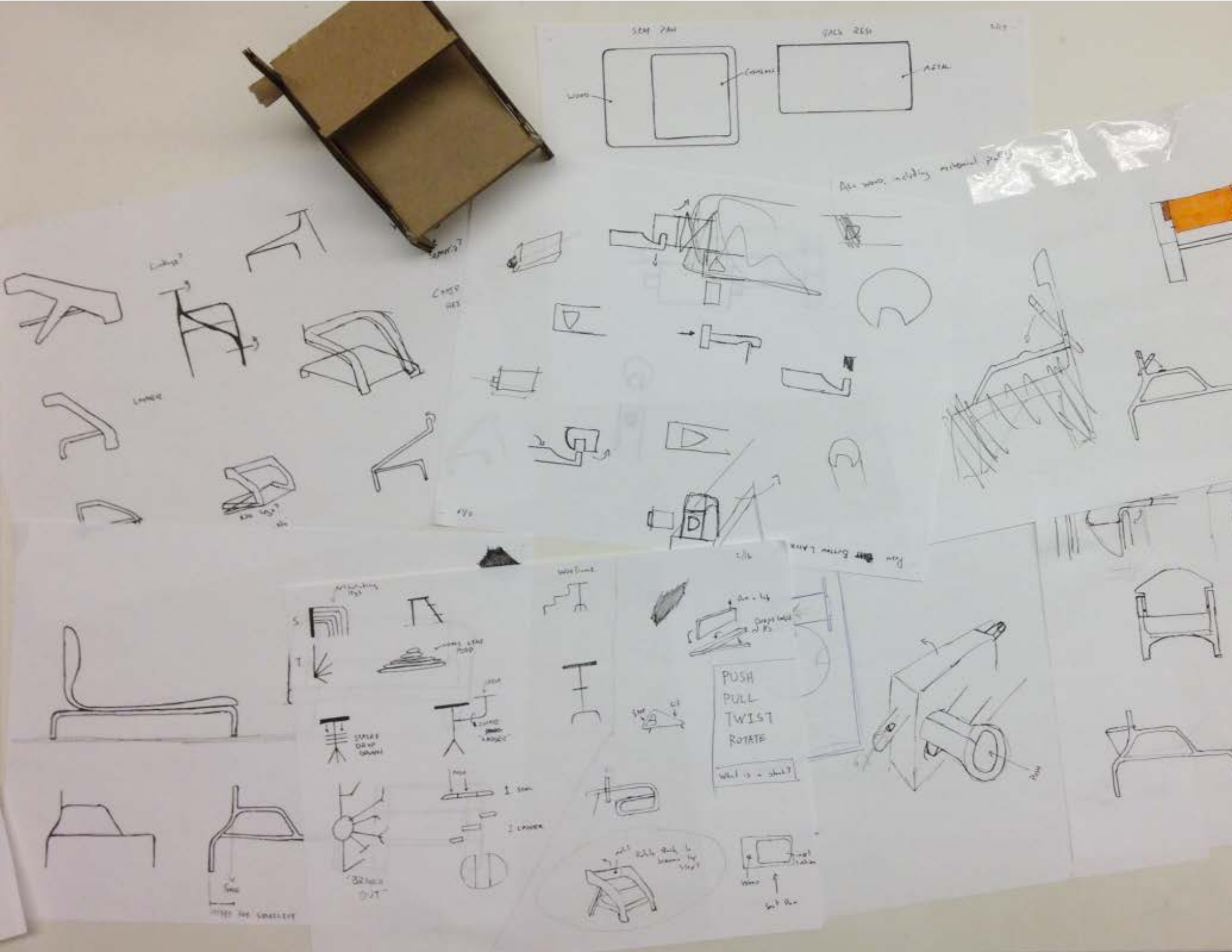
H 28" x W 21.75" x D 19" Seat H 11"

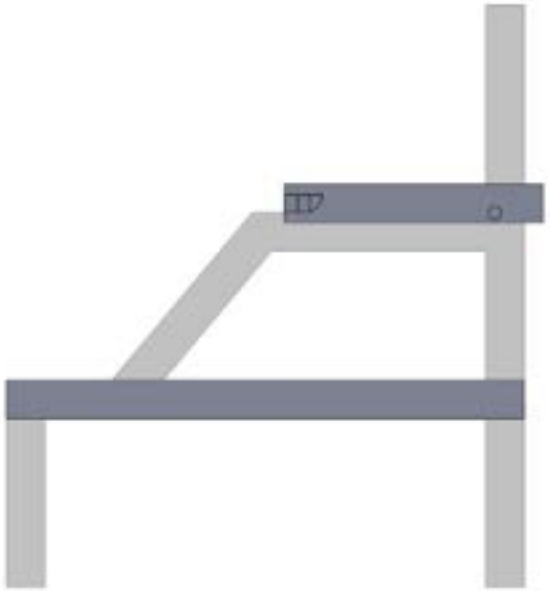
Imagine the place on the left is where you lived, and that the inside of your home looked like the scenario on the right. Well in Japan, a typical one bedroom apartment is only 110 sq ft — that's a 10'x10' room.

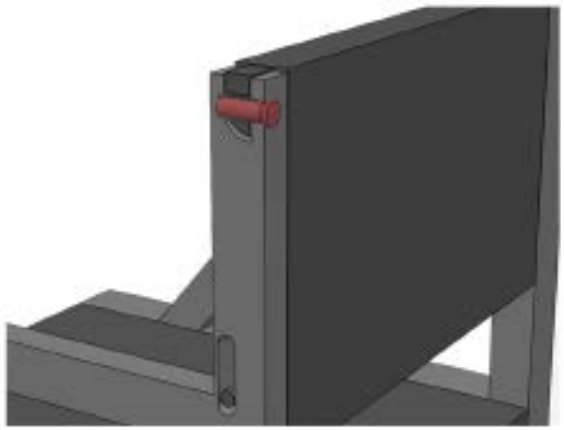
Convertible furniture does exist to alleviate issues with cramped living spaces. However, as shown, the options that exist on the market are a combination of multiple different things — never really owning a solitary identity.

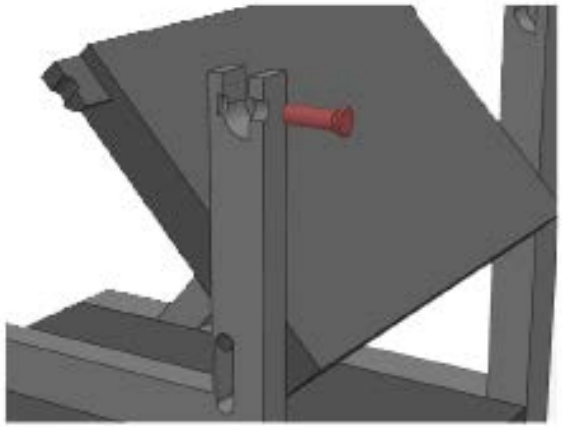
So it was important to me that I didn't design a convertible piece of furniture by simply combining two separate things.

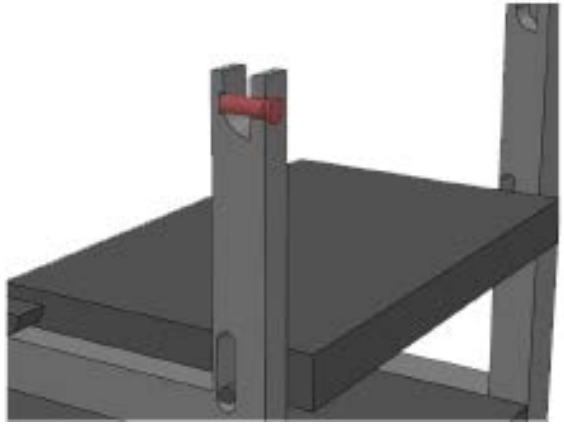
I turned to Japanese style seating, and Japanese woodworking to find inspiration. The subtle beauty in the meticulous craftsmanship is visually comforting; with so much consideration for the details, nothing about Japanese furniture making is clumsy.


SEAT PAN
BACK REST
WOOD
CANVAS
METAL
PUSH
PULL
TWIST
ROTATE

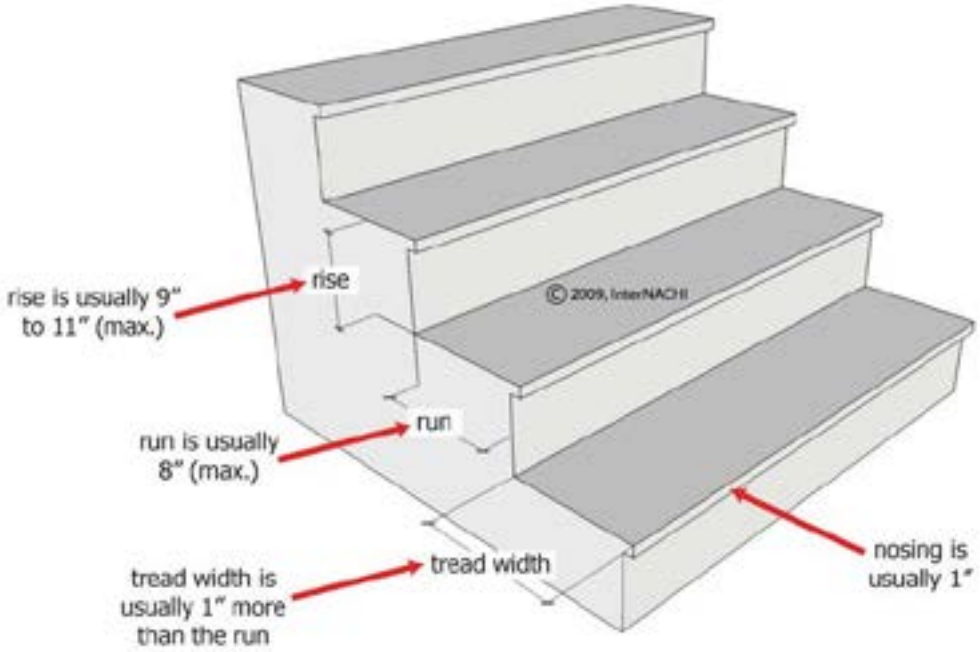




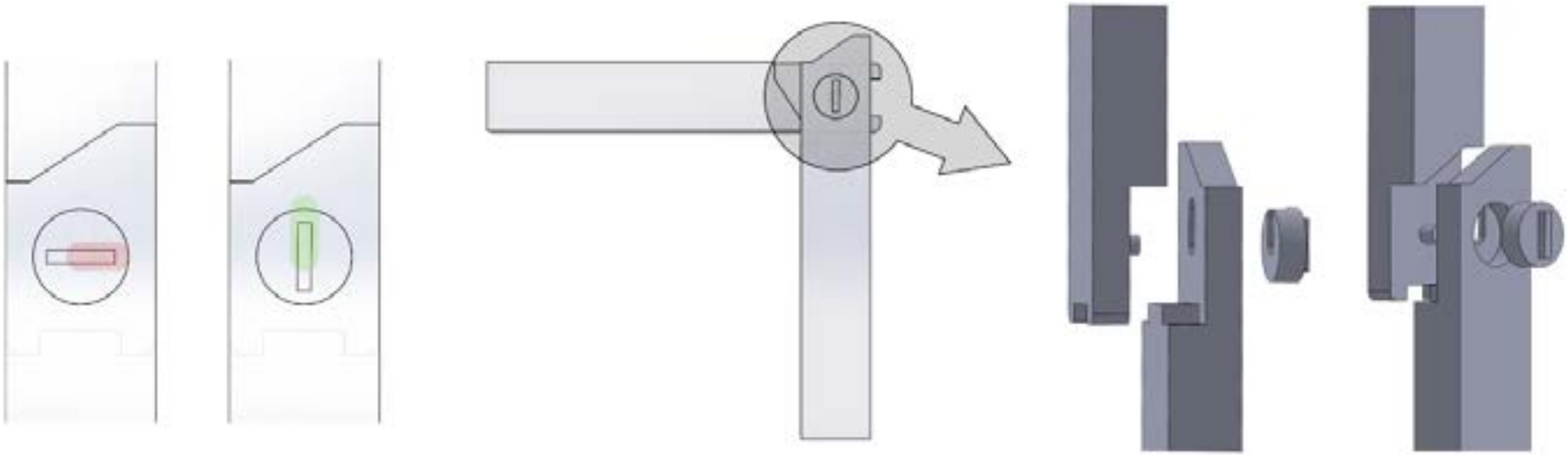




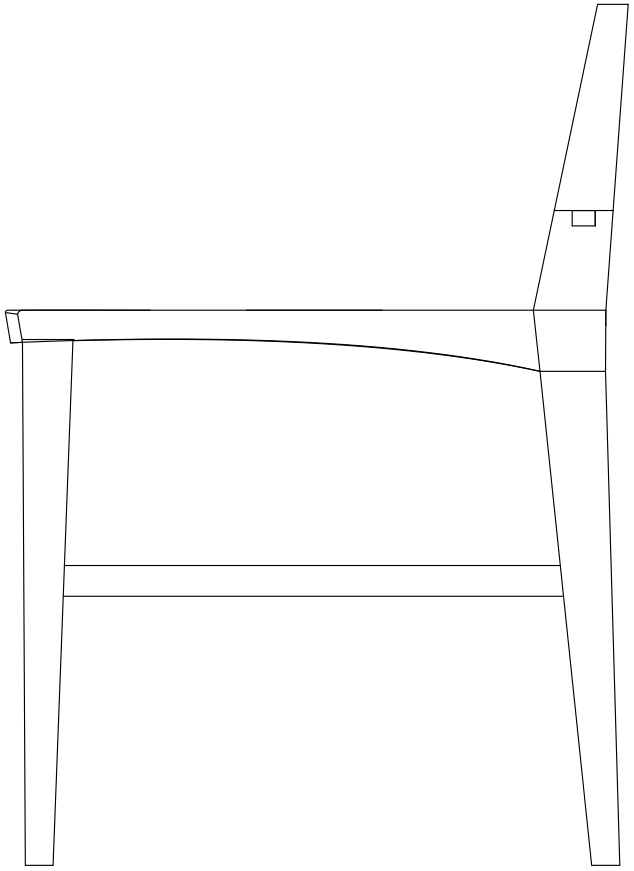
Rise, Run and Tread Width

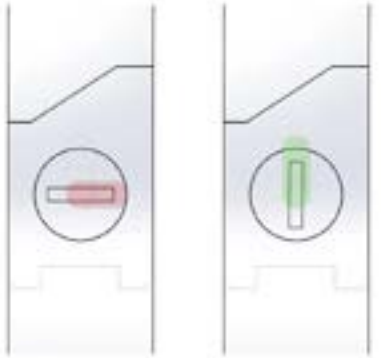


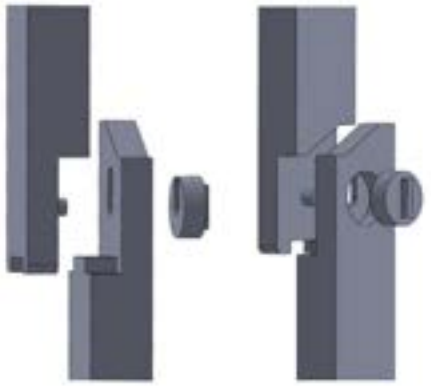
After testing many kinetic joints, I developed the mechanism below. To transition from chair to step stool — and vice verse — the user simply turns a key located on either side of the chair. Turning the key unlocks the to joint such that the upper half can be lifted up and rotated downward — or upward depending on the user scenario.

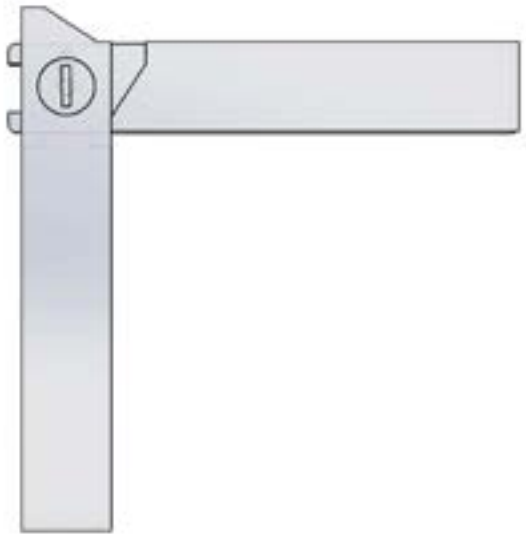


3D modeling was used to produce accurate construction drawings from which to build a working prototype.









Chaool - Convertible Furniture

White Ash / 3D Printed switch

H 28" x W 21.75" x D 19" Seat H 11"

Group project with Elvin Chu and Courtney Gruber.

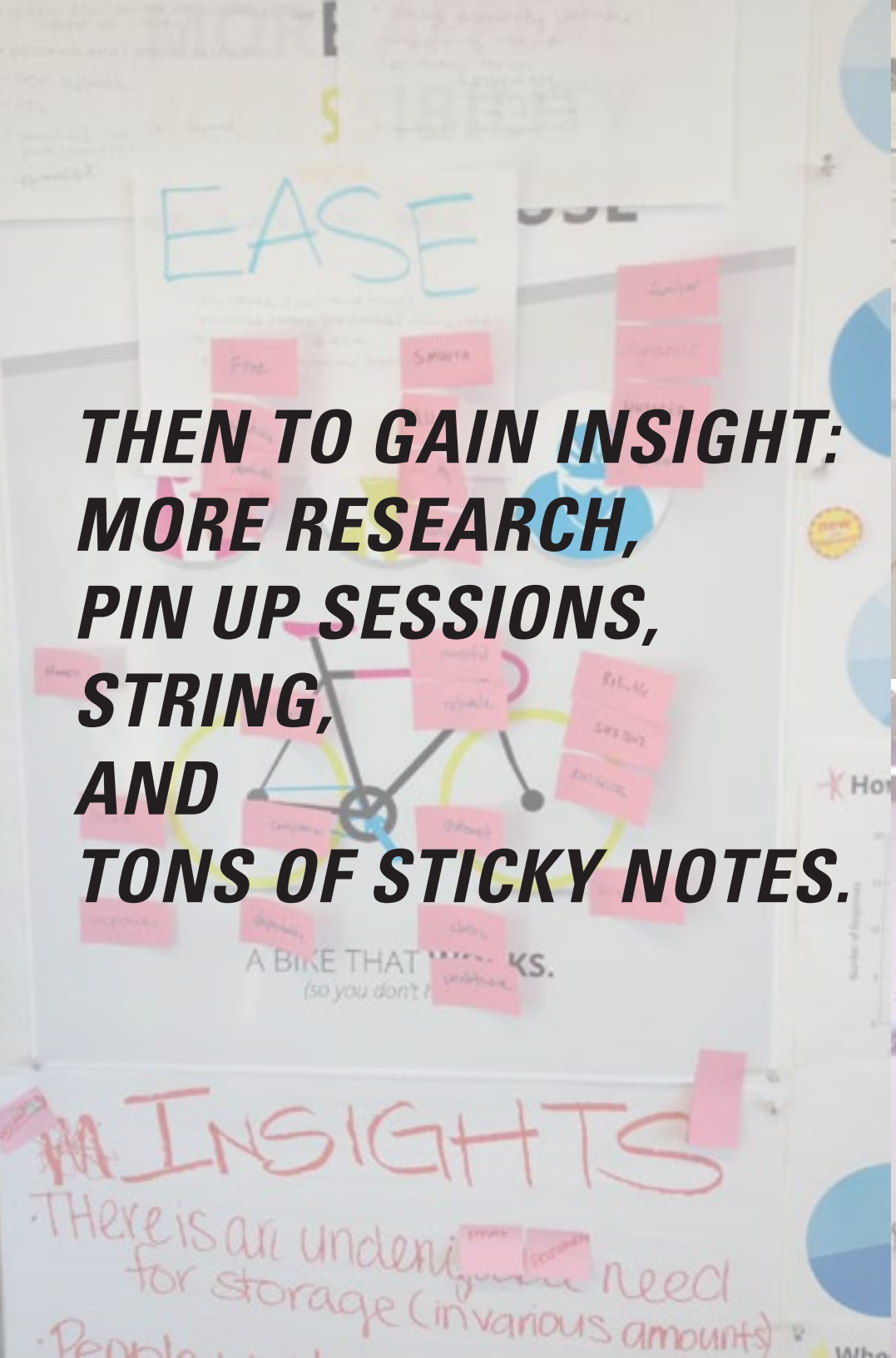
SHIBUSA

"Research and find untapped design opportunity within the cycling industry."

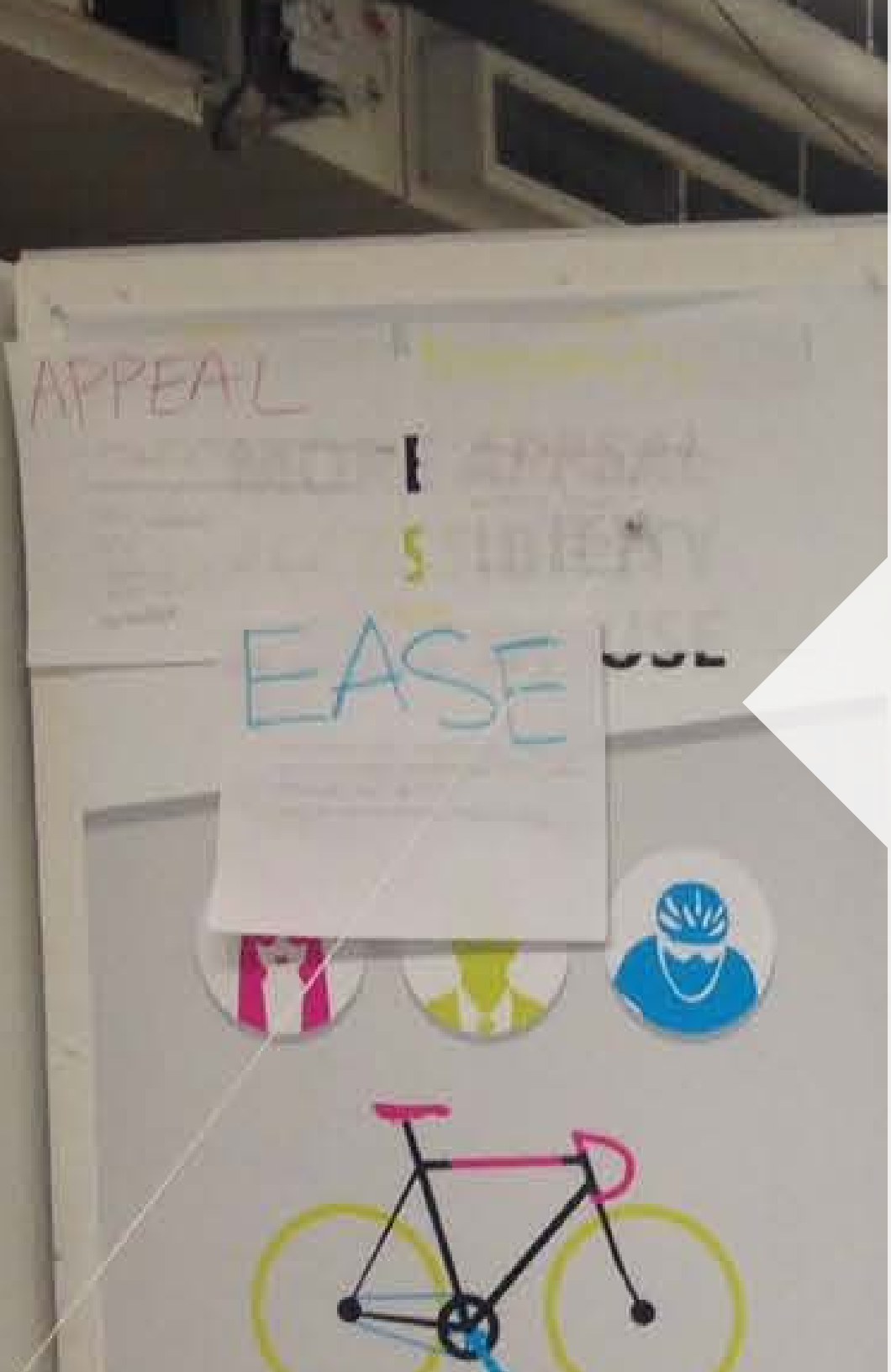
Shibusa is a hassle-free commuting solution for getting to and from work while maintaining the ability of enjoying bike-riding in other recreational situations. Shibusa offers the benefit of a capable electric-assist bicycle while maintaining the spirit of a human-powered bike when the necessary components are swapped out. Modular componentry that is both upgradeable and interchangeable means that personal appeal and possibilities far surpass that of current bicycles on the market.

Urban and recreational cycling is ripe for innovation. Few bikes have been designed specifically for the urban commuter.

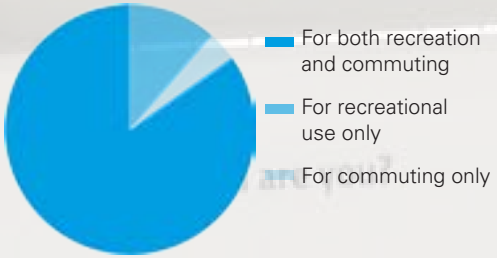

How do you ride your bike?
What's your occupation?
How much of a bike enthusiast are you?
How old are you?
How would you improve your bike?
Do you wear a helmet?
Does anything prevent you from doing your daily commute?
What other modes of transporation do you depend on?
Most frequent mechanical issue...
Does your bike have multiple speeds?
Describe your bike...
How often do you commute?
How many miles do you commute?
To bag, or to pannier?
Is there a need for storage?
We surveyed commuters from around the world.



THEN TO GAIN INSIGHT:
MORE RESEARCH,
PIN UP SESSIONS,
STRING,
AND
TONS OF STICKY NOTES.

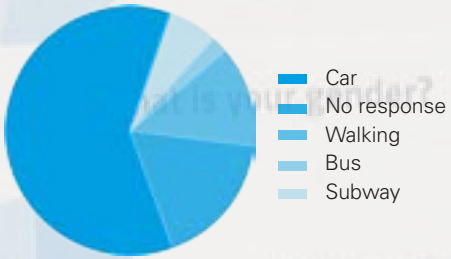


How do you ride your bicycle?



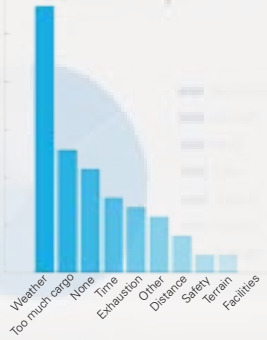
There needs to be a desire to commute.

If not using a bicycle, what modes of transportation do you typically use?

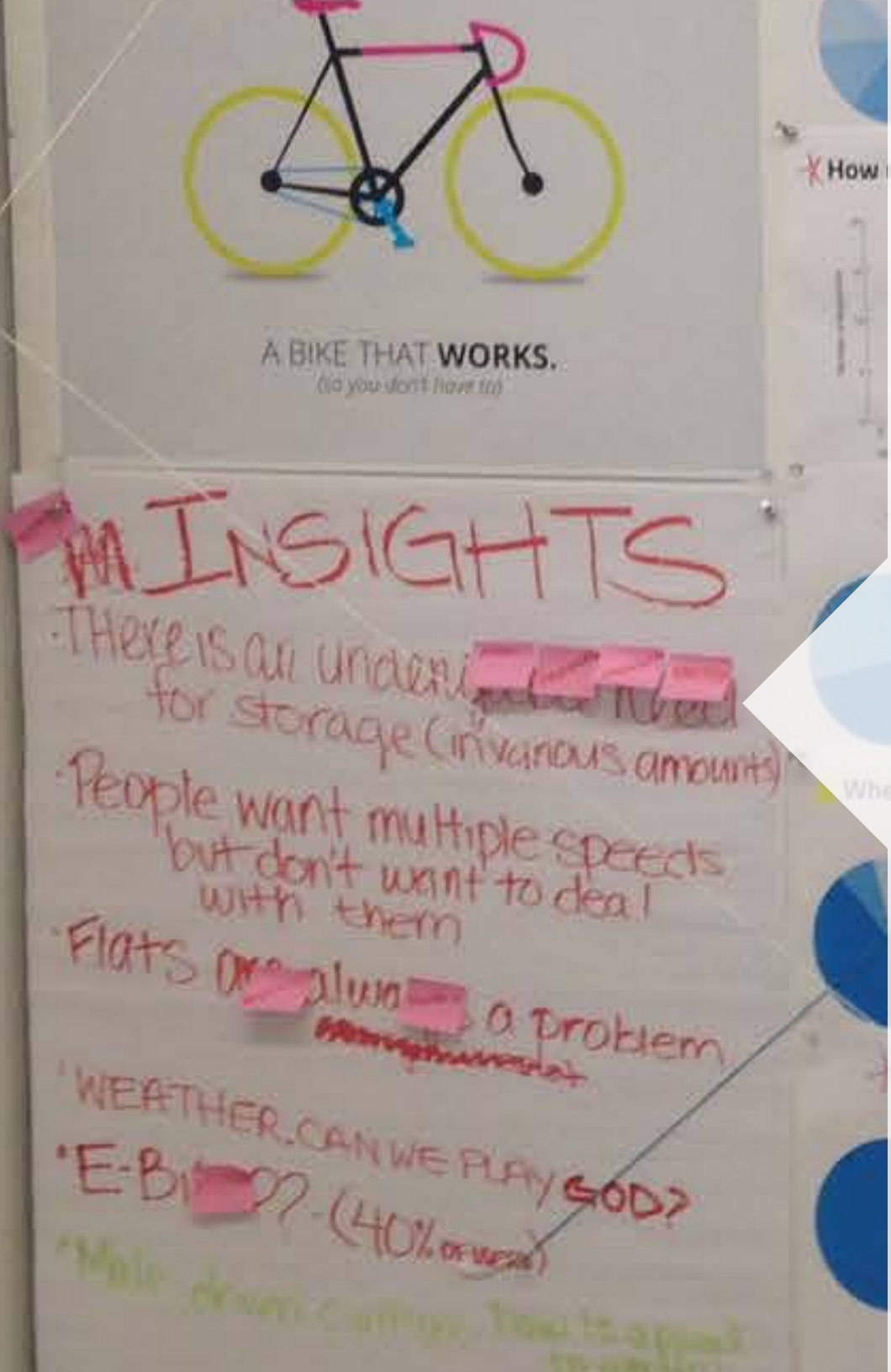


Recreational cyclists entirely rely on a car as their main source on transportation.

Does anything prevent you from commuting on your bicycle?



While distance and time are correlated, time is perceived as being a larger deterrent than distance.



Is there a need for storage on your bicycle commute?

The answer couldn't be any clearer.

"I use a back pack, it would be useful if the bike can store my bag."

"Yes. You've always got stuff - you never realize how easy car transport of crap is till you're always biking"

"Yes, a backpack, basket bars and a trailer --to hold paint brushes, ladders, and more."

money.cnn.com/gallery/real_estate/2014/01/27/cities-moving/

5K

4K

996

421

Top 10 cities people are moving to

Whether it's the warm weather, jobs or cheap cost of living, these are the top 10 cities Americans are moving to, according Penske Truck Rental's annual list.

Recommend 1K

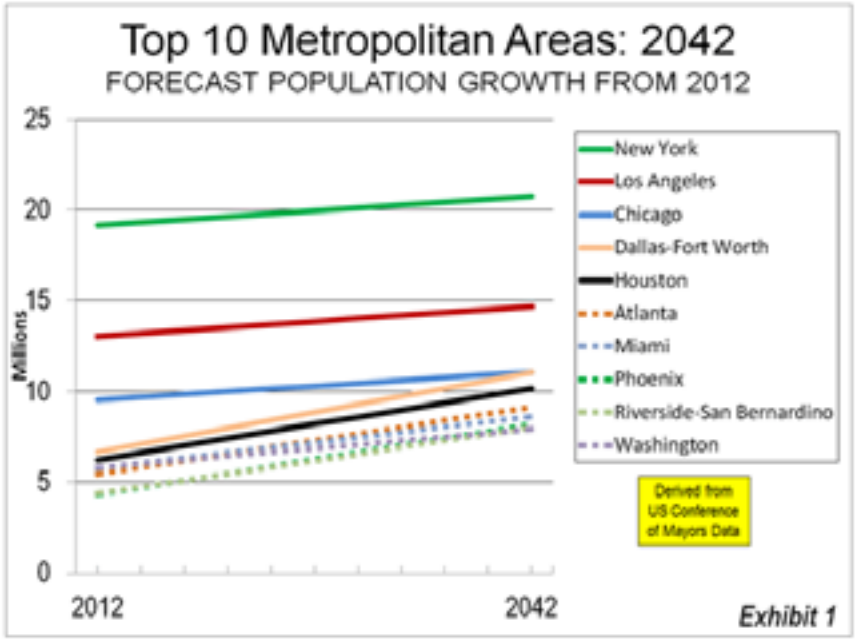
1 of 10

Atlanta

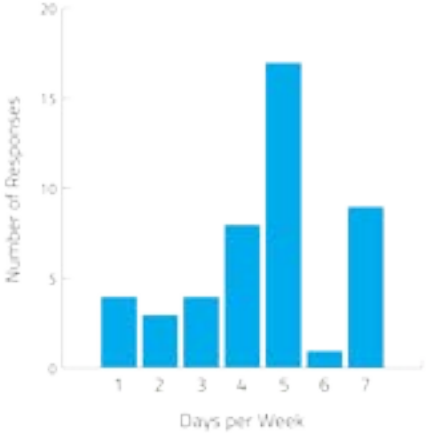
NEXT

Median income: $66,300
Median home price: $166,000
Home price growth forecast: 5.3%

Even though it was hit hard by the recession, Atlanta has claimed the top spot on Penske's list for four years running. Home to Coca-Cola, Home Depot and roughly a dozen other Fortune 500 companies, the city offers a range of job opportunities. And the cost of living is pretty cheap -- less than half the cost of Manhattan -- with much warmer weather (well... except for this winter).

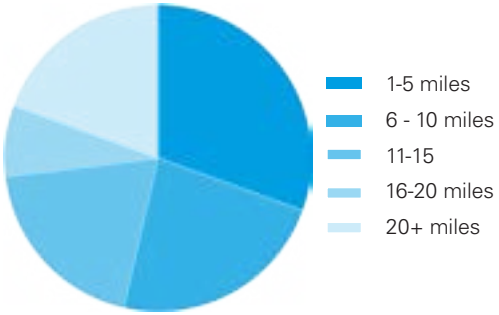


How often do you commute by bicycle?



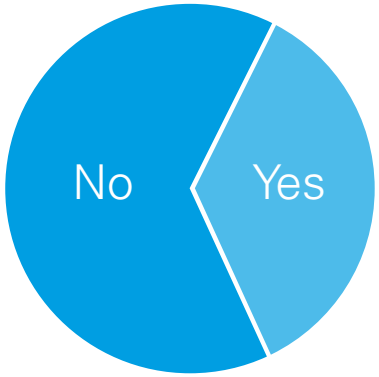
If they ride to work, they typically do it 5 days a week; something that is made accessible by living in a city environment.

How many miles do you commute by bicycle?



Bicycles are the preferred transportation method for short distances, especially within a city setting where everything is within 5 miles .

Would you ride an Electronic Bicycle?



"I like the exercise aspect"

"I can always use a helping hand."

"They're too heavy to pedal when the battery dies."

"It would help me get up hills and be less sweaty."

Traditional bikes are **sleek**, **desirable**, and **simple**, but they can be too *exhausting* for some.

Current E-bikes are *bulky*, *heavy*, and *unappealing*. However, they can aid in **far commutes** with **less effort**.

INSIGHTS:

- Non bicycle commuters worry about the weather, struggle, and time spent
- There is an overwhelming need for bicycle storage
- The majority of bicycle commuters travel to work in an urban environment
- Comsumers are turned off by the aesthetic of current electronic bikes on the market

OUR DESIGN OPPORTUNITY

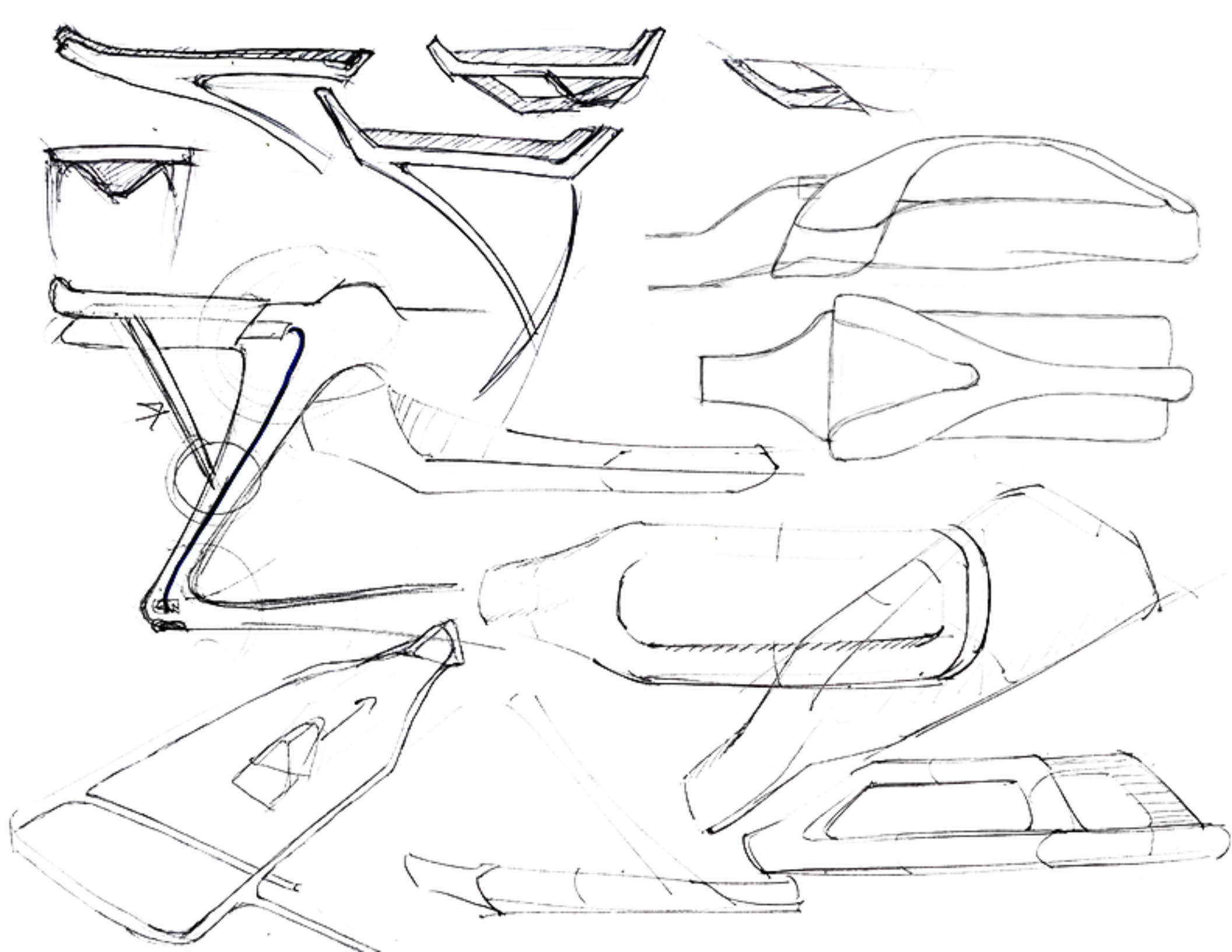
LIES AT THE CONVERGENCE
OF TECHNOLOGY, LIFESTYLE,
AND TRENDS.

OPPORTUNITY:

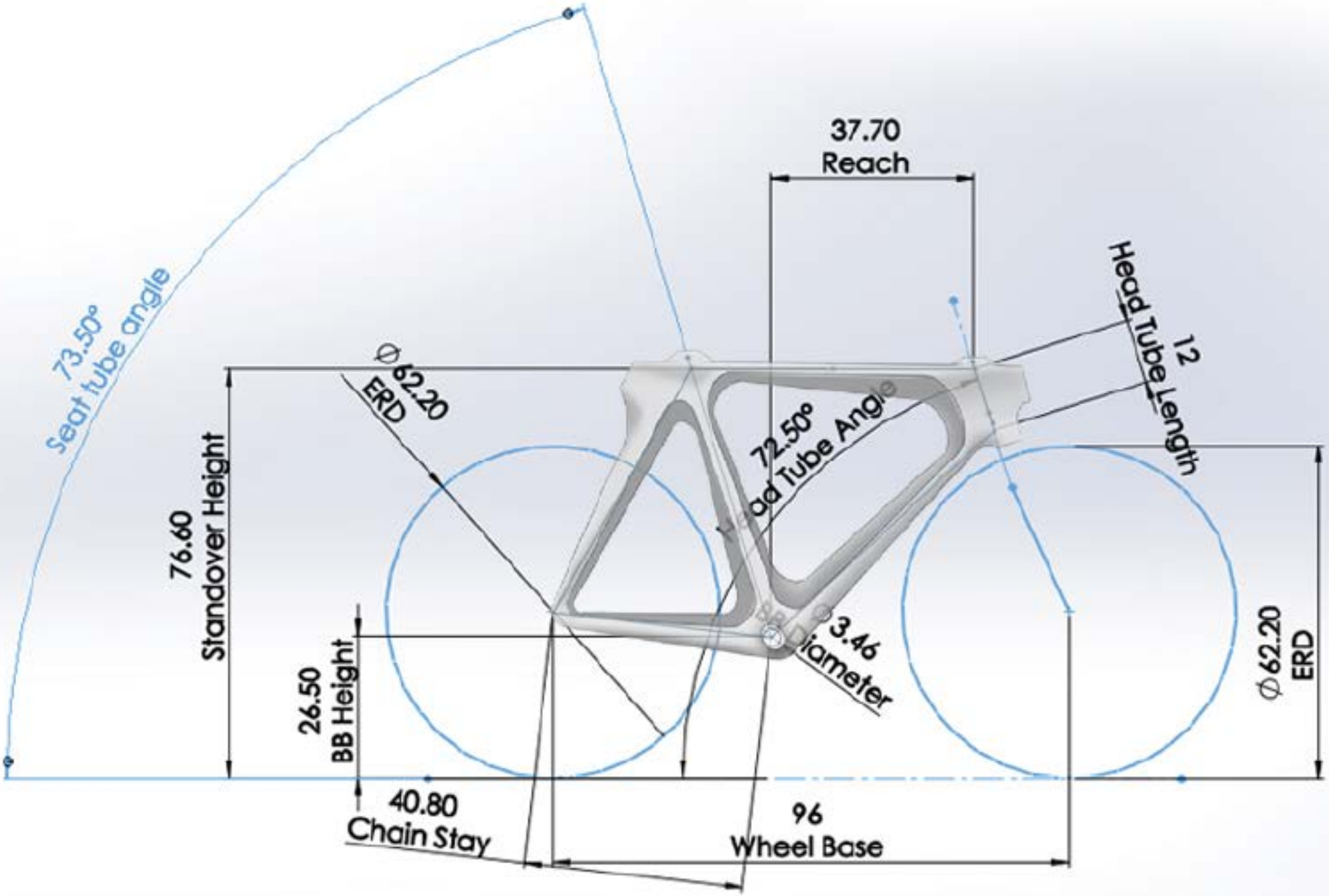
With the growing demand of bicycle commuting due to rapid urban growth and the rise of electric powered transportation, there is an opportunity to leverage the electronic bicycle market.

DESIGN CRITERIA:

- A traditional aesthetic
- Modular storage options
- Easily converted between electronic assist and human powered



To better understand our concept and frame design, we needed to move beyond 2D sketches on paper and into 3D space.

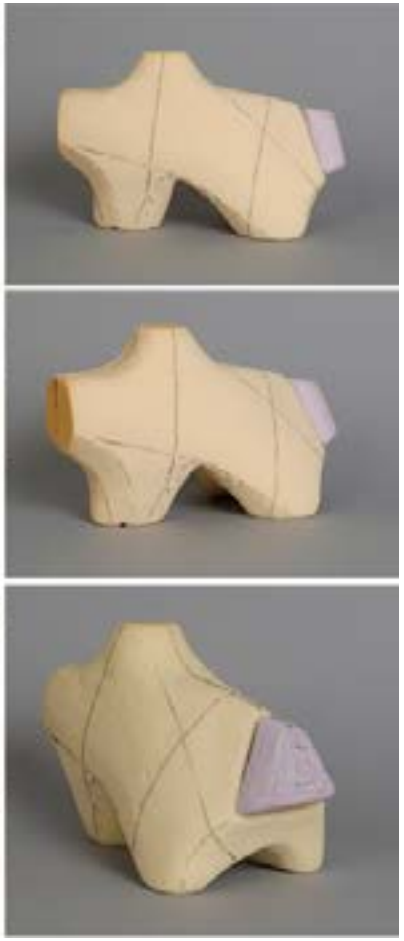


From there the bicycle was modeled to represent the original sketch.

Shibusa's modular plug system makes converting between an electronic and a traditional foot powered bicycle simple and quick, and the ingenious rack system seamlessly integrates with whatever component the user needs.

1. Rear light
2. Battery for E-assist with built in rear light
3. Rack system

Multiple models were made at various scales and of various materials.



The frame was cut using a CNC router from plywood, the parts of the bike that required more precise tolerances were 3D printed, and the accessories for the bicycle were modeled from dense foam.

Having a model that reflected the desired material choice and finish was important in presenting our idea. Thusly, we worked rigorously sanding, priming, painting, and finishing the model to represent its real life qualities.

THANK YOU

For more information, please visit: www.joshuadycus.com