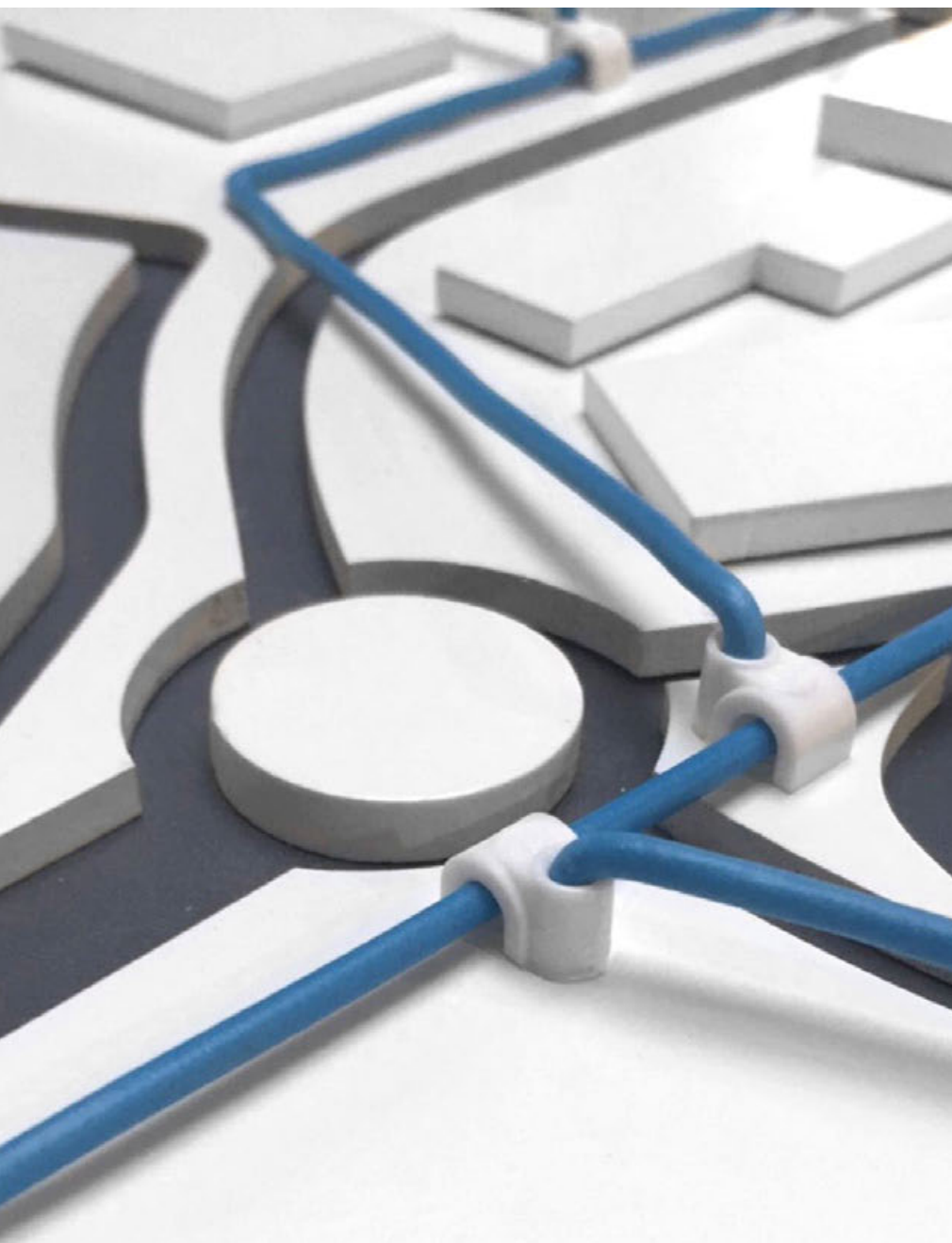


Christian Poulsen



Explorations in
Folding Felt

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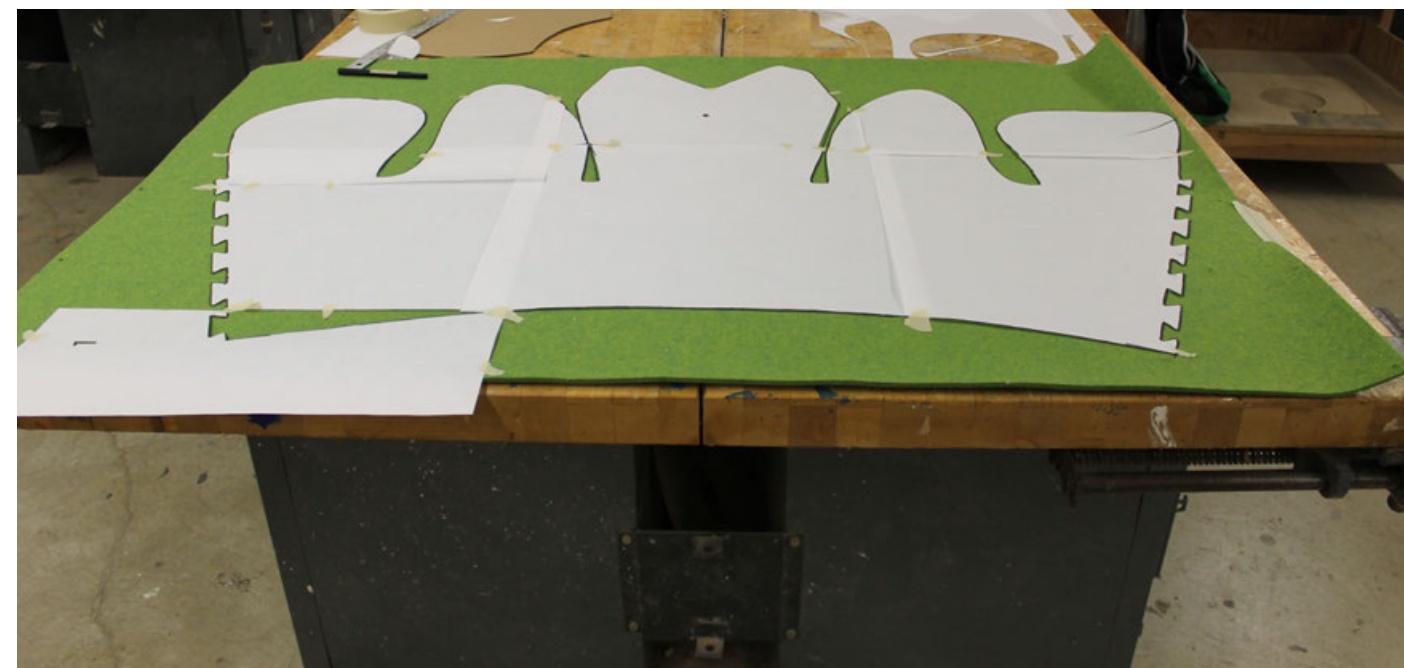
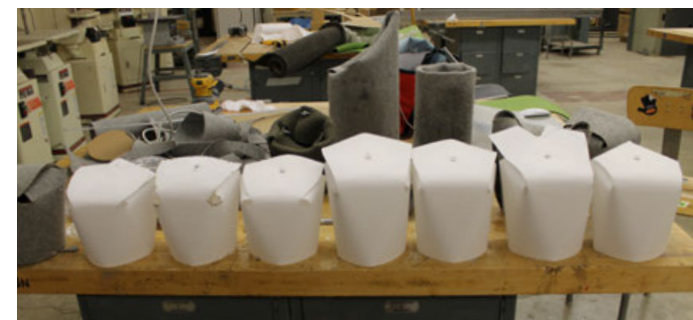
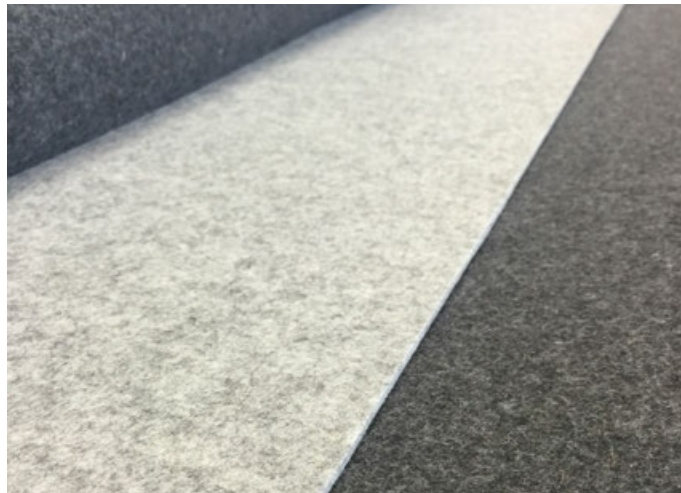
Explorations in Folding Felt

B66 Chair

2013-15

During my time with Wasatch Design Collective we were working under a grant from NASA and the National Science Foundation to research innovative applications of compliant mechanisms and folding techniques.

I used this opportunity to explore the folding properties of exotic materials, wool felt in particular. I became interested in the way that felt behaves when folded in gentle curves, the volumes that could be created from single flat pieces, and the structural traits that felt inherently has.



Through a long series of form studies I eventually arrived at what would become the B66 Chair. I found that by impregnating one side of the felt with polyester resin I could maintain enough pliability to make the folds, but gain enough structure due to the inherent compressional strength of cylinders to easily support weight.

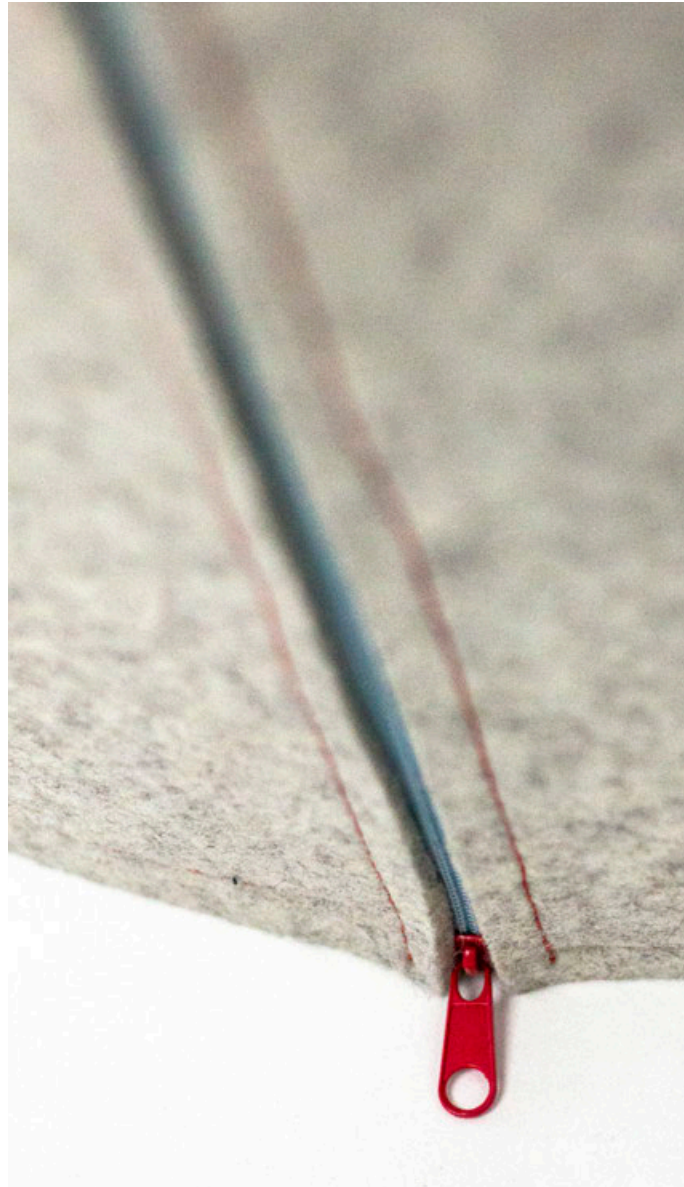
Using a strap to fasten the petals and a birch ring to maintain the circular base, the otherwise hollow chair made for a lightweight accent chair that could be easily and repeatedly be folded and unfolded.



Explorations in Folding Felt

B67 Chair

2013-15



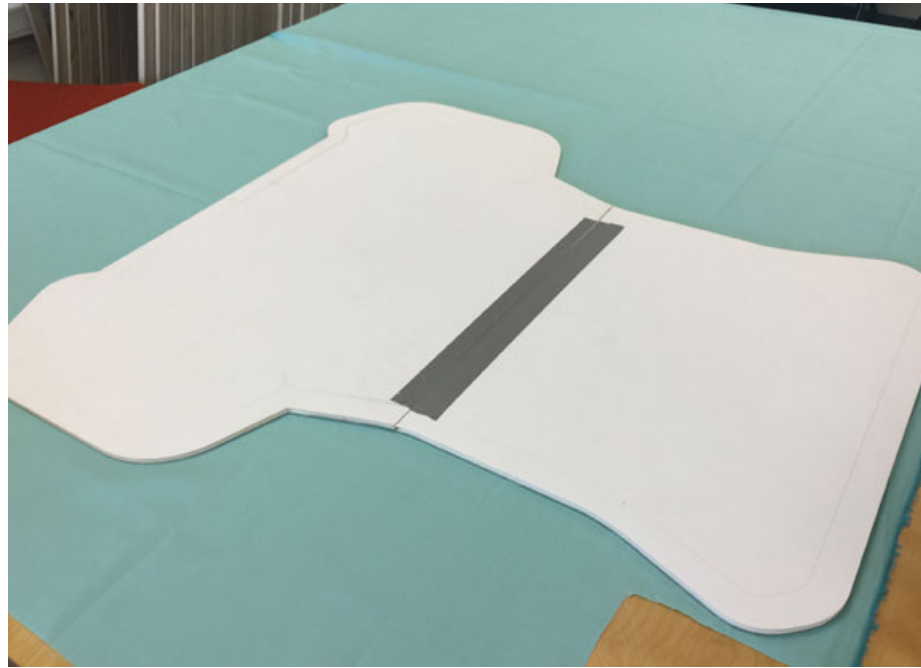
The progression of my experiments led me to look at methods of attaching felt to itself. I wanted to take what I had learned from the B66 Chair and simplify the assembly process to make it as fast and easy as possible to transform from a flat material to a dimensional object.

The solution I arrived at was simple enough - zippers. Or to be exact, one zipper. I found that I could create a chair with the same structural properties as the B66 chair using a single zipper sewn around the perimeter of the felt pattern. With this discovery, The B67 Chair was born.



Explorations in Folding Felt Packet Bags

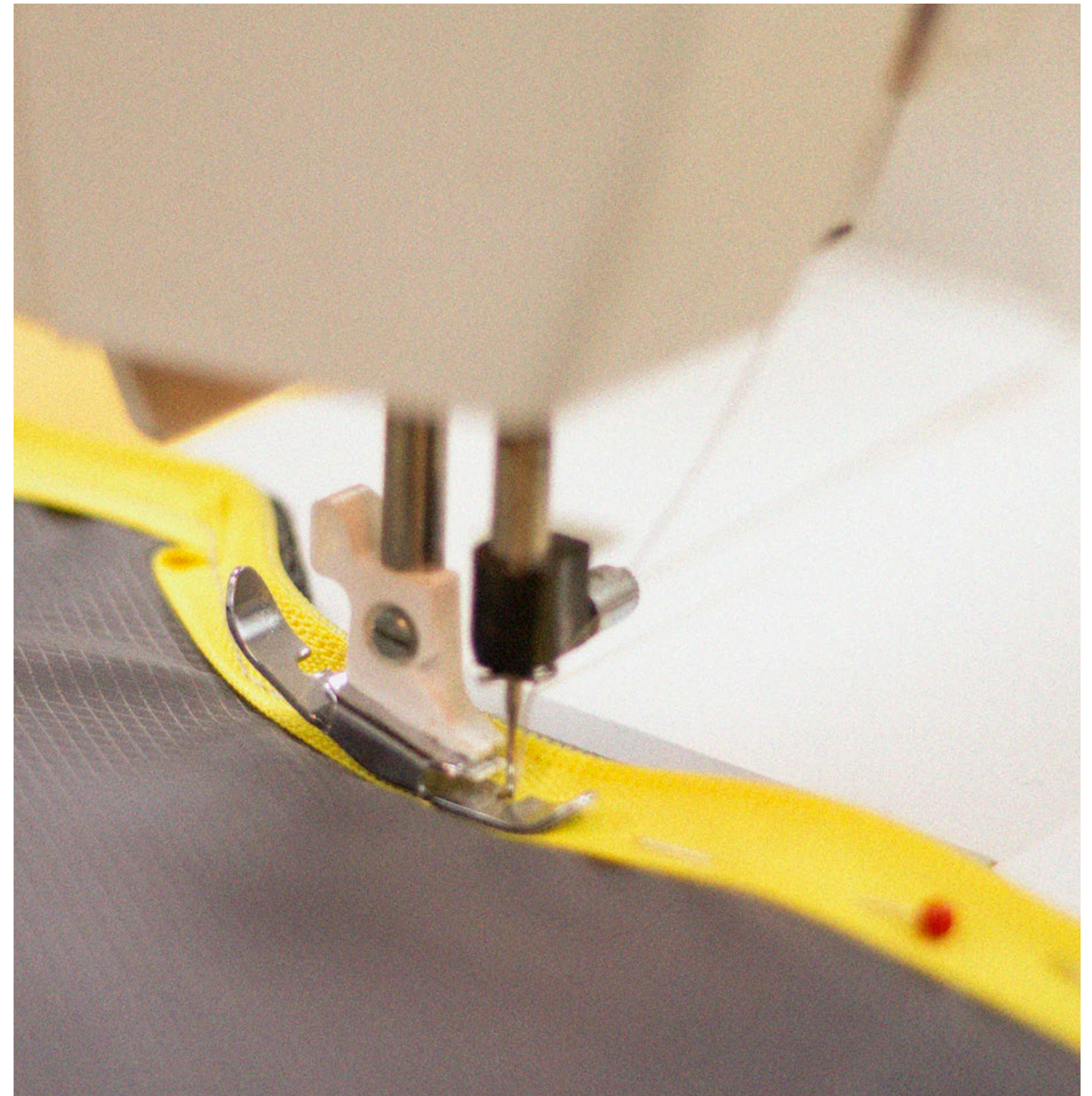
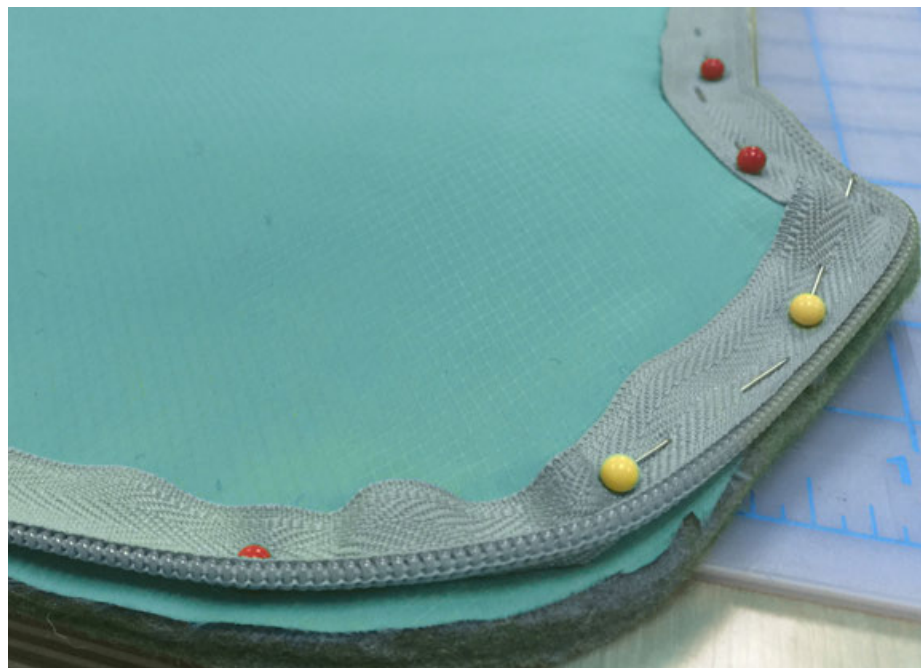
2013-15



5 Intrigued by the possibilities of using zippers to quickly assemble form, I began looking at other ways to apply what I had learned.

I wanted to explore additional functionality that could be found by using a zipper to fold a flat material.

I soon realized that this technique had great potential with bags and backpacks, which already heavily rely on zippers. I could not only simplify the construction of the bag, but could add functionality by allowing multiple sides to be opened, or unfolded completely.



The design process involved over a dozen pattern iterations and prototypes, material testing, sewing, and **lots** of accidental finger pricks before arriving at a direction I was happy with.

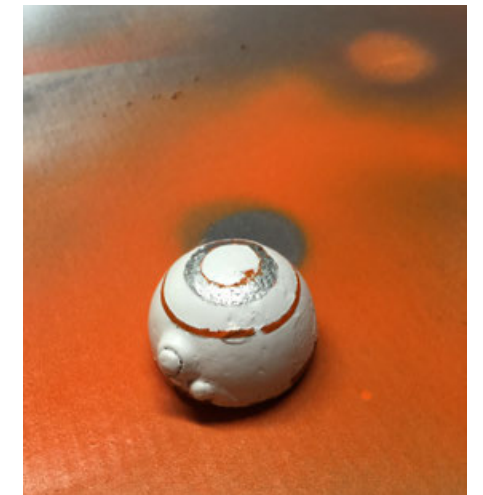
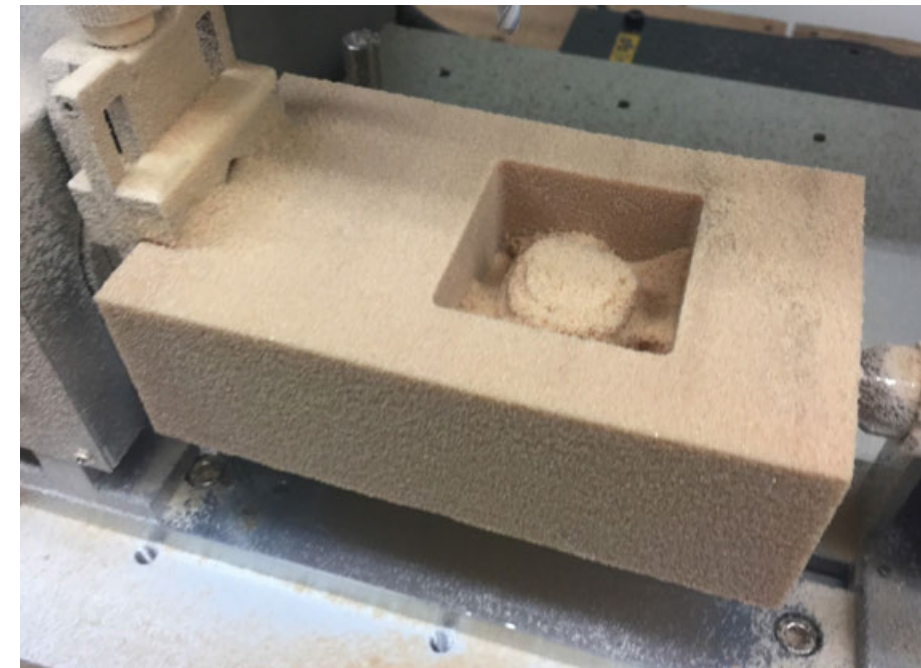
The double zipper pulls allows the bag to be opened from the top, side, bottom, or unfolded completely, and can accommodate a 17" laptop.





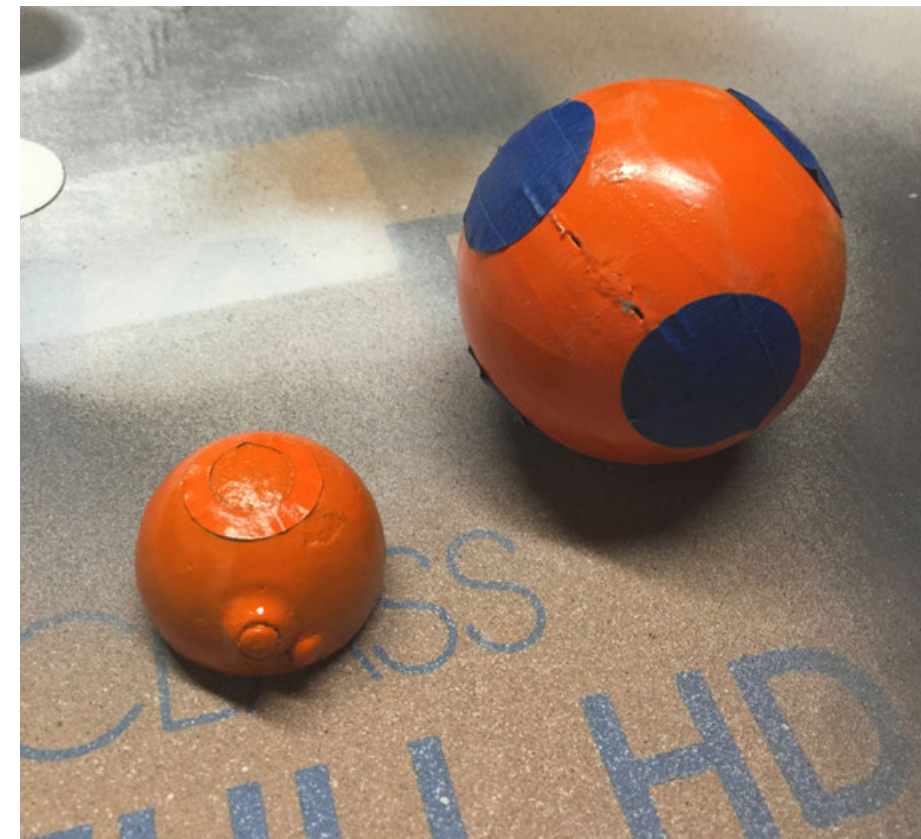


Star Wars D.I.Y. BB-8 Droid



While caught up in the midst of Star Wars Mania as of late, I stumbled into a bit of internet fame when I built a working toy version of the new BB-8 Droid from things I had around the house.

Using a Sphero RC Ball, polyurethane foam, neodymium magnets, and spray paint, I was able to make a little working droid in less than a day.



The head was CNC milled out of foam and surfaced with spackle.

I laser cut shapes to mask off the markings found on the droid in the movie.

Once completed, the robot could be controlled via bluetooth with any iPhone.



After posting a video of the droid on YouTube, I was asked to write a step-by-step guide for Make Magazine. By the following day the article had been picked up by everyone from Wired to Entertainment Weekly. The project also appeared in the print version of Make Magazine, as well as Popular Science.





'Water We Doing?' Reykjavík Harbor



More than 1.2 billion people lack access to clean drinking water. Only 2.5% of the Earth's water is freshwater, of which 68% is inaccessible. As a result, we are seeing a rapidly changing landscape as countries that were once wet become arid and companies attempt to privatize this resource.

Water scarcity impacts all aspects of life, including agriculture, sanitation and health. We are beginning to see an increase of people fleeing their countries for better resources and escaping potential 'water wars.'

Our research lead us to find that 70% of global freshwater is used for food production. So while taking shorter showers will certainly conserve water, we wanted to look at where the biggest impact can be made. In Iceland, food production is comprised largely of the fishing industry and makes up over 1/3 of Iceland's exports. We learned that the water usage in Icelandic fisheries is currently unmonitored (new regulations will be put in place in 2016 to address this.) We also learned that Icelandic fisheries use approximately twice as much water to process fish as other Scandinavian countries, of which roughly 70% is used to clean the facilities.

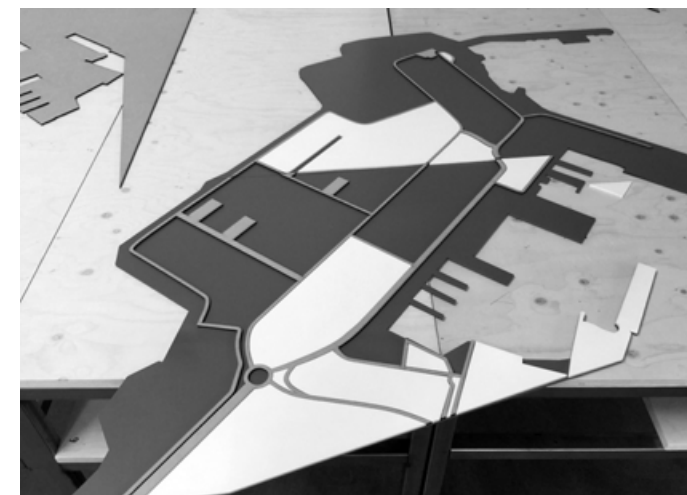
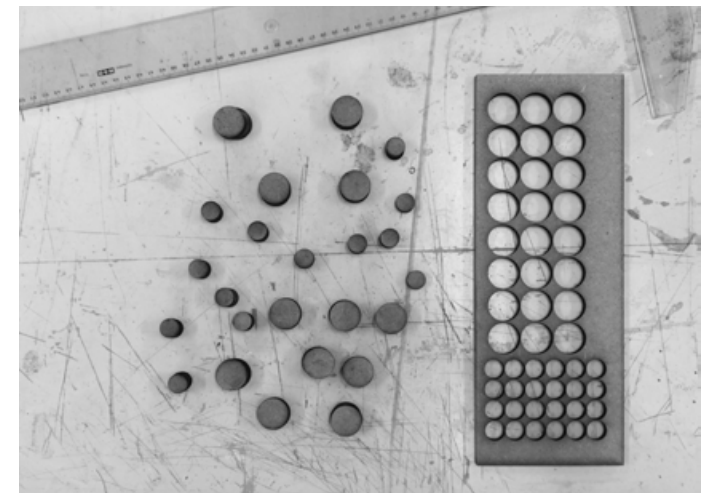
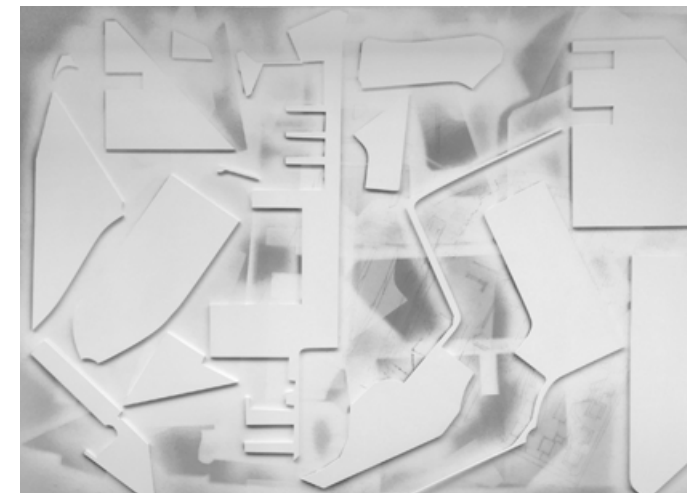
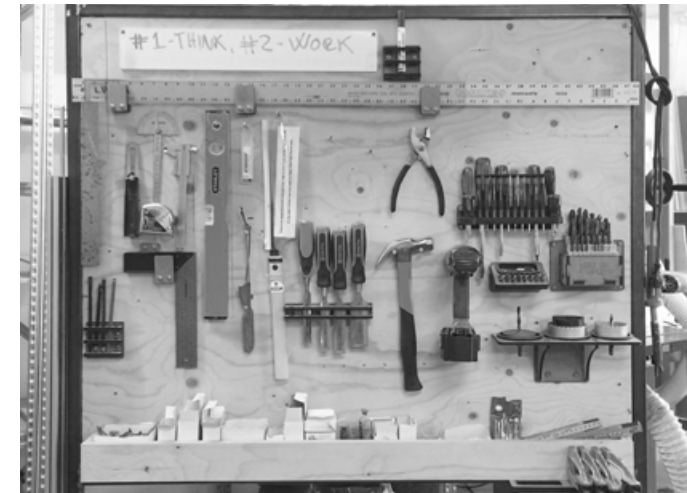


While Iceland currently has the most renewable water per capita in the world, that shouldn't excuse excessive and unsustainable water use. So how might we help address this situation, and bring it to light to those who are stakeholders in this area? One might ask 'Water we doing?'

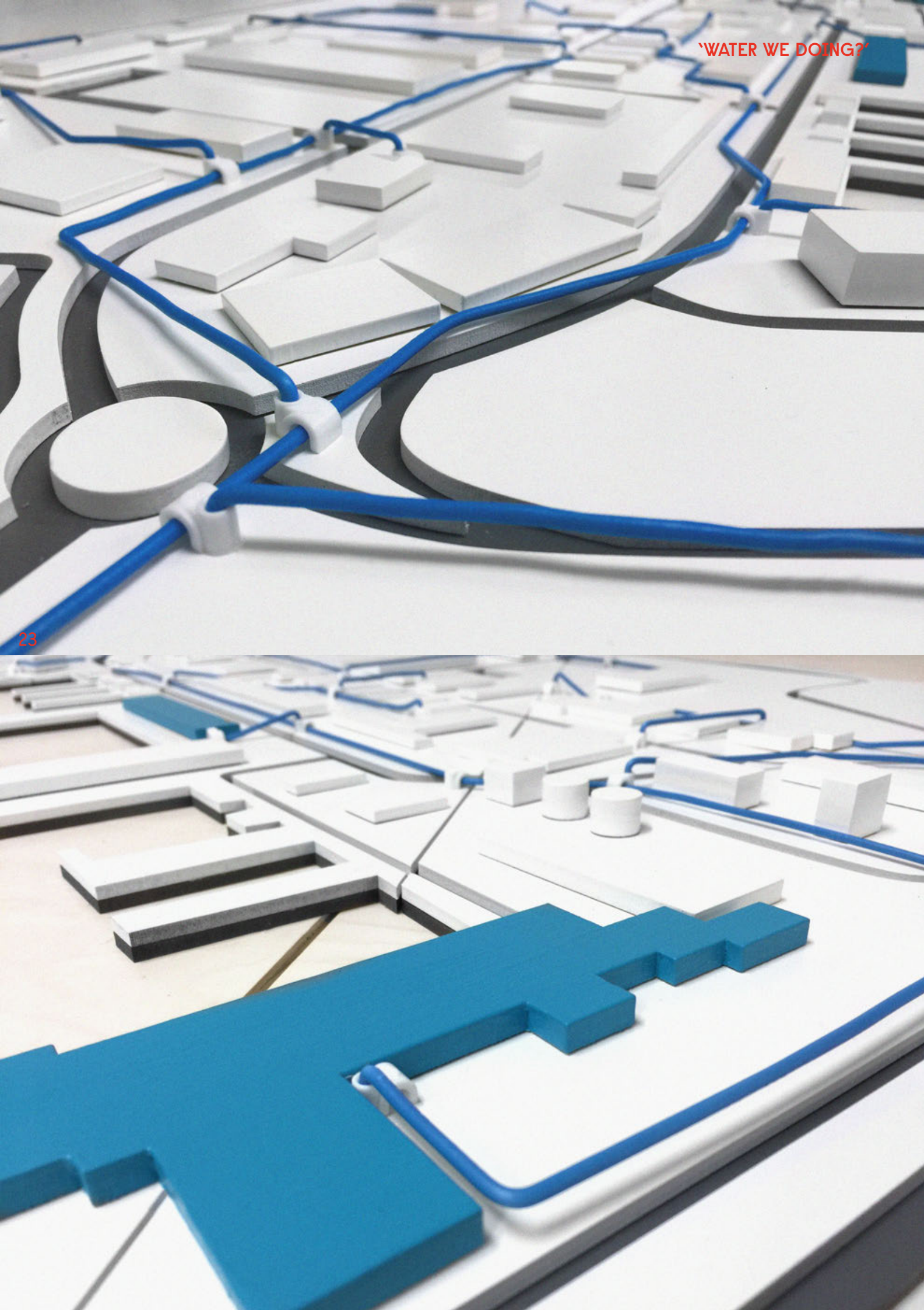
Future Scenario

The Reykjavík Harbor is home to Sjóvarklasinn, or the Ocean Cluster House. This is mixed use space that is home to a wide array of companies whose business ties directly to the local fishing industry.

As a method of prompting conversation about water usage amongst the stakeholders in Sjóvarklasinn, we proposed a scenario wherein the water pipelines would be elevated above ground. By increasing awareness of where our water is coming from and where it is going, we can change the way we think about and treat this valuable resource.



As a conversation prompt around the topic of water conservation, we built a 1:1000 scale model of the Reykjavík Harbor, re-imagining the current underground water pipelines as an above-ground system. We then presented the model, along with our research, to a group of employees at Sjóvarklasinn.



'WATER WE DOING?'

2015



Students

Christian Poulsen

Eusun Pak

Sinéad McCarron

Sölvi Kristjánsson

Mentors

Hlín Helga Guðlaugsdóttir

Massimo Santanicchia

Thomas Edouard Pausz

2013

Goldcoast Longboard Trucks

While working at Hencil, we were asked by GoldCoast Skateboards to design a new set of longboard trucks to replace their current line of Century Trucks.

My task was to maintain the existing truck geometry, while updating the form to match Goldcoast's aesthetic vision. I was provided with reference images for inspiration, and also used the designs of their decks to inform the design.



Original Goldcoast truck to be phased out.



The client provided us with inspiration images.





CNC milled full scale prototypes to ensure correct proportion, geometry and component fit.

Century C80 Longboard Truck

\$25.00

COLOR
White ▾

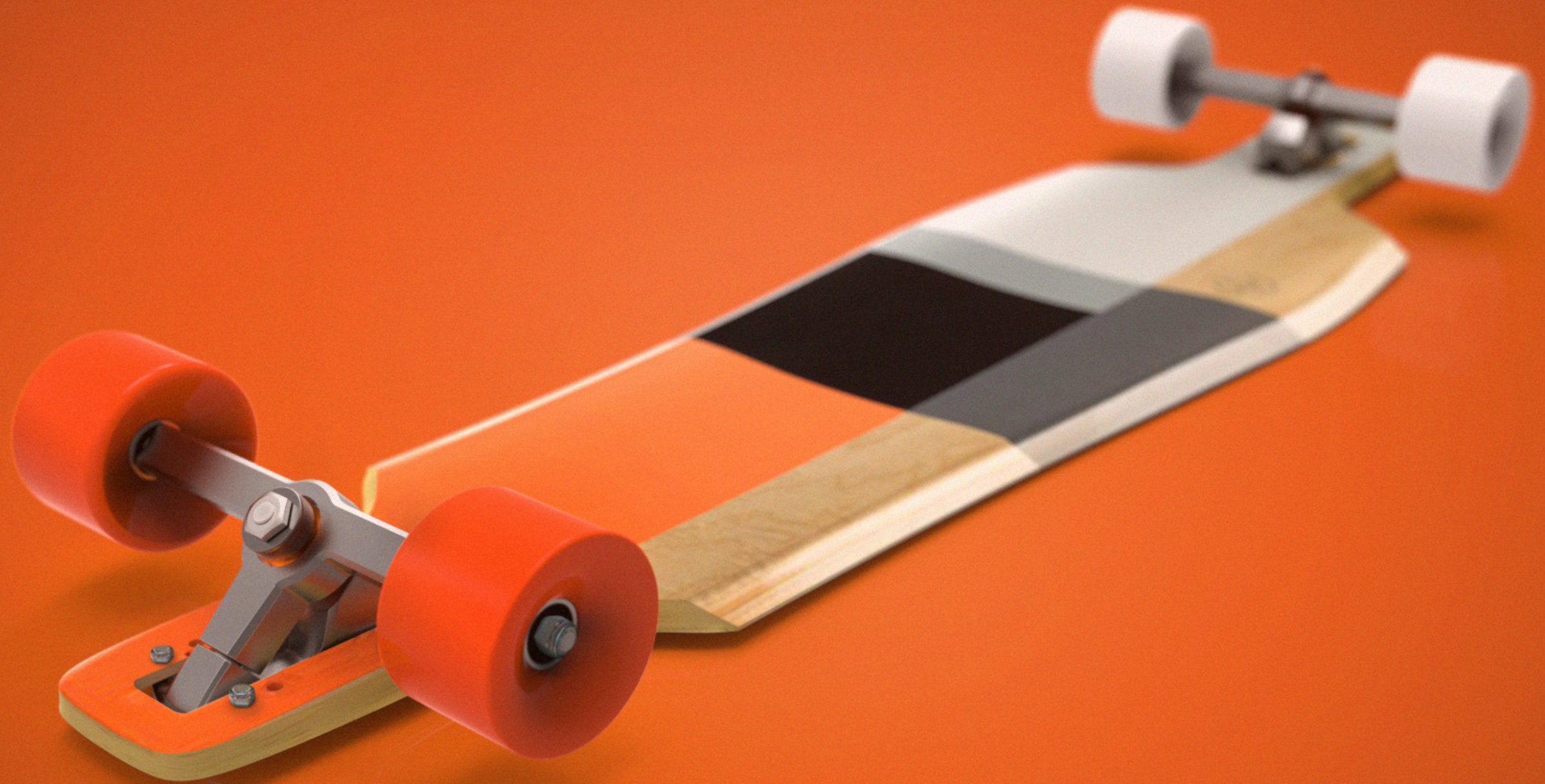
PA_ ▾

- -8mm Diameter Carbon Steel Axle
- -Grade 8, Carbon Steel Kingpin, Press Fit Kingpin
- -9/16" Silver Kingpin Nut
- -Silver Flat "Amish" Washer
- -15mm Tall Barrel Bushing, 86A Hardness
- -86A Hardness Pivot Bushing
- -SHR Formula Bushings (Anti-yellowing)

Description Additional Information Reviews (0)

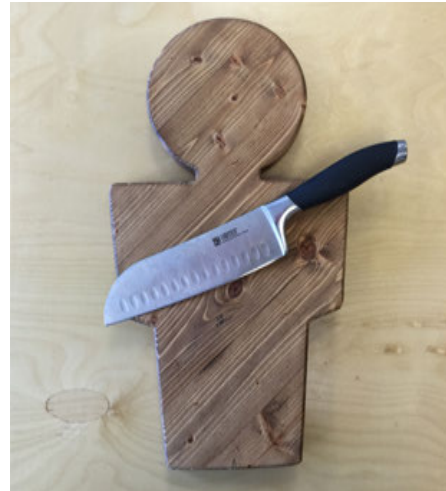
Completely redesigned and manufactured to the highest standards, the new C80 Reverse Pivot Longboard Truck from Century sets the bar for performance and design. Gravity cast from virgin aerospace aluminum, the truck has integrated axle spacers, counterbored hardware holes and a symmetrical 50 degree hanger that can be flipped easily for more even wheel wear. Double barrel, ultra high rebound urethane bushings give you predictablke and responsive turns every time. The Century C80 longboard truck is the new standard by which all other cast trucks can be measured. There's nothing like the turn of the Century.

The production version for sale on the Goldcoast website.



I began my senior thesis project by doing extensive research into the psychology and anthropology of personification and anthropomorphism – how and why humans are hardwired to perceive human-like traits in non-human subjects.

I became particularly interested in the emotional attachments that we often develop towards inanimate objects we interact with and wanted to use personification to draw attention to this phenomenon.



ally or unintentionally, we regard our possessions as parts of ourselves. As Tuan argues, "Our fragile sense of self needs support, and this we get by having and possessing things because, to a large degree, **we are what we have and possess**" (1980, p. 472). That we are what we have (e.g., Van Esterick 1986; Feirstein 1986; Rosenbaum 1977) is perhaps the most basic readiness to such situations.

Another instance in which nonvoluntary loss of possessions may bring about a diminished sense of self is when possessions are lost to theft or casualty. **In the case of burglary victims, Rosenblatt, Walsh, and Jackson (1976) suggest that a process of grief and mourning may follow the discovery of theft, just as one might grieve and mourn the death of a loved one who had been a part of one's life. What is lost in both cases may be a part of self.** As the college student victim of a bicycle theft accuses the unknown thief, she reveals the identity invested in the bike (Donner 1985, p. 31).

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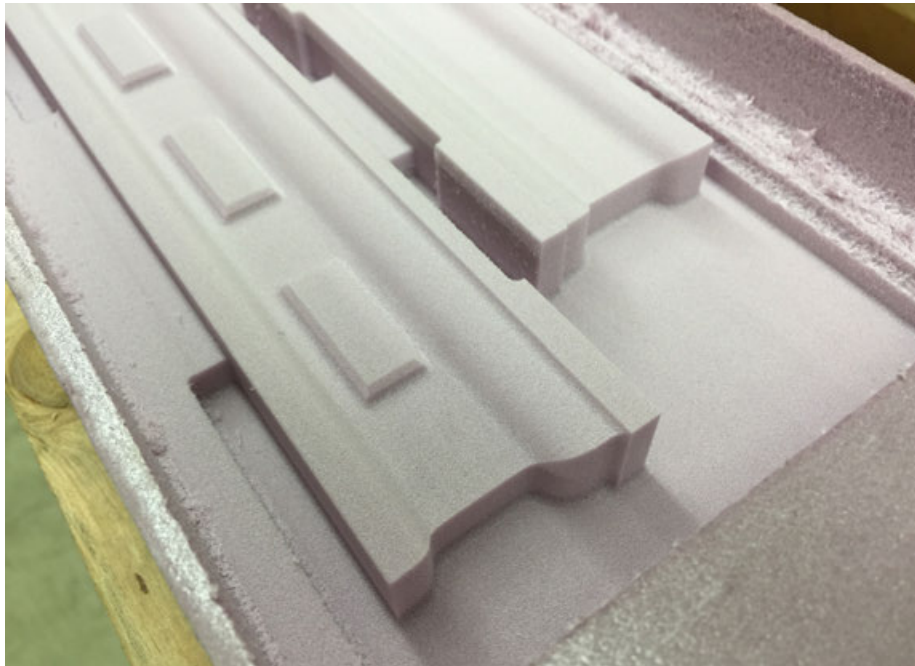
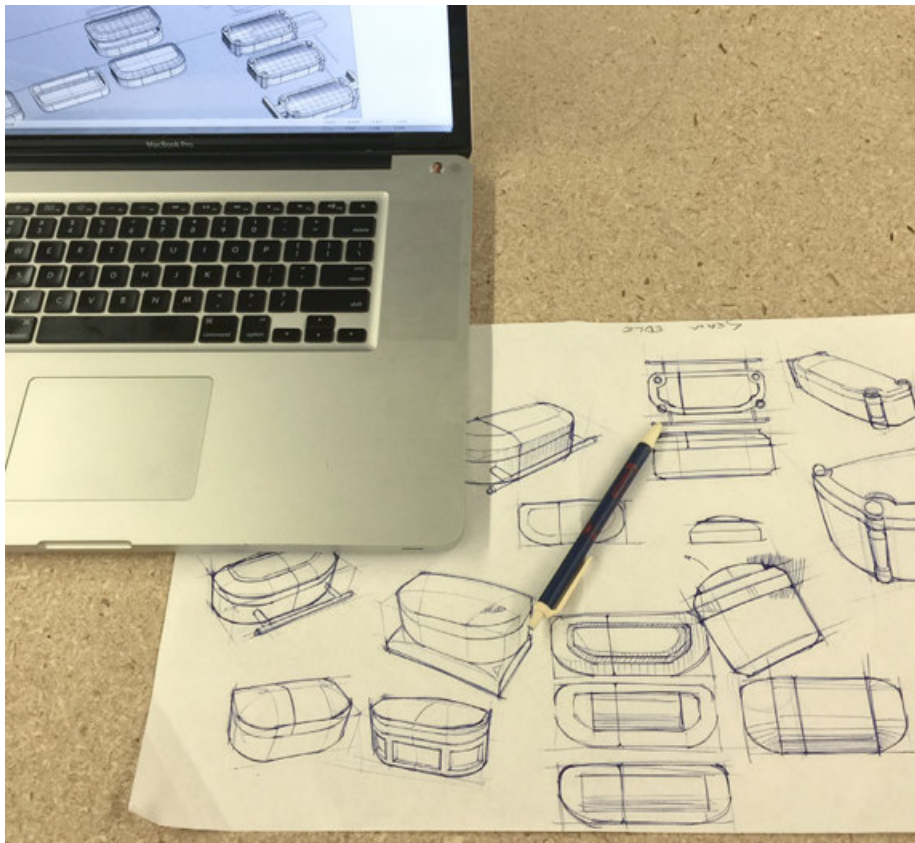
My initial research and explorations centered primarily on the use of anthropomorphism to illicit strong emotional reactions to objects. I wanted to understand what attributes have the most impact on effectively conveying human emotions.

What I found in my research as well as my own observations was that the less literal the human-like features in an object, the more anthropomorphic it seemed to be. This led me to explore the idea of personification through metaphor to evoke emotions.

I also looked at the psychology behind emotional attachment, loss, and how that extends beyond humans to the objects that surround us.

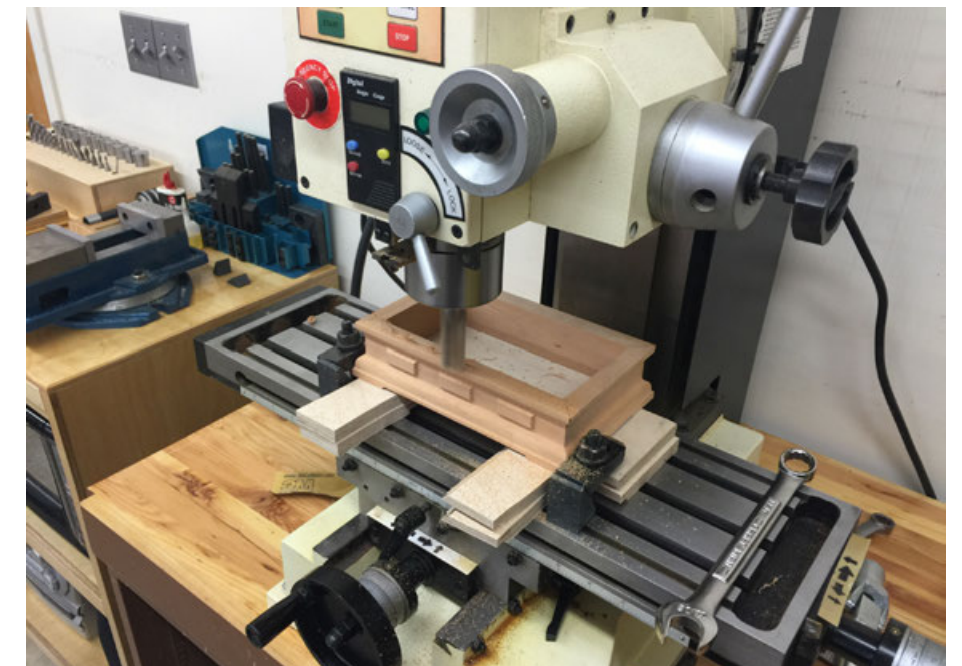
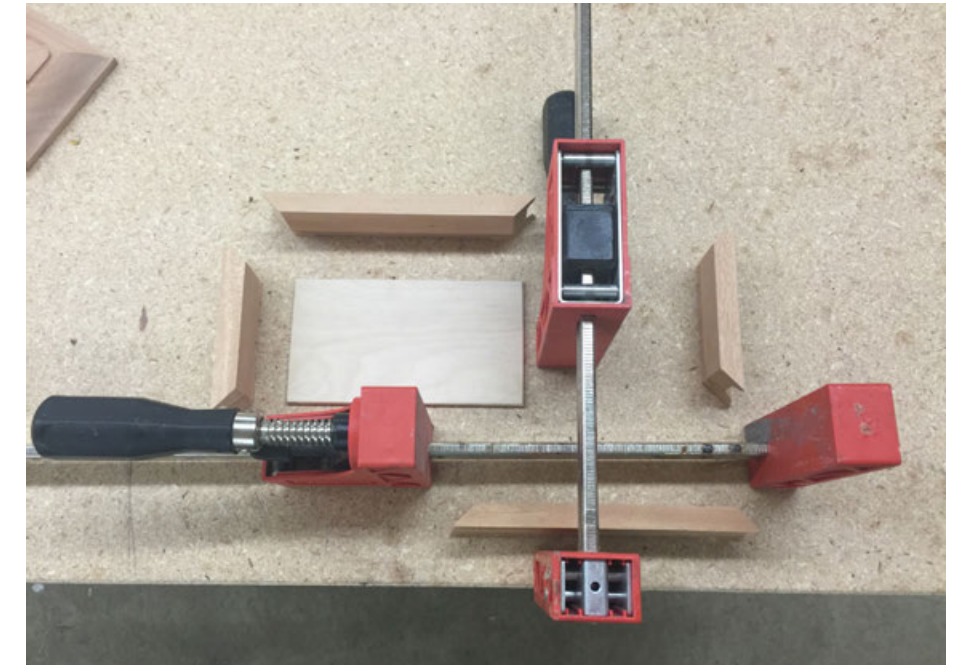
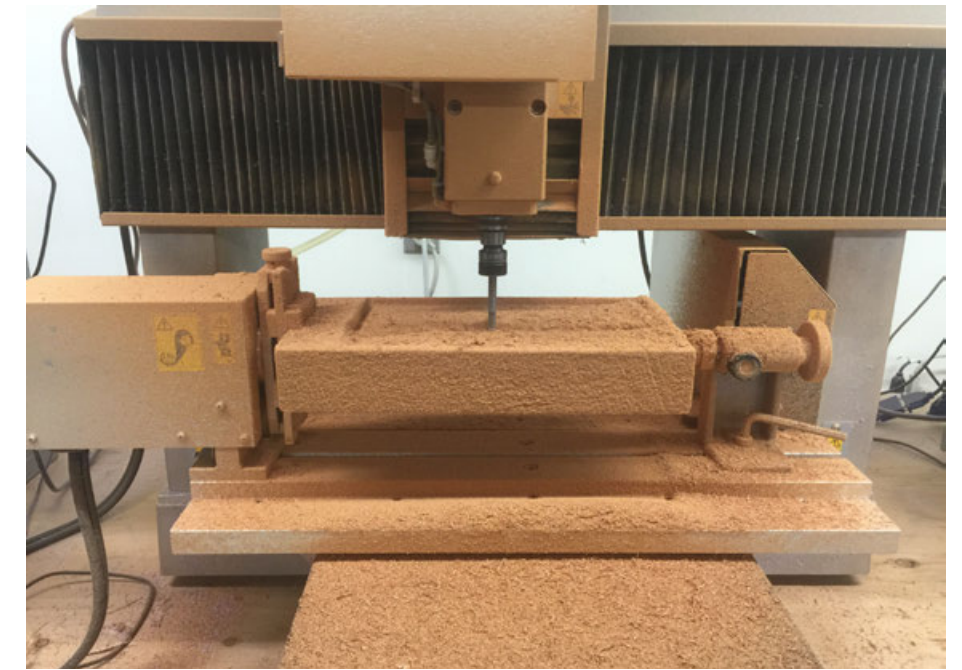
Early experiments in using anthropomorphism to illicit a strong emotional reaction.

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From this research and exploration came the idea for Rebox - a series of funeral caskets made specifically for the things we love when they have passed away/broken/become obsolete.

Building the caskets meant diving into the art of woodworking, as well as learning about the funeral industry. I had to identify the different hardwoods that not only could be worked and finished well at a scale smaller than traditional cabinetry, but that denote various levels of value.



The phenomenon of the 'unboxing ceremony' has become a common practice and is somewhat representational of the birth of a product. Eventually, the lifecycle of all products will end, so I am providing a way to 'rebox' the things we love, to help us cope with loss by honoring the life of these products.





Caskets for phones, glasses, and watches are available in a variety of materials including Honduran Mahogany, Walnut, and Curly Maple.



Work Experience

WASATCH DESIGN COLLECTIVE INDUSTRIAL DESIGNER

Dec 2013–April 2015

- Used origami and other folding techniques to develop a series of furniture pieces.
- Designed website and print material, and managed all social media.
- As a collective we displayed our work in multiple international design shows including Clerkenwell Design Week in London and DesignMarch in Reykjavik.

HENCIL

INDUSTRIAL DESIGNER

Jan–Dec 2013, Jan 2014–Present (contracting)

- Worked on client projects for companies such as Goldcoast Skateboards and Wicked Audio.
- Interfaced directly with factories and clients daily.
- Assisted in designing the studio space and branding.

SKETCH LAB

TEACHER/TUTOR

Oct 2014–April 2015

- Selected by BYU ID faculty to run the Sketch Lab, a weekly supplemental drawing class open to all industrial design students.
- Taught digital and analog sketching techniques to a wide range of skill levels.

CINCO DESIGN OFFICE INDUSTRIAL DESIGN INTERN

June–Aug 2014

- Worked on a wide variety of products for companies such as Nixon, Poler and Union Bindings.
- Taught workshops on using Keyshot VR as well as using the Silhouette Paper Cutter.
- Worked alongside product and brand teams on an innovative retail fixture system.

SPROUT KIDS

INDUSTRIAL DESIGN INTERN

Dec 2012–Apr 2013

- Explored potential product concepts for a new childrens' furniture line.
- Developed graphics that have been applied to many of their products.
- Designed and prototyped furniture that has been put into production.

Recognition

IDSA

STUDENT MERIT AWARD WINNER

April 2015

Selected to represent BYU at the IDSA Western District Conference in San Jose.

DESIGNMARCH

HARPA SHOW

March 2015

- Displayed my work at the 2015 DesignMarch Festival in Reykjavik, Iceland.
- Assisted in the design and setup of our exhibit in the Harpa Concert Hall.

ADOBE MAX 2014

ADOBE LINE CONTENT CREATION

Oct 2014

- Worked with Adobe's creative team to create sketches that would highlight upcoming features being announced for Adobe Line on the iPad.
- Images were used for promotional purposes as demo images at Adobe MAX and in tutorials.

CLERKENWELL DESIGN WEEK

PLATFORM SHOW

May 2014

- Displayed a collection of furniture pieces in the Platform Show at CDW 2014 in London, England.
- Interviewed by ICON Magazine about our exhibit. <http://bit.ly/103BiCL>

Education

LISTAHÁSKÓLI ÍSLANDS MA DESIGN

2015–Present

BRIGHAM YOUNG UNIVERSITY BFA INDUSTRIAL DESIGN

2009–2015

Design Proficiencies

- Adobe Creative Suite
- Rhinoceros (incl. T-Splines, V-Ray)
- Solidworks
- Keyshot (incl. VR)
- Rapid Prototyping
- Model Making
- Sketching (Digital/Analog)
- Origami