

D'VAN HOWARD
INDUSTRIAL DESIGN



Hi, I'm D'Van

I'm a 5th year Industrial Design student from the University of Cincinnati with a degree in Mechanical Engineering from the University of Kentucky

Between prototyping, realistic concepts, and communicating with non-designers in various companies, I've found so many opportunities to utilize my cross-disciplinary experience. I believe that it's where design meets engineering, that true innovation can be discovered.

D'VAN HOWARD

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dvanhoward.com

EDUCATION

University of Cincinnati

BS in Industrial Design | Class of 2020

Tama Art University, Tokyo, Japan

Product Design Exchange Student | Fall 2018

University of Kentucky

BS in Mechanical Engineering | Class of 2014

Pamplona Learning Spanish Institute, Spain

Renewable Energies Study Abroad | Summer 2013

INVOLVEMENT

Design For America Team Lead / Studio Lead
2016 - 2018

UC Honors Program 2015 - 2019

Ethicon ENCORE Award Recipient 2017

UK Habitat For Humanity Club President 2013 -
2014

EXPERIENCE

39A Design | Cincinnati, OH

Junior Designer/CTO (Fall 2019)

Interacting directly with clients to transform their ideas or technology into a marketable concept. Creating graphics and presentations for grant proposals. Research, project planning, creating concepts, client reviews and updates. Internally for 39A, updating and managing website, various social media (LinkedIn, FB, GoogleMaps, Insta), office tech support as problems arised.

Cramer Inc | Kansas City, MO

Design Co-op (Spring 2019)

Part of small R&D team developing Helix chair and other upcoming line. Participating in weekly scrum planning, concept development, CAD development, prototyping, and testing of chairs. Working back and forth between shop and office when needed.

DePuy Synthes, Johnson&Johnson | Raynham, MA

Design Co-op (Summer 2018)

Worked with team on presentation illustrations, user research, and concept development. Cintiq sketching, UI/UX, prototyping concepts. Lead design of personal project, printing prototypes, and presented concept to engineers.

Ethicon, Johnson&Johnson | Blue Ash, OH

Design Co-op (Fall 2017)

Supporting designers with concept development and research implementation. Sketching, ideating, Keyshot, InDesign, prototyping concepts. Presenting ideas in small meetings. Working with other J&J employees on various projects.

Nottingham Spirk | Cleveland, OH

Design Intern (Spring 2017)

Sketching, ideating, prototyping concepts. Presenting concepts in small meetings. Working with shop workers to develop prototypes.

NACCO Materials Handling | Greenville, NC

Design Engineer (Dec 2014 - Aug 2015)

Constructing and modifying component models of forklift trucks for specialty batch orders. Provided engineering support to manufacturing line.

Toyota Motor Manufacturing | Georgetown, KY

Paint Specialist Co-op (Summer 2012)

Redesigned a prototype moon-roof installation component on manufacturing line. Designed and began development on new dolly to reduce strength required to push car frame.

SKILLS

Digital | Solidworks, Rhino 3D, Fusion 360, KeyShot, Sketchbook Pro, Procreate, Adobe Creative Cloud (Photoshop, Illustrator, InDesign), HTML, Wix Design, Microsoft Office (Word, PowerPoint, Excel)

Soft Skills | Adaptability, Troubleshooting, Analytical/Strategic Thinking, Empathy, User Experience, Mechanical Prototyping, User Interviewing, Human Centered Design, Leadership, Ideation, Scrum Planning, Systems Design, Spanish (Intermediate), Japanese (Intermediate)

Hard Skills | Sketching, Parametric Modeling, Surface Modeling, Prototyping, 3D Printing (FDM & SLA), Laser Cutting, CNC Machining, Digital Sketching, UI/UX Design, Mechanical Minded, Woodshop, Soldering, Hand Sewing

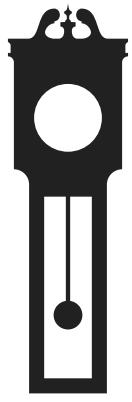
LIKES

Problem Solving, Science Fiction, Podcasts, Ultimate Frisbee, Learning New Skills, 3D Printing, Pizza Making, Craft Beer, Food, Superheroes, Board Games, Bowling, Cooking, Hot Sauces

Pendulumen

Modernizing Traditional Elements





How Can We Modernize The Grandfather Clock?

Trend Timeline



The Grandfather Clock at it's time was a statue symbol



Electricity allowed us to make time more compact



Lifestyle and technology meet and made time personal



Computers are making our older traditions outdated



How will our growing technology shape the future time piece?

| tradition



| modernization

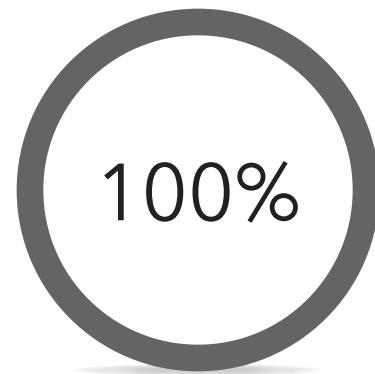
Noticing that the grandfather clock was replaced by technology, I realized that this would be the way to bring it back into the home.

There is a growing trend in the desire for "smart" objects in our environment, so this seemed to be the perfect pairing for this sentimental home device.

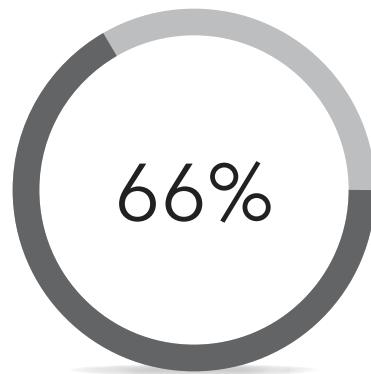
Keyfindings:

Smart Assistant Use and Clock Survey

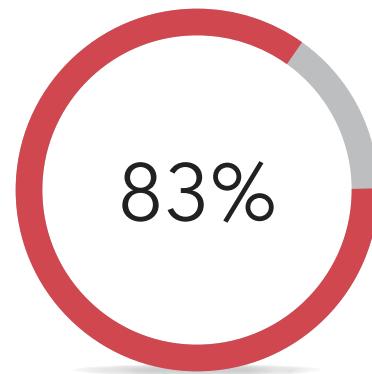
Survey size of 12 smart assistant owners via Google Form



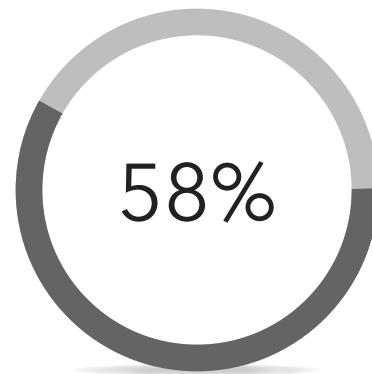
Own Smart Phones



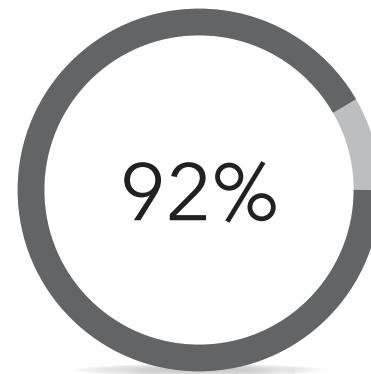
Use Calendar Apps



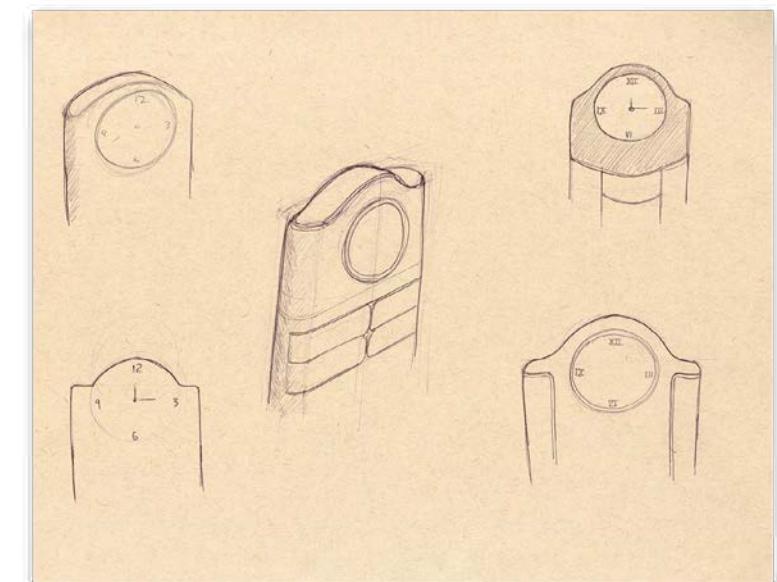
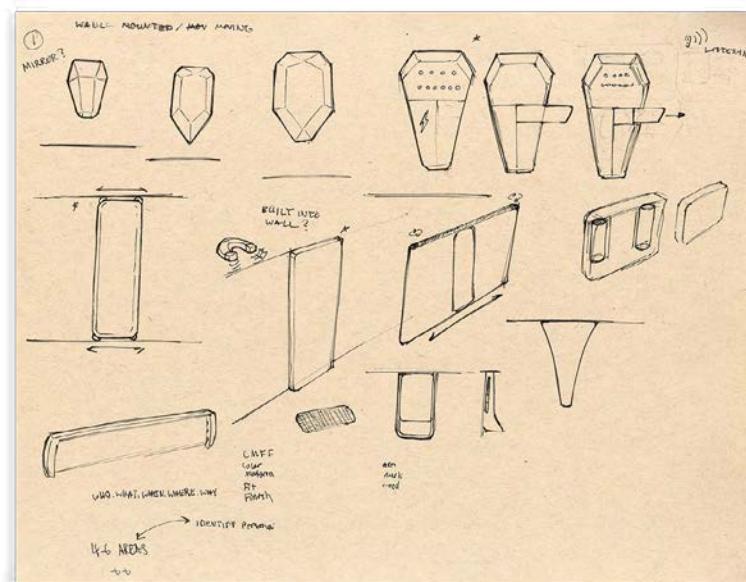
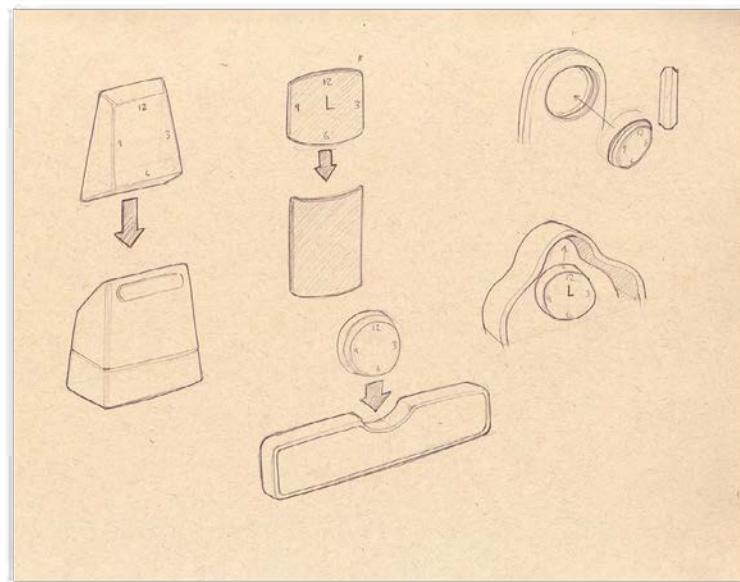
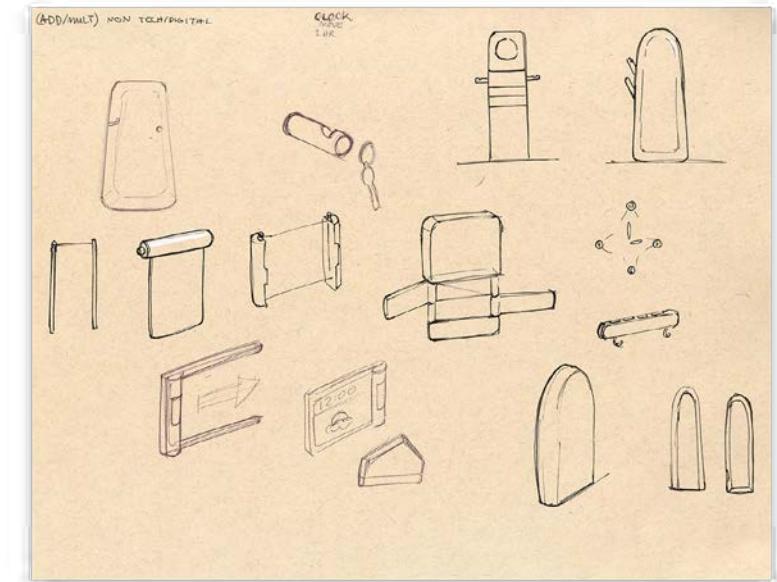
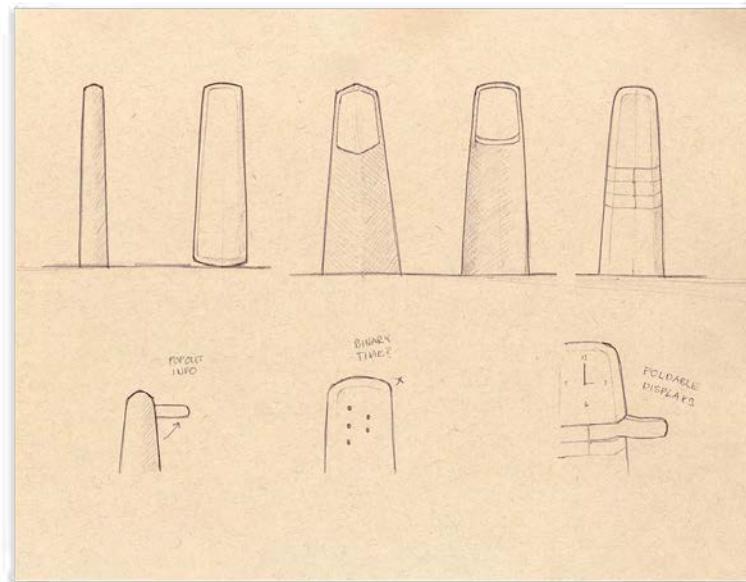
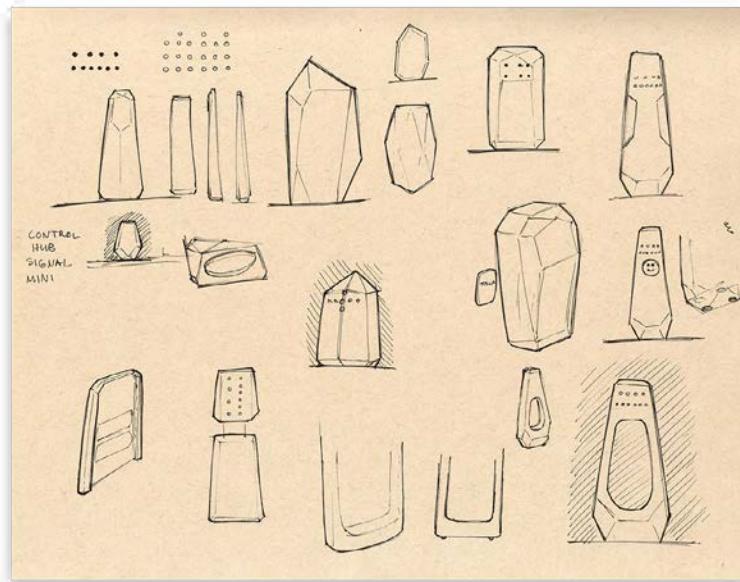
Don't Check Schedule With
Smart Home Assistant



Own Wall Clocks

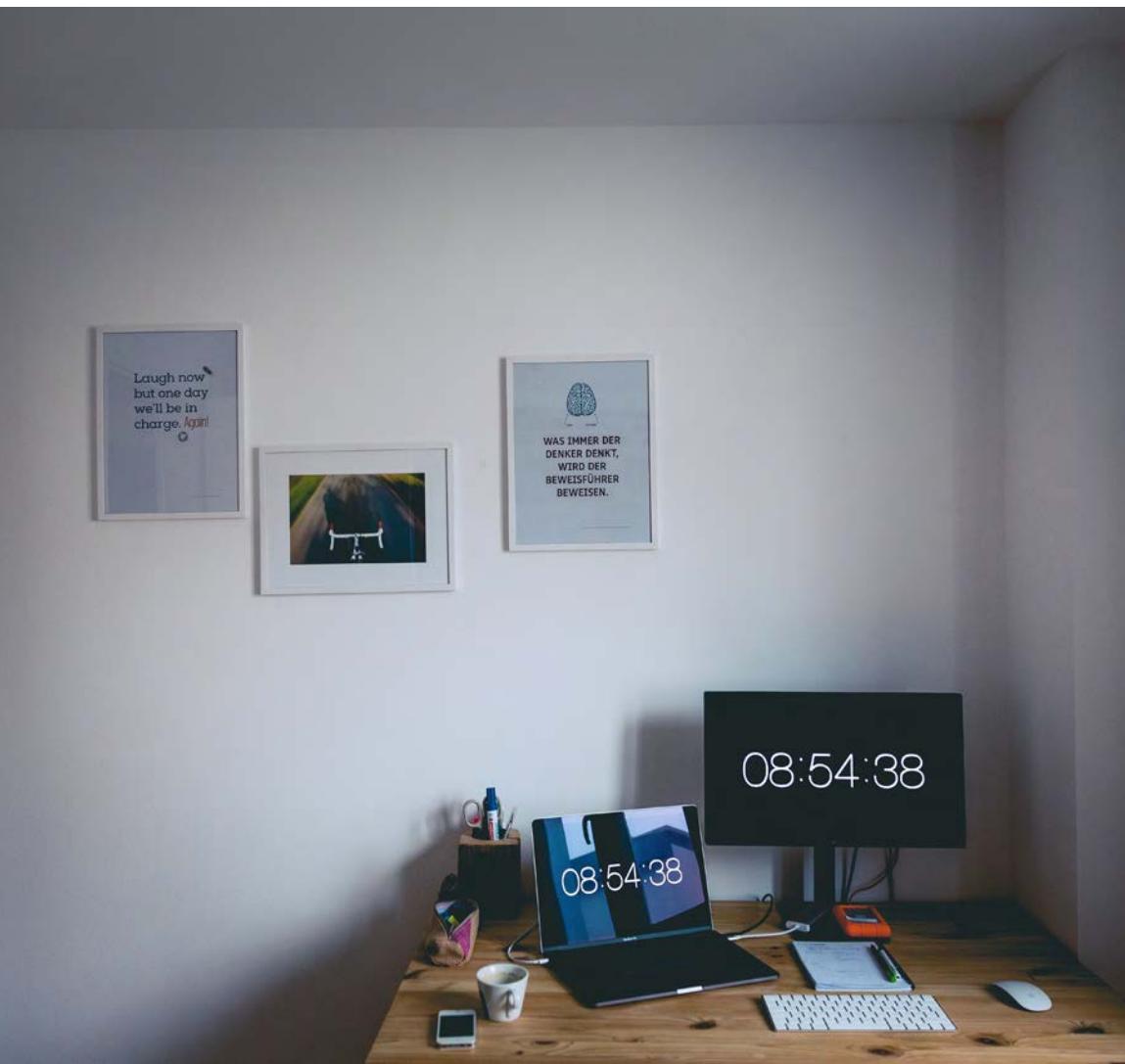


Prefer Quiet Notifications



| brainstorm sketches

Using the research I brainstormed on modern functions and technology that could rejuvenate the grandfather clock



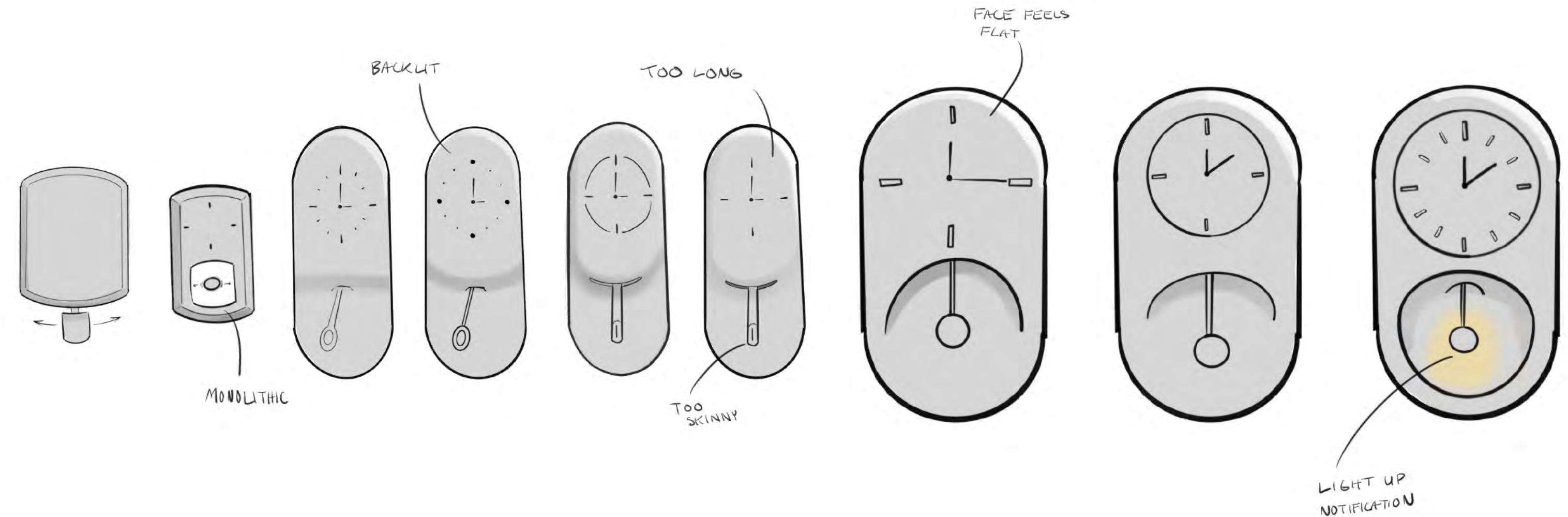
Through research and observation it became apparent that the grandfather clock would not fit in the current workspace of users

The pendulum was the main component that made it possible, so I pivoted to using the pendulum clock as the focus

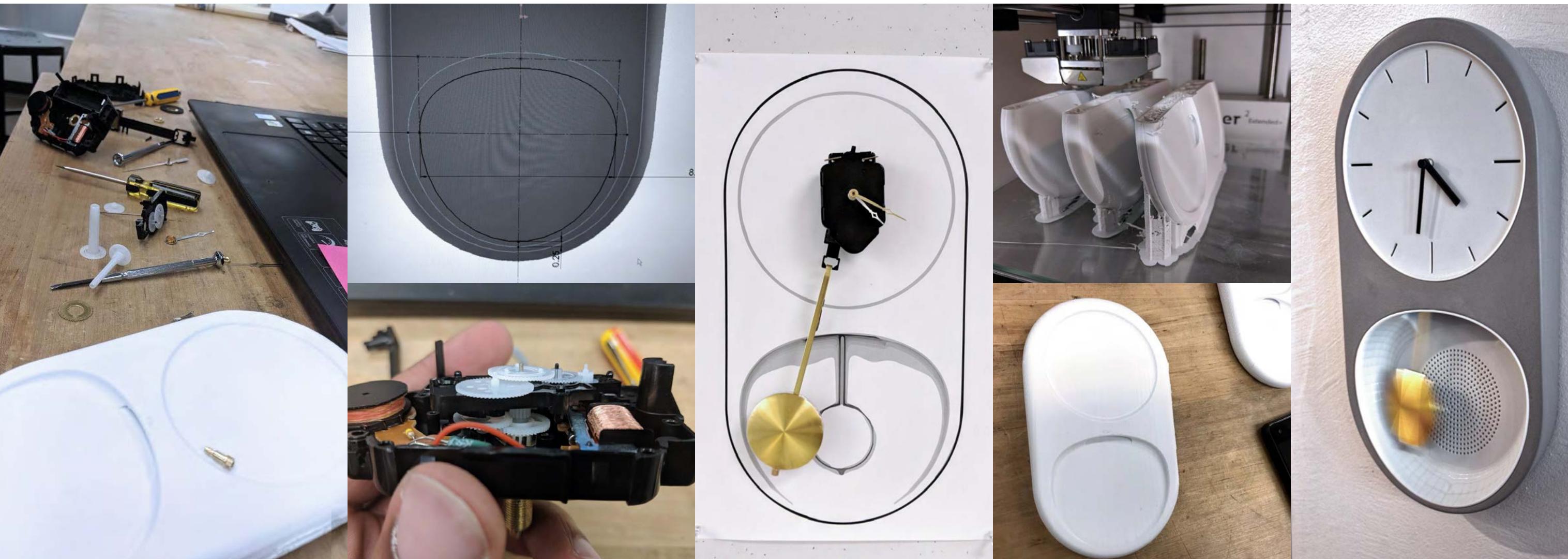
| pivot



| analogous inspiration



| concept



| prototyping

PENDULUMEN

SMART HOME ASSISTANT





NOTIFICATION PENDULUM

The swinging pendulum glows to remind you of your scheduled events

REPAIRABLE

The internals are easily accessible through the back panel, making repairs and updates easy for the user



PENDULUMEN

Designed and Manufactured
in Louisville, Kentucky

CE

PENDULUMEN

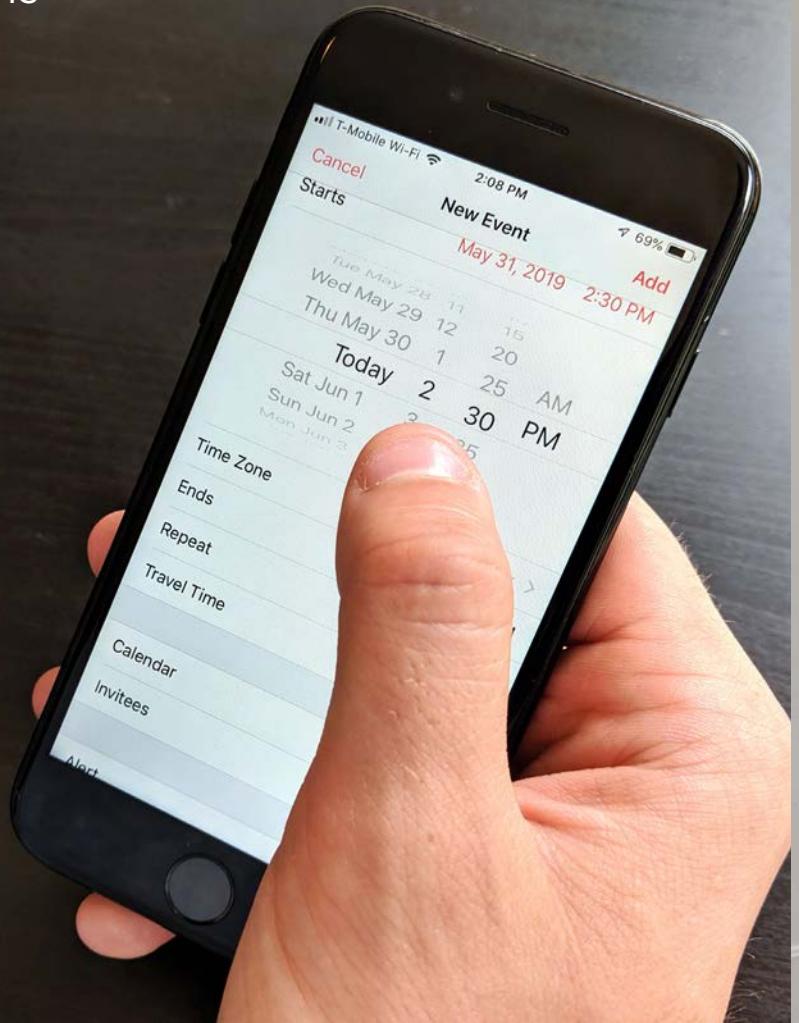
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in Louisville, Kentucky

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CE



make plans



remember



enjoy



| notification pendulum



SHADE

Eliminating Distractions While Working

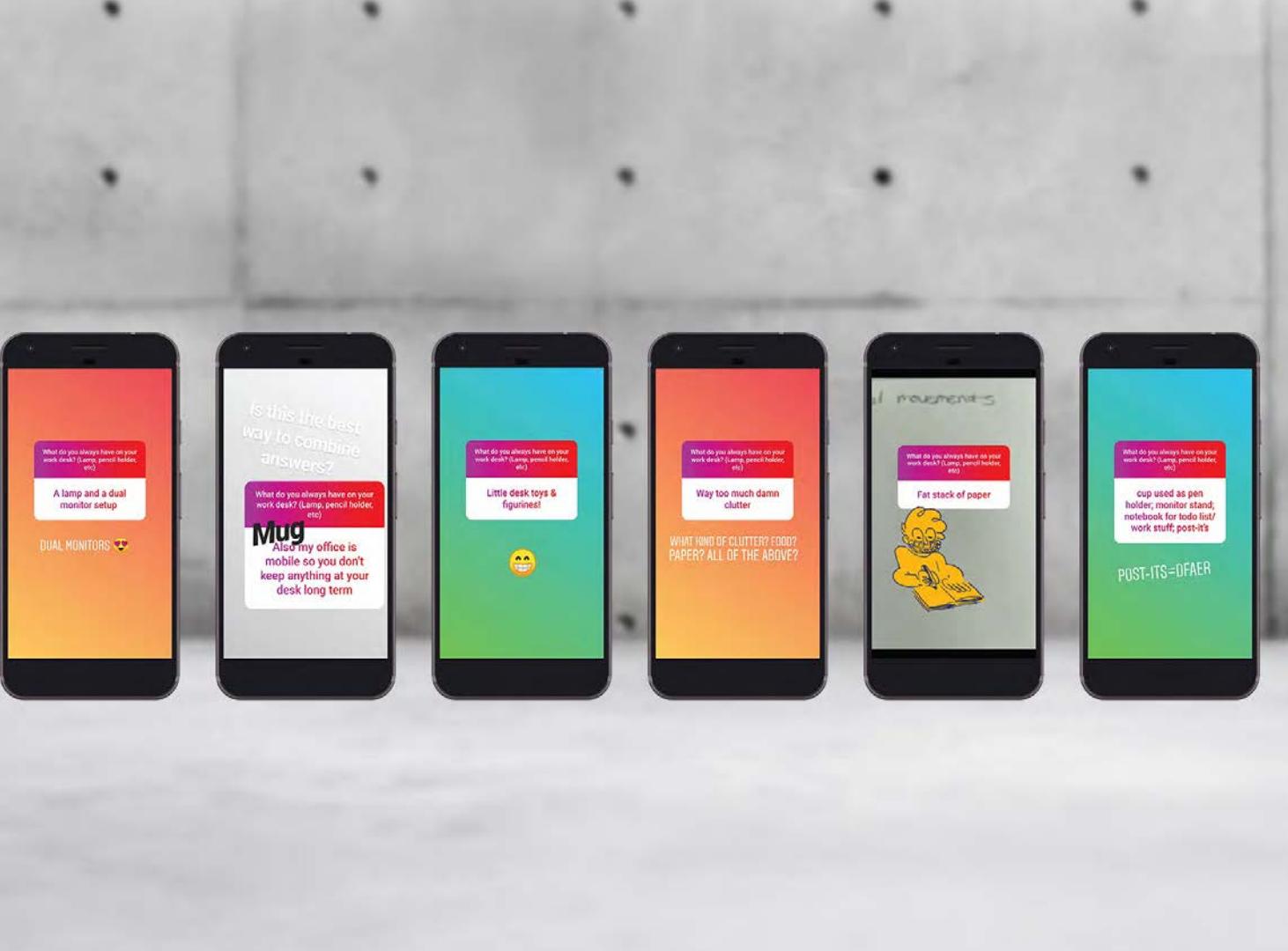
Tama Art University Exchange



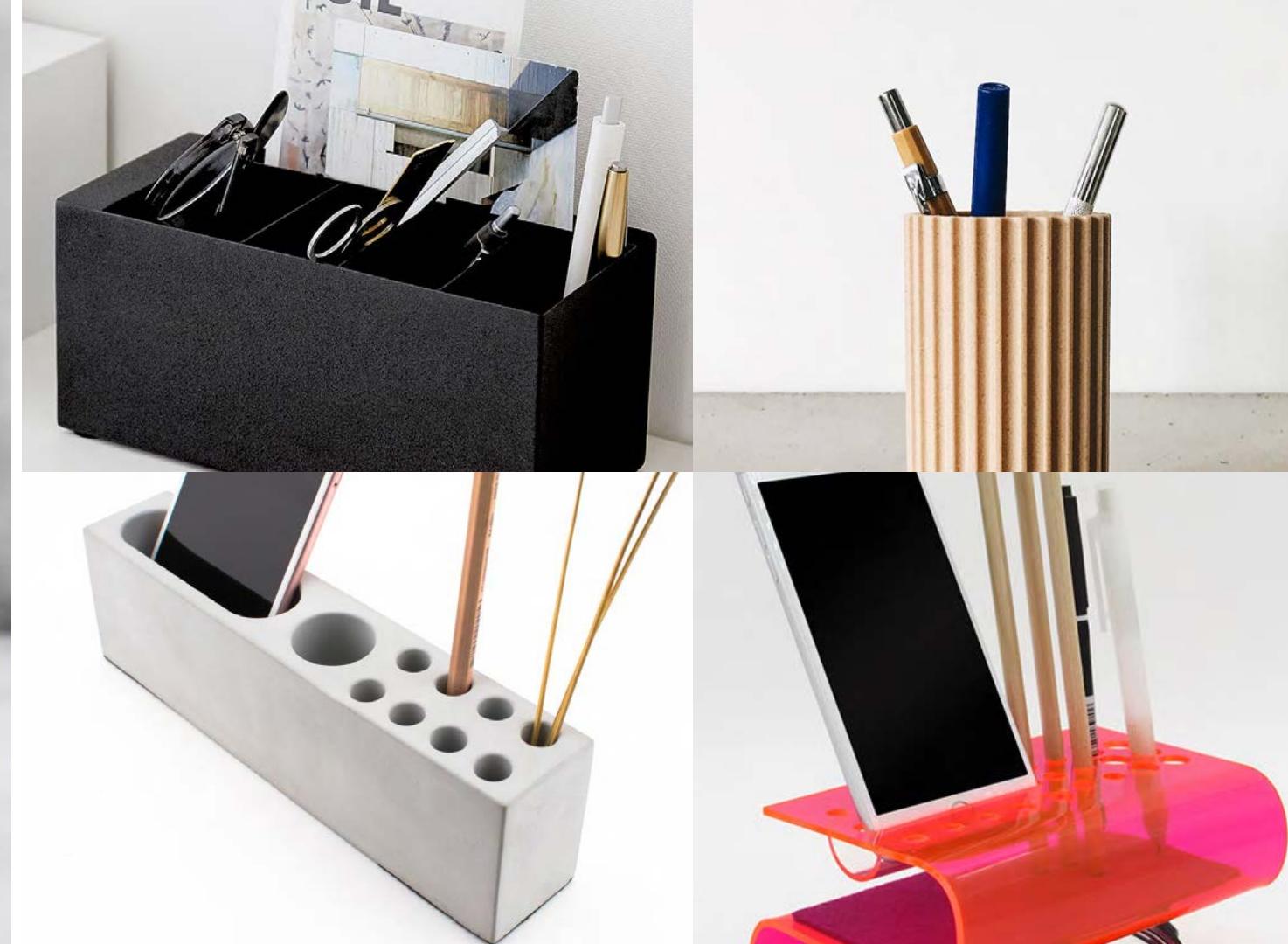
| constant companion

Smart-phones give us access to all the knowledge the world has to offer,
but all this brain stimulation content makes it hard for you to stay away.

The brain stimulating effects of smart-phones harm us most while we are
hard at work.

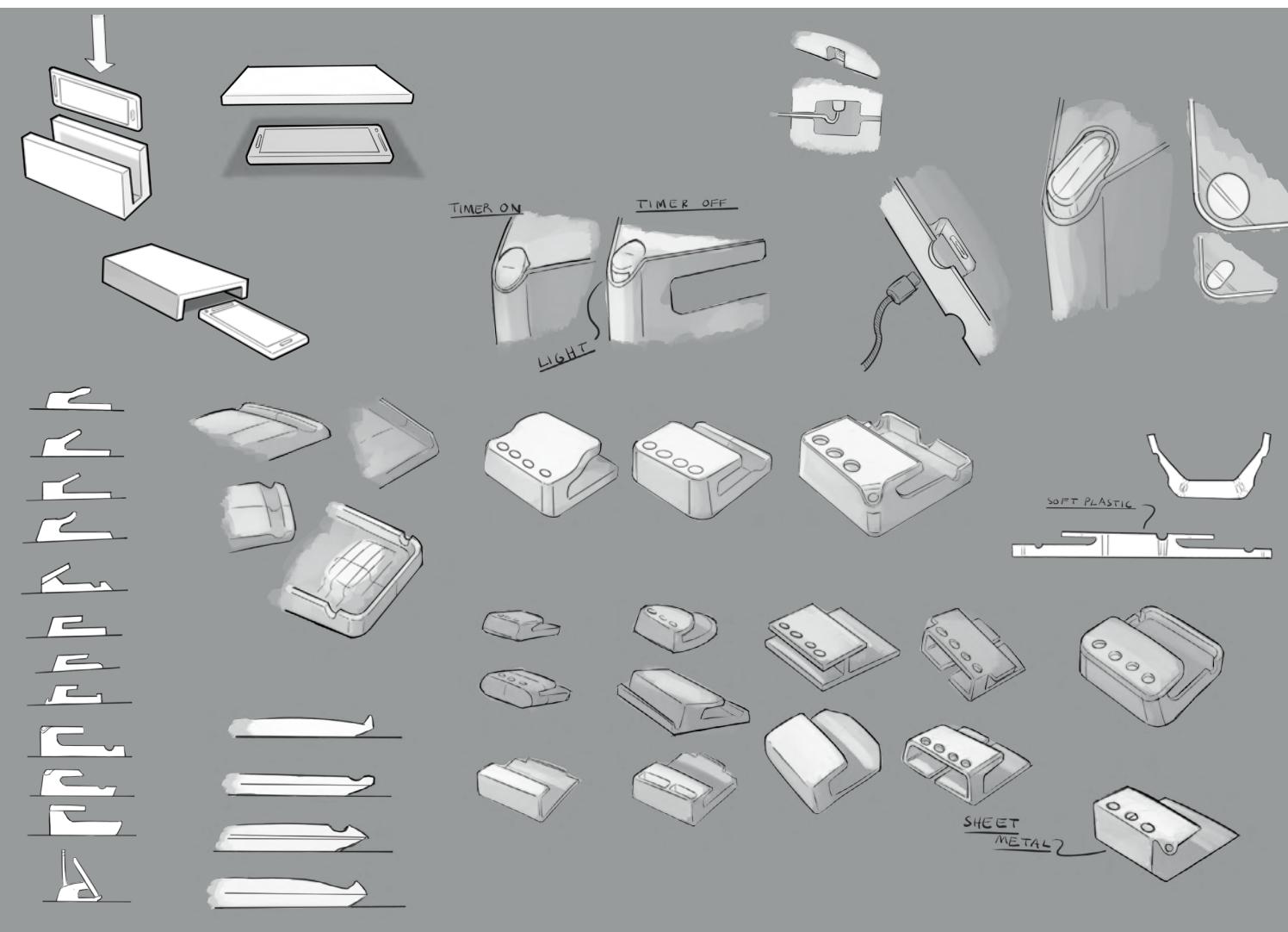


| research

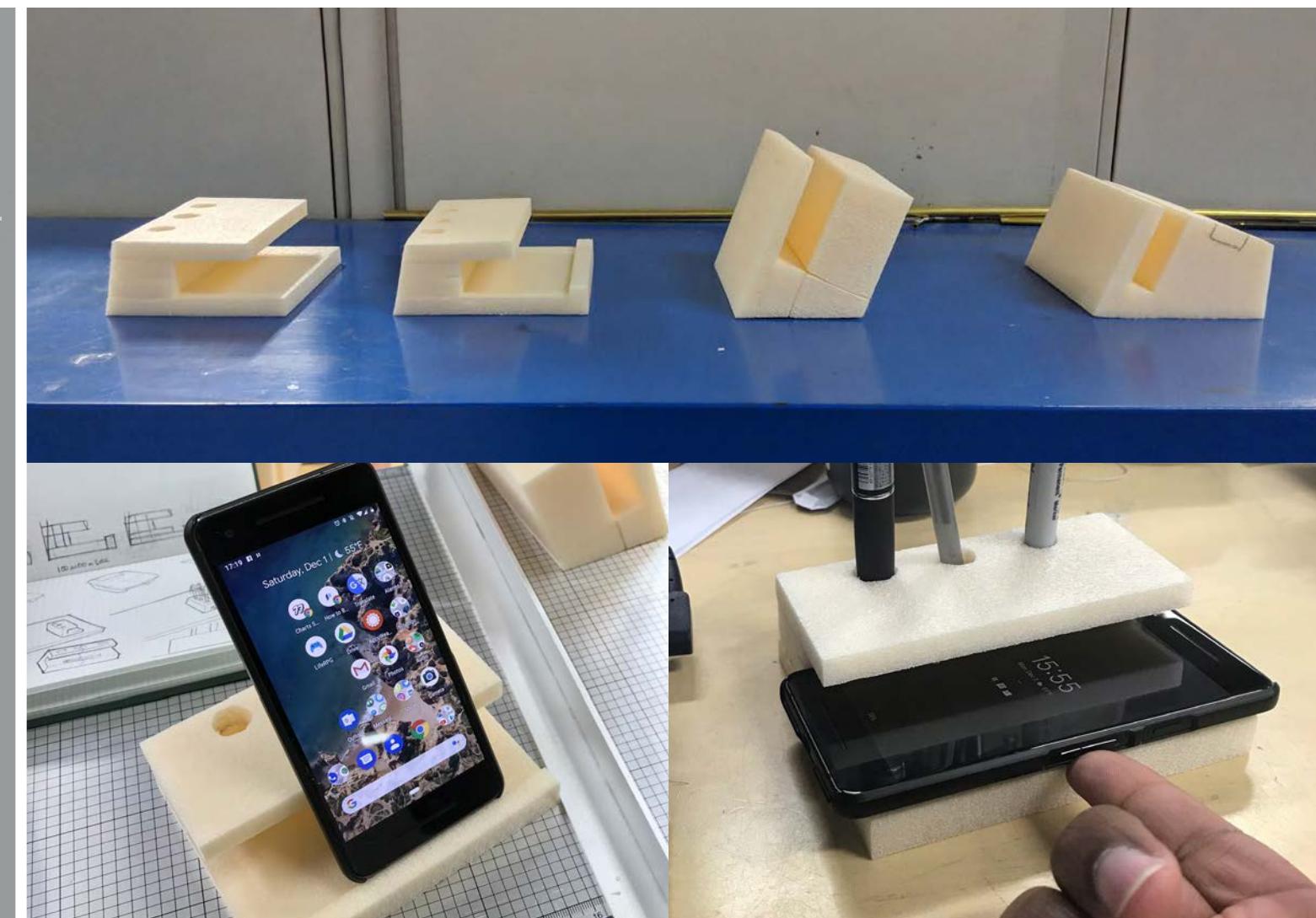


With smartphone users being my target market, Instagram worked well to obtain research.

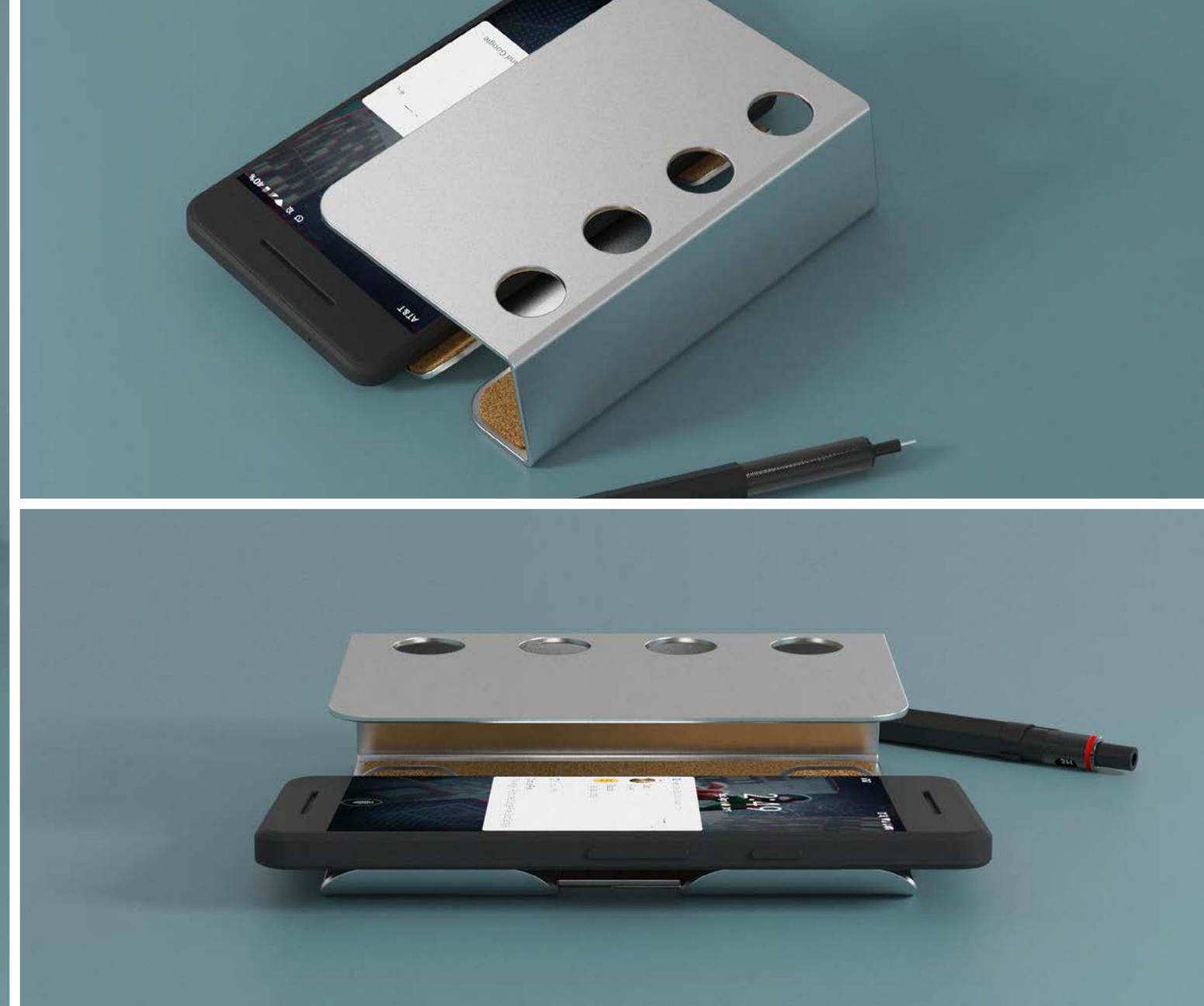
Looking at the market of desk accessories, current smartphones products all prioritize screen visibility. For those wishing to decrease their screen time, this can be detrimental.

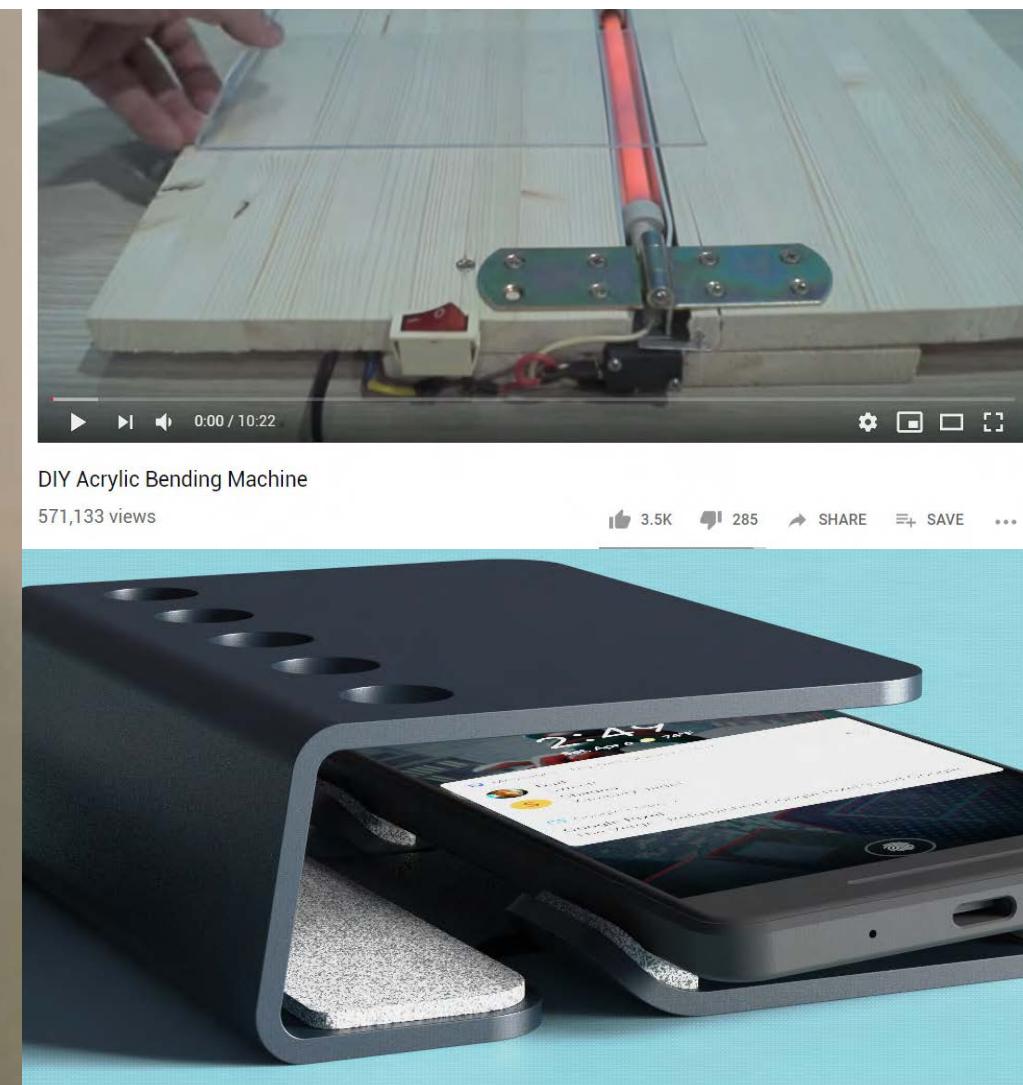
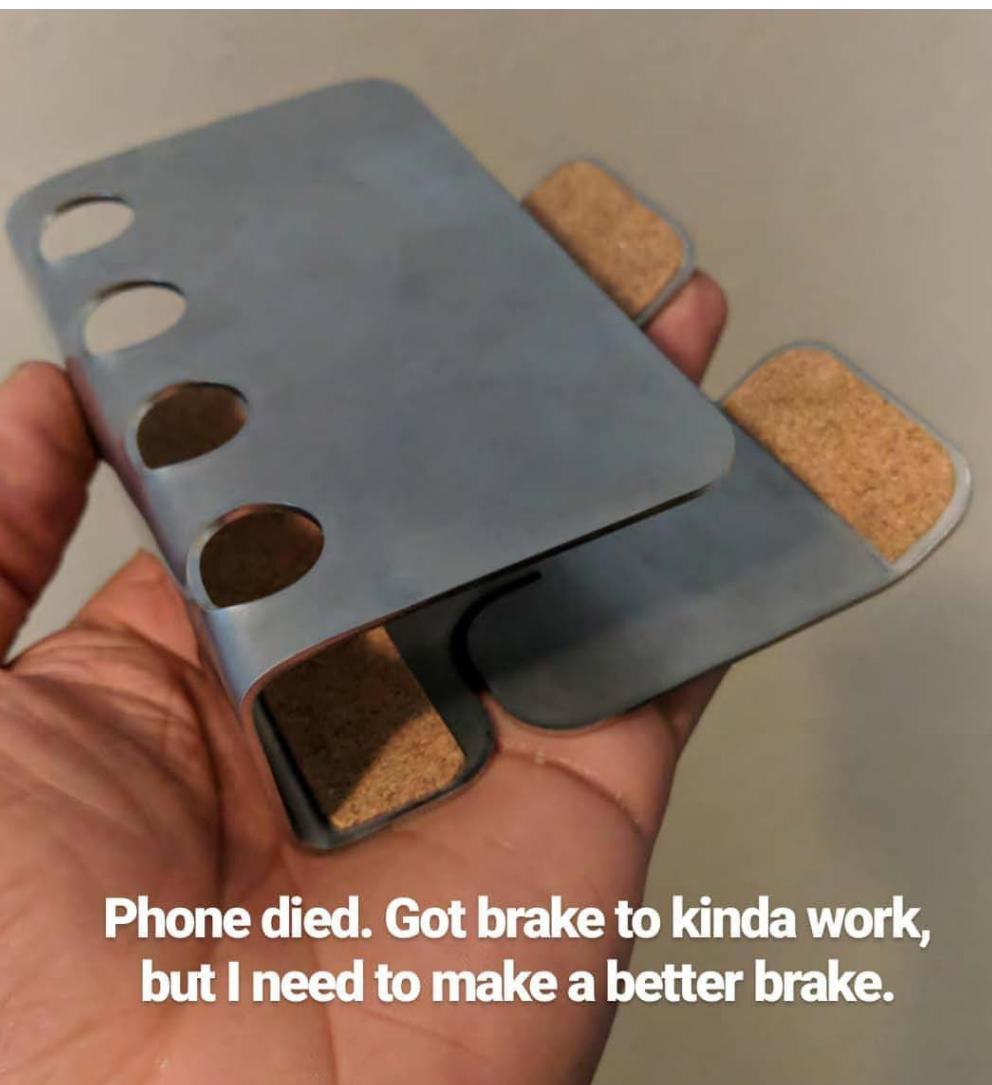


| sketches & form exploration



Along with sketching, physical prototyping was important to understand the interactions and understanding how the phone can be both blocked from your view while also being accessible when needed.





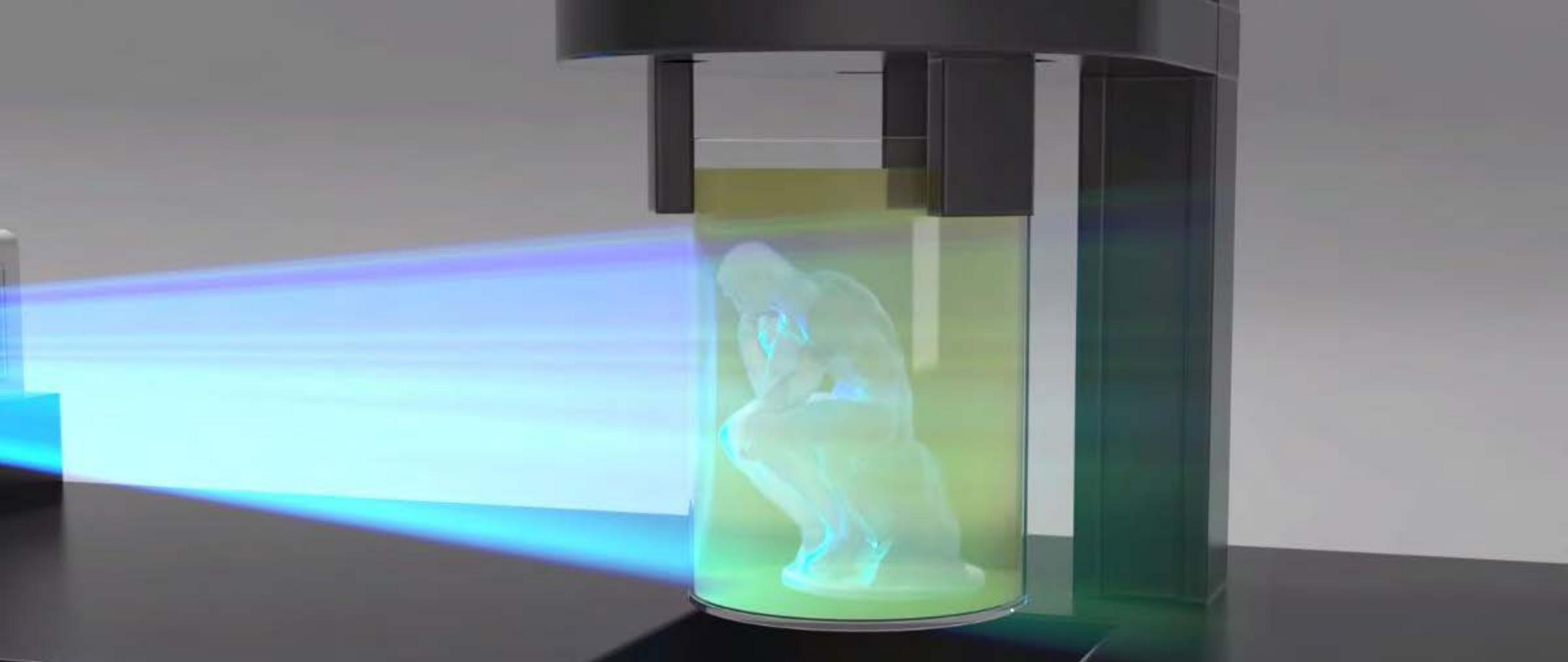
| manufacturing plan

So I took a shot at trying to manufacture this so I could possibly sell it. I built a metal bending jig over co-op and purchased cork, but it turns out cork sucks at keeping pens/pencils in place. Looking at similar products, they use acrylic and felt, so I'm working on a redesign that both easier to produce and actually works.

LightJet Printer

Two week concept product for 3D
printing in 2027





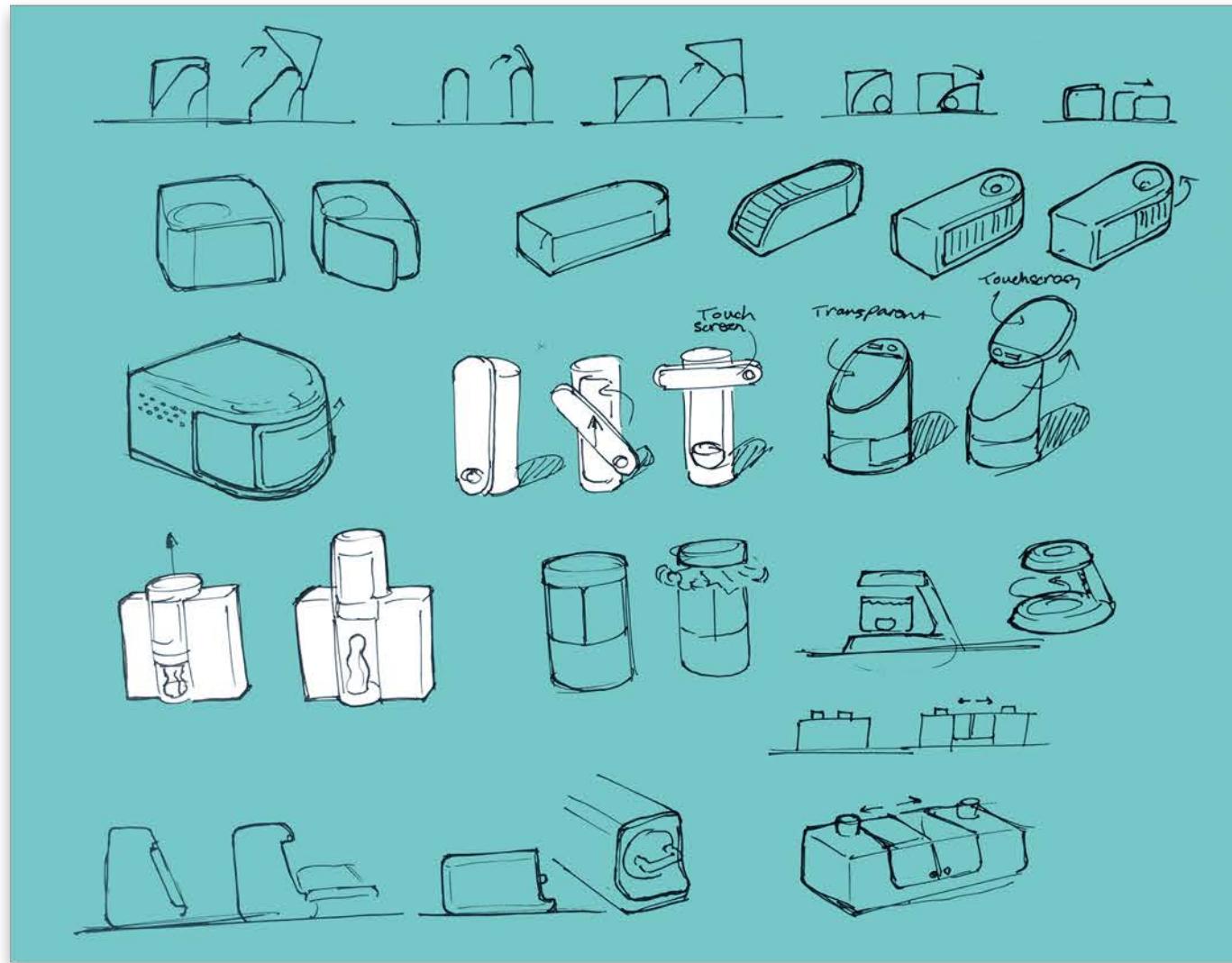
| breakthrough technology

In early 2019, scientist have developed a new method of 3d printing using light rays projected into a liquid resin. This new method has been found to be 100 times faster. Now imagine how this breakthrough will change printing in the future.

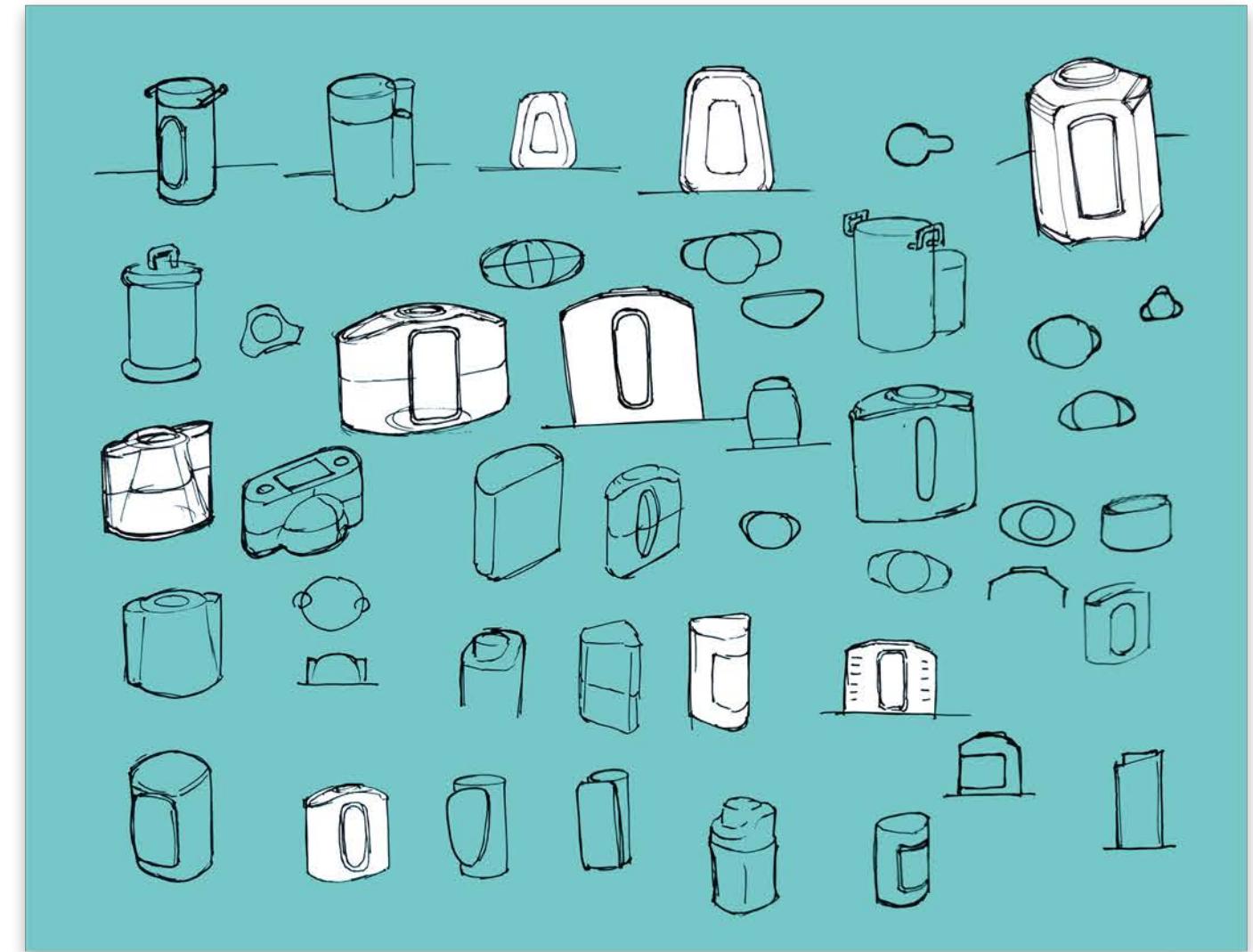


| aesthetic

3D printing has promised a better future, but has traditionally been too slow for traditional home use. For this concept the goal was to fit this printer to a residential setting.



| sketches



In the context of a home setting, I explored forms that would potentially sit on counter-tops, keeping in mind issues of interaction and space with the opening

Makerbot LightJet

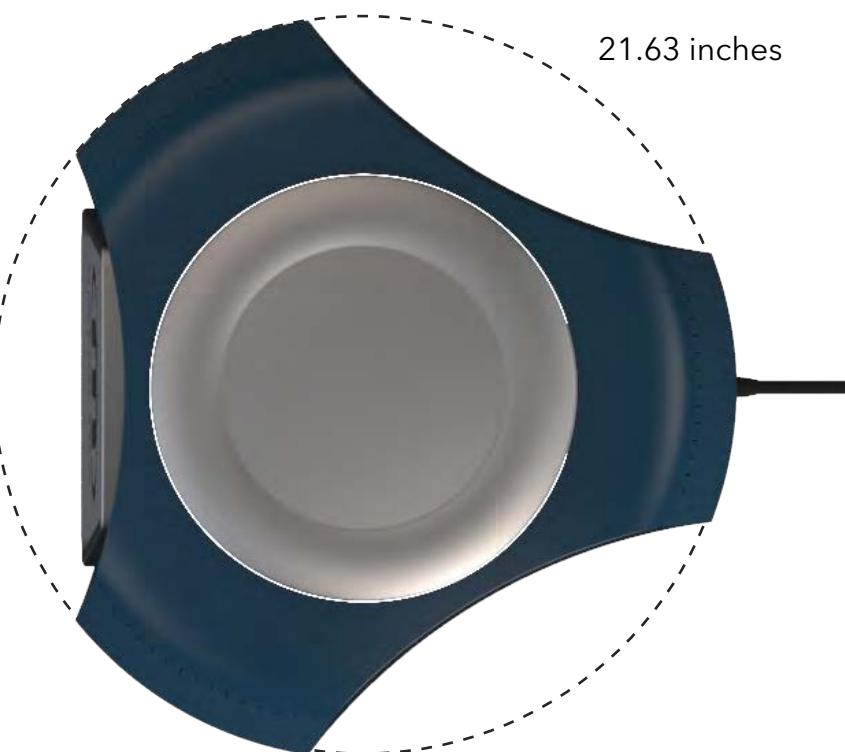
Insanely fast printing at
your finger tips

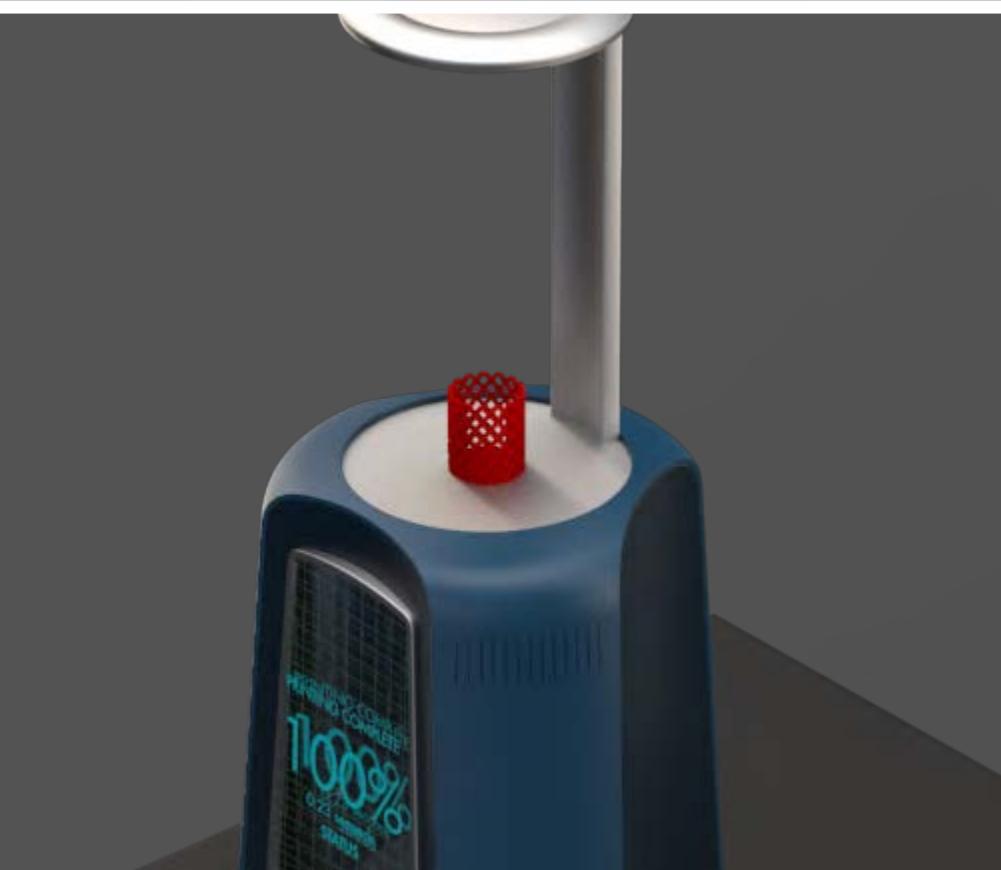


25.25 inches



21.63 inches







Washi Watch

Exploring Japanese Materials

Tama Art University Exchange



| overview

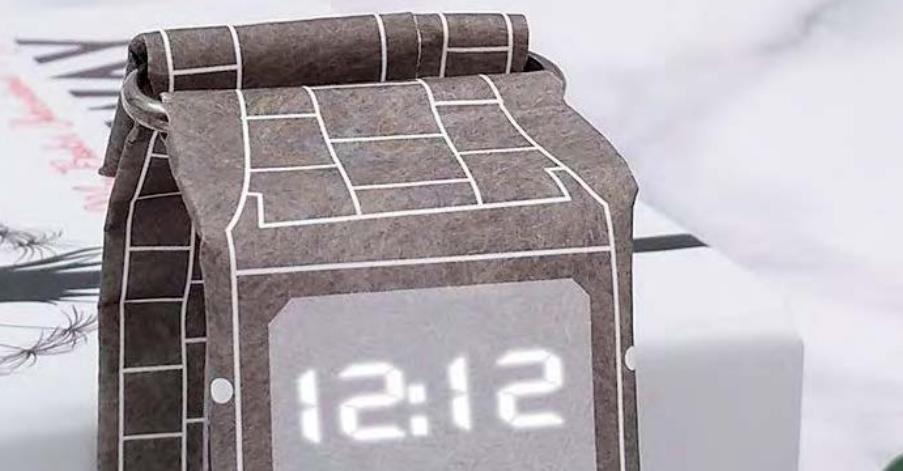
During my exchange in Japan I was tasked with observing and exploring the environment to find inspiration for a project rooted in Japanese culture.



I washī aka japanese paper

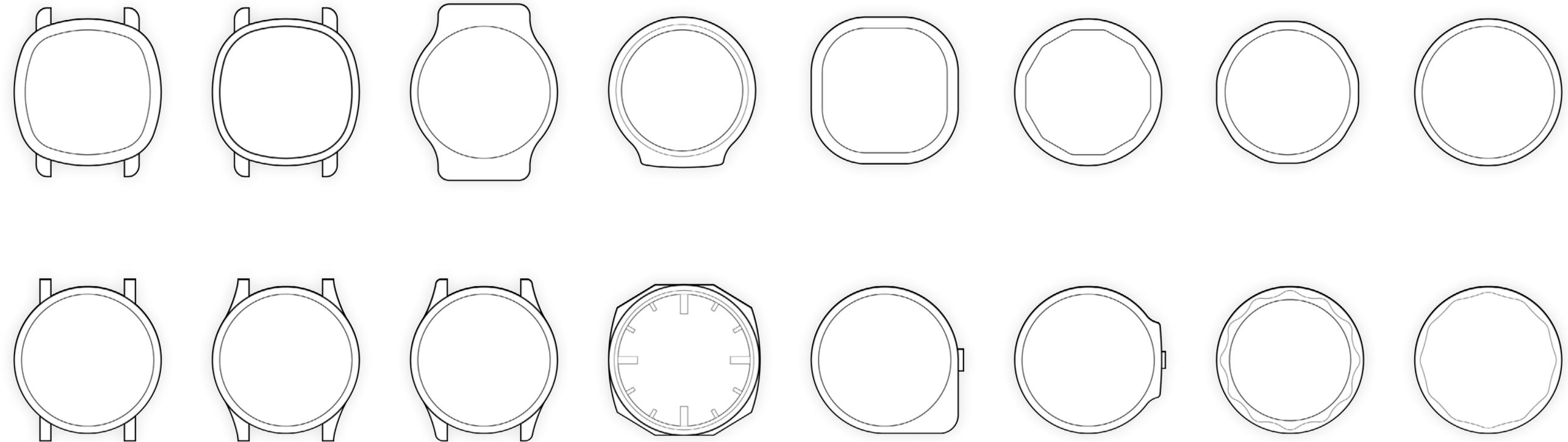


I became fascinated with the many uses of washi. Washi can come in many forms and has a huge amounts of applications. Stationary, clothing, lighting, umbrellas, and much more.



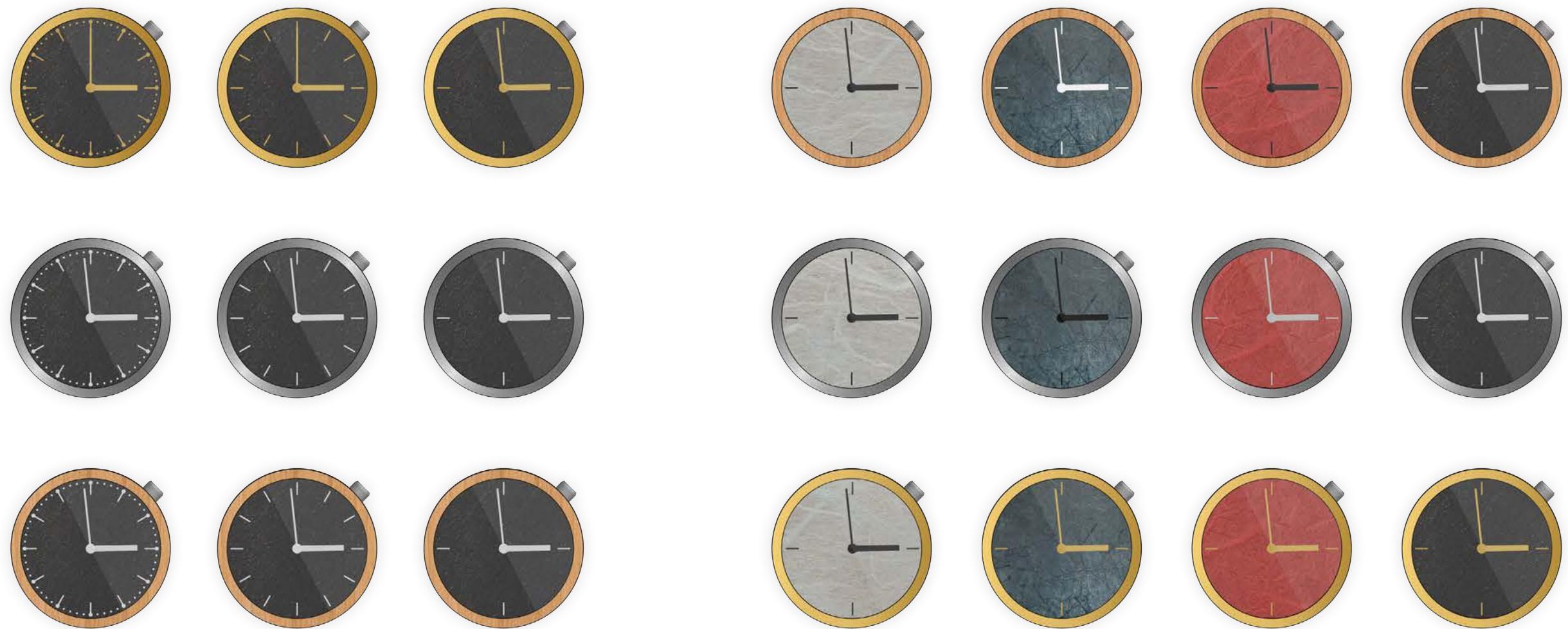
I watch-strap?

I was surprised to not find a watch that attempted to use paper as a watch-strap, so I decided to make my own.



| case body

Going through several iterations I decided to choose a simple design that would bring more focus to the watch-strap



| watch face

I considered several materials for the case body and how the case material would affect the watch face material.



| material choice

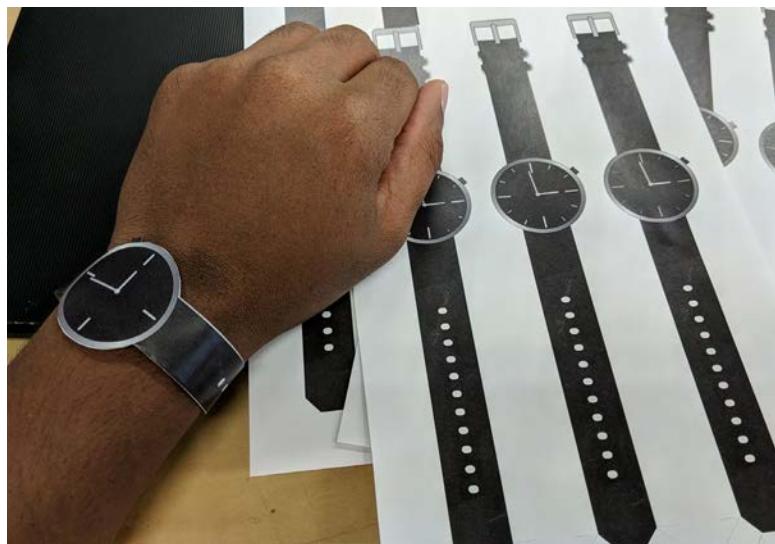


I was on the verge of making my own material when I discovered the **SIWA** brand. They are made from a special blend of wood fiber and plastic called **Naoron**. With the added strength from plastic, I felt confident it could be used as a watchband.



| final round

Faces were chosen to optimize the readability of the face white and maximize the area of the washi dial.



I prototyping

To choose a final face, I made prototypes to get a better idea of the scale of the watch on the wrist.

I chose to use standard watch parts instead of custom so that I could reduce the cost of the watch.

WASHI WATCH

Laser cut dial

Ergonomic crown

Aluminum case

Water resistant

Tear resistant





| colorways





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THANK YOU

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