ROSS VELAZQUEZ

INDUSTRIAL DESIGN PORTFOLIO

ROSS VELAZQUEZ

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SKILLS

Concept Development
Design Strategy
Creative Problem Solving
Traditional/Digital Sketching
CAD development/surfacing
Product Rendering
User-centered Design
Mechanical Ideation
Design for Prototyping
Design for Manufacturing
Rapid Prototyping
Design Management
Graphic Design/Illustration

SOFTWARE

Photoshop
Illustrator
InDesign
Solidworks
Keyshot
Rhino
Alias

EDUCATION

UNIVERSITY OF CINCINNATI

2005-2010

Studied with a talented group of people who pushed each other to their maximum potential. The school's renowned co-op program opened the doors to many opportunities within the design community for further growth.

EXPERIENCE

Humanscale

2010-PRESENT NEW YORK, NY

- Led projects in a wide variety of categories including seating, lighting, monitor arms, and other ergonomic tools
- Participated in every phase of the design process from initial concept generation through final production.
- Developed robust CAD models that can adapt to design changes and moved directly into engineering.
- Produced high quality product renderings for internal and external presentation.
- Worked closely with engineering from early on in projects to ensure mechanical feasibility and manufacturing techniques are taken into account.
- Traveled to various locations in China and Taiwan to work directly with suppliers and oversee production.
- Managed younger designers and interns

TEAMS DESIGN

WINTER 2010 CHICAGO, IL

- Rapidly sketched concepts for presentation to clients
- Developed prototype CAD models

g design

SUMMER 2009 NEENAH, WI

- Co-developed the first dedicated iPhone tripod mounting solution, taking it from concept to prototype to final product.

DELL

WINTER 2009 AUSTIN, TX
SUMMER 2008

- Concept sketching
- Usability research
- 3D CAD design for rendering and modelmaking
- Presentation preparation

ION

WINTER 2008 EDGEWATER, NJ

- Competitive product testing and analysis
- Concept sketching
- Graphic Layouts and design
- Prototype modelmaking
- Product mock-ups

Whirlpool

SUMMER 2007 BENTON HARBOR, MI

- Assisted with new product development
- Competitive market research
- Rough prototype mock-ups

Humanscale

Product: M2.1/M8.1/M10
Employer: Humanscale
Year: 2018
Role: Lead Designer

In 2016, after almost a decade leading the industry in performance and design, the Humanscale M2 and M8 monitor arms were starting to show their age. The market was getting more competitive with improved features and the monitors themselves continue to get both larger and lighter.

Based on years of feedback from our customers and looking forward at the continued advancement of computer technology we set to work on a brand new line of monitor arms that would live up to Humanscale's legacy of long-lasting, elegant ergonomic tools.

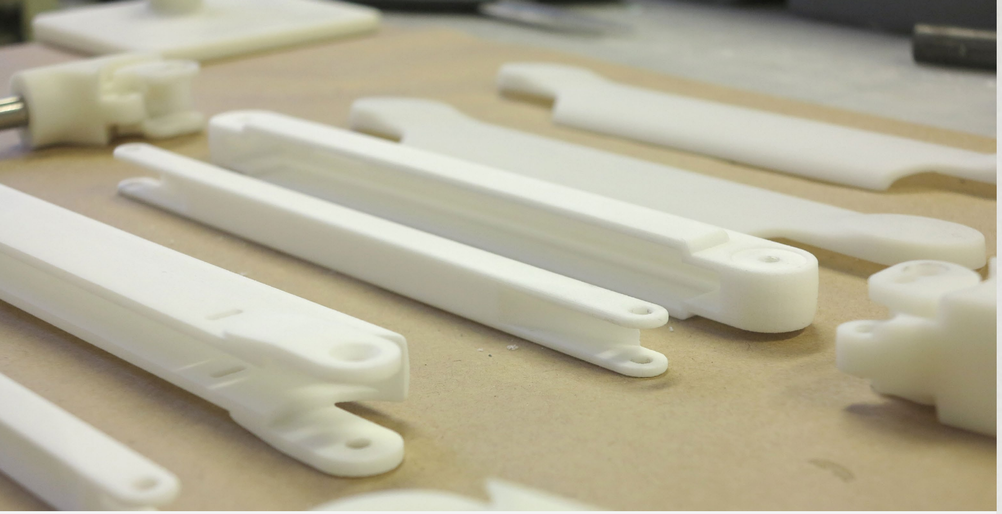
As lead designer on the project I managed other designers and collaborated closely with the engineering team from concept through mass-production. It was a massive undertaking involving over one hundred new components and many trips to China to oversee the production process and ensure consistent quality between several suppliers.

A MODERN CLASSIC

The original M2 and M8 arms have been the gold standard of the industry for over a decade. Our job was to improve on their weaknesses while maintaining the traits that made them great to begin with.

THEN ▶▶▶ NOW

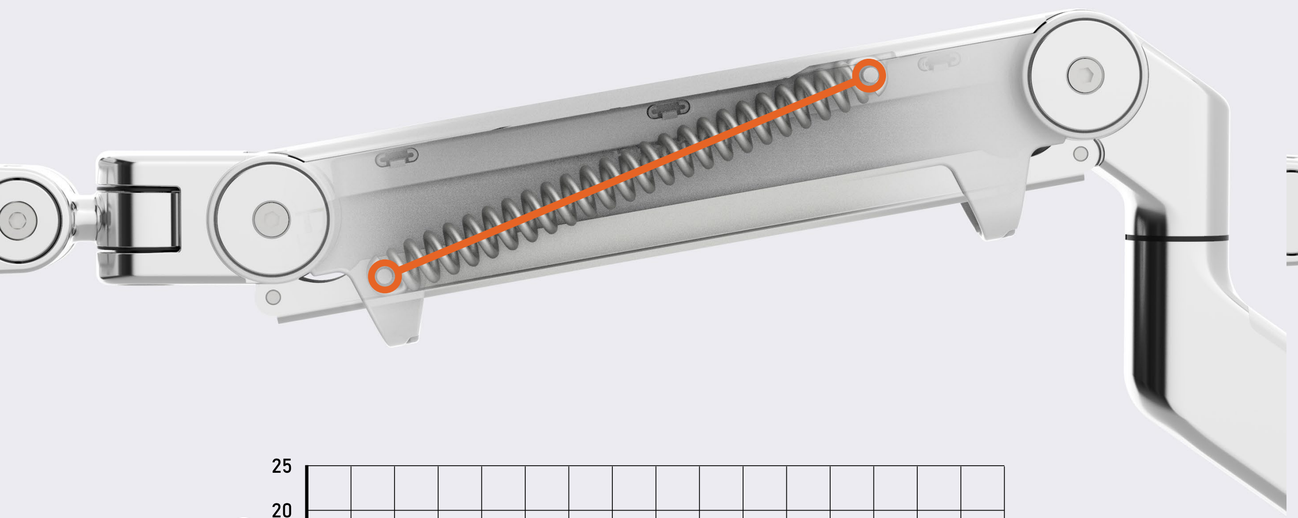
Great products evolve over time, incorporating new technologies and adapting to the needs of the users. Offices have grown from the cube farms of the 90s to open, active workplaces that encourage mobility and flexibility. As the spaces evolved, their design language shifted from rigid structures towards softer, more residential treatments. We wanted to incorporate some of these traits to make the arm feel comfortable any workspace.

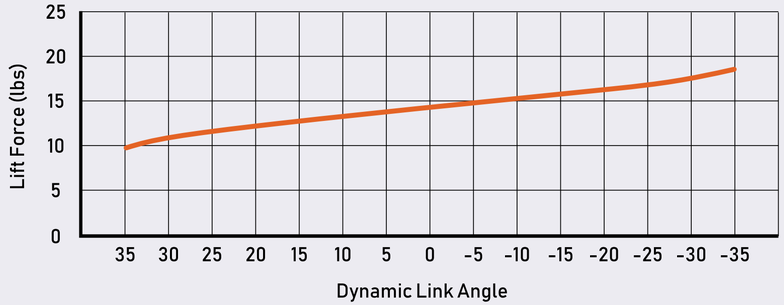


CONCEPT DEVELOPMENT

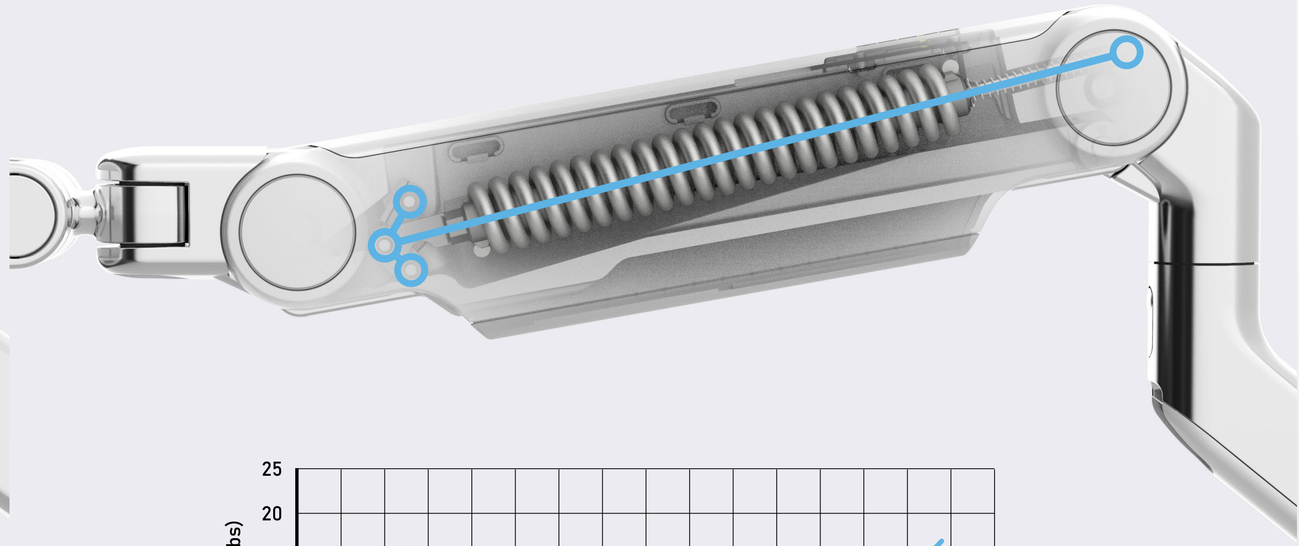
Through many rounds of sketches, renders, half, and full-scale models we eventually settled on a design direction that maintained the classic silhouette while reducing visual clutter

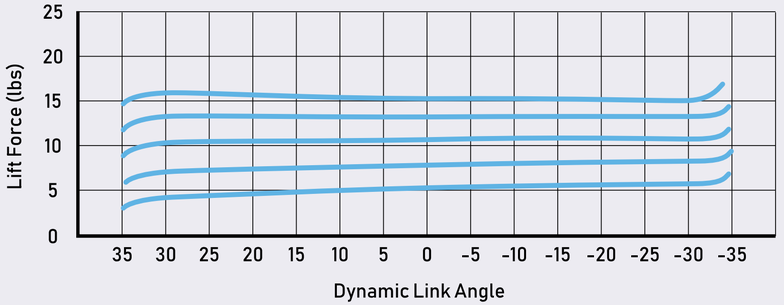
MECHANICAL DEVELOPMENT





The non-adjustable extension spring in the old M2 increases in force as the arm is lowered, so it requires anywhere from 7-15lbs worth of friction to hold a monitor in any position. This allows it to have a wide weight range but makes it very hard to move the arm.



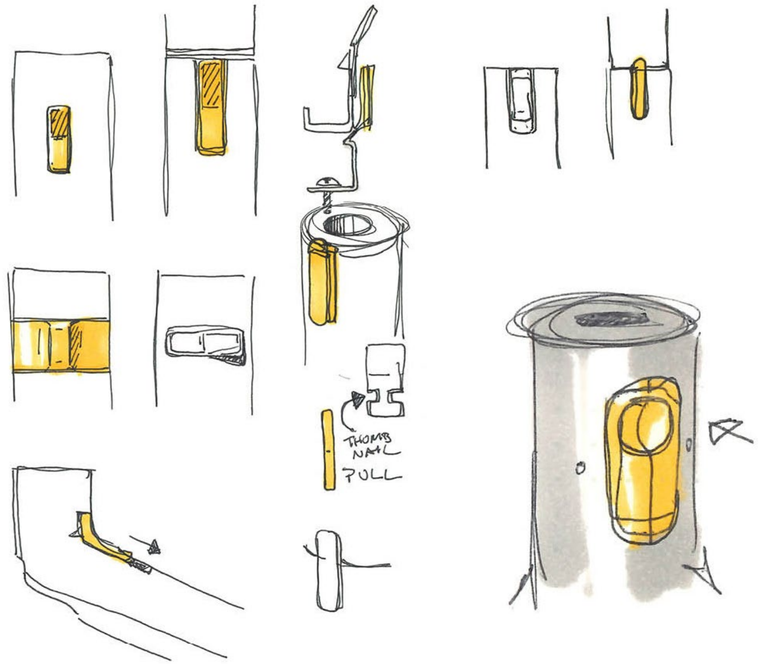


The new M2.1 and M8.1 use a compensated, adjustable spring. The spring can be adjusted to precisely balance the weight of the monitor and the added compensator links ensure that the forces are kept flat throughout the arm's movement range. No friction needs to be added.

RAPID ASSEMBLY

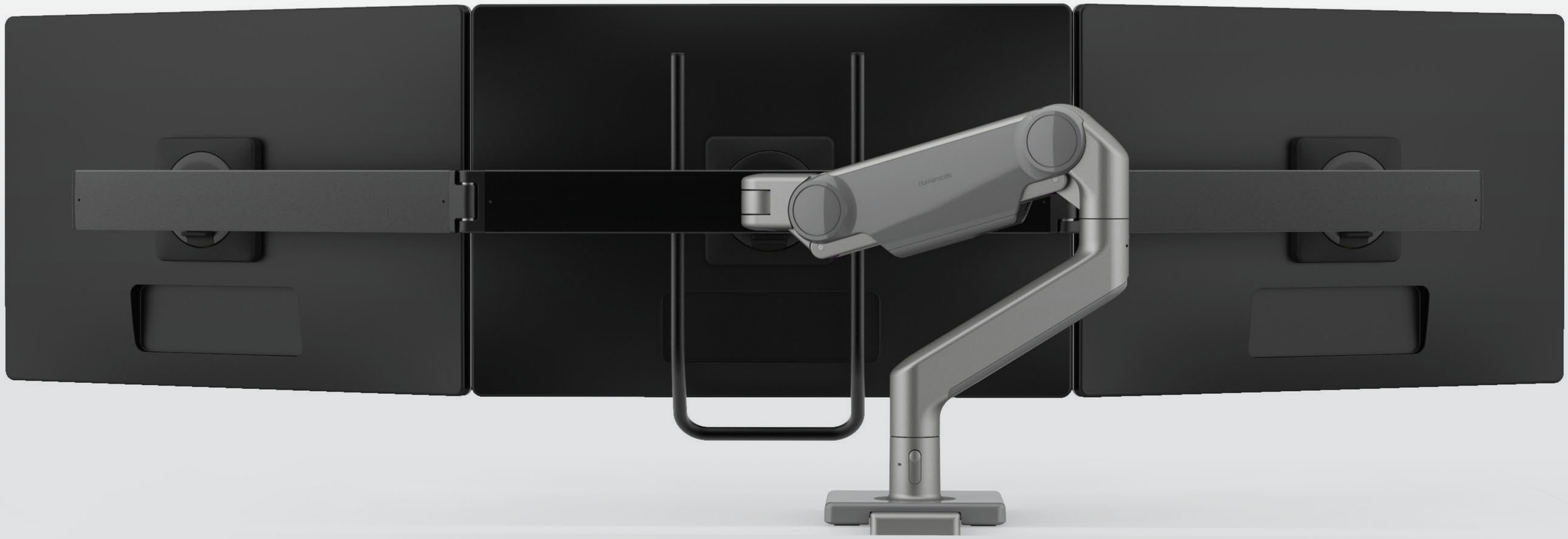
What ultimately became one of the defining features of the new arm line is the quick connect joints. While traditional arms come fully assembled to ease installation, our arms simply snap together. Individual links can be packed more tightly, reducing the shipping cost of our boxes.

The ring inside each joint allows for total customization of the rotational range of motion, preventing the arm from rotating beyond the desk and causing damage.



FLEXIBLE + POWERFUL

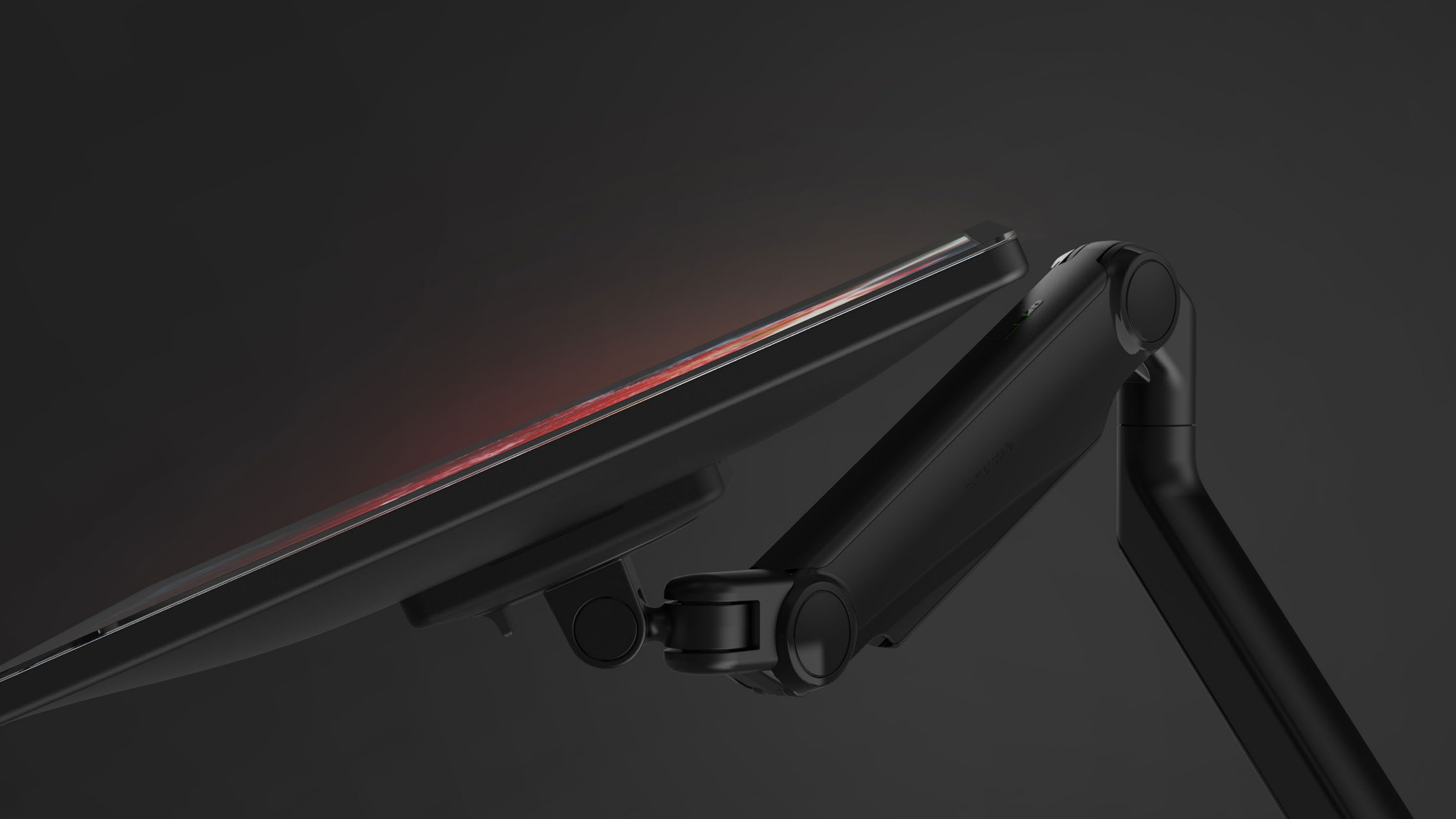
Beyond simply the single monitor M2.1 arm, we also updated the dual monitor M8 arm and introduced a new entry to the family - the super heavy duty M10, capable of holding up to three normal monitors or the heaviest ultrawide displays



QUALITY CONTROL

The project's lead engineer and myself spent months going to and from China, painstakingly examining hundreds of components and assemblies at our various suppliers to ensure consistency and quality across the board.


Humanscale
Humanscale
Humanscale



Humanscale

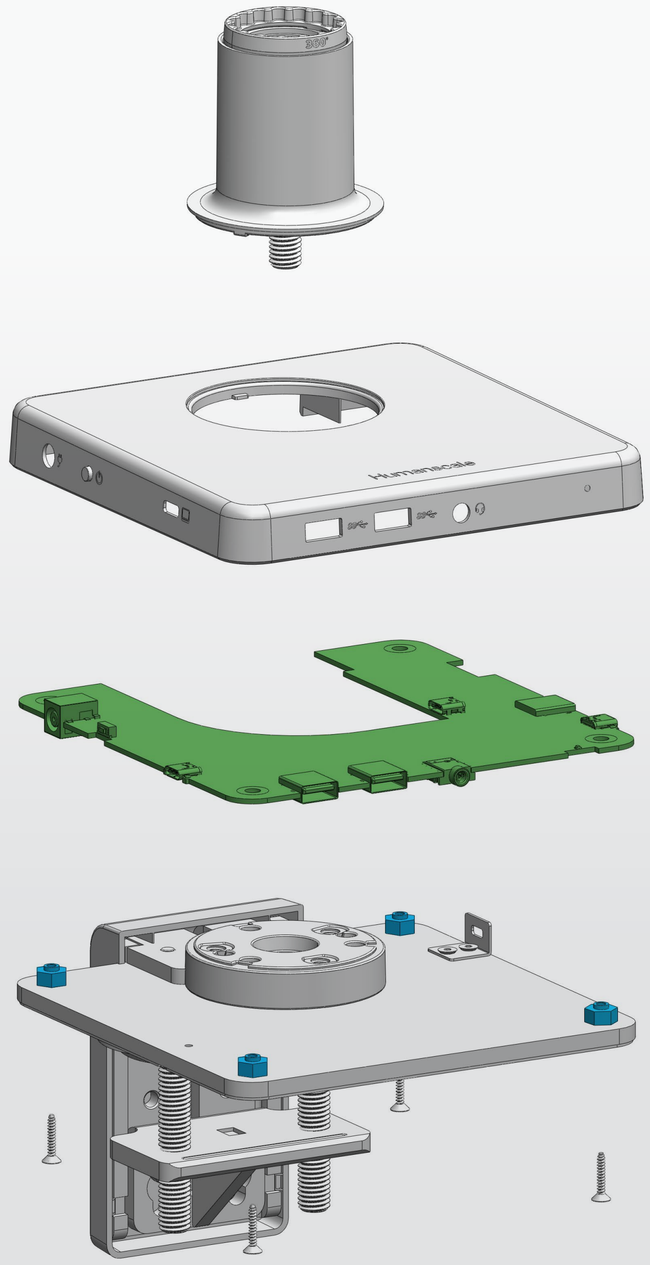
Product: M/Connect 2 Mod
Employer: Humanscale
Year: 2021
Role: Lead Designer

The M/Connect 2 is a laptop docking station that's popular for its integration into Humanscale's monitor arm bases. This, combined with the split dock design provides a clean desk area with minimal cable clutter. However, this integration makes it difficult to service the electronics if a problem is to arise.

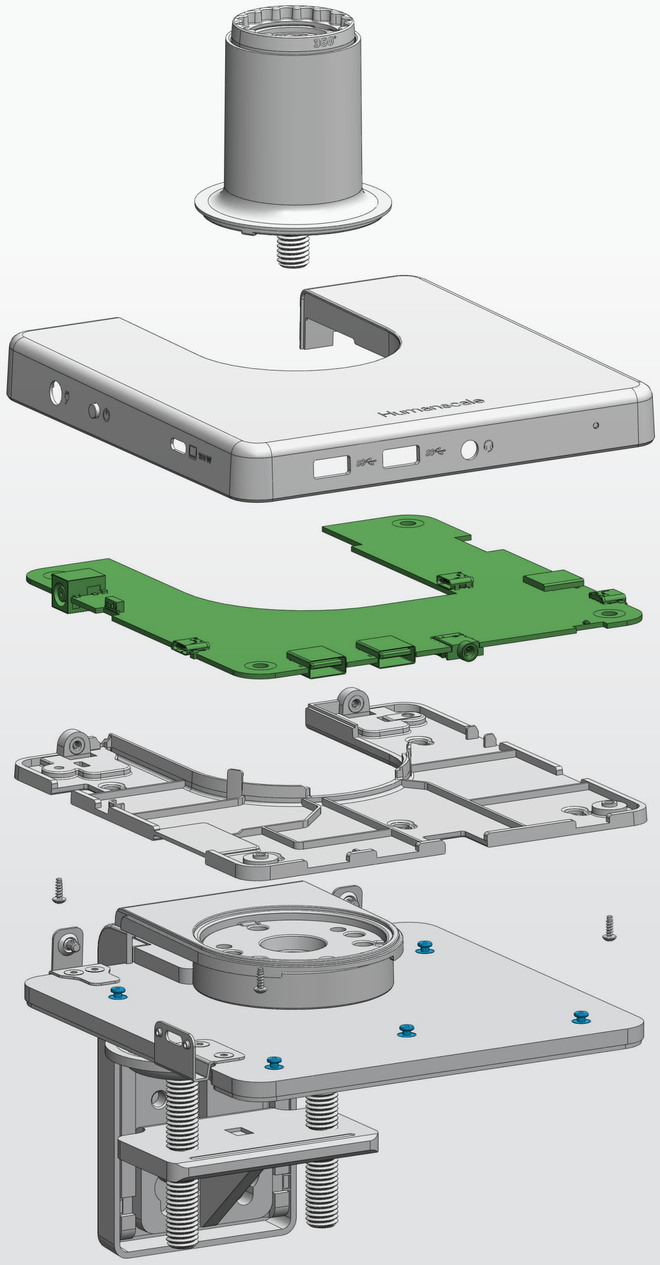
The "Mod", or modular, update to M/Connect 2 allows for quick replacement of the technology portion of the base without affecting the structural portion. While updating this design, I also took the opportunity to lay the groundwork for future generations of M/Connect to share the same platform, giving customers a path to upgrade as technology changes.

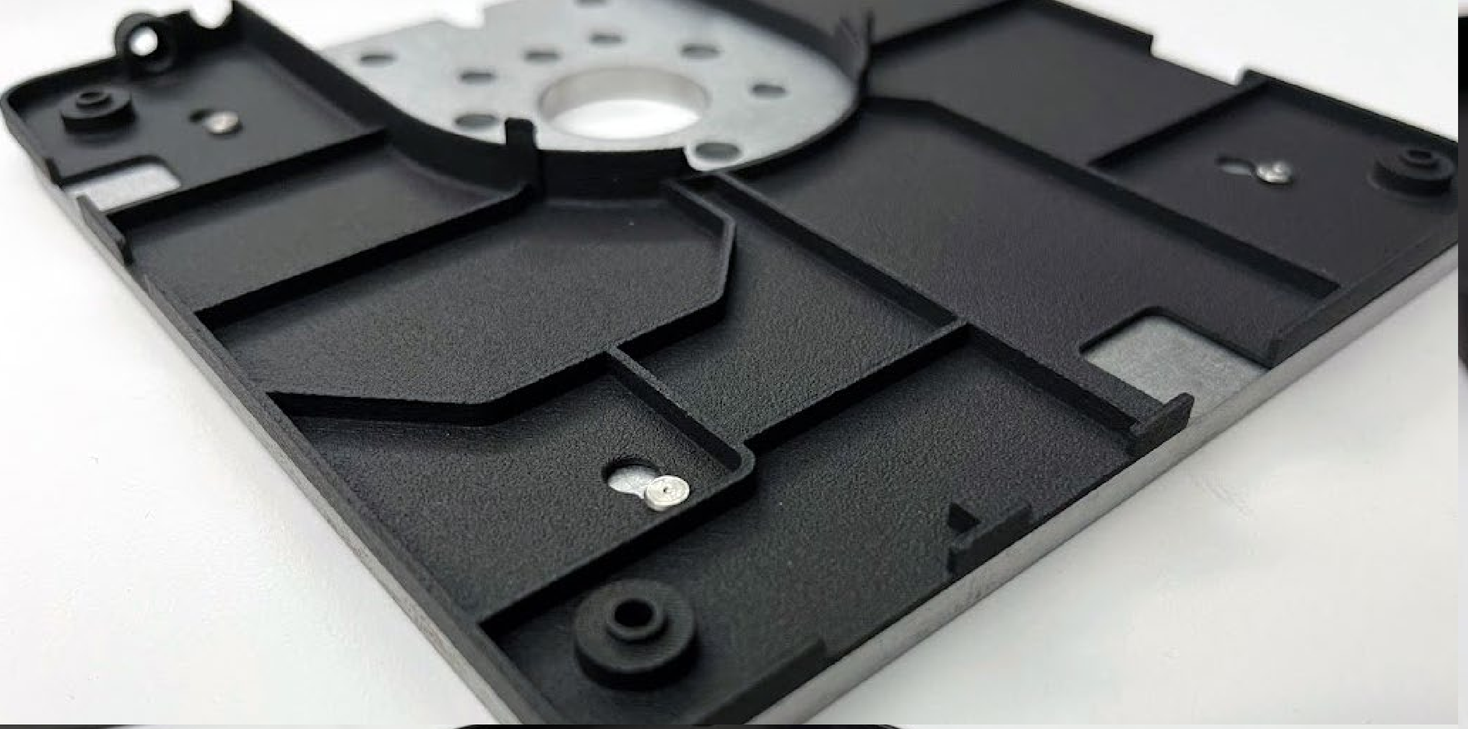
DOCKING, DECLUTTERED

Since its inception, the M/Connect line has had two primary components. 1 - a desk-mounted hub with access to data + charging ports that also serves as a base for mounting one of Humanscale's monitor arms, and 2 - a second dock beneath the desk with connections for devices that are more or less permanent (monitors, peripherals, and ethernet). This gets all those cables off the desk while still giving easy access to usb ports for charging or transferring files.



The M/Connect 2 is a global product, certified in many countries around the world under different regulatory bodies. In an effort to get the modular update to market quickly and avoid costly and time consuming certification testing, we reused all the existing electronics. Working around these constraints while still creating a safe, modular system was the primary achievement of the MC2 Mod.





FUTURE FORWARD

Although this new functionality is a huge step forward for the M/Connect, the DisplayLink technology at its core is rapidly becoming outdated. Before this product even launched, I began planning a path forward to allow the next generation of M/Connect to use the same base. Without the compromises needed to work around the existing PCB, future models will drop in even faster and easier, secured with a single easily accessible screw, for maintenance or upgrades.

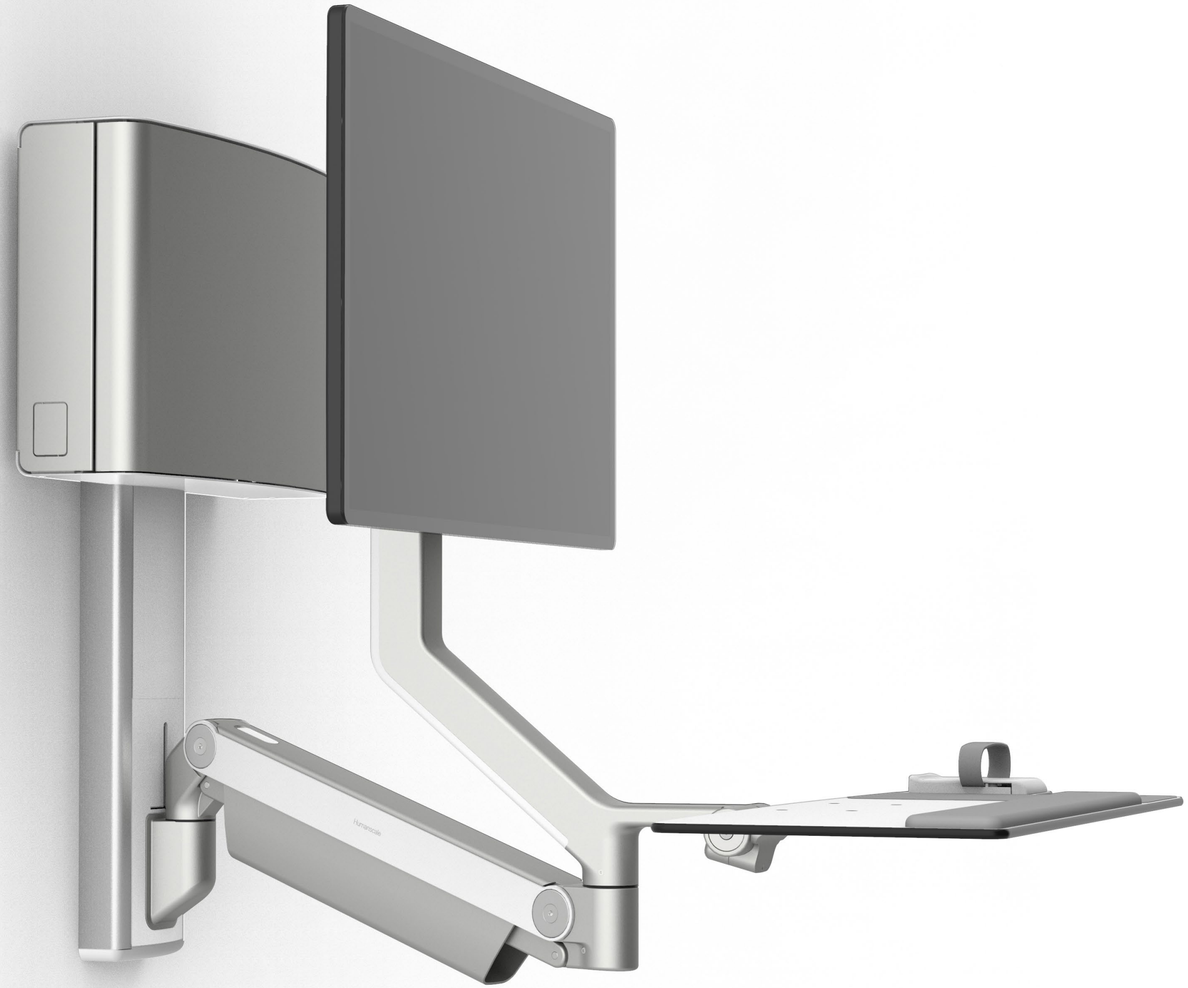
Humanscale

Product: QuickStand Lite
Employer: Humanscale
Year: 2016
Role: Lead Designer
Awards: Red Dot - Best of the Best 2016

Even in the most ergonomic chair, sitting all day has been found time and time again to result in a host of health problems. That said, standing all day brings its own set of issues to the table. Research shows that the best option is to stay in motion, sitting and standing throughout the day as needed.

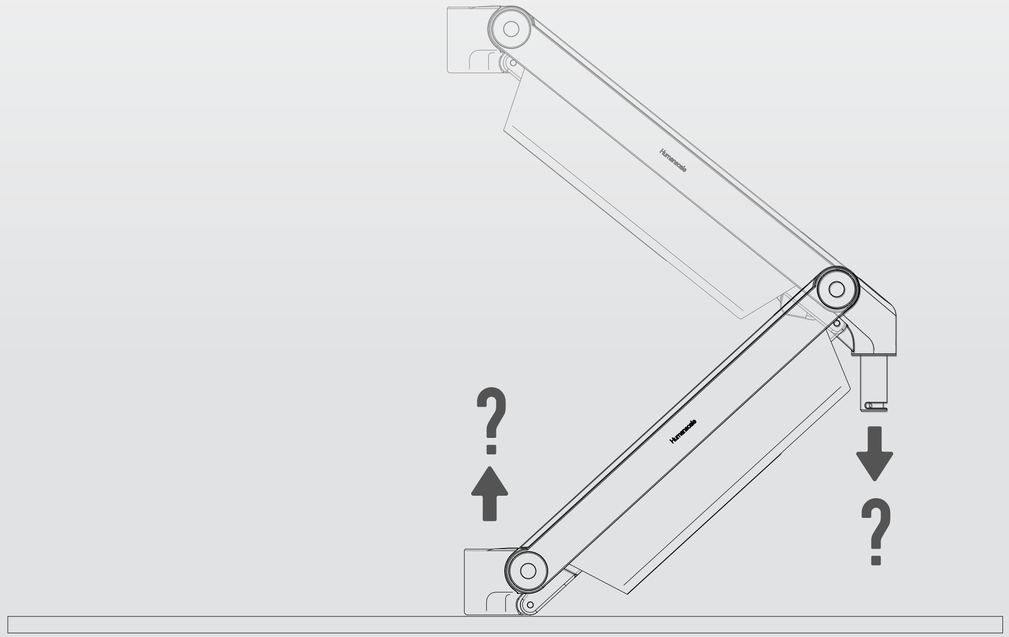
The goal of the Quickstand Lite was to expand on the success of the original Quickstand by creating a flexible solution that can adapt to any workspace. Using an extra-long version of the M8 monitor arm for vertical adjustment has the side effect of offering front-to-back adjustment as well, which allows the Quickstand Lite to easily accommodate desks of varying depth.

I took over this project after the initial concept phase and refined the final form language of the upper body and base, working with internal and external engineering resources to take the product to production.



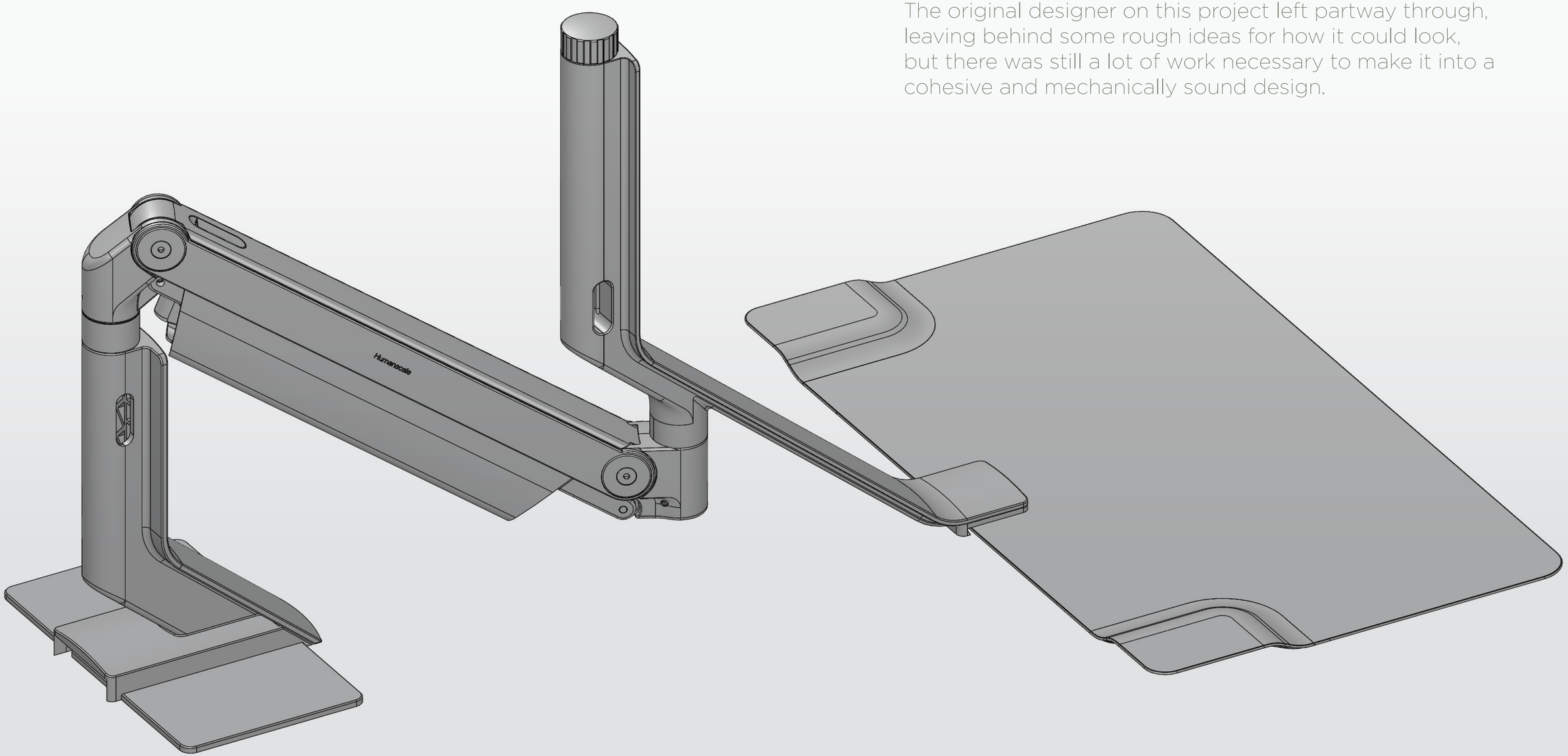
PROJECT SCOPE

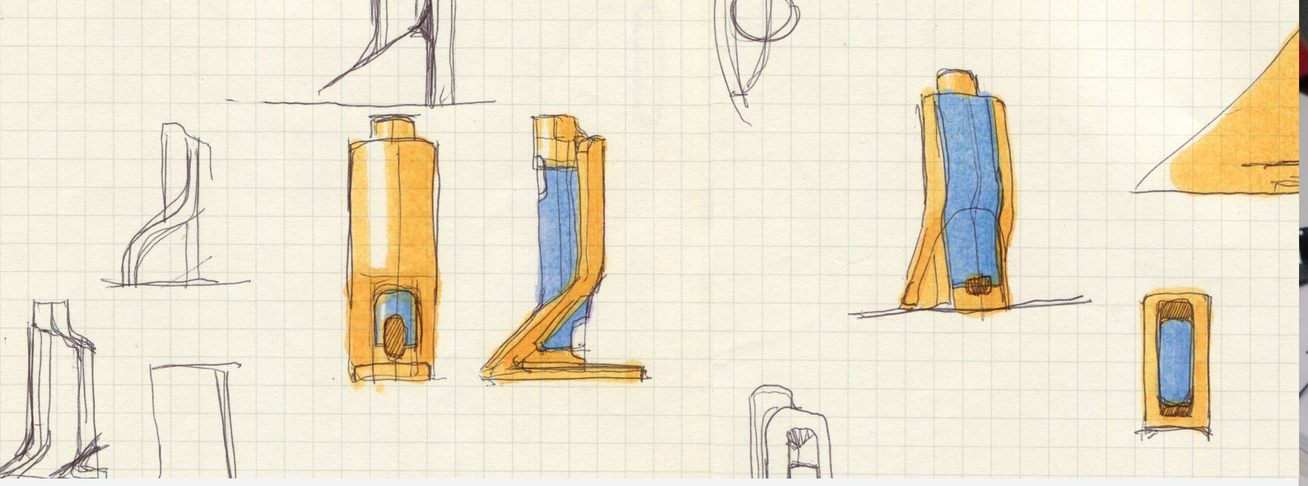
The existing M8 long arm was created to bring sit/stand functionality to our wall-mounted healthcare stations. Mounting this arm to a desk required a sturdy base that was tall enough to take advantage of the full range of motion. The basic geometry of the healthcare upper arm was sound, but the new design needed to sit flush on the desk surface and support more fine-tune monitor adjustment.



TAKING THE LEAD

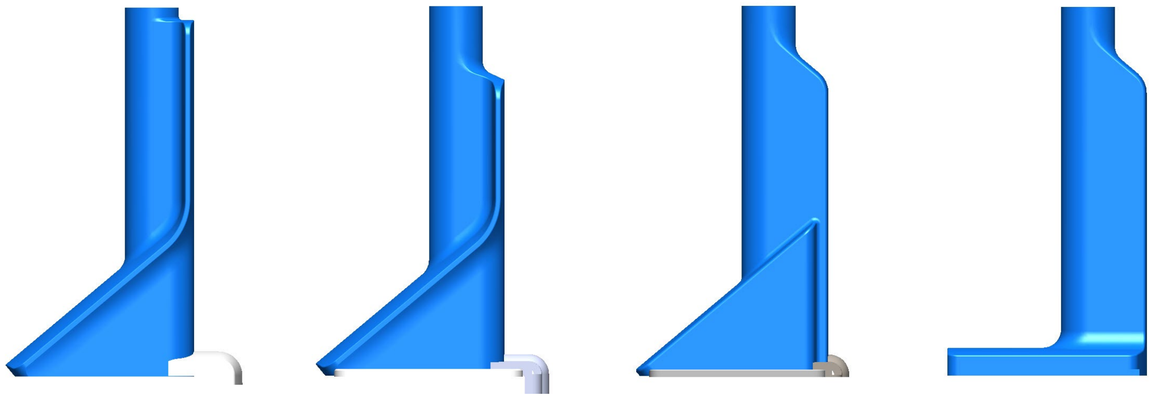
The original designer on this project left partway through, leaving behind some rough ideas for how it could look, but there was still a lot of work necessary to make it into a cohesive and mechanically sound design.

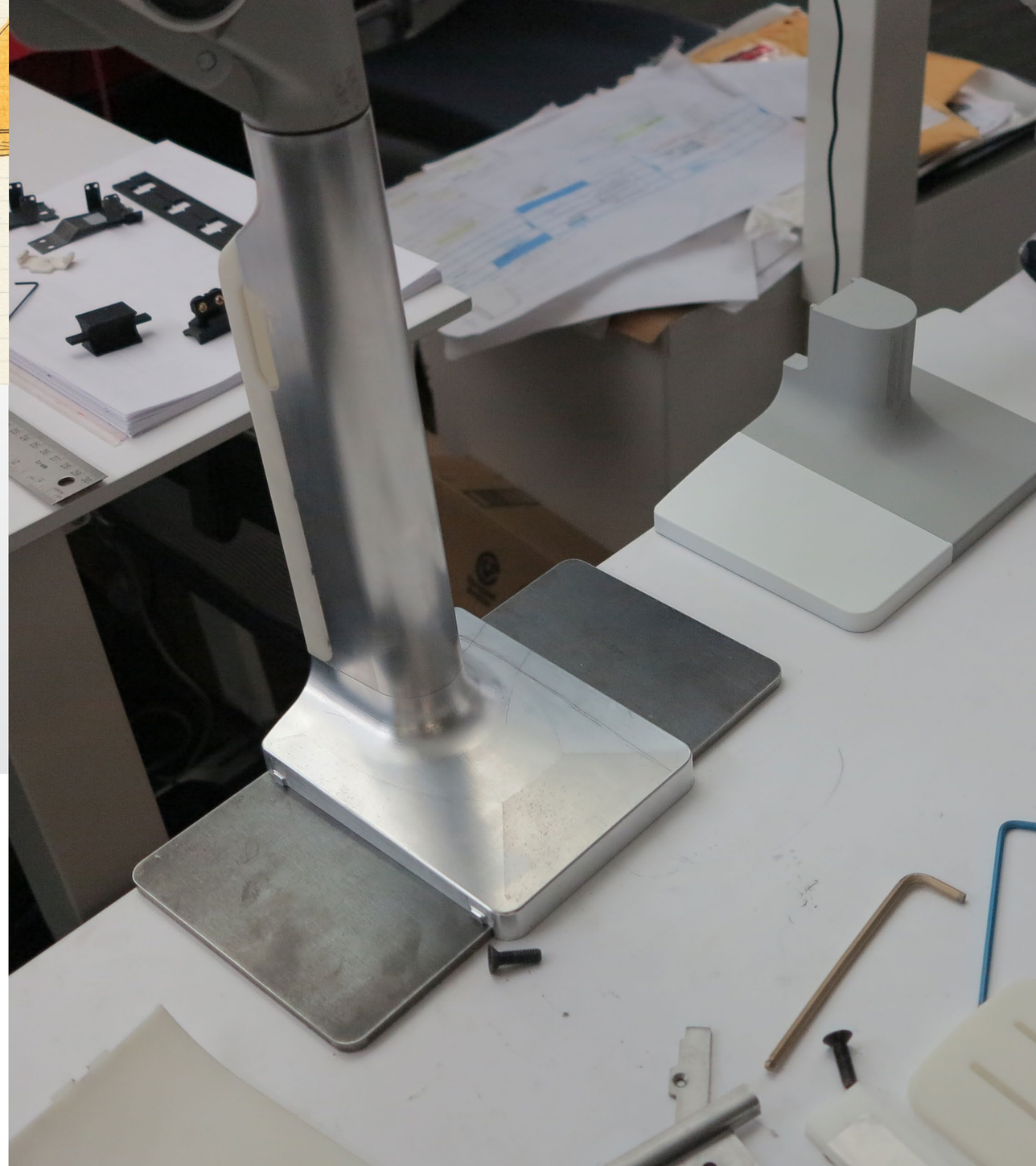


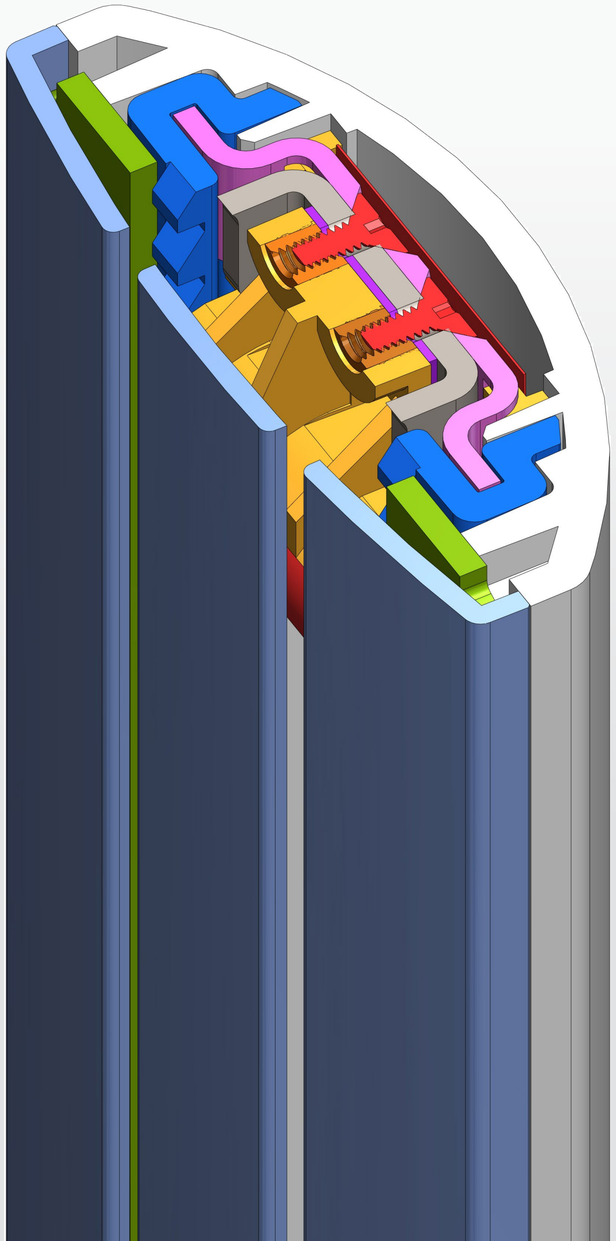


LESS IS MORE

The wall-mounted healthcare rails provided a wide base of support that could easily hold a long arm. Creating a desk mount strong enough to handle the forces but slim enough to not overpower the aesthetic was a balancing act - stripping away as much as possible while retaining a robust structure.







LOW PROFILE

Everyone agreed that there was something nice about the thin and flat profile of the upper arm, but the strength was questionable and the height adjustment mechanism created a large mass that took away from the lightness of the overall assembly. I worked hard to maintain that design intent and proposed new engineering solutions for the height adjustment system to minimize overlapping parts and space requirements.


Humanscale

Humanscale

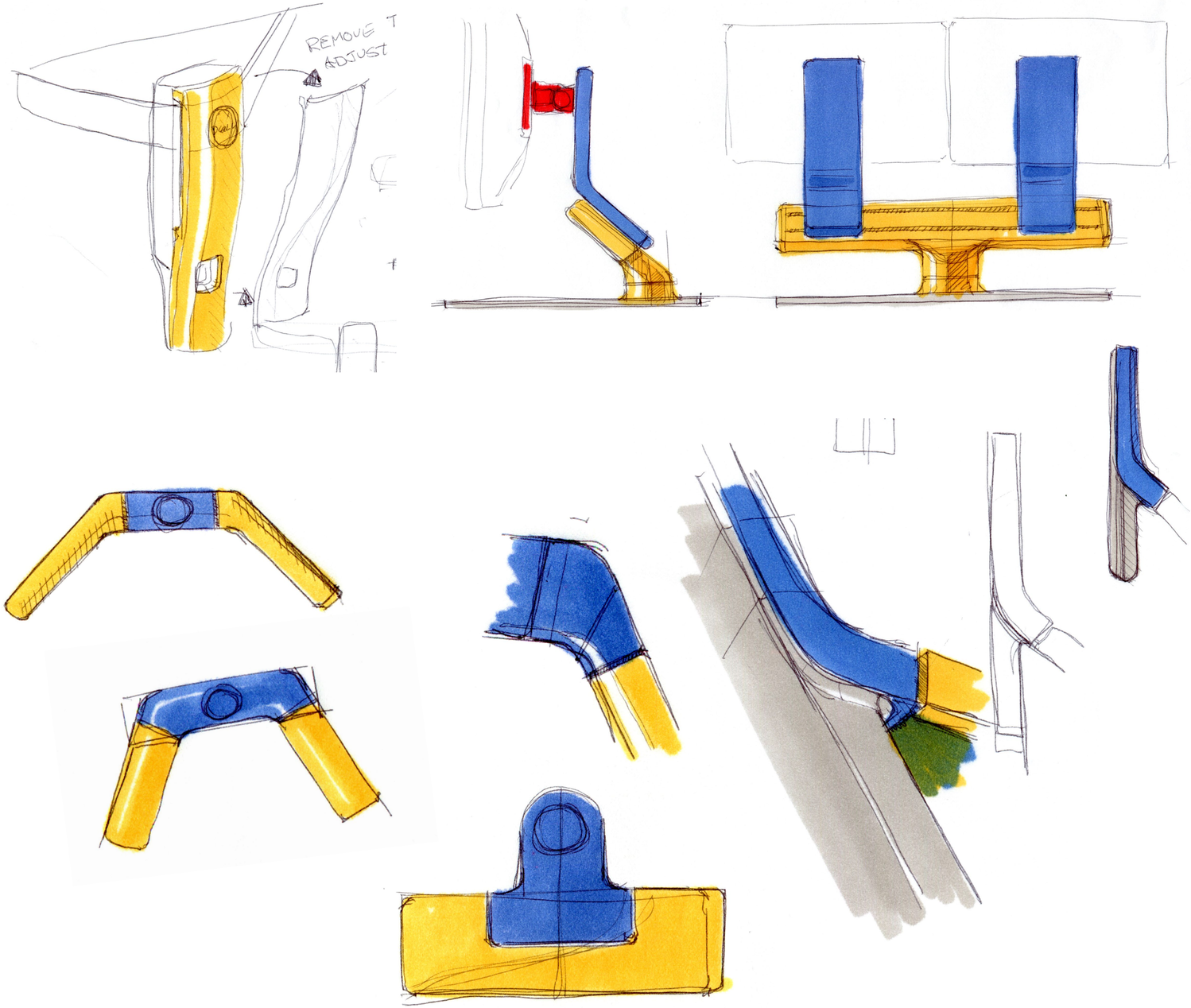
Client: Dell
Employer: Humanscale
Year: 2014
Role: Lead Designer

As an early collaboration between Humanscale and Dell, I designed this dual monitor stand in cooperation with Dell's Singapore design studio. It blends concepts from Humanscale's own dual monitor crossbars with the counterbalance mechanisms inside standard Dell monitor bases.

As a Dell-branded product it was important to follow their internal brand guidelines and aesthetic. We worked with suppliers within the Dell network to ensure the finishes would be a perfect match for the monitors.

YOU GOT A DELL

Dell has spent years establishing a strong brand identity so I started by taking some of the key visual elements from their monitor stands and blended them with the clean lines and architectural forms that Humanscale monitor arms are known for.



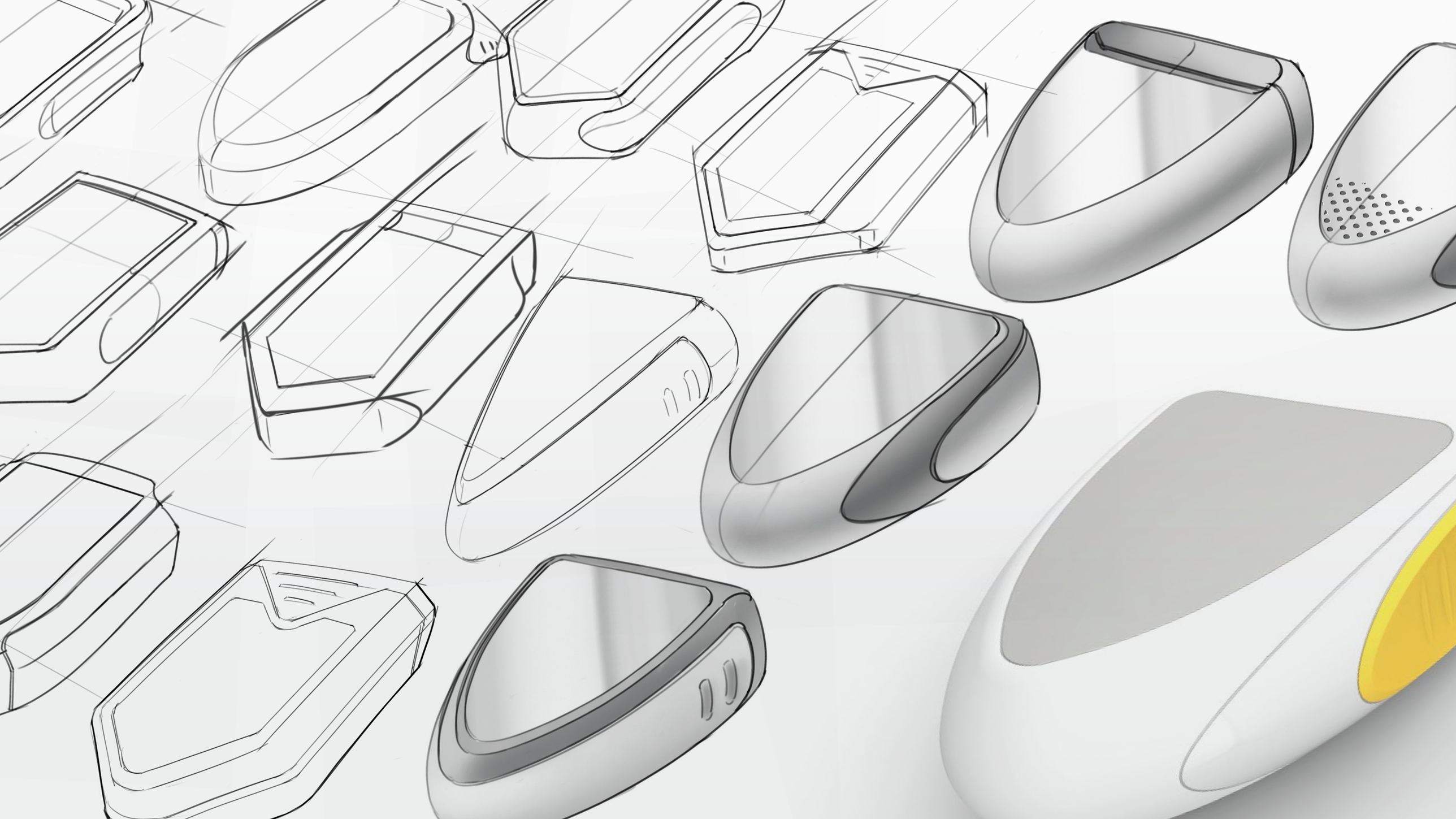

DELL
DELL

TEAMS DESIGN

Client: Edgeware
Employer: Teams Design
Year: 2011
Role: Design Intern

Edgeware is well known for their compact and ergonomic knife sharpeners, but they wanted to expand their product line into other kitchen tools. They fine-tuned a unique v-shaped blade that is perfect for small zesters and graters and asked Teams Design to help create a unified line of products to enter the market with.

As an intern I was on a small team developing concept forms for these new products. Through rapid 2D visualization we explored a variety of directions before settling on one that worked well and fit into Edgeware's vision for the brand. Prior to the end of my internship, I took several of the designs and developed initial CAD geometry to guide prototyping.




edgeware

Client: OXO
Employer: Ion Design
Year: 2011
Role: Design Intern

The humble ice cream scoop has existed for decades, constantly evolving in search of the perfect form. As an intern at Ion Design, I helped the team to research the top competitive scoops on the market to determine what works and what doesn't. Once we isolated the key factors that make a good scoop, the challenge was to combine them all into a scoop whose design is unmistakably OXO.

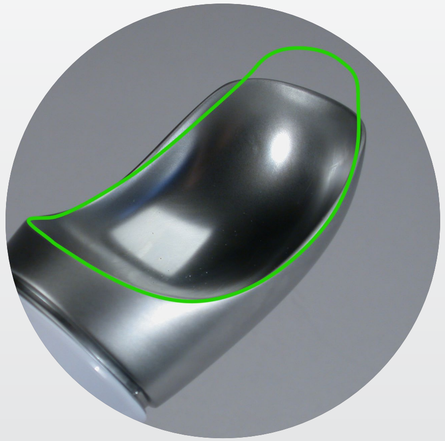
In addition to research, I participated in the early conceptualization, prototyping, and testing of mockups.

WHAT MAKES A GOOD SCOOP?

We conducted extensive testing of every major ice cream scoop on the market - ranking them in cost, performance, and design. Based on the results of our study, we established several key design element that our ideal scoop should feature.

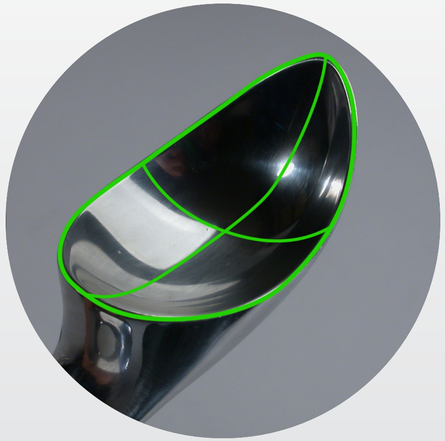
LONG HANDLE

For maximum grip, the handle must fit your whole hand



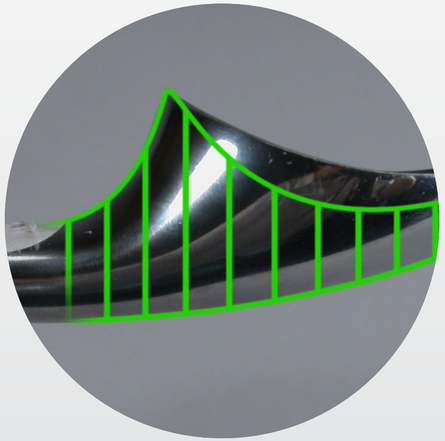
CUTTING EDGE

The leading edge of the scoop needs to be sharp enough to cut into hard packed ice cream



BOWL CURVATURE

The shape should be calculated to produce a optimal sized scoop of ice cream

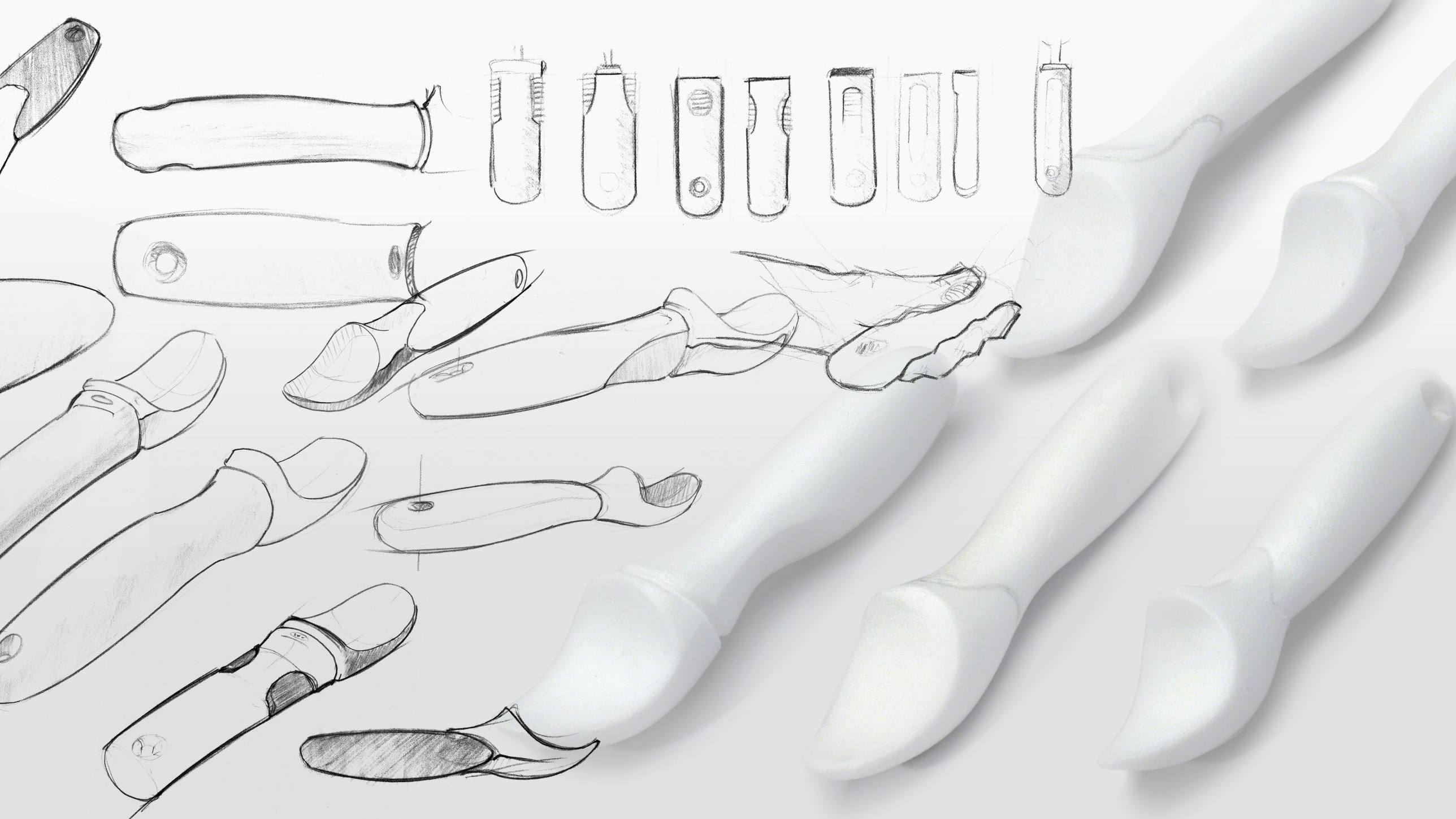


THERMAL MASS

A large metal head helps the scoop retain heat and prevent sticking

FLAT PROFILE

Flattening the handle shape gives more support for twisting



THANK YOU

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