DOUG MARRIOTT

PORTFOLIO

INDUSTRIAL & PRODUCT DESIGN

FLEX

TU Delft - Erasmus Year
6 Weeks

SEND

Loughborough - Final Year
20 Weeks

ALLURE

Personal Project
6 Weeks

TROPHY

Mascalls Academy - Employer
4 Weeks

MORE

Other Work
4 Projects

Hi I'm Doug Marriott

I'm a Loughborough design graduate seeking a junior designer role.

I believe my most effective designs emerge from tight constraints, with the limitations actually helping drive my creativity. I prioritise being user focused by continuously refining my ideas through feedback. My teaching experience has strengthened my collaboration, rapid problem solving and ability to manage multiple projects under high pressure.

Software: Adobe suite, Solidworks, Keyshot, Sketchbook, 2D design, Rhino + Grasshopper, ApS-Ethos (Laser cut), Makerbot (3D Print), VR CNC Milling + QuickCAM Pro (CNC Router).

Key Skills: Table saw, Handheld router, Lathe, Mill, Band saw, Research, Concept creation, Sketching, Marker renderings, Prototyping, 3D modelling & visualization, User testing.

2022 - 2025 **Design Technician** - Mascall's Academy
Managing and assisting for all student practical projects

2020 - 2022 **Maths & Physics Tutor** - GCSE
Skateboard Instructor

2015 - 2019 **Loughborough University** - BSc - Product Design and Technology
TU Delft and **UTS Sydney** - DintS - Diploma International Studies

2014 - 2020 **Experience** - Inov8 Joinery, Jones & Partners design consultancy, SBFI control room furniture designers, Scarab sweepers, DP9 city planners

2011 - 2015 **A Level (A,B,C,A)** - Design, Maths, Physics, Photography AS

About Me

Active

I have a passion for **skating**, **climbing** and **running**. I find exercise is crucial for my peace of mind, focus and perseverance.

Creative

I enjoy **sketching** and **photography** in my spare time. I also create clay **sculptures** and make **skate ramps** to use and sell.

Positive

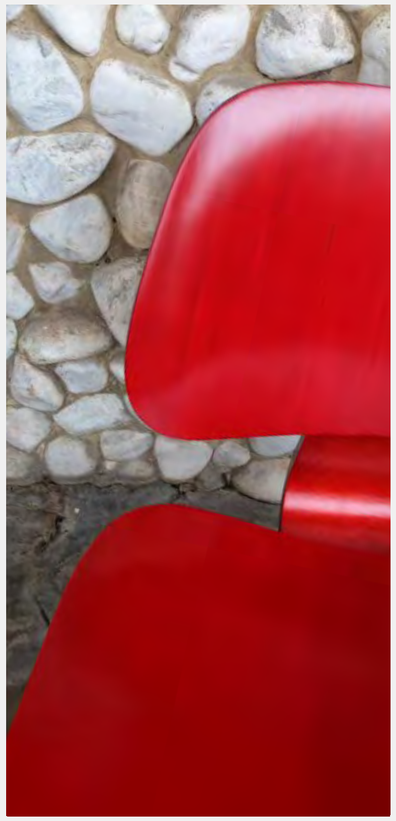
I love to **travel**, discover new cultures and connect with people. It's reinforced my **optimistic** views and is a great source of **inspiration**.

FLEX

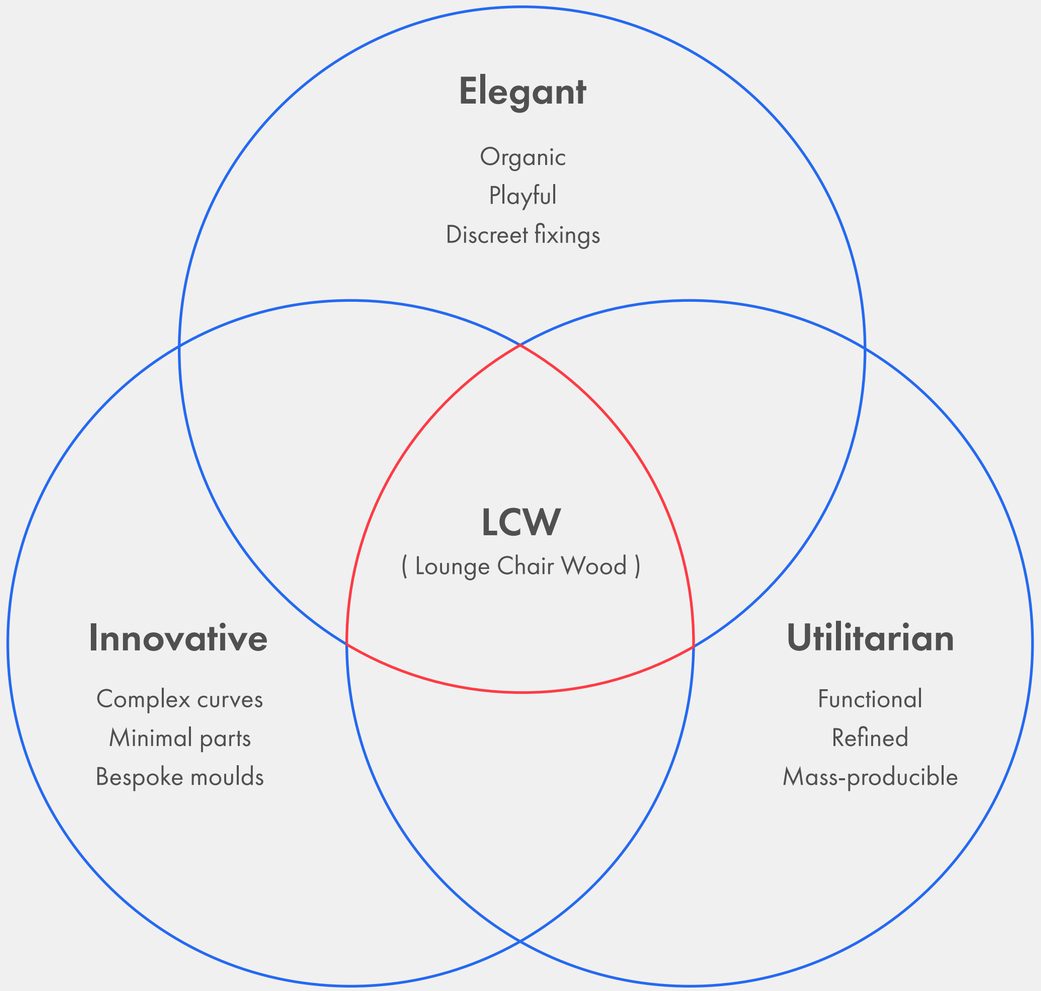
Eames inspired plywood lamp

The Eames duo revolutionised the industry through their innovative use of moulded plywood especially with their lounge chair. FLEX builds on their legacy with it's sculptural form, minimal components and it's three-dimensional mould.

Charles and Ray Eames' attempts to make a seat from a single piece of plywood ultimately led them to the iconic Lounge Chair. I approached FLEX in the same spirit - an experiment in the possibilities of the material.

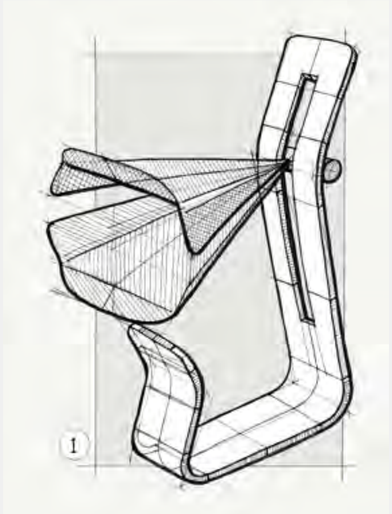


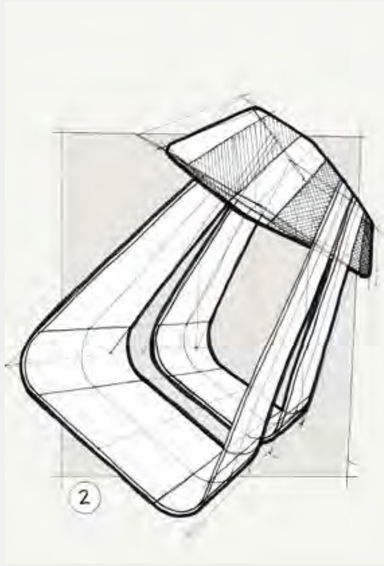
Eames Lounge chair is both utilitarian and elegant. Refined to a few parts and materials, it's perfect for mass production. Despite its simplicity, the design feels playful, with organic forms reminiscent of drooping leaves.

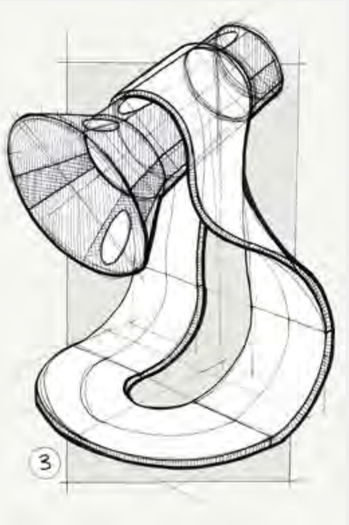


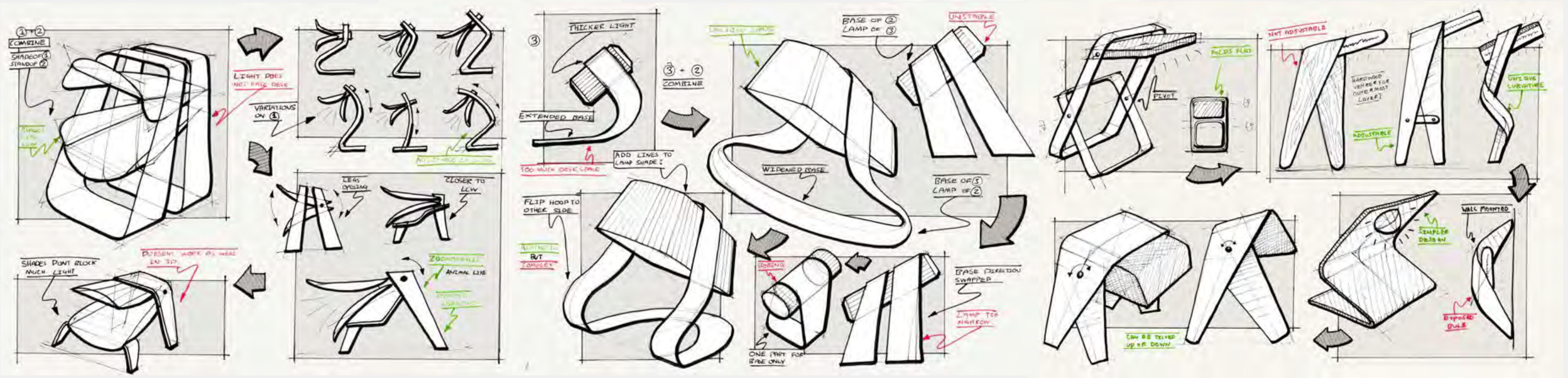
I analysed what made the Eames chair work so that I could replicate it.

It's a highly sculptural product, so I started with low-fidelity prototypes to focus on the three-dimensional form, and then gathered user feedback.

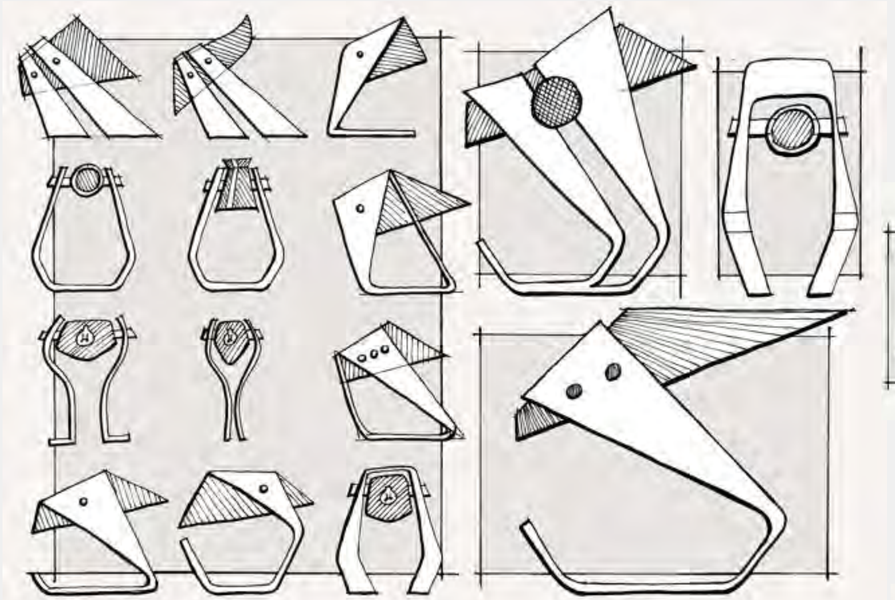


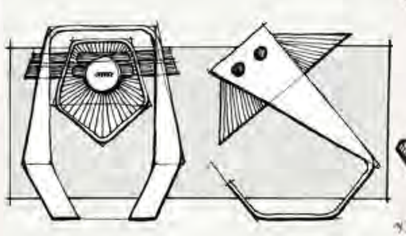


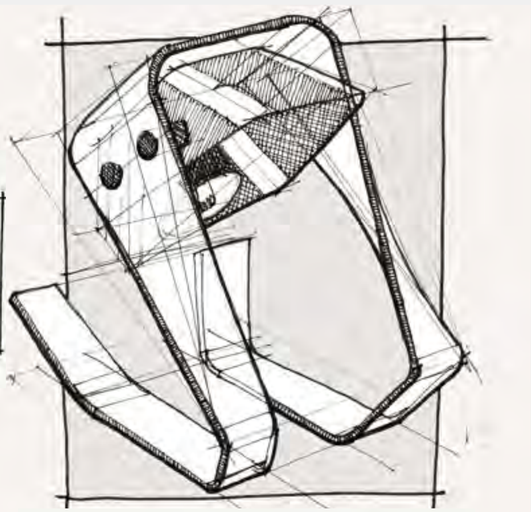


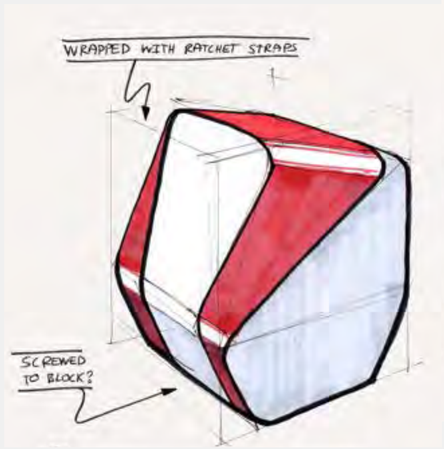


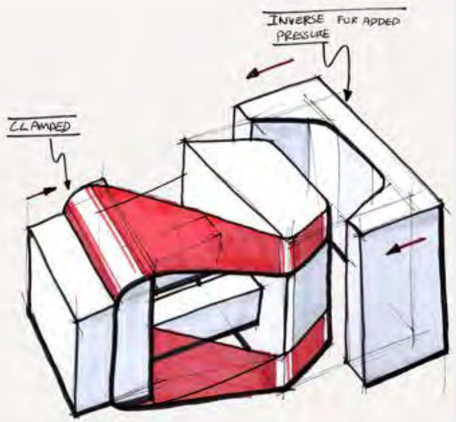
I selected the three most successful designs and combined key elements from each to generate new variations, which I then developed.

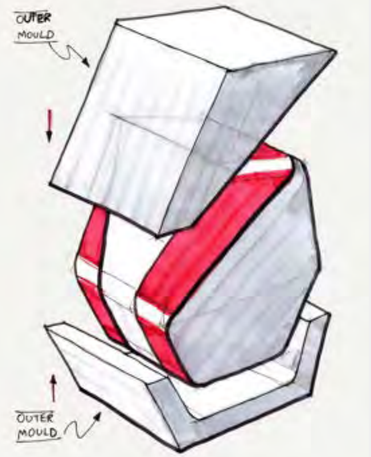


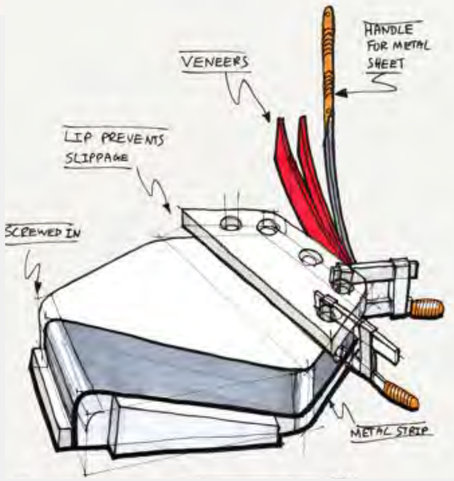




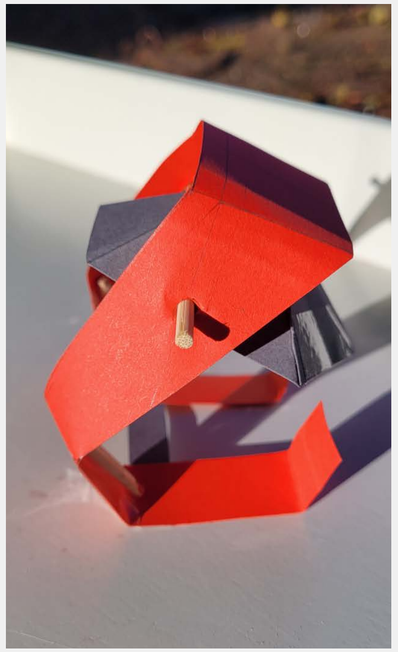








I explored kerfing, steam bending, and bending ply but chose bent lamination for its strength, aesthetics and tight radii. To compress the veneers, I considered ratchet straps, a partial or full mould, or a metal strip.

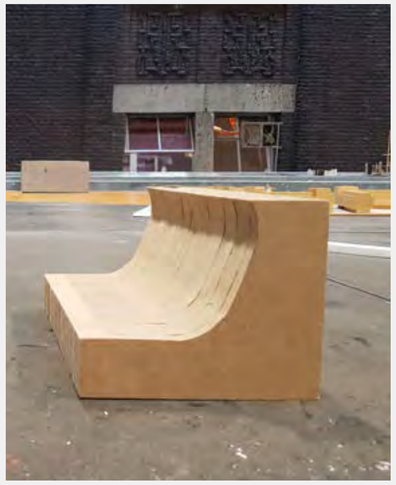





The card and foam prototypes confirmed the 3D form. For the manufacture test, I glued veeners and tightened them around a mould with ratchet straps. I concluded that it needed an outer mould and more layers.

V1 V2 V3 V4 V5 V6

The changes between each iteration are highlighted red.



Due to the complex shape of the mould and the limitations of the CNC Router, (2.5D) the mould had to be constructed from nine parts.

When all the mould parts were combined, the plywood veneers were almost fully encased, ensuring some presure across the entire part.

I printed a ‘flattened’ surface from the 3D model to use as a template. I used cork layers to help spread the load and bond the veneers evenly.

The simplest way to achieve the chamfers on the shade was to use the vacuum former. A small mdf part inside holds the light bulb and the bolts that connnect the shade to the rest of the lamp.

The mould's complexity kept the veeners from fitting fully, resulting in a weaker piece that had to be mounted on a plinth. For another attempt, I would use metal strips and bend the veneers in sections.

SEND

Camera dolly for skateboarding

SEND empowers skateboarders to film their tricks independently and to a high quality. It gives them the freedom to shoot when they like, as many attempts as they need and the time to analyse their clips in-between the runs.

Why do skateboarders film each others tricks...

Documentation - The videos are memoirs, records of improvement and their legacy in the skate community.

Sharing - A good skate video builds their reputation and watching videos together is how bonds are formed.

Expression - Their creatitvity is expressed through their choice of tricks, music, filming styles and editing.

Progression - They can analyse the clips to adapt their technique and track their progress.

A common way to achieve a smooth shot is to follow along behind or beside the rider on another skateboard.

...what is the best way to film skating...

Close & Low - Being close fills the frame and low makes the tricks look big.

Smooth Motion - No bumps; riding along on a skateboard does this well.

Tracking shots - The camera itself needs to move with the subject.

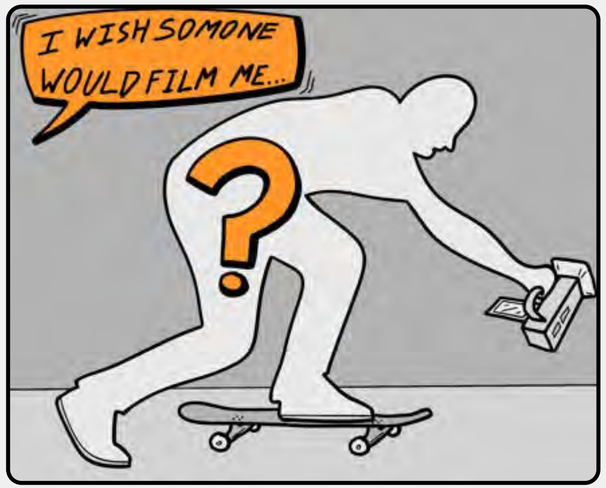
Tracking cameras are placed far away which is not ideal for skate clips.

...and what's on the market already?

Professional cinematographers use dollys to a achieve a smooth shot and there are tracking cameras that pivot on a tripod to follow the action.

Key Insights:

People dont always want to film.

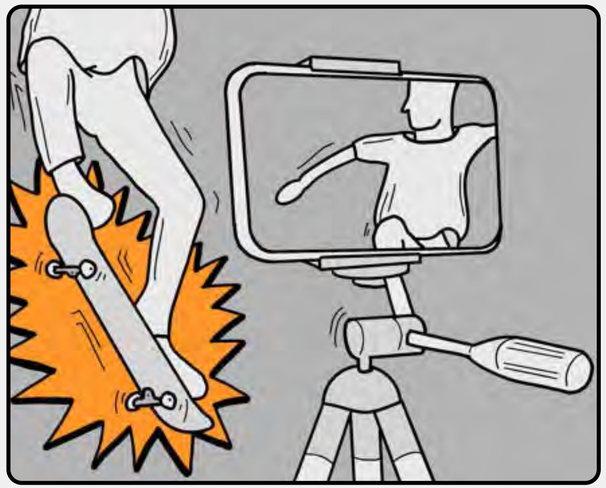


Filming tends to happen when it is convenient for the cameraman or the skater is close to landing a hard trick.

Time pressure can make it hard.

Filming is repetitive and takes a while, so not wanting to waste the cameraman's time adds pressure.

It's hard to film yourself well.

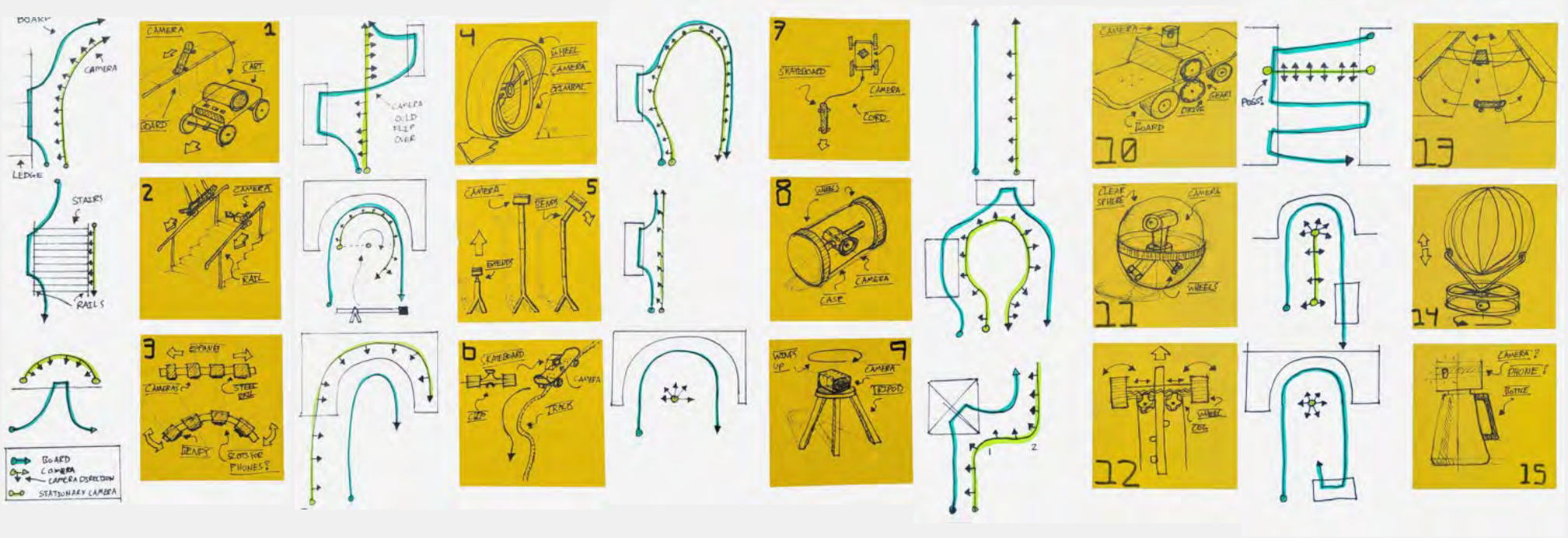


The camera has to be stationary and if it's close up, the trick isn't in frame. If its further away, it looks small.

Design Brief:

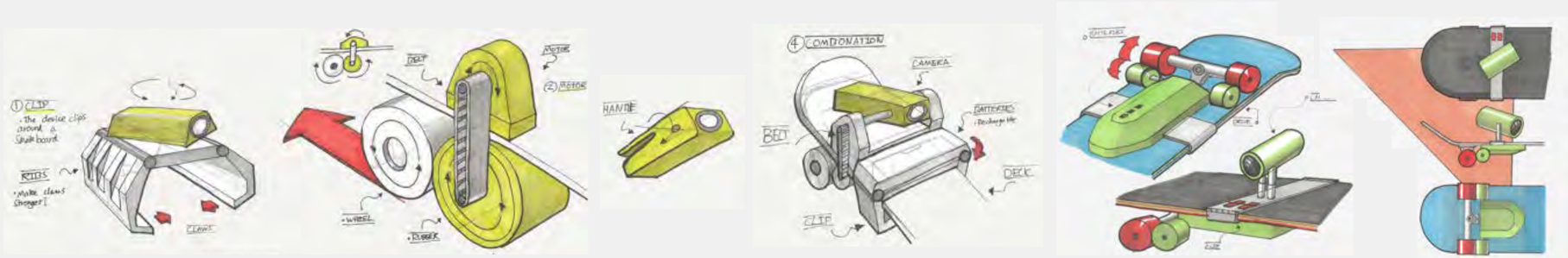
A device to help film high quality skating clips alone.

It should provide time for as many attempts as desired and a chance to learn from clips between runs.

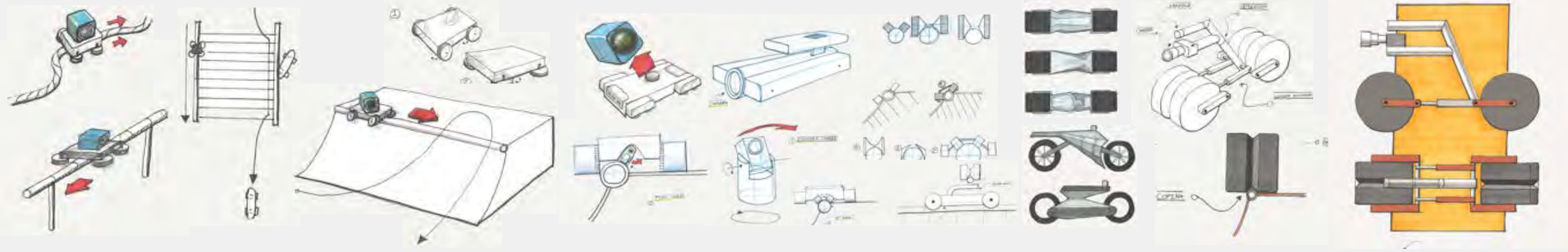


I used ‘Post-it’ and ‘coded’ sketches to explore the interaction with the camera. A concept matrice based on the specification helped select ideas.

Attaches to a second board.



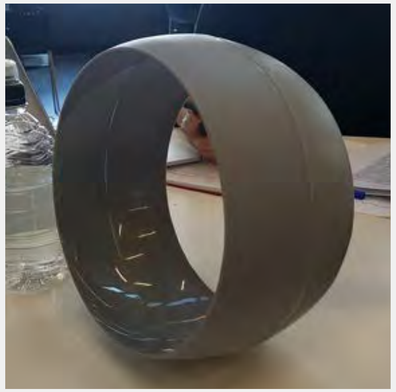
Connects to a rail or ledge.



Mounted in a mono-wheel.

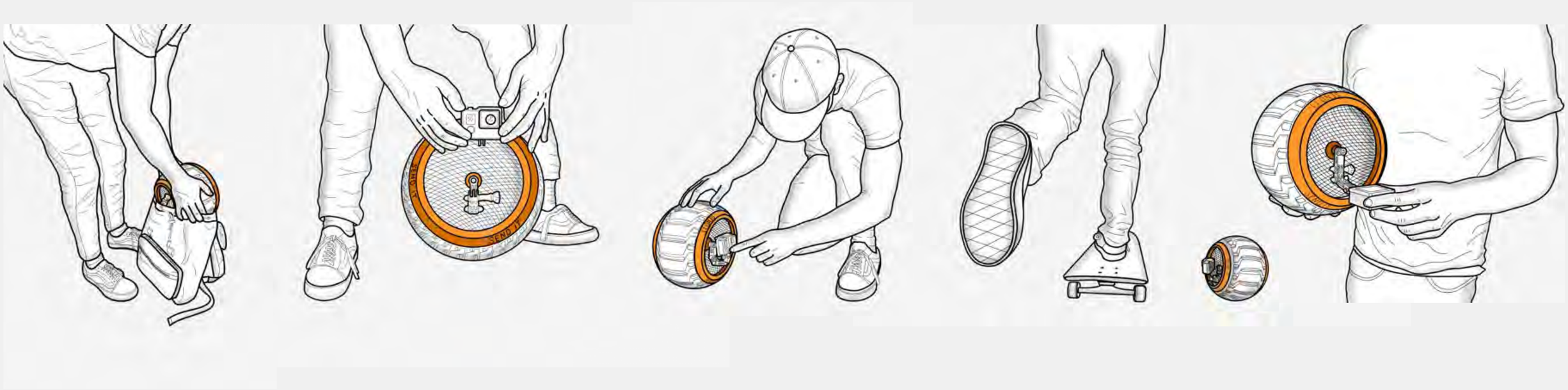
I developed the three strongest concepts to fully explore their potential.
Based on the positive user feedback I went forward with the camera wheel.



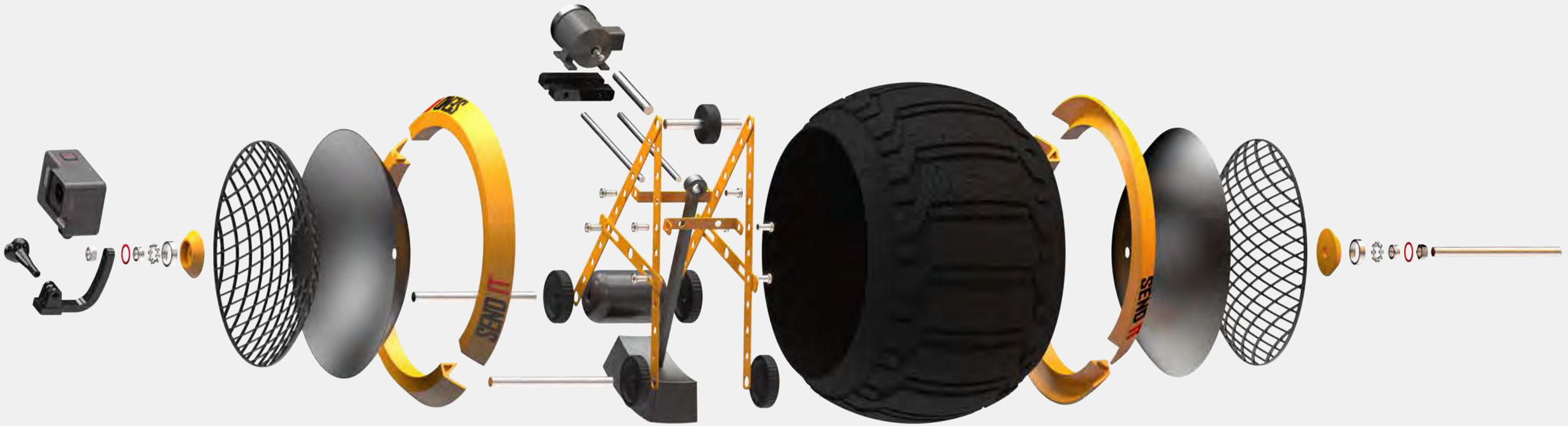
I chose a monowheel over a two wheel differential drive for its aesthetics, stability and smoother cornering. For the sphere, the bowl was too flexible, the lampshade uneven, but the reflective pond ball was ideal.

I made a jig for the angle grinder from a series of stiff objects to ensure a straight cut. I then rotated the sphere around slowly pushing it into the blade.



The user gets SEND out, attaches their camera, turns it on and starts the recording. Utilising its motion sensor, it follows the user capturing a video. They review it, make adjustments, and repeat until the trick is successful.


SENO R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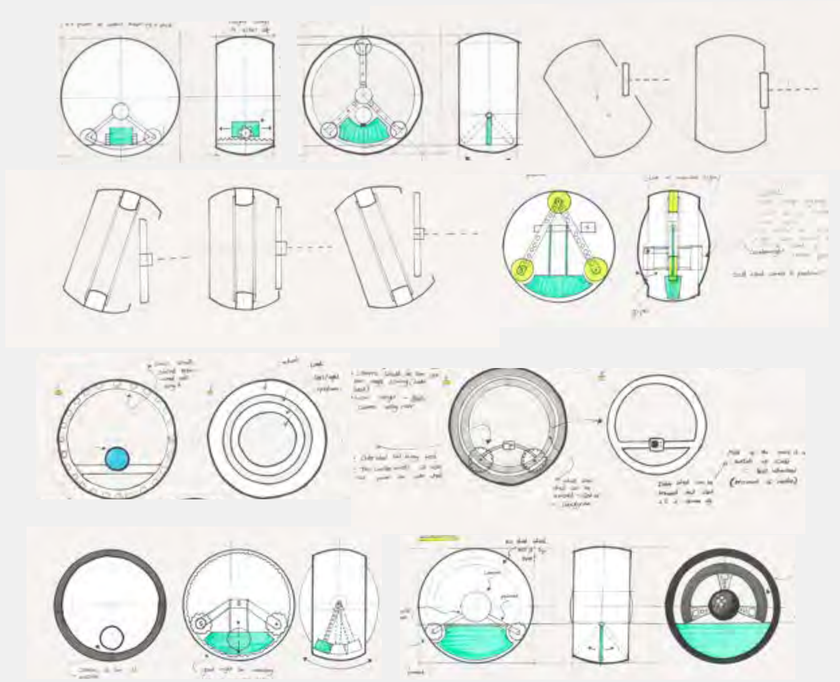

The frame was built from “Meccano” so that it could be reconfigured.

The springs pushed the frame into the outer wheel preventing slipping.

The wheels had bearings inset so that it could quickly readjust to level.

The electronics from an R.C. car allowed it to mimic following the rider.


SEND IT


SEND IT


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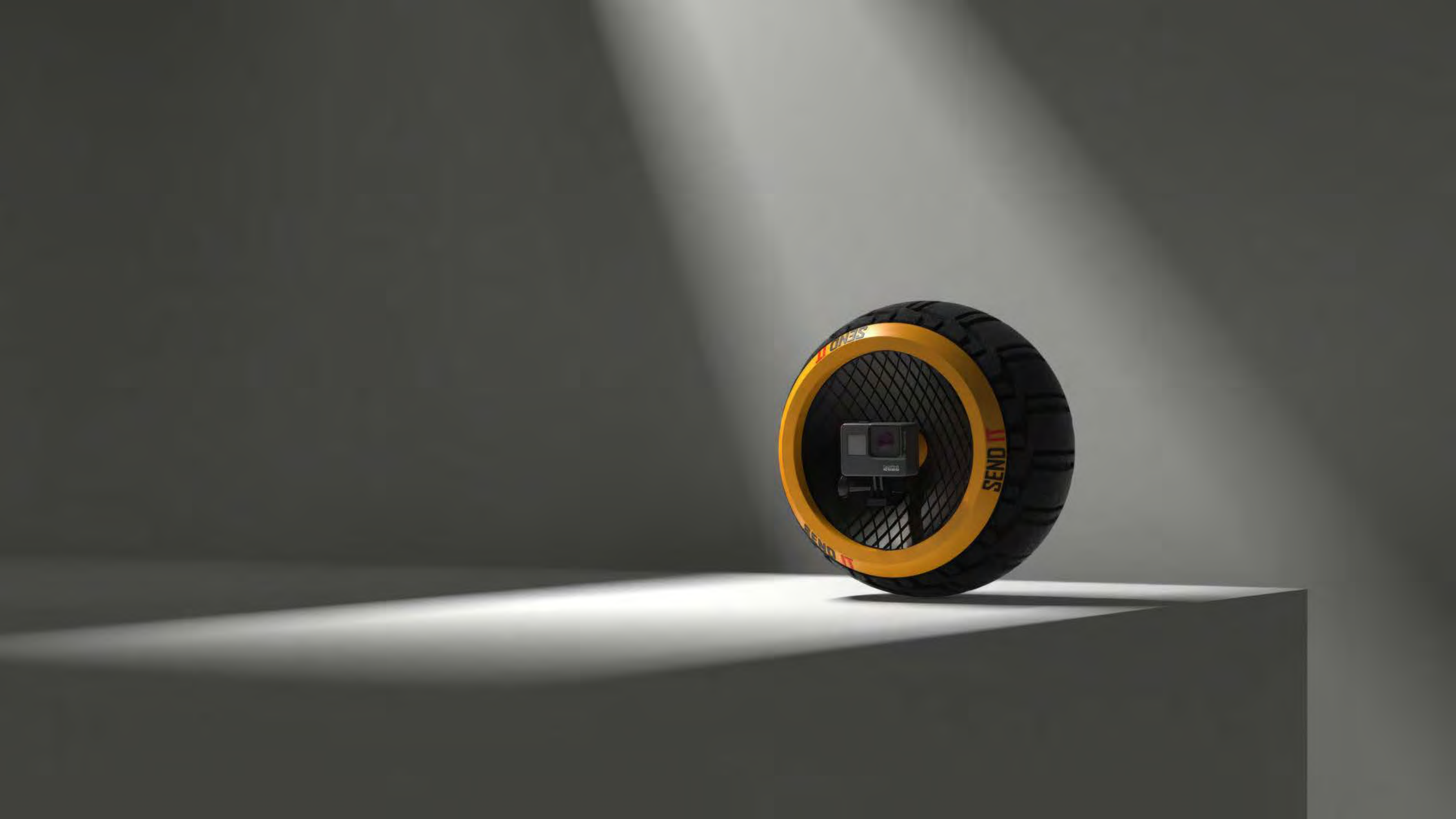
SEND IT


SEND IT ONES

ALLURE

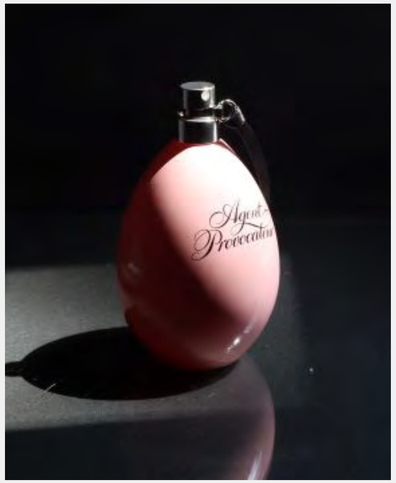
Gaultier inspired fragrance bottle

Inspired by Gaultier's "La Belle", ALLURE is a perfume bottle based on a woman's legs. Its anthropomorphic form is recognisable and adapts easily to a variety of styles. Offering this selection amplifies the impact of the wearer's choice.

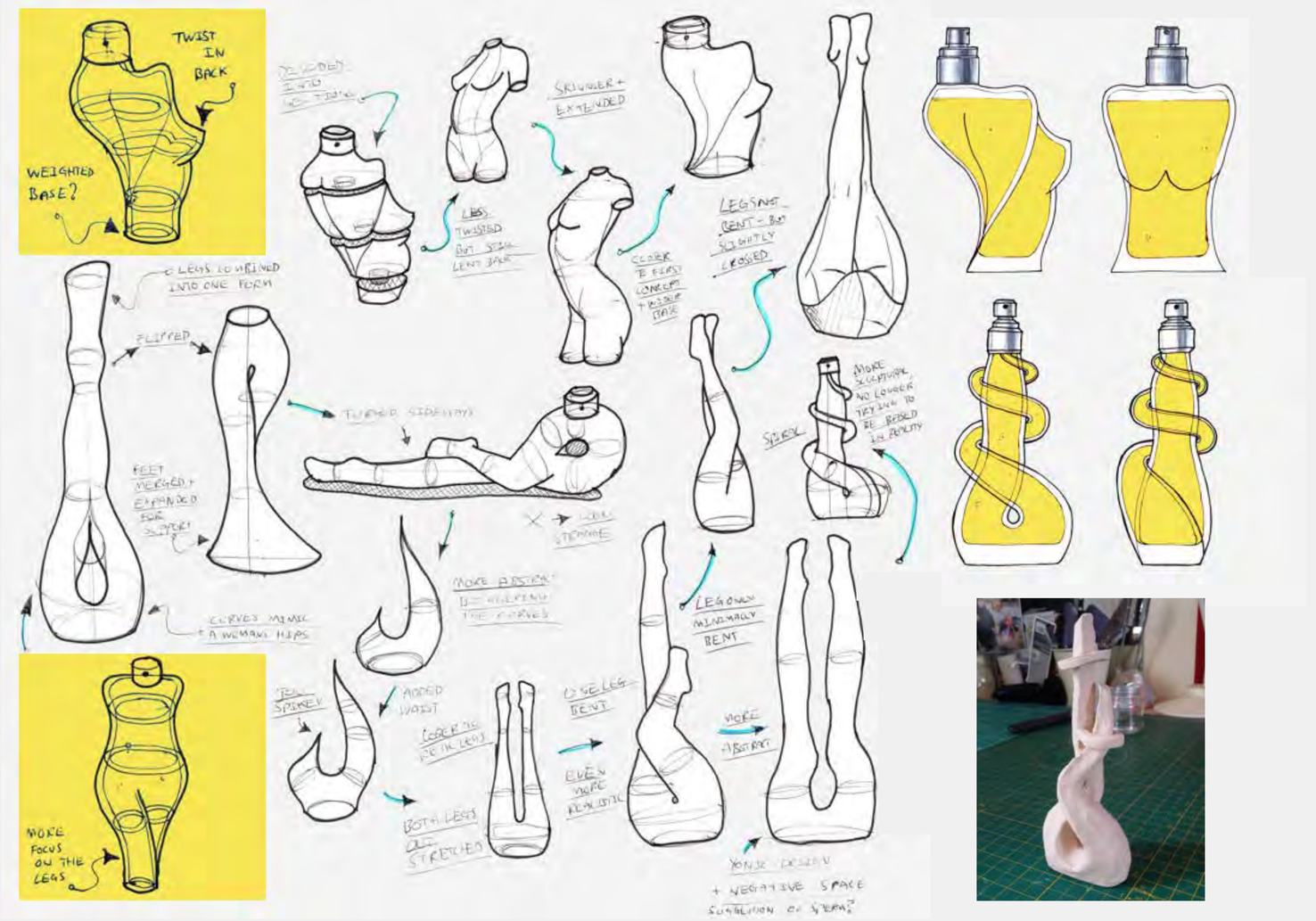





Feedback from a focus group on the bottles below guided my ideation. The “la Belle” bottle and the resulting ideas were received best. Inspired by the “Gaultier” line above, I aimed to create a similarly versatile design.





I developed the ideas based on the Gaultier bottle. One had an exaggerated twisted torso and a weighted base for stability. The other was inspired by legs, but feedback indicated that it needed to be more realistic.

The final design used character lines to compliment the natural curves of the legs and gold ankle bracelets to highlight where to interact with the lid.

Discover

Define

Develop

I put my work onto a design wall, which helped iterate, keep disciplined with the project's focus and continually consider the bigger picture.



I made a 3D printed prototype to evaluate the ergonomics. It also allowed me to test packaging, confirming it fits a standard JPG bottle case.

TROPHY

Commissioned hardwood awards

For this project, I made fifteen trophies, twelve commissioned by Mascall's Academy for an award ceremony and three created as gifts. The school requested a standard design and an enhanced one for the more prestigious award.

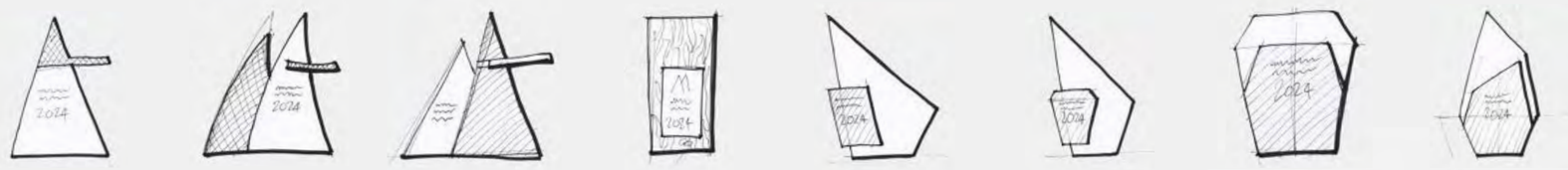
Design Brief:

Brutalist - Geometric shapes, block forms, and exposed natural materials.

Scalable - Materials and manufacture suitable for batch production.

Adaptable - Two variations, one standard and one more prestigious.

Stable - It looks sturdy and does not wobble or topple over.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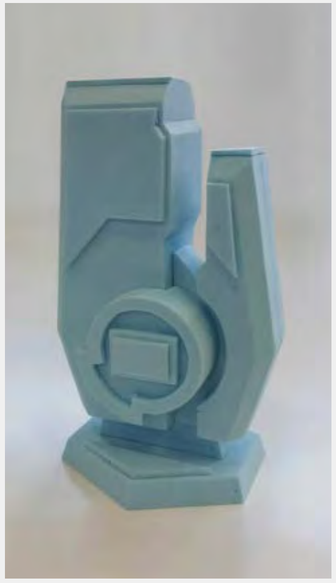
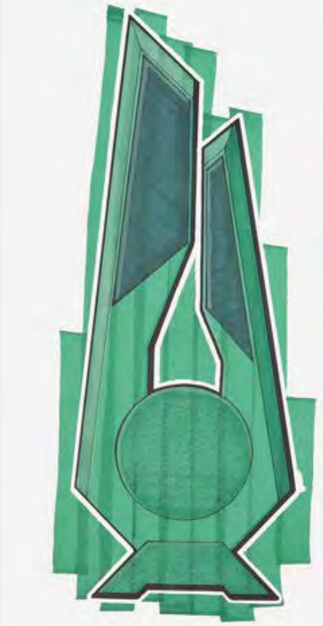
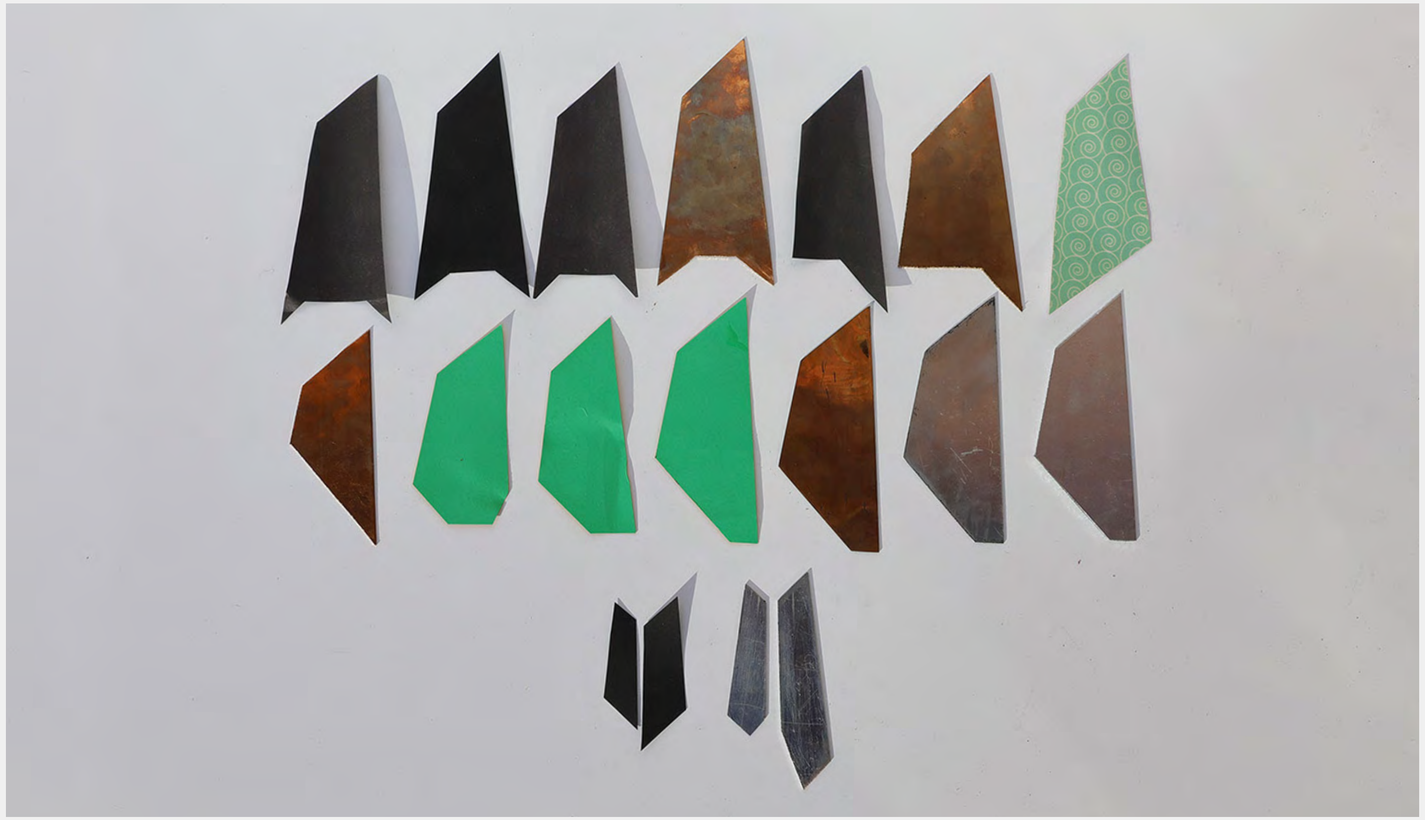
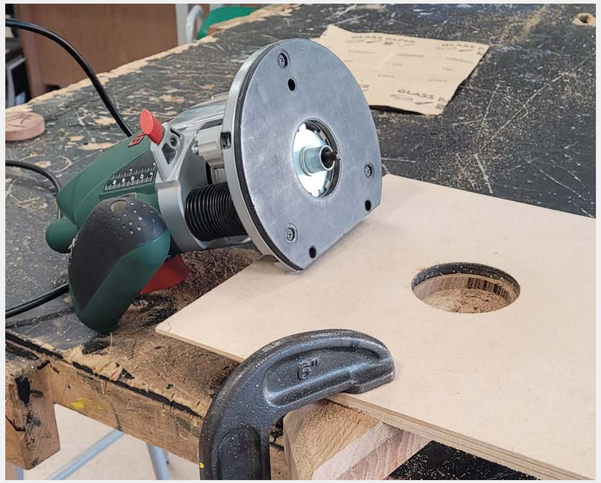


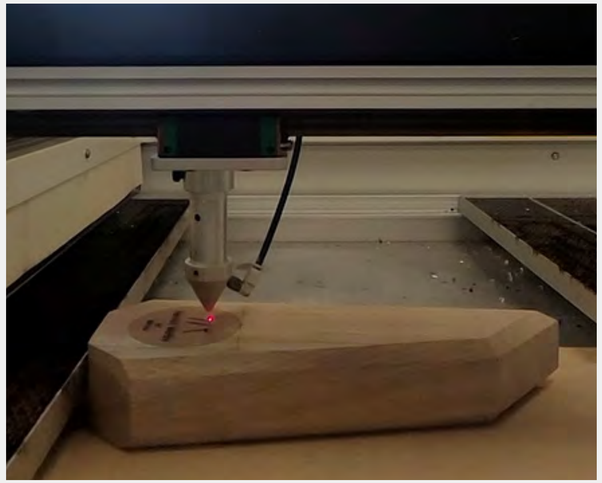




Prototyping the metal revealed inward angles couldn't be polished. I used the table saw and belt sander for the wood. To avoid a visible seam on the 'enhanced version' I used hand tools.

It was a challenge making disks that fit into holes perfectly. The best method was to turn the disks on the lathe and to use a router jig for the holes. Once they were flush, I engraved the text.





The label was a contrasting wood to make it a clear focus point. To ensure the trophies were ready in time for the ceremony they were made simultaneously as a single batch.


Hannah Warley
SLT
SEN Star


Alan,
you truly are
The World's
Best Godfather
Love you always,
your Godson Doug


Pup,
you truly are
The World's
Greatest Dad
Love you always,
your son Doug
Alan,
you truly are
The World's
Best Godfather
Love you always,
your Godson Doug
Mumma,
you truly are
The World's
Greatest Mum
Love you always,
your son Doug

There's more
for you to explore...

Skateramps - Custom skateramps made to sell.

Carve - Longboard progression tracking system.

Brewdog - Injection moulded bottle opener.

Intersect - Space saving furniture.







...get in touch, and lets chat!

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Sketching_Progression