

# portfolio

PHOTOGRAPHY

UX

SUSTAINABILITY

INDUSTRIAL DESIGN

emilia ziolek







## about me

My name is **Emilia Ziolek**. I am a final year Product Design & Technology student at University of Limerick, passionate about sustainability, intuitive physical design, and the intersection between people and the natural world. My work often challenges passive consumption habits, favoring analog, human centered solutions inspired by biomimicry and circular systems.

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## education

- University of Limerick - BSc. Product Design & Technology 2021 - 2025.
- Rosenheim Technical University - Class B Sustainability & Circular Economy jul. 2023.
- Janets UK Online Platform - Advanced Diploma in Renewable Energy (CPD/QLS Certified) jan. 2024.

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## work experience

- Continuous Improvement Intern – Stryker (Limerick) jan. 2024 – sep. 2024.
- Real World Studio – Stryker (Cork) sep. 2024 – oct. 2024.
- Shift Supervisor – Centra (part-time) oct. 2024 – current.

## technical skills



Adobe Creative Cloud; Basic Knowledge and Interface.



3D Modelling; Strong solidworks, softer on rendering in blender.



Affinity Suite; basic knowledge and interface.

## soft skills

- Communication & Presentation
- Leadership & Teamwork
- Accountability
- Organisation
- Cultural Adaptability

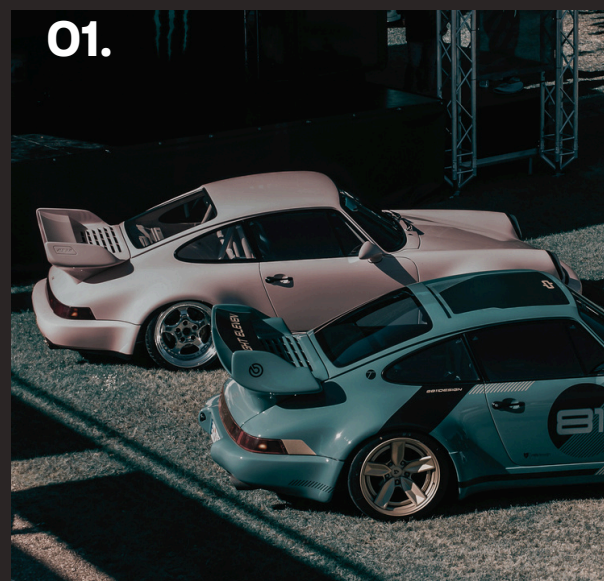
# chapters

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UX

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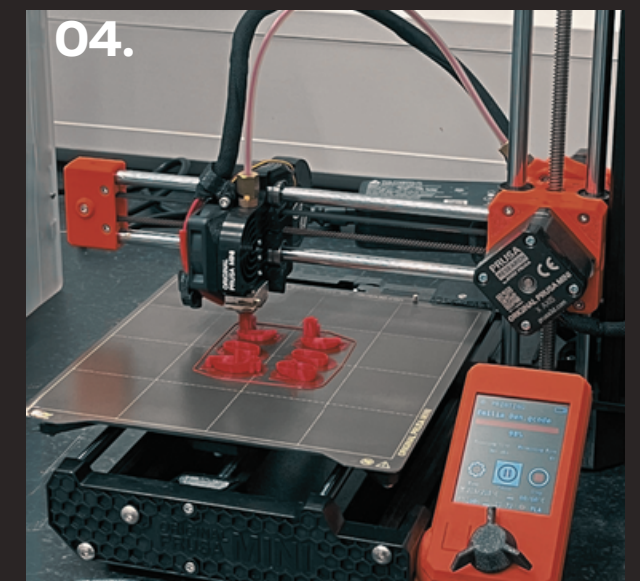
photography & editing



UX & graphic design



sustainability



industrial design



photography & editing

01.

Shot Type: Automotive event photography

Camera Focus Intent: Isolated subject focus on the custom-painted car, using Lightroom masking to bring **attention forward**.



Shot Type: Drift Show Photography

Camera Focus Intent: **Freeze the motion** while preserving the **dynamic energy** and atmosphere.



World Archery Youth Championships 2023





photography & editing

01.



Video Editing

**CrúCapaill** is a startup developing removable, **non-metal horseshoes** that protect hooves during intense activity while allowing horses to go barefoot in low-impact environments—combining performance, comfort, and **hoof health**.

<https://www.youtube.com/watch?v=BtGj4JFEzUk>

SHORTLISTED (STAGE 2) FOR THE STUDENT ENTREPRENEUR AWARDS 2025

SECOND PLACE WINNER OF STUDENT ENTREPRENEUR AWARDS (INTERNAL) UL

Frame Breakdown:

strong visual identity through logo



horses in motion to establish tone of brand

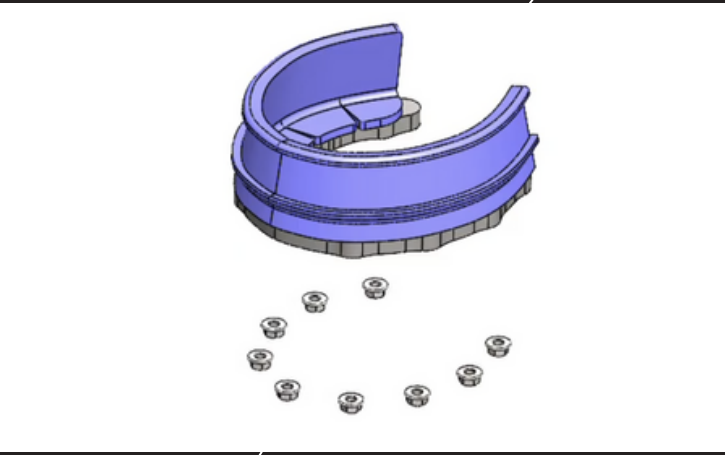
team intro. to establish human connection



showcases group project

personalize startup

clear 3D visuals through solid works animation



explains product

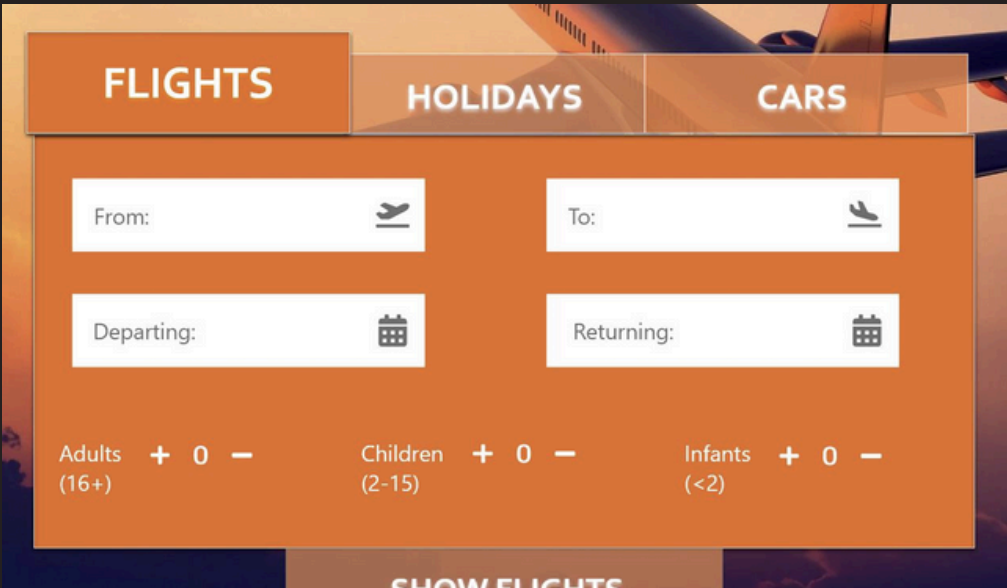


UX/UI Case Study: easyJet Website Redesign - 6 weeks (2023)

I redesigned the easyJet desktop website to improve user experience through **simplified navigation**, clearer visual hierarchy, and more intuitive task flows. The project involved **benchmarking**, **journey mapping**, **usability testing**, **wireframing**, and creating a functional prototype in Adobe XD.



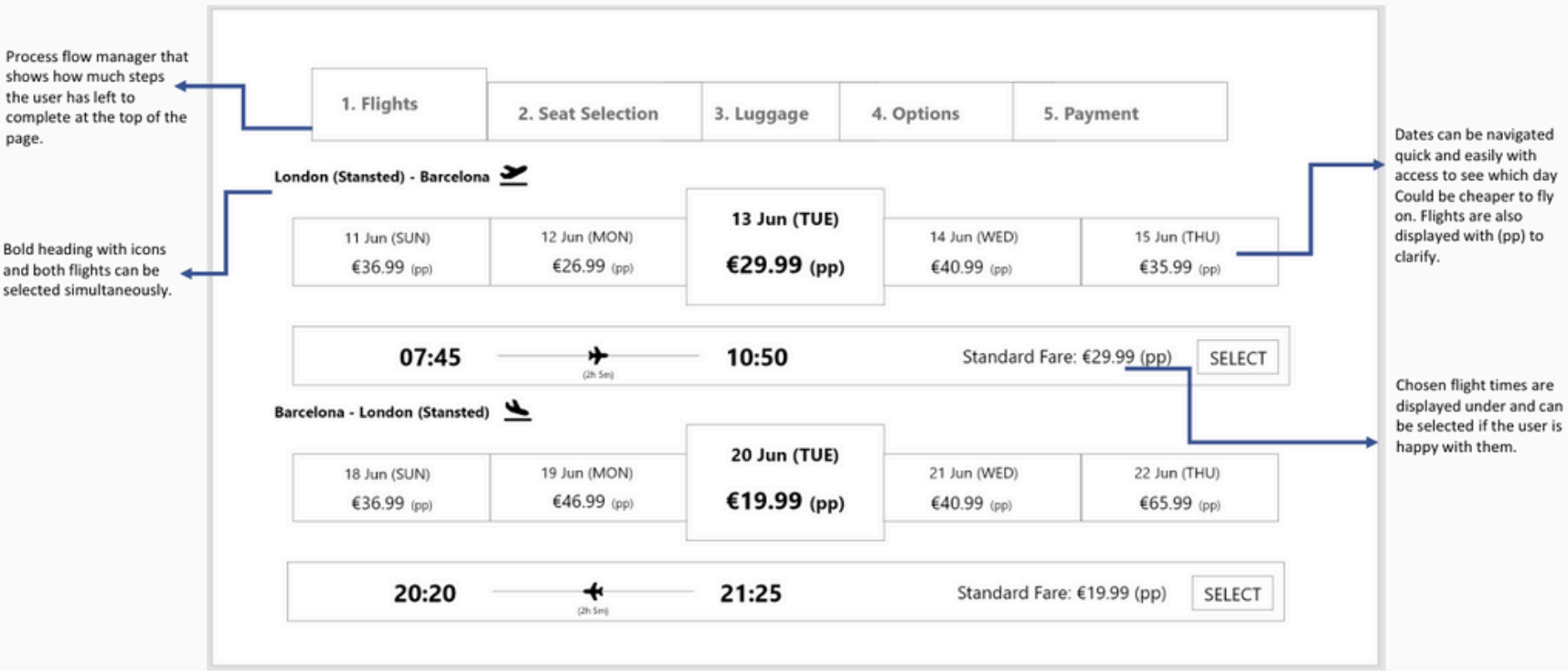
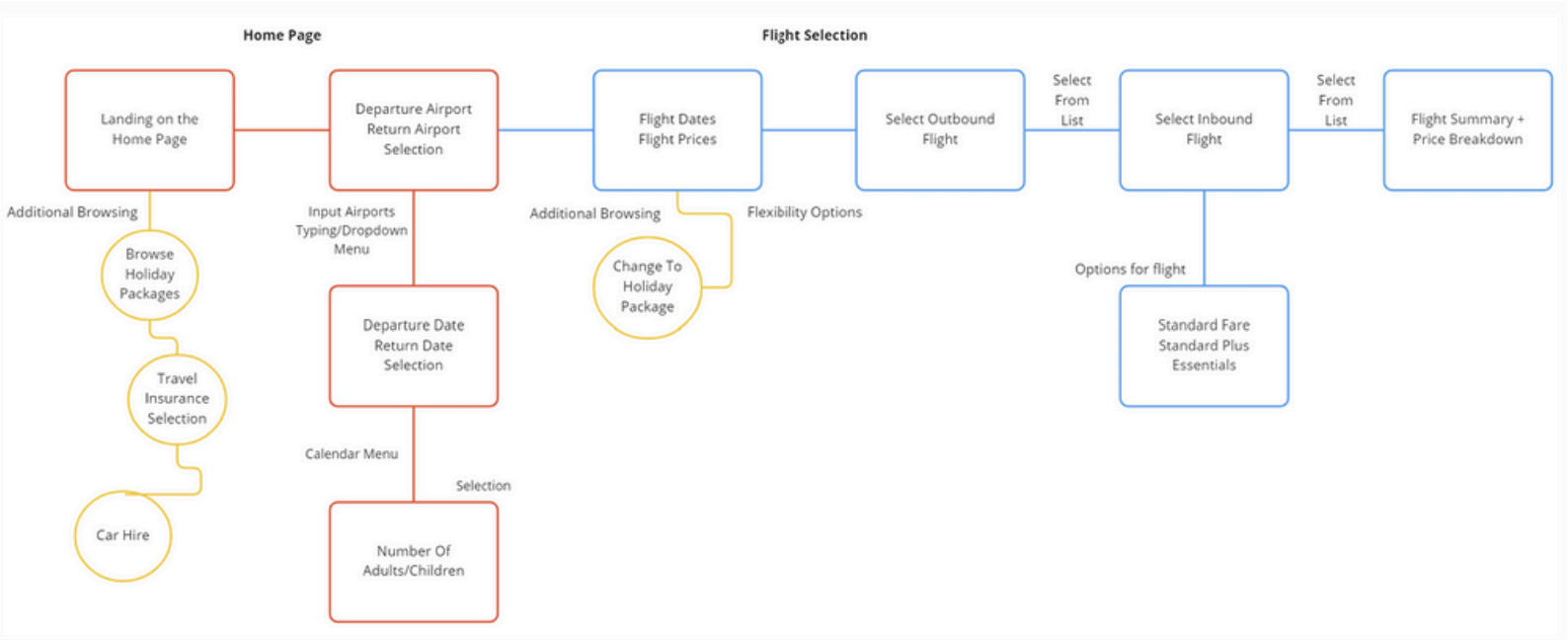
Video of AdobeXD Prototype Walkthrough



<https://www.youtube.com/watch?v=DOkkBNOPKfw>

task flows journey mapping wireframing

Stages	Landing Page	Choosing Flights	Option Details	Checking Out
Experience				
Goals	<ul style="list-style-type: none"><li>Input flight details and dates/potentially discover different options.</li></ul>	<ul style="list-style-type: none"><li>Be able to find the best price for a flight and quickly manoeuvre through the times and dates.</li></ul>	<ul style="list-style-type: none"><li>Choose additional/potential packages like baggage, insurance and food vouchers.</li><li>Choose seats by navigating through the seat selection.</li></ul>	<ul style="list-style-type: none"><li>Review booking details and input passenger details</li><li>Confirm flight details. And enter payment details.</li></ul>
Behaviours	<ul style="list-style-type: none"><li>Confused by the system and didn't think to type.</li><li>Tedious process of resetting flight dates the user didn't want to go through.</li></ul>	<ul style="list-style-type: none"><li>Choosing the best flight time and the lowest fare where you must navigate the interface.</li></ul>	<ul style="list-style-type: none"><li>Picking best and most convenient seats on the image of the plane.</li><li>Choosing luggage that isn't already included in the fare.</li></ul>	<ul style="list-style-type: none"><li>Booking summary.</li><li>Payment/input method.</li><li>Transaction confirmation.</li></ul>
Mental Models	<ul style="list-style-type: none"><li>Expecting to be able to go back and change dates while in interface.</li><li>Expecting to be able to look at all the airports.</li></ul>	<ul style="list-style-type: none"><li>Expectations for a clear layout and system</li><li>Expectations to be able to choose different dates if flexible.</li><li>Expectations to be able to filter through the flights.</li></ul>	<ul style="list-style-type: none"><li>Expectations for a system that provides correct information on where the user sits on the plane.</li><li>Expectations for clarity about what baggage is for the hold or cabin.</li><li>Expectations for an easily-navigated system.</li></ul>	<ul style="list-style-type: none"><li>Expectations for passenger details to be put in quickly and conveniently.</li><li>Expectations for normal input method for payment.</li></ul>
Pain Points	<ul style="list-style-type: none"><li>Confusing side interfaces that pop up.</li></ul>	<ul style="list-style-type: none"><li>Confused by small typography and layout of boxes – which times indicate which?</li><li>Layout of different airports presented in a weird structure.</li></ul>	<ul style="list-style-type: none"><li>Plane is difficult to understand and parts of the plane you can't book are still displayed.</li><li>Hard to understand what baggage the user has purchased.</li></ul>	

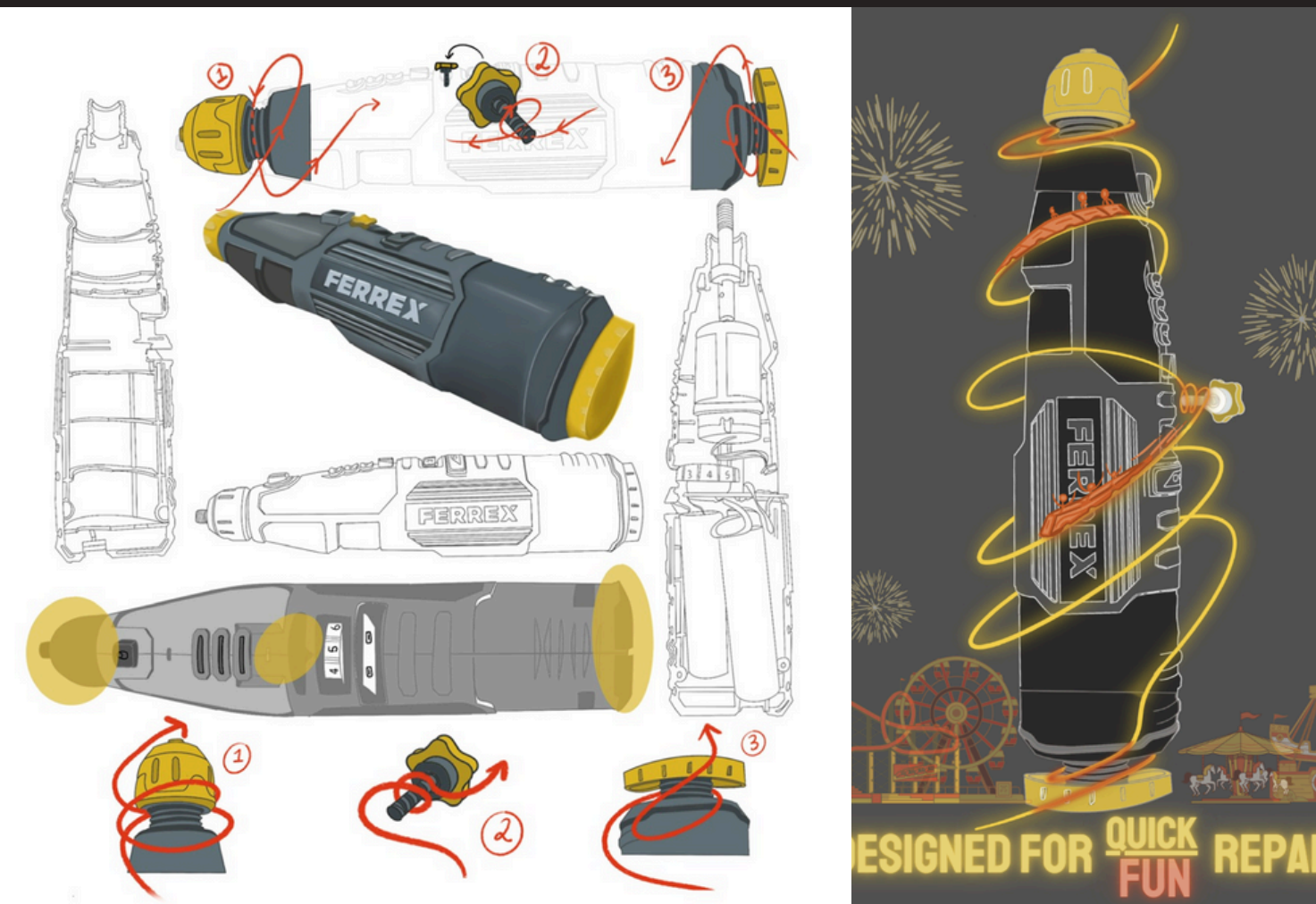
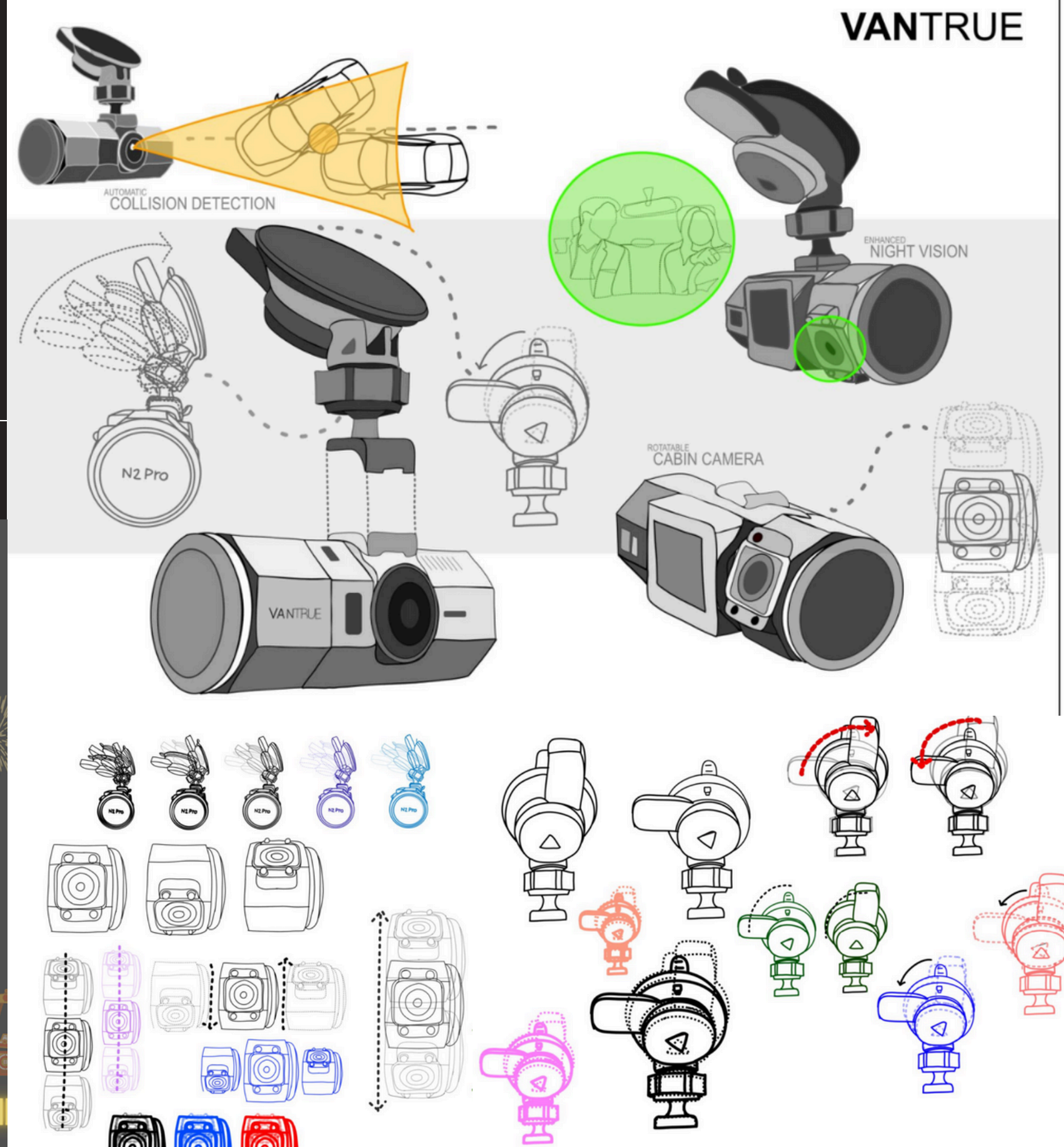






Visualising Function Through Digital Illustration (Design Vis 1) - 4 weeks 2024.

Using Affinity Designer, I created an A3 visual story to showcase the features and **user experience** of a dash cam. My goal was to communicate both the physical functionality and the **in-use scenarios**—like night vision and motion detection—through clear, layered illustrations. I used layout, movement cues, and minimal text to guide the viewer across the page and **highlight key selling points**.



Digital Illustration (Design for Repair) - 4 weeks 2023.

To challenge the dull, technical image of repair, I created bright, **energetic illustrations** that reframe repair as something playful and approachable. Inspired by neon colors, theme parks, and abstract movement, these visuals aim to **spark curiosity and reduce intimidation** for everyday users. All illustrations made by ProCreate.







FINAL YEAR  
DESIGN PROJECT

NOV 24 - MAY 25

sustainability

03.

ZEER is **a zero-energy approach to keeping food fresh** that uses natural evaporative cooling to slow down spoilage and reduce food waste at home.

We've built kitchens that hide food away — out of sight, out of mind, and often out of date. This disconnect distances us from the food we have, how we store it, and how we value it. ZEER creates space to store food more naturally — keeping it visible, within reach, and a conscious part of everyday life.







- MATERIAL FOCUSED
- BIOMIMICRY
- INDUSTRIAL DESIGN

## 29% OF ALL FOOD WASTE IN IRELAND IS GENERATED AT A HOUSEHOLD LEVEL.

### • User Research:

I conducted research with over 50 participants across 3 user types (students, parents, skilled cooks) to understand how habits and environments affect food waste.

### • Behaviour Mapping:

I used fridge recall exercises, food diaries, and live cooking observations to track food use, waste patterns, and storage decision-making.

### • Biomimicry & Low-Tech Systems:

I explored natural cooling methods like the Zeer pots, focusing on evaporation, porous clay, and passive airflow as sustainable design strategies.

### • Design Development:

I created a double-walled clay dome with a 30 mm sand gap, designed to cool through watering and encourage daily interaction with stored food. Learnt to use a Lutum 5 3D Ceramic Printer where the dome took 35 hours to print total.





THE CLAY BODY IS INTENTIONALLY LEFT UNGLAZED TO RETAIN MOISTURE AND ENABLE EVAPORATION THROUGH IT'S SURFACE

20 DEGREE ANGLE OF THE DOOR  
ALLOWS THE USER TO SEE MORE INSIDE

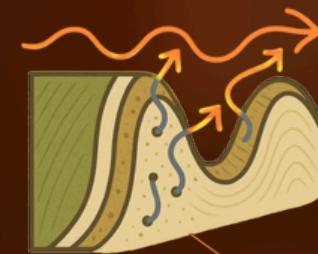
CURVATURE AND UNEVEN SURFACE ALLOWS FOR MORE EVAPORATION AREA AND GREATER COOLING EFFECT

QUICK ACCESS TO SHELF FOR REPLACEMENT OF THE SALT

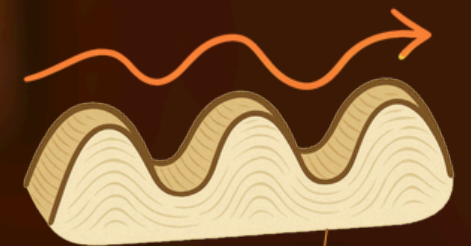
OPENING AT THE TOP TO WATER THE SAND,  
HOLE LEFT OPEN FOR THE USER TO VISUALLY SEE WHEN THE SAND IS DRY AND NEEDS TO BE WATERED.

## TECHNOLOGY

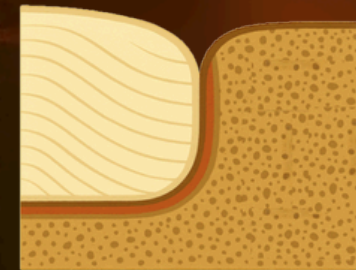
**Cooling effect** is caused by water particles escaping the clay



**3D Printed** ridges enhance natural cooling



**Cork** creates a natural airtight seal against the walls



**Salt** helps absorb moisture and extend freshness





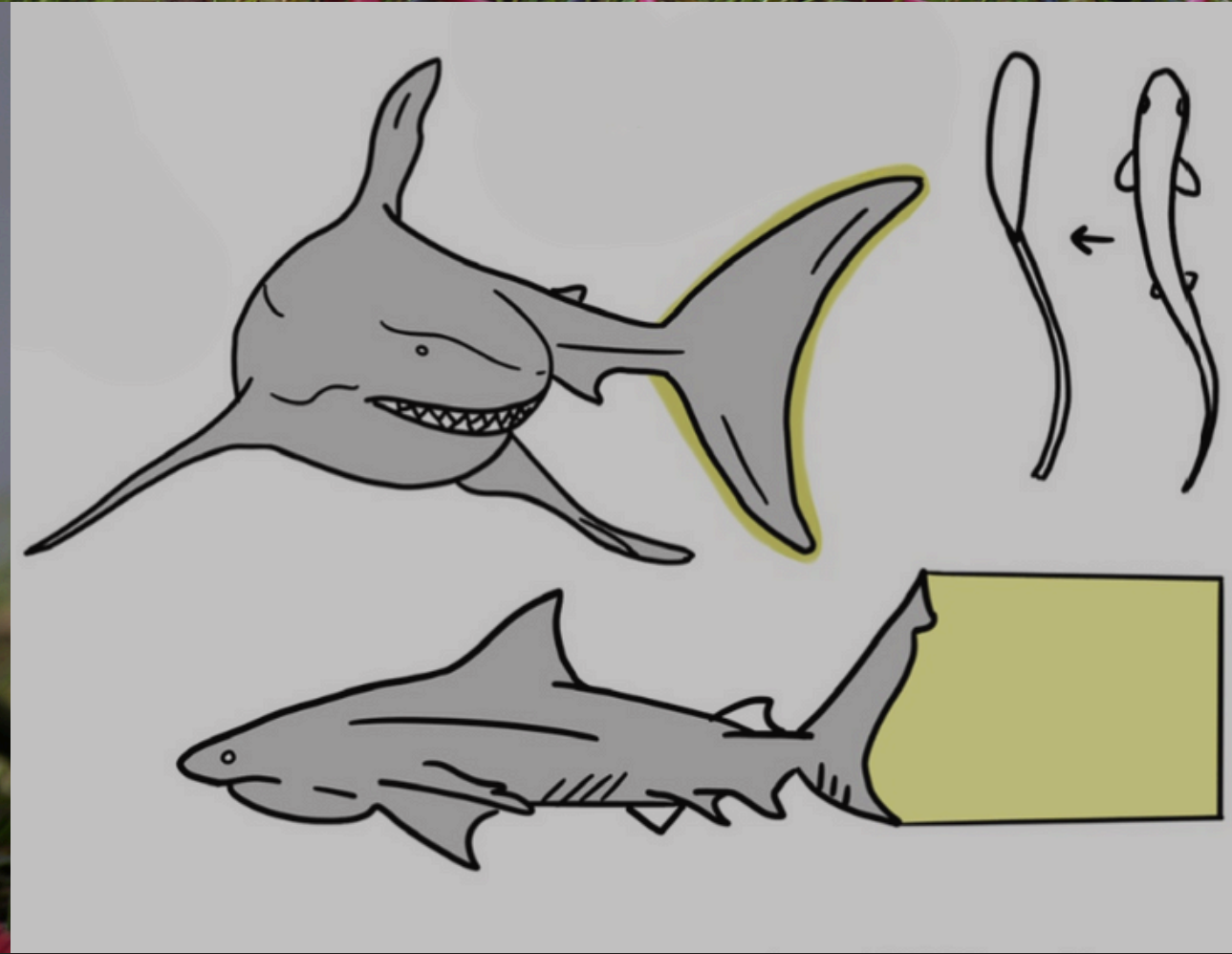
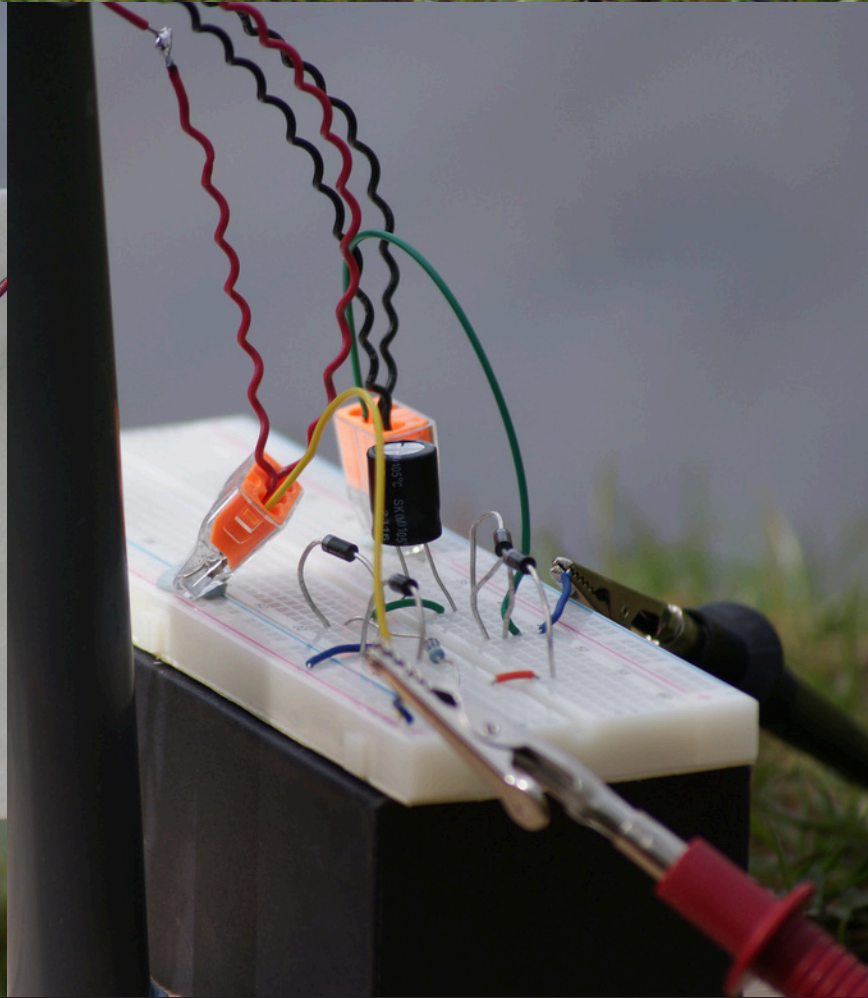
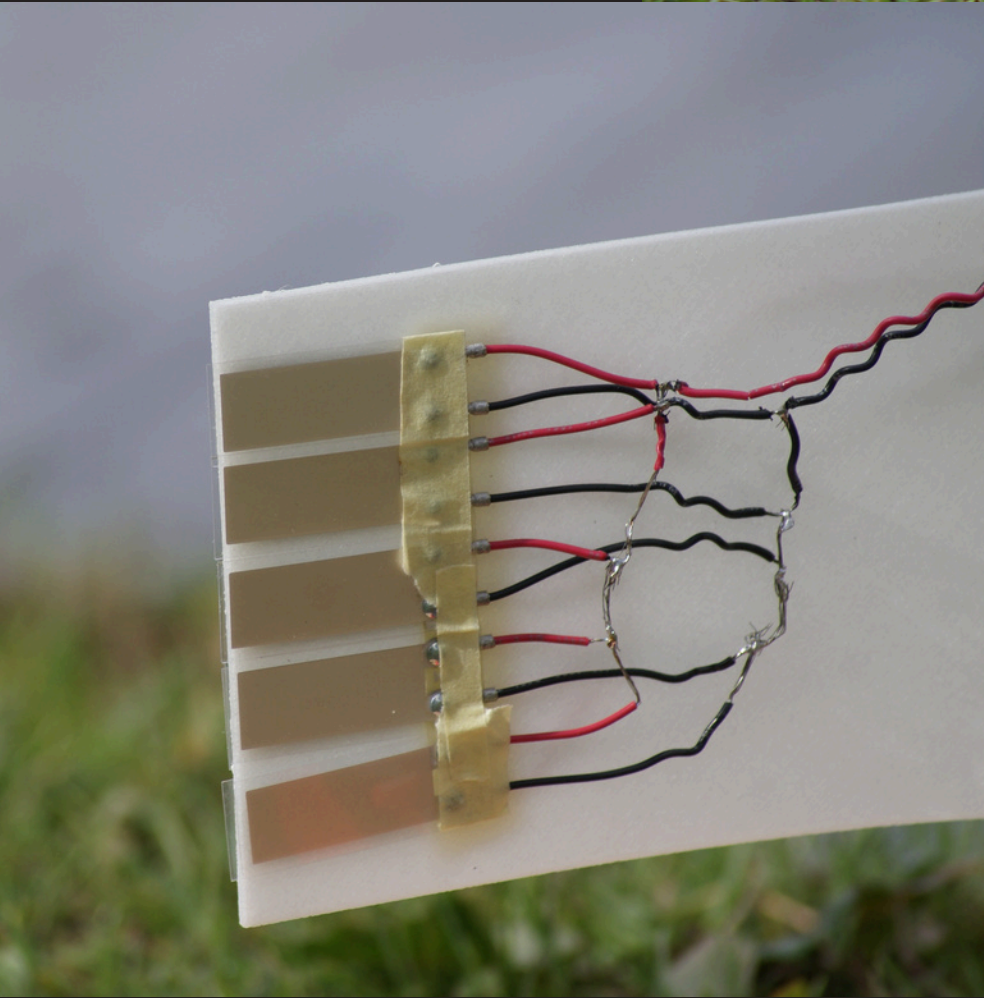
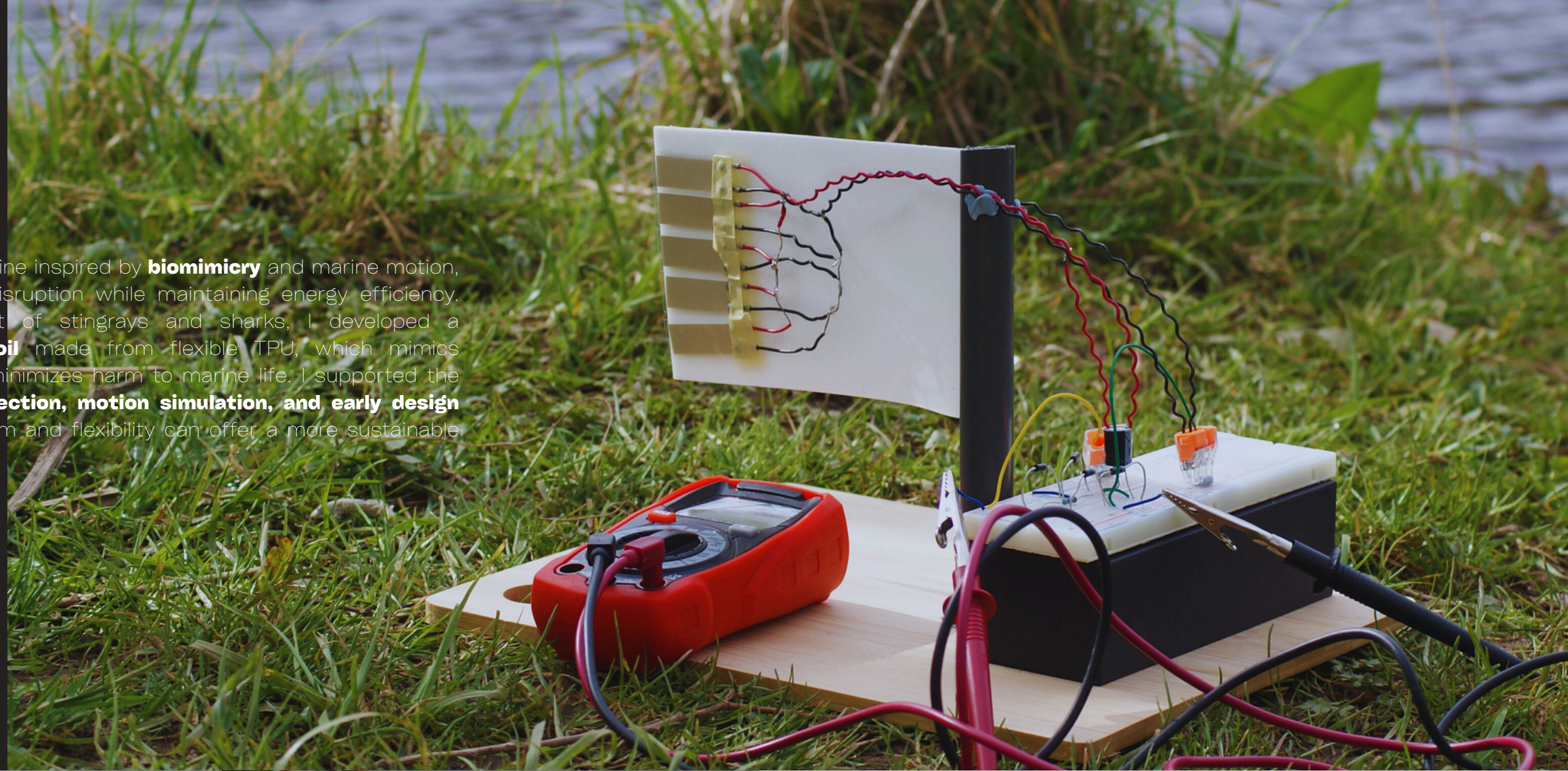
## Tidal Energy Turbine Redesign

I redesigned a tidal energy turbine inspired by **biomimicry** and marine motion, aiming to reduce ecological disruption while maintaining energy efficiency. Drawing from the movement of stingrays and sharks, I developed a **bladeless, oscillating hydrofoil** made from flexible TPU, which mimics natural underwater flow and minimizes harm to marine life. I supported the concept through **material selection, motion simulation, and early design iteration**, focusing on how form and flexibility can offer a more sustainable approach to tidal power.

- BEOPEN'S DESIGN CLIMATE ACTION THIRD PLACE & FOUNDER'S CHOICE WINNER.
- UL SUSTAINABILITY CHALLENGE 1 OF 5 SHORTLISTED APPLICANT.



- ENGINEERING FOCUSED
- TESTING PROCEDURES
- ELECTRICS





# 04.

Advanced Modelling of Form - 4 weeks 2023.

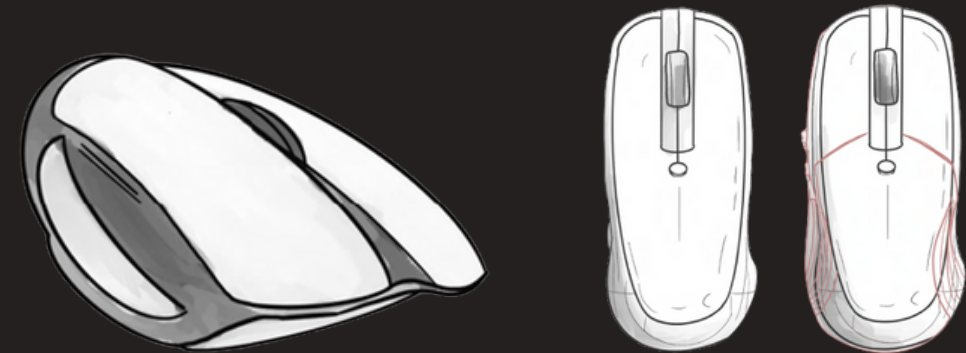
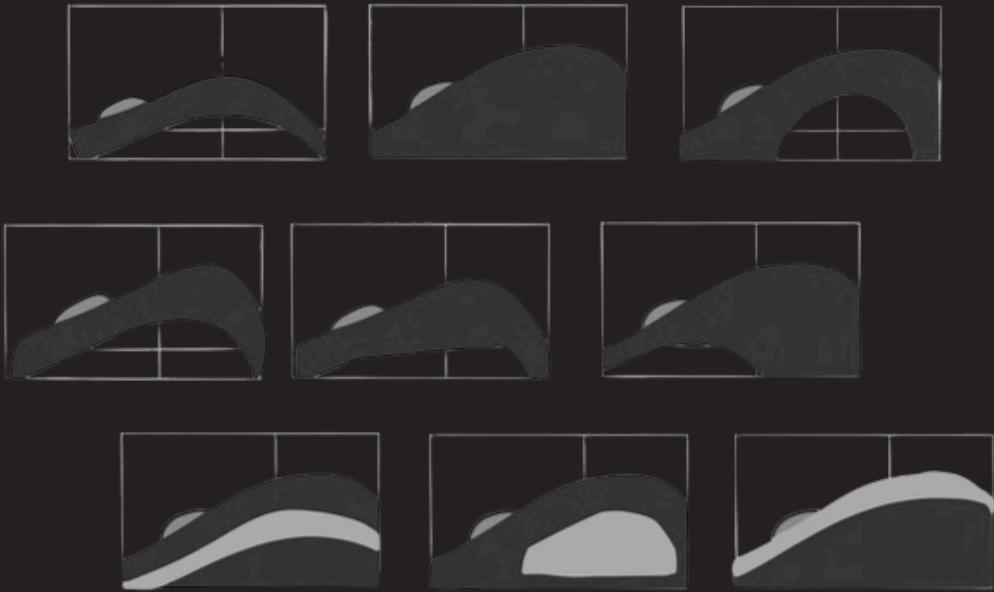
This project focused on designing an ergonomic computer mouse through an industrial design lens—balancing **form, function, and user comfort**. Using clay prototyping, hand studies, and brand-driven styling, I created a concept with a split-button layout and sculpted grip that reflects both **usability and manufacturing intent** within a minimalist aesthetic.



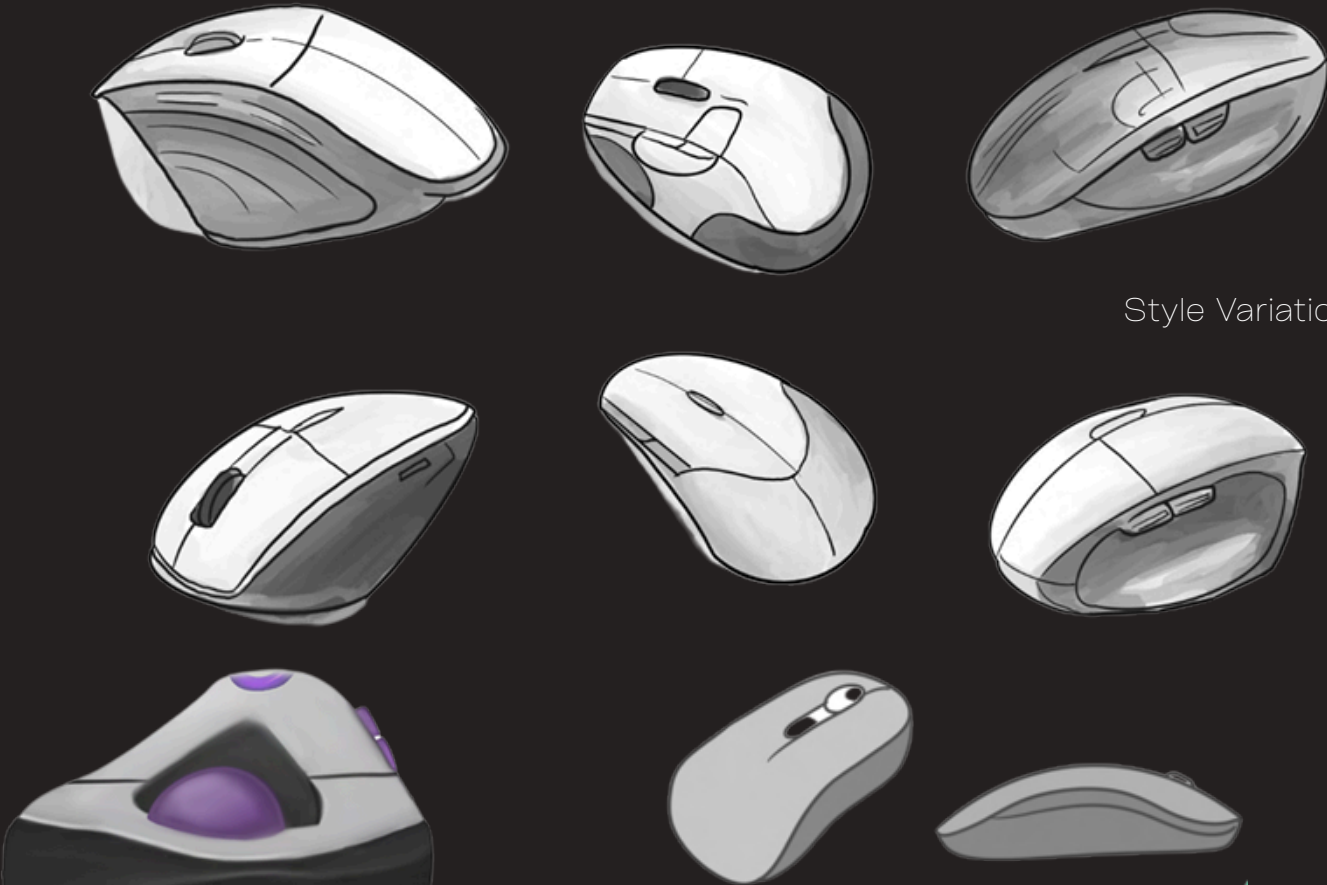
Final Render



Form Language Exploration

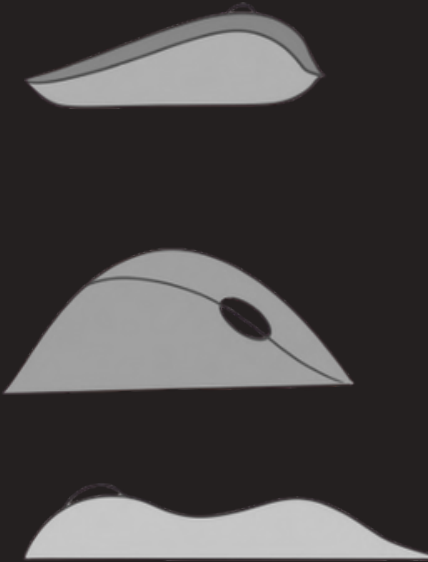


Concept Development

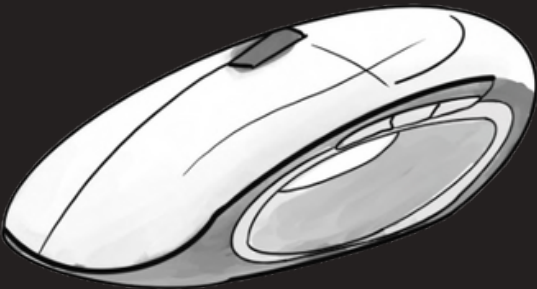


Style Variations

Volume & Curve Balance



Ergonomic Refinement





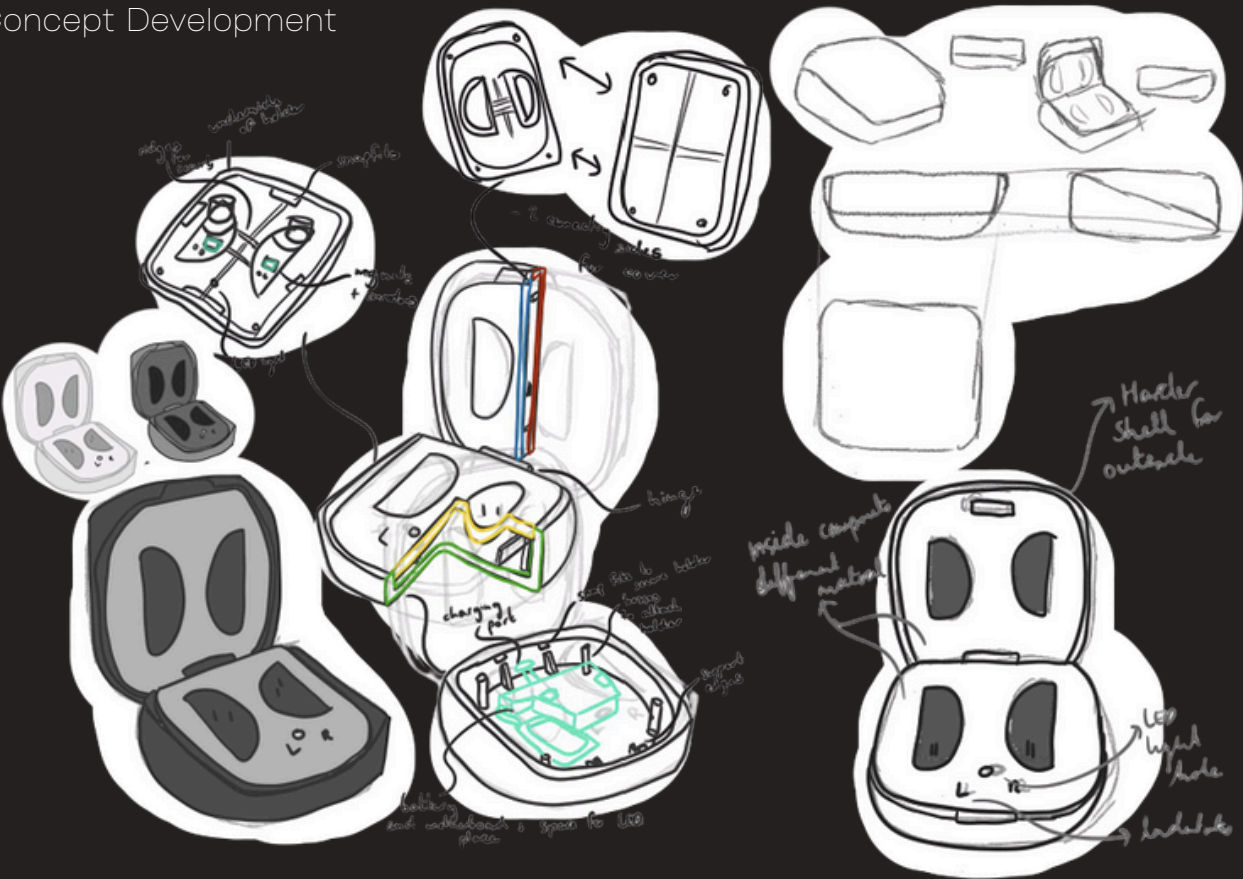


Design for Manufacture (Earbud Case) - 4 weeks 2023.

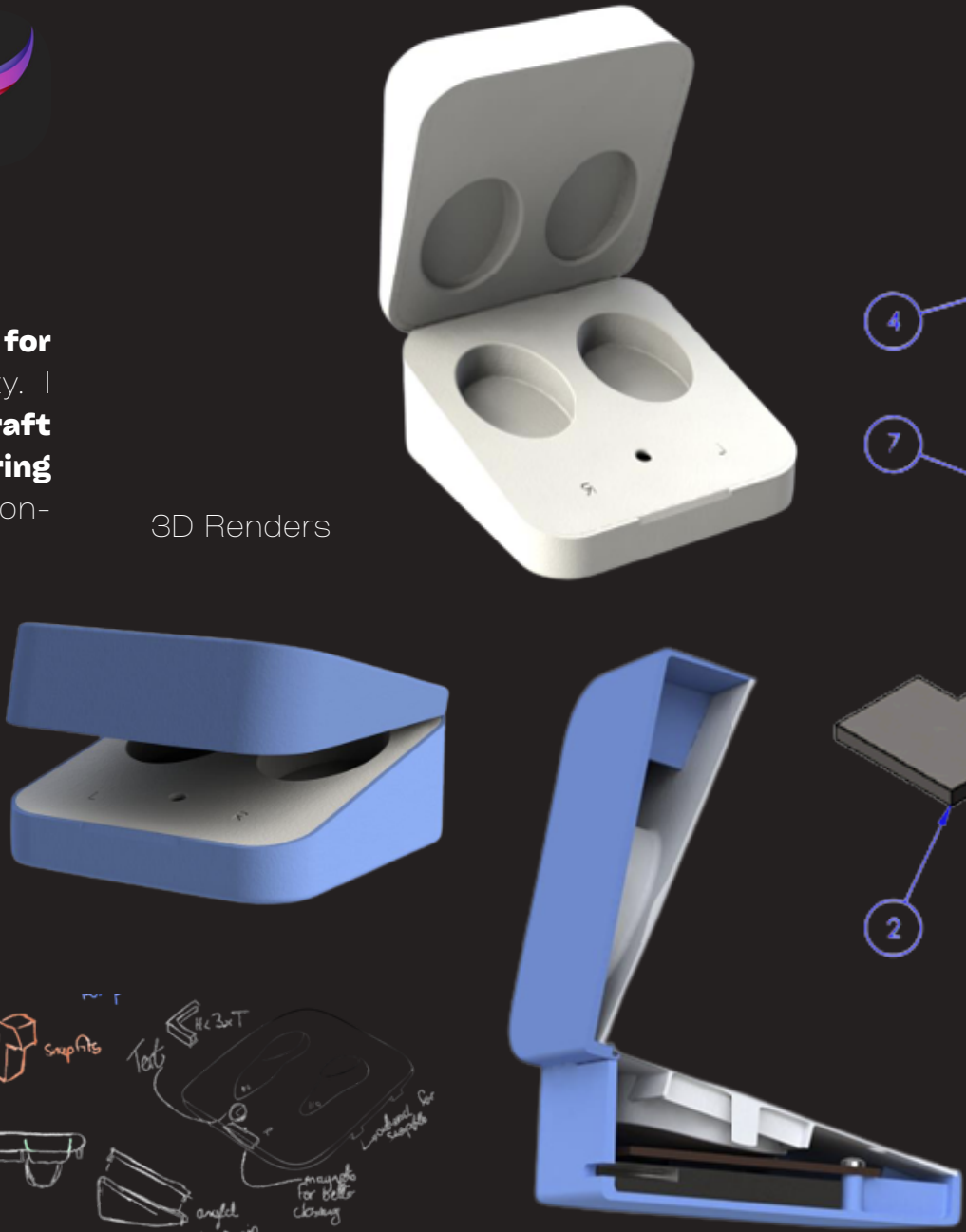
For this project, I designed a gym-friendly earphone case **optimised for injection moulding**, focusing on durability, comfort, and manufacturability. I integrated essential DFM features such as **snap fits, ribs, bosses, and draft angles**. It was rewarding to design within **real-world manufacturing constraints**, ensuring the product could be both practical and production-ready.



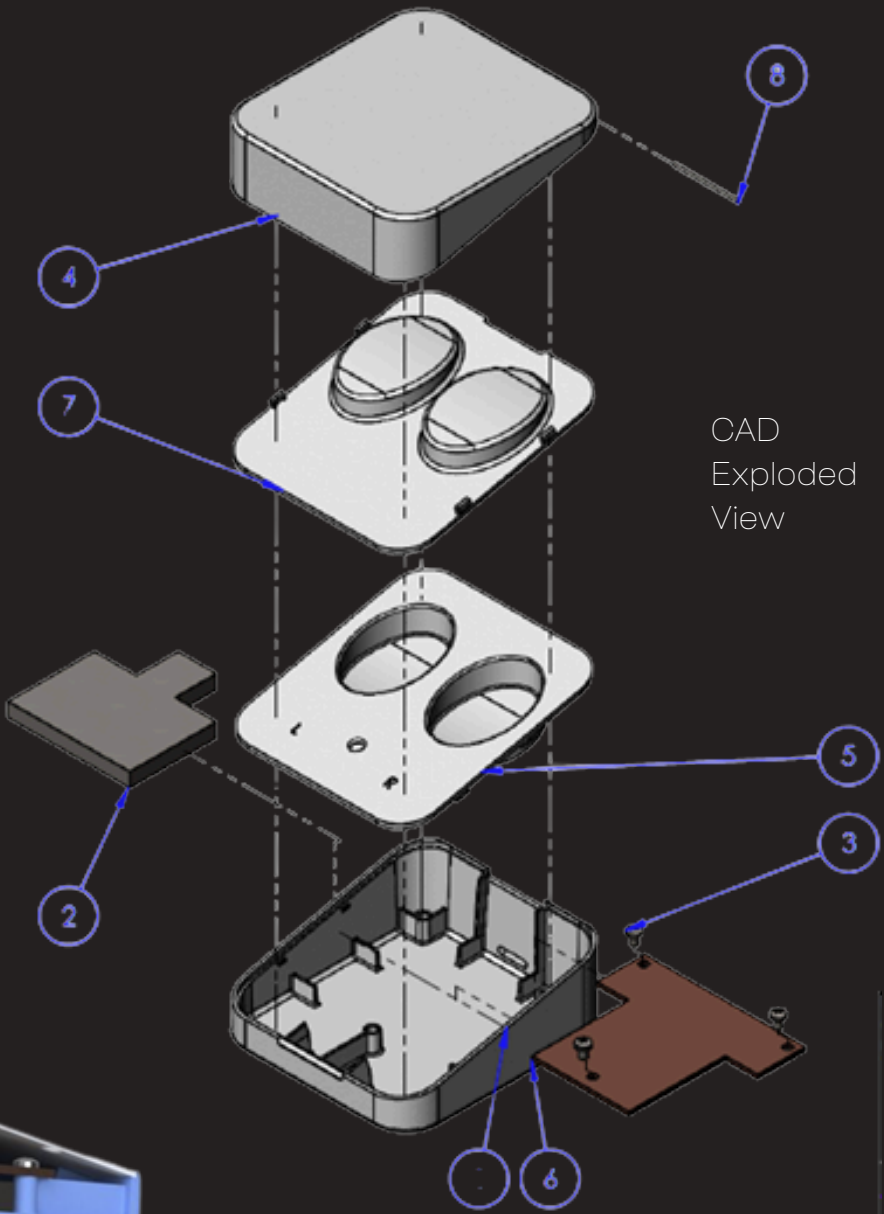
Concept Development



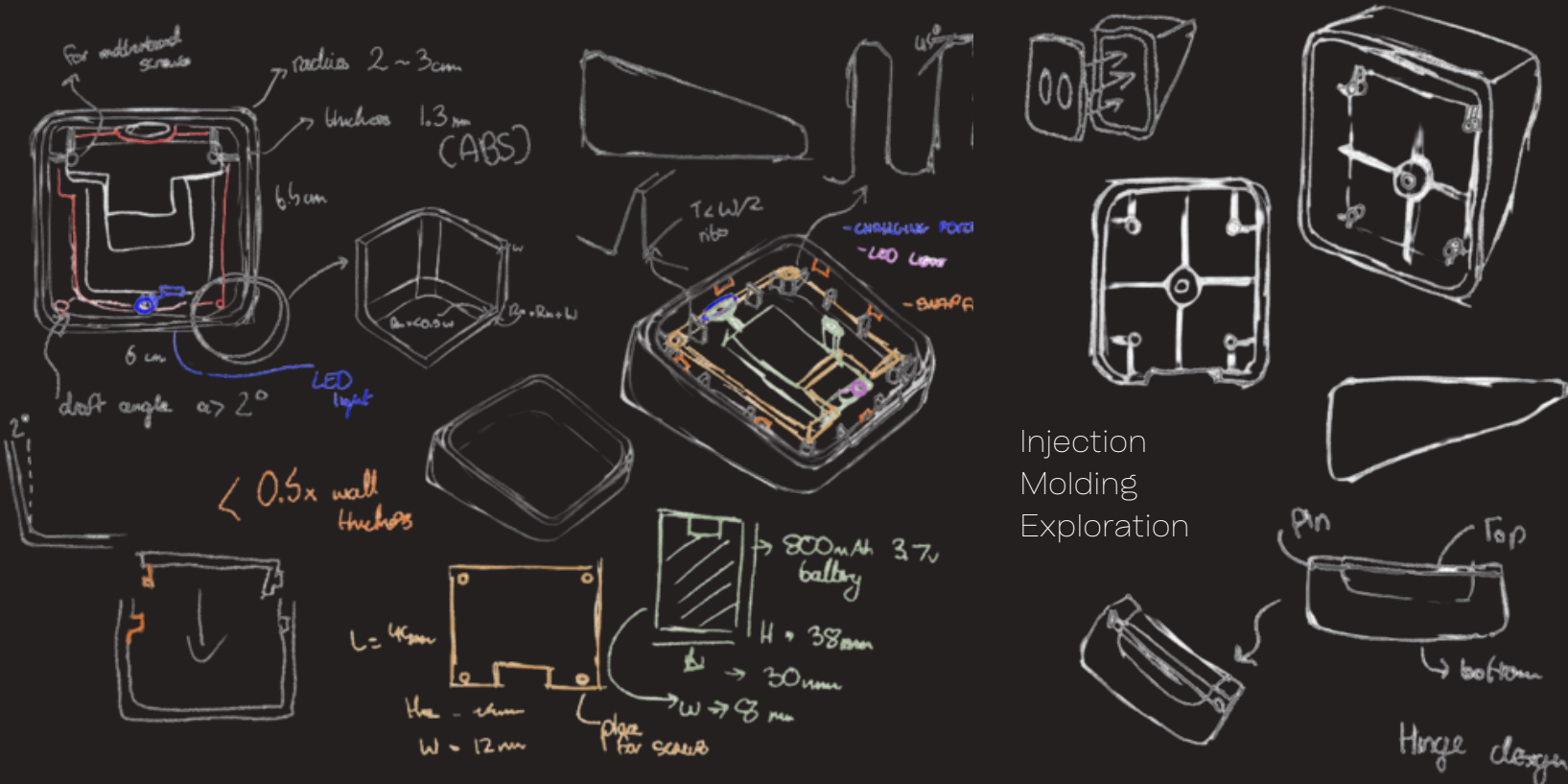
3D Renders



CAD Exploded View



Injection Molding Exploration





# thank you

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## get in touch with me



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## emiliaziolek.com

For my up-to-date CV, more projects, blog posts etc.

DOWN-N-OUT  
ROTIFORM

