



nephele

Design Portfolio by Nefeli Lemessiou

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about me



Hello! I am Nefeli Lemessiou,

a London-based Product & Industrial Designer who believes great design should feel effortless.

My work blends hands-on making with smart technology to create products that are not only functional, but calming, intuitive, and a little bit delightful. From IoT devices and tactile health tools to thoughtful app interfaces, I design with people's everyday lives — and emotions — at the centre.



onaka

Tracking and Monitoring Device for GI Conditions

Onaka is a pocketable, tactile device that turns symptoms into simple button presses. Paired with an app, it transforms quick logs into calming reflections and meaningful insights — not overwhelming charts.

November 2024 - July 2025

*UX/UI · Tangible Interaction · Data Design · CMF ·
Research-Driven Design · Health*

Problem: **Chronic GI conditions affect 1 in 5 in the UK, impacting physical health, mental well-being, and daily life.**

10-20%

of UK population suffer from Irritable Bowel Syndrome

20%

experience Gastroesophageal Reflux Disease

0.5%

are diagnosed with an Inflammatory Bowel Disease like Crohn's or Colitis



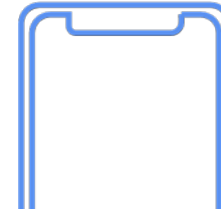
Need for Better Tools

Doctors and patients highlight a lack of simple, effective tools for tracking gut-related conditions.



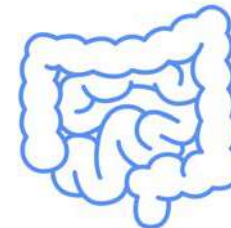
Gut-Brain Connection

Stress and anxiety can worsen symptoms, as the gut is directly linked to the brain.



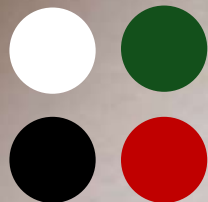
GI Tracking Apps have many shortcomings

- **Cognitive overload:** Require frequent manual logging.
- **Symptom anticipation:** Constant tracking can heighten anxiety.
- **Complex data:** Graphs are often unclear or hard to interpret.
- **Lack of engagement:** Being phone-based makes them feel disconnected and less intuitive



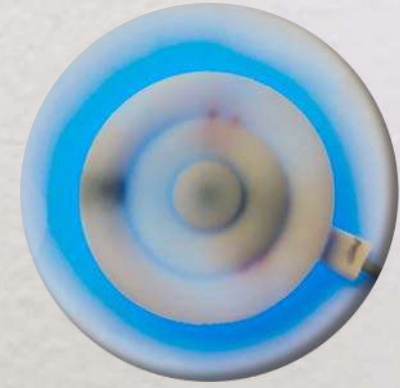
Insight

Existing GI tracking tools are effortful, medicalised, and create hyper-awareness; people need a fast, low-stress way to capture lived experience. *How might we capture symptoms in seconds—calmly—and return only the most helpful insights?*



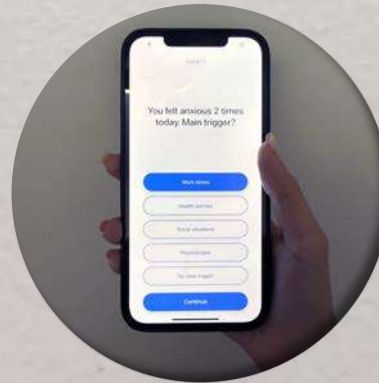
Input Symptoms and Severity

Press to log during the day. Long-press adds severity or type.



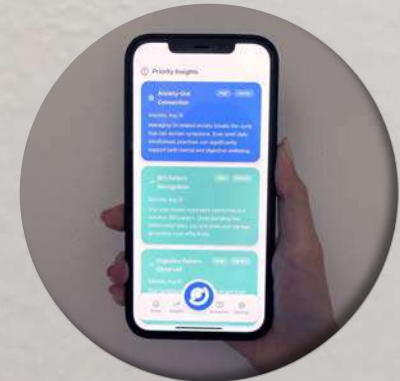
Breathing Light

When Anxiety is pressed, a blue pulse guides a brief breathing exercise.



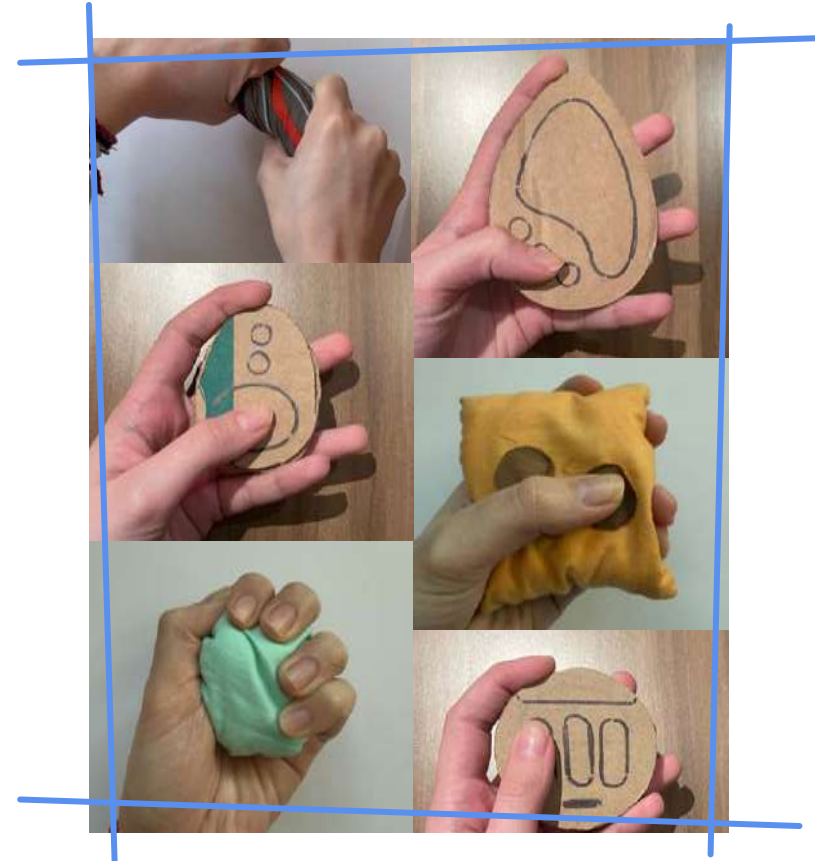
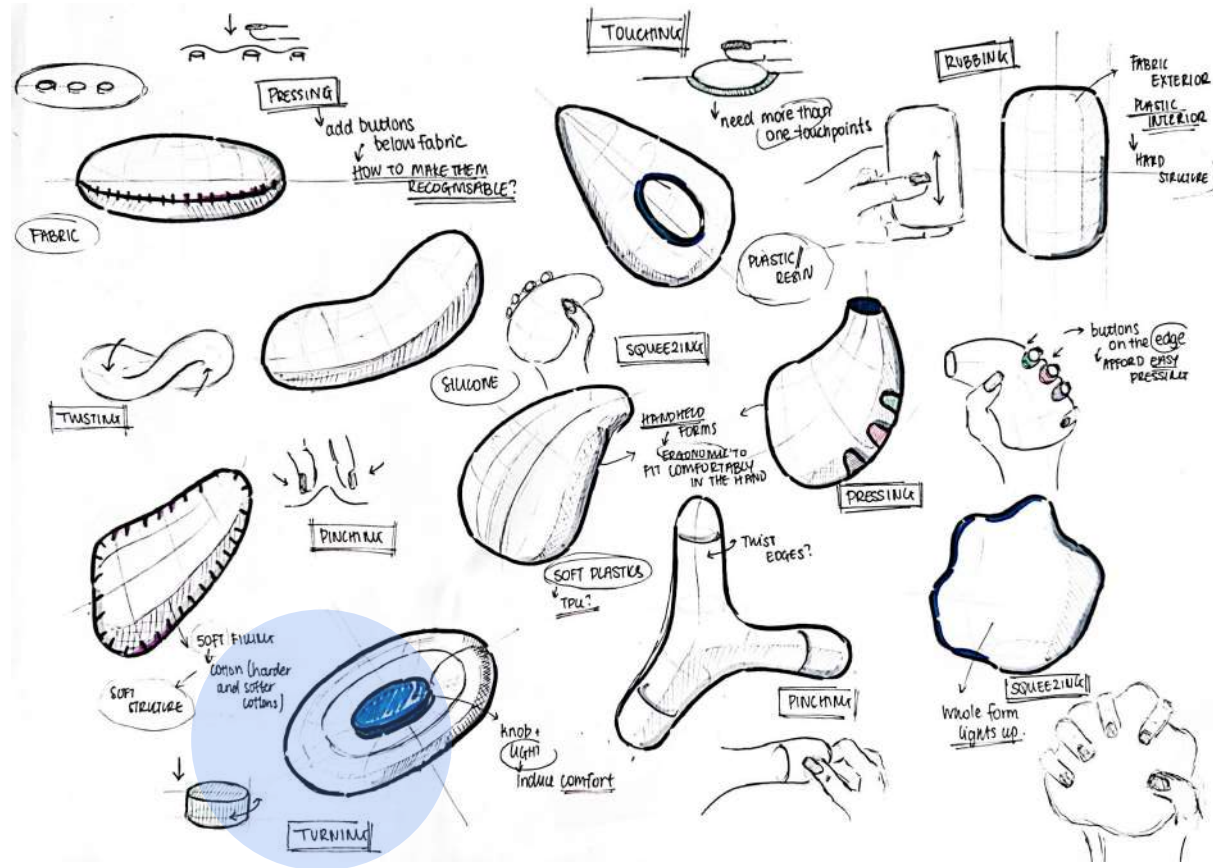
Reflective Questions

At the end of the day, answer one gentle prompt generated from your logs.



Personalised Insights

Get simple, actionable insights based on your symptoms and answers.



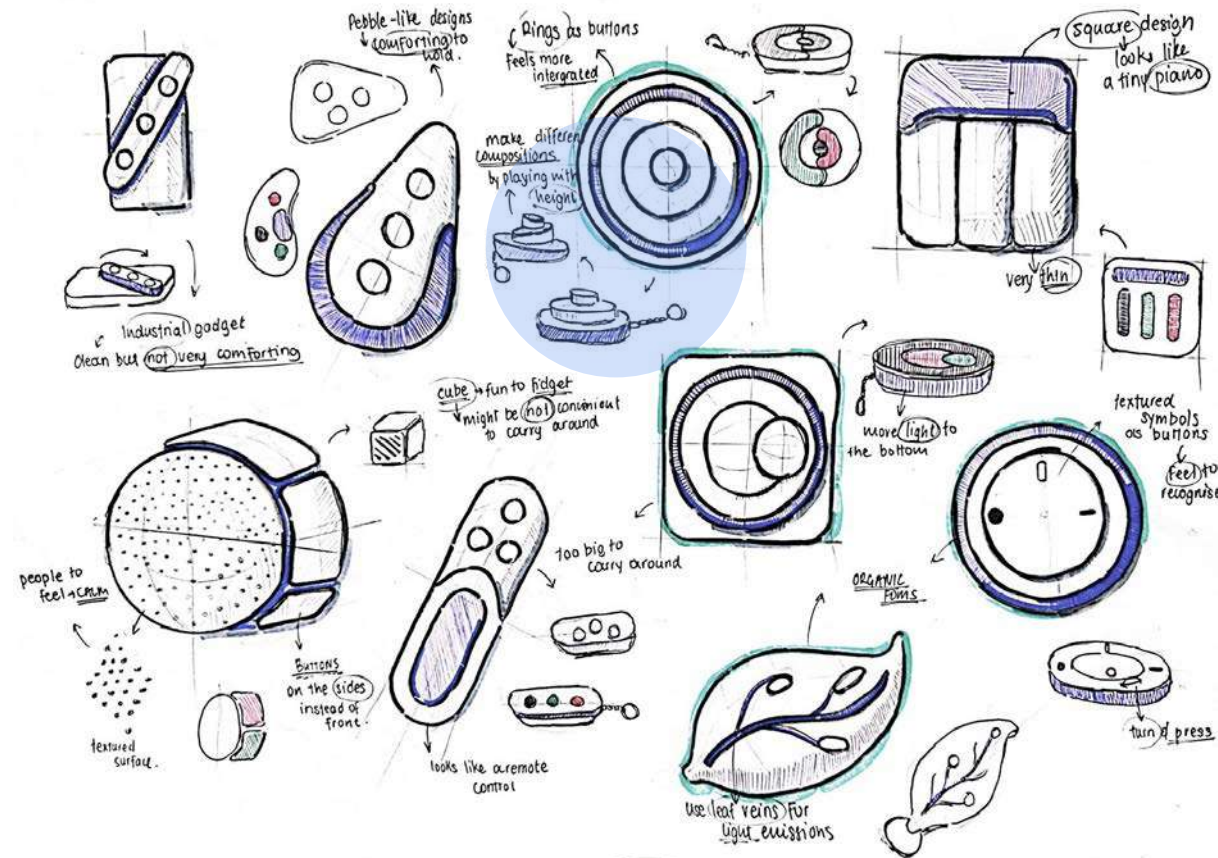
Buttons Over Gestures

While gestures like squeezing and pinching were explored, buttons were chosen for their clear feedback and reassurance that input was successfully logged.



Key Symptom Selection

Pain, anxiety, and bowel movements were chosen based on healthcare input—they're spontaneous, easy to identify, low-effort to log, and often linked to other tracked factors.



Tactile Circular Design

The concentric ring layout integrates buttons in an aesthetically pleasing way, with raised edges that guide the user's fingers—enabling use without needing to look at the device..



Discreet and Private

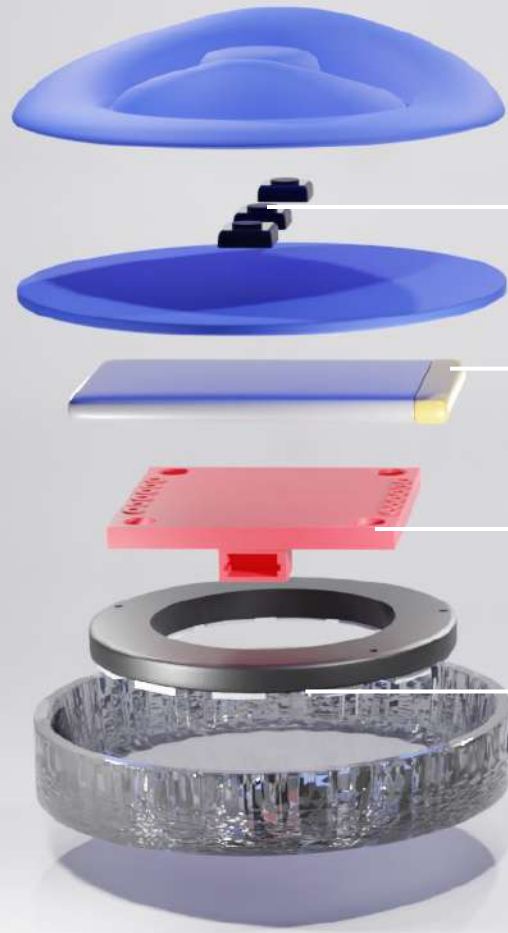
Designed to blend into everyday life, Onaka is subtle and unrecognisable to others, allowing for discreet use and protecting the user's privacy.



Portable and Adaptable

Includes a keychain attachment so it can easily be carried on keys or bags, offering flexibility in how users choose to keep it with them.





All data logged from the physical device is wirelessly transmitted to the companion app via a Wi-Fi-enabled system built into the Spark Fun microcontroller. The data is securely sent and stored in the Blynk cloud server, where the app accesses it through an API and displays it to the user.

Push Buttons

Three buttons log symptoms (pain, anxiety, bowel movements), sending inputs directly to the app.

1200mAh Li-Po Battery

Powers the device for portability and charges via USB-C through a 2-pin JST connector.

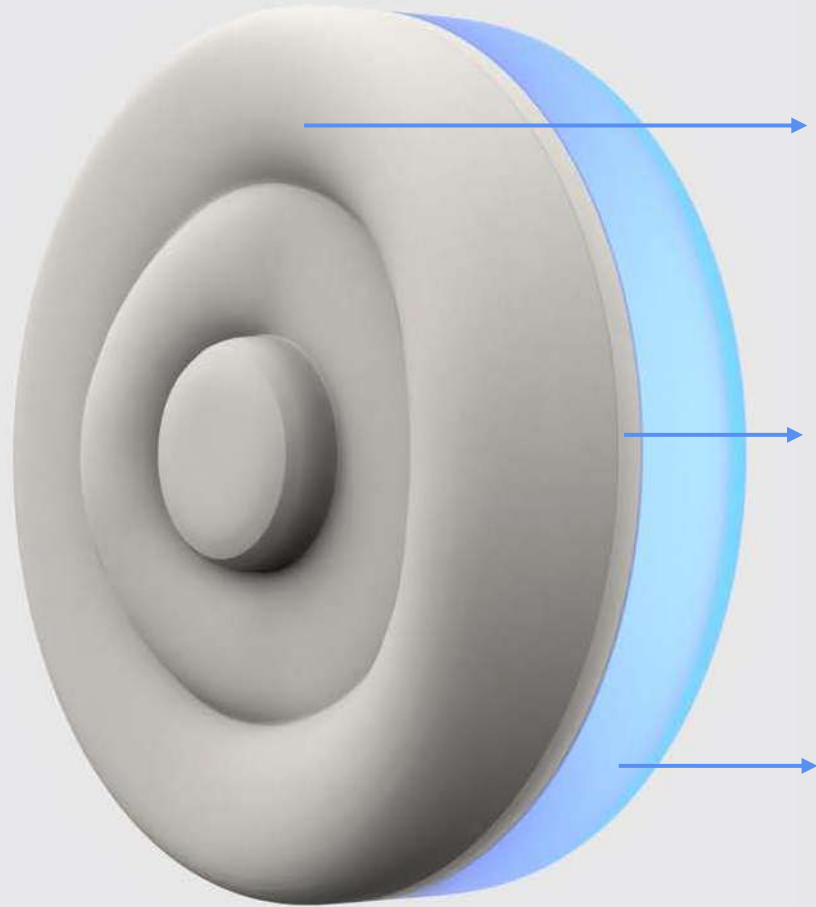
SparkFun Qwiic Board

A compact microcontroller that runs the code, enables internet connectivity, and syncs data with the app.

NeoPixel Ring

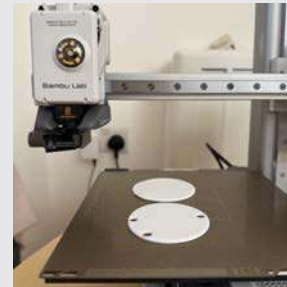
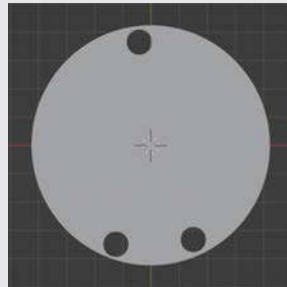
Displays a calming blue breathing light for anxiety and indicates connection and battery status.

Circuit design, shell fabrication, and code were developed and tested in-house.



Silicone Rubber

Used for buttons interface—soft, springy, durable, water- and chemical-resistant, and safe for skin. Prevents accidental presses and comes in various colours.



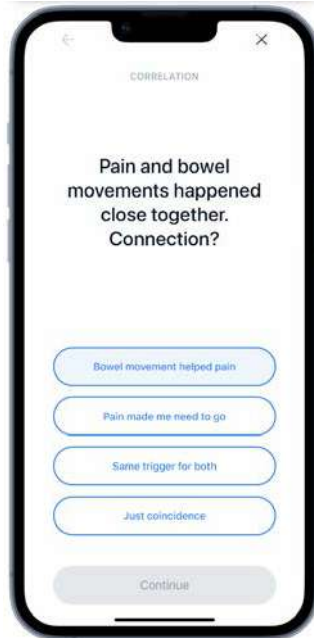
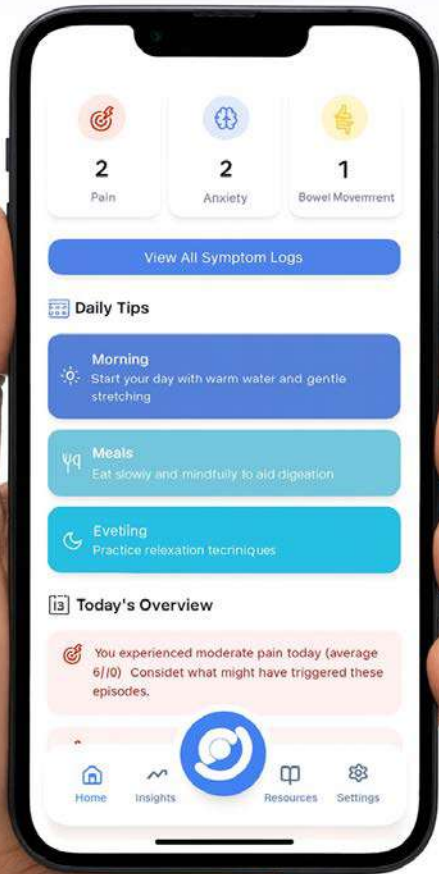
PLA (to be replaced with PP)

A 2mm PLA layer supports the silicone in prototypes. Final version uses PP for its durability, heat resistance, and cost-effectiveness.



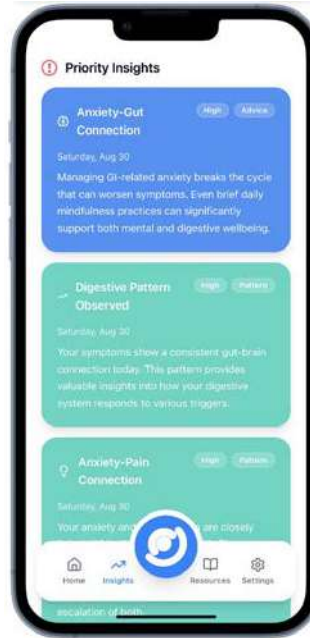
SLA Resin (to be replaced with PP)

Translucent SLA resin base allows light diffusion in prototypes. Will be replaced with PP for better durability and manufacturability.



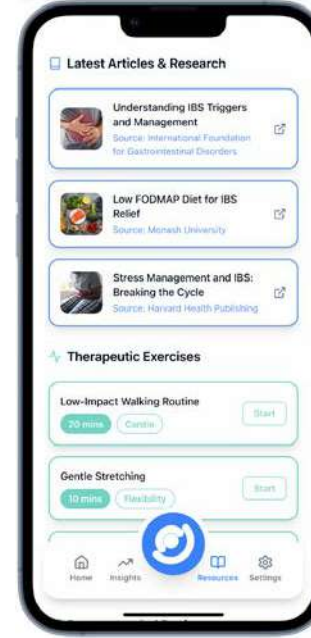
Targeted Symptom Logging

Generates end-of-day questions based on daily inputs to reduce unnecessary tracking.



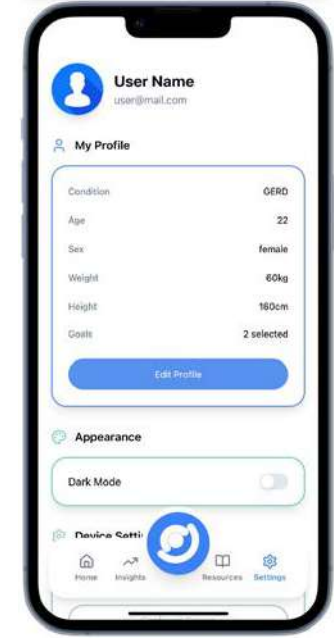
Simple, Clear Insights

Uses color-coded, digestible text instead of complex graphs for easy understanding.



Tailored Resources

Offers personalized content like articles, exercises, and recipes based on user needs.



Doctor Sharing

Allows users to compile and share data with healthcare providers for better support.

period.

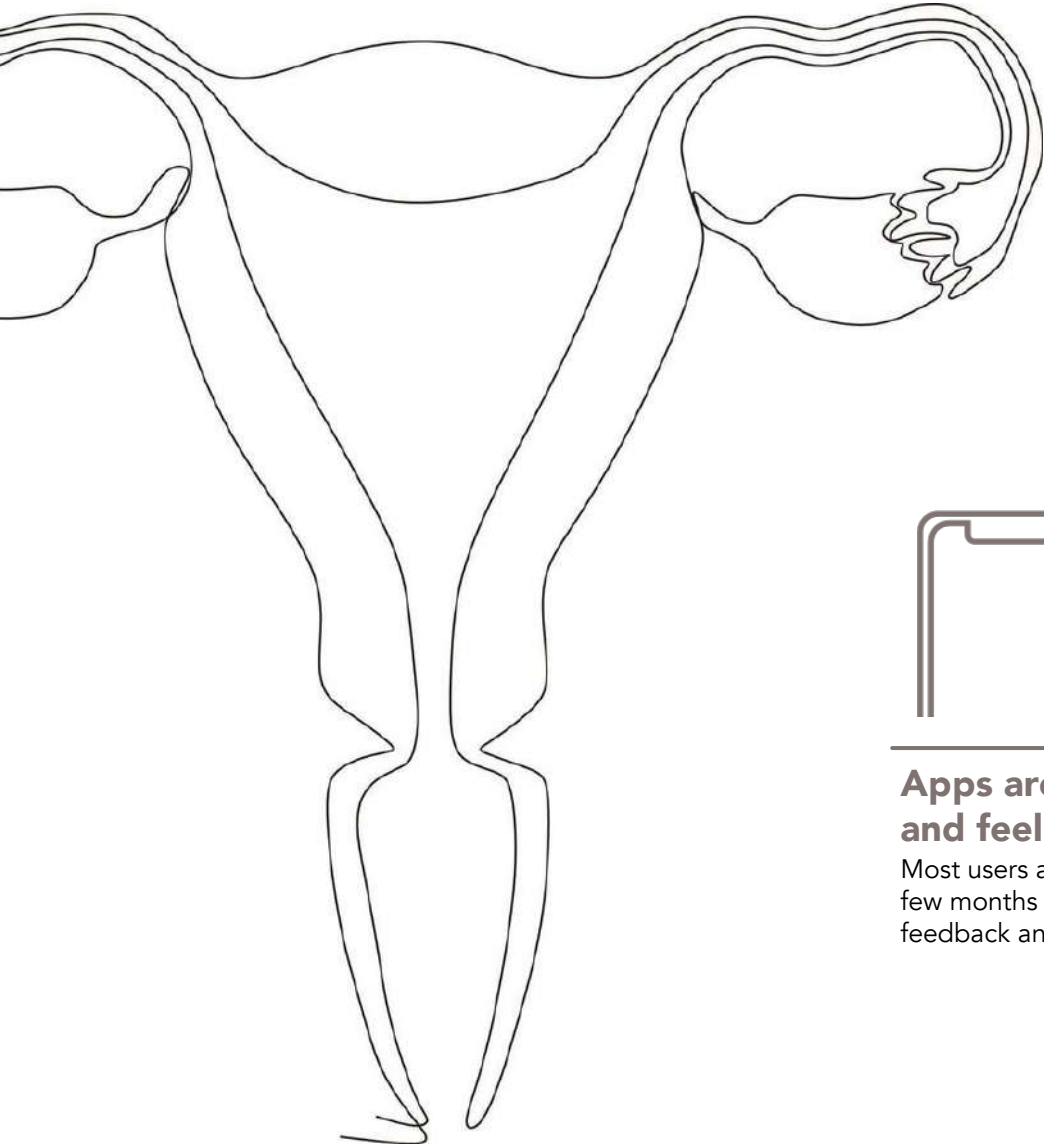
A Tangible, Smart Menstrual Cycle Tracker

A physical product that visualises and tracks the menstrual cycle, combining light, voice, and daily interaction to make cycles visible, intuitive, and supportive.

September 2023 - May 2024

UX/UI · Tangible Interaction · Research-Driven Design





50%

of the global population menstruates

480

periods on average experienced in a woman's life



Apps are easy to forget and feel impersonal.

Most users abandon them after a few months due to lack of feedback and visual clarity.



No physical trackers exist.

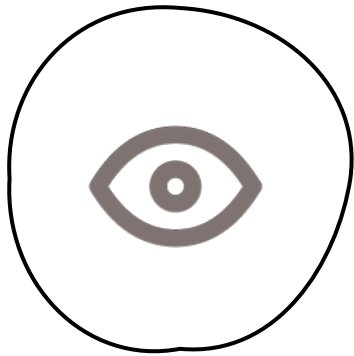
Menstrual cycles remain invisible in everyday life, limiting awareness and shared understanding.



Cycles vary.

Most tools assume a 28-day cycle, failing to support irregular menstruators.

“To design a product that helps women track and better understand their menstrual cycles by making cycle tracking visible, intuitive, and supportive.”



Always Visible Status

Light gradient showing the phase and indicator pointing on cycle day



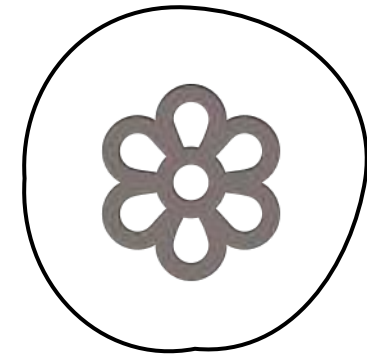
Personalised Feedback

Artificial Intelligent Voice Assistant that provides hands-free personalised feedback



Irregular Cycles

Design that caters for people with irregular cycles



Emotional Comfort

Soft, calming design that blends into the home



Voice Assistant (Luna)
Activated by wake word,
answers cycle-related
questions



Foldable Days
Engraved days and
foldable sections support
irregular cycles

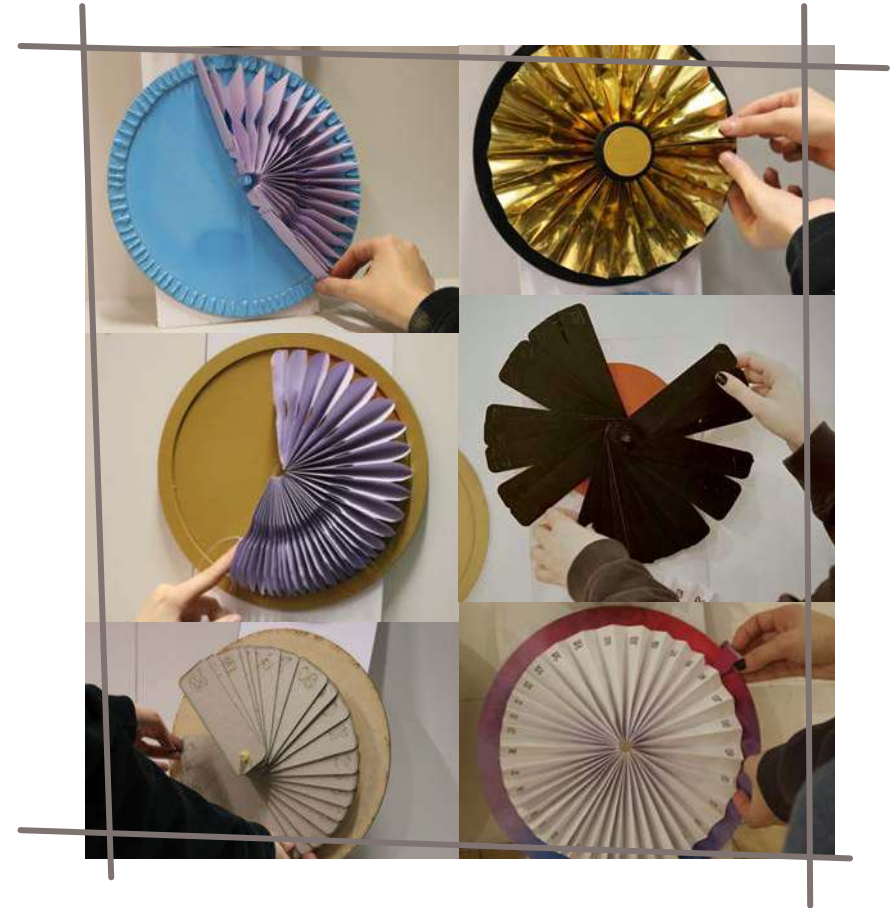
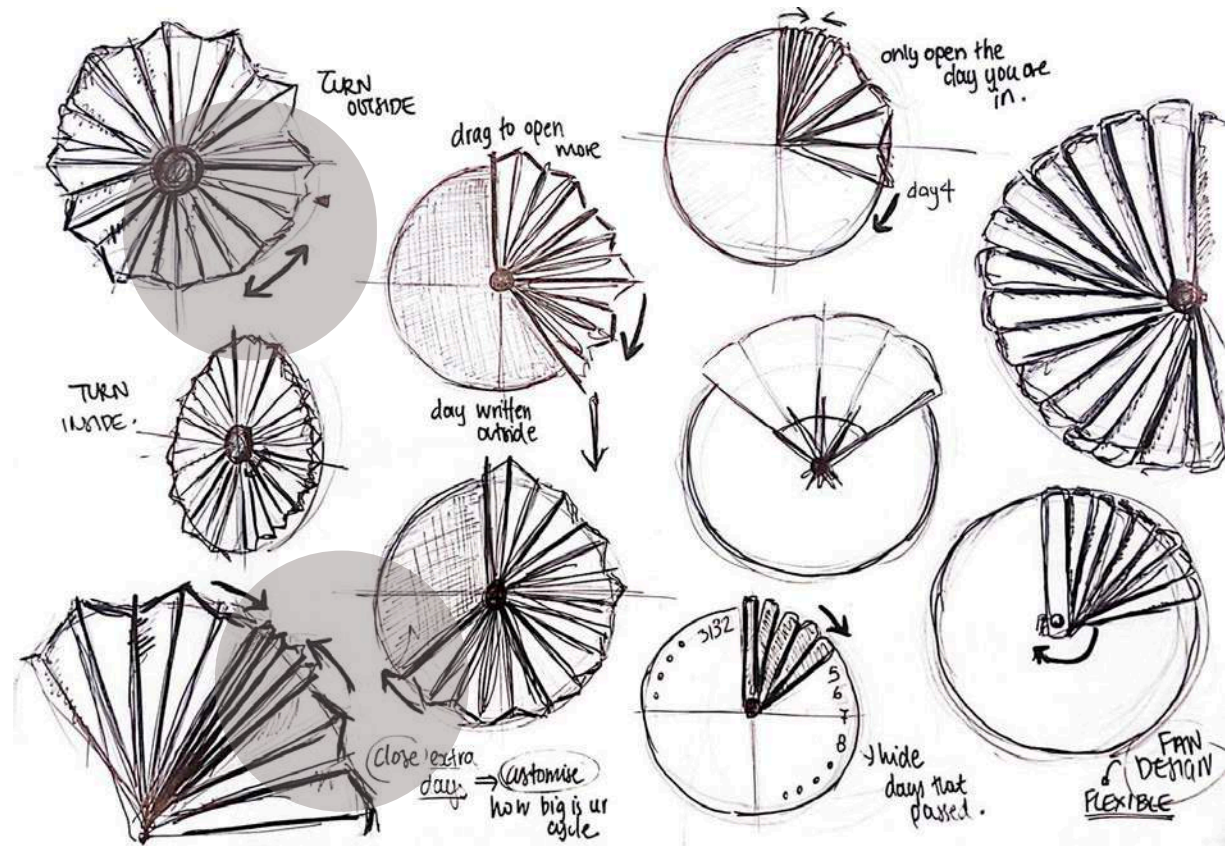


Cycle Day Indicator
Servo motor rotates
pointer daily to mark
current day



Indicative Light
Neopixel ring shows
phase via customisable
gradient

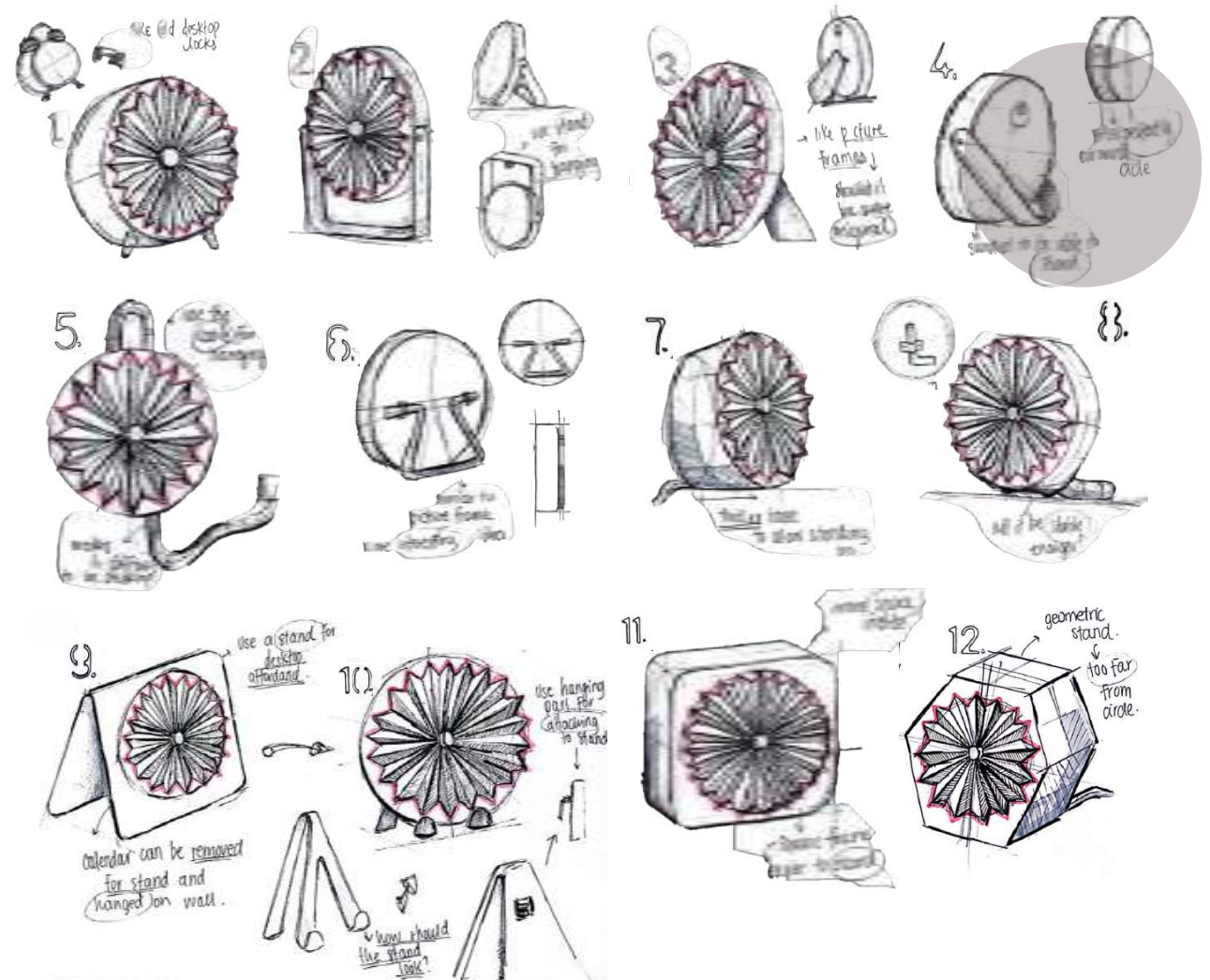




After creating and testing several prototypes, an accordion fan form was implemented, recognizing its potential for modularity and, therefore, for tracking different cycle lengths. This concept resulted in a calendar comprising 35 days and 70 folds, with days 21-35 representing the gap between the shortest and longest cycles, equipped with magnets for folding away unwanted days.

sketching and prototyping

02



Both hanging and desktop options were explored after user feedback revealed diverse preferences. The final design features a semicircular handle, providing stability on flat surfaces and allowing the product to hang flush against the wall when closed.



Remote Interaction
Log data without speaking aloud.



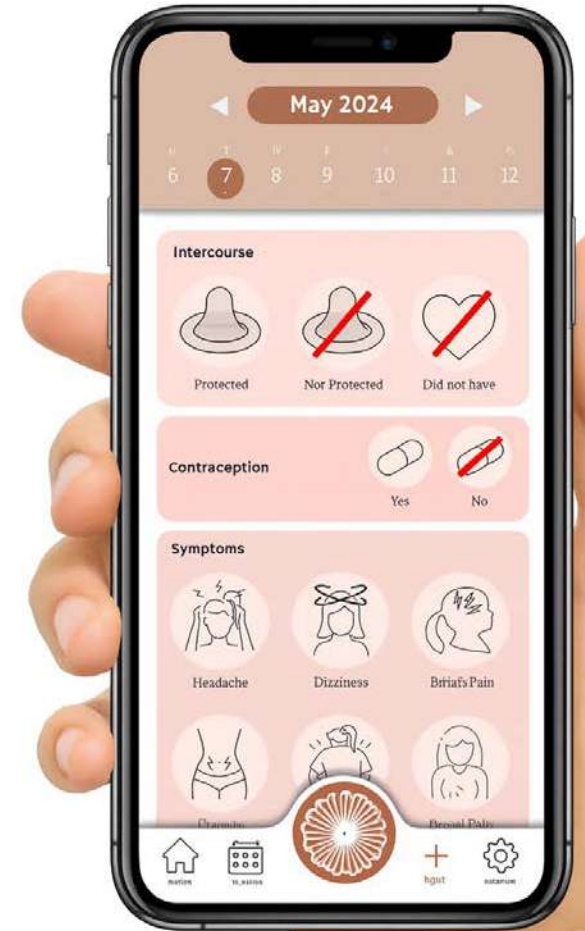
Symptom History
View and edit past entries.



Doctor Sharing
Export cycle summaries for healthcare.



Interface Aesthetic
Echoes the physical fan design.



Milo



A Connected Memory Game for Long-Distance Play

Inspired by the classic Simon game, Milo enables playful, screen-free interaction between loved ones living apart — using light, sound, and rhythm to foster joyful connection.

January- May 2023
In collaboration with Quentin Bachelot

*Connected Play · Tangible UX · Emotional Technology ·
Interaction Design*

Problem: **Living apart often weakens spontaneous emotional connection.**

92%

of international students in the US reported missing the familiarities of home. (UNESCO)

50%

believed that not having family and friends impacted their academic performance. (UNESCO)

Games are a medium for connection.

70% of men & 55% of women

(ages 18-34) say games help them stay connected with friends and family. (ESA)



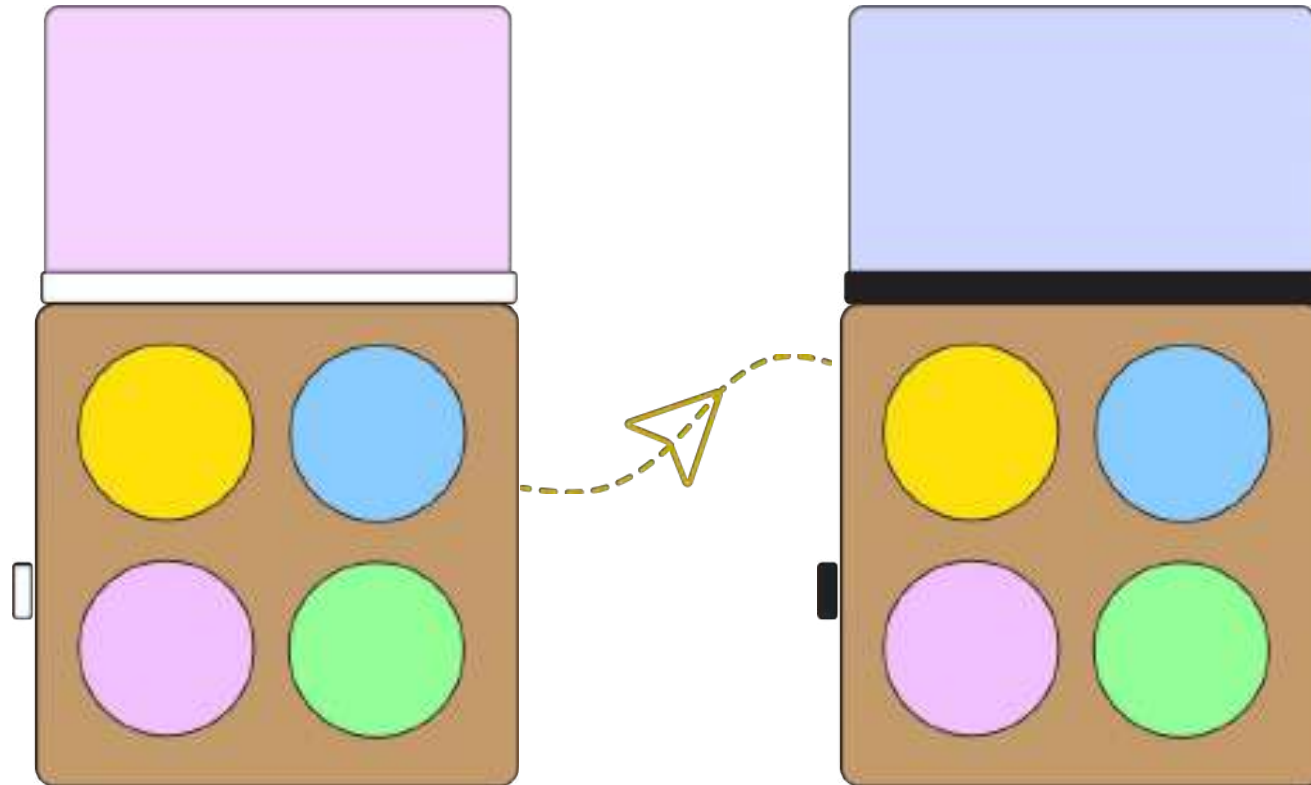
Insight

People crave playful, emotional connection — but most games rely on screens and visuals, not feelings.



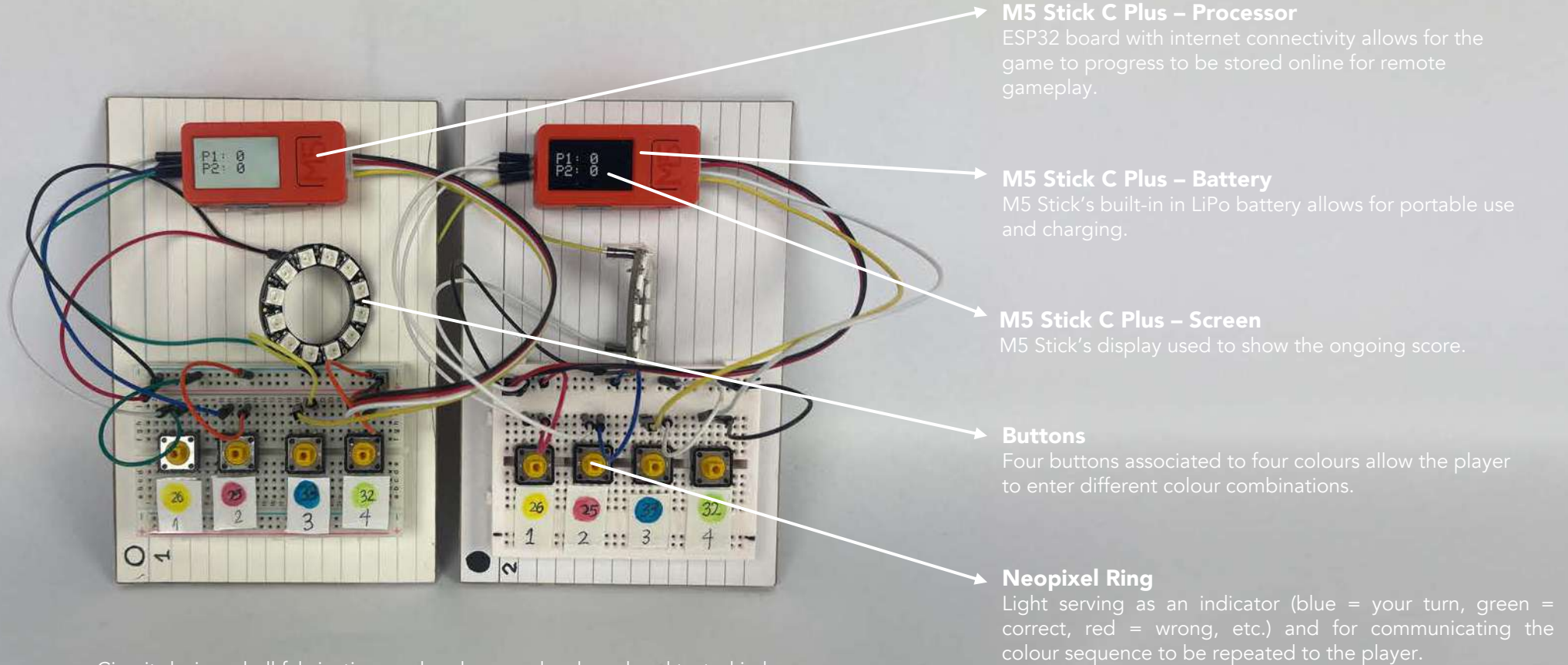
Opportunity

Create a tangible, emotionally rich game that lets people “talk” in light, rhythm, and memory — without a screen.



- **Start the sequence**
Player 1 taps three colours to begin
- **Receive the sequence**
A blue light signals it's your turn. Press side button to play.
- **Watch and remember it**
Lights display the latest sequence
- **Repeat it**
Reproduce the pattern with the coloured buttons.
- **Nailed it?**
Flashing green = success! Add one more colour and send it back.
- **Miss it?**
Flashing red = new round. Other player scores and starts over.

A rhythmic "conversation" — played across time and space.



Circuit design, shell fabrication, and code were developed and tested in-house.

M5 Stick C Plus – Processor

ESP32 board with internet connectivity allows for the game to progress to be stored online for remote gameplay.

M5 Stick C Plus – Battery

M5 Stick's built-in LiPo battery allows for portable use and charging.

M5 Stick C Plus – Screen

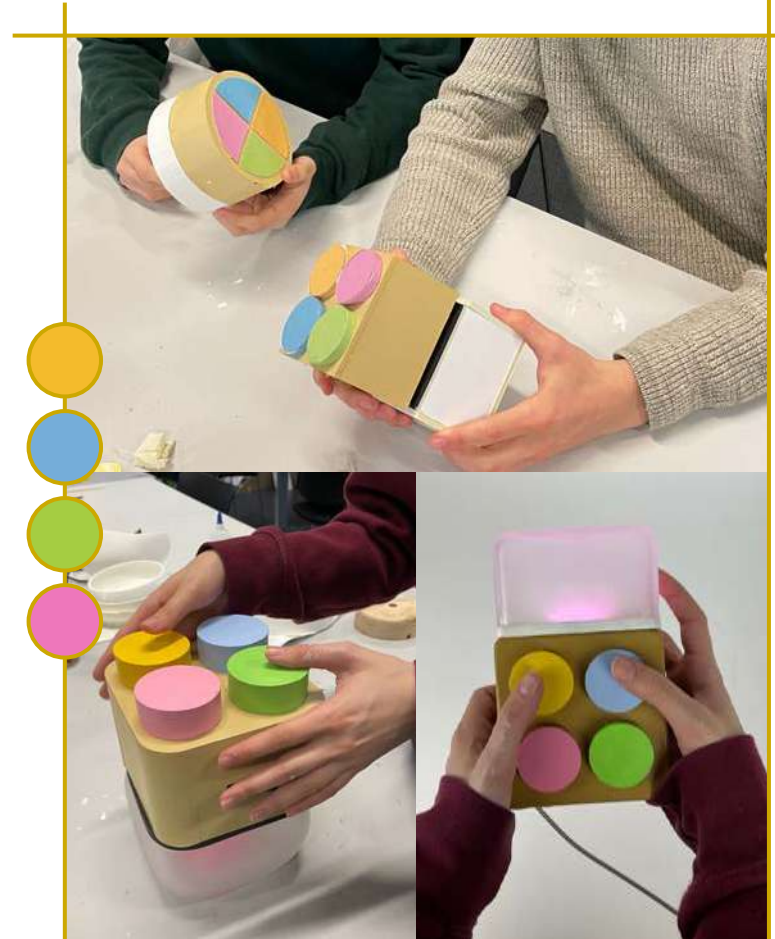
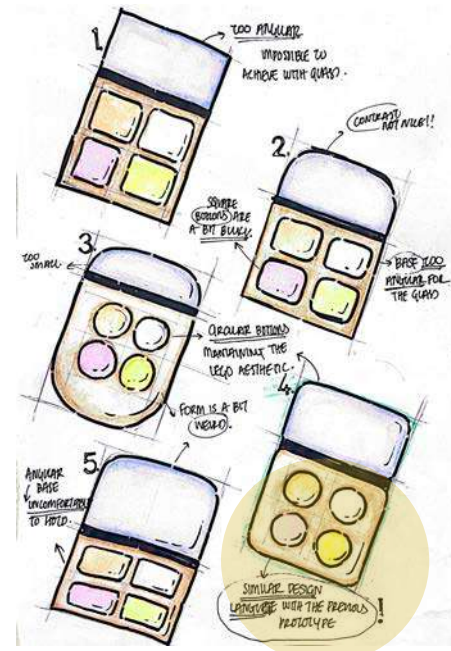
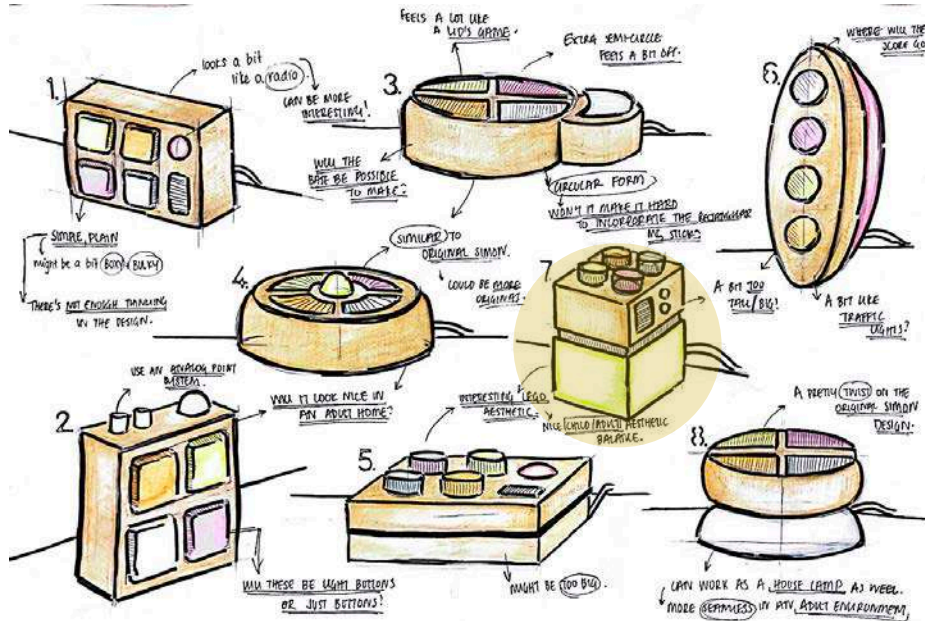
M5 Stick's display used to show the ongoing score.

Buttons

Four buttons associated to four colours allow the player to enter different colour combinations.

Neopixel Ring

Light serving as an indicator (blue = your turn, green = correct, red = wrong, etc.) and for communicating the colour sequence to be repeated to the player.

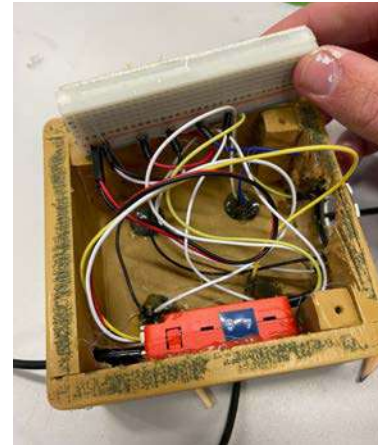


Both portable and fixed versions were explored to test user assumptions around habit, visibility, and comfort

Initial designs focused on creating a fixed object to encourage daily use through visibility.

User testing — especially with young adults — showed a strong preference for handheld, smartphone-like format

We shifted to a hybrid model: **a portable object with a dock, balancing spontaneity and routine.**



Playful, not childish

Soft pastel hues with neutral bases strike a balance between fun and maturity — suitable for all ages.



Tactile, warm, and familiar

Rounded forms, wooden components, and a matte texture invite touch and comfort.



Designed for sensory engagement

Smooth button press, gradient lighting, and subtle sound create a calming, delightful experience.



Positive Experiences

"I liked how it felt like a conversation with my loved ones, but without needing to text or talk."

"I love how nostalgic and calming it feels. I would actually use it with long-distance friends."



Usability Feedback

"It is a bit unclear that is waiting for me to add a colour after I get the sequence right."

Game Design

"Right amount of difficulty to make it engaging and enjoyable"

VATTENKANNA

A Greywater Watering Can for IKEA

Designed to collect water used during dishwashing, Vattenkanna encourages reuse and reduces domestic water waste — while aligning with IKEA's philosophy of sustainable everyday living.

January- May 2023
Brief provided by IKEA

*Sustainable Design · Circularity · IKEA Collaboration · Design
for Manufacturing · CAD*



Water Waste in the UK

6%

of CO2 emissions in UK are from water use

5%

of domestic water use in UK comes from washing dishes

Household Habits

50%

of UK household never use a dishwasher

300L

of weekly water wasted per UK household from handwashing dishes

Problem

Every time we handwash dishes, 30 litres of clean water go straight down the drain, contributing to avoidable water and carbon emissions.



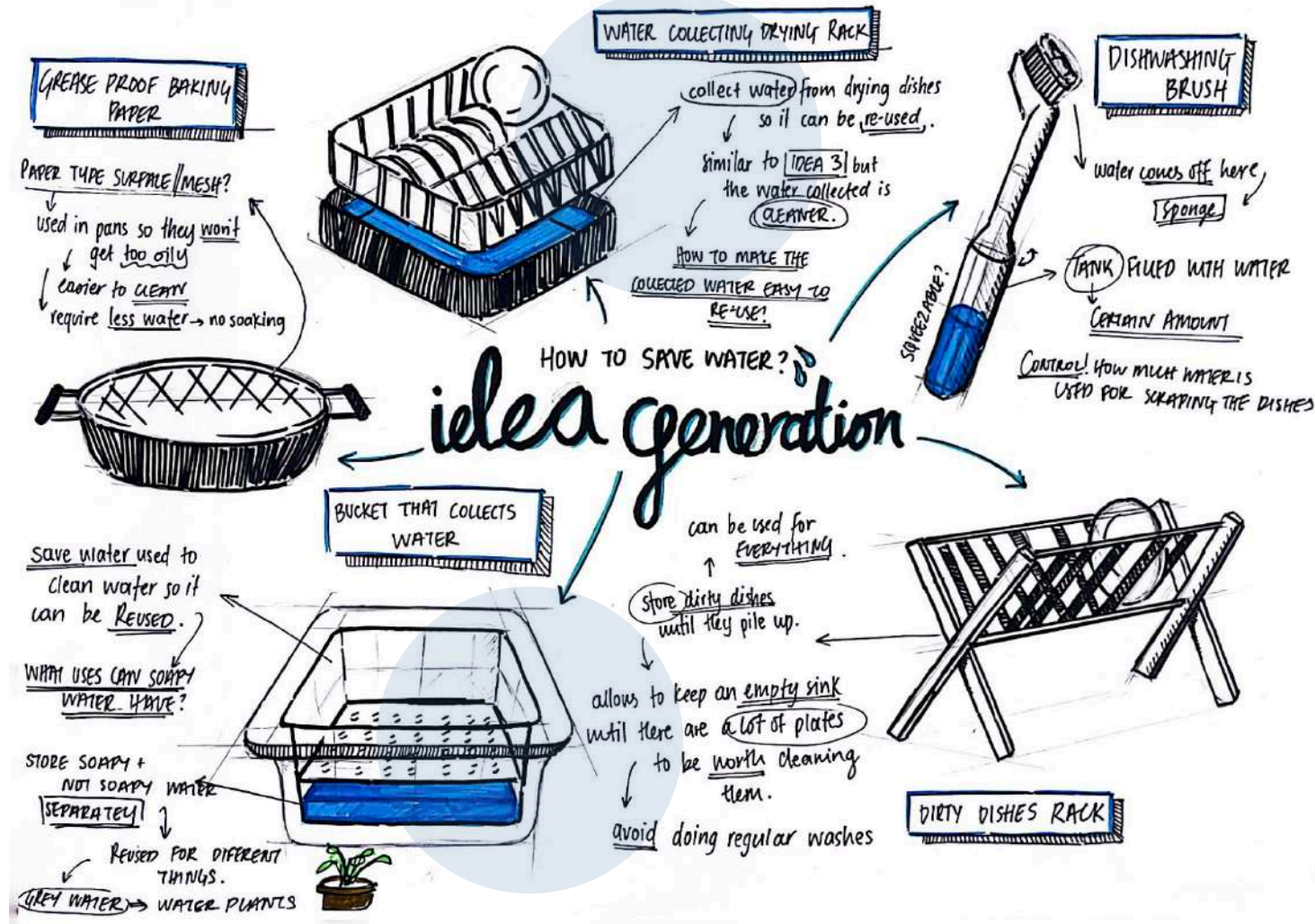
We documented 15+ kitchen sinks around the UK to understand typical sink environments and dishwashing behaviours.



Insights

Despite high awareness of sustainability, water collection is rarely integrated into kitchen routines — especially during dishwashing.

How might we integrate water reuse into everyday habits without disrupting people's existing routines?



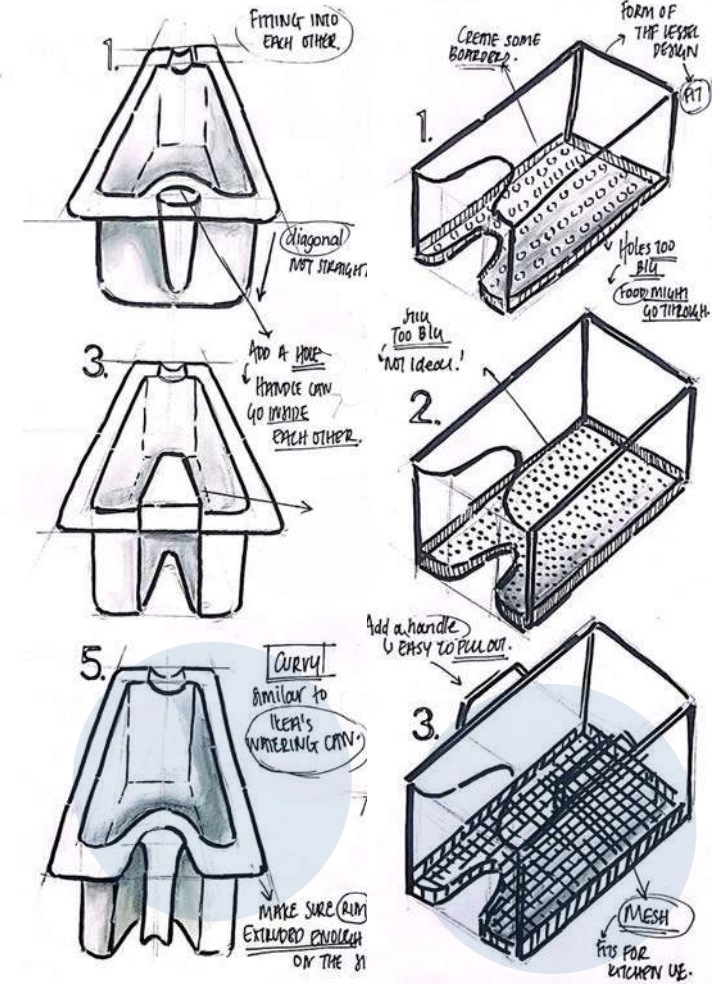
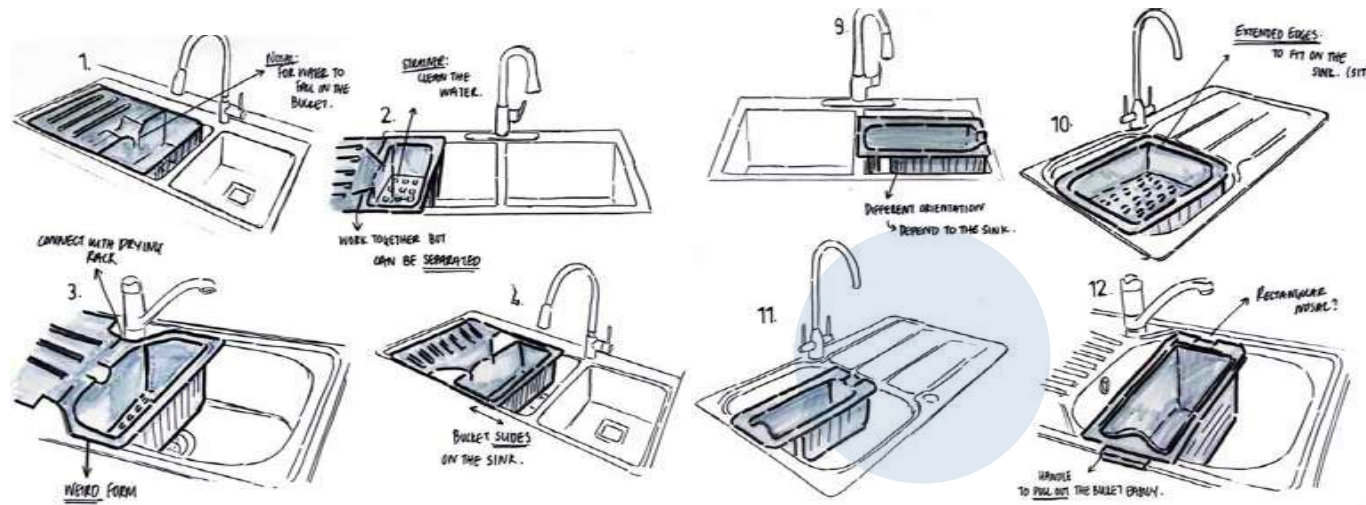
Opportunity:

A simple, low-effort tool to collect and reuse greywater from dishwashing — for watering plants, washing the car, or other household tasks.



Why IKEA?

Vattenkanna fits IKEA's values of accessible, scalable, and joyful sustainability — designed for affordable production and everyday use.



Form Explorations

Designed to fit seamlessly in the sink and collect greywater from both handwashing dishes and from the drying rack



Ergonomic Rim

The rim geometry was shaped for balance, grip, and easy removal — even when wet.



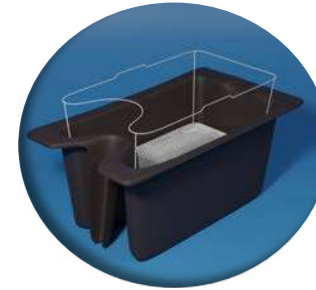
Portable and Familiar

The object invites users to pick it up and pour with a single gesture — making the reuse action feel natural and intentional.



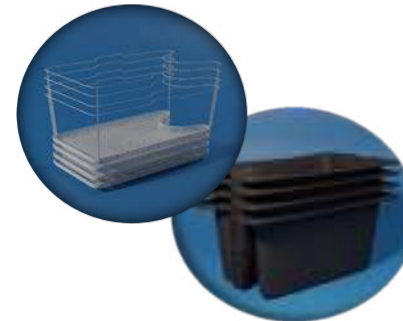
Sink Compatibility

Vattenkanna was modelled to nest within standard UK sink basins (34 x 40 x 20 cm) without interrupting the flow of washing, ensuring ease of integration into existing routines.



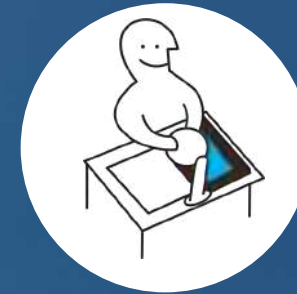
Built-in Filtration

A removable mesh insert filters out food particles and debris — making greywater safe for reuse.

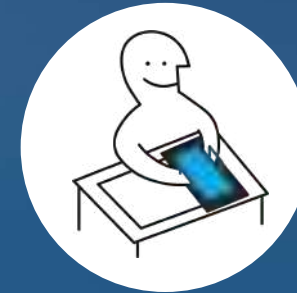


Efficient Manufacturing

Designed for stack ability and minimal part complexity, Vattenkanna reduces shipping volume and manufacturing costs — aligned with IKEA's sustainability goals.



Vattenkanna collects the greywater while user handwashes the dishes



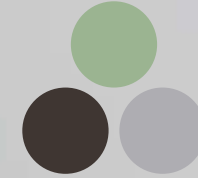
User removes the mesh filter and disposes the debris



User carries Vattenkanna and uses it to **water plants or wash car**

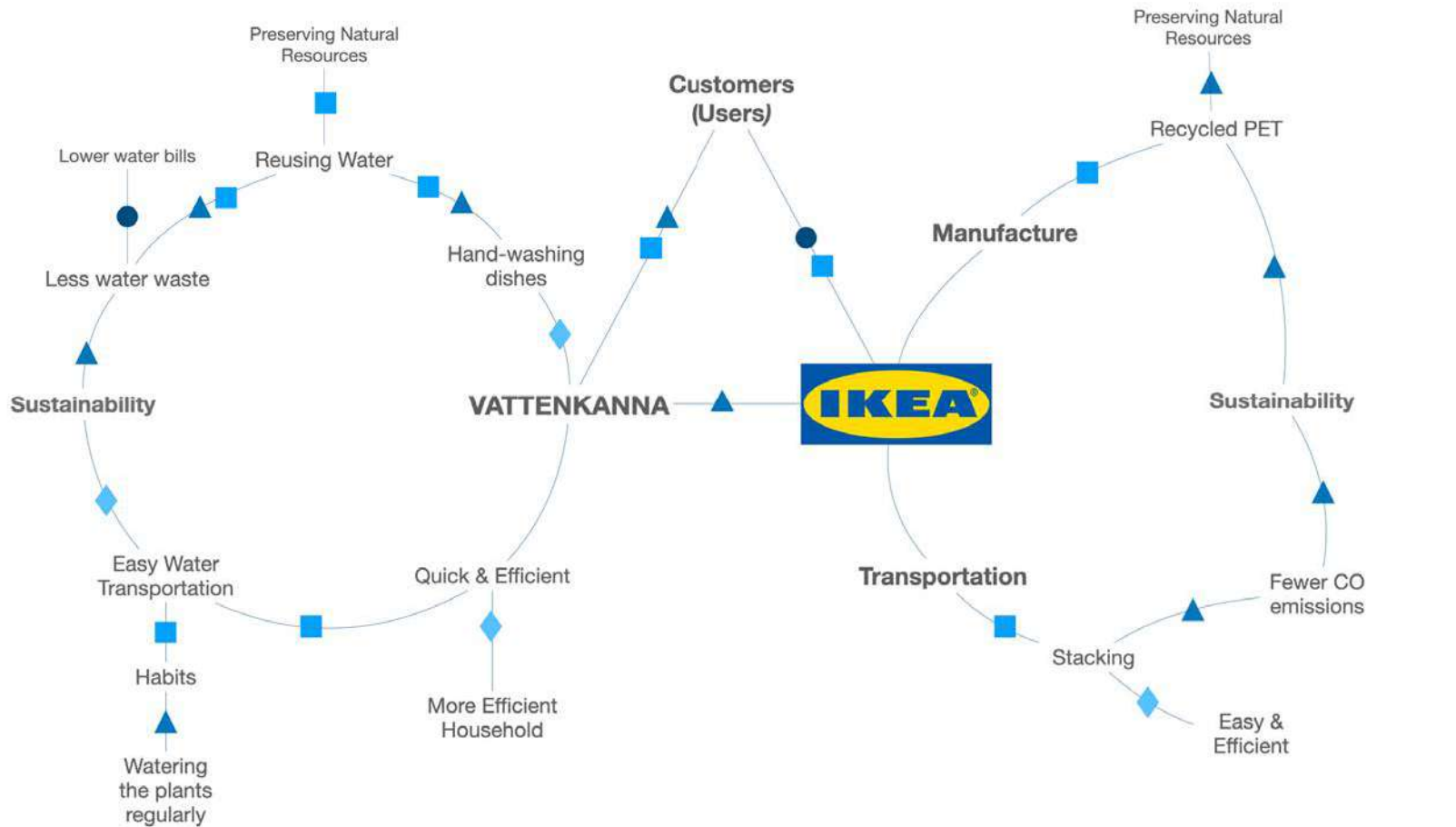


Sustainable Material Choice
Made from 100% recycled PET plastic — waterproof, durable, and aligned with IKEA's 2030 circularity goals.



Colour Strategy
Neutral tones (light grey, soft green, dark brown) inspired by IKEA kitchenware allow the product to blend naturally into any household.





Mapping product touchpoints across the IKEA ecosystem — from production and packaging to in-home use and emotional engagement.





A breathing lamp for emotional regulation during studying

A tactile, interactive lamp designed to reduce anxiety and encourage mindful breaks during study through light-based breathing guidance.

January- May 2022
In collaboration with Quentin Bachelot

Mental Health · Tangible UX · Emotional Technology · Prototyping · User Testing

Problem: **Increased anxiety and stress in university students**

63%

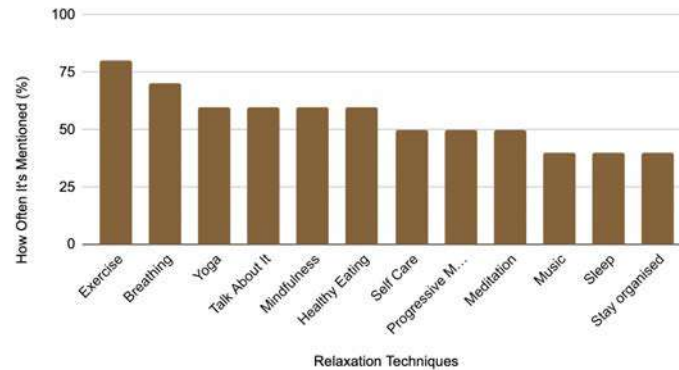
of university students in the US experience increased anxiety post COVID19, reporting that it impacts their ability to focus (APA)

62%

of university students in the UK report experiencing peak anxiety while studying/working. (Independent Survey)

Breathing is one of the most accessible and effective techniques, according to journal research

Most Recommended/Discussed Techniques



Insight

University students are experiencing high levels of stress especially when studying and need managing tools. *How might we design stillness into the study routine?*



Opportunity

Create an interactive desk lamp that naturally integrates breathing guidance into the study environment, helping students reduce stress and improve concentration—without relying on screens or apps.



The interaction is subtle and intuitive, encouraging breaks and deeper focus without screens or noise.



Mode 1

Acts as a desk lamp, touch to activate breathing



Mode 2

Turns blue every 2h, reminds you to take a break



Touch

Activated breathing guide



Breathing

Blue pulse, 5s inhale/ 5s exhale



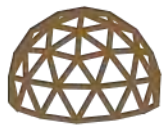
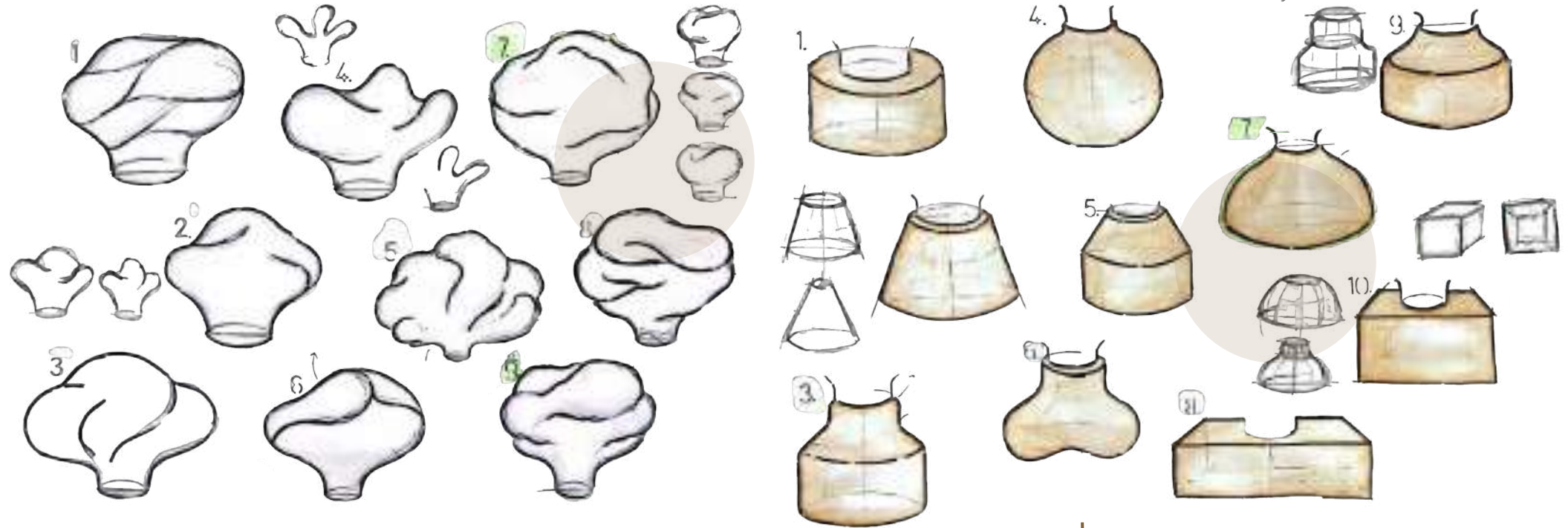
Time

2 mins guided cycle, but can continue if desired



Remove Hand

Stops pulsing



Ergonomic Base

Dome-shaped wooden base supports natural hand placement and comfort, with two sizes developed to suit different hand sizes.



Tactile Interaction

Soft wood invites gentle hand contact, encouraging users to engage with the breathing rhythm in an intuitive, calming way.



Glass Cloud Form

The organic, cloud-like glass top diffuses light softly, reinforcing the emotional and sensory calm of the product.





Wooden Base Construction

Layered MDF was lathe-turned into a dome and hollowed to fit electronics, with drilled channels for wiring.



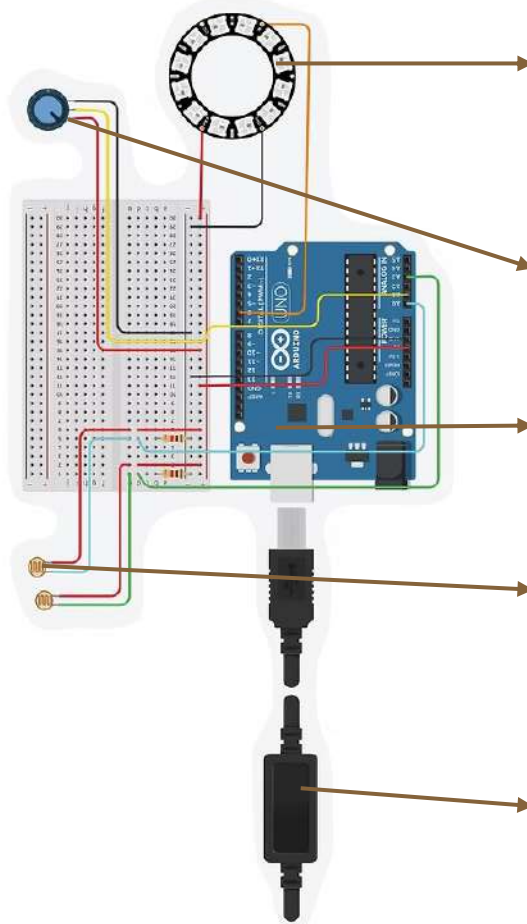
Glass Component Crafting

Rounded forms, wooden components, and a matte texture invite touch and comfort.



Collaborative Making Process

The process was a collaboration between our design team and the expert glassmakers at ECA, who assisted with the hot glass blowing



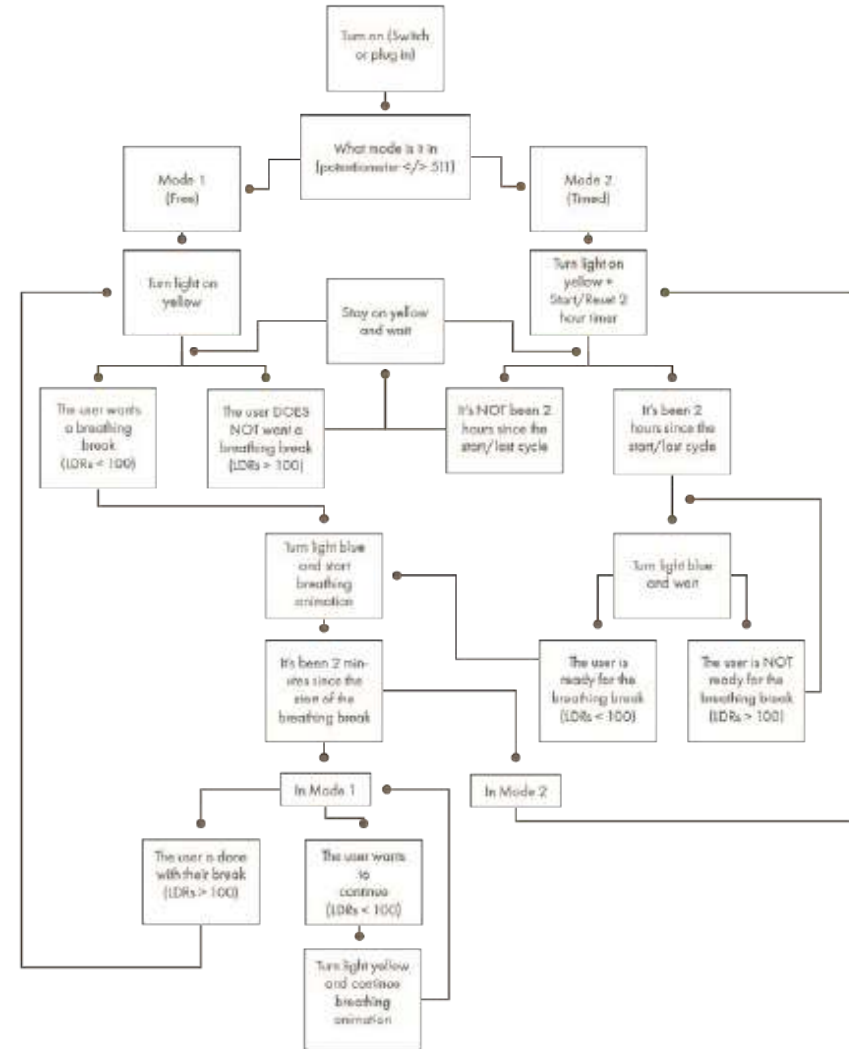
NeoPixel Ring emits yellow light in lamp mode and shifts to a soft pulsing blue for breathing guidance, following a sine wave rhythm.

Potentiometer allows switching between modes by rotating left or right.

Arduino Uno controls all components and animations, including the sine wave timing for the breathing guide.

LDR Sensors detect when hands are placed on the wooden base by sensing the drop in ambient light. When blocked, they trigger the breathing animation.

External Power Switch enables the lamp to be easily turned on and off.



Coded on Arduino Uno using sine wave logic for breathing animations. All sensor inputs (LDRs) and outputs (NeoPixel) were integrated into a modular, responsive loop. Flow diagram illustrates interaction logic and transitions between modes.



"It really helped me take regular breaks — my study sessions actually felt more productive when I used it."

"I like the simple, calming design. It fits right into any study space and feels intuitive to use."

"Switching between modes could be clearer, and the sensors are a bit too visible and sometimes unreliable."



AirFlux

A compact, handle-free hair dryer for intuitive, sustainable use

AirFlux rethinks the hair dryer through ergonomic grip, reduced bulk, and repairable design — combining portability with everyday practicality.

September - December 2021

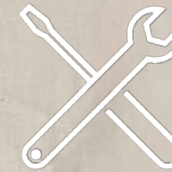
*Redesign · Circularity · Object Teardown · Design for
Manufacture · Design for Repairability*





Why This Product?

The Remington hair dryer is a somewhat famous and inexpensive hair dryer used by many people that could be improved to better serve its users.



What We Found

- Glued shut, no screws → non-repairable
- Large form dominated by bulky handle
- Complex inner assembly for a basic function

Initial Insights

Minimal screws and heavy use of glue made repairs nearly impossible — a key opportunity for redesign. Meanwhile the handle adds most of the bulk, removing it offers a path to a more compact, ergonomic form.

Problem: **Users want lighter, easier-to-hold dryers — and the ability to fix them.**

62%

of participants wished their hair dryer was lighter and smaller

30%

Wished they could change the way it's held

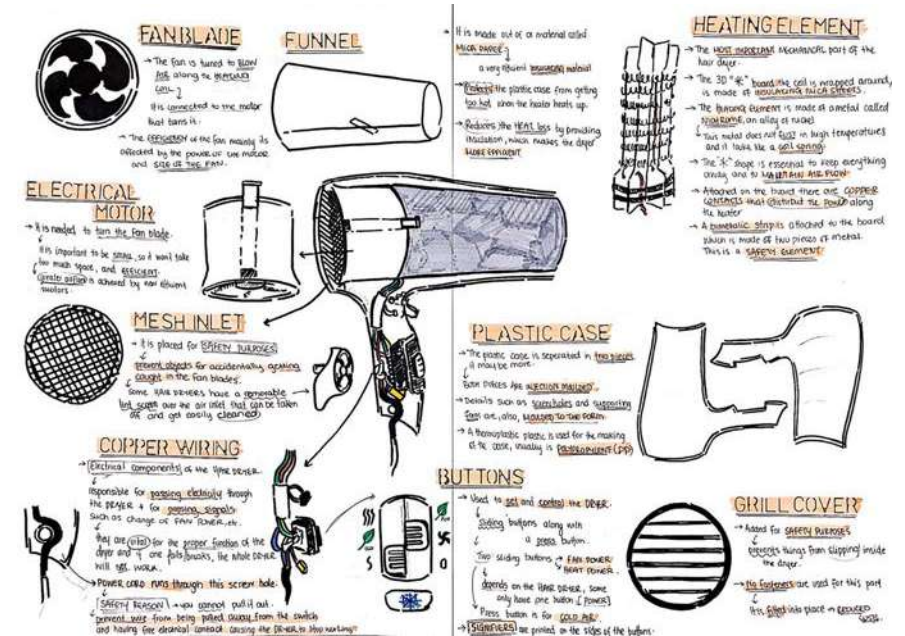
69%

stated that is difficult to open and fix it

A study of current models showed standardised form and CMF — long handles dominate, despite usability complaints.

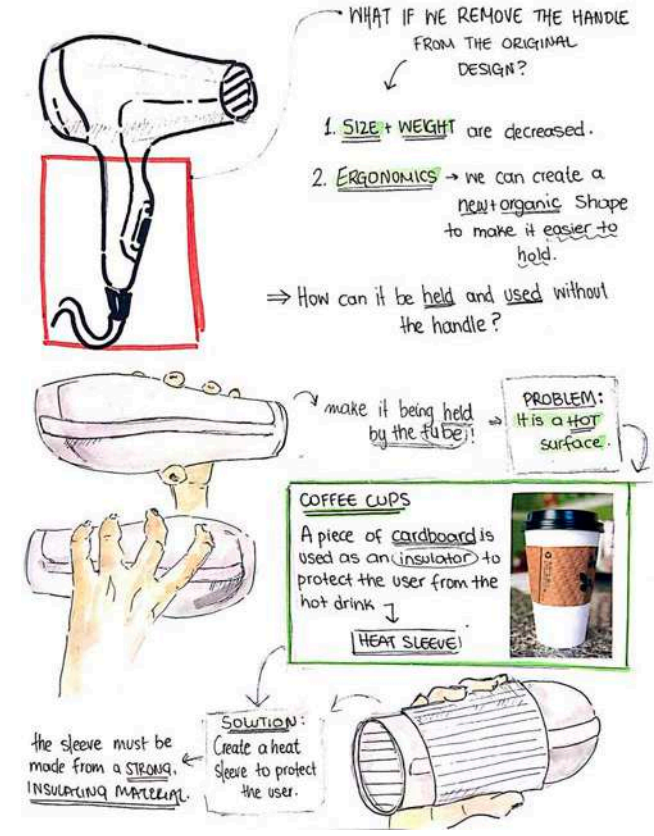
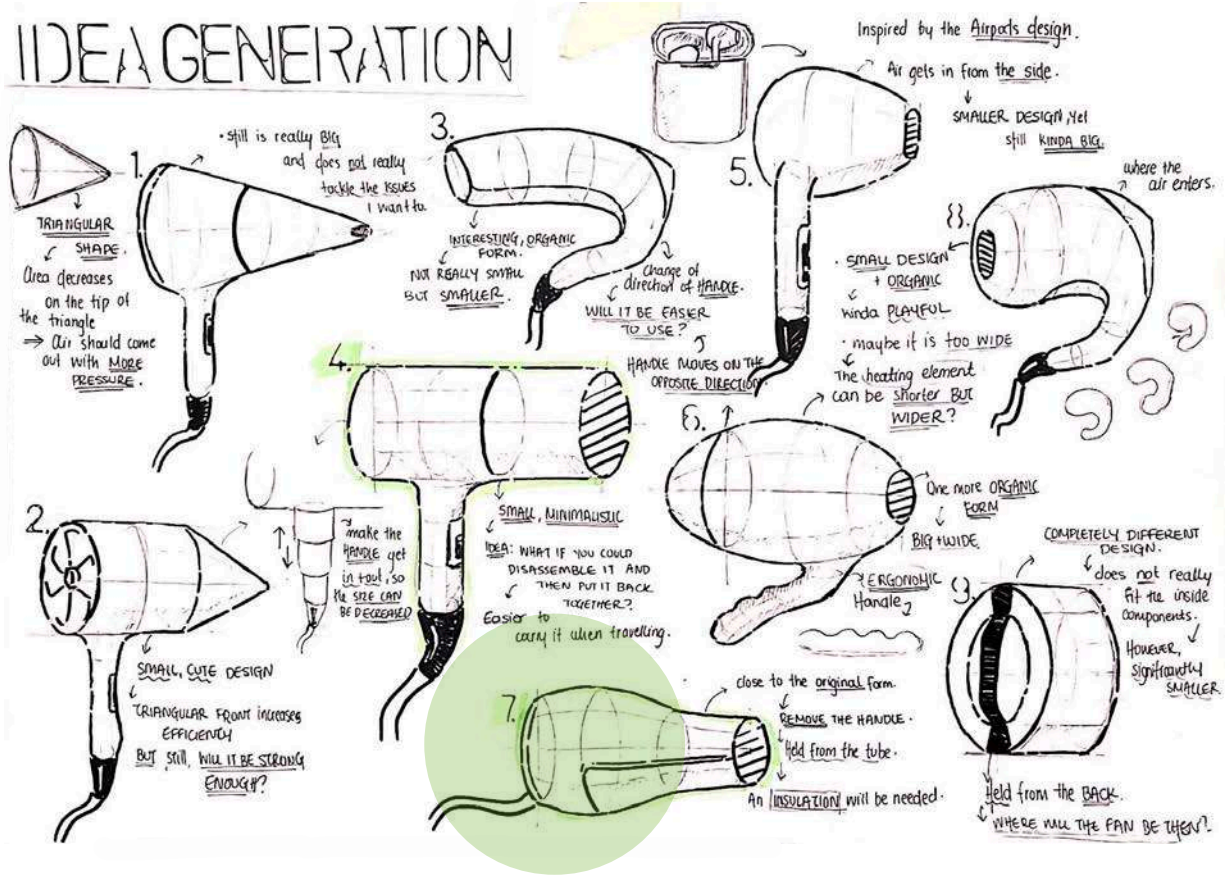


A teardown of the Remington dryer revealed design flaws in structure, heat management, and maintenance. I annotated each component to better understand opportunities for simplification and improvement.



Opportunity

How might we rethink the form and assembly of hair dryers to better align with user needs and reparability?



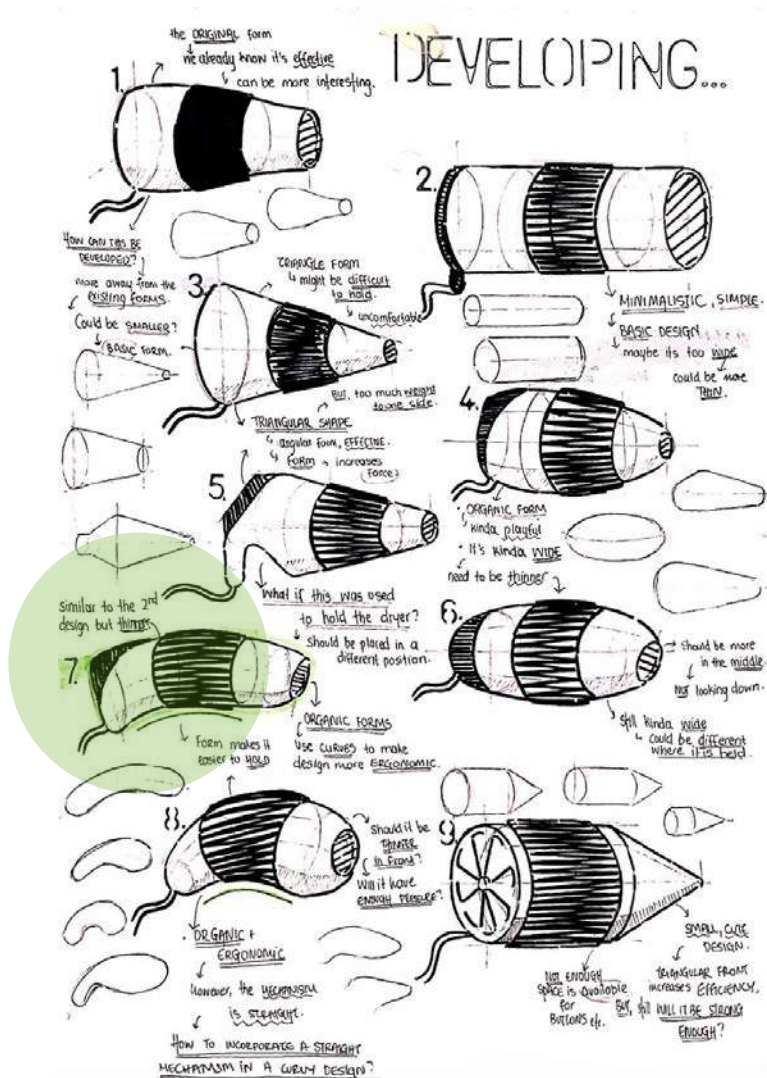
Handle-Free Design
AirFlux eliminates the traditional handle to reduce bulk and weight, making the dryer more compact and travel-friendly.



Ergonomic Grip
The product is held directly by the air outlet tube, offering a new, intuitive grip that improves control and ease of use.



Optimized Power-to-Size Ratio
By keeping the core system intact while removing unnecessary parts, AirFlux maintains high performance in a much smaller form.



Heat Protection Sleeve

A thermal insulating sleeve was added to prevent burns when holding the dryer by the tube, its hottest part.



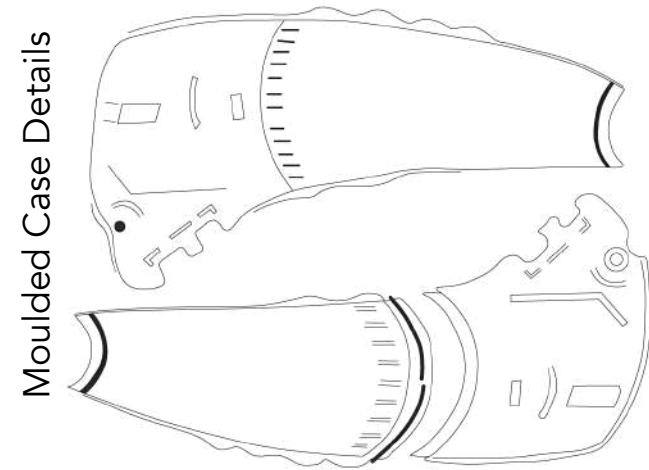
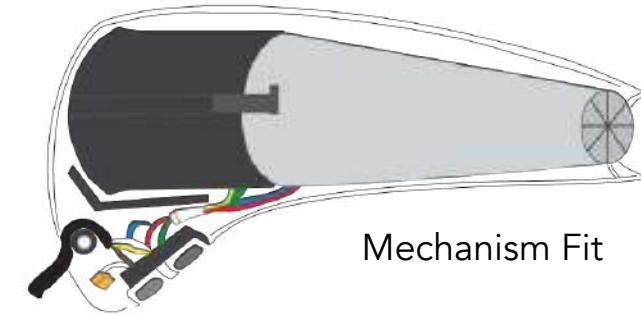
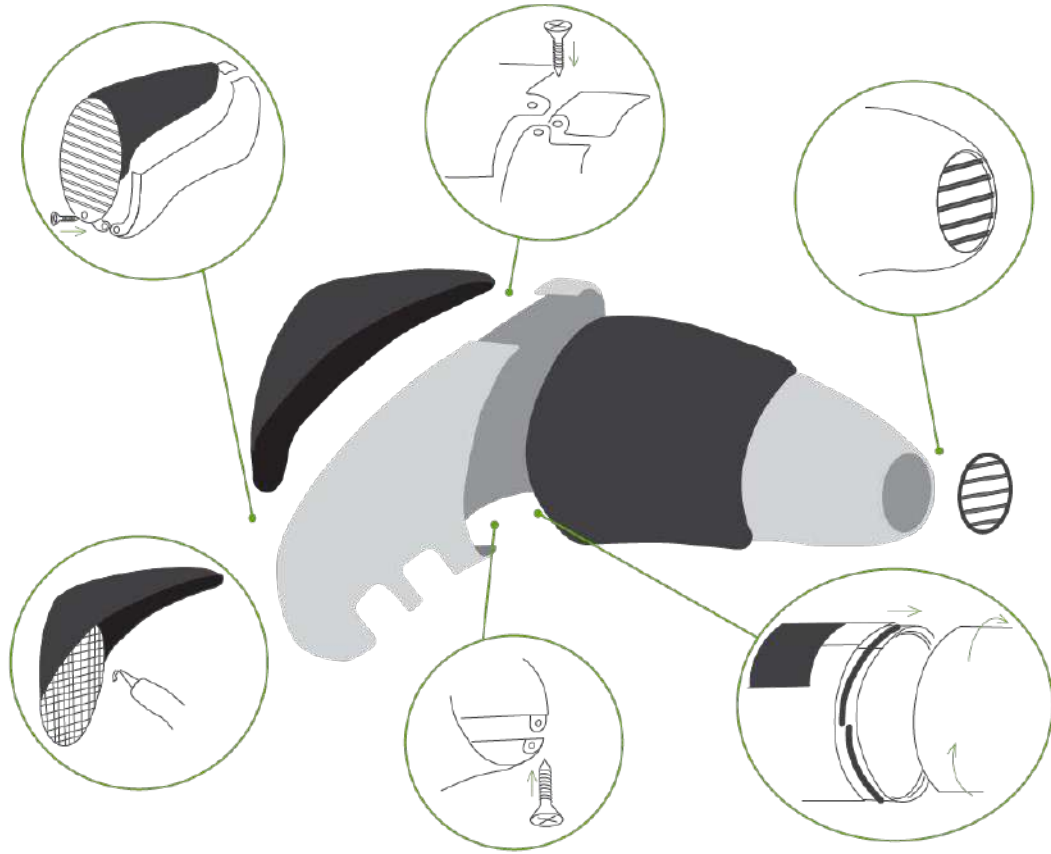
Ergonomic Sleeve Testing

Multiple prototypes were tested to design a sleeve shape that offers a safe, comfortable, and ergonomic grip.



Integrated Compact Design

The sleeve was carefully designed to fit the compact new form of AirFlux without compromising aesthetics or usability.



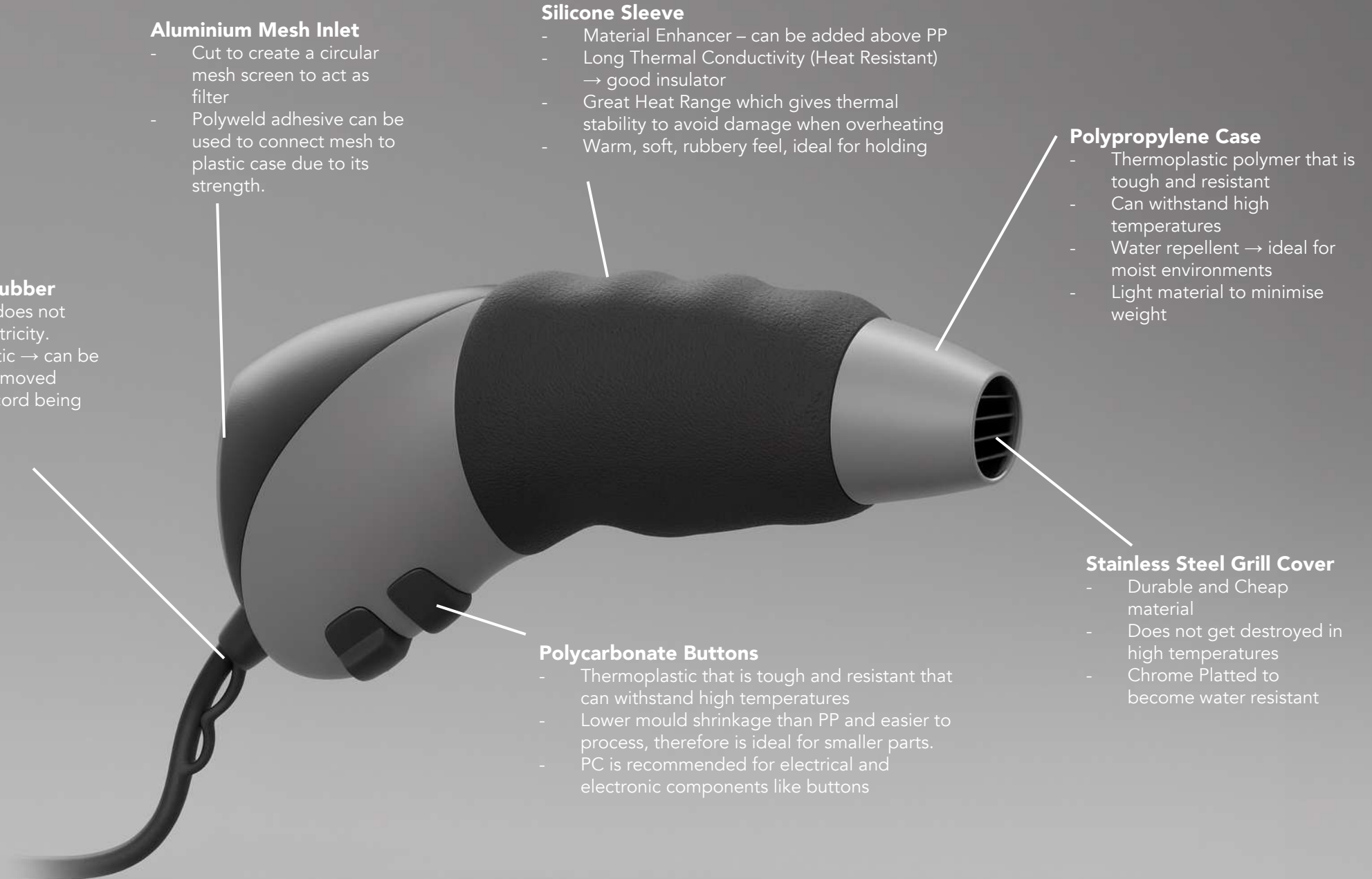
Designed for Repairability

Components were reworked to allow easy disassembly—glue was replaced with screws for better user access to electronics.



Compatible Internal Layout

AirFlux's form fits the existing Remington mechanism with minimal changes, only altering the casing and internal placement.



Aluminium Mesh Inlet

- Cut to create a circular mesh screen to act as filter
- Polyweld adhesive can be used to connect mesh to plastic case due to its strength.

Silicone Sleeve

- Material Enhancer – can be added above PP
- Long Thermal Conductivity (Heat Resistant) → good insulator
- Great Heat Range which gives thermal stability to avoid damage when overheating
- Warm, soft, rubbery feel, ideal for holding

Polypropylene Case

- Thermoplastic polymer that is tough and resistant
- Can withstand high temperatures
- Water repellent → ideal for moist environments
- Light material to minimise weight

Silicone Cord Rubber

- Insulator → does not conduct electricity.
- Flexible Plastic → can be bended and moved without the cord being destroyed.

Stainless Steel Grill Cover

- Durable and Cheap material
- Does not get destroyed in high temperatures
- Chrome Platted to become water resistant

Polycarbonate Buttons

- Thermoplastic that is tough and resistant that can withstand high temperatures
- Lower mould shrinkage than PP and easier to process, therefore is ideal for smaller parts.
- PC is recommended for electrical and electronic components like buttons



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Thank you for considering
my application!