Portfolio.

Vinayak Syam

Edition
2025

Integrated Industrial
/ Product Design

Inside.

1

VĀYU-2

A **Dry powder Inhaler (DPI)** solution that is positioned to be an economical and sustainable option for vulnerable asthematic patient's across the globe.

2

Twirl

A new chapter on **vanity solutions** realized for Vetromoda,Inspired from the symphonic forms of life that bloom's in nature After a monsoon Rain.

3

Kard

A **smart clock** radio that measures and rates the quality of your sleep while cleaning out your huddled well-being and bedside table.

"A sustainable way to breathe easy"

VĀYU-2

3 Weeks / Design for Sustainability
Msc. Integrated Product Design

A sustainablility driven Redesign
of Sertide Accuhaler by GSK.

Why Redesign?

The Seretide Diskus Inhaler, lasting only 30 days. A Life Cycle Assessment shows that its materials drive 83% of energy use and 73% of its carbon footprint, highlighting a critical need for better alternatives.

Functional Unit

To deliver 1 dose a time ,2 times a day for 30 days.

Life Expectancy

30 Days on Ideal use.

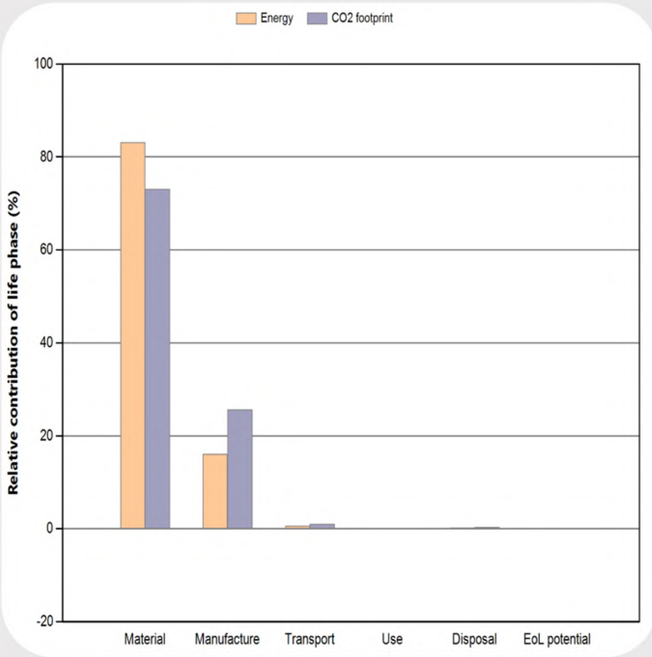
83% Energy

73% CO2

LCA Results

Phase	Energy (MJ)	Energy (%)	CO2 footprint (kg)	CO2 footprint (%)
Material	6.13	**83.1**	0.252	**73.1**
Manufacture	1.18	16.0	0.0882	25.6
Transport	0.0467	0.6	0.00336	1.0
Use	0	0.0	0	0.0
Disposal	0.0176	0.2	0.00123	0.4
Total (for first life)	**7.38**	**100**	**0.344**	**100**
End of life potential	0		0	

Seretide Diskus Inhaler,



Redesign Priorities

Priority : High Medium Low

H Reduced Material Impact

With a bulky ABS housing,The material stage of the Seretide Diskus inhaler has the greatest environmental impact, accounting for 83% of its energy use and 73% of its CO2 emissions

M Manufacturing Innovation

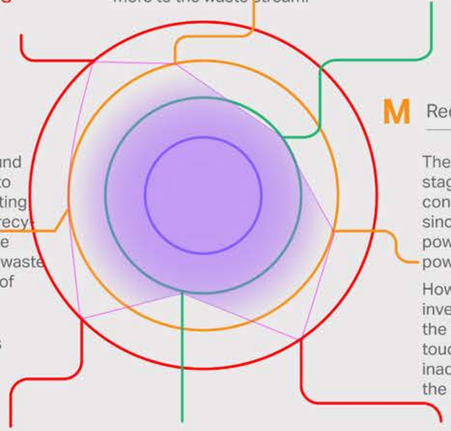
The manufacturing stage had a modest environmental impact, according to the LCA, contributing just 16% of the total energy use and 25.7% of the CO2 footprint.

Since the product is useless once the doses have been consumed, the qualitative study showed that it will contribute more to the waste stream.

L Reduced Distribution Impact

According to the eco audit, only the transportation step contributed.6% in terms of energy use and 1% in terms of CO2 emissions. Since the product is produced in areas that are closer to the global market that is being targeted.

The seretide diskus Inhaler is packed in a close to the product size packaging for retail.



M Dissassembly

The qualitative analysis found that there are obstruction to disasmbly, which is prohibiting the user from reusing and recycling the material.Hence the whole product goes to the waste stream after the depletion of Doses.

Even though the product is not meant to be dissasembled there product is lacking modularity.

M Reduced Behaviour Impact

The Eco audit shows that the use stage have zero impact on energy consumption and Co2 emissions since, the Inhaler is mannually powred and doses are delivered in powder form..

However, after doing a qualitative investigation, we discovered that the inhaler has a very shaky PUI touchpoint, which causes users to inadvertently release doses from the inhaler.

H Optimised end of life

The product becomes obsolete after 60 doses, leading to frequent waste disposal. The Life Cycle Assessment (LCA) estimates that disposal impacts are 0.2% for energy and 0.4% for CO2 emissions.

L Transitional Systems

Although at the LCA disposal stage, there was evidence of little environmental impact. The NHS suggests discarding DPI inhalers after checking for unused doses because the item is a medical equipment. But this approach is challenging due to the lack of modularity.

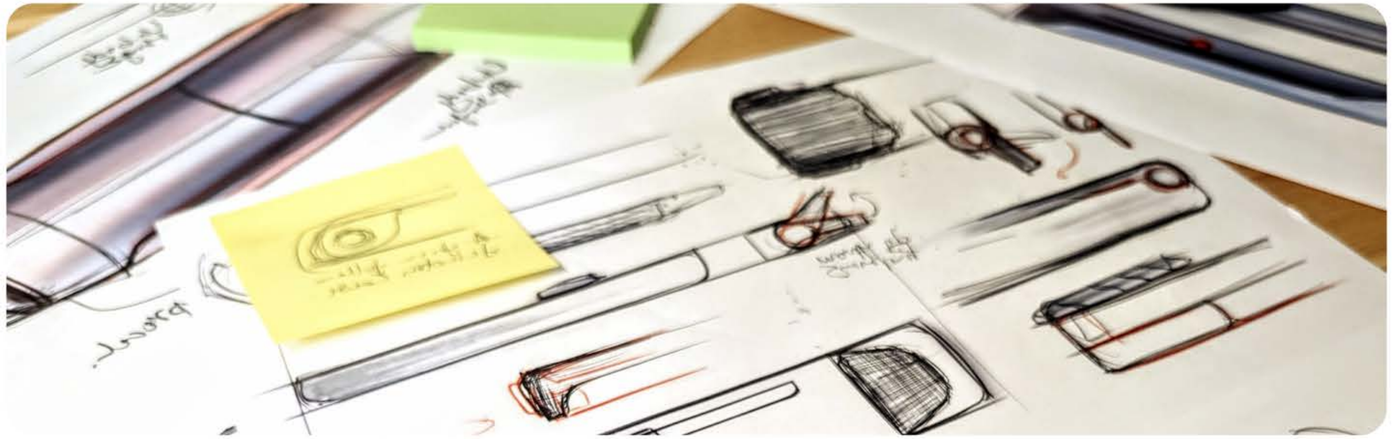
H Product Longevity

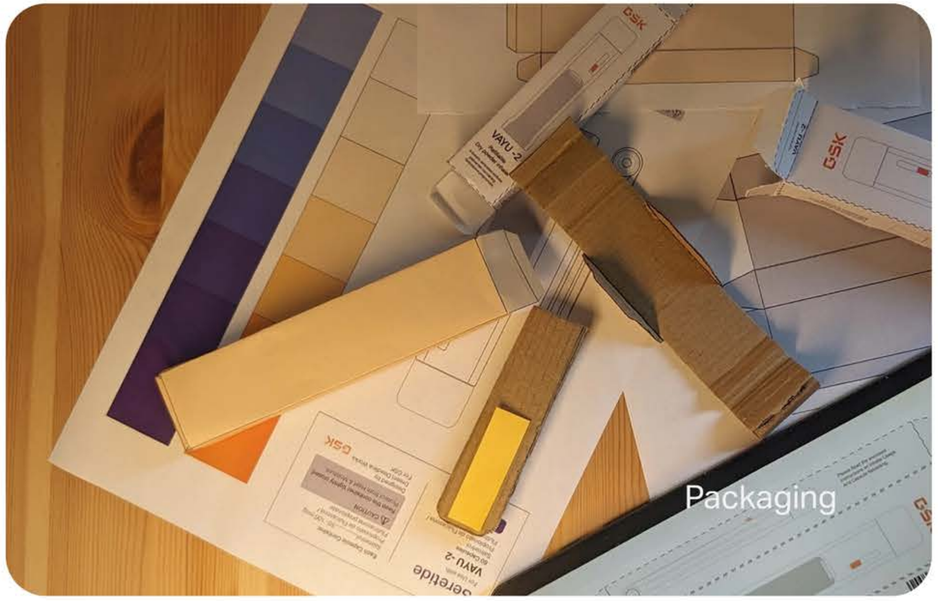
The Inhaler is highly affected by the Shorter product life and premature Obscelsence. since the product is supposed to be replaced entirely after the the dosage exhaustion.

The redesign priorities, based on LCA findings and qualitative study data, are classified as "High," "Medium," and "Low" relevance. These priorities are shown in the radar graphic below, derived from the Ecodesign strategy wheel.


Mockups


Gut Tech




Packaging

Introducing VĀYU-2, A reusable inhaler put together with a palette of reduced materials that are sustainable from both ecnomical and enviornmental prespective.

Optimized for Sustainability.

The material of the outer shell is switched from ABS to PPcopolymer.Since the material is much lighter than ABS while having the same chemical and structural advantageous to a limit.

Refill, Reuse,Repeat.

Energy

Sertide Accuhaler - 7.38 MJ
VAYU -2 **- 1.04 MJ**

85% REDUCTION

CO2

Sertide Accuhaler - 0.344 kg
VAYU -2 **- 0.0523 kg**

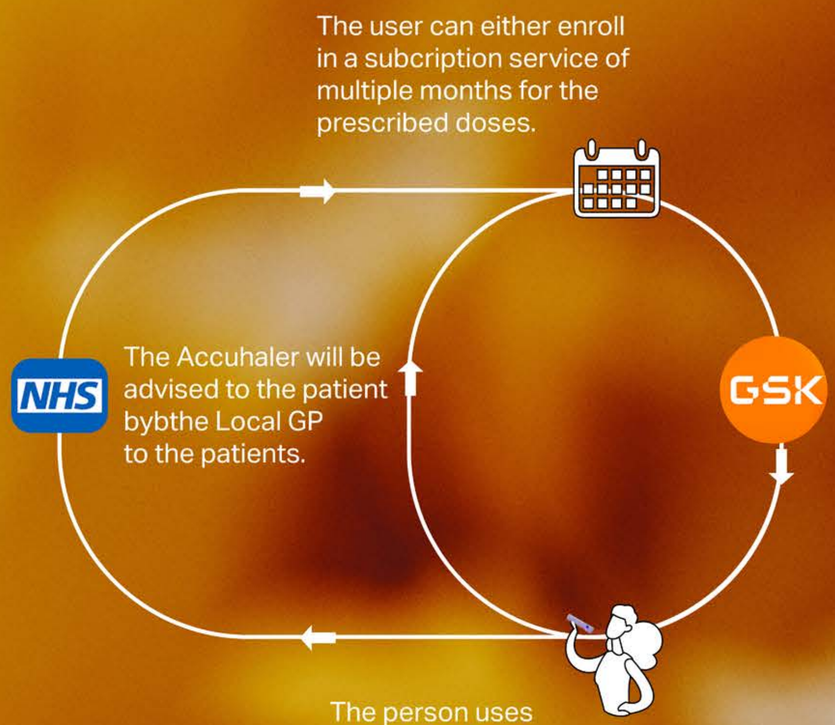
85% REDUCTION

Footprint Impact.

The new design is so efficient, you could make nearly 8 redesigned units with the same amount of energy it takes to produce in the material phase of the original Inhaler.

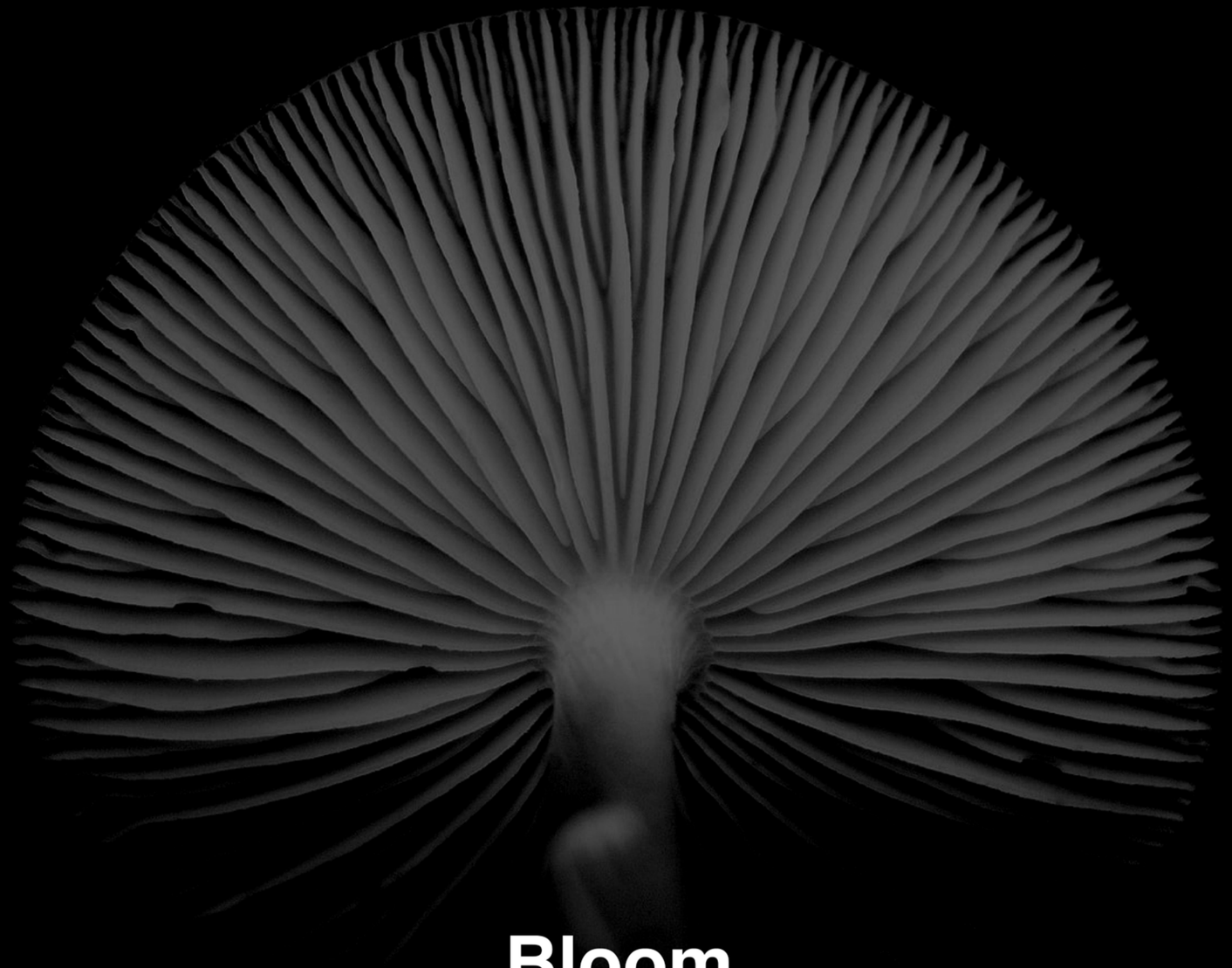
PSS Opportunity

A product service system has been developed that extends product lifespan and significantly reduces energy consumption and environmental impact during material manufacturing, thereby promoting the growth of a circular economy.




Packed.
GSK
Refillable
Dry powder inhaler
Each Capsule Contains:
Salmetrol.....50- 100 mcg
Propionato de Fluicasona /
Fluticasona propionate
CAUTION
Keep the container tightly closed
Protect from Heat & Moisture
Designed by
Dream Deadline
For GSK
USE ONLY WITH:
Salmetrol DP Capsules
Propionato de Fluicasona / Fluticasona
Refillable
Before loading capsules into the inhaler
Always make sure:
The trigger button is on Position 1.
Not to exceed the recommended
Number of Capsules.
Please Read the enclosed
Instructions on Inhaler Usage
And Capsule Reloading
Before Use:
Check the inhaler indication for
Number of remaining Capsules.

The 100% recyclable paper packaging keeps the product completely protected, without the need for any plastic or other less sustainable protection materials.

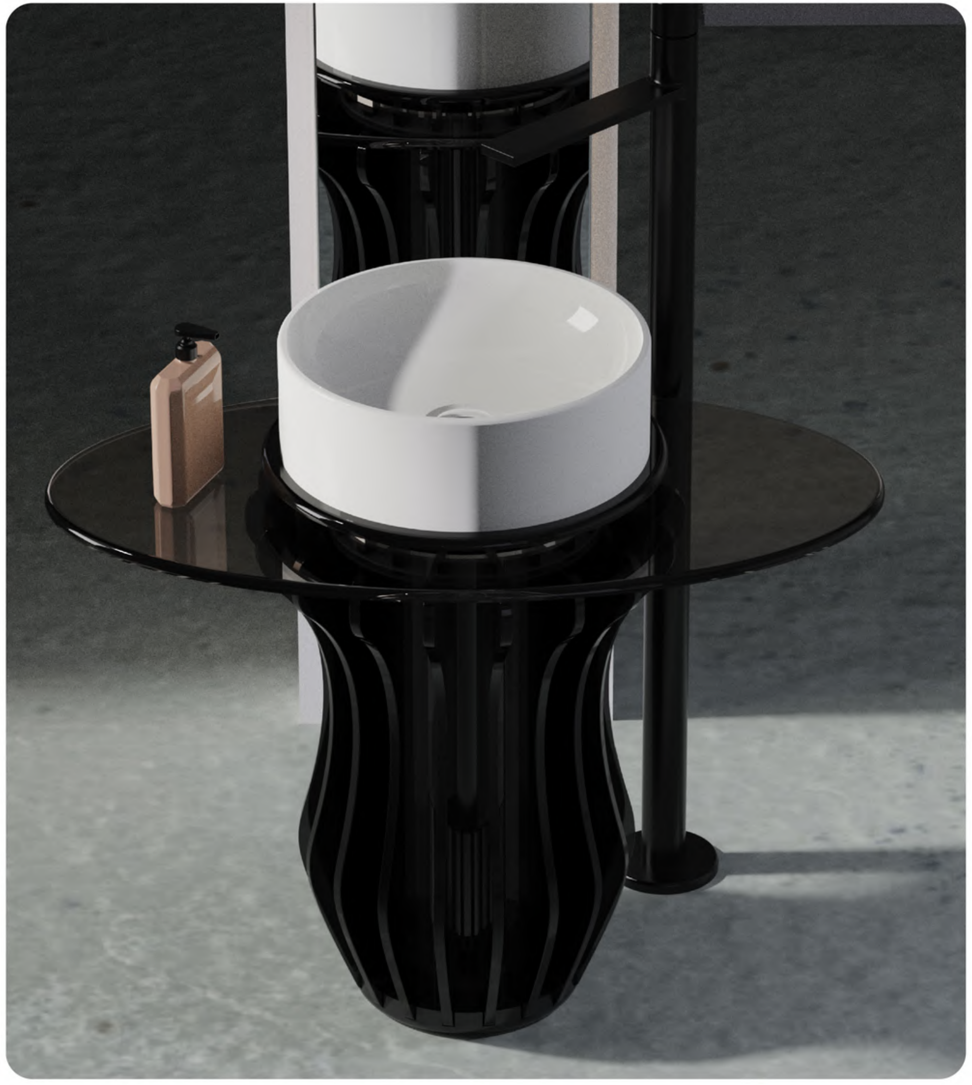


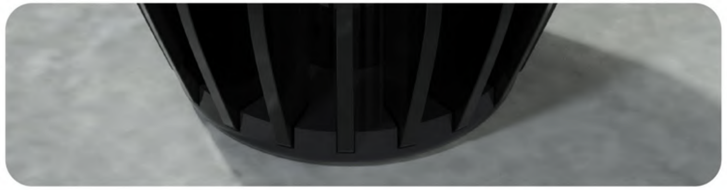
Bloom.

A new chapter on vanity solutions realized for Vetromoda,
Inspired from the symphonic forms of life that bloom's in nature
After a monsoon Rain.

Twirl from Bloom.

A symphonic Twirl of form and function hand-crafted out of glass that can stand on its own.

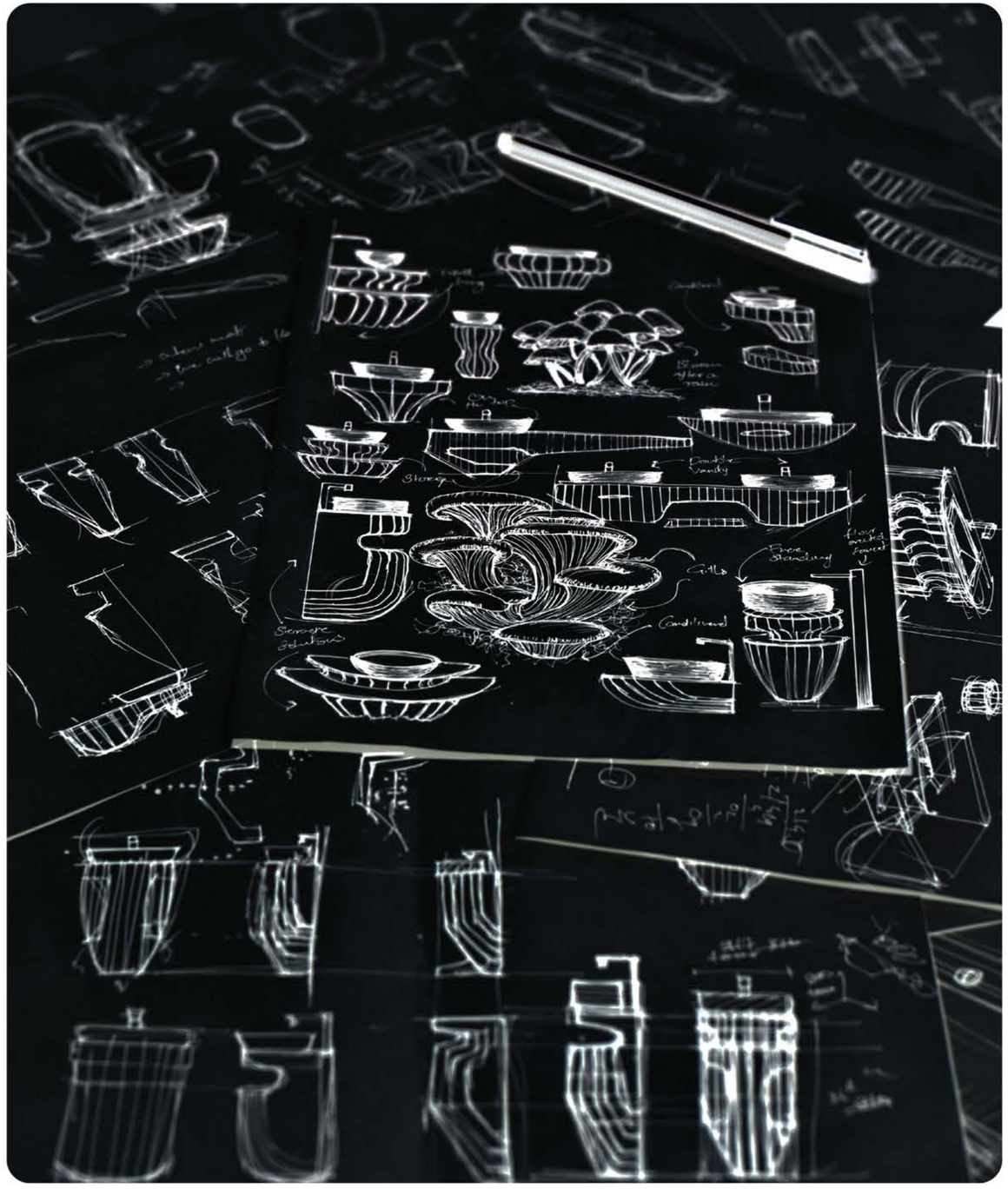




Twirl.

Introducing our unique and captivating Vanity Stand, a free-standing symphonic whirl of form and function hand-crafted out of glass. Inspired by the exquisite beauty of mushroom blooms and the organic shapes that flourish during the monsoon season, this piece is a true work of art. Each Vanity Stand is a testament to the harmonious blend of nature's aesthetics and human craftsmanship. Its sinuous curves and whimsical contours evoke the enchanting allure of a mushroom's cap, making it an eye-catching focal point for any room.

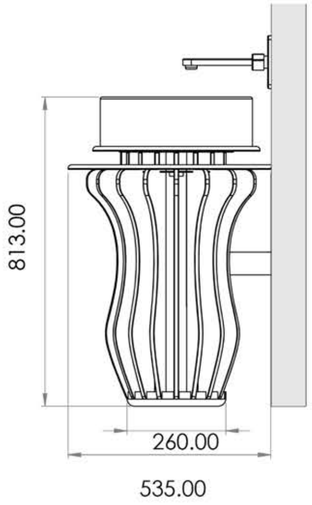
Crafted with meticulous attention to detail, this stand seamlessly combines aesthetics with practicality. The glass construction not only lends it a timeless elegance but also provides durability and stability. Its shelves and surfaces offer ample space for your cosmetics and accessories, ensuring both style and convenience. Bring a touch of nature's splendor into your living space with this Vanity Stand, a masterpiece that harmoniously blends the monsoon's organic forms and the elegance of handcrafted glass. Elevate your decor and daily routine with a touch of enchantment.

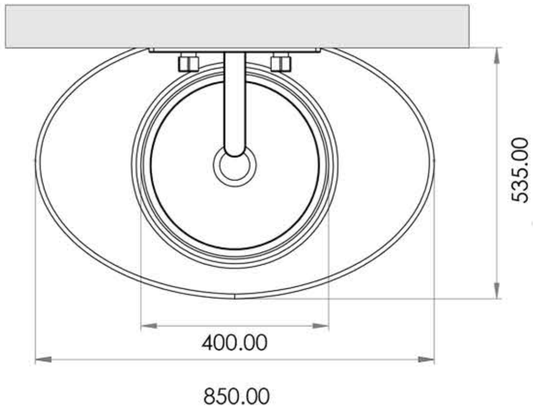


ALL DIMENSIONS ARE IN MM.

Twirl.

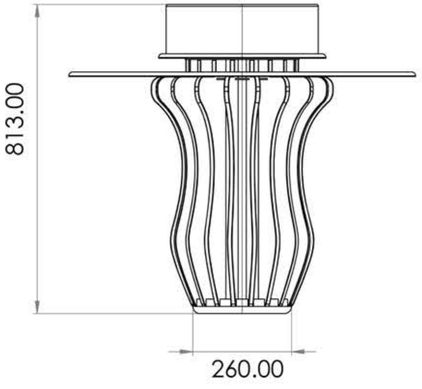
**Wall slanted Island Vanity.

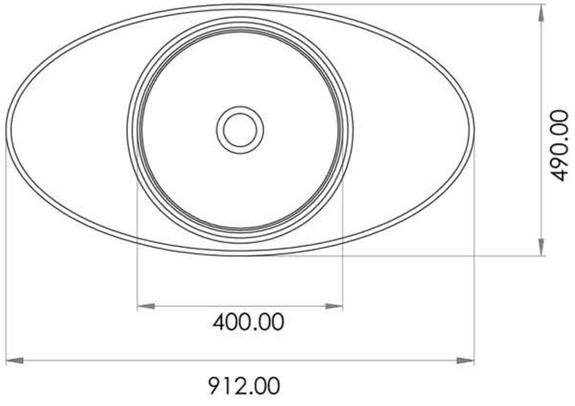


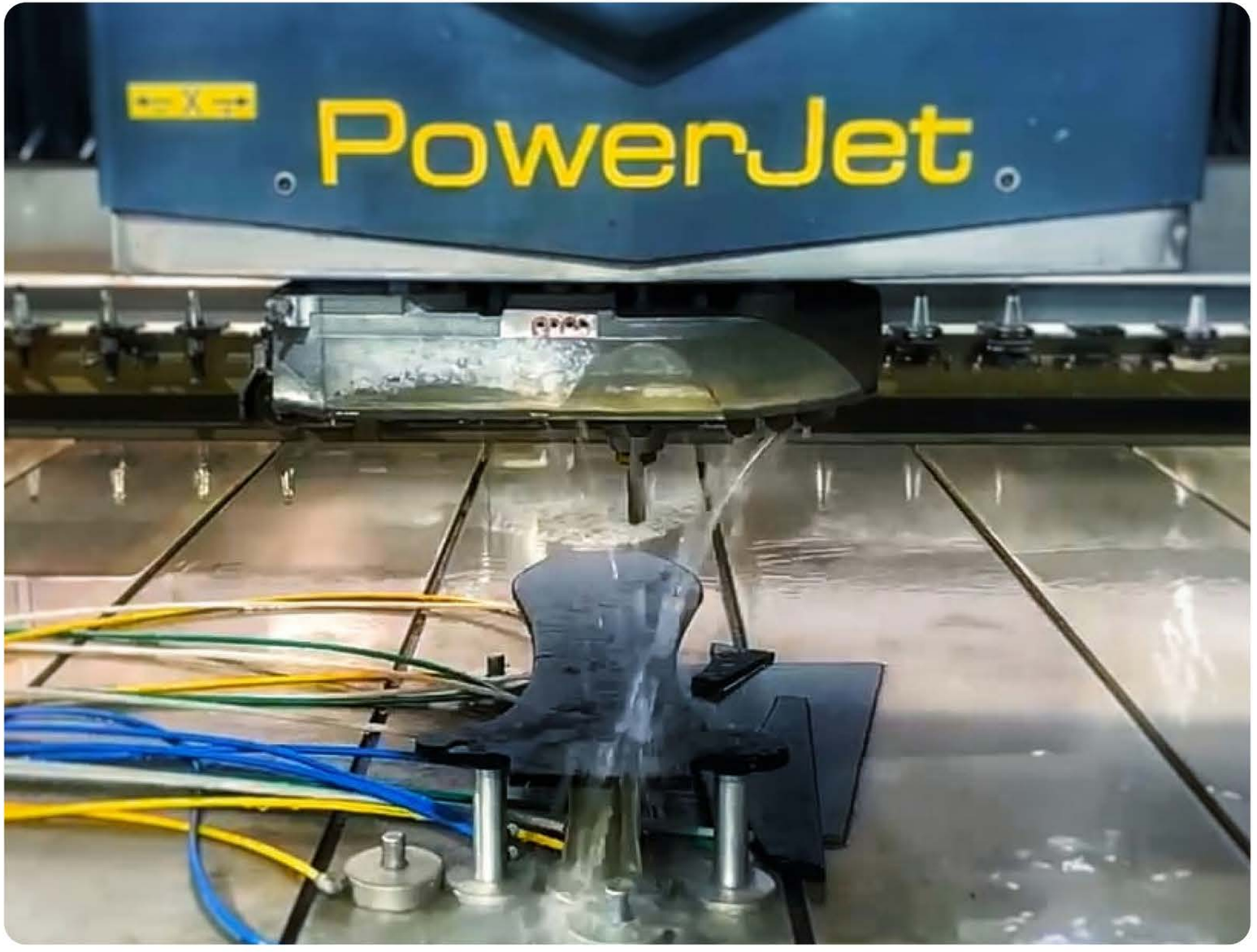


Twirl.

** Free standing Island Vanity.






PowerJet


Being successfully produced
and sold by VM since 2022.

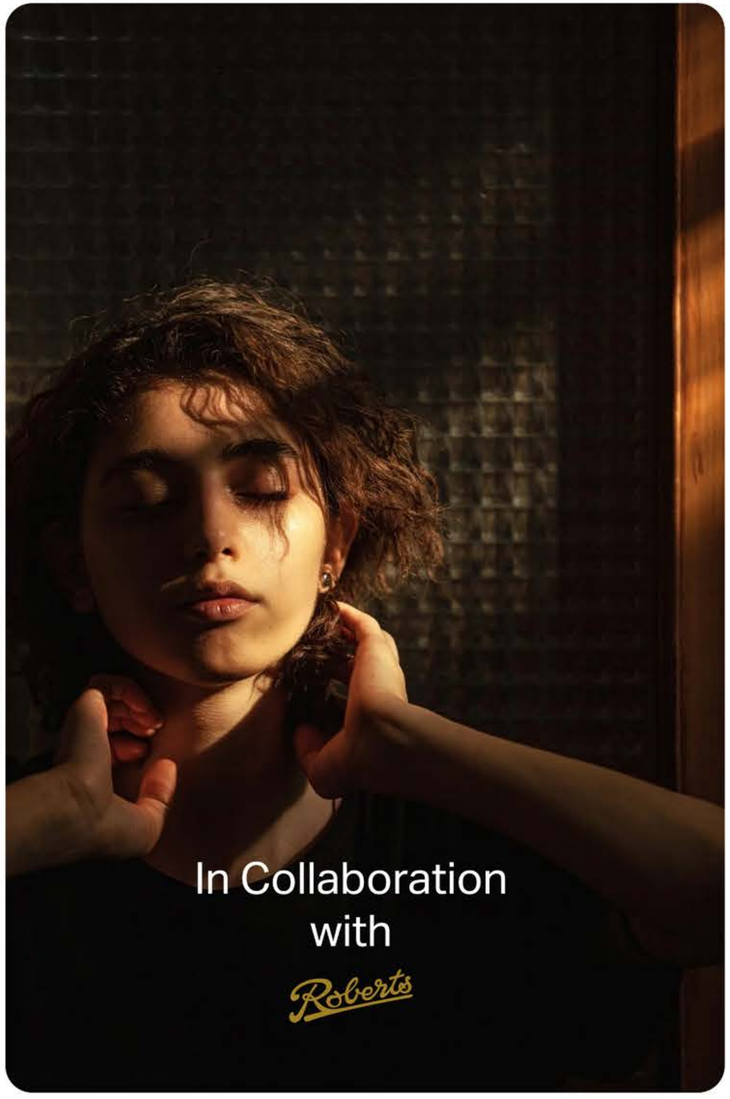
Count your Sleep better.

Kard.

3 Weeks / Industry Live Project.
Msc. Integrated Product Design

A sleep and wellbeing
facilitator.

“To Craft a well-being solution for Roberts that transforms sleep and wellness with modern insights and technology.”



Doomscrolling Disrupts Sleep.

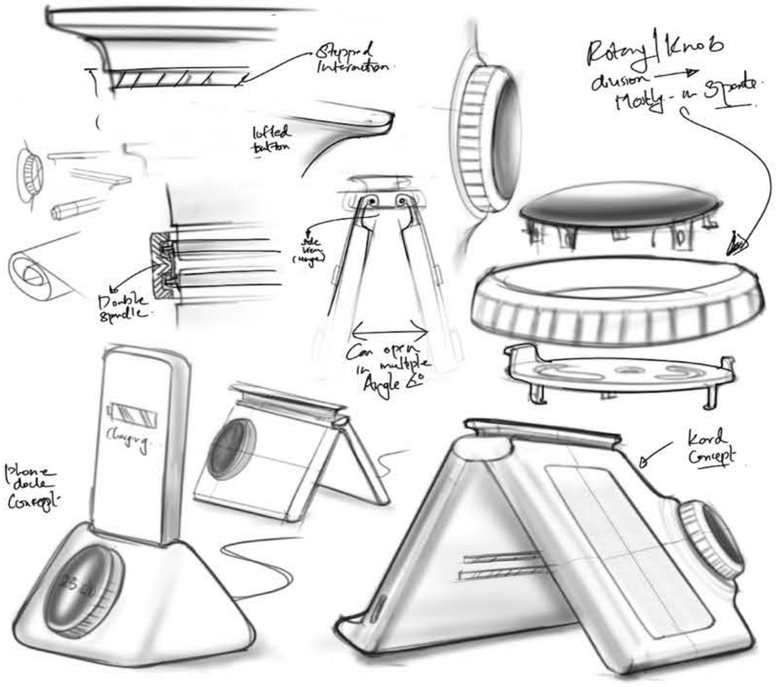
A study of 2,000 people in the UK found,

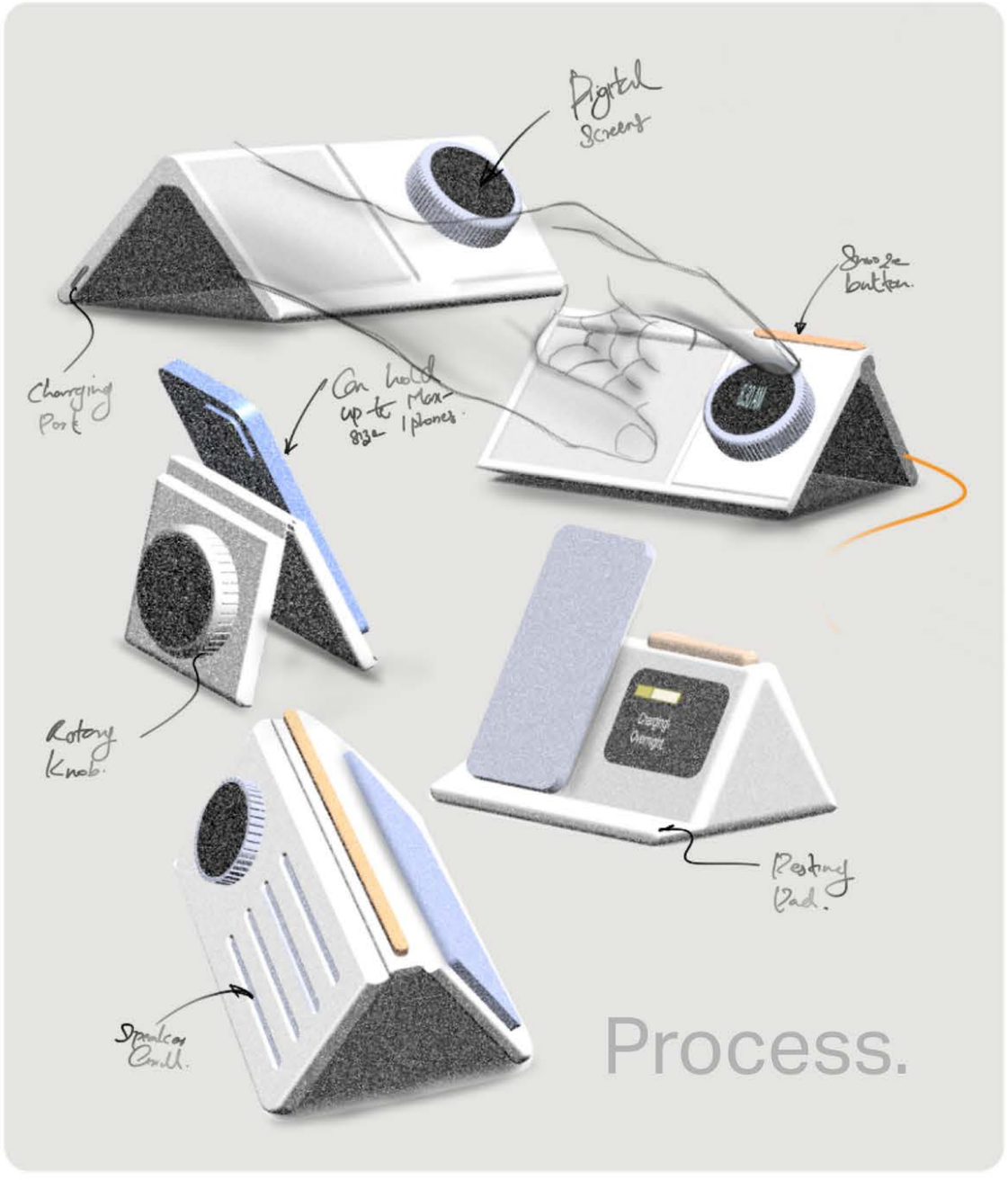
55% Check phone when they wake up middle of Night.

63% Identified enhancers are Females with family.

80% people use their smart phones before bed

The study also found that those who use their phones before bed are more likely to report poor quality sleep (Statista, 2019).

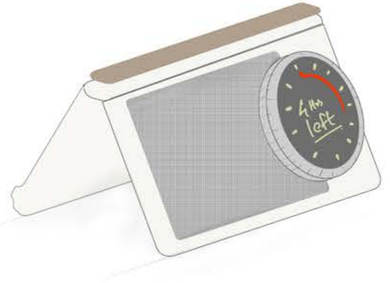




Work Like an Egg timer

Turn the knob to set desired sleep hours, like an egg timer. The Kard counts down and displays sleep duration,Number of Cycles and cycle quality.

Analyse your sleep Better



Kard counts the number of sleep cycles,as opposed to the overall amount of time spent sleeping, this helps the user meassure and analyse sleep in a more effective way.

“ Kard Coauld help make them feel in control of their time and connected to the Now.”

Discipline.

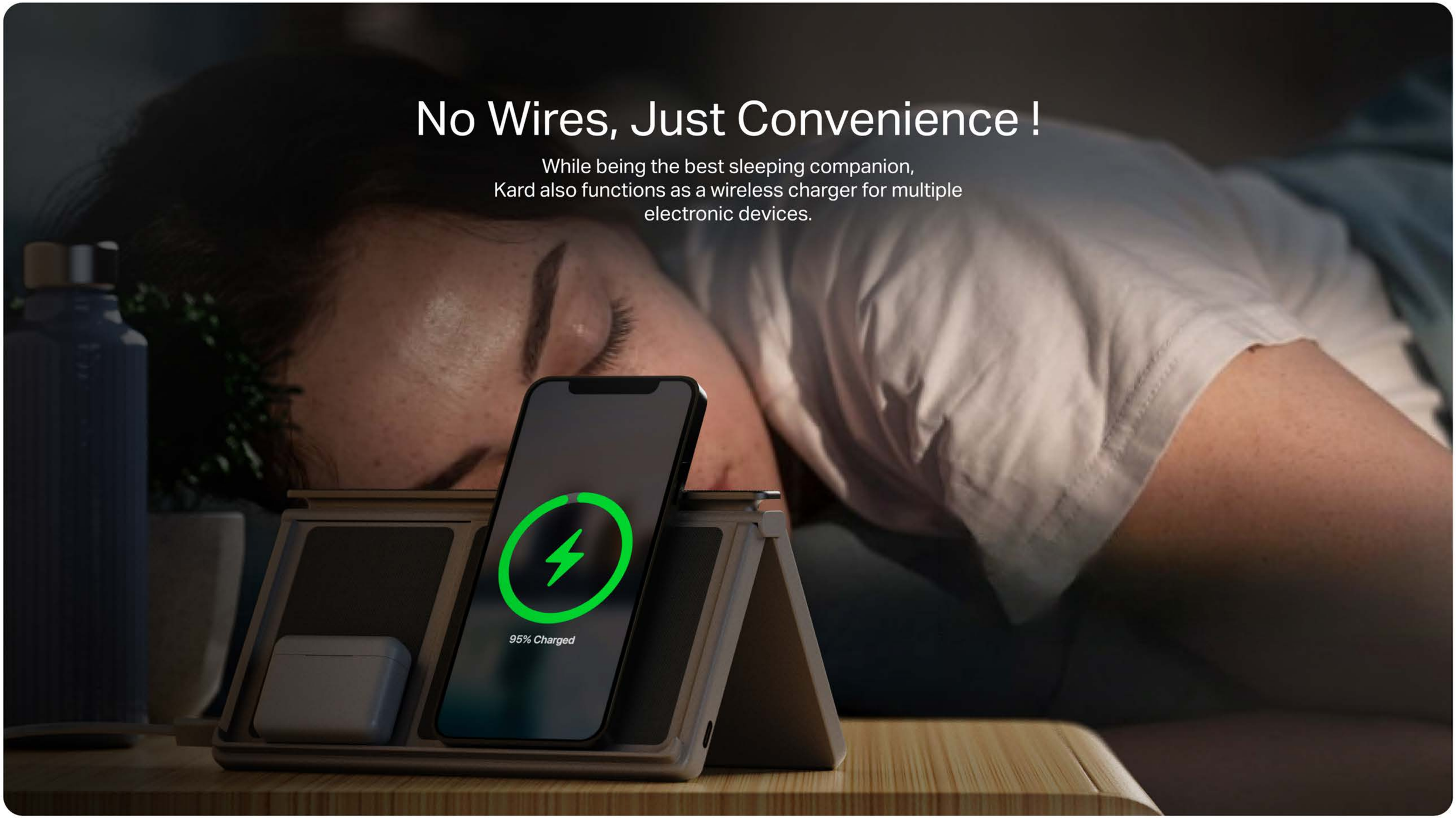
Distractions.

Familiar Affordances.

A rotary knob designed like an egg timer offers intuitive interaction, allowing users to effortlessly Naviagte and adjust functions with precision and simplicity.

Count your sleep better.

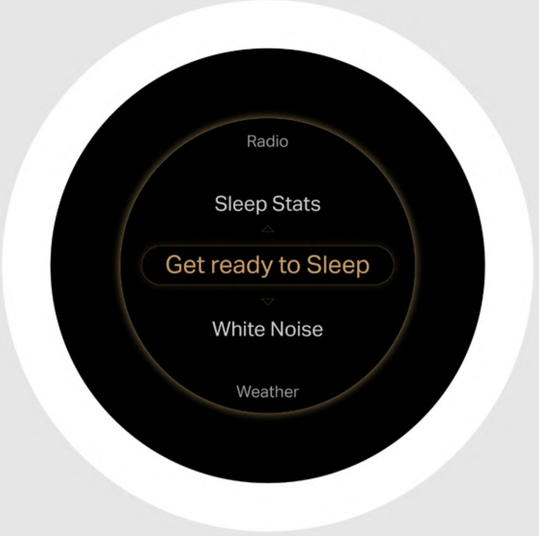
A sleep calculator helps you achieve optimal sleep by ensuring enough rest through all four sleep phases, enhancing both quantity and quality for better physical and mental health

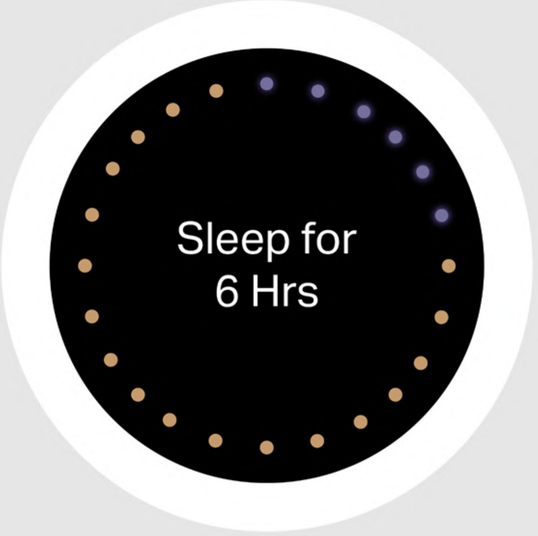


No Wires, Just Convenience !

While being the best sleeping companion,
Kard also functions as a wireless charger for multiple
electronic devices.


6
Cycles
Completed.
6:00 AM
Roberts





Meassuring sleep right.

The average sleep cycle is 90 minutes long
A typical night of sleep includes 5 full sleep cycles
90 x 5 = 450 minutes, or 7.5 hours Starting at your wake time, work back 7.5 hours to find your bedtime.

Smart, Seamless, Versatile.

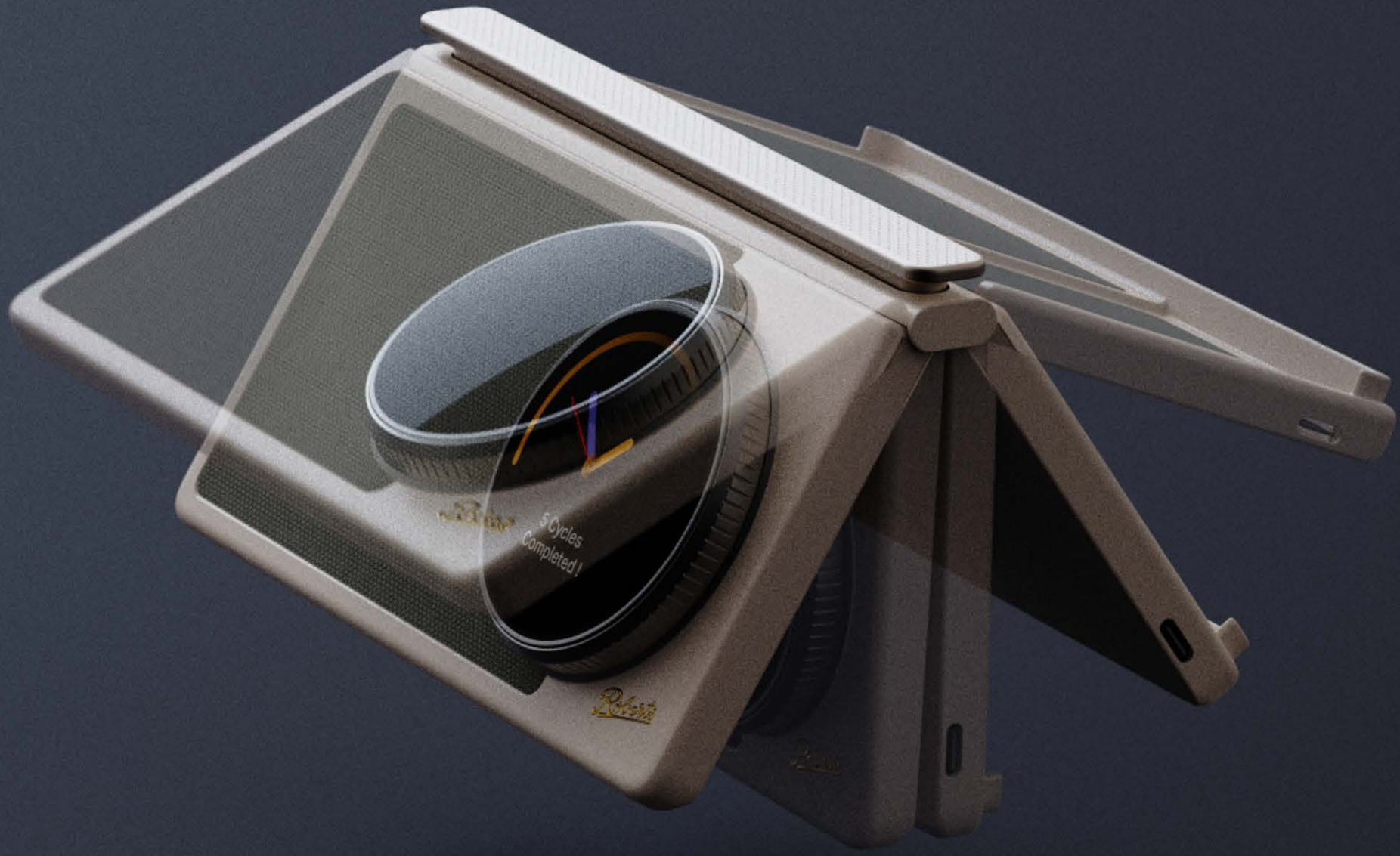
The Kard offers smart features like live weather updates, voice-activated assistants, white noise, and seamless Spotify integration for a personalized, effortless experience.

Wellness beyond Night

Considering the number of people who take quick naps during the day hours .the clock can be used more as a timer ,were the user only need to input Mins or hrs required for the nap.

Prompt Nudges

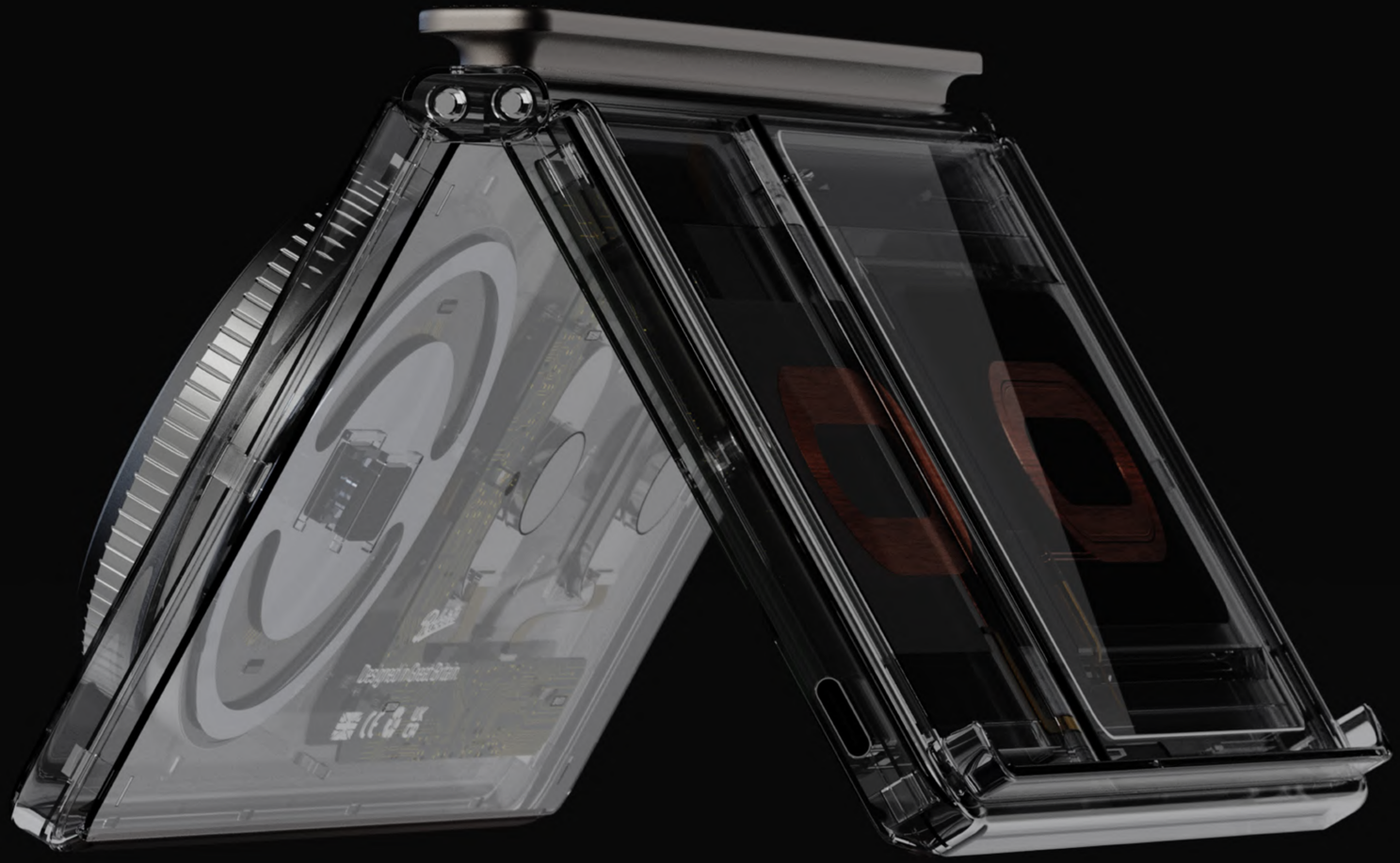
Promting nudges based interaction modal and information architectures cn be used to promote ,rectify and direct right sleeping behaviour among users.



“Kard adapt’s
to your bedside table”

Internal Architecture.

In product development, internal architecture was carefully considered to ensure electronics integration into the housing. Kard concept envisioned a space-efficient layout with easy maintenance and servicing.



Roberts

Blending legacy & Innovation.
Kard is available in timeless,
classic Roberts colors.

Experience.

F.r.a
London, England ,UK

Technical Designer

February,2025 - April,2025

- supported the development of wayfinding, placemaking, and branded environmental elements through iterative prototyping, material testing, and component detailing—bringing a hands-on, user-centred approach to environmental and experiential design.
- Leveraged my product design background, I translate conceptual design ideas into precise technical drawings and specifications that align with architectural and spatial constraints—ensuring creative intent is preserved while meeting fabrication and installation requirements.

Dream Deadline Works.
London, England ,UK

Freelance Industrial Design Consultant.

December,2023 - Present

- Successfully acquired and managed freelance visualization projects, delivering high-quality visual content to clients and achieving 100% client satisfaction
- Leading an ongoing furniture design project for Vetromoda from concept to manufacturing, focusing on sustainable materials and Bespoke design for play and flat packing.
- Collaborating with manufacturers to ensure design feasibility and production efficiency, resulting in reduction in production costs

GSK
London, England ,UK

Paediatric Solid Dose Deivery (ODT)-Msc. Dissertation Project

January,2023- August, 2023

- Designed a unique paediatric medicine deployment solution, increasing medication adherence & Accountability.
- Investigated medication challenges in economically disadvantaged regions, effecting over 37,000 children in sub-Saharan Africa.
- Prioritized sustainability, and proposed a solution reducing production to supply Carbonfootprint by 20%.
- Iterative testing and observation enacted a crucial role in refining the final concept, ensuring it tackling multiple underlying issues such as adherence, stigmatization, and compliance in treating Antiretroviral therapy.

AfterConcepts
New Delhi, India

Associate Industrial Designer

January,2022 - August, 2022

- Deployed design thinking methodologies to seamlessly integrate technical specifications from Engineering into compelling marketing collateral, enhancing cross-functional communication between departments in the company.
- Applied user experience design principles to create intuitive visual representations of complex engineering and manufacturing processes, facilitating easier comprehension for stakeholders and clients.
- Utilized agile methodologies, reducing project delivery times by 15%. to adapt quickly to evolving project requirements, ensuring efficient collaboration and timely delivery of design solutions across diverse projects from visualisation for NASA to Industrial Design for Med-tech.

Vinayak Syam

Industrial / product Designer

Education.

(2022-2023)

Msc. Integrated Product Design

Brunel University,Uxbridge,London,UK.

(2017-2021)

B.des Product Design

SOFD, GD.Goenka University, Gurugram, India
in collab. with Poli technico Di Milano, Milan,Italy.

Cheers.!

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