

Hi, my name is

Eero Brandt

I am a Master's candidate in Industrial & Collaborative Design at Aalto University, Finland's leading institution for higher education in design. Specializing in sustainable industrial design, I've worked with companies like Fiskars Group and KONE, and I'm currently a product designer at COMPARO GmbH. My focus is on creating innovative, sustainable products that blend Nordic minimalism with responsibility.

My design philosophy is rooted in responsibility. As designers, we are at the starting point of creating products, holding significant influence over decisions that shape our future. We have the power to guide users toward responsible choices and encourage corporations to adopt circular practices. This ethos guides my form-giving leading objects to possess more meaningful and subtly refined appearances.

I am passionate about using biomaterials and side streams in my designs, and I think it's important to know not only how to close the loop but also how to do regenerative design.

Currently, I am writing my Master's thesis at Aalto University, focusing on surface structures that reduce the material required for product manufacturing without compromising the user experience of holding the product.

In my free time, I like to volunteer in events that support the design community, like Ornamo Responsibility Circle or Helsinki Design Week.



Contents



1.



2.



3.

1. On-demand headboard

Bedroom concept for Unikulma

The Viola project was developed for the Young Finnish Design (YFD) competition in collaboration with my Aalto University MA classmate, Roosa Harju. The competition, sponsored by Unikulma, challenged us to create innovative and sustainable bedroom furniture using Sulapac and Hollolan viilu ja laminaatti (HVL) veneer as core materials.

Design Brief and Research Insights

Through our research, we identified a significant gap in Unikulma's product offering: only 20% of customers opted for headboards when purchasing bedroom furniture. This insight highlighted an opportunity to design a customizable product family that could appeal to both existing customers and younger audiences. Our aim was to address this gap while emphasizing sustainability and user-centric design.



Key Features

Customizability:

The modular design of the Viola collection enables customers to create unique combinations tailored to their needs.

Sustainability:

Each element incorporates eco-friendly materials, and flat-pack & on-demand manufacturing shows a commitment to responsible design and production.

User-centric approach:

Viola integrates functionality, aesthetics, and customization to enhance the bedroom space for a diverse range of customers.

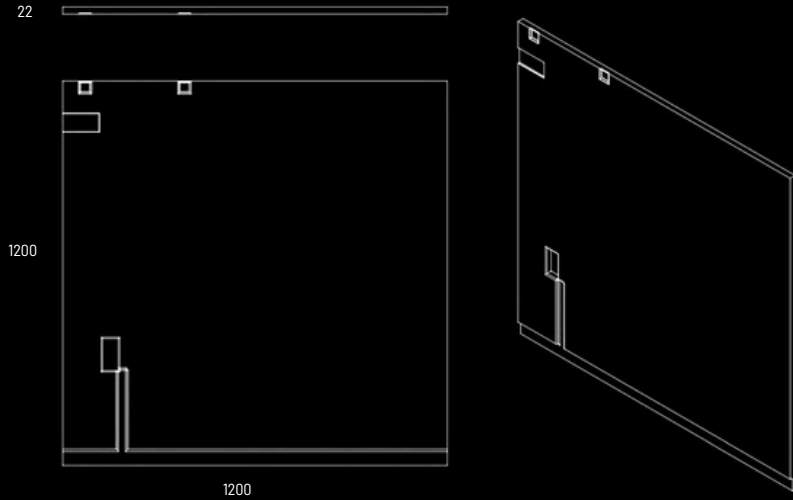


Viola Product Family

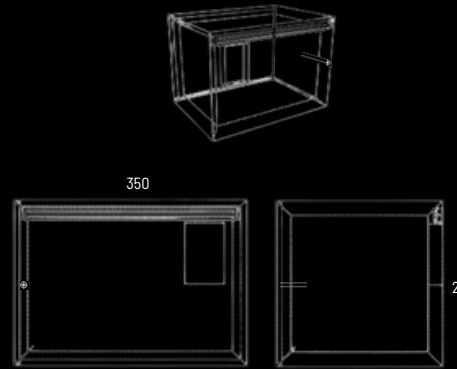
Headboards: Crafted from MDF with HVL veneer and produced using CNC routing, the headboards offer significant customizability, allowing users to personalize designs to suit their style and space. Designed for on-demand production, they empower users to configure the right combination of pieces to fit their space and route the needed fixing holes and grooves for wiring on custom order bases.

Lamps: Made from Sulapac bioplastic combined with waste wood fiber, these lamps bring together elegance and sustainability.

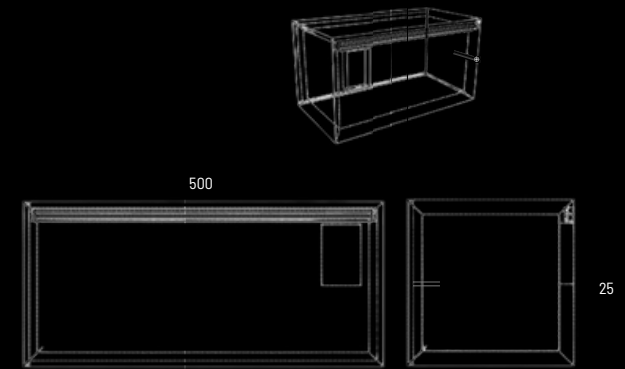
Pillows: Woven from hemp, introducing a renewable, tactile material with a luxurious feel with washable covers.



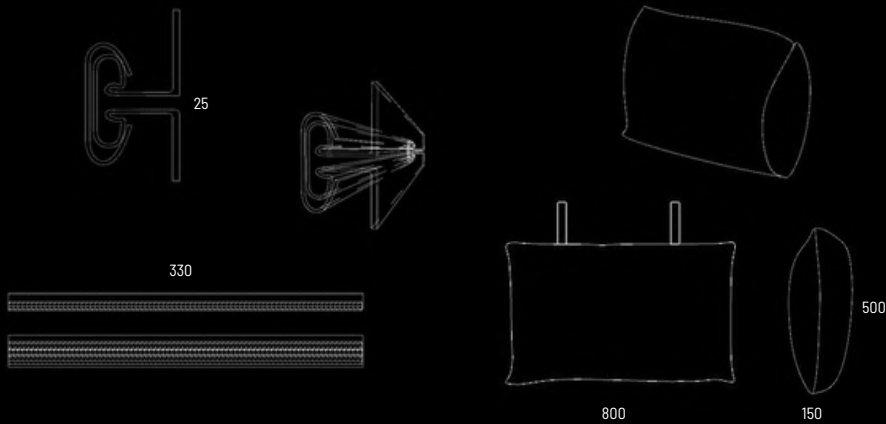
VIOLA headboard



VIOLA nighstand S
floating

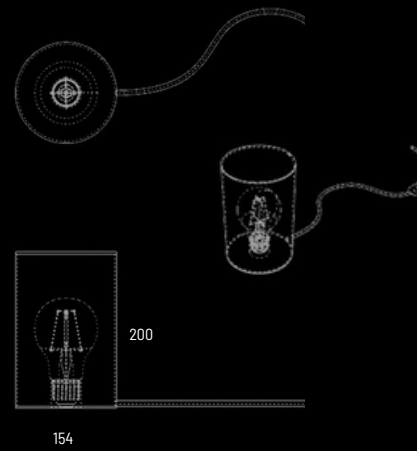


VIOLA nighstand L floating &
standing

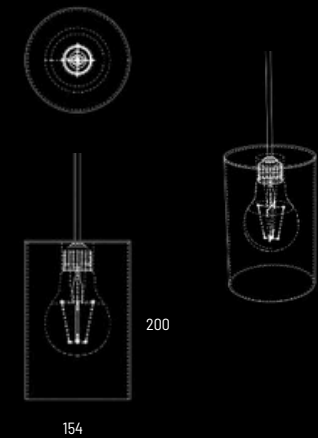


VIOLA hanging rack

VIOLA pillow

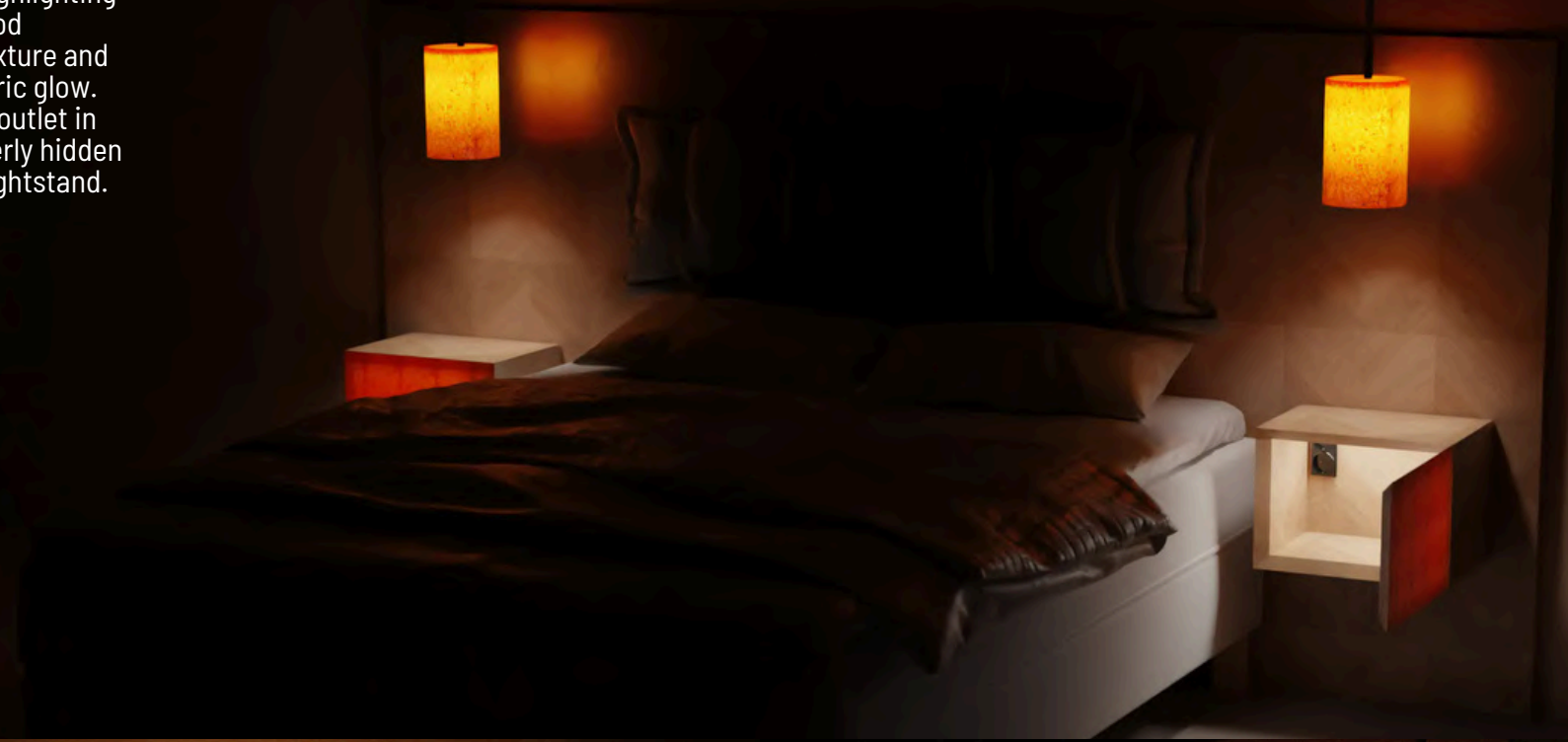


VIOLA table lamp

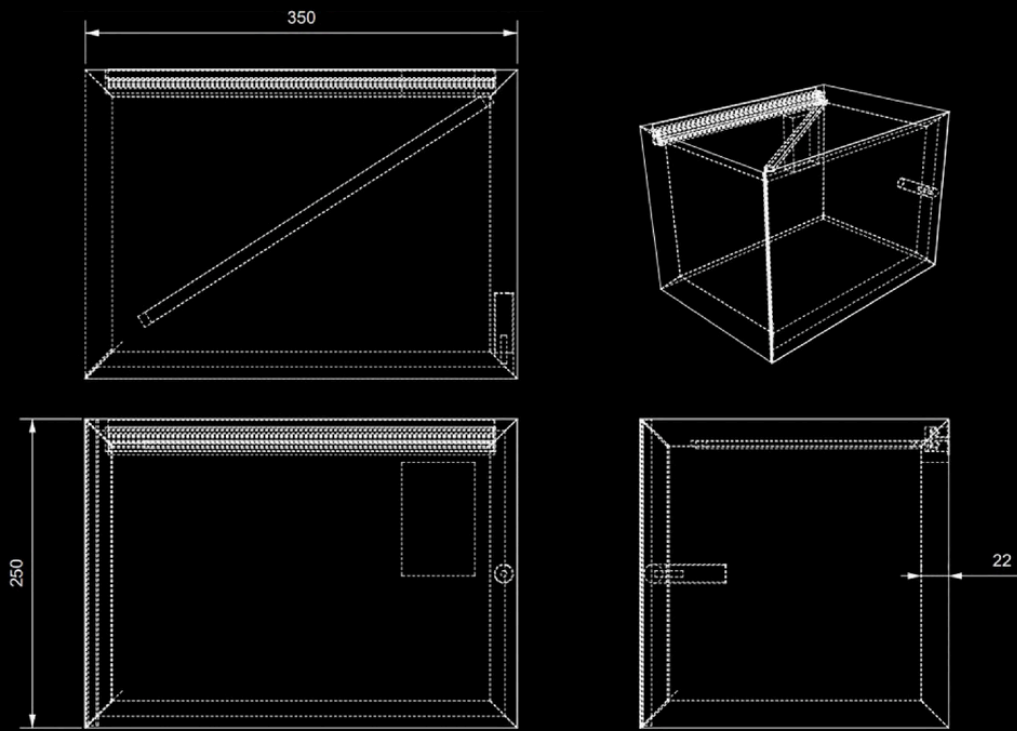


VIOLA pendant

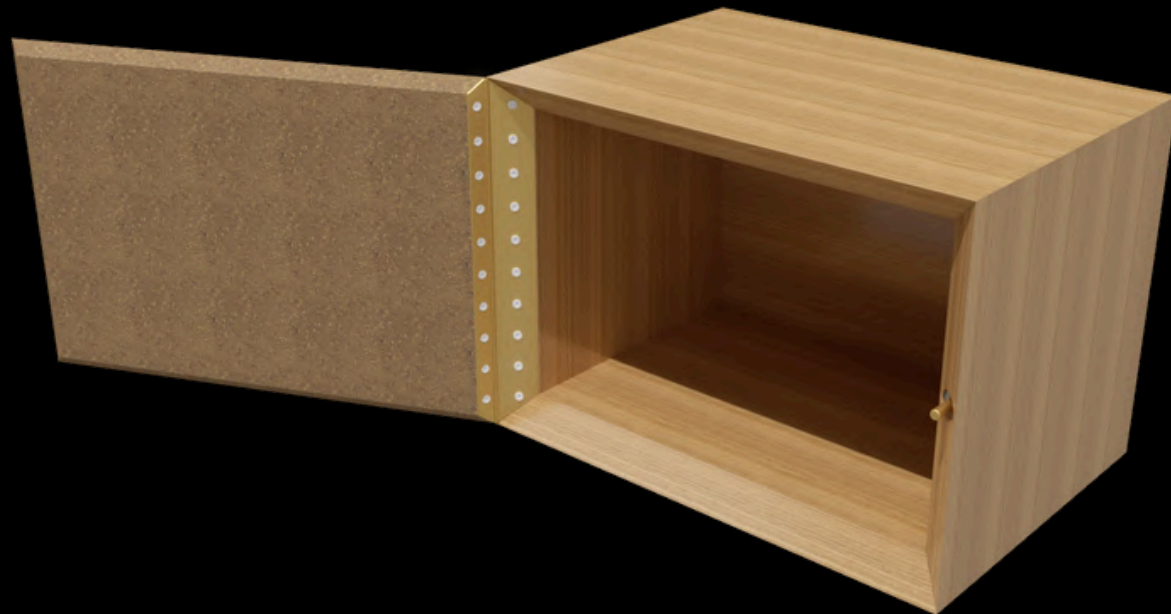
The lamps and nightstand doors made from Sulapac's premium bioplastic allow light to pass through, beautifully highlighting the side stream of wood production fiberius texture and creating an atmospheric glow. The integrated power outlet in the headboard is cleverly hidden inside the attached nightstand.



VIOLA-nightstand details



The **push-to-open** mechanism and **concealed hinges** enable a seamless and discreet connection between the cabinet door and the nightstand.



Customizability and Different Headboard Variations

The Viola headboard adapts to a variety of needs, growing and evolving along with life's different stages.

Headboards can be configured to fit beds of various sizes. For example, you can create a three-piece headboard for a child's or guest room or a stylish and practical two-piece headboard for a 160 cm master bed.

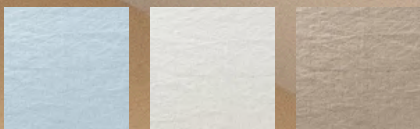
The headboards are made from HVL veneers, with an MDF board as the structural frame.



Viola pillows use hemp fiber, as it's the world's strongest plant fiber. It is a sustainable choice compared to cotton/linen farming, and its durability makes it a long-lasting material. The fabric softens with use, does not pill, and keeps its condition well.



Pillows



Uni

Valkoinen

Hiekka

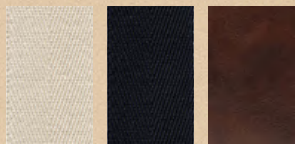


Hiili

Metsä

Okra

Straps



Vaalea

Musta

Konjakki



VIOLA

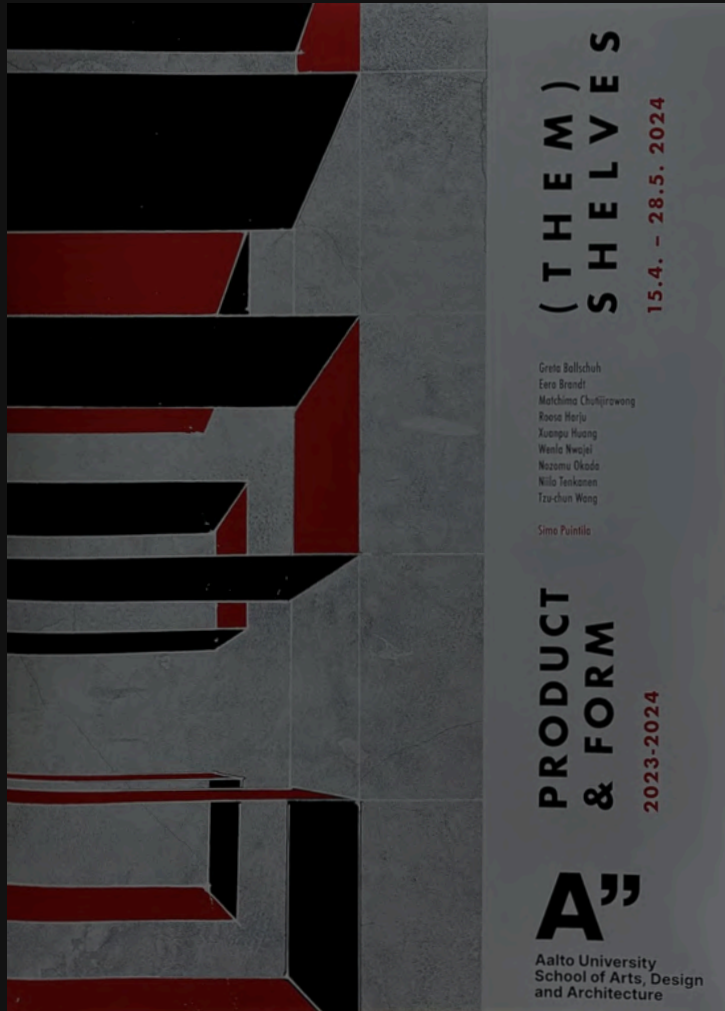
Headboard concept that sits with you



2. Modular Shelving Concept

Project Context

This project was developed as part of the Product and Form I & II coursework at Aalto University. The brief required using one casted material and one solid material to design a modular shelving system. As further restrictions, materials were limited to concrete, aluminum glass, and wood, prompting exploration of innovative approaches. I chose concrete as the cast material, but I aimed to experiment with a bio-based mix to align the project with sustainable design goals.



task ideas concepts forms product production

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bar (snacks et boissons sans
boissons sans alcool, plateau
VOTRE ASTOTEL COMPLIMENTAIRE
bar (snacks and non-alcoholic
bar with soft drinks, courtesy

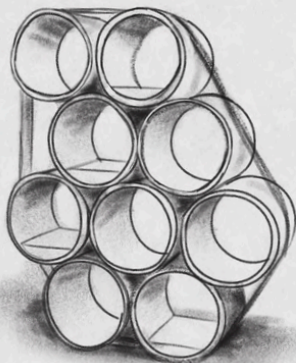
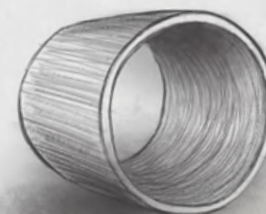
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VOTRE ASTOTEL COMPLIMENTAIRE
Wi-Fi, open bar (snacks and non-alcoholic beverages) every afternoon,
minibar with soft drinks, courtesy tray, PressReader.

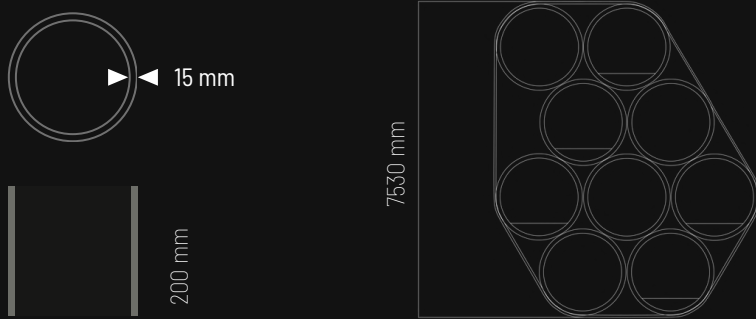
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Veneer lined eco concrete shelving. Fastened to desired stacking configuration with a tourniquet strap. Additional wooden shelf inserts for storing square objects.

A concept idea to the design task of modular shelving system using castable materials.

The "eco concrete" uses spent coffee grounds as a replacement for aggregate. Valorising waste and cutting down on product weight, transport and material cost.



Roll of veneer lines the mould on the inside.

Wall thickness 15 mm
Volume 1740 cm³

Traditional
Concrete needed 4,17 kg
CO₂ emissions 4,17 kg

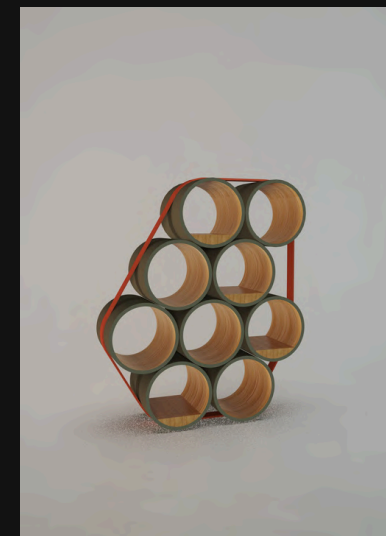
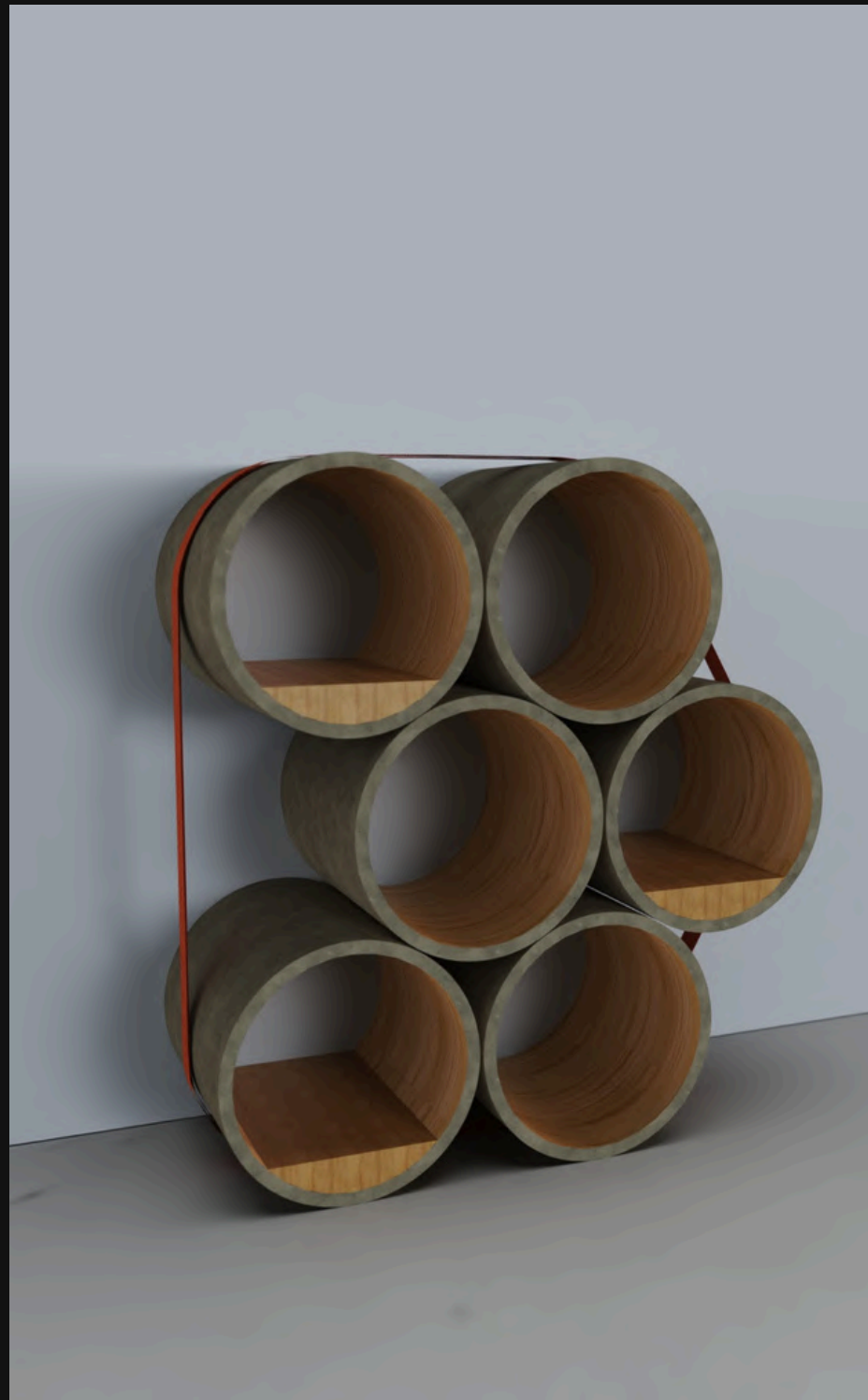
Eco 20%
Concrete needed 2,9 kg
CO₂ emissions 2,9 kg

Cement 470 g
Aggregates:
Sand: 1160 g
Crushed Stone: 1740
Food waste filler fiber:
Coffee grounds 675 g
Water 235 g

My research journey, fueled by readings, visitors, excursions and experiments, led me to a idea to replace traditional concrete aggregate with home and industrial waste fibers.

Some pictures are created with the aid of image generation model.

Future steps involve strength test, refining the concrete mix and further incorporating sustainable manufacturing practices.



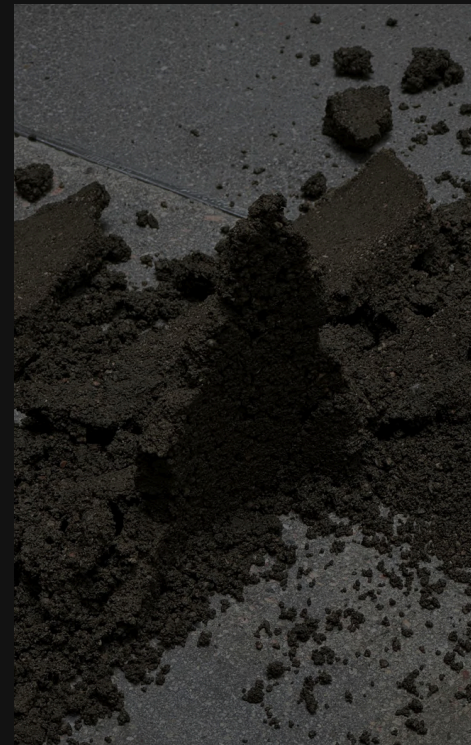
Material Exploration & Innovation

To address the environmental impact of traditional concrete, I developed a sustainable mix by incorporating spent coffee grounds and fibers from used coffee filters as filler materials. This not only reduced the weight and carbon footprint of the concrete. The coffee-based fillers reduced the CO2 emissions of the concrete required per unit from 4.17 kg to 2.9 kg—a significant improvement in sustainability.

The second material used in the shelving system was two-way airplane veneer, which added durability and a refined aesthetic finish. This material combination emphasized lightweight, modularity, and eco-conscious design.

Cement	1,06
Filler	0,67
Coffee grounds	0,3
Water	0,5
Pigment	0,06
0,5-1,2 stone	0,67
Superplasticizer	0,0264
Sum	3,28 kg

Coffee grounds 17,34%

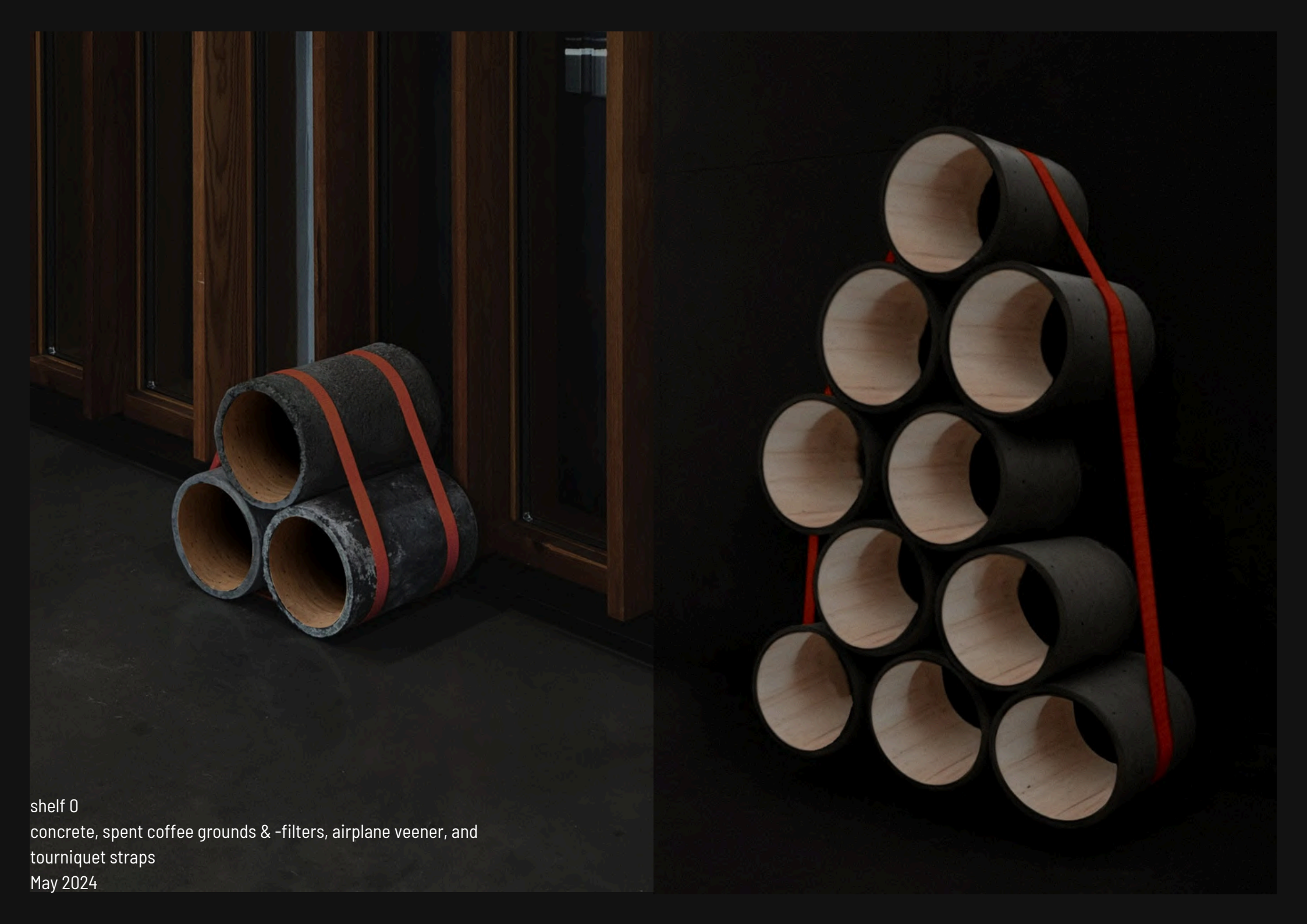


Refining the Design Through Experimentation

Initial experiments with eco-concrete led to adjustments in the mix to achieve optimal hardening and structural performance. Hand- and CNC-crafted molds were refined to ensure a seamless fit, showcasing adaptability and problem-solving throughout the process.

The modular shelving system consists of veneer-lined eco-concrete panels that can be stacked and secured with a tourniquet strap. The veneer provides a smooth, elegant finish that contrasts with the raw texture of the ecoconcrete. An optional wooden shelf insert was added to enhance usability by supporting square objects, further demonstrating the system's versatility.





shelf 0
concrete, spent coffee grounds & -filters, airplane veneer, and
tourniquet straps
May 2024

3. Apartment interior design & remodel

Focused on optimizing spatial flow, integrating functional storage solutions, and maintaining a clean, modern aesthetic, I managed this project from concept to execution, overseeing all aspects of design, building permissions, material selection, and contractor coordination to ensure precision and high-quality results.

Private client



Spatial Planning: Both the kitchen and living room layouts were reconfigured to improve circulation and maximize usable space. The design prioritizes concealed storage and a seamless visual flow between areas.

Kitchen Design: Custom, nearly handleless cabinetry was designed with high-end push-to-open/move and soft-close mechanisms for a seamless look. A marble island serves as the central workspace and gathering point. Ventilation was fully integrated with custom vent covers and hidden ductwork to maintain a minimalist aesthetic.





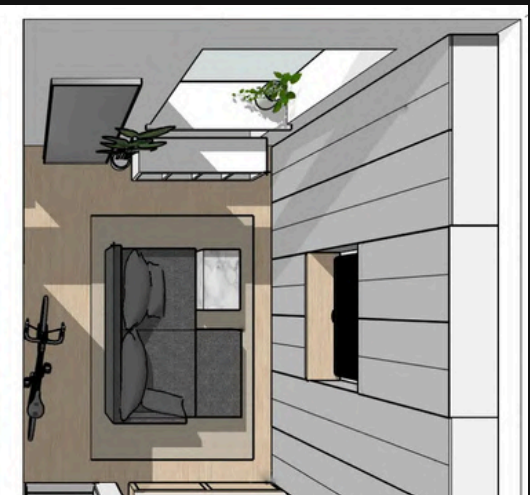
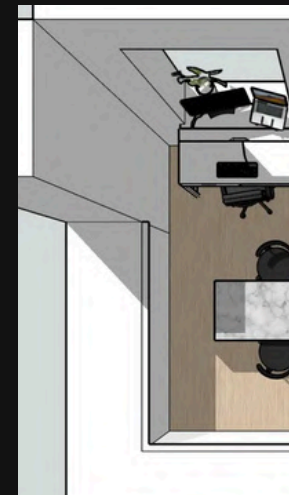
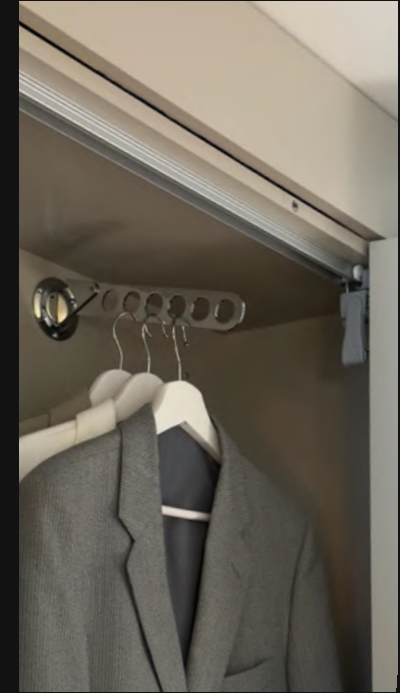
Materiality & Finishes: The original wood floors were sanded and refinished to highlight their natural grain. All walls, ceilings, and trim were resurfaced for a consistent and refined appearance.





Living Room Storage & Layout

A fully redesigned layout features a custom-built, wall-wide shallow wardrobe with floor-to-ceiling folding-sliding doors. A recessed cutout was incorporated for TV, with hidden compartments for media consoles to keep cables and devices out of sight.



Custom details were implemented throughout the apartment for ease of use and for a high-end finish.



