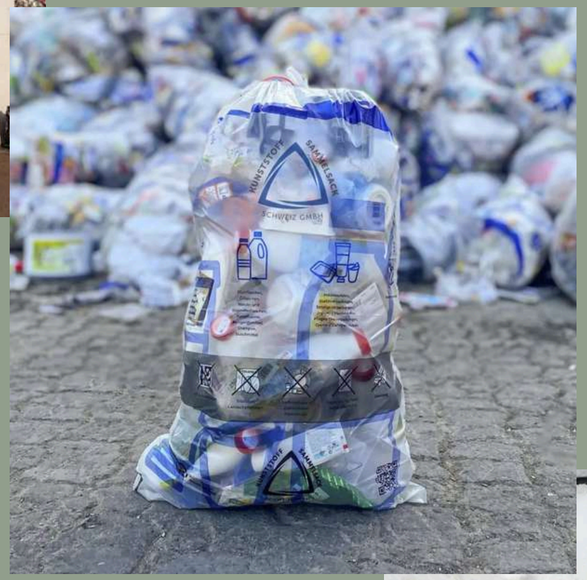
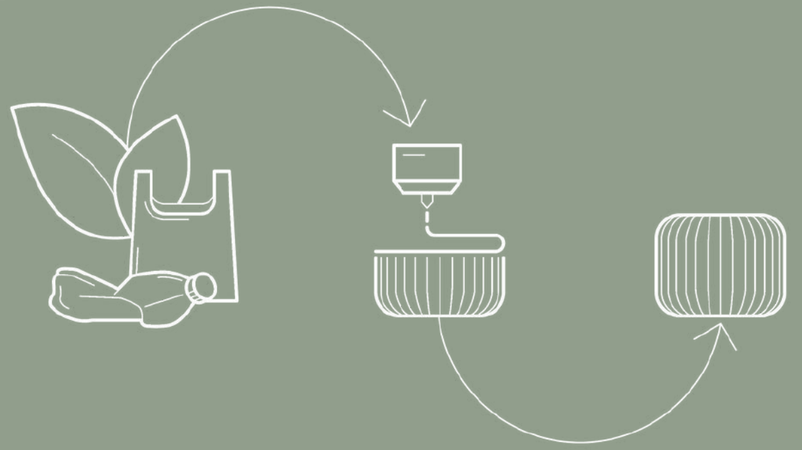
ENGA

Modern Alchemists – Circling Waste Into Value

Gildas Höllmüller - 30.10.2025

350 million tonnes of plastic waste each year





“You see waste? – we see valuable resources”

“Each person generates 125 kg of plastic waste per year – yet under 10% gets recycled”

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Unique Selling Proposition

We offer high-quality, **end-to-end recycling solutions** from the collection of industrial and post-consumer plastic waste to the production of finished products.
Our approach **integrates design and complete industrial processes**, with a strong focus on material innovation and additive manufacturing.

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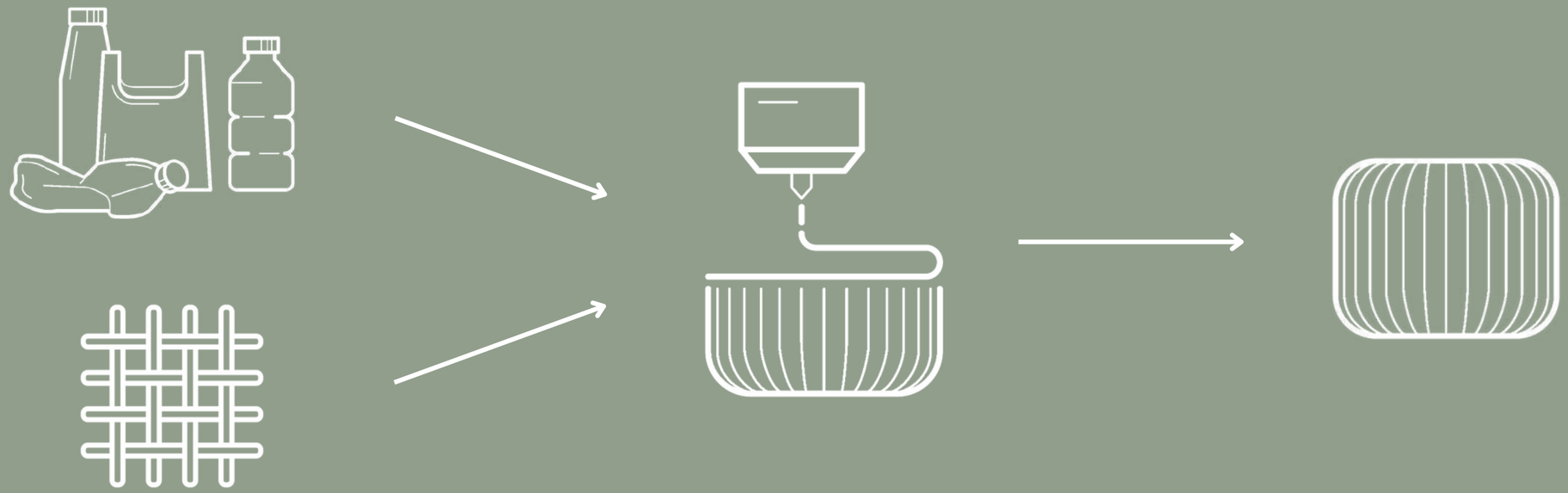
Simplifying and relocalising processes



We deconstruct complex industrial processes into fewer and streamlined steps. This approach significantly reduces energy consumption by eliminating unnecessary transportation and processing stages. Integrating plastic and fibre waste streams directly into a single, efficient process, resulting in materials & products with minimal resource input.

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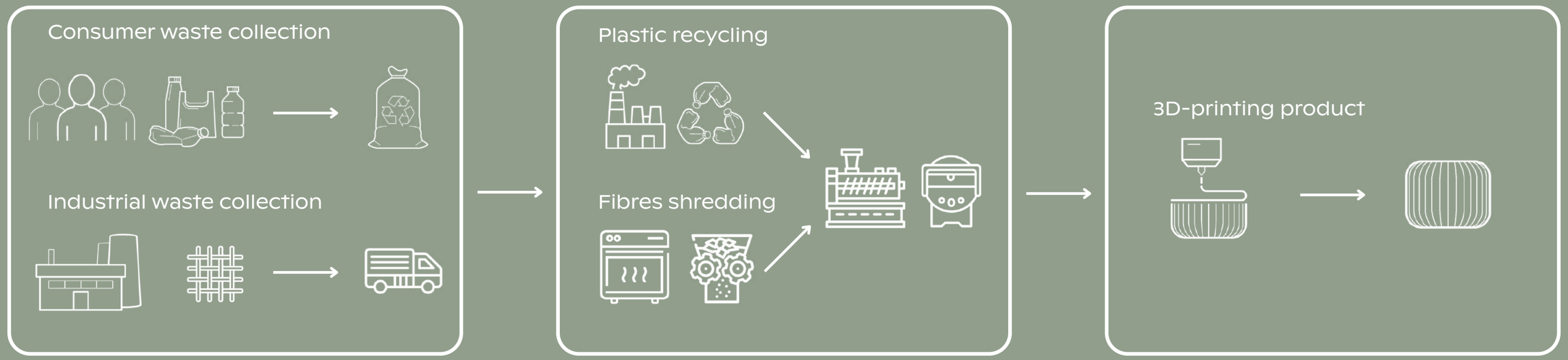
Waste to product recycling platform

Materials & compounding

Products & services

Technology & processes

Process & partners



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Key Partners in Materials and Technology

ENGA × KSS × Vogt – Plastic Waste Collection & Recycling

ENGA × BFH – Material Development and Testing

ENGA × WASP – Ambassador and R&D Partner

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Solutions and Processes for All Polymer Waste Streams

We provide recycling solutions for all types of polymer waste streams which are the most difficult to recycle , focusing on adapting processes and design to the material. Our approach ensures optimal quality and emphasizes the recovery of currently unrecycled streams.

Virgin polymers

Made from virgin rescources

First grade recycled polymers

Often from industrial waste streams

- Does not need to be sorted
- Shredded and directly processed as flakes or regranulated without any virgin additives

Second grade recycled polymers

Often from post-consumer waste

- Need to be sorted and washed
- Re-granulated
- Up to 2% additives

Third grade recycled polymers

Often from post-consumer waste

- Can not be sorted 100%
- Mixed plastic fractions
- Re-granulated
- Up to 2% additives

Fourth grade recycled polymers

Often from post-consumer waste

- Can not be sorted 100%
- Mixed plastic fractions with up to 5% non-polymer based materials
- Re-granulated
- Up to 2% additives

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Materials Compounds from Waste Streams

We incorporate various organic and mineral waste additives into our recycled polymer matrix to enhance mechanical performance. This enables us to match or surpass the properties of virgin materials—while remaining adaptable to specific application needs and avoiding the use of heavy chemical additives.

Organic Fibres & Fillers

Corn Cob

Cocoa Beans Sheels

Sunflower seeds

Rapeseed

Wood

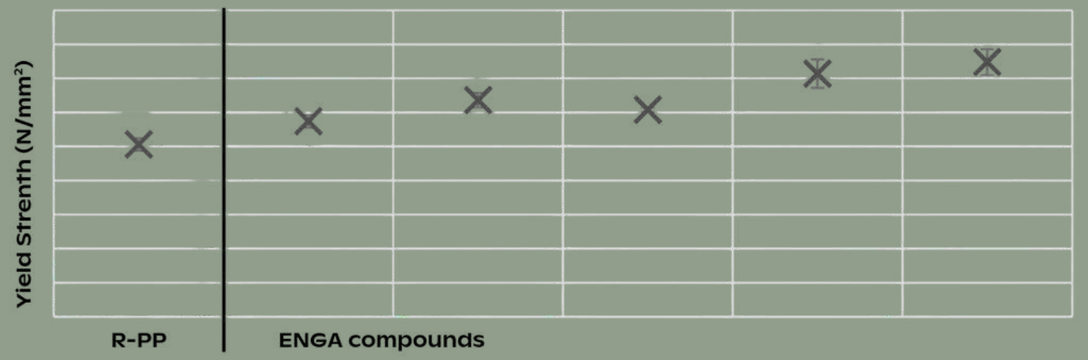
Jute Bags

Hemp

Mineral Fibres & Fillers

Carbon

Glas



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10-Year Vision - Materials

Oil-based Materials

Recycled & fully contained within our own value chain

Recycled polymers - sourced from partners

Bio-based Materials & Fibre Compounds

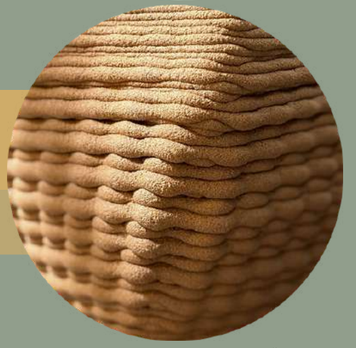
Blended with natural fibres - within our own value chain

Blended with natural fibres - sourced from partners

LDM - Natural Materials

Loam, Stoneware, and Geopolymers

Clays & Porcelain - sourced from partners



2022 2023 2024 2025 2026 2027 2028 2029 2030 2031

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Material Development: Properties, Optics and Haptics

Building on a case study with Master's students from the Bern University of Applied Sciences, a subsequent Master's thesis, and a potential Innosuisse project, ENGA's material development is designed for continuous improvement and advancement — securing a long-term competitive advantage in the market.

Crafting high-quality materials from 100% waste

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Offerings

- Standard Products
- Customization of Standard Products
- Tailor-made Solutions
- Your Waste – your Product

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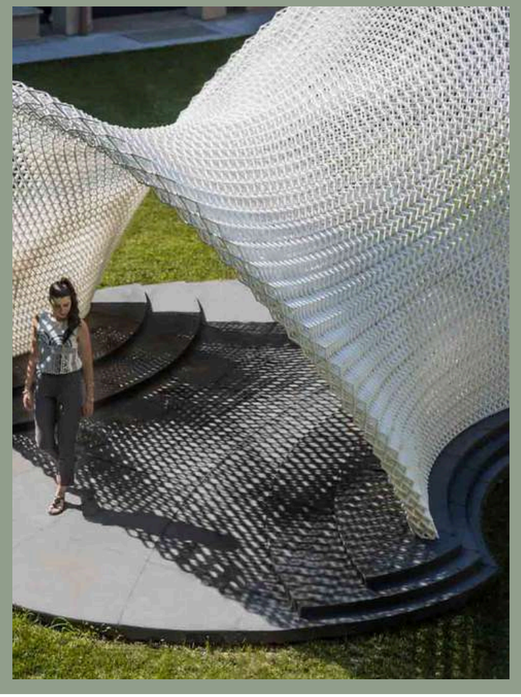
10-Year Vision - Products & Markets

“We innovate in materials and additive manufacturing for living“

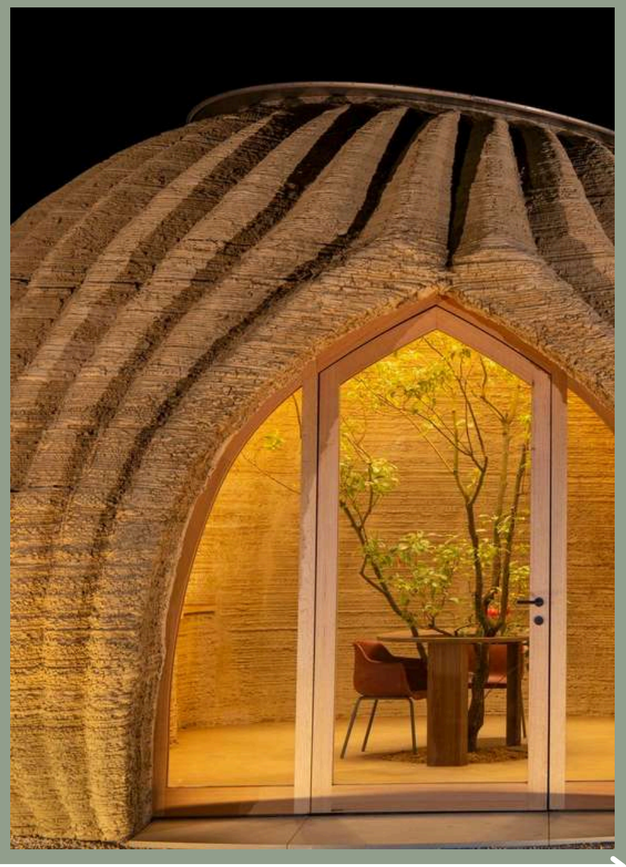
Objects

Furniture

Installation



Buildings



2022 2023 2024 2025 2026 2027 2028 2029 2030 2031

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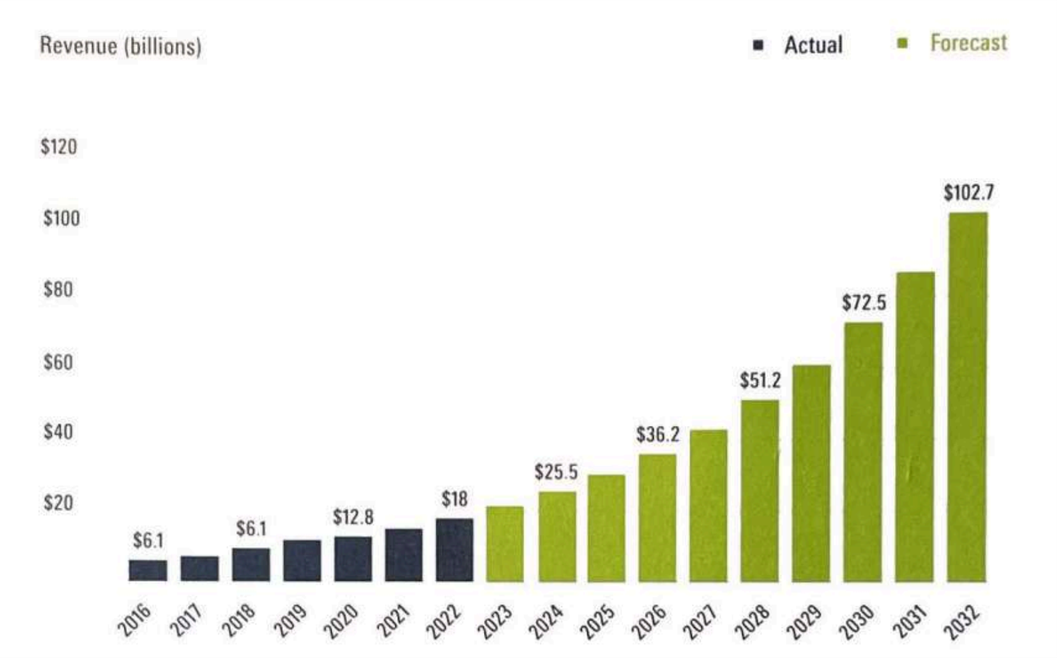
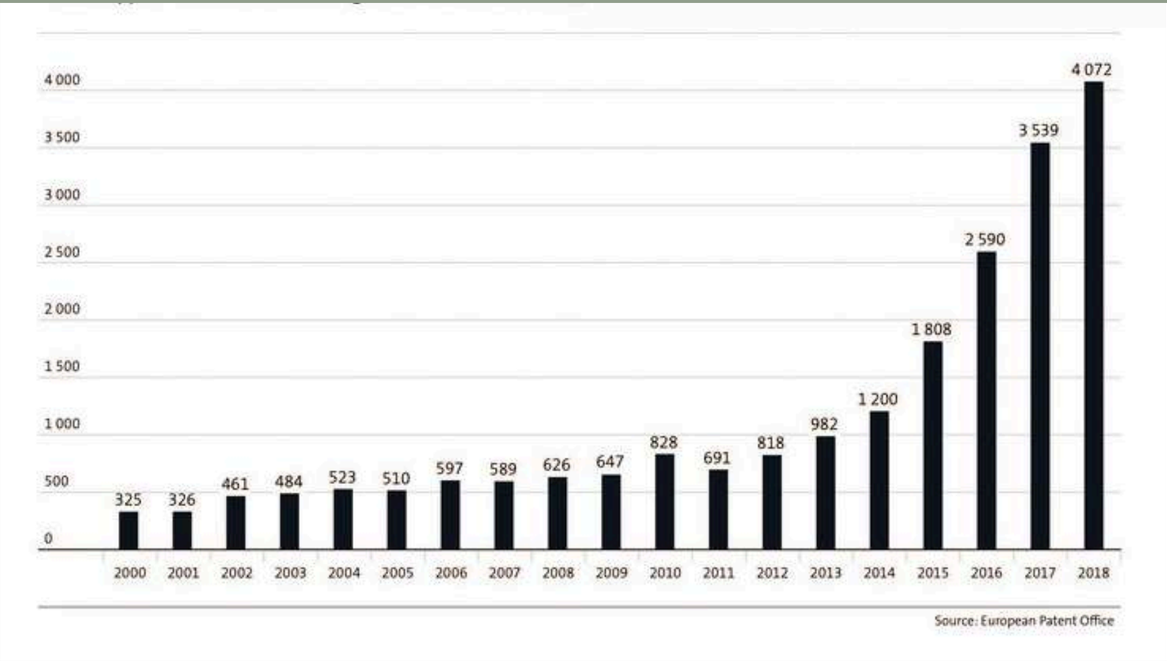
Economical and technological growth of additive manufacturing





Wohlers Report 2023 predicts that the global additive manufactiuring market will grow from U.S. $18 billion to U.S. $ 102.7 billion over the next 10 years.

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Design Collaborations – Crafting Designs Around Material and Process

ENGA

marc gerber design

LAURE GREMION
PRODUCT DESIGN

FINK

Studio Lucie de Martin

Gildas Höllmüller

Marc Gerber

Laure Gremion

Elias Kopp

Lucie de Martin

We collaborate closely with our partners to design with our materials and processes, creating well-crafted, innovative, and aesthetically pleasing pieces that prioritise functionality, longevity, and minimal ecological impact.

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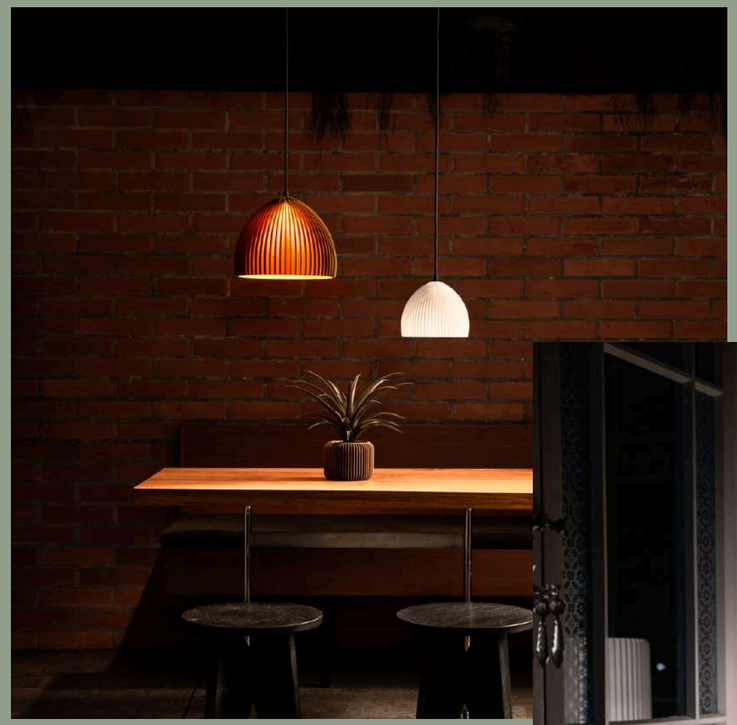
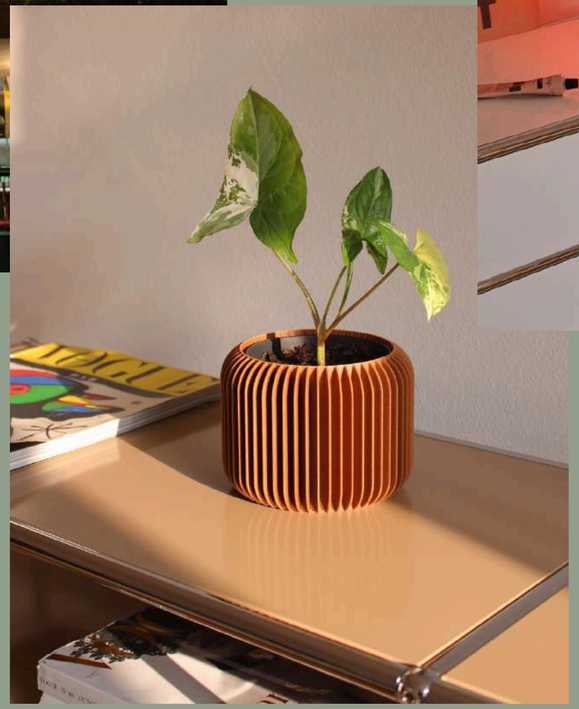
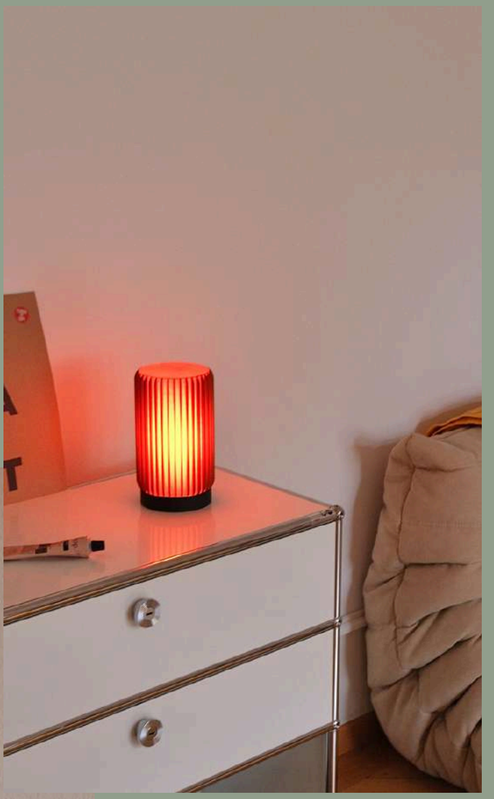
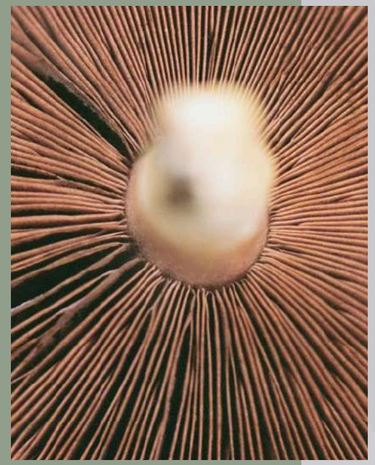
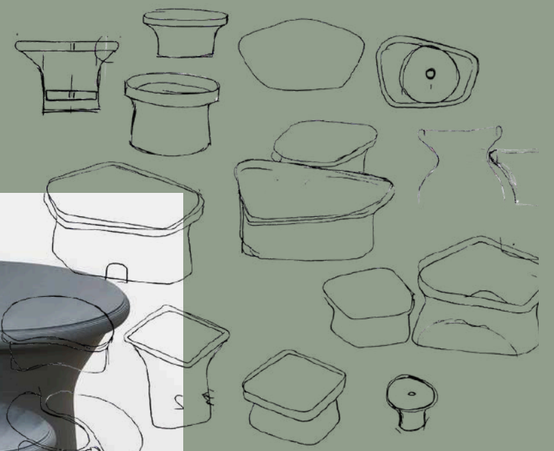


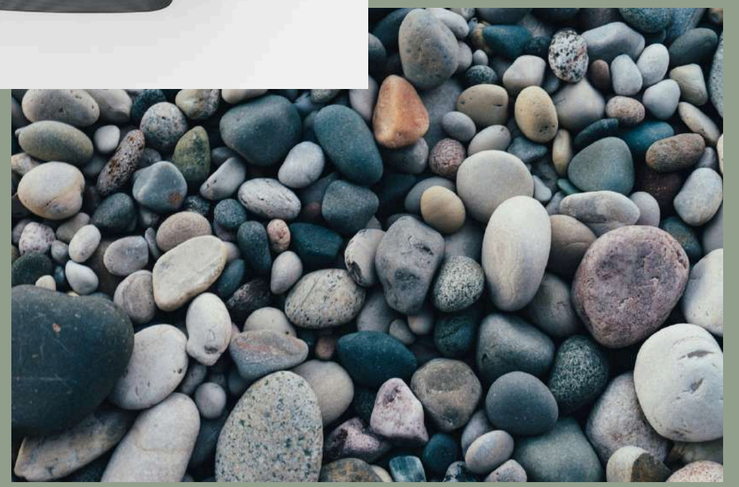




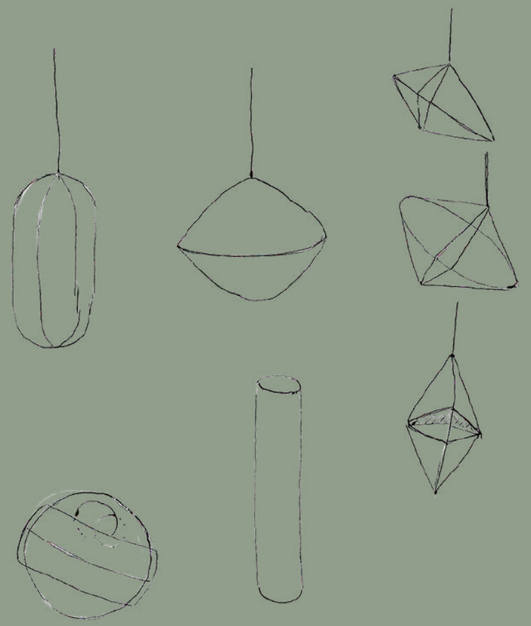
marc gerber design

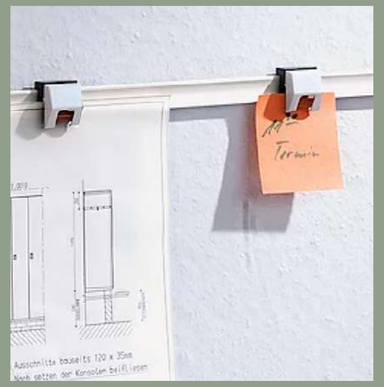


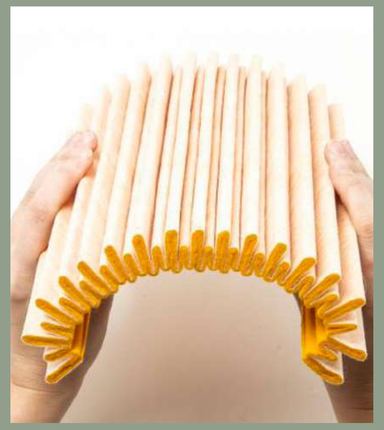


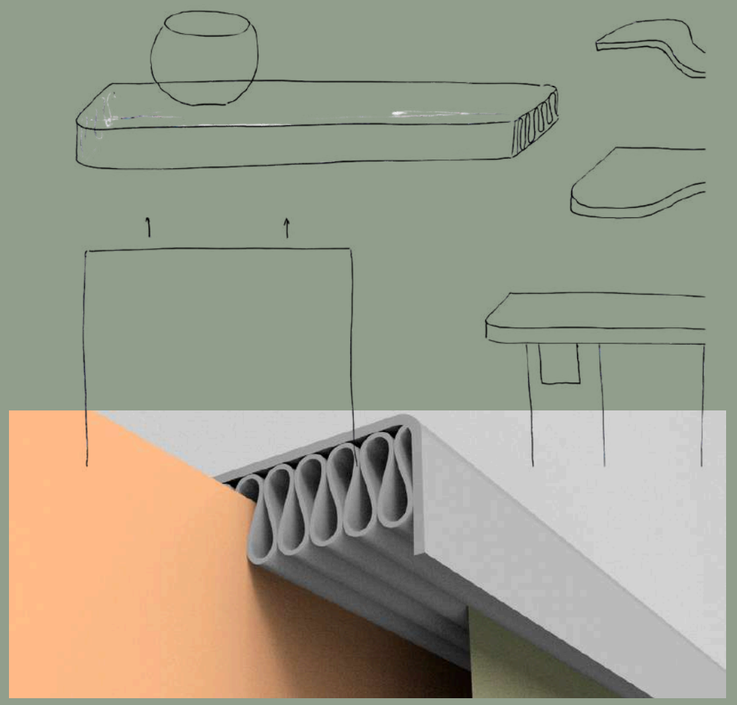


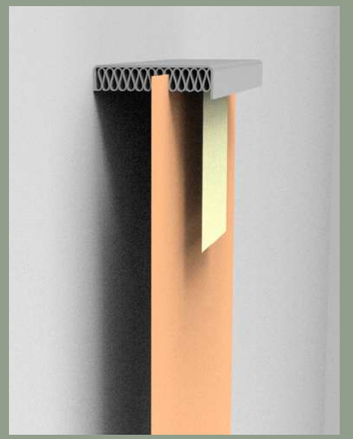
LAURE GREMION
PRODUCT DESIGN

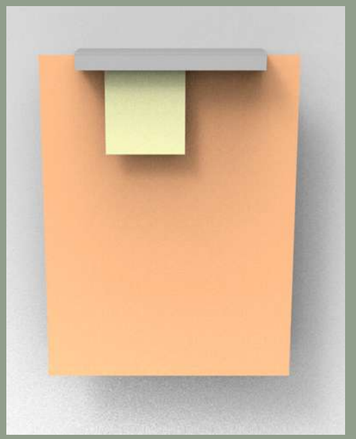




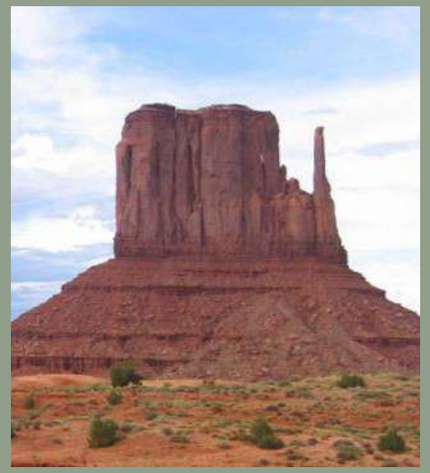


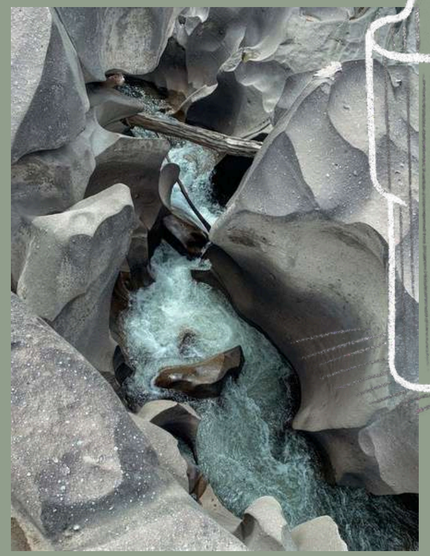


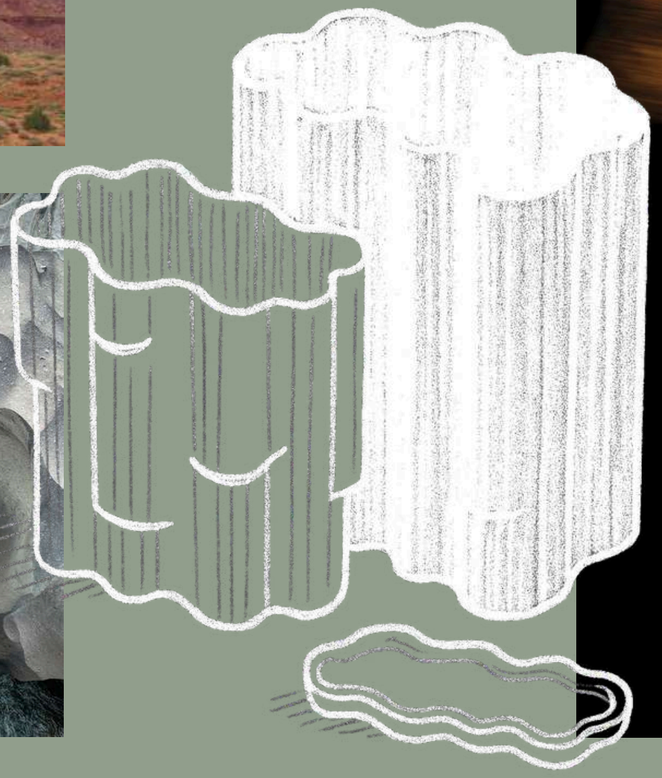


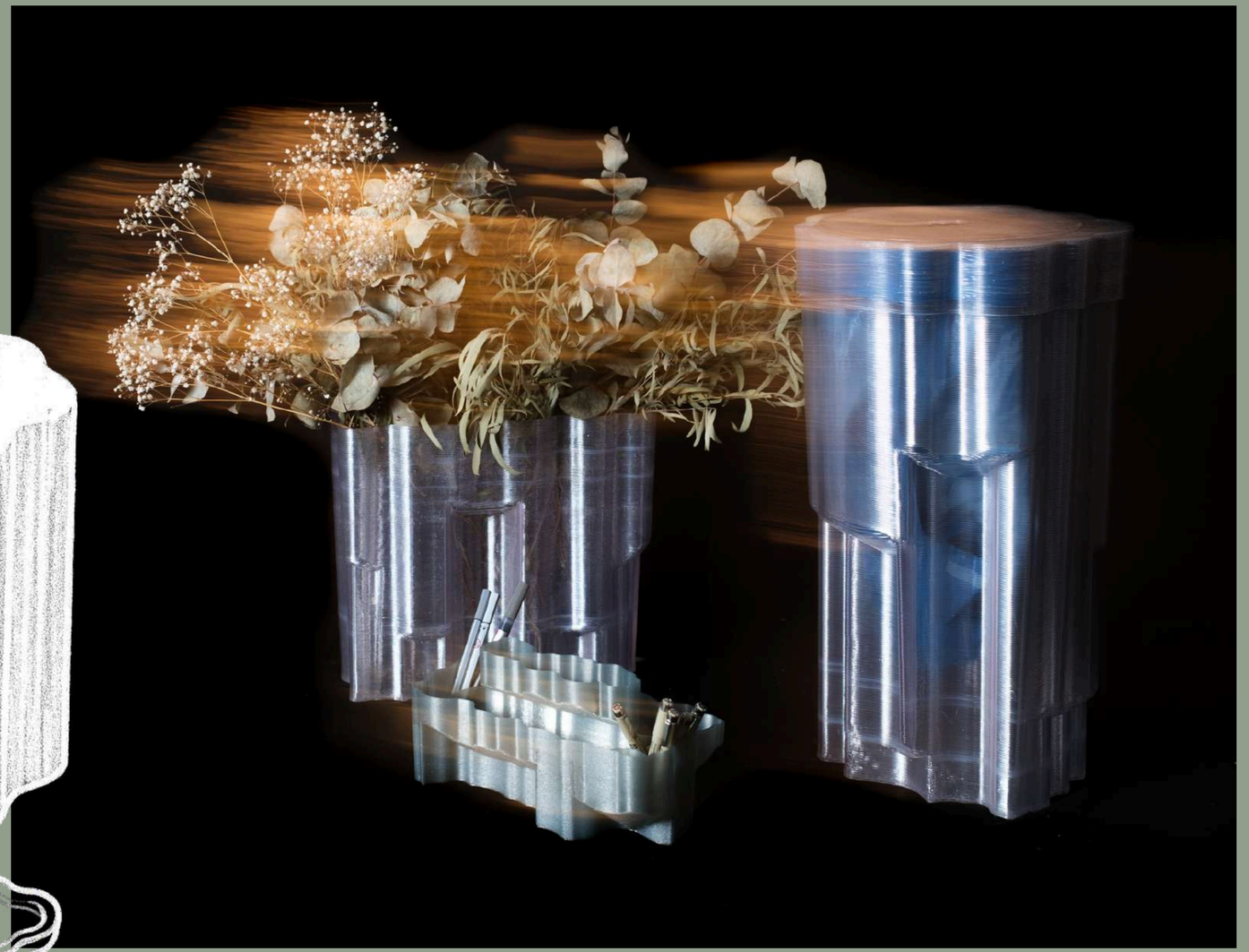


Studio
Lucie de Martin









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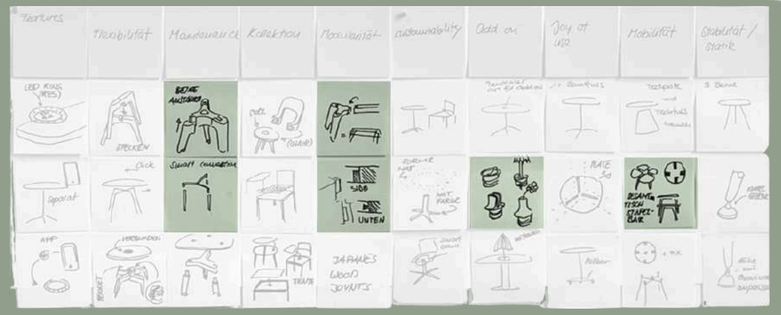
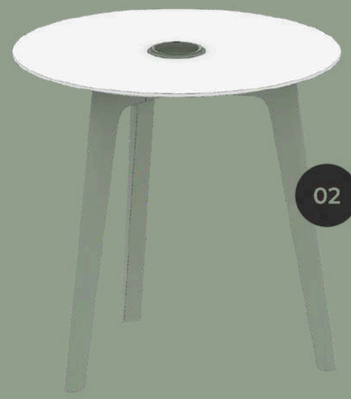
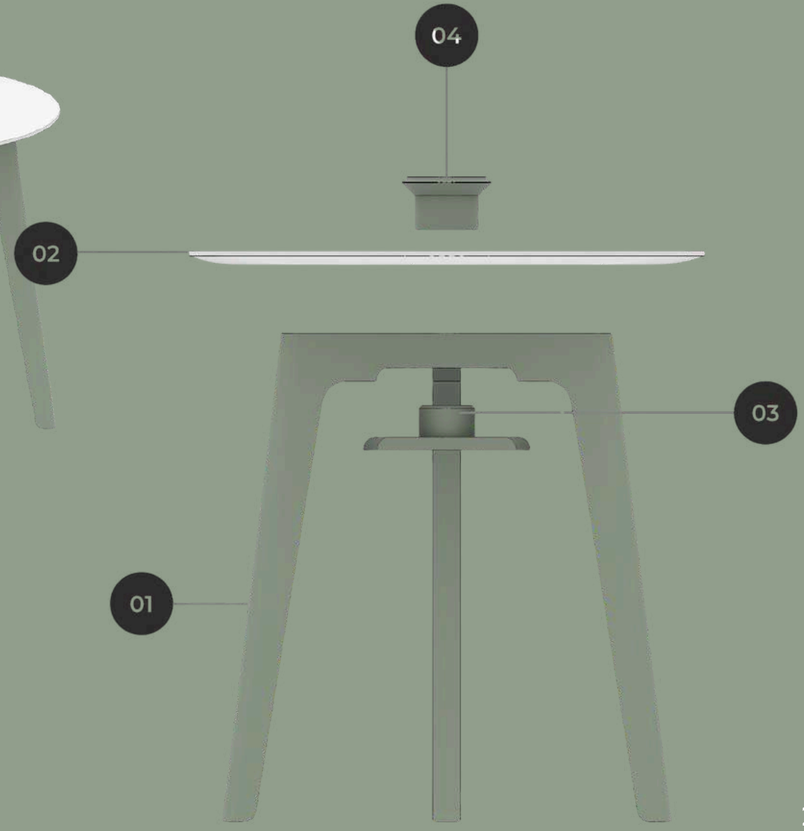

Features
Flexibilität
Maschinerie
Reaktion
Modularität
Stapelbarkeit
Add on
Joy of use
Mobilität
Stabilität / Statik
BEQUEM
JAPANES WOOD JOINTS

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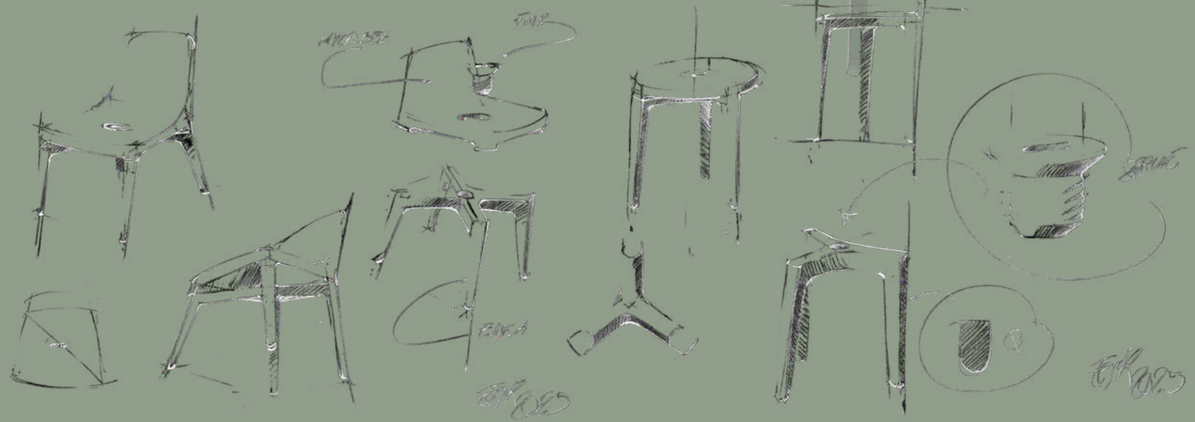

The people behind ENGA

Gildas
The Captain

Ivo
Recycling Master

Keo
The mechanist

Etienne
Strategy & finances

Clément
The Environmental Analyst

Cédric
The Cycle Opener

Lisa
Value Driver

Luca
Sales

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Modern Alchemists – Circling Waste Into Value

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