

**MAGICAL[®]
MUSHROOM**
COMPANY

PLANET POSITIVE PACKAGING

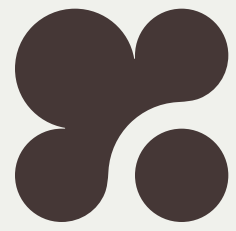




BIOMATERIALS PLATFORM



Using technology pioneered by Ecovative Design LLC

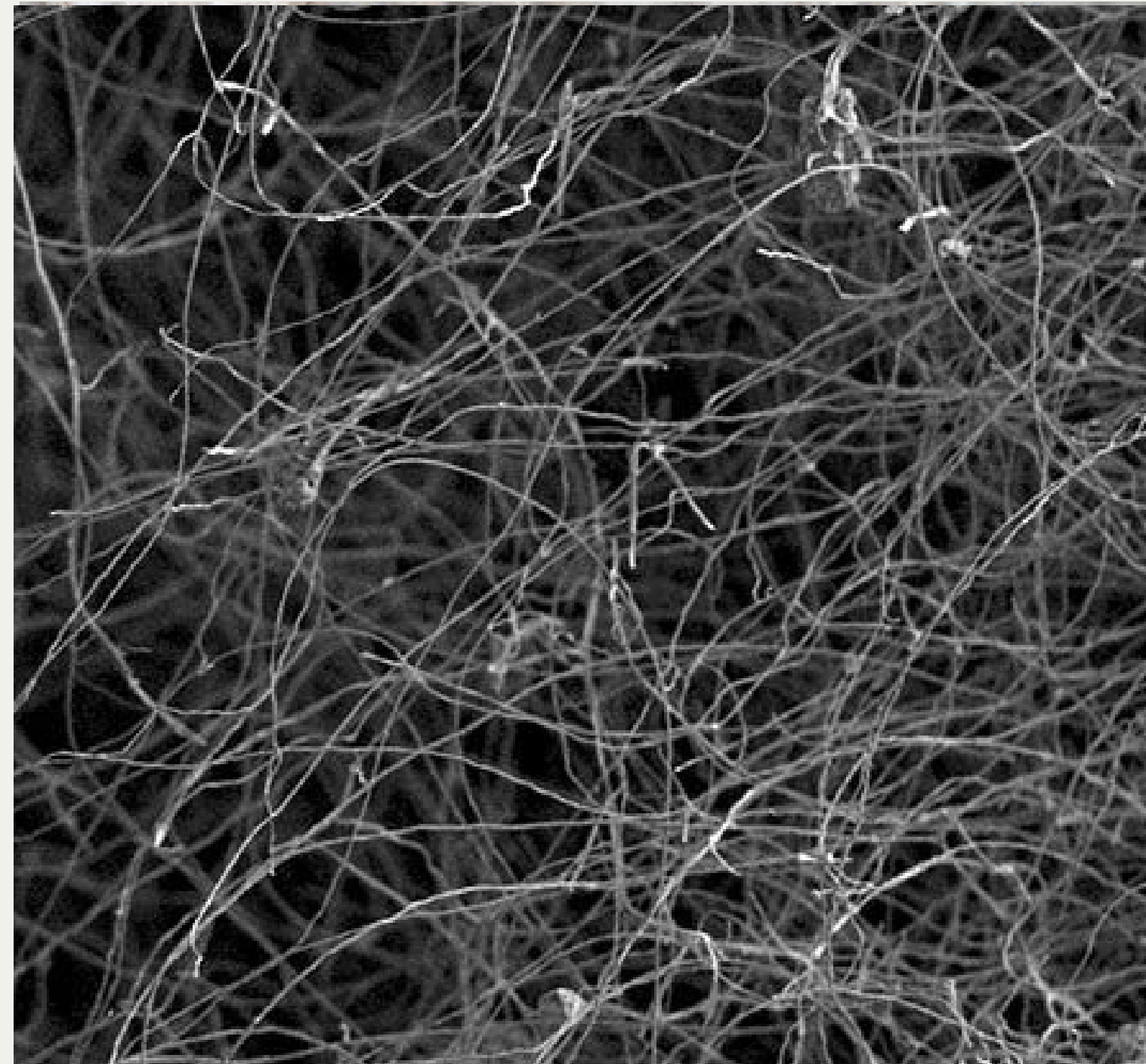


BIOMATERIALS PLATFORM



BIOMASS

+



MYCELIUM

=

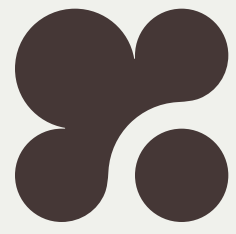


PACKAGING

Working with regional farmers to source agricultural by-products which are carefully prepared

Mycelium is added and binds the agricultural waste together into a high-performance material

After six days of growth and drying, your mycelium-based products are ready to use



MUSHROOMS

Mushrooms are nature's recycling system, growing on plant-based materials, self-replicating without any outside energy inputs

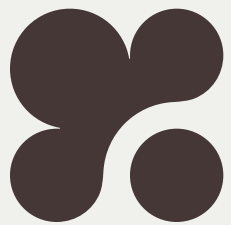
MYCELIUM

Mycelium is the vegetative tissue (roots) of a mushroom. Mycelium grows exponentially when provided with the correct nutrition and environment

CHITIN

Myceliem is made up of chitin, a natural glue produced by mushrooms, which naturally water resistant and flame resistant



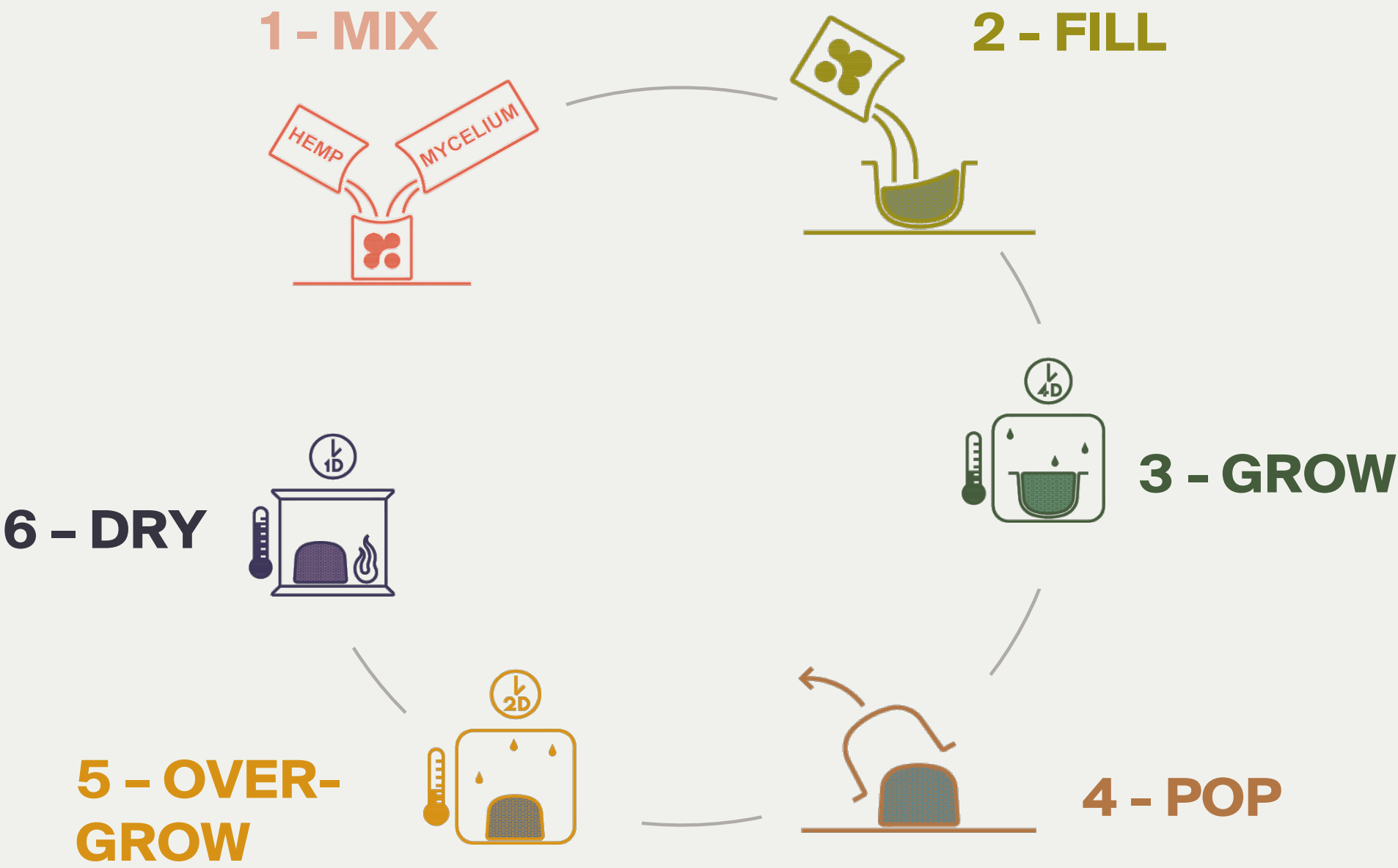


BIOMATERIALS PLATFORM



1	Over 500 different agricultural byproducts tested in the US
2	UK Agricultural waste trial and fibre component removing
3	The woody core of the hemp plant constitutes around 98% of our current product
4	Hemp sequestration rate is around 15 tonnes of CO2 per hectare
5	MMC in-house substrate inoculating facility from 2022

PRODUCTION CYCLE





MATERIAL FEATURES



FEATURES

BIODIGESTIBLE



Compatible with anaerobic waste

BIODEGRADABLE



Environmentally friendly and reduces waste

HYDROPHOBIC



Shrugs off water

DURABLE



Over 25 years shelf life



FEATURES

VEGAN & CRUELTY-FREE



No animal products or testing are ever involved

PERFORMANCE TESTED



Protects against impact, temperature and humidity

FLAME RESISTANT



Low ignition source

AGILE



Fast and effective service



HIGH PERFORMANCE PACKAGING

OUR PACKAGING HAS PASSED EXTENSIVE MATERIAL TESTING THAT SIMULATES THE RIGOURS OF PRODUCT TRANSPORTATION

Tests conducted

- Transit Testing
- Humidity Cycling
(Up to 70% Humidity)
- Drop Tested
- Temperature Tested
(70 C° 5 hours for 5 occasions down to - 25 C°)
- Vibration Tested
- Edge Crush
(All 8 edges of boxes dropped)



* Strengths measure (pound per sq. inch)
equals to Expanded polystyrene





MUSHROOM ® PACKAGING



MUSHROOM PACKAGING IS A DIRECT REPLACEMENT FOR CARDBOARD AND SINGLE-USE PLASTICS SUCH AS:

- Polystyrene (EPS)
- Polyethylene (PE) Foam
- Extruded Polystyrene (XPS) Foam
- Packaging inserts (Die-cut)



New plastic tax applies to plastic packaging produced in, or imported into the UK: the £200 per tonne tax rate for packaging with less than 30% recycled plastic

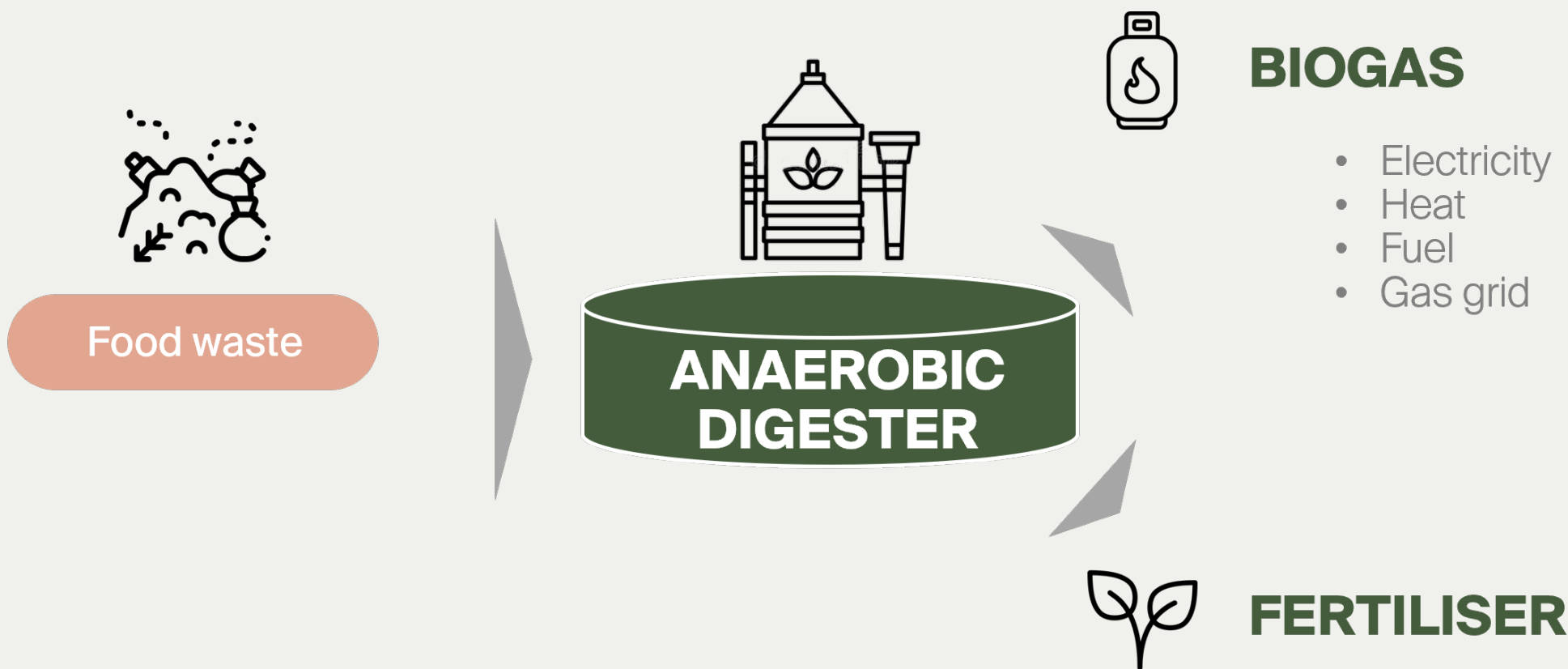




MUSHROOM® PACKAGING IS BIODEGRADABLE WITHIN 40 DAYS

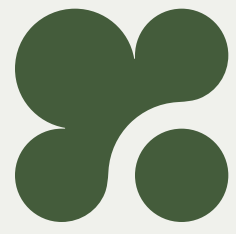
Disposal methods:

- Food waste collection
- 100% naturally biodegradable
- Reuse feedstock at home (wildflowers pots)
- Novel recycling: closed-loop trial with OEM
- Reusable and biodigestable



Biodegradation - Featured in BBC

[Video Link](#)



INDUSTRIES CATEGORIES

MANUFACTURING
GENERAL (E-COMMERCE)
COSMETICS
HORTICULTURE
CONSTRUCTION
INTERIORS
FMCG
VISUAL MERCHANDISING





MMC CLIENTS



beko



**Tom
Dixon.**

SEEDLIP®
DISTILLED NON-ALCOHOLIC SPIRIT
Owned by **DIAGEO**

**THACKRAY
BROWN**

Hæckels®

SELFRIDGES&CO

Raymarine®

LUSH

WILDSMITH
SKIN
England, MMXVIII.

 **BREWDOG**

belrebel

Ffern



**FORTNUM
& MASON**
EST 1707

ID GENEVE

eden 



Mercedes-Benz

ARK
SKINCARE

**EVOLVE
ORGANIC BEAUTY**





MANUFACTURING



Sustainable Swiss Timepiece

ID WATCH



Electric Motor Protection

SAIETTA



Evolution AHRS

RAYMARINE



MANUFACTURING



Kitchen door protection
(Industrial volumes)

DOORS MANUFACTURING



Radiator protection
(Industrial volumes)

RADIATOR MANUFACTURING



Packaged Ice-cream delivery's
(Temperature maintained - 48 hours)

ICE-CREAM COMPANY



MANUFACTURING



DockSense

RAYMARINE



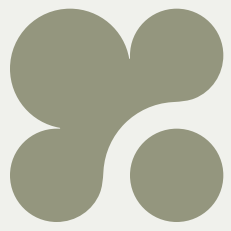
Sink Corner Protection

SINKS



Coffee Machine

BEKO



GENERAL (E-COMMERCE)



General Corner Packaging

CORNER UNIT



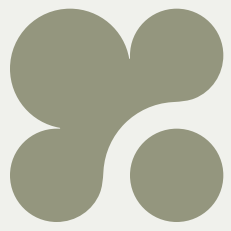
Browns Department Stores

GIFT BOX



Candle Holders (3 sizes)

TAYLOR & CO INTERIORS



GENERAL (E-COMMERCE)



Available on MMC E-commerce site

CUP HOLDERS



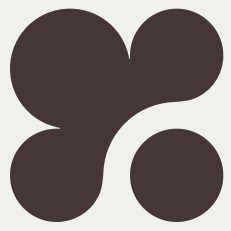
Available on MMC E-commerce site

HEART GIFT BOX



Available on MMC E-commerce site

WINE BOTTLE HOLDER



COSMETICS



Christmas Hamper 2021

THACKRAY BROWN



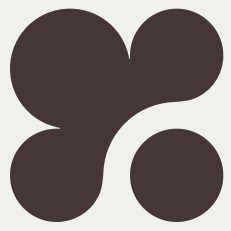
Christmas Gift Pack 2021

HAECKELS



Christmas Gift Pack 2021

ARK SKINCARE



Seasonal Perfume Subscription

FFERN



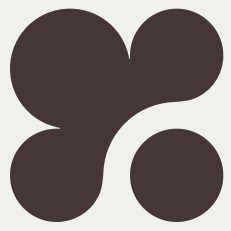
Christmas Gift Pack 2021

EVOLVE BEAUTY



Christmas Gift Pack 2021

NATURAL SPA



COSMETICS



Gift Pack 2021

MILKMAN



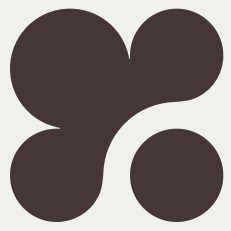
Christmas Gift Pack 2021

EVOLVE



Available on MMC E-commerce site

ECO GIFT BOX



COSMETICS



Full range of Wildsmith Products

WILDSMITH SKIN



Full range of Wildsmith Products

WILDSMITH SKIN



Vegan and Multitasking Cosmetics

ÖRN KUU



HORTICULTURE



Various Large Planters

LARGE PLANTER



Award-Winning Beehive - Will Jordan

BEEHIVE



Edenn Life Urns

MYCELUM URN



Seed Starters and Small Plant Pots

SMALL PLANTER



Available via MMC E-commerce site

MEDIUM PLANTER



Square Planters for Paul Stamets Book Launch

SQUARE PLANTER



New Launch for 2021

INSULATION PANELS



Tom Dixon Acoustic Boards

ACOUSTIC BOARD



Mae-Ling Lokko Acoustic Boards

MULTIPLE WALL TILES



INTERIORS



Mycelium millinery by Jessica Evans

JESSICA EVANS



On Sale Soon

TOM DIXON CHAIR



New Range in 2021

LAMP SHADES



Overworks Gift Pack 2021

BREWDOG



Christmas Gift Pack 2020

SEEDLIP (OWNED BY DIAGEO)



Summer Gift Pack 2021

DRINKS DROP



Christmas Gift Pack 2020

LUSH COSMETICS



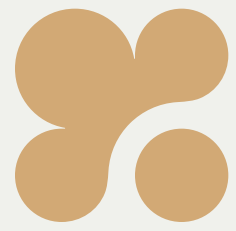
Summer Gift Pack 2021

THE VURGER CO



On Shelf Pack 2021

AMLY BOTANICALS



VISUAL MERCHANDISING



Sustainability Shop Front 2021 - Volcano

SELFRIDGES



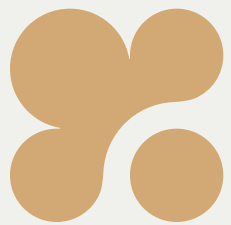
Sustainability Shop Front 2021 "SUN"

SELFRIDGES



January Store Display 2021

SEEDLIP SELFRIDGES



VISUAL MERCHANDISING



International Display Blocks 2021

BODY SHOP BLOCK 1



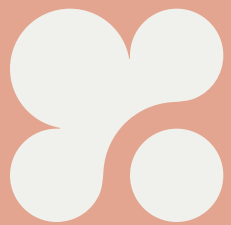
International Display Blocks 2021

BODY SHOP BLOCK 2

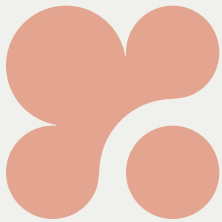


Selfridges Visual Merch Display 2021

MUSHROOM DECORATION



MANUFACTURING PROCESS AND PLANTS



GROWING PROCESS



● Growing process



MUSHROOM 1 ESHER - SURREY

UK'S ONLY MYCELIUM-BASED PACKAGING PLANT

Operational

80 TROLLEY SLOTS
weekly cycle

3,990 TROLLEY SLOTS
annual cycle (50 weeks)

399,000 TRAY CAPACITY
(100 per trolley)

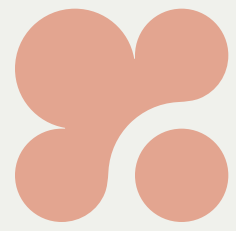
1,596,000 PARTS



Production process video

[Link](#)





MUSHROOM 2 ATTENBOROUGH - EAST MIDLANDS

FULLY OPERATIONAL & NEW
SEMI AUTOMATED FILLING BY
DECEMBER 2021

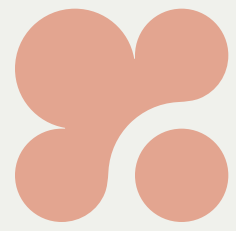
137 TROLLEY SLOTS
weekly cycle

6,840 TROLLEY SLOTS
annual cycle (50 weeks)

684,000 TRAY CAPACITY
(100 per trolley)

2,736,000 PARTS
Capacity (average 4 per tray)





MUSHROOM 3 SOFIA - BULGARIA

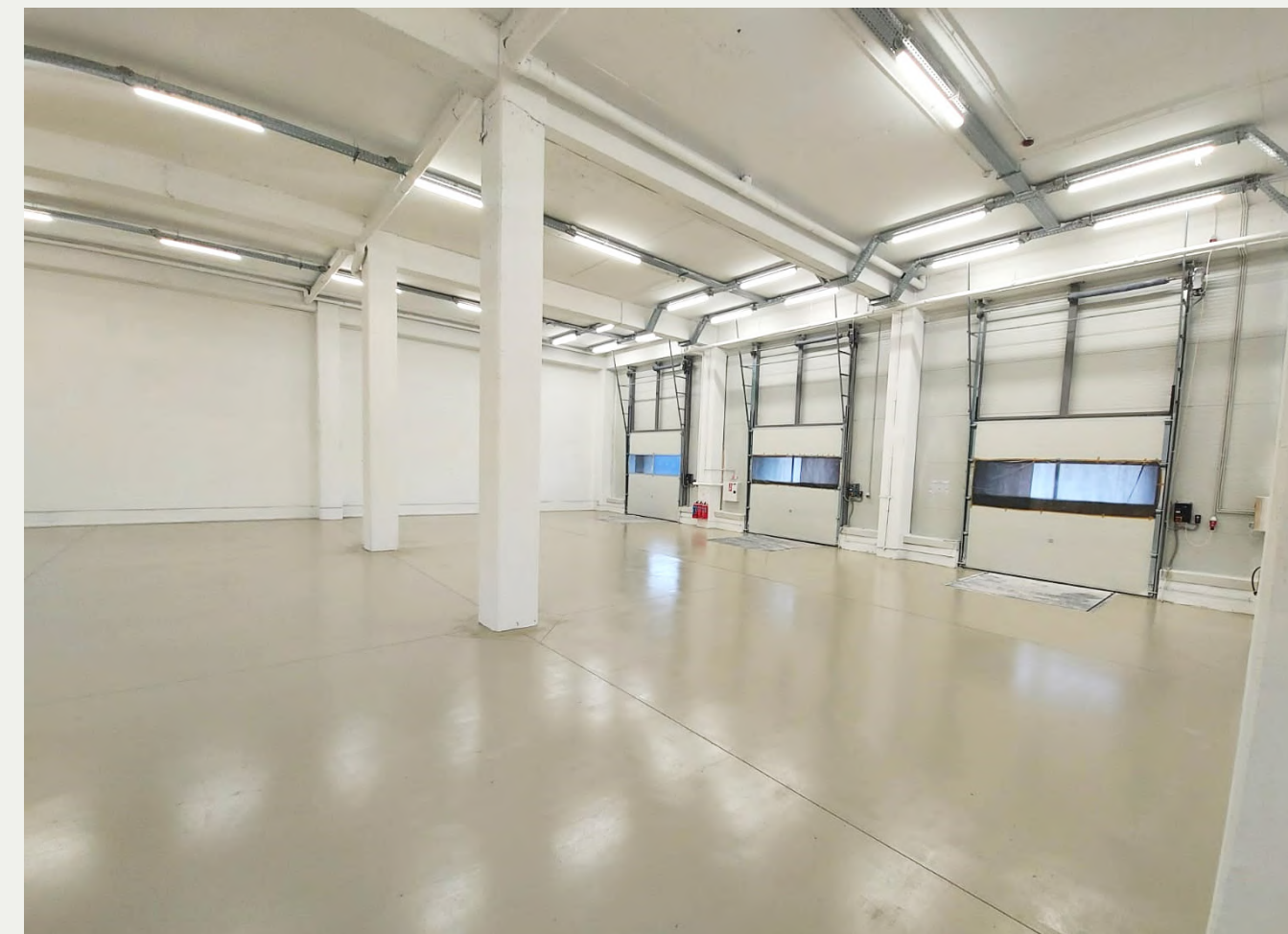
**FULLY OPERATIONAL & NEW
SEMI AUTOMATED FILLING BY
END OF MARCH 2022**

342 TROLLEY SLOTS
weekly cycle

17,100 TROLLEY SLOTS
annual cycle (50 weeks)

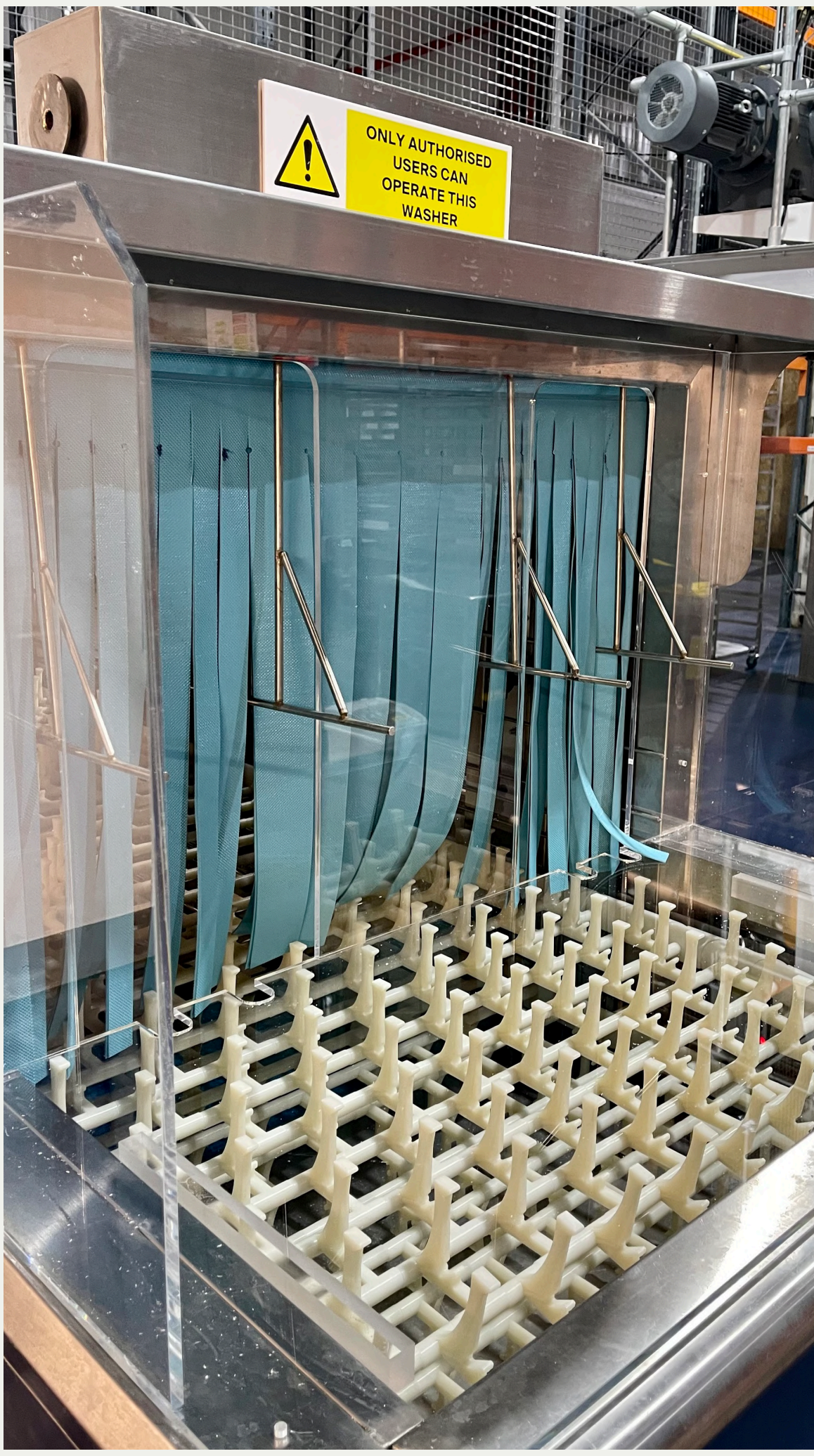
1,710,000 TRAY CAPACITY
(100 per trolley)

6,840,000 PARTS
Capacity (average 4 per tray)





AUTOMATION





DESIGN PROCESS

MUSHROOM ® PACKAGING



A FRAMEWORK FOR INNOVATION

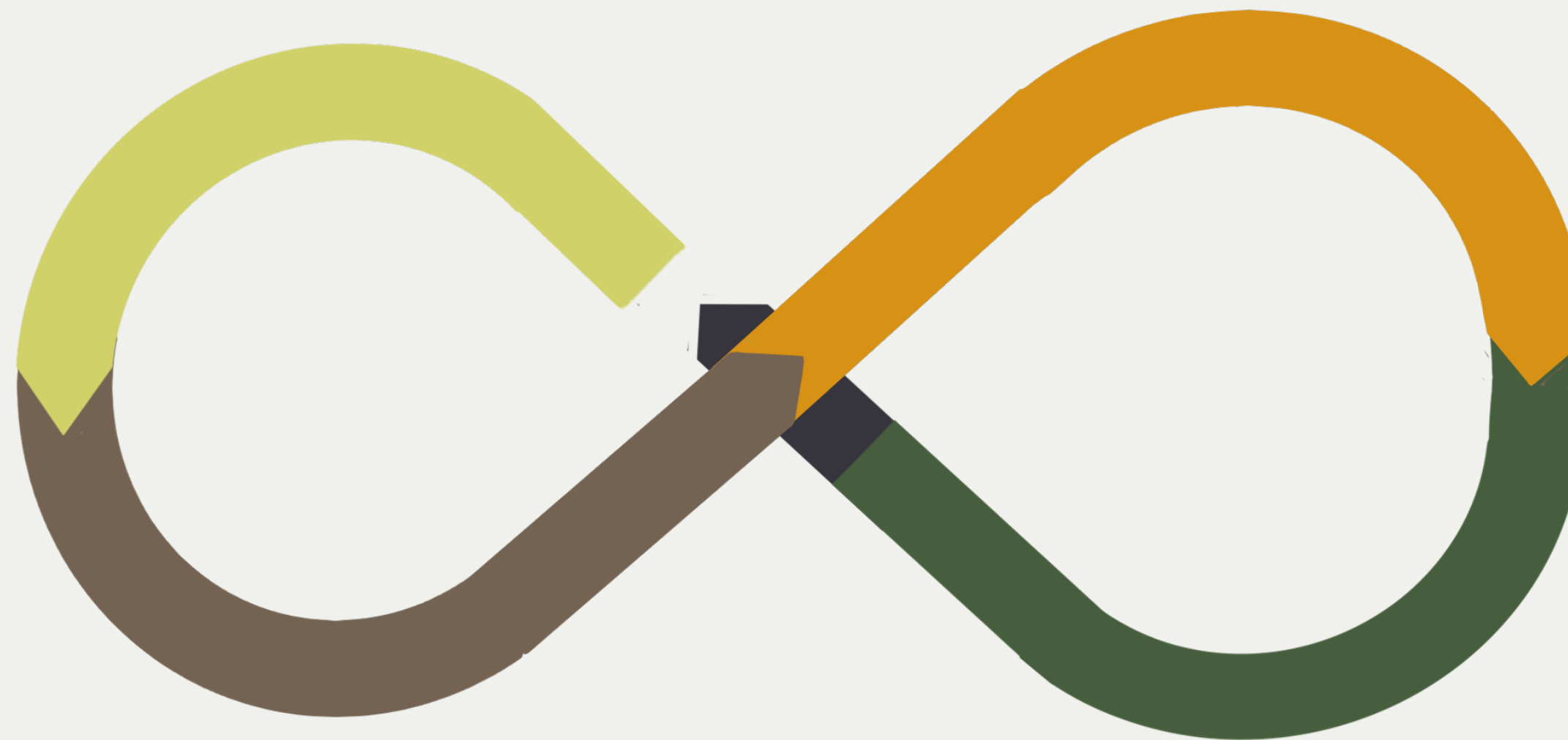
EMPHATHISE
What is the problem?

IDEATE
What is the problem?

DEFINE
Why is it important?

TEST
Does it work?

PROTOTYPE
How do we create it?



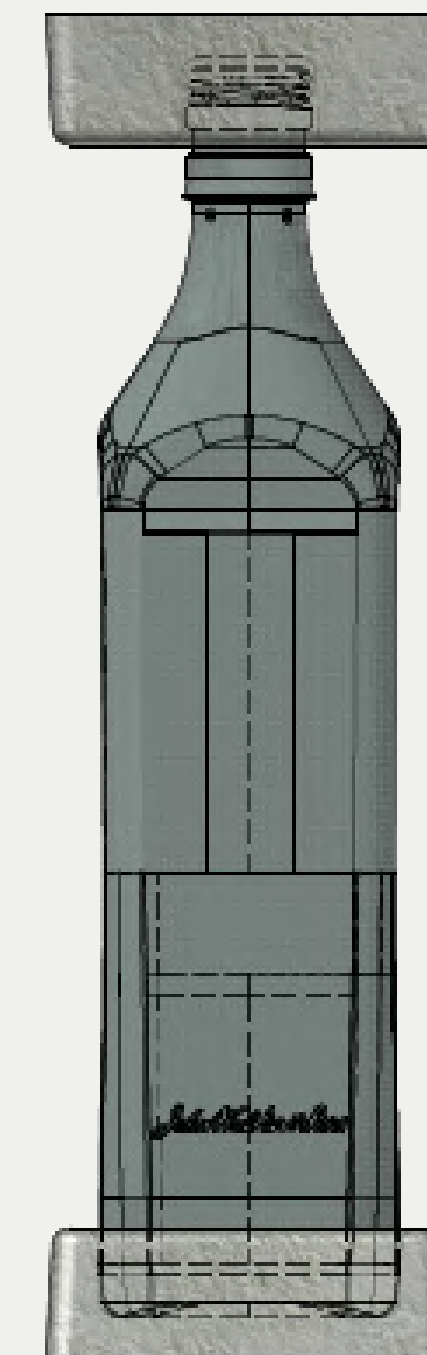


DESIGN AND PROTOTYPING

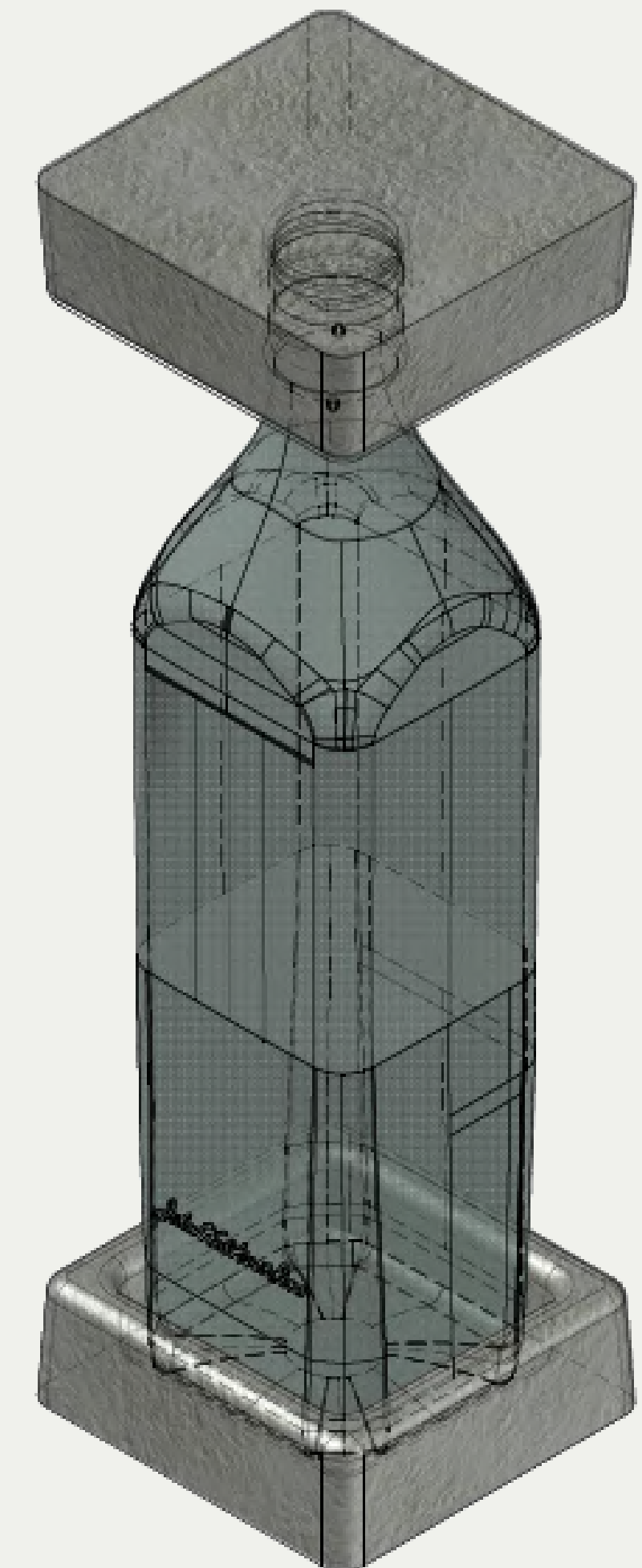
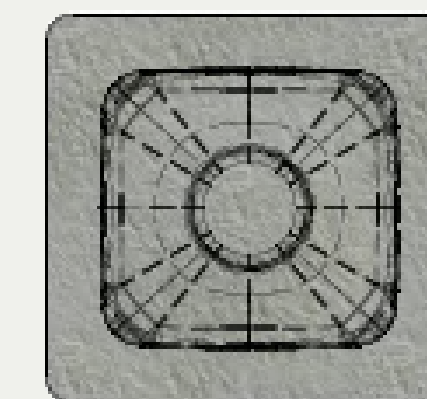
TOTAL AVERAGE TURNAROUND TIME OF 2 WEEKS

Process includes:

- Initial design consultation
- 3D CAD design and iterations
- 2 sets of packaging growth
- Transit and crush tests
- Soft tooling

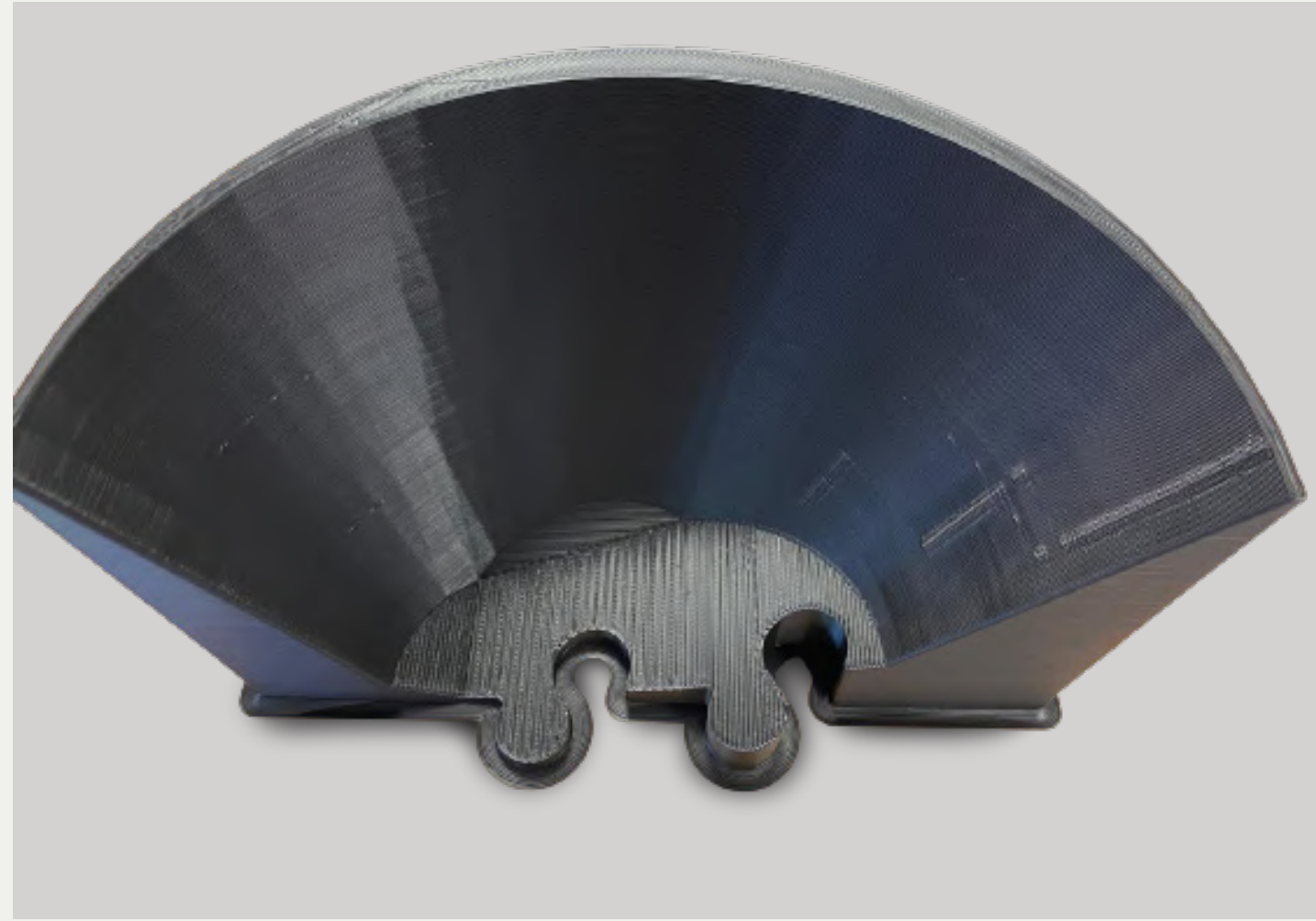
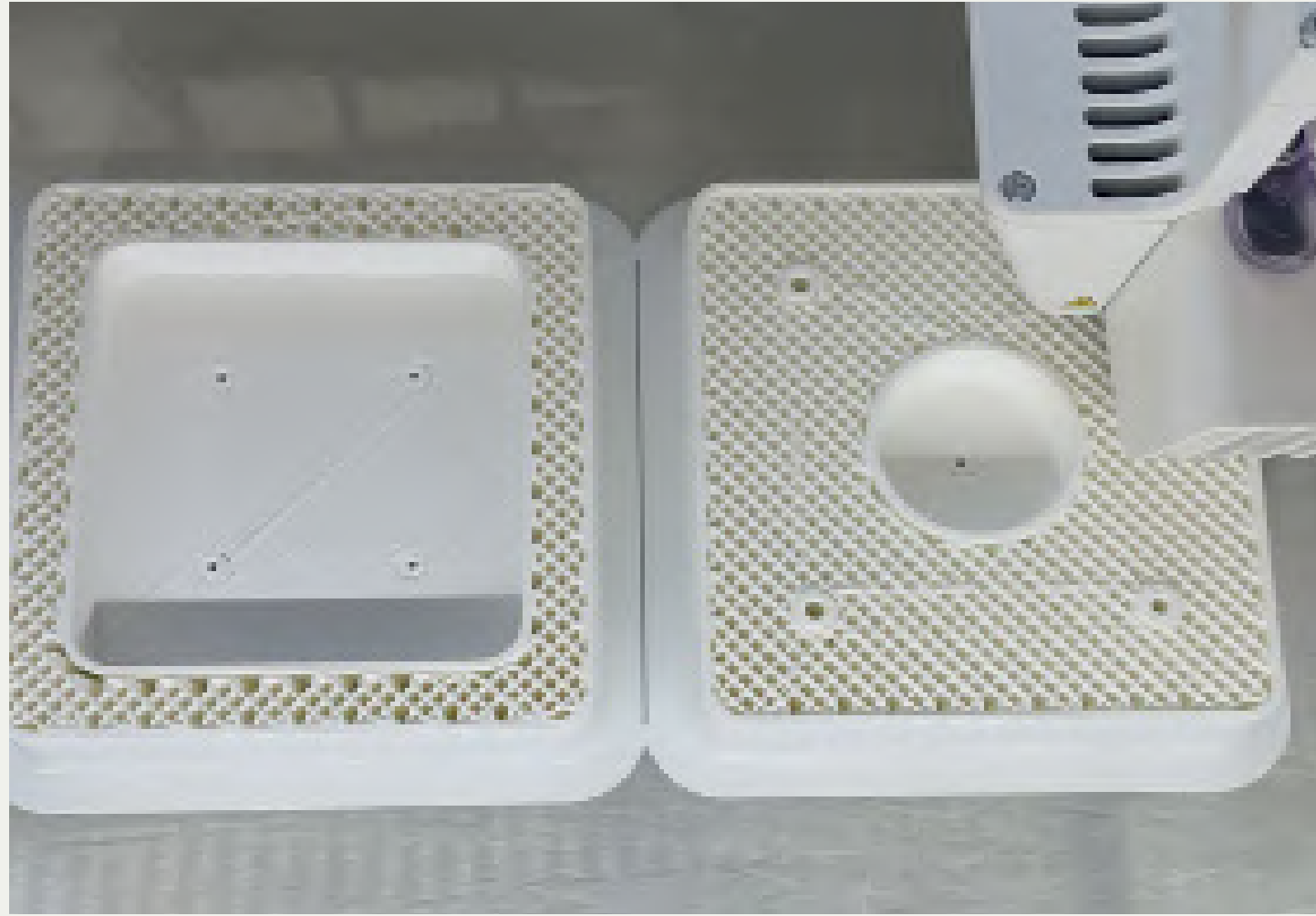


FRONT VIEW





3D PRINTING





TOTAL AVERAGE TURNAROUND
TIME OF 4 WEEKS

Process includes:

- Trays quantity estimation (based on order volume and growth frequency)
- Vacuum forms production
- 4 days’ forms growth
- Forms “popping”
- 2 days of forms “free standing”



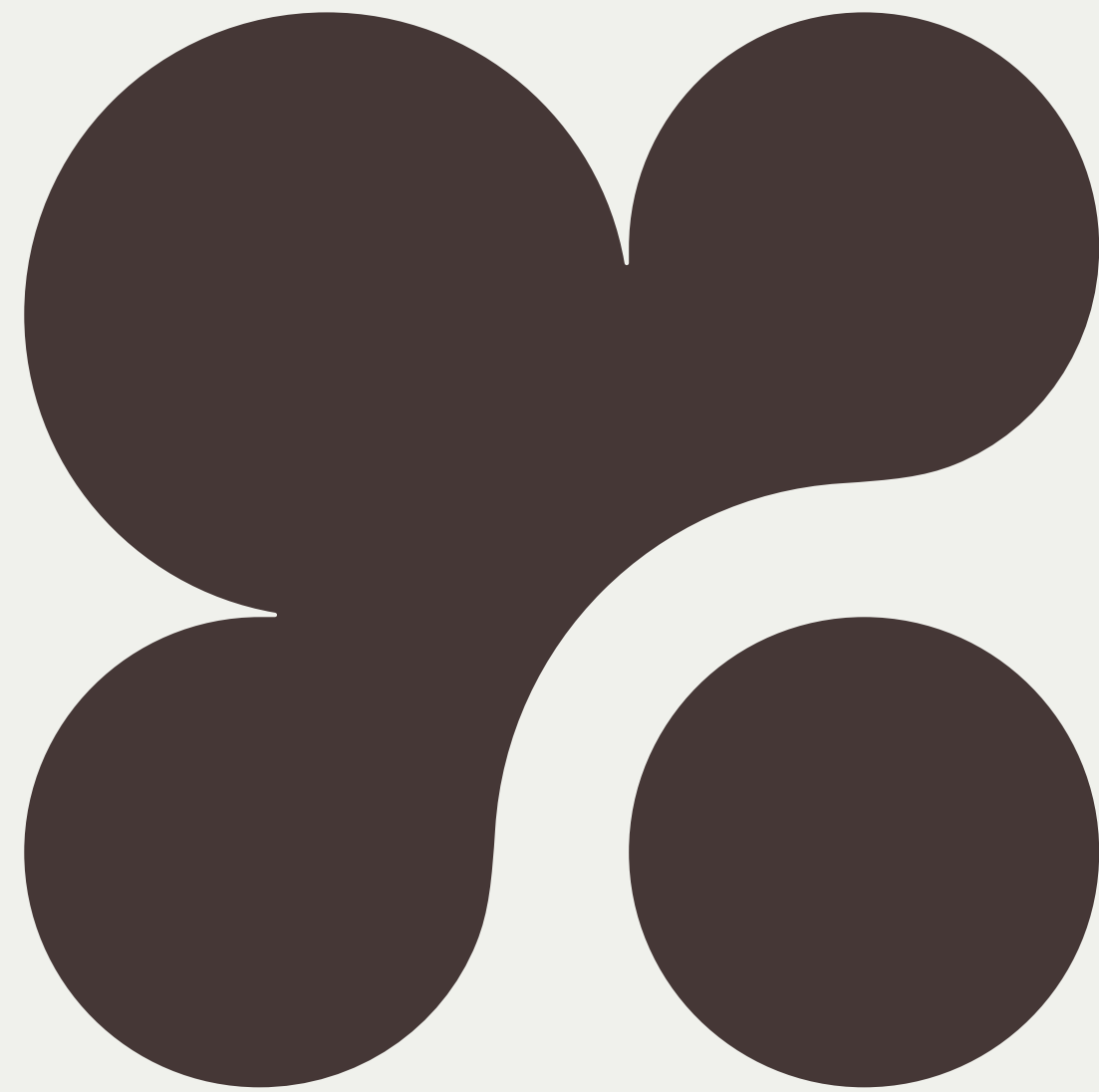
Hard tooling and vac formed trays are a one-off investment, ongoing orders only need to consider the actual cost of the substrate which is quoted once we know the sizes of each piece, the volume of substrate being used, the order volumes etc

Mushroom ®
Packaging

Growing Tray

Hard Tool





MAGICAL[®] MUSHROOM COMPANY

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