

MY. TABLE



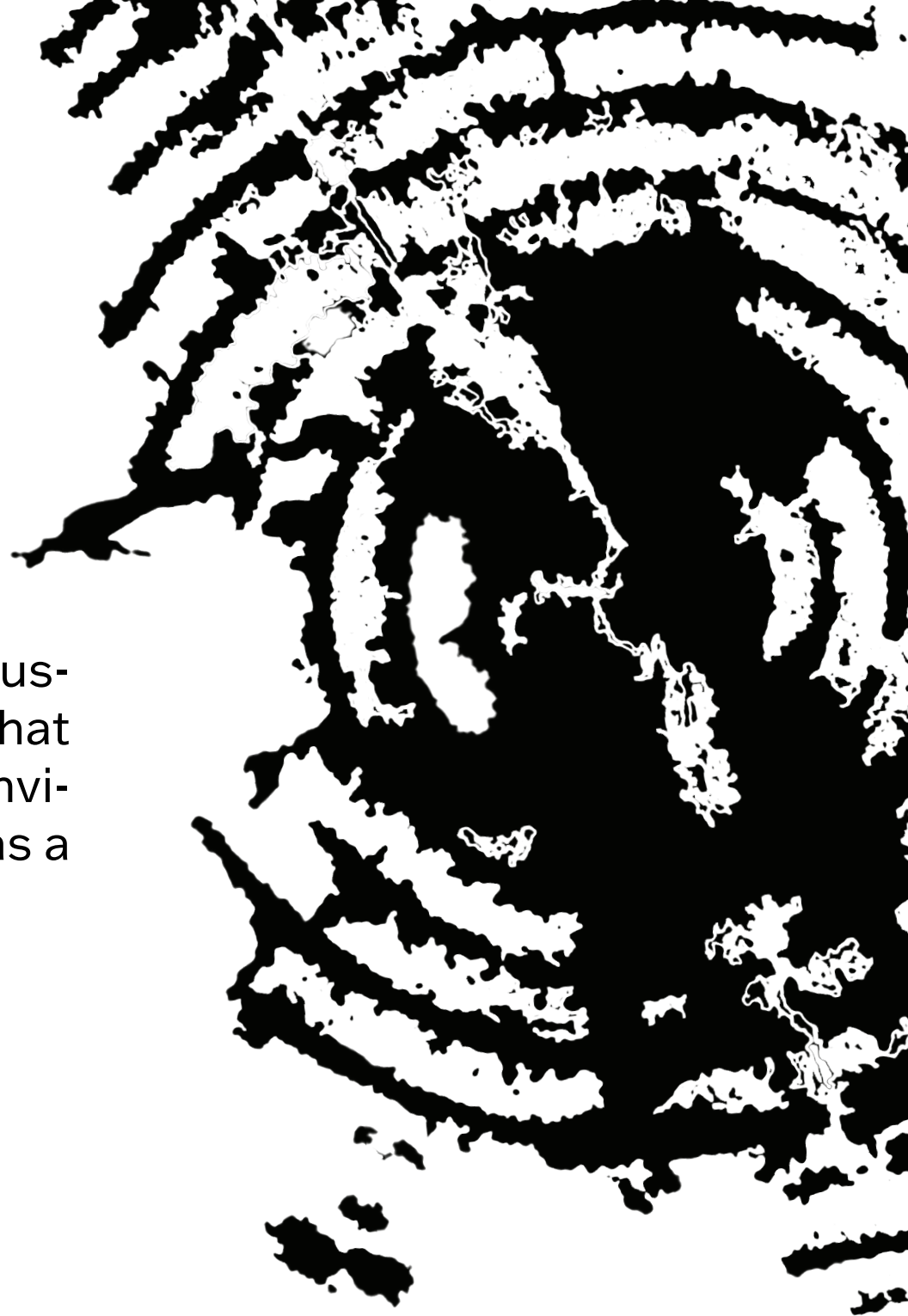
Change together

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PROJECT BRIEF

How might we design an affordable, sustainable, modular furniture solution that can seamlessly blend into various environments, while serving the purpose as a living, changing element of nature?



NATURE DEFICIENCY

WHAT IS IT?

The combined psychological, physical and cognitive costs we suffer due to our alienation from nature.

CAUSES:



Parental fears



Limited access



Increased consumption
of media

COSTS:



Attention and
mood disorders



Limited respect for
the environment

WHAT CAN WE DO?

Encourage nature exploration.

Meet at the middle- overcome with creative solutions.

Ignite interest in the outdoors.

PERSONAS



Ember Braxley

Home: Los Angeles, CA

Age: 32

Occupation: Digital Marketer

Bio:

New to LA, daily outdoor enthusiast and proud owner of an electric vehicle. Passionate about sustainable living, collects rain-water, tends to an organic garden, and explores eco-friendly practices. Contemplating the installation of solar panels.

Issues:

- Unclean air
- No close green space
- Limited space

Needs:

- Space optimization
- Furniture
- New target audience
- Aesthetic balance



Osby Wade

Home: Front Royal, VA

Age: 43

Occupation: Homesteader
(Local Produce)

Bio:

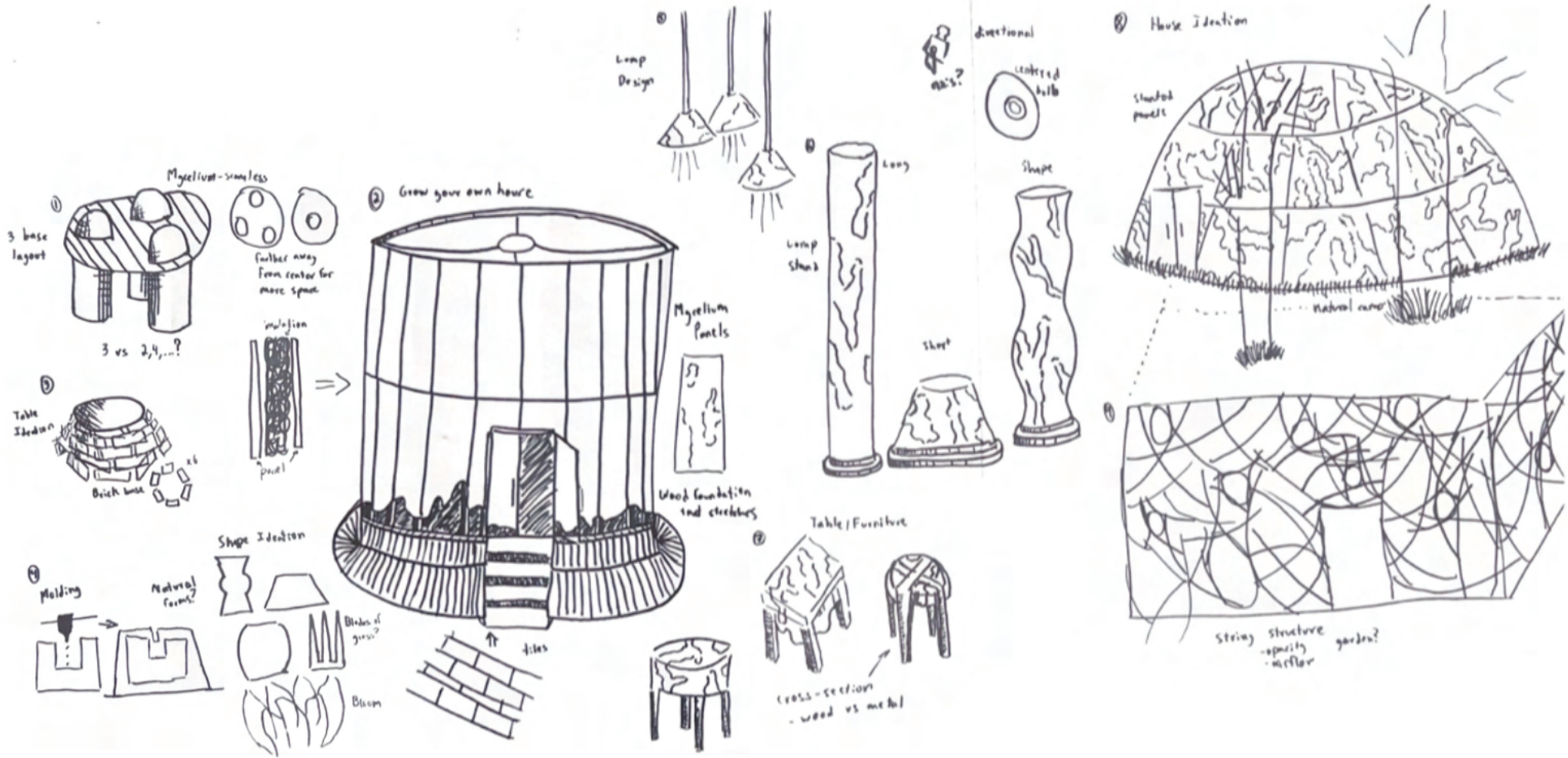
Dedicated homesteader deeply connected to the land. Tending to a self-sufficient lifestyle, embracing organic farming, and raising livestock. Interested in materials like Mango Wood and Rubber Wood. Identifies challenges in incorporating sustainability, and price to purchases.

Issues:

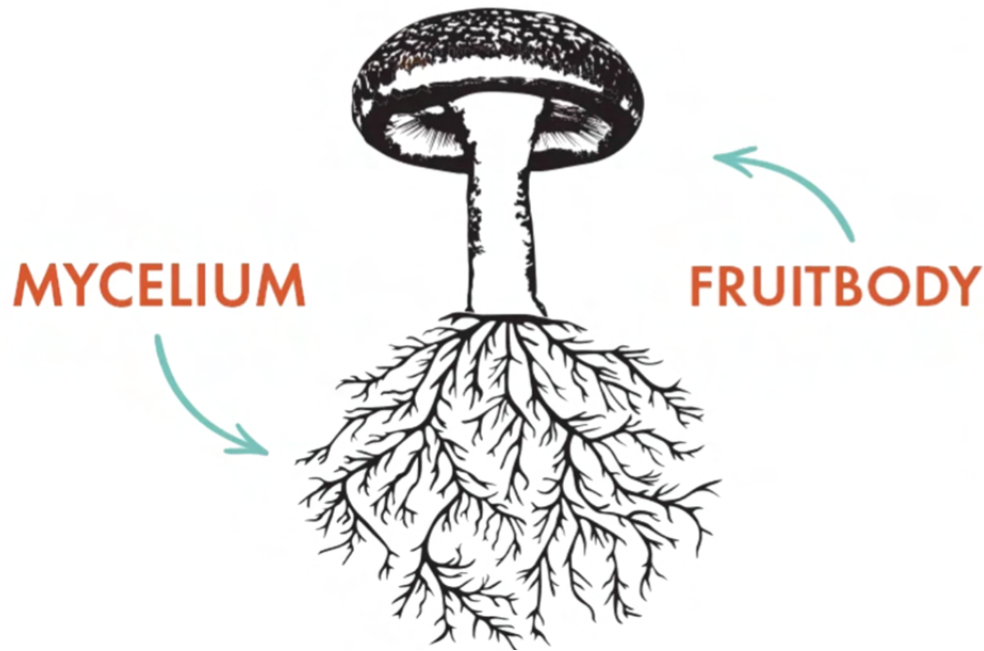
- Doesn't like things staying the same
- Using materials from environment

Needs:

- New furniture
 - Sustainable
 - Cost-effective
 - Durable
 - Customizable
- New hobby



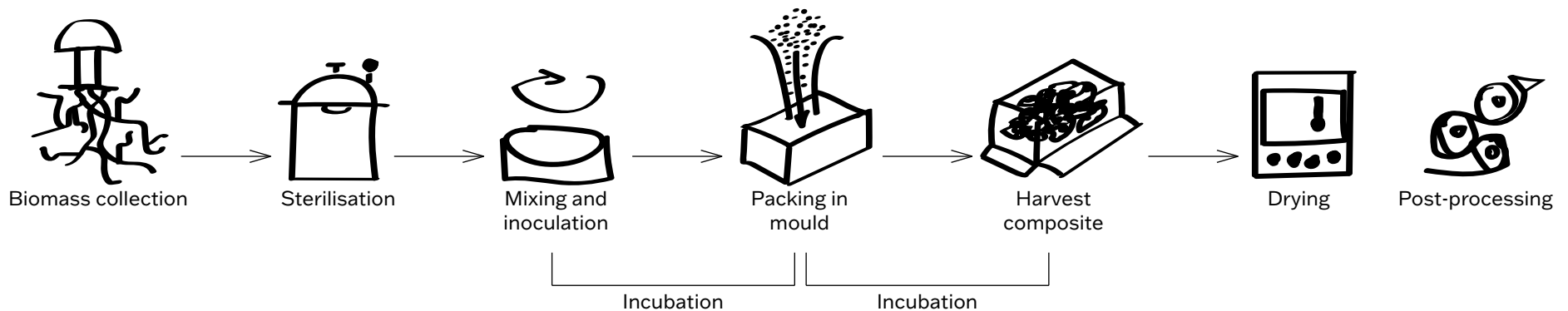
RESEARCH



“Mycelium is a root-like structure of a fungus consisting of a mass of branching and provides a transportation network to pass nutrients along the fungal body.”

Mycelium packaging is created by using organic waste which is then cleaned and combined with mycelium which then will grow around the waste, sending out roots and fibres which digest the materials. It is then broken up and put into moulds, a solid form is then grown which then can be used in a variety of ways

PROCESS

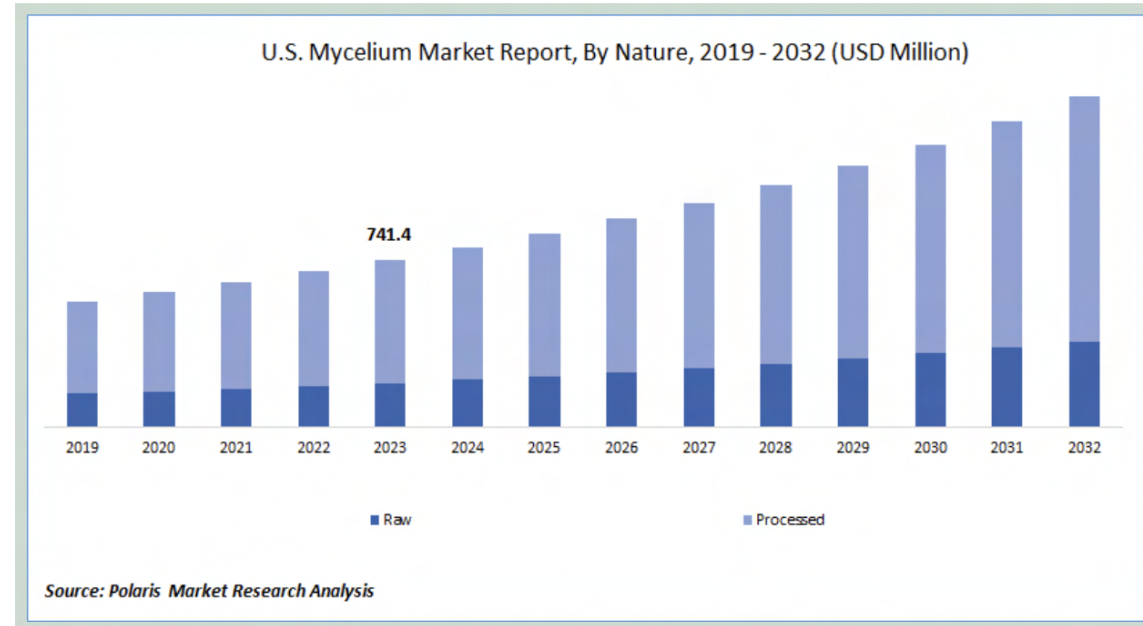


“Beyond its ecological significance, mycelium showcases tremendous potential in diverse industries. It has been harnessed to create fire-resistant, robust, and lightweight building materials, mirroring the texture and functionality of leather for the fashion sector, and even serving as a bonding agent for materials such as bricks in specific applications.”

- POLARIS Market Research

Revenue size value in 2024: 3,306.89 million USD

- Mycelium-based composite (MBC) packaging material
- Protein
- Leather
- Building blocks



Food and beverages, pharmaceuticals, cosmetics, electronics, fashion design, engineering, architecture.



1.



2.



3.



4.

- 1. **HiFy Project** - MoMA (2014)
- 2. **Tree Design** - Dirk Hebel & Phillipe Block (2017)
- 3. **The Growing Pavillion** - (2019)
- 4. **Lampshade** - Myceen (2022)
- 5. **Spore Dispenser** - Suzie McMurtry (2022)
- 6. **Room Divider** - Interesting Times Gang (2023)
- 7. **Hayes Pavillion** - Simon Carroll (2023)



5.



6.



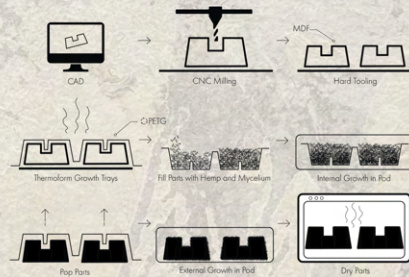
7.

Mycelium

Narrative and Design Research

“Designing a sustainable and biodegradable furniture solution that resonates with eco-conscious consumers, particularly those engaged in homesteading practices, while considering affordability for a broader audience while blending seamlessly into various environments, providing users with a meaningful connection to nature.”

- Robust and durable, sturdy framework
- Biodegradable
- Sustainable creation
- Moldable
- Insulating
- Lightweight
- Fire resistant
- Cost-Effective



Research Habits + Behaviors



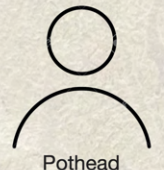
California Citizen

Passionate about nature and sustainable living. Enjoys daily outdoor activities, particularly in water and forests. Drives a Tesla, collects rainwater, practices water conservation, and gardens organically. Values design and style when selecting furniture but recognizes the need to consider biodegradability and sustainability. Familiar with mycelium-based products. Engages in homesteading through gardening and composting. Open to investing in furniture that fosters a connection with nature. Actively exploring solar panel installation. Connects with like-minded individuals through work in exponential technologies. Planning a transition to a more sustainable lifestyle in retirement.



Homestead

Nature enthusiast, deeply connected to sustainability. Daily outdoor activities include hiking and gardening, emphasizing composting and homegrown produce. Eco-conscious practices extend to electric bikes, thrift store finds, and a preference for durable, American-made furniture. Intrigued by mycelium-based products, they actively engage in environmental movements like composting and supporting organic products. Challenges include availability, cost, and time for learning sustainable practices. Eager to join a community centered around sustainable living and homesteading.



Pothead

Passionate about cannabis culture, this individual embraces a laid-back lifestyle in California. They enjoy the outdoors, finding relaxation and inspiration through nature. Incorporating eco-friendly practices aligns with their easygoing vibe, reflecting in choices like electric bikes and thrift store finds. When selecting furniture, comfort and style take precedence. Open to exploring innovative and sustainable products, they might be interested in mycelium-based items. Engaging in cannabis-related communities, they connect with like-minded individuals and stay informed about new and sustainable products through online forums and social networks. While challenges might include stigma and legal restrictions, they maintain a casual and open approach to their lifestyle, seeking comfort, connection, and sustainability.

Market Data

Permaculture Design:

- Mimic natural ecosystems
- Strategic placement of plants, animals, and structures
- Create a sustainable and resilient environment

Natural Building Techniques:

- Use materials from the immediate environment
- Earth-based construction methods (cob, adobe, straw bale)
- Minimal environmental impact

Rainwater Harvesting:

- Reduce reliance on municipal water
- Design systems for rainwater collection
- Use natural slope, gutters, and storage tanks

Agroforestry:

- Integrate trees and shrubs in agricultural spaces
- Mimic natural forest ecosystems
- Enhance sustainable and resilient food production

Energy Efficiency:

- Design energy-efficient homes
- Passive solar design for heating and lighting
- Use renewable energy sources (solar panels, wind turbines, micro-hydro systems)

Composting and Waste Management:

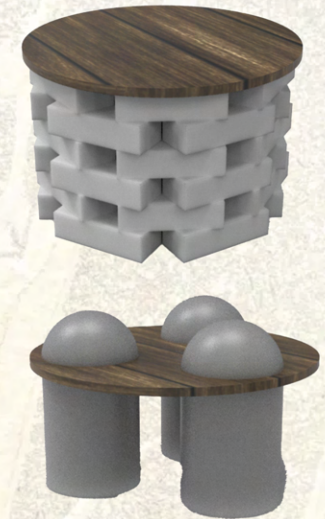
- Design composting systems for organic waste
- Recycle organic matter into the soil
- Enrich gardens and reduce external inputs

Small-Scale Livestock Integration:

- Design spaces for small-scale livestock (chickens, goats, rabbits)
- Mimic natural behaviors
- Promote symbiotic relationship with plants and animals

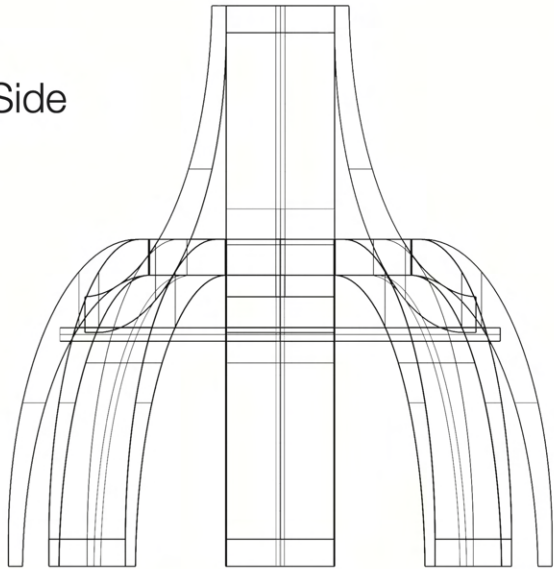
Community Collaboration:

- Engage in communal or cooperative living
- Design spaces and systems for collaboration
- Encourage resource sharing among community members

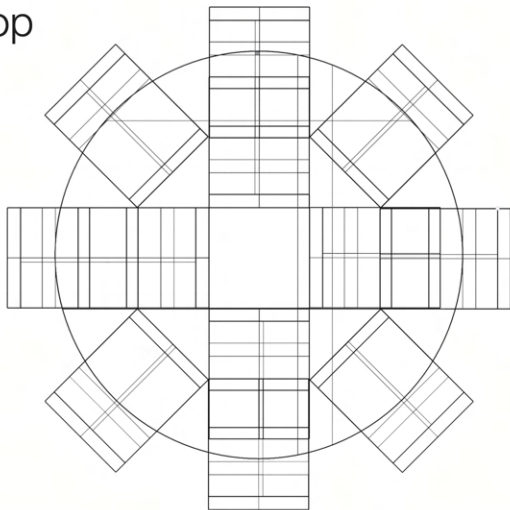


LIVING TEEPEE

Side



Top

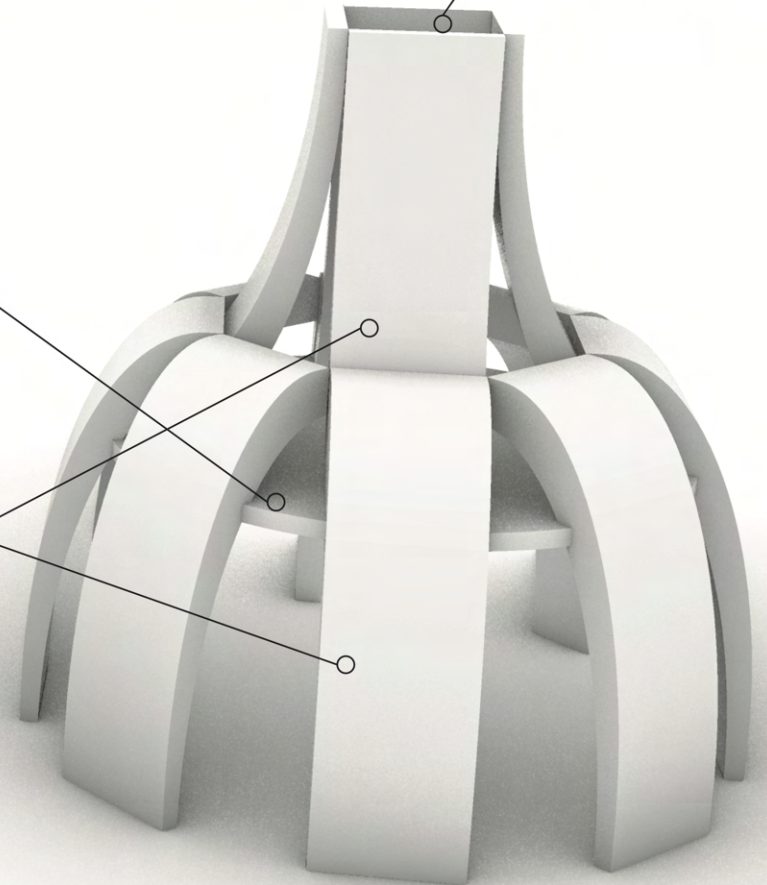


The Living Teepee is the essence of “grow your own home”.
Made out of 8+ Mycelium panels, its smooth and curvy
composure imitates that of the river stones, or sand dunes.

Chimney and light
source

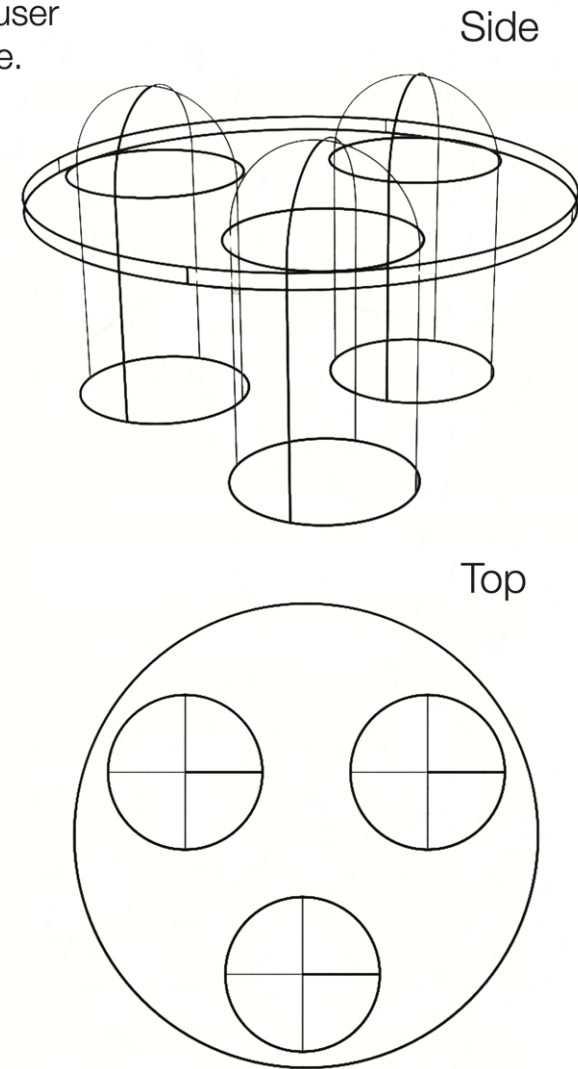
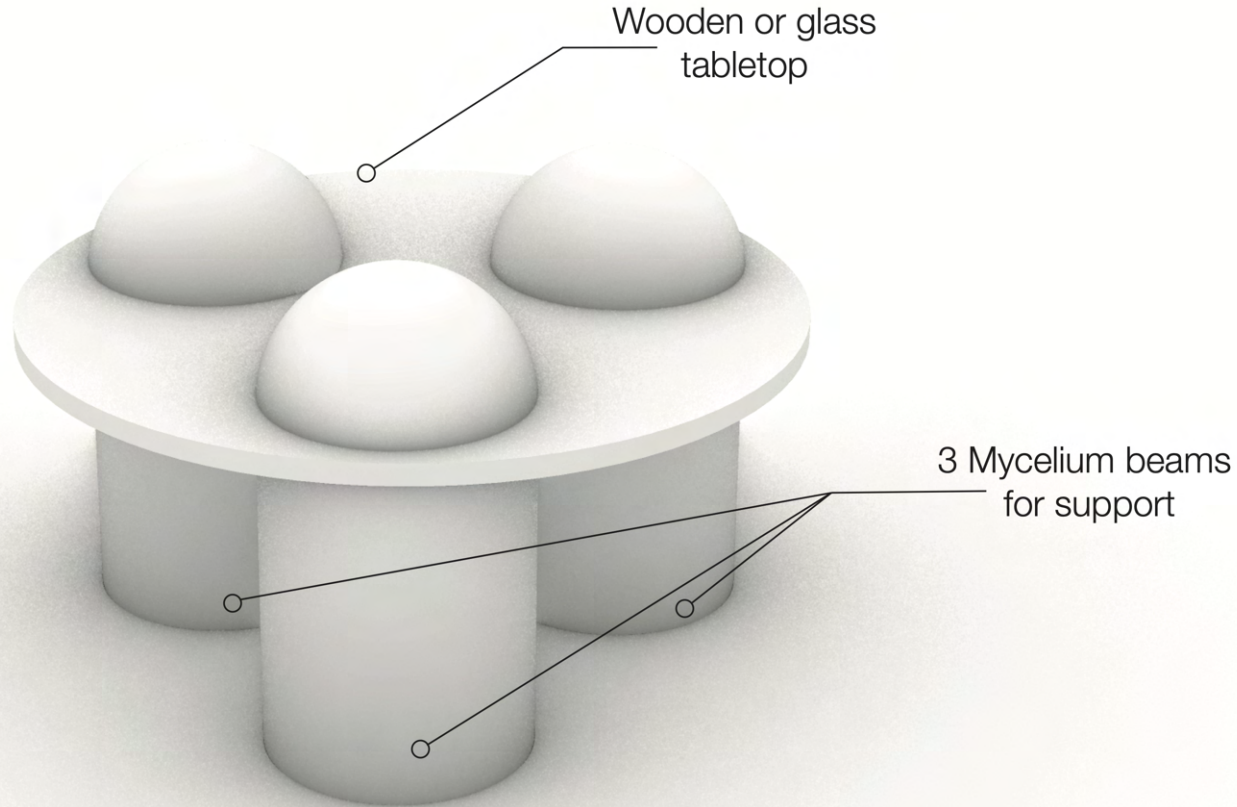
Flat rounded surface
for structure control

Mycelium panels



OBJ-001

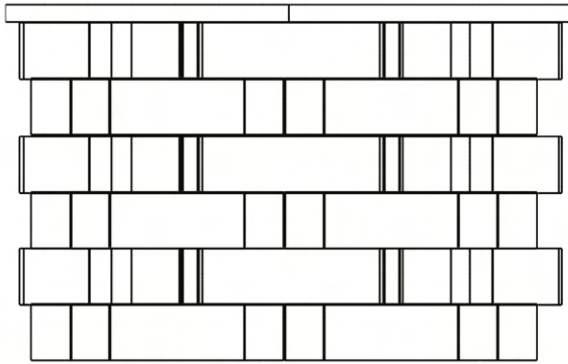
OBJ-001 envelops the user in a sense of nature. Its Mycelium structure “rusts” over time. As it is a living organism, the user can watch it change form from the comfort of their home.



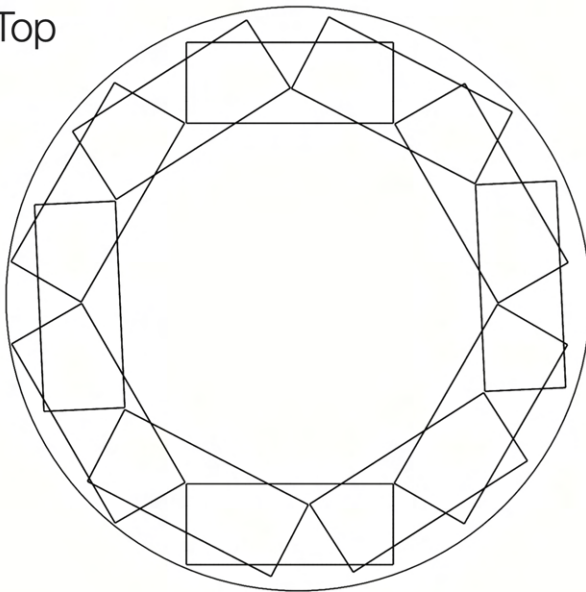
OBJ-002

OBJ-0012, just as 001, changes its form over time. This table has more open space on its top with increased stability. The pattern symbolizes the “building blocks of life and nature”.

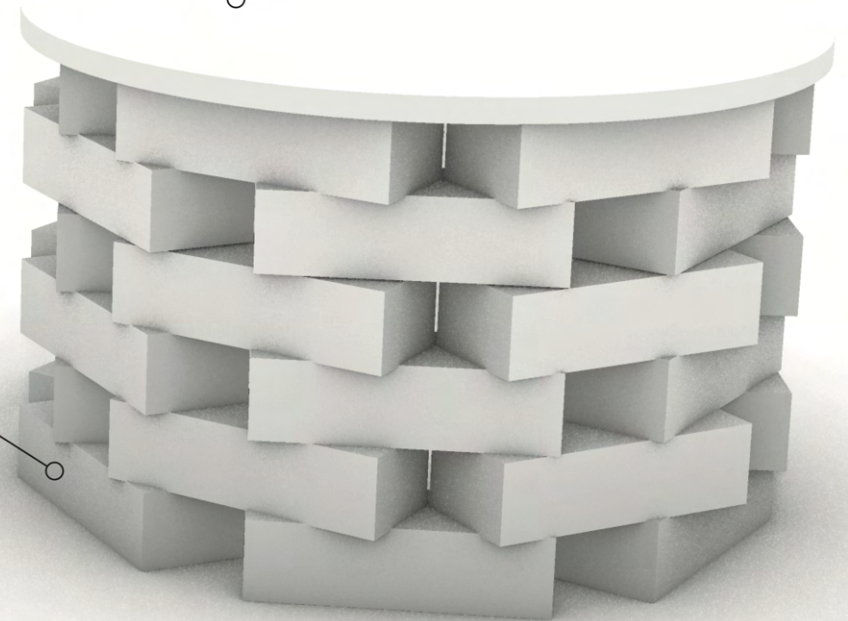
Side



Top



Wooden or glass
tabletop



Layers of 5

*Most promise and liked

User 1:

- Enjoys the concept of the mycelium table
- Appreciates its **autonomy**
- Values the **ability to create forms with the remaining pieces**
- Expresses a desire to physically see the prototype and potential decay.
- Notes that **achieving perfect balance with the pieces was a bit challenging.**
- Sees potential for outdoor use.

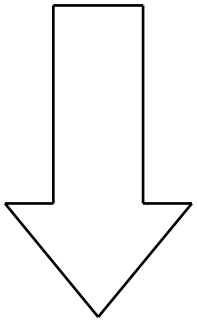
User 2:

- Finds the form of the mycelium table unique and feels it's directly from nature
- Describes the prototype as eccentric in a positive way
- **Appreciates its versatility**
- Curiosity about the **material's sturdiness, comfort, and how it changes over time**
- Easy to modify the table
- Envisions **seamless integration into various environments**
- Appreciates its ability to bridge the gap between indoors and outdoors

Moving Forward

- Balance of the blocks
- Working with decay - Beauty vs Obsolescence
- Modification
 - **A system that allows the blocks to move in any way**

- Biodegradable
- Modular
- Aesthetic



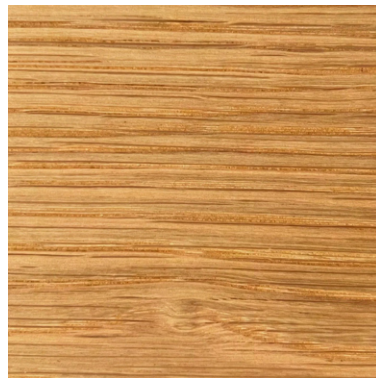
- Wood
- Mycelium

Mycelium



“Our mission is to replace plastic foam with our CO2 efficient & 100% compostable mycelium-based packaging to protect our goods and leave a more live-able planet for generations to come.”

Wood

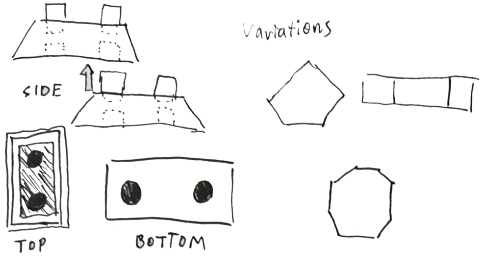


Oak Wood

Remarkable durability, strength, and beautiful grain patterns. Oak is local to the Philadelphia area, supporting sustainable practices by reducing transportation emissions and promoting local economies.

A SYSTEM

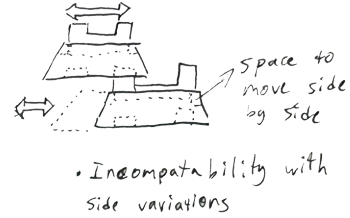
① Lego Brick



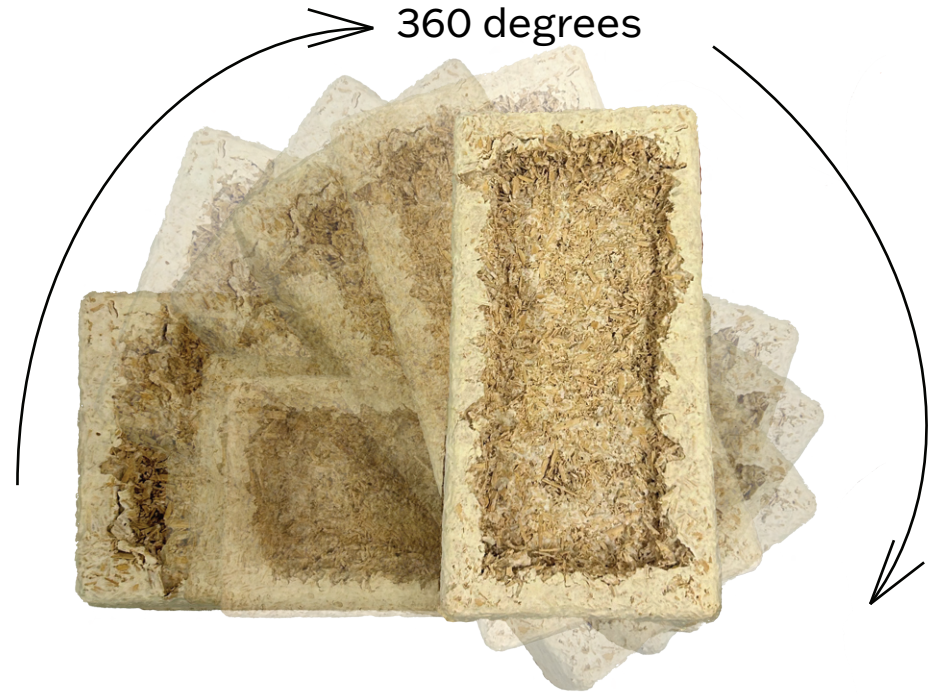
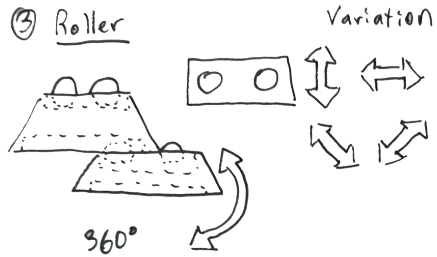
Variations

- Limited Variations
- Fixed pieces
- Material compatibility

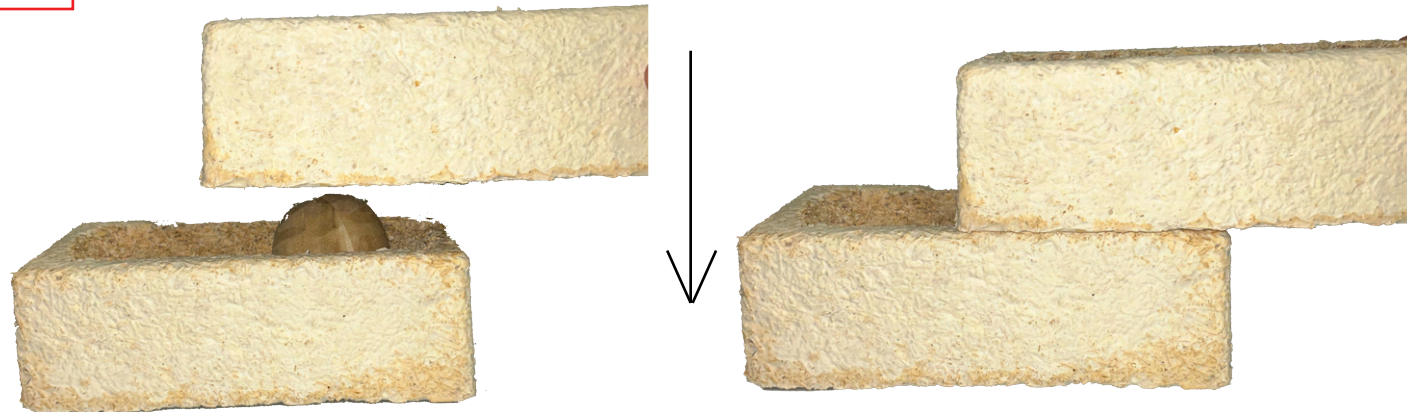
② Slider



③ Roller



By adding a dome of 2 inches, the blocks can slide and rotate on an axis.





Round Oak Wood
Diameter: 9 inches
Finish: Teak Oil



Mycelium Bricks
30 count
Woodchip and Mycelium

FINAL DESIGN



I intended to make a unique design that fit my personas and users requirements. These included: making the design modular, have an aesthetic balance, be biodegradable and sustainable, have the ability to blend into any environment, and serve multiple uses (change in form and carbon sequestration). After thorough research I found that Mycelium, specifically Mycelium bricks, would be the perfect solution to meet these requirements.

After some ideation, I came up with a design for a side table that works on a system where the bricks can be layed on top of each other and move on the axis of a dome. This allowed me to come up with several ideas and concepts for my look-book.

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