

# Entanglements Across Scales

*Architecture as a relational practice  
across systems, bodies, and ecologies.*

Portfolio  
Martina Hollmann  
Columbia University  
GSAPP  
MSAAD 2025

Architecture is one of the most powerful entities, constantly operating in cultural, economic, societal, and environmental forms. In these entanglements, the role of architecture becomes crucial in intervening in the world.

This portfolio brings together projects that define architecture as something embedded within larger ecological, social, and material systems. Buildings are agents within ecosystems, participating in cycles of growth and repair.

Each project operates across multiple scales: from the material (soil, waste wood, algae, mycelium), to the bodily (care, sensory experience, pedagogy), to the territorial (wetlands, migration routes, infrastructures). They draw connections between intimate spaces and broader environmental systems—blurring boundaries and creating relationships between body, space, and landscape.

Architecture becomes a medium of connection, where other forms of life are essential cohabitants. Each project is grounded in designing for more-than-human coexistence.

Underlying the work is a belief in architecture as a form of care—for bodies, communities, species, and damaged environments. Whether through ecological restoration, educational support, or slow spatial transitions, each design explores how architecture can support and sustain.

Time-based thinking is central. These are not static structures, but systems that unfold, erode, and regenerate—responsive to seasonal shifts, environmental conditions, and shared rhythms.

Across studio, research, and technical work, these projects reflect a design practice grounded in ecological sensitivity and material responsibility—always in motion, always entangled.

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# Between Self & World

Adv Studio VI

Spring 2025

Instructor: Leonidas Trampoukis / Eleni Petaloti

TA: Devansh Shah

Individual project

## Architecture As Ecosystem









*"For much of human history, across cultures, humans have indeed found the divine in the natural world, understanding nature as awesome, sacred, and sublime. Over time, this worldview has been replaced by perspectives that place the human in a separate, often superior position to nature."*

- Nocturnal Medicine

## What if we build alliances with Earth?

## What if we co-create with the environment?

As climate breakdown accelerates, architecture must redefine its relationship to the natural world. We are witnessing ecological collapse. The climate crisis is happening and architecture plays a central role in it.

There is an urgency to rethink the materials we use, and how—and for whom—we build. This manifesto proposes a vision for architecture as ecosystem—an architecture that no longer separates itself from nature, but grows with it, supports it, and allows it to thrive.

Through three interconnected spatial proposals—a private structure shaped by natural processes, a semi-public installation that immerses the body in raw matter, and a public space that serves as ecological infrastructure—the manifesto explores how buildings can become living systems. It asks what it means to build with the environment, to use materials that decompose, evolve, and belong.

Each project becomes a site for entanglement between species, bodies, and landscapes, where nature is co-creator.

# Coexistence Between Nature And Architecture

## Blurring the boundaries between built and natural environments

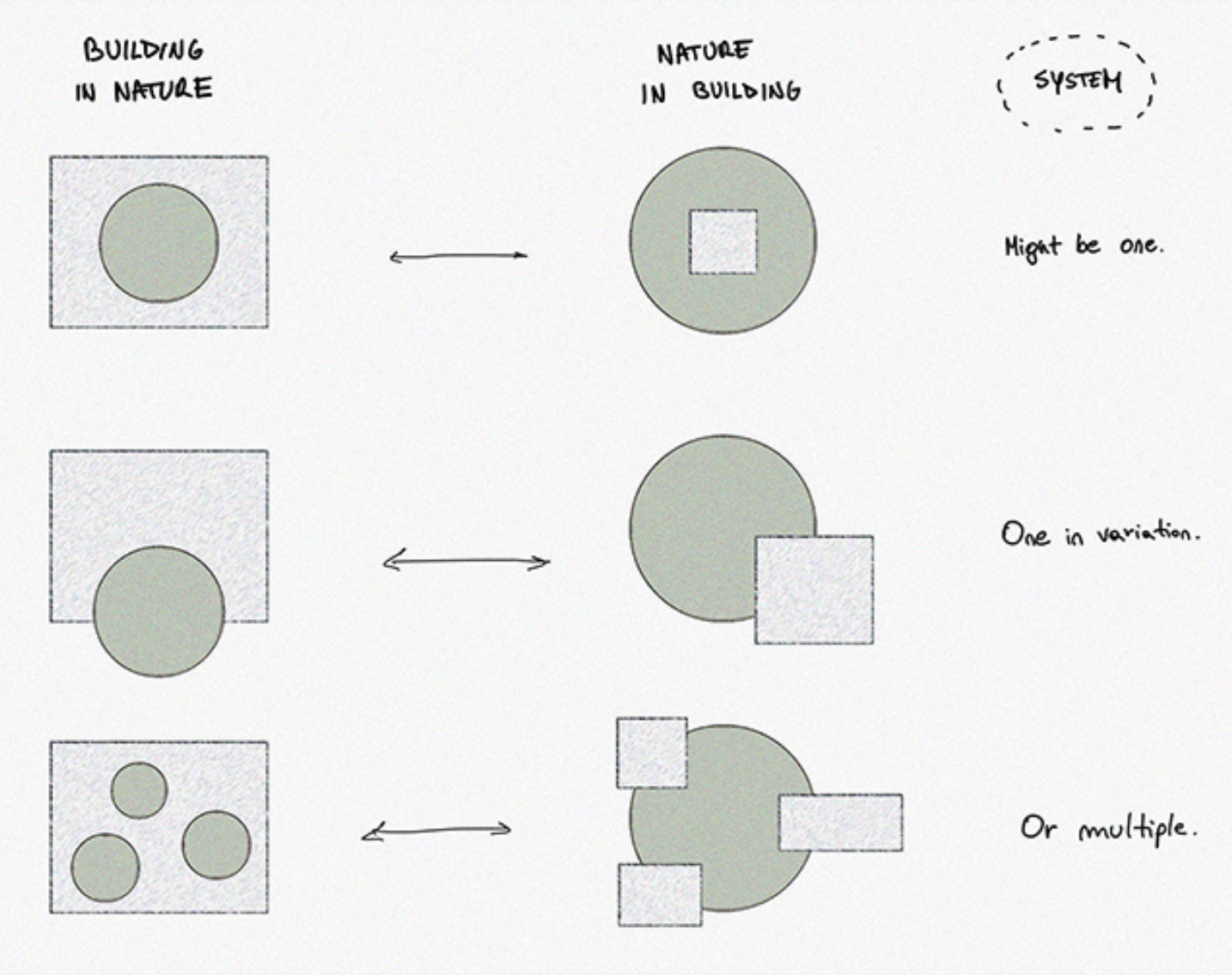
Architecture must bridge the gap between human life and the natural environment.

This work proposes a system where architecture and nature coexist, and boundaries blur.

The relationship may vary: sometimes nature is part of the building, while at other times, the building is part of nature. In the end, they always operate together.

In this system, buildings are ecosystems, and ecosystems become architecture.

Each project in this series explores that interaction. They create tangible connections between body, space, and environment.



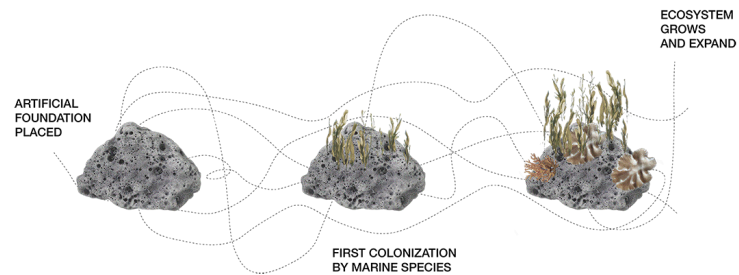




01 - Private Space

Nature As Creator

The private space begins underwater. Concrete blocks are placed on the seabed to support marine biodiversity and coral growth. Over time, the ecosystem grows and expands.



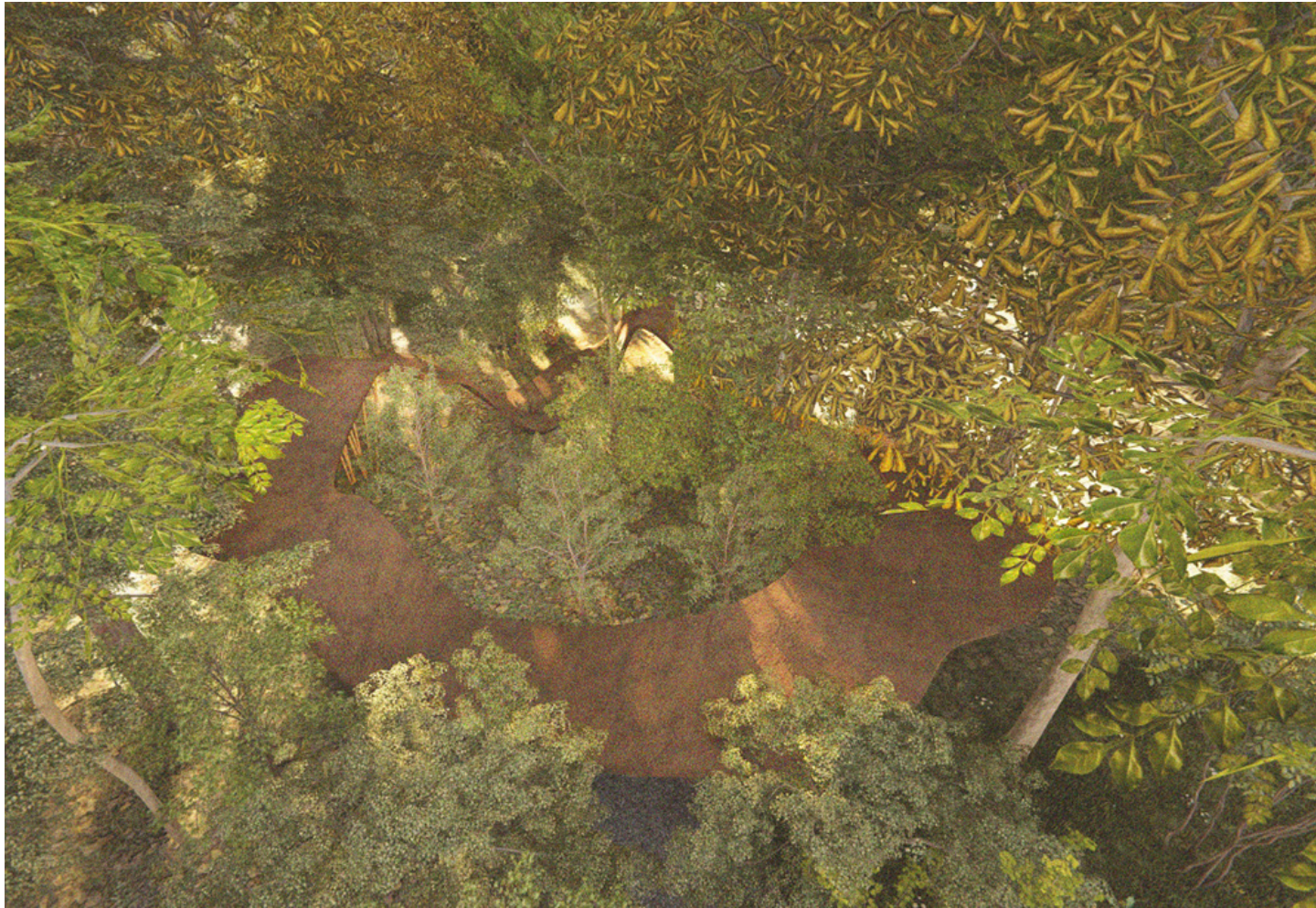
Above water, vegetation emerges as architecture becomes an extension of the ground, allowing nature to root and expand—the space is constantly transformed by the environment, a house shaped by natural processes, designed by nature.



## Entangled Grounds







The Club is an installation designed to immerse visitors into raw earth, reconnecting them with it. It proposes different moments of transition to cross from dark to light, silence to sound, individual to collective, and man-made to nature-made.

Located in Teshima Island, Japan, **everything is made from one single material—earth.** It is made with nature in order to return naturally to it, decomposing over time.

The entrance is a narrow passage—a moment to slow down, to feel the material, and to become fully present. Visitors receive a handheld listening device that amplifies **the sounds of the material and the ecosystem, inviting them to immerse in the soundscapes of the earth.**

Along the way, walls of varying compositions, densities, and textures invite visitors to observe, to touch, and to listen as the earth shifts and cracks—revealing its constant transformation. Moss, fungi, and bacteria grow in it.

Curved walls guide visitors toward the next transition: a path of silence that leads into the forest. This forest becomes **a space for interconnectedness between humans and more-than-humans.**

A canopy made of soil follows the natural contours of the landscape, adapting to trees and terrain. Insects fill the air, shifting throughout the day as light, temperature, and movement change. When it rains, new rhythms emerge—raindrops hitting the canopy, the ground, and the leaves. In winter, the snow, footsteps, and branches create an entirely new soundscape.

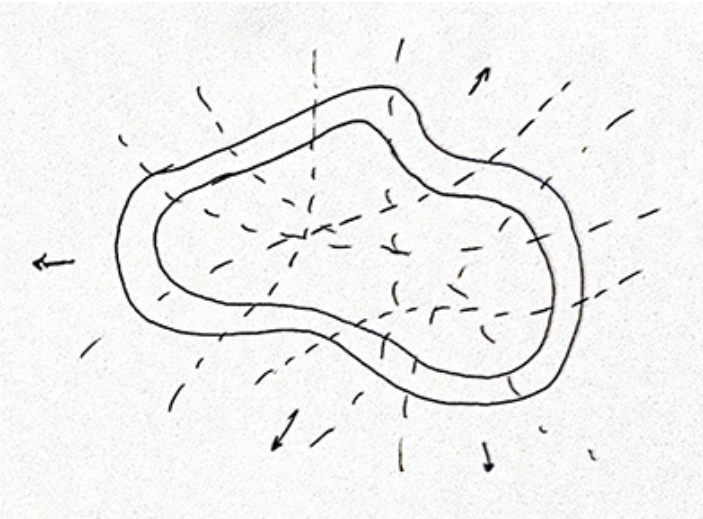
The materials are a recomposition of the island: soil, clay, and sand form the canopy, while bamboo plants are used for the structure. The soil is mixed with natural fibers—rice straw, washi paper fibers, and seaweed—evolving over time. Seeds are integrated into the material, inviting birds to inhabit and interact.

The installation fosters cohabitation between visitors, material, and local wildlife—supporting **a dynamic ecosystem where different species coexist. It is a living structure, where architecture is forest, and forest is architecture.**

If architecture can blur the boundary between the natural and the artificial, then nature will grow from and become part of architecture.

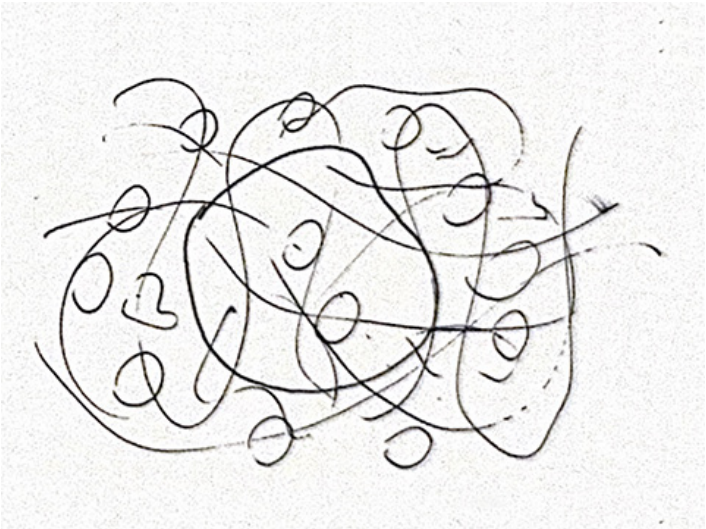
Walls and other elements become extensions of the earth.

BLURRED  
BOUNDARIES



IN / OUT

PATH / TRANSITIONS



ARCHITECTURE AS FOREST

FOREST AS ARCHITECTURE

Moments of  
Transitions  
and the In Between



## MATERIALS MATTER



## EARTH SOUNDSCAPES











*Leaves, Light, Steps*



*Fireflies, Voices, Crickets*



*Birds, Grass, Movement*



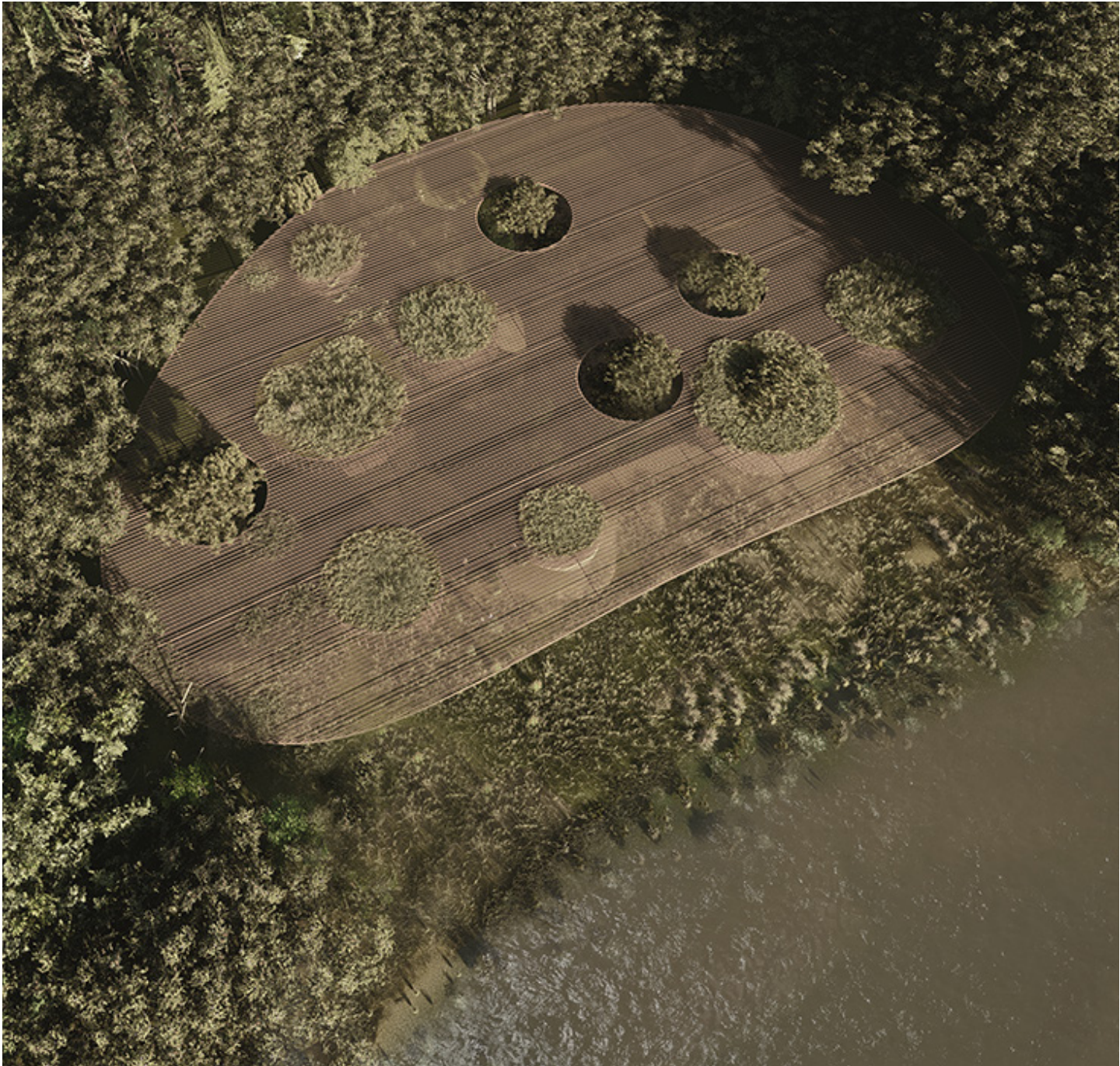
*Snow, Branches, Steps*







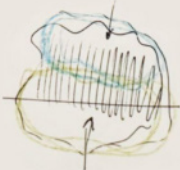
Ecologies  
Of  
Care



NATURE  
ENTERING



NATURE  
TAKING OVER



IN BETWEEN

If architecture and nature are able to coexist and support each other, structures can become extensions of the landscape, shaping new terrains for life to inhabit.





## Inwood Hill Park, New York

This project is located in Manhattan, at Inwood Hill Park, which holds the last natural forest and tidal salt marsh on the island. Over 90% of New York City's wetlands have been lost to urban development. Inwood Hill Park preserves Manhattan's final remnant.

Located within the park, the Inwood Nature Center functions as a community hub for environmental education and recreation. Ongoing efforts by community groups and environmental organizations aim to preserve the park's native ecosystems. However, the site continues to face severe ecological stress: habitat fragmentation, urban runoff, and the decline of native plants and wildlife.

This proposal expands the Inwood Hill Nature Center, rethinking public space as a site of ecological care—where humans engage in the recovery of living systems through learning, observation, and collective restoration. The design dissolves into the landscape, extending the forest and the marsh into the architecture.









## Public space as Ecological Infrastructure

### Workshop / Educational Rooms / Reaserch

Architecture becomes part of the ecosystem—blurring the boundaries between structure, vegetation, and water. Rooms are placed along the terrain and support specific programs: native plant nurseries, bird shelters, ecological education workshops, research rooms, and a visitor center. Each space grows from its context—varying in size, height, and orientation.

### Migratory Birds Shelter

New York City lies along the Atlantic Flyway, a major bird migration route. But as species cross the city, they face growing threats—light pollution, glass towers, and habitat loss—causing many to die along the way.

Nesting boxes and feeders support migratory birds on their journey. A small care room offers space for injured birds to recover. The bird shelter is built with untreated wood and blends into the forest, while the landscape forms a natural barrier for humans.

### Wetland Restoration

In the nursery, native wetland plants are cultivated under controlled conditions. Seeds are germinated, grown, and prepared for reintroduction into the marsh. Wetlands are among the most critical ecosystems on the planet: they act as sponges for flood control and water purification, support biodiversity, and store more carbon than any other ecosystem.

**With time, the salt marsh expands as a climate strategy for New York City.  
The project transforms the site into a living climate infrastructure.**

The structure is made entirely of wood, extending the forest and strengthening the ecosystem it inhabits. Across the U.S., large amounts of wood waste are discarded through demolition and landfill. This project reclaims unwanted pieces. Following the idea that no part of nature is waste, the building embraces irregular, overlooked materials—branches, offcuts, bark—that are usually discarded.

## MATERIALS ACTS

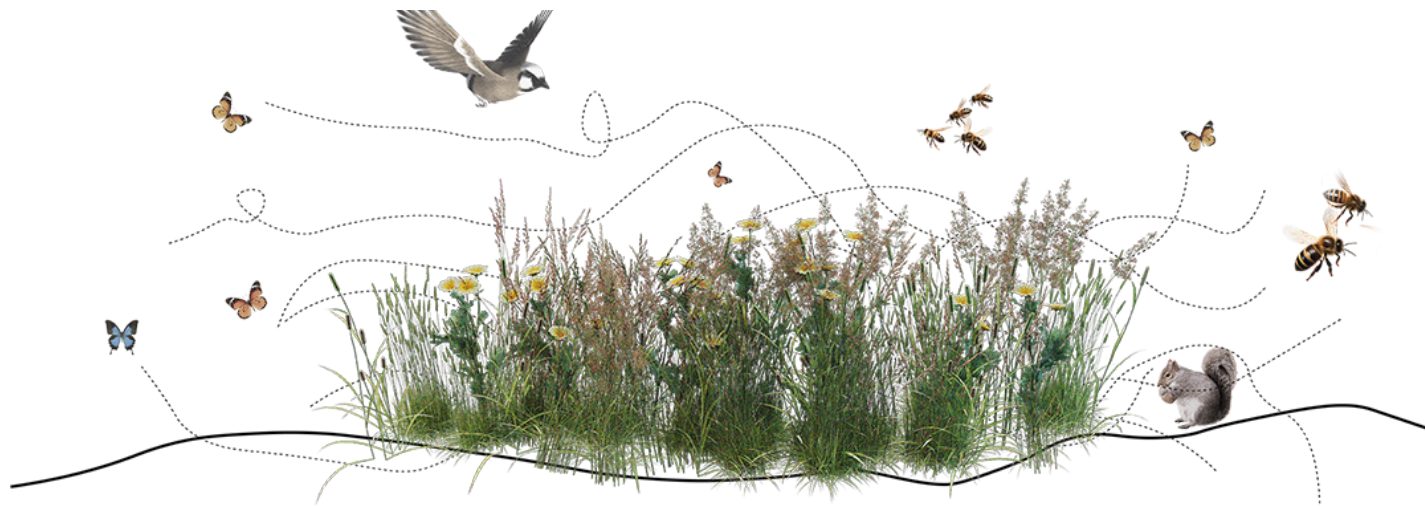


Wood Waste



## Microclimate

The structure creates a microclimate that improves soil and water conditions, supports the return of pollinators and wildlife, and contributes to forest health. This is a space designed to sustain and expand the ecosystems it hosts—ensuring that as the climate shifts, plants and animals will still have a place in the city.



Architecture is reimagined as a living ecosystem—growing with nature, supporting it, and reshaping how we inhabit the world. Rather than separating humans from their environment, architecture becomes a threshold where materials, landscapes, and species converge. Nature becomes the co-creator, and architecture and landscape coexist.

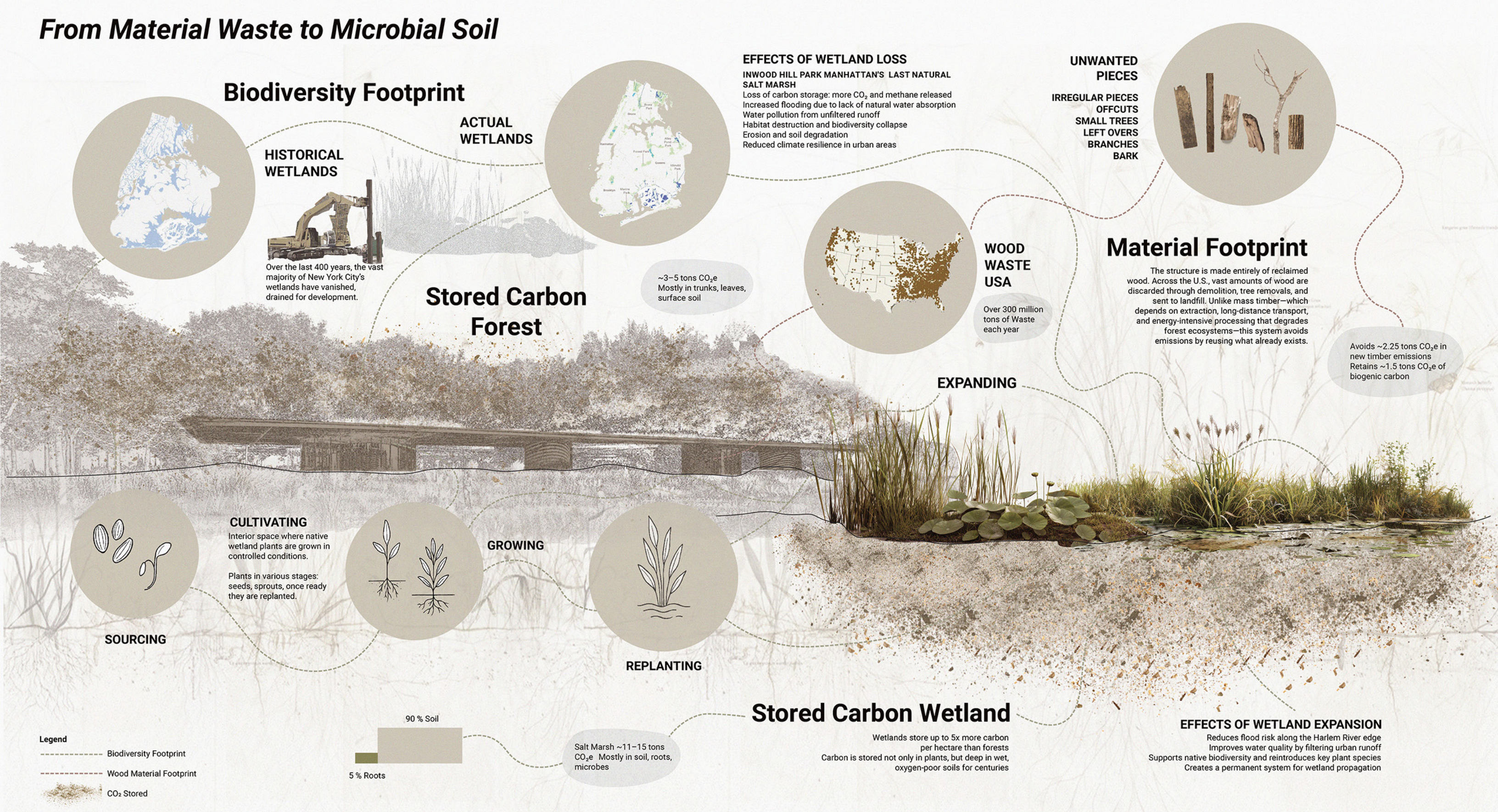








# From Material Waste to Microbial Soil



## Footprint: Carbon and Design

Spring 2025  
Building Science & Technology Elective  
Instructor: David Benjamin  
Individual Project

This drawing traces the unseen ecological work of wetlands and reclaimed wood, showing how plant propagation, microbial recovery, and material reuse together shape the biodiversity footprint of a regenerative structure.



# Metabolic Materialities

## Between the Animate and the Inanimate

Spring 2025  
Building Science & Technology Elective  
Instructor: Michael Wang  
Collaboration: Maria Paula Rico

### Roots of Thirst

*Natural Rubber*



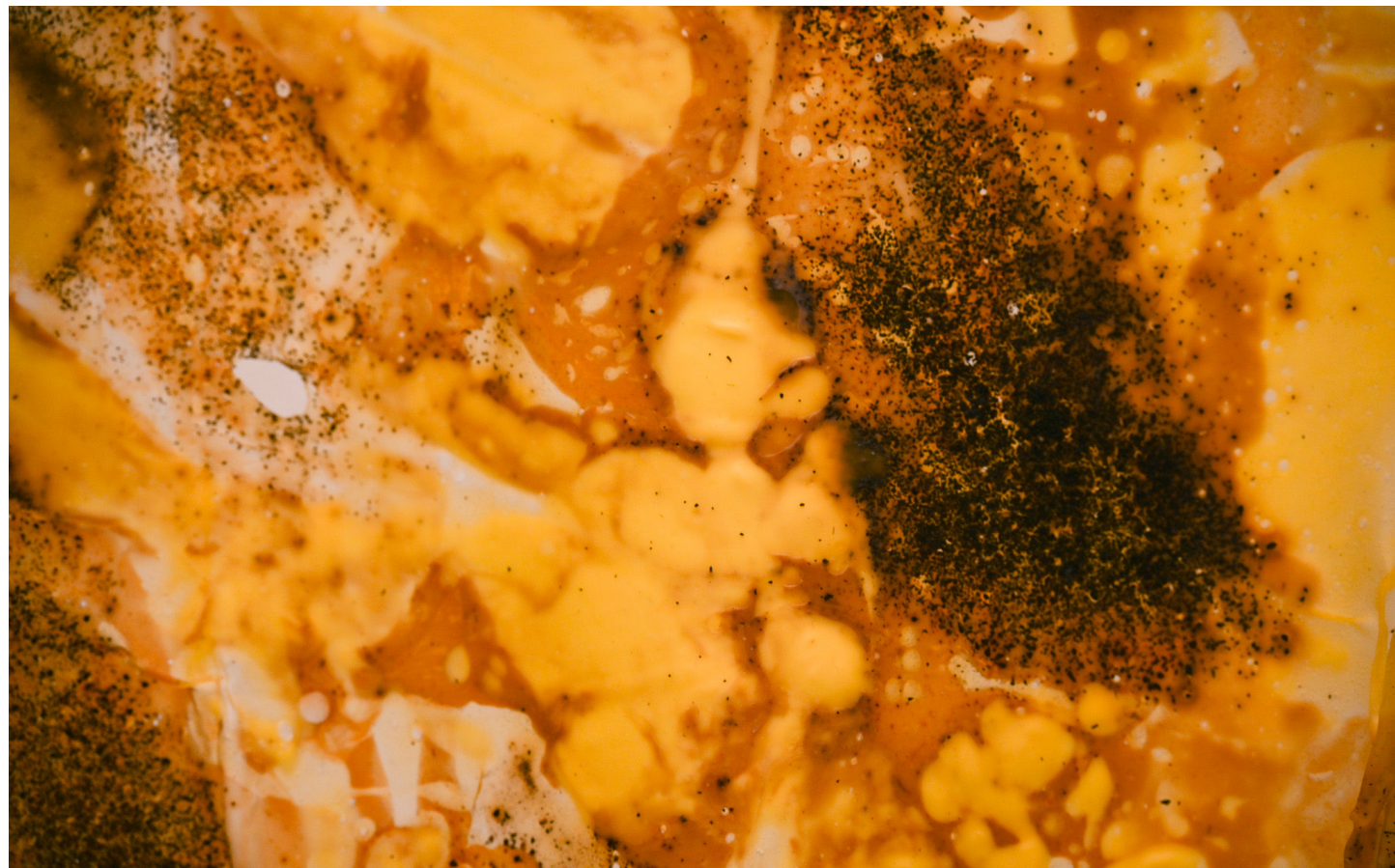
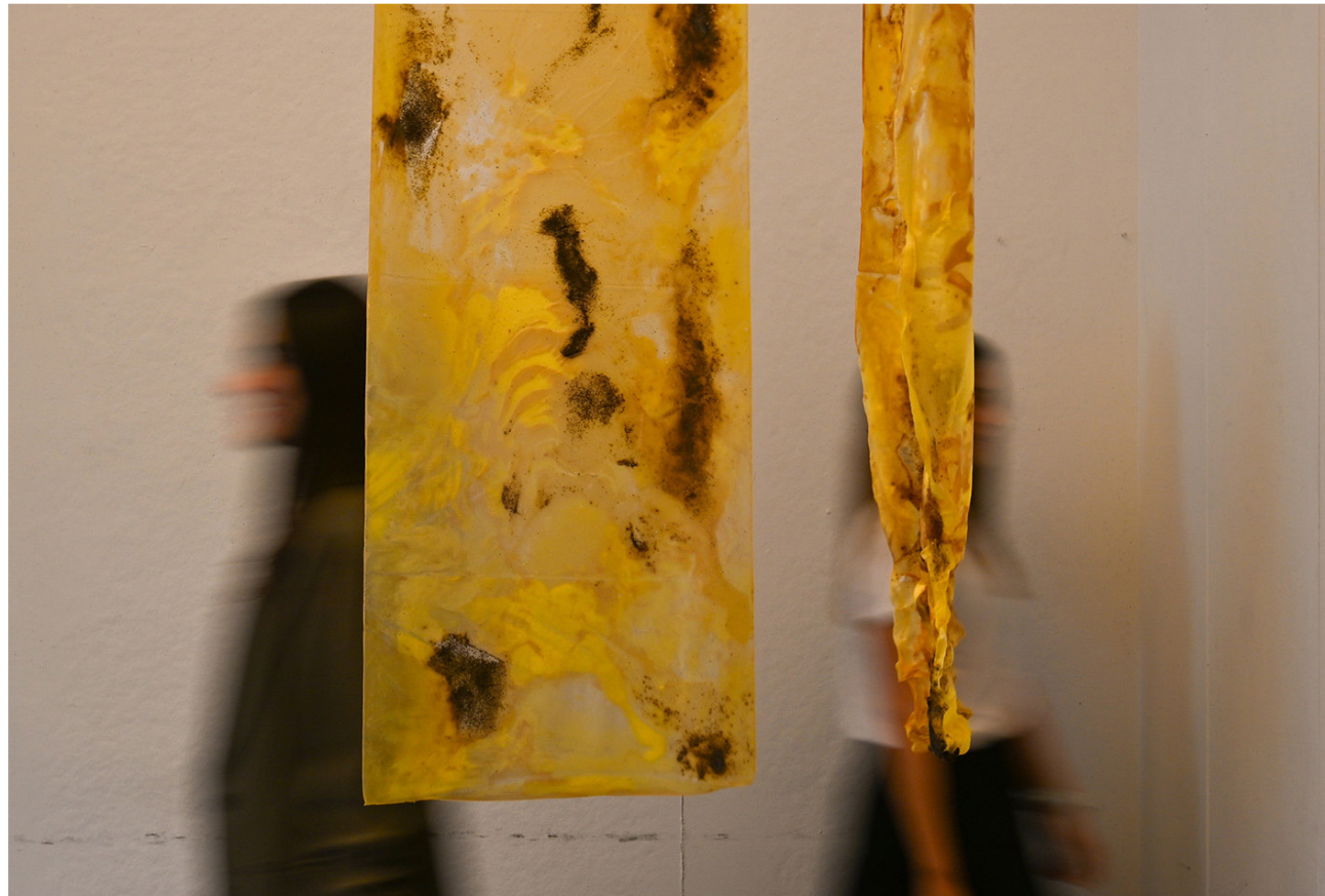
**Water and rubber are entangled across multiple scales,** from the microscopic structures embedded in the leaf and latex of *Hevea brasiliensis* to the broader disruptions of global water cycles caused by vast monoculture plantations. The transformation of natural rubber through the process of evaporation emerges not as a passive condition, but as an active, formative force—one that shapes rubber's materiality, propels its industrial expansion, and leaves deep ecological consequences.

At the smallest scale, the shift from dispersed liquid latex to consolidated solid rubber marks the moment of water's disappearance, a quiet but irreversible material threshold.

Expanding outward, **the installation exposes how rubber, soil, and atmospheric moisture interweave, altering local evapotranspiration patterns, draining ecosystems, and redirecting hydrological flows.** These transformations reveal rubber's hidden "water debt" its silent contribution to drought, soil degradation, and systemic imbalance, made visible when the tree is extracted from its ecological niche and cultivated at industrial scales.







Material Experimentation

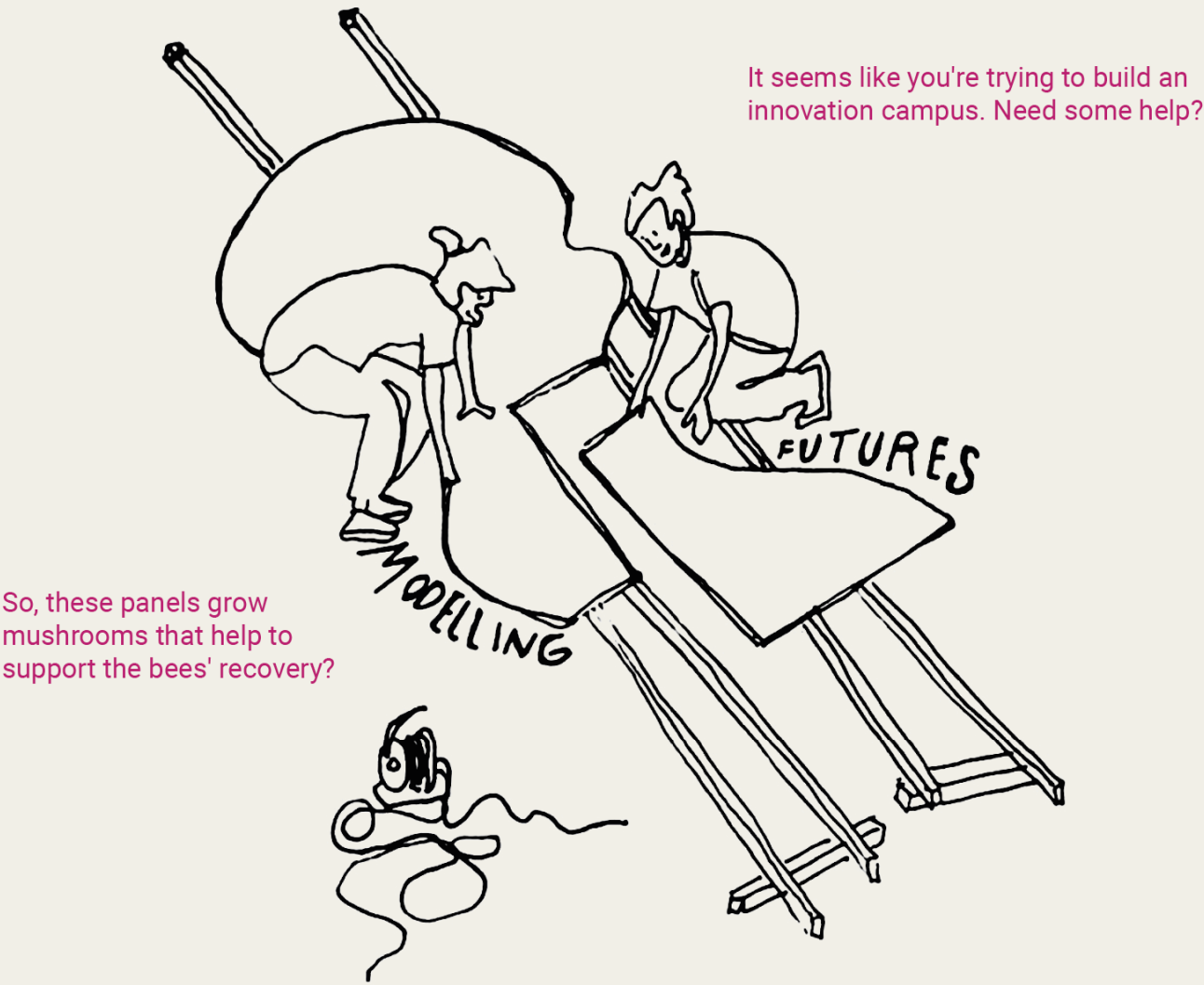


The Well School

Adv V Clinic Studio  
Fall 2024  
Instructor: Bryony Roberts  
TA: Abriannah Aiken and Angela Alissa Keele  
Collaboration: Adi Klein and Yinhui Dong

MAKING  
LEARNSCAPES

MAKING  
LEARNSCAPES



ORIENTATION DAY

LOCATION: AVERY 115

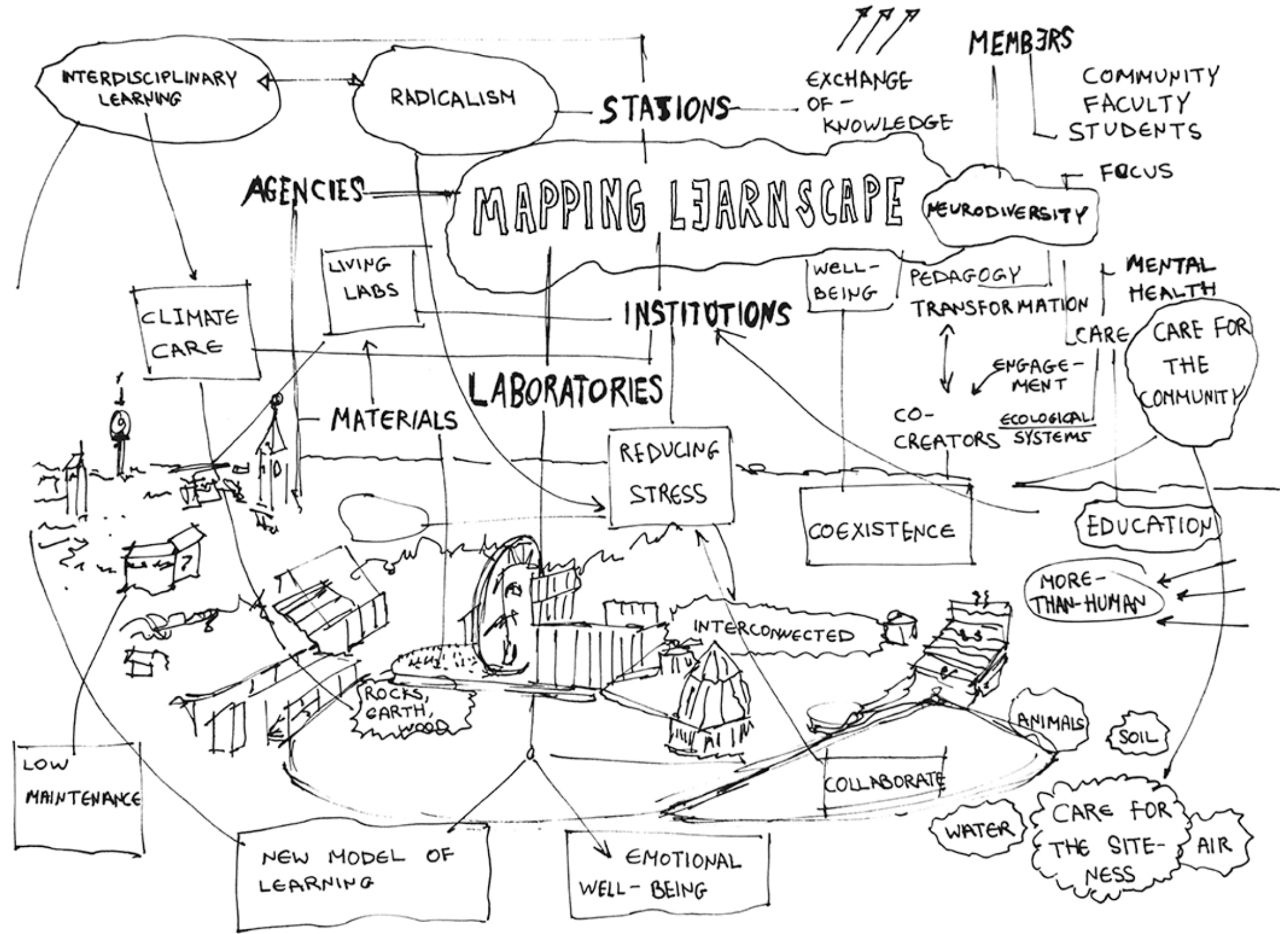
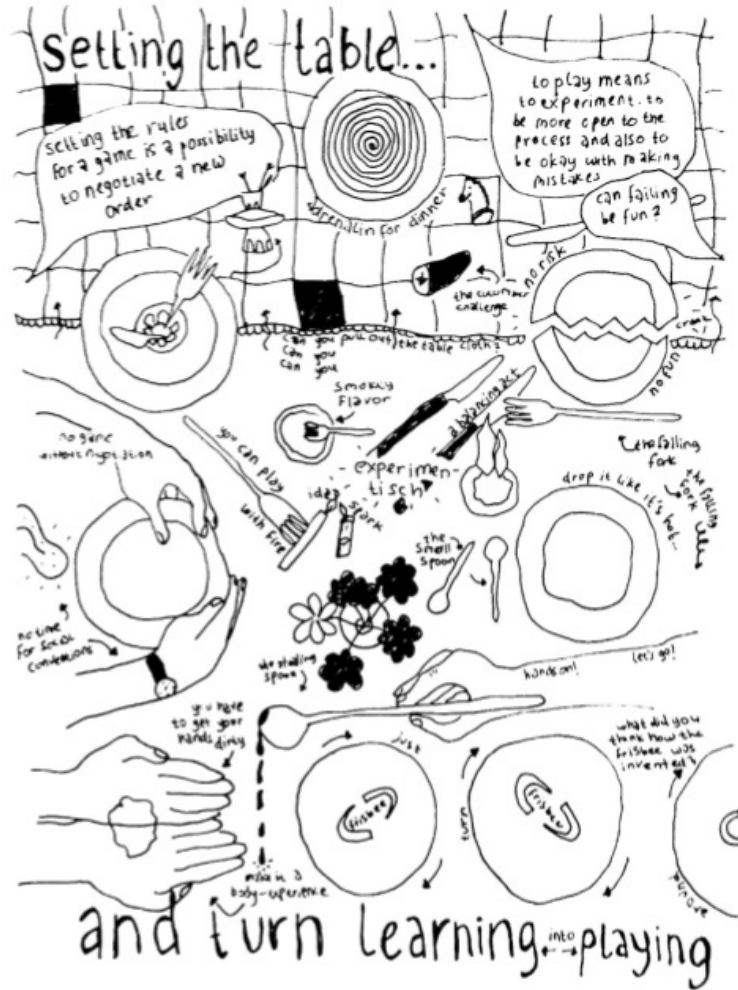
TIME: 12/09/2024 , 3:00 PM



Making Learnsapes is a program that reimagines education as a collaborative landscape—one that transforms how we learn, interact, and grow.

Even with all the advancements in the world, pedagogy has evolved slowly since its beginnings. We still teach and learn in the same ways. In architecture schools, the conditions and environment often lead to a lot of stress, deeply affecting mental health and well-being.

But does it have to be this way?





# 01 - What are we working with?

Reaserch Phase: Understanding the Existing Conditions at Avery Hall

## Your Emotions Matter

"Caring for myself is not self-indulgence, it is self-preservation, and that is an act of political warfare."

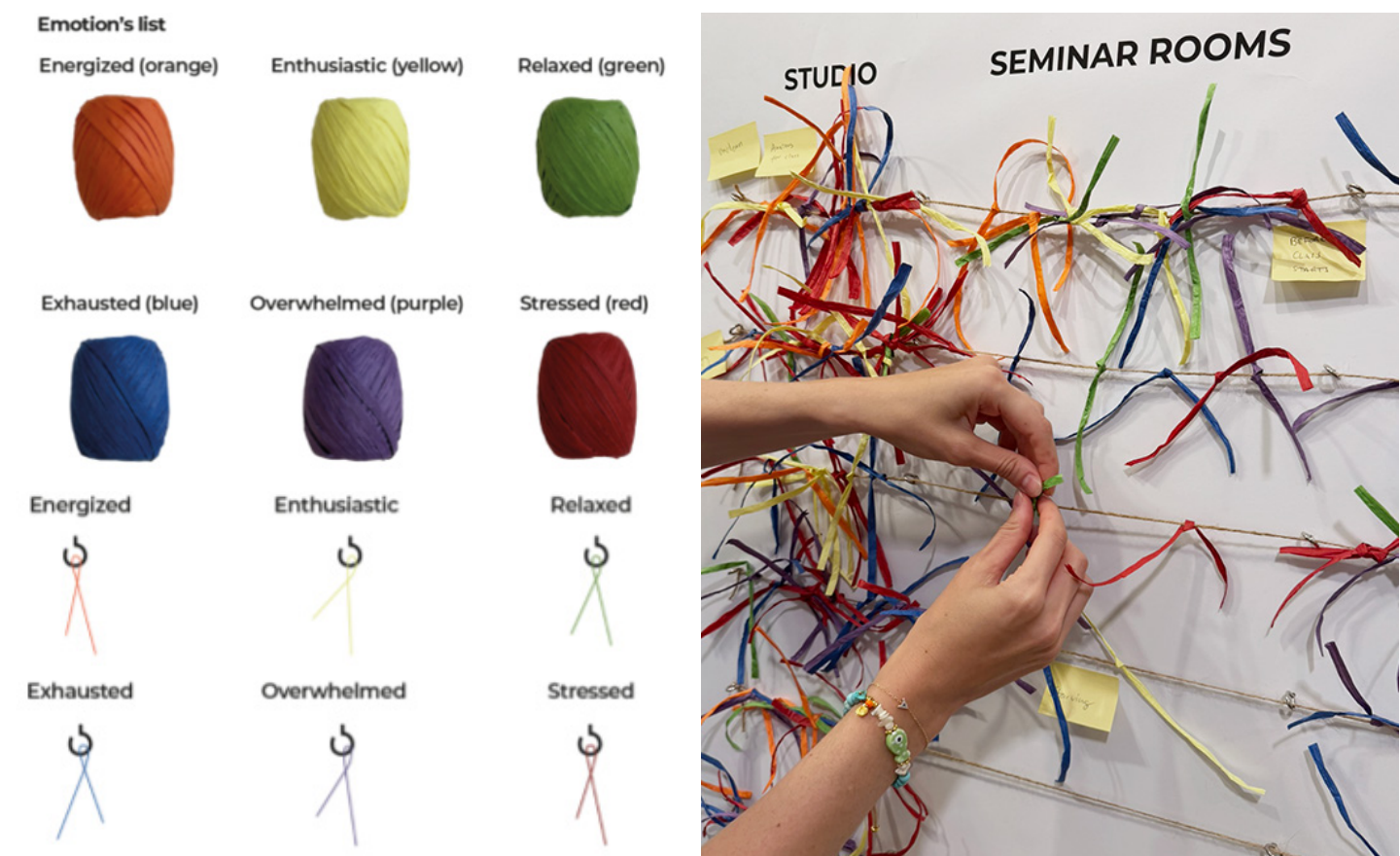
— Audre Lorde

Most of us, whether students, faculty or administrators, have experienced moments in Avery Hall that sparked strong emotions. You may remember a few of those moments yourself. Can you recall feeling Enthusiastic, Relaxed, Overwhelmed, or some other emotions?

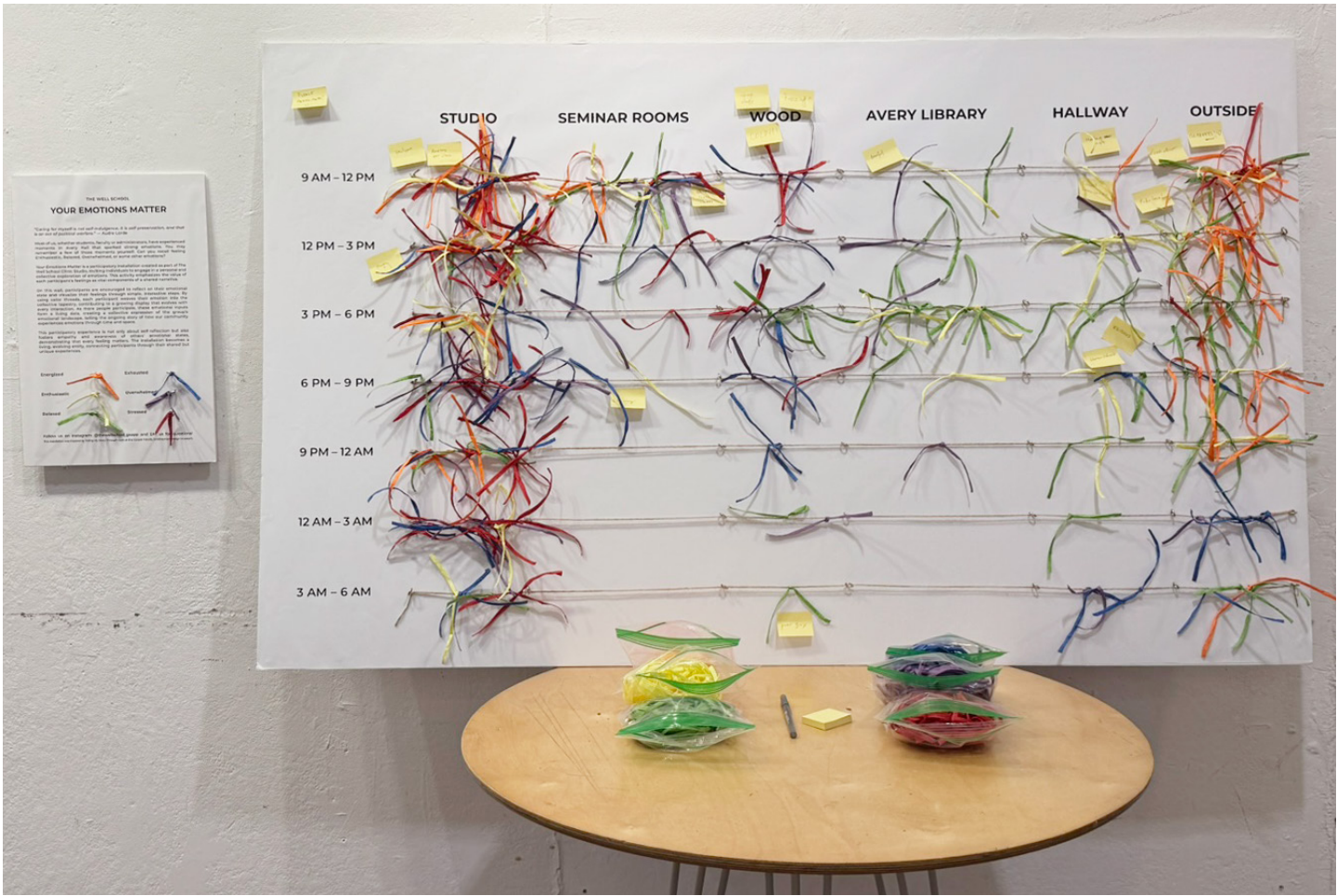
Your Emotions Matter is a participatory installation created as part of The Well School Clinic Studio, inviting individuals to engage in a personal and collective exploration of emotions. This activity emphasizes the value of each participant's feelings as vital components of a shared narrative.

On this wall, participants are encouraged to reflect on their emotional state and visualize their feelings through simple, interactive steps. By using color threads, each participant weaves their emotion into the collective tapestry, contributing to a growing display that evolves with every interaction. As more people participate, these emotional inputs form a living data, creating a collective expression of the group's emotional landscape, telling the ongoing story of how our community experiences emotions through time and space.

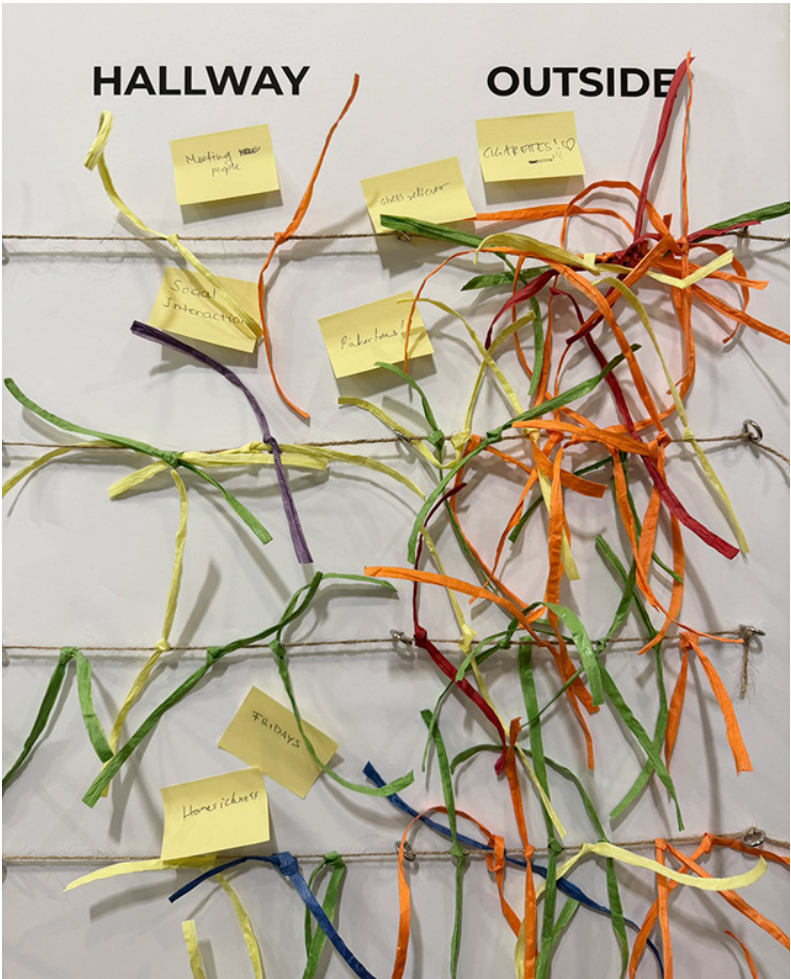
This participatory experience is not only about self-reflection but also fosters empathy and awareness of others' emotional states, demonstrating that every feeling matters. The installation becomes a living, evolving entity, connecting participants through their shared but unique experiences.



Collected Data: 240 participants





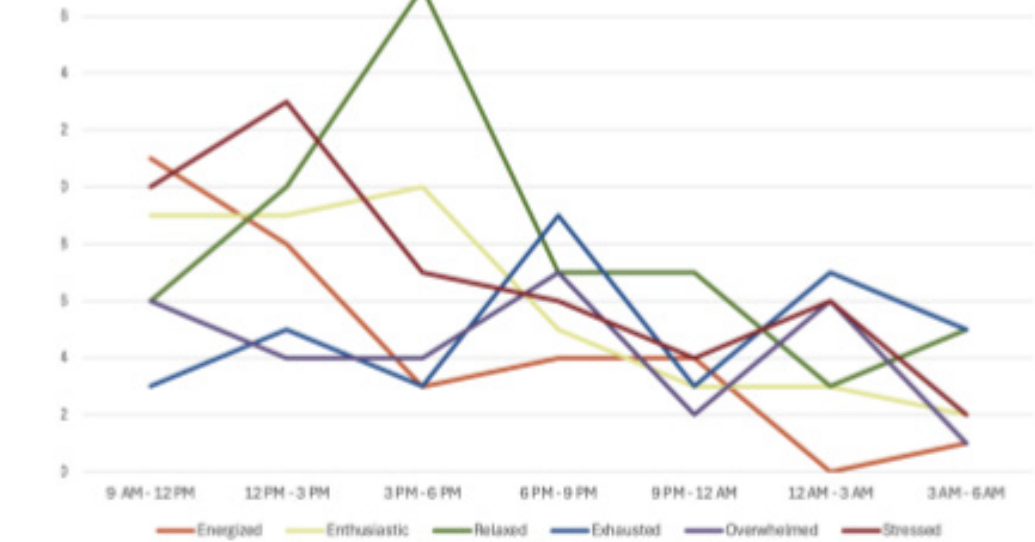
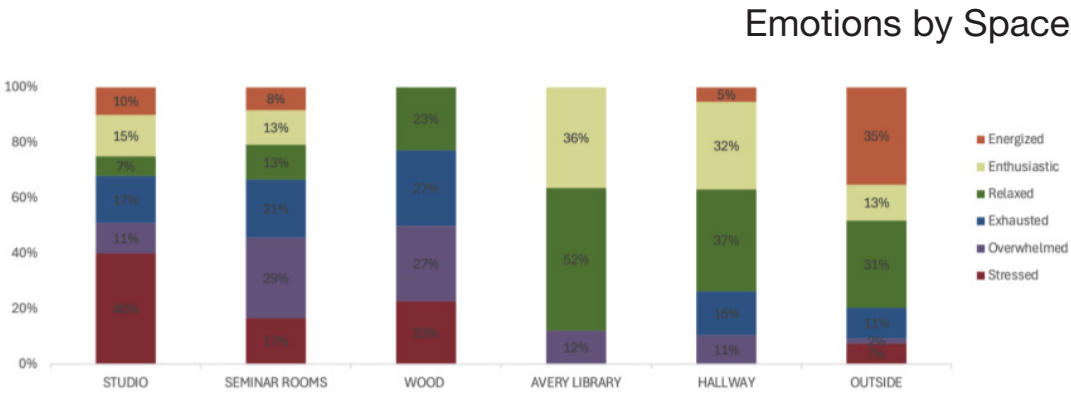
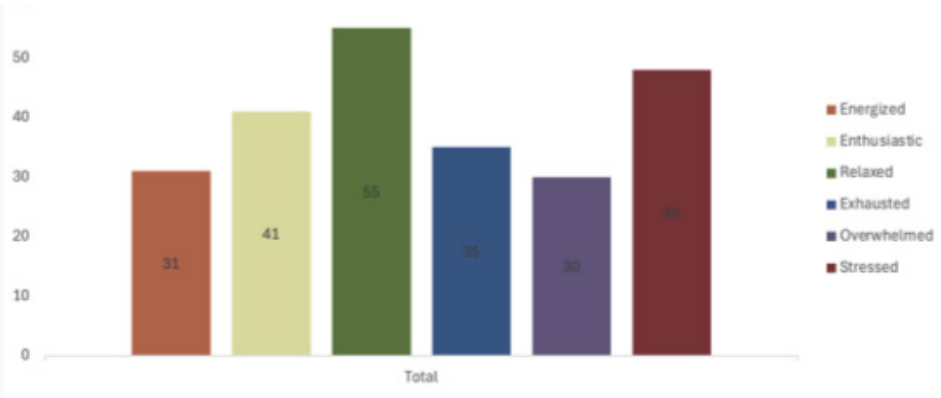


Overall, the installation revealed key emotional patterns: high stress and exhaustion in studio spaces, the positive influence of outdoor areas, and the library's role as a calming and energizing environment. This evolving installation demonstrated how different spaces evoke distinct emotional responses, contributing to a richer understanding of the community's relationship with the building.



## Emotional patterns

The most frequently reported emotion is Relaxed, followed closely by Stressed and Enthusiastic.



## Time of the Day

Emotions fluctuate throughout the day, with stress peaking in the afternoon and relaxation increasing in the evening, reflecting typical daily rhythms.

### STUDIO

Exhibited a concentration of stress and exhaustion, reflecting the high-pressure environment of this space.



### SEMINAR ROOMS

Showed elevated levels of overwhelm and exhaustion and fewer positive emotions.



### WOOD AUDITORIUM

Presented a mix of emotions, with both exhaustion and overwhelm, and more positive feelings such as relaxation and enthusiasm.



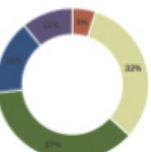
### AVERY LIBRARY

There were no reports of stress, and fostered feelings of relaxation and enthusiasm, likely due to its calming atmosphere and natural light.



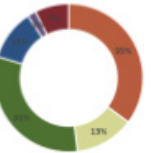
### HALLWAY

Emotions were generally neutral to positive, indicating a less intense emotional experience, connected to the fact that it is a place for social interaction.

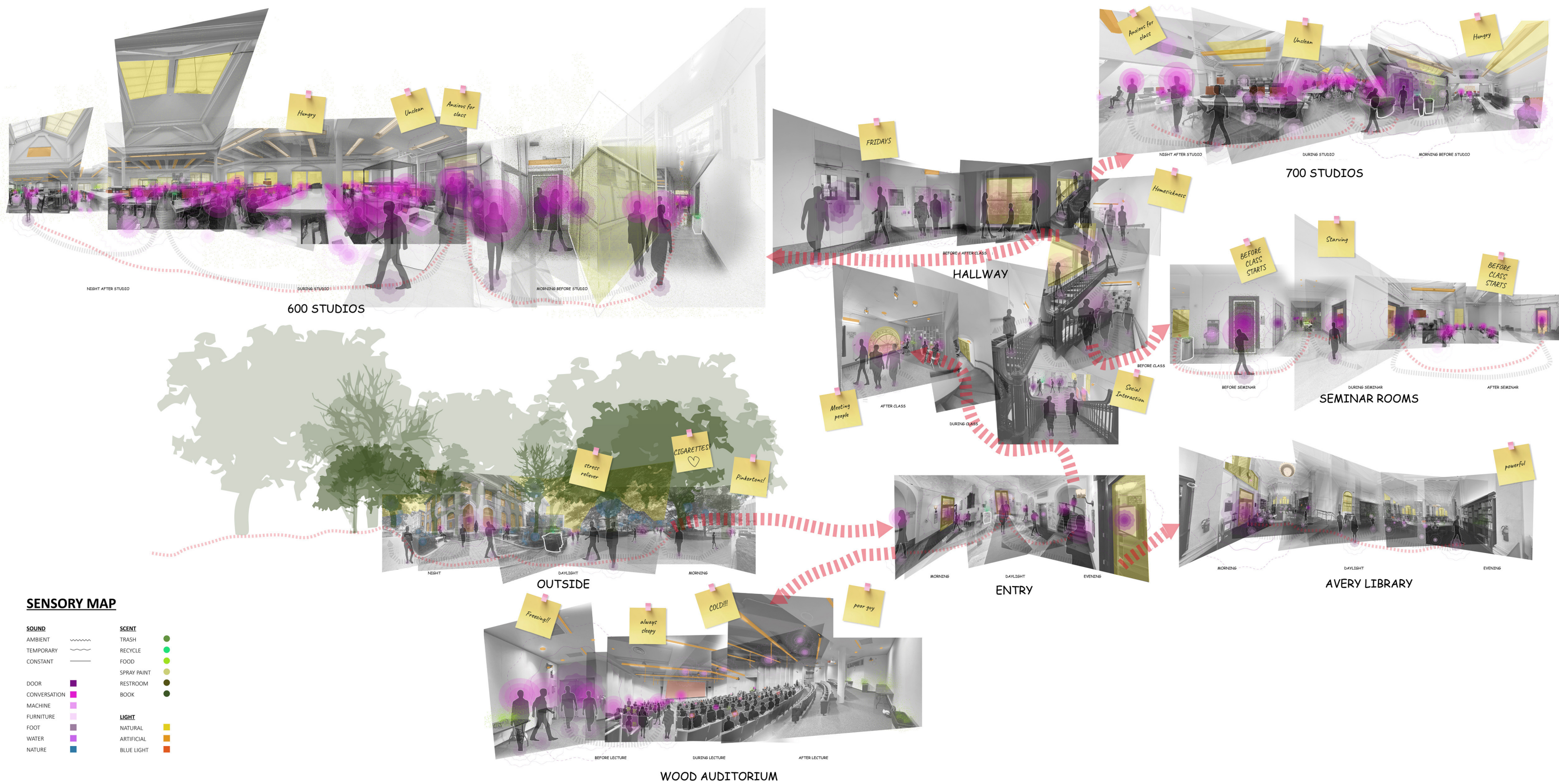


### OUTSIDE

Higher levels of energized and relaxed emotions, with minimal reports of stress or overwhelm, emphasizing the positive influence of outdoor spaces.







### Sensory Map

We used the same spaces from the participatory activity and mapped them from a sensory-spatial perspective—considering factors such as smell, sound, light, and so on. We created human-scale perspectives to immerse participants in the sensory experience of each space, and then combined these perspectives into a unified collage that showcases the diverse sensory experiences within the building.

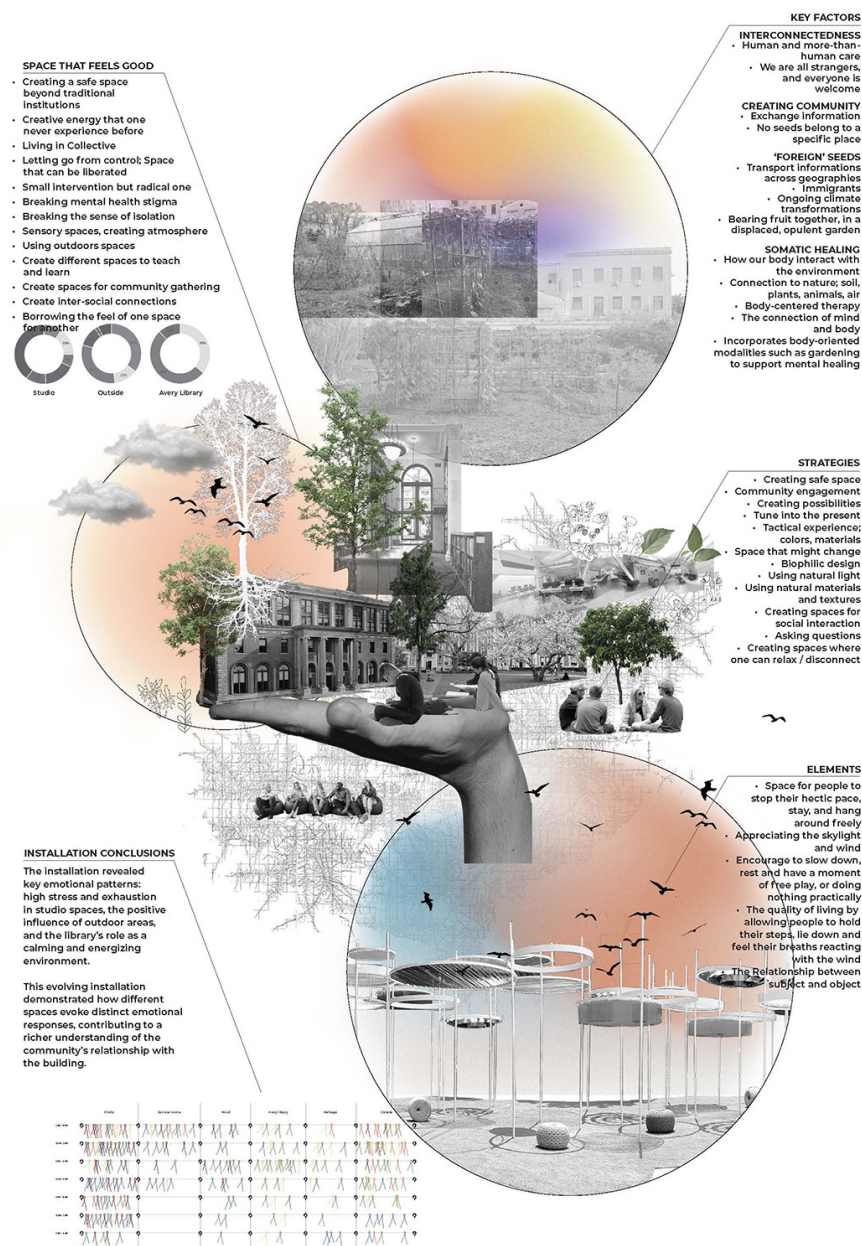
In conclusion, the participatory activity and the sensory perspectives together revealed how different spaces in Avery Hall shape and influence our emotional and physical experiences. Through the emotional data collected via color-coded threads and the immersive human-scale sensory mapping, we gained a deeper understanding of how spaces like the studio, library, hallways, and outdoor areas evoke distinct responses. The combination of these approaches highlights the intricate relationship between our environment and our well-being, fostering a more holistic awareness of the building's impact on its users.



Research Phase II  
Case studies on organizations and projects designed with neurodiversity  
and mental well-being.

We envision a transformation in the way of learning, creating a space that fosters community, interconnectedness, and cultural exchange, with mental health at its core.

By incorporating natural elements and more-than-human alliances, the space will support well-being and nurture a deeper connection between individuals and their environment.



## 01 The Foreign Farmers

Located in Palermo's botanical garden invited migrants to plant seeds from their native lands, introducing vegetables unfamiliar to the local context. It created a safe space for farmers to reconnect with their roots, exchange agricultural knowledge, and find emotional refuge. Through cross-cultural dialogue and care for the non-human, the project fostered interconnectedness, mental well-being, and a sense of belonging.

It's an organization that facilitates connections between individuals with mental health experiences. They encourage people to express themselves and share their stories, breaking mental health stigmas. All the activities held are connected by different testimonies, thoughts, and beliefs, showing the importance of storytelling and community building.

01 The Foreign Farmers

PALESMO, ITALY

• Pumpkin China

• Bottle Gourd Indochina

• Squash Philippines

• Pumpkin India

• Cucuzza Sicily, Italy

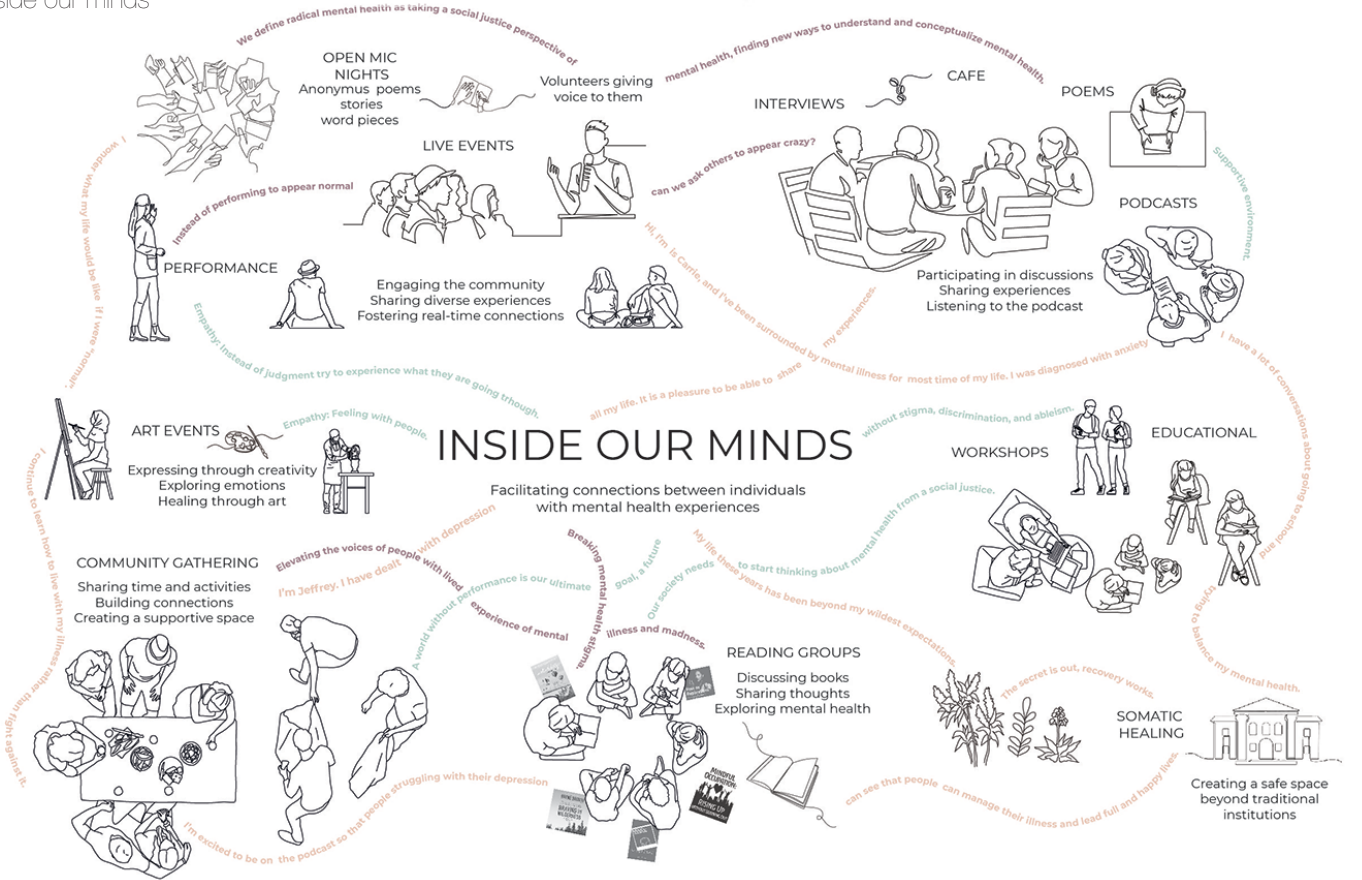
• Karela (Bitter Melon) Nepal or Turkey

• Tomatoes Sahel & Africa

Under the shady pergola of Foreign Farmers we are all strangers, and everyone is welcome.  
At the Botanic Garden they bear fruit together, in a displaced, opulent garden.

02 Inside our minds

## 02 Inside our minds





# INTERSPECIES PICNIC

## Making Learnscapes

This new program envisions education as a tapestry of collaboration, weaving connections into a learnscape where everything is interconnected. By celebrating shared moments of joy, this setting enhances emotional well-being and deepens our relationship with the world beneath our feet.

The previous edition of the program unfolded over a year and was structured in five chapters. It broke free from traditional course structures and crossed the boundaries of individual schools at Columbia, fostering interdisciplinary learning. Students, faculty, and the wider Columbia community came together to engage with today's pressing issues. For example, last year's participants questioned the pollinator pathways in cities. This model gives each participant the opportunity to define their own issue.

The program introduces a way of learning grounded in collaboration, active engagement, and knowledge exchange—providing a more inclusive and supportive approach to education. It shifts learning into playing, transforming schools from spaces of massive production into collective energy—like gardens: places of growth, interdependence, and life.

### A network of devices

At the core of this program is a collaborative relationship with the environment. Through a network of devices, each offering a different mode of engagement, participants come together to learn, explore, and grow with the site, treating it as a living laboratory.



Model, Soil, Mushrooms, Sawdust



Columbia University



RADICAL  
PEDAGOGY

# TIMELINE

WHAT happened WHEN?

1<sup>ST</sup> RADICALS MEETING

MAY



RAISING  
TRANSSCALAR  
QUESTION

RESEARCH

JUNE  
SPRING

- Siteness and Waste
- Co-hiving
- Animal Instinct
- The Hidden Dimension of Fungi
- Compost Care
- Living Lab
- What Are Algae?

CARE FOR  
CARE WITH  
CARE ABOUT

This device serves as a framework for growing materials, which are then used to create future devices. The device can either remain unchanged, adapt, or be disassembled, allowing the materials to return to the earth. Meanwhile, new participants arriving in May will contribute to the expansion and development of a new device.

The device itself serves as an example of future architectural production.

APRIL



Collaborative Work

Living in harmony with nature, appreciating the ecosystem in all its diversity, acting as gardener and guardian.

Where to gather, meditate, or have a picnic.

AUGUST  
(Break)

SUMMER

How can we document THIS?

JULY

INTERDISCIPLINARY  
LAB

What if waste isn't the end of the story?

FOSTERING ENVIRONMENTAL CARE

SEPTEMBER

Community Building Device  
Structure pieces crafted at the wood shop, the kitchen pieces crafted from reclaimed wood, everyone invited to participate in the construction process of the device.

Experimenting with Materials  
Materials such as food waste, wood, mycelium, and soil are found all around the campus. The students start questioning materials cycles. These materials are processed in the lab to create new ones.

MARCH  
(Spring Break)

WE  
WERE  
HERE

SUNSET  
PARK  
MATERIAL  
RECOVERY  
FACILITY

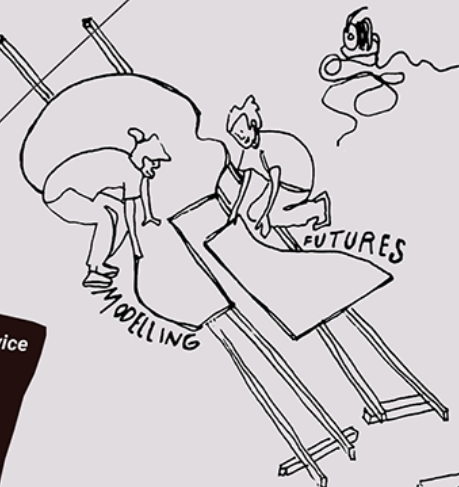
472 2nd Ave, Brooklyn, NY 11232

OCTOBER

A Garden For a New Radical Learning

- Collective kitchen
- Learning by doing
- Gathering space
- Meditating
- Experiencing Senses
- Being one with nature

FALL



Transcultural Collective

FOOD  
thoughts

FEBRUARY

Space to find care and intimacy

The winter season, cold and breezy, is filled with fabrics and cushions that create a warm atmosphere, while wind spinners generate electricity to power small, warm lights both around and inside the device, ensuring it operates effectively during winter.

NOVEMBER



Seasonal Adaptability

Preparing the device for fall and winter activities.

DECEMBER

(Break)

JANUARY

WINTER

Its flexibility allows it to adapt to different seasons, making it a versatile and dynamic space.

The device travels around the campus depending on weather conditions and the specific gathering needs.

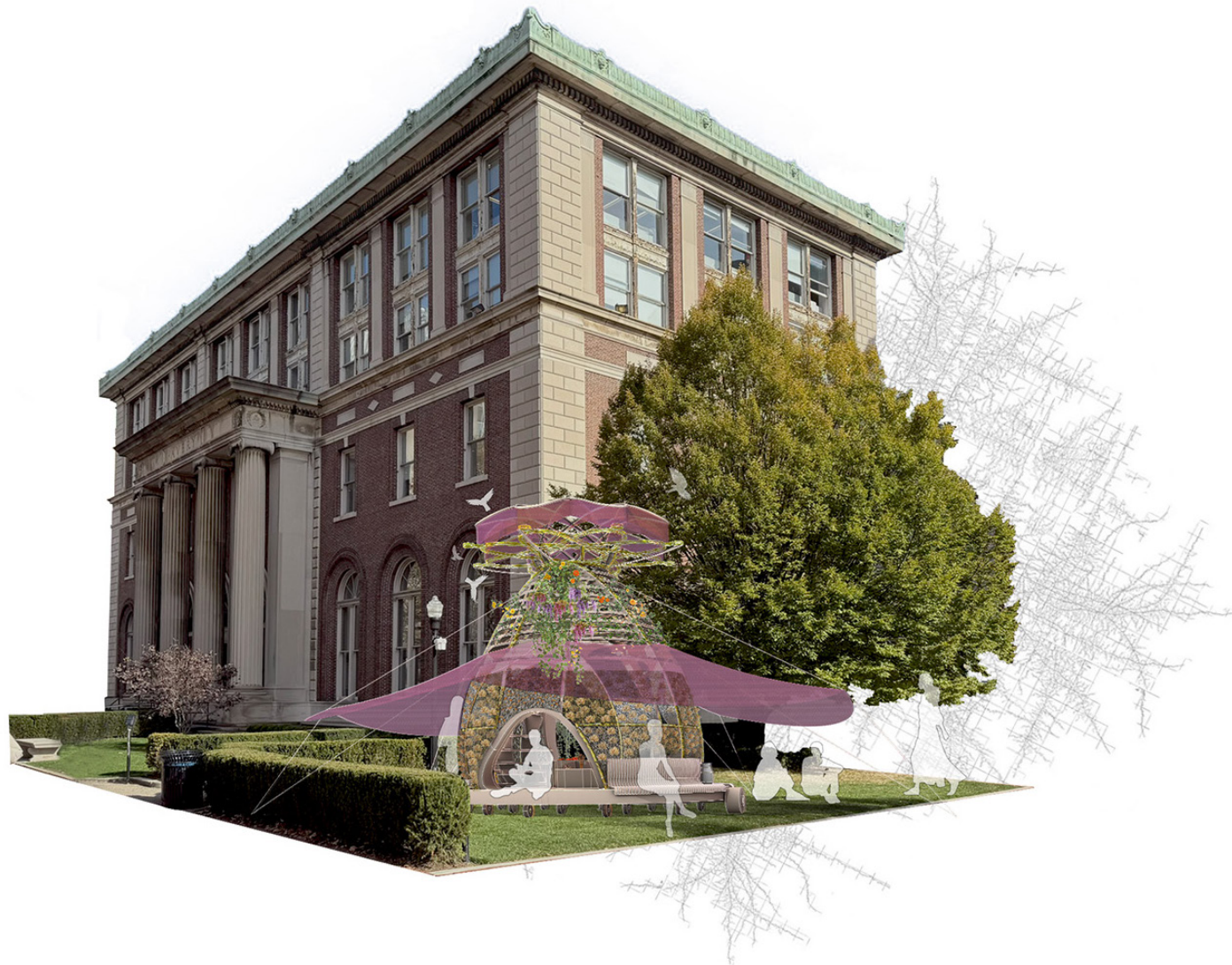
calling into the now



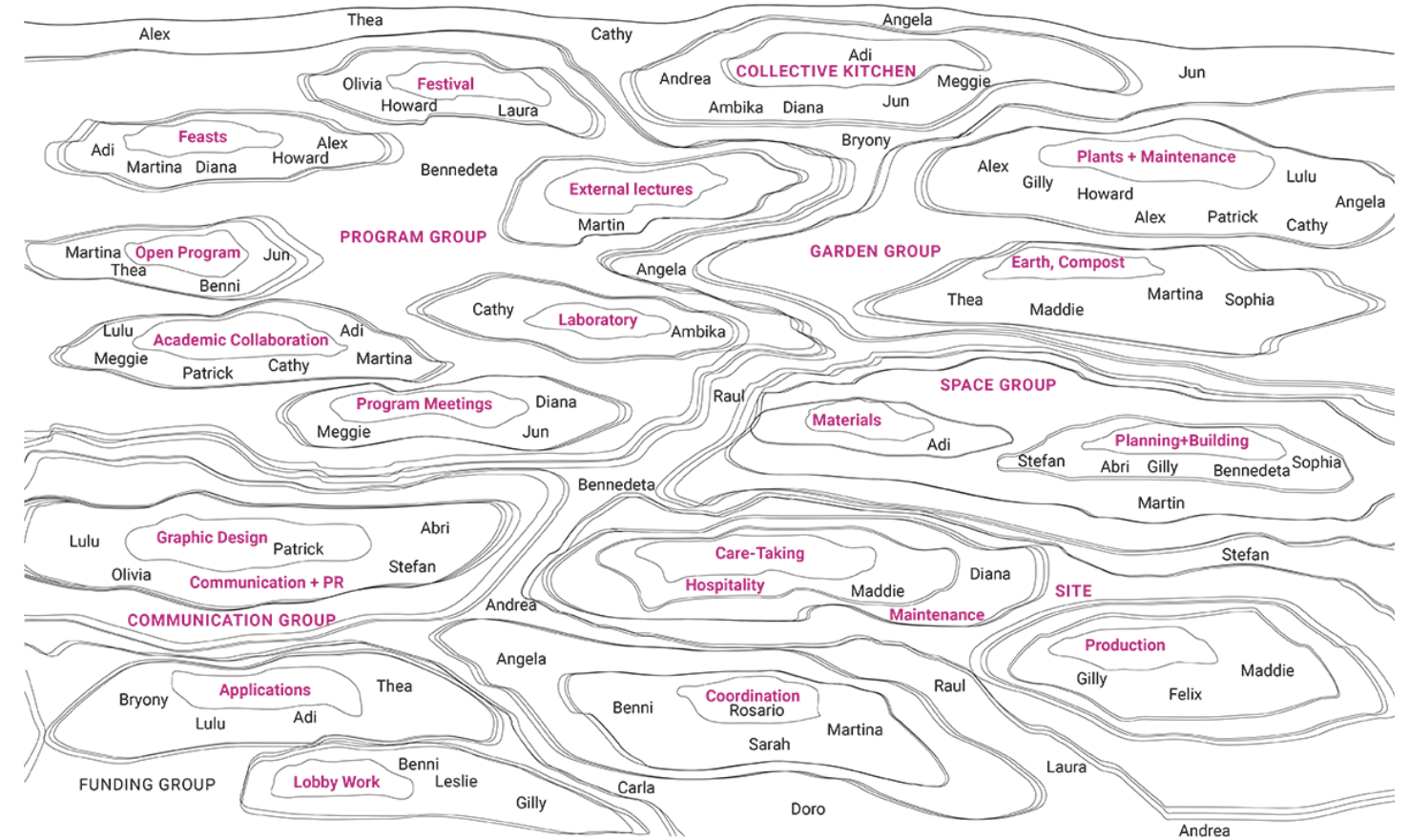
The first chapter focused on raising transscalar questions, which led to the development of the first device: the Interspecies Picnic. During the first ten days, participants shared feasts, explored questions, discussed readings, and engaged in activities like 'Range of Sounds'. In this process, they identified the site and discovered an underground bee colony near Avery Hall. This inspired an exploration of the bee life cycle, revealing their risk of extinction and the potential of mycelium as a food source to support their survival.

Through participatory activities like 'Your Emotions Matter,' participants also realized the absence of social spaces around food in Avery. This led them to investigate materials available on campus—food waste, wood, plastics, soil—and consider how those materials could continue a story, rather than end as waste.

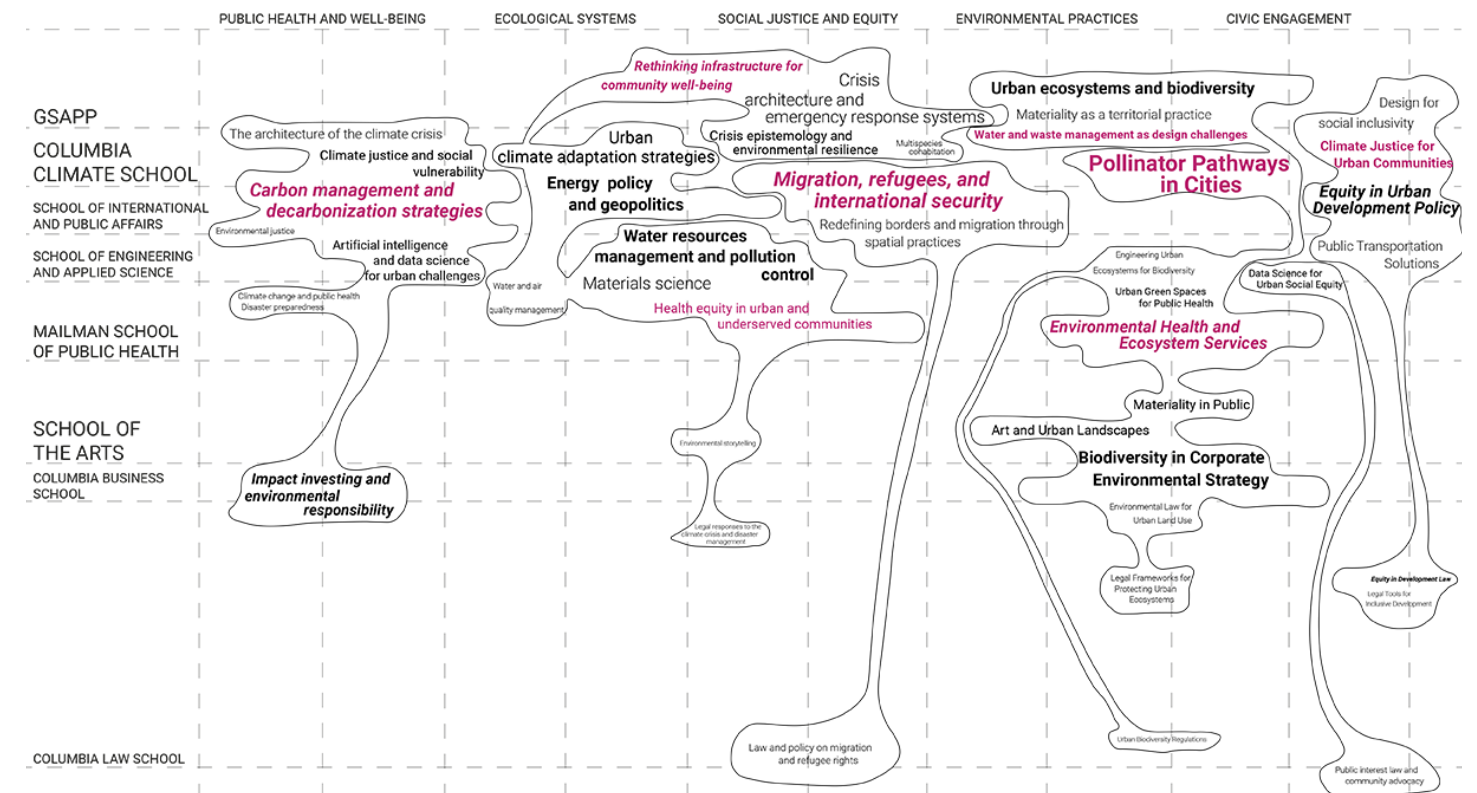
RAISING A  
TRANSSCALAR  
QUESTION



## FIELDS OF KNOWLEDGES + ACTION OR WORKING GROUPS



## LIST OF INGREDIENTS FOR AN INSTITUTIONAL CHANGE

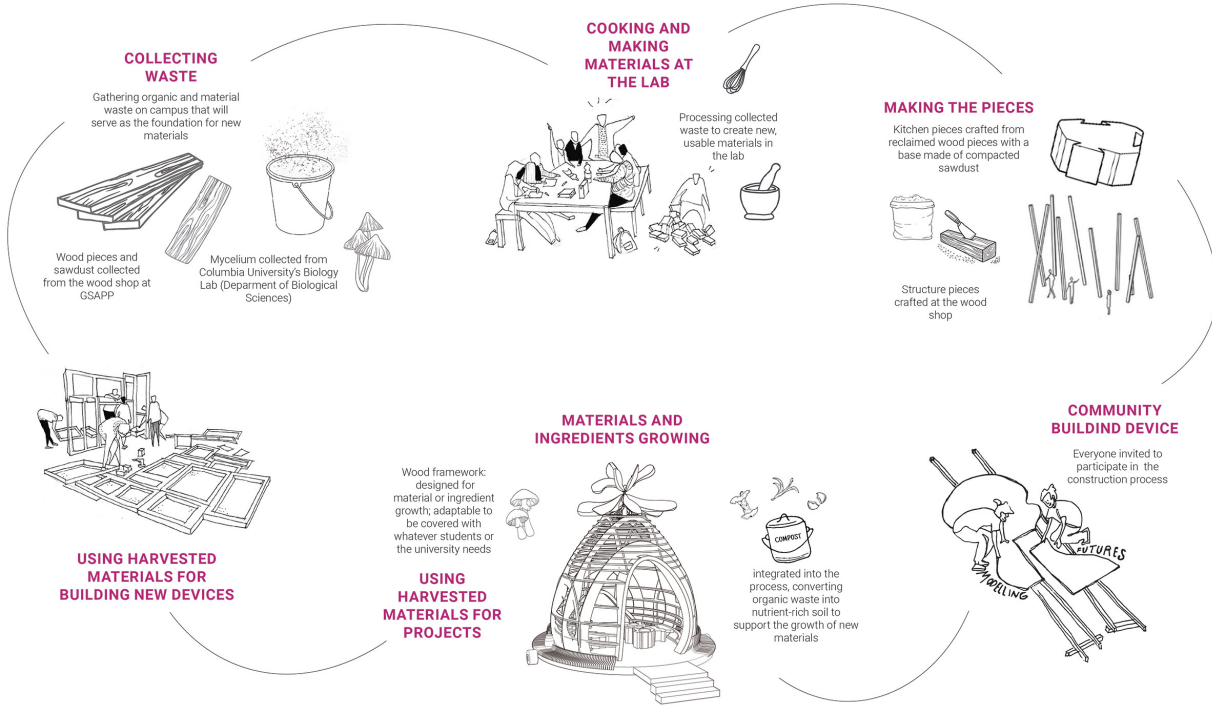








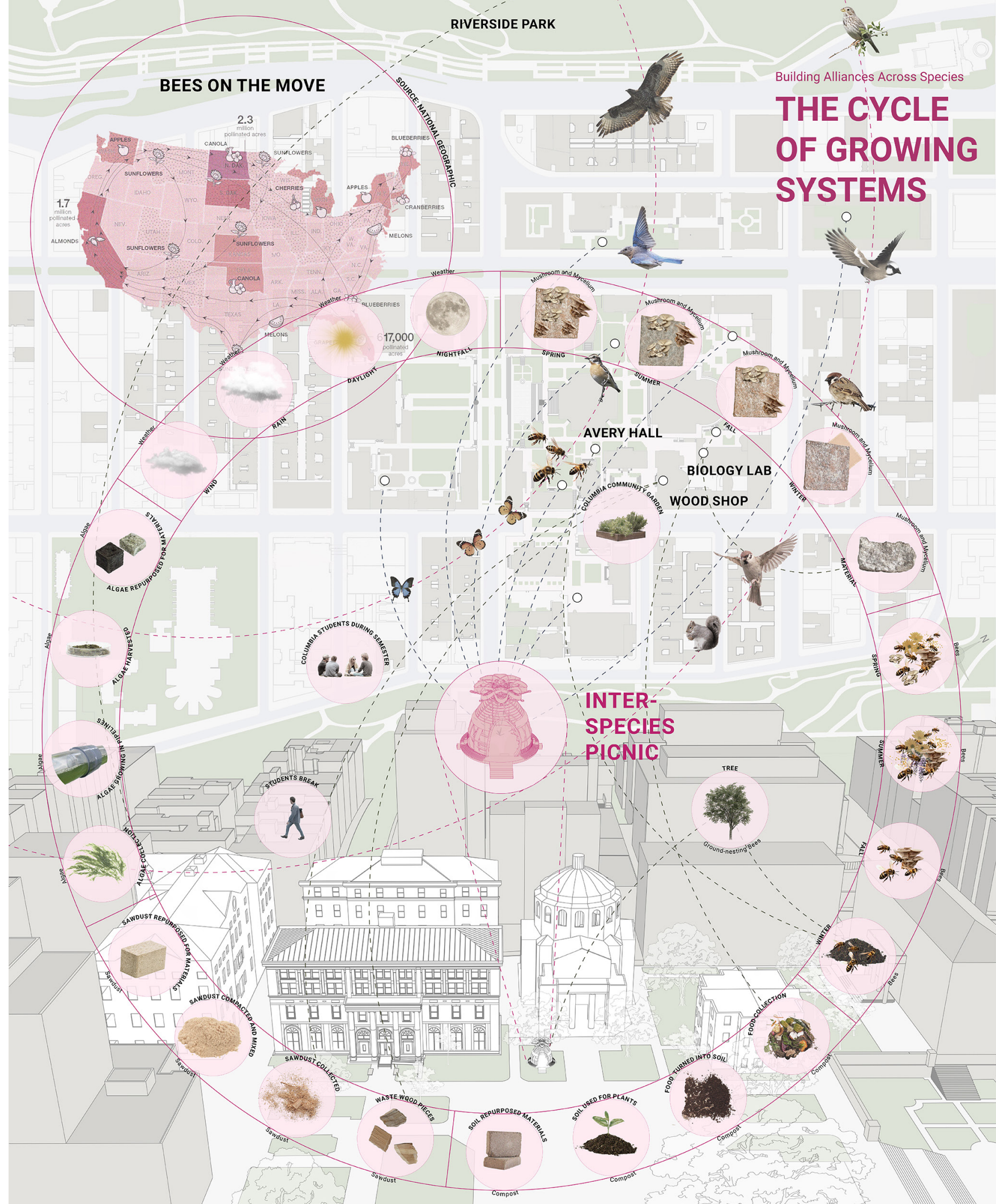
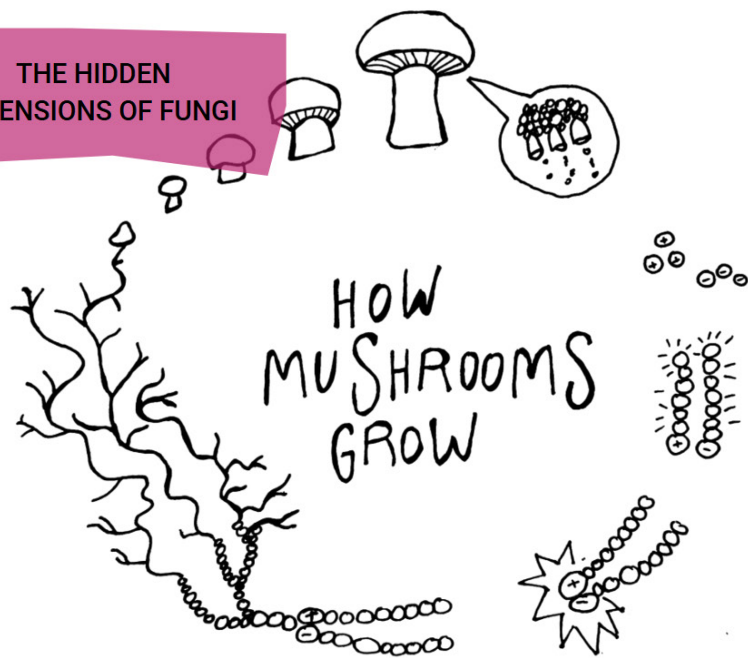
## MAKING AS LEARNING



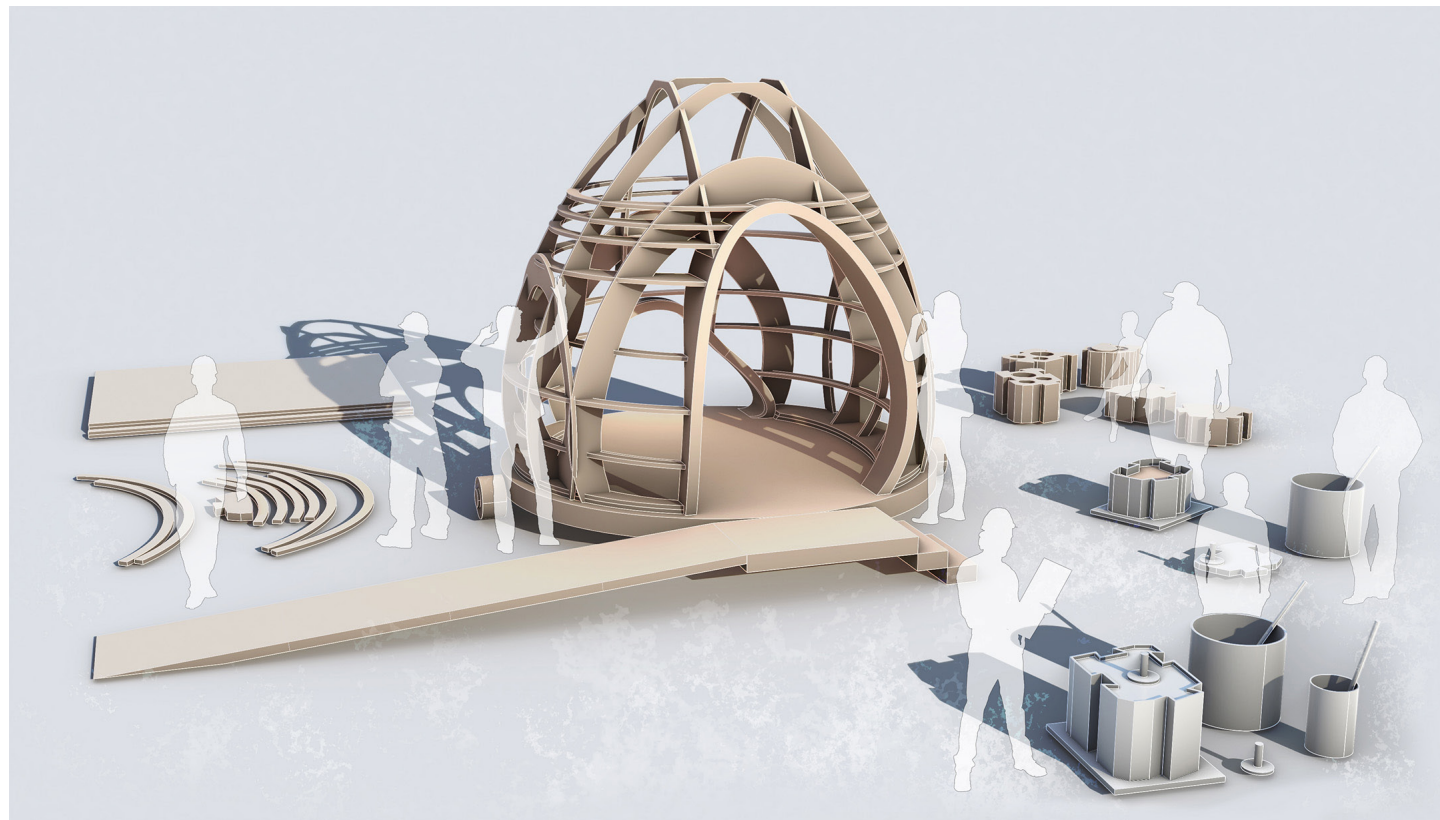
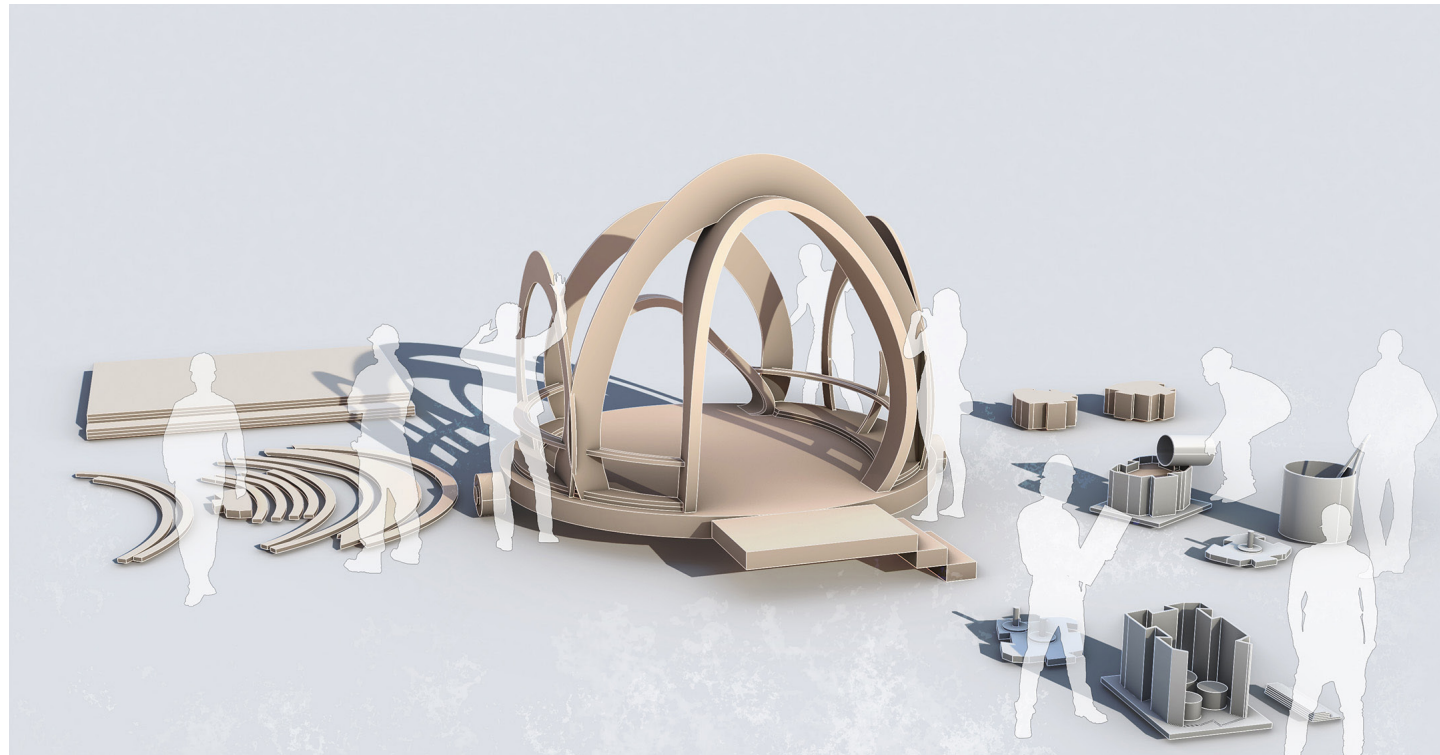
In the second chapter, participants began experimenting with materials. They entered what was called the 'Cycle of Growing Systems', embracing the ecosystem in all its diversity. The device became a framework for growing materials, which were then used to create new natural materials and future devices. Shaped by participants, seasons, bees, birds, mushrooms, algae, materials, and food, the device moved across campus as a living organism for ecological repair—fostering mutual care across species. Mycelium, collected from the biology lab, initiated the building of the first device—a pedagogy of making as learning.



## THE HIDDEN DIMENSIONS OF FUNGI







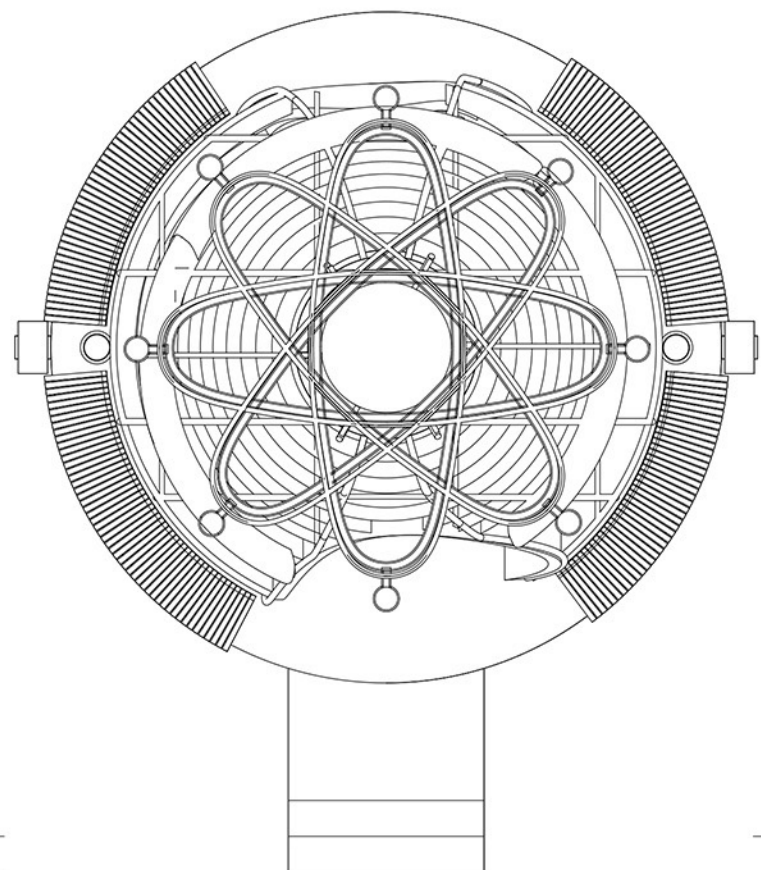
The next chapter focused on construction. Participants designed adaptive and participatory systems that sparked creativity without rigid expectations, fostering autonomy and easing stress. Through hands-on engagement, participants were invited to explore and innovate, while caring for their mental health.

The device became a modular system, designed to adapt to seasonal changes. It could be reassembled and adjusted without needing foundations that would compromise the soil. Elevated above ground, the structure preserved paths for animals and insects.

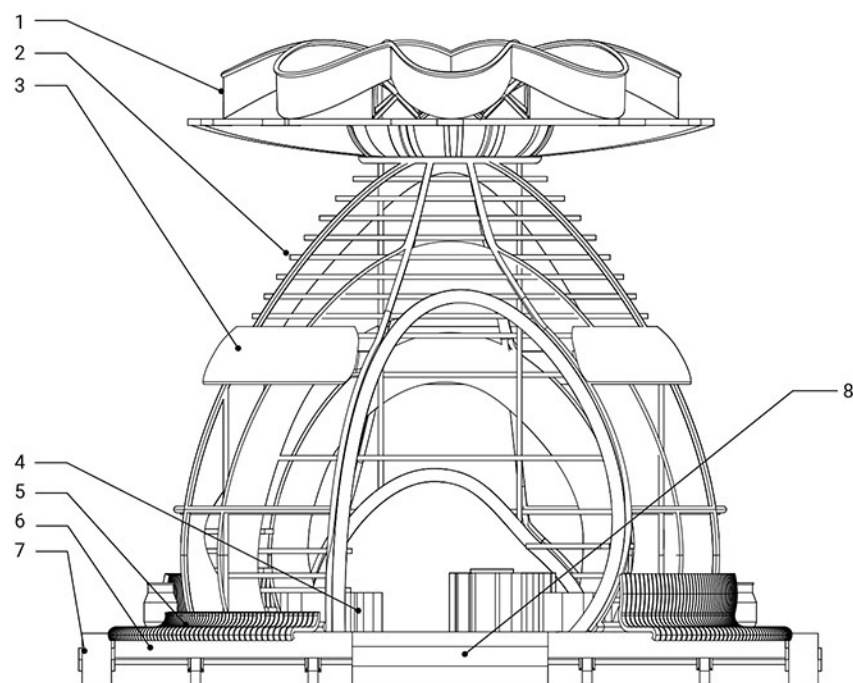
# BUILDING DEVICE



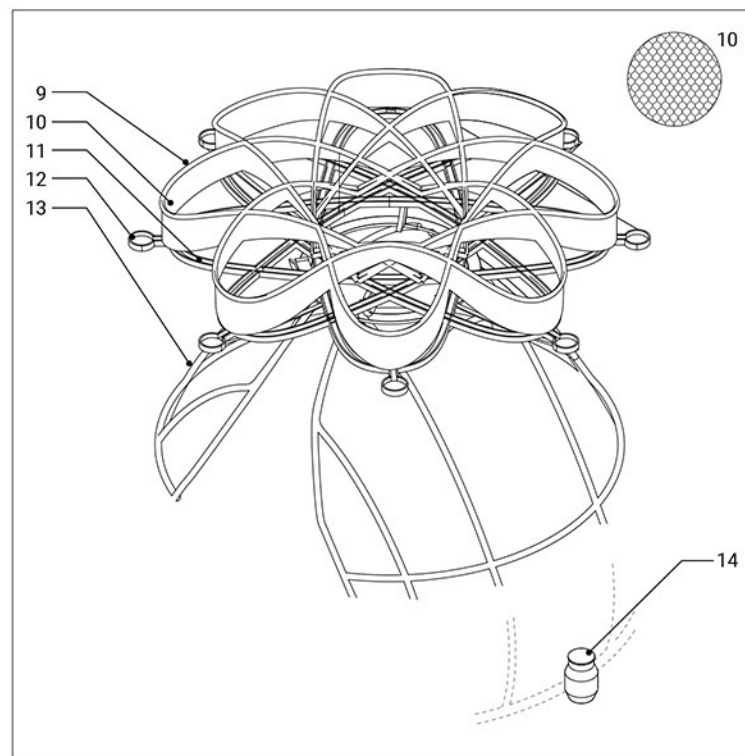




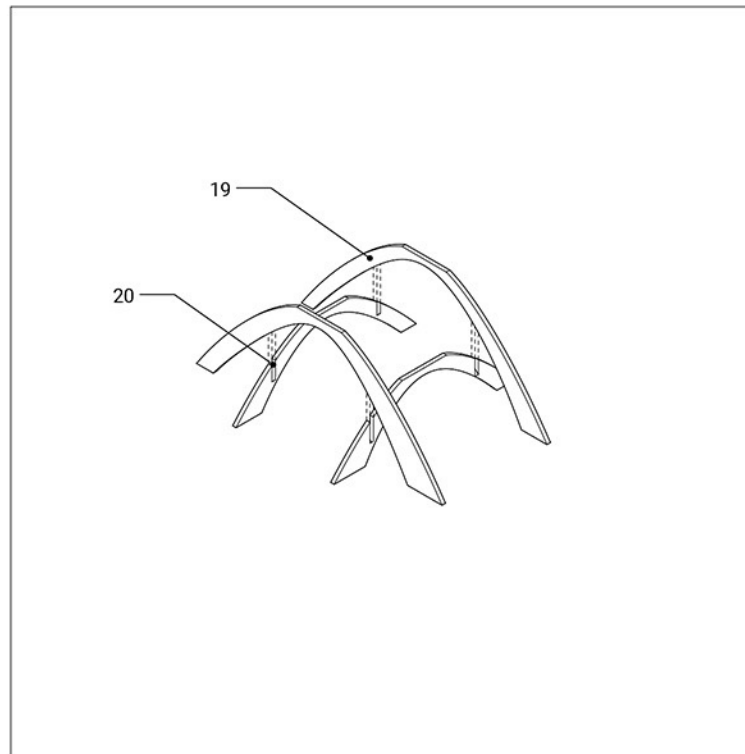
**01** TOP VIEW  
SCALE 1:20



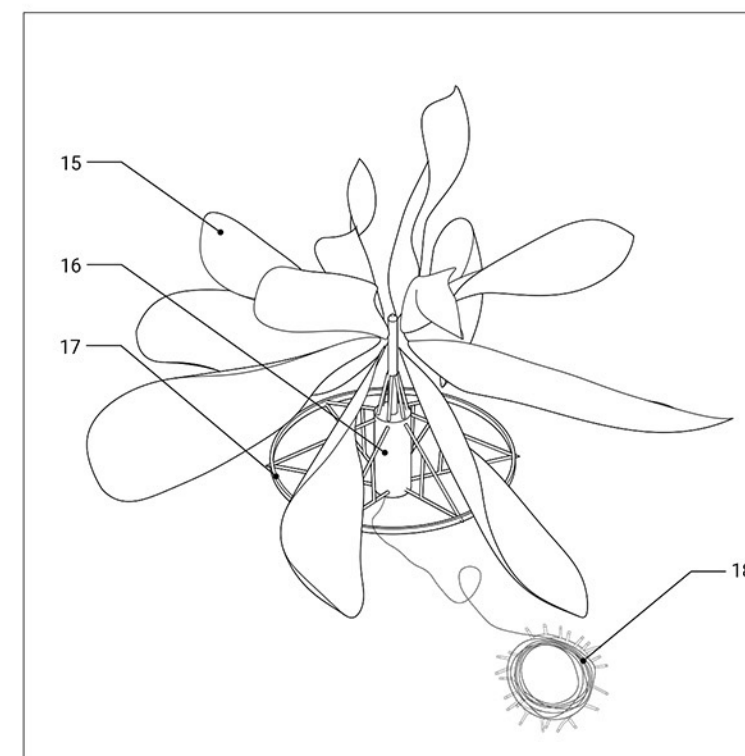
**02** ELEVATION OF INTERSPECIES PICNIC  
SCALE 1:20



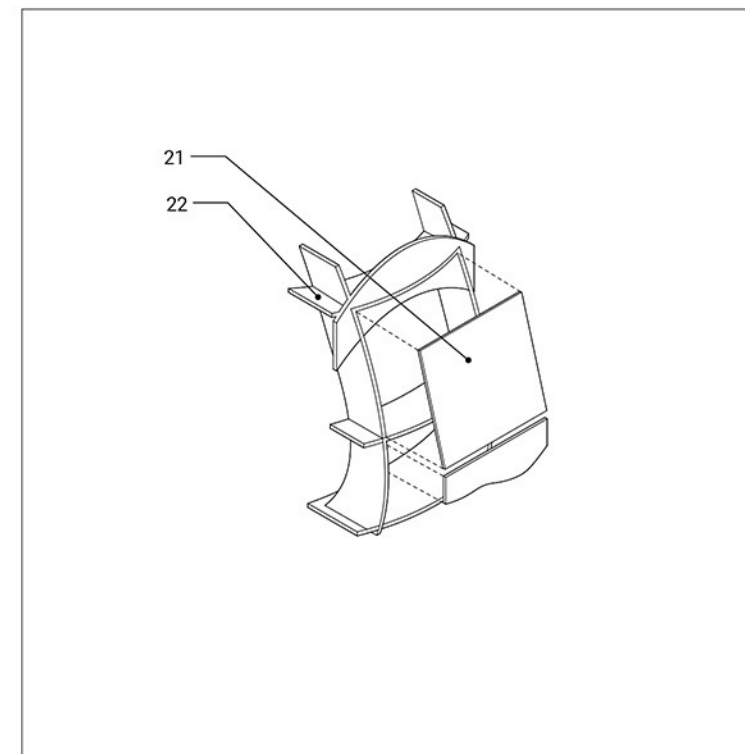
**03** DETAIL A (MOISTRE CATCHER)  
SCALE 1:20



**05** DETAIL C (WOOD SLABS CONNECTION)  
SCALE 1:20



**04** DETAIL B (WIND SPINNER)  
SCALE 1:20



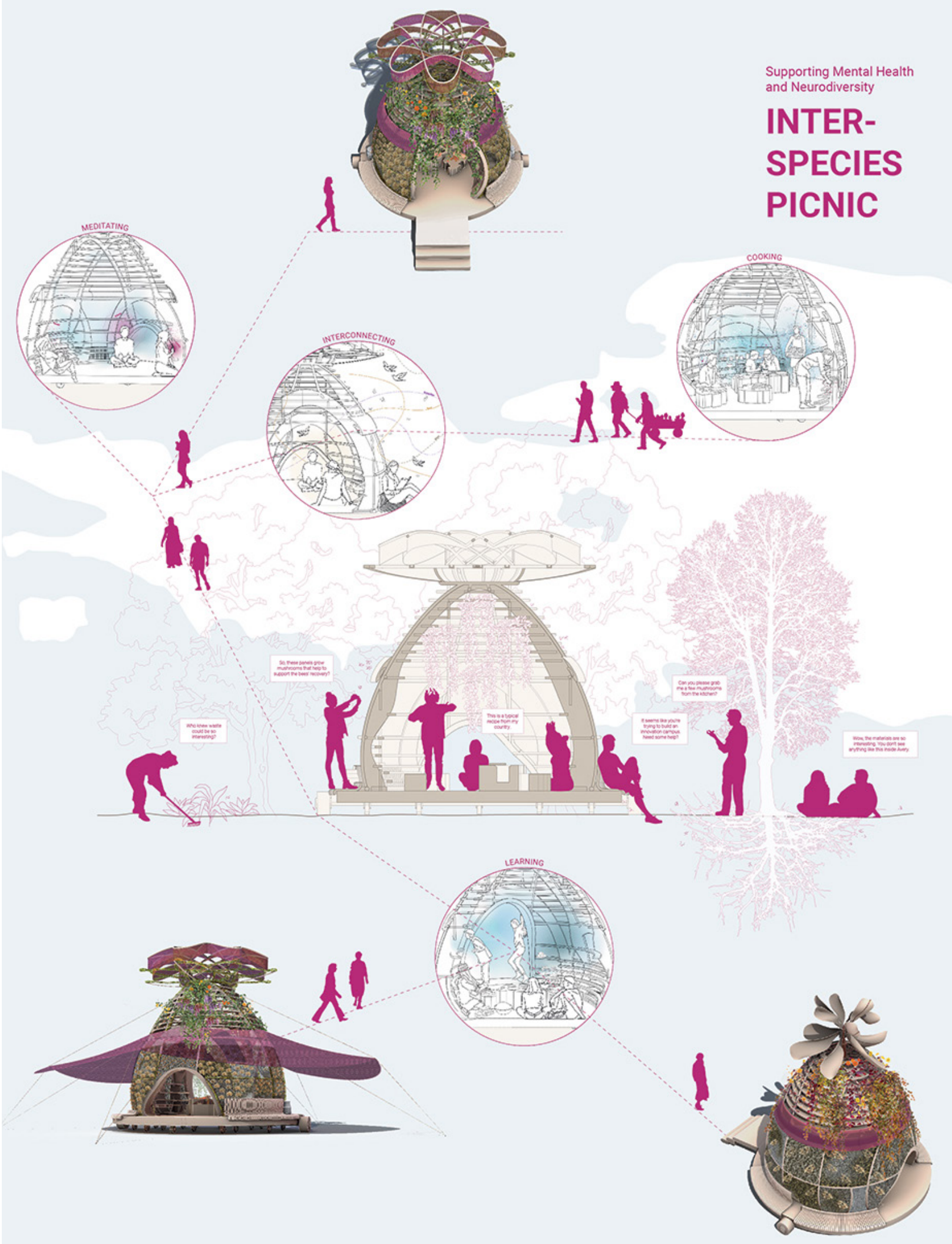
**06** DETAIL D (MYCELIUM PANELS)  
SCALE 1:20

1. Detail A (Moistre Catcher)
2. Wooden Structure
3. Canopy / Cover-up Shade
4. Collective Kitchen
5. Wooden Bench
6. Wooden Base
7. Wheels
8. Stairs / Ramp
9. Wooden Frame
10. Polypropylene Mesh
11. Gutter
12. Water Bowl for birds
13. Funnels for Algae
14. Liquid Storage
15. Wooden Spinner
16. Wind Generator
17. Wood Frame
18. Golden LED Lights (2700K-3000K)
19. Wooden Slabs
20. Connection Plank (plung / socket)
21. Mycelium Panels
22. Wooden Slabs



Supporting Mental Health  
and Neurodiversity

## INTER- SPECIES PICNIC



# A GARDEN FOR RADICAL LEARNING

As the main structure was finalized, participants assembled a collective kitchen. They installed mycelium panels for mushroom cultivation to support bee health, planted herbs and crops, harvested materials, and cooked together as a community. This kitchen included modular units for cutting, pouring, mixing, dining, and composting—designed at different heights to question how cooking spaces are used and to expand accessibility. Each module acted like a puzzle piece that could be arranged as needed, supporting preparation, learning, and gathering.

In the fourth chapter, participants began using the device as a garden for radical learning. The Interspecies Picnic brought together food, ecology, and mental well-being. It was designed to operate in radical ways: in summer, the upper canopy used mesh fabric to collect moisture, which dripped into transparent pipes to grow algae. The water could be reused in the kitchen, and the algae in material creation. The system revealed the flows of water, air, and energy—turning the space into one of learning. The fabric canopy opened for outdoor picnics, and bowls at the top invited birds to join.

In winter, the upper portion transformed into a wind spinner that generated electricity through a small generator, powering lights. Fabric wrapped the top and side panels for warmth. Participants became both gardeners and guardians of the system.

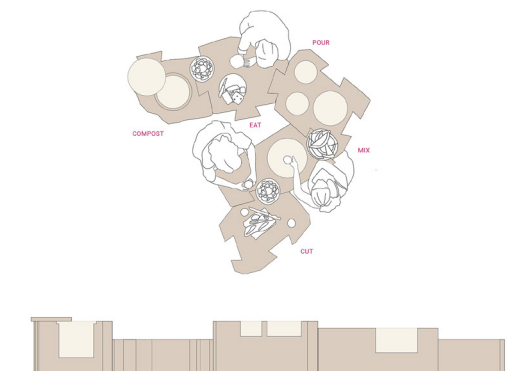
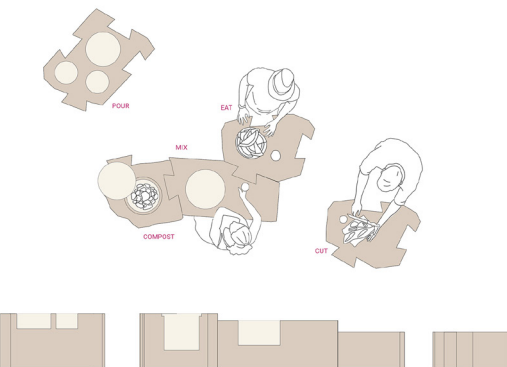
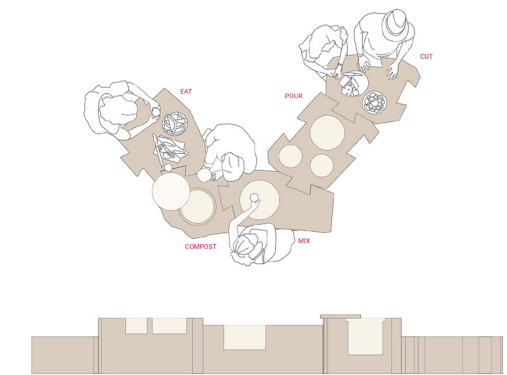
The final chapter centered on inhabiting the device as a space of care. This new model created a mindful place where participants could slow down, disconnect from technology, and reconnect with their environment. Through sensory experiences—textures, scents, flavors, and materials—it fostered somatic healing. Designed with body-shaped seating, the space encouraged conversation, intimacy, and collaboration, while reducing stress and stimulating creativity.

This approach extended beyond physical space into pedagogy itself. It moved away from rigid, standardized evaluation and embraced diverse paths and ways of learning. Collaborative settings, moments of solitude, and spaces for neurodiverse learners were fully integrated. The model is not about production—it's about nurturing life, supporting connection, and encouraging growth.

Would you like to join us next year?

### THE COLLECTIVE KITCHEN

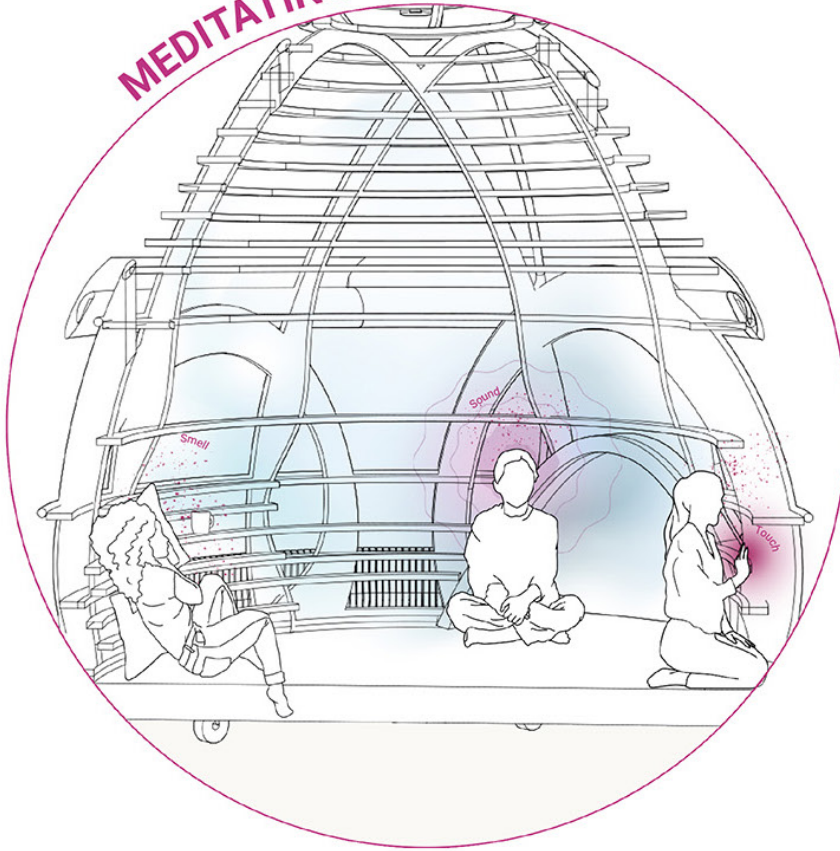
COOKING, DIGESTING, GROWING AND DECOMPOSING: AN ALLIANCE BETWEEN DIFFERENT FORMS OF LIFE





# THE WELL-BEING ECOSYSTEM

## MEDITATING



### MINDFUL

A space to shift from sympathetic to parasympathetic, disconnect from technology, slow down, and stop the pace to fully experience the environment.

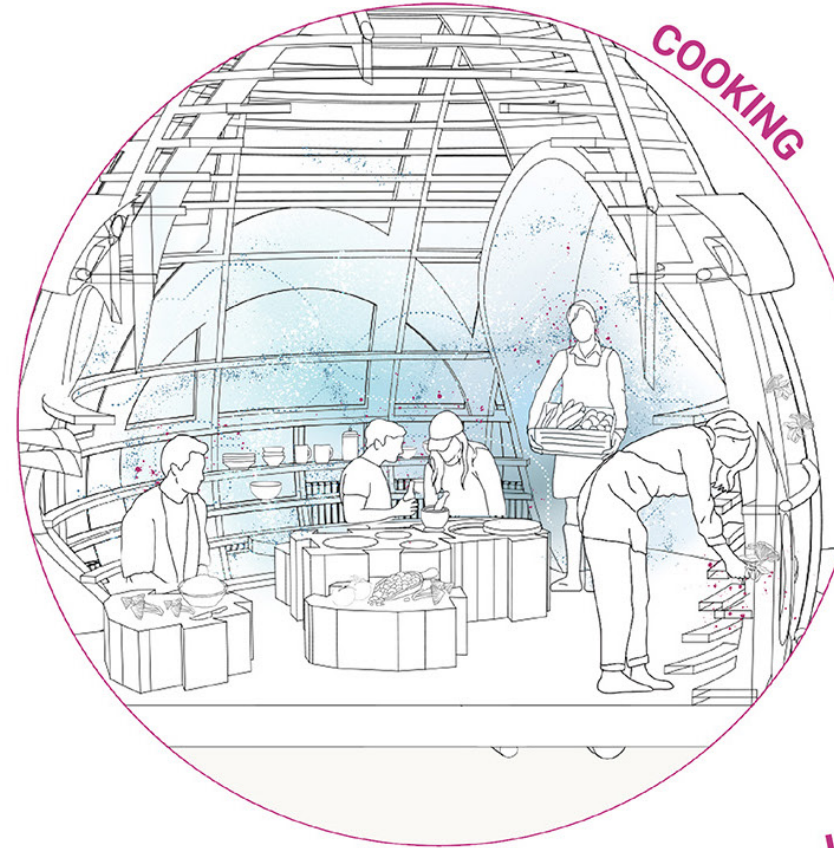
### SENSORY

Bodies connect to the air and environment through natural materials, experiencing textures, scents, and the flavors of food.

### DOMESTIC

Finding care and intimacy within the school context: a space for conversation, sharing, and collaboration that feels like home.

## COOKING



### COLLECTIVE KITCHEN

Ingredients, ideas, and people come together, fostering community, interdependence, and shared nourishment.

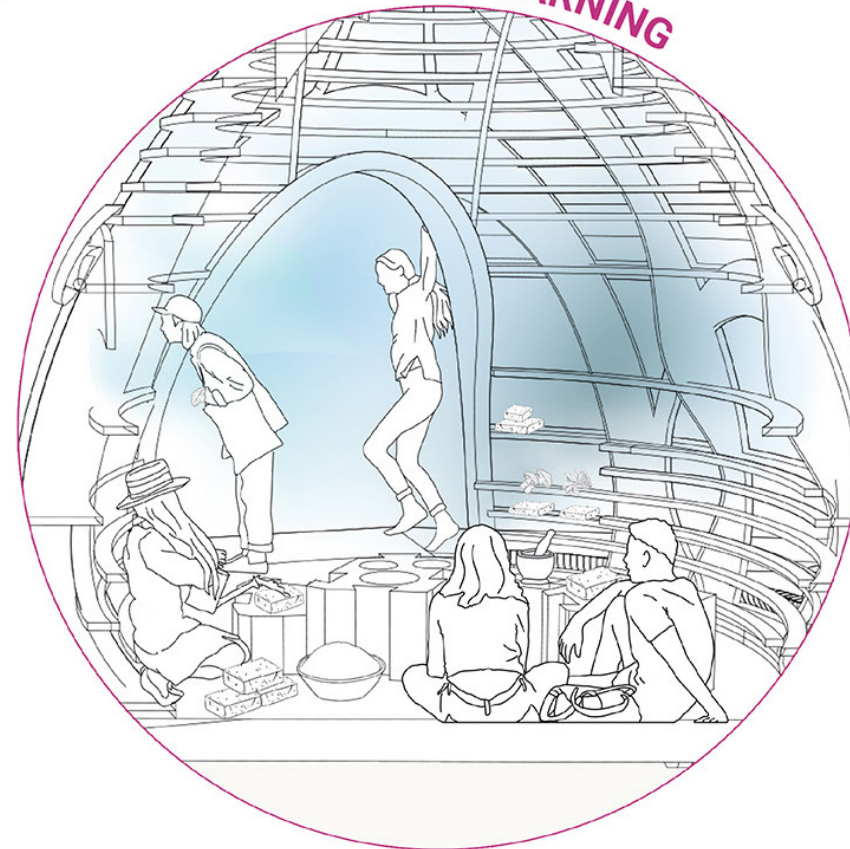
### ENJOYMENT

A space that celebrates shared moments, fostering collaboration, joy, and connection beyond the pressures of production.

### BUILDING COMMUNITY

Interconnectedness and cross-cultural dialogue, creating a sense of belonging.

## LEARNING



### NEURODIVERSITY

An open learning environment supports diverse ways of learning, improving attention, engagement, and mental well-being for neurodivergents.

### OPEN FORM PEDAGOGY

Encourages students to create adaptive and participatory designs, promoting creativity and reducing the pressure of predefined outcomes, fostering autonomy and confidence.

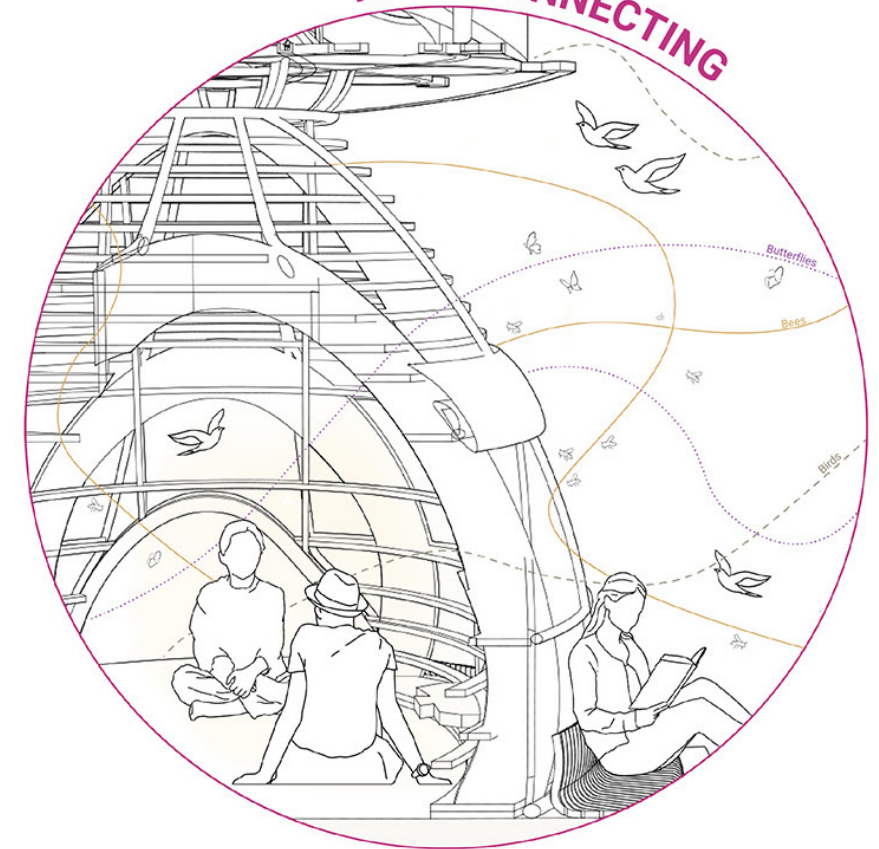
### EXPERIMENTAL LEARNING

Hands-on activities increase motivation, creativity and help reduce anxiety and stress.

### ACCESSIBILITY

A movable ramp creating a space where everyone is welcomed and included.

## INTERCONNECTING



### BIODIVERSITY

Mutual care among species. Living organism for ecological care and repair. A climate reparation device.

### LEARNING IN NATURE

Spending time outdoors reduces stress, enhances calm, and promotes faster recovery from mental fatigue, fostering relaxation and overall well-being.

### NATURAL ELEMENTS

Integration of nature and natural light: Regulates circadian rhythms, boosts mood, and reduces stress.

### SOMATIC HEALING

Engaging the senses to foster emotional and body awareness.









Summer



Spring



Fall



Winter - Mycelium



Winter - Fabric



Winter - Night







# The History of Architectural Theory

History & Theory  
Fall 2024  
Instructor: Mark Wigley  
Individual Project

## Radical Pedagogies



This 15-page research paper analyzes the piece of architectural theory *Radical Pedagogies* by Beatriz Colomina, Ignacio G. Galán, Evangelos Kotsioris, and Anna-Maria Meister. The book explores a series of experimental educational practices from the 1960s–70s that challenged conventional architectural pedagogy, redefined the role of the architect, and expanded the discipline's tools and media.

By combining collaborative authorship, historical case studies, and experimental visual and textual strategies, the book challenges the traditional boundaries of architectural theory. It is not just an analysis of radical pedagogy but an invitation to reimagine architectural education itself. Its open-ended, transscalar, and collaborative structure positions the theory as an active force for transformation. It urges educators, students, and practitioners alike to embrace architecture's potential to challenge inherited norms and create new, critical ways of learning and building. Through this, the book transforms architecture into more than a discipline; it becomes a tool for questioning, experimenting, and reshaping the world we inhabit.



# The Outside In Project II

Building Science & Technology Elective  
Fall 2024

Instructor: Galia Solomonoff - Laurie Hawkinson

TA: Tristan Schendel

Collaboration: Programming and Graphics Team

## Cloud







Midterm reviews under Cloud



Cloud envisions a participatory experience that emphasizes the interconnectedness of peoples' actions in shared spaces. Stretched above the inflatable is a large net that positions seating within, which descends into the Plaza through the center, creating a device for people to modify and curate the space. Measuring 20 meters (66 feet) wide and suspended by 25 cables, this floating inflatable reframes the relationship between Avery Hall and Avery Plaza, questioning notions of connectivity between interior and exterior spaces. Powered by four electric blowers, the metallic form expands from the 400-level window and classroom, inviting visitors inside its contemplative interior and challenging boundaries of conditioned space. The pavilion encourages playful interaction between people, their environment, and one another.

#### Midterm Reviews

As part of the organized events effort, the Cloud team reached out to professors of various studios to host midterm reviews, scheduled for the week after Open House, under Cloud. Various professors proved very enthusiastic to the idea of showcasing and presenting student work on Avery Plaza, and the furniture design' adaptability proved

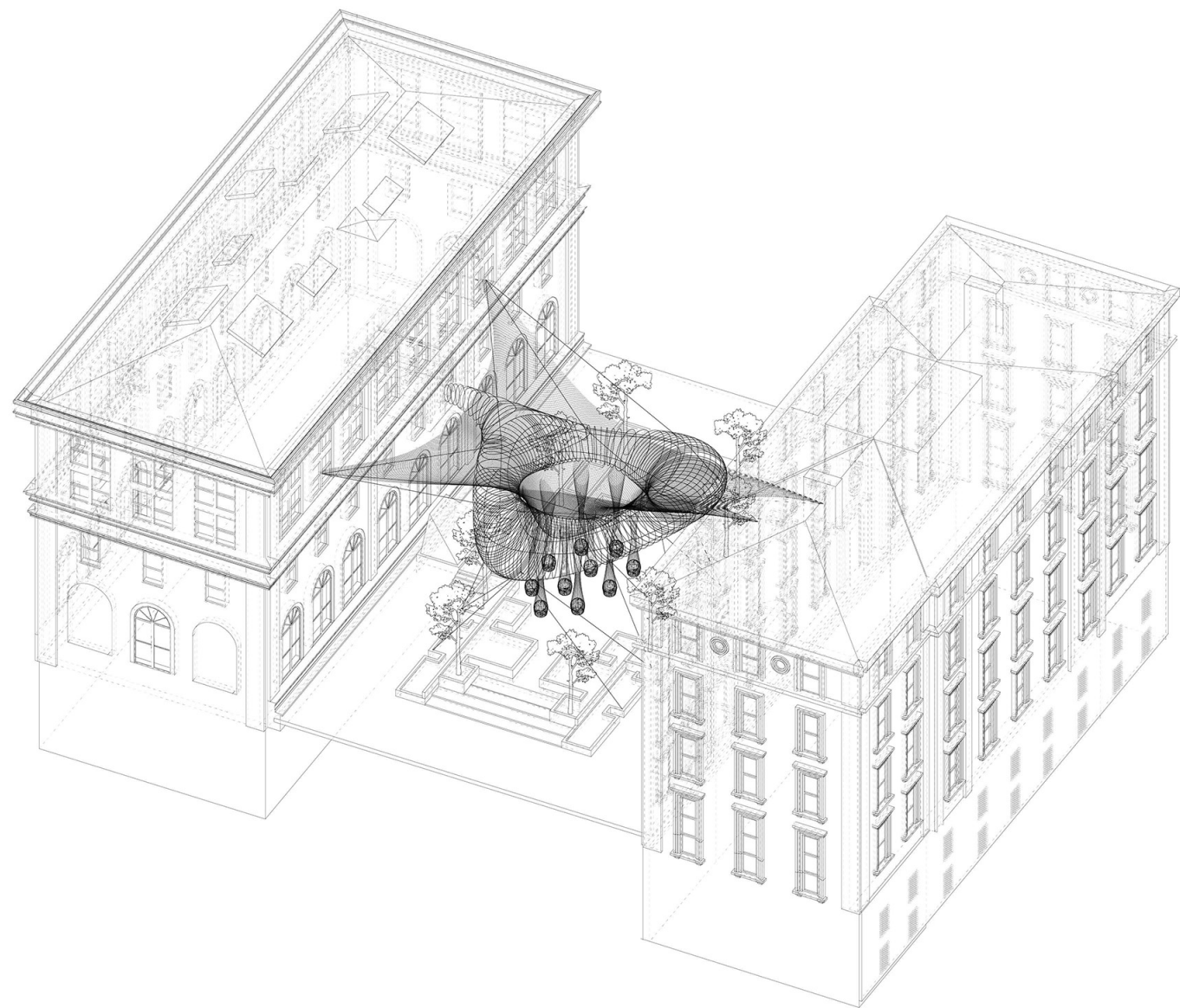
#### Lectures

The Cloud Team reached out to various Professors to hold impromptu lectures under Cloud. One such lecture was delivered by Mark Wigley's on Inflatable structures, and the conceptual theories behind them.

#### Customization

Studio meetings, Mid-term Reviews, or casual hangout spaces; the components in synchrony with the adaptability of the net tentacles, allow for event-specific individual creativity.











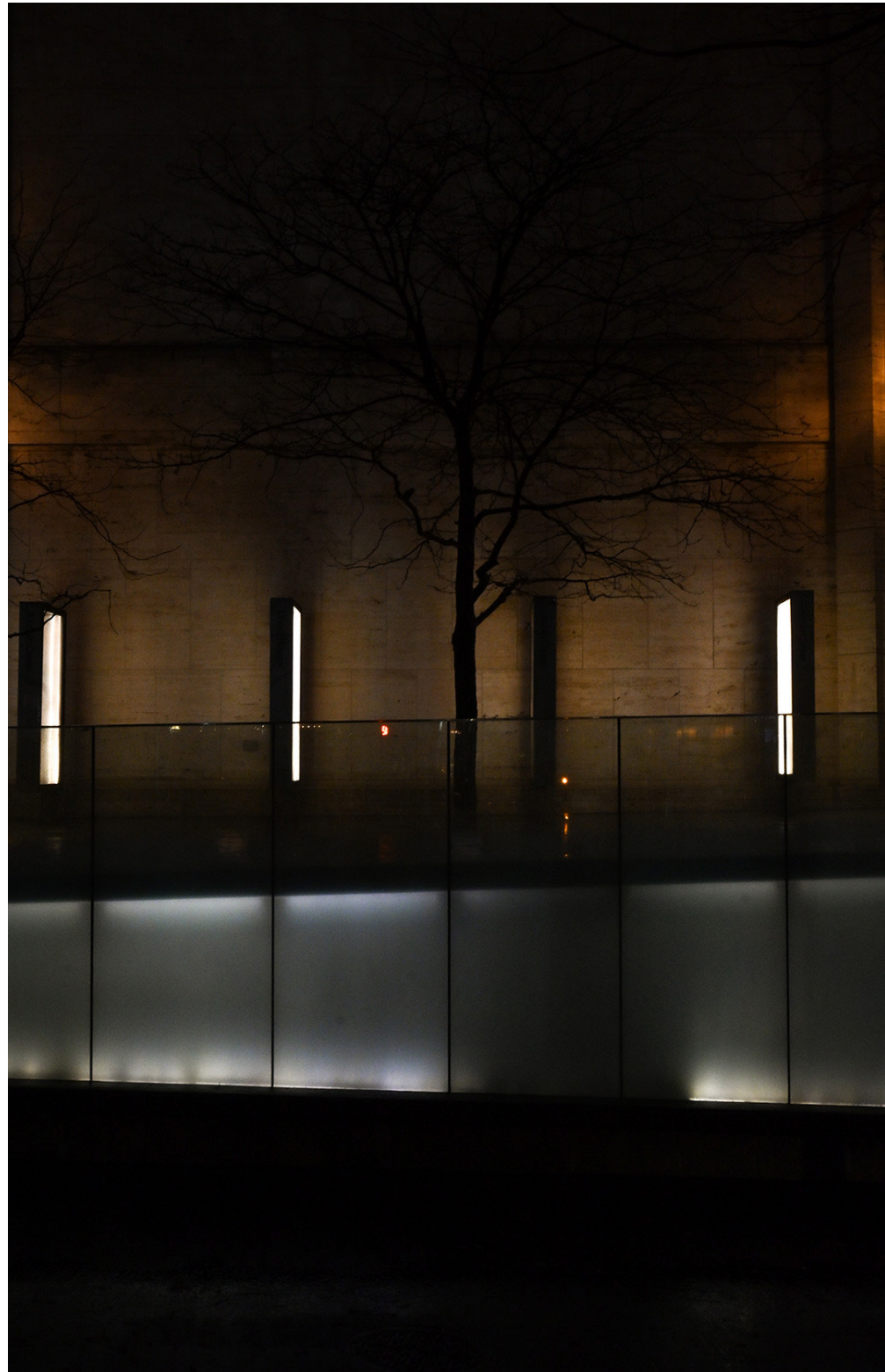
Architectural Photography  
From the Models to the Built World

Visual Studies Representation  
Fall 2024  
Instructor: Michael Vahrenwald  
Individual Project

Revealing  
the  
In Between















WHITNEY  
WHITNEY  
WHITNEY

EDGES OF AILEY  
SEPT 25-FEB 9

INTERSTATE FOODS INC.

INTERSTATE FOODS INC.

INTERSTATE FOODS INC.



Toxic Land(fills)

Adv Studio IV  
Summer 2024  
Instructor: Nerea Calvillo  
TA: Aishwarya Garg  
Collaboration: Matija Pogorlic

(Steam)view Park

*Breathing Machine*







## Extracting from Coned to Democratize Energy Distribution

Steam is synonymous with New York. The city has been running on steam since the Industrial Revolution, produced by the ConEdison company. By 1932, Consolidated Edison had become the largest company in the world providing electrical service. Today, it is the largest U.S. provider of electrical service, natural gas, and steam.

For over 40 years, ConEd used the land of Soundview Park for waste disposal from its power plants. Toxic compounds damaged the ecosystem, contaminating soil and water as well as causing various health problems for nearby residents. The development of Soundview Park officially began in 1947 under Robert Moses' supervision—while the landfill continued. These operations led to nearby communities being displaced, forcing many residents to leave their homes.

In the 1950s, the communities initiated efforts to stop the landfill operations. They were successful in stopping ConEd, but the park remained closed for the next 50 years, turning the area into a site for illegal dumping. The park reopened in 2001. The community collaborated in cleaning up the waterfront, removing garbage, and improving park infrastructure. Local residents and community organizations have played a crucial role in advocating for the park's revitalization. Today, the park hosts various community events, recreational programs, and environmental education initiatives. Residents, environmental advocacy groups, the U.S. Army, and various organizations are continuously working on restoration projects—such as habitat restoration, native species planting, water quality improvement, oyster restoration, and salt marsh recovery.

However, conflicts between the communities and ConEdison persist. While Manhattan has an abundant supply of steam, in the Bronx, it is being replaced with fracked gas coming from Pennsylvania. Environmental organizations and concerned residents continuously protest against the fracked gas system due to its significant contributions to climate change and health risks such as asthma. ConEdison states that steam production requires fracking to achieve net-zero emissions, which theoretically emits fewer greenhouse gasses and pollutants—but net zero doesn't look like oil and gas.

Through history, Soundview Park has been the place of disputes between ConEdison and the communities—over displacement, environmental violence, health issues, and ecosystem degradation. But this must end.



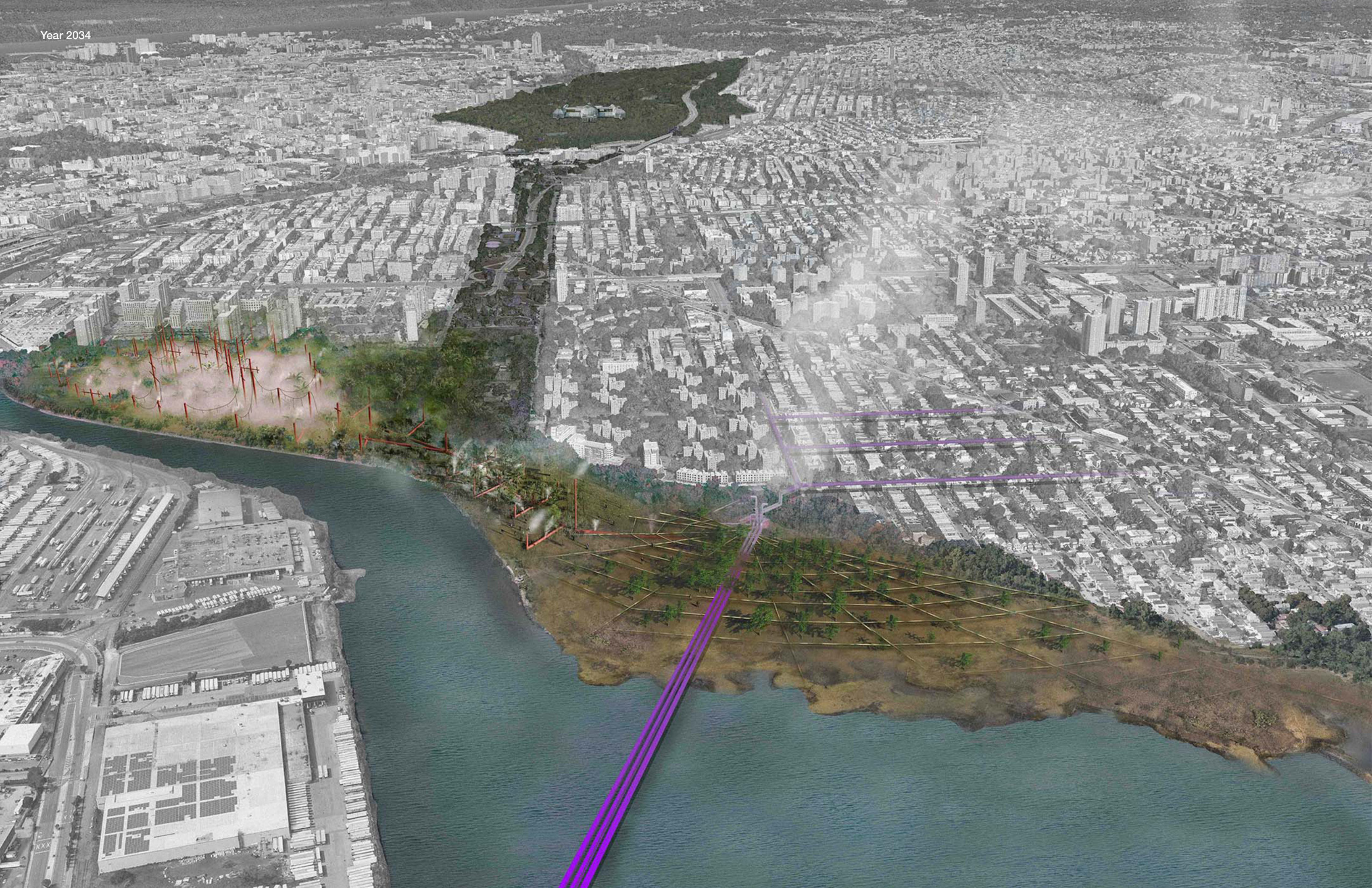
## How can the histories of environmental injustice be reversed?

The proposal reverts the tendency to fracking by requiring ConEd to continue using steam and to bring it free to the neighborhood as an environmental reparation and a way to prevent energy injustice.

It anticipates climate change by creating new ecologies with steam—challenging the rhetorics of decarbonization.



Year 2034





The pipelines are always underground and unseen. Here, they are brought over ground. **The park is transformed into Steamview Park—a steam-breathing machine.** Pipes already stored in the park will be reused. Other pipes will be made by hand, in cooperation with various environmental advocacy groups, using waste from the park and the neighborhood with the help of the community. As Soundview lays at a fracked gas distribution bifurcation, the proposal builds on top of it a steam distribution line from ConEd's power plants. At this energetic intersection, a condensation unit will regulate and distribute steam into 4 different systems.

**1: supply route for domestic use.** Carbon steel pipelines distribute steam across the streets to provide heating and cooling to each building, allowing the communities to have 100% democratic energy.

**2: conditioning for new ecosystems.** Another line goes to the park and connects with a network of pipes of different diameters and heights. By regulating temperature, pressure, and humidity, the system designs different climate zones throughout the park to create new ecosystems. Tropical plants will be brought from the NYC Botanical Garden, which is nearby and funded by ConEd. To create a tropical forest, steam is released at different heights, at a temperature of 30°C. Twenty years from now, when the ecosystem is developed, steam will be released through the taller pipes, letting the trees grow even more in height.

**3: adaptable dispersion.** Made of waxed fabrics it hangs from the principal system, increasing the quantity of steam where it is needed. It will be denser in the forest to support ecosystem growth, and in areas of the park where communities gather for activities creating new experiences where air becomes visible.

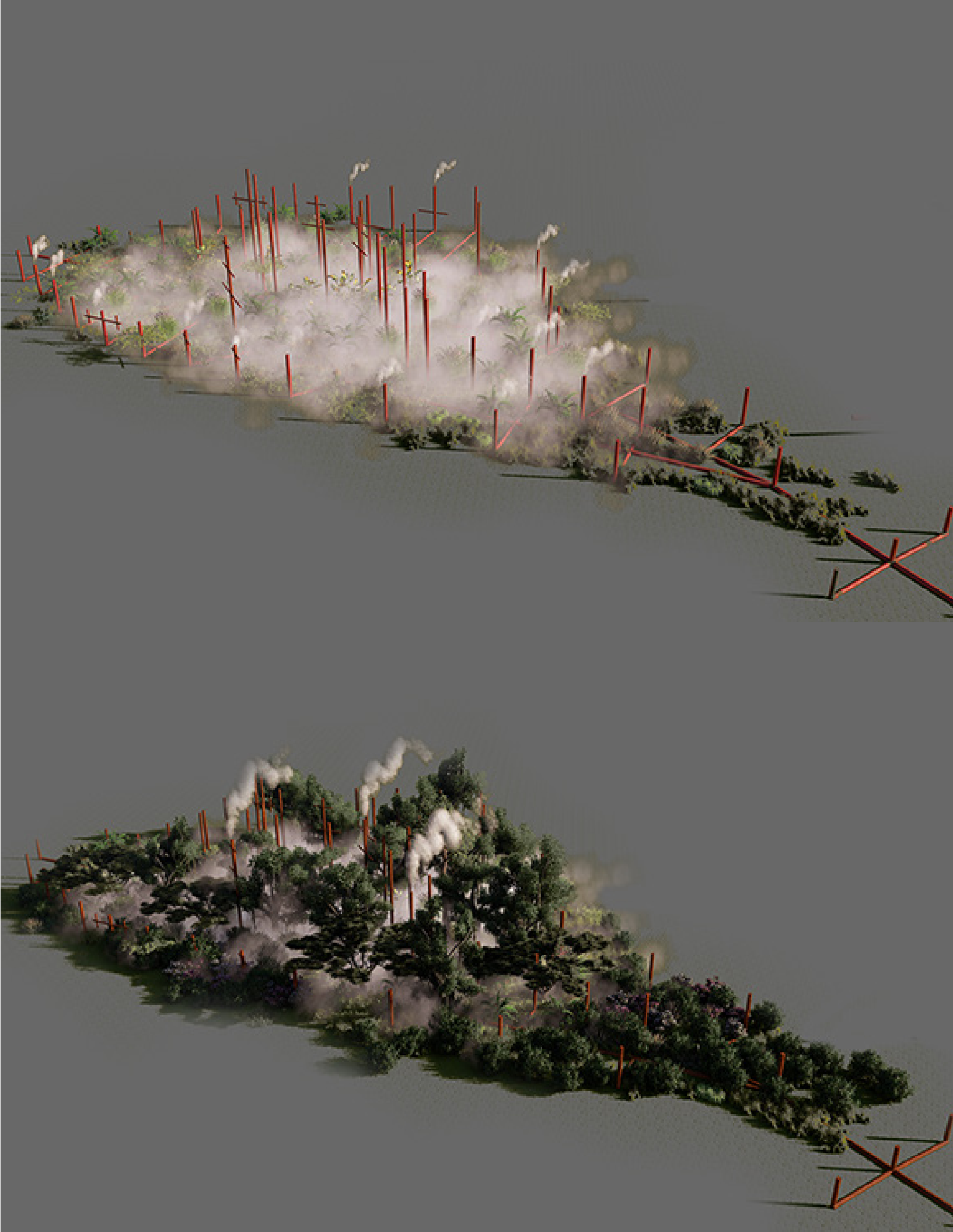
**4: irrigation.** Steam is condensed and transported as water. The park is full of bamboo plants, which are used to build an irrigation system in the current salt marsh to increase its reach. Mounds of mulch are currently spread across the park. Every winter, NYC hosts Mulch Fest, where residents bring their Christmas trees. The proposal invites the fest to take place in Soundview, transforming the park from a dumping site into a collection site. The collected mulch is used to build the structure of the system.

There are many **Cottonwood trees** at the park that are being removed by different groups. They grow very well in marshland—and this proposal allows them to grow.

By regulating temperatures seasonally, steam released from the pipes serves as heating in winter and provides irrigation in summer. **With the changes of seasons, temperatures, visibilities, light reflections, and sound, steam creates new conditions.** Every night, when fracking is reduced, laser lights—like the ones by the artist duo HeHe—turn on, representing the victories of the people.



Fifty years from now, the steam habitat will destroy its own infrastructure. The bamboo pipes will be broken by the cottonwoods, and the fabric pipes will decompose. Eventually, climate change will catch up, and pipes will no longer be needed. The system will remain as a legacy of a materiality that is dying, shaped by the histories of the park, serving as a memory of the histories of environmental injustice.









# Arguments

Summer 2024  
Instructor: Xiaoxi Chen  
TA: Irina Chernyakova  
Lecturer: Xu Tiantian - DNA Architects  
Individual Project

# Architecture As a Practice of Care and Repair

In 2022, DnA Architects were commissioned by the cultural and tourism ministry to build a museum on Meizhou Island in Putian. However, DnA Architects managed to shift the project into a community and ecology-based initiative by creating various small-scale interventions rather than a single iconic building. How is it possible for architects to shift these premises into a more conscious approach to architecture?

What I find most challenging about Xu Tiantian's project is that clients often care more about the profit a project can generate rather than its ecological impact or community involvement. It is impressive how she managed to transform this project. The key was her strategies and how she managed to bring multiple benefits to the island, expanding its potential and impact.

In her lecture at GSAPP, Xu Tiantian explained her strategies and how she made this transformation possible. Tourism was already very strong on the island. Instead of building an iconic museum, her proposal was more pragmatic, utilizing what already existed. The budget was allocated to small interventions rather than one large building. She proposed that visitors could explore more than just the museum; they could visit the entire island. The idea was to create a circulation to other parts of the island that were not previously visited. Instead of bringing visitors to one place, the project guides them through the real setting, allowing them to see different villages of the community rather than just viewing them in a museum. Thus, the project not only serves as a museum but also functions as community spaces, reprogramming the project and making it multitask. It is not only for tourists; by doing this, it becomes a project that also benefits the local people and the ecologies. The project becomes a recomposition of the island.

Meizhou Island has a rich historical and cultural background, dating back to ancient times. The island's population has traditionally been involved in the fishing industry, with many cultural and religious practices centered around the sea and its resources. This enduring cultural heritage highlights the island's continuous link to traditional practices. Xu Tiantian collaborated with local people to identify their resources and heritage, creating a recomposition that supports the community and generates jobs. This regenerative approach involves using local materials and knowledge, fostering a sense of ownership and pride among residents.

The project leverages this deep historical and cultural context to promote local production and increase profitability. By rooting interventions in local traditions, the project not only enhances community engagement but also serves as a branding strategy for local products, thereby boosting the island's economy. DnA's work demonstrates how architecture can function as a social strategy through thoughtful design.

Moreover, the project also serves as a pedagogical experience. By bringing visitors to observe the work of local people, it involves them in the island's cultural and historical heritage. The project generates awareness in both visitors and locals, inviting them to explore new ways to connect with the ecologies. This approach not only educates visitors but also strengthens the community's connection to their own traditions and environment.

For instance, the oyster cultivation structures reused traditional methods by employing stone pillars in the mudflats, creating a living museum of local practices. Similarly, the Mangrove Research Base restored a fishpond to mimic natural tidal pools, supporting biodiversity and serving as an educational site.



The project shows the different ways in which architecture can address materiality. **“Using an approach of architectural acupuncture, DnA applies precise and minimal design interventions, using local materials to restore ecological balance and traditional knowledge to revitalize rural identity.”**<sup>1</sup> The decision to use local materials and the way they are used brings many benefits. By reutilizing the materials of the island and inviting ecosystems to play a role, architecture becomes self-efficient and can reduce environmental issues.

The United Nations Environment Program states in their recent report "Broken Record" (UNEP, 2023) that architecture is one of the main contributors to greenhouse gas emissions and global warming. It is crucial to understand this crisis we are facing, and the role and impact architecture has on it. Architecture can no longer be just to benefit humans; it must also take care of the non-human, the ecologies, the environment, etc. It is not something that works in isolation, and its consequences are very impactful.

What if the project had responded to the initial premise, and instead of these interventions, a typical museum building had been developed? The decisions made by architects significantly impact the world we live in. Xu Tiantian's project invites us to rethink the role of the architect. It is crucial to understand the power architecture holds and how important it is to consider the details.

**It is not just about physical buildings but about understanding the impact each decision can have, both in the short term and in the long term. The role of the architect becomes crucial in intervening in the world. By understanding all the complexities that are part of the network of architecture, designs can integrate the connections between architecture, communities, and the environment, transforming them.**

In Xu Tiantian's project, architecture becomes a practice of repair and care with minimal design interventions. Her approach is a clear example of how sometimes buildings are not needed. Through extensive research and various studies, using resources cleverly, giving existence to things that are already there, and enhancing them rather than replacing them, her work on the recomposition of the island shows that small interventions can make a huge impact. This approach demonstrates that architecture can become a social strategy to identify problems and provide solutions, emphasizing repair and care rather than mere construction.

<sup>1</sup> DnA\_Design and Architecture. "Meizhou Island." CCA Groundwork: Into the Island Wall Texts, 2022.



# Transscalarities

Summer 2024  
Instructor: Andrés Jaque / Bart-Jan Polman  
TA: Alan Alaniz  
Case Study: Adolf Loos - IBM Pavilion  
Individual Project

## A House for Josephine Baker

In 1928 Adolf Loos designed the Josephine Baker House, in Paris. Europe was at that time recovering from World War I and experiencing a boom in the arts during the Roaring Twenties.

Both Loos and Baker were pioneers of their time who challenged and transformed social, cultural and architectural norms. Adolf Loos revealed the beginnings of the modernist movement with his opposition to ornaments and anything that could not be justified for its rational function. Josephine Baker, an African American dancer, singer, and actress, transcended her role as a performer to become a symbol of resistance against racial and gender barriers, as well as a civil rights activist.

*“She did not write a conventional memoir; she played film roles subversively; she danced in ways that broke the rules even for jazz; she compromised her status as a sex symbol by adopting a dozen children. And she turned down a house by Adolf Loos.”<sup>1</sup>*

The house was a reflection of both Loos and Baker, conveying a strong societal message. It was designed to reflect Baker's role as an exotic performer and her impact on European culture, symbolizing the blend of cultures. Mario Gooden<sup>2</sup> argues that the house symbolized a territorial claim within the European cultural landscape, marking Baker as a significant figure who crossed racial and national boundaries.

The house featured a black-and-white marble striped façade. The interior, highlighted by a grand staircase, was centered around a large swimming pool with thick glass walls, making it visible from various parts of the house.

It is fascinating that we are speaking about the 1920s, a period when racial segregation and discrimination were pervasive. Loos' decisions regarding the design, distribution, and program of the house were a direct contrast to the conventional, more private, and restrained domestic spaces typically assigned to women, especially women of color. Thus, the house itself, through its design and intended use, questioned and disrupted existing racial and gender norms.

But what makes this house unique is that it was designed for Baker, the iconic figure of the 1920s whose role in society was remarkable. Her influence extended far beyond the stage, as she actively challenged racial and gender stereotypes, making significant strides in the fight against discrimination. Her performances were not just entertainment but a site of cultural and political significance, with a huge influence on Modernism. From Le Corbusier writing a ballet for her as a testament to her impact on his vision, to Matisse's fascination with her, resulting in a life-size cutout that he hung in his bedroom, her achievements and the breadth of her influence are truly impressive and advanced for her time.

**However, the house was never built.** Many authors discuss that features like the large windows and the elevated indoor swimming pool intended to create a theatrical spectacle of her presence, a way of facilitating the gaze upon Baker's body, objectifying her. Maybe this was the reason why Baker turned it down.

## Architecture as a Medium of Communication

*"We are surrounded today, everywhere, all the time, by arrays of multiple, simultaneous images."<sup>1</sup>*



Even though images and multimedia seem quite contemporary, their origins lay many years ago, and there were architects, artists and designers the ones who were involved in the beginning of it.

In 1964, Charles and Ray Eames in collaboration with Eero Saarinen designed the IBM Pavilion for the New York World's Fair, located in flushing Meadows-Corona Park.

World fairs were an opportunity for architects to present radical and innovative ideas and use these events as a creative laboratory. Every country put its best in this competition, striving to stand out among the others at almost any cost.

The New York World's Fair served as a showcase for American companies including IBM, General Electric, Dupont, and Ford, entertaining 51 million attendees. It left a lasting legacy, influencing architecture, technology, and international relations.

The pavilion was designed to showcase the innovative spirit of American technology and culture through a multimedia presentation. Thus, its design demonstrated a deep understanding of the power of visual communication and its potential to influence public perception and convey political messages.

The overall concept was to engage visitors with a series of entertaining experiences that would convey the many applications and uses for computers in the modern world. Every aspect of the pavilion emphasized the ways in which computers could be an integral, unthreatening part of the future.

For instance, the pavilion's centerpiece was the "Information Machine" where visitors were bombarded by screens and fragments of information at a pace too rapid to be fully absorbed. These engaged visitors in a multisensory experience, like an electronic auditory space.

The fragmented images occasionally left visitors feeling confused and frustrated. However, the installation's disorienting nature was part of a broader strategy by Eames, trying to achieve the most effective means of communicating multiple stimuli, in a similar way to how the mind processes information.

But how did this idea of multimedia begin?

Charles and Ray Eames' projects were notable for their engagement with the propaganda of American culture, and their deliberate deployment of images with a political target.

In 1959, during a period of geopolitical tension, the USA and the USSR agreed to exchange national exhibits on "science, technology, and culture." This exchange took place at the American National Exhibition in Moscow, marking the first significant cultural statement from the United States to the Soviet Union since the Russian Revolution.

The USA wanted to create a memorable impression of American culture. Due to differences in languages, Eames opted for other forms of communication, just with images that could be understood by everyone. This exhibition underscored the potential of multimedia as a powerful tool for cultural diplomacy, capable of conveying nuanced messages and creating impactful, immersive experiences.

As Beatriz Colomina states, the Eameses' innovations in the world of communication, with their exhibitions, films, and multiscreen performances, transformed the role of architecture. Architecture becomes a language, a medium of communication, while a transformation of space into immersive experiences through information.

<sup>1</sup> James Donald, Some of These Days: Black Stars, Jazz Aesthetics, and Modernist Culture (Oxford University Press, 2016)

<sup>2</sup> Mario Gooden, Dark Space: Architecture, Representation, Black Identity (New York: Columbia Books on Architecture and the City, 2016)

<sup>1</sup> Beatriz Colomina, Enclosed by Images: The Eameses' Multimedia Architecture, Grey Room, Winter, 2001, No. 2 (The MIT Press, 2001), 7.



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