



Portfolio

Selected Work
2024 - 2025

The Graduate School of
Architecture, Planning
and Preservation GSAPP

The Master of Science
in Advanced Architec-
tural Design

***Pim*chid Chariyacharoen**

Summer 2024
AAD ADVANCED STUDIO

Fall 2024
ADVANCED STUDIO V

Spring 2025
ADVANCED STUDIO VI

Spring 2025 Elective
WASTE / WORKS

Fall 2025 Elective
SUBJECT + OBJECT

Fall 2024 Elective
FEASTING + FASTING

Spring 2025
AAD EDIBLE SUMMIT

UP [Utilize Power]

Organic Waste, Energy, and Food Security in Urban Futures

Fort as Found

Potential in Ruin - Adaptive Reuse in the Context of Unfinished Island

Soft Pink, Deep Blue

Restoring Balance Between Land and Sea

Net-Works

What if every barrier held the potential to become a carrier of care?

Smell

Scent gathers in space, assembling the architecture of memory

Culinary Crossroads

Food, Space and Relationships in Invisible Layers of Everyday Life

What is Food: Decornstruction

AAD Edible Summit Spring 2025

UP [Utilize Power]

Summer 2024 Studio

AAD ADVANCED STUDIO

ACCESSIBILITY TO
SUSTAINABLE ENERGY AND
THE PROMISE OF A FUTURE

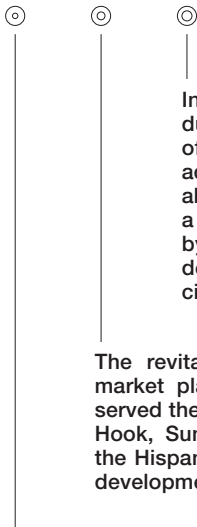
Instructor:
Laura Gonzalez Fierro

Teaching Associate:
Pietro Rosano

Program:
Biogas Plant
[Adaptive Reuse]

Location:
Red Hook, Brooklyn, NY

Individual Work



In May 2024, the city's GrowNYC Compost Program ended due to budget cuts, leaving approximately three million tonnes of organic waste that would now go to landfills each year. To address this, UP (UTILIZE POWER) aims to re-purpose the abandoned Red Hook Grain Terminal and transform it into a biogas renewable energy site. UP focuses on production by drawing from forms of life and integrating them into the design, addressing the issue of organic waste while creating a circular economy within the community.

The revitalized grain terminal will feature a community market platform, reviving the Mexican market that once served the area. This will help reduce food insecurity in Red Hook, Sunset Park, and Gowanus, particularly benefiting the Hispanic community facing challenges from real estate development and gentrification.

By harnessing energy from waste, UP will manage organic waste, rejuvenate the local area, and provide increased cultural space and accessibility. UP will foster community engagement and celebrate diversity, creating a space that empowers longstanding residents and supports their cultural heritage.



Studio Desk Crit
June 2024, 600 South

Organic Waste, Energy, and Food Security in Urban Futures

PIMCHID CHARİYACHAROEN



MSAAD end of semester
exhibition on view on the
Avery 100 level

UP [UTILIZE POWER]



UTILIZE POWER

Site Condition and Potential

- ① Food Waste Crisis
- ② Loss of Cultural Spaces in Red Hook
- ③ Food Insecurity
- ④ The Gowanus Canal
- ⑤ Proposed Biogas Plant
- ⑥ Idea of Re-power

The biogas plant is designed as a source of renewable energy for the city. By utilizing organic waste from urban areas, it transforms waste into valuable resources, producing gas for heat and electricity. This shifts the perception of waste from a burden to a valuable input.

- ⑦ Idea of Re-Invigoration
- Repurposing the abandoned grain terminal into a community platform revitalizes the area, fostering community engagement and development in a neighborhood at risk of gentrification. This transformation helps to upgrade and uplift the community, preserving its cultural and social fabric.

- ⑧ Idea of Re-distribution
- The fertilizer, a byproduct of the biogas production process, is used to rejuvenate surrounding areas such as public parks and cemeteries within the neighborhood, enhancing green spaces and contributing to local ecological health.

- ⑨ Green-Wood Cemetery & Prospect Park

HISTORY OF FOOD TRANSPORTATION

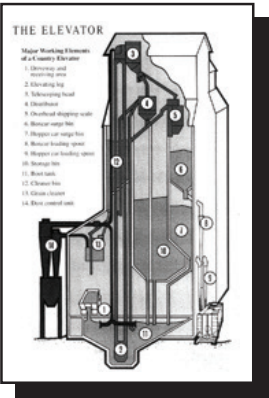
GRAIN ELEVATOR

Grain terminals have played a crucial role in U.S. food transportation history. The first steam-powered grain elevator, introduced in 1843 by Joseph Dart in Buffalo, New York, revolutionized the way grain was moved from ships to storage. This innovation increased efficiency and capacity, and by the late 1800s, cities like Buffalo, Chicago, and New York had established similar facilities to handle the growing agricultural output.

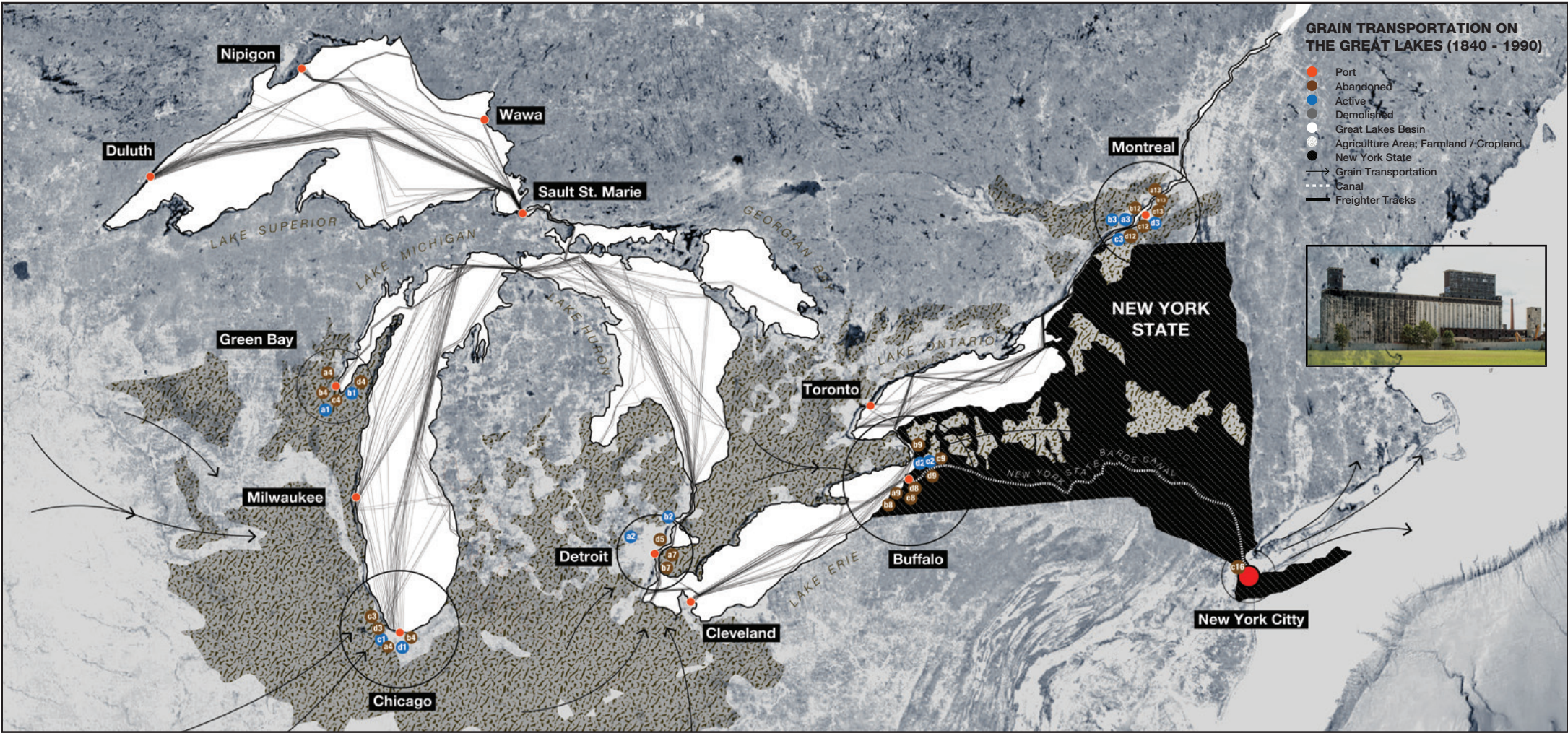


New Terminal Ready for Grain Transport - Late 18th Century.

The Red Hook Grain Terminal in Brooklyn, built in 1922, exemplifies this infrastructure. Designed to serve the New York State Canal System, it featured reinforced concrete silos and a conveyor system to efficiently transport grain. These terminals supported domestic and international grain trade, shaping food distribution systems in the U.S.



Grain Elevator Section - Key Elements in Action



(a1) Norwood Yard, 1898 (b1) Sturgeon Bay, 1901 (c1) 420 Twelfth Ave, 1917 (d1) Fox River Grain Elevator, 1928 (a2) The Damen Silos, 1906 (b2) Santa Fe Grain Elevator, 1906 (c2) Bridgeport and Back of the Yards, 1930 (d2) Port of Illinois, 1959 (a3) Port Hope Grain Elevator, 1875 (b3) Distillery offices, malt houses & grain elevator, 1894 (c3) Rickel Malt Grain Elevator, 1906 (a6) Port Hope Grain Elevator, 1875 (b6) Malt houses & elevator, 1894 (c6) Rickel Malt Grain Elevator, 1906 (a2) South Lyon Grain Elevator, 1944

(b2) Richmond Grain Elevator, 1952 (c14) Electric Steel Elevator, 1901 (d14) Vanderbilt Grain Elevator, 1914 (c8) Grain Elevator #4, 1903 (a9) Metcalf company, 1906 (b9) Elevator #5 (aka Silo #5), 1906 (c9) Elevator #2, 1910 (d9) Elevator "B", 1914 (a3) Viterra Grain Elevator, 1912 (b3) Canada Malting Co. Limited, 1928 (c3) Viterra Montreal Terminal, 1954 (d3) Nova Grain Inc, 1997 (b17) Grain Elevator No. 3, 1899 (c17) Harbour Commissioners No.1, 1902 (d17) Elevator 5 B1, 1903 (a18) The Montreal Hub, 1903 (b18) Harbour Commissioners No.2, 1904 (c18) Canada Multi-Food Ltd., 1909 (d18) The Port Perry mill, 1930 (a10) Red Hook Grain Terminal, 1922 (a19) Atlantic dock, 1841 (b19) West Shore Railroad, Pier 7, 1866 (c19) NY Central and Hudson River, 1869 (c10) Cargill Elevator, 1875 (d10) Brown County, 1913 (a11) Great Northern elevator, 1944 (b11) Green Bay Trolley Barn, 1964 (c11) The Green Bay & Western, 1971 (d11) Manitoba Grain Act, 1989

What can we learn from local people and their way of living that we have lost over the past centuries?



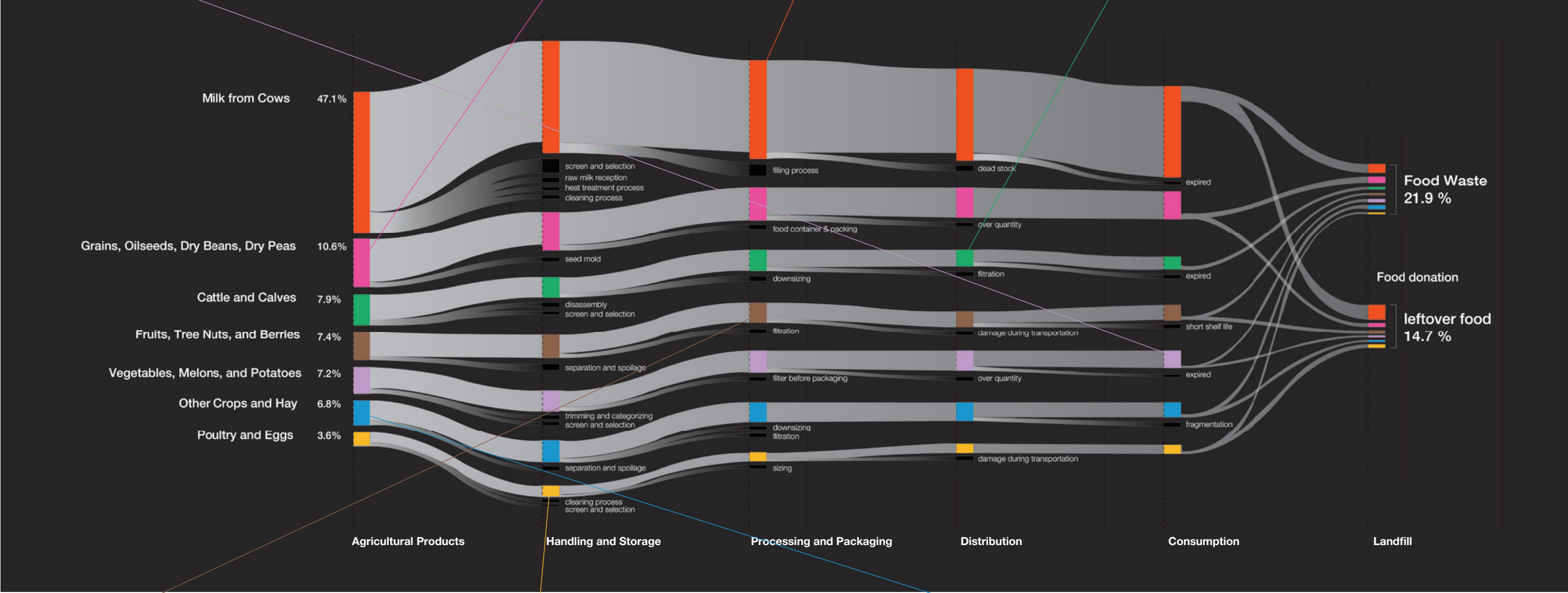
Do we really know where the food we consume everyday is produced and where it is disposed of?



How can lessons from traditional rural farms inform the development of sustainable and resilient practices in modern food systems?



How can we build and strengthen relations with non-human beings beyond commercial interests?



How can we redesign food transport systems from rural farms to urban centers to reduce environmental impacts and improve efficiency?



In what ways does mass food production alter our relationship with food, reducing our awareness of its origins and qualities?



How can our food systems evolve to foster deeper respect for nature, integrating essential non-human relationships into sustainable production processes?

FOOD WASTE

The diagram explores the waste in food production and consumption, raising questions about our disconnect from food sources. It challenges us to learn from traditional farming practices and strengthen relationships with non-human beings to create sustainable, resilient food systems.

FOOD INSECURITY in Brooklyn

Food insecurity rate:
Red Hook: 40.9% | Sunset Park: 28.9% | Gowanus: 11.6%

Many communities in New York City that has been undergoing systematic urban renewable. The resulting Juxtaposition of wealth and poverty has created a unique situation in terms of food availability.

Tianguis - A Living Mexican Tradition
Tianguis are open-air markets rooted in Aztec heritage, offering goods and creating local economy. In modern times, Hispanic communities have brought tianguis to New York, creating pop-up markets that preserve cultural identity while connecting local producers, shoppers, and traditions.

- 01,19 Tianguis del Sol
[Guadalajara, Jalisco]
- 02,20 Tianguis Cultural del Chopo
[Mexico City]
- 03,21 Tianguis de La Lagunilla
[Mexico City]
- 04 Tianguis de Tonalá
[Tonalá, Jalisco]
- 05,22 Tianguis de Tepoztlán
[Tepoztlán, Morelos]
- 06 Tianguis de Tlacolula
[Tlacolula, Oaxaca]
- 07,23 Tianguis de Zaachila
[Zaachila, Oaxaca]
- 08,24 Tianguis de Juchitán
[Juchitán, Oaxaca]
- 09,25 Tianguis de Ocotlán
[Ocotlán, Jalisco]
- 10,18 Tianguis de Patzcuaro
[Patzcuaro, Michoacán]
- 11 Tianguis de Malinalco
[Malinalco, Estado de México]
- 12,26 Tianguis de Atlixco
[Atlixco, Puebla]
- 13,27 Tianguis de Metepec
[Metepec, Estado de México]
- 14 Tianguis de Taxco
[Taxco, Guerrero]
- 15 Tianguis de Tenango del Valle
[Tenango del Valle, Estado de México]
- 16 Tianguis de Amealco
[Amealco, Querétaro]
- 17,28 Tianguis de Ixmiquilpan
[Ixmiquilpan, Hidalgo México]

Red Hook Flea Market / Tianguis
Closed in 2014. This market, held weekly or bi-monthly, offered a variety of goods from such as food or clothing which are cheaper than general market. The exact reason for its closure is unknown, but it coincides with significant population changes in the area.

LOSS OF CULTRAL SPACE in Red Hook

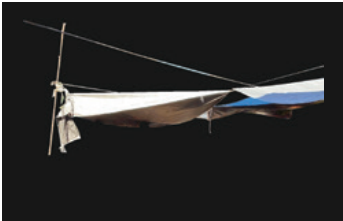
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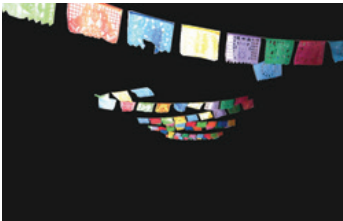
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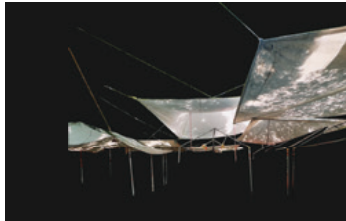
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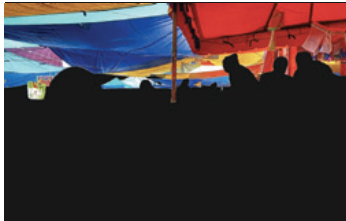
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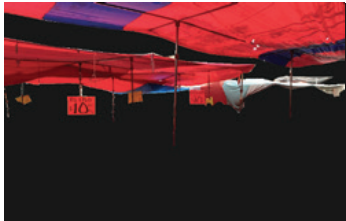
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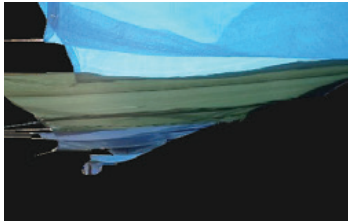
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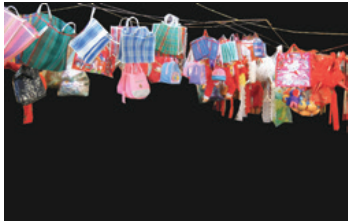
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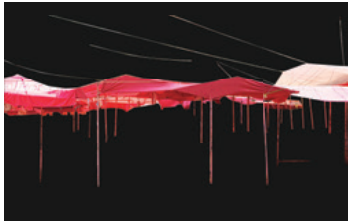
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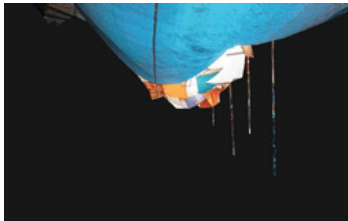
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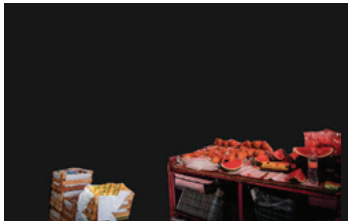
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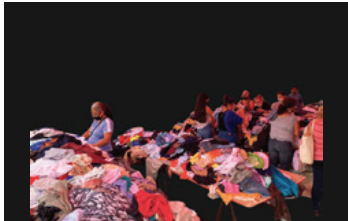
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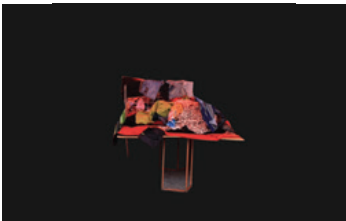
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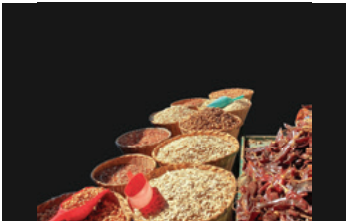
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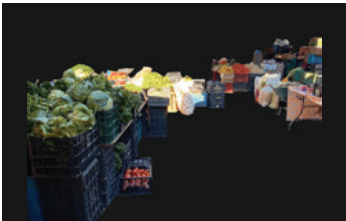
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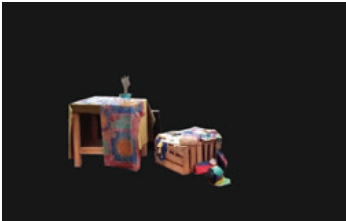
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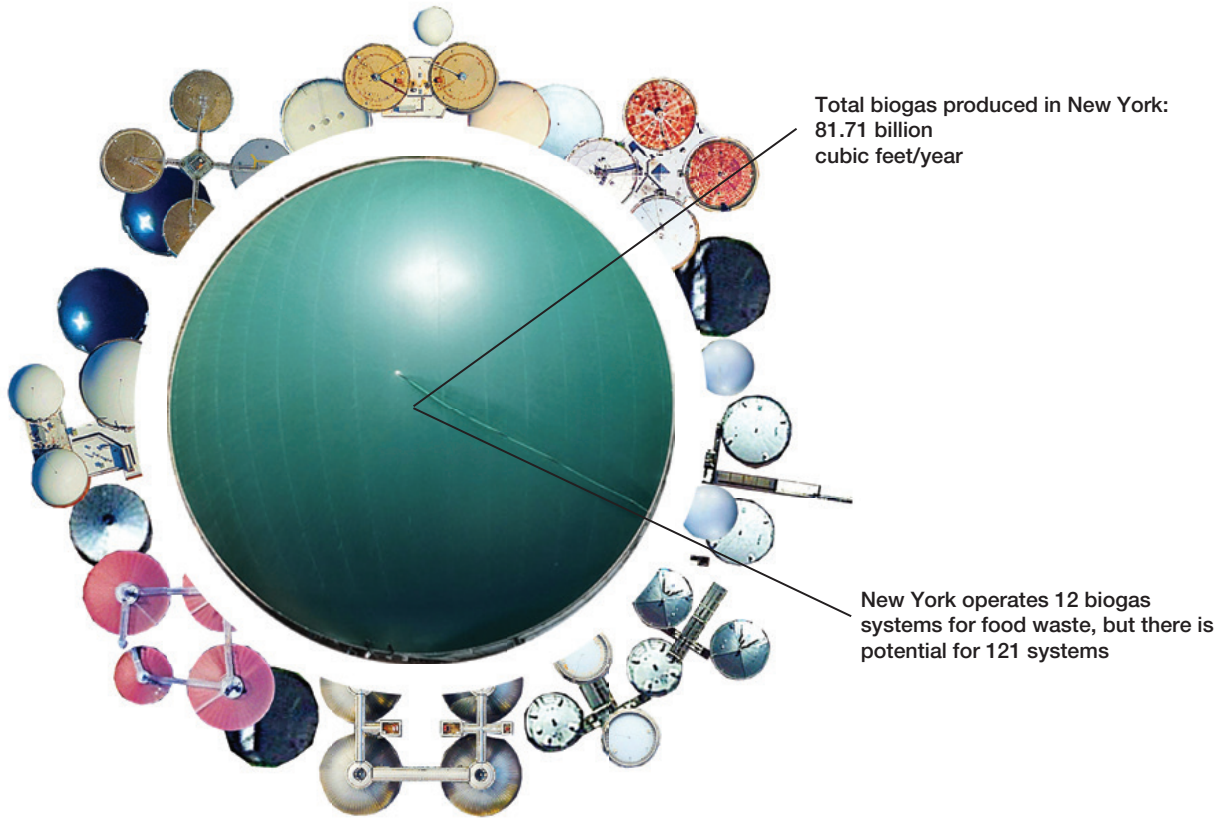


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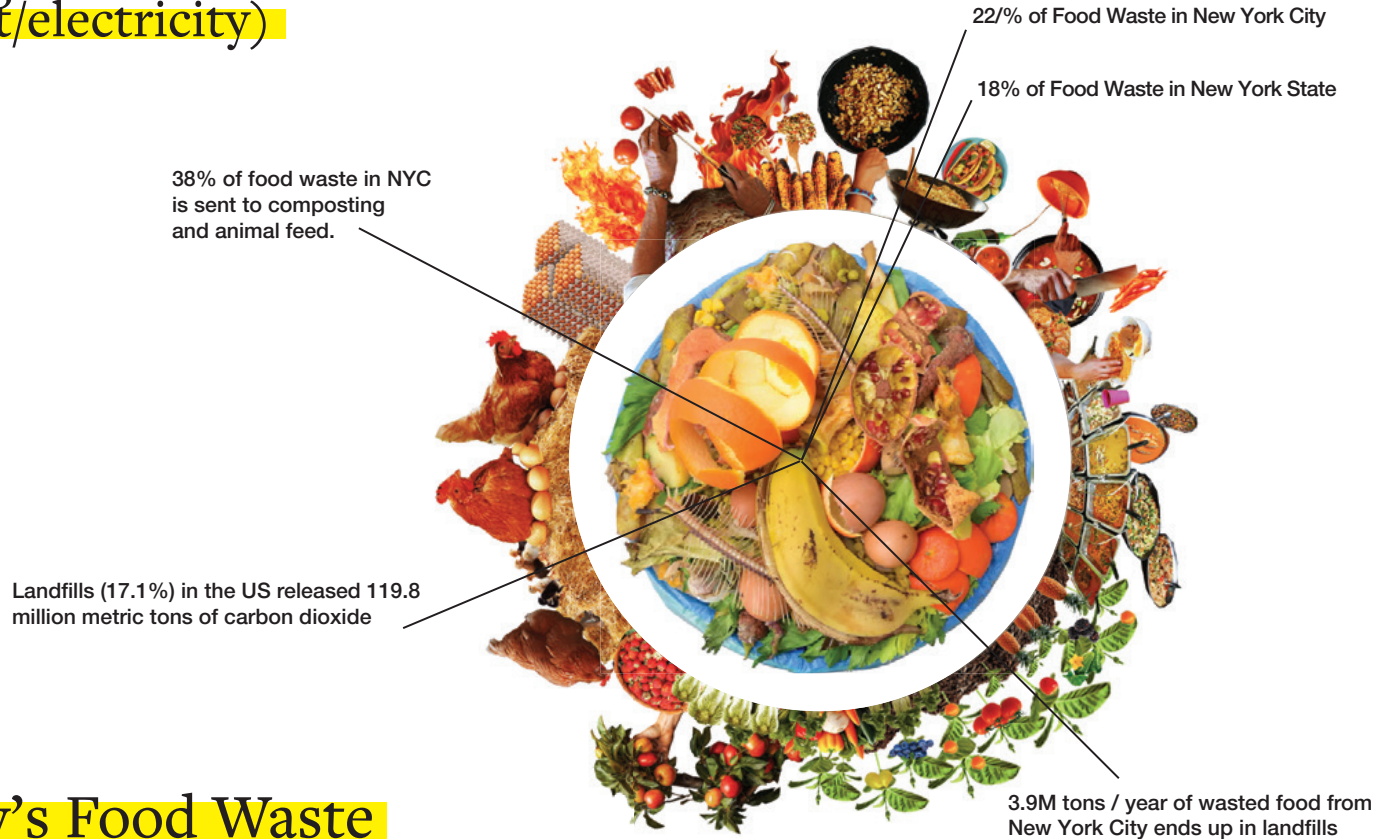




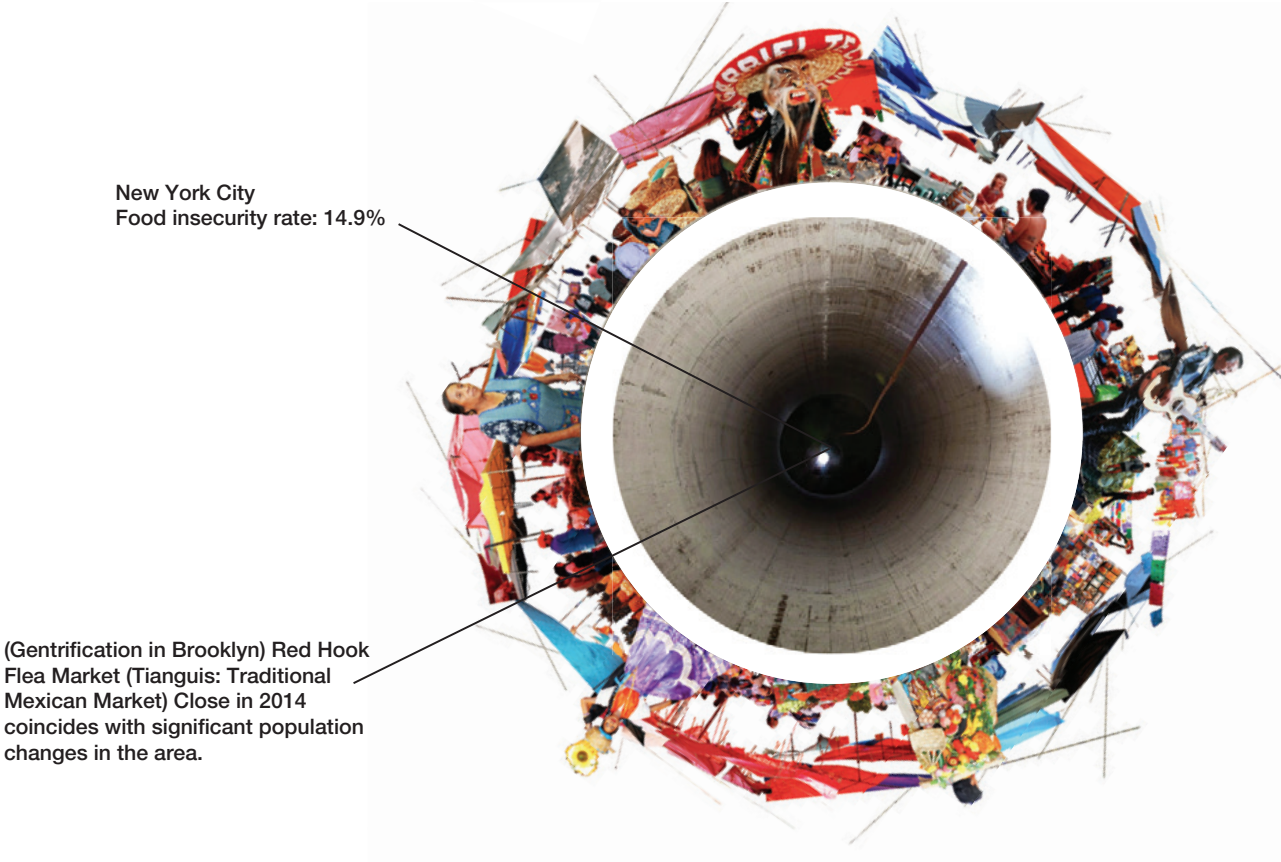
Biogas Ststem
(heat/electricity)



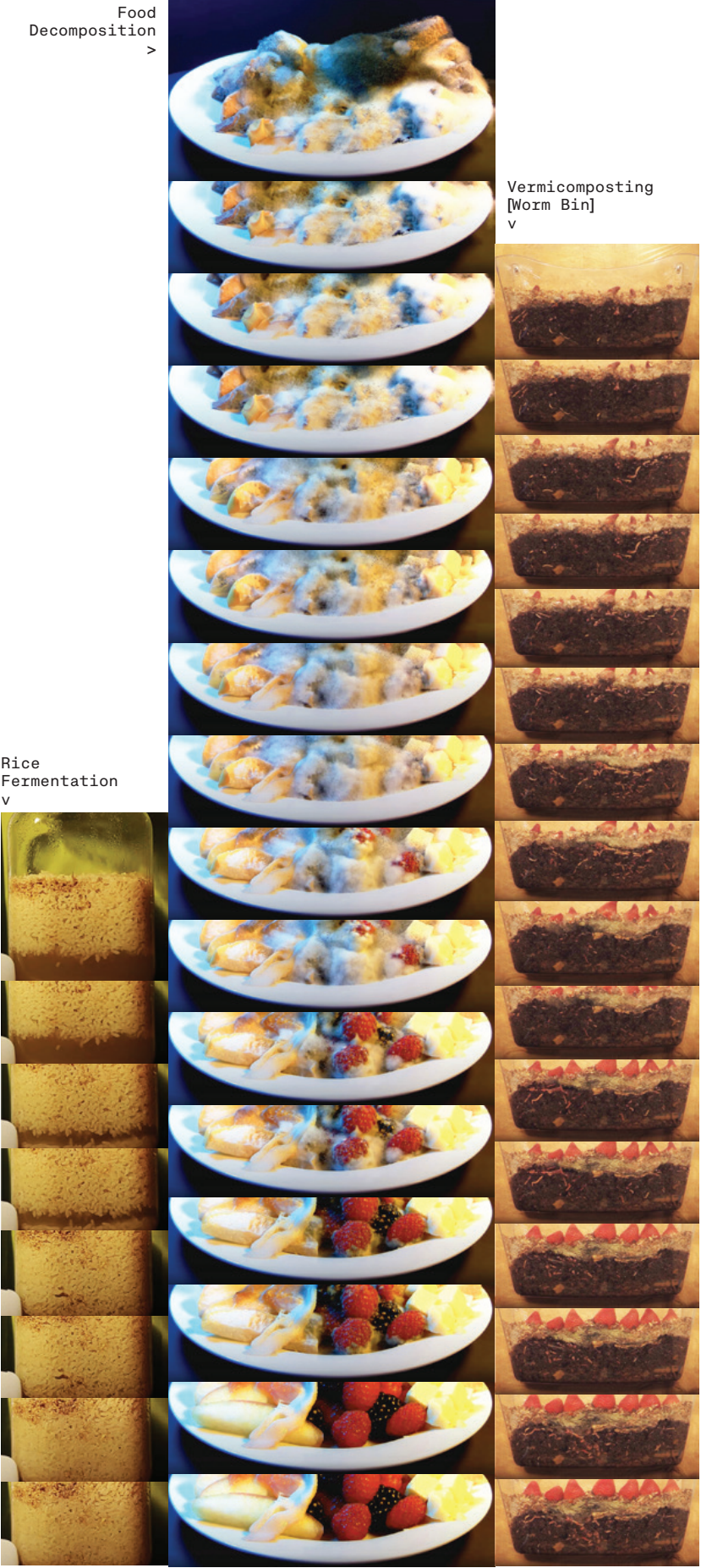
Fertilizer (Output)
for parks and cemeteries



City's Food Waste
(crisis, input)

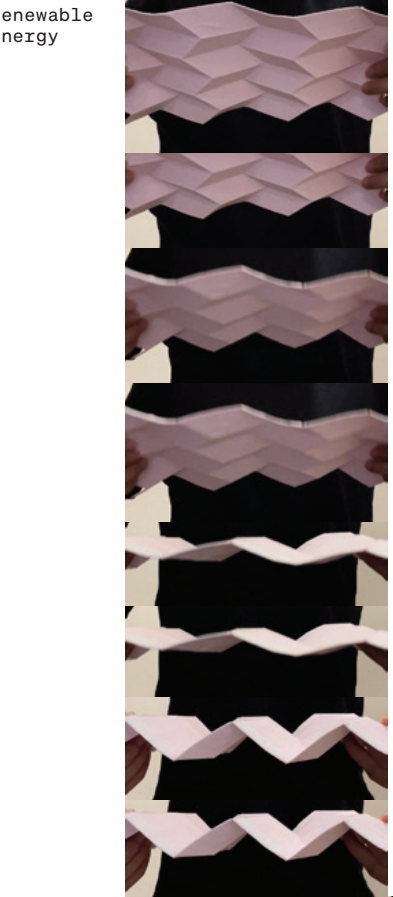
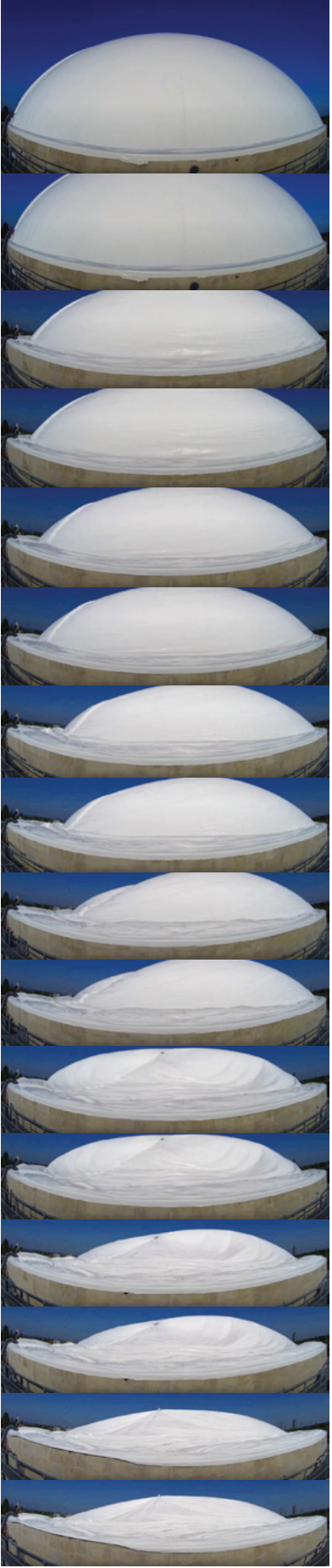


Reimagining the Elevator,
Reviving the Market



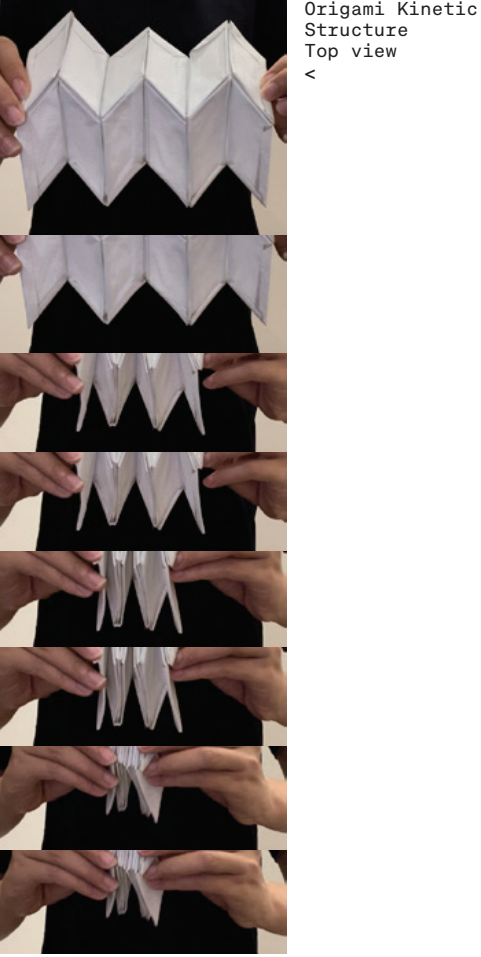
Transformation Through Fermentation

Food undergoes a remarkable journey when subjected to fermentation, composting, and worm bin processes, evolving from everyday scraps into soil, rice wine, or even gas. Each stage illustrates a cyclical transformation, harnessing microbial activity to convert organic matter into new resources. By embracing these methods, communities can reduce waste, foster sustainable practices, and cultivate a deeper appreciation for nature's regenerative power.



Energy and Community

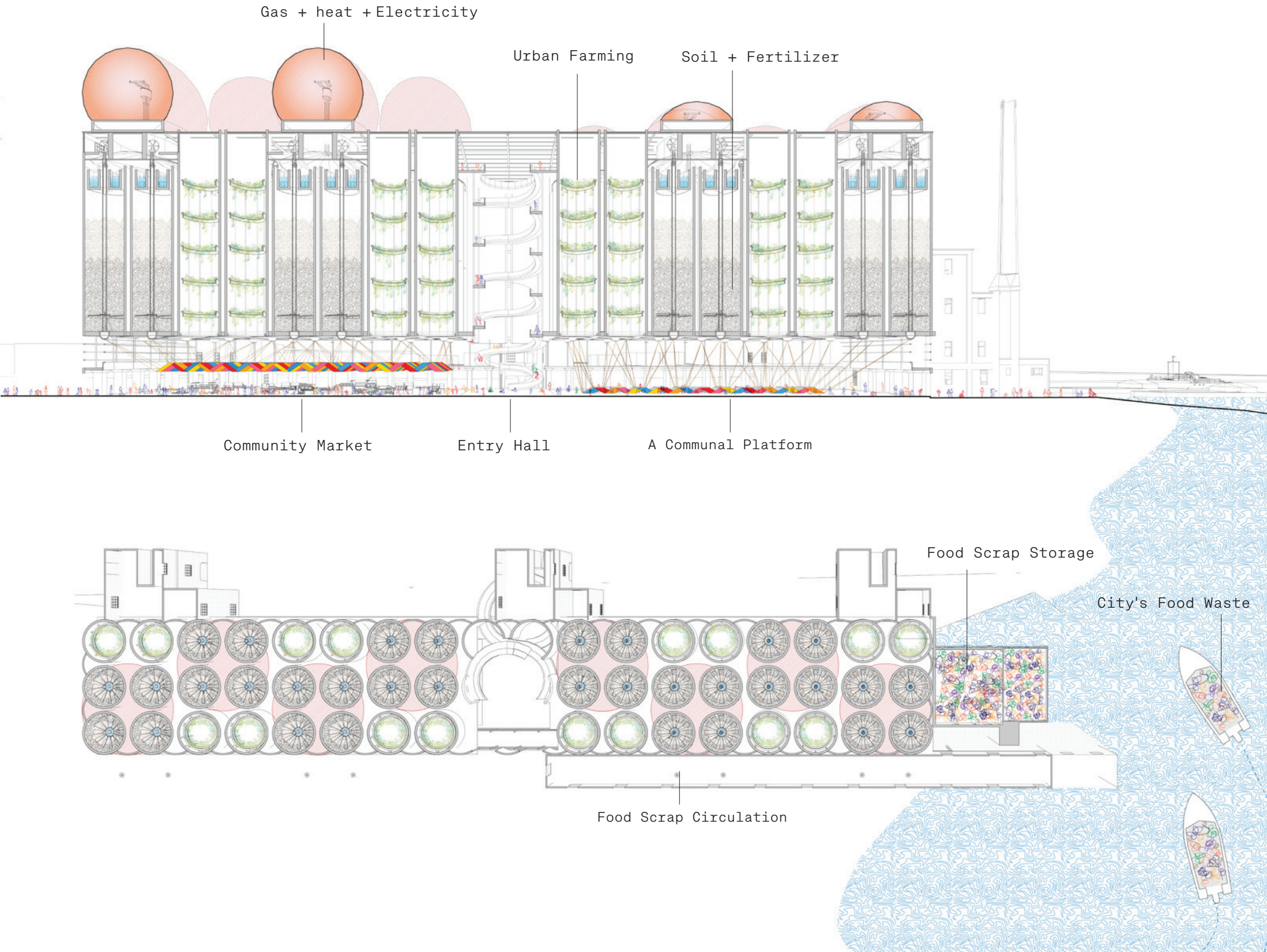
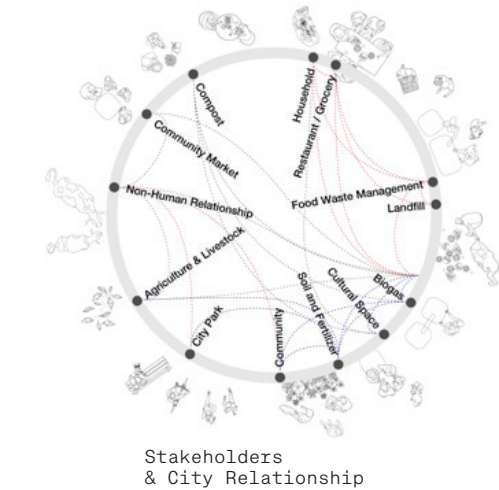
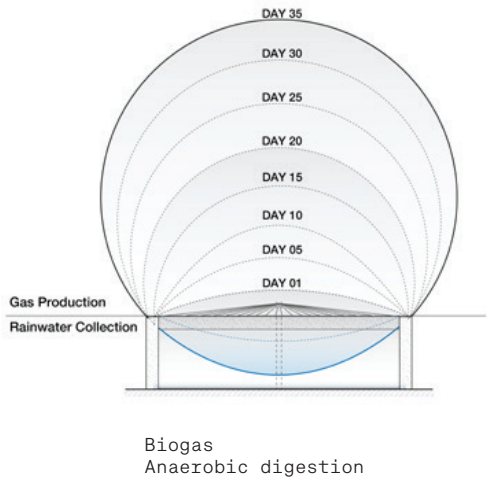
The biogas system and tent structure converge into a single cohesive design, each offering distinct benefits: the biogas component provides renewable energy, while the folding canopy creates a communal gathering space. A balloon rising above unites these elements, visually signaling the flow of energy and the evolving spatial experience. This integration balances practical needs with social interaction, demonstrating a design that adapts to both people and the environment.



The Ritual of Renewal

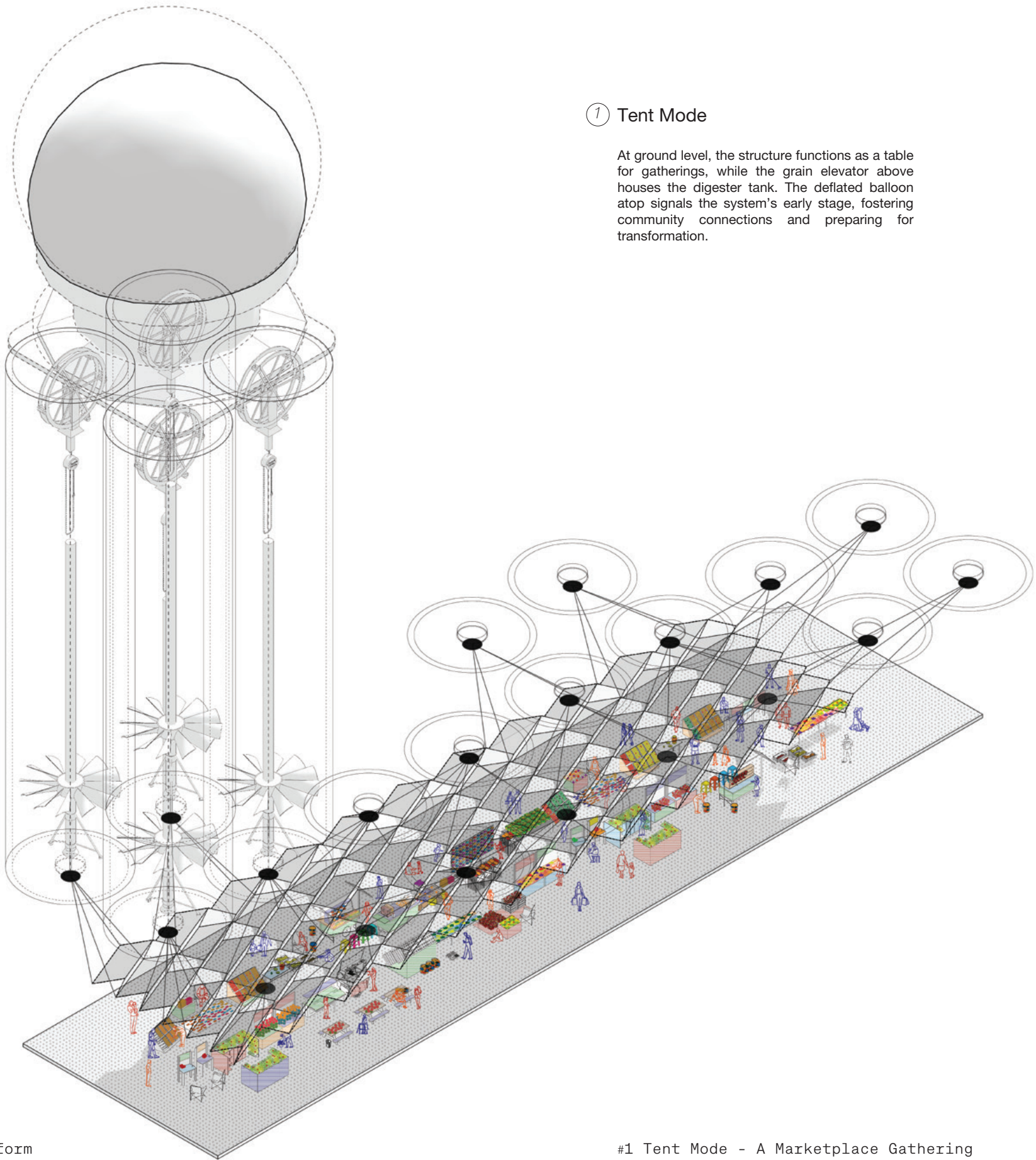
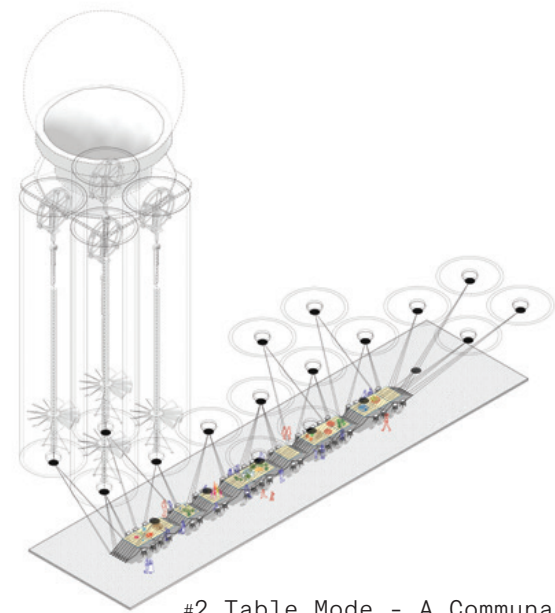
This project transforms the Red Hook Grain Terminal into a center for renewable energy and community renewal. The building's biogas system converts food waste from city households into energy, powering a market on the ground floor. This market, fueled by waste, becomes a vital space for residents, fostering economic activity and cultural exchange. The biogas process also produces soil and fertilizer, used to restore nearby parks and cemeteries, extending the project's impact.

At the heart of this transformation is a ritual of renewal, where waste is turned into something valuable. Microorganisms in the biogas system break down food scraps into energy and nutrients, highlighting the interconnectedness of urban life. The diagram below illustrates the cycle: food scraps > biogas > soil, emphasizing accessibility and community empowerment.



The Relationship of Reuse

This project transforms the old grain elevator into a biogas plant, where food waste is processed in a digest tank to generate renewable energy. The balloon expands with compost movement, creating a dynamic feature. Below, a temporary structure offers a market space, fostering community engagement and showcasing the building's sustainable reuse.

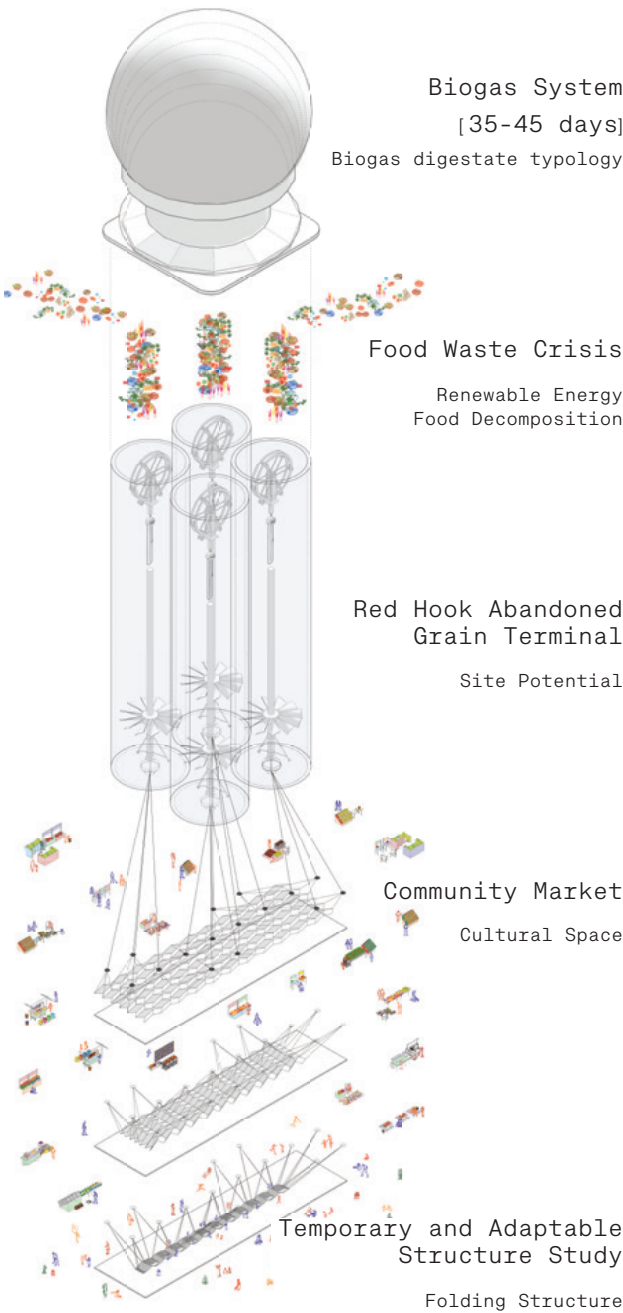


① Tent Mode

At ground level, the structure functions as a table for gatherings, while the grain elevator above houses the digester tank. The deflated balloon atop signals the system's early stage, fostering community connections and preparing for transformation.

② Table Mode

As biogas inflates the balloon atop the grain elevator, the structure below rises into a tent-like canopy, creating a vibrant tianguis market. This space fosters a circular economy and reconnects Red Hook's Hispanic heritage with sustainability.





The conceptual model of the biogas system with the folding tent structure conceptually represents both the digestion process and the urgent issue of food waste in New York City. Created using expired food items sourced from a Brooklyn food bank, the model highlights the alarming amount of food that ends up as waste, releasing carbon emissions into the atmosphere, even as surrounding areas, including Brooklyn, face significant food insecurity. The rosemary (1), Thai Basil (2), black pepper (3), oregano (4), rice (5), and minced onion (6), which would have otherwise contributed to landfill waste, were repurposed into the section model to symbolize the UP project's core mission: turning waste into a resource for growing renewable energy while illustrating the imbalance between waste and food insecurity.



Beyond its environmental impact, UP is designed to catalyze social empowerment and community engagement. By harnessing energy from organic waste, the project activates dynamic spaces within the terminal that evolve alongside the biogas production process. This transformation creates opportunities for a variety of activities that directly serve and celebrate the local Hispanic community in Red Hook. The terminal will host community markets (1) that support local vendors and artisans, cultural festivals (2) that celebrate traditional and contemporary Hispanic heritage, and educational workshops (3) focused on sustainability, composting, and renewable energy. Additionally, art exhibitions (4) and public murals by local artists will bring visibility to community voices, while performance spaces (5) will provide platforms for music, dance, and storytelling. Communal kitchens (6) will foster shared cooking events, connecting people through food and creating opportunities for cultural exchange and culinary education.



Within the repurposed grain terminal, activities unfold in a space divided by a flexible structural system that connects to the biogas facility above, where the former grain silos are now transformed into biogas fermentation tanks.

FORT AS FOUND

Fall 2024 Studio
ADVANCED STUDIO V
BUILDING ON BUILDINGS

Instructor:
Wonne Ickx [PRODUCTORA]

Teaching Associate:
Anna Kim

Program:
Storage & Archive Building

Location:
Governors Island, NY

in collaboration with Cen Shen

Governors Island faces the dual challenges of rising sea levels and a growing need for sustainable reuse of its existing structures. South Battery #298, with its robust red sandstone

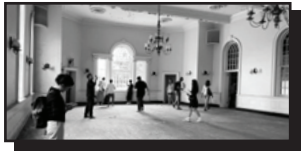
walls and layered history, stands as a testament to the island's resilience. This project embraces the fort's transformations and the materials left behind from recent demolitions,

repurposing them to create a contemporary retaining wall that provides critical flood protection and safeguards archival facilities. The design integrates adaptive reuse and environmental

Site visit 10 sep 2024
Governors Island



Interior View
Building#298



resilience, transforming the fort's defensive legacy into a foundation for new possibilities. By crafting a gathering platform from reclaimed materials, the project fosters community

interaction and honors the site's layered history. The name "Fortas Found" reflects this approach—celebrating what is discovered, reused, and reimagined to connect the past with the present

while building for the future. This project is an adaptation of South Battery #298 on Governors Island, turning its historic fortress walls into a new retaining wall that houses an archive, library,

and exhibition, preserving the building's layered history. The design addresses flooding by elevating public areas and shielding stored materials. Visitors explore the site's past as they move between

restored spaces and newly formed pathways, reflecting on the island's evolving identity. By integrating recycled construction waste into the walls, a living record of its transformation emerges.

This approach balances historic preservation with forward-thinking solutions, ensuring the fort's relevance for current and future generations.



Existing Fortification
Building#298

Potential In Ruin: *Adaptive Reuse* in the Context of Unfinished Island



< Wall Construction and Material Reuse

Starting in 2021, Governors Island entered a new phase of redevelopment, with numerous renovation and demolition projects generating significant construction waste. To address this issue, this project proposes repurposing these materials—particularly brick fragments—to construct a new retaining wall for the South Battery, inspired by its original (2) red sandstone fortifications. This wall will encapsulate the island's layered history, embedding its transformation into the architecture itself.

By incorporating recycled materials, the project transforms waste into a building element, archiving Governors Island's evolution while promoting sustainable construction.

< Resilience in Crisis: Flood Protection

Governors Island faces critical flood risks from sea-level rise and extreme weather, threatening its historic structures. This project responds with a retaining wall informed by recorded wall rubbing and layered wainscot from the original fort, safeguarding South Battery's archive and creating an elevated public platform. Inspired by the site's fortifications, it honors a legacy of resilience while adapting to modern challenges, transforming the site into a secure repository built to endure.

Site: Governors Island



Throughout history, Governors Island has stood as a sentinel in New York Harbor, guarding the city and shaping its maritime identity. Once a fortified military base, its walls and structures were built for defense, reflecting the island's strategic importance during times of conflict. Over centuries, its role shifted from military stronghold to neglected landscape, leaving behind layers of history embedded in its architecture. These remnants now offer a foundation for reimagining the island's future, where past defenses can inspire new forms of protection and public engagement.

Governors Island is a newly accessible public space, historically a strategic outpost. With rising sea levels threatening its shoreline, it now faces urgent flood challenges—and new opportunities for rejuvenation. Once home to South Battery #298 and other military forts, its abandoned buildings are transforming into public amenities, bridging cultural heritage, education, and environmental resilience.



Contextual Evolution and Material Transformation of South Battery #298

Building #298
North Elevation
Third Coast Guard District
Governors Island, N.Y.
David Brodherson, Photographer
Summer, 1982

The red sandstone in South Battery298 is locally sourced, reflecting the island's natural landscape.



^
Abandoned Military Building on Governors Island

Brick Debris from Renovation Demolition
v



The island's history of military use, followed by periods of civilian occupation, has led to numerous renovations and adaptive reuse projects. Each phase of transformation has left its mark, with various construction materials added on top of existing elements—brick, mortar, and stone—often as a result of demolitions around the island.

As part of the ongoing island-wide renovations, a significant amount of brick and material waste from demolished structures has accumulated. This waste offers an opportunity to repurpose materials in creative ways, making it possible to integrate the island's past into the new architectural interventions. The discarded materials present an untapped resource for the project, enabling a design approach that honors both the building's history and the need for sustainable solutions.

In analyzing the South Battery's architectural evolution, it becomes clear that the building is not a static monument but a living record of time. The combination of its original red sandstone with later renovations demonstrates how architecture can adapt to new contexts while retaining connections to its past. This dynamic transformation, made possible by both the evolution of its physical elements and the repurposing of demolition waste, will shape the fort's future as a cornerstone of sustainable architecture.

Model Showing Evolving Elements of South Battery
v



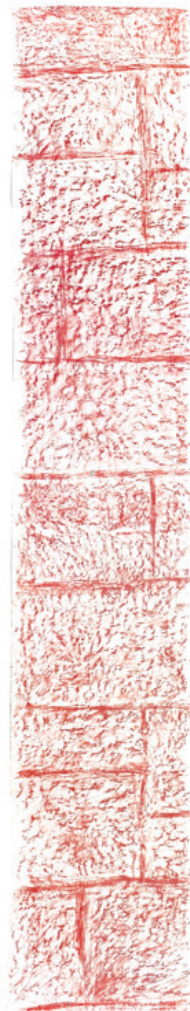
The building's layers reflect its evolving history, with each renovation adding new elements and functions.

Evolving Layers

This diagram explores the process of wall rubbing, focusing on the sandstone's transformation over time. The exterior and interior wainscoting elements reveal the layers added during renovations, showing how the building's structure has been altered through successive interventions. The sketches highlight these evolving layers, providing insight into the fort's architectural adaptations.



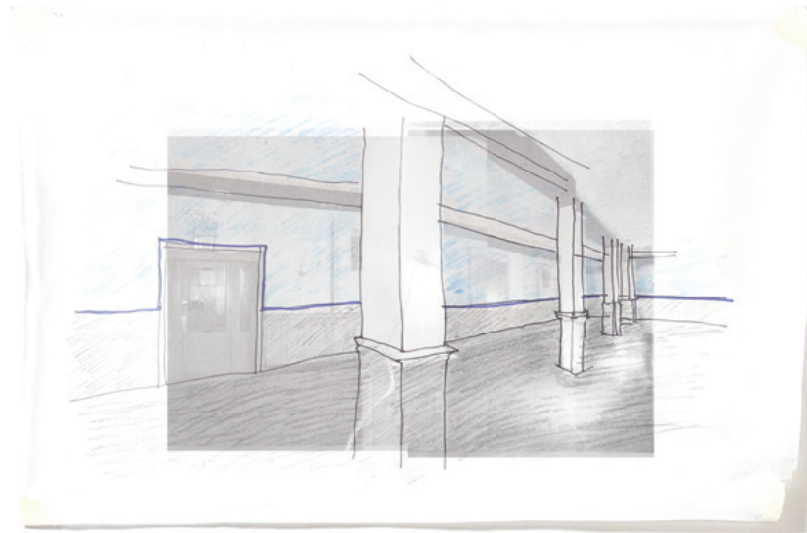
Ballroom - Former Dining Hall and Lecture Room



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Exterior Wall
Rubbling
Red Sandstone



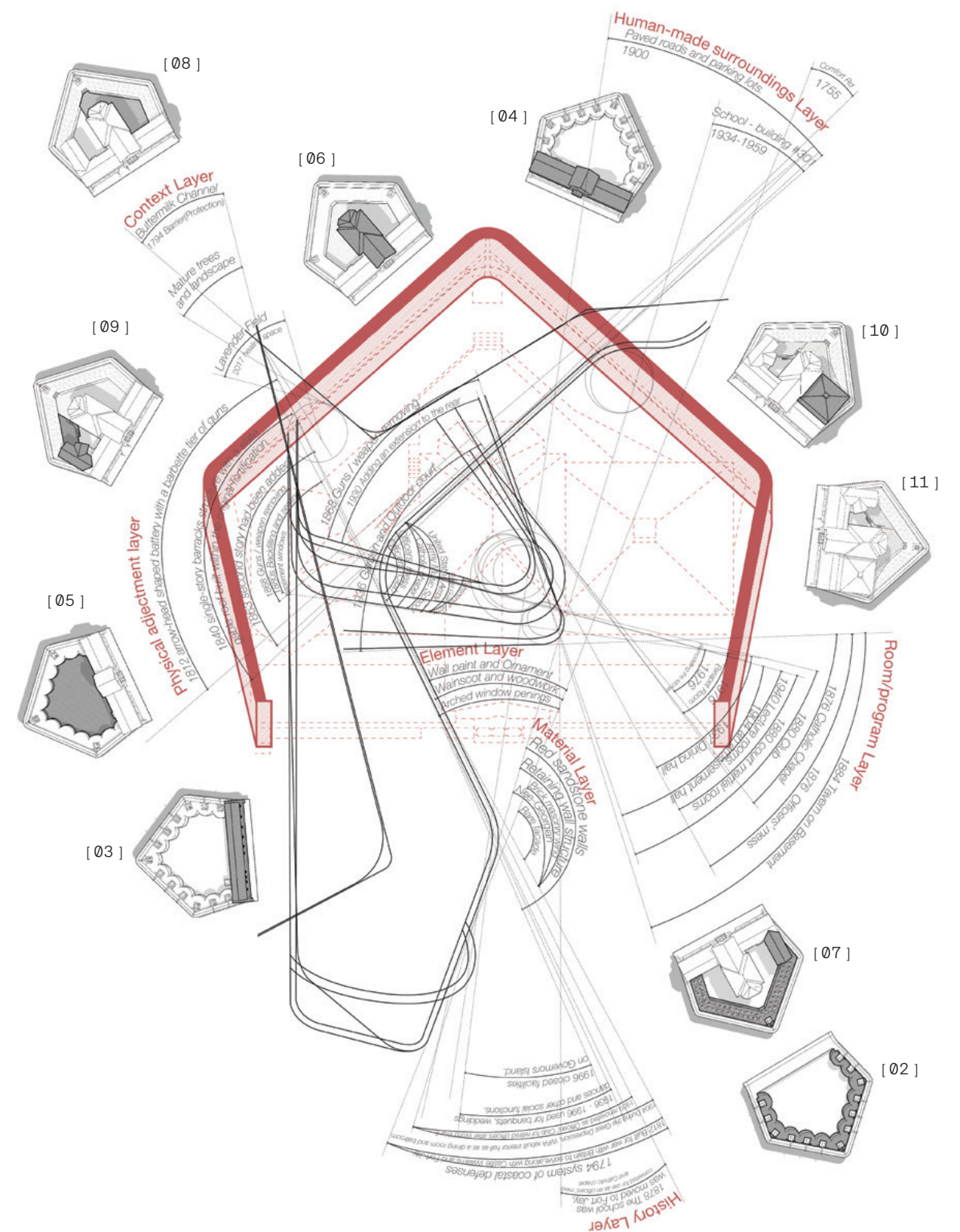
Interior Wall
Rubbling
Wainscoting



Tavern - Former Military Storage and Officer Quarters



Retired Army Celebration Room - Former Military Administration and Barrack Lobby

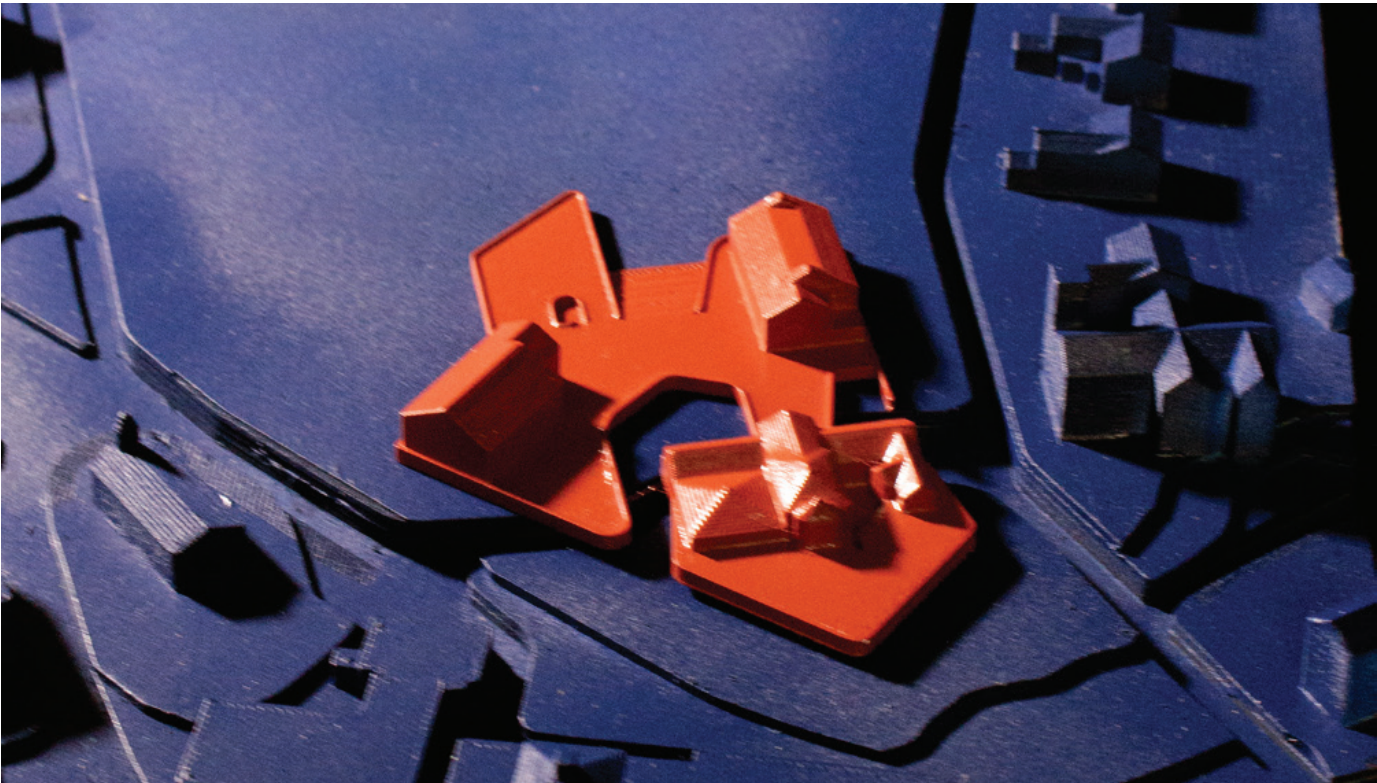
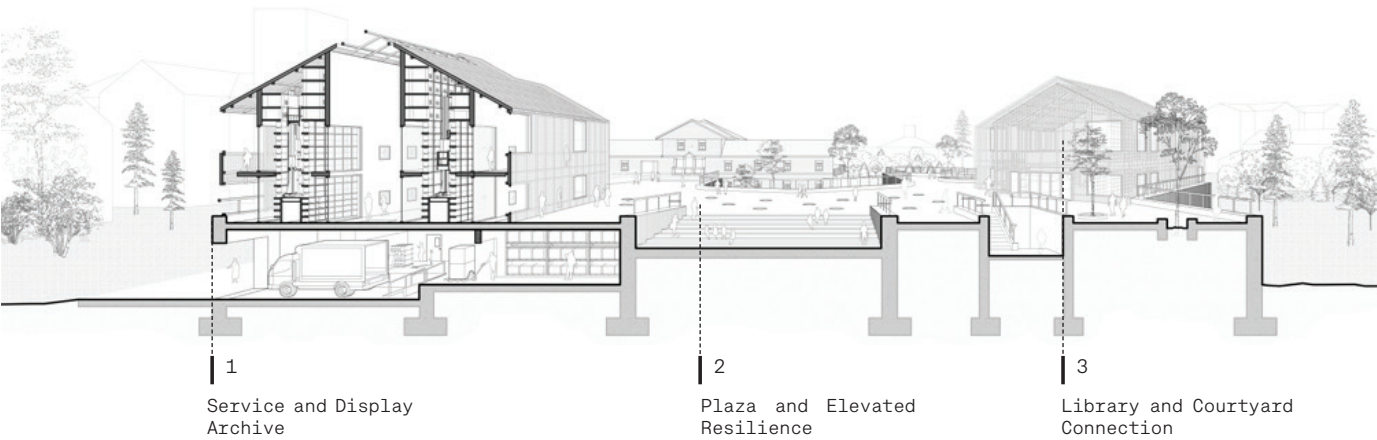


[01] 1794 - system of coastal defenses [02] 1812 - arrowhead shaped battery with a barbette tier of guns [03] 1840 - single story barracks [04] 1863 - a second story had been added, occupied by non-commissioned staff [05] 1878 - converted for use as an Officers mess and Catholic Chapel [06] 1880s - court martial rooms were located in the building [07] 1904 - remodeled into an amusement hall and lecture room [08] 1936 - second floor was gutted and redesigned as a dining hall of a new officers club [09] 1939 - garden added renovated for use as the Officer Club for retired Army officers [10] 1950 - kitchen has been remodeled and the building was used for banquets, weddings, dances and other social functions [11] 1996 - As a cost cutting measure, the Coast Guard closed its facilities on Governors Island

IN CONTINUOUS DIALOGUE

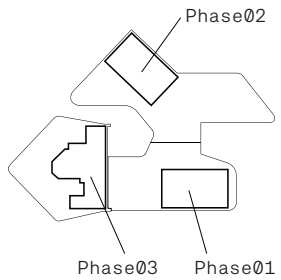
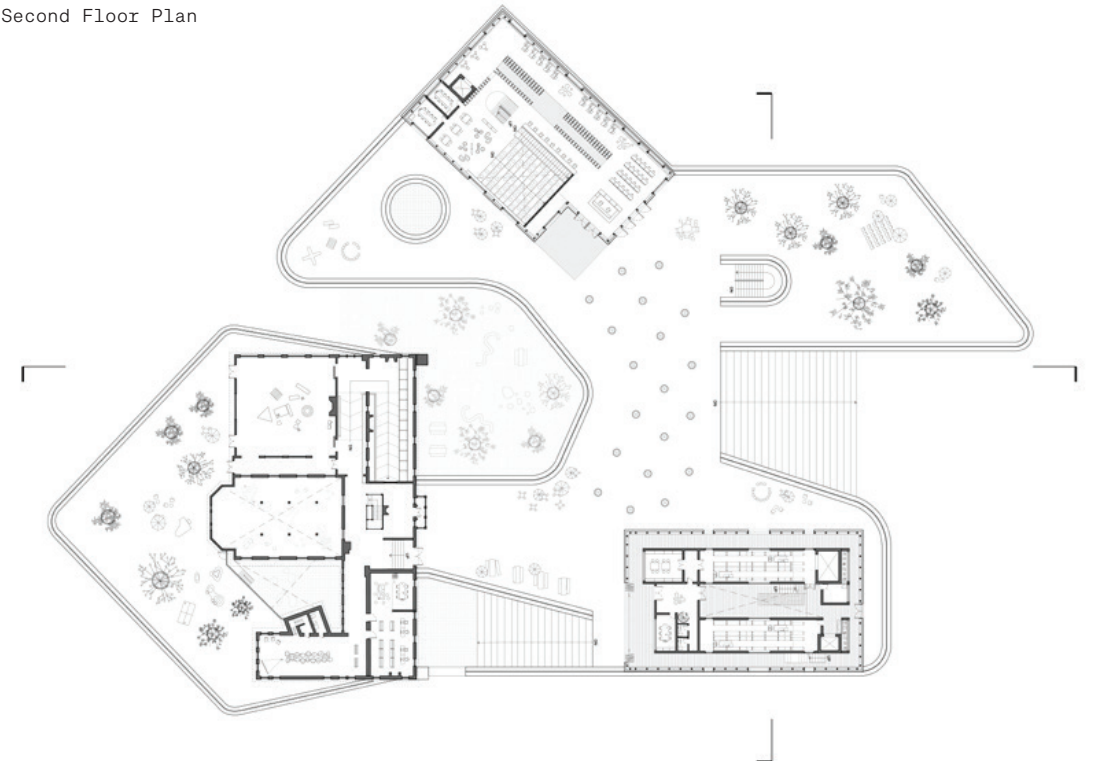
The design process begins with a deep consideration of the relationship between the existing fort structure and the proposed interventions. There is no clear distinction between “old” and “new” because the existing building itself is a product of multiple layers, built and transformed over time. The fort’s history is embedded in its walls, each renovation adding to its complexity and character. This layered evolution is central to the design approach, where the aim is not to disrupt the fort’s original fabric but to integrate new elements in a way that respects and builds upon its historical context. The goal is to create a seamless dialogue between the existing architecture and the new spaces, where both coexist and inform one another.

The relationship between the existing fort and the proposed design is explored through spatial form. The floor plans and section views reflect how these layers are woven together, creating a cohesive and integrated environment. The design does not aim to separate the past from the present but instead seeks to celebrate the fort’s evolving identity. By carefully considering how each new addition interacts with the original structure, the design emphasizes continuity rather than division. The new elements are not seen as additions to a static building, but as part of an ongoing process of transformation, where each layer contributes to the fort’s ongoing story and future potential.



P32

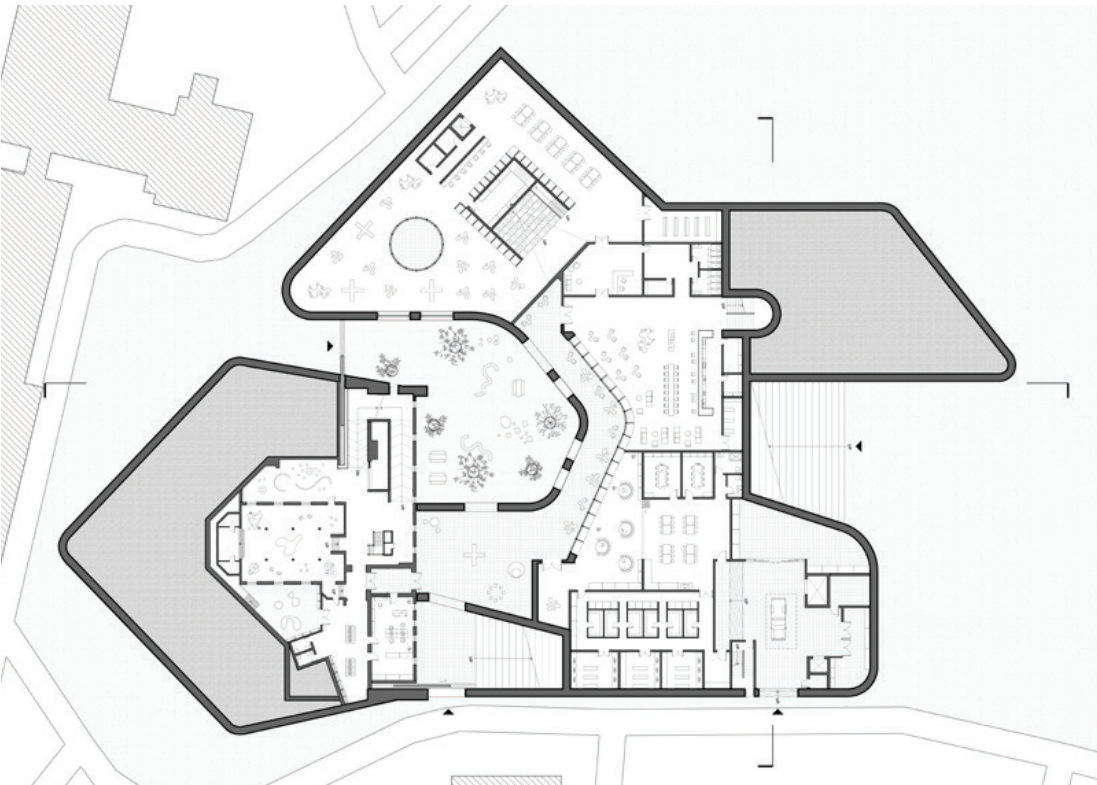
Second Floor Plan



Phase 01
Archive File Room
and Workshop

- 01 3D Print Room
- 02 Laser Cut Room
- 03 Wood Workshop
- 04 Temporary Storage
- 05 Workshop
- 06 Wood Shop
- 07 Model Workshop
- 08 Physical Storage
- 09 Drawing Storage
- 10 Discussion Room
- 11 Office
- 12 Meeting Room
- 13 Material Room
- 14 Loading Dock
- 15 Material Lab
- 16 Research Lab
- 17 Administrator

Ground Floor Plan



Phase 02
Library and Study
Center

- 18 Library
- 19 Cafe
- 20 Reception area
- 21 Quiet Room
- 22 Storage
- 23 Outdoor Area
- 24 Seating
- 25 Conference Room
- 26 Study Room
- 27 Co-working Area
- 28 Lounge

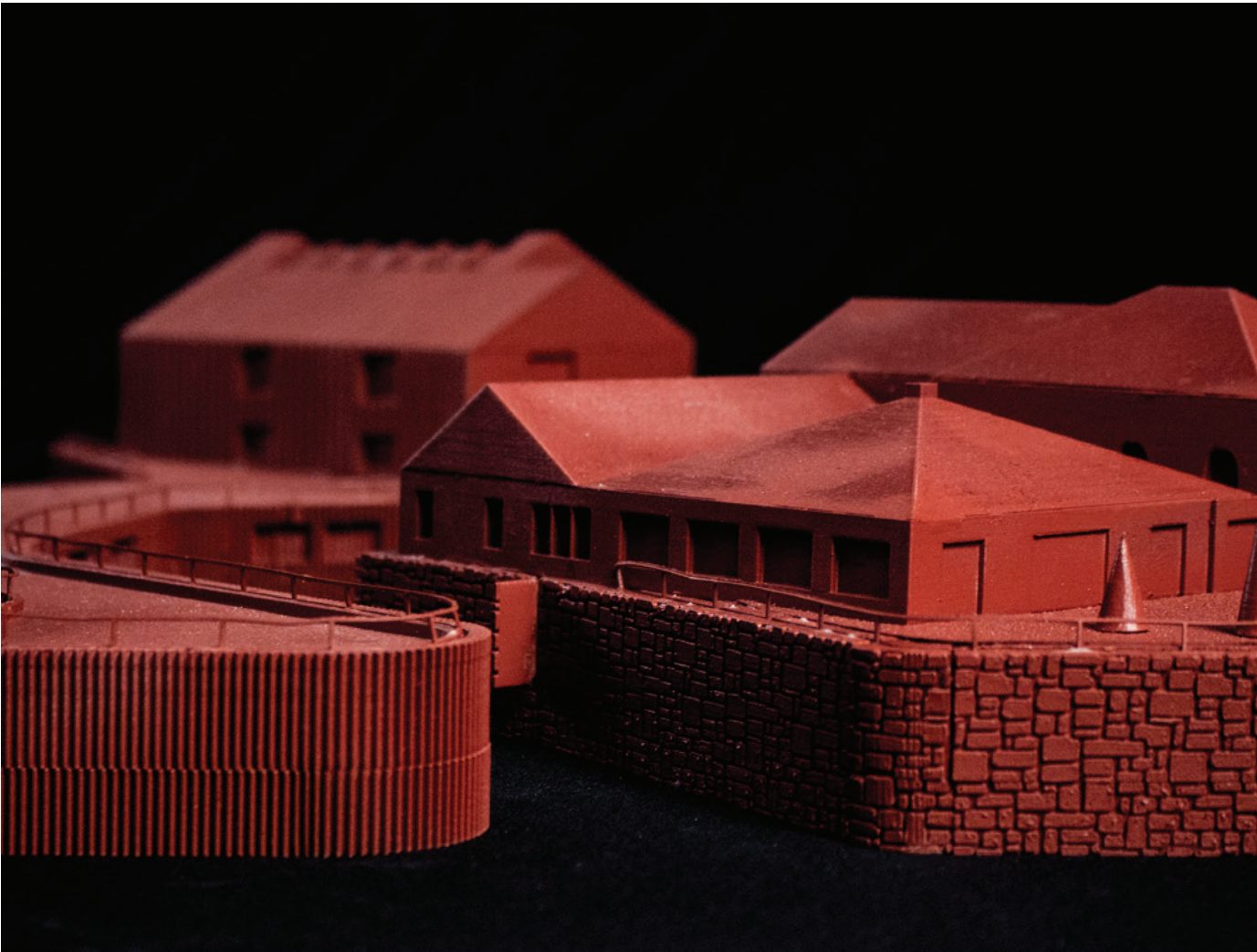
Phase 03
Exhibition Space and
Event Space

- 29 Entry Hall
- 30 Temporary Exhibition
- 31 Storage
- 32 Reception
- 33 Exhibition space 1,2,3
- 34 Collection Galleries

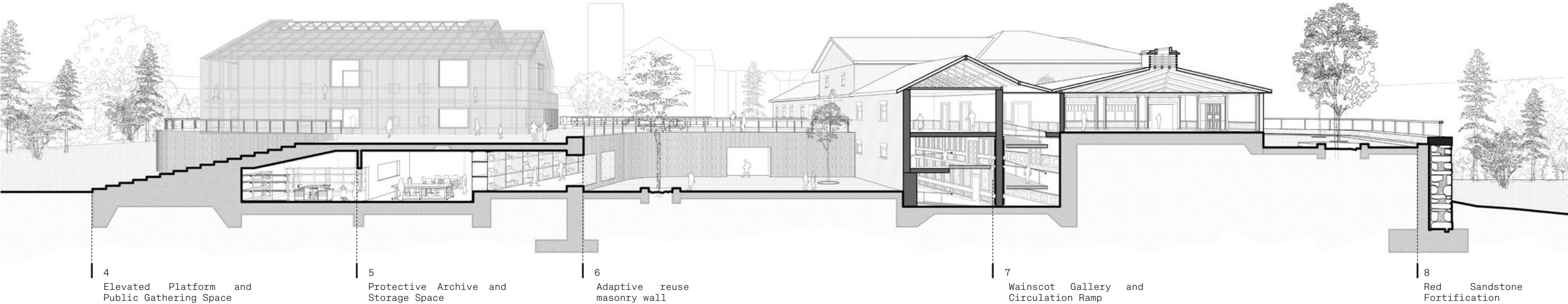
P33



The overall design shows the continuity between the existing structure and the new form, emphasizing resilience in the transformation.



The physical model highlights the contrast between the brickwork of the existing building and the new proposal, showcasing the difference in architectural language and construction methods.



4
Elevated Platform and
Public Gathering Space

5
Protective Archive and
Storage Space

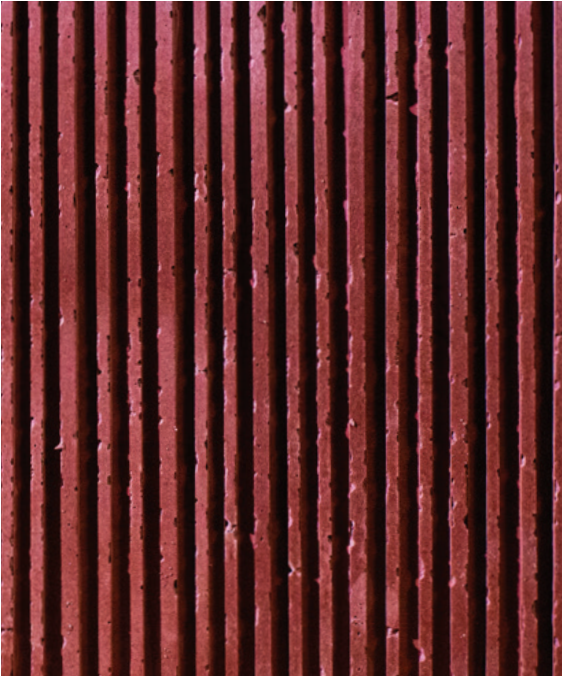
6
Adaptive reuse
masonry wall

7
Wainscot Gallery and
Circulation Ramp

8
Red Sandstone
Fortification



Section Model Showing the Relationship Between Interior and Archive Space.



Vertical Brick Pattern
Contrasting with the Existing
Red Sandstone Exterior



Material Experiment
Waste Brick, Cement, and
Pigment as a New Wall Technique

SOFT PINK, DEEP BLUE

Restoring Balance Between Land and Sea

SPRING 2025

ADVANCED STUDIO VI

Coding the Storm - Architecture
and the Posthuman Politics of
the Caribbean Hurricanes

Instructor:
Mireia Luzarraga

Teaching Associate:
Angela Keele

Location:
Cabo Rojo Salt Flats,
Cabo Rojo, Puerto Rico

Individual Work

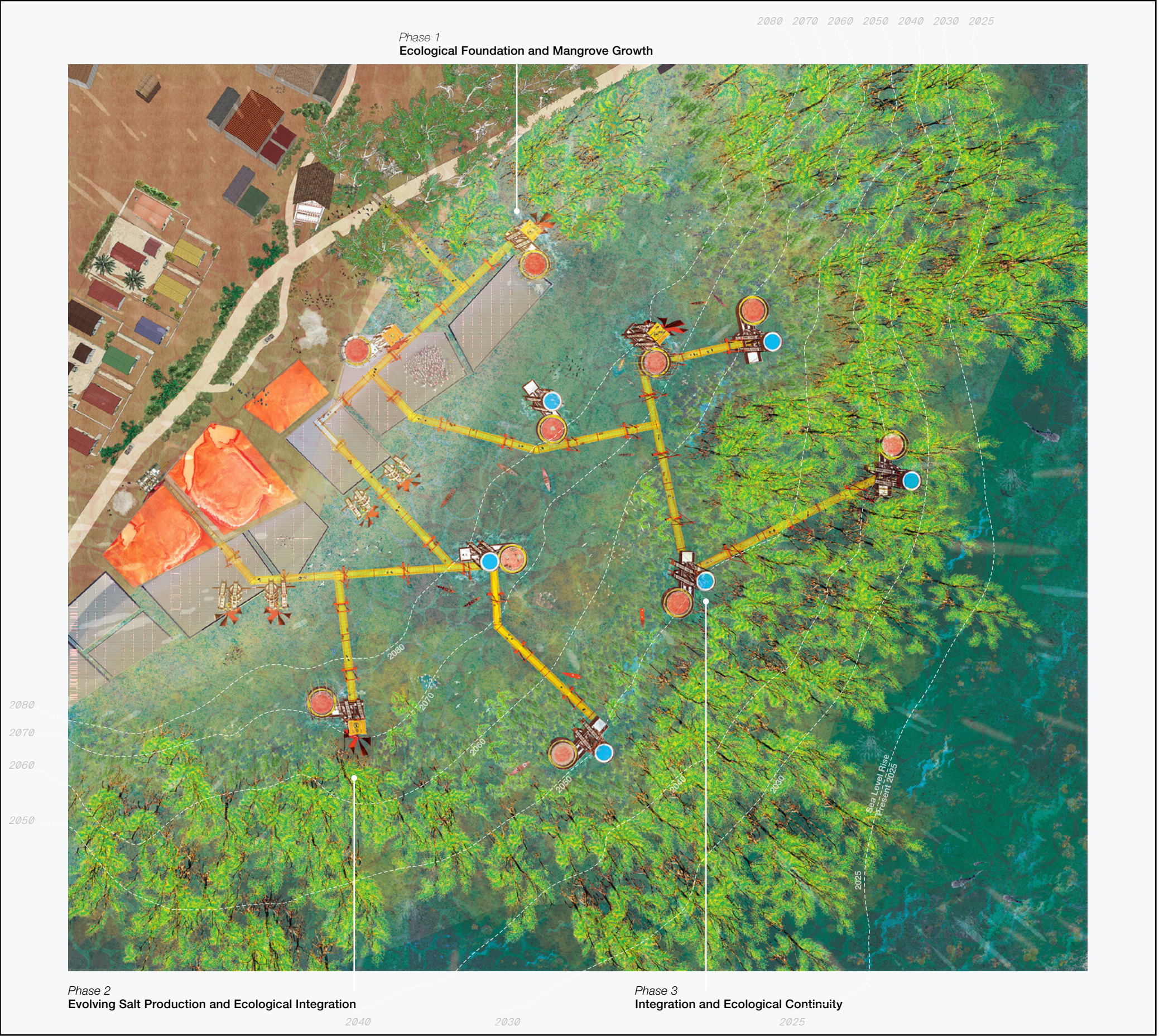
Where land meets
sea, salt and water
dance in harmony,
shaping the future of
ecology and culture.

Pink Waters of Cabo Rojo
Salt Flats



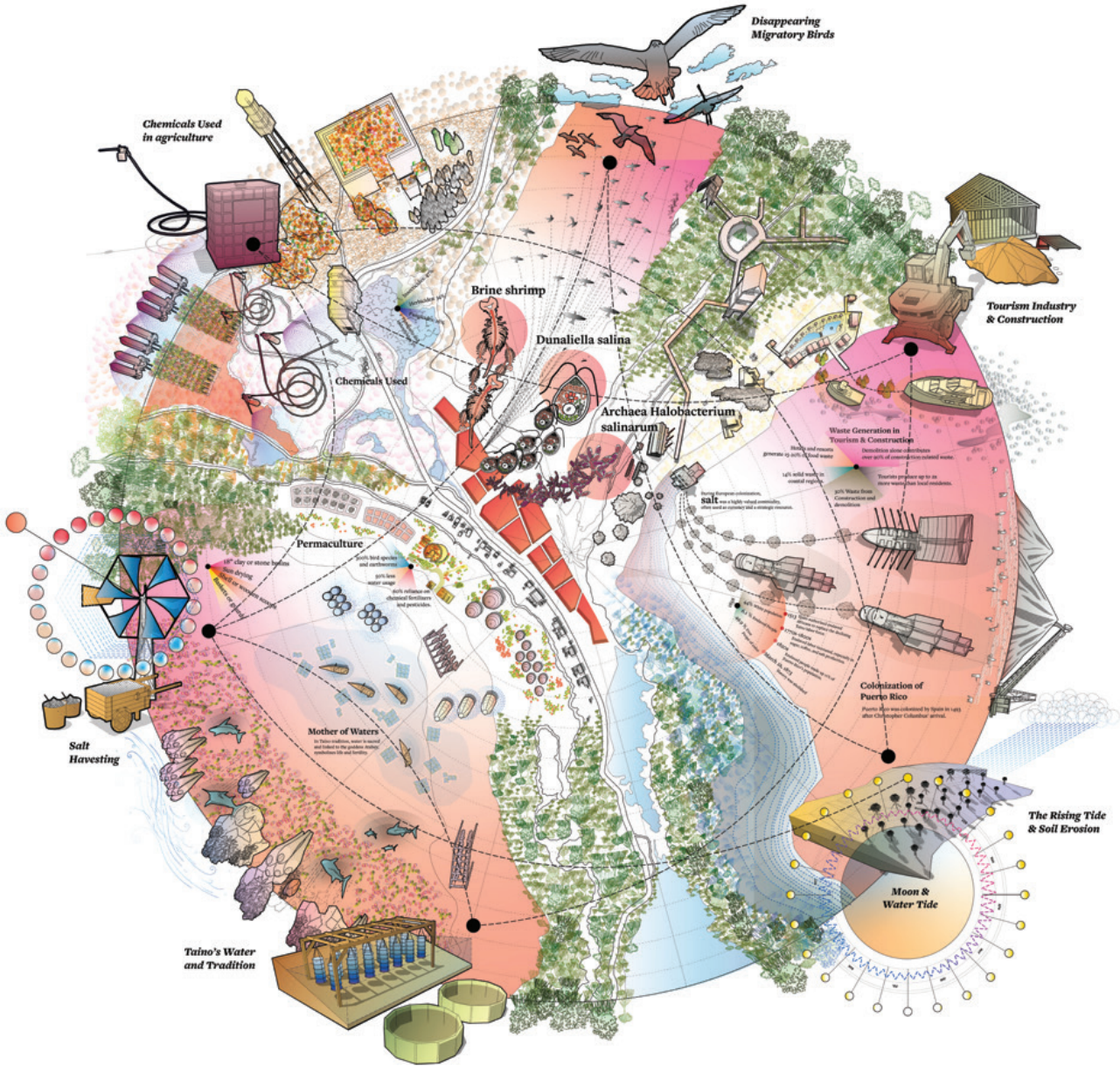
Abandoned Wind
Wheel - Echoes of
Salt Production

Shoreline Defense
- Rocks Against
Rising Waters

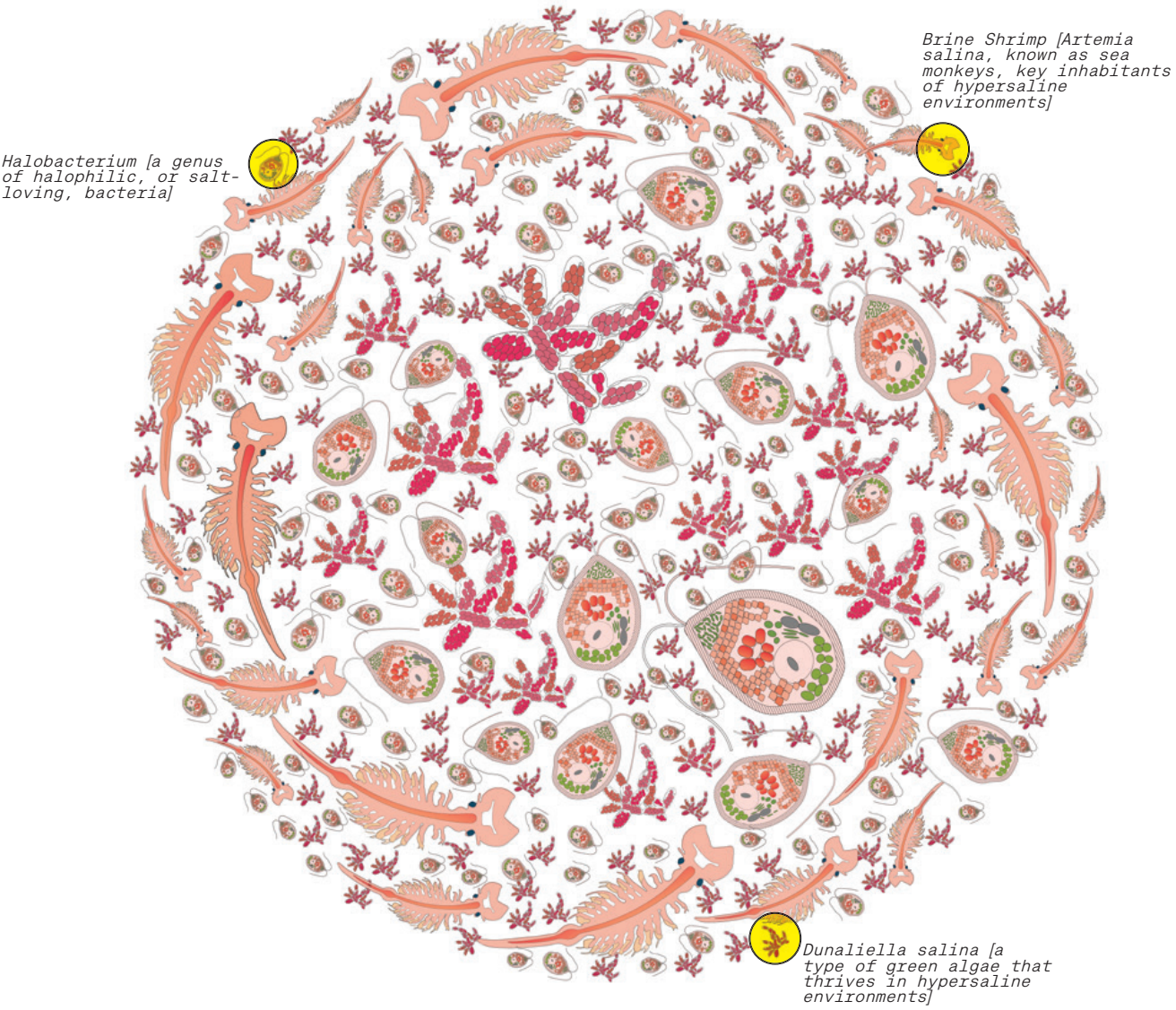




This diagram traces the timeline of salt production in Cabo Rojo, from indigenous practices to colonial and industrial methods, showing how the process has evolved in response to environmental and historical challenges. It reflects the changing role of salt production and its adaptation to shifting conditions over time, up to the present day.



The **cosmogram** reveals the interconnected layers of Cabo Rojo Salt Flats, illustrating how social, economic, political, ecological, and environmental factors shape the area. It highlights the hidden dynamics that influence salt production, community impact, and the surrounding ecosystems. By mapping these layers, the diagram uncovers the complex relationships between **historical exploitation, ecological degradation, and the ongoing struggle for environmental and social justice**, emphasizing how these forces continue to shape the land today.

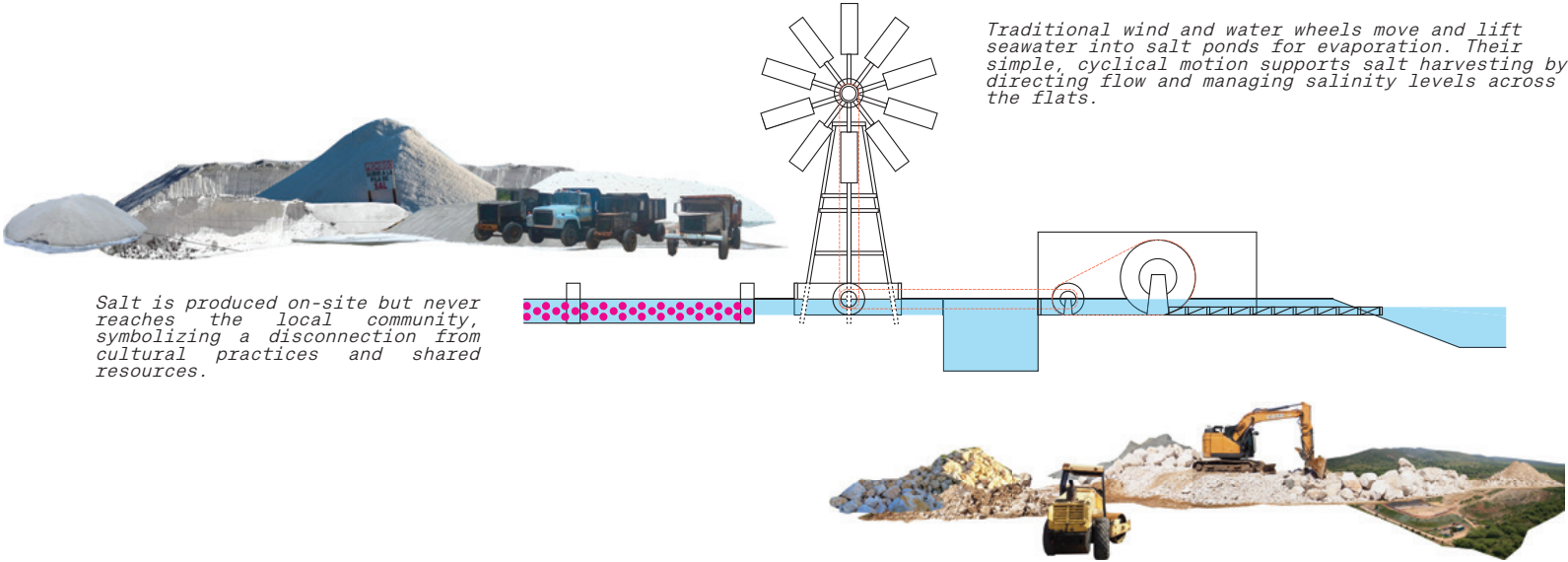


The **Cabo Rojo Salt Flats** are home to a unique ecosystem where pink-colored waters result from the **presence of bacteria, brine shrimp, and algae** that thrive in the salty environment. These organisms are integral to the salt production process, creating a natural cycle of life. This **ecosystem** also supports biodiversity, providing a critical habitat for migratory birds and a variety of species that rely on the salt flats for survival, making it a vital part of the region's ecological balance.



*Gear System Model
A mechanical assembly
translating wind energy
into environmental and
economic flow.*

*Wind Wheel Prototype
Using wind force to
collect and move water
across the salt flats.*

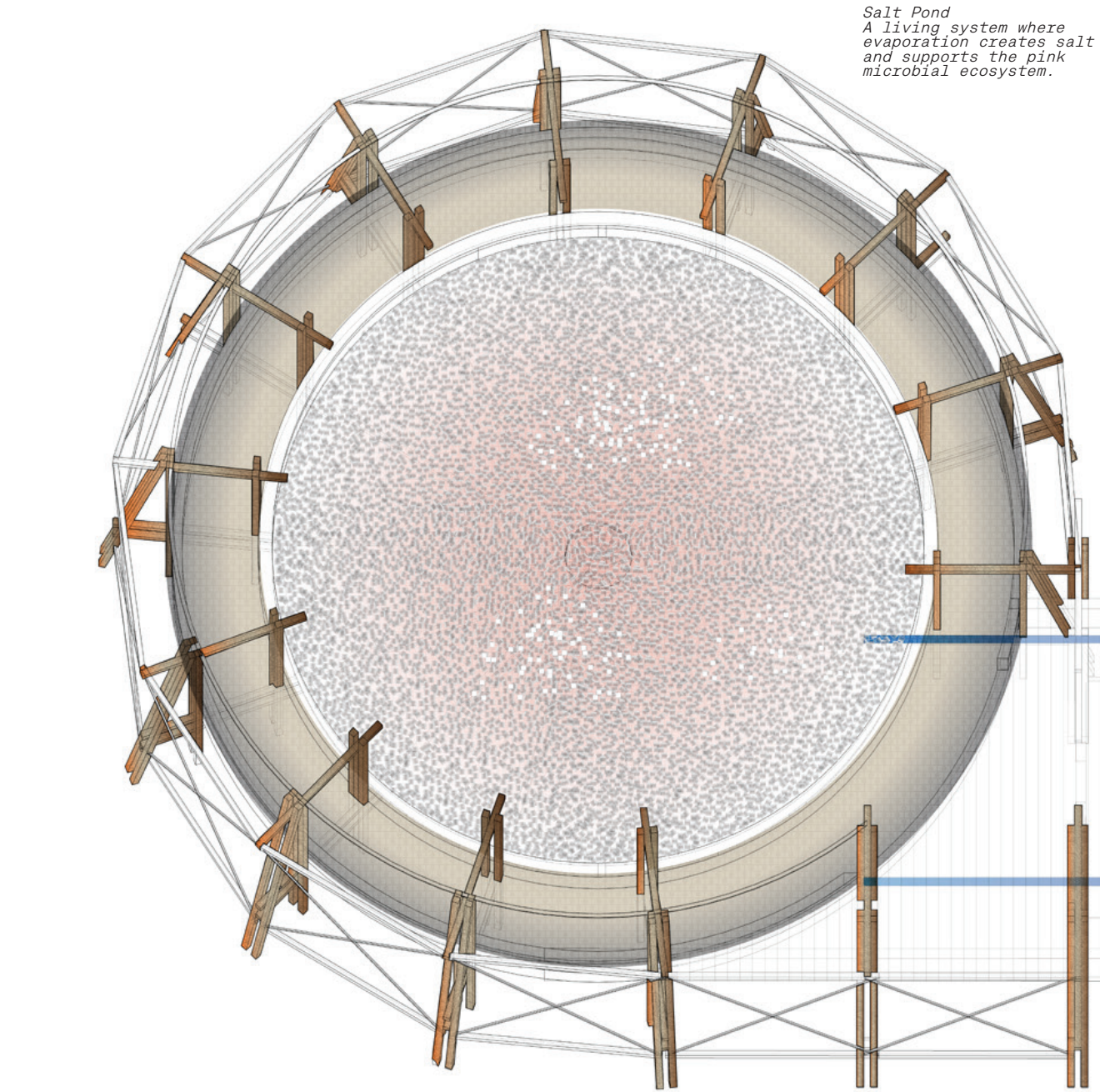


*Salt is produced on-site but never
reaches the local community,
symbolizing a disconnection from
cultural practices and shared
resources.*

*Traditional wind and water wheels move and lift
seawater into salt ponds for evaporation. Their
simple, cyclical motion supports salt harvesting by
directing flow and managing salinity levels across
the flats.*

*Rocks extracted from the mountains of Cabo
Rojo are stacked to hold back rising water,
a response to crisis that protects land but
cannot restore what has been lost.*

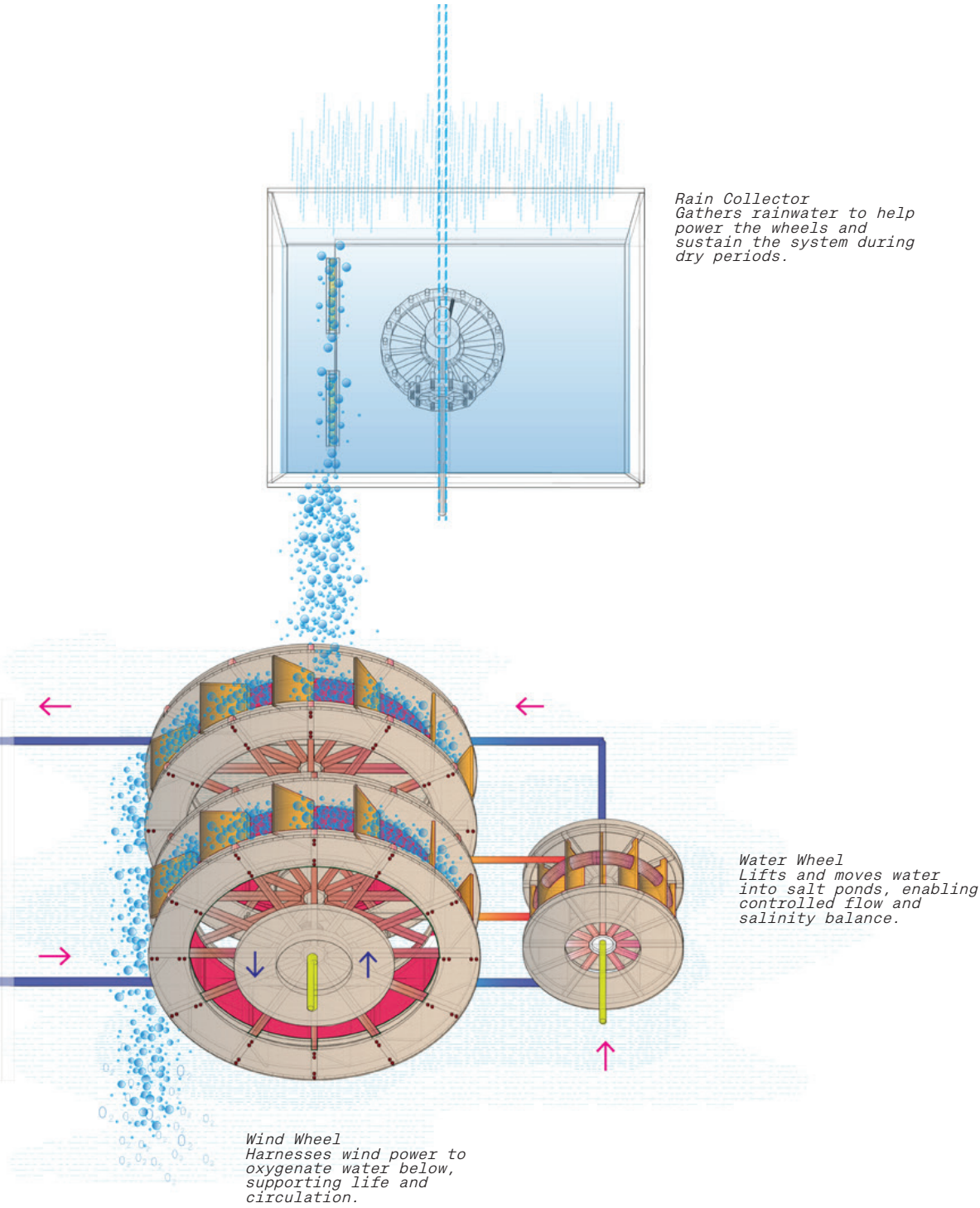
The project uses wind and water wheels as quiet agents of restoration. Historically used for labor and extraction, these systems are reimagined here as tools for ecological care. Wind moves water across the salt flats, aiding regeneration, while water wheels help circulate and balance flows within the landscape. These mechanisms, simple and cyclical, connect natural forces with local economies by restoring mangroves, managing salinity, and supporting slower forms of harvesting. In a place shaped by crisis such as rising seas, fading migration, and environmental degradation, the project shifts these wheels from symbols of industry to instruments of renewal, offering a spatial and systemic response rooted in care, rhythm, and resilience.



Salt Pond
A living system where evaporation creates salt and supports the pink microbial ecosystem.

Agents and Community

This system supports more than ecology - it revives cultural memory, local knowledge, and community rhythms once tied to salt harvesting.



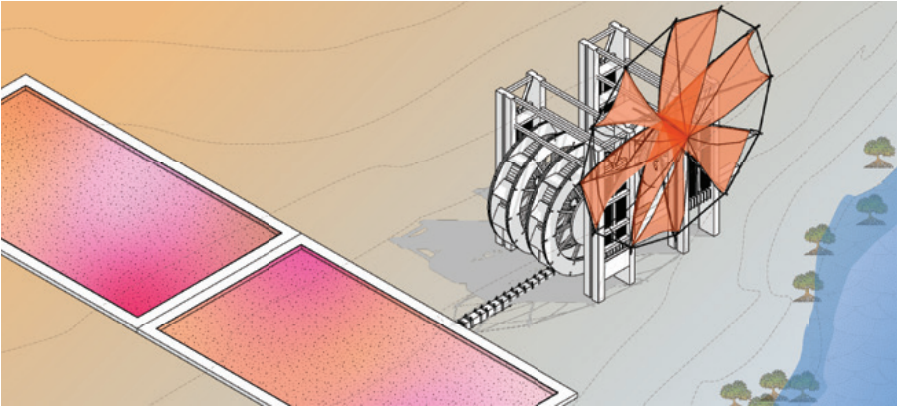
Rain Collector
Gathers rainwater to help power the wheels and sustain the system during dry periods.

Water Wheel
Lifts and moves water into salt ponds, enabling controlled flow and salinity balance.

Wind Wheel
Harnesses wind power to oxygenate water below, supporting life and circulation.

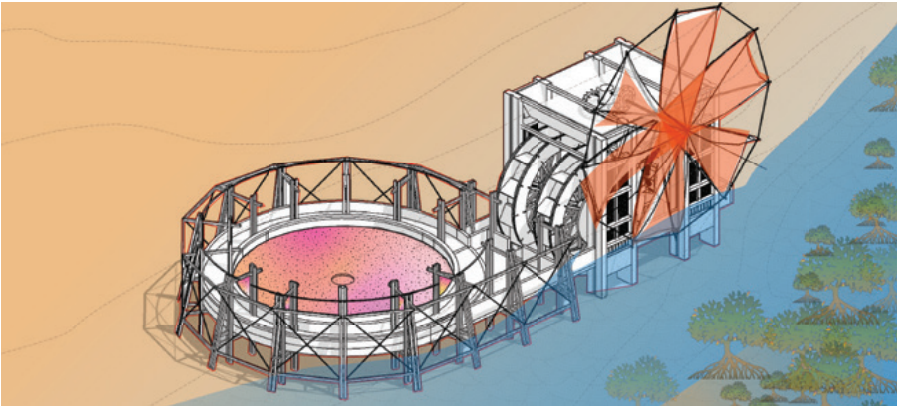
Integrated System

A closed-loop cycle powered by wind and rain, where mechanical elements restore balance across ecological, economic, and spatial layers.



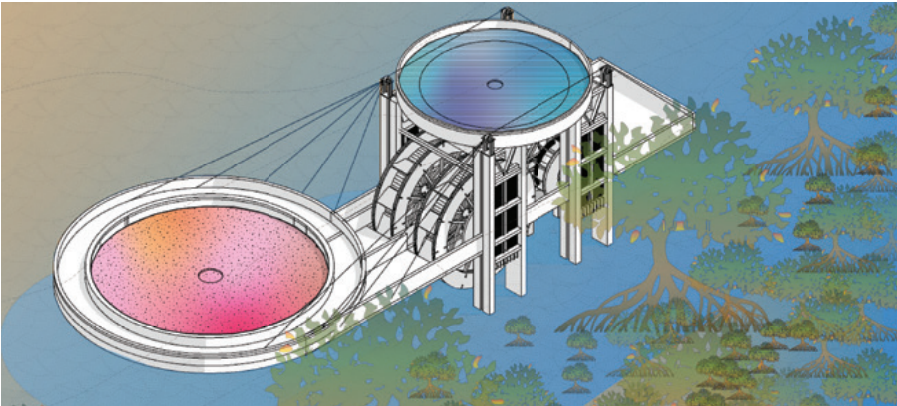
Phase 1: Ecological Foundation and Mangrove Growth

The first phase focuses on restoring the ecology by allowing mangrove forests to grow along the coastline. Wind and water wheel systems are integrated to manage water flow and support salt production in a way that works with the environment. Mangroves stabilize the coastline, reduce erosion, and protect the ecosystem from rising water levels.



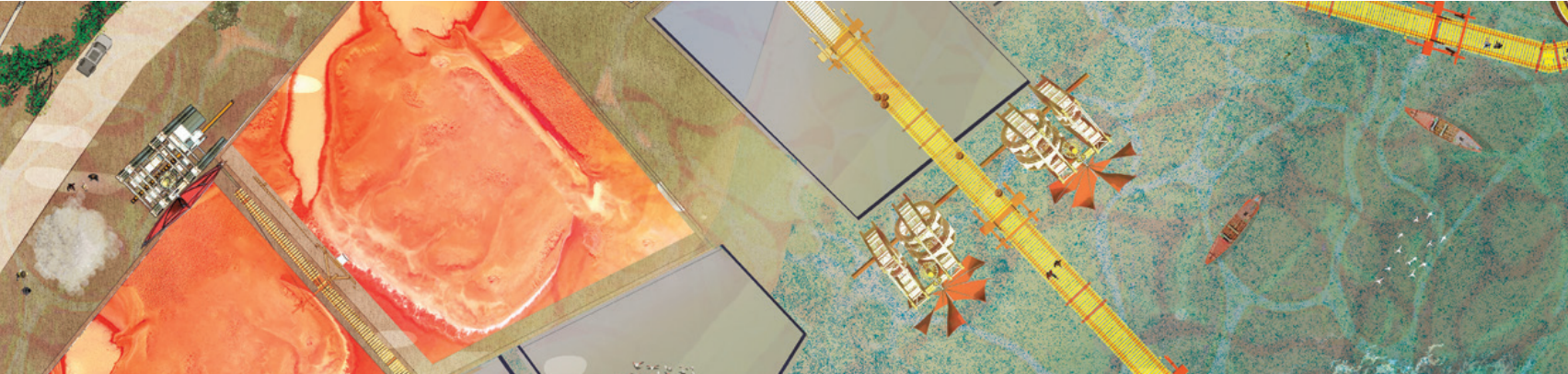
Phase 2: Evolving Salt Production and Ecological Integration

As the salt flats begin to flood, wind and water wheel systems adapt to guide water into the salt ponds. This phase doesn't repeat old methods but evolves from them, responding to current ecological needs. The design supports salt production while letting the ecosystem thrive, maintaining a balance between the land, water, and salt production.

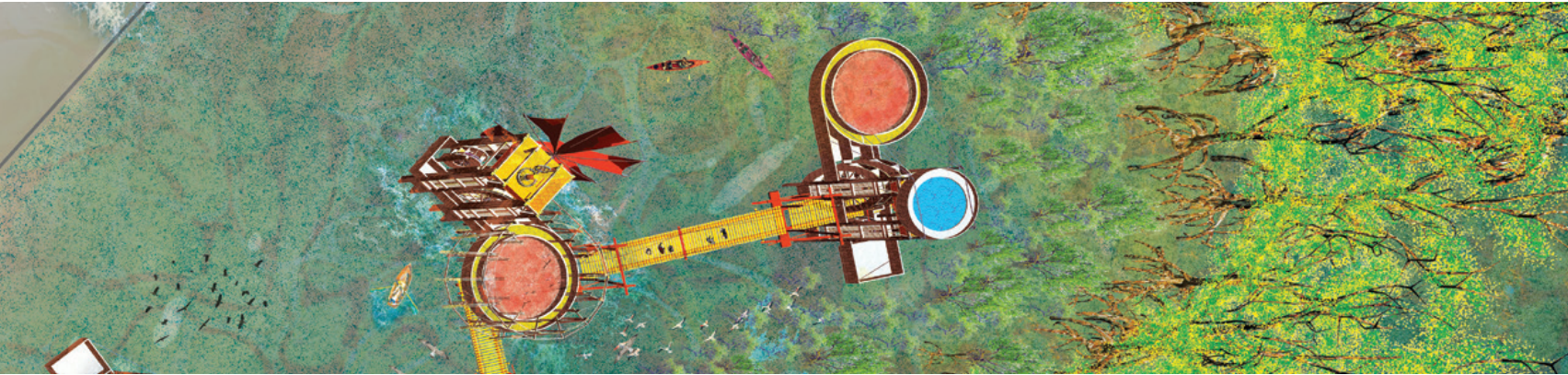


Phase 3: Integration and Ecological Continuity

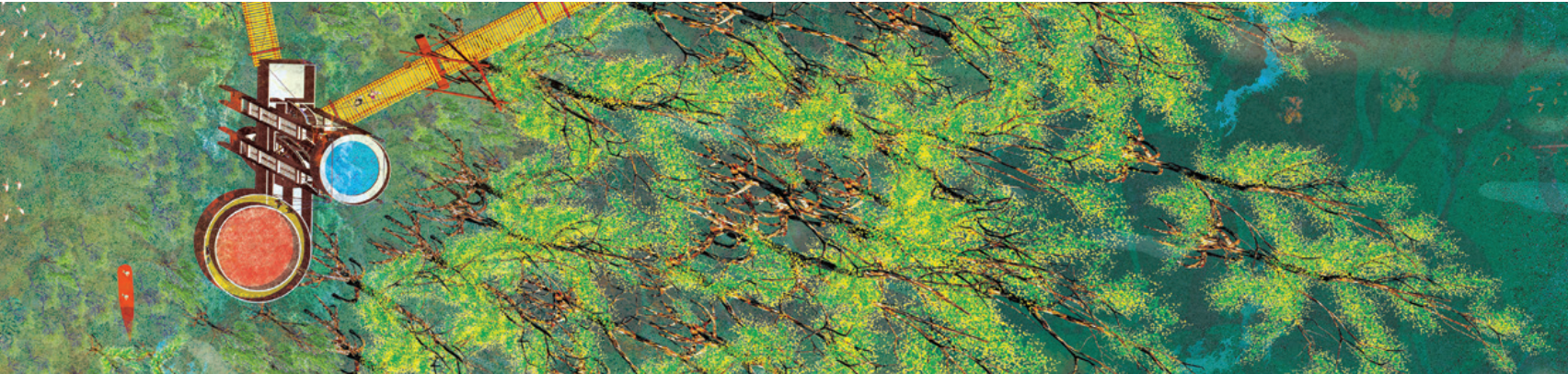
With rising water levels, the wind and water wheels float on the water, working alongside the mangroves. This phase reflects the changing relationship between land, water, and time, where the elements adapt to the natural rhythm. The interventions support the ongoing processes, allowing the ecosystem to continue evolving naturally.



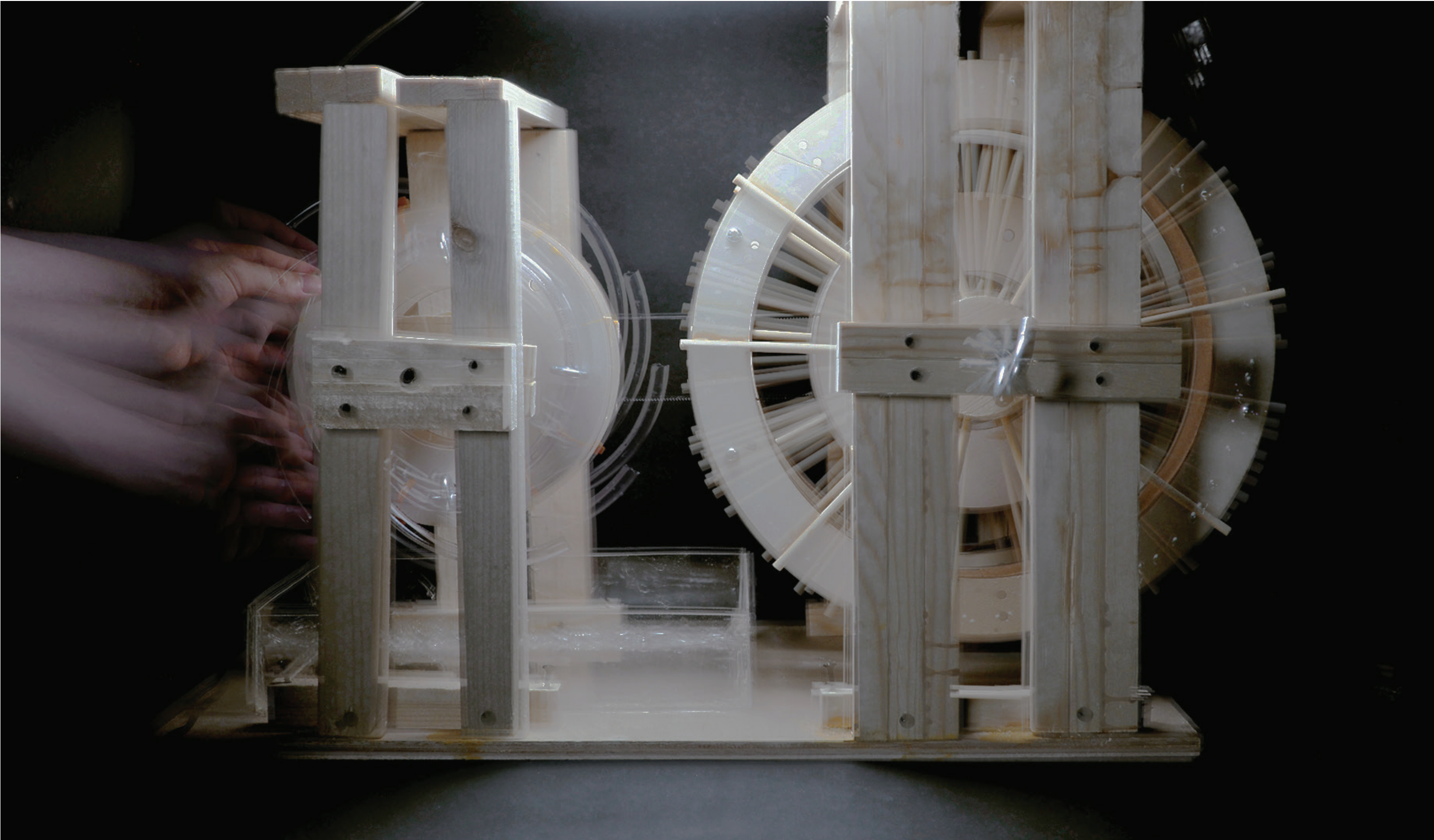
Crystallized Ground - Salt forms across the exposed flats under the sun.



Shifting Waters - Floodwaters reshape the surface and patterns of use.



Rooted Recovery - Mangroves begin to take hold, restoring balance over time.



Tidal Motion - The movement of wind and water wheels activates a quiet system that nourishes more than land. Through its cycles, the design reveals invisible layers of the site, supporting not only environmental flow, but also the intertwined social, economic, ecological, cultural, and political rhythms long buried beneath the salt.

NET-WORKS

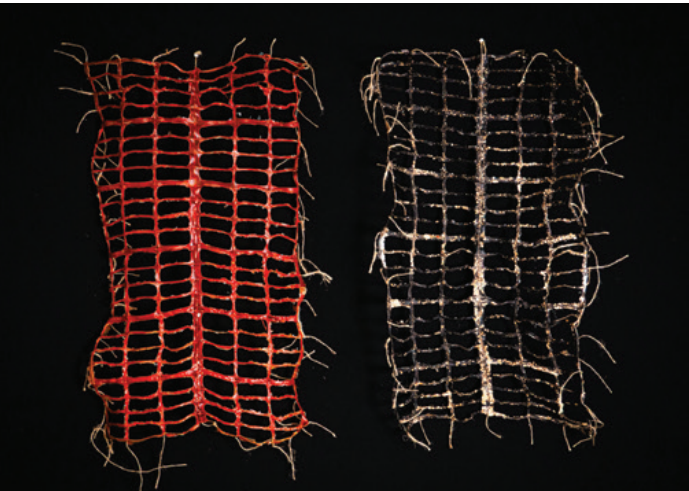
Spring 2025 Elective

WASTE/WORKS

Instructor:
Amelyn Ng

in collaboration with
Seong Hyun Leem

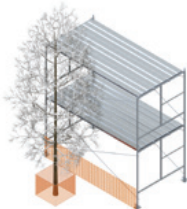
Net-Works investigates how discarded safety nets from New York City scaffolding sites can be repurposed into elevated urban habitats that support non-human life. Originally designed for human safety, these single-use nets often end up in landfills. This project proposes transforming them into structures that hold soil, foster plant growth, and offer shelter for urban species. Inspired by the current crisis facing monarch butterflies, now endangered due to habitat loss, the proposal reflects on how cities might better coexist with migrating and resident species. Through mapping, drawing, and prototyping, Net-Works repositions construction waste as a material for care. It explores how design can extend the life of what is usually discarded and cultivate ecological support within the built environment.



What if a
safety net
was never just
for us?



What if every
barrier held the
potential to become
a **carrier** of care?



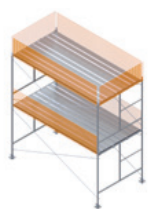
High-visibility
Safety Net



Debris Safety
Net



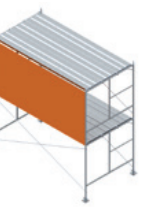
Personnel Safety
Net



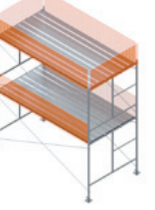
Bioplastic
safety net



Scaffold Sheet



Poly Sheet



Privacy Net



Bioplastic
safety net

Safety Orange
Safety orange is a highly visible color commonly used in construction, traffic control, and outdoor safety gear. In our project, it's used to signal both protection and restriction - marking the boundary between human infrastructure and ecological fragility. Repurposing this color in a net for urban wildlife transforms its meaning from one of exclusion to one of care and visibility for non-human life.



Monarch butterflies are in sharp decline due to habitat loss, climate change, and herbicides that destroy milkweed, their breeding ground. With disrupted migration and few urban safe zones, they face mounting threats. On December 12, 2024, the U.S. Fish and Wildlife Service proposed listing them as a threatened species under the Endangered Species Act.



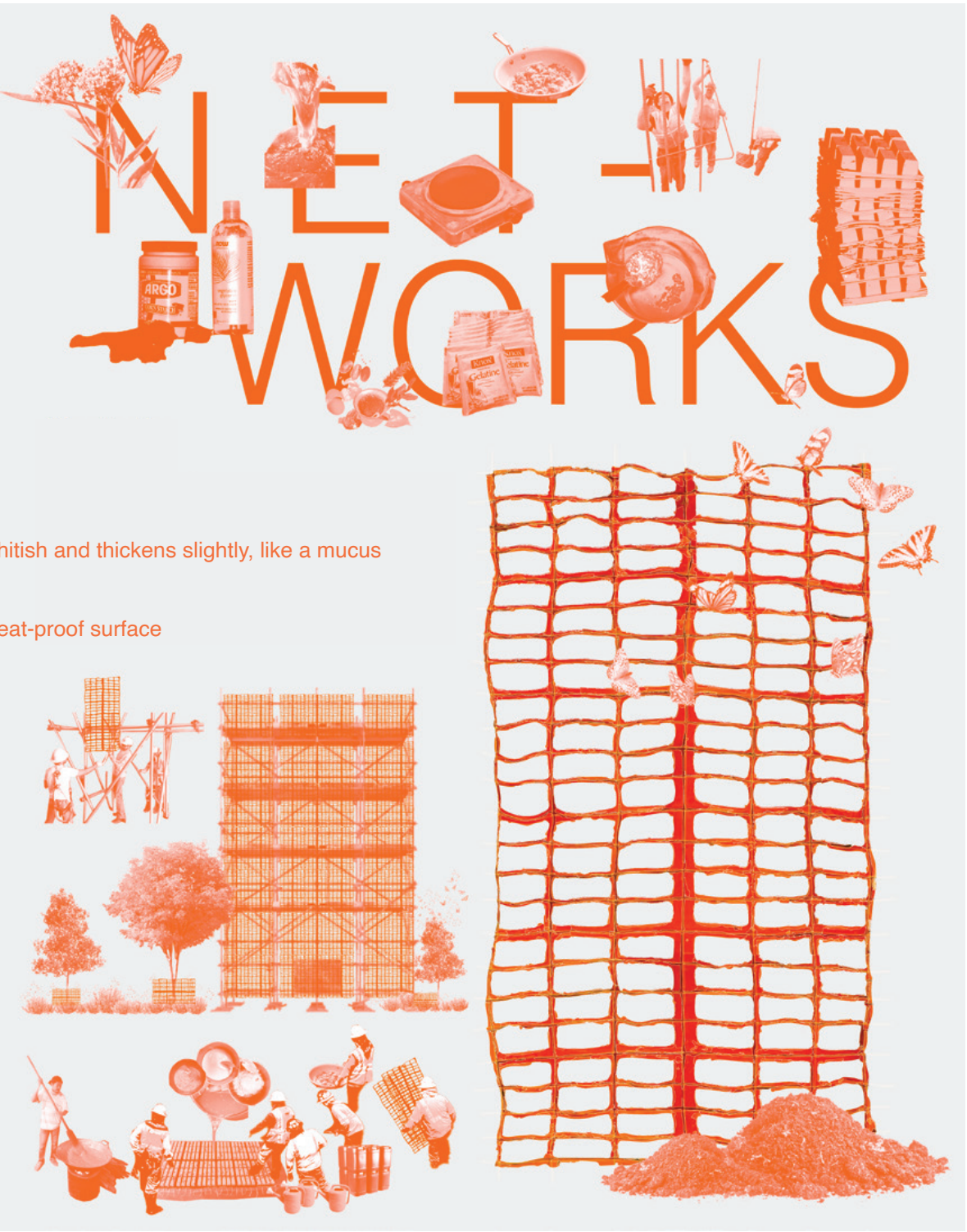
Bioplastic recipe

Ingredients:

- 60 ml **water** (solvent)
- 6 grams **potato starch** (polymer, natural)
- 6 grams **gelatin** (polymer, natural)
- 6 grams **glycerin** (plasticizer; 3 grams makes stiffer sheet)

Process:

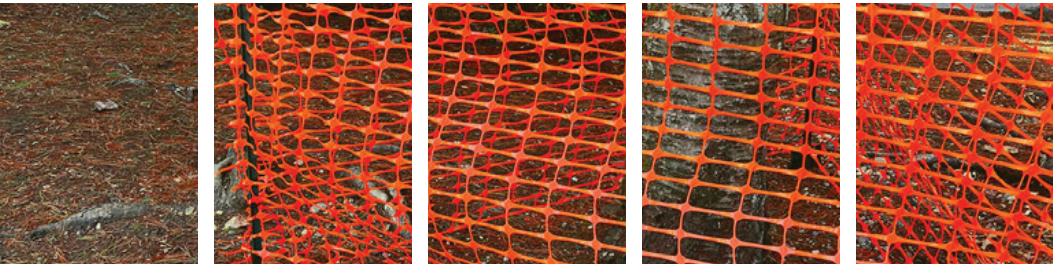
1. Combine dry ingredients in a beaker
2. Add glycerin and water to the beaker.
3. Mix all ingredients well in a small beaker until incorporated.
4. Place on the hot plate and stir. Continue stirring until mixture begins to turn whitish and thickens slightly, like a mucus consistency
5. Carefully pour the liquid out into your tray
6. Quickly tilt the tray to make sure the liquid reaches all corners; place it on a heat-proof surface





Bioplastic Net Installed on Tree Guard

Plastic safety nets



Plastic safety nets that persist for over 100 years in landfills

Bio Plastic safety nets



Introduction of on-site bioplastic alternatives made from waste



Installation as safety nets during construction



Post-construction breakdown into soil, nourishing the landscape



The net disappears into the ground - no waste left behind



Support for milkweed, monarchs, and multispecies life in the city

A Lifecycle of Care Beyond Human

SMELL

Fall 2024 Elective

SUJECT + OBJECT

Instructor:
Suchi Reddy [Reddymade]

in collaboration with
Minhan Lin

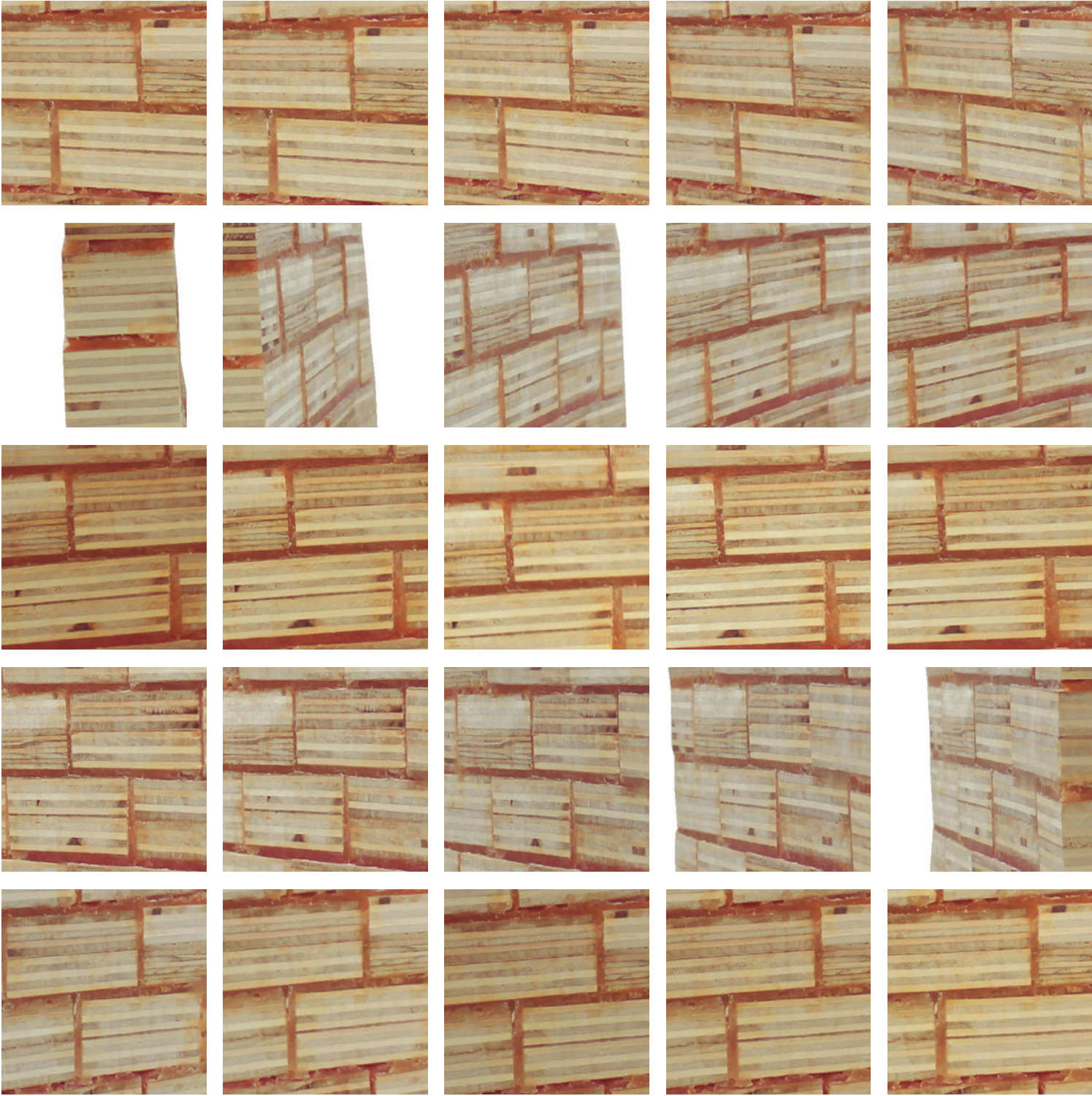
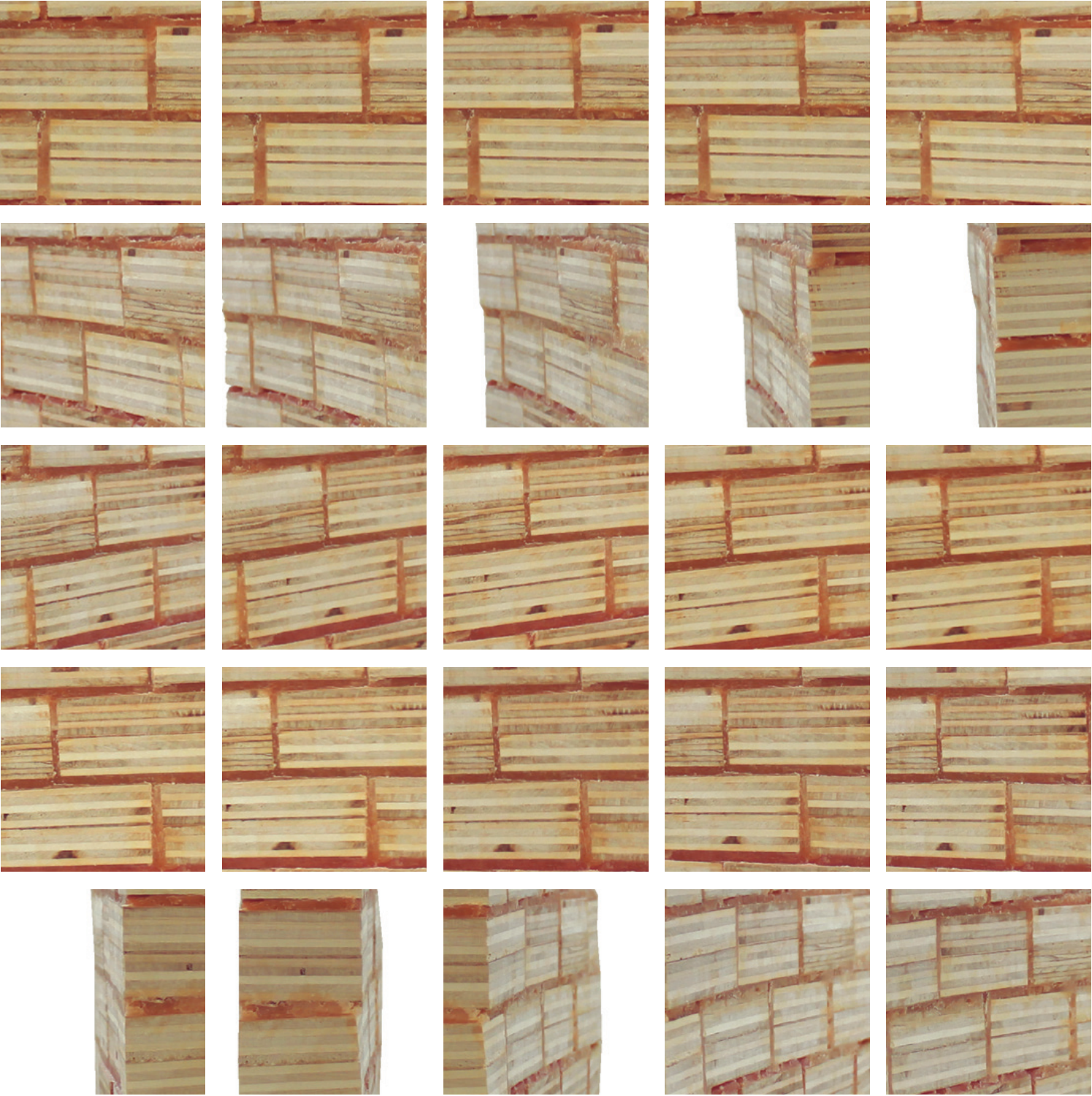


This project begins with the subject of fallen leaves—fragments of time, memory, and decay. By extracting their scent and embedding it into a wax object, the work transforms an ephemeral trace into a tangible form. The resulting object captures the quiet overlap between memory and material, presence and absence. Through scent, it evokes spatial and emotional layers that linger beyond the visible. The connection between organic decay and olfactory memory speaks to both life and loss, exploring death not as an end, but as a transformation. Aligned with the class's aim, this project uses material and sensory expression to assemble a poetic object, where scent becomes a connective tissue between subject and space, body and memory.



***Scent* gathers in *space*, assembling the *architecture of memory*.**





Wall of Smell - A wax-bound brick wall holds the scent of fallen leaves, quietly layering memory into matter. Each image reveals subtle shifts in texture and tone, capturing the wall as a sensory surface where time, smell, and material gently converge. It becomes both boundary and vessel, holding what can no longer be seen.

CULINARY CROSSROADS

Fall 2024 Elective
FEASTING + FASTING

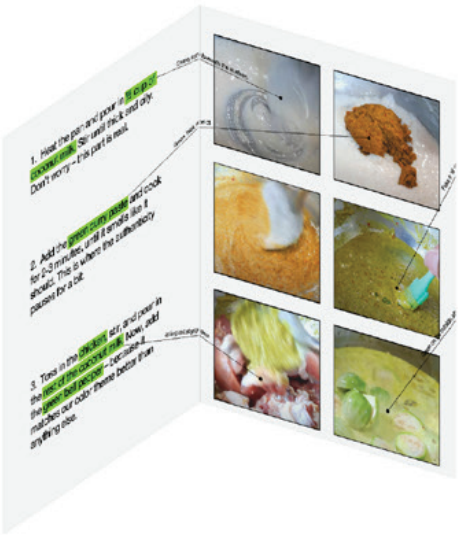
Instructor:
Ateya Khorakiwala

Individual Work

Food, Space and Relationships in Invisible Layers of Everyday Life

Red is Green: The Secret Color of Home-Cooked Curry

This Project explores the shifting identity of Thai green curry when made far from home. Unable to find the original ingredients, the curry turned red, revealing how food adapts across distance. Through two versions of a family recipe, the project reflects on authenticity, improvisation, and how memory and tradition travel, change, and take new forms in unfamiliar kitchens.




The first time I made green Thai curry in the U.S., I was surprised to see it turn red instead of the familiar green. Without access to local ingredients, I improvised, but the result was different from what I knew growing up in Thailand. Later, I realized that some U.S. restaurants add food coloring to make the curry look green. This zine captures two versions of my family's secret recipe—one with the true taste and appearance of Thai green curry, and another that mimics the green color often found in U.S. restaurants. Both tell the story and ask questions of adaptation, authenticity, and the journey of bringing a taste of home to a foreign kitchen.

Mapping Flushing Through Food and Space

This page documents a food tour through Flushing, Queens, where food becomes a way to read the city. Through sketches, sections, and sensory encounters, the experience maps connections between cuisine, architecture, and culture. Restaurants, street elements, and ingredients reveal how food shapes space and memory, offering a layered understanding of place through taste, texture, and the built environment.

and sketches
draw food carts here:



transcribe a conversation you had with a chef:

A: IS THE BEANFOND IN THIS POT ALREADY SWEET?

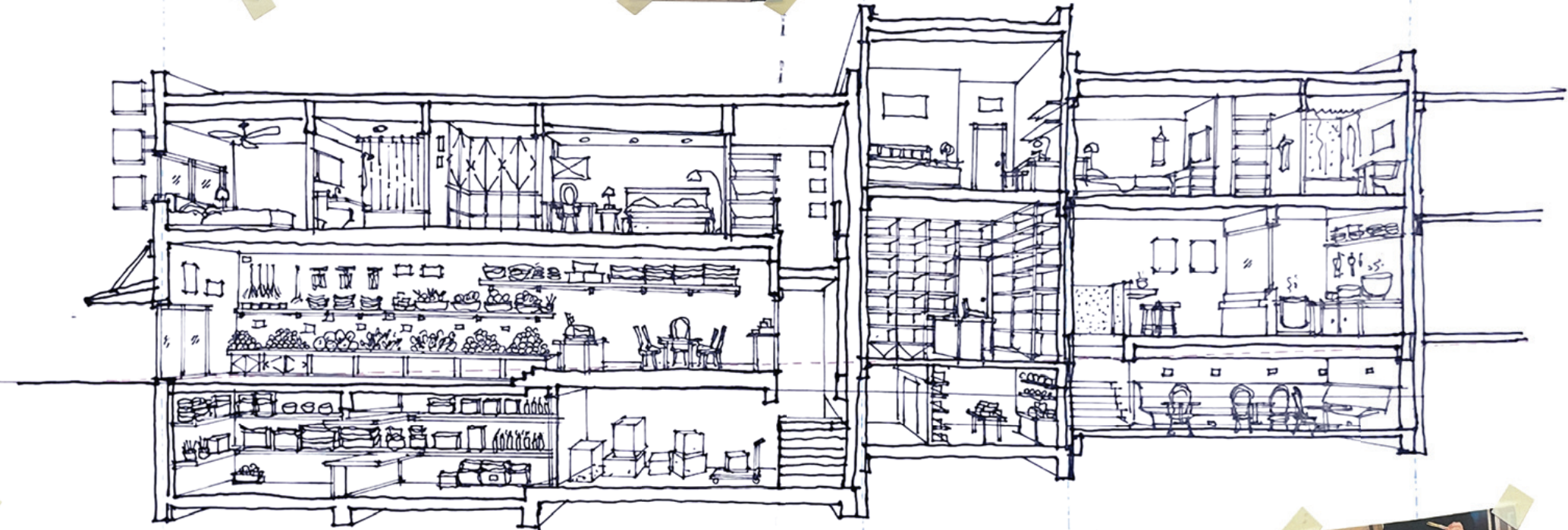
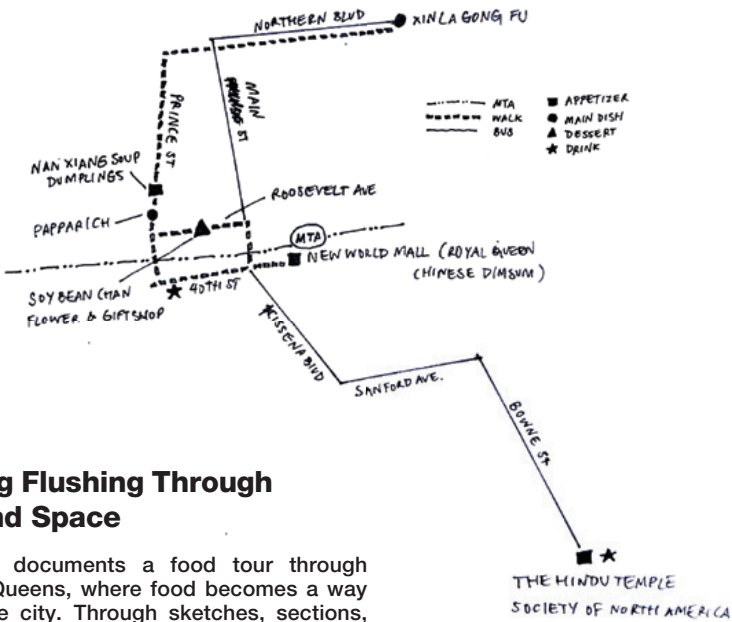
B: IT IS TASTELESS. YOU HAVE TO EAT IT WITH HONEY.

B: AND YOU HAVE TO EAT IT WHILE IT'S STILL WARM.

A: WHAT IS IT CALLED IN CHINESE?

B: WE CALL "TAU HUU"

add some photos of the chefs here



A6875/A6877
Food Tour
October 26, 2024
Flushing, Queens NY

WHAT IS FOOD DE *CORN* STRUCTION

SPRING 2025

AAD EDIBLE SUMMIT
DINING TABLE
[BUILT FURNITURE]

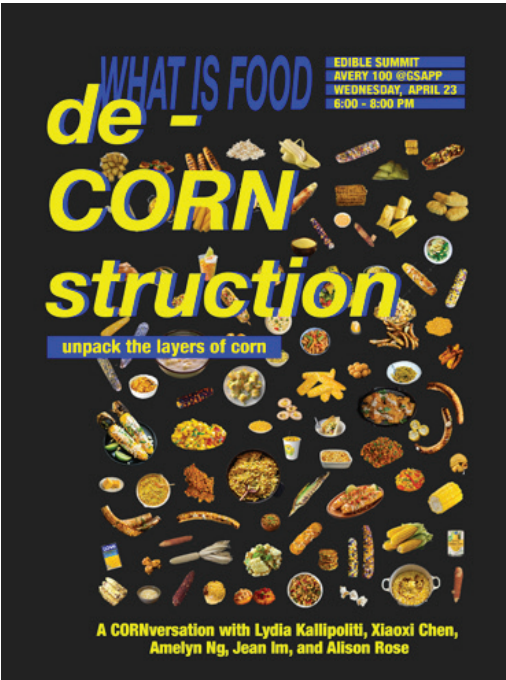
Advisor:
Lydia Kallipoliti
Xiaoxi Chen

Guest:
Amelyn Ng
Jean Im

in collaboration with
Sungjun Baek
Adnan Kasubhai
Dongjae Ko
HyunSeung Moon

“Architecture can be considered as a closed world where all these elements [air, water, energy, and labour] circulate and recirculate in different feedback loops inside structures seen in terms of truly ecological systems.”
– Lydia Kallipoliti

Kallipoliti, Lydia. “Reassembling.” *In Cycles: The Architects Who Never Threw Anything Away*, Lisbon Architecture Triennale, 2022.



Decornstuction poster



EDIBLE SUMMIT - WHAT IS FOOD. DeCORnstruction

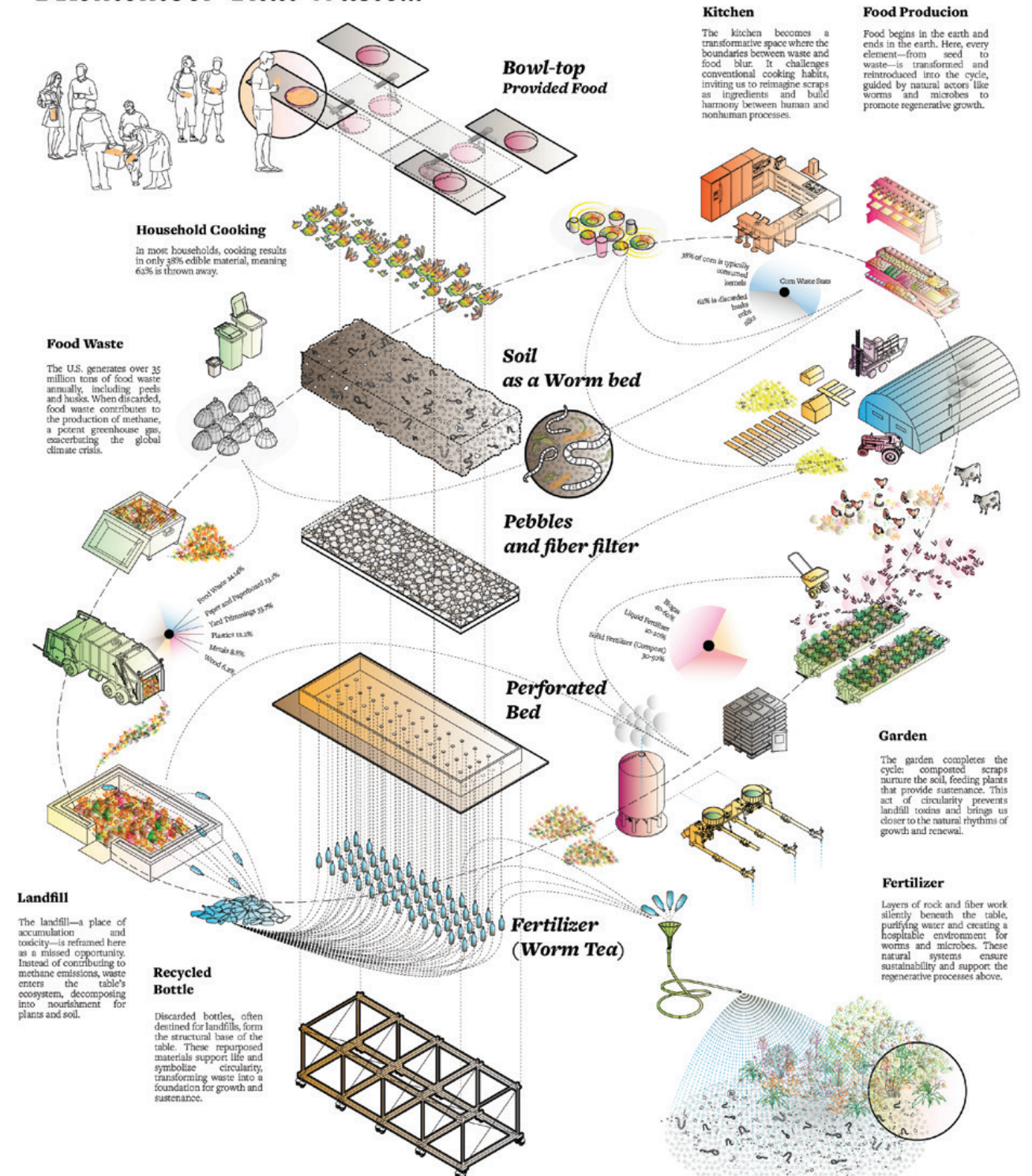
I remember that waste: the banana peel left after breakfast, the pizza crust that never quite made it into my stomach, the watermelon rind discarded, leaving only the red, juicy part behind, and the corn cobs with only the yellow kernels left. I remember that waste—the scraps we toss aside without a second thought, the parts we deem unworthy, the leftovers that pile up in trash bags, waiting to be buried in landfills, never to be seen again.

I remember that waste, but this time, it doesn't end in a bag. It doesn't disappear into the oblivion of the garbage dump. Instead, it returns to the table—a living machine, quietly working beneath the surface. Here, in this space, the scraps that once seemed unworthy are now transformed. Beneath the table, earthworms churn the remnants into nourishment, turning what was once discarded into life.

The table, too, remembers that waste. It doesn't just hold our food, it questions the cycles that stretch from the production, transportation, collection, distribution, consumption, and disposal of food. From the invisible bacteria in our stomachs to the moon's influence on seasons and crops, the table operates not in a linear way, but as a conveyor, transforming food and waste back into the cycle. Every peel, every rind, every leftover piece finds purpose.

I remember that waste—the kind that can only become methane, discarded to sit in a landfill. But here, it becomes a conversation—a dialogue between the human community and the microbial community, within us, the soil, the air, and the food itself. Beneath this table, not only do we eat, but we exchange food scraps for soil. The straight line becomes an endless circuit, protesting for balance between rural and urban spaces, revealing hunger and food insecurity. This table will continue its work even after the event ends. The fertilizer created by the worms will be returned to the earth, to nourish the surrounding community, to grow food once again, to complete the cycle. Because this table is built with the belief that in this world, nothing is wasted. Everything will be reborn. Cultural tradition continues to thrive.

I Remember That Waste...

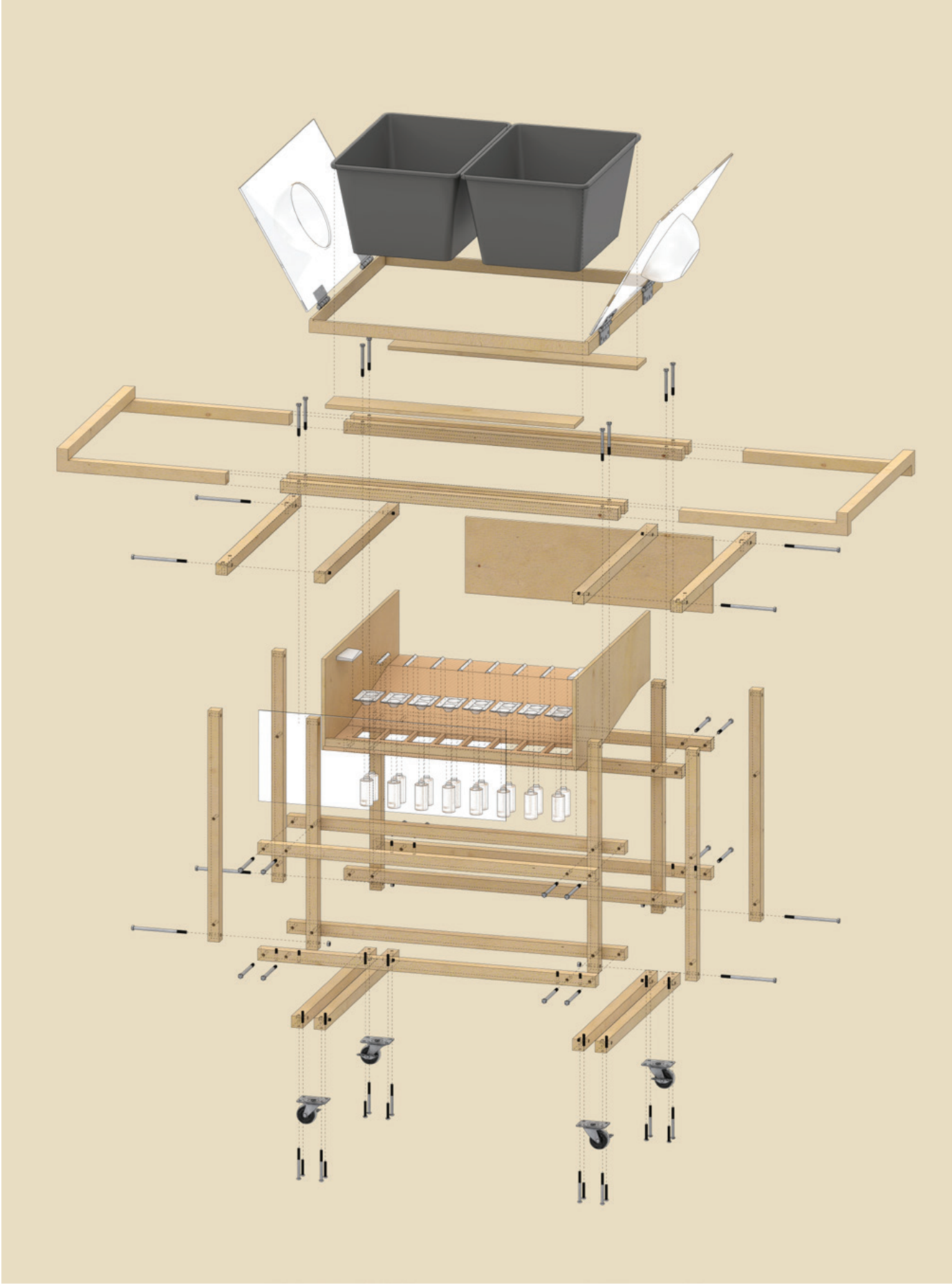


Dining Table

A multi-layered living system, the dining table features opening and extending tops that create a sense of drama and discovery. It invites diners into a shared world where humans, microbes, worms, and plants coexist and collaborate in cycles of regeneration.

"Architecture can be considered as a closed world where all these elements [air, water, energy, and labour] circulate and recirculate in different feedback loops inside structures seen in terms of truly ecological systems." — Lydia Kallipoliti

Kallipoliti, Lydia. "Reassembling." In *Cycles: The Architects Who Never Threw Anything Away*, Lisbon Architecture Triennale, 2022.





deCORNstruction explores the architectural and ecological entanglements of food systems by tracing the journey of corn—one of the most industrialized crops—from field to waste. Through a dining table installation, the project unpacks the hidden costs of industrial agriculture, revealing how corn shapes bodies, landscapes, and economies. Drawing on themes of edibility, waste, and systemic imbalance, the table becomes both a site of gathering and a tool of critique. By making visible the often-invisible links between consumption, production, and ecological impact, the work reframes the act of eating as an architectural gesture—one deeply tied to planetary systems and cultural narratives.