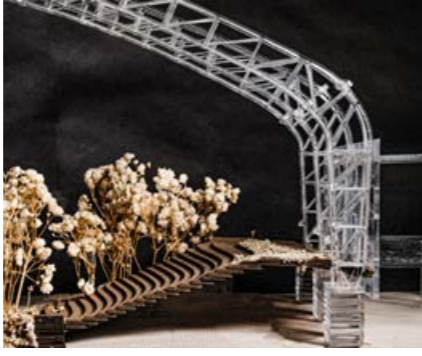
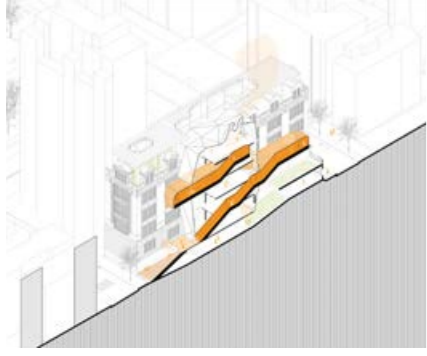
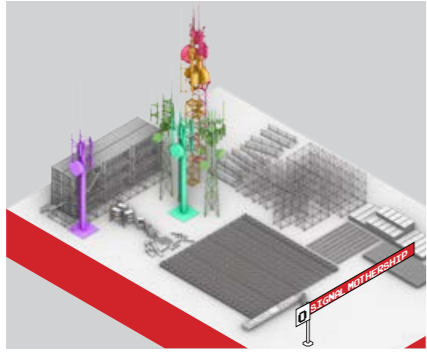
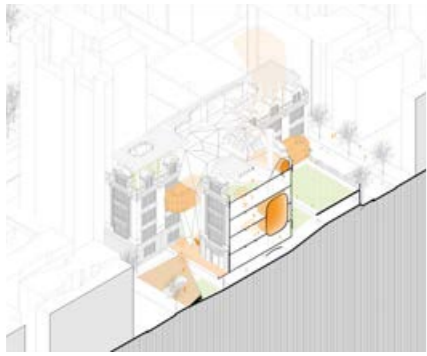




Portfolio
Shaoyu Lu
2023-2024 Selected Work



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SPRING

FALL

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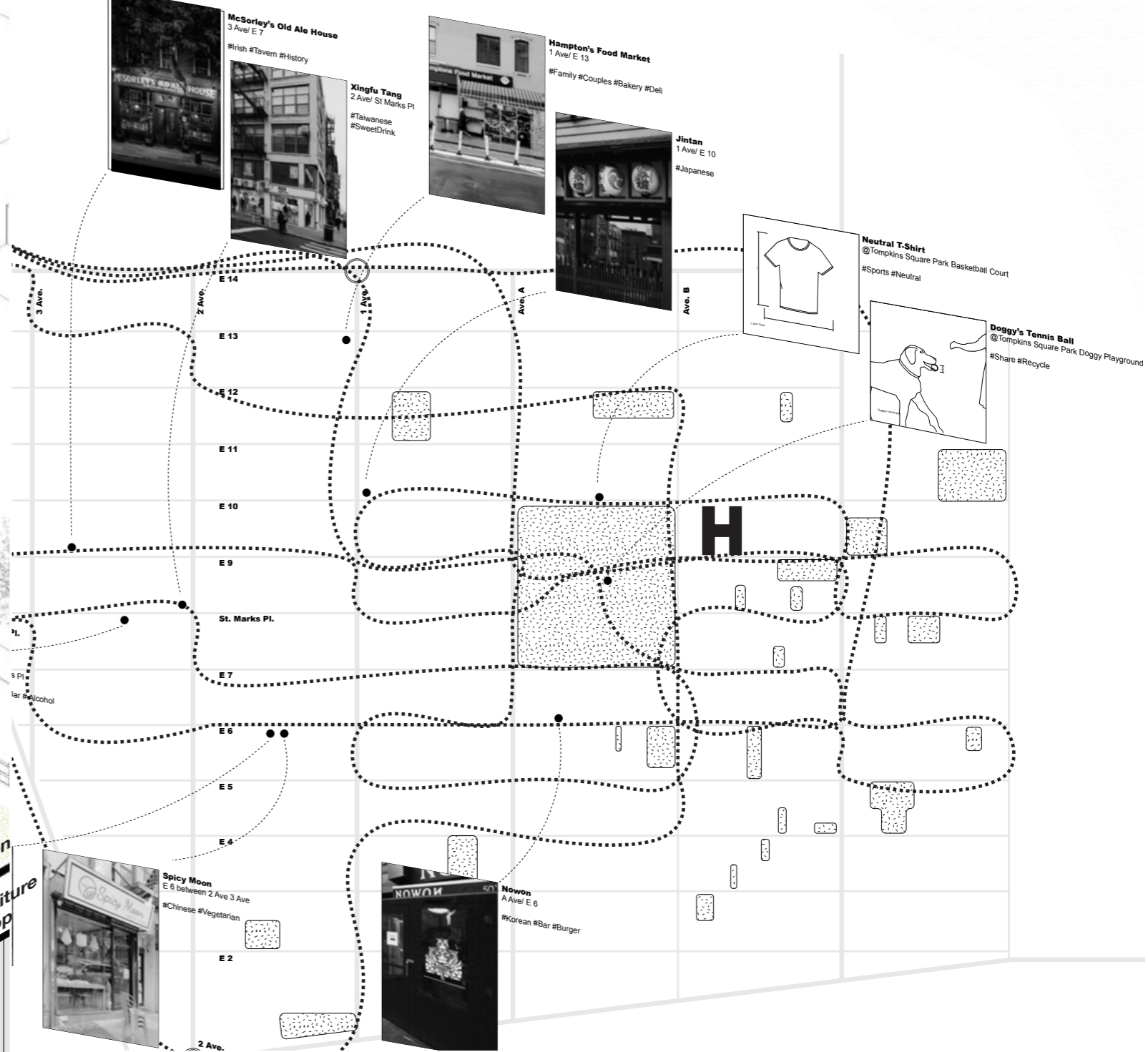
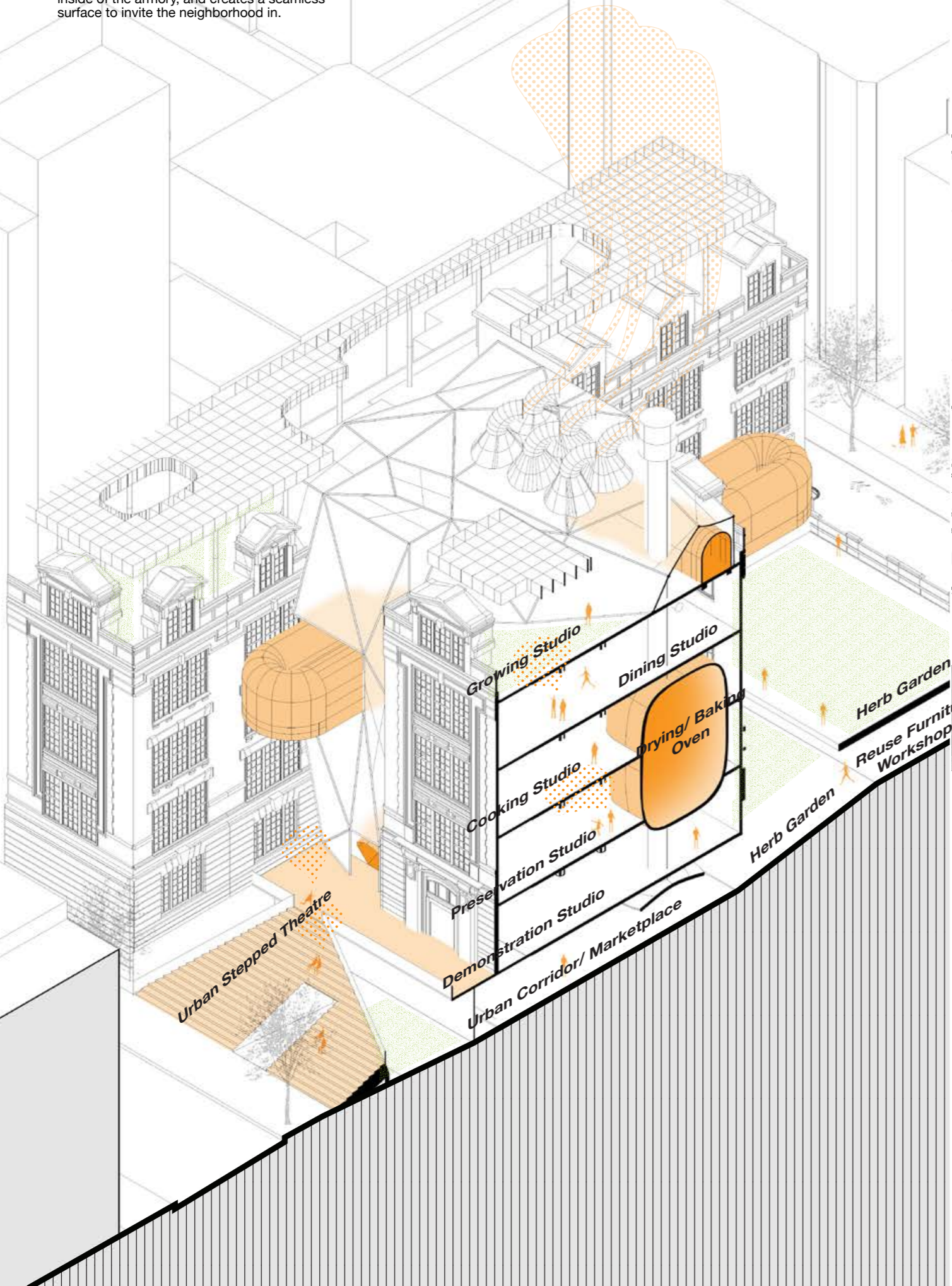
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S *SPRING* **G**

The topography extends itself from outside to inside of the armory, and creates a seamless surface to invite the neighborhood in.



Urban Dining Table

2024 Spring Advanced Studio VI
Advisor Patrice Derrington, Christoph a. Kumpusch
Site former PS. 64, East Village

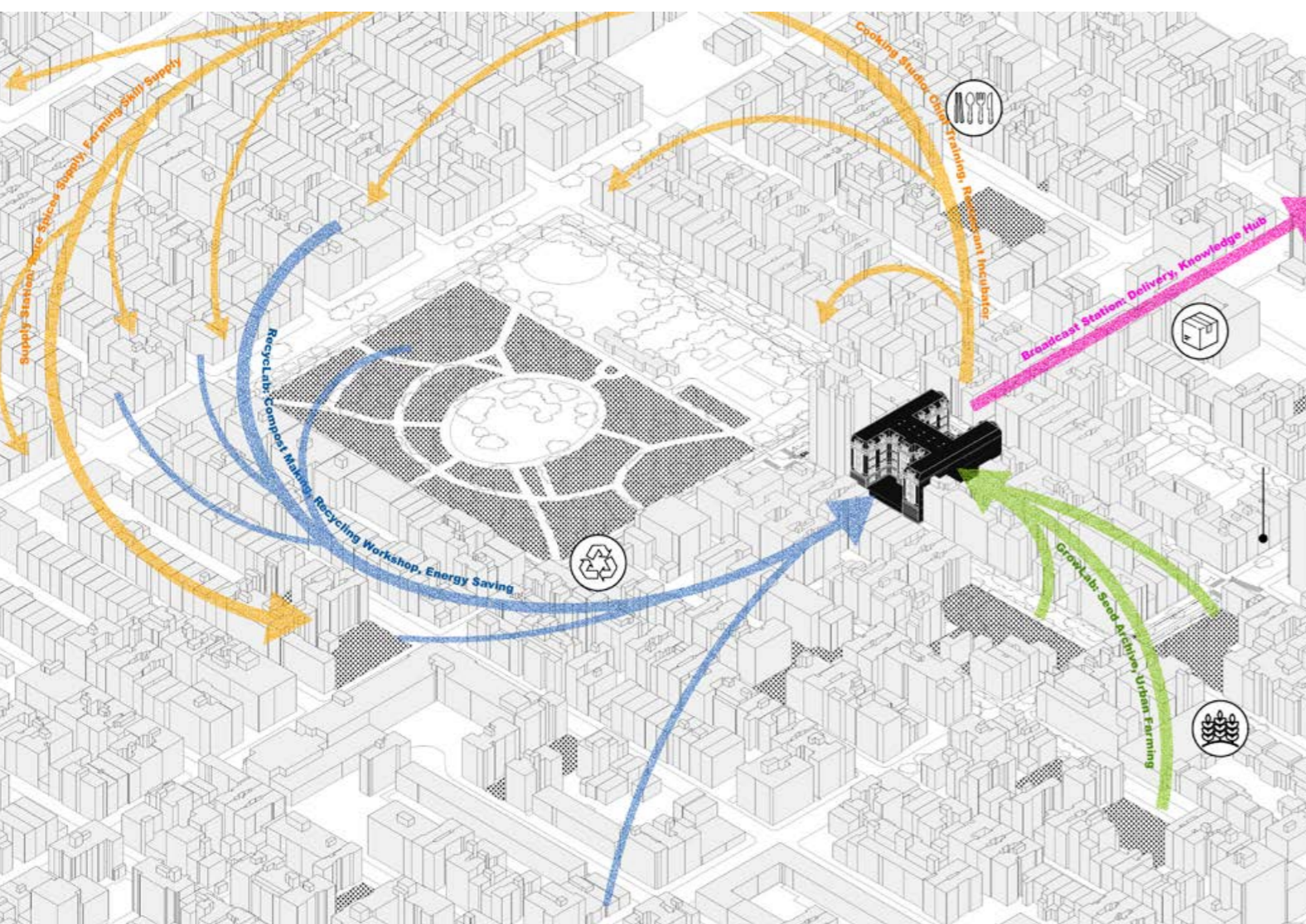
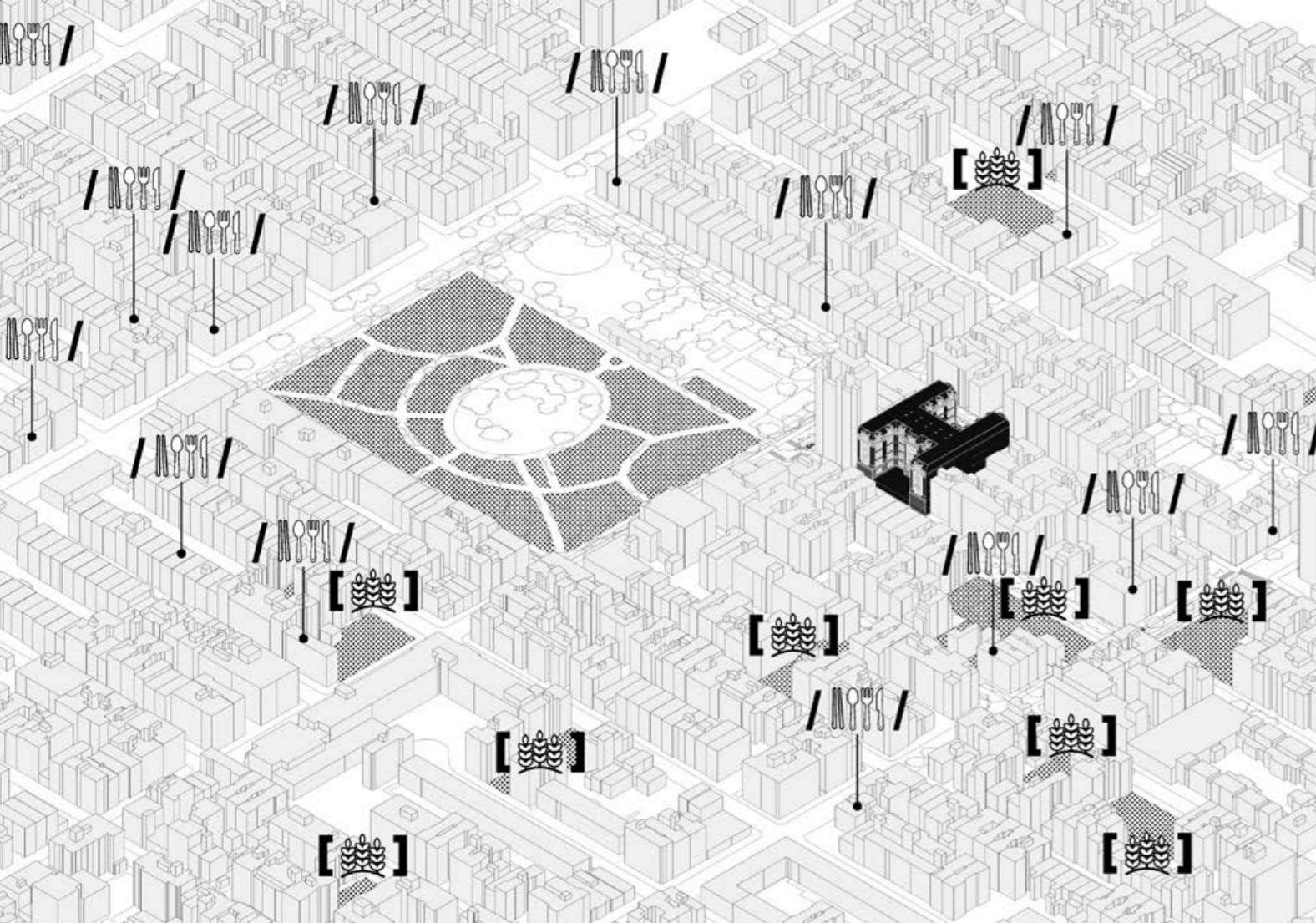
East Village with its own unique history of diverse immigrants and community garden makes it a perfect place as Vernacular Food Knowledge Hub.

East Village was once Little Ireland, Little Germany, Little Ukraine... What is the future name of the Village?

Poles and Ukrainians started coming around the 1880s, and Puerto Ricans began arriving after World War II. In the late 1950s and 1960s, an incursion of beatniks, followed by hippies, led to the adoption of the name "East Village" to differentiate the area, which was once lumped together with the Lower East Side.

East Village in New York City is layered with abundant and diverse immigrant cultures. One can know the history either from the book or simply from the restaurant options in the neighborhood.

It was originally a farm covering an area that is now Fourth Avenue to the East River, and 17th Street to Fifth Street. Irish and German immigrants moved into the neighborhood starting around the 1850s, and in the early 1900s, Italians and Eastern European Jews followed.



The history brings the vernacular food production, display, and recycle process back at East Village.

Community gardens and guerrilla gardens are the hubs for the present residents in East Village to pass down the agricultural knowledge and produce local vegetables, fruits.

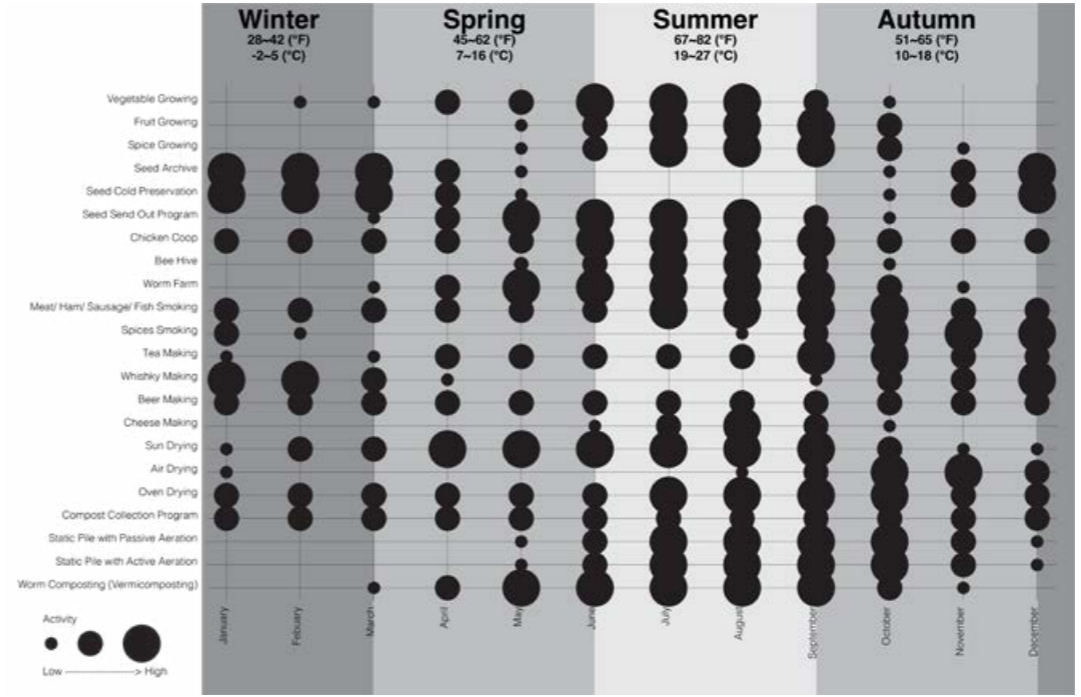
In the early 1970s, New Yorkers banded together with a shared vision: beautify the urban landscape with lush greenery and produce local food for the neighborhoods. Many neighborhoods at the time were seeing a high number of abandoned lots and buildings as the city entered a massive fiscal crisis, and community members aimed

to transform these spaces one seed drop at a time.

The residents at that time replaced part of the toxic debris in the abandoned lots with the soil, which was made from the organic compost people collected from the community compost program, suitable for growing edible produce and other greenery. Those gardens gradually become farms, parks, cultural plazas, and so on.

The former PS.64 has the potential for making the food cycle more complete and promoting to the rest of the City.

The former PS.64 is located at the center of the East Village and this food cycle. At the east of the building lie numerous major community gardens in the area, like La Plaza, 9th St Community Garden, while the multi-cultural restaurant clusters are more at the west side. Tompkins Square Park, just one crosswalk away, serves as a vital place for compost collecting program and food charity.



The programs and the building adapt to different seasons.

Like growing different vegetables and fruits in different seasons, the whole food producing process also adapt to seasons deeply.

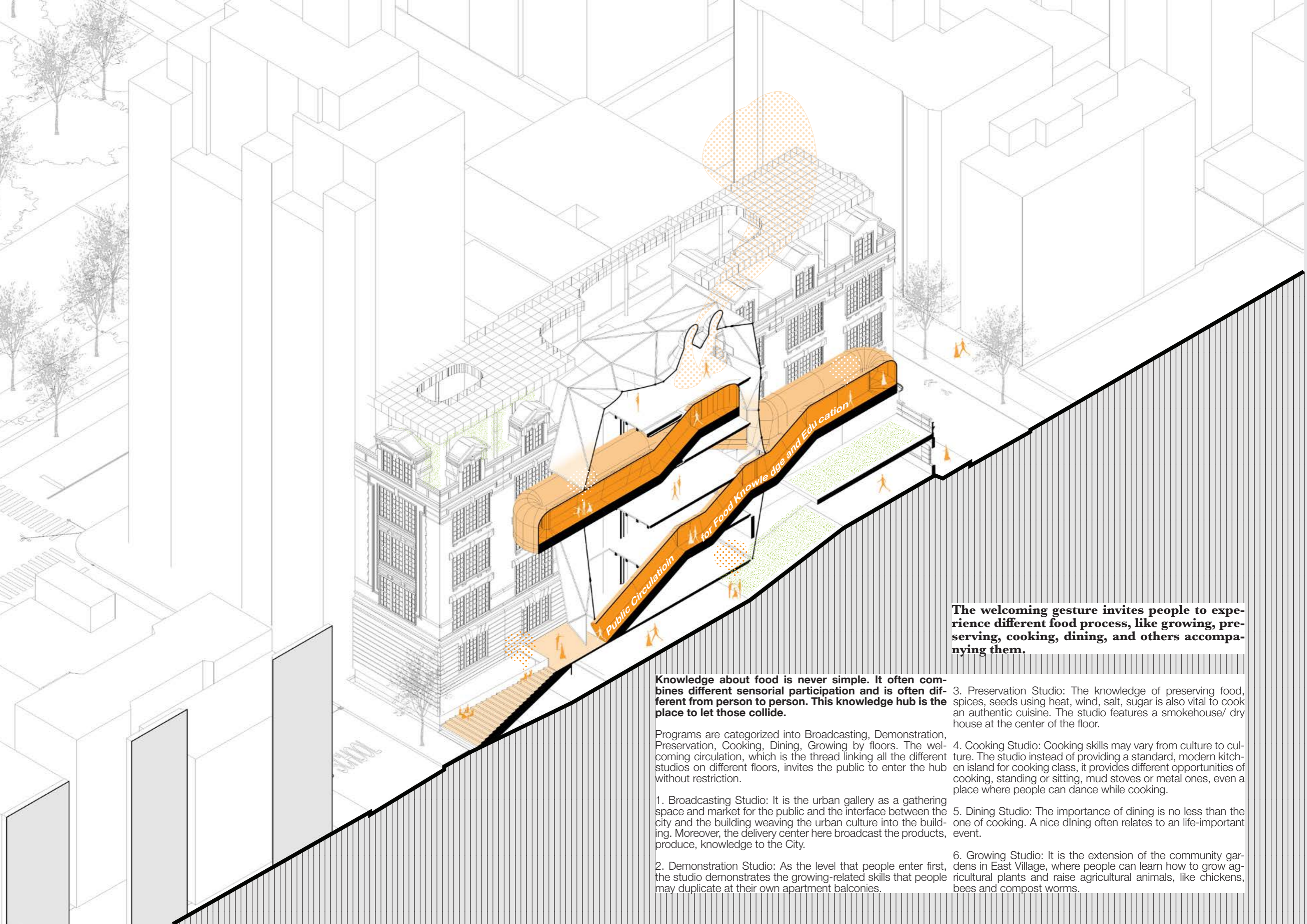
local community offering reasonable rents to those who aim to introduce food knowledge, experiment new cuisine, learning cooking skills, providing reasonable food to those in need.

The programs in the building live with the nature and learn from the nature. With the wind pipes, thermal systems, hybrid use program space, different seasons will be the power driving the building.

It is not only a energy-sustainable building, but also a financial self-supported one.

The Urban Dining Table in PS.64 collaborates with the

Urban Dining Table					
Usable sqft	80000				
REVENUE	sqft	number of unit/ event	rent per month/ sqft	rent per year/ sqft	total rent per year
Clinic (2F Clinic)	1,900		\$2.00	\$24.00	\$43,200
Retail (1F Temp)	576		\$2.00	\$24.00	\$13,824
Retail (1F Brewery)	1,902		\$2.00	\$24.00	\$45,648
Retail (1F Farm Market)	1,813		\$2.00	\$24.00	\$43,512
Workshop (1F Workshop)	4,253		\$0.25	\$3.00	\$12,759
Workshop (2F Processing)	2,635		\$0.25	\$3.00	\$7,905
Workshop (3F Fermenting)	2,635		\$0.25	\$3.00	\$7,905
Workshop (4F Studio)	2,635		\$0.25	\$3.00	\$7,905
Workshop (5F Studio)	2,635		\$0.25	\$3.00	\$7,905
Living Unit (6F Single Dorm)		3	\$1,500.00		\$4,500
Living Unit (6F Family Dorm)		2	\$2,000.00		\$4,000
Event Space (1F Hall)	3,682	20		\$4,500.00	\$90,000
Event Space (2F Hall)	4,160	20		\$5,500.00	\$110,000
Event Space (3F Hall)	4,054	20		\$5,000.00	\$100,000
Event Space (4F Hall)	4,054	20		\$5,000.00	\$100,000
Event Space (5F Hall)	4,054	20		\$5,000.00	\$100,000
Event Space (6F Outdoor)	7,000	20		\$6,000.00	\$120,000
Delivery Center	1,917		\$0.10	\$1.20	\$2,300
Total Revenue					\$821,363
OPERATING COST	sqft	number of personnel	cost per year/ sqft		
management		2	\$25,000.00	\$50,000	
utility	80,000		\$2.00	\$160,000	
cleaning	80,000		\$0.10	\$8,000	
security	80,000		\$0.05	\$4,000	
insurance	80,000		\$0.10	\$8,000	
repair and maintenance	80,000		\$0.75	\$60,000	
Total Operating Cost				\$290,000	
NET OPERATING INCOME				\$531,363	



The welcoming gesture invites people to experience different food process, like growing, preserving, cooking, dining, and others accompanying them.

Knowledge about food is never simple. It often combines different sensorial participation and is often different from person to person. This knowledge hub is the place to let those collide.

Programs are categorized into Broadcasting, Demonstration, Preservation, Cooking, Dining, Growing by floors. The welcoming circulation, which is the thread linking all the different studios on different floors, invites the public to enter the hub without restriction.

1. Broadcasting Studio: It is the urban gallery as a gathering space and market for the public and the interface between the city and the building weaving the urban culture into the building. Moreover, the delivery center here broadcast the products, produce, knowledge to the City.

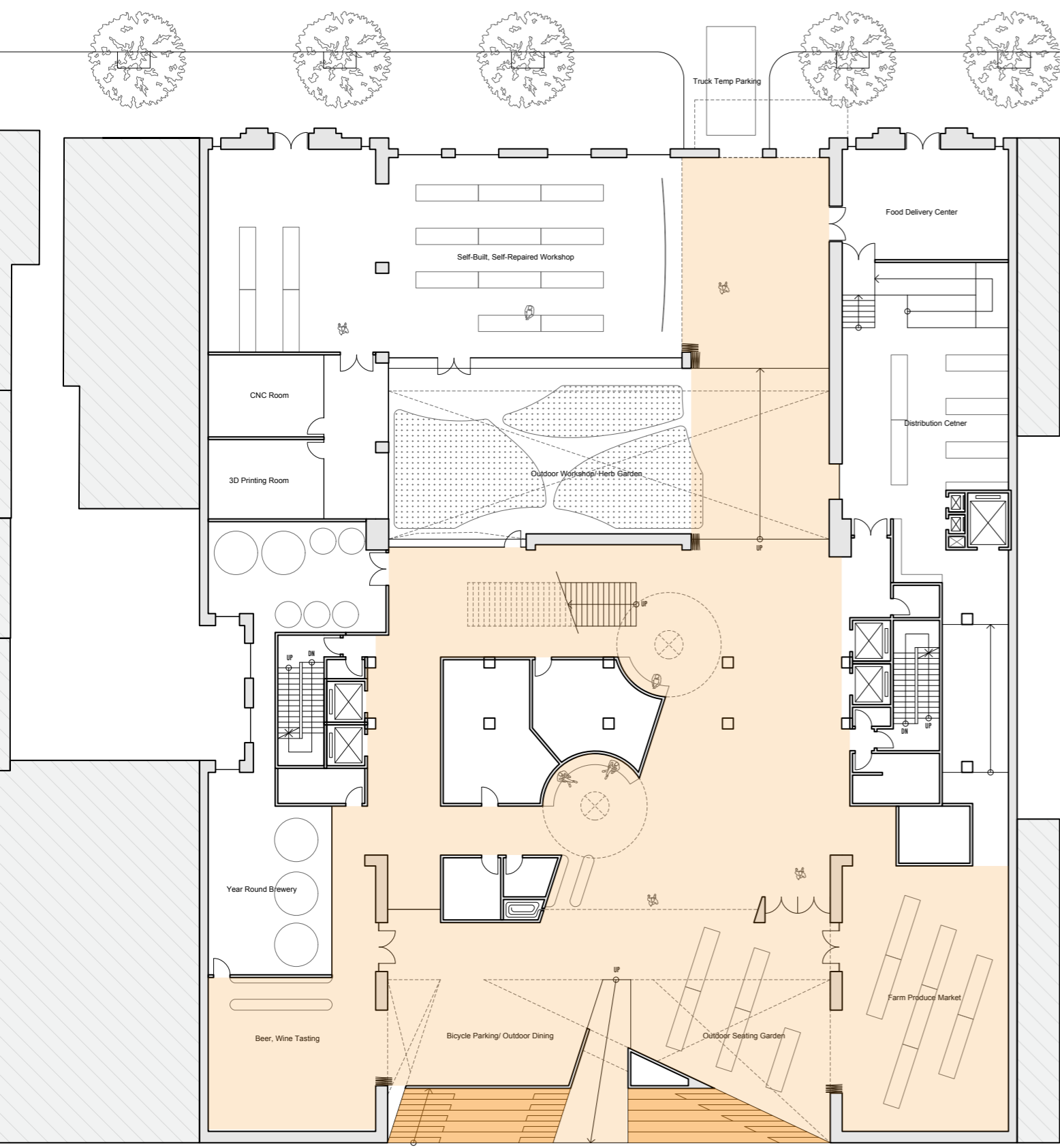
2. Demonstration Studio: As the level that people enter first, the studio demonstrates the growing-related skills that people may duplicate at their own apartment balconies.

3. Preservation Studio: The knowledge of preserving food, spices, seeds using heat, wind, salt, sugar is also vital to cook an authentic cuisine. The studio features a smokehouse/ dry house at the center of the floor.

4. Cooking Studio: Cooking skills may vary from culture to culture. The studio instead of providing a standard, modern kitchen island for cooking class, it provides different opportunities of cooking, standing or sitting, mud stoves or metal ones, even a place where people can dance while cooking.

5. Dining Studio: The importance of dining is no less than the one of cooking. A nice dining often relates to an life-important event.

6. Growing Studio: It is the extension of the community gardens in East Village, where people can learn how to grow agricultural plants and raise agricultural animals, like chickens, bees and compost worms.

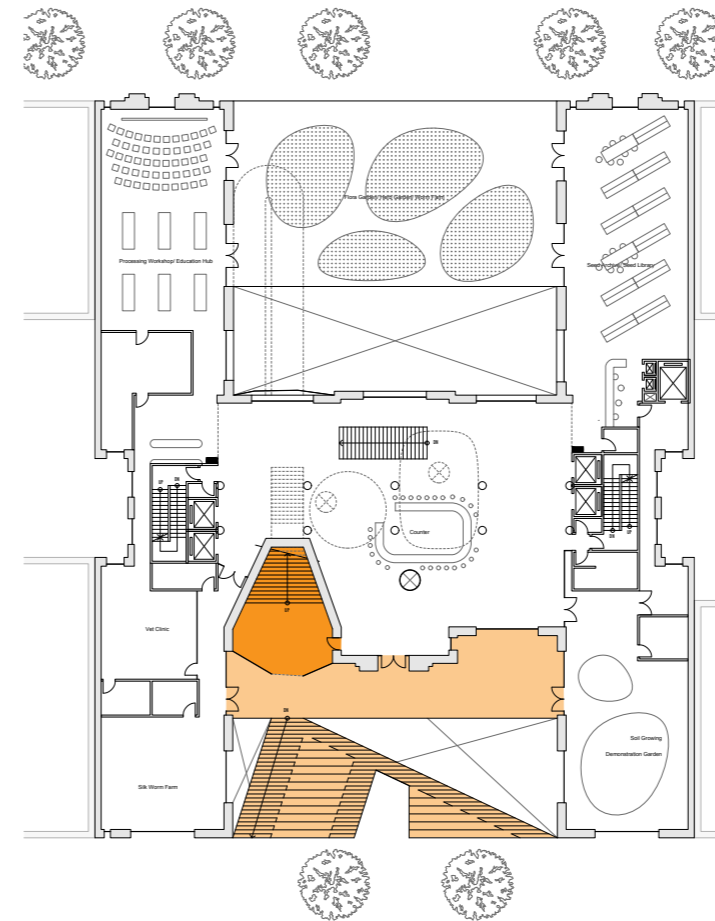


Weave the urban culture into the Hub.

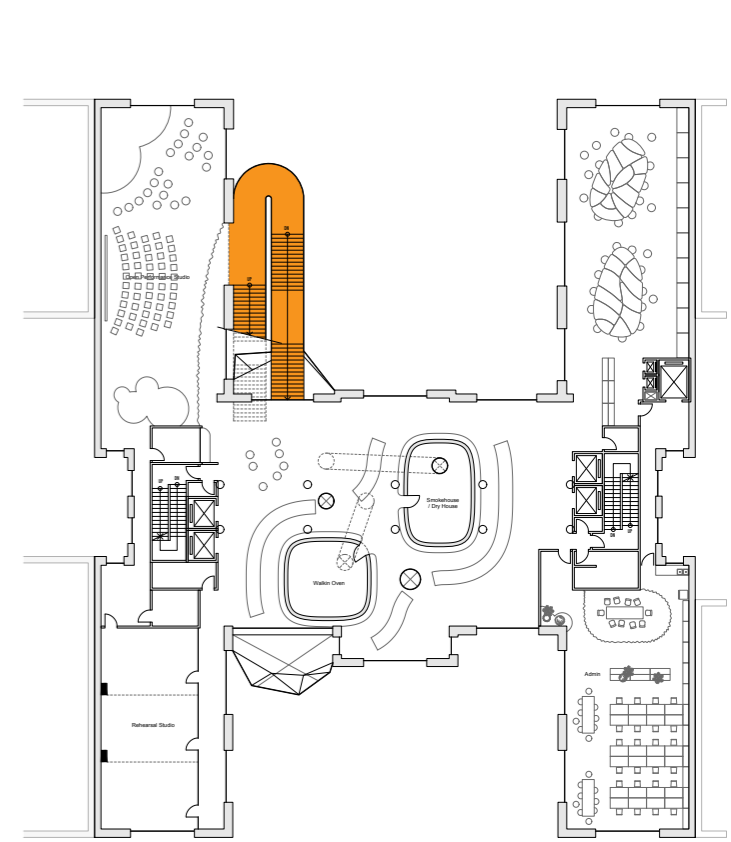
Broadcasting Studio on the 1st floor is the interface between the building and the City.

The triangular stairs and the tunnel at the middle encourage the passers-by to come in and explore. The gallery/ market space not only serves as the event and gathering space, but also is the easement during comfortable season for the public.

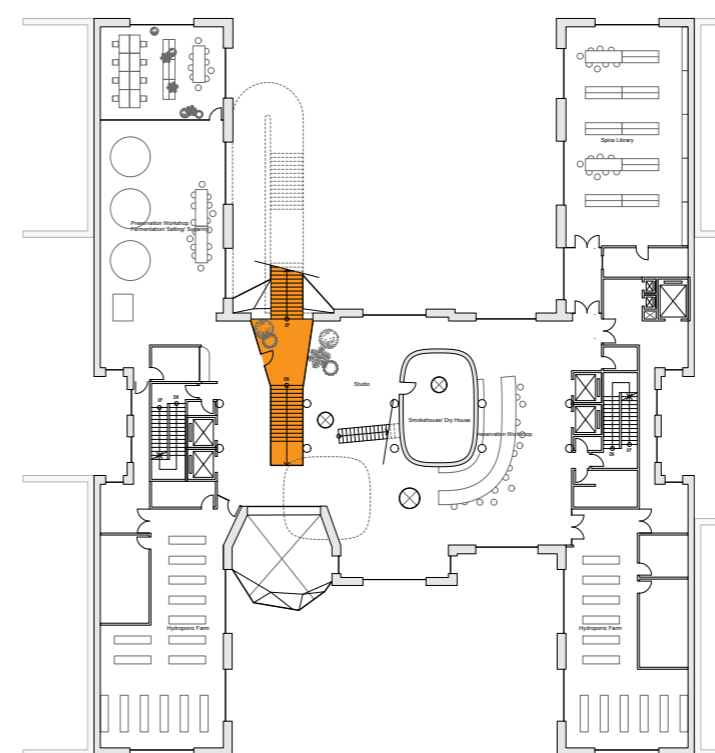
The workshop at the north continue the self-fixing, stooping culture in East Village. It also promotes the knowledge to the over-consuming society.



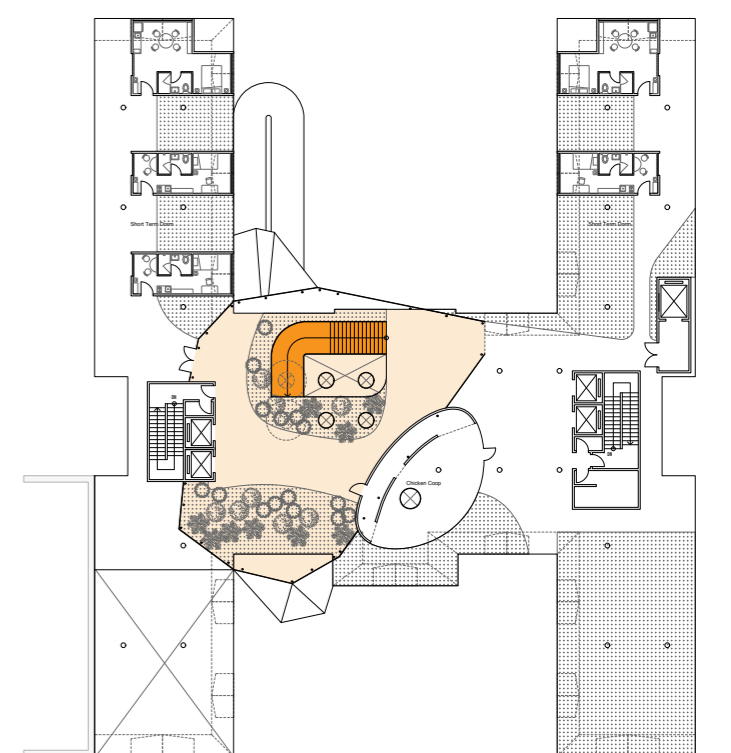
Demonstration Studio, Small Archive, Small Library, V&L Clinic, Warm Farm, Herb Garden, Education Hub, Preserving Workshop
2F Plan
 Demonstration Studio



Experimental Cooking Studio, Performance Studio
4F Plan
 Cooking Studio



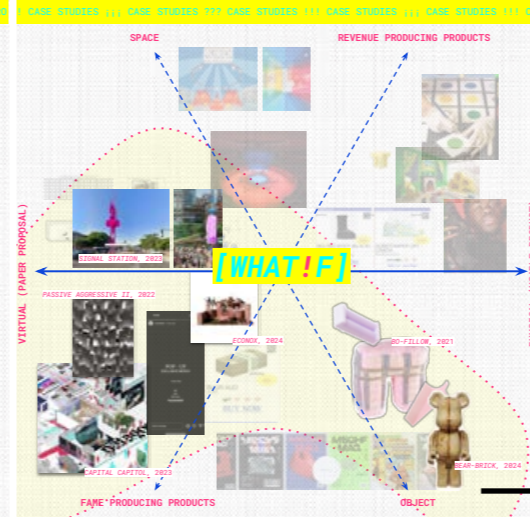
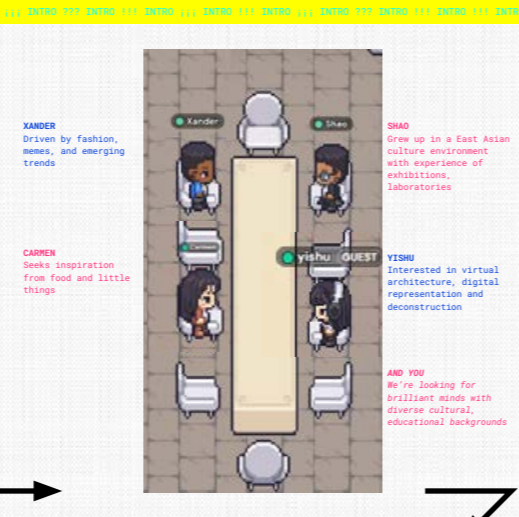
Small Archive, Small Library, V&L Clinic, Warm Farm, Herb Garden, Education Hub, Preserving Workshop
3F Plan
 Preservation Studio



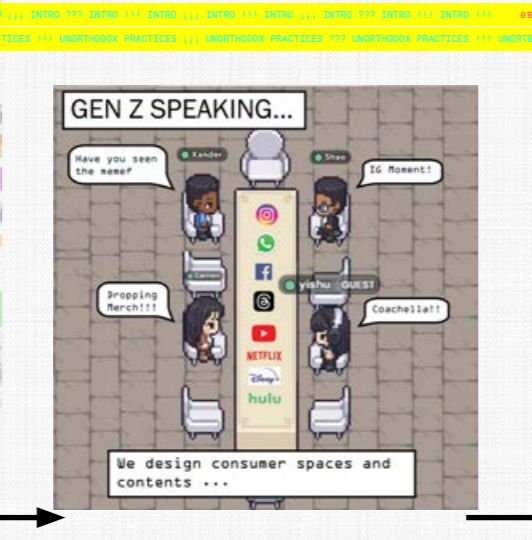
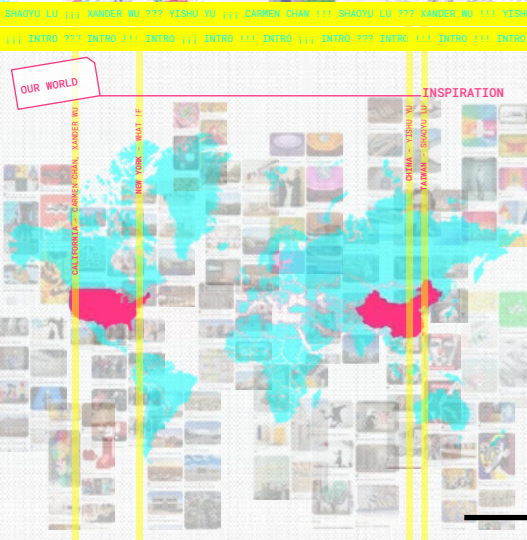
Community Garden, Chicken Coop, Bee Hive, Warm Farm, Short Term Living Unit
6F Plan
 Growing Studio



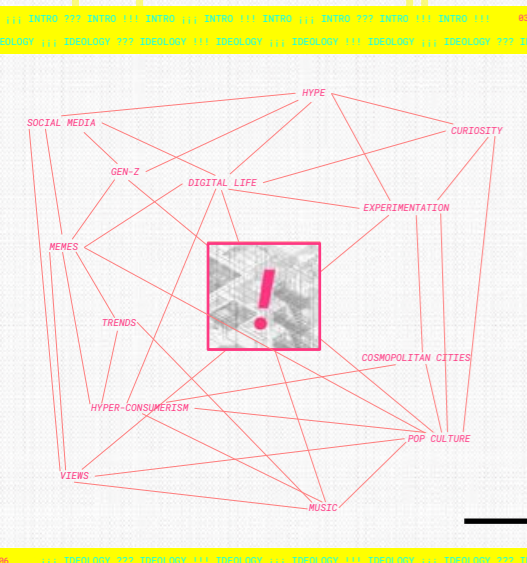
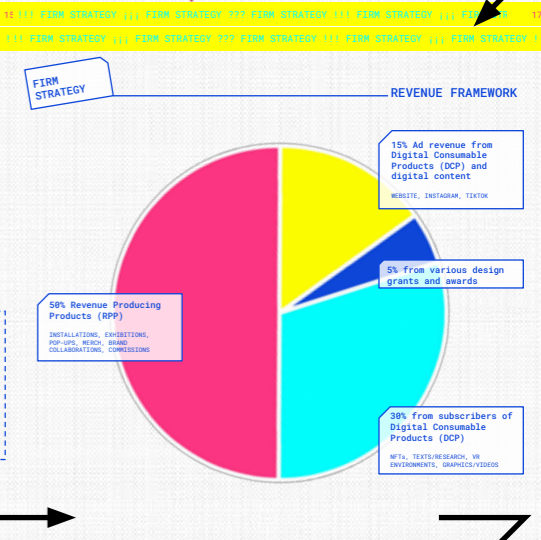
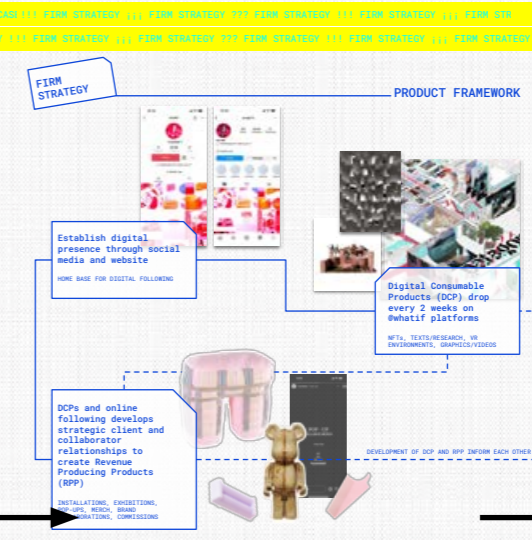
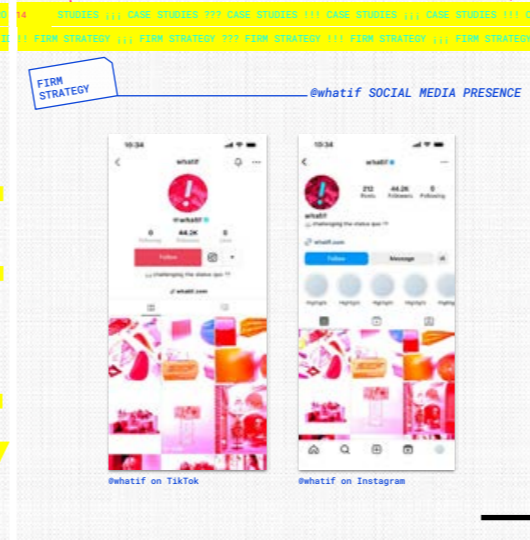
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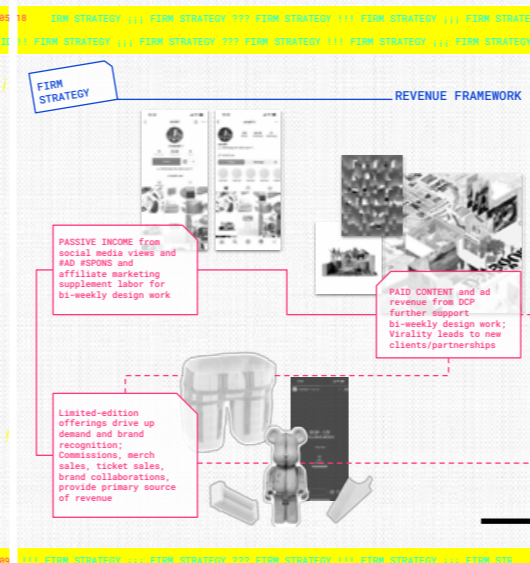


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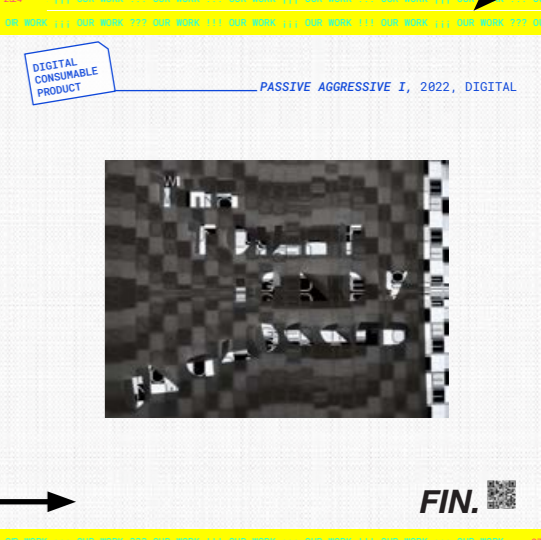
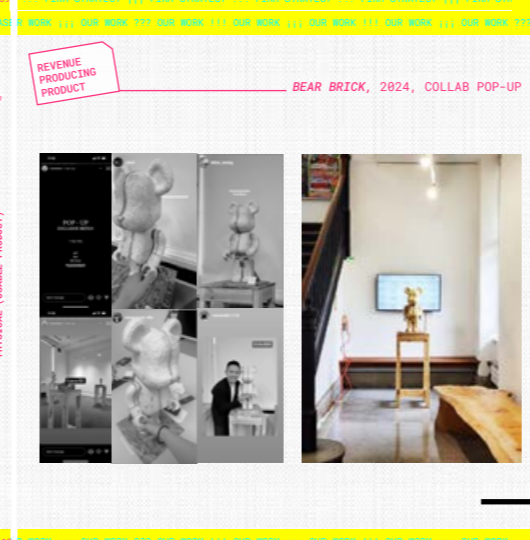
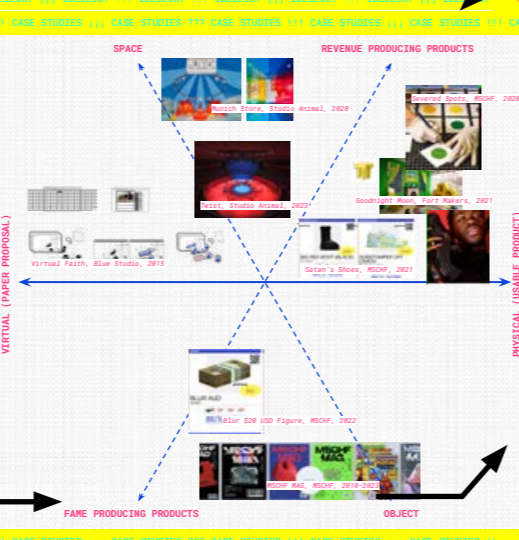
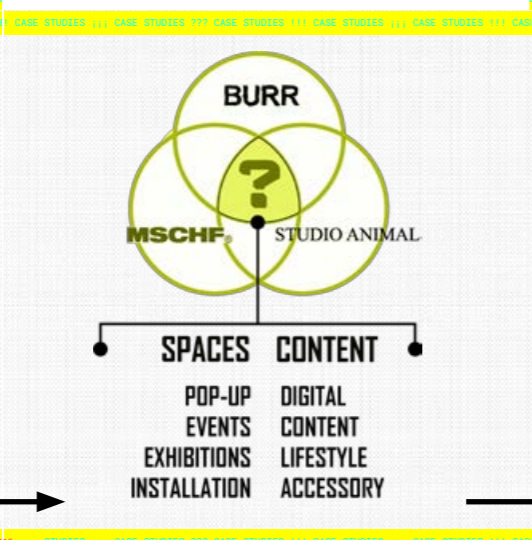
2024 Spring Unorthodox Practice Advisor
 Juan Herreros Guerra
 Teammate
 Alexander Wu
 Carmen Chan
 Yishu Yu



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CASE STUDIES IES IES



Vernacular Architecture in Postwar Taiwan from Female Architects' Perspective, Wang Chiu-Hwa

2024 Spring Modernism + the Vernacular by Prof. Mary McLeod

The postwar time, 1945~1990, in Taiwan is a chaotic period of change. The colonization by the Japanese ended in 1945 along with the end of World War II. Chinese civil war between the KMT, Chinese Nationalist Party, and CPC, Communist Party of China, led to the great retreat from China to Taiwan. Taiwan suddenly became crowded with the philosophies of native Taiwanese, colonial Japanese, classical Chinese, and Western, which was brought by the economic cooperation from the United States from 1951 to 1965.

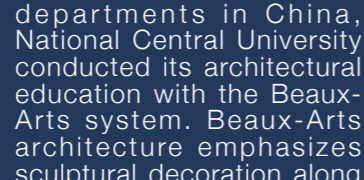
The hybrid situation was also shown in architectural style. The essay is intended to talk about the Taiwanese architectural identity from female architects' perspective during the postwar period in Taiwan, 1945~1990. Male professionals dominated the Architecture Industry at that time.



Wang Chiu-Hwa (1925-2021): Wang Chiu-Hwa was born in 1925 in Beijing, finished her university studies in architecture in Chongqing, China, was trained as an architect in GSAPP, and worked for 30 years in Percival Goodman's studio in New York before going to Taiwan.

Her initial interest in architecture started from listening to her cousin's friend's review at National Central University when Chiu-Hwa was in her third year in high school. After that, she listed architecture as her first choice when selecting her major at university. Due to the outbreak of World War

II in China in 1937, National Central University was forced to move to a far back area, Chongqing, from Nangjing. As a result, Wang Chiu-Hwa was admitted to the Architectural Engineering Department at the Central University in Chongqing in 1942. As one of the earliest architecture departments in China, National Central University conducted its architectural education with the Beaux-Arts system. Beaux-Arts architecture emphasizes sculptural decoration along conservative modern lines and modern materials. However, the Beaux-Arts education system in China was criticized due to overcaring the classical exterior decoration rather than focusing on the interior function arrangement of the architecture. Chiu-Hwa was confused about tracing the French and Italian Baroque and Rococo columns and decorations that was novel but irrelevant to the Chinese environment at that time. Li Hui-Bo, who graduated from the University of Michigan in 1932 and also know as one of the four significant architectural educators during the WW2 period in China, was a meaningful mentor who truly intrigued Chiu-Hwa with architecture. Except for teaching students in the former Beaux-Arts way, Hui-Bo taught with the modernism philosophy inherited from Emil



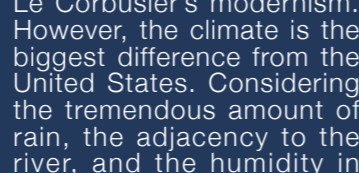
Lorch, UMich. After graduating from the National Central University in China in 1946, Chiu-Hwa spent a year studying the fifth year at the University of Washington, Seattle. It was not until she entered Columbia University GSAPP, that she met the important mentor of her lifetime, Percival Goodman. Percival Goodman was a professor in GSAPP, an architect and a planner with a strong commitment to social ideals. He contributed to projects with social meanings, like synagogues and schools in the United States in modern architectural principles. With his brother, the sociologist and writer Paul Goodman, he also influenced a generation of architects and planners about

participatory architecture in the 1960s and 1970s to improve social conditions. Chiu-Hwa started to work part-time in Percival's studio while she was still in school, became a full-time employee, and eventually became a partner of Percival's studio.

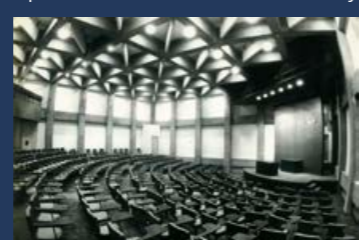
As the first project she had in Taiwan, Chiu-Hwa designed the Center of American Studies at Nangang District in Taipei in 1973, which was situated in a rice field within the southwest corner of the Academia campus. When she was designing the project, Taiwan hasn't been her long-term home yet. She designed the architecture when she was still practicing in New York. All of her base knowledge about the site came from the Taiwanese collaborative firm and the short site visit. The links between her design and the local environment are limited. The overall space organization and exterior style resemble Le Corbusier's modernism. However, the climate is the biggest difference from the United States. Considering the tremendous amount of rain, the adjacency to the river, and the humidity in Taiwan, Chiu-Hwa used the philosophy of stilt houses to design the facility. Stilt houses are commonly seen in humid areas like Taiwan and southeast Asia. The indigenous people, especially the ones living in the plain areas, in Taiwan used bamboo, wood, and straw to build those stilt houses as their administrative buildings or important gathering spaces. The reasons may



be two, one is the elevated position makes the building stand out and prestige, and the other is to keep those important buildings last longer than the residential houses. In the painting "The Genre Paintings of Taiwan's Aboriginal Peoples: Welcoming the Bride" the elevated house behind the wedding crowd", the stilt house is clearly shown.



During the Japanese colonial period, Japanese architects also integrated the design to their important administrative buildings, like the residence for the principal of Taiwan Sugar Manufacturing Company at Takao. The elevated base keeps the building dry. On top of the base stands the Baroque-style arches and decorations, which is called "the tropical colonial style" by the Taiwanese architectural historian Li Chen-Lan.



Material-wise, the connection between the Center of American Studies and the local vernacular architecture

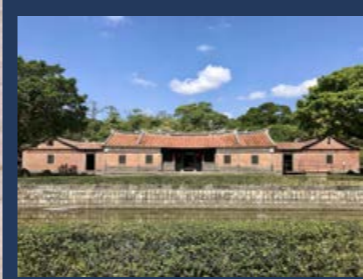


is the red brick. The history of using red brick dates back to the end of the Qing Dynasty, 1750-1895. Chinese living on the southeast coast of China often stayed shorty in the coastal area of Taiwan when they were fishing or trading. Because of the abundant production of red clay, the material of red bricks, in southeast China, the architecture in southeast China used heavily red bricks as their primary building materials, which was not commonly seen in the other parts of China, because the color red was seen as a royal exclusive color. During that time, although there was no brick industry in Taiwan at all, and people saw Taiwan only as a temporary shelter place not worthy of investing money in building brick civil buildings, the official administrative buildings were built in red bricks using the exported bricks from China. In Japanese colonial times, the Japanese put effort into developing the brick industry

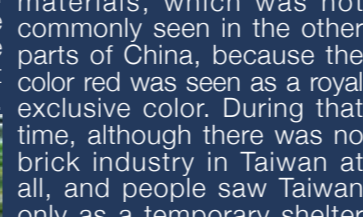


when they found abundant red clay resources in the western coastal area of Taiwan. Red bricks started to be massively used in Taiwanese civil architecture.

care of her elder father. Xue Residence, which is the long-



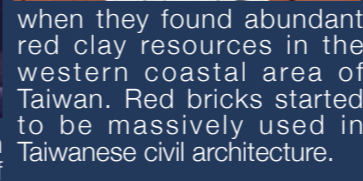
Western classical style with the Japanese traditional



term home for her and her mother after her father passed away, was her second project in Taiwan in 1983. Compared to the mindset designing the Center of American Studies, Chiu-Hwa linked Xue Residence with her cultural habits and the land more than the previous one. Xue Residence looks like a building with 2 units on a floor and with a circulation at the center, but it's actually 1 unit on 1 floor. The facade of the building is tiled with white glazed tiles. The history of using glazed tiles happened slightly after red bricks were broadly used. In Japan, after the Meiji Restoration, from 1868 to 1889, architecture in



While Chiu-Hwa designed and built Xue Residence for her whole extended family, she kept the upper two floors for her and her mom. On these two floors, some Taiwanese hybrid culture was reflected in the design. All of her home flooring is wood, but she made the guest room with a tatami floor to maintain the flexibility of being the bed as well. The importance of tatamis in Taiwan is deep.

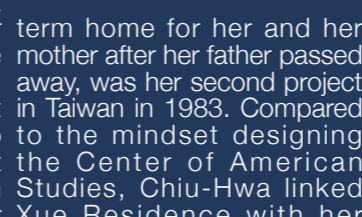


Japan started using Western materials and integrating

the Japanese not only made the material commonly used during the colonial period, but tatamis also changed the way we measure space til now. Ping, the common space unit in Taiwan, is equal to the size of two tatamis, 91cm x 182cm x 2. Tatamis also increase the flexibility of the space, which can be laid out as a flat gathering space or a bed space. The window here is also another interpretation of her cultural experience. The flower shape window was inherited from the design of Chinese gardens (園林). Besides the flower shape, there are more variations from the pentagon shape to the shape of an East Asian fan. Postwar architects in Taiwan liked to include this garden art in their designs, like another



culture. The usage of tiles was brought into Japan during that time either to mimic the texture of marble facades or simply differentiate themselves from traditional wooden architecture in a more affordable way. The Japanese brought the habits to Taiwan when they started to colonize the island on 1895. Compared to the paint facades, the tiled facades are more suitable for the humid and rainy Taiwanese environment and with a more diverse variation. However, Chiu-Hwa didn't choose the colorful and diverse tiles as the Residence's facade, instead, she chose simple white glazed tiles, which she later complained about the difficult-to-maintain color.



postwar architect Wang Da-Hong designed a circular window as the main visual feature in his own residence in 1953. During that period, people just retreated from China with Chiang's troops. They still had the thought of fighting back to mainland China. People reflected their emotions in their living space.



To read postwar Taiwanese history, Wang Chiu-Hwa's experience is a miniature of a part of that hybrid, chaotic time. From Chiu-Hwa's perspective, she was born into a relatively wealthy and privileged family with her father as the principal of Wu Han University. Before she left China for the United States for education in 1946, China was her home. Chinese land carried all of her childhood memories and acquaintances. After working in Percival Goodman's studio in New

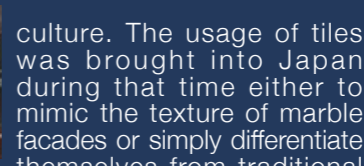


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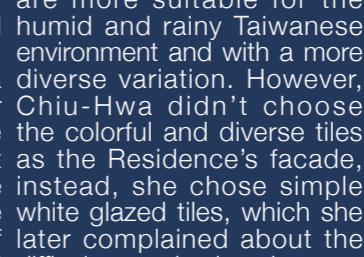
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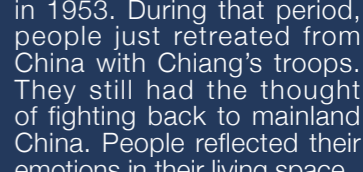


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York

York

York for 30 years, New York somehow became her other significant home. She embraced the modern concrete cityscape and the design philosophy of modernism. In 1979, Chiu-Hwa moved to Taiwan to take care of her aging father. She had to make the island she had never spent a long time on her home. The island bore the memory of the indigenous people living here for 8,000 years according to Rober Blust's Selected papers from the Eighth International Conference on Austronesian Linguistics (pp. 31-94), Dutch colonizers from 1624 to 1662, Chinese Ming and Qing Dynasty from 1662 to 1895, Japanese colonizers from 1895 to 1945, Chinese Chiang Kai-Shek's troops from 1949 till now, and the economic and military support from the United States from 1951 to 1965. All the different layers of history add to the small island, which makes the vernacular languages sway between different origins. People may say there's no style in Taiwan because there are too many ingredients cooking in the pot, and each of them has their origin somewhere else in the world. In Chiu-Hwa's own residence, Xue Residence, those elements are combined together harmoniously. The hybridity and diversity maybe are the vernacular languages in Taiwan.



- Wang Chiu-Hwa in her house, Xue Residence

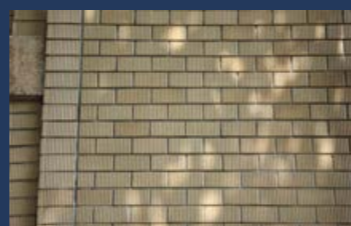
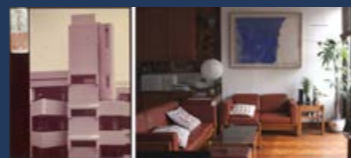
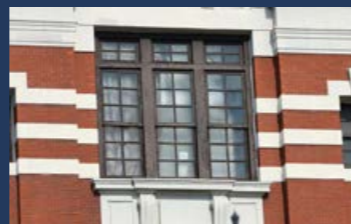
- The elevated ground floor of the Center of American Studies. (Source from a+tec Magazine)

- The interior of the Center of American Studies auditorium. (Source from a+tec Magazine)

- The Genre Paintings of Taiwan's Aboriginal Peoples: Welcoming the Bride (A.D. 1736 -1795)

- Residence of the principal of Taiwan sugar-manufacturing Company at Takao, 1901

- The mixed-use of brick and concrete of the Center of American Studies (Source from M+ Archive)



- Lin An Tai Historical House, 1820

- The Government-General of Taiwan, 1919

- The Red Header-Sized Tiles (赤小口磚) on the Government-General of Taiwan, 1919

- The sketch of Xue Residence, 1983

- The exterior and living room on the 7th-floor photo of Xue Residence, 1983

- Taipei Post Office, 1930

- The Scratch Tiles (筋面磁磚) on the Taipei Post Office, 1930



- Taipei City Public Auditorium, now called Zhongshan Hall, 1936

- The diverse tiles on Taipei City Public Auditorium, 1936

- The guest room on the 8th floor of Xue Residence, 1983

- The plan of Wang Da-Hung Residence, Wang Da-Hong, 1953

- The circular window in Wang Da-Hung Residence, Wang Da-Hong, 1953

Reference

1. M+ Digital Document Archive <https://www.mplus.org.hk/en/collection/archives/wang-chiu-hwa-archive-ca39/>
2. "The Mother of Library", Taiwan Panomara Magazine, 2021
3. Interview with Architect Wang, Chiu-Hwa <https://www.mplus.org.hk/en/magazine/7-facts-about-about-taiwans-mother-of-libraries/>
4. "On the Architectural Works of Chiu-Hwa Wang in Taiwan", Lin Chun-Yu Graduate School of Architecture, Tamkang University, 2008

FALL

The topography extends itself from outside to inside of the armory, and creates a seamless surface to invite the neighborhood in.



The topography extends itself from outside to inside of the armory, and creates a seamless surface to invite the neighborhood in.



At the exhibition, I presented the project to US Congressman Adriano Espaillat, Columbia University President Minouche Shafik and GSAPP Dean Andres Jaque with my other team member.

Park Kingsbridge

2023 Fall Advanced Studio V

Advisor

Laurie Hawkinson

Site

Kingsbridge Armory, the Bronx

Teammate

Harshini Ashok

What if there was a self-sustainable park in the Armory that could weave the gap between parts of the neighborhoods?

A vibrant oasis of landscaped hills connect to a water valley where kids can play, therapy gardens for elders tie in between informal amphitheaters for theatrical performances, and a subway station roof, we can easily collect rainfall and snowfall enough to grow **1,000+ trees of 15 inches diameter**, which makes it a fantastic place for construction company planting trees to decarbonize building construction.

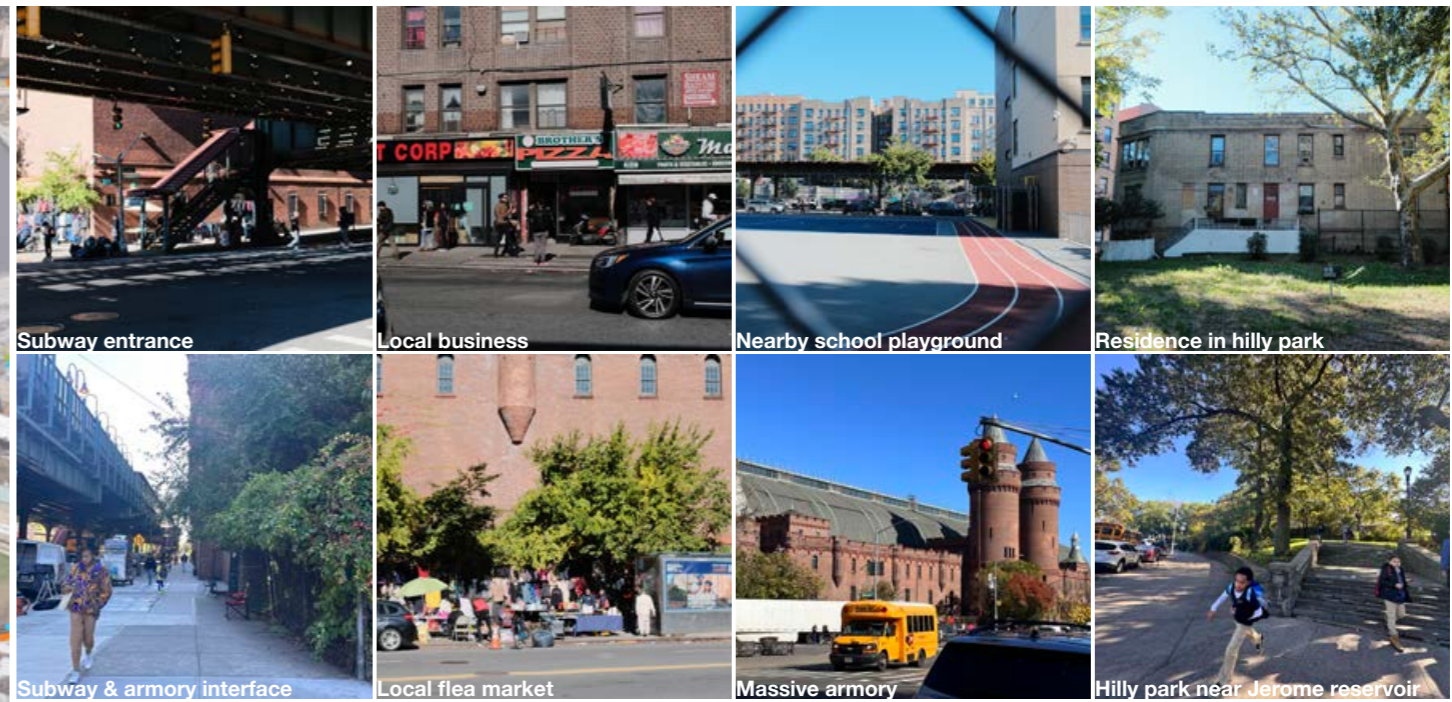
Imagine taking your evening walk through a contained forest atmosphere, dining at your favorite local business while listening to upcoming artists, sitting atop the landscape volumes to finish a book with panoramic views, or grabbing a drink and watching the local basketball game with your friends.

It's a park would keep thriving with continuous income of green and with the diverse community around it.

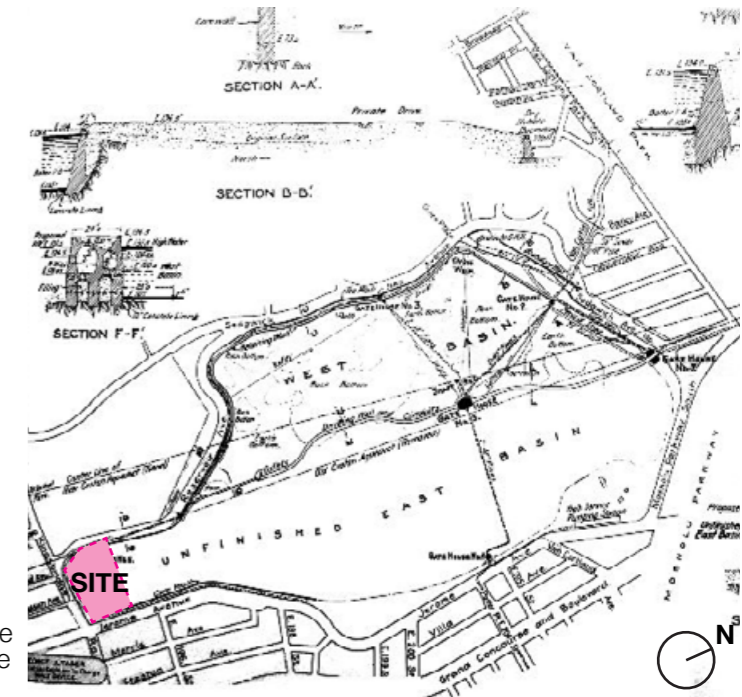
People may wonder the feasibility of bringing a park under a roof. However, with armory's gigantic

roof, we can easily collect rainfall and snowfall enough to grow **1,000+ trees of 15 inches diameter**, which makes it a fantastic place for construction company planting trees to decarbonize building construction.

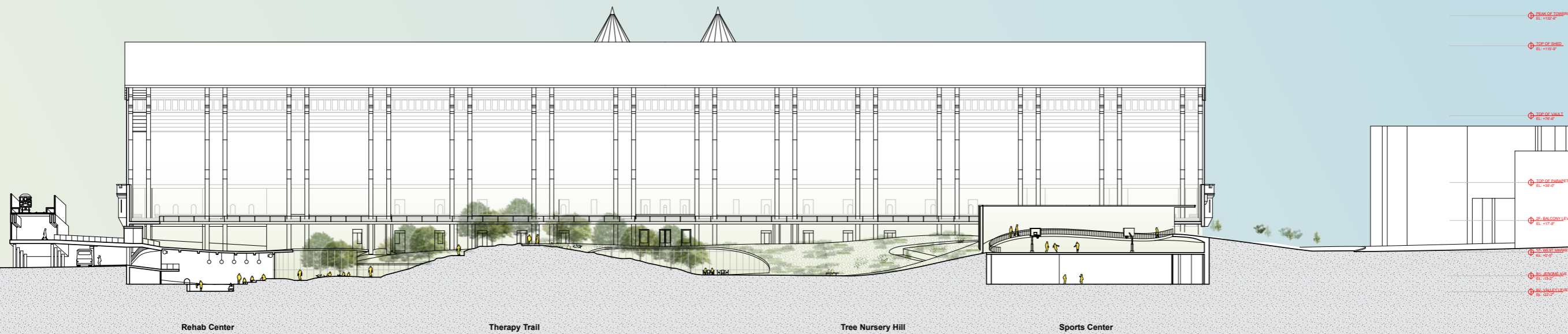




← **Diverse and Complex Neighborhood**
 Kingsbridge Armory has been a black box blocking connection between diverse neighborhood for ages. The neighborhood is proud of its abundant local commercial, educational energy and tranquil living environment.



↓ **Open up the black box as a Free Surface**
 The terrain around the armory is also complex like those programs around it. The free surface, as a park, a tree bank, a community gathering center, creates continuous experience for the residents, commuters, students, seniors, vendors, late night pedestrians, and so on.



KIGALI Urban Development Proposal



Kigali Urban Development Proposal

2023 Fall Building the Engine: Industry + The African Urban Agenda

Advisor
Fatou K. DIEYE
Teammate
Eddy Voltaire
Elizabeth Ogunsanya
Yewon Hong

G the SAPP Inc.

Our Mission

We are committed to fostering sustainable urban development across the world by driving necessary policies that empower communities, enhance livability, and propel economic prosperity. Our mission is to create vibrant, inclusive, and resilient urban environments that promote the well-being of all residents.

We strive to be a catalyst for positive change, leveraging innovation, collaboration, and evidence-based solutions to address the unique urban challenges that African cities face. Our core principles include transparency, equity and accountability, and we aim to lead by example, setting the standard for effective, efficient, and ethical policy-making in urban development.

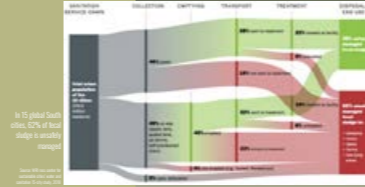


What's Wrong?



What's Wrong?

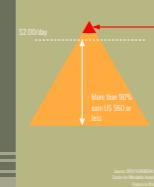
Poor Infrastructure



What's Wrong?

Poor Infrastructure

Unaffordable Housing



What's Wrong?

Poor Infrastructure

Unaffordable Housing



What's Wrong?

Poor Infrastructure

2015 Yearbook projected that the city needs over 1,000 units per year and City of Kigali will require at least 344,088 dwelling unit by 2022.

2020 Yearbook indicated that the annual average increase in the number of households between 2014 to 2017 was at 24,772 and housing need will grow from 345,079 in 2018 to 718,205 in 2032.

2022 Yearbook did not include a projection in the statistical value.

Unaffordable Housing



Impoverished Policy



Proposal

Install Infrastructures



Circular Economic



Reform Policy



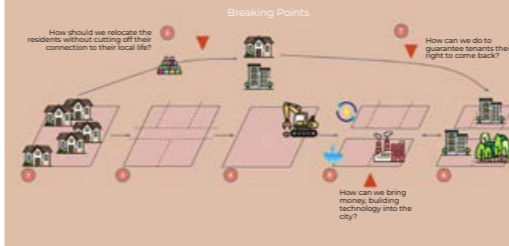
Business As Usual



Continuing with business as usual makes future housing and urban development goals harder to reach.

Promoting healthy urban development!

Procedure



Relocation Strategy



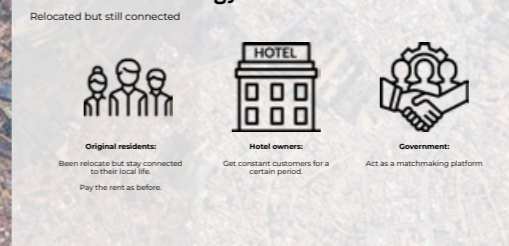
Relocation Strategy



Relocation Strategy



Relocation Strategy



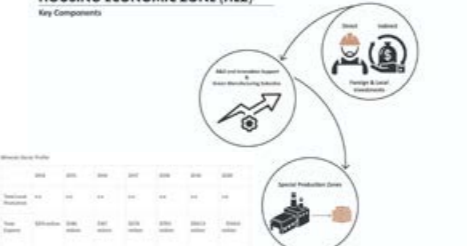
HOUSING ECONOMIC ZONE (HEZ)



HOUSING ECONOMIC ZONE (HEZ)



HOUSING ECONOMIC ZONE (HEZ)



HOUSING ECONOMIC ZONE (HEZ)



HOUSING ECONOMIC ZONE (HEZ)



Sense Deprivation Pod

2023 Fall Ways of Experiencing by Karen Wong



Immersive experiences are the ultimate goals of all shows, exhibitions or services. To achieve this goal, there are several steps, according to Maria Lorena Lehman's tips for great exhibition design, that need to be taken care of. However, it doesn't mean that if we overload every element in the pyramid will make a splendid show, like many shows today claiming immersive. Some exhibition packages their contents using loads of projection and speakers. In this technology-boomed era, people may be tired of getting bombarded with technological stimuli and may be rather going for a more intimate and sensory one. There are two separate approaches to designing immersive environments: one is to provide loads of sensory stimuli, and the other is to block sensory stimuli from the physical environment.



Since humans are the visual-dominant species, what if the visual part of the experience is distorted to create another surprise? Another team using loads of projection and speakers. In this technology-boomed era, people may be tired of getting bombarded with technological stimuli and may be rather going for a more intimate and sensory one. There are two separate approaches to designing immersive environments: one is to provide loads of sensory stimuli, and the other is to block sensory stimuli from the physical environment.



are only for physiological and sustaining functions. By using an aromatic diffuser, VR headset, and a bone conduction transducer, the company recreates the experience of eating by hacking vision, gustation, olfaction, audition, and touch thus tricking people's senses into believing that the "faux" food they're eating is a gourmet meal, even they're served with 3D printed and tasteless food. What is the dominant factor in this experience? The physical food seems to be replaced by other sensory impulses. Recently in the wine industry, a team based at Stockholm University has developed a way for users to smell or taste wine in the virtual world.



So, maybe in a homesick night, it is an easy self-made

immersive experience that I'm eating a burger with a YouTube video playing about home food.



Speaking of sense hacking, though the idea seems novel in the food industry, it was used in the exhibition realm before. In 2022, a Norwegian-born, Berlin-based artist, Sissel Tolaas,



hosted an exhibition focusing on olfactory senses. A wall in the exhibition is coated in mylar, with several small scent emitters mounted. The small scent emitters are triggered by motion sensors detecting visitors' movement. However, the scents emitted are too faint for human noses, and visitors have to get so close to detect the scents from the installation. From the scents, the artist left a story for the public to find out. With rare exceptions, humans have been ignoring our noses to explore the world. Sniffing through the exhibition leaves much imagination for us to ponder. Smelling sense is not as strong as humans' visual memory, but scent memory is often stored in a different way than visual memory. Smell and memory seem to be so closely linked together, said Harvard's Venkatesh Murthy, Raymond Leo Erikson's Life Sciences Professor. The scent exhibition thus not only plays with our sensory input but also plays with the memory linked to it.

A sensory deprivation tank is another level of sense hacking. A light and sound-isolated pod filled with salty water and air both heated to the same temperature as our body, stimulate people to

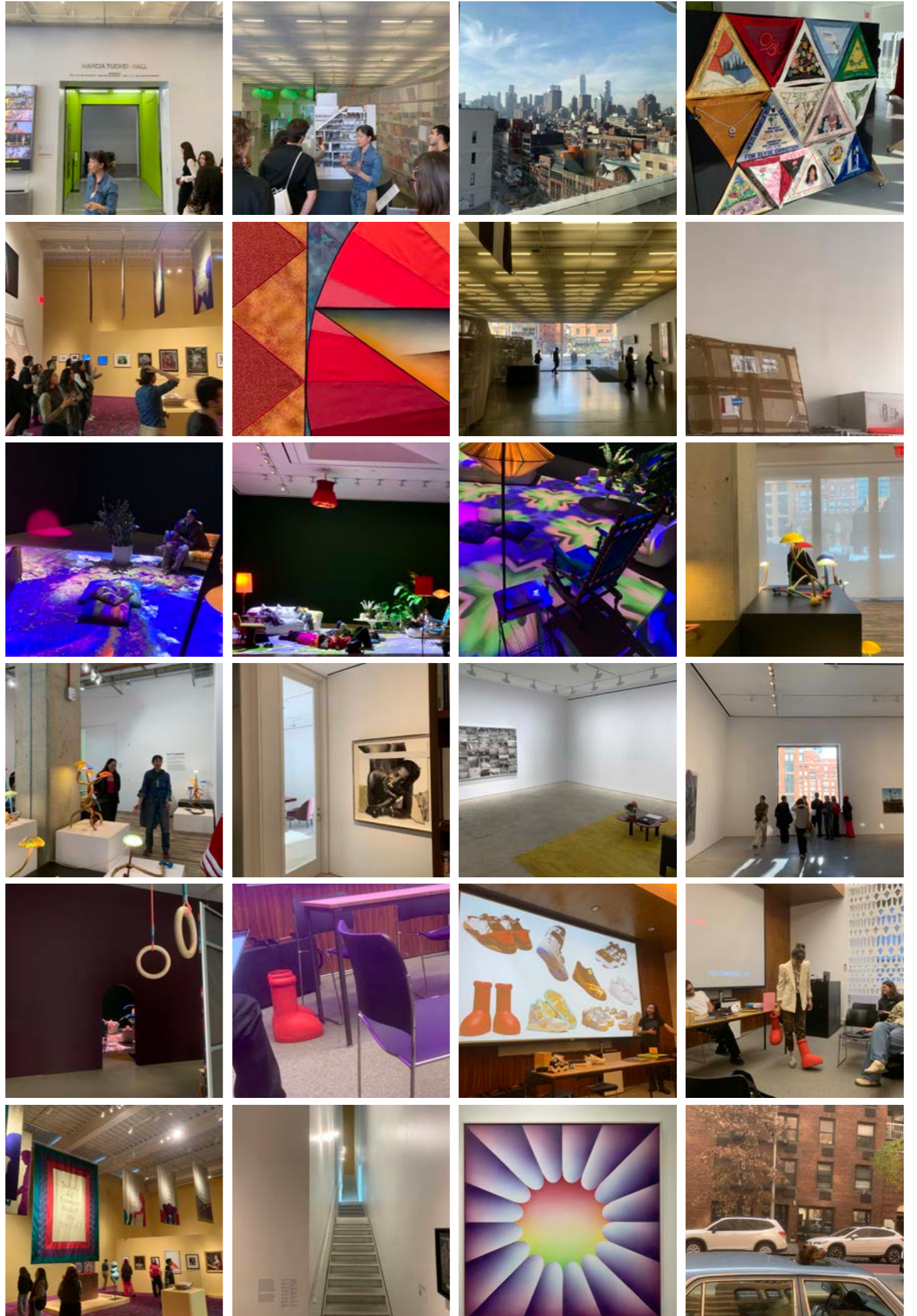
meditate and claims to ease stress effectively. Because of the isolation of the light, and sound, and even loss of the touch of the boundary



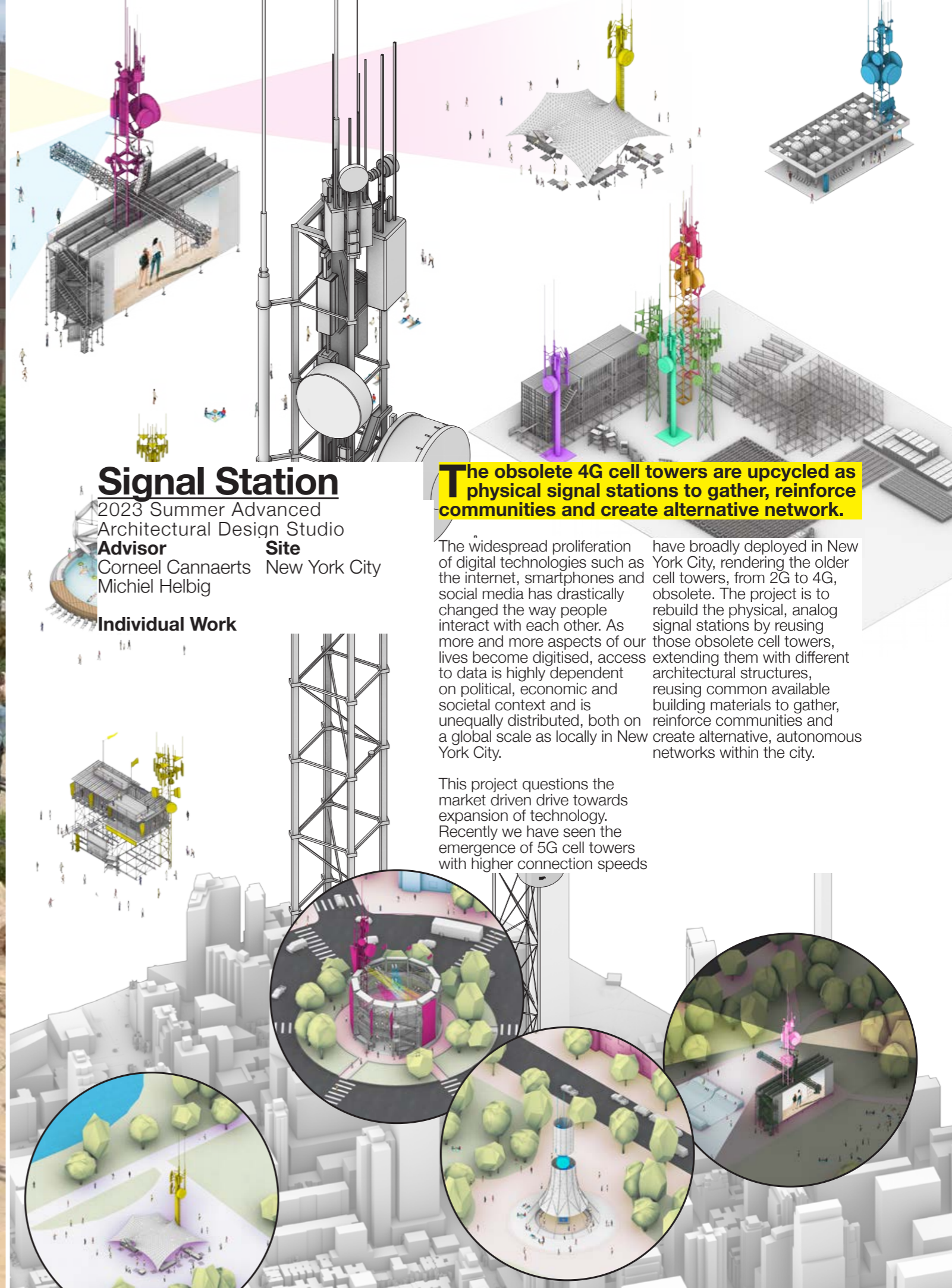
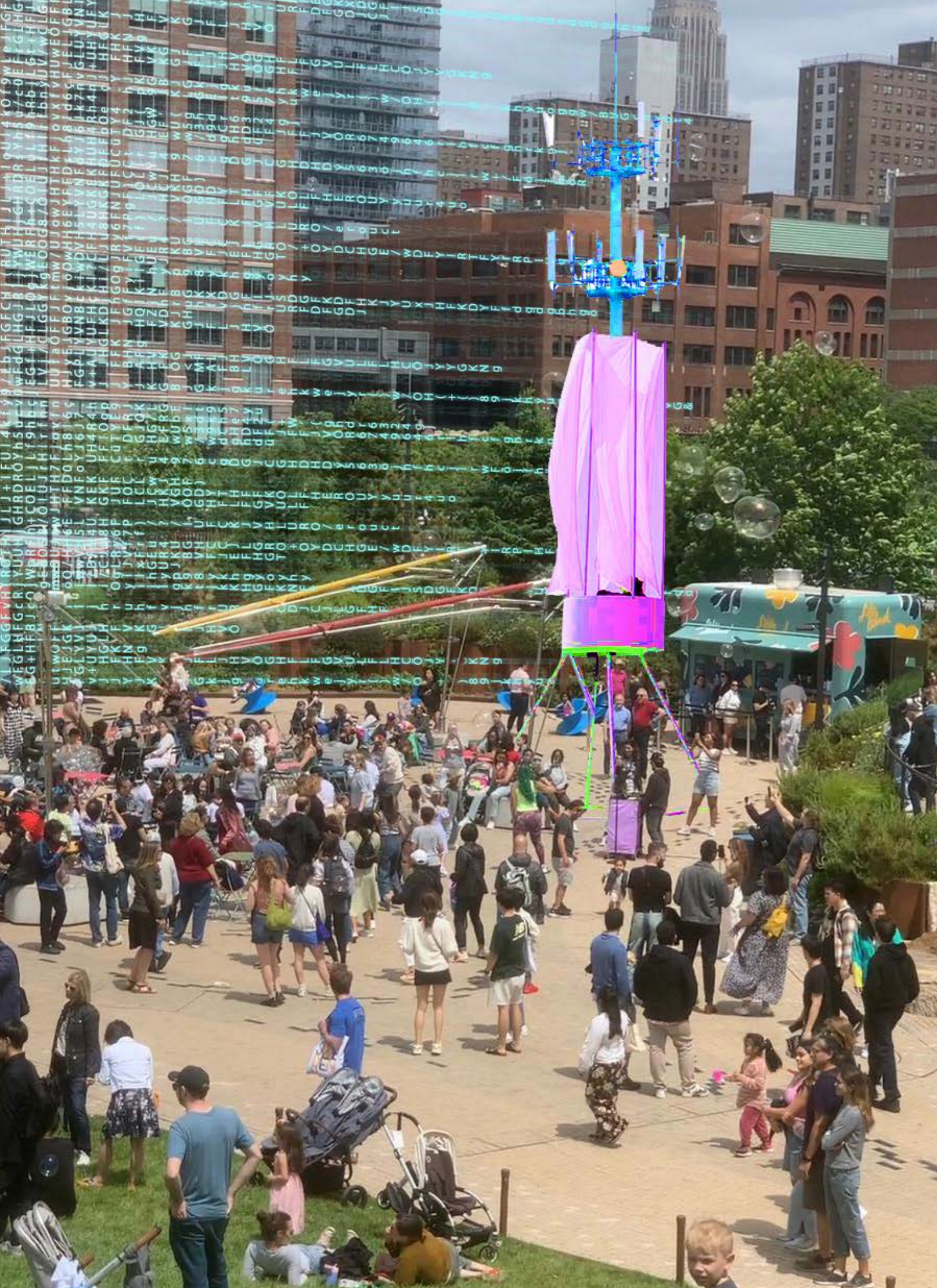
FIGURE 2-7 This experimental condition was specifically designed for short-term studies (4 hours or less) in which the subjects were not fed or hydrated during isolation and movement restrictions were severe. The room was air-conditioned, white noise was used as a masking sound, and the subjects wore translucent eye coverings which diffused light from a bank of fluorescent tubes. The subject's chair faced the fluorescent lights during the course of the experiment.

between water and air, people would feel like drifting in an extremely dark and quiet outer space. Soon after, people's brains will not be able to construct the world due to the lack of sensory stimulation, like one may not be able to orient oneself in a non-echoing chamber. Without any physical senses, the existence of our mentality become the main character of the experience. Some may feel themselves traveling through high-speed liquid, some may feel the motion of one's inner organs. No matter what one feels, it's all deeply related to one's own personal experience.

Among the examples above, the experiences can be hacked, be enhanced, be distorted or be isolated. The boundary between true and false feelings of the physical world becomes more and more vague. We'll eventually lose track of authenticity, like the human pod in The Matrix, the utmost use of immersive experience installation. Whether it's real or fake people experience in the matrix, there will always be someone buying these unique experiences.



SUMMER



Signal Station

2023 Summer Advanced Architectural Design Studio

Advisor Corneel Cannaearts
Site New York City
 Michiel Helbig

Individual Work

The obsolete 4G cell towers are upcycled as physical signal stations to gather, reinforce communities and create alternative network.

The widespread proliferation of digital technologies such as the internet, smartphones and social media has drastically changed the way people interact with each other. As more and more aspects of our lives become digitised, access to data is highly dependent on political, economic and societal context and is unequally distributed, both on a global scale as locally in New York City.

have broadly deployed in New York City, rendering the older cell towers, from 2G to 4G, obsolete. The project is to rebuild the physical, analog signal stations by reusing those obsolete cell towers, extending them with different architectural structures, reusing common available building materials to gather, reinforce communities and create alternative, autonomous networks within the city.

This project questions the market driven drive towards expansion of technology. Recently we have seen the emergence of 5G cell towers with higher connection speeds

>Impersonating Infrastructure

TAGS: Infra-
structure. Hidden.
Cell Tower. Data.
Service. Natural. Ar-
tificial. Impersonation



Photographer Annette Lemay Burke became captivated by their “accepted yet contrived aesthetic.” From 2015 to 2020, she embarked on a series of road trips across the American West to seek them out, the result of which has just been published in her monograph Fauxliage (Daylight Books).

“The towers have an array of creative concealments,” she writes. “They often impersonate trees such as evergreens, palms, and saguaros. Some pillars serve other uses such as flagpoles or iconographic church crosses. Generally the towers are just simulacra. They are water towers that hold no water, windmills that provide no power, and trees that provide no oxygen. Yet they all provide five bars of service.”

Both examples demonstrate the way we attempt to hide digital infrastructure as well as the impersonation of more natural identities. While one is arguably good, hiding the ugly industrial aesthetics within a natural environment, the other presents potential for political, economical, and historical concerns. Found between the two is a connection of the impact of pollution on both the natural and digital worlds.

TAKE ME TO A USELESS WEBSITE

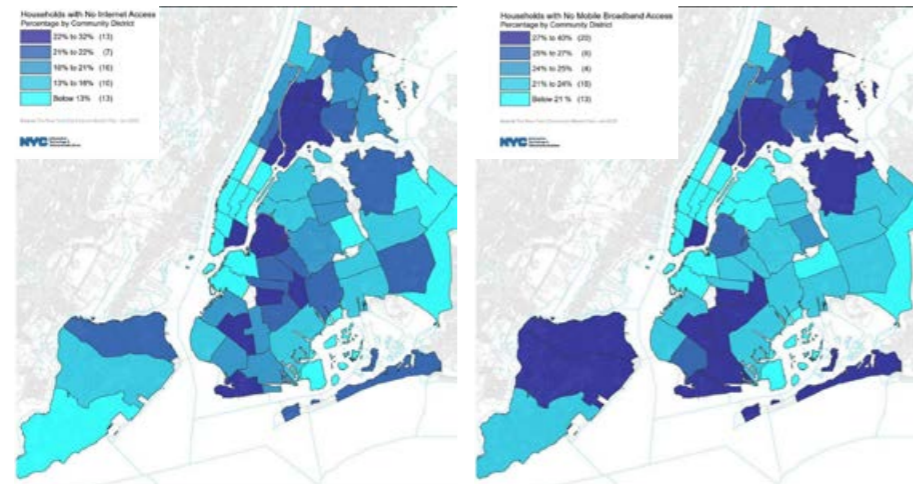
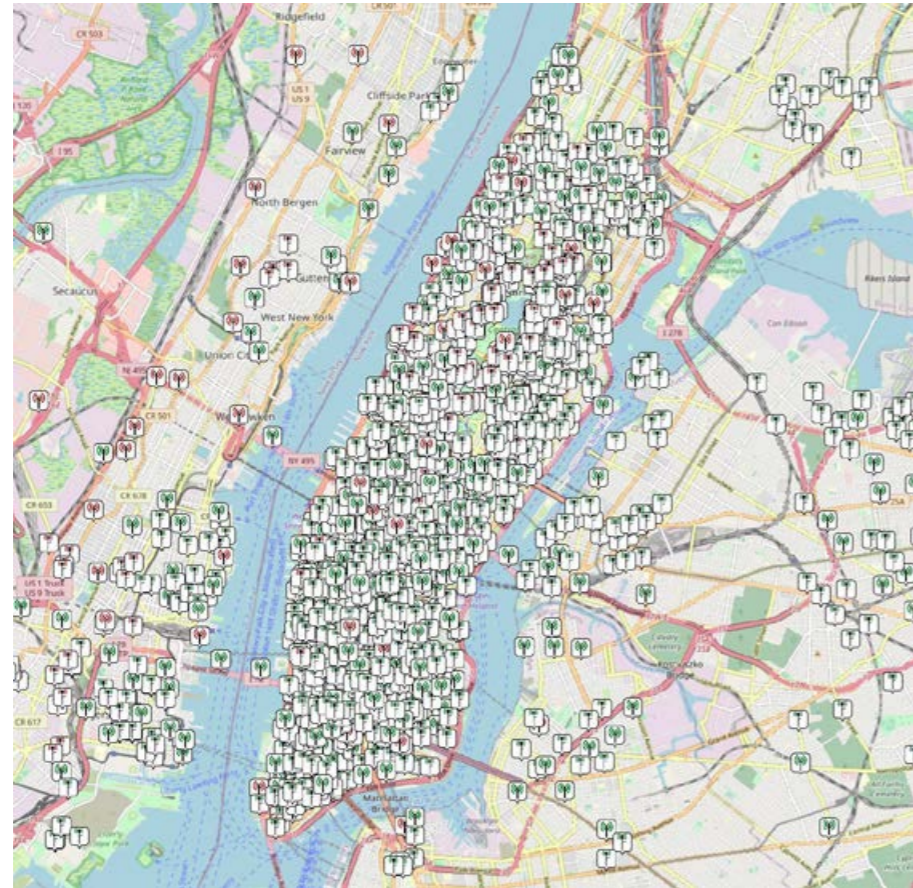
PLEASE

“Take Me to a Useless Website”
It was a list of links to web pages the writers deemed egregiously useless, with humorous descriptions. In time it grew to a directory with links archived by category. It helped disseminate many early minor internet memes and phenomenon. There were many imitators, and it spawned its own Yahoo category. Marc Andreessen once called it “One of the best sites on the Web”.

“System Gone Off the Rails”
Publishers are under more pressure than ever to make money in an ad system that’s rigged to reward quantity over quality.

This kind of webpage is a perfect case study of a system gone off the rails. Like CafeMom created the page, which carries a ho-hum piece on “Glee,” following the death of show star Cory Monteith, specifically for content-distribution network Outbrain, which displayed it on sites like TMZ.com and SI.com. This page contains over 90 ad units, mostly “content marketing” ads from networks Taboola, Adblade, Zergnet. There are also four standard display ads served by CafeMom. The user experience is, well, not optimal. This is what the middle of the story looks like.



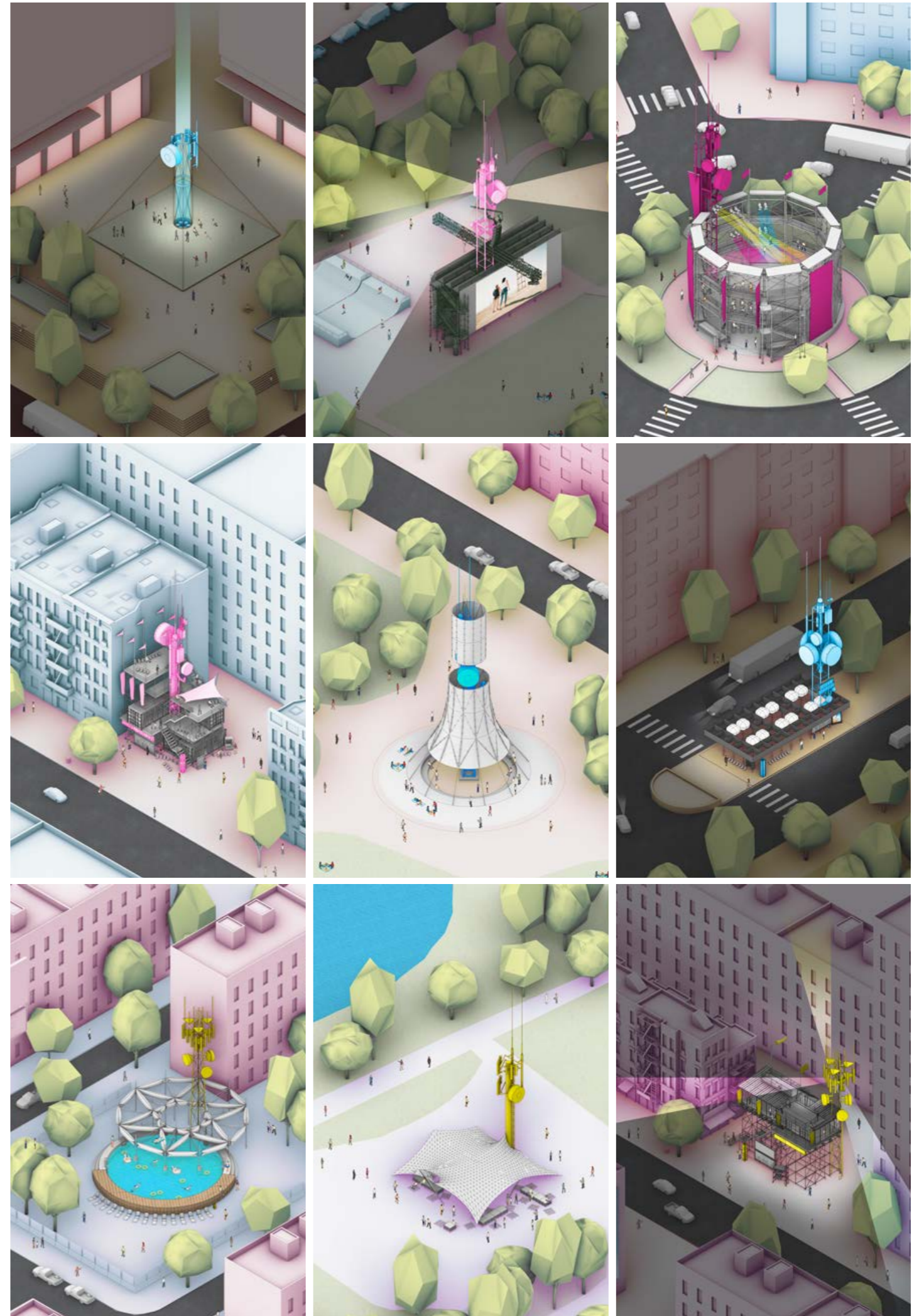


↑ **Uneven Deployed Cell Towers**

Though the cell towers are densely mounted in some area of the city, they are unevenly installed, which make dark corners of connection in the dark blue areas.

→ **Imaging Signal Stations in Different Context in New York City**

The project aims to rebuild the physical, analog signal stations by reusing those obsolete cell towers, extending them with different architectural structures, reusing common available building materials also hoping to raise people's awareness and interest in upcycling the old infrastructures to autonomous gathering landmarks.





Lantern Signal Station

Brighter space at night would statistically lower the crime rate, and also if you get the signals, you get help for emergency. The lantern station as a shelter space for late night pedestrians provides good lighting and digital signal.



Arena Signal Station

Columbus Circle is one of the busiest traffic junction in New York City. What if we replace the statue at the center with the Arena Signal Station? With the easy accessibility and the signal service, we make the roundabout also a place for people to gather.

A Cyborg Manifesto

SCIENCE, TECHNOLOGY,
AND SOCIALIST-FEMINISM
IN THE LATE TWENTIETH
CENTURY

by DONNA HARAWAY

This essay explores the impact of advanced "cyborgs" on feminism, socialism, and materialism in future society. In the past, dualism was used to establish boundaries and reduce dissent. However, with technological advancements, distinctions between physical abilities for different roles are no longer necessary. This opens up various possibilities for human identities, such as a new worldwide working class, new sexualities, and new ethnicities.

I agree with the author's perspective on women's roles in employment, reproduction, and cultural domains. While some aspects can be easily changed, others are more resistant to change. With evolving job typologies, physical condition will no longer be a decisive factor in securing employment. As a result, the influence of women and men in the professional sphere will converge, a trend that I believe will continue in the foreseeable future. However, the ability to give birth is an inherent difficulty for men and machines, and this distinction will inevitably affect equality in certain ways.

In conclusion, Haraway proposes the idea of coalition politics, which I find challenging to implement until cyborgs are capable of producing human babies, similar to the concept depicted in the movie "Matrix."

SUPERPOWERS OF SCALE

BY ANDRES JAQUE

The book derives from a short film by Ray and Charles Eames talking about architecture is something that beyond scale constraint called Powers of Ten. Architecture is not only a term to describe a physical building, in my opinion, it is also a word representing solutions to questions. In the book, Andres talks about architecture being not only a spatial word but a form connecting human, human institutions and their hegemonies in every scale. We have to look a simple thing in a wider aspect since everything is connected in somehow. Take my favorite connection in the book as an example, the connection between Shirley card produced by Kodak, an American company and the apartheid policy in South Africa seemed so irrelevant but actually tied together in some aspects. Then we may discuss that whether was the existence of Shirley card promoted the apartheid or the white supremacy ideas at that time created this skin color tone standard card. At the present time, we always try to find the opportunities to reserve diversity of every racial, religious, political, economical groups and to seek the equality between them. By looking things in every scale like the short film of Ray and Charles's showing us, we can find the balance between them carefully.

Manual of Biogenic House Section

by
David J. Lewis, Marc
Tsurumaki, and Paul
Lewis

Manual of House Section is a book that I enjoyed a lot showing the vertical space relationship in architecture, elaborating the structure of the space and illustrating wall section details in different areas, which gave me a fundamental sense of architecture in college. Manual of biogenic house section brought the idea further to showing the way how a sustainable and biogenic architecture was built to alert people to the urgency of climate change.

Sustainability has become an unignorable element in every part of our life. I totally agree with the author that while designing and building an architecture we should replace building materials like concrete, steel with other earth-grown materials to reduce carbon emission and ease global warming. However, no problem can be solved individually without involving other problems. One of which is the huge human population. Due to the large population, buildings in the city have to grow vertically, but the earth-grown materials have their limits to build high. Though there are some successful projects like Mjostarnet in Norway, 85 meters tall, Haut in Netherlands, 21 stories high, Brock Commons Tallwood House in Canada and so on, most of them are in temperate zones. Maintenance in the humid, hot tropical area may be a problem.

Building architecture in a more sustainable way is a topic that we cannot oversee in the future, but we may have to change our living habits dramatically to get used to the topic.

Medium Design by Keller Easterling

The book pointed out the rise of automated vehicles (AVs) and the impacts that they might bring us in urban design, landscape, real estate and our habits. The author analyzed the pros and cons of replacing private cars nowadays with AVs thoroughly. What intrigues me the most is using smart, automated devices, like AVs, to promote the libertarian decentralization of power, however, they often concentrate power and control in yet another closed loop. It relates to a news that happened last weekend that the CEO of United Airlines hopped on his own jet and left New York, while so many others were stranded due to mass cancelation of flights.

The invention and widespread use of airplanes brought traveling abroad affordable and democratized. People used to spend a huge amount of fortune and time to sail to other nations. While traveling with planes seems to promote equality that they don't treat people on board much differently except the cabin classes on one hand, on the other hand, the power of canceling planes is seized in one company's hand.

Reading the paragraph talking about power decentralization struck me with a question how we can pursue true equality for human beings with the advanced technology. Is removing all the characteristic features from humans, like using AVs comprehensively, a way to pursue equality? Or is it another beginning for us to hand our right of choice to another power?

Race Reason and the Architecture of Jefferson's Virginia Statehouse by Mobel O. Wilson

The essay was talking about the decolonization progress in historical sites, tragic locations or in our everyday life. Colonizing, in my opinion, can be interpreted as domination between powers, which are not necessarily as big as nations, they can also be the powers between people. As long as there's a power difference, there's colonization, which means we may never equalize completely every person, camp, nation no matter how hard we try. However, it doesn't mean that we should do nothing, but instead, it is the way that's more important.

Take the Morningside Park construction project mentioned in the book as an example. Students in Columbia University went on a protest against the construction due to the sacrifice of the losing natural light in the original park for the community. However, if we think the other way around, the major problem with the present Morningside Park is the safety issue. If Columbia University did build their gym on top of the existing park, which meant they may take part in the security. Under this situation, if I were the resident in the neighborhood wanting a secure place for my kids to play around, the topic of reconstructing the park would become a choice between colonization from Columbia or colonization from the gangsters.

Though the idea mentioned above may be like a belated thought, the courage of standing for ourselves or others against the power is still a crucial thing we have to learn.

Relationship between Men and Things by Jaap Bakema

What is the core value of humans, of life, of urban spaces, of a nation? I agree with Jaap Bakema mentioned in the paragraph that society should find its own core. To him, the core is the relationship between people; as to me, I think it is equality and open mind to the diverse culture.

As to the relationship between people, it can also refer to the respect of people with different age, belief, origin or hobby. In my home country, it seems that we're all from the same origin and speaking the same language, Mandarin. However, we neglect a large group of people, the aboriginals from thirteen different tribes, for a long time until recent days. Like Jefferson saw the African Americans, the government used to think the aboriginal culture was inferior to the Mandarin culture, and tried to wipe it out completely. Fortunately, now people have become more and more confident of their mother culture. Songs, movies, architecture using aboriginal language, intelligence can be seen in more and more places. The government even promotes them intensively in the media to compete with mainland Chinese culture, but that's another political issue.

With the rapid connection with the world, I think our core value is not stuck to a singular culture but to embrace diverse possibilities.

Slow Violence, Neoliberalism, and the Environmental Picaresque by Rob Nixon

In the book, the authors are talking about the impact of catastrophes from the past, like Chernobyl or Bhopal, that often transcend over scale, time, and physical boundaries. I cannot agree more with this perspective. Relating to the studio, the compression of architecture, I have this semester, advanced digital information technologies have made influences penetrate ubiquitously into everyone's mind. Not to mention Covid, the most helpful promoter of this trend, deprived people's right to physical interactions. People couldn't help but depend on the digital system completely. It started to form from a tool to a powerful, influential living sphere yet without many clear regulations.

Compared to catastrophes in Chernobyl, Bhopal, or Fukushima, it's hard to tell the starting point and the trace of the violence. Kia Boyz is one of the incidents. Car theft was never an incident worth promoting. However, Tiktok, a Chinese-origin company, accidentally fuels a trend of car thefts targeting Korean cars in the United States in recent years. The trend was triggered by a series of decisions like the Korean car companies selling strategy, poverty issues in some parts of the States, and also the final push of the digital waves. However, with those information, we're still difficult to find out what is the real cause and the way to prevent it.

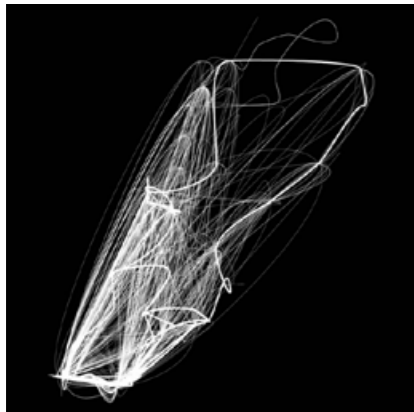
TRANSSCALARITIES. 2023 SUMMER
Director: Andres Jaque
Coordinator: Bart-Jan Polman



Rachaporn Choochuey

- Since the prototypes are made of materials that are so light and convertible, it seems that they can easily fit into any kind of building type. Why did you choose the parking lot to contain the prototypes, not other kinds of buildings? And what if they're in another kind of building type, what would they adopt to it?
- How to maintain a better environment including air, light, privacy when more and more people move into the parking lot, and also where should the architect stop to reduce interference of this organic society?

Rachaporn didn't mention the reason that she picked the parking lot instead of others. However, this living prototype was designed based on the size of one parking space for cars, which is compact but relatively affordable to the young. Later on, the unit is moved and redesigned to fit into the exhibition in offices or semi-outdoor area. During the lecture, Rachaporn didn't point out clearly the boundary between design made by architects, regulations and one made by the resident. She said that the boundary may vary by cases to cases. It's not a fixed line that everyone should obey, it's a conclusion based on discussion and coordination. Even after more and more people move in, the maintenance of the environment, like air, light or noise, should be debated and conducted by everyone living in the group.



Lawrence Abu Hamdan

- Instead of taking sides on this conflict, which is what I thought he would before the lecture, Lawrence emphasized that the art work is only a neutral language in response to the fact that Israeli aircrafts are in Lebanon air space. The art work is him simply unveiling the truth to show the interesting point that violence is not always direct and lethal, it is sometimes ambient and ignorable.
- Lawrence attempts to make a neutral language responding the fact that happens in Lebanon. However, I think that nothing and no one can be truly neutral. Everyone is biased in some ways. Even the reports are writhing news, which should be objective rather than subjective to public, would add their opinions into news. What makes things intriguing is to make things subjective that gives people the chance to debate with you. So, what kind of characters you think you are during the process of making audio visualization artworks?



Junya Ishigami

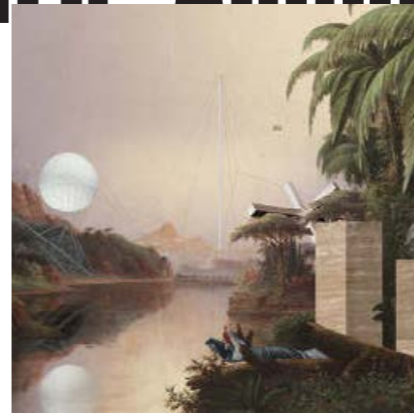
- The contradiction between uncertainty and eternity. The client requires a space capable of last over time, however, the building process of this project is using earth and soil, which is an uncertain element to control its precision, as the mold. And also, here are some ad hoc decisions, for example, they decided not to clean the dirt from the structure, which may be a risk to the strength of this architecture. What do you think about the contradiction between uncertainty and eternity?
- Observation: Contrary to the architecture, which should be precise and controllable, nature is an uncontrollable element. However, with the advanced technology, the team can control the size, the depth, the quantities of the excavation and the concrete pouring in to a very precise scale. And how to control the uncontrollable is what is appealing to both architects and the public.
- One of the concepts that you are trying to express in the project is to make this building invisible. However, with its unique shape, the building is somehow extremely visible to the public within the quiet community. How do residents living in the area think about the impact of this unique shape building on the neighborhood?



Shannon Mattern

- AI takes the approach of layers to collect data, interpret data and showcase the data, hence, Is this a method of arboreal thinking or is it yet another data driven, techno solutionist approach to knowledge?
- I agree with the author about the idea that trees and nature are more complex and smarter than we thought they are. It's naive and hubristic for humans to use 3D scanning and AI technology to understand the ecosystem and further calculate the results of improving our environment. But, it's at least a starting point for us to understand the ignored part of the world. In what way do you think it's more appropriate for us to deeply understand nature itself?

I feel like that Shannon address trees are not as only the physical objects but an overall idea of hybridity, data collection, communication network. Arboreal intelligence may has that sense long time ago, however, people nowadays tend to simplify things into data points to analyze easily. Shannon revealed the problem we have yet to discourage any methods we have now to understand the nature more. As to the design realm, design should not be only consist of one part of professions' ideas, but composed of opinions from different users and professionals from every area like how trees coping with problems hybridly.



WAI Architecture Think Tank

- Through history, nature has been used as a tool to colonize communities and nations, through the mediums of plantations, farms and more, in a post colonial world, is nature still used as a tool of colonization in today's world?
- The ideology of colonization is to oppose harmonious balance between nature and human, and the definition of nature and human often depends on what scale we see a certain phenomenon. So, on what scale do you think that we should see the conflicts between human and nature, and what is the balance between us?

The speech didn't reach deep into the conflict between nature and human, however, it indeed talked about colonization between powers and nations. To my understanding from the lecture, colonizations or injustice in some way mentioned by them refer to the intentional neglect by the public and manipulation by the power people. Like people often see mass carbon emission from the developing countries, while the biggest carbon creator is the US military, which often also create conflicts within other regions. Resources cannot and will not be dispensed equally. The talk about colonization will go on for a long time.



Troy Vettese and Drew Pendergrass

- Coping with the environmental problem can be two sides.
- Biodiversity, reduction of meat consumption,
- Biodiversity, man made one, relate to the huge land use on earth
- Symptom of democracy is we never have the control of doing something.
- Information to inform a decision. We don't necessarily need that much information to make decision.
- Capitalism does not care about the people. It's an idea that make everything as commodity, no matter who's doing anything, as long as the things are done. However, what a socialism is like is everyone has their own character in the society.
- Capitalism make the world so dependent on each other. However, that also makes us don't know where and how our sources are made, delivered and the consequences come after them. To make the circumstances solved, we have to reveal those hidden phase to the public.
- To the extinction if necessary, someone has to be the left wing, the progressive one. Because no matter what we do, something will definitely change, which will definitely affect some amount of the society. If we stay conservative towards the crisis, everything will become a disaster.
- If being a vegan is another green activity towards the climate crisis, then country like India, which have 50% vegan, provide more effort than else countries.



Chip Lord

- In a world of fast changing trends and cultural volatility, how can we start defining 'iconic art'? For the Cadillac ranch it was the Bruce Springsteen song that made it famous. But we are facing a cultural boom today. Do you think Iconic is 'time specific' or is it 'timeless'?
- How do you think media can drive and influence what the world calls iconic? Do you think the media is a fast and easy way. There are so many ways to be seen and heard today as things go 'viral'. How do you think it's going to affect what we see as cultural icons?
- They work so consciously work within the media. When art is produced and media becomes an agent in making the piece iconic? To what point are they actively involved in making it iconic? How conscious are the author to make the artwork iconic? These videos cant compete with them appearing in the movies or springsteen song? Who is really watching these videos? What really was the purpose of working with media? Is the piece more important or mediatic coverage important? Did they want cultural appearances or does the culture define it? Layering of icons? Cadillac is an icon, bruce is an icon, the ranch is an icon?



Mio Tsuneyama & Fuminori Nousaku

- According to the syllabus. Broader historical meaning. Broader view to the topic.
- Broader context of the formulation of the projects. Tradition of the questions and answers, looking from the specific trajectory, but the speaker answer it with their understanding. Participation, the background of the project, the challenge to the future, not open ended problem
- Writing the paragraph from a broader view. What skills, technologies.... Do the authors use?
- Develop my own critique and opinions
- Cross referencing two or more lecturers



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