



# Gaole Stella Dai

2021 - 2022 | M. S. Advanced Architectural Design | Graduation Portfolio  
Columbia University | Graduate School of Architecture, Planning and Preservation

Misunderstanding, conflict and discrimination between different races, genders, cultures, religions and isms are major issues in today's society. During her semester at GSAPP, Stella began to consider how multicultural values can be implicitly incorporated into architectural design practice and combined with architectural energy to respond to rapid globalization and environmental crises.

Multicultural architecture" is not just a form of architecture that combines various cultural elements, but a medium in which spatial arrangements urge cross-cultural exchange and social interaction. In the year of GSAPP, Stella uses feminism and queerness as entry points to understand in-depth the current controversial isms and minority groups in mainstream society and turns them into a "soft" force in architecture. By rethinking the identity of women in homes, the architectural space will be changed accordingly, and in this way, more reflections and innovation processes will be propelled. At the same time, it fights against the patriarchal culture that has existed for centuries and creates an impactful propaganda in the architecture itself, or on the façade, from a formalistic perspective. In so doing, it raises public awareness of minority groups and reduces capitalist exploitation of these communities. Last but not least, the consideration of the global environment, as a "hard" objective, needs to be measured with finer precision. Carbon, as the culprit of major environmental problems, is seen as Stella's emphasis on this issue, and she tries to give an innovative solution.

	<u>Rethinking Feminism in Homes</u>	01
	Artificial Womb Seeding Program	.1
04	<i>Feminist Technoscience, Societal System, Public &amp; Private Babies</i>	
	Kitchenless Stories	.2
16	<i>Essay: Women's Role in South Korean Homes</i>	
	<u>Queerness and Capitalism</u>	02
	The Tower of Constellations	.1
24	<i>LGBTQIA+ Communities, Kinship, Anti-Heteropatriarchy</i>	
	<u>CarbonArt</u>	03
	Footprint: Carbon and Design	.1
44	<i>Climate Change, Carbon Offset, Innovative Facade Strategy</i>	
	FutureCurrent	.2
46	<i>Real-Commission Project, Climate Change, Eco-Hostel</i>	

# 01.1

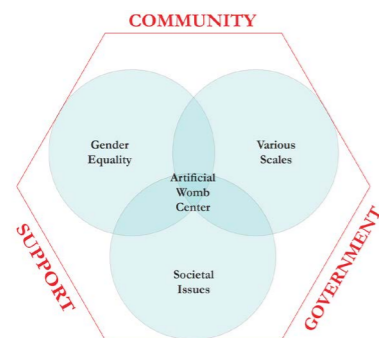
## Artificial Womb Seeding Program

2021 Summer

Teamwork w/. Lewei Wang

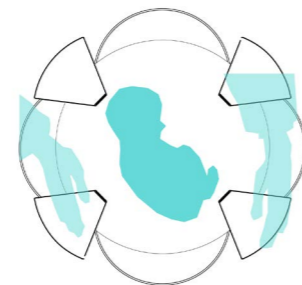
Associated Professor: Ani Liu

Site: Shanghai, China



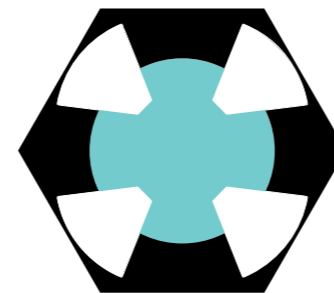
### Issues in Motherhood

Referencing to Chinese Current societal issue: China is currently experiencing a declining population growth rate and has recently published a new policy for the third child. This project draws attention to gender equality and questions how the societal structure will be if we diminish sex differences of reproductive ability. In other words, the project liberates women's bodies and switches the individual motherhood duty into a collective one.



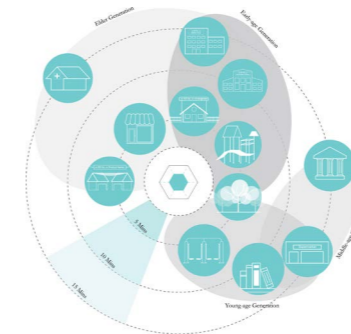
### Artificial Womb Technology

Through interviews, the 'connection' between the adults and the infant is the unique part of the motherhood process and was selected to be the main point of the design. Based on the potential clients - the government, the IVF client, and the new generation - the artificial reproduction system will help create both public and private babies, inviting different visiting groups for educational purposes.



### Shanghai First Community Pilot Site

The speculative project of <Shanghai's first community pilot site for the artificial womb seeding program> is set up with the hope of governmental support and interference. The pilot site is located next to the best IVF center in Shanghai, and hopefully, in 2040, the artificial womb seeding program could be launched throughout the country.



### 15-min-walkable Community

Besides the artificial womb center, we also have a 15-minute walkable community that includes schools serving for the babies from the Center, the elder people who are in Chinese tradition the person who taken care of the younger generation will have most of their life cycle in here as well. In this way the community will act like a family that holds the needs for babies, younger age generations, mid-age generations and older generations.

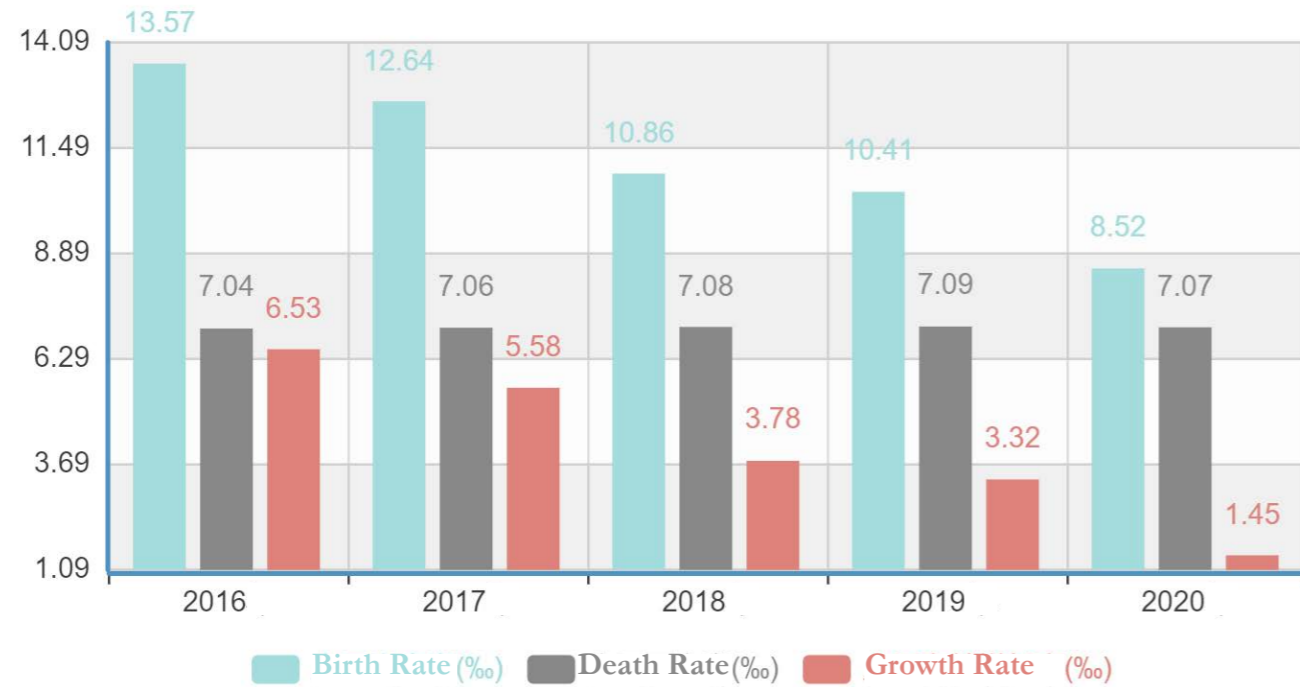


### Community As 'Family'

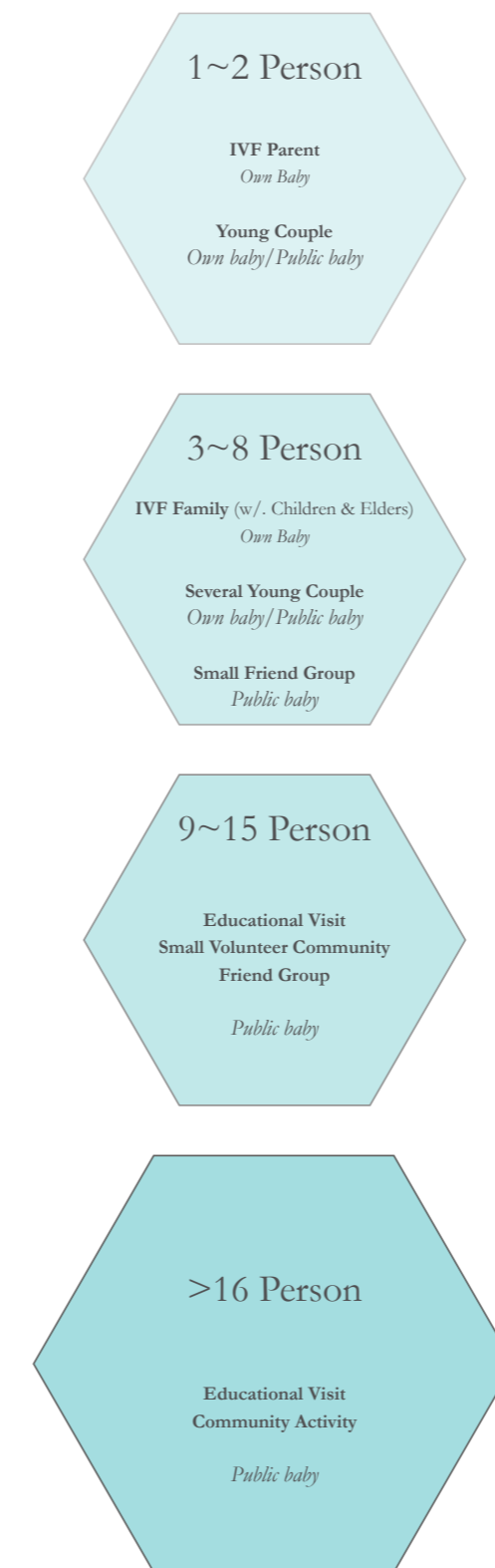
The artificial reproduction center for such scale diversity establishes a spectrum of private and public family relationships that helps transition from traditional family culture to communal families. It facilitates artificial reproduction as a tool for individual reproduction liberation, as well as a new social structure.

Societal Issues & Speculative Solutions

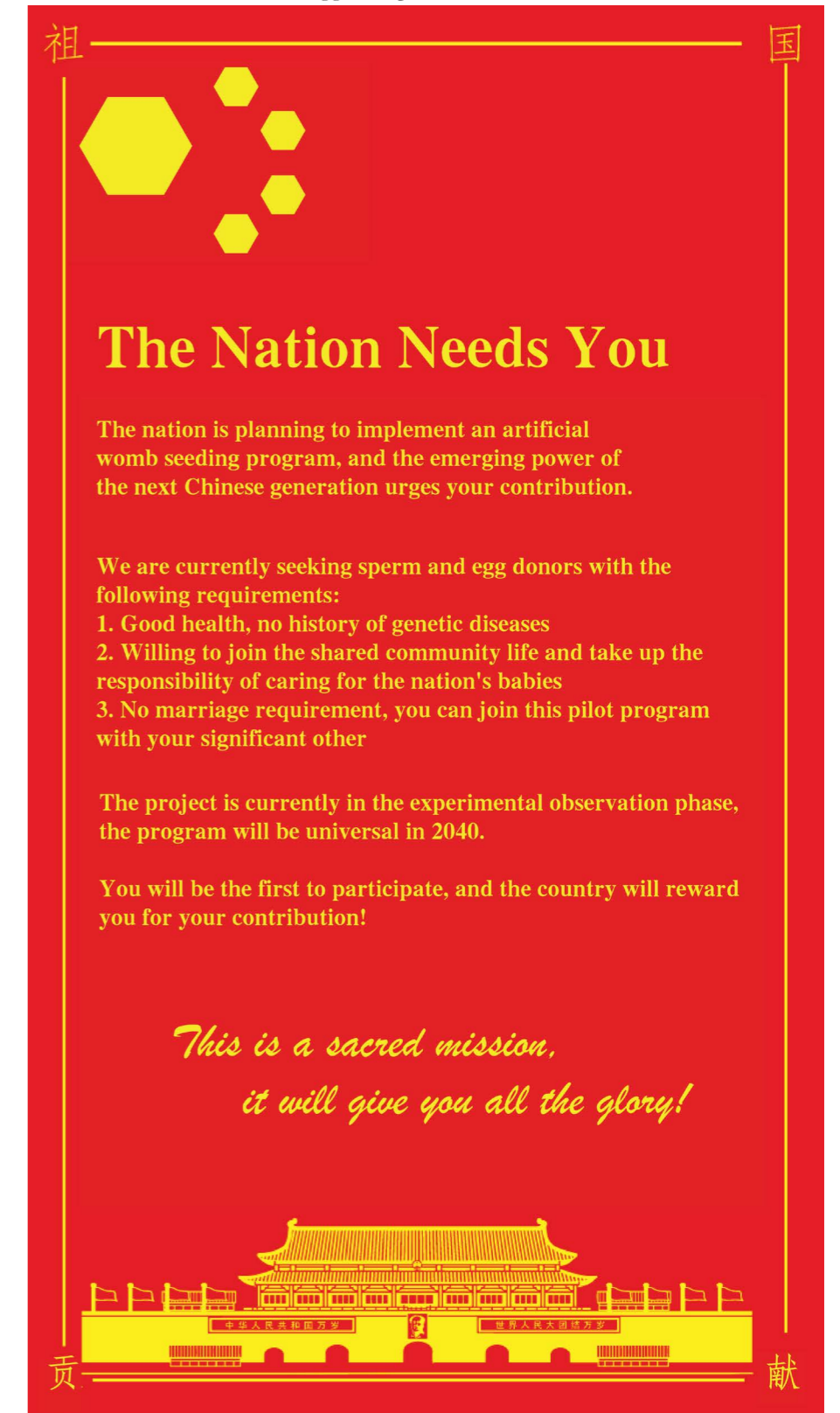
The Declining Population Growth Rate (Recommended Natural Population Growth Rate = 2.1)



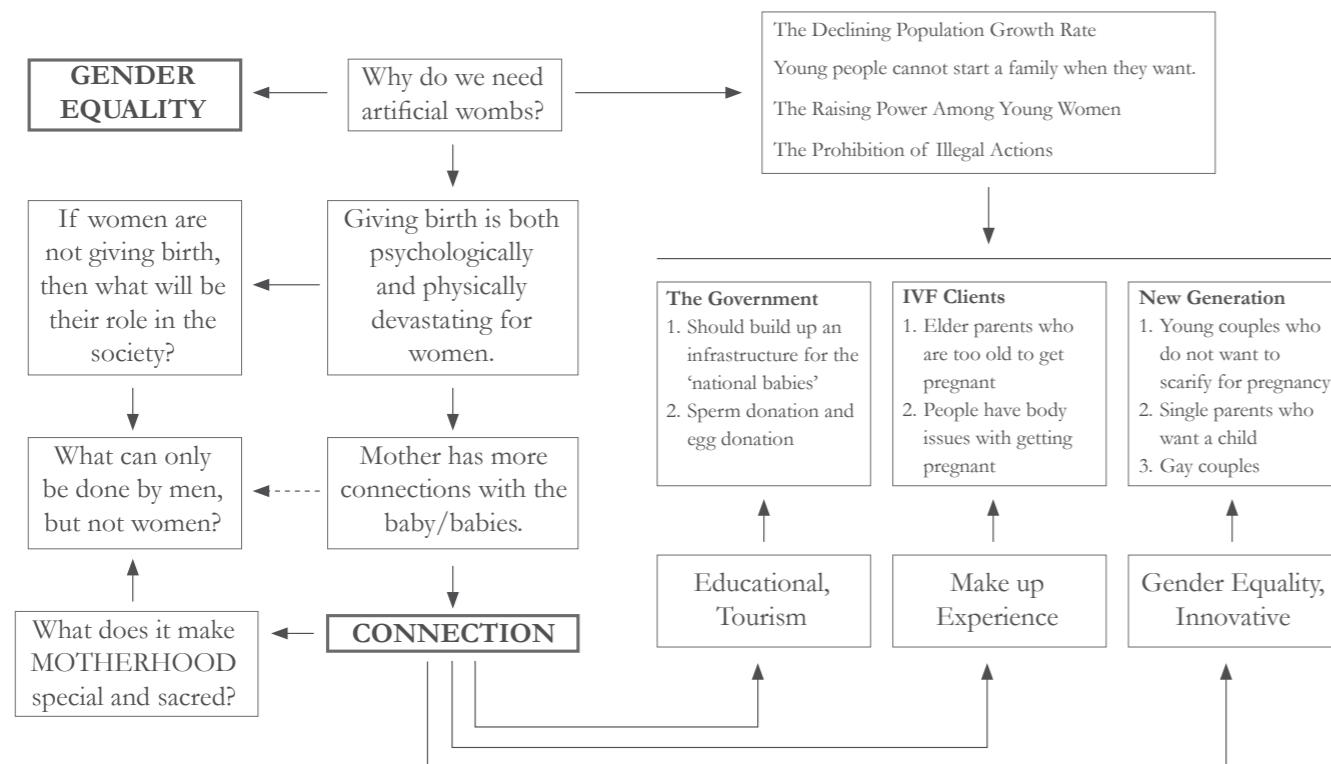
Reproduction Babies in Various Scales



Governmental Poster calls for Egg and Sperm Donors

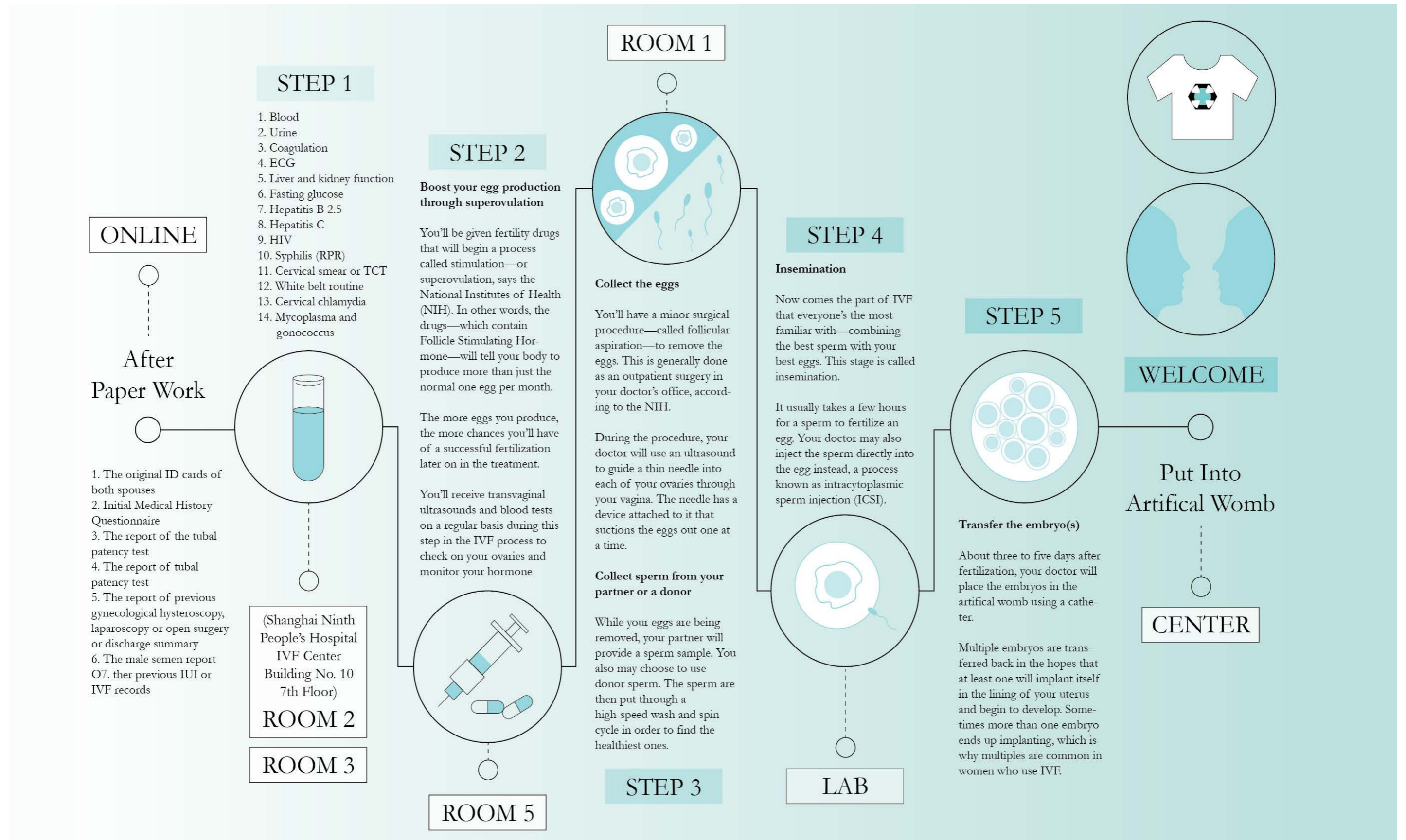


Ethical Issues



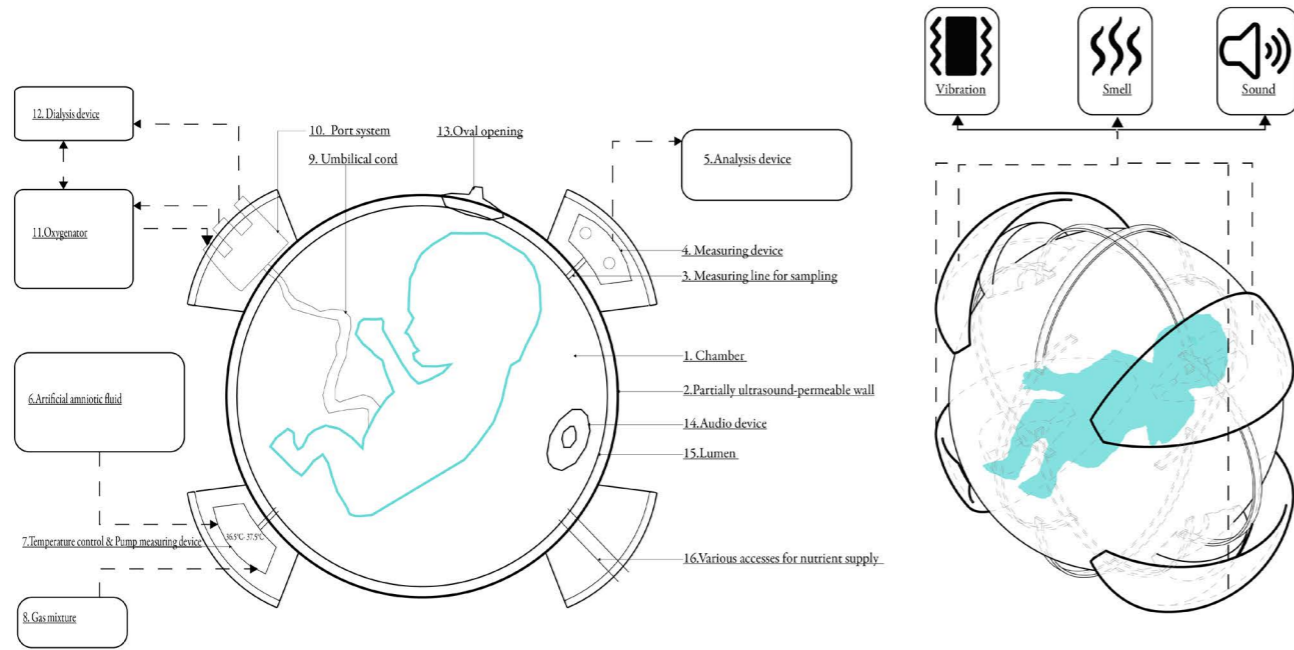
# Artificial Womb Seeding Program

IVF Process

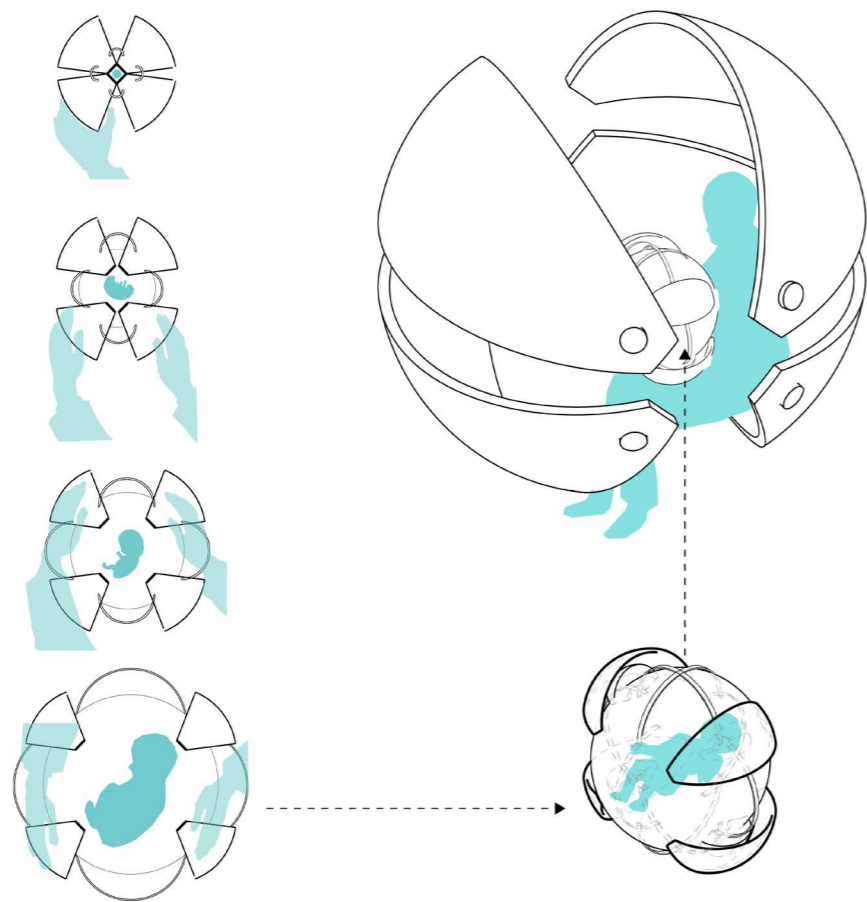


# Artificial Reproduction In Growing Scales

## Artificial Womb Technology

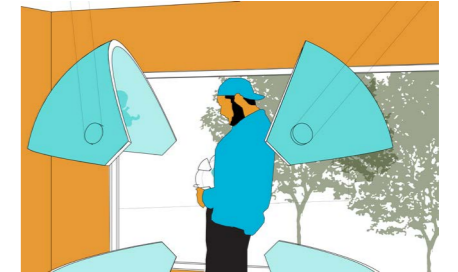
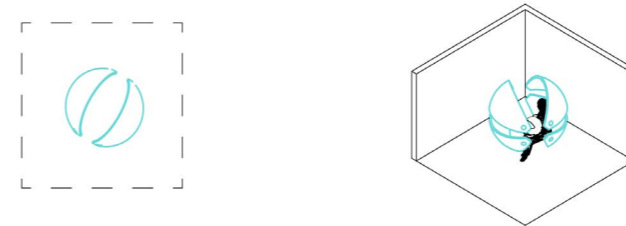


## Parent & Baby Interaction & Furniture

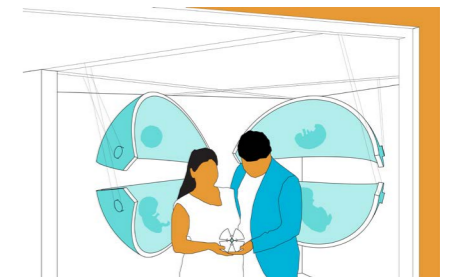
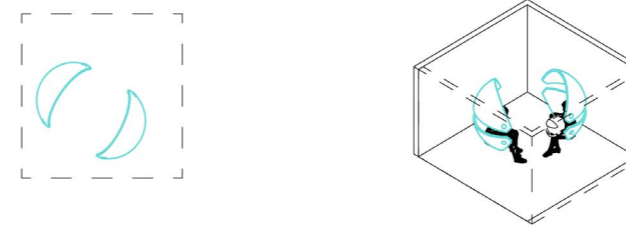


## Interaction Space for Various Groups

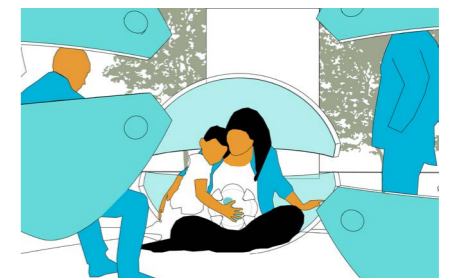
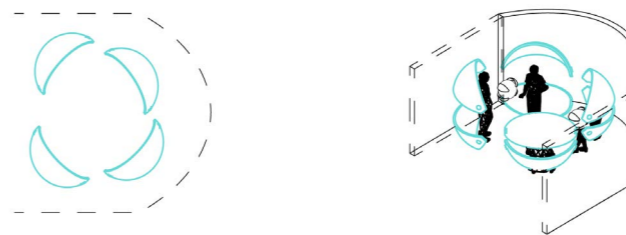
### Self-Interaction



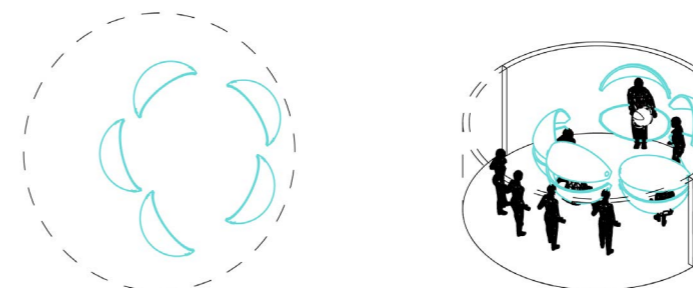
### Group Interaction for Couples



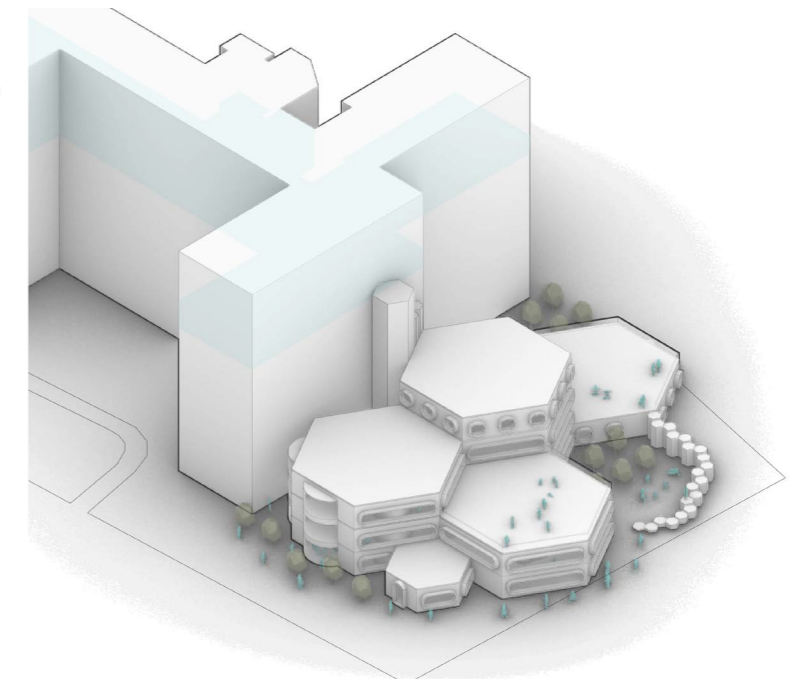
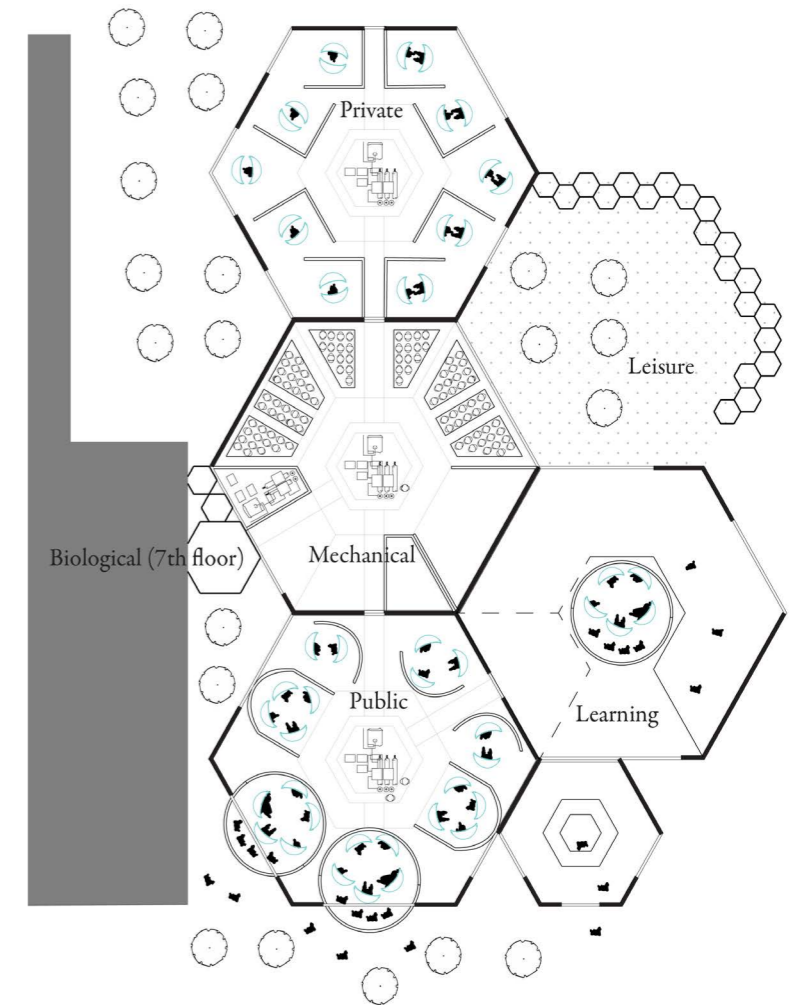
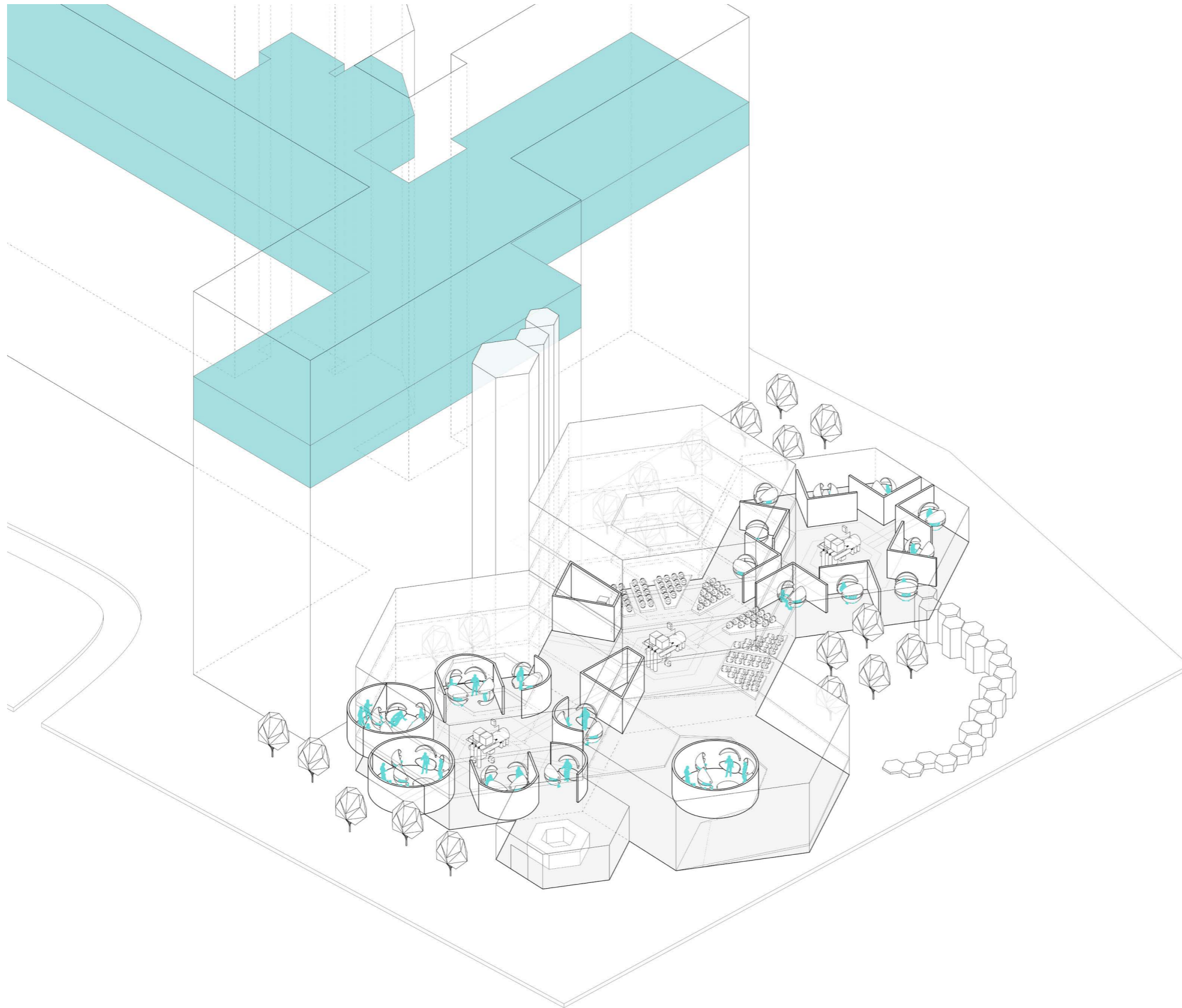
### Group Interaction for Families



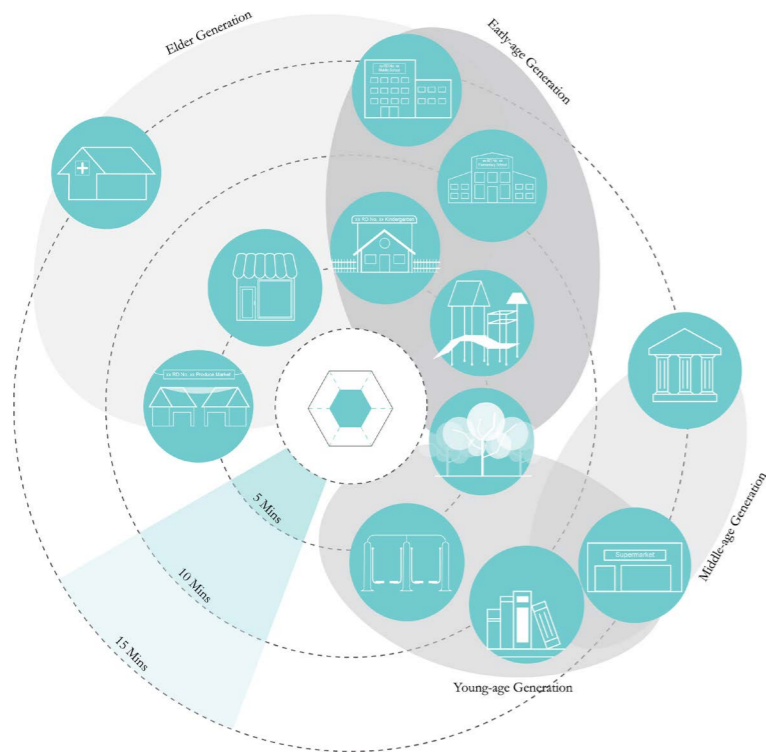
### Educational Interaction for the Public



Feminist Technoscience  
**Artificial Reproduction Center**



15-min-walkable Community



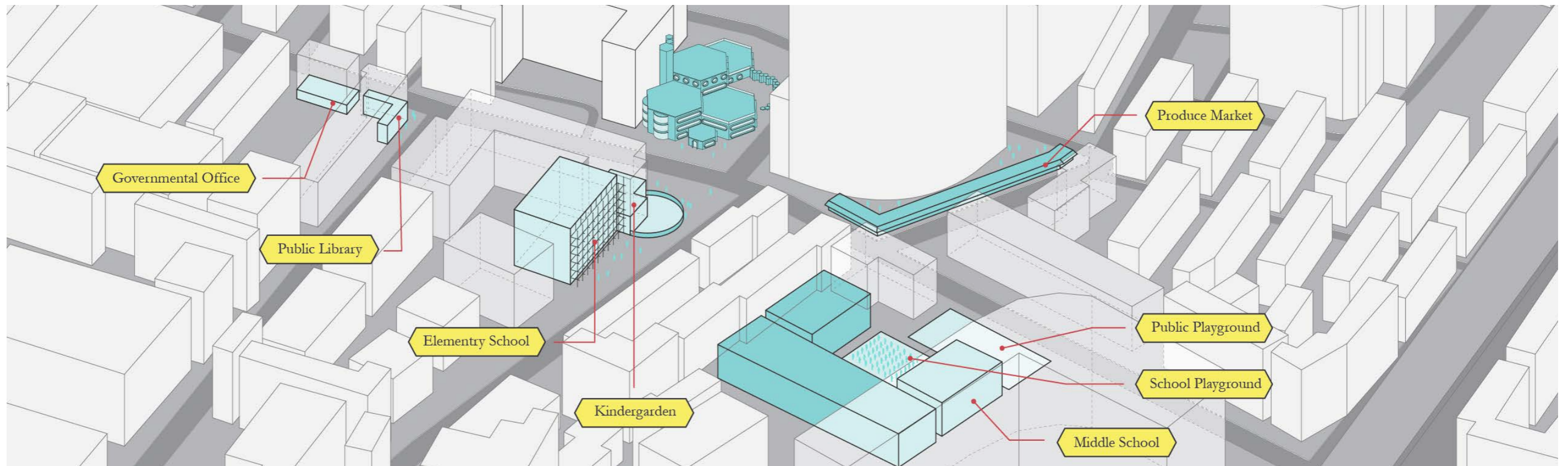
Application on Site



Community Propaganda



Community Axon





## Women's Role in South Korean Homes:

### The impact of Western dining manners in transforming Korean Homes

#### Feminism and Korean Feminism

The gender binary of male and female can be traced back to the tale of Adam and Eve. This Biblical story interprets Adam to be identified as male after Eve was introduced into the world, and a distinction needed to be made between the two. The idea that man was created first, and its primacy throughout different cultures and languages explains the ideology of patriarchy that exists in many variations. Within each patriarchal society is feminism, which is typically supported by a larger number of women than men “who reject the notion that the masculine is superior to the feminine.”

Feminism describes an attitude, and its meaning varies between different people, time periods, cultures, and geographies. However, the Oxford English Dictionary definition defines feminism in a very straightforward way:

*“Feminism is the advocacy of equality of the sexes and the establishment of the political, social, and economic rights of the female sex.”*

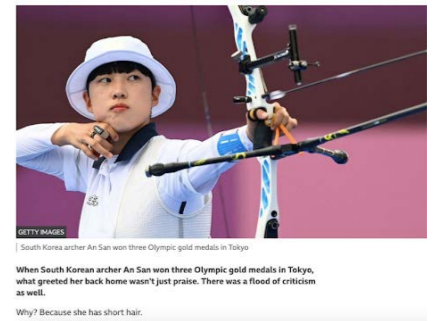
The history of feminism in the western world is marked by four waves of movements. The first wave corresponds to the battle for women's suffrage achieved by the Nineteenth Amendment in 1920, and the urge for women's education rights, better working conditions, and the abolition of double standards. The second wave took place between the 1960s and 1970s, and advocated for greater equality in education, the workplace, and home. Following this was the third, which paid more attention to identity politics to acknowledge the importance of race, class, religion, and other factors that are critical in analyzing the differences between women. In 2012, the rise of the fourth feminist movement focused on the empowerment of women in terms of internet technology, gender norms, and marginalization of women in society. Although feminist ideas in South Korea have created a more recent stir, it is believed that the women's rights movement in South Korea retains the main idea of first wave and second wave feminism in the western world, particularly the ones in the United States. The timeframe of the two western movements lasted almost a century, whereas in South Korea, rights started to get attention around World War II. What's more, there are also many parallels to third wave feminism because of the intersectionality between gender and class. The extremity of South Korean feminism presents an interesting contrast to Western culture, as its impact within Korean society greatly affected the architecture of Korean traditional homes, as well as gender roles within the family.

#### Women's Role in South Korean

With a history of royal monarchy, there were highly strict hierarchical and patriarchal divisions within South Korean society, as well as traditional South Korean families, which directed years of unbalanced and unequal social treatments for men and women. The origin of this mindset points to Confucianism, which is deeply rooted in the minds of South Korean people. Confucianism was, and still is, the base of South Korean education, and children are taught in their young age that ‘women should obey men.’ It emphasizes the wife's obedience to her husband, and the importance of interpersonal relationships over individual freedom. Gender discrimination is camouflaged under the idea of of ‘unity’ that Confucianism created, where both men and women are unconsciously acknowledging such discrimination and subordination. Looking back on the history of Confucianism, these traditional customs came from Japan during the colonial era, and prior to that, originated in ancient China. Due to the similar cultural norms and economic development statuses among Korea and Japan, both cultures were highly influenced by the colonialism of western developed countries, for example, the idea of “sweet homes.”

With the influence from western cultures, the rise of women's rights groups today primarily occurred in the mid-1980s, and were derived from the Minjung Undong (democratic movement). The movement started as a response to Japanese colonialism in South Korea and lasted from 1961 to 1992. It revealed the exploitation of women's labor in the working industry during South Korea's “Economic Miracle,” when South Korea transformed from a developing country to a developed country. During the governmental reformation and political turmoil, women began to have access to higher education, as well as gain more rights in the workplace. However, by the end of 1980s, even though women made up over half of the paid labor force, the majority of female labor was in the service industry, which was already considered the woman's job.

Today's feminist movement in South Korea is famous for its extremity. One of the latest discussions was about the archer An San, who was the winner of two gold medals at the Tokyo Olympics. The internet abuse started with her ‘Tommy Boy’ hairstyle, and increased anti-feminist sentiment from men in South Korea. The public even asked Olympic Committee to withdraw An San's golden medals due to her ‘uncertain’ but ‘suspicious’ feminist identity. Another debate in South Korea was sparked by a simple hand gesture: holding an item by thumb and index finger. Among South Korean young men, this hand movement represents an insult to the size of men's reproductive organs, which translates to feminist scorn on masculine power. The woman who created the advertisement experienced extreme abuse online that affected her normal day and family life.



Sourced from BBC News



Sourced from New York Times



Logo of Megalia

The radical reputation of South Korean feminism is heavily shadowed by an online community called “Megalia,” launched in 2015. This movement was initiated by a false rumor regarding two South Korean women who refused to quarantine and decided to go shopping after contracting MERS. The term “Kimchi Woman” was invented by misogynists to mock women who only spent their time shopping, which aggravated the radical feminists. The reactionary term “Kimchi Man” and the website Megalia were created as a response to both insult and mock South Korean men. These examples show the social relationships between men and feminists to explain why South Korean men are highly sensitive about the term ‘feminism.’

Confucianism continues to impact the traditional roles within the Korean home. The idea of ‘Obey your father when you are young; obey your husband when you are married; and obey your son when you are old’, is one of the driving principles of traditional Korean families, showing the strict familial structure that still remains common in today’s South Korean society. The historical Korean society could be divided into two parts - ‘Outside’ and ‘Inside’. Like most western societies, the outside space was only for men, who worked and earned money to support their family; and the inside space was the woman’s responsibility, to clean, cook, and raise the family’s next generation. The segregated spaces were very strict, making men seem ‘disabled’ at home, whereas women were like their ‘servant’ to take care of them entirely. In addition to housework and cooking, women also played the role of ‘guardian’, requiring them to watch over men’s property because they spent their entire days at home. If there was a thief or burglary, the women at home would take full responsibility, as if they were not doing a good job keeping the ‘fruit’ of their men’s hard work. In this way, women became a ‘prisoner’ of the home, and the home became a space that limited their physical body and their individual freedom. Another key factor of Korean family structure is a shared tradition among all Asian families. In Asia, family structure and size are usually bigger, compared to those in

western cultures. It also comes with a tighter relationship, so it is common to help out other family members; nevertheless, housework duties are still resolved only by female family members.



Men in Sarangbang



Women in Anbang

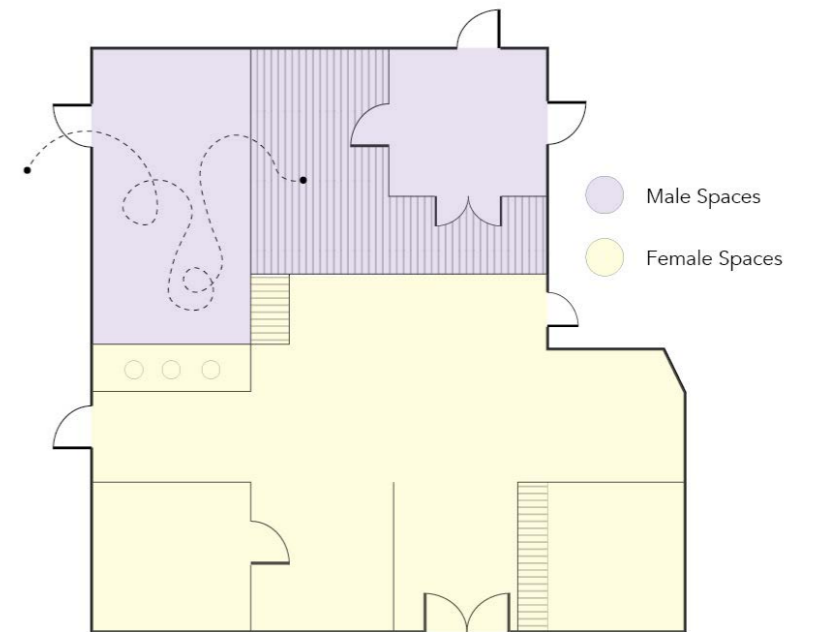
### Architectural Impacts of Family Roles in Traditional Korean Homes

The traditional roles of men and women within Korean society heavily impacted the spatial qualities of a traditional Korean home. The separation of responsibilities was reflected in the architecture as the home consisted of a duality between male and female spaces. A couple notable terms are:

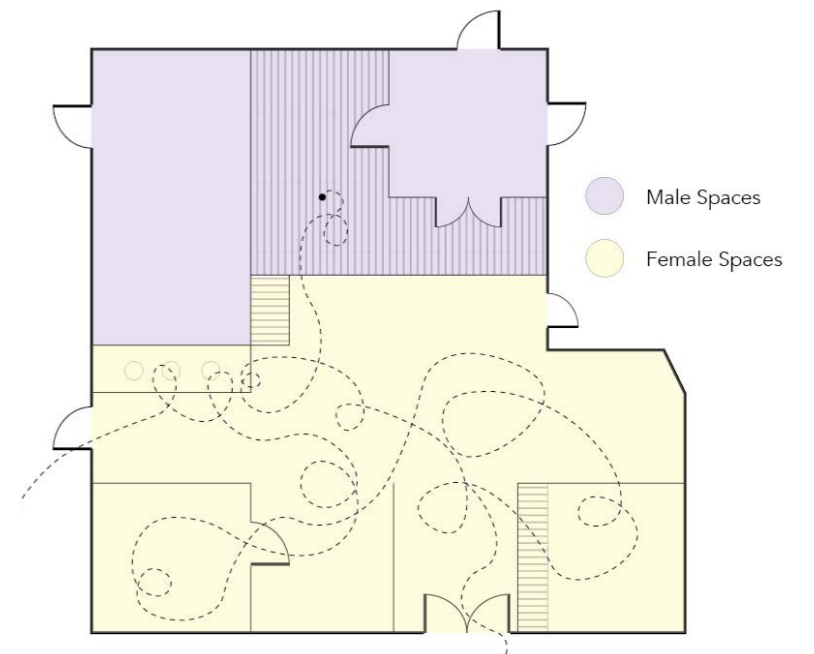
- Anchae*: the main building for female occupants
- Anbang*: the room for female occupants
- Sarangchae*: the main building for male occupants
- Sarangbang*: the room for male occupants

In addition to spaces being separated by gender, the activities also contributed to the inequality within the home. In Korean homes, spaces were utilized for multiple functions, such as sleeping, eating, and leisure and social activities. Service spaces, such as the kitchen, were given to the women, along with the responsibility of raising her children and completing the housework. Children would live with their mother in the anchae during childhood, and would become active agents of the patriarchal system after the age of seven, when they would be separated by gender within the home. Further spatial decisions are present in the architecture of the home to denote the gender hierarchy, specifically the kitchen. The kitchen, also known as the *arae*, meaning below, was placed on a lower elevation within the home. This space was located in a separate space from the main living area and its floor was represented with a more earthen material to convey the idea of a dirtier space.

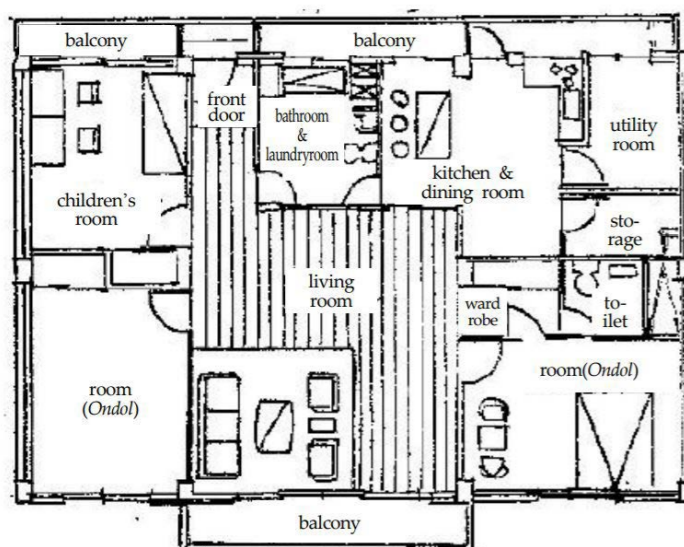
Furthermore, the separation of spaces to indicate different responsibilities within the home is one example of how the architecture of Korean homes reflected traditional roles within the family. These gendered spaces also extend beyond the family and serve guests as well. For example, guests were only welcomed into the male spaces, in contrast to female spaces which were closed off. The allocation of female and male spaces within the homes continue to contribute to the hierarchy of gendered spaces. The anchae was located far from the entrance, and the anbang was typically placed in secluded areas where daylight did not enter. The sarangbang did not have any windows facing women’s spaces, leaving them in isolation.



(Typical layout of Traditional Korean Home highlighting male and female spaces)  
Men’s daily circulation route



Women’s daily circulation route  
The comparison shows how the space allocated to women requires them to take on more responsibilities within the home and serve the man of the house.



**Yeouido Apartment (40 pyeong, 132.2m<sup>2</sup>)**

*This image shows an example of a new housing plan for the Korean home. This plan shows the elimination of segregated gender spaces, an interior kitchen with a dining room, the addition of a living room, and a shared master bedroom. Sourced from Asian Journal of Women's Studies: Modern Changes in Korean Residential Culture and Women's Everyday Life: A Microhistorical Perspective*

The emergence of modernity within Korea was a result of the Japanese colonial period, which took place from 1910 to 1945. Previously, the architecture in South Korea was designed in parallel with the ideology of the Chosun dynasty to reflect the gender construction of Korean society. This new wave of modernity shows how Japanese rule helped pave the way for the influence of Western dining manners, which heavily impacted the transformation of the traditional Korean home. In the 1960s, the spatial qualities of the home became nuclear on a larger scale. During this time, Korean elites started planning a new type of housing as a result of their western education developed abroad after the Korean War. One of the major changes that started to take place in the architecture was the separation of spaces for social activities. In the analysis of the traditional Korean home, the spaces were multipurpose, lacking areas for engagement between men and women. During this time, women had to carry dining tables from the kitchen to the men's room for each meal. In the 1970s, dining tables were properly introduced into the home, and dining rooms were shifted closer to the kitchen to reduce the labor for the housewife. Dining gained a new role within the family, as dining spaces became a place for family interactions, further reducing the discrimination amongst family members. The dining table acts as a transitional object between the kitchen and dining room, which was typically allocated as a "female space." The dining room is starting to become a non-gendered space as other material objects begin to contribute to the shared areas. In addition to the dining table, the variation of plate sizes also impacts the attitude towards a more unified home. Larger plate sizes are brought into the eating space to encourage family members to engage in sharing their food. The introduction of the dining room presents many opportunities for material objects to contribute to a more unified family dynamic as well as new spatial changes. Other appliances and furniture that played a role in this shift include couches in living room spaces, which provided another opportunity for men and women to come together at home and further bridge the gap between their different responsibilities.

Another shift in the planning of the home is directly related to the transformation of gender roles. As men spent more time outside of the home, the sarangbang, male space, slowly became more insignificant and gradually disappeared. The idea of a master bedroom was adapted from Western culture, and began to take shape in the Korean home as the anbang transitioned from the female room to the bedroom for the couple. The shift to a more Western-influenced home began to unify spaces, therefore weakening the gender hierarchy within the home.

### Issues in Today's South Korean Homes

Given that in the past, women were responsible for housework and guarding men's properties and were not allowed public relationships with the outside world, women today have gained a lot of power in society in general. Putting women's participation in higher education and the workplace aside, their duties in the home have shifted significantly as well. In the past, the home was the only space that women had to work in, while modern women had to fulfill their career first and then the housework. On the contrary, the men's role stayed the same. This led to a negative influence on gender equality in the workplace. For example, because women still held major roles at home, they were not assigned challenging tasks at work, which typically consisted of simple labor or office jobs. The domestic economy still remains in the hands of men, and indicates a dead loop -- the more women devote themselves to home, the more they are yoked to it.

People may argue that modern technologies save humans from doing time-consuming housework, yet the invasion of home appliances implants the idea that "women have more time to do more" than before. This also explains why the customer segments for modern home appliances mainly target women, with companies hiring beautiful actresses to stand in front of nicely-decorated kitchens with a joyful face and mimic the idea that women will be both excited by these home products and feel accomplished for finishing home tasks. This example of advertising to appeal to women reflects the power dynamics of male and female in the South Korean home today. Women's full-time status at home gives them the power to be in charge of all the details within. For example, the color of bedsheets, the use of a couch, the pattern of curtains, and other design choices, whereas men are disengaged with decision-making. This shift in power within the home has relieved the home of segregated gender spaces, further empowering women. However, as women gain more control at home, some men have begun asking for rights to participate in the 'sweet home' creating process.

Prior to the implementation of technology, women were responsible for preventing crime from occurring within the home. In the age of modernism, new technologies such as surveillance systems and alarms have been implemented to improve home security and carry the responsibility of safety. However, the fact that the burden of home security still rests fully on women remains a major issue because it is not possible for one person to be liable for everything, which, in turn, presents new opportunities for the introduction of helpers.

Besides getting help from close family members, hiring maids seems like another option that has been widely accepted in the current South Korean society. According to the income class and economic power in homes, having housework helpers can be categorized into two different circumstances. One is for business women to free more time from home, and the other one is for housewives to achieve a better quality of life. Women who ask for help would need to contribute economically to this family expense, as it is originally their job. On the other hand, helpers are ordered to do most of the heavy-duty jobs in rich families, but the wife still has the responsibilities to take charge and host major events. Similar to western upper class families, educating the next generation becomes the most essential and competitive task for most housewives. In this way, women still play the 'traditional role' by raising the younger generation, even though this job is viewed as a responsibility of both parents in modern society. Additional help through the advancements in technology and physical help by maids presents new opportunities for women to lessen the workload and labor at home. However, each new convenience opens the door for new issues and responsibilities to arise at home, further trapping women there with an endless list of tasks to complete.

### The Shift of Extremity

The boundaries of men and women were and are so absolute that, though the separated space is merged, the extremity of men's and women's role remains. The idea of extremity in the relationship between men and women within the traditional Korean home creates an intense shift in power roles. Prior to the influence of western dining manners, there was a clear duality in spaces between the two genders, limiting interaction between them at home. The spatial transformation of the home created new opportunities for women, giving them the power to be the main decision makers. When there is no distinction between 'outside and inside', 'men's room and women's room', or 'public and private', there is a new emphasis on symbolic forms, such as hand gestures and social norms. This change in power dynamics at home reflects same ideas that are present in South Korean feminism that relay very extremist ideals.

The impact of western culture in South Korea heavily impacted the architecture of the traditional home, as the modernization of the home removed segregated gender spaces. This shift allowed furniture to have new meanings, bridging the gap between gender hierarchy and emphasizing a more unified family dynamic. This is especially true in the symbolism of the dining table, which created more opportunities of engagement between men and women in "female zones." The advancements in technology also helped transform the role of women within the home, by providing assistance in completing different tasks. However, these new innovations did not necessarily improve their lives because the introduction of such technologies gave rise to new issues and responsibilities that further confined women to the home. The modernization of society within South Korea helped women gain a new sense of freedom at home by allowing them greater responsibilities. This new freedom within the home also trapped them within, which makes celebrating this win difficult. To continue the idea that architecture has the power to influence the transformation of women's rights, new architectural moves should be made to avoid trapping women at home and, instead, usher them into the broader face of society.

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## 02.1

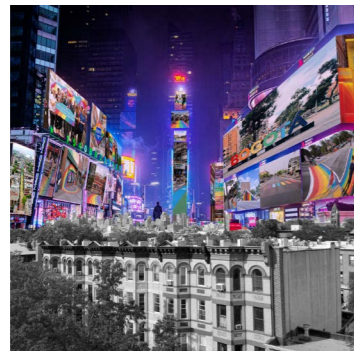
# The Tower of Constellations

2022 Spring

Teamwork w/. Camille Newton

Associated Professor: Anna Puigjaner

Site: New York City, United States



### Queerness in NYC

There has never truly been a solid, tight-knit queer neighborhood in New York, despite the myths of Greenwich Village and Park Slope. This is particularly true for trans/gender non-conforming, lesbian, and queer POC communities. Rather, there is a constellation of common spaces people gather, celebrate, and exist in. These spaces are often public, health-oriented, or commercial, as well as, unfortunately far from where many New Yorkers can afford to live.



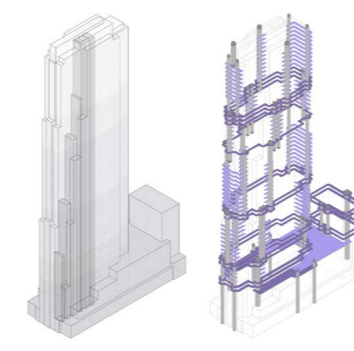
### 30 Rockefeller Plaza

The iconic Rockefeller Center is a space that symbolizes the hetero-patriarchal character of Midtown Manhattan and the dominance of capitalism over Manhattan's grid, hosting areas for public gathering, leisure, and protests while having its own complicated constellation of power and money. It was built to represent American Media and is the home to NBC. Today, the garden walkways and plazas provide public space for an "approved" public. It also hosts protests and rallies, approved or not.



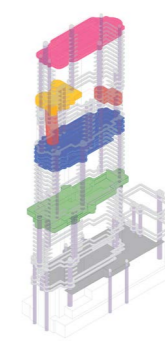
### Protest as Non-normative Acts

While protest can be violent and loud, we also see protest through quieter and non-normative acts, such as existence, representation, self-expression, health, inclusion, and artistic production. We've categorized six typologies of protest space to be used for current and future interventions to transform the building into a social machine that will create a new star in the LGBTQ+ constellation.



### Inefficiency

In order to boost chance interactions, we are introducing inefficiency to the existing efficient circulation strategy. The Tower envelops the building in a system of elevators and platforms, pulling the publicness of the plaza and street to meet the exclusive real estate inside. Wrap-around platforms correspond to the existing elevator breaks. Users are required to change elevators at these platforms to encourage interactions between workers and the public. Platforms can be open-air or enclosed in an operable textile facade.

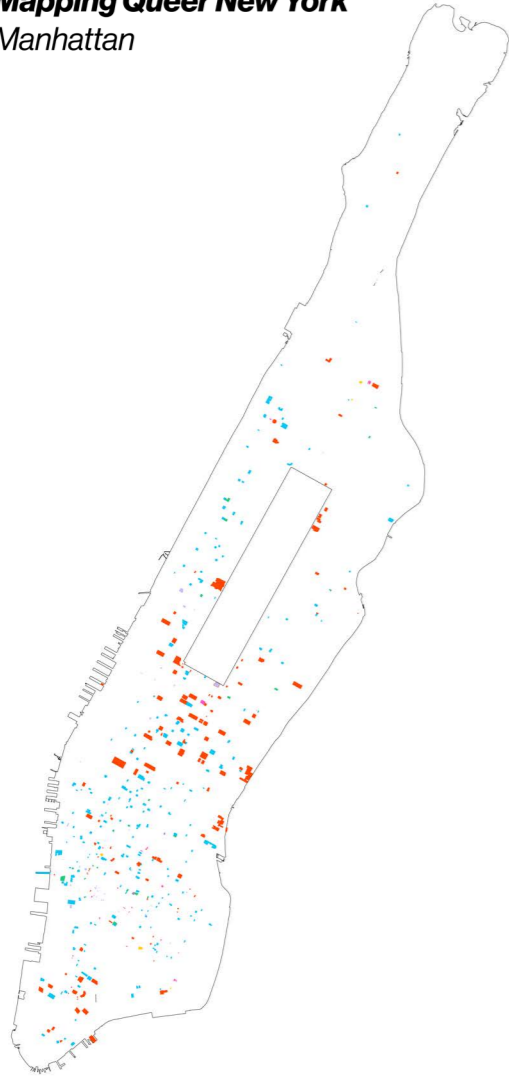


### Unfinished Interventions

The second system is a series of interventions, based on the categorized forms of protest, are designed to support new and existing LGBTQ organizations, as well as informal kinships. These spaces are starting points on a larger constellation to support New York's diverse and ever-growing LGBTQ communities. As these places begin to support organizations and individuals passing through midtown, we imagine more spaces developing to support protest, foster chance interactions, and encourage new forms of community.

# Queerness in New York City

**Mapping Queer New York**  
Manhattan



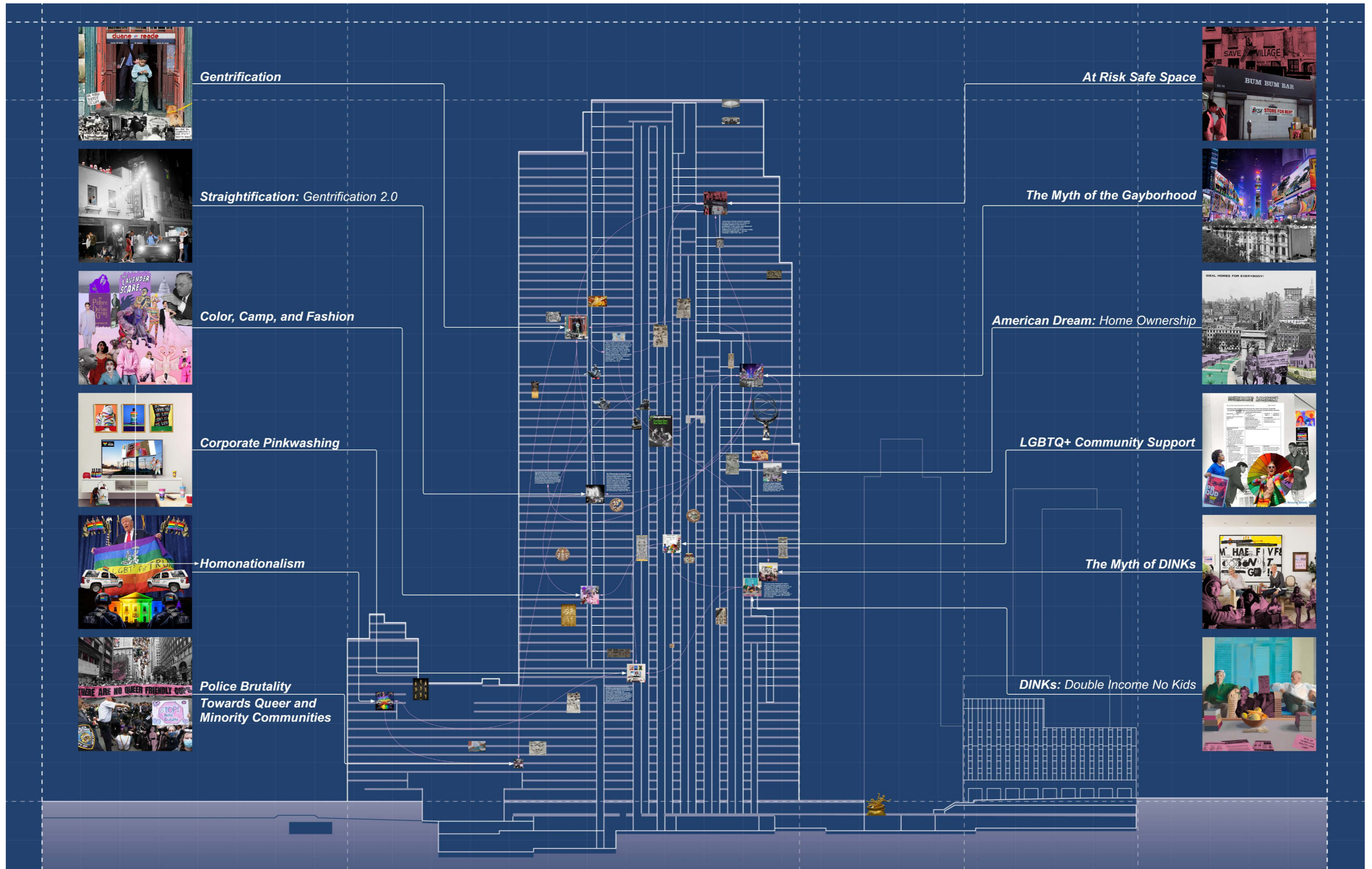
**Mapping Queer New York**  
West Village



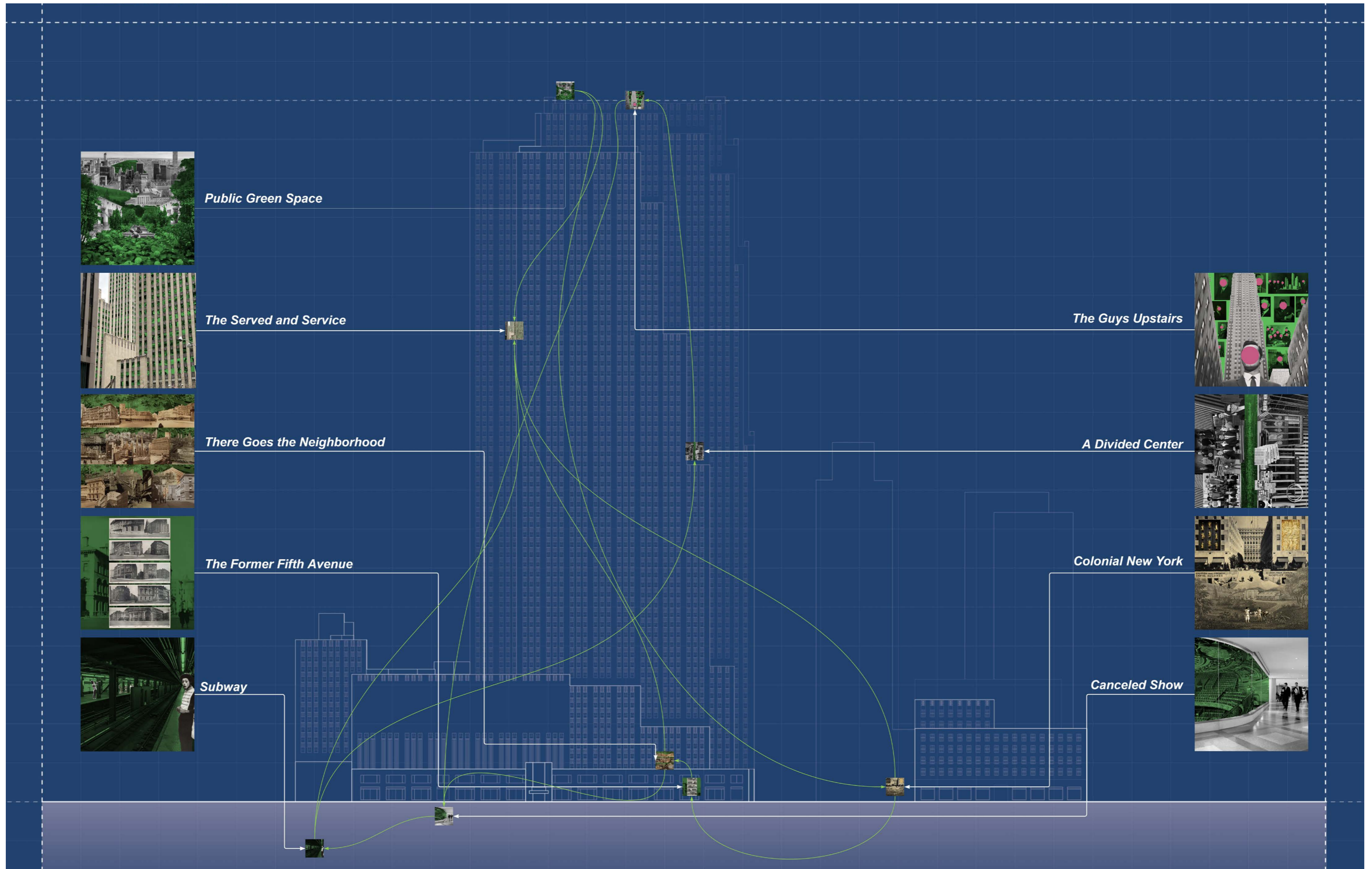
**Site Context**  
LGBTQ+ Protests



# Constellation of Queerness



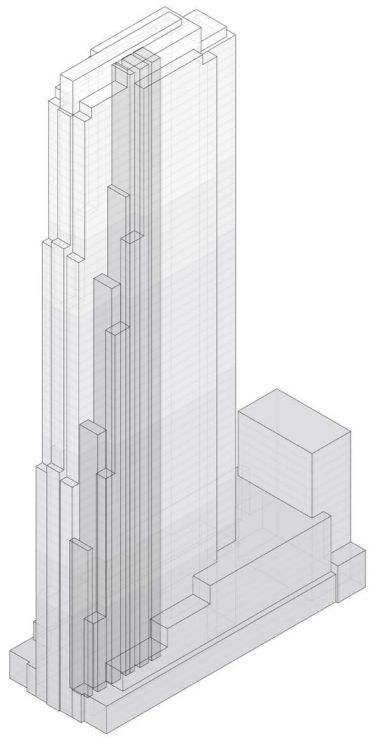
# Constellation of Hetero-patriarchy



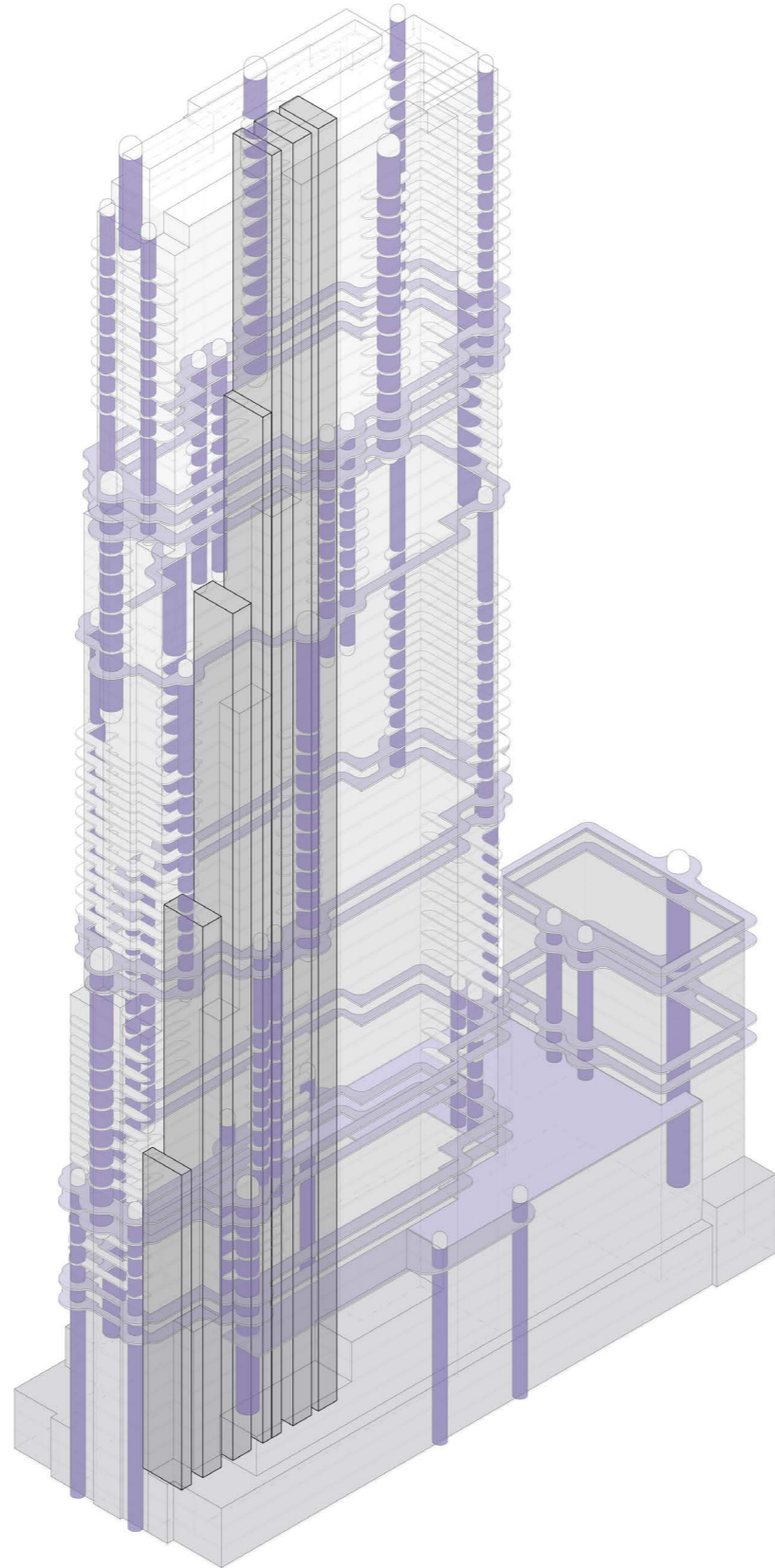


# New Elevator and Platform System

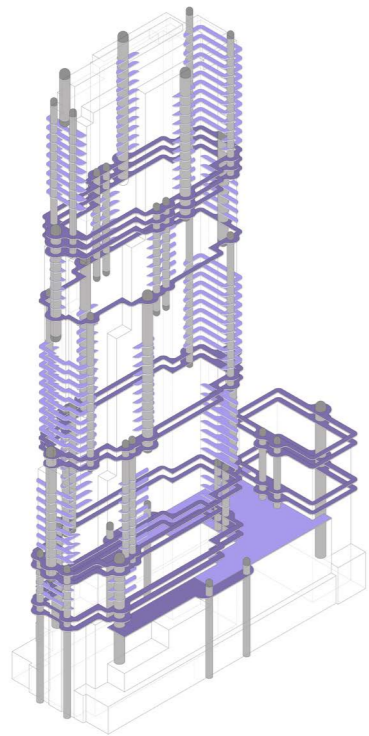
Existing Elevator Banks



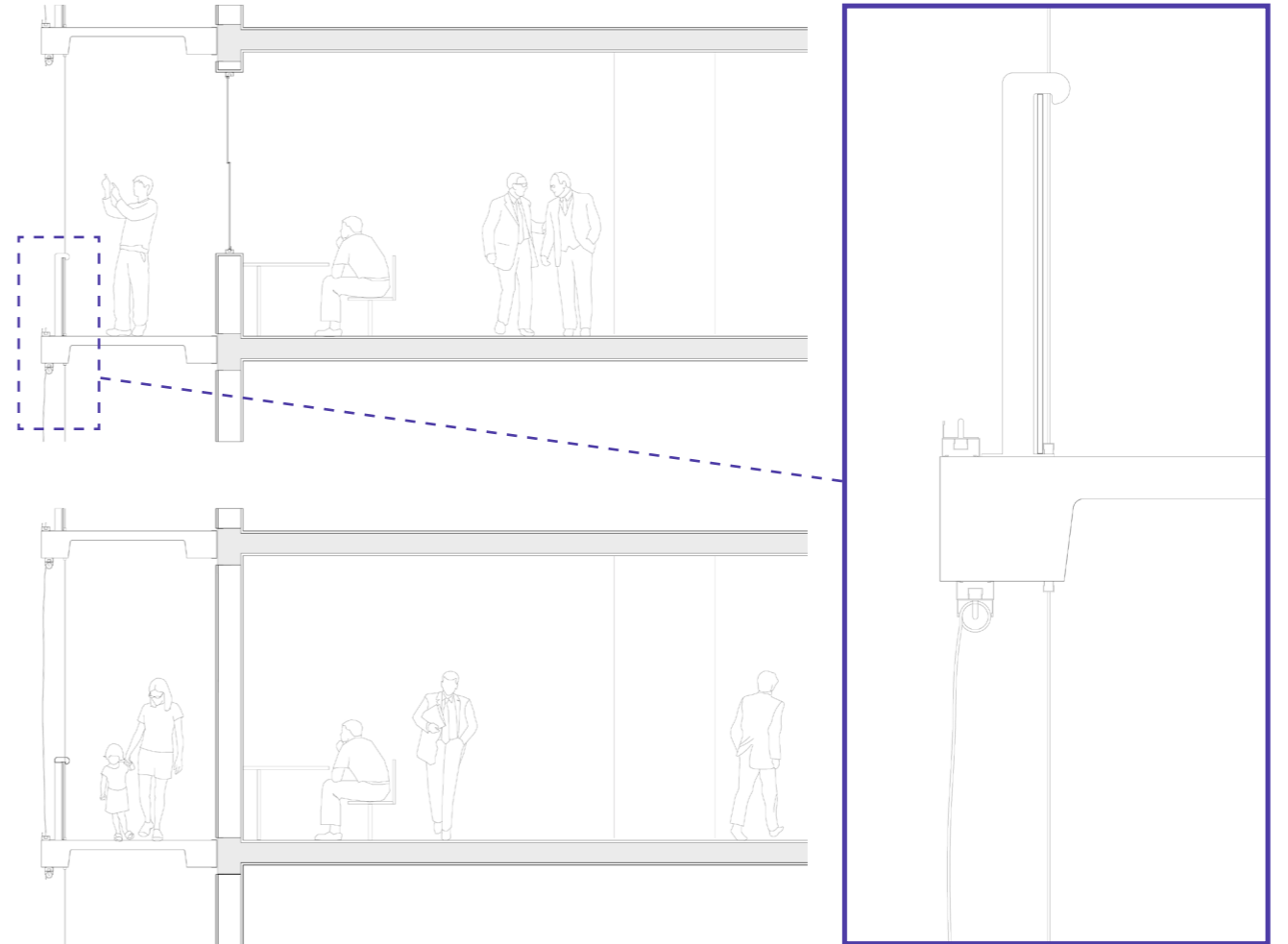
New Elevator System



Exterior Elevator Proposal



Detailed Platform Section



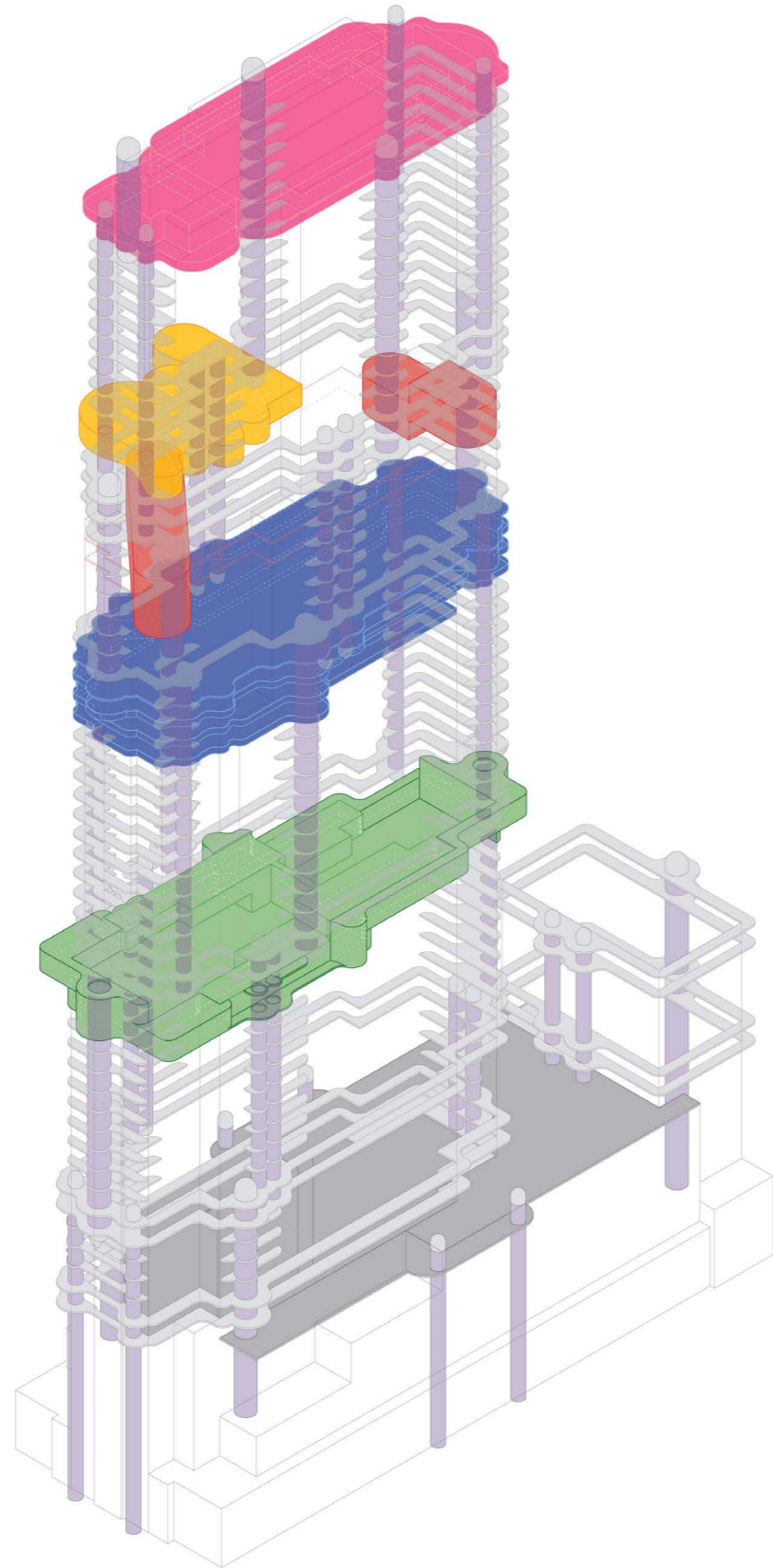
Diagrammatic Model

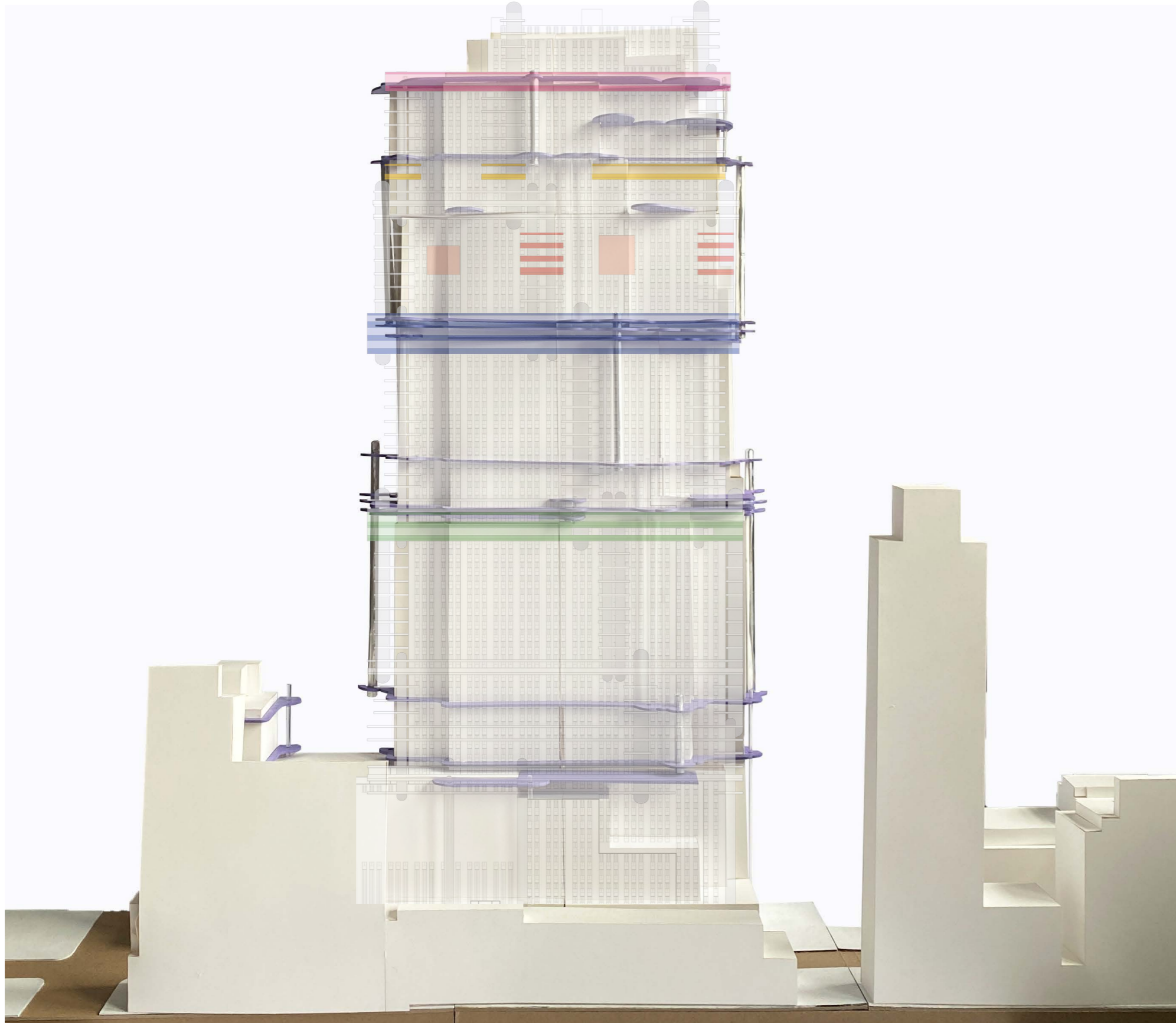


New Forms of Protest



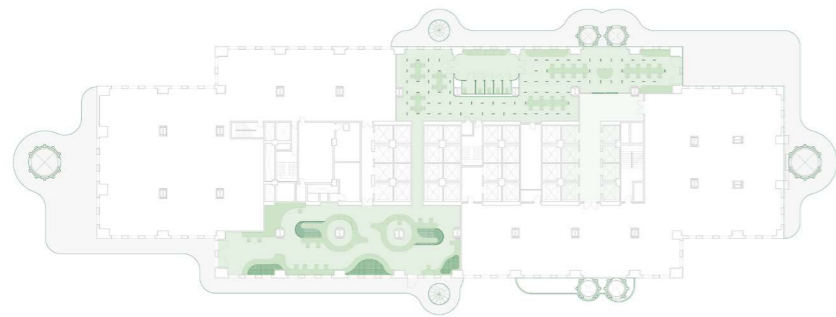
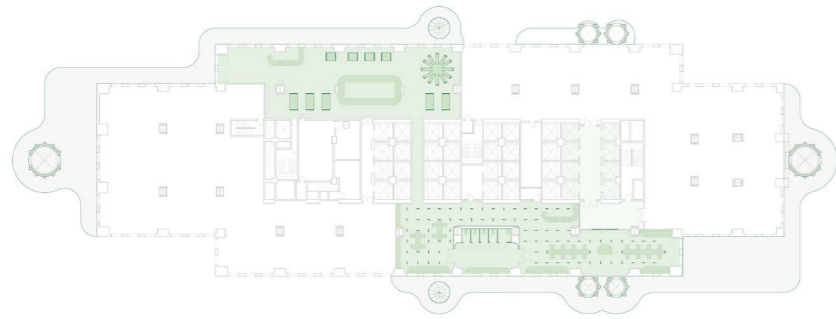
Combined Axon



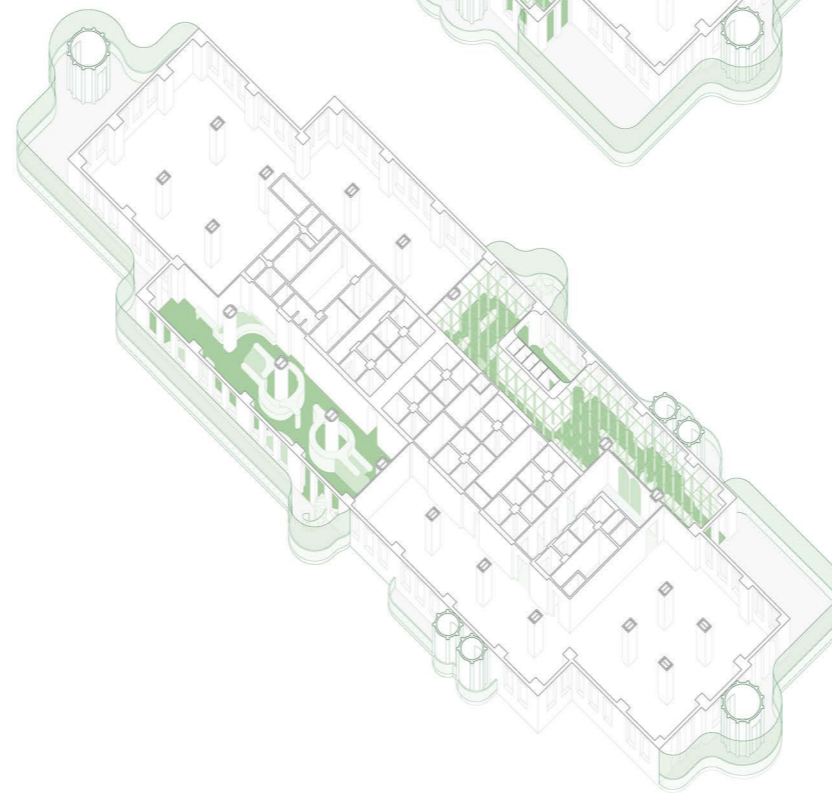
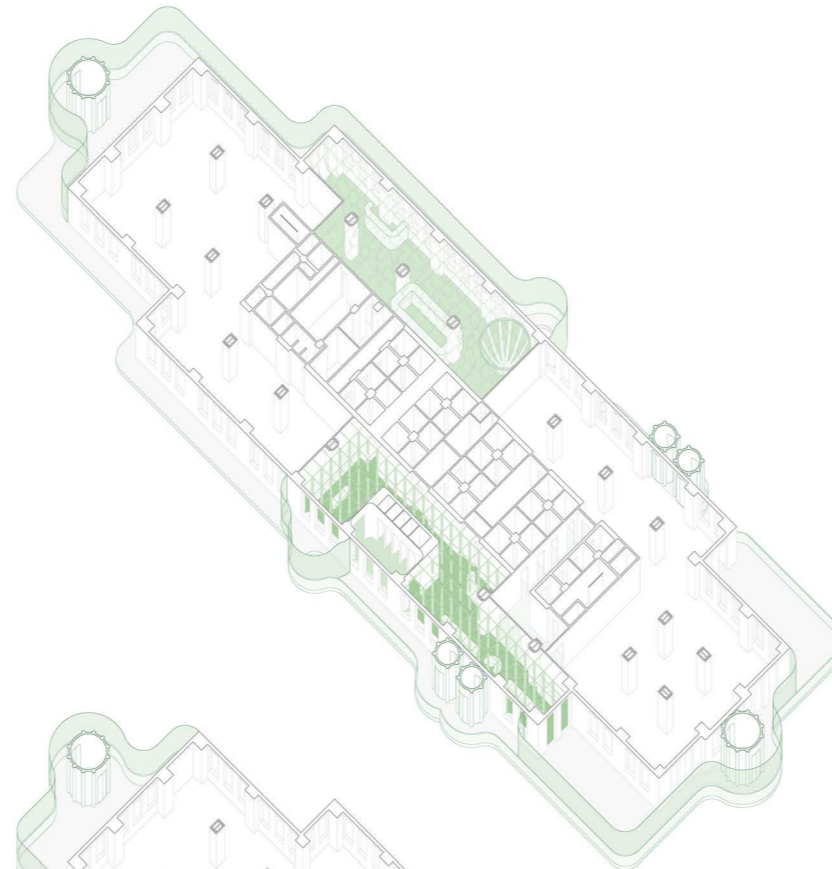


New Intervention: Cafe/Salon/Bar/Barber

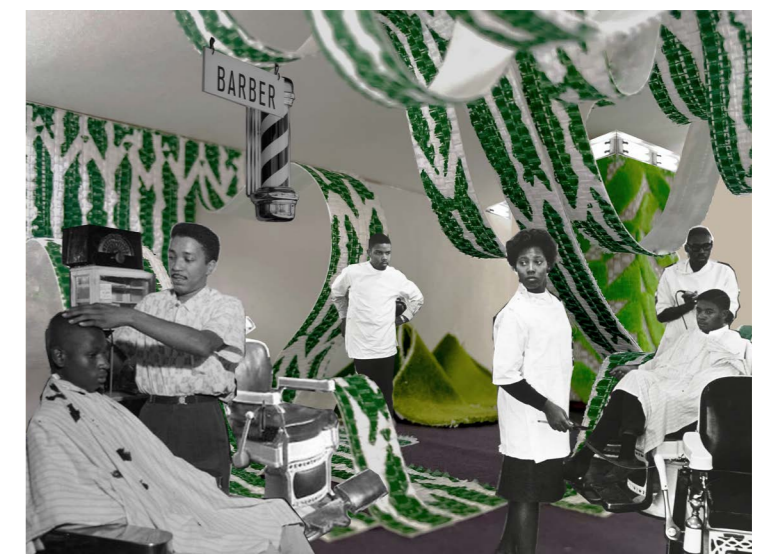
Plans



Axons

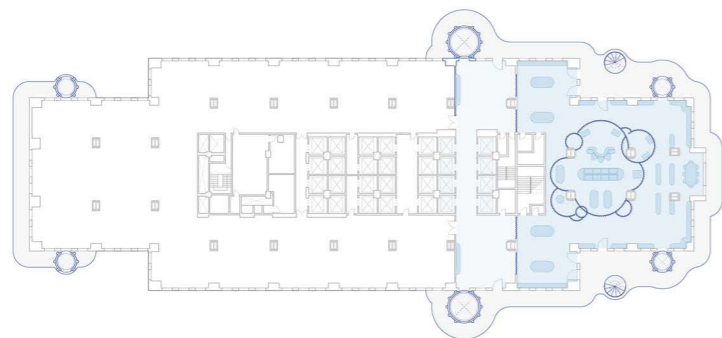
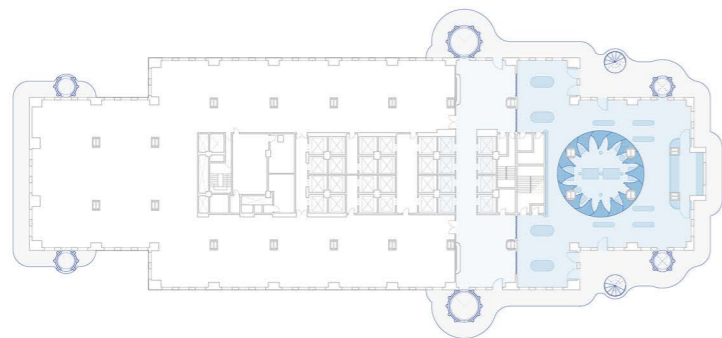
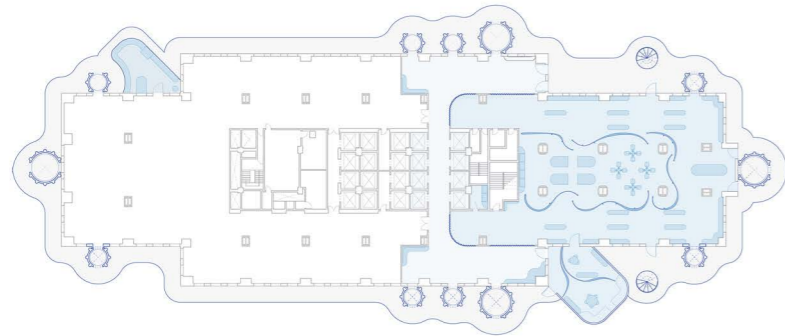


Perspectives

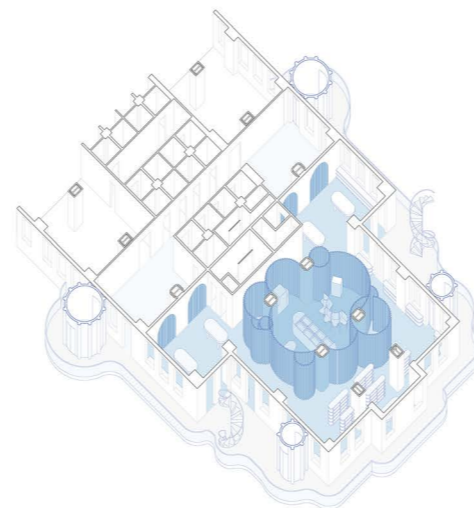
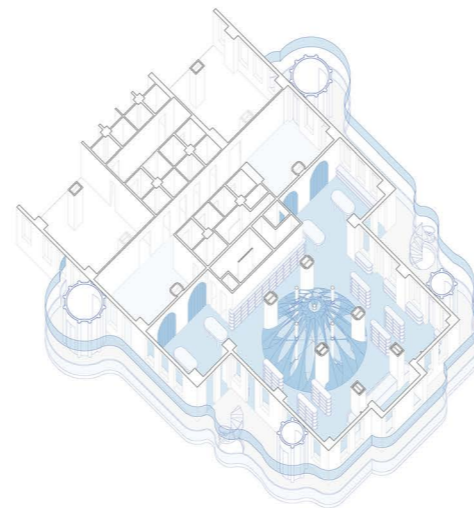
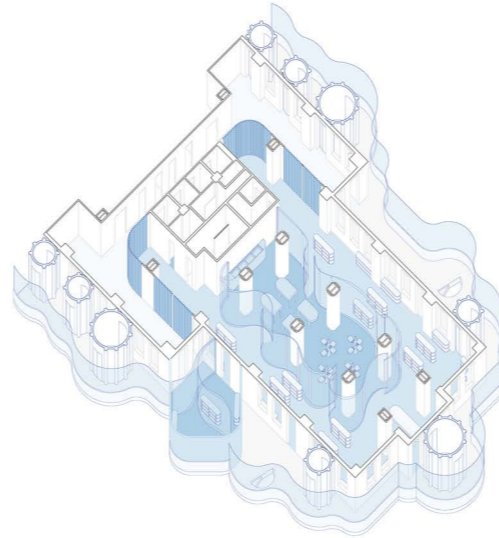


# New Intervention: Print Shop

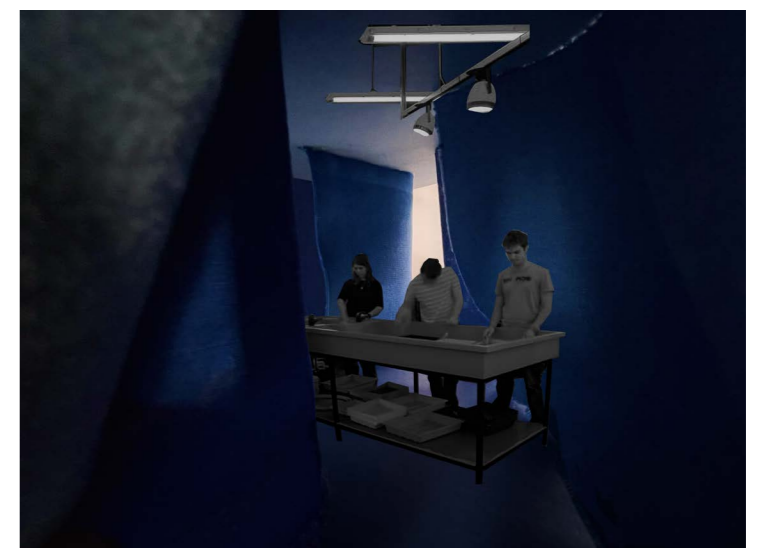
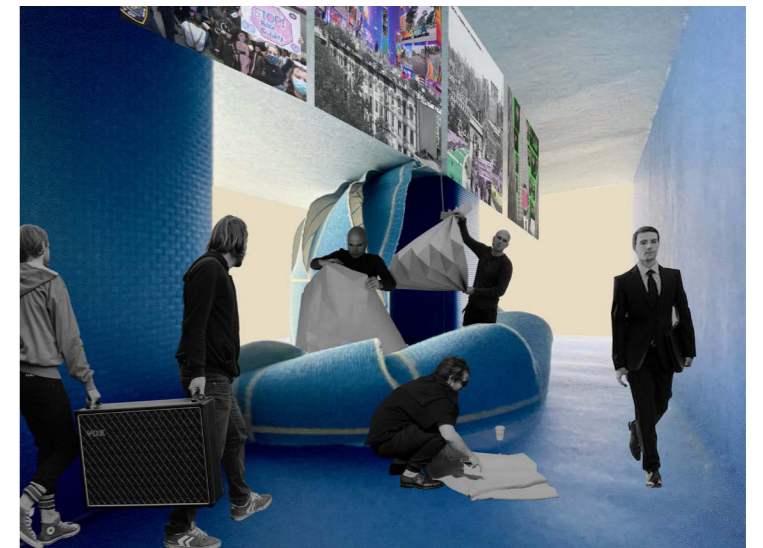
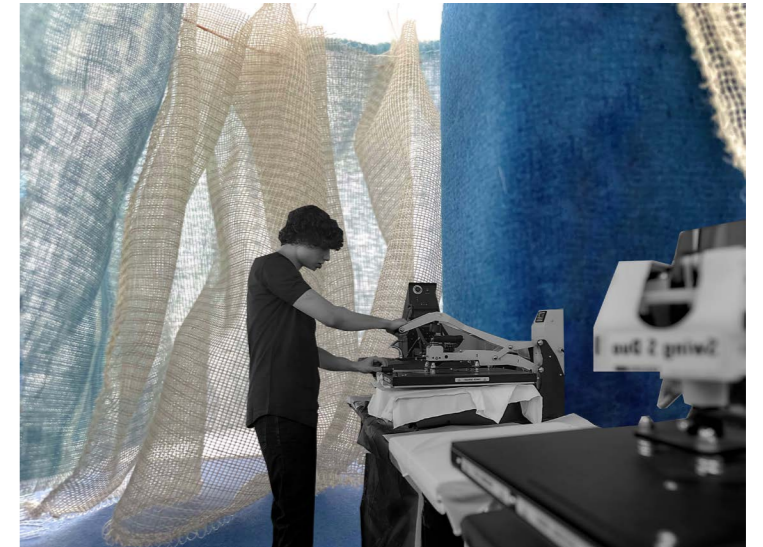
Plans



Axons

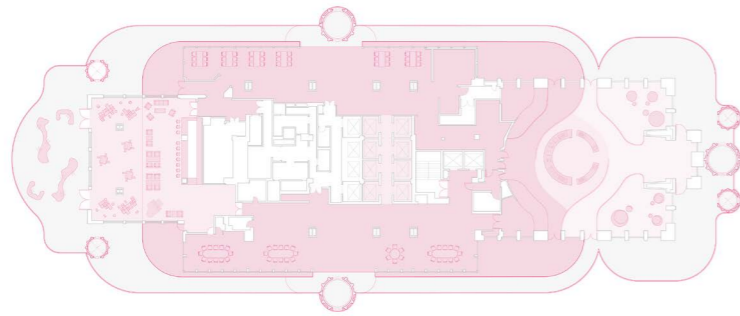


Perspectives

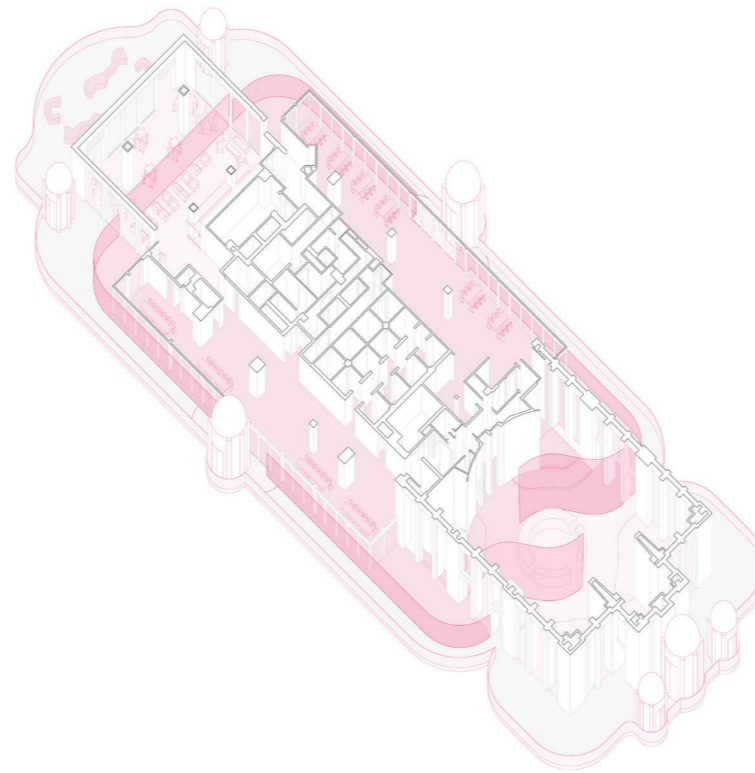


# New Intervention: Communal Kitchen

Plans



Axons



Perspectives



# Footprint: Carbon and Design

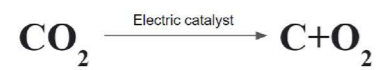
2022 Spring

Individual Work

Associated Professor: David Benjamin

## Principle

<https://www.cnn.com/videos/business/2019/11/01/econundrum-carbon-dioxide-co2-solid-product-melbourne.cnn>



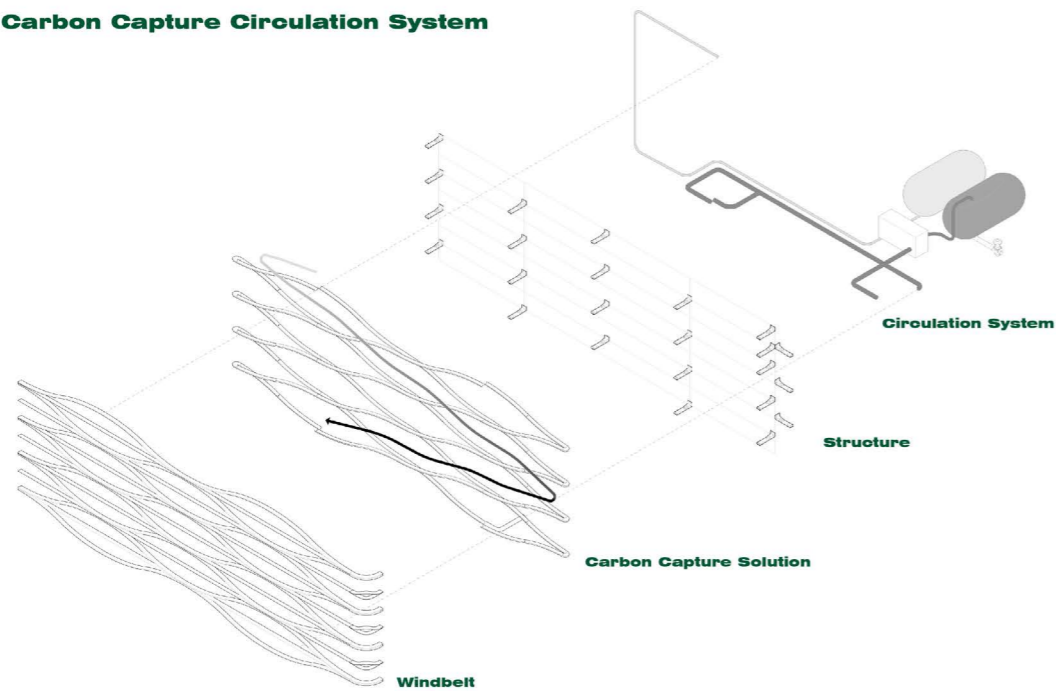
## Carbon capture

v / m / m  
0.00003925 / 0.003 / 0.008

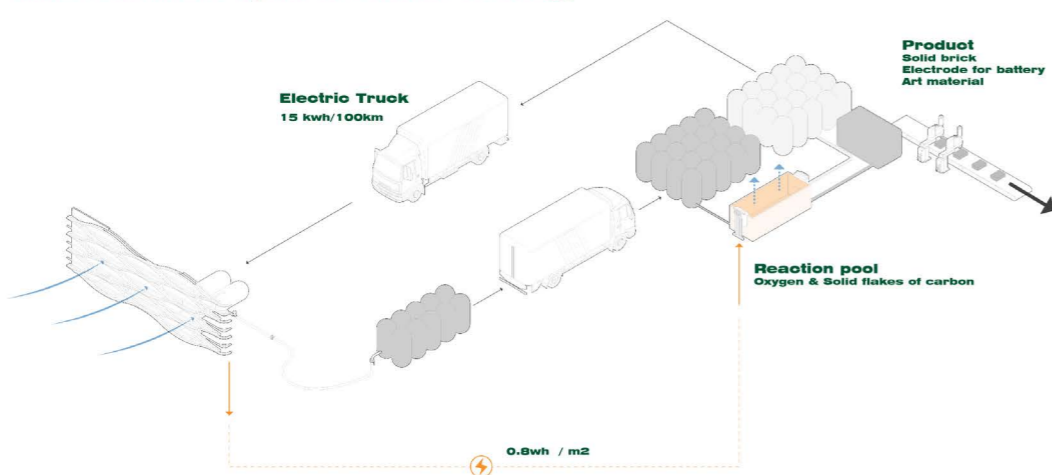
1L solution + electricity  
76.4g C 203.8 02 279.4gCO2



## Carbon Capture Circulation System

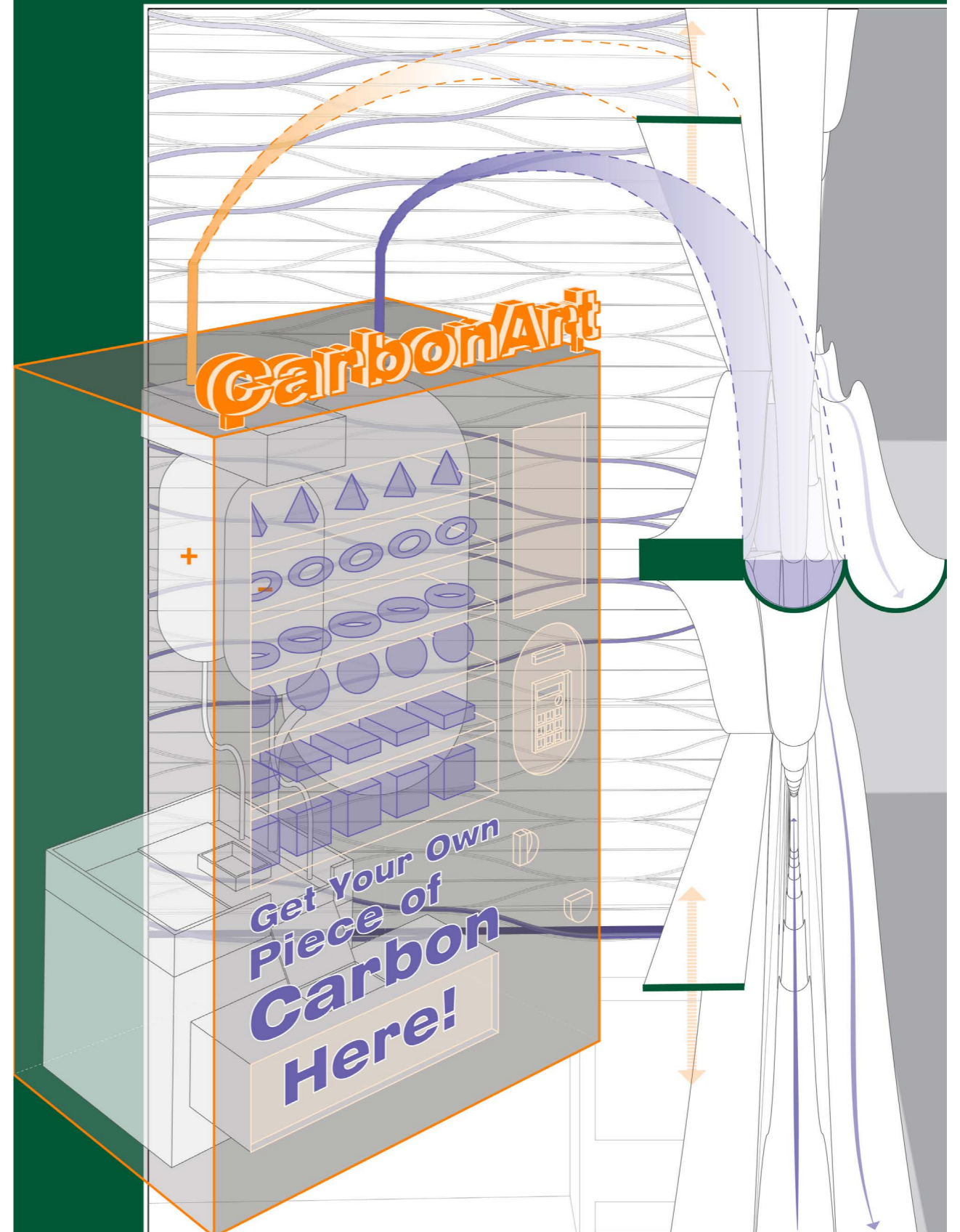


## CO2 Treatment Cycle of Facade Strategy



# Carbon Footprint

Offsetting CO2 by making it into solid art.



## 03.2

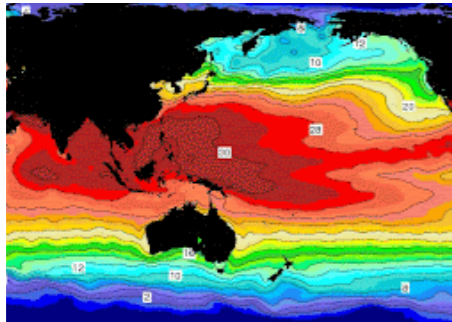
# FutureCurrent

2021 Fall

Teamwork w/. Xiangru Zhao

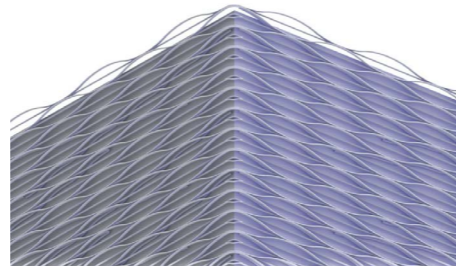
Associated Professor: Vanessa Keith

Site: Jamaica



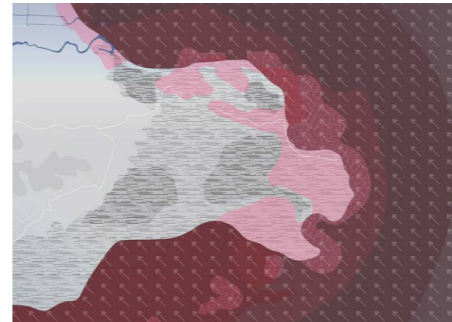
### Climate Change

In the last few decades, more hurricanes have formed due to rising sea surface temperatures caused by global climate change. The greenhouse effect is the result of exceeding the output of carbon dioxide. In the past 2020, when humans were quarantined in their homes, there was a significant reduction in carbon production, which led to a decrease in sea surface temperatures directly. This project will address the “sin” of climate change and attempt to solve the carbon problem through design.



### Carbon - Art

By capturing carbon dioxide in the air using a carbon capture solution, then adding a catalyst and connecting it to electricity, oxygen and solid carbon are produced. This project will utilize the solid carbon products and make them into artwork, not only achieving the goal of raising public awareness about protecting the natural environment, but also extending the technology to more potential uses.



### East End, Jamaica

This is a real commission project, and the site is located in the East End of Jamaica. The area suffers from heavy flooding during the hurricane season and is also a protected area for mangroves. The client required a comprehensive design for the entire site, which had to include an eco-lodge, an eco-hostel, and an oceanographic research center. The new design had to create a connection between researchers and locals so that everyone could be part of the “planet-saving mission”.



### Daily Research v.s. Art Festival

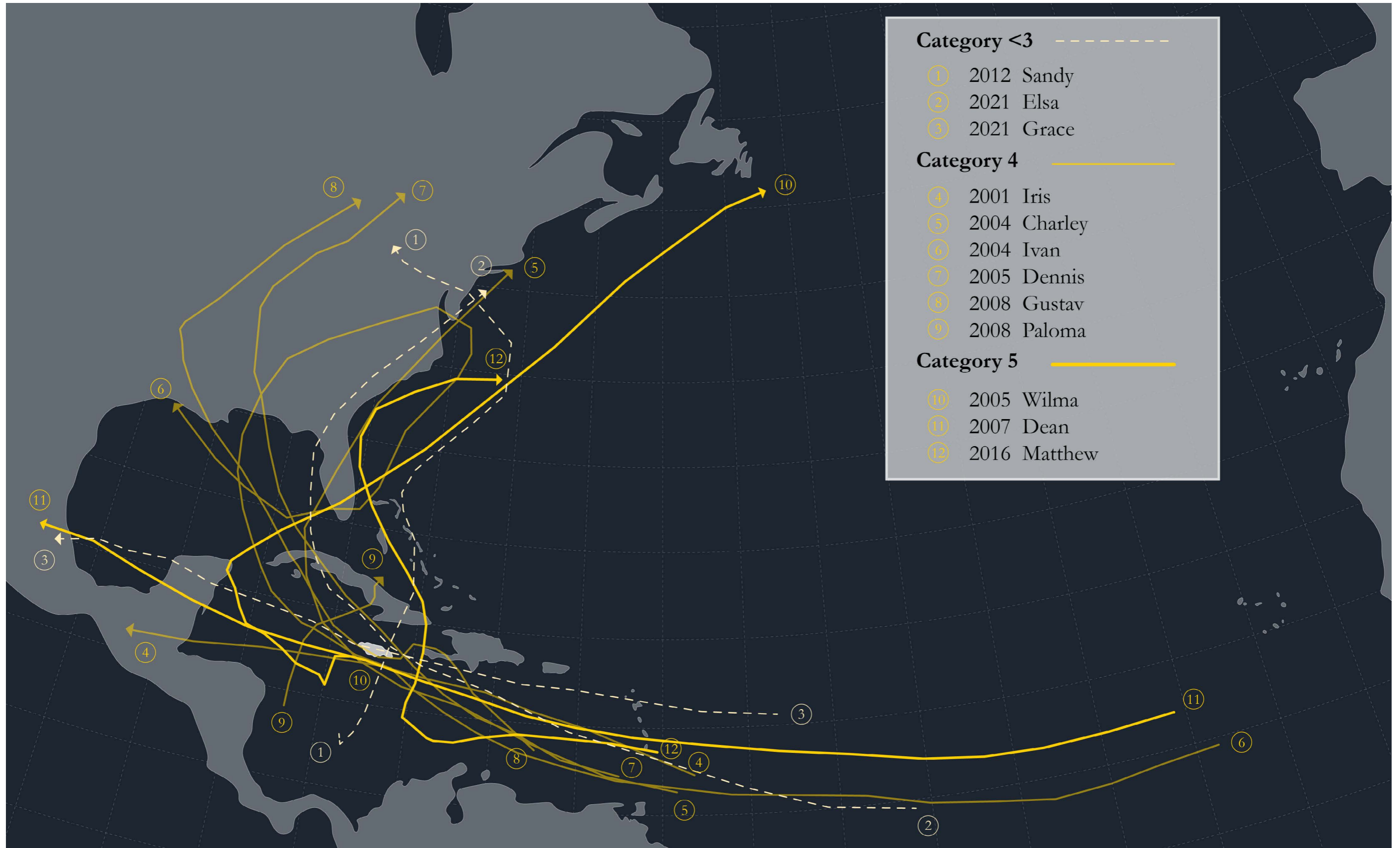
To better promote CarbonArt, the site will be made into an art park, which will be shuttled back and forth with electric trams to transport visitors. Due to the tourist season, the venue will have two modes: daily research and art festival. In this way, the design has a high degree of flexibility to adapt to different occasions.



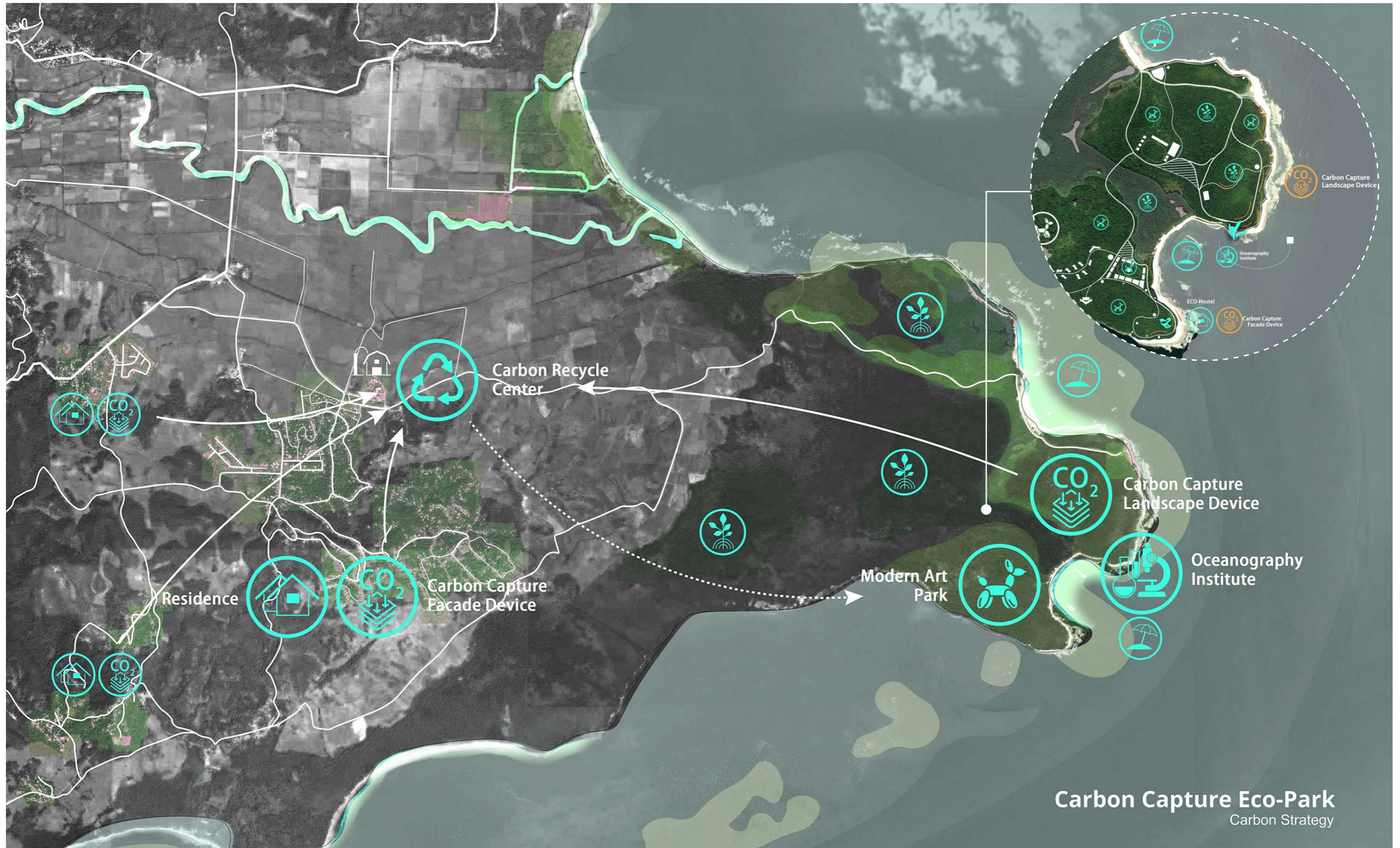
### Architecture As Landscape

The building form is based on the wind direction in order to maximize the generation of wind power. The wind belts will be placed on top of the roof and the electricity will be used on site and for charging the electric tram. The design has a large open deck that allows for a variety of activities, while it is also elevated to prevent flooding.





# Site Map w/. Carbon Recycling Route



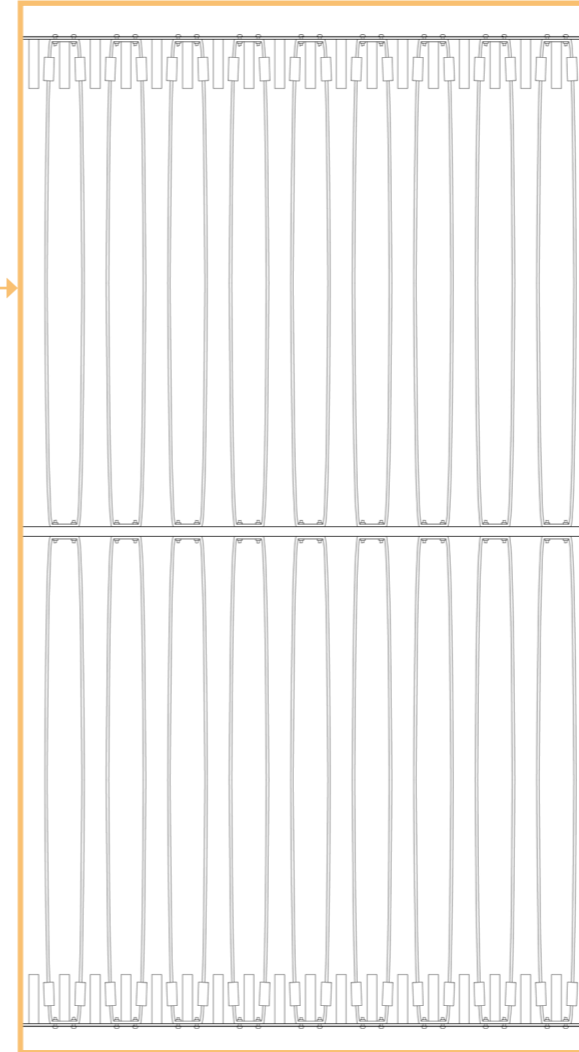
# Wind Energy & CLT Embodied Energy

Material Selection in Perspective

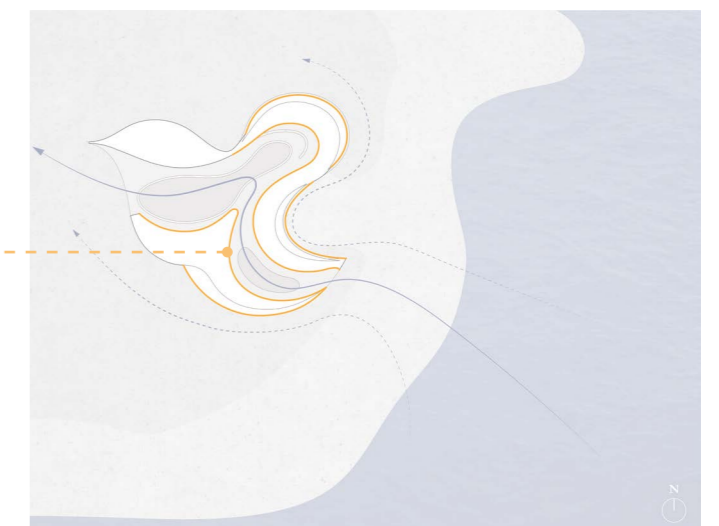
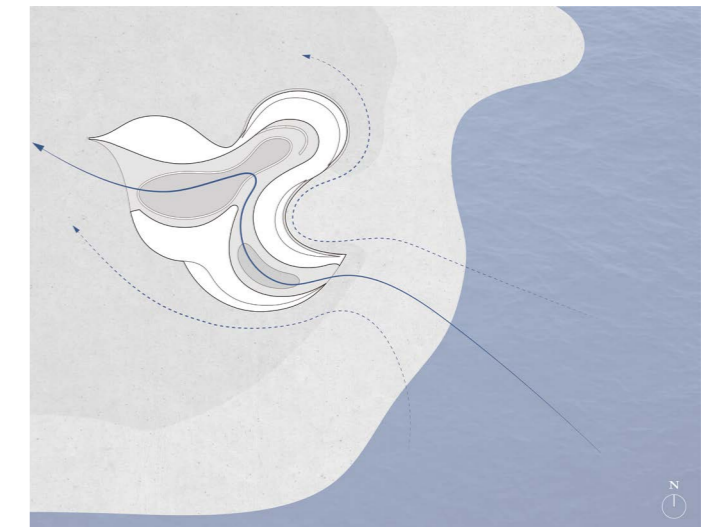
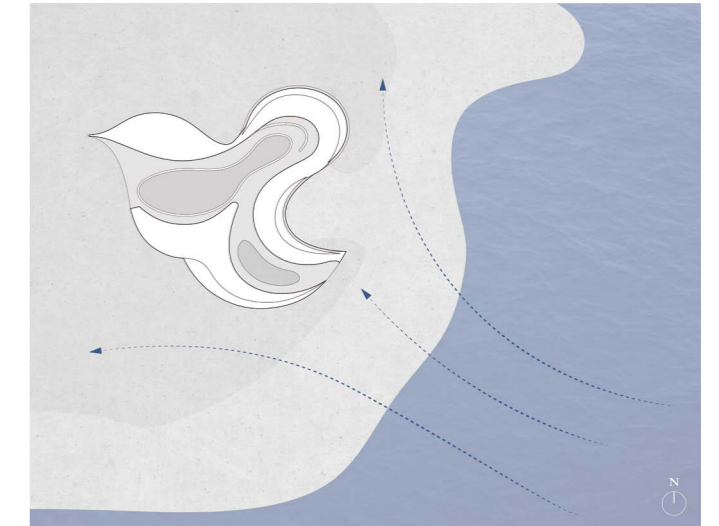


- ←····· Carbon Capture
- Carbon Emission
- Carbon Sequestration
- Carbon Recycle
- Biogenic CO2 Emission

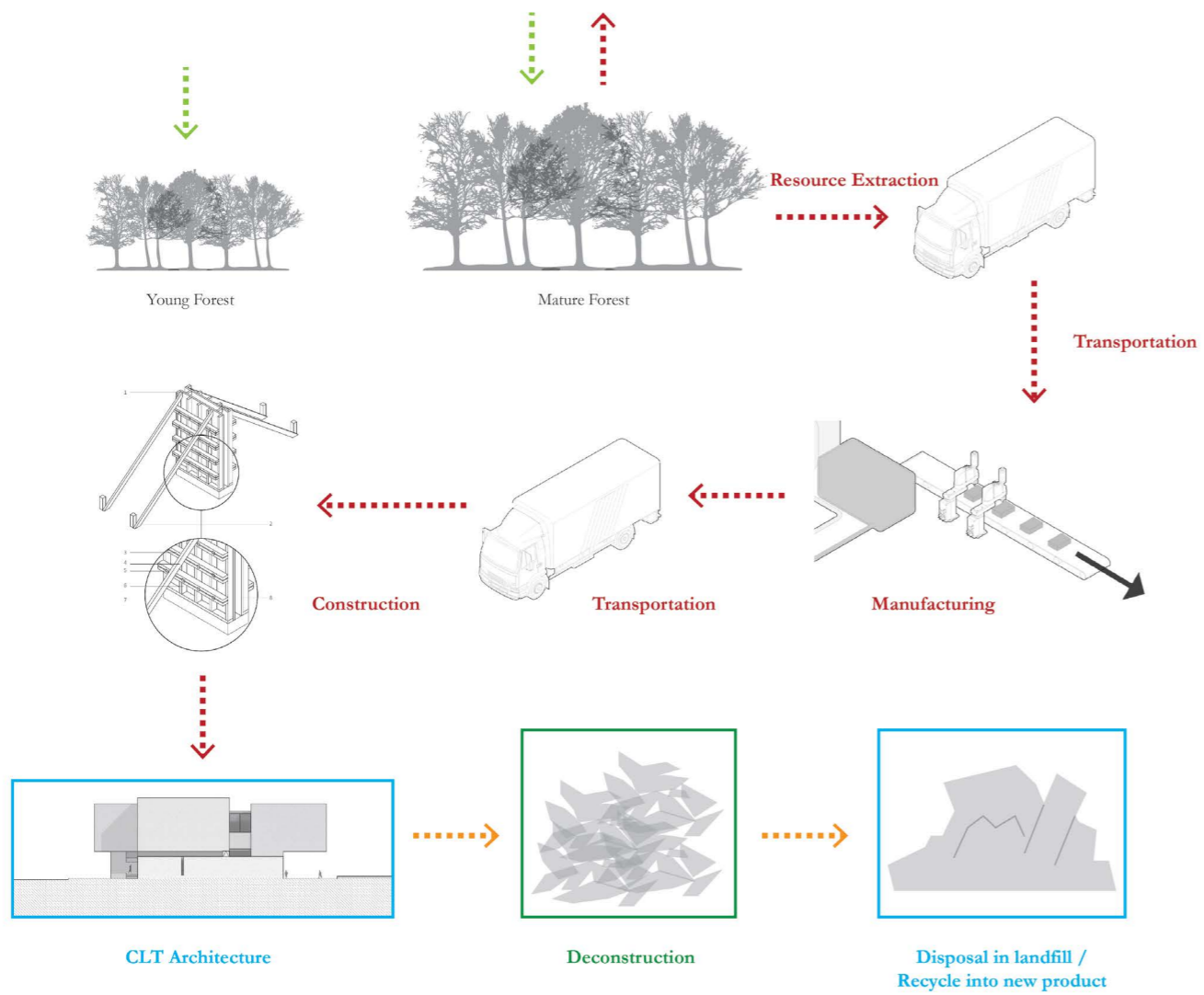
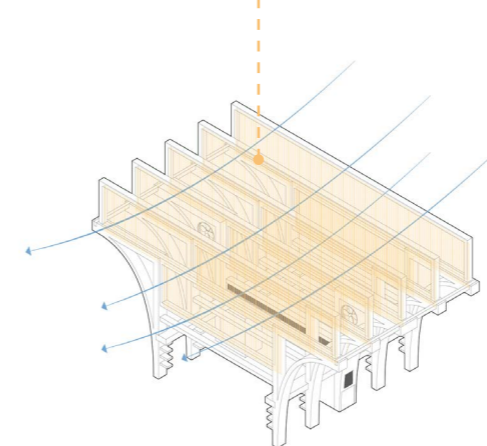
Windbelt Detail



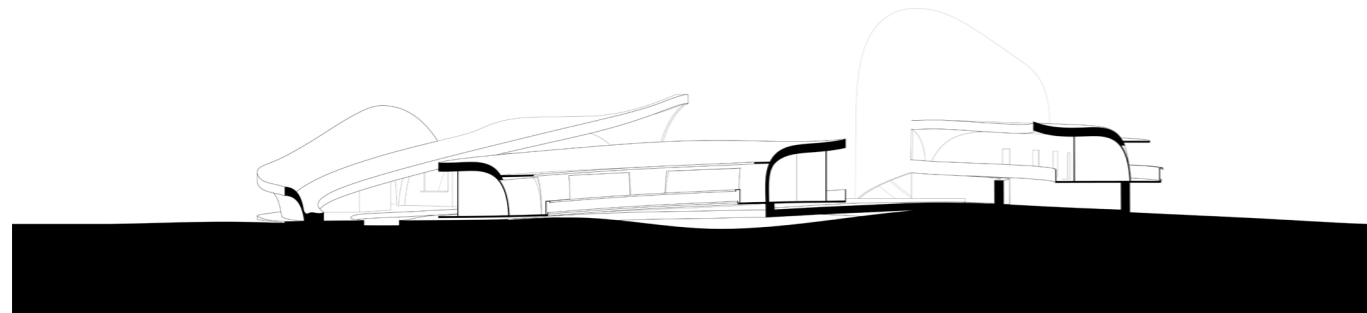
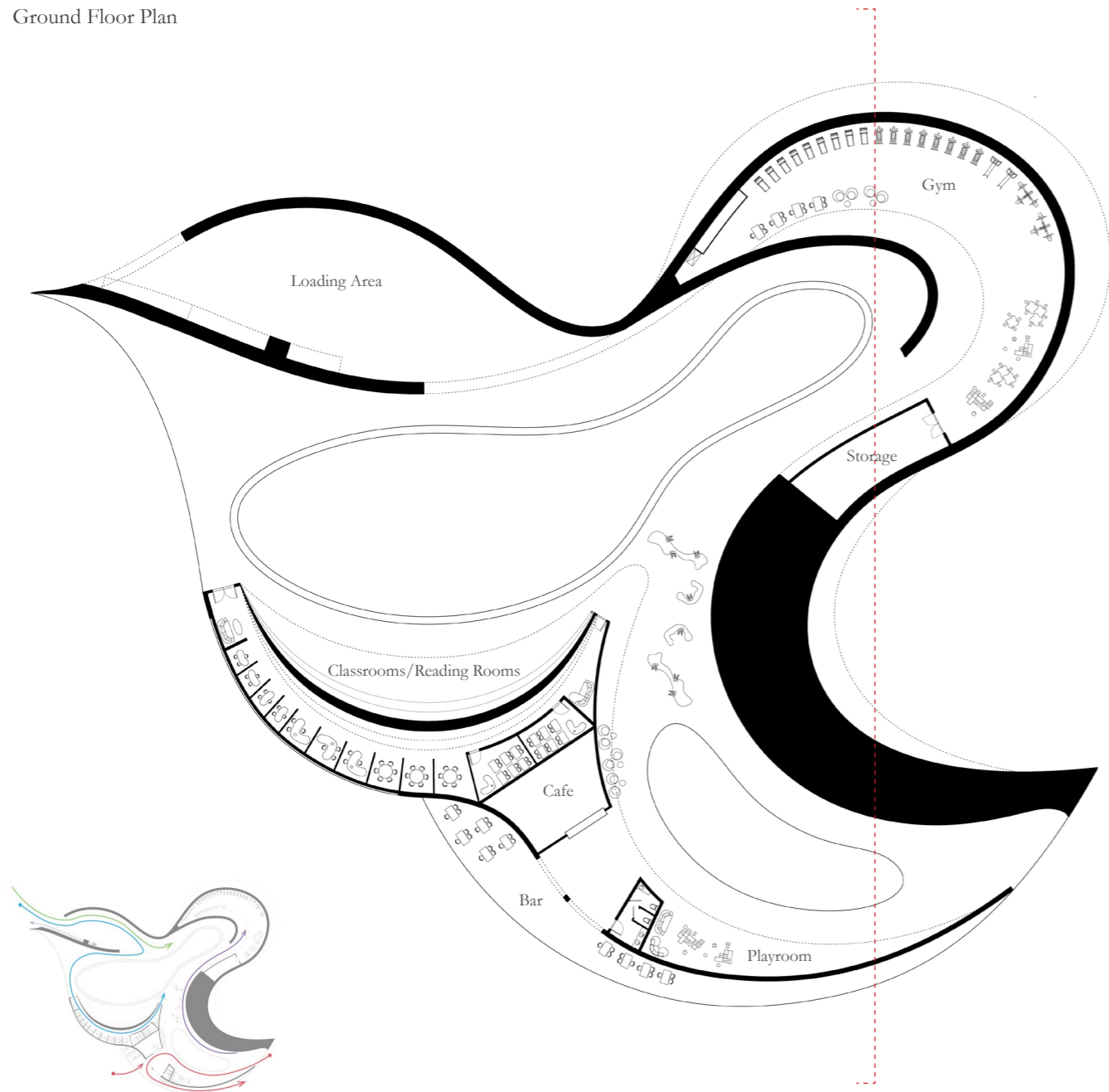
Wind Directions on Site



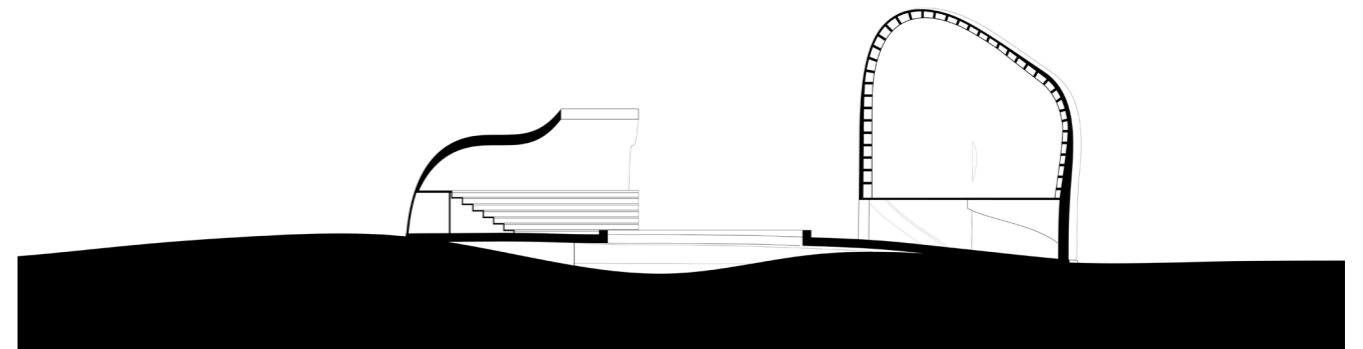
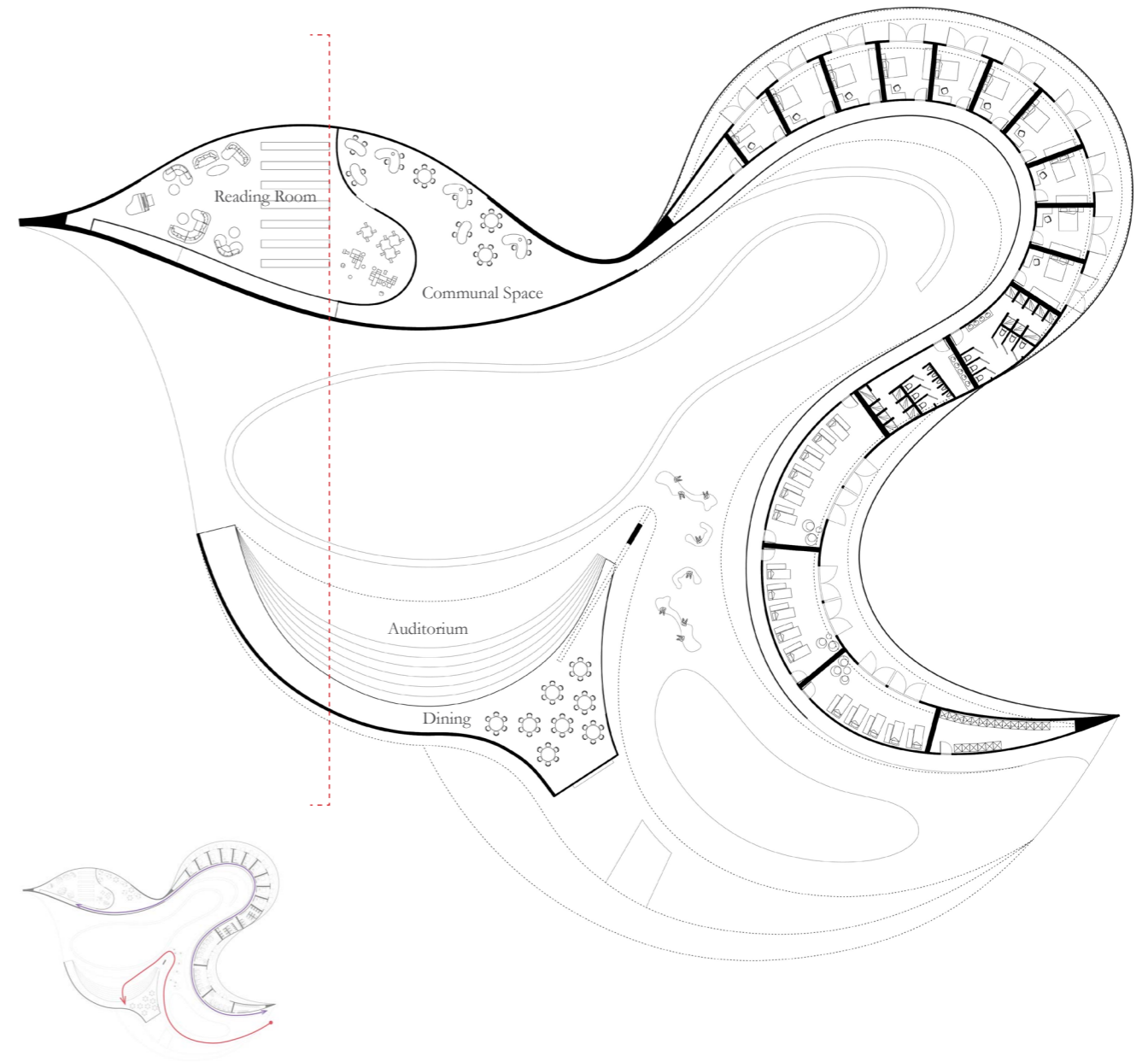
Windbelt Kiosk



Ground Floor Plan



Upper Floor Plan





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The End