

PORTFOLIO

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At GSAPP
June, 2021 - May, 2022

01 Normalizing Networks of Interdependencies

06/2021 - 08/2021

02 The Defeated Flood

09/2021 - 12/2021

03 Inconsistency in the consistency

01/2022 - 04/2022

04 Generative Design

09/2021 - 12/2021

05 Re-thinking BIM

09/2021 - 12/2021

06 Seminar of Section

01/2022 - 04/2022

The transformation of rooftops is connected to a more radical re-thinking of housing, challenging isolationism and lack of access to communal space. Housing renovations integrate communal ground floors and activated rooftop gardens to promote inclusive housing for all people to give and receive assistance.

In townhouses rented to different tenants, the city will subsidize the transformation of every floor to gain communal spaces. The ground floor could accommodate diverse uses decided by residents. Here is a prototype: communal kitchen + living/reading room.

An infrastructure of vehicles called Mobile Care Units will mobilize programs already carried out by organizations focused on providing assistance to people who are not included in the current healthcare system, such as immigrants.

We aim to spatially connect and expand current functions to food access through a distributed effort of garden spaces and a centralized, multi-functional Center. GrowNYC and other organizations have the opportunity to manage the building's nursery, composting and educational facilities.

The nutrition station can promote accessible cooking options focused on fresh foods and other educational programming can exist. Community members can pick up plants at the nursery, soil at the composting facility, Fresh Food Boxes, as well as interact with the public spaces, such as the activated rooftop.

Normalizing Networks of Interdependencies Housing Infrastructures for the Countercollapse

Instructed by Ignacio G. Galán
Collaborated with Abriannah Aiken, Ruben Dario Gomez Ganan
June~August, 2021

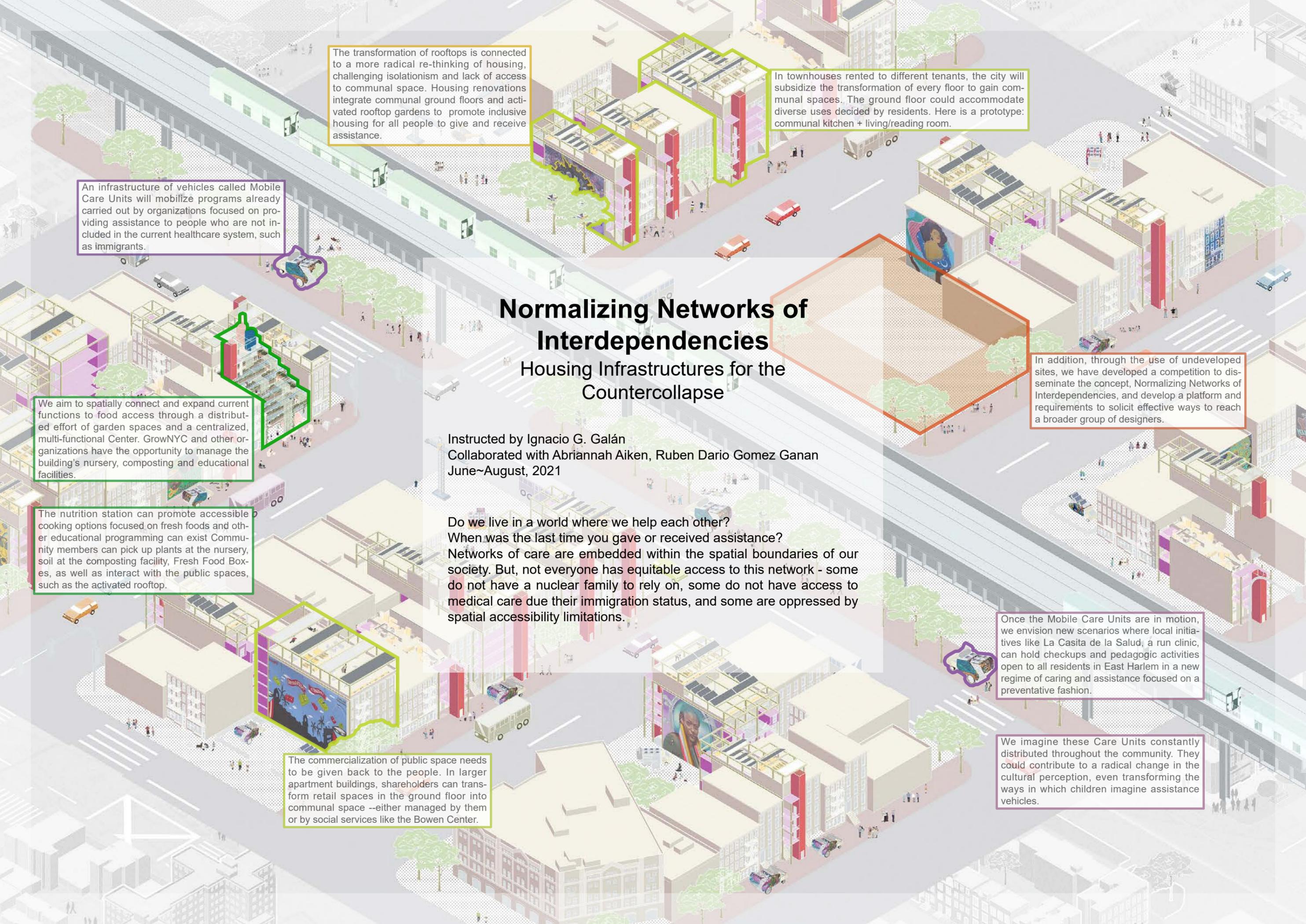
Do we live in a world where we help each other?
When was the last time you gave or received assistance?
Networks of care are embedded within the spatial boundaries of our society. But, not everyone has equitable access to this network - some do not have a nuclear family to rely on, some do not have access to medical care due their immigration status, and some are oppressed by spatial accessibility limitations.

In addition, through the use of undeveloped sites, we have developed a competition to disseminate the concept, Normalizing Networks of Interdependencies, and develop a platform and requirements to solicit effective ways to reach a broader group of designers.

Once the Mobile Care Units are in motion, we envision new scenarios where local initiatives like La Casita de la Salud, a run clinic, can hold checkups and pedagogic activities open to all residents in East Harlem in a new regime of caring and assistance focused on a preventative fashion.

The commercialization of public space needs to be given back to the people. In larger apartment buildings, shareholders can transform retail spaces in the ground floor into communal space --either managed by them or by social services like the Bowen Center.

We imagine these Care Units constantly distributed throughout the community. They could contribute to a radical change in the cultural perception, even transforming the ways in which children imagine assistance vehicles.



East Harlem is taken as a platform to rehearse this approach, and started our research following individuals involved in the current neighborhood's networks of care.



Betty comes from El Salvador, since then, she has worked a seller at the Mexican Deli. She got her apartment lease with the support of Hope Community Inc.



Beatriz is an immigrant from Costa Rica who wants a good life for herself and her children. Beatriz is an aspiring sous chef who trained at Hot Bread Kitchen in 2018.



Bob was a high school teacher. After a bicycle accident, his brain injury affected his memory and ability to carry out some everyday tasks.



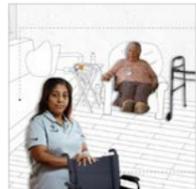
Myron found his talent at writing. So far, he has written short stories, his autobiography and a play- he even did a performance of the play.



Michael, 53 years old. He stopped working as a carpenter because of his Degenerative neurological condition.



Mercedes is an Entrepreneur at La Marqueta, where she sells handmade dolls, running her own business for over 10 years.



Norma's family lives in El Salvador, including her two children. She sends money and gifts home to them.



Transnational motherhood is a fairly common occurrence for immigrant families.



Martha has several children, but she often needs therapy. The Bowen Community Center helps her with that



Jordan is a young man with spina bifida who lives alone in a one-bedroom apartment. Twice a week, her sister assists him to go shopping for groceries at a mexican deli.



Maria saves money to get her mom a house and sends her monetary remittances. She shared a two bedroom apartment with her husband, her daughter and two friends.



Evelyn Unisex Hair Salon is dedicated to haircuts form men and special process to women like coloring, dying and hairstyling.



Independent Living

"Independent living" originated in the 1960s, in a movement fighting for equal rights for people with disabilities. Welfare was expanded in the 1990s and currently includes Medicaid and Supplemental Security Income for those who need it.



Marcus Garvey Park was created in 1840 and was originally named for Robert Morris, then the mayor of New York City. It was renamed after black activist.



The Fresh Food Box is a weekly distribution of produce sourced from local farms that helps to fulfill our community needs for fresh, local, seasonal produce.



Outdoor Economies exist within the urban fabric. Street vendors like this bring their food and material cultures to the streets of New York.



There are not only small business that sell goods from different countries, but also outdoor vendors activate the sidewalks by selling products.



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So-Harlem is a social enterprise connecting people living in Harlem to cultural industries' opportunities that help people achieve economic self-sufficiency.



Opportunities

The job opportunities of disadvantaged groups are not only related to their livelihood but also to the realization of personal value. The fight for jobs has always been an issue.



Uptown Grand Central is a nonprofit organization dedicated to transforming East 125th Street into a thriving corridor.



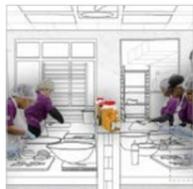
The urban garden center is a wonderful garden shop which are designed in a way to limit "environmental barriers" for disabled people with the flat ground and wide aisles.



Located at 116th street, it sells fruits and vegetables from latinamerican countries. Three times a week, they put fruits outside to retail and negotiate fruits and vegetables.



Tent camps house many people who travel to the country across the border. Some people live in it for up to 2 years, who are affected by health problems.



Hot Bread Kitchen is a nonprofit that creates economic opportunity through careers in food through our culinary training and incubator programs.



La Marqueta, a social and cultural hub functions as a space of buying and selling products, distributing food, and creating a space for community connection.



Women Empowerment

Within East Harlem, there are cultural hubs that impact the community positively, especially the gendered experience of women attempting to establish and maintain independence and stability. Many of these women are not only immigrants, but also experiencing the world intersectionally as women of color.



Immigrants Equality

There is a large immigrant community, with about 43% of Latinx making up the population. Immigrants still face many difficulties when it comes to accessing assistance. But, undocumented immigrants are not eligible for these benefits.

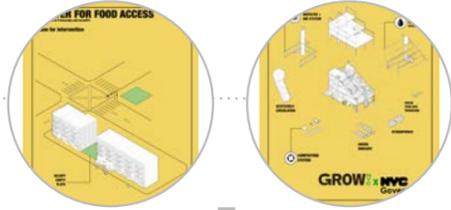


Polarization and Gentrification

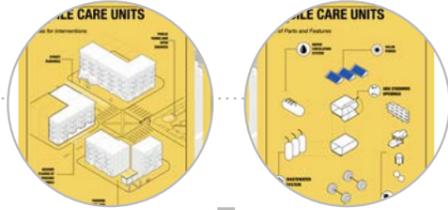
The regional gentrification of capitalism is eroding communities like Harlem, casting a shadow of uncertainty over the future of local residents' lives. Society is also being torn apart by increasingly fierce confrontation and polarization.

Mediators & Documents

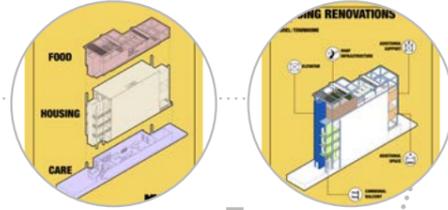
Food



Care



Housing



Guideline

The city gives Guideline in three different but relevant aspects.

Advertising

The City will use all kinds of method to notify every one in communities, including brochures, newspapers, flyers, etc.

Portal

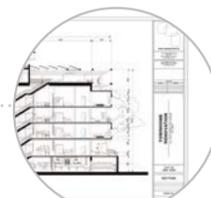
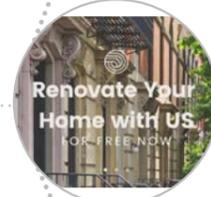
Official website can be approached for getting details of each topic.

Discussion Feedback

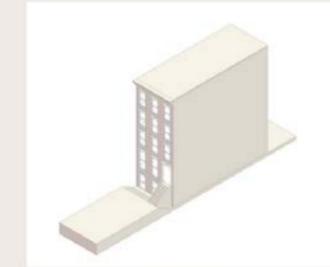
A series of Meeting, including experts workshop and participatory workshop of residents, will be hold for getting feedbacks toward design details.

Enactment

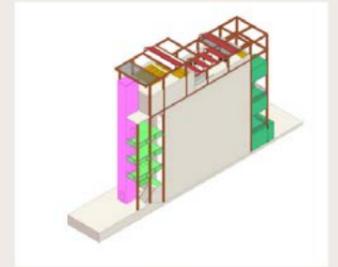
Final Design and documents will be finished.



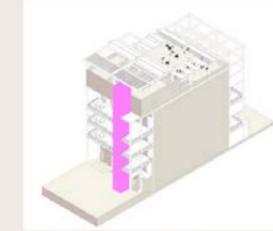
Townhome Guideline



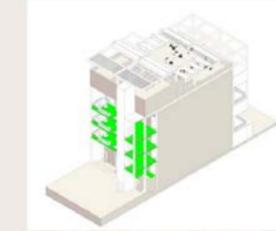
BEFORE



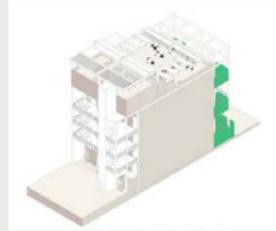
AFTER



ELEVATOR



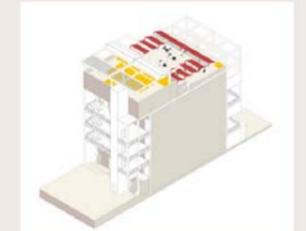
PRIVATE/COMMUNAL BALCONY



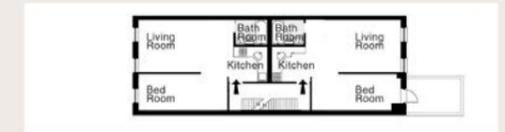
MORE GREEN/INDOOR SPACE



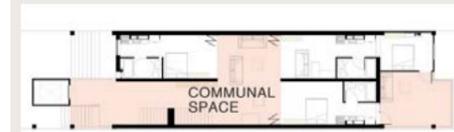
ADDITIONAL SUPORT STRUCTURE



ROOFTOP INFRASTRUCTURE



BEFORE



PROTOTYPE OPTION A



PROTOTYPE OPTION B

AFTER

Bottom Communal Space

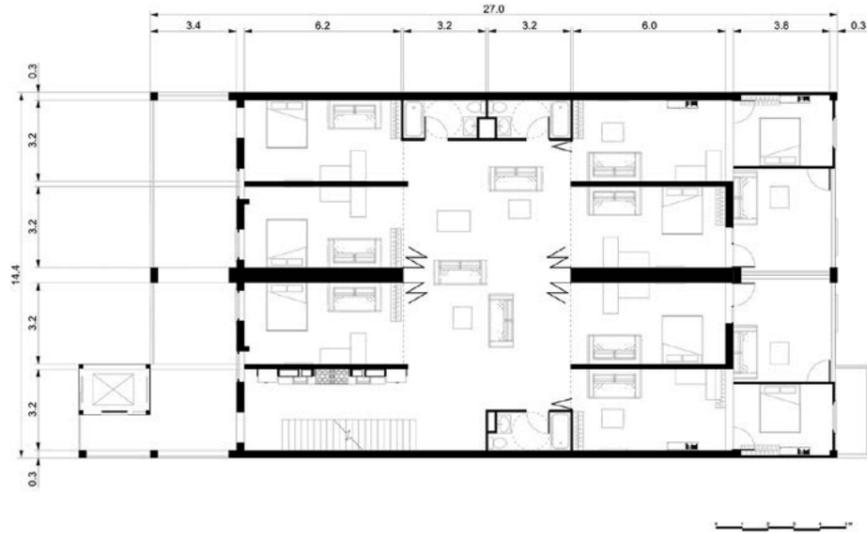


READING ROOM COMMUNITY LIVING ROOM CHILD CARE

Housing

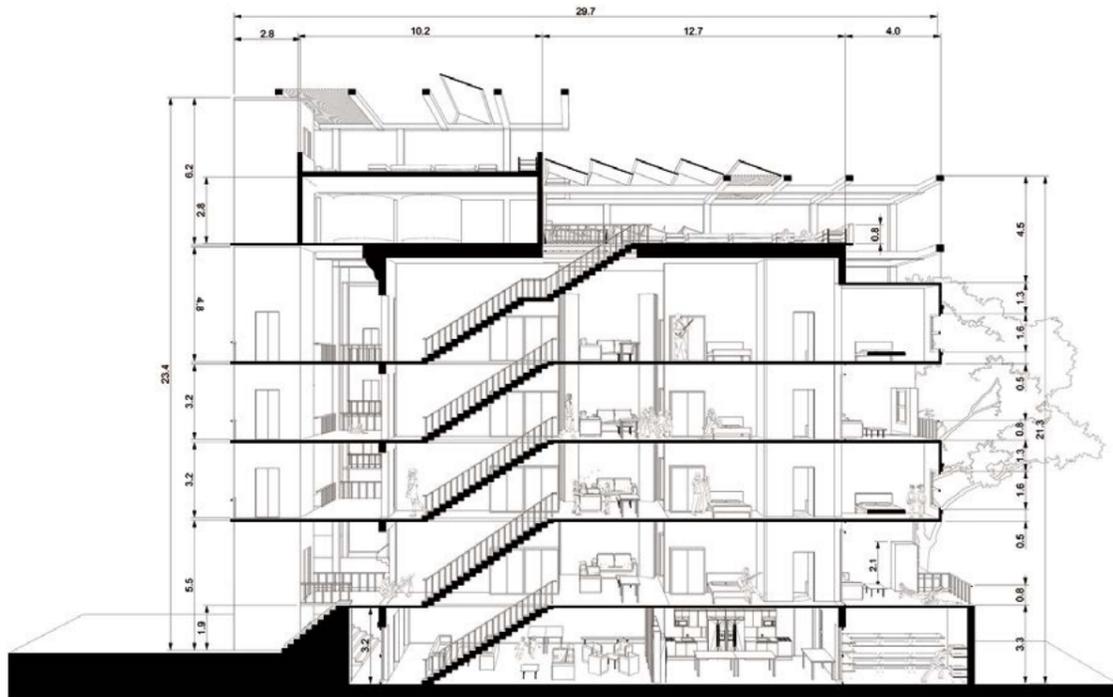
Housing renovations integrate communal ground floors and activated rooftop gardens to promote inclusive housing for all people to give and receive assistance.

This occurs through the installation of elevators and the update of ALL units to be ADA accessible. These renovations introduce a new regime of ADA accessibility standards and networks of care. Rooftop infrastructure, communal living spaces, and balconies all promote expanded networks of care and spaces of communal living.



Prototypes of Townhouse Renovation Floor Plan

In townhomes rented to different tenants, the city will subsidize the transformation of every floor to gain communal spaces. We re-organized every floor to create a dynamic communal space at the center with more units to account for displaced first floor residents.



Prototypes of Townhouse Renovation Perspective Section

Rooftop lets people can plant seed and sprout from the Center for Food Access. The Middle floors show people interacting in communal space. The bottom story is transformed to communal space, a specific function following residents' consensus.



Rooftop of Housing

Additional Balcony



Care

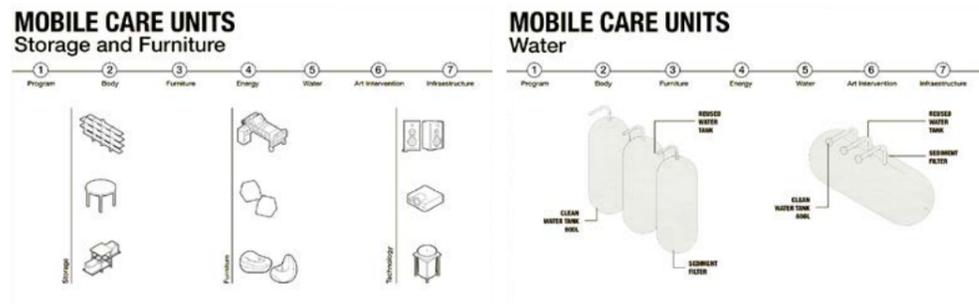
The city will provide specific zones for the mobile care units like parking lots to host activities. These Care Units constantly distribute throughout the community. They could contribute to a radical change in the cultural perception, even transforming the ways in which children imagine assistance vehicles.



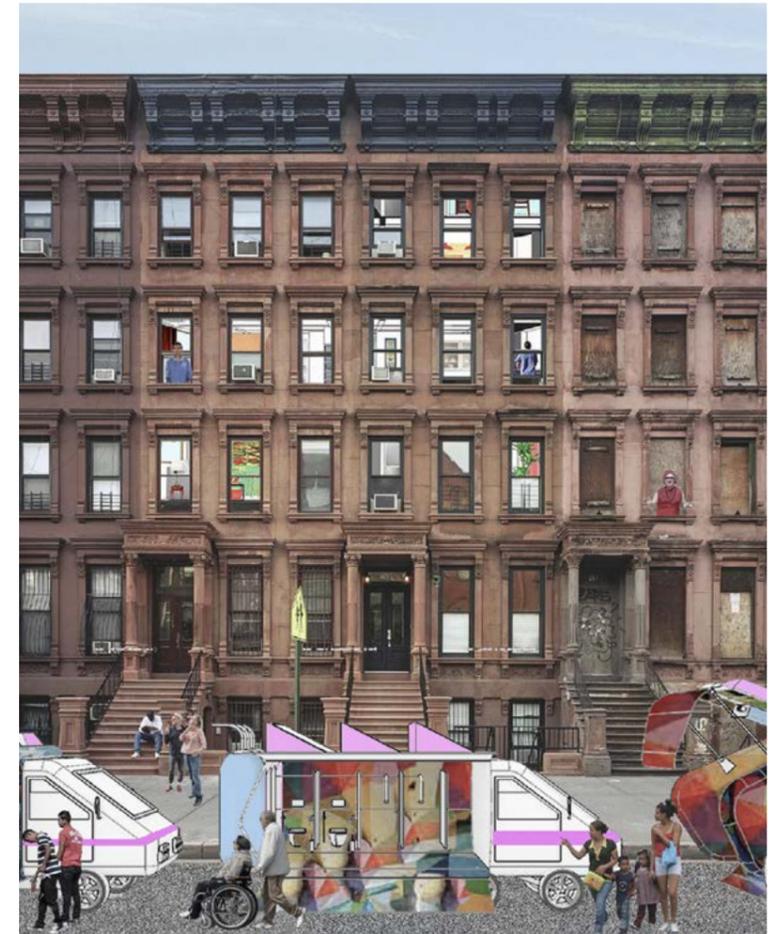
These vehicle have a high degree of freedom and adaptability, which can provide great convenience to the community and make up for the existing deficiencies on care.



These Units house local organizations like a mental health organization focused on those excluded from current health systems. We envision an indoor space in the apartment ground floor, where individual counseling can be supported.

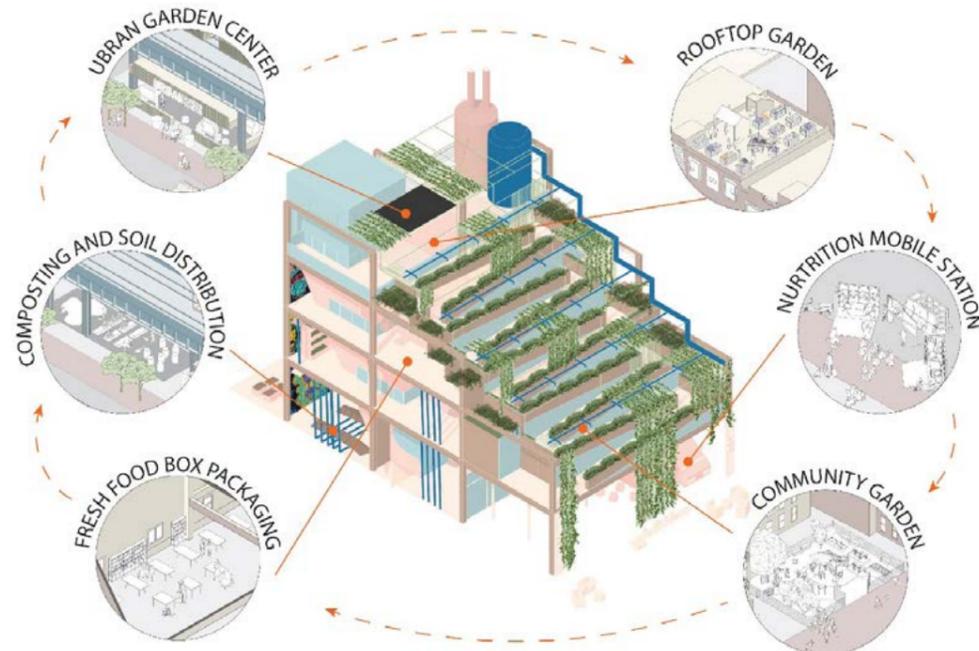


This intervention responds to the hierarchies and exclusions of the current system of healthcare. The city will launch a new program aimed to provide assistance for everyone that is mobile, de-centralized, and welcoming.



Food

Centers for Food Access will be placed in empty lots that the city will buy. GrowNYC and other organizations have the opportunity to manage the building's nursery, composting and educational facilities. GrowNYC already plays an active role in this community in relation to Fresh Food Box distribution.

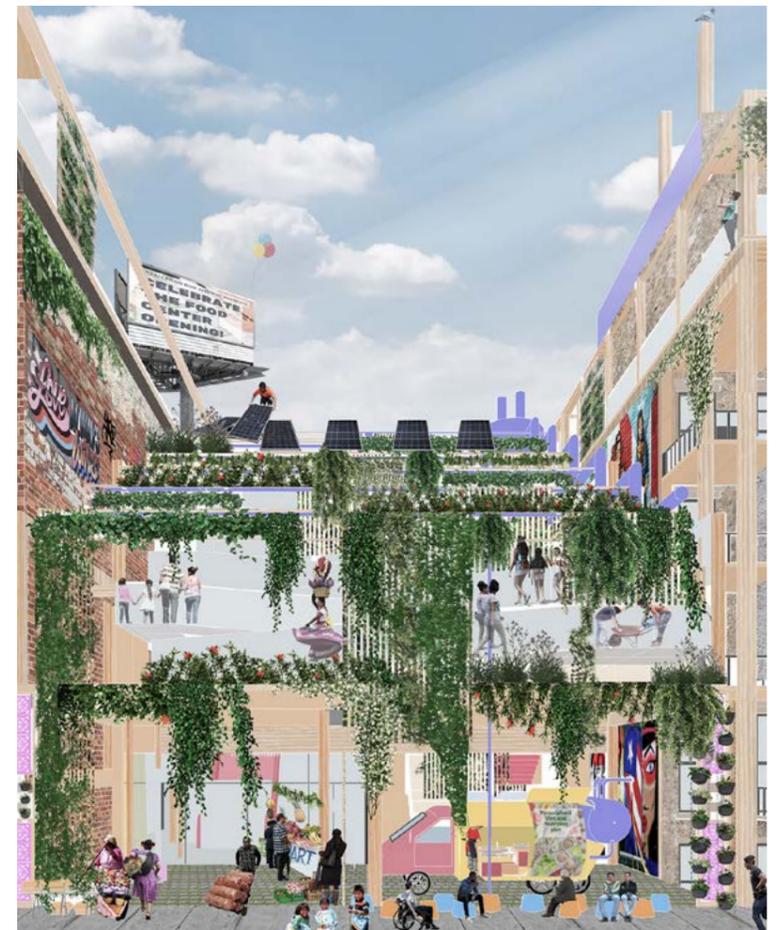


the nutrition station can promote accessible cooking options focused on fresh foods and other educational programming can exist.

This building will emphasize accessible circulation through a diagonal elevator, a visible water circulation system, and a biofilter air system. Therefore, Centers for Food Access will become a living learning experience for users.



Community members can pick up plants at the nursery, soil at the composting facility, Fresh Food Boxes, as well as interact with the public spaces, such as the activated rooftop.



The Defeated Flood



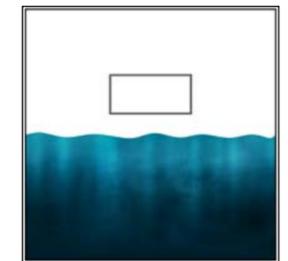
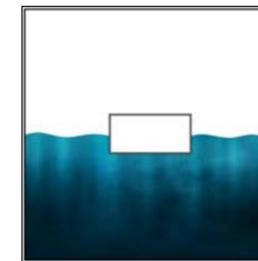
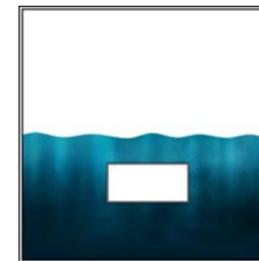
Instructed by Bernard Tschumi
Collaborated with Rourke Brakeville, Vasco Li
Sep~Dec, 2021



Conflict

Indifference

Reciprocity



Under Water

On Water

Above Water

I

II

III

Started with the three relationships between water and human

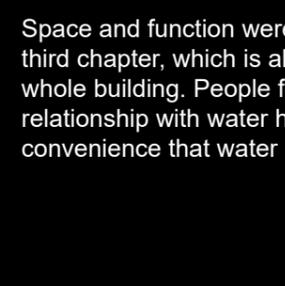
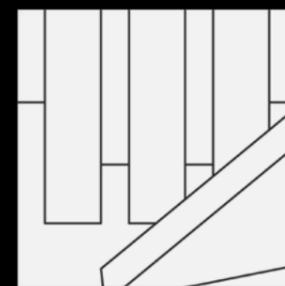
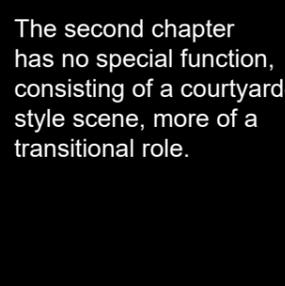
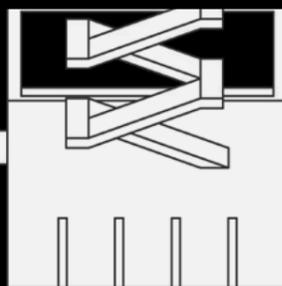
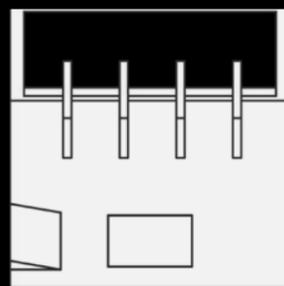
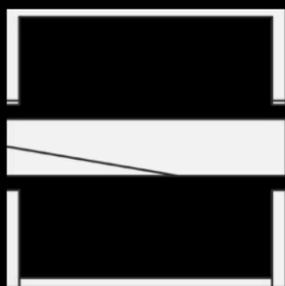
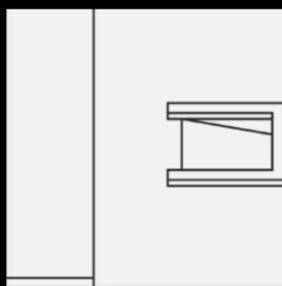
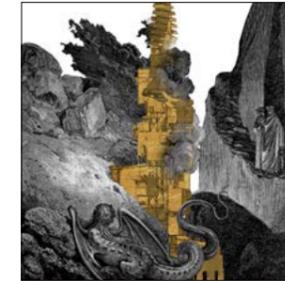
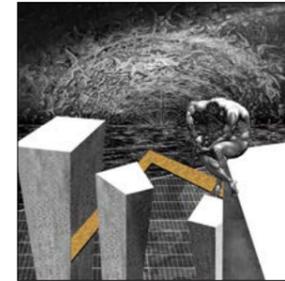
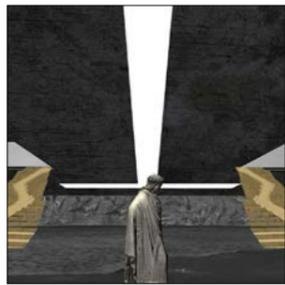
After researching the water-related disasters of climate change and, we wanted a design to house the same potent emotions that come out in an emergency.

Imagery & Space

Our narrative explored the emotional potential of the on-water spaces: these are meant to evoke feelings of neutrality, reflection, and contemplation, a kind of "Lingering"

Emotionally, the experience was designed to begin with discomfort and shock that directly reflects "Suffering" in flooding.

Above-water the narrative sought to bring out emotions of hope and wonder, which is a spiritual rising.

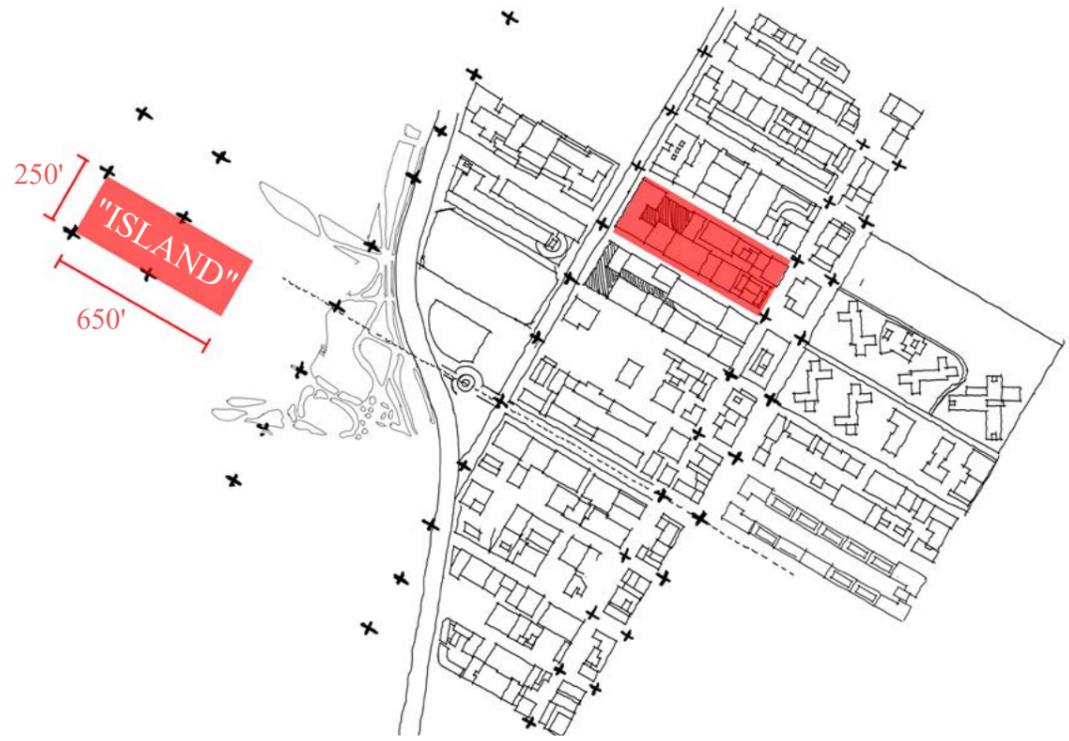


The narrative of Underwater was constructed with an entrance that passes the visitors to go under water. Functionally, it mainly performs the service-oriented task of building entrance.

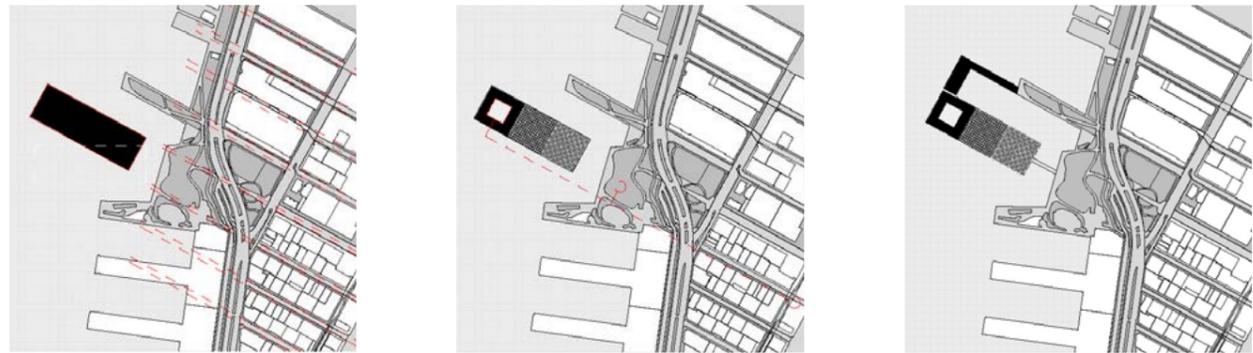
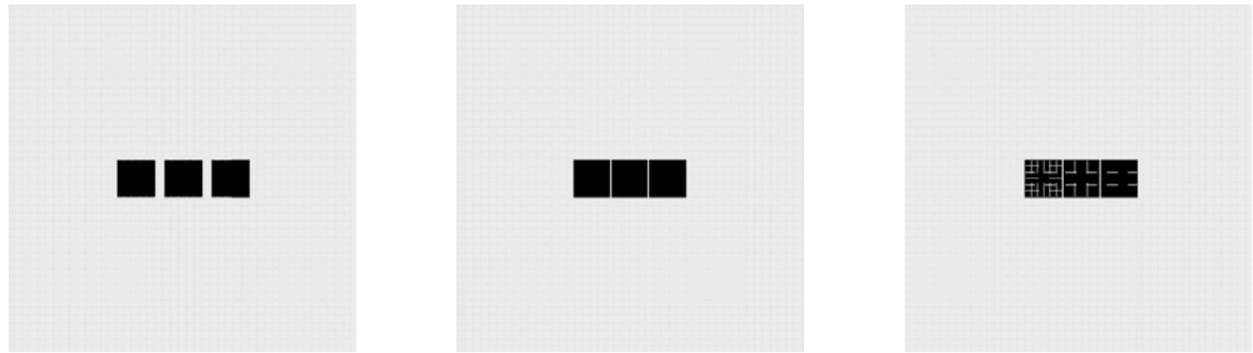
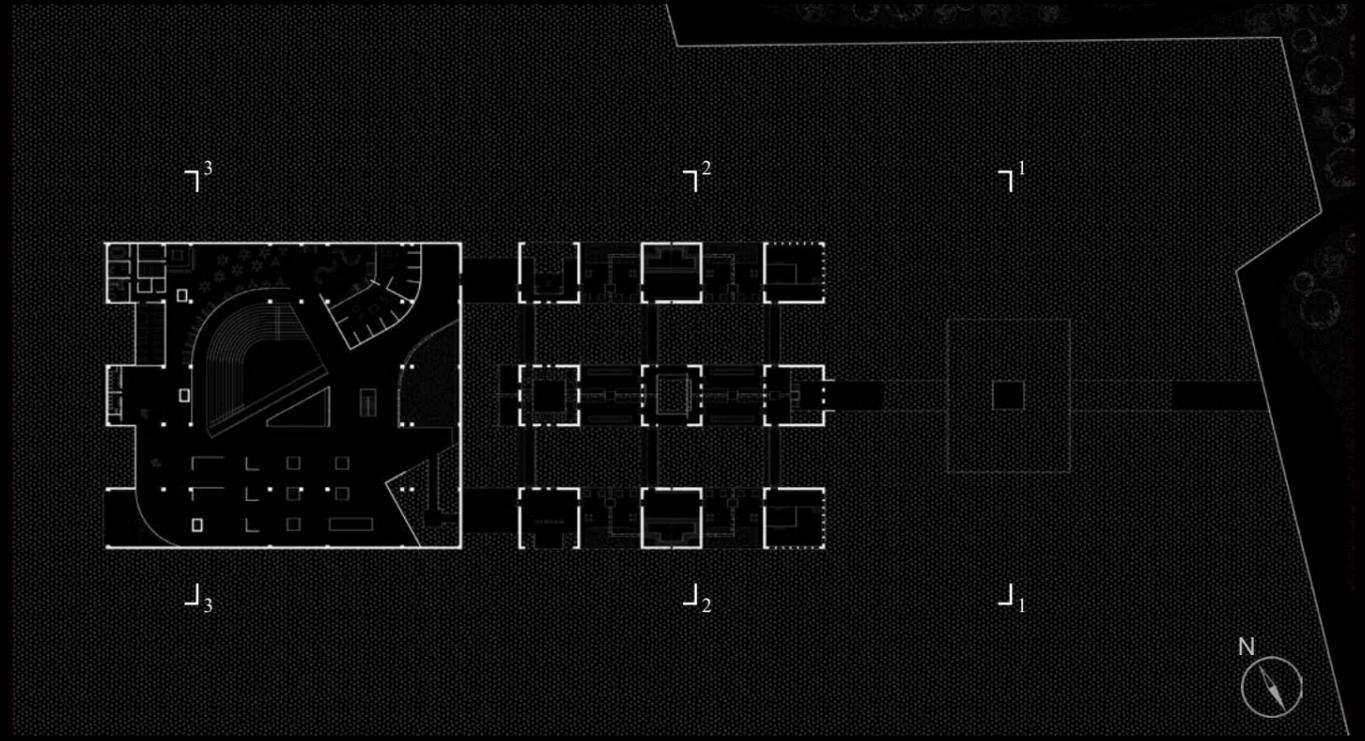
The second chapter has no special function, consisting of a courtyard-style scene, more of a transitional role.

Space and function were unified in the third chapter, which is also the core of the whole building. People feel the symbiotic relationship with water here, and enjoy the convenience that water brings to people.

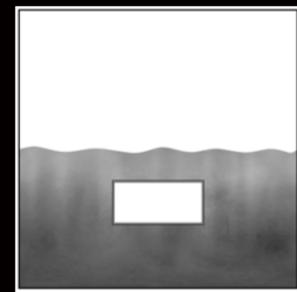
Dimension



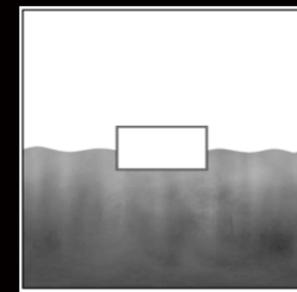
Site Plan



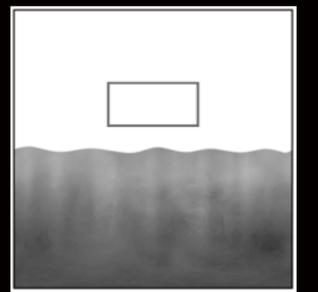
Massing Generating



Under Water



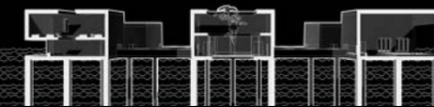
On Water



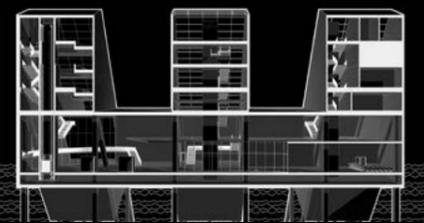
Above Water



1-1



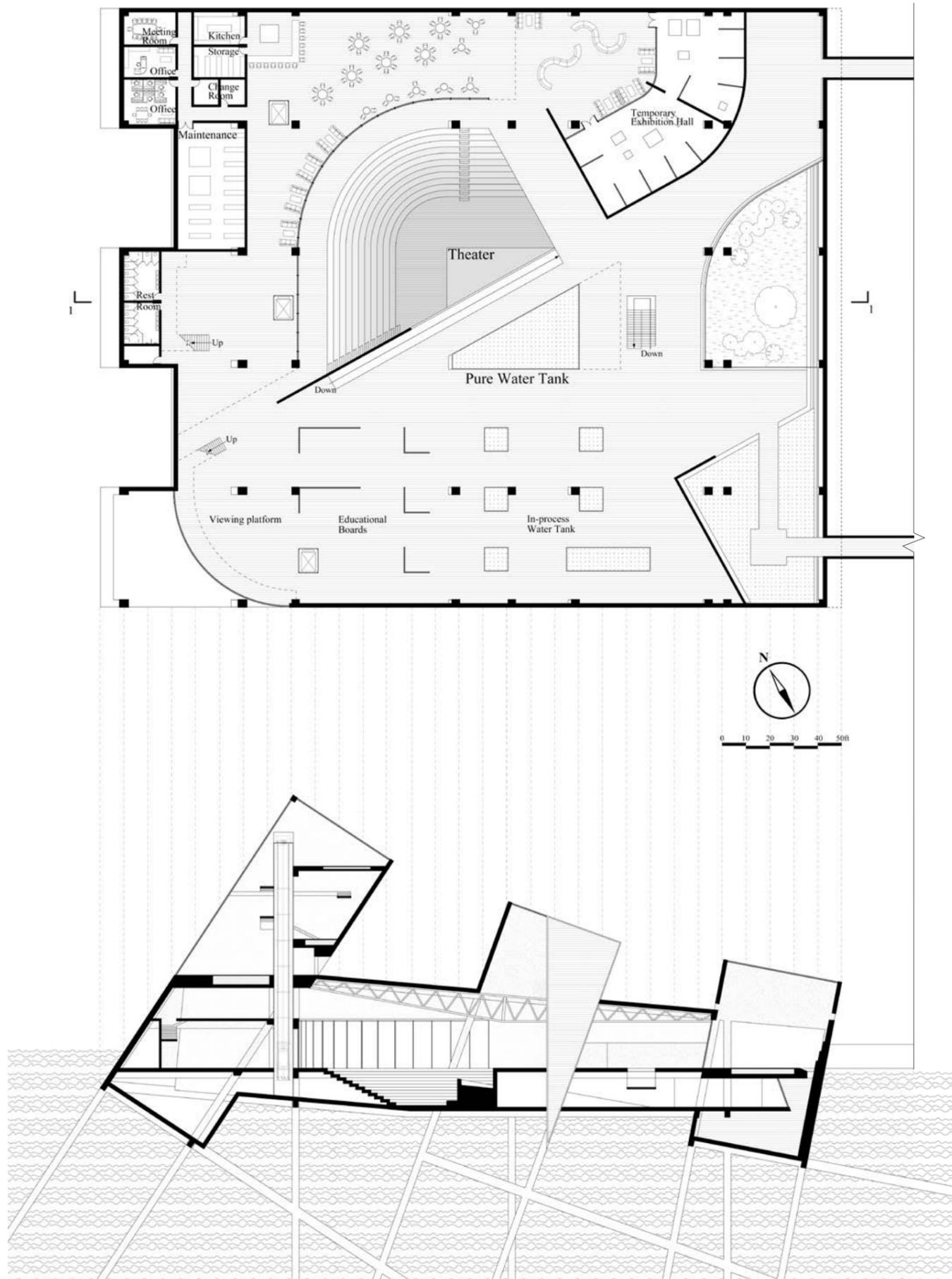
2-2



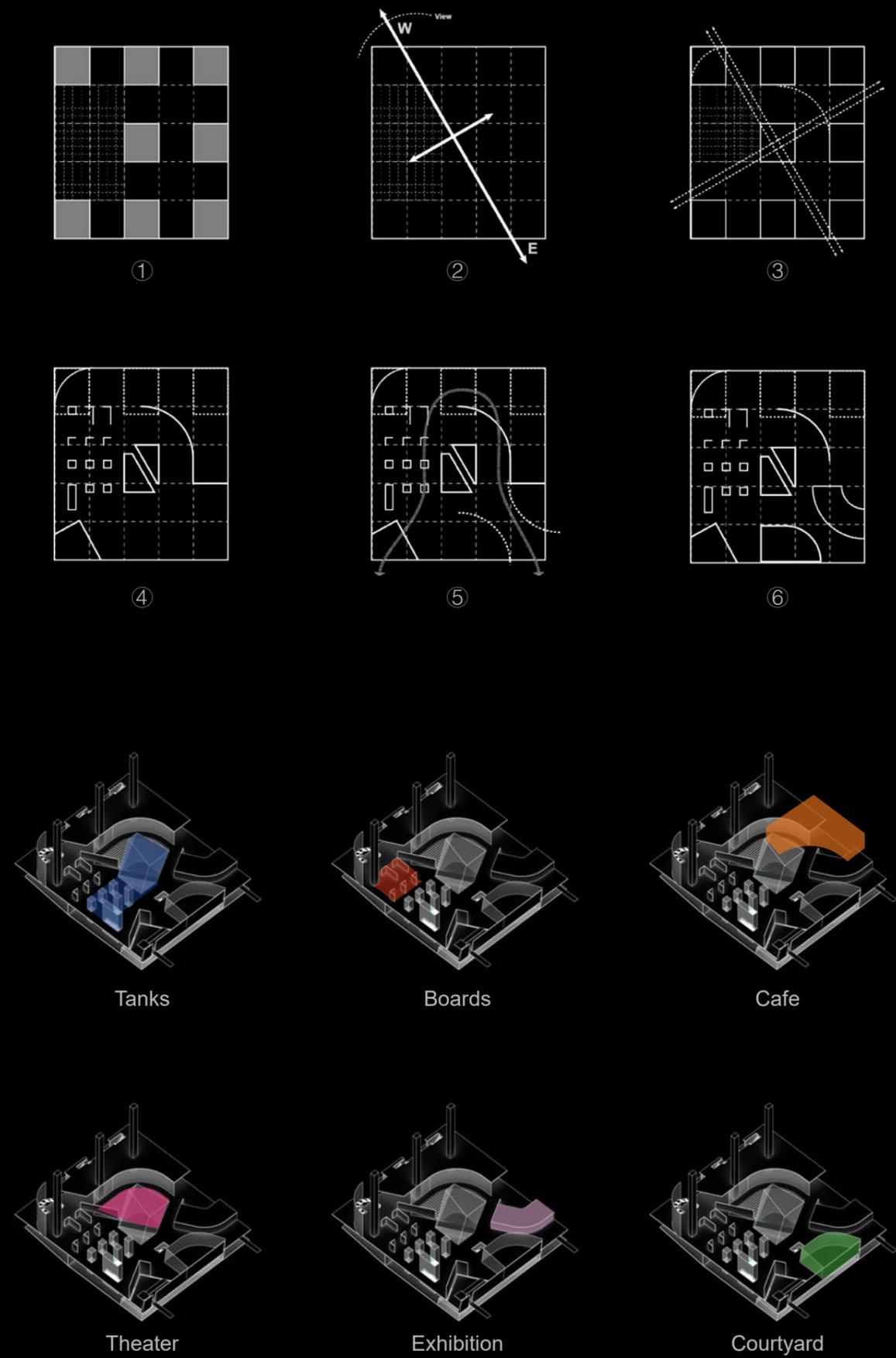
3-3

Concept & Transverse Sections

Floorplan and section of Chapter III



Plan Generating



Programs



The first chapter is located underwater, where visitors can experience the overwhelming emotions of the disaster. The scenes speak of suffering and reveal the unpredictable future brought about by climate change.



I

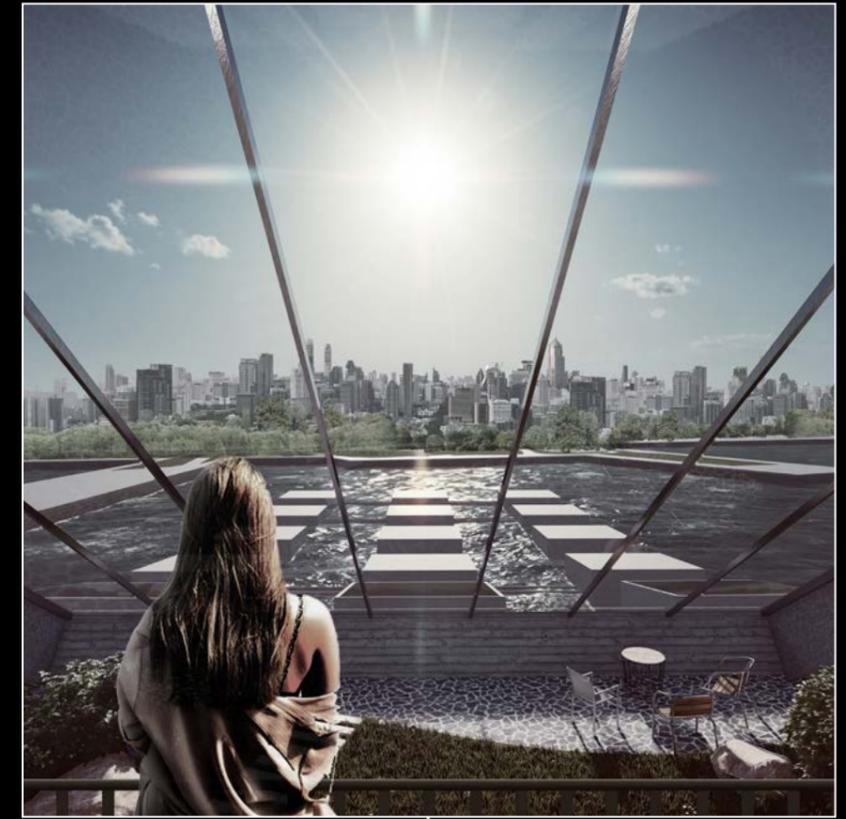
Respond to Emotion



The second chapter takes a neutral attitude to let visitors feel the objective existence of water as an element. It also serves as a transition space connecting the core third chapter, where calmness is the key word.



II



The narrative ends on a high note, here revealing the way in which man harnesses water resources and also serves the visitor with practical functions. The symbolism is that with inspiration, people unite to overcome all difficulties and finally come to a happy ending.



III



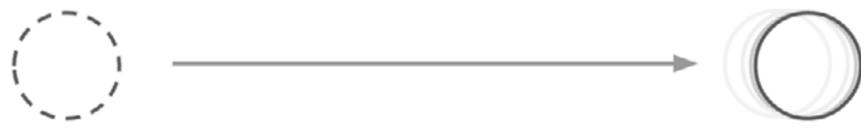
Inconsistency in the consistency

Everything Must Scale

Instructed by Michael Bell
Jan~Apr, 2022

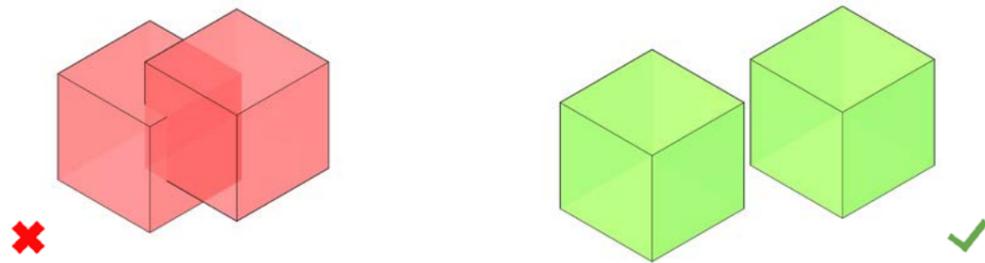
Inconsistency in the consistency and chaos needs to be seen. And the real radical innovation is from the underlying logic, for the real-time expression of individual will, on shaping space, whether for reasons of equality, justice or the objective law of development.

Motion and Space



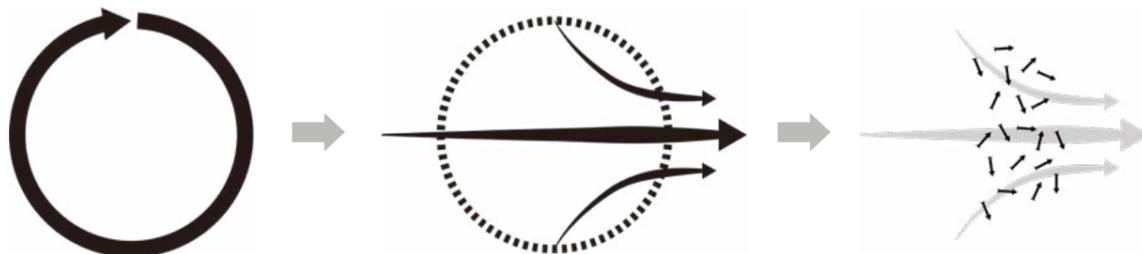
Motion

Motion refers to the change of position from here to there. All motions of people have purpose/meaning.



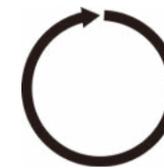
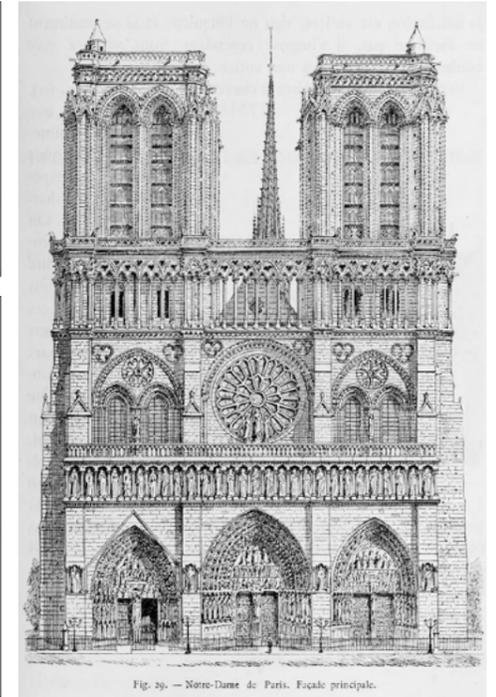
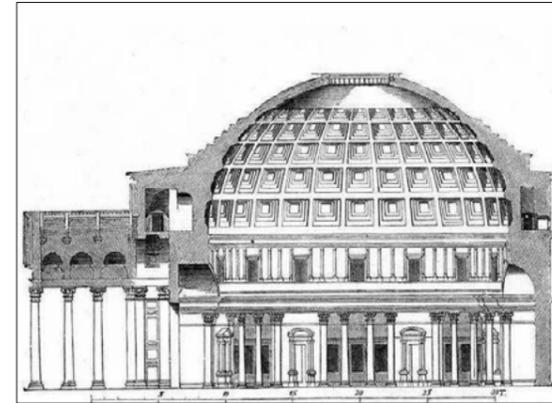
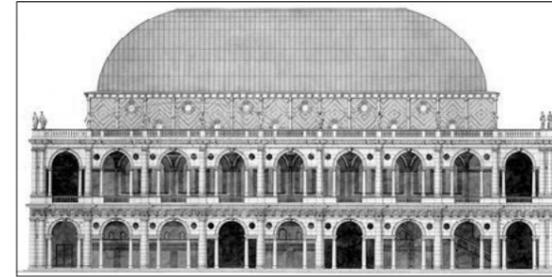
Space

Entities occupy space, cannot overlap each other, which forces people to go through intermediate, to get the purpose. Motion is the tool, which shows its Methodology wise.

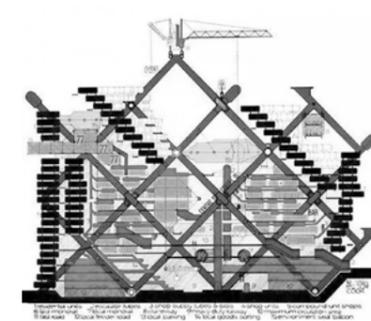
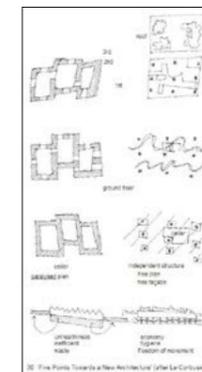


Evolution in the philosophical sense

Historical Analysis

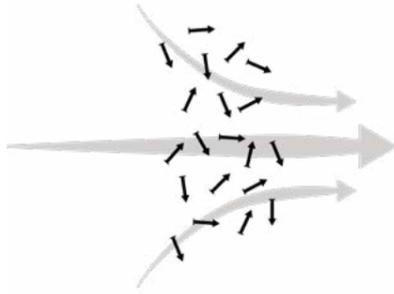


Emphasize classic proportions, pursue completeness and perfection, whether in terms of firmitas, utilitas, venustas. In fact, Perfection is a metaphor for the motion of a closed loop.

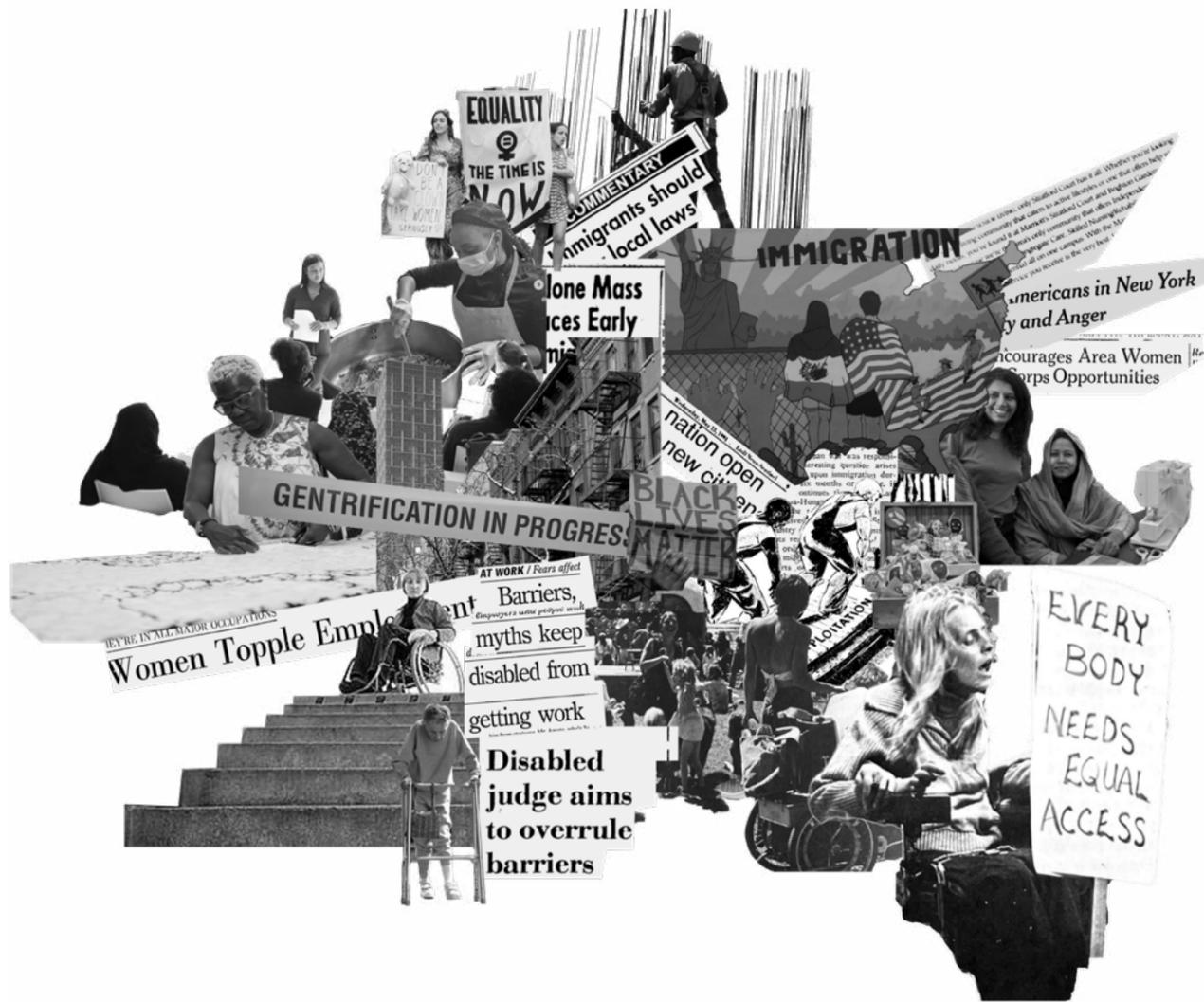


As development speeds up, the closed-loop circular motion collapses towards the flow of time, the vector shows. The so-called sustainability, the dynamic construction planning, free plan free facade all are concrete form of that vector.

Inconsistency in the consistency

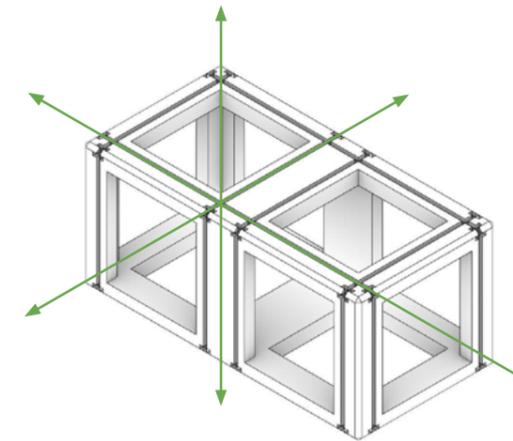
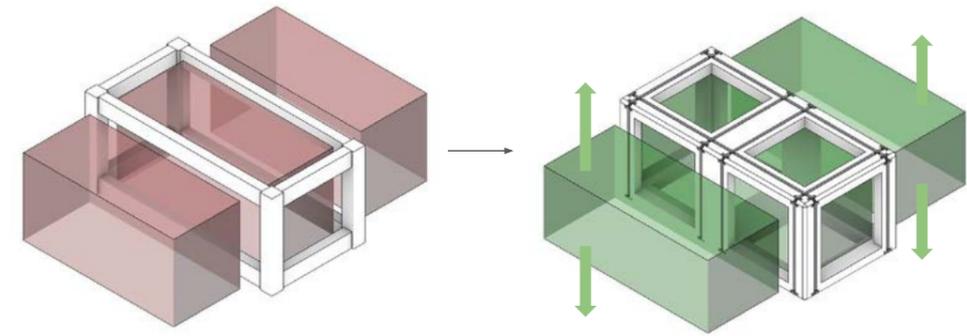


The result emphasizes the overall direction and ignores the inconsistencies in it. This inconsistency refers to the different expression of "me" for space.

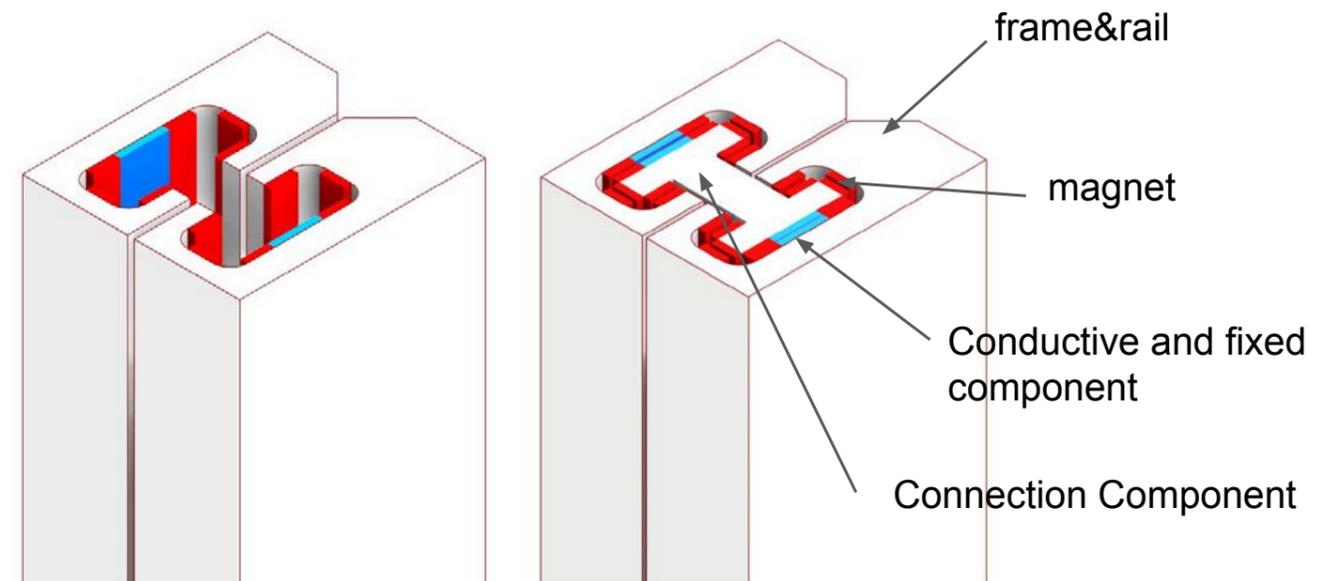


The real radical innovation is from the underlying logic, for the real-time expression of individual will/personal will, on shaping space, whether for reasons of equality, justice or the objective law of development

Inconsistency in the consistency

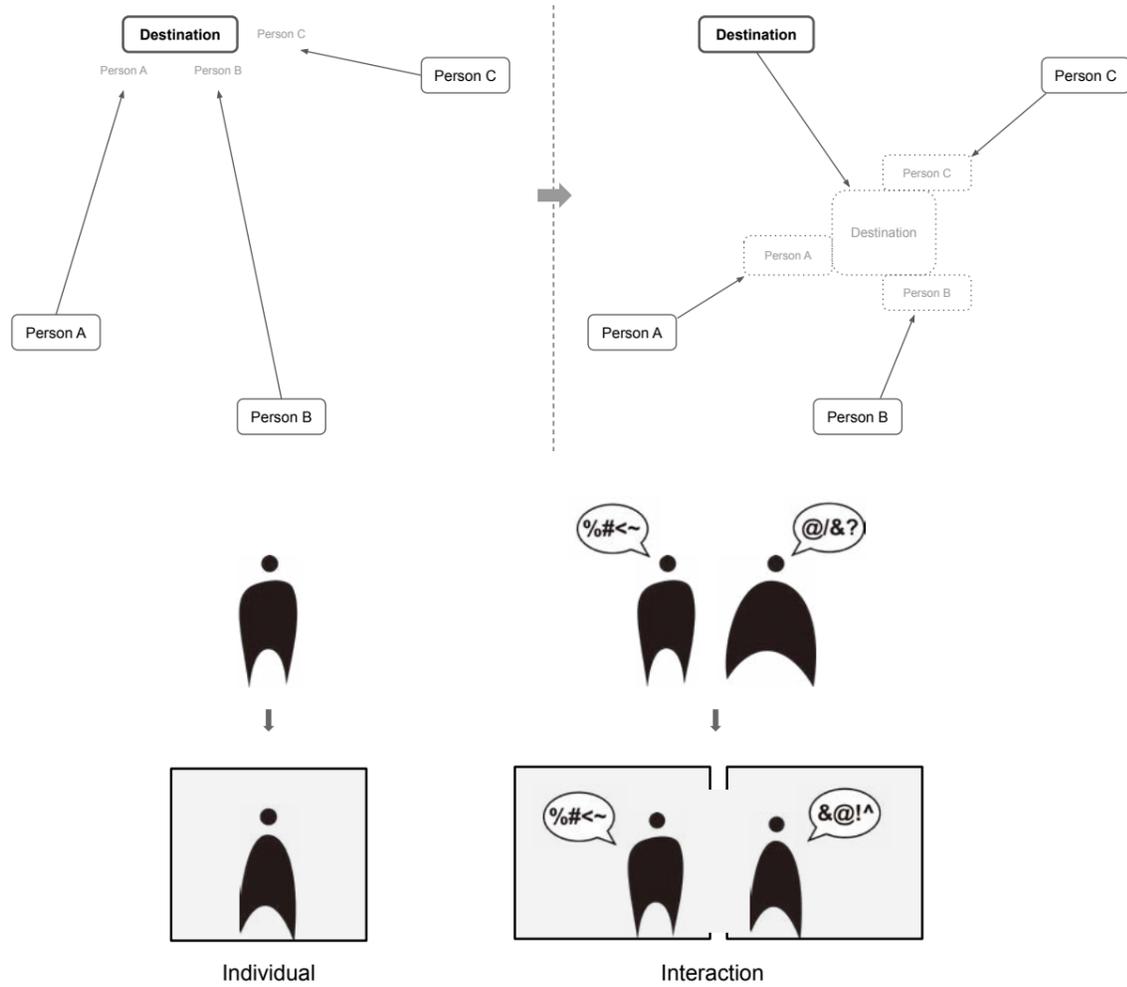


The task of column and beam becomes Transportation. Frame becomes rails. Space can flow along them along the XYZ dimension.

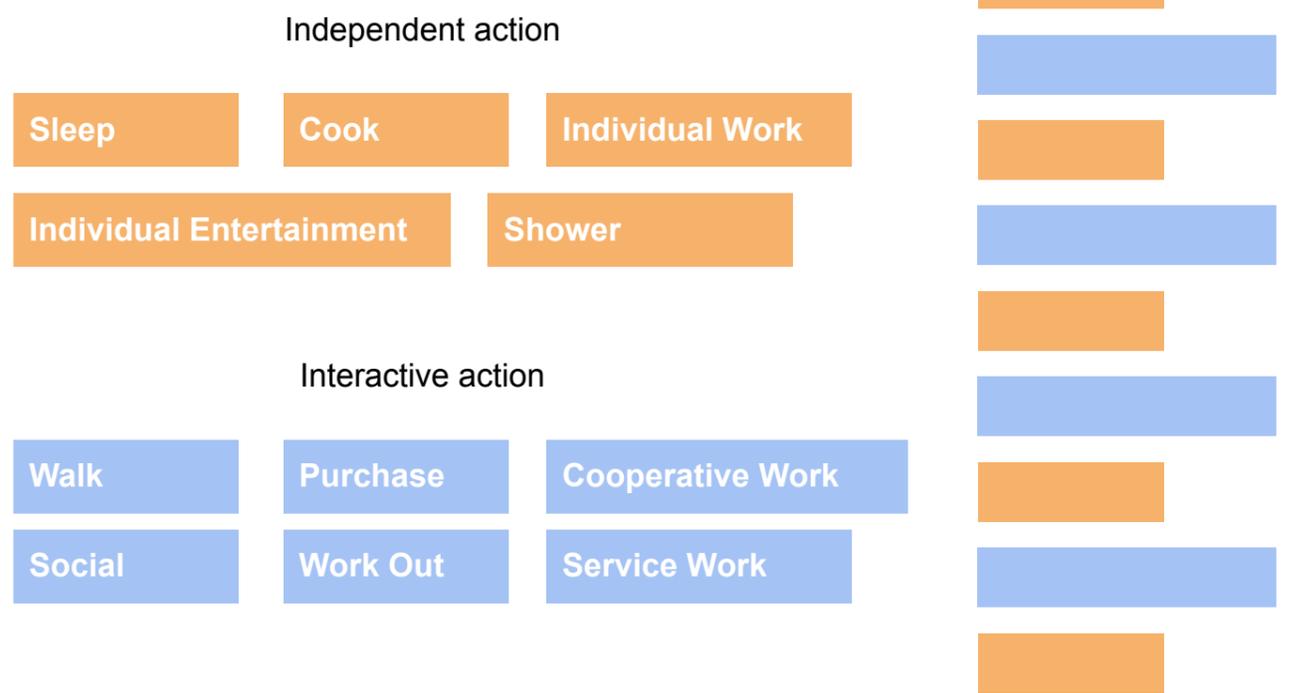


Maglev EMS allows the system to work at any speed condition. and There is an intermediate component transfer motion between two entities.

Change of individual motion

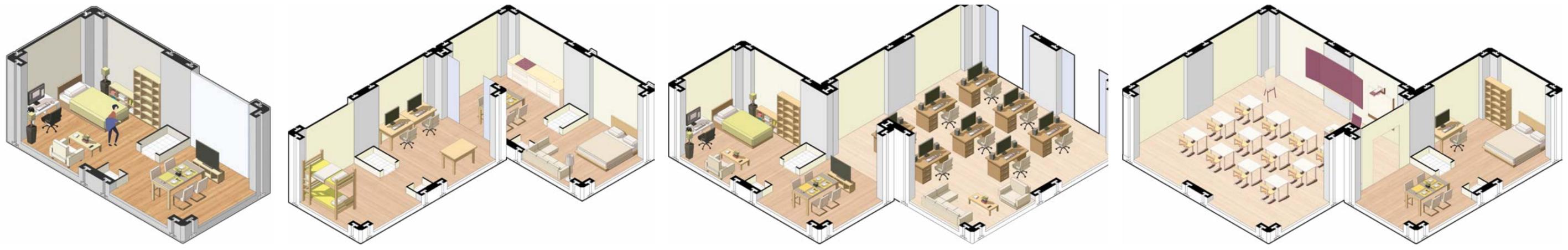


Schedule matters

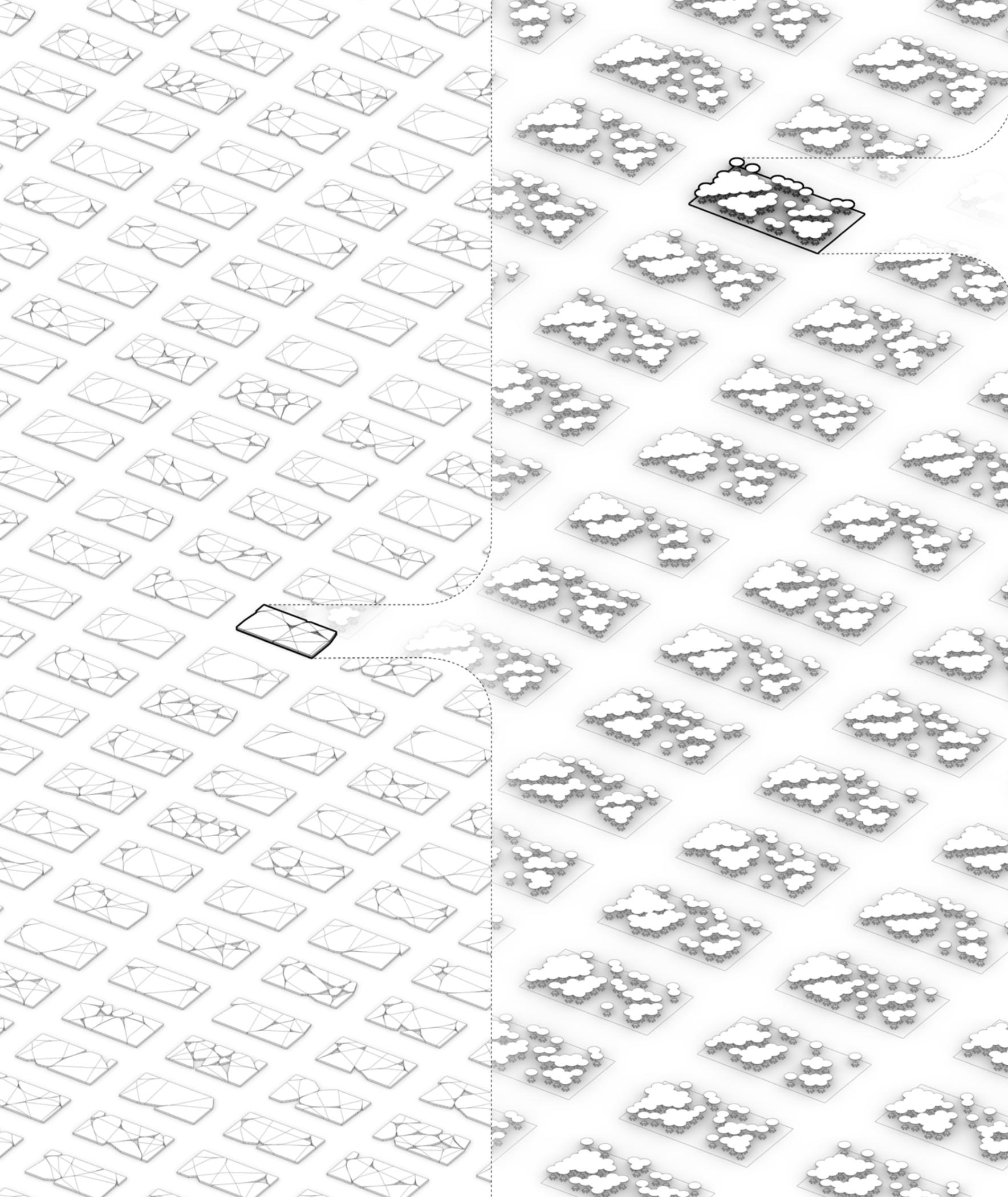


humans have been somewhat detached from natural selection. The so-called evolution has been its environment, which includes the quality of space, equipment, light and other architectural elements. Architecture has become the new vehicle of evolution. Therefore, the boundaries of the so-called "individual" concept have been extended, and the inconsistency of the individual's behavior includes the inconsistency of the space to which it belongs.

Schedule becomes the key. A very important part of people's growth is learning to make schedules, and everyone agrees that a clear and organized schedule is the cornerstone of achieving free will.



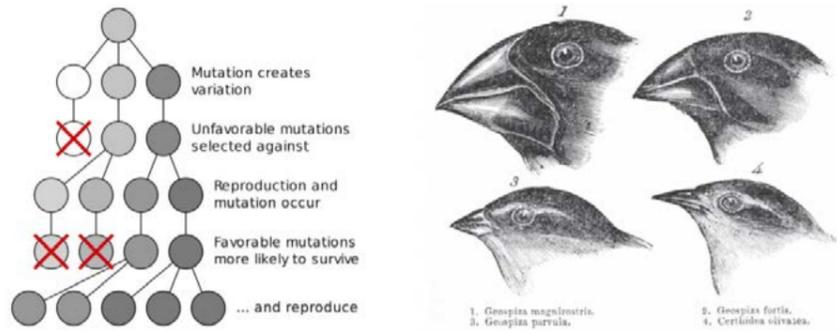
Simultaneous motion allows space to be organized dynamically. All motions are inconsistent. All the will can be part of the decisive power of shaping space. In such an utter motion, the nature of substances can be liberated.



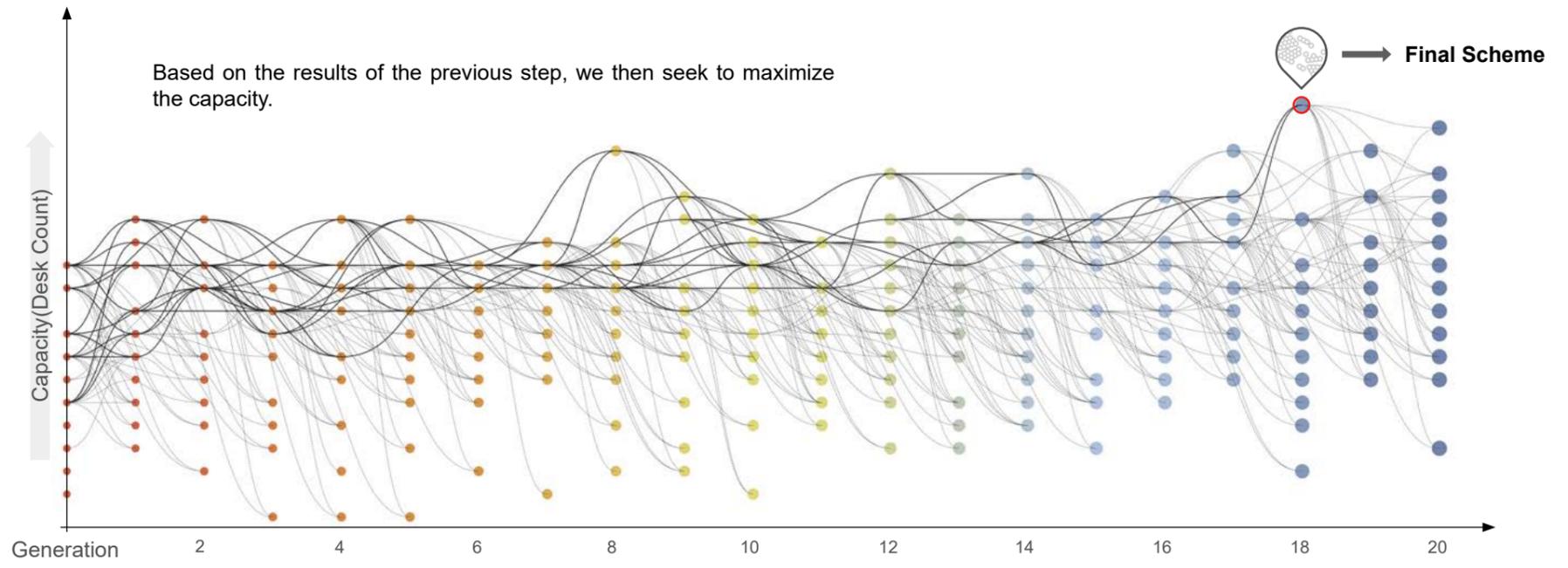
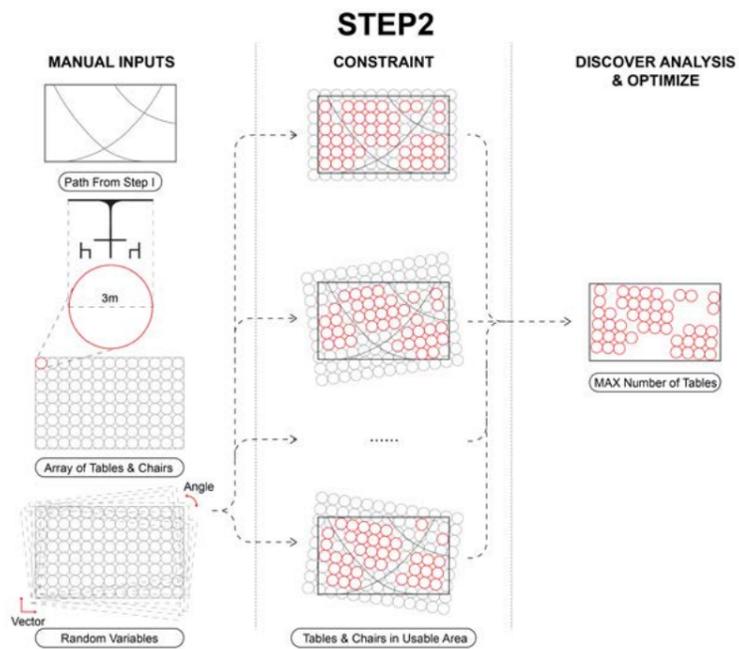
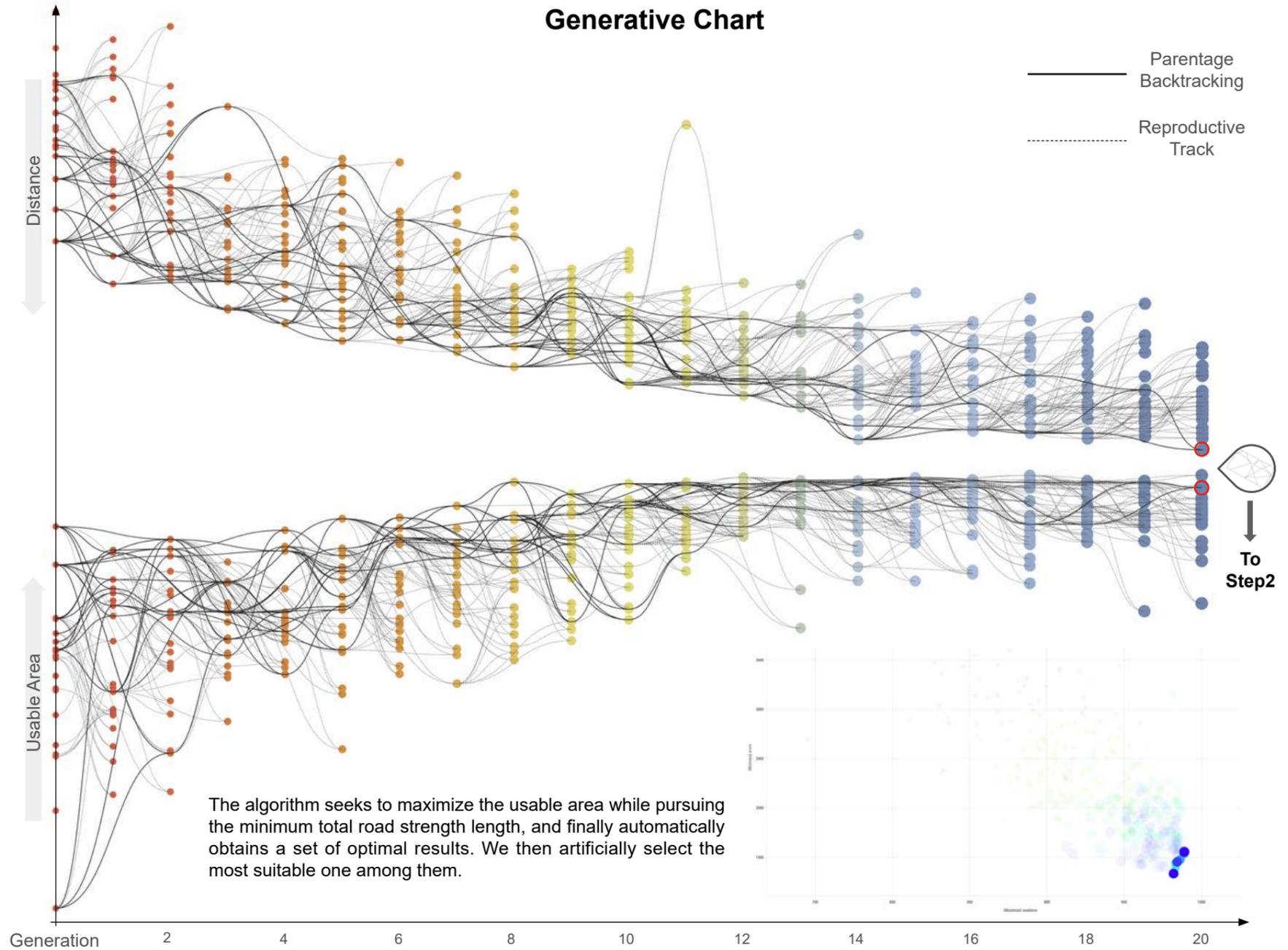
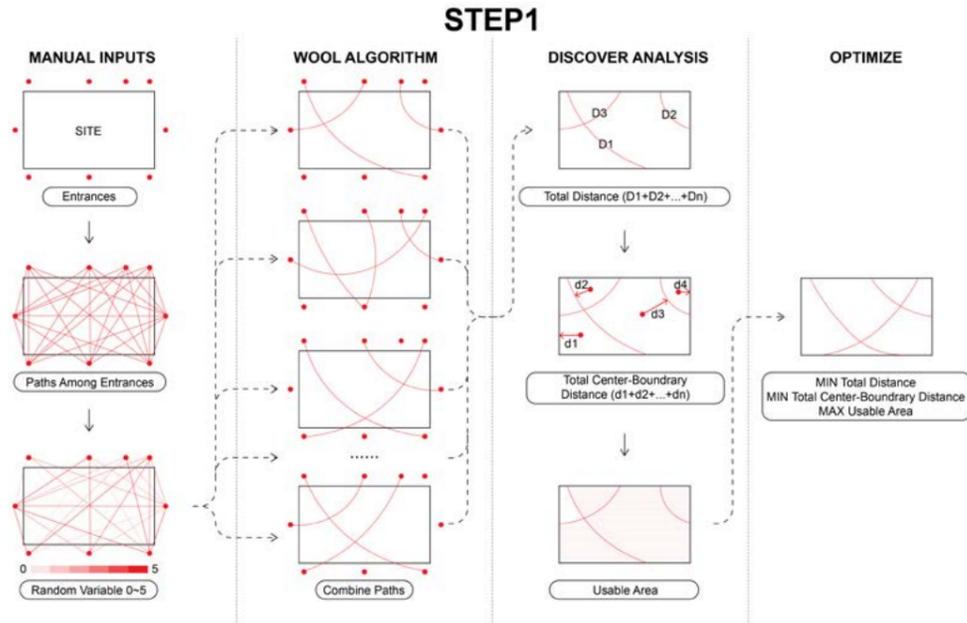
Generative Design Pavilion design

Instructed by Danil Nagy
Collaborated with Lichong Tong, Ningyuan Deng, Haotong Xia, Jiaying Qu
Sep~ Dec, 2021

This project aimed to generate optimized model by given context variables.



This image came from *Voyage of the Beagle*, Charles Darwin



Re-thinking BIM

Instructed by Mark Green
Collaborated with Ke Zhai
Sep~ Dec, 2021

The project aimed to explore more possibility building complicated adaptive Revit componets by Grasshopper according to context data.

1. Extract the first 4 vertices of the facade base panel.

2. Set a quarter of this side as the fifth point.
Rotate the plane based on the axis of this edge also with a one to one angle data.

3. Connect the center point of the top edge and the two vertices of the bottom edge.
Rotate this surface around the bottom edge with a one to one angle data.

4. The triangle and the plane intersect at two points, which are the sixth and seventh points.

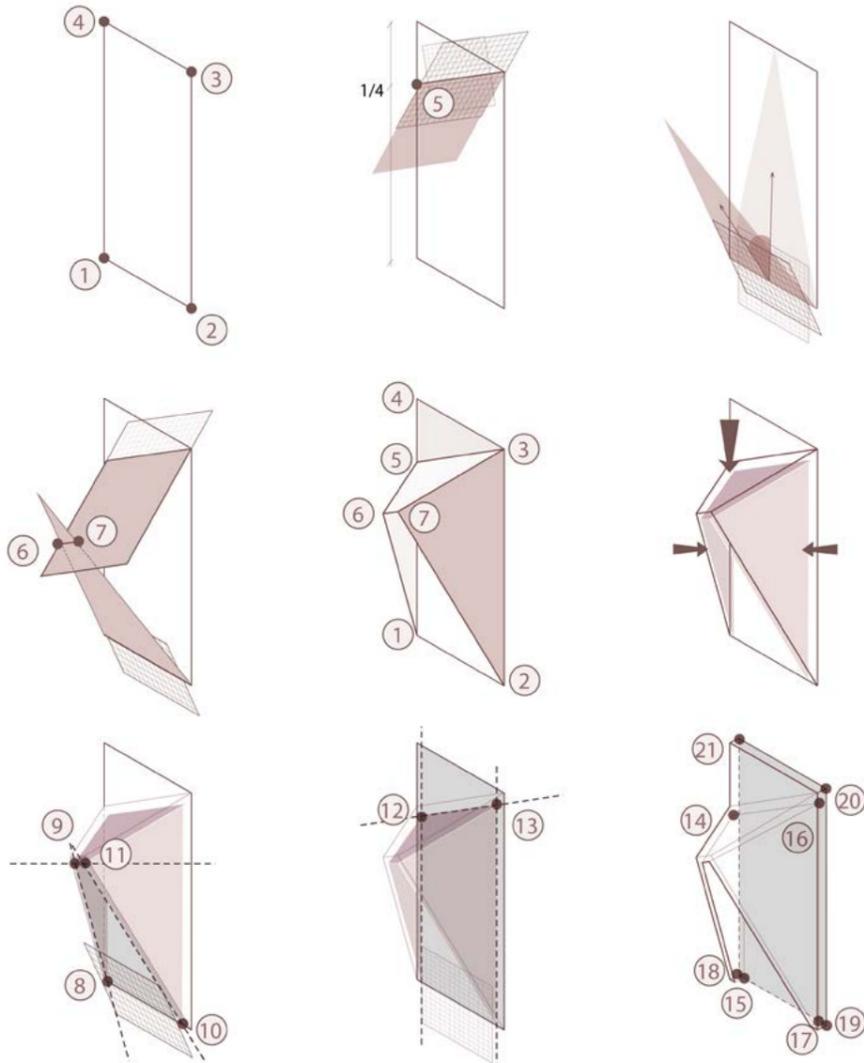
5. With these two and previous points, we can get three surfaces.

6. These three faces need to be offset inwards.

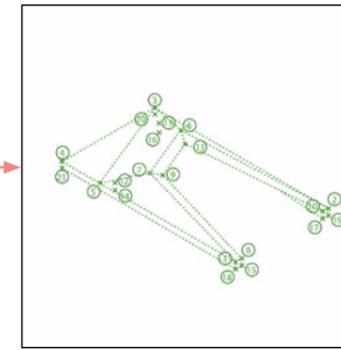
7. These three curves and the bottom edge intersect to generate four points.

8. The three new surfaces intersect with the facade panel base plane to get another two new points.

9. The intersection of these three surfaces and the inner face of the facade panel, with the four vertices of the inner facade panel face, we got 21 points.



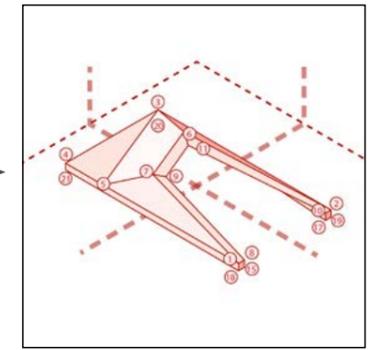
Define an adaptive spatial logic by which points can be generated



Grasshopper defined all relative positions of adaptive points

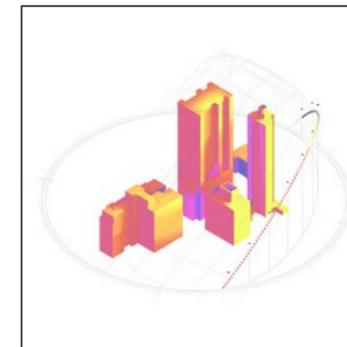
One Panel

Import points
Rhino.Inside.Revit



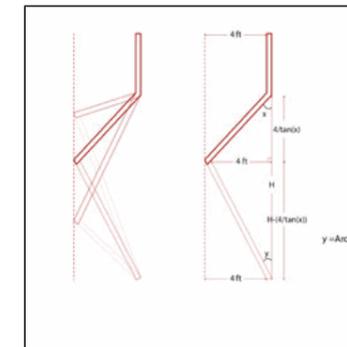
Revit generated entities according to given points

Multitudinous Panels



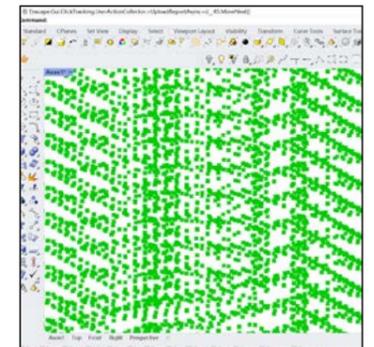
Analyze the illuminance of each panel

+



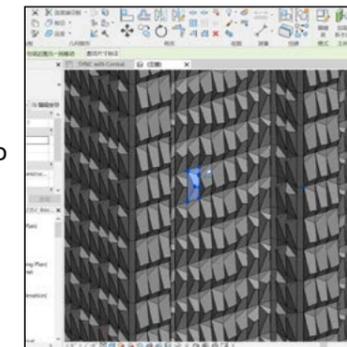
Apply illuminance to the modeling logic

=



Calculate positions of all points of multitudinous panels

Use imported points to build panels in Revit

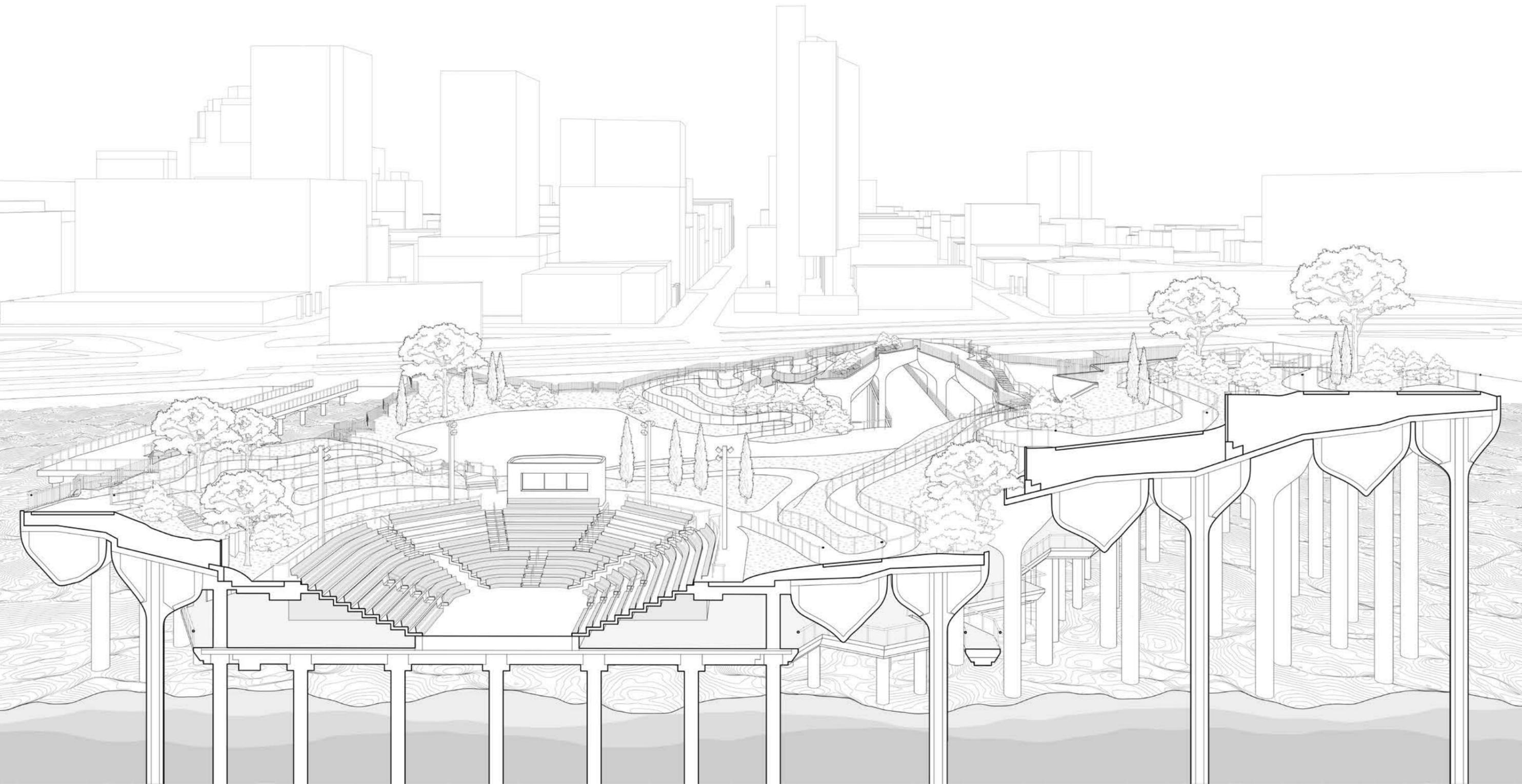


Import points
Rhino.Inside.Revit



Re-thinking BIM

Instructed by Marc Tsurumaki
Jan~ Apr, 2022



Section of the Little Island