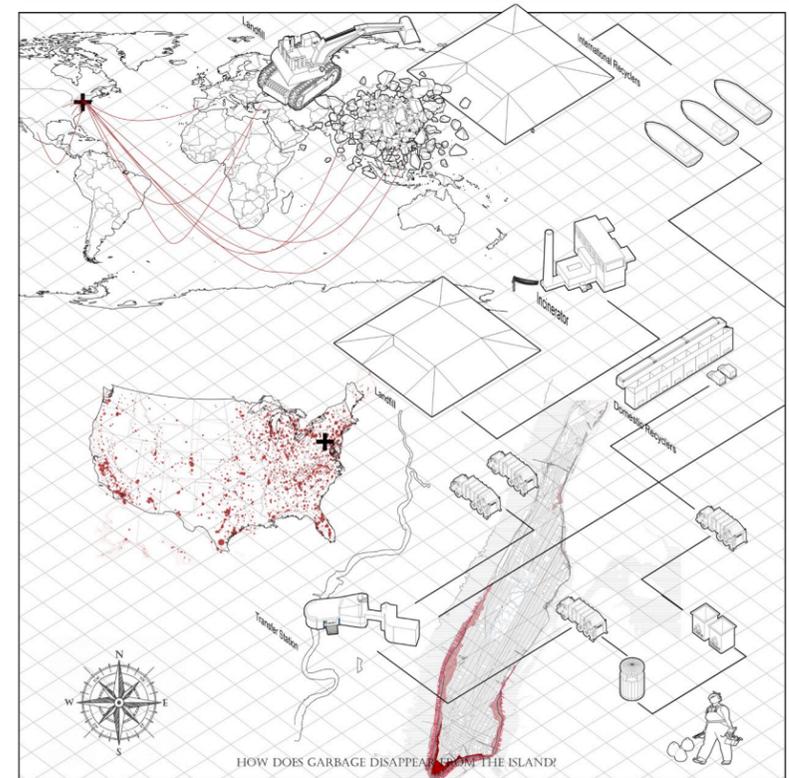
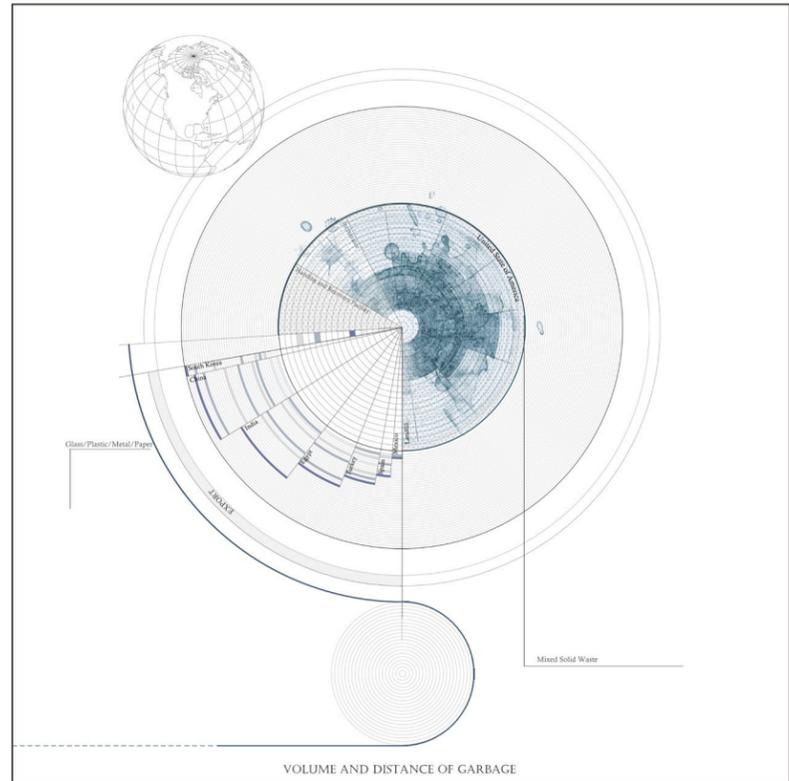




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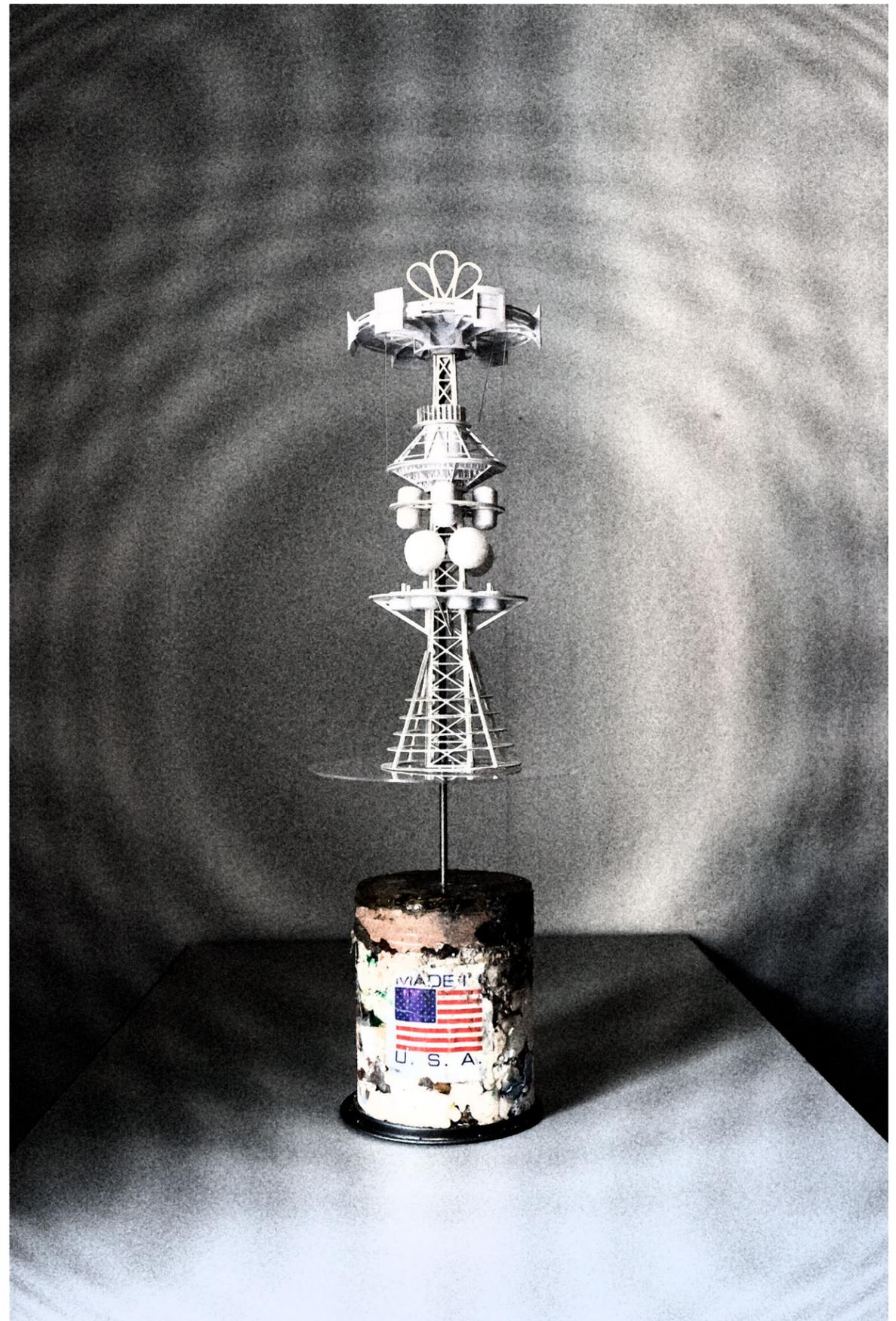
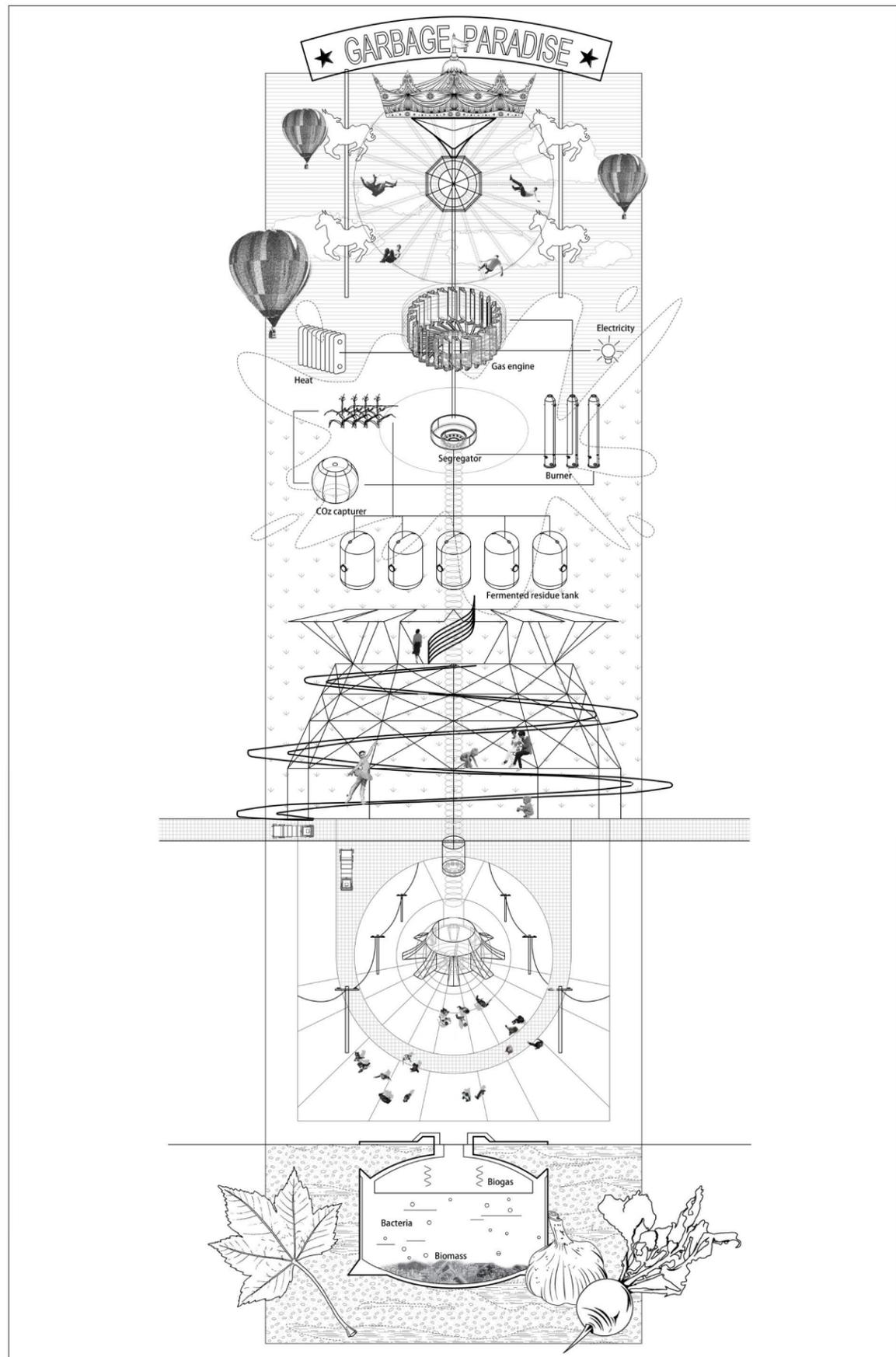


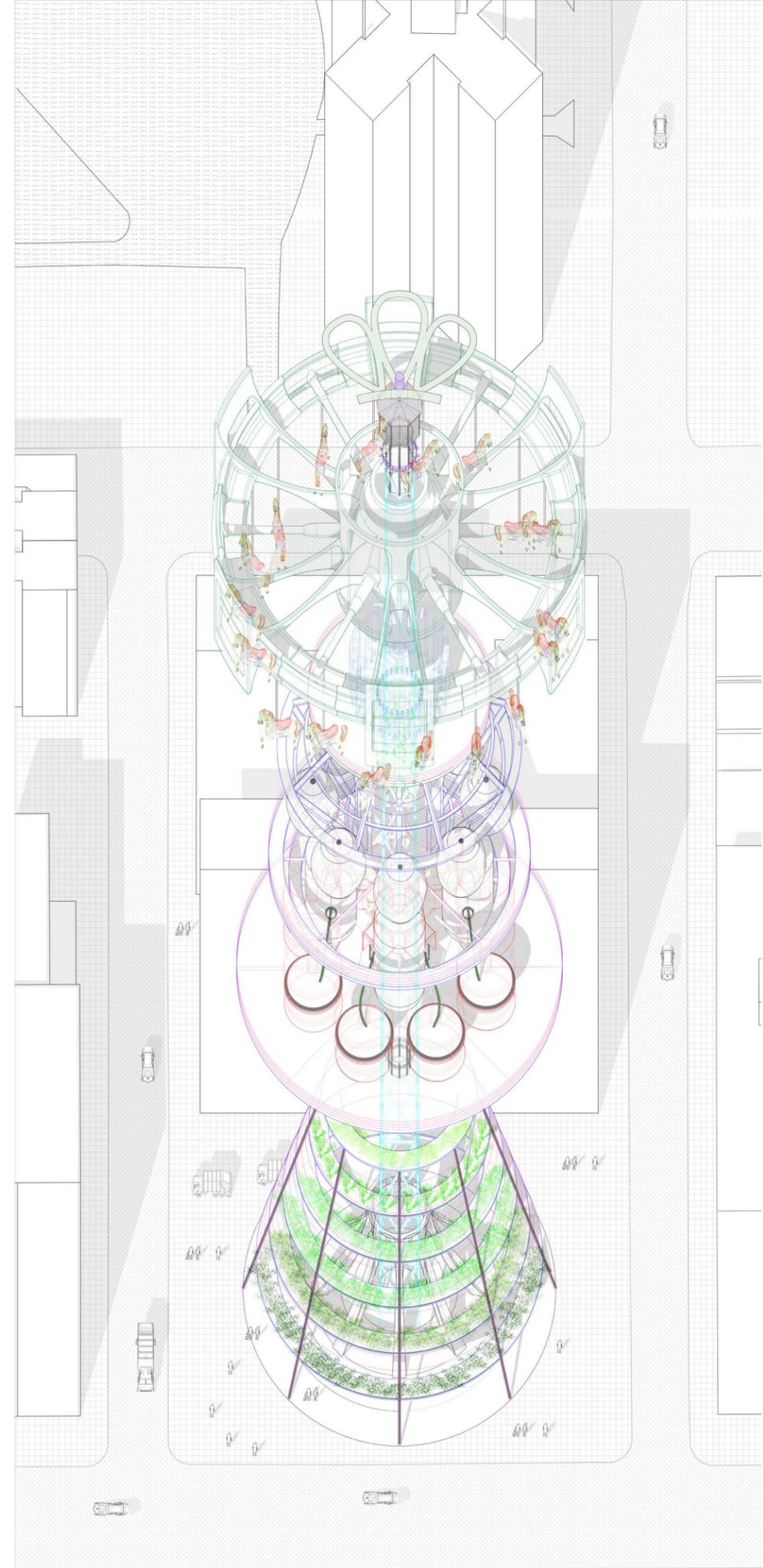
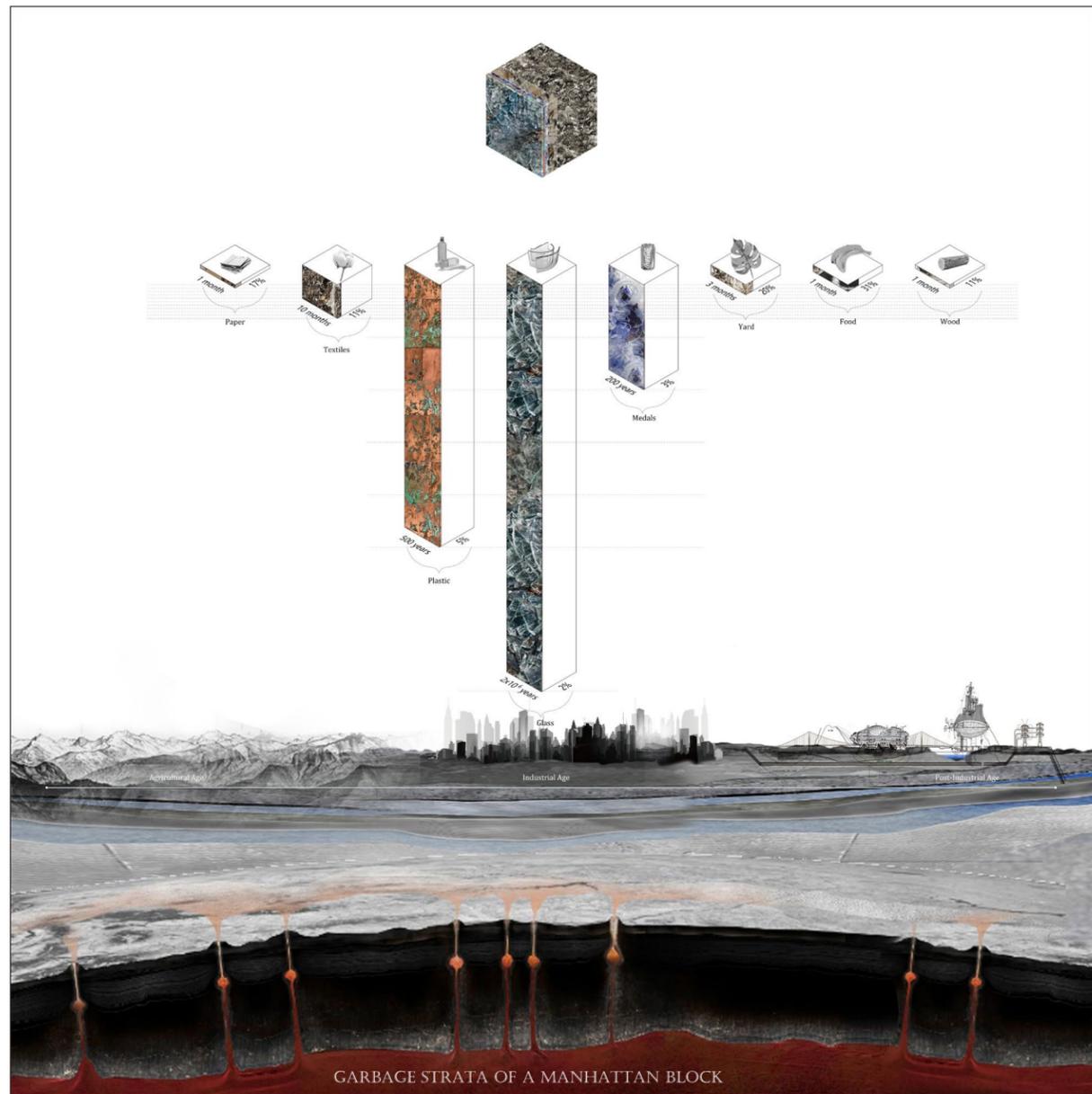
GARBAGE PARADISE

Project Type	AAD Studio
Time	2019. Summer
Location	New York, USA
Partnership	Individual Work
Tutor	Jorge Ambrosi, Gabriela Etchegaray

The study of garbage is the study of cities and civilization. What industrial societies do, is to convert forests, minerals, and water— low-entropy matter and energy — into different forms of garbage. Through garbage, we can see human's ambition and vulnerability.

In the past, garbage exerted a powerful force on the physical form of New York. People lived with garbage in their daily life. Now, behind a huge developed garbage management system, garbage seems to disappear. By measuring its volume and time, we can regard garbage as a vehicle to read the city, to think and imagine where we are in the whole process of civilization.





ADAPTIVE RENOVATION

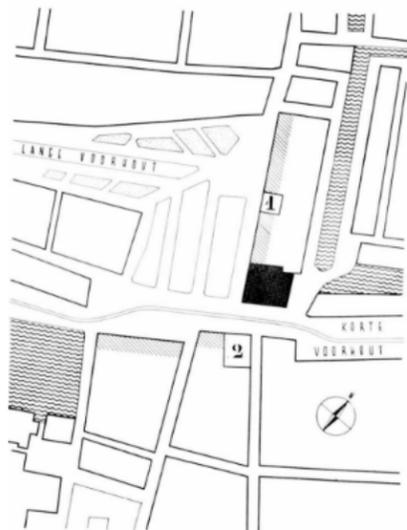
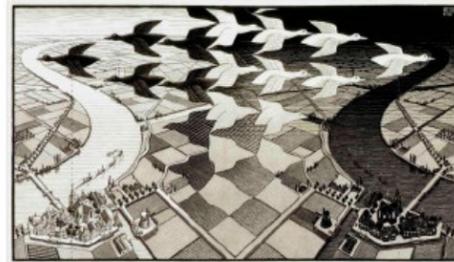
RENOVATION OF U.S. EMBASSY IN THE HAGUE

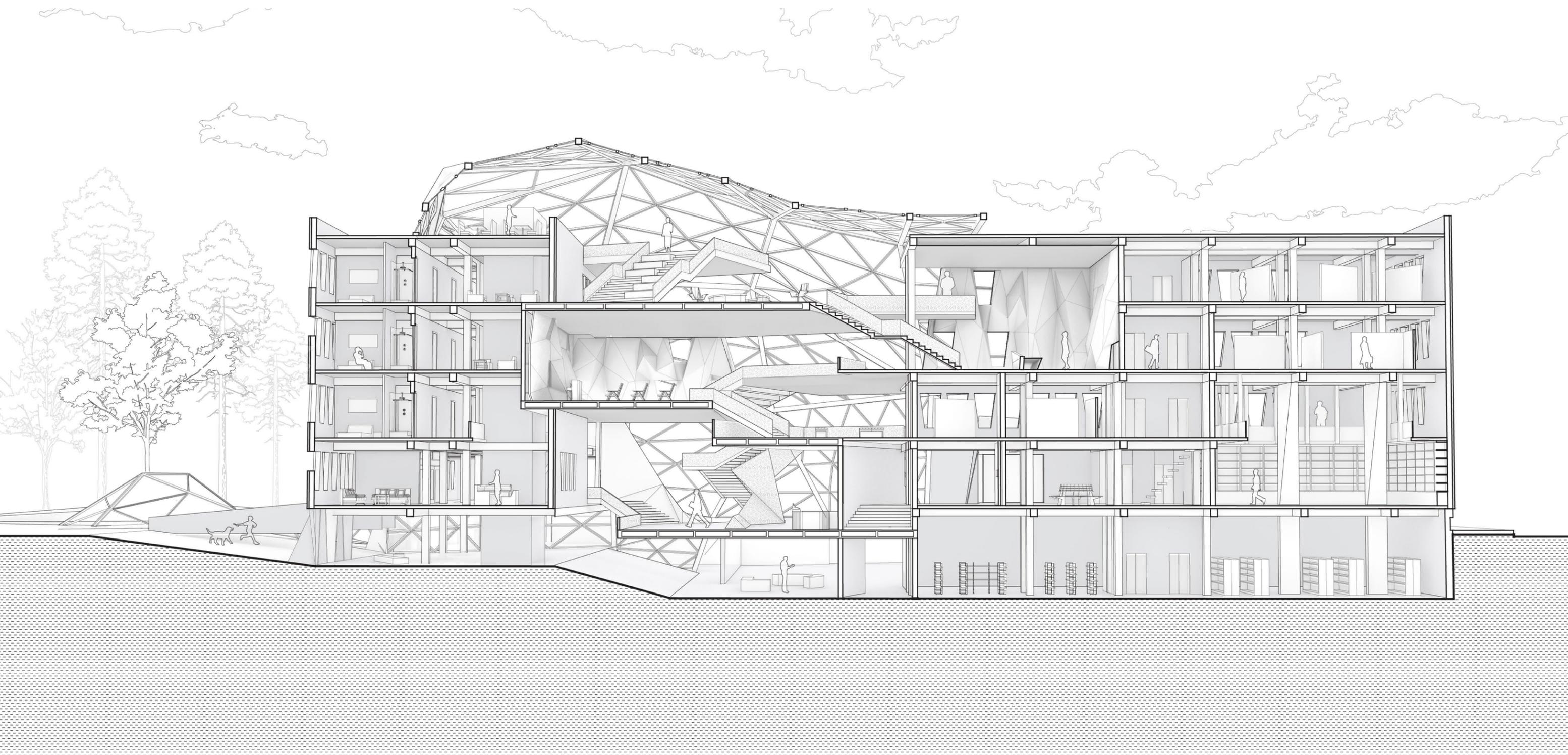
Project Type
Time
Location
Partnership
Tutor

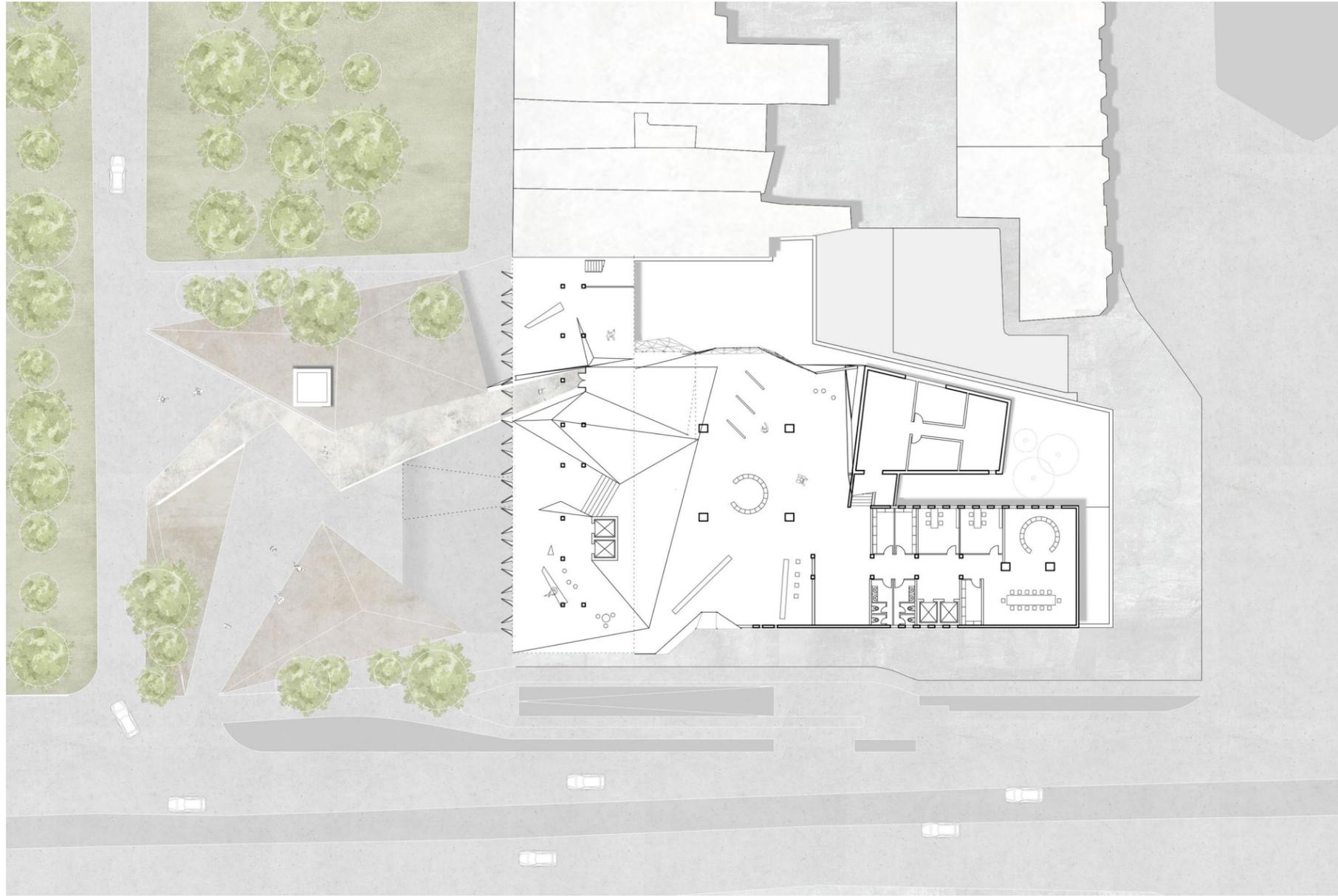
AAD Studio
2019. Fall
Hague, Netherland
Shengyang He
Rakatansk, Kim Yao

The purpose of this program is to explore the reuse and activation of the old building heritage. The US embassy in the Hague, designed by Marcel Breuer, has been abandoned as a temporary exhibition after undergoing political change. The renovation will be used as a hotel and exhibition hall for Escher's paintings.

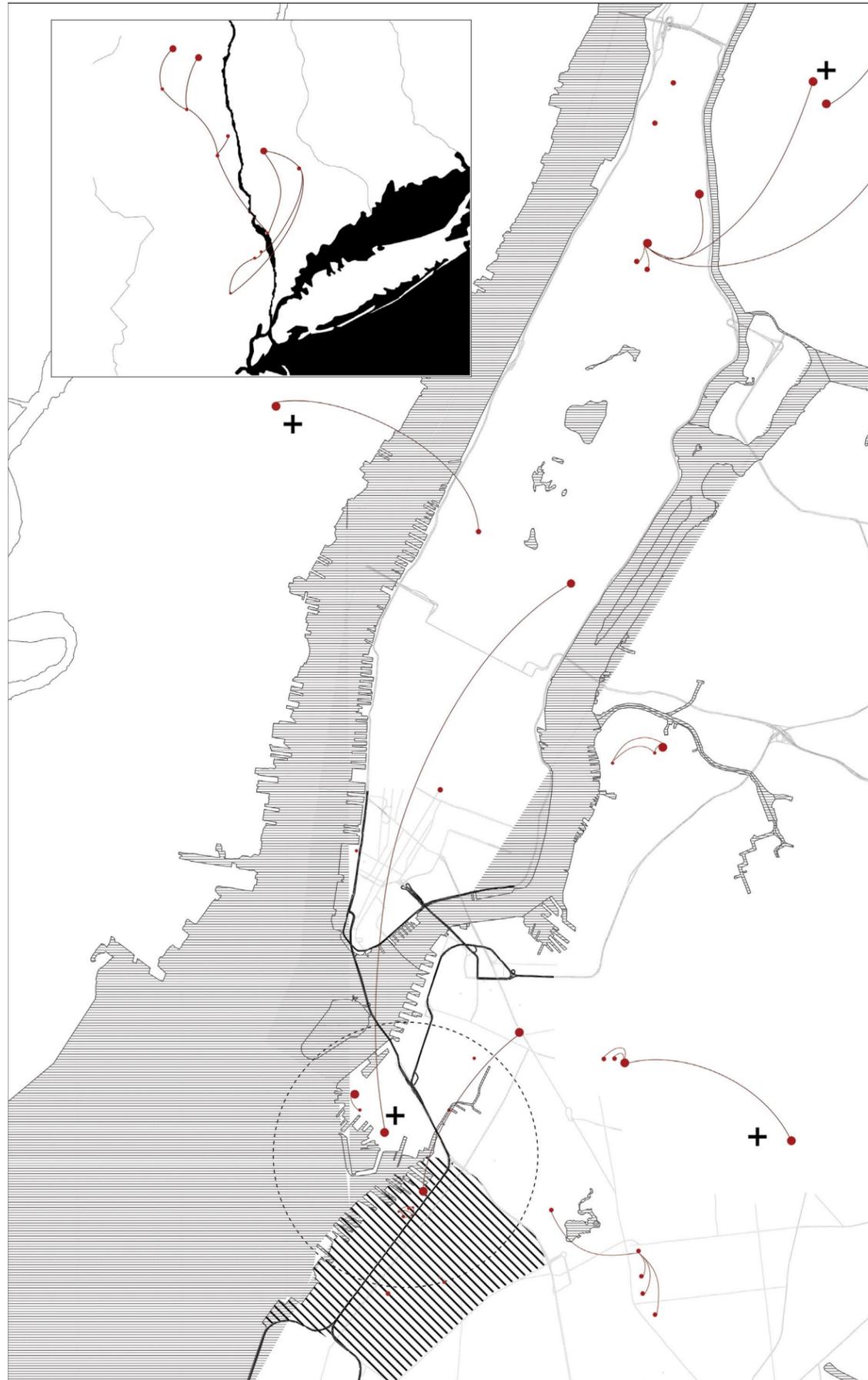
Inspired by Escher's paintings, I design a flow to weave two different Spaces, the hotel and the exhibition hall. Due to the particularity of the site, it faces the busy street on one side and the garden on the other. The design opens the ground floor facing the garden, making the heavy and thick facade transparent and light. Lightweight perforated boards were used to contrast the original limestone material.











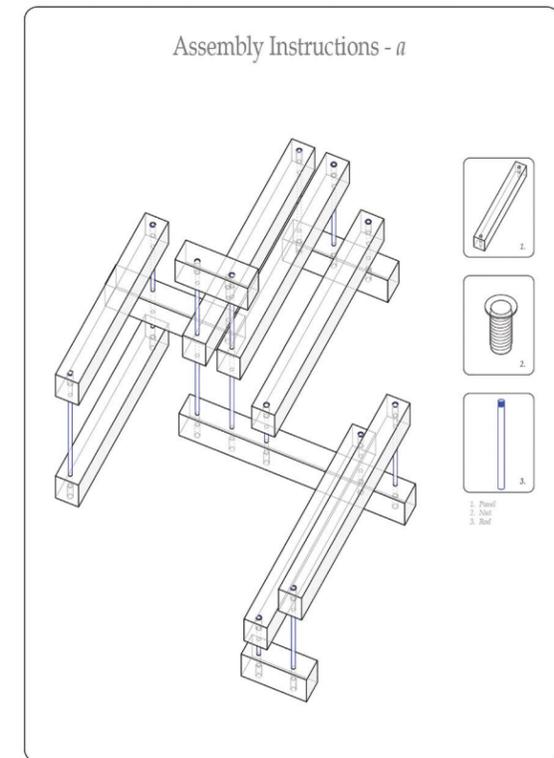
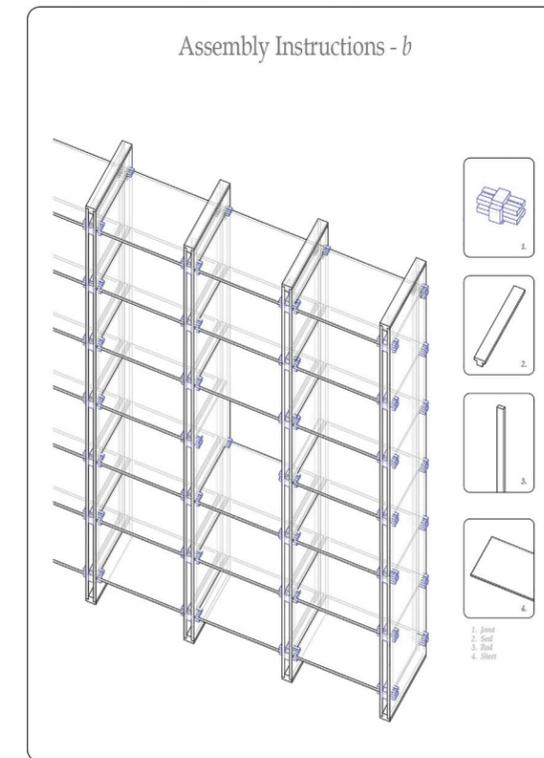
WOOD FACTORY

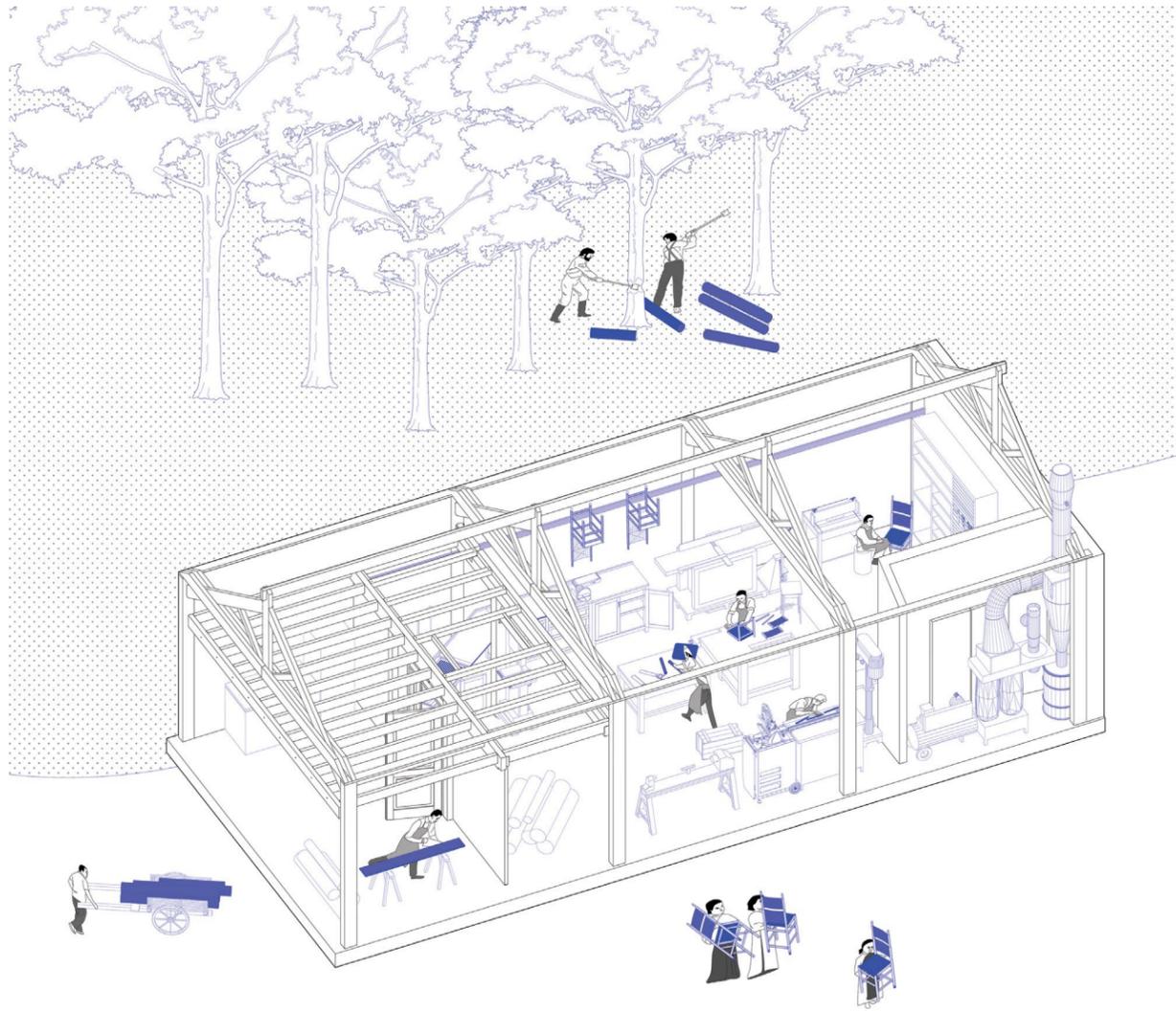
REDEFINING BUSH TERMINAL

Project Type	AAD Studio
Time	2020. Spring
Location	New York, USA
Partnership	Feibai An
Tutor	Mimi Hoang

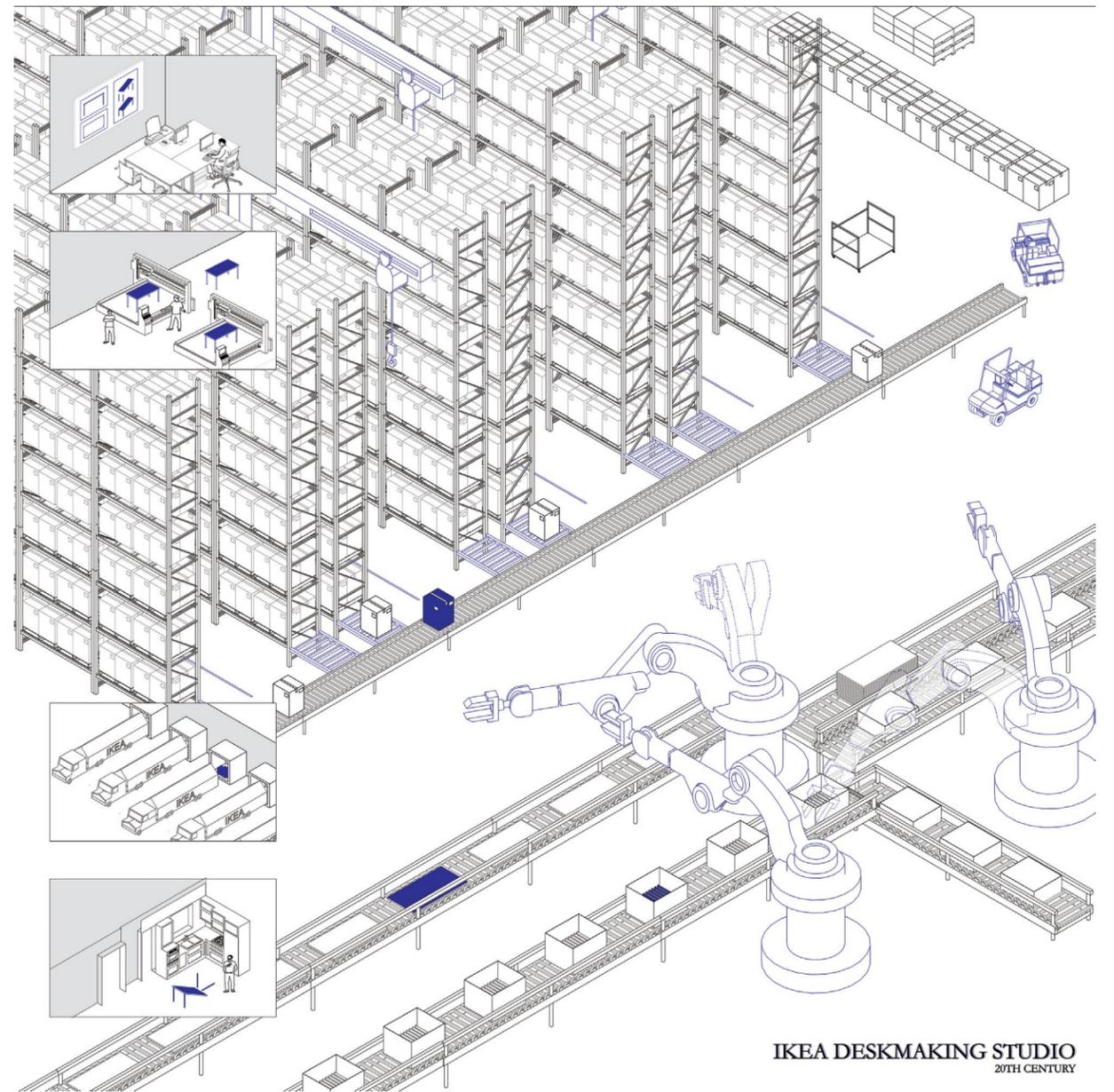
In our factory, we're looking at wood in the waste stream. About 35% of the wood cut for making furniture and building materials is wasted every year. Most of the wood waste are burned or go to landfills. As the popularity of disposable flatpack furniture has risen, the amount of furniture taken to a landfill is accelerating.

The factory is aiming to recycle wood waste in New York to make a factory. It is viewed as a new vehicle between the existing urban industrial fabric and terminal memory. We use universal components and universal joints to build a system, which can be interpreted as structure product, enclosure and product.

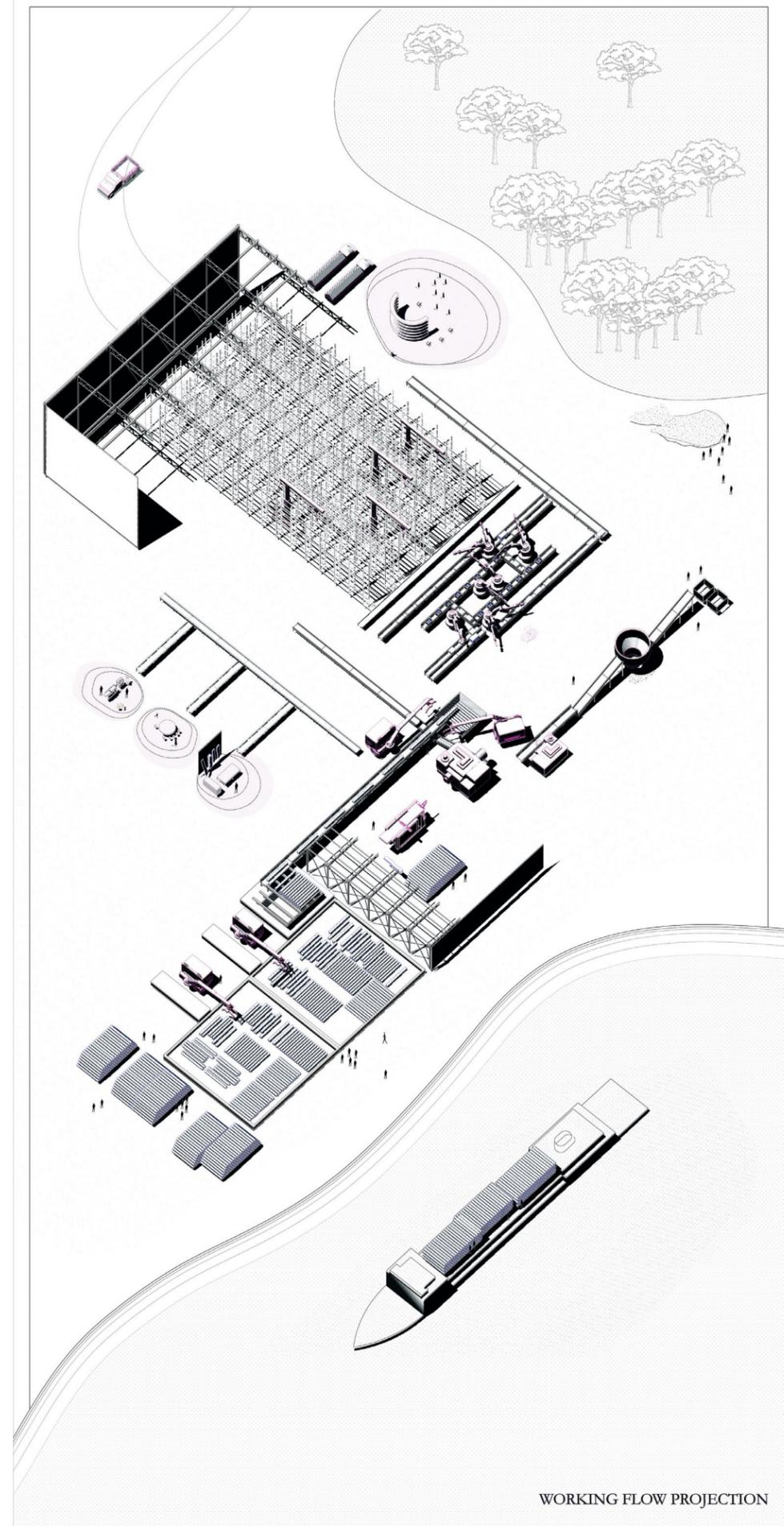
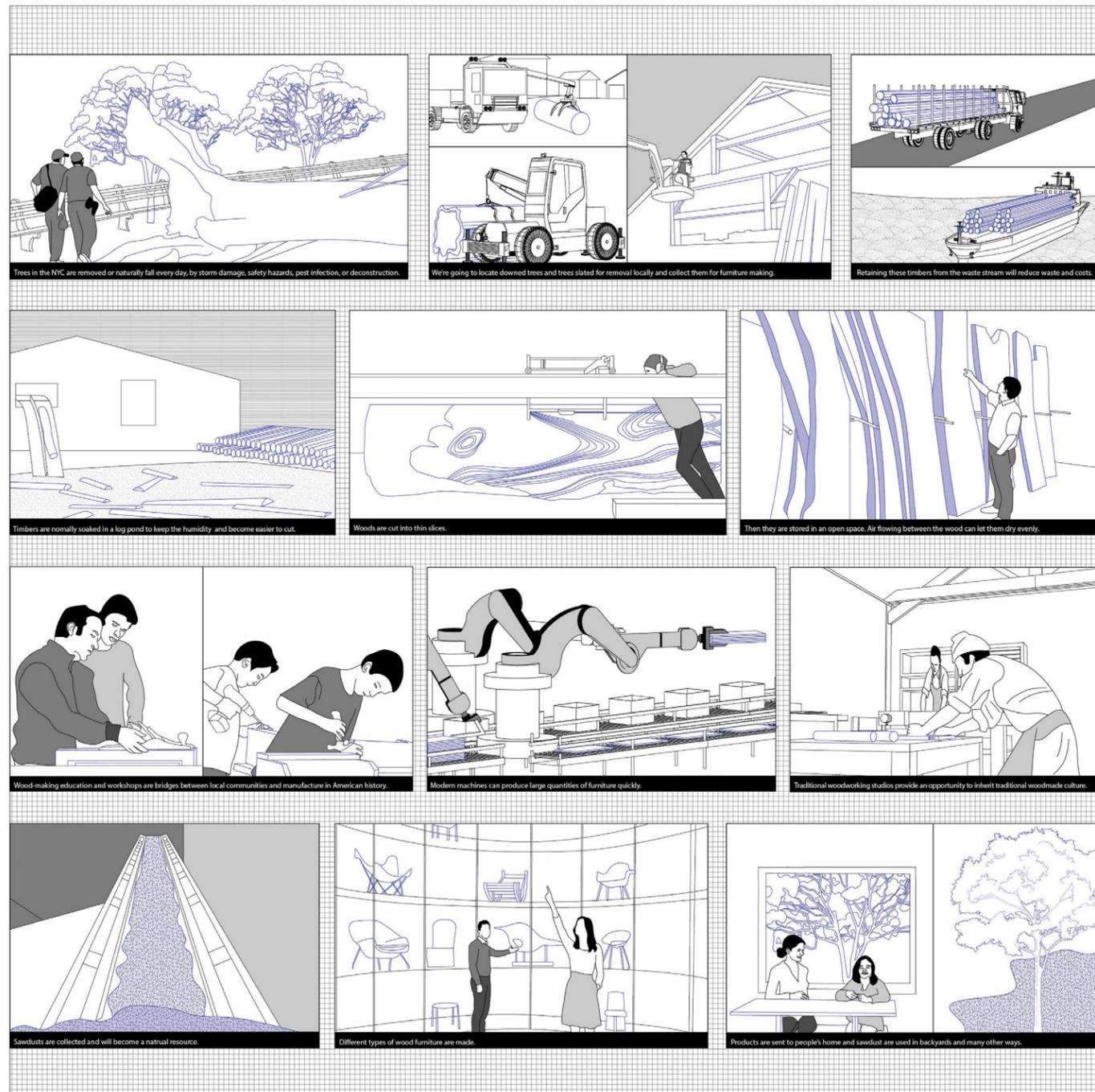


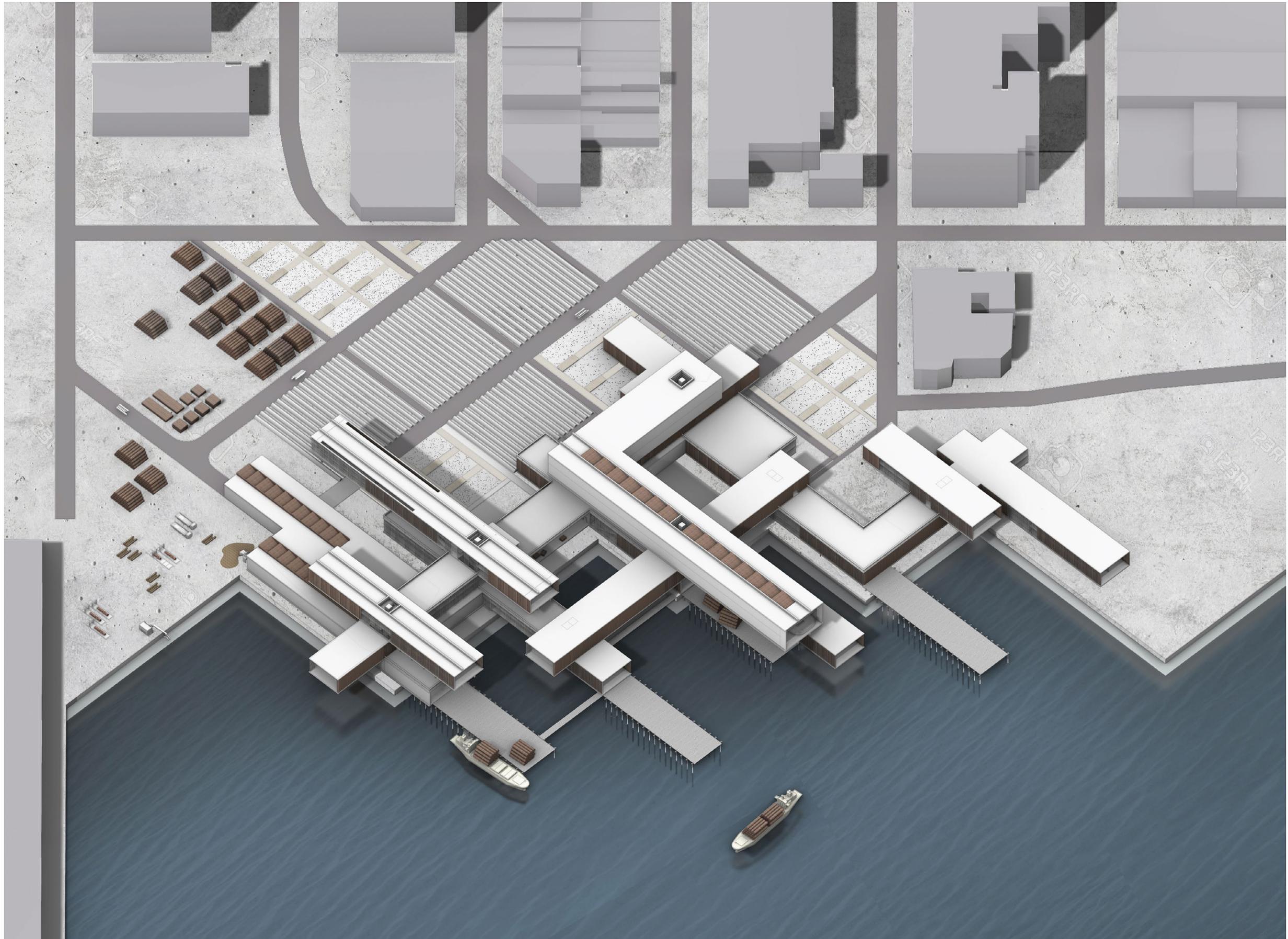


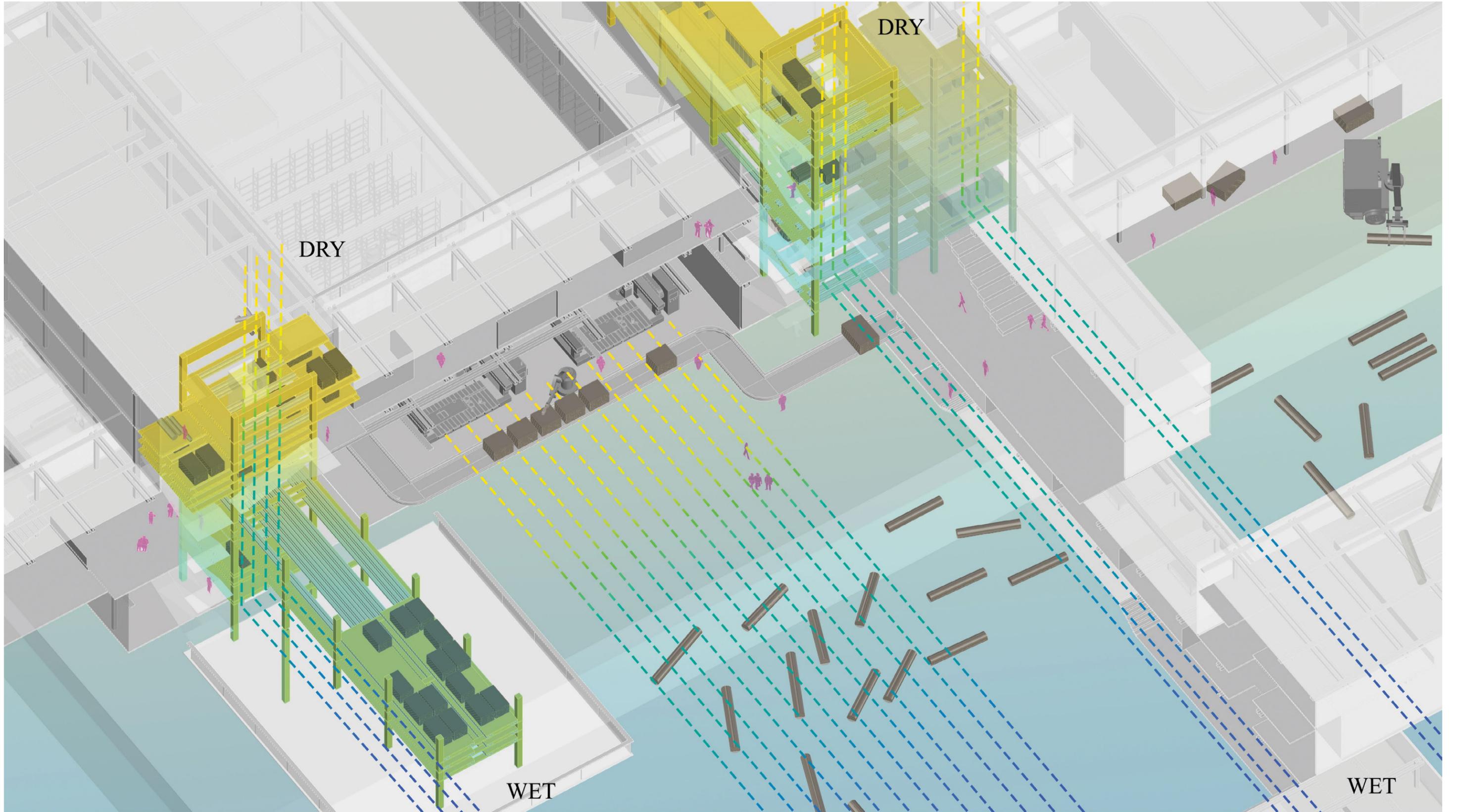
SHAKER WOODWORKING SHOP
19TH CENTURY

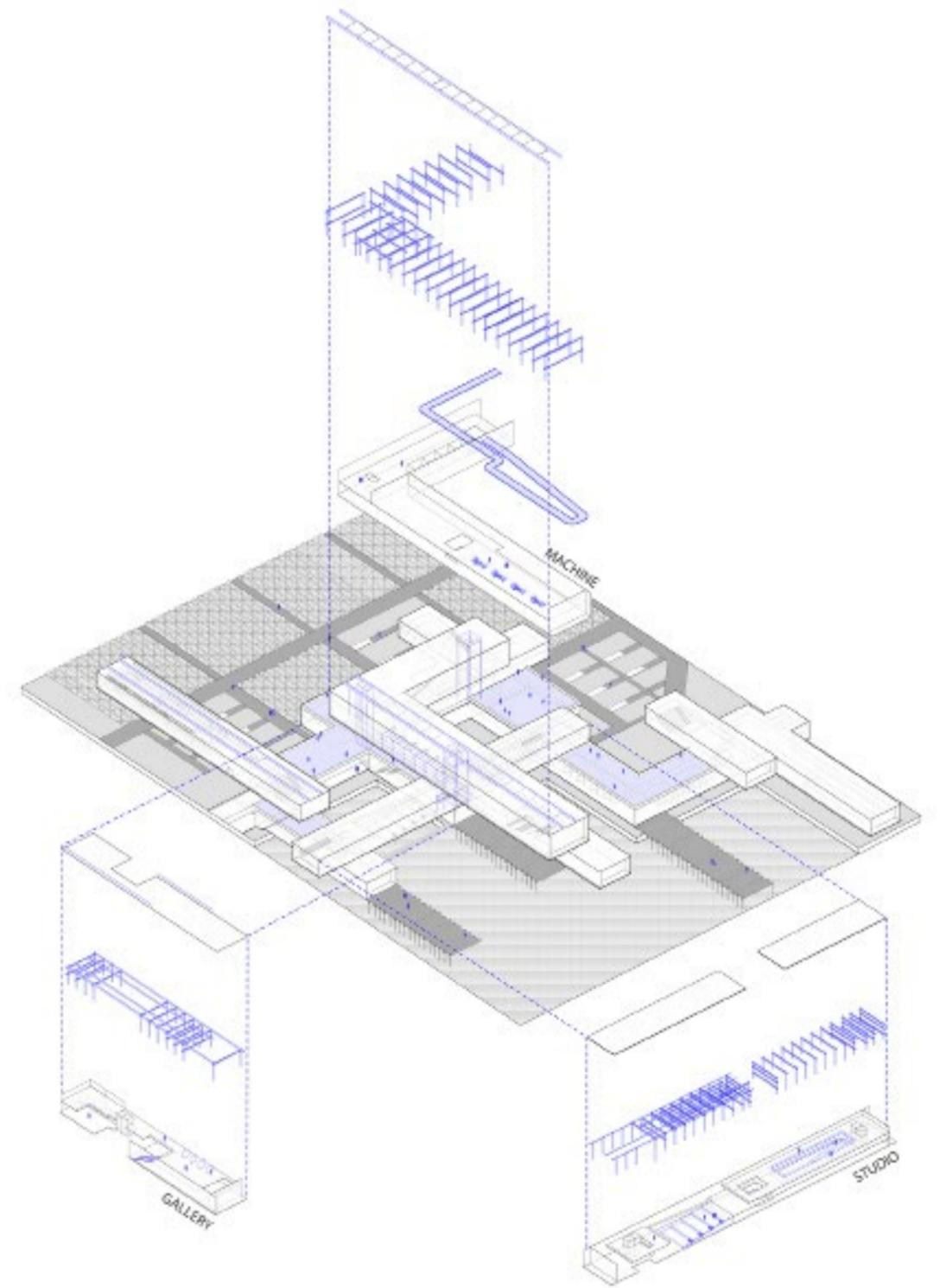


IKEA DESKMAKING STUDIO
20TH CENTURY







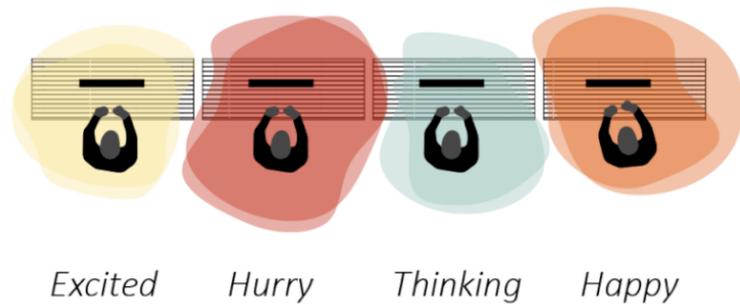
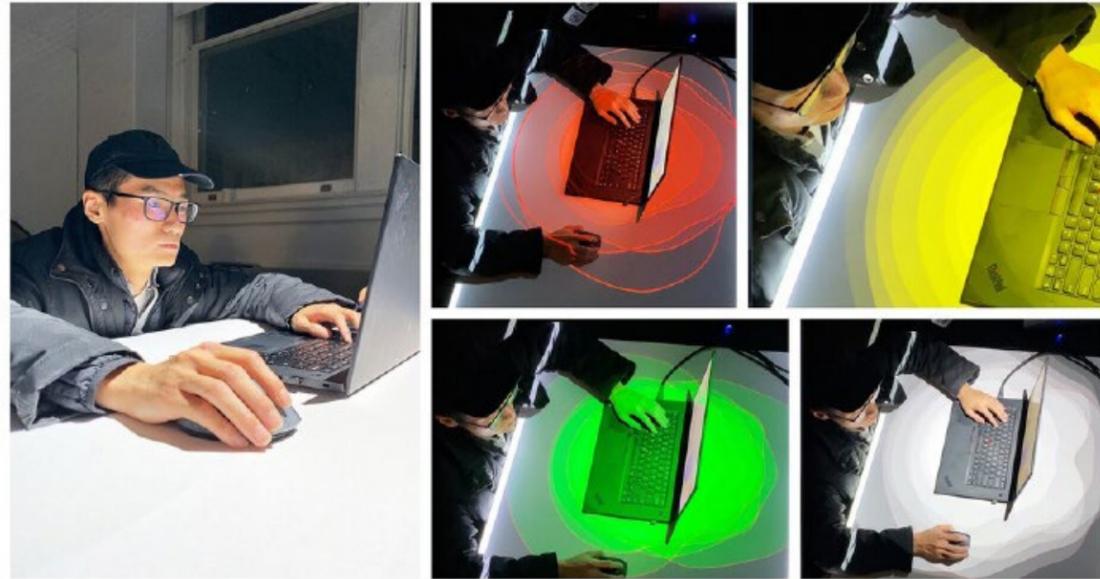




INTERACTIVE DESK

Project Type Visual Studies Building Science & Technology Elective
Time 2019. Fall
Course Metatool
Partnership Yankun Yang, Xiaoxuan Hu, Jose Luis Vintimilla Granda
Tutor Dan Taeyoung
Software Python, Grasshopper, Rhino

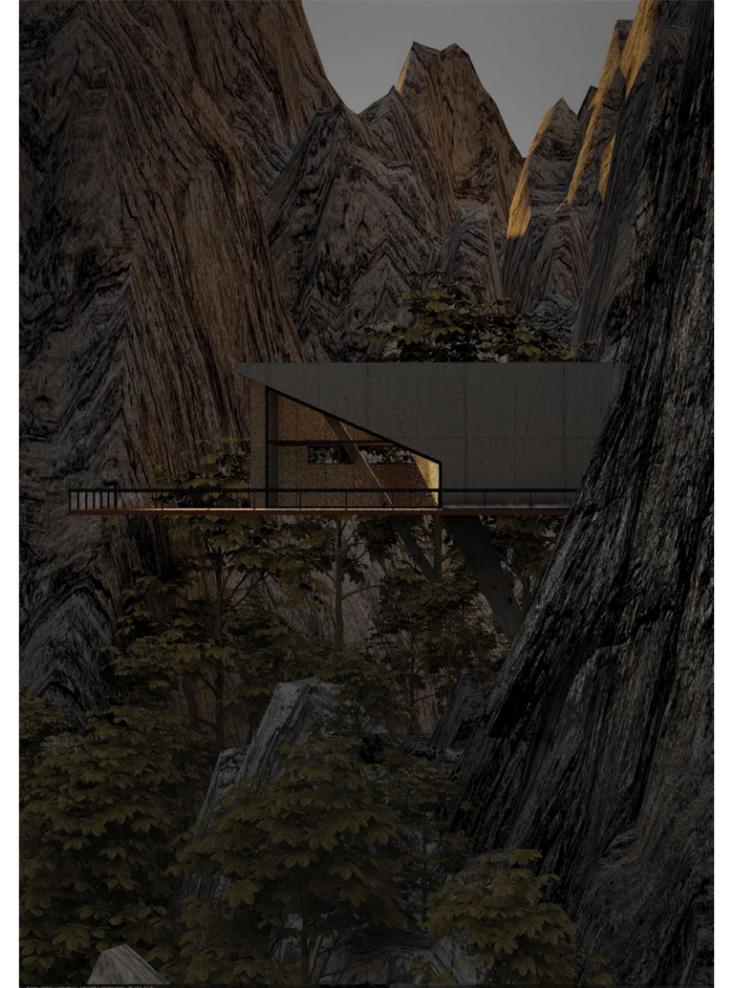
Computer has become such belonging that is so personal to the user. The massive quantity of data is hidden behind the screen that only can be accessed by the user. An invisible boundary between the physical context and the contents displayed on the screen is constructed, which scatters the world (and the social responsibilities) into pieces whenever the screen lights up. This project intends to raise an question, what if the computer is able to interpret the user's working rhythm and emotions (intense, rest, bored, etc) in the physical world, and it exposes the results to inform the surroundings? Can that construct a new social responsibility and enhance the collaboration between people in the age of digital data.

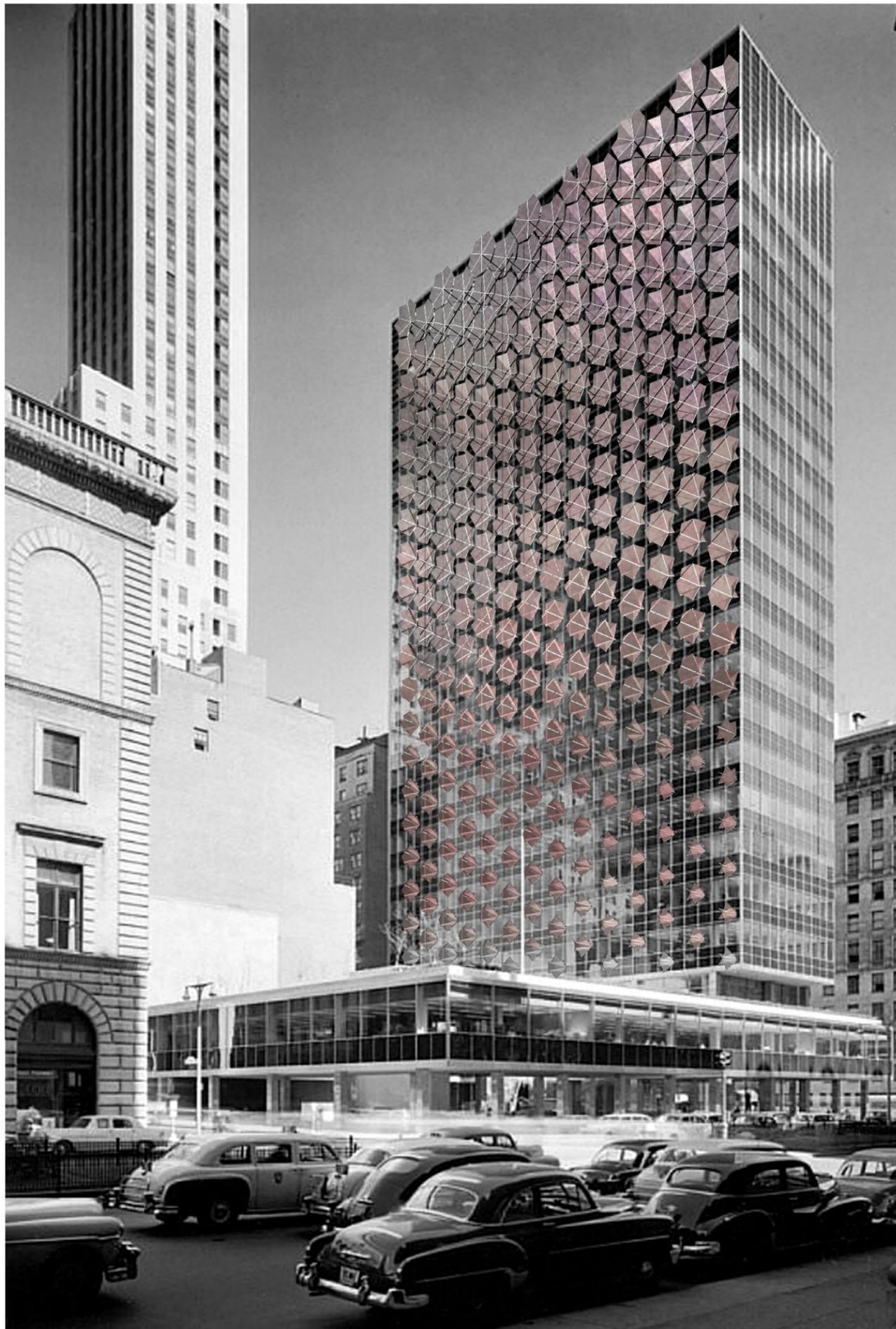


more videos:
test record: <https://youtu.be/Vf6bCSh2ot0>
review record: <https://youtu.be/FTOi2IvEJE>

TECHNIQUES OF ULTRAREAL

Project Type Visual Studies Building Science & Technology Elective
Time 2019. Fall
Partnership Feibai An, Joice Chen, Yixuan Shi
Tutor Joseph Brennan, Phillip Crupi
Software 3D Max, Vray, Rhino

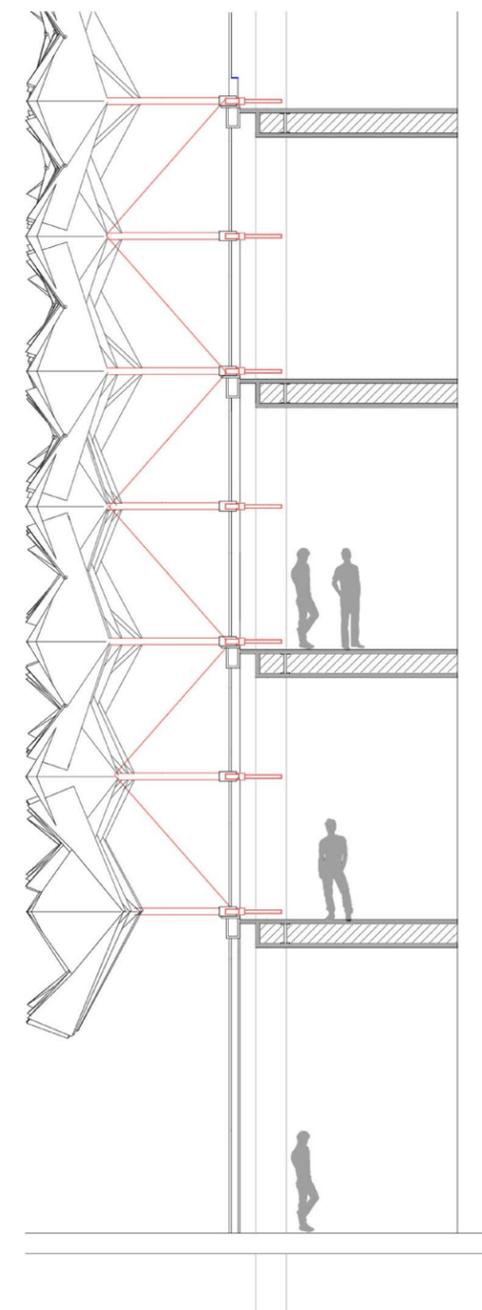
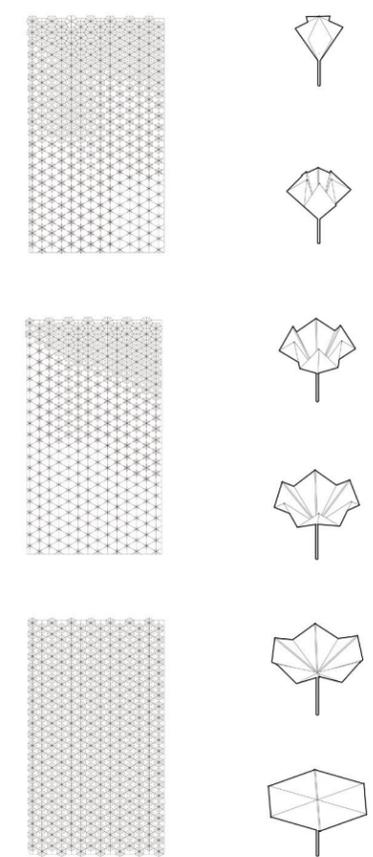
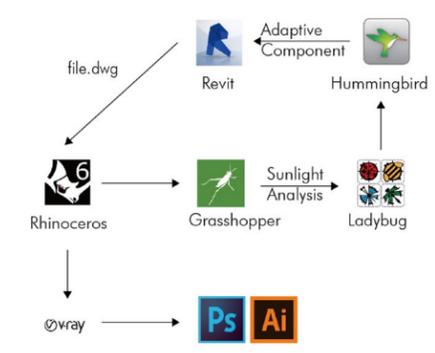
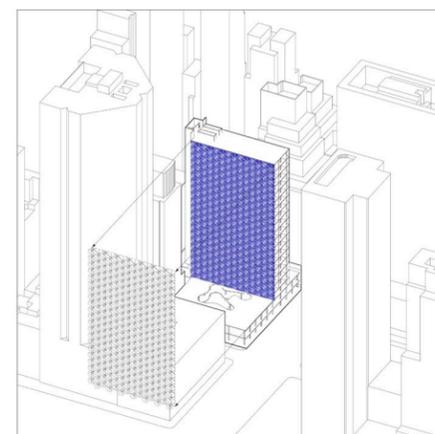
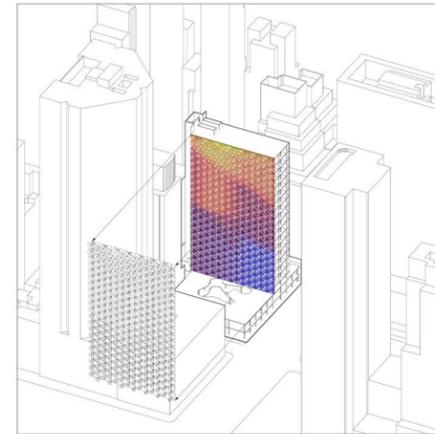
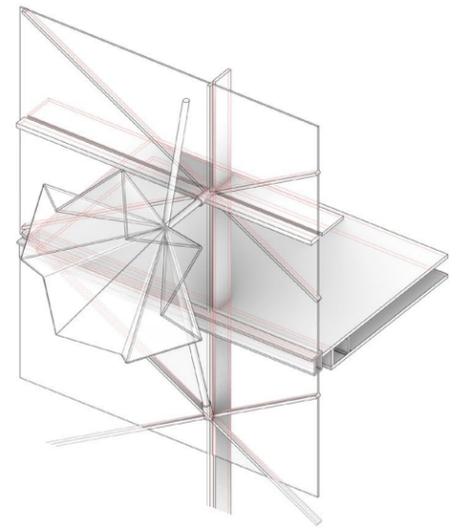




RETHINKING BIM

Project Type Visual Studies Building Science & Technology Elective
 Time 2020. Spring
 Partnership Yixuan Shi
 Tutor Jared Friedman
 Software Revit, Grasshopper, Rhino

As Lever House is undergoing a change in ownership, the original curtain wall is not responding well to the direct sunlight. Therefore, a new dynamic facade is proposed to create a more comfortable thermal environment. It consists of a series of hexagonal adaptive component unit that each functions as a reversed umbrella, made out of GORE-TEX membrane. The openness of each unit is determined by sunlight density. The flexibility and sustainability of the dynamic facade will revitalize Lever House.



Brief Analysis on Grafton Architects

Studies in Tectonic Culture

Prof. Kenneth Frampton

Xueqi Hu

Grafton Street, where Grafton Architects work, is a narrow pedestrianized street, which is also central to the city’s civic society. Every week it is thronged with Dubliners of all types. Its meandering route slows people down, hoards them together, encourages communication, and triggers the secular drama of urban life. They took the name of their practice from a street where they’ve based and rooted, and it is hard to know whether it reflects a set of already well-established concerns.

In contrast, they both come from towns in rural Ireland- McNamara came from Ireland's rocky west and Farrell from the muddy midlands. It is an antithesis to the urban character, which is also something peculiarly Irish. The duality in Ireland between town and country catalyzed a fascinating tension in their works.

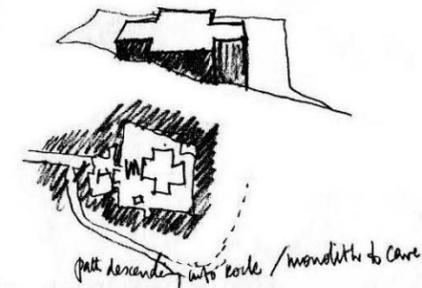
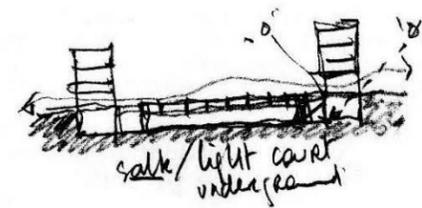


Fig. 1 Grafton Architects’ sketch of Louis Kahn’s Salk Institute

Fig. 2 Grafton Architects’ sketch of carved underground churches in Ethiopia

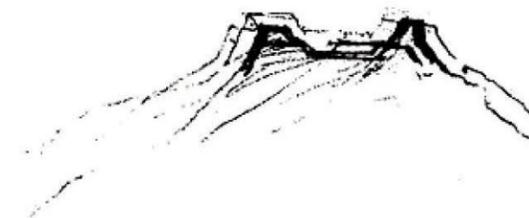


Fig. 2 Jorn Utzon’s sketch of Mayan platforms in Yucatan

“‘Gravity’ applies, precisely, to behaviors – a serious man, a serious action, a serious word. But in the physical sense, ‘gravity’ refers to a force that assigns us a weight and ensures our verticality. That means that the seriousness of behavior, moral or intellectual, must be put in relation with physical gravity, as the two meanings of the word are complementary and referring to it evokes both weight and intelligent and thoughtful action.” Looking at their sketches of the Salk Institute and underground churches in Ethiopia (Fig. 1), the close relationship between the building and the ground is emphasized. Like Jorn Utzon’s sketch of powerful Mayan platforms in the Yucatan (Fig. 2), weighted lines expressed building’s anchored posture into the ground. The sketch was like a clue, it rooted itself in the unconscious and then resurrected itself at the appropriate time.



Fig. 3 University Luigi Bocconi



Fig. 4 North King Street Housing

Fig. 5 President House, University of Limerick

In University Luigi Bocconi project, the volume made of stone is heavily carved into the ground, giving the public space a heroic quality (Fig. 3). From the North King Street Housing's façade, which was inspired by Louis Kahn's Exeter Library, we can see how the building sits 'solid' on the ground, and has a sense of weight and permanence (Fig. 4). The President House University of Limerick also acts as an anchor around the bigger landscape with a proud presence. It evokes the image of destroyed monasteries, ruins of castles and towers that stand in the Irish landscape (Fig. 5).



Fig. 6 Ardscoil Mhuire School

On the other hand, Ardscoil Mhuire School sits on an agrarian landscape, which is quite different from the tower house (Fig. 6). The building is prostrated on the ground, and the heavy precast concrete-plank roof like a blanket echoes the low horizon. Vertical ventilating chimneys and light boxes speak to the sky, slightly, bringing light and fresh air to the classrooms. The school's plan is quite introverted, like monastic building type, responding to the quiet pastoral landscape. It is another distinctive and powerful way to interpret larger landscape.

Although 'solidity' is a strong impression of Grafton Architects' works, buildings are not isolated or exclusive. Architecture's capacity to enable social interaction and construct the space of public appearance is always one of the most important themes of Grafton Architects' practice. The building they presented are not as solid sculptural objects but rather as sponge-like porous set of volumes, which in a way involve the dialogical engagement of gravity and sunlight, earth and sky, mass and void, heavy and light...

Even in their earliest works, the most minor scale facing narrow and cramped urban context, we can find the same idea. In Long House project (Fig. 7), as the site is small [measuring 6.5m x 20.0m], they occupy the entire site. External spaces were carved from the solid mass of building, creating a series of internal and external rooms. Brick and concrete used on the outside creates a

sense of solid substance, subtly merged in street surroundings. At the same time, they infill the interior with timber and glass screens. Volumes staggered back and forth to produce void space, thus brought light and courtyards. Private space hovered overhead, street public life naturally flowed into the ground. In this small housing project, we can see how architect make architecture carve the site and enrich the interior space.

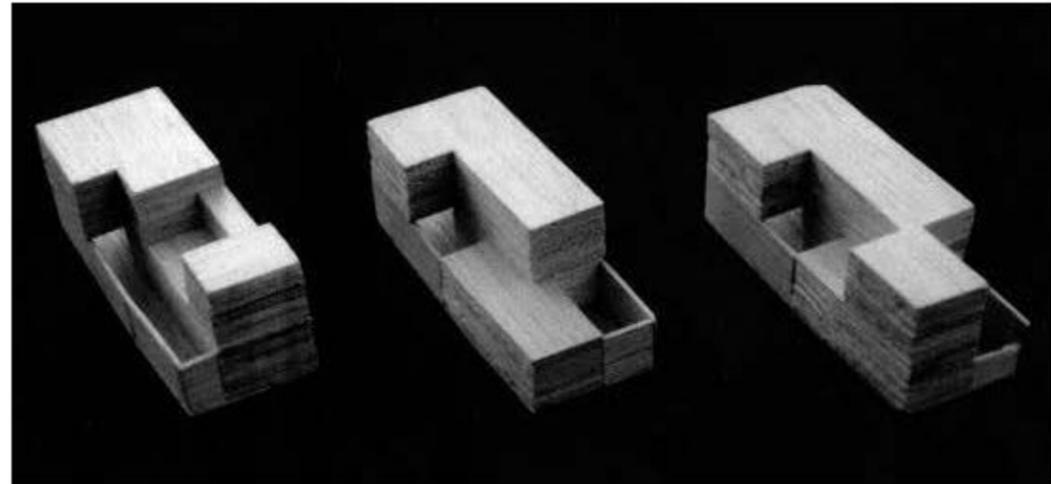


Fig. 7 Study Models, Long House



Fig. 8 Rendering of Royal Dublin Society Urban Arena

Expressive structural form is presented not as a solid sculptural object, but to stand for vitality, drama, and even ecstasy. Those branching tree-columns Royal Dublin Society Urban Arena (Fig. 8), which are full of strength and beauty, grow madly, together to form a wonderful canopy, sheltering the city performance. Ramps, stepped ramps, staircases, bridges, galleries... all architectural element stagger together, to celebrate the urban life. Similarly, in the Marshall Building (Fig. 9,10), London School of Economics, a grid of massive square concrete columns set at 45 degrees to the façade on Lincoln's Inn Fields. Each one branches overhead into four angled beams that connect to form a folding structural grid lifting the upper space. The angled beams are joined to form a massive interlocking structural frame, which make it not only a monumental presence, visually, but also a catalyst inspiring a variety of events, that can be continuously perceived by human body.

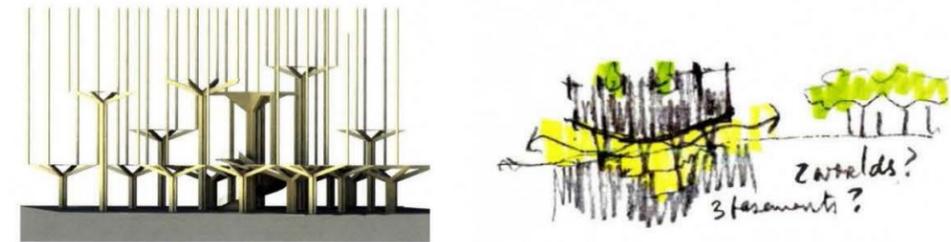


Fig. 9 Structural diagrams, the Marshall Building, London School of Economics



Fig. 10 Rendering of the Marshall Building, London School of Economics

The project in Lima is also an academic building- an arena for learning for the UTEC (Fig. 11,12). In the New University Campus, dramatic structure clearly states and defines the University on its new ground, echoing the unique condition of Lima and its relationship to the Pacific Ocean. The northern boundary facing the heavy traffic is conceived as a 'new cliff'. The depth of "frame" expands the distance between urban traffic, which is like a stem statement. However, when we look at the section, it is full of chance and possibility. The circulation strategy celebrates the ethos of the

Institution, the collective life of the campus, as well as fostering the research life of the individual student and professor. Staircase is a place of meeting and space of social overlap. On the other side of the building, which is facing the neighborhood, the volume is divided into smaller and scattered platforms. They worked towards a sense of intimacy, with little subspaces that frame and make connections between the parts. Like they said, “Architecture’s role is essentially a public one... we are passionate about architecture’s potential role to provide a framework, a matrix, a scaffold for life... So we try to make space so that unexpected as well as expected things can happen”.

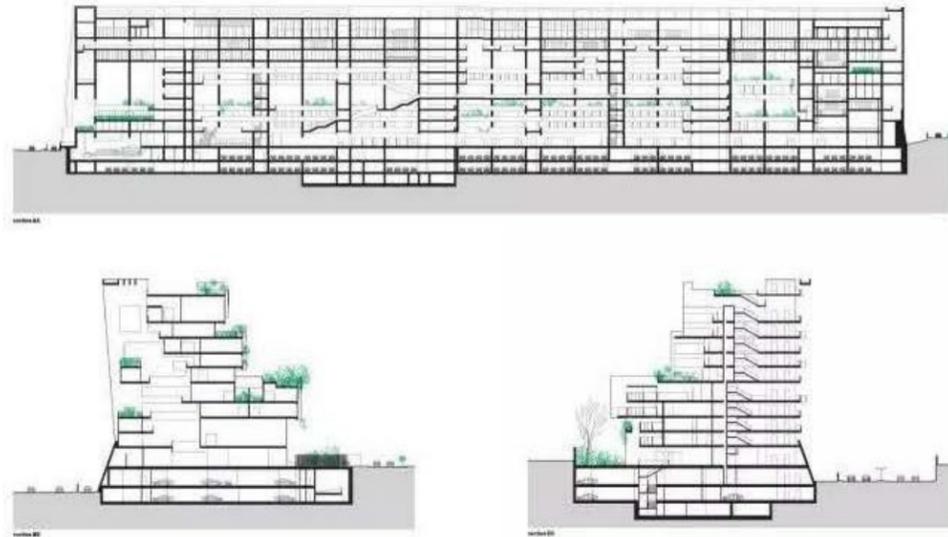


Fig. 11 Section of the New University Campus, UTEC

Fig. 12 the New University Campus, UTEC

“Architecture is the protector of our humanity. As more of the natural world disappears, what we do as architects in making this new landscape of buildings has deep, societal repercussions.” Grafton Architects’ works are like Irish poems or metaphors, translating physical world into the silent language of space, in which our humanity is sheltered.

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