1 THE NEUTRAL ZONE

1.1 Design Work | Co-work with Huanpeng Li, Yangxi Liu
Studio Work | Summer 2022 | Columbia University GSAPP
Instructor: Eric Bunge

Seventy years later, the UNHQ no longer stands. However, the UNHQ never completed? As with the environment or geopolitics, everything in the world is constantly changing, and so is the UN. As the UN’s mission and inner workings become more complex, we propose that it will require a compact and effective space that hosts conversations between different departments.

The project, The Neutral Zone, connects the original UNHQ to the northern part of the site to a new armature for inter-agency discussions and cross-departmental conversations. The second level links multiple nodes of conversation platforms that facilitate cross-departmental conversations, also accommodating overseas UN agencies’ offices. The third and highest level is organized as a square grid of paths connecting various chambers and a common hall, hinting at when people look up from the ground level. The Neutral Zone aims to improve the foundation of the original UNHQ and encourage cross-departmental dialogue. In this project, we accept the chaos of the world, and forge neutral relationships between different countries’ delegates, the UN, and the general public.

“A world capital, or a temple of peace… It is too soon to use such fine phrases, non? The UN simply does not exist yet. The nations are not united. The UN is not proved. It is simply a poste de combat.”

Le Corbusier, 1947
Municipal Solid Waste can be converted into biochar. The negative carbon additives, and its unique advantage include avoiding carbon emissions from waste transportation and burning while permanently storing carbon inside. Combining it with different building materials can lead to the possibility of a self-repairing building that redefines metabolism. The project will design a new trash chute system that collects and converts wastes during the operation of buildings into biochar-included materials as products, which forms a closed loop circulation economy around MSW that encourages a new lifestyle of sorting and shared living. MSW collected from surrounding buildings will be re-exported as biochar products to make a bigger influence. The infrastructural system works both at building scale and urban scale, connecting buildings, forming public skywalks, and leading to new types of aesthetic spatial qualities around the trash chute system.
Potential of MSW Biocahr Building Material & Application

**BIOCAR AS ADDITIVE OF BUILDING MATERIAL**

- **COMMERCIAL**
  - Biochar Carpet (commercial)

- **RESIDENTIAL**
  - Biochar Furniture (fabric)

- **COMMUNAL**
  - Biochar Concrete (surfaces)
  - Biochar Insulation
  - Biochar Carpet (residential)
  - Biochar Carpet (commercial)
  - Biochar Furniture (3D print)

**BIOCAR QUALITY**

- **RAW MATERIAL**
  - Yard Waste
  - Food Waste
  - Paper Waste
  - Wood Waste

- **BUILDING MATERIAL**
  - Concrete Block
  - Plastic
  - Plastic Block
  - Biochar Plastic
  - Foams Insulation
  - Sawdust
  - Soil

- **PRODUCTS**
  - Biochar Concrete Block
  - Biochar Plastic
  - Biochar Insulation
  - Biochar Product
  - Biochar Added Soil

**APPLICATION**

- **Biochar Concrete Wall**
- **Biochar Plastic Wall**
- **Biochar Insulation**
- **Biochar Added Soil**
More than 60 percent of MSW have the potential to be converted to biochar and they usually become landfills and composters in the current system, emitting a lot of carbon.

According to the construction plan, several buildings surrounding Penn Station will be demolished. 7 Penn Plaza is one of them. As one of the busiest places in NYC, we studied greenhouse gas emission of buildings on site and the trash truck density here. Both are very high, which means the attempt to reduce trash and emission in this area can be efficient.
The system could work at a larger scale in the city as a new type of infrastructural system. Trash in surrounding buildings can be collected and transported through horizontal trash chutes to the central building and converted into biochar products. Those chutes are also designed to beDegradable that connect rooftop spaces in the community to create more public spaces in such a high-density area. In this way, the new infrastructural system serves both functionally and aesthetically, and expands the concept of metabolism to a larger community scale.
Three women—Lillie P. Bliss, Mary Quinn Sullivan, and Abby Aldrich Rockefeller—founded MoMA with the radical idea of creating “a public gallery where the works of the founders and masters of the modern schools can be seen.” DS+R designed the current MoMA after several expansions and redesigns. Since its founding, MoMA has prioritized education. In 1951, Victor D’Amico officially established MoMA’s educational department, making it more than just an exhibition or collection of the founders and masters.

In our design, we want MoMA to reopen the garden as the main entrance and resume its educational mission by renovating it into a learning experience circulation-leading building. Compared to the old MoMA, our design divides the institution into two major programs: circulation, which includes educational programs, and permanent collection, which is more contained and controlled. And the sculpture garden as the main lobby is the start of the educational journey along with this circulation. Numerous public educational programs are attached, such as meeting rooms, auditoriums, media rooms, public exhibition spaces, and classrooms for printmaking, sculpturing, painting, or sketching. Also, visitors will enter the colorful rooftop for leisure at the end of the circulation. We envision the MoMA as a Kaleidoscope that allows people to explore the unlimited possibility of images. MoMA can finally accomplish its mission and become a treasuring place in midtown Manhattan.

“MoMA: The Kaleidoscope
Design Work | Co-work with Wentao Liu, Xun Lu
Studio Work | Spring 2023 | Columbia University GSAPP
Instructor: Juan Herreros

MoMA's Mission Statement

“We aspire to be a catalyst for experimentation, learning, and creativity; a gathering place for all; and a home for artists and their ideas.”

MoMA in a Educational Desert
Timeline of MoMA
5 Sublime of Cathedral

Photography: Sublime of Cathedral
Photography: Spring 2023 | Columbia University GSAPP
Instructor: Michael Vahrenwald
People in Guggenheim
Photography Work | Individual Work
Photography | Spring 2023 | Columbia University GSAPP
Instructor: Michael Vahrenwald