Selected Work At GSAPP

FENGXUE XIA

Columbia University GSAPP I M.S. Advanced Architecture Design 23’

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Visual Studies

DEFORMABLE STREET IN NY

A Resilient Street Installation

Architecture Design of Urban Installation Project
Summer 2022,Columbia University
Location: Manhattan, NewYork
Instructor: Karla Rothstein
Design Team: Fengxue Xia, Sixue Chen

After COVID-19, the distribution of spontaneous street activities in New York changed. Some spaces for spontaneous activities, such as food vendors and street performance spaces for street performances, were occupied by private merchants, such as the expansion of restaurants that led to traffic jams, which created a chaotic and congested status quo on New York's streets. Our design strategy improves the coexistence of activities by system-atizing the street infrastructure. Spontaneity within the system is maintained by providing sufficient infrastructure to allow not only spontaneity, but also the coexistence of all street activities and urban elements in a harmonious and orderly manner.

Axonmetric I Street with Deformable Installation

Collection of Relax

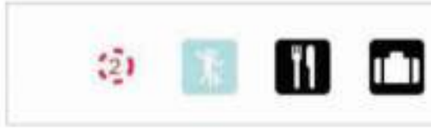
The section cut corss the office building and park area which has themost relax and landscape area.

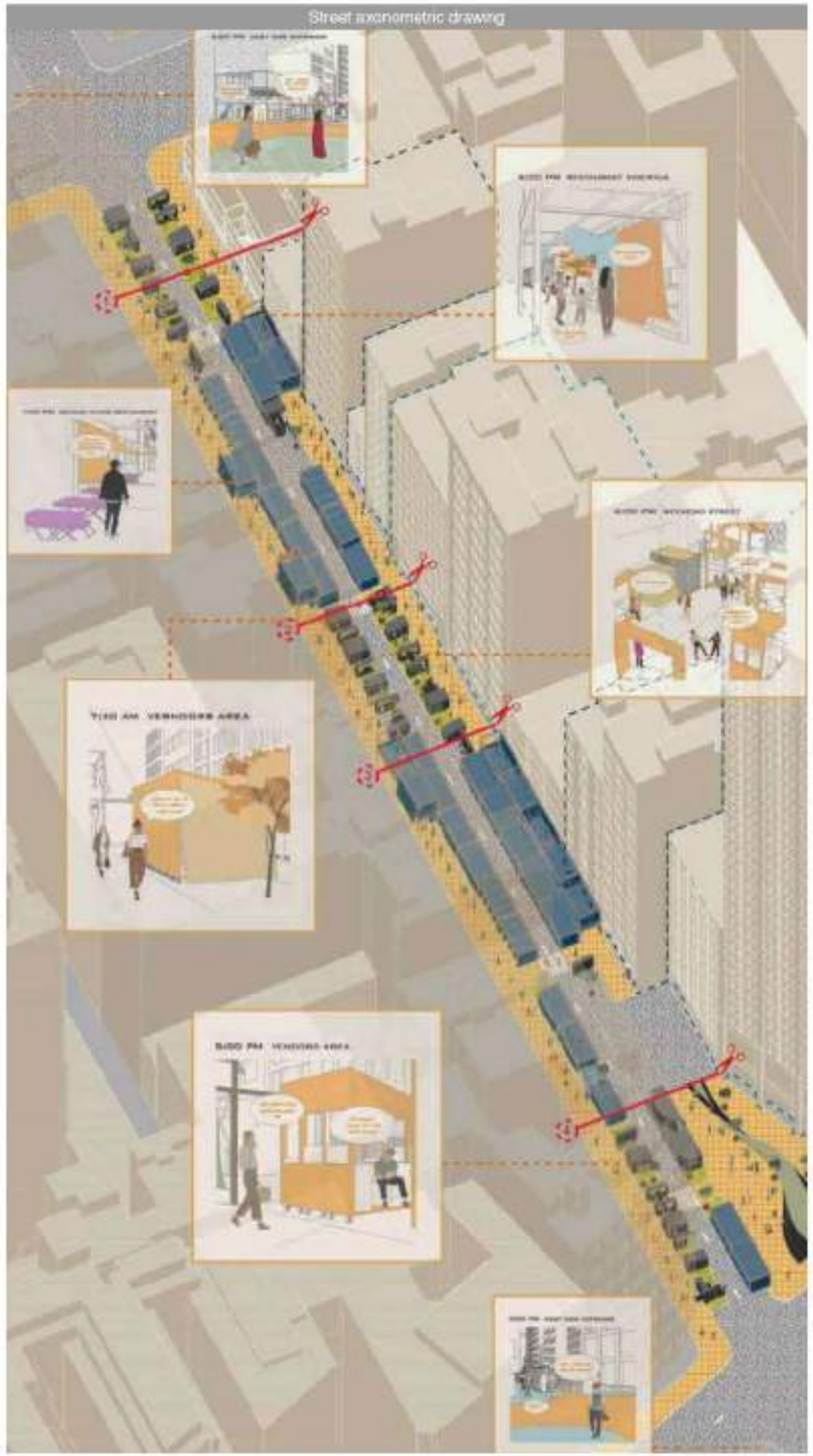
Collection of Restaurant

The section cut cross the office building restaurant and relax areas which shjow the coexistence of activities.

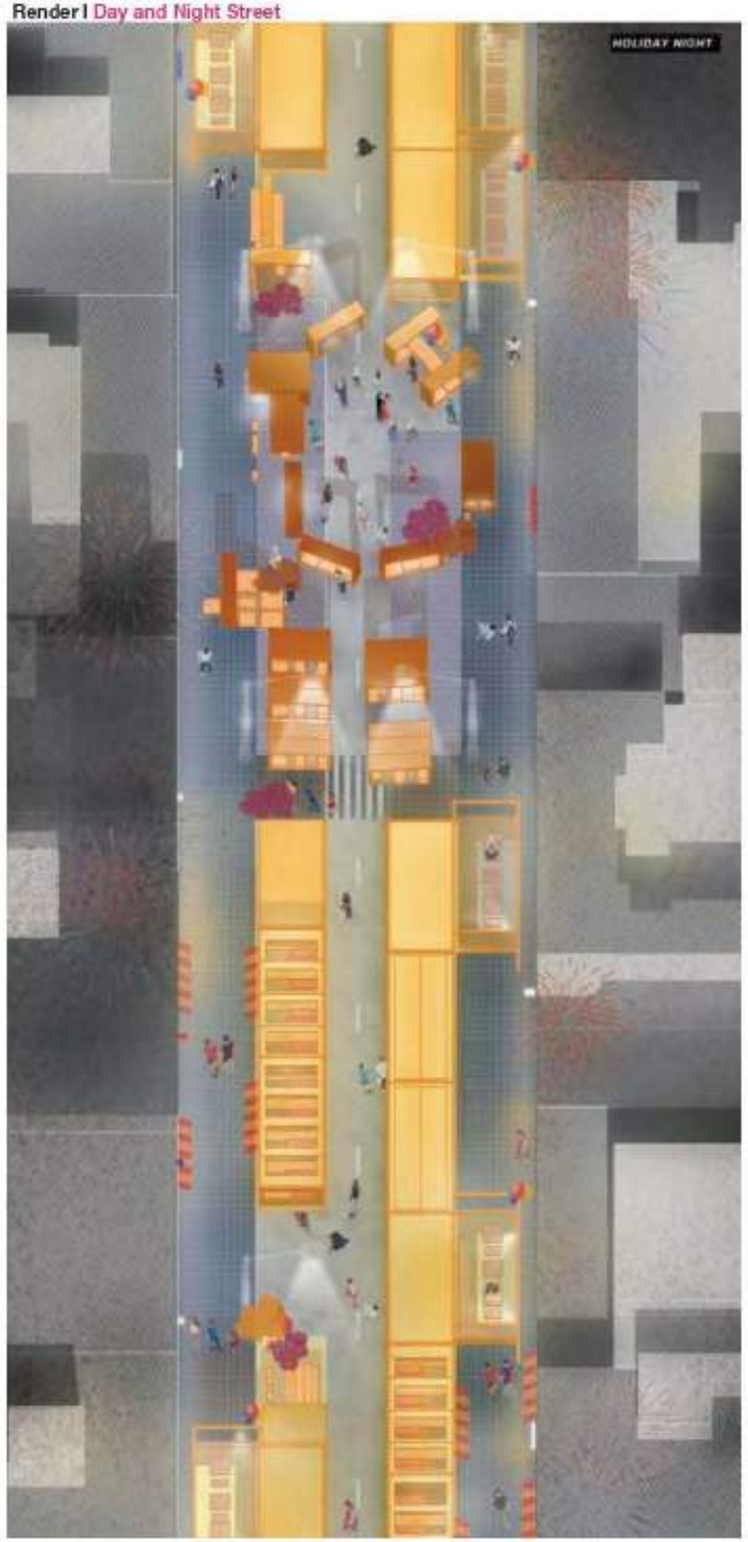
Collection of Street Venders

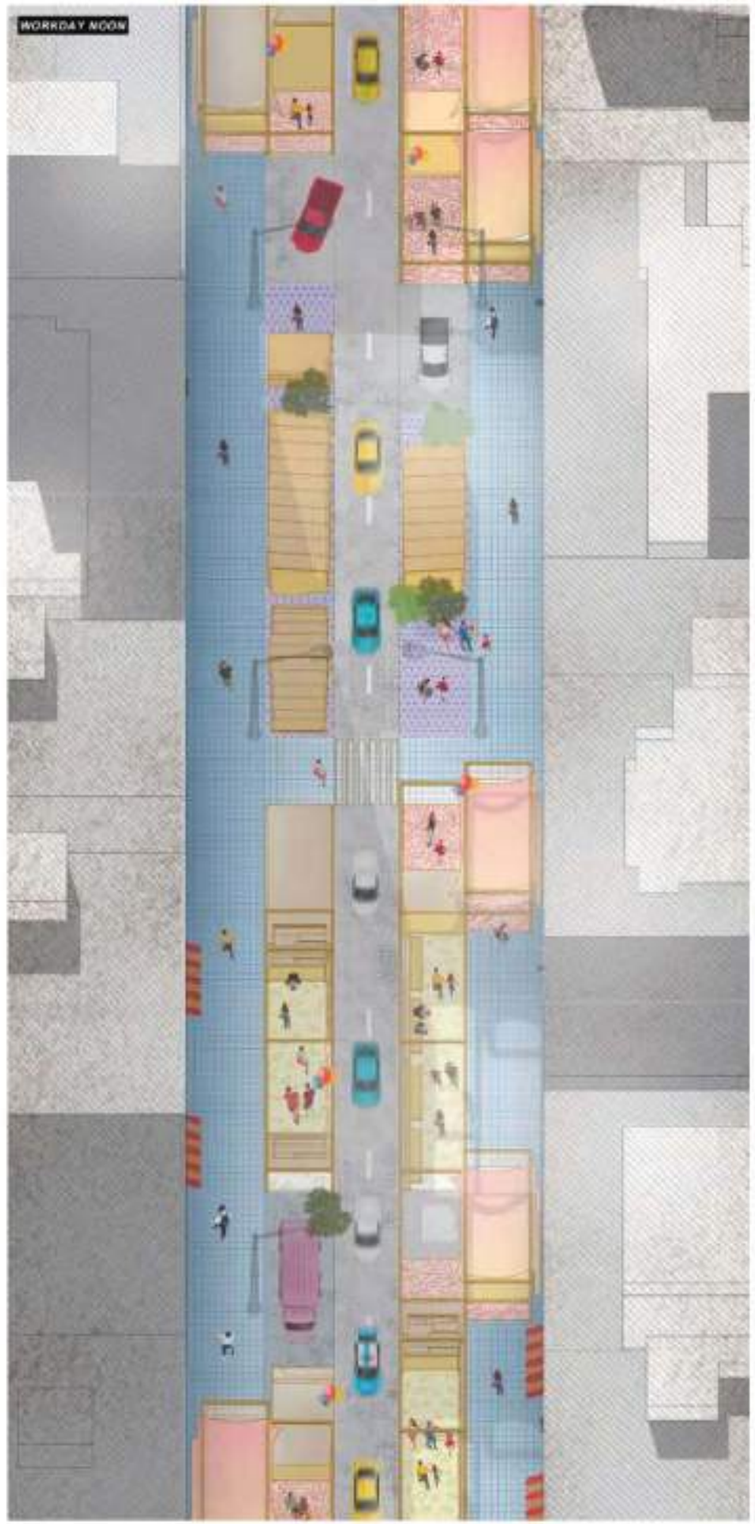
The section cut cross the office building restaurant and hotel which shoe the circulation of people in and out buildings.



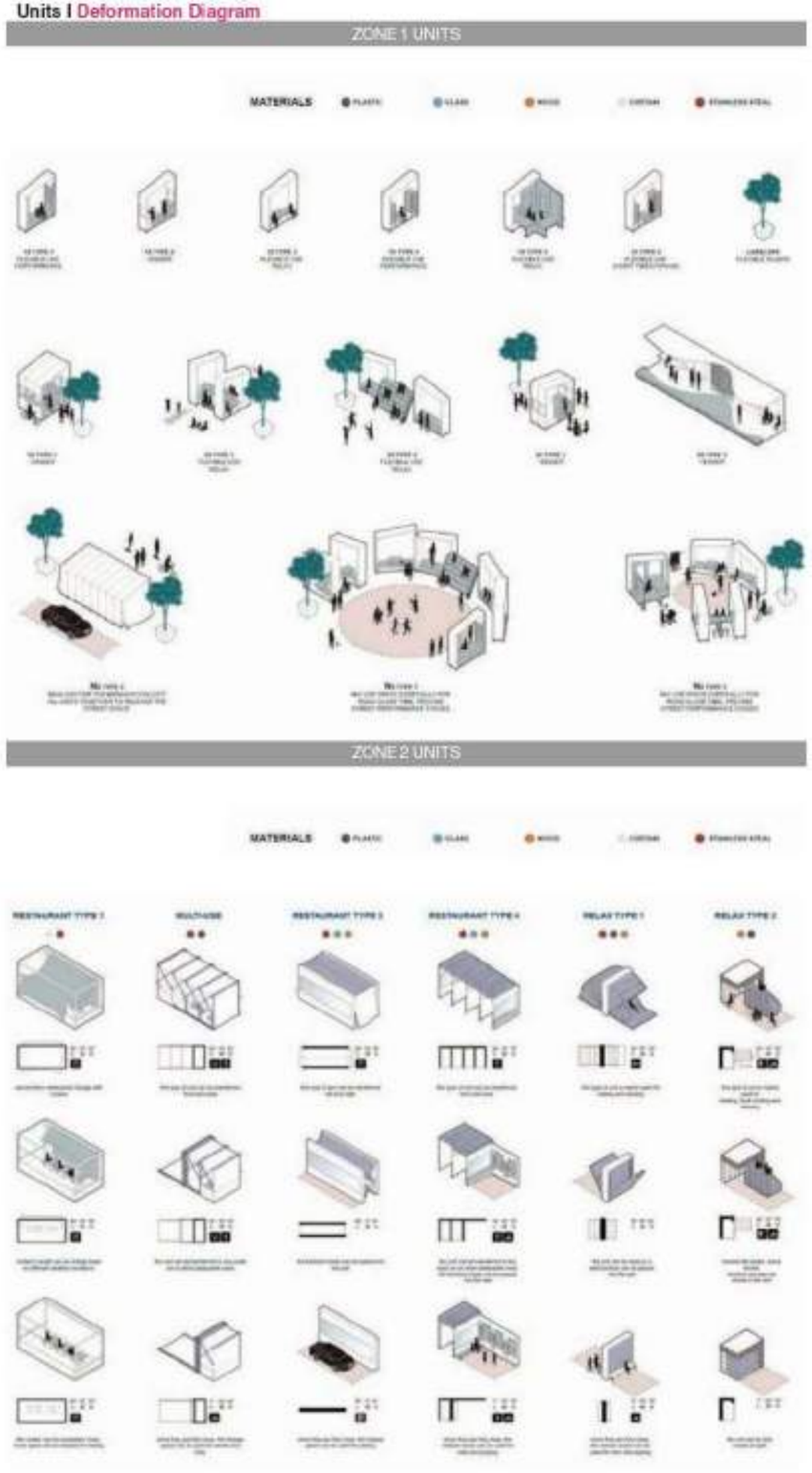


Render I Day and Night Street





Units I Deformation Diagram

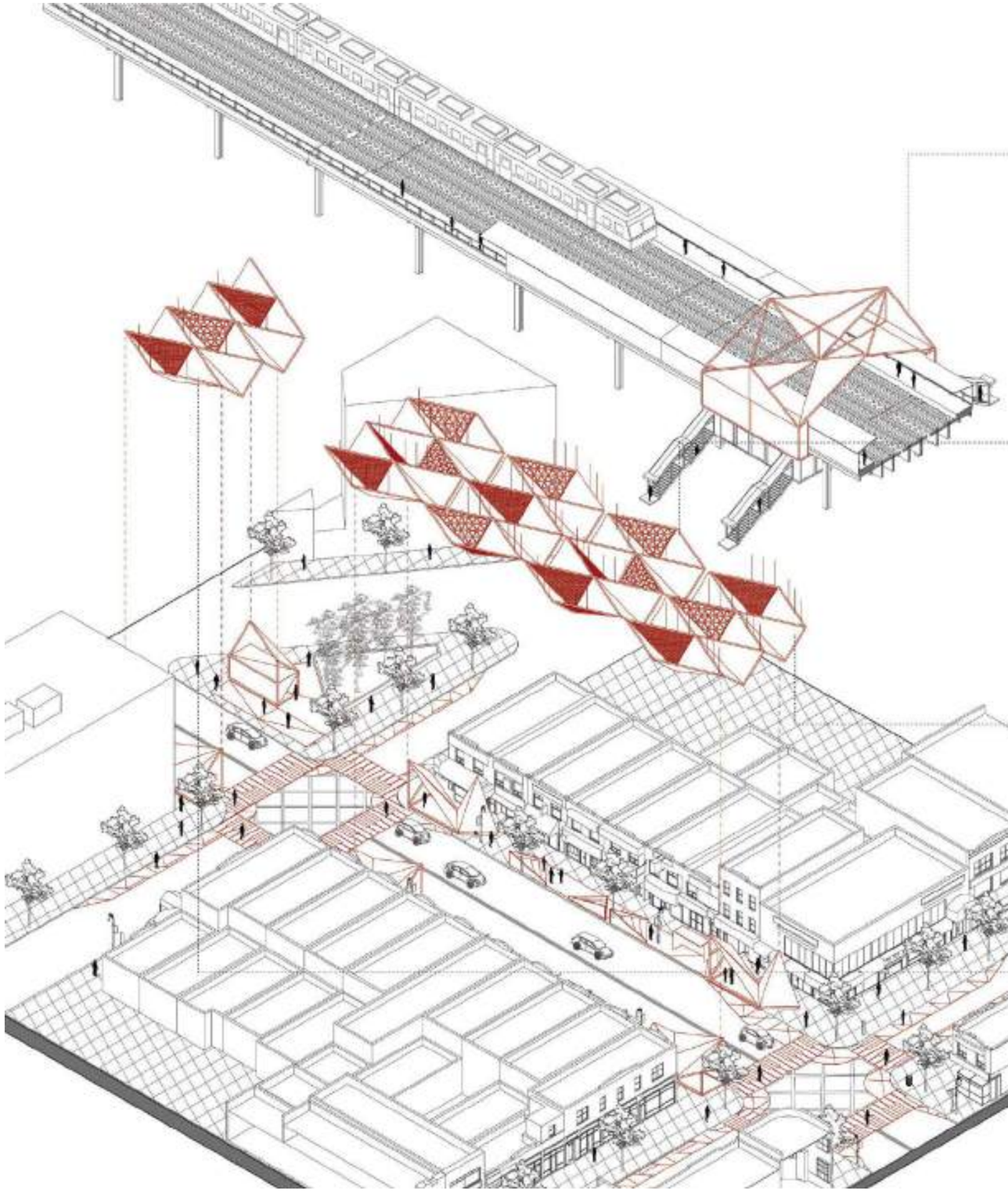


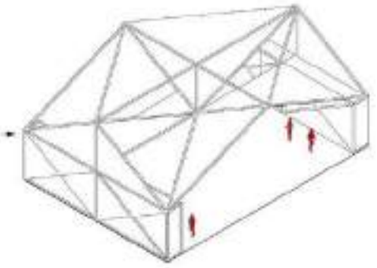
STREET INSTRUMETN

The Streetscape of Noise

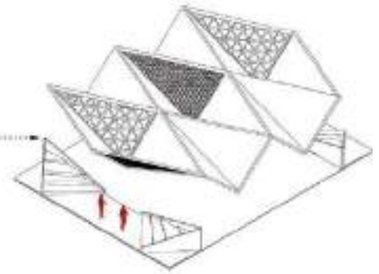
Architecture Design of Street Installation Project
Fall 2022,Columbia University
Location: Jackson Park
Instructor: Jing Liu
Individual Project

We live in an “ocean” of sound. This invisible energy affects our emotions, our psychology, and even our health. In modern cities, noise pollution has become the second biggest killer of human health after air pollution. since noise cannot be completely eliminated, this project explore the the different street typology that can help to reduce the harmful noise to people, and visualization sound for the remaining noise that cannot be eliminated, the sound visualization program will provide a new way to entertain people.

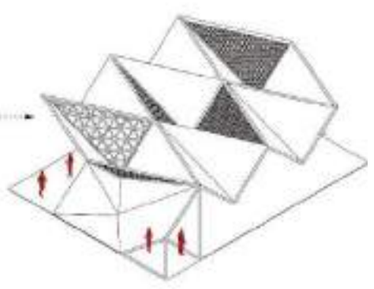




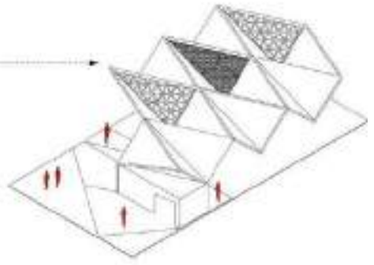
Train Station Sound Installation



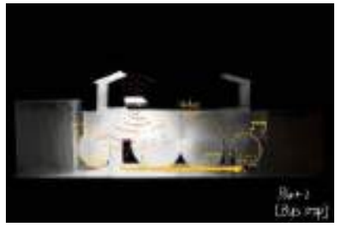
Noise Reducer & Street Seating

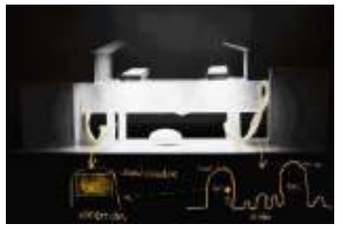


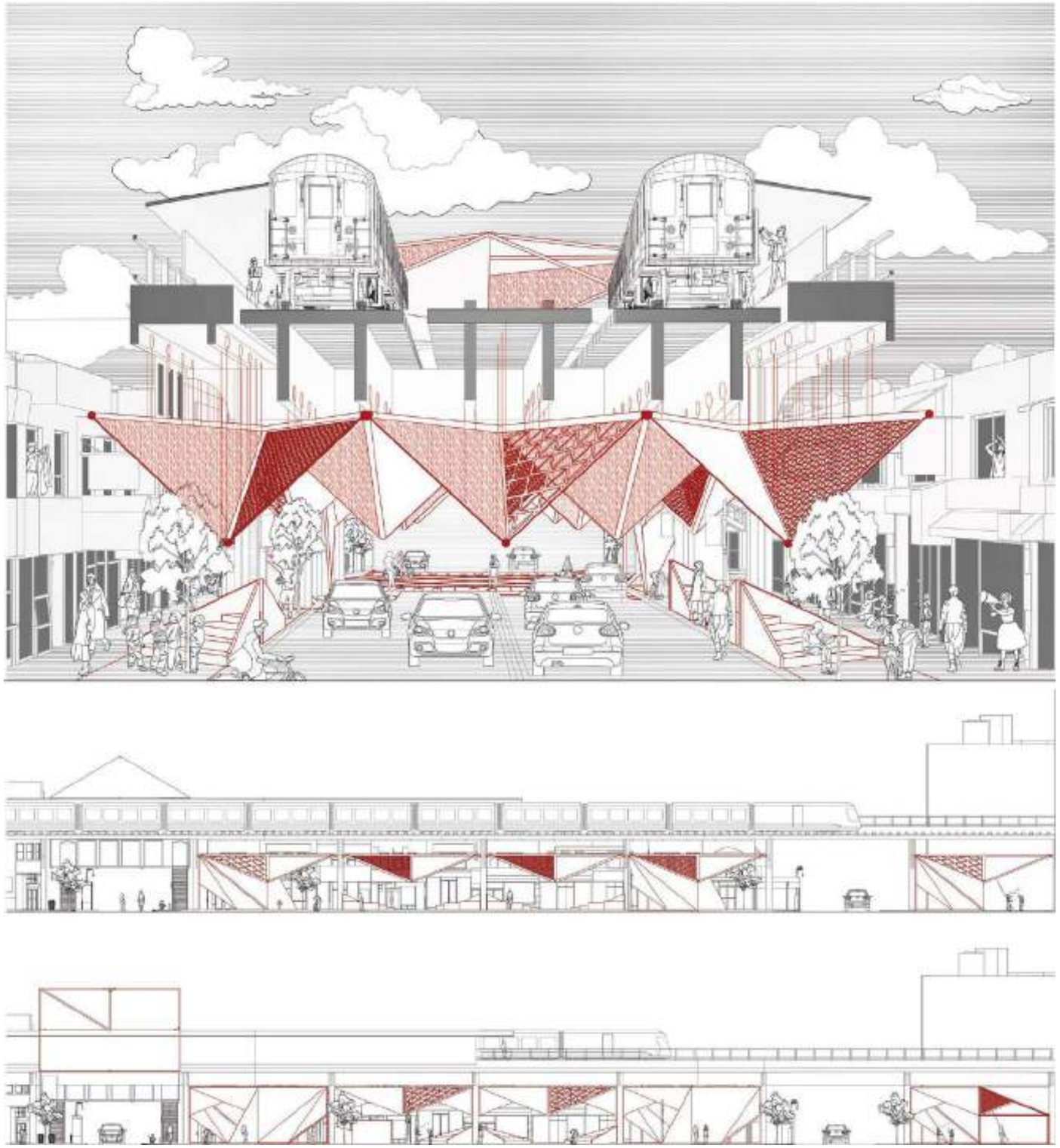
Noise Reducer & Sound Visualization

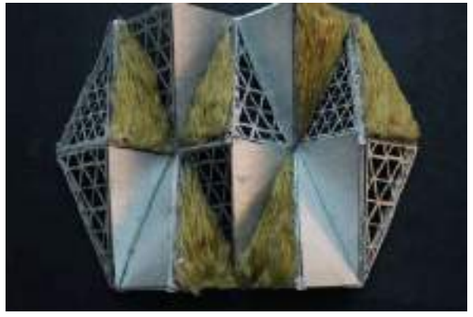


Noise Reducer & Park Pan









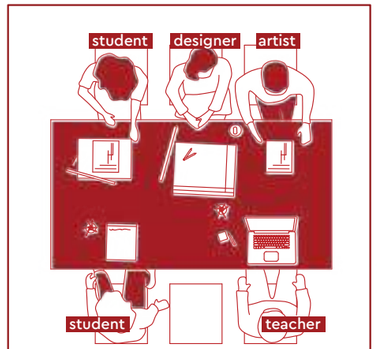
CO2GO!

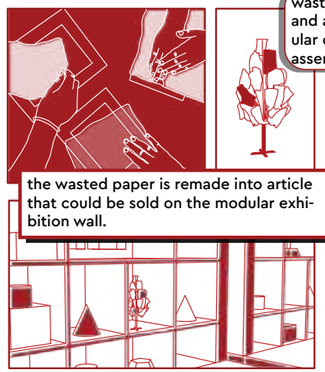
The Recycling City Moving Modular

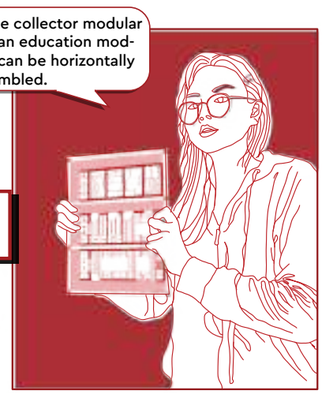
Architecture Design of Urban Typology Project
Spring 2023,Columbia University
Location: Conceptual Site
Instructor: David Benjamin
Individual Project

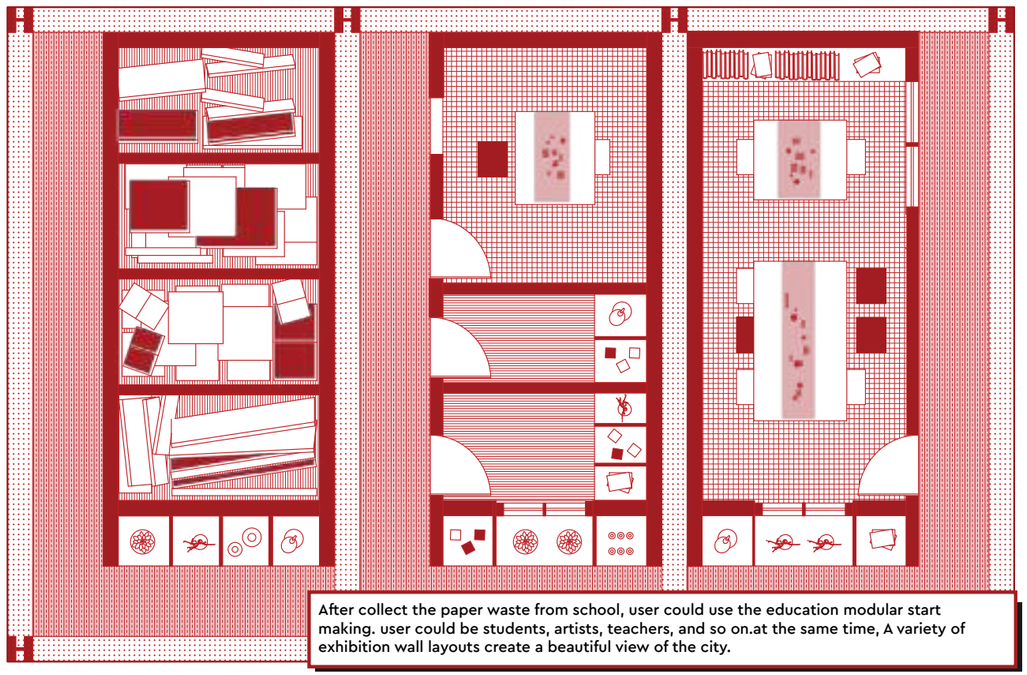
This program will encourage everyone in the city to participate in the waste recycling process. With the development of new economic chains and lifestyles that CO2GO brings to the city over time, waste will be transformed into new construction emerging in the world.
[YEAR 2030] The moving waste collector and moving workshop will appear in the city. This initial system will start with the paper re-make strategy. CO2GO, activated only on weekends, will collect paper waste from SCHOOL. Students will be the first users of CO2GO.
[YEAR 2040] Workshops will be combined with living rooms, and a new lifestyle will appear in the city. CO2GO, activated at night, will collect waste from RESIDENTIAL. HOMELESS who wishes to get a maker job will pay a low rent fee to live there.
[YEAR 2050] The accumulated profits from the past 20 years will be used to build a CO2GO community. New urban community is emerging, ANYONE in the city can visit.

——YEAR 2030——



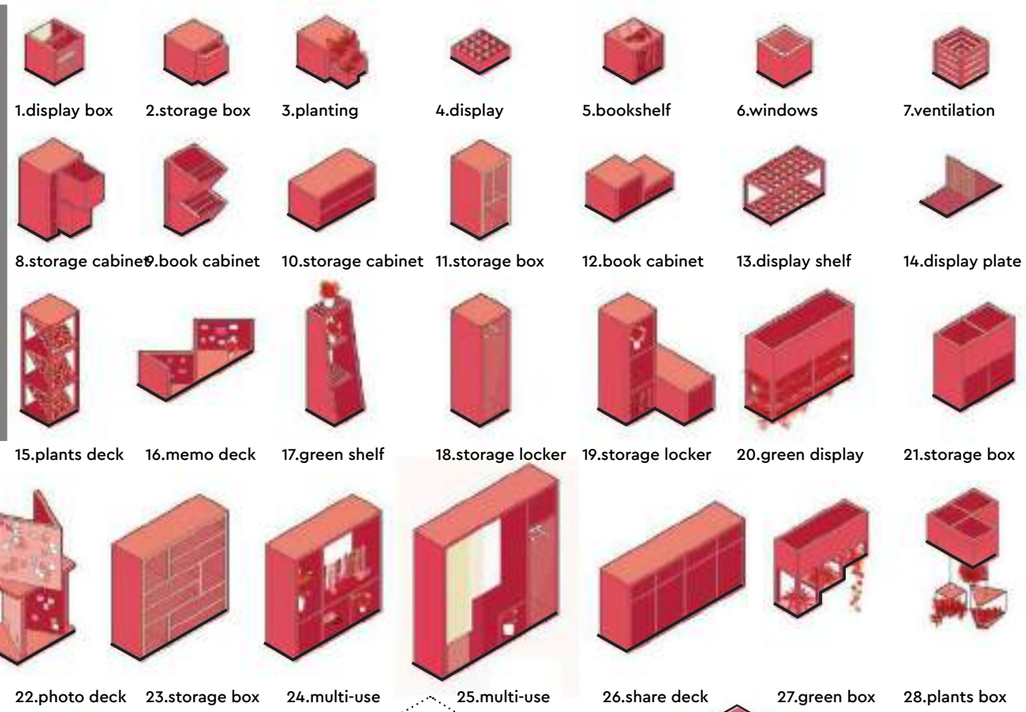


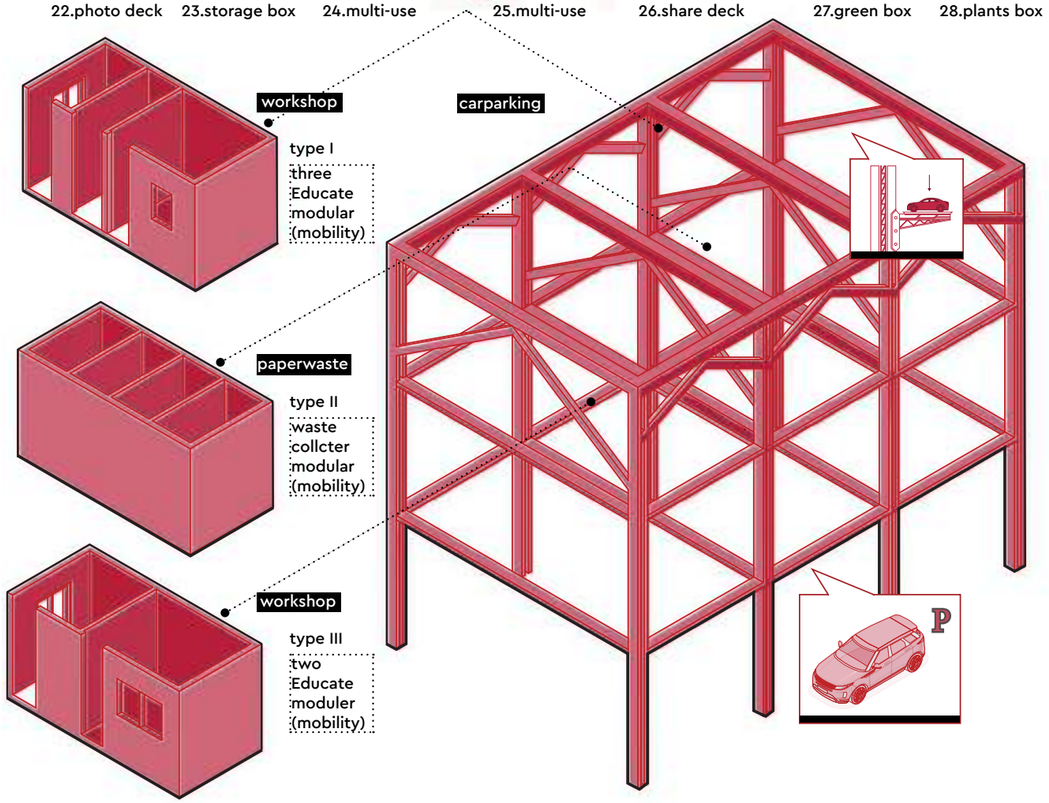




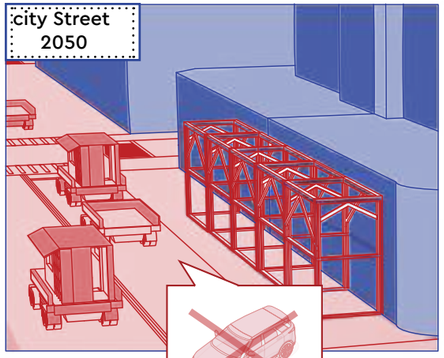
After collect the paper waste from school, user could use the education modular start making. user could be students, artists, teachers, and so on.at the same time, A variety of exhibition wall layouts create a beautiful view of the city.

EXHIBITION REMADE NY PAPER WASTE

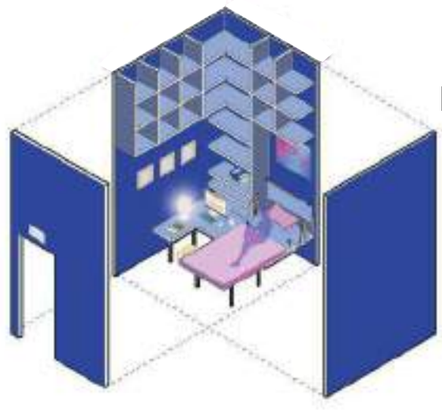




YEAR 2050

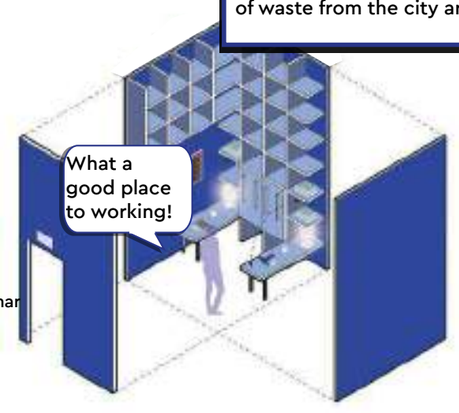


As the successful implementation of the CO-2GO plan starts, the moving modular starts to replace vehicles in the city, and all types of waste from the city are accepted.



signle room

- fast wifi
- book shelf
- charging
- air conditionar
- storage

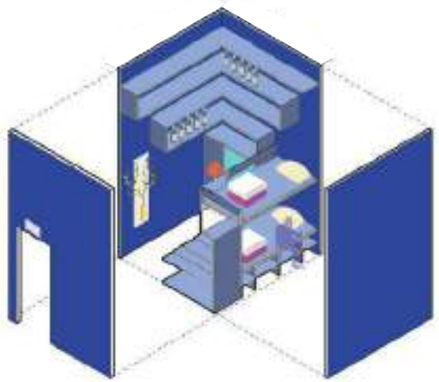


reading room

- wifi
- sleep
- shelf
- rest
- charging
- office
- air conditionar
- pet

twin room

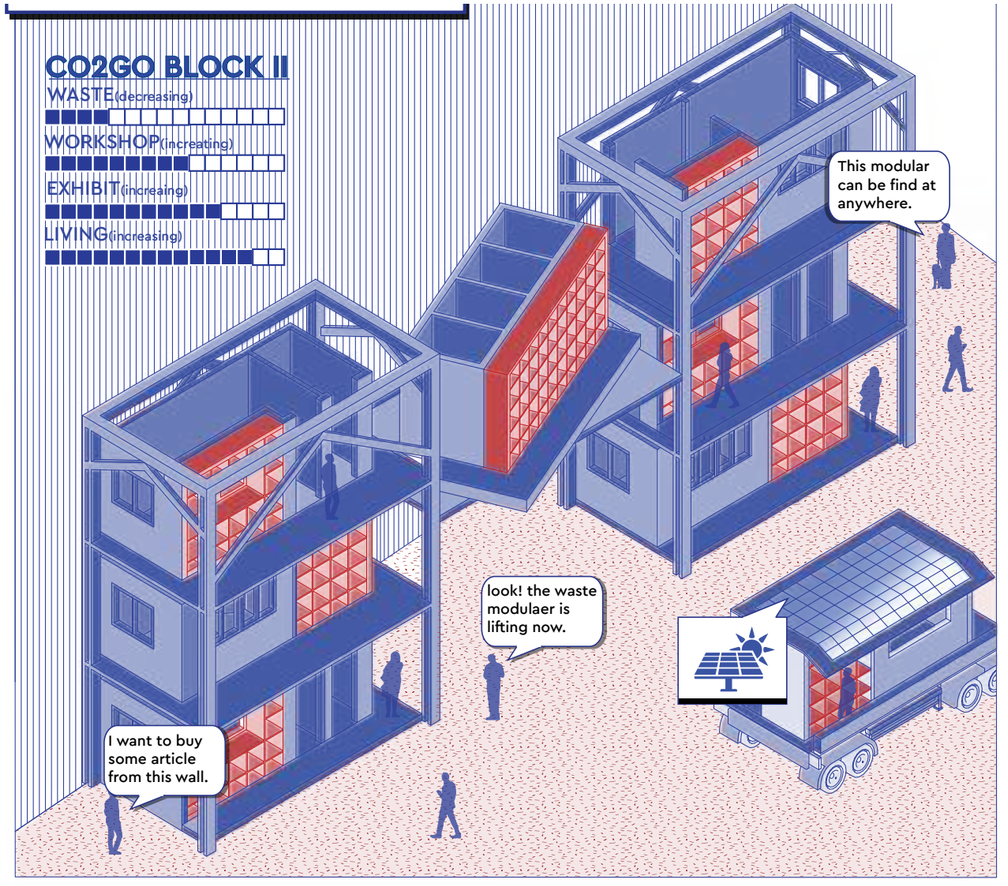
- wifi
- sleep
- rest
- stair
- charging
- air conditionar
- shelf

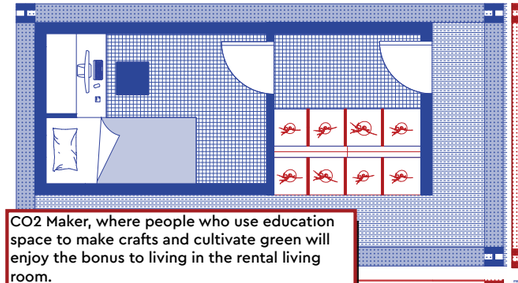


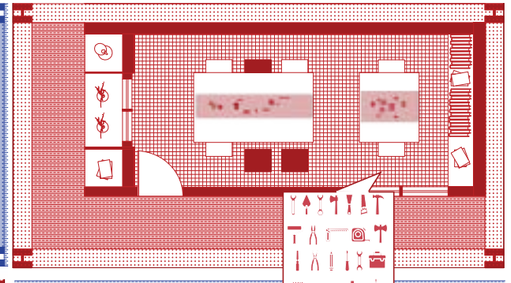
twin room

- wifi
- sleep
- rest
- TV
- charging
- air conditionar
- shelf

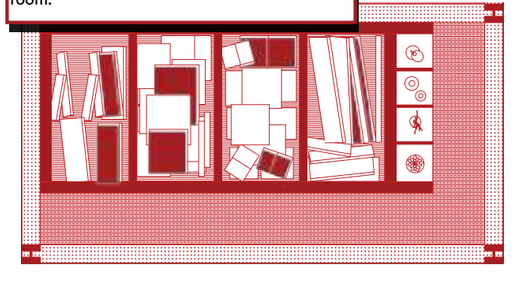
The previous 20 years profit from selling paper remade articles made the CO2GO plan have enough funding to add a short-term rental living strategy. The rental room provides single and twin living types to people.

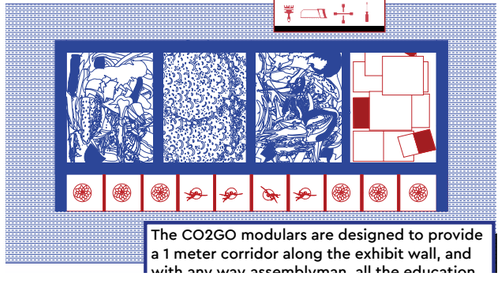






CO2 Maker, where people who use education space to make crafts and cultivate green will enjoy the bonus to living in the rental living room.





The CO2GO modulars are designed to provide a 1 meter corridor along the exhibit wall, and with any way assemblyman, all the education

the waste colletor façade
is always face the stree for
display and selling !

woops! I am lift-
ed and removed
by user.

Selected Work

ENVIRONMENTS ANIMALS TECHNOLOGIES

Fall 2022
Instructor: Gal Nissim

Blog I

I was inspired by the sound trip of the New York Times Magazine to consider how immersion may be achieved with just one sense. My emotions and sensations were influenced by the variations in sound as soon as I put on the headphones, closed my eyes, and concentrated on listening to the sounds of various sceneries with only my sense of hearing. I transitioned from being in nature to being in the city during the aural voyage, feeling the “sense of scene” generated by the many sound characteristics of the various flora, animals, climates, and other noises. When I added a second sensory experience, such a wind, the immersion experience was increased even when I was only listening to the sounds of natural settings.
I couldn’t help but think about how closely we have actually listened to the noises around us after this listening experience. Do the various noises we hear in various settings and under various conditions directly affect our lives? What distinguishes man-made sounds created by people who are not animals from natural and animal noises? Do these disparities affect people’s lives in any way? With the help of these inquiries, I will find additional inspiration for my career future and personal life, and I will be able to look at things from a fresh perspective.

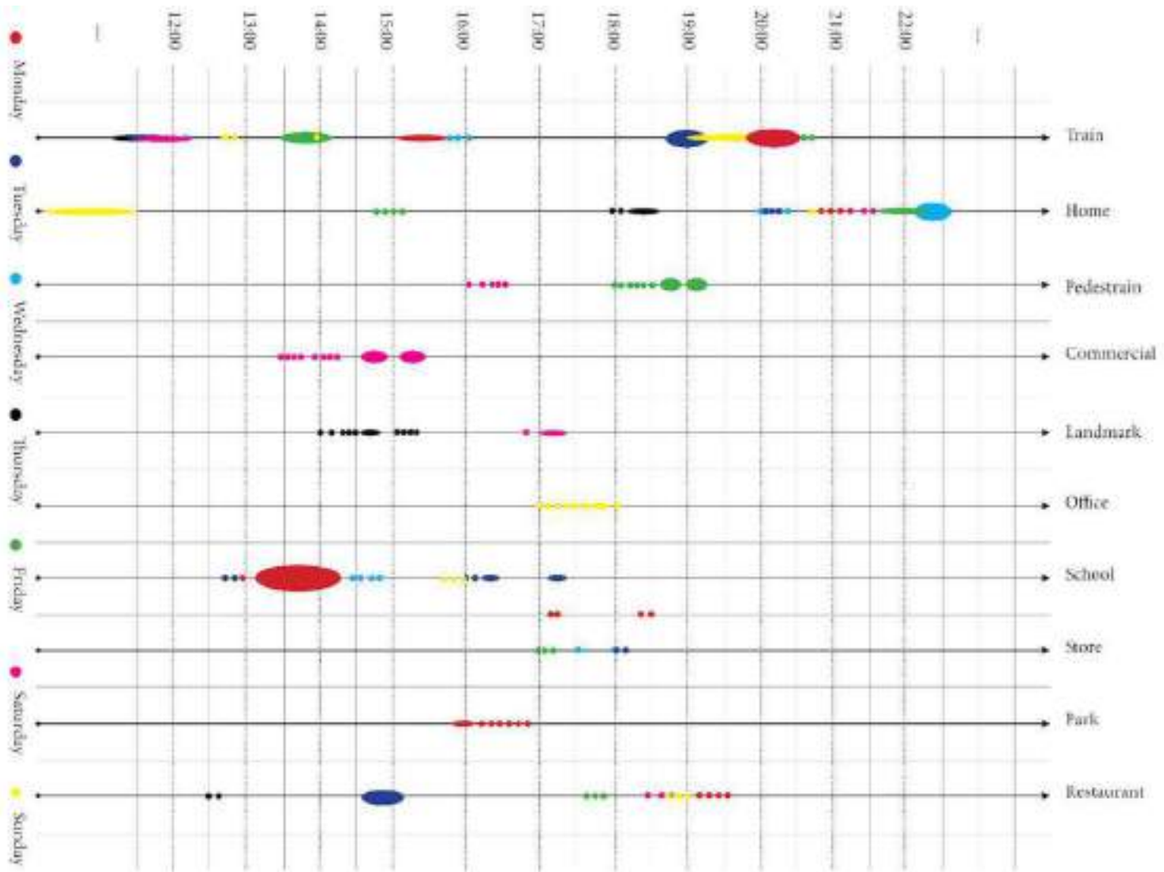
Blog II

MAXforum 2022 by ONX Studio
ONX Studio’s MAXforum 2022 focuses on the use of interactive technology to extend virtual space into real space by fusing it with the actual. Mimi Yin, a studio panelist, and Dr. Ryan York, a motion mapping artist, explored the creative potential and constraints of using AI at this event. Motion mapping draws on the knowledge of neurobiologists, avatars, insects, and doppelgängers to create specific appearances.

In the event, what interested me was that the guest introduced the sensation of space that the human body perceives when it moves, that the body has a memory of space, and that virtual space is very similar to physical space, defined as the “third space”, especially when dancing. She talked about the existence of a “third space” in the physical space of telecommunications, as Byron Berger put it, in the 1980s and 1990s, when much of his early telematics work was sorted. This is a space that consists of information about the community to the communicating parties. So the essence of this space is neither the physical space nor the place where these two people are communicating, it’s like somewhere out of sight. For her, this is the spatial realm that fascinates her so much, studying how to get the bodies of people in the real world into this space, perhaps through the extension of the physical presence and thus actually feeling that third space.
This made me start thinking about the blurring of the boundary between the virtual world and the real world that I experienced during my participation in the unfinisedlive project, where human actions in real life also have an impact in the virtual world.

Blog III

Photograph action for a week



Blog IV

Fish Action—Sardines
Whether in daily fishkeeping experience or in the natural ocean, fish share a common behavior: when they arrive in a new environment, each fish swims to the place where its own kind is, thus forming a community gathering. The reasons for this behavior include the fact that, in addition to the organism's own instinct for community aggregation, small fish aggregation has the effect of deterring larger fish.
In this assignment, I used Sardines as a reference sample, added my own code language by referring to online coding tutorials, and created a behavior that represents fish swimming in a specific direction (i.e., where their kind is).

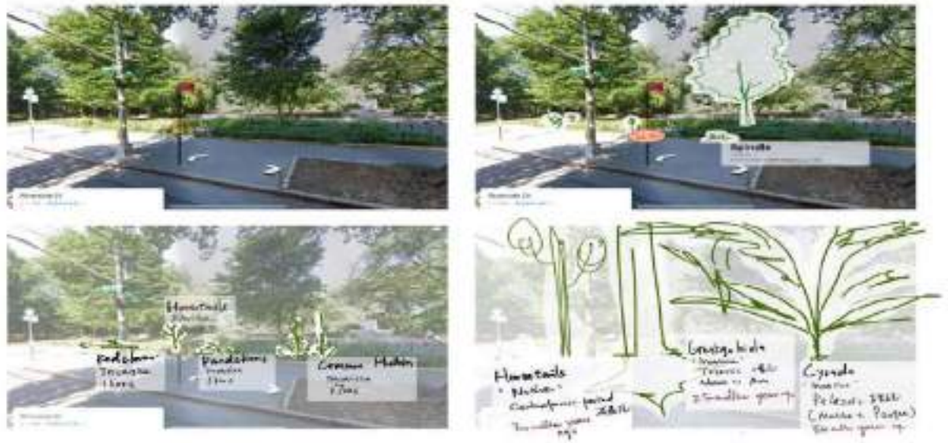
As shown in the picture above, sardines will appear in groups whether they are hunting or in danger, or take any action, and the place where the group of the same kind is located is the direction of their march.
References from BBC:
https://www.youtube.com/watch?v=15B8qN9dre4
https://www.youtube.com/watch?v=Hg-NsZQFSAk
My Visualization of Sardines' moving behavior.
1.Where the sardines stay 2.Where the sardines mov
Code demonstration
1.Code of Stay 2.Code of MoveChanged Part
P5.js Link: https://editor.p5js.org/fx2191/full/Y9r3wqX8Z
Reference:Daniel Shiffman Yutube channel

```
function draw() {
  background(000);

  for (let i = 0; i < vibrations.length; i++) {
    vibrations[i].show(50);
    vibrations[i].update(50);
  }
}

function mousePressed() {
  vibrations.push(new Particle(mouseX, mouseY));
}

class Particle {

  constructor(x, y) {
    this.x = x;
    this.y = y;
    this.history = [];
  }

  update() {
    this.x = this.x+0.1*(450-this.x);
    this.y = this.y+0.1*(450-this.y) ;

    let v = createVector(this.x, this.y);
```

```
  update() {
    this.x = this.x+0.1*(450-this.x);
    this.y = this.y+0.1*(450-this.y) ;

    let v = createVector(this.x, this.y);

    this.history.push(v);
    //console.log(this.history.length);

    if (this.history.length > 60) {
      this.history.splice(0, 5);
    }
  }

  show() {
    for (let i = 0; i < this.history.length; i++) {
      let pos = this.history[i];
      noFill();
      vertex(pos.x, pos.y);
      endShape();
    }

    noStroke();
    fill(222);
    ellipse(this.x, this.y, 19, 19);
  }
}
```

Week 6&7 Plant Invasion

Storyboard:



AR Vedio Version I:
https://www.youtube.com/watch?app=desktop&v=2Yw779oylyk

AR Vedio Version II:
https://m.youtube.com/watch?v=l3_y0R-Ywu8

Introduction:
Plants having "superpowers" for regeneration Plants' roots, stems, leaves, and other parts may regenerate themselves when given the correct conditions for growth, making them excellent examples of invasive creatures in the natural world.

We always think of some plants as invasive and some plants as native, and we resist exotic plants. But a long time ago, plants lived together, and if you go back far enough, all plants can be considered invasive.

Background:
Long ago, several ambitious invaders from other countries traveled across the ocean to the United States with the intent of founding a new dominion there. …
Part I. Cretaceous
Invasive plant representatives.

Horsetails (**Equisetum hyemale**) :"a primitive vascular plant group of the Carboniferous Period."

maidenhair tree (**Ginkgo biloba**): " the living survivors of an ancient flora that dates back to the days of dinosaurs."

Amborella trichopoda :" the most primitive living flowering plant."

The Magnolia Family (Magnoliaceae): "the most primitive of all living angiosperms."

Part II.Year 1776
Invasive plant representatives.

Dandelions :"Evolved in Eurasia about 30 million years ago"

Red Clover : "probably arriving in the 1500's and in the Northeastern United States"

Common Mullein:1630年, "Puritans brought mullein seeds to America for use in their herb gardens"

Part III. Year 2022
Invasive plant representatives.

Armour, honeysuckle: "Armour honeysuckle has begun to grow in some areas of Hamilton County. Today, it is a dominant woody plant found throughout the state, crowding out almost all other low-lying vegetation, the study found."

Kudzu: "climbing perennial vine terrorizes native plants all over the southeastern United States and is making its way into the Midwest, Northeast, and even Oregon."

The END.
The moment the plants land in the United States, they discover a living environment that pleases them, beginning with a place where they can immediately begin to observe the haughty vegetation around. The invasion is still ongoing.....

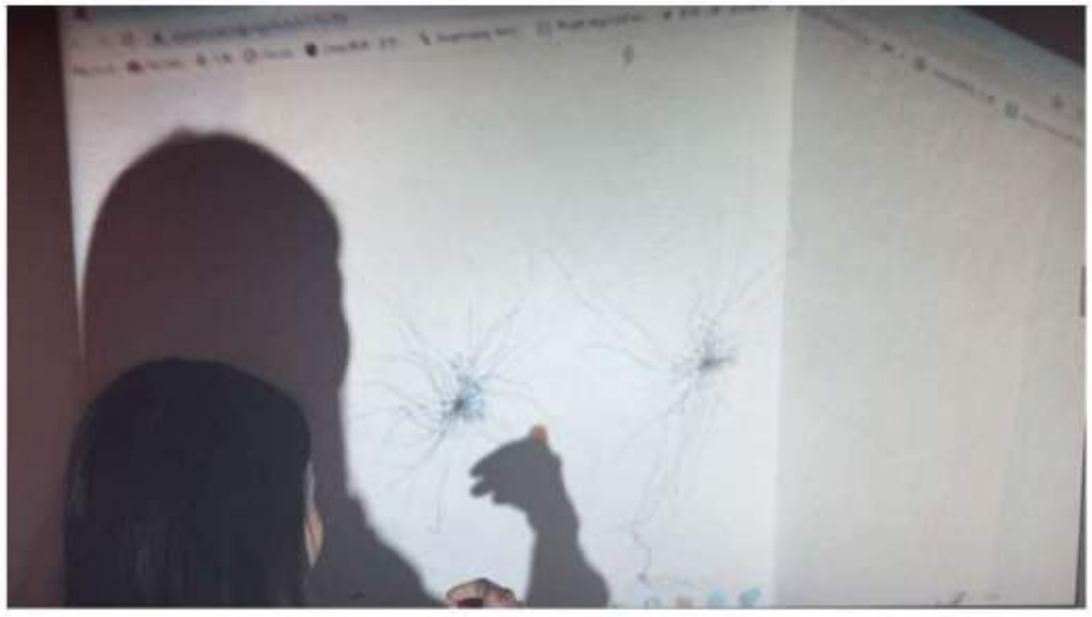
Final AR Code:

Final Project

Mycelium, the nutritive growing part of a fungus, consists of many branched hyphae. Large pieces of mycelium are sometimes called “shiro”, especially those that can form fairy rings. Mycelium can be present in soil or many other substrates. This projecy we inspired by mycelium, use leapmotion. coding and touchdesigner to text on. The growth process of mycelium and leap motion provide an inspiring platform for spaced interaction.

Interaction I

Interaction II



Selected Work

ACHITECTURE PHOTOGRAPHY

Spring 2023
Instructor: Michael Vahrenwald