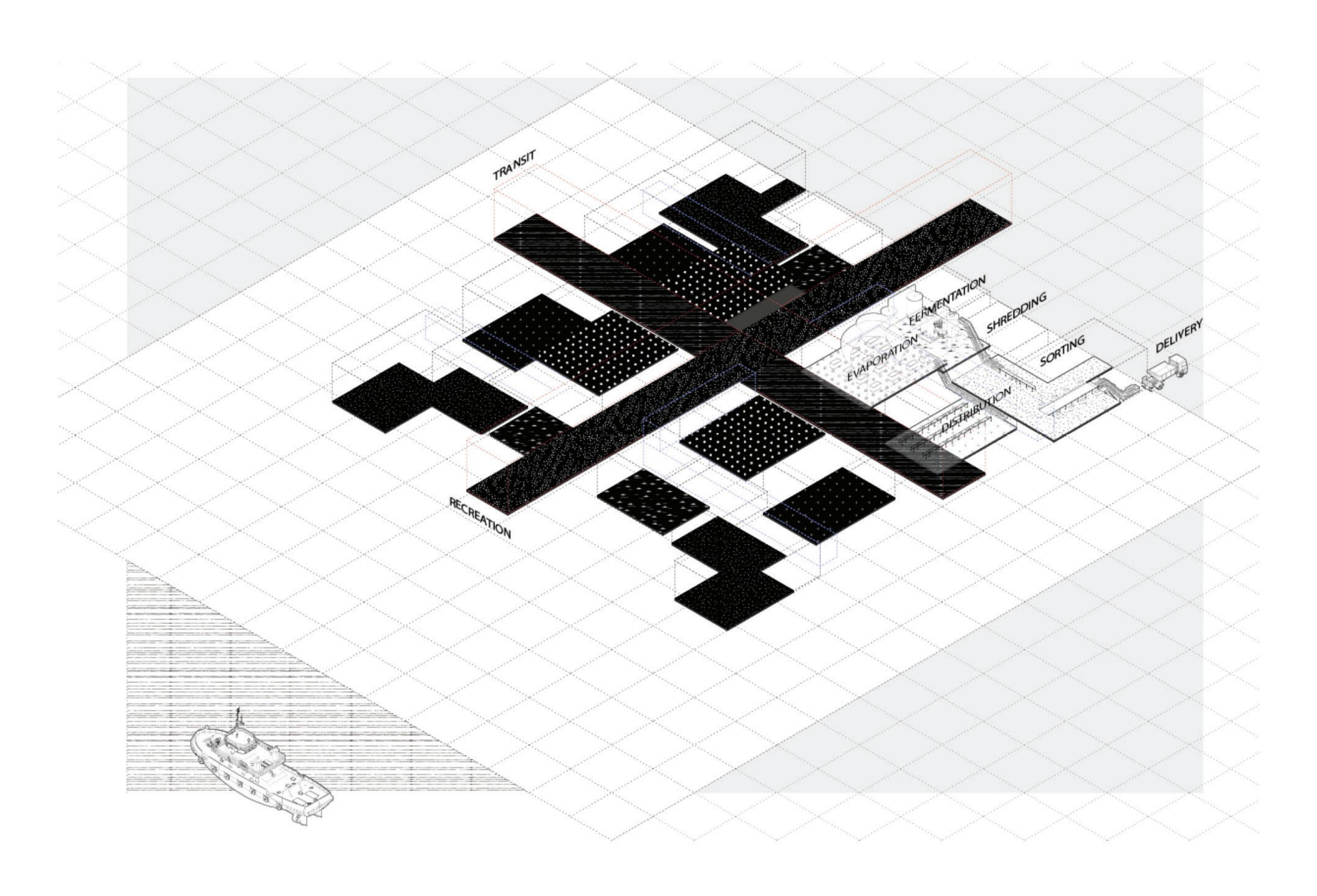
Digital Publication

JOYCE CHEN

Portfolio



Columbia GSAPP Masters of Science (Advanced Architural Desig SU 2019 - SP 2020

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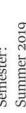
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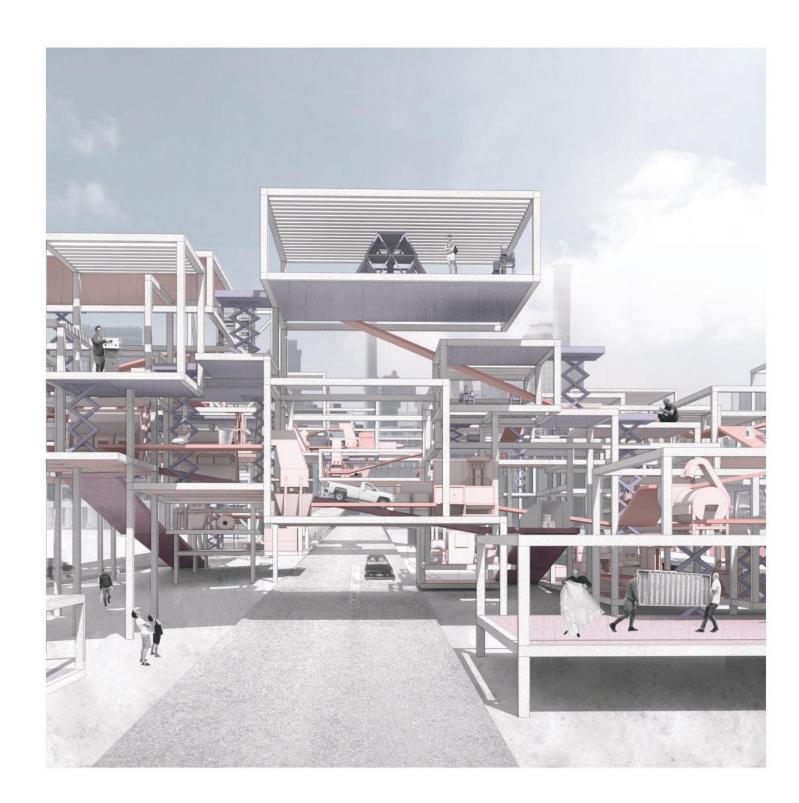
Plastic Nation

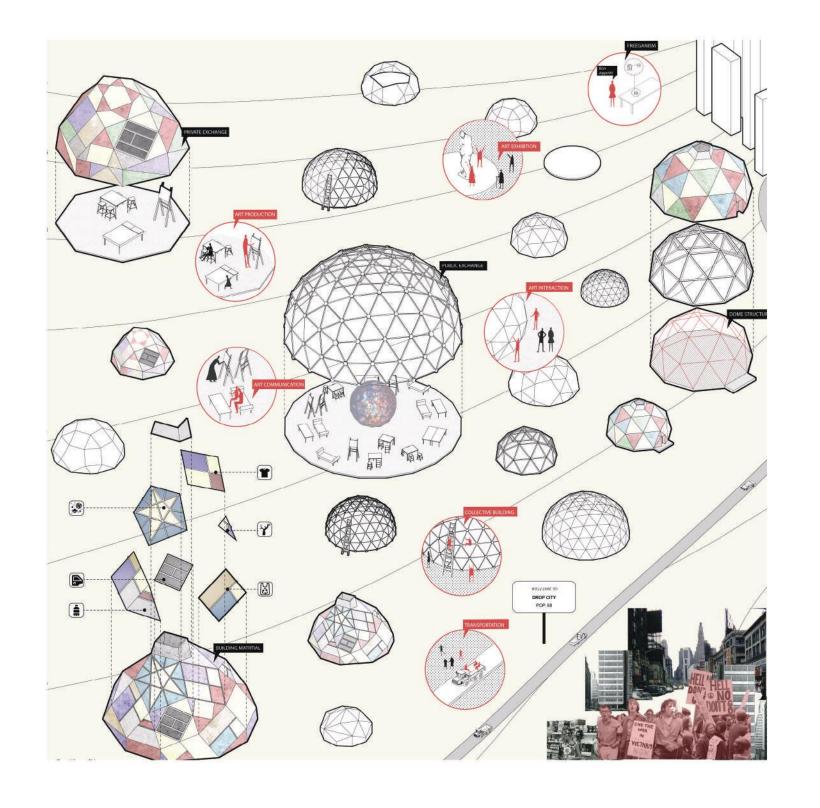
Yixuan Shi

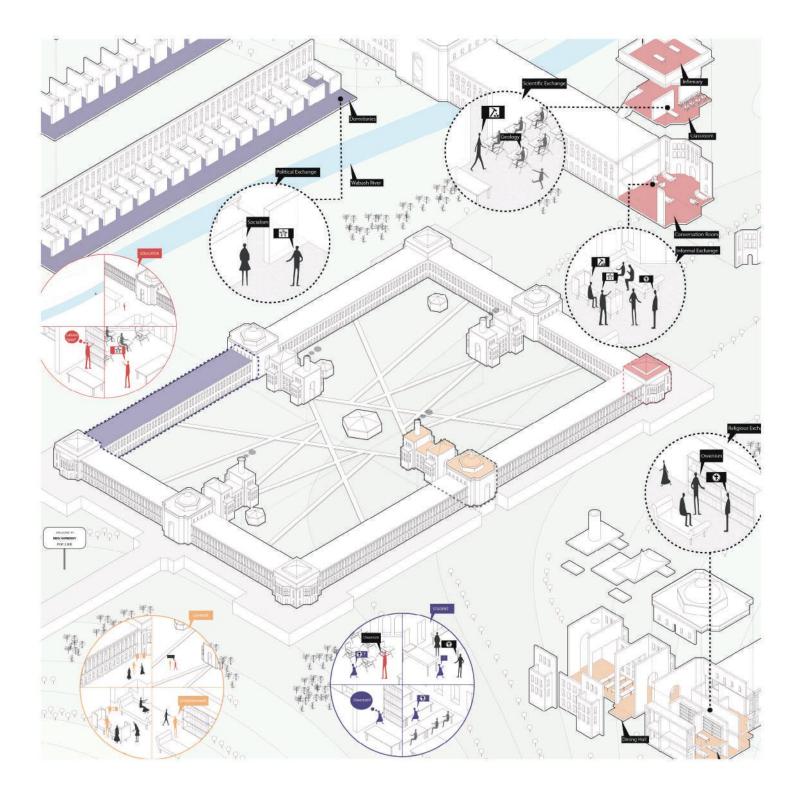
Instructor: Tei Carpenter

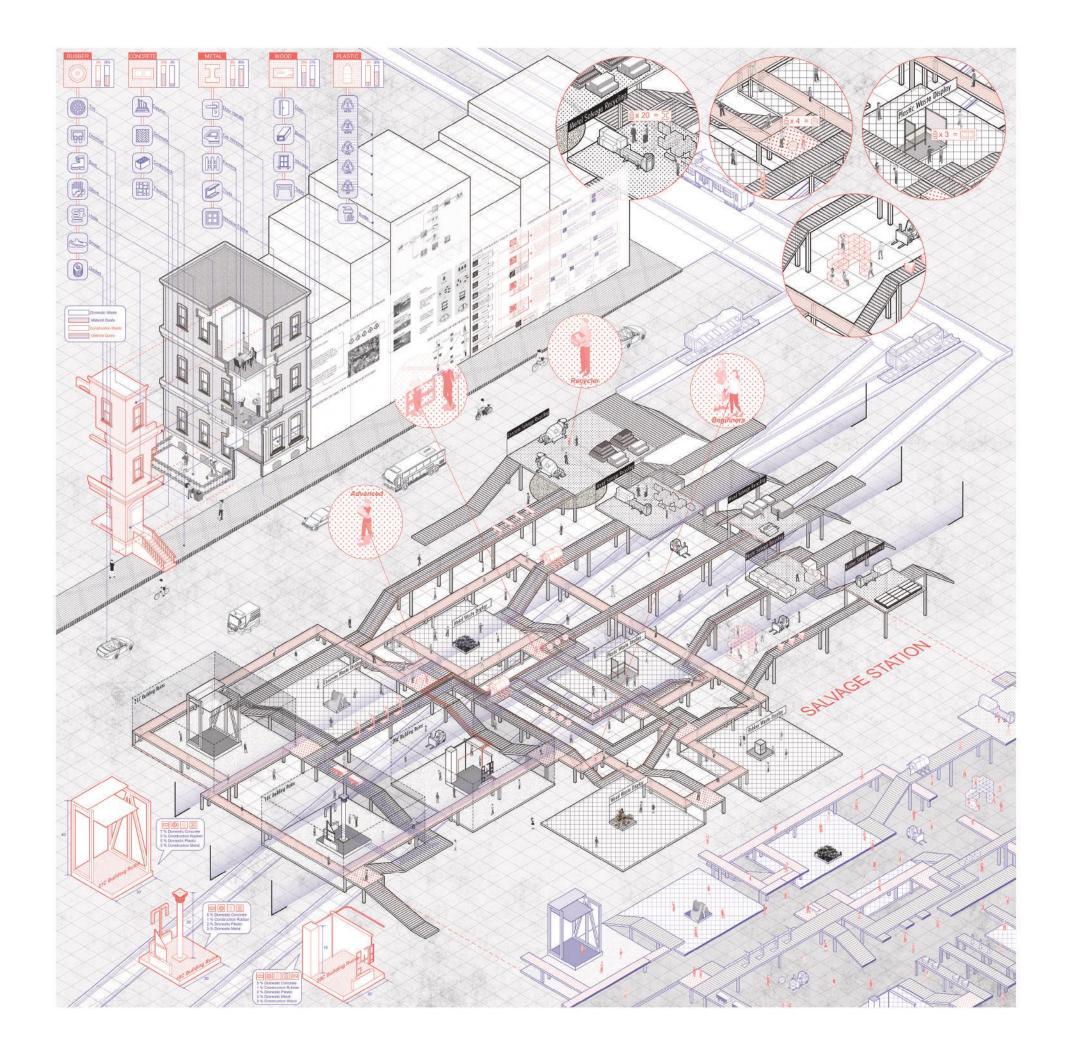
Plastic Nation takes place in a future where New York City no longer accepts plastic products as a result of laws recently enacted to reduce the carbon footprint within the city, such as the banning of plastic bags in the state of New York and the zero waste initiative. In eliminating the production of new plastics, a new circular economy would emerge based on the existing supply, commodifying plastic and eliminating its typical single use purpose in a series of interlocking spaces where the transformation process of plastic is observed and exchanged in various states.



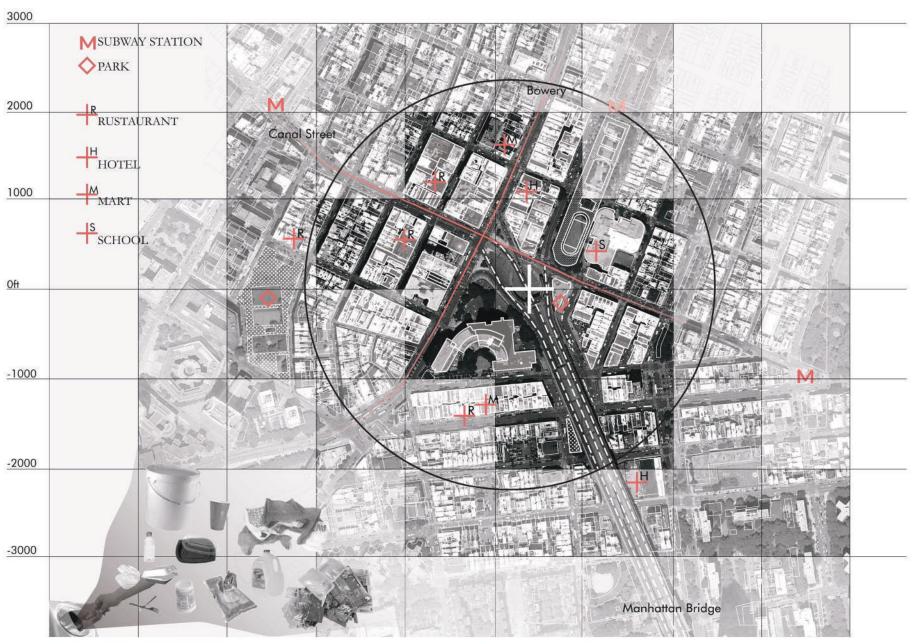




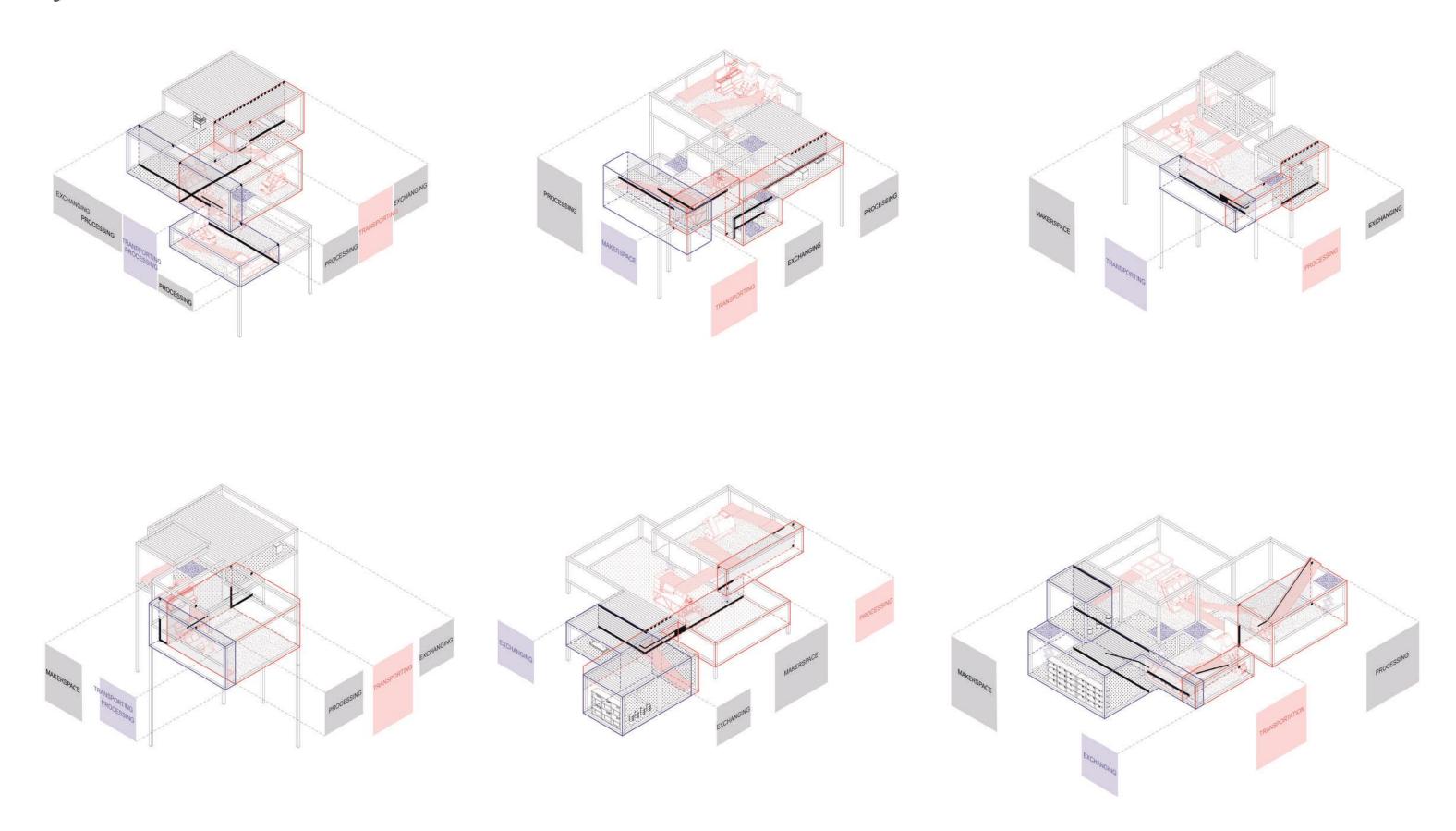




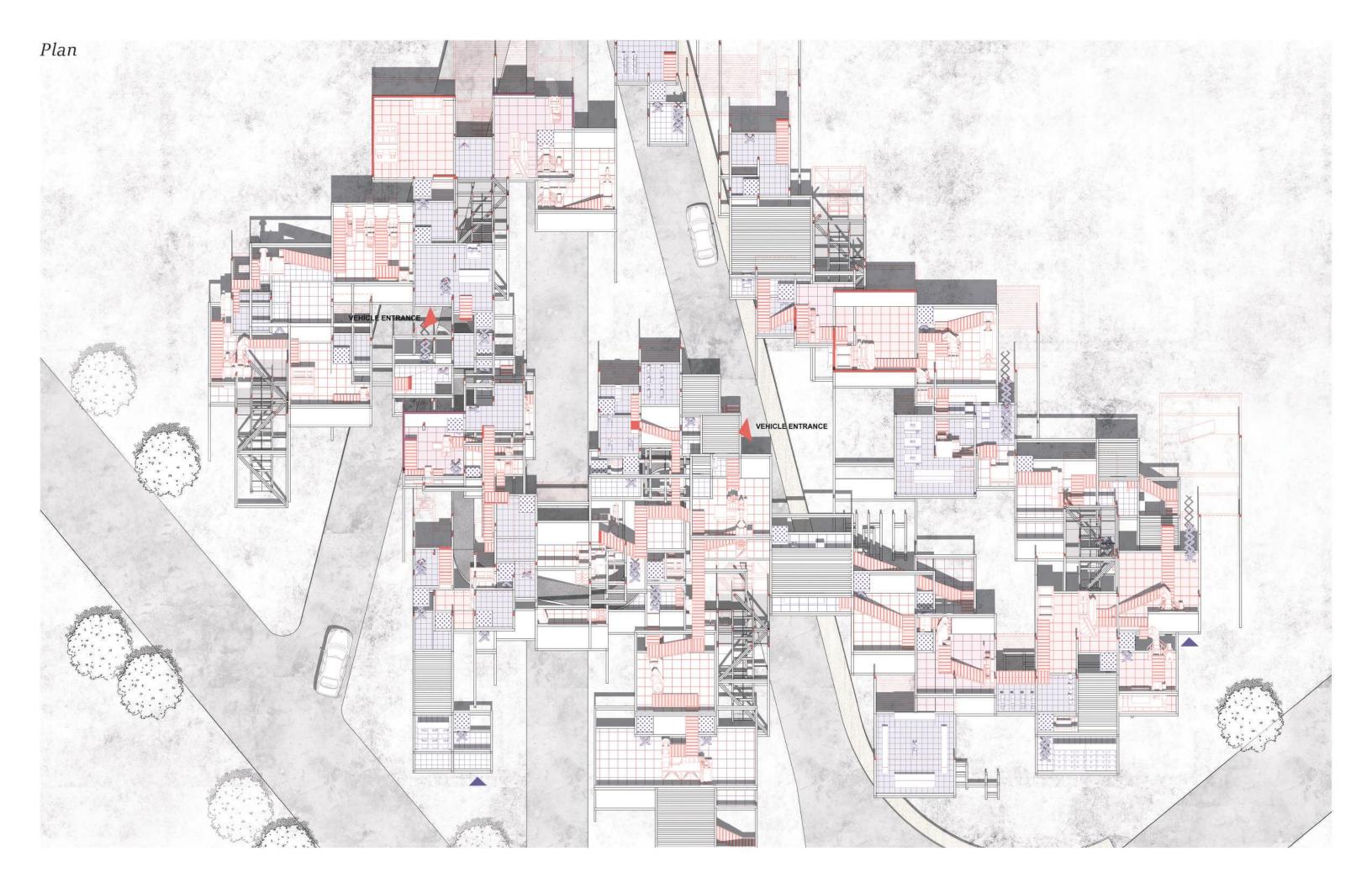


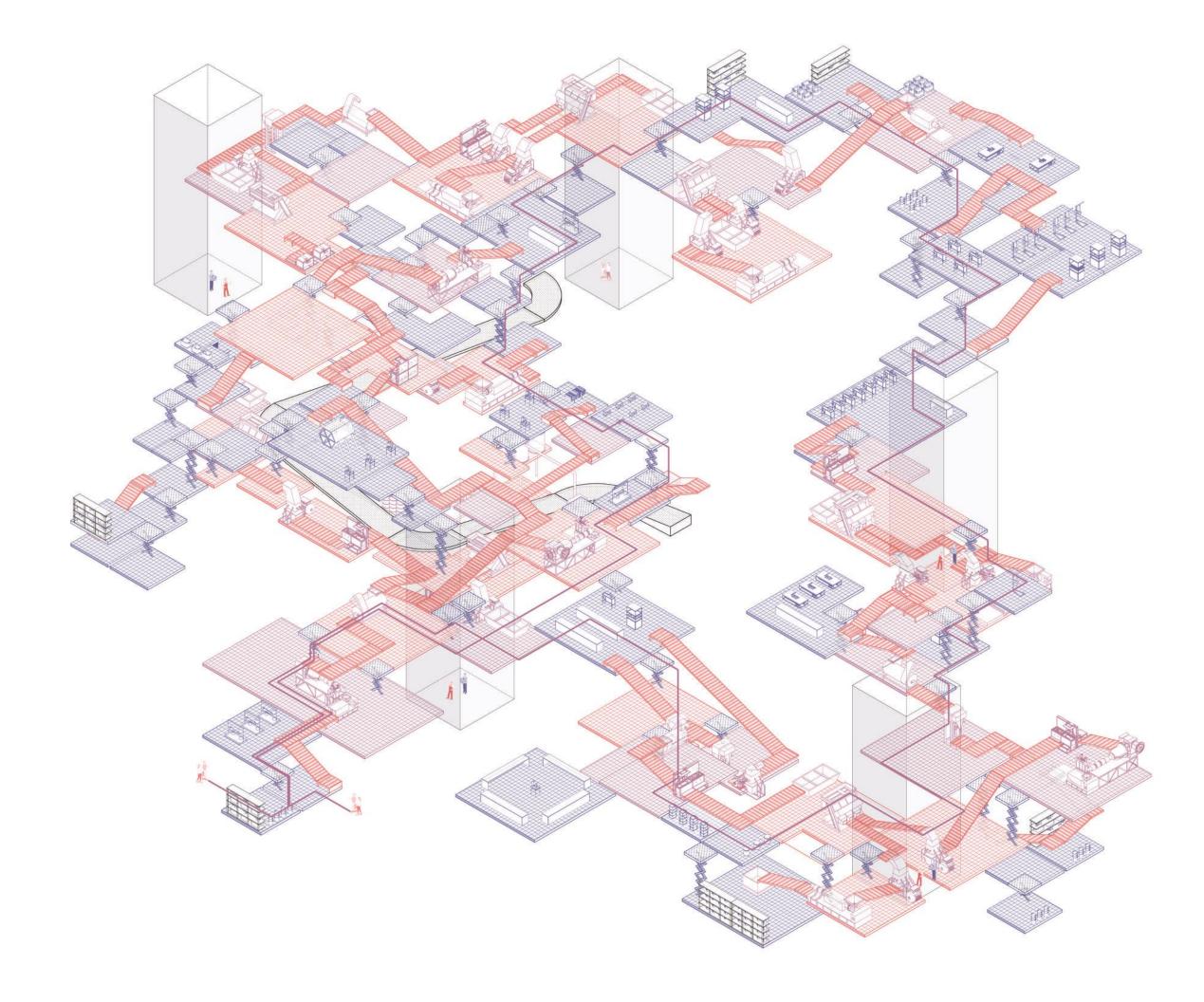


Program

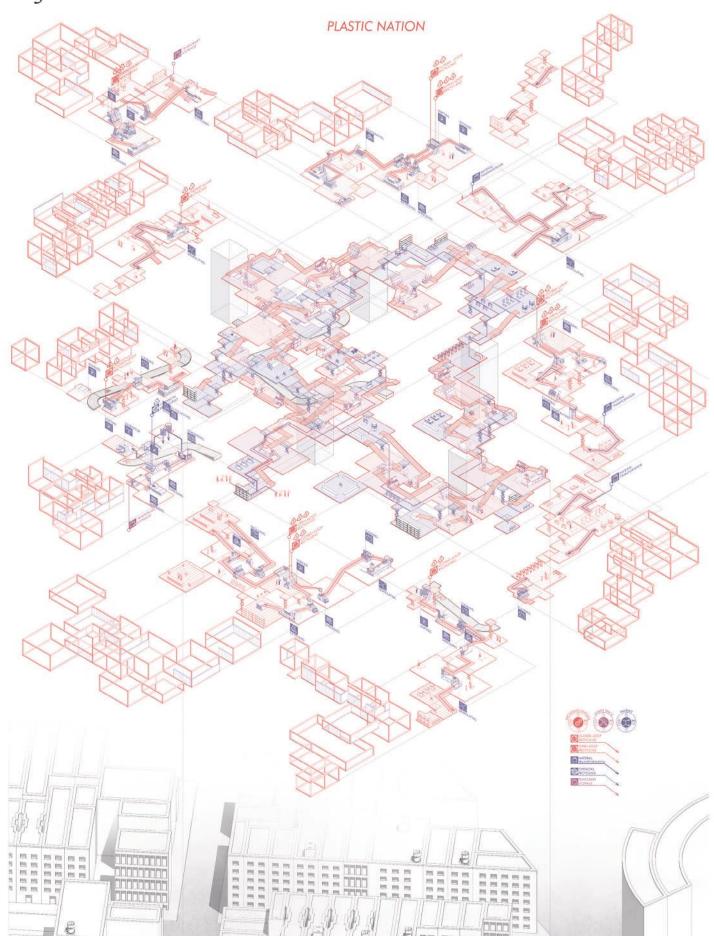


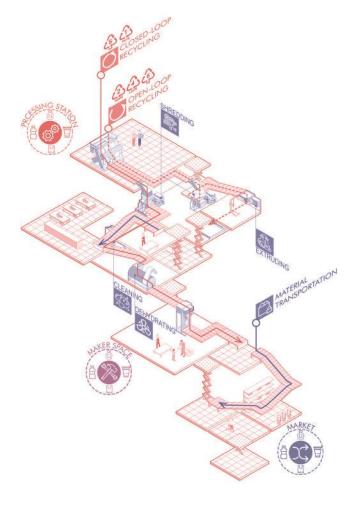


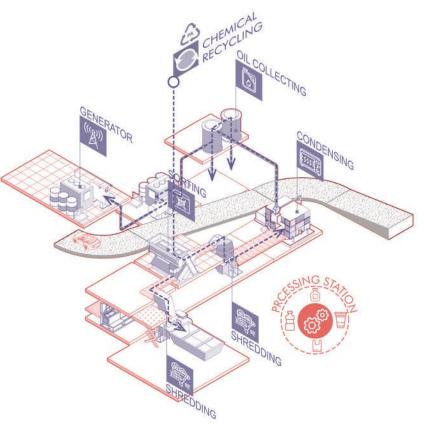


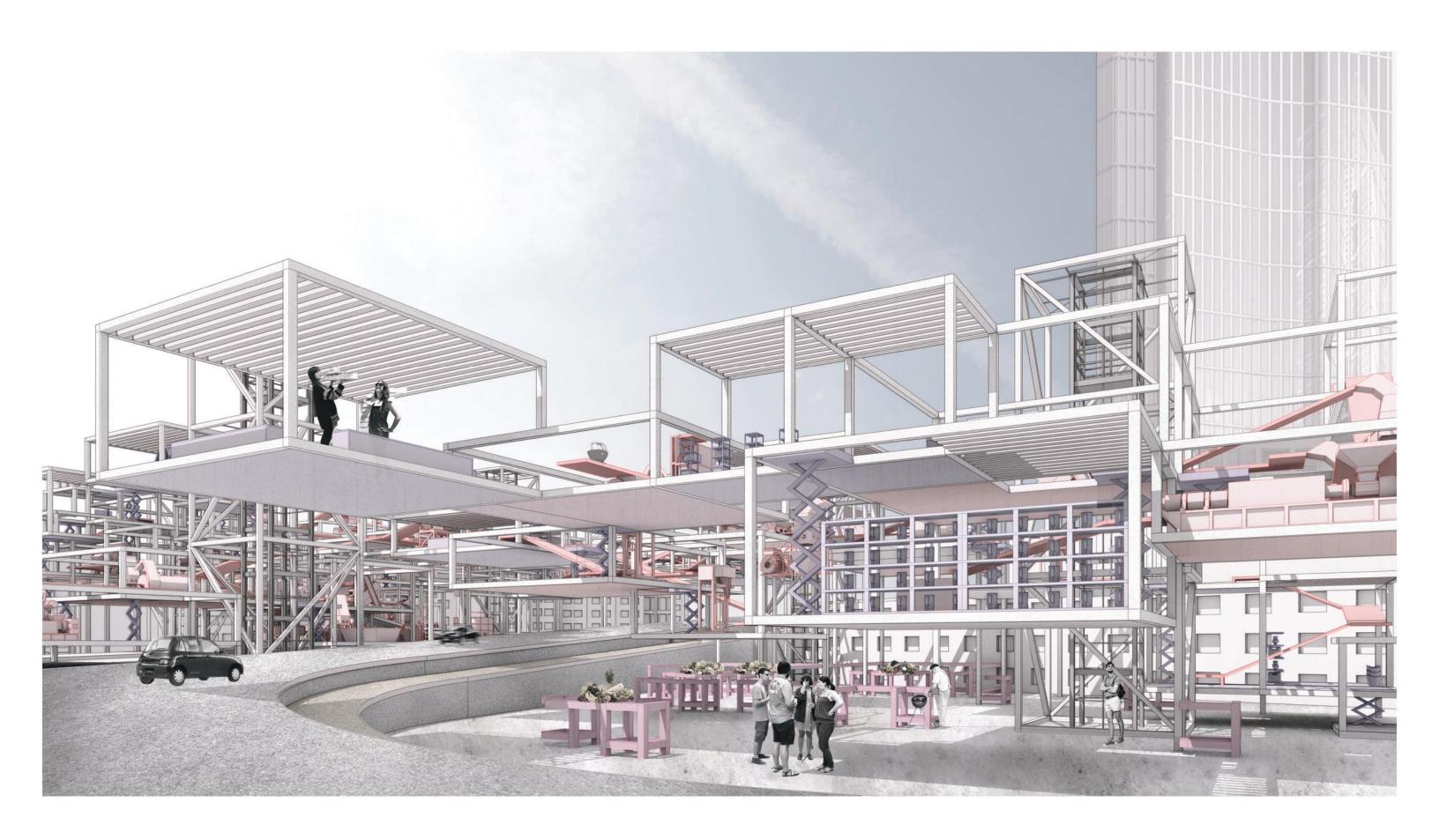


Program





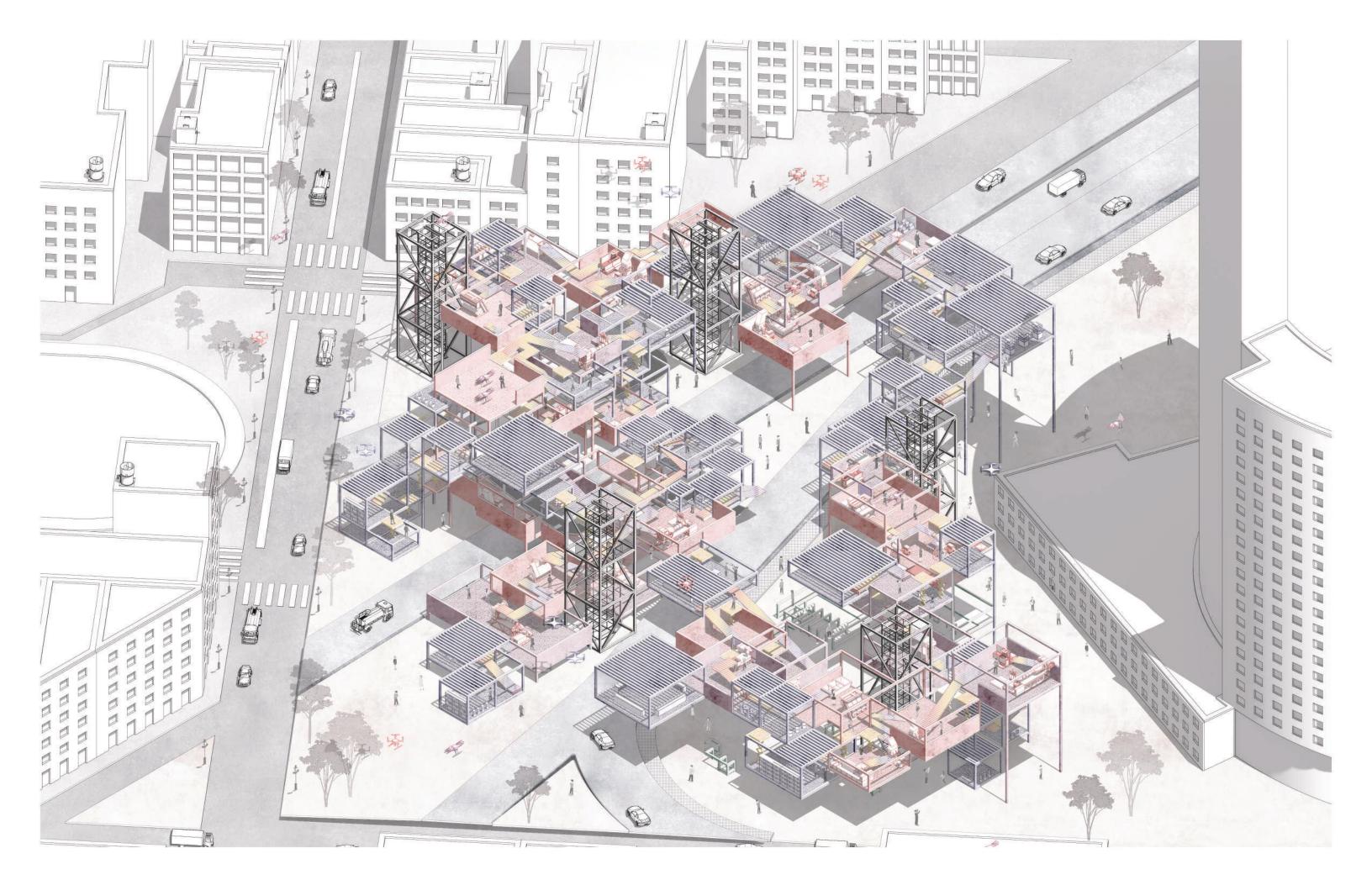




The framework of the design is centered on principals obtained through the manifesto drawing, an experiential diagram that illustrates the players within our market space as well as the transformational process of material, and the potential spaces and programs that the market may hold.







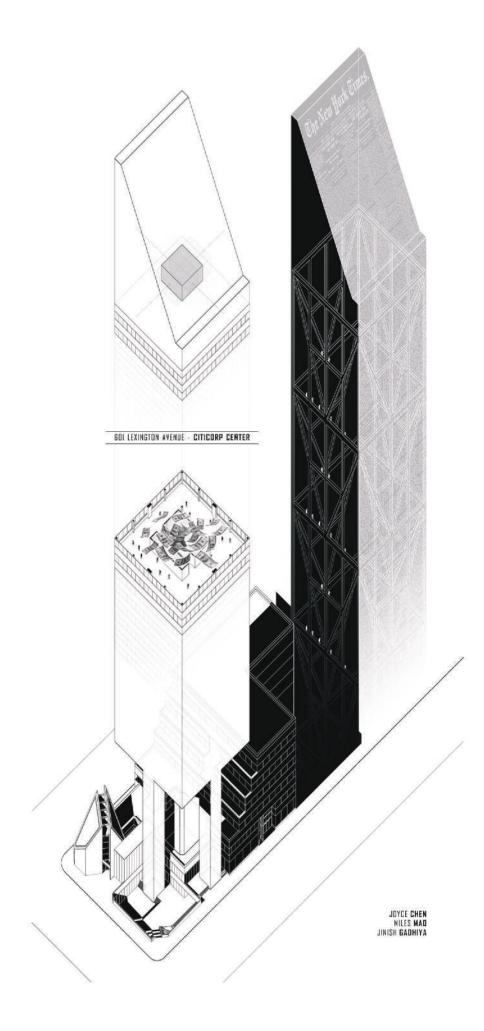
Transcalarities

wolk. Individual

Instructor: Andres Jacques

This course queries the ways in which architectural devices of reference, which have shaped the discourse of the field over the last 3 decades, are characterized by their transitioning through spatial and temporal scales. The course explores the agency architectural devices unfold through this transscalar condition—this is to say, the specific political modes that architectural devices perform, and the way they multiply their reach, influence, and sensitivity: for instance, from the microbiological to the mineral, the atmospherical, the ecosystemical, the genetic, and the planetary.

Summer 2019



Joyce Chen

Andres Jacques

06/20/19

Transcalarities

Dipesh Chakrabarty's *Postcolonial Studies and the Challenge of Climate Change*examines the present geological influence of humanity, or the Anthropocene period, and
how humans must expand beyond their ontological thinking capabilities in order to take

It is perhaps through recontextualizing climate change and viewing the state of the world through multiple timelines generated by artificial natures that humanity gains a new perception of the ecological world.

created to satisfy the avarice of humanistic desires. Due to these creations humanity has entered an ecological state that has transcended qualitative values. It is perhaps through recontextualizing climate change and viewing the state of the world through multiple timelines generated by artificial natures that humanity gains a new perception of the ecological world. By introducing simultaneous states of consciousness, the linear timeline introduced by previous scientists becomes muted, and multiple states of consciousness emerge to provide an objective framework.

Joyce Chen

Andres Jacques

06/29/19

Transcalarities

The Postman

Rossi Braidotti's chapter *Compensatory Humanism* argues against extending humanistic values to animals, and instead advocates that humans must recognize the symbiotic relationship between humans and animals. In hybridizing human and animal

It is within this temporality, through the contextual perspective of chimeric humans and animals, that equality may truly be achieved and the human centric notions of the other becomes disbanded.

responsible for the current environmental climate, anthromorphizing animals is a fruitless endeavor that will not quell the current environmental issues. It is only by acknowledging that a bond between humans and animals exists in which they function in tandem with one another allows for the transcendence of all species into another plane of awareness. It is within this temporality, through the contextual perspective of chimeric humans and animals, that equality may truly be achieved and the human centric notions of the other becomes disbanded.

Joyce Chen

Andres Jacques

07/11/19

Transcalarities

Rotor's A Reverse Engineering and Methodology Practice demonstrates designing in response to the current environment and illustrates the significance of

By immersing the participants within the lived realities of the landscape, the human removes its self-imposed barriers constructed by urban dwellings, and reclaims its place within the interlocking network of ecosystems in which all species are a part of.

element of the natural to participants in order to generate a sense of ecognosis, or awareness of the human in relation to its natural environment. By immersing the participants within the lived realities of the landscape, the human removes its self-imposed barriers constructed by urban dwellings, and reclaims its place within the interlocking network of ecosystems in which all species are a part of. The recognition of readapting existing materials is critical in the modern climate, as sustainable typologies facilitate critical discussions in an era of converging environmental crises.

Joyce Chen

Andres Jacques

07/18/19

Transcalarities

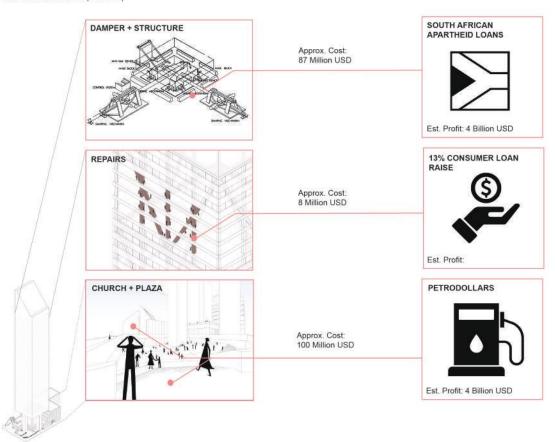
Baroque Technopatriarchy

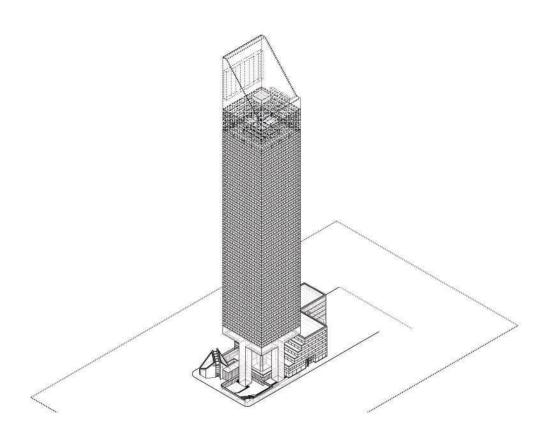
Paul B. Preciado's *Baroque Technopatriarchy* advocates for the synthesis of the organic reproductive body and the inorganic technologies of mechanical production in order to overcome the sexist and fascist modern paradigm ushered in by the Trump era

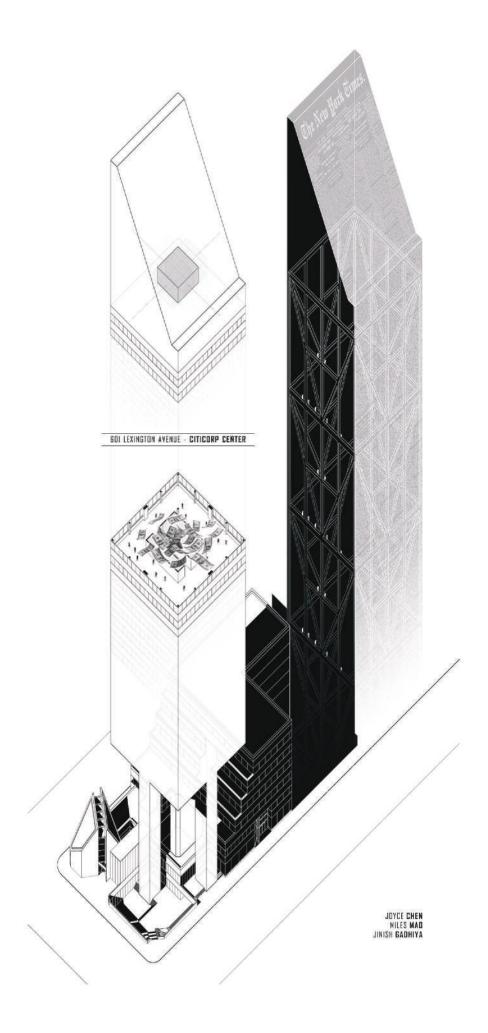
The implementation of hybridizing technology and biology requires further explorations and investigations into the context of cultures, and how such a practice is applicable within the context of the global network in an era of converging ecological crises.

addition to this, by reframing existing technological frameworks in order to establish systems of equality, one questions potential futuristic scenarios and how society as a whole may operate within an era of removed preconceptions of beings previously considered to be second class citizens. The implementation of hybridizing technology and biology requires further explorations and investigations into the context of cultures, and how such a practice is applicable within the context of the global network in an era of converging ecological crises.

TOTAL: 195 MILLION USD (1970) 806 MILLION USD (TODAY)







Arguments

work: Individual

Instructor: Jana Berankova

The course interrogates the way architectural devices and architectural practices gain collective relevance by participating in the making of contemporary realities; by facing current environmental, technological and representational challenges; and by being part of ongoing interactions, collaborations, disputes and coexistences. Organized around a series of case-studies (half of them coming from the field of architecture, half of them brought by speakers who approach architecture from non-architectural fields) this course has as a main goal to interrogate the way architecture is part of the shared concerns that shape the evolution of the world's societies; that is to say, to explore what is the way architectural practices are evolving by confronting and being part of shared concerns.

QUARRY

NEW INVESTIGATIONS IN COLLECTIVE FORM

UNAUTHORIZED AND POWERLESSNESS

FORMA FANTASMA

Summer 2019

Joyce Chen Jana Berankova 06/10/19 Arguments Questions

Quarry

 Amie Siegel states that objects can impress an intrinsic sense of value for the user, and oftentimes pseudomorphs are used to assume "false forms" in order to create a similar impression. By removing the intrinsic spiritual value of a material

Quarry

In her film Quarry Amy implements a choreographic sequence of camera techniques in conjunction with the crescendo of orchestra music to convey the opulence and wealth displayed through the use of marble within a montage of Manhattan apartments. Can a camera ever be used to capture a space without manipulating the viewer or creating political connotations through the composition?

techniques in conjunction with the crescend of orchestra music to convey the opulence and wealth displayed through the use of marble within a montage of Manhattan apartments. Can a camera ever be used to capture a space without manipulating the viewer or creating political connotations through the composition?

- 11. Is the film utilizing the concept of Dziga Vertov's kino-eye, in which an invisible truth becomes revealed through the use of montage and camera techniques?
- 12. Is Amy intentionally/ unintentionally revealing the materialistic nature of the space?

Joyce Chen Jana Berankova 06/04/19 Arguments Questions

New Investigations in Collective Form

1. In the foreword, Pie Vittorio Aureil argues that The Open Workshop's abstract
artifices prevents authoritative form. The suspended forms suggests the notion of
malleability within The Open Workshop's body of works, and in doing so defies the
oppressive power exerted by traditional architectural forms. Yet, what are the limitations
in this approach to reinvigorating form? The Theory of Forms by Plato, for instance,
states that forms themselves all possess an essential virtue beyond the physical realm
that defines its properties. These essences are understood through the limiting nature of
human imitations and interpretations. Therefore, although The Open Workshop seeks to
remove the essences behind structures by creating "open artifices," could it be argued

New Investigations in Collective Form

Therefore, although The Open Workshop seeks to remove the essences behind structures by creating "open artifices," could it be argued that the limitations of the human conceptions of space and objects can only transform these suspended forms into a limited catalogue of configurations?

"openness" by generating active participation between the users and their environments through a series of controlled modules. Gallery visitors are then able to "have more control over their environment and construct their own experience." (pg. 32) What would happen if an unexpected element that mirrors modern day challenges brought about by urban density, such as pollution, were to be introduced to the modules? How would the inhabitants subsequently react?

Joyce Chen Jana Berankova 06/18/19 Arguments Questions

Unauthorized and Powerlessness

In his article *Unauthorized*, Angelidakis notes that the people of Athens generated their own typology known as afthereto following the massive migration of half the country's population to Athens. Families would gradually construct their homes over time to accommodate their expanding families, creating a building organism that developed in response to the inhabitants. Is the typology of afthereto a precedent of future buildings in a society of rapidly expanding urban developments?

Andreas Angelidakis states that the city of Athens appears to be in a state of constant revolt due it's chaotic history of migrations and crises. Would the character that defines

Unauthorized and Powerlessness

Andreas Angelidakis states that the city of Athens appears to be in a state of constant revolt due it's chaotic history of migrations and crises. Would the character that defines Athens exist if not for the people who developed their own typology of afthereto and antiparochi?

Joyce Chen Jana Berankova 06/24/19 Arguments Questions

Forma Fantasma
Do people dictate the purpose of the object or vice versa?
Is the perception of e-waste altered by introducing the complete life cycle of the object?
By introducing the components of the object, does it return the material to the natural world and dissolve artificial barriers through introducing its origins?
At building scale, what would the level of waste production be and what conversations would it facilitate in regards to future construction?

Forma Fantasma

At building scale, what would the level of waste production be and what conversations would it facilitate in regards to future construction?

Residency in Frames

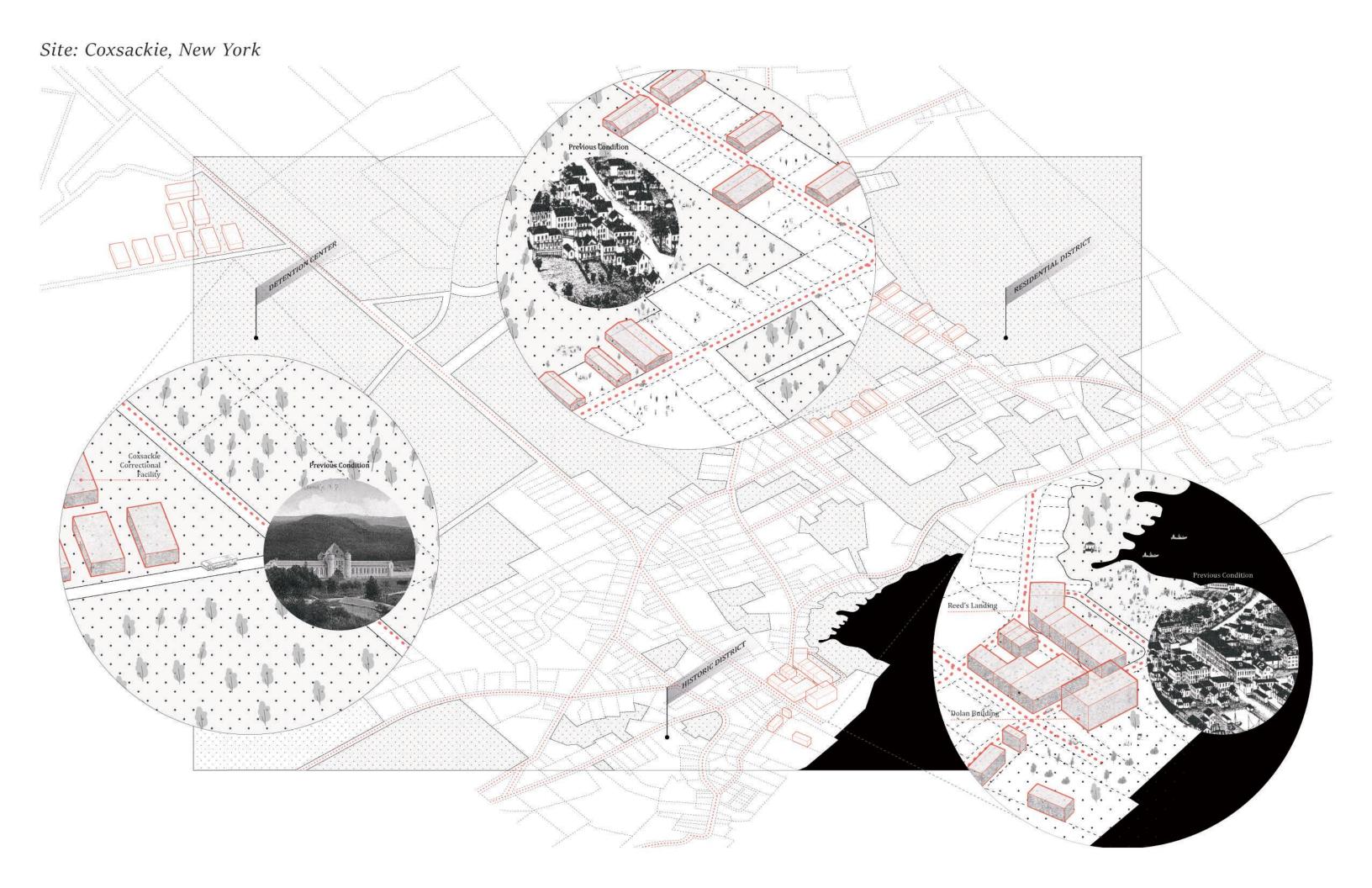
Work: Individual

Instructors: VPPR

Residency in frames is an artist's community primarily designed for landscape artists. The project activates the existing site by challenging the depth of vision through a series of sequentially framed perspectives aligned with artworks that direct inhabitants to proceed towards the Hudson River. Units and galleries are customized to accommodate different types of landscape artists ranging from painting, sculpture, photography, and performance, and are organized along a radial grid system responsive to the existing site typology. It is through these devices that views become intentional moments set along the Hudson River, reinvigorating the abandoned town and creating a contemplative communal space for artist residencies primarily focused on artworks activated by the site.

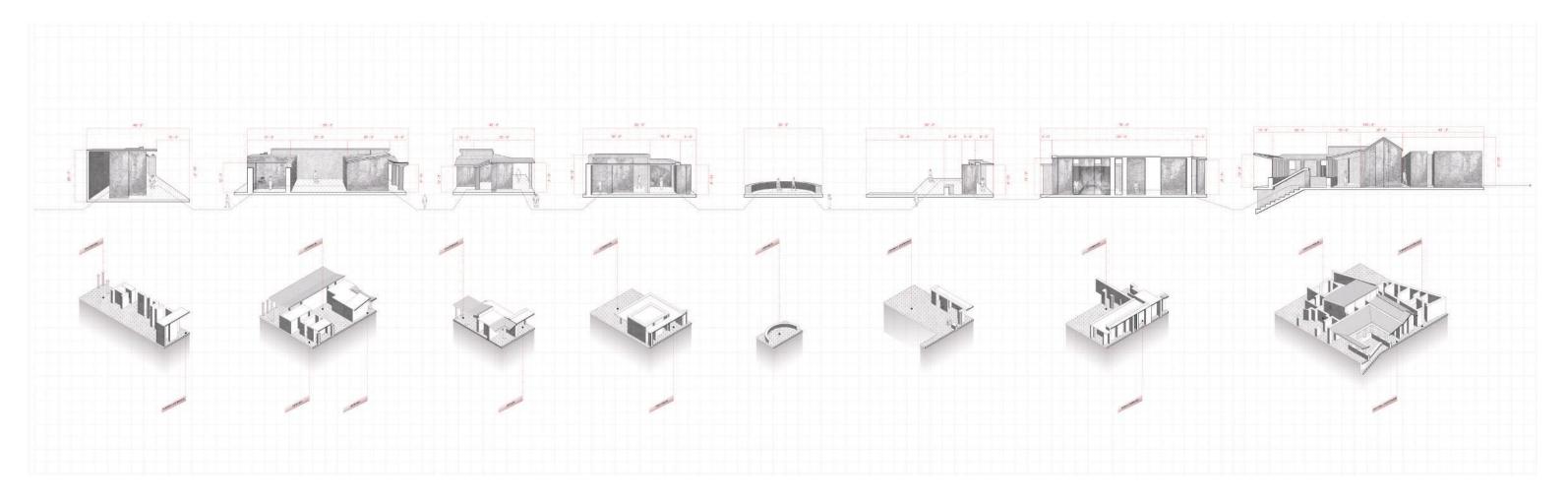


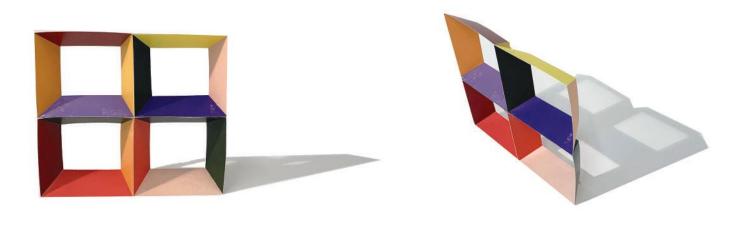




Precedent: Villa of Mysteries

















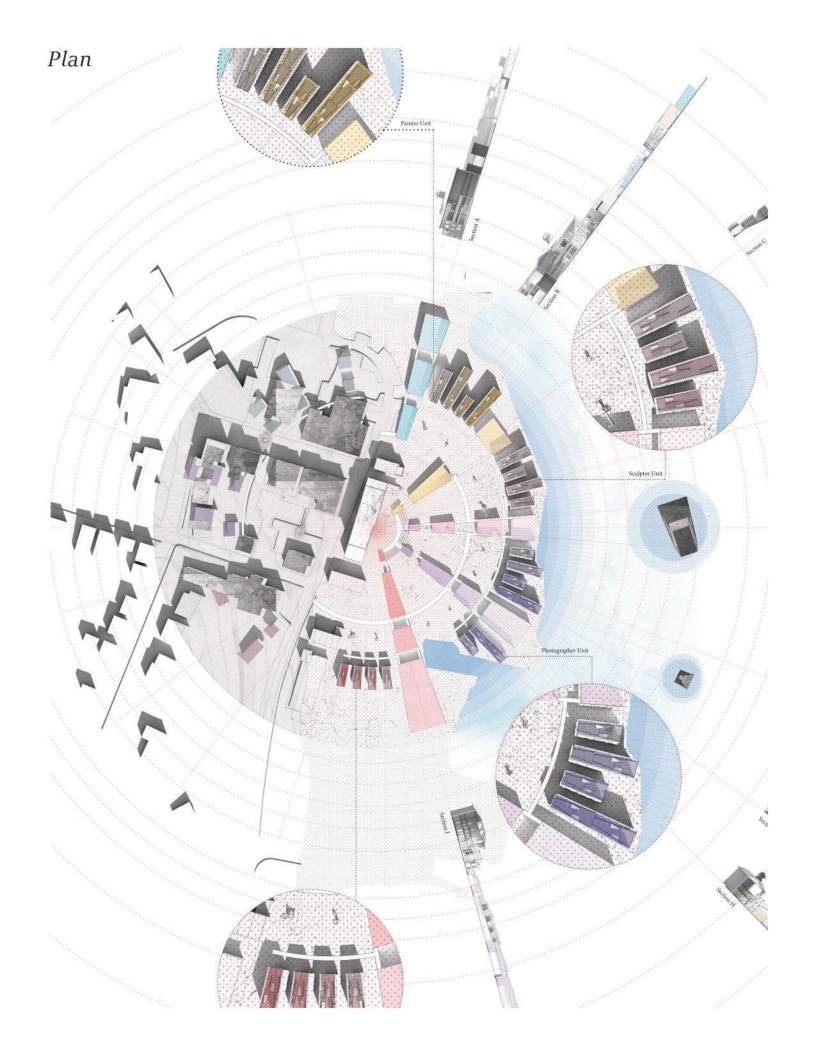
First, I selected the artist Ad Minoliti, a painter and digital artist based in Argentina. I extrapolated 5 key manifesto points in order to develop my final wall model; color, geometry, layering, framing, and scale. Beginning with study models that abstracted her works and transforming them into physical manifestations, I then selected the model with the most spatial potential. Minoliti's works are metaphysical, consisting primarily of geometric abstractions in which beings in her art find each other, exchange information (shapes and colors), and go their separate ways to run into other subjects and continue their mutation.

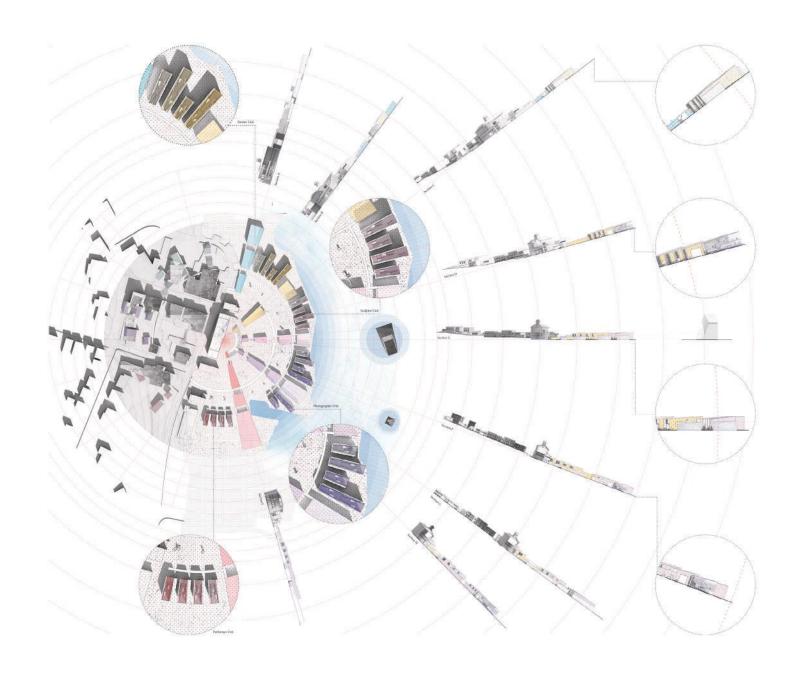




The 3 walls reflect the transformative nature of Minoliti's art, and begins to investigate the potentially operative nature of frames. Combining these investigations led to the development of the current master plan, an intervention that combines the concepts of framing and intersecting corridors to generate spatial conditions.

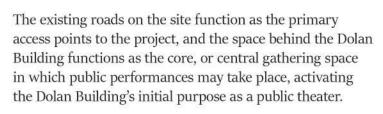




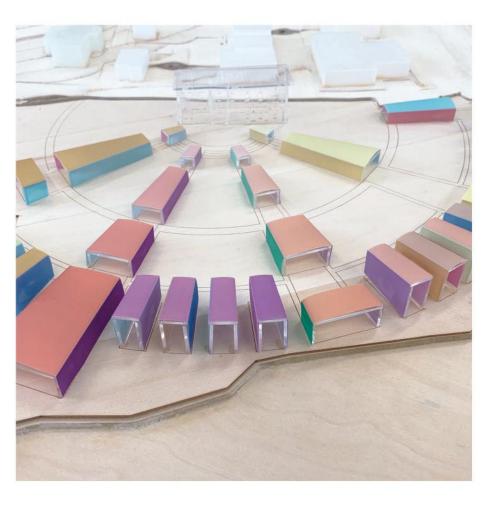


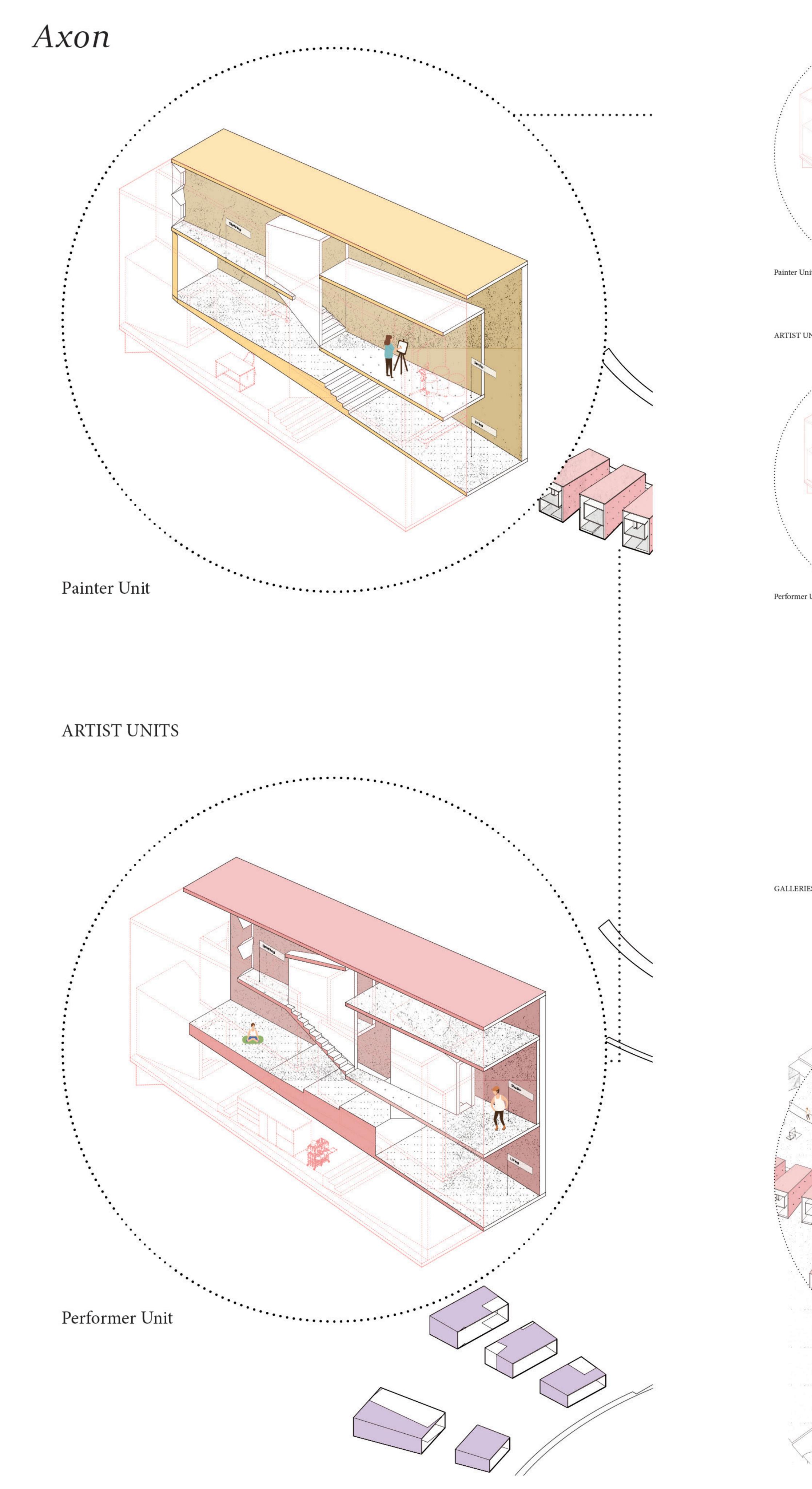
Site Model

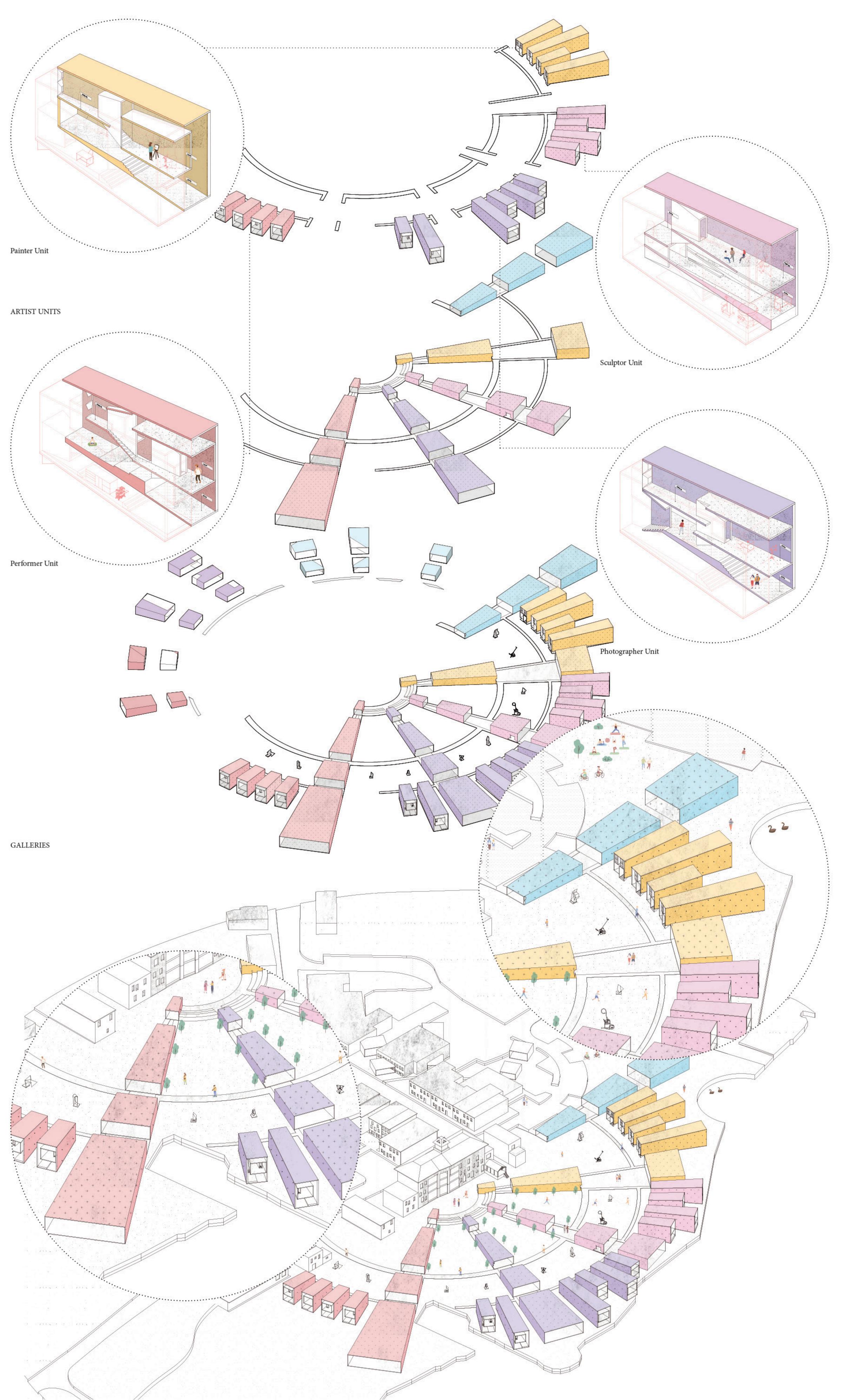


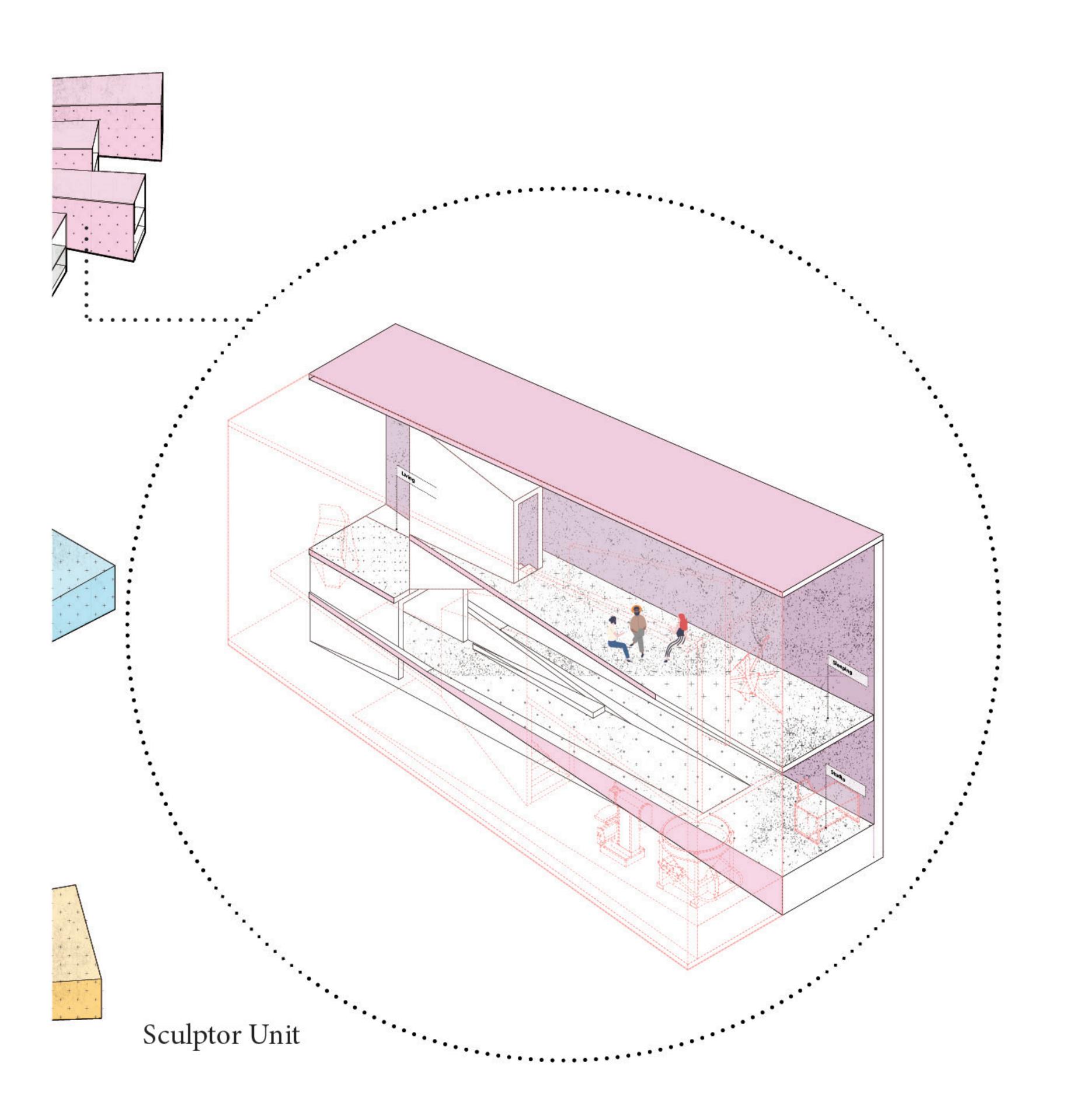


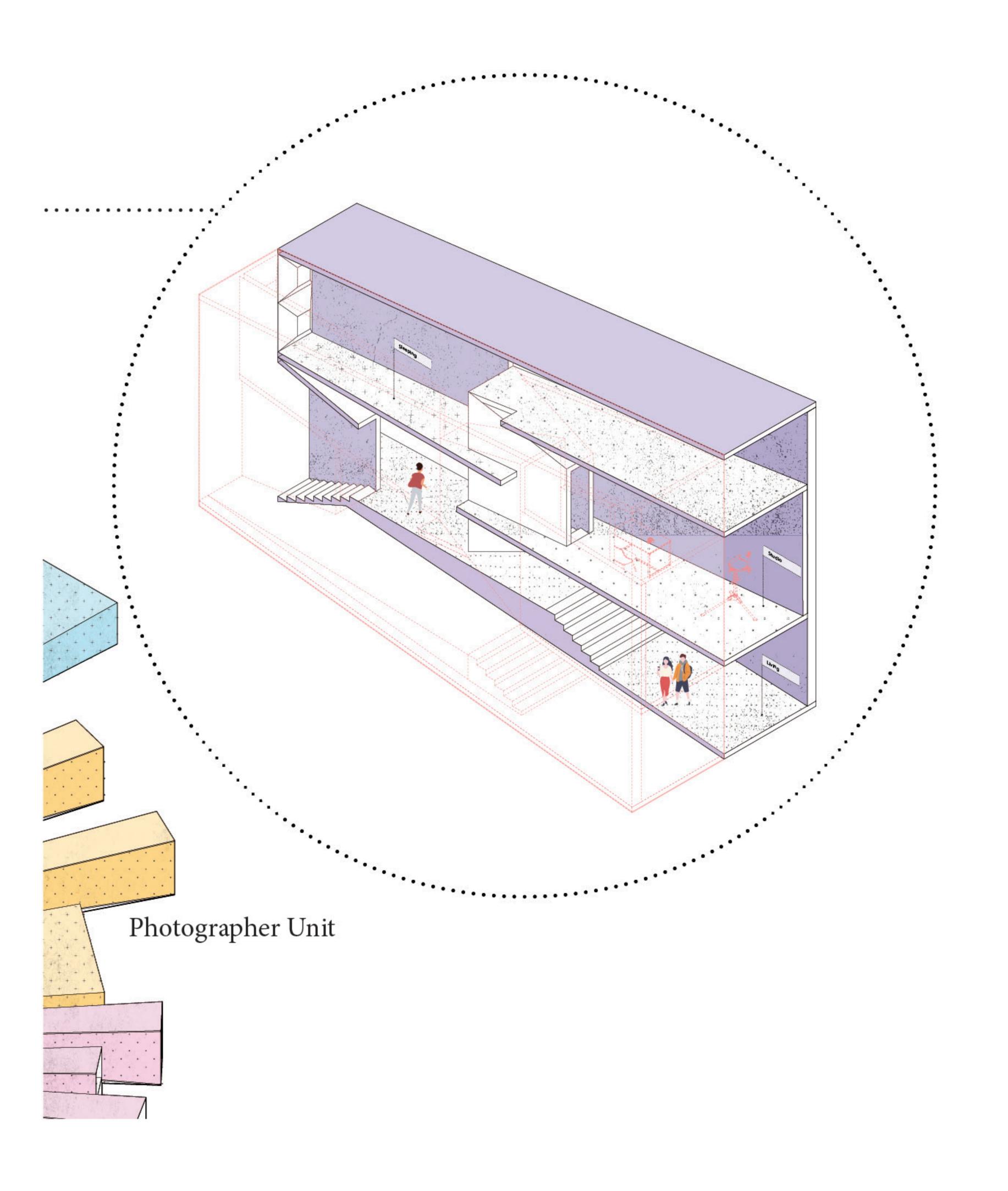




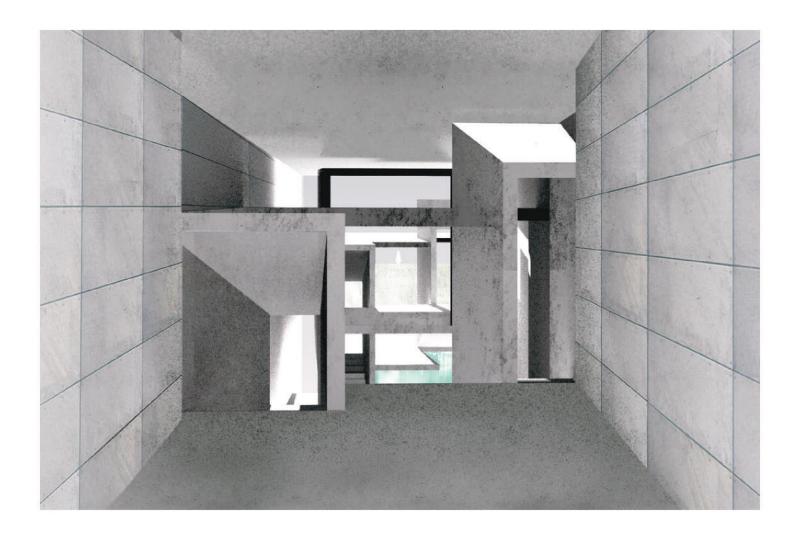














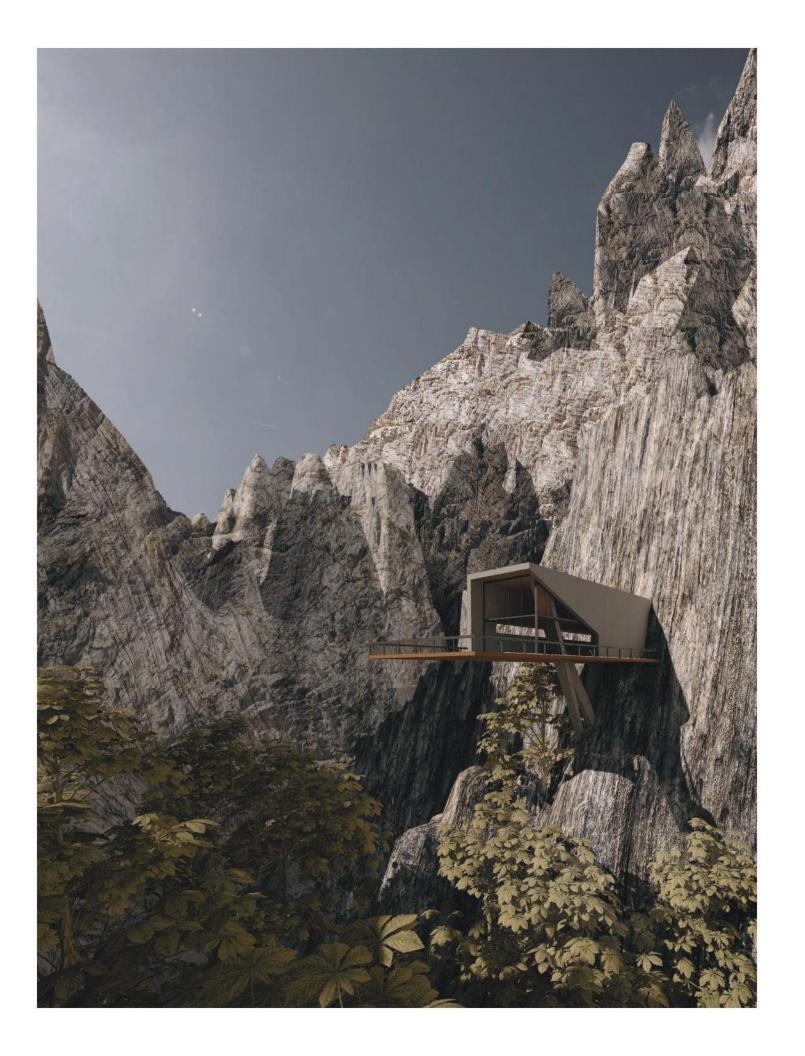
Techniques of the Ultrareal

Instructors: Joseph Brennan, Phillip Crupi

Partners: Xueqi Hu, Feibai An, Yixuan Shi

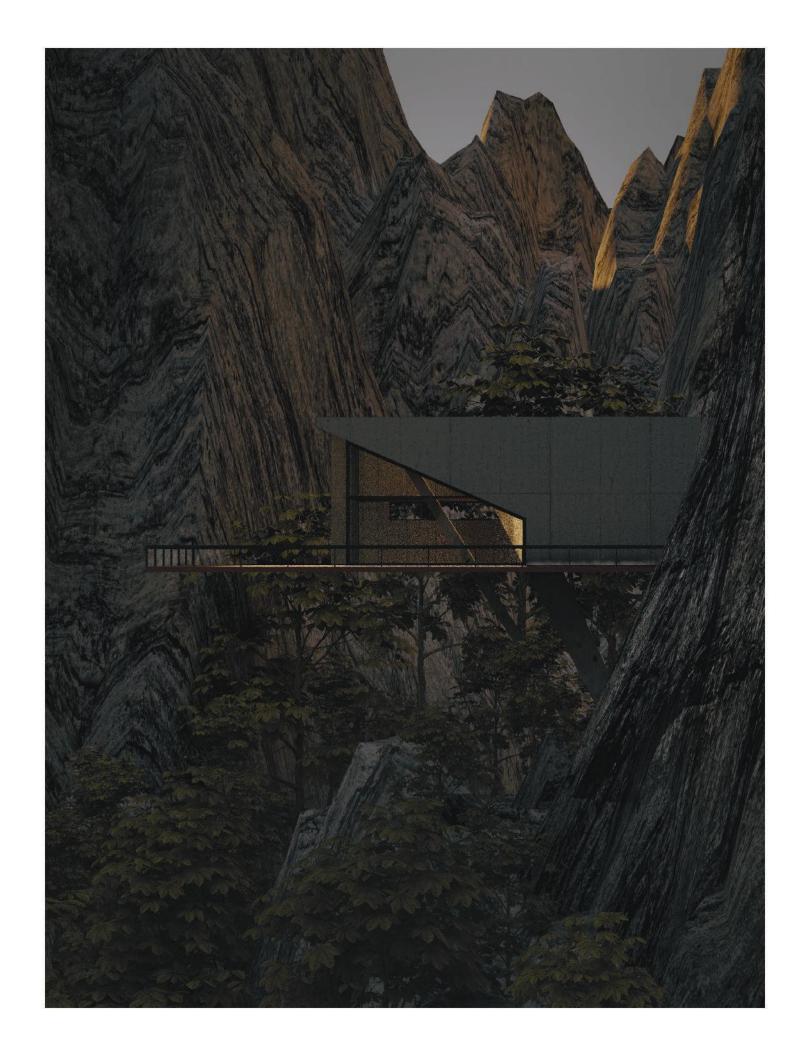
With the abundance of 3D modeling software and the ability to see every angle of a project instantaneously, renderings are often thought of as a last minute tool for representation. This class challenges participants to not only think of rendering as a method of presentation, but also a tool for design. The class uses V-Ray for 3D Studio Max as the main engine for exploration, but also encourages the use of other modeling applications, post-processing software, and 3rd party plug-ins.

Semester: Fall 2019











Architectural Theory

Work: Individual

Instructor: Mark Wigley

Architecture emerges out of passionate and unending debate. Every design involves theory. Indeed, architects talk as much as they draw. This class will explore the way that theory is produced and deployed at every level of architectural discourse from formal written arguments to the seemingly casual discussions in the design studio. A series of case studies, from Vitruvius through to social media, from ancient treatises on parchment to flickering web pages and tweets, will be used to show how the debate keeps adapting itself to new conditions while preserving some relentless obsessions. Architectural discourse will be understood as a wide array of interlocking institutions, each of which has its own multiple histories and unique effects.

The Sound of the Architect: Between Words and Drawings

The Reign of the Classical Treatise: Digesting Vitruvius

Curriculum as Polemic: Disciplining Architecture from Academy to University

The Invention of Architectural History: Strategic Narratives

The Invention of Criticism: Buildings in Review

Theory as Weapon: System versus Manifesto

The Canonization of Modern Theory

Domesticating Discourse: Soft Packages

Theory on the Couch: Self-Analysis

Postmodern Theory: Engaging the Other

The Commodification of Architectural Theory

Transgressive Theory: Sciences of Insecurity

Semester: Fall 2019 Mark Wigley

Gissen's subnatural theory is situated within the current period of modernity, as it predicates upon analyzing and challenging historical precedents of architectural practice, from the inception of architectural theory by Vitruvius to modern practices reactive to existing infrastructures that attempt to address future conflicts.

continuous beautifum space. According to Gissen, gas was central to emerging architectural concepts of the 19th century and fascinated

perceives as displaced matter, elements of nature that inherently possess neither good nor bad es but have been perceived as notentially threatening due to social and architectural intemporary debates about the presence of alternative natural forms within architecture. Intended for audiences familiar with architectural discourse and history, the text aims to reframe architectural practices and rejecting normative notions of current design methodologies. Gossen's

theorists alonoside sumplemental images and illustrations. Gissen explores what he considers to be an underdeveloped relationship between architecture and the lesser forms of nature. By theory aims to raise awareness on the presence of alternative natural elements, and questions the precedent works, certain elements of what is considered subnatural requires further investigation. as they currently remain underdeveloped to warrant consideration. Gissen's description of what

Gissen states that in comparison to caves, motions fund better, and were perceived as quasi-naturalistic spaces that combined darkness, light, water, and earth. This form of especially flourished in English gardens during the 18th century as they were believed to add a dark and erotic narrative to the picture-que landscape. Citing Jean Jacques Lequeu's grotto for fountain surrounded by statues within a subterranean space, claiming the grotto and its properties would offer particution to those who submerged themselves in the water. Following urbanization within the 19th century these dank subterranean spaces

By introducing the concept of daukness first, Gissen attempts to introduce readers into the atmosphere of the subnatural: an otherworldly atmosphere beyond the typically understood conditions of architecture. Existing within the dankness of the underground, the inhabitant the expense of dark, and those living within light and dark perceive the dark as the foreign and harmful entity that must be avoided. In favor of living above ground in light, the dark and people although it harks beneath the surface and is the foundation of what light stands upon. Becoming reaccuainted with the underground creates a vivid intimacy and exposes a new element of the ecological web that people of the earth are unknowingly fully immersed in.

Following dankness, Gissen notes that Vitruvius believed that smoke was a misano and a hyproduct of fire. Generally depicted as a mysterious and alien presence, it is characterized within the industrial period as a strong presence due to rapid industrialization By the 10th century, smoke had become associated with the industrial cityscape, with cities in became associated with class, as the type of smoke emitted from coal, cigars, and factorie indicated one's rank in society. The act of smoking itself was seen as refined, as smokers

of design are considered popular that reflect the values of society from each time period shift

The Vitruvian influence on architecture has significantly impacted Gissen's categorizations of the subnatural as well. In using Vitruvius' theories as precedent, Gissen establishes the framework upon which he expands his own theoretical approach to modern architectural practice.

Gissen, this attempt to reintroduce a lost element within a space was explored recently by

could familiarize themselves with a once prevalent subnature in architecture.

The Vitrovian influence on architecture has significantly impacted Gissen's rizations of the subnatural as well. In using Vitruvius' theories as precedent, Gissen architectural practice. The nonhuman entity of smoke acts as a directive for humans, commanding the body to dispose itself toward the object. When smoke enters a space, one is indicator of fire, people are demanded by smoke to seek out the source and possibly extinguish it if deemed harmful. This directive surrounds the human body in a set of shifting zones in which confrontations with different objects connels the body to instructively react. Because it is a new object within a set space, the subnature smoke is an interruption that changes all the surrounding objects, thus causing humans caught within the shift to unwillingly adjust themselves. Unlike the element of dankness, smoke is still seen as a

for electricity and became we appointed during scientists due to its ability to transform a space. It to tactify to people. During the 1965s and on Clean Air Pod project by Ant Farm took these ideas into consideration, designing a space the absurd connotations people held on gas during the 1970s. In the present, fear and discomfort are still primarily associated with this subnature due to its weaponized ability as well as its use as

a form of social control by authorities. Many architectural concents still attempt to explore this fear. The Vatusmyri Urban Plan by Sean Lally/Weathers proposed repurposing gas leaks to create pockets of warm and pleasurable air along the urban plan; thus creating a new perception about gas and its potential beyond damage. Thus, the gas itself becomes the environment, The description of what constitutes as a harmful versus un-harmful gas remains unclear

feared by the public. The topic of gas as a displaced matter requires further justification and explanation as to what types of gases constitutes its supposed conditioned societal response of

Born in an era of machinery, exhaust became a dominant subnature during the 1950s and 1960s due to vehicle emissions. In an effort to senarate inhabitants of the urban landscape from drive in. This proved largely unsuccessful, and instead legislation created a lower emissions standard for automobiles. Much like smoke, exhaust is seen as a form of social control, as higher India where exhaust levels are difficult to control due to lack of regulations and population density. Citing the Dusty Relief project by R&Sie architects as an example of incomprating the

drawings, dust has been a pervading and invading presence within architecture since the sketches of Piranesi. Seen as a register of time, dust is a flature material that ultimately consumes ruins ranging from temporal and volumetric to geographic and intense as a result of natural disasters and building demolition. Dust has greatly impacted human behavior, with dust emissions from natural disasters runing human settlements as well as dust from buildings damaging human architects such as Le Corbusier, dust was previously seen as simply an indicator of time and ruin

> the downfall of modern cities, it has become an indicator of societal decay within the modern era Mud was a key element within primitive architecture due to its accessible nature and eain construction. As society evolved, mud became associated with decrepitude in England, seen as a deterring material used primarily by the poor. Mud also contained elements of postaleia. 2s

sought to eliminate mud particularly around the Thames River, and other cities around the world

European cities of their water management systems. The 18th century was notorious for flooding

issues, and Piranesi's drawings greatly influenced Pierre Patte, who developed a new system that

civilizations, in the mid to late 20th century images of undrainable cities emerged and puddles

became associated with the notential downfall of modern cities. Water surged from above and

increasingly prevalent within modern society, as rising sea levels have led to an increase in

flooding throughout the globe. The concept of the puddle has transformed beyond a signifier of

Seen as a register of time, dust is a future material that ultimately consumes ruins until becoming one with the earth again.

By categorizing and analyzing each element considered to be a subnature in relation to existing architectural concepts and designs, Gissen not architectural purious usual the venice issuantle by the least personnel of the venice issuantle by the least personnel to the constitution of the least personnel of the venice issuantle by the least personnel

design. Rather than being treated with contempt, many contemporary architects have turned towards using mind in order to create environmentally friendly products, therefore potentially

Having emerged due to the invention of guspowder, debris is a collection of mrecognizable matter transformed by disaster. Theories of debris emerged following the destruction of war, the debris itself transforming society as people continued to live around created by Alison and Robert Smithson in which remnants were harvested to create a new collective landscape. While a submature been from violence, debris inherently possesses no

picturesque era weeds became unleashed but became restrained during the 19th century. Like the previous subnatures, weeds are associated with an uncultivated presence lurkino beneath the metaphorical properties of growth in a practice known as weeding. Recent works by firms such as R&Sie(n) Architects, West 8, and Cero9 explore the concept of weeding, using the plant as a matter that will potentially consume its surroundings. R&Sie(n)'s project nMBA, for instance. and colonizing nature. The concept of what constitutes as a weed remains undetermined. In order to further justify the weed as a subnature, the types of plants that would be considered an

gridded environments. During the late 1970s and mid 1980s, the parasite metaphor emerged in which, much like a parasite, the human body adapts itself within a space in order to exist. Currently, insects are still seen with repulsion, and architects confront this fear by Bottleneck project by R&Sie architects. By cultivating a level of discomfort within a space, the

Mosquito Bottleneck project creates a direct confrontation with nonlinmans that was previously withdrawn. The nonlesson becomes uncomfortably confronted and is arknowledged in relation to the human being itself, awakening the human to the realization that they share their perceived space with the unknown. This realization further enmeshes the human within the complex network of ecology and demonstrates the innex of contemplating human existence without the

urban perspective based on the flocking patterns of the pigeons themselves. Typically found throughout urban developments, pipeons can still be regarded as a subnature, as many structures are often protected with defense mechanisms in order to prevent pigeons from perching and the category of life could be considered, such as rats for instance.

by artists such as Piranesi and also as an indicator of representival change by architects such as

during its eruption. An inescapable element, modern artists such as An Te Liu confront dust

Describing crowds as elements of nature themselves, crowds generate their own atmospheres due to the sheer concentration of bodies within a space through exertion of body ventilation within interior spaces to mitigate the severity of large bodies within a contained space. This submature has been explored constantly through history by architects such as Mies. society. Tracing the tumultuous relationship between architecture and subnatures, Gissen is adamant that these alternative atmospheres cannot be disregarded, as they become critical practice of architecture itself will be able to progress by acknowledging and introducing a new source of conflict that aims to challenge the existing sterile environments of current designs. the typical practices of architecture and how these subnatures can be integrated to confront contemporary designs, the text does not elaborate how these confirmations seek to benefit

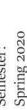
While Gissen's theory raises awareness in regards to the external forces that operate outside of the typical practices of architecture and how these subnatures can be integrated to confront contemporary designs, the text does not elaborate how these confrontations seek to benefit society. In bringing to the forefront elements that have previously only existed within the subconscious of society, how does architecture become further advanced?

Upcycling: Food Factory

Farnter: Junwei Li

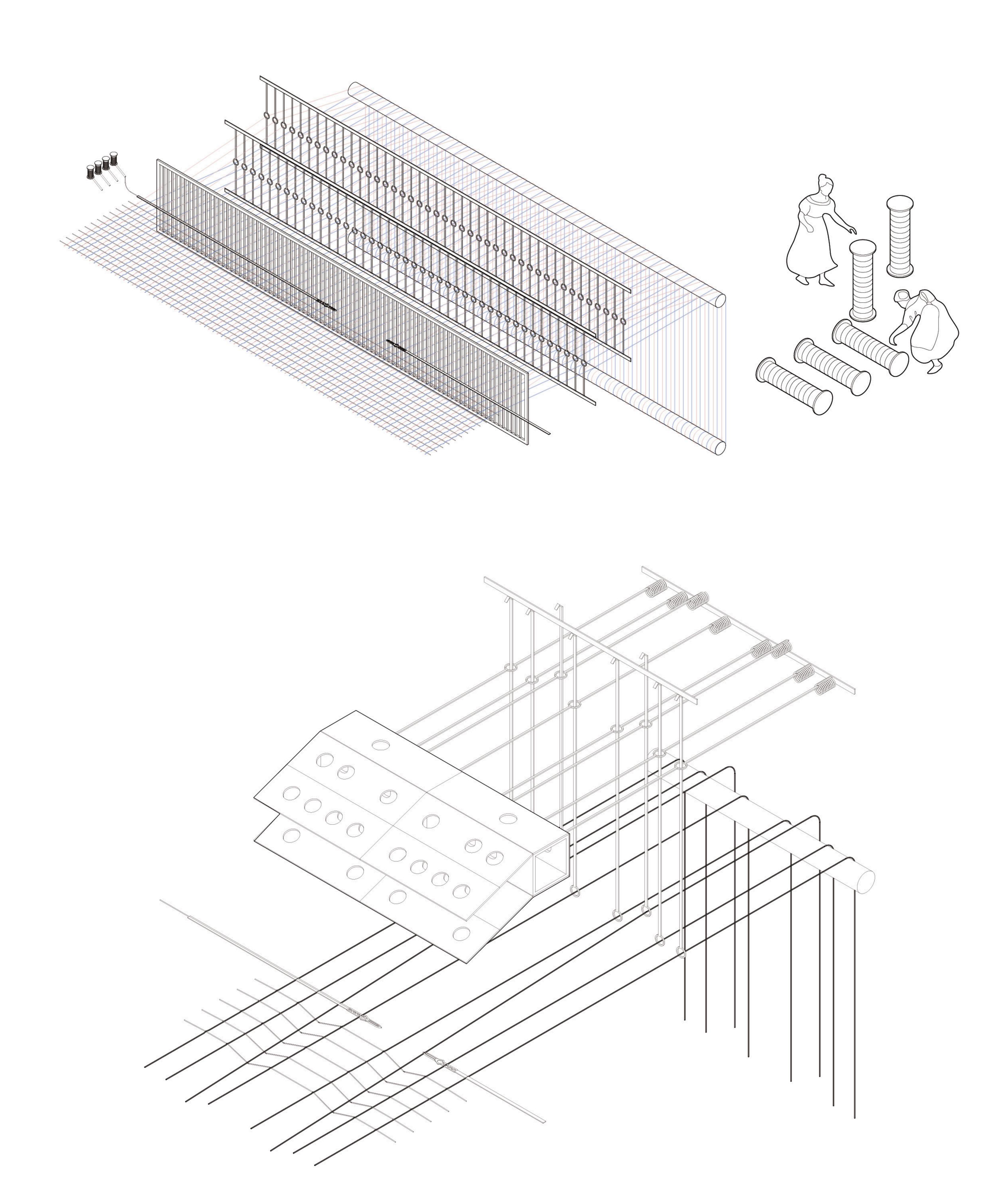
Instructor: Mimi Hoang

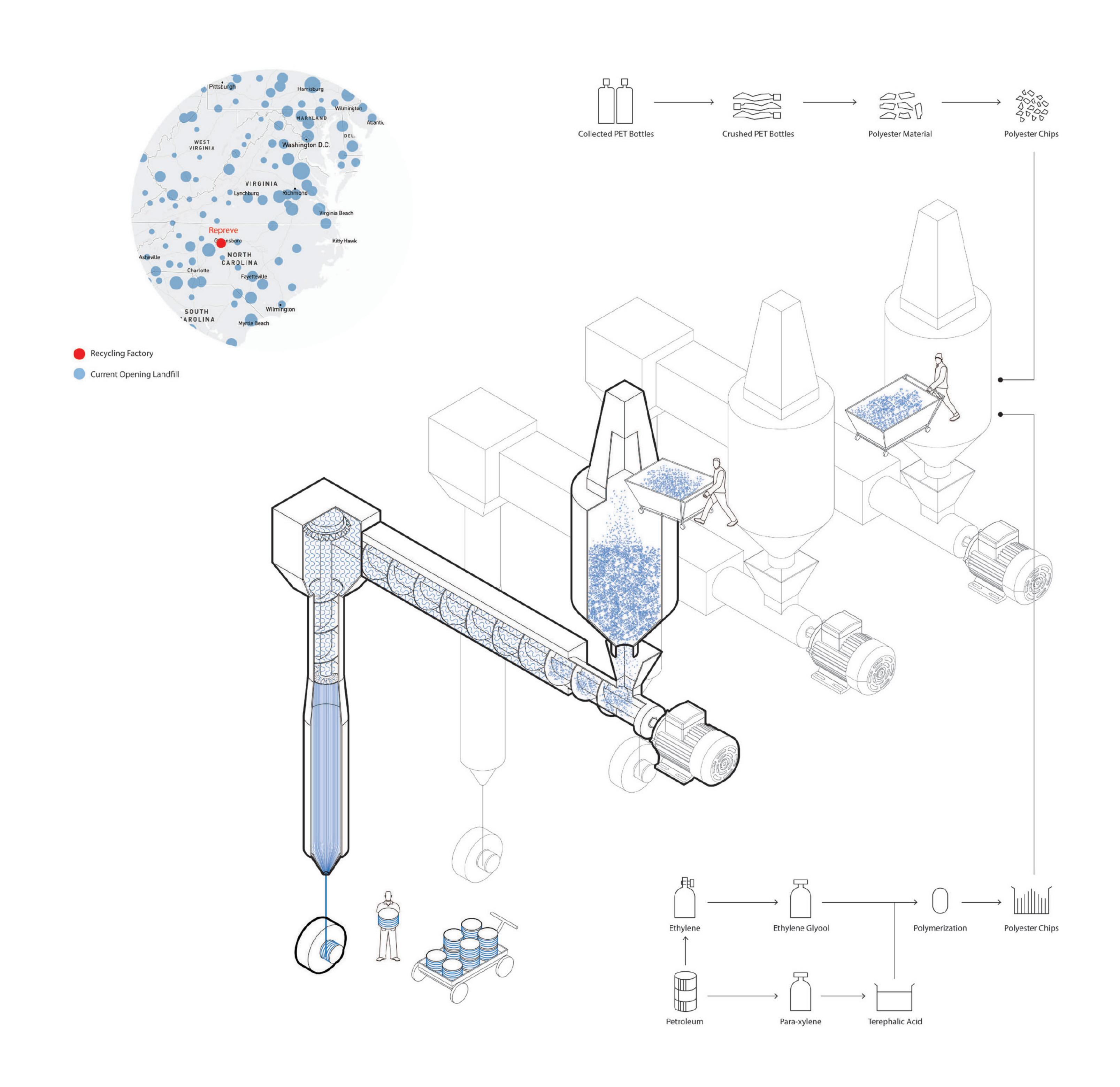
The factory upcycles food waste and provides a shared roof garden for the community and facilitates transparent relationships that connect local food producers to the Brooklyn community and the upcycling of discarded food products. A new system that synergizes the existing typologies of market and production, the factory is a modular and flexible proposal capable of expanding throughout New York City, the beginning prototype currently situated in Bush Terminal at Sunset Park. Bringing the manufacturing process to the forefront, the factory aims to reduce food waste and facilitate a transparent relationship between the buyers and the producers. This new factory system may expand along the city of New York, inviting different communities throughout the city to contribute with their varying scales of businesses and practices.

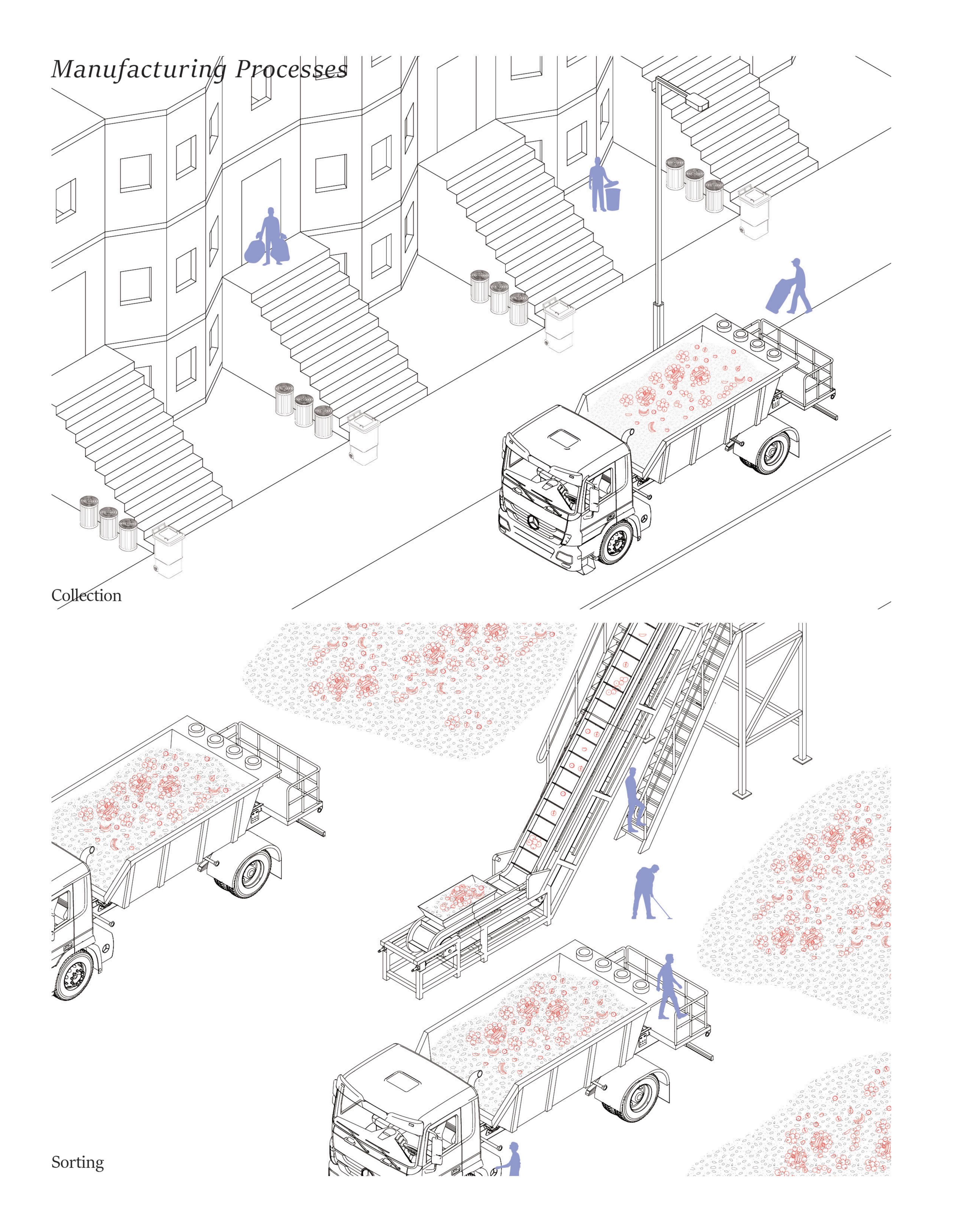


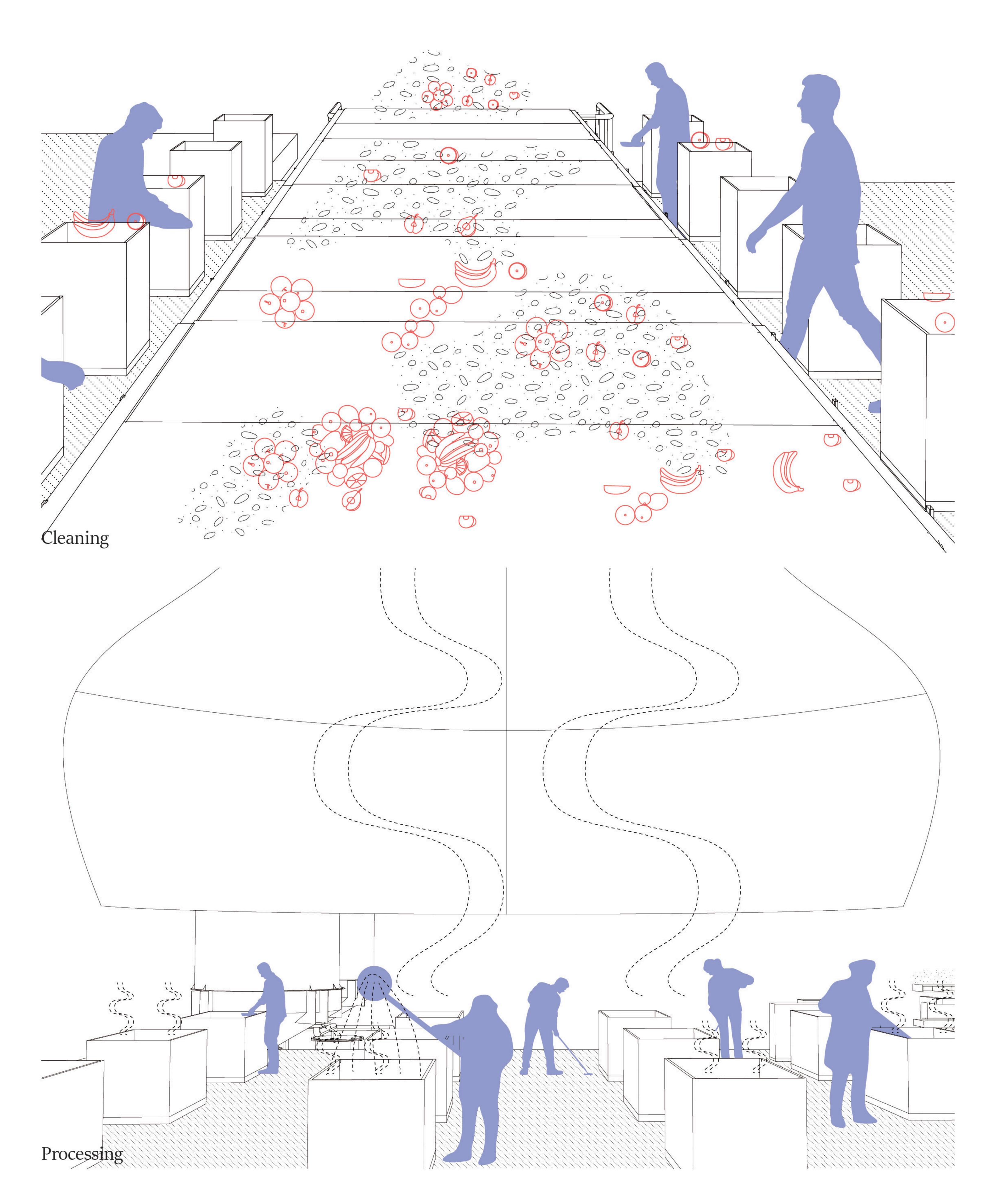


Manufacturing Processes

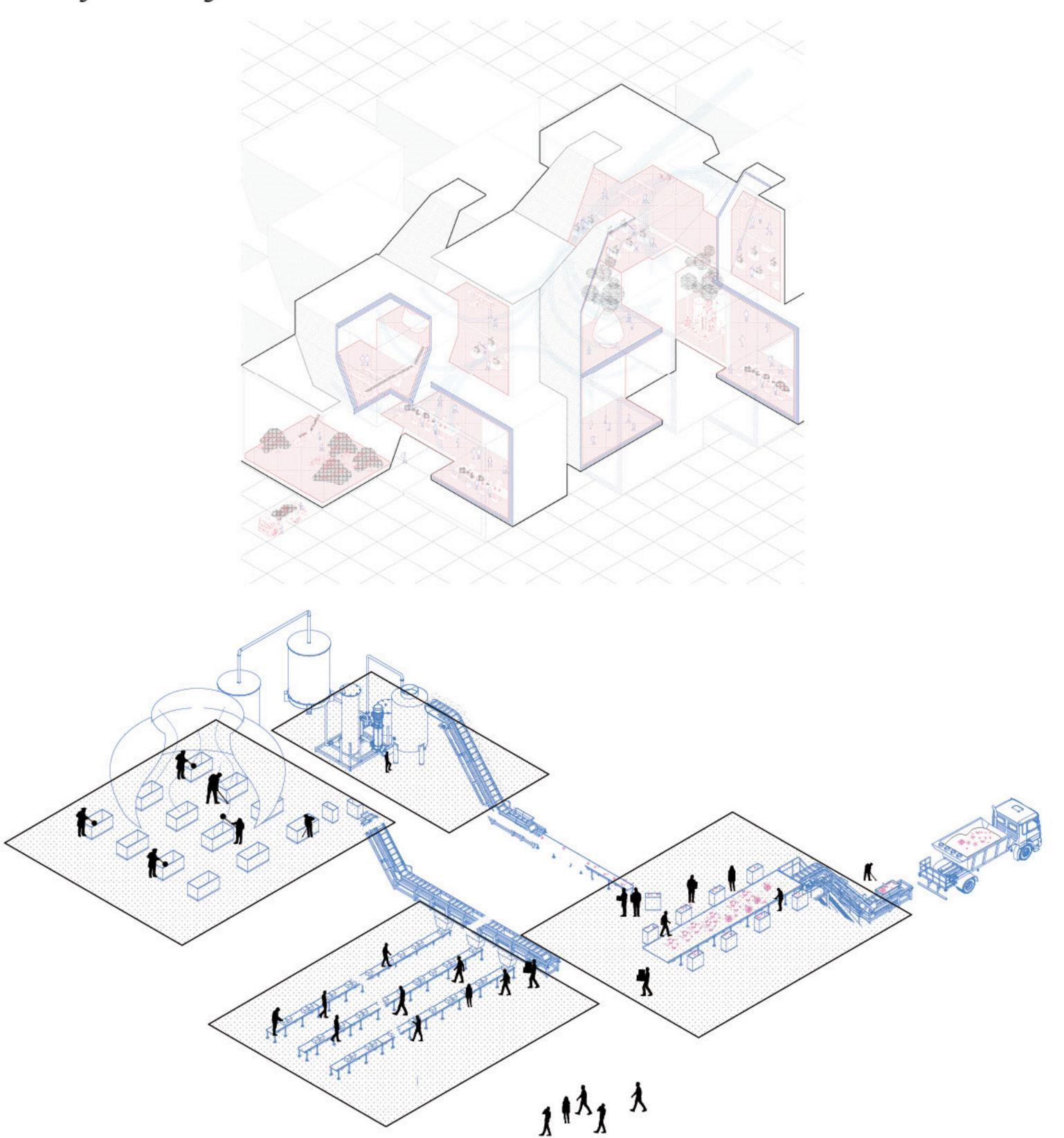




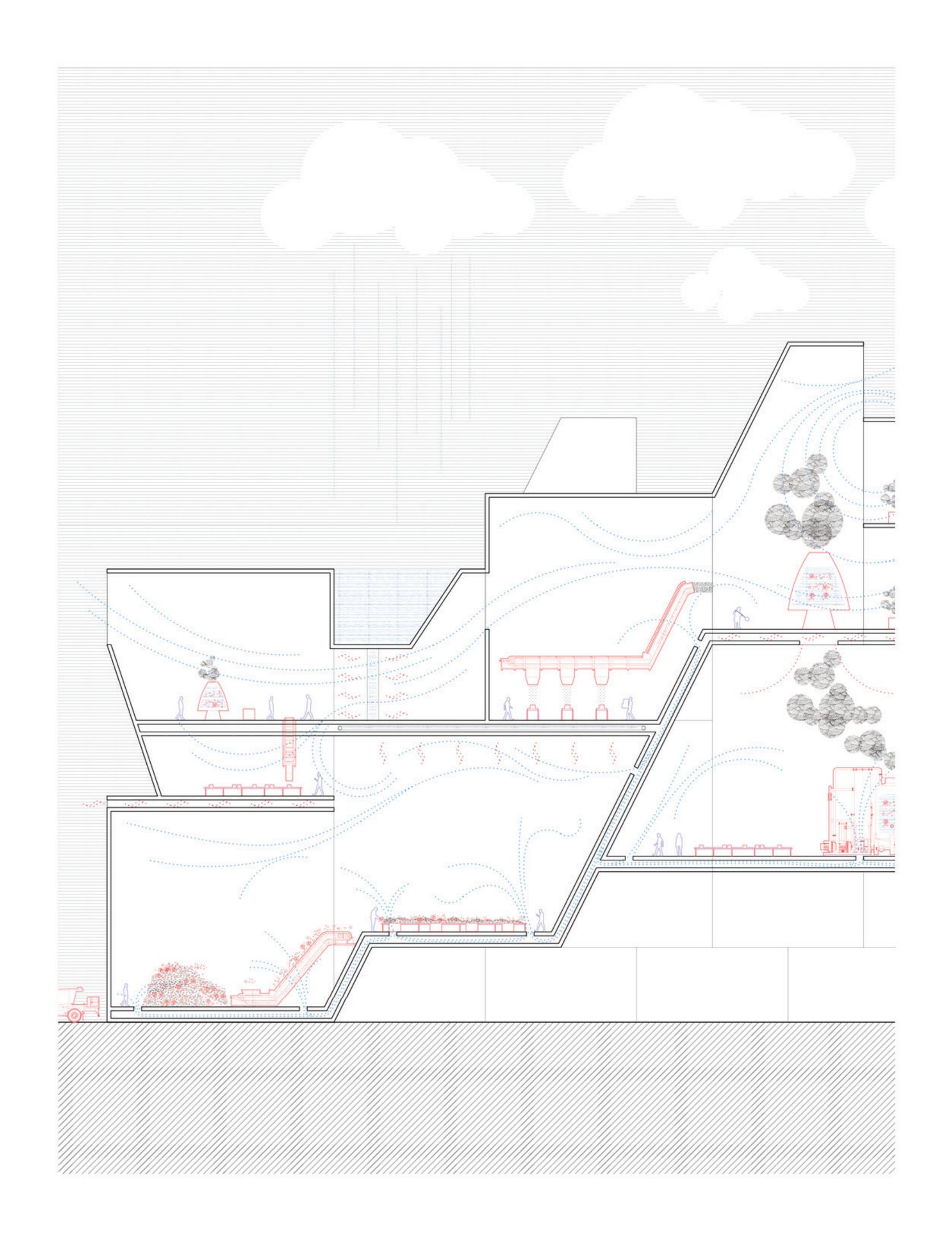




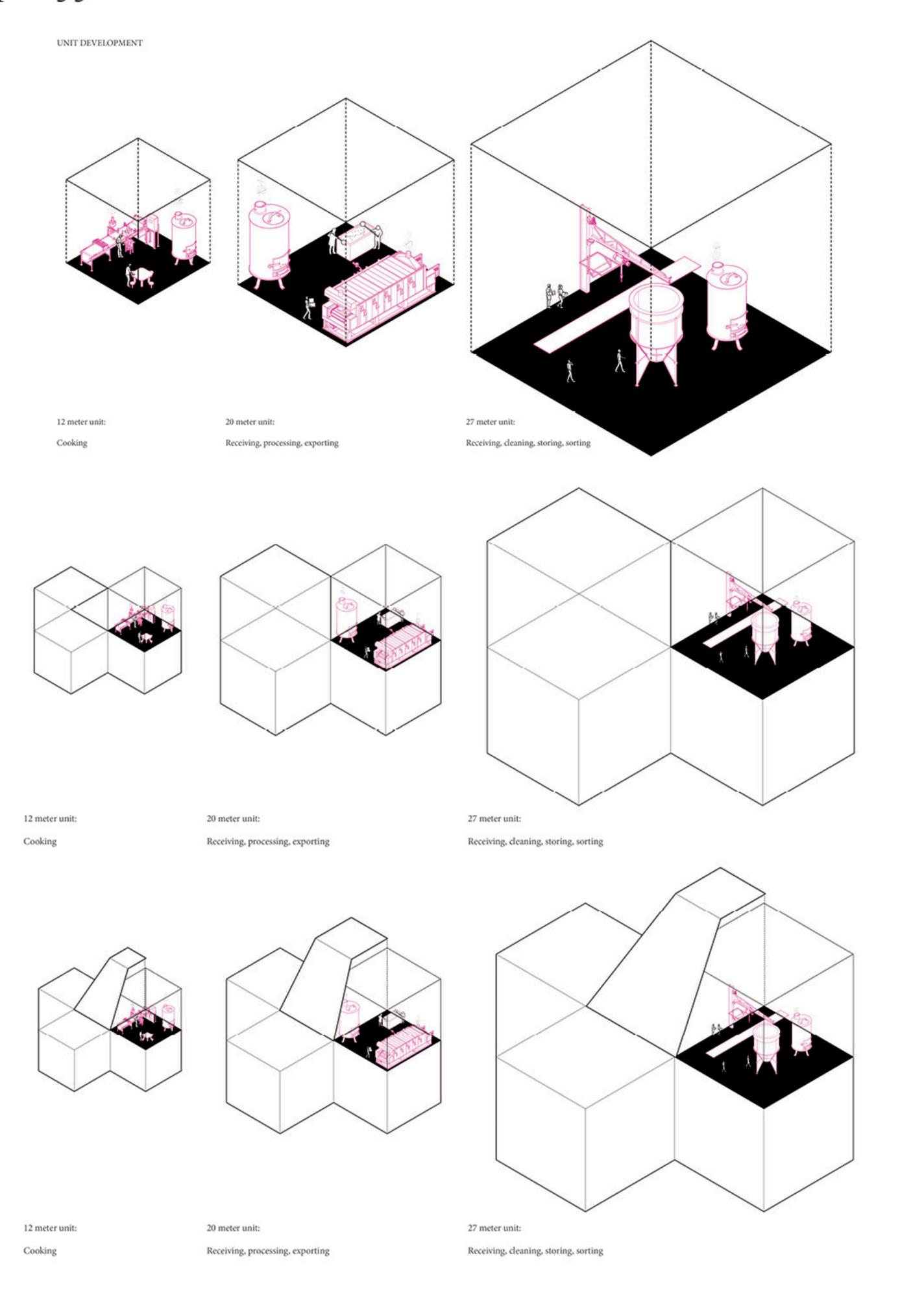
Manufacturing Processes

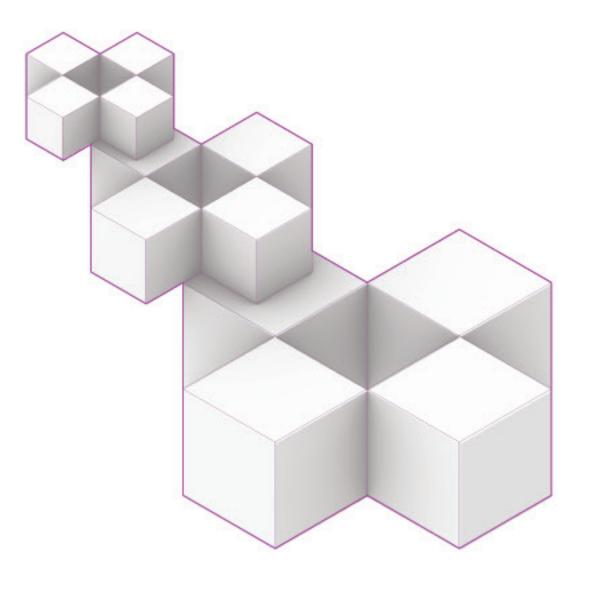


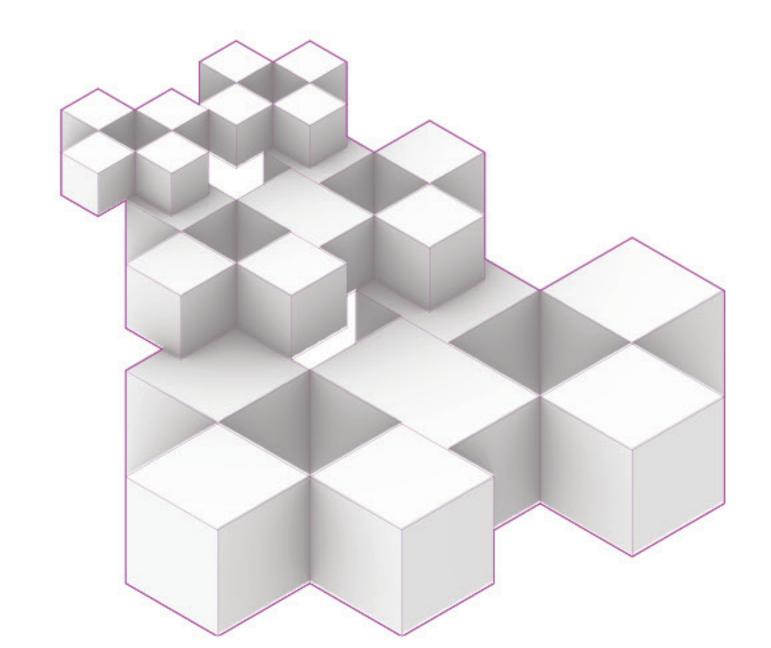
We began by studying and diagramming the life cycles of food waste, from collection, to sorting, cleaning, and processing of salvageable food waste into new products. In doing so, the analysis produced a template in which to develop the factory based on the scale of the food waste and the different types of communities who would be using the factory.

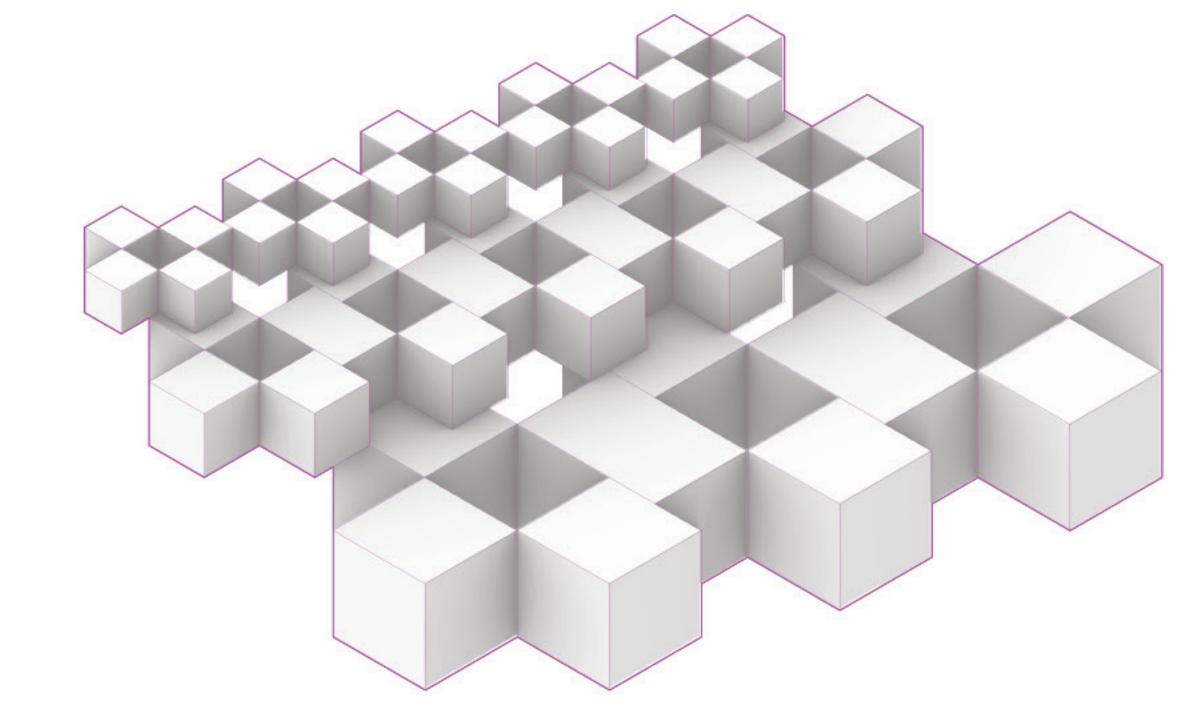


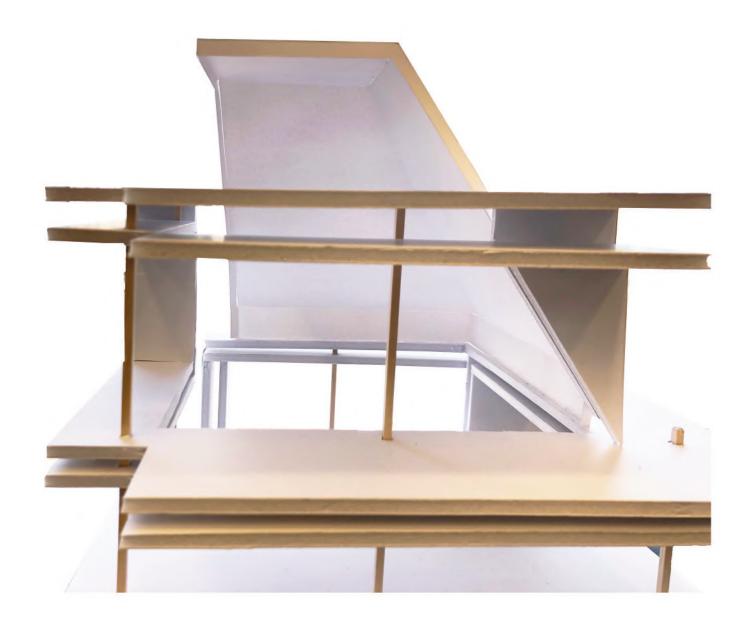
Typology











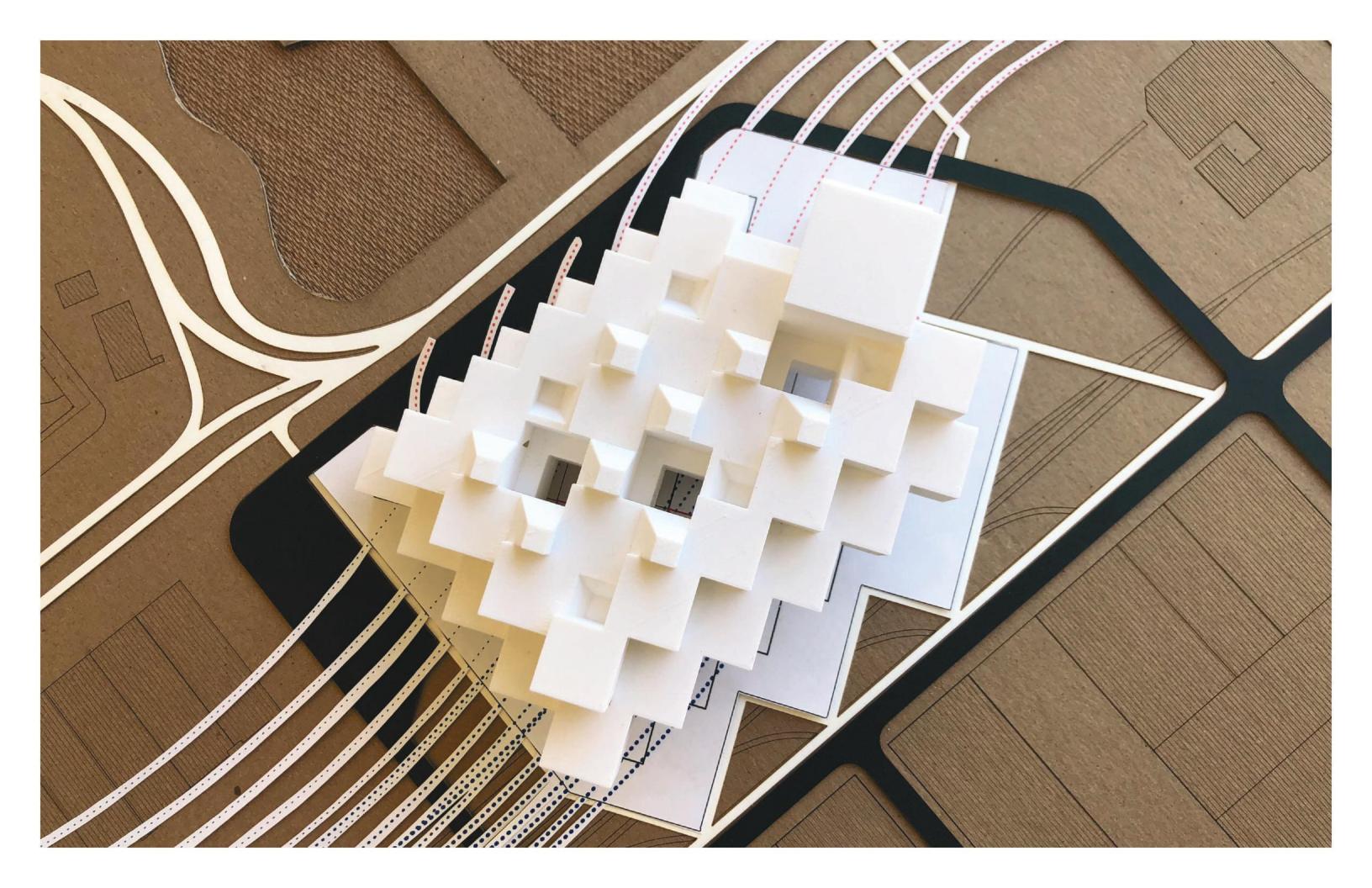


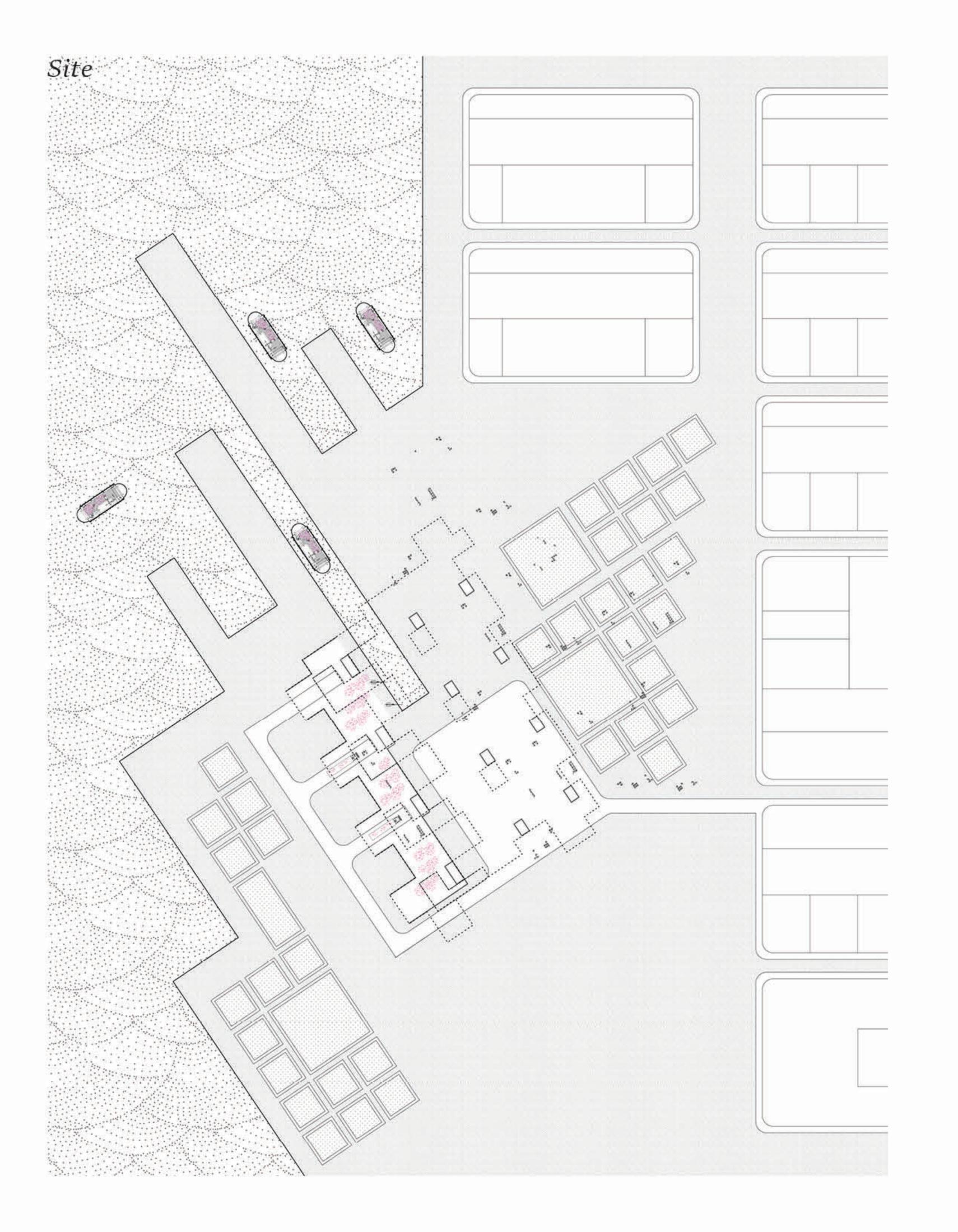
Sharing a common core space in order to allow each unit equal access to a wind chamber oriented West in the direction of New York's prevailing winds which will passively cool the excessive amounts of heat produced by the machinery.





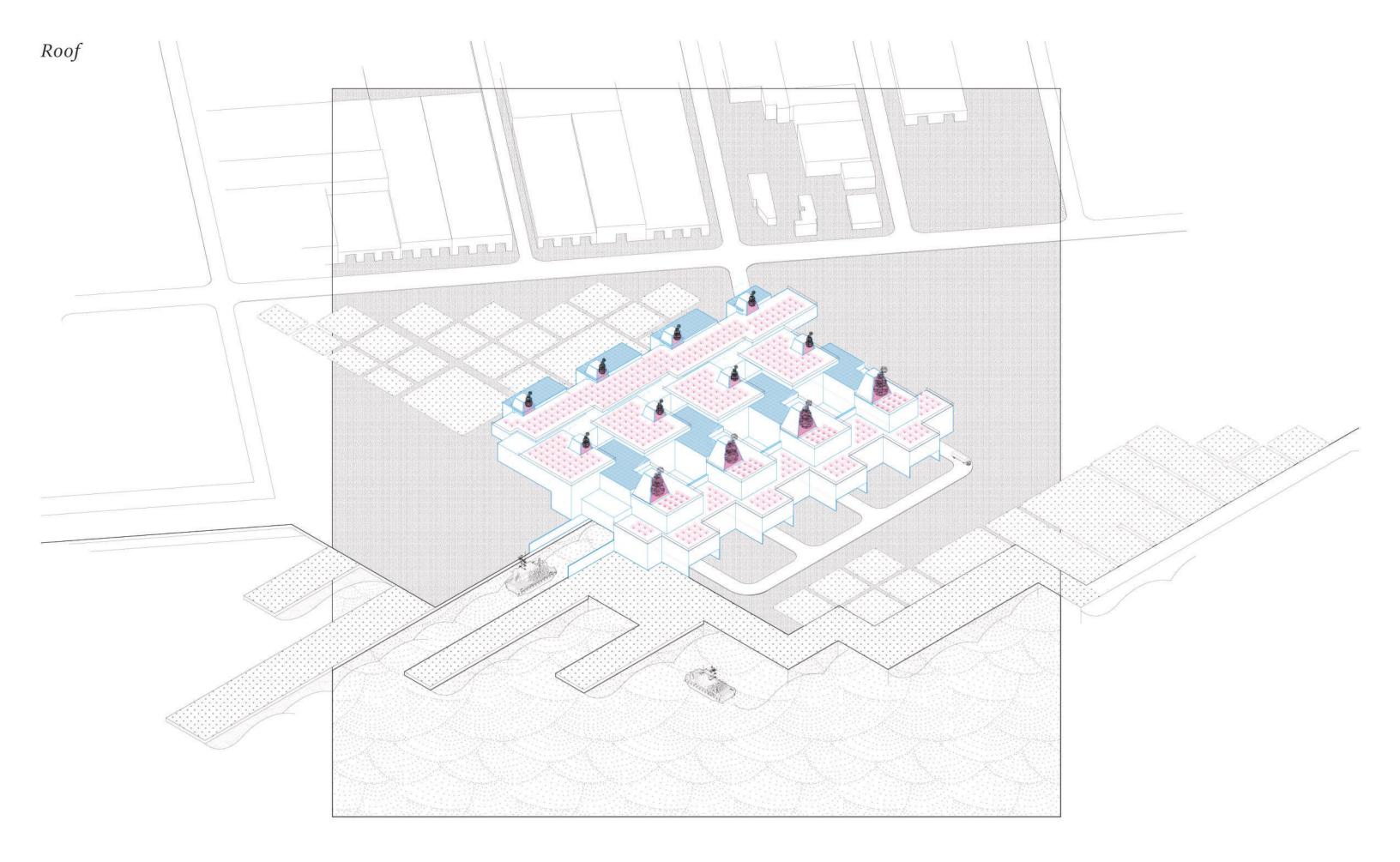
Pipes pitched throughout the double wall cavities allow each factory access to water in order to effectively clean and manufacture products. The pipes channel downward into the ground, where a culvert network system runs in parallel to the factory.

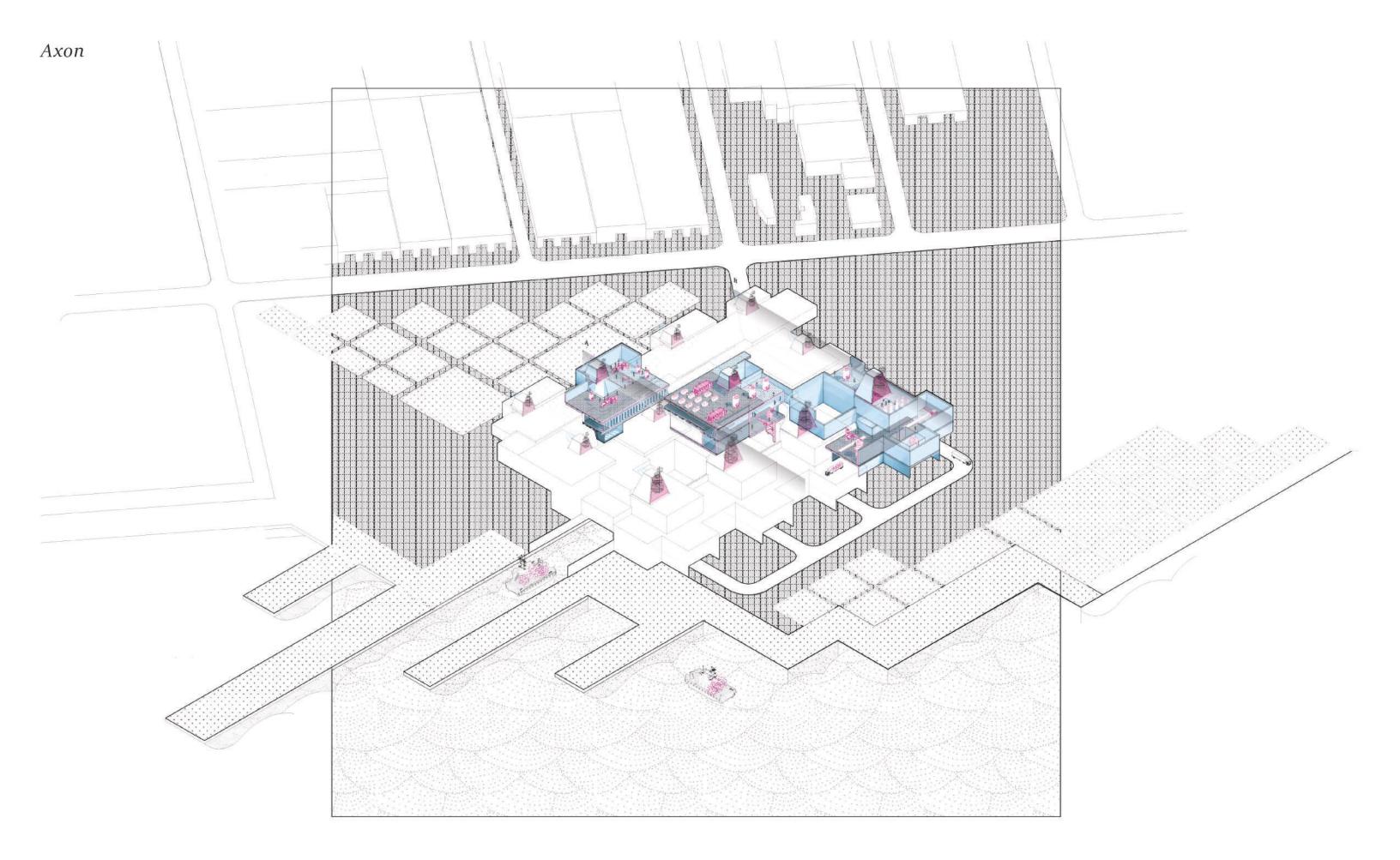


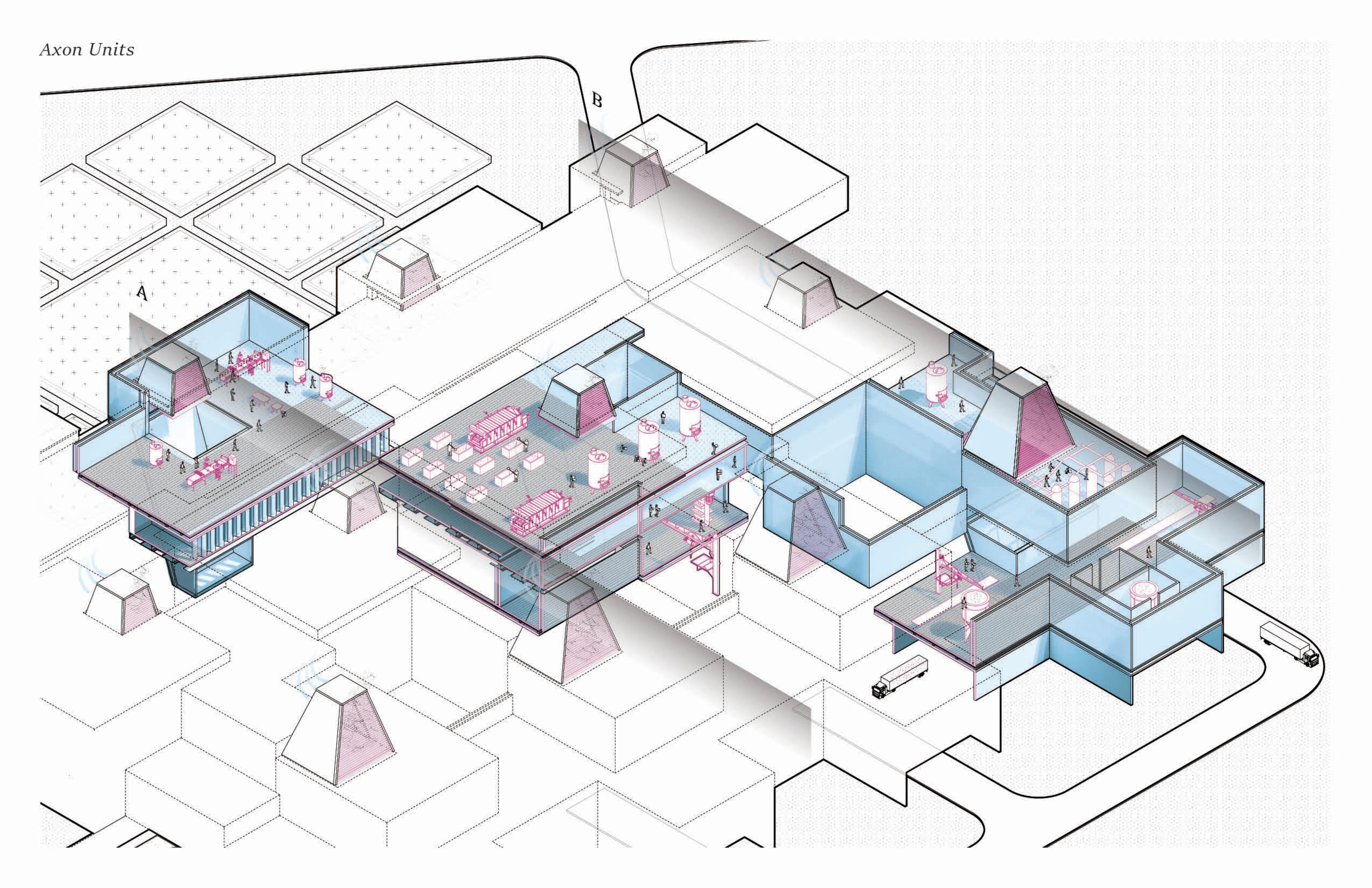


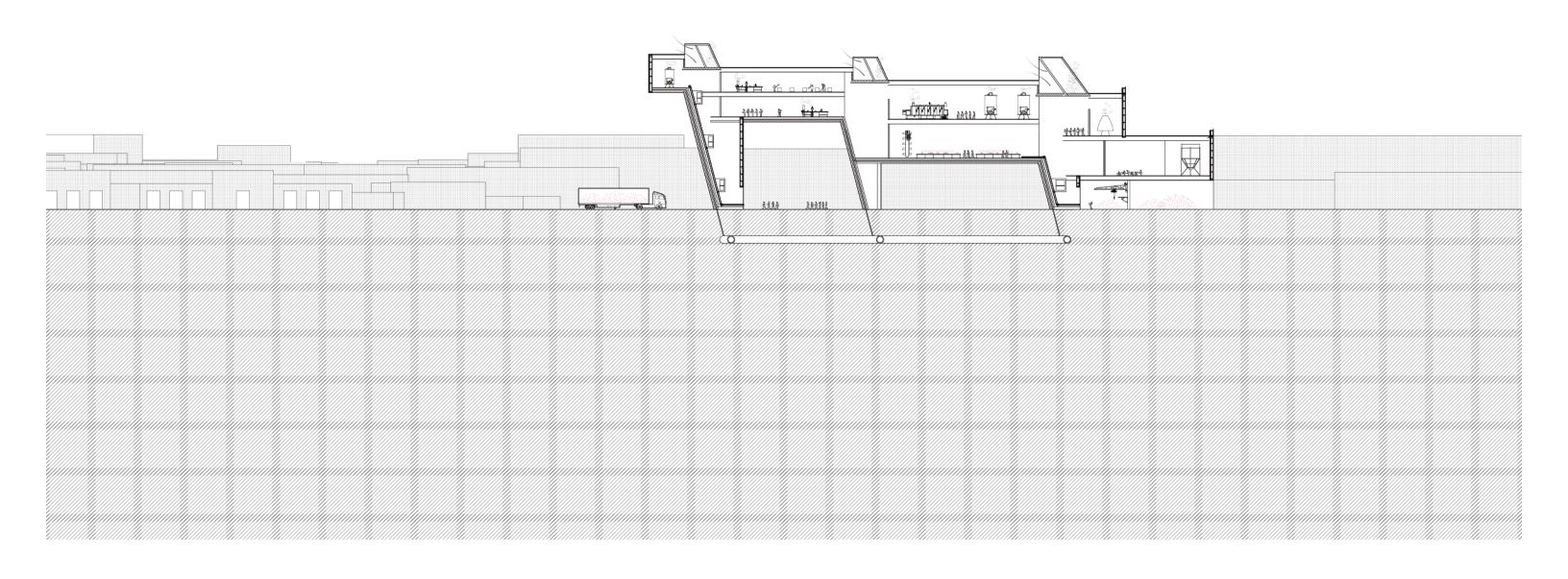


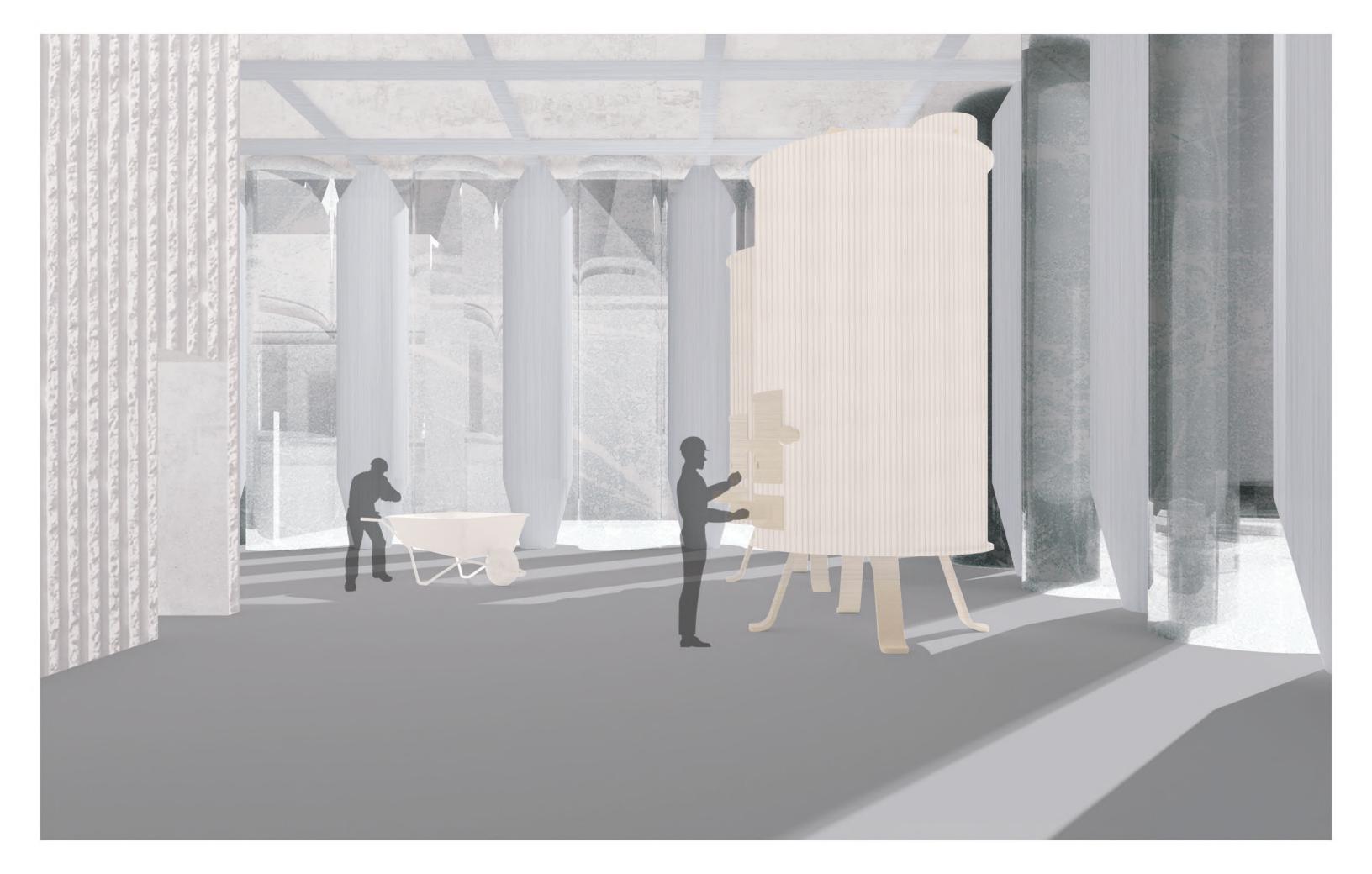


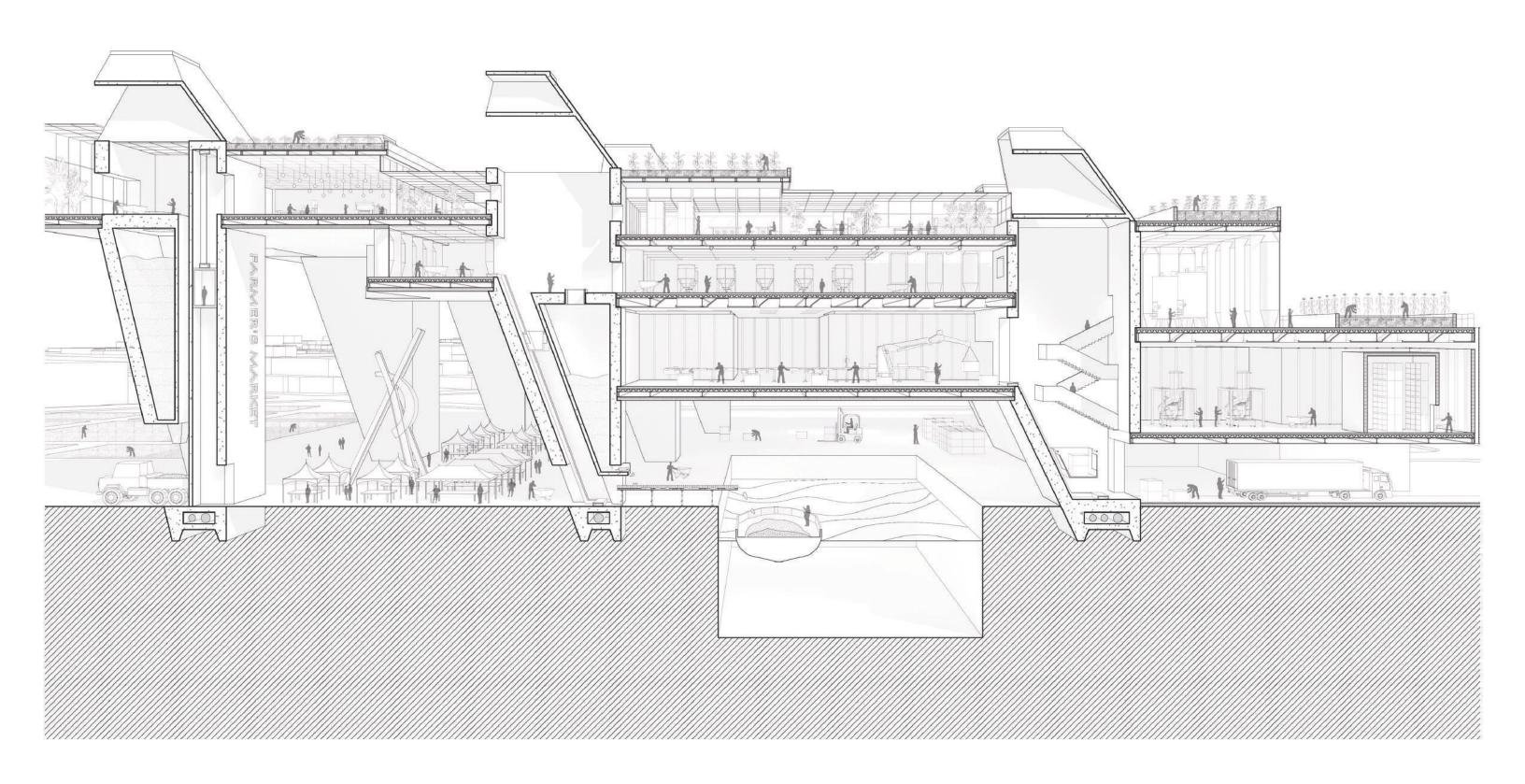




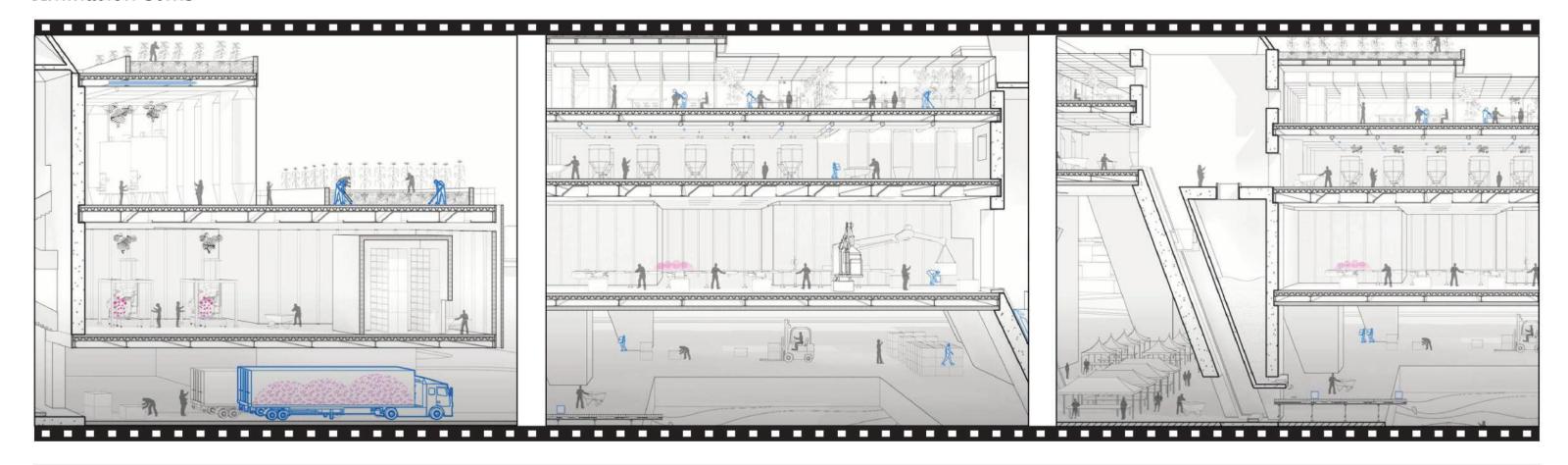


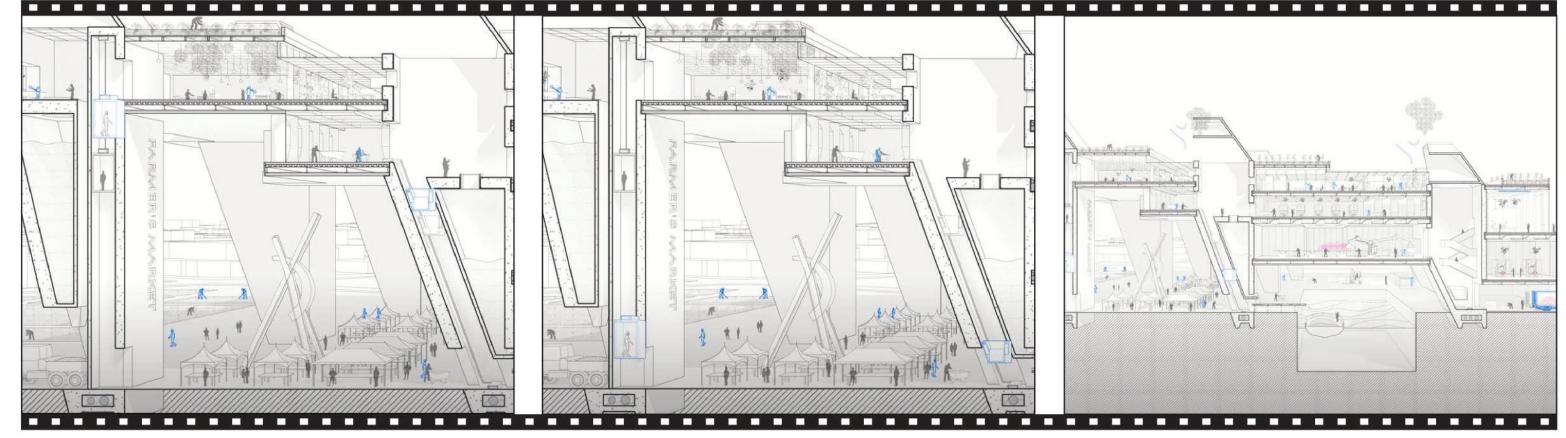






Animation Stills





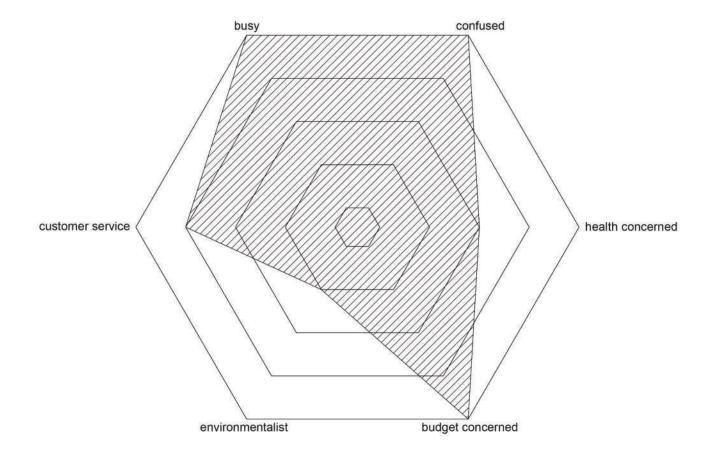
User-Centered Design

Instructor: Agnes Chang

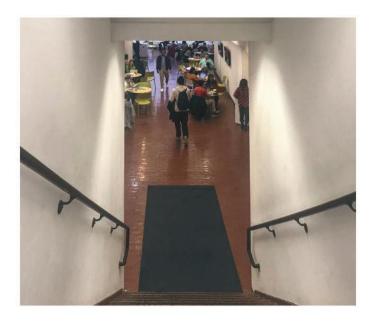
Partners: Niki Kourti, Jingyi Shao, Ruisheng Yang

As emerging technologies such as VR/AR dissolve prior divides between the digital and physical experience, how can we draw upon interdisciplinary methods to design for the future mixed reality that is just around the corner? We will survey current technology trends and examine their implications for design and for society. Students will develop skills in user research, rapid-prototyping, usability testing, and data collection as methods for excellent interaction and spatial design.

Spring 2020



Introduction



Brownie's is the place where students and instructors of GSAPP usually come together for grabbing quick lunch/snacks/drinks.
However, it can be difficult for people to efficiently sort their garbage generated through food and drink consumptions since neither trash categories in brownie's are clearly tagged nor their locations are distinctly directed.

Observations



Students tend to choose Brownie's because, among all, they are really concerned about time, and this cafeteria is the most easily accessible from their studios. At the same time, GSAPP students tend to be environmentally conscious, and understand the importance of correct waste sorting. However, there is confusion about what can be recycled/composted and where, which leads to sometimes throwing reusable materials into garbage, especially when they need to leave Brownie's in a hurry.

Survey

Q1:How do you feel about the line in Brownie's?

Not enough seating during rush hour; not quite for study

It is so overwhelming; too long, uncomfortable; even to pay! At some point there are three lines, so you do not know where to go!

Too long. Always takes too long. And complicated - multiply lines

Q3: What do you value most from a sandwich?

Taste + warm or not

Maybe the size!

Flavor and taste

How soft the bread is

Q5: What influences your decision on choosing Brownie or not?

Do I have time to eat somewhere else or not

Definitely the line! And the variety!

The weather outside and time availability

The convenience and the cookies, which I cannot find anywhere else

Q2: How do you decide which sandwich to buy?

Depends on which ingredient I like

Depends on my mood

Always the same one. Never looked at the menus

Depends on how familiar I am with the ingredients

Q4: What do you want to know from Brownie's on a daily basis?

How much food they throw away?

What time are the food prepared?

Its prices and sales

Specialty Soup kinds on a weekly basis

Images of the food, such as the soups and sandwiches

Q6: What do you like best about Brownie's?

Nice people! Good service

That I do not have to waste time going out, especially in the cold days

Proximity and friendliness of staff

It's convenient and their coffee is cheap

Personas



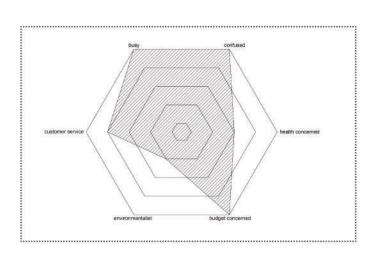






 It would feel annoying. I would just prefer to know this through an appl.





User Journey

How might we...?

How might we make sure that no one is frustrated because of the line?

How can we make user time more efficient?

How can we make the product more accessible and transparent?

How can we raise the awareness of health and environment among customers?







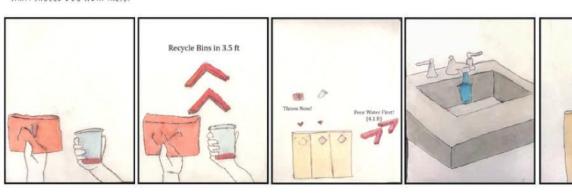




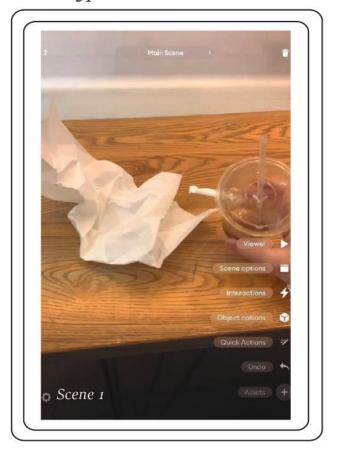
Conclusion

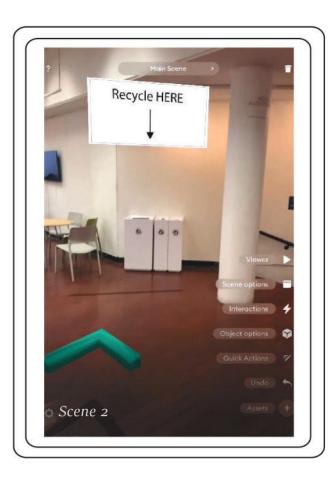
It's sometimes difficult to know where to put different types of garbage, but AR could remove any confusion. Informing the customers how to effectively sort and process their trash through augmented reality removes previous confusion in regards to the recycling procedures of Brownie's.

"WHAT SHOULD I DO WITH THESE?"



Prototype

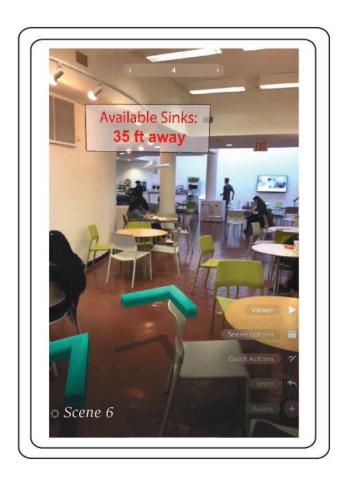


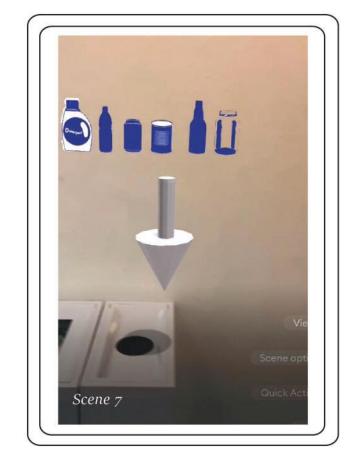














Future work

Encountered many technical issues with the Torch AR prototyping application (arrows and signs would not stay in same location, world anchor and interaction toggles did not always work, tutorials provided were misleading).

If more time was given, we could consider redesigning our graphics that give directions through the AR application.

We could also experiment with other AR prototyping platforms in order to determine which one would produce the most user friendly interface in the future.



Maybe the virtual suggestions are too much. For example, green arrows may be replaced by highlighting the recycle bin. People can decide the way to go and the screen will be more concise.



The arrow doesn't really showing me where to go or it's not that instructive of showing the direction. Maybe I need more information about the different types of trash, like a title and maybe add some color coded symbols. The "Remove liquids" text box can be viewed more directly instead of step back to see the whole text box.

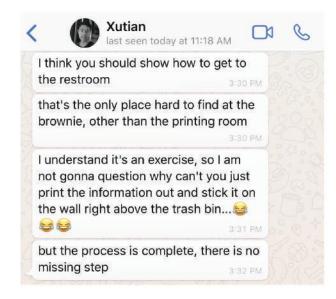


Ryan Alexand... Tue, Mar 10, 3:45 PM (11 hours ago)





To avoid redundancy with signage that is already in brownies your VR could provide only iconographies that are relevant to the user, i.e. just a coffee cup not pizza box or an aluminum can.



Super-Tall

Work: Individual

Instructor: Nicole Dosso

This class follows an analytical approach by dissecting individual building components and their interrelationships to each other to build a comprehensive understanding of how Super-Tall Buildings behave. What are the building blocks of this unique typology? How do users circulate? How are such structures challenged by the wind? What are the operational considerations and how are they maintained? How do we ensure the health, safety, and welfare of occupants? How can we design and build smarter?

Spring 2020

