

ti v e s a N a r

Niharika Shekhawat

Narratives

by Niharika Shekhawat
is a collection of Urban
Activism and Humanitarian
design works during the
2019-20

Urban Design course
at Columbia University
GSAPP



Contents

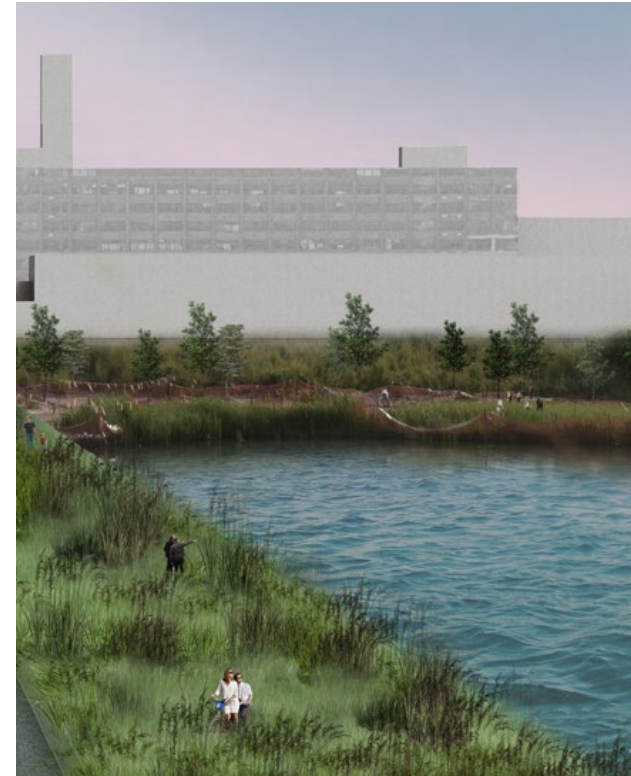


- 01 Resilient Living Shoreline
Sunset Park, Brooklyn, NY
- 02 Dispersing Wellness
Hudson Valley, New York
- 03 Unearthing Neve Sha'anani
Tel Aviv-Yafo, Israel
- 04 Redefining refugee camp
Kutupalong, Bangladesh
- 05 Resilient cities and Landscapes
Johnstown, PA
- 06 Energy use change in buildings
New York City, NY
- 07 Live Work Play
Sunset Park, Brooklyn



Resilient Living Shoreline

Summer 2019
Critics : Tricia Martin, Nans Voron
Neighborhood scale : Sunset Park, Brooklyn
Team : Niharika Shekhawat, Jaime Palacios,
Minjung Lee



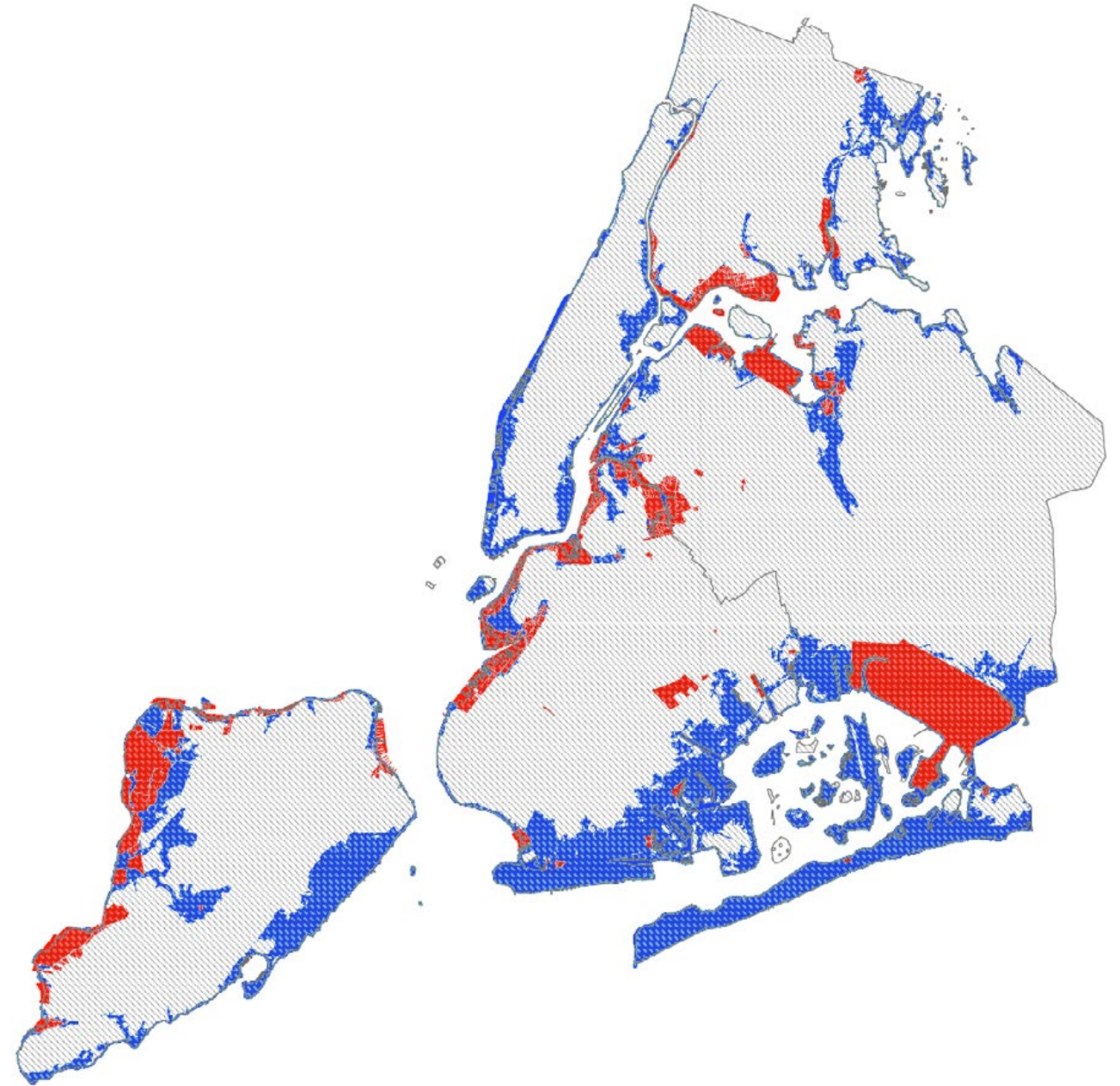
NYC has 21 Industrial Business Zones. 18 of these are located in waterfront sites. The Southwest Brooklyn IBZ is located in a historical marshland. About 55% of the IBZ is located under the flood zone. Global warming, increasing sea levels and extreme weather conditions threaten this manufacturing zone, as well as the prosperity of the community.

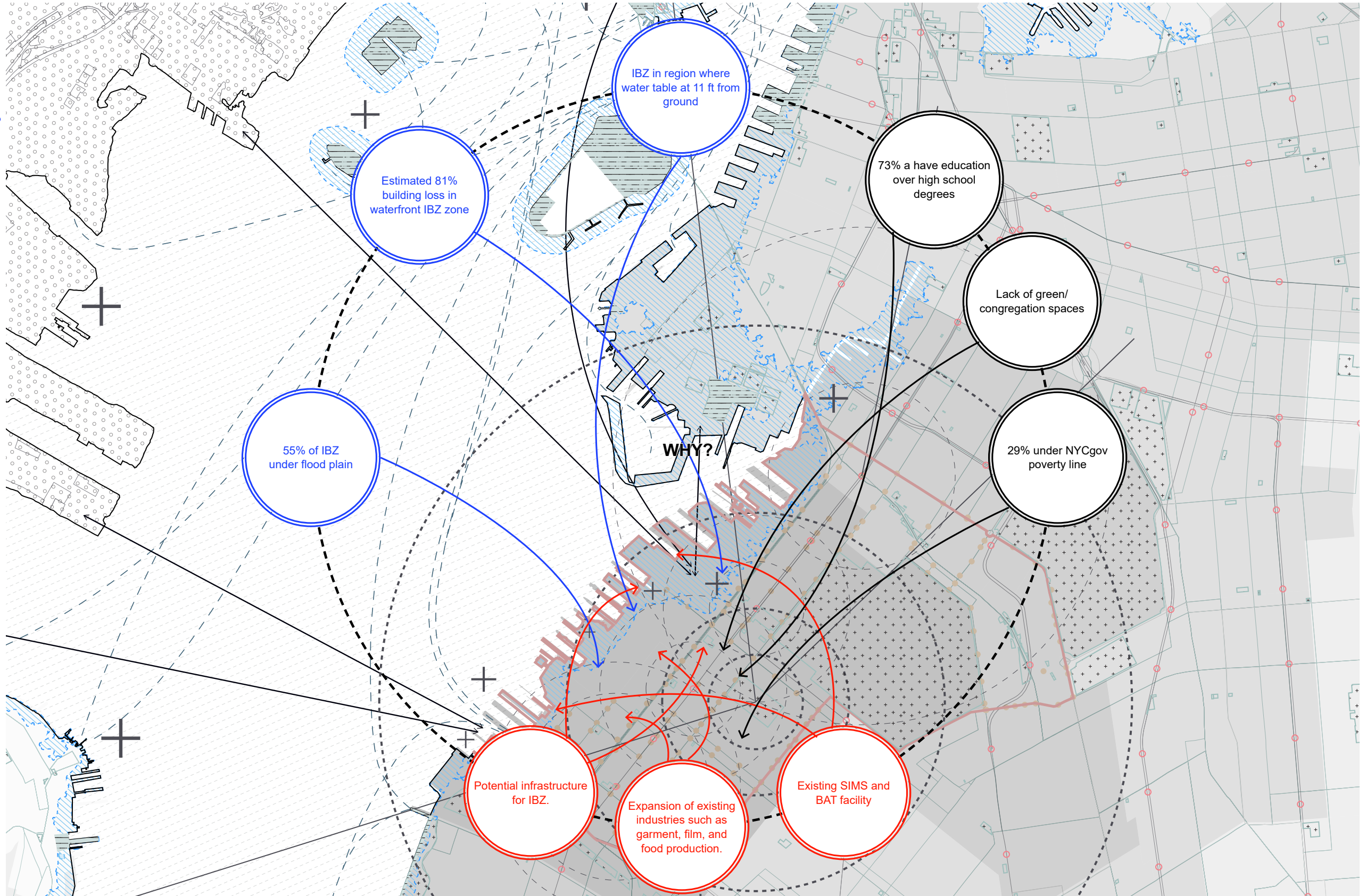
Project is about providing a resiliency framework to protect the waterfront IBZ through the lens of Ecology, Community and Economy: A Resilient IBZ.

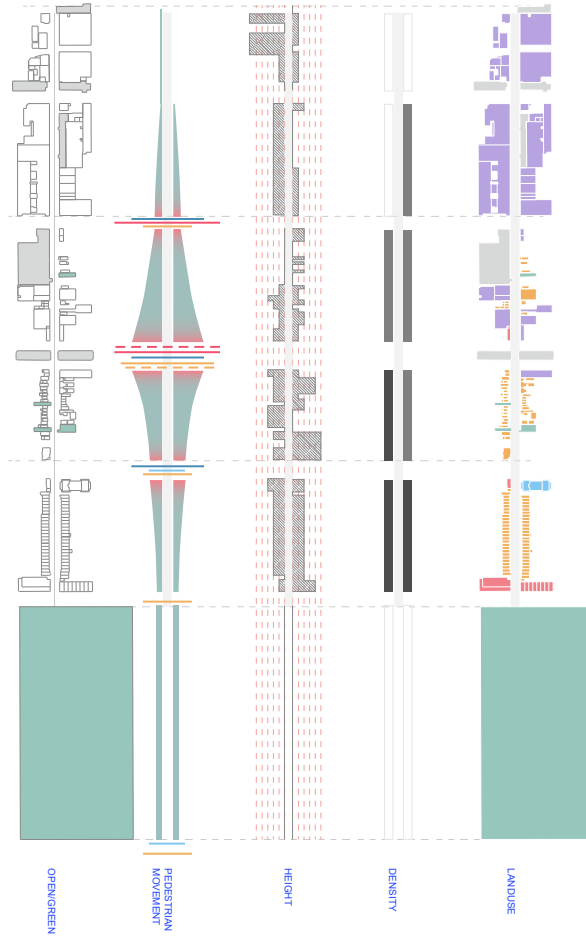
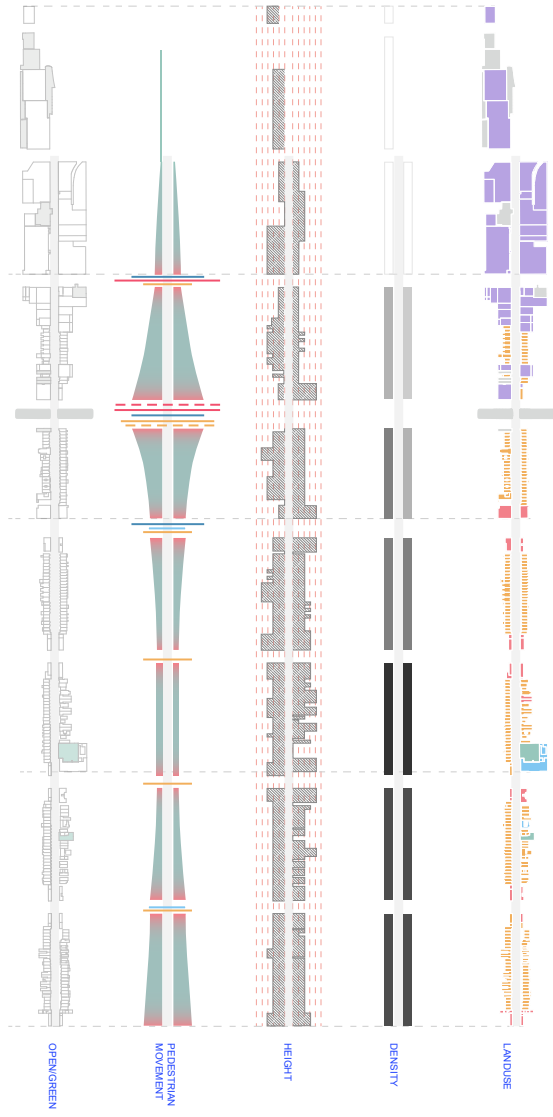
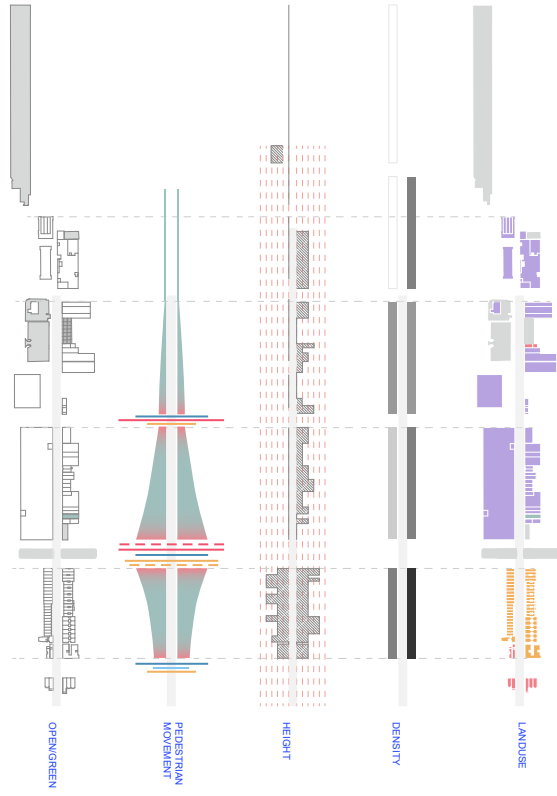
New York City is the largest regional economy of the United States. Manufacturing is a major contributor to its growth. There was an industrial decline in the mid 90's and, in response, in 2006 New York City created Industrial Business Zones to protect manufacturing areas and continue to provide good paying jobs for the working class.

Sunset Park, a neighborhood located in the South West of Brooklyn where one third of the population lives below the New York City government poverty rate, is home to an IBZ. Although, the area is currently underutilized, it holds hopes and opportunities for the generations to come. However, the IBZ is at risk.

The Southwest Brooklyn IBZ is located in a historical marshland. About 55% of the IBZ is located under the flood zone. Global warming, increasing sea levels and extreme weather conditions threaten this manufacturing zone, as well as the prosperity of the community. So, how can we make a Resilient IBZ that advocates for ecology, protects the economy, and safeguard the future of the local people? The key is on its waterfront.





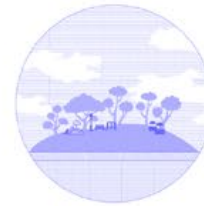
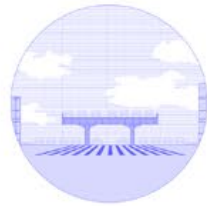


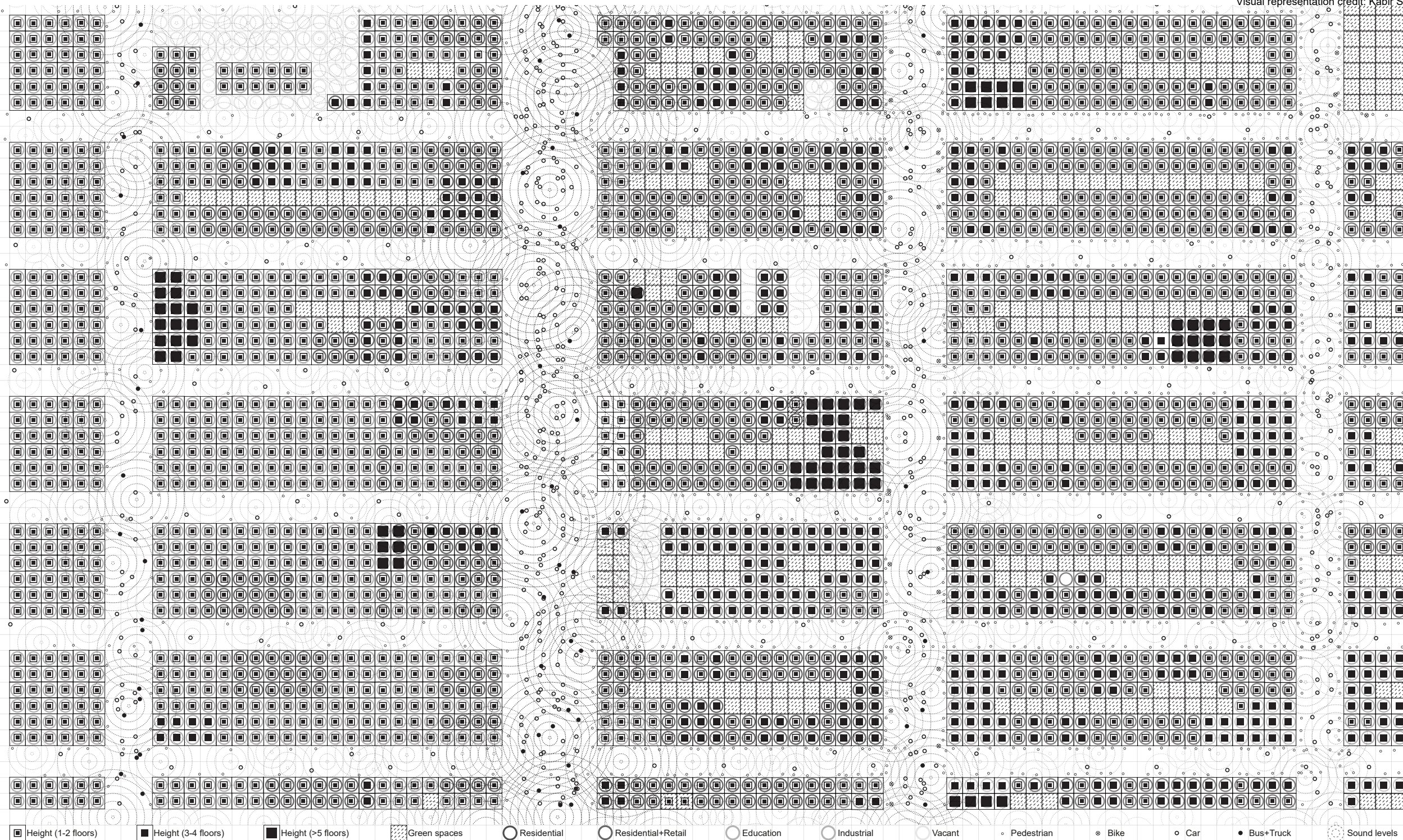
58TH STREET

51ST STREET

43RD STREET

Analysis of the streets to understand current conditions





□ Height (1-2 floors)
 ■ Height (3-4 floors)
 ■ Height (>5 floors)
 ▨ Green spaces
 ○ Residential
 ○ Residential+Retail
 ○ Education
 ○ Industrial
 ○ Vacant
 ○ Pedestrian
 ◇ Bike
 □ Car
 ● Bus+Truck
 ○ Sound levels

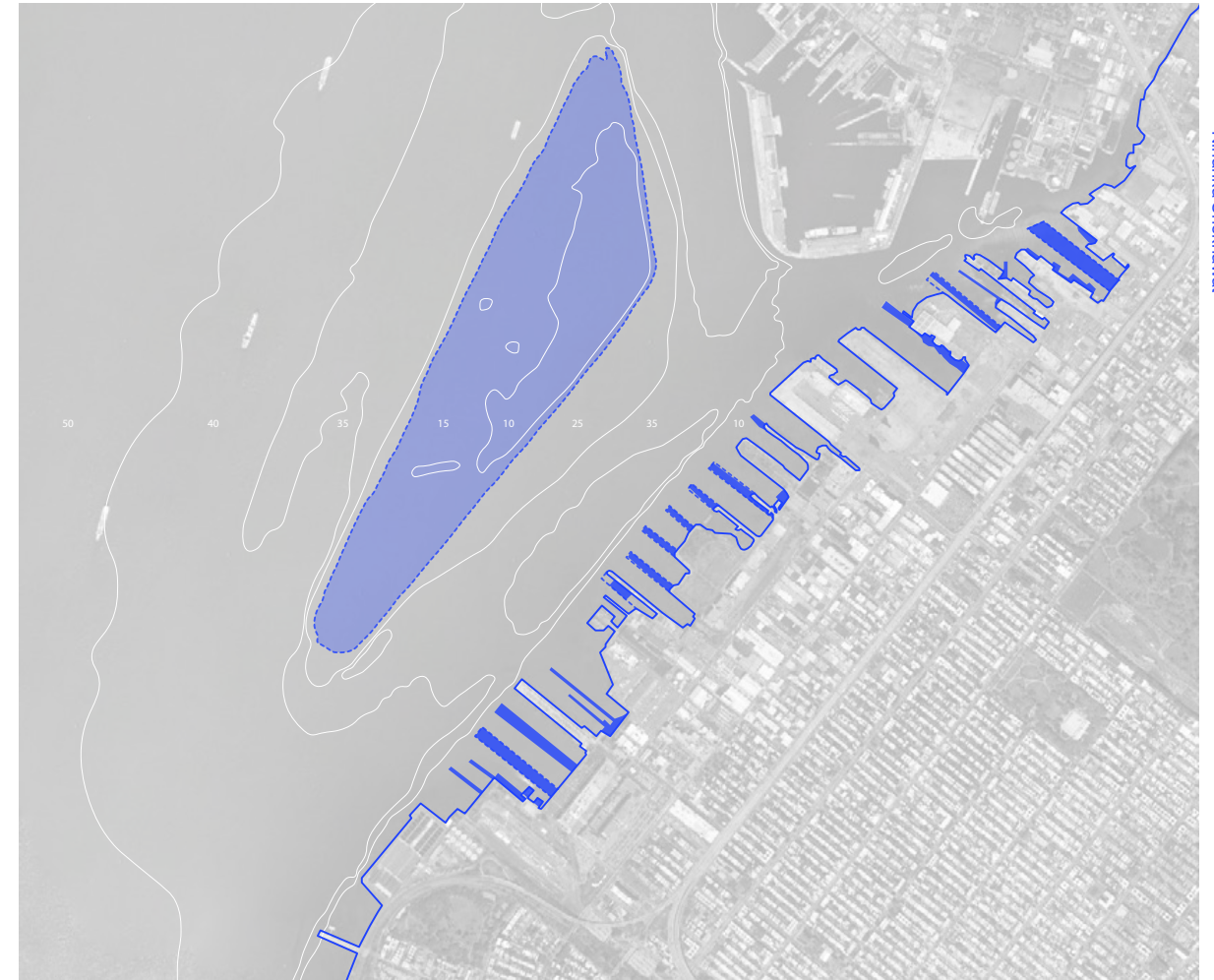
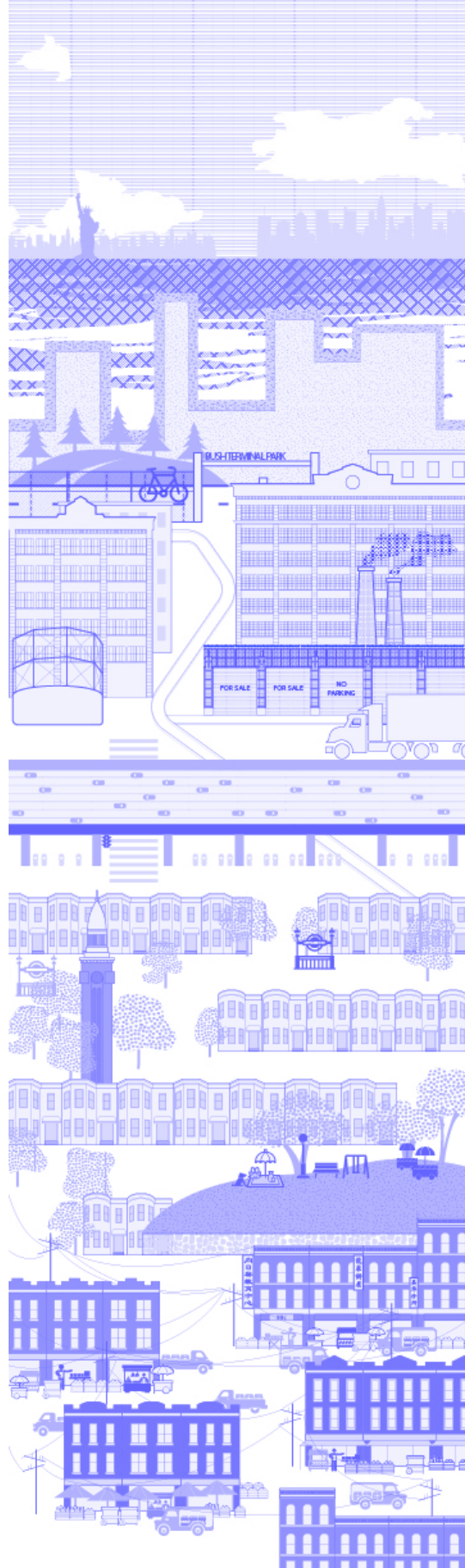
Living shorelines stabilize the shore, and reduce erosion and storm damage. They increase the flood storage capacity and strengthen the ecosystems. Hard infrastructure decays, while living shorelines naturally grow stronger over time. We are proposing to connect to the existing greenway, and use this connection as a barrier for sea level rise and inland water overflow.

The first step is to raise awareness by taking advantage of the local resources and using the current infrastructure assets. Educational facilities and training centers will inform the local community about the program and provide a series of green job opportunities.

To restore the bio-network, we need to nurse oysters, seagrass, and salt marsh. The nursery itself will start working as a natural purifying system. To manufacture the needed resources, recycled materials from the Sims Recycling Facility will be processed and developed on site, powered by our wind farms.

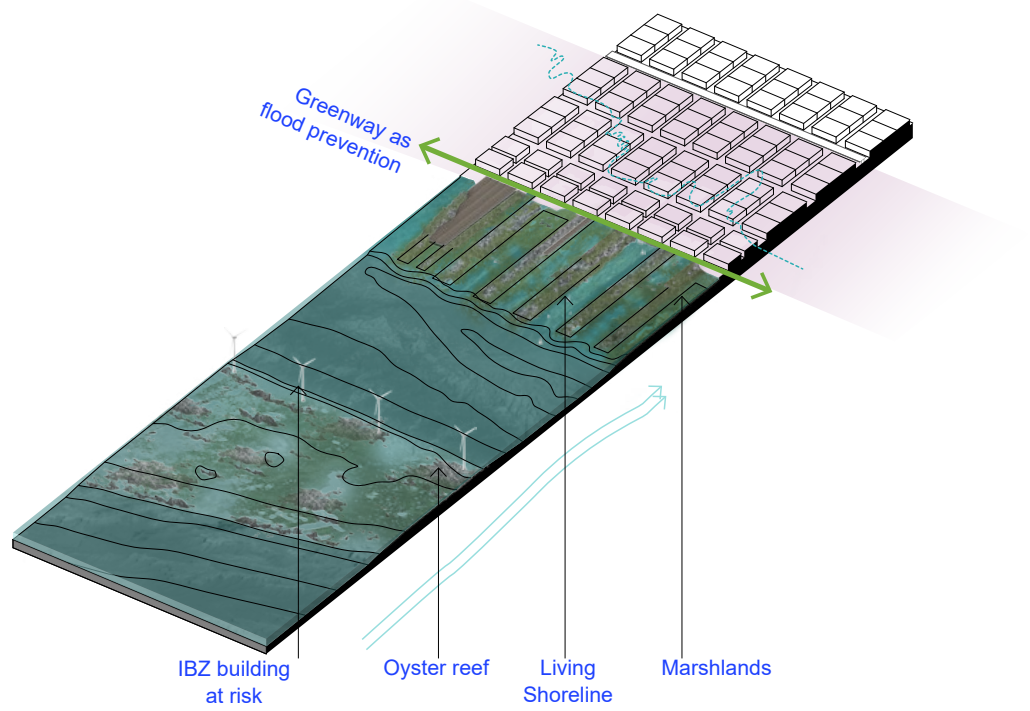
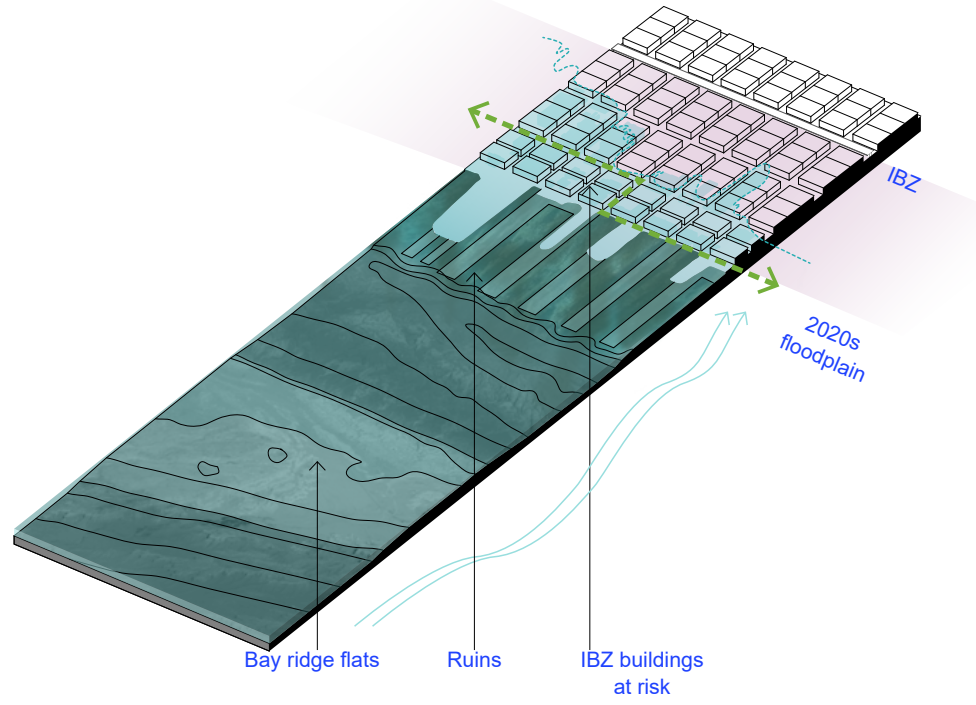
Manufacturing will help the community thrive by providing better jobs, giving access to local products, and reducing their energy expenses. The work of the community will safeguard the industrial business zone, and it will attract new industries that add value to the community: an economy of sharing.

We envision a protected IBZ that becomes stronger over time. A place that supports the community by securing its economy. An IBZ that advocates for environmental and social justice. A Resilient IBZ.

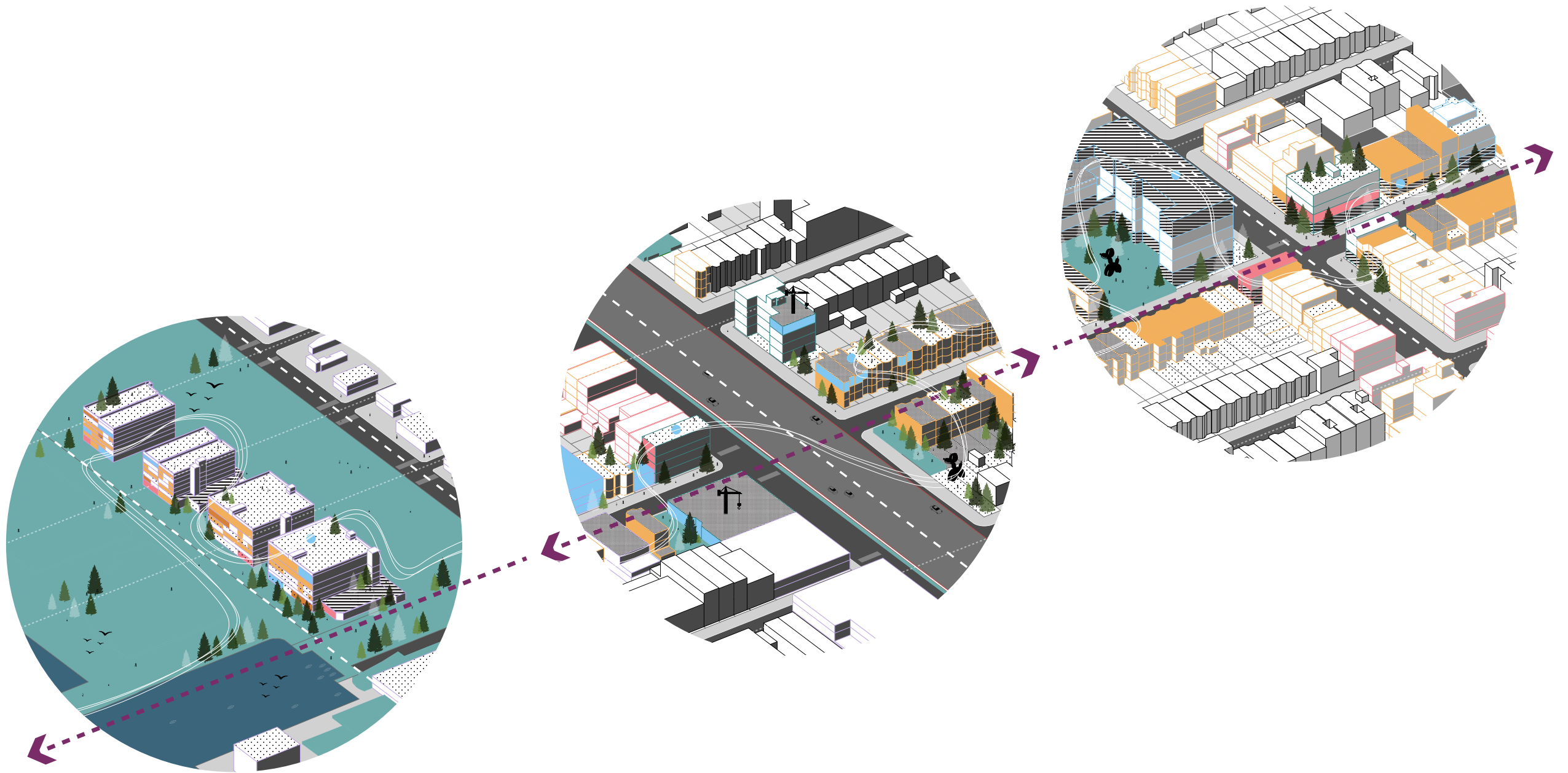


Bay Ridge flats
Ruins as assets visualized by
bathymetric mapping

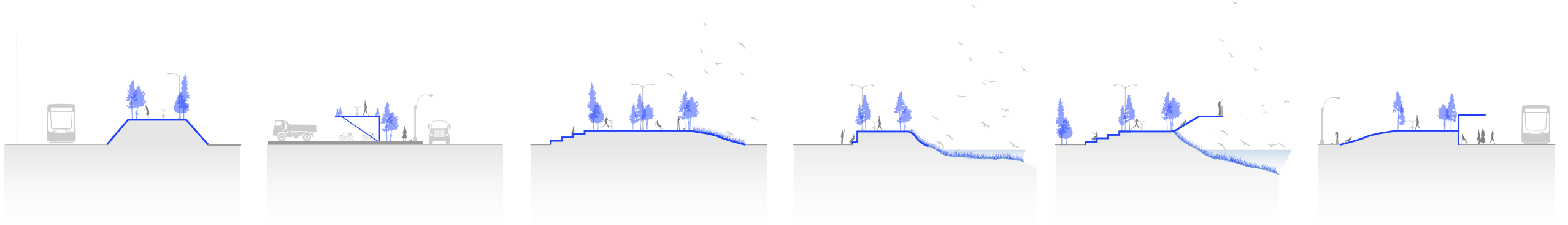




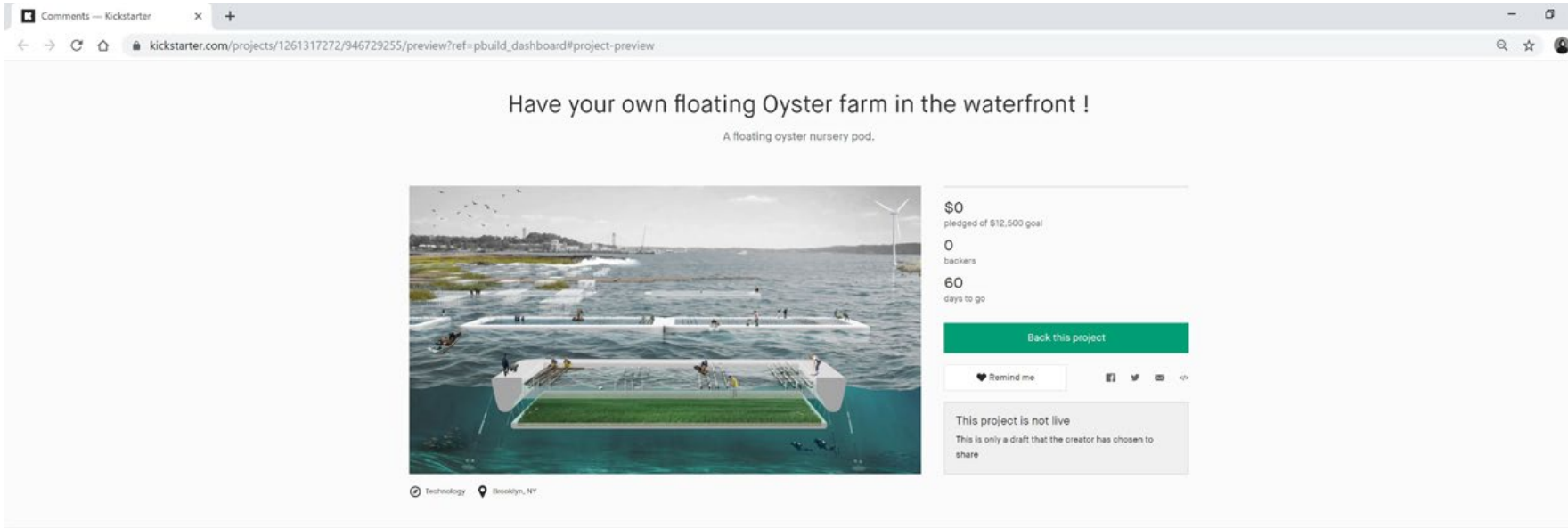




The Greenway acts as a soft wateredge and protects the shoreline, while also connecting the IBZ to the rest of the Brooklyn







Floating Oyster pod kit

"Grow your own oysters to help the waterfront"

One adult oyster filters and cleans about 50-60 gallons of water a day.

Protect your waterfront property and enhance local habitat while cleaning the water. This installations typically cost less than others using recycled plastic frame from local resources.

The floating Oyster pod is an easy way to grow your own oysters and help the waterfront. Engage kids and grandkids with local aquatic animals and have family or neighbors over for fresh homegrown oysters.

Floating oyster pod kits (One 18 square feet reef contains approximately 600 oysters)

: 1 Oyster float + 600 (3/4 inch) Seed oysters (\$84.00)= \$250.00

- Training, Lecture, Transport, Maintenance, Instruction

\$250 x 50 Oyster floats = \$12,500



Oyster farming

About

New York City is the largest regional economy of the United States. Manufacturing is a major contributor to its growth. There was an industrial decline in the mid 90's and, in response, in 2006 New York City created Industrial Business Zones to protect manufacturing areas and continue to provide good paying jobs for the working class.

Sunset Park, a neighborhood located in the South West of Brooklyn where one third of the population lives below the New York City government poverty rate, is home to an IBZ. Although, the area is currently underutilized, it holds hopes and opportunities for the generations to come. However, the IBZ is at risk.



Floating oyster reefs above the Bay-ridge flat

The Southwest Brooklyn IBZ is located in a historical marshland. About 55% of the IBZ is located under the flood zone. Global warming, increasing sea levels and extreme weather conditions threaten this manufacturing zone, as well as the prosperity of the community. So, how can we make a Resilient IBZ that advocates for ecology, protects the economy, and safeguard the future of the local people? The key is on its waterfront.

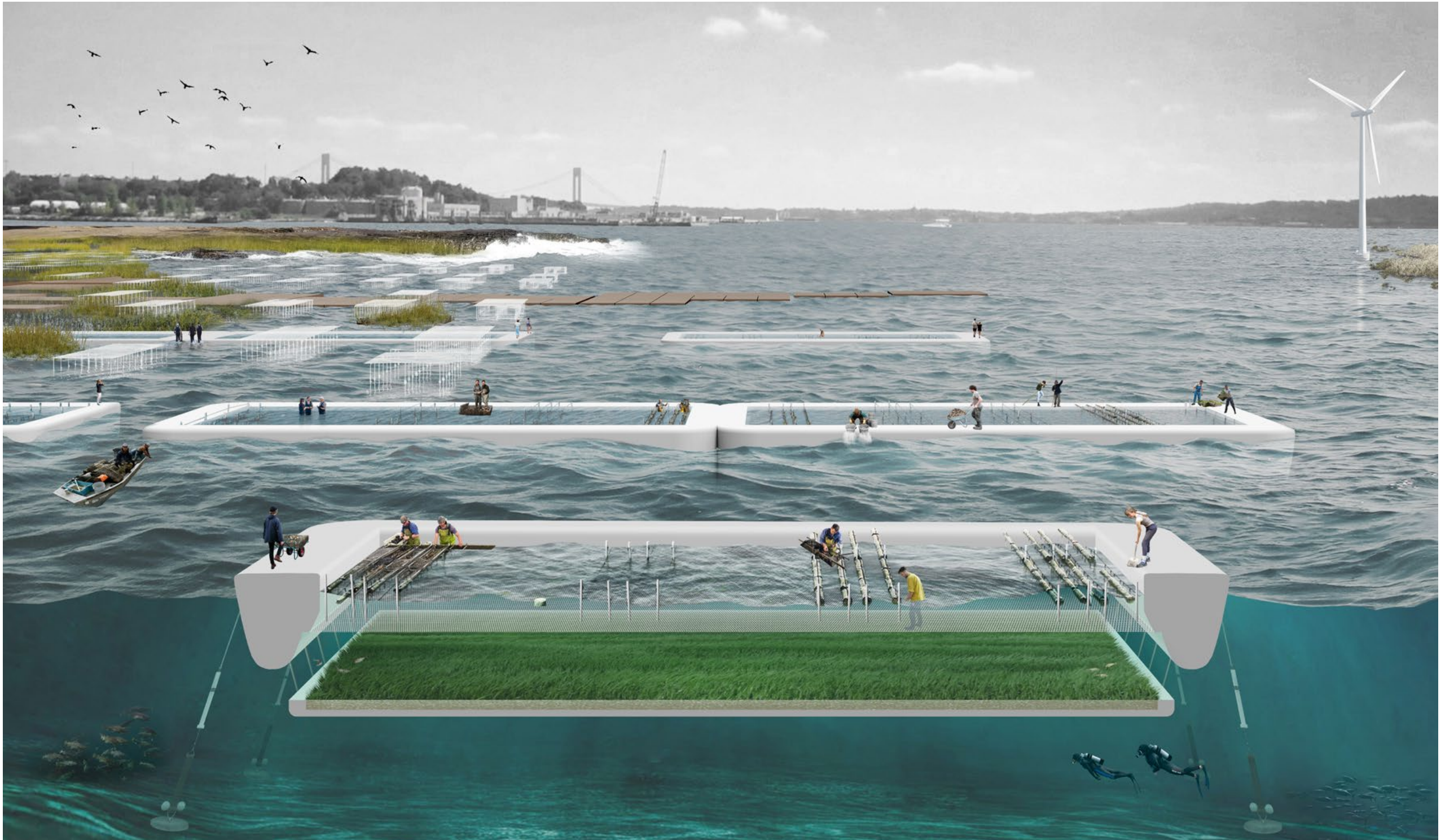
Living shorelines stabilize the shore, and reduce erosion and storm damage. They increase the flood storage capacity and strengthen the ecosystems. Hard infrastructure decays, while living shorelines naturally grow stronger over time. We are proposing to connect to the existing **greenway**, and use this connection as a barrier for sea level rise and inland water overflow.

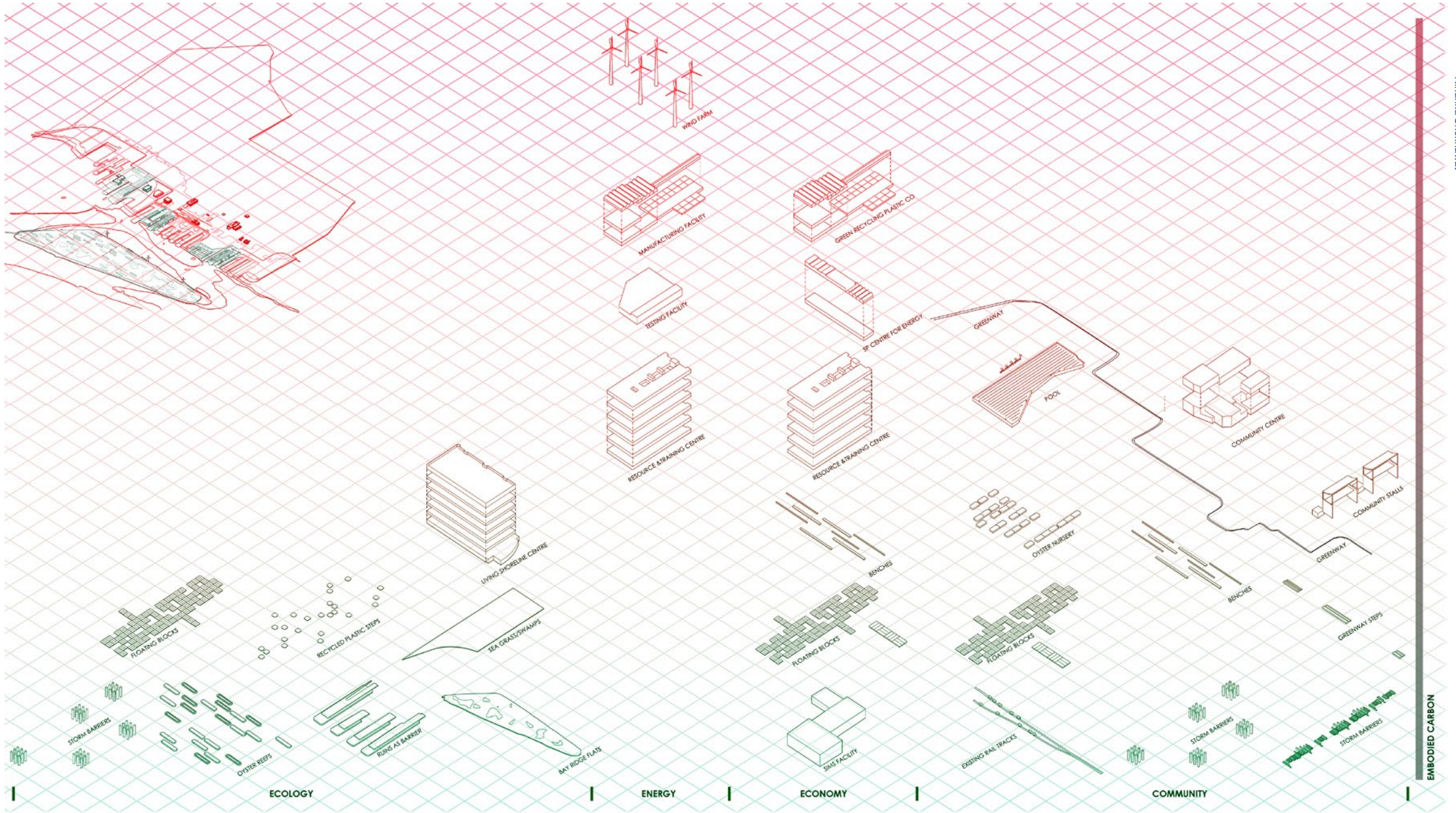
The first step is to raise awareness by taking advantage of the local resources and using the current infrastructure assets. Educational facilities and training centers will inform the local community about the program and provide a series of green job opportunities.


Jaime Palacios Anaya
 0 created - 0 backed
 Columbia University student doing a M.S. in Architecture and Urban Design. [See more](#)


Niharika N Shekhawat
 0 created - 0 backed
 Columbia University student doing a M.S. in Architecture and Urban Design. [See more](#)


Minjung Lee
 0 created - 0 backed
 Columbia University student doing a M.S. in Architecture and Urban Design. [See more](#)







Dispersing Wellness

Fall 2019
Critics : Kaja Kuhl
Regional scale : Hudson Valley, NY
Team : Niharika Shekhawat, Mansoo Han, Ting Zhang, Shailee Shah
Re-imagining the Green New Deal



The goal of the project is to substantially lower the carbon footprint and reduce health disparities within the urban/rural context by dispersing wellness through social infrastructure in the Hudson Valley. Within the healthcare industry, 84% of CO₂ comes from health system supplies and services and 16% from the building facilities itself. The idea is to change the perspective of health services. Hospital acts as a promoter of community well being in urban area and disperses wellness through additive typologies of social infrastructure in rural areas.

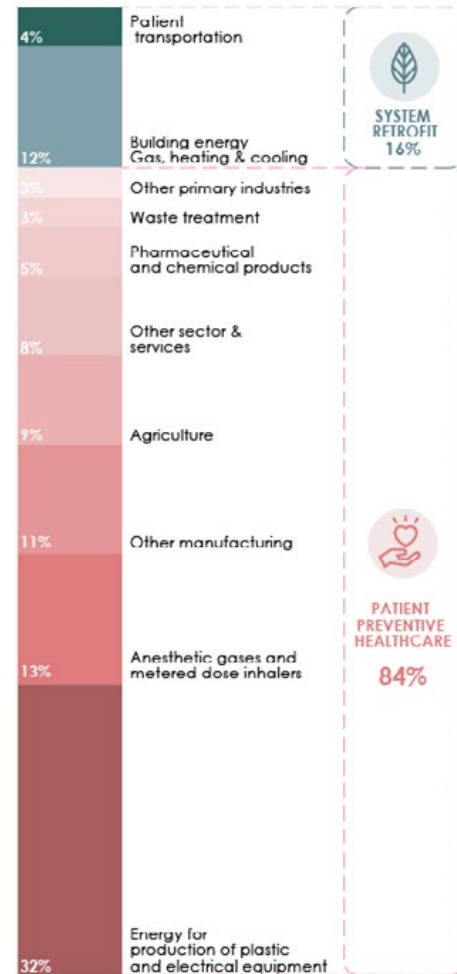
The project challenges and changes the perspective of the current healthcare system from being a measure of cure to an extension of health and wellbeing of the community. The goal of the project is to substantially lower the carbon footprint and reduce health disparities within the urban/rural context by dispersing wellness through social infrastructure in the Hudson Valley.

The healthcare industry accounts for 10% of the total greenhouse gases generated. We have two major issues that are often ignored of the healthcare system - High carbon footprint and lack of accessibility(physical and monetary) that in turn makes people sicker and more dependent on health facilities in the long run.

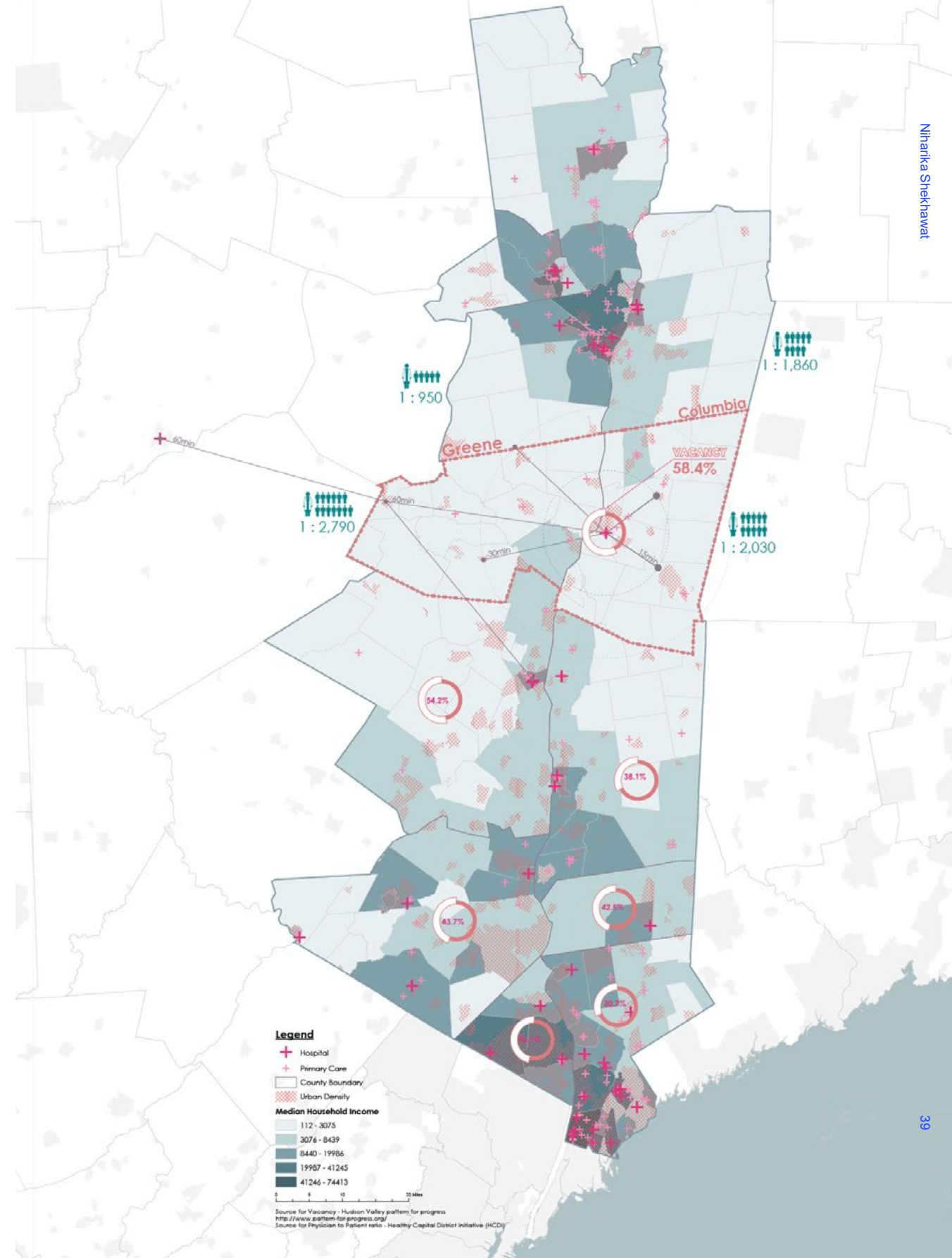
The healthcare facilities provide health services but are high polluters of the environment, in turn making people sicker and more dependent on health facilities in the long run. Another cycle is the lack of physical and monetary access to healthcare that makes people conditioned to living with the discomfort of disease which further enhances the gap as it propels them to get treated only in “when needed” scenario with high expenditure.

In the Hudson Valley, we see that the concentration of hospitals in urban areas is much higher whereas the rural areas lack services to healthcare. Therefore, there is a huge health care disparity in terms of accessibility between the urban and rural areas. The base maps represents median household income, we see that the areas that have higher income have more access to health facilities whereas low income, which are more rural areas lack health facilities completely. The geography of the region drives people’s health seeking behavior in Hudson Valley, residents especially from the rural areas are the most disadvantaged and travel up to 1.5 hours one way for basic health needs.

HEALTHCARE SYSTEM CARBON EMISSIONS



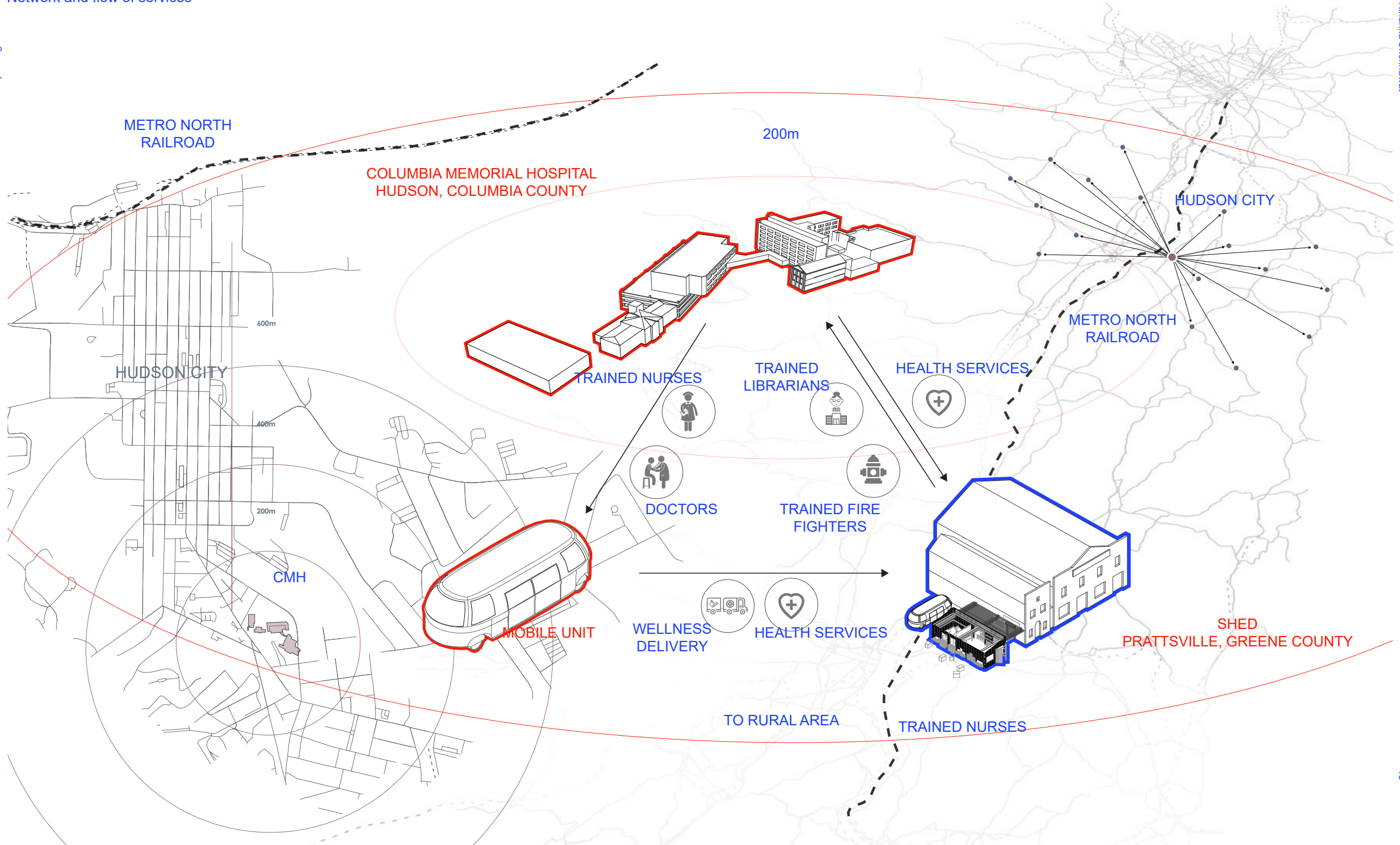
Source: Healthcare's climate footprint. noharm.org. 2019

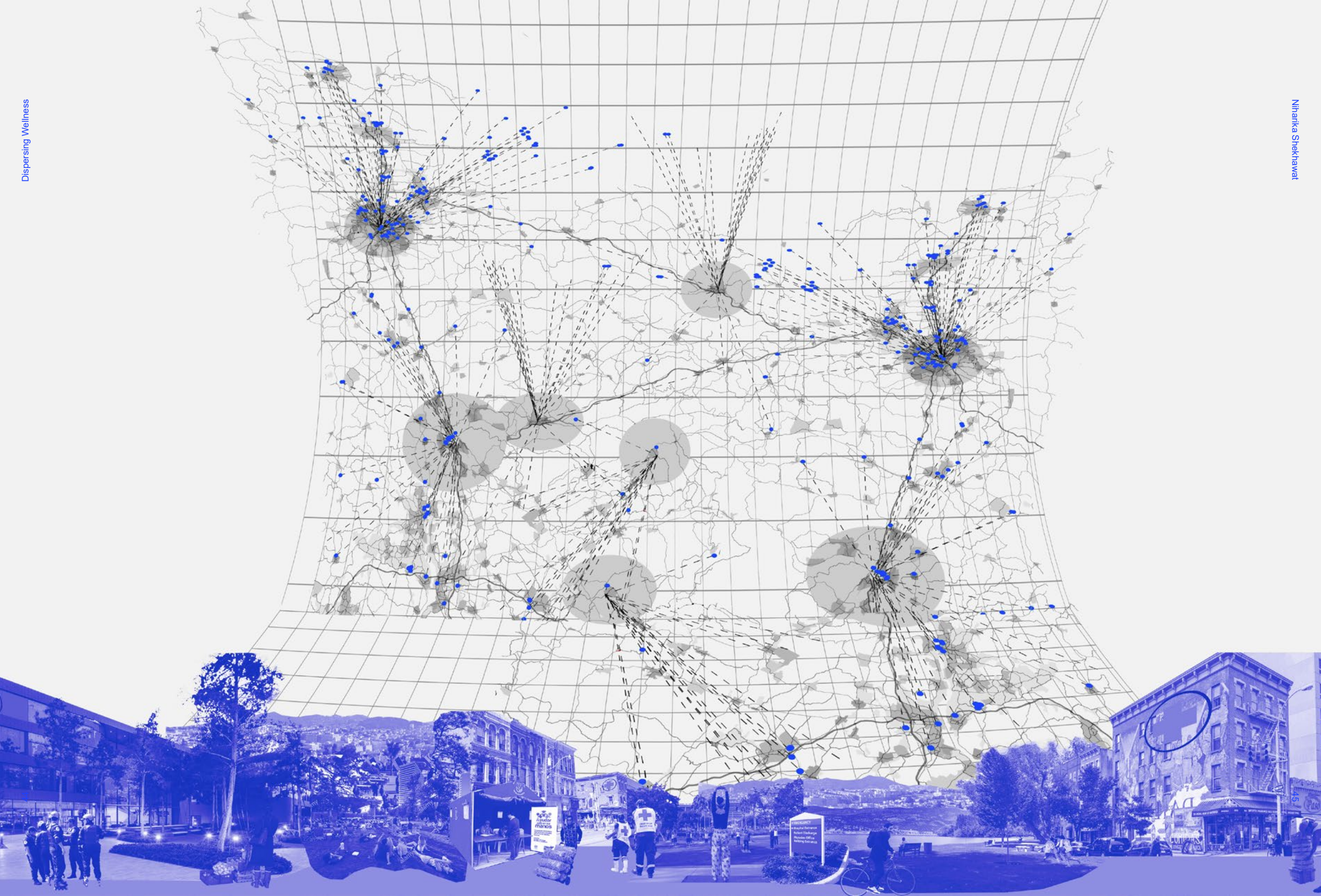


The project focused on the twin counties - Columbia and Greene County. These counties have the lowest access to healthcare facilities but also the lowest physician to patient ratio and higher travel distances for health needs. As we have identified that 84% of the carbon emissions can be reduced through patient preventative healthcare, we look into the health profiles of these counties. In Columbia and Greene county, we see that there is an increase in the ageing population and is projected to rise by 2040. According to the health assessment, there are two main health issues in the county - First, high number of chronic diseases such as obesity. We also see that the community in these regions consume less fresh vegetables, engage less in physical activities and has limited access to fresh food supermarkets. Second, high number of substance use in the middle aged population that also results in mental health issues and social isolation within the ageing population in the rural areas.



Network and flow of services



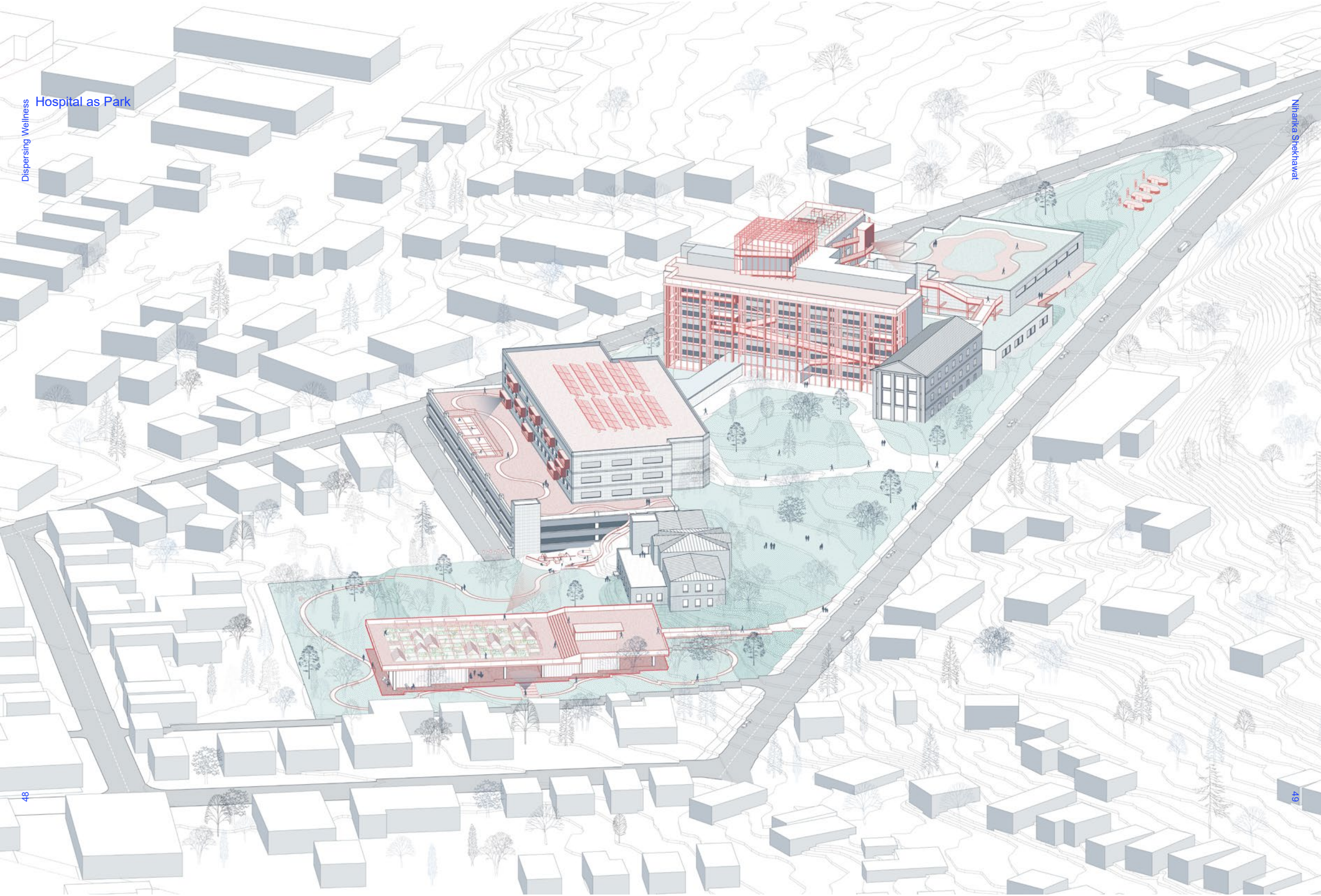


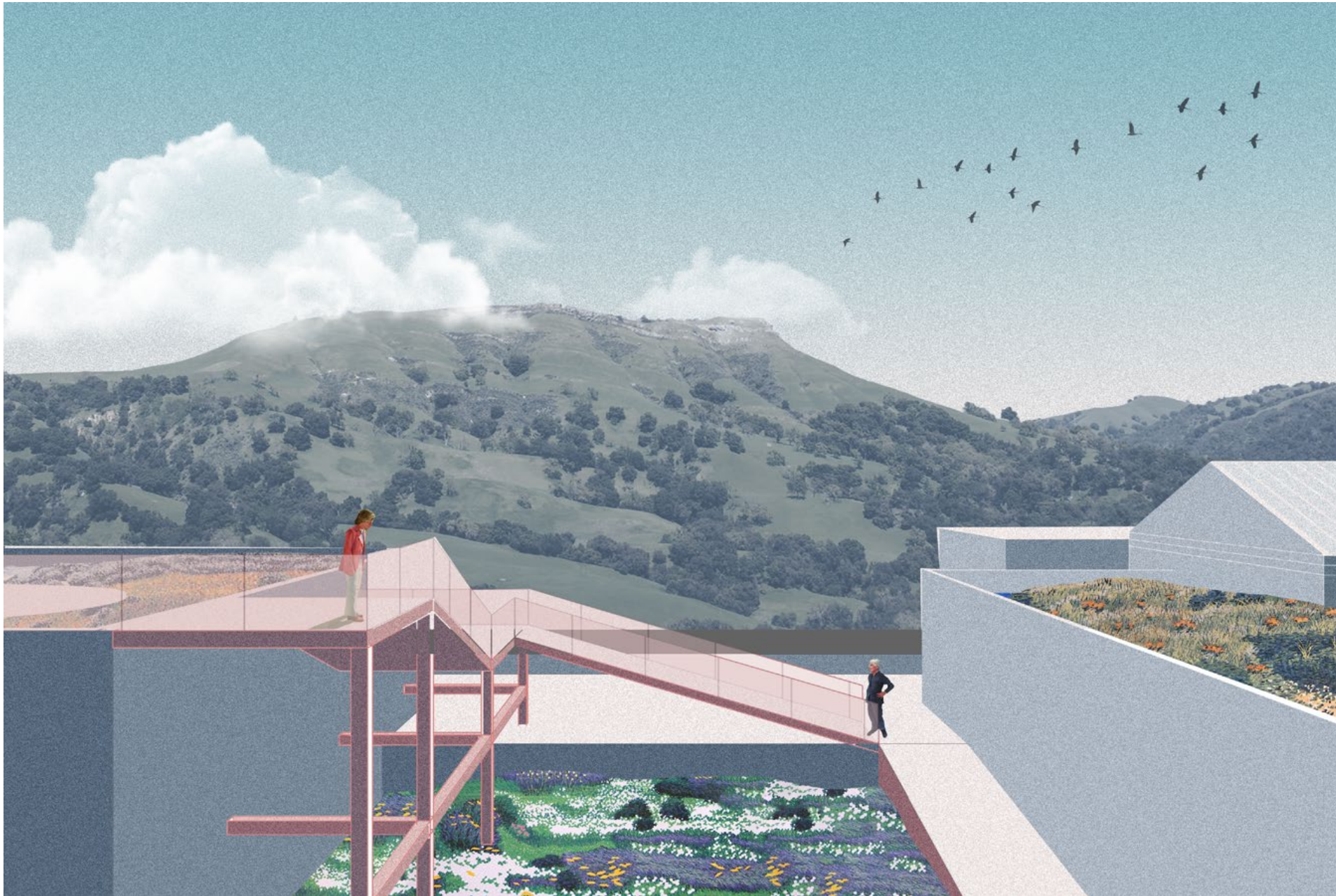
To respond to the issues of the healthcare system, we propose two strategies that would substantially lower the carbon footprint and reduce health disparities in the Hudson Valley.

The first strategy is to extend health services in the rural area by adding health services to public institutions such as fire stations and public libraries. In the twin counties, Columbia Memorial Hospital serves as a sole healthcare provider. As we can see, libraries and fire stations are fairly dispersed in the region. As major health issues in the region are chronic and can be treated through preventative measures, through this strategy we can reduce the carbon impact but also provide health services as closer proximity.



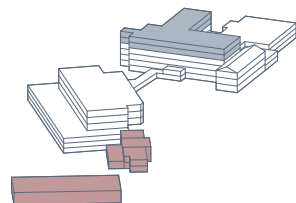
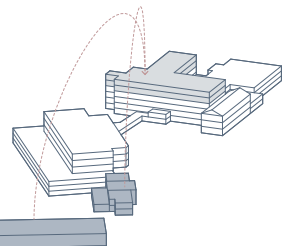
Hospital as Park



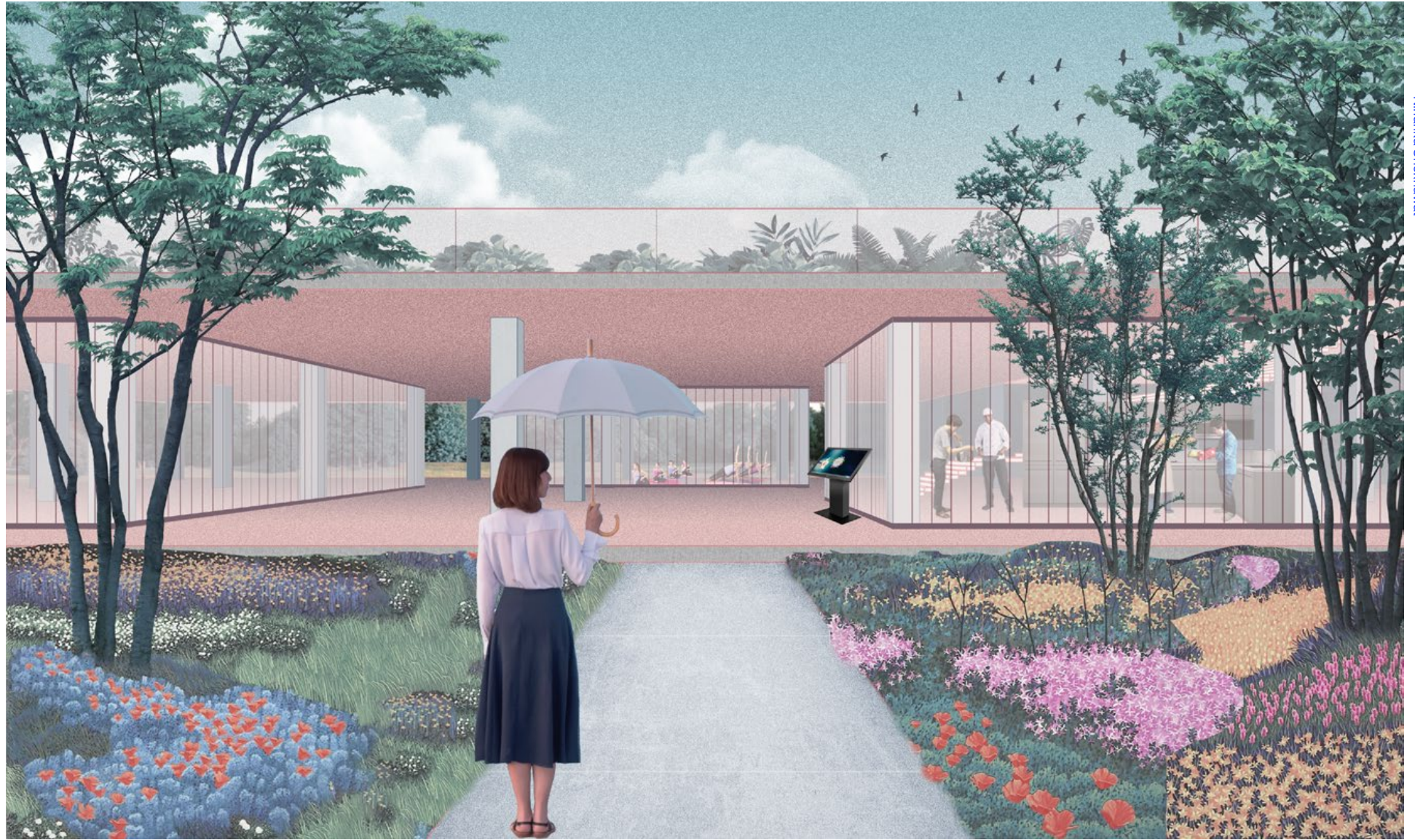


Urban Areas

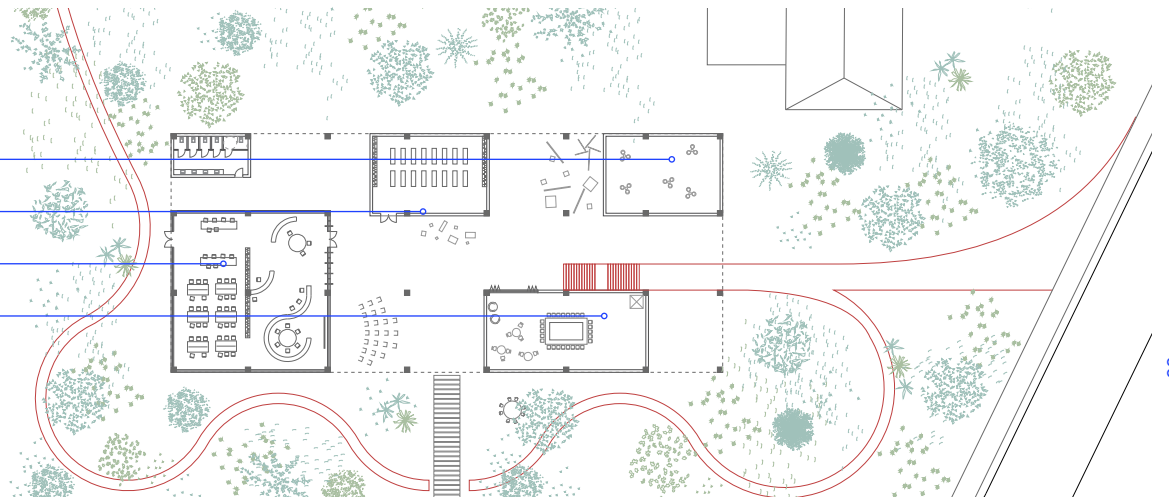
At Columbia Memorial Hospital in Hudson, Columbia County, we focus on the retrofit of the hospital. We reimagine the hospital as not a place for cure of disease but also as a center of dispersing wellness. Therefore, we propose 'Hospital as a Park' strategy considering that in the site analysis we find that there are not many places that promote wellness in the area. We intend to make the space inviting not just for the people that are sick but also reimagine the space as a form of public space. The overall strategy is to repurpose not fully utilized building by cluster hospitals operational programs into the main functions building and reprogramming other two buildings. The parking lots on site are converted to green spaces. The park will also have an ongoing health fair where the mobile health vans will be stationed. Residents can get their routine health check up while at the park during scheduled times of the day. To tackle the energy systems that can reduce 12% of the carbon emissions. We proposed to retrofit the facade of the hospital - a double skin facade to make it more energy efficient in terms of heating and cooling. The double skin facade is connected through a series of ramps that form a connection between the buildings. All the buildings have been converted to have farm gardens and solar panels on the roof that help achieve up to 50% of the carbon emissions reduction in the energy systems of the facility.

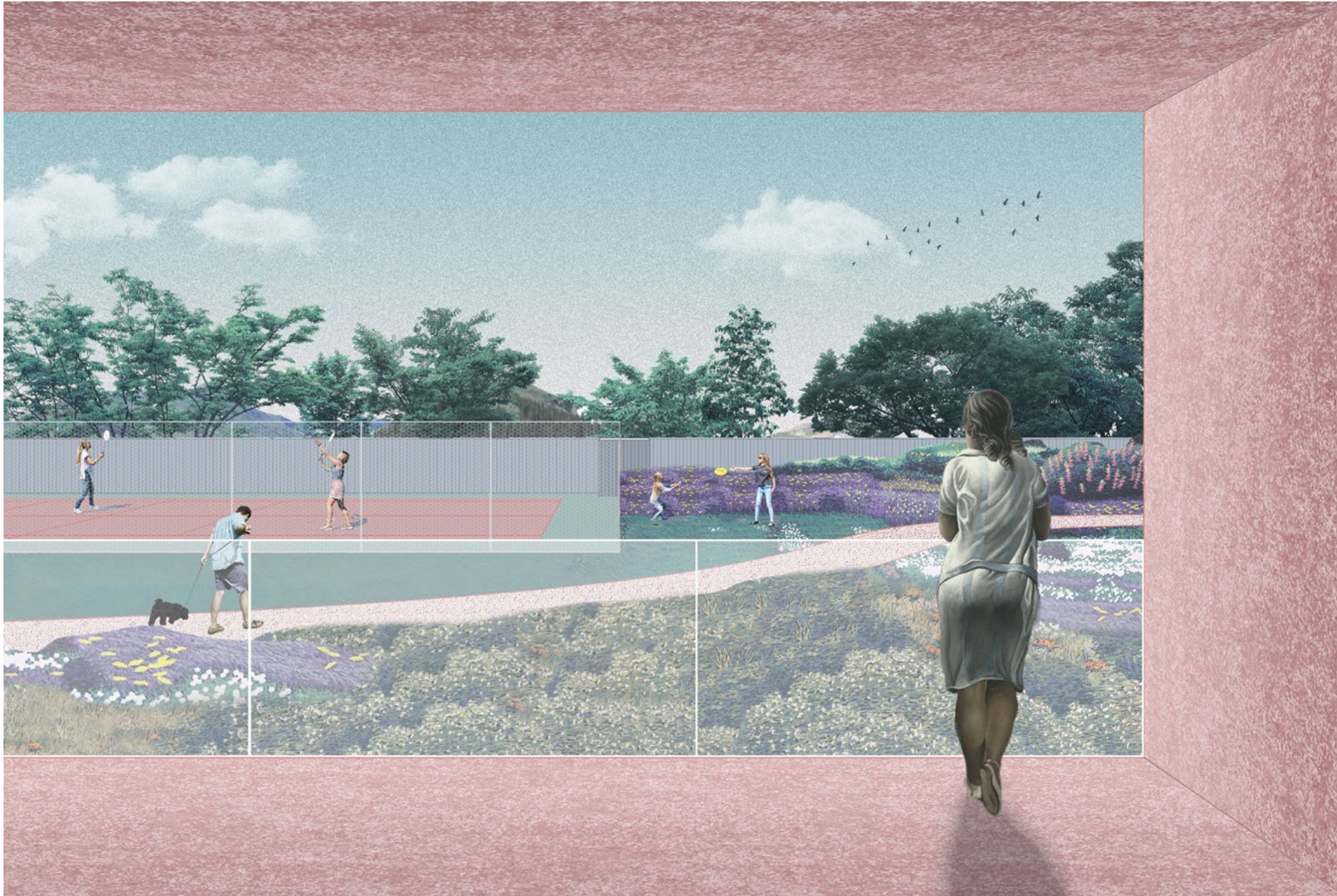


Program Transition



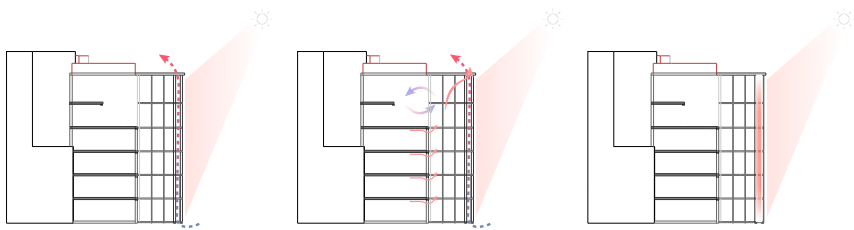
- Telehealth center
- Community Gym
- Training Center
- Public Kitchen



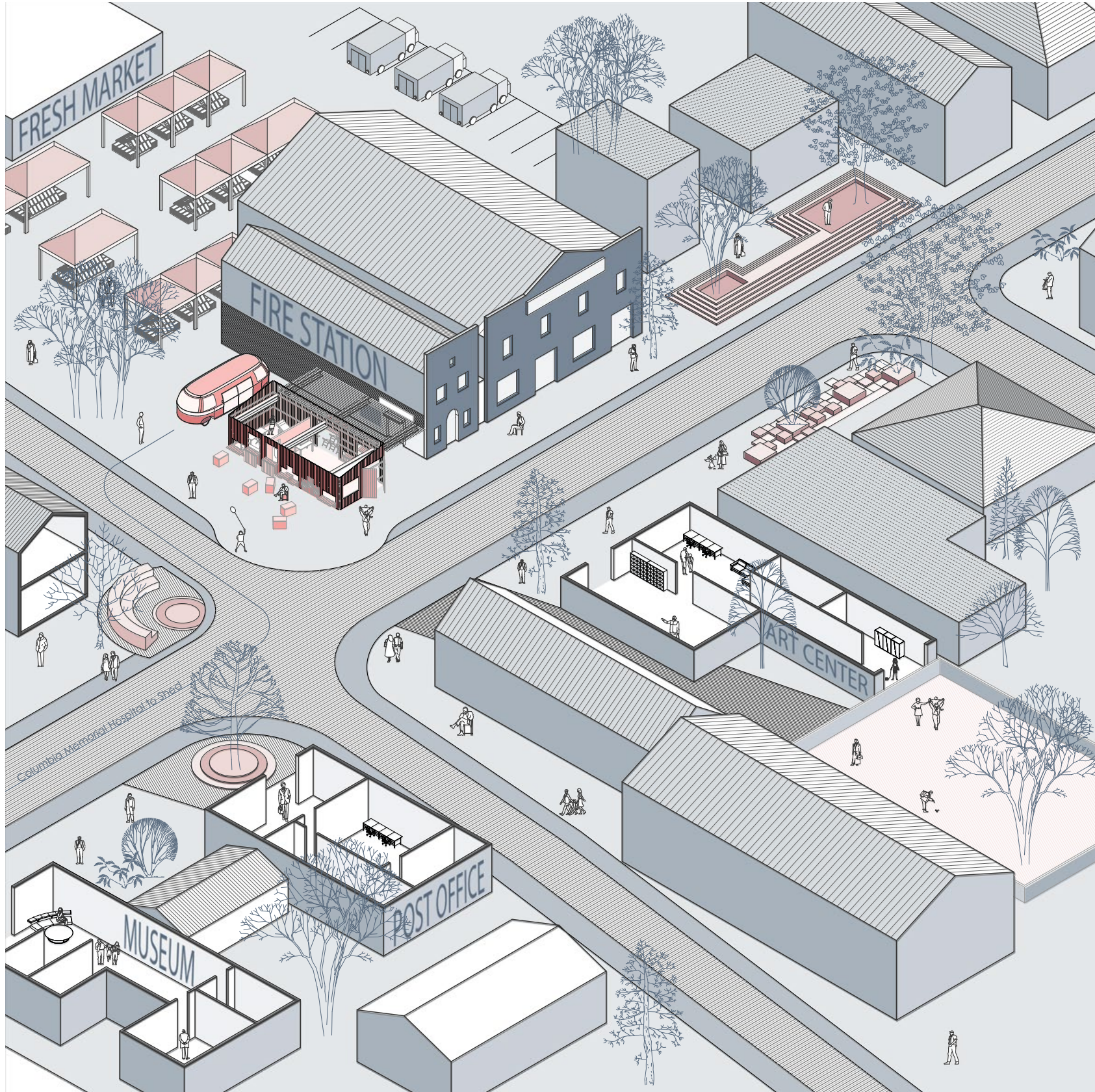


The second strategy is the mobile network that would make health services more accessible - scheduled health professional servicing rural areas but also distribution of medications, fresh food and wellness services.

As the Columbia Memorial Hospital is a major stakeholder in this process of transition, the idea is to change the perspective of health services. It acts as a promoter of community well being in Hudson and disperses wellness through an additive typology that empowers the role of social infrastructure to spread a wellness network in rural areas.



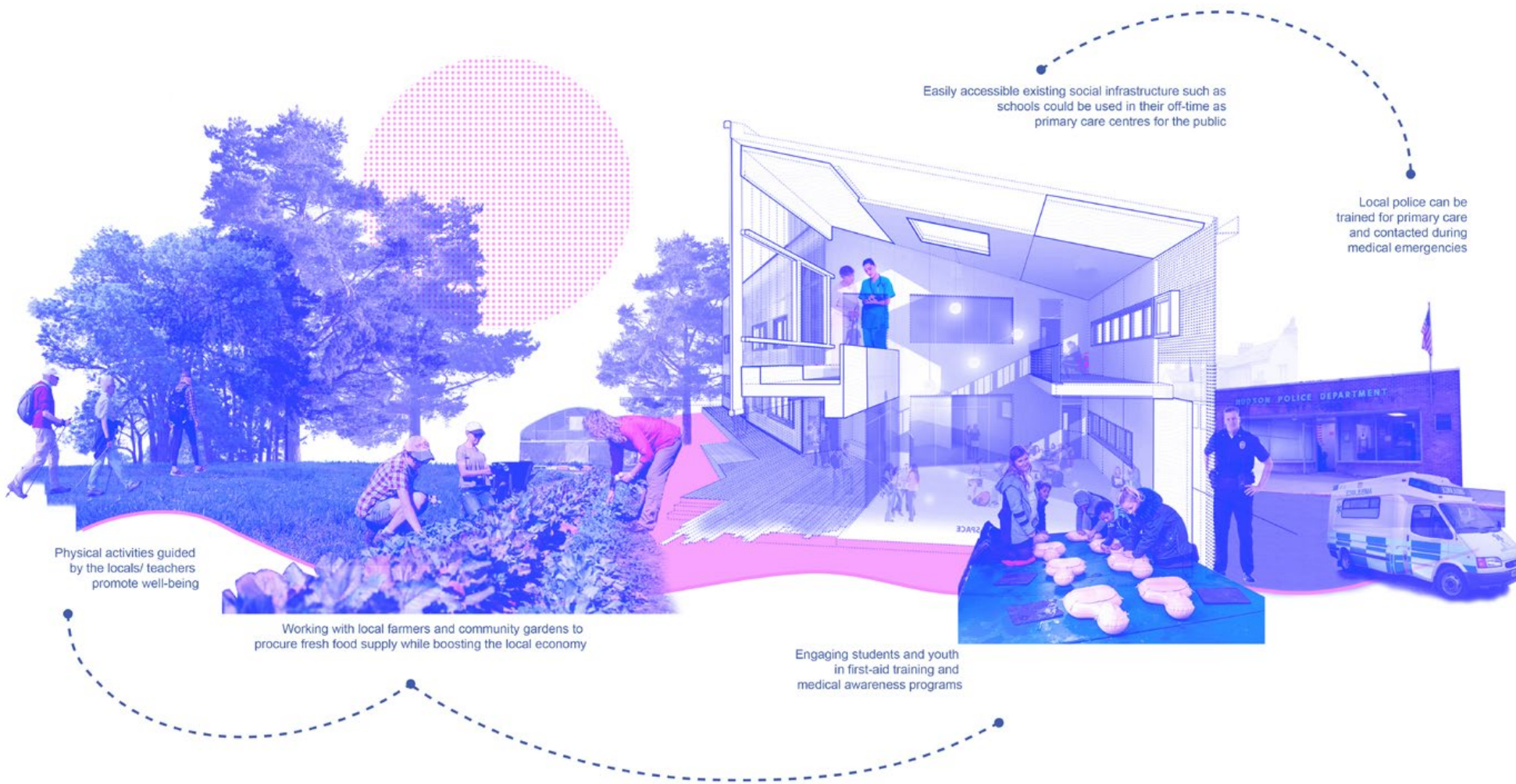
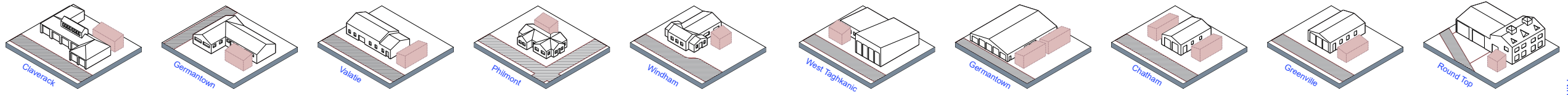
Double facade skin



Rural Area

We propose a shed typology that becomes an attachment to public institutions such as a fire station in Prattville, Greene county. The Shed is designed to be energy-positive space that provides a high performance, healthy communal environment, while minimizing energy use through careful daylighting and natural ventilation, employing photovoltaic panels to generate substantially more power than consumed. The modular shed can be easily built on site as it has standardized dimensions of 8x16ft and uses 2x4 planks





Easily accessible existing social infrastructure such as schools could be used in their off-time as primary care centres for the public

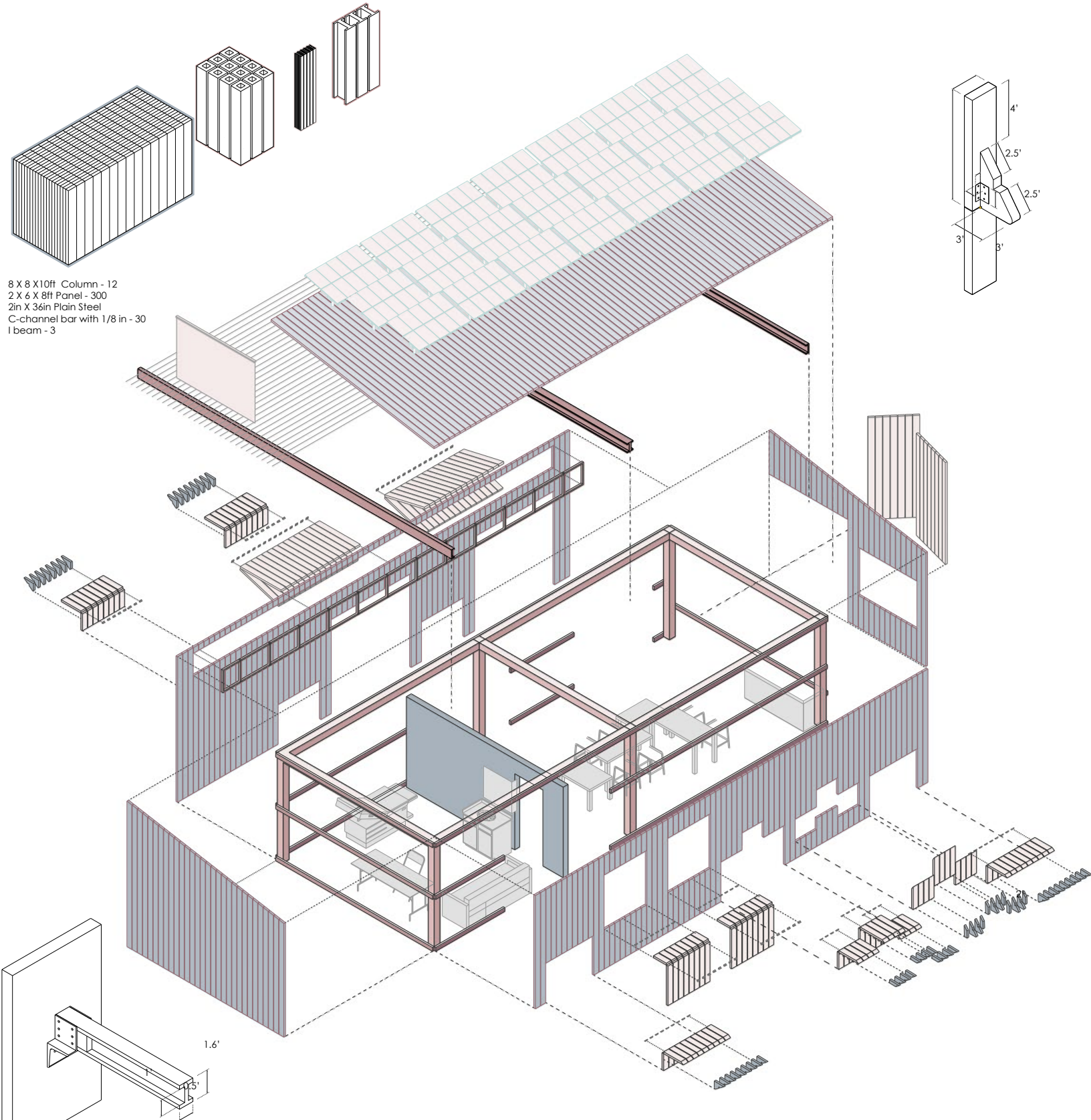
Local police can be trained for primary care and contacted during medical emergencies

Physical activities guided by the locals/ teachers promote well-being

Working with local farmers and community gardens to procure fresh food supply while boosting the local economy

Engaging students and youth in first-aid training and medical awareness programs

Rural Area
 We propose a shed typology that becomes an attachment to public institutions such as a fire station in Prattsville, Greene county. The Shed is designed to be energy-positive space that provides a high performance, healthy communal environment, while minimizing energy use through careful daylighting and natural ventilation, employing photovoltaic panels to generate substantially more power than consumed. The modular shed can be easily built on site as it has standardized dimensions of 8x16ft and uses 2x4 planks



Rural area health shed will comprise of a storefront health center serviced by a trained firefighter where residents can go for their routine check ups. In the case of Prattville where the major health issue is social isolation, the shed also serves a communal living room space where programs such as home theatre movie, knitting activities programs that facilitate connections can be carried out. Through the extension of health services in public institutions and dispersing a wellness network in each neighborhood, we strive to make healthcare accessible to all but also promote the healthy living. The mobile health with a certified doctor make routine rounds to these rural areas for further services.



Therefore, by reimagining a dispersion of health services and promoting preventative healthcare programs, we can substantially lower the environmental impacts of the healthcare sector and create an equitable and sustainable model by dispersing wellness.



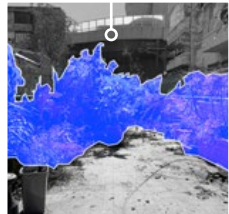


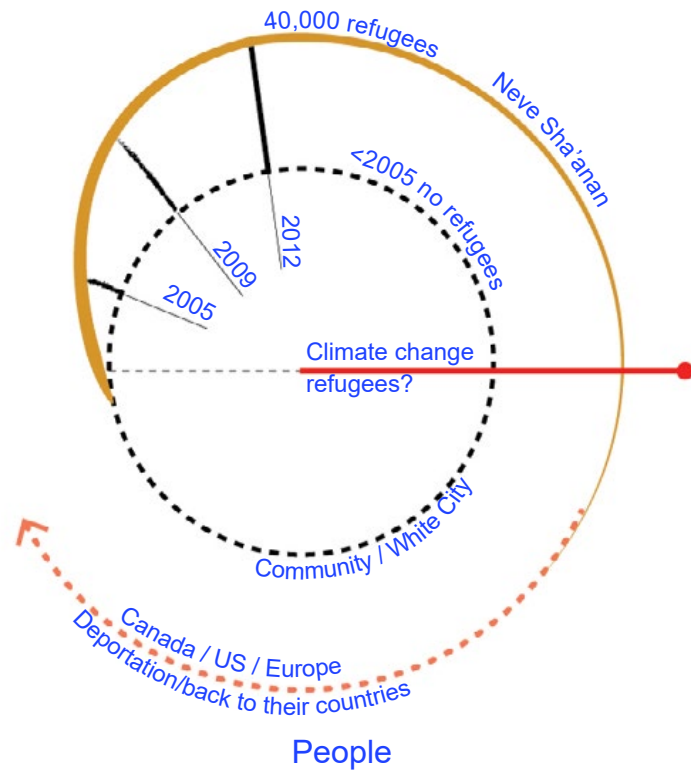
Unearthing Neve Sha'anani

Spring 2020
 Critics : Kate Orff
 Rift Valley scale : Tel Aviv-Yafo, Israel
 Team : Niharika Shekhawat, Antonia Medina bell, Candelaria Mas Pohmajevic, Shailee Shah

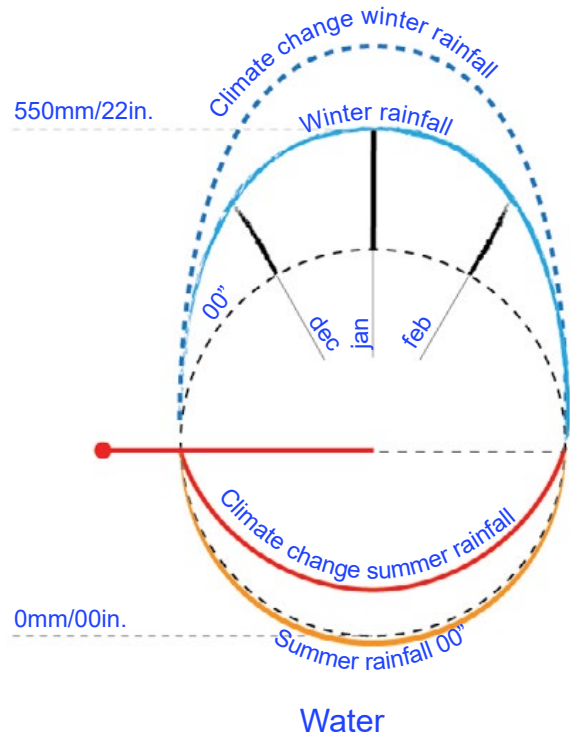


Unearthing Neve Sha'anani is about its marginalized community and buried natural assets. The goal is to celebrate the transitional character of Neve Sha'anani. Building on the efforts of its community, we will develop a path to residency and civic participation through a Neve Sha'anani Action Lab.





People



Water

The migrant workers, asylum seekers and the Ayalon are perceived as the two migrants of Tel Aviv-Yafo. Both people and water are contained between bureaucratic boundaries of legality and channeling. They are siloed behind the facades of Neve Sha'anani and the walls of the Ayalon Highway. Tel Aviv experiences extreme fluctuations of drought and flood conditions throughout the year. We will work with water and people to empower them through collaborative urban design.



People enter via Central Bus Station



Water enters via concrete channels

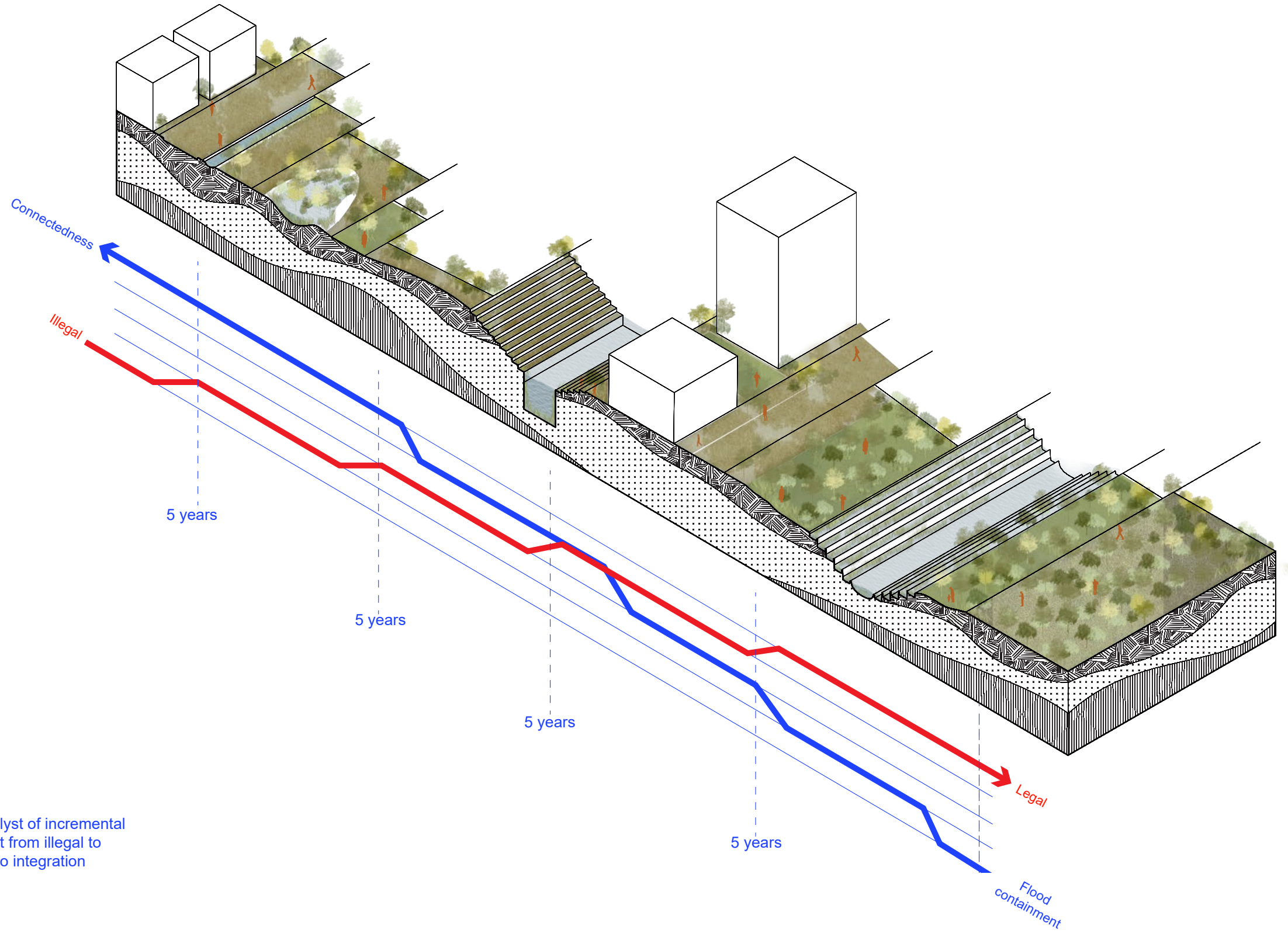
"*Family businesses* and restaurants, with *unbelievable history.*"

"These children don't know that they are seen as *outsiders*"

"They *don't have legal status.* They live in this *survivor mode.*"

"Before they pedestrianized this street, *it was chaos*"



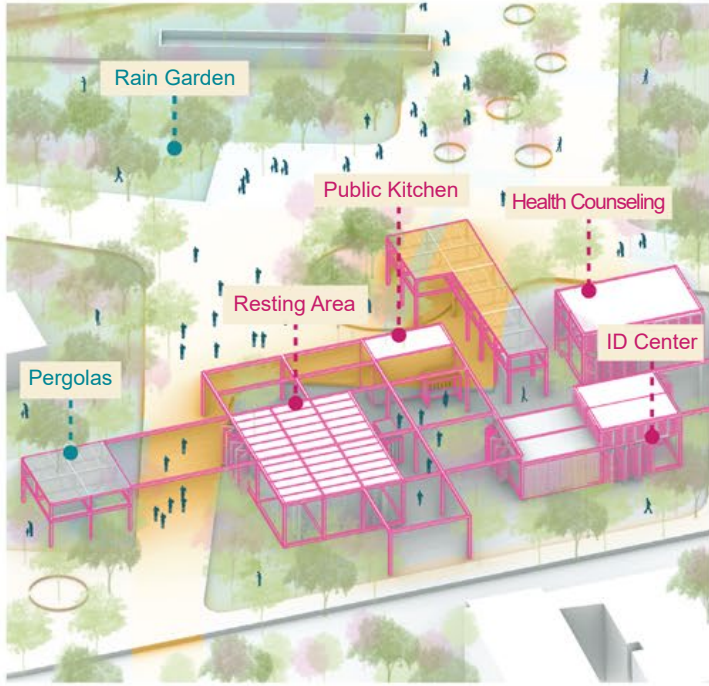


Unit of change acts as a catalyst of incremental change by creating a gradient from illegal to legal, and from containment to integration



Neve Sha'anani Action Lab connects residents and municipal stakeholders to create empowering public spaces. This public-private partnership supports the migrant workers and asylum seekers of Neve Sha'anani to actively participate as stewards in their neighborhood.

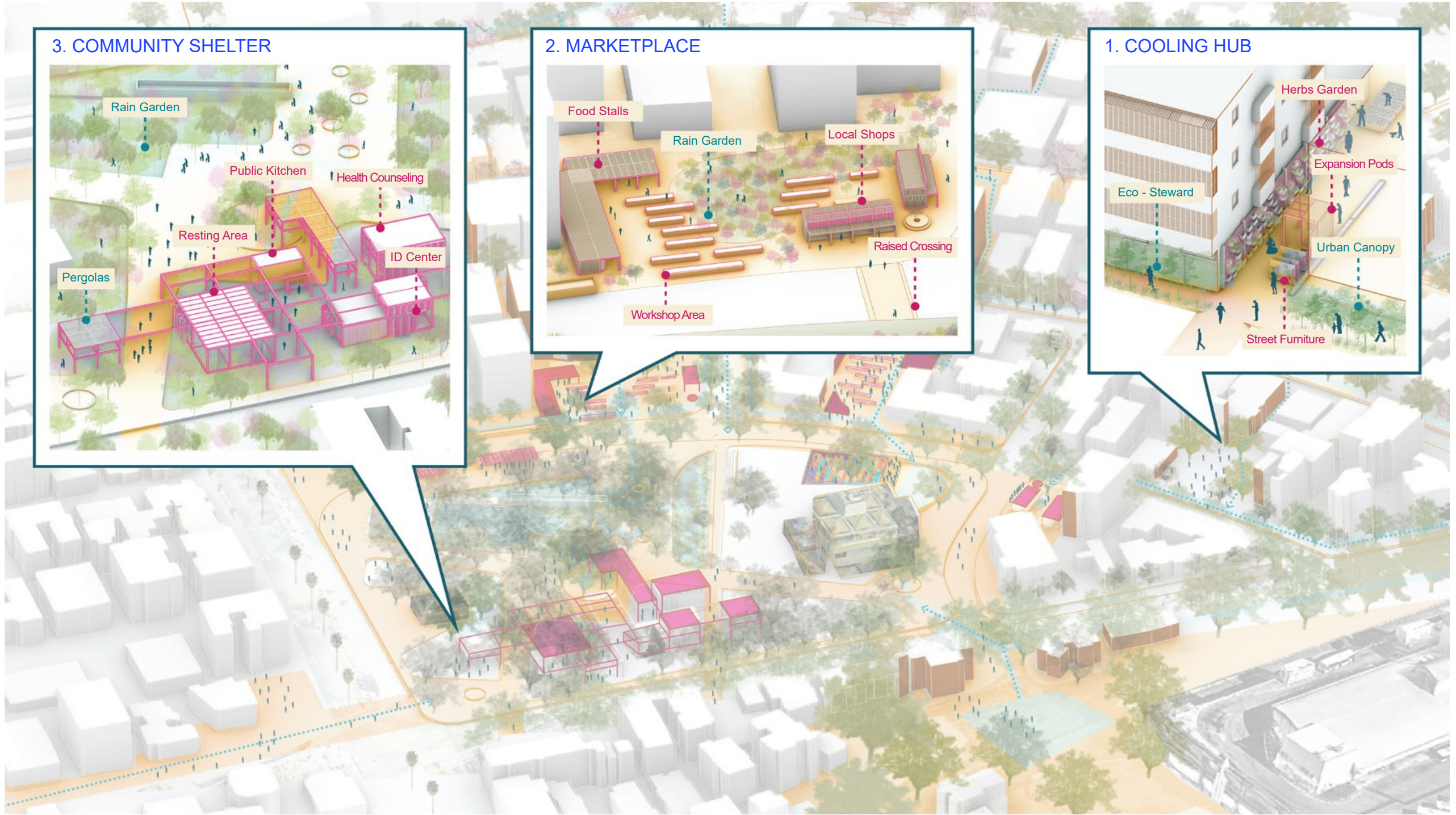
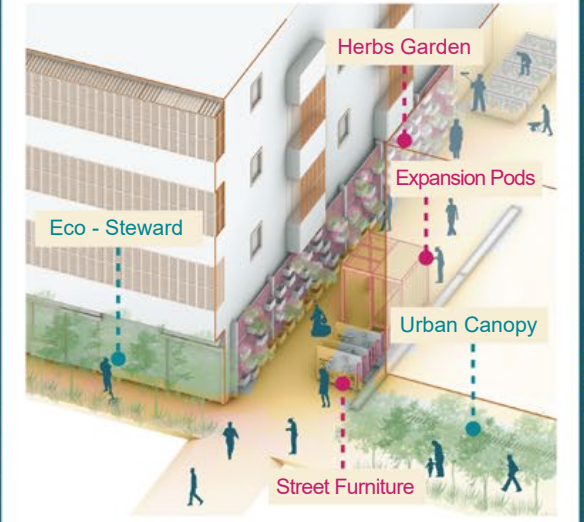
3. COMMUNITY SHELTER



2. MARKETPLACE

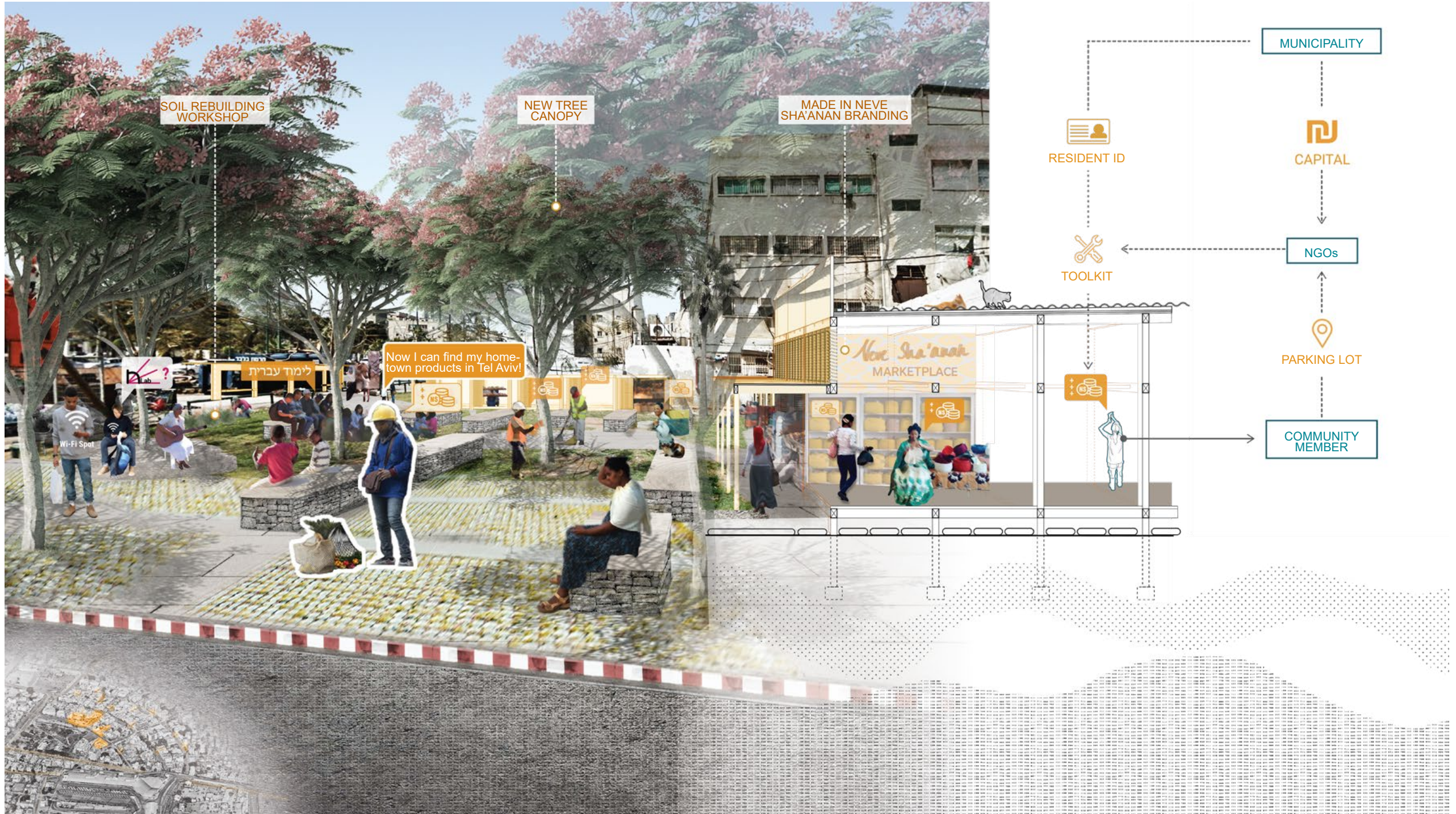


1. COOLING HUB





The community will partner with local NGOs, which will be funded by the municipality and privates to develop a toolkit to rebuild the neighborhood, as shown in our diagram.

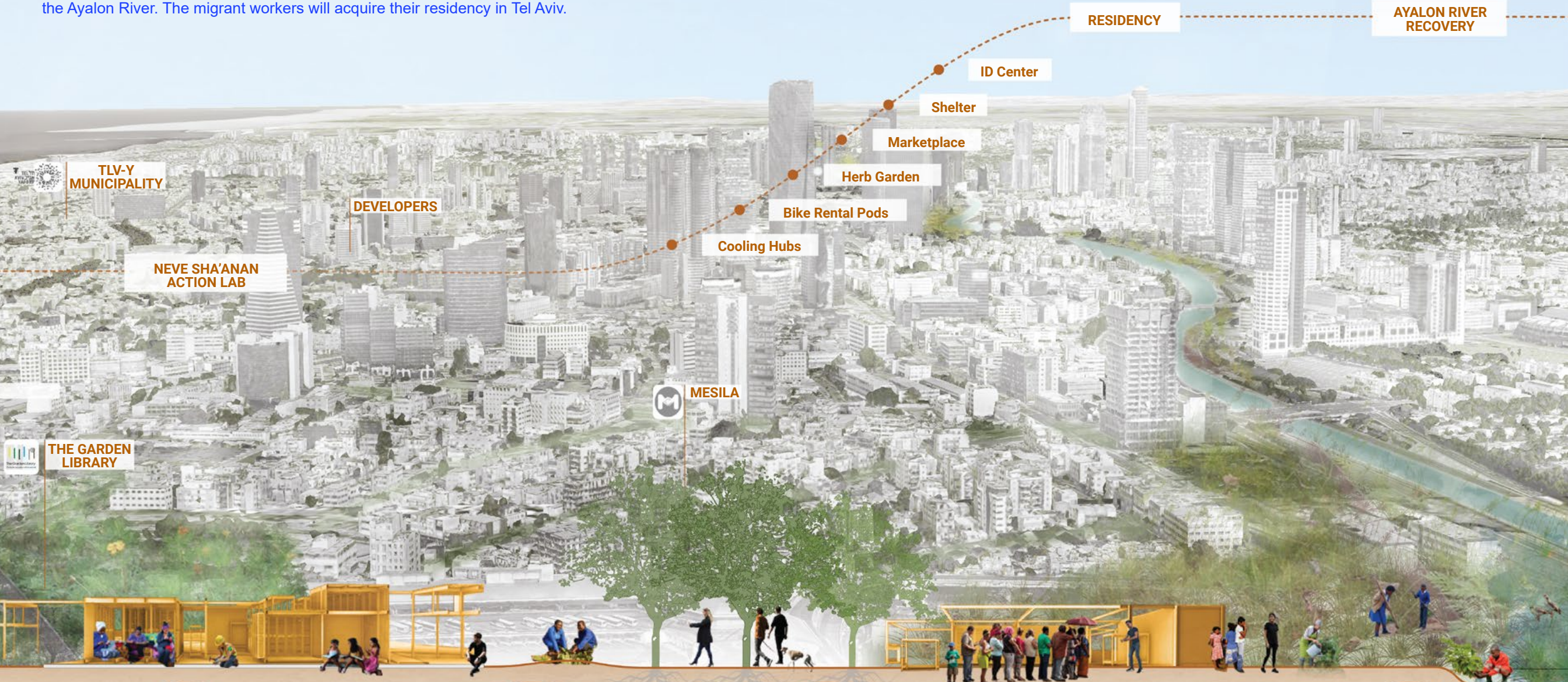


84 Parking lots will be transformed into shaded spaces for the community allocating programs to spur local economies, such as markets and food stalls.



86 Community effort will be utilized to build a transitional shelter in Levinsky Park, soil rebuilding by ecological stewards

Empowering Tel Aviv through collaborative design by a paradigm shift. Through Neve Sha'anani Action Lab, migrant workers and asylum seekers will be integrated in the city fabric by providing their services to the whole community. The collaborative spirit of this proposal will empower locals and newcomers alike in an innovative grassroots- public/private partnership. The climate stewards will transform Levinsky Street into an urban ecological corridor through Soil Rebuilding, Tree planting and ultimately, by recovering the Ayalon River. The migrant workers will acquire their residency in Tel Aviv.



JUTE WEAVING



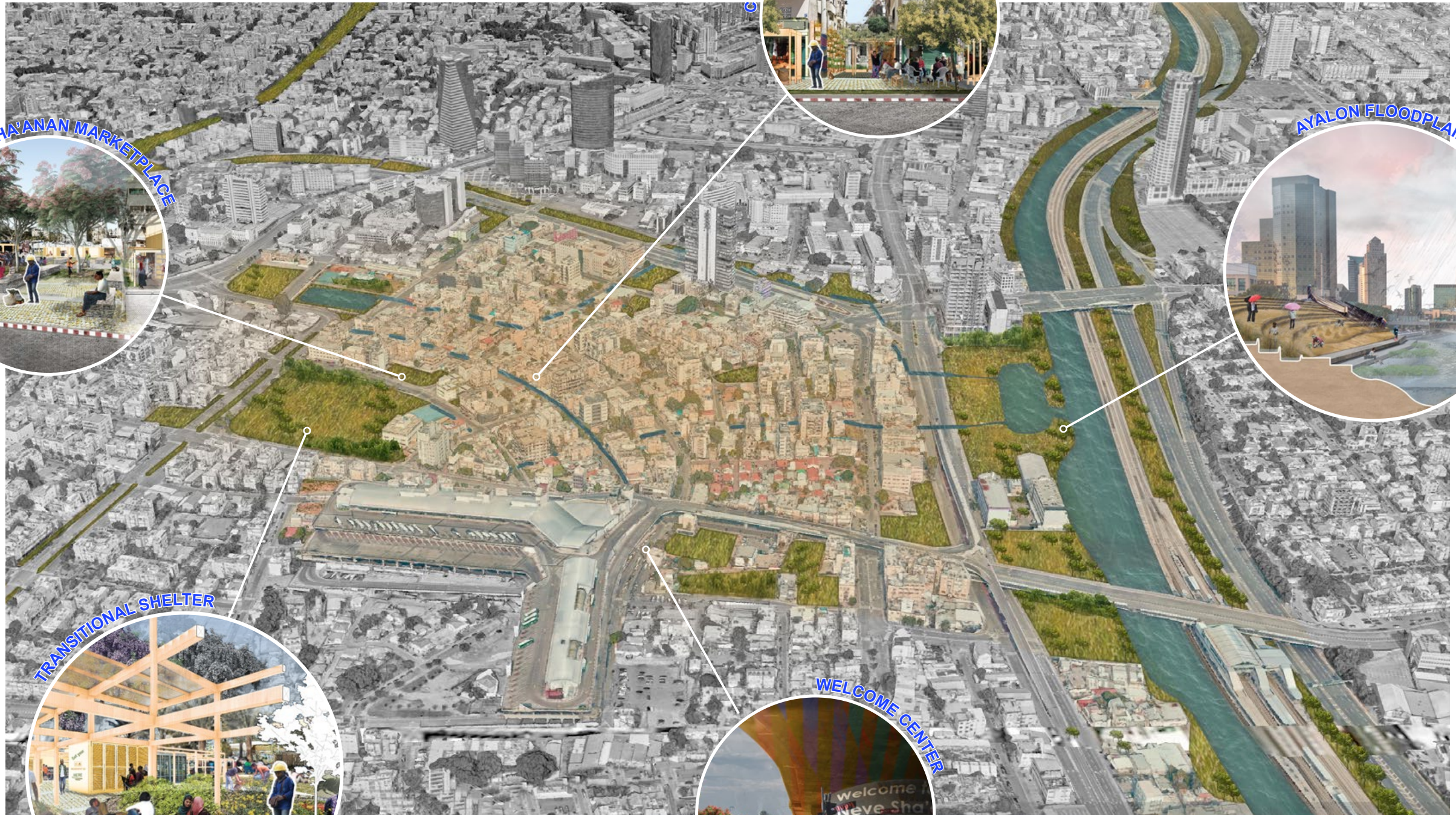
SOIL RECOVERY



BUILD ROOT SYSTEM



CUT & FILL FLOODPLAIN



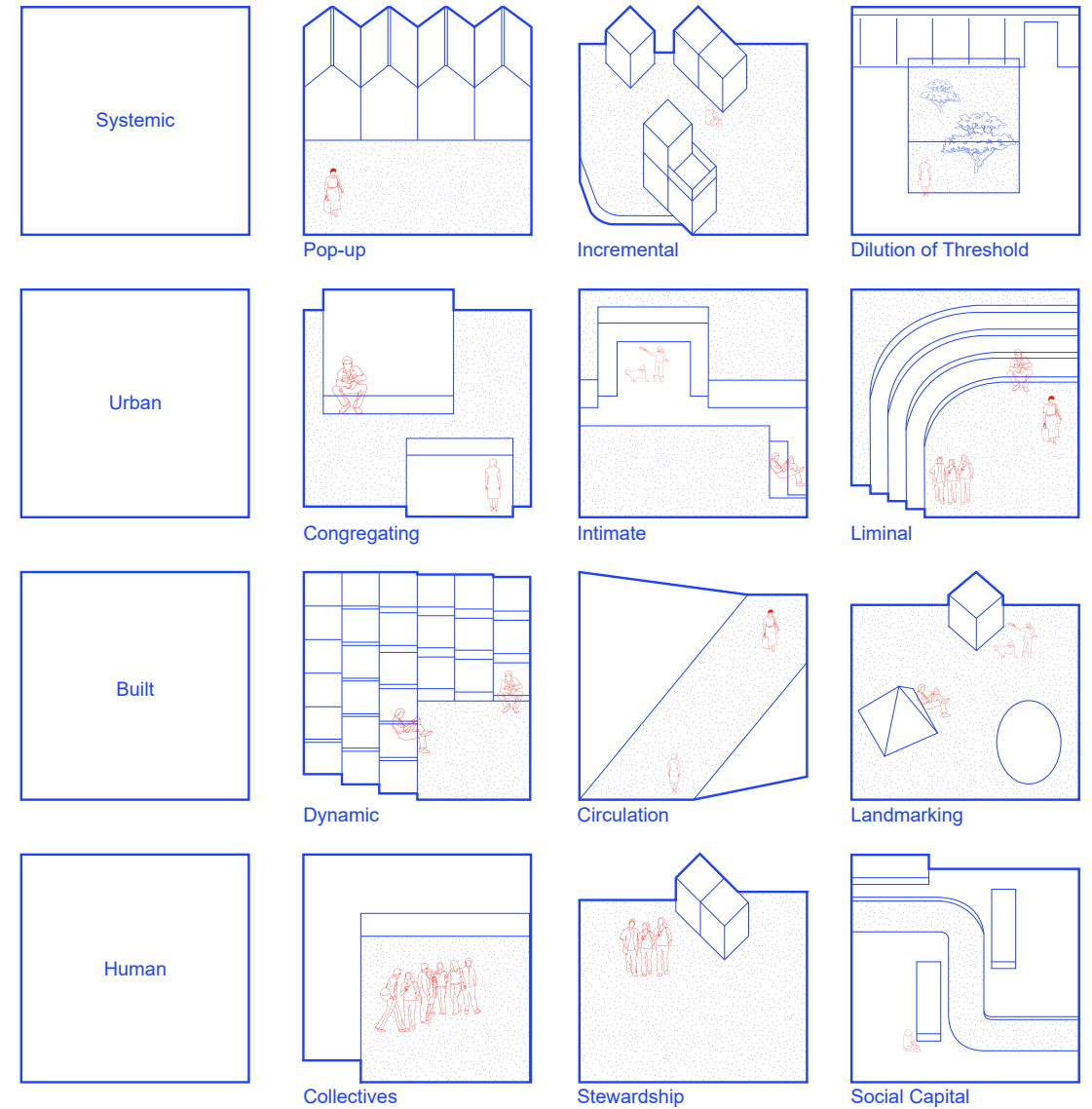
Through a strong workforce, the migrants, asylum seekers and locals will unbuild the Ayalon Highway and recover the river edge. The space will be transformed into an expanded floodplain for the winter, through the Action Lab, the Neve Sha'anani community will render Tel Aviv-Yafo into a resilient and more equitable city.

Redefining Refugee City

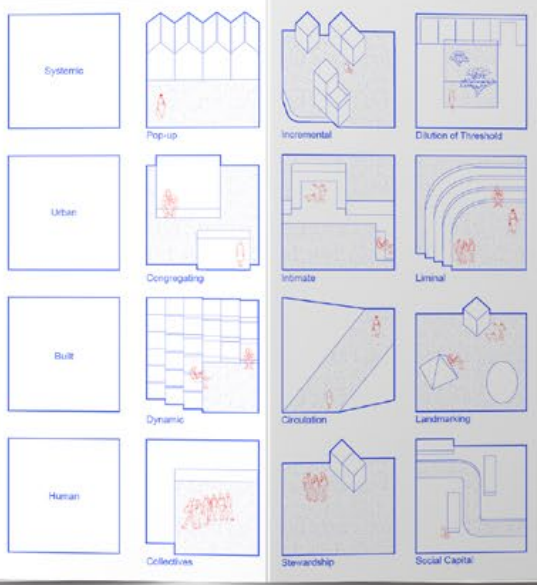
Designing for refugees is one of the most sought after trends followed by many architects and designers. There has been so much focus on the speed and ease of construction for these “camps” that designers have forgotten the basic humane aspects of “living”. Most of the world’s refugee camps are designed as temporary facilities and designers have not focused on the journey and mental health of the refugees for whom they design for, therefore the booklet speculates on the need to Redefine the Refugee City as a vibrant city, with thriving economies, judicious system of governance and a step away from seeing them as temporary camps or settlements.

Redefining refugee city

Speculative City
 Spring 2020
 Critics : David Moon
 Rohingya refugee camp, Kutupalong



Redefining Refugee City

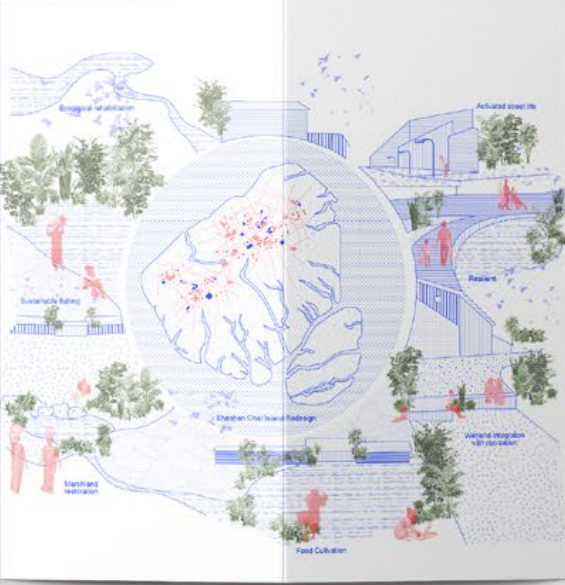


Refugee camps have become associated with human suffering, and the sheer size of these settlements testifies to the severity of forced displacement around the world. Yet, these settlements are also spaces of hope and optimism. For many inhabitants, these camps could represent a stepping stone on the path to safety and prosperity.¹

So what makes a refugee city? By speculating the city to be a catalyst for promoting the humanity of the migrants that live in it, designing spaces that foster a safe environment which has the capacity to lessen the trauma inflicted by displacement. On a systemic level, the city should pop-up with ease and speed, but also have scope for incrementality. There should be scope to replace temporary elements with permanent ones over time. Diluting thresholds can help in seamless flow of spaces to accommodate equitable access to non-private areas. Refugee encampments and detention centers should no longer act as zones of exclusion, ignored by both governments and civic institutions.² On an Urban level, the city should have spaces for congregations. These liminal spaces can vary from outdoor ones, adapting to smaller collections of people to large spaces, accommodating more people to collect. This provision will affect mental health by fostering conversations which can give rise to a sense of identity. On a built level the city can be made of structures that are dynamic and changing with the intended use. These built spaces should be well connected with comfortable circulation channels. Landmarking in the city can also help in creating a sense of identity and relationship to the new place. On a human level the spaces of the city should nurture the rights of the individual. They should foster collectives. There can be bodies of stewards from the migrant community which creates a system of social capital in which people can perform tasks in return for benefits. This locally created currency can create an ecology of resources that are circulated within the people of the community.

These speculations when applied to the Ishaan Char Rohingya Refugee island can foster a community which is hopeful and positive of its future livelihood. The city would be built with ecological rehabilitation by marshland restoration. The people would be able to cultivate their own food by farming and sustainable fishing. They would have recreational spaces for congregation, created by wetland integration. This resident city with its activated street life would thrive with the help of stewards and their social currency.

It is critical for us to speculate such habitable spaces for the migrant populations and respond to the social integration of people with each other. Encourage a sense of belonging and identity by creating socio-cultural bonds amongst the people. These cities are dynamic and should adapt to the changing nature of factors that affect it. Once the communities thrive we further their social fabric by integrating them to the host communities. We need to stop seeing these 'refugee settlements' as 'camps', but as the next 'cities and centres of vibrancy by Redefining the Refugee City.



Redefining Refugee City

Niharika Shekawat, M.S. AUD, Columbia GSAPP

Designing for refugees is one of the most sought after trends followed by many architects and designers. They have an affinity for designing tech heavy, modular, 'one size fits all' solutions for a group of people who couldn't be more different from them. There has been so much focus on the speed and ease of construction for these 'camps' that designers have forgotten the basic humane aspects of 'living'. Most of the world's refugee camps are designed as temporary facilities and designers have not focused on the journey and mental health of the refugees for whom they design for, therefore the booklet speculates on the need to Redefine the Refugee City as a vibrant city, with thriving economies, judicious system of governance and civic institutions and a step away from seeing them as temporary camps or settlements.

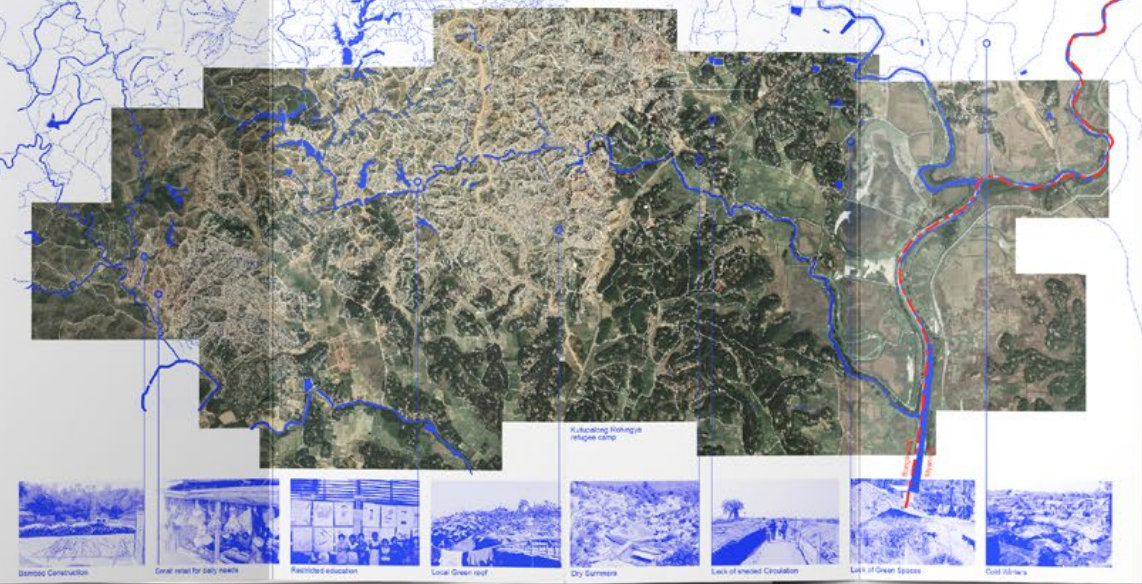
It is critical for us to study and respond to the socio-cultural ramifications of migration. How do we stop seeing these 'refugee settlements' as 'camps'? How do we use 'materials' and local partnership to create a sense of identity and ownership for these migrants? How do we build cities that are adaptive to the needs of these ever changing dynamics? How do we ensure that host communities absorb refugees and migrants into their local social fabric?

When we look at the current situation, there are more refugees and internally displaced people today, than at any point since World War II.³ People all over the world are driven from their homes by conflict, persecution, environmental calamity, or dire economic straits. They have been deprived of their claim to land, stakehold, material possessions, and even their loved ones. More than half of these refugees are children, who with their families seek solace in purpose-built 'refugee camps' and unplanned settlements, where they wait out their displacement, with an attempt to begin a new life.⁴ While their numbers are increasing each year, the average

refugee camp is currently around seventeen years, and yet it keeps increasing year after year.⁵ Furthermore, the situation is going to get worsened by the current Climate crisis which has increased the number of climate refugees migrating to safer lands.

When we look at some of the refugee camps currently in the world, we see how there are many kinds of settlements, from camps set up by refugees themselves, in which case they have lesser facilities and organizations, or camps set up by agencies such as the United Nations High Commissioner for Refugees (UNHCR). These camps are more ordered and have more amenities for people. There is also a distinction made based on the governing body over a settlement. Some camps or parts of them might fall under the UNHCR, but there are many that are controlled by host communities (Host communities are communities native to the area that the migrants have settled in). More factors that affect the fabric of a camp are the number of displaced persons seeking refuge, the cultural and ethnic ties between the host country and the refugees, the host country's capacity to absorb new people, and the military and political circumstances of the host country are all factors that contribute.⁶

Apart from the usual to be expected modular cramped, temporary shack construction seen in the typical camp, there are many new age variants designed keeping in mind the refugee and their mental and social needs. Masan Tertti by Bonaventura Visconti di Modrone and Leo Bistini Oberkammerer aims to create a semi open indoor public communal space with adaptive features to protect from water, wind and be fire resistant.⁷ The garden library in Levensky Park in Tel Aviv, Israel caters to the migrant population that congregates there. It is constructed to be open to all, a conscious decision to ensure free and equitable access to the library. Playgrounds for Refugee Children in Bar Elias, Lebanon by CatalyticAction was created as an effort to address the psychological trauma experienced by migrant children and to ensure their healthy development.



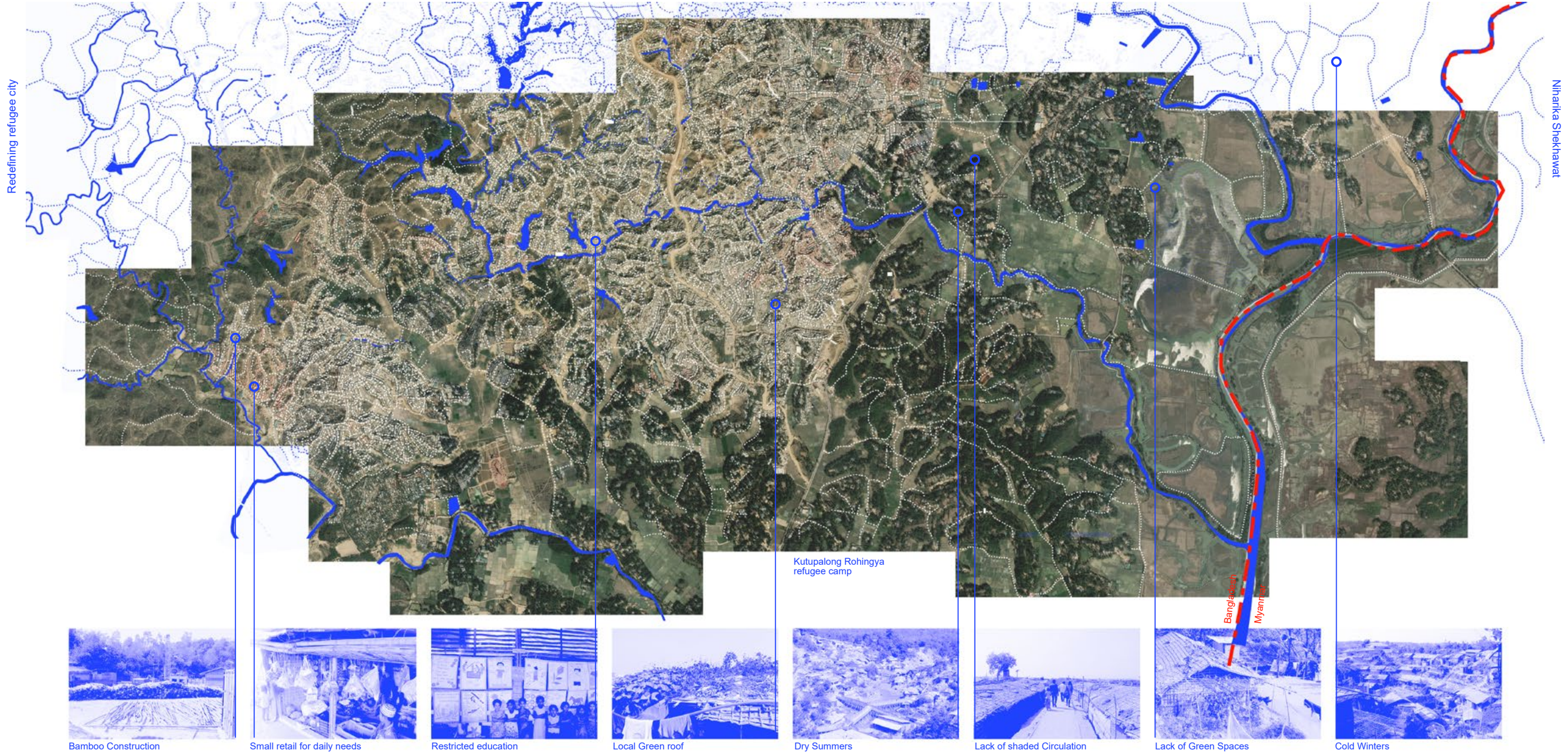
The Rohingya refugee population in Bangladesh is one of the largest refugee populations in the world. In 2017, there were 1.2 million people in need of humanitarian aid. United Nations Secretary-General Antonio Guterres described the situation as 'the world's fastest-developing refugee emergency and a humanitarian and human rights nightmare'. Kutupalong settlement in Cox's Bazar, near the Bangladesh-Myanmar border is home to these refugees but at the same time is also one of the poorest districts of Bangladesh. The recent influx of Rohingya refugees and haphazard construction of sprawling camps roused local concerns; both communities are competing for resources and there has been widespread destruction of forests and agricultural land, and a related surge in inflation of everything from food to housing prices.⁸ About 85% of the host community don't feel safe with the Rohingya community nearby.

Apart from friction with the host communities, these migrant workers have to face many issues like no access to formal education or prospects of jobs to earn a livelihood, badly constructed shack houses which are not resilient to rain or heat waves, easy access to drugs and violence, rising trafficking due to overpopulation, lack of resources such as water and nutritious food. Mental health is another factor affecting the migrant communities, as many Rohingyas feel hopeless of any positive change in their livelihoods and want to return to Myanmar in spite of the violence they faced there.

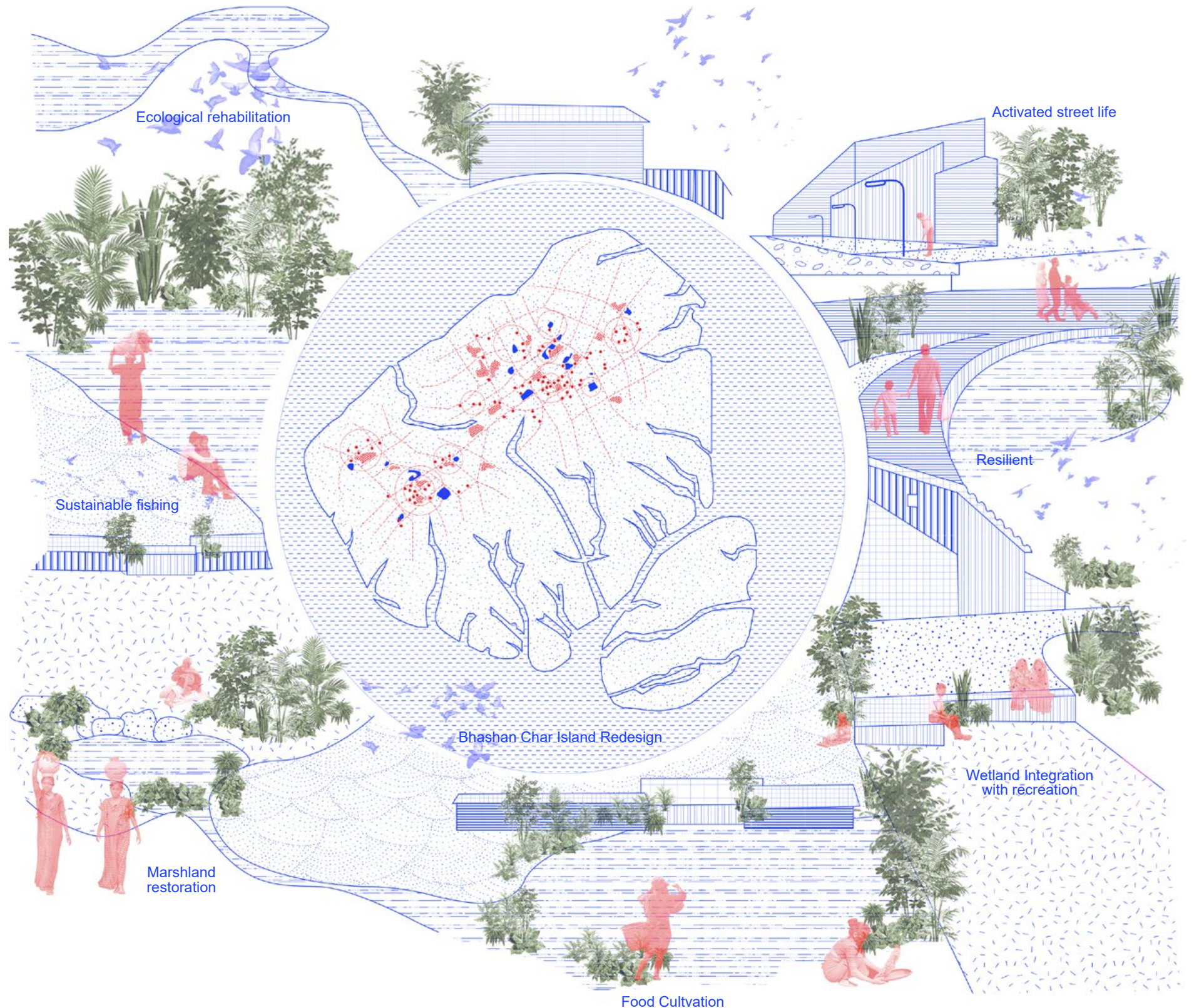
The Bangladesh government's solution for this overgrowing crisis in Ishaan Char, an island off the coast of Cox's Bazar. They have approved plans for a 'refugee island' to relocate these refugees. Currently the plans include row concrete housing in a flood prone island with no scope for employment or education. Many Rohingyas are wary of this relocation and are rejecting the move as it feels like an island Prison, with no exit.

"We are trying to keep alive. But it is nothing like home. We are not living"

-Rohingya Refugee in Kutupalong, Cox's Bazar, Bangladesh



The Rohingya refugee population in Bangladesh is one of the largest refugee populations in the world. In 2017, there were 1.2 million people in need of humanitarian aid. United Nations Secretary-General António Guterres described the situation as “the world’s fastest-developing refugee emergency and a humanitarian and human rights nightmare.” The recent influx of Rohingya refugees and haphazard construction of sprawling camps roused local concerns: both communities are competing for resources and there has been widespread destruction of forests and agricultural land



It is critical for us to speculate such habitable spaces for the migrant populations and respond to the social integration of people with each other. Encourage a sense of belonging and identity by creating socio-cultural bonds amongst the people. These cities are dynamic and should adapt to the changing nature of factors that affect it. Once the communities thrive we further their social fabric by integrating them to the host communities. We need to stop seeing these “refugee settlements” as “camps”, but as the next ‘cities’ and centres of vibrancy by



Resilient cities and landscapes

Fall 2019
Critics : Kate Orff
Workshop : Johnstown, PA



Workshop in Johnstown to imagine it as a place for making. Creative place making and River arts walk to create a resilient, community oriented creative district serving as a magnet for influx of people and resources were some first steps ideas that came out of this workshop.

How will climate change affect...

Consider the impact of heat gain and loss on the building.

Followed by increased heat gain and loss on the building.

Insulation: Reduces heat gain and loss.

Energy Efficient Windows: Reduces heat gain and loss.

Energy Efficient Appliances: Reduces energy consumption.

Energy Efficient Lighting: Reduces energy consumption.

Energy Efficient HVAC: Reduces energy consumption.

Flourish - How?

NEW 100% RENEWABLE PLAN - TRANSFORMING AMBITION INTO ACTION

GOAL

HOW?

1. 100% Renewable Energy

2. Energy Efficiency

3. Energy Storage

4. Smart Grids

5. Demand Response

6. Energy Conservation

7. Energy Research and Development

8. Energy Policy

9. Energy Education

10. Energy Innovation

HOW WILL CLIMATE CHANGE IMPACT ENERGY?

Energy demand will increase due to population growth and economic development.

Energy supply will be affected by climate change through changes in wind, solar, and hydro resources.

Energy infrastructure will be vulnerable to extreme weather events such as hurricanes, floods, and wildfires.

Energy efficiency will become increasingly important to reduce energy demand and emissions.

Renewable energy sources will become more critical to meet growing energy demand and reduce greenhouse gas emissions.

WHAT IS PUBLIC TRANSIT IN NYC?

Public transit in NYC includes the MTA, PATH, and other transit agencies.

Public transit is a vital part of the city's infrastructure, providing a sustainable and efficient mode of transportation.

Public transit helps reduce traffic congestion, air pollution, and greenhouse gas emissions.

Public transit is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

HOW?

Public transit is a key component of a sustainable transportation system.

Public transit helps reduce greenhouse gas emissions and air pollution.

Public transit is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

Public transit is a vital part of the city's infrastructure, providing a sustainable and efficient mode of transportation.

How will Climate Impact Transit?

Climate change will impact transit through rising sea levels, extreme weather, and heat stress.

Transit agencies are working to build resilience into their infrastructure and operations.

Transit agencies are investing in climate-resilient infrastructure and technologies.

Transit agencies are also working to reduce their own carbon footprint and emissions.

DRINKING WATER

Climate change will impact drinking water through changes in precipitation, evaporation, and runoff.

Drinking water infrastructure is vulnerable to extreme weather events and sea level rise.

Drinking water quality may be affected by increased runoff and pollution.

Drinking water availability may be reduced due to changes in precipitation and evaporation.

DEBRISING WATER SYSTEM

Climate change will impact the water system through changes in precipitation, evaporation, and runoff.

Water infrastructure is vulnerable to extreme weather events and sea level rise.

Water quality may be affected by increased runoff and pollution.

Water availability may be reduced due to changes in precipitation and evaporation.

HOW WILL CLIMATE CHANGE IMPACT DRINKING WATER?

Climate change will impact drinking water through changes in precipitation, evaporation, and runoff.

Drinking water infrastructure is vulnerable to extreme weather events and sea level rise.

Drinking water quality may be affected by increased runoff and pollution.

Drinking water availability may be reduced due to changes in precipitation and evaporation.

ENERGY EFFICIENCY

Energy efficiency is a key strategy for reducing energy demand and emissions.

Energy efficiency measures include insulation, energy-efficient appliances, and LED lighting.

Energy efficiency can help reduce energy costs and improve energy security.

Energy efficiency is a key component of a sustainable energy system.

When it rains TWICE as much wastewater enters the system because of combined sewer overflow.

Combined sewer overflow (CSO) occurs when the capacity of the sewer system is exceeded.

CSO can cause environmental damage and public health concerns.

Transit agencies are working to reduce CSO through infrastructure improvements and better management practices.

What's water?

Water is a vital resource for life and industry.

Water is also a key component of a sustainable transportation system.

Water infrastructure is vulnerable to extreme weather events and sea level rise.

Water quality may be affected by increased runoff and pollution.

Energy

Energy is a key component of a sustainable transportation system.

Energy efficiency is a key strategy for reducing energy demand and emissions.

Renewable energy sources are becoming increasingly important to meet growing energy demand and reduce greenhouse gas emissions.

Energy Efficiency

Energy efficiency is a key strategy for reducing energy demand and emissions.

Energy efficiency measures include insulation, energy-efficient appliances, and LED lighting.

Energy efficiency can help reduce energy costs and improve energy security.

Energy efficiency is a key component of a sustainable energy system.

HOW WILL CLIMATE CHANGE IMPACT ENERGY?

Climate change will impact energy through changes in wind, solar, and hydro resources.

Energy infrastructure is vulnerable to extreme weather events and sea level rise.

Energy demand will increase due to population growth and economic development.

ENERGY DISTRIBUTION

Energy distribution is a key component of a sustainable energy system.

Energy distribution infrastructure is vulnerable to extreme weather events and sea level rise.

Energy distribution is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

How? Energy Efficiency

Energy efficiency is a key strategy for reducing energy demand and emissions.

Energy efficiency measures include insulation, energy-efficient appliances, and LED lighting.

Energy efficiency can help reduce energy costs and improve energy security.

Energy efficiency is a key component of a sustainable energy system.

HOW WILL CLIMATE CHANGE IMPACT ENERGY?

Climate change will impact energy through changes in wind, solar, and hydro resources.

Energy infrastructure is vulnerable to extreme weather events and sea level rise.

Energy demand will increase due to population growth and economic development.

WASTE

Waste management is a key component of a sustainable transportation system.

Waste management infrastructure is vulnerable to extreme weather events and sea level rise.

Waste management is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

Waste

Waste management is a key component of a sustainable transportation system.

Waste management infrastructure is vulnerable to extreme weather events and sea level rise.

Waste management is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

WASTE

Waste management is a key component of a sustainable transportation system.

Waste management infrastructure is vulnerable to extreme weather events and sea level rise.

Waste management is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

WASTE

Waste management is a key component of a sustainable transportation system.

Waste management infrastructure is vulnerable to extreme weather events and sea level rise.

Waste management is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

FREIGHT: how does it do it?

Freight is a key component of a sustainable transportation system.

Freight infrastructure is vulnerable to extreme weather events and sea level rise.

Freight is also a key factor in reducing the city's carbon footprint and achieving its climate goals.

IMPACT OF CLIMATE CHANGE ON FREIGHT IN NYC

Climate change will impact freight through changes in precipitation, evaporation, and runoff.

Freight infrastructure is vulnerable to extreme weather events and sea level rise.

Freight demand will increase due to population growth and economic development.

Streets

Streets are a key component of a sustainable transportation system.

Street infrastructure is vulnerable to extreme weather events and sea level rise.

Streets are also a key factor in reducing the city's carbon footprint and achieving its climate goals.

STREETS

Streets are a key component of a sustainable transportation system.

Street infrastructure is vulnerable to extreme weather events and sea level rise.

Streets are also a key factor in reducing the city's carbon footprint and achieving its climate goals.

Streets

Streets are a key component of a sustainable transportation system.

Street infrastructure is vulnerable to extreme weather events and sea level rise.

Streets are also a key factor in reducing the city's carbon footprint and achieving its climate goals.

WETLANDS AND WATERFRONTS

Wetlands and waterfronts are a key component of a sustainable transportation system.

Wetlands and waterfronts infrastructure is vulnerable to extreme weather events and sea level rise.

Wetlands and waterfronts are also a key factor in reducing the city's carbon footprint and achieving its climate goals.

Wetlands and Waterfronts

Wetlands and waterfronts are a key component of a sustainable transportation system.

Wetlands and waterfronts infrastructure is vulnerable to extreme weather events and sea level rise.

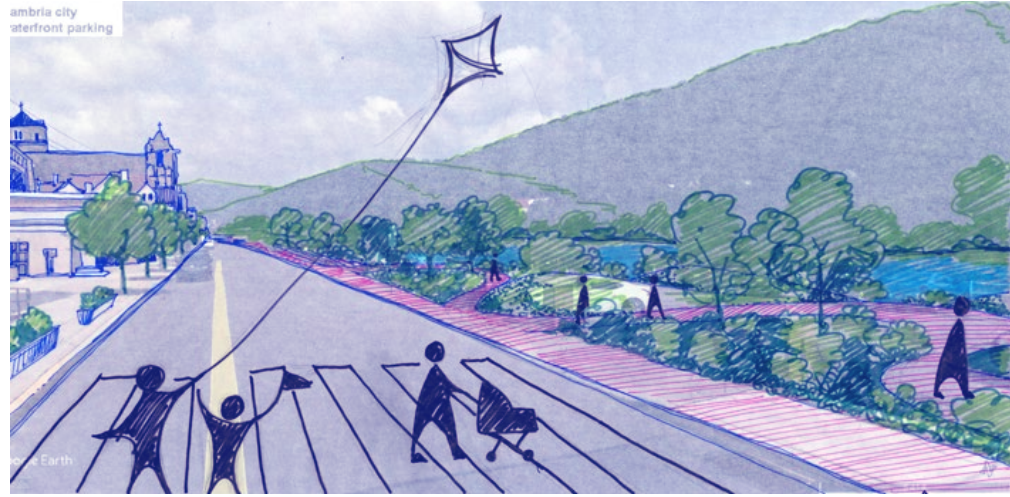
Wetlands and waterfronts are also a key factor in reducing the city's carbon footprint and achieving its climate goals.

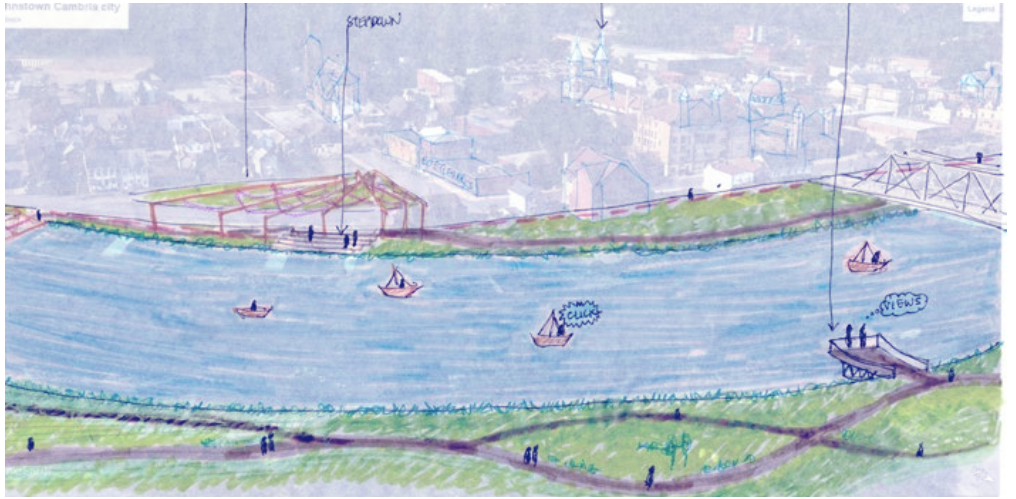
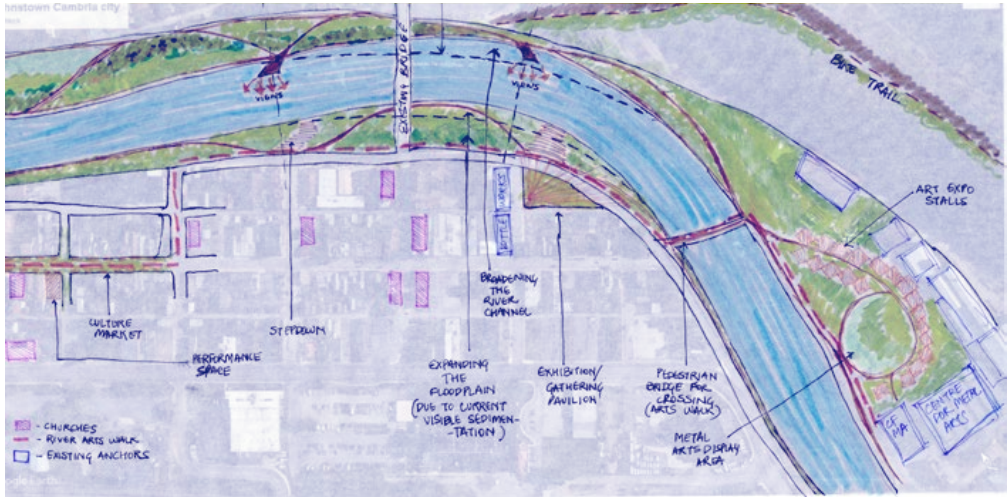
Wetlands and Waterfronts

Wetlands and waterfronts are a key component of a sustainable transportation system.

Wetlands and waterfronts infrastructure is vulnerable to extreme weather events and sea level rise.

Wetlands and waterfronts are also a key factor in reducing the city's carbon footprint and achieving its climate goals.





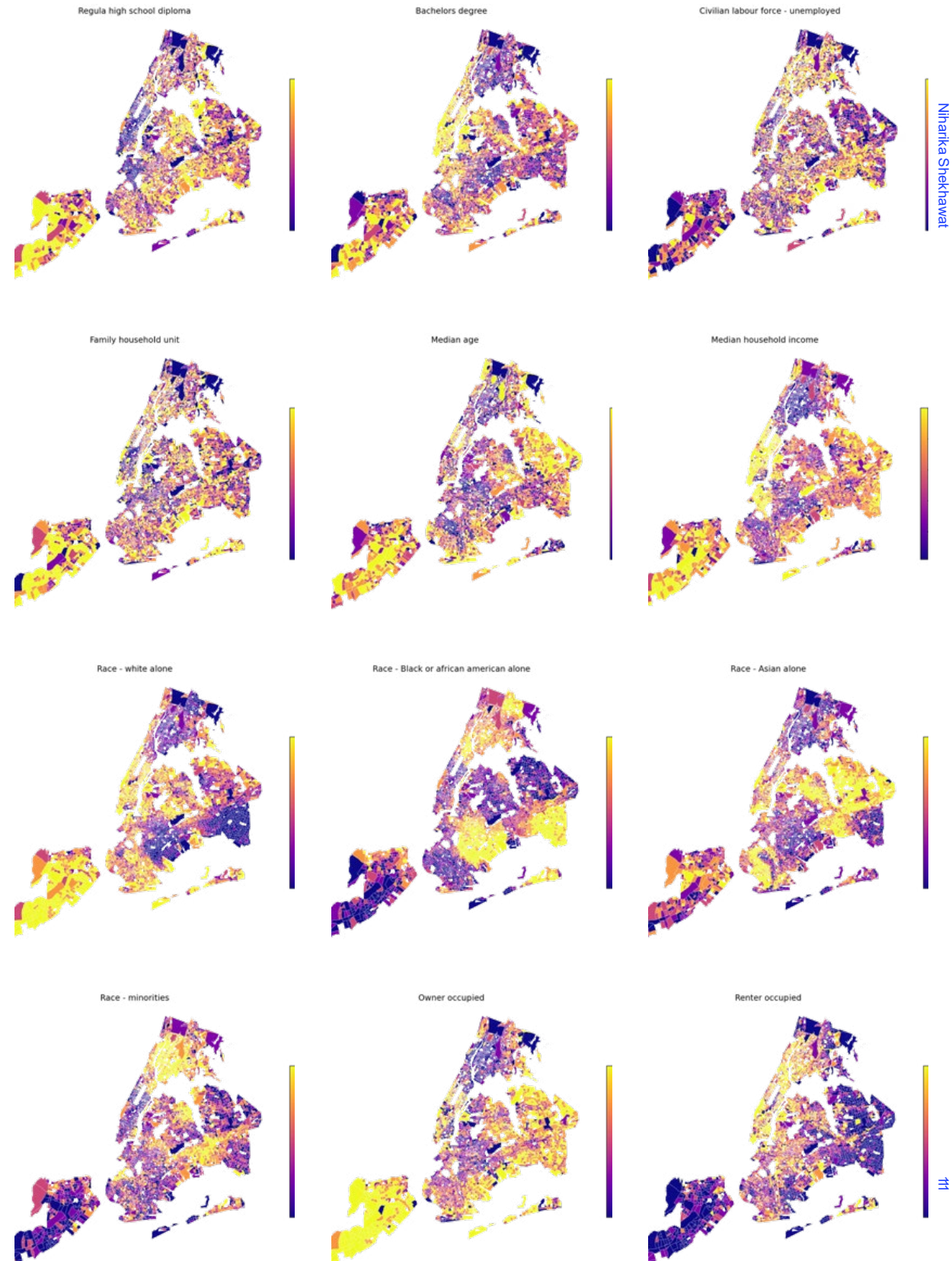
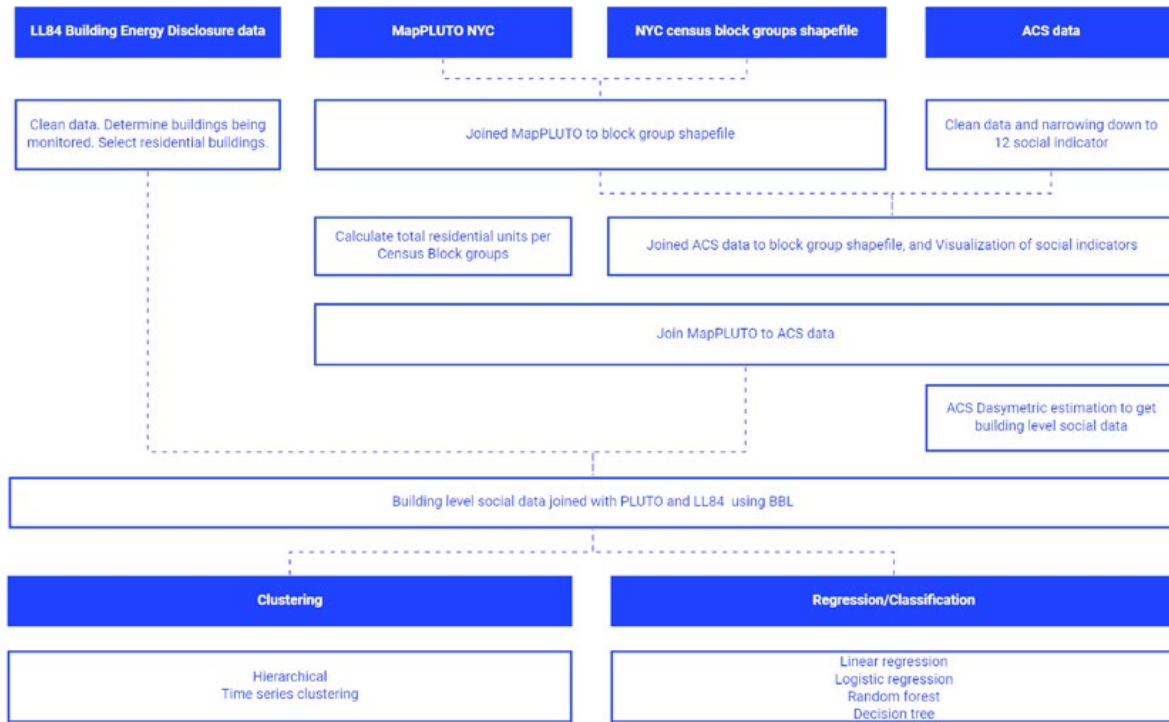


Energy use change in buildings

Spring 2020
Critics : Boyeong Hong
Team : Niharika Shekhawat, Kate Galbo,
Savannah Wu
Machine Learning coding for energy disclosure
of buildings in NYC

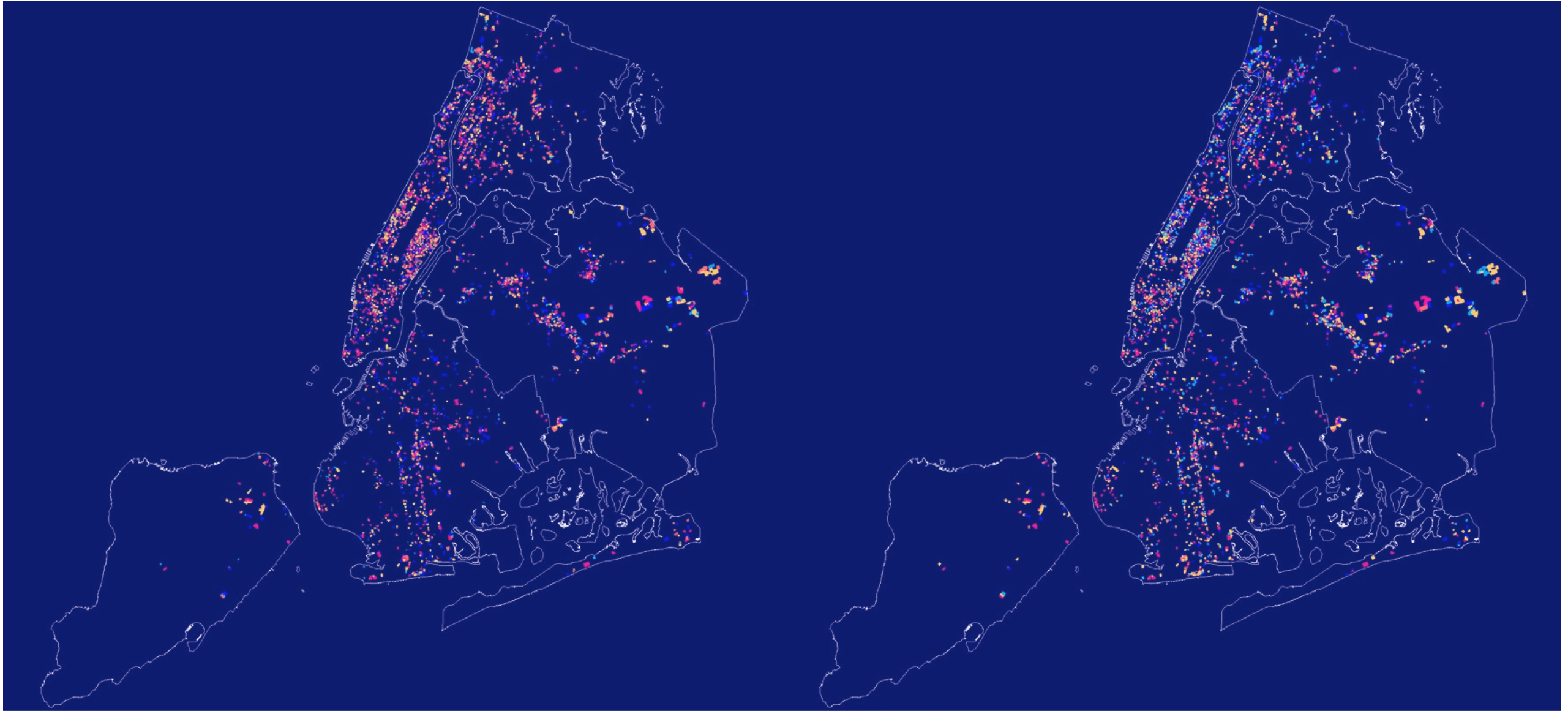


An Analysis of Built & Social Factors that Influence Energy use from 2012-2017 Using LL84 Energy Disclosure Data. Buildings in New York City continue to be the largest contributor to greenhouse gas emissions (GHG), accounting for 66% of total citywide emissions followed by transportation (30 percent) and waste (4 percent).

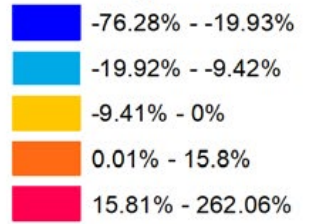


In May 2019, New York City Council tried to combat this through Local Law 97 (the building emissions law) requiring 40 percent citywide emissions reductions by 2030 (from a 2005 baseline) for most buildings greater than 25,000 square feet, which covers over 57,000 buildings across the city.

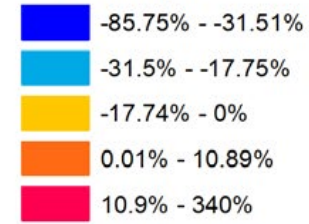
Local Law 84 requires buildings to submit energy and water benchmarking data - private buildings over 50,000 SF (25,000 SF since 2017) and public sector buildings over 10,000 SF.



EUIChange



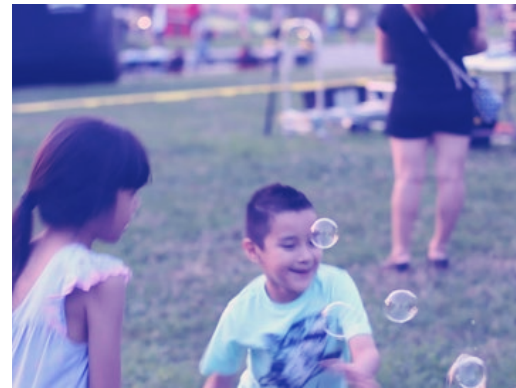
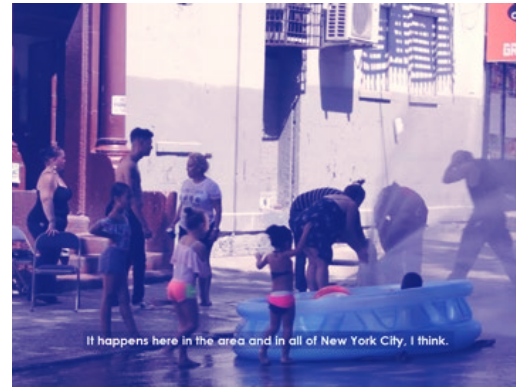
GHGChange





Live Work Play

Summer 2019
Critics : Cassim Shephard
Film making : Sunset Park, Brooklyn
Team: Niharika Shekhawat, Antonia Medina,
Chris Zheng



The film shows the daily lives of the people of Sunset Park. Speaking to many people in the neighborhood with fascinating stories. Mom and pop shop owners with some having flourishing businesses because of really good food and loyal customers, also some of them losing their businesses due to gentrification. The narrative of the lives of people of sunset park and how it had changed over time was captured in this film. From block parties to open park movies many beautiful and close knit stories are represented.

2025
servit

И
Иницијатива