

New Jersey

New York

Addis Ababa

▶ PORTFOLIO.E.L.2020

EINAT LUBLINER. ARCHITECTURE AND URBAN DESIGN

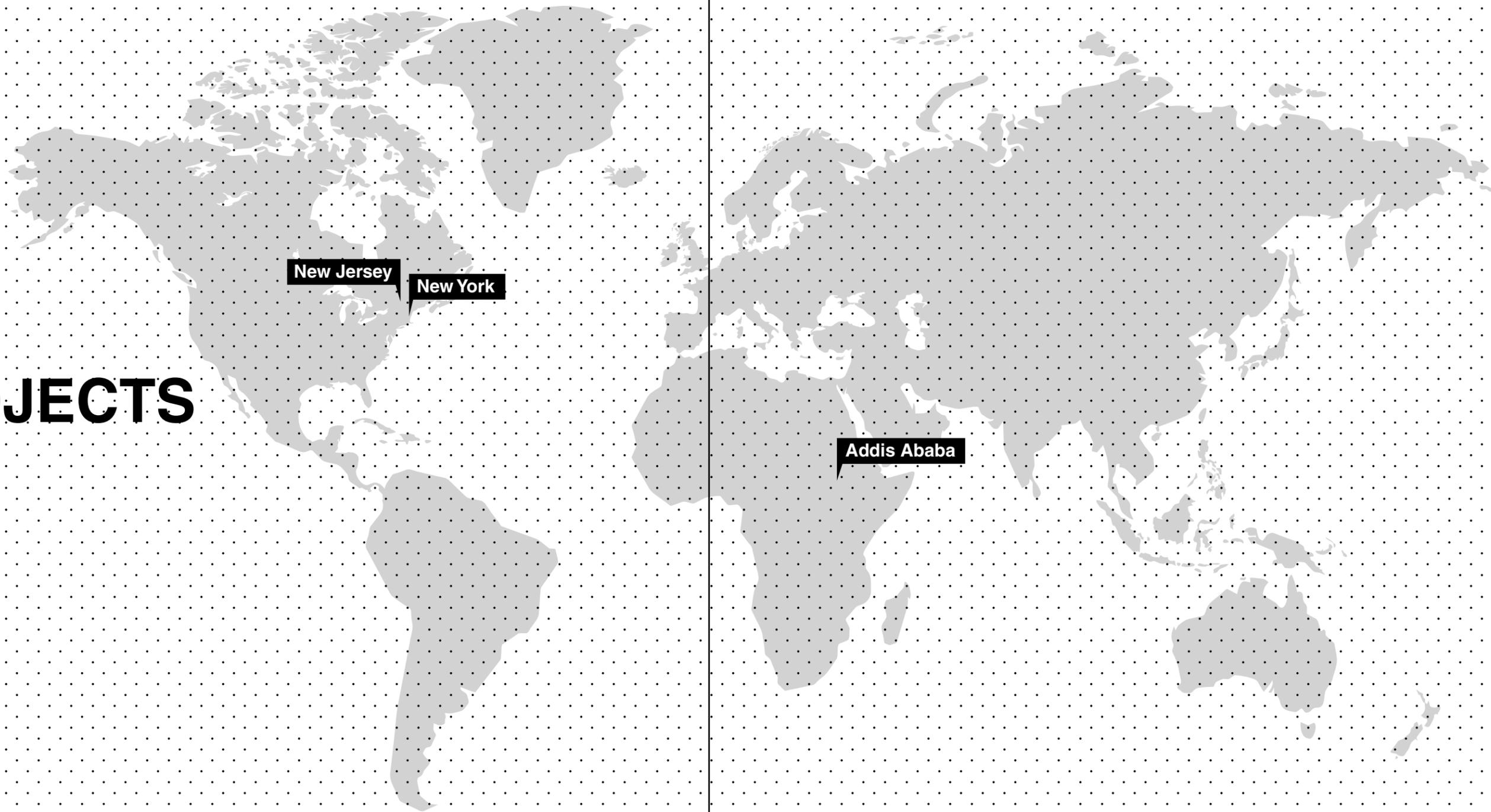
► TABLE OF CONTACTS

| | | |
|------------------|--|------------------|
| <p>01</p> | <p>Lots of People..... 10-29 Summer Semester Team: <i>Yile Xu, Palvash Sophia, Einat Lubliner.</i> Instructors: Tricia Martin, Nans Voron, Hayley Eber, Sagi Golan, Quilian Riano, Austin Sakong, Shin-pei Tsay.</p> | <p>S*</p> |
| <p>02</p> | <p>Post Retail Scape 30-51 Fall Semester Team: <i>Chris Zheng, Hatem Alkathlan, Sushmita Sheker, Einat Lubliner.</i> Instructors: Faculty: Kaja Kühn, Anna Dietzsch, Jerome Haterd, Liz McEnaney, Justin Moore, Shachi Pandey, Raafi Rivero, David Smiley, Dragana Zoric.</p> | <p>M*</p> |
| <p>03</p> | <p>Rearticulating Capital 52-95 Spring Semester Team: <i>Hatem Alkathlan, Sushmita Sheker, Pratibha Singh, Einat Lubliner.</i> Instructors: Kate Orff, Geeta Mehta, Thaddeus Pawlowski, Lee Altman, Diip Da Cunha, Julia Watson, Adriana Chavez, Fitsum Gelaye.</p> | <p>L*</p> |
| <p>04</p> | <p>Gentrifind 96-103 Fall Semester Team: <i>Sushmita Sheker, Tal Fuerst, Moneerah AlAjaji, Hala Abukhodair, Einat Lubliner.</i> Instructors: Justin Moore, Dan Taeyoung Difference in Design, Meta-tool.</p> | <p>L*</p> |
| <p>05</p> | <p>Flex(c)ity 104-121 Spring Semester Team: <i>Sushmita Sheker, Tal Fuerst, Eduardo Veronese Ransolin, Einat Lubliner.</i> Instructors: Kate Wittels, Kairos Shen Social Entrepreneurship</p> | <p>L*</p> |
| <p>06</p> | <p>Solar Driven Design 122-135 Spring Semester Team: <i>Sushmita Sheker, Einat Lubliner</i> Instructors: Jared Freidman Rethinking BIM</p> | <p>S*</p> |

Design Studio

Tech Studio

▶ PROJECTS



New Jersey

New York

Addis Ababa

► DESIGN TOOLS



► Systems

Urban Design is a superposition of systems. By defining different layers, their characteristics and intersection, the design becomes more holistic.



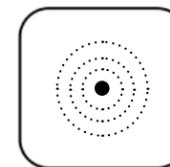
► Localize

Thinking local is highly important for reduce carbon emission, strengthen local economies and communities and reduce consumption.



► The Public Realm

The 'publicness' level is influenced by different actors. While designing those spaces inclusiveness, accessibility and equity must be taking into account.



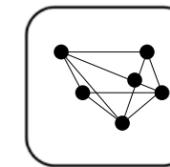
► Triggers

Strategic design of tactical intervention rather than a master plan encourages bottom up approach and increase the feasibility of making a real change.



► Social Capital

GDP is not the only measurement for growth and advance. Empower local communities, economy and social network are essential for a healthy city.



► Multidisciplinary

Incorporate different disciplines leads to a more creativity design. Data science, environmental aspects and economics have to be integrated in the process.



► Ecological Capital

Responding to climate Crises and ecological conditions are essential for the design thinking. Environment and sustainability have to be integrated.

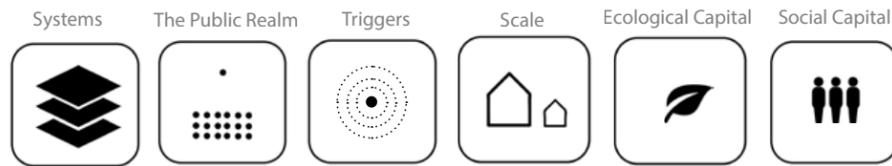


► Scale

Designing and thinking through different scales enables a broad understanding of the context and the systems of the project.

01 LOTS OF PEOPLE

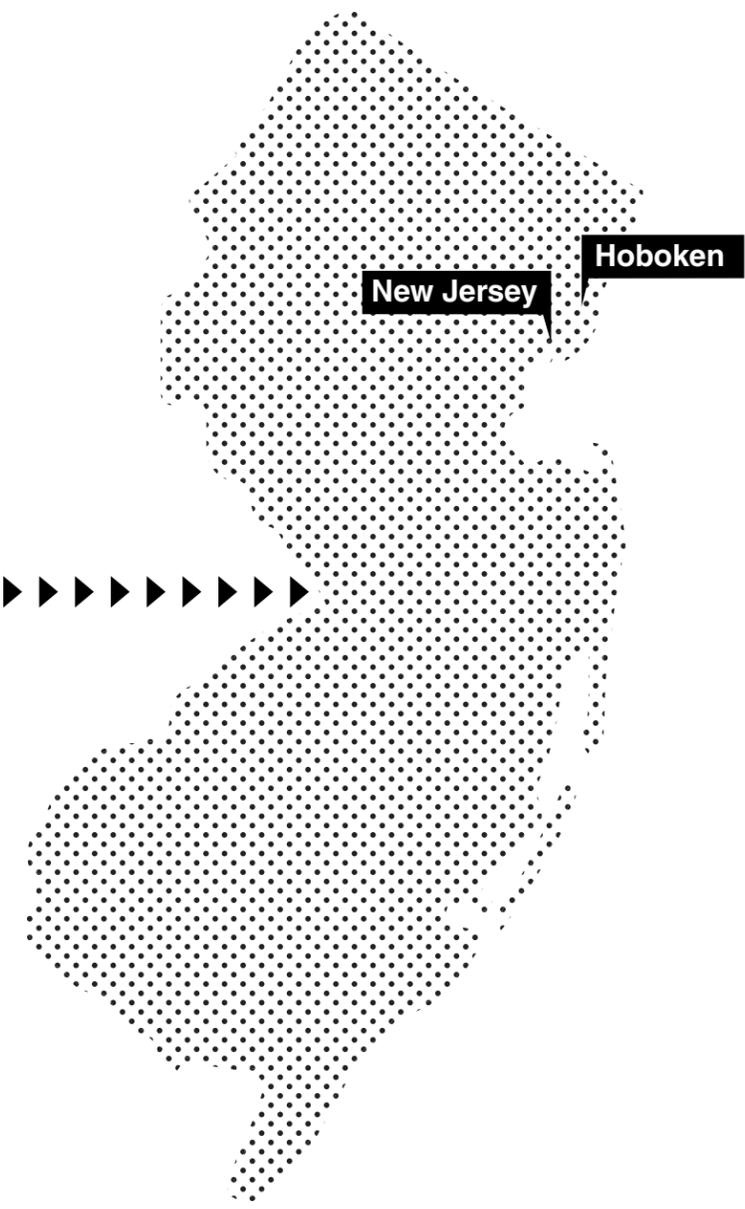
Design Tools



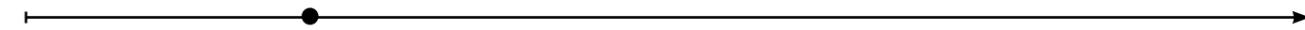
The project concerns Jersey City and Hoboken's challenge of rapid population increase, which results in lack of public open spaces and environmental challenge of flood mitigation. While exploring the city, we identified a large quantity of vacant lots in the city fabric, both public or privately owned (393). We have found it as a great opportunity to address those challenges.

The design proposes a new platform for 'borrowing' spaces which are in the interim of a built project. We propose to creating temporary community pop-up spaces on privately-owned lots, and semi-permanent spaces on public lots which address the problem of flash floods. Through an incentive-based policy facilitated by the platform, the municipality can provide diverse pop up spaces for the community within the existing built fabric. The programs of the new pop-ups and their design derives from the context and needs of the local communities in their respective neighborhoods.

For the project's video click: <https://vimeo.com/354214258>



Summer 2019

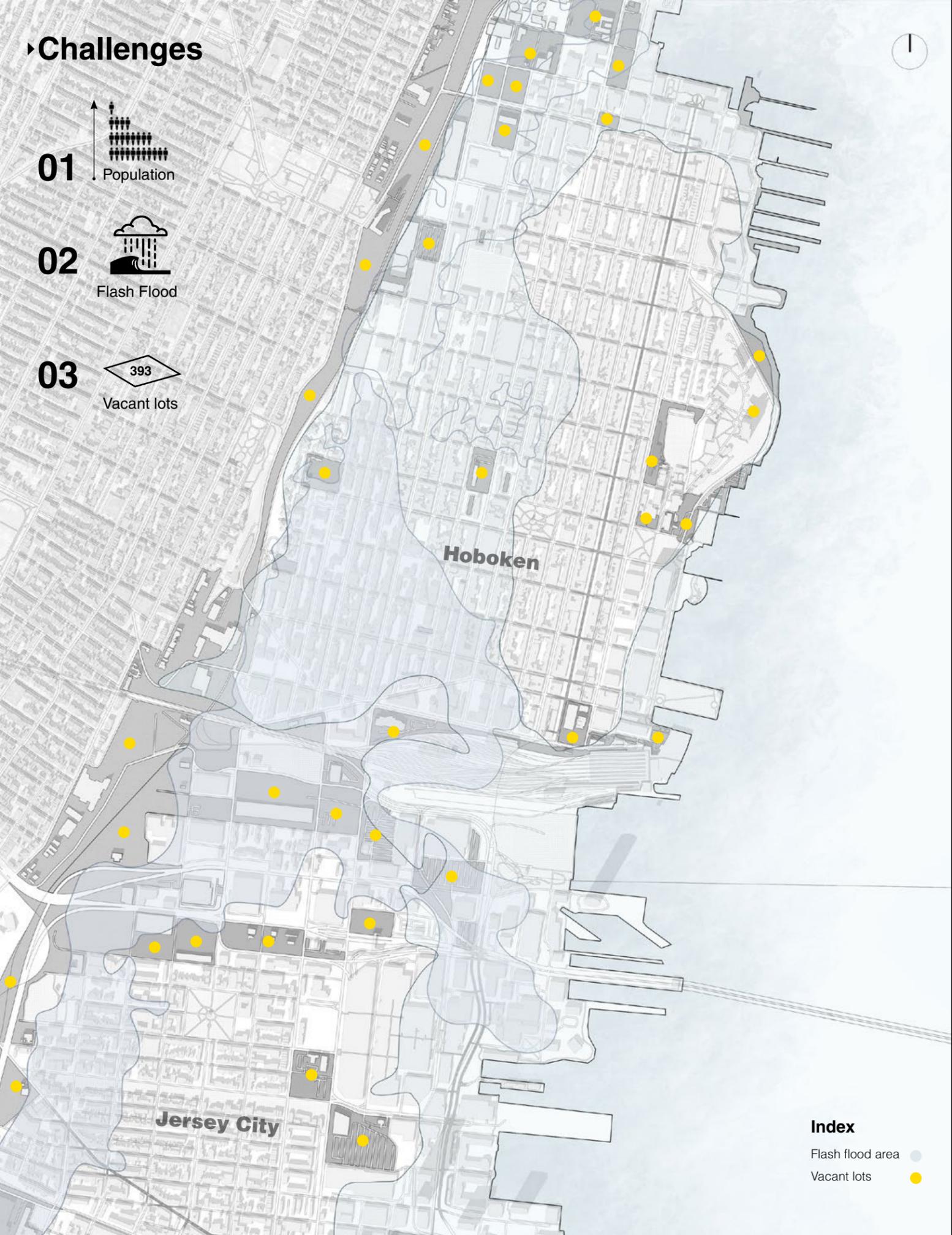


A vacant lot in Hoboken



Challenges

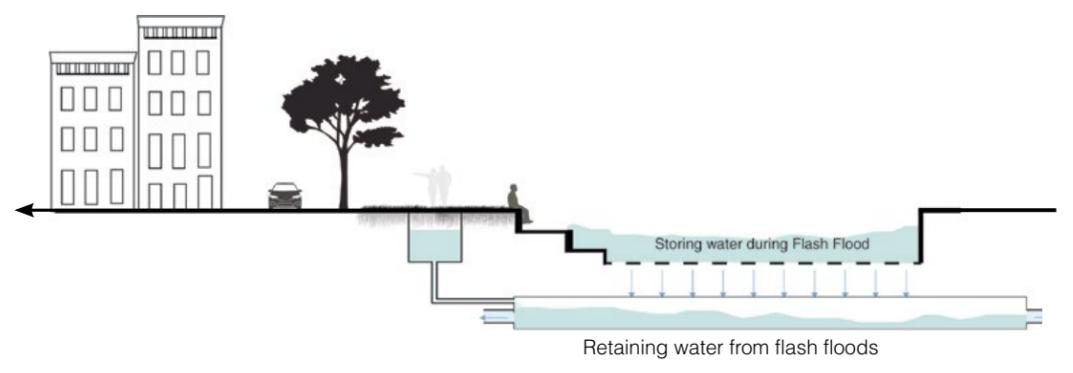
- 01  Population
- 02  Flash Flood
- 03  393 Vacant lots



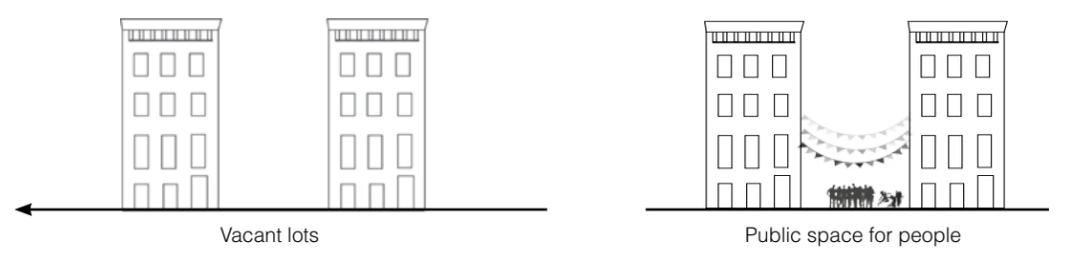
Index
 Flash flood area 
 Vacant lots 

Design Strategies

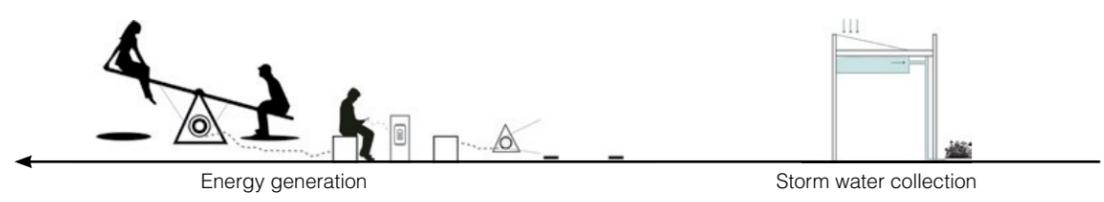
01 Water Plaza



02 Tactical Urbanism



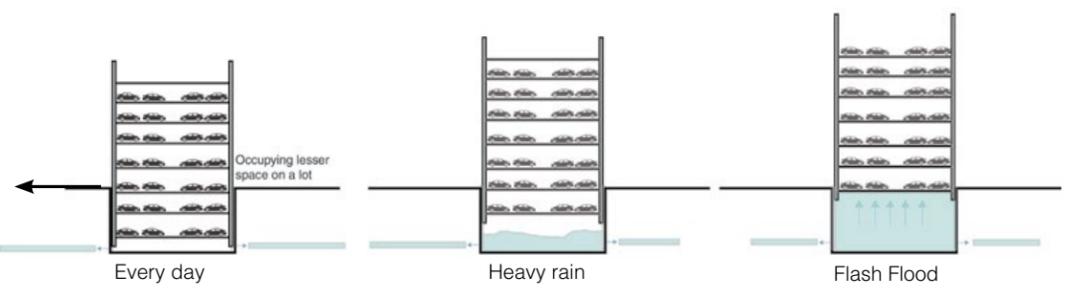
03 Sustainable design



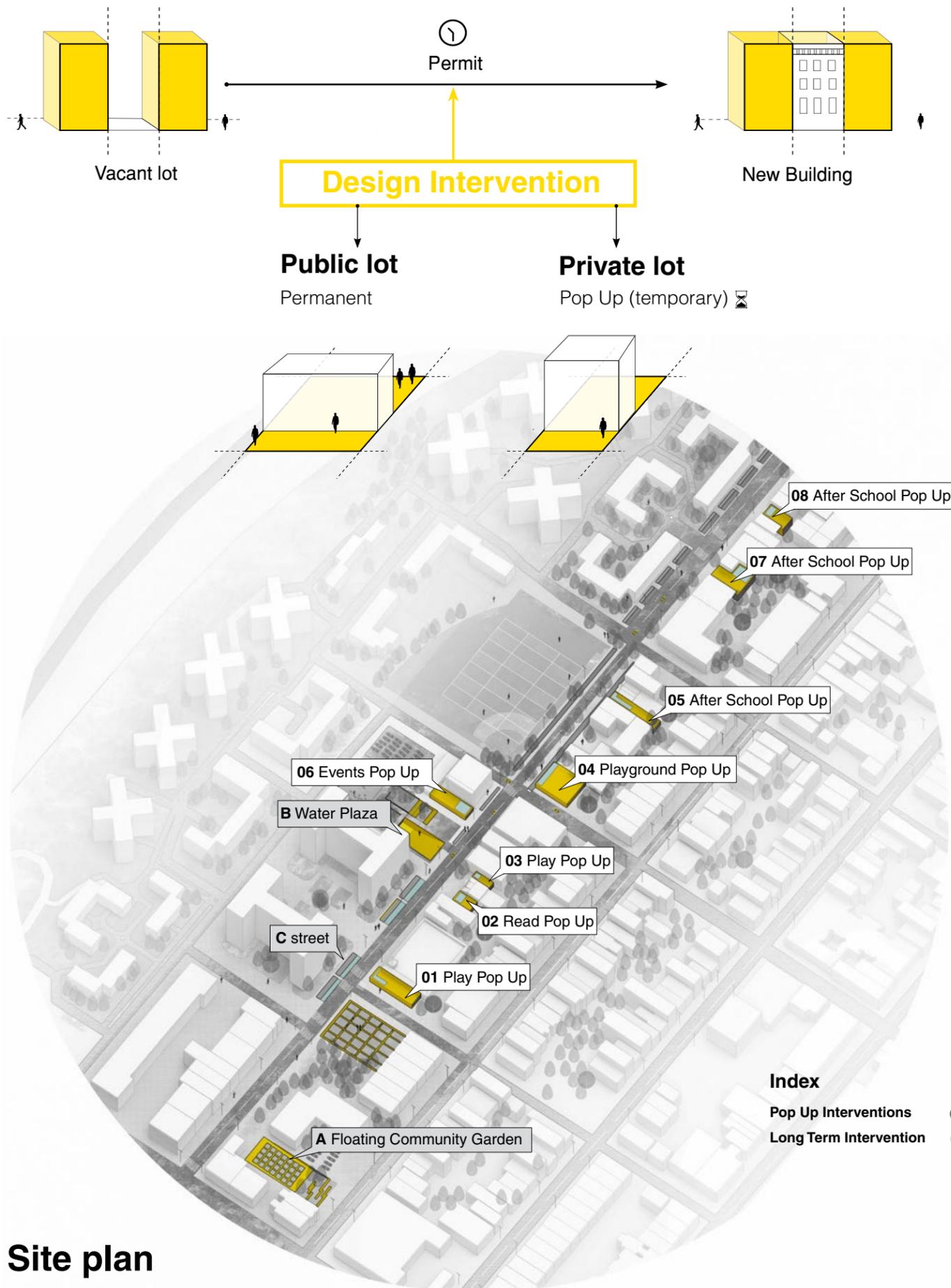
04 Floating Gardens



04 Floating parking



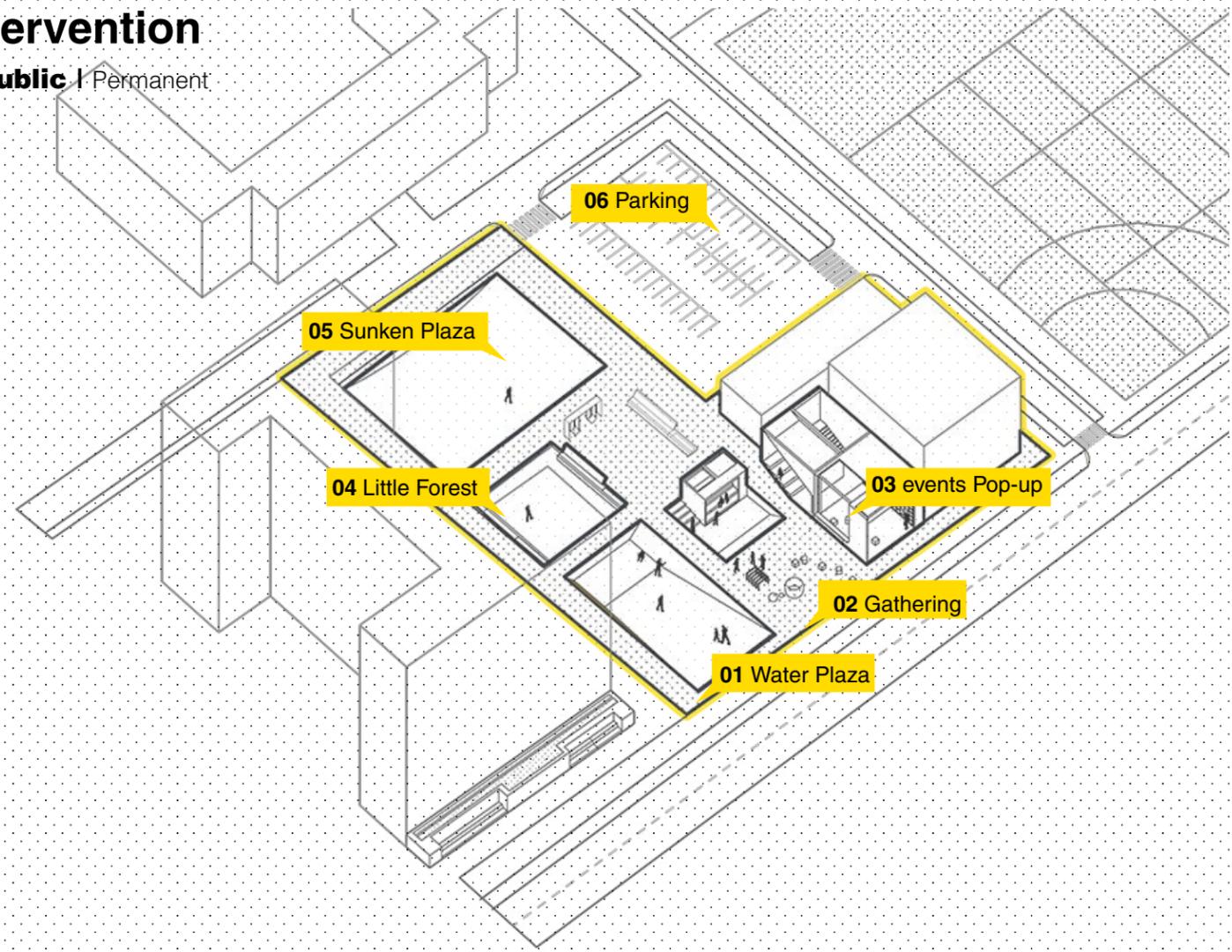
› ‘Borrowing’ space Concept



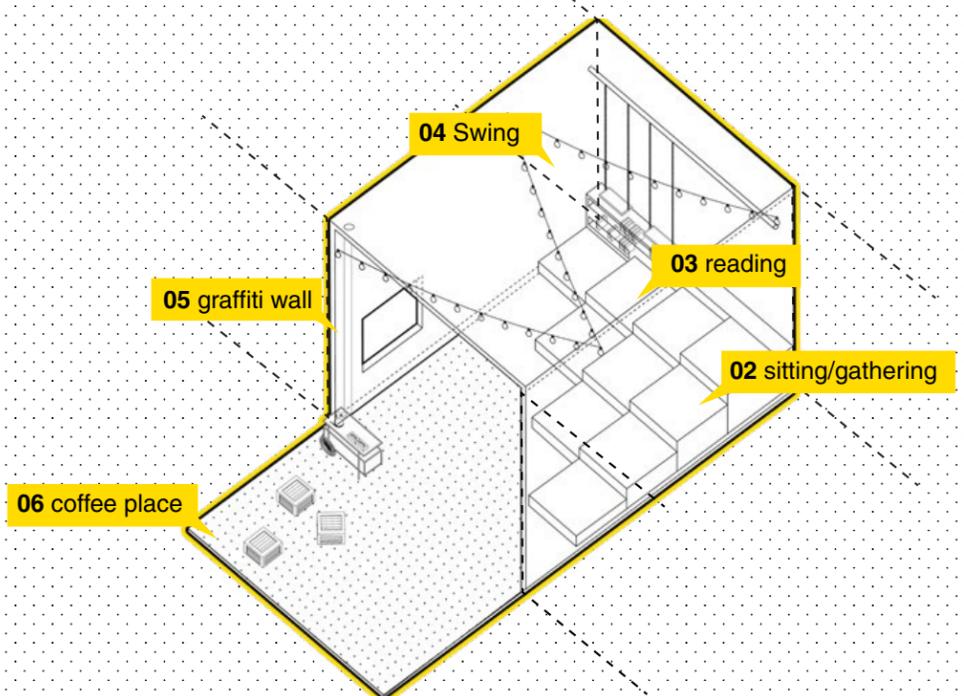
› Site plan

› Intervention

01 Public | Permanent



02 Private | Temporary Pop ups



RAINSUN



Workshop
Pop up

The workshop
starts!

10th Annual
MUSIC
FESTIVAL
FRIDAY
DECEMBER 9
Cool for One Drink
WWW.MUSICFEST.COM
\$3.00
BEER, WINE, COCKTAILS 001

Water Plaza

Are you coming to the
Music festival at the
events Pop-Up ?

SUN RAIN

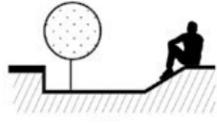


'Play' Pop - Up

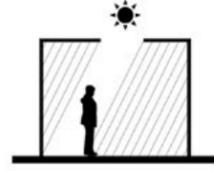
01 Design Components



Gathering, Sitting



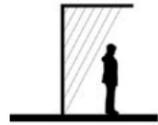
Nature



Sun



Street Connection



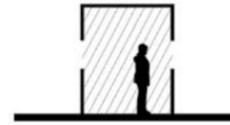
Grownup scale



Children Scale



Smart walls



Opening



Laying



Privacy

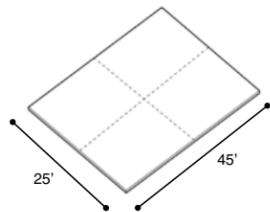


Views

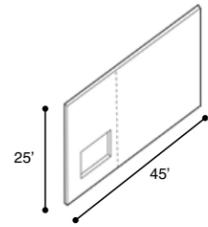


Landscape

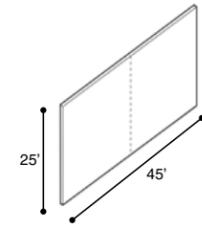
02 Design Elements | Assemble and disassemble



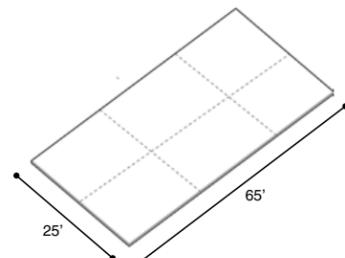
Top panel



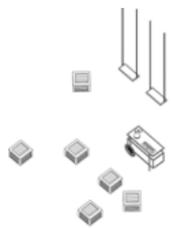
Side panel



Existing wall graffiti painted



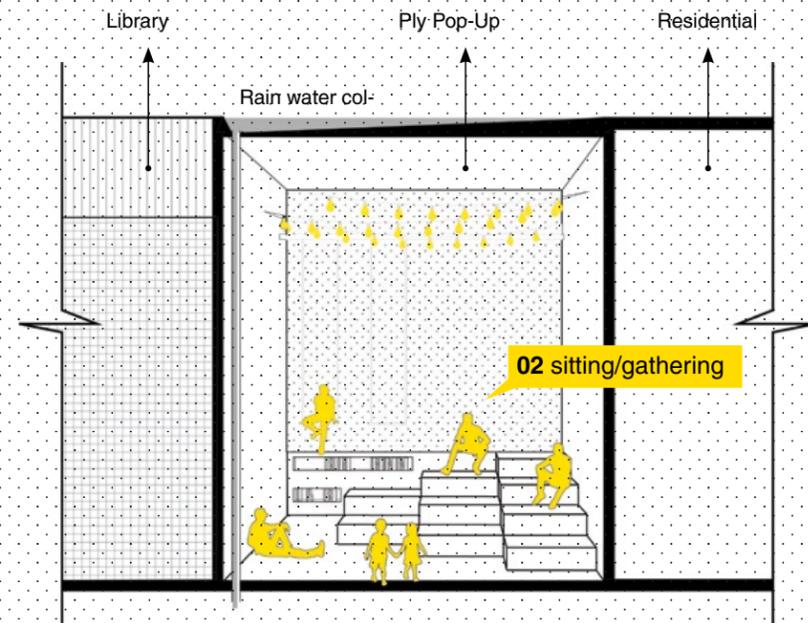
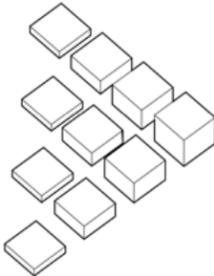
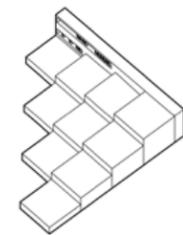
Bottom panel



Portable furniture



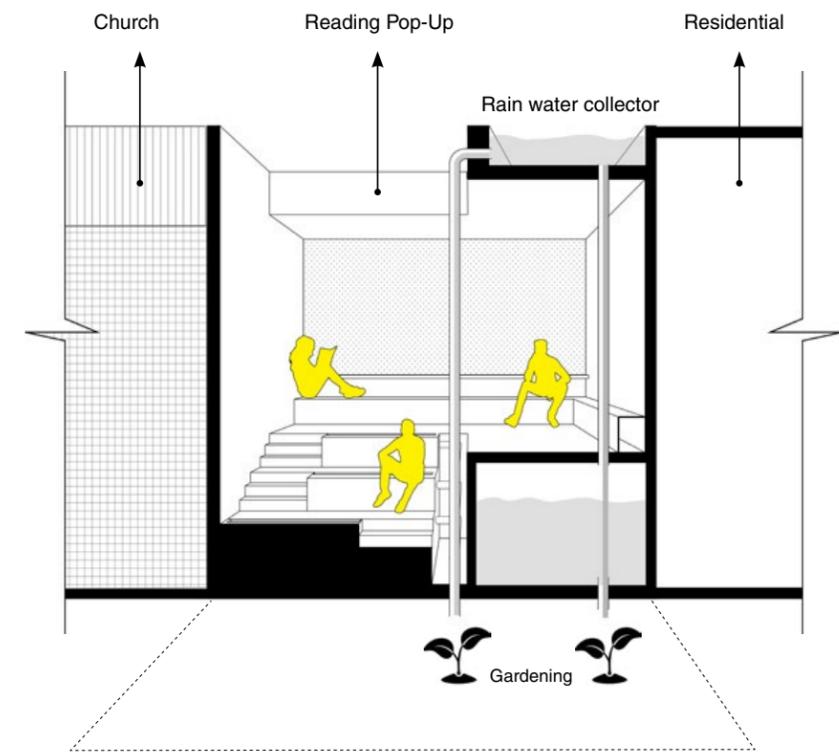
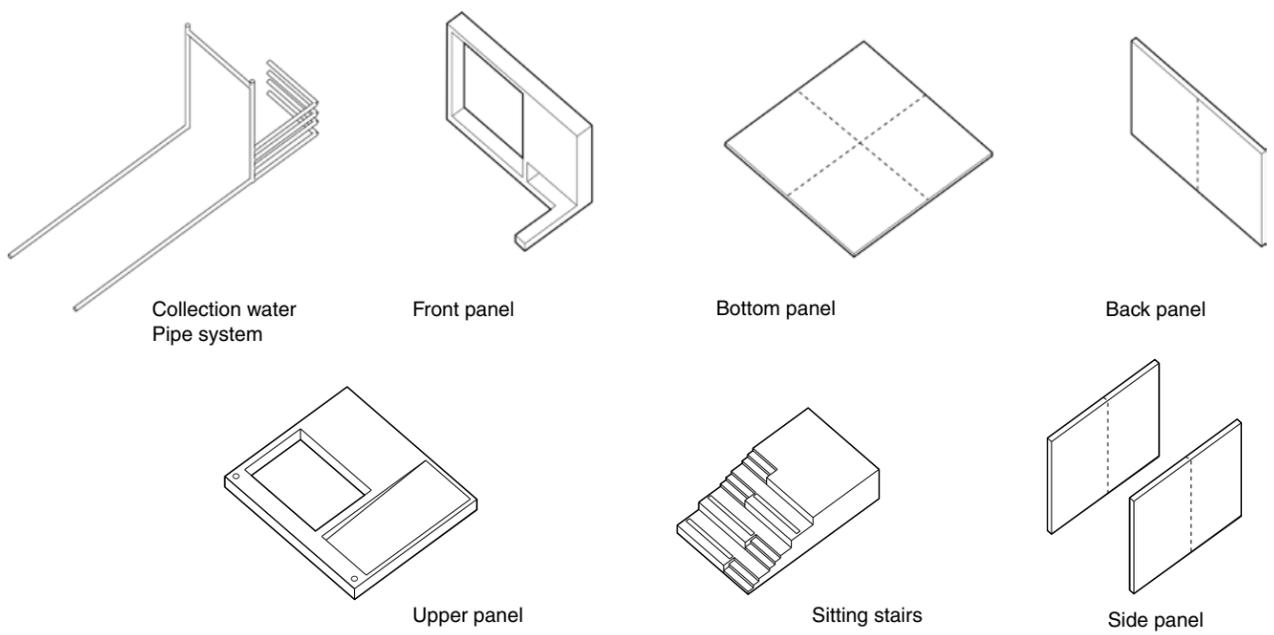
Light



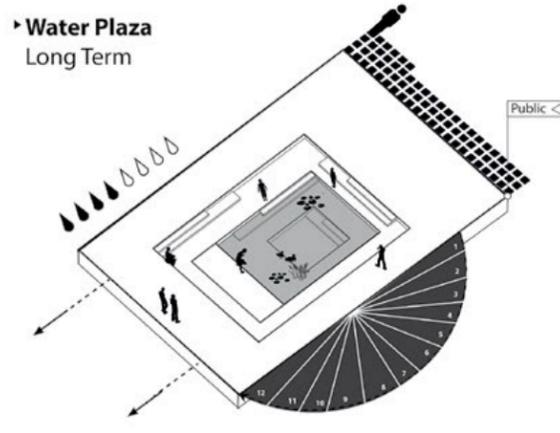
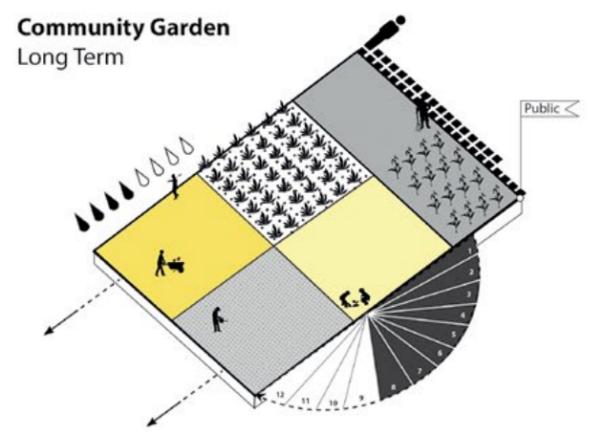
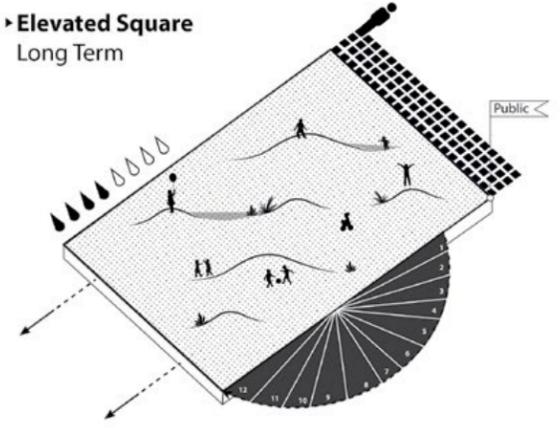
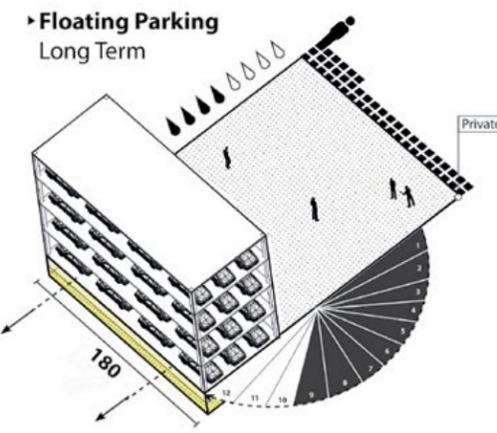
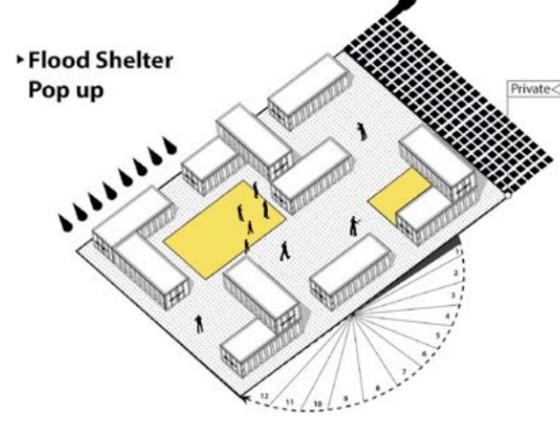
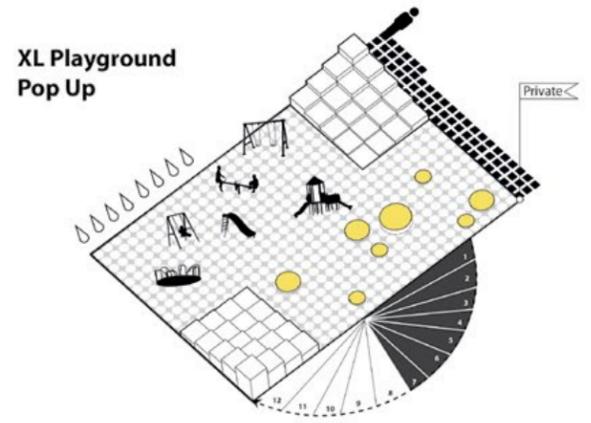
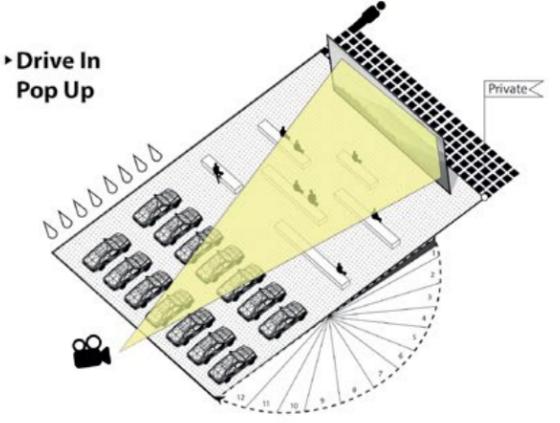
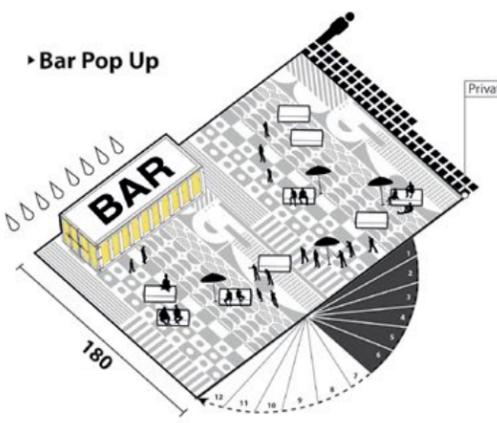
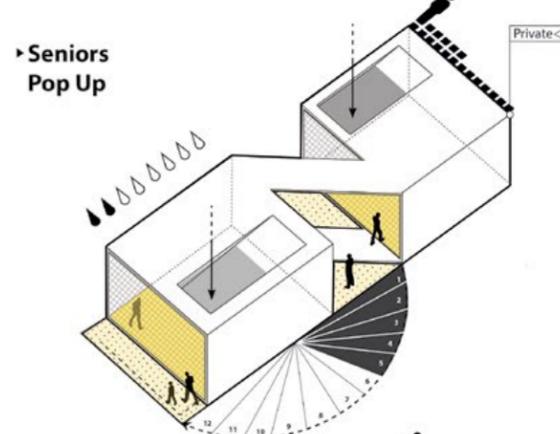
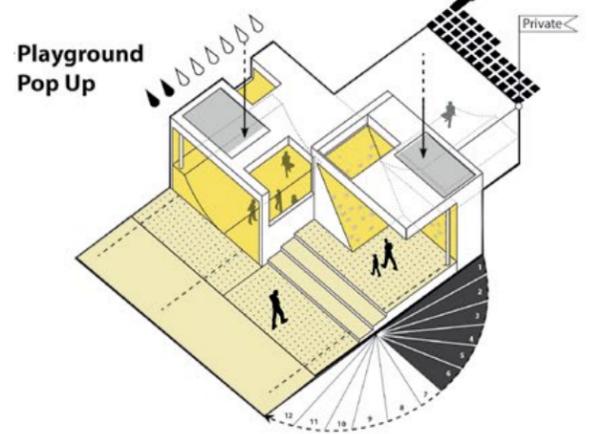
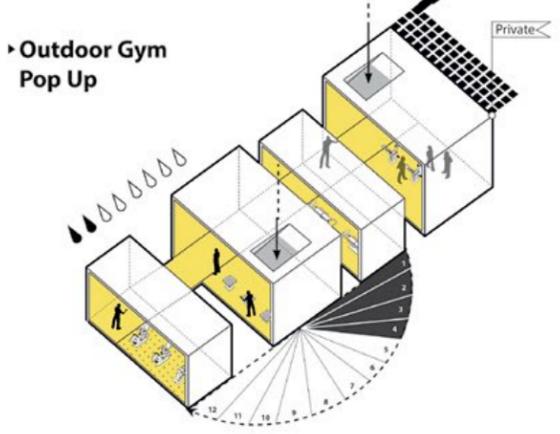
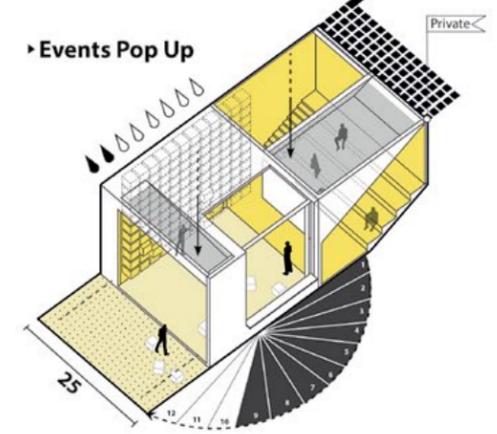
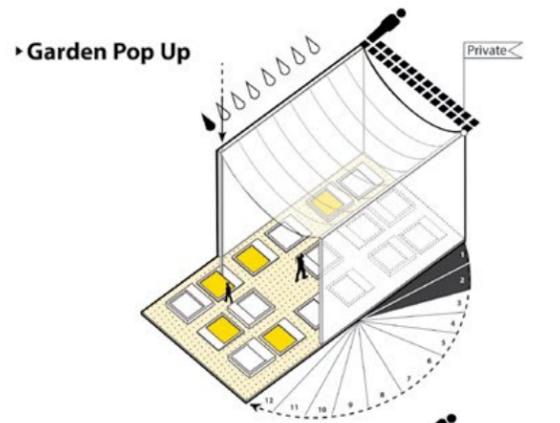
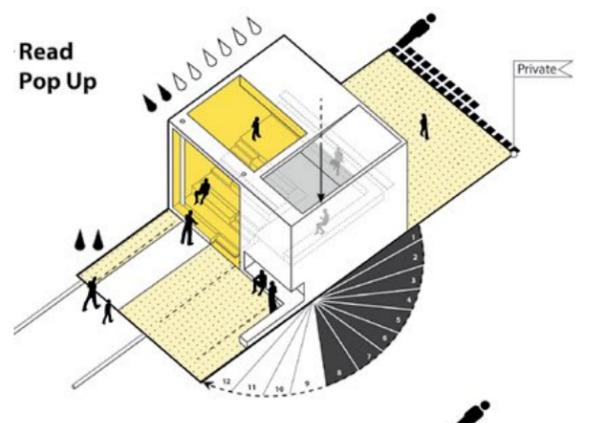
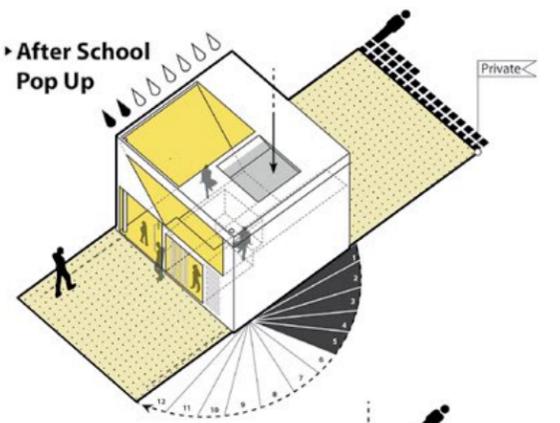
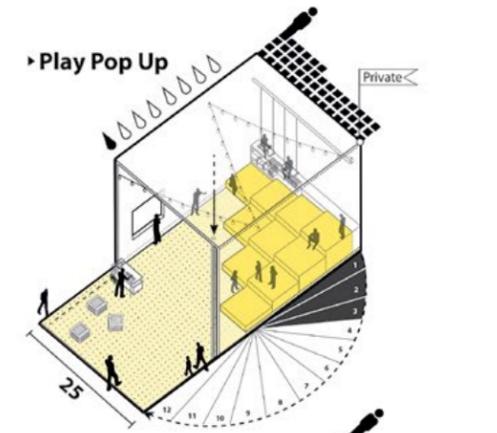
► 'Read' Pop - Up



01 Design Components

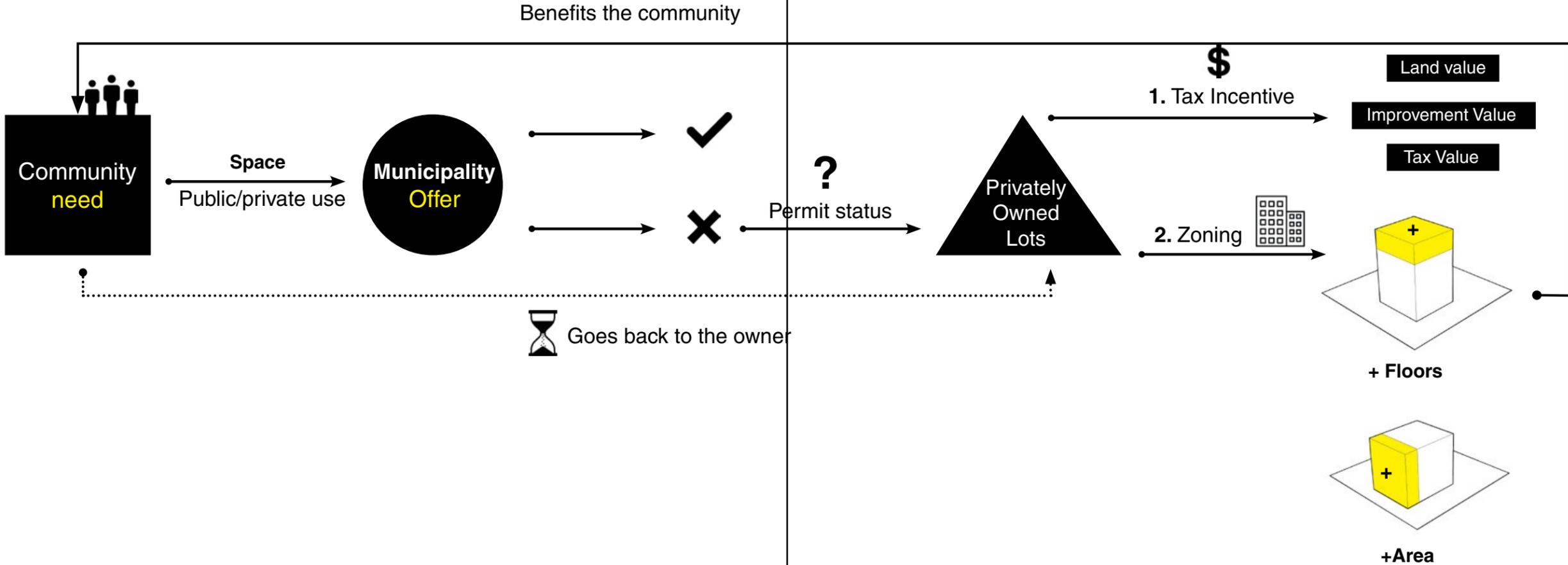


Pop - Up Typologies

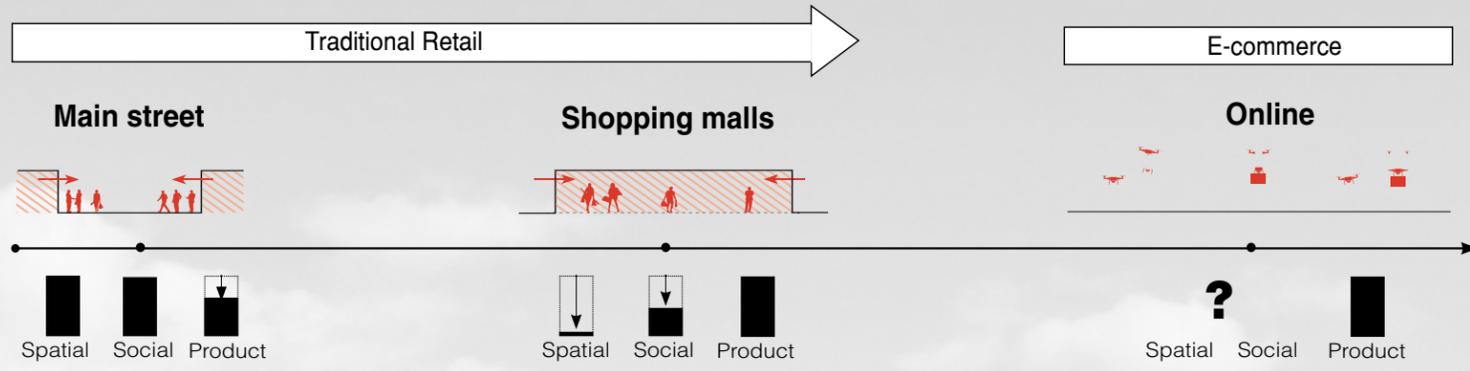


Implementation

Policy



In the Hudson Valley 25% of the shopping malls are in the danger of closing and Main street retail is imperil.



Retail Apocalypse

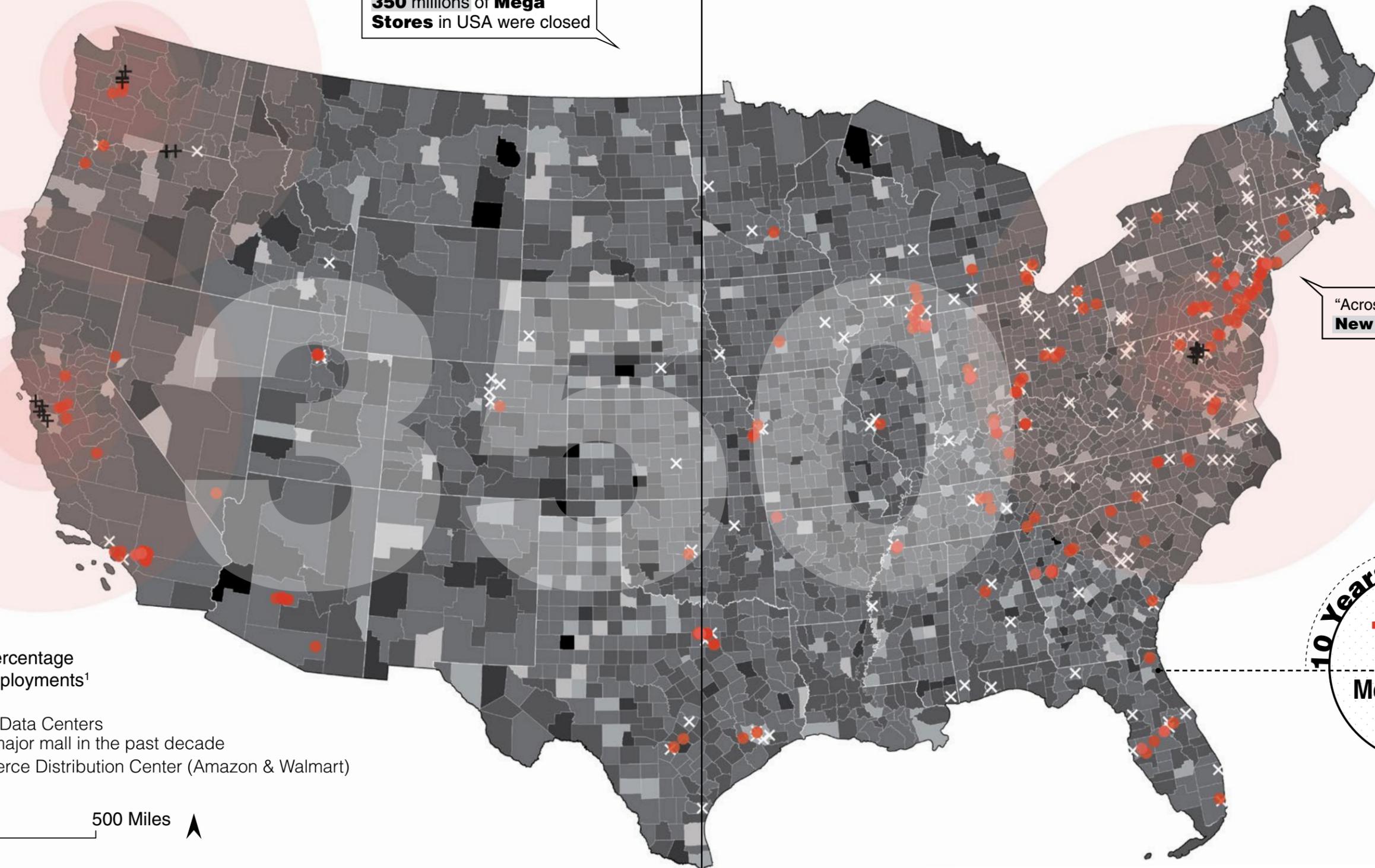
01 E-commerce trade distribution



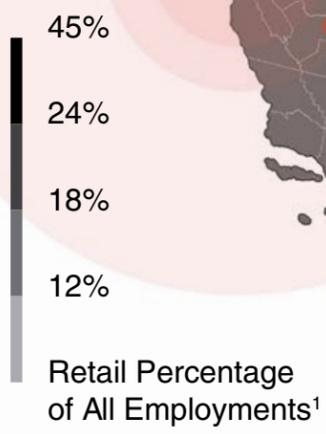
- ebay
- Apple
- Walmart
- THE HOME DEPOT

350 millions of **Mega Stores** in USA were closed

Consumer Behavior and Co₂e



"Across all 50 states, **New York** has the most."

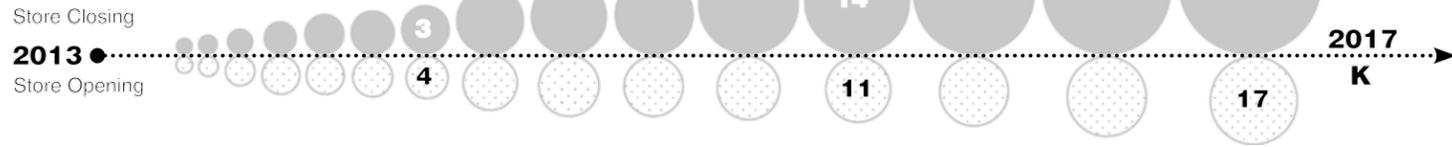


- + Amazon Data Centers
- x Closed major mall in the past decade
- E-commerce Distribution Center (Amazon & Walmart)

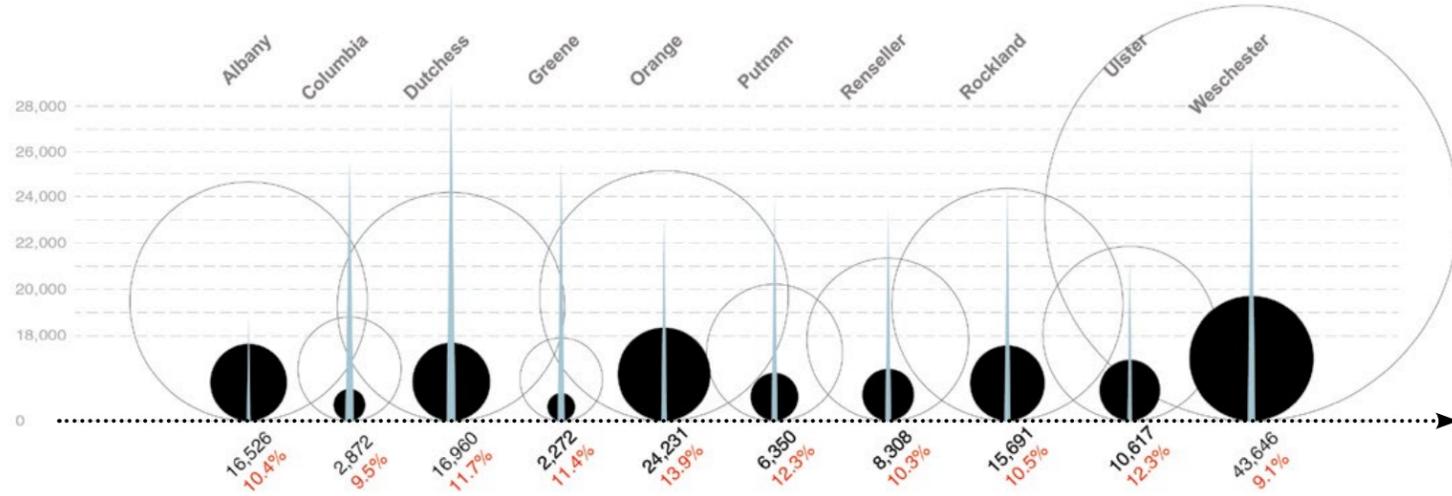
0 500 Miles

► Retail Apocalypse

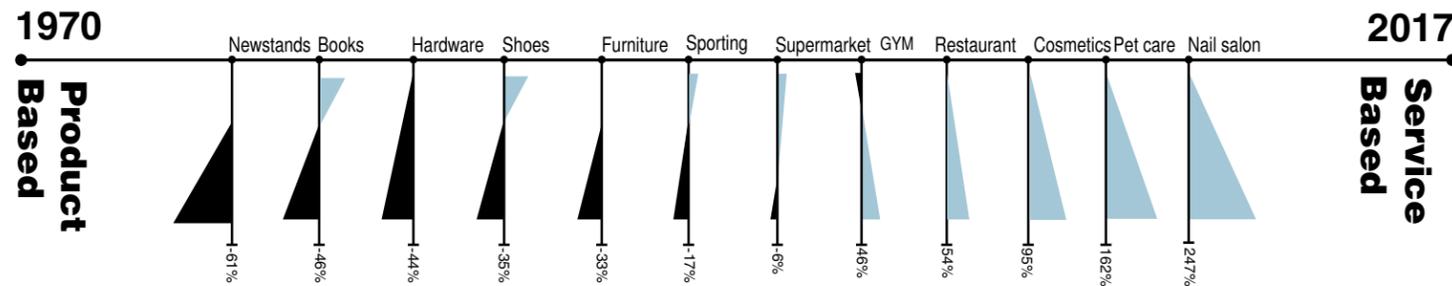
01 Street retail is dying



02 Employment and retail revenues | Hudson Valley



03 The transition to an Experiential Economy

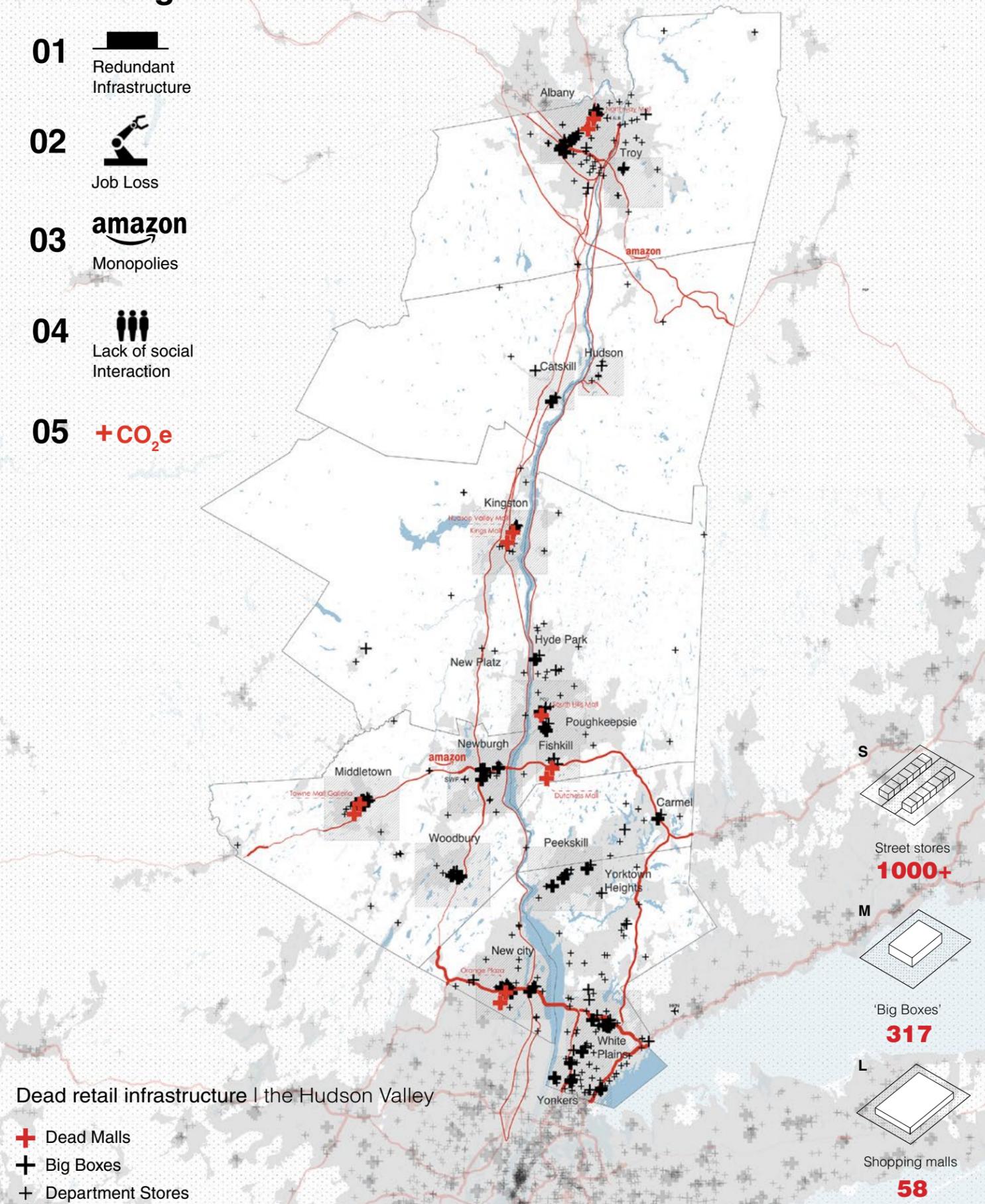


04 Online Vs Traditional Shopping



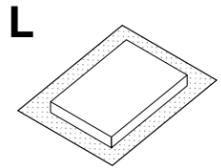
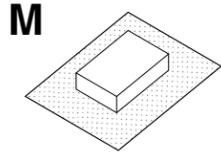
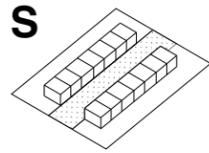
► Challenges

- 01 Redundant Infrastructure
- 02 Job Loss
- 03 amazon Monopolies
- 04 Lack of social Interaction
- 05 +CO₂e



Design Intervention

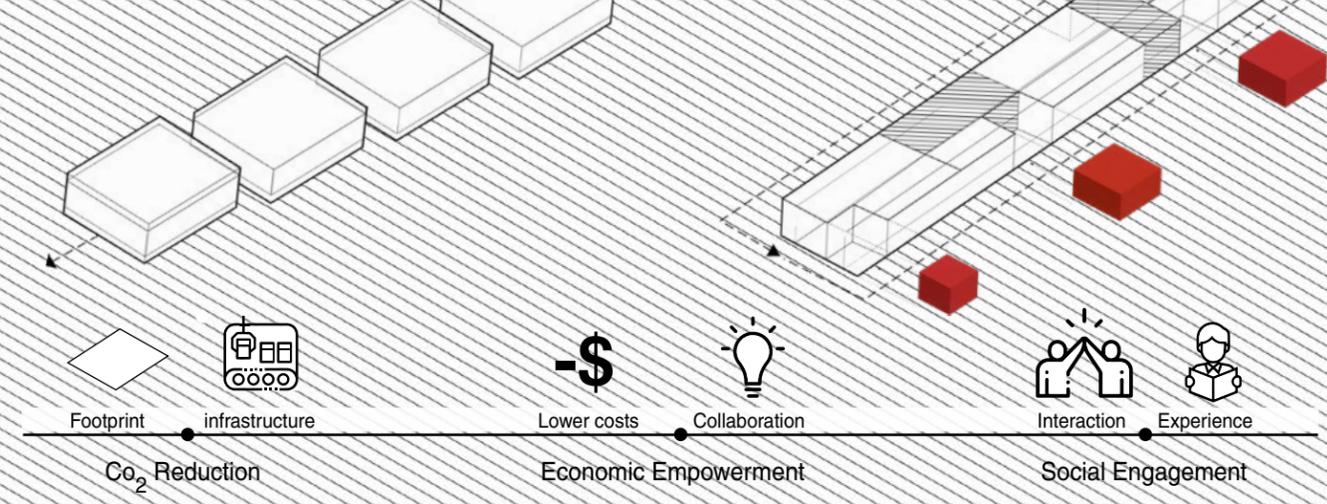
01 System Map



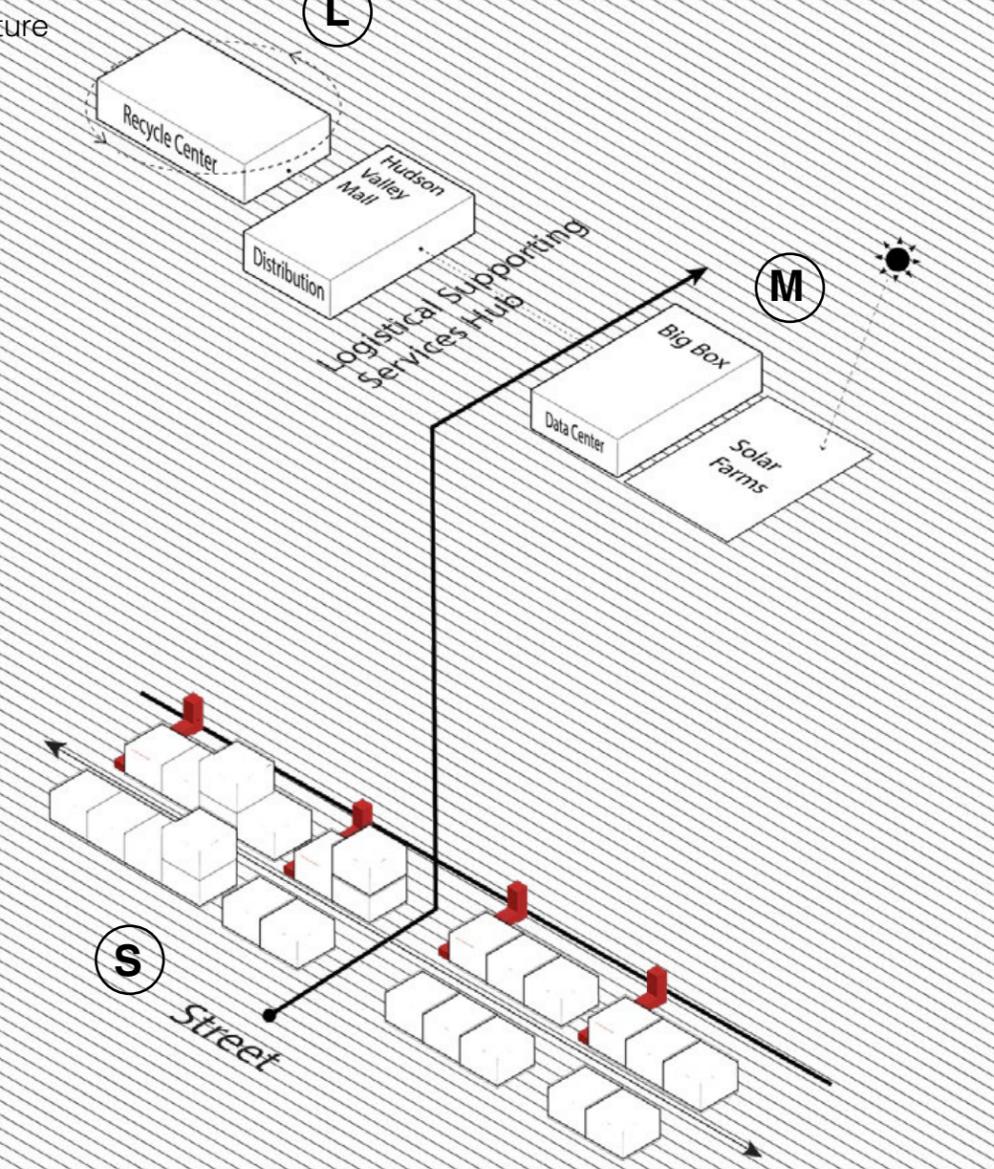
02 Retail Model

Old Model
Individual Retail

New Model
Collaborative



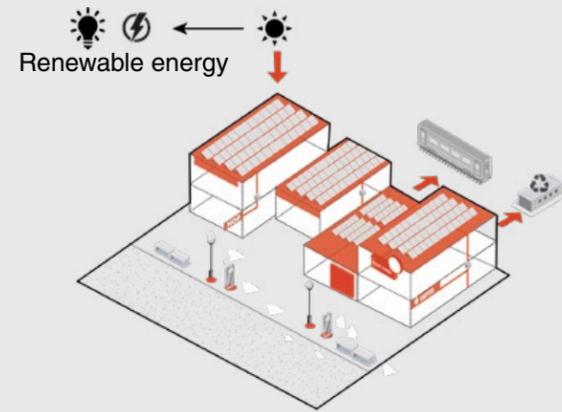
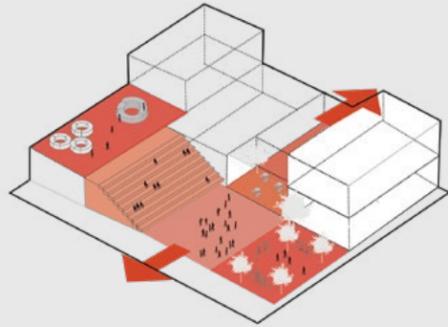
03 Reusing Infrastructure



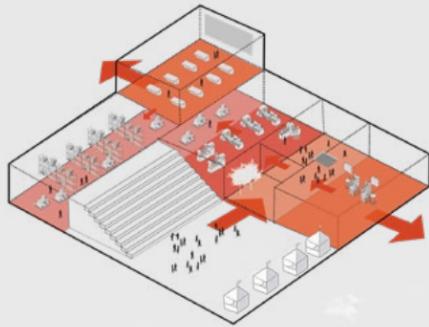
S Scale Intervention | Street Co-op

01 Design Strategies

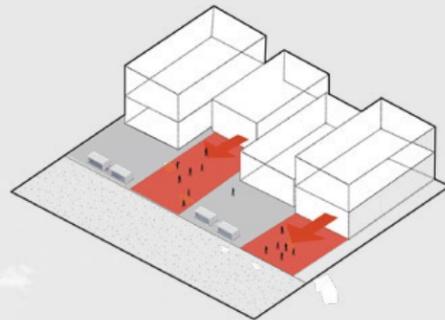
Experiential space



Shared space

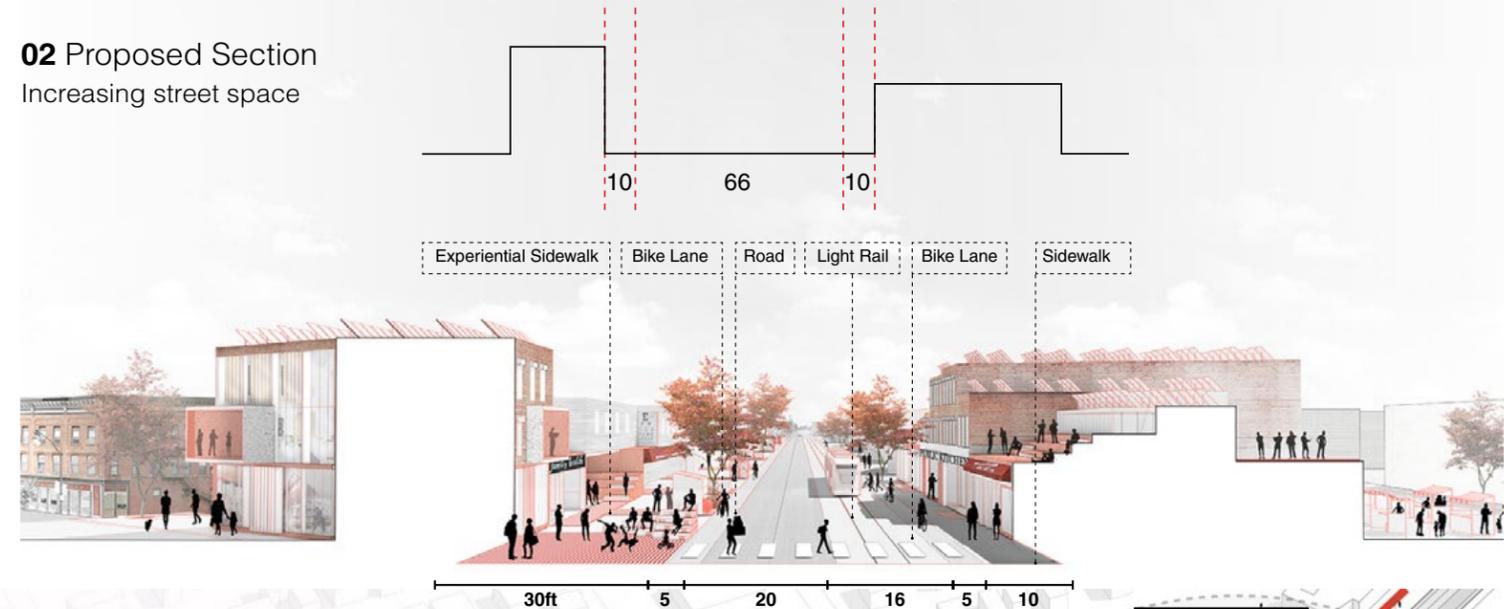


Street extension



02 Proposed Section

Increasing street space

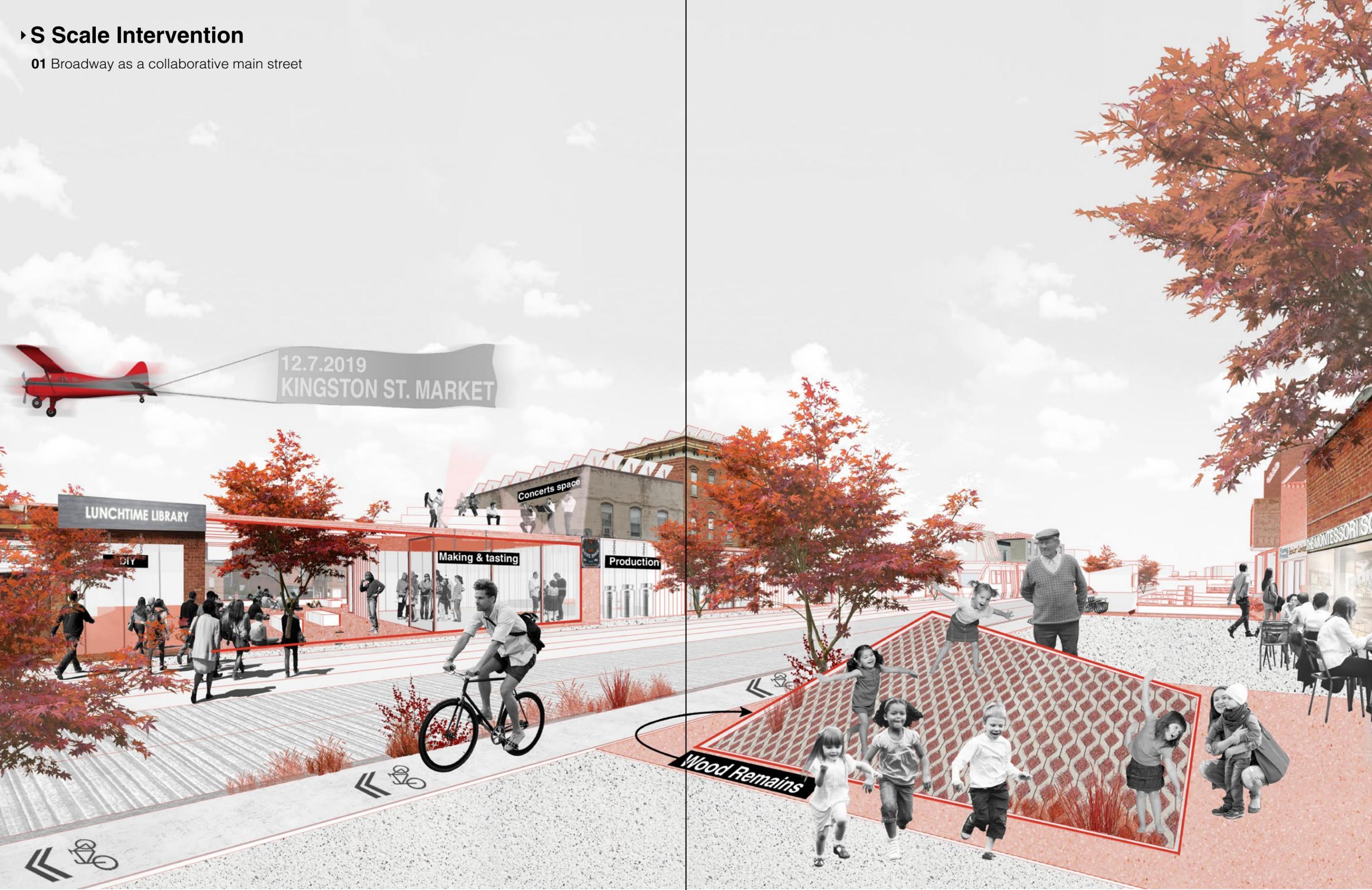


03 Street Retail Co-ops | Broadway



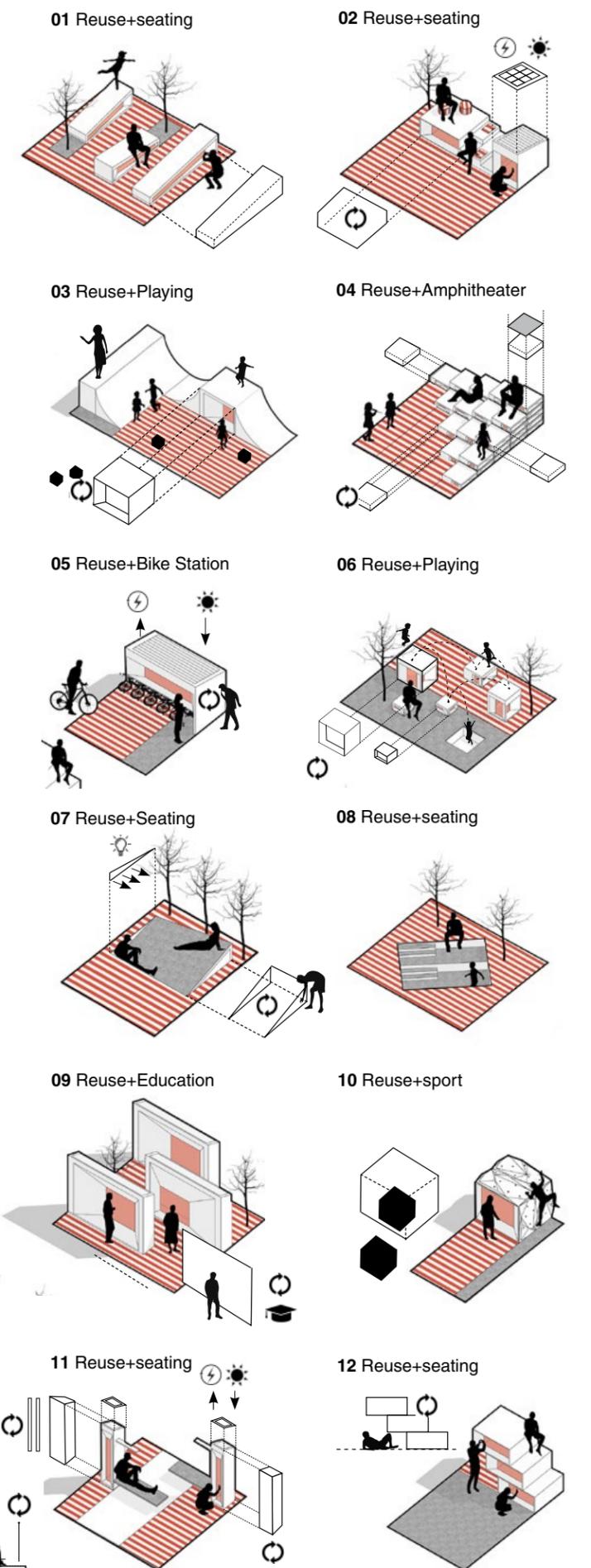
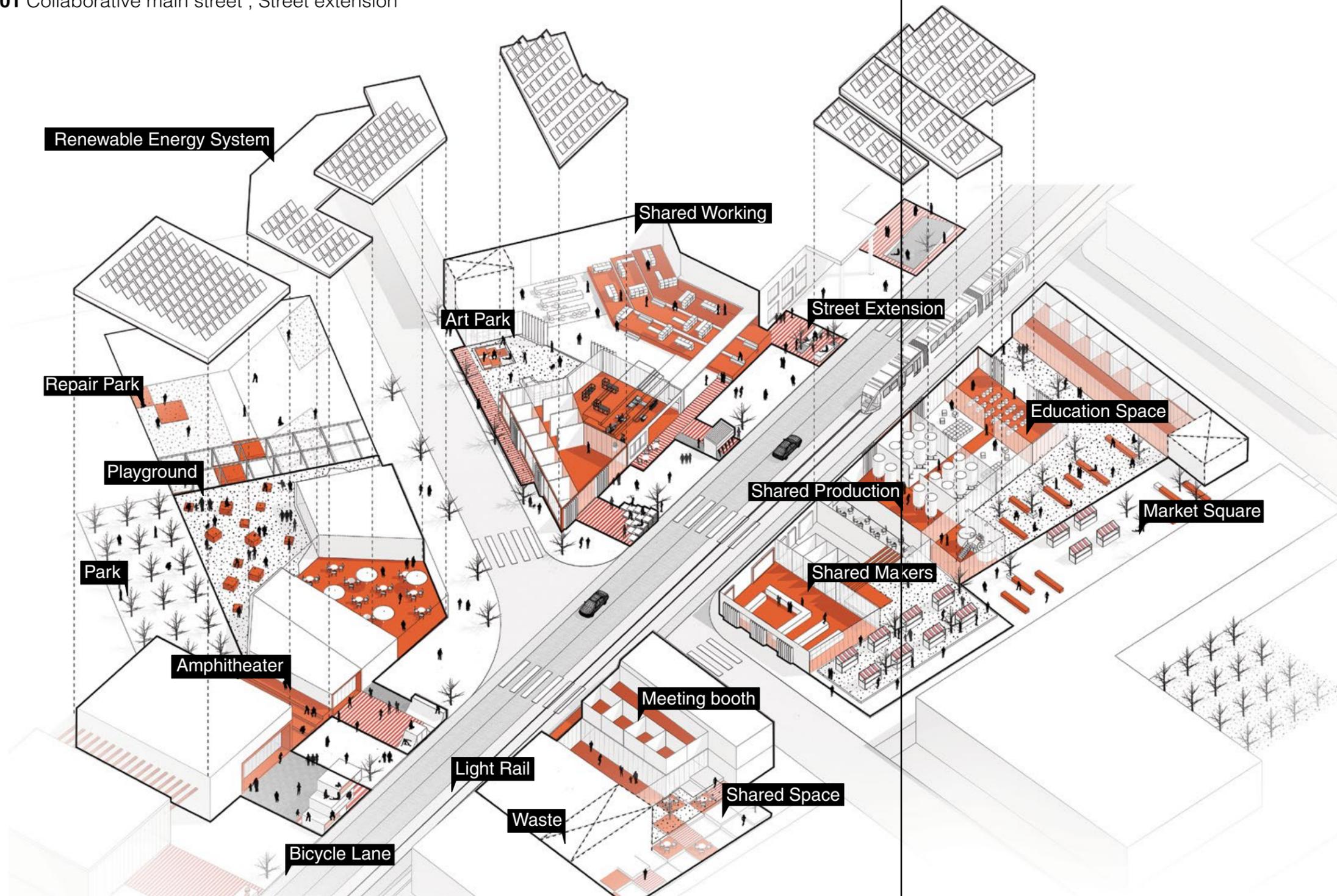
► S Scale Intervention

01 Broadway as a collaborative main street

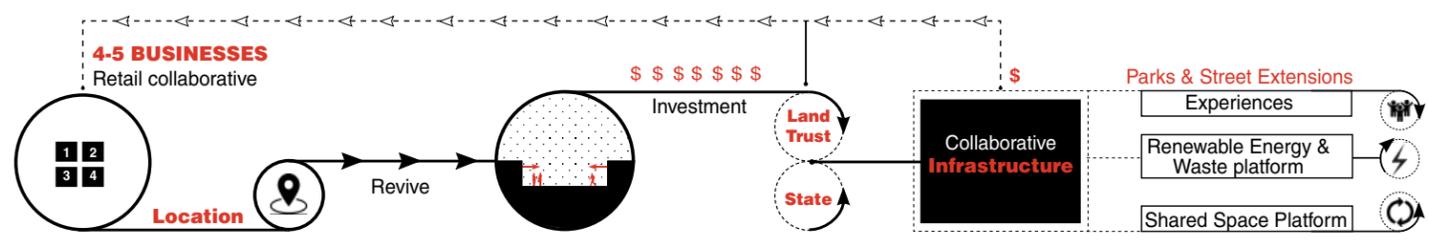


S Scale Intervention

01 Collaborative main street, Street extension



02 Policy | Small Business Co-op



› S Scale Intervention



MAKERS

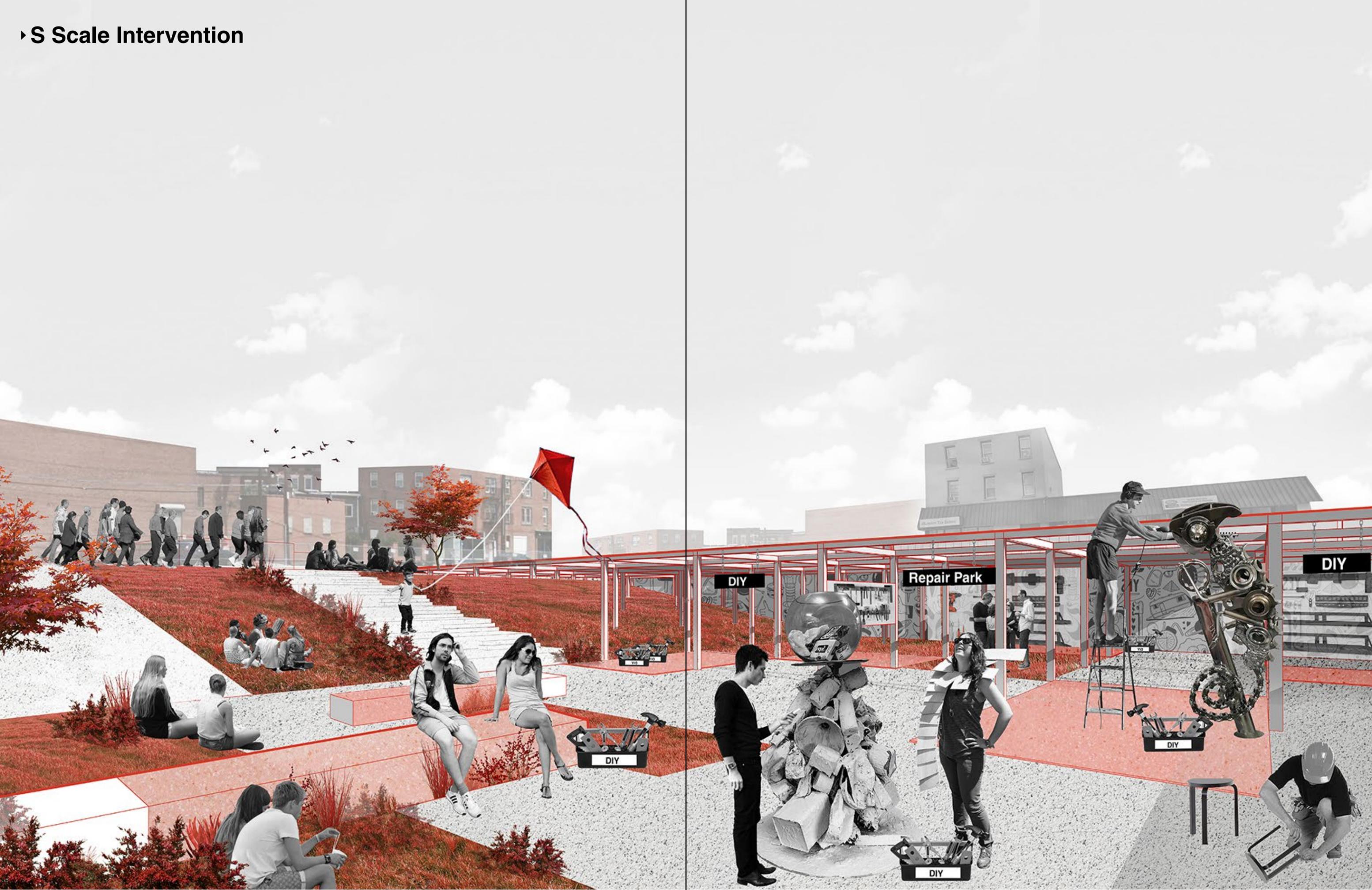
MAKER SPACE
Cardboard Furniture
Workshop

DO WHAT YOU LOVE

HELLO

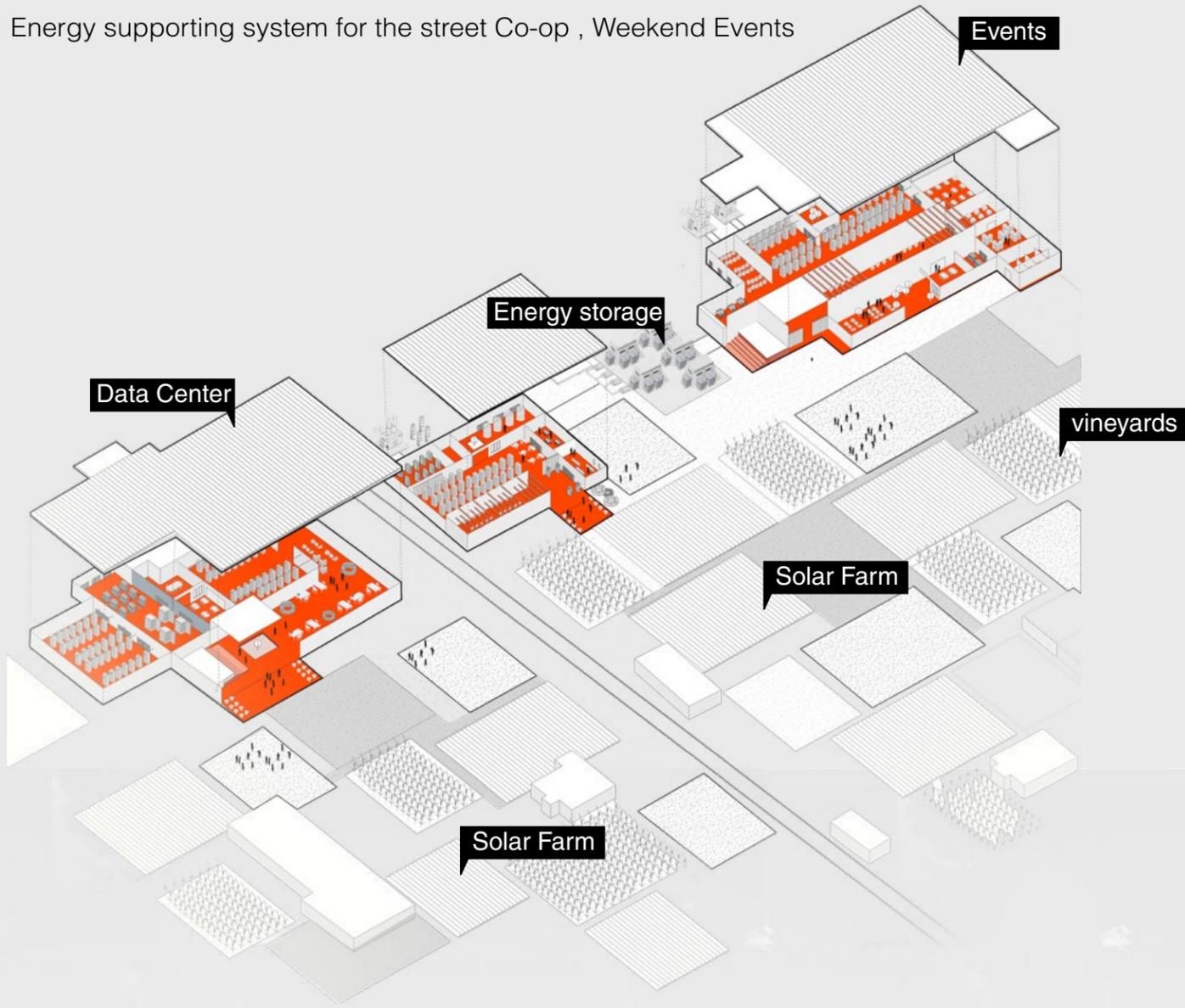
Bring your own
Cardboard

► S Scale Intervention



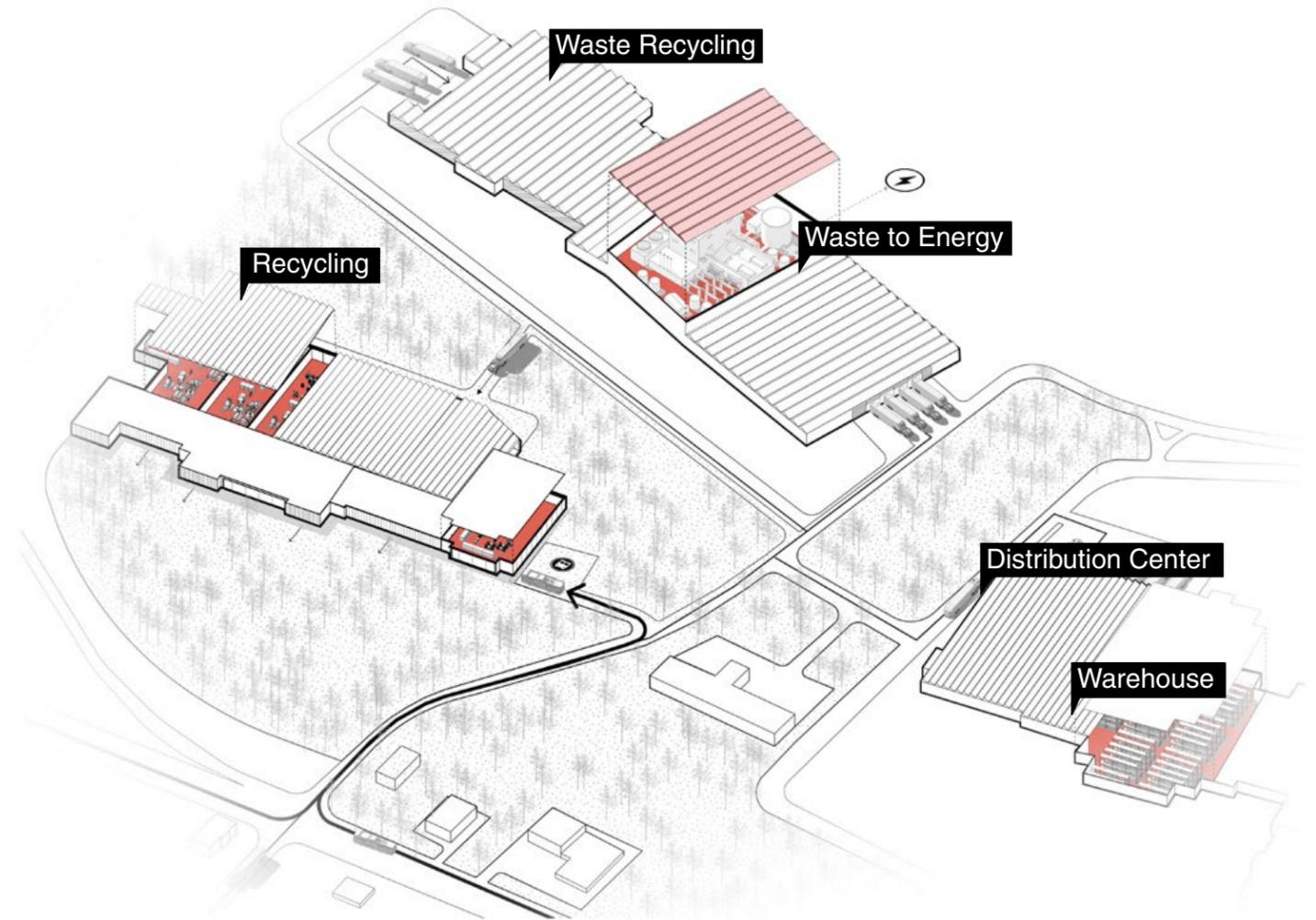
► **M Scale Intervention** | Solar farm

01 Energy supporting system for the street Co-op , Weekend Events



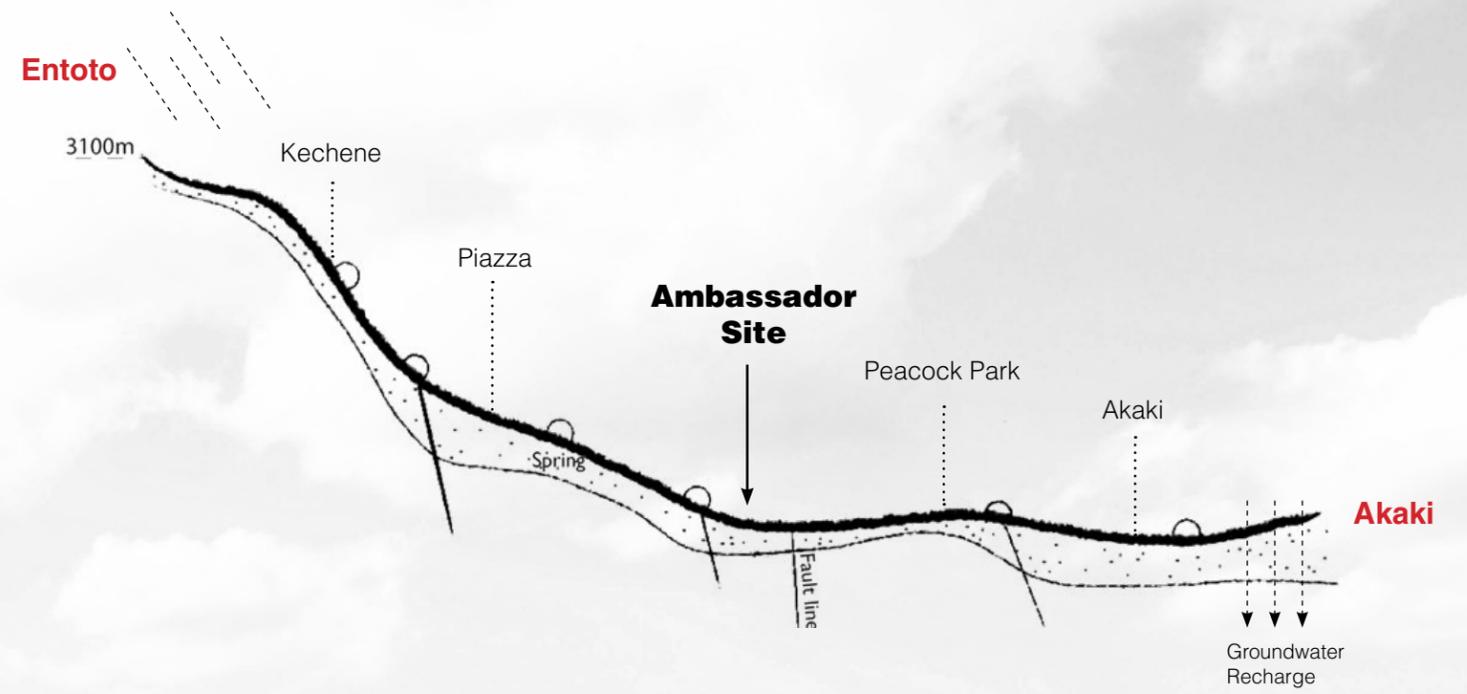
► **L Scale Intervention** | Recycle to Energy Plant & Distribution Center

02 Logistics supporting system for the street co-ops. Packaging, recycling, distributing



► Ambassador area

In the context of the transect, the ambassador site is the main city center of Addis, where the financial capital flows in the CBD. By taking advantage of it, the project aims to direct a part of this capital through a CBD co-operative, to enable an inclusive public & trade space, to aerate, clean the river and improve accessibility for all of Addis Ababa residents.



Is that the FUTURE we want?

2020> 2050+

01 Massive Development

Uncontrolled Foreign Investment \$

Real Estate Developers \$\$\$

+9M sqm

Speculative urbanism

What If?

Ambassador Park

At risk

Sheger project

Meskel Square

ECA Park

Bantyeketu river

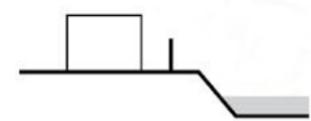
20K Households

02 Displacement

Breakdown of Social Networks
Local Informal Economy

69%

03 Disconnected And Exclusive Public Spaces



04 Ecological Degradation



Contamination



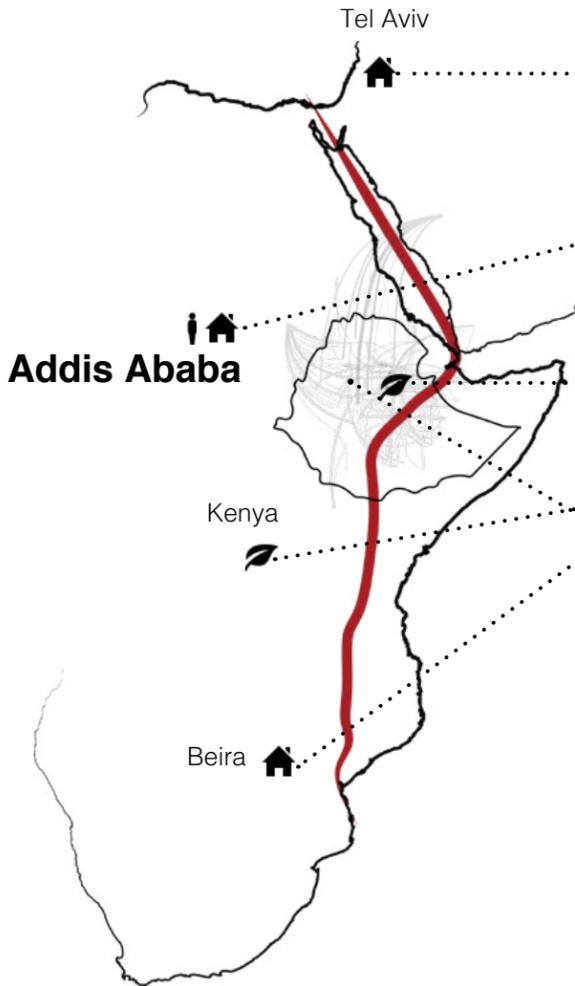
Concretization

► Scales of interventions

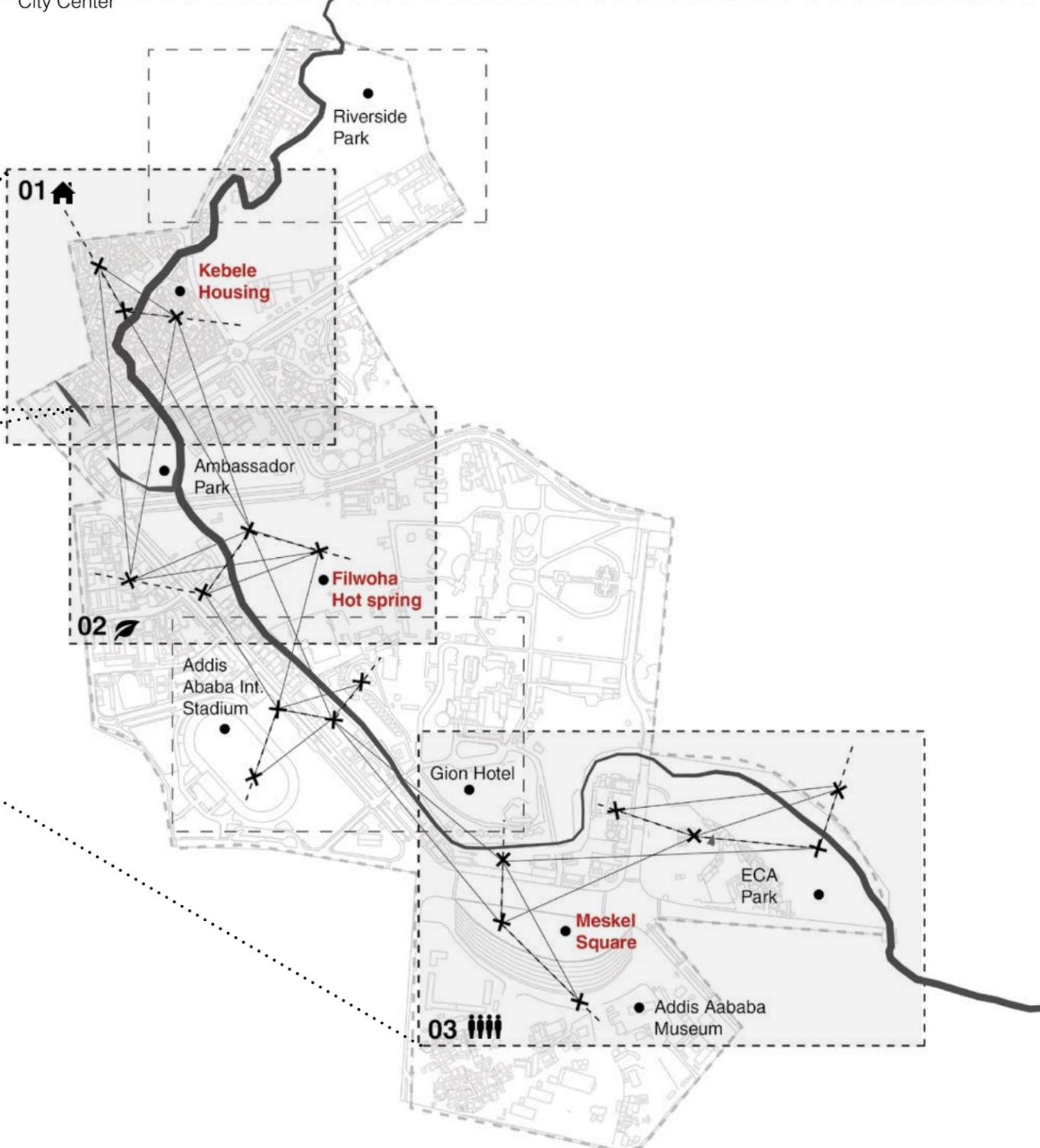
01 Similar challenges along the Rift Valley area

-  Real Estate induced displacement
-  Rift Geology
-  Exclusive Public space

► The Rift Valley



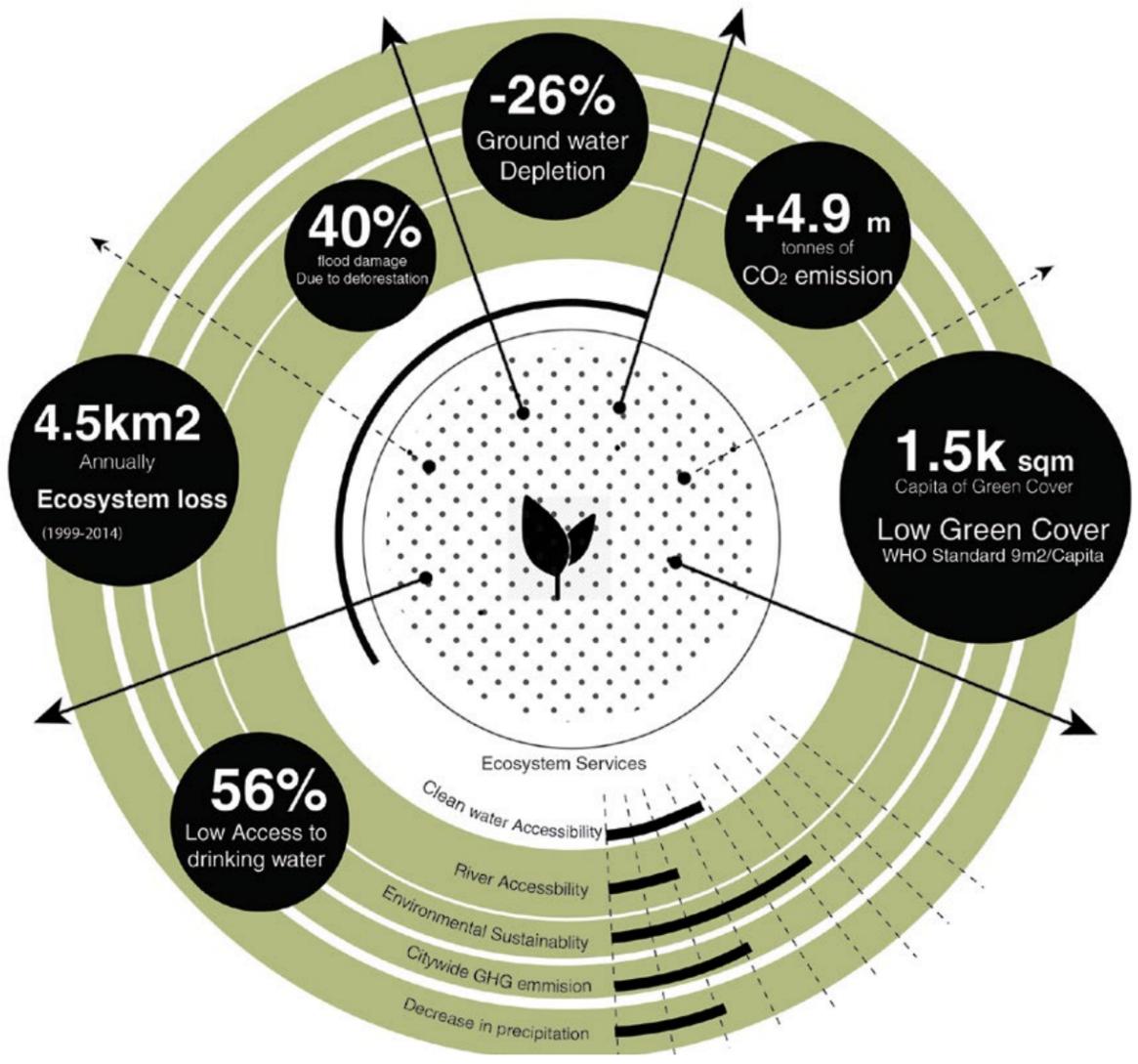
► Addis Ababa City Center



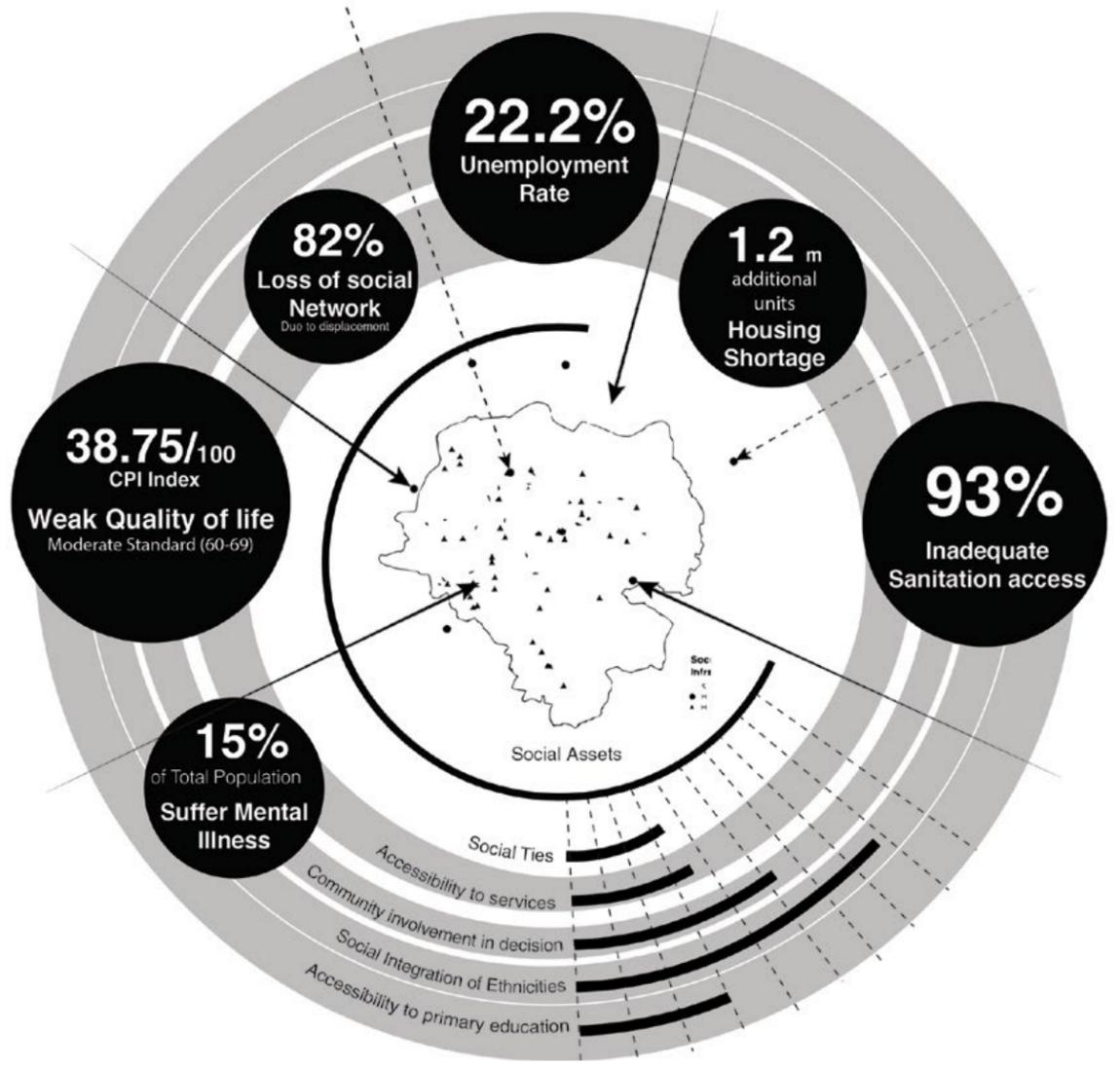
► Zooming out to the global scale we identified similar conditions that are happening throughout parts of the Valley. We tried to sample those conditions in our site as case studies for triggers of change for sustainable development. Through these 3 patches we study different transects and identify initiation nodes for design.

Ecologic and Social Capital in Addis Ababa

01 Ecological Degradation and lack of green spaces



01 Loss of social Networks, lack of infrastructure and high unemployment rate

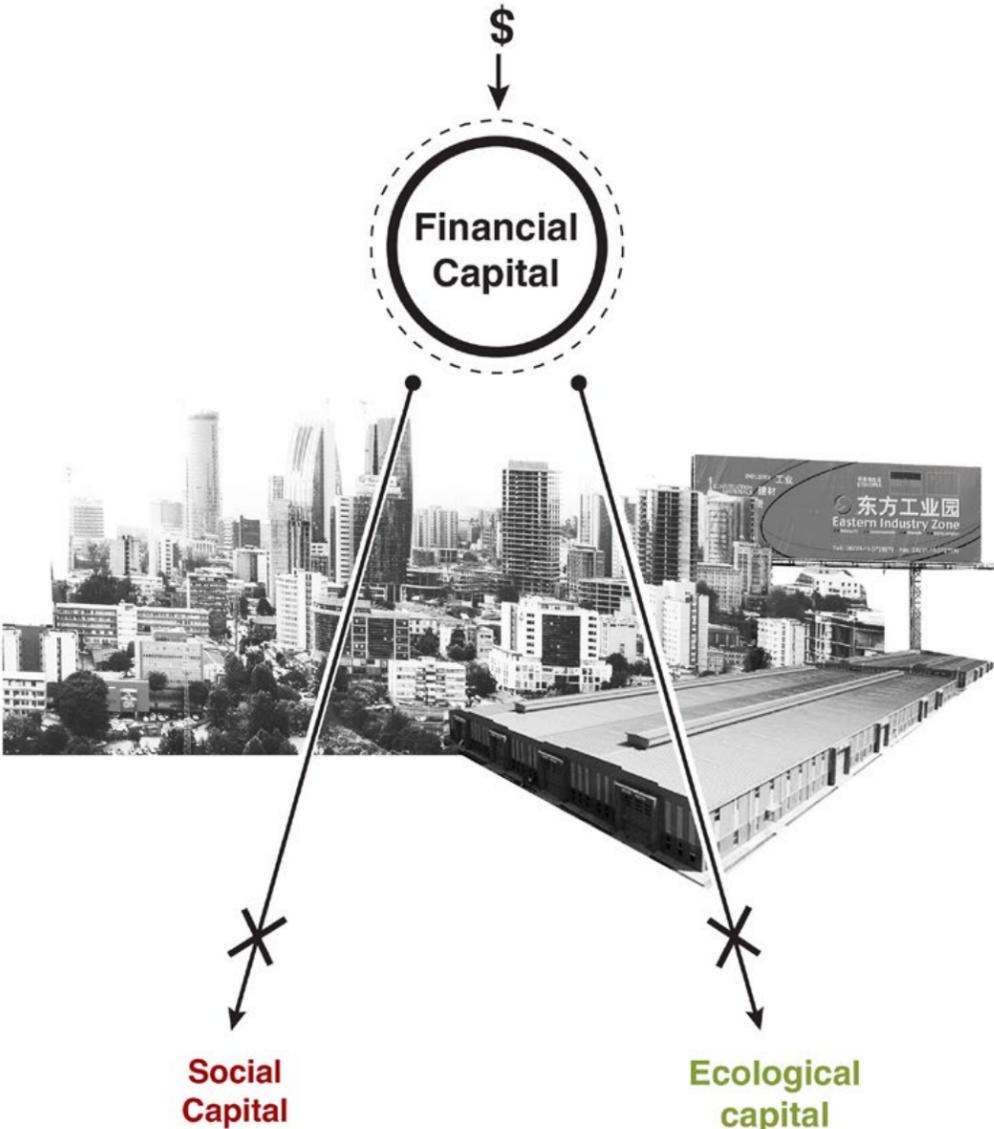


Trigger of Change for Sustainable Development

01 Re-articulating capital

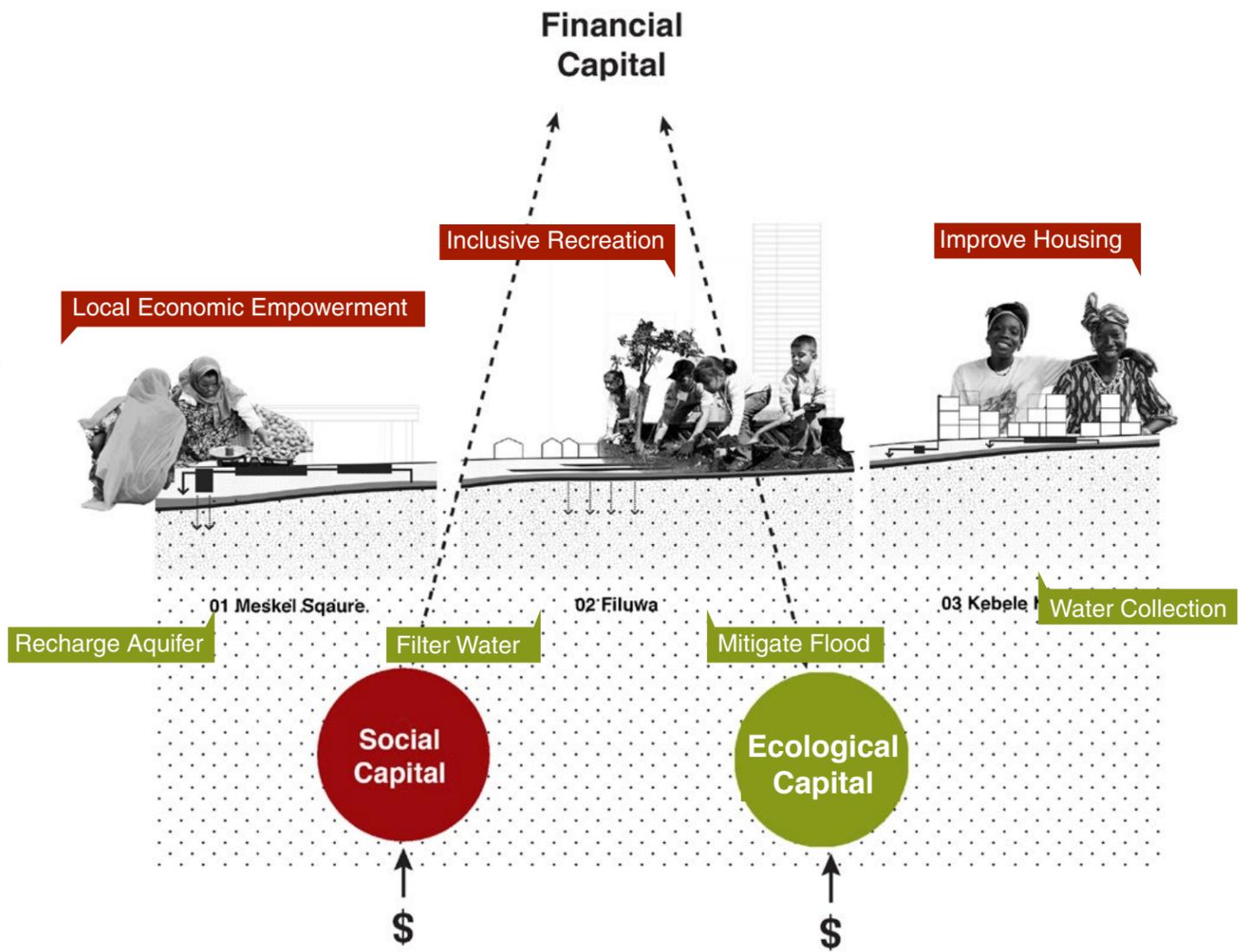
Current Development

• Mono-functional



Proposed Scenario

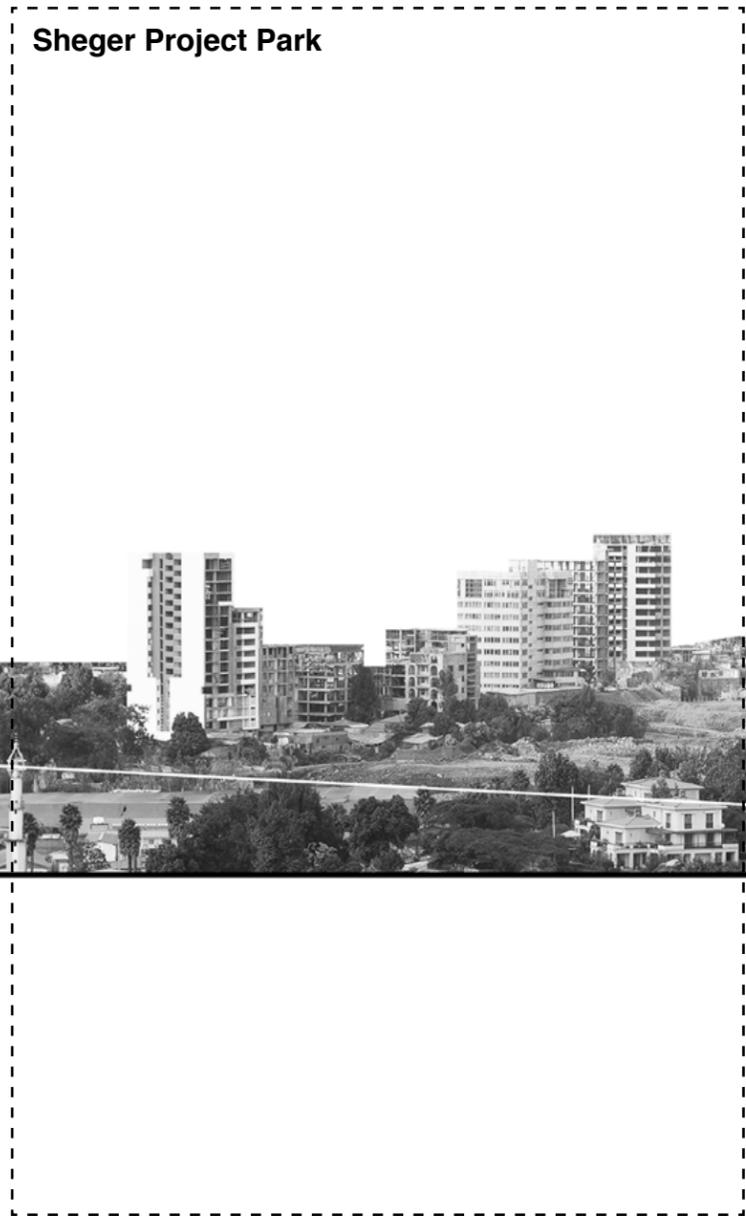
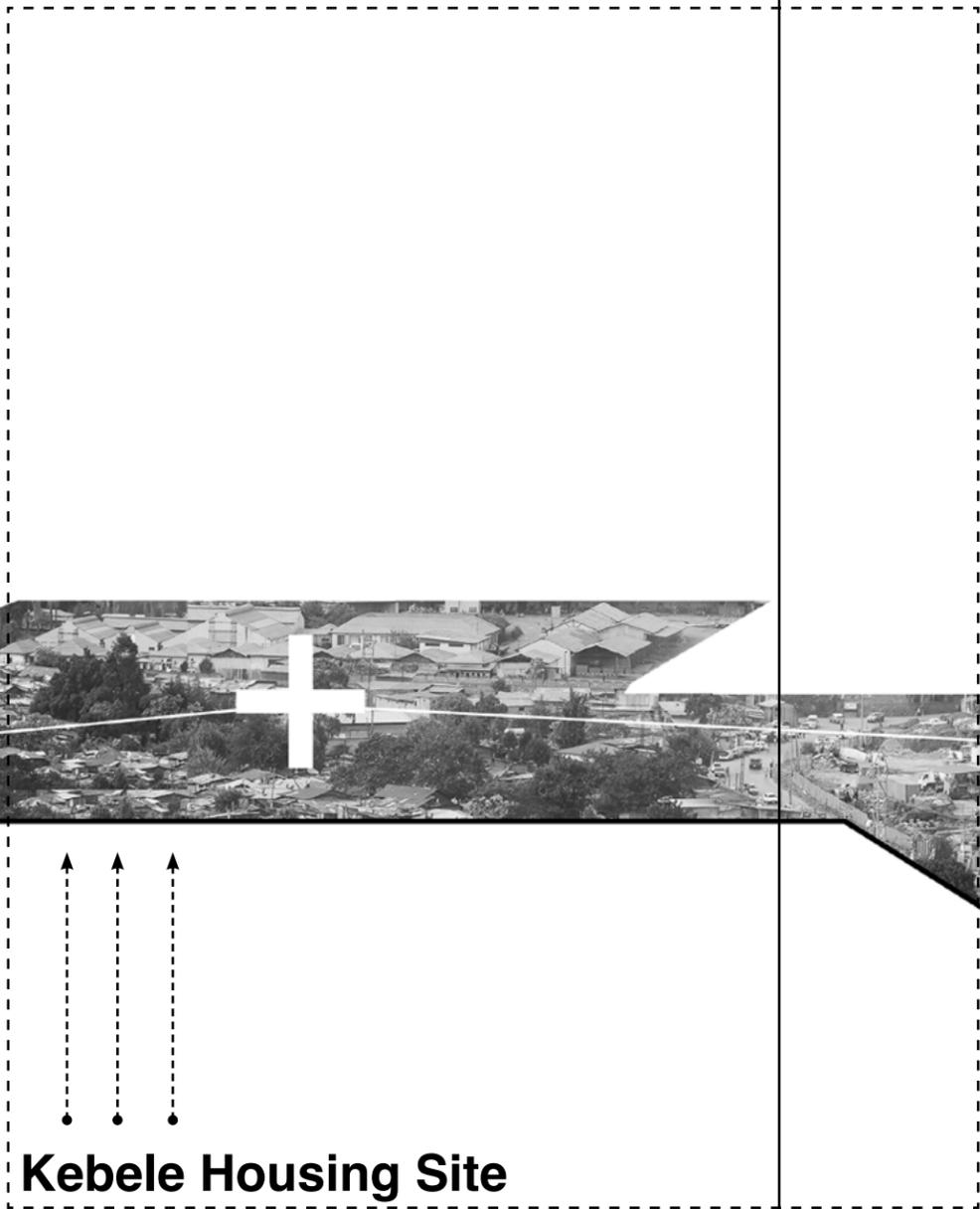
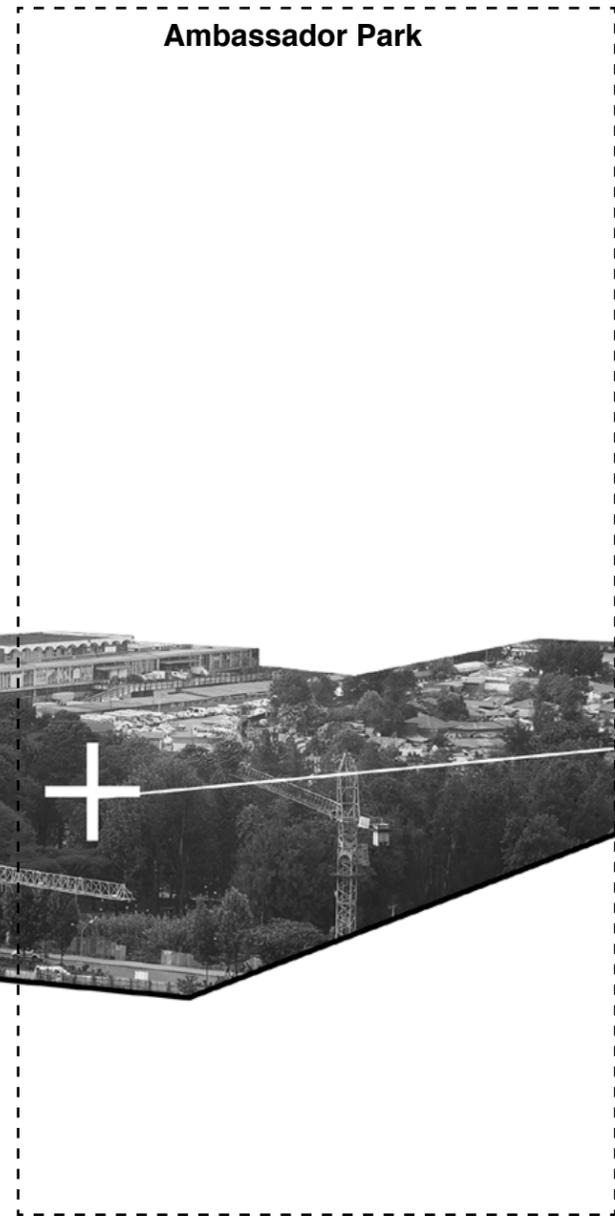
• Multi-functional



What If?

A "world class" city center is envisioned to leverage social and ecological capital in support of ecosystem restoration, an inclusive public realm and the local economy?

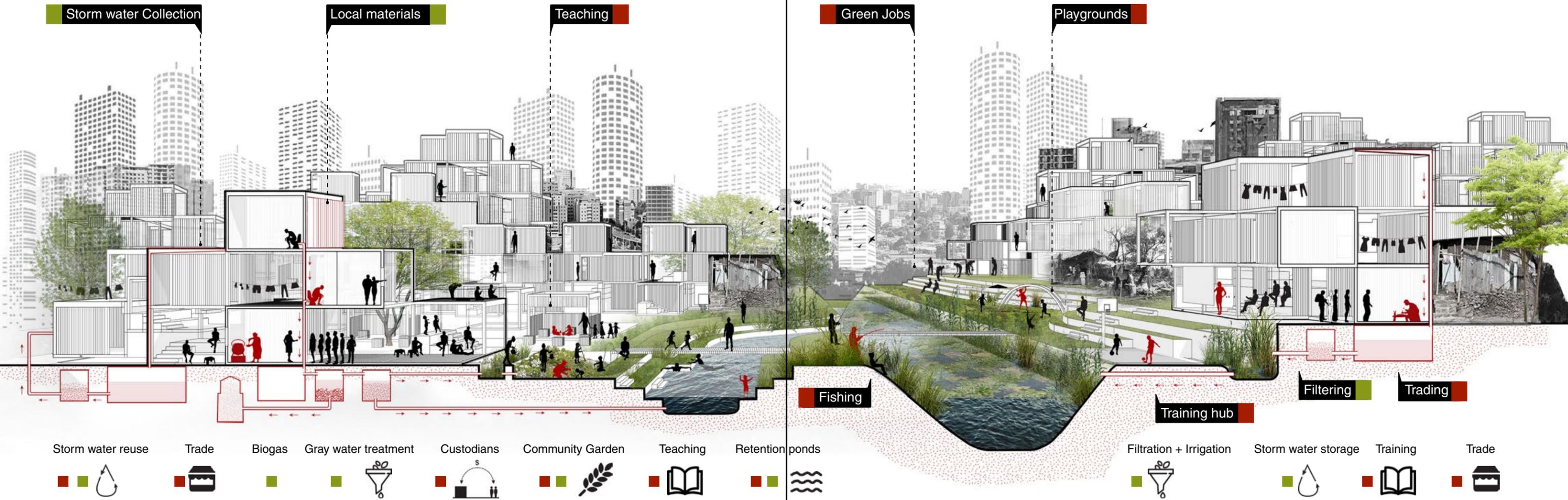
► Design Intervention



► Design Intervention

01 Kebele Housing | Improve conditions through social and ecological networks

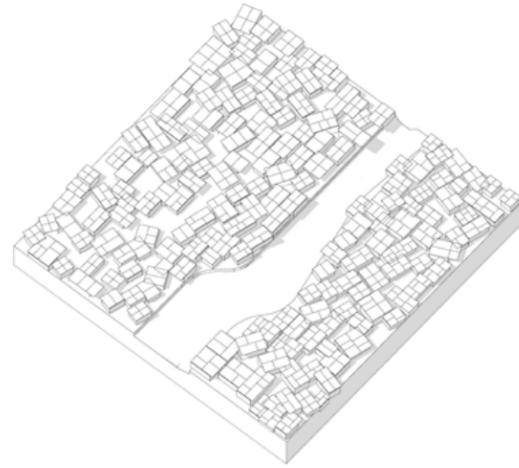
- Social Capital
- Ecological Capital



► The trigger points will empower the residents with social infrastructure inside the fabric to support their needs of education, training center, health and recreation. The system will include storm water collection and reuse, decentralized STPs and retention ponds will mitigate flood. The community organization will provide incremental housing which will be funded by part of the private investments that enters the city center. People from the community could work in the Edir organization in building and maintenance to gain rent incentives and benefits.

► Design Intervention

01 Kebele Housing | incremental housing phasing



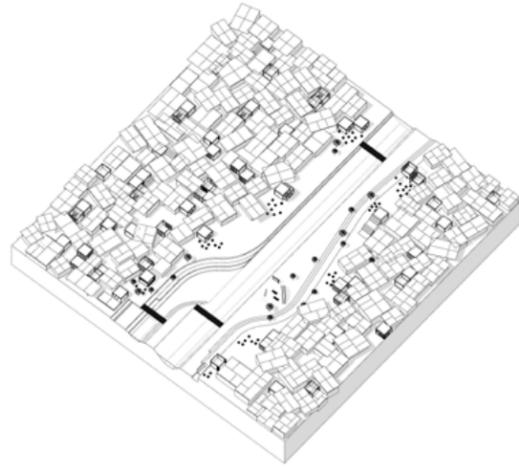
01

Existing Kebele housing
~50 sqm per unit. ~1000 existing Units



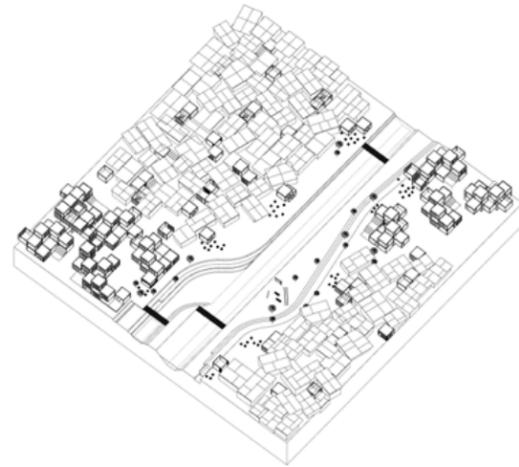
02

Flood zones will transform to
Social and ecological supporting network.(Section)



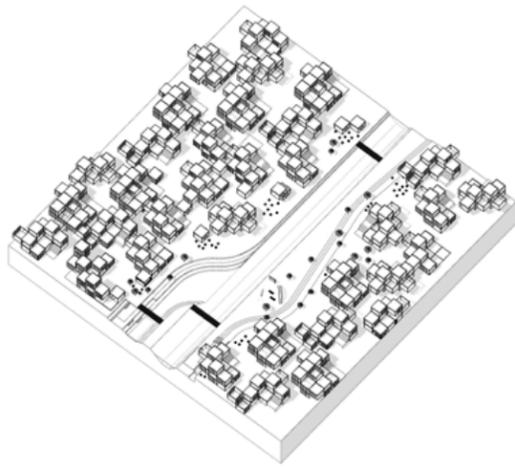
03

Social nodes for trade, Training, health care and
leisure to improve conditions and empower locals.



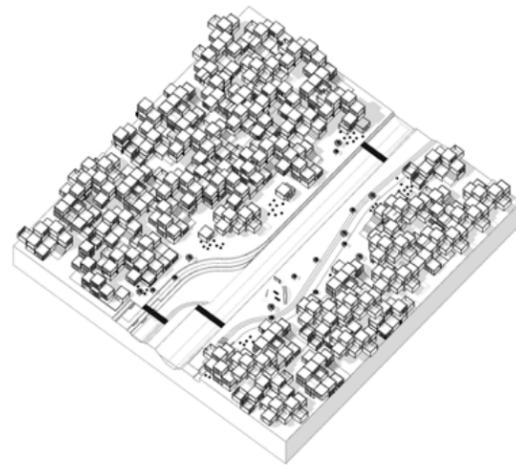
04

Incremental housing provided by the Edir and fund
by part of the city investments according to a policy.



05

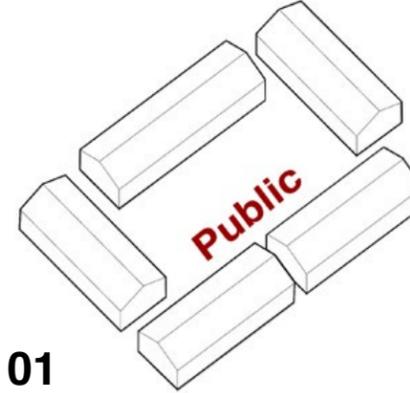
The people can build their own houses with local
materials inside a skeleton that will be built by
community workers.



06

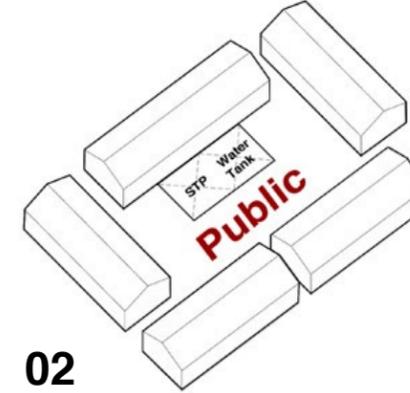
The whole Network will be realized by a social and
economical supporting system of trading, training
and river custodians.

01 Kebele Housing | From a trigger of social node to housing

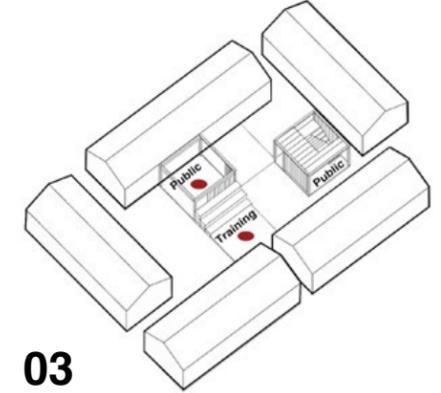


01

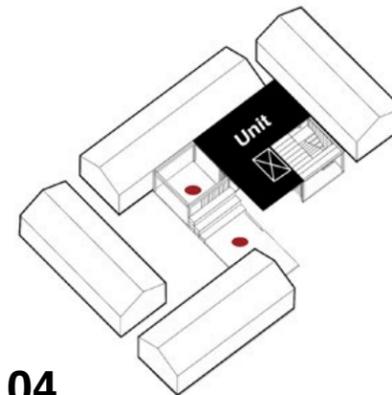
A gradual transformation through the
shared space inside each Kebele
Housing, **to avoid displacement**



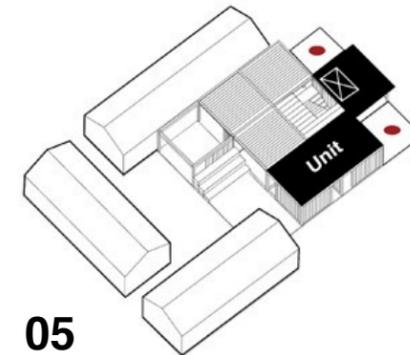
02



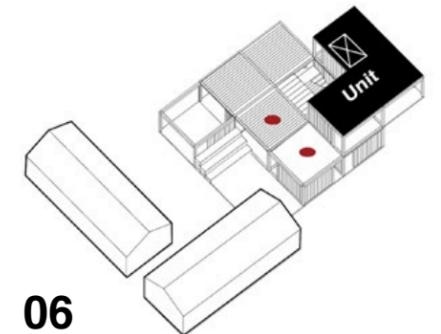
03



04

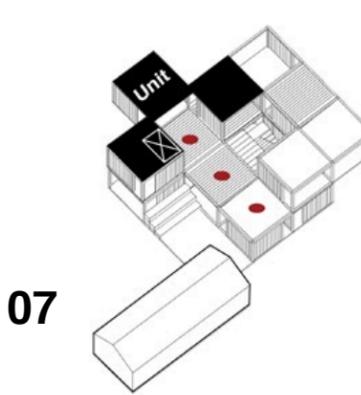


05

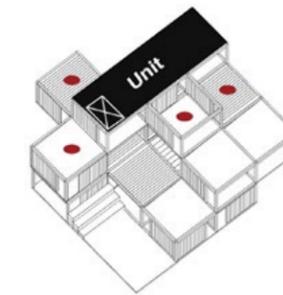


06

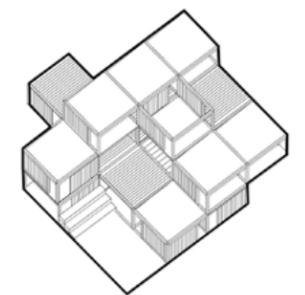
Outdoor spaces throughout the levels
to keep the 'outdoor space' component
in the original kebele housing typology



07



08



09

-50%
Coverage space → new units

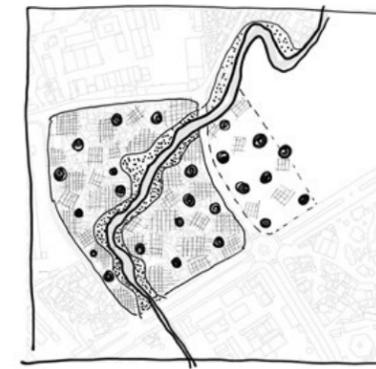
Design Intervention

01 Kebele Housing | Wet season scenario

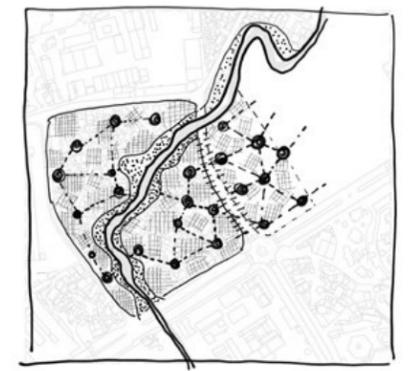
- Social Capital
- Ecological Capital



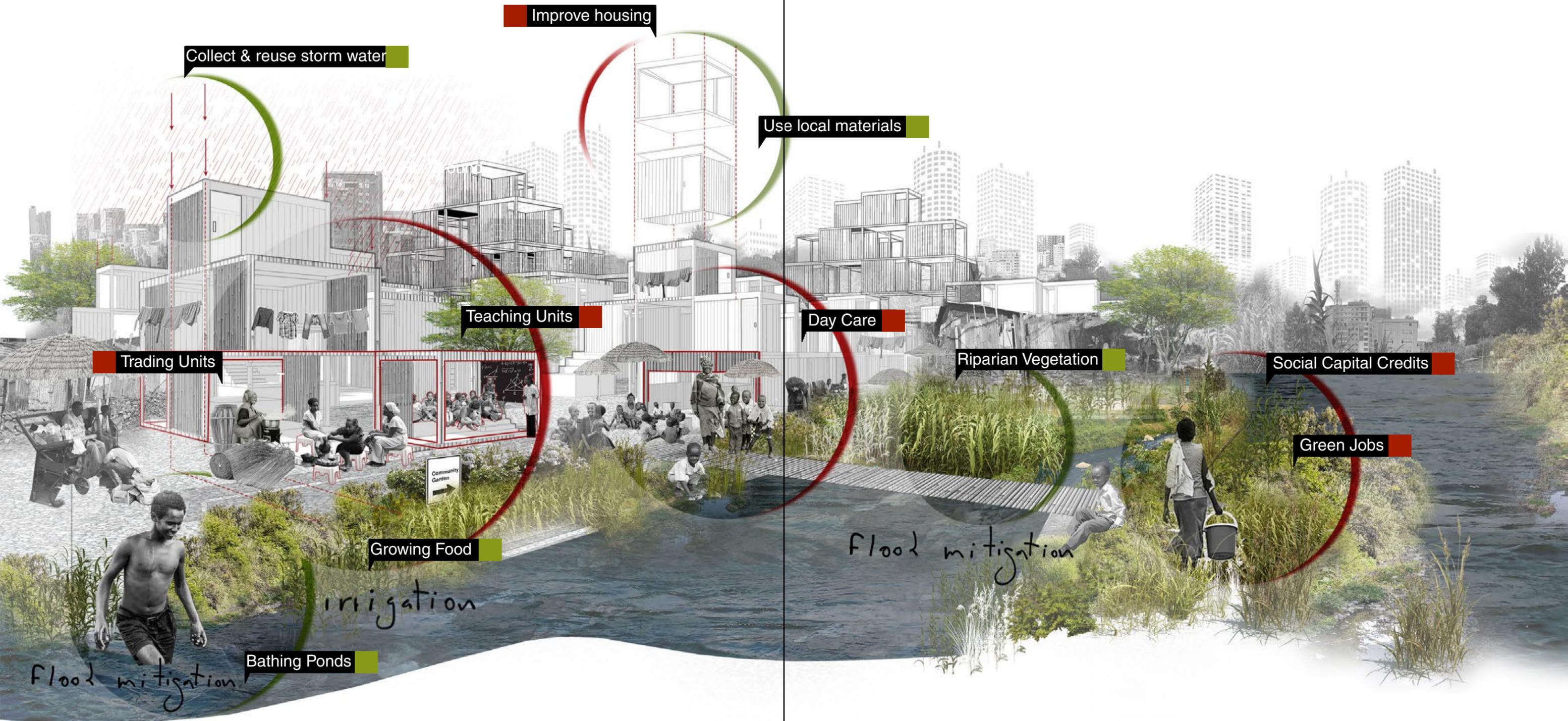
Trigger: Social nodes & local trade empowerment



Growth: Incremental housing Provided by the Edir



Network: connecting social and ecological infrastructure



Improve housing

Collect & reuse storm water

Use local materials

Teaching Units

Day Care

Trading Units

Riparian Vegetation

Social Capital Credits

Green Jobs

Growing Food

Flood mitigation

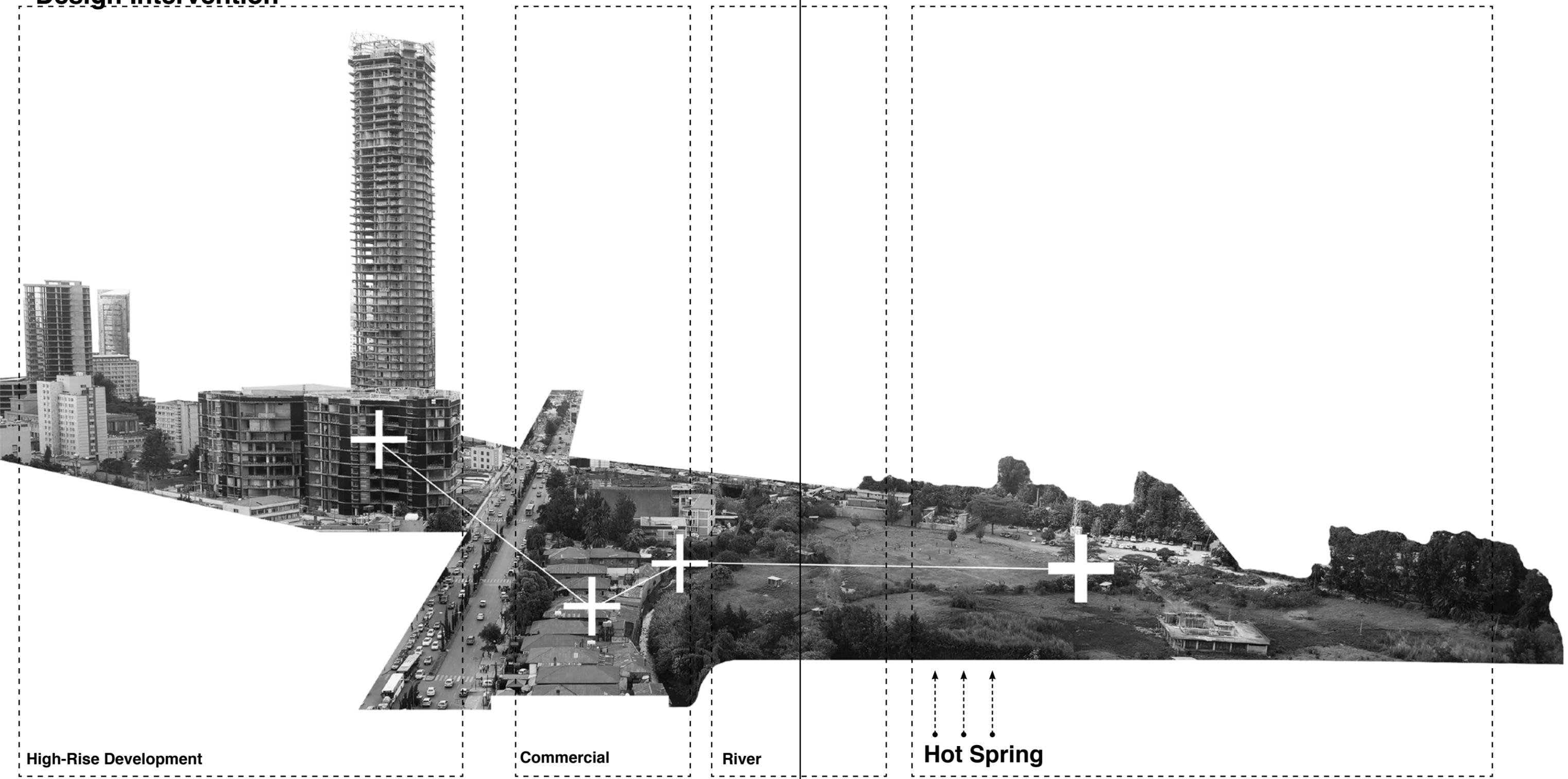
Bathing Ponds

Flood mitigation

irrigation

Community Garden

► Design Intervention



High-Rise Development

Commercial

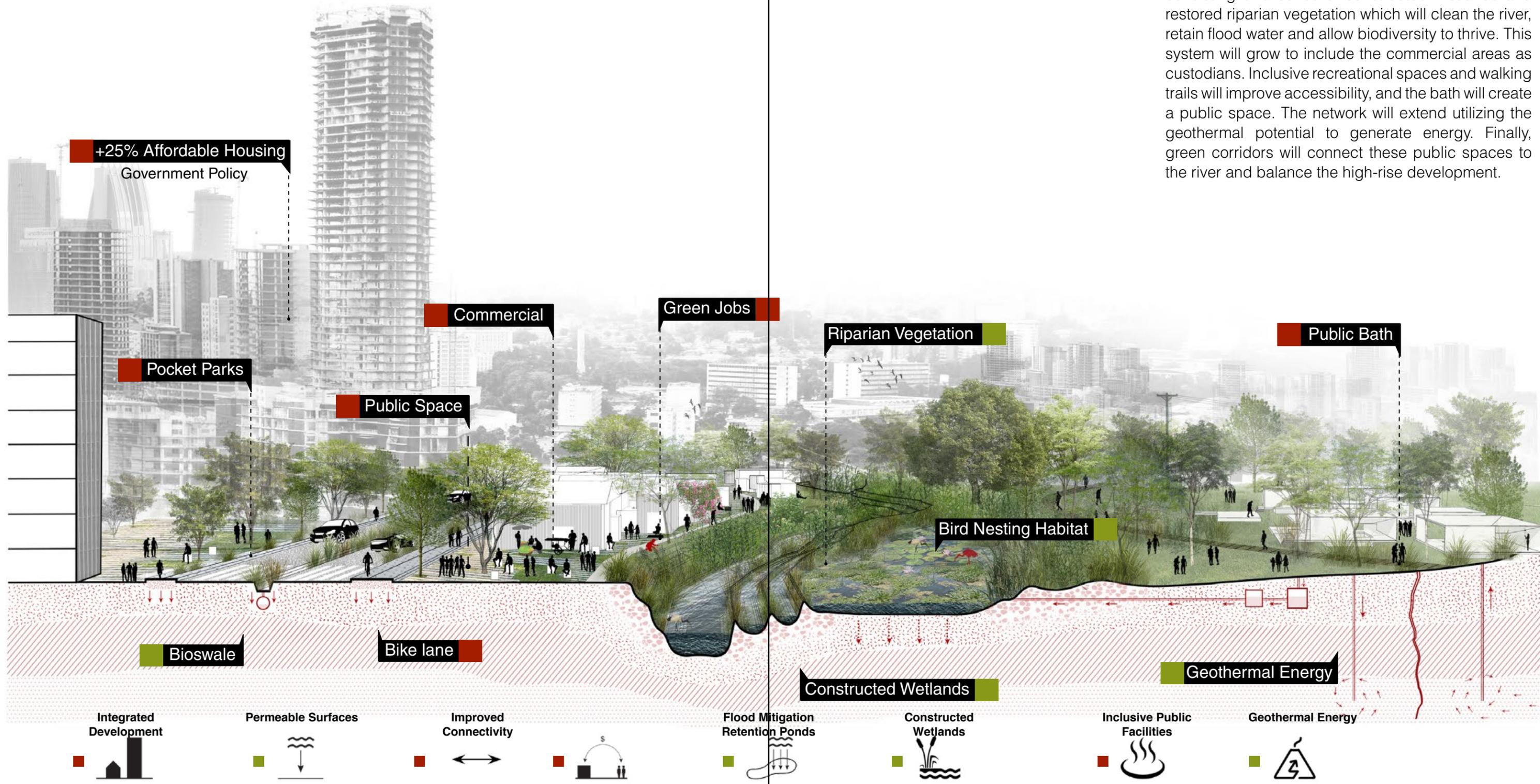
River

Hot Spring

Design Intervention

02 Filwoha | Integration Ecological to the city development

- Social Capital
- Ecological Capital

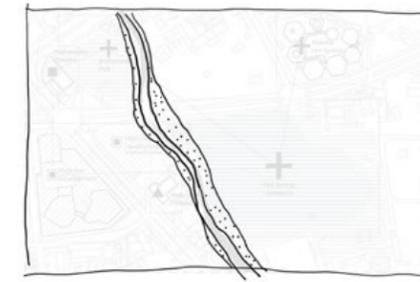


► The Filwoha hot springs formed the basis of the establishment of Addis Ababa. Change will be triggered through an ecological infrastructure consisting of a series of constructed Wetlands and restored riparian vegetation which will clean the river, retain flood water and allow biodiversity to thrive. This system will grow to include the commercial areas as custodians. Inclusive recreational spaces and walking trails will improve accessibility, and the bath will create a public space. The network will extend utilizing the geothermal potential to generate energy. Finally, green corridors will connect these public spaces to the river and balance the high-rise development.

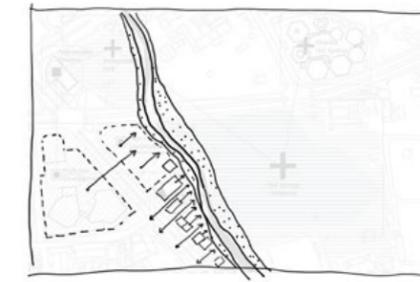
Design Intervention

02 Filowha | Recreational scenario

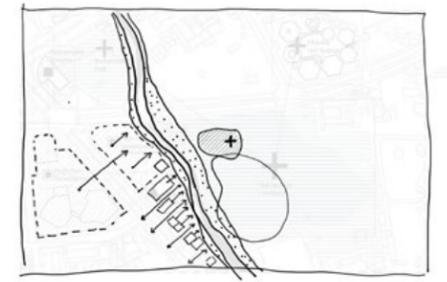
- Social Capital
- Ecological Capital



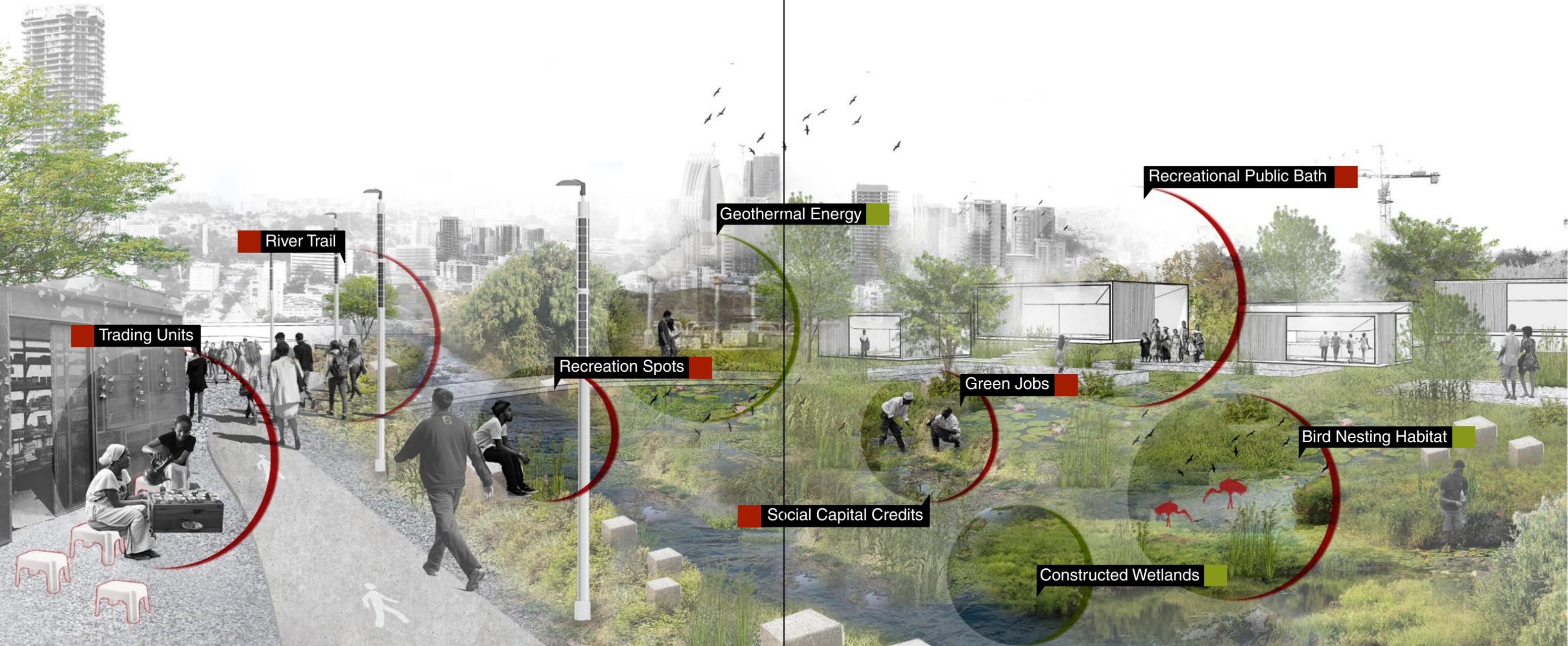
Trigger: Wetlands, Riparian Vegetation, Public Spaces



Growth: Weaving the River edges to the city fabric



Network: Integrated Development, Green Corridors, Pocket Parks



River Trail

Trading Units

Recreation Spots

Geothermal Energy

Green Jobs

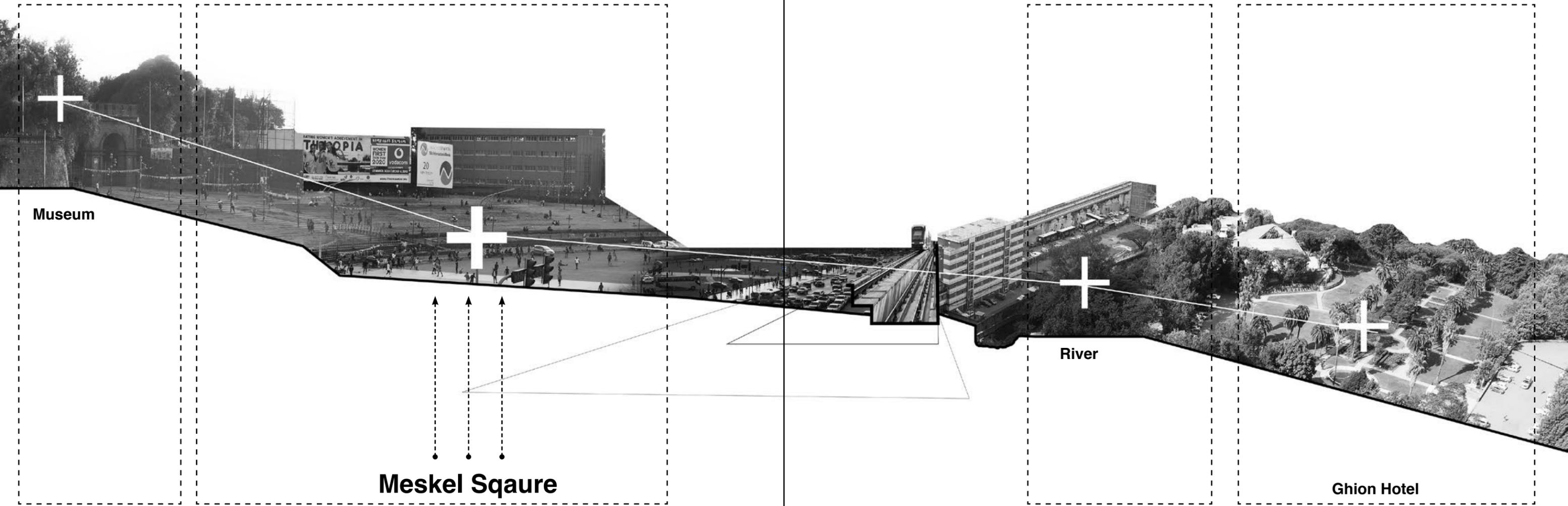
Recreational Public Bath

Bird Nesting Habitat

Social Capital Credits

Constructed Wetlands

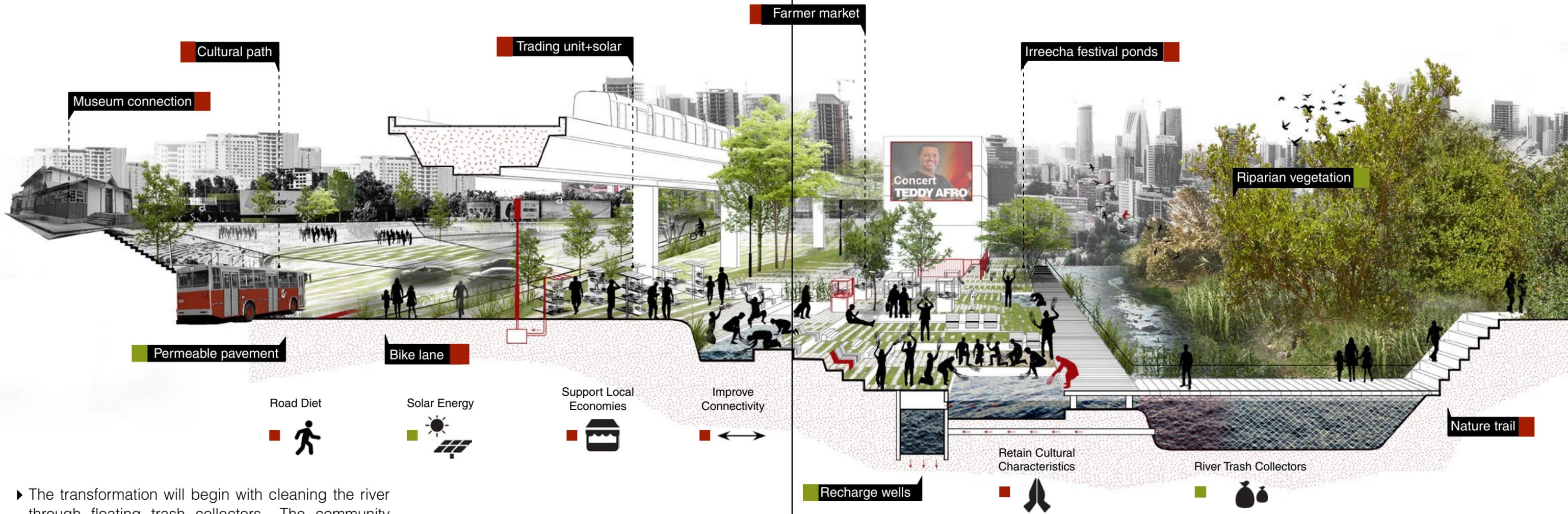
► Design Intervention



Design Intervention

03 Meskel Square | Improve connectivity and flexibility

- Social Capital
- Ecological Capital

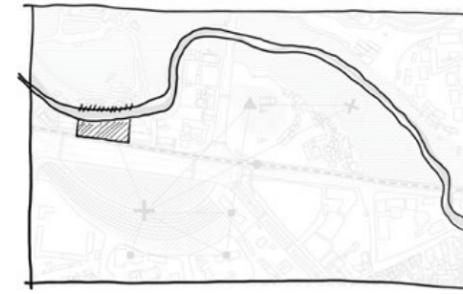


► The transformation will begin with cleaning the river through floating trash collectors. The community will earn social capital credits to assist in cleaning which can be exchanged later for services. Further, the stairs and recharge ponds will mitigate flood by increasing water holding capacity and facilitate the celebration of festivals. The wells will store water for use during dry season. New temporary markets and commercial areas along the river edge will empower the local vendors from Akaki and Kechene to create a vibrant water edge to the public.

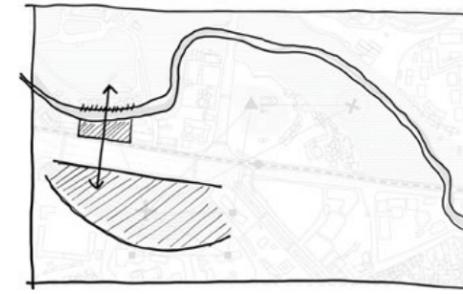
Design Intervention

03 Meskel Square | Cultural scenario

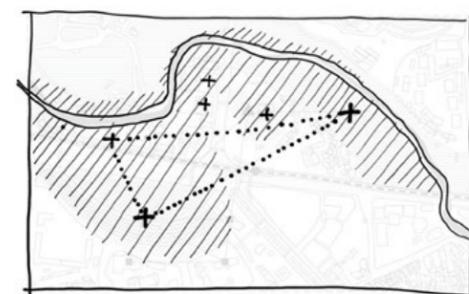
- Social Capital
- Ecological Capital



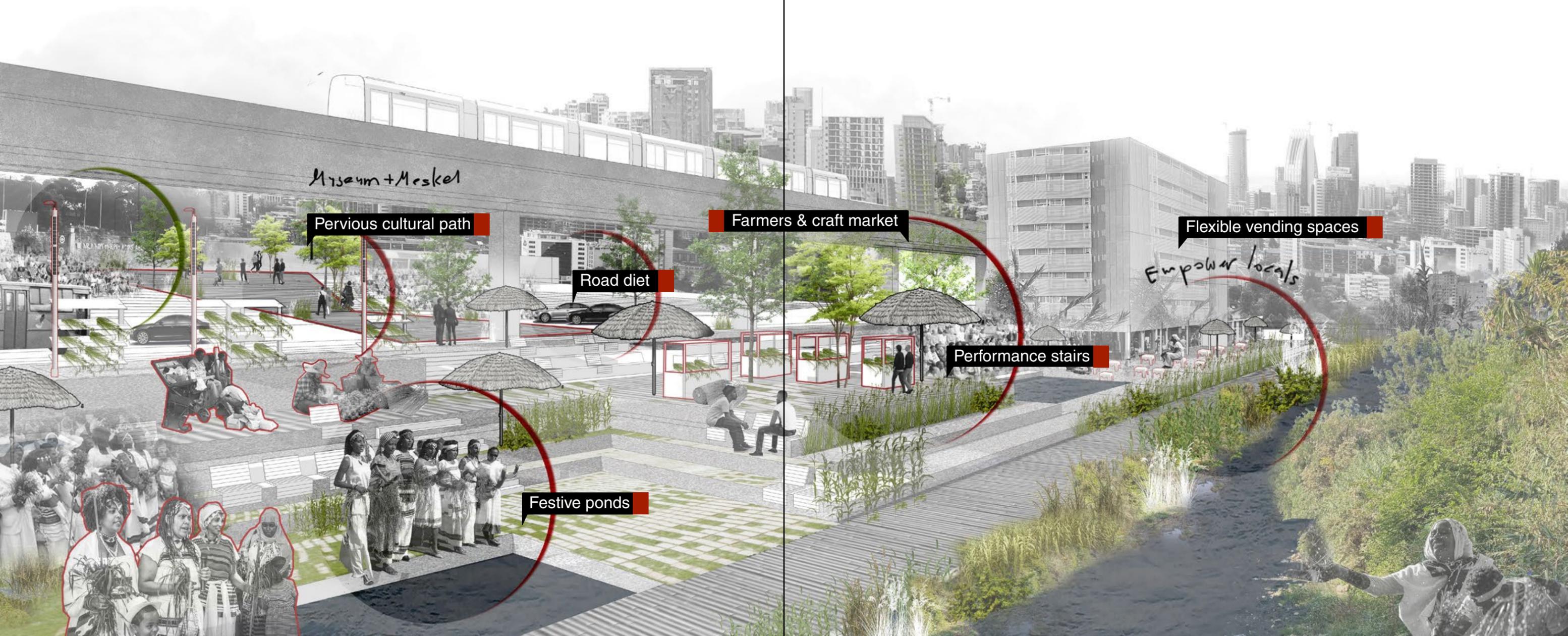
Trigger : Revitalize Vacant lots with local trade



Growth: Improve connectivity through road diet and pedestrianization

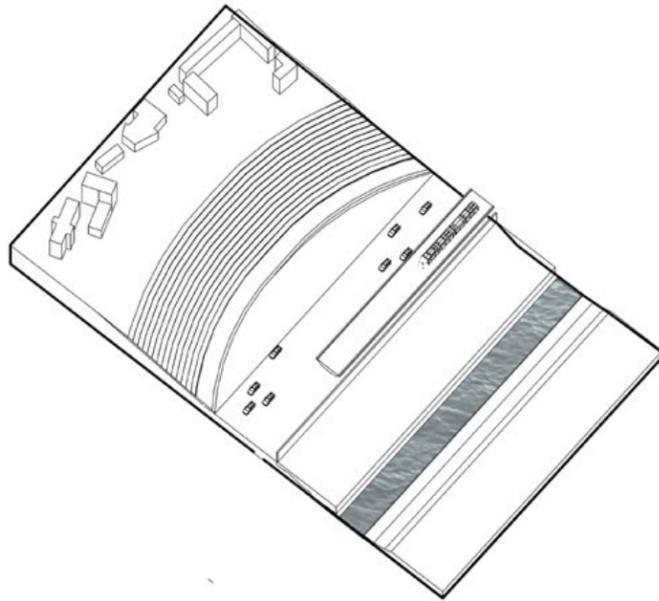


Network: Create a network of cultural nodes



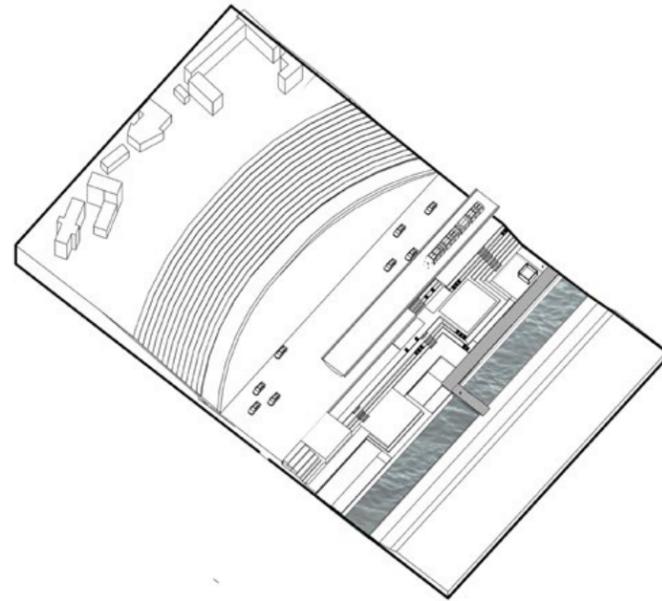
► Design Intervention

03 Meskel Square | Improve connectivity and flexibility



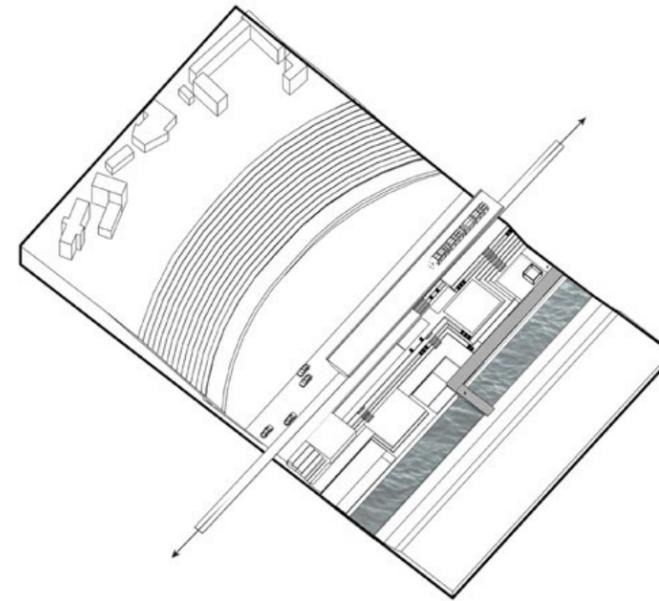
01

Existing condition. massive transportation
unaccessible river edge and disconnectivity.



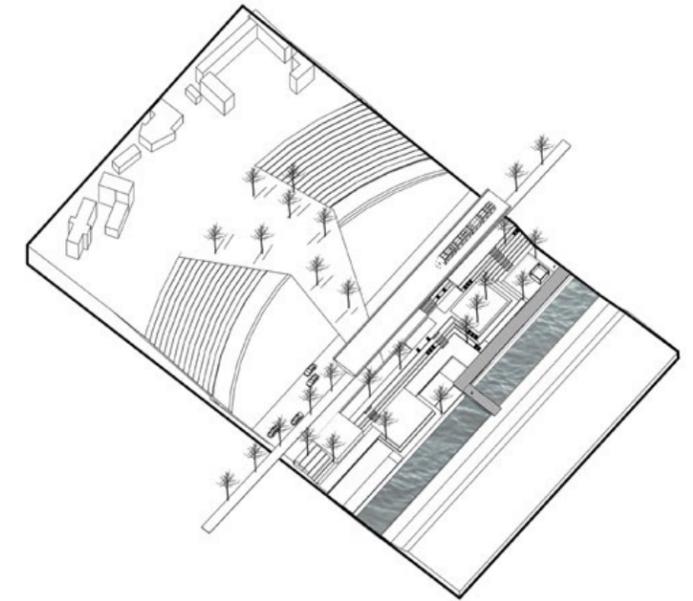
02

Re purpose of the vacant lot on the river edge to
facilitate religious functions ,daily leisure activities,
local trade and river cleaning mechanism.



03

Pedestrian connectivity between the square and
river edge through a road diet and continual
pavement.

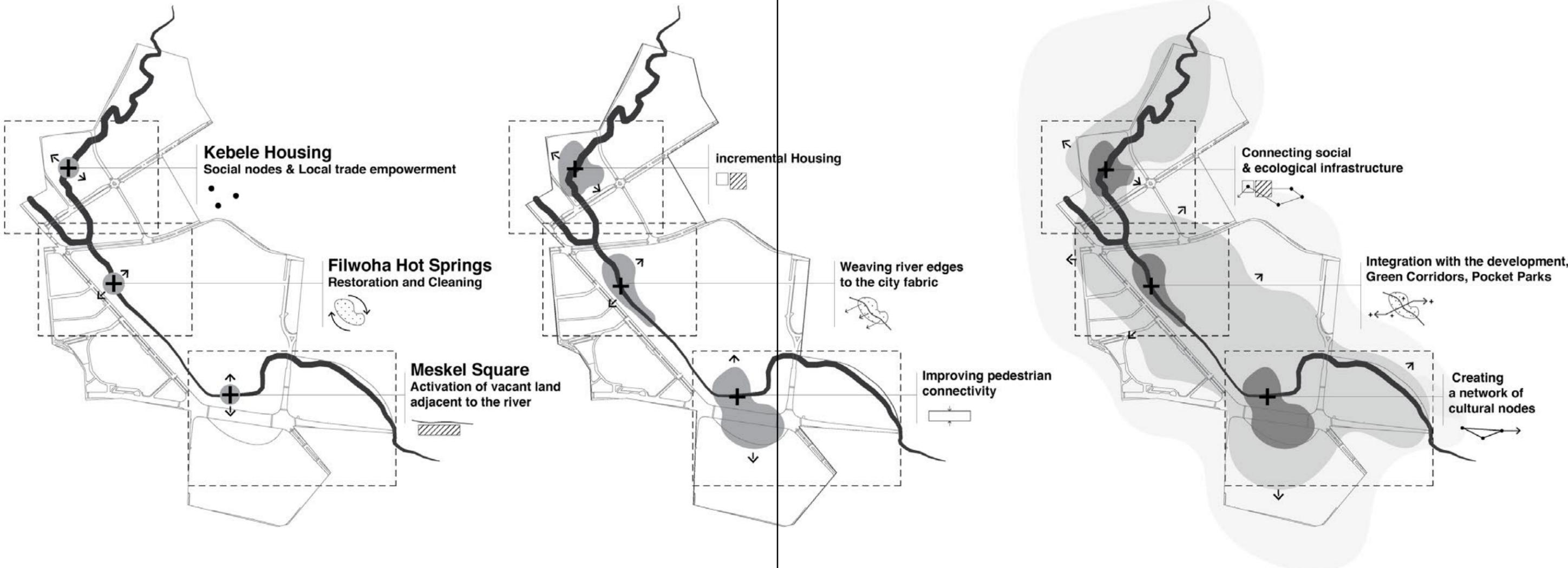


04

Gradually the public institutions like the Addis
museum, church and sports areas will network
with the river edge to form a flexible public realm.

Micro-Interventions rather than Top-Down Process

01 Growth of triggers projects to form an integrated Network



Trigger

Growth

Network

River Accessibility.
Cleaning the River.
Stewardship/custodianship.

Activating vacant lots adjacent to the river.

Integrating existing public spaces to the river.

Housing improvement & densification

Markets & social infrastructure.
Infrastructure (STP, geothermal energy).

Creating Green Corridors that reach out into the city.

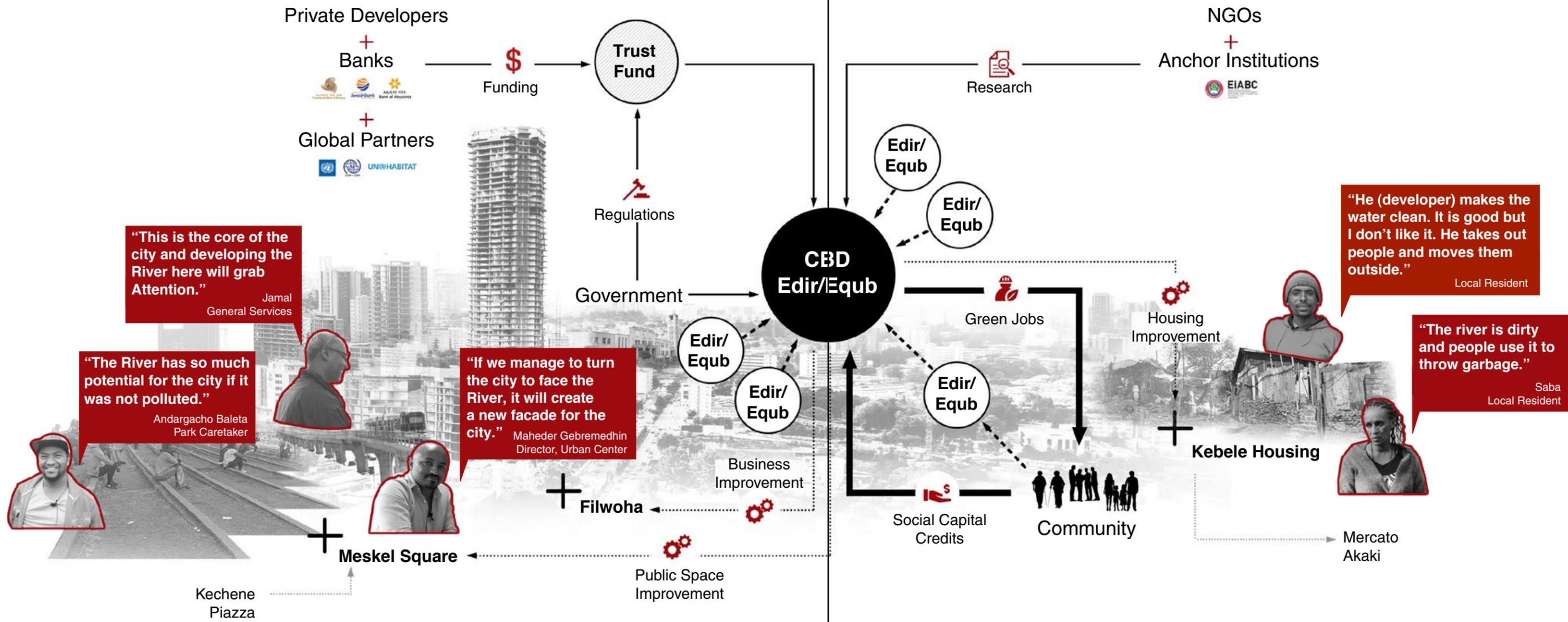
Improving transportation connectivity to the river.

Self-supporting networks.

Project Implementation

01 Strengthening existing social organization

The Edir and the Equb, are existing social cooperatives that serve as social nets for the community in times of stress. By reinforcing the scope and functions of the existing system, the organization will advocate for community needs and mediate fund flow. Taking advantage of the banks and global actors in the city center, the project will be realized through private-public partnerships to redirect investment, regulated by a fund trust. An apex organization consisting of leaders from multiple Edirs will come together to represent and support the community, through social capital credits earned through custodianship.



Strategic plan for sustainability and Inclusiveness

01 Through New ecological, social and development system

Connectivity.

Cultural & Social Network.

Economic Programes.

Incremental Housing & Integrated Development.

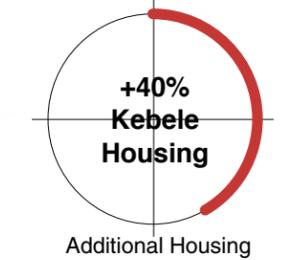
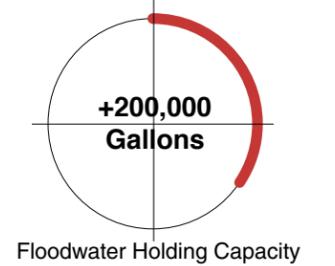
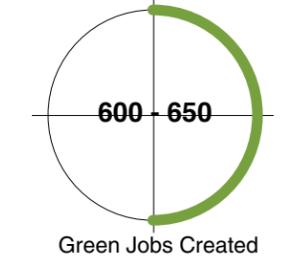
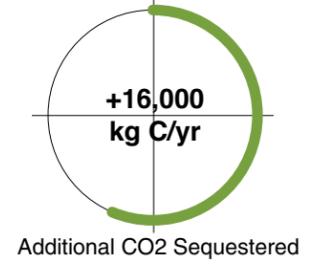
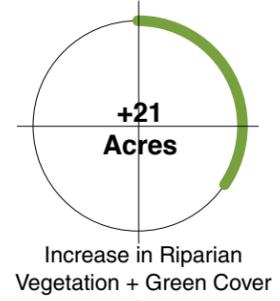
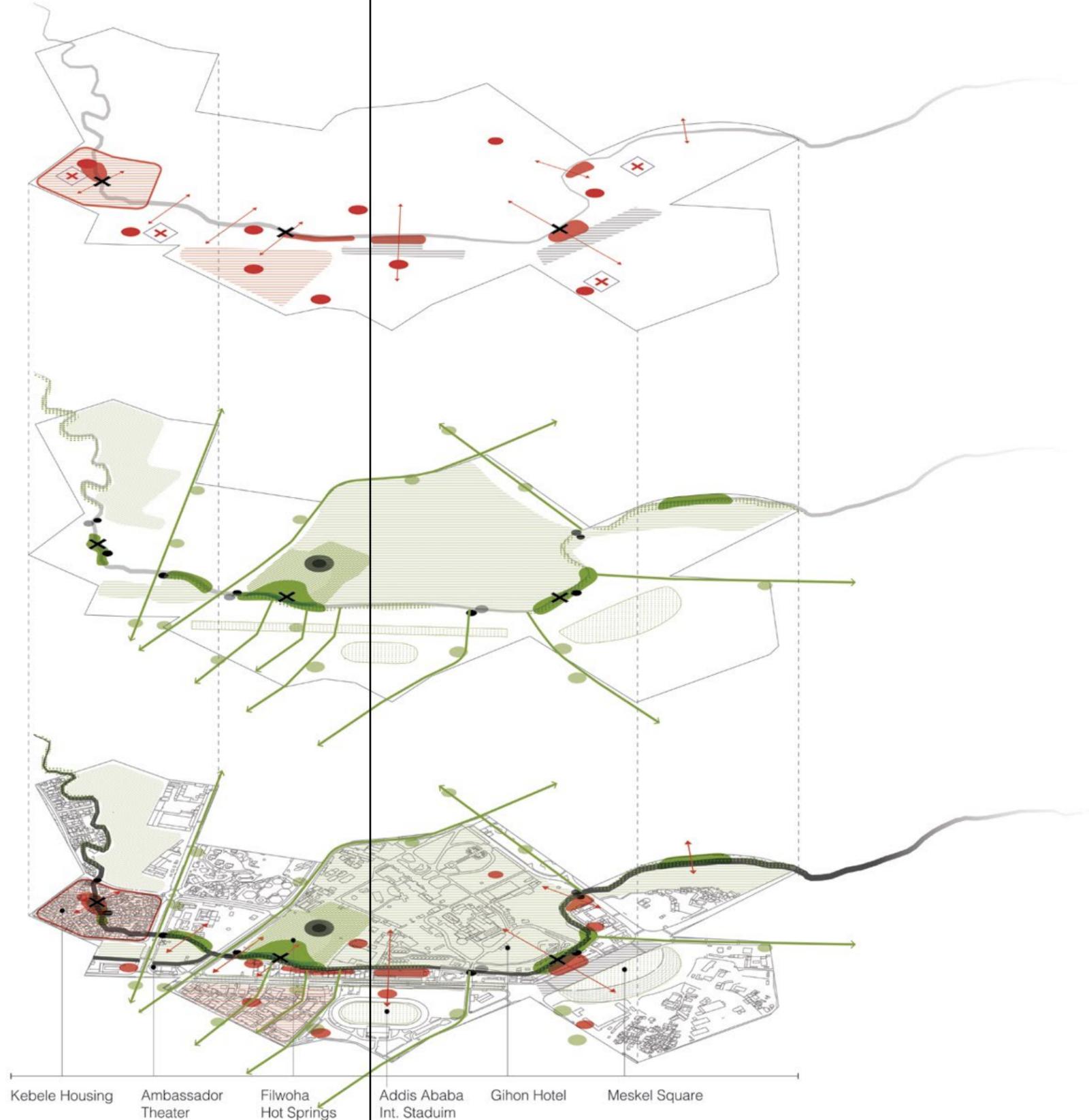
- Accessibility to the river
- ⊕ Community centers
- ⊞ Incremental housing
- ≡ Pedestrian zones
- Active recreational Spaces
- ⊞ Integrated development
- Markets

Ecological restoration and expansion.

Water cleaning, collection & recharge.

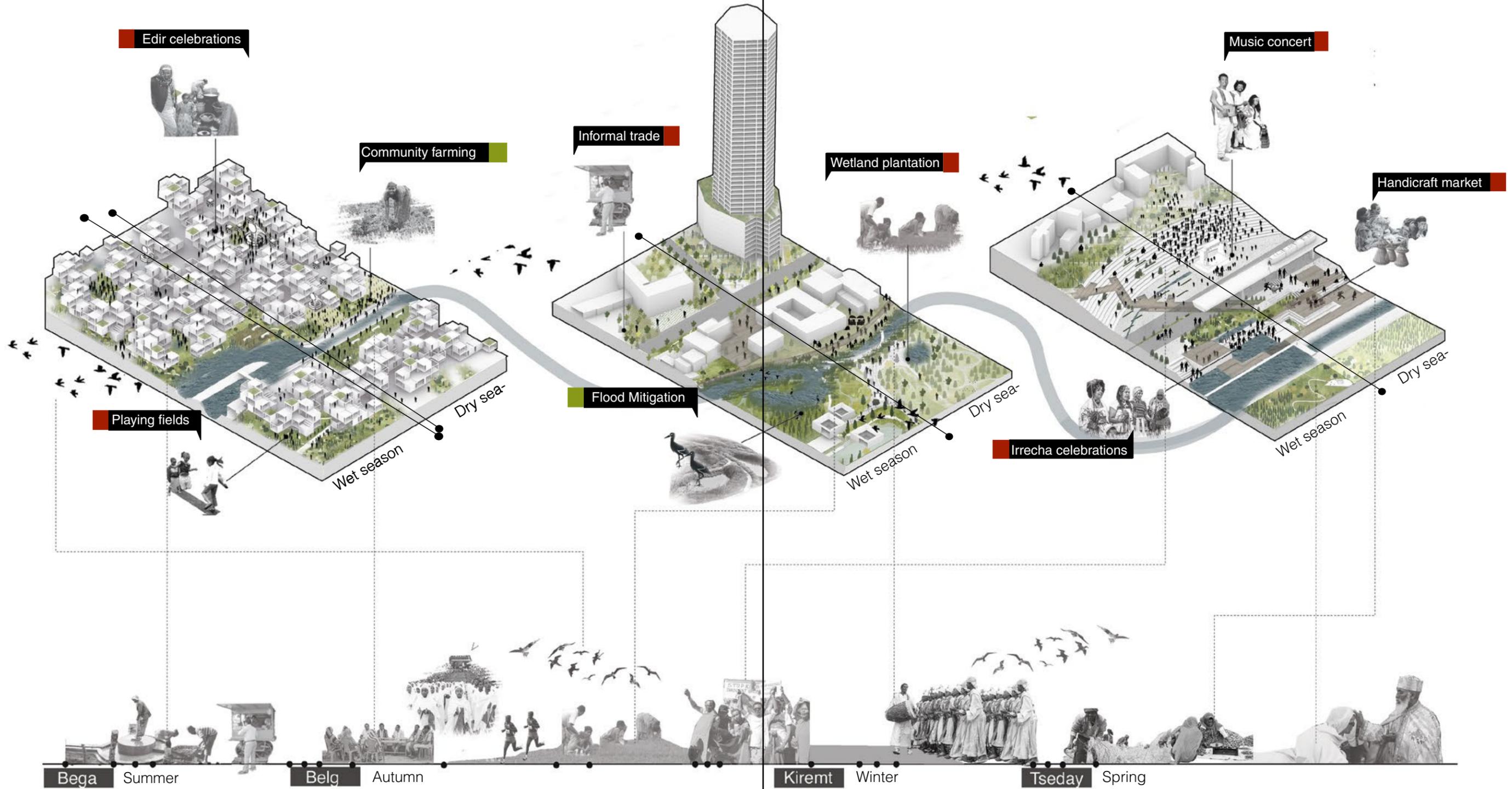
Sewage infrastructure.

- ↔ Green avenues
- Pocket parks
- ▨ Ecological
- ⊞ Riparian vegetation
- Retention ponds
- ▨ Permeable surfaces
- Geothermal
- STPs
- Trash collectors



Flexibility of design

01 Resilience and adaptive to growth



Envisioned Scenario

01 Balancing investment

\$\$\$

Foreign Investments to Benefit the Locals.



CBD Edir

02 Improving Housing Infrastructure

🏠 x2

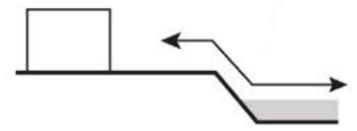
🏠 x2

🏠 x2

Peacock Park, Akaki

Kechene, Piazza

03 Accessible and inclusive Public space



Bantyeketu river

04 Ecological restoration



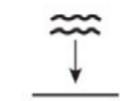
filter



reuse



clean



recharge



mitigate

04 GENTRIFIND

Design Tools

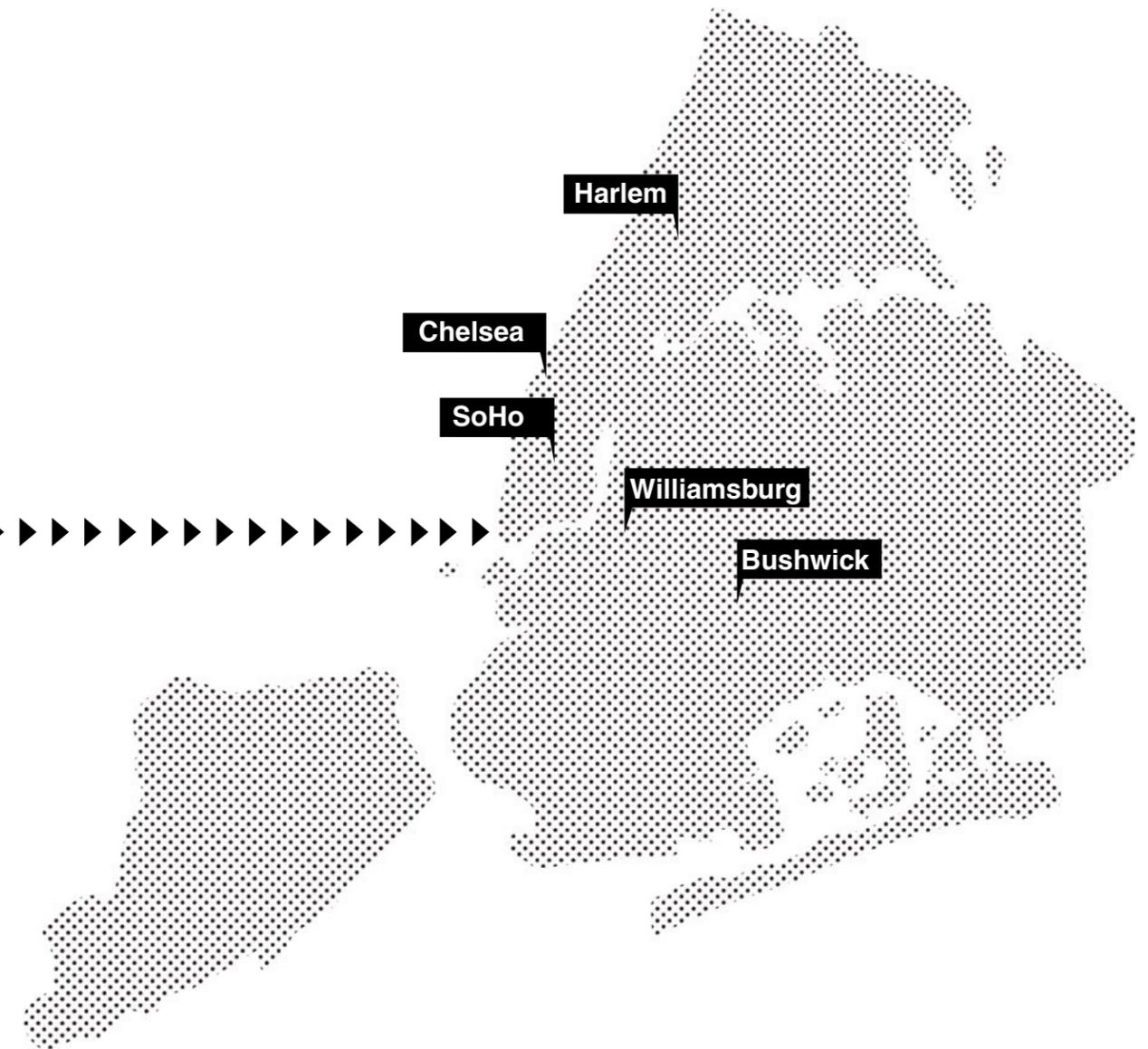


Can the process of gentrification be more transparent?

Gentrification has been the inevitable outcome of development. The Development has positive aspects such as being the engine of growth and the upkeep of the urban landscape. On the other hand, it can cause displacement. This is the starting point of the project - to create a tool that has the potential of identify gentrification. The tool helps to make the process of gentrification more transparent to the community, developers, and policymakers, in order to increase awareness both top-down and bottom-up.

To identify gentrification we developed a prototype which is a data driven platform based on GIS, Grasshopper software and Google teachable machine and programmed it to identify gentrification according to specific parameters that was studied in advance according to existing case studies in the city. The outcome of the tool could assist in three main fields: Policies - Top Down) ,awareness and education - Bottom Up and spatial Design -Both Top Down and Bottom-up.

For the video of the project: <https://medium.com/metatool/gentrifind-ade05f3af045>



Fall 2020





The Tool

The first step is collecting data according to the defined parameters through a combination of census data (GIS). This data is then filtered by a set of 'rules' from earlier case studies of gentrification. The overlapping areas between the different parameters - indicates the areas at risk. The Google teachable machine is used as a mediator, which identifies change in human movement, gestures and makes the tool interactive for people to use.



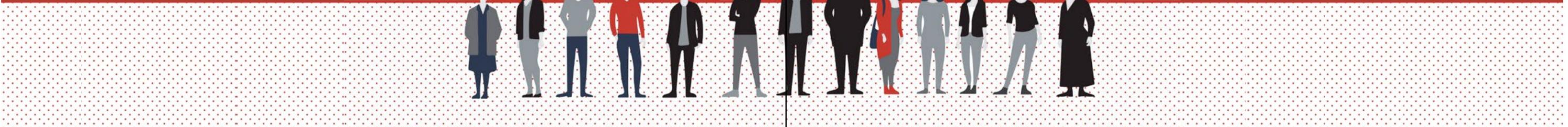
So many new high-end projects

Two new Starbucks have Opened at my street

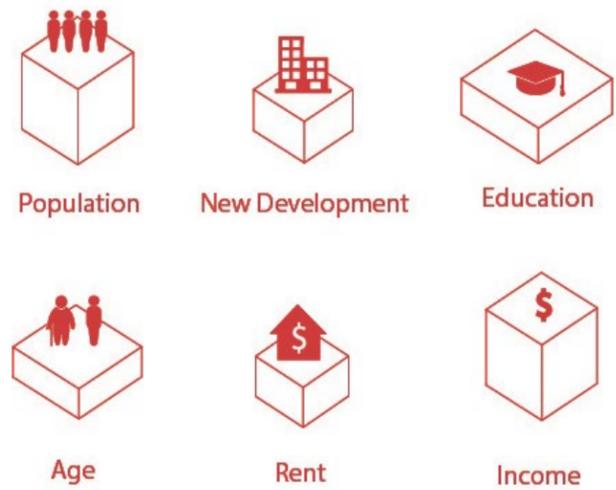
It has become so expensive to live here!

Toni closed! Now when I mend my shoes?

GentriFind



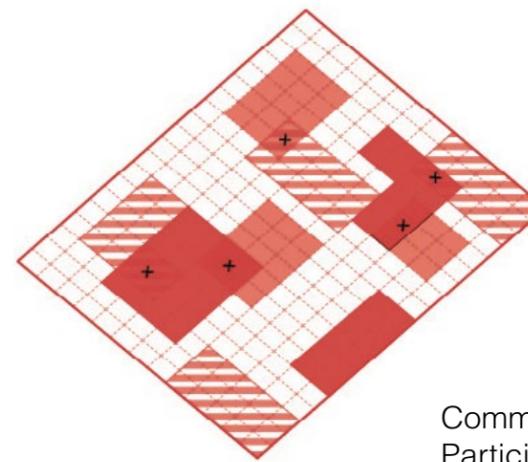
Define Parameters



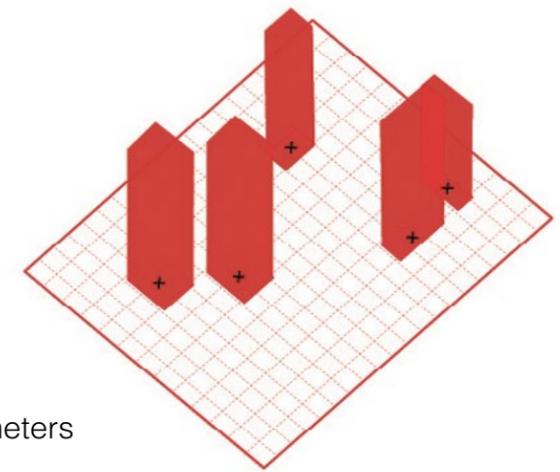
Ratio

- 0% < X < 20%
- 5% < X < 17%
- 0% < X < 20%
- 5% < X < 80%
- 1% < X < 11%
- 3% < X < 47%
- 2% < X < 50%

Overlapping

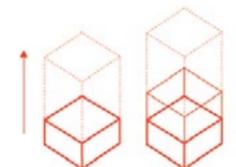


Gentrification Alert



Community Participation

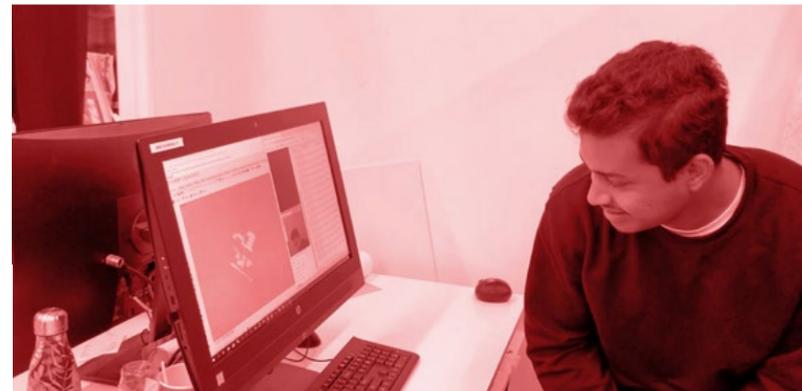
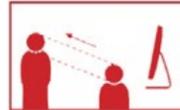
Parameters



Community interaction

01 Using Google Learning machine to translate the motion into data

01 Age



02 Education



03 Population



04 Income



02 Street intervention of the Gentrifind tool

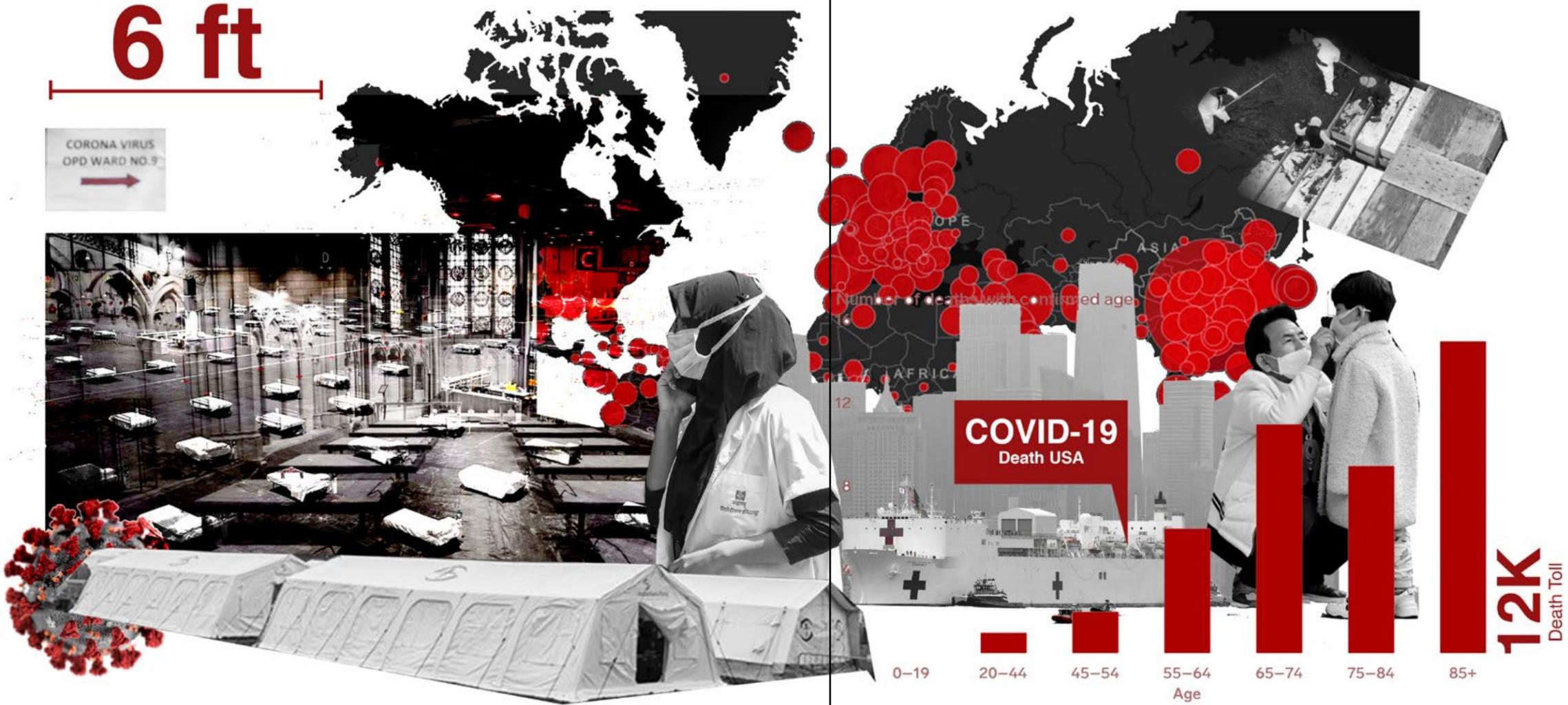


The interactive device will collect data from the neighborhood for inclusive future development, as well as provide information about future developments that could indicate gentrification.

City crises | Pandemic

COVID 19

More than 170K people were died, (12K in New York) and more than 2.5M people where infected. Besides the physical element of it, pandemic has a direct impact on the economy.



► Natural Disasters

Hurricane Sandy

It hit in 2012, and caused a damage of nearly 128 billion \$. In this crises 285 people died and over 7.5 M people left without power.



\$128 B
Damage

HURRICANE SANDY

285
Death Toll

7.5 M
Without power

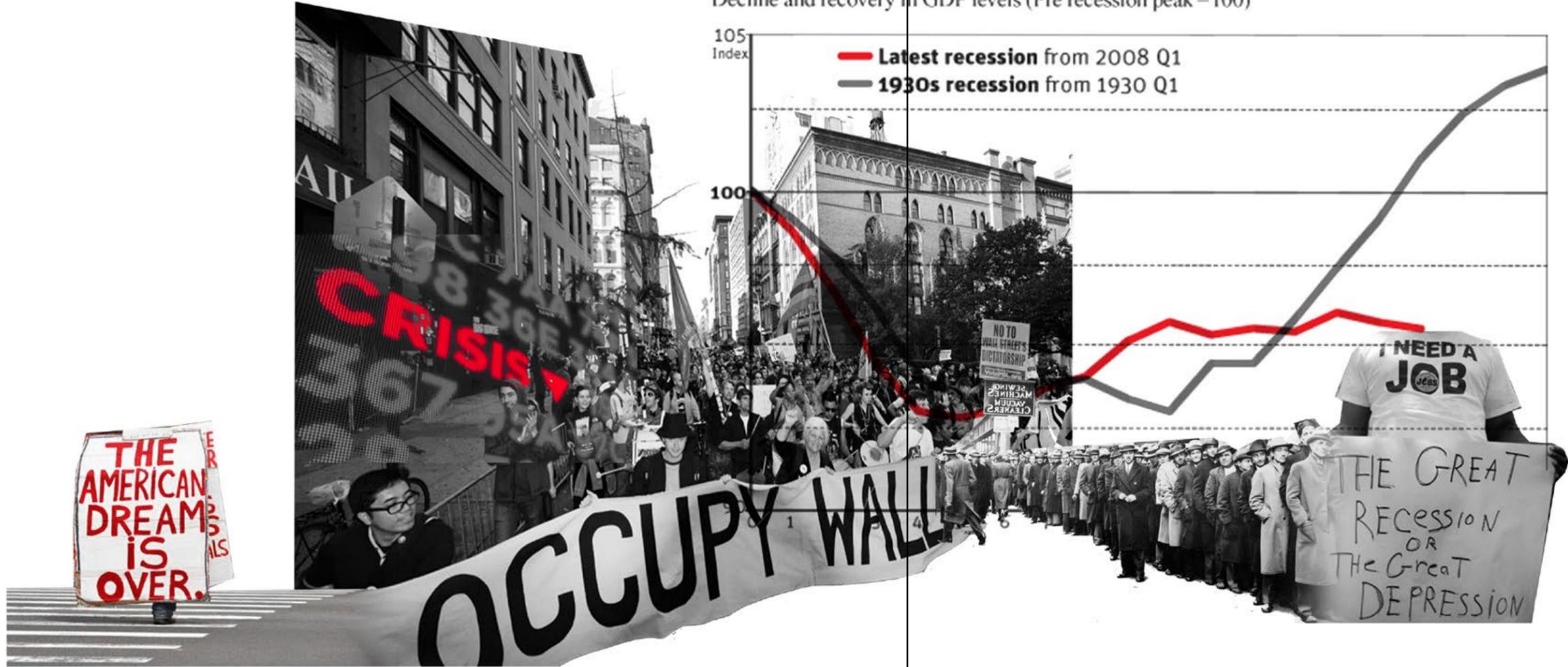
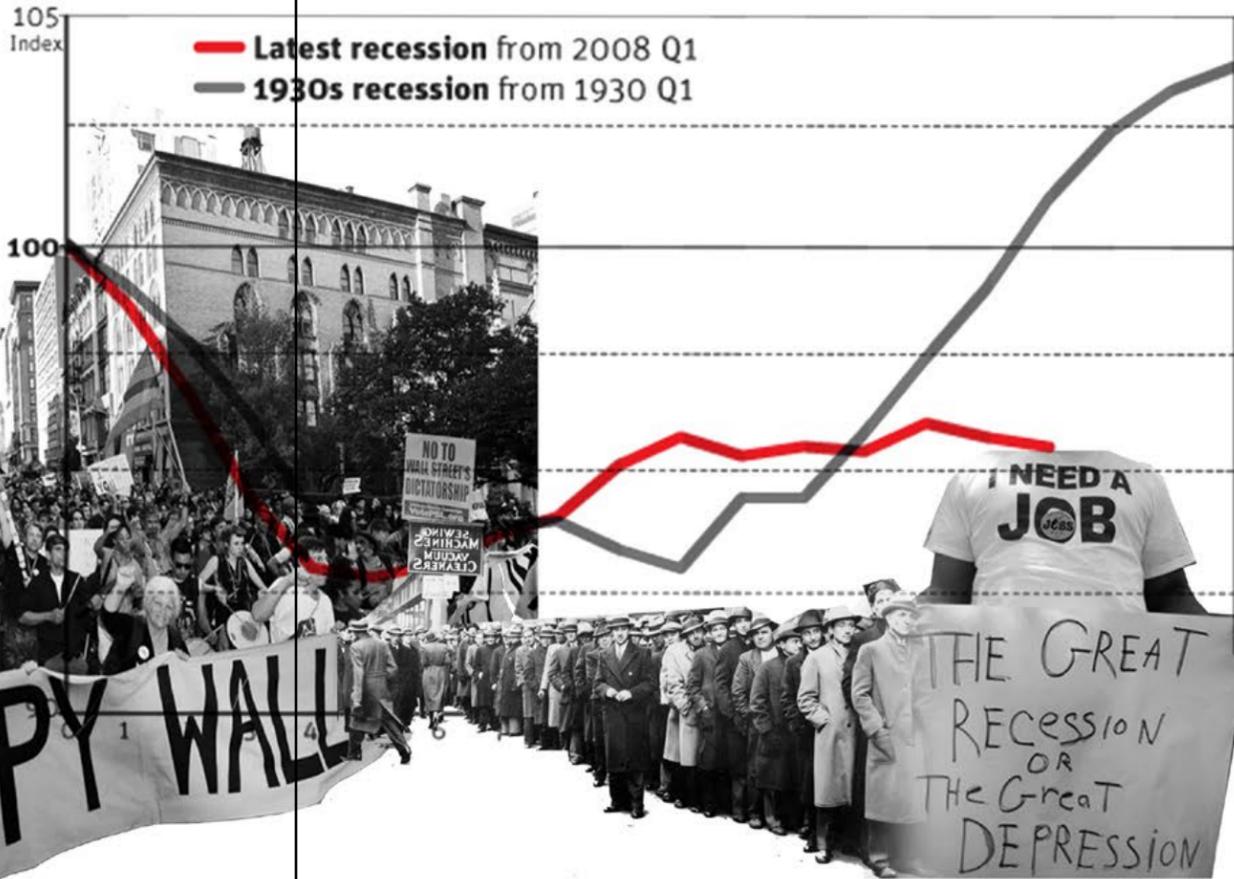
Recession

1903 | 2008

The Great Recession refers to the economic downturn in 2008, after the bursting of the U.S. housing bubble and the global financial crisis. American households lost roughly 19 trillion\$ of net worth as a result of the stock market plunge.

The Great Recession

Decline and recovery in GDP levels (Pre recession peak = 100)



Unemployment

Company's Bankrupt

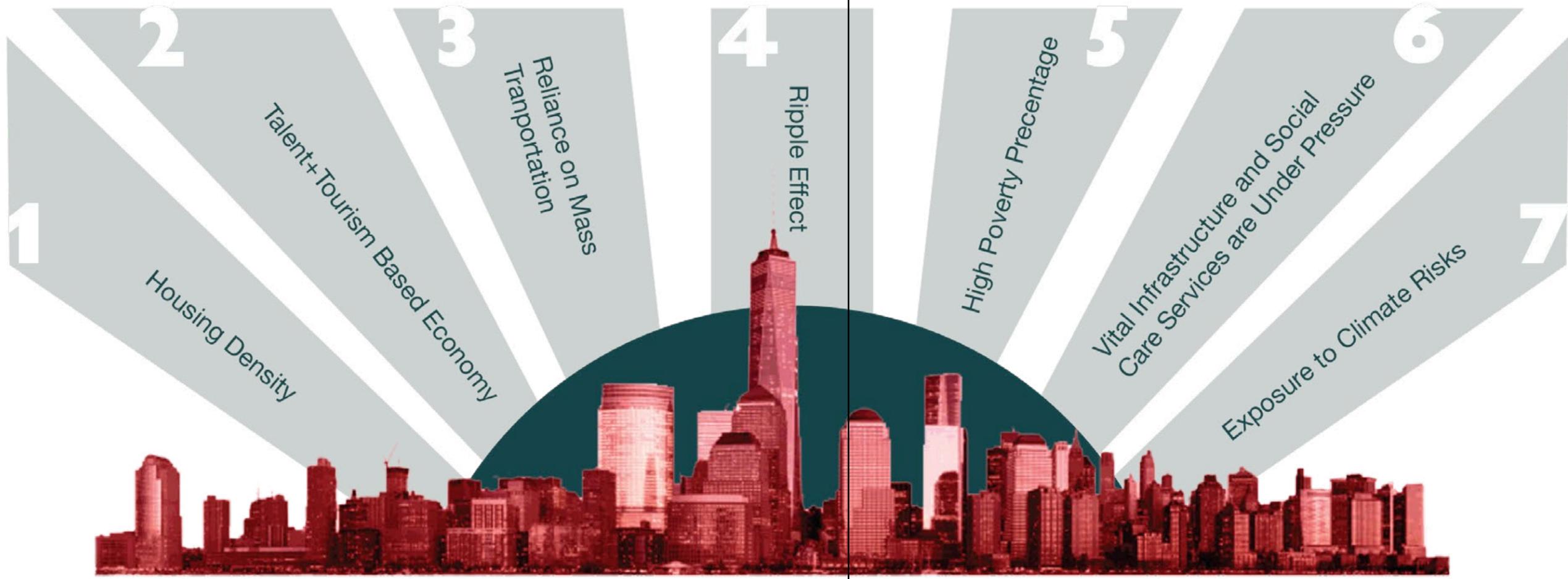
When one big company/factory is being shut down and all at once, large amount of people losing their jobs.



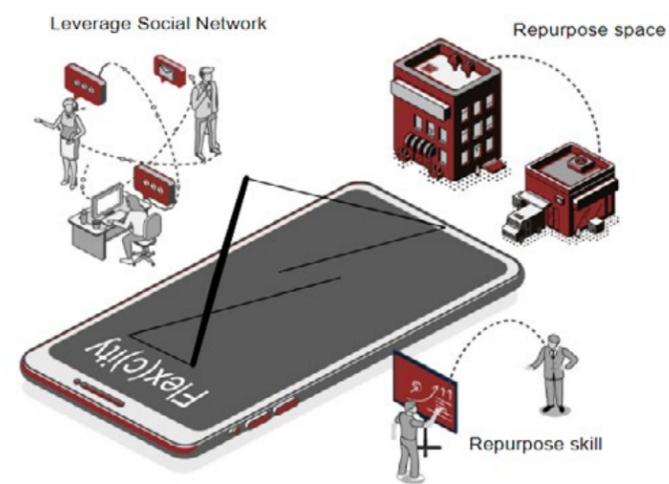
190K
Jobs loss

105

► Why Mega Cities?

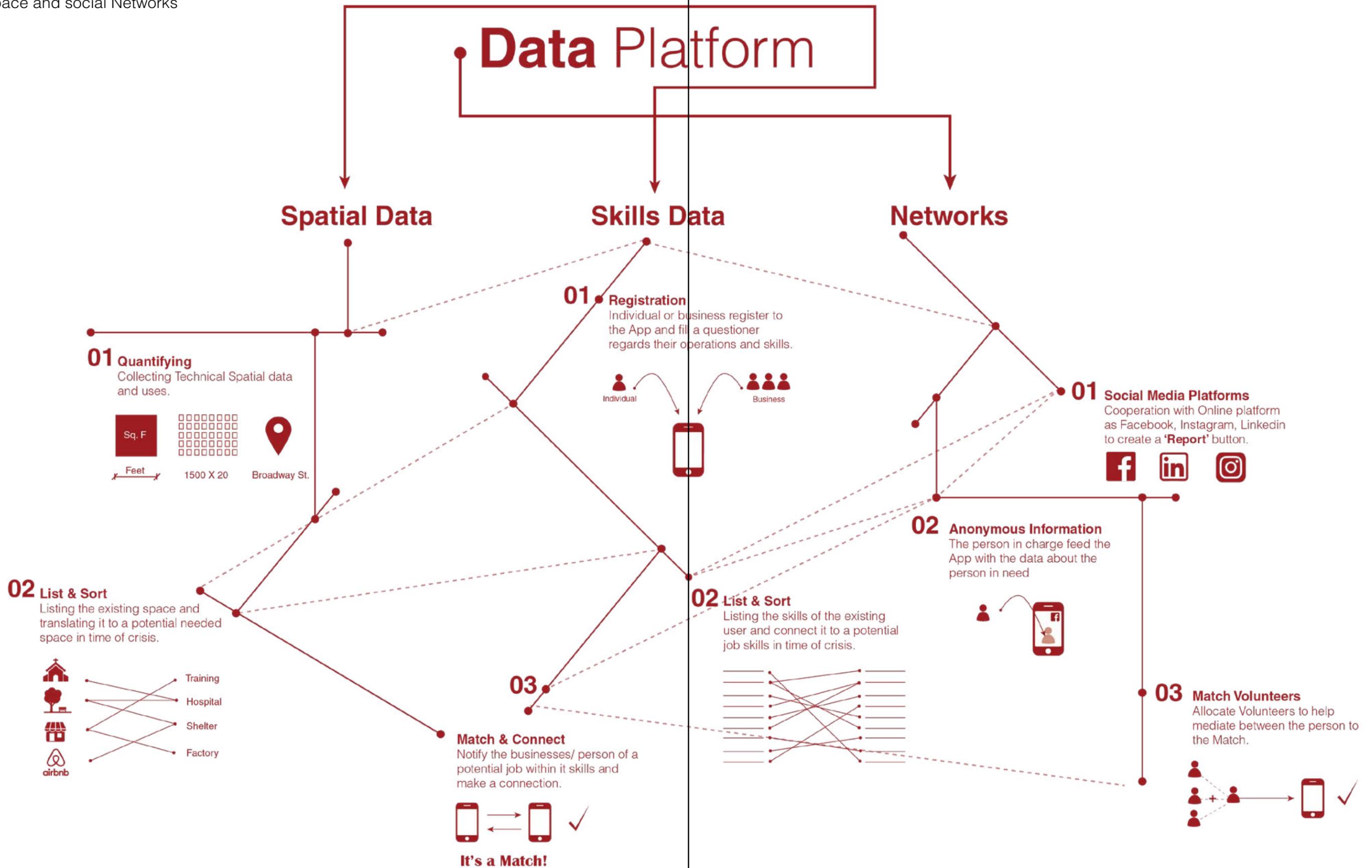


- **What** A platform that mediates between the existing Infrastructure to a new Need.
- **Why** The Mega City tend to get affected the first and the most.
- **When** Effective at time of a Crisis.
- **How** “City matchmaker”- matching the need to the infrastructure by data collection.
- **Who** City residents, public sector and experts through private public partnerships.



► The Platform

Skills, Space and social Networks



►Interface

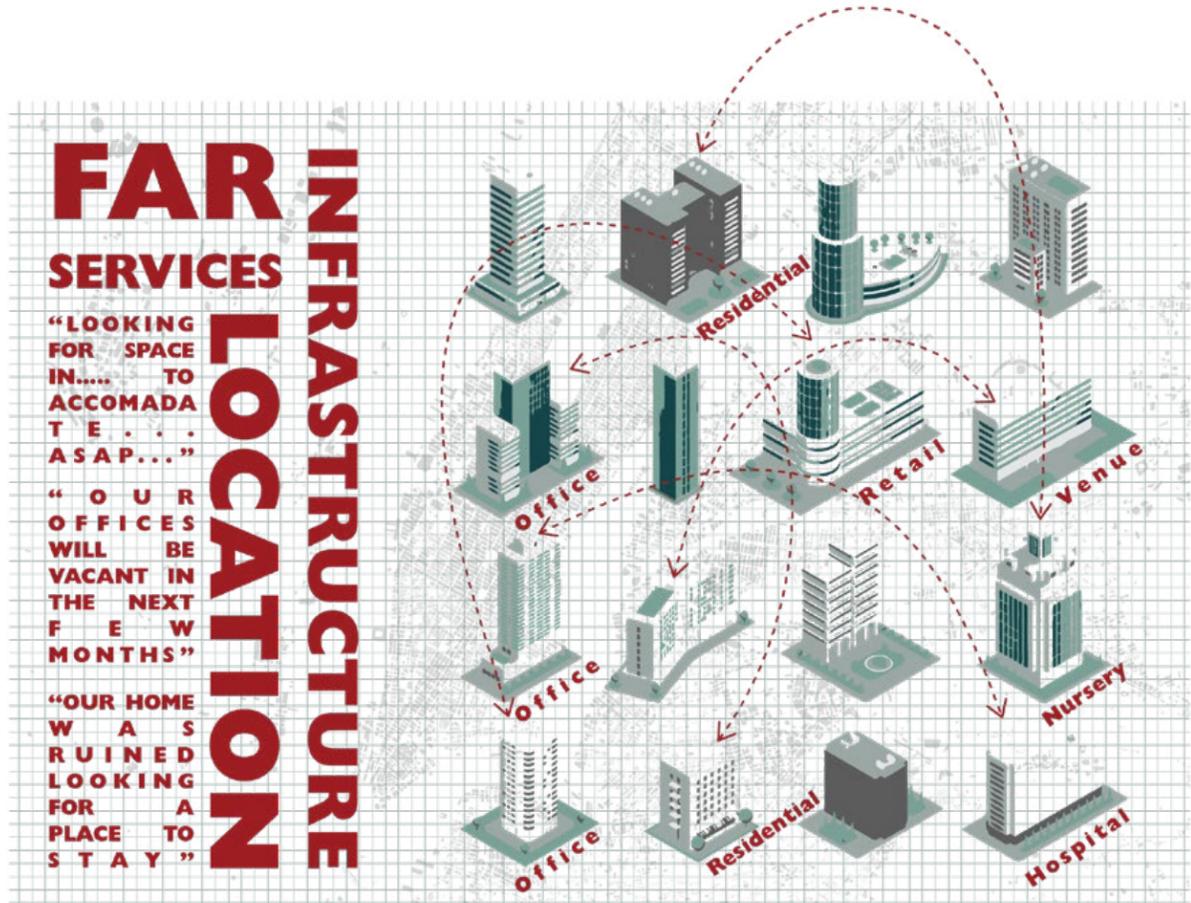


► The App has multiple applications. First, it can observe how user can get resources for multiple crises. The user can choose the specific crisis to gain more information. Then, the interface helps to connect with people of other vocations and skills. Moreover, it assists in finding shelter- both private volunteers and public institutions can post space opportunities. Lastly, the App also helps network and building teams to provide immediate action.

Applications

01 Real Estate

Real estate as a commodity can be divided into 4 sub characteristics one can trade with: floor area, the infrastructure that comes with it, the location of the property and some sub services such as cleaning service. The platform allows to trade those in a more flexible and temporary way than how rent or lease agreements are being done today.



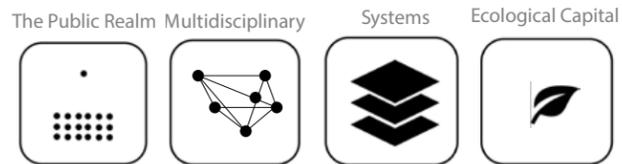
02 Skills

An important part of the App is understanding the multiplicity of vocations and skills that the App can support. During the time of crisis people of different professions can assist , train and add value to help improve lives.



06 SOLAR DRIVEN DESIGN

Design Tools

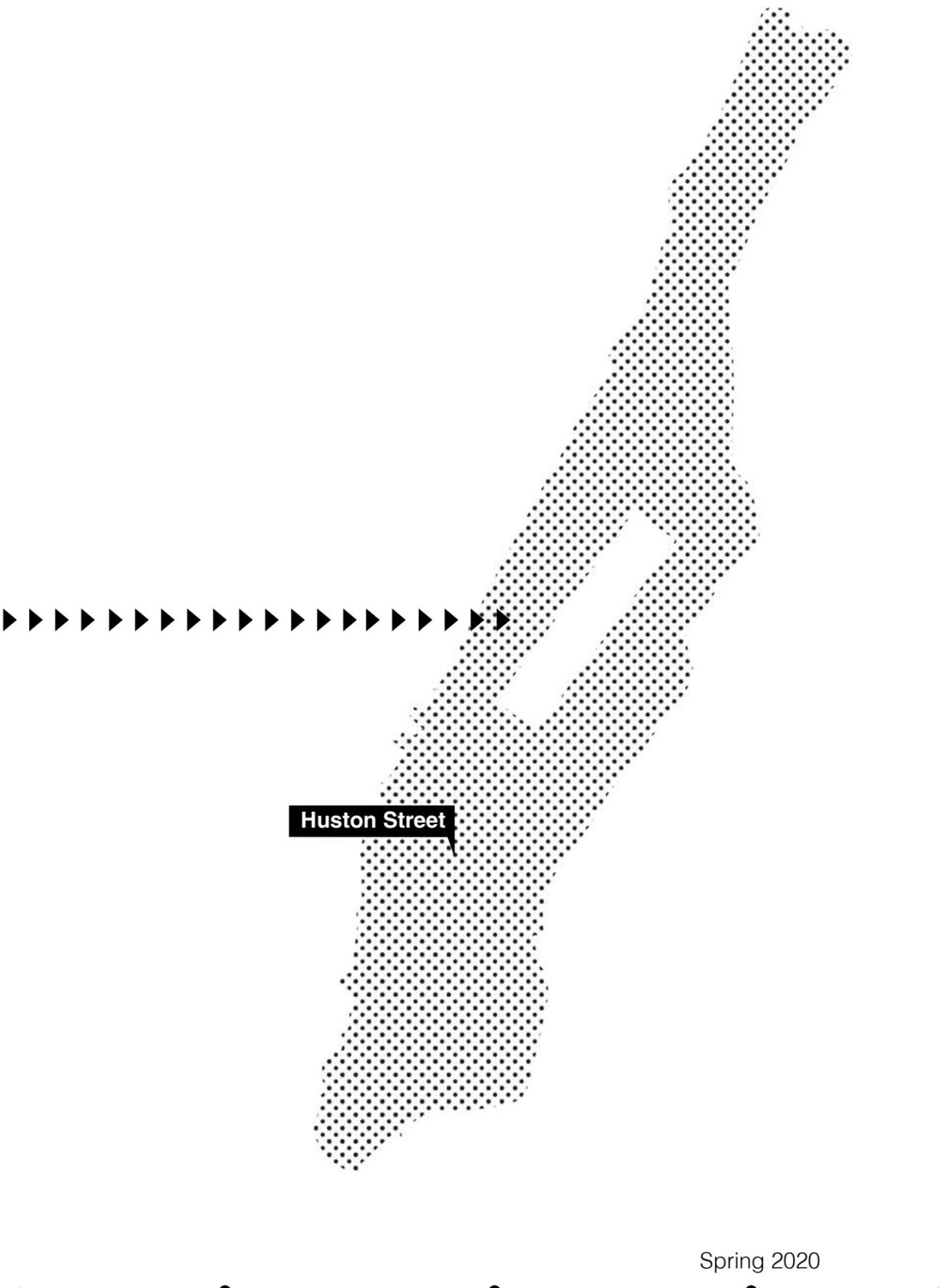


This project aims to optimize massing and facade design through radiation analysis, sunlight hour and shadow study to design a sustainable, climatologically oriented and energy efficient building. These studies are conducted through ladybug analytical tools. Three main studies were conducted: Sunlight hour Analysis , Radiation study and Shadow Study. The first, refers to hours calculation of direct sunlight received by input geometry or massing using sun vectors. The main inputs include climate, direction , geometry, context, orientation study parameters and sun vectors and the output received helps select geometry receiving greater hours of sunlight. The second study, refers to the heat radiation from the

sun and external environment temperatures cause the heat to build up within the facade structure. For this reason, it is important to prevent that critical components from overheating. Once the total radiation is obtained, masses can be altered to receive least radiation in summer and maximum radiation in winter to reduce dependence on mechanical heating or cooling. The shading analysis helped to compare shadow impacts of various alternatives in respect to the context, and to determine the optimal alternative which has the most natural light outdoor public space during winter.

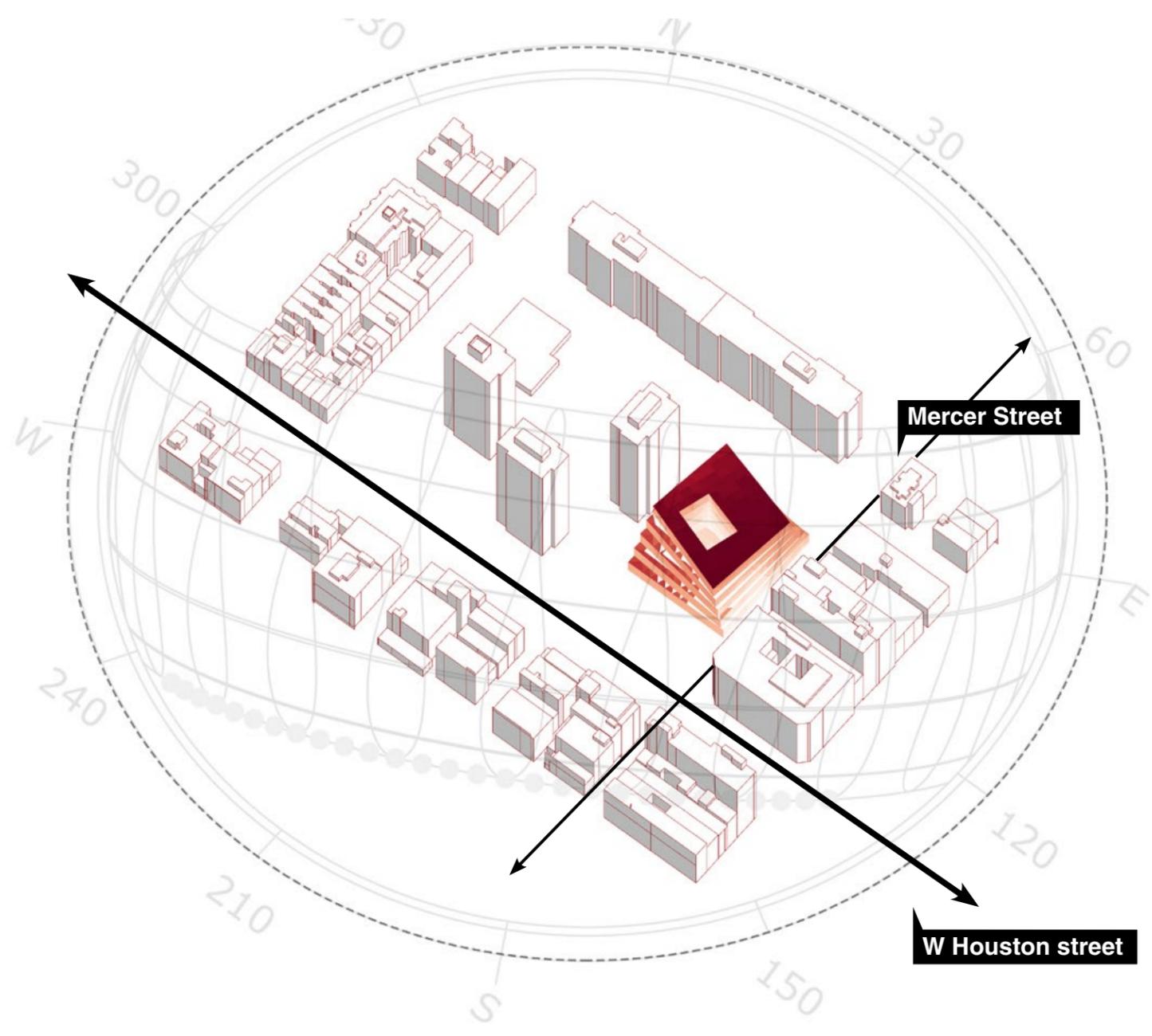
Huston Street

Spring 2020

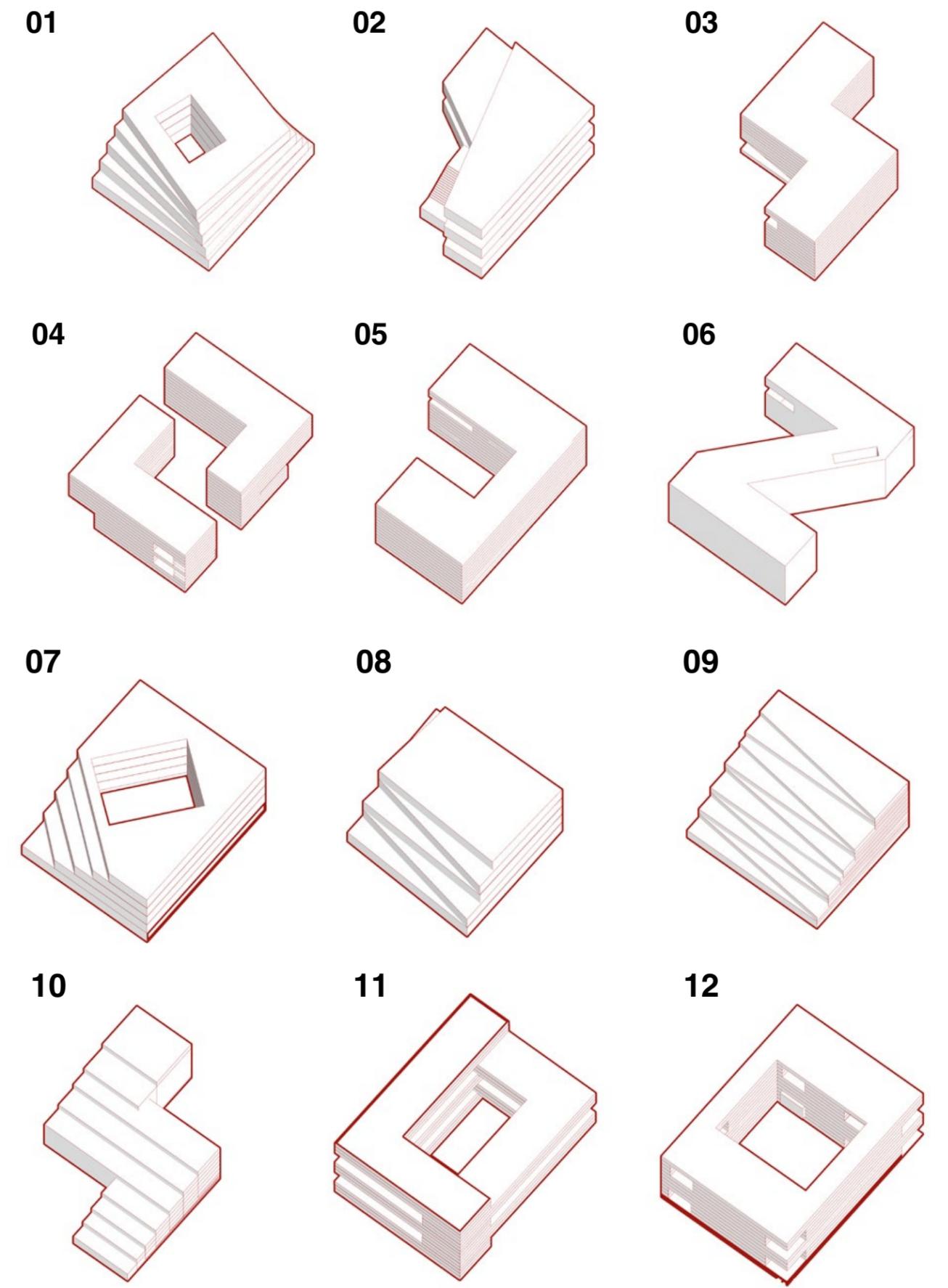


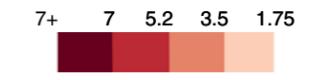
Context

01 W Houston Street

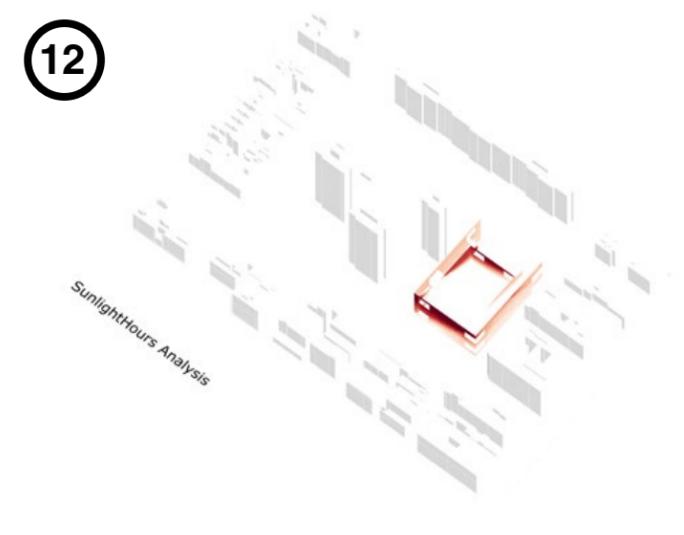
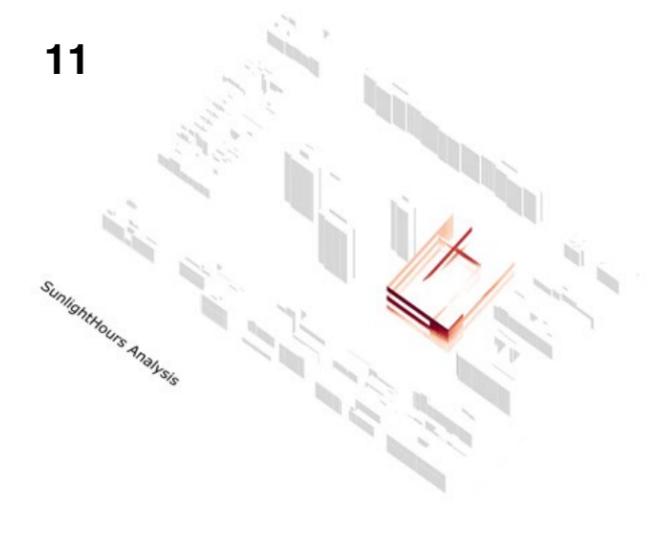
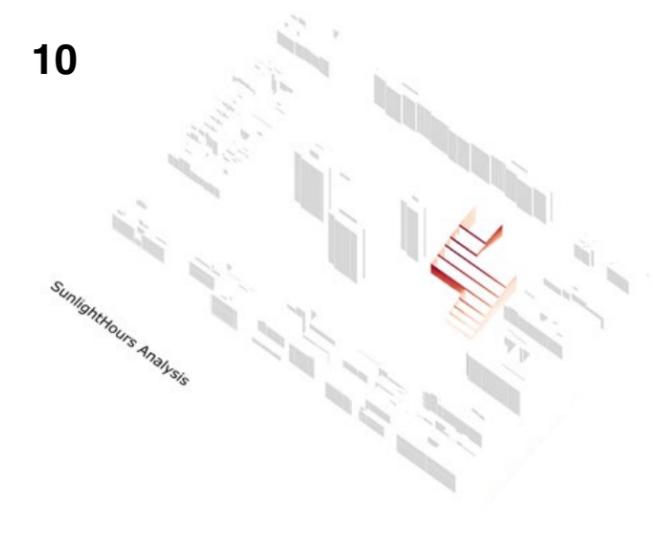
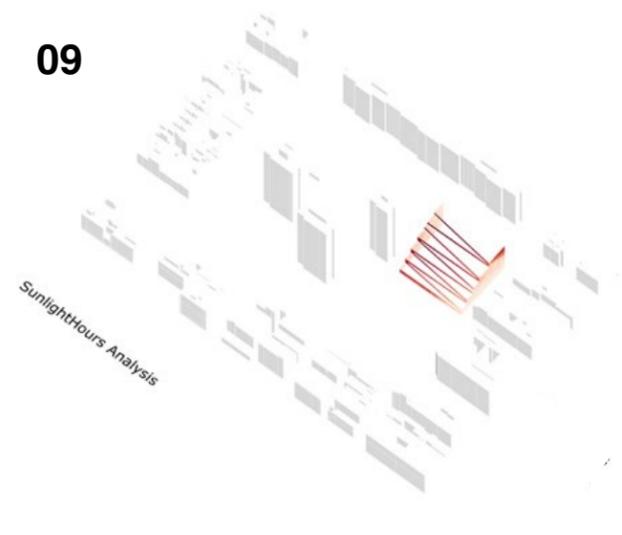
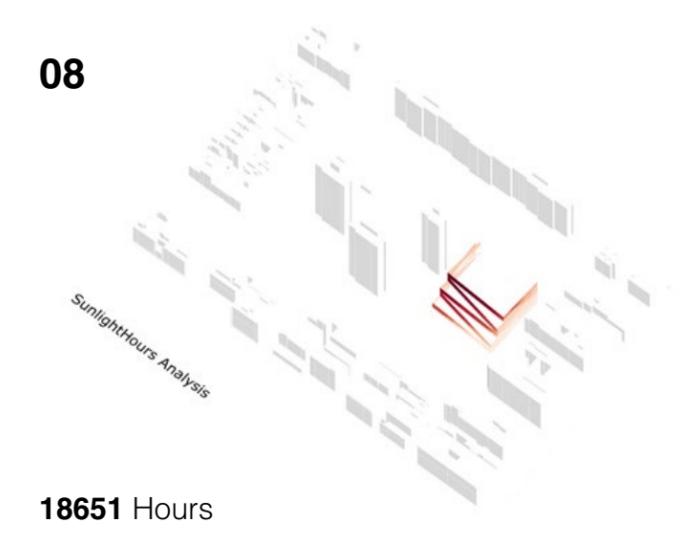
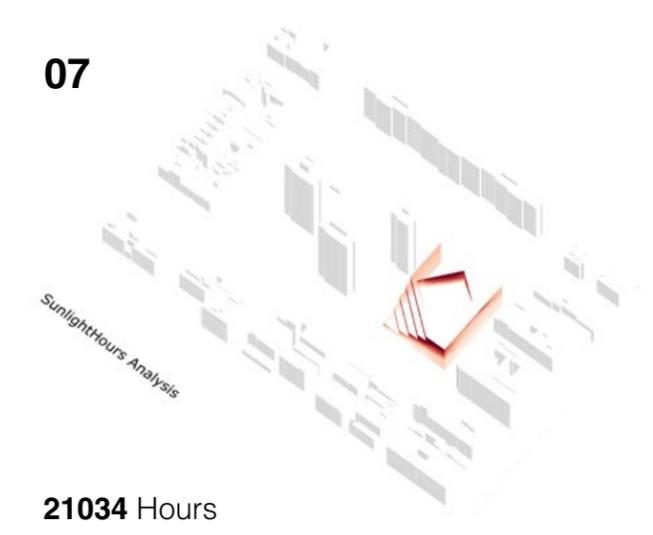
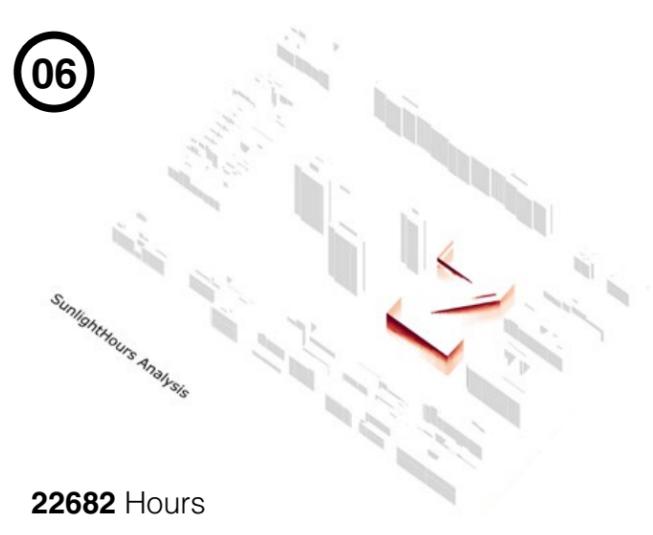
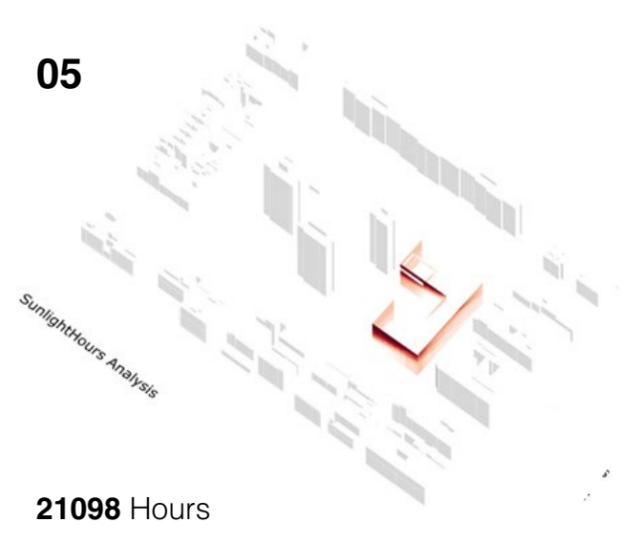
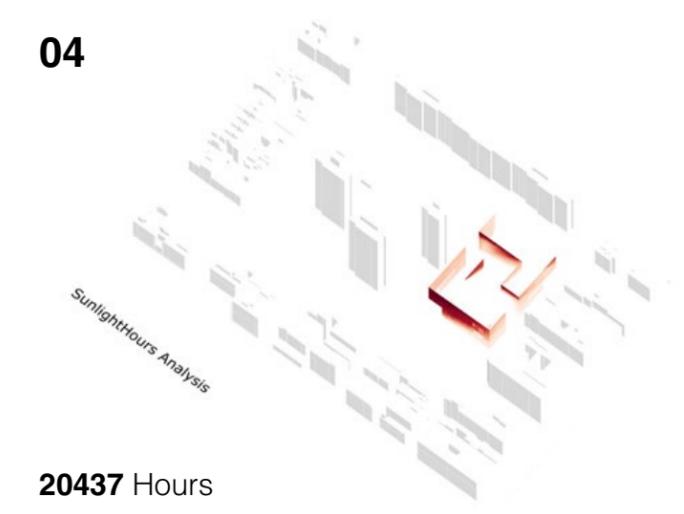
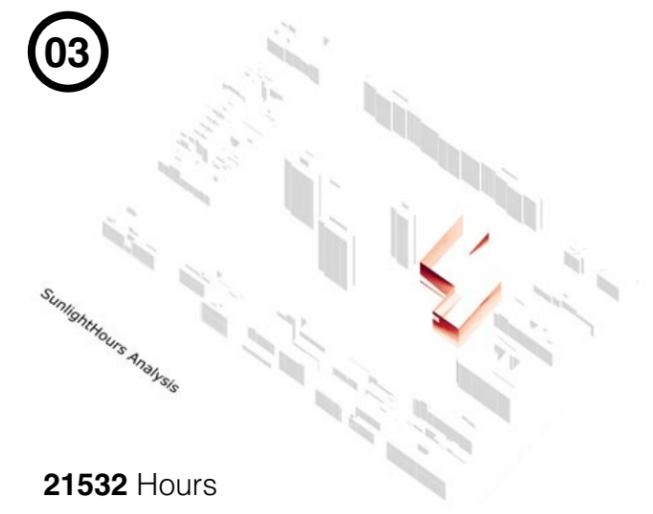
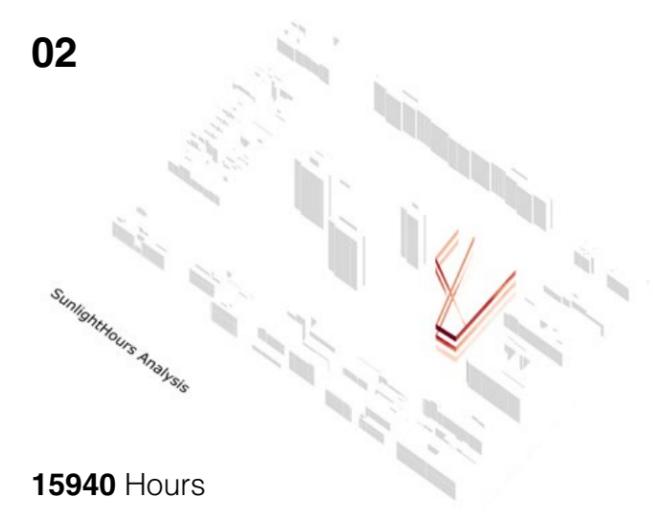
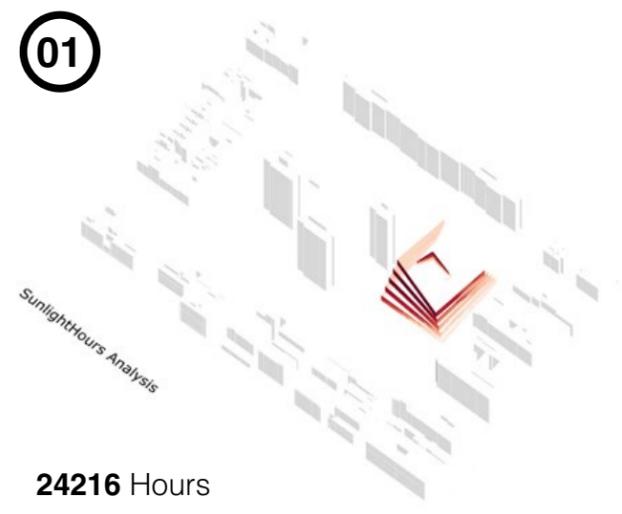


Design Alternatives



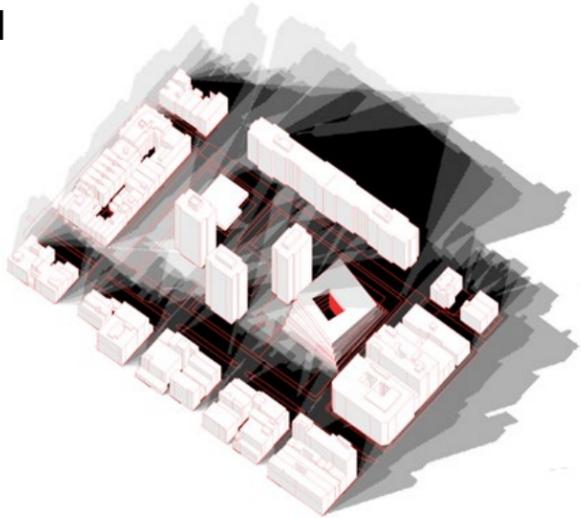


► **Sunlight hours Analysis** During the winter to maximize natural light

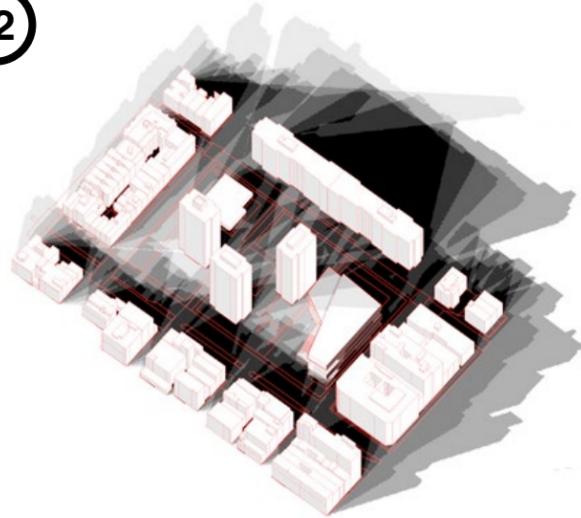


Shadow study During the winter to maximize outdoor public space with natural light

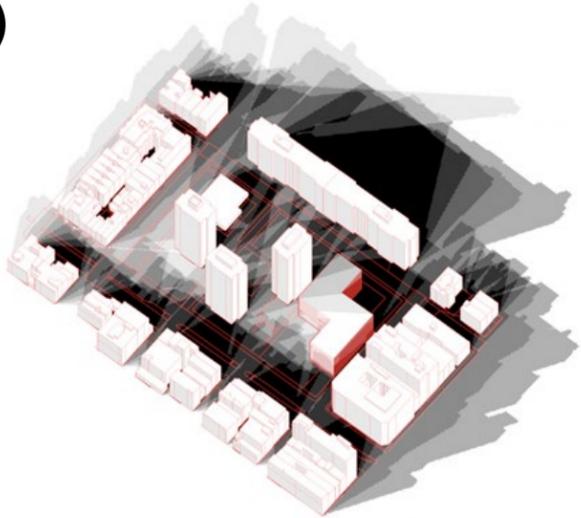
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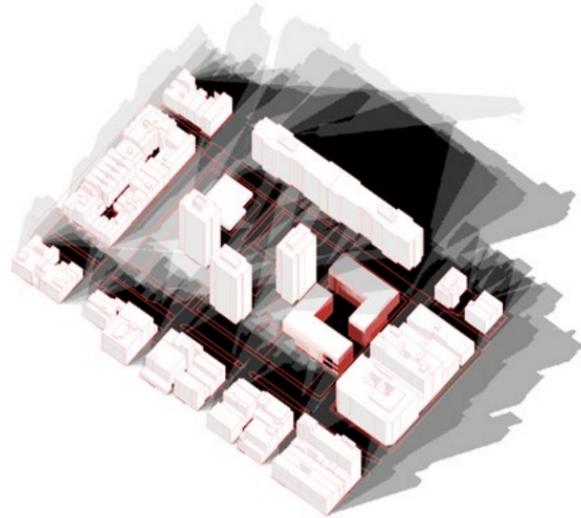
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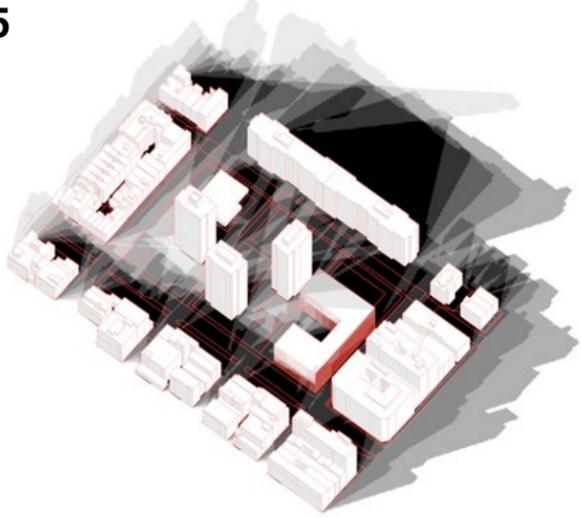
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04



05



06



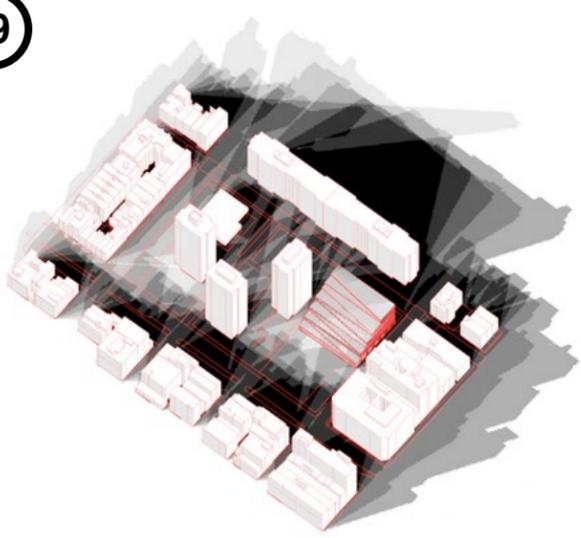
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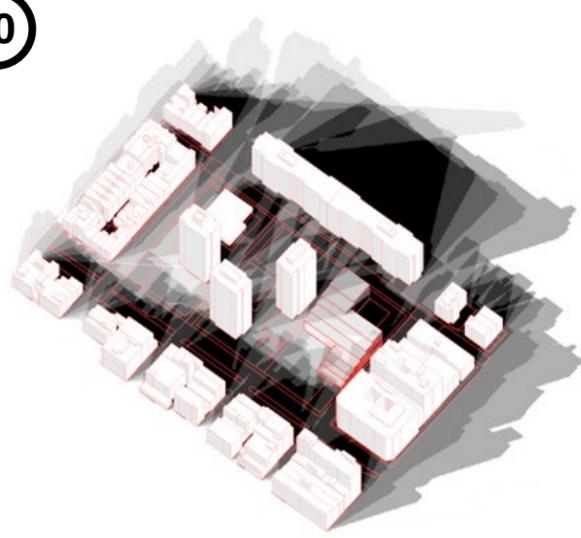
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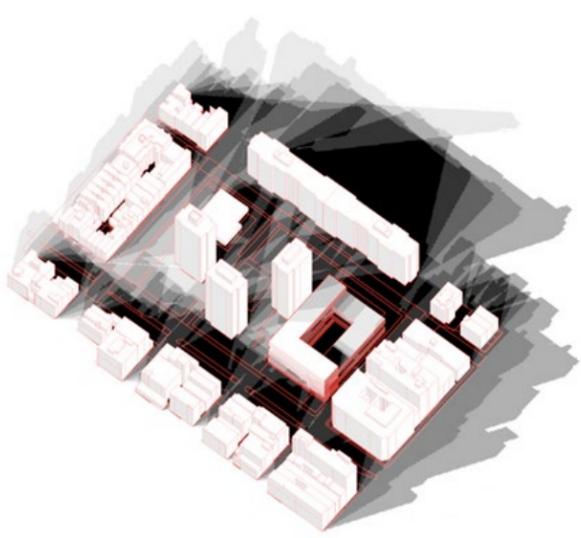
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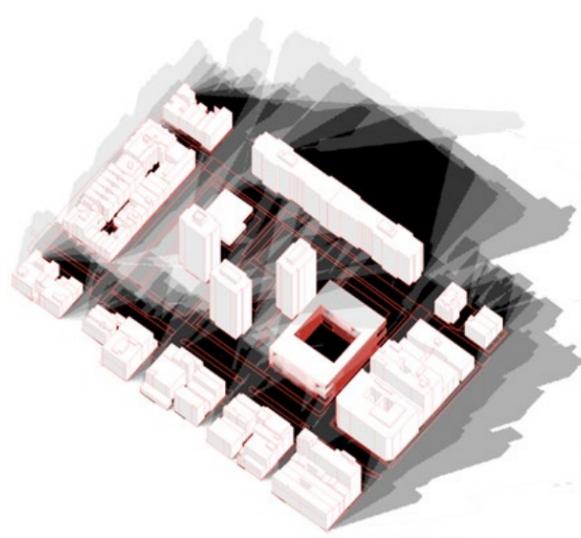
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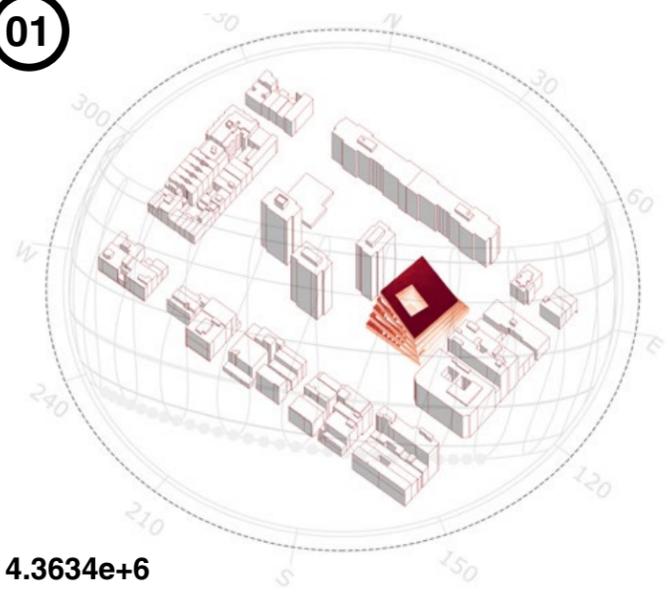


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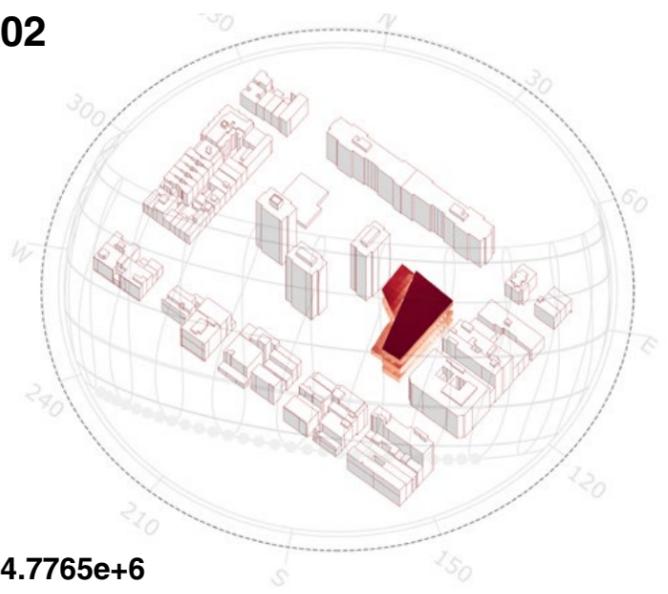
► **Radiation Study** During the summer to minimize the envelope heat exposure

01



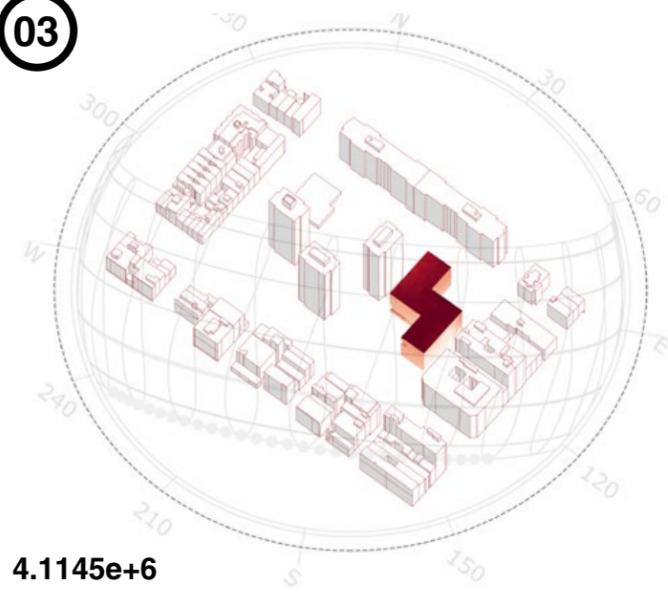
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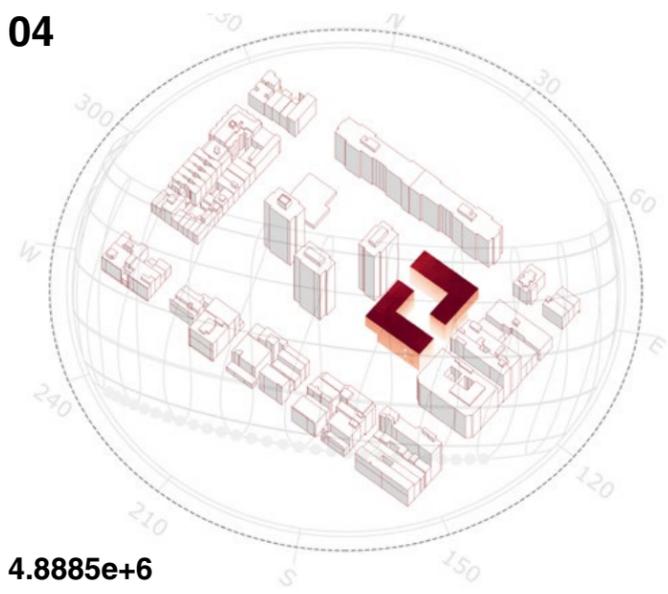
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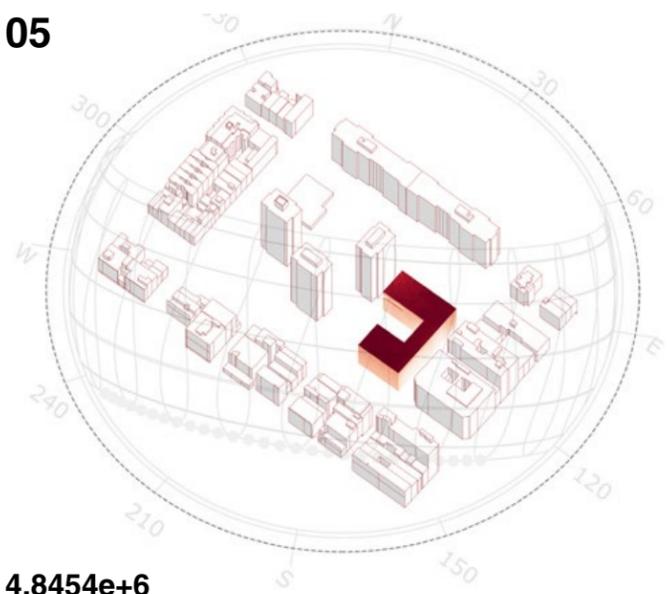
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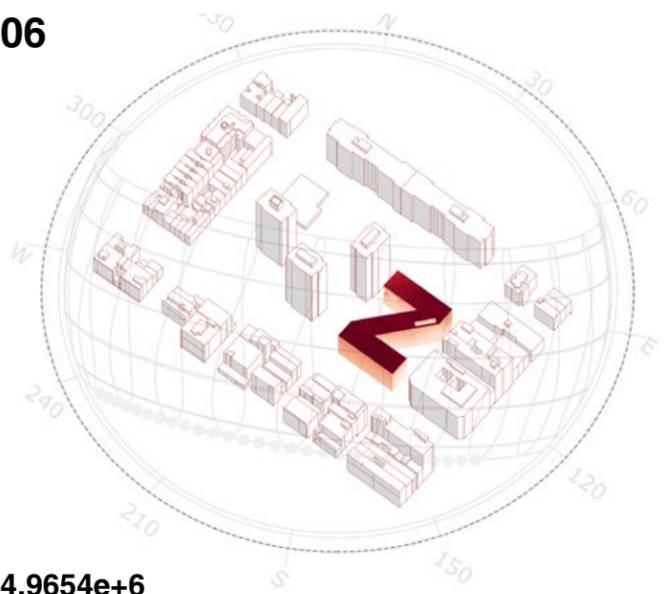
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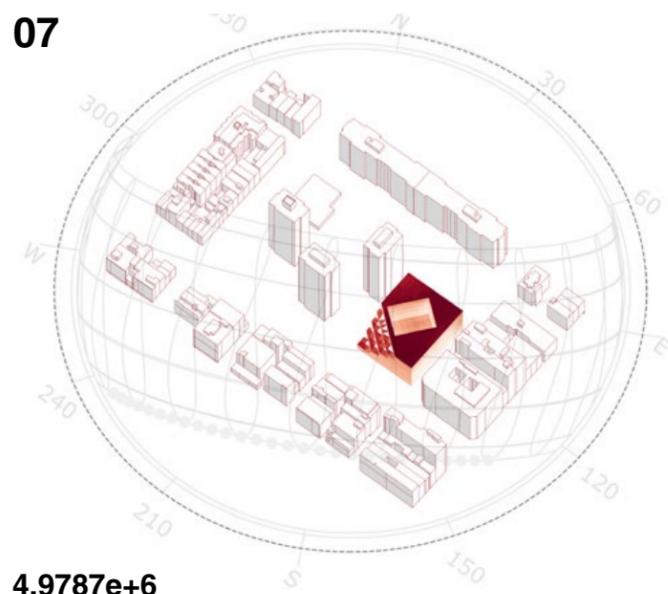
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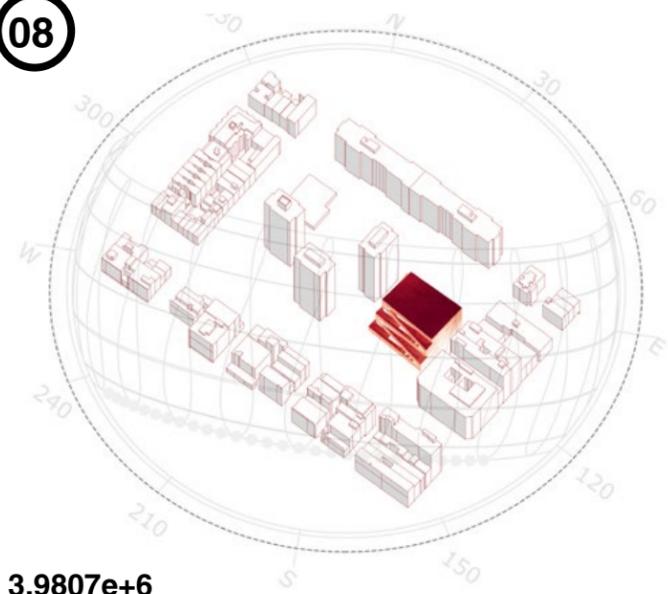
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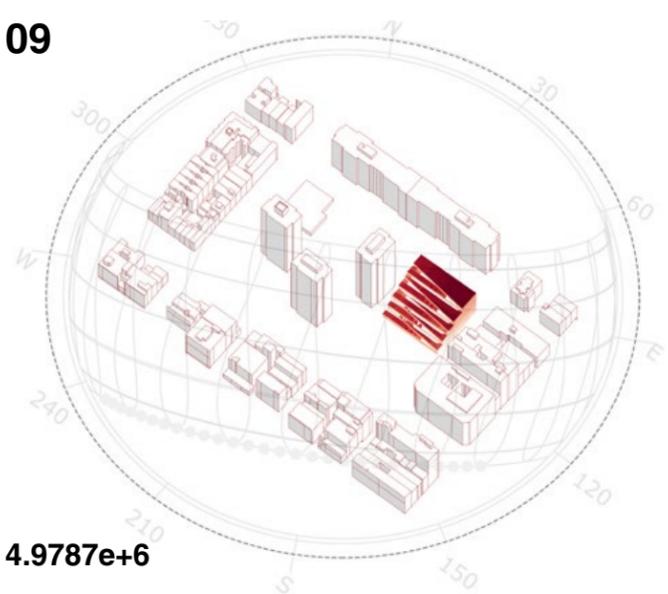
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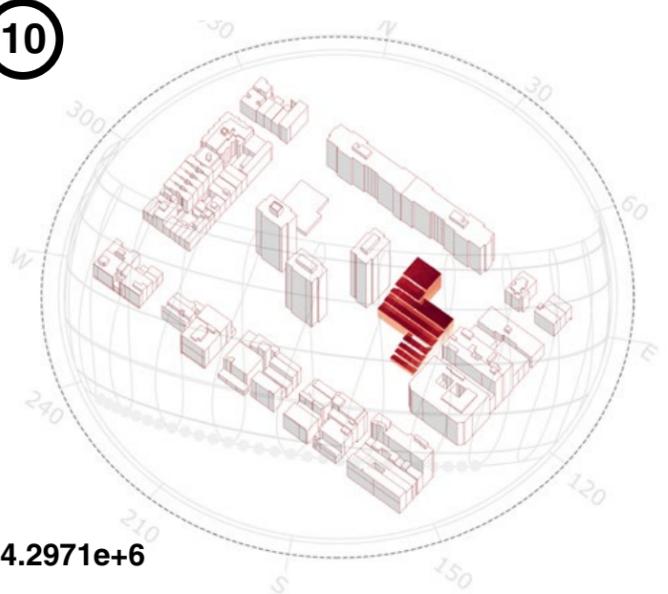
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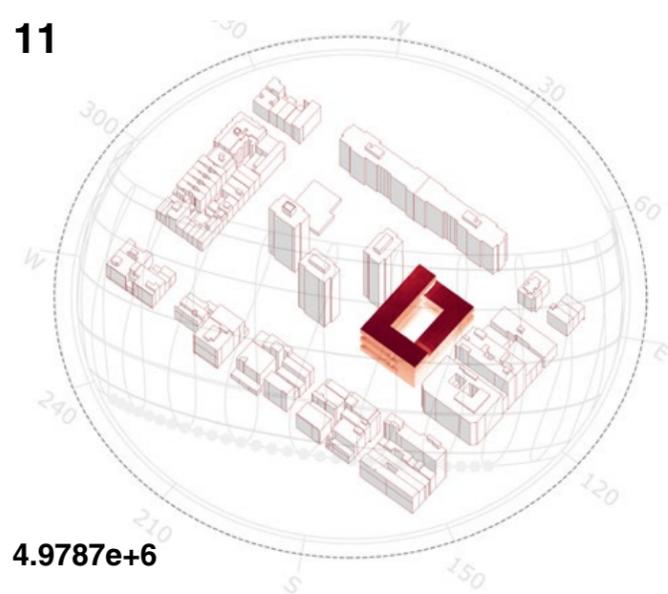
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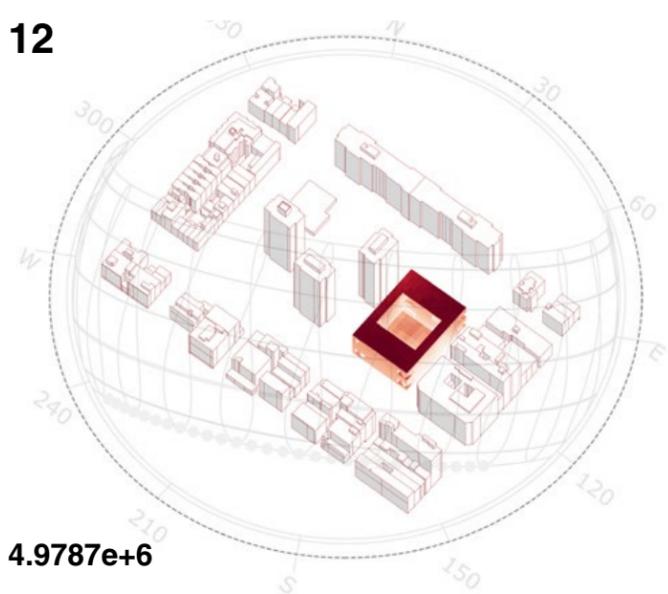
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11



4.9787e+6

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4.9787e+6

Facade Alternatives

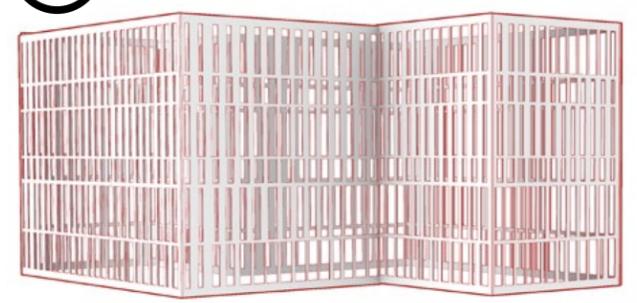
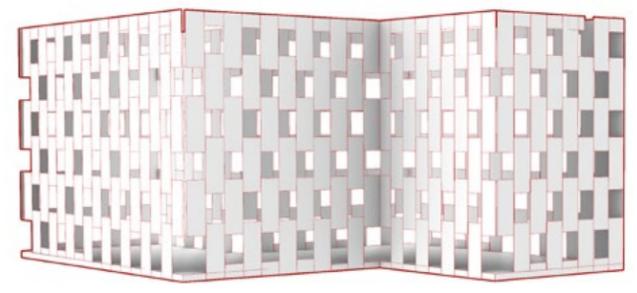
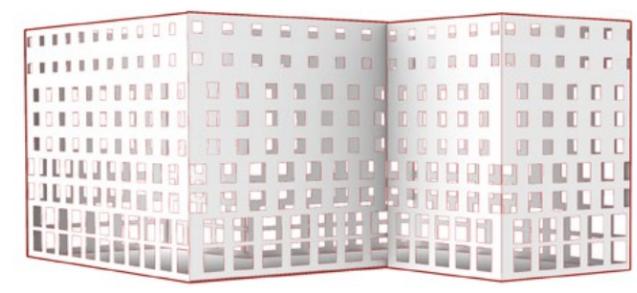
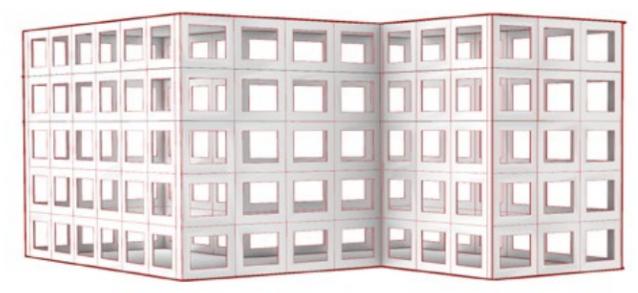
Radiation study

A radiation and facades exposure to the sun was conducted. Option 4 was chosen since the narrow vertical opening brought in light in addition to less solar heat gain.

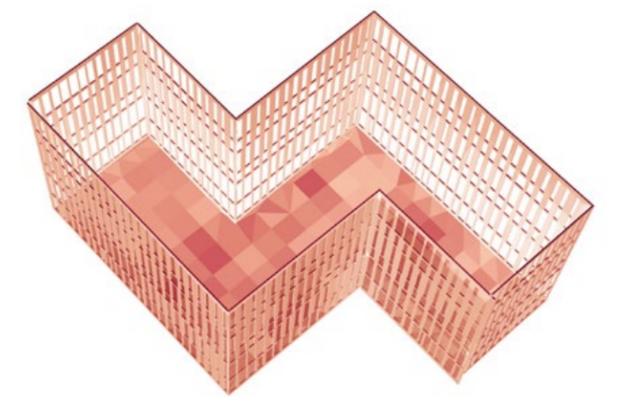
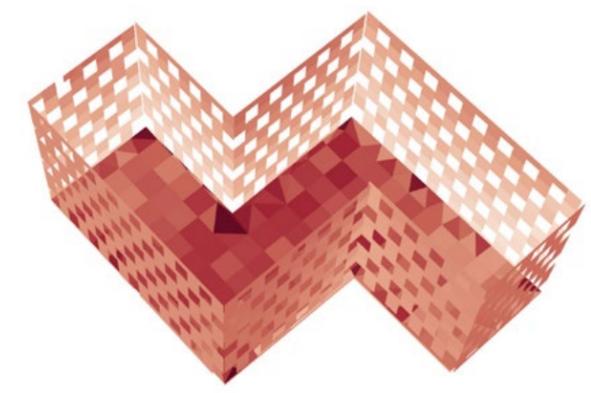
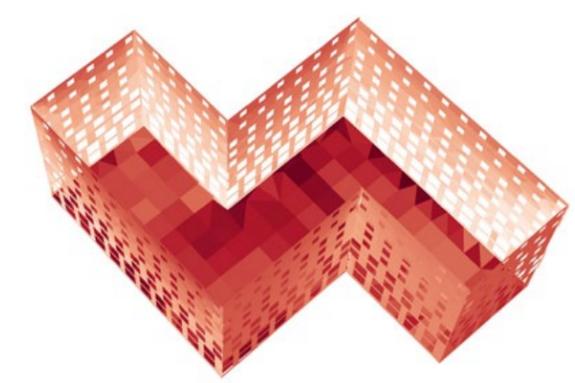
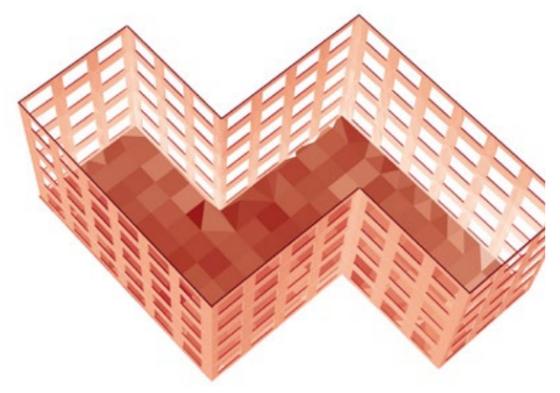
02

03

04



Facade Radiation Analysis



Render of the optimal alternative

