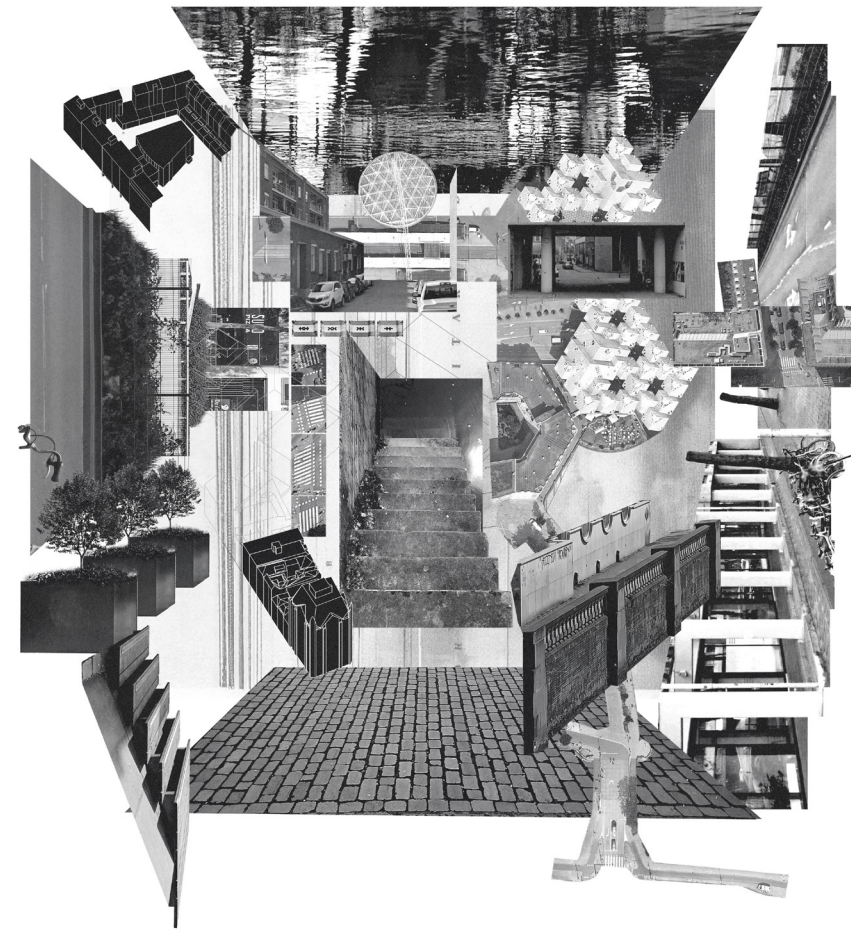


The 0th Place

Utilizing Urban Cracks as Experimental Sites



Student: Hasan Hashas

First mentor: Luca Iuorio

Second mentor: Birgit Hausleitner

Graduation Studio: Design of the Urban Fabric

coordinators: Birgit Hausleitner, Claudiu Forgaci

Msc Urbanism TU Delft

What if the most neglected spaces in our cities held the key to
our urban future?



Fig. Urban cracks captured by the author



Fig.Urban cracks captured by the author



Fig.Urban cracks captured by the author

“Urban cracks”



interstice, playground, borderland, transit zone, **in-between space**, pauzelandchap, **urban void**, wasteland, non-lieu, brownfield, shadow space, **terrain vague**, residual space, Freiflach, indeterminate space, no-man's-land, dead zone, raw space, tussenland, **heterotopia**, sluipgroen, urban sprawl, space of uncertainty, **urban cancer**, etc. (Steel, Eeghem, Verschelden, & Dekeyrel, 2012).



Fig.Urban cracks captured by the author



Streets, Parks, Squares



Infrastructure



Vacant Lots



Sidewalks



Buildings

Steel, R., Van Eeghem, E., Verschelden, G., & Dekeyrel, C. (2012)

The **goal** of the project is to **understand** urban cracks and **uncover** their **potential**.

1.0 Introduction

Problematization

2.0 Research Design

Methodology

3.0 Design Research

Analysis

4.0 Design

Design

Urban cracks are present in **every city**; in Rotterdam, the **Brandgrens** serves as the **entry point** for **discovering** them.



Fig. Aerial view on Rotterdam



Fig. Aerial view on Rotterdam after the bombing in WWII (<https://www.mediastorehouse.co.uk/p/767/composite-photograph-taken-raf-reconnaissance-21891866.jpg.webp>)



Fig. Rotterdam Nolli map 1815

Center



Fig. Rotterdam Nolli map 1918

Expand



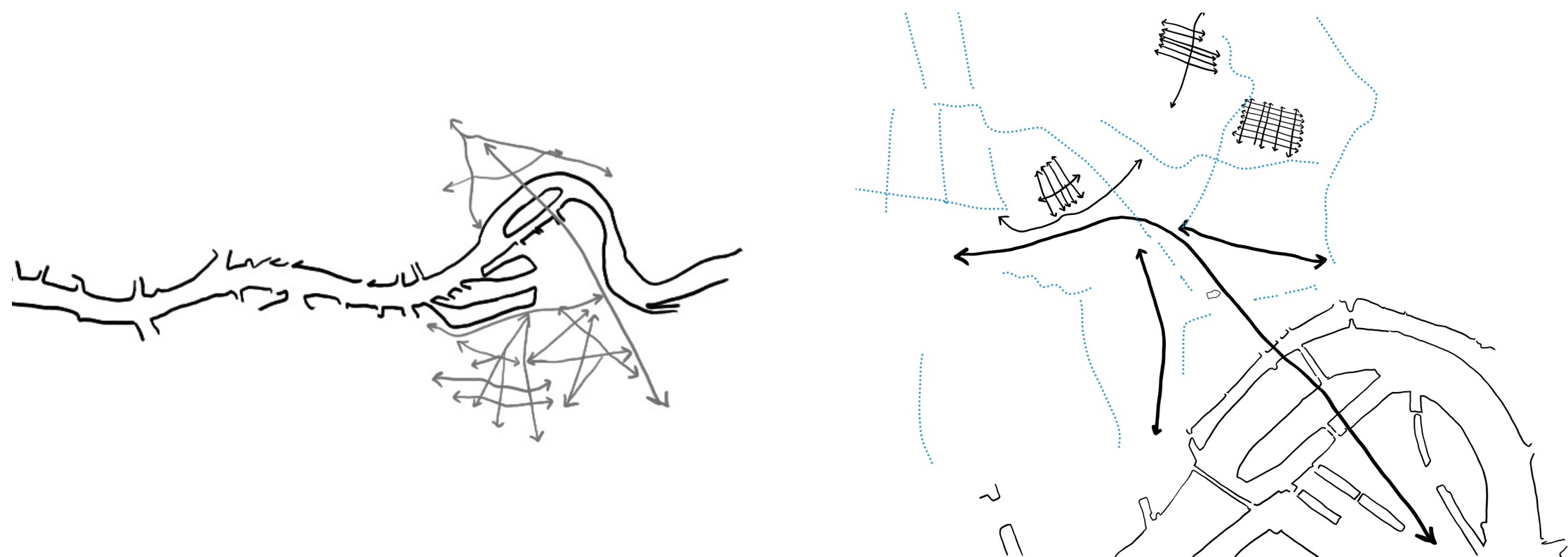
Fig. Rotterdam Nolli map 1948

Center bombed



Fig. Rotterdam Nolli map 2023

Redevelop

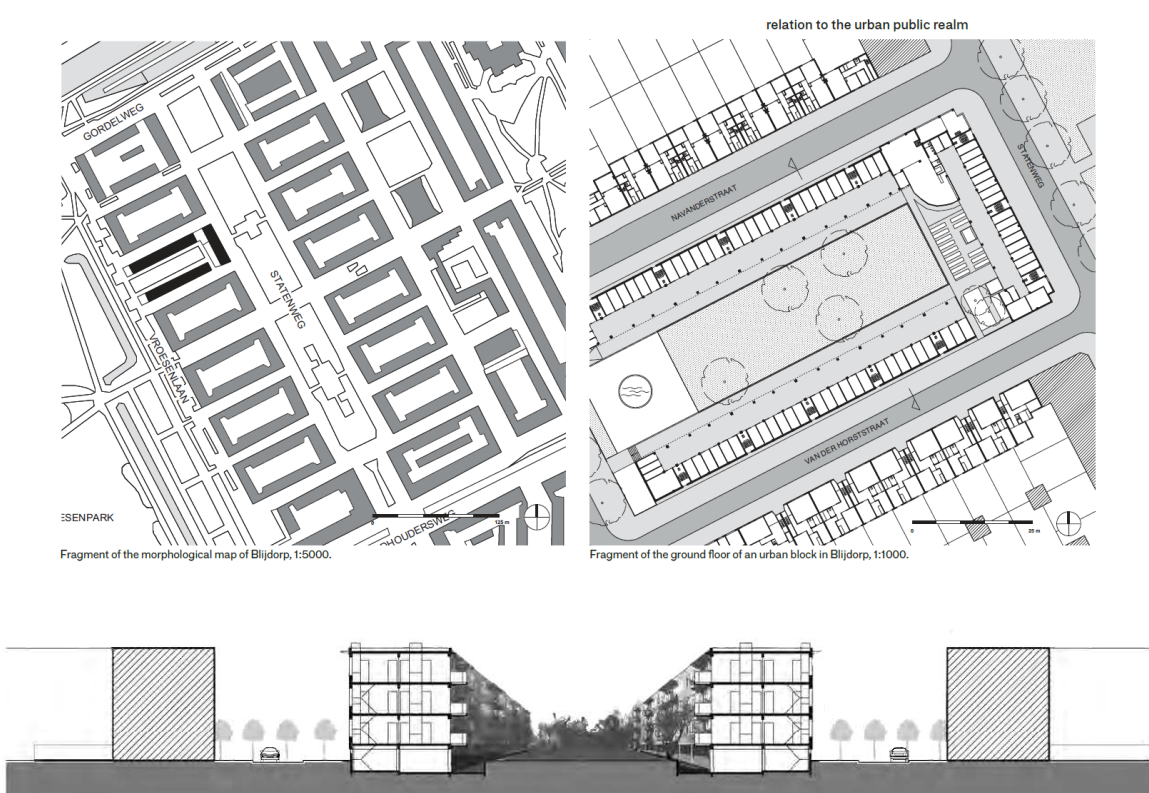


Implementation of Fan-Like Road Pattern in Southern Areas

Adoption of Grid-Like Structure on North Bank with Creation of Canals

1900s-1930s:
Introduction of **fan-like road patterns** and **grid-like structures** potentially created urban cracks at intersections or **irregularly** shaped areas.

1970s - 1980s:
Densification campaigns and introduction of **vertical** elements may have left urban cracks in densely built neighborhoods.

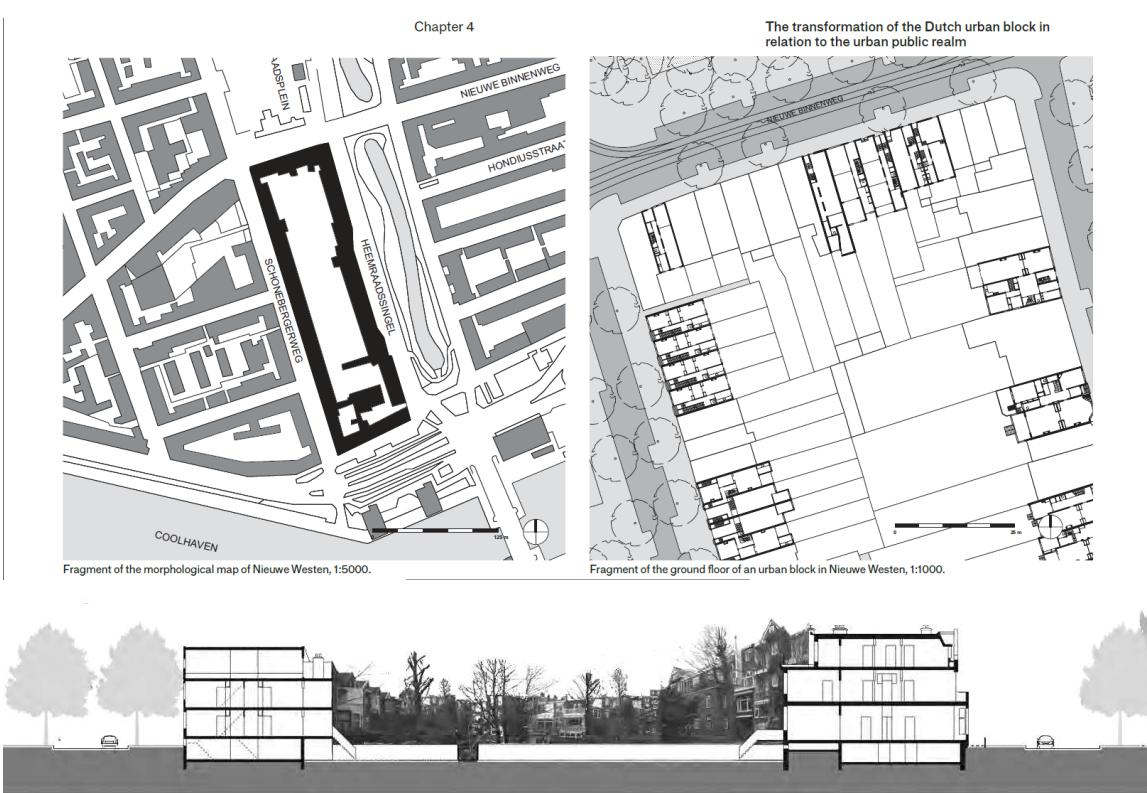


Plans and perspective cross-section of an urban block in Blijdorp (Komossa, S, 2010).

1900s-1930s:
Mixed-use streets and **closed urban blocks** created **hidden** areas.

1930s-1950s:
Modernist designs introduced **open spaces** between buildings.

Post-WWII Reconstruction Period:
Diverse building types and **layouts** led to **potential unused spaces**.



Plans and perspective cross-section of an urban block in Nieuwe Westen (Komossa, S, 2010).



Fig. <https://www.buzzfeed.com/sydrbinson1/aerial-views-cities-of-the-world>



Fig. <https://i.pinimg.com/originals/2b/5c/8e/2b5c8e0a8a5ee5173e-2a2d67dd777d08.jpg>

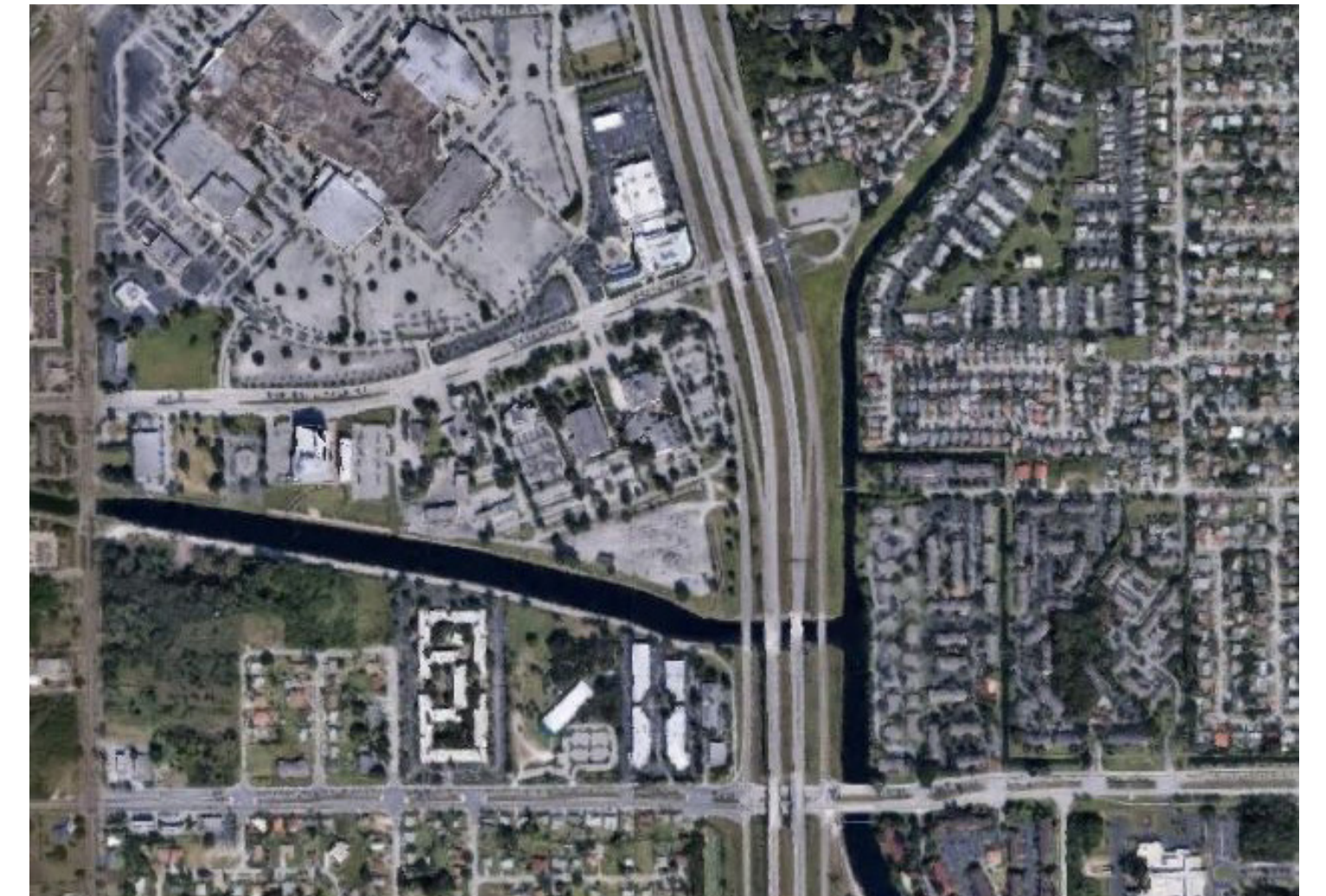
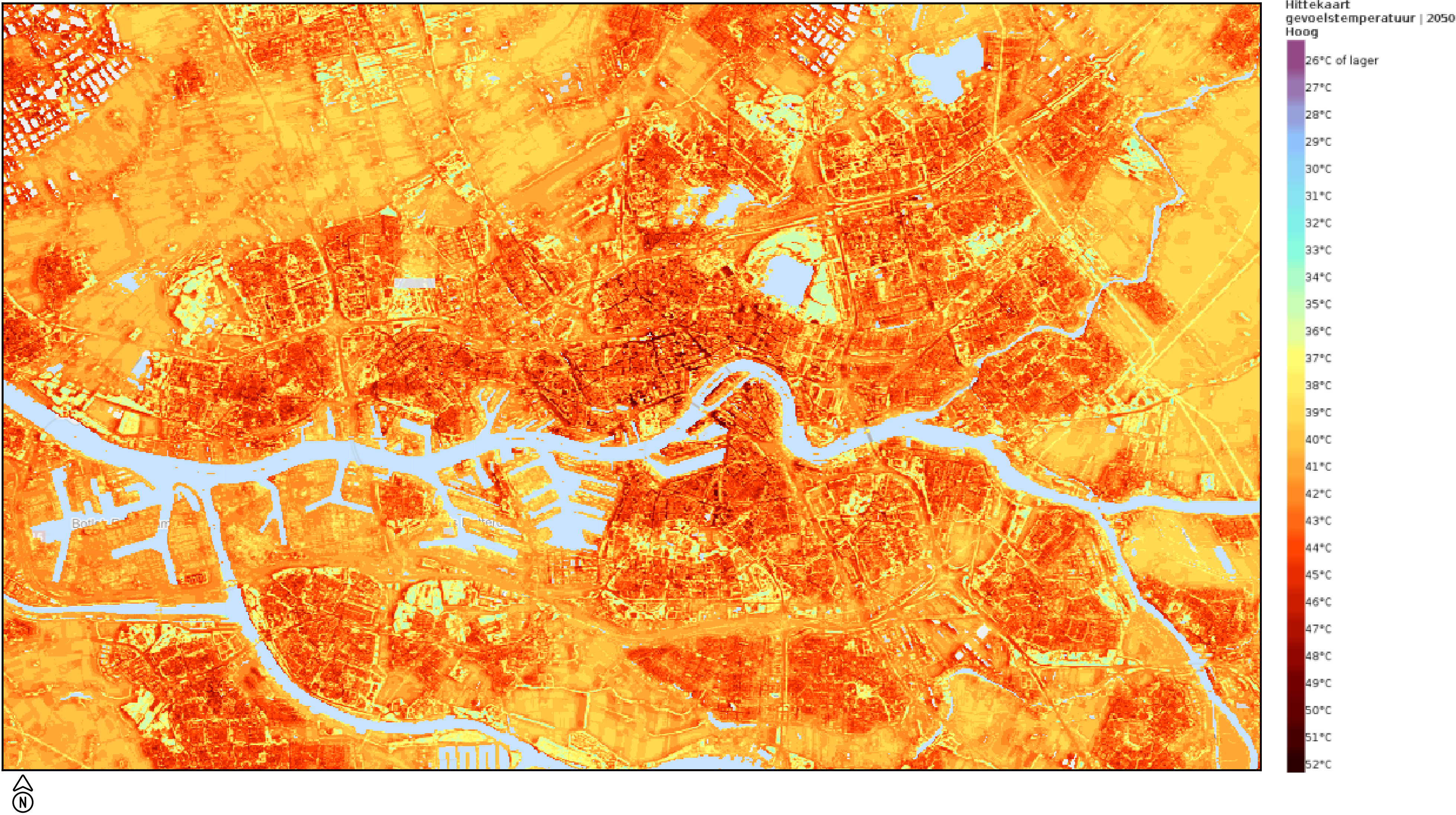
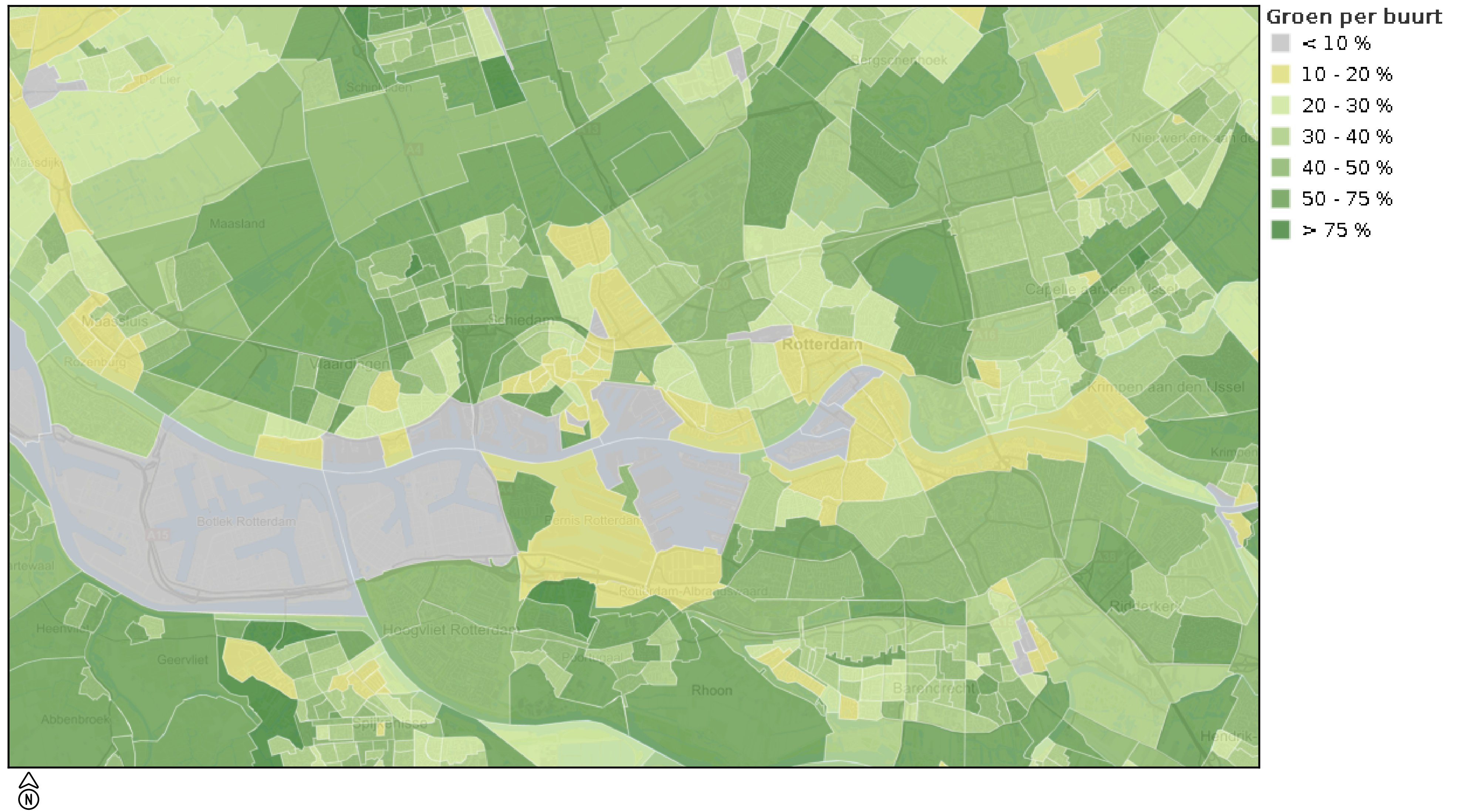


Fig. Rotterdam Nolli map 1948

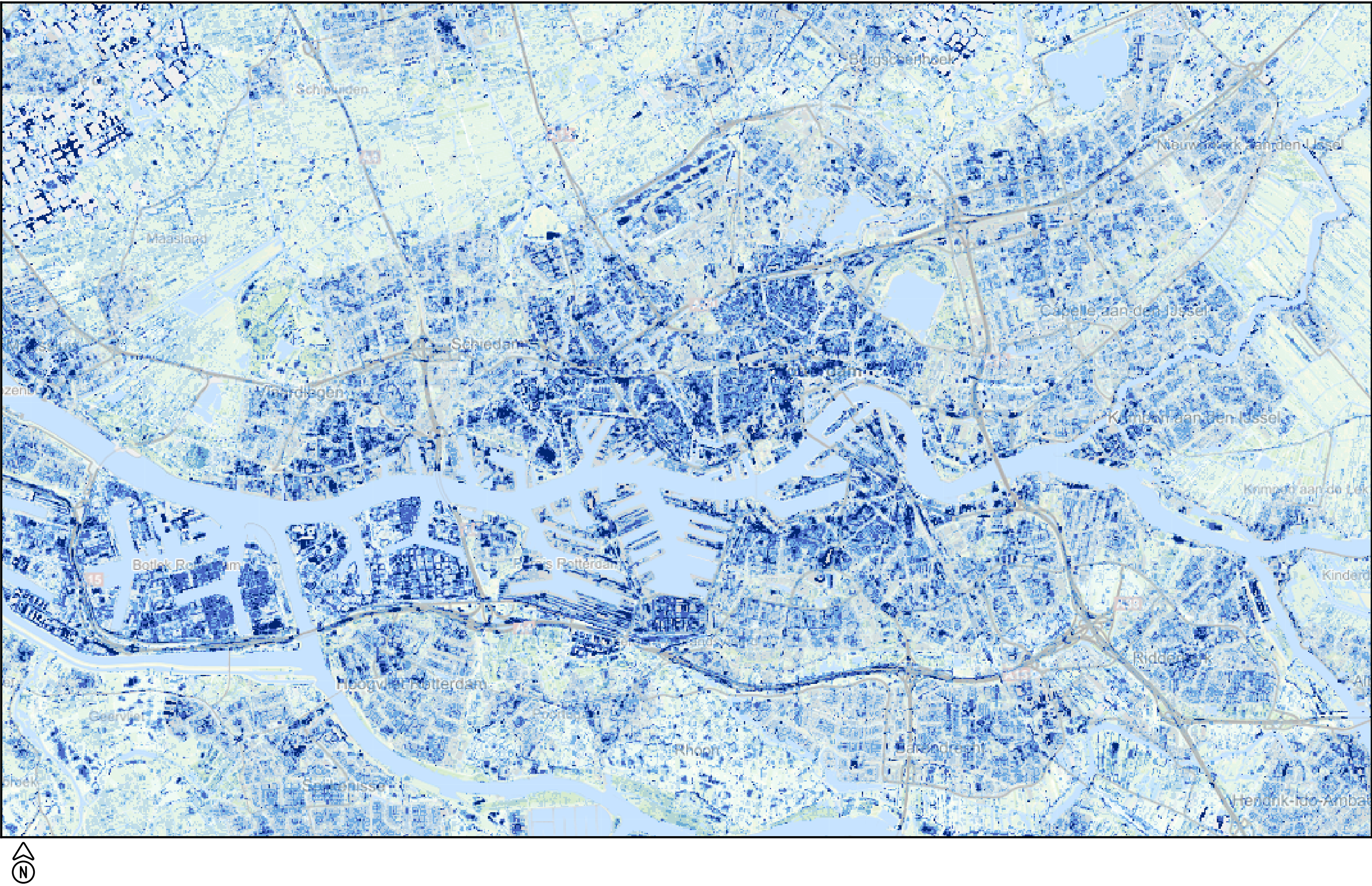
As long as new development occurs, urban cracks will persist.



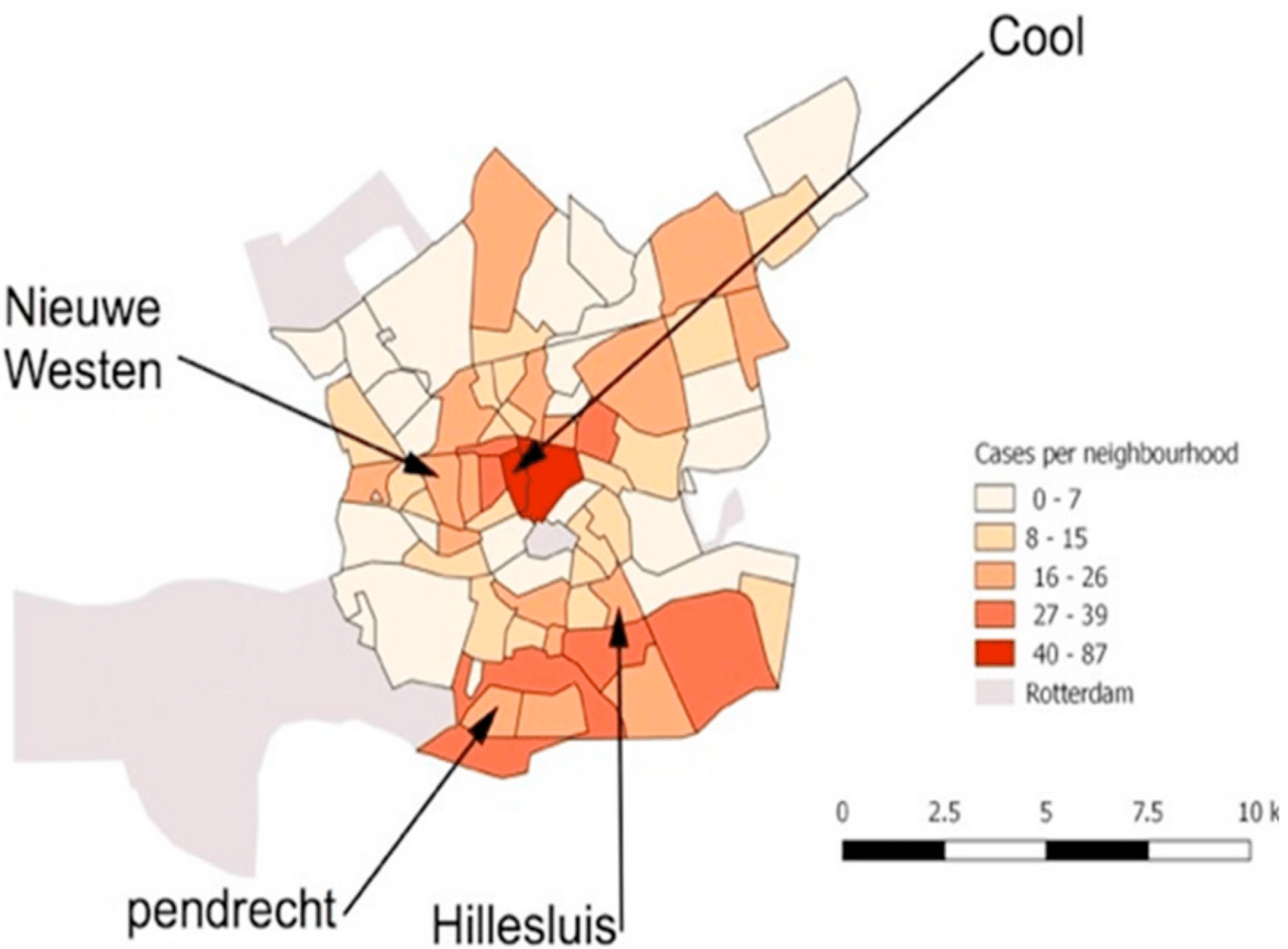
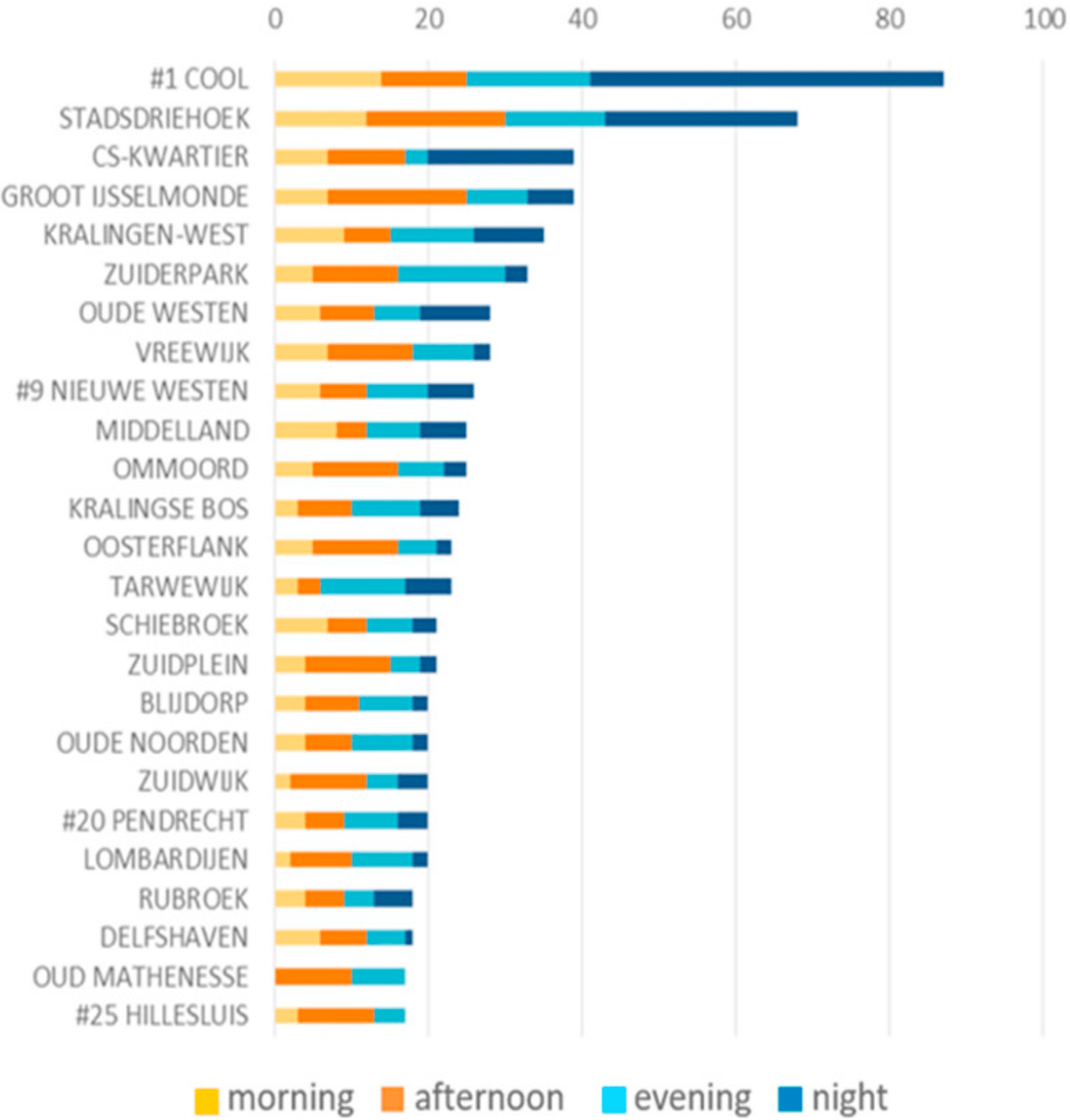
Rotterdam has a notable **urban heat island effect**, with **temperature differences** between urban and rural areas reaching up to **8 degrees Celsius** during windless **summer** nights. (<https://www.klimaat-effectatlas.nl/nl/>)



Current **greenery** coverage in **Rotterdam's** urban area is around 22%. The target for **2030** is to increase this to **35%** to help mitigate heat stress and improve overall climate resilience. It can be observed that the **center** has the least amount of greenery, ranging between **10-20%** (<https://www.klimaateffectatlas.nl/nl/>).

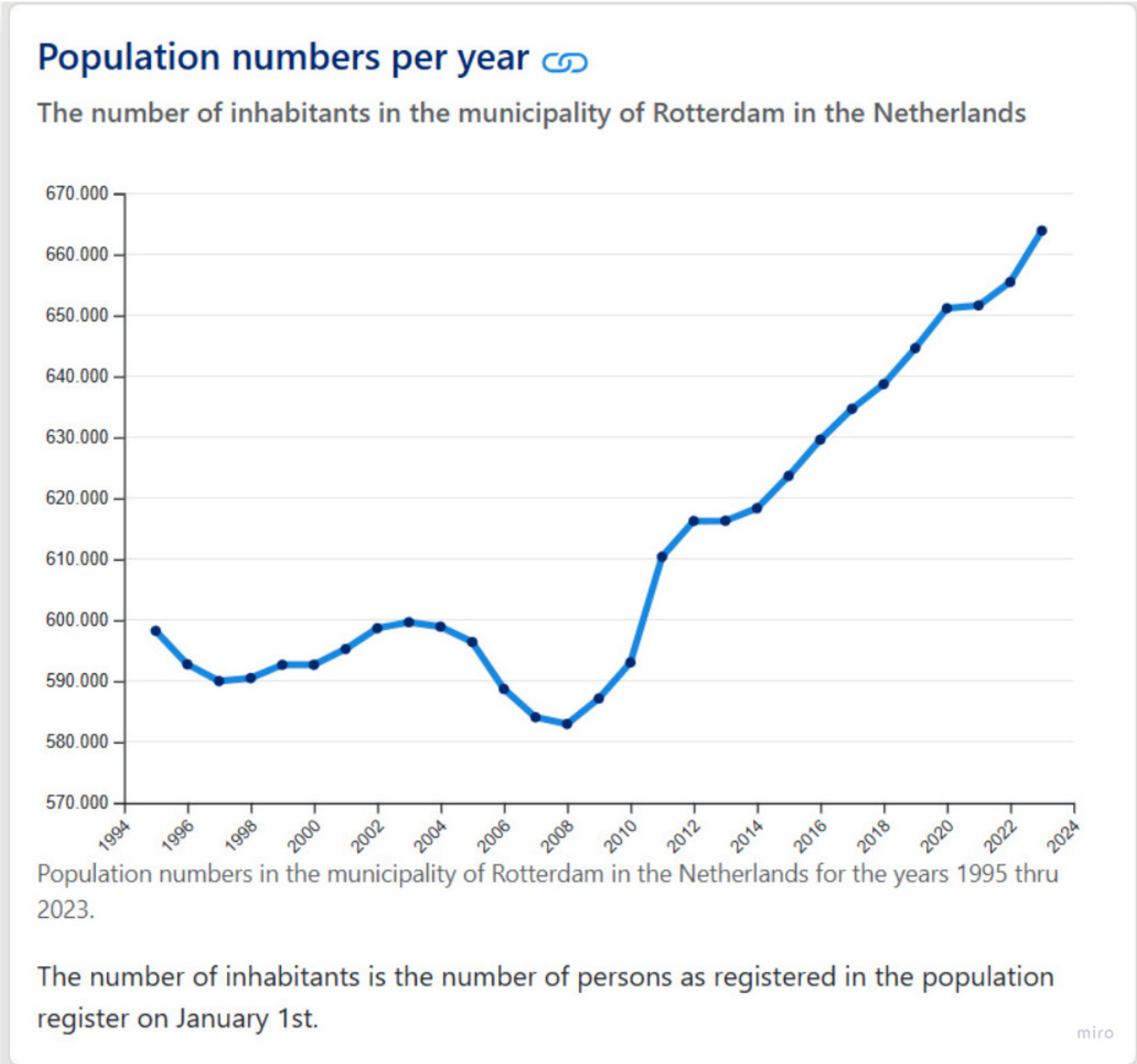


water depth during heavy showers is **highest** in the **city center**, **Rainwater** can reach depths of more than **30cm** during heavy showers



Crime rate

Analyzing the dispersal of sexual violence cases in Rotterdam at the neighborhood level, based on data from the Rotterdam police (January 2012–June 2017), highlights areas needing safety



Density

Given the expected population 1.048 million by 2030 in Rotterdam (cbs.nl), enabling new public spaces presents a significant challenge.<https://allcharts.info/the-netherlands/municipality-rotterdam/>

ThemesInspirationNetworksAccessibilityTranslate

HomeNewsAgendaEntrepreneurs ✓Regulate ✓Contact

Enter your search term here

Rotterdam Climate Boosters (RKA)

Ondernemen010

Home > Rotterdam Climate Boosters (RKA)

Rotterdam is working clean energy, on the sustainable use of raw materials, on making buildings more sustainable, sustainable mobility and the port. The Rotterdam Climate Action Plan sets out what the municipality is doing and what still needs to be done. In doing so, it is crucial to work together with partners in the city. The Rotterdam Climate Boosters establish and strengthen connections between these partners and with the municipality. To accelerate the energy and raw materials transition together and to make concrete projects possible.

circular society-economy and a climate-resilience

Fig.31 In 2019, the Rotterdam government and over 100 companies and organizations signed the Rotterdam Climate Agreement. The agreement outlines measures to achieve a fully circular society and a climate-neutral city by 2050. It emphasizes reducing greenhouse gases and promoting a CO2-free economy³. (<https://www.ondernemen010.nl/rotterdamse-klimaataanjagers-rka/>)

In light of the challenges posed by the expected population growth in Rotterdam and the various urban issues highlighted, **Urban cracks** serve as **both** the **breeding ground** for urban challenges and the **potential solution**.

[Research question]:

How can the ‘**urban cracks**’ in Rotterdam, particularly within the **Brandgrens** area, be **revitalized** to foster **resilience**, vibrancy, and inclusive placemaking, while **mitigating social, economic,** and **environmental** challenges?

[Research question]:

How can the ‘**urban cracks**’ in Rotterdam, particularly within the **Brandgrens** area, be **revitalized** to foster **resilience**, vibrancy, and inclusive placemaking, while **mitigating social, economic,** and **environmental** challenges?

[Sub-Research question 1]:

What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?

(Analytical **Identification** of Urban Cracks)

[Research question]:

How can the ‘**urban cracks**’ in Rotterdam, particularly within the **Brandgrens** area, be **revitalized** to foster **resilience**, vibrancy, and inclusive placemaking, while **mitigating social, economic,** and **environmental** challenges?

[Sub-Research question 1]:

What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?

[Sub-Research question 2]:

What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?

(Analytical **Identification** of Urban Cracks)

(Investigating the **potential** of the urban cracks)

[Research question]:

How can the ‘urban cracks’ in Rotterdam, particularly within the **Brandgrens** area, be **revitalized** to foster **resilience**, vibrancy, and inclusive placemaking, while **mitigating social, economic,** and **environmental** challenges?

[Sub-Research question 1]:

What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?

[Sub-Research question 2]:

What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?

[Sub-Research question 3]:

What are the key characteristics of the ‘0th place’ concept, and how does it differ from traditional urban spaces?

(Analytical **Identification** of Urban Cracks)

(Investigating the **potential** of the urban cracks)

(**Design** possibilities)

[Research Aim]:

Redefine urban cracks as **resilient** and vibrant places (**0th place**) through **tactical urbanism** interventions to **enhance Social** Integration, **Economic** Equity, and **Climate** Resiliency. Investigate the relationship between urban cracks and the broader urban fabric to understand their influence on city dynamics.

1.0 Introduction

Problematization

2.0 Research Design

Methodology

3.0 Design Research

Analysis

4.0 Design

Design

What is the 0th Place, and Why the 0th Place?

In **sociology** literature, **places** are defined by **how people occupy them** in their daily lives.

In **sociology** literature, **places** are defined by **how people occupy them** in their daily lives.

-The **first place** is the **home**

In **sociology** literature, **places** are defined by **how people occupy them** in their daily lives.

-The **first place** is the **home**

-The **second place** is the **workplace** or **school**

In **sociology** literature, **places** are defined by **how people occupy them** in their daily lives.

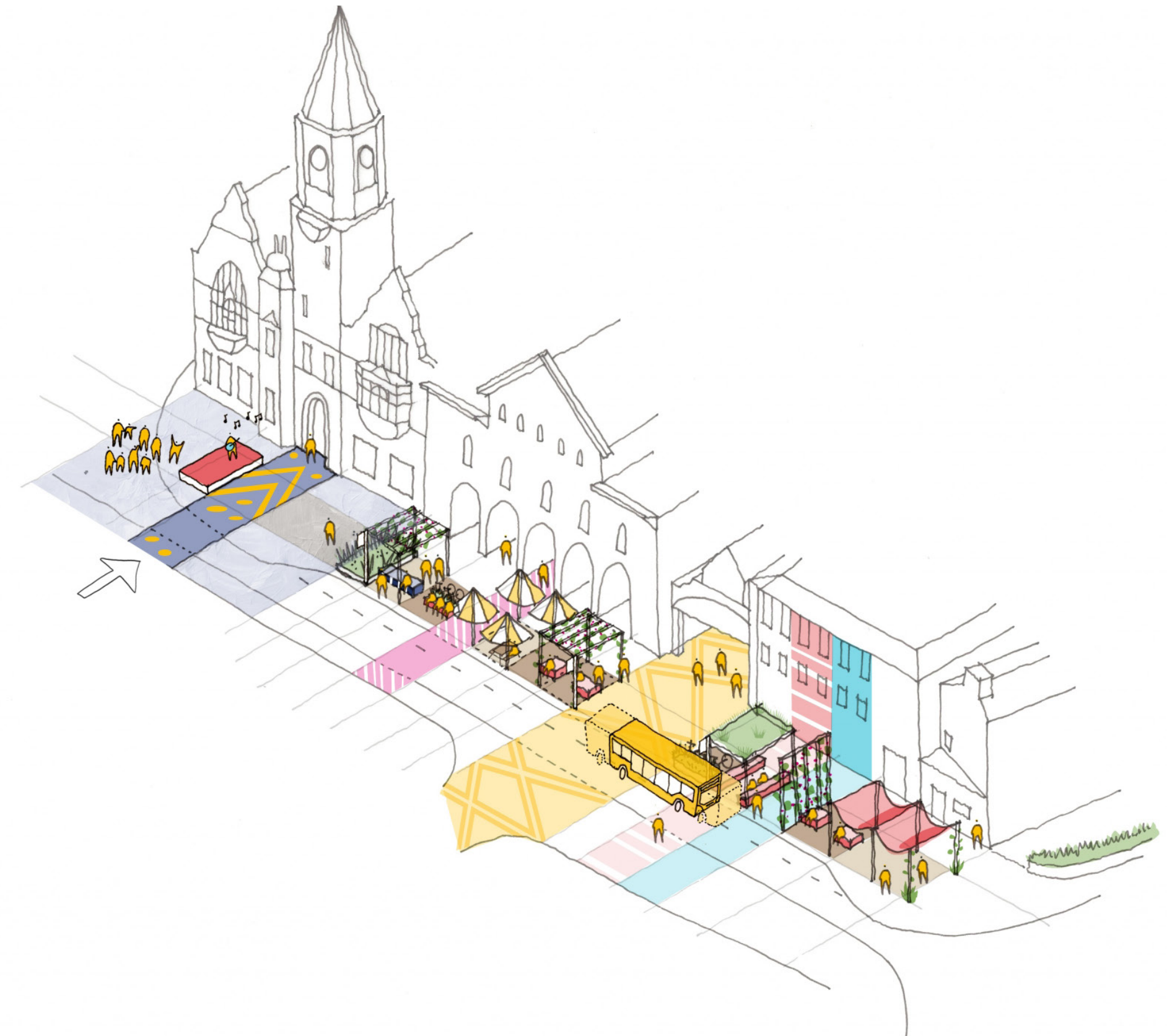
- The **first place** is the **home**

- The **second place** is the **workplace** or **school**

- The **third place** is **where people gather** and **interact** outside of their first two places. This concept of first, second, and third places was introduced by Ray Oldenburg.

The idea of the **0th place** emerged as a **response** to **non-places**—spaces that are either **feared** or **purely transitional**. But what if there was a **space** that could **evolve** over time and **adapt** to **different uses** by different groups?

The “**0th place**” is a **concept** that refers to a **theoretical social space** acting as a **reset point** for **place identity**(1st,2nd, non-place,etc). It serves as a **potential nest** for **new, site-specific functions** within urban design and sociology. It is a space of **freedom** and encounter **that challenges traditional interpretations of place**.



<https://bibostudio.com/town-gateways-design/?popup=public-realm-urban-design>

[Research Aim]:

Redefine urban cracks as **resilient** and vibrant places (**0th place**) through **tactical urbanism** interventions to **enhance Social** Integration, **Economic** Equity, and **Climate** Resiliency. Investigate the relationship between urban cracks and the broader urban fabric to understand their influence on city dynamics.

Tactical urbanism refers to a **rapid, low-cost, and scalable** approach for making **temporary changes** to the **urban environment**. It often involves **short-term** interventions in urban gathering areas, aiming to improve public spaces and address environmental, social, and economic challenges. These interventions can be seen as “bricks and mortar” street-level actions that animate tangible urban change (Elzenga, L., 2023).

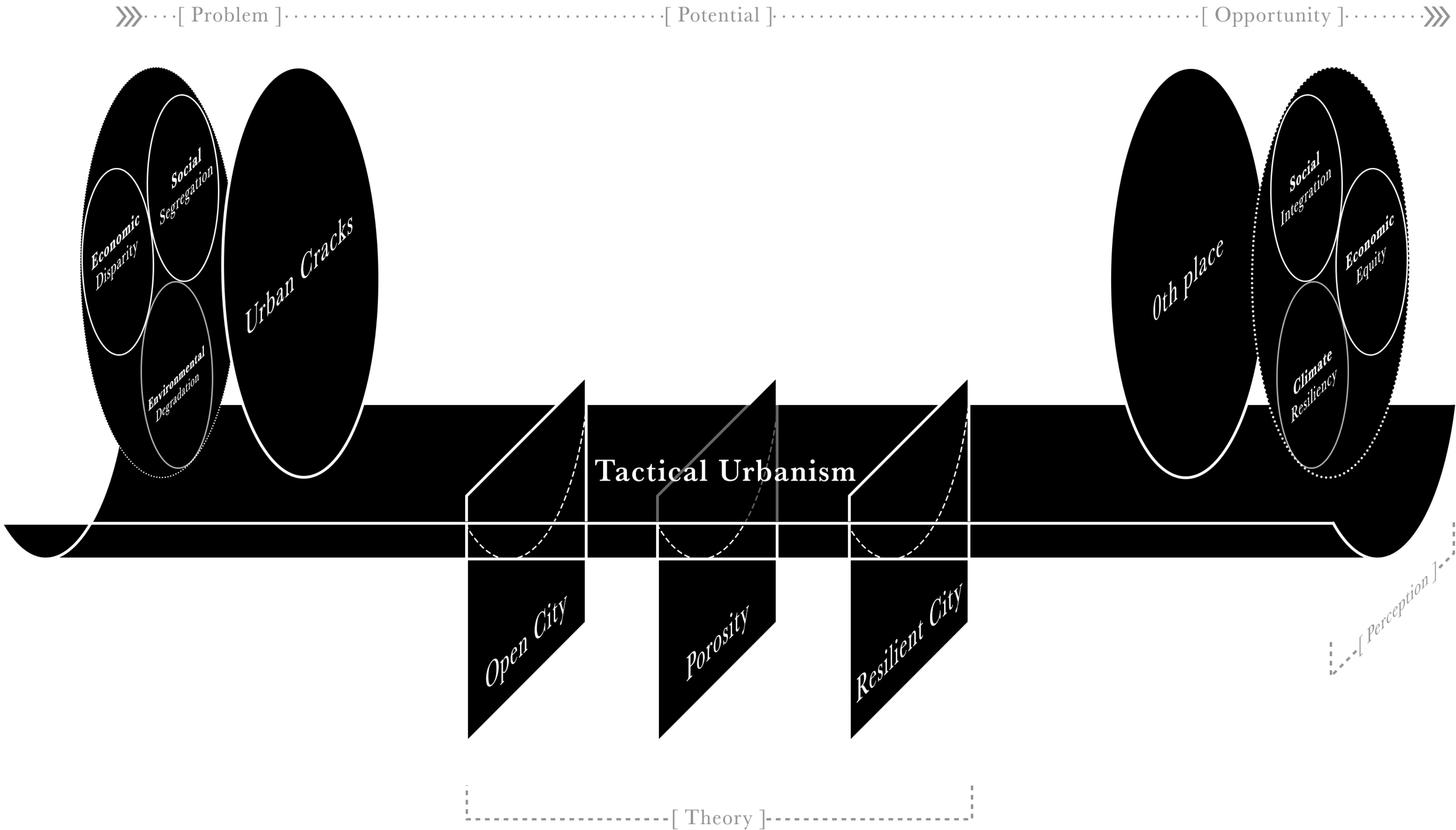


An example for project aims. Activated Street with Wooden Intervention <https://www.archdaily.com/799277>

For me, **tactical urbanism** is about **leveraging** the **outcomes** of these **small interventions** by **using design** knowledge and **skills**, **not solely** relying on **limited tactical urbanism tools**. It's about **pushing** the **boundaries** of **tactical** urbanism with the help of thoughtful design to create meaningful and **lasting** impact.



An example for project aims. Activated Street with Wooden Intervention <https://www.archdaily.com/799277>



Method \ SQR	[Sub-Research question 1]: What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?			[Sub-Research question 2]: What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?			[Sub-Research question 3]: What are the key characteristics of the ‘0th place’ concept, and how does it differ from traditional urban spaces?		
Research by design approach	○			○			●		
Critical mapping	●			●			●		
Field work	●			●			●		
Data mining	●			●			●		
Morphological analysis	○			●			●		
Modeling	●			○			●		
Literature Review	●			●			●		
Expected outcomes	Identifying urban crack typologies as initial sites for in-depth problem investigation			Map of Opportunities: Design locations listed, highlighting their potentials.			The result is the creation of a design and strategy through an eight-step process.		

1.0 Introduction

Problematization

2.0 Research Design

Methodology

3.0 Design Research

Analysis

4.0 Design

Design

[Sub-Research question 1]:

What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?

(Analytical **Identification** of Urban Cracks)

[Sub-Research question 2]:

What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?

(Investigating the **potential** of the urban cracks)

[Sub-Research question 1]:

What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?

(Analytical **Identification** of Urban Cracks)

Qualitative identification

Literature review:

The characteristics of urban cracks and distinguishable aspects will be defined through the examination of existing literature.

Fieldwork:

The spaces alongside the Brandgrens will be assessed through on-site evaluations.

Critical mapping:

Problems related to social, economic, and environmental aspects within the spaces will be identified through critical mapping.

Quantitative identification

Morphological analysis:

Space-syntax analysis

Critical mapping:

Mapping all the possible urban cracks

3.0 Design Research Situating Urban Cracks (SRQ1)

3.0 Design Research Situating Urban Cracks (SRQ1)

3.0 Design Research				Situating Urban Cracks (SRQ1)			
State/Condition	Buildings	Sidewalks	Streets	Parks	Squares	Infrastructure	Vacant Lots
Neglected	Neglected buildings	Neglected sidewalks	Neglected streets	Neglected parks	Neglected squares	Neglected infrastructure	Neglected vacant lots
Underutilized	Underutilized buildings	Underutilized sidewalks	Underutilized streets	Underutilized parks	Underutilized squares	Underutilized infrastructure	Underutilized vacant lots

3.0 Design Research				Situating Urban Cracks (SRQ1)			
State/Condition	Buildings	Sidewalks	Streets	Parks	Squares	Infrastructure	Vacant Lots
Neglected	Neglected buildings	Neglected sidewalks	Neglected streets	Neglected parks	Neglected squares	Neglected infrastructure	Neglected vacant lots
Underutilized	Underutilized buildings	Underutilized sidewalks	Underutilized streets	Underutilized parks	Underutilized squares	Underutilized infrastructure	Underutilized vacant lots
Marginalized	Marginalized buildings	Marginalized sidewalks	Marginalized streets	Marginalized parks	Marginalized squares	Marginalized infrastructure	Marginalized vacant lots

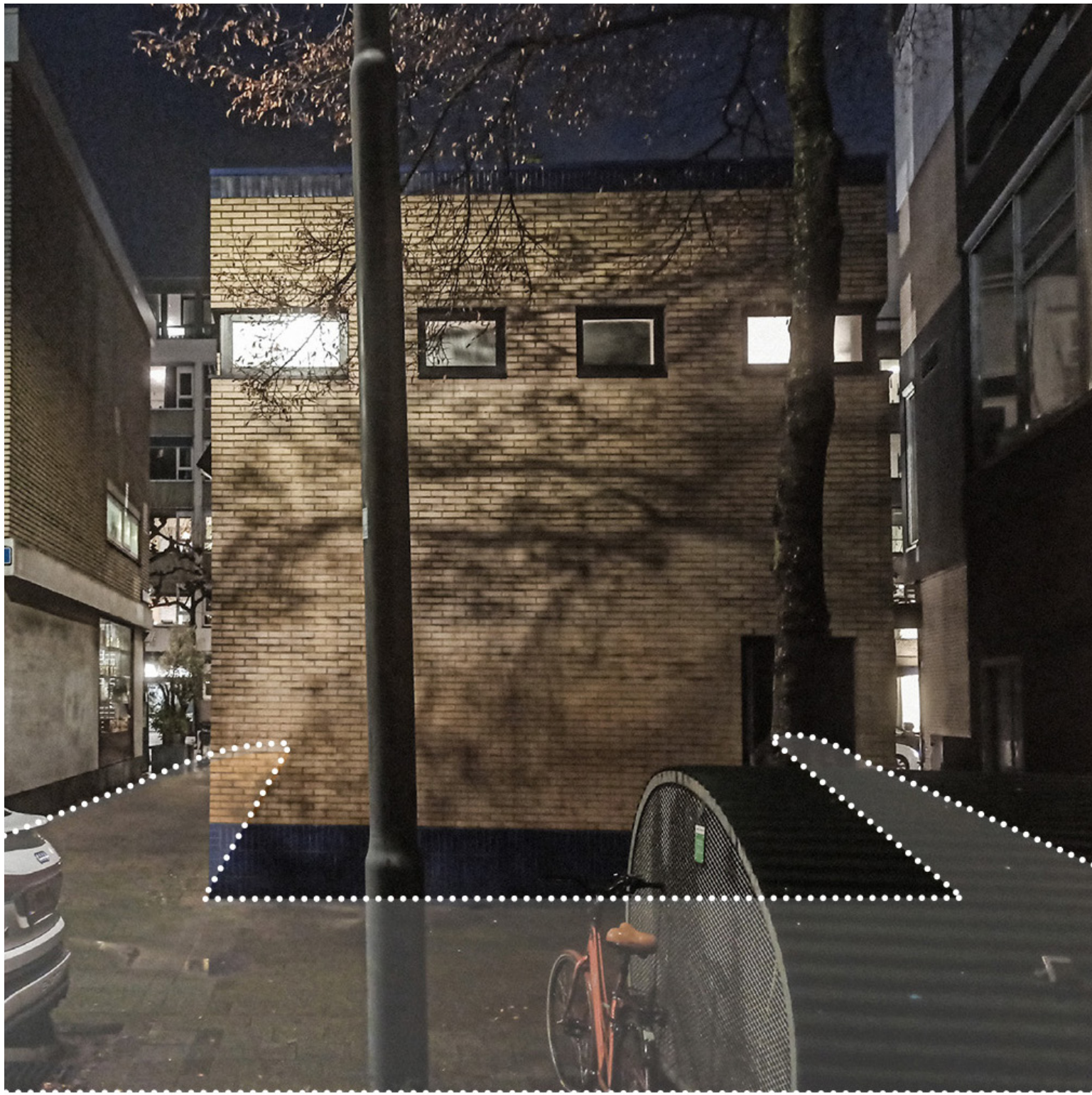
State/Condition	Buildings	Sidewalks	Streets	Parks	Squares	Infrastructure	Vacant Lots
Neglected	Neglected buildings	Neglected sidewalks	Neglected streets	Neglected parks	Neglected squares	Neglected infrastructure	Neglected vacant lots
Underutilized	Underutilized buildings	Underutilized sidewalks	Underutilized streets	Underutilized parks	Underutilized squares	Underutilized infrastructure	Underutilized vacant lots
Marginalized	Marginalized buildings	Marginalized sidewalks	Marginalized streets	Marginalized parks	Marginalized squares	Marginalized infrastructure	Marginalized vacant lots
Fragmented	Fragmented buildings	Fragmented sidewalks	Fragmented streets	Fragmented parks	Fragmented squares	Fragmented infrastructure	Fragmented vacant lots

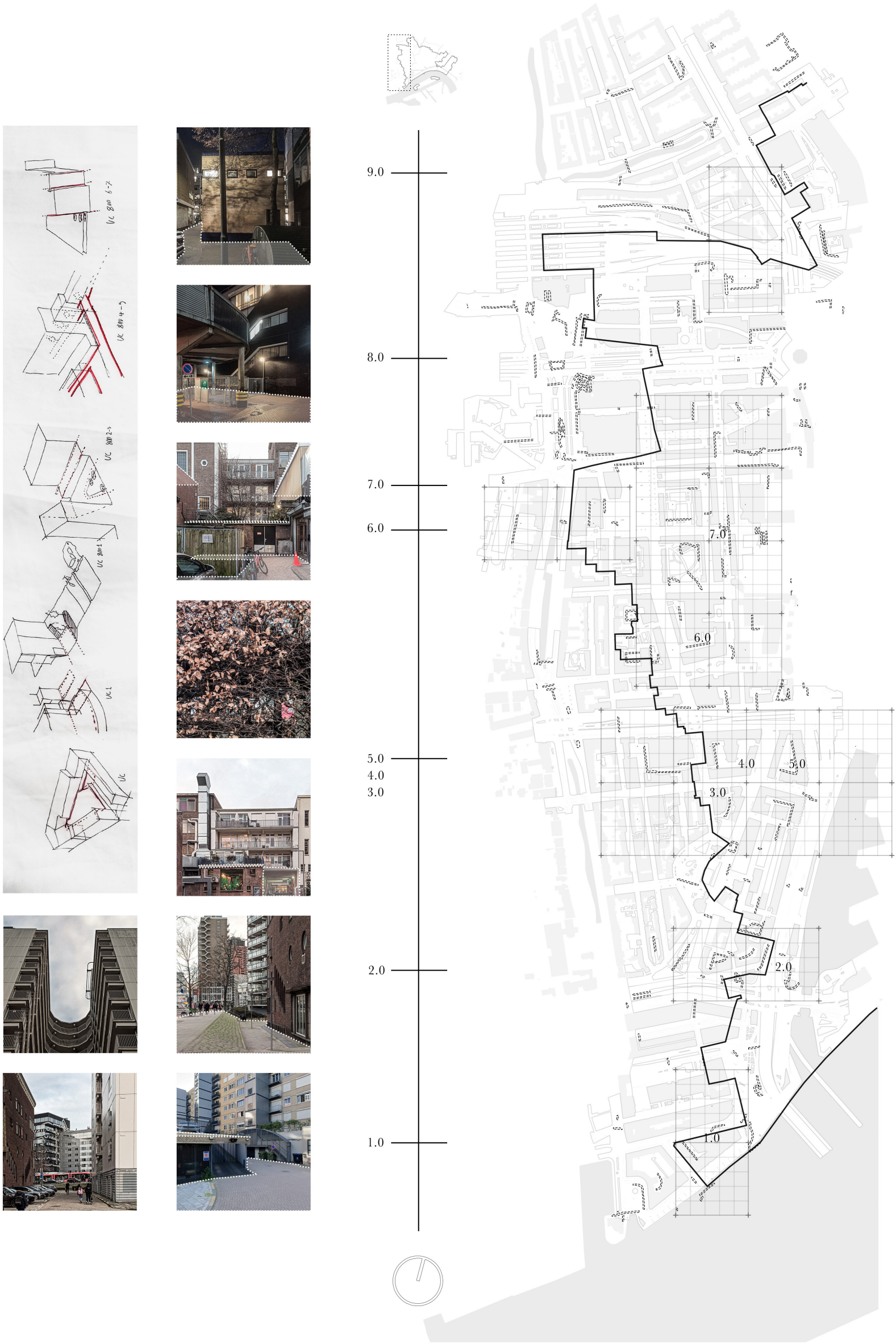
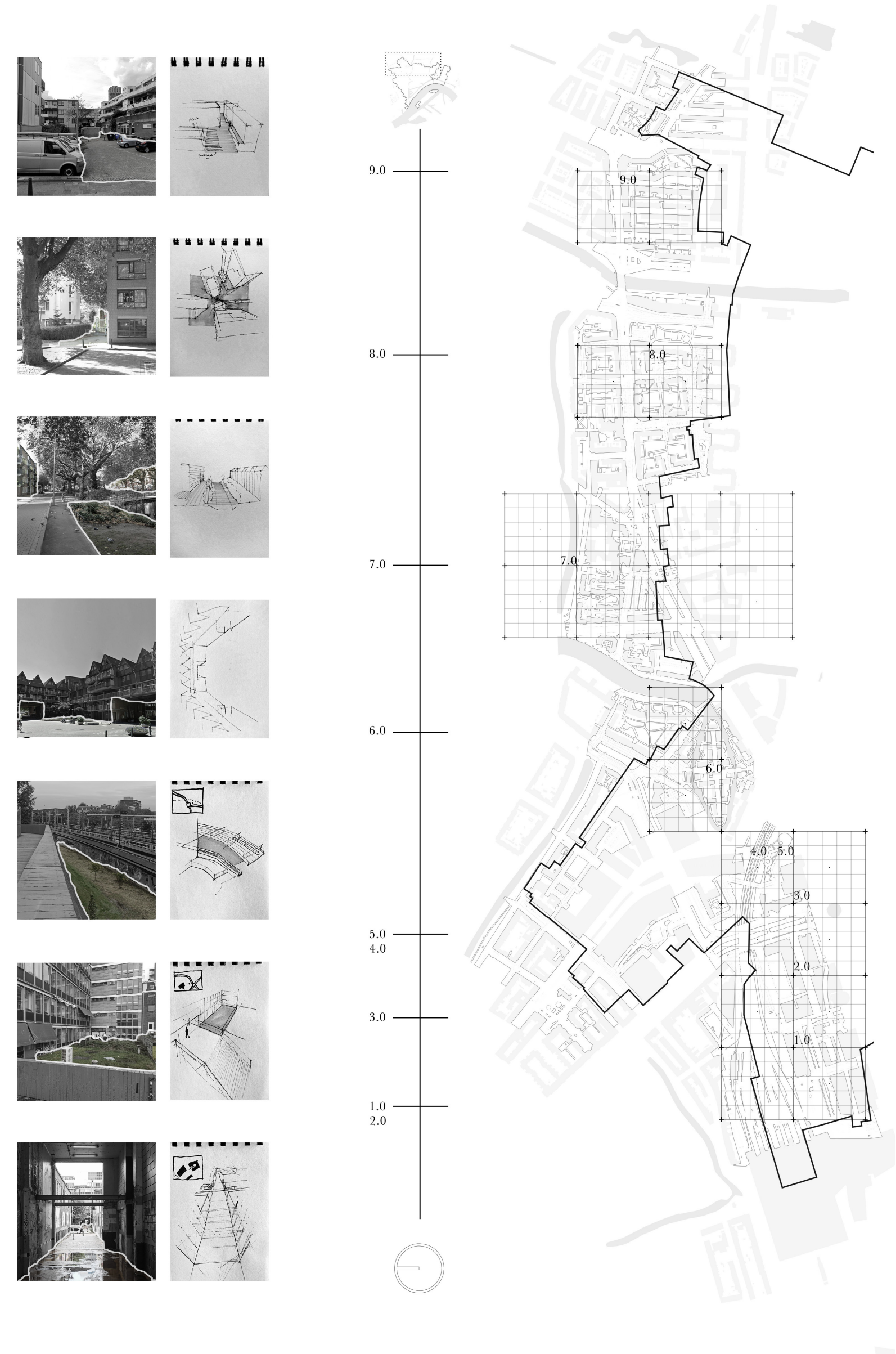
State/Condition	Buildings	Sidewalks	Streets	Parks	Squares	Infrastructure	Vacant Lots
Neglected	Neglected buildings	Neglected sidewalks	Neglected streets	Neglected parks	Neglected squares	Neglected infrastructure	Neglected vacant lots
Underutilized	Underutilized buildings	Underutilized sidewalks	Underutilized streets	Underutilized parks	Underutilized squares	Underutilized infrastructure	Underutilized vacant lots
Marginalized	Marginalized buildings	Marginalized sidewalks	Marginalized streets	Marginalized parks	Marginalized squares	Marginalized infrastructure	Marginalized vacant lots
Fragmented	Fragmented buildings	Fragmented sidewalks	Fragmented streets	Fragmented parks	Fragmented squares	Fragmented infrastructure	Fragmented vacant lots
Inaccessible	Inaccessible buildings	Inaccessible sidewalks	Inaccessible streets	Inaccessible parks	Inaccessible squares	Inaccessible infrastructure	Inaccessible vacant lots

State/Condition	Buildings	Sidewalks	Streets	Parks	Squares	Infrastructure	Vacant Lots
Neglected	Neglected buildings	Neglected sidewalks	Neglected streets	Neglected parks	Neglected squares	Neglected infrastructure	Neglected vacant lots
Underutilized	Underutilized buildings	Underutilized sidewalks	Underutilized streets	Underutilized parks	Underutilized squares	Underutilized infrastructure	Underutilized vacant lots
Marginalized	Marginalized buildings	Marginalized sidewalks	Marginalized streets	Marginalized parks	Marginalized squares	Marginalized infrastructure	Marginalized vacant lots
Fragmented	Fragmented buildings	Fragmented sidewalks	Fragmented streets	Fragmented parks	Fragmented squares	Fragmented infrastructure	Fragmented vacant lots
Inaccessible	Inaccessible buildings	Inaccessible sidewalks	Inaccessible streets	Inaccessible parks	Inaccessible squares	Inaccessible infrastructure	Inaccessible vacant lots
Abandoned	Abandoned buildings	Abandoned sidewalks	Abandoned streets	Abandoned parks	Abandoned squares	Abandoned infrastructure	Abandoned vacant lots

State/Condition	Buildings	Sidewalks	Streets	Parks	Squares	Infrastructure	Vacant Lots
Neglected	Neglected buildings	Neglected sidewalks	Neglected streets	Neglected parks	Neglected squares	Neglected infrastructure	Neglected vacant lots
Underutilized	Underutilized buildings	Underutilized sidewalks	Underutilized streets	Underutilized parks	Underutilized squares	Underutilized infrastructure	Underutilized vacant lots
Marginalized	Marginalized buildings	Marginalized sidewalks	Marginalized streets	Marginalized parks	Marginalized squares	Marginalized infrastructure	Marginalized vacant lots
Fragmented	Fragmented buildings	Fragmented sidewalks	Fragmented streets	Fragmented parks	Fragmented squares	Fragmented infrastructure	Fragmented vacant lots
Inaccessible	Inaccessible buildings	Inaccessible sidewalks	Inaccessible streets	Inaccessible parks	Inaccessible squares	Inaccessible infrastructure	Inaccessible vacant lots
Abandoned	Abandoned buildings	Abandoned sidewalks	Abandoned streets	Abandoned parks	Abandoned squares	Abandoned infrastructure	Abandoned vacant lots
Disorganized	Disorganized buildings	Disorganized sidewalks	Disorganized streets	Disorganized parks	Disorganized squares	Disorganized infrastructure	Disorganized vacant lots

Fieldwork



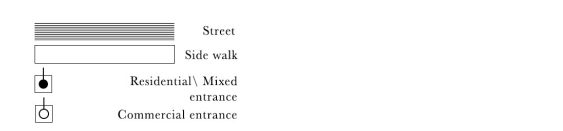


Critical mapping (Environmental)

Critical mapping (Socio-Economic)



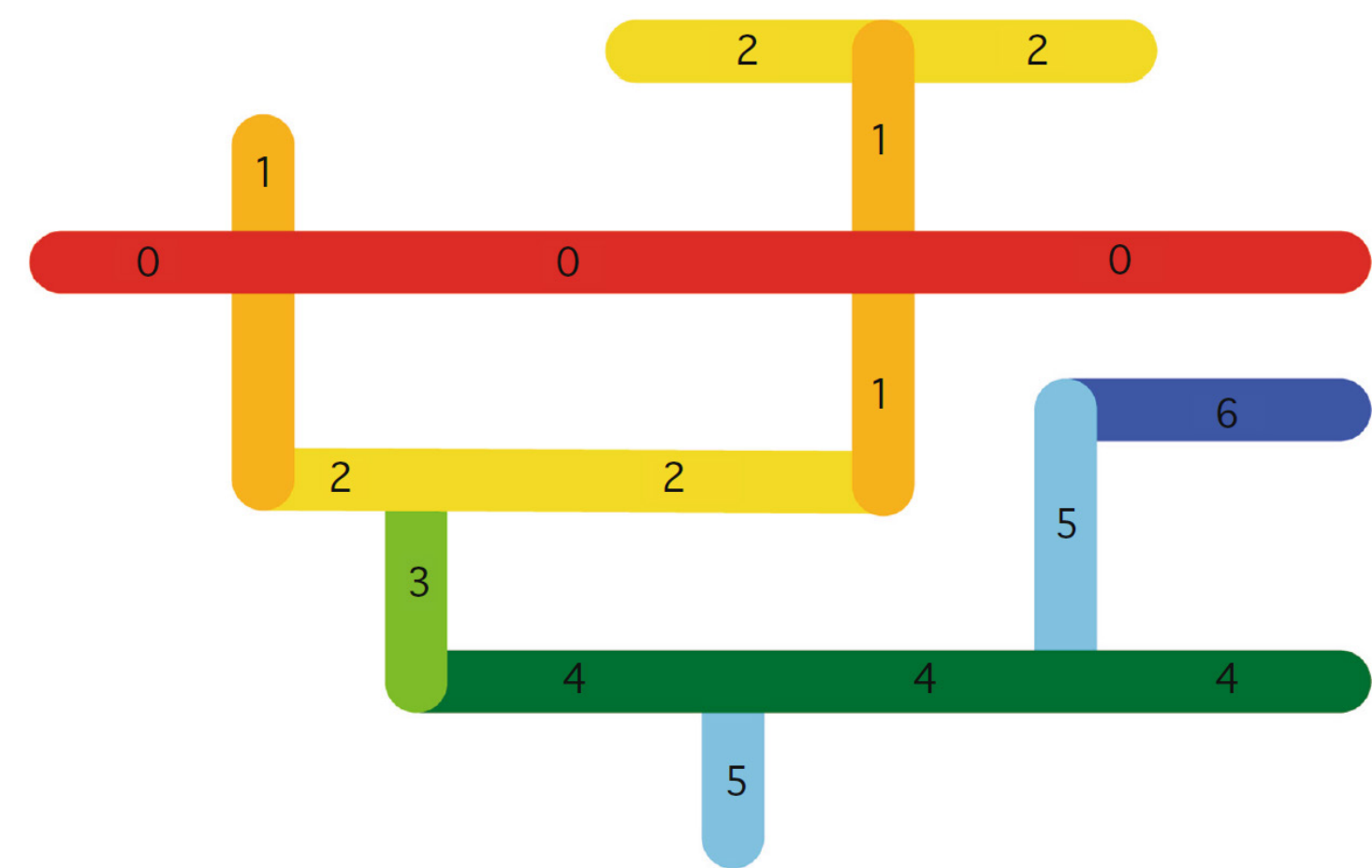
wijkprofielrotterdam.nl



Qualitative Analysis conclusion

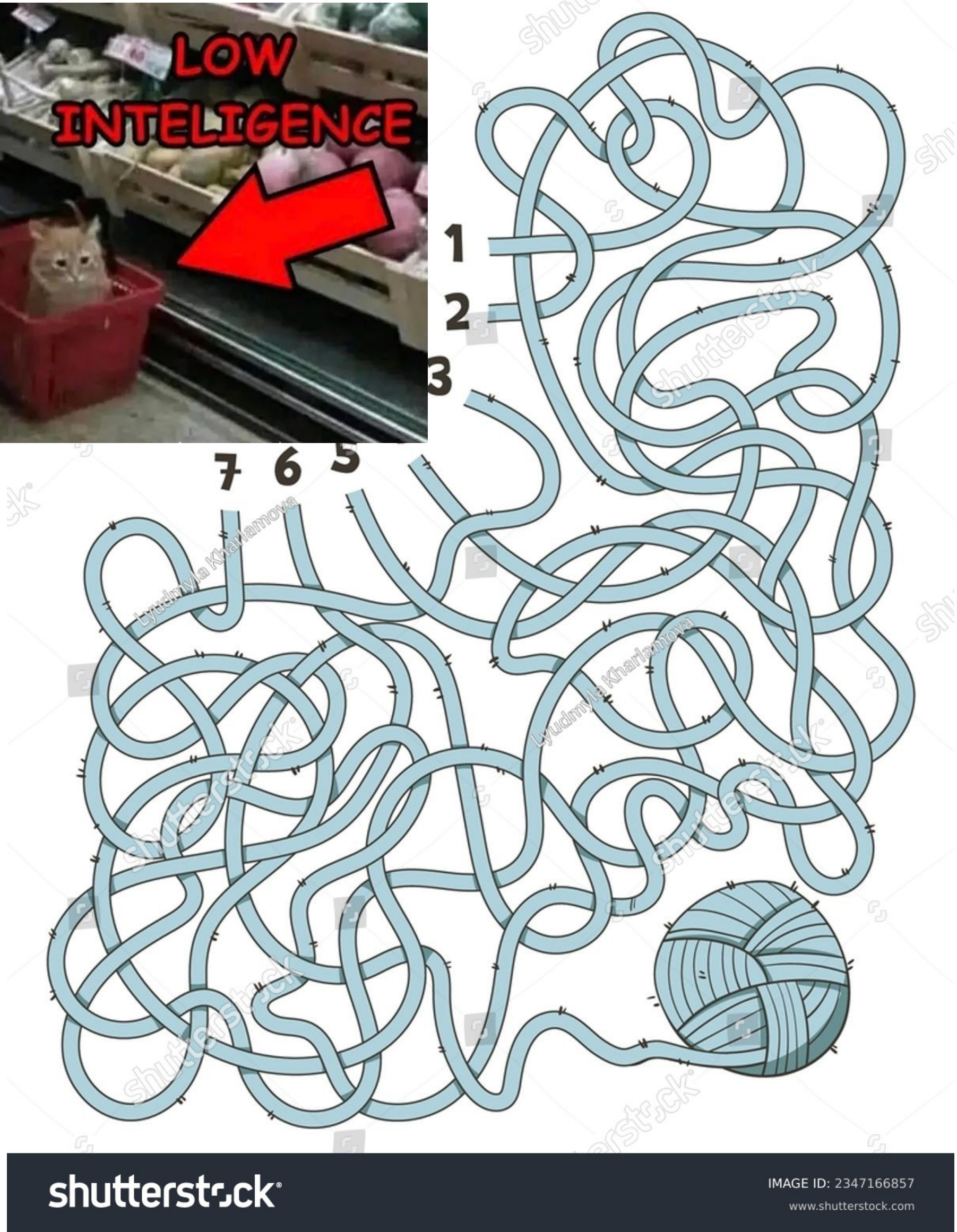
Initial urban cracks were mapped and found to be particularly vulnerable.

Quantitative identification



Angular Integration Analysis: how easily can
a street be reached?

Scheme of how topological depth is calculated from a chosen street (step 0)
Van Nes, A., & Yamu, C. (2021). Introduction to Space Syntax in Urban Studies



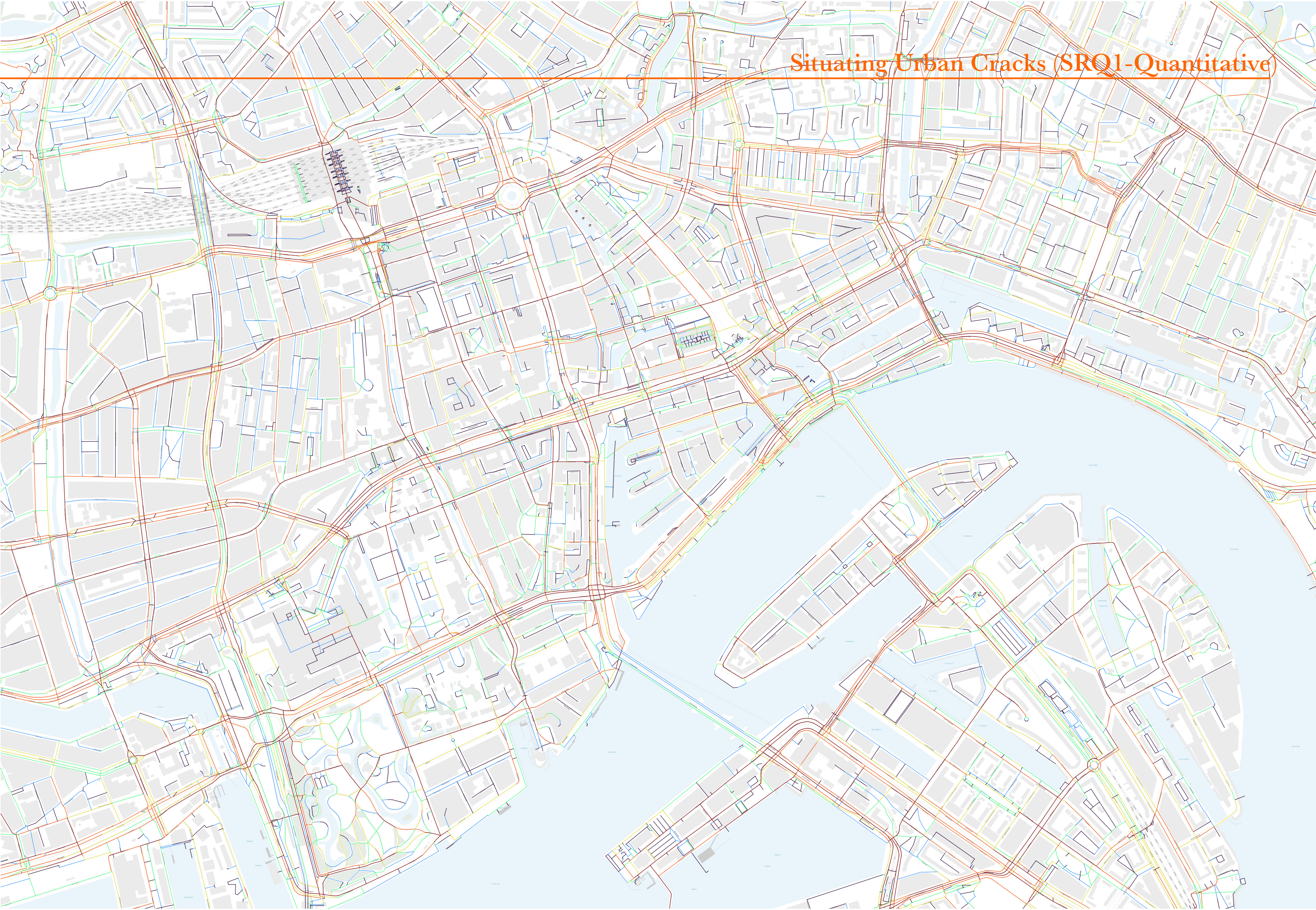
What is the easiest route to take?

3.0 Design Research

Situating Urban Cracks (SRQ1-Quantitative)

Angular Integration Analysis: how easily can a street/place be reached?

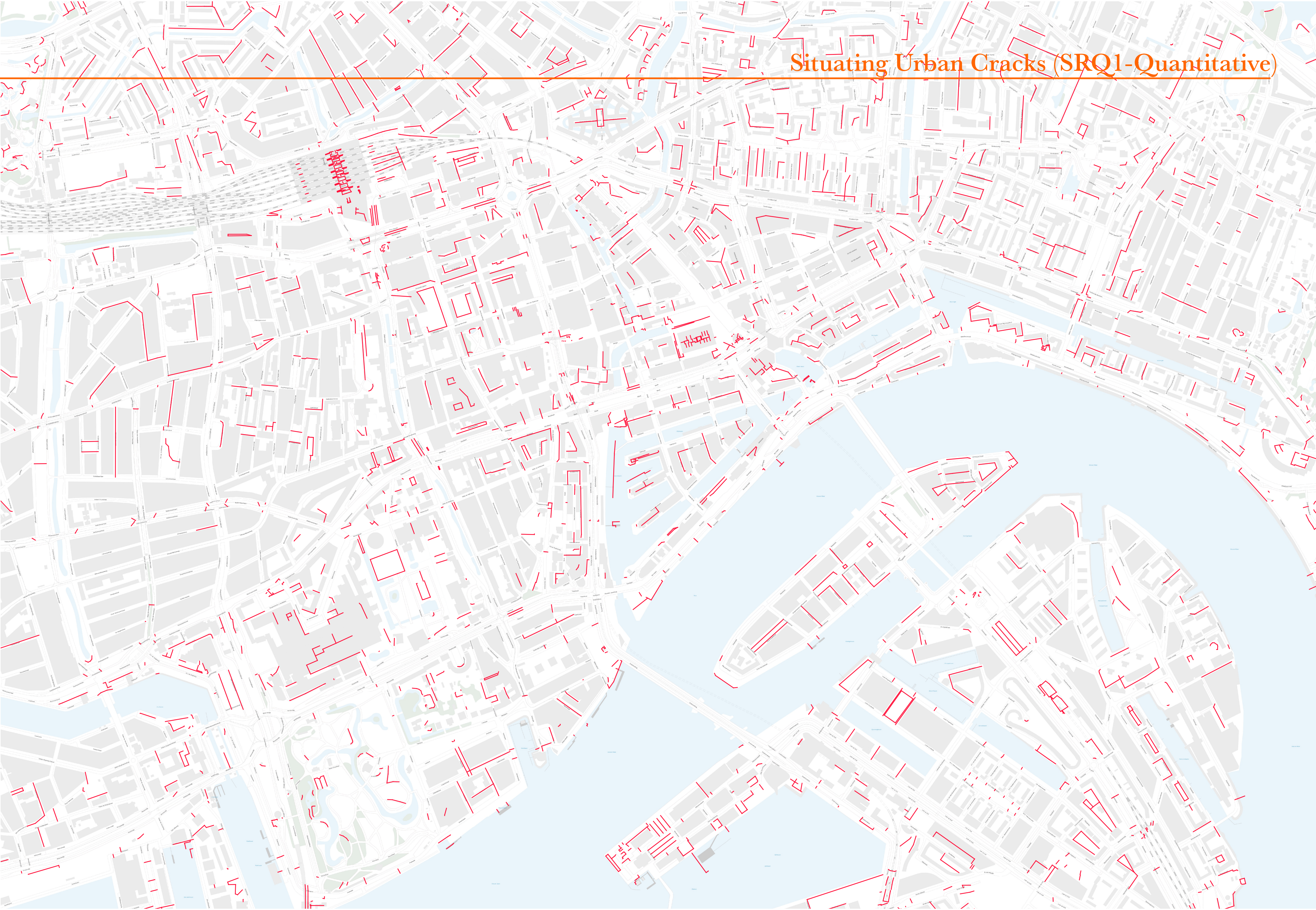
800 meters for pedestrian accessibility, where **red** the is **easiest** to be reached, and **blue** is the **least easily** reached



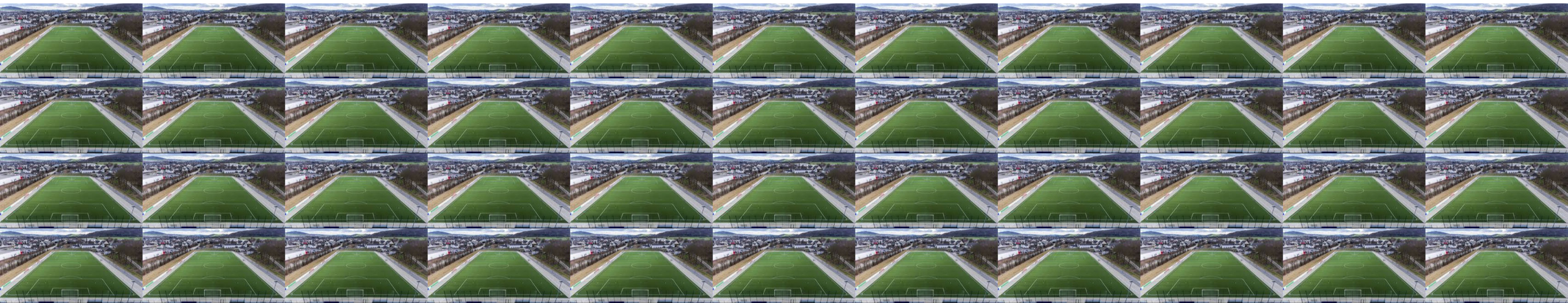
3.0 Design Research

Situating Urban Cracks (SRQ1-Quantitative)

Isolating the **Blue** streets that are the least easily reached, for initial investigation. Coloring them red for clarity



Collectively, **315,000 square meters** is approximately equivalent to **44 soccer fields** or a significant portion of a large university campus. This is approximately the amount of underused and marginalized space within the Rotterdam city center area.



3.0 Design Research

By intersecting the findings from quantitative and qualitative analyses, all the possible cracks were mapped.

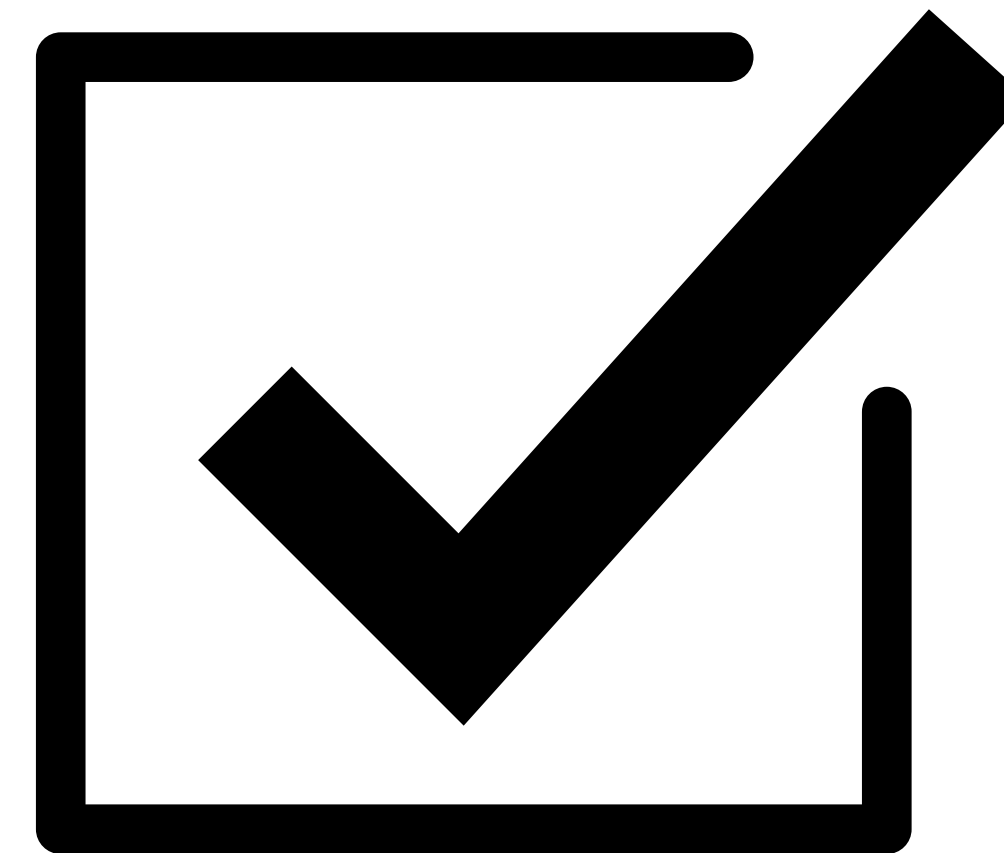
Situating Urban Cracks (SRQ1-Quantitative)



[Sub-Research question 1]:

What spatial characteristics and physical features define urban cracks, and how can they be distinguished from other urban spaces?

(Analytical **Identification** of Urban Cracks)



1.0 Introduction

Problematization

2.0 Research Design

Methodology

3.0 Design Research

Analysis

4.0 Design

Design

[Sub-Research question 2]:

What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?

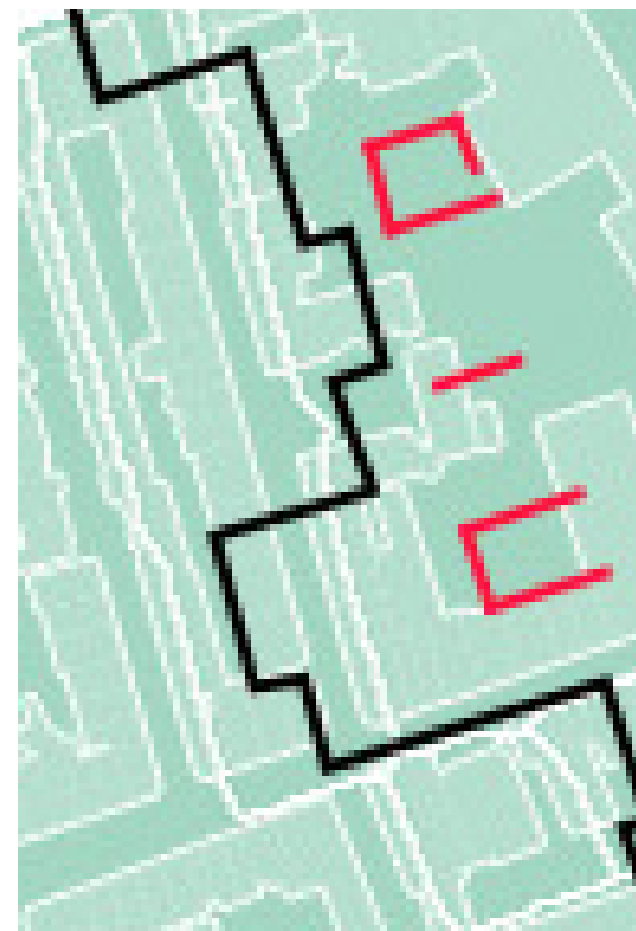
(Investigating the **potential** of the urban cracks)

[Sub-Research question 2]:

What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?

(Investigating the **potential** of the urban cracks)

Data mining
Morphological analysis





Density based analysis?

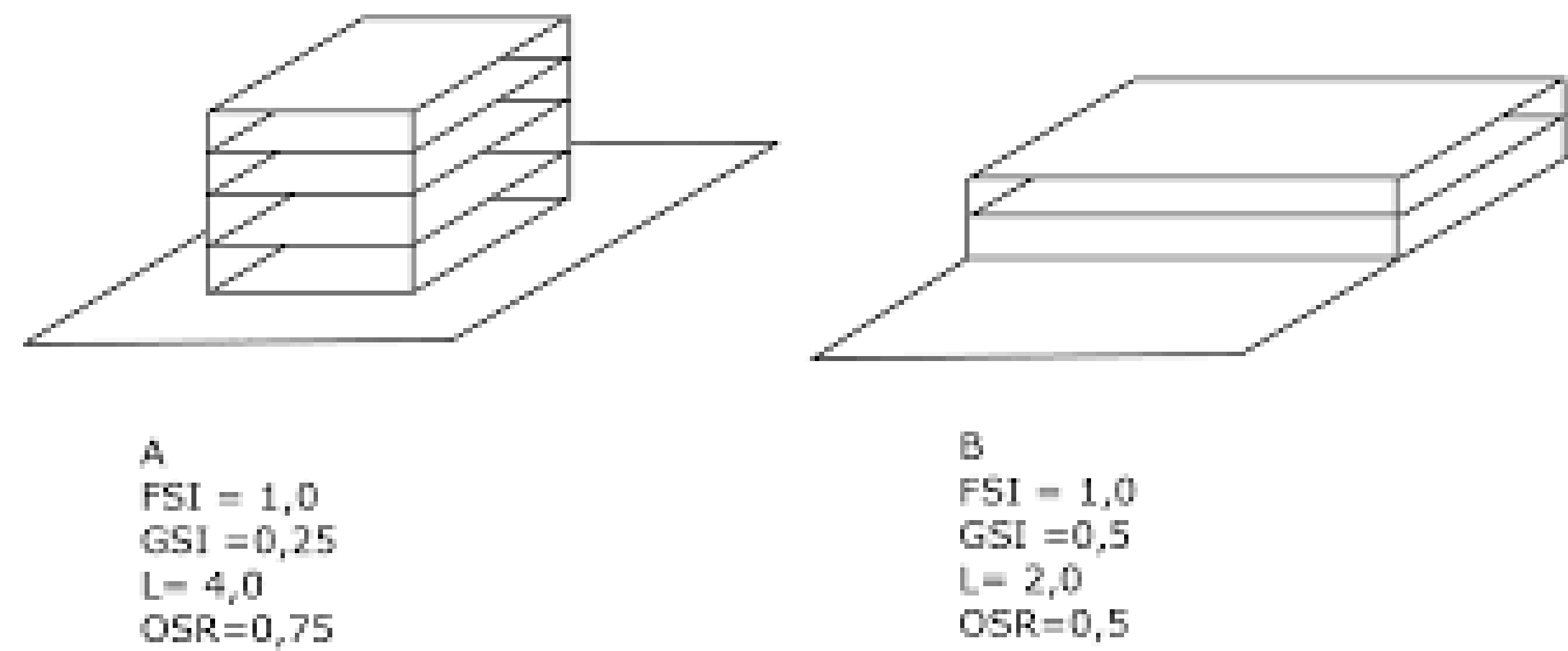


Fig.the Floor Space Index (FSI), Ground Space Index (GSI), number of Layers (L), and Open Space Ratio (OSR) (<https://www.pbl.nl>)



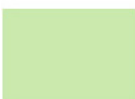







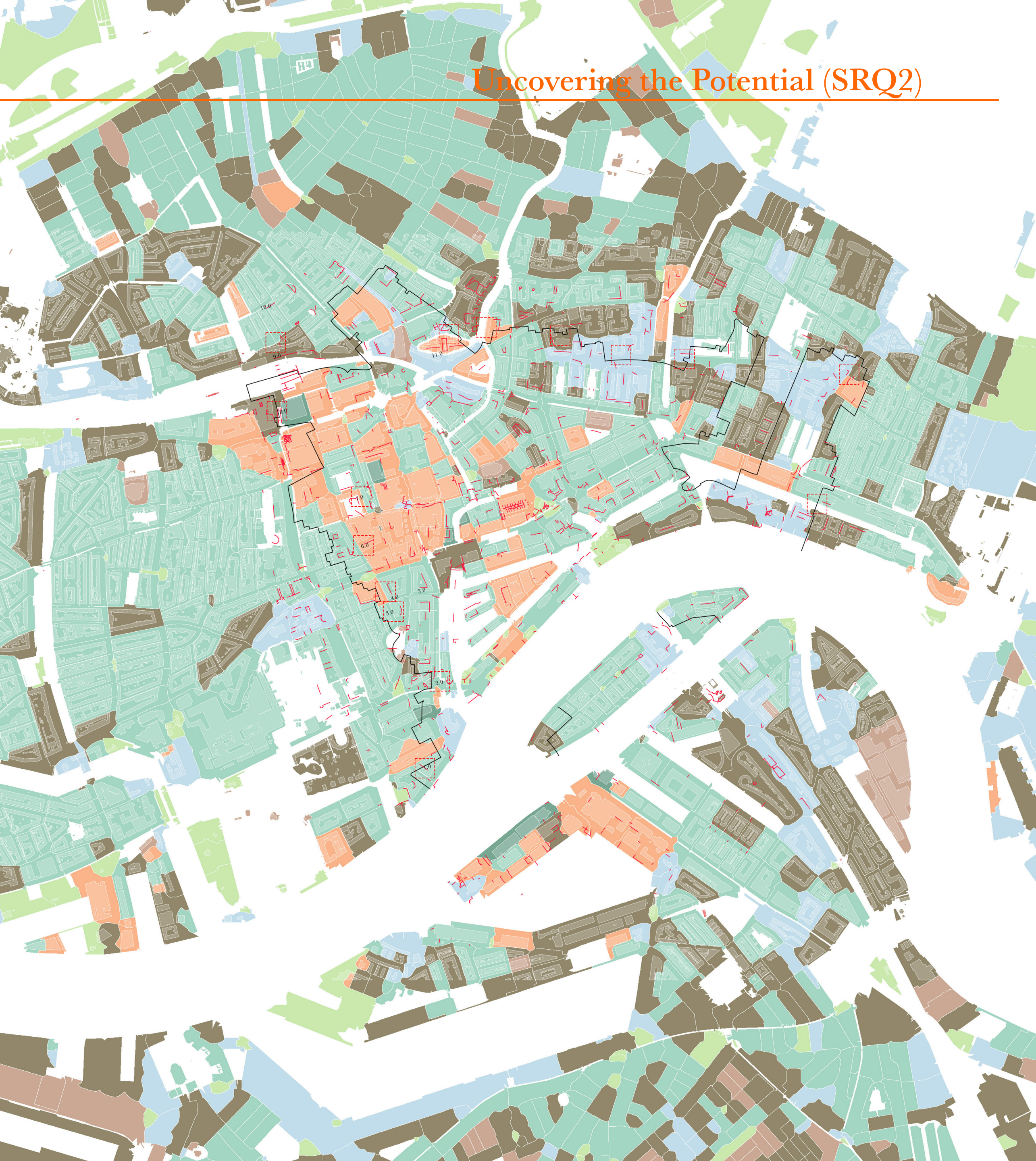
Density based typology map

3.0 Design Research






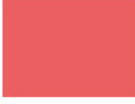


Uncovering the Potential (SRQ2)

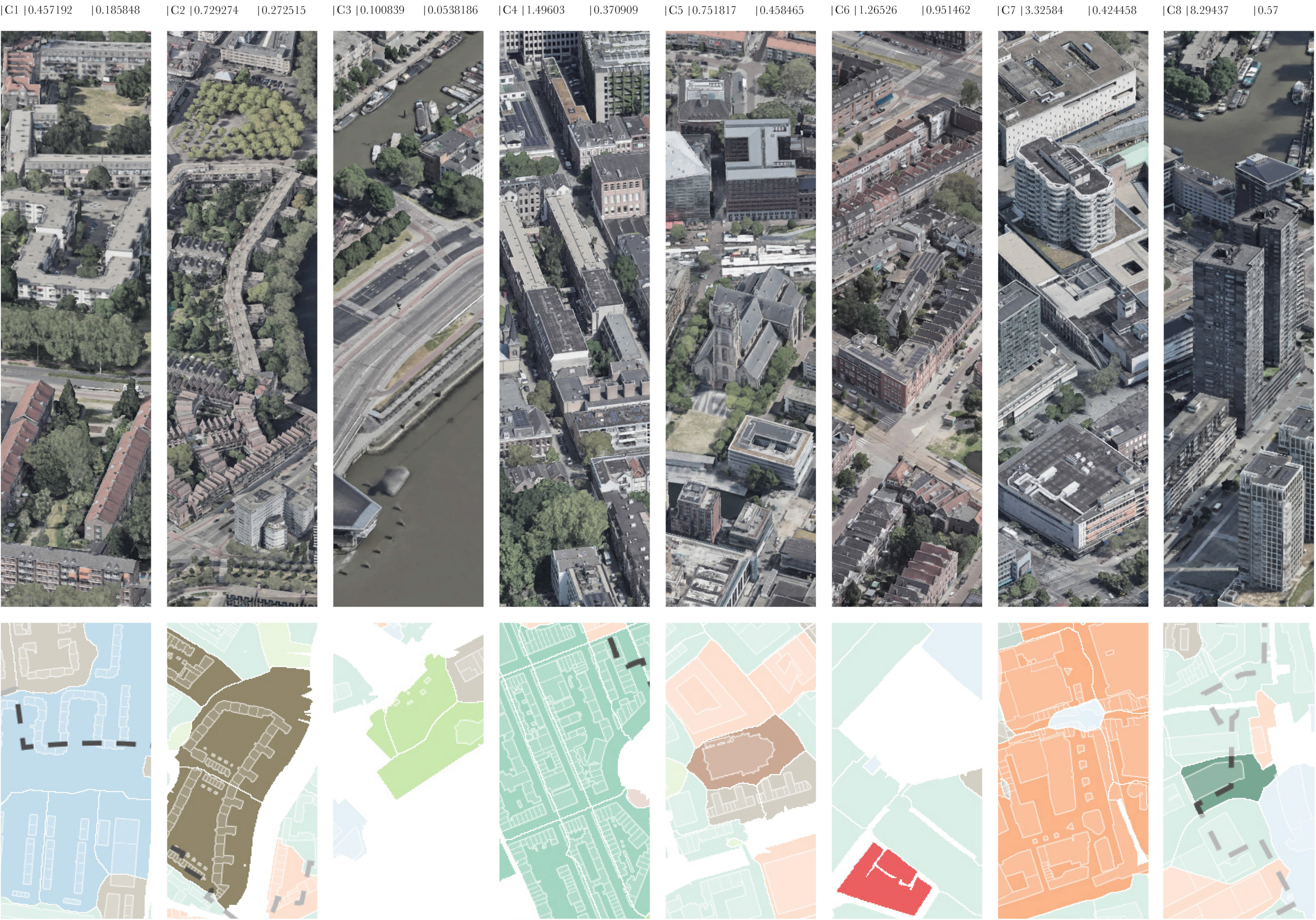
The typology was generated using Geoda and data from Rudi-fun_PV28_Zuid_Holland, employing the ‘kmeans’ method to create categories based on **FSI** and **GSI**. This resulted in **8 types, ranging from very dense to low density.**

	Type	FSI_22	GSI_22	Function
	C1	0.457192	0.185848	Residential
	C2	0.729274	0.272515	Very diverse mixed-use (retail, residential, commercial)
	C3	0.100839	0.0538186	Public spaces (parks, open areas) with very low density
	C4	1.49603	0.370909	Residential with ground-floor shops and some mixed-use (bars)
	C5	0.751817	0.458465	Mixed-use with shops (retail and commercial)
	C6	1.26526	0.951462	High-density residential with a mix of commercial and office spaces
	C7	3.32584	0.424458	Predominantly mixed-use (offices, health care, industrial, retail)
	C8	8.29437	0.57	High-density mixed-use (meeting, industry, office, retail, other uses)



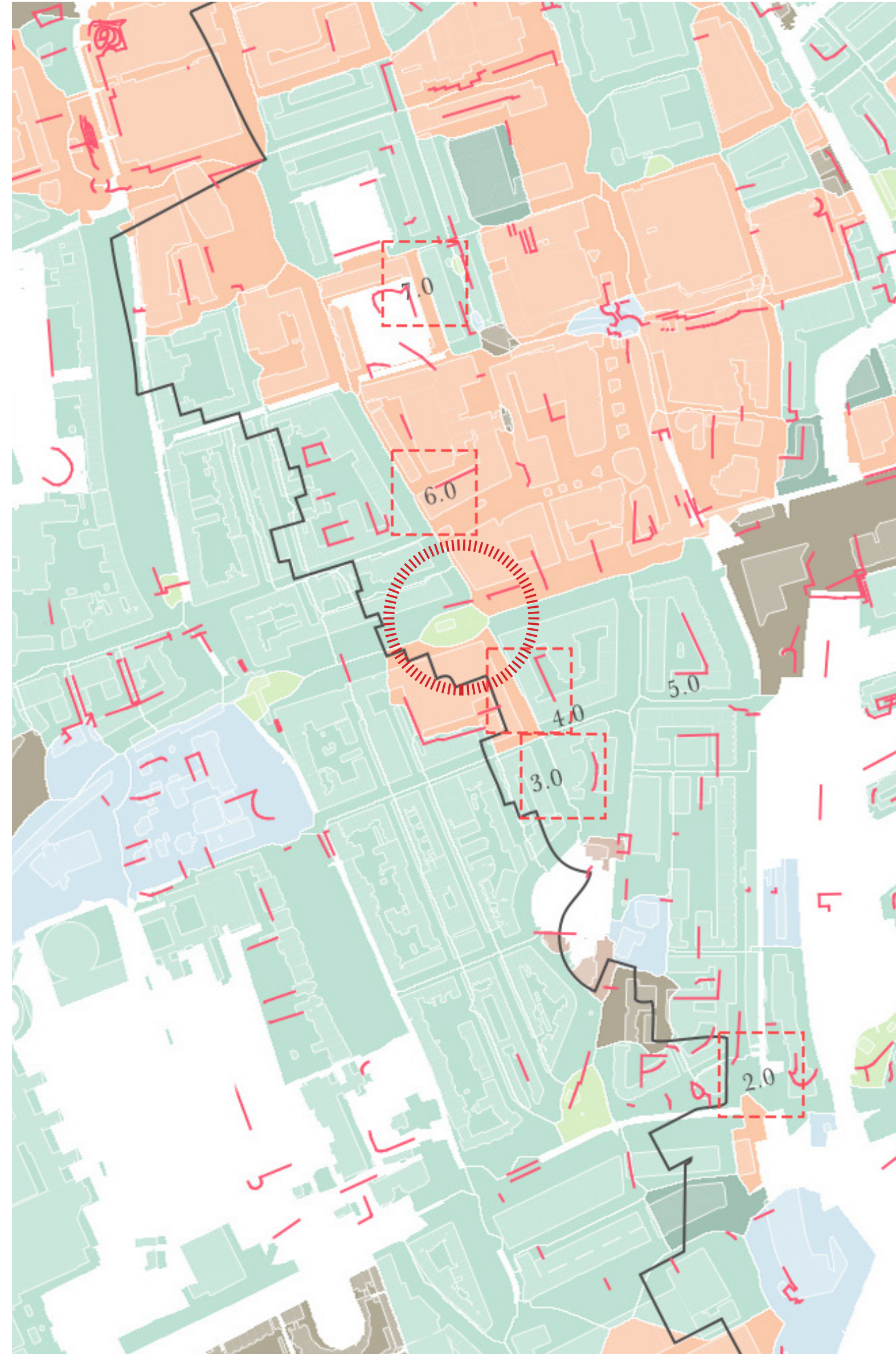
- C1) Low-density residential areas.
- C2) Moderate-density mixed-use areas.
- C3) Very low-density public spaces.
- C4) High-density residential and mixed-use areas.
- C5) Mixed shops with high density.
- C6) High-density areas with mixed-use areas.
- C7) High-density mixed-use areas.
- C8) Very high-density areas for meeting, industry, office, and retail functions.

	Type	FSI_22	GSI_22	Function
	C1	0.457192	0.185848	Residential
	C2	0.729274	0.272515	Very diverse mixed-use (retail, residential, commercial)
	C3	0.100839	0.0538186	Public spaces (parks, open areas) with very low density
	C4	1.49603	0.370909	Residential with ground-floor shops and some mixed-use (bars)
	C5	0.751817	0.458465	Mixed-use with shops (retail and commercial)
	C6	1.26526	0.951462	High-density residential with a mix of commercial and office spaces
	C7	3.32584	0.424458	Predominantly mixed-use (offices, health care, industrial, retail)
	C8	8.29437	0.57	High-density mixed-use (meeting, industry, office, retail, other uses)

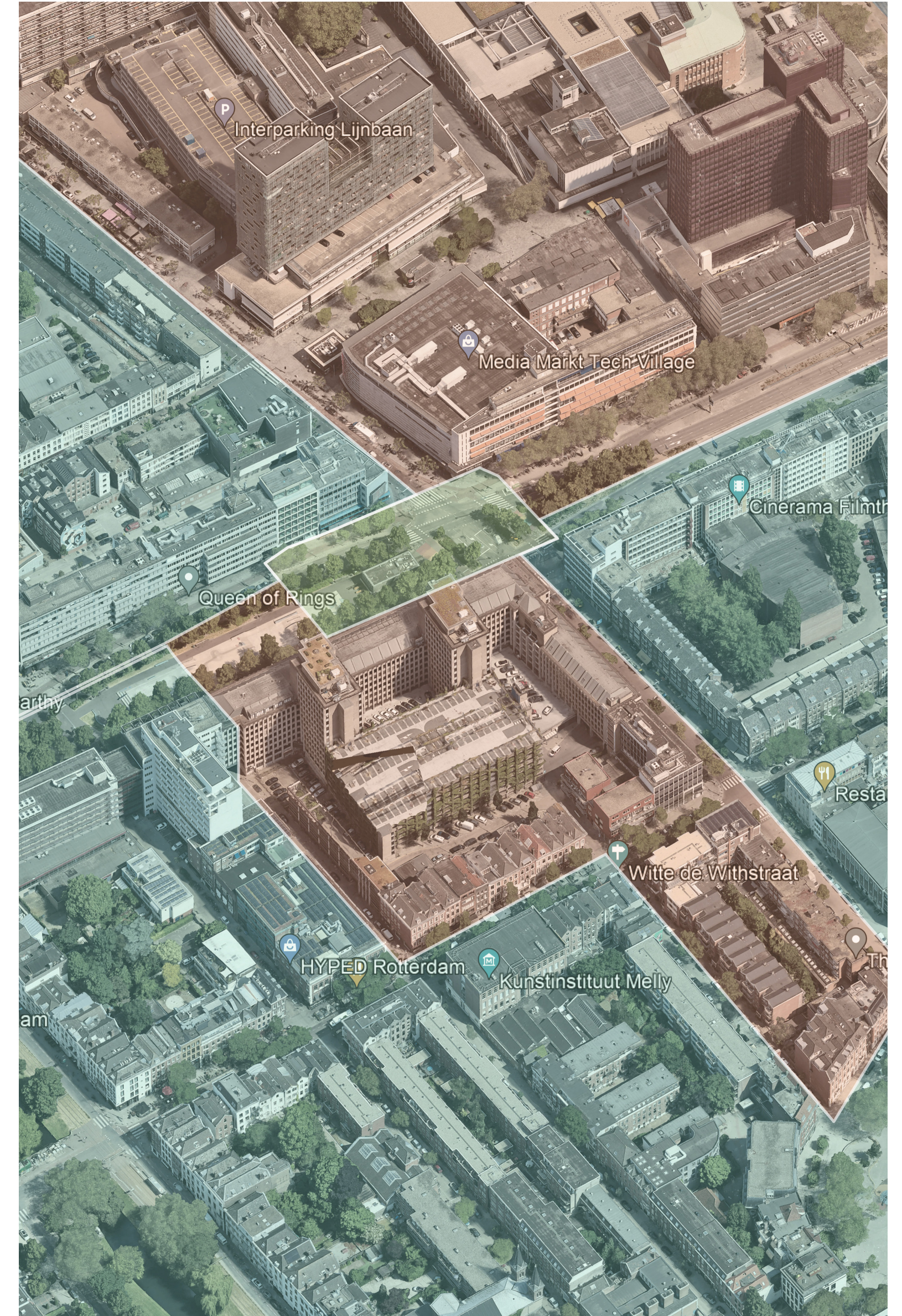


3.0 Design Research

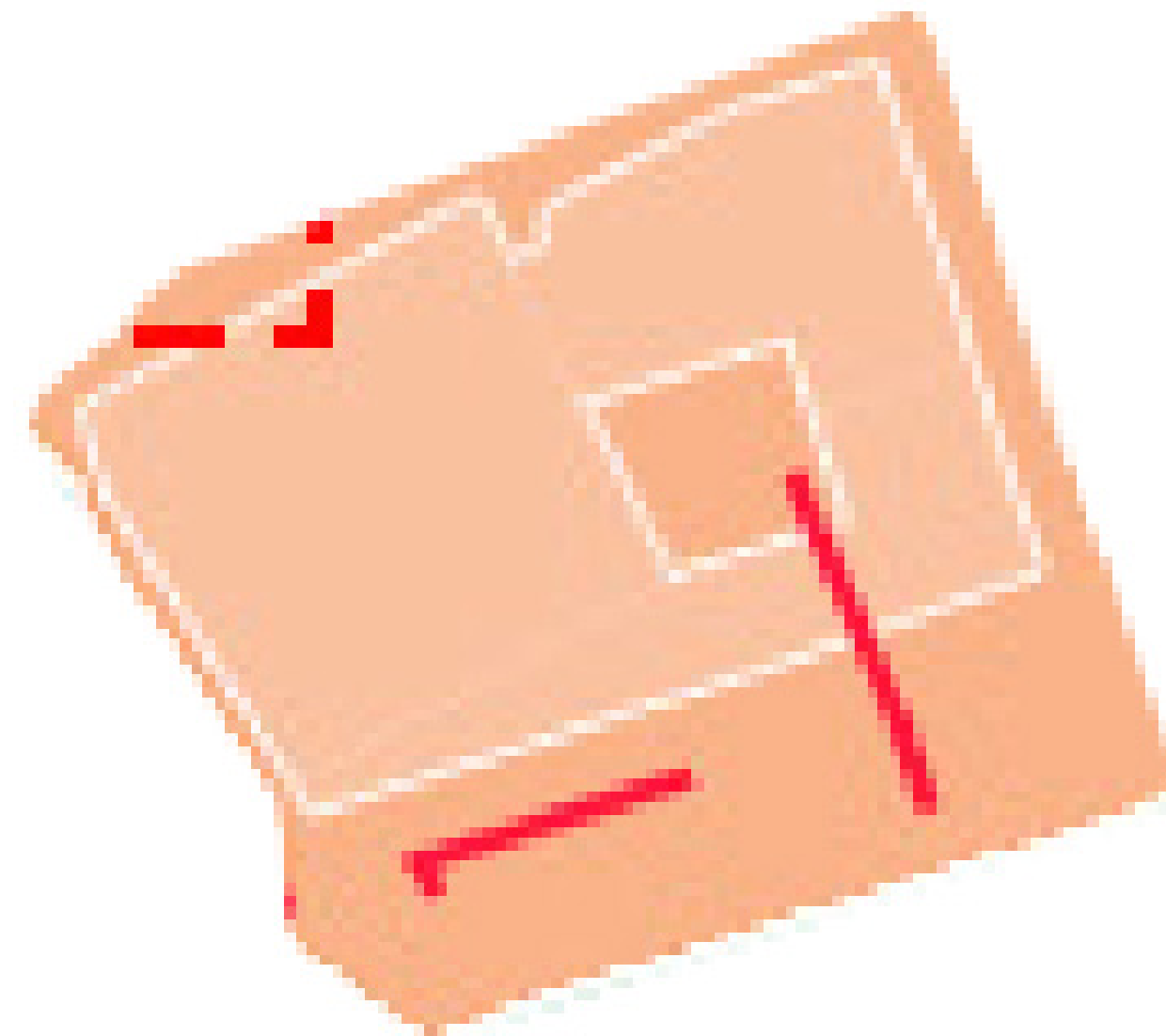
To **understand** the **connections** between the **types**, **examine** **urban challenges** and **urgencies** for each **type** to **determine** which **urgency** is **most visible**.



Uncovering the Potential (SRQ2)



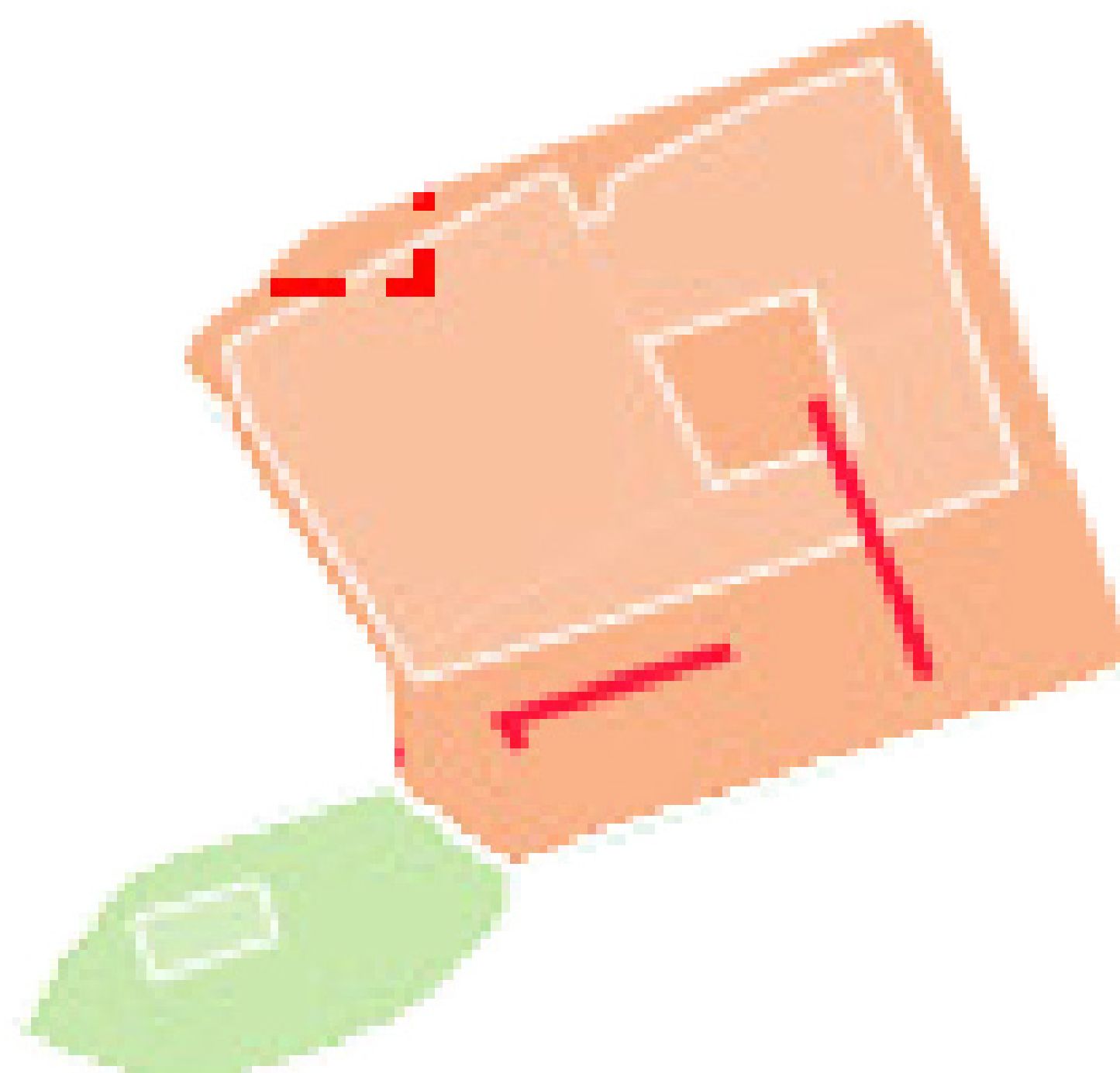
C7 (**high** density and **mixed** functions)



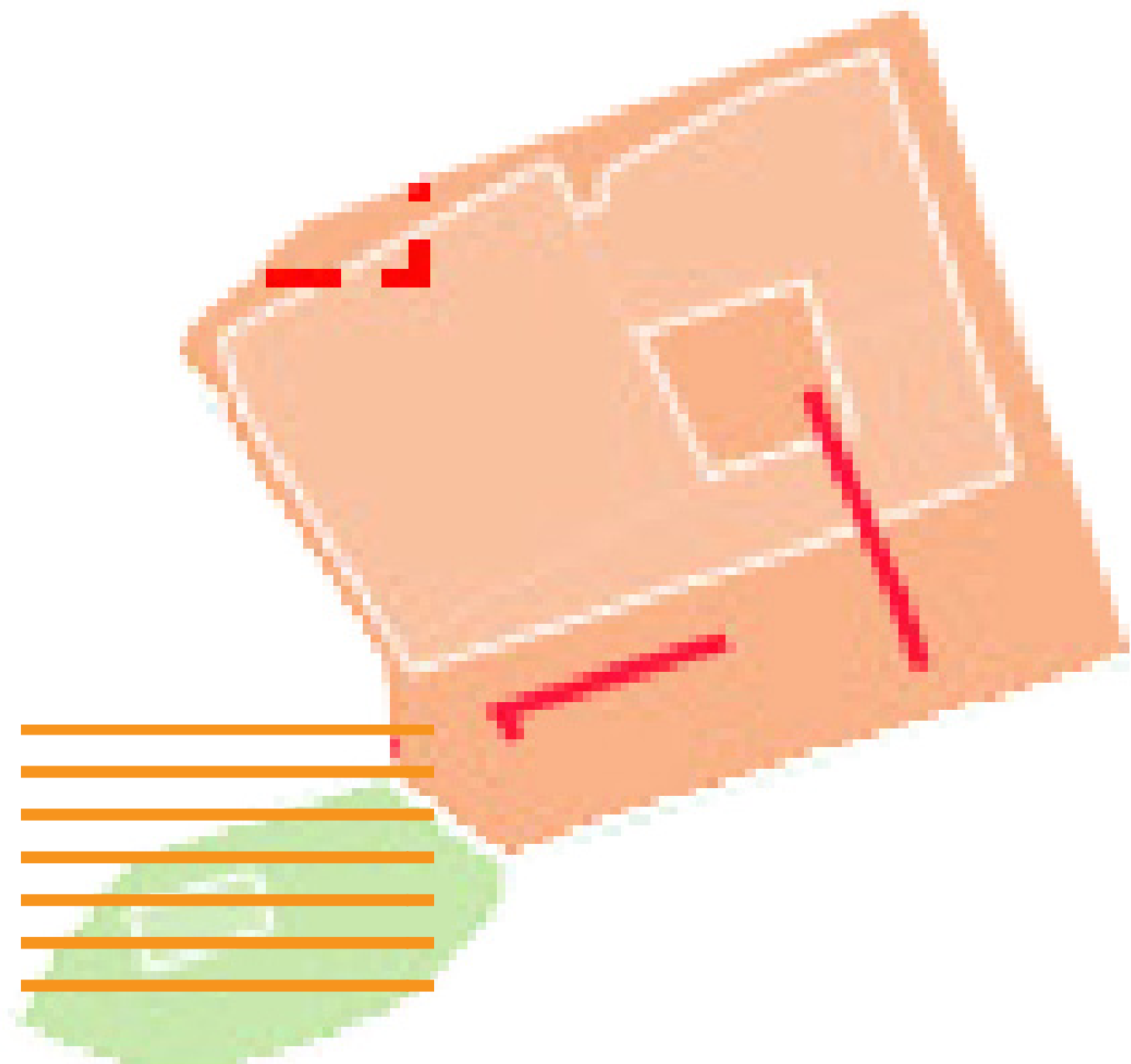
C3 (public with low density)



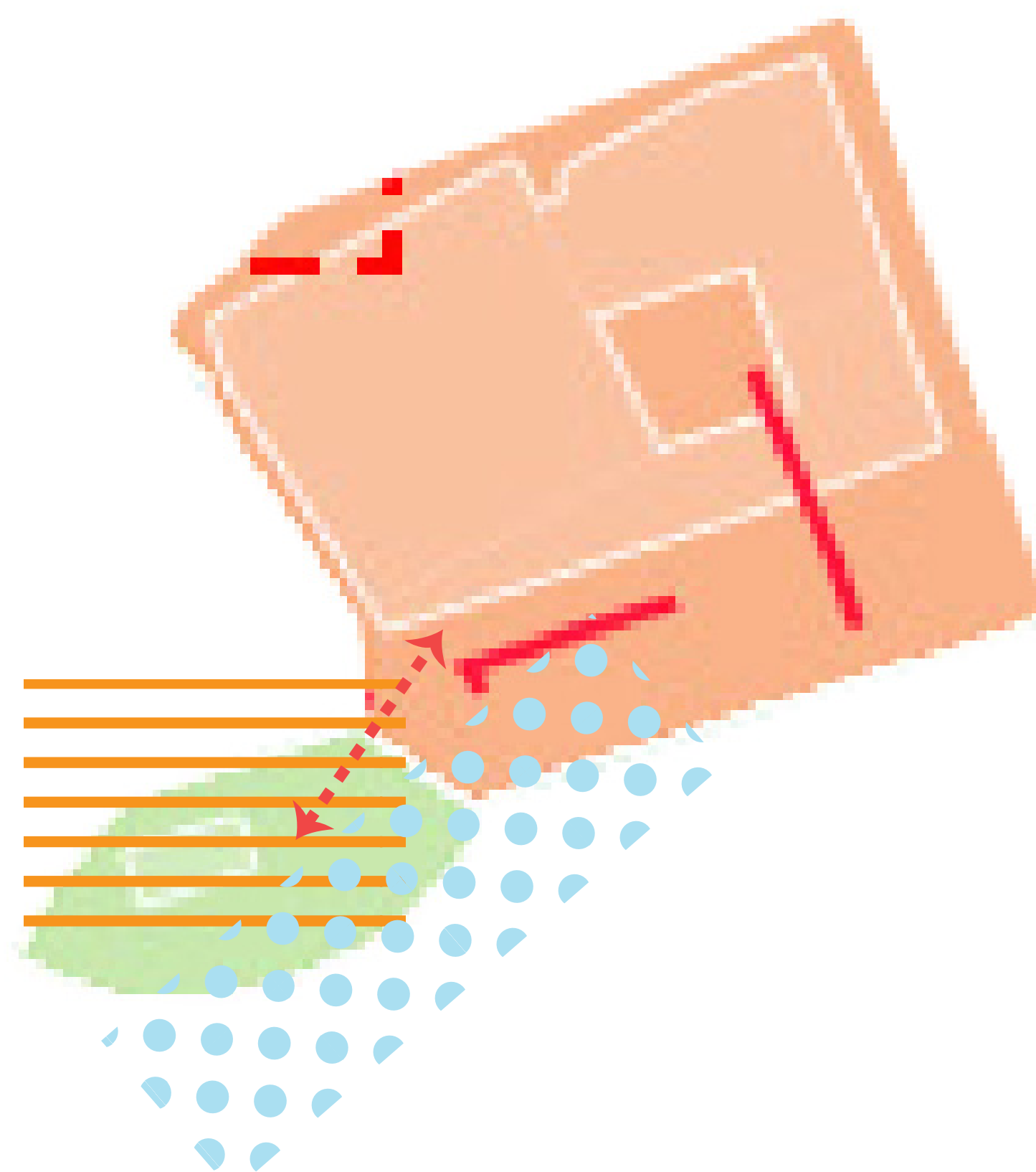
The **urgency** for C7 is the **lack of green areas**



which can be **compensated** by **increasing** the **green footprint** in **C3**



Improved connections would enable **better pedestrian flow**, allowing for **increased economic opportunities** in C3.



The analysis led to

28 different types of relationships identified

Neighboring Pair	Linkage to Trend	Linkage to Urgency			
C1, C2	Supports smart mobility and sustainable planning.	Reduces emissions and addresses climate change.	C3, C4	Promotes mixed-use development and green spaces.	Improves quality of life and access to amenities.
			C3, C5	Improves walkability and green corridors.	Enhances biodiversity and reduces car reliance.
			C3, C6	Integrates green infrastructure for quality of life.	Supports resilience and walkability.
			C3, C7	Supports sustainability and well-being.	Manages congestion and enhances quality of life.
	Enhances community interaction and activity.	Improves resilience and local economy.	C3, C8	Enhances pedestrian infrastructure and resilience.	Improves connectivity and addresses density disparities.
			C4, C5	Optimizes pedestrian infrastructure and green spaces.	Balances density and ensures access to green spaces.
			C4, C6	Enhances green infrastructure and resilience.	Manages climate impacts and supports adaptation.
			C4, C7	Fosters mixed-use development and connectivity.	Manages congestion and enhances air quality.
C1, C3	Promotes mixed-use development and quality of life.	Balances density and enhances well-being.	C4, C8	Creates green spaces and pedestrian corridors.	Supports climate adaptation and walkable spaces.
			C5, C6	Creates green corridors and improves walkability.	Supports climate adaptation and manages resource strain.
			C5, C7	Fosters mixed-use development and connectivity.	Reduces congestion and improves air quality.
			C5, C8	Enhances pedestrian infrastructure and green spaces.	Supports housing needs and manages density.
	Advances sustainable development.	Reduces congestion and improves air quality.	C6, C7	Improves connectivity and sustainable mobility.	Manages congestion and enhances air quality.
			C6, C8	Integrates green infrastructure and mobility.	Supports affordable housing and manages density.
C1, C4	Integrates pocket parks for health and well-being.	Manages resource strain and improves biodiversity.			
	Uses green infrastructure for resilience.	Mitigates congestion and impacts from high density.			
C1, C5	Enhances green infrastructure for resilience.	Manages density and resource strain.			
	Promotes walkable neighborhoods.	Improves mobility and air quality.			
C1, C6	Improves quality of life with green spaces.	Addresses service disparities and sustainability.			
	Promotes walkability and connectivity.	Reduces congestion and improves air quality.			
C1, C7	Introduces green infrastructure for sustainability.	Enhances resilience and climate adaptation.			
	Supports sustainability and mobility.	Manages congestion and supports air quality.			
C1, C8	Enhances pedestrian design and connectivity.	Promotes equity and reduces service disparities.			

three main types of opportunities emerged:

- Enhancing Connectivity and Walkability (**connection-social**)
- Boosting the economic value and Supporting Local Businesses through Mixed-Use Development (**economical**)
- Developing Green Infrastructure (**environmental**)

1. Enhancing Connectivity and Walkability

(Residential) x (Residential with Mixed Use)



2. Supporting Local Businesses through Mixed-Use Development

(Very Diverse Mixed) x (Public with Low FSI and GSI)



3. Developing Green Infrastructure

(public with low density) x (high density and mixed functions)



3.0 Design Research

Map of opportunities

- Enhancing Connectivity and Walkability
- Supporting Local Businesses through Mixed-Use Development
- Developing Green Infrastructure

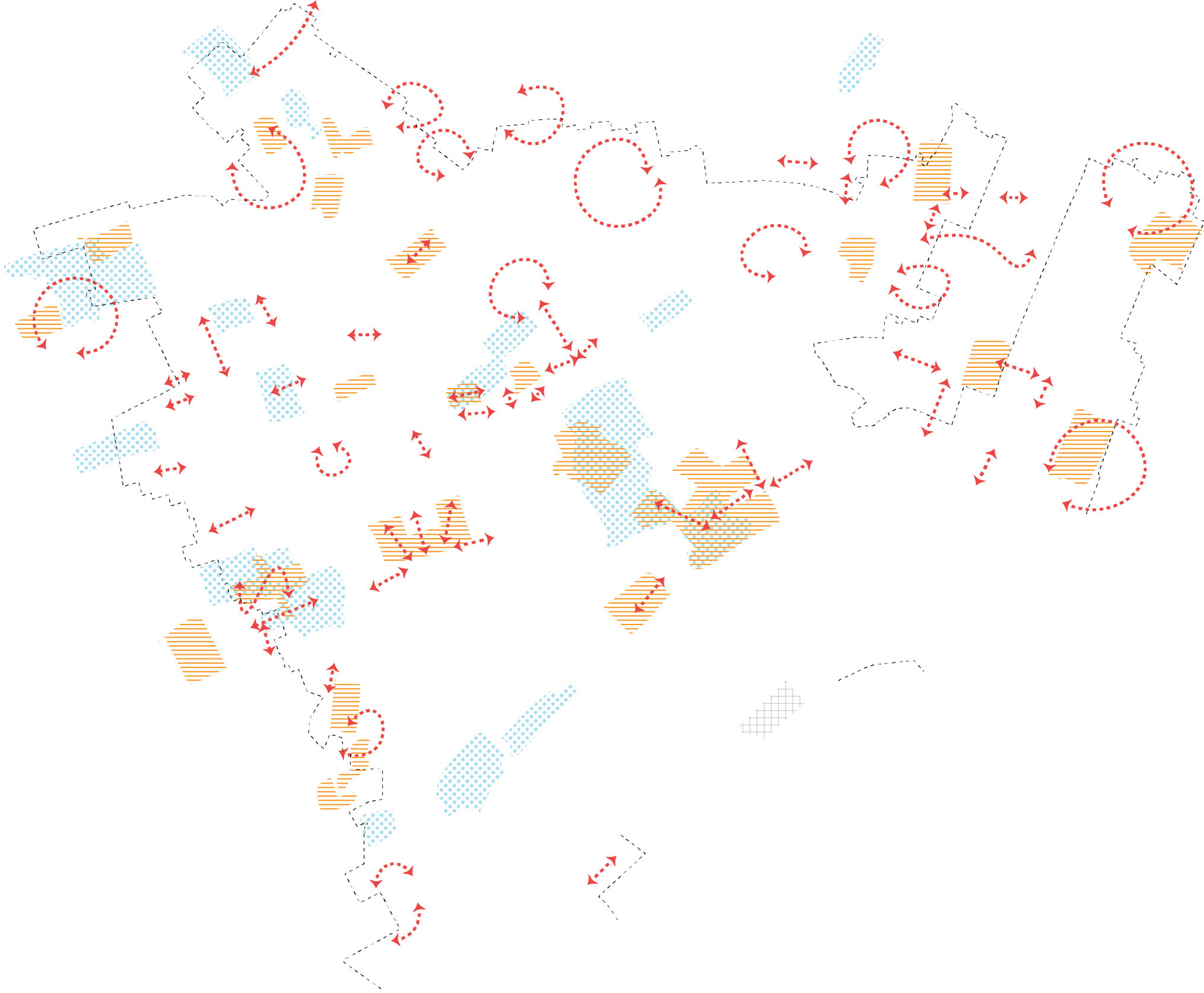
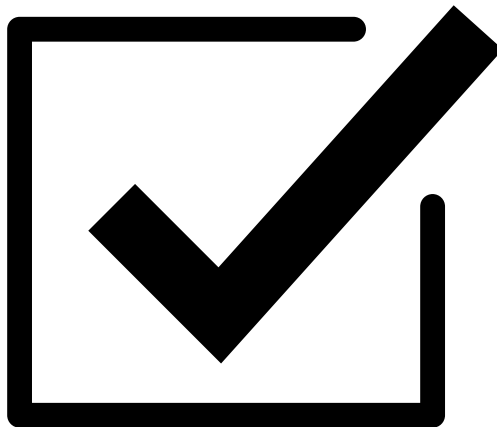


3.0 Design Research

[Sub-Research question 2]:

What are the existing and potential functions and activities that urban voids can accommodate, and how do these contribute to the vitality of the city?

(Investigating the **potential** of the urban cracks)



1.0 Introduction

Problematization

2.0 Research Design

Methodology

3.0 Design Research

Analysis

4.0 Design

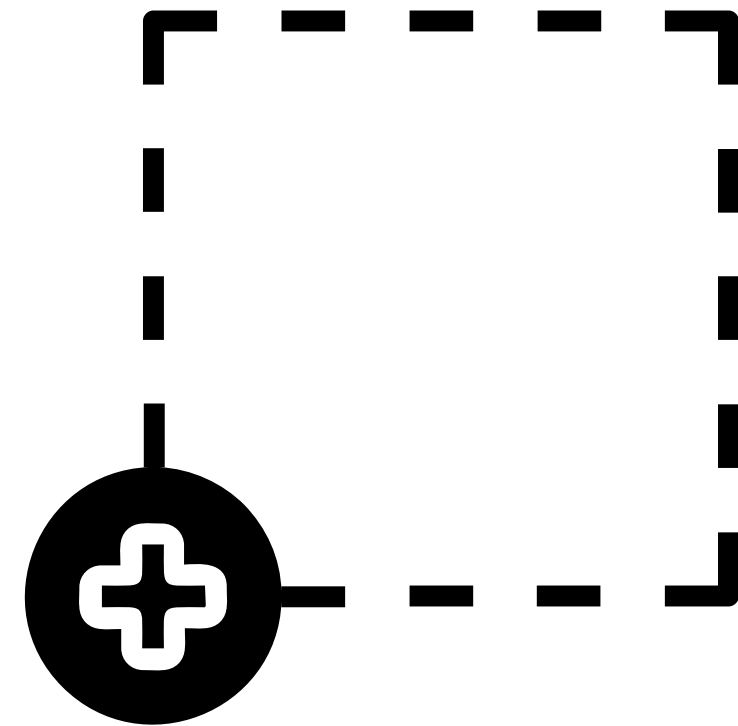
Design

[Sub-Research question 3]:

What are the key characteristics of the ‘0th place’ concept, and how does it differ from traditional urban spaces?

(**Design** possibilities)

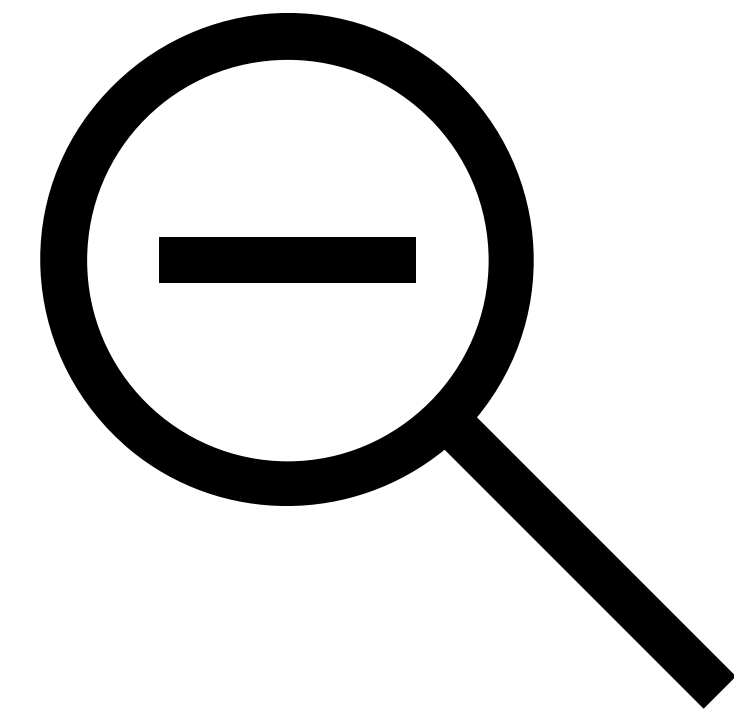
To answer these questions, an **eight-step** process will be undertaken:



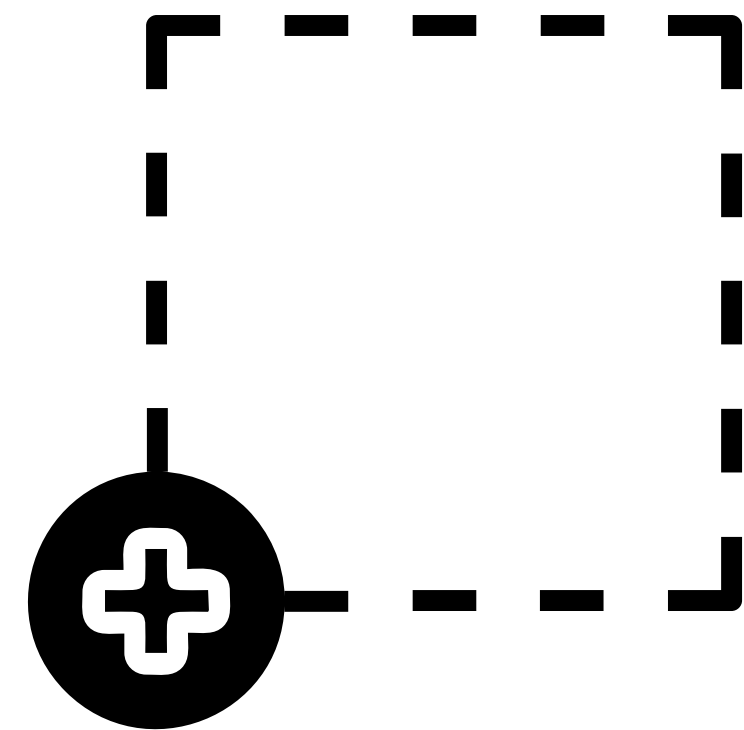
1-Selecting the site



2-Fieldwork
3-Problematization
4-Strategizing
5-Description (design testing)
6-Final Design
7-Urban Evolution ('0th place' concept in action.)



8-Scaled-up Brandgrens Strategy



1-Selecting the site

4.0 Design

1-Selecting the site

Site 2 Westblaak street (Author)





Transition Zone
Historical Significance



Filled with Identified Urban Cracks



Social and Economic Disparities
Connectivity Issues
Cultural and Environmental Opportunities



2-Fieldwork

3-Problematization

4-Strategizing

5-Description (design testing)

6-Final Design

7-Urban Evolution ('0th place' concept in action.)

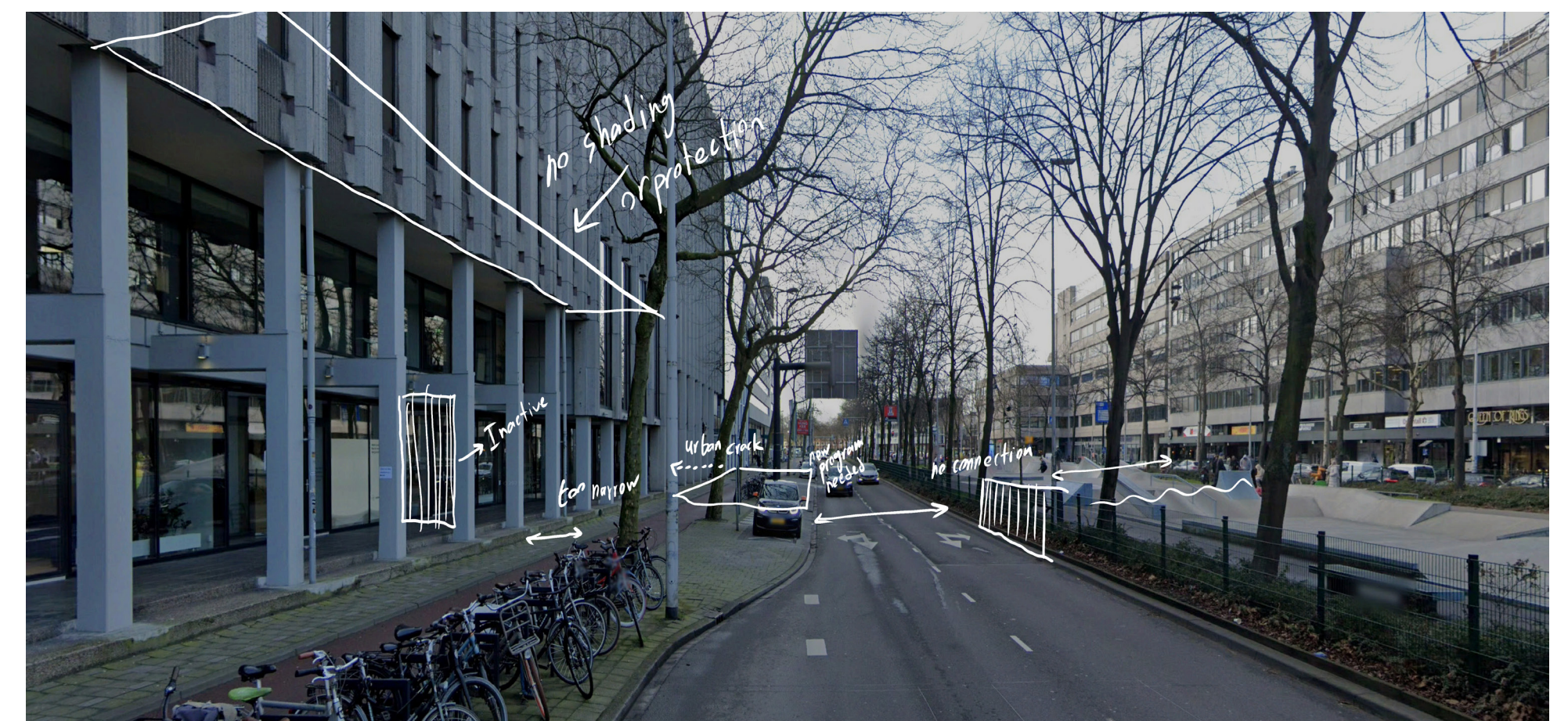
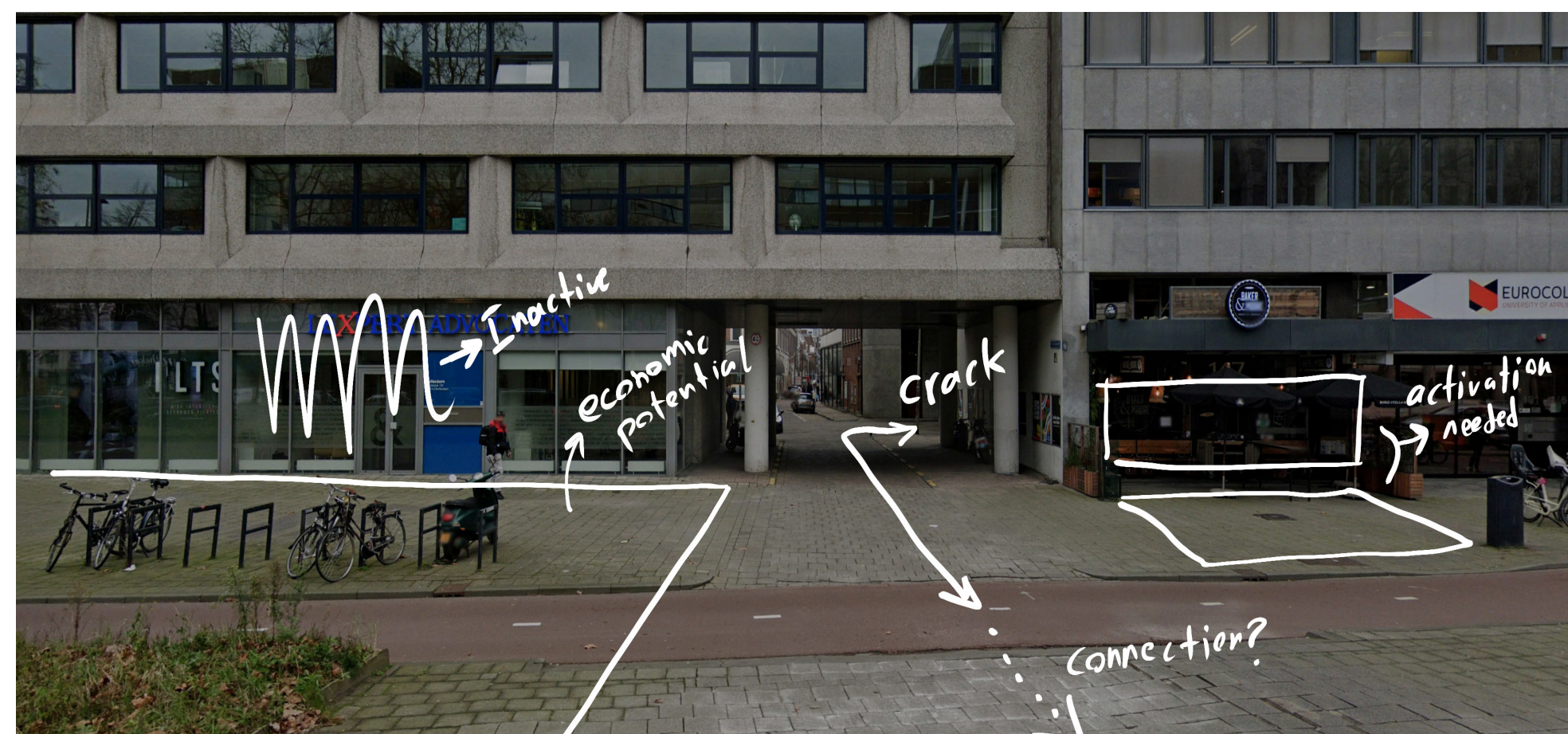
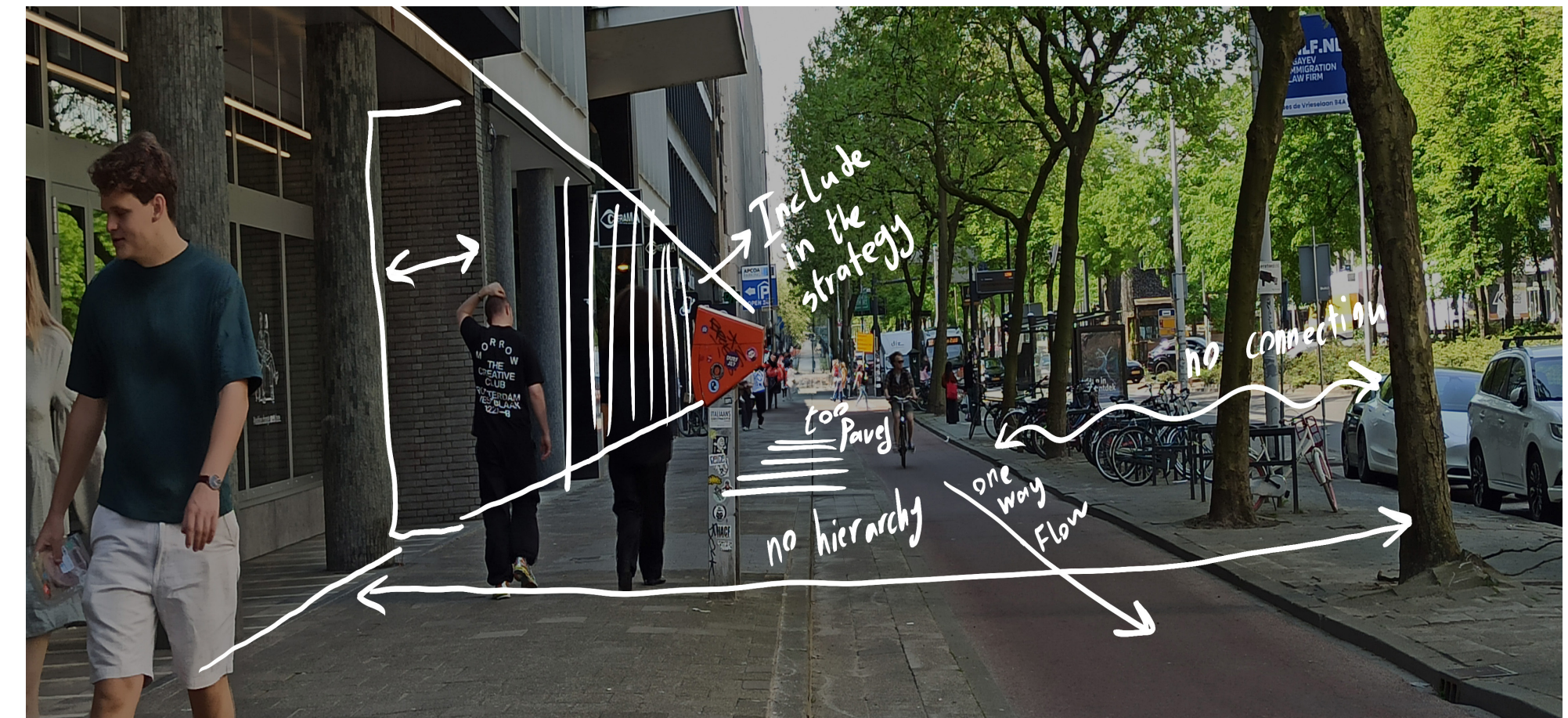
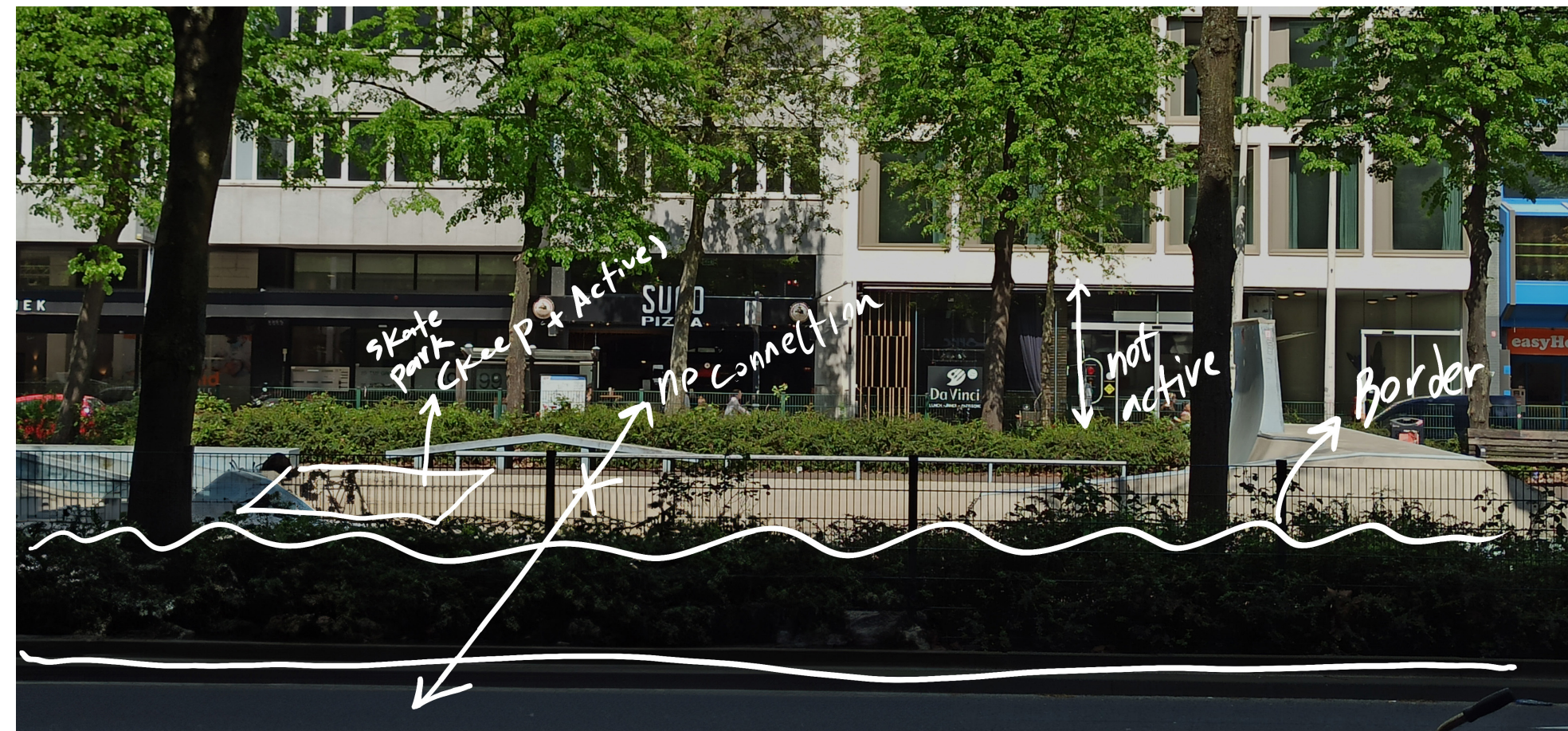
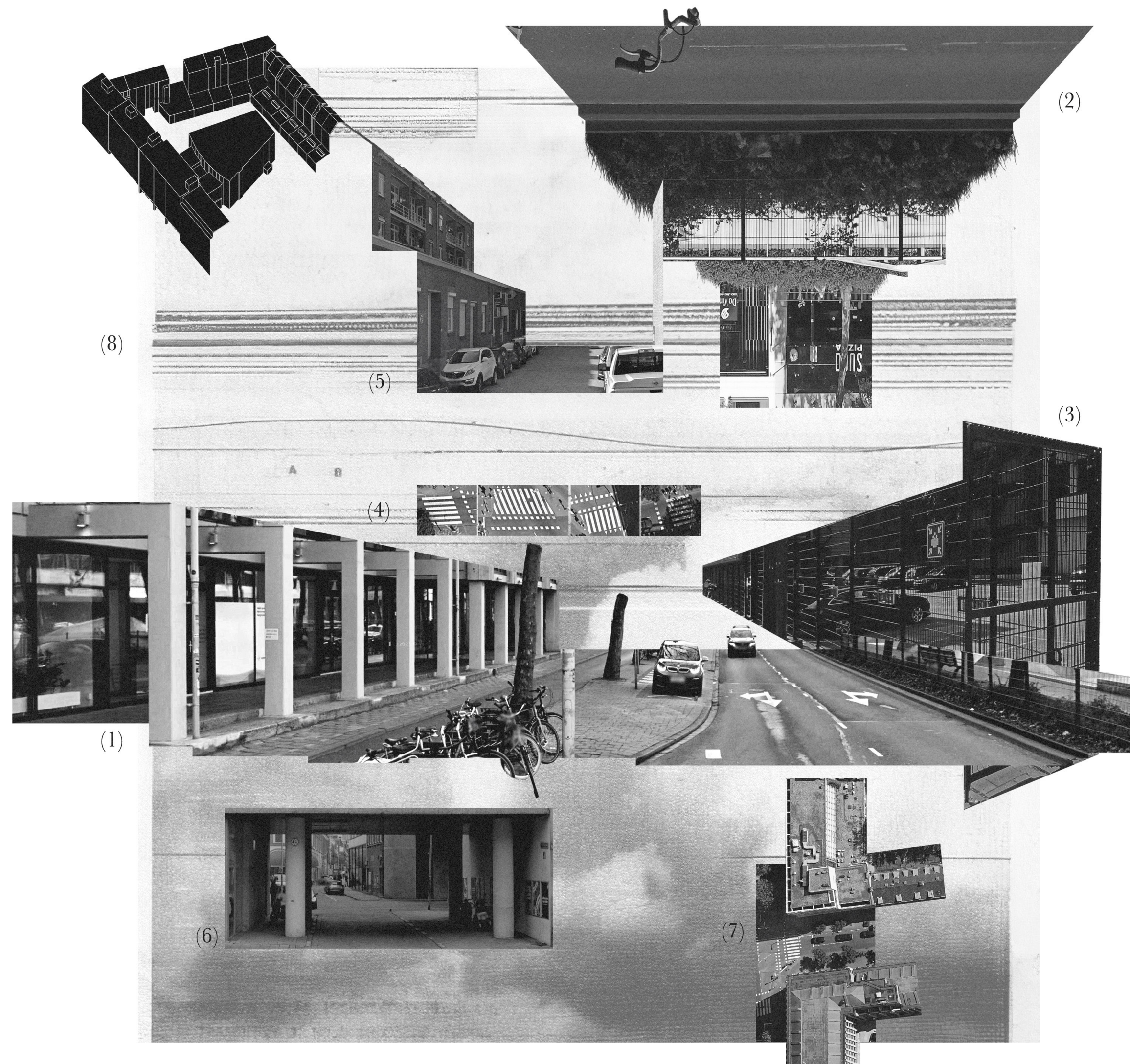
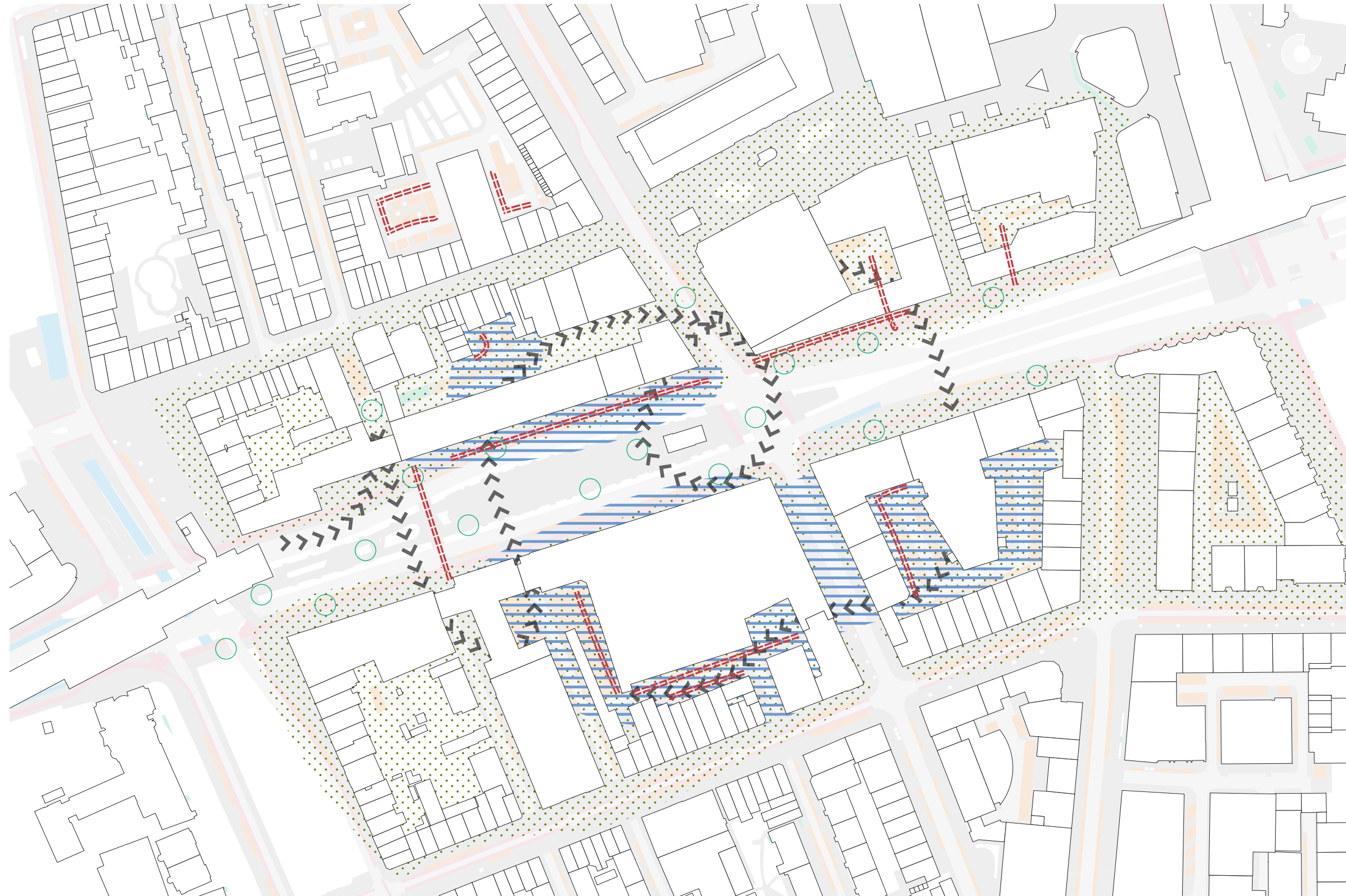


Fig.67 Fieldwork Observations







2-Fieldwork

3-Problematization

4-Strategizing

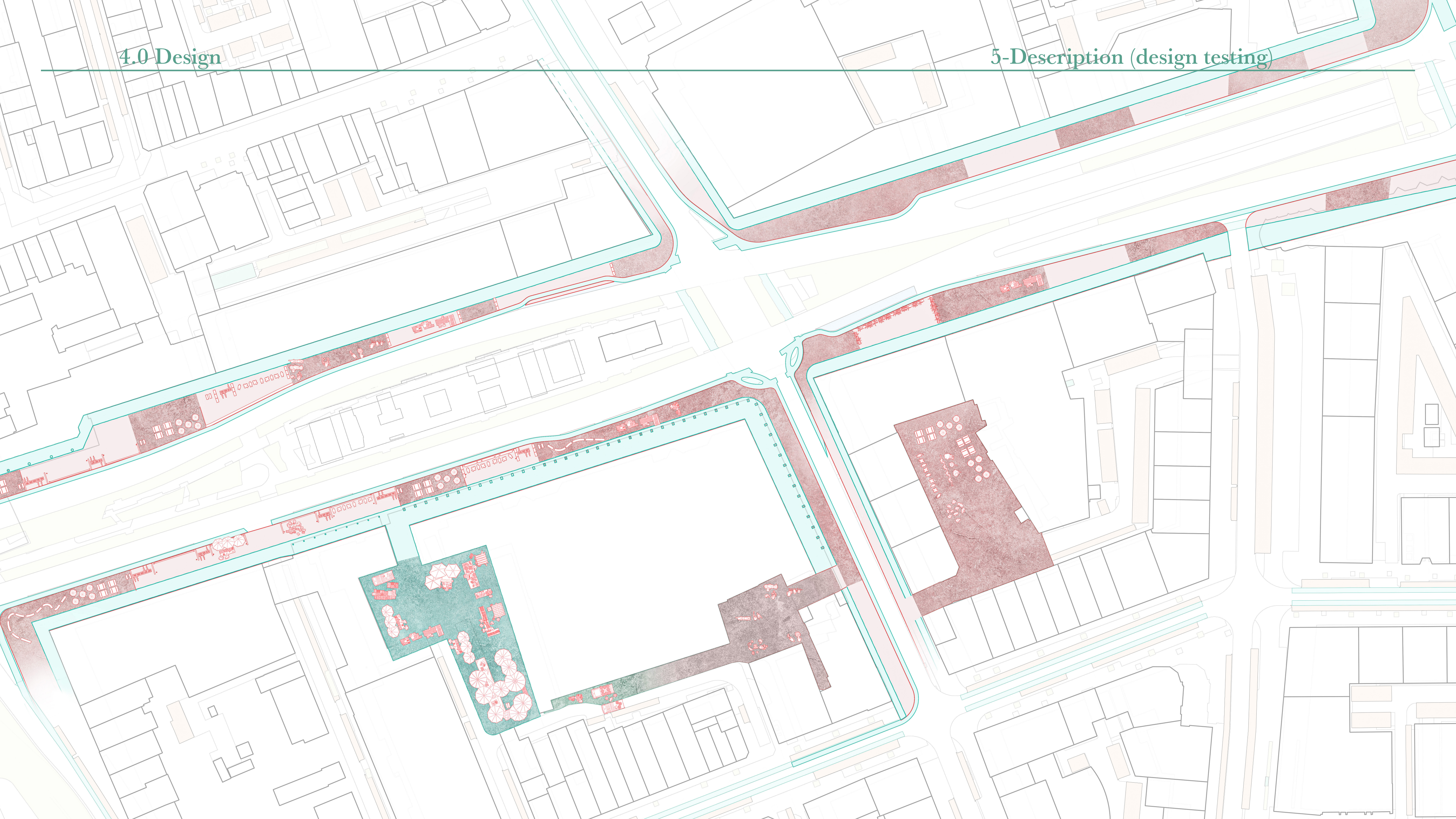
5-Description (design testing)

6-Final Design

7-Urban Evolution ('0th place' concept in action.)

4.0 Design

5-Description (design testing)

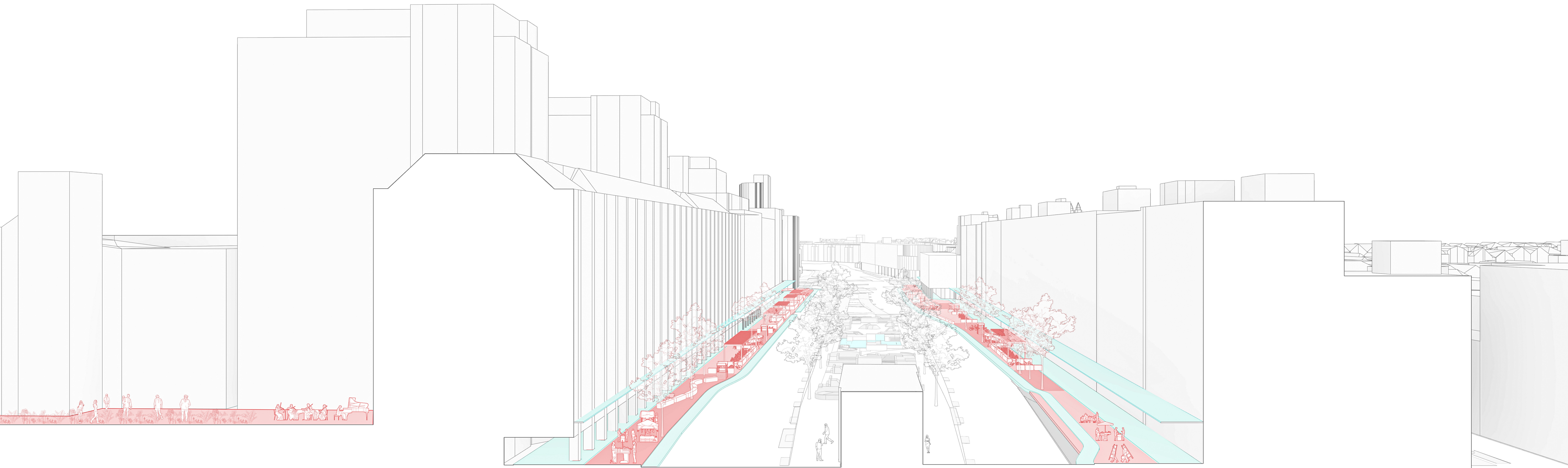


4.0 Design

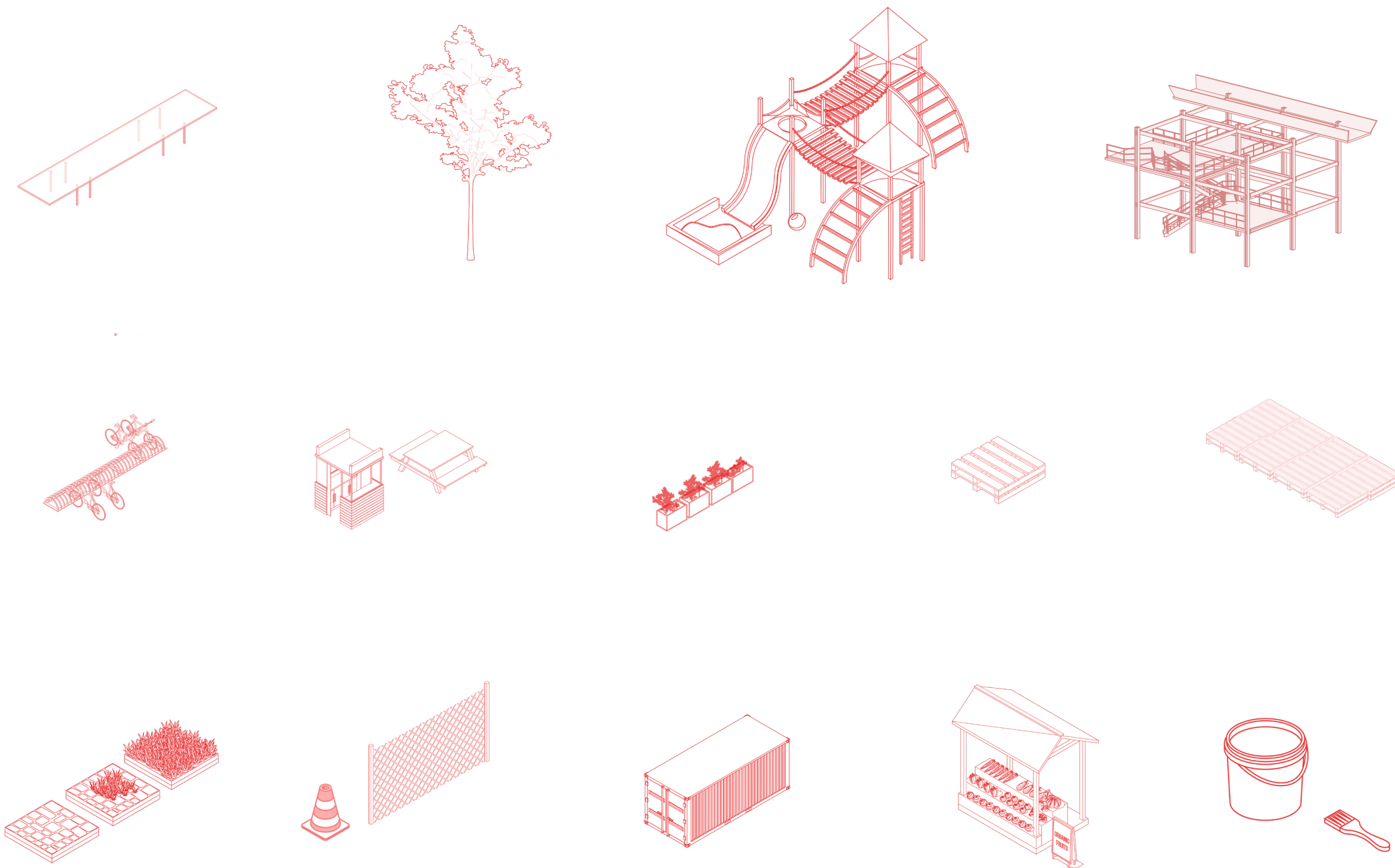
- More connections can be established.
- The central zone can take place.
- Ground-level activities affect the new sidewalk.
- Pushing the limits of tactical interventions.

5-Description (design testing)

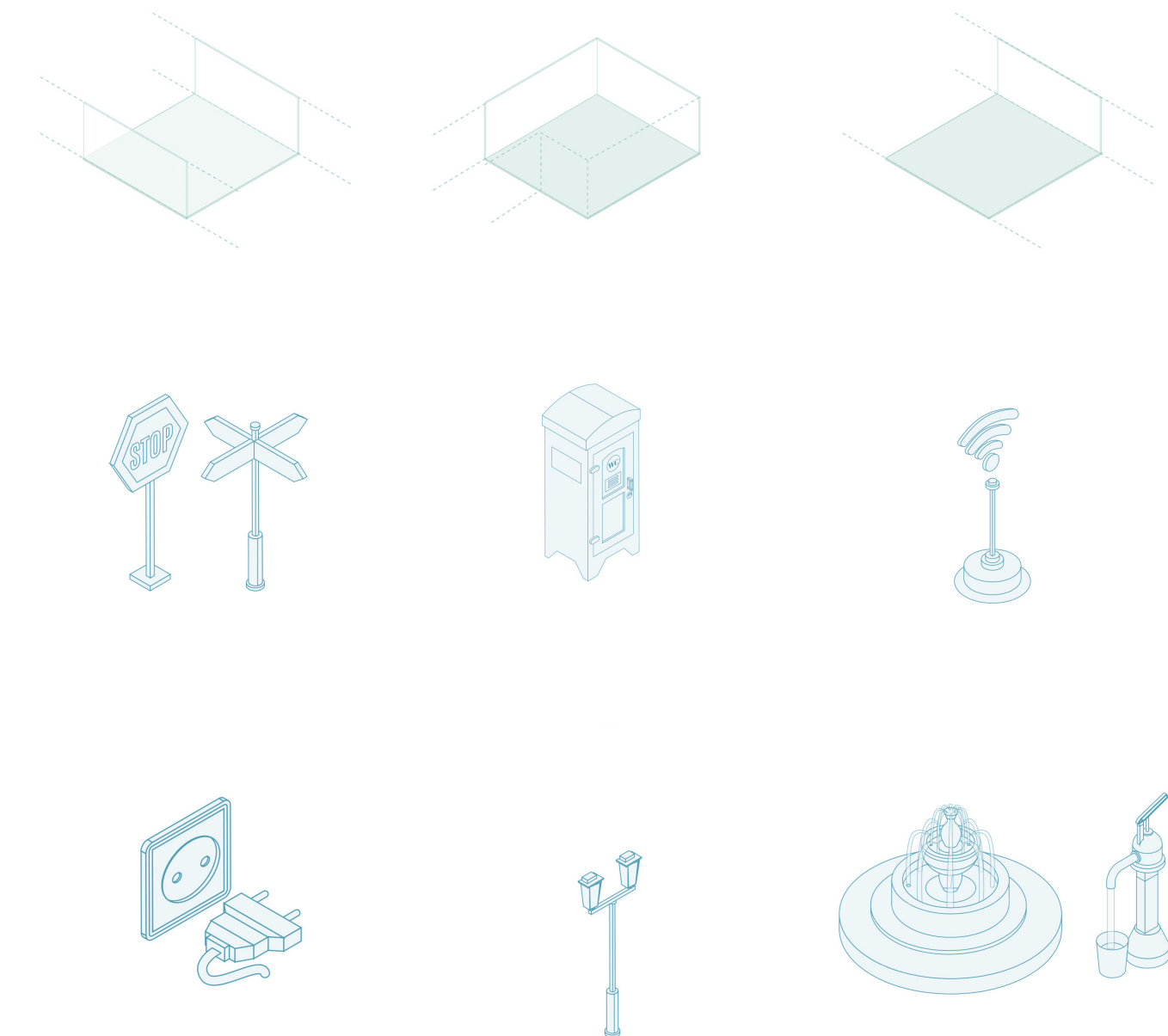
Helped Understand What Is Tactical and What Is Non-Tactical



Tactical Elements



Infrastructural Configurations

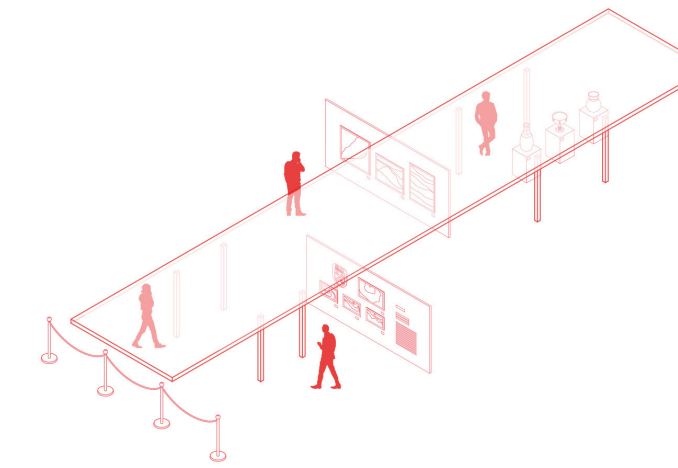


Tactical Elements

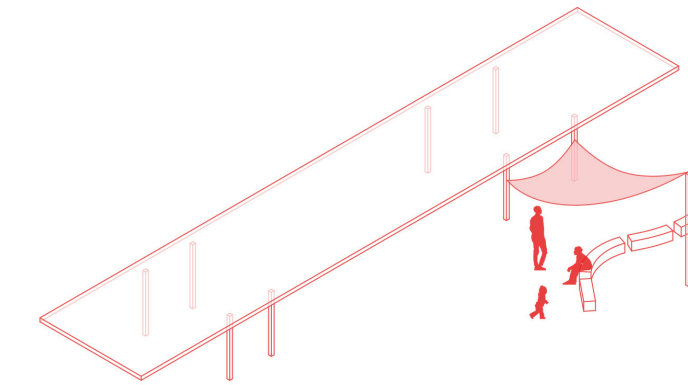
Urban table

- Connecting
- Shading

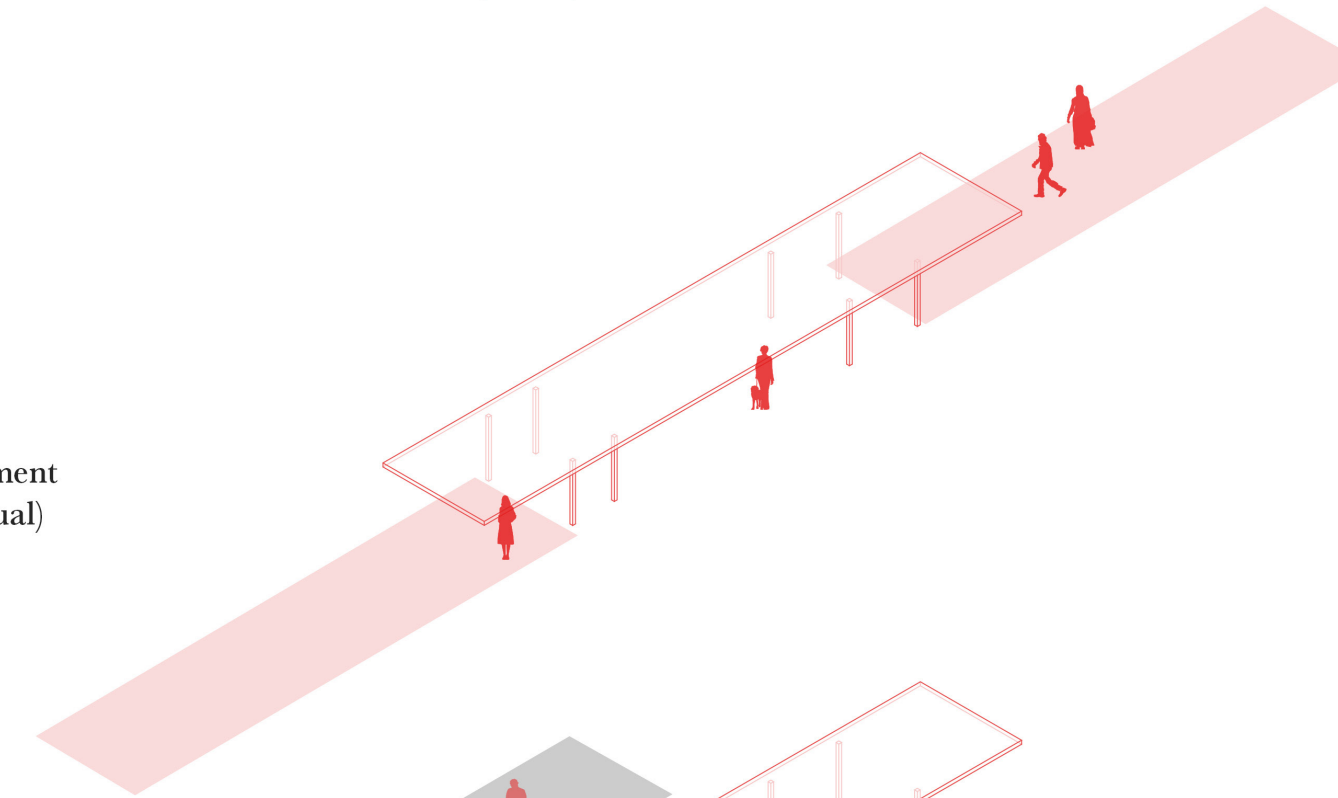
Exhibition Space



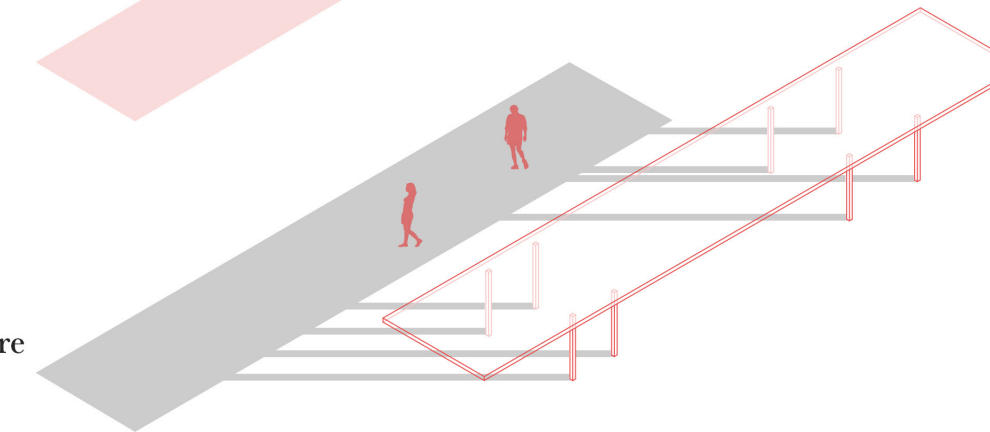
Shading Attachment



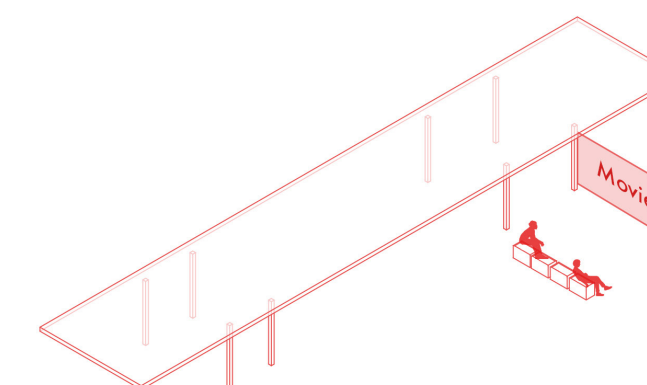
Connecting Element
(Spatial and Visual)



Shading Structure



Pop-up Cinema

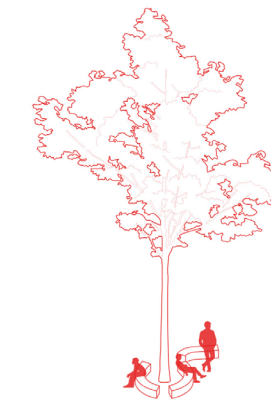


Tactical Elements

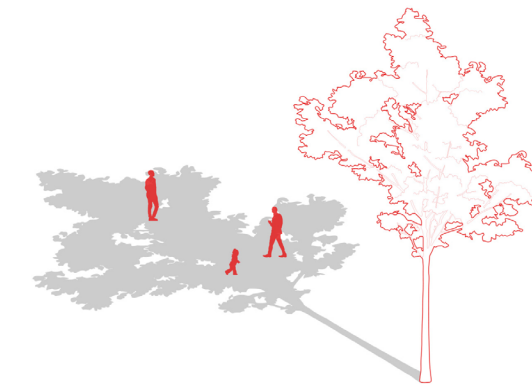
Trees

- Connecting
- Shading
- Gathering spots
- Supporting other activities like urban farming

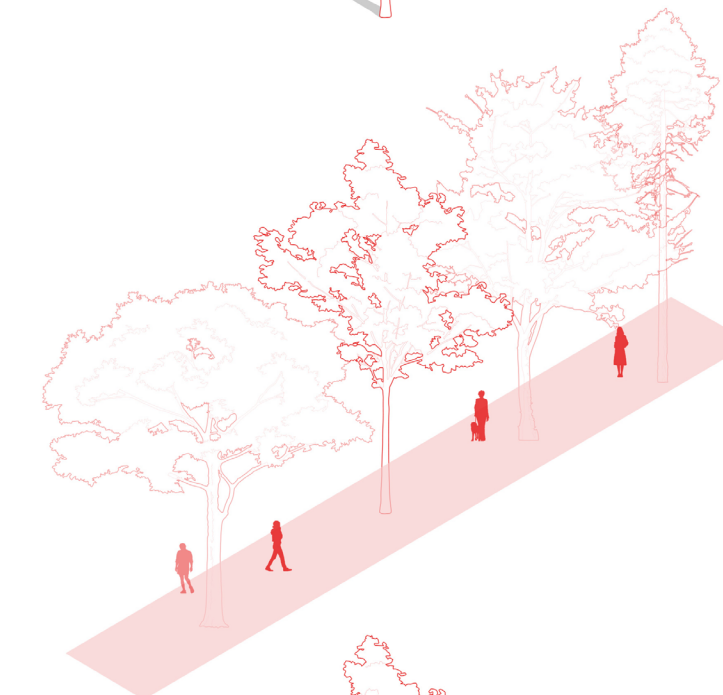
Urban Seating (Gathering Point)



Natural Soft Shading



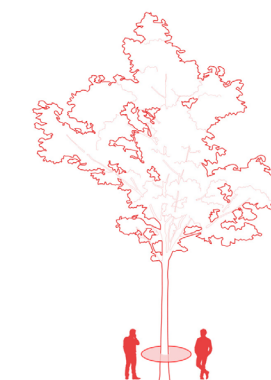
Connecting Element
(Spatial and Visual)



Attached Urban Farming



Standing Bar

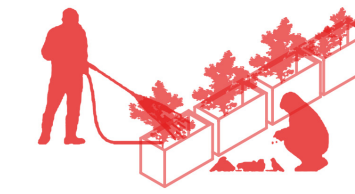


Tactical Elements

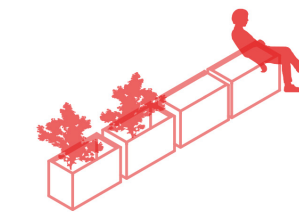
modular planter-seating pieces

- Partitioning
- Activation

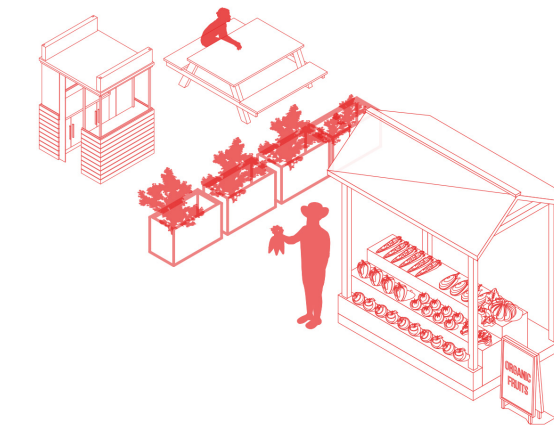
Urban Agriculture



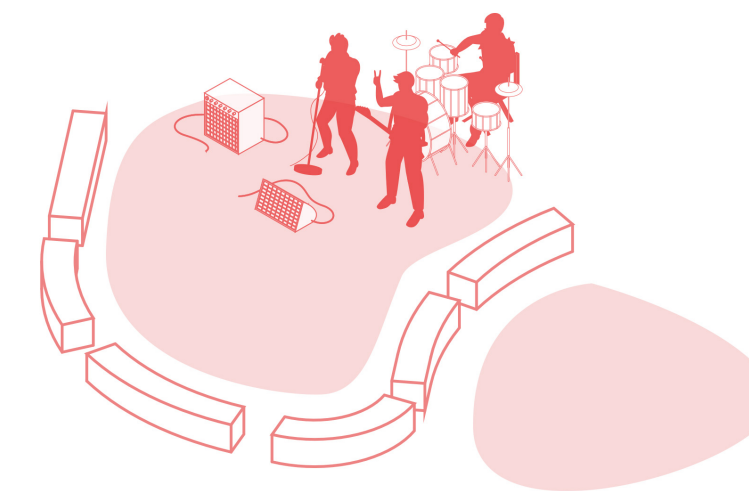
Public Seating



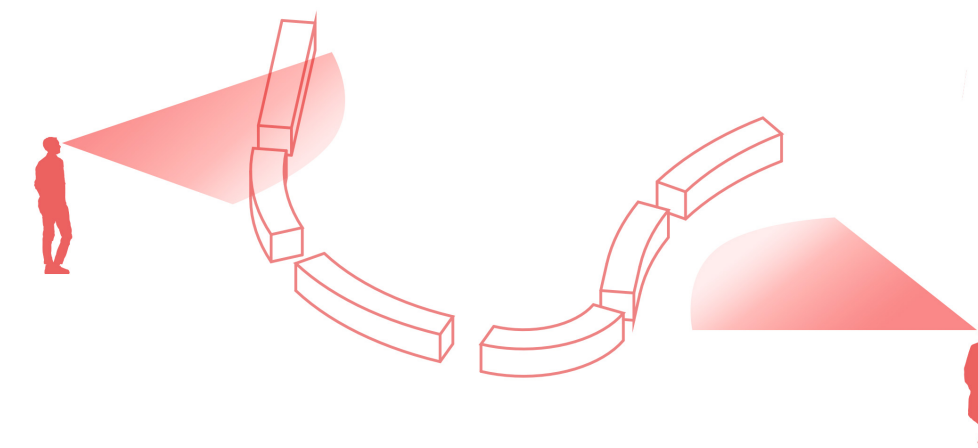
Partitioning Element



Zoning Element
(Performance and Pop-up Activities)



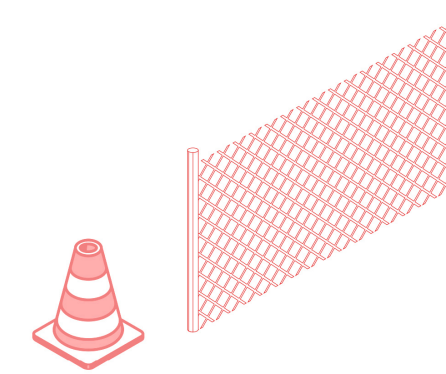
Visual Barrier for Site Program
and Directional Counterpoint



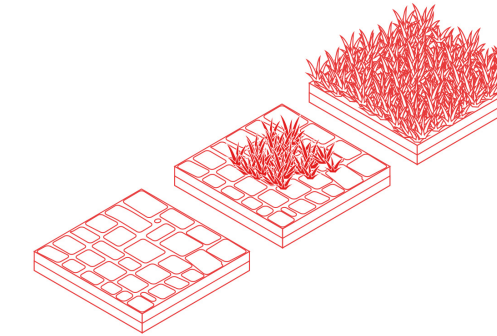
Tactical Elements

- Additional elements**
- Create temporary spaces
 - Activate spaces

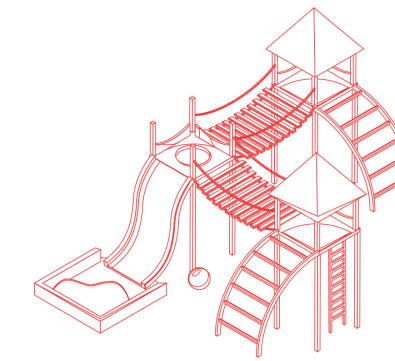
Temporary Boundary Markers



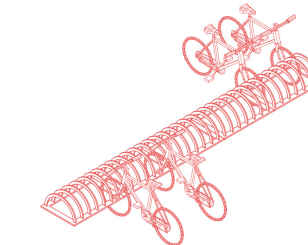
Tactical Depaving



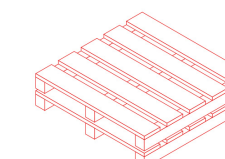
Children's Play Area



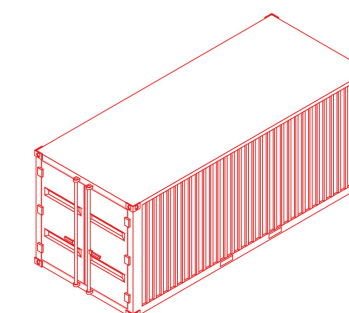
Bicycle Parking Facilities



Modular Platforms (Pallets)



Temporary Structures (Event-based Installations)



Infrastructural configurations:

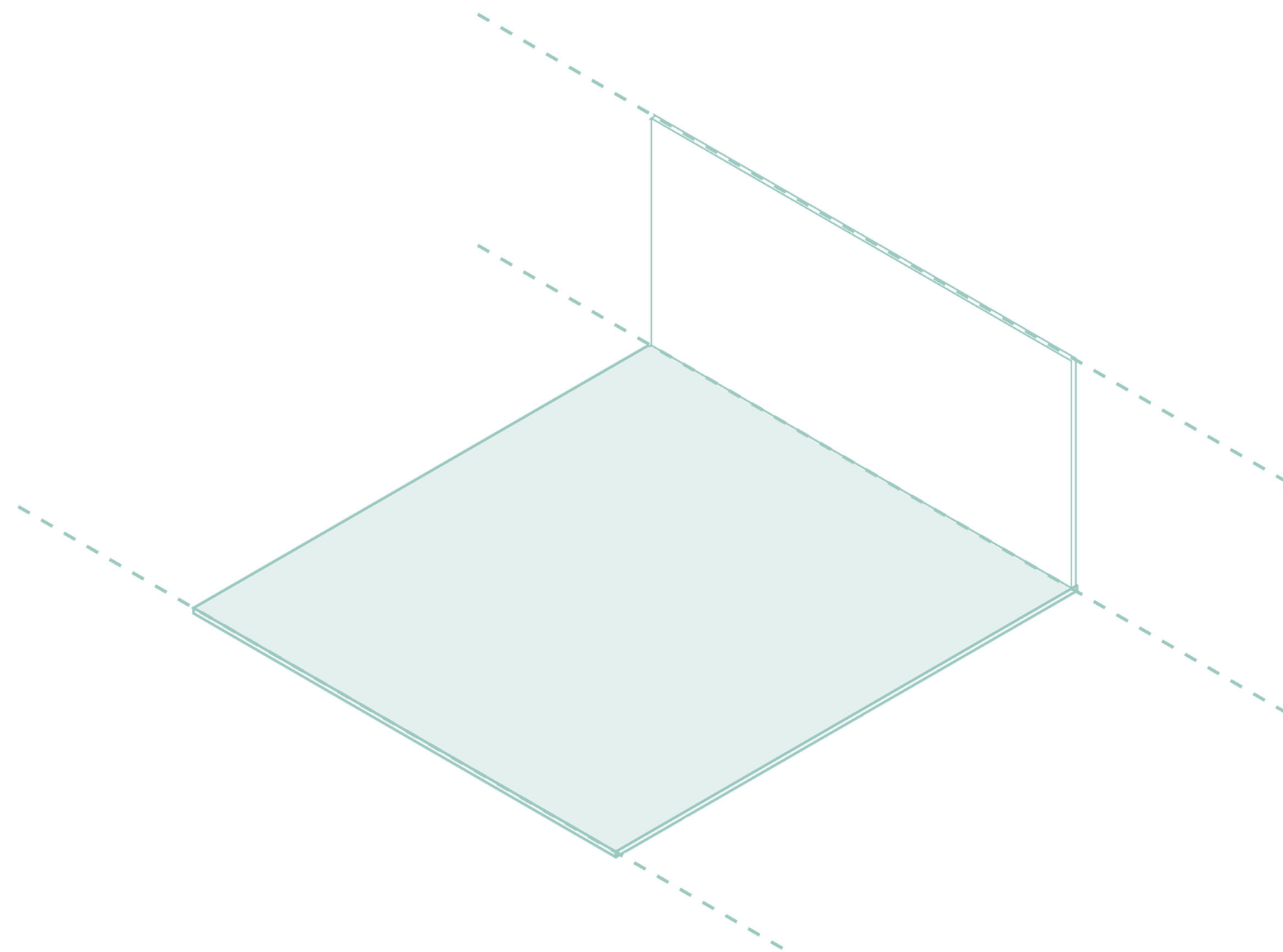
Spatial Infrastructure

Policy Infrastructure

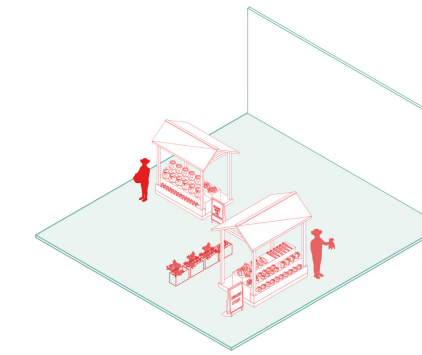
Punctual Infrastructure

Spatial Infrastructure

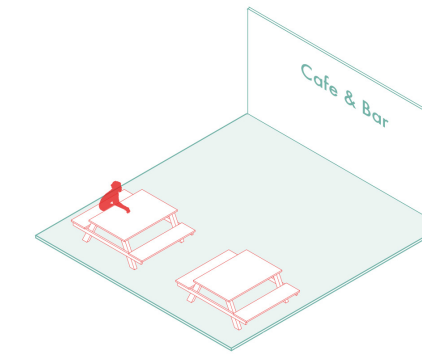
Flat Ground Surface with Two Parallel Vertical Surfaces (Corridor)



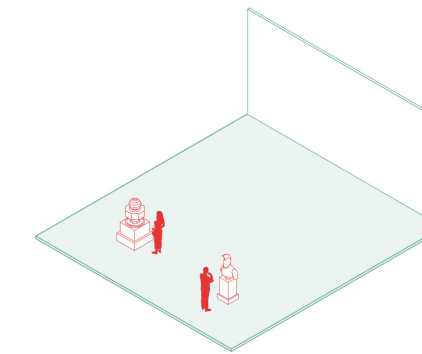
Pop-up Markets



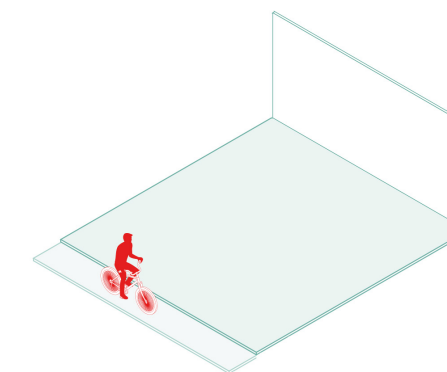
Extended Building Functions with Street Furniture (Benches)



Public Art Installations (Exhibitions)

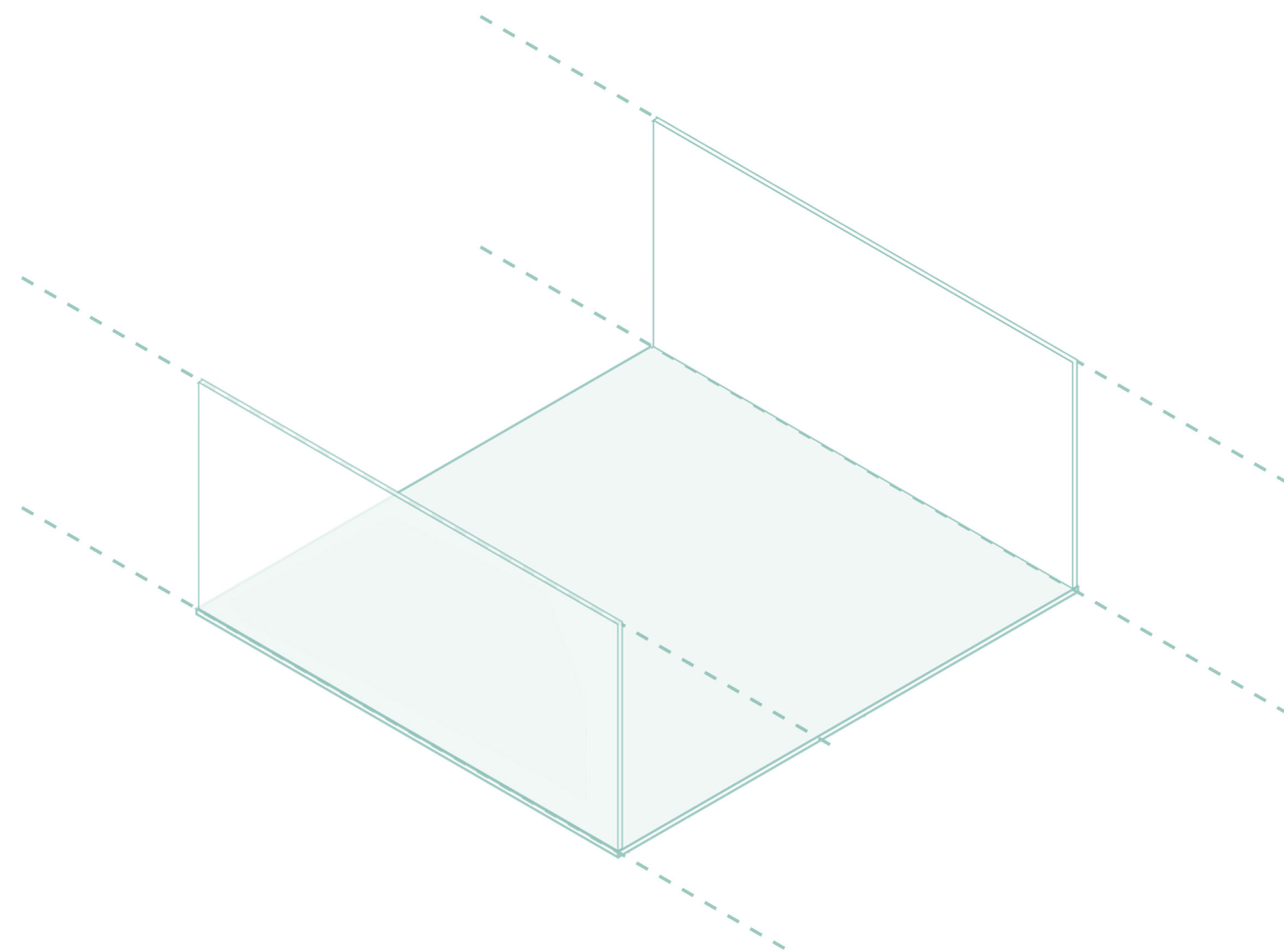


Relocated Bike Lane

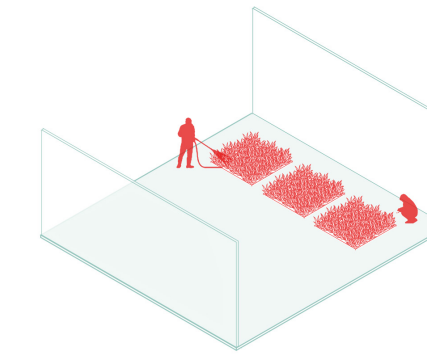


Spatial Infrastructure

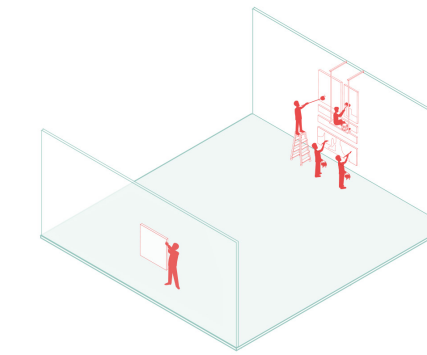
Flat Ground Surface with One Vertical Surface (Sidewalk)



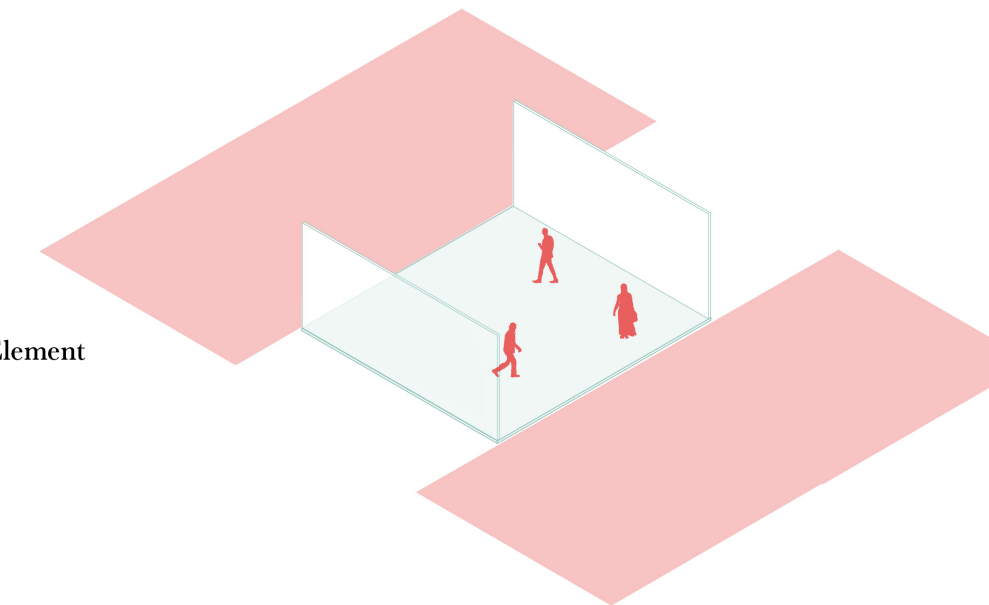
Tactical Green Corridors



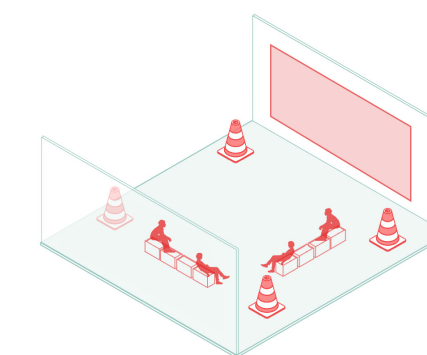
Linear Creative Expression Zone
(Transitional Journey)



New 0th Places Connection Element

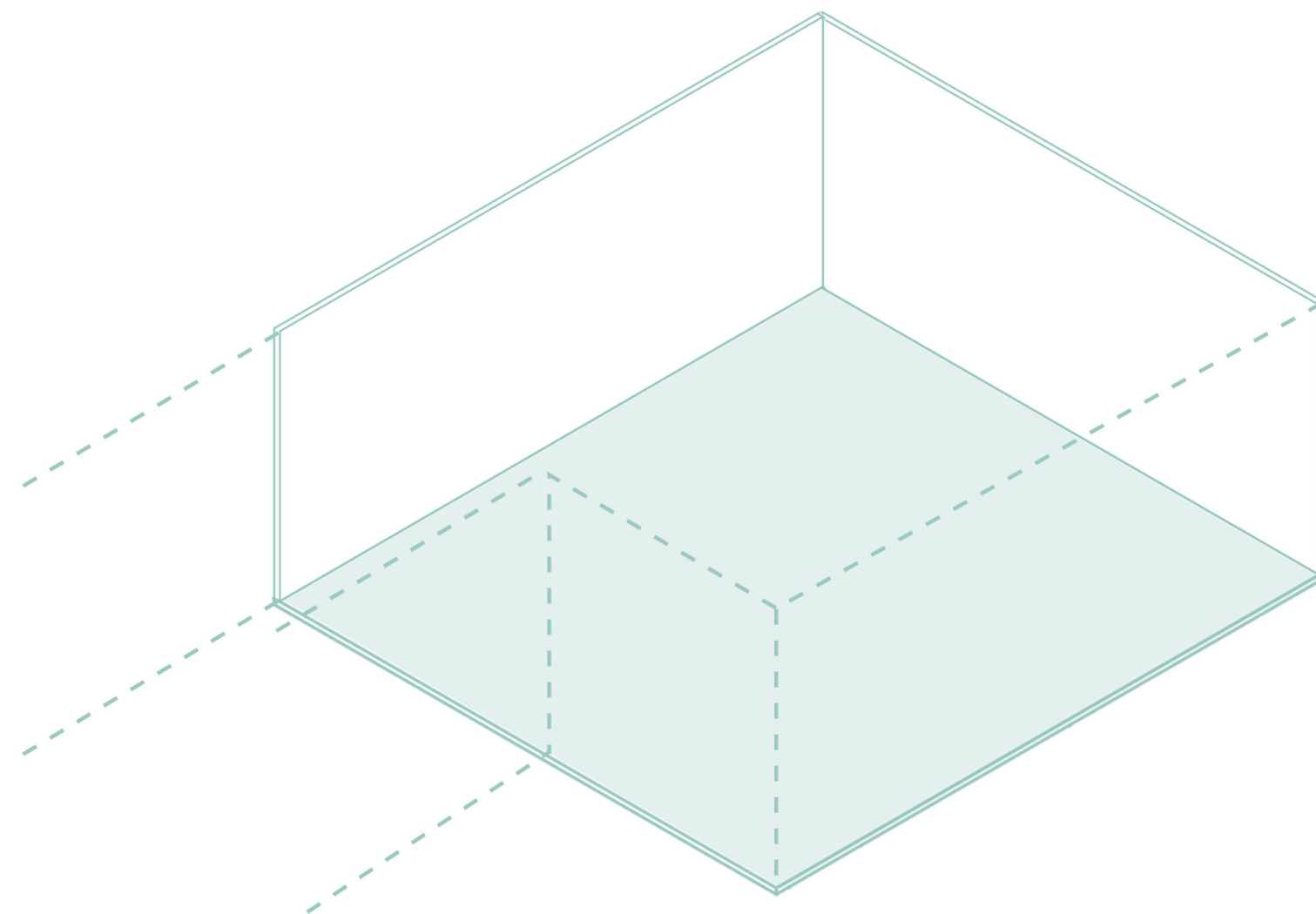


Temporary Reclaimed Enclosed Public Space
(Instantaneous Public Building)

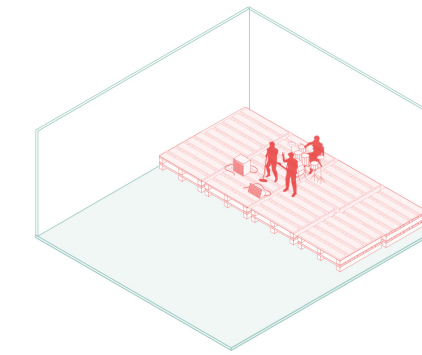


Spatial Infrastructure

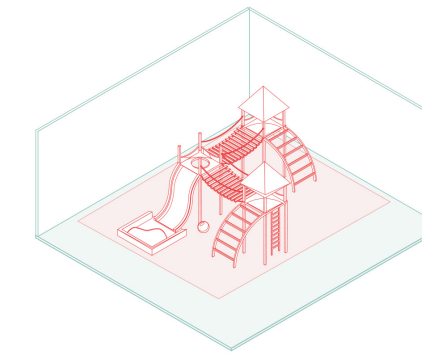
Flat Ground Surface with Two Perpendicular
Vertical Surfaces (Corner



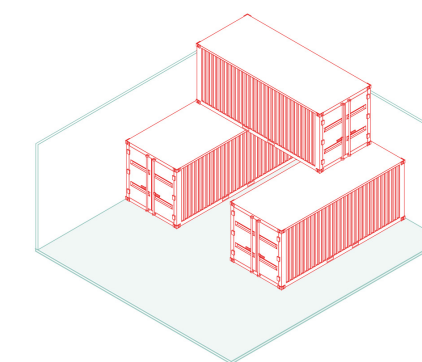
Pop-up Tactical Stage (Enclosed Event Space)



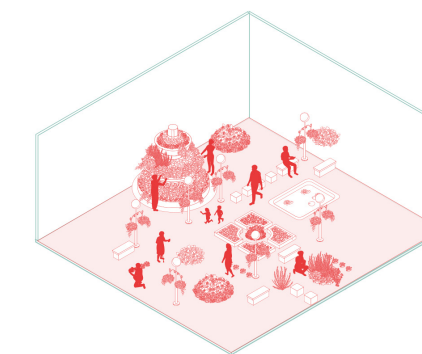
Children's Playground (Safety Enclosure)



Storage and Prefabricated
Modular Units

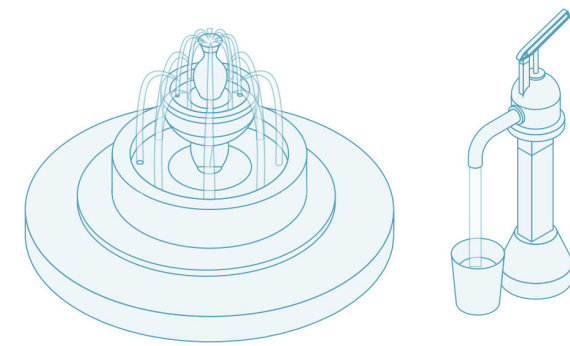


Pocket Parks

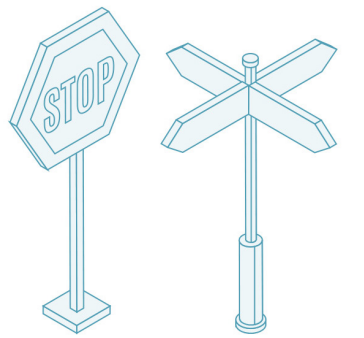


Punctual Infrastructure

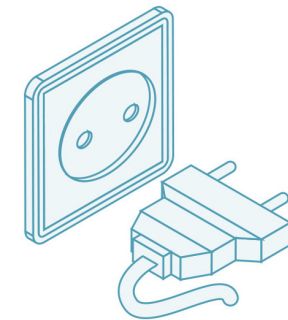
Water Supply



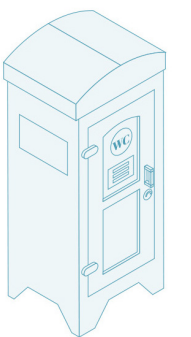
Signage



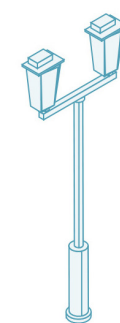
Electrical Outlets



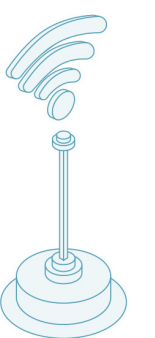
Public Toilets

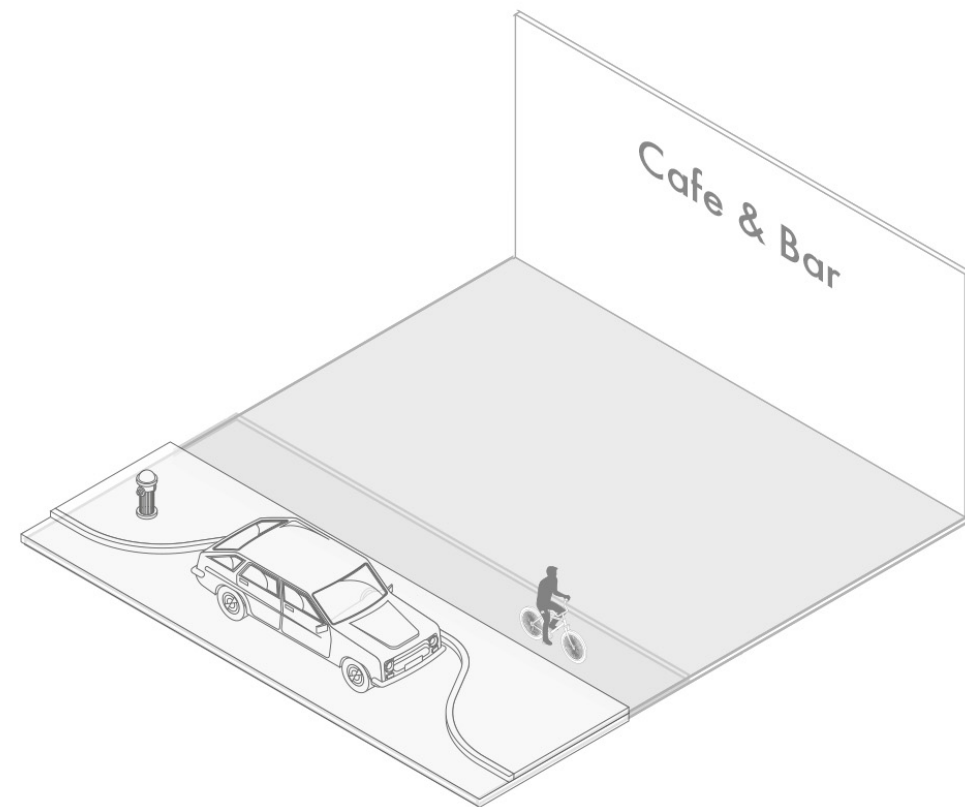


Street Lighting

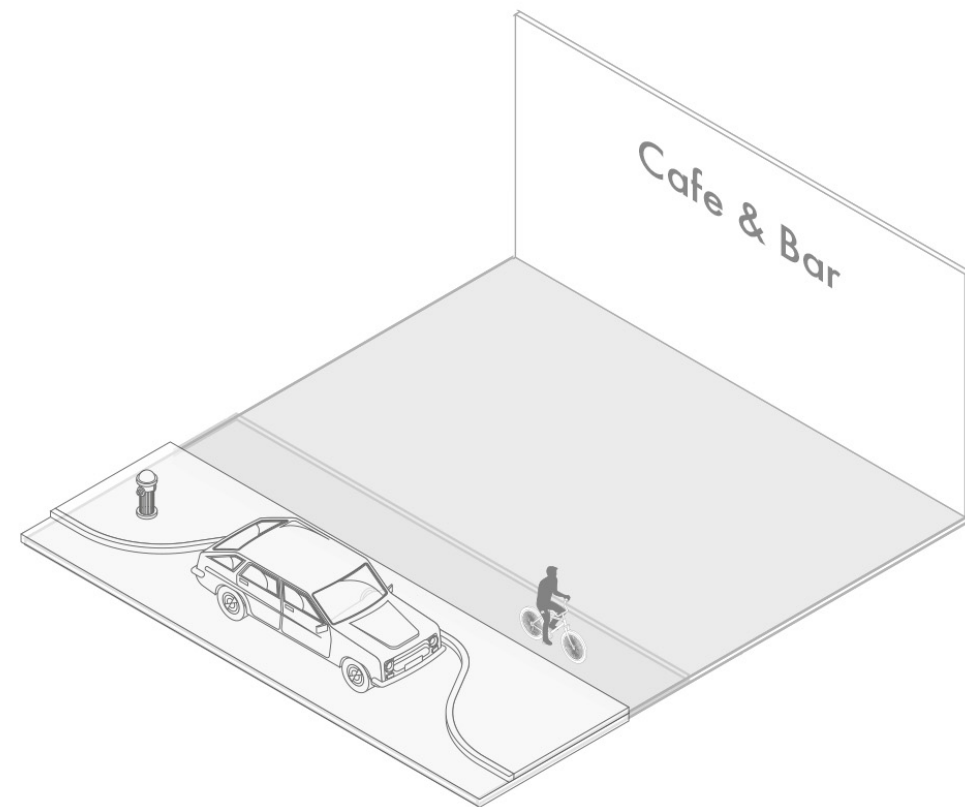


Public WiFi

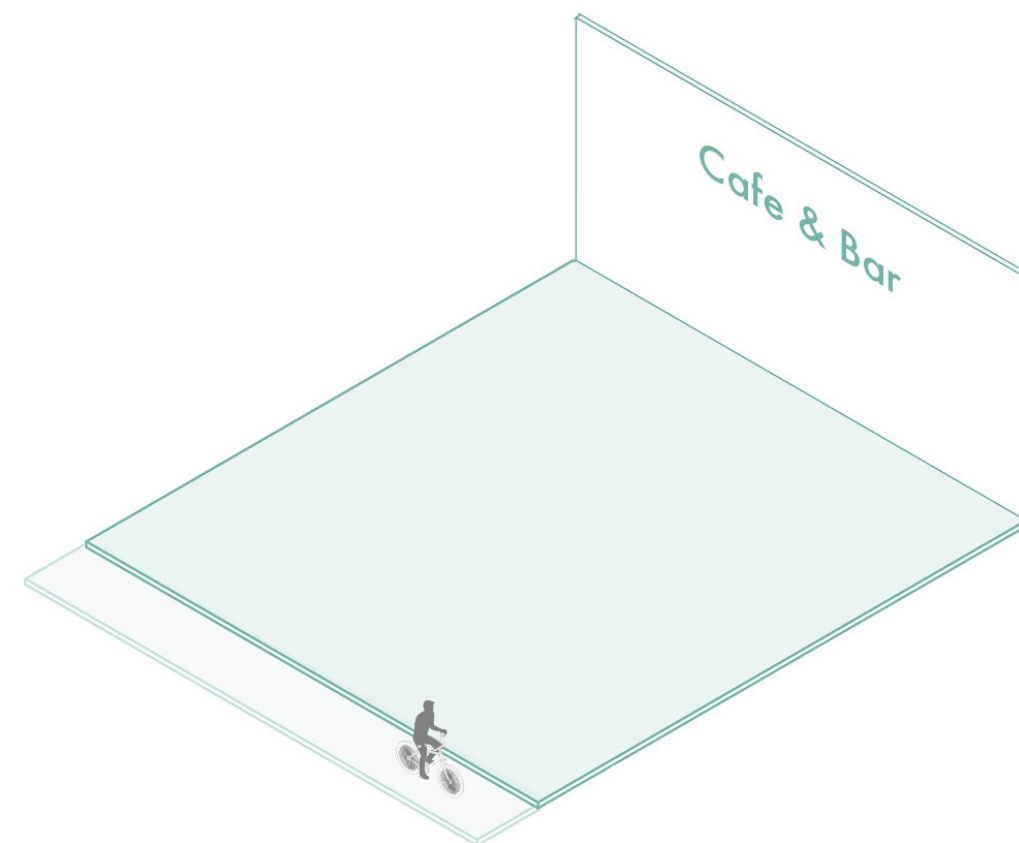




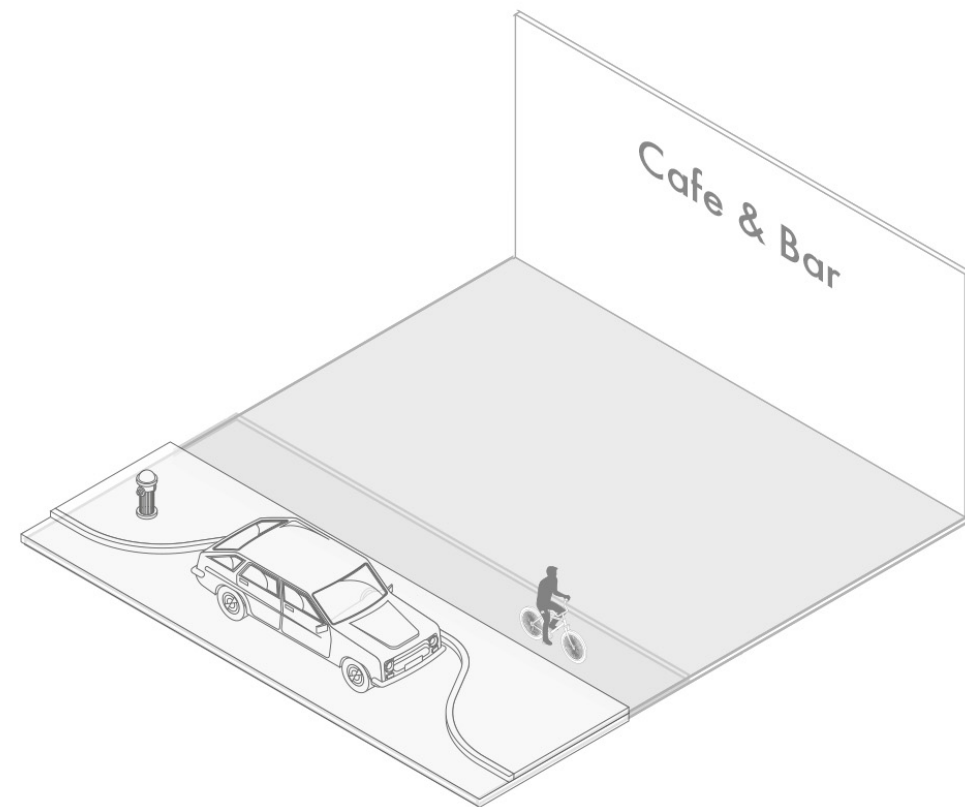
**Urban Crack with Potential
(Underutilized Sidewalk)**



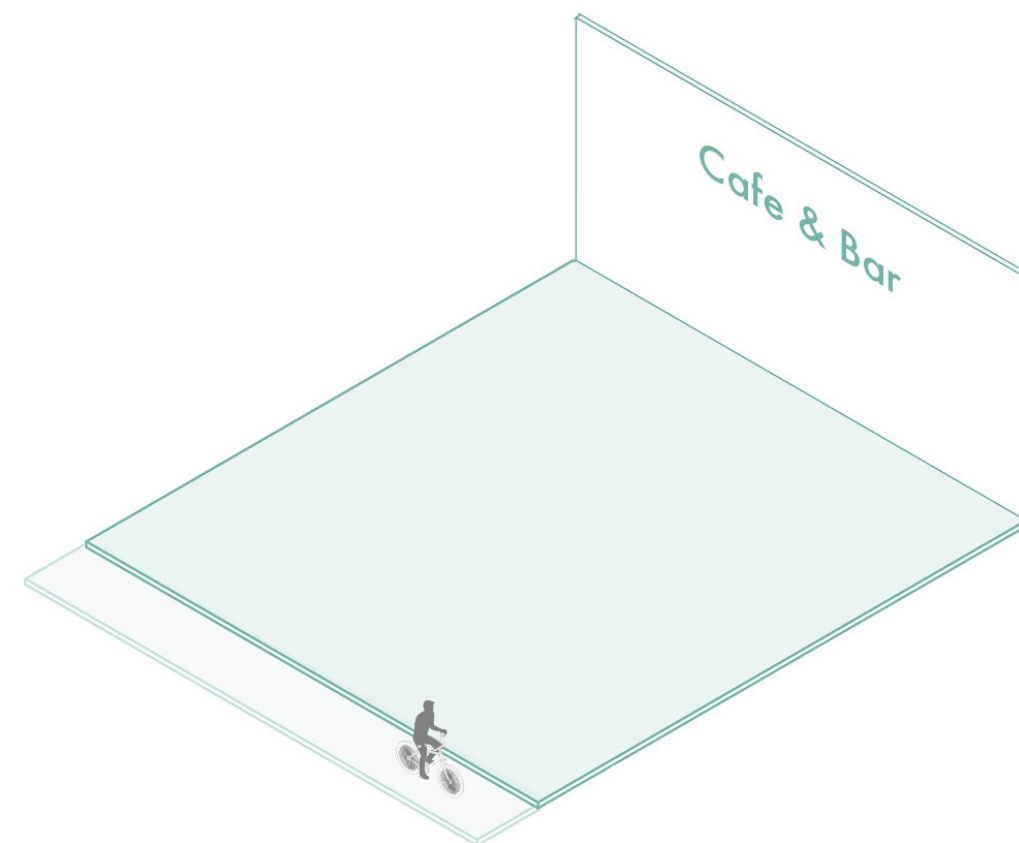
Urban Crack with Potential
(Underutilized Sidewalk)



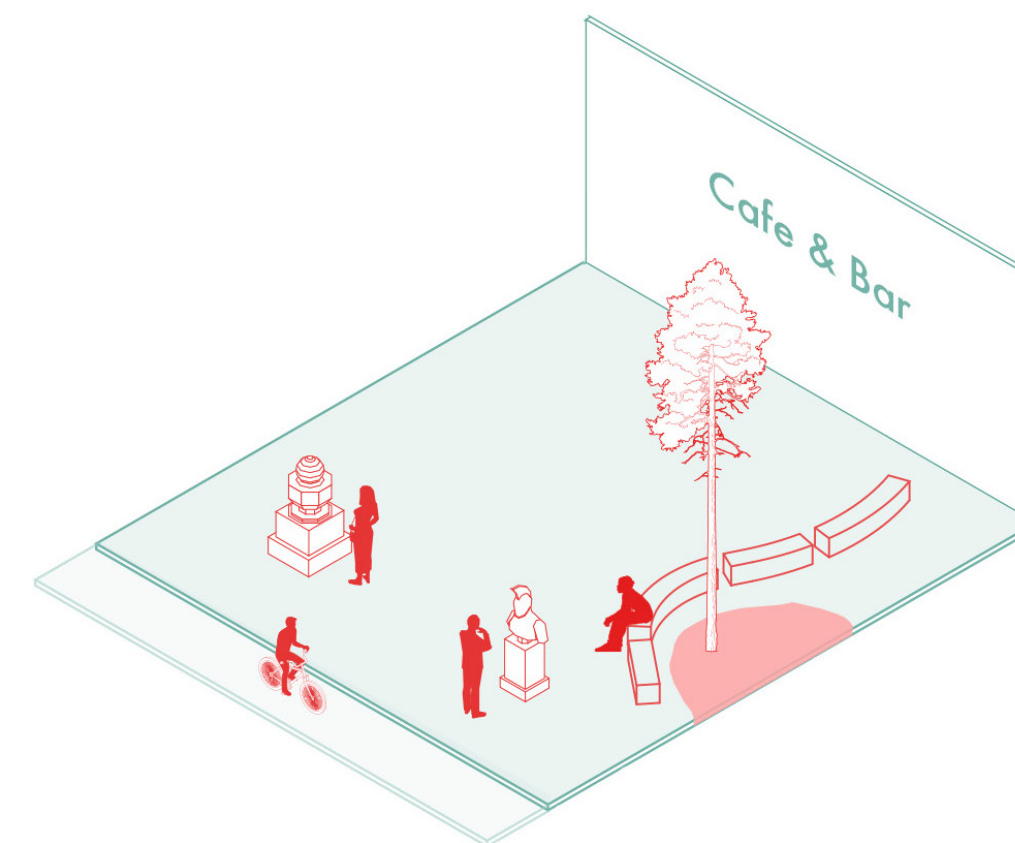
Infrastructural Intervention
(Sidewalk Expansion, Bike Lane Relocation)



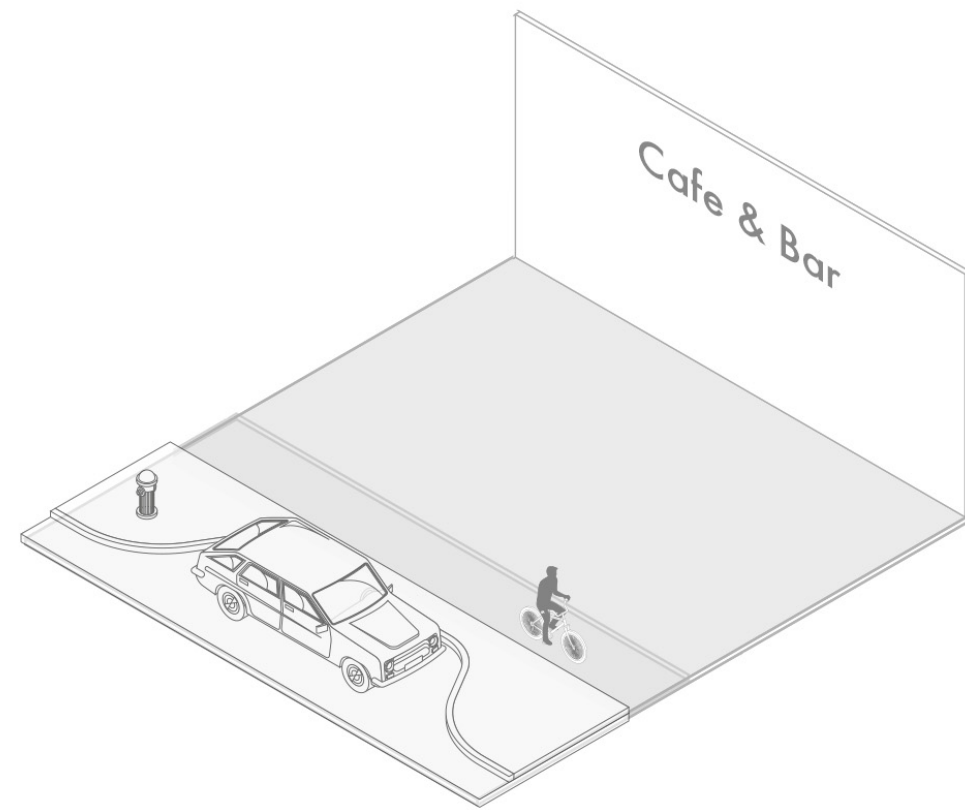
Urban Crack with Potential
(Underutilized Sidewalk)



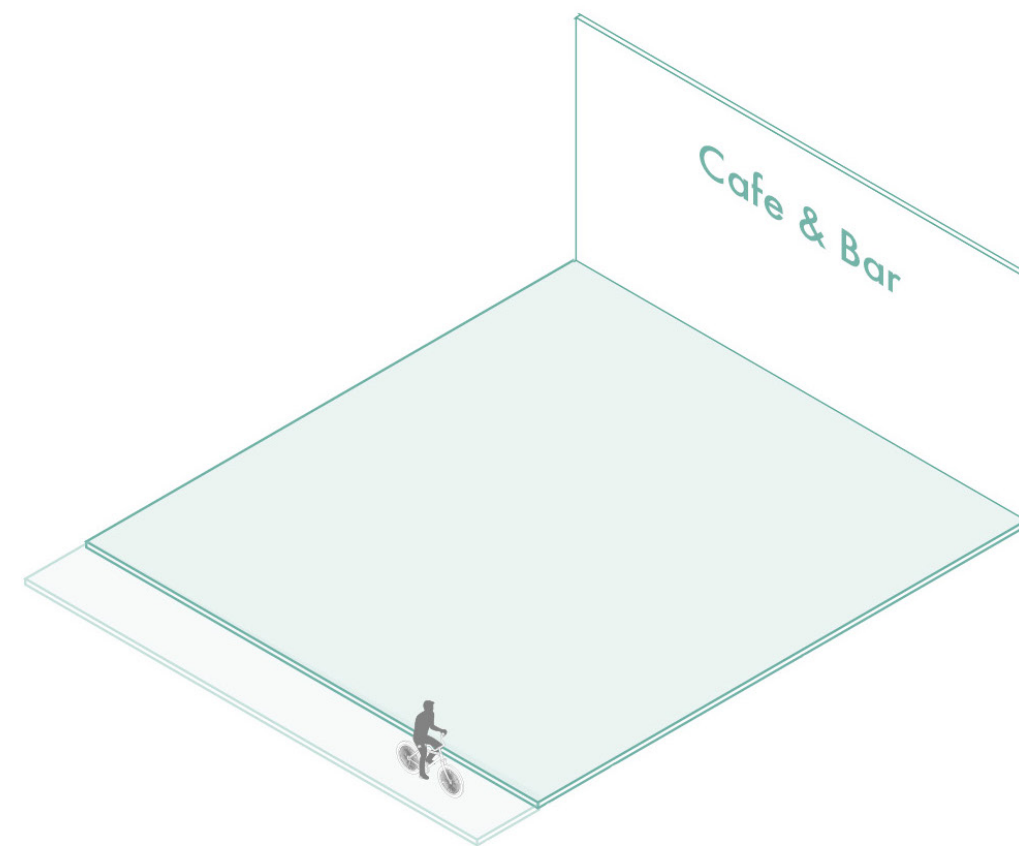
Infrastructural Intervention
(Sidewalk Expansion, Bike Lane Relocation)



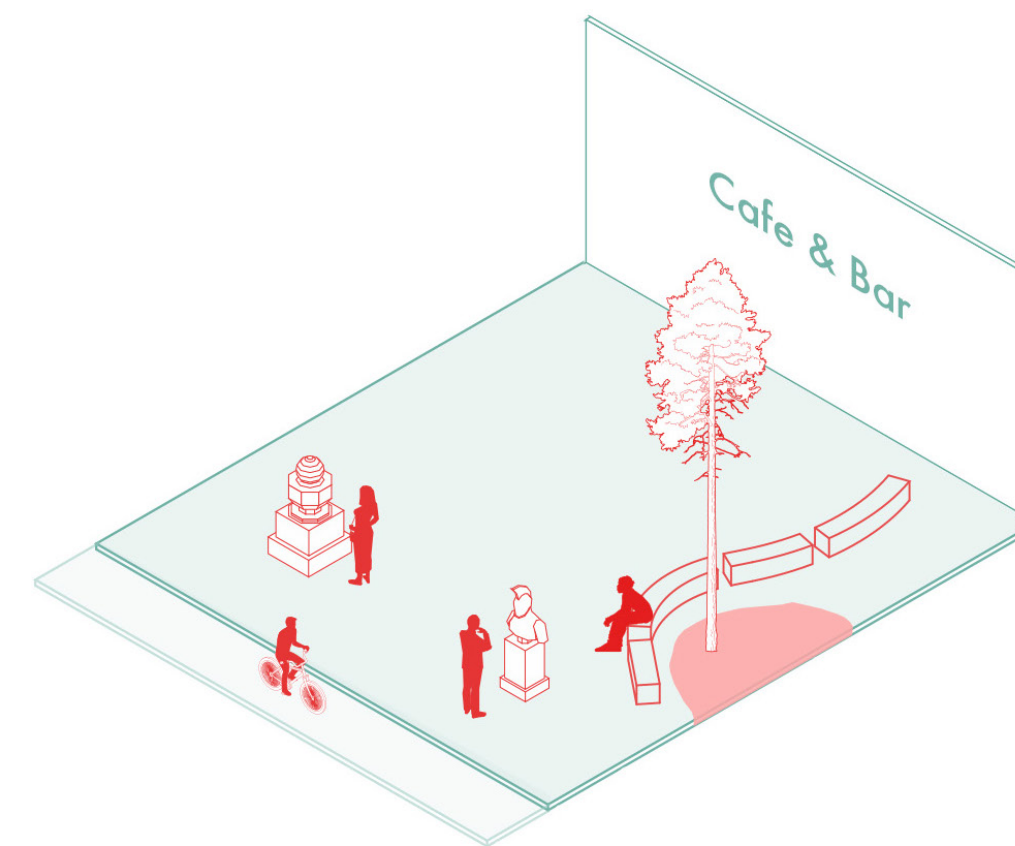
Implementation of Tactical Urbanism



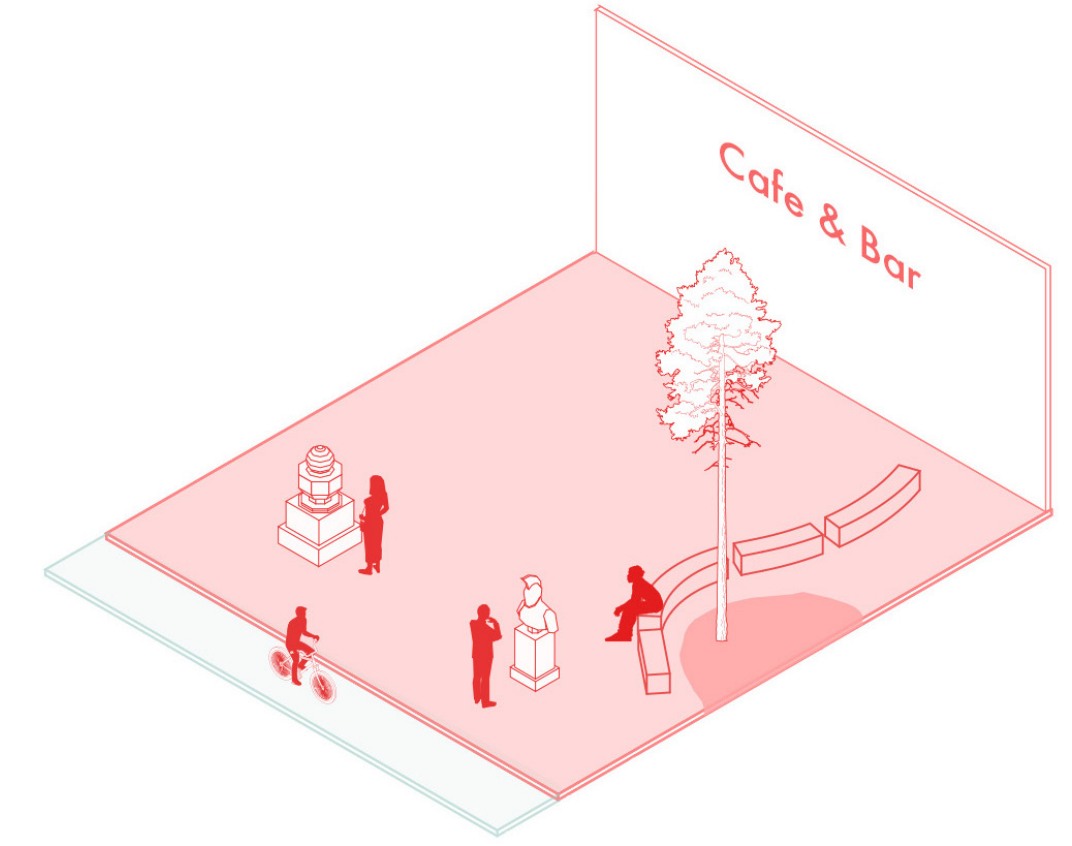
Urban Crack with Potential
(Underutilized Sidewalk)



Infrastructural Intervention
(Sidewalk Expansion, Bike Lane Relocation)



Implementation of Tactical Urbanism



Initial 0th Place



2-Fieldwork

3-Problematization

4-Strategizing

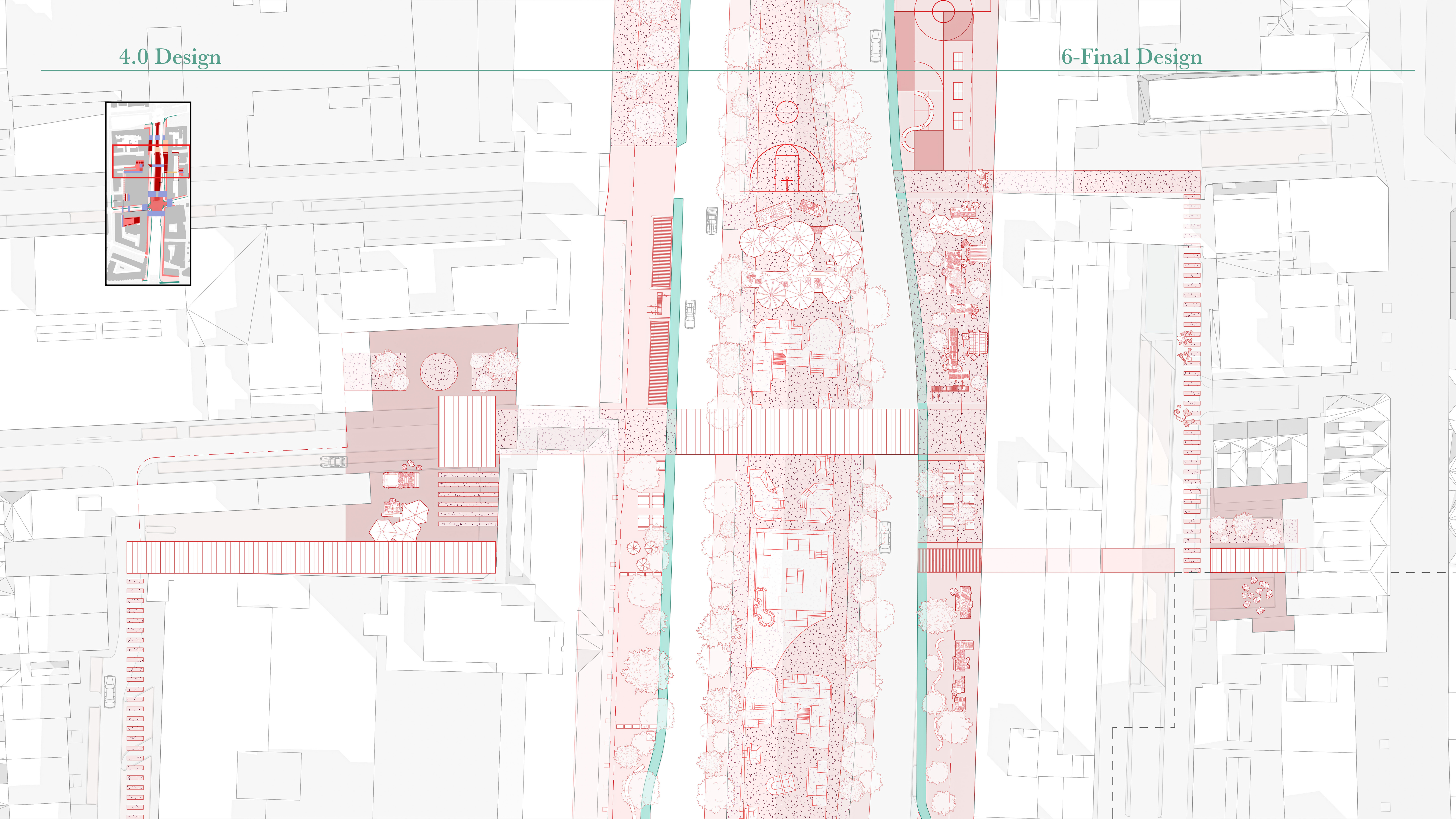
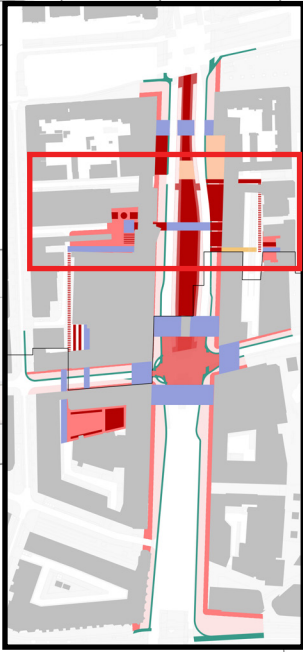
5-Description (design testing)

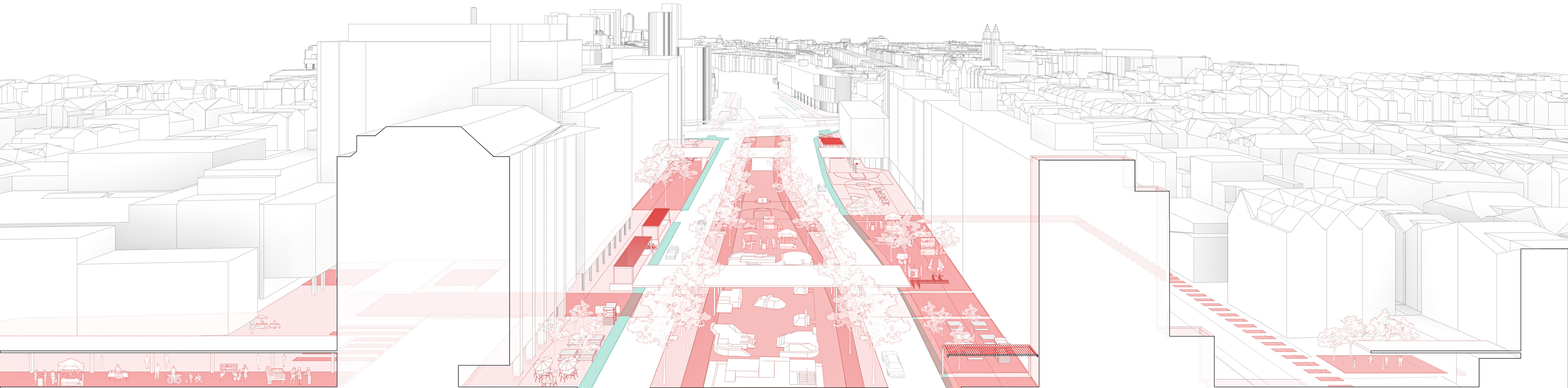
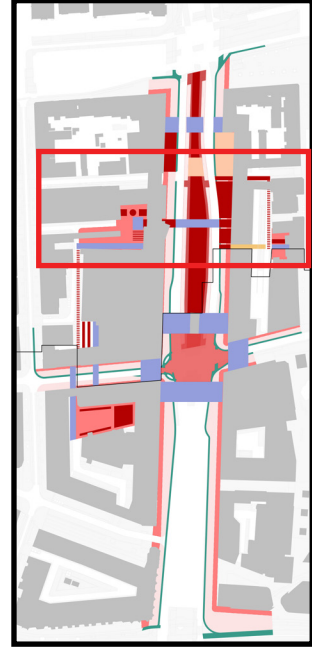
6-Final Design

7-Urban Evolution ('0th place' concept in action.)

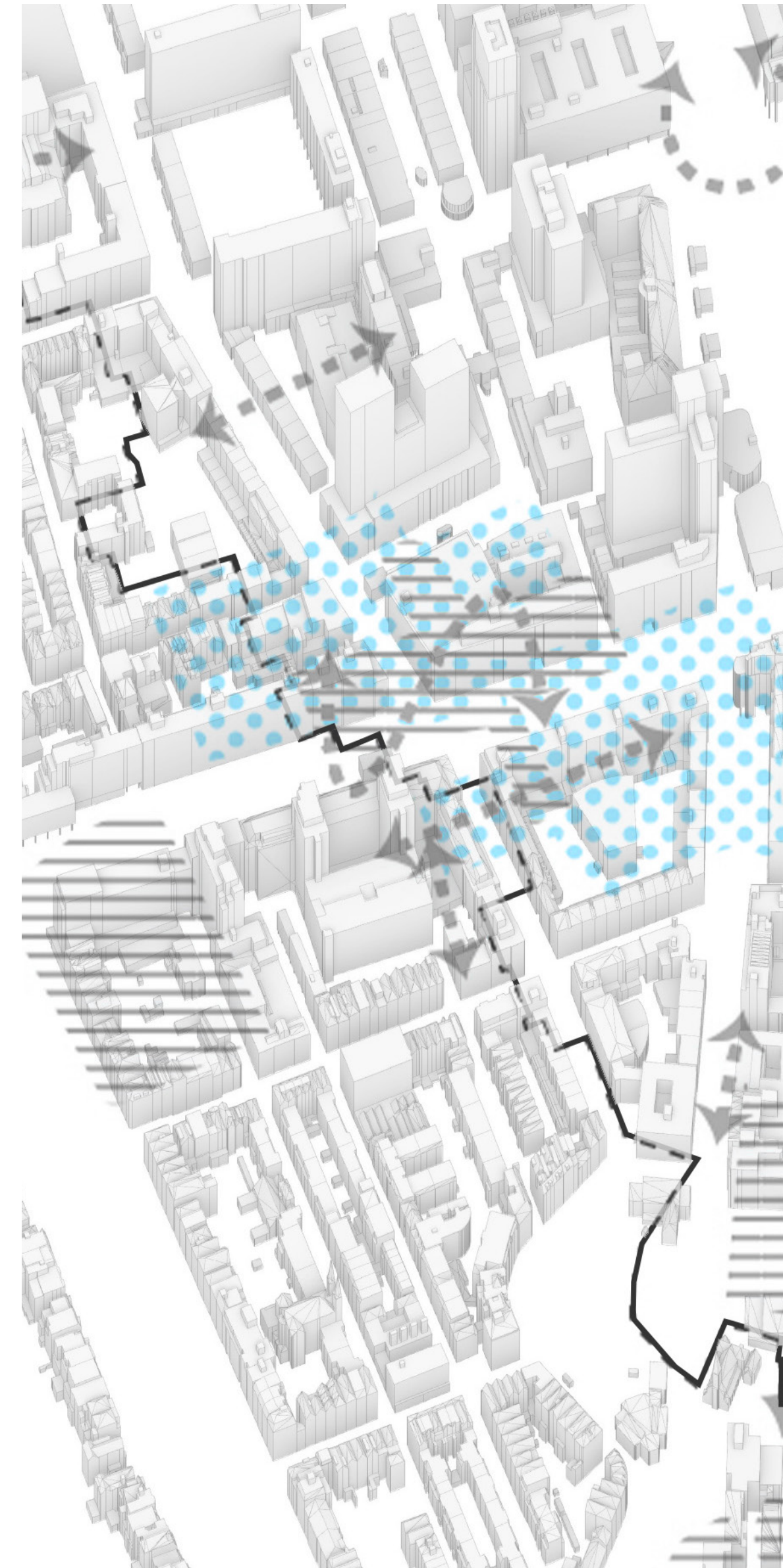
4.0 Design

6-Final Design

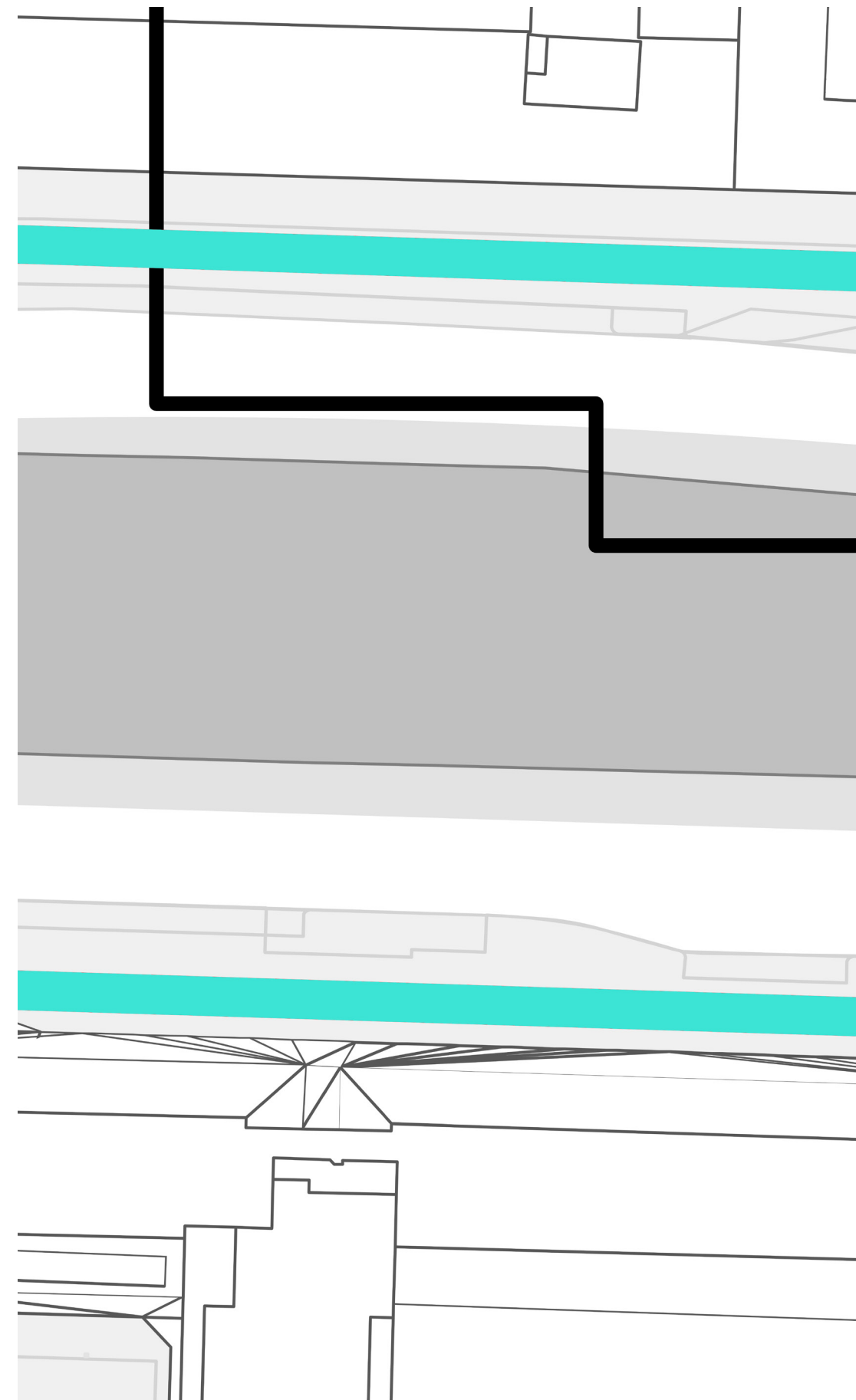




**Boosting Economic Value and Supporting Local Businesses through
Mixed-Use Development**

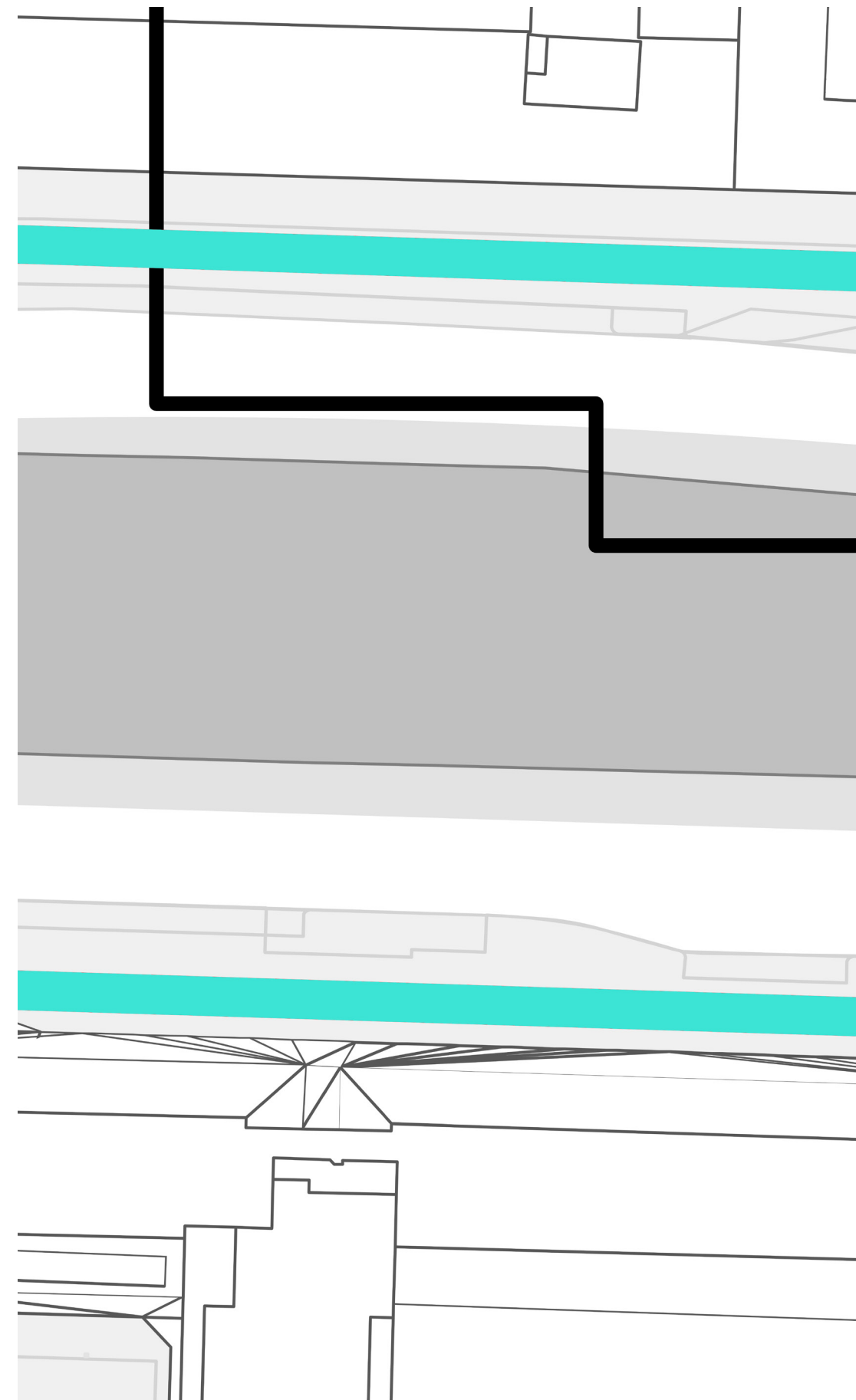


Reorganizing the Bike Lane & Expanding the Sidewalk

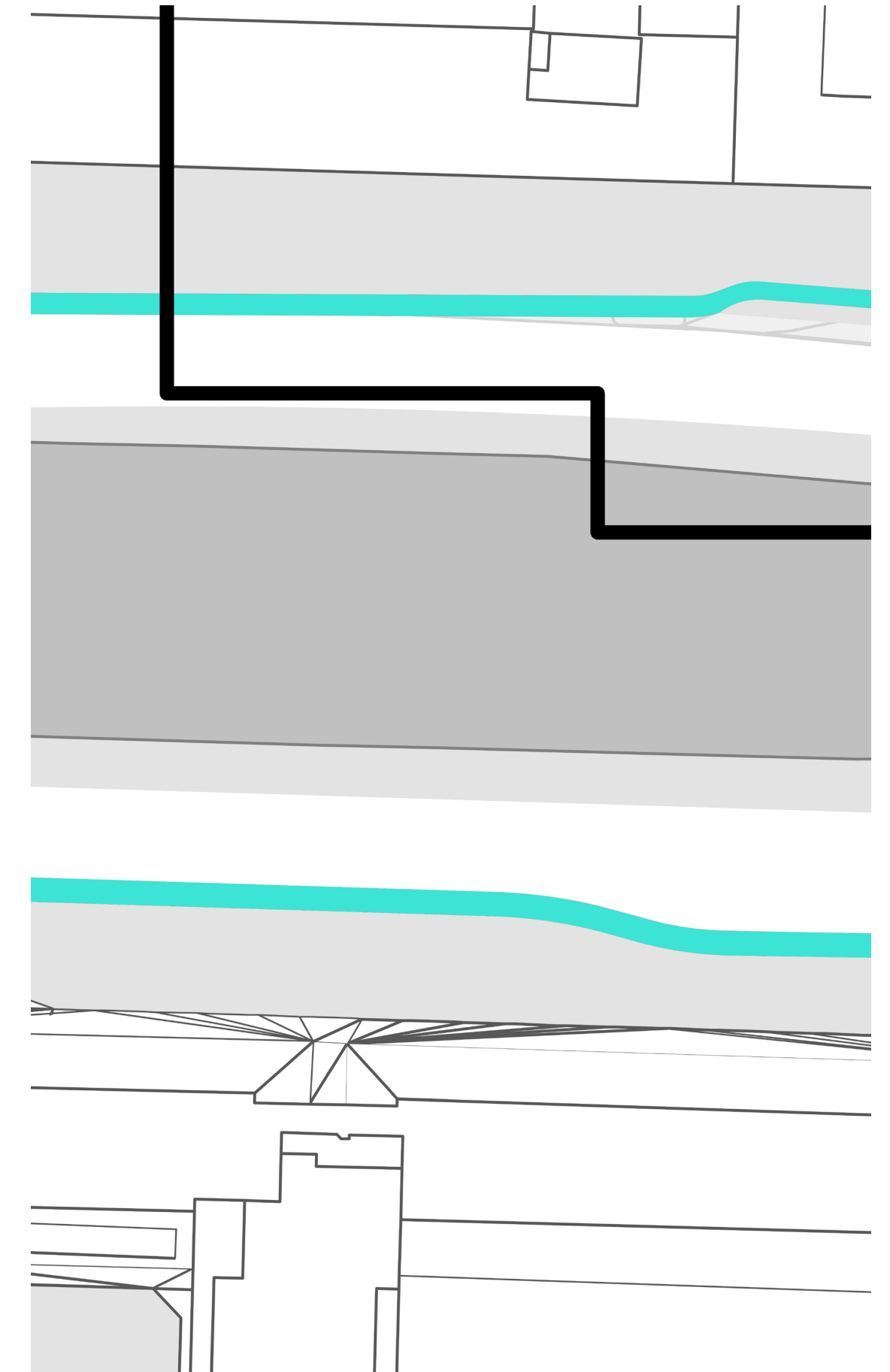


Before

Reorganizing the Bike Lane & Expanding the Sidewalk

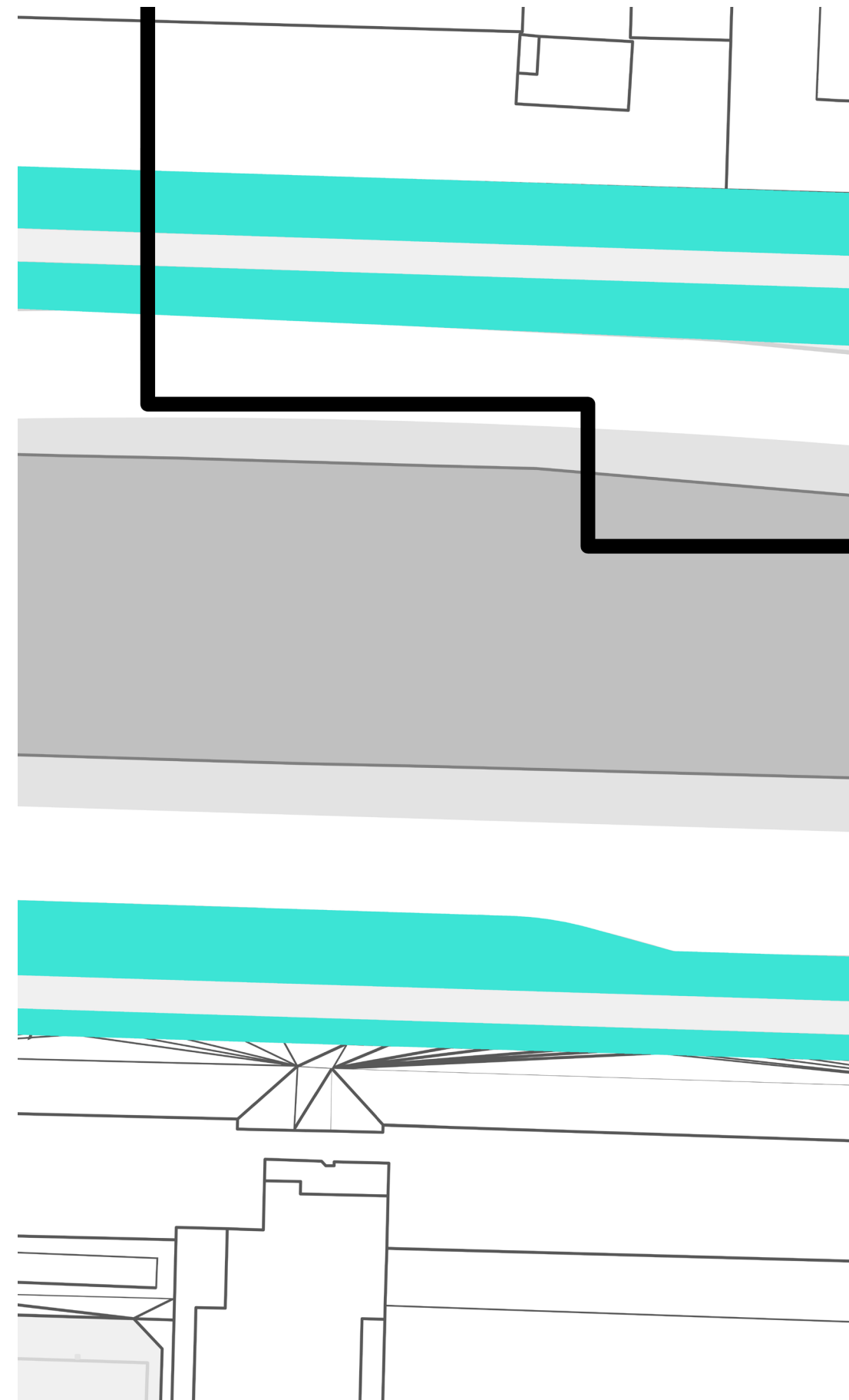


Before



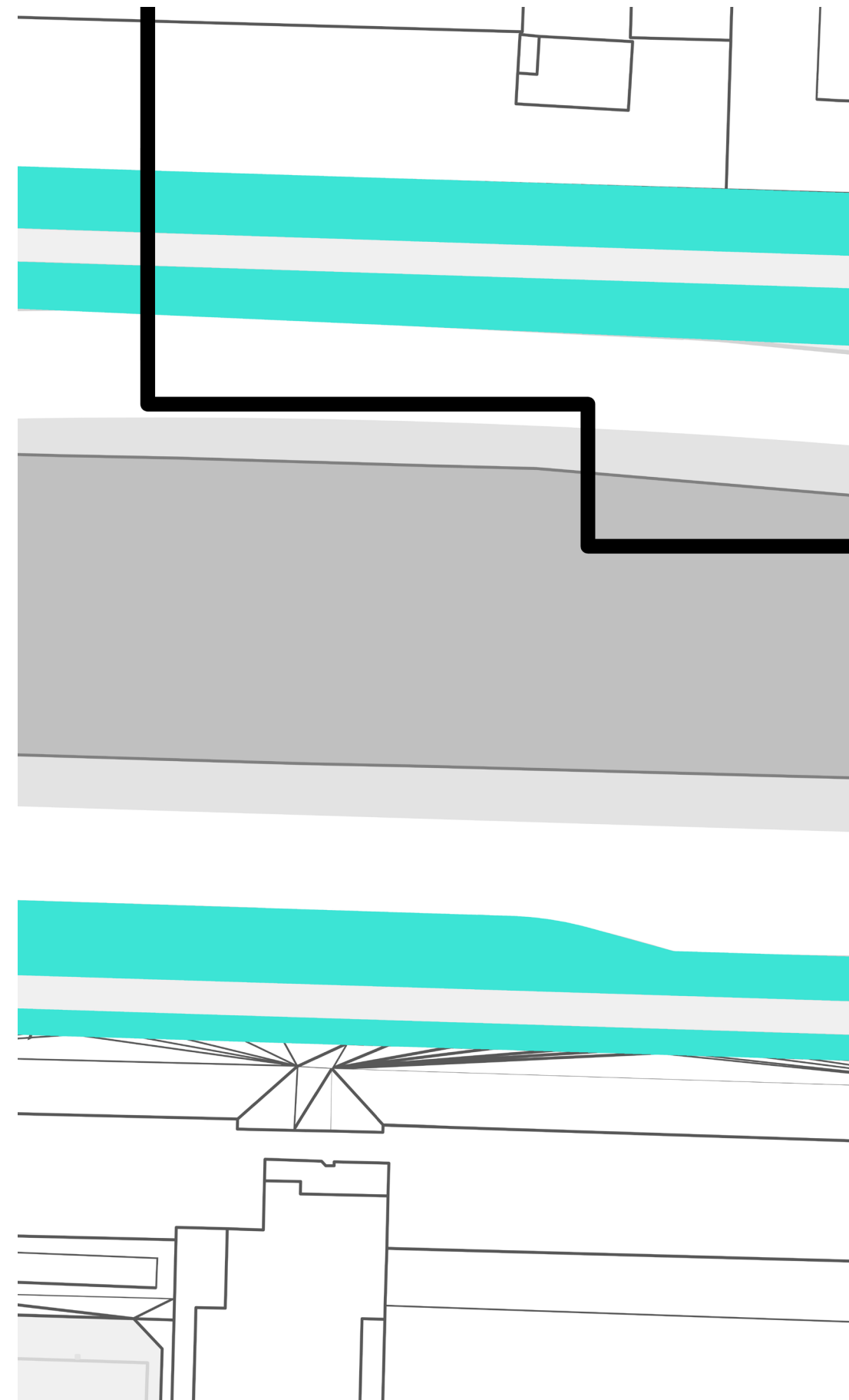
After

Reorganizing the Bike Lane & Expanding the Sidewalk

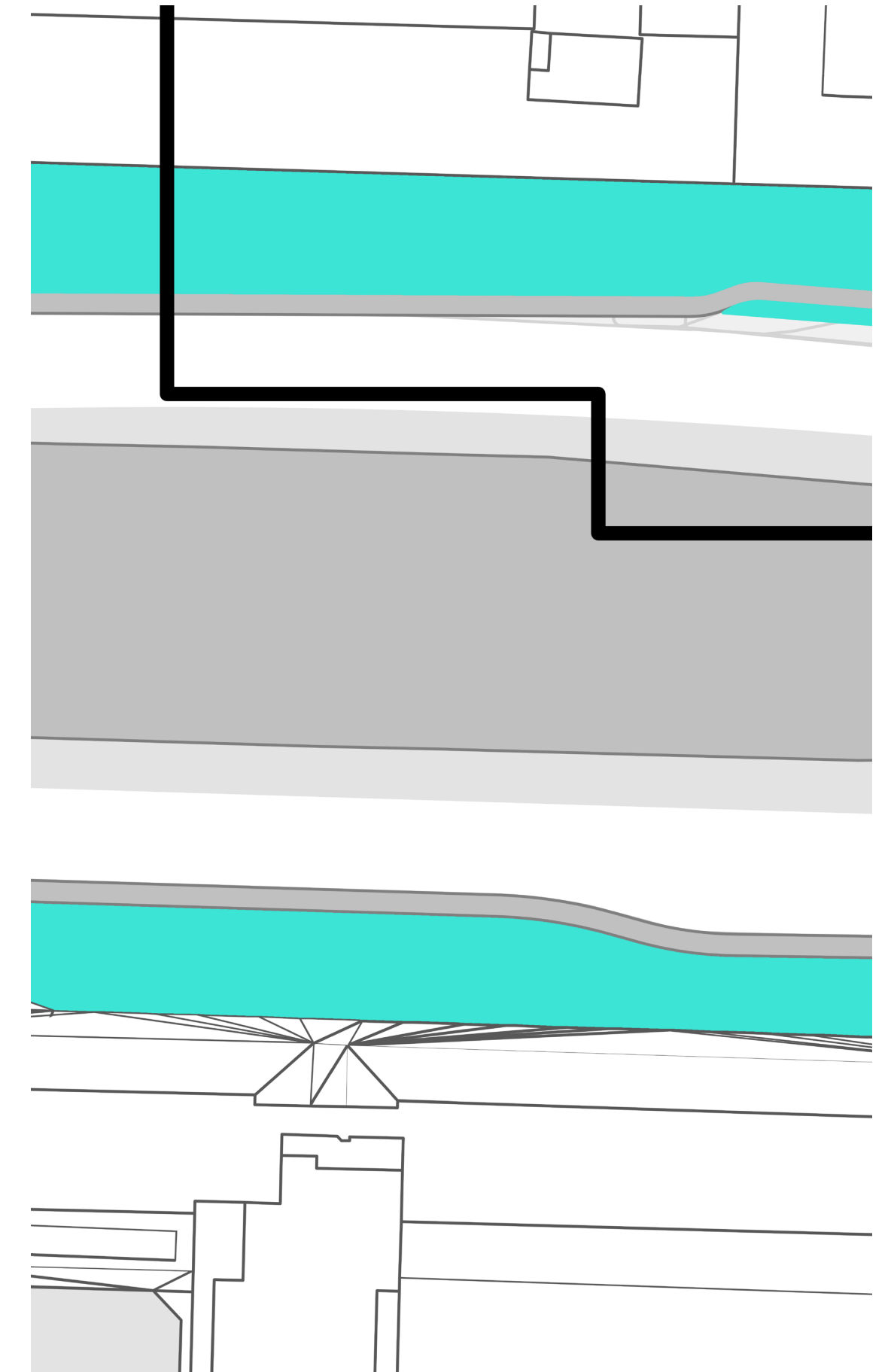


Before

Reorganizing the Bike Lane & Expanding the Sidewalk

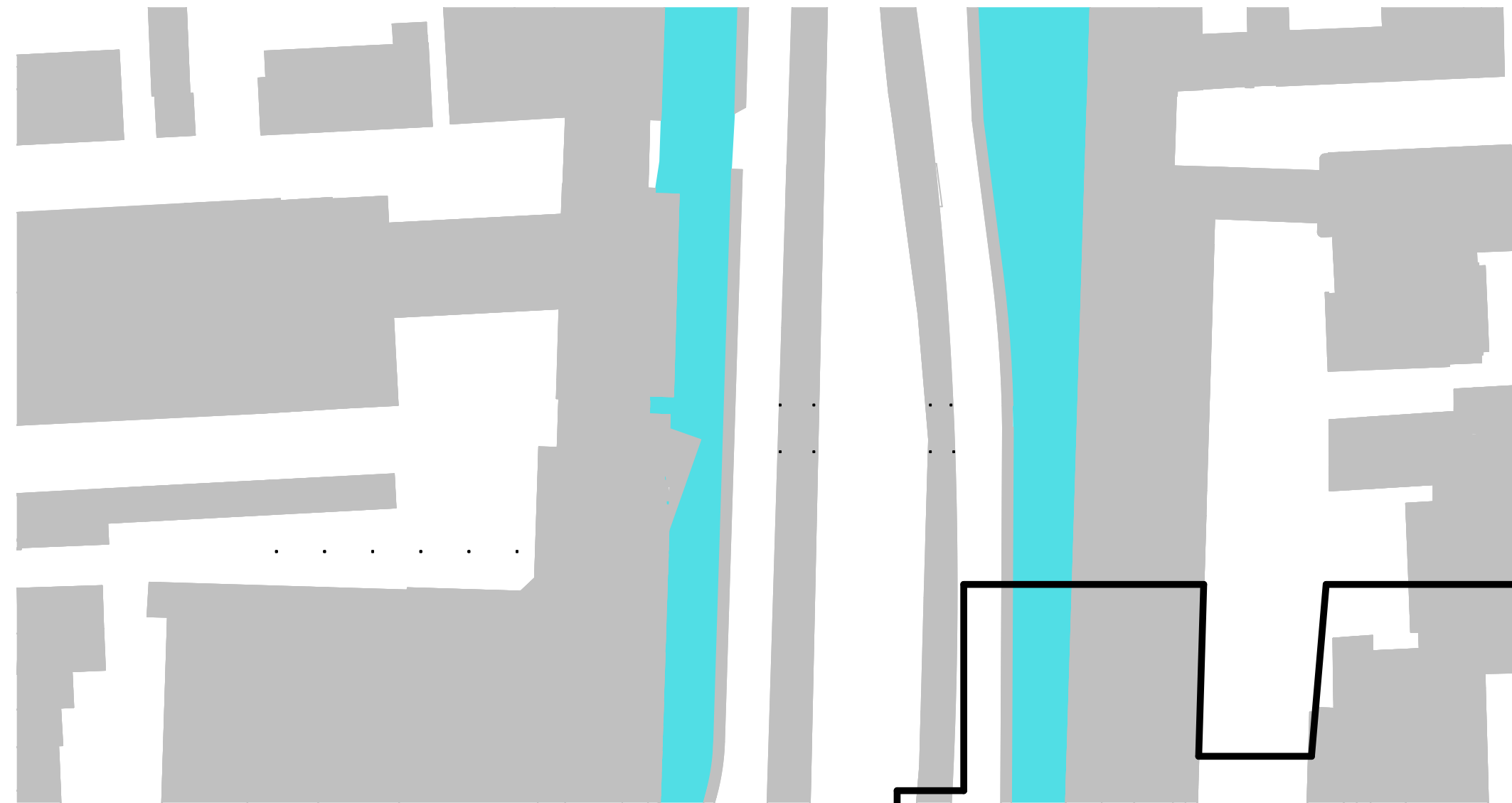


Before



After

Reorganizing the Bike Lane & Expanding the Sidewalk



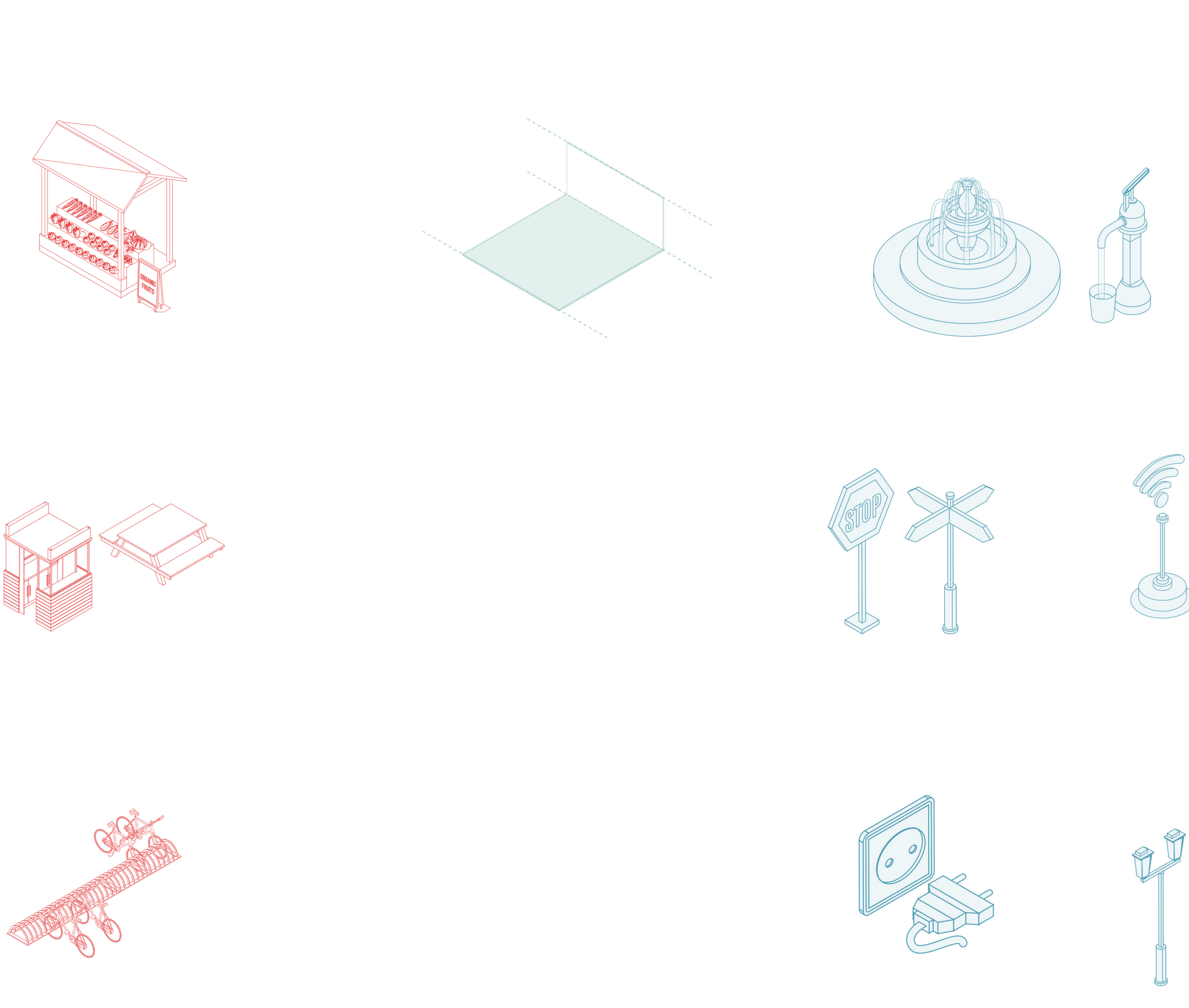
Tactical Elements

Spatial Infrastructure & Policy

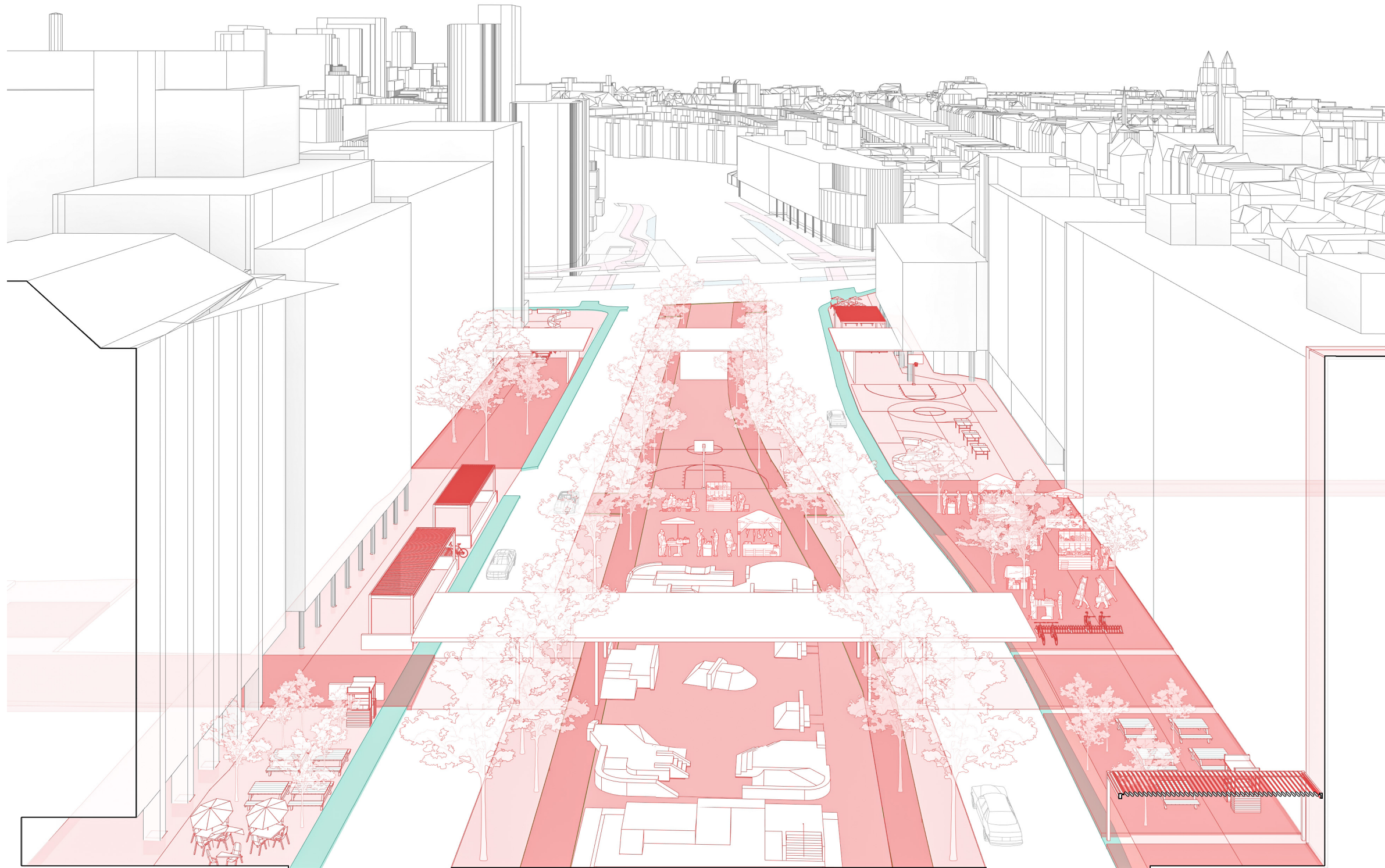
Punctual Infrastructure

The new **tactical** features, such as **micro-squares** with **benches** and **cafes**, and **pop-up markets**, were made possible by the **presence** of **sidewalks** (**spatial infrastructure type 1**) and **reliable water and electrical supplies** (**punctual infrastructure**).

Additionally, other **punctual infrastructure** elements, like **signage** and **public Wi-Fi**, enhanced accessibility and **ease of access**, thereby contributing to both economic and social opportunities.



4.0 Design

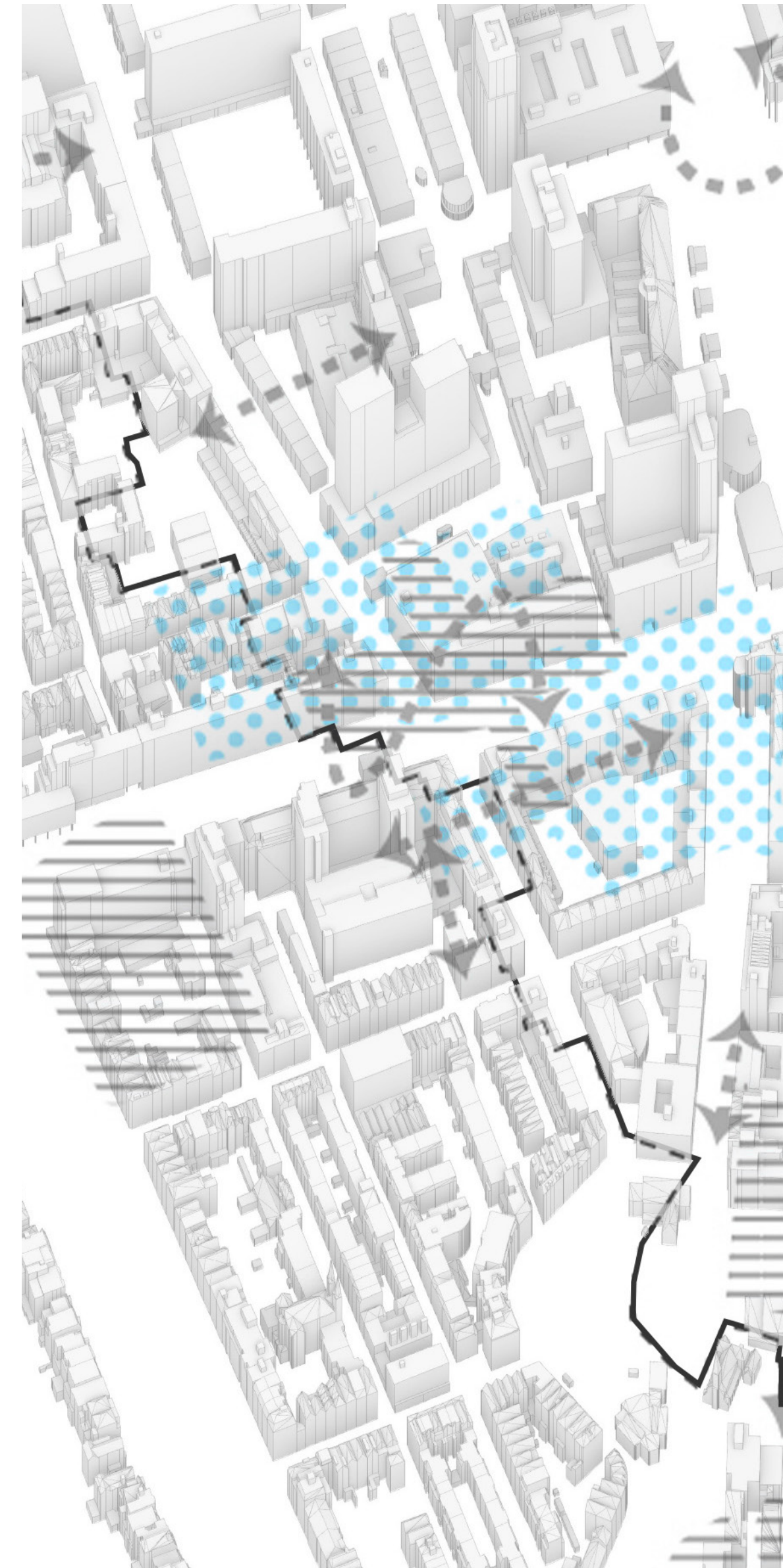


6-Final Design

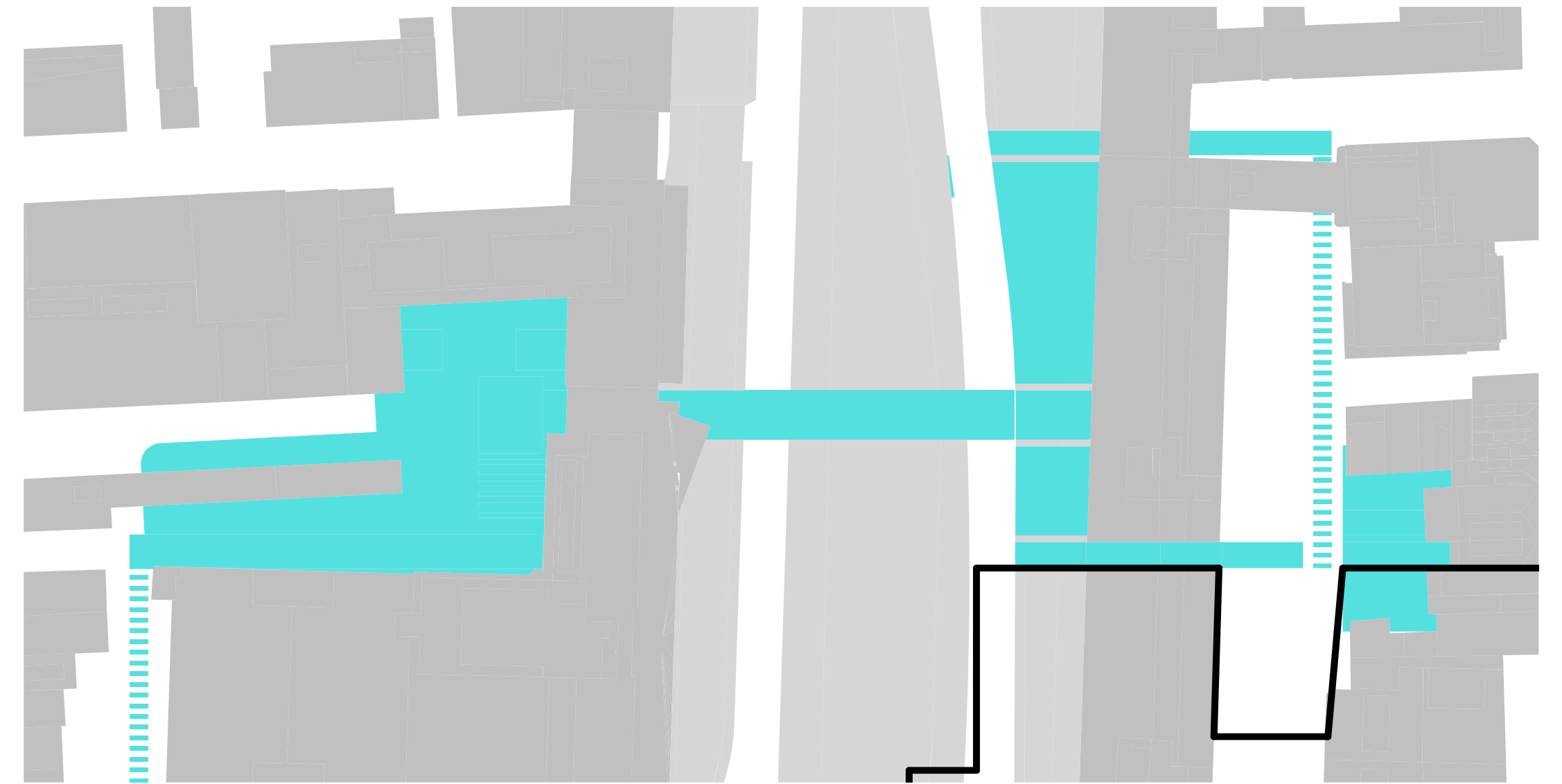


<https://www.livingstreetsalliance.org/news/street-transformations-oct2022>

**Boosting Economic Value and Supporting Local Businesses through
Mixed-Use Development**



Connecting The New Courtyards



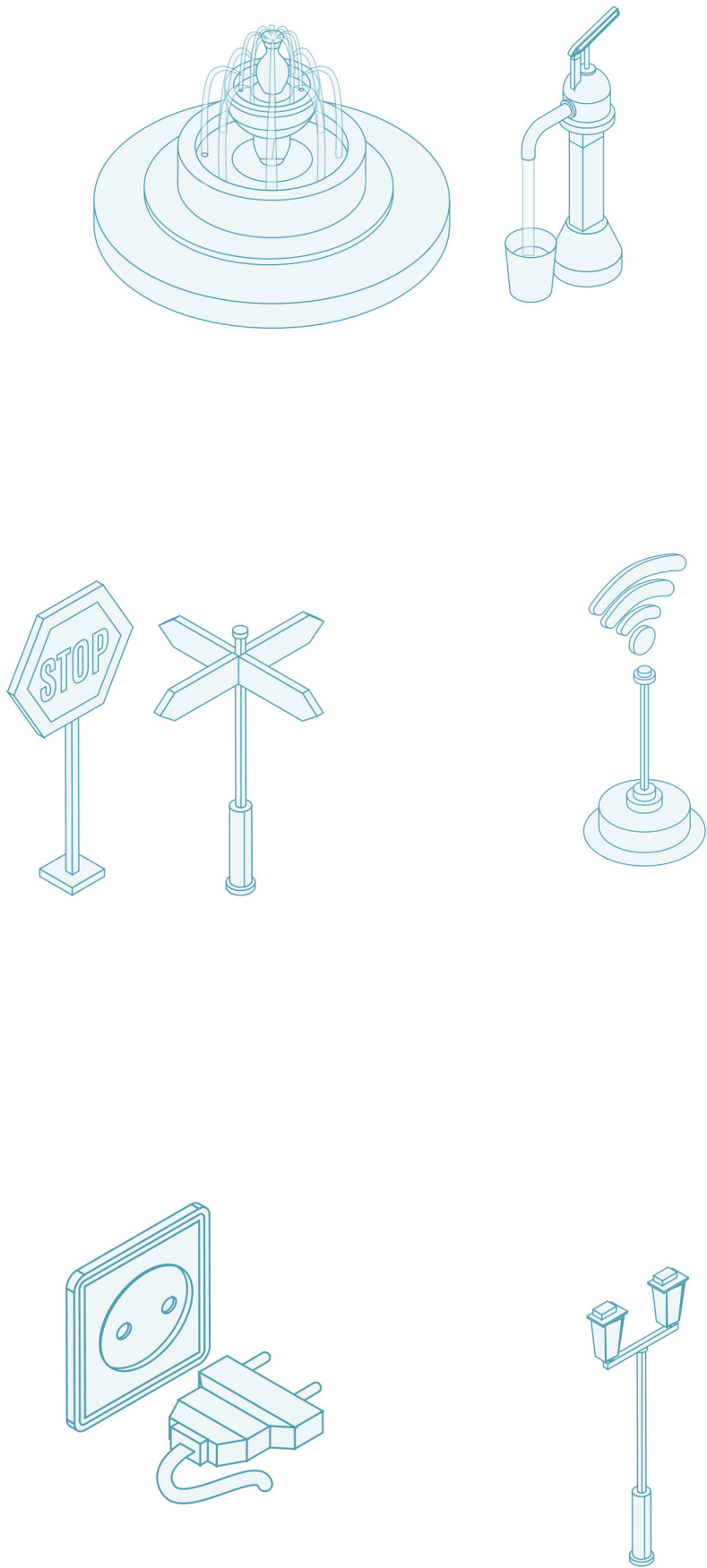
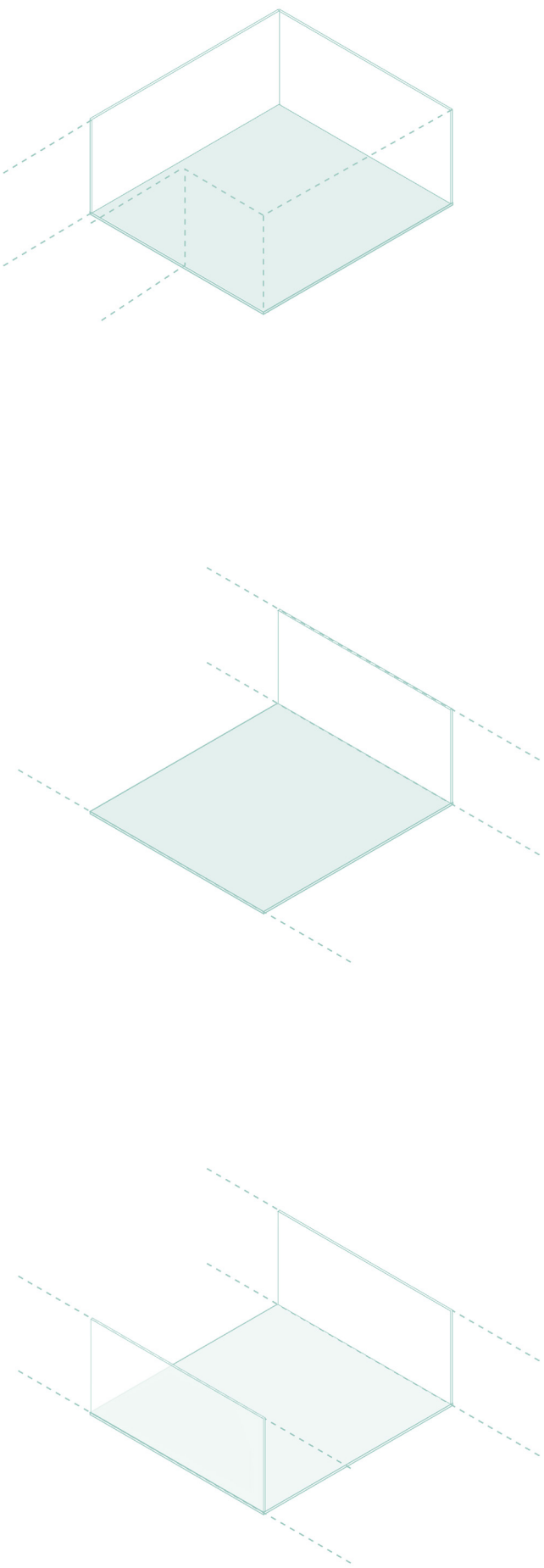
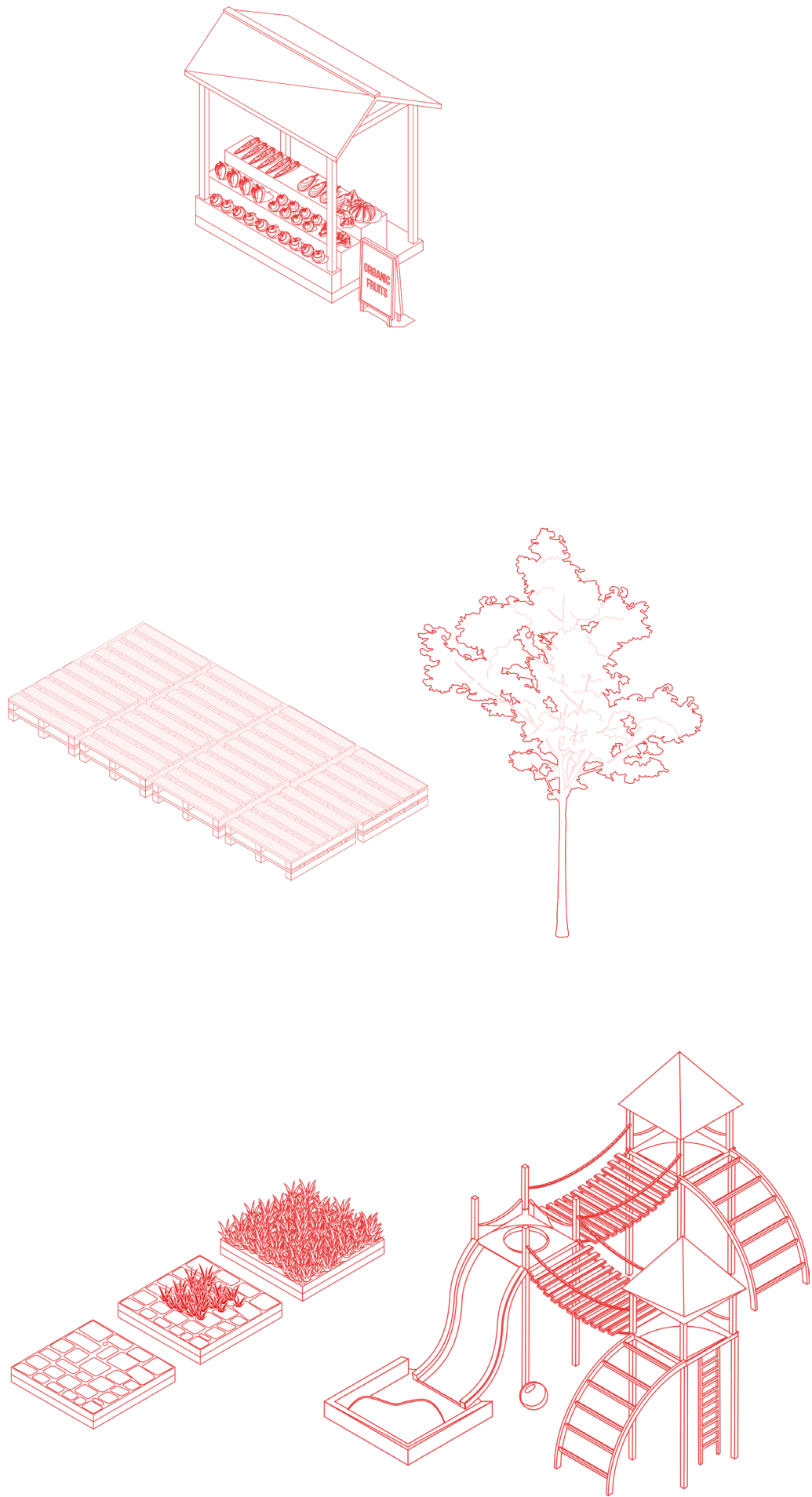
Tactical Elements

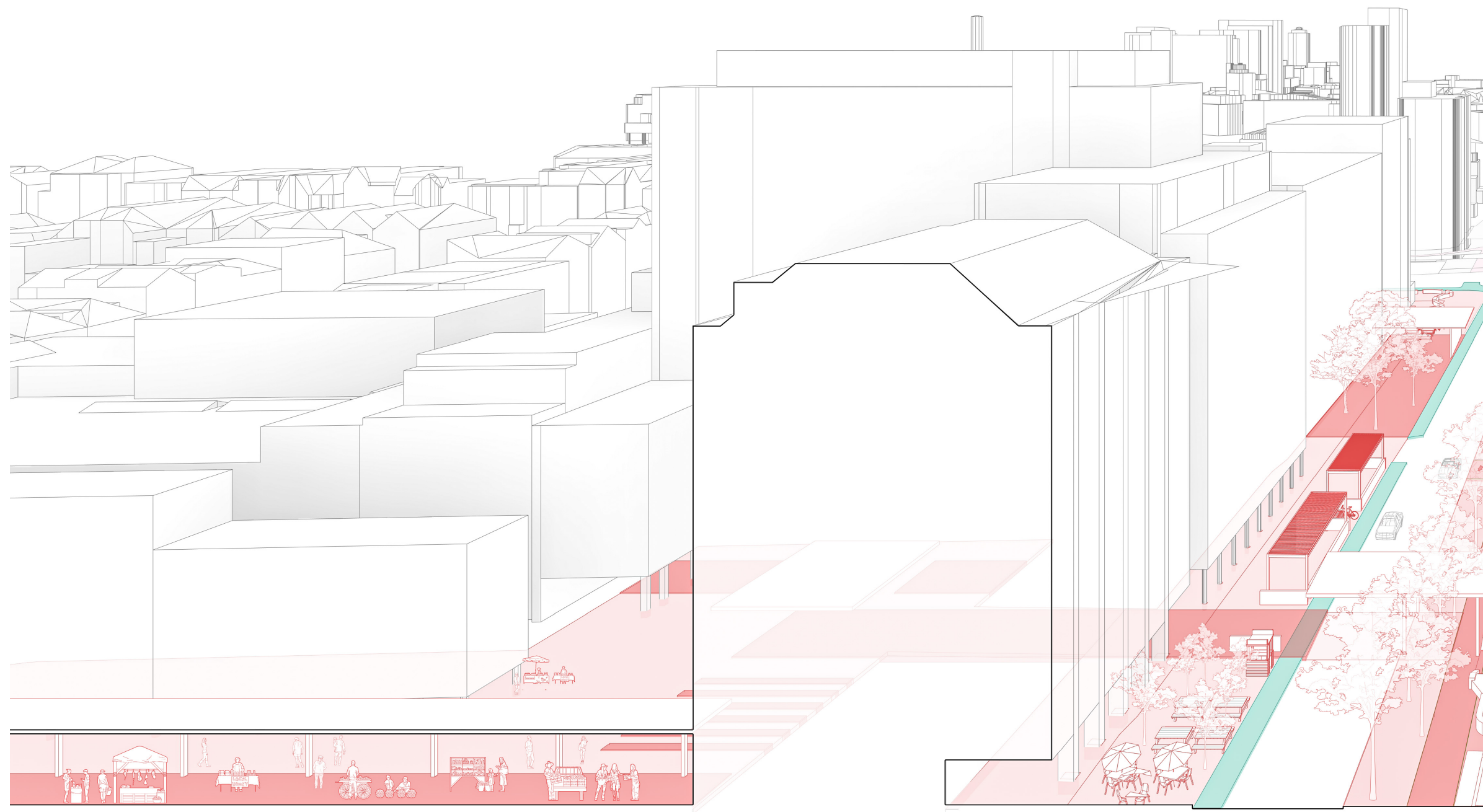
Spatial Infrastructure & Policy

Punctual Infrastructure

Connecting the courtyards, which were previously urban cracks, enabled functions such as the urban stage and kids’ play zone to exist through (spatial infrastructure type 3), safety policies (policy infrastructure), and other punctual infrastructures like electrical supply for the stage, signage for both, and lighting for night shows.

Depaving, as a bottom-up tactical act, occurred across all three spatial infrastructural types, supported by participation policies (policy infrastructure), directional signag, and essential water and electrical supplies (punctual infrastructure).



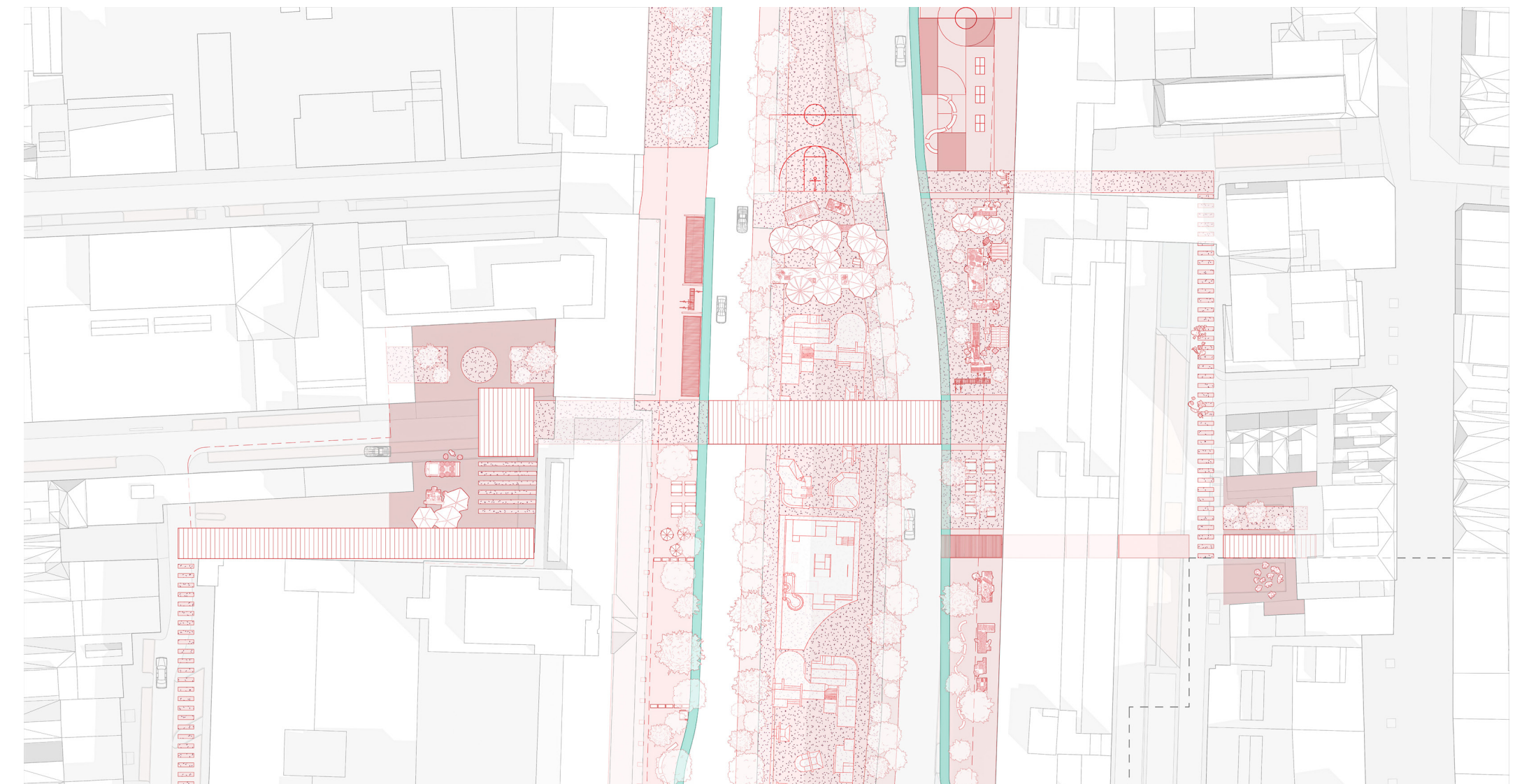
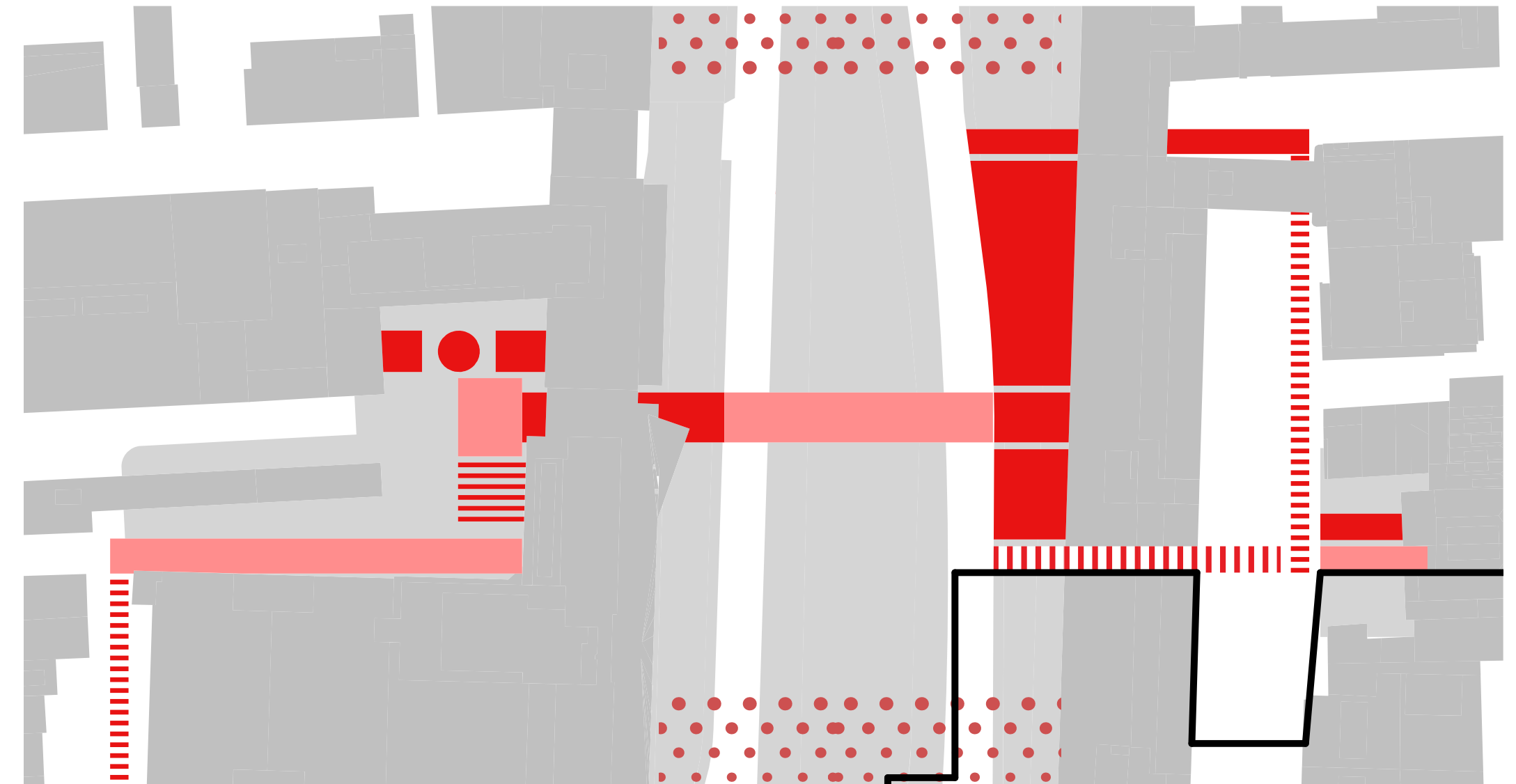


<https://parcitypatory.org/2020/07/31/tactical-urbanism/>

Enhancing Connectivity and Walkability



Implementing Tactical Connections



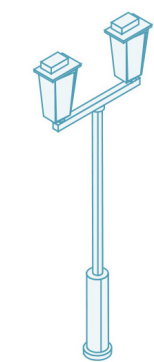
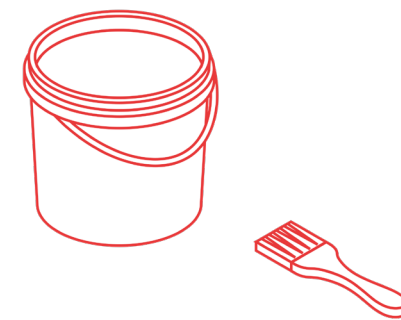
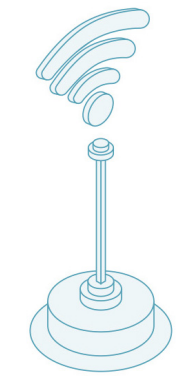
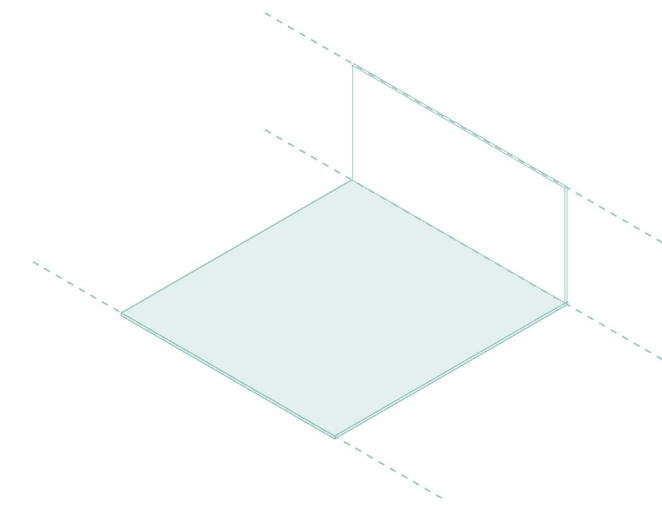
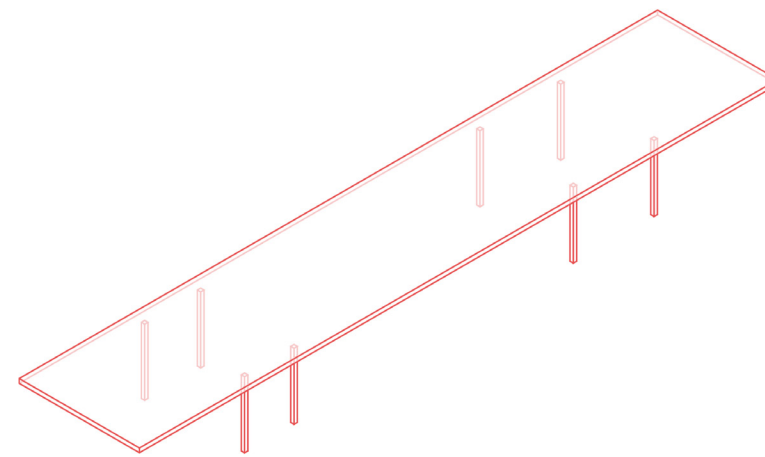
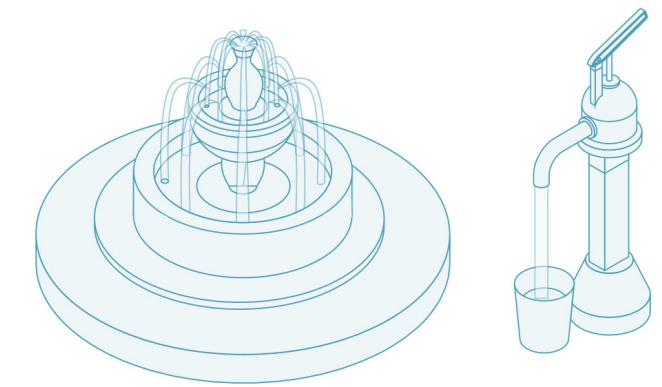
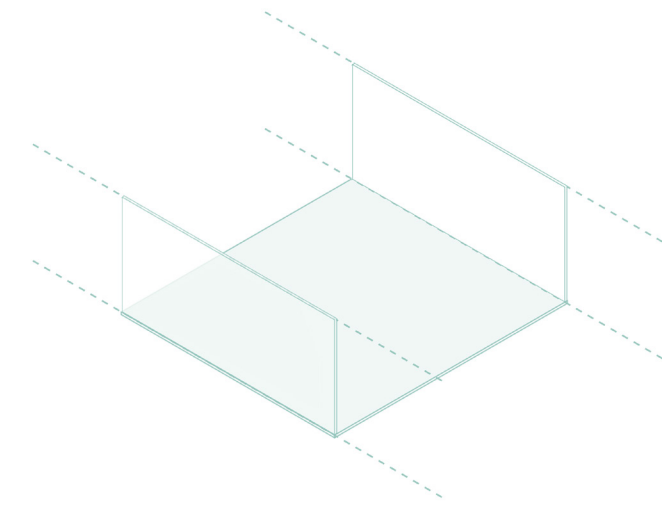
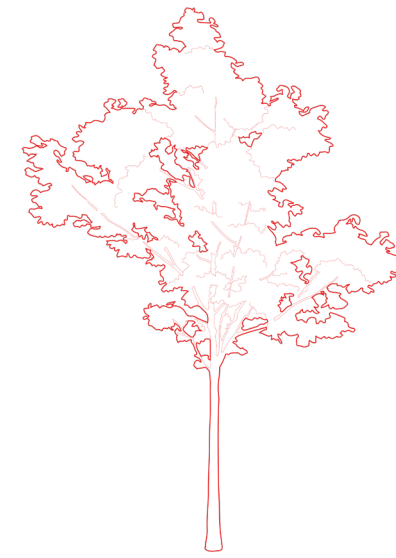
Tactical Elements

Spatial Infrastructure & Policy

Punctual Infrastructure

There will be three types of tactical connectors:

- Horizontal elements such as **shades** and urban **furniture**.
- Green connectors** like **trees**, **bushes**, and **vegetation** to link both sides.
- Visual** connectors using tools like **paint**, **Light installations**, and **art installations**





<https://groveland-fl.gov/558/Tactical-Urbanism>

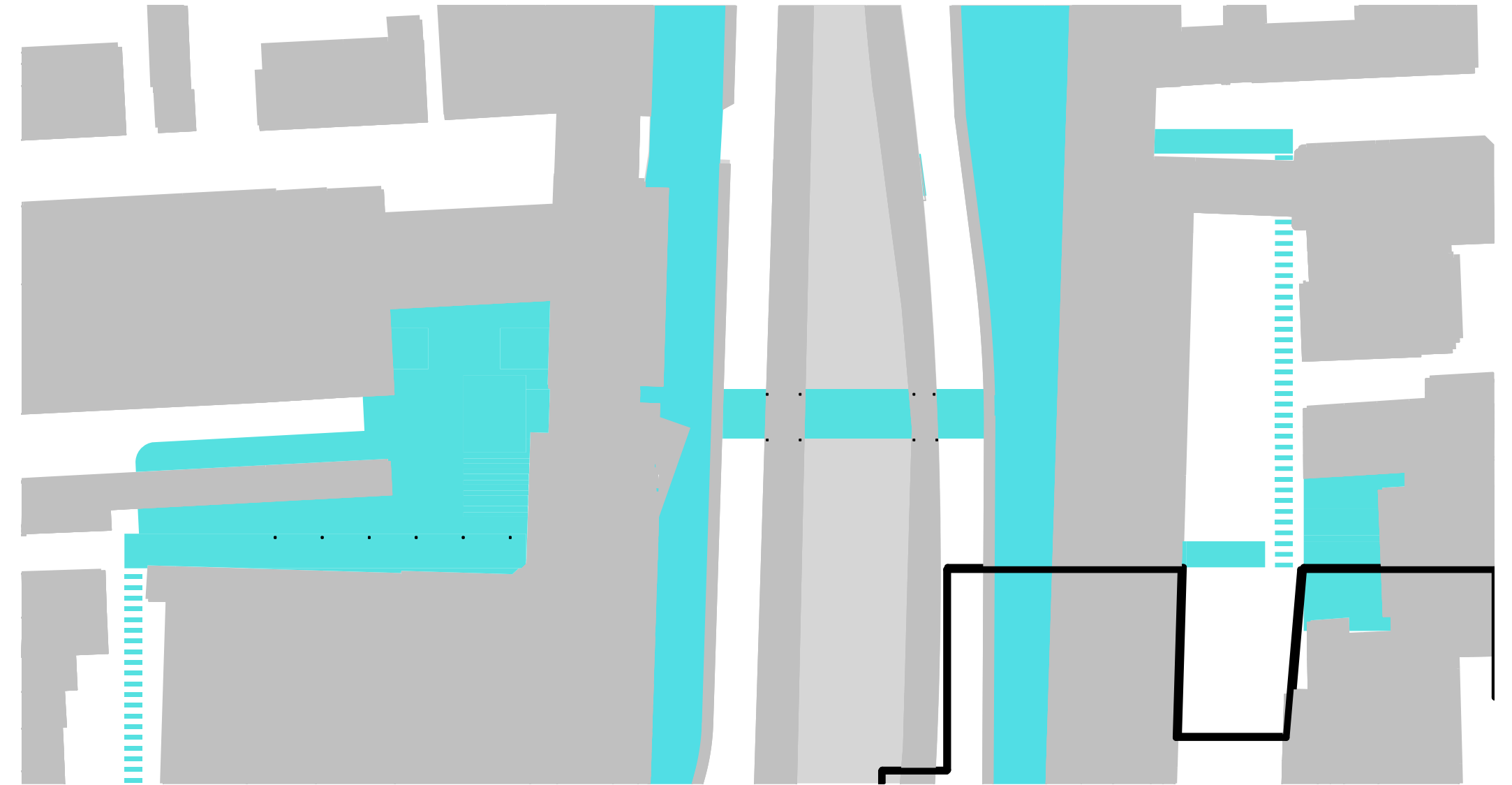


https://www.researchgate.net/figure/A-Tactical-Micro-Task-organized-in-the-framework-of-an-the-Urban-Design-Studio-in-KU_fig4_279925521

Developing Green Infrastructure

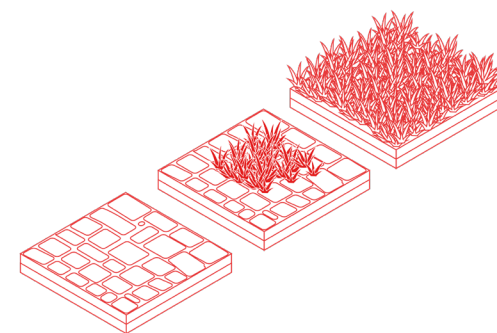
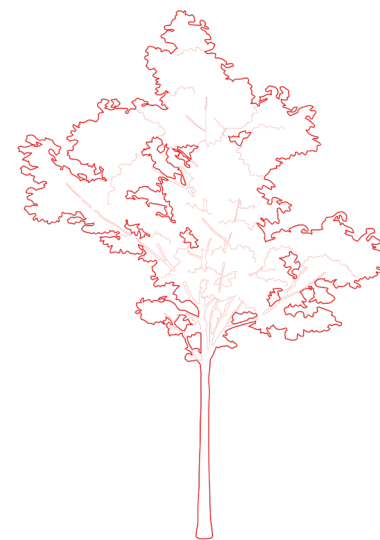
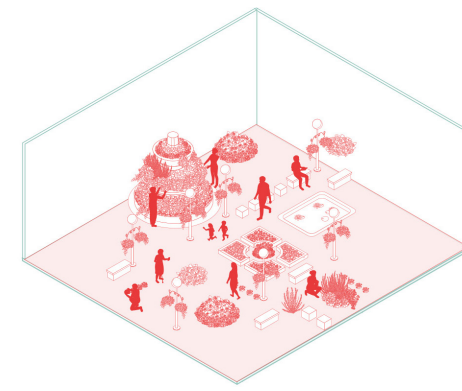


Creating ecological networks.

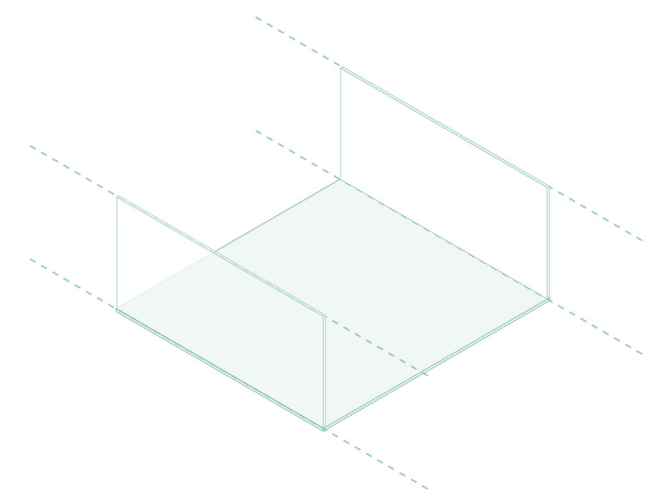
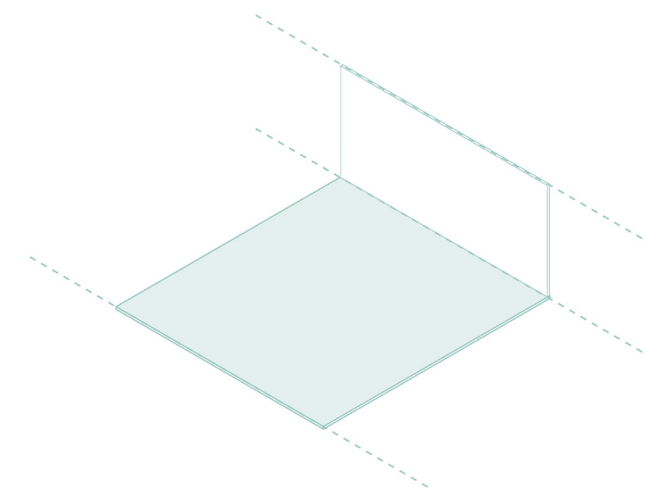
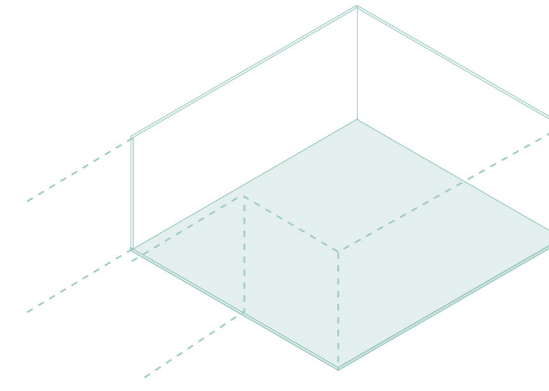


All the **tactical elements** and tools used—such as **trees**, **depaving**, **urban farming**, **green partitions**, and **pocket parks**—depended on **essential infrastructure** like **water supply**, **signage**, and **public toilets** (punctual infrastructure). The **availability of space**, represented by three types of spatial infrastructure—corridors, courtyards, and sidewalks—enabled these interventions. **Corridors** and **courtyards facilitated depaving**, **sidewalks** and **courtyards** accommodated **tree planting**, and **pocket parks**.

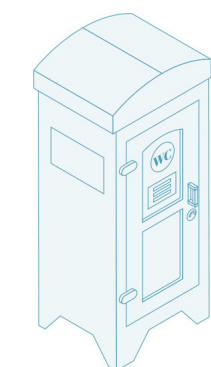
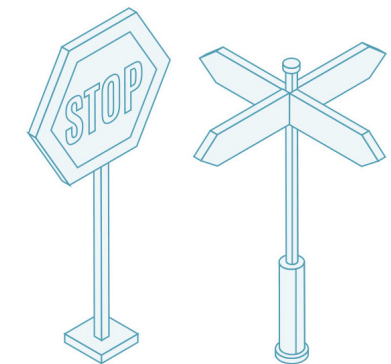
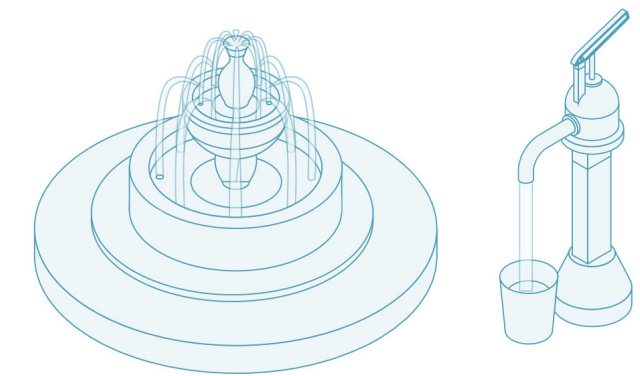
Tactical Elements



Spatial Infrastructure & Policy



Punctual Infrastructure



4.0 Design



<https://www.filmsforaction.org/takeaction/guide-to-depaving-cities/>

6-Final Design



<https://www.cnu.org/what-we-do/build-great-places/smtx-tactical-urbanism>



2-Fieldwork

3-Problematization

4-Strategizing

5-Description (design testing)

6-Final Design

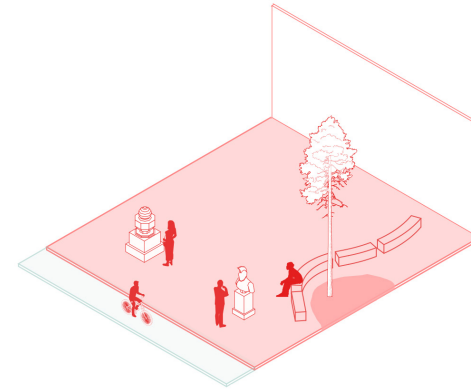
7-Urban Evolution ('0th place' concept in action.)

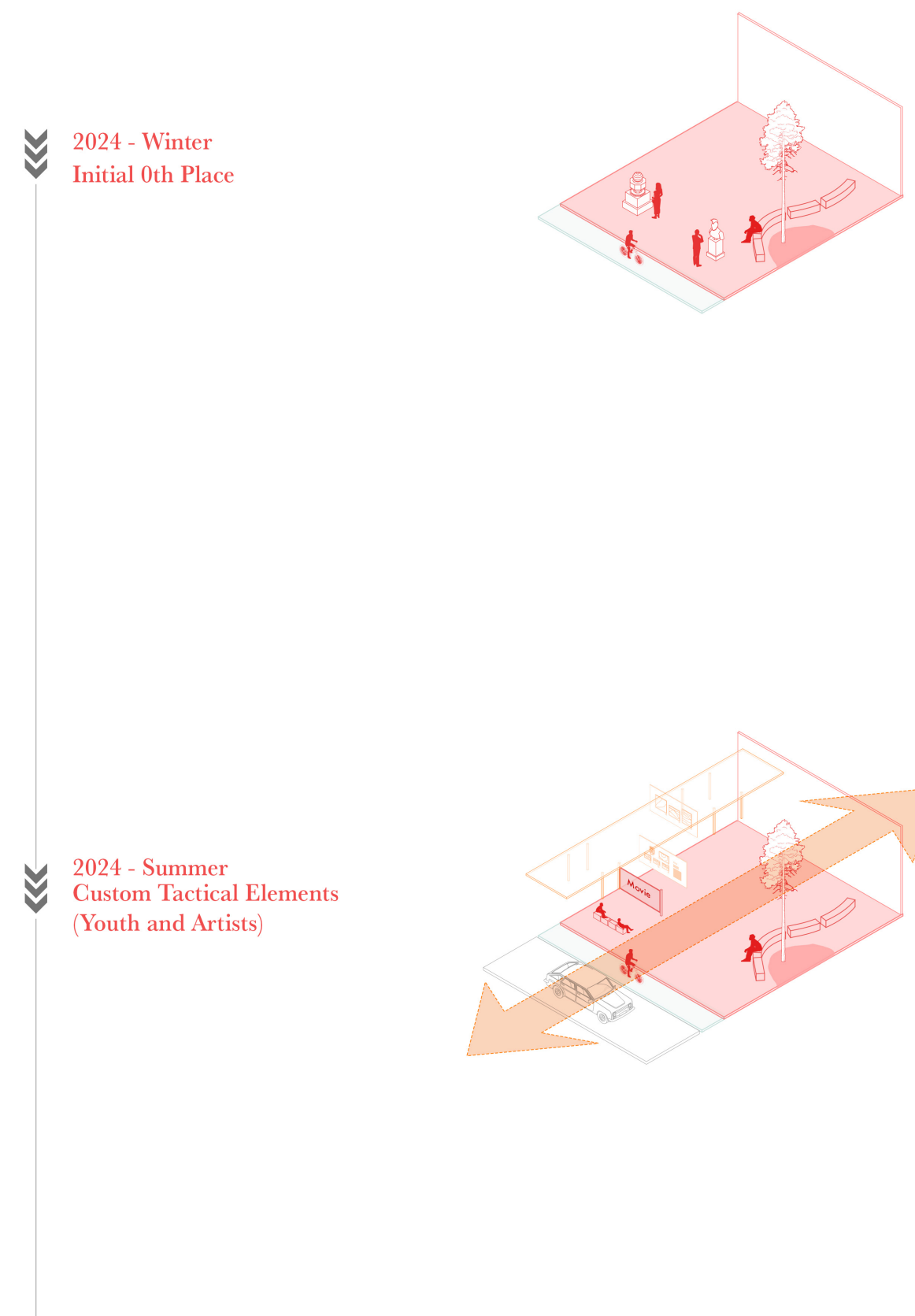
0th place (Reset)

How could the space look for each user (social group)?



2024 - Winter
Initial 0th Place





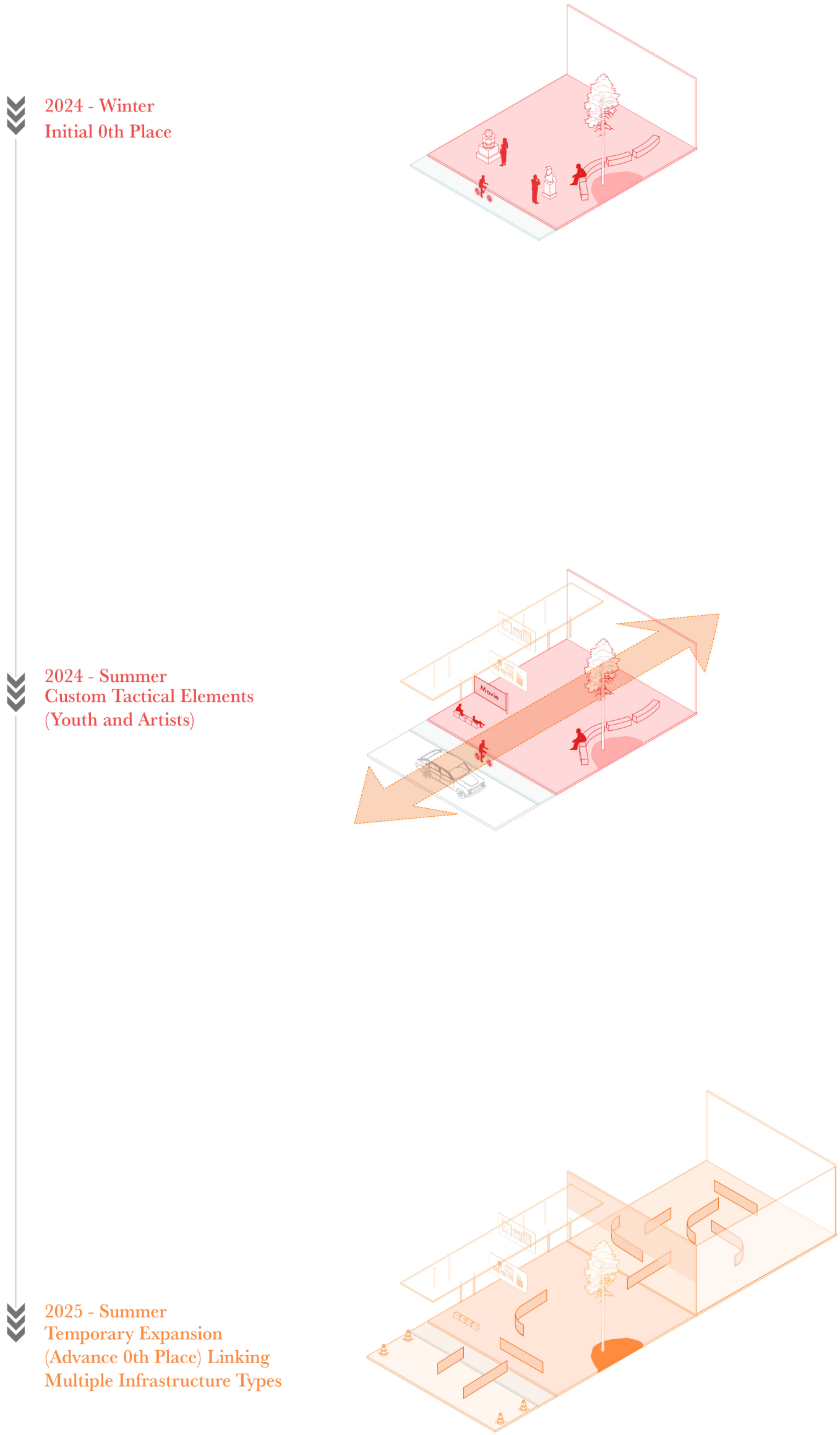
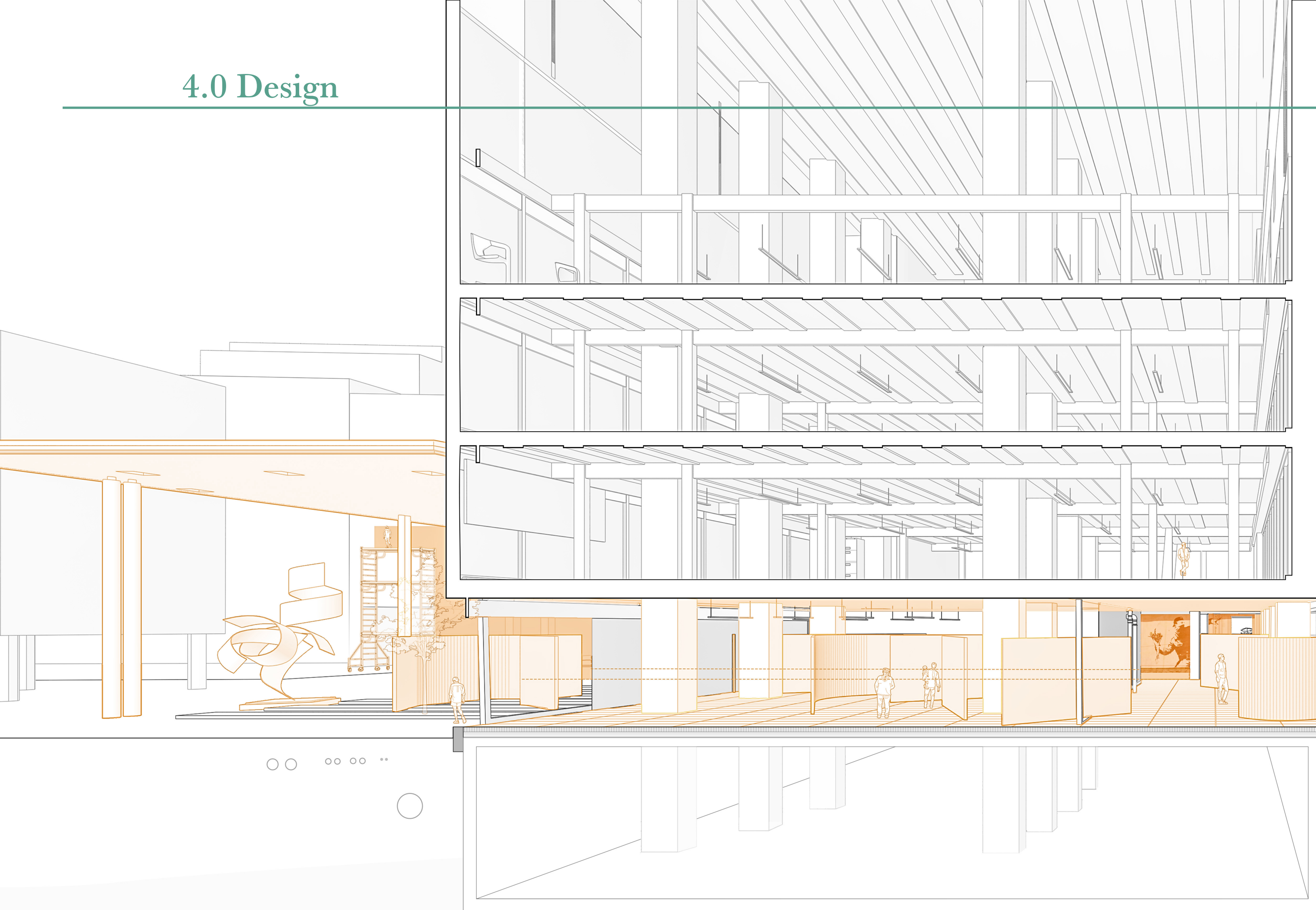
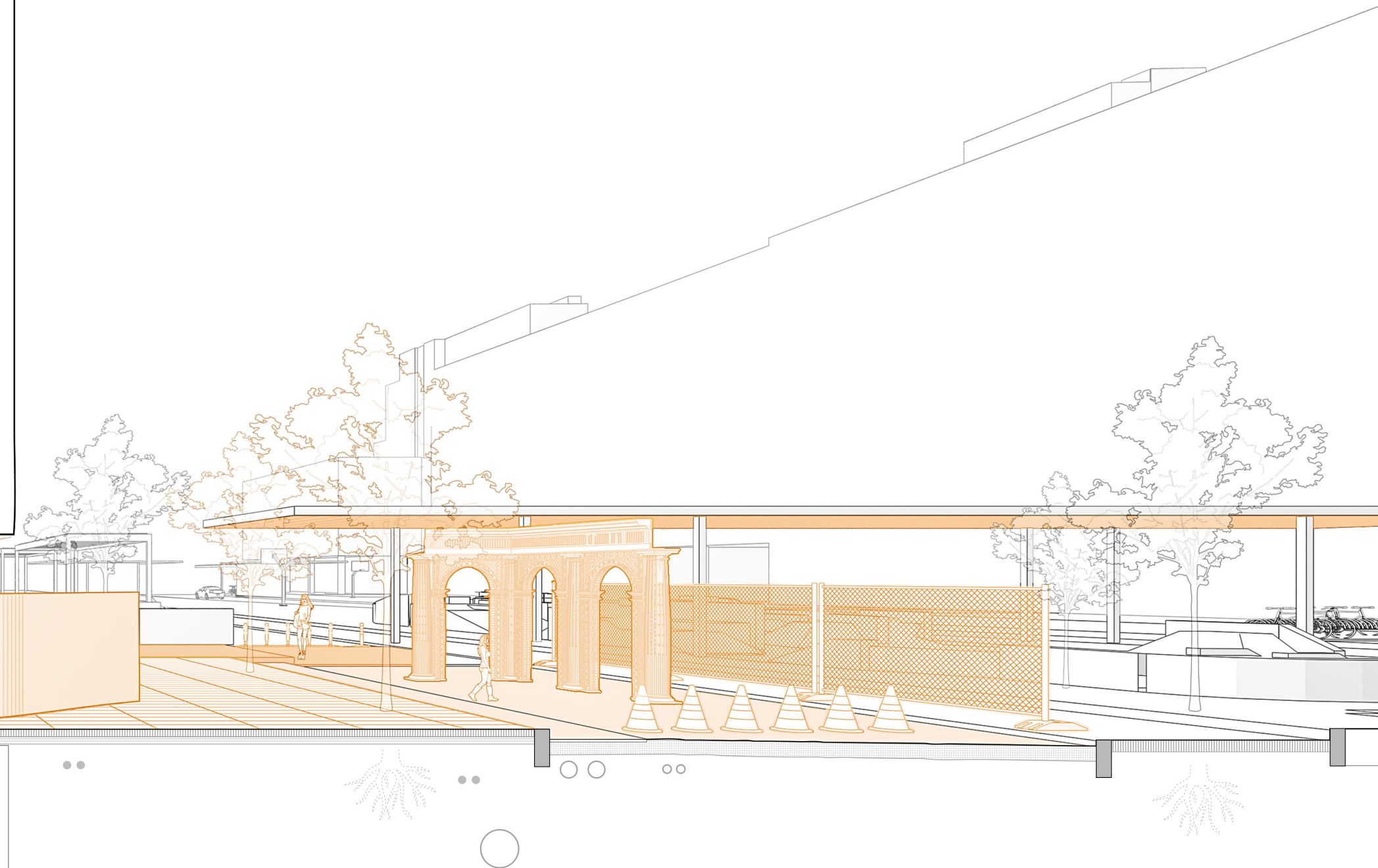


Fig.90 Art Community Perception of the 0th Place (author)

4.0 Design



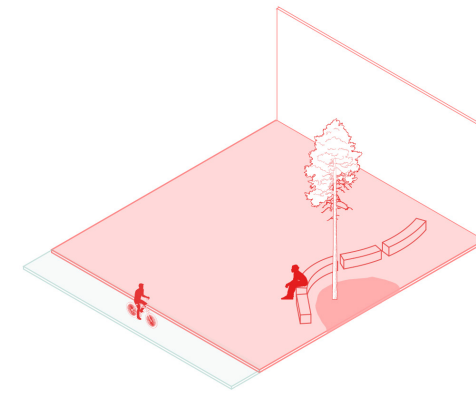
7-Urban Evolution



- Ground floor facilitates** new **temporary connectivity** and relationships.
- Fences** and **traffic cones** serve as **dual infrastructure** and **tactical** elements.
- Introduce policies** for **expressive** use of space.
- Use **courtyards** for **public shows**
- Allow **urban cracks** to serve as **areas** for **freedom** of expression.

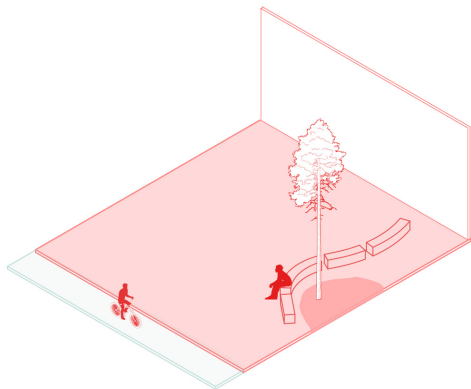


2024 - Winter
Initial 0th Place

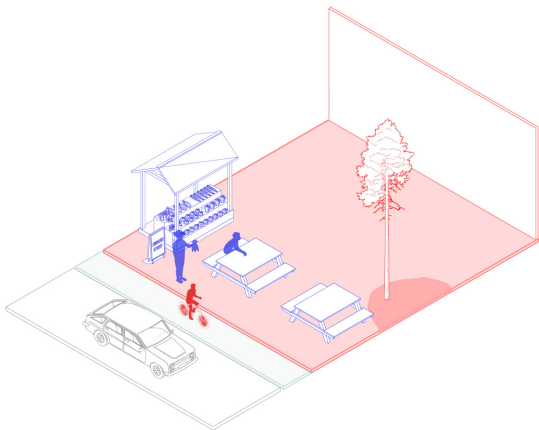




2024 - Winter
Initial 0th Place



2024 - Summer
Custom Tactical Elements
(Locals and Tourists)



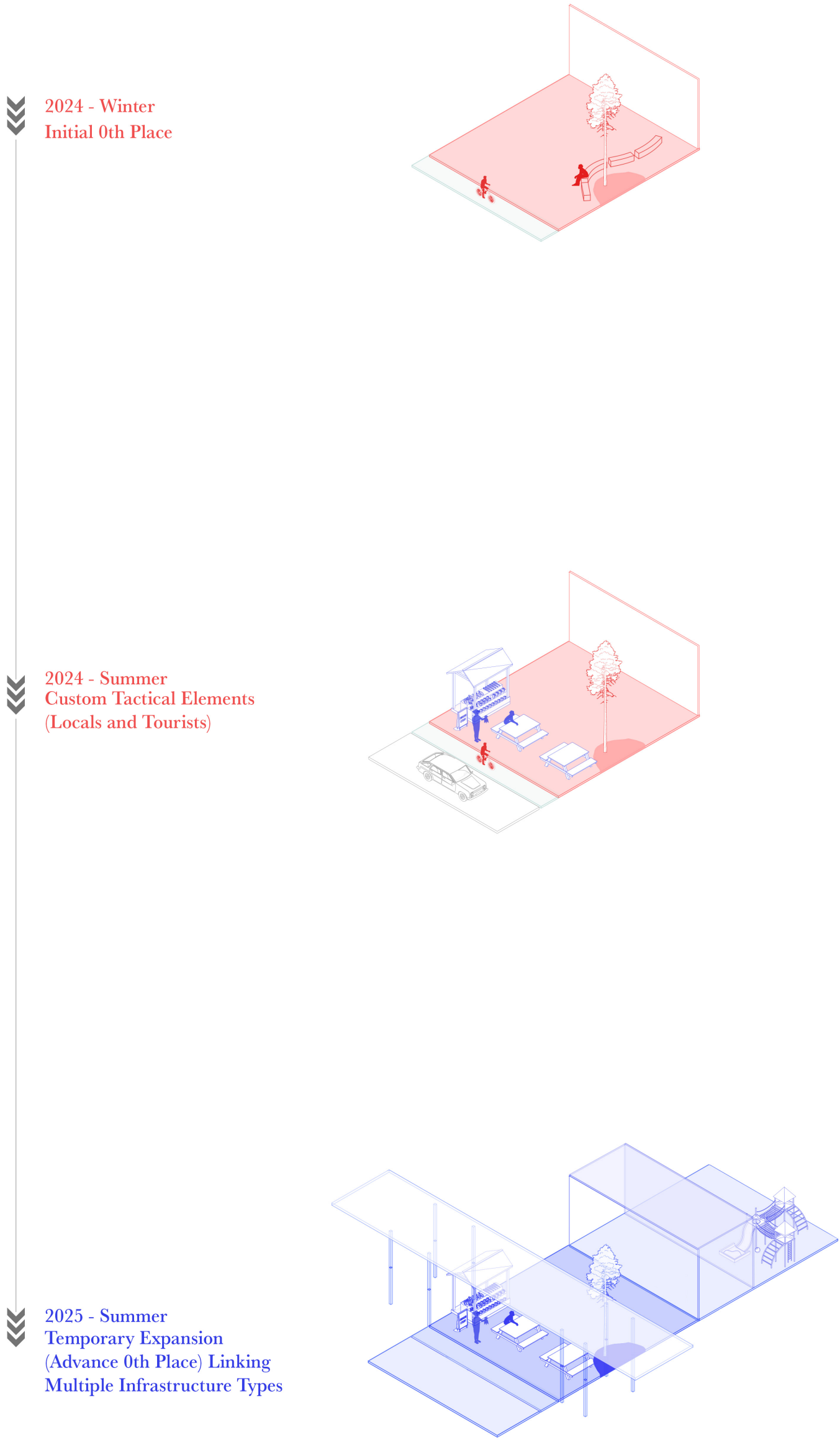
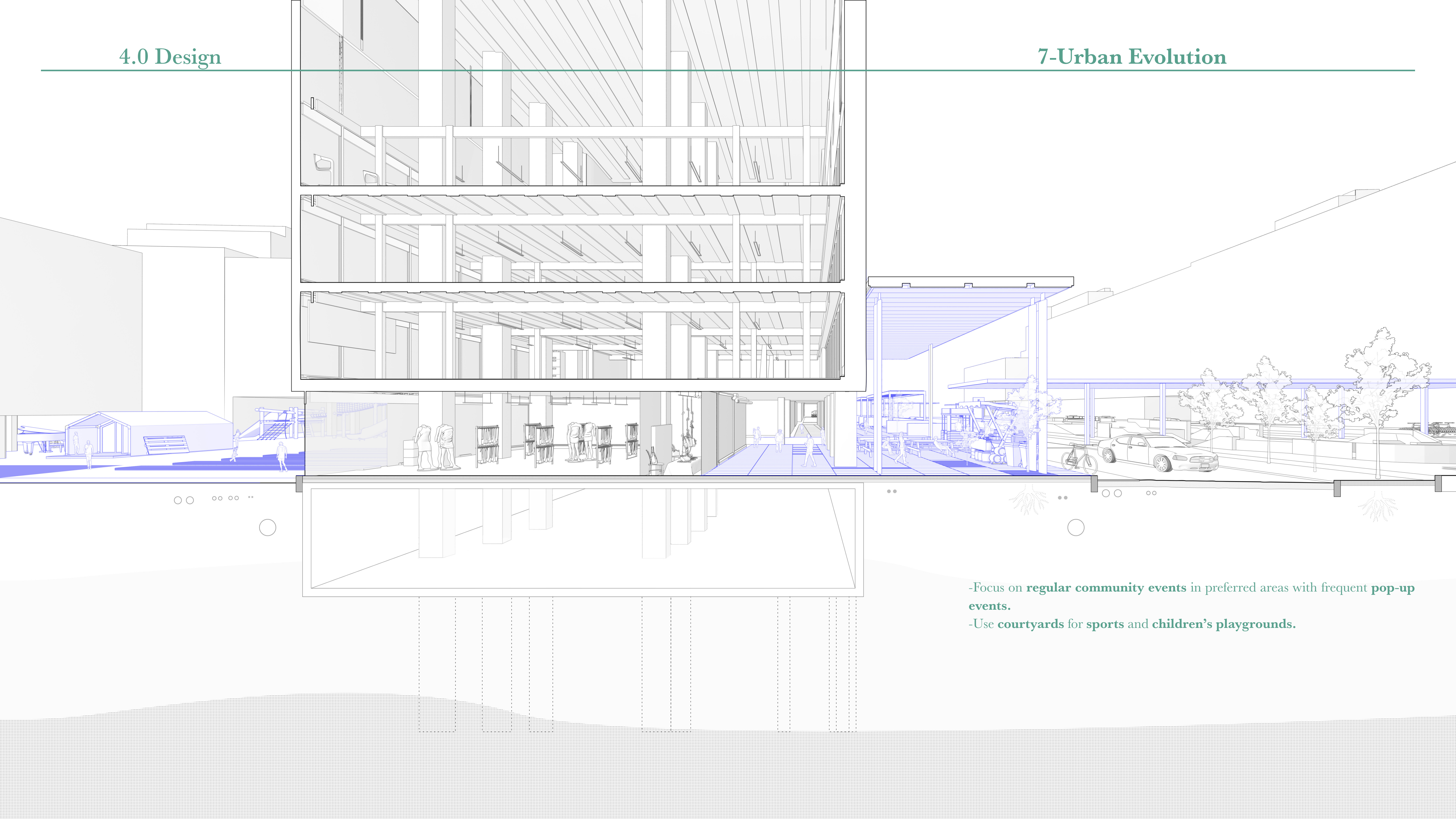


Fig.90 Art Community Perception of the 0th Place (author)

4.0 Design

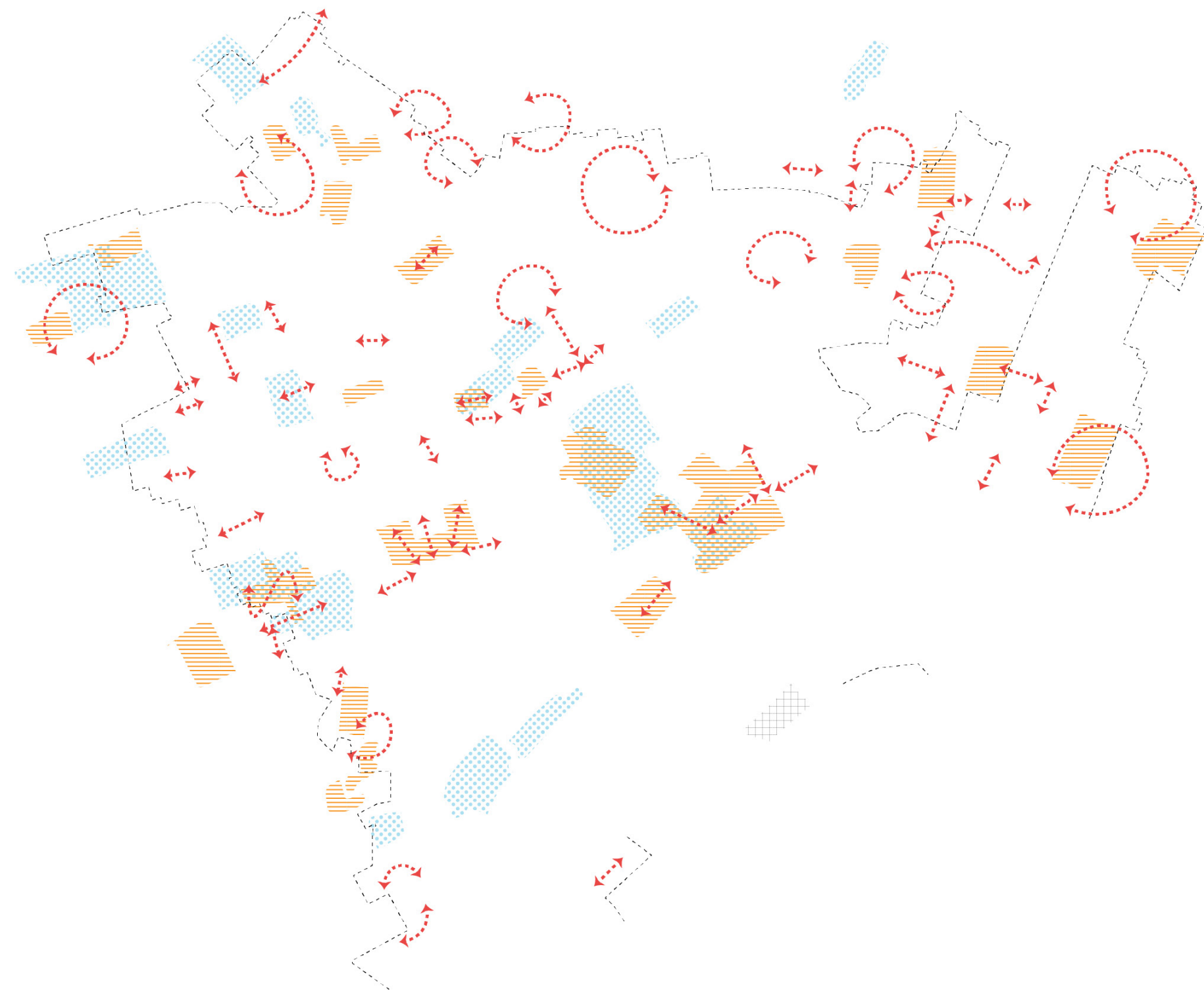
7-Urban Evolution

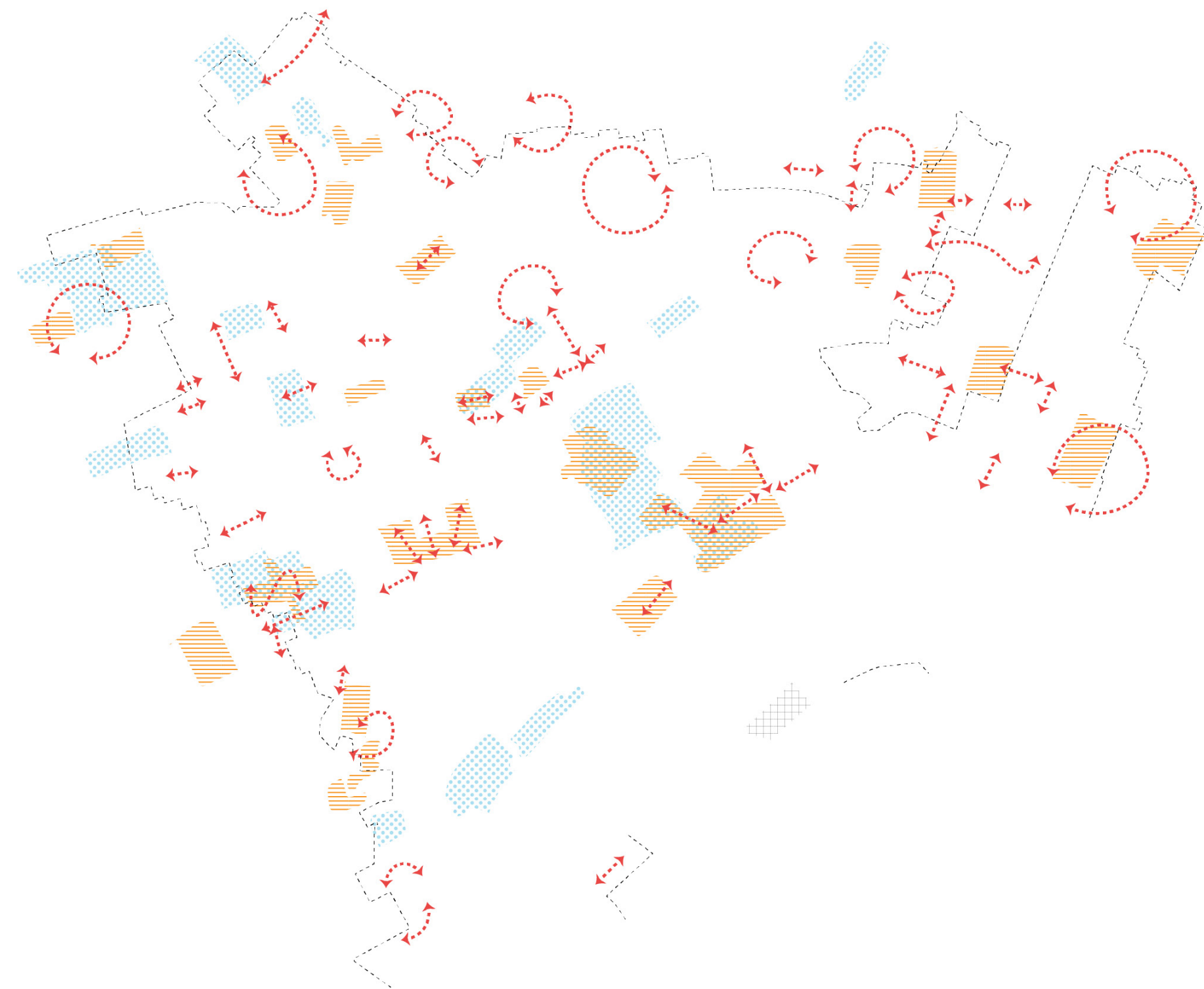


- Focus on **regular community events** in preferred areas with frequent **pop-up events**.
- Use **courtyards** for sports and **children’s playgrounds**.

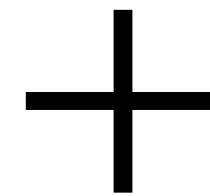
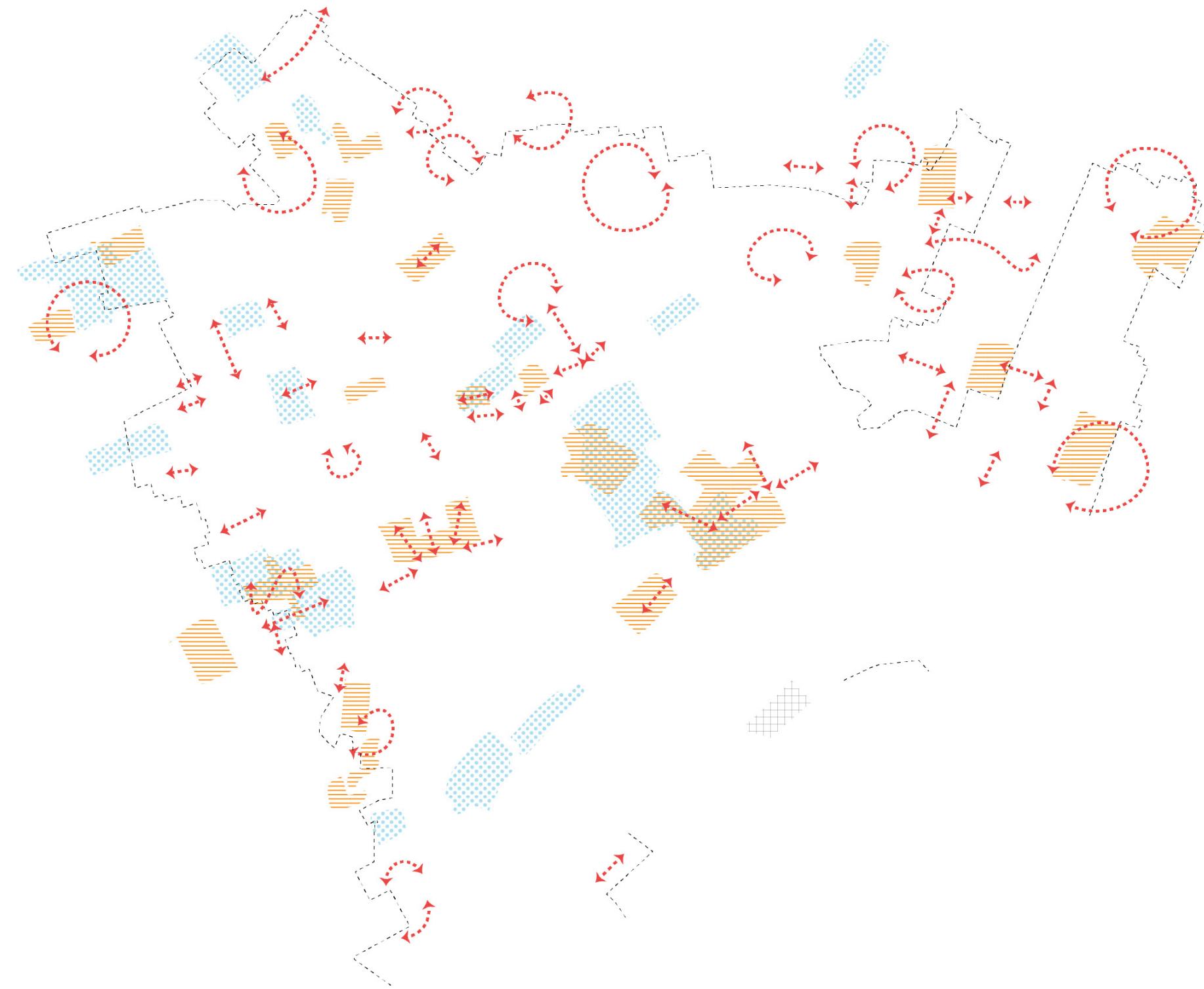


8-Scaled-up Brandgrens Strategy

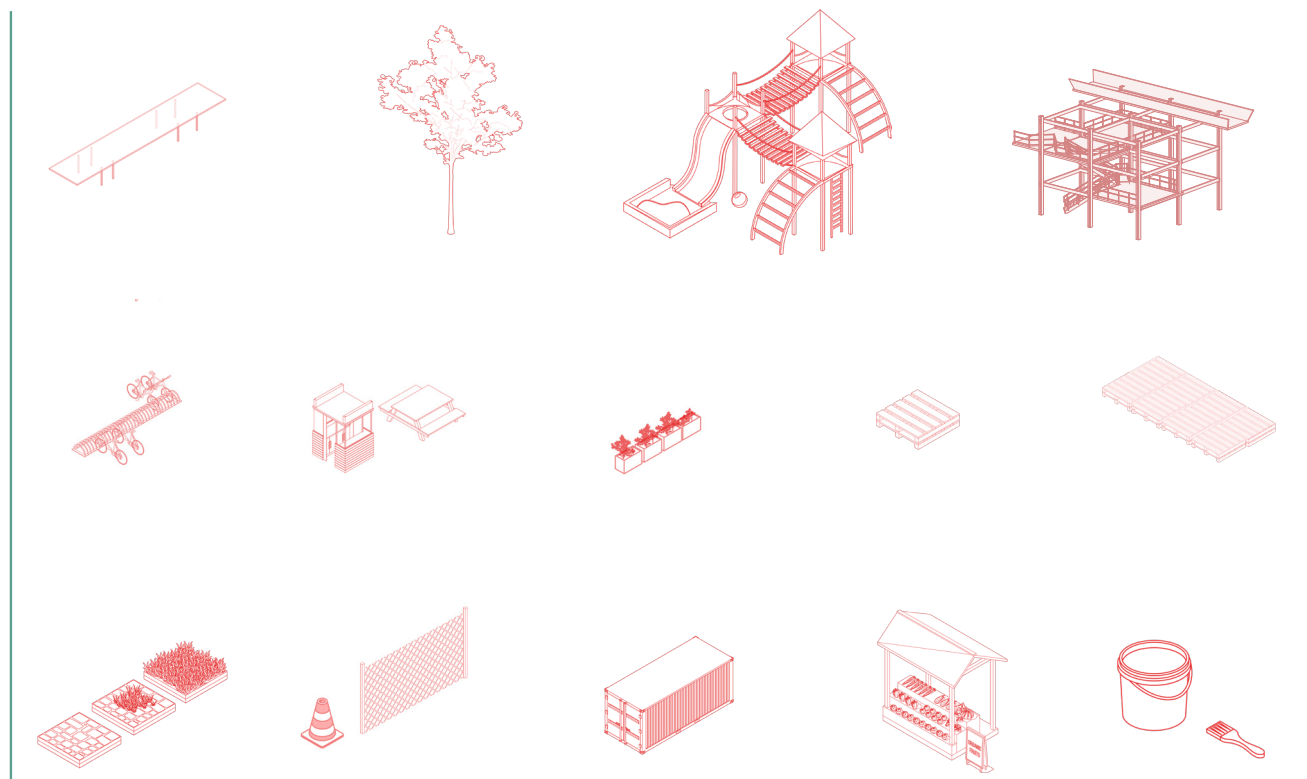




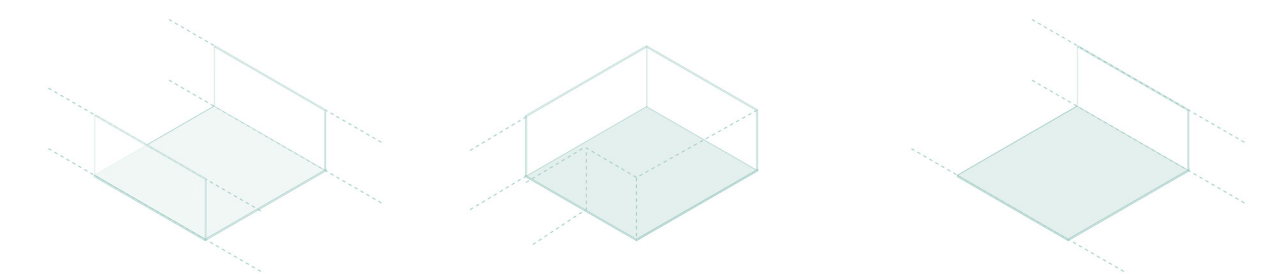
+



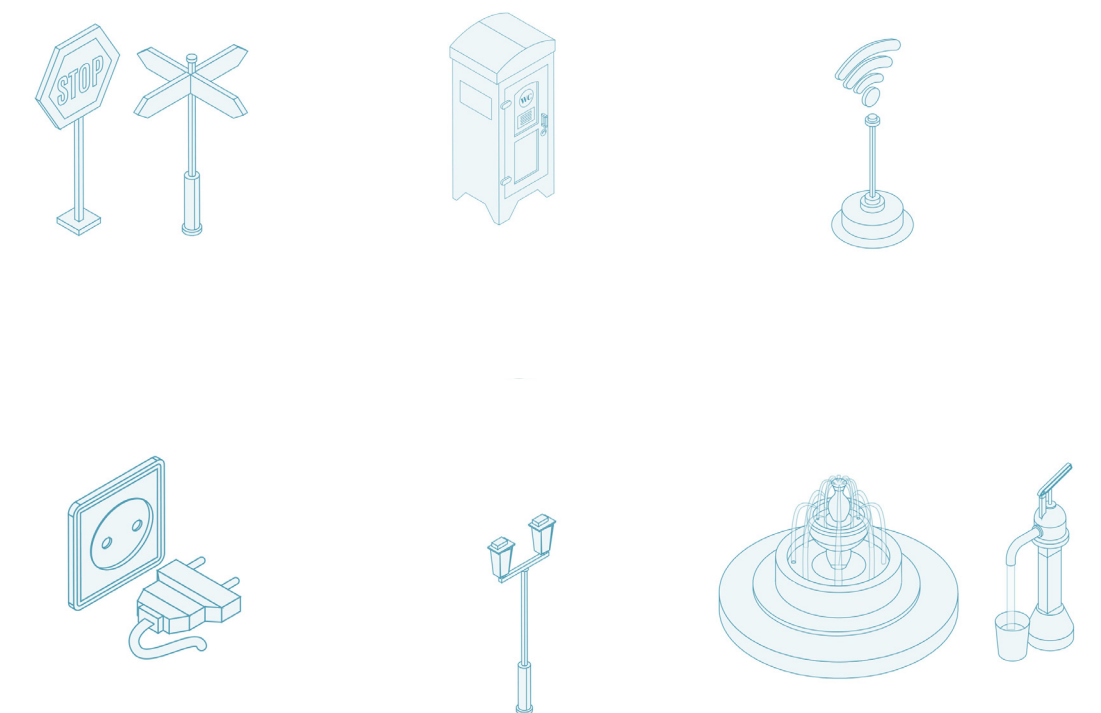
Tactical Elements








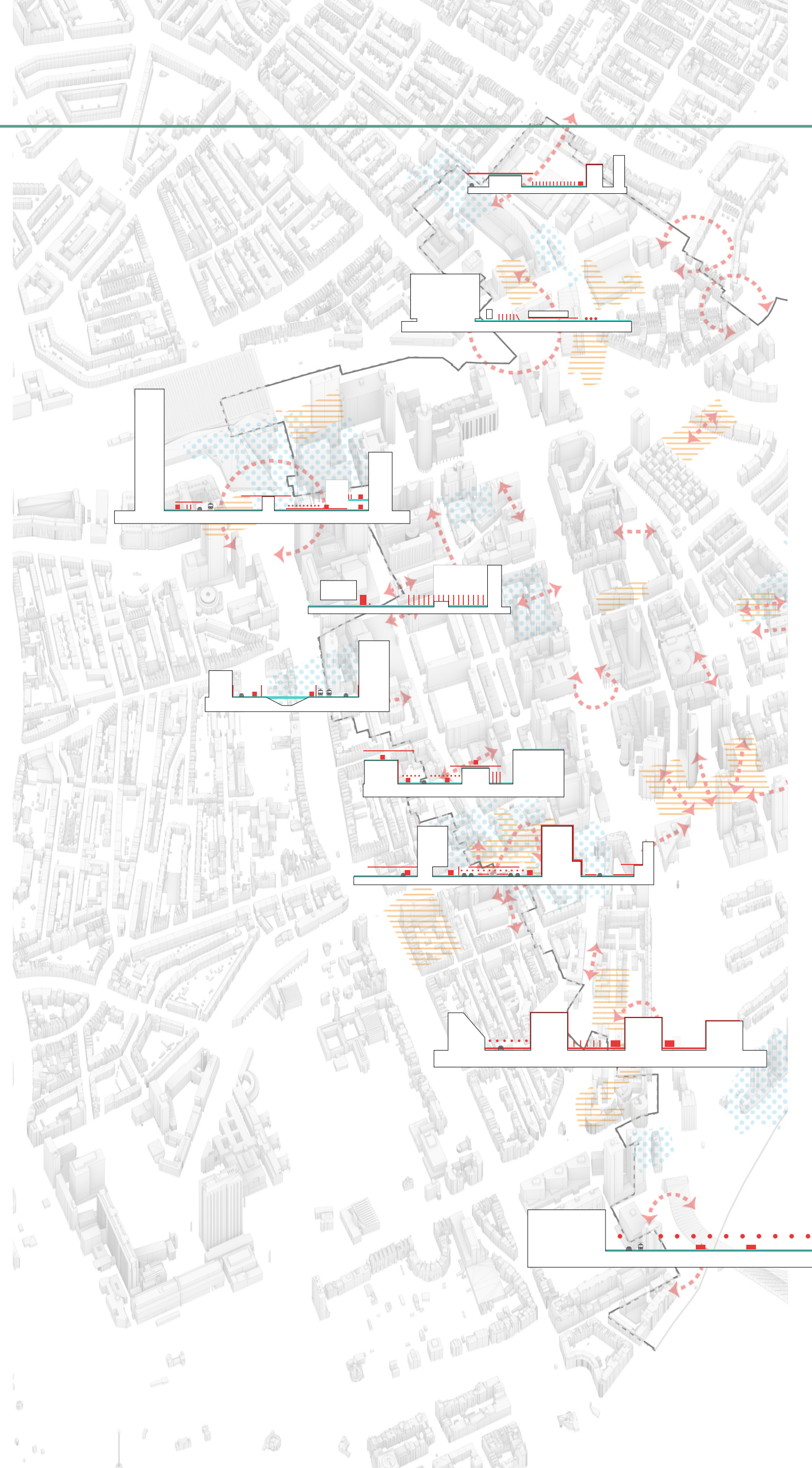
Spatial Infrastructure & Policy

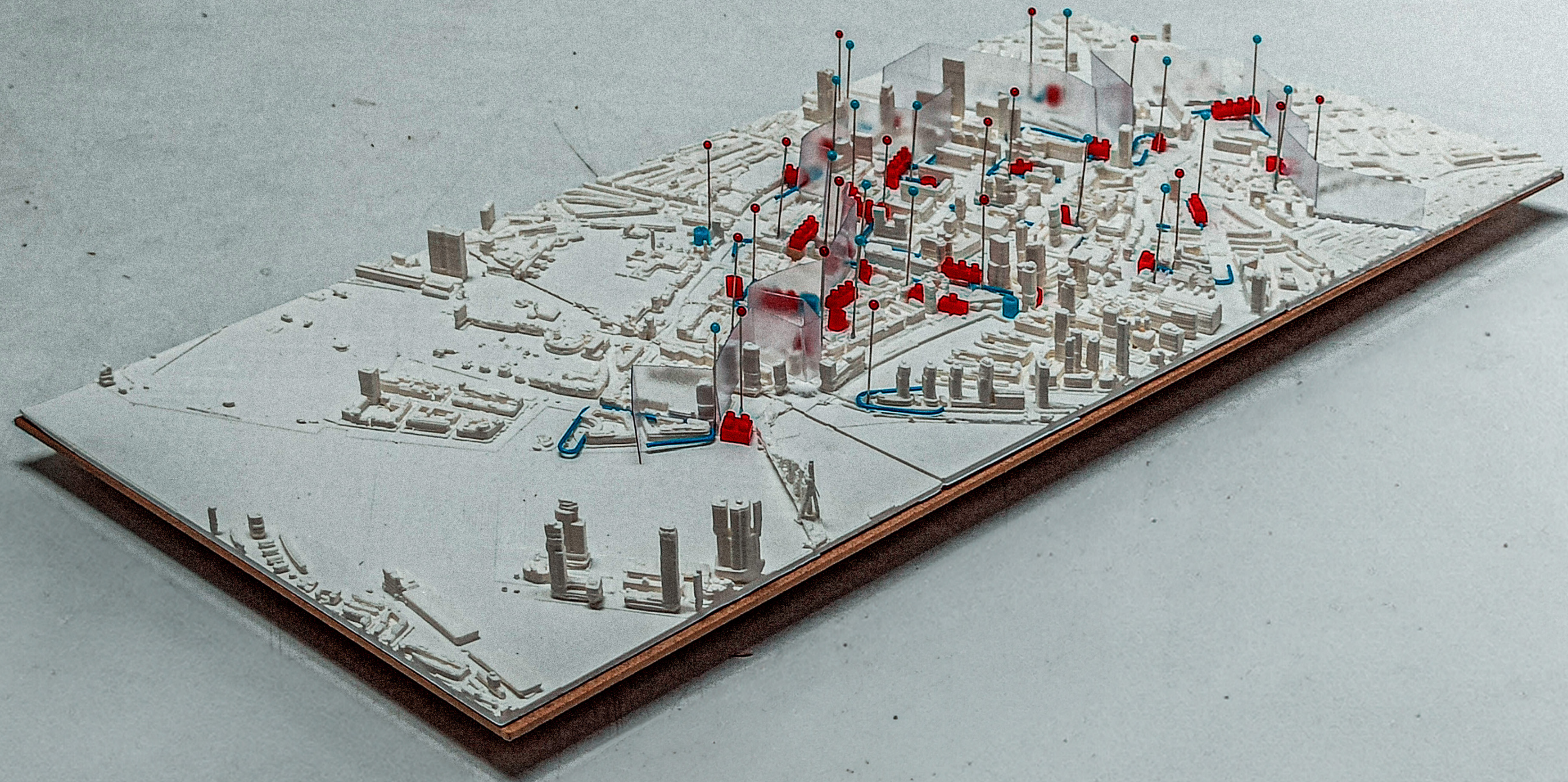


Punctual Infrastructure

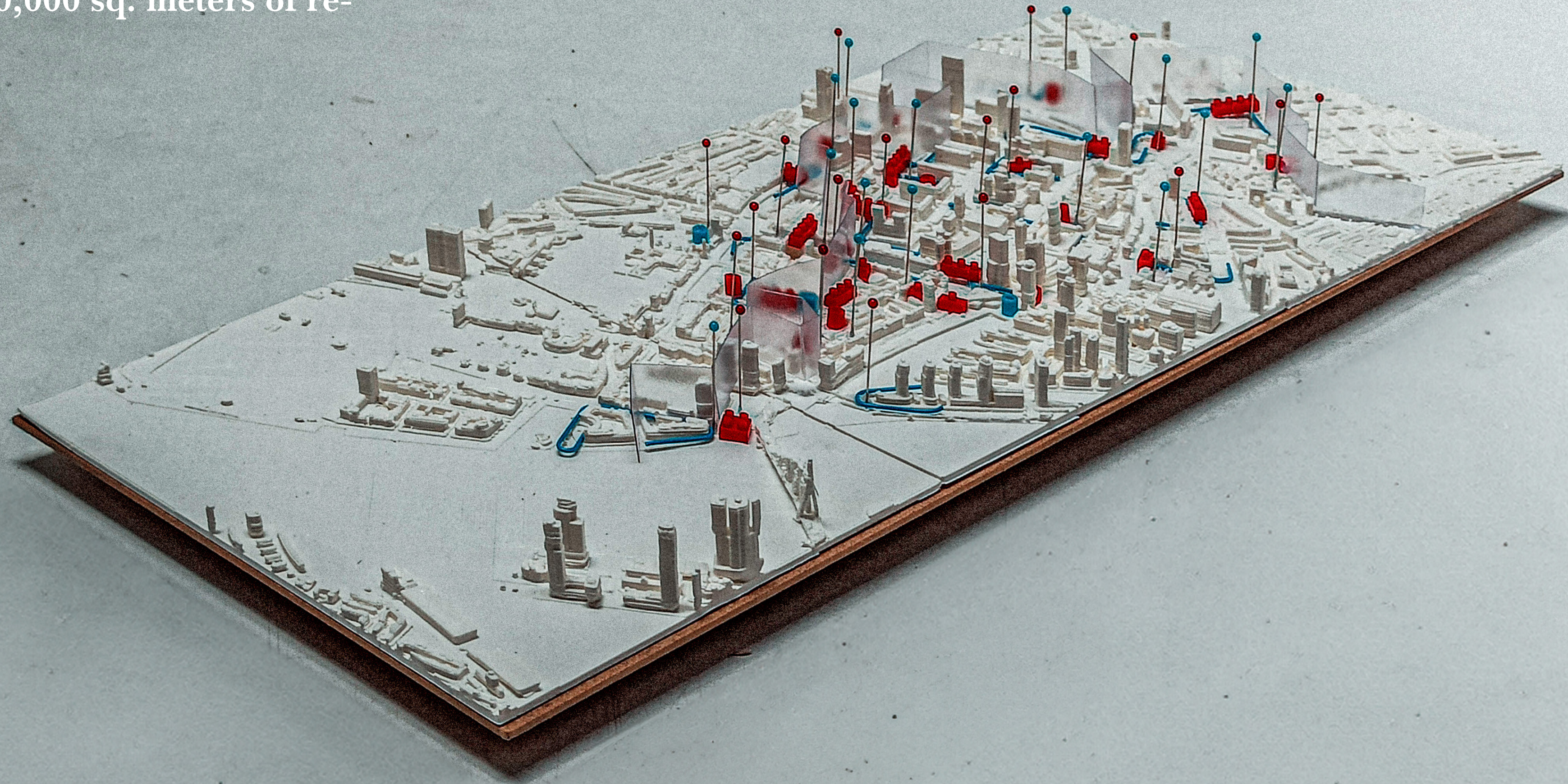


-  Small tactical elements (bench, depaving, palettes, etc.)
-  Green tactical elements (trees, green partitions, etc.)
-  Mid-scale tactical elements (public stage, pop-up market, kiosk, etc.)
-  Visual connecting tactical elements (urban tables, paint, light installations, etc.)
-  Infrastructural interventions (punctual, spatial, and policy-related)

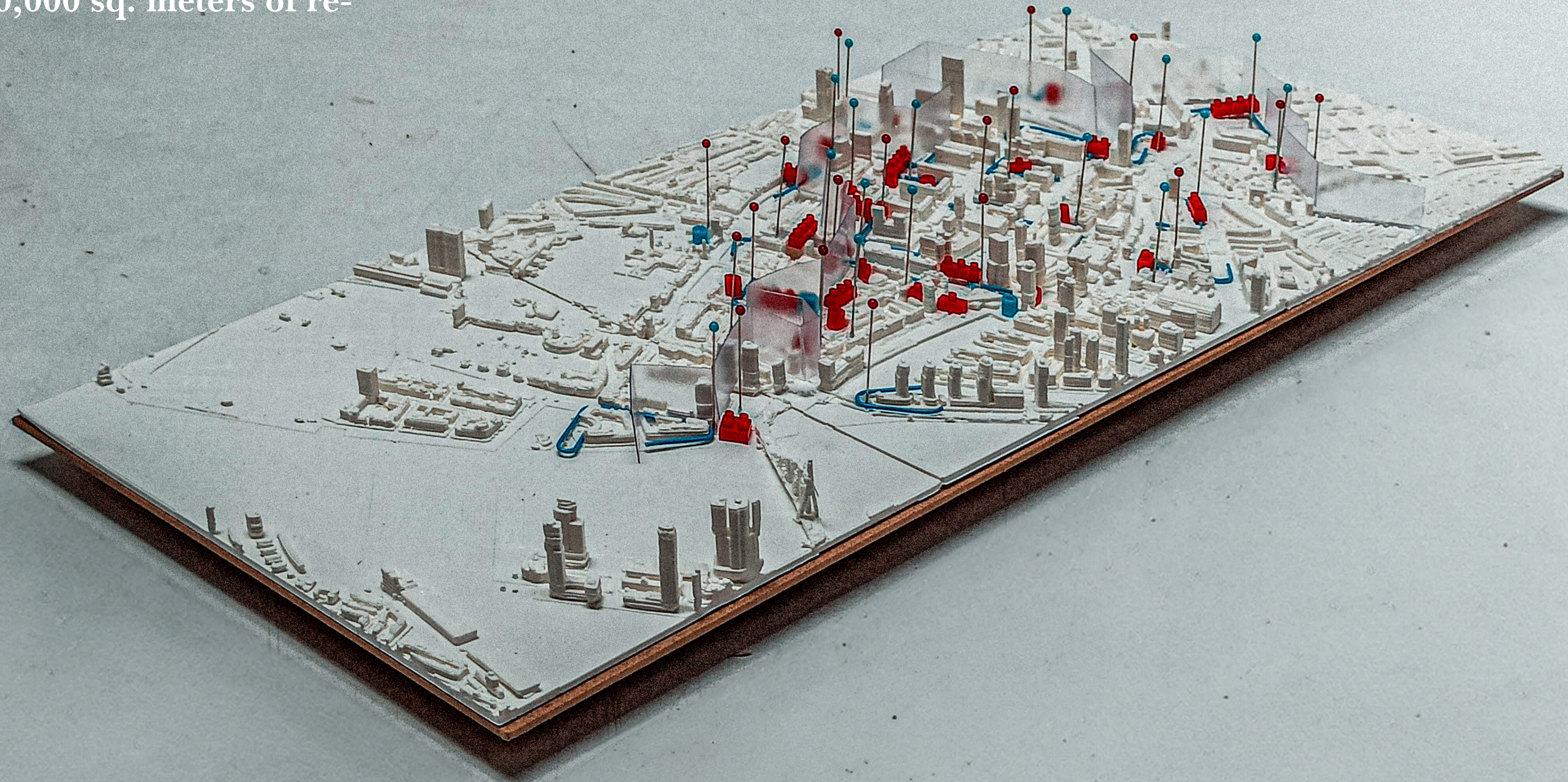




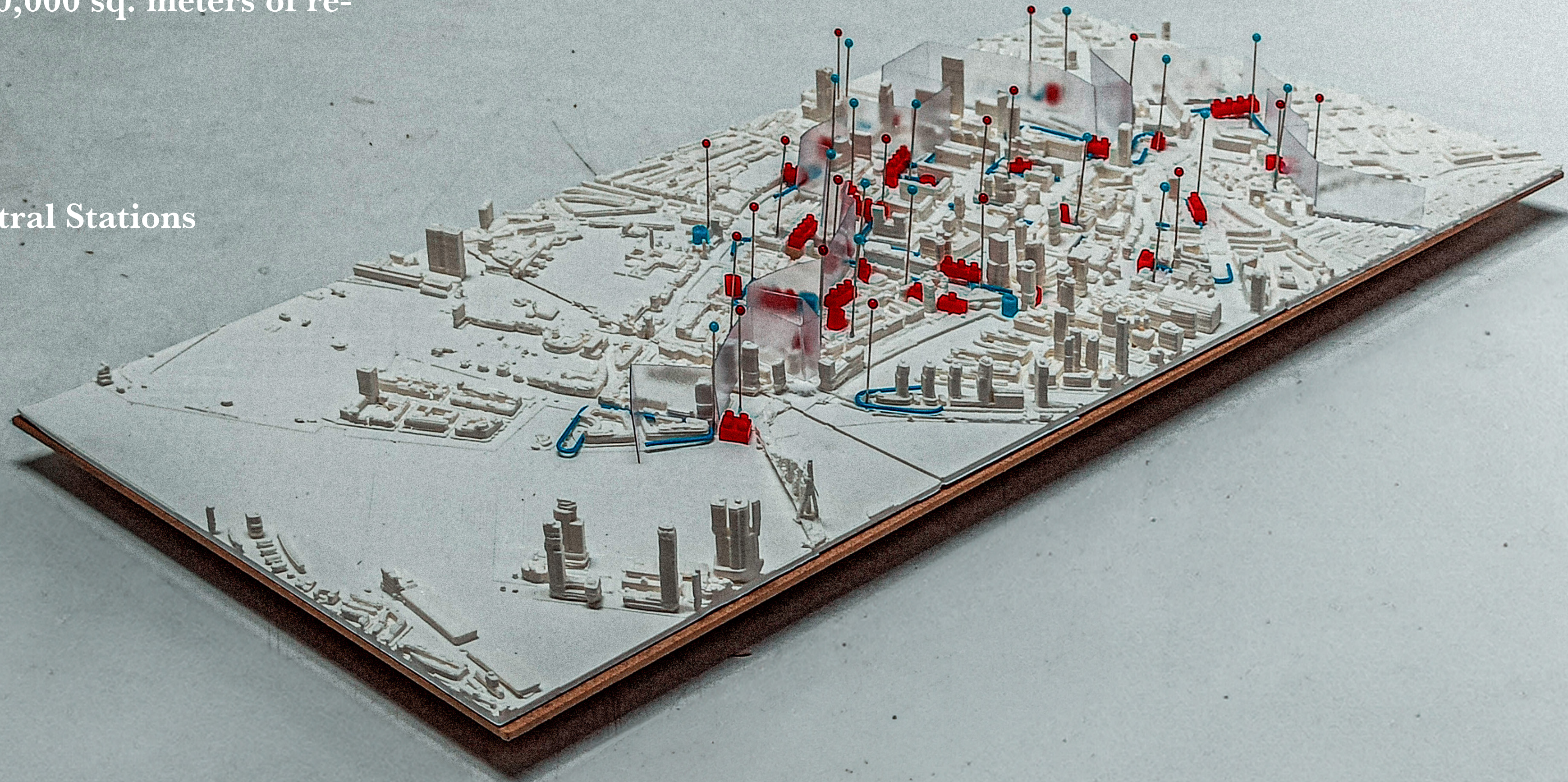
- Potential for ~200,000 sq. meters of resilient space.



- Potential for ~200,000 sq. meters of resilient space.
- 28 football fields



- Potential for ~200,000 sq. meters of resilient space.
- 28 football fields
- 5 Rotterdam Central Stations



1.0 Introduction

Problematization

2.0 Research Design

Methodology

3.0 Design Research

Analysis

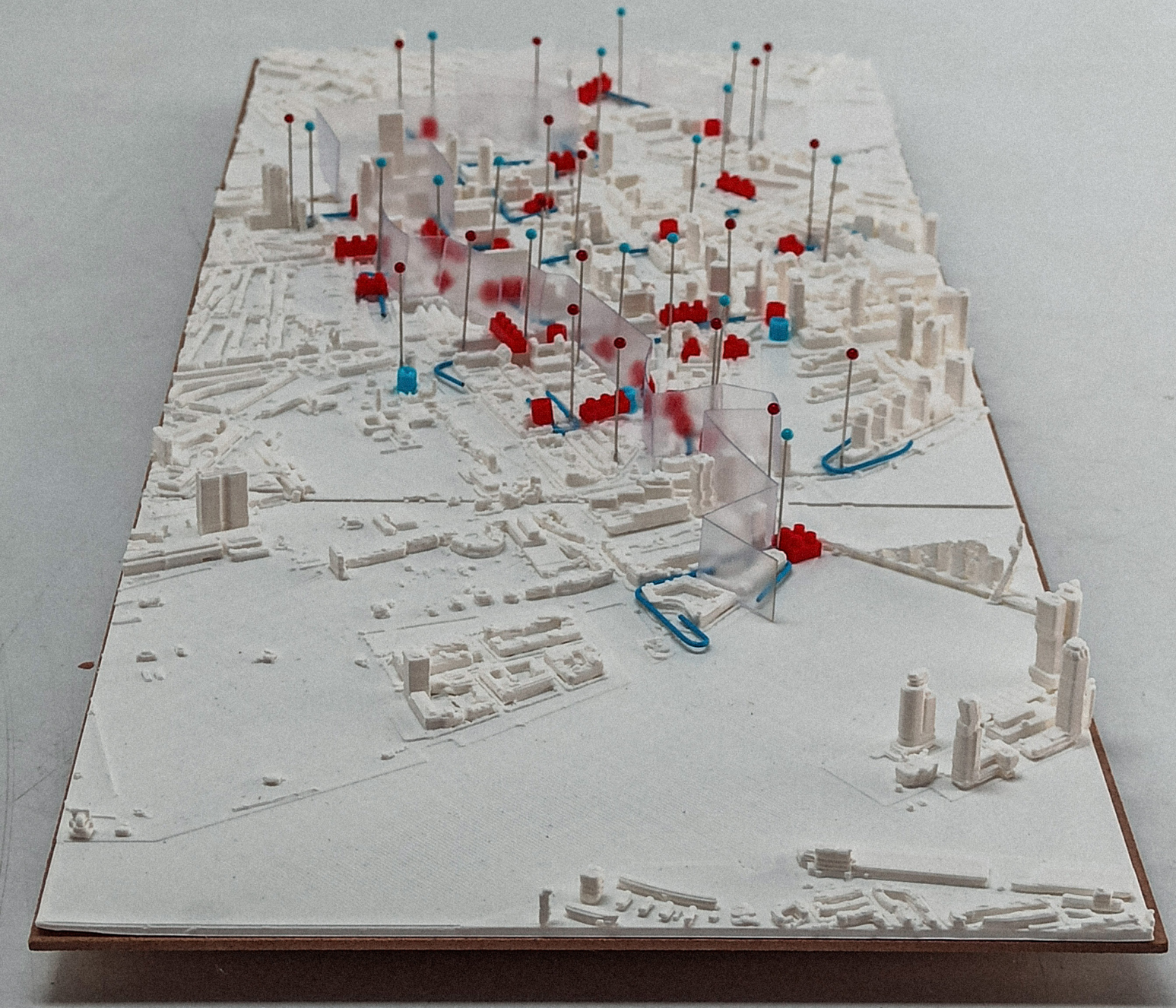
4.0 Design

Design

Conclusions

Conclusions

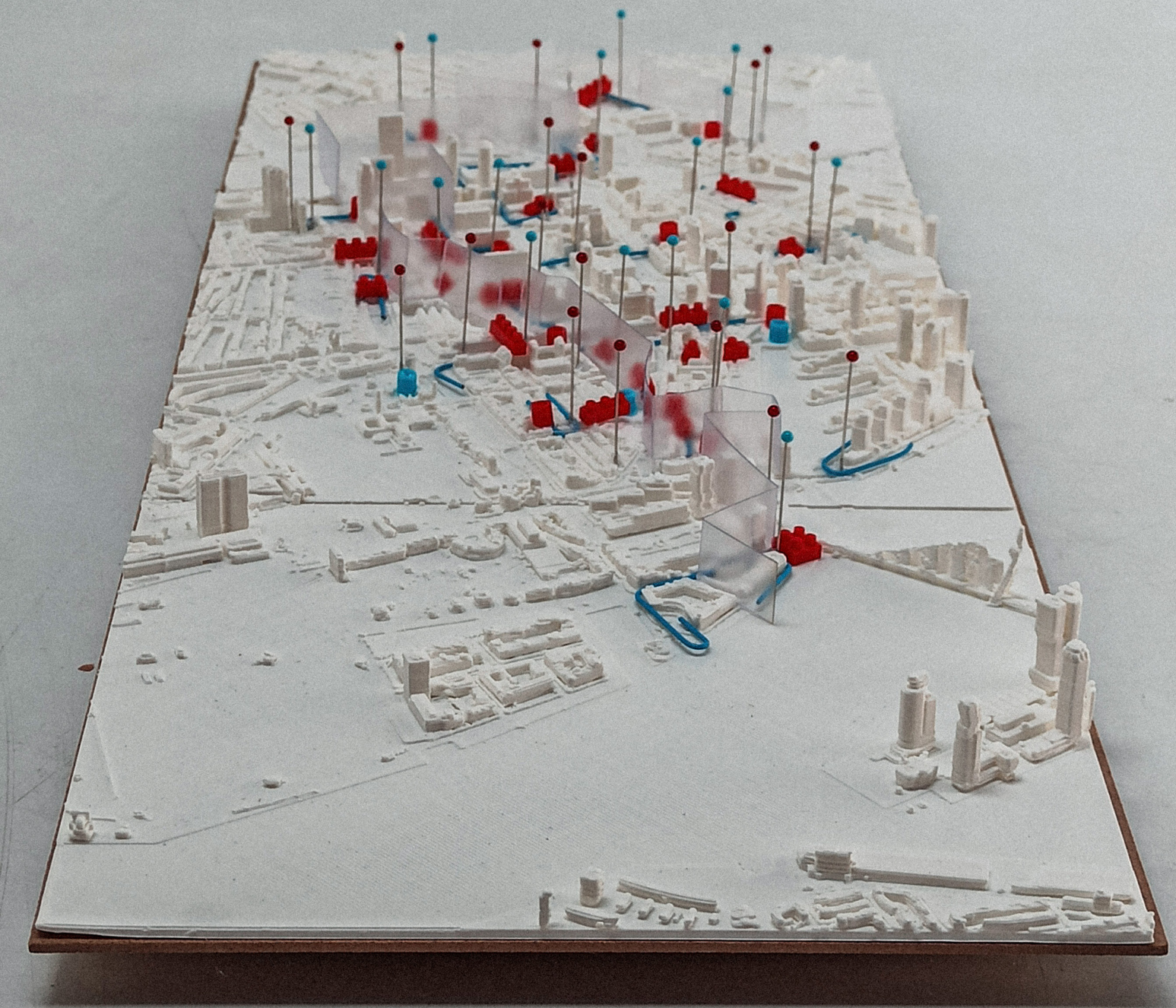
The process of **identifying, uncovering potential, and designing** urban cracks led to a **systematic framework** for **analysis** and **design**.



Conclusions

The process of identifying, uncovering potential, and designing urban cracks led to a systematic framework for analysis and design.

The **Brandgrens** served as an **entry** point to **explore urban cracks** and influenced the final design in Wesblaak. A key aspect of the project is its **transferability**—**adaptable** but not **duplicable**.

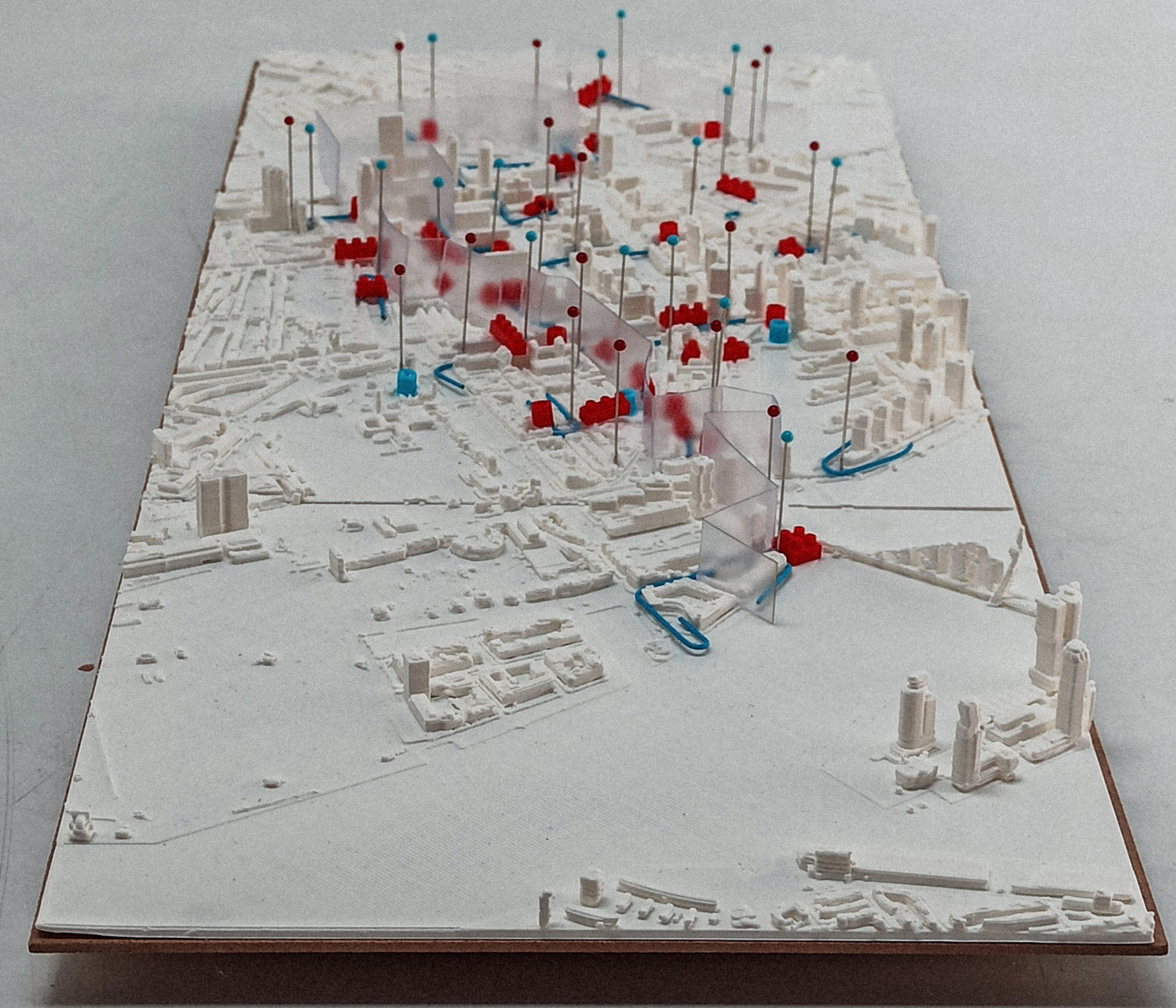


Conclusions

The process of identifying, uncovering potential, and designing urban cracks led to a systematic framework for analysis and design.

The Brandgrens served as an entry point to explore urban cracks and influenced the final design in Wesblaak. A key aspect of the project is its transferability—adaptable but not duplicable.

Urban cracks are **examined** at the **city level** but **addressed** on an **architectural scale**. due to their **inherent complexity** and the **diverse contexts** in which they are found.



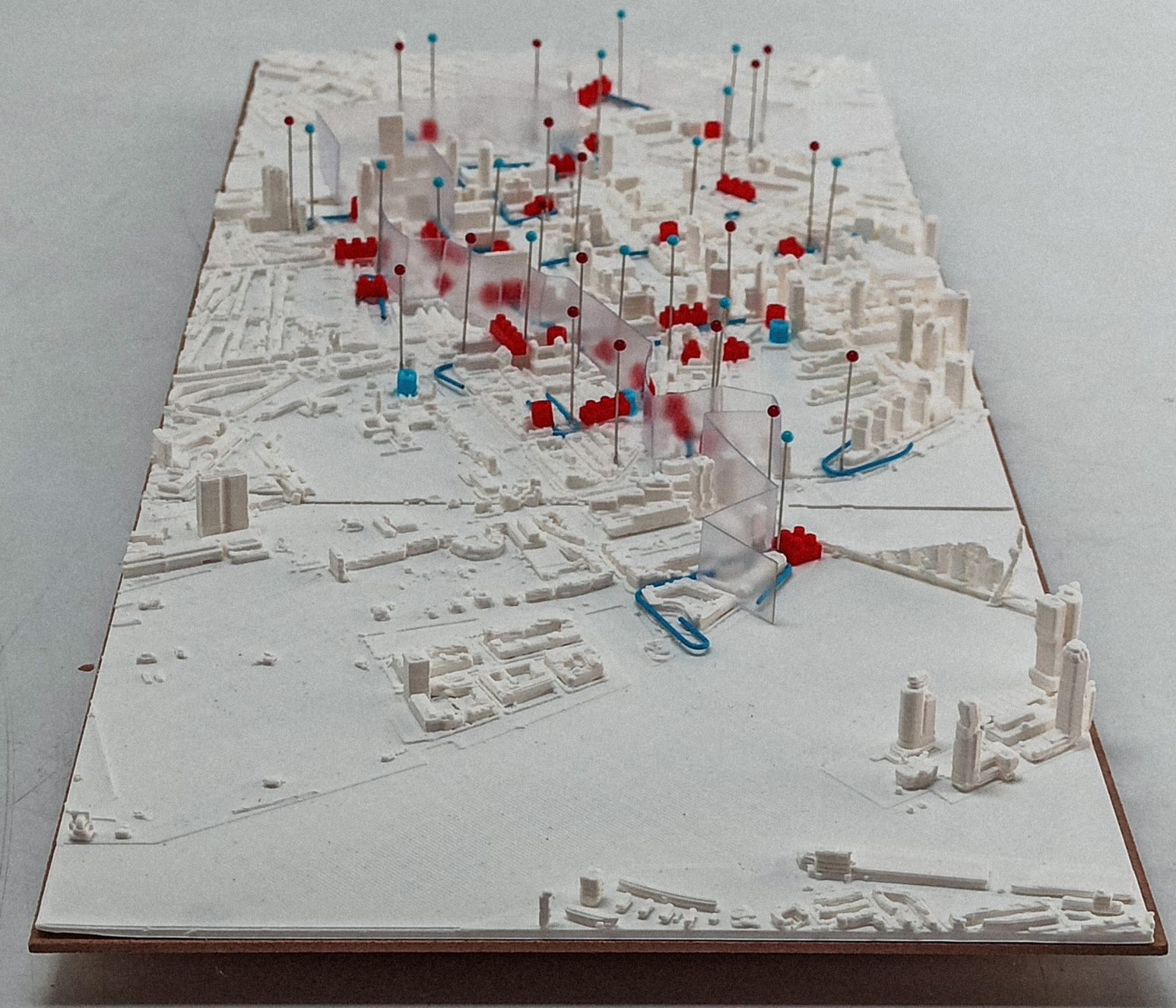
Conclusions

The process of identifying, uncovering potential, and designing urban cracks led to a systematic framework for analysis and design.

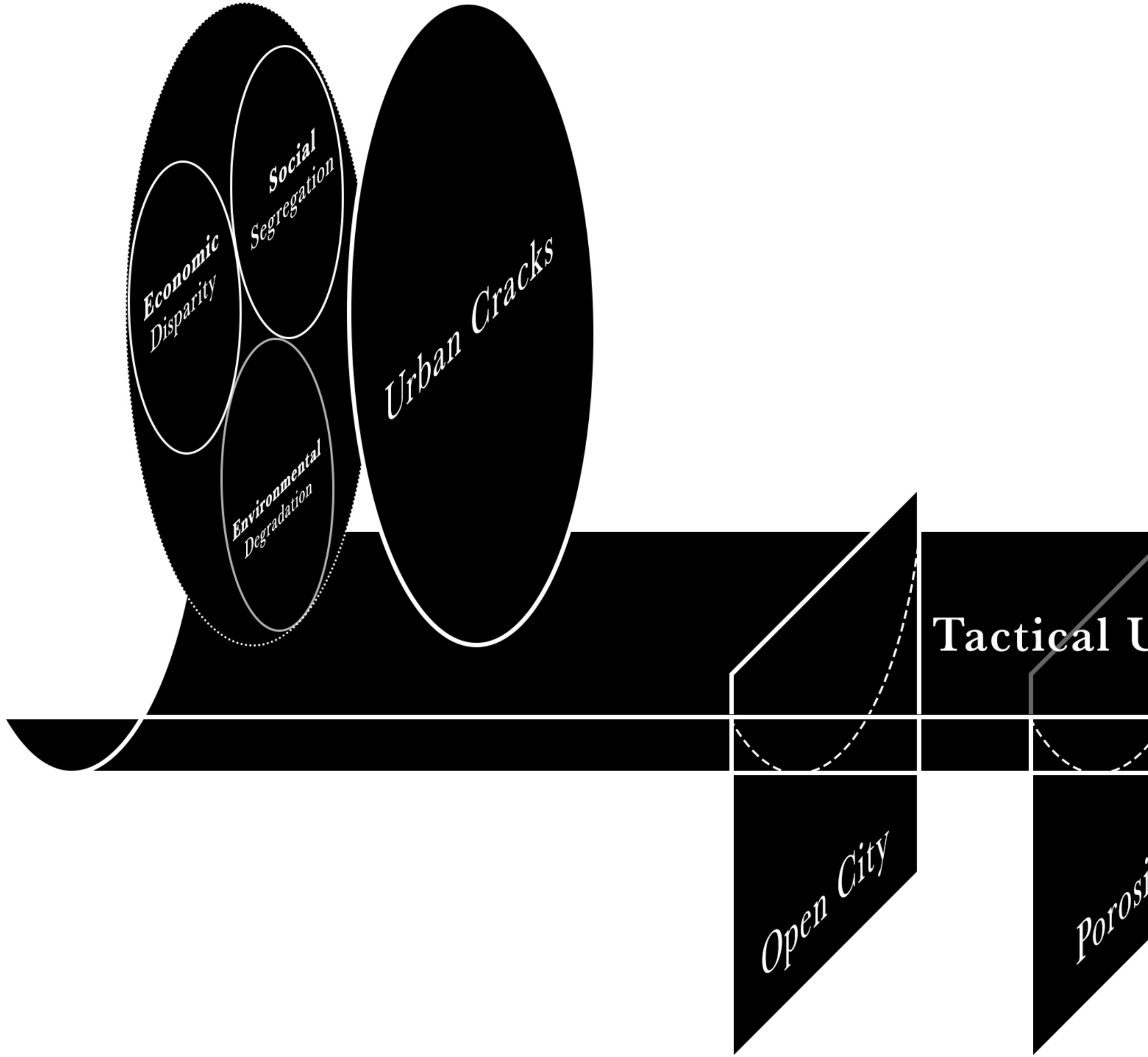
The Brandgrens served as an entry point to explore urban cracks and influenced the final design in Wesblaak. A key aspect of the project is its transferability—adaptable but not duplicable.

Urban cracks are examined at the city level but addressed on an architectural scale. This approach considers their inherent complexity and the diverse contexts in which they are found.

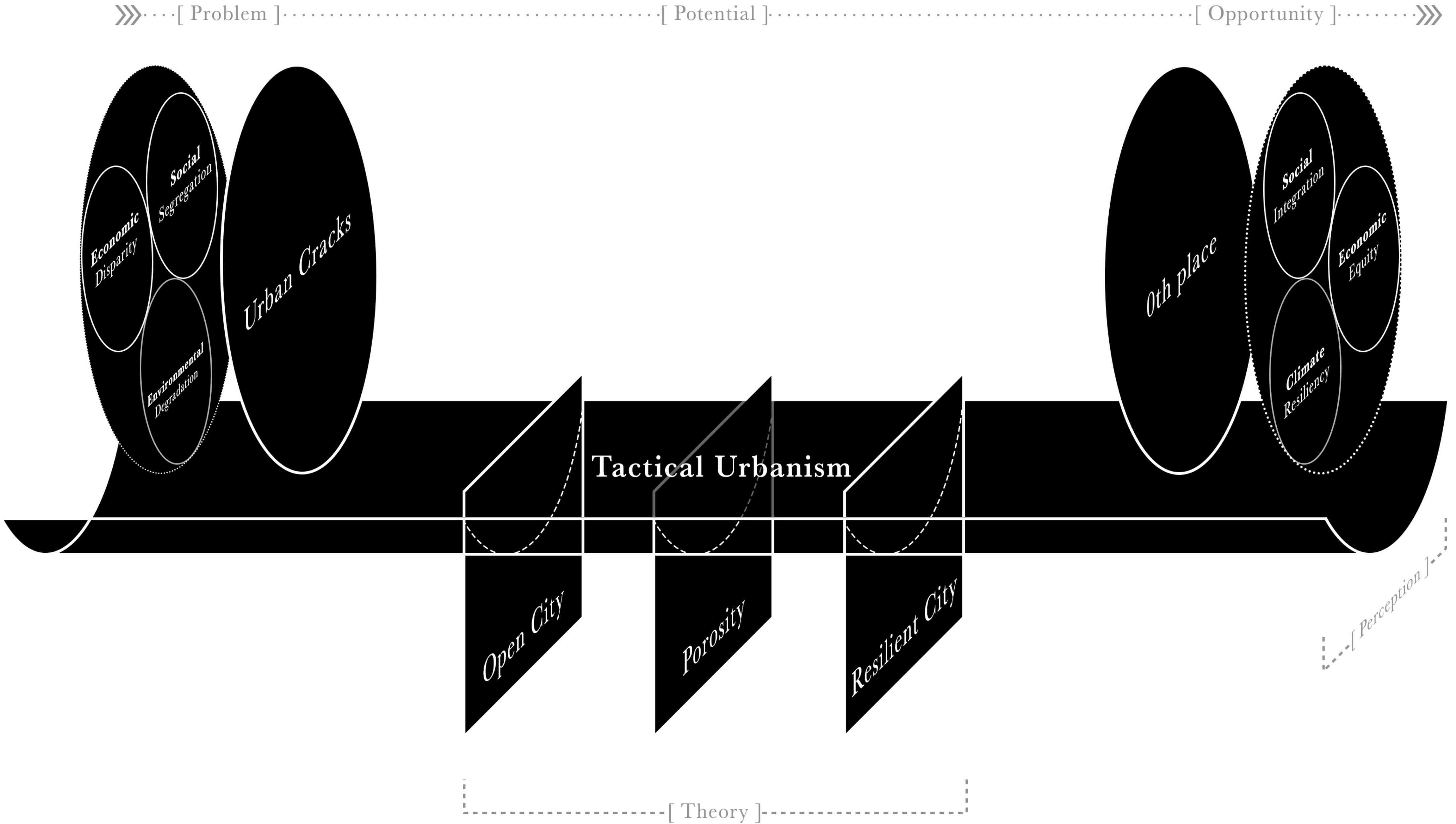
0th place resets the concept of ‘**separation**’ by **illustrating** how **diverse neighborhoods** can **synergize** through **tactical urbanism** and **infrastructure interventions**.

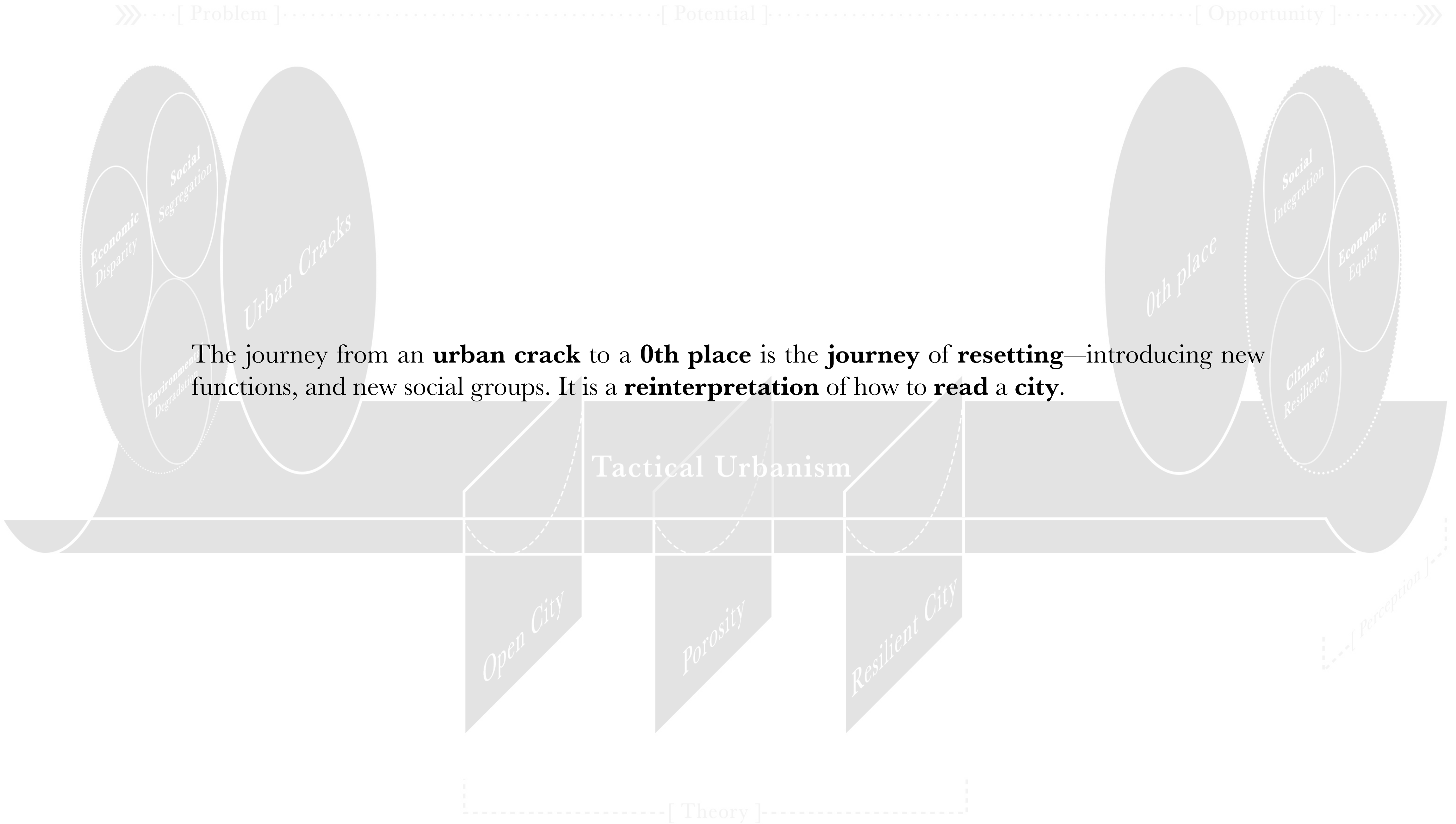


»»...[Problem].....[Potenti



-----[Theo

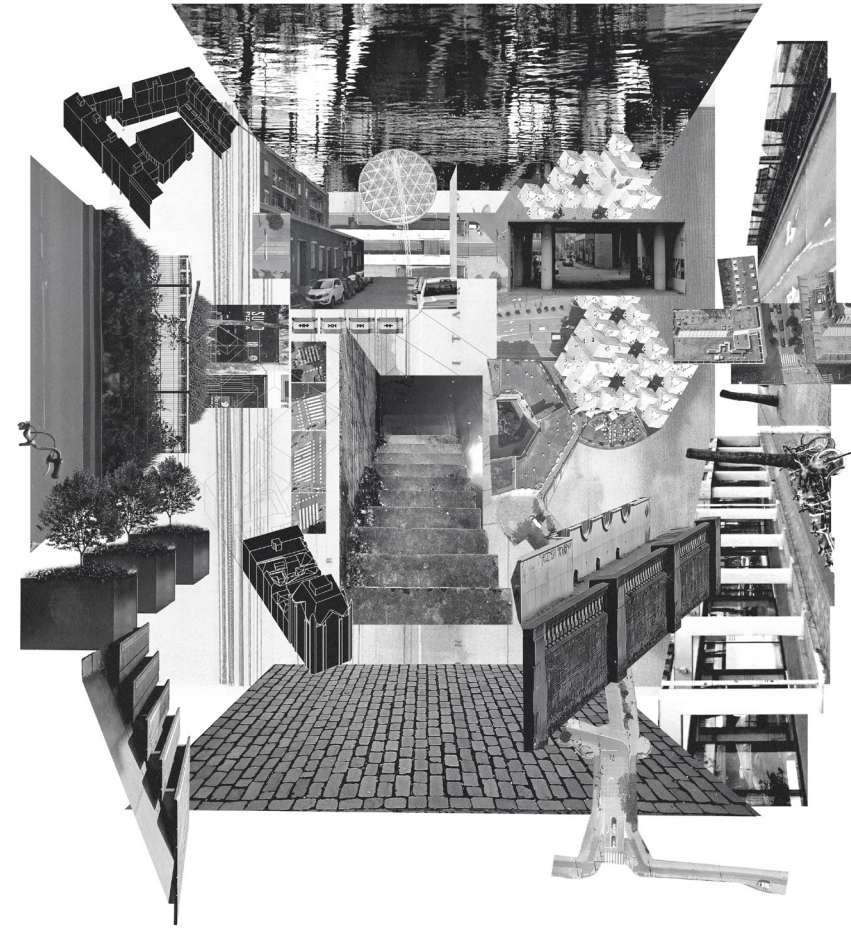




Can the urban cracks in our cities hold the key to our urban future?

The 0th Place

Utilizing Urban Cracks as Experimental Sites



Thank you for listening!