

**{ MELANIE NICOLE GILER PINARGOTE }**  
**{ ARCHITECT }**

{ TURIN | ITALY }

**{ PORTFOLIO }**

# ABOUT

MEL



I recently earned my Master's degree in **Architecture Construction City at Politecnico di Torino**, with a thesis focused on the application of parametric processes in urban design.

During my academic journey, I developed and implemented an **evolutionary algorithm to generate meta-design scenarios** which I applied to a case study in Turin (the former Thyssen site), earning recognition for an outstanding thesis.

Professionally, I have built strong skills in **BIM software** and **computational tools** based on visual programming. I also enhanced my expertise by assisting professors in several Master's courses at Politecnico di Torino.

My passion for computational languages led me to blend design with programming, resulting in a **personal website** conceived as a dynamic platform to present my portfolio and CV.

I am **curious, innovation-driven**, and highly collaborative, with a clear focus on problem solving. My goal is to integrate technology and architecture to create sustainable, cutting-edge solutions capable of addressing the challenges of contemporary urban life.

## {CONTACT}

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mail. nicole.giler@outlook.com

## {CURRICULUM & PORTFOLIO}

## {LINKEDIN}

## { WORK EXPERIENCE }

**MUNICIPALITY OF CELLE LIGURE**  
INTERNSHIP  
2015

**INGEGNERE STEFANO PERATA**  
FREELANCE COLLABORATION  
2016 | 21

**RISTORANTE S. GIACOMO**  
WAITRESS  
2017 | 21

**BLACK STONE CAFÈ**  
WAITRESS  
2021

**RISTORANTE LA BENITA**  
WAITRESS  
2021

**MUNICIPALITY OF VARAZZE**  
ISTAT SURVEYOR  
2021

**ARCHITETTO PAOLO CASTELNOVI**  
JUNIOR ARCHITECT  
2022  
**GIUBERGIA- GRIGLIO ARCHITETTI**  
JUNIOR ARCHITECT  
2022 | 23

## { EDUCATION }

**IISS BOSELLI ALBERTI**  
**SURVEYING TECHNICIAN**  
2012 | 17

**POLITECNICO DI TORINO**  
**URBAN PLANNING**  
2017 | 18

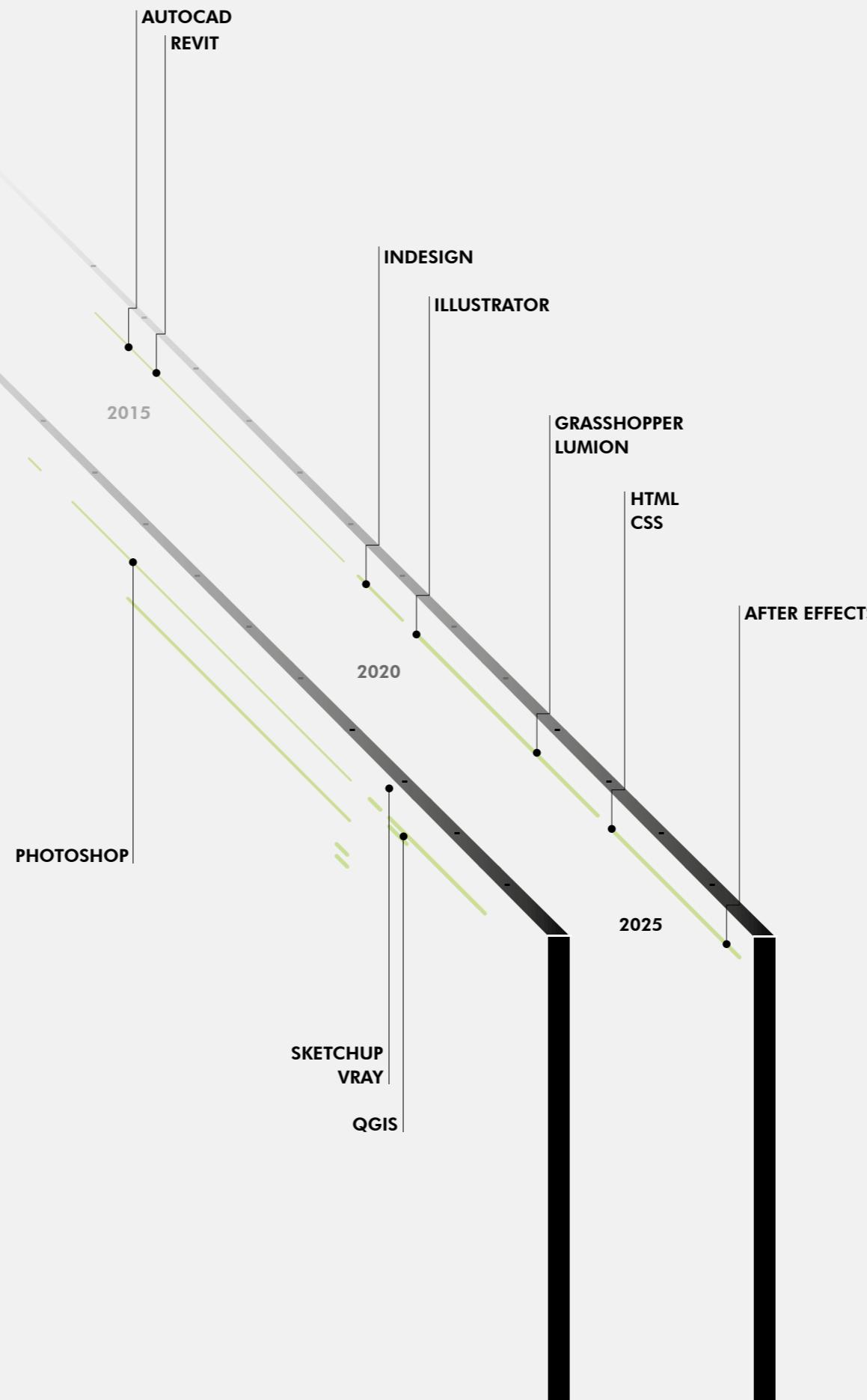
**POLITECNICO DI TORINO**  
**ARCHITECTURE**  
2018 | 22

**POLITECNICO DI TORINO**  
**MASTER'S IN ARCHITECTURE CONSTRUCTION CITY**  
SCORE:109/110  
2023 | 25

## { LANGUAGES }

(native)	+	+	+	+	+	ITA.
	+	+	+	+	+	ENG.*
	+	+	+	+	+	ESP.

\*Certificazione Ielts livello 5.5 | 2023



2025	{ (“Hello, city”) }	pp.	5		12
2024	{ Track Point! }	pp.	13		18
2023	{ Ceci n'est pas une pipe }	pp.	19		27

REACT  
NODEJS  
PHOTOSHOP  
ILLUSTRATOR  
INDESIGN  
RHINO  
**GRASSHOPPER**  
CODING  
AFTER EFFECTS  
SKETCHUP  
3D

{ ("Hello, city") }

[ Track Point ]

[ See it's just one pipe ]

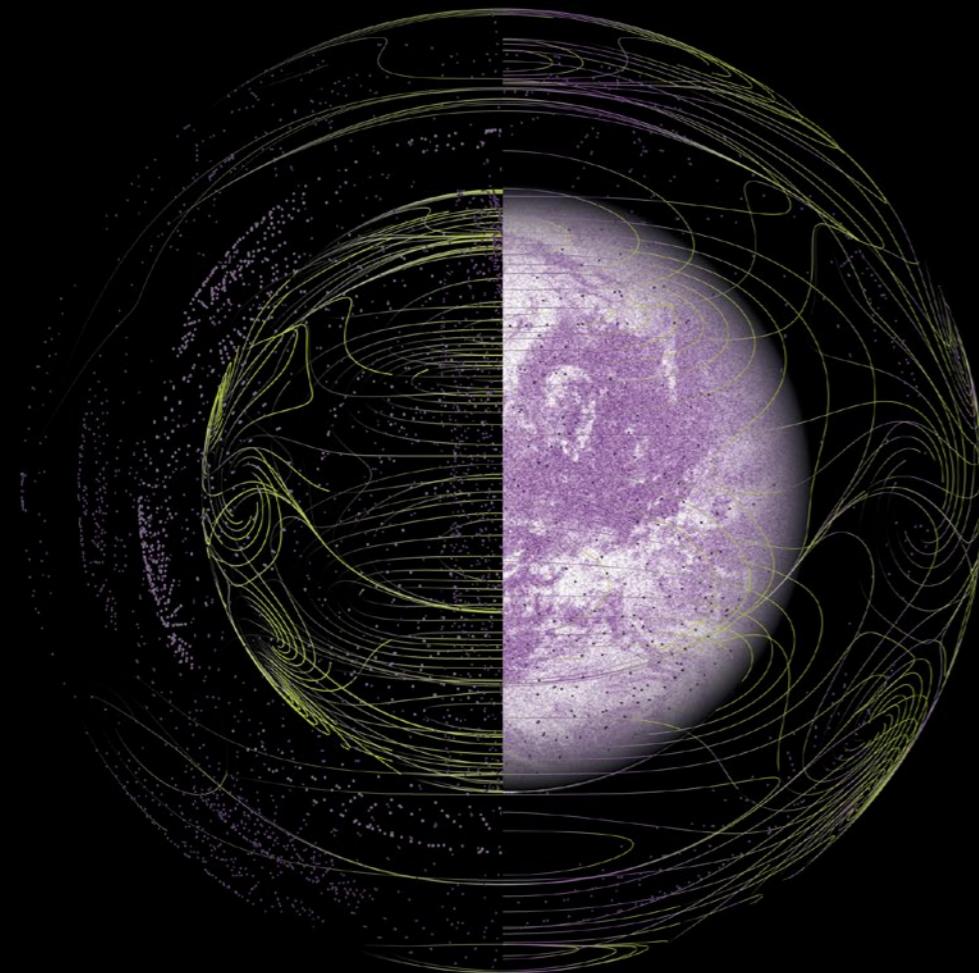
PROGETTO ARCHITETTONICO  
PIANECAZIONE URBANA  
**URBAN DESIGN**  
PROGETTO STRUTTURALE  
**MASTERPLAN**  
**PARAMETRIC ARCHITECTURE**  
ARCHITETTURA DI EMERGENZA

TURIN | ITALY

PROJECT: MANUFACTURING OF RIBO

(“Hello, city”)  
Parametric tools for urban design

**How do you design a city?**



Designing a city—or even just a part of it—is inherently an interdisciplinary act, as the city itself is the overlapping and interaction of multiple dimensions. From this perspective, we can consider the city a living organism, capable of evolving and adapting over time, a phenomenon in transition. To address and manage this complexity, it can be useful to operate within the framework of parametricism.

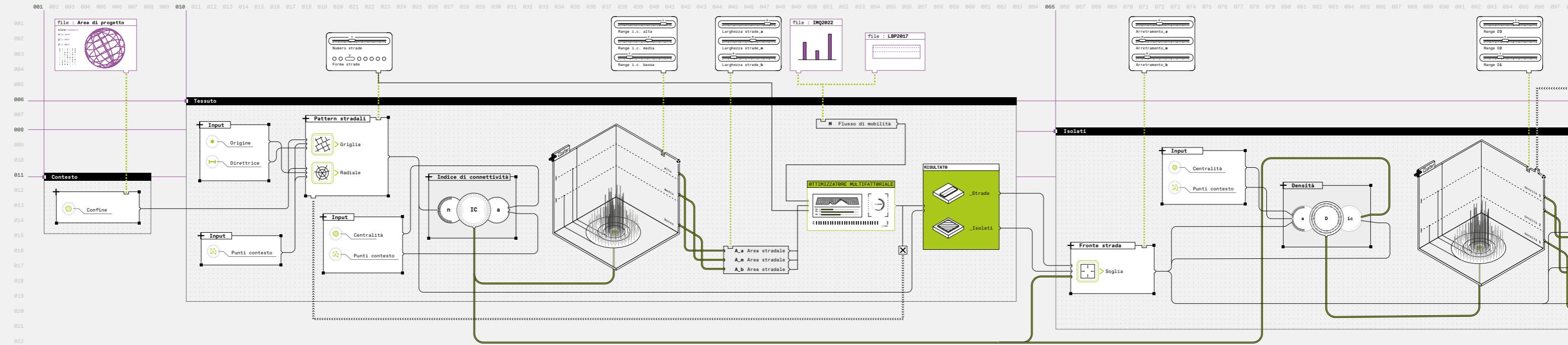
The core idea of this research is to apply computational tools based on the parametric approach to structure and manage a design process capable of connecting constraints, data, and design concepts. Their spatial and temporal variations generate a wide range of evolutionary scenarios, which do not simply represent a final state but the entire process needed to reach it.

Thus, the ultimate goal is to test the potential and limitations of the parametric approach in the urban environment.

The application of an advanced digital algorithmic model to the former Thyssen industrial area in Turin demonstrated how such processes enable designers to make informed decisions, while also broadening their design vision. However, it also highlighted the risk of reducing urban complexity into rigid computational schemes, thereby losing the spontaneous and unpredictable nature that characterizes urban dynamics.

Within this academic research context, (“Hello, city”), as a parametric tool for urban design, plays the same role as (“Hello, world”) does in computer programming: both are used as testing grounds for new tools and development environments.

## DIAGRAM GENERATIVE DESIGN PROCESS

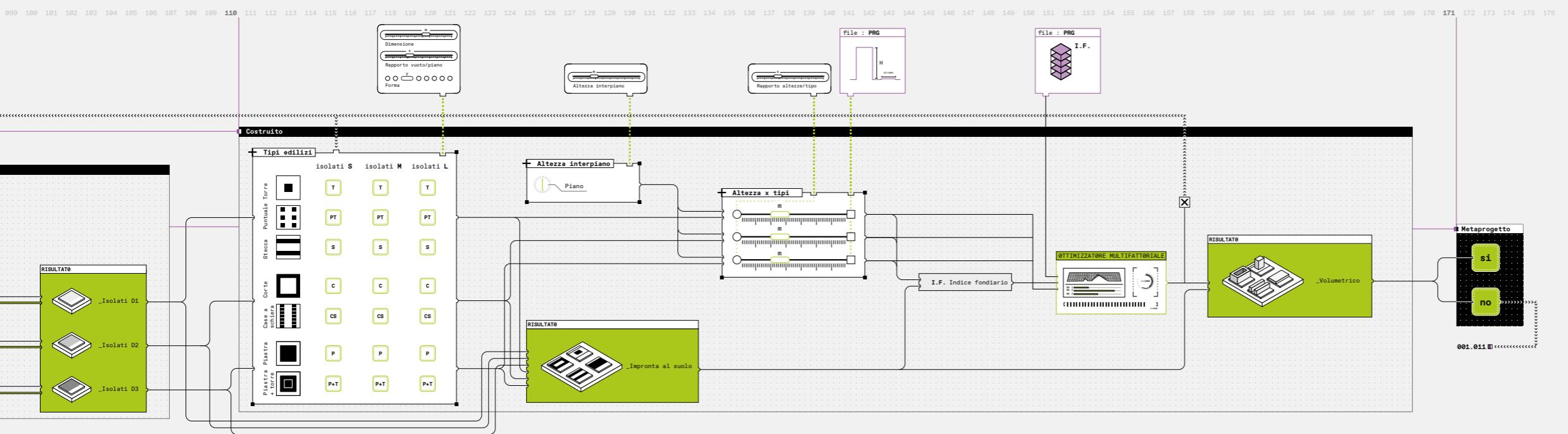


At the initial stage, the research focused on creating an algorithm through the use of Visual Programming Languages (VPL), which allow the development and management of geometries via visual flowcharts that integrate data in an iterative process. In this phase, parameters were defined—variables that determine the final geometries and act as a medium between the designer and the algorithm.

The parametric approach, being inherently dynamic and capable of addressing urban complexity, proves to be a suitable design method. At its core lies parametric thinking, which deconstructs and analyzes the creative process, regard-

less of the field of application, to make its stages explicit and translate them into comprehensible and manipulable schemes, shapes, and relationships.

The result is parametric design, the right tool for managing complex systems like cities. It is an iterative process where the designer defines a set of parameters and rules that govern their relationships, allowing the processing of a large volume of data and the production of a wide range of design scenarios to choose from.



Throughout this work, the generative diagram serves as the instrument through which we unveil, layer by layer, the complexity of our design tool. Like a matryoshka doll, it allows us to progressively deepen the different levels of the process without losing sight of the overall picture.

Unlike traditional maps, graphs, or schemes—which merely capture static fragments of reality or reduce complexity to linear relationships—the diagram is a dynamic device that lets us make decisions progressively, influencing the project at every step.

As Lidia Gasperoni points out in *Construction and*

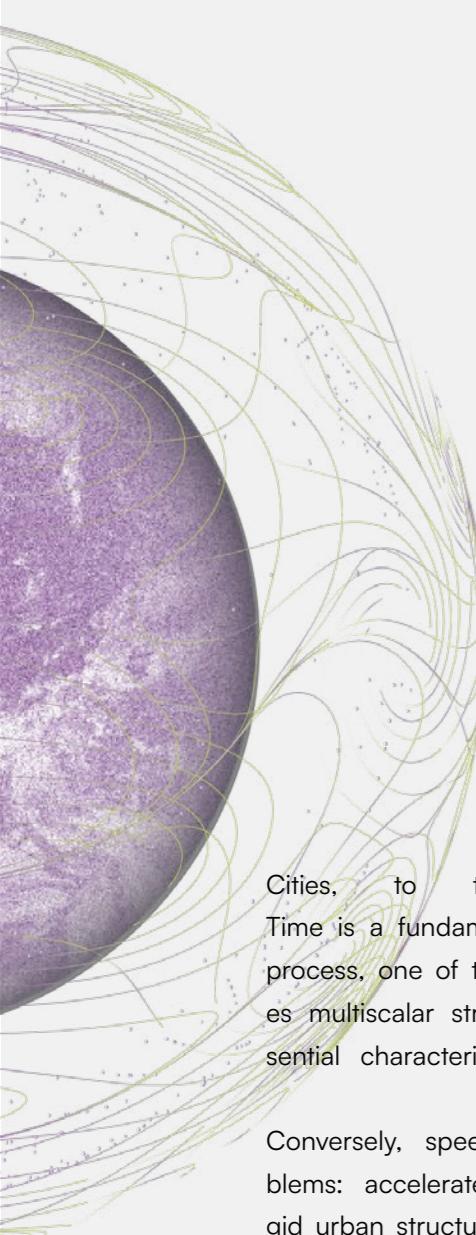
*Design Manual. Experimental Diagrams in Architecture* (2022), the diagram operates on two temporal planes:

- Synchronicity, which captures a specific moment in time
- Diachronicity, which anticipates changes and processes over time.

In our work, this double temporal movement was crucial. On one hand, it allowed us to visualize potential interrelations between data and design choices; on the other, it enabled us to simulate urban scenarios—

unfinished projects in constant transformation.

Thus, the diagram is not just a graphic support: It is a generative mechanism, a project activator that modifies and adapts as the project evolves.



Cities, to truly exist, need time. Time is a fundamental component of the urban process, one of the key elements that guarantees multiscale stratification and complexity—essential characteristics of the urban landscape.

Conversely, speed is one of the main problems: accelerated projects risk producing rigid urban structures, unable to evolve over time.

Although parametric design undoubtedly provides tools to manage the complexity and dynamism of the city, starting an entirely new city from scratch often leads to top-down interven-

tions, lacking sensitivity and adaptive capacity.

Therefore, our focus shifts to working within an existing urban context. It is precisely in areas where social interactions, physical structures, and historical dynamics already exist that we can extract data, information, and forms for a flexible and adaptable design, capable of responding to future challenges.



AERIAL VIEW | EX-THYSSEN AREA



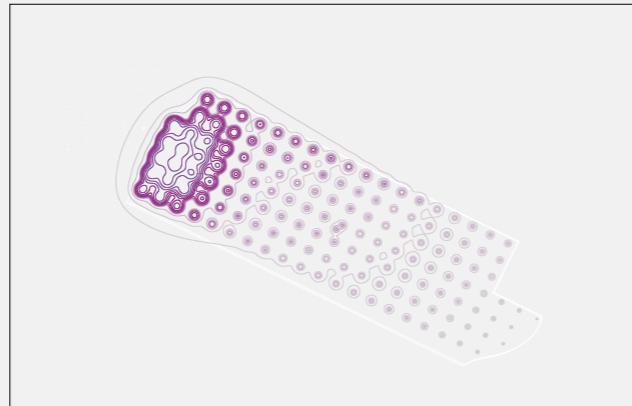
The case study chosen is the former industrial site of the Thyssen complex, located in the northwest quadrant of Turin, in a peripheral position relative to the city center.

The design proposal aims to create one or more centers for the Lucento district, a territory that, due to historical, social, or urban reasons, lacks such a center. The idea of a center acts as the symbolic, functional, and social core of the area, providing a reference point and promoting community cohesion.

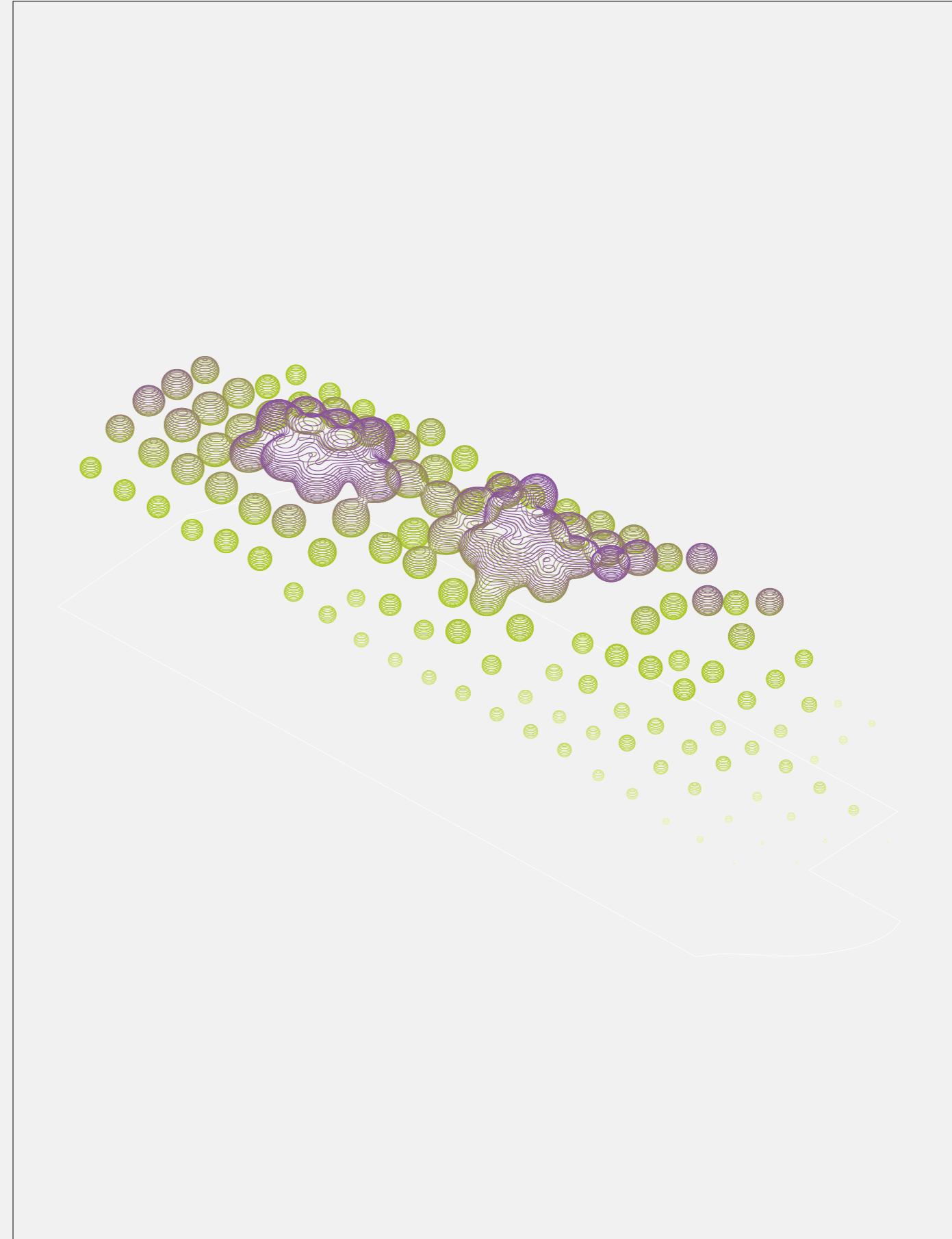
This center can take different forms depending on the needs and characteristics of the context:

A functional center that catalyzes economic, cultural, or social activities (e.g., cultural hubs, markets, educational or production centers). A symbolic center with representative and identity value (e.g., squares, monuments)—an urban void where the community can gather.

HEATMAP: BLOCK ATTRACTIVENESS ANALYSIS



HEATMAP: IDEAL DENSITY DISTRIBUTION PER BLOCK



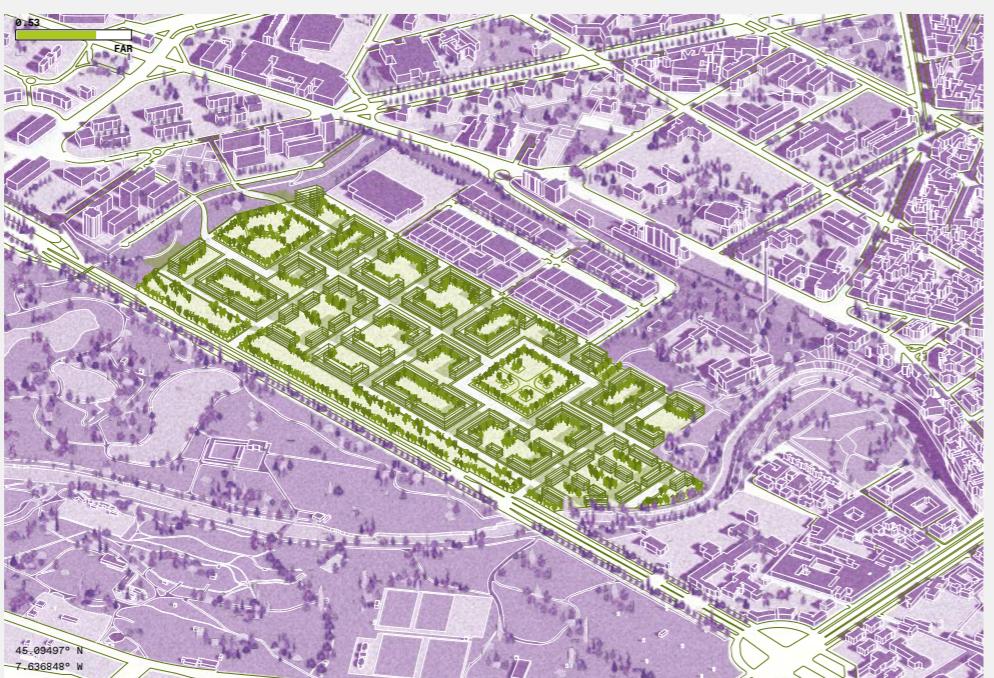
The open-source dissemination of a massive volume of data—Big Data—represents a crucial resource for addressing urban challenges with innovative solutions.

The integration of Big Data into urban-scale design allows for a multidisciplinary approach, expanding analytical possibilities and providing a solid foundation for design strategies.

As part of this thesis, a spatial syntax model of the road system and urban density was developed. These models, through the use of algorithms, can analyze large datasets in a short period of time, leaving

the designer with the task of interpreting the results.

To represent the findings, heatmaps were chosen as the visualization method, because they provide an intuitive and immediate understanding of the analyses results.



RESULTS

The real challenge is not to design perfect cities but to create urban spaces that can meet present needs while adapting to future transformations.

"Hello, city" is the outcome of an extensive research process that has led to the development of a tool that neither reduces urban design to a mere computational exercise nor promotes parametric design as the sole solution to the challenges of contemporary cities. On the contrary, it seeks to explore and critically assess both the strengths and limitations of the parametric approach in urban contexts.

Within this research framework, scenario-based design and parametricism emerge as effective methodologies for addressing the complexity of urban phenomena.

REVIT  
VRAY  
PHOTOSHOP  
ILLUSTRATOR  
INDESIGN  
RHINO  
GRASSHOPPER  
CINEMA  
AFTER-EFFECTS  
SKETCHUP  
3DS

[ “Hollow city” ]

{ Track Point! }

[ See floor plan pipe ]

ARCHITECTURAL PROJECT  
PROGETTO URBANO  
URBAN DESIGN  
PROGETTO STRUTTURALE  
MASTERPLAN  
PARAMETRIC ARCHITECTURE  
ARCHITETTURA DI EMERGENZA  
TURIN | ITALY  
ENRICO MANTOVANI (DEL NORD)

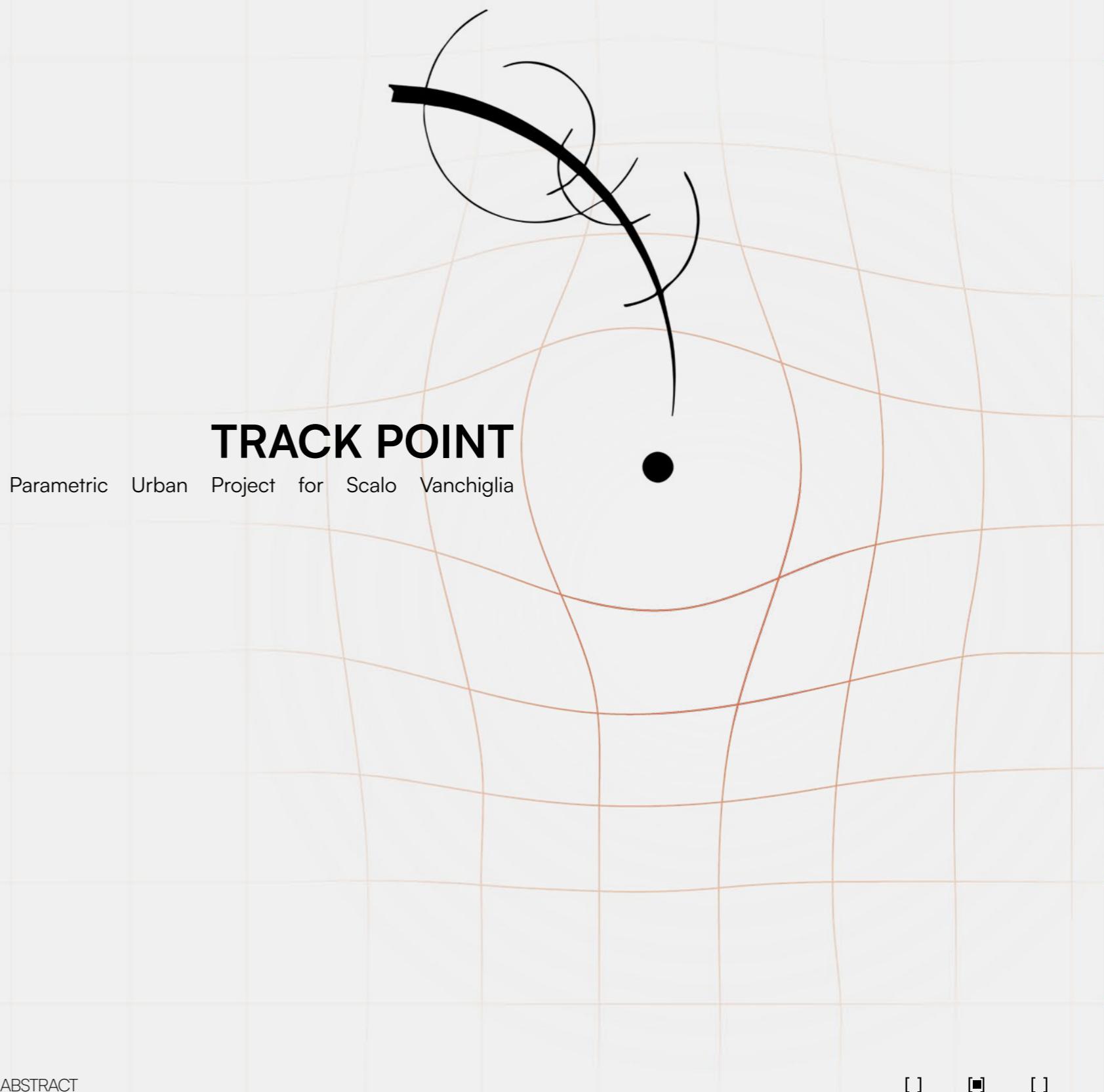
**What kind of city do you envision?**

A cohesive city, a city conceived as a single, dynamic, and vibrant organism.

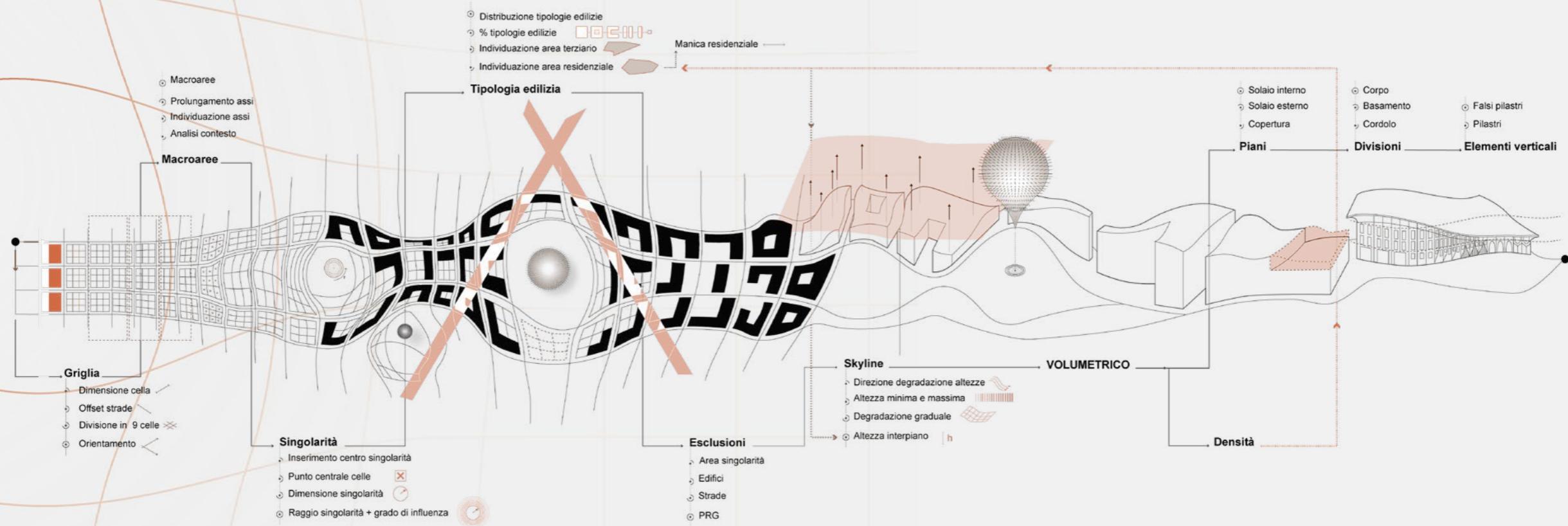
The Track Point project is an attempt to integrate parametric design methodologies into the urban fabric of Turin, specifically within the Scalo Vanchiglia area—an environment characterized by diversity and urban complexity. As its name suggests, Track Point originates from two fundamental geometric elements: the line and the point. These elements generate a rigid grid that is then deformed and disrupted by “singularities,” ultimately resulting in a new conception of urban space.

This university atelier, focused on parametric design, requires a strong connection between project conceptualization and representation. The design process is based on the morphogenesis of a city fragment, achieved through the variation and deformation of urban typologies using advanced modeling tools such as Visual Programming Languages (VPL) and Building Information Modeling (BIM).

The outcome is not an absolute truth but rather a framework of rules and guidelines derived from a thorough analysis of the site's contextual conditions.



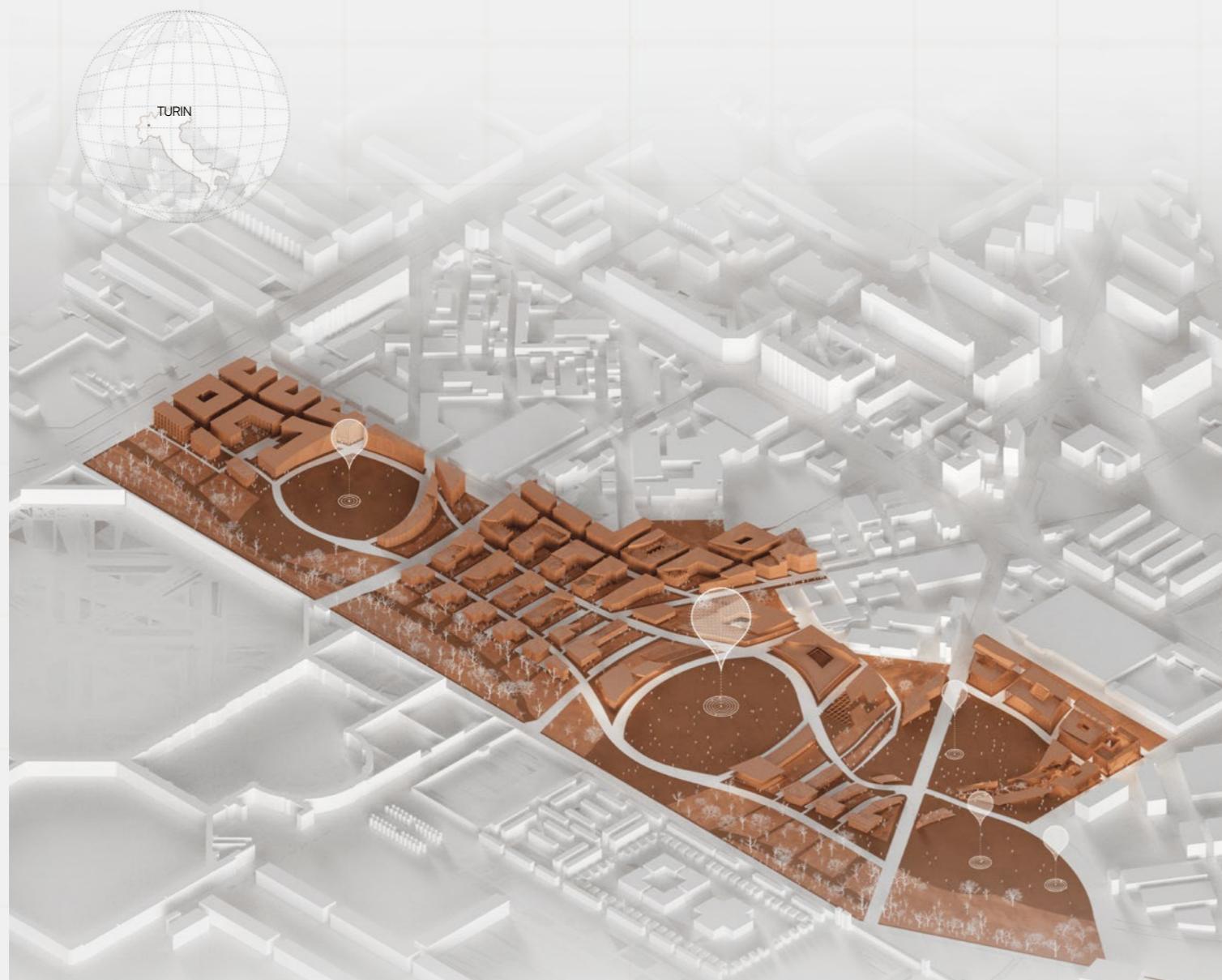
## GENERATIVE DIAGRAM



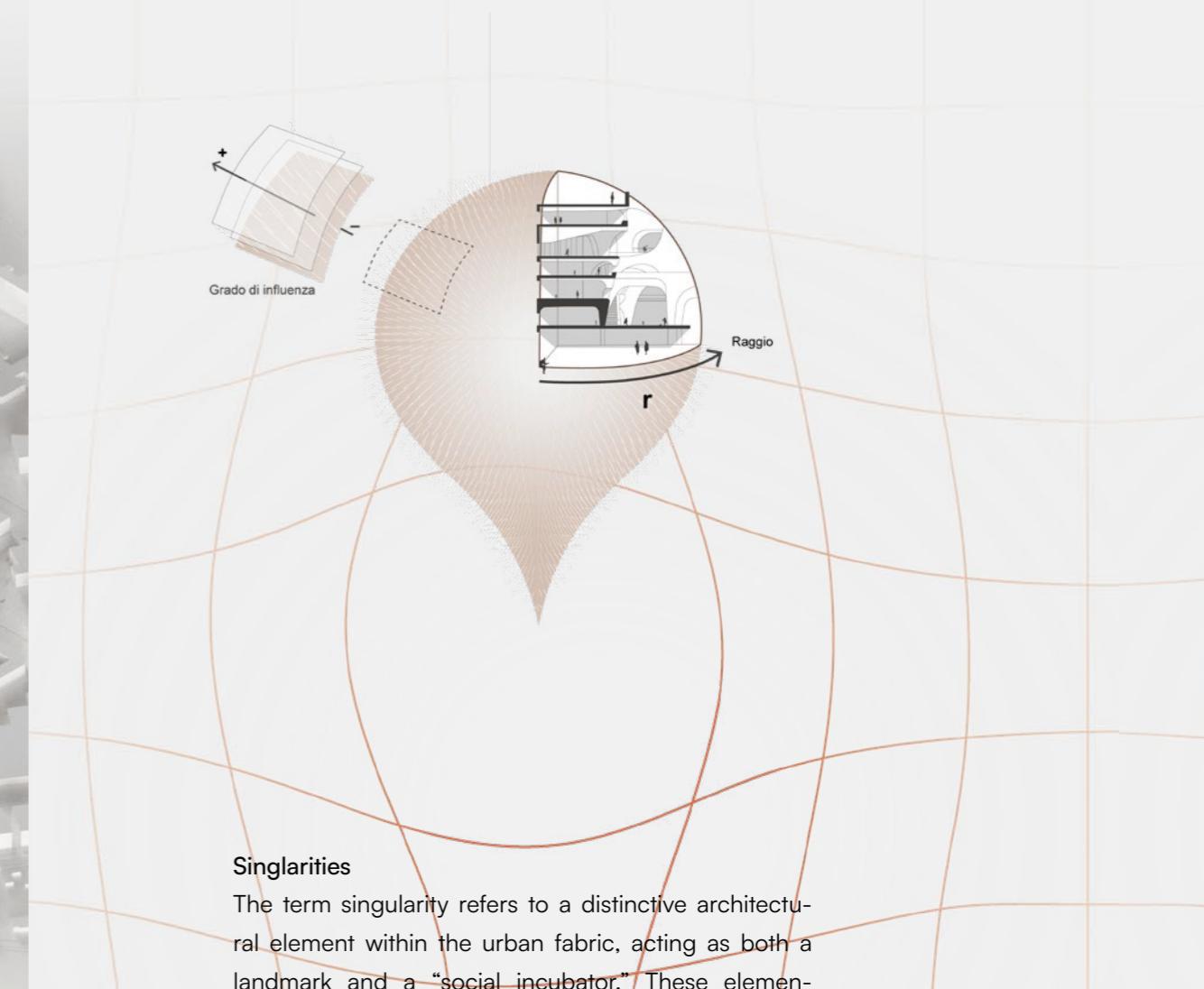
## SCENARIOS



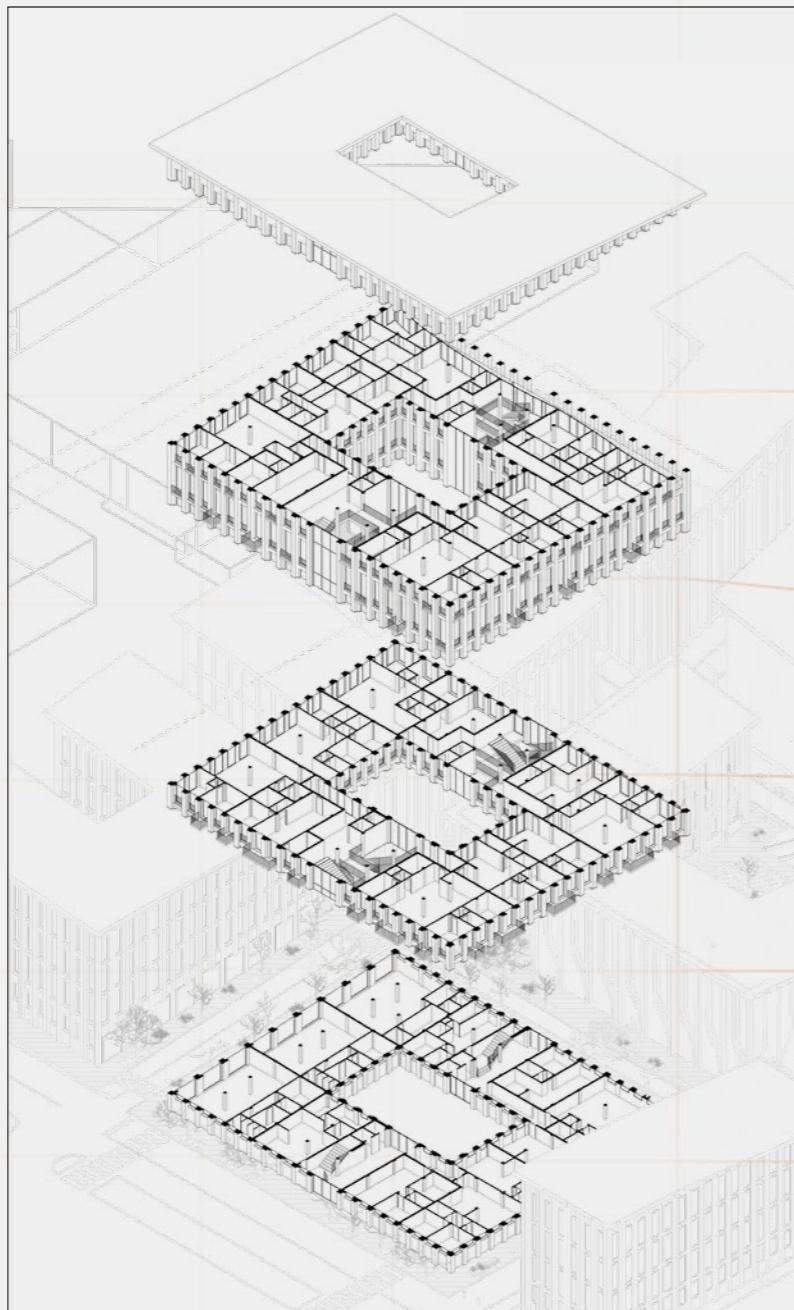
AXONOMETRIC MASTERPLAN



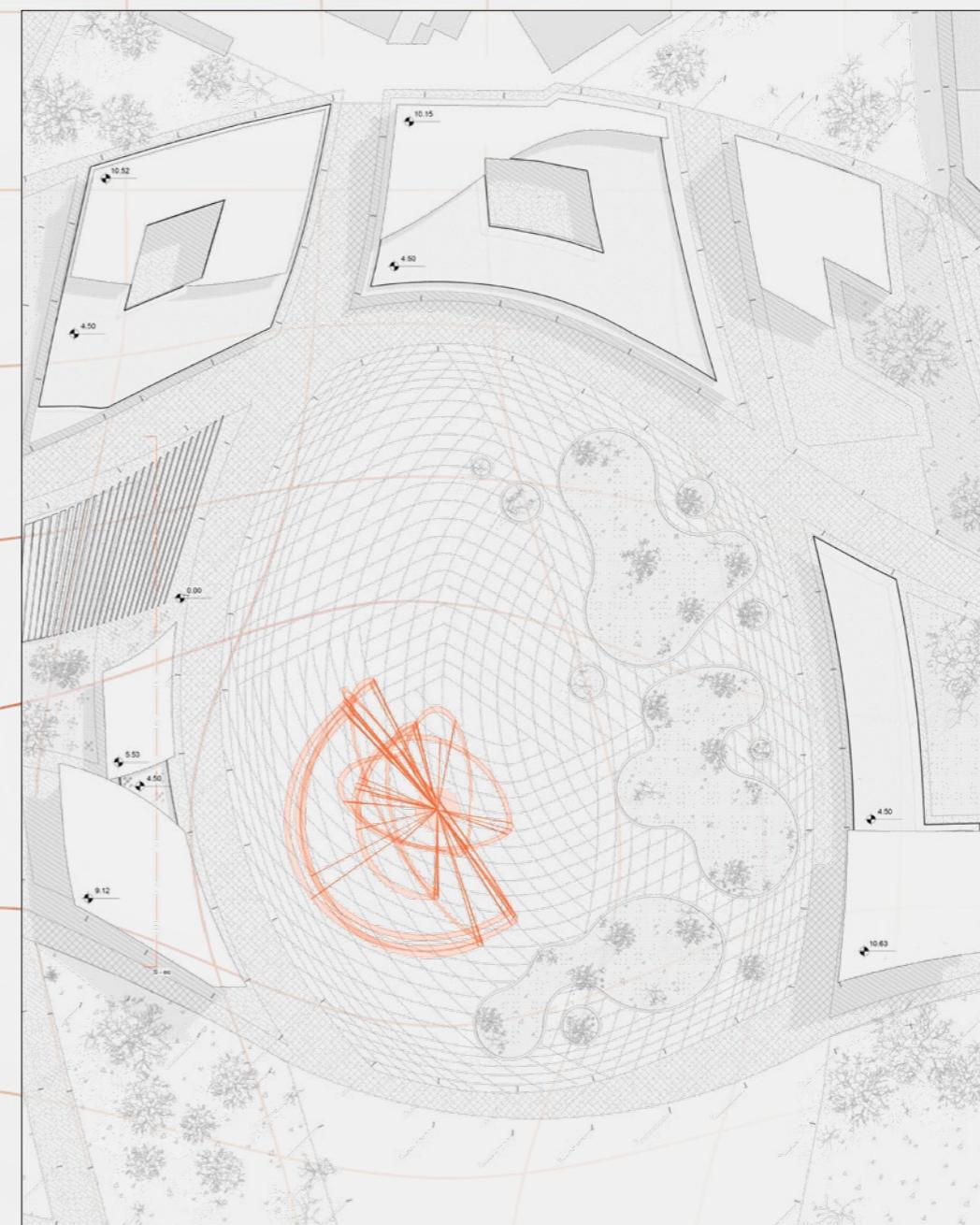
CONCEPT SINGULARITY



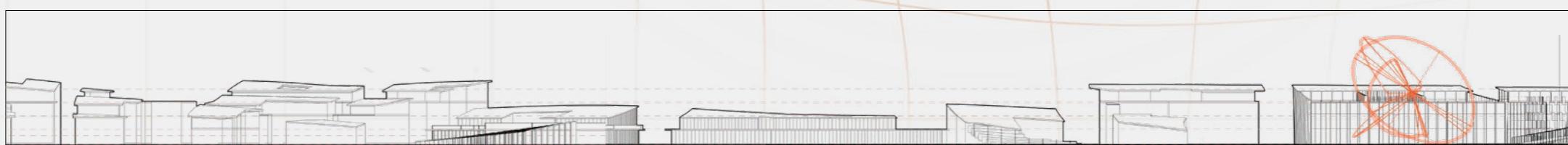
EXPLODED AXONOMETRIC VIEW OF A PROTOTYPE RESIDENTIAL BUILDING

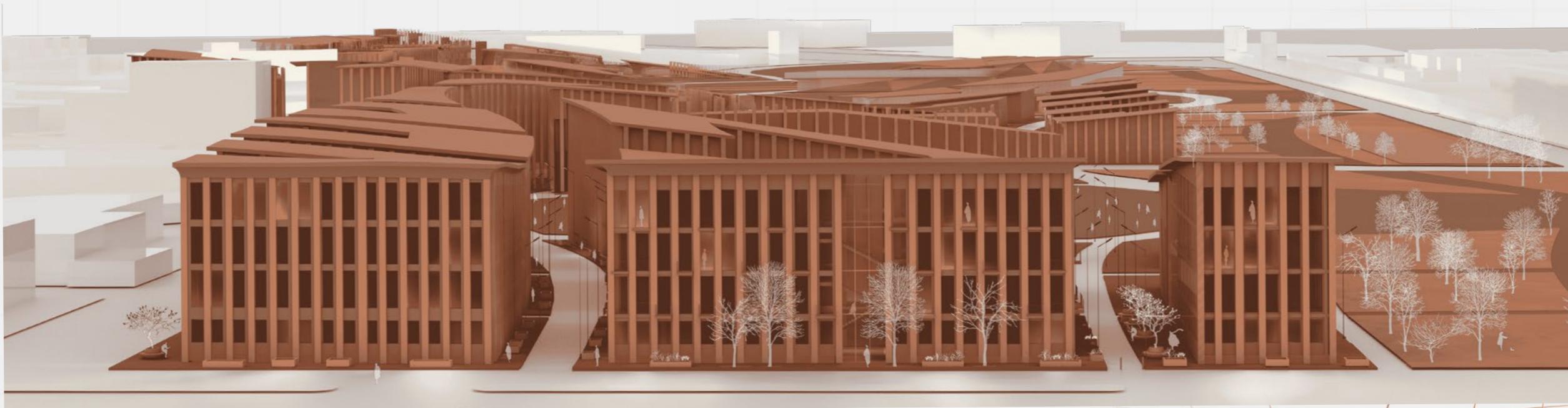
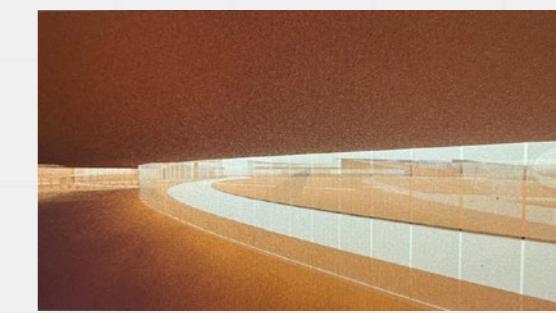


PLAZA SITE PLAN



LONGITUDINAL SECTION





**REVIT**



PHOTOSHOP  
ILLUSTRATOR

INDESIGN



GRASSHOPPER



AFTER EFFECTS

SKETCHUP



QGIS

[ “Molotov City” ]

[ Track Point ]

{ Ceci n'est pas une pipe }

ARCHITECTURAL PROJECT  
URBAN PLANNING

PROGETTO URBANO

PROGETTO STRUTTURALE

MASTERPLAN

ARCHITETTURA PARAMETRICA

ARCHITETTURA DI EMERGENZA

TORINO | ITALIA

SKOPJE | NORTH MACEDONIA

**This is not a pipe.**

Magritte invites us to reflect on the relationship between perception and representation: an image is never the real object but rather its visual transposition—an interpretation. This notion compels us to question the very nature of representation and the risk of mistaking depiction for a constructed and mediated reality.

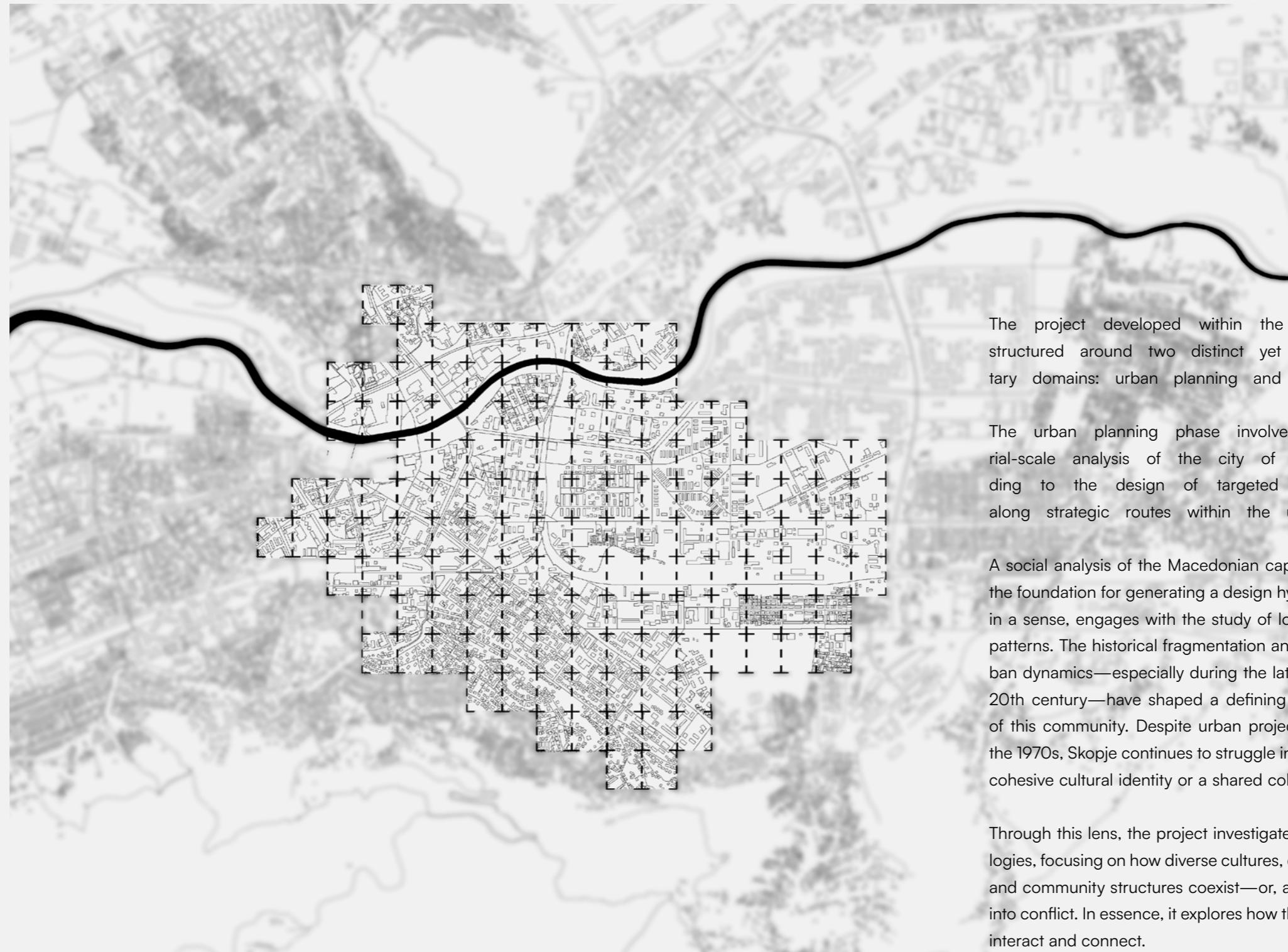
In architecture, as in art, the representation of a space never fully coincides with the space itself; rather, it is a subjective reading, shaped by intent, context, and sensibility.

This awareness opens up new critical perspectives, encouraging alternative approaches to understanding and designing reality. It pushes us to look beyond the apparent clarity of the image to investigate what it conceals or suggests, thus assuming an active role in the interpretation of space.

*Ceci n'est pas une pipe.*

Magritte

## CONTEXT ANALYSIS



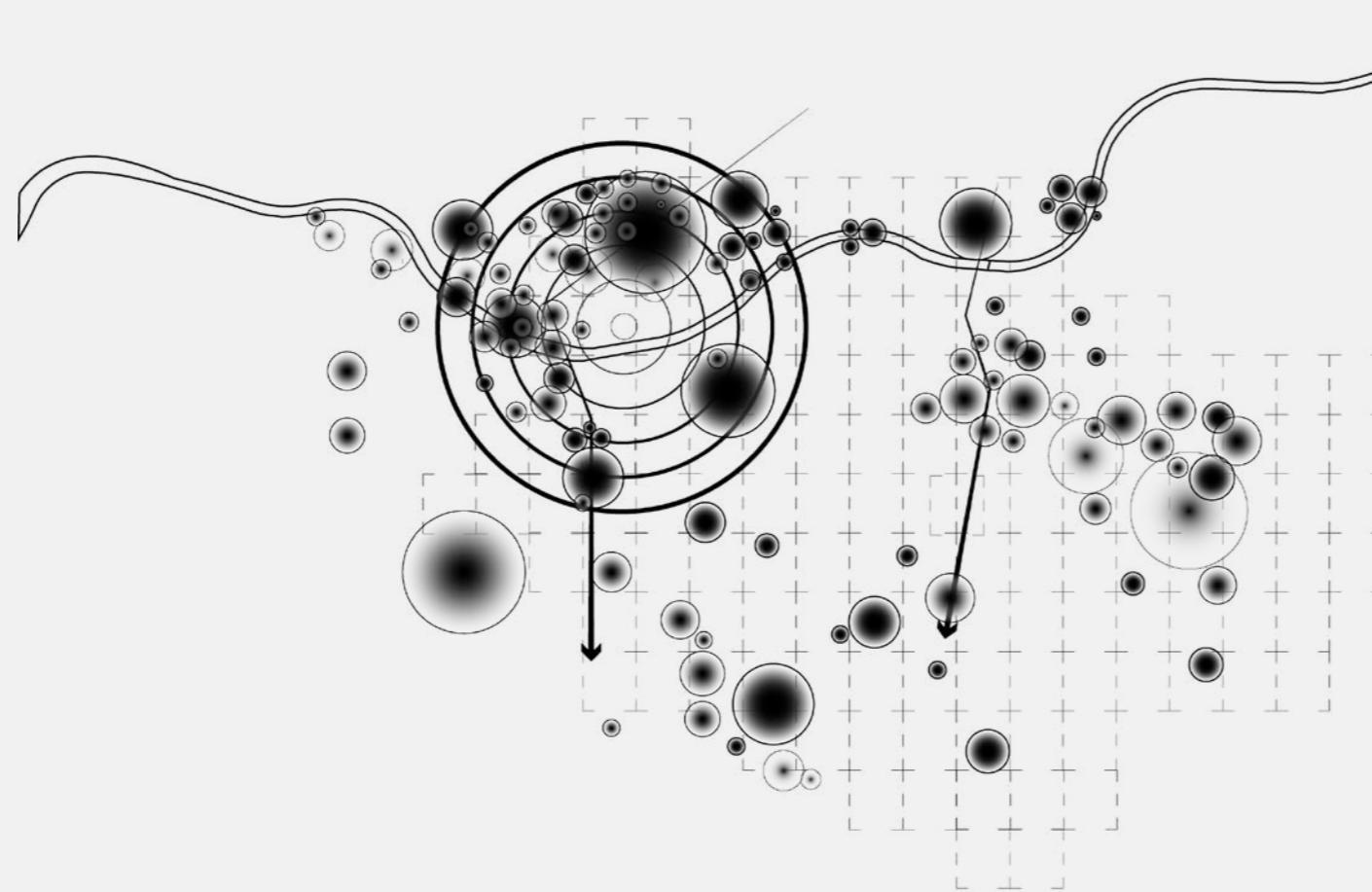
The project developed within the atelier was structured around two distinct yet complementary domains: urban planning and composition.

The urban planning phase involved a territorial-scale analysis of the city of Skopje, leading to the design of targeted interventions along strategic routes within the urban fabric.

A social analysis of the Macedonian capital served as the foundation for generating a design hypothesis that, in a sense, engages with the study of local habitation patterns. The historical fragmentation and evolving urban dynamics—especially during the latter half of the 20th century—have shaped a defining characteristic of this community. Despite urban projects initiated in the 1970s, Skopje continues to struggle in articulating a cohesive cultural identity or a shared collective image.

Through this lens, the project investigates social typologies, focusing on how diverse cultures, ethnic groups, and community structures coexist—or, at times, come into conflict. In essence, it explores how these elements interact and connect.

## SOCIAL ANALYSIS FOR THE IDENTIFICATION OF OPAQUE | CAMOUFLAGE | TRANSPARENT SPACES



PERCEPTIVE TERRITORIAL SECTIONS

The analysis of spatial quality, achieved by overlapping multiple perspectives—such as social aspects and the urban grid—enables the definition of form and expression. The identified spaces are articulated into three interconnected but distinct categories.

Transparent space emerges from a deliberate design process in which form and function are closely interrelated. It is a legible, well-defined space where the design intent is clearly expressed.

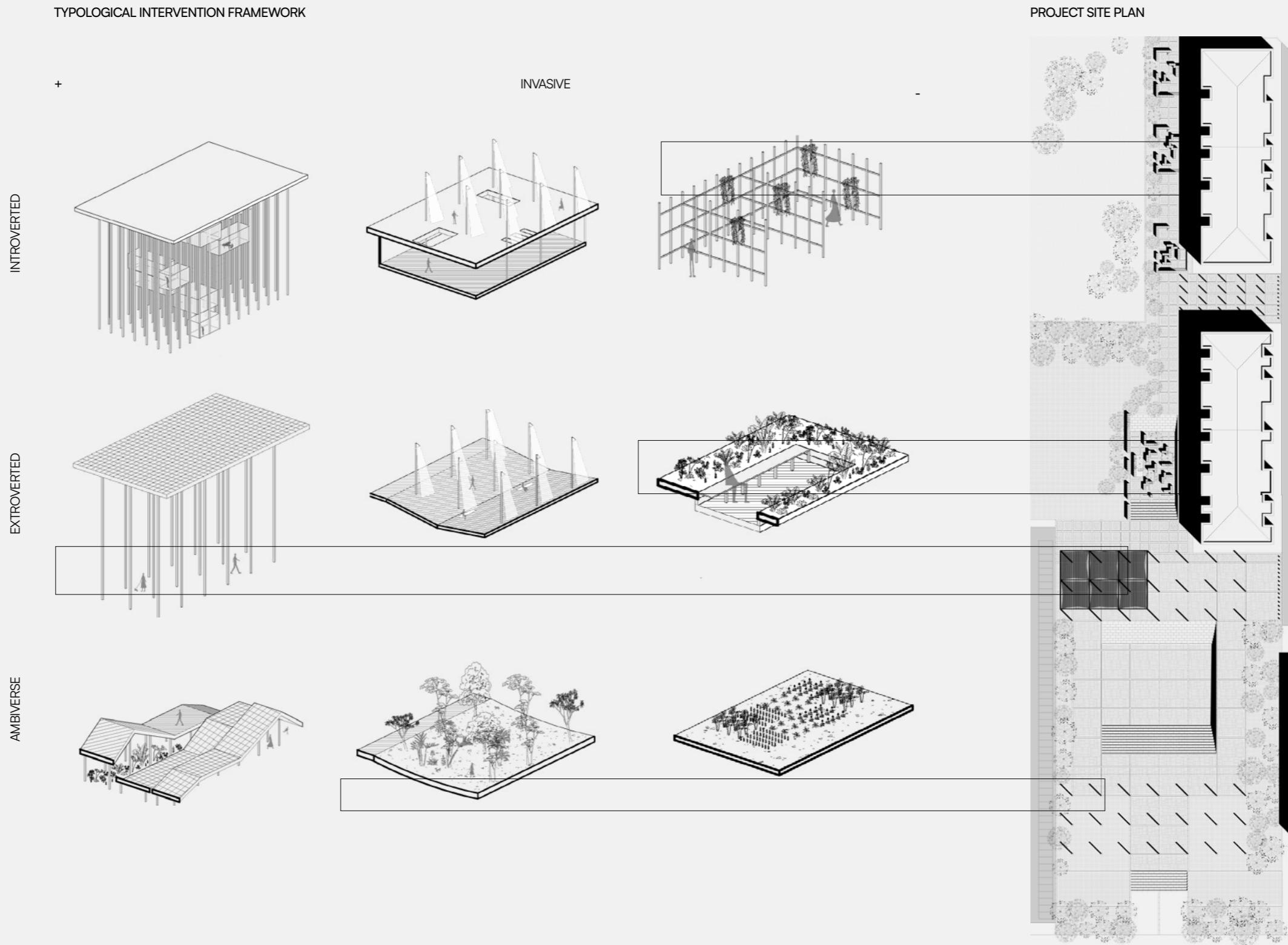
Camouflage space is flexible and ever-changing, adapting its function and character depending on context and time of day. It serves as a shared space for different communities, less defined and more complex to interpret than transparent space.

Opaque space, as suggested by Édouard Glissant in *The Poetics of Relation*, represents what cannot or does not wish to be fully understood. It is the space of ambiguity and intentional misinterpretation—a reaction to transparency that can either include or exclude, depending on its nature.

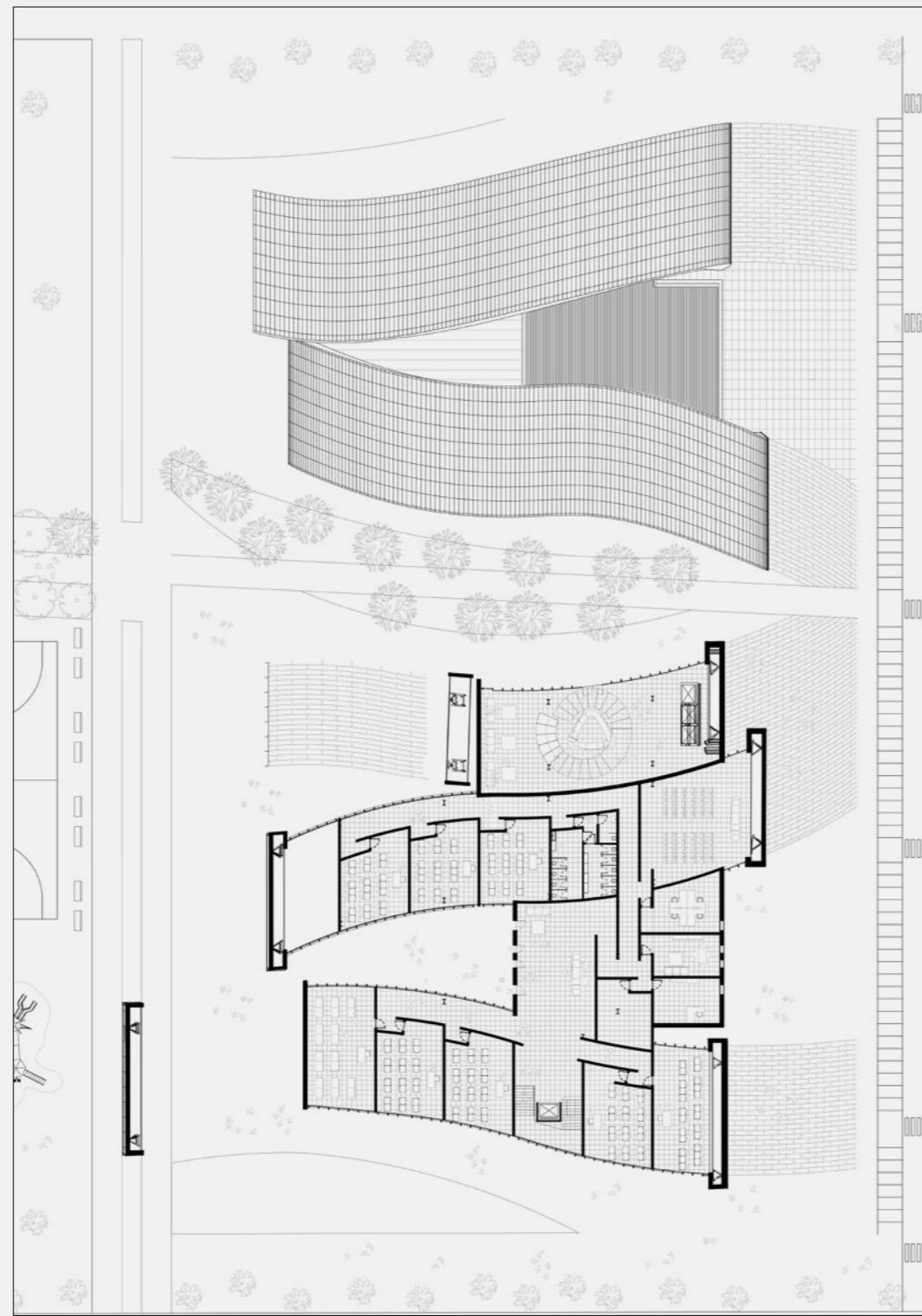
These three categories intertwine with the concept of introverted and extroverted spaces, defined both socially and compositionally. The design framework translates this spatial duality into formal expressions, employing the interpretive lenses of transparent, camouflage, and opaque spaces.



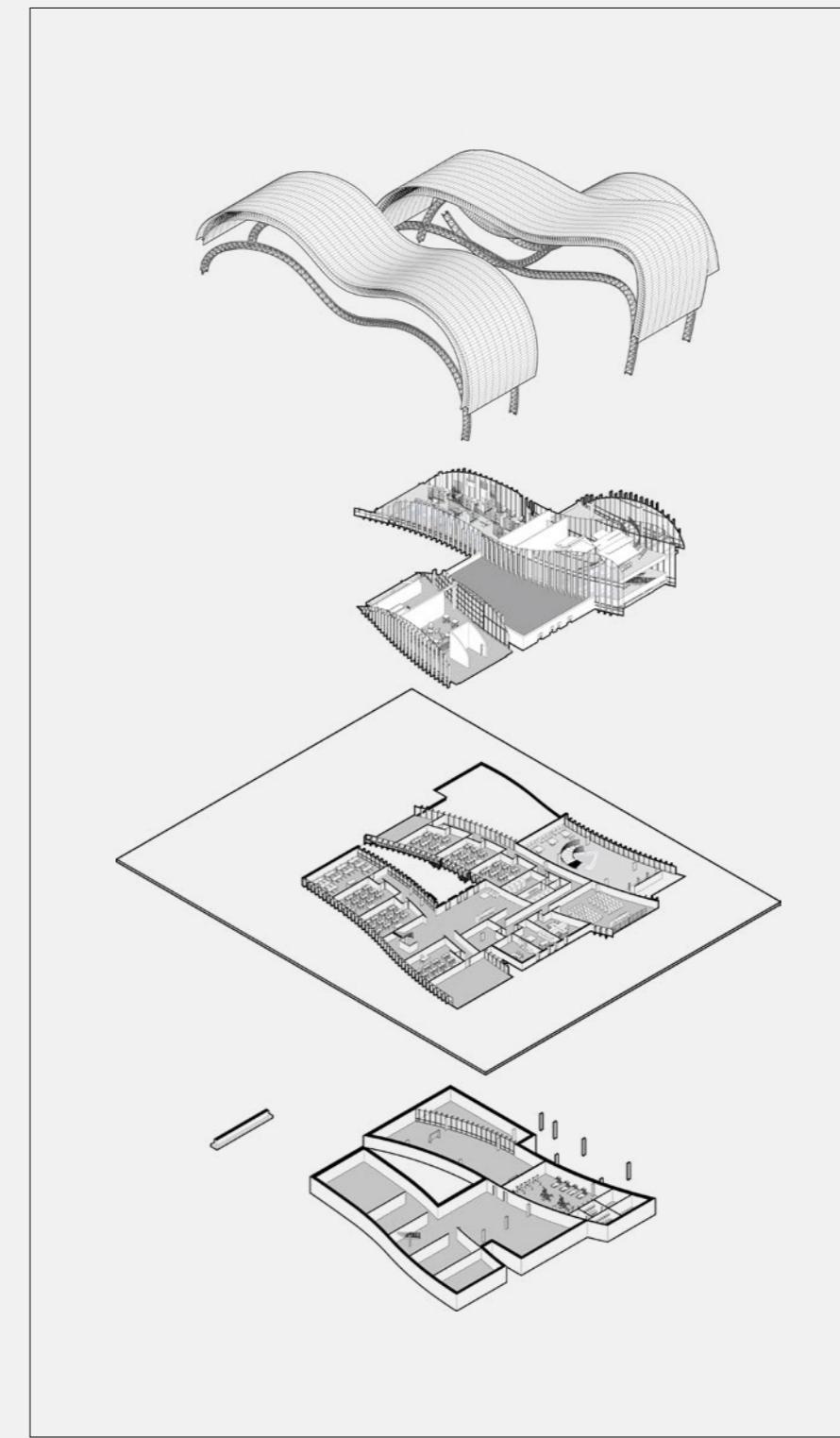
## TYPOLOGICAL INTERVENTION FRAMEWORK



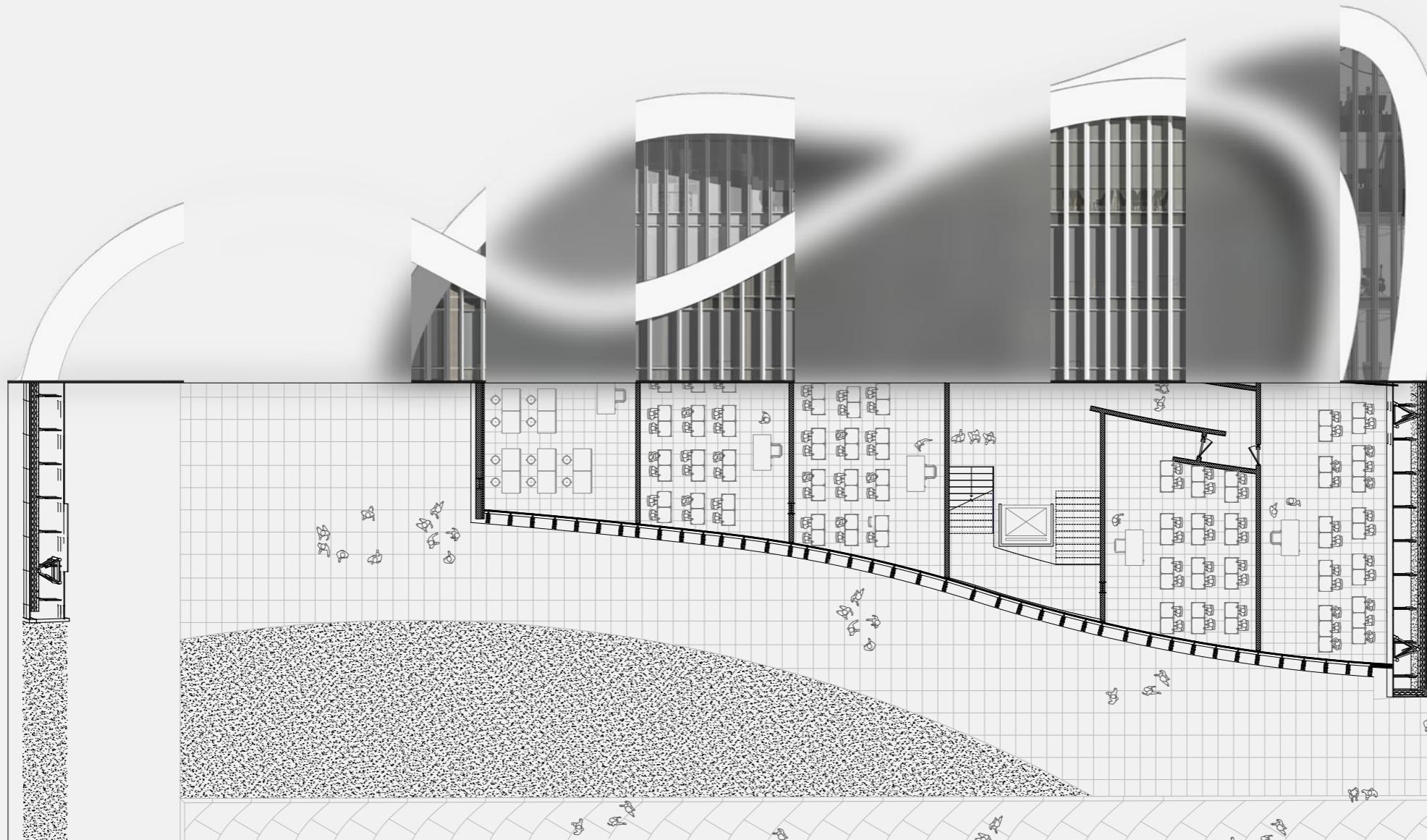
GROUND CONNECTION AND ROOF STRUCTURES PLAN



ARCHITECTURAL EXPLODED VIEW

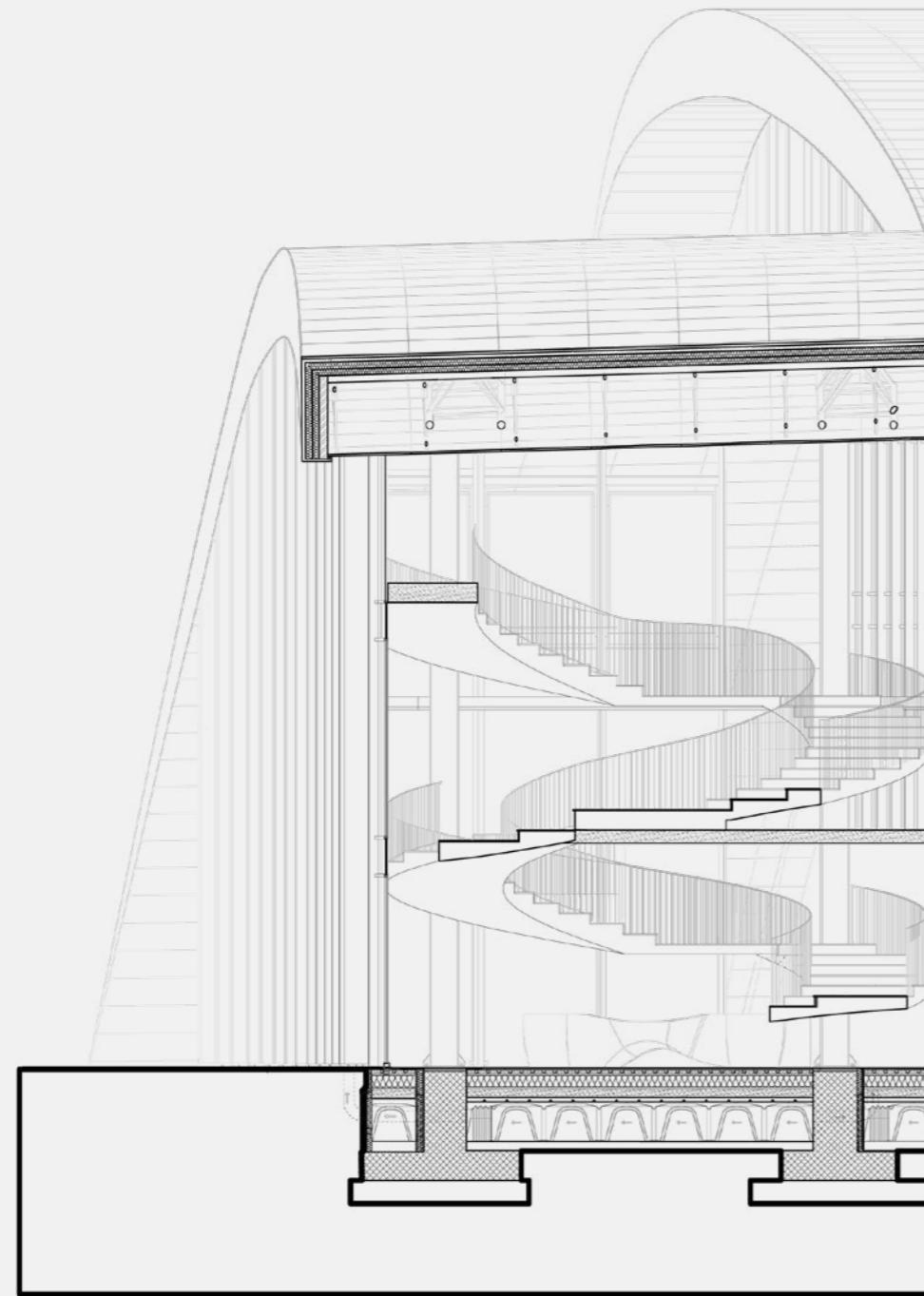


ELEVATION

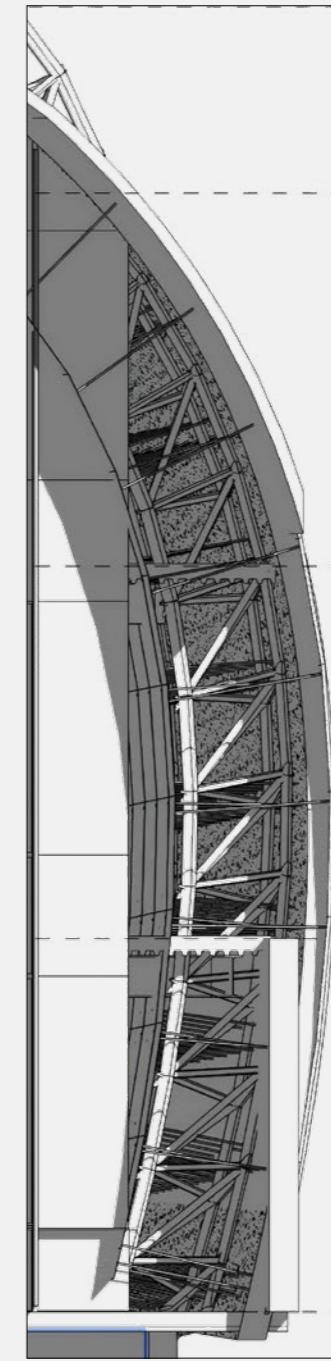
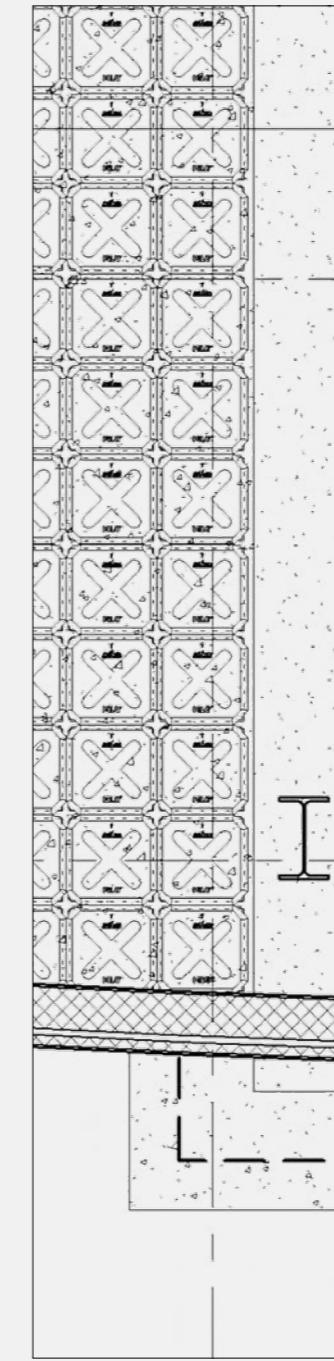
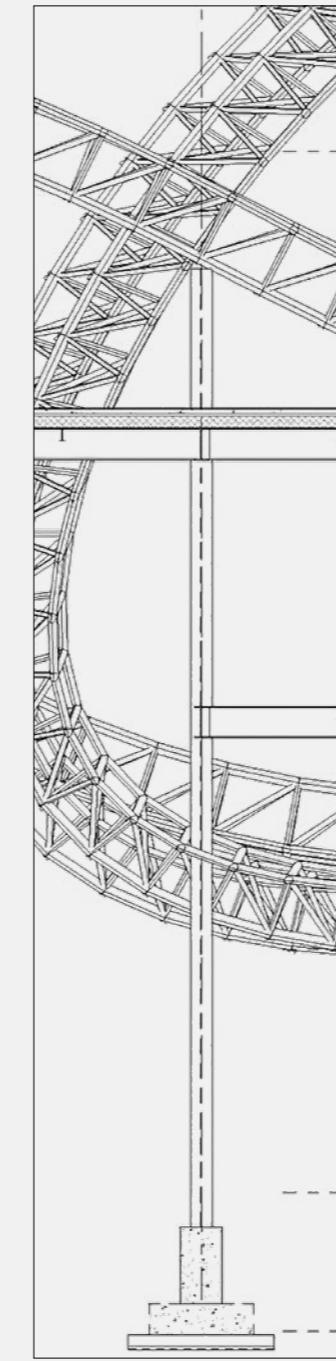


GROUND FLOOR PLAN

TRANSVERSAL SECTION



DETAILS



LONGITUDINAL PERSPECTIVE SECTION



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**{ ARCHITECT }**      **{ TURIN | ITALY }**

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