# Stitching Barcelona Together

## Urban Design for Social and Spatial Integration in Sant Martí and Beyond

Graduation Presentation
P5 17/05/2025

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## Metropolitan Area of Barcelona (AMB)

[1]

[2]

Spain

Barcelona

Legend

- Barcelona
- AMB
- neighborhoods
- Spain

*Fig. 1.*
*Metropolitan area of Barcelona (AMB).*
*Created by author.*

*Fig. 2.*
*Spain.*
*Created by author.*

**4th** region in Europe for people employed in high and medium-high tech manufacturing

**1st** European city with the best strategy of foreign investment attraction

population **1,636,193**

**1st** city in Southern Europein atractiveness for talent

tourists per year **15.6 mil**

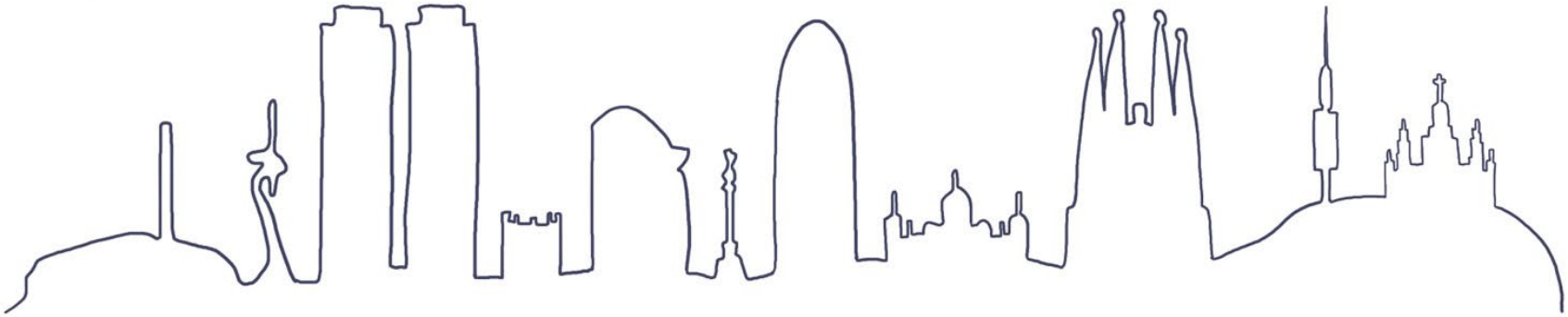

*Fig. 3.*
*Barcelona skyline.*
*Data derived from (Ajuntament de Barcelona, 2023)*
*Created by author.*

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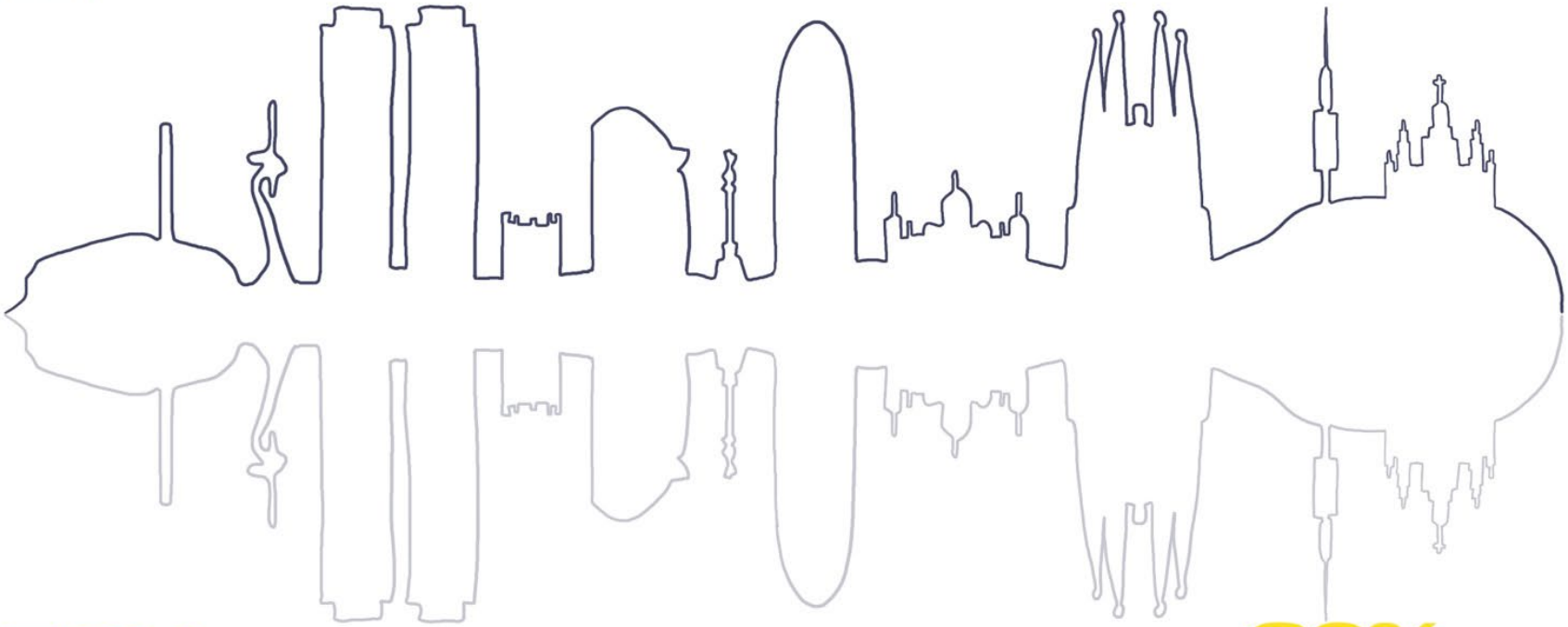

**56%** of locals believe that city reached its limit in welcoming tourists

**Barcelona is banning Airbnbs due to housing crisis to free homes for locals**

**36%** of neighborhoods have to pay more than **50%** of their income to live in Barcelona

*Fig. 3.*
*Barcelona skyline.*
*Data derived from (Ajuntament de Barcelona, 2023)*
*Created by author.*

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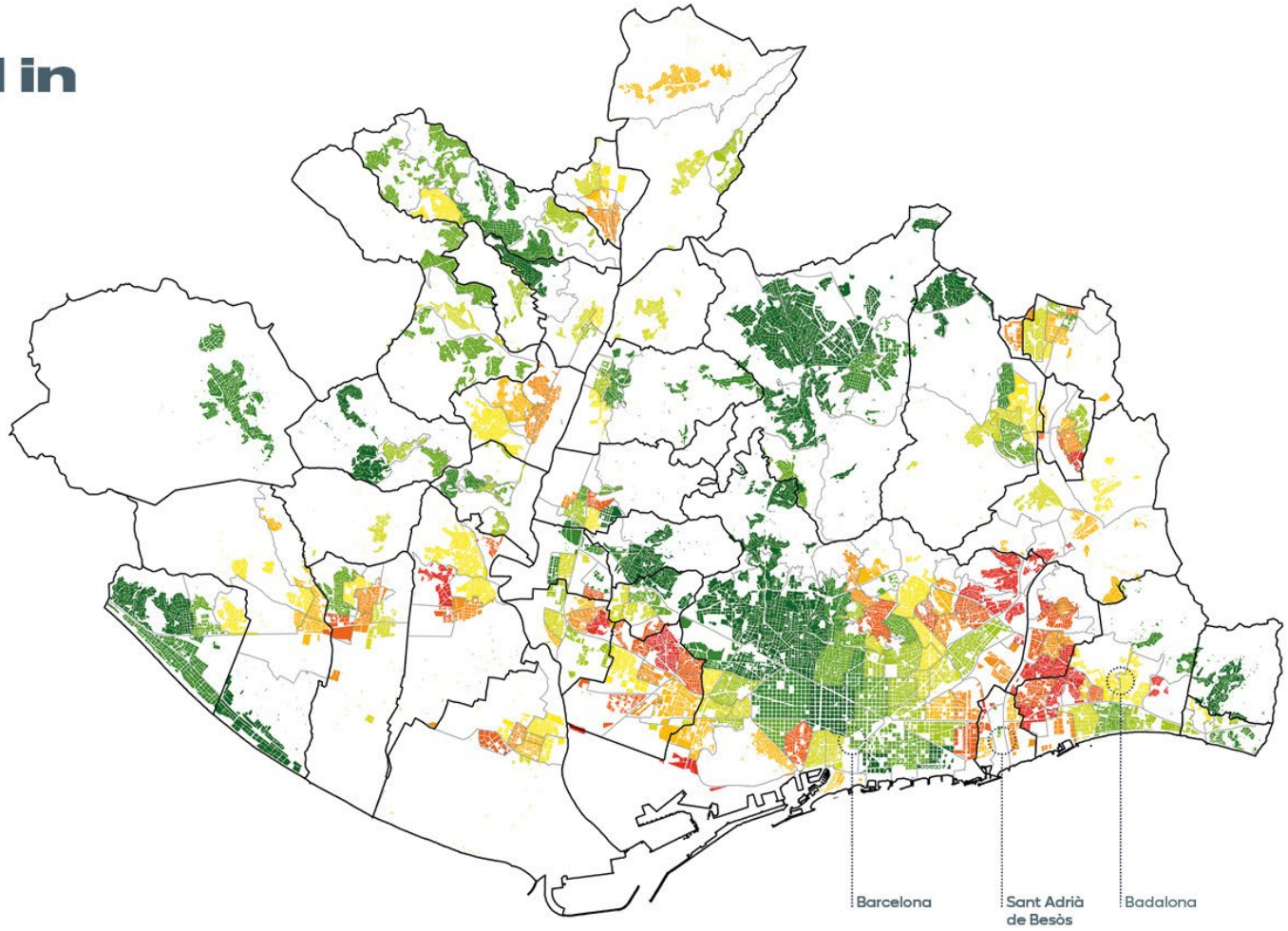
# * 70% of the most vulnerable neighborhoods of AMB are concentrated in the Besòs

Besòs area




10% less vulnerable

10% more vulnerable

*Fig. 4.*
*Urban vulnerability index. (IERMB, 2017).*

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# Sant Adria de Besòs is a backyard of Barcelona and Badalona

*Fig. 5.*
*Scheme of the cities.*
*Created by author.*

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# Sant Adria de Besòs as a connector

*Fig. 6.*
*Scheme of the cities.*
*Created by author.*

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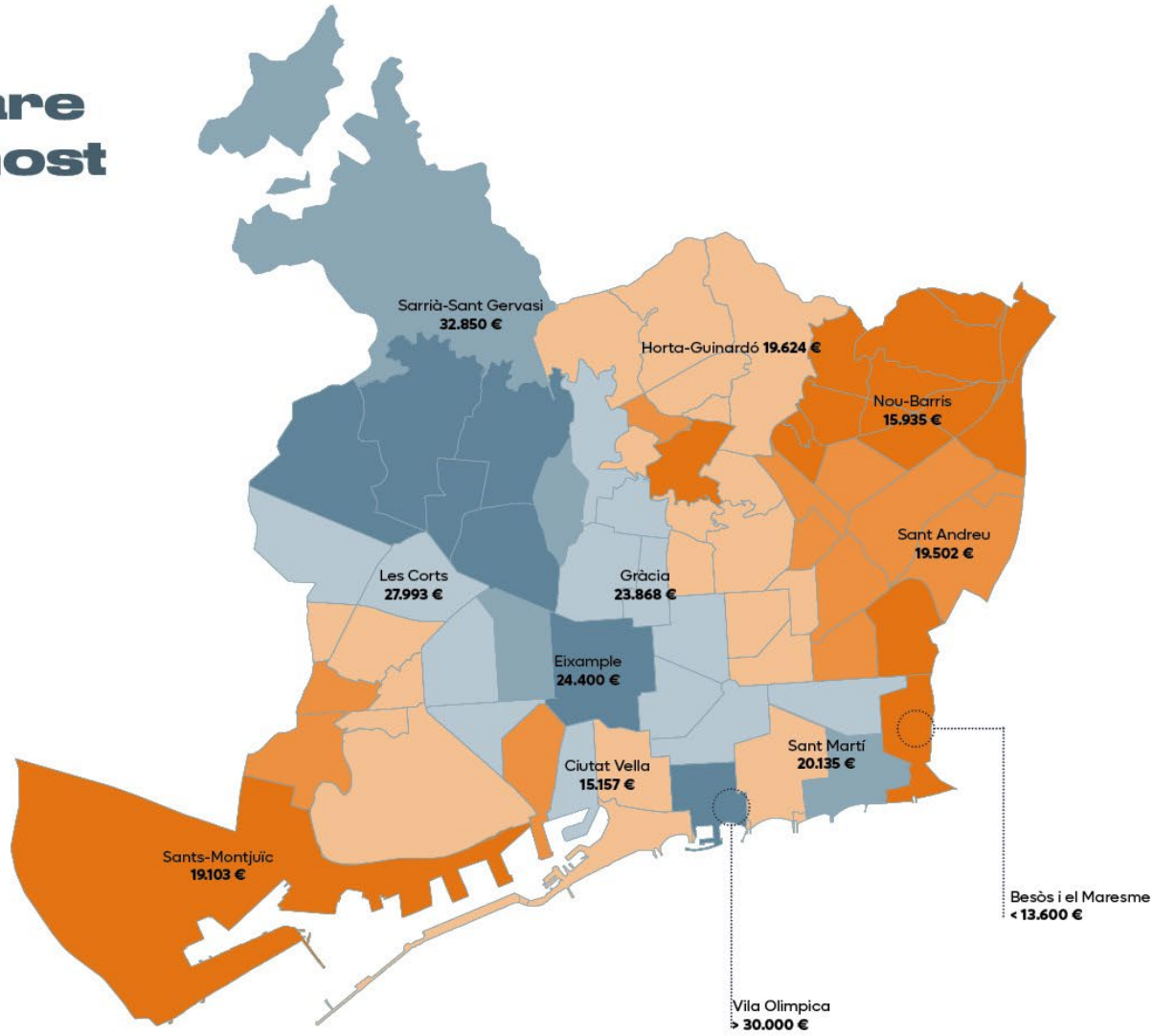
# Sant Martí: where the most expensive neighborhoods share "border" with the most poor areas




Legend

areas with high income per capita

areas with low income per capita

*Fig. 7.*
*Average Disposable Income per Capita in Barcelona, 2022.*
*Data derived from Ajuntament de Barcelona Open Data BCN. Created by author.*

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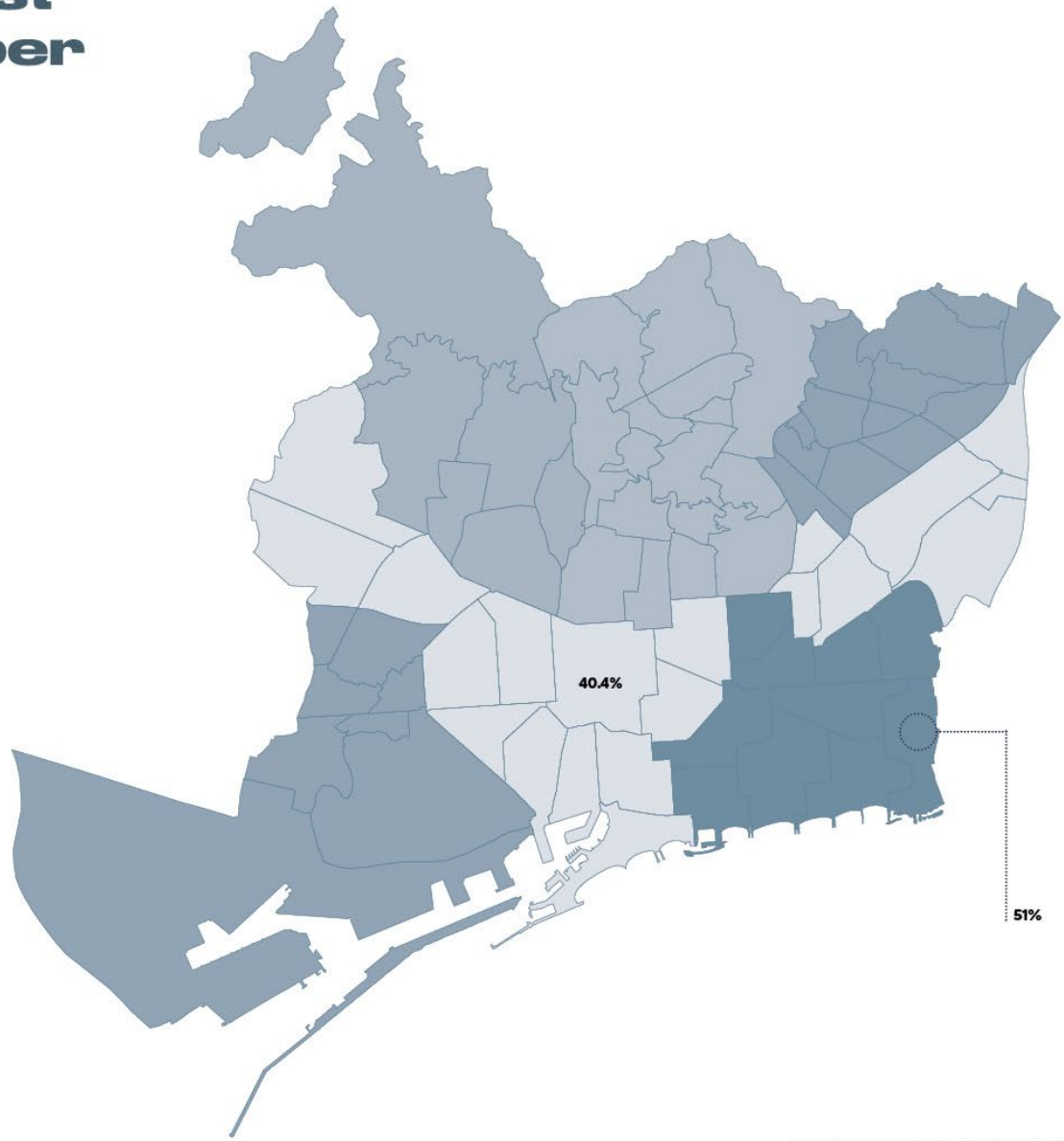
# Sant Martí:
# district with the most rise in rent prices per last 10 years




Legend

rise in rent prices

*Fig. 8.*
*Average increase in rent price from 2013 to 2023.*
*Data derived from Ajuntament de Barcelona Open Data BCN. Created by author.*

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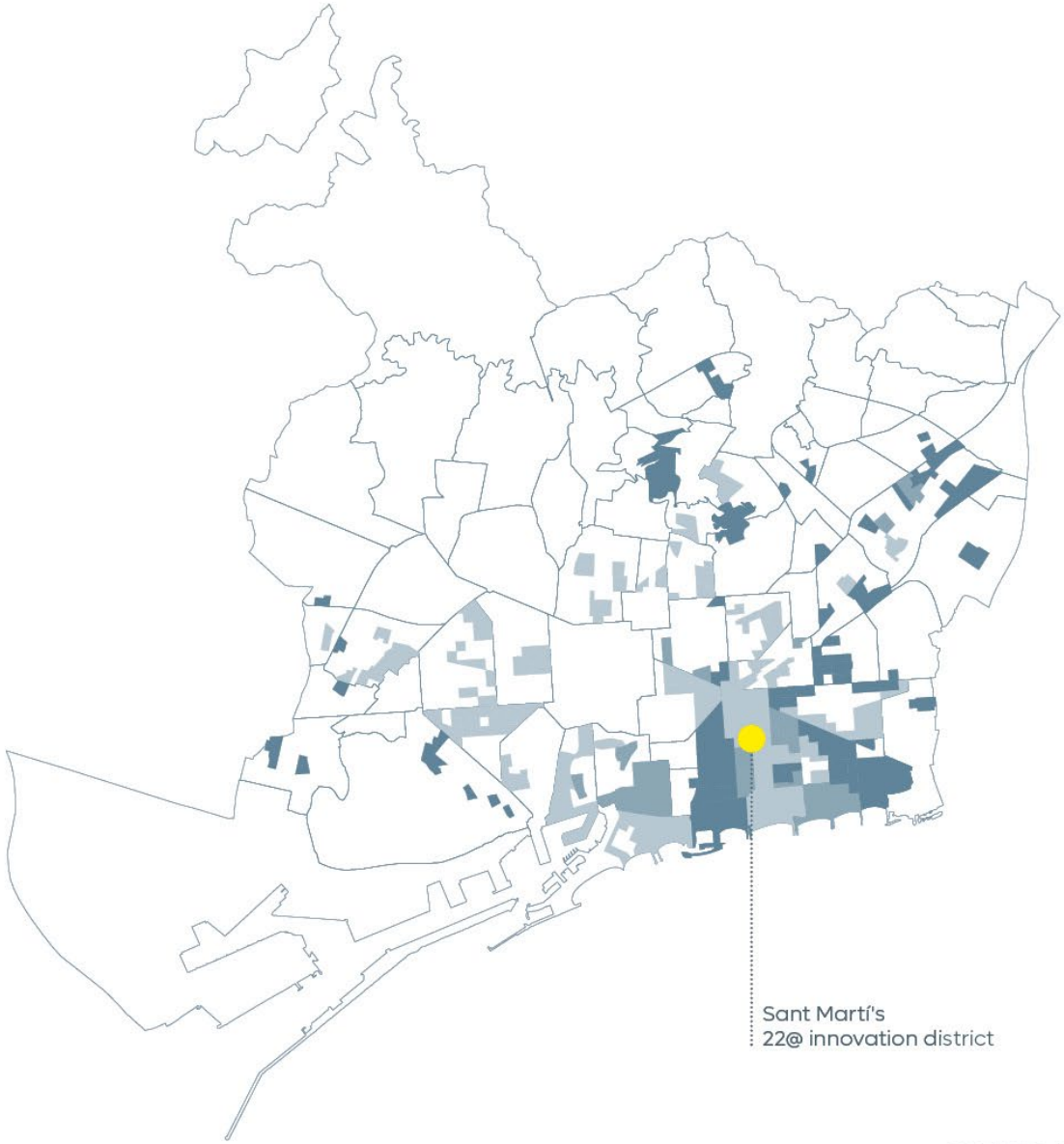
# gentrification creates spatial segregation in Sant Martí




Legend

- Recent gentrification
- Continued gentrification
- Old gentrification

*Fig. 9*
*Gentrification, 1991-2016.*
*Data derived from Wahlund, 2019. Adapted by author, 2024.*

# 22@ the innovation district in Sant Martí

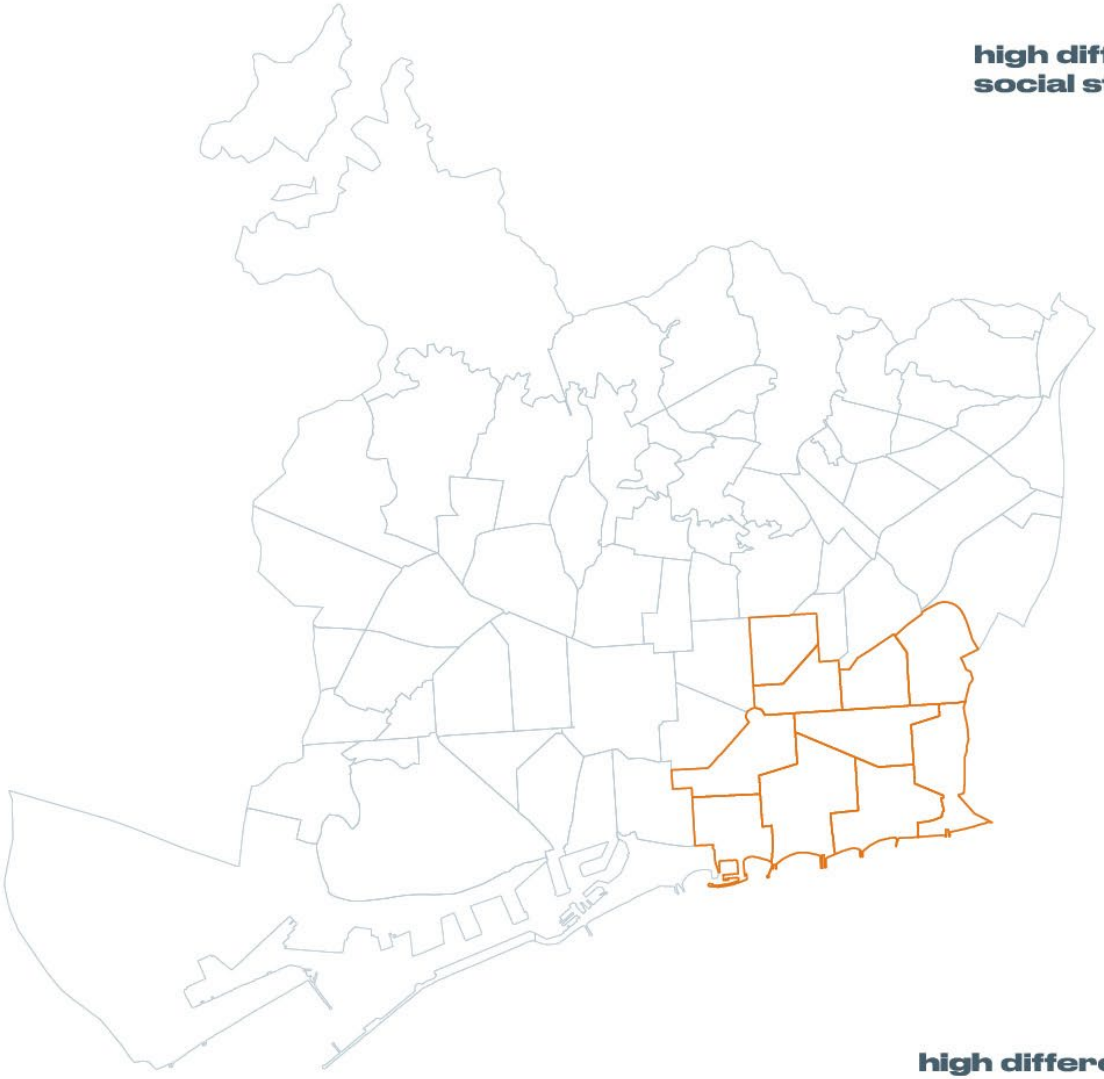
Fig. 10
View of the 22@ Innovation District
© Daniele Ansidei
Adapted by author

# two sides of one coin

**"Superstar cities and knowledge hubs are not just the places where inequality is most on display; their success is inextricably tied to the very clustering of talent and firms that shapes the widening gap between rich and poor"**

Richard Florida, "The New Urban Crisis" (2017)

*Fig. 11.*
*Buildings in the Besòs and Maresme neighborhoods.*
*Photo: Twitter (@Bcn_SantMarti). Adapted by author.*



**high difference between social statuses of population**

**high gentrification**

**high level of vulnerability**

**high level of increase of rental payment**

**high difference in living conditions of population**

Legend

Sant Martí district

Barcelona

*Fig. 12.*
*Neighborhoods of Sant Martí district in Barcelona context.*
*Created by author.*

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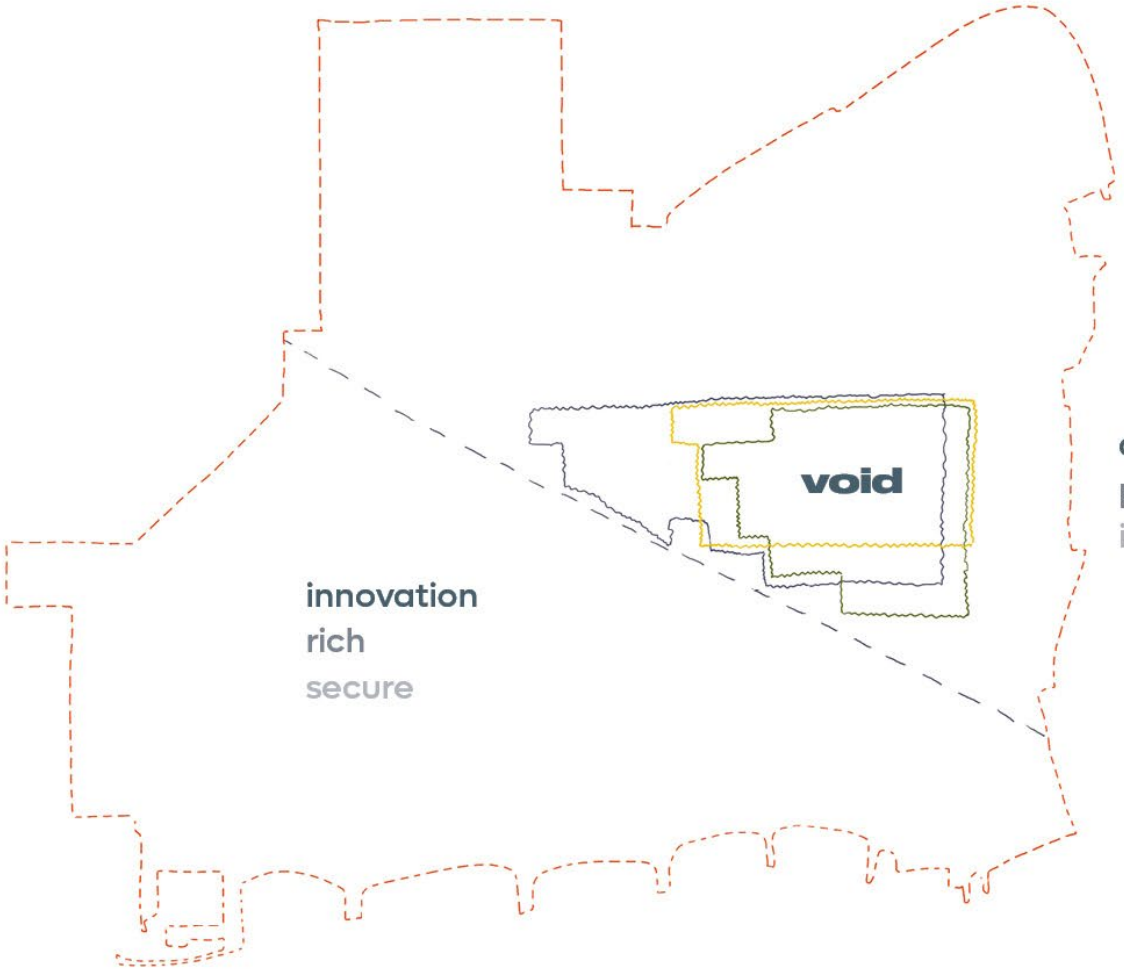
# void in the middle of Sant Martí

Fig. 14.
Sant Martí district within Barcelona borders.
Created by author.




Legend

- Sant Martí district
- activity void
- green void
- night movement void

Fig. 13.
Scheme of void location.
Created by author.

# void

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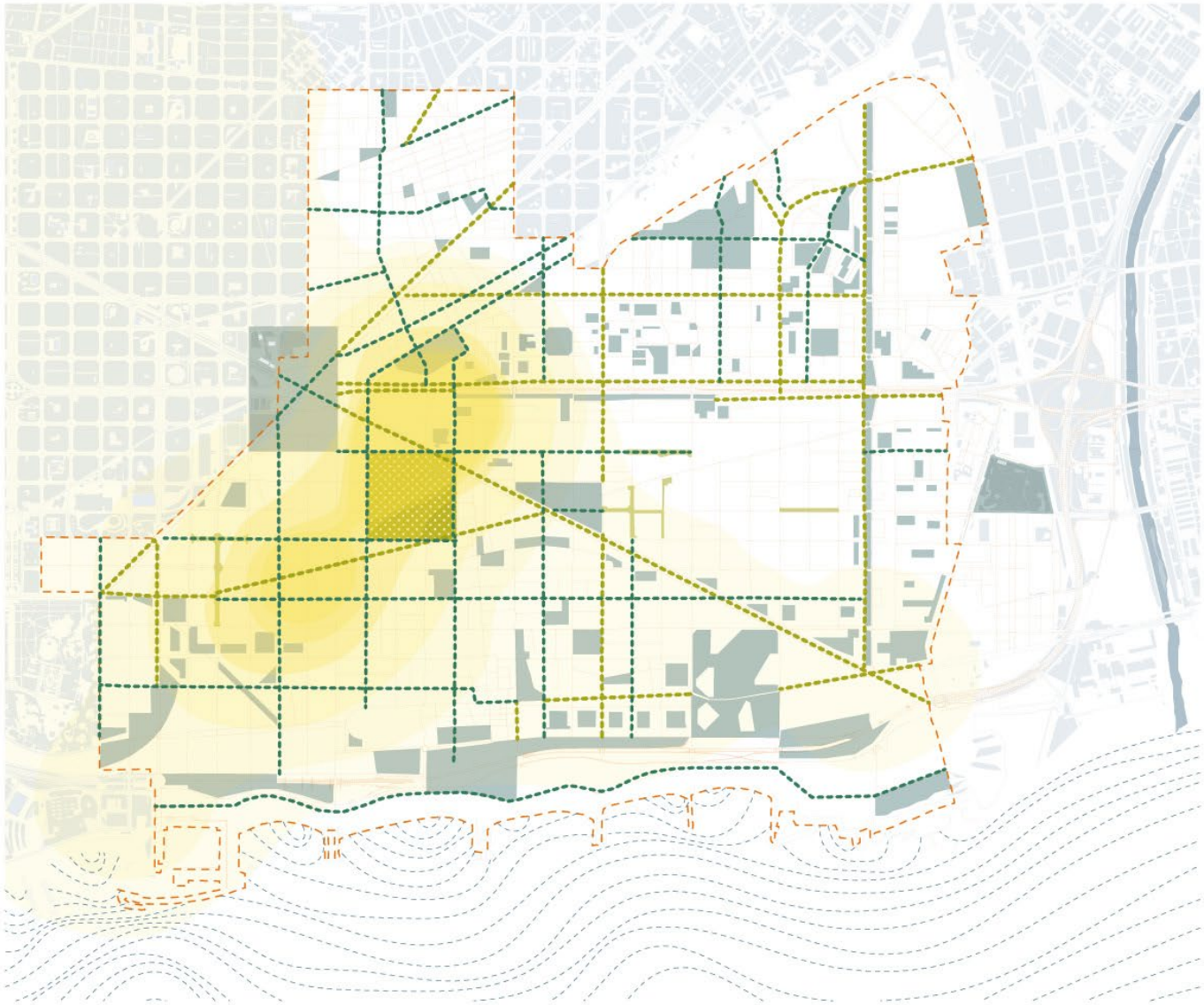

Legend

- Sant Martí district
- innovative clasters
- extra green corridors
- green areas
- Superblock Poblenou

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# project area: from @22 till natural border

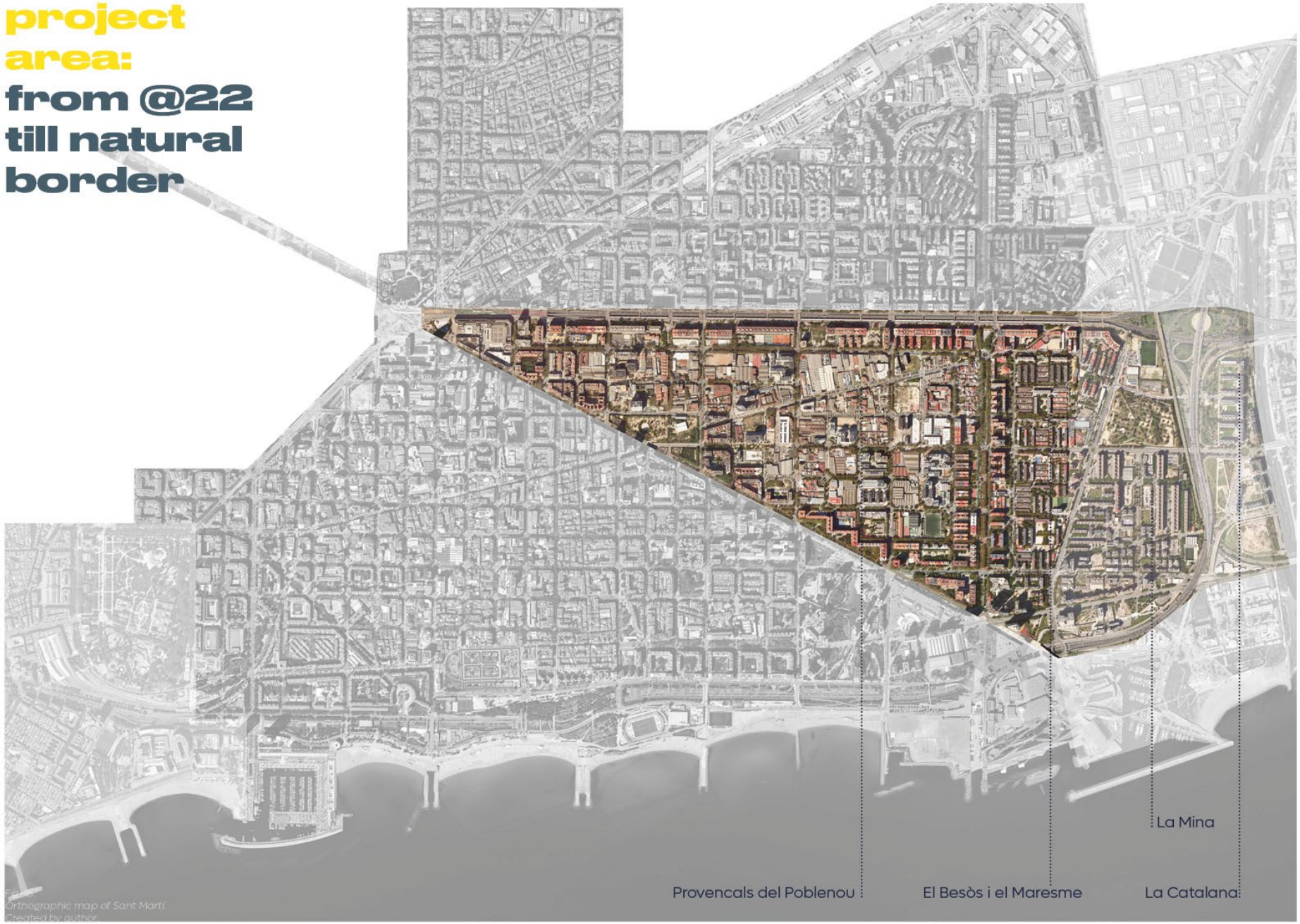


Figure
Orthographic map of Sant Martí
Created by author

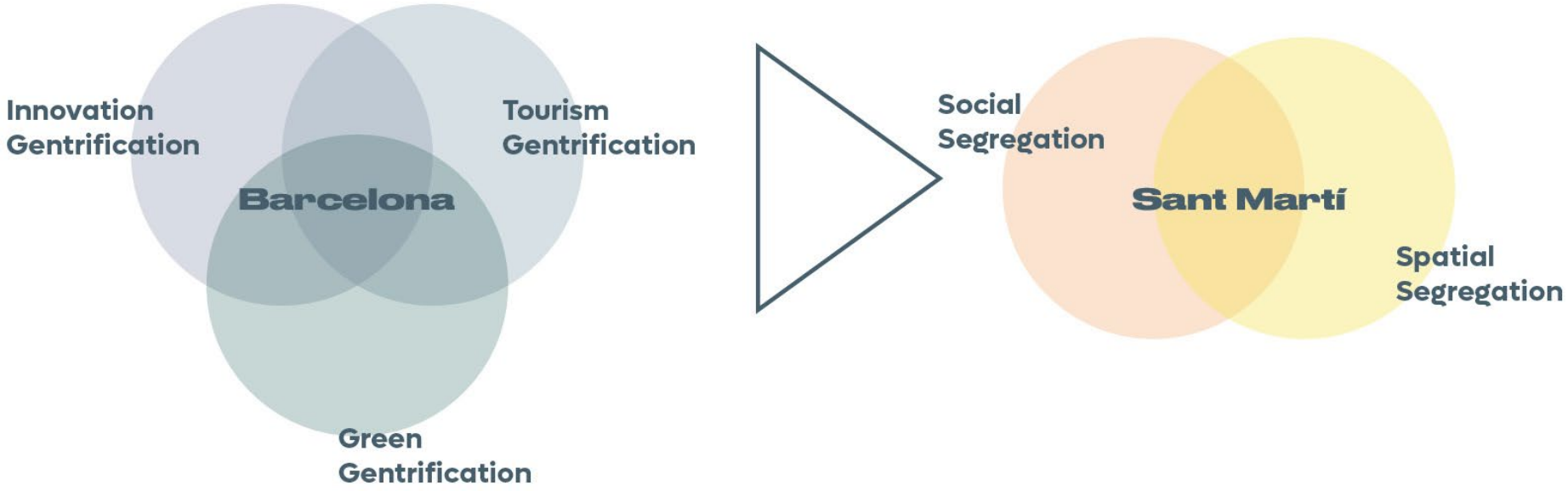


*Fig. 17.*
*Conceptual framework.*
*Created by author.*

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# socialy fragmented urban landscape

Legend

- Predominantly young professionals, tech workers, and middle-to-high income groups attracted by innovation-driven industries.
- Area with low-density of population. Mainly old local residents.
- High concentration of low-income residents and immigrant communities and gypsy with high unemployment rates and significant socio-economic challenges.
- Densed area with middle or low-to-middle income.
- Predominantly young cooples of middle income.

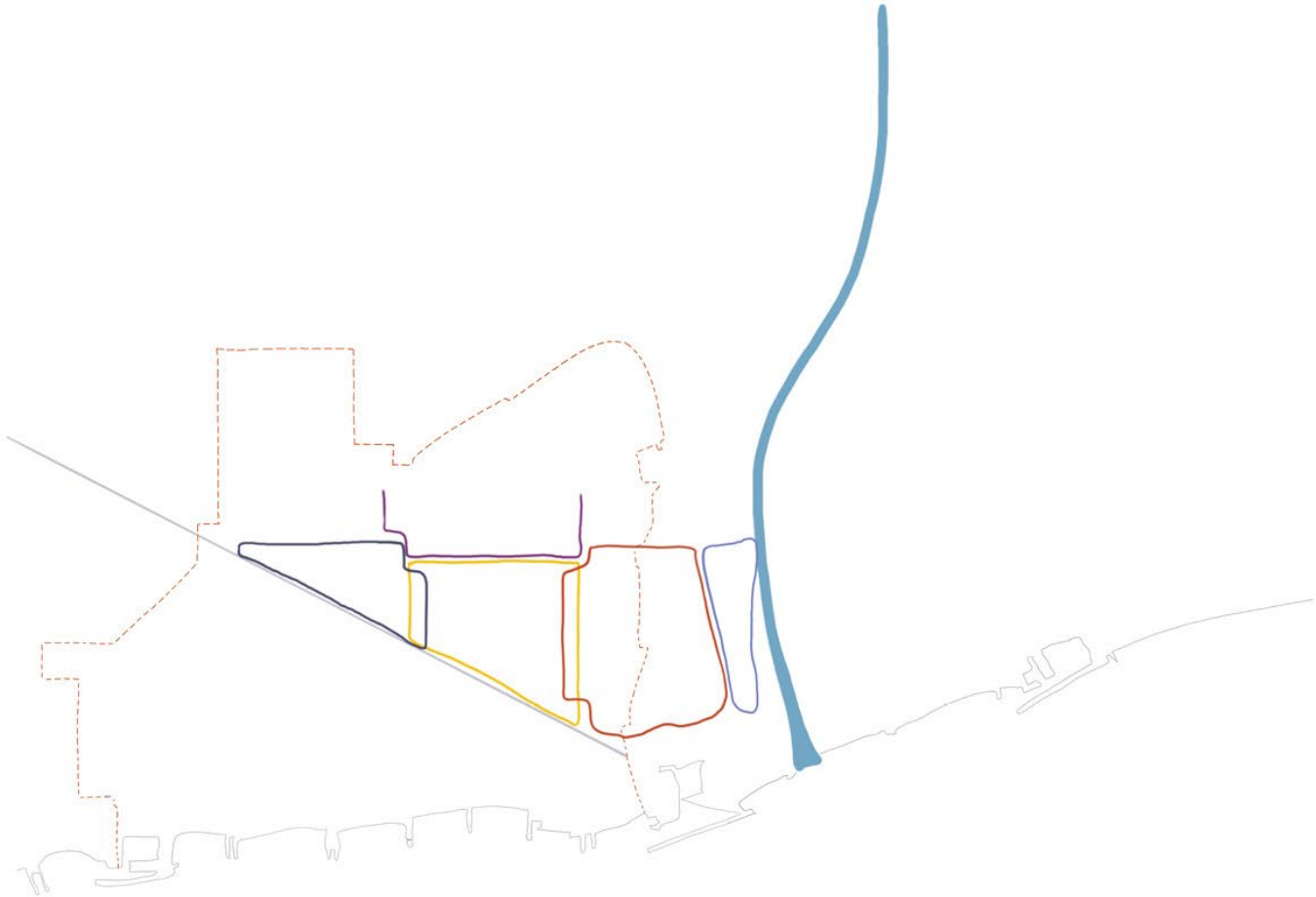

*Fig. 18.*
*Sociodemografic profile of Sant Martí.*
*Created by author, 2025.*

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# spatialy fragmented urban landscape

Legend

- physical barriers
- soft barriers
- industries

Fig. 19.
Physical barries.
Created by author.

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# urban structure

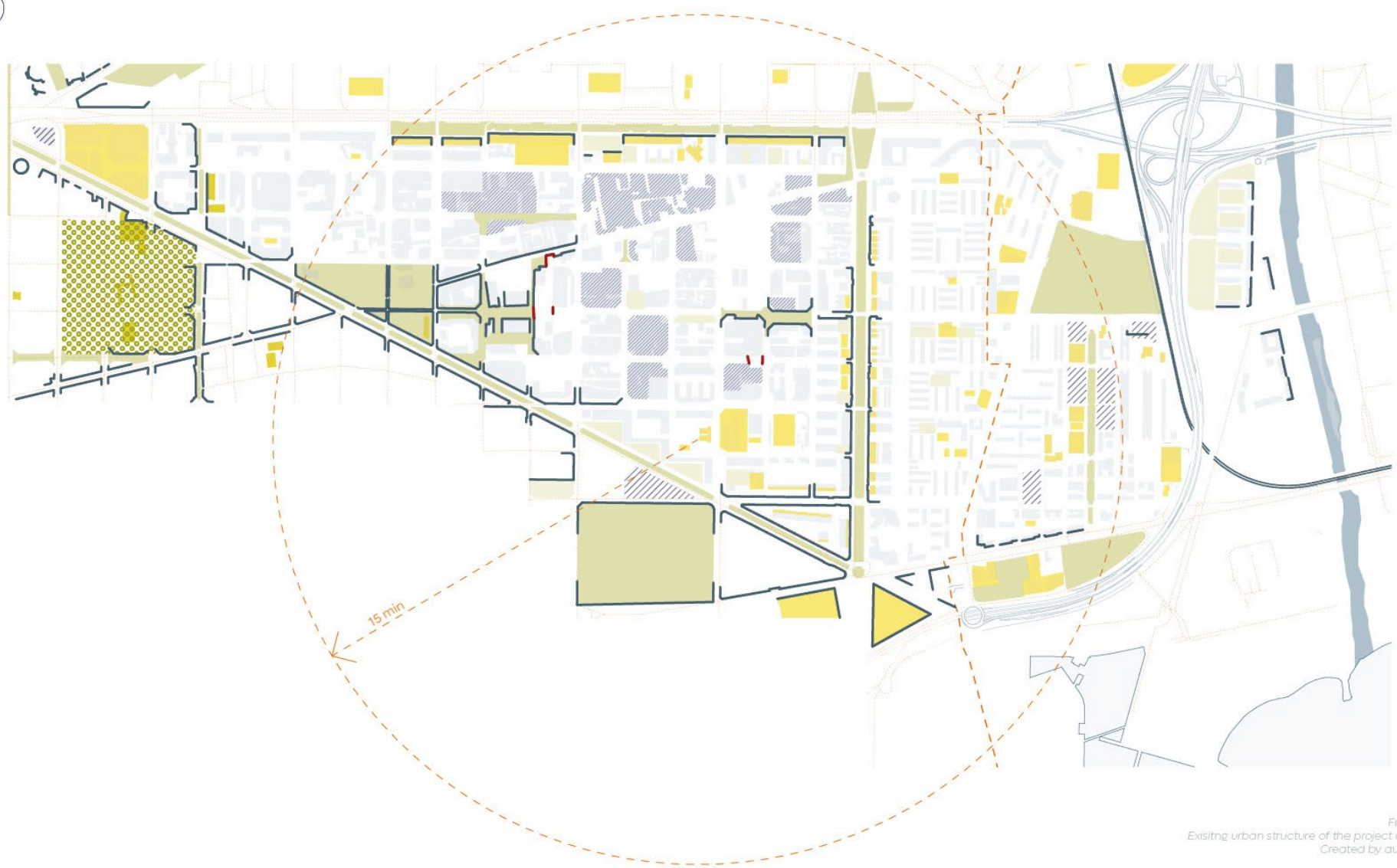


Fig. 20.
*Exisitng urban structure of the project area.*
*Created by author.*

**How can urban design foster spatial, social and economic connectivity between the 22@, La Mina, and La Catalana, ensuring a cohesive and inclusive urban fabric from Sant Martí to the Besòs River?**

## Subquestions:

→ Effect of gentrification and segregation

→ Social interaction and accessibility through spacial confugurations

→ Urban design interventions to reduce physical, economic and social barriers

→ Urban corridor 'the 22@, La Mina, La Catalana' as a unifying element

→ Urban planning measures to mitigate displacement and enhance community resilience

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# edge of the city

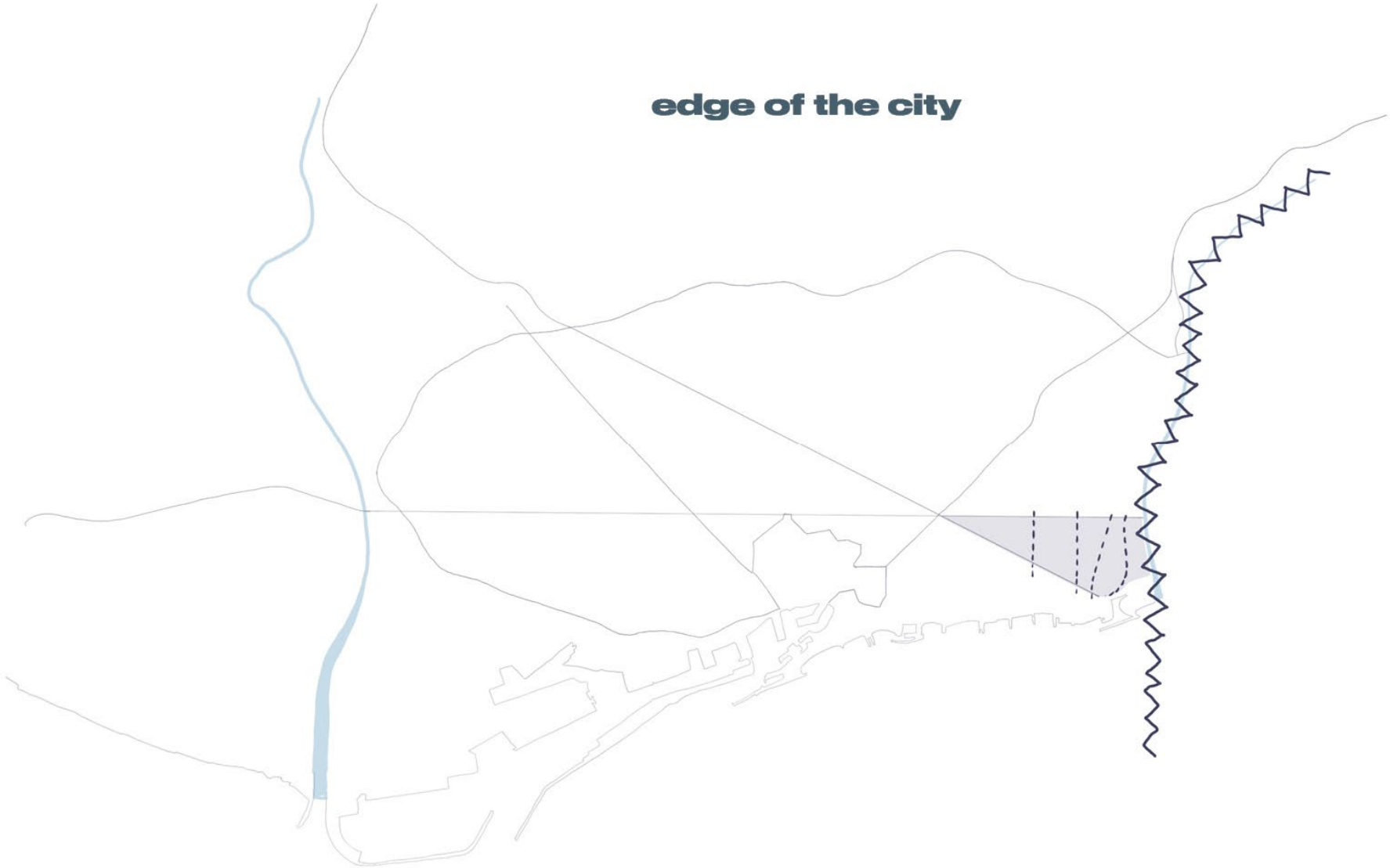

*Fig.21.*
*Area as an edge of Barcelona.*
*Created by author.*

*Fig. 22.*
*Area as new intercity centrality.*
*Created by author.*

# recreational connection

**Establish recreational spaces near the Besòs River that can act as a bridge between neighborhoods, promoting interaction and integration.**

**Core idea:** Accessible, well-designed recreational spaces enhance community well-being and attract visitors, fostering social cohesion and urban vitality (Lynch, 1960).

*Fig. 23.*
*Recreation concept.*
*Created by author.*

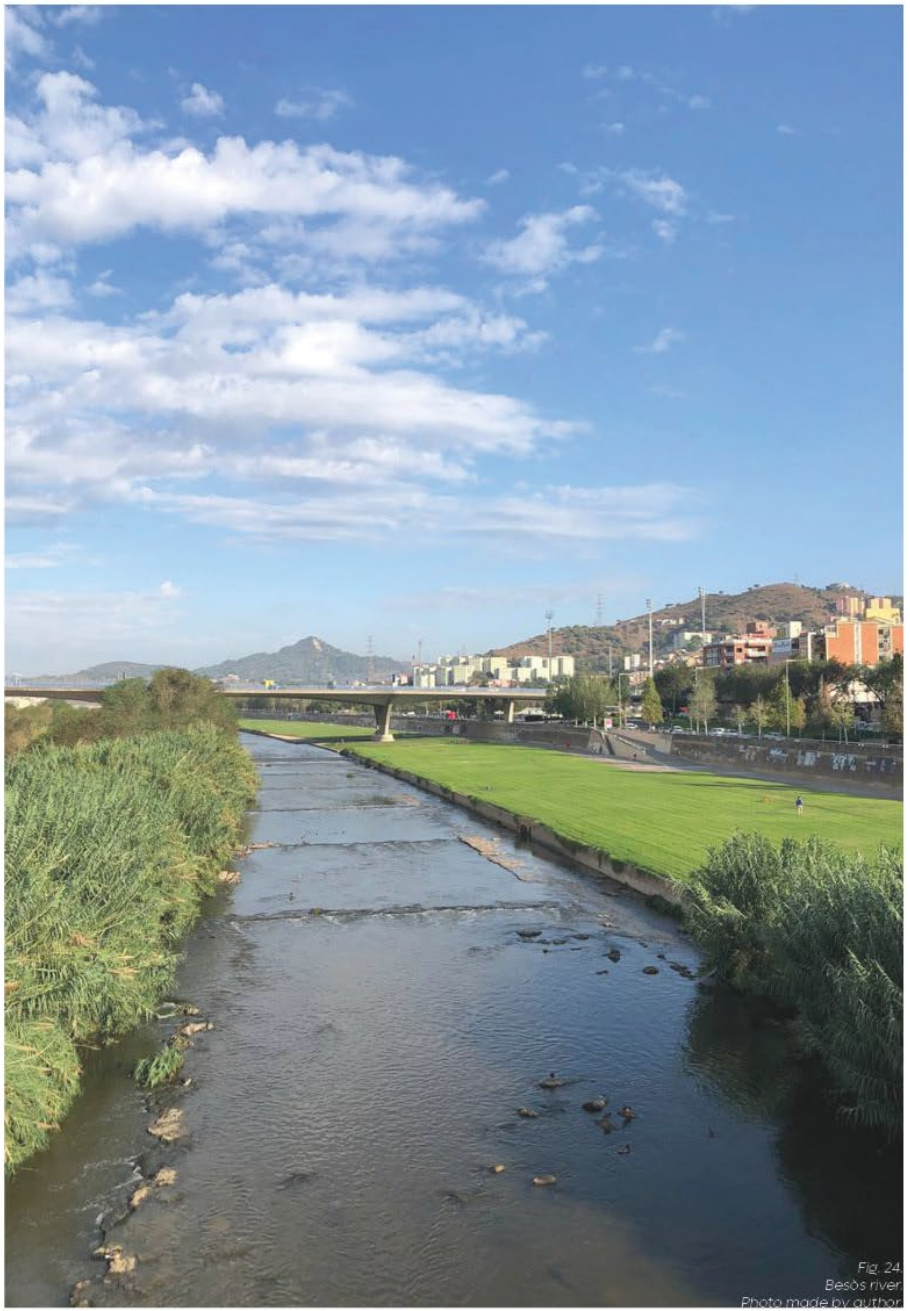

*Fig. 24.*
*Besòs river.*
*Photo made by author.*

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# green spaces
# dis/continuity

Legend

- green areas
- possible green lines
- project area

Fig. 25.
Connectivity of major green & open areas.
Created by author.

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# green spaces
# dis/continuity

Legend

- green areas
- possible green lines
- project area

Fig. 25.
Connectivity of major green & open areas.
Created by author.

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# green spaces
## dis/continuity

Legend

- green axis
- green lines with low development
- main green areas
- green areas with low development
- public infrastructure

Fig. 26.
*Possibility for green spaces in project area.*
*Created by author.*

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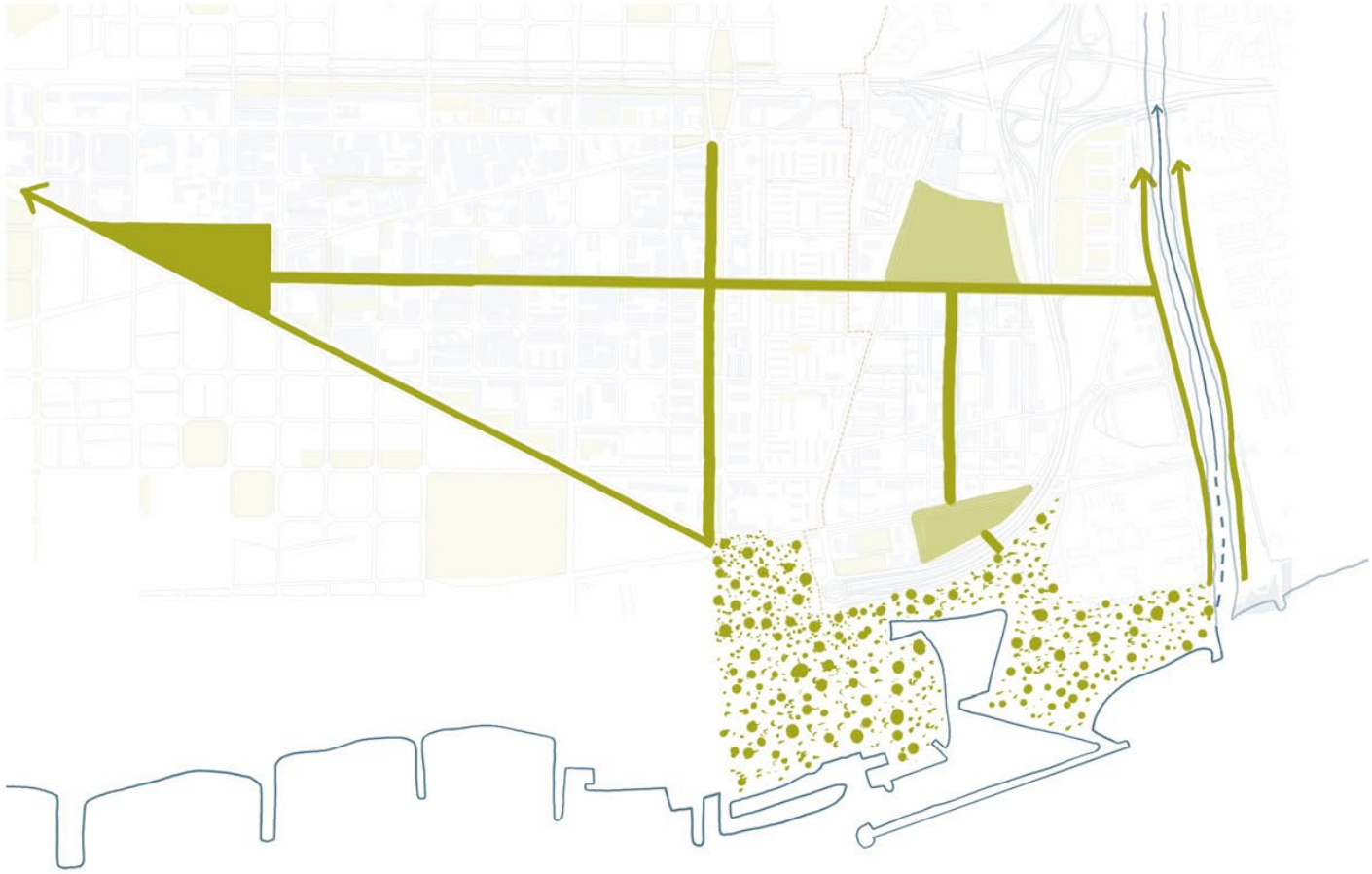
# green spaces
## dis/continuity



Legend

- green axis
- main green areas
- green areas with low development
- public infrastructure

Fig. 26.
*Possibility for green spaces in project area.*
*Created by author.*

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# cultural & social attraction

**Develop a cultural center to celebrate local histories and bridge social divides between diverse communities.**

**Core Idea:** Cultural hub can revitalize neighborhoods by fostering creative economies, preserving heritage, and enhancing urban identity (Zukin, 1995).

*Fig. 27.*
*Culture concept.*
*Created by author.*

*Fig. 28.*
*Visual rendering of the future Catalunya Media City in the Tres Chimeneas turbine hall.*
*Render from Garcés de Seta Bonet & Marvel Architects, 2025.*

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# density
# rise

**Develop a denser, more mixed-use urban fabric that can accommodate population growth while improving spatial quality, public services, and accessibility.**

→ **Core Idea:** Strategic densification enhances the efficiency of land use and infrastructure, creates the conditions for social mixing, and supports long-term urban resilience (Dovey & Pafka, 2014).

Fig. 29.
Density concept.
Created by author.

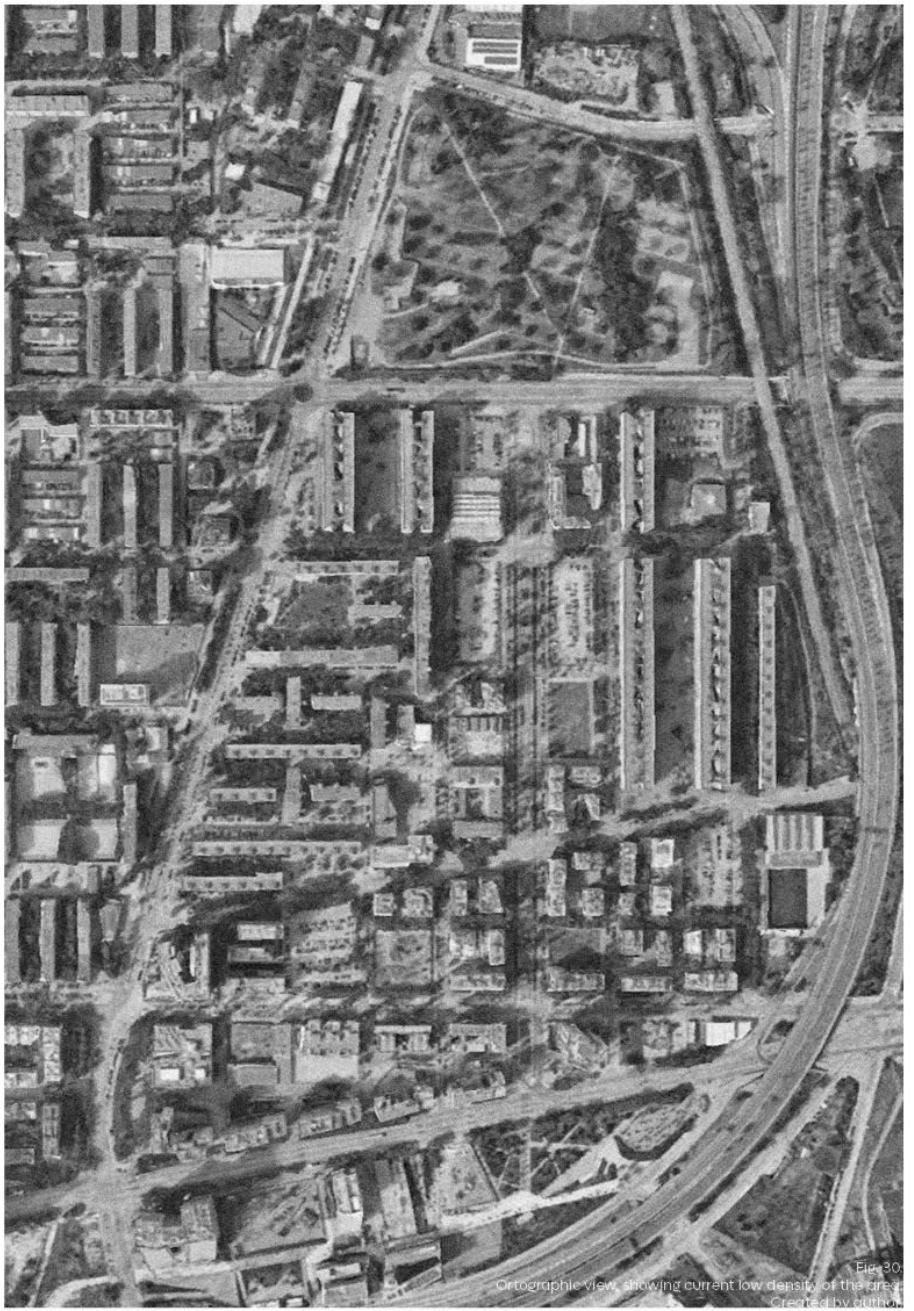

Fig. 30.
Ortographic view, showing current low density of the area.
Created by author.

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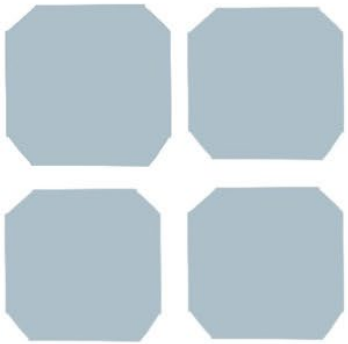
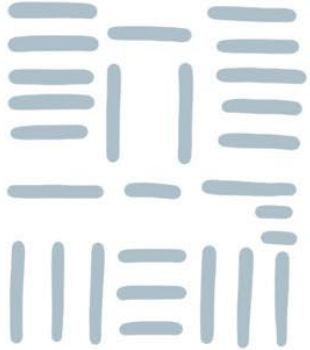
# low density
# poor quality
# no mix

**center of Barcelona**

**@22 innovation district**

**El Besos i El Marisme and La Mina**





FAR: 4.6

FAR: 2.7

FAR: 1.9

*Fig. 31.*
*Existing urban fabric.*
*Created by author.*

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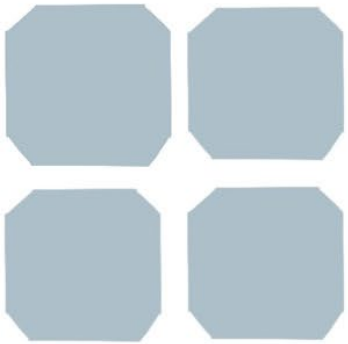
# high density
# great quality
# social mix

**center of Barcelona**



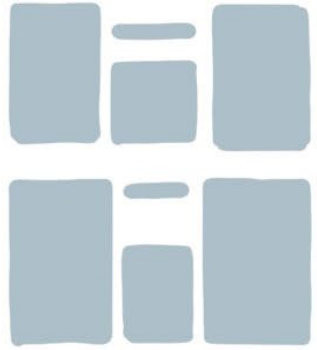
FAR: 4.6

**@22 innovation district**

FAR: 2.7

**x2**

**El Besos i El Marisme and La Mina**



FAR: 3.8-4

*Fig. 32.*
*Proposed densification in the area of La Mina and El Besòs i el Maresme.*
*Created by author.*

# reference: socially conscious development

**FAR:**
Planned up to 3.8

**Population:**
20,000-25,000 residents

**Density:**
130–150 dwellings/ha

**Affordable Housing Share:**
45%

**Height:**
Mid-rise to high-rise 5–12 stories

**Jobs Created:**
25,000

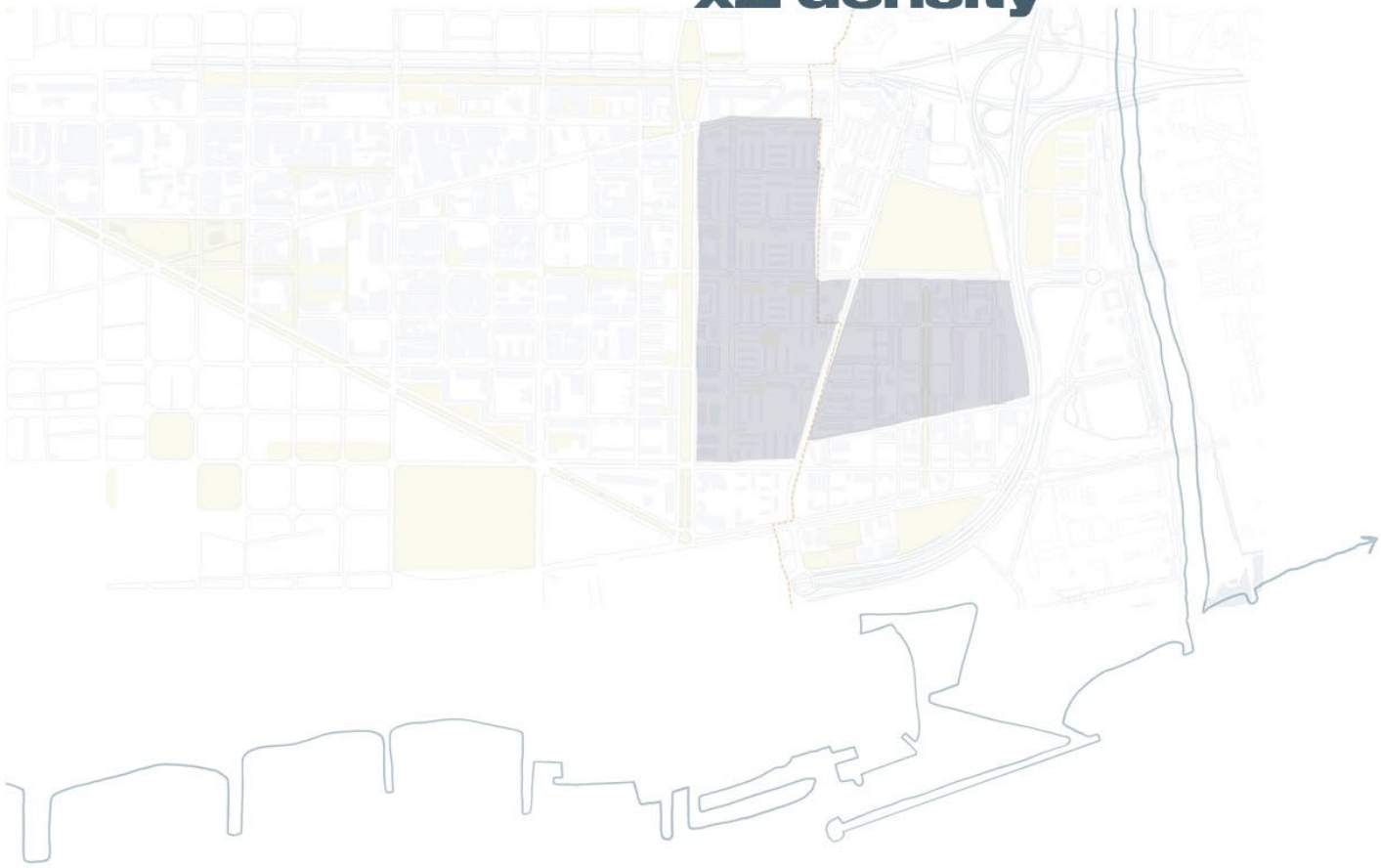
## Brent Cross Town/ London

Fig. 33
Brent Cross Town Masterplan aerial view
Source: Related Argent

# demolish for better

Fig. 35.
State of buildings in La Mina.

## x2 density



Legend

area for demolishion

Fig. 36.
Area of densification.
Created by author.

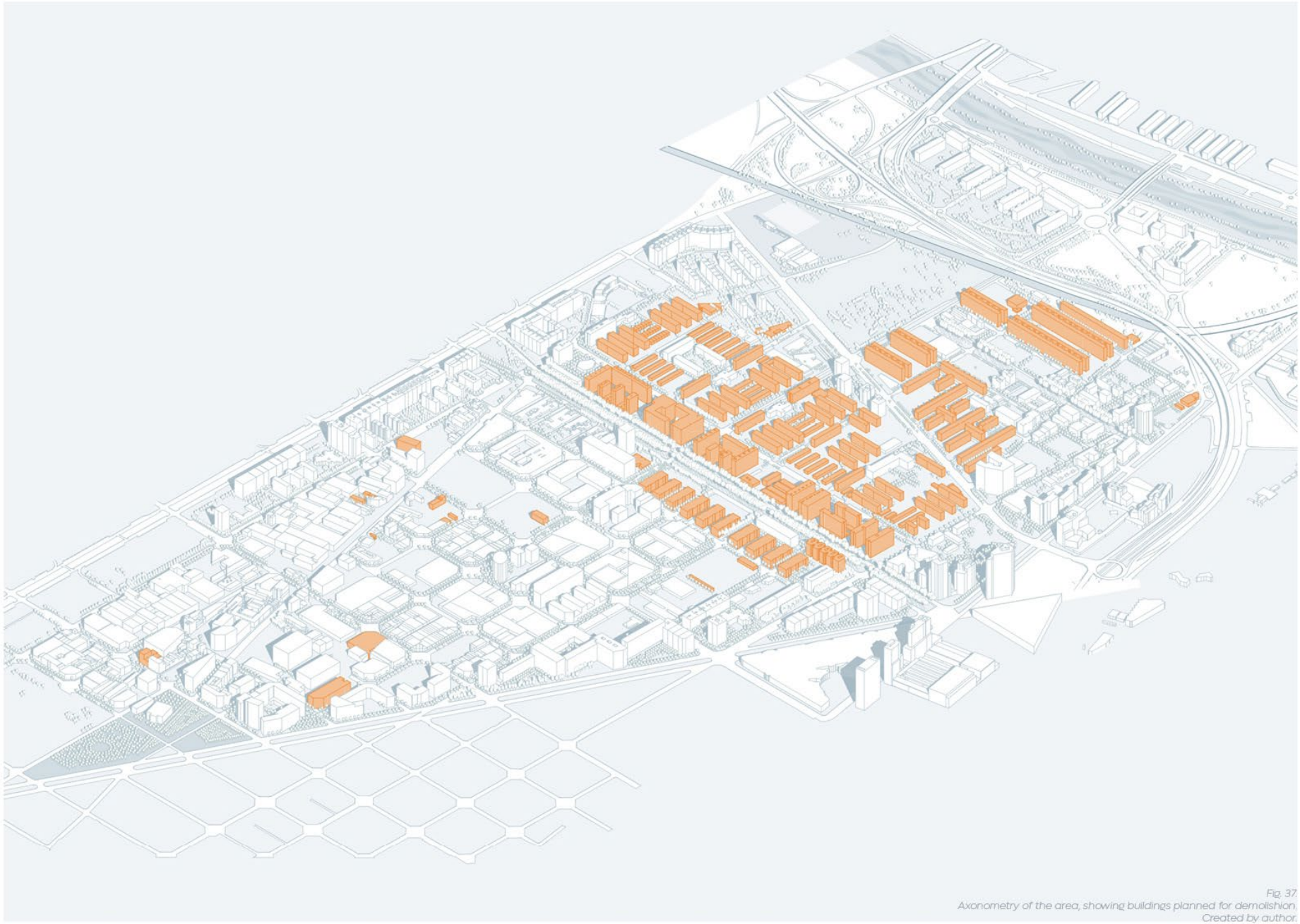


*Fig. 37.*
*Axonometry of the area, showing buildings planned for demolishion.*
*Created by author.*

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# broken grid

Legend

- extended grid
- main grid
- proposed grid
- out-of-grid lines
- green areas

Fig. 38.
Structure of the grid.
Created by author.

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# extended grid

Legend

- extended grid
- main grid
- proposed grid
- out-of-grid lines
- green areas

Fig. 38.
Structure of the grid.
Created by author.

# tunnel city

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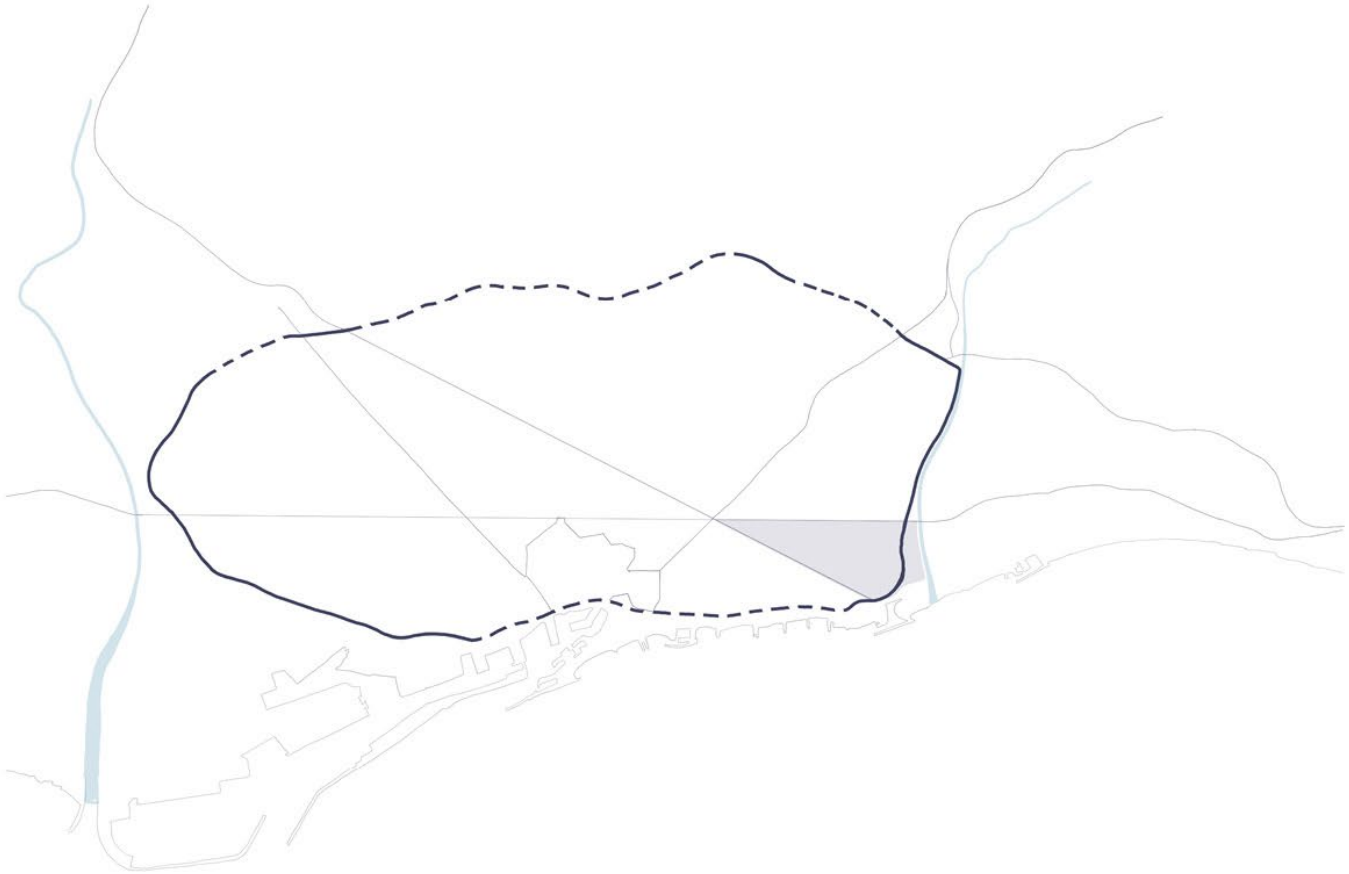

Legend

— — — hidden highway

——— open highway

*Fig. 40.*
*Current location of tunnels of the main highway around Barcelona.*
*Created by author.*

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# city startegy extended: invisible highway

Legend

— — — hidden highway

——— open highway

Fig. 41.
Strategic area for arranging the hifgway into tunnel in the future.
Created by author.

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# highway as a border

Legend

- highway in a tunnel
- ground highway
- exising undeground connections
- area in decline

*Fig. 42.*
*Current discontinuity between neighborhoods due to infrastructure and low quality of connectors.*
*Created by author.*

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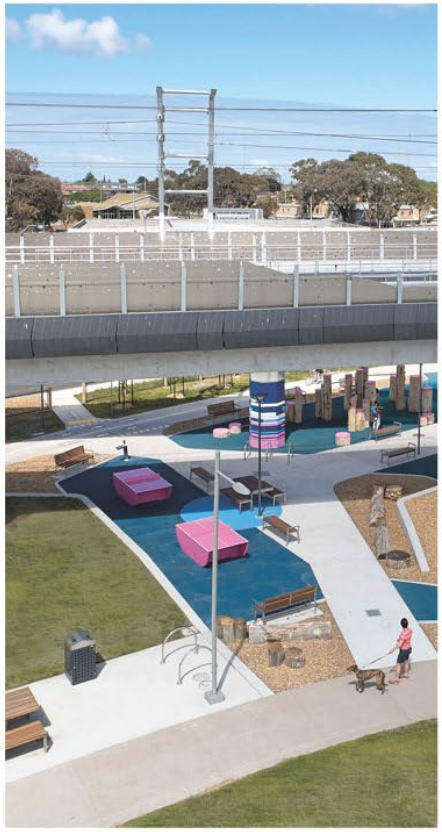
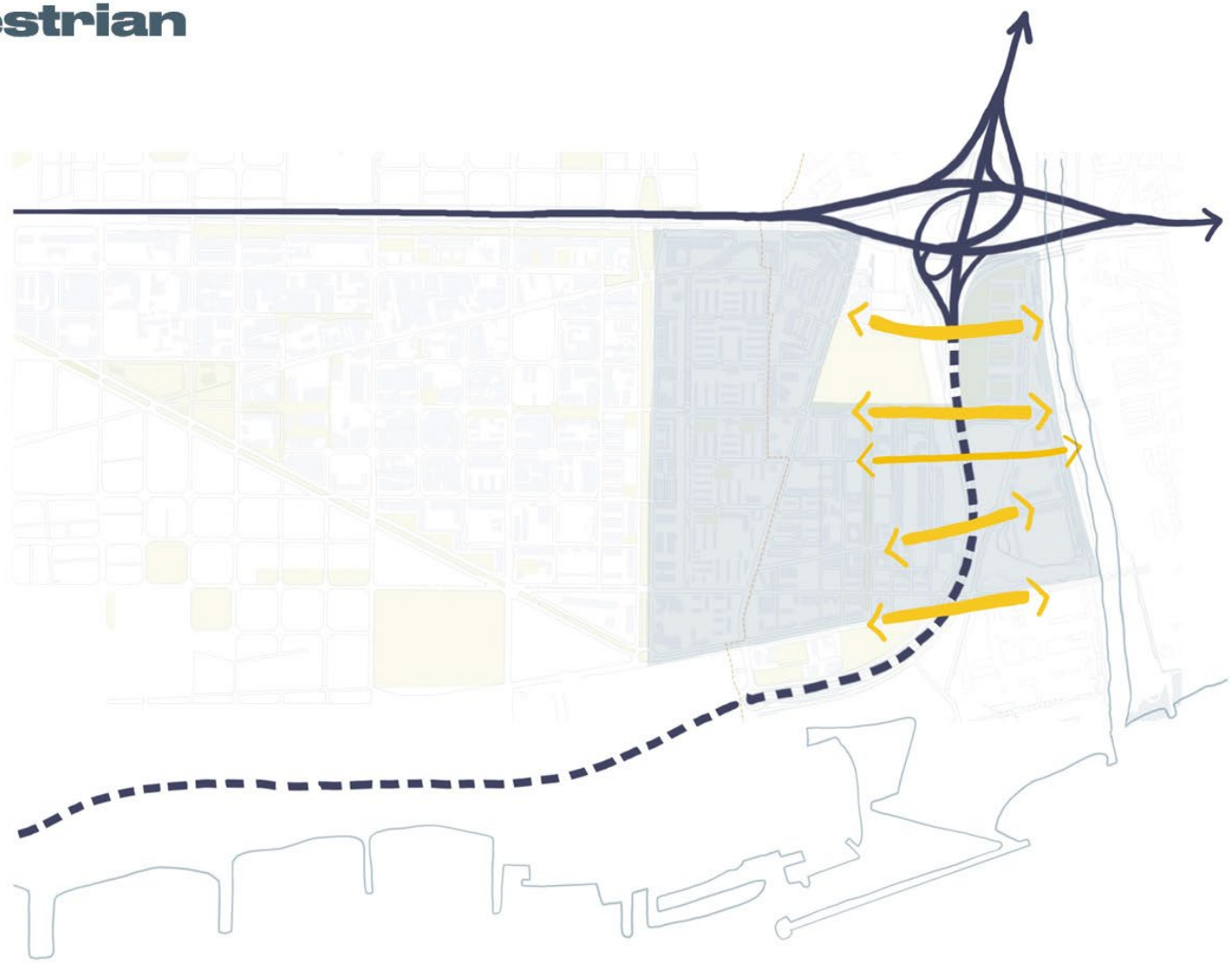
# smooth pedestrian connection





Legend

- highway 'transparent'
- ground highway
- continious undeground connections
- area in decline

Fig. 43.
*Proposed connections for improvement.*
*Created by author.*

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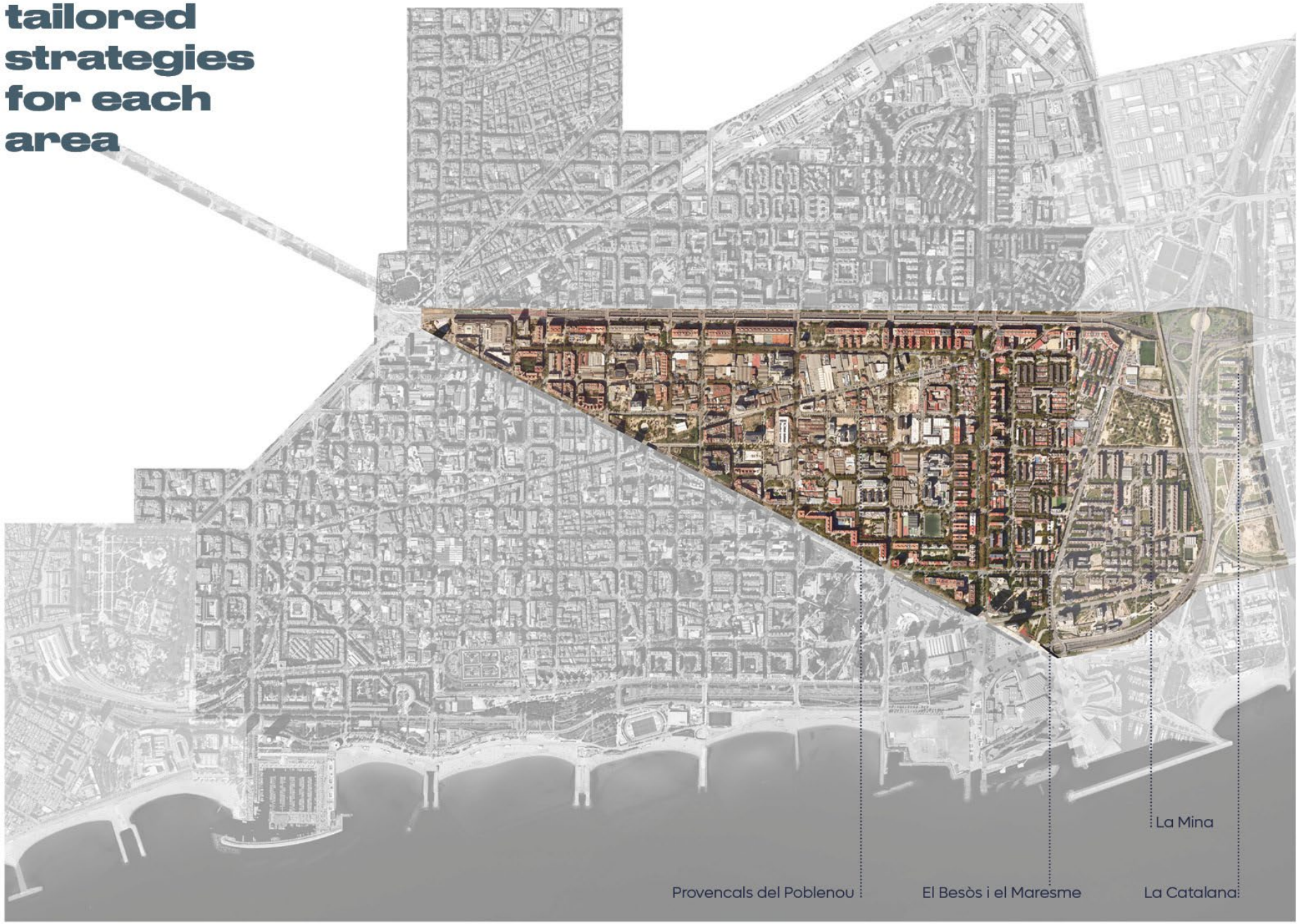
# tailored strategies for each area



# free to fill

Legend

areas without use

*Fig. 45.*
*Open spaces without program.*
*Created by author.*

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# break the wall

Legend

barriers to destroy

Fig. 46.
Areas with physical barries.
Created by author.

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# industry as an attraction

Legend

barriers to destroy

Fig. 47.
Industries that can be a part of public infrastructure.
Created by author.

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# facades to be opened

Legend

facades to open

Fig. 48.
Facades that need to be improved.
Created by author.

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# proposed master plan

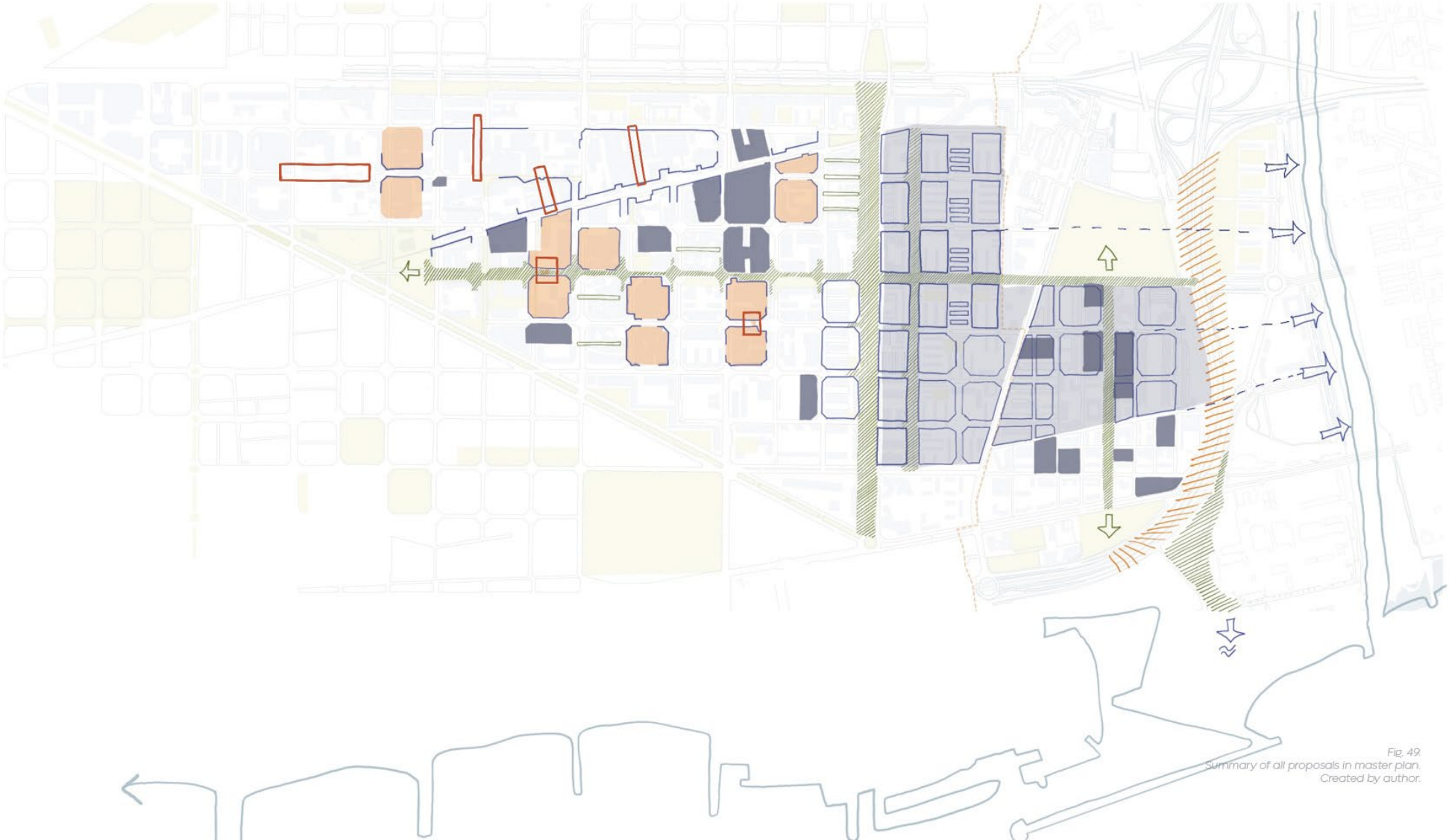

Fig. 49
*Summary of all proposals in master plan. Created by author.*

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# proposed master plan

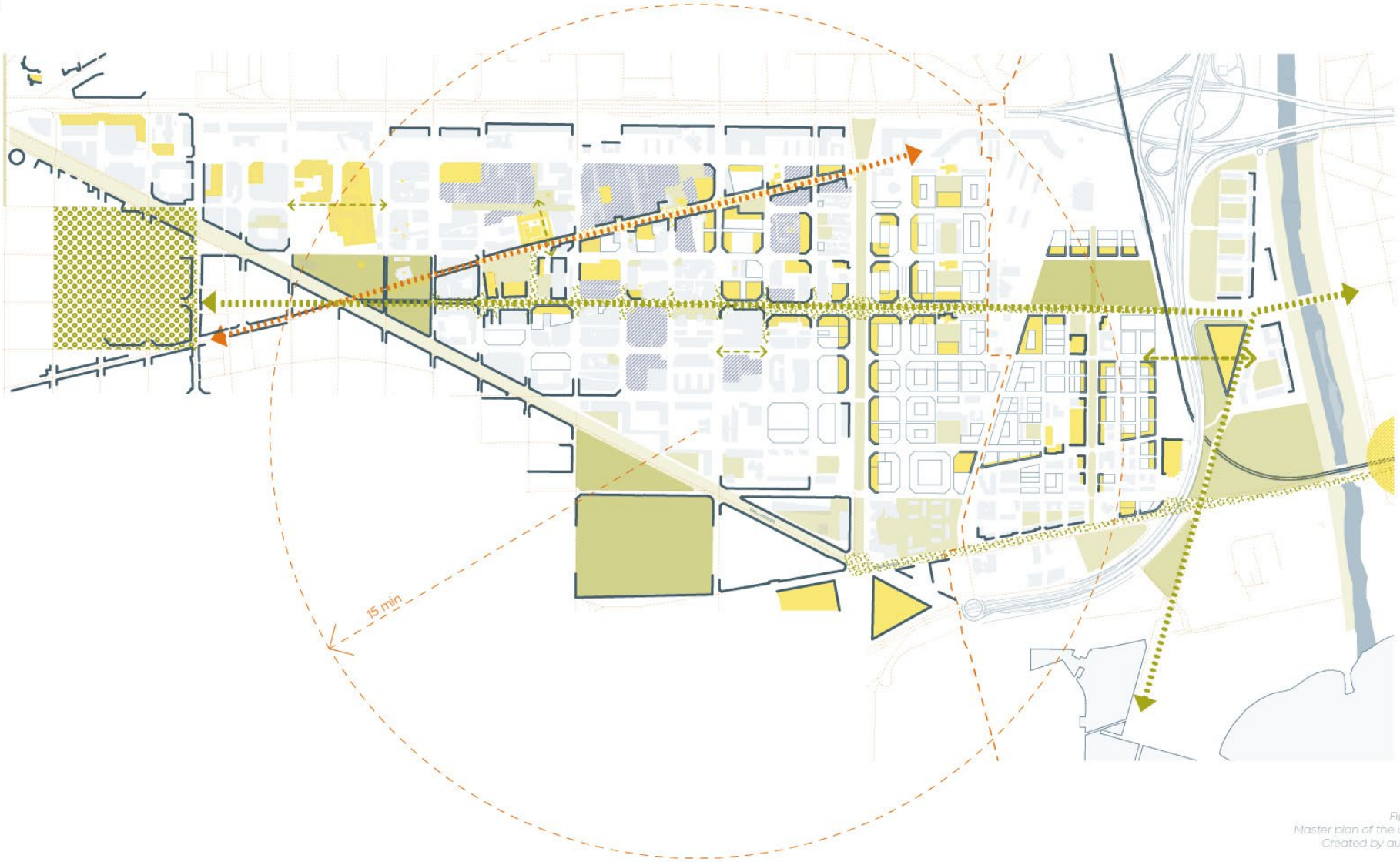


Fig. 50.
Master plan of the area.
Created by author.

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# existing

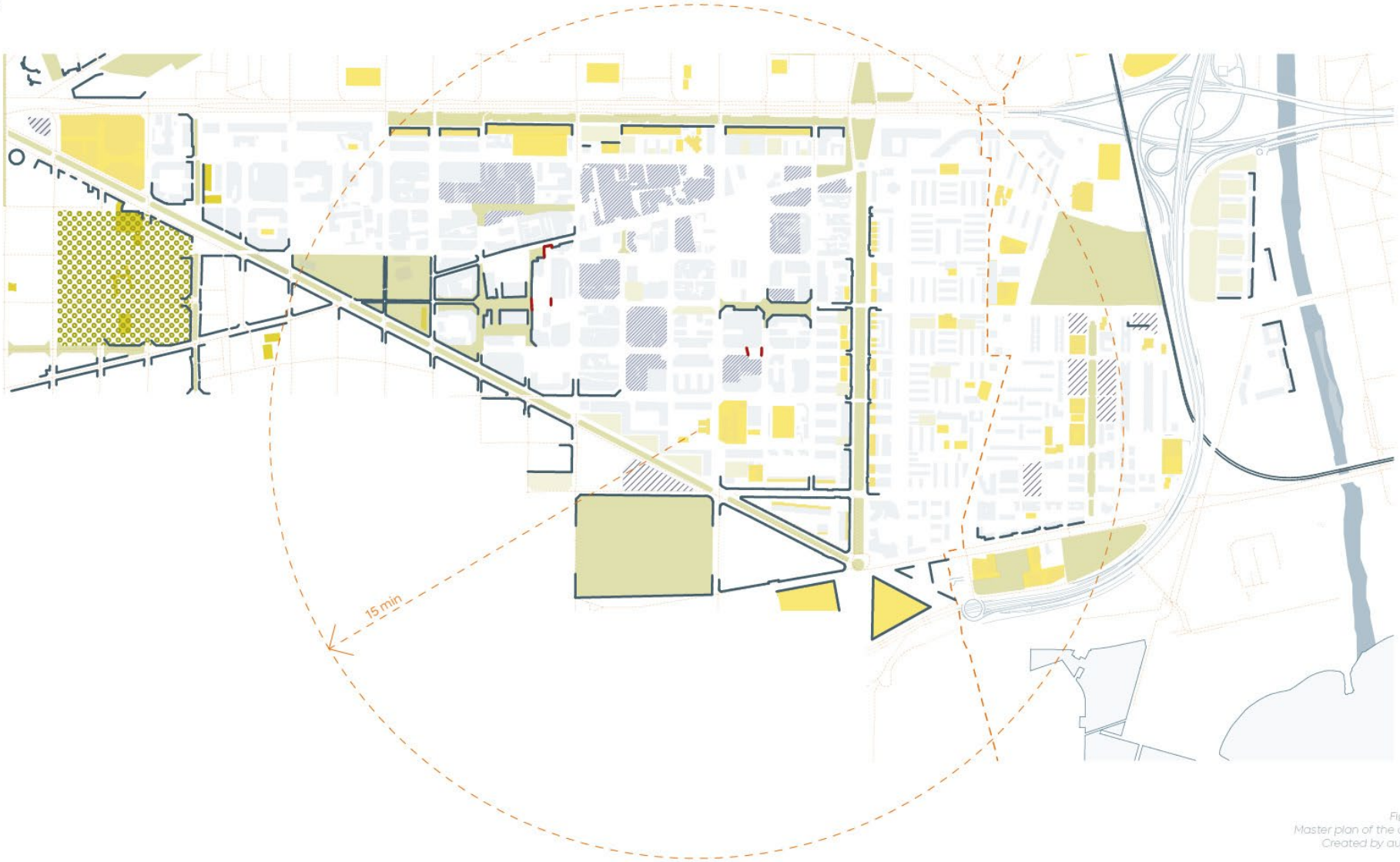


*Fig. 50.*
*Master plan of the area.*
*Created by author.*

# socially conscious gentrification

**Inhabitants to relocate**

**23000 people**

**Living area to demolish**

**600.000m2**

**N of flats to demolish**

**8000**

**m2/person**

**25**

**Average N of floors**

**5**

**Inhabitants old+new**

**46000 people**

**Living area to build**

**1.200.000m2**

**N of flats to rebuilt**

**16000**

**m2/person**

**26**

**Average N of floors**

**6**

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# before

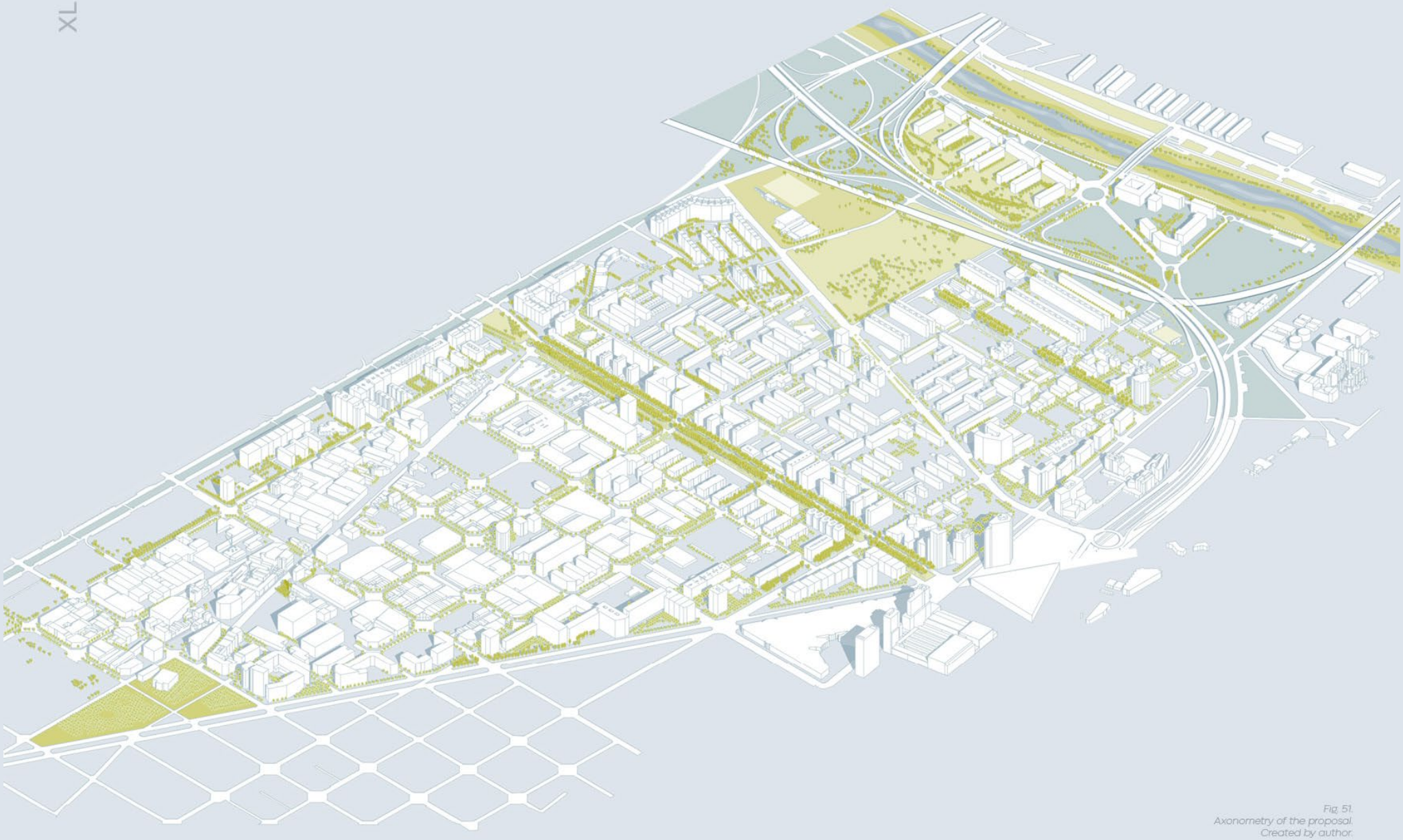

*Fig. 51.*
*Axonometry of the proposal.*
*Created by author.*

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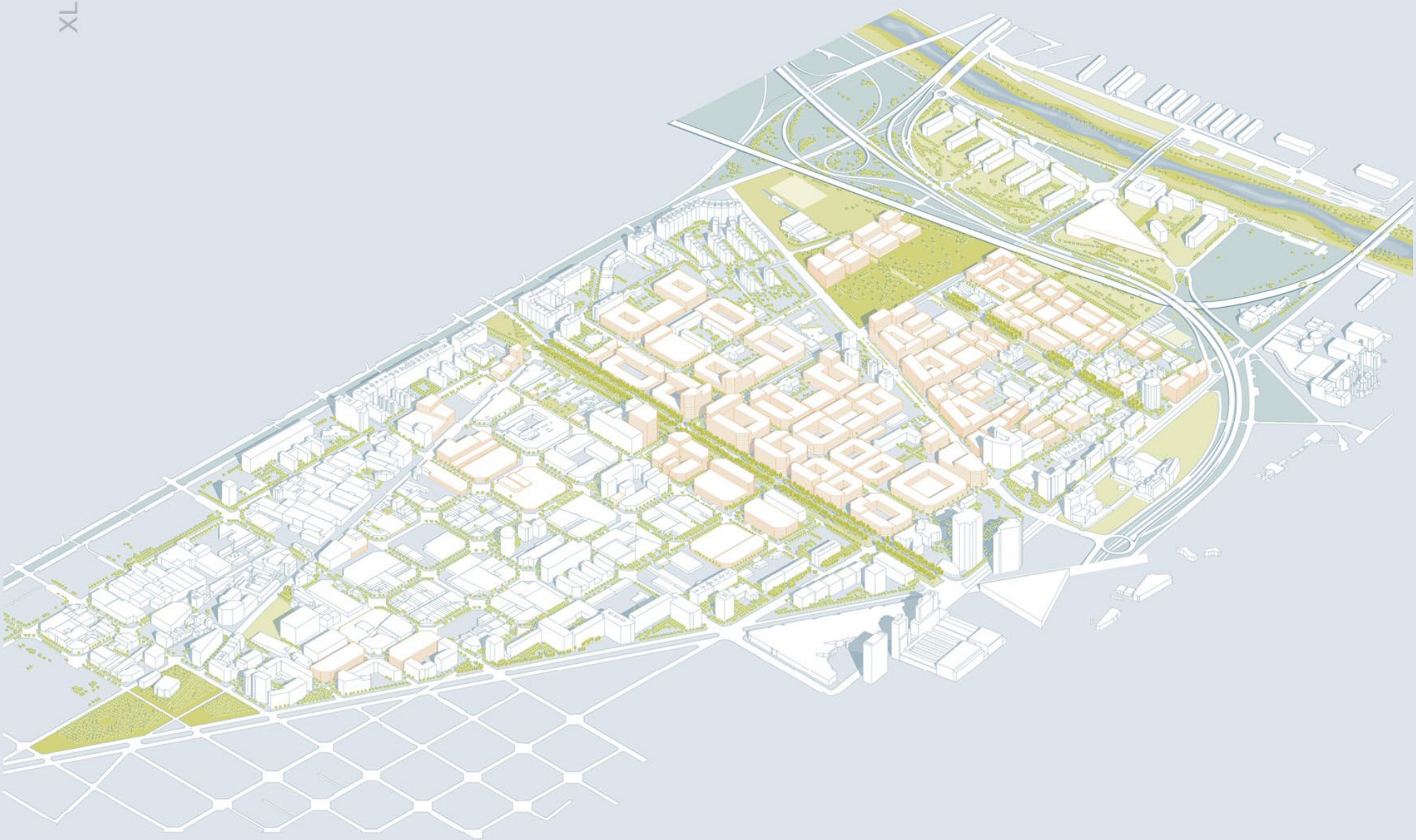
# after



# thresholds design

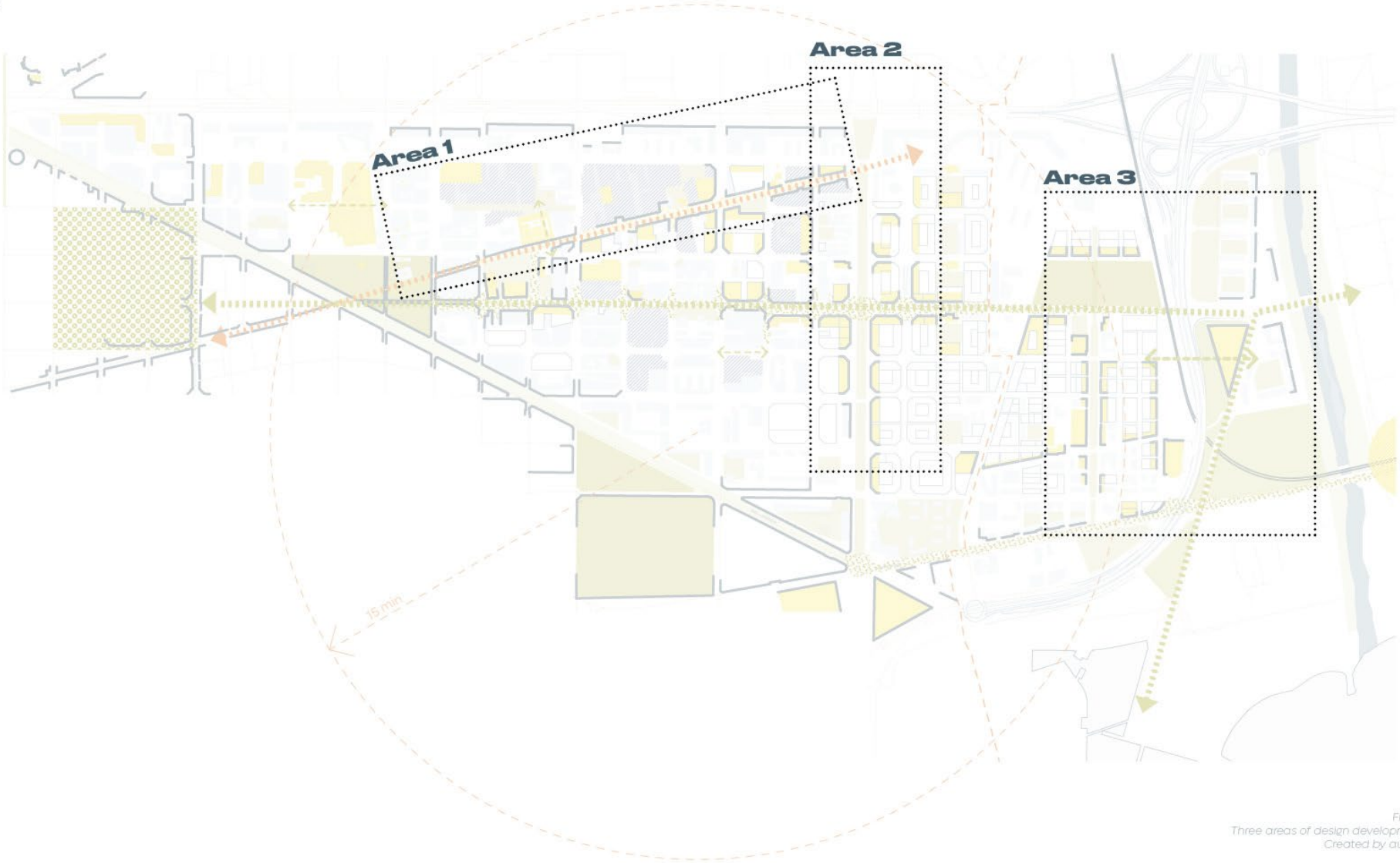



Fig. 52.
*Three areas of design development.*
*Created by author.*

## area ONE: old bricks, new tricks

*Fig. 53.*
*Conceptual image.*
*Created by author with the use of Midjourney.*

## area TWO: transparent streets for citizens, not for cars

*Fig. 54.*
*Conceptual image.*
*Created by author with the use of Midjourney.*

## area THREE: softening the hard edge

*Fig. 55.*
*Conceptual image.*
*Created by author with the use of Midjourney.*

# area ONE: old bricks, new tricks

Fig. 56.
Conceptual image.
Created by author with the use of Midjourney.

Fig. 57.
Conceptual scheme of the area.
Created by author.

# area ONE

Fig. 58
Inhective facades and low maintenance of the area
Photo made by author

Fig. 59
Area near La Escocesa.
Photo made by by author.

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# area ONE

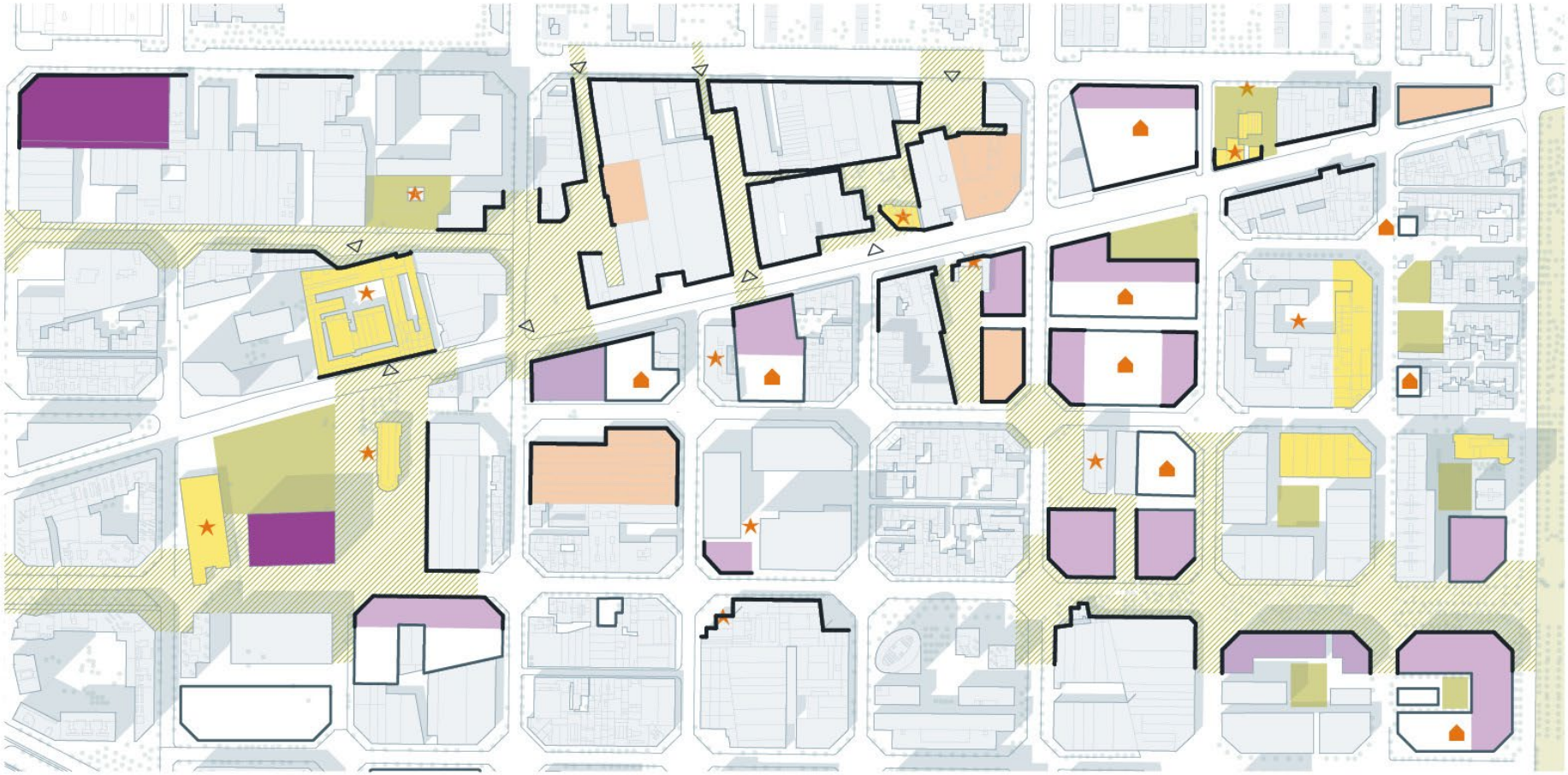


Fig. 60.
General master plan of the area.
Created by author.

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# area ONE:

*Fig. 61.*
*Map of program of open areas.*
*Created by author.*

# area ONE:

## ① To play

Fig. 87.
Superkilen by BIG in Copenhagen.
Photo by Iwan Baan.

## ② To rest

Fig. 88.
Ca l'Alier, renovated industrial building and green areas in Barcelona.
Source: Ajuntament de Barcelona (2023). Retrieved from https://www.barcelona.cat/surveyfotografic/en/project/ca_lalier.html

## ③ To wait

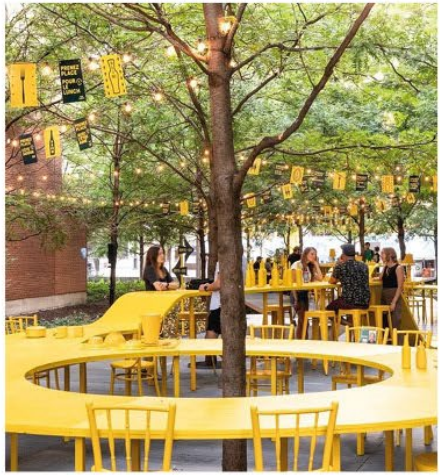

Fig. 89.
Example of dynamic waiting area.
Photo by Raphael Thibodeau.

## ④ To buy

Fig. 90.
Example of public activities integrated into industrial urban fabric.
Rendering: Courtesy of Wire Park.

## ⑤ To see art

Fig. 91.
Example of pop-up exhibition.
Source: Uknown.

## ⑥ To produce

Fig. 92.
Example of public garden.
Photo by Julia Sherman.

# area ONE

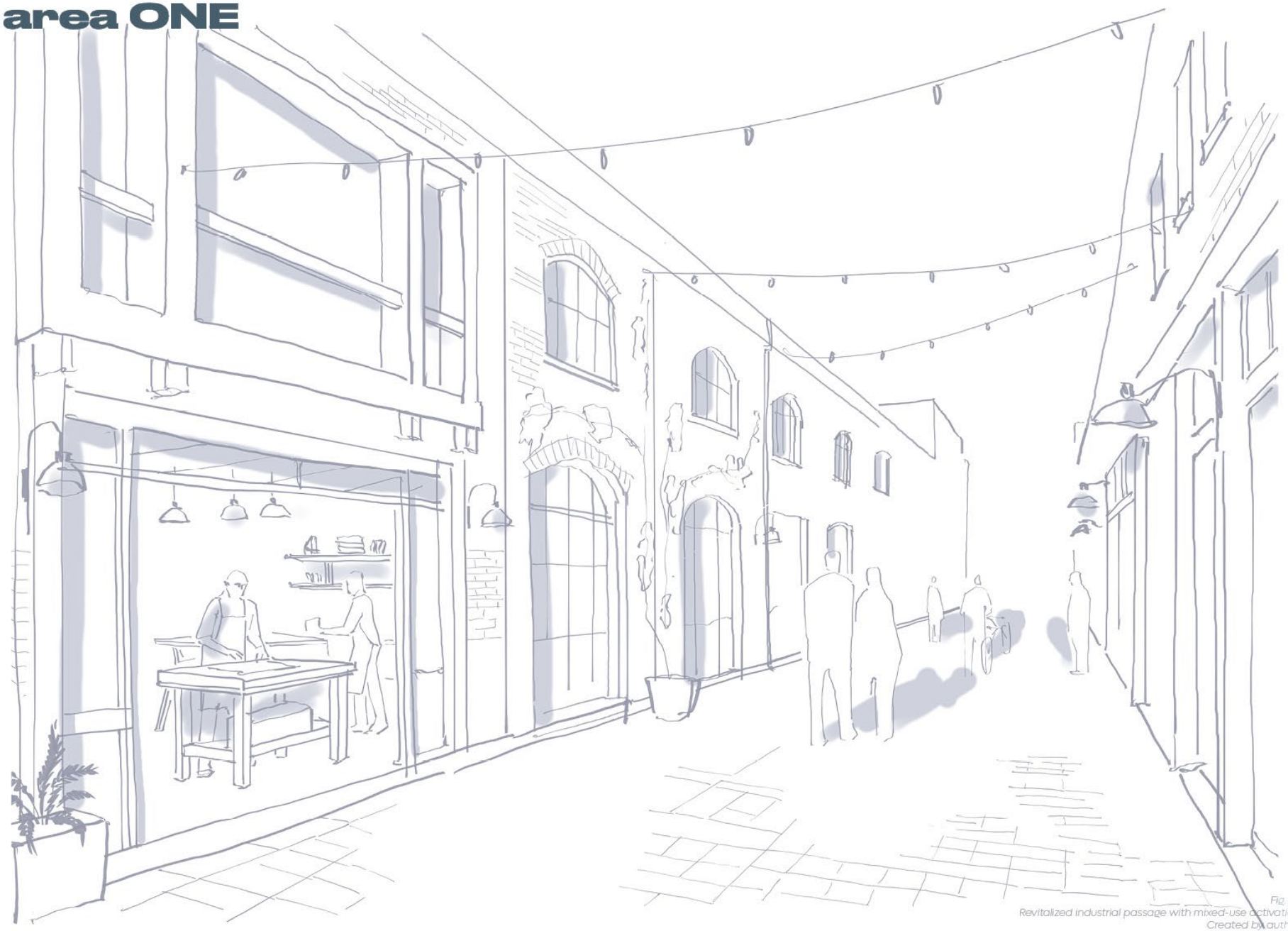

Fig. 62.
Revitalized industrial passage with mixed-use activation.
Created by author.

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# area ONE

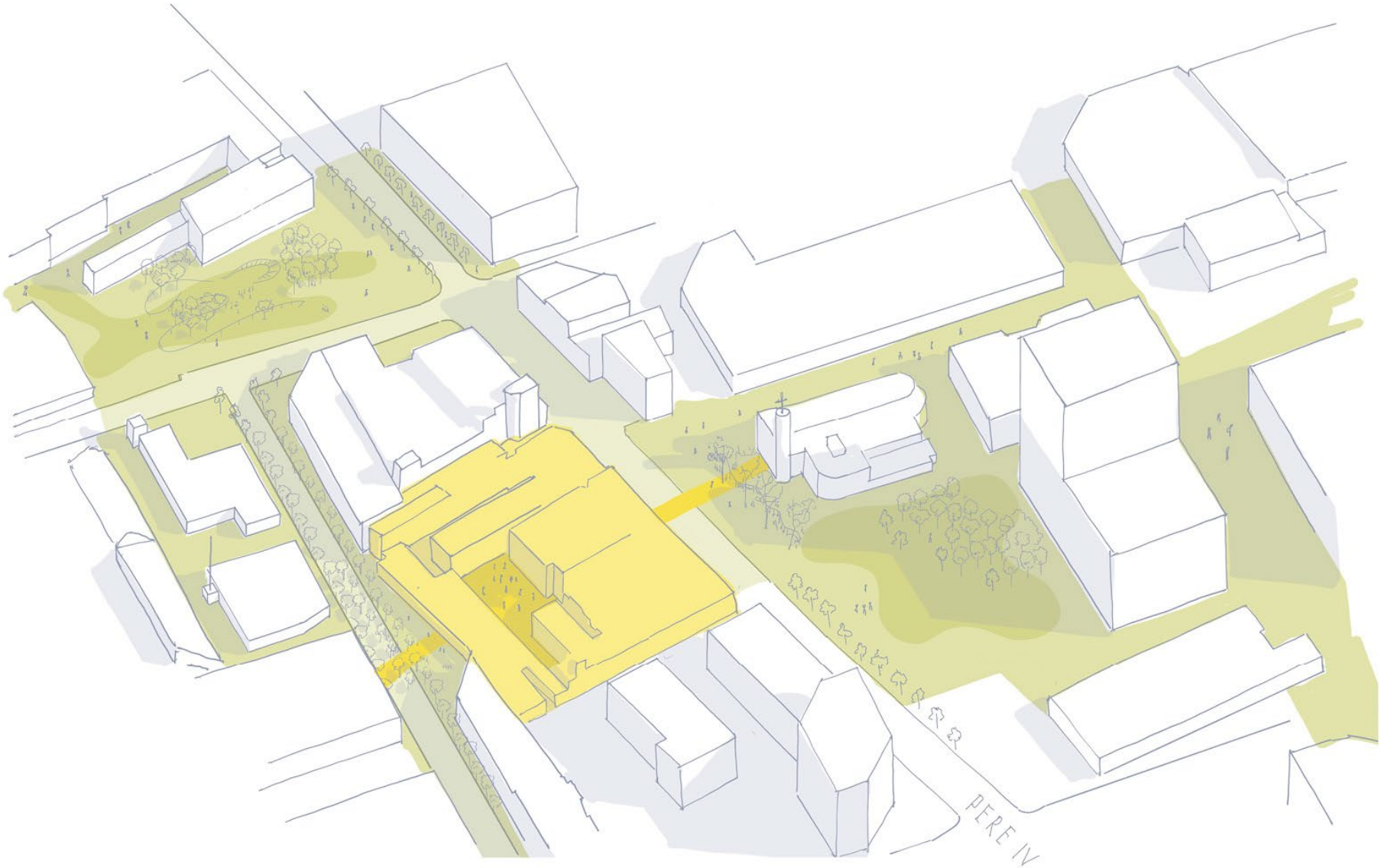


*Fig. 63.*
*Area around La Escocesa and church.*
*Created by author.*

# area TWO: transparent streets for citizens, not for cars

Fig. 64.
Conceptual image,
...or with the use of Midjourney.

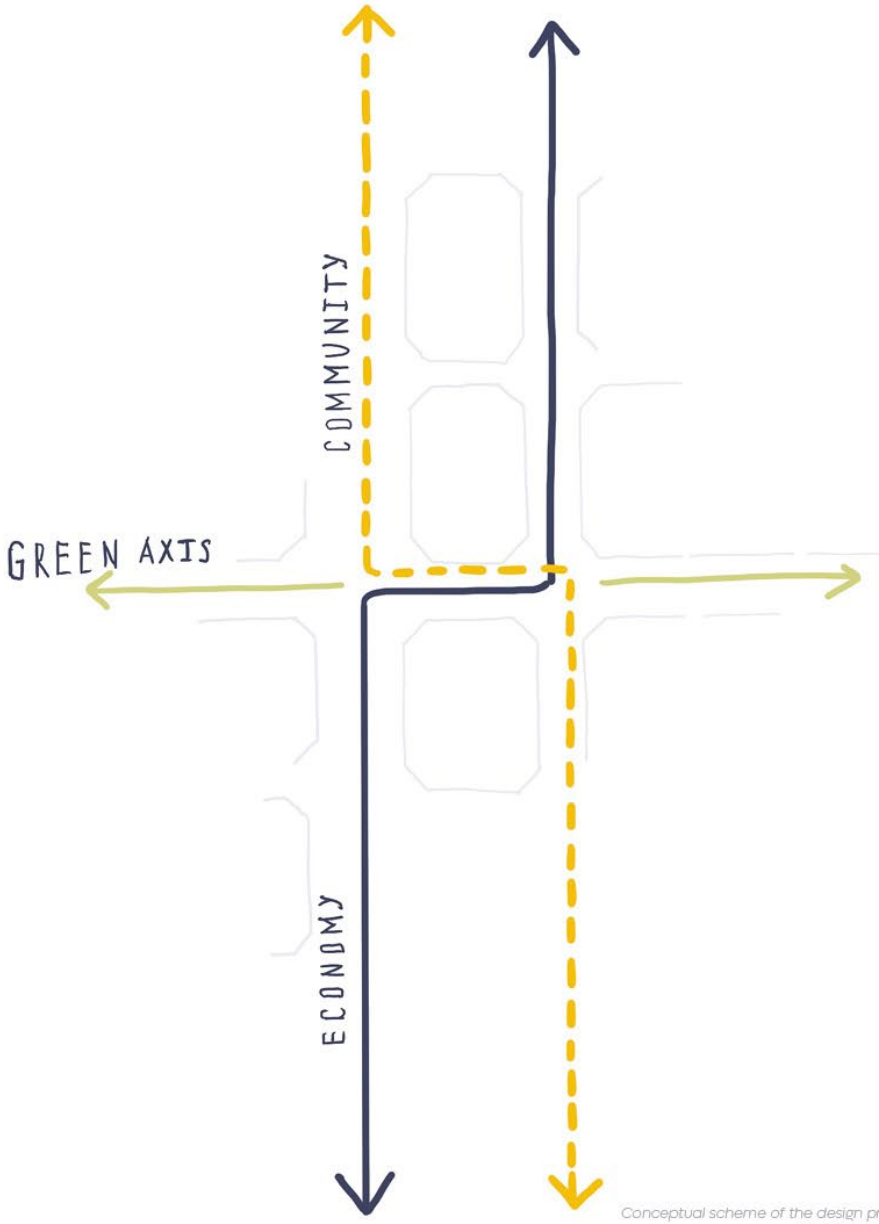


Fig. 65.
Conceptual scheme of the design proposal.
Created by author.

# area TWO

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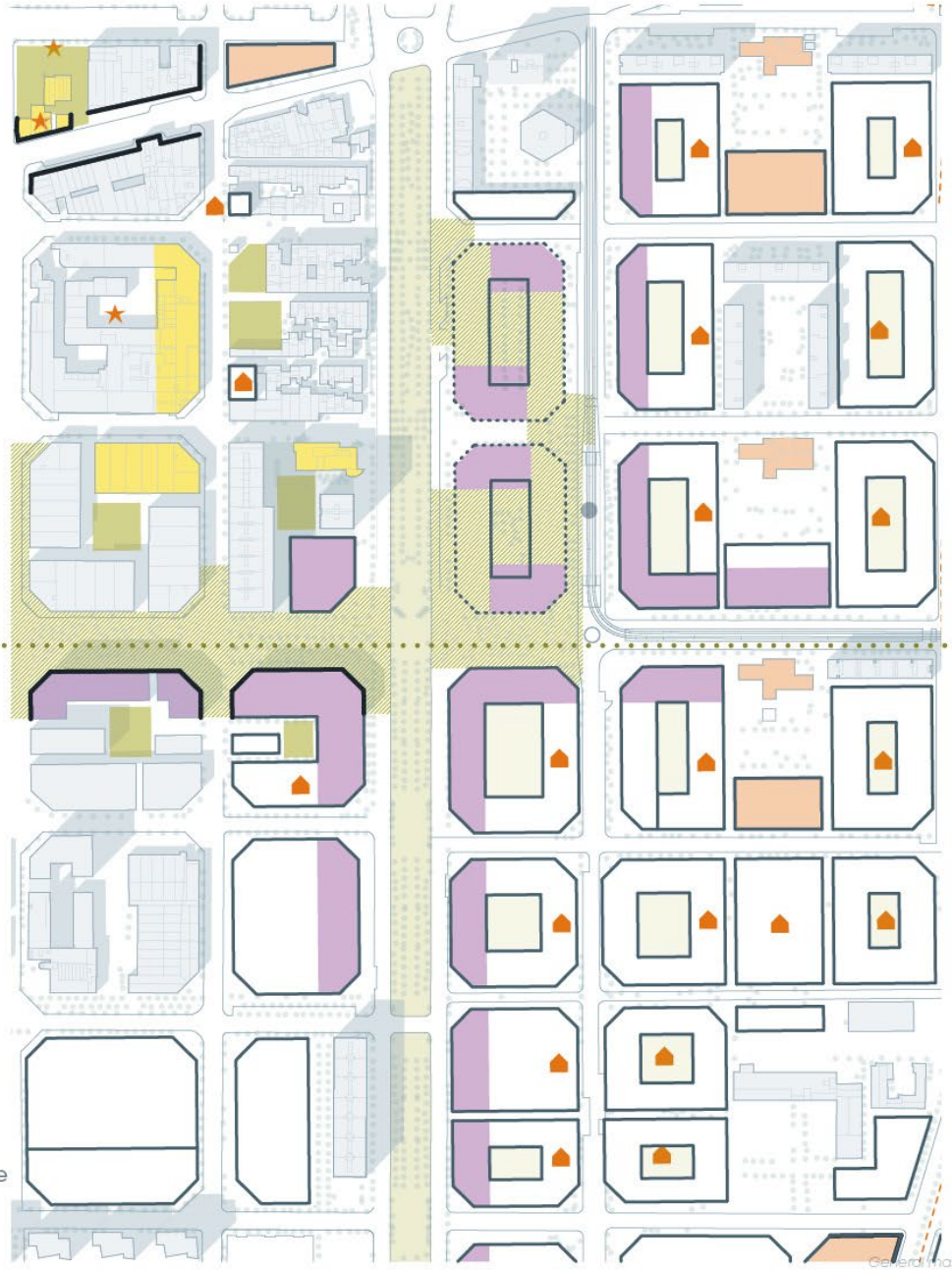
Green axis



Legend

- extended grid
- pedestrian spaces
- economic activities
- culture spots
- key green areas
- industrial heritage
- housing
- amenities

Fig. 66.
General master plan of the area.
Created by author.

# area TWO

## existing section

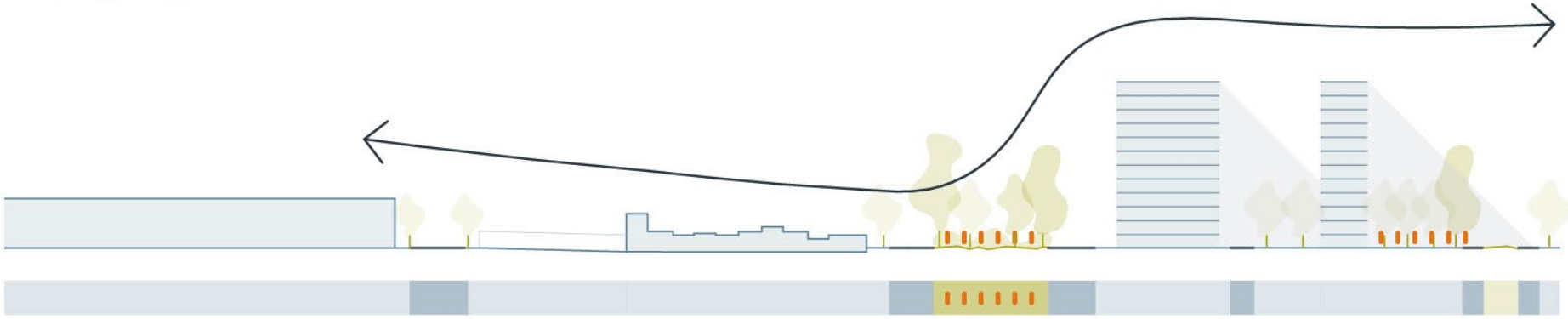


Fig. 67.
Exisitng section.
Created by author.

## proposed section

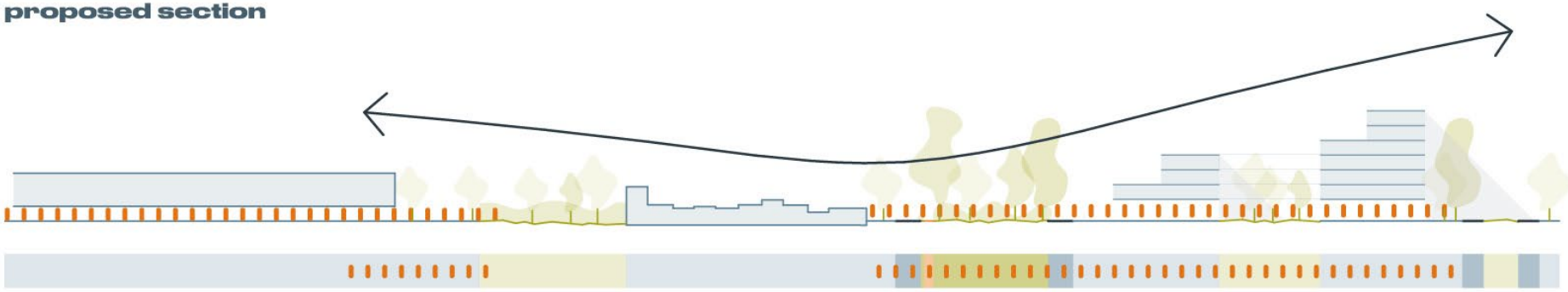


Fig. 68.
Proposed section.
Created by author.

# area TWO

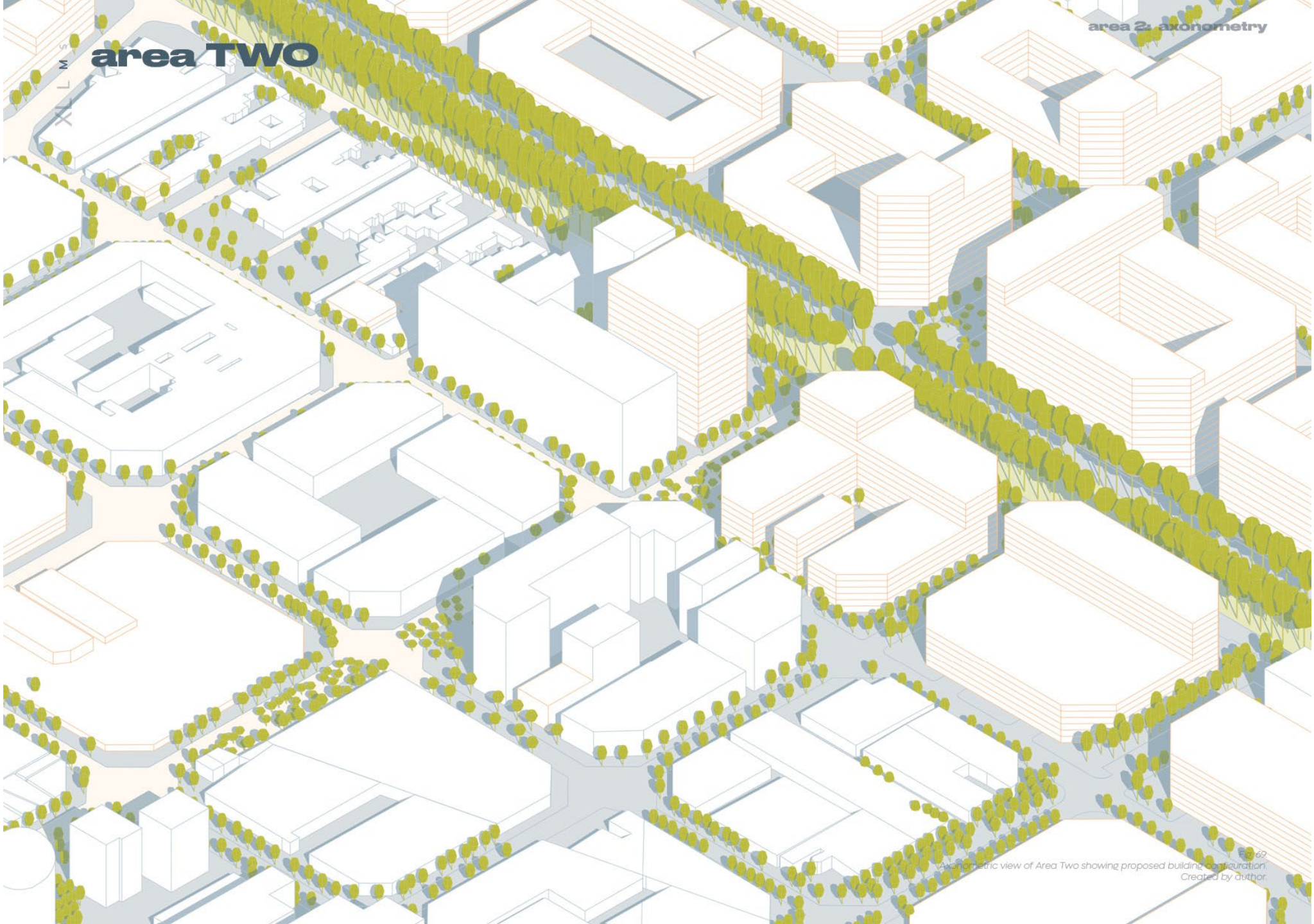


Fig. 69
Axonometric view of Area Two showing proposed building configuration.
Created by author.

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Fig.58.
Detailed plan of selected part of the area two.
Created by author.

# area TWO

*Fig. 69*
*Rambla de Prim.*
*Created by author.*

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# area TWO

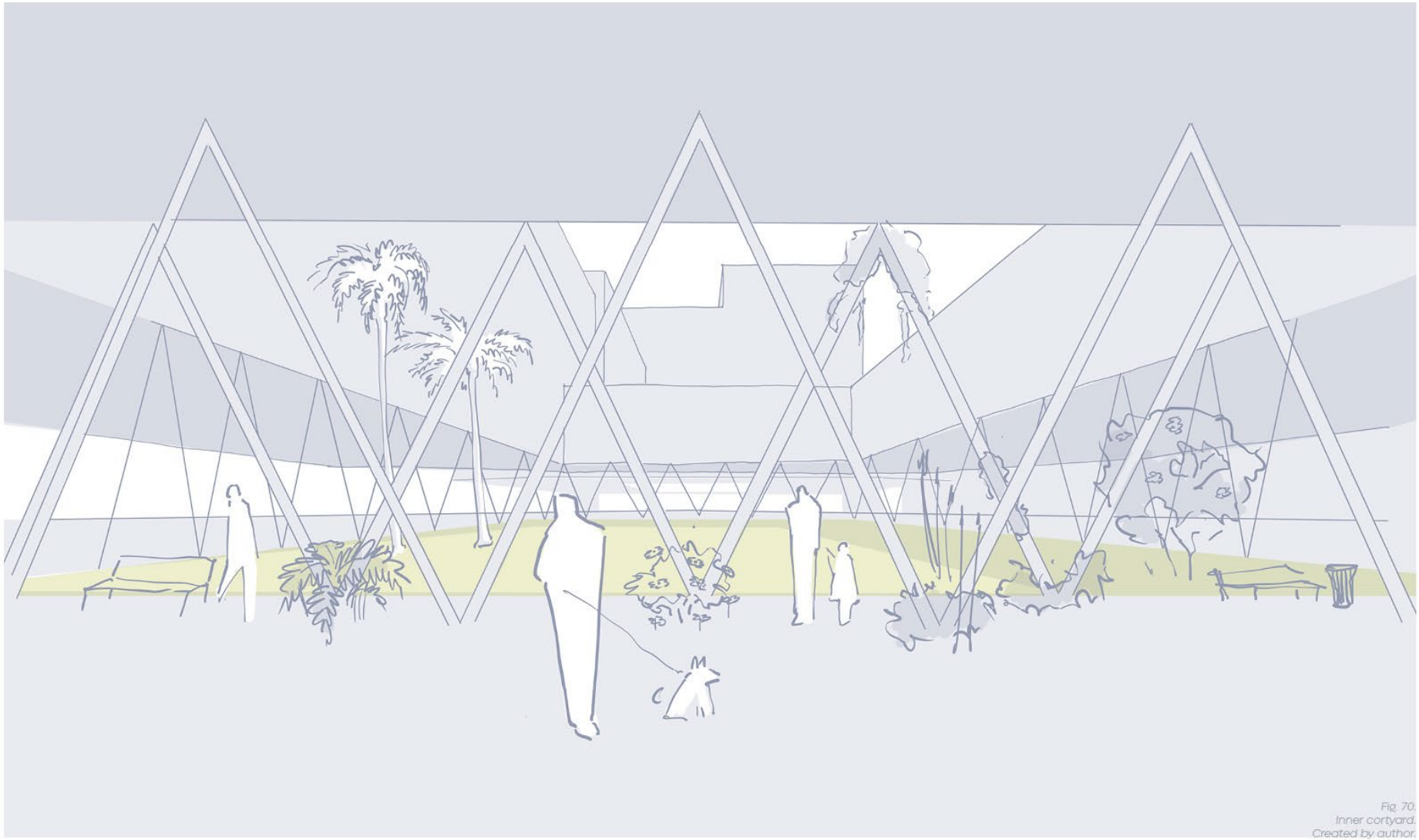

*Fig. 70.*
*Inner cortyard.*
*Created by author.*

# area THREE:
# softening the hard edge

Fig. 71
Conceptual image.
Created by author with the use of Midjourney.

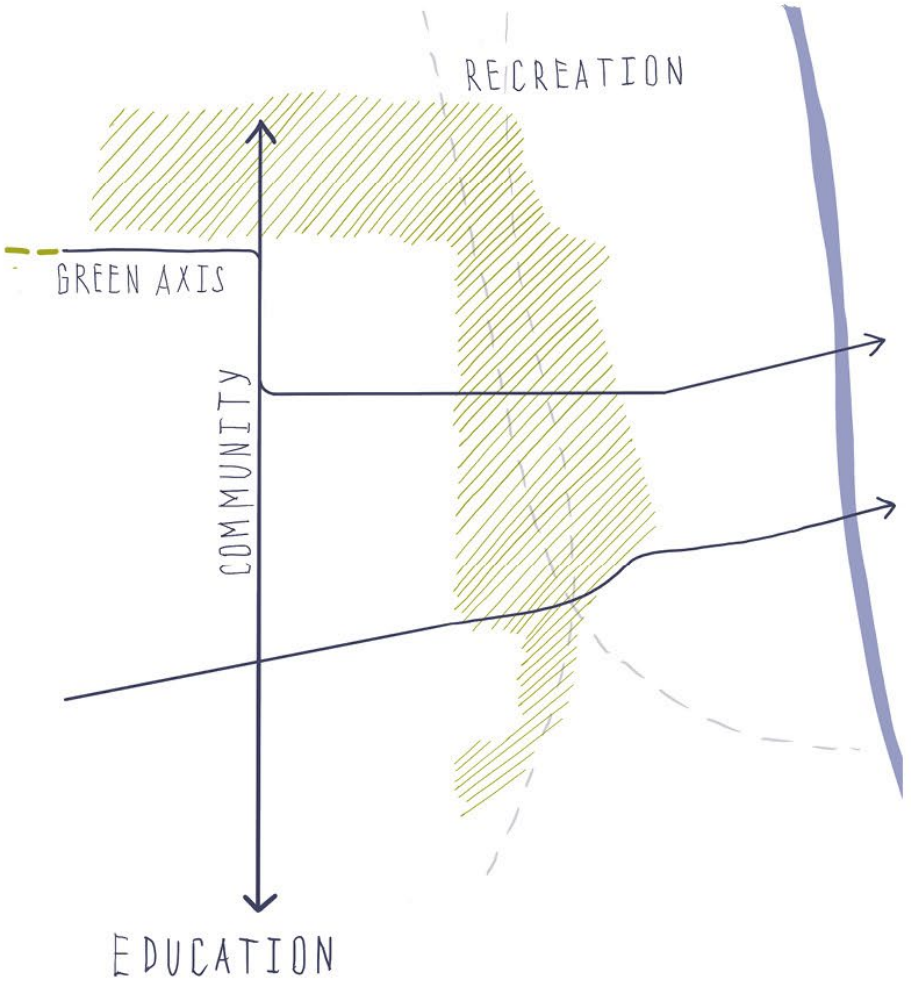


Fig. 72
Conceptual scheme of the area.
Created by author.

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# area TWO

Fig. 73
Area near the tunnel connection.
Created by author.

Fig. 74.
Underused public space between buildings in La Mina.
Created by author.

# area THREE

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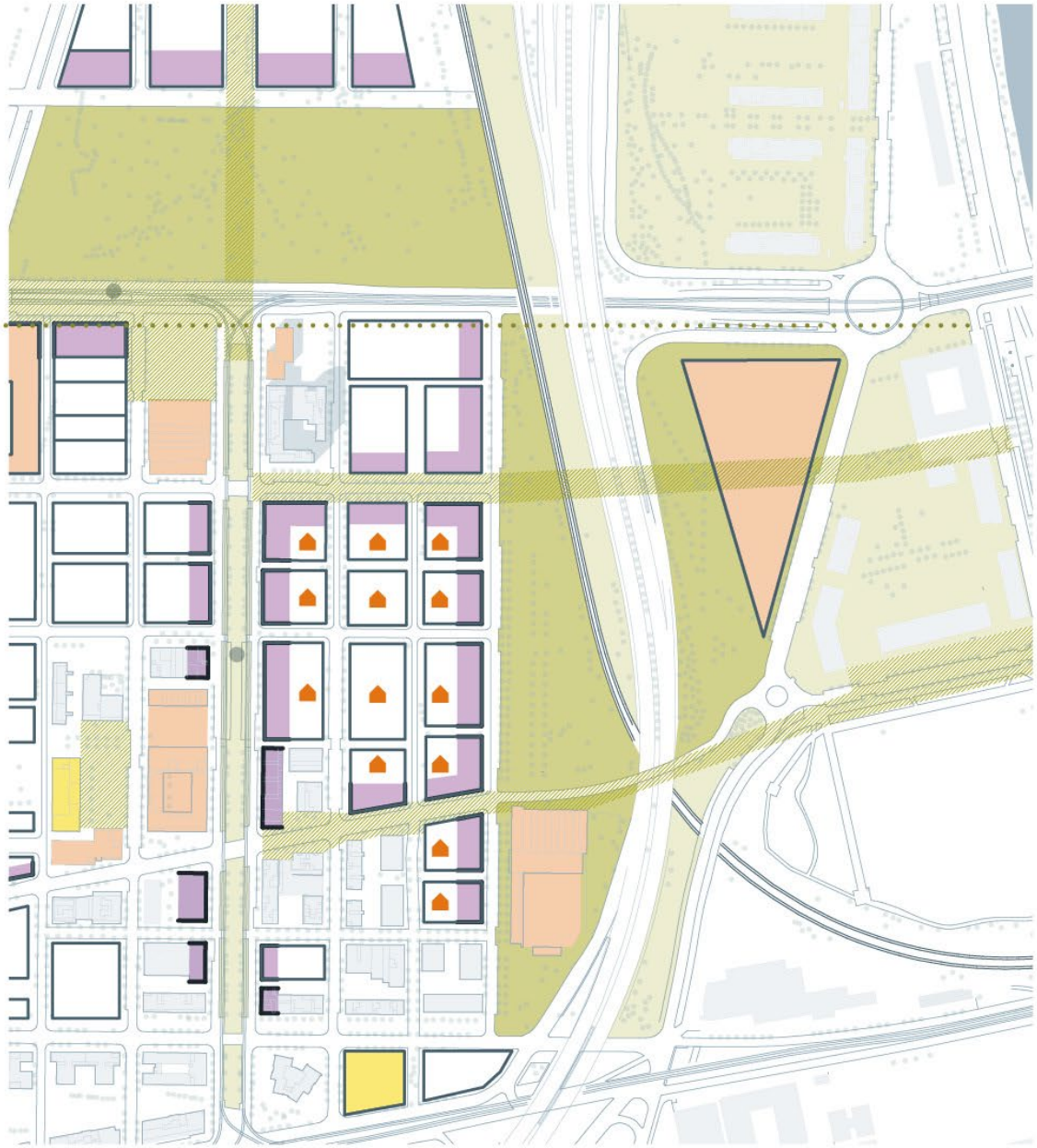
**Green axis**



Legend

- economic activities
- culture spots
- green areas
- amenities
- pedestrian spaces
- extended grid
- housing

Fig. 75
General master plan of the area.
Created by author.

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# area THREE

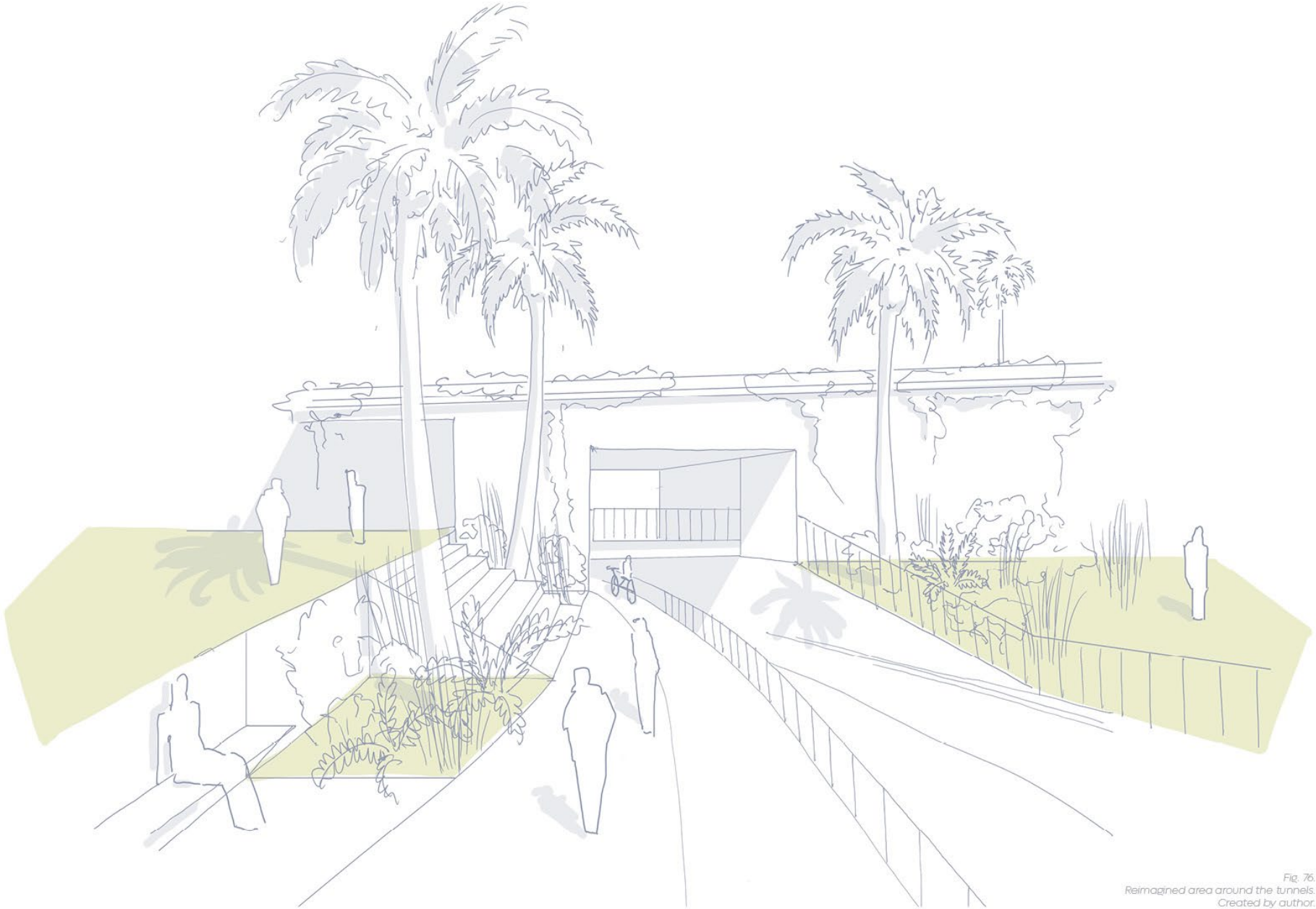

Fig. 76.
Reimagined area around the tunnels.
Created by author.

# area THREE

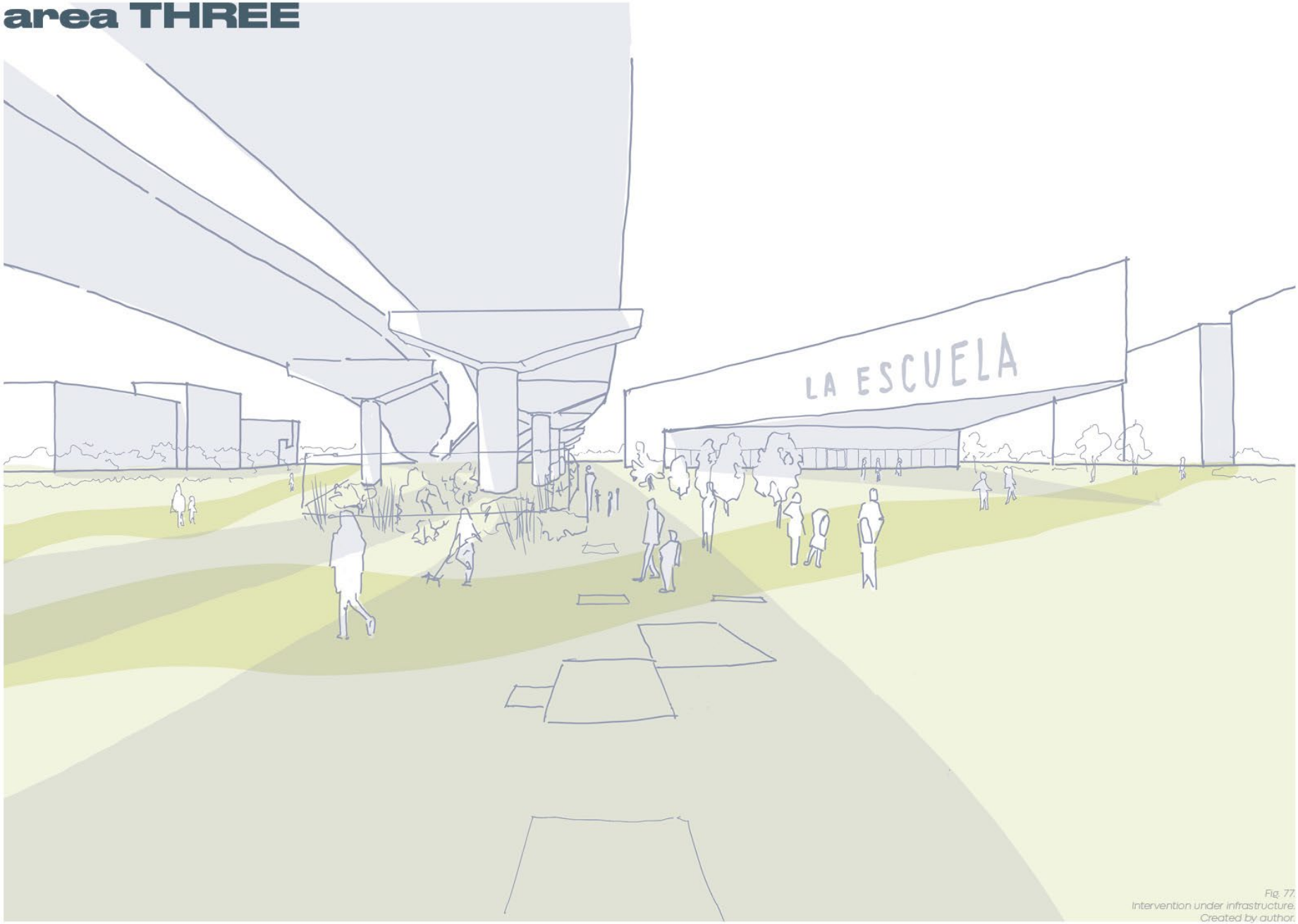


*Fig. 77.*
*Intervention under infrastructure.*
*Created by author.*

# area THREE

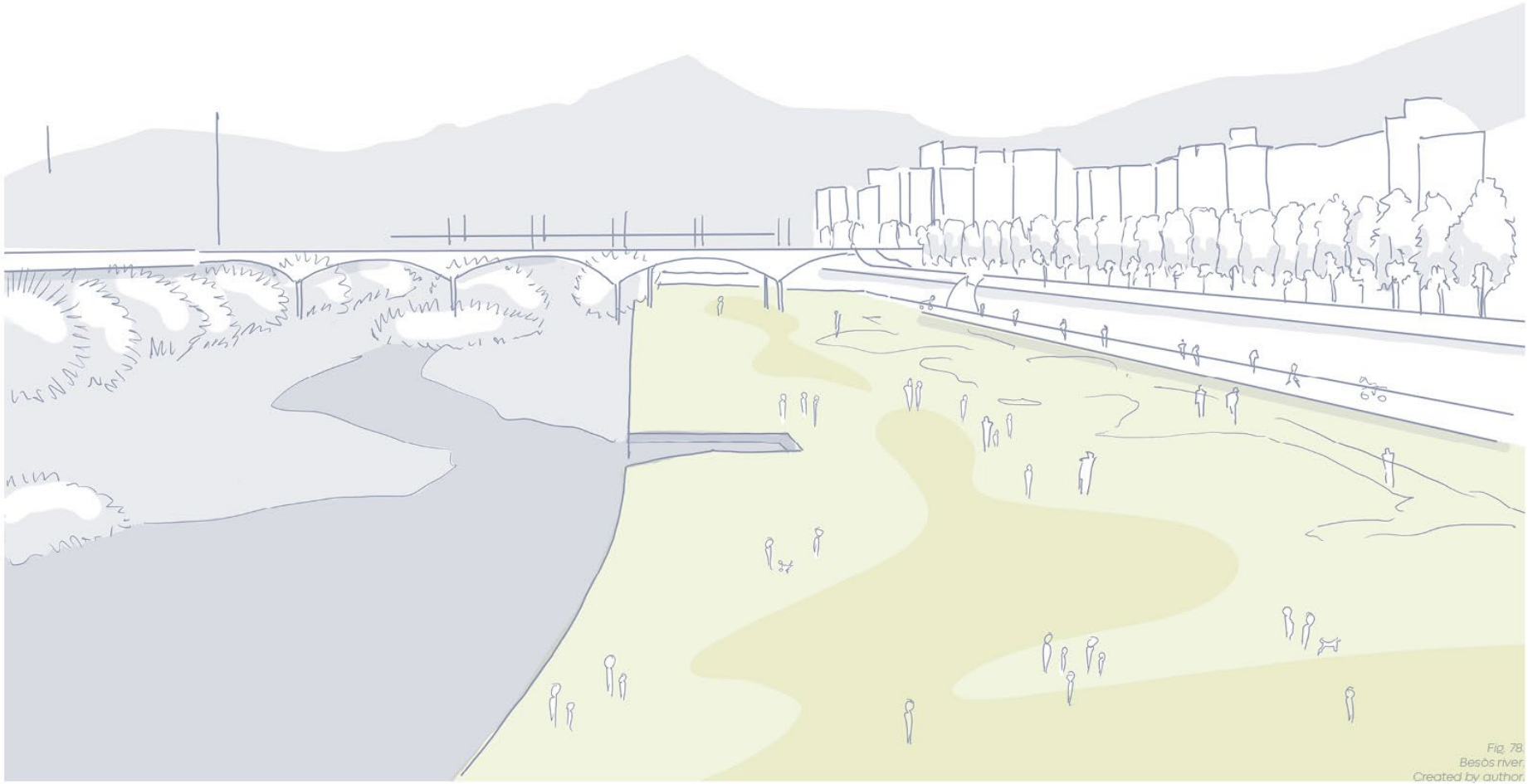

*Fig. 78.*
*Besòs river.*
*Created by author.*

*Fig. 79.*
*Axonometry of the proposal.*
*Created by author.*