

a *shift* towards **Collectivity**

...using a collective approach in urban design to contribute to sustainable development from spatial, environmental and social perspectives in Bospolder-Tussendijken

P5

Rosa de Kruif
4694562

Design of the Urban Fabrics
First mentor: Machiel van Dorst
Second mentor: Leo van den Burg

Department of Urbanism
Faculty of Architecture and the Built Environment
TU Delft

2023/2024

Content

why?

Introduction

Problematisation

BoTu

what?

Methodology

Utopian vision

Research of collectivity

how?

Design of collectivity

Conclusion

individualism

Cultures in which ties between individuals are relatively loose and individual interest often prevails over group interest.

collectivism

Cultures in which people are integrated into tight-knit groups and group interest is generally given priority over individual interest.

adapted from NOS, 2021 & socialisme.nu, 2021

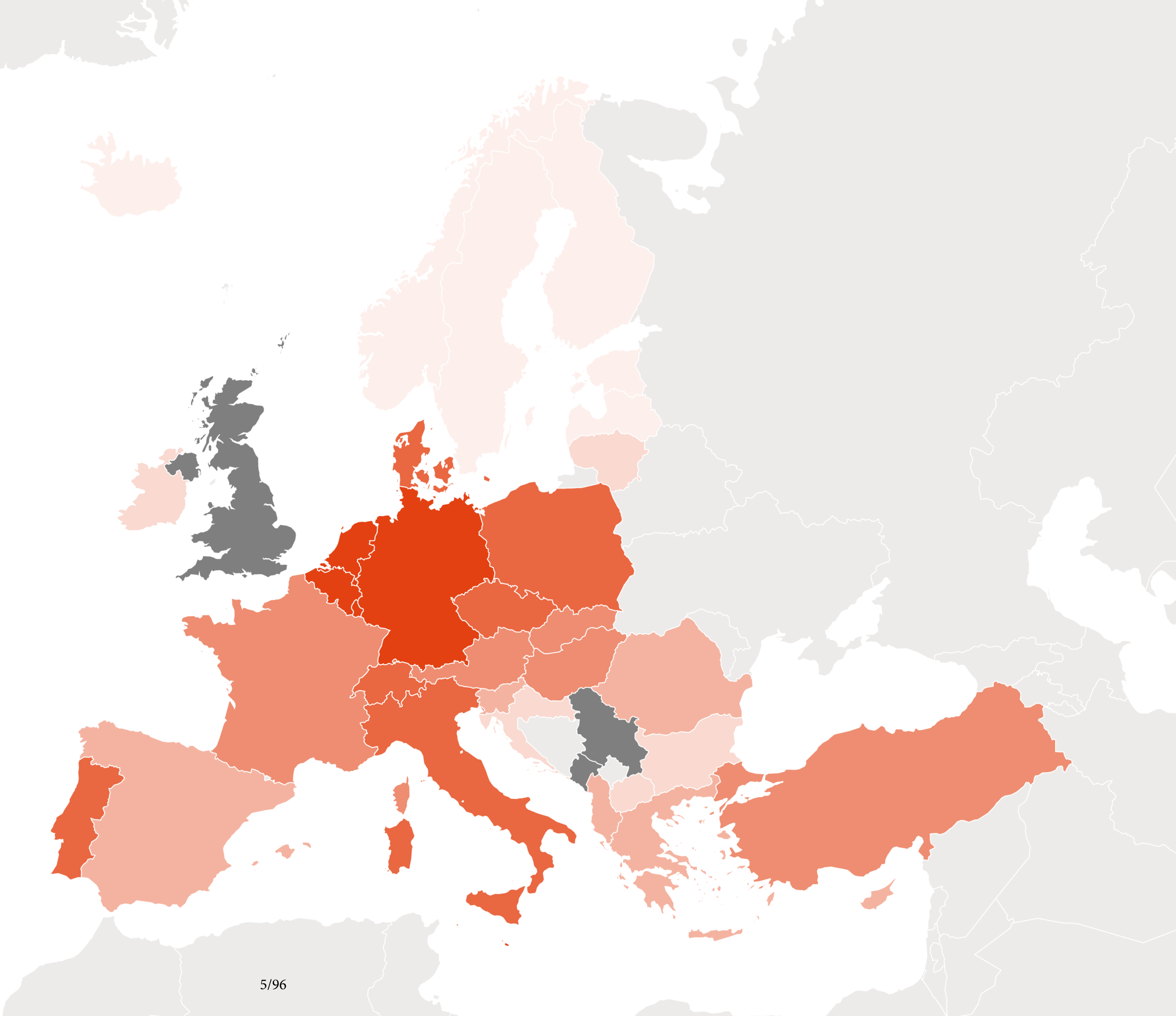
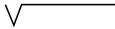


Problematization

inhabitants per km²

- > 3.8 to 38.1
- > 38.1 to 80.3
- > 80.3 to 105.25
- > 105.25 to 114.4
- > 114.4 to 228.7
- > 228.7 to 1,692.7
- data not available

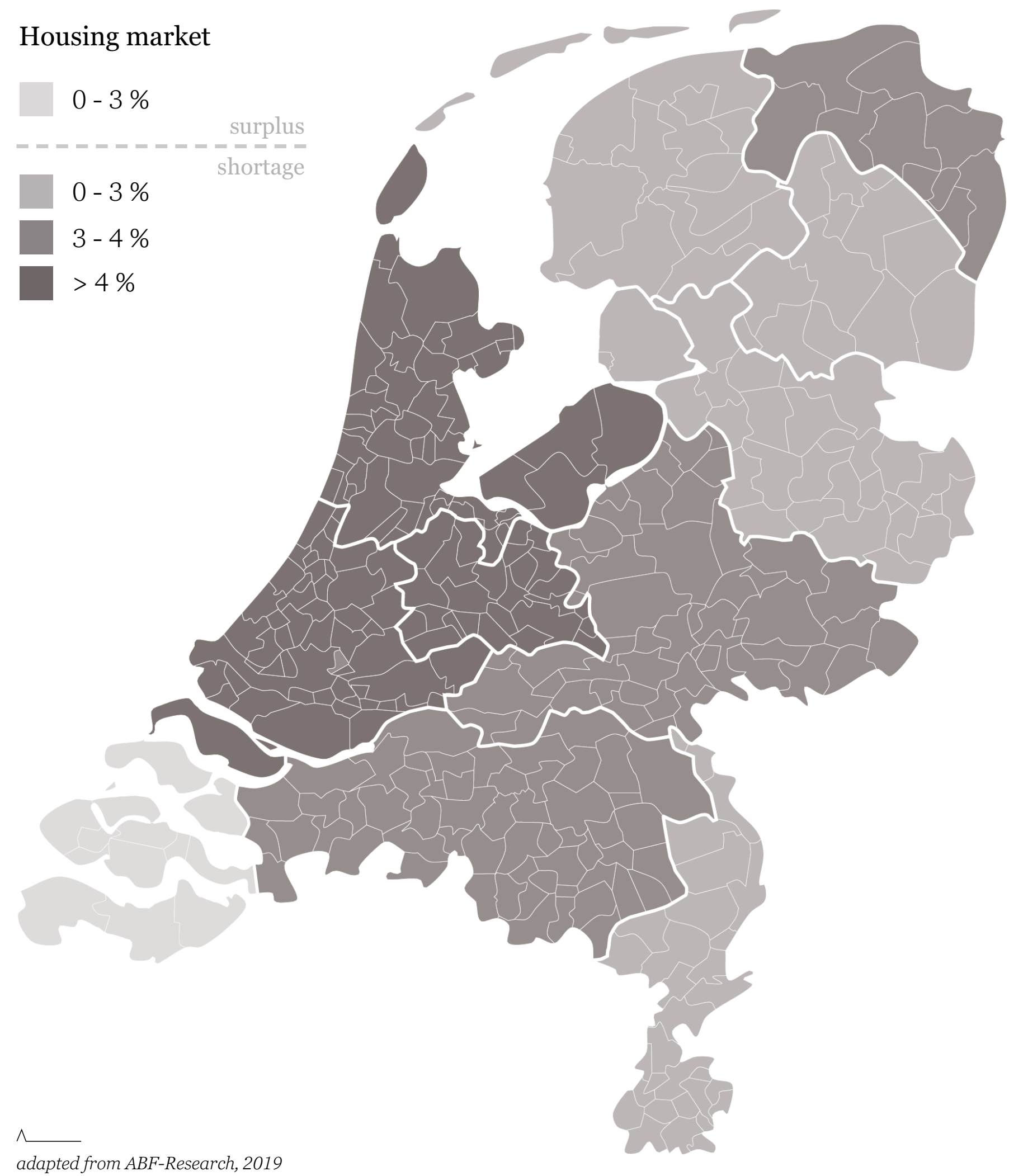
adapted from Eurostat, 2022



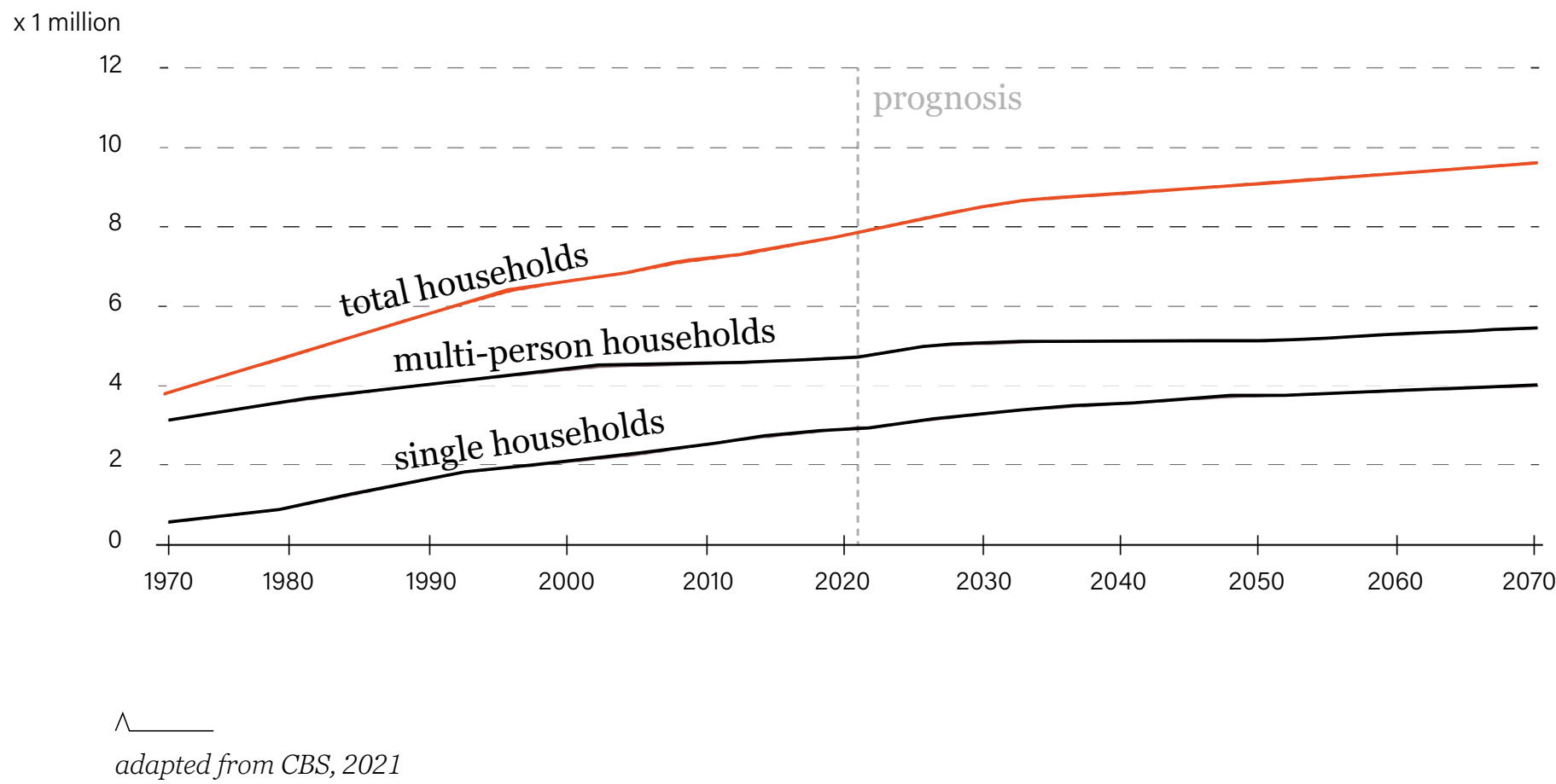
Problematisation

| Spatial implications

| Increasing households



Increasing households in the Netherlands

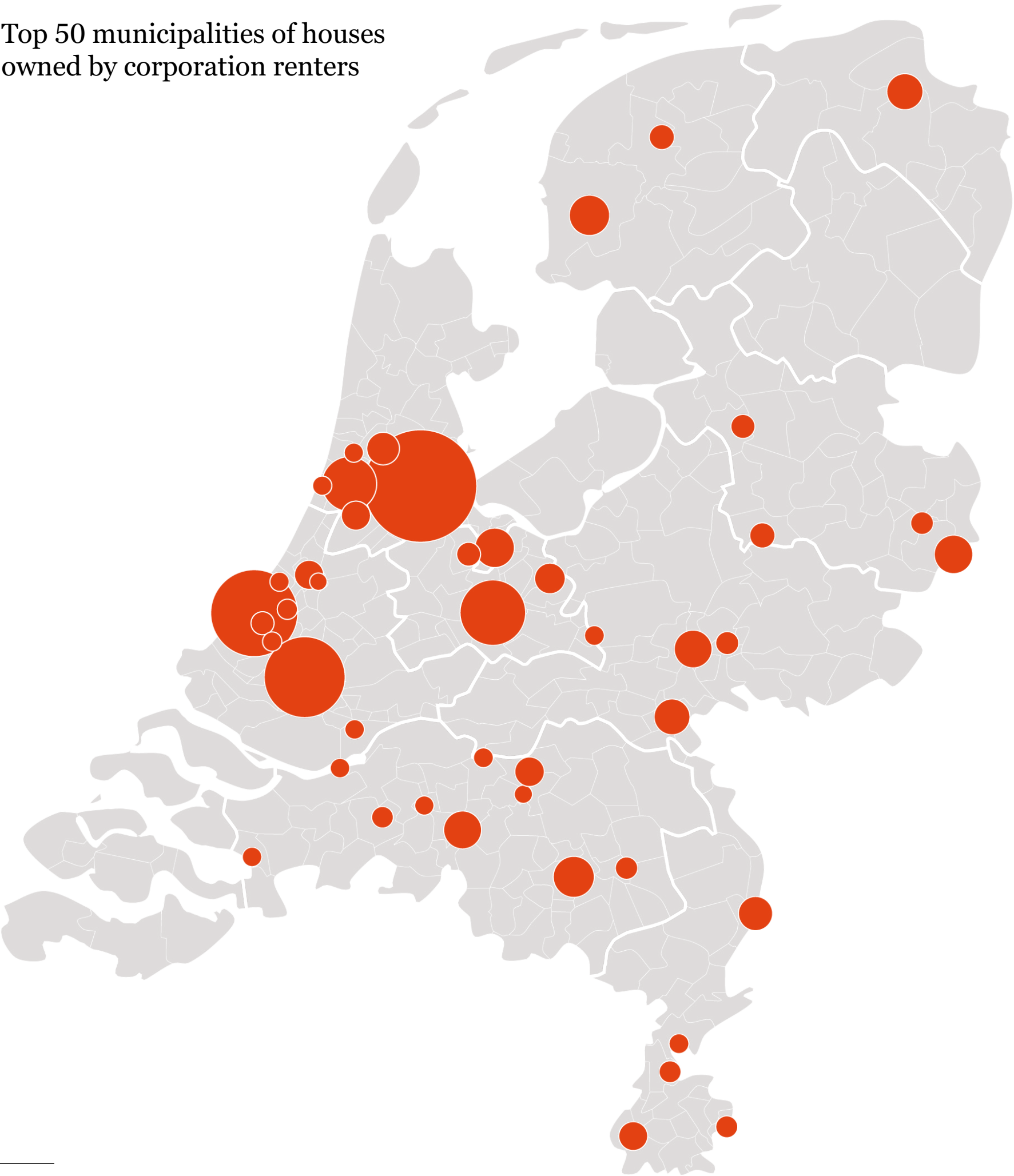


Problematisation

| Spatial implications

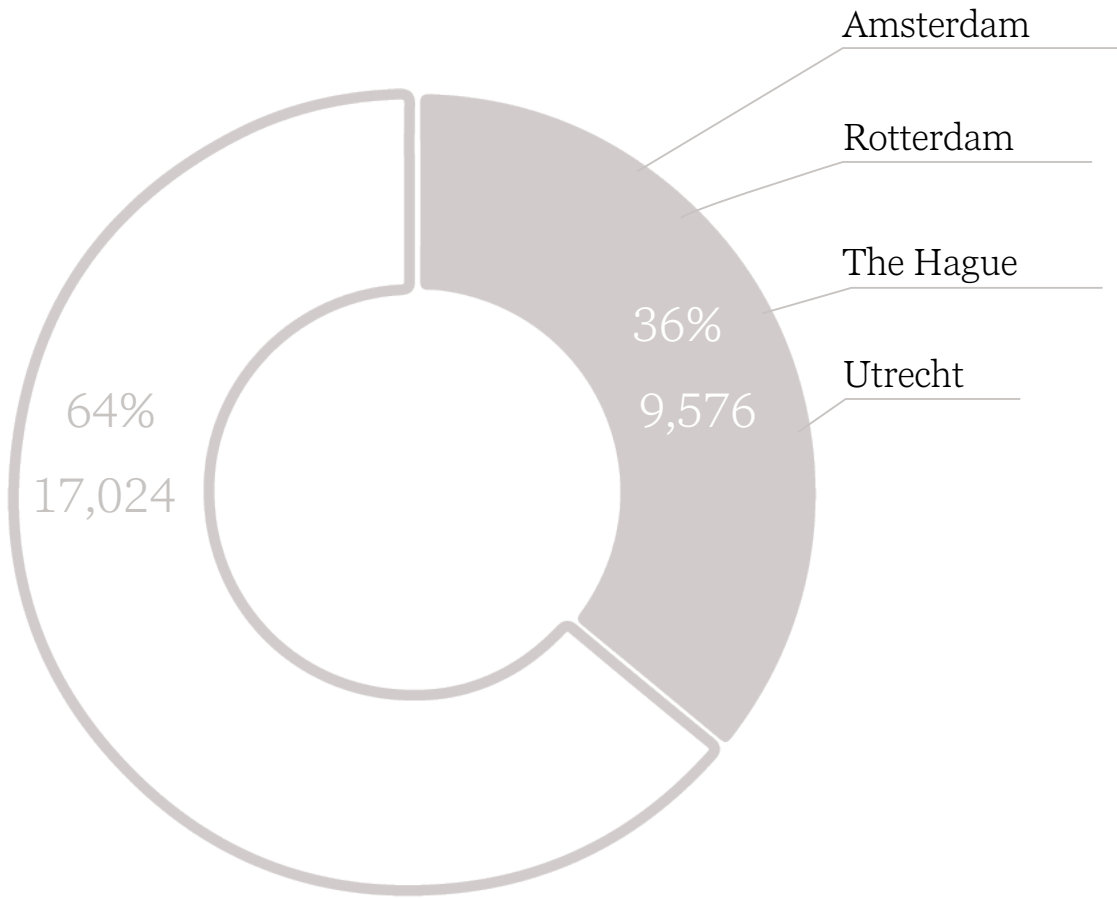
| Inequal distribution of space

Top 50 municipalities of houses owned by corporation renters



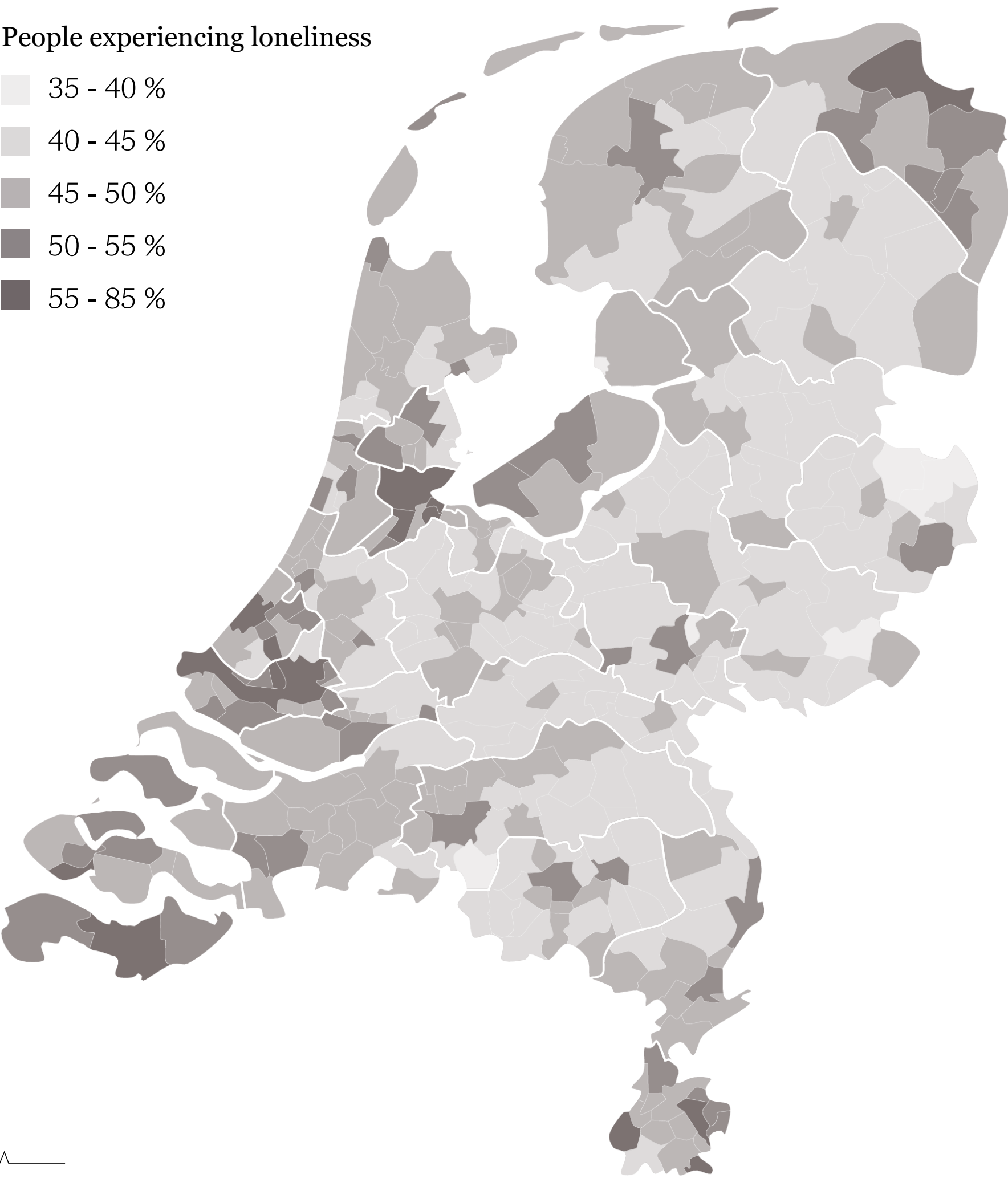
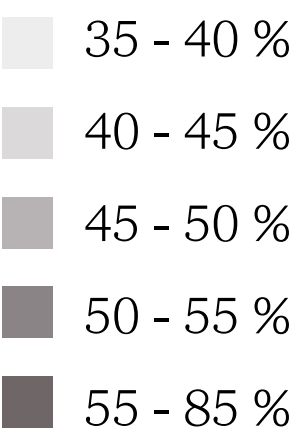
^
adapted from Kadaster, 2021

Homeless people in the Netherlands



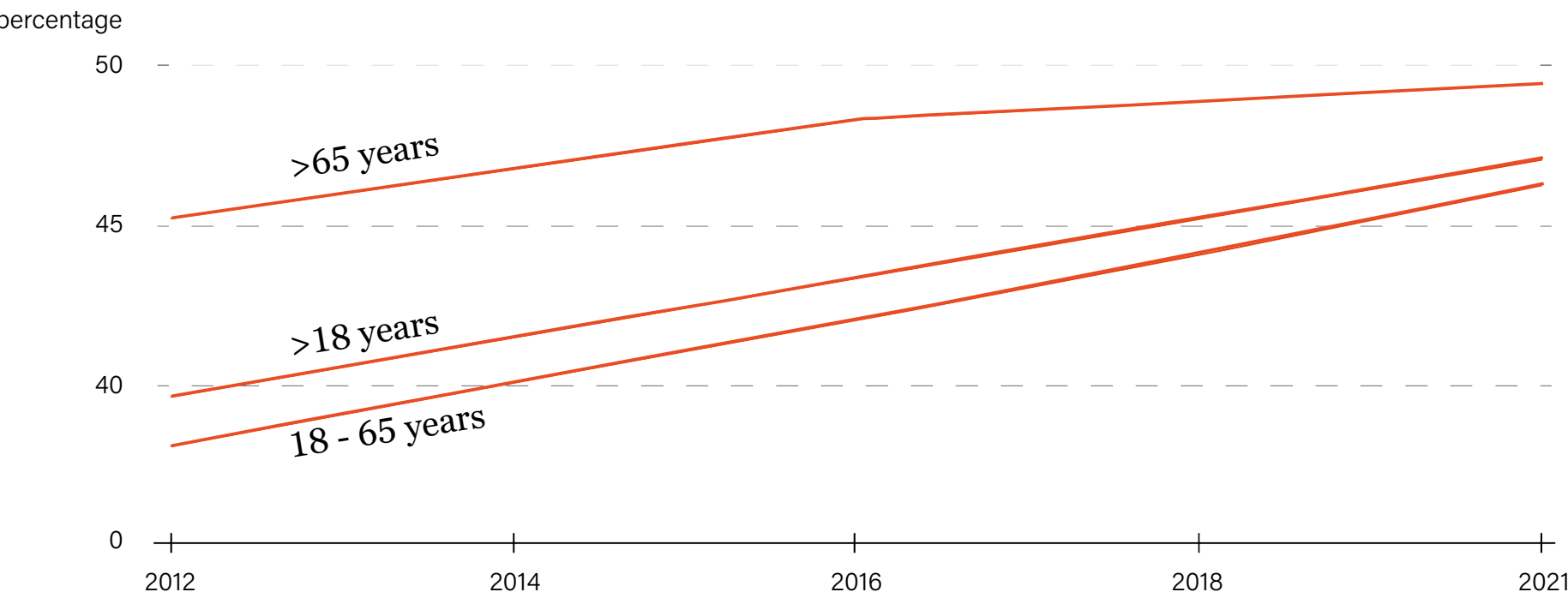
^
adapted from CBS, 2020

People experiencing loneliness



^
adapted from Rijksinstituut voor Volksgezondheid en Milieu, 2020

People experiencing loneliness

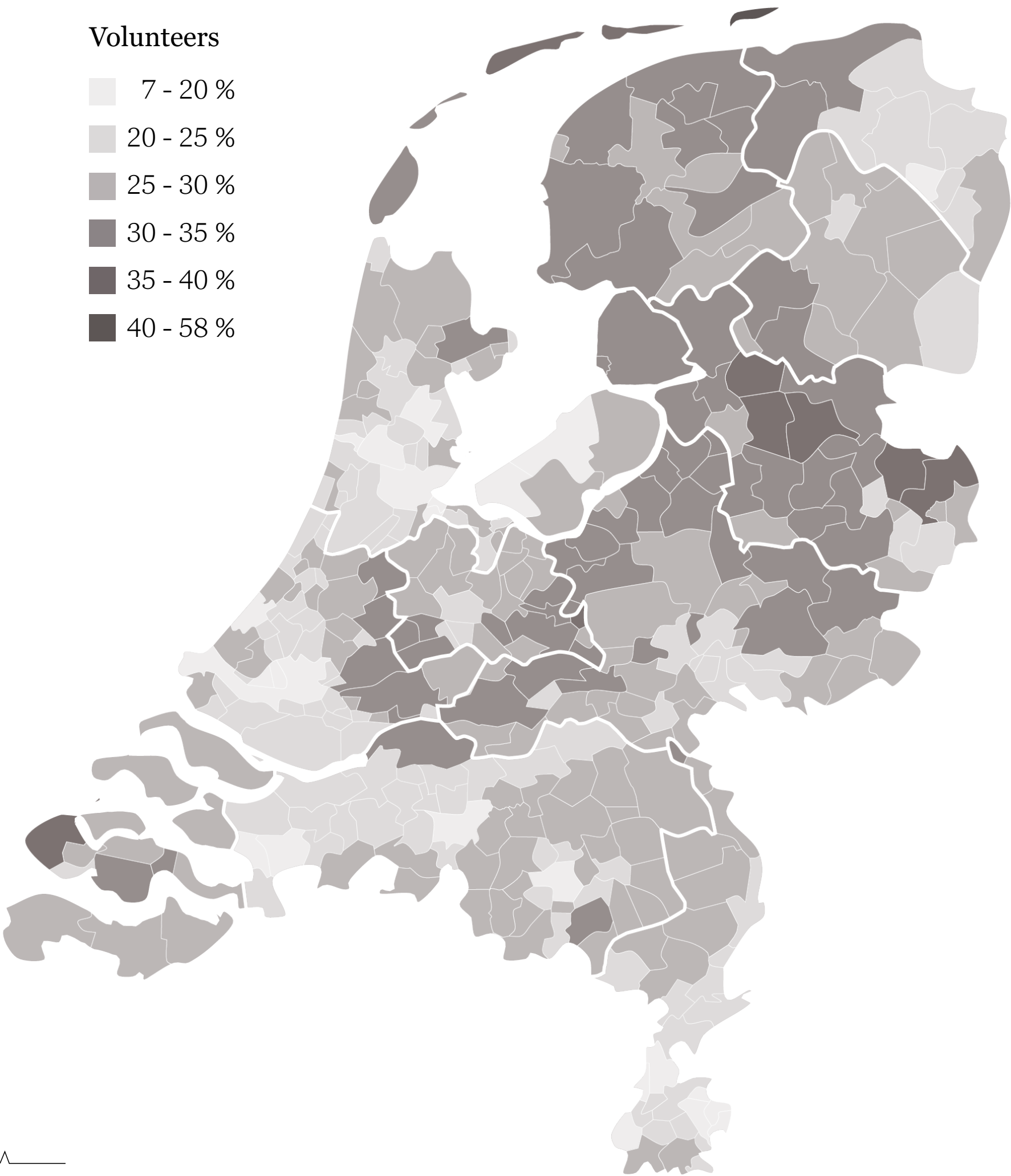


^
adapted from Rijksinstituut voor Volksgezondheid en Milieu, 2020

Problematisation

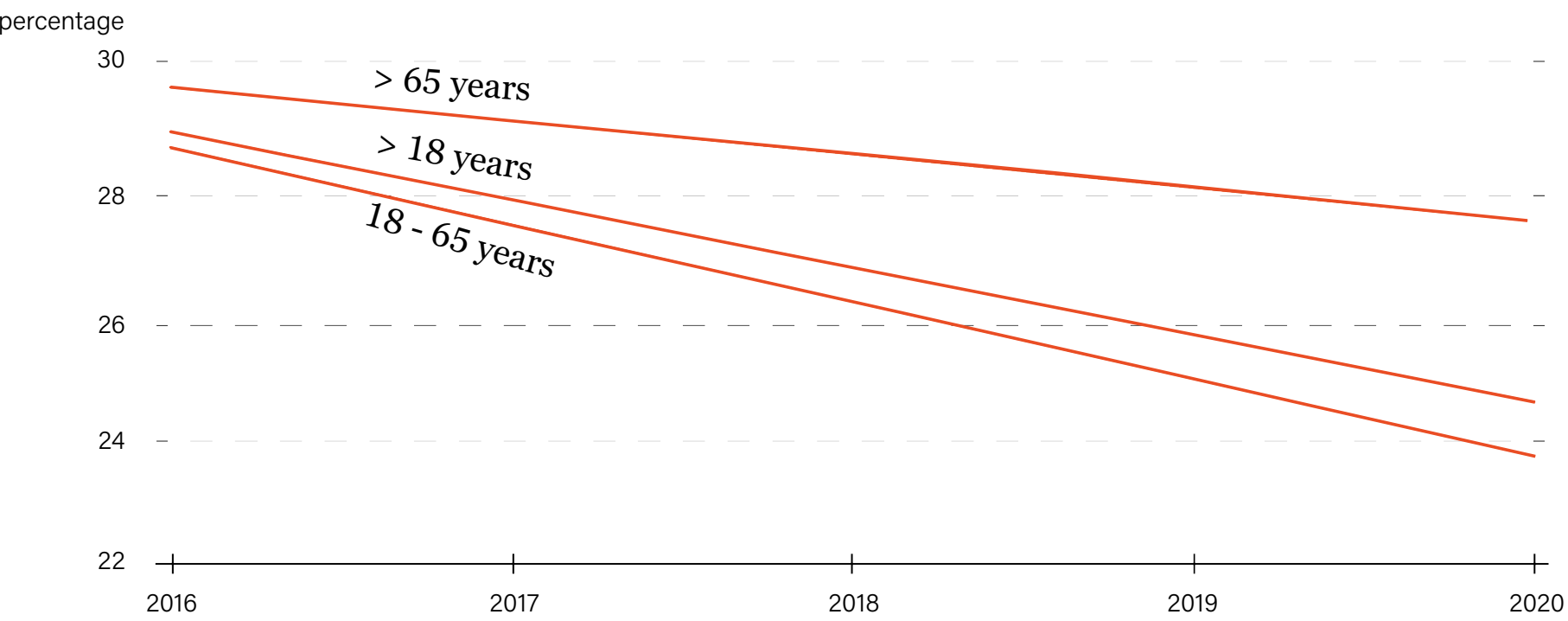
| Social implications

| Lack of solidarity



^
adapted from Rijksinstituut voor Volksgezondheid en Milieu, 2020

Volunteers

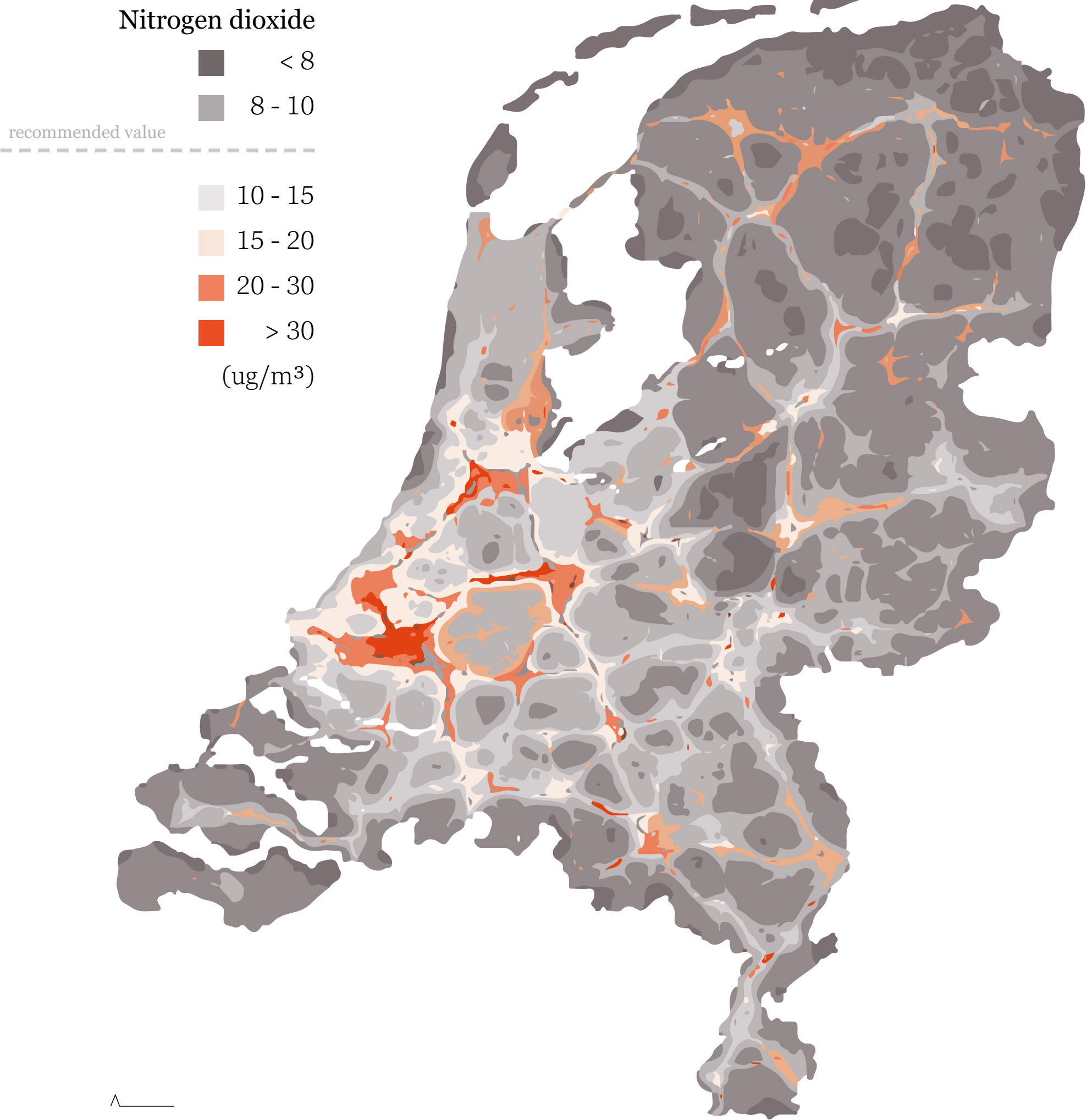


^
adapted from Rijksinstituut voor Volksgezondheid en Milieu, 2020

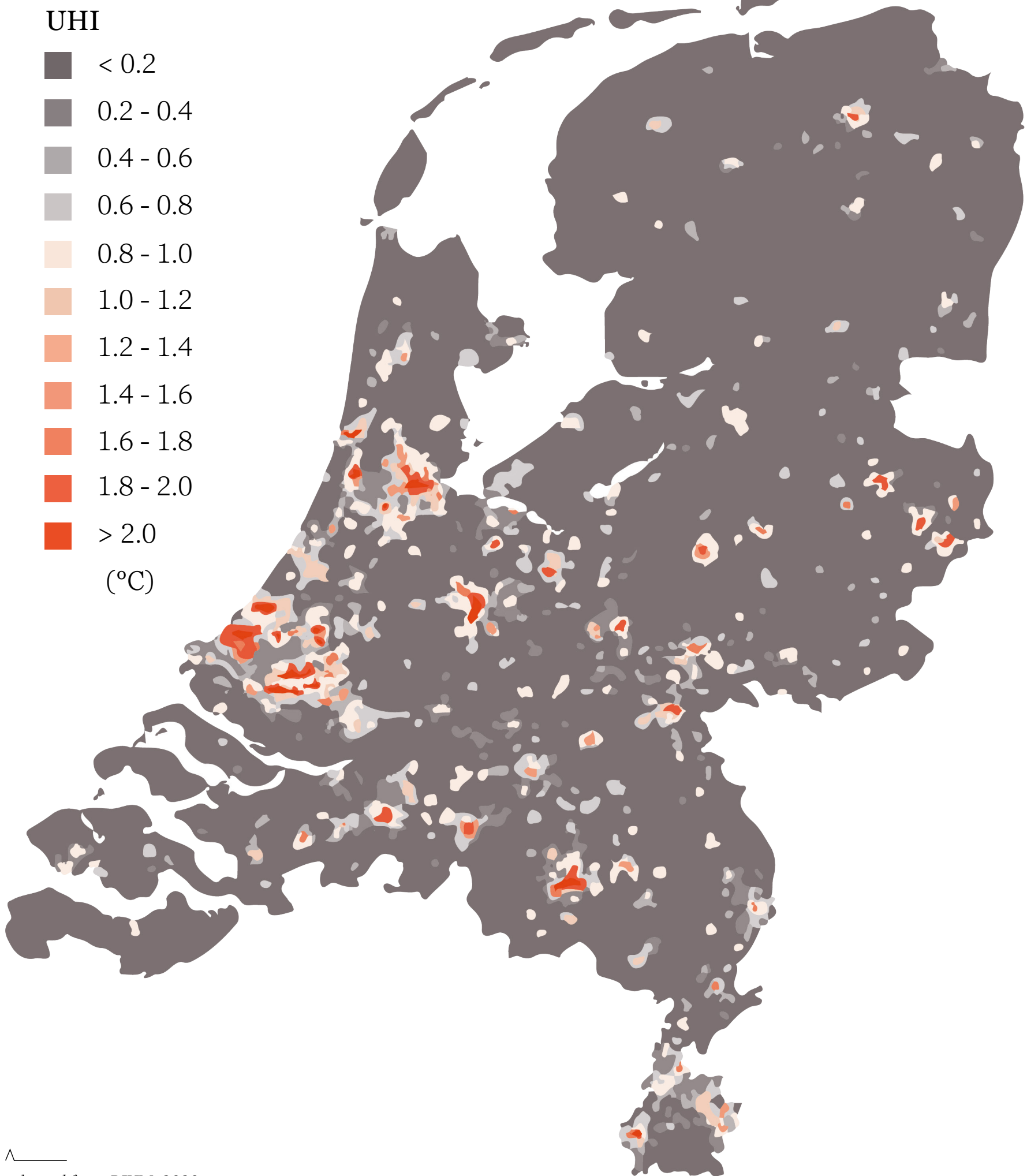
Problematisation

| Environmental implications

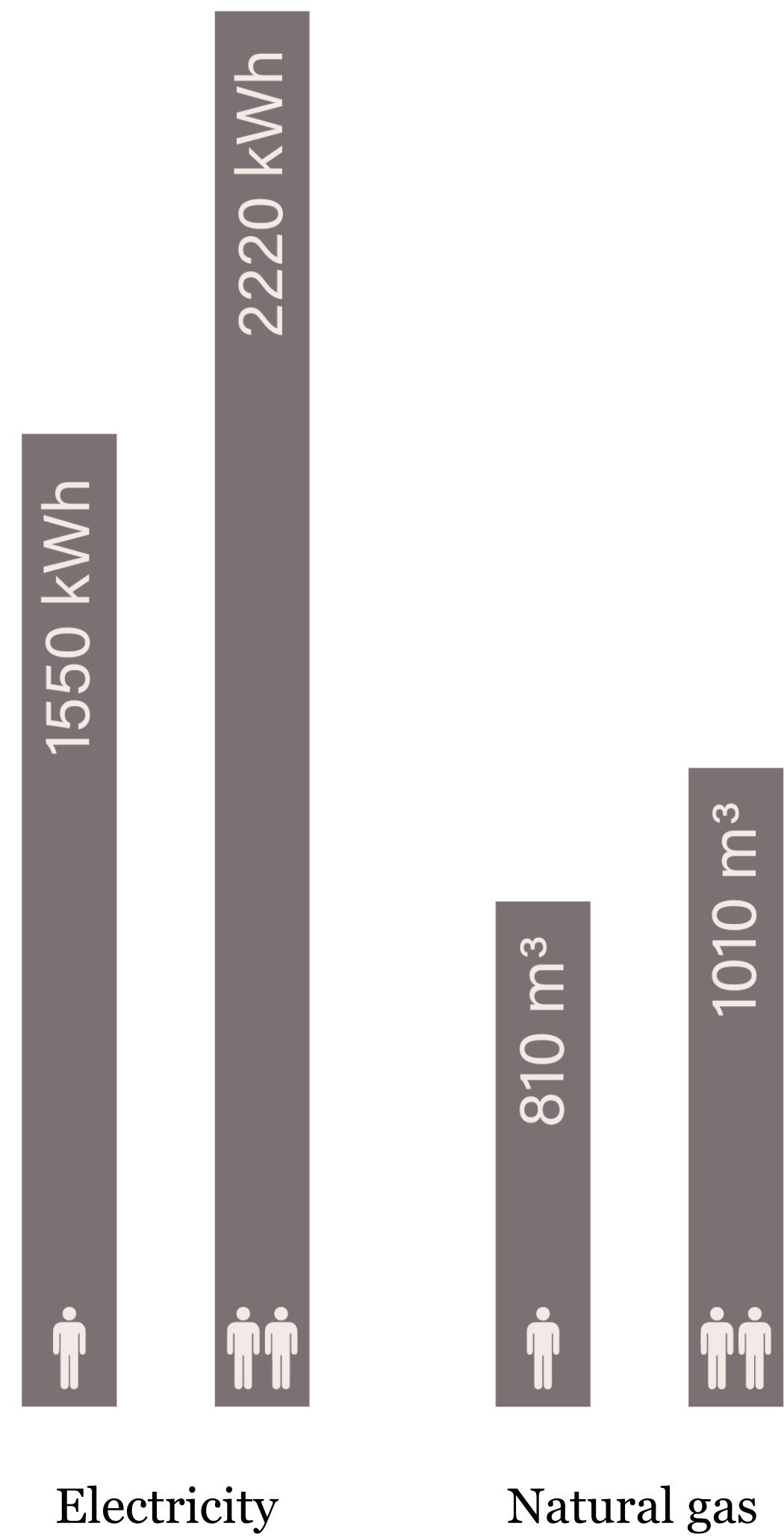
| Environmental pollution & UHI



^
adapted from RIVM, 2021



^
adapted from RIVM, 2020



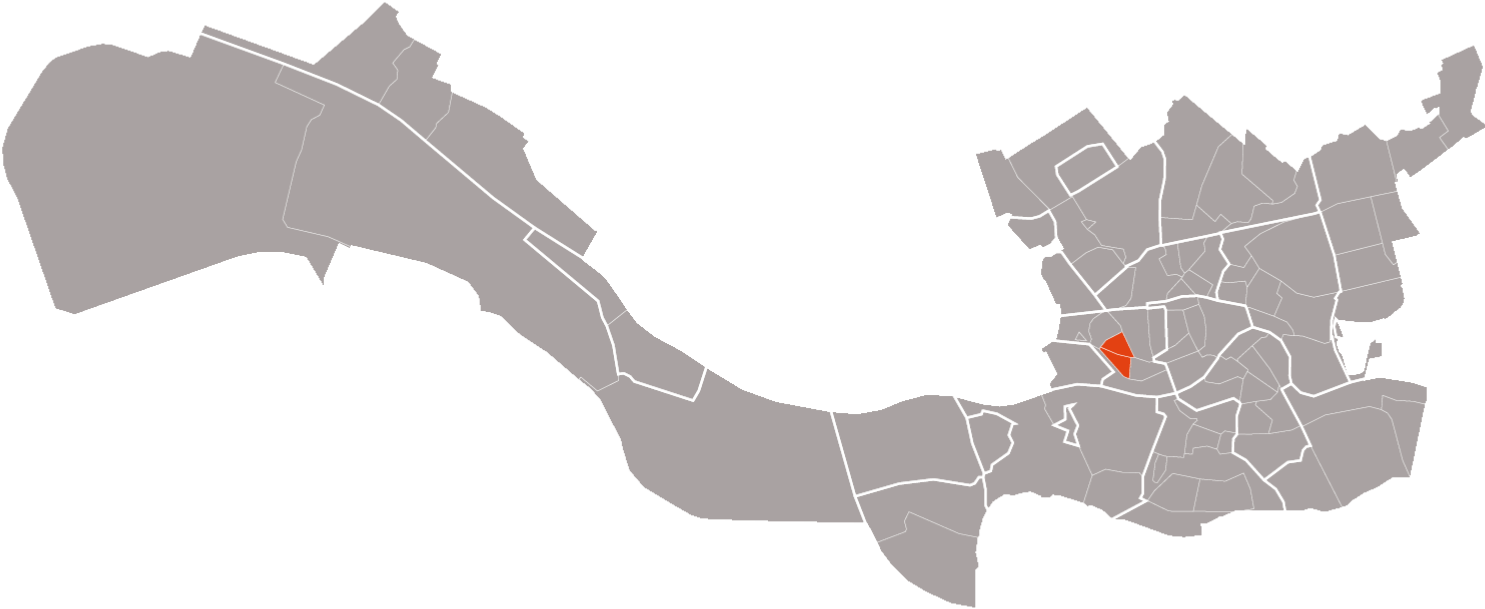
^
adapted from CBS, 2021

‘The **individualistic trend** that has increased over the years resulted in **unsustainable development** from **spatial, environmental and social perspectives**, being visible in the Dutch urban landscape’

BoTu (Bospolder-Tussendijken)



25 50kms

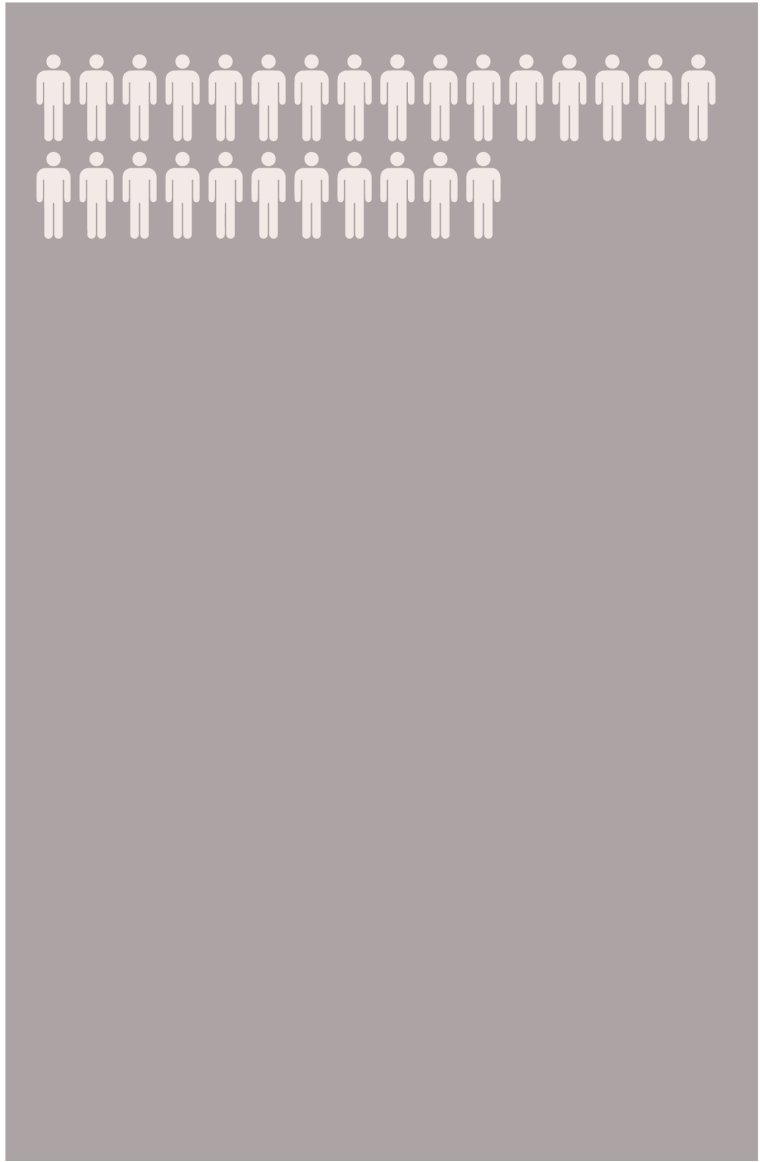


5 10kms



100 200mrs

Rotterdam



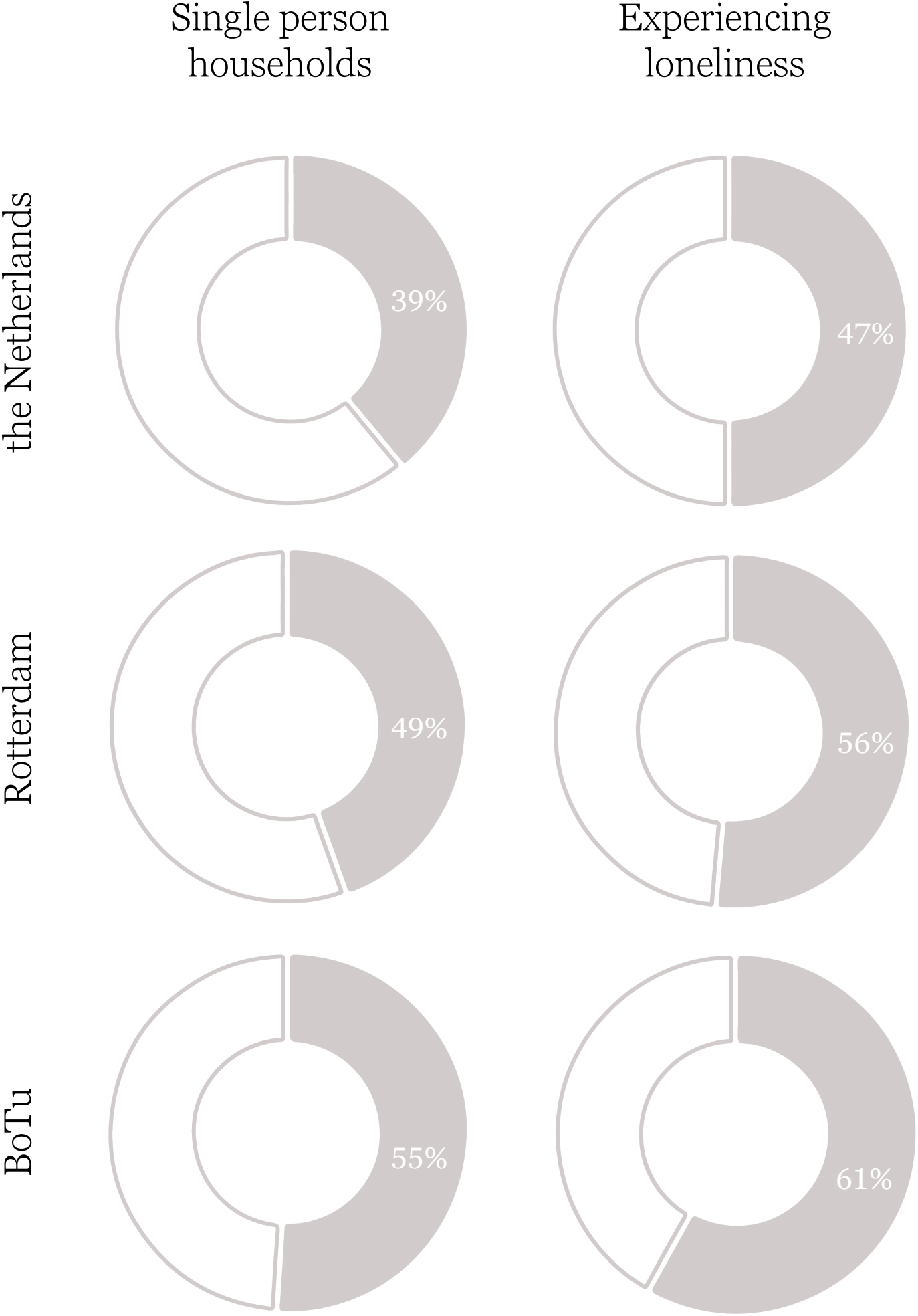
Delfshaven



BoTu



^
adapted from AlleCijfers.nl, 2023



^
adapted from CBS, 2022

BoTu

| Resilient BoTu program

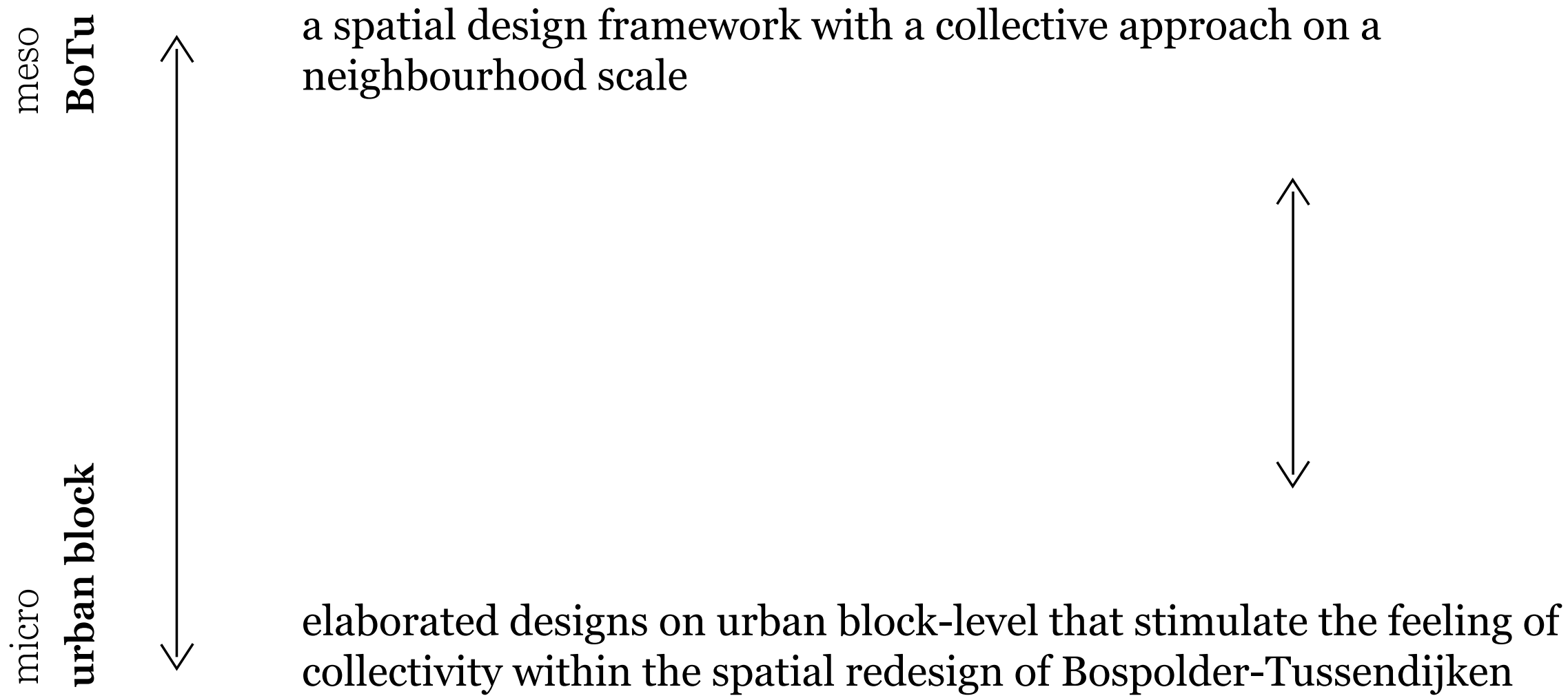


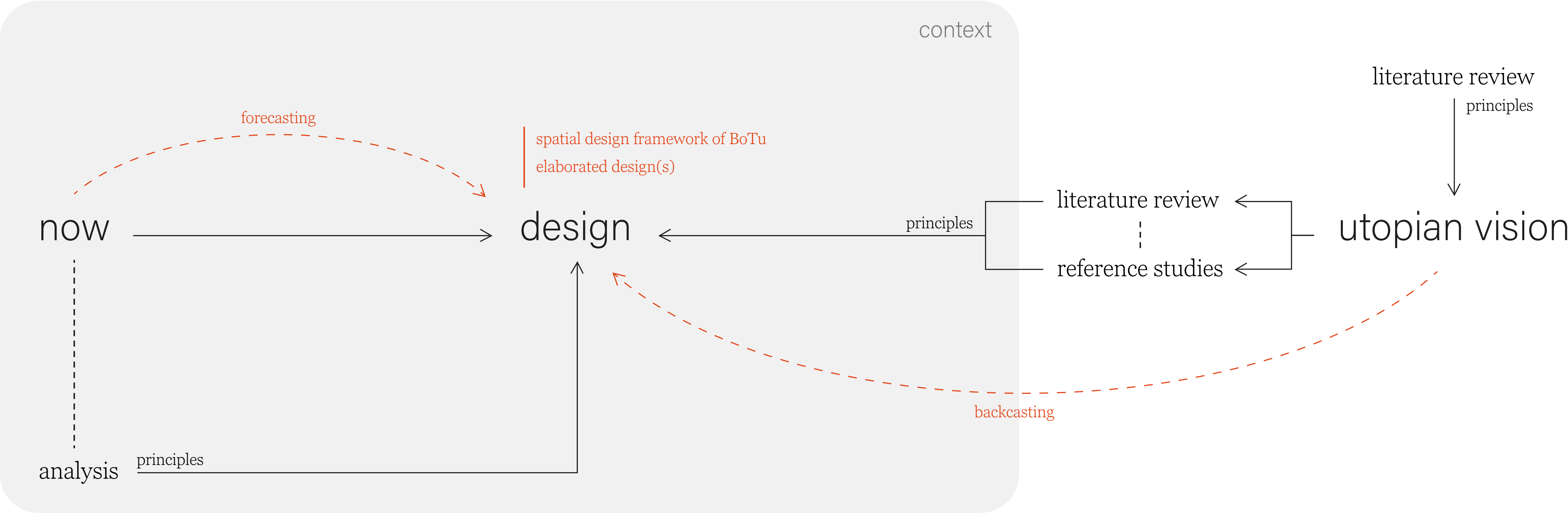
Research question

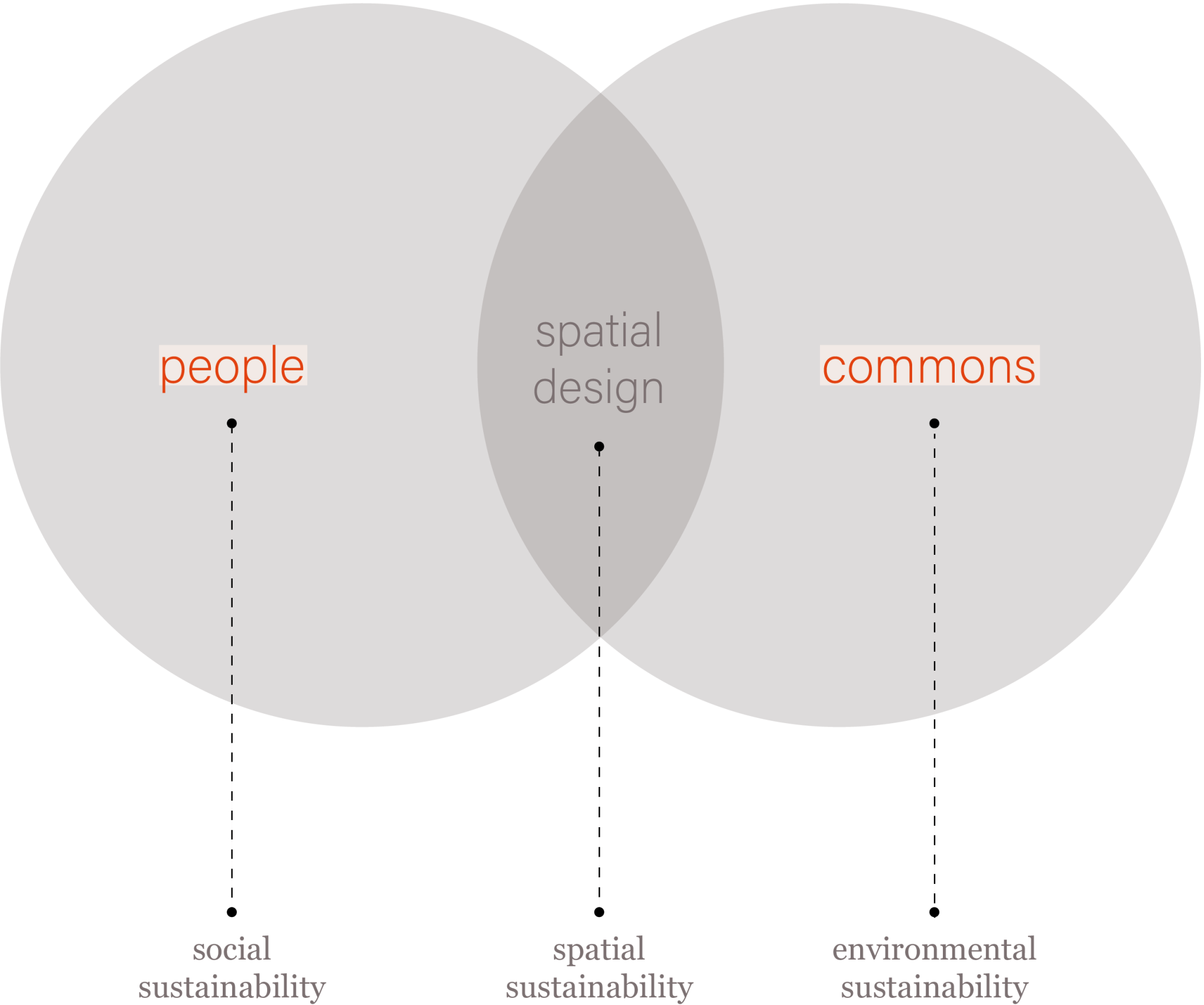
‘In what way can the shift from an **individualistic** towards a **collective approach** in urban design contribute to **sustainable development** from **spatial, environmental and social perspectives**, focusing on **Bospolder-Tussendijken**?’

Methodology

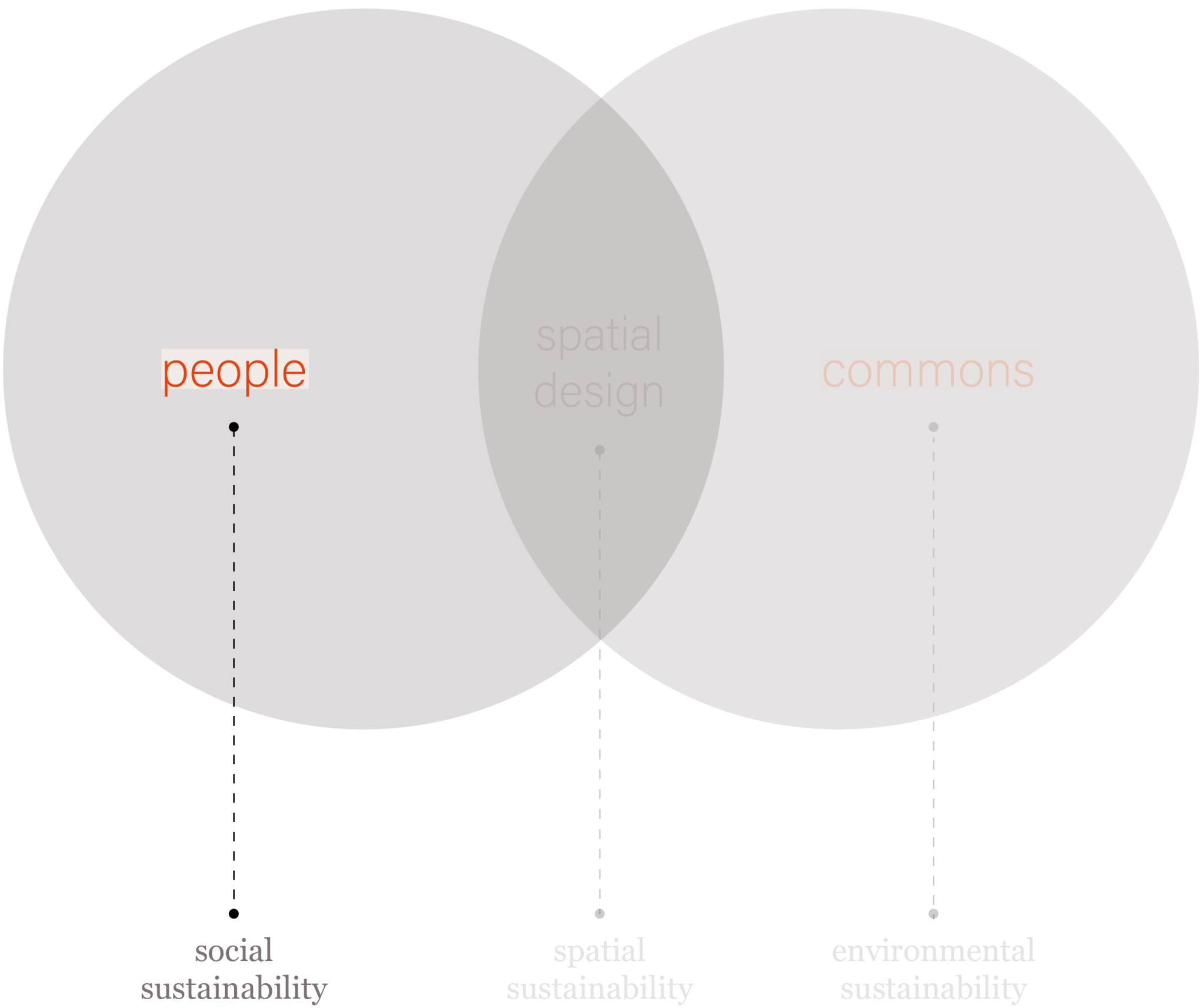
‘Create a multi-scalar design with a collective approach to contribute to sustainable development from spatial, environmental and social perspectives, focusing on Bospolder-Tussendijken’

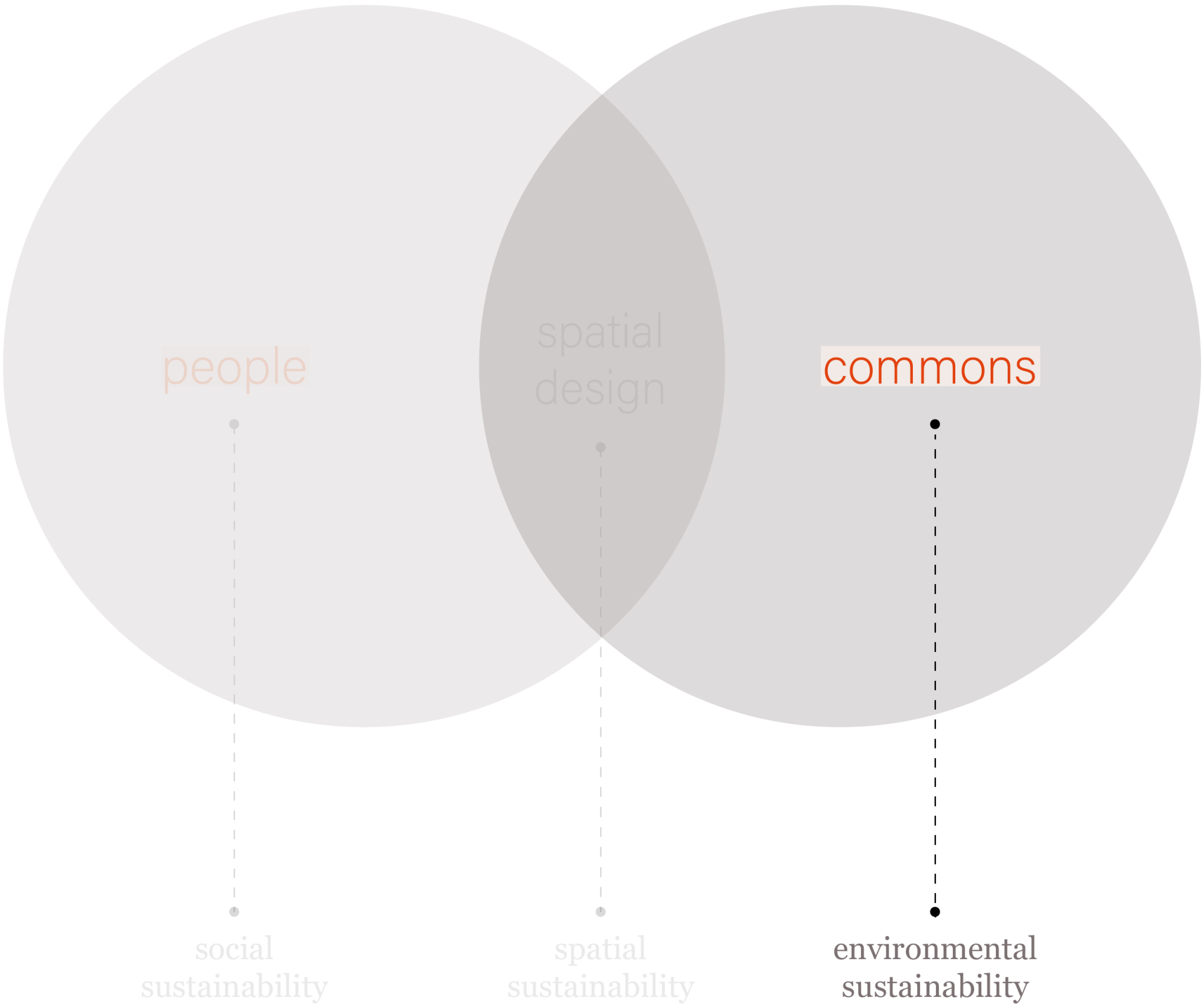






Substantial evidence suggests that social relationships play a crucial role in promoting mental and physical well-being throughout life (Cacioppo & Cacioppo, 2014).



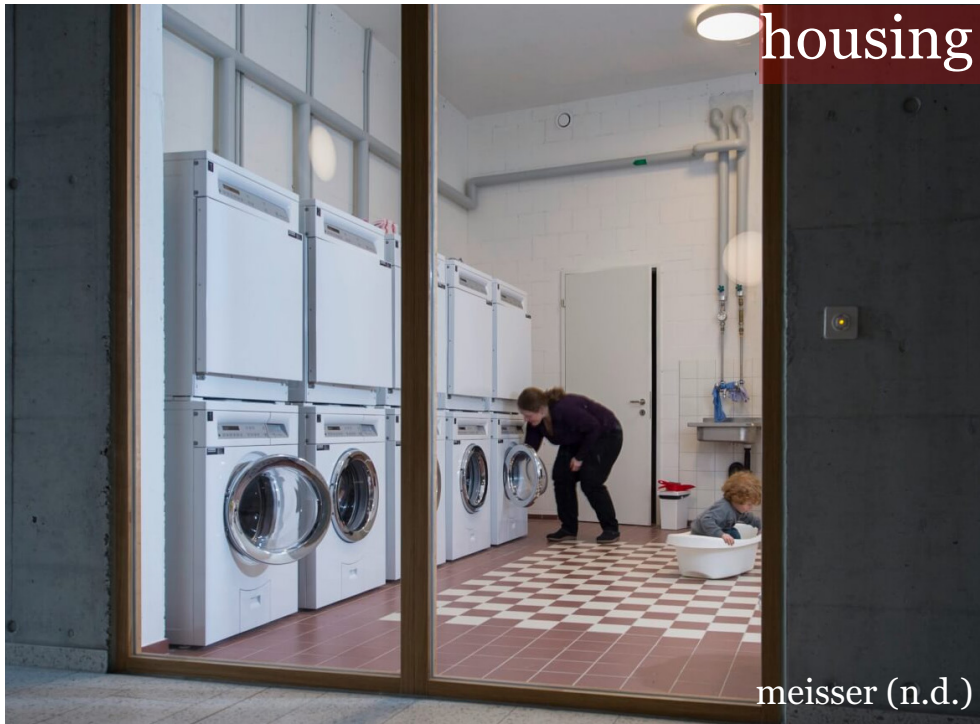


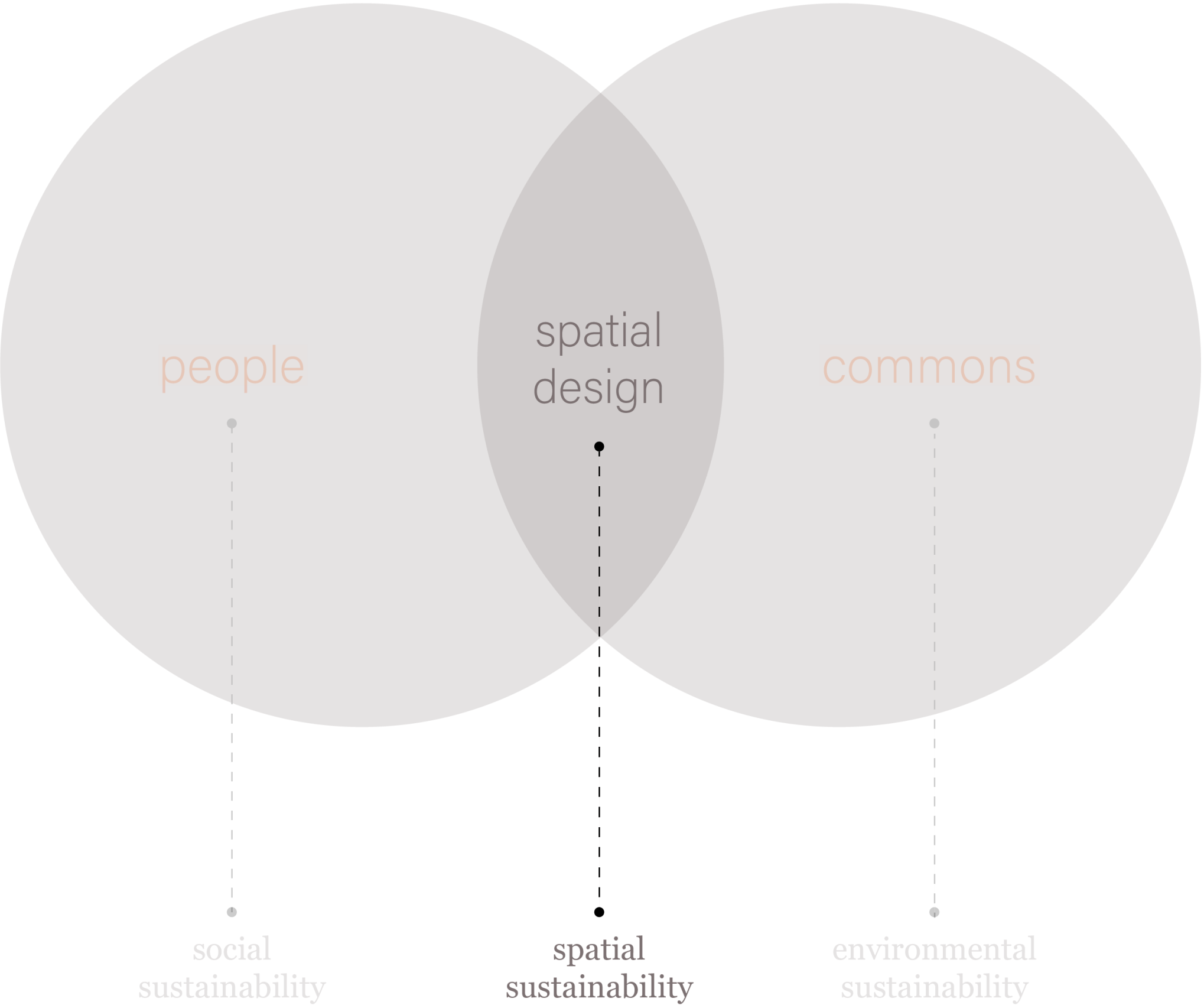
The trend of “corporatizing access and control over urban land” and the “corporate buying of whole pieces of cities,” leads to a transformation of what was once small and/or public into the large and private domain (Sassen, 2001).

Asserting ownership over urban resources and city space by framing them as a “commons” (Foster & Iaione, 2016).

Methodology

| The commons

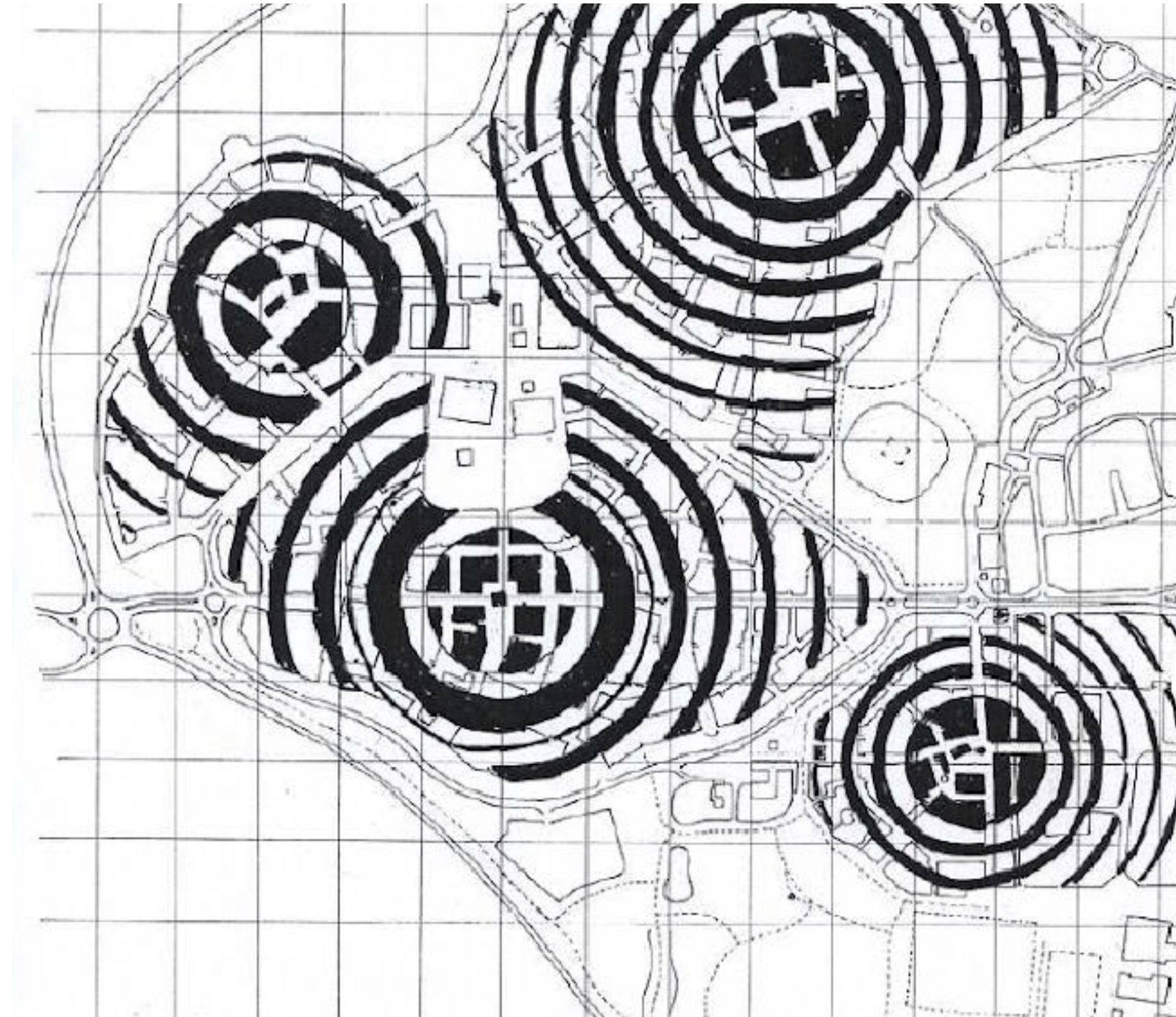




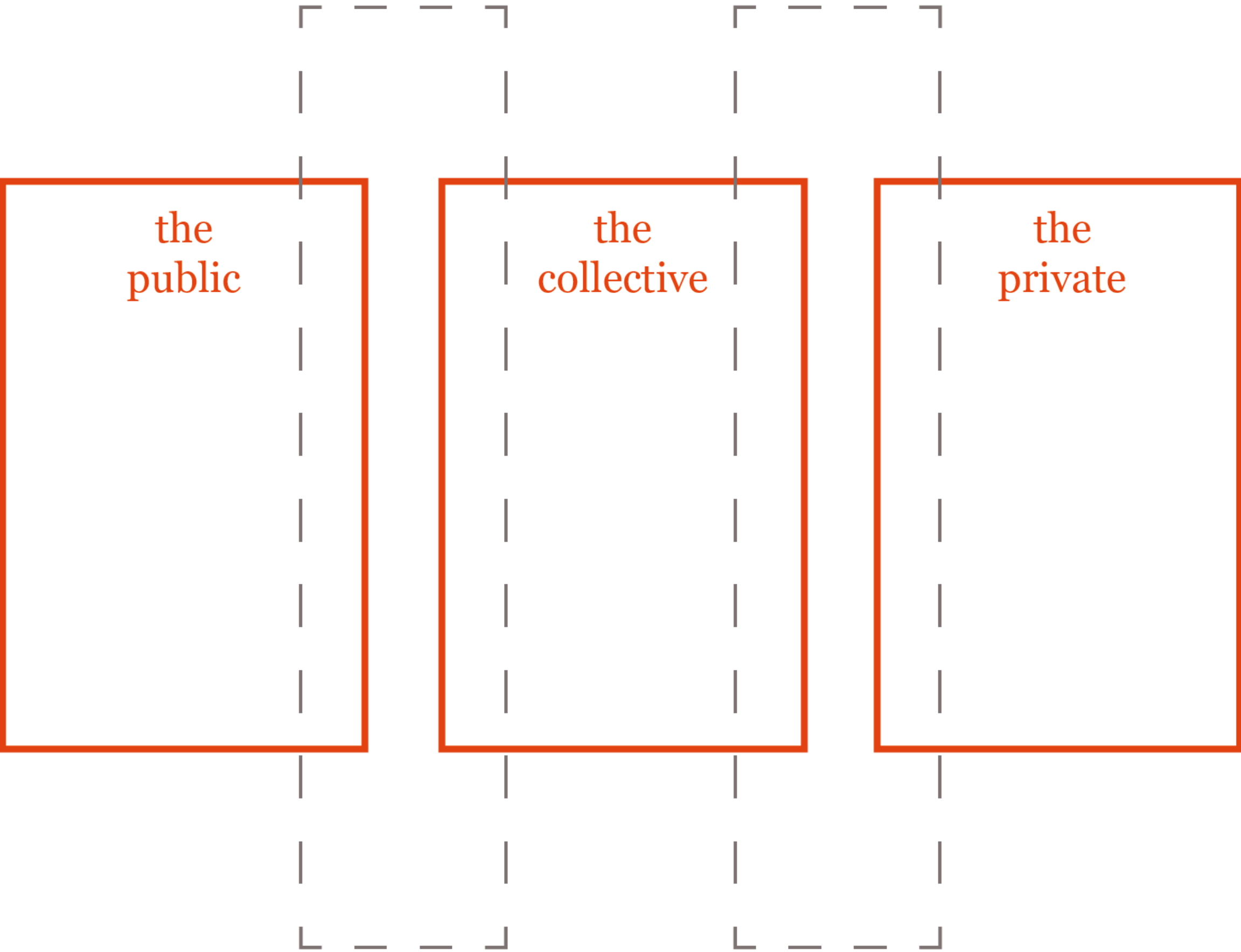
Methodology

| *Designing for people*

| *Polycentric city*



^
Krier, 2009



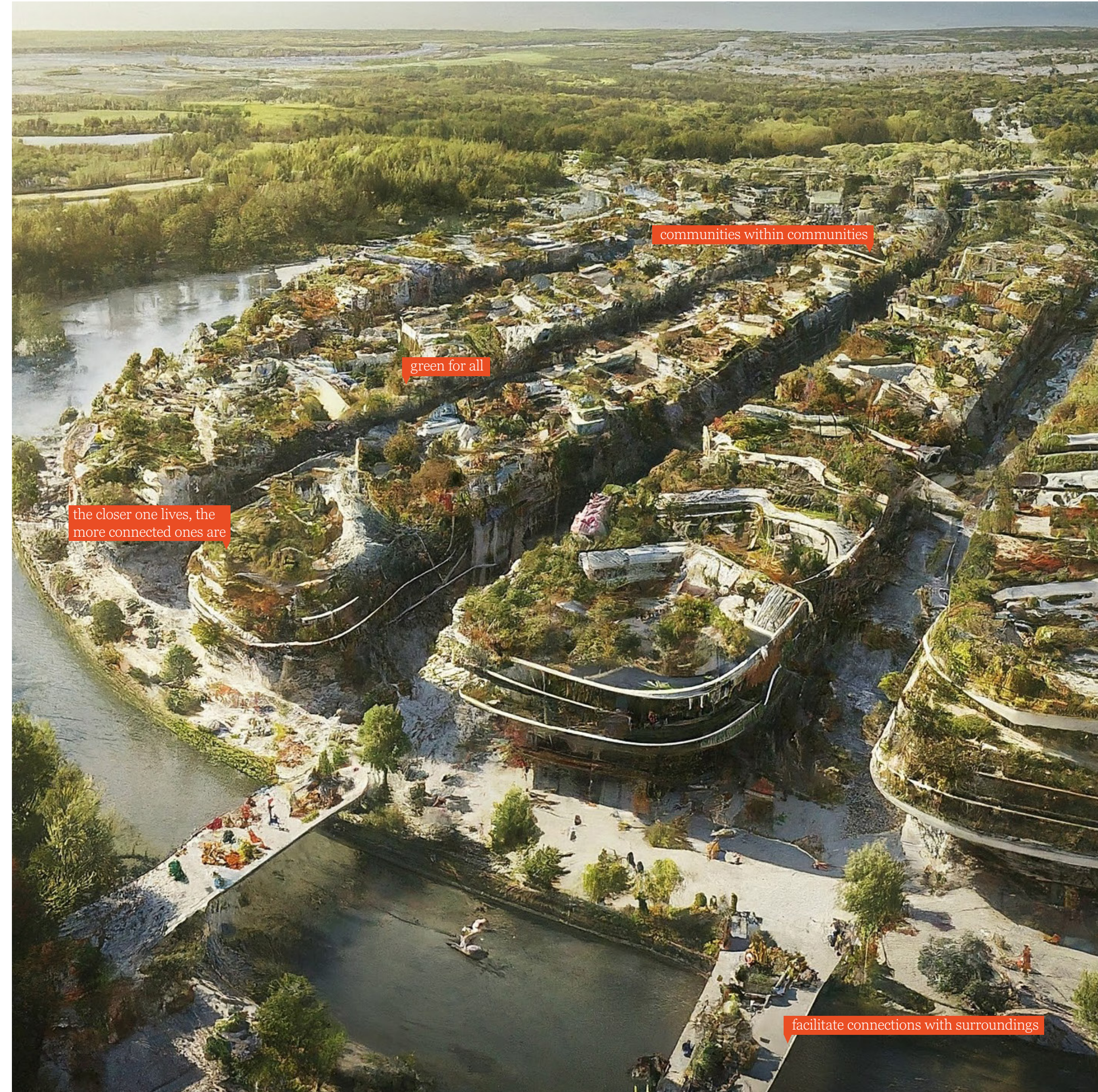
Utopian vision

Utopian vision
| *The neighbourhood*



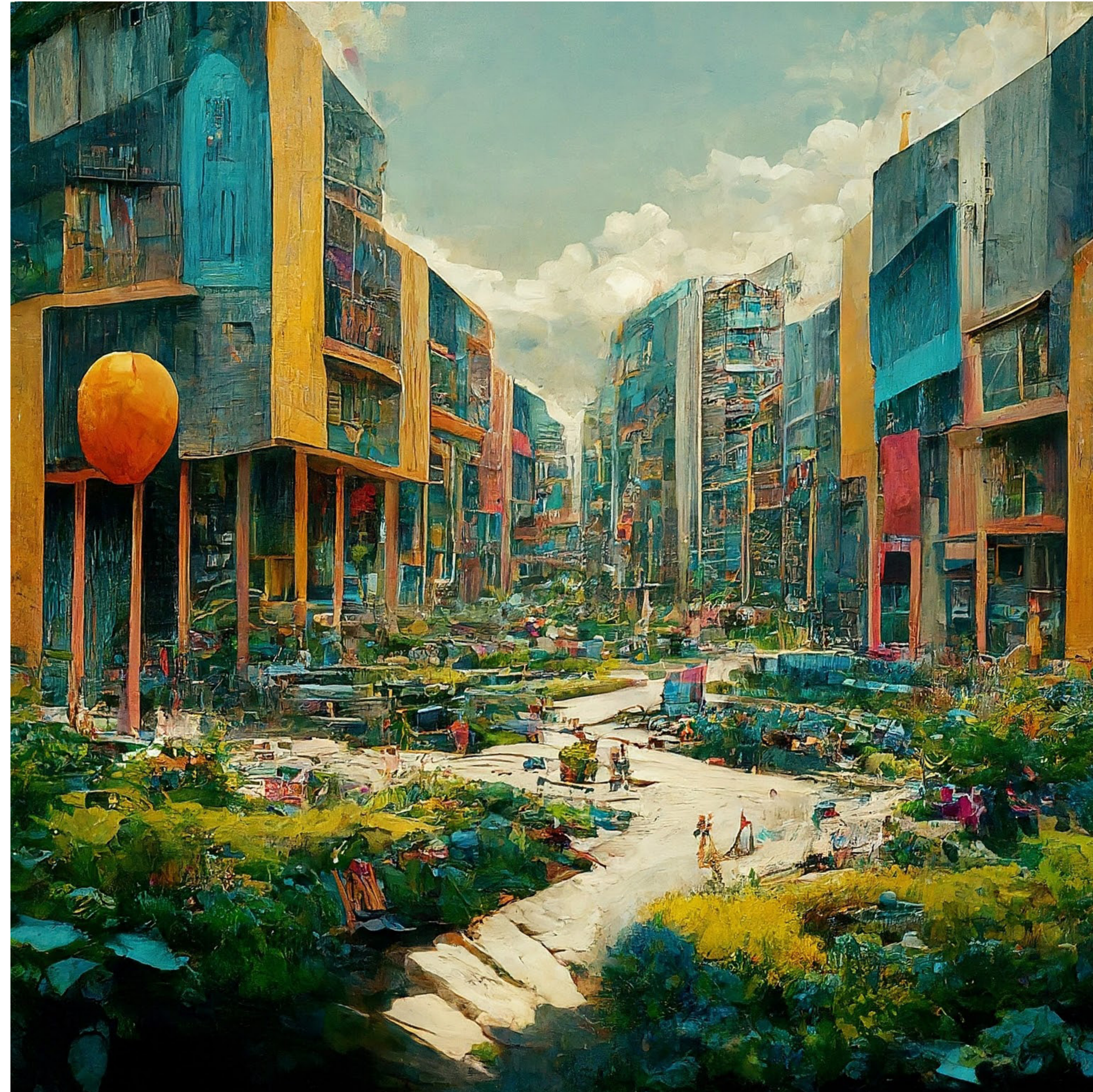
^_____
Generated with ImageFX, 2024

Utopian vision
| *The neighbourhood*



^_____
Generated with ImageFX, 2024

Utopian vision
| *The urban block*



^_____
Generated with ImageFX, 2024

Utopian vision

| The urban block



^_____

Generated with ImageFX, 2024

Research of collectivity

Research of collectivity

| *The inhabitants*

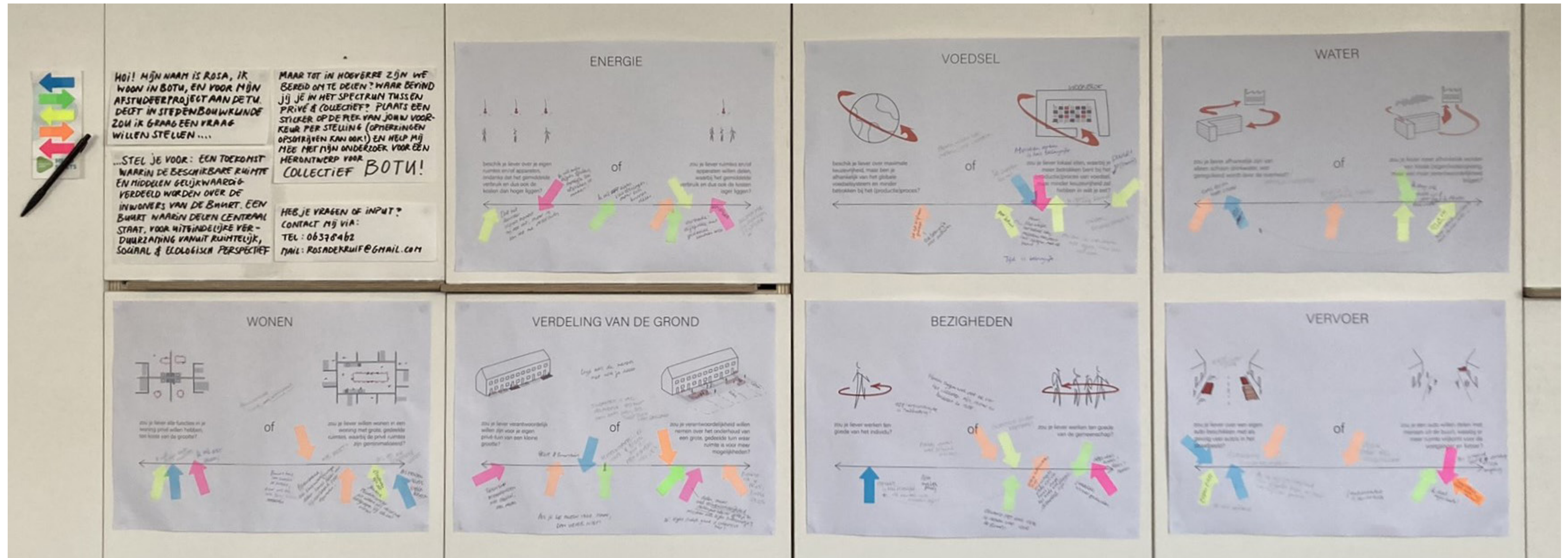
| *Workshop*



Research of collectivity

The inhabitants

Workshop





‘Right now I’m always on my way to work in the city, I would like to have more opportunities within the neighbourhood’



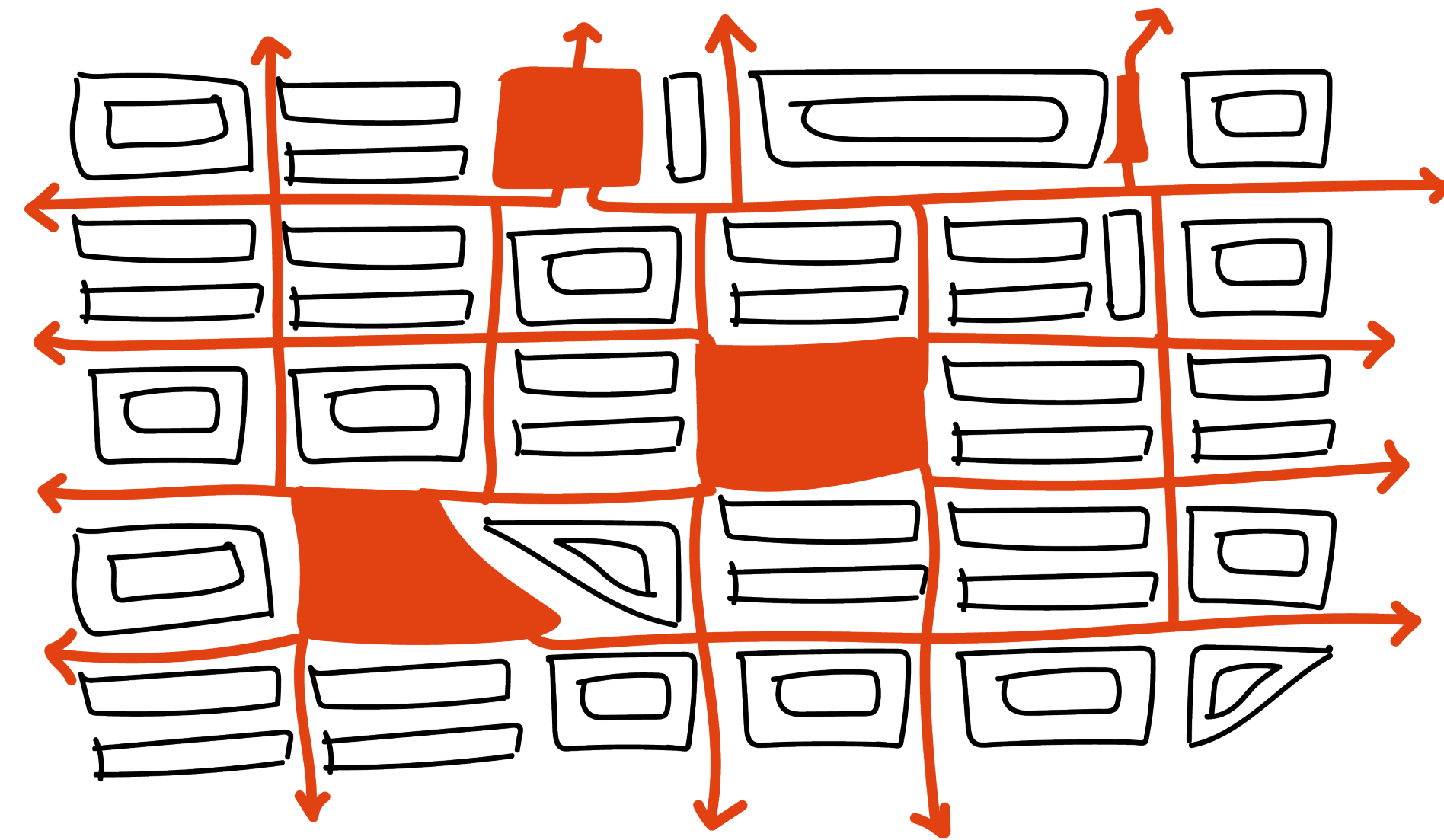
‘I think it’s a pity people don’t show engagement within the neighbourhood, since there already is a great potential of initiatives’



‘I would like to be more active within the neighbourhood, but the visibility of approachable activities is missing’



‘With the current lack of tram connections I’m depending on my private car, since I’m not mobile enough to bike’



Research of collectivity

| *Interscalar studies*

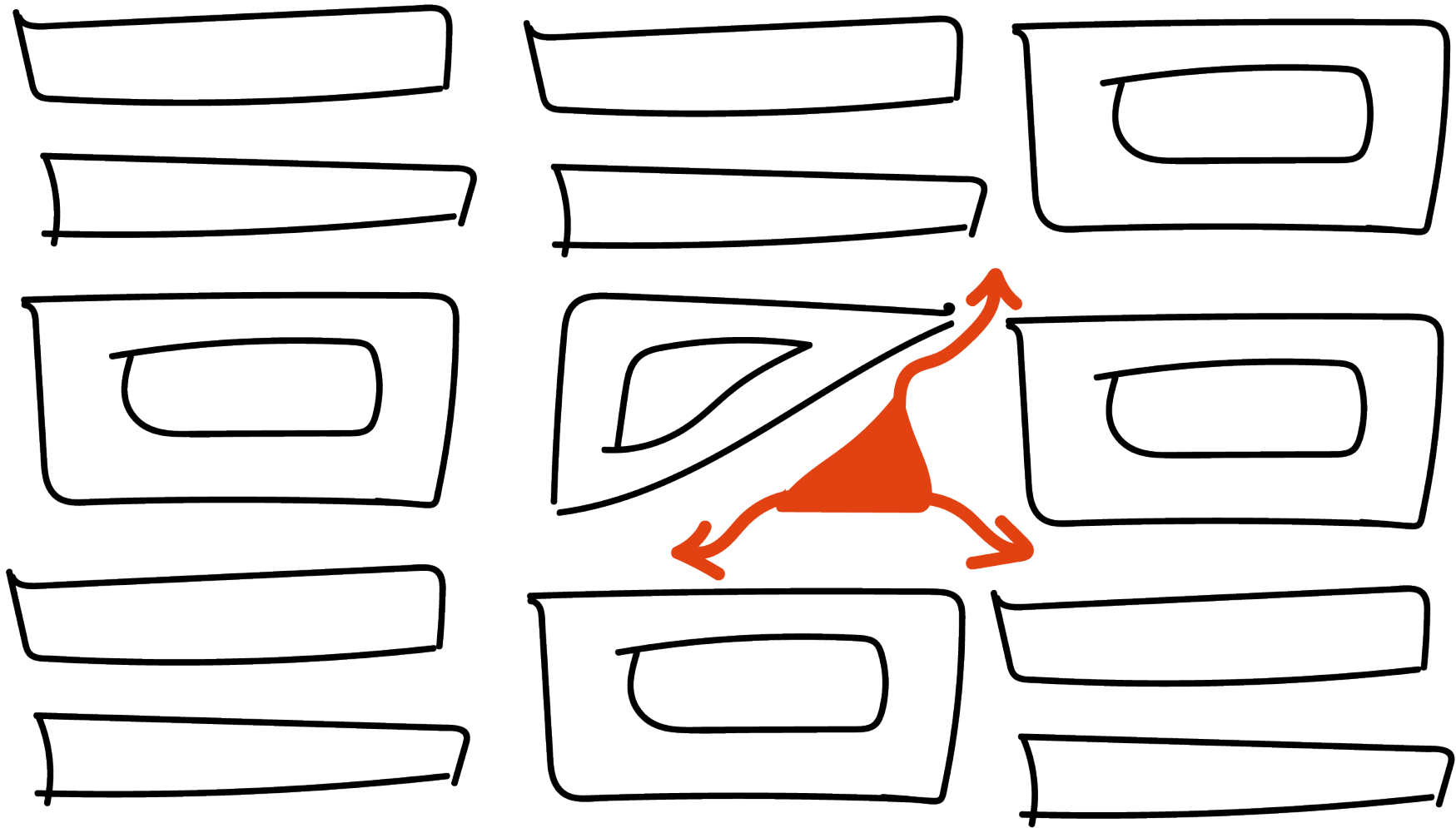
| *The neighbourhood*



Research of collectivity

| Interscalar studies

| The district



Research of collectivity

| *Interscalar studies*

| *The district*



Research of collectivity

| *Interscalar studies*

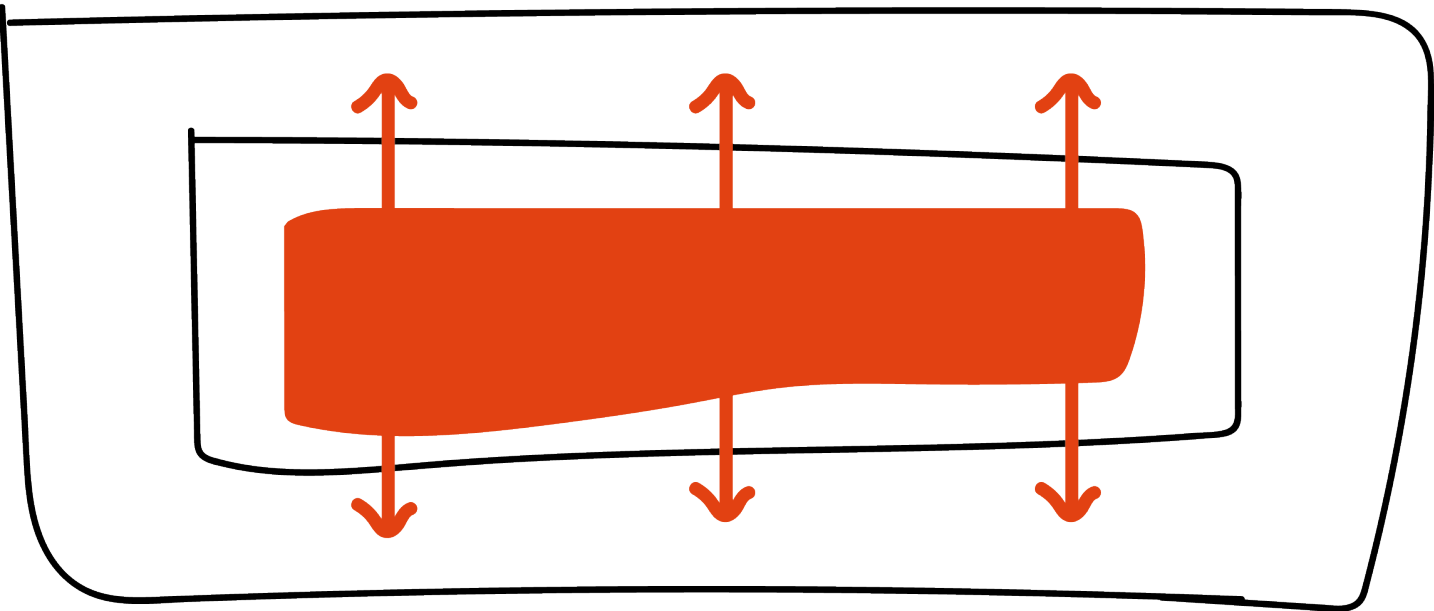
| *The district*



Research of collectivity

| Interscalar studies

| The urban block



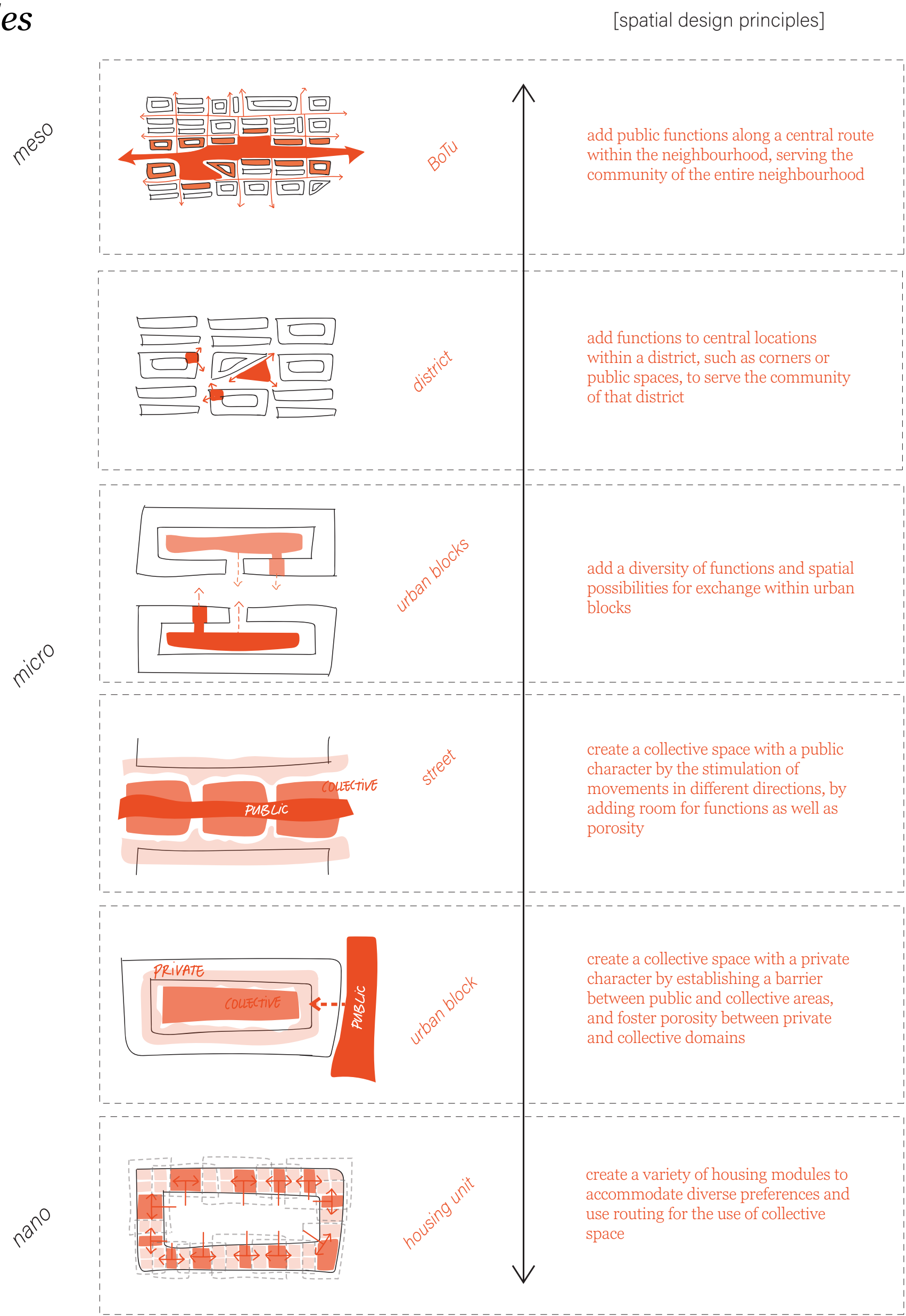
Research of collectivity

| *Interscalar studies*

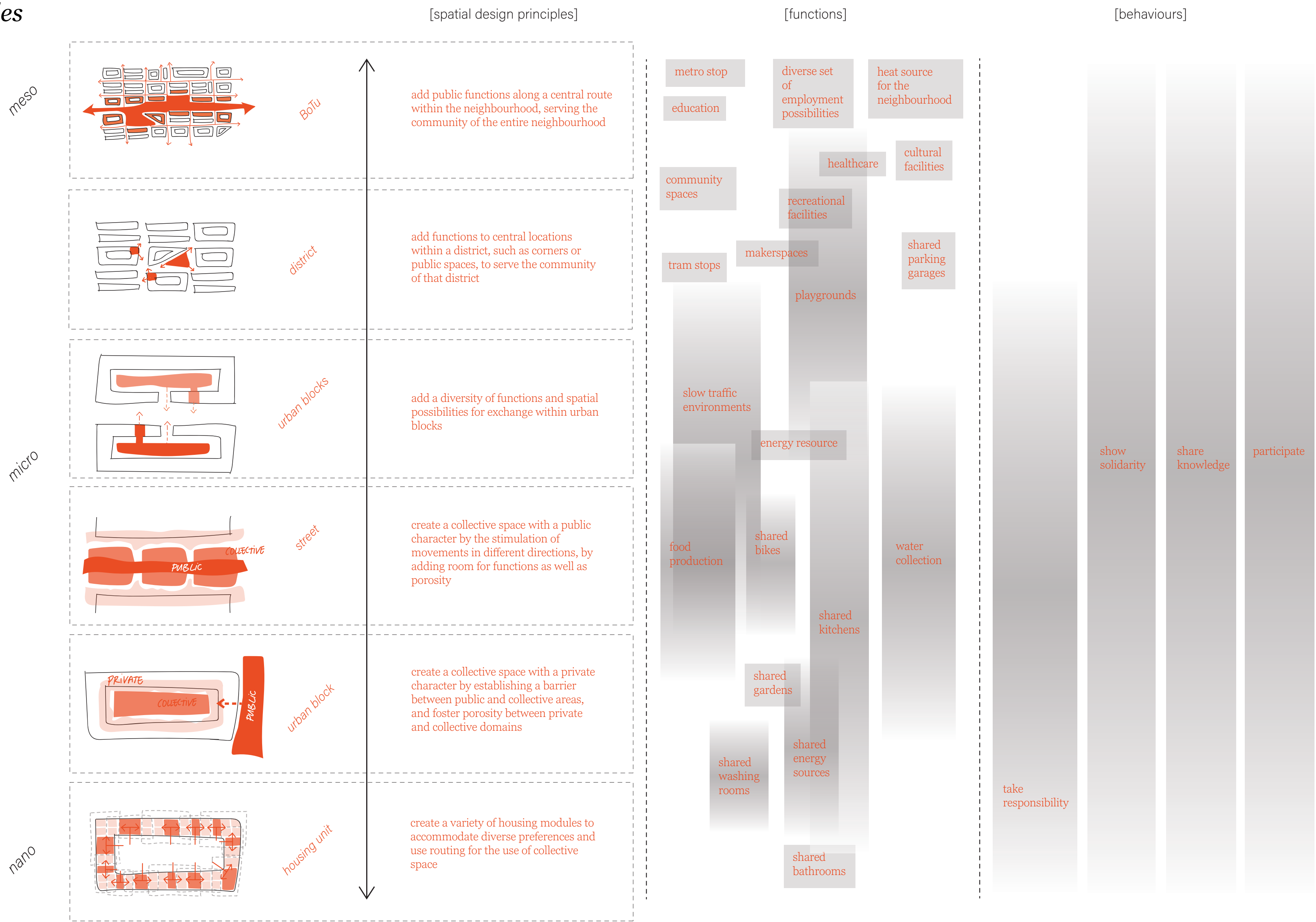
| *The urban block*



Design principles








Design principles



Design of collectivity

Design of collectivity
| A collective *BoTu*
| Spatial design framework

-  functions for the neighbourhood
-  functions for the district
-  connections between urban blocks
-  collective street
-  collective urban block

Design of collectivity

A collective BoTu

- | Green as a qualitative basis
- | Provide mobility
- | A diverse set of urban activities
- | Improve engagement

- central locations for community initiatives
- M metro stops
- T tram stops
- P shared parking

Design of collectivity

| *A collective BoTu*

| *From invisible to visible places for communities*

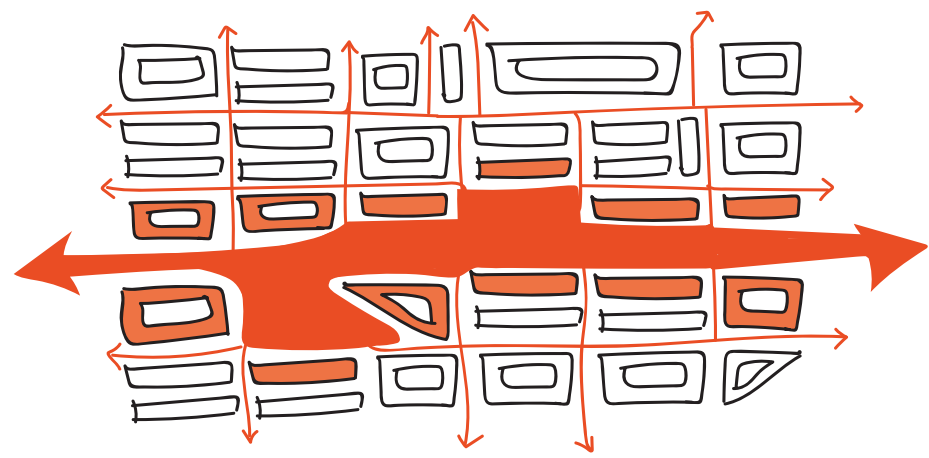
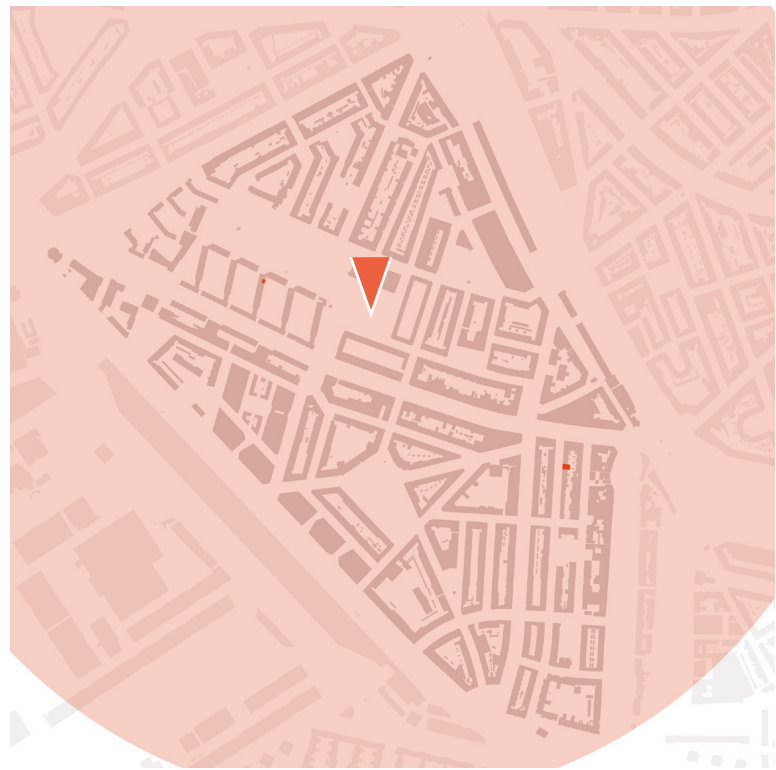




Tom (32)



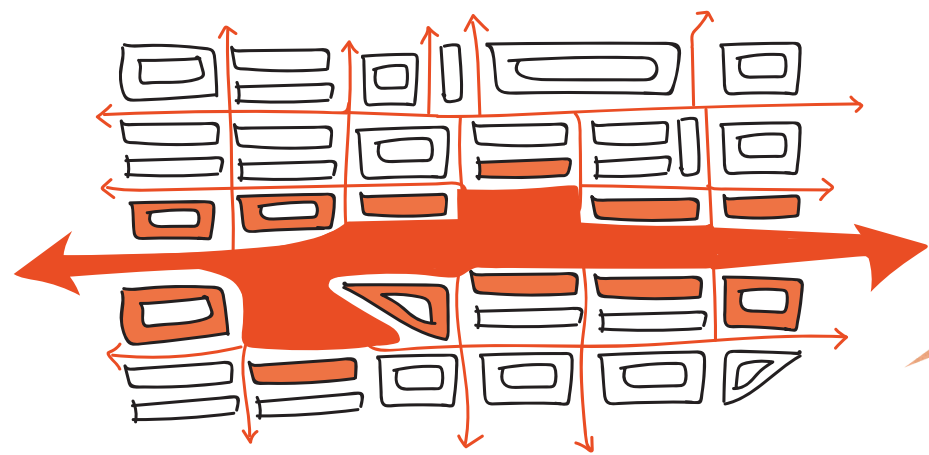
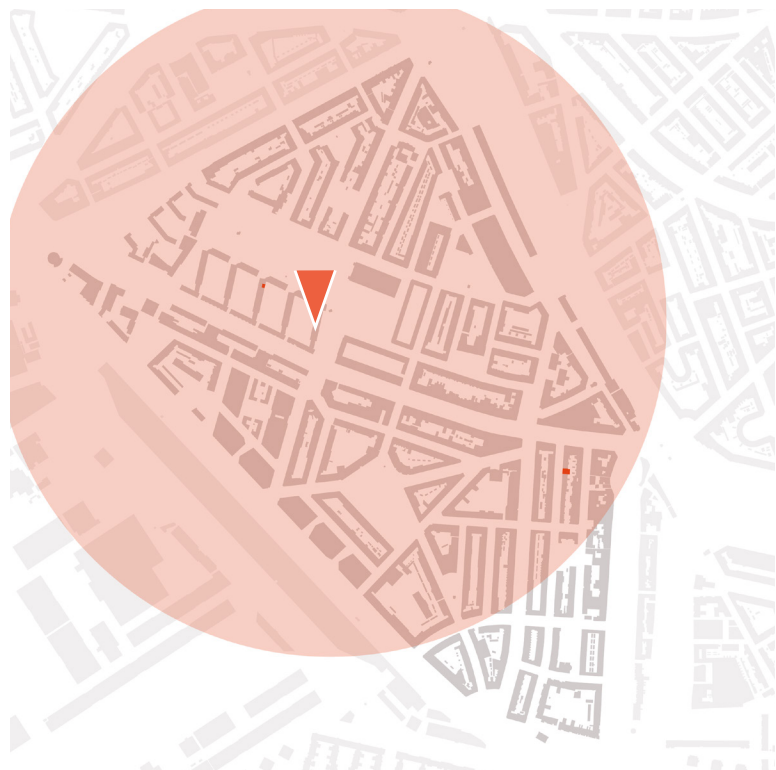
Gina (68)



add public functions along a central route within the neighbourhood, serving the community of the entire neighbourhood



'When I go for grocery shopping on the market, I always see familiar faces from the community kitchen next door'



add public functions along a central route within the neighbourhood, serving the community of the entire neighbourhood

‘After going to the market I always go for a cup of coffee at the community kitchen next to the market’





Design of collectivity

| *Systemic design*

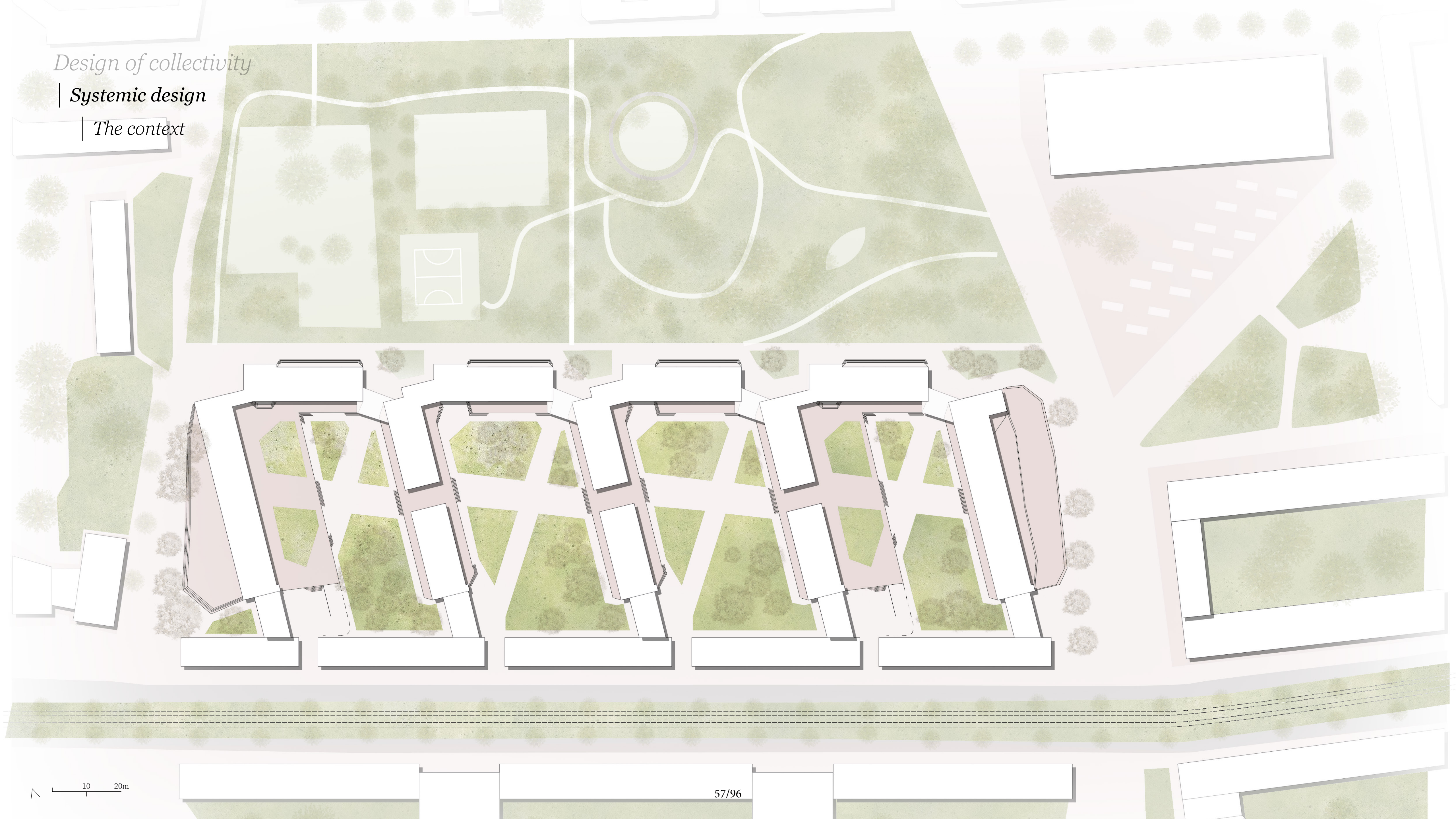
| *Current situation*



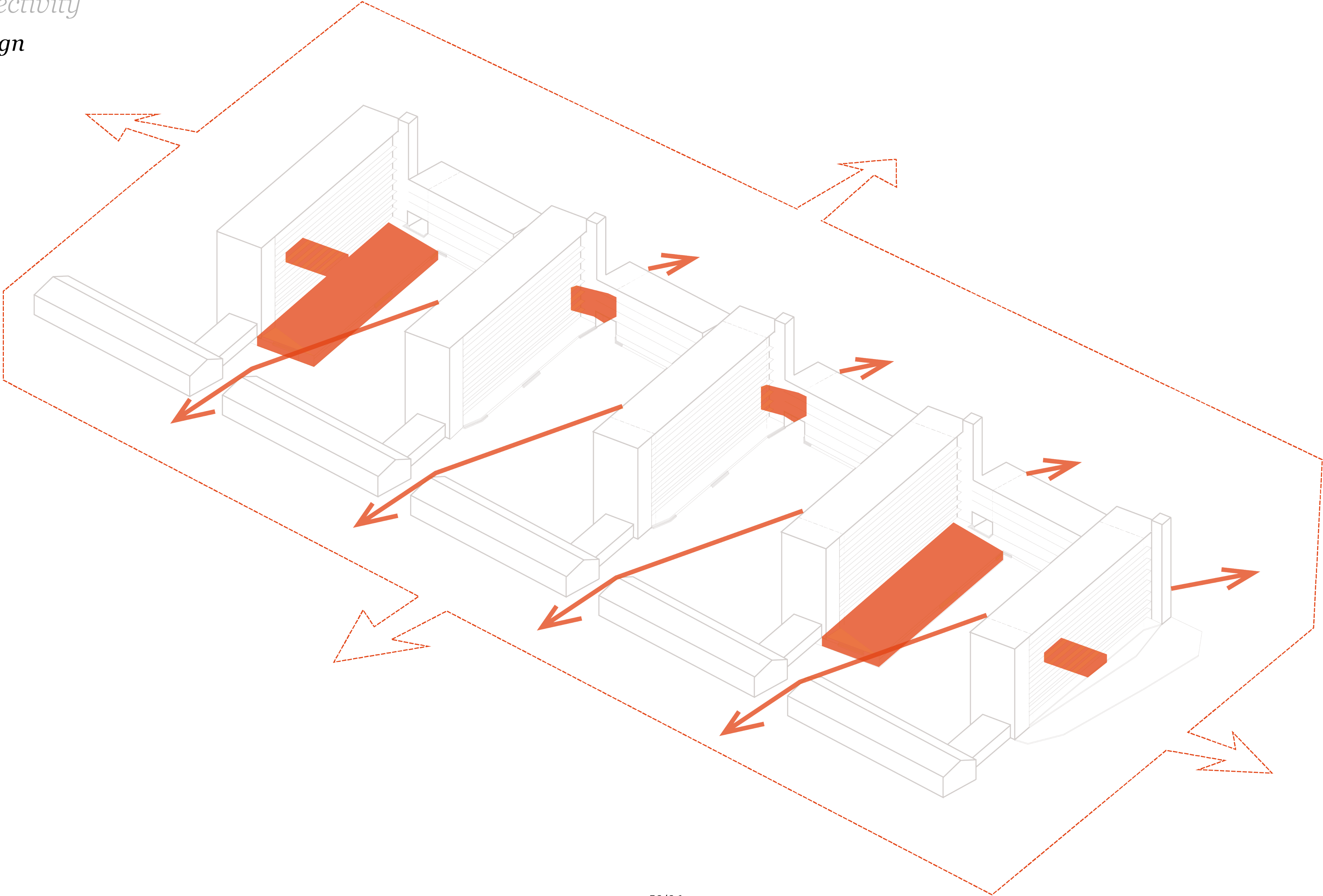
Design of collectivity

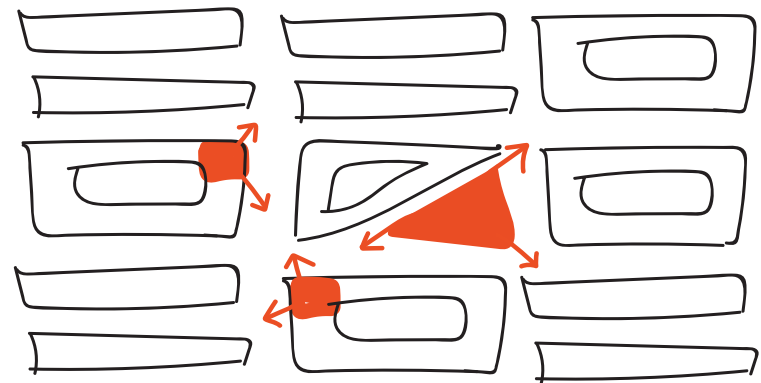
| *Systemic design*

| *The context*



Design of collectivity
| *Systemic design*
| *The system*

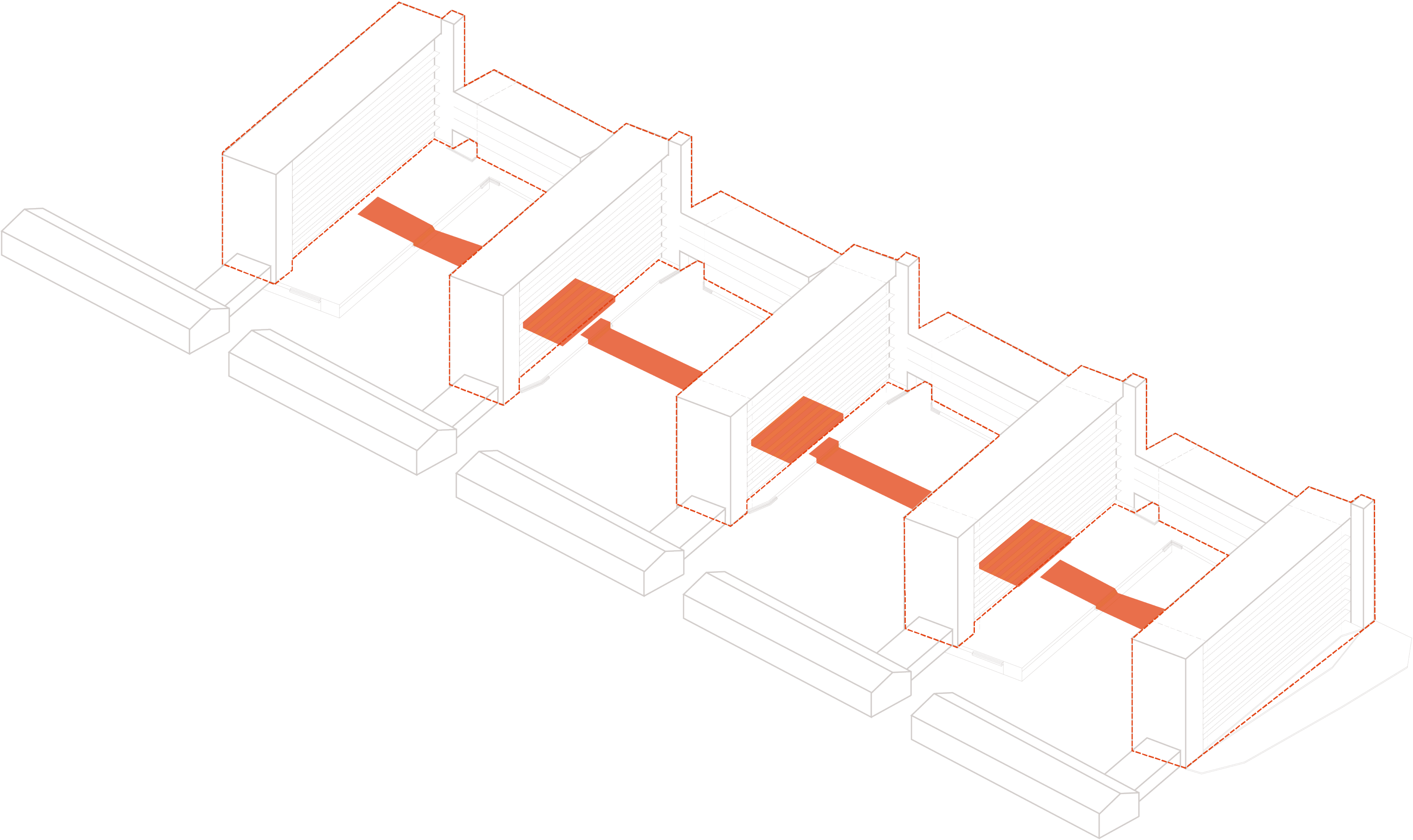




add functions to central locations within a district, such as corners or public spaces, to serve the community of that district

‘People sometimes ask me to help fixing their bike, which can be done in the repair space within my block’

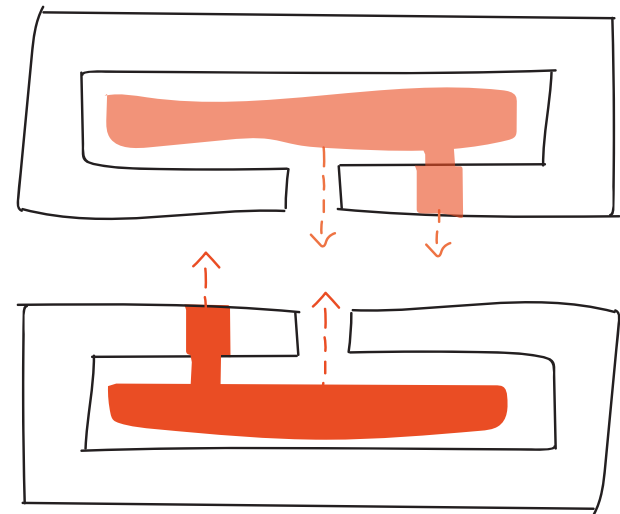
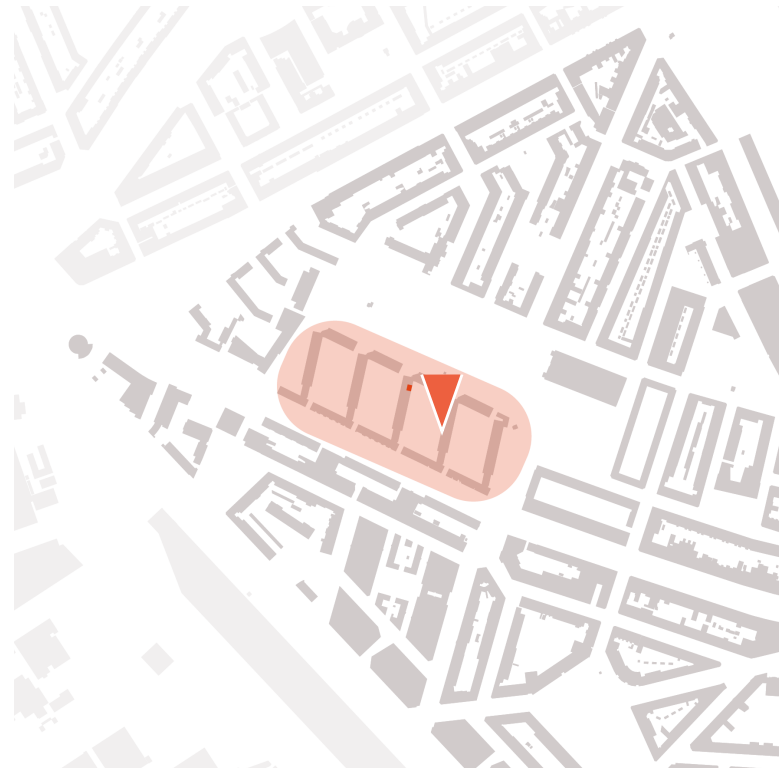




Design of collectivity

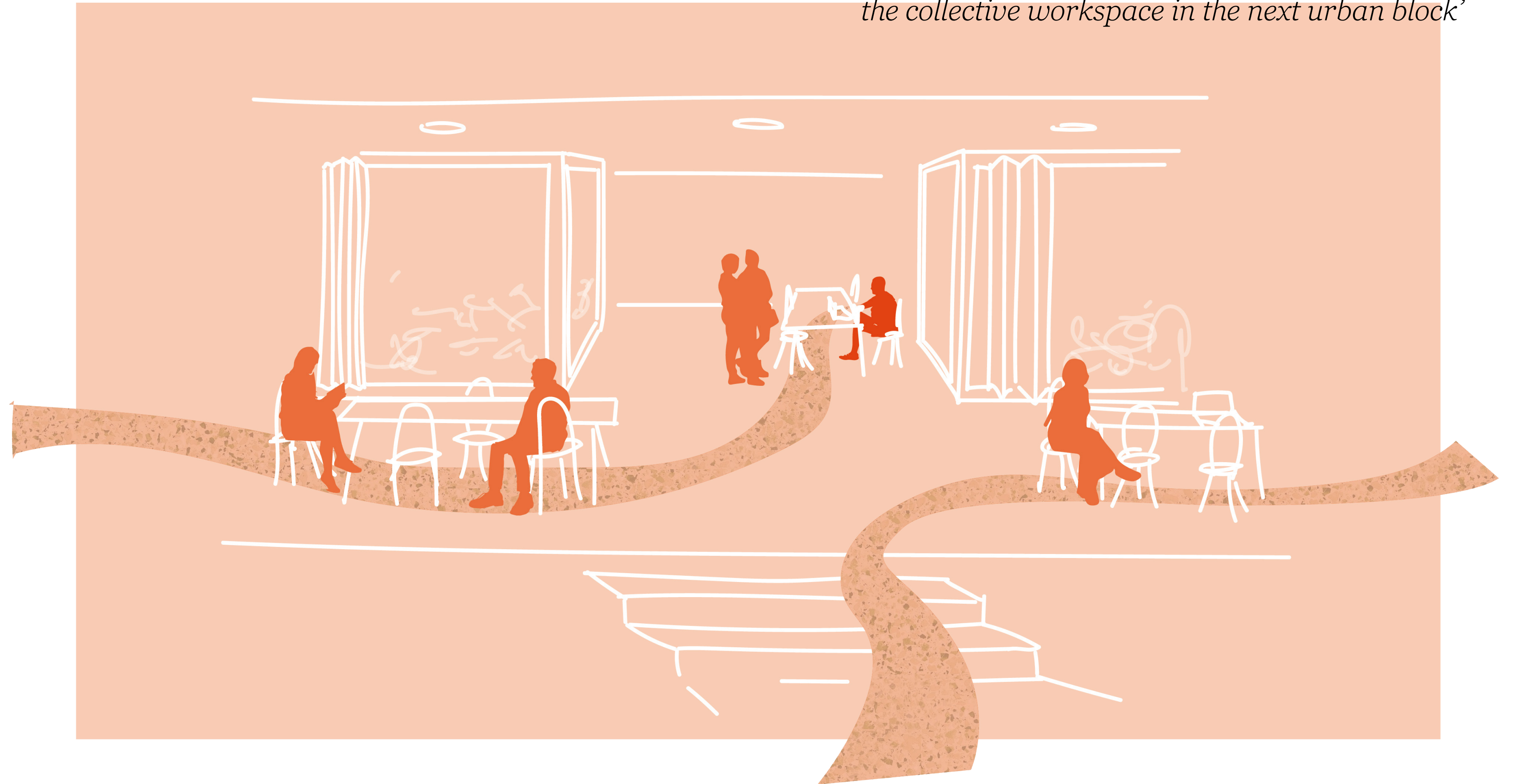
| Systemic design

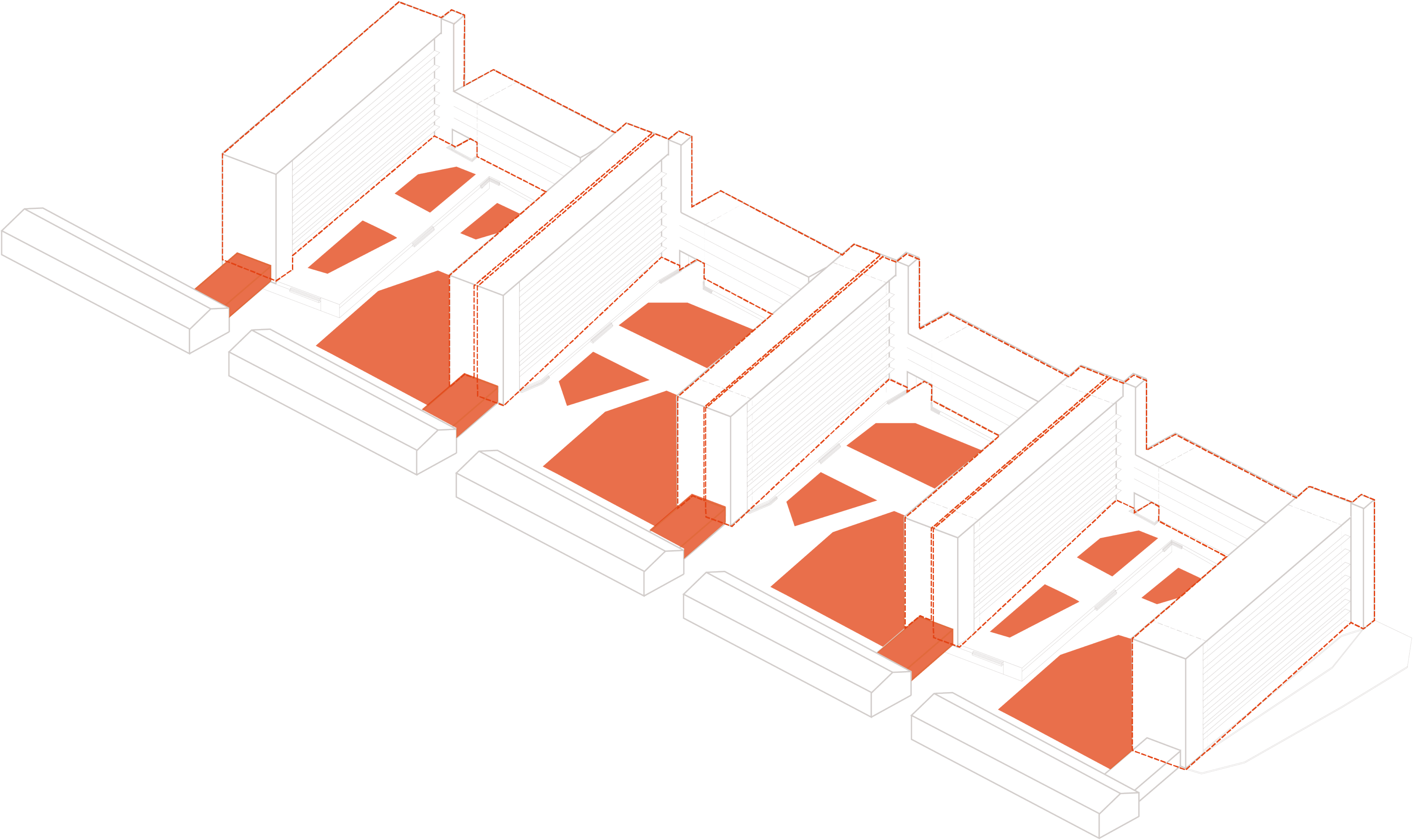
| Scene

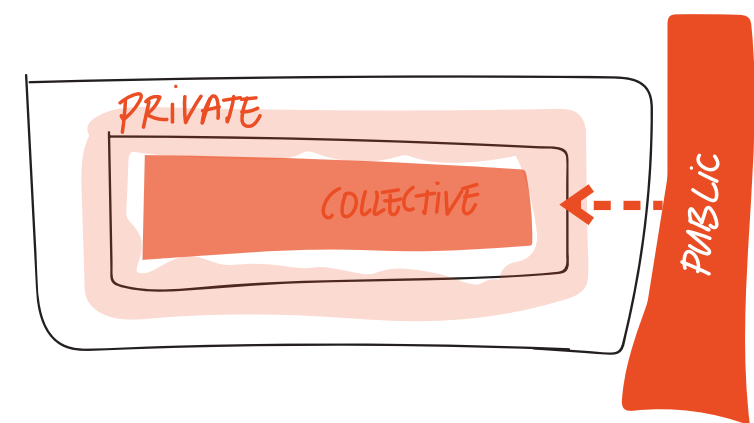
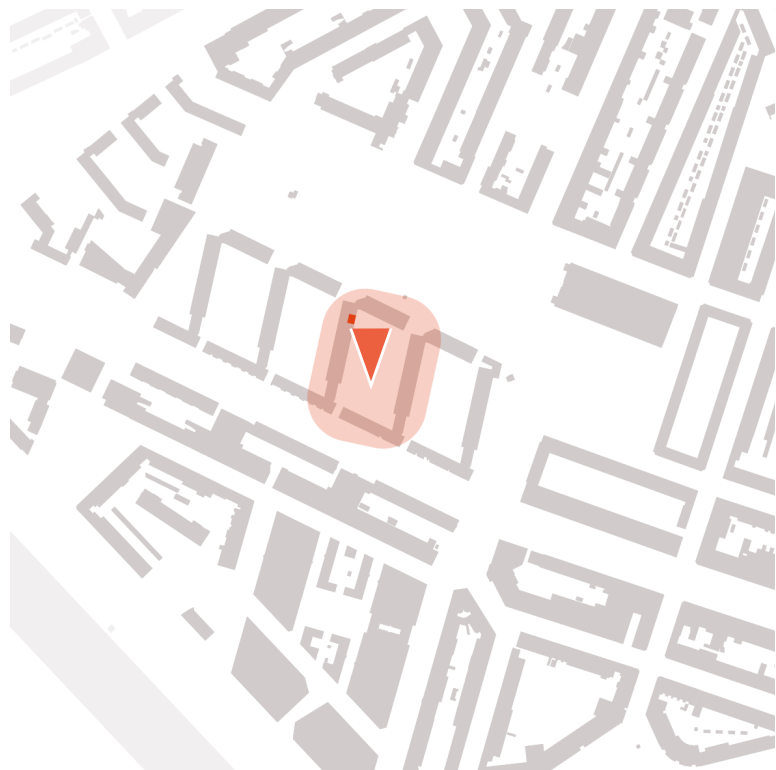


add a diversity of functions and spatial possibilities for exchange within urban blocks

‘When I have to work on my computer I always go to the collective workspace in the next urban block’







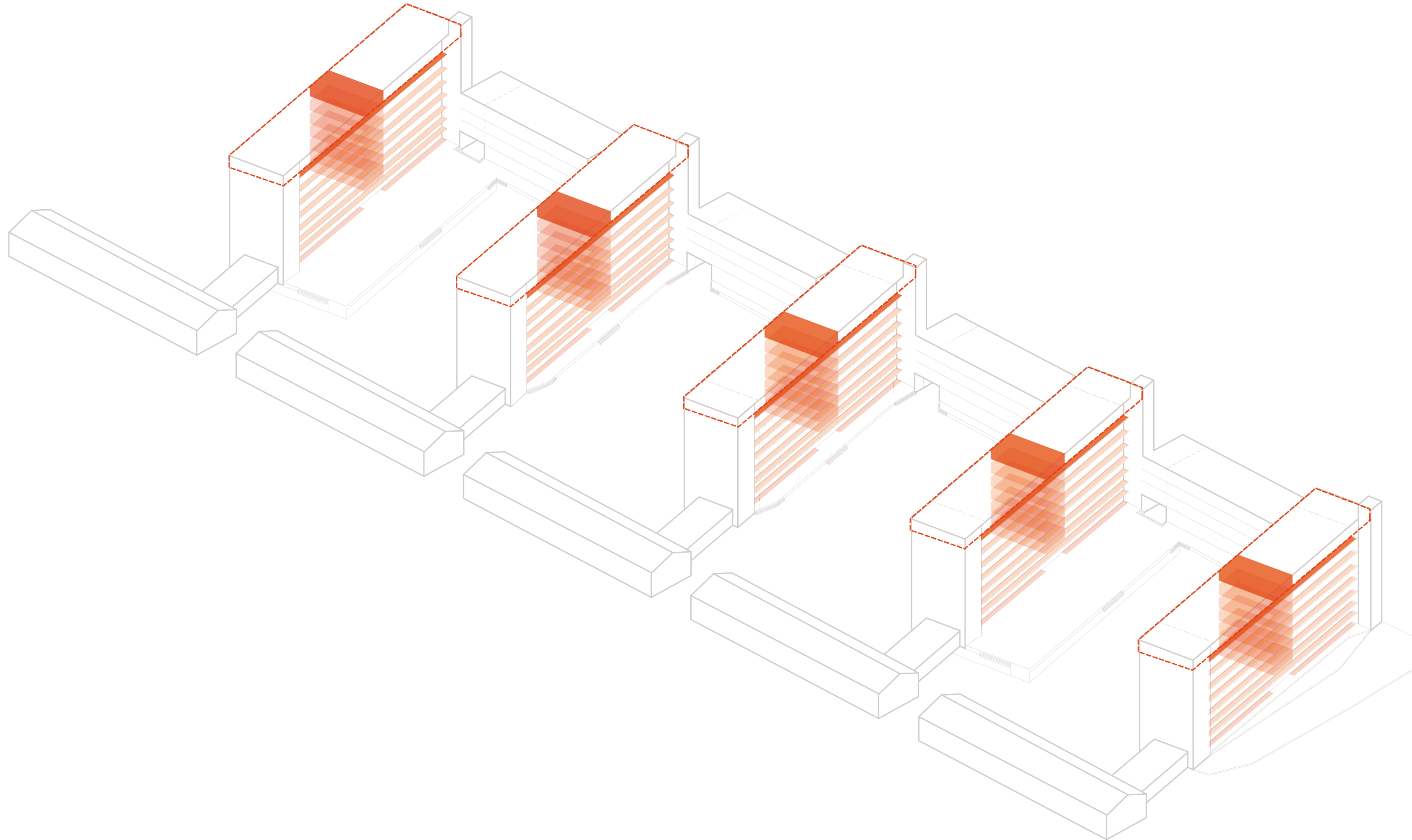
create a collective space with a private character by establishing a barrier between public and collective areas, and foster porosity between private and collective domains



Design of collectivity

| *Systemic design*

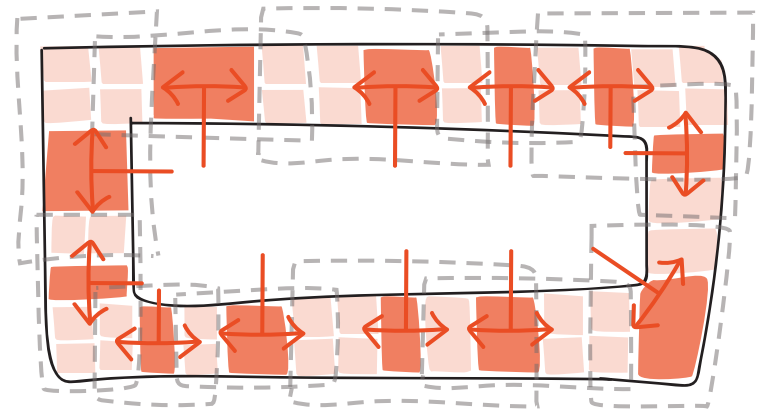
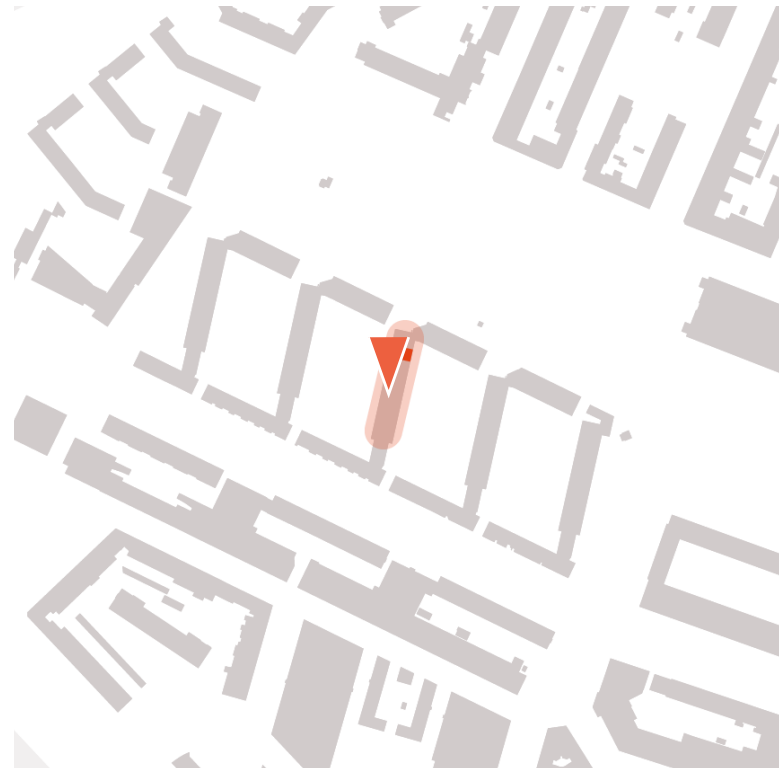
| *The system*



Design of collectivity

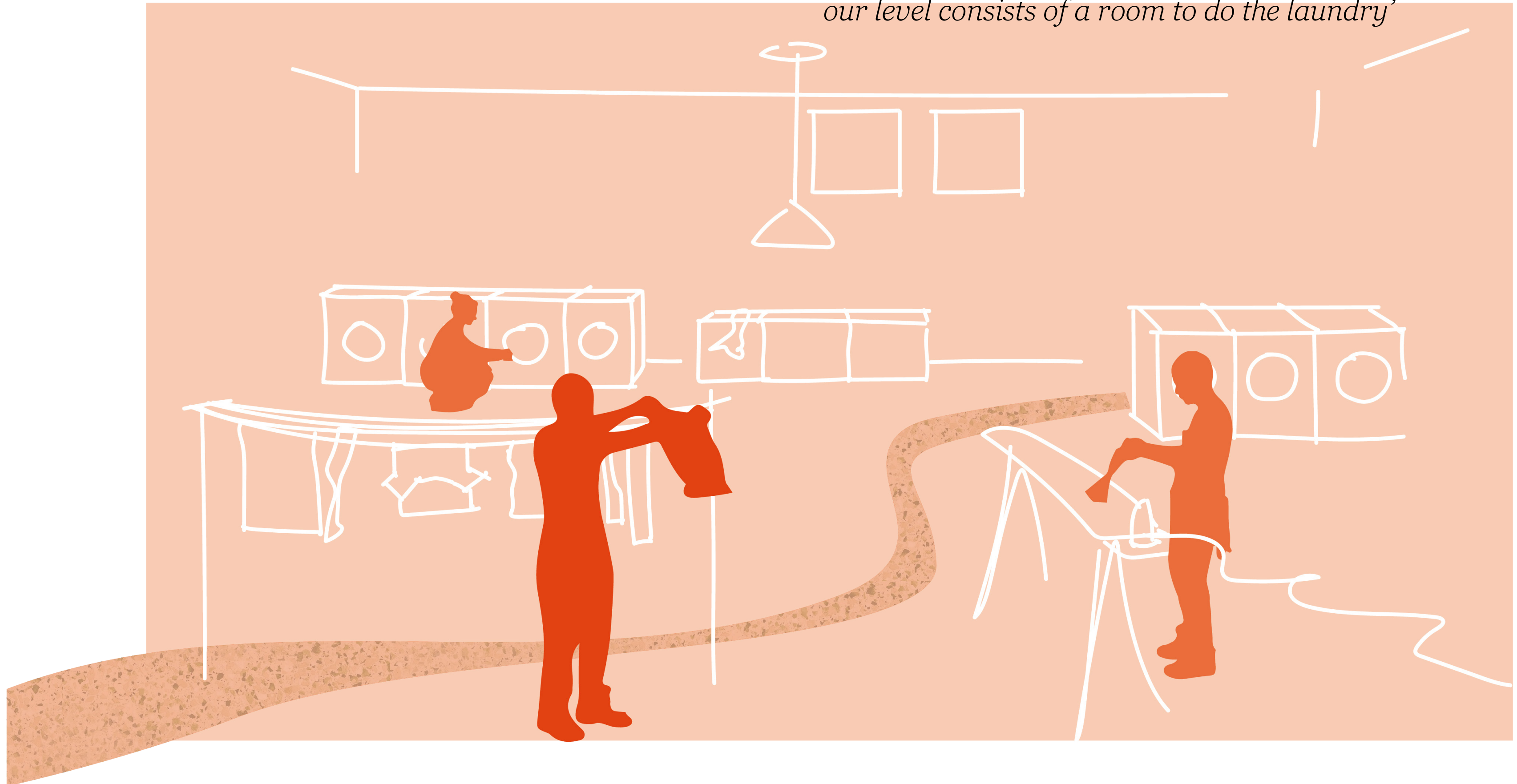
| *Systemic design*

| *Scene*



create a variety of housing modules to accommodate diverse preferences and use routing for the use of collective space

‘The cores of our building have collective functions, in which our level consists of a room to do the laundry’



Design of collectivity

| *Systemic design*

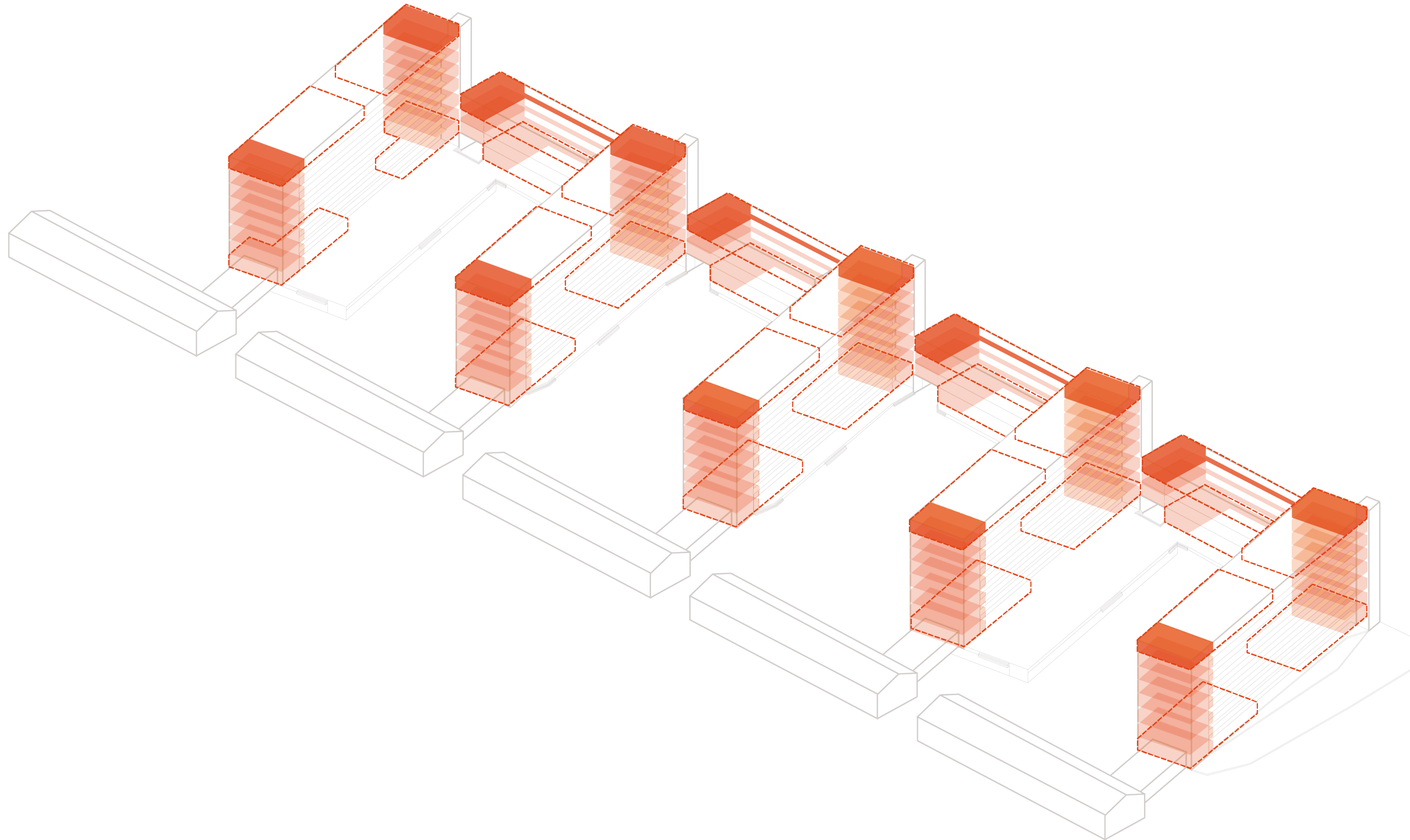
| *The gallery*



Design of collectivity

| *Systemic design*

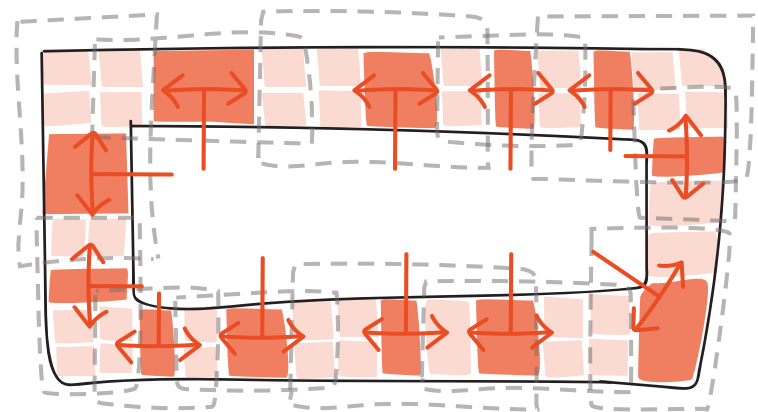
| *The system*



Design of collectivity

| Systemic design

| Scene



create a variety of housing modules to accomodate diverse preferences and use routing for the use of collective space

‘Since I’m passing the collective space before entering my private place, I always have a look if people are there’



Design of collectivity

| Systemic design

| The design



Design of collectivity

| *Systemic design*

| *Daytime*



Design of collectivity

| *Systemic design*

| *Nighttime*





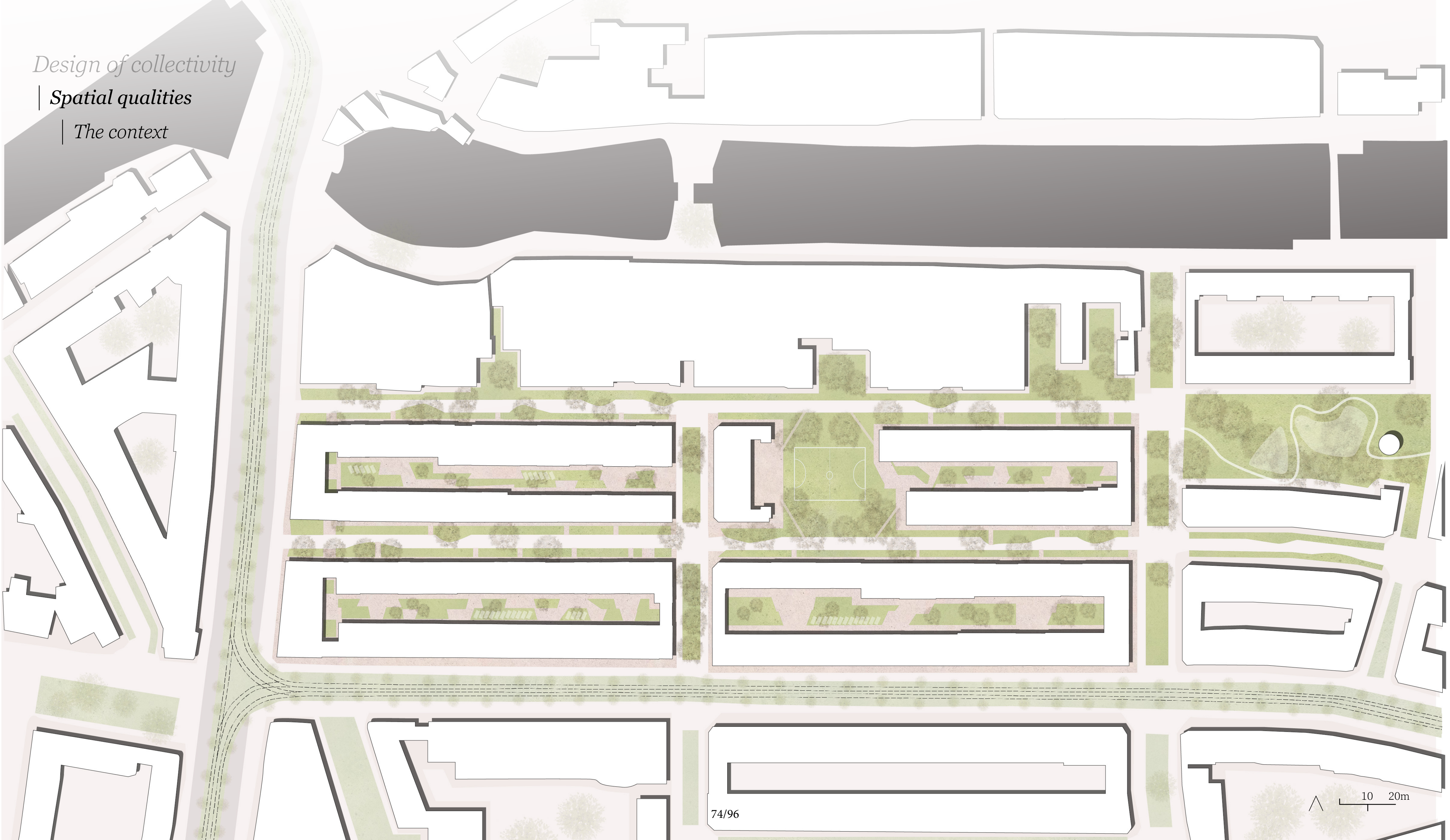
Design of collectivity

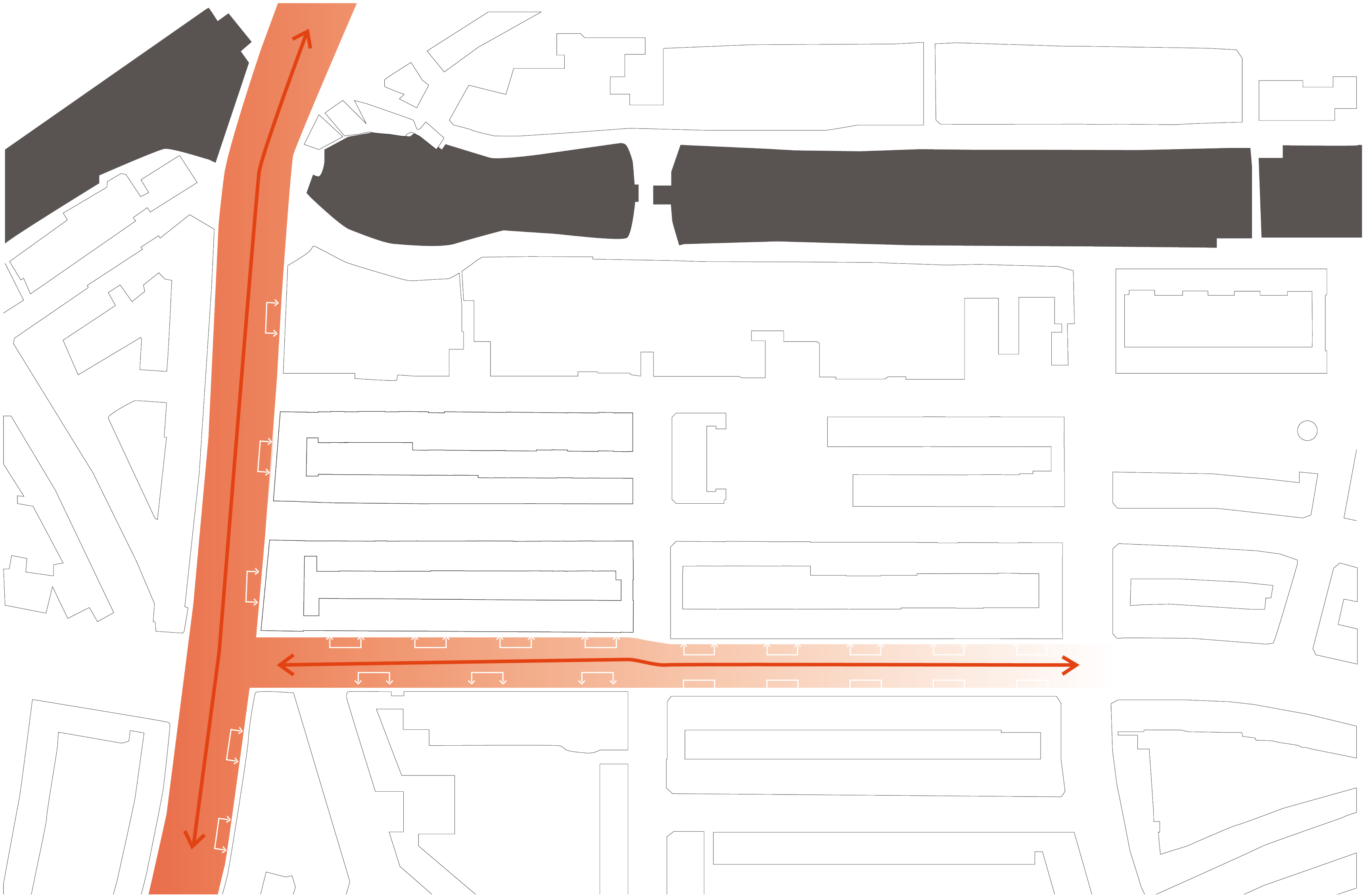
| *Spatial qualities*

| *Places of going vs room for porosity*



Design of collectivity
| *Spatial qualities*
| *The context*

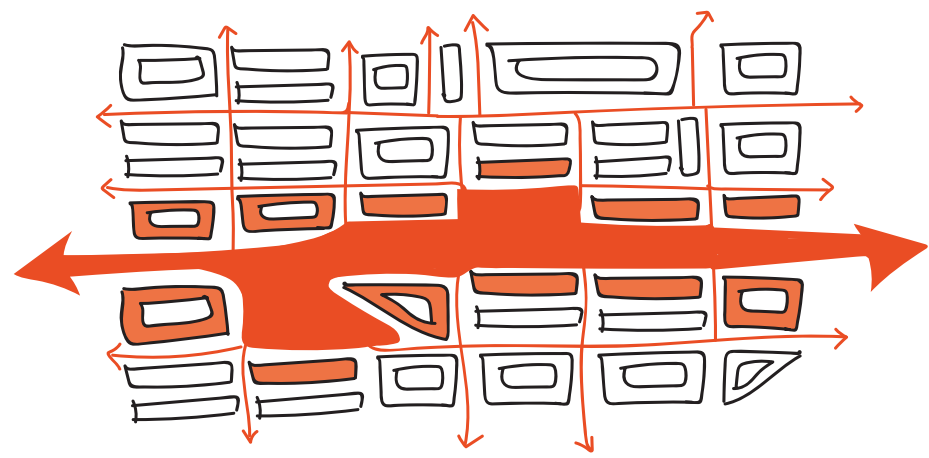
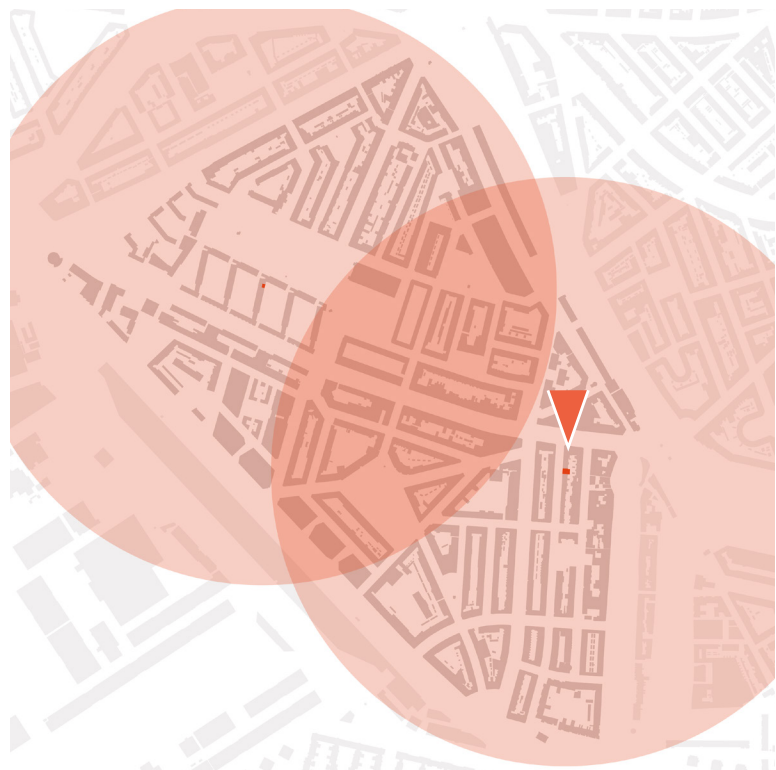




Design of collectivity

| Spatial qualities

| Scene



add public functions along a central route within the neighbourhood, serving the community of the entire neighbourhood

‘Once a week I cook in the kitchen along Schiedamseweg’



Design of collectivity

| *Spatial qualities*

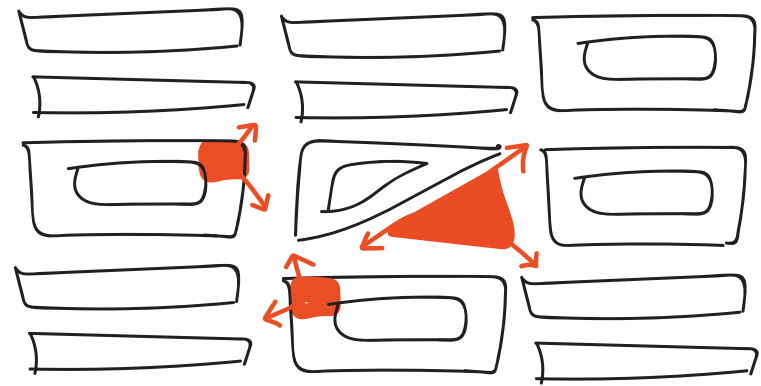
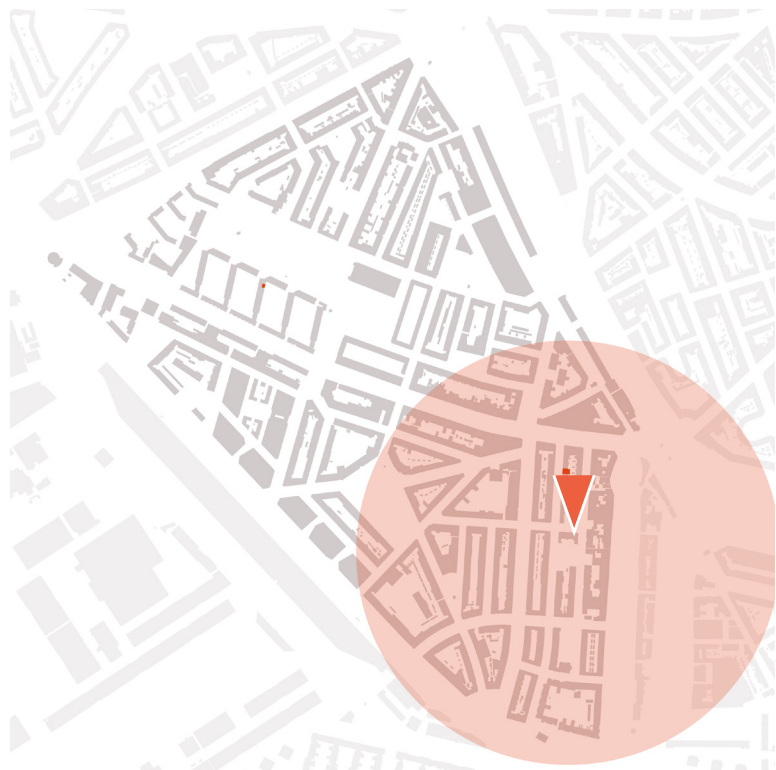
| *Ways of sharing*



Design of collectivity

| Spatial qualities

| Scene



add functions to central locations within a district, such as corners or public spaces, to serve the community of that district

‘Every weekend there is a different workshop in our community centre, where I go painting sometimes’



Design of collectivity

| *Spatial qualities*

| *Daytime*



Design of collectivity

| *Spatial qualities*

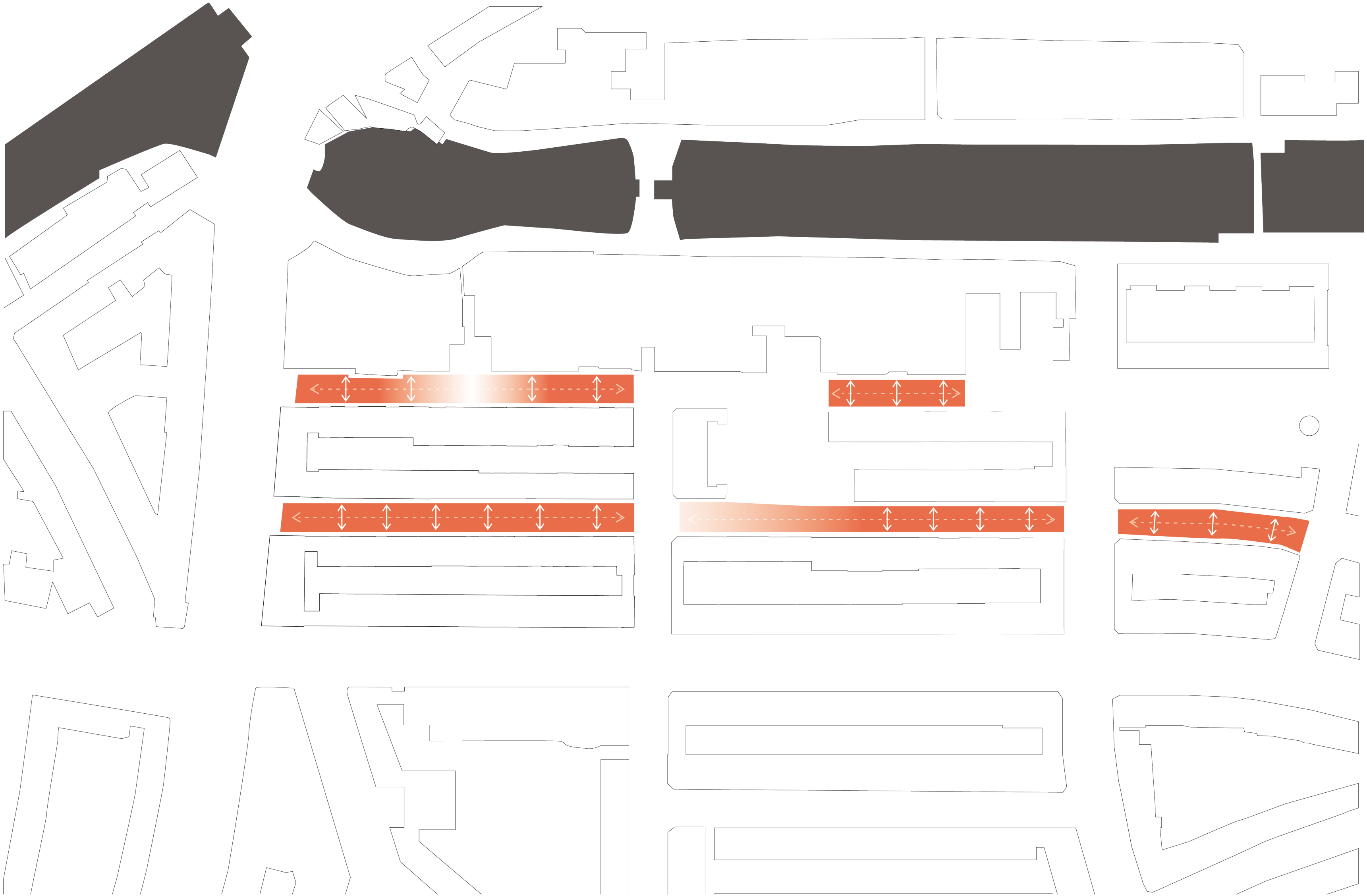
| *Nighttime*



Design of collectivity

| *Spatial qualities*

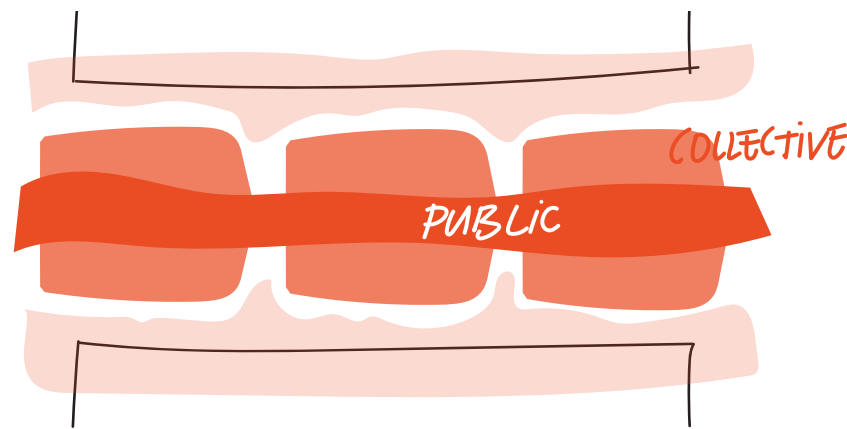
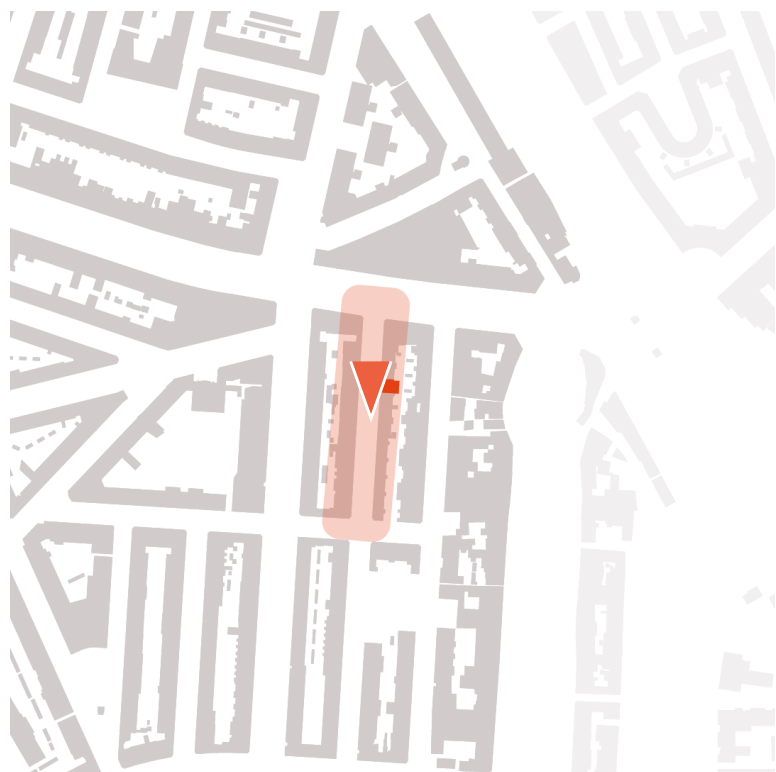
| *Ways of sharing*



Design of collectivity

| Spatial qualities

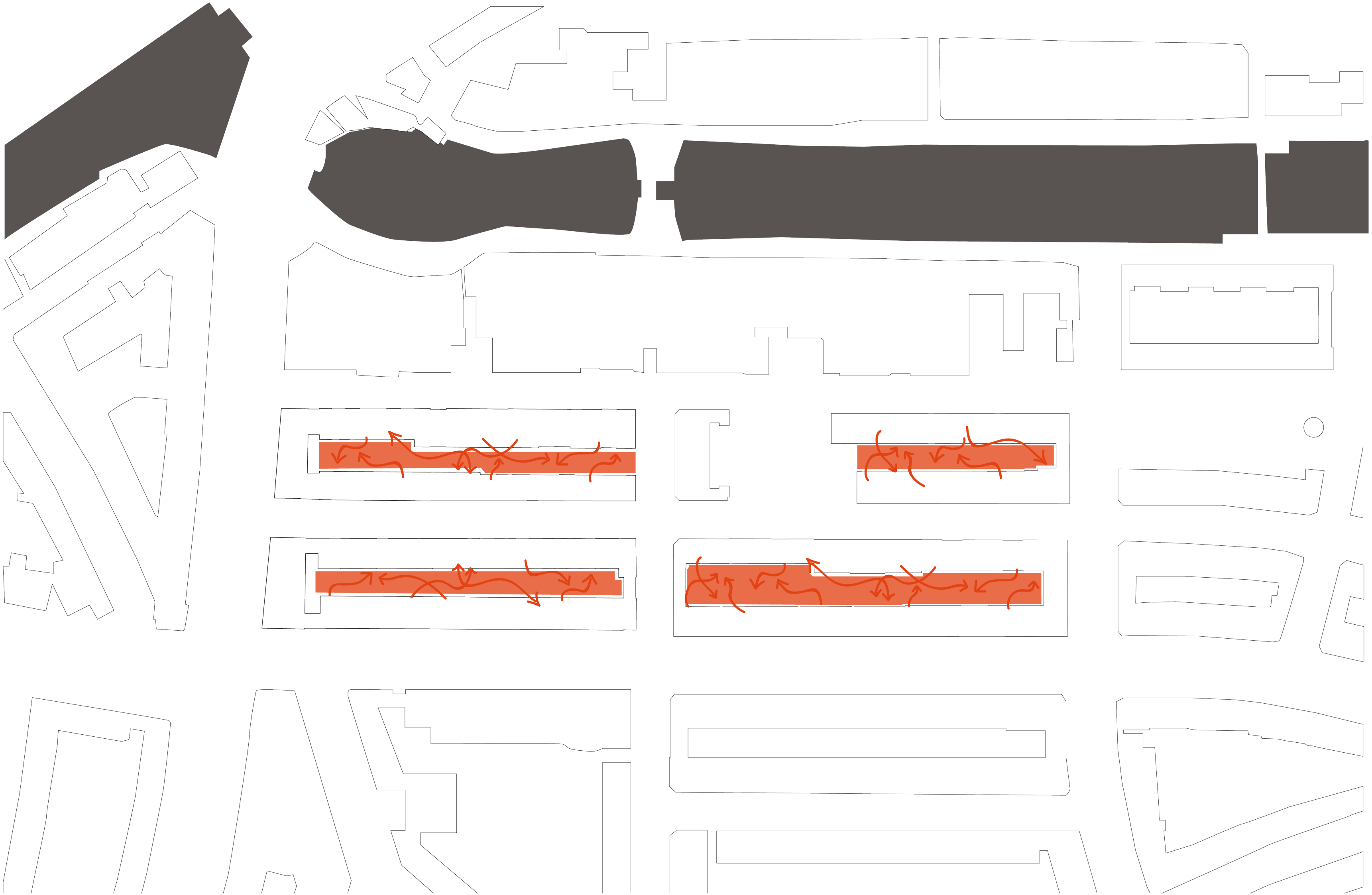
| Scene



add functions to central locations within a district, such as corners or public spaces, to serve the community of that district

‘When I have a seat in front of our door I often see the same kids playing football, as well as familiar faces passing through the street’

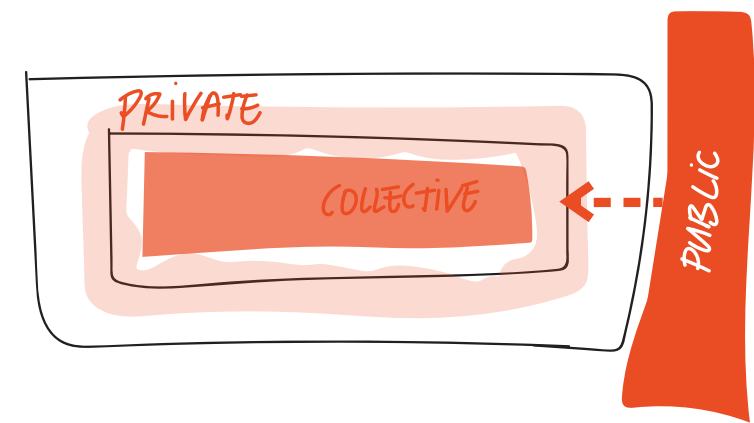
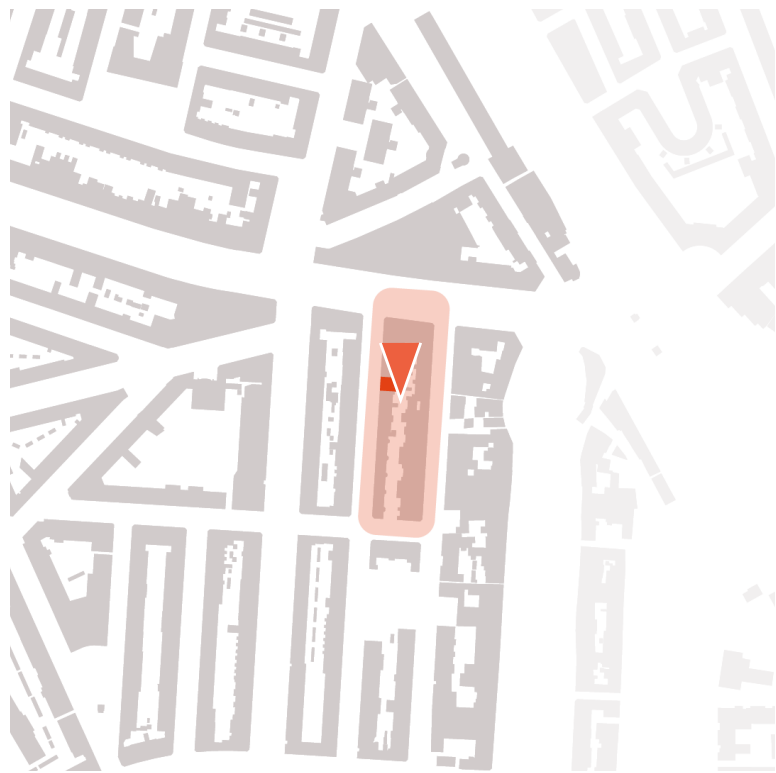




Design of collectivity

| Spatial qualities

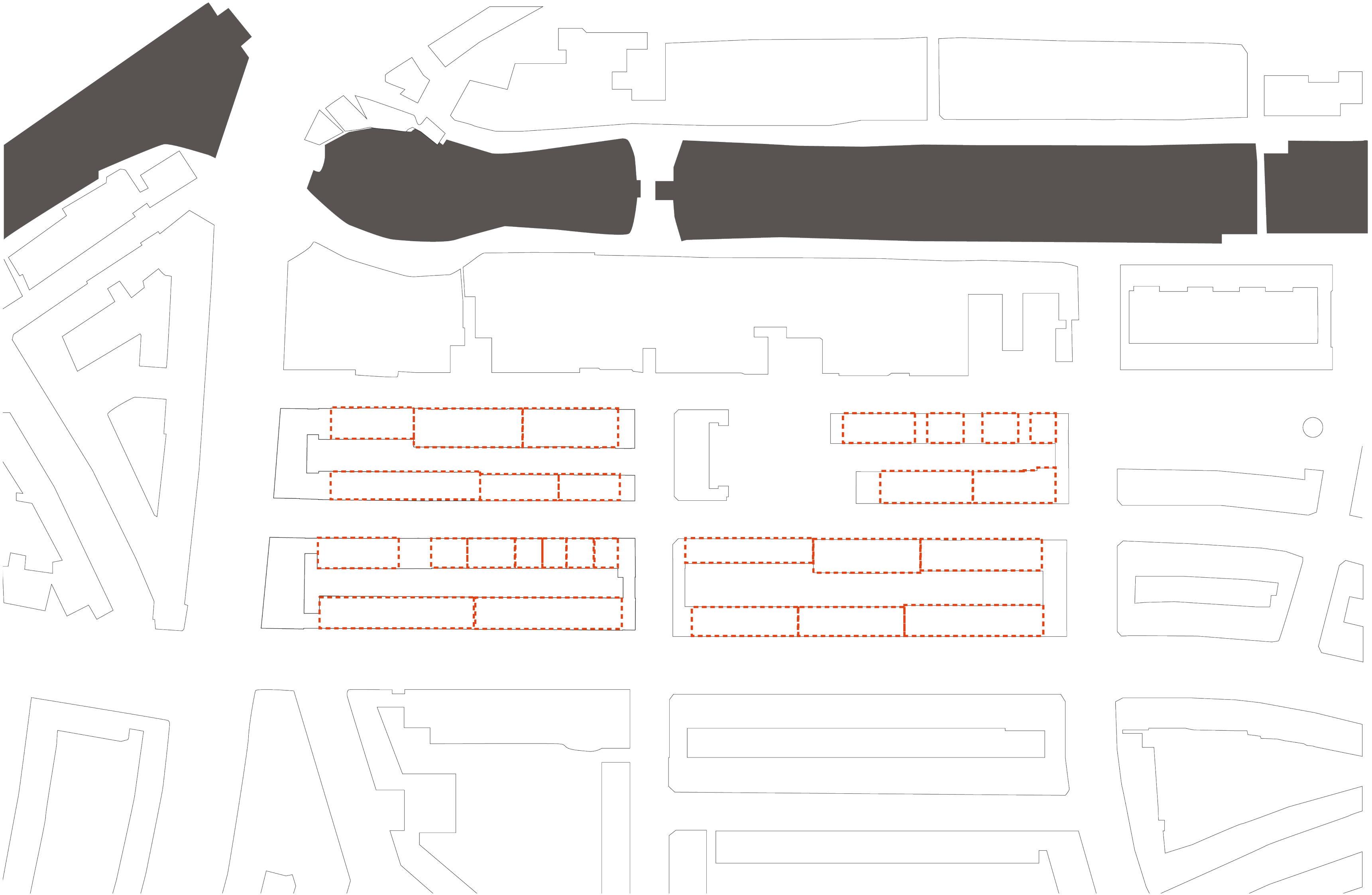
| Scene



create a collective space with a private character by establishing a barrier between public and collective areas, and foster porosity between private and collective domains

‘When my home-sharers are not at home during dinner, I can always join my neighbours if I want to’

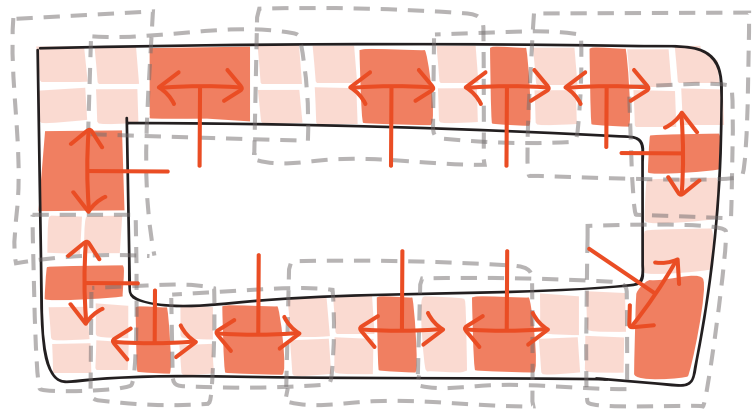




Design of collectivity

| Spatial qualities

| Scene



create a variety of housing modules to accomodate diverse preferences and use routing for the use of collective space

‘If I go inside to go to bed in the afternoon, I’m always passing the collective space wishing my home-sharers goodnight’



Design of collectivity

| Spatial qualities

| The design



local shops & food

local shops & food

workspaces

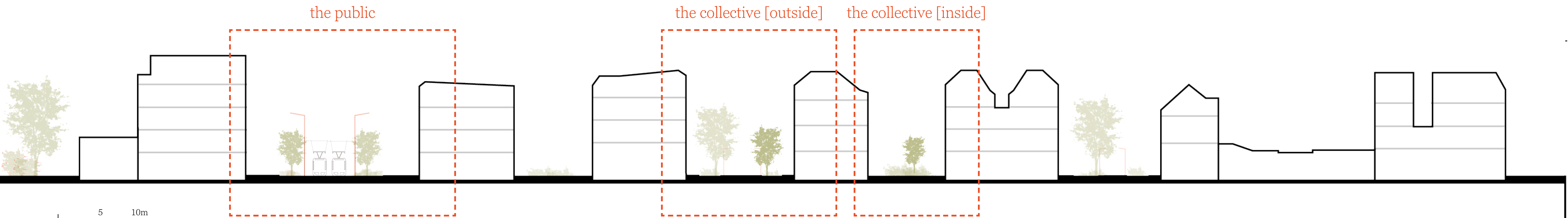
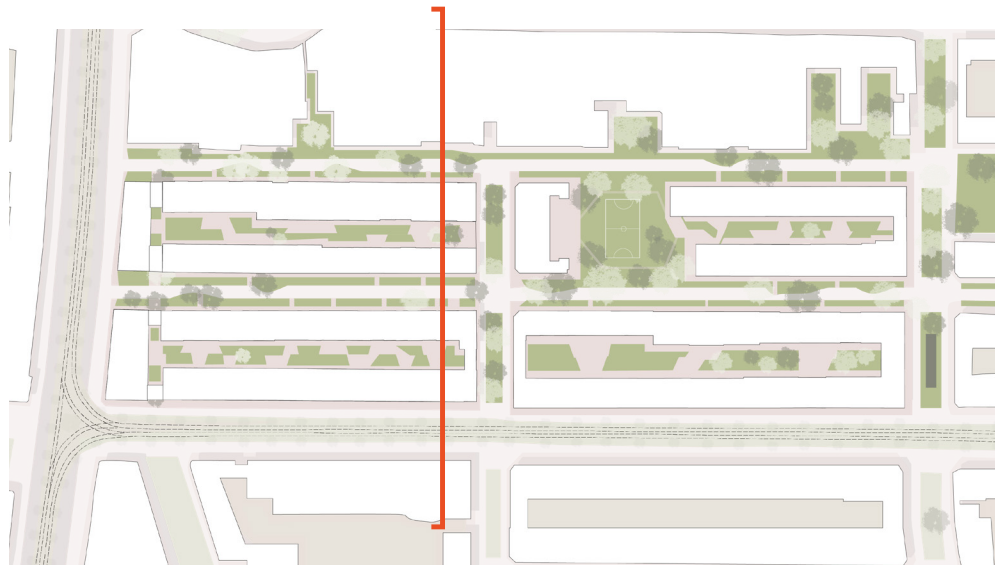
bike repair

ateliers

community space

shared garage

sports



Design of collectivity

| *Spatial qualities*

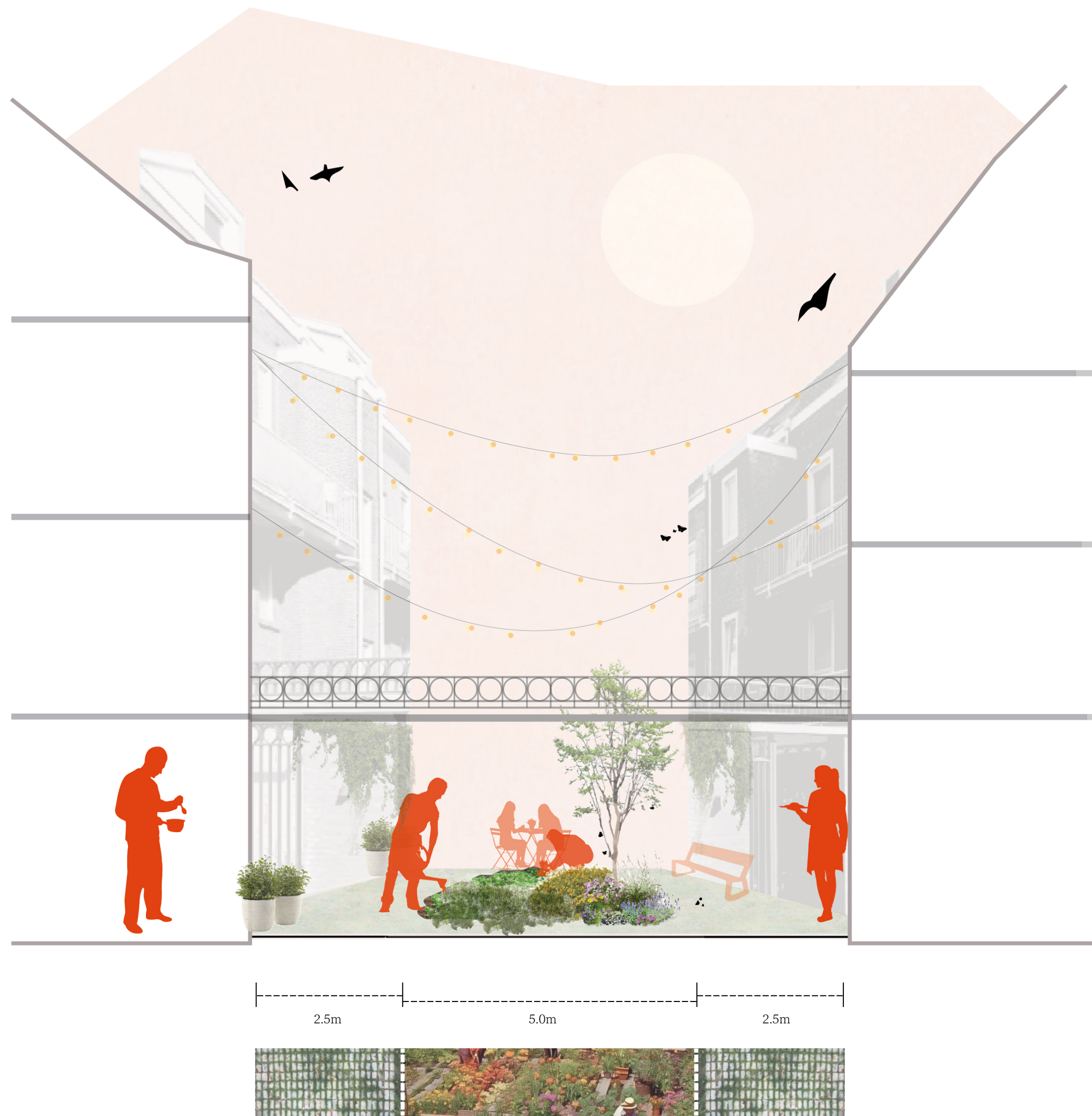
| *The public*



Design of collectivity
| *Spatial qualities*
| *The collective [outside]*



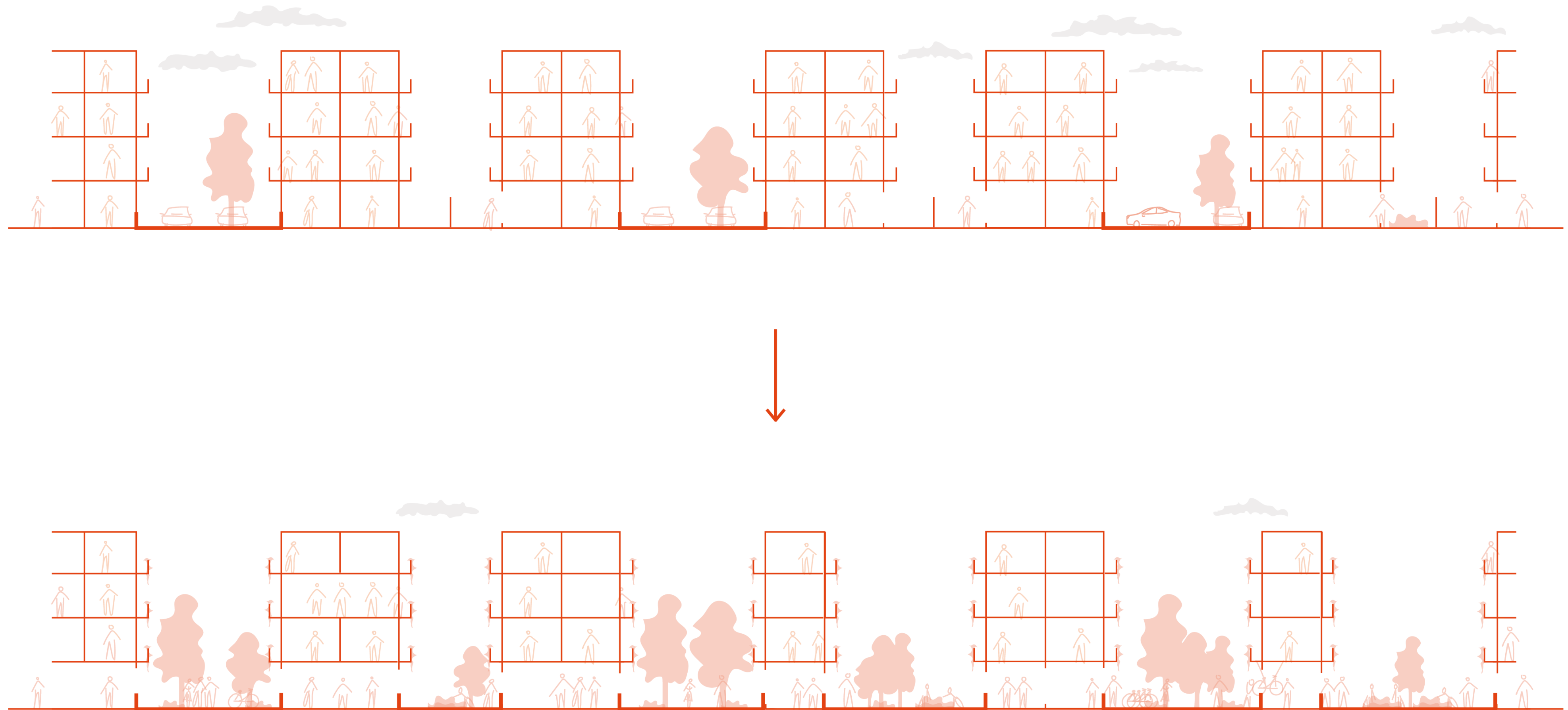
Design of collectivity
| *Spatial qualities*
| *The collective [inside]*



Conclusion

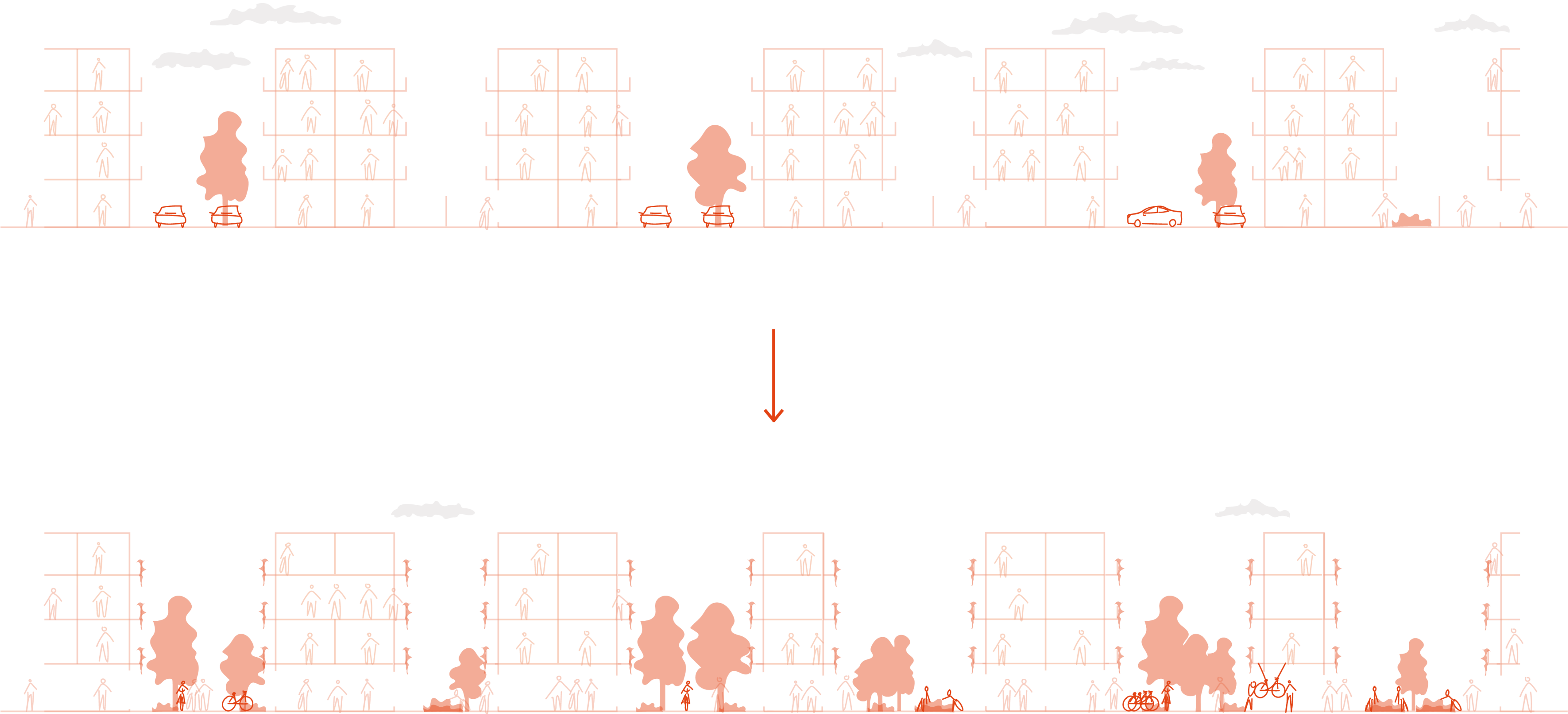
‘In what way can the shift from an **individualistic** towards a **collective approach** in urban design contribute to **sustainable development** from **spatial, environmental and social perspectives**, focusing on **Bospolder-Tussendijken**?’

Conclusion
| Spatial

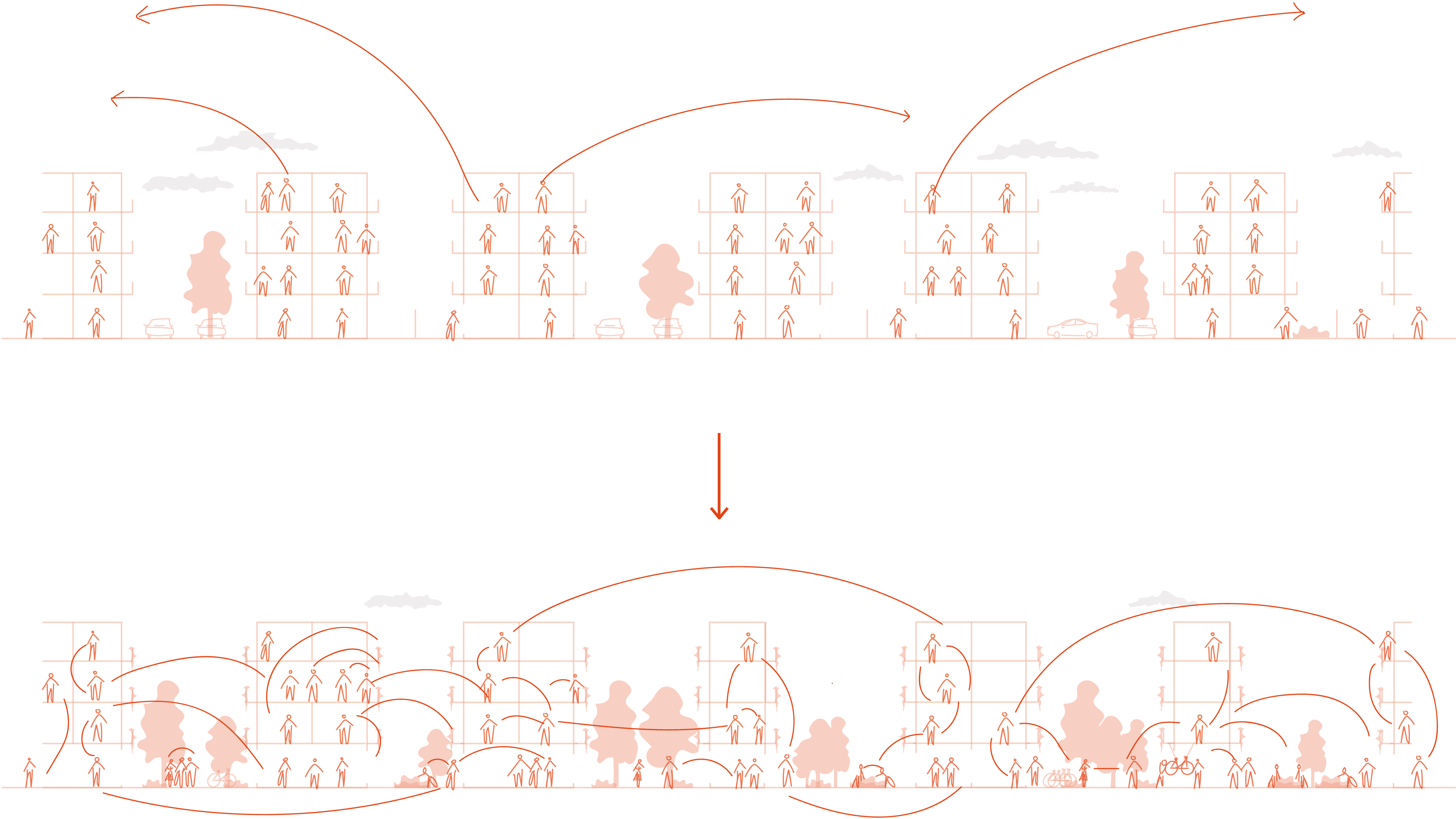


Conclusion

| Environmental



Conclusion
| Social



Thank you! :)

Phasing



Phasing

| *Car-free districts*



1



2



3



4



5

Conclusion

Design assessment

Neighbourhood scale

- 1. Improve diversity of employment
- 2. Switch to heating network
- 3. Make community spaces visible
- 4. Add makerspaces
- 5. Improve awareness of environmental sustainability
- 6. A car-free BoTu
- 7. BoTu shaped by its green network

District

- 8. Add tram lines
- 9. Car sharing
- 10. Improving residential quality to public spaces
- 11. Add community spaces in central locations

Urban blocks

- 12. Add bike hubs
- 13. Intergenerational models
- 14. Exchangeable functions
- 15. Shared workspaces
- 16. Shared ateliers

Street

- 17. Greening streets
- 18. Make room for porosity

Urban block

- 19. Make room for local cultivation
- 20. Merge gardens
- 21. Solar panel networks
- 22. Water collection
- 23. Shared garages
- 24. Shared kitchens
- 25. Shared washing rooms

Housing unit

- 26. Collective housing models
- 27. Shared kitchens
- 28. Shard living rooms
- 29. Shared bathrooms

