

# From Node to Place

A new livable and sustainable neighborhood in Amsterdam Sloterdijk

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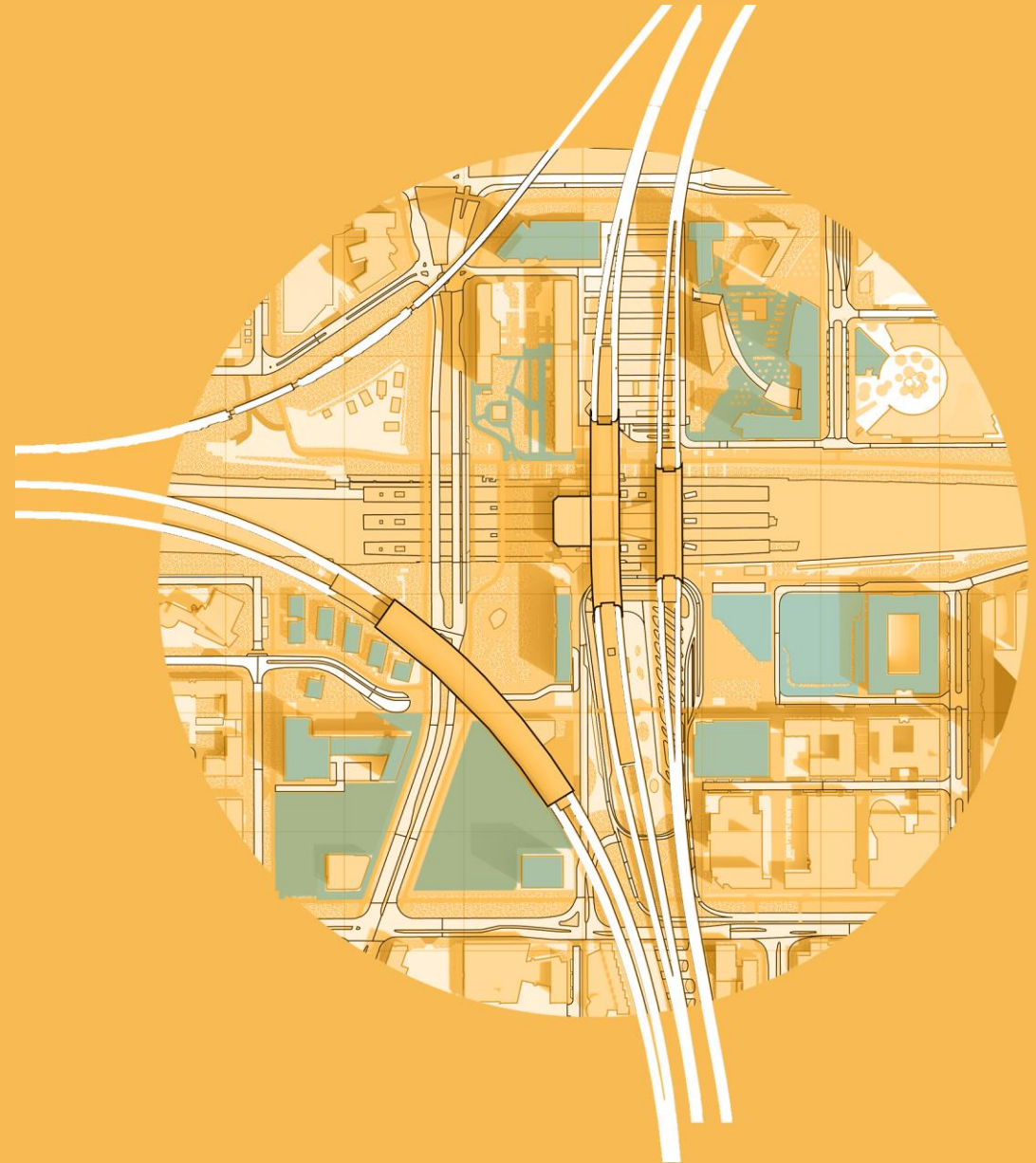
P5 Presentation

Date: 2023\_06\_23

MSc Architecture, Urbanism and Building Sciences

Track Urbanism

Graduation studio: Design of the Urban Fabric



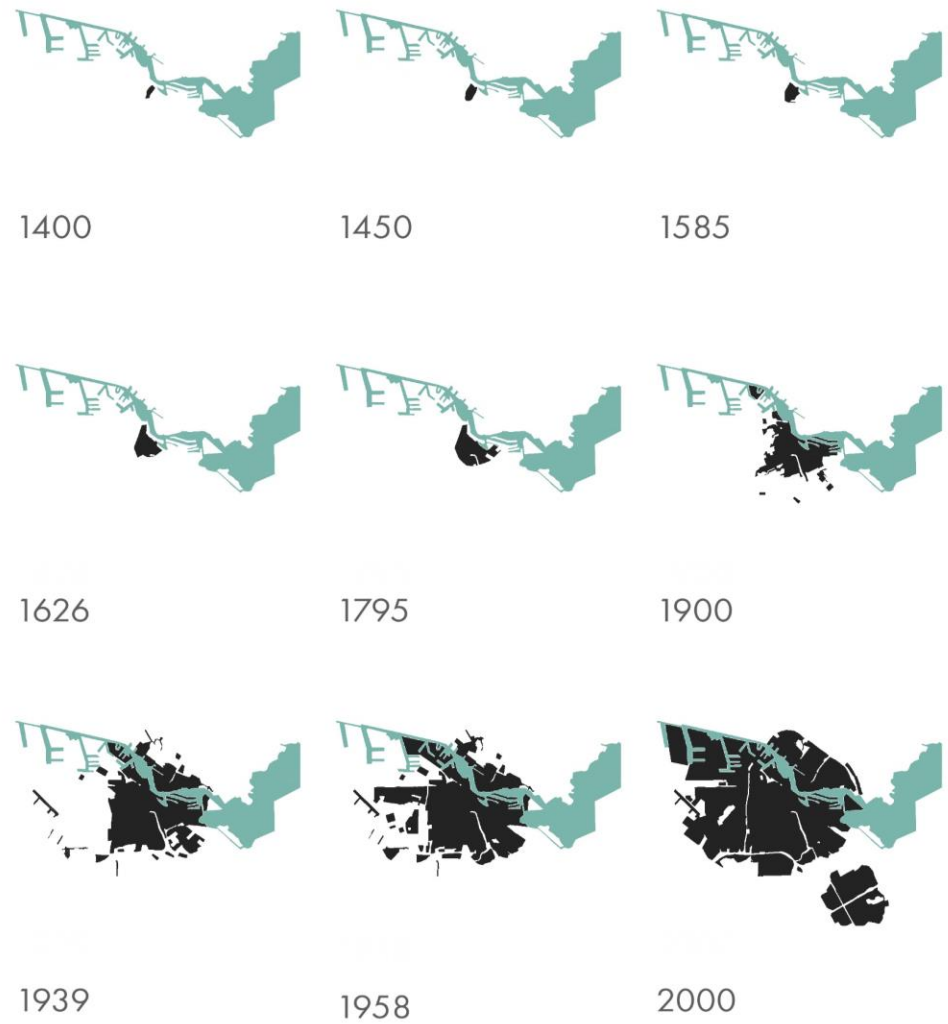
# Introduction 01

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# Cities are expanding

“Since 2000, about 1 million ha of land has been converted to urban use, which is roughly one third of the size of the Netherlands”

PBL, 2019



Source: Berghauser Pont & Haupt (2009)

# Creating a wide range of problems

**Car dependency**

**Ecological  
fragmentation**

**Greenhouse gas  
emissions**

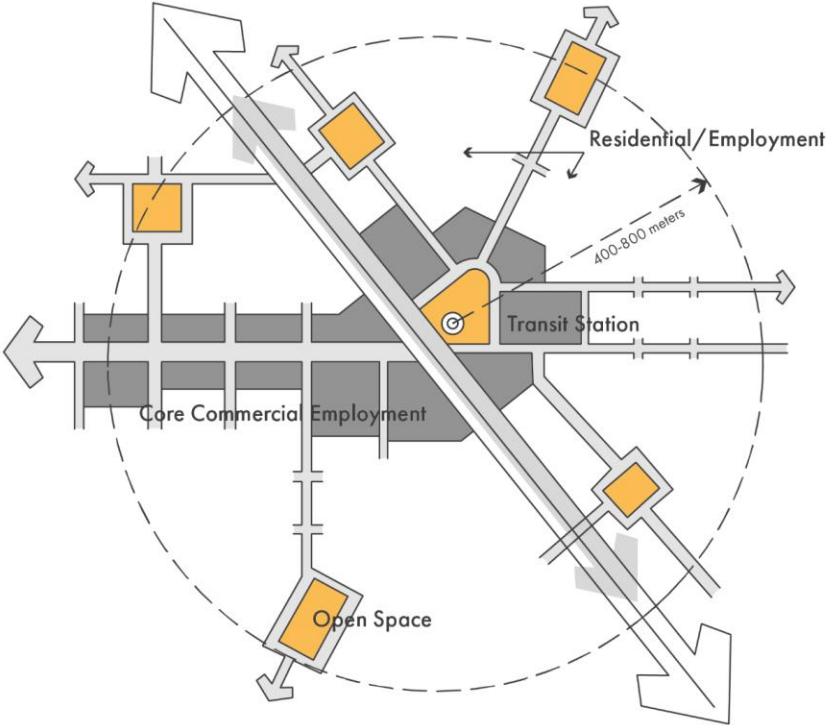
**Higher energy  
demands**



# The concept of Transit-Oriented Development (TOD)



Source: [www.networkrail.co.uk](http://www.networkrail.co.uk)



Source: Calthorpe, 1993

Which typically refers to..

Dense and mixed-use urban environments that aim in maximizing public transportation efficiency and promote walking and cycling

# Train station areas are becoming popular



Source: [www.kcap.eu](http://www.kcap.eu)

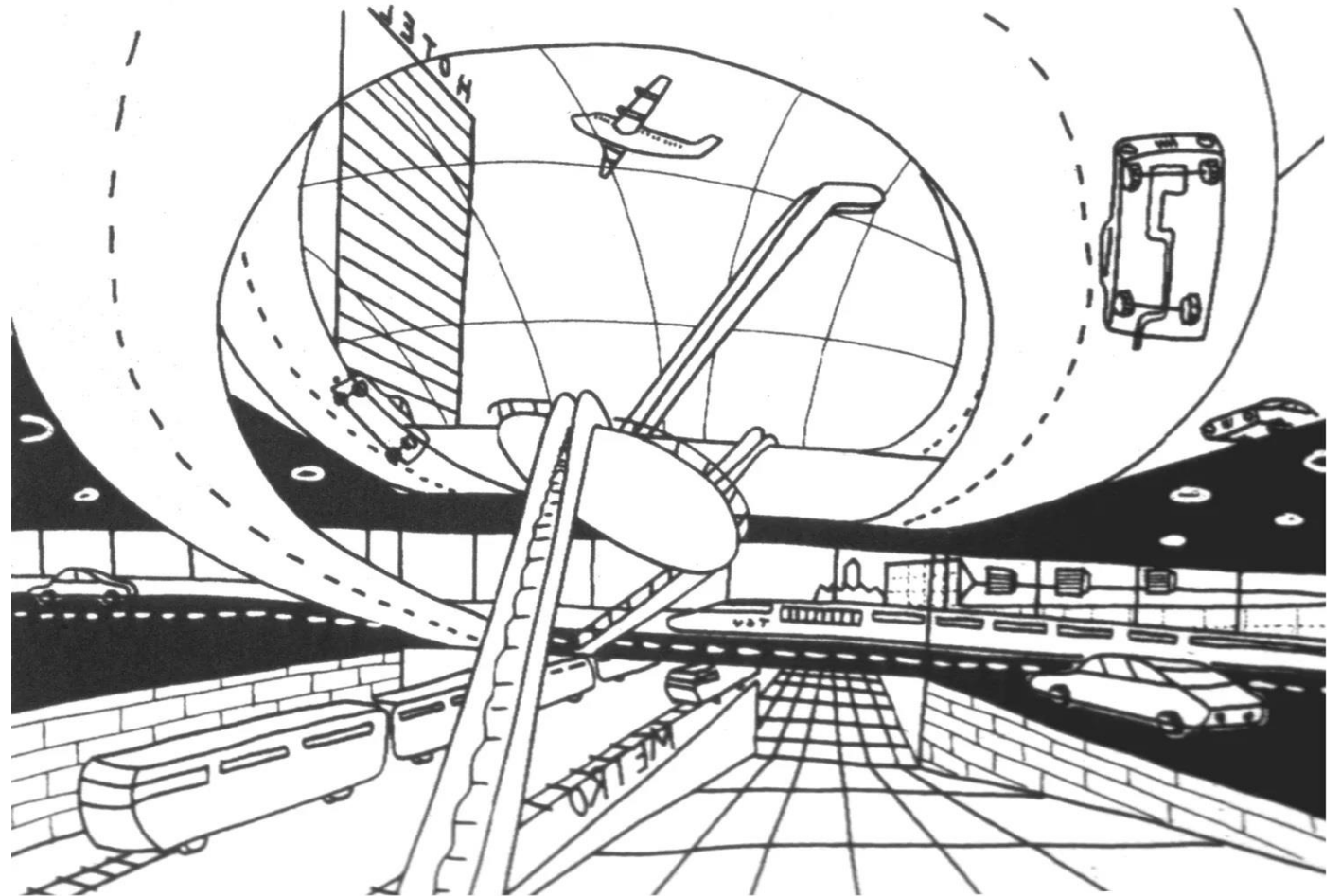


Source: [www.businessinsider.nl](http://www.businessinsider.nl)

# Train station areas are both nodes and places

All these elements define a new urban condition which is at the same time local and global, as important for the 'Japanese' as it is for the 'Lillois'."

OMA, n.d





# Where a wide range of users come in one place

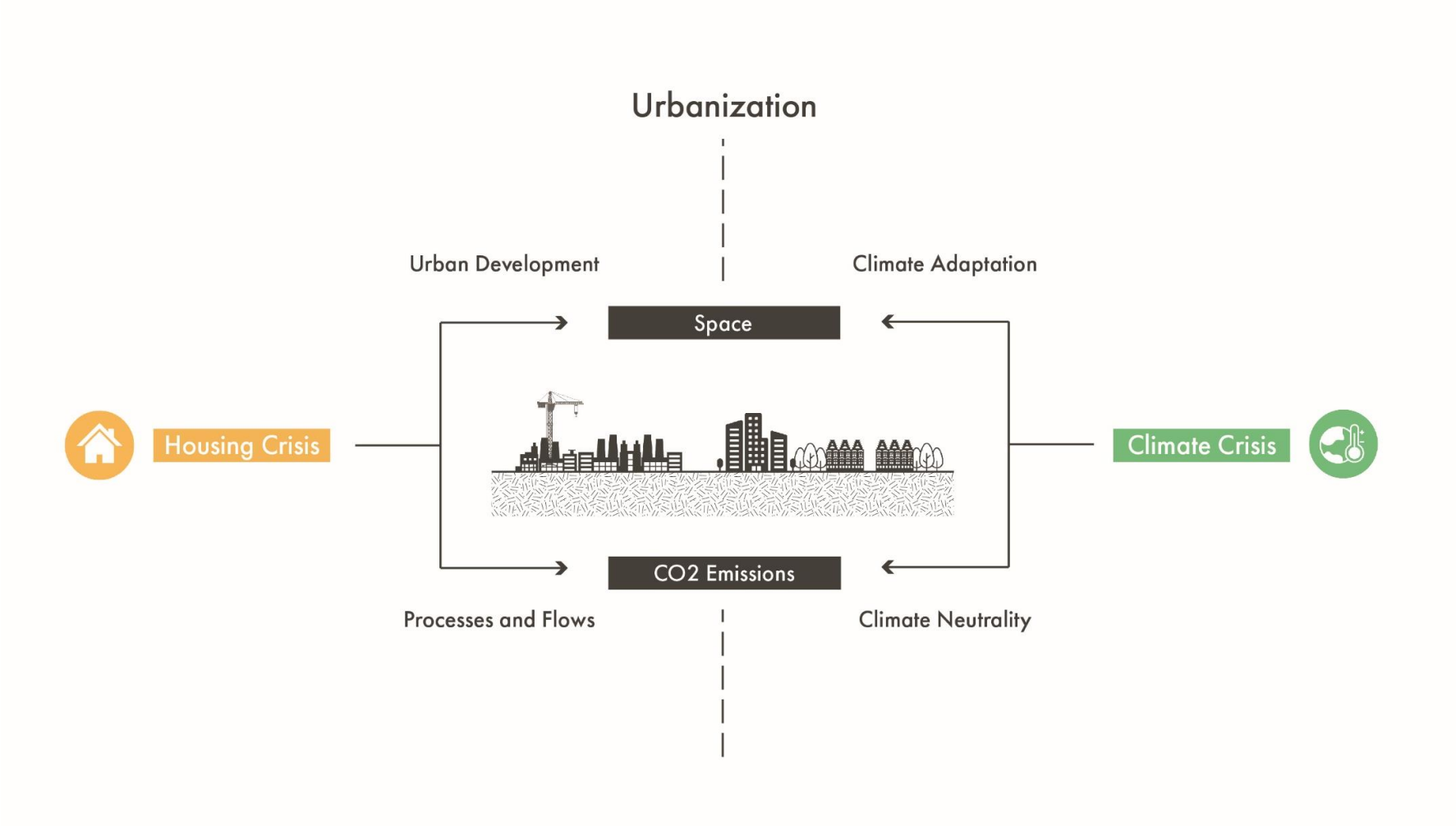


Source: [www.vdberk.com](http://www.vdberk.com)



Source: [www.archdaily.com](http://www.archdaily.com)

# Is TOD enough?



# Housing crisis



dutchreview.com

## Why is there a housing shortage in the Netherlands? The Dutch housing crisis explained

There is a huge housing crisis in the Netherlands. In the major cities, finding a place to live is expensive and difficult. Particularly for people who



www.cbs.nl

## Sterke groei in steden en randgemeenten verwacht

Tot 2035 zal 1 op de 5 gemeenten krimpen, vooral aan de randen van Nederland. Grote steden en randgemeenten zullen meer inwoners tellen. De meeste gemeenten zullen verder vergrijzen, vooral de krimp gemeenten. Ook wonen steeds meer mensen alleen.



# Climate crisis



dutchreview.com

## The effect of climate change on the Netherlands: what's going to happen?

The global climate is changing, in fact, it's really heating up over here. ☹️ Melting ice caps, natural disasters and rising sea levels - what does all of



nltimes.nl

## Netherlands will be hard-hit by climate change with "more extreme" storms, drought

The risks of climate change have also increased for the Netherlands, the KNMI warned in a new research report. The sea level on the Dutch coast may rise faster than previously expected, and the risk of extreme downpours in the summer will increase.



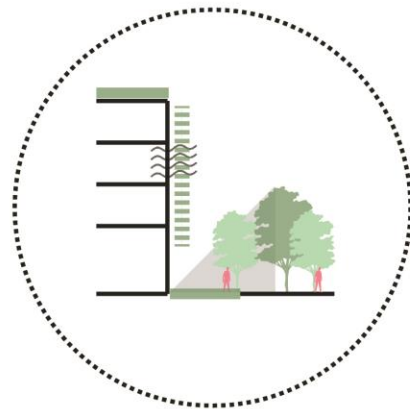
# What if we implement a new version of TOD?

High-density

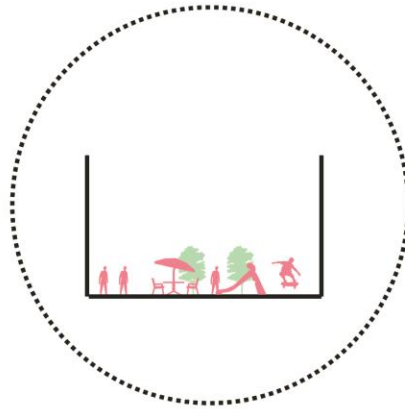
Mixed-used

Public  
Transportation

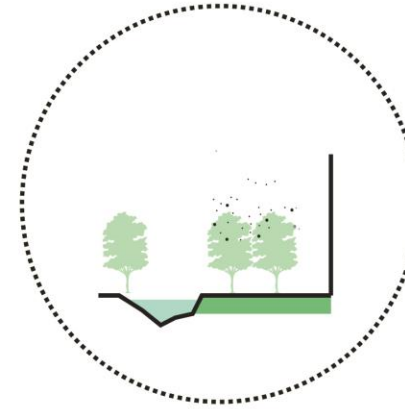
Walking  
Cycling



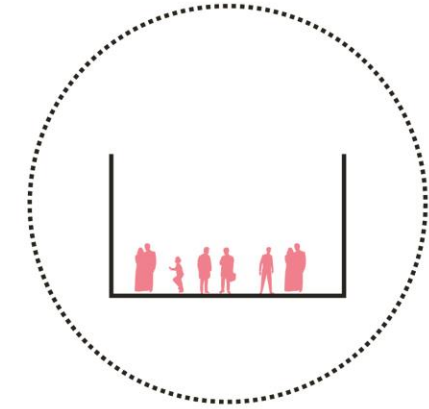
Climate adaptive



Focusing on  
Public space



Integrating  
nature

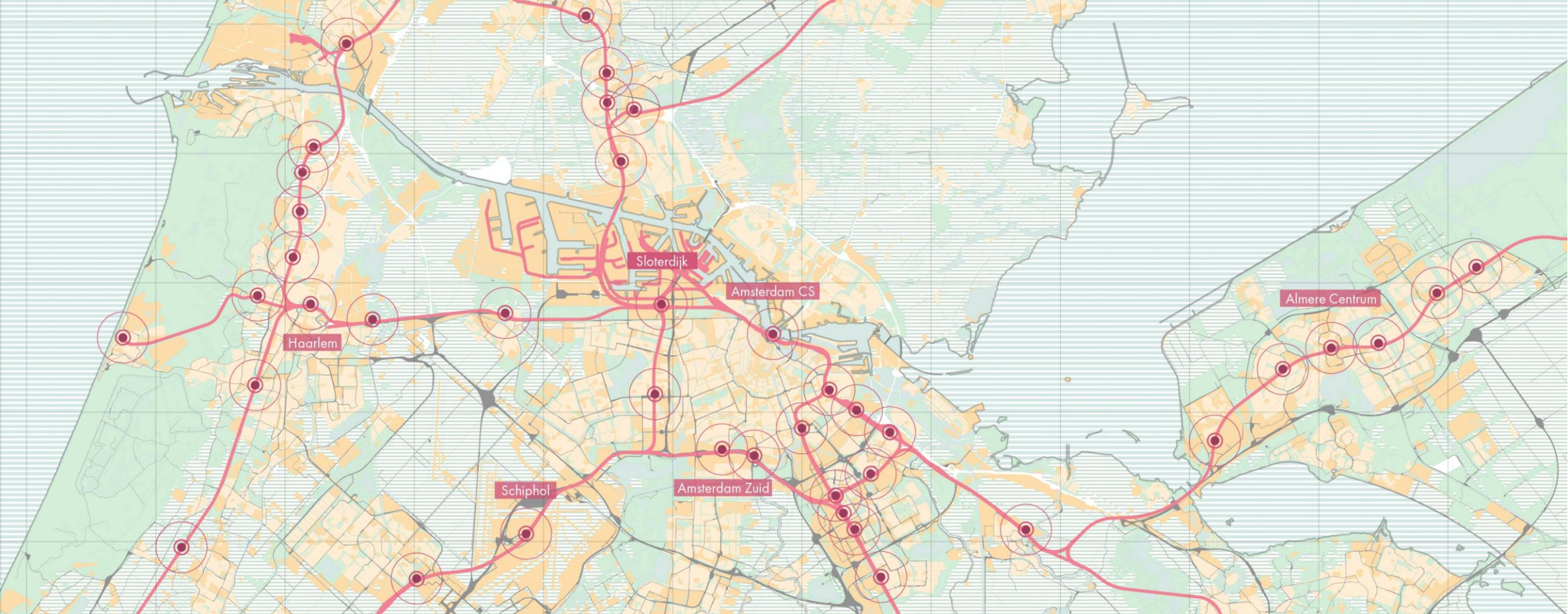


Inclusive

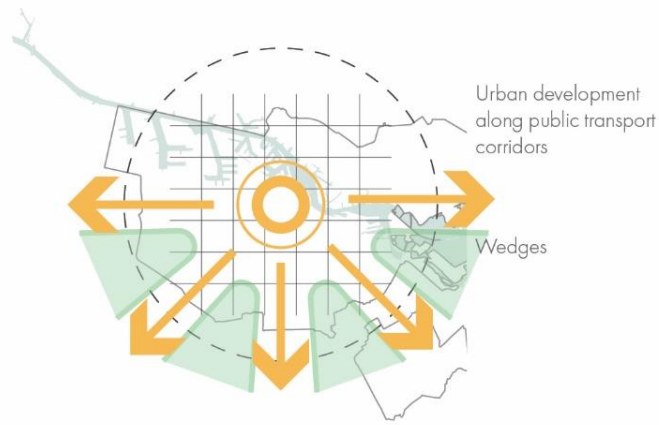
# The case of Sloterdijk 02

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# The city of Amsterdam

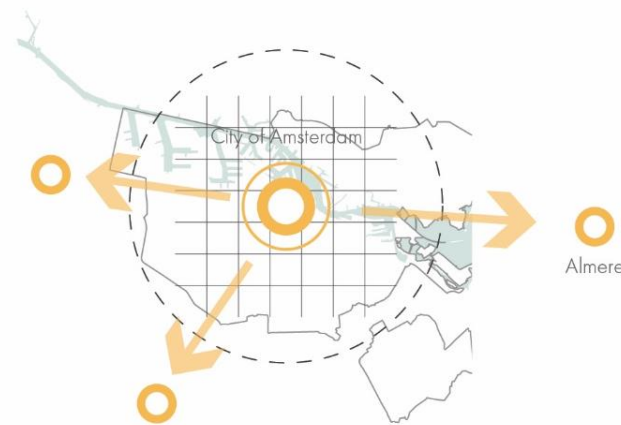


# Development of the city of Amsterdam



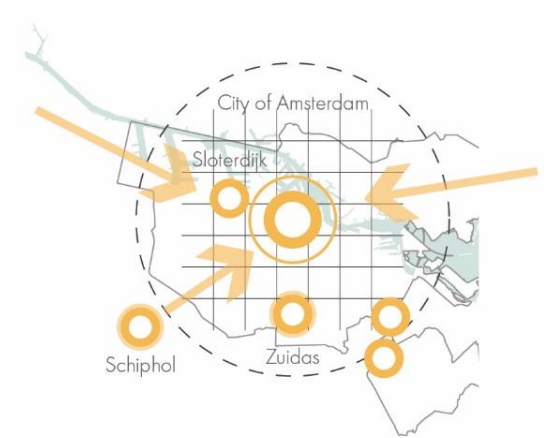
**1945-80**

**Post-War  
Lobe City**



**1980s**

**Concentrated  
deconcentration**



**1990s**

**Compact city  
approach**



# Creation of monofunctional nodes



Source: [www.cbre.nl](http://www.cbre.nl)



# One of them was the station area of Amsterdam Sloterdijk



Source: [www.cbre.nl](http://www.cbre.nl)

# An important transportation node



## And vacant business district



Source: [www.dekruifff.nl](http://www.dekruifff.nl)

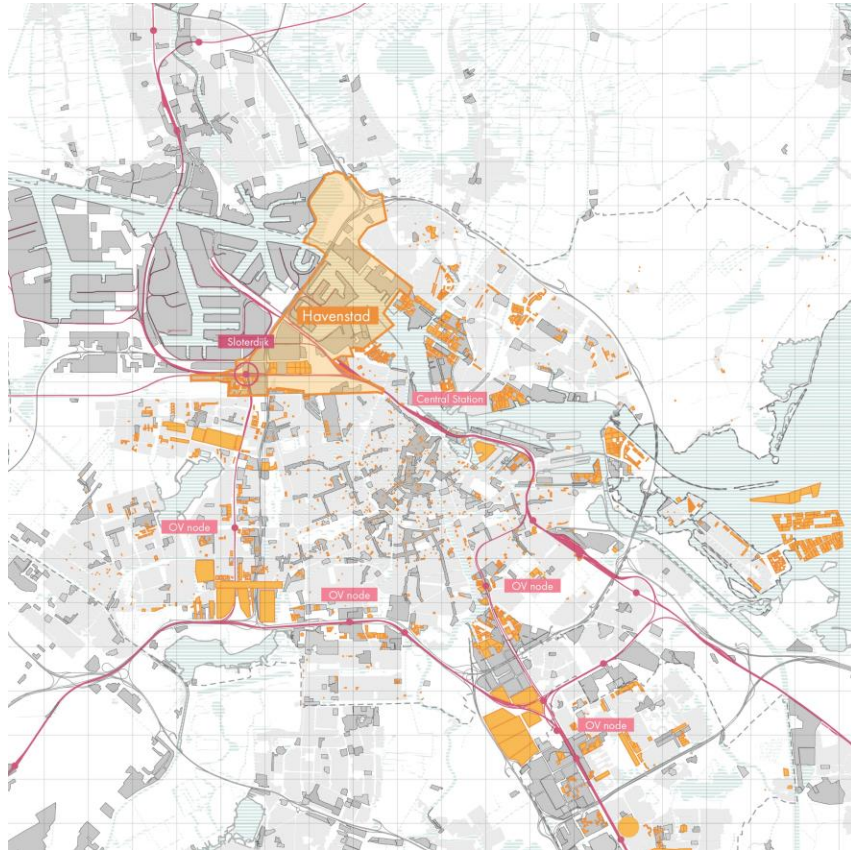


Source: [www.weekvanhetlegegebouw.nl](http://www.weekvanhetlegegebouw.nl)

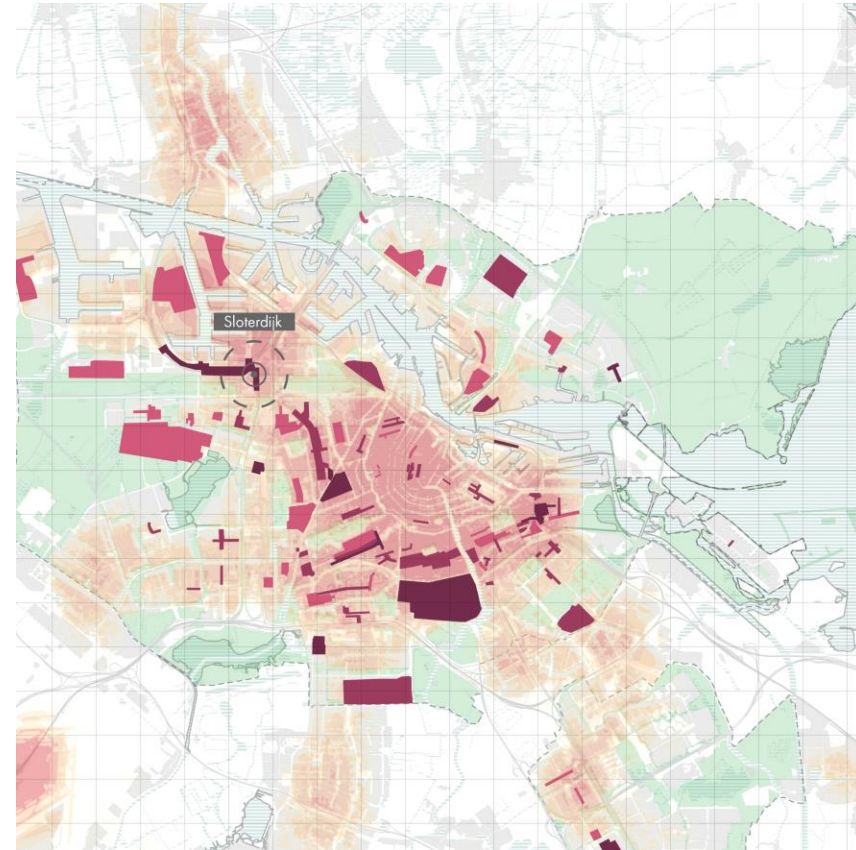
# Due to its unattractiveness



# The city of Amsterdam is facing both crises



Housing development

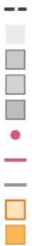


Environmental urgencies

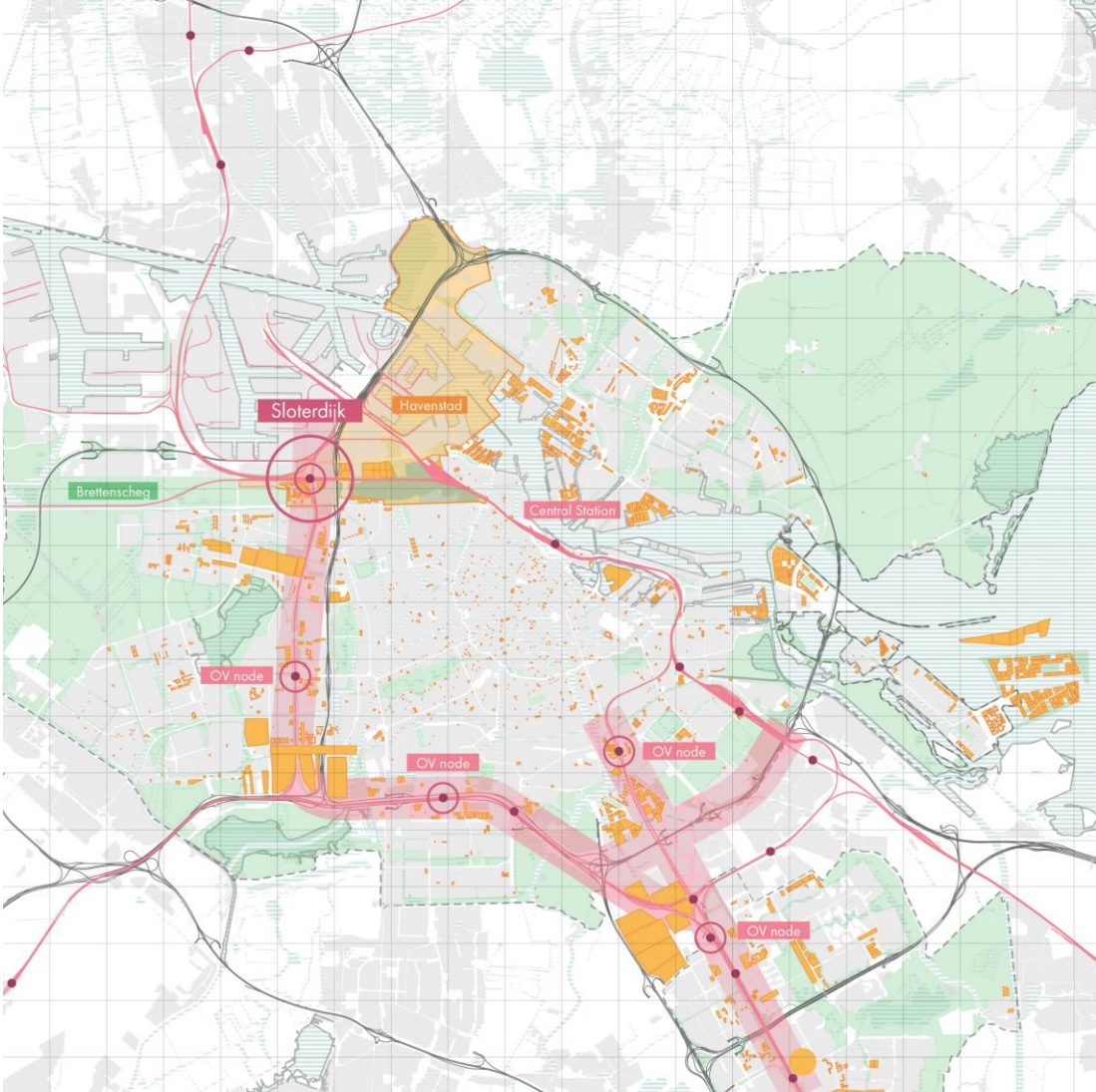
# The area of Sloterdijk is an important location

### Legend

- Municipality of Amsterdam
- Built-up area
- Company premises
- Socio-cultural activity
- Retail
- Railway Station
- Railway Network
- Road Network
- Havenstad
- Housing plans



Grid Size: 2kmx2km

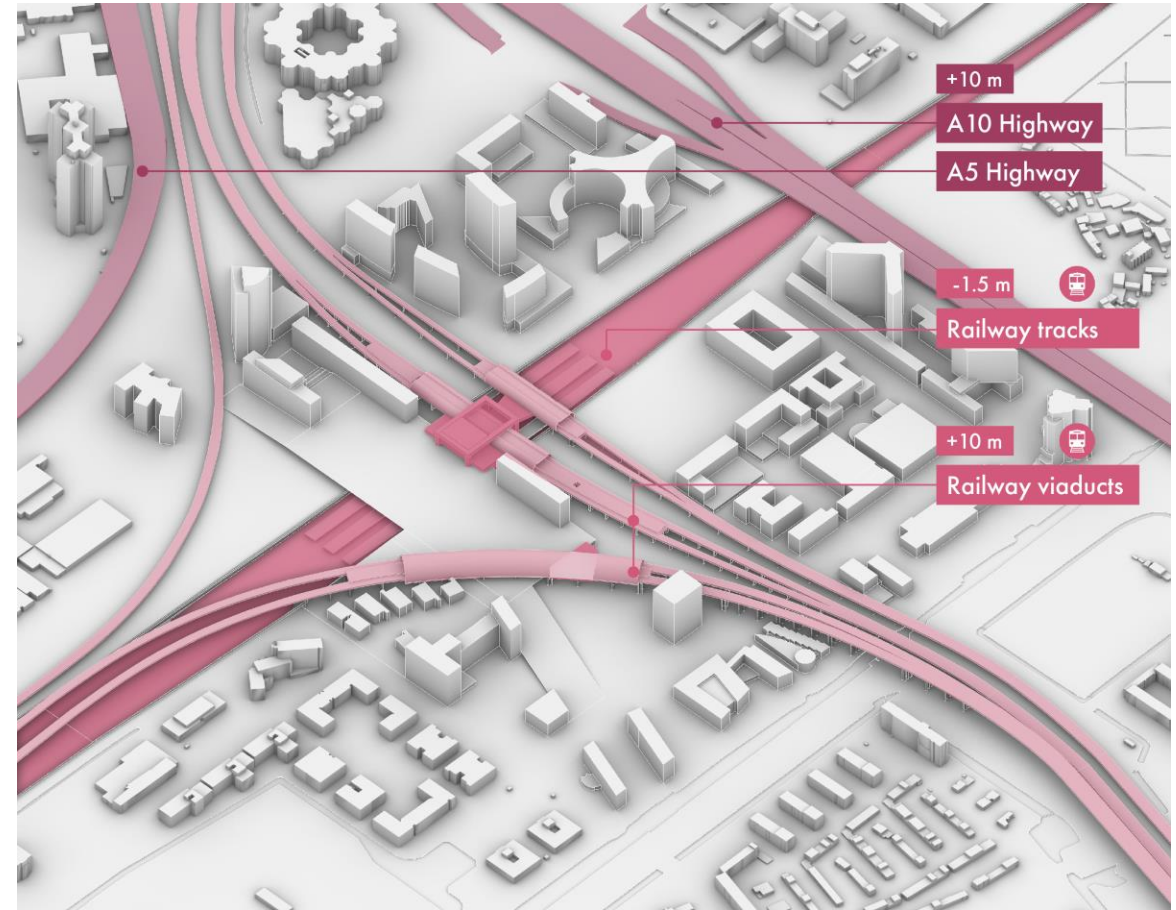
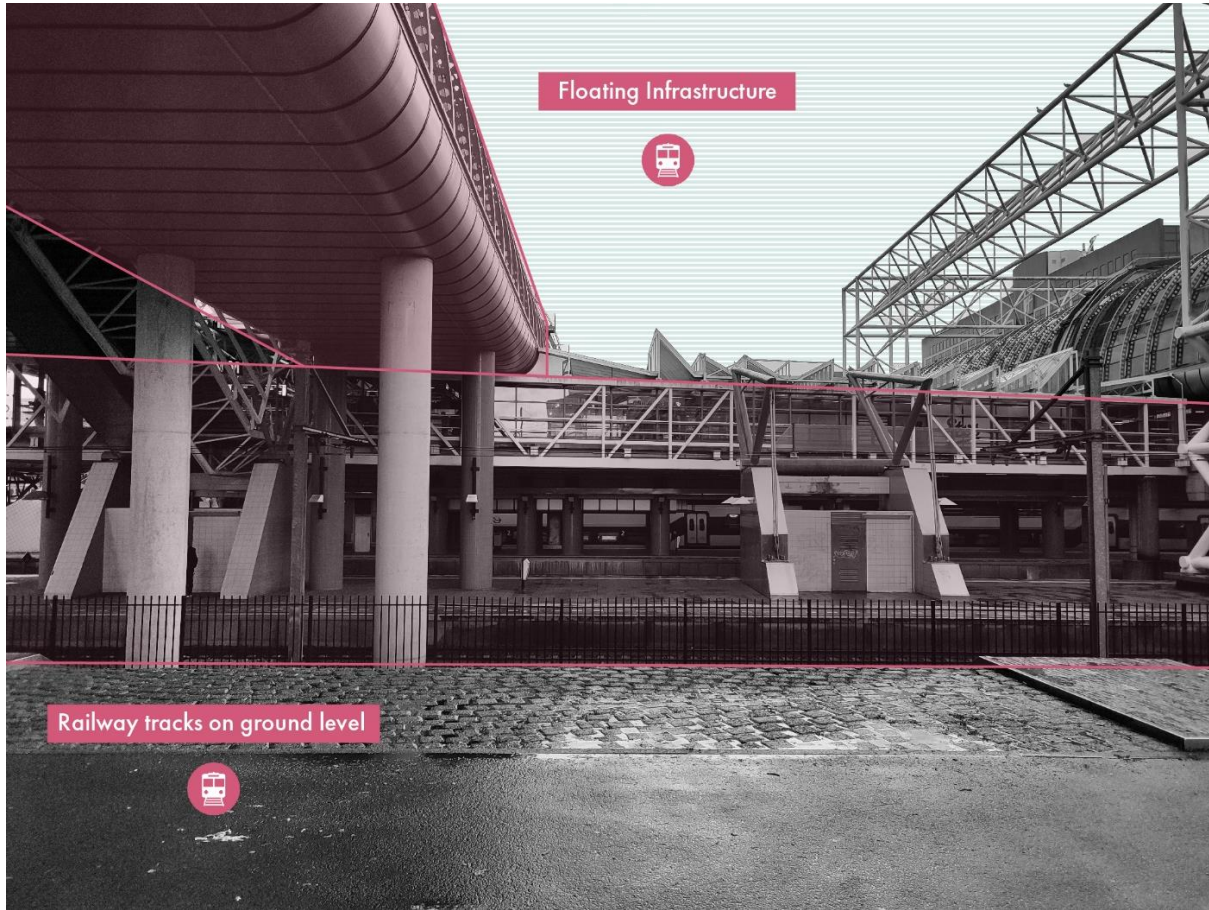


# Local conditions are important





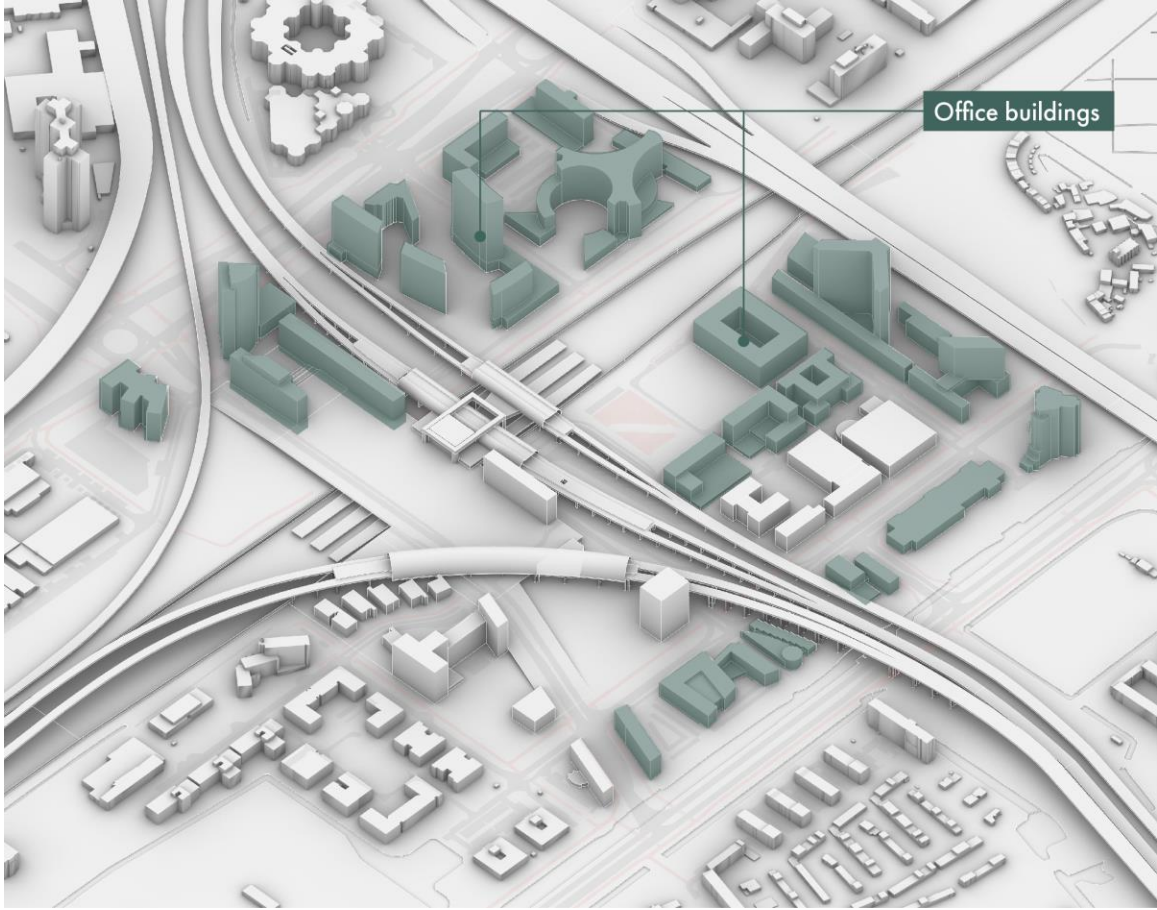
# Barriers



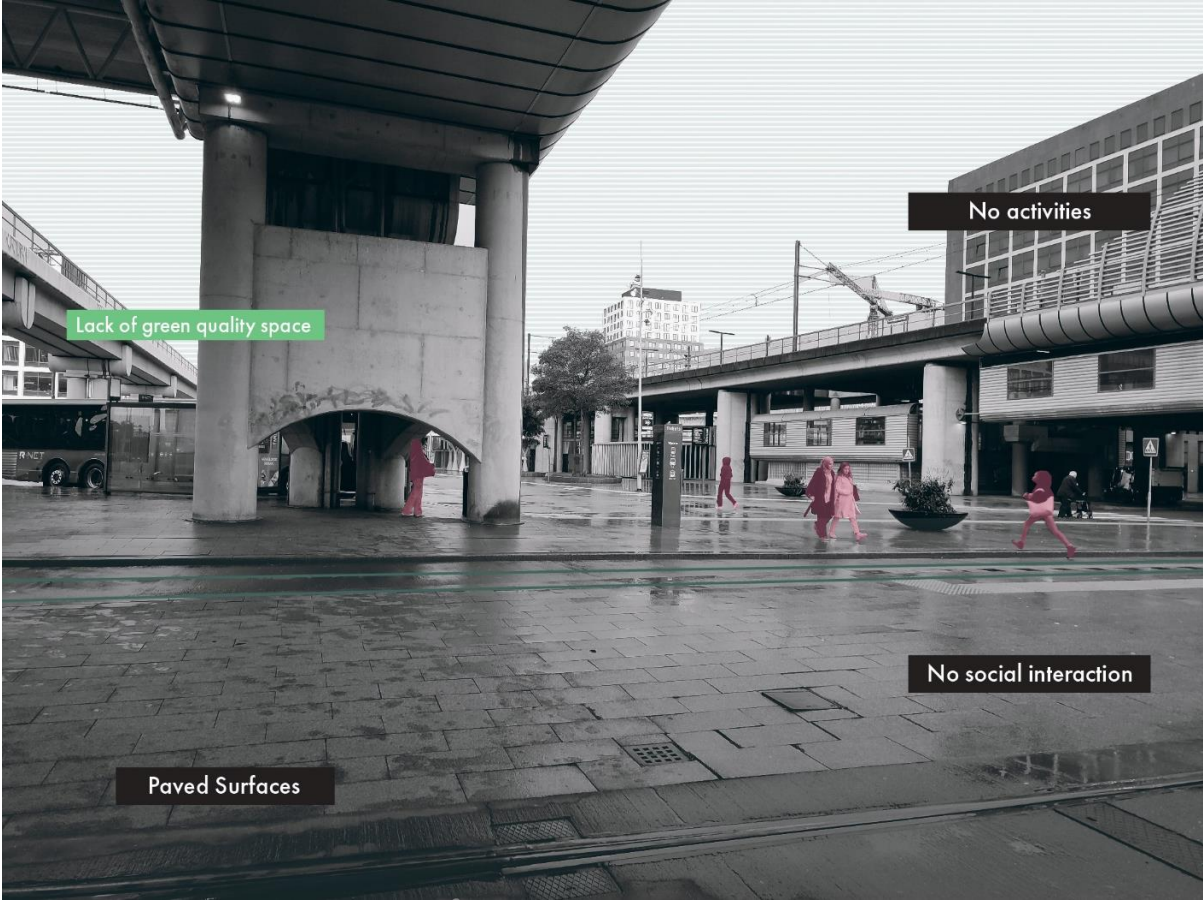
# Space dominated by mobility



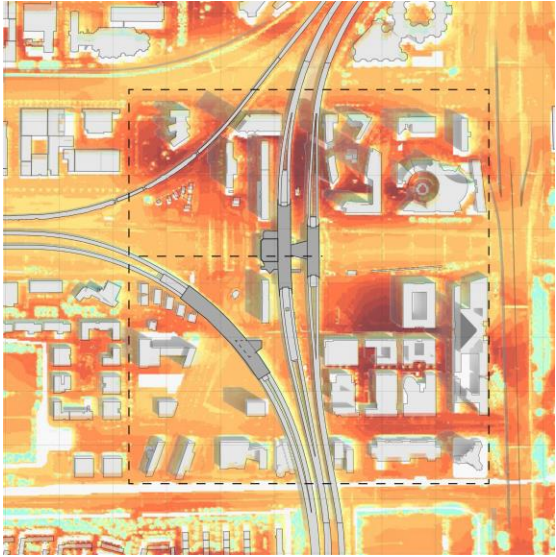
# Lack of diversity



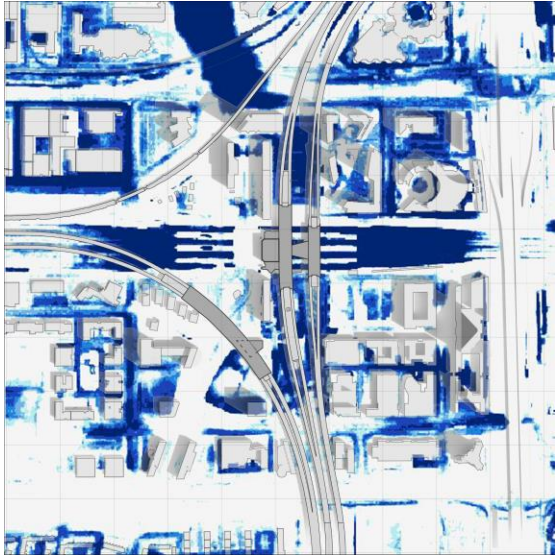
# Lack of social interaction



# Extensive paved areas



Perceived temperature



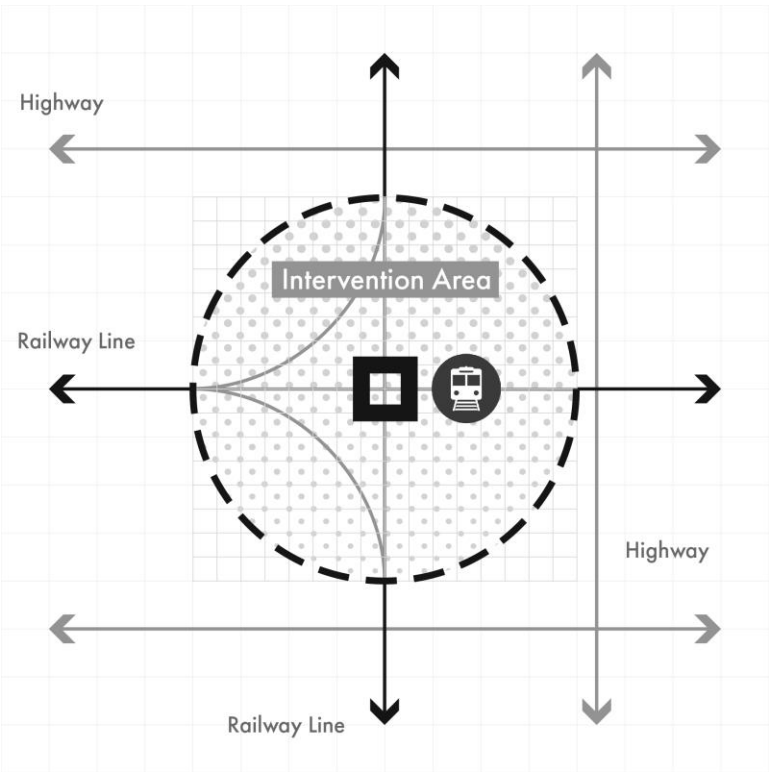
Flood depth

Source: [www.klimaatffectatlas.nl](http://www.klimaatffectatlas.nl)

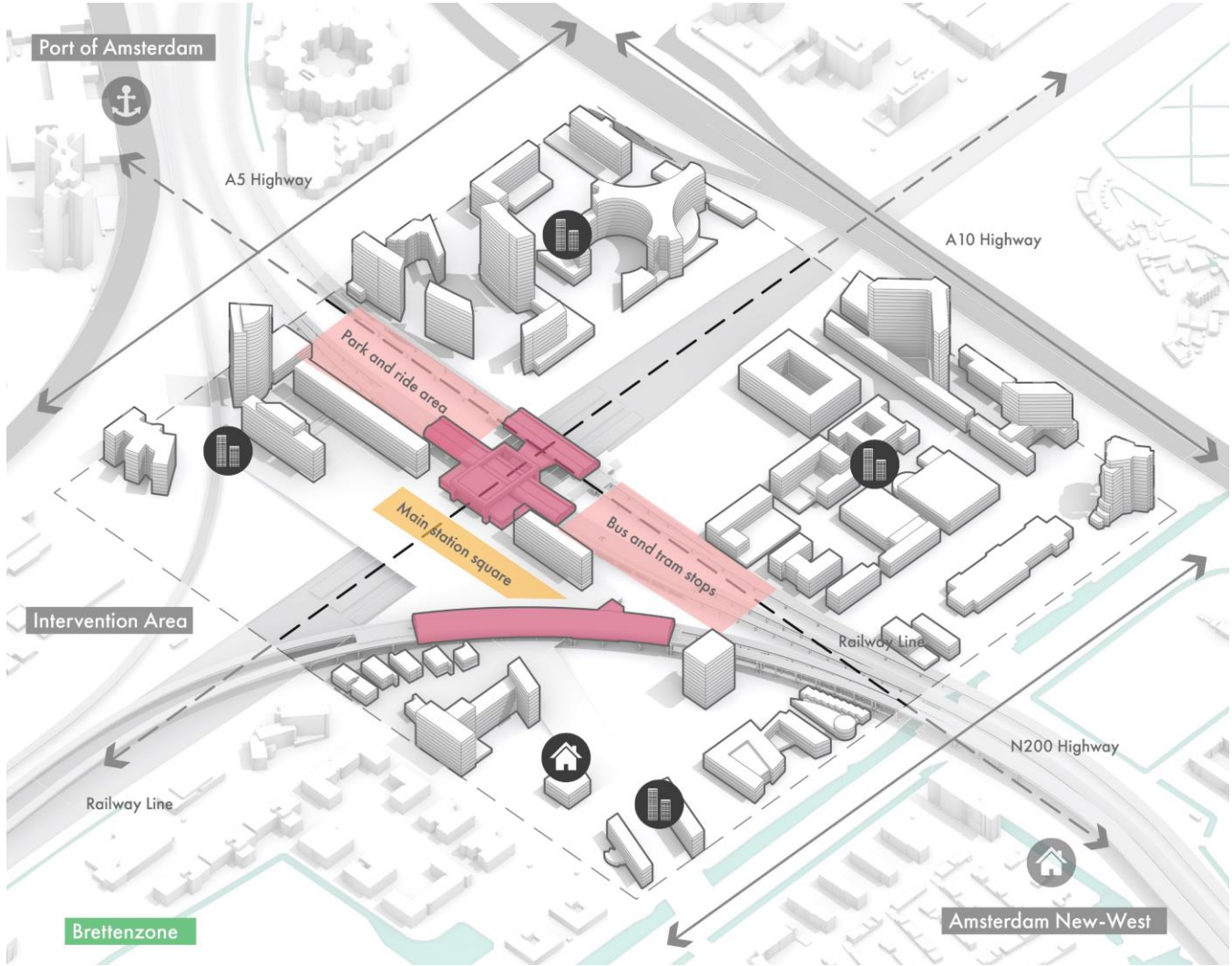
# Realizing the updated TOD **03**

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# The site

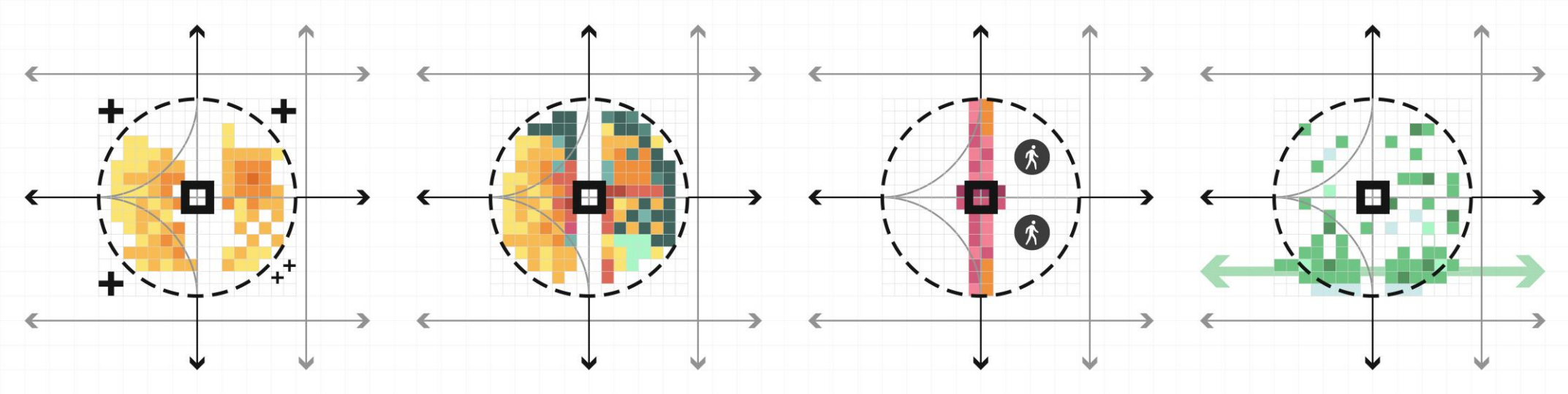


Size: 49 He or 490.000 m2



700m x 700m

# Transformation steps



**01** Space for living

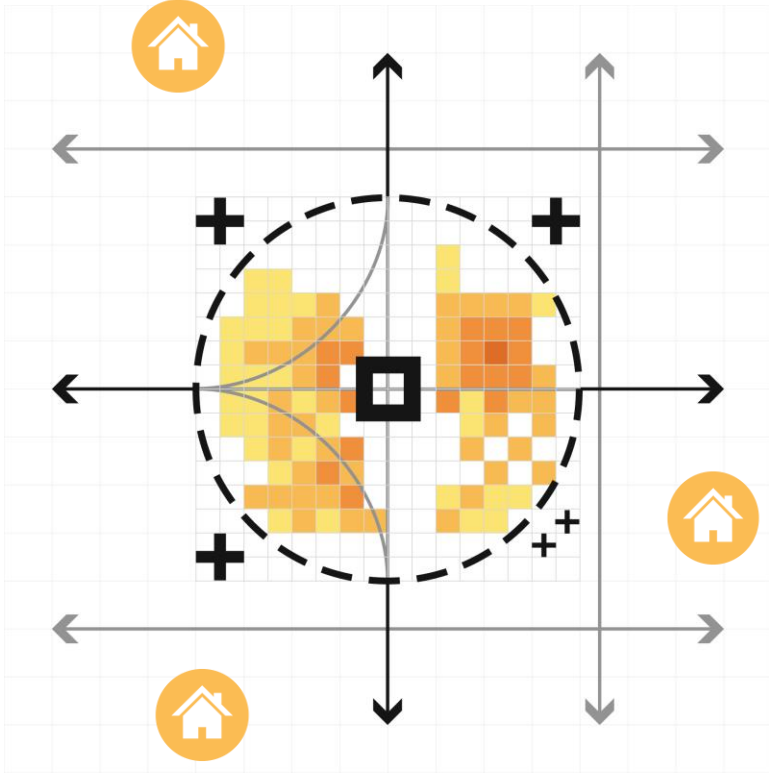
**02** Mixed-Use and vibrant urban district

**03** Sustainable mobility hub

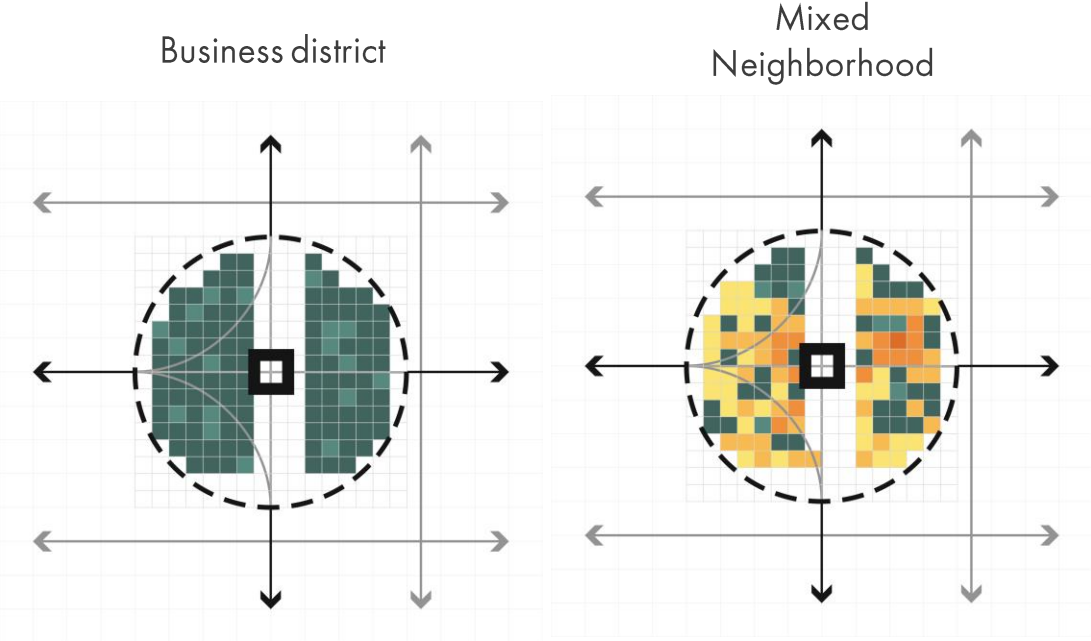
**04** Healthy and safe environment



# 01 | Space for living



## The challenge



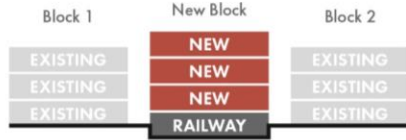
How can housing be integrated in the existing business district?

# Potential for densification

Add New Blocks



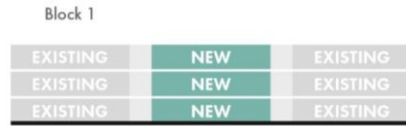
Add New Blocks Over the tracks



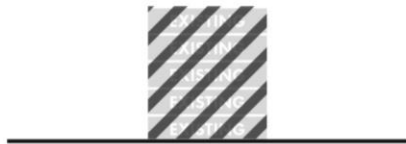
Adjust Existing-Build over existing buildings



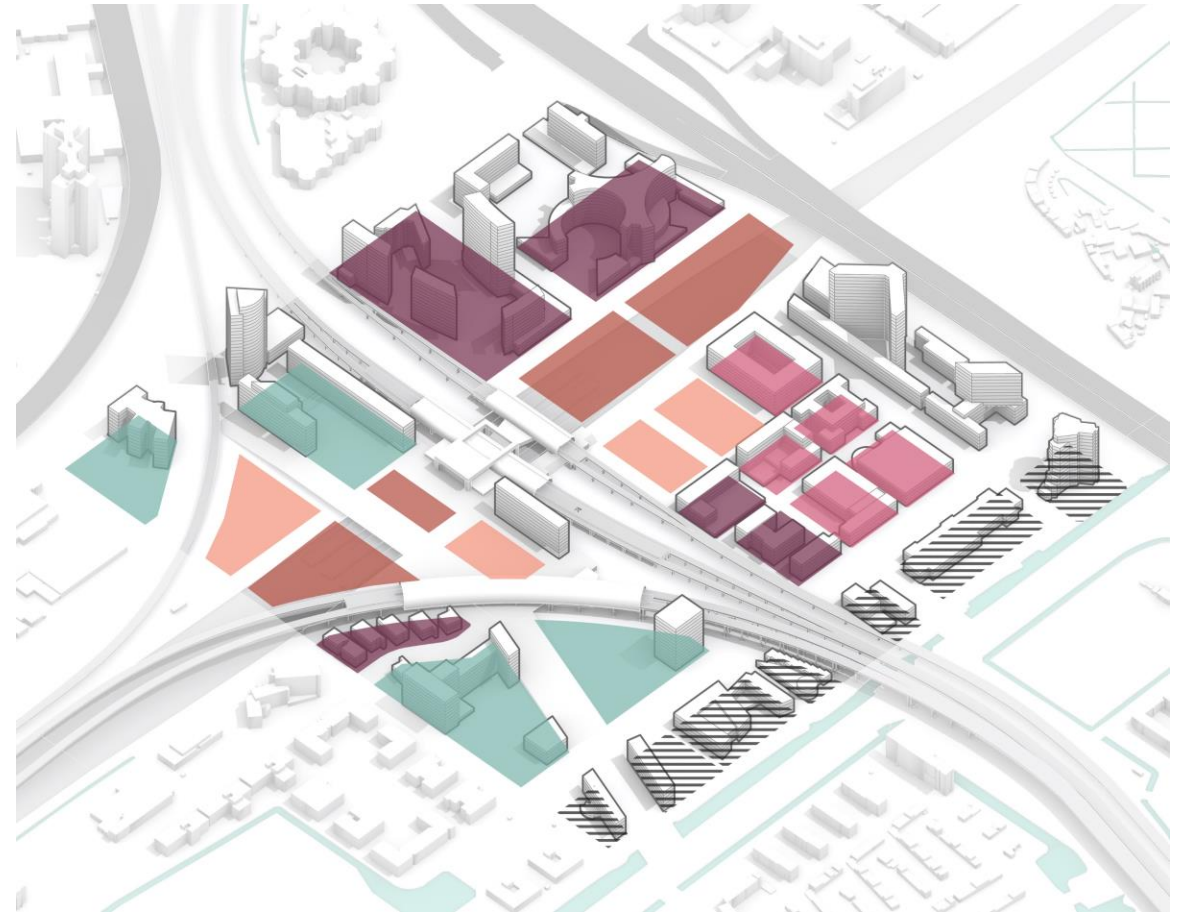
Adjust Existing-Fill blocks



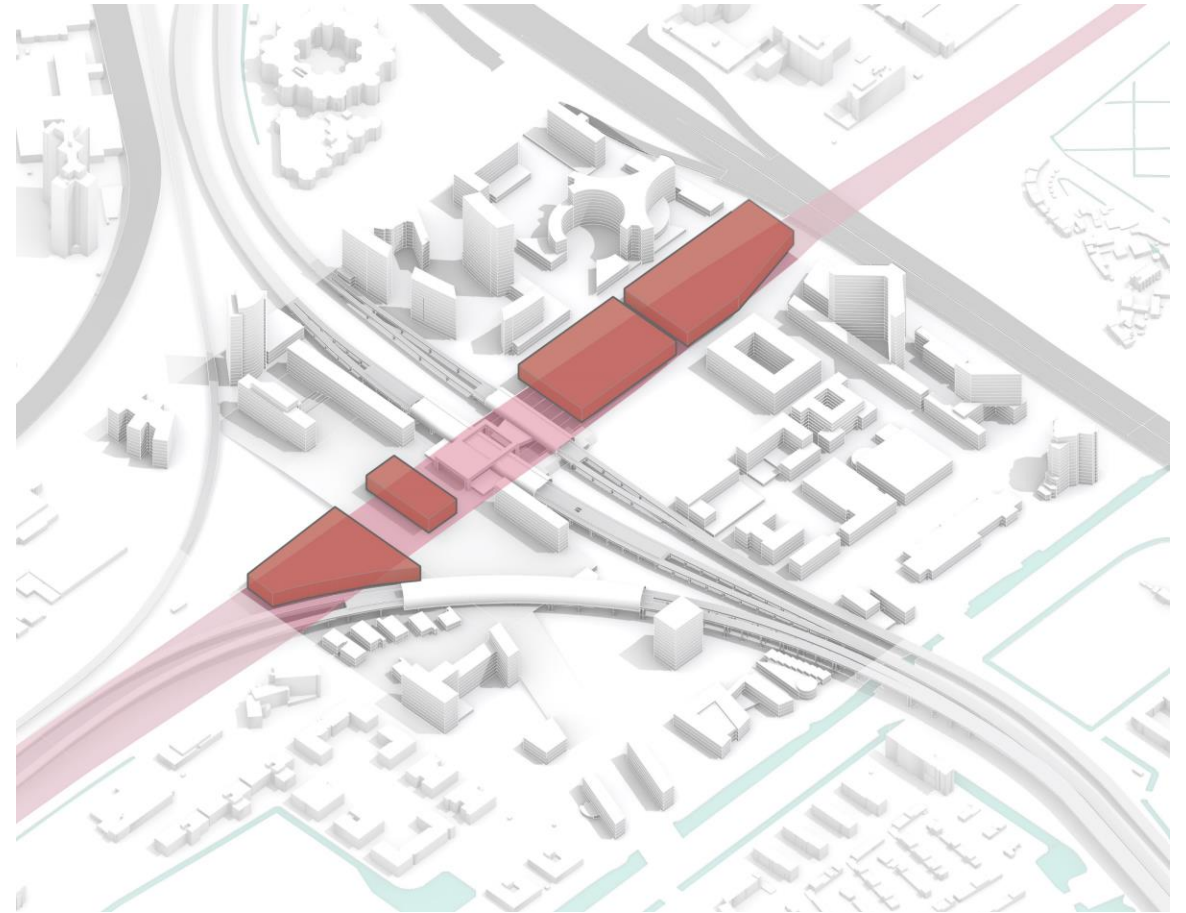
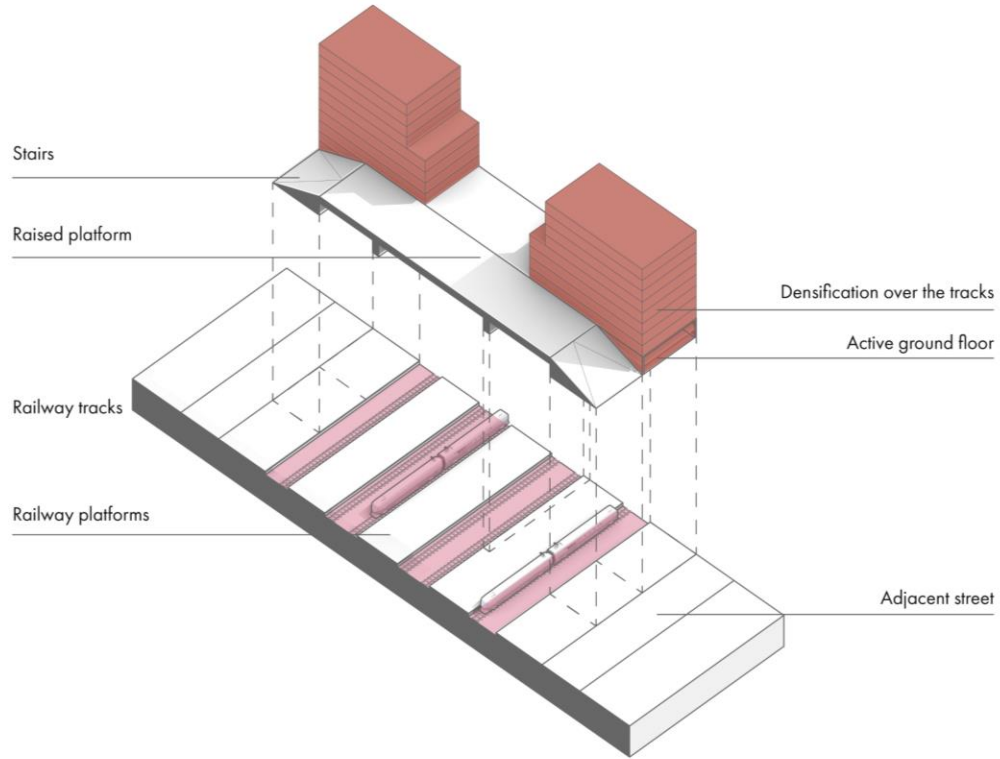
Transform-Completely Remove Buildings



Transform-Replace existing



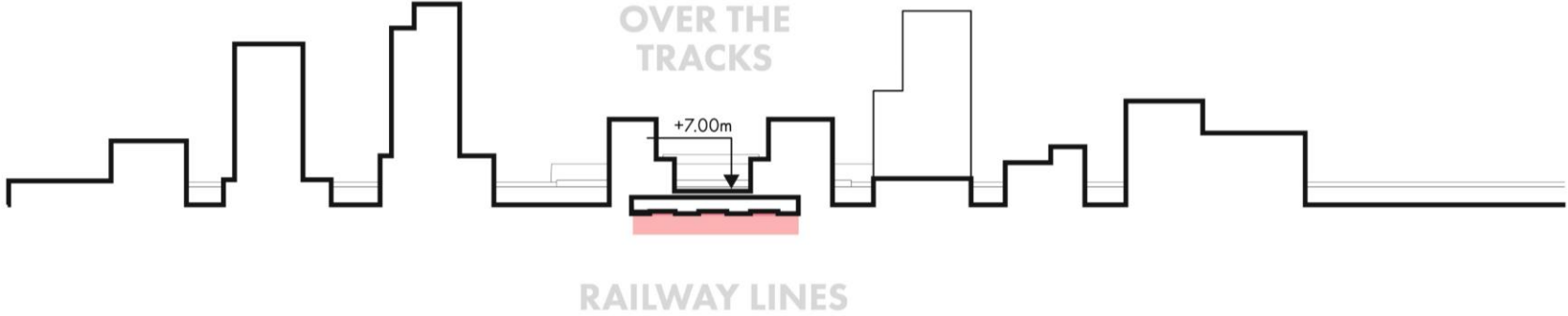
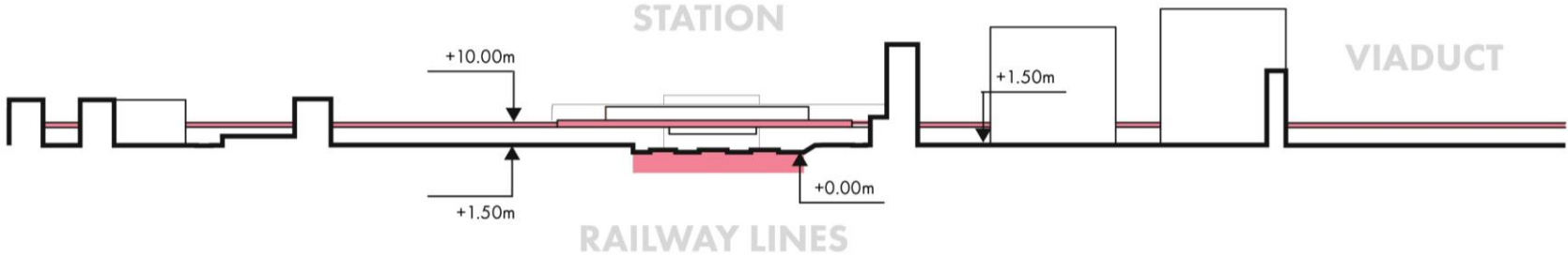
# Densification over the railway tracks



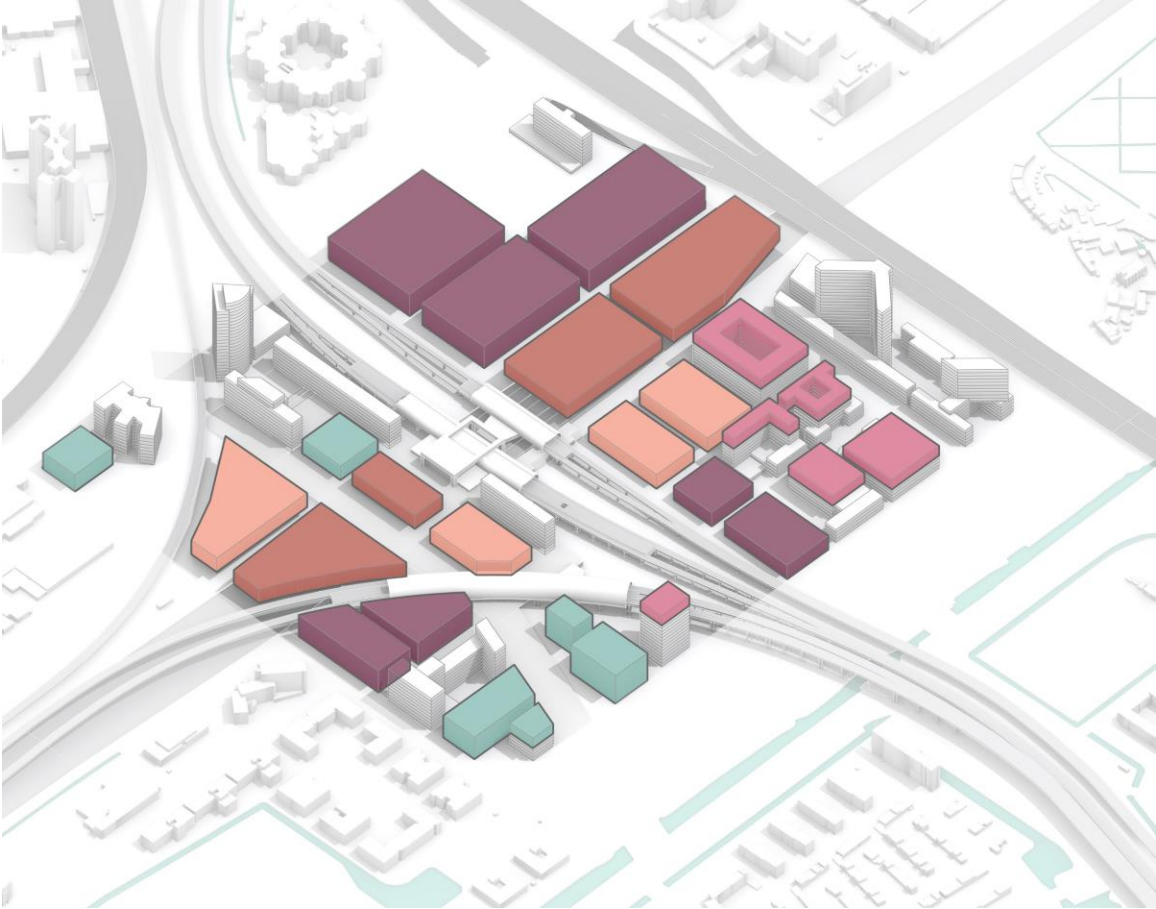
Addition of 2000 homes



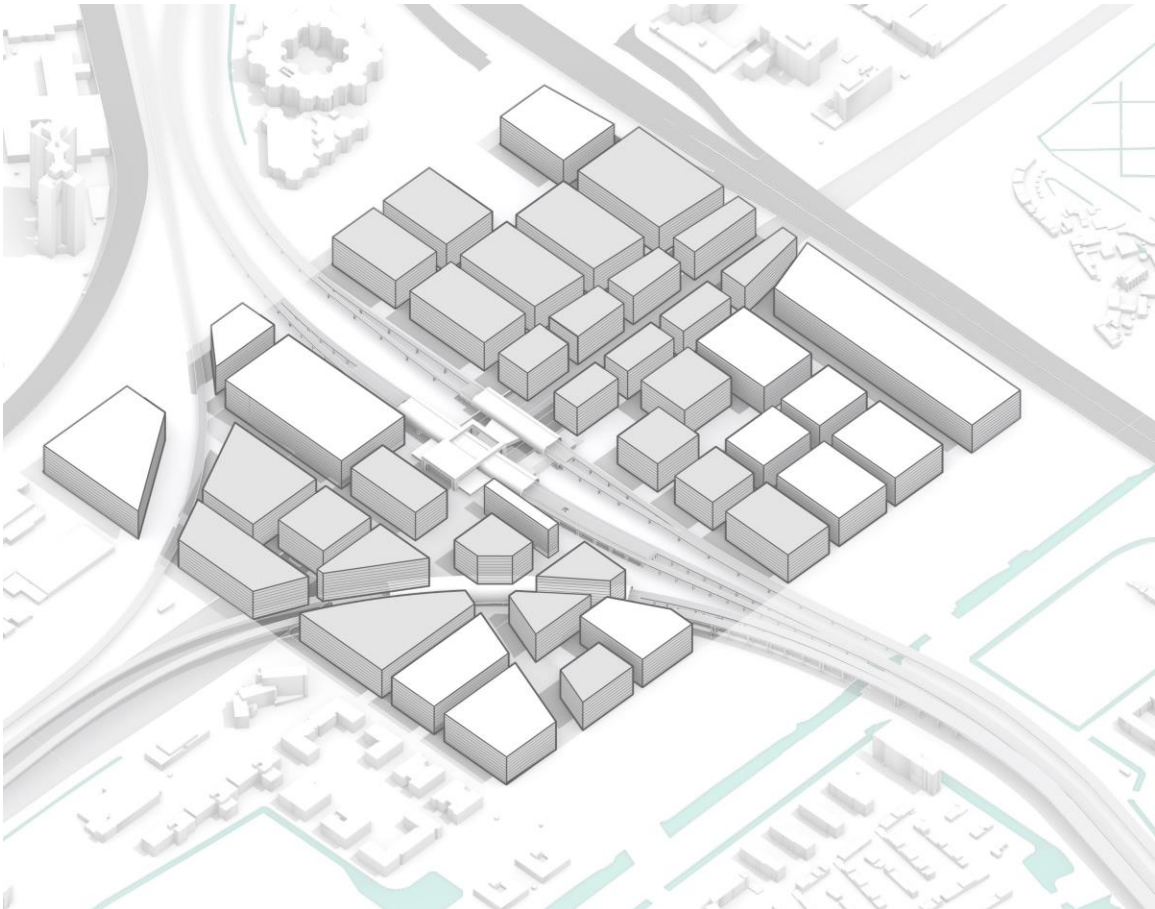
# Overcoming the barrier



# Application of the strategies

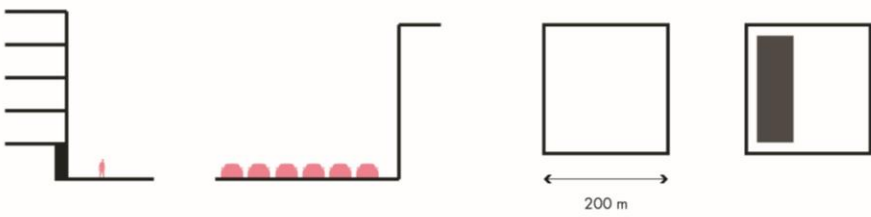
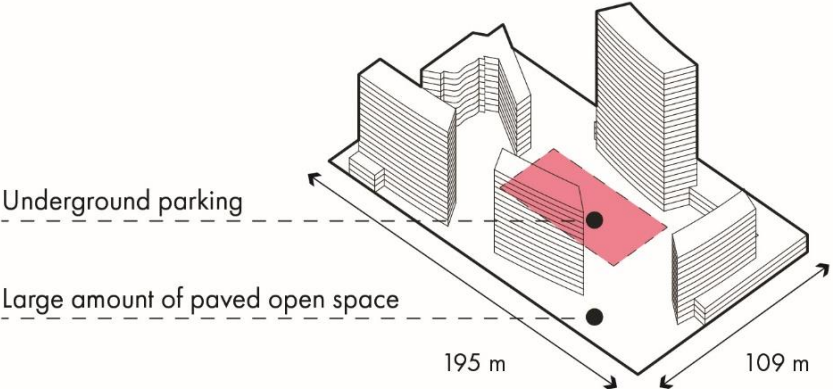


Application of densification strategies



Adjustment of the urban grid

# Current block typology

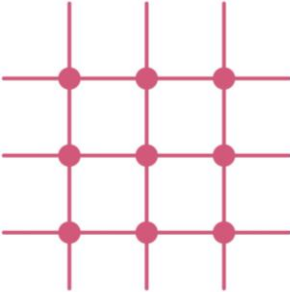


Inactive facades      Space for cars      Large dimensions      Undefined spaces

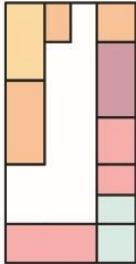


# Principles for the new urban structure

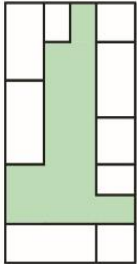
Increase potential interaction



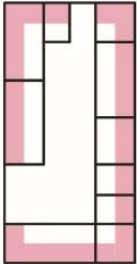
Increase diversity



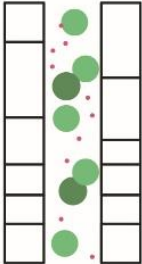
Green inner spaces



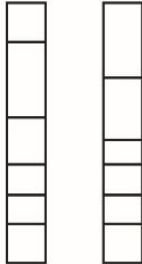
Active facades



Minimize space for mobility



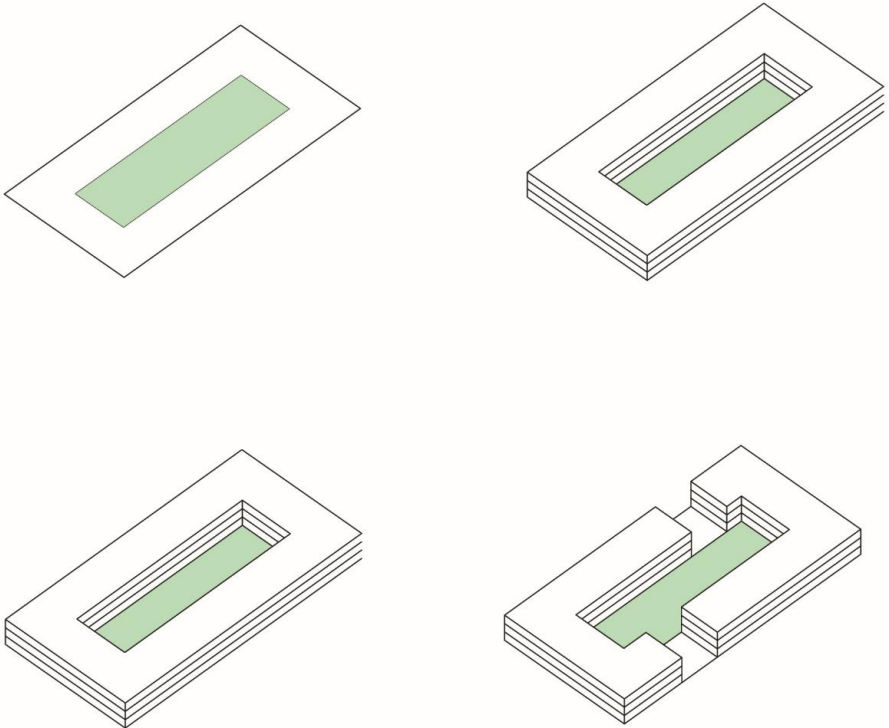
Reduce street width



12-18 m



# New Block





# Transformation



Before the transformation



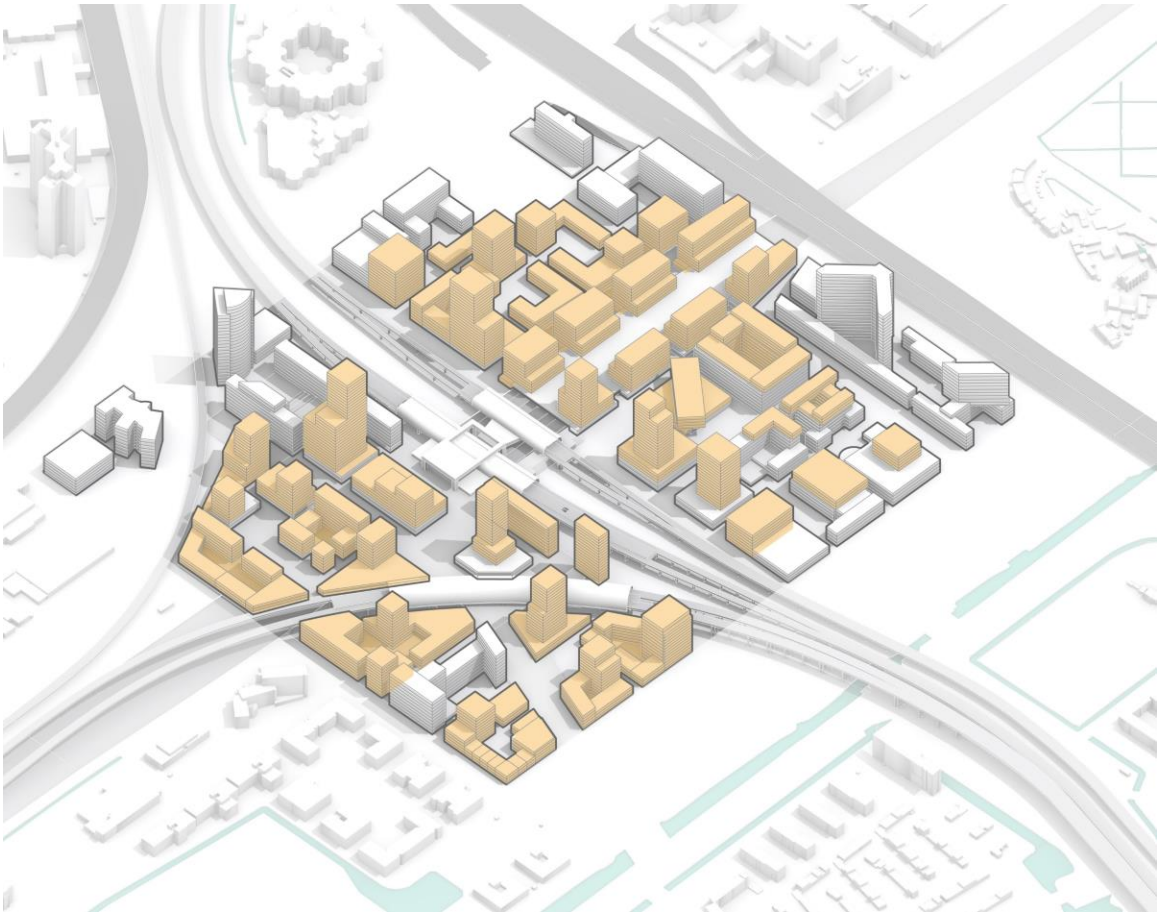
After the transformation

# Space for living

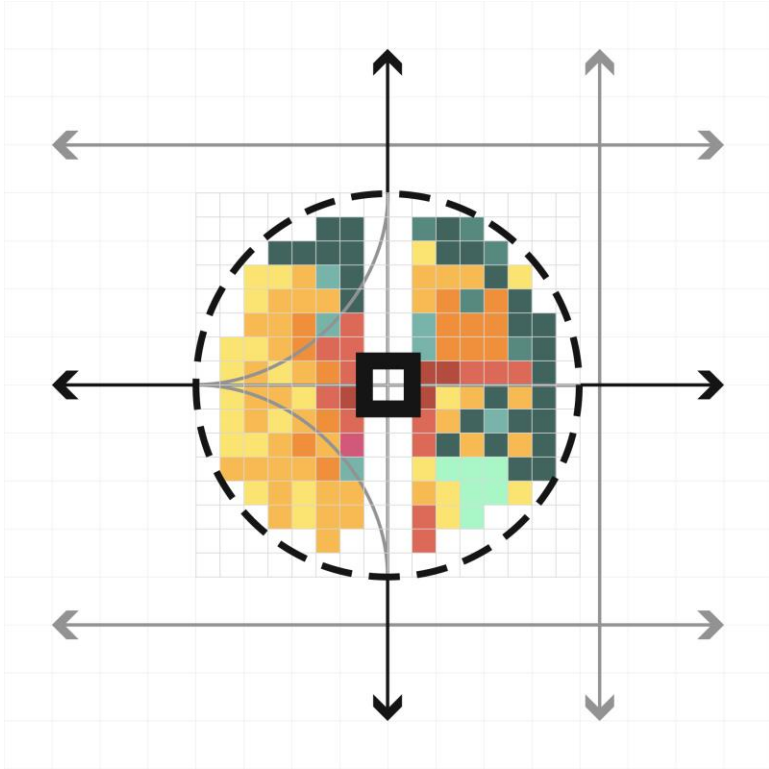
Addition of 6700 homes



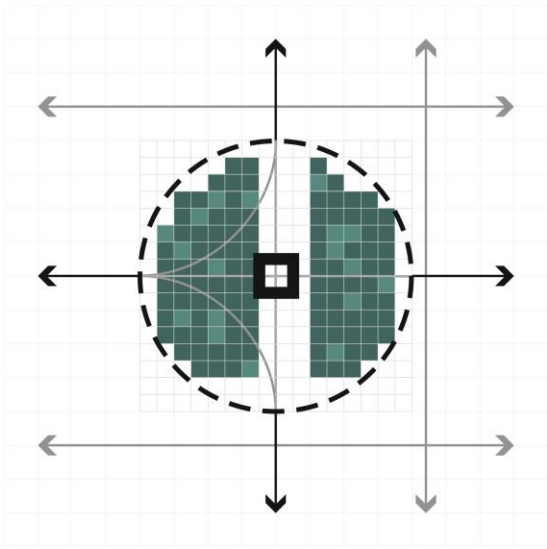
10.000 new residents



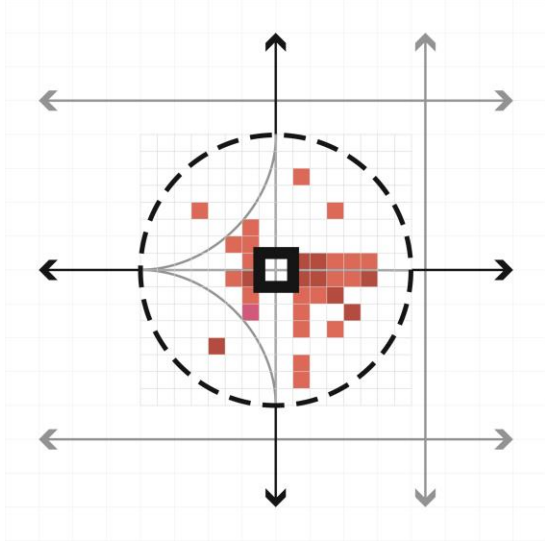
# 02 | Mixed-use and vibrant urban district



Monofunctional district



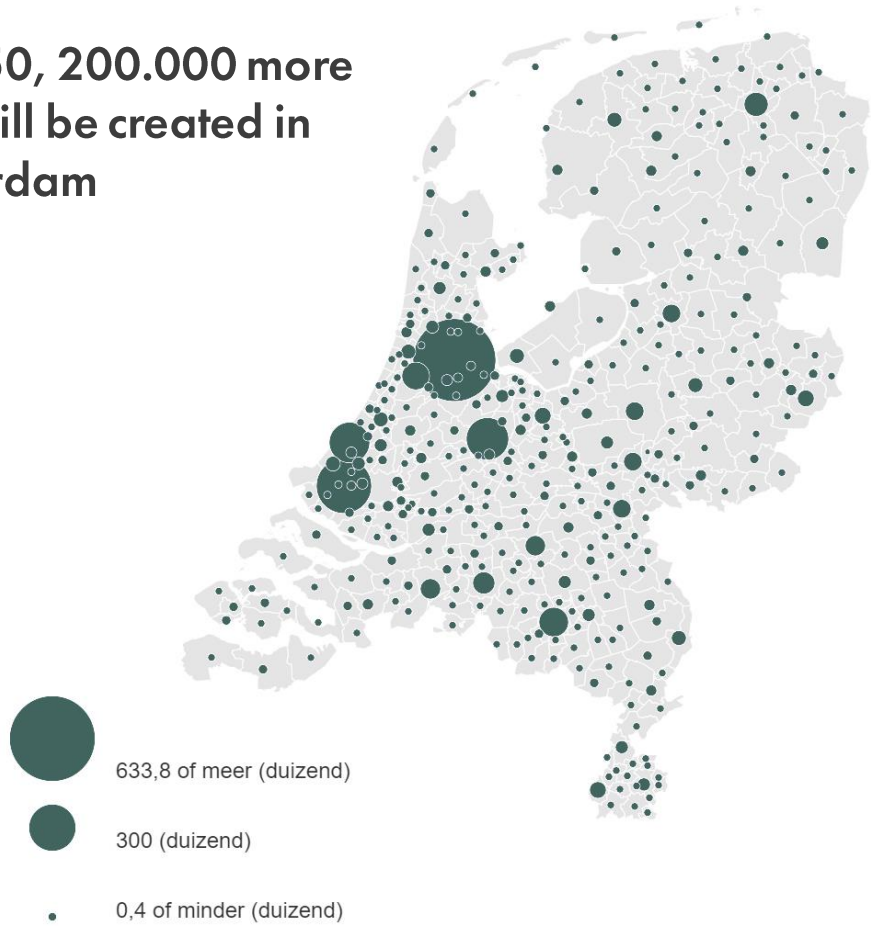
Mixed and vibrant Neighborhood



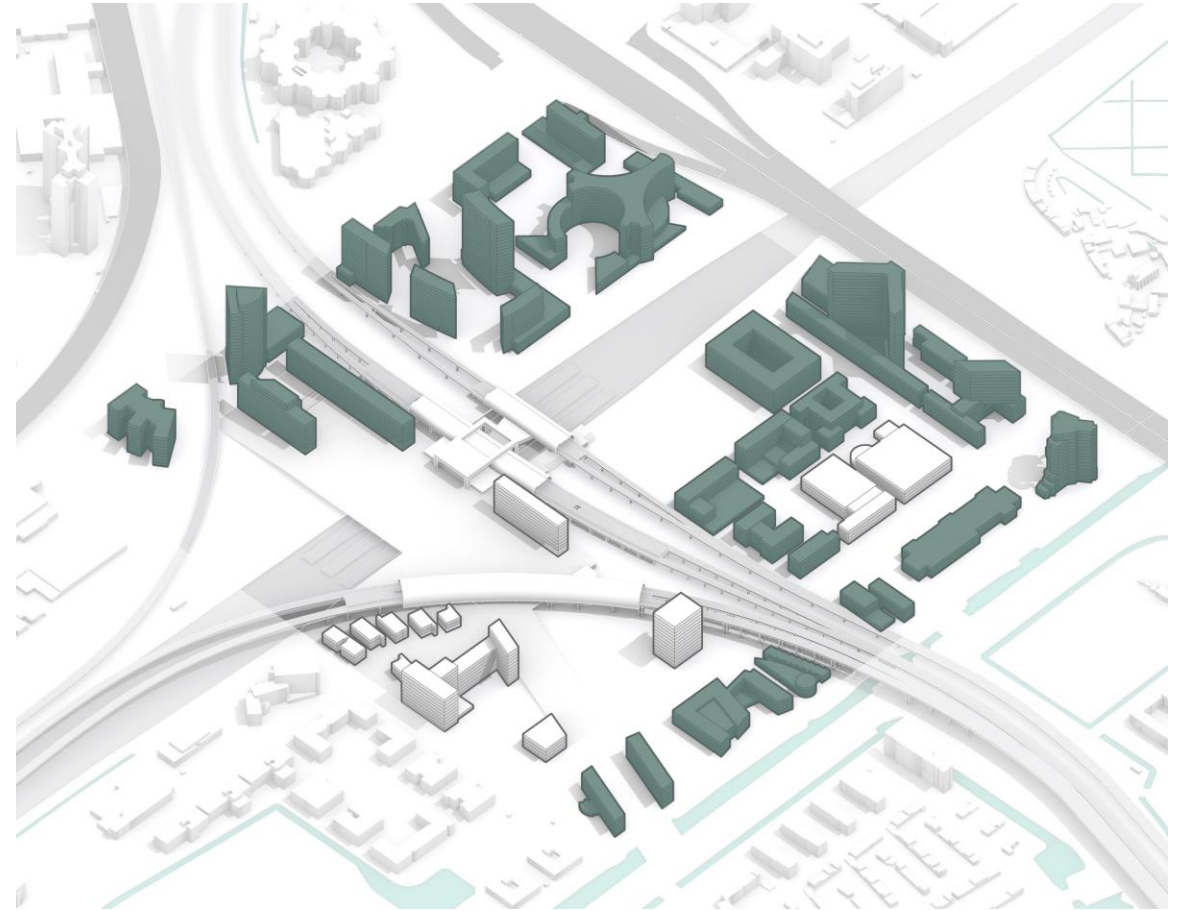
What other functions should the area of Sloterdijk include?

# Amsterdam is attracting most of the jobs

By 2050, 200.000 more Jobs will be created in Amsterdam



Source: [www.cbs.nl](http://www.cbs.nl)

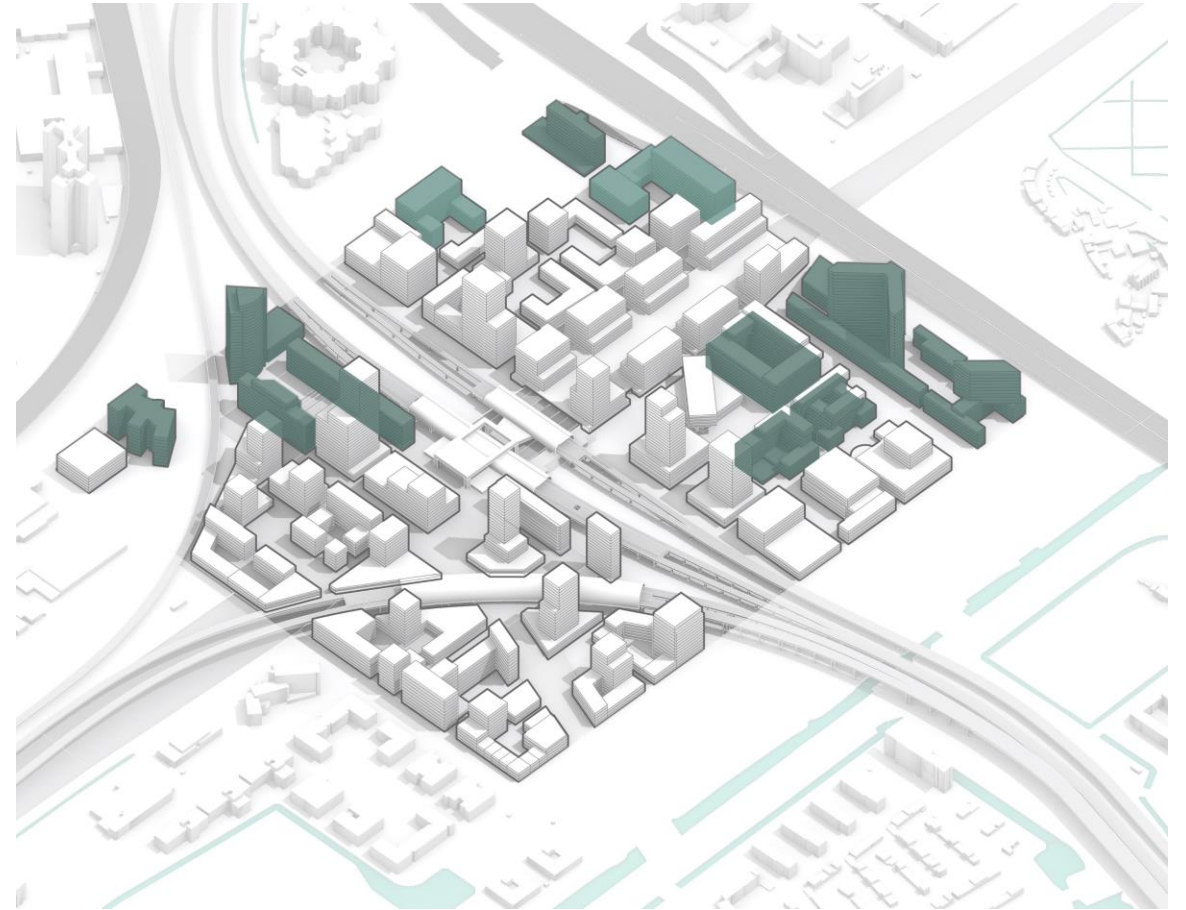
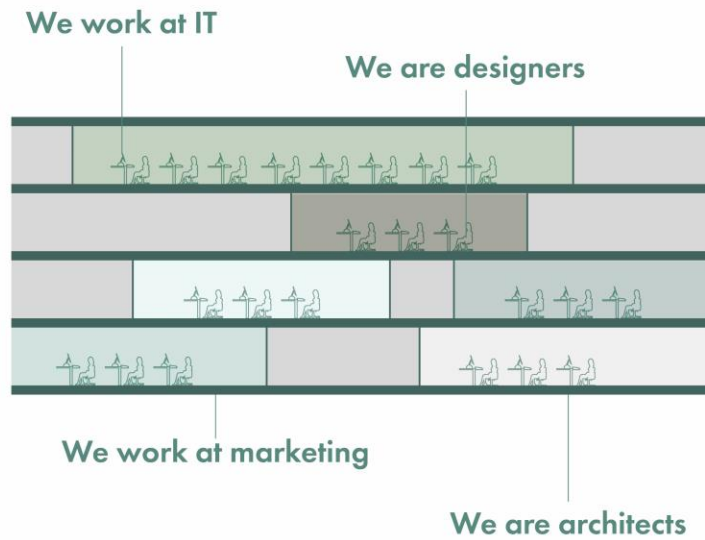


Current workplaces in Sloterdijk

# Preservation of workplaces

Thus, while car-oriented suburbanization was central to 20th Century industrial economy, TOD is seen as an urban development concept more suited to postindustrial, service-based economies”

Hrelja et al., 2020



# Work is evolving – Integrating remote work

## Co-working spaces



Source: [www.wired.co.uk](http://www.wired.co.uk)

## The aspect of loneliness



Source: [theconversation.com](http://theconversation.com)

# Accessibility as a key element

**Mobility**

**Station as node and  
place**

**Activities**

**Users**

# Potential users

Distinction into:

Locals  
Visitors

**1** Julia, Commuter



**2** Lucas, Child



**3** Jan-Remote Worker



**4** Lars, Older adult

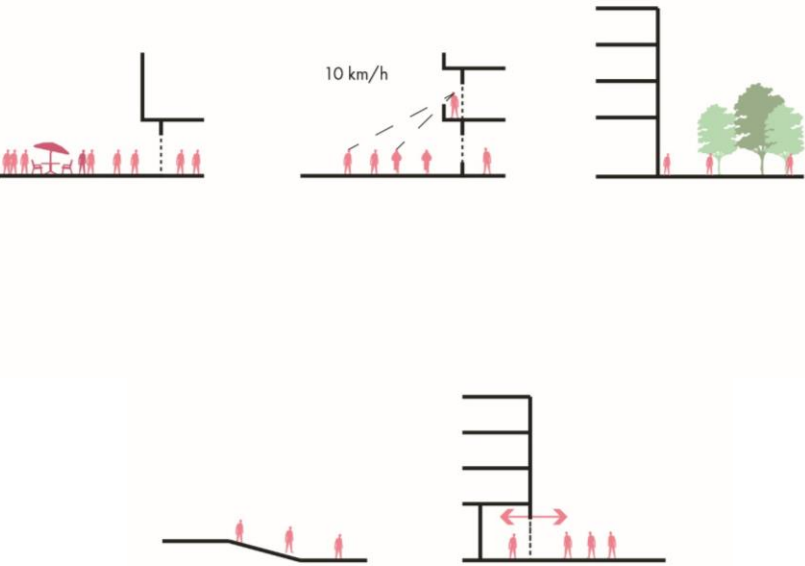


**5** Tess, Amsterdammer





# Public space: Levels of intensity and desired qualities



# Functional framework

## Cultural activities



Source: [www.archdaily.com](http://www.archdaily.com)

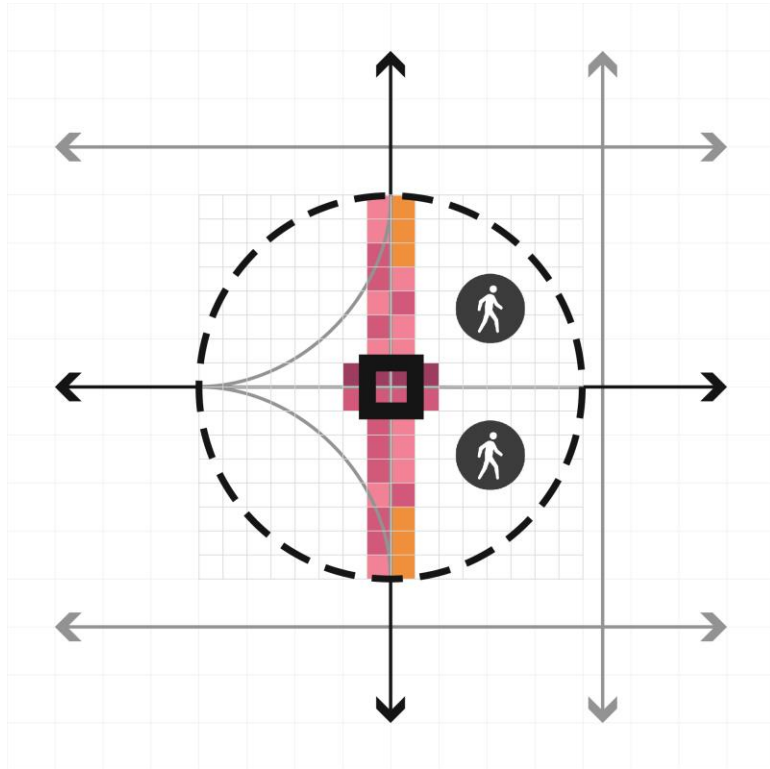
Source: [www.hpp.com](http://www.hpp.com)



## Activities for children



## 03 | Sustainable mobility hub



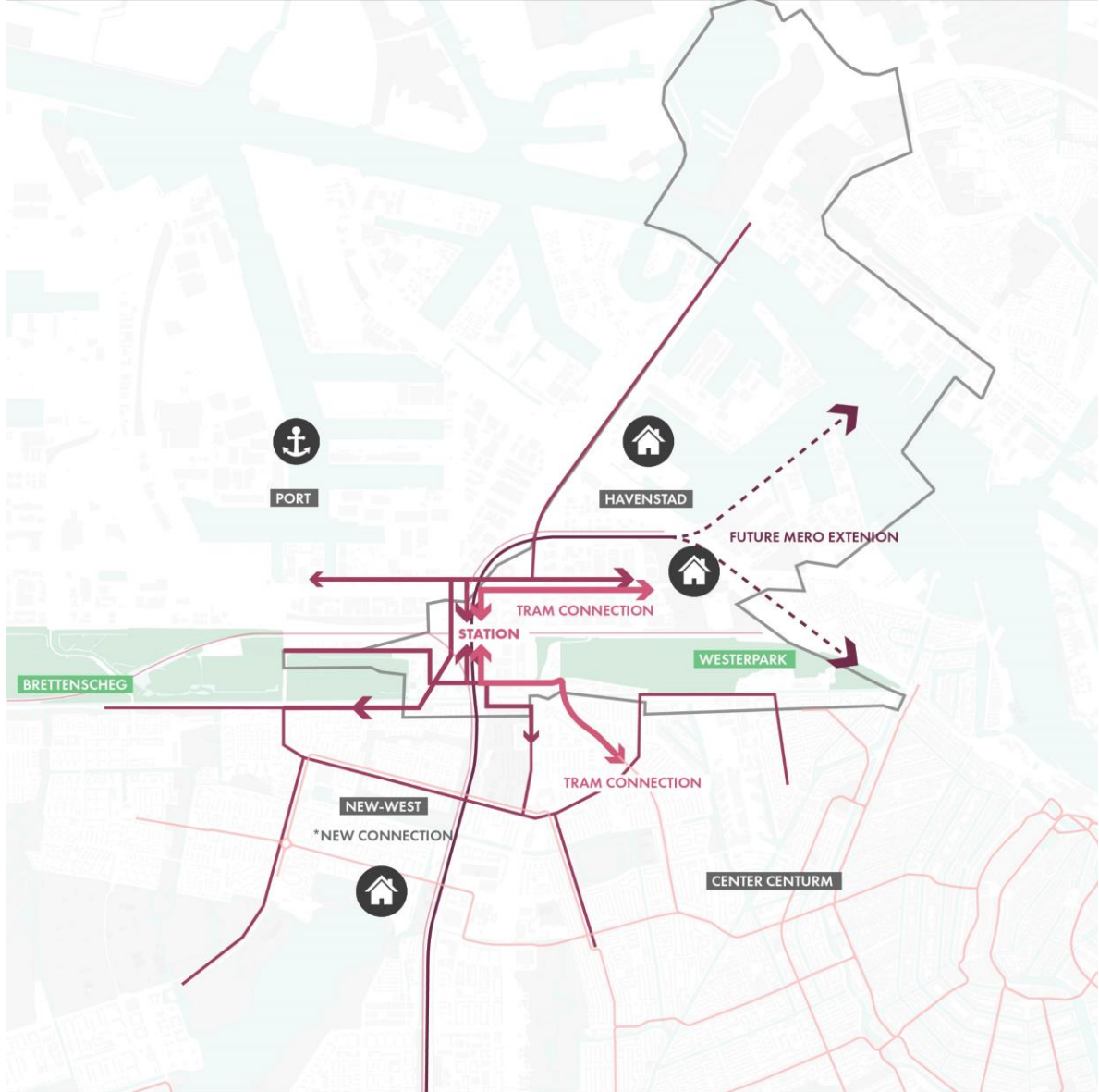
### Principles

- Improve public transportation connectivity
- Minimize use of private cars
- Promote active mobility
- Create slow streets

# Adapt to pressure



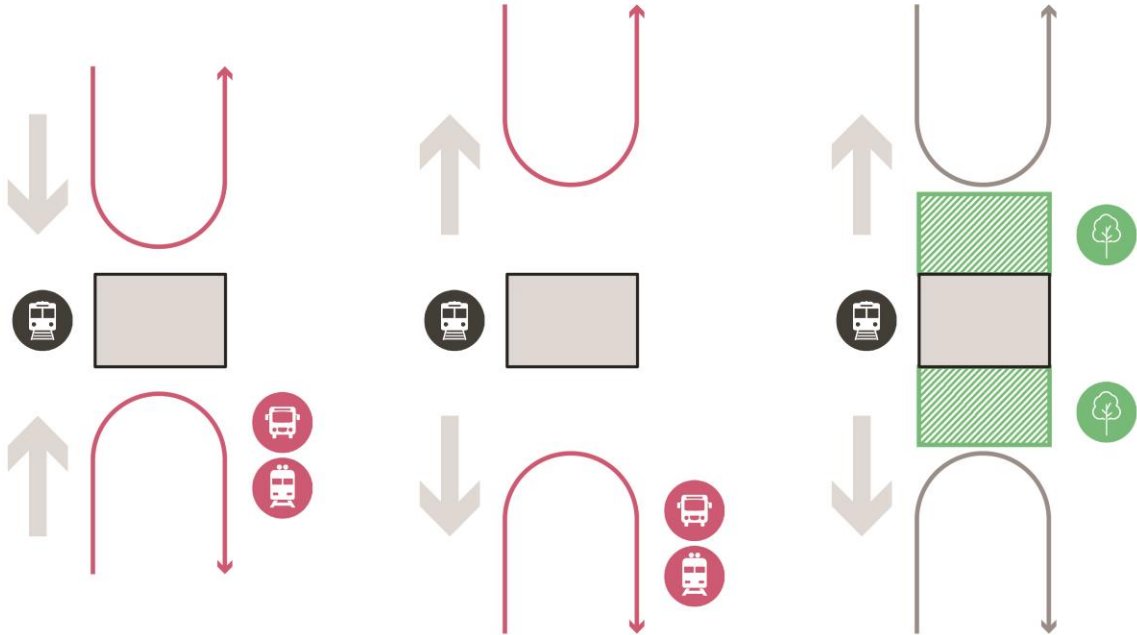
- Legend**
- Tram route
  - Bus lane
  - Railway line
  - Metro line
  - Green structure
  - Havenstad
  - Residential areas
  - Bus



# Designing the mobility hub

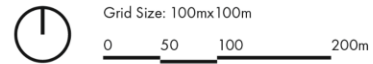


Concept diagram – Adjusting the structure to create space



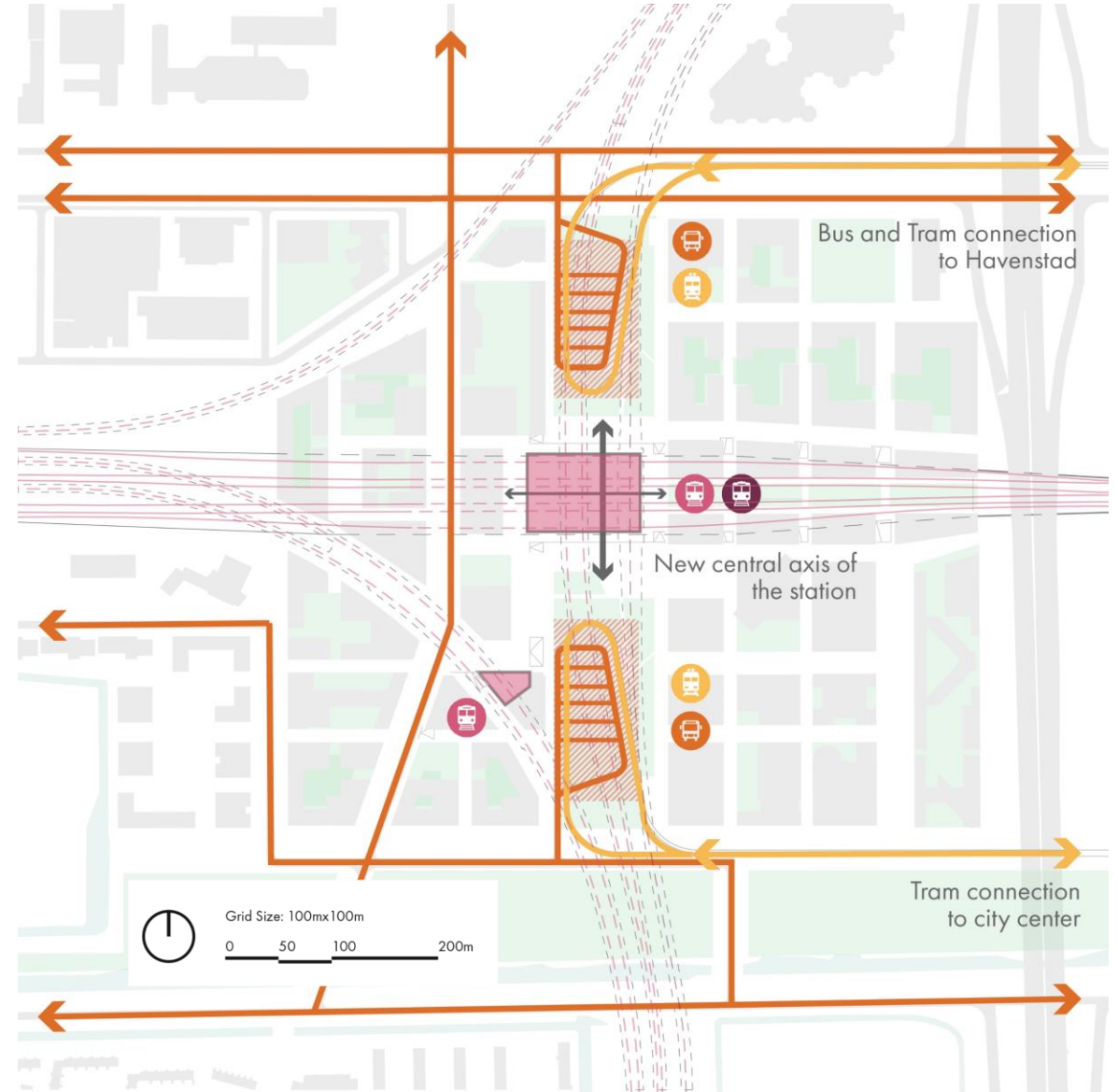
# Public Transportation

Provide access from both sides of the station



## Legend

- Tram route
- Bus lane
- Railway line
- Metro line
- Tram
- Bus
- Railway
- Metro

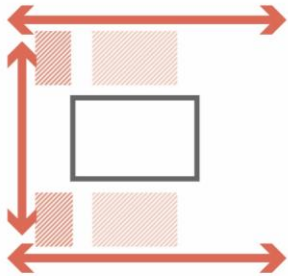


# Slow mobility through shared space

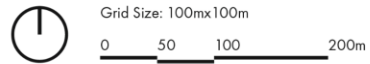
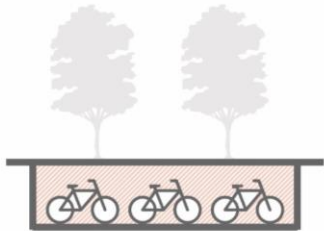


# Facilitating bikes

## Concept

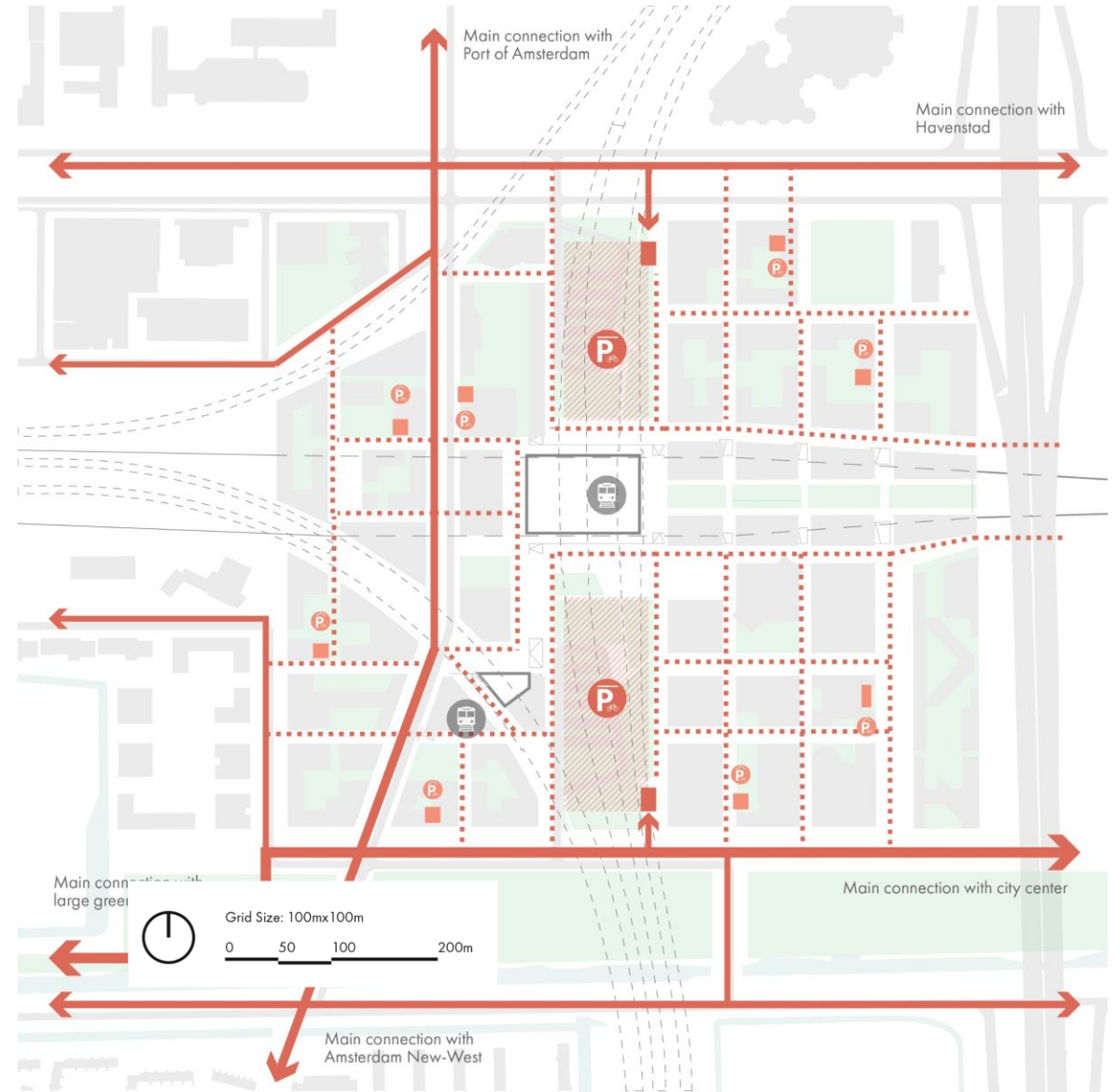


## Parking Underground



### Legend

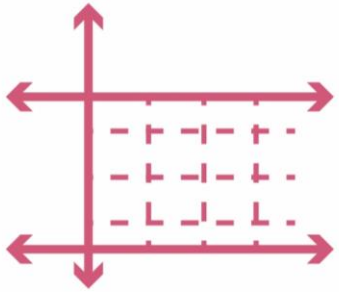
- Bike Route 
- Shared Street 
- District Parking area 
- Underground parking 
- Underground bike parking 
- Neighborhood parking 



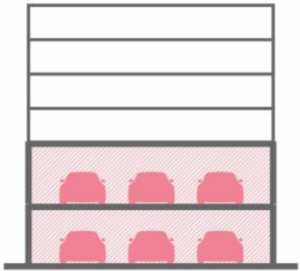


# Eliminating space for cars through shared mobility

## Concept



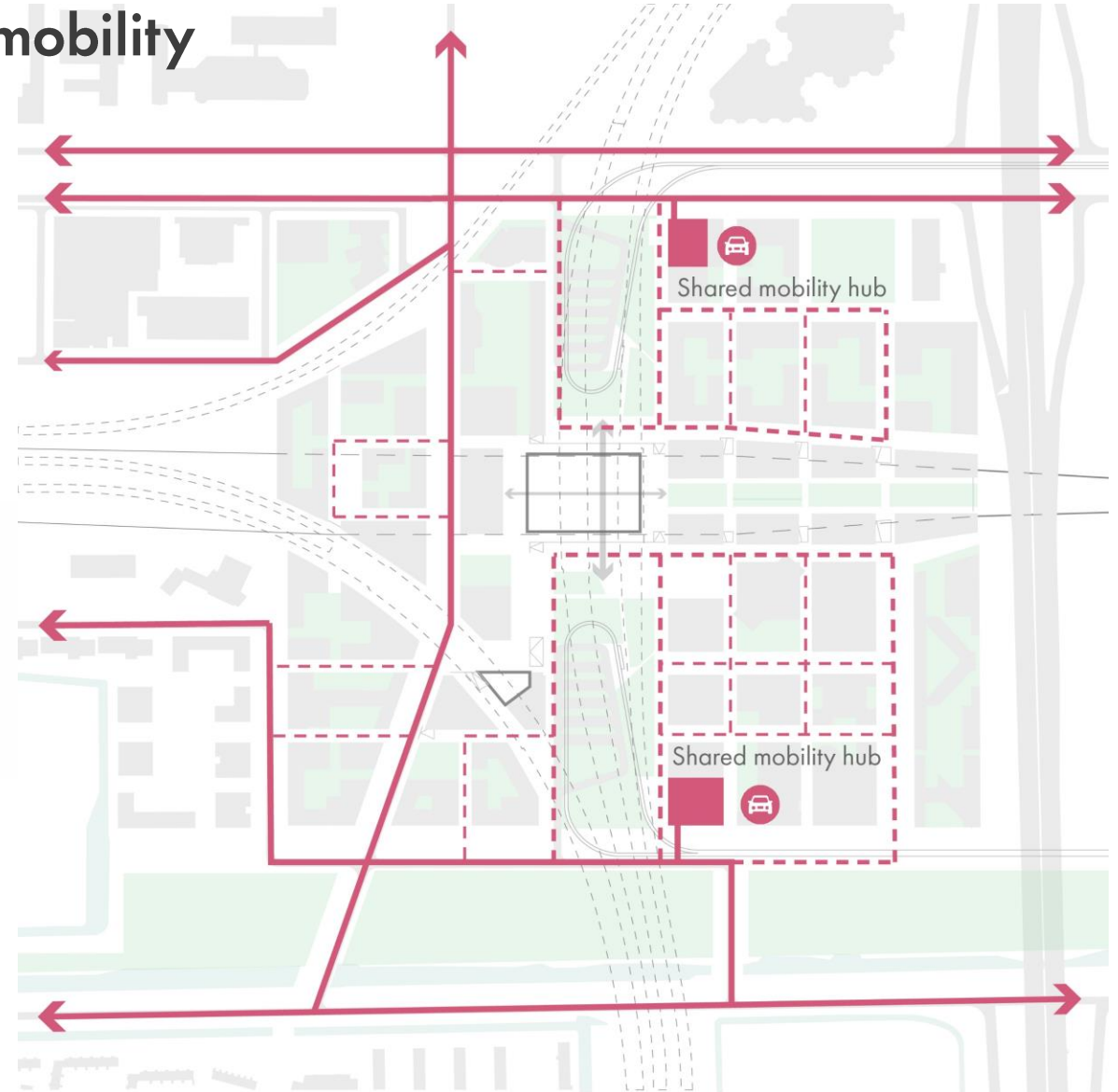
## Shared Mobility hub



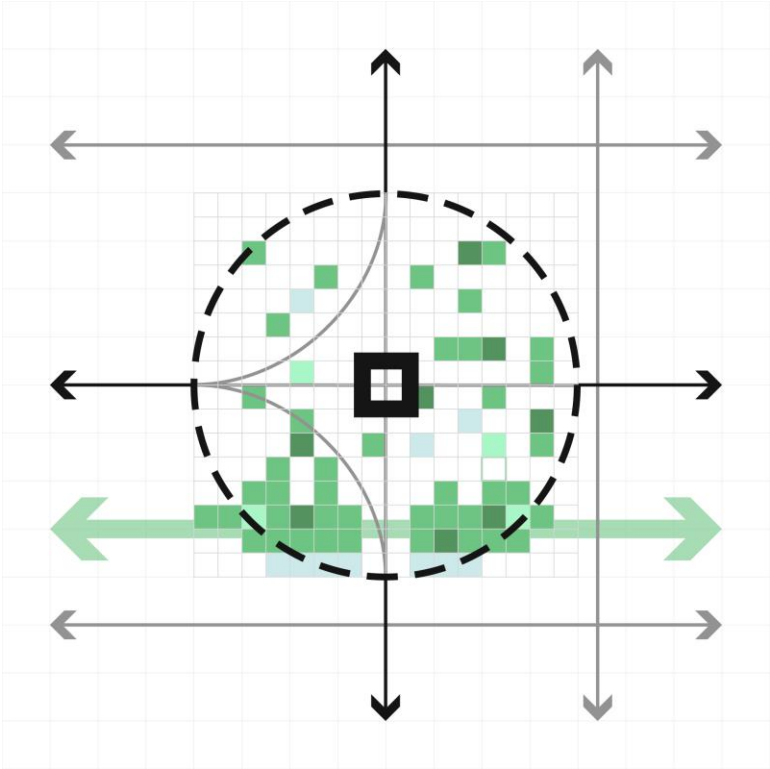
Grid Size: 100mx100m  
0 50 100 200m

### Legend

- Car lanes
- Shared Street
- Shared mobility hub area
- Shared mobility hub

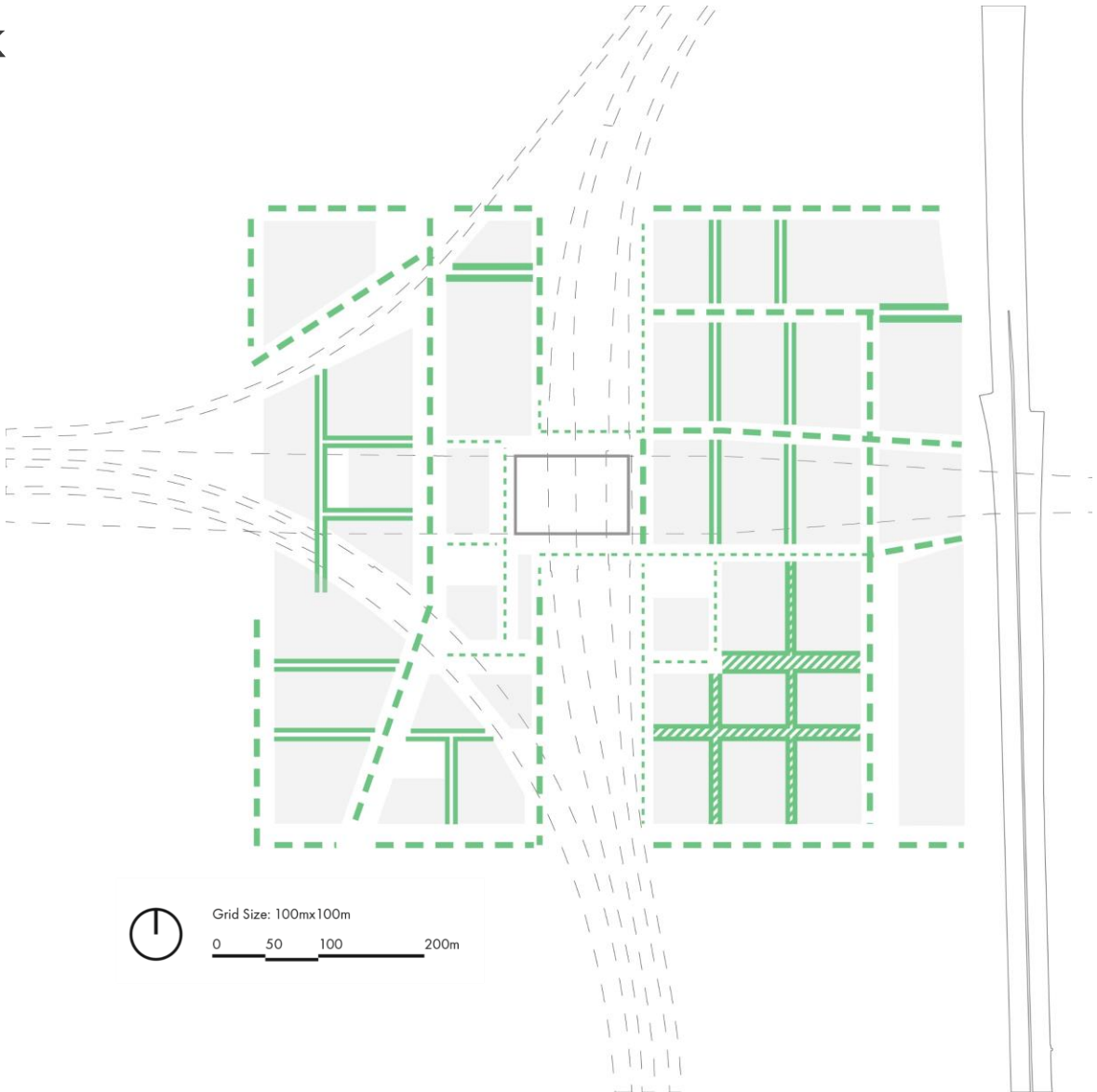
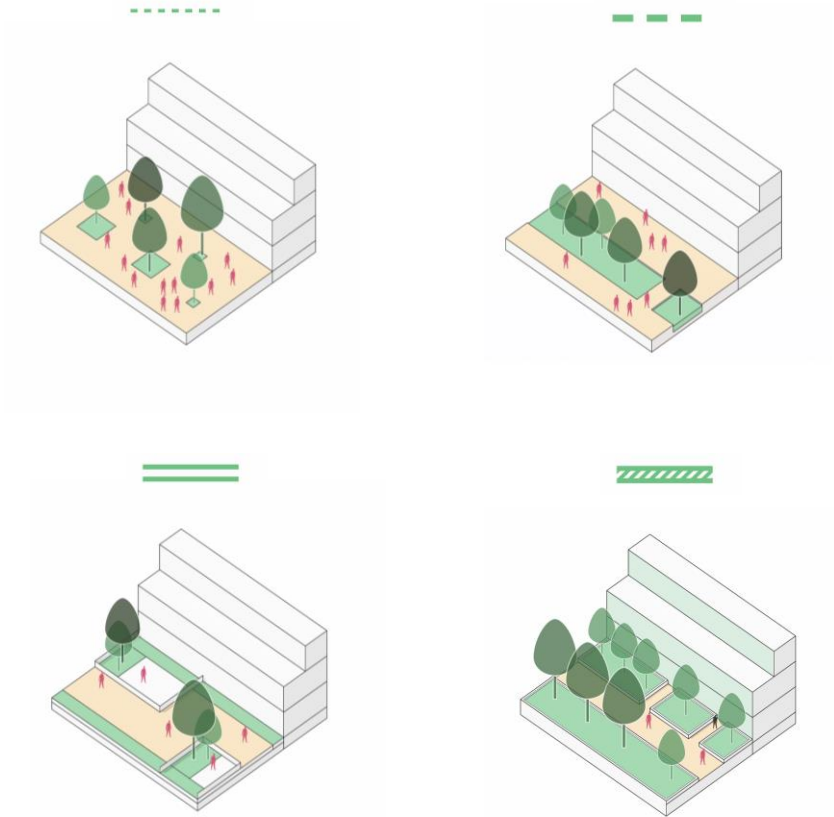


# 04 | Healthy and safe environment

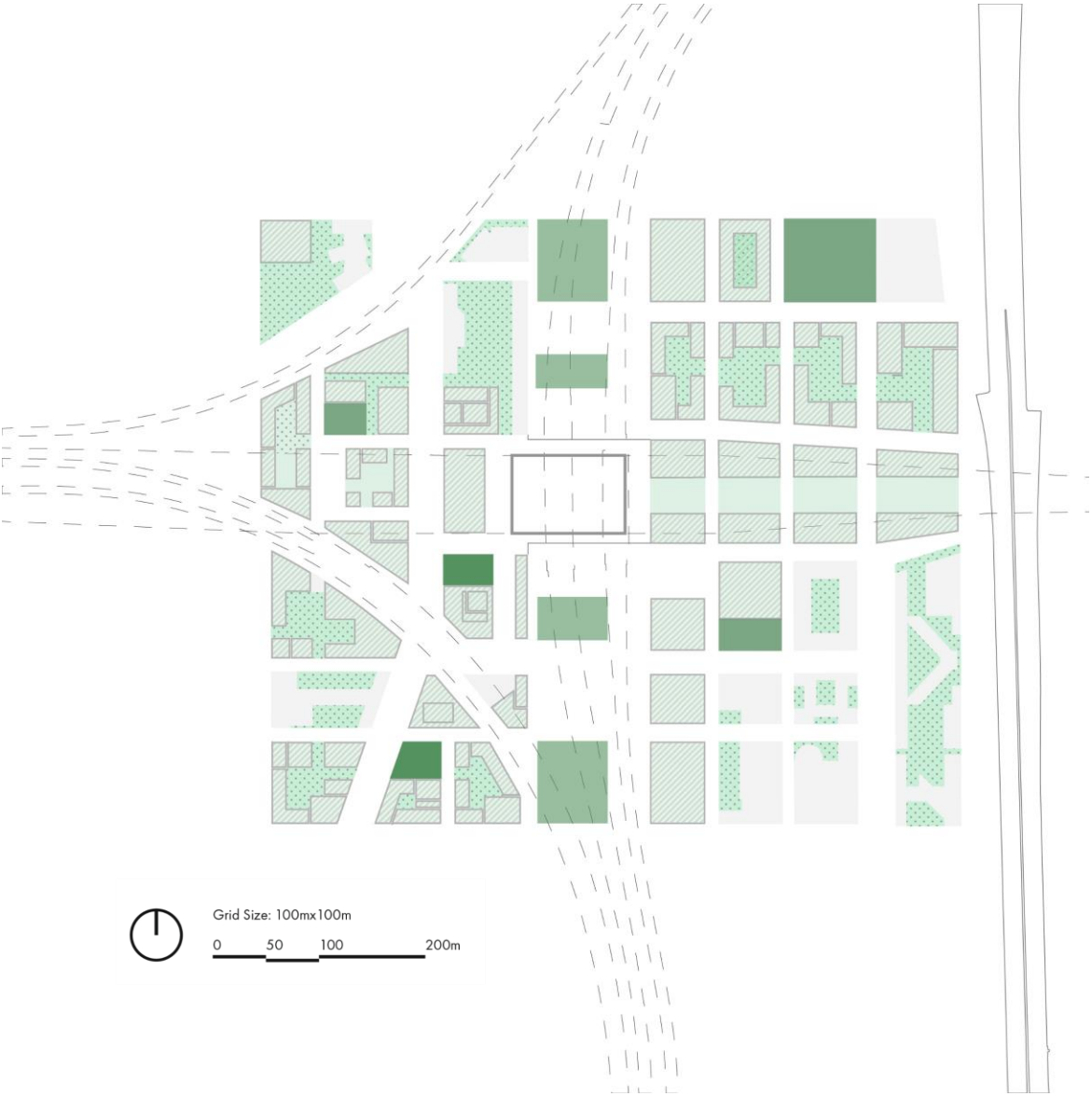
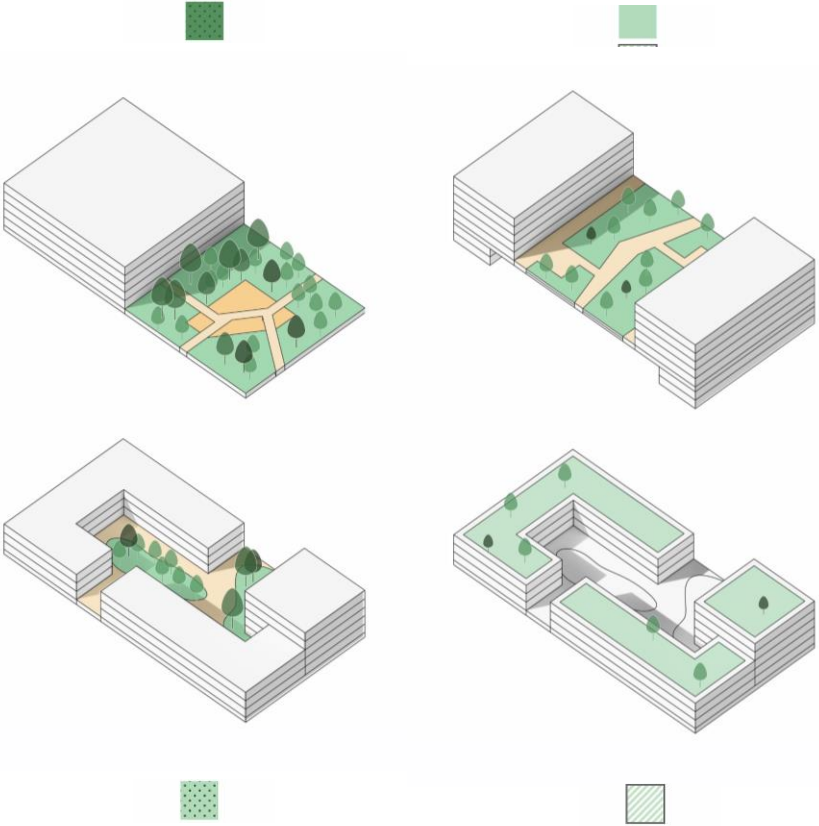


Source: [www.thenextgreen.ca/](http://www.thenextgreen.ca/)

# Creating a continuous green street network



# Adding



# Creating a complete network of green spaces

**Street**

- 1. Tree-lined
- 2. Middle-verge
- 3. Residential Street
- 4. Business-area



**Block**

- Inner block green space - infiltration
- Inner block green space - no infiltration
- Green/Polder roof



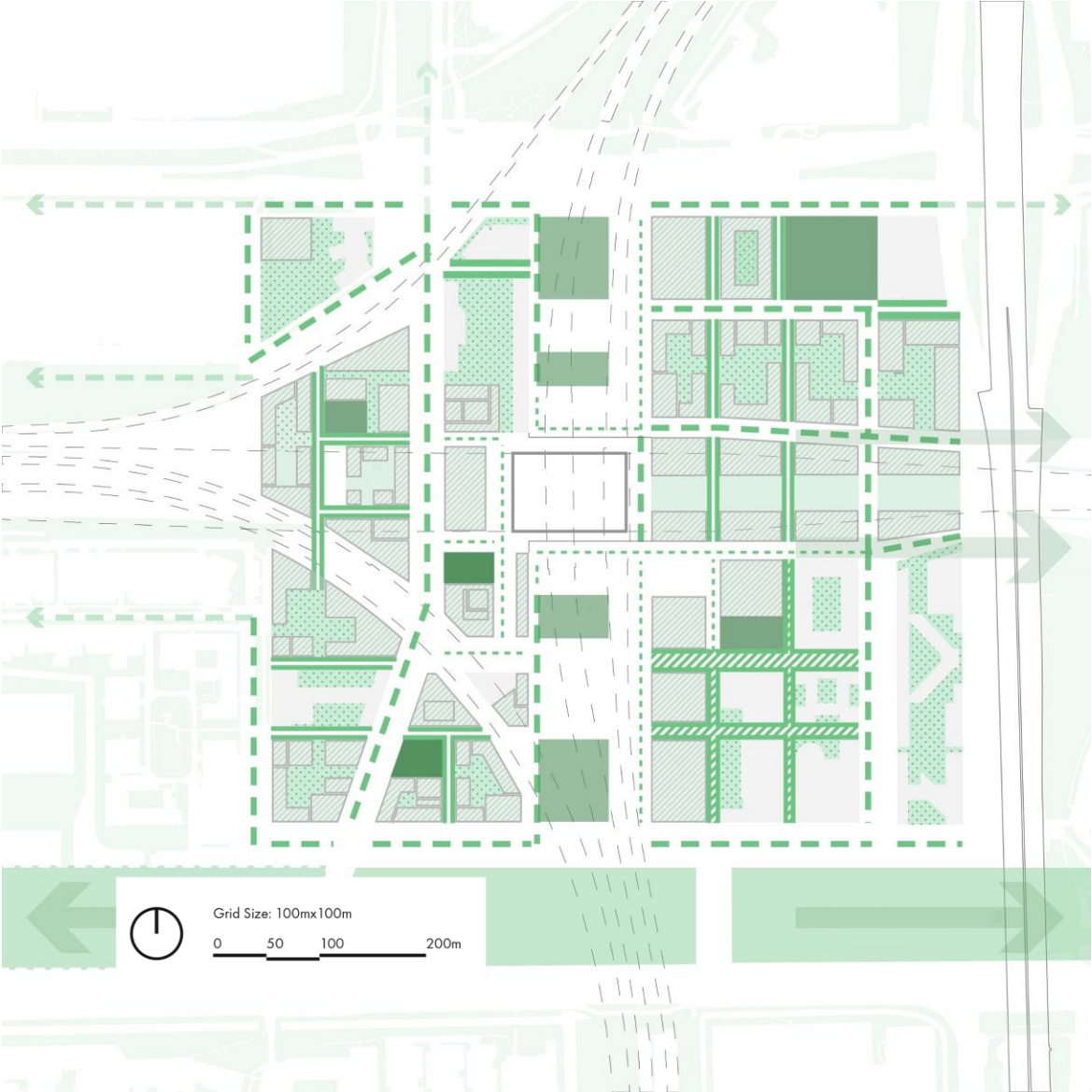
**Neighborhood**

- Park -Infiltration
- Urban green - no infiltration

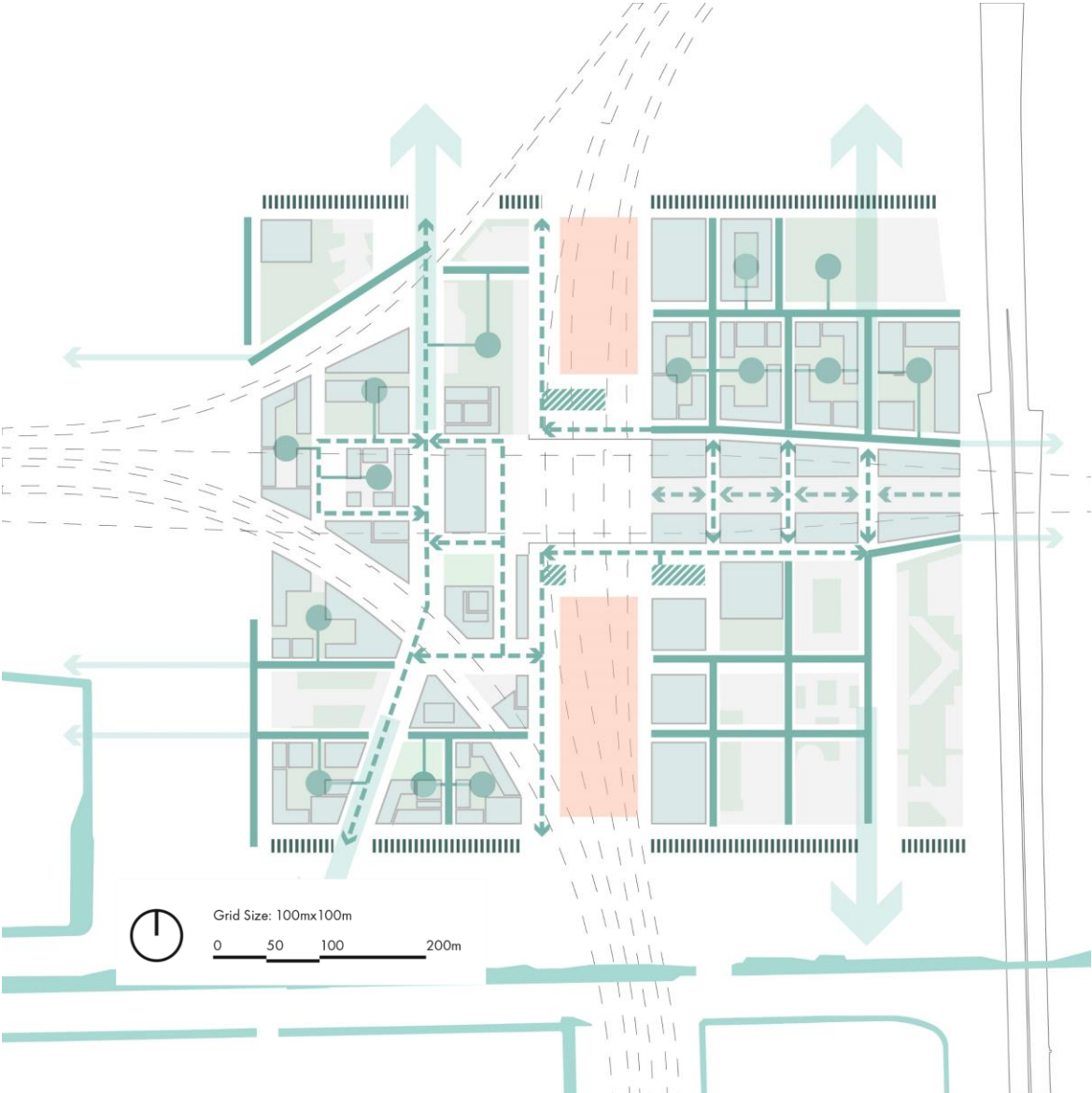


**District**

- Ecological Corridor
- Connections

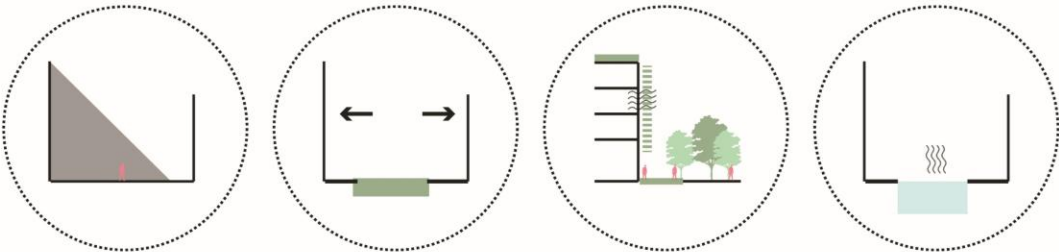


# Mitigating flood risks



- Street**
- Raingarden
- Underground pipe
- Bioswale
- Block**
- Block level temporary water storage
- Polder roof
- Infiltration area
- District**
- Temporary water storage-Watesquare
- Canal-Haarlemmertrekvaart
- Water direction
- Underground bike parking

# ..and heat stress

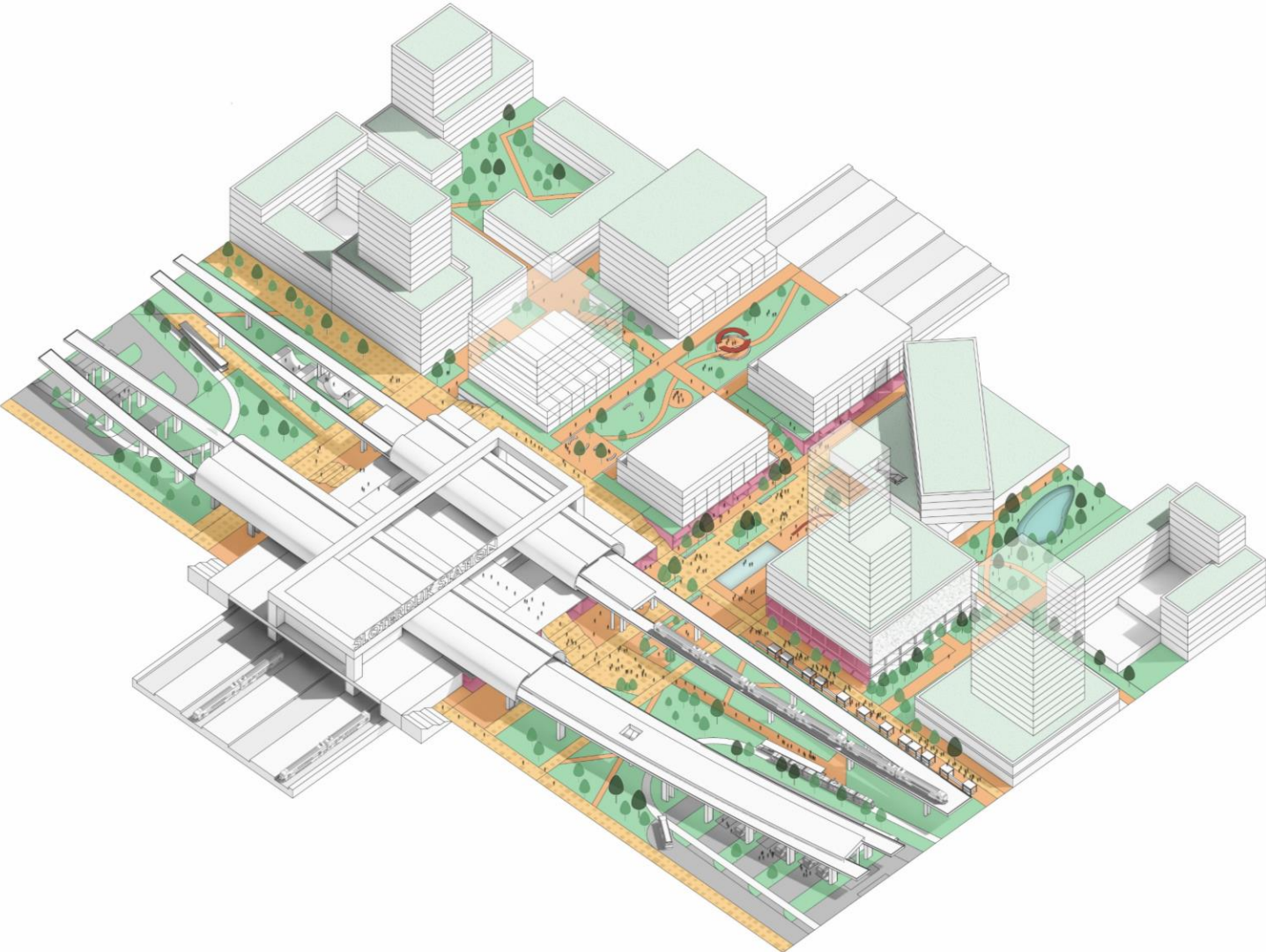


# Designing the public space **04**

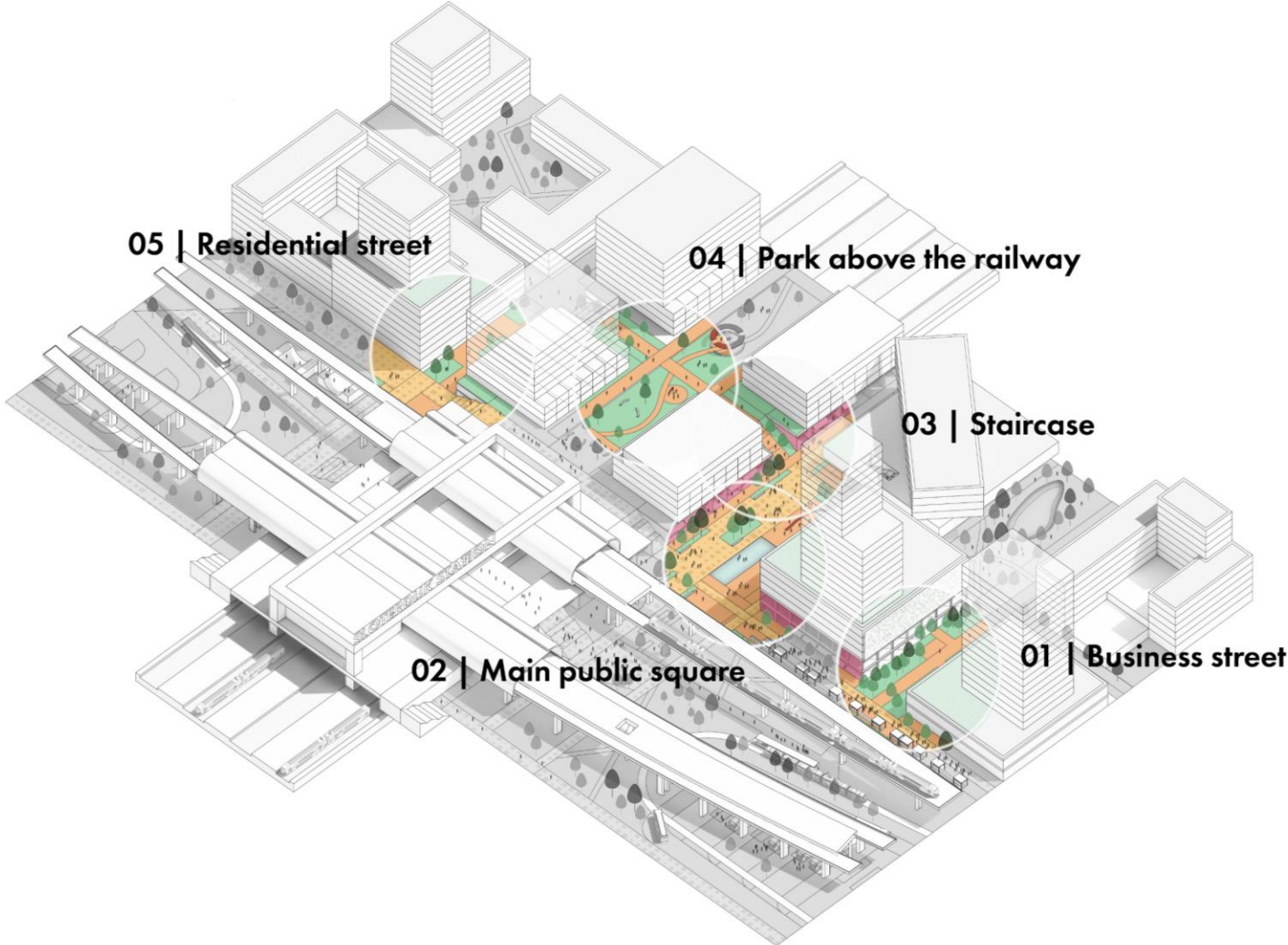
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# The new image of Sloterdijk

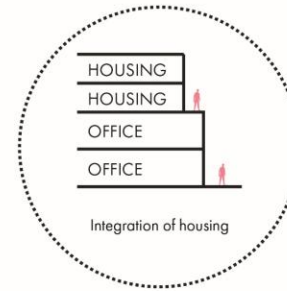
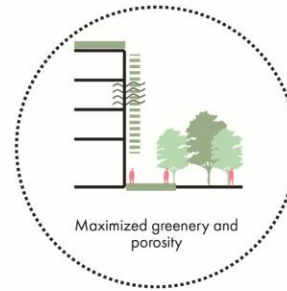
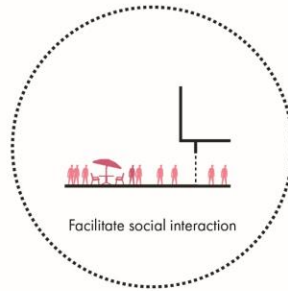
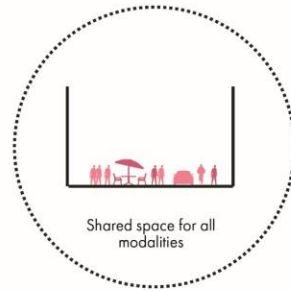
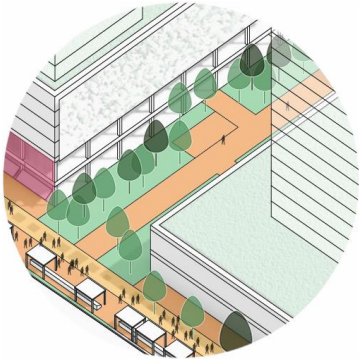


# 5 distinct characters

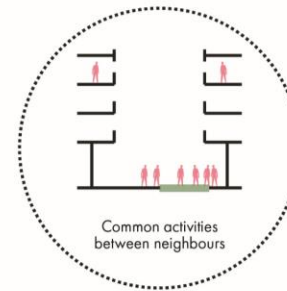
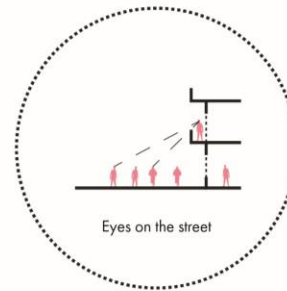
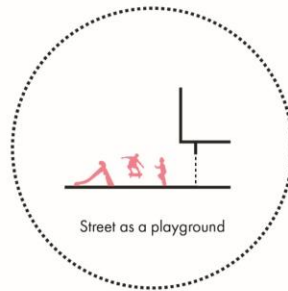
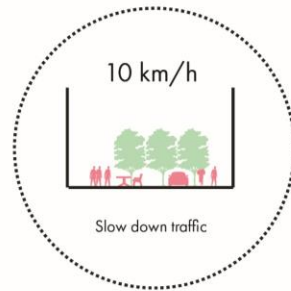
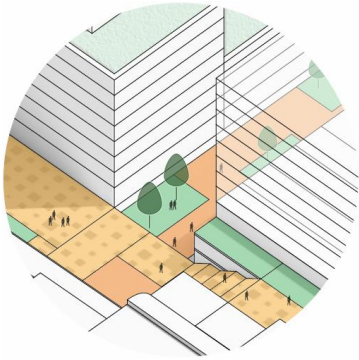


# Business and residential streets

## Business-area street

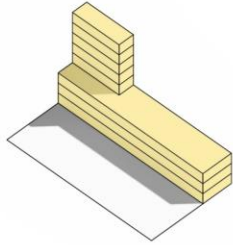


## Residential street

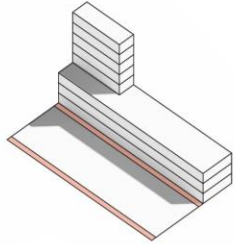


# Business and residential streets

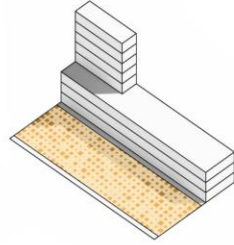
Road 12-18m



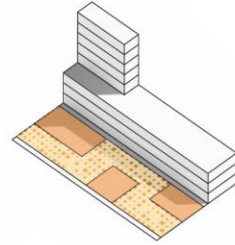
Semi private zone



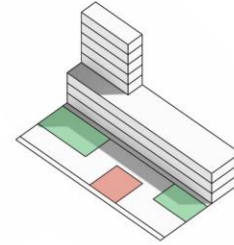
Shared street



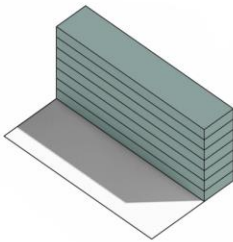
Slow down cars



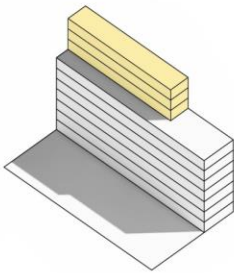
Activities and green



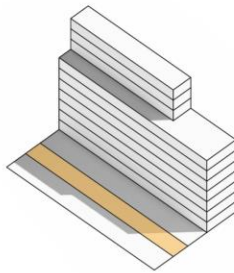
Road 20m



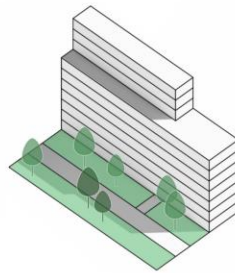
Addition of housing units



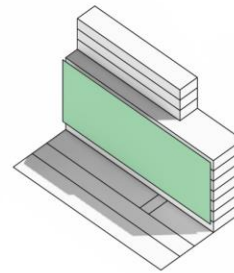
Middle shared street



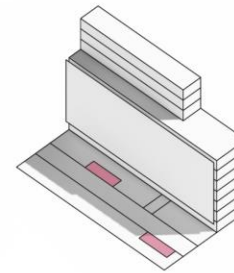
Maximize green



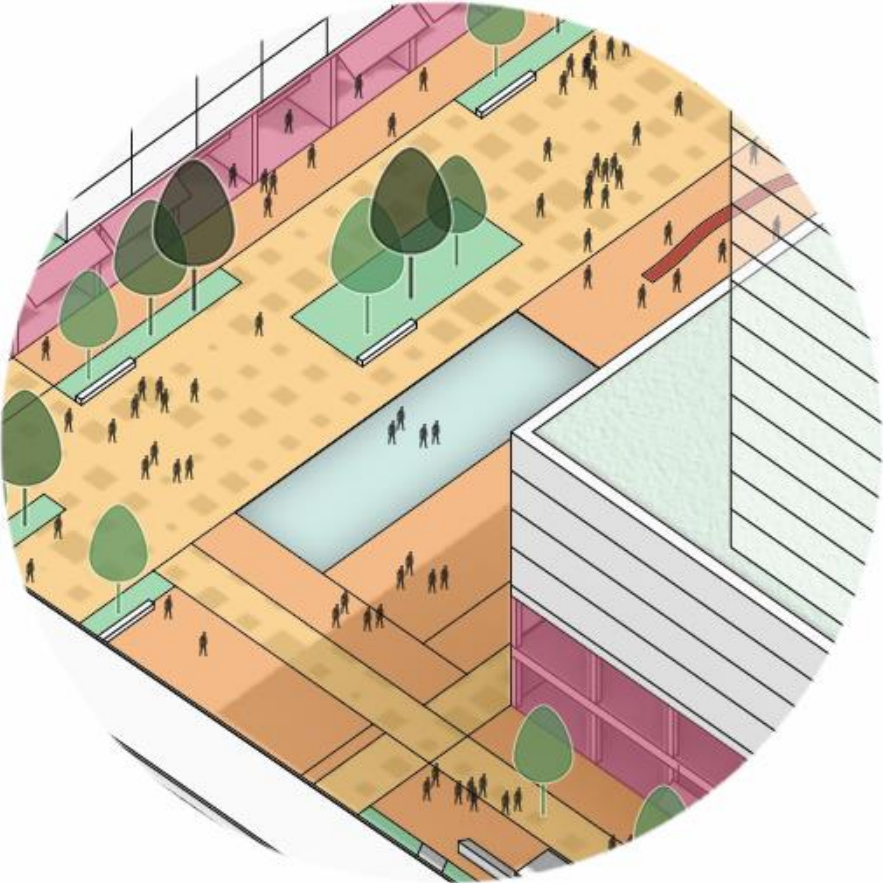
Add green on buildings



Sitting places

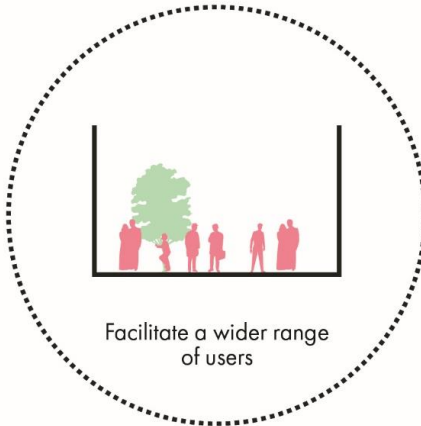
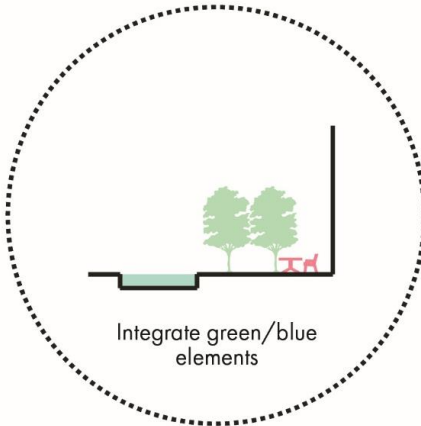
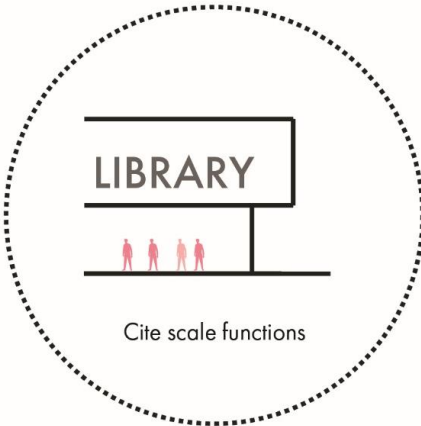
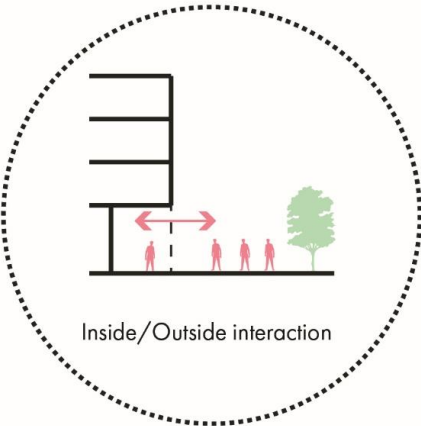


# 02 Main public square



# 02 Main public square

## Principles

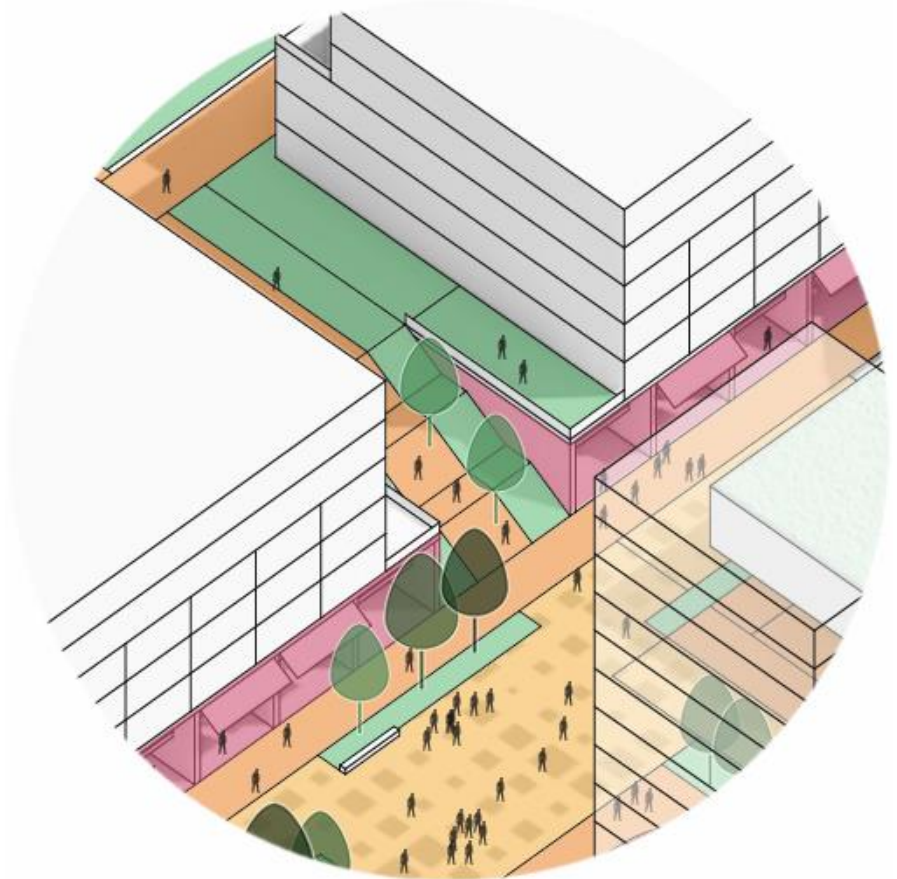


# 02 Main public square

Eye level perspective



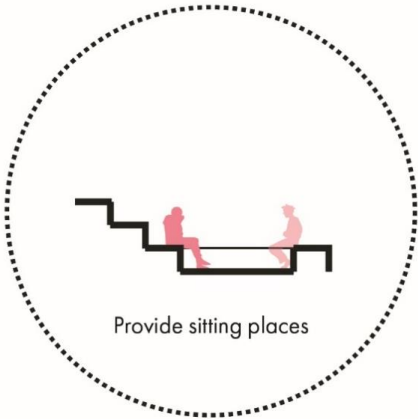
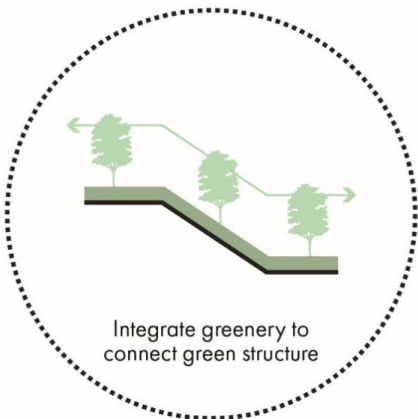
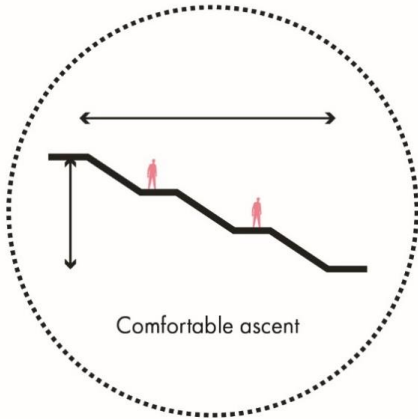
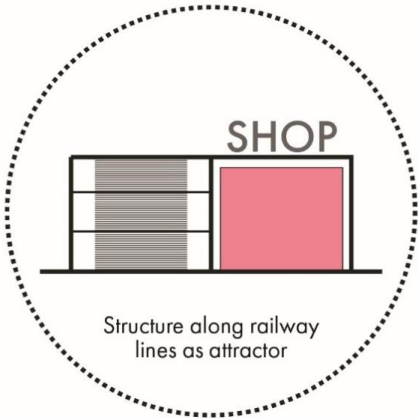
# 03 Staircase





# 03 Staircase

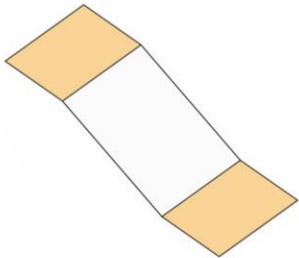
## Principles



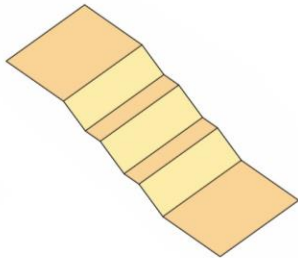
# 03 Staircase

## Design Steps

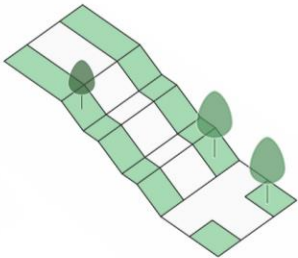
Connect levels



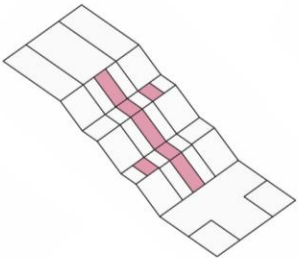
Split height



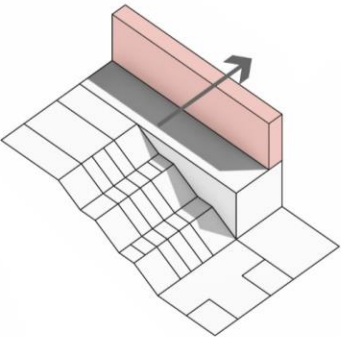
Green zones



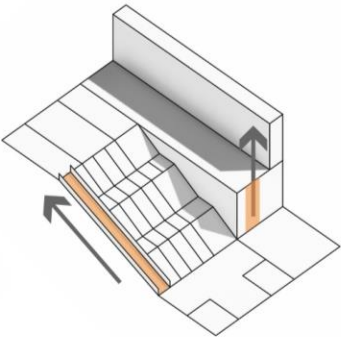
Sitting areas



Building setback



Elevators/Escalators



# 03 Staircase

Eye level perspective

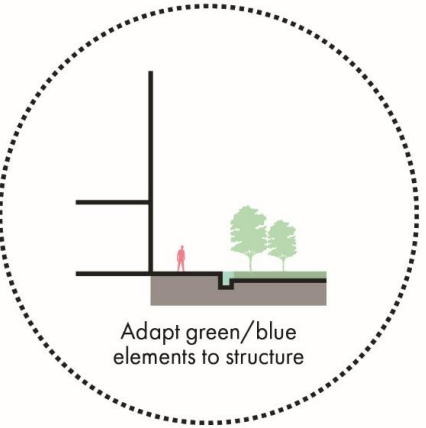
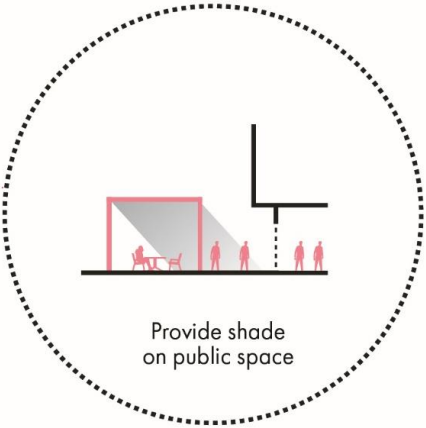
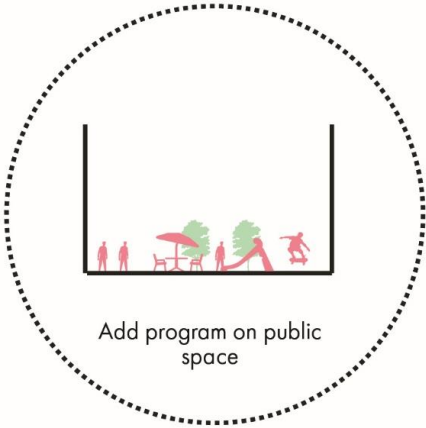


# 04 Public space above the railway



# 04 Public space above the railway

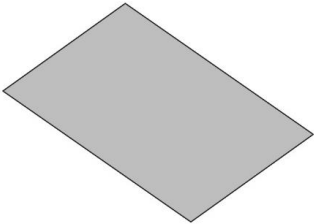
## Principles



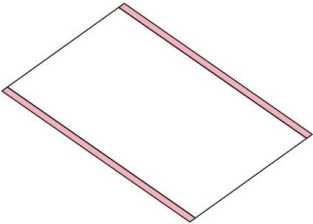
# 04 Public space above the railway

## Design Steps

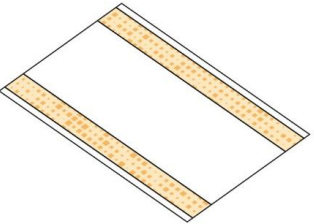
Create platform



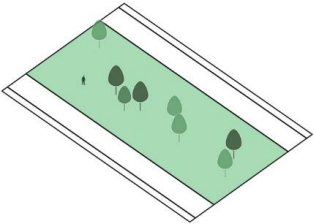
Semi-private zones



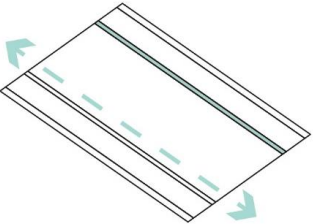
Wide sidewalks



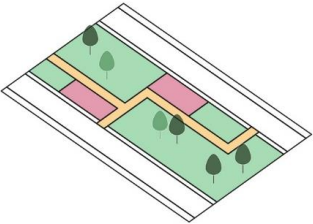
Green middle zone



Visible water gutter



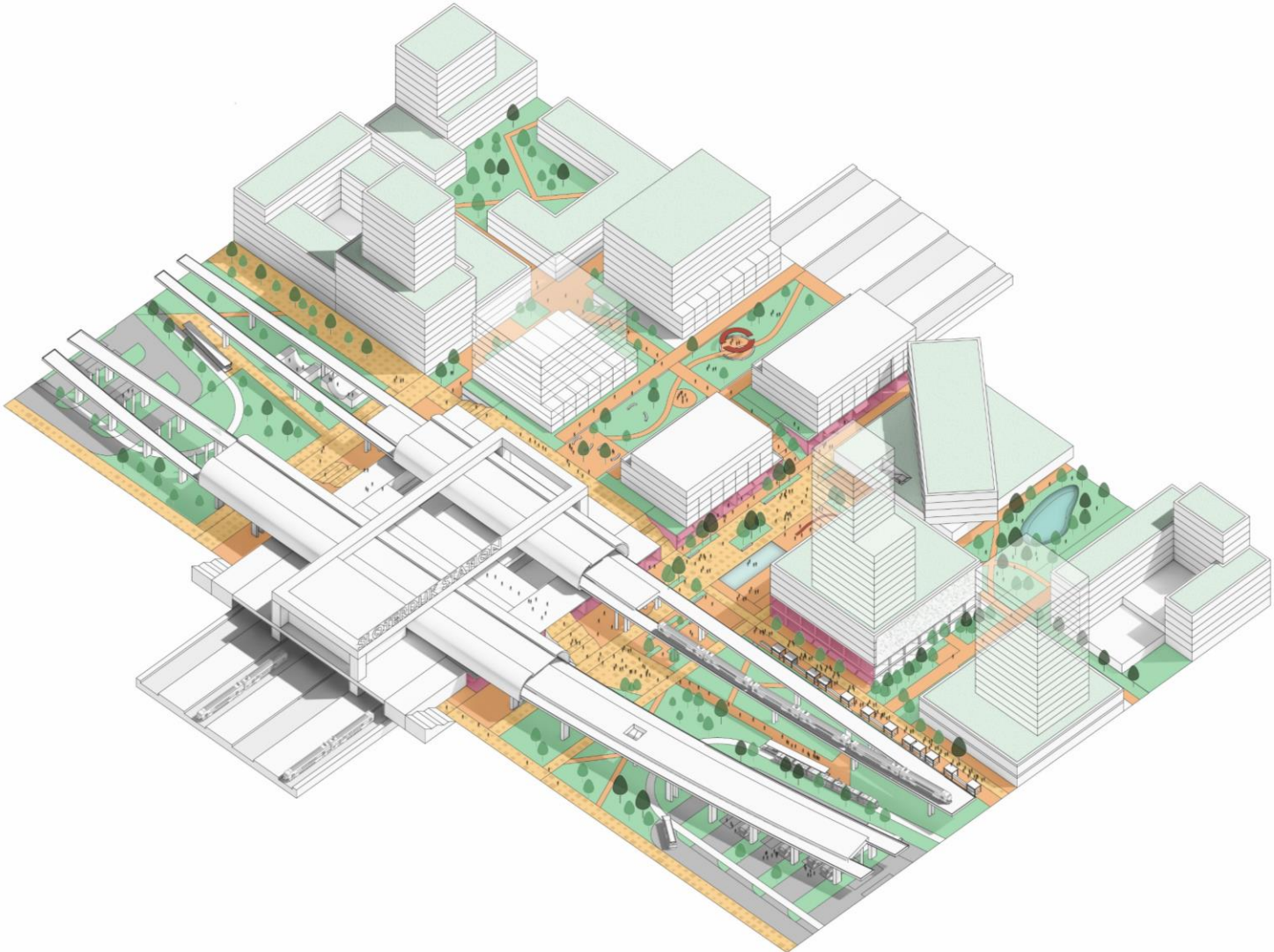
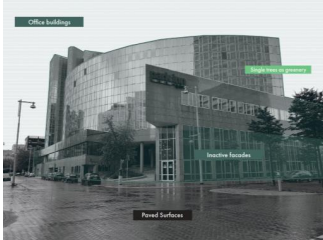
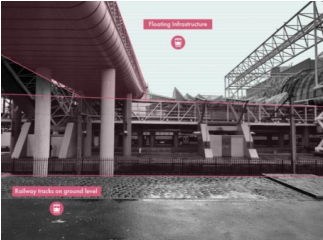
Areas for activities



# Conclusions 05

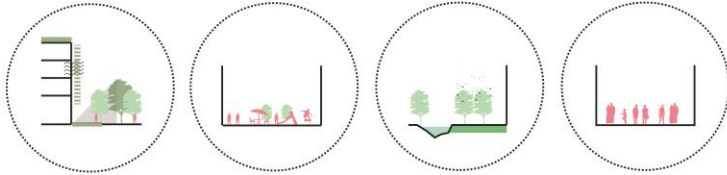
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# Contextualization





# Sloterdijk is unique but Principles are applicable

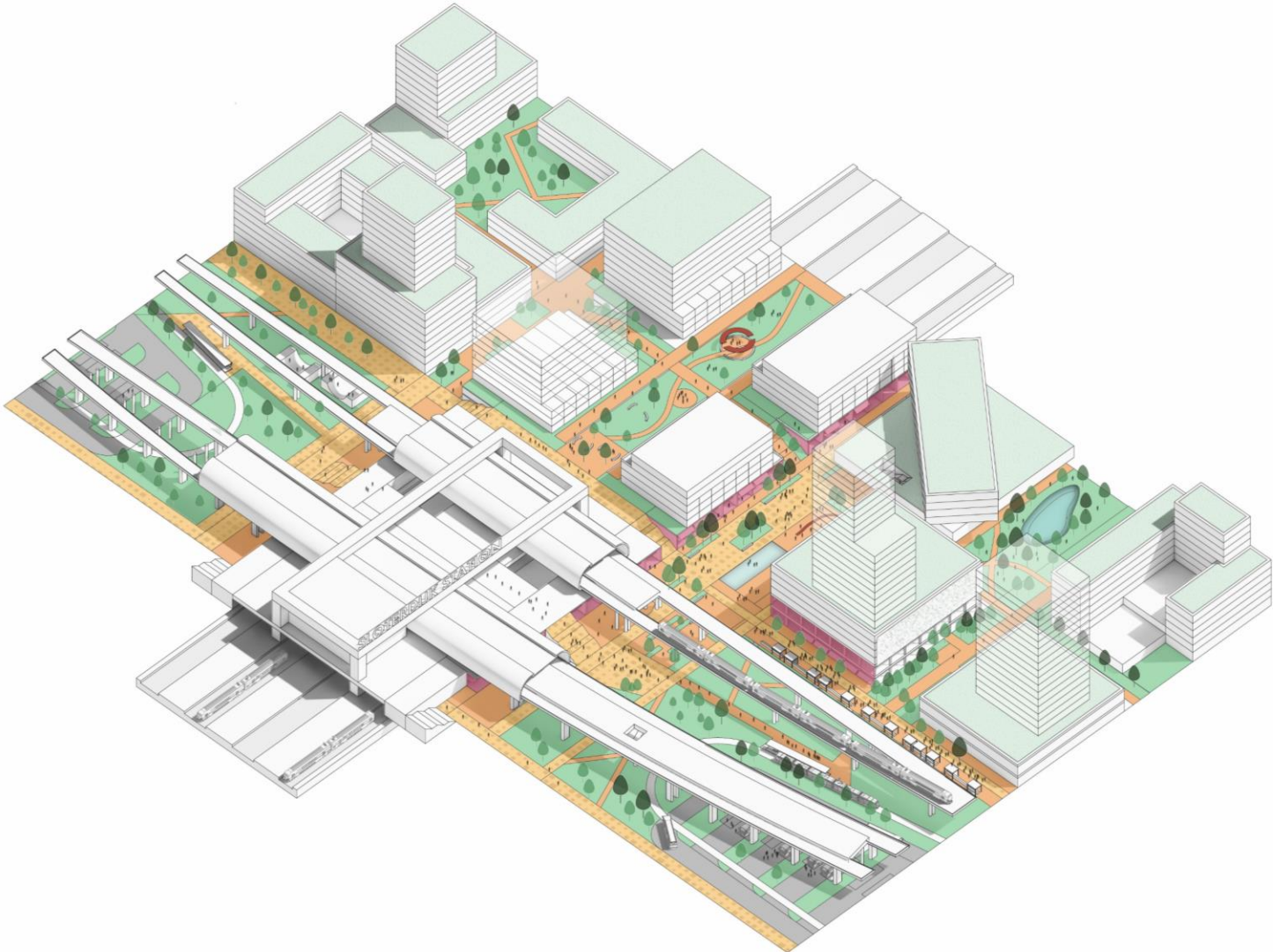


Climate adaptive

Integrating nature

Focusing on Public space

Inclusive



**Thank for *your* time**

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