



# Cities for Families of Tomorrow

P 5  
presentation

Claudia Engel  
20th of June 2024

Children's independent mobility  
in Lombardijen – A place to play,  
learn and grow

# Introduction

**Overly protected children have a higher chance to get involved in traffic accidents at a later age**

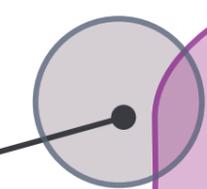
# Introduction

**Son:**  
8 years old - 2015  
< 300 yards  
< 300 m

**Mother:**  
8 years old - 1979  
< 0,5 mile

**Grandfather:**  
8 years old - 1950  
1 mile

Allowed independent  
walk distance



Sheffield



**Great-grandfather:**  
8 years old - 1919  
10 km

Rotherham

## Rotherham, UK

Allowed independent walk distance per generation. Data: De nieuwe generatie stadskinderen (2016). (the new generation city children) - Karsten, L; Felder, N

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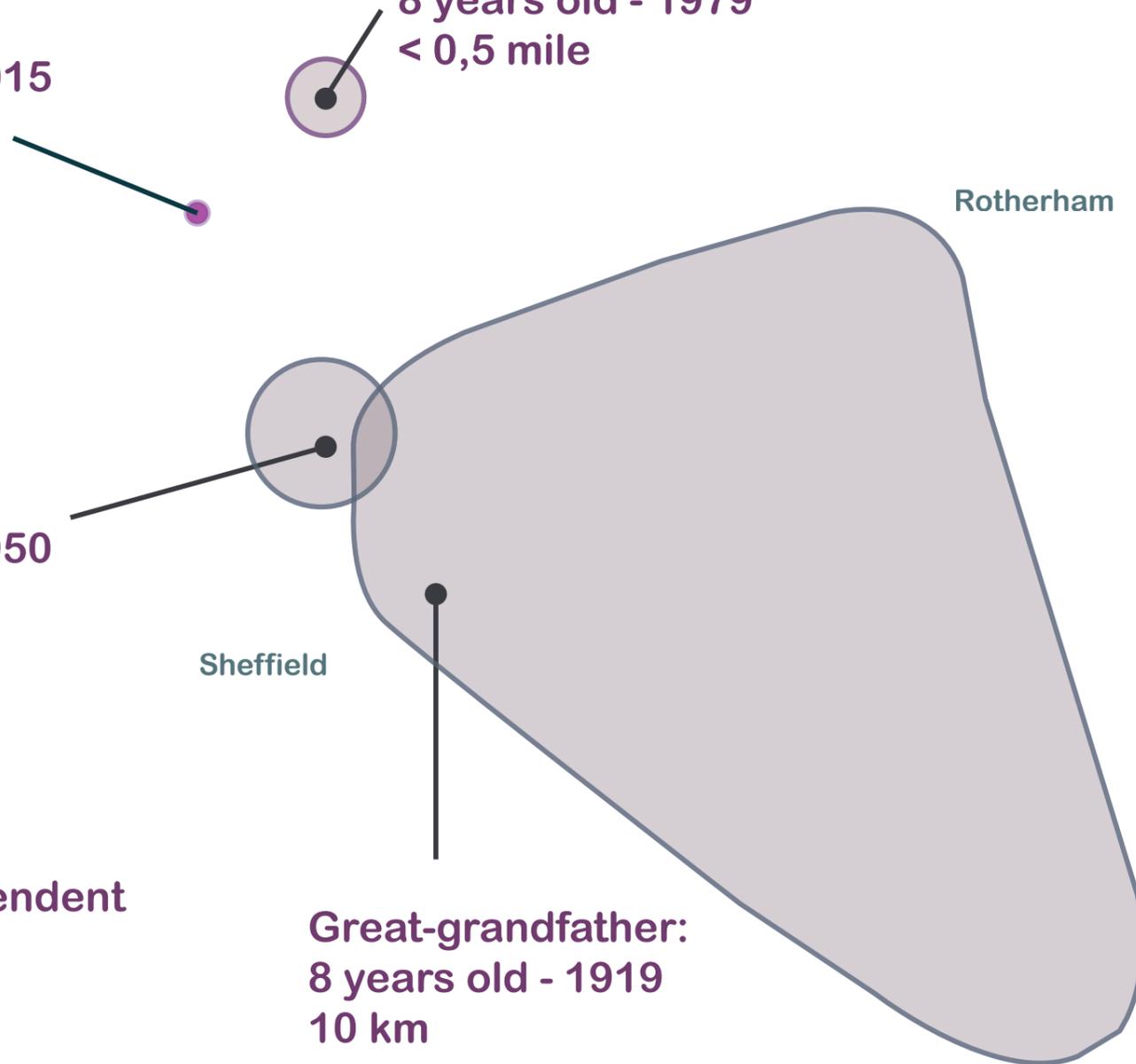
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## Rotherham, UK

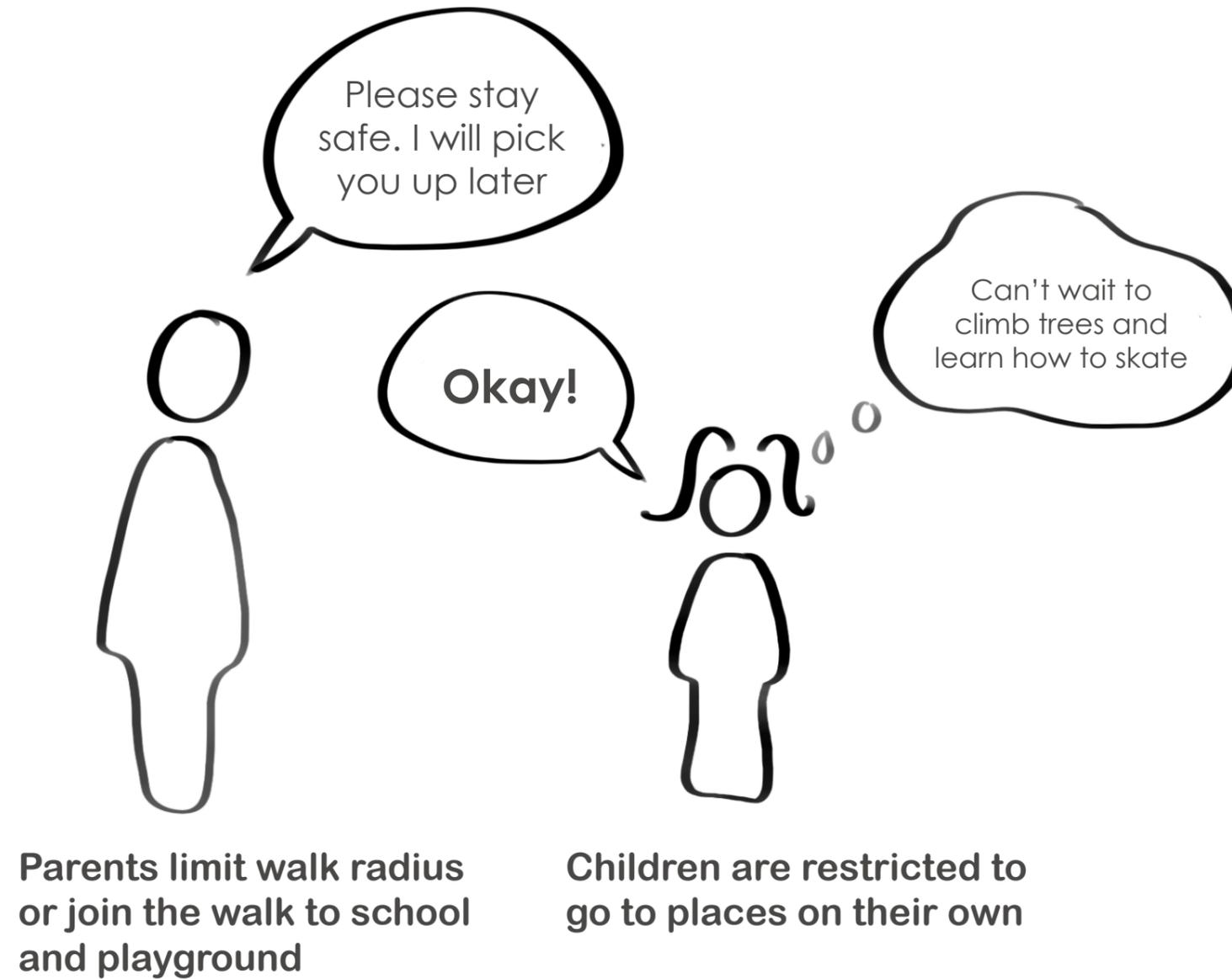
Allowed independent walk distance per generation. Data: De nieuwe generatie stadskinderen (2016). (the new generation city children) - Karsten, L; Felder, N



# Rising of the car



# Parents' role in independent mobility of children

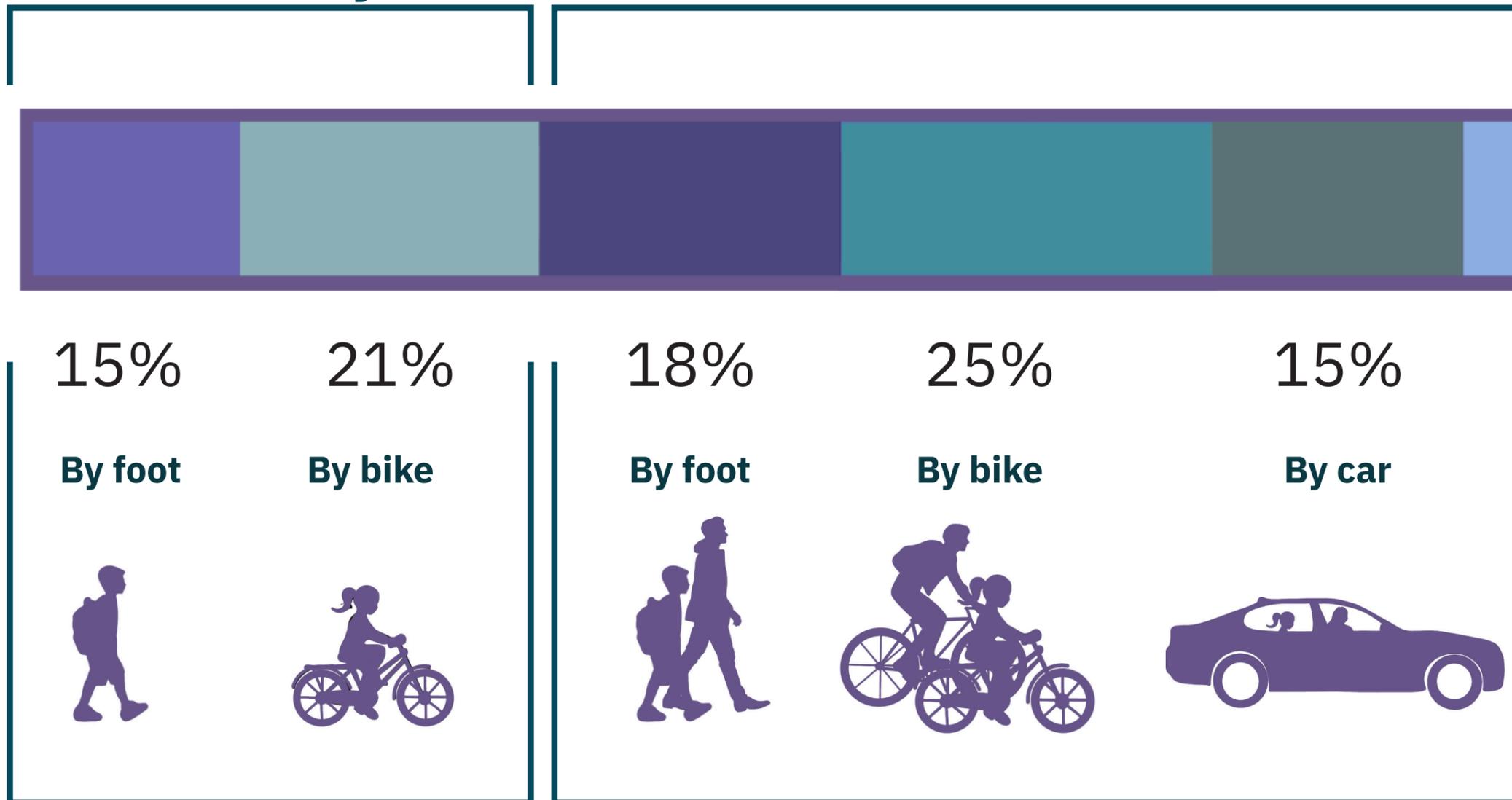


## **Research aim**

**Family friendly, liveable neighbourhood with networks that facilitate children in Lombardijen to independently and safely move through the neighbourhood**

## Independent mobility

## Guided mobility



\*Average of five researches by CROW & SWOV, children range mostly between 4 and 12 years old

# Importance independent mobility for children

- Movement decreases risk of being overweight, releases stress and enhances endurance
- Independent walking enhances cognitive abilities. (social & traffic awareness)
- Healthy habits. Early learned positive habits provide a stable foundation later in life.

Overall: Frequent movement = less health risks later in life = positive in health, less financial care costs (also for collective), higher happiness rate

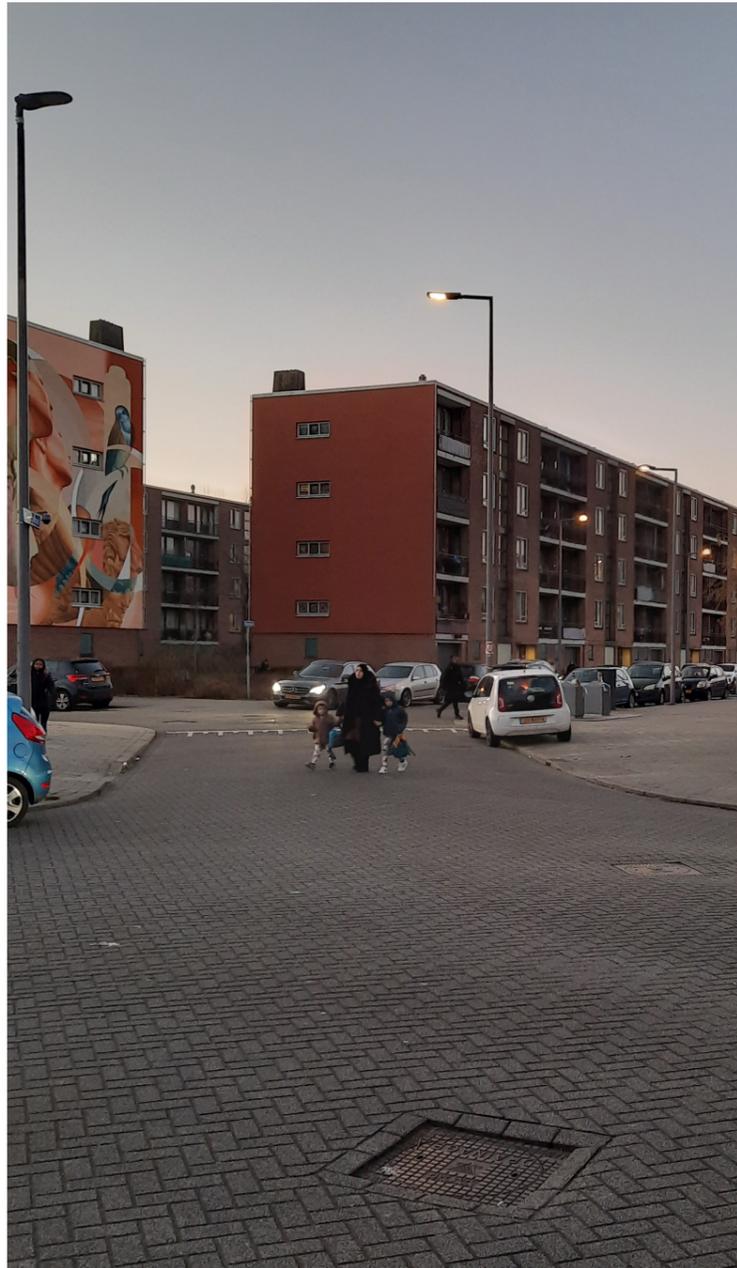


Source image: vvn.nl

# Lombardijen, Rotterdam Zuid



# Problem field - Lombardijen



Walking parent with children in a jungle of cars



Sidewalks besides the school are also used as parking during rush hour



Long distances to cross the road near school as pedestrian

# Problem field - goal



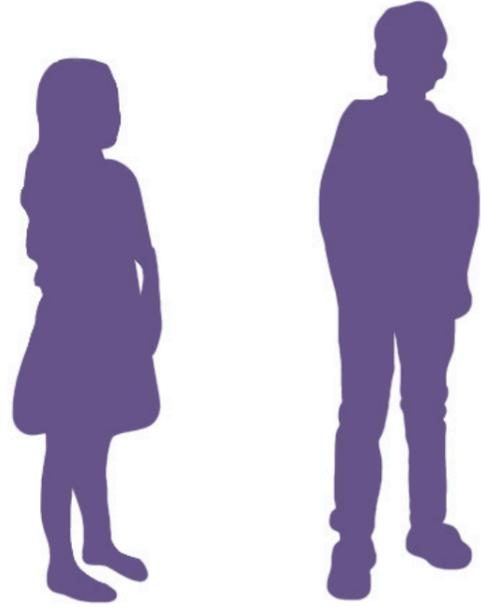
# Problem field - goal



# Problem statement

*“The city does not facilitate for the needs of both parents and children, and because of this, parents do not allow their children to move outside independently when public spaces fail to meet their requirements, ultimately slowing down children’s learning processes towards independency”*

# Families with 7-12 years old children

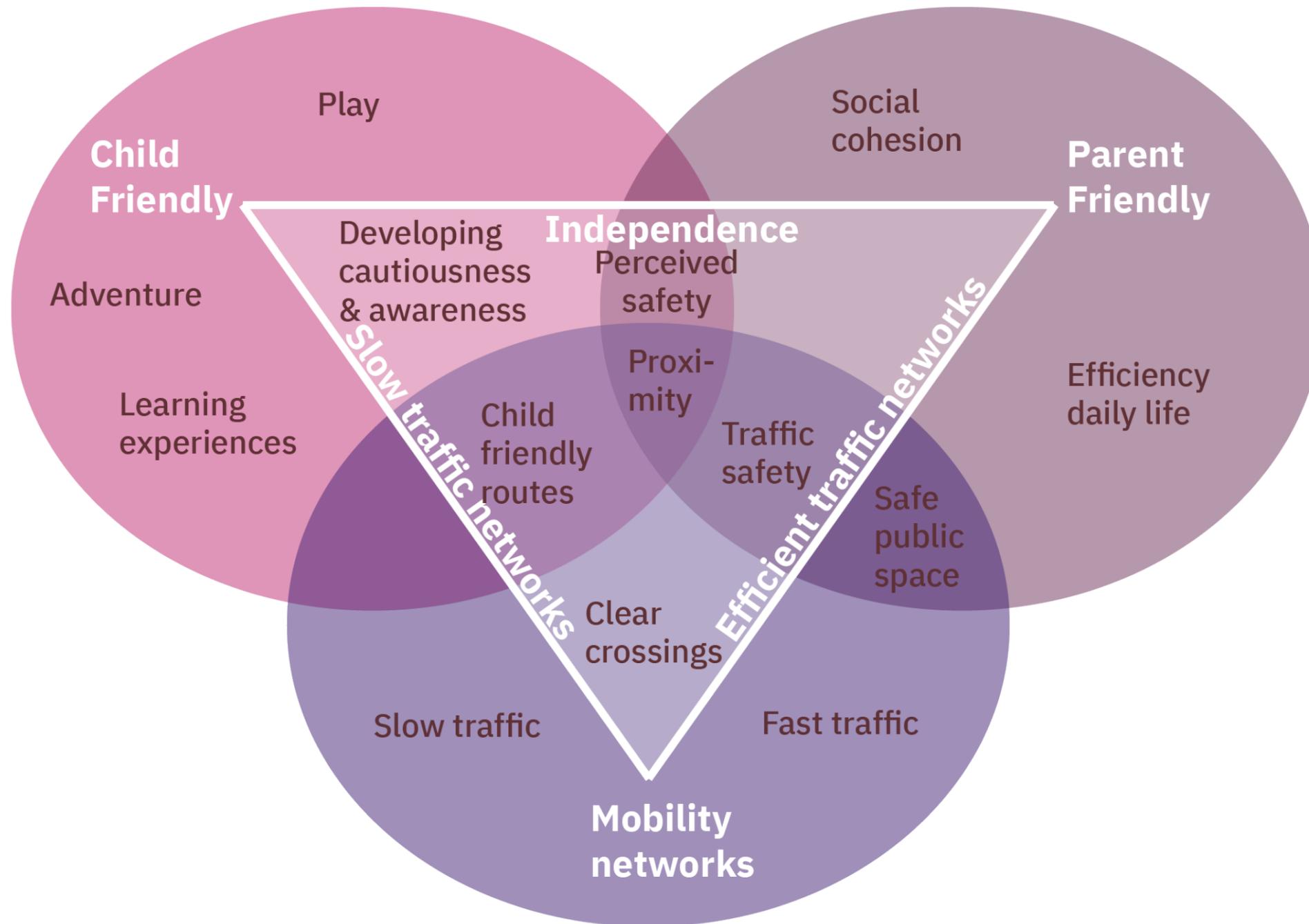


**Children 7-12 years old**



**Parents**

# Conceptual framework

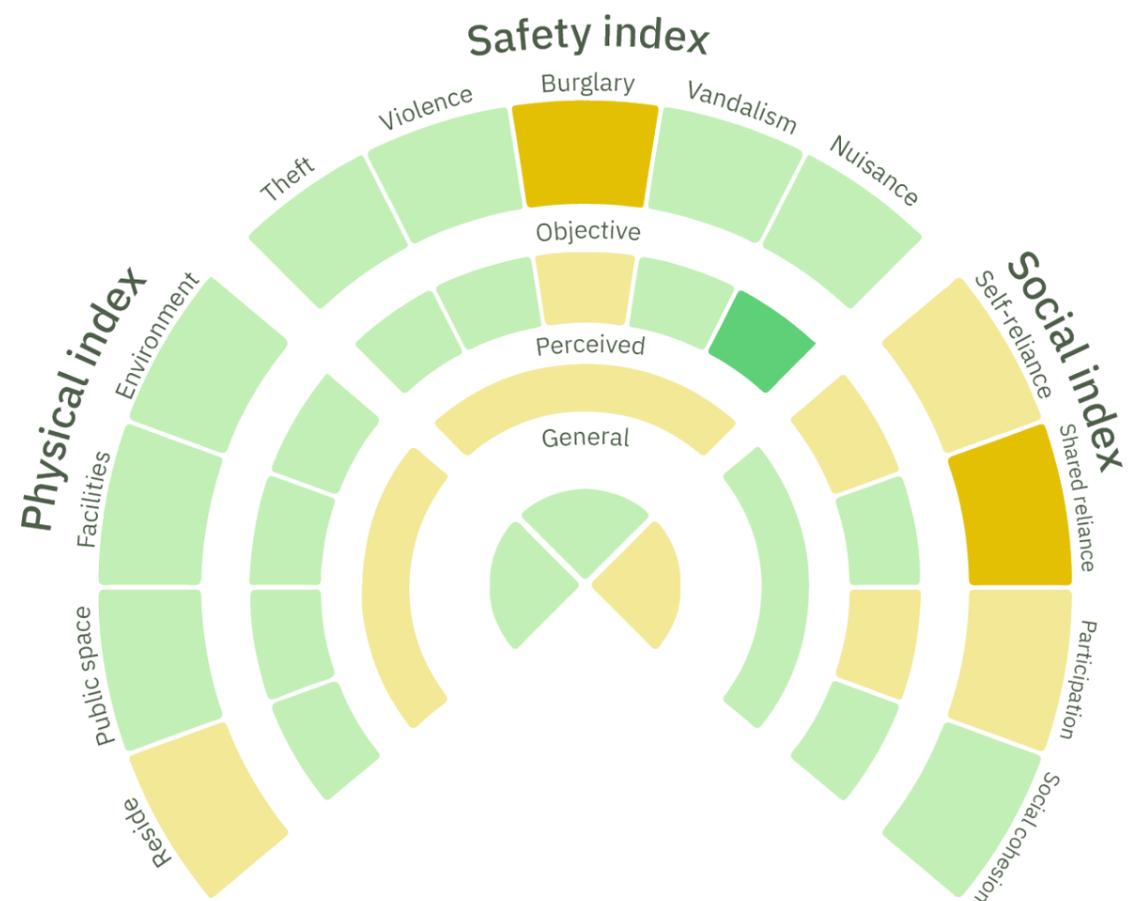


## Research question

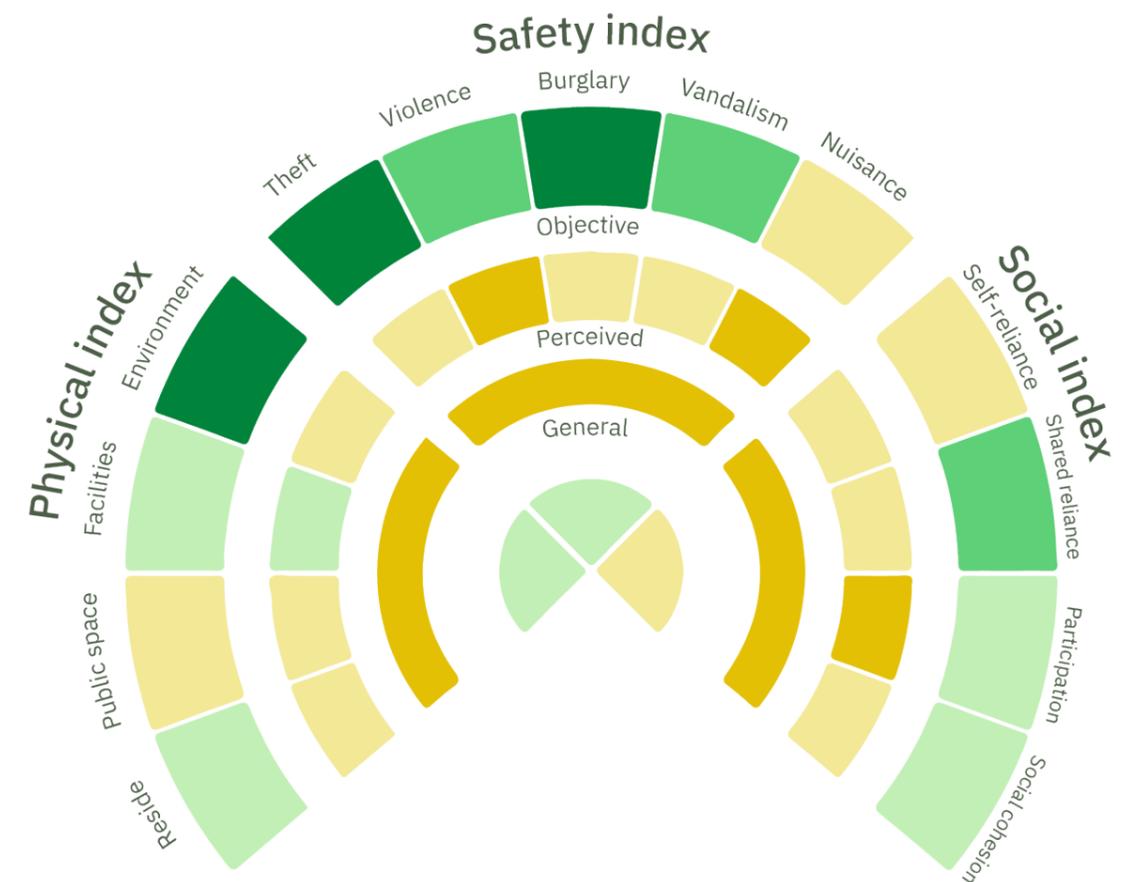
“How can a child friendly network facilitate to the needs of a family friendly city, where 7-12 year old children can independently go from A to B safely ?”

# Analysis

## Liveability Lombardijen



Index Lombardijen 2014. Objective index enhanced, subjective index decreased



Index Lombardijen 2022 on physical, safety and social domain  
Source data: [wijkprofiel.rotterdam.nl](http://wijkprofiel.rotterdam.nl)

# Man doodgestoken in Lombardijen, verdachte aangehouden, ook hond met steekwonden

27 september 2023, 21:08 Algemeen 3.137 keer gelezen

Rotterdam - Bij een grote vechtpartij in Lombardijen is woensdagavond rond 20.00 uur een 71-jarige man doodgestoken. Er is nog geprobeerd de man te reanimeren, maar dat mocht niet baten.

Bij de vechtpartij op de Molièreweg zouden zo'n personen zijn betrokken. Daarbij is een man overleden na openlijke geweldpleging. Het slachtoffer is mishandeld en gestoken.

Een 53-jarige man uit Rotterdam kon na getuigenverklaringen worden aangehouden; zijn betrokkenheid wordt onderzocht. De politie is nog op zoek naar meerdere verdachten.

## Agenten vinden drugslab in leegstaande studentenkamer

Maandag 27 november 2023 17:04 uur

Aristotelesstraat Rotterdam

Bron Politie.nl

Drugs

[Ontvang updates voor Lombardijen](#)

Rotterdam - Een zoemend geluid en een anonieme tip deden samen vermoeden dat er in een studentenpand aan de



# Verschillende woningen beschadigd bij explosie in Lombardijen

7 februari 2023, 10:52 Algemeen 1.407 keer gelezen

Rotterdam - De politie is op zoek naar getuigen die meer weten of iets gezien hebben op dinsdagochtend 7 februari rond 06.30 uur op het Wim Wagenerhof in Lombardijen. Hier ging rond die tijd een explosief af. De politie doet onderzoek en kan daarbij dus de hulp van getuigen goed gebruiken.

## Politie neemt ruim 50 kilo verdovende middelen in beslag na controle

Donderdag 8 september 2022 17:01 uur

Socratesstraat Rotterdam

Bron Politie.nl

Drugs

[Ontvang updates voor Lombardijen](#)

Rotterdam - De politie heeft ruim 50 kilo aan verdovende middelen in beslag genomen na een controle van een bestuurder in een voertuig en een doorzoeking in een woning aan de Socratesstraat. Ook werden er versnijdingsmiddelen aangetroffen in de woning. Er is een 22-jarige man uit Berkel en Rodenrijs aangehouden.



Dinsdag 6 september omstreeks drie uur in de middag voerden agenten een controle uit bij een bestuurder van een personenauto

## Twee explosies op twee plekken in uur tijd in Rotterdam

1 november 2023, 06:58 • 1 minuut leestijd



## Mannen in Lombardijen maken elkaar zó het leven zuur dat de buurt de politie belt over geluidsoverlast

11 juli 2022, 11:51 Algemeen 1.245 keer gelezen

Rotterdam - Zaterdag kwam er een melding binnen bij de politie vanwege

**AD** NIEUWS REGIO SPORT SHOW PLAY PODCAST PUZZLES

## Vuurwerkbom laat bewoners van getroffen flatgebouw sidderen. 'Ik leef hier met een angstgevoel'

Geslapen heeft ze niet. Een Rotterdamse die met haar gezin in een galerijflat aan de Dantestraat in de wijk Lombardijen woont, moet nog bijkomen van de schrik. In het kantoor van de stadsmarinier onder haar woning ontplofte zaterdagavond laat een [vuurwerkbom](#). „Stel je voor dat ze die op ons balkon hadden gegoooid...”, zegt de vrouw. „We zijn het hier al langer zat en gaan verhuizen.”

# Barriers



Spinozapark



# First steps out of the house



# Methods

## Sub question

## Method explanation

## Intended outcomes

**1. What do urban families need?**

**Method #1:** Literature review  
**Method #2:** Interviews, booklet children, workshops

**Insights on children, (in)dependence, mobility networks, parent-child perception, urban families**

**2. What is necessary within a child friendly network?**

**Method #1:** Literature review  
**Method #2:** Interviews, booklet children, workshops  
**Method #3:** Ethnographic mapping

**Principles for a child friendly Network**

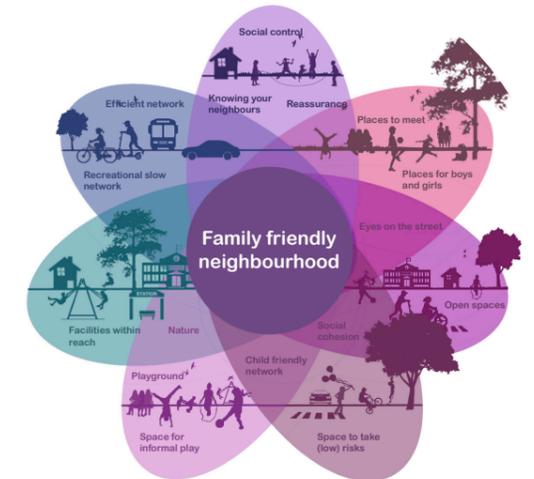
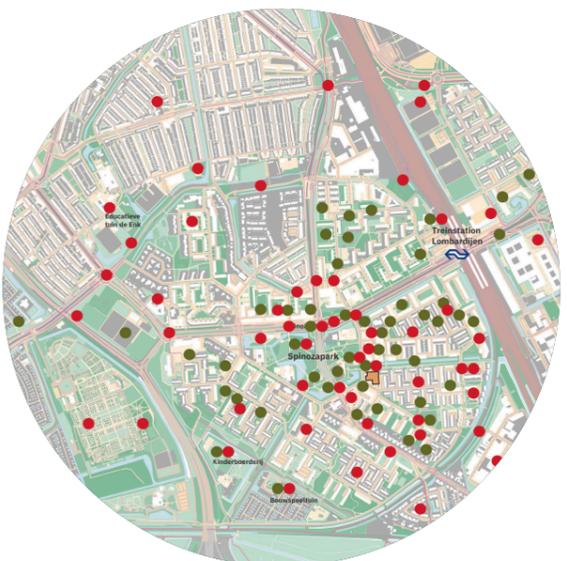
**3. What are the (spatial) characteristics of a child friendly network?**

**Method #1:** Literature review  
**Method #2:** Spatial analysis  
**Method #3:** booklet children

**Needed as backbone to translate towards a design proposal**

**4. How can a child friendly network be implemented in the sub-urban neighbourhood Lombardijen, Rotterdam?**

**Method #1:** (Spatial) analysis  
**Method #2:** literature review  
**Method #3:** Interviews, workshops  
**Method #4:** Ethnographic mapping  
**Method #5:** ADP method

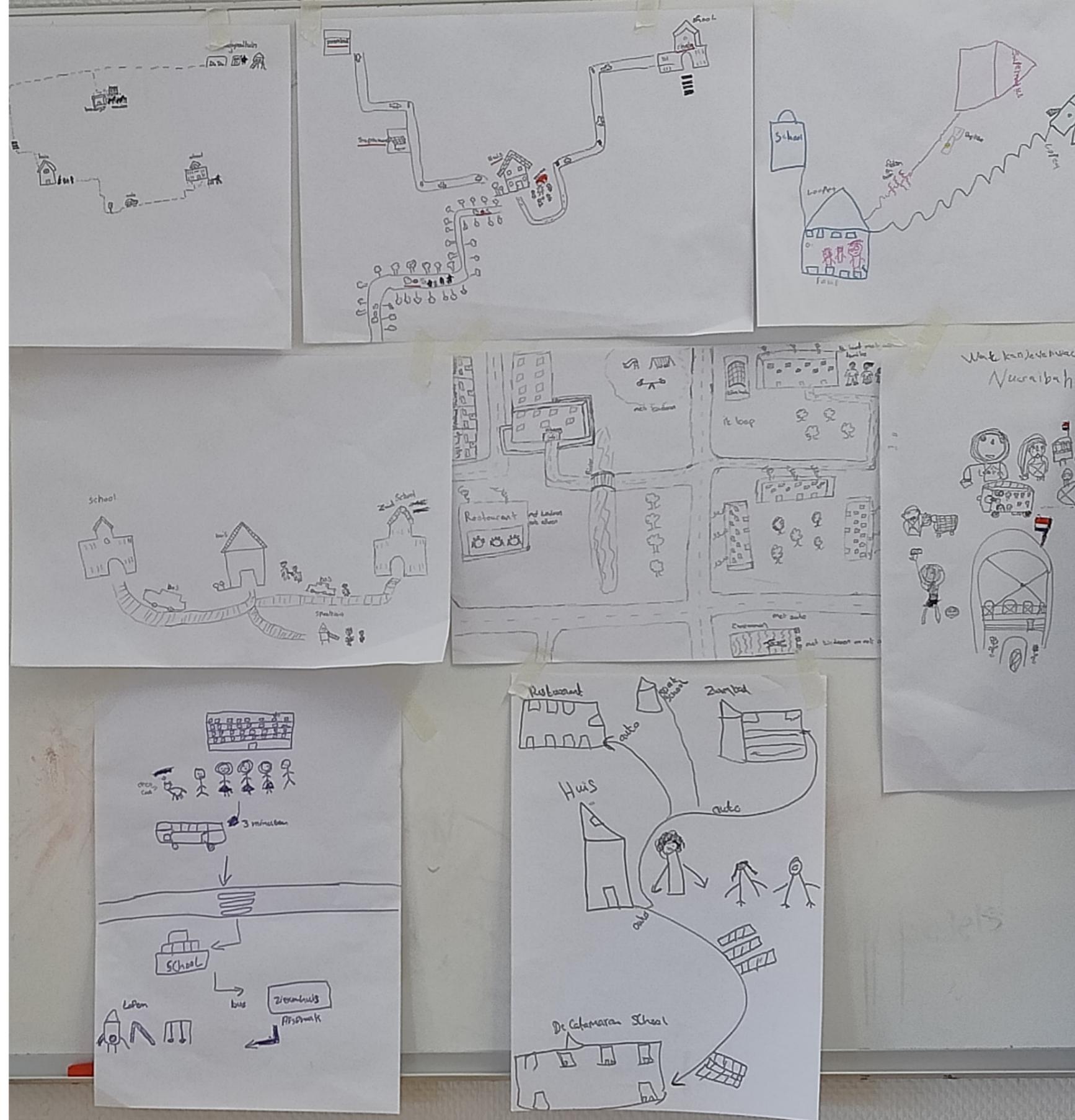


# Workshop mothers

- 9 mothers
- One 11 years old child

Two groups - 3 assignments  
(+ extra task for 1 group)

**Goal:** learn how they perceive Lombardijen, learn how they travel and see which places they like and dislike, find safe or unsafe.



## **Needs parents**

- **Going to multiple places in a day effortlessly**
- **Spaces should be safe for their child to move around on their own**
- **Health**
- **Being near child as much as possible outdoors to know they are safe**

# Booklet children & walk workshop

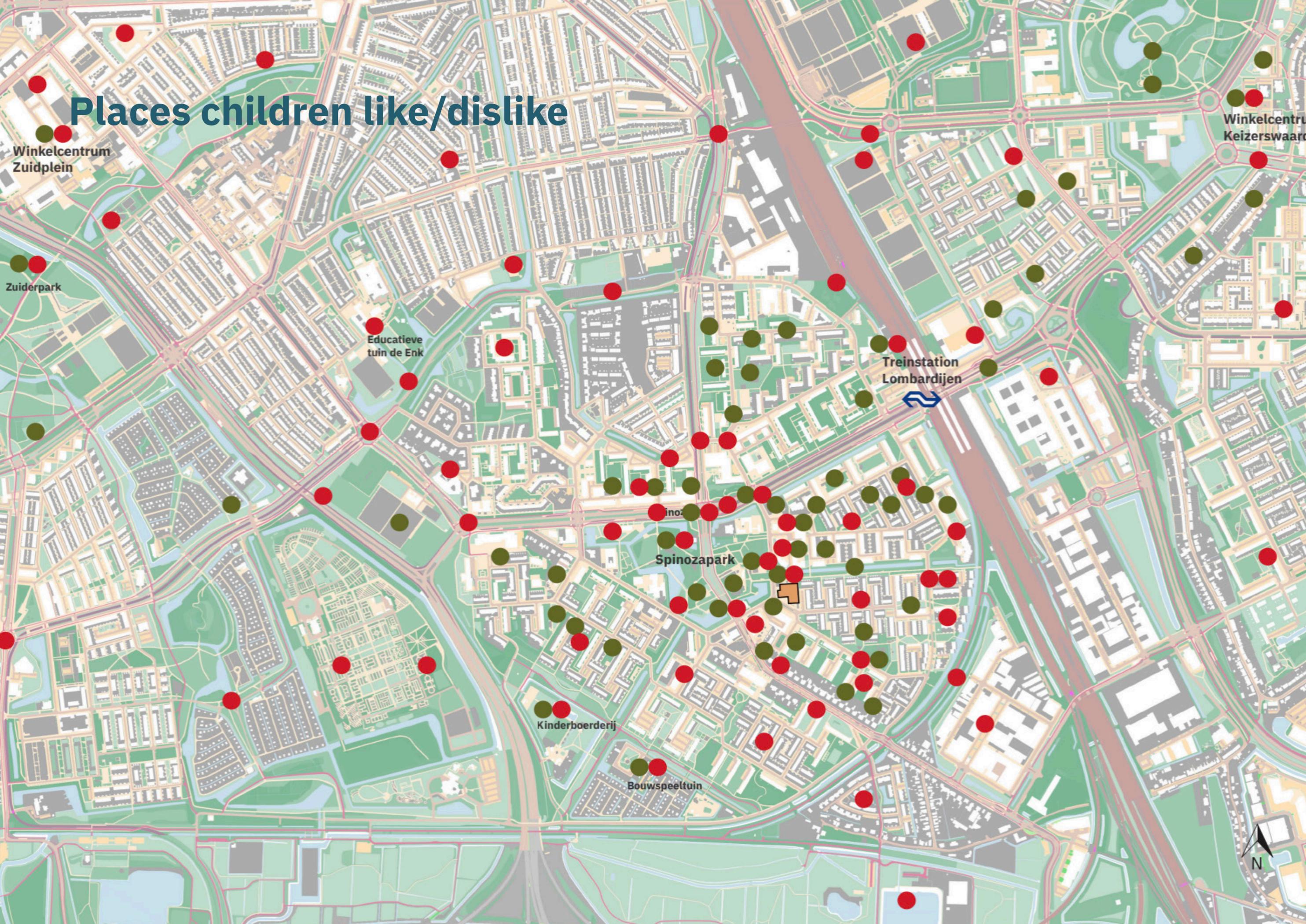
Completed by 51  
group 8 children  
in Lombardijen

Data included:

- Their route to school
- Places they do/do not like
- Other aspects they do  
/do not like
- Free time activities
- Dangers along the way



# Places children like/dislike



Winkelcentrum  
Zuidplein

Zuiderpark

Educatieve  
tuin de Enk

Treinstation  
Lombardijen

Spinozapark

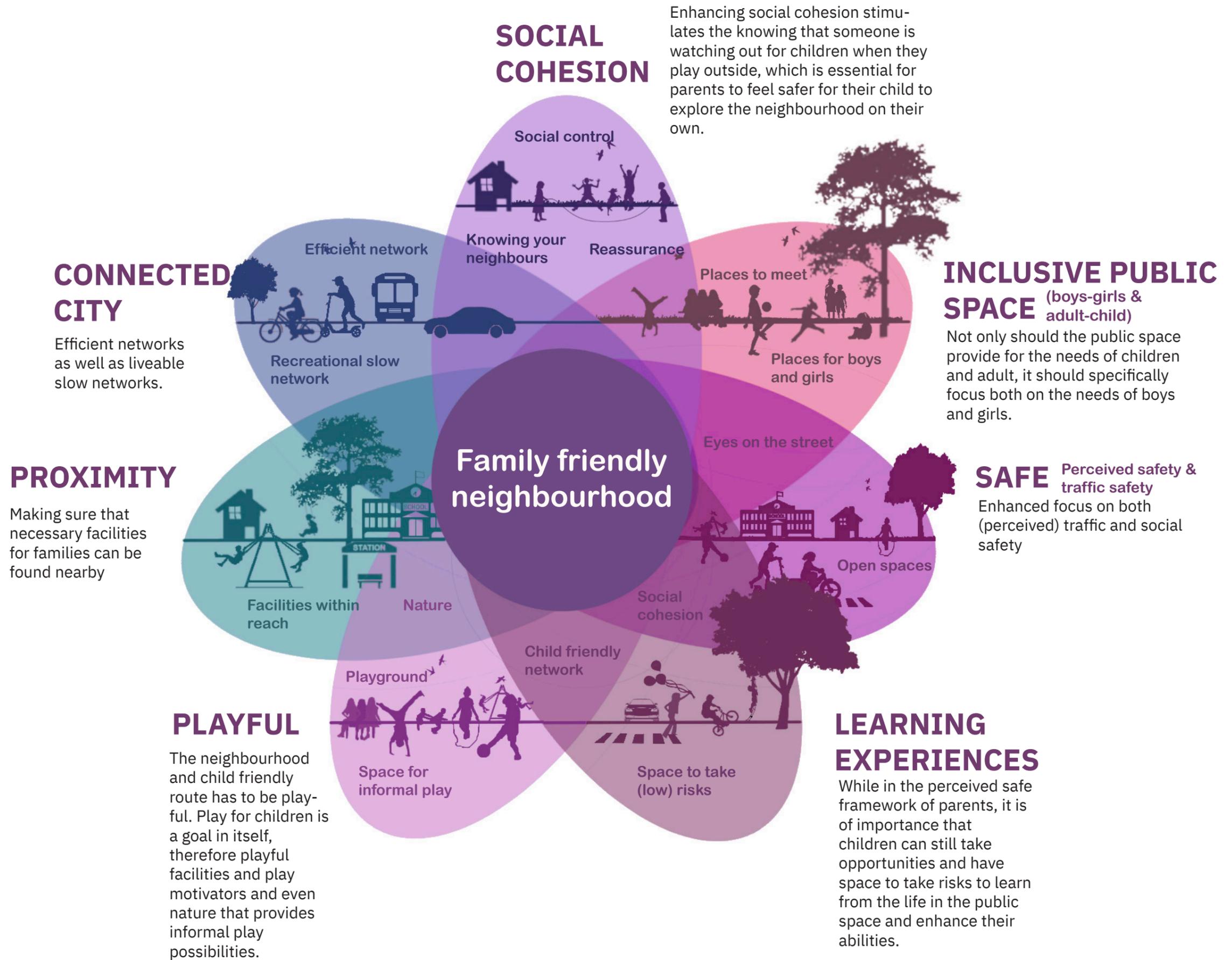
Kinderboerderij

Bouwspelletuin

Winkelcentrum  
Keizerswaard



# Themes family friendly neighbourhood



# Connected city

Themes family friendly neighbourhood

- Shift in transport mode



1.



2.



3.



4.



- Prioritise pedestrians
- Maintaining connectivity on different transport modes

# Social cohesion

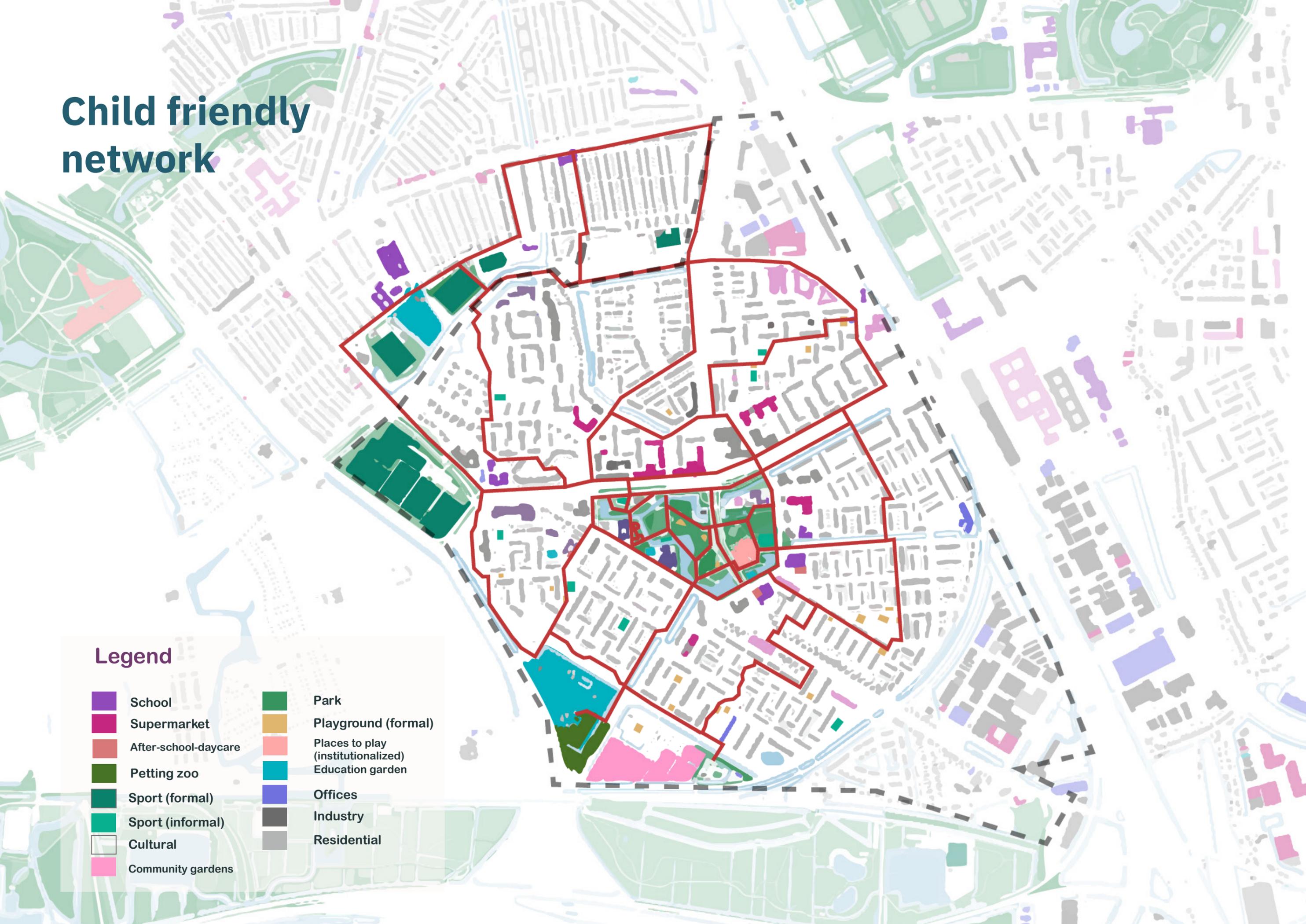
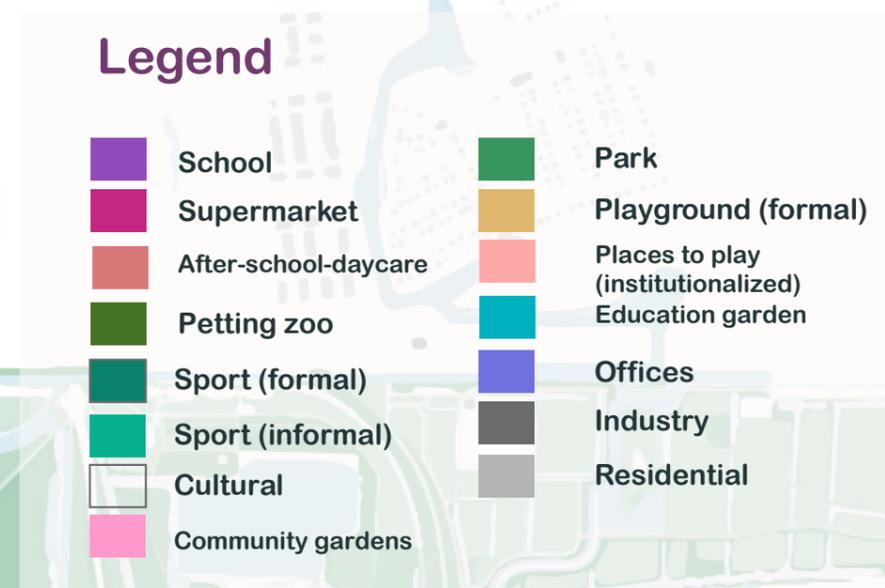
## Themes family friendly neighbourhood

- Decrease anonymity
- Social Control

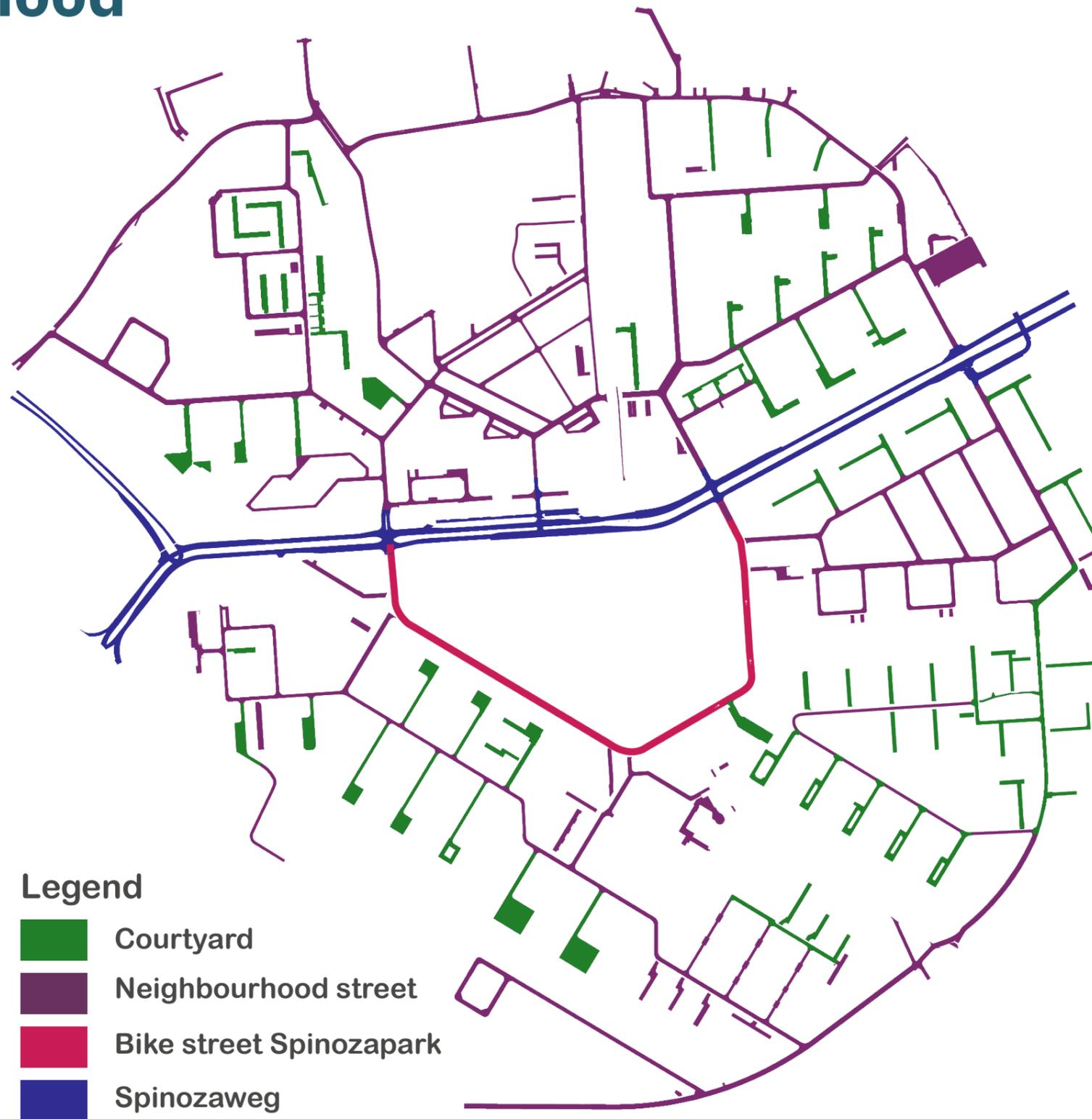


- Places to connect & stay
- Transition private-public
- Densify

# Child friendly network



# Neighbourhood streets



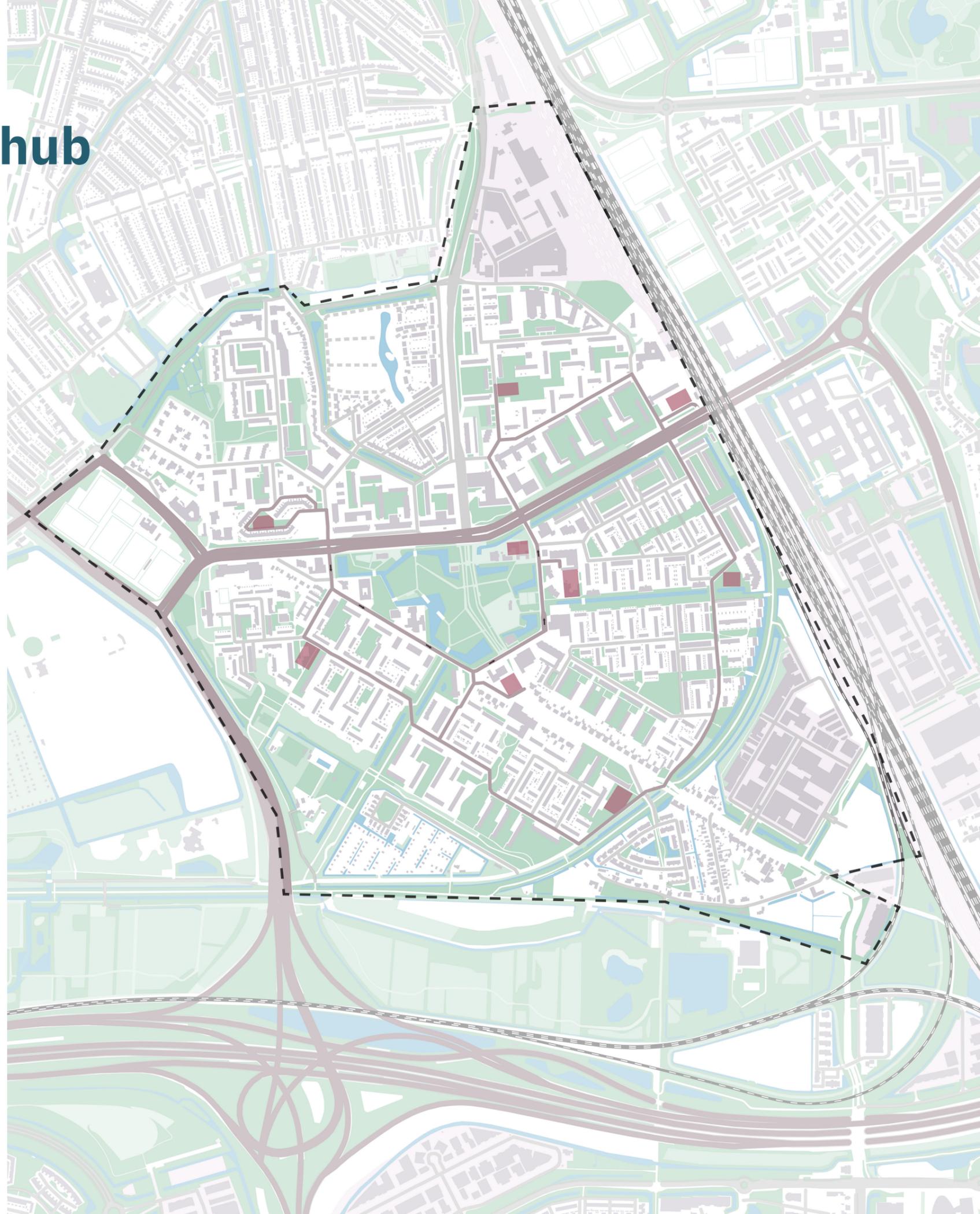
# Shared mobility - mobility hub

*Shift priority transport modes: from car oriented to slow traffic oriented*

**Change from personal vehicles to shared vehicles**

**Shared vehicles need only 1/10-1/15 of cars currently used**

*Spatially this could be divided in multiple places, e.g. parking clusters of 9 to 10 mobility hubs to make sure the walking radius to/from car is within radius of 400m (6 min walk)*



# Vision 2075

Elementary school area



Front door streets



## Legend

-  School
-  Pedestrian road
-  New pedestrian street
-  Parking garages (underground)
-  Tram line
-  Buildings
-  Traffic cut
-  Railway
-  Maintained main car road
-  Bus line
-  Project area



# Vision 2075



**Biodiverse  
planting**



**Network for  
families and traffic**



**Places to stay**

## **Liveable, safe neighbourhood where children can freely move outdoors**

**... and parents are okay with that**



**Enhancing  
social cohesion**



**Safe crossings where  
speed is discouraged**



**Stimulating health  
and prosperity**

**How does this look spatially?**



Inzoom



**Market Square**



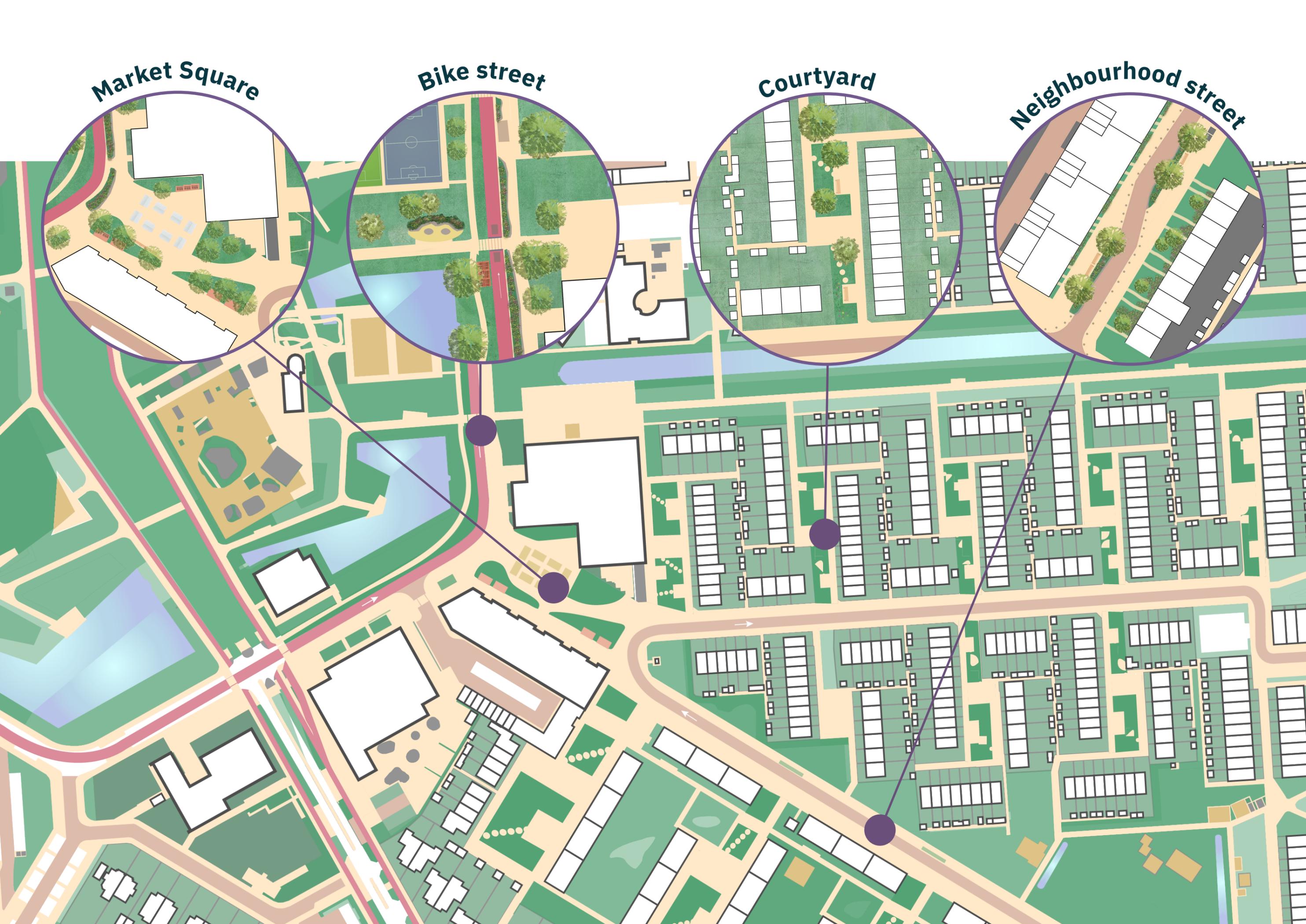
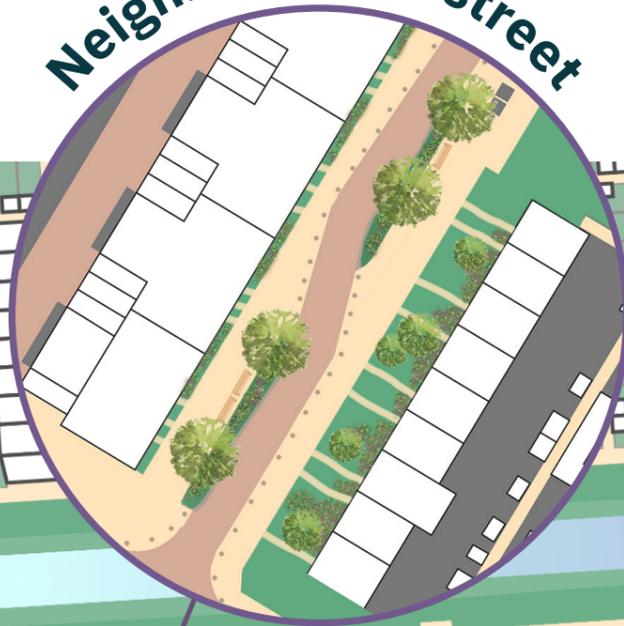
**Bike street**



**Courtyard**



**Neighbourhood street**



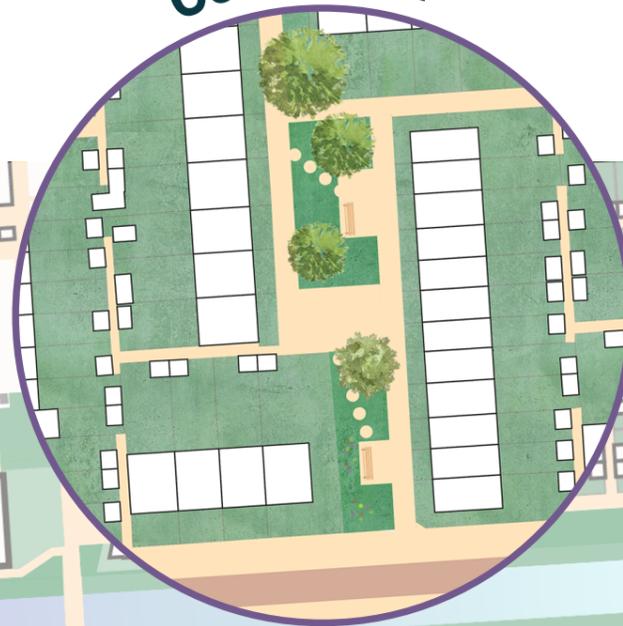
**Market Square**



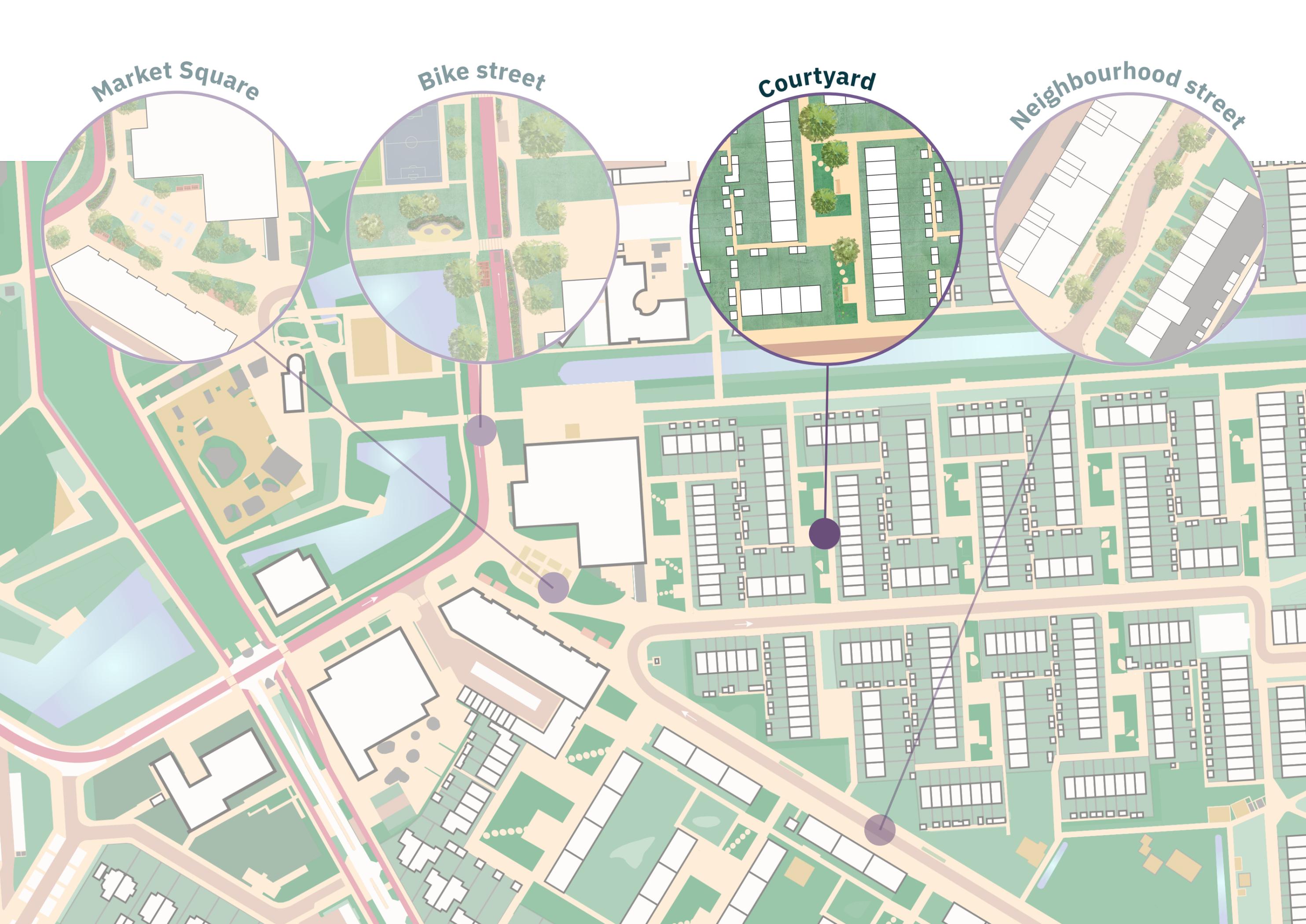
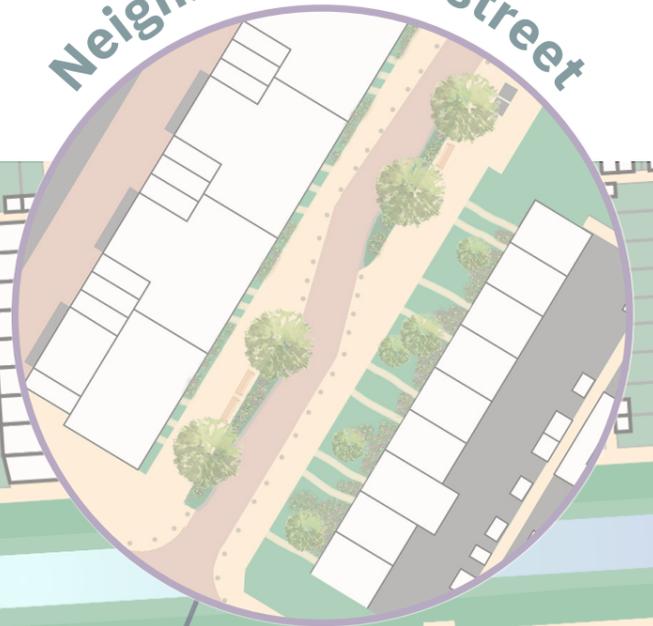
**Bike street**



**Courtyard**



**Neighbourhood street**



Where it used to be a parking area...



Proximity  
Playful city  
Inclusive public  
space  
Safe



Space to move  
freely

Variety in  
vegetation to attract  
insects and animals

Playful objects  
through green

Benches to  
stay

Car free

Near home for parents to become  
confident in child's abilities & public  
space



# Courtyard - map

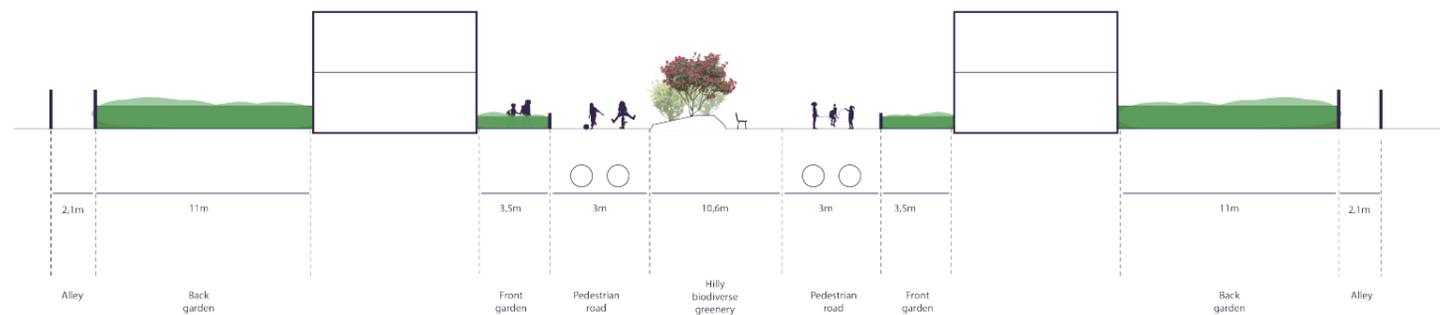
Playful objects through green

Benches to stay

Near home for parents to become confident in child's abilities & public space

Space to move freely

Car free



# Courtyard



Extra pathways for children vary from flat to challenging



Variety in vegetation. Hofje van Bakenes, Haarlem. (Source: Pinterest)



Nature play.  
(Source: natuurgroenenbeleving.nl)



Height differences and space for informal play. (Source: natuurgroenenbeleving.nl)

Market Square



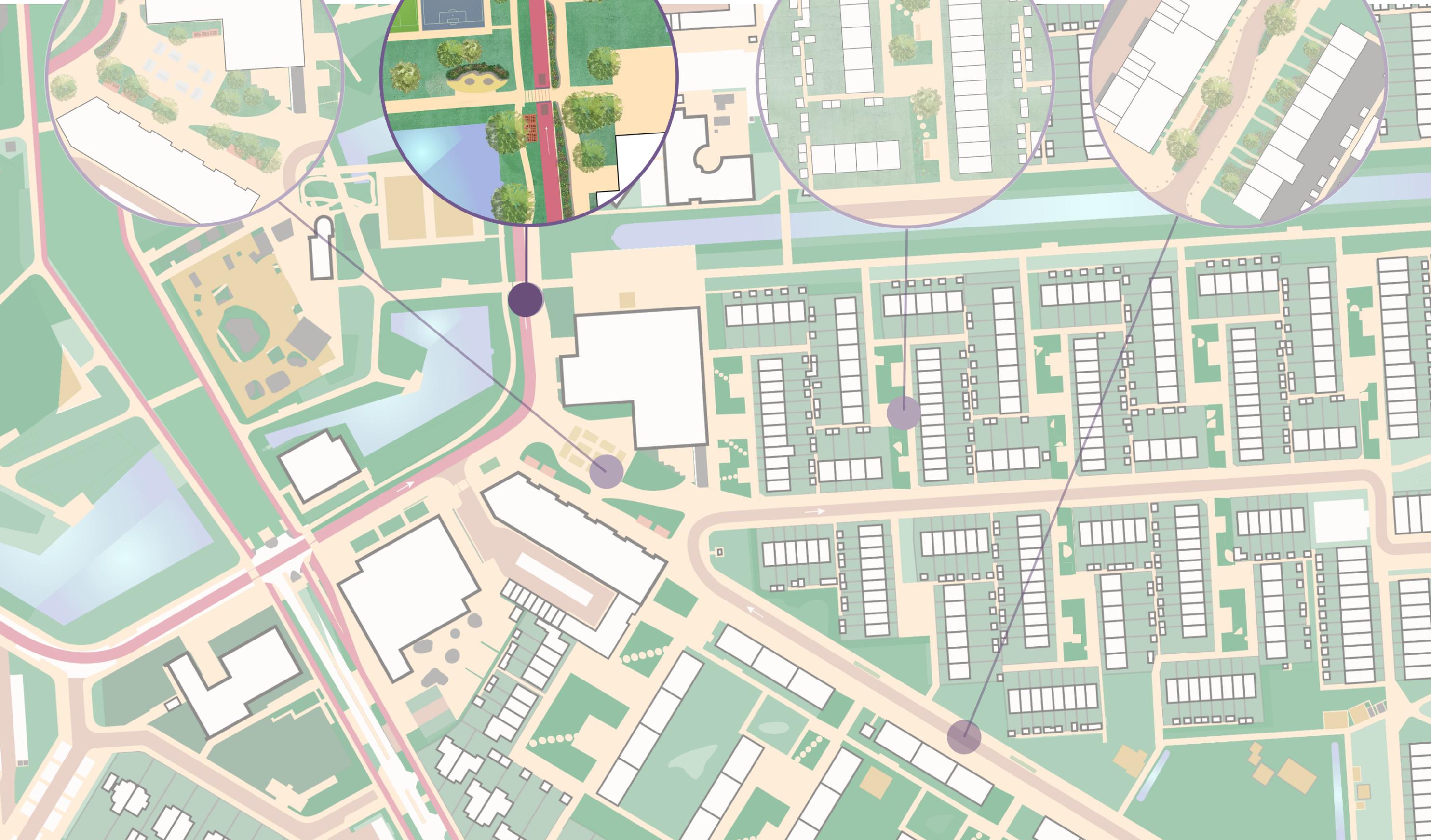
Bike street



Courtyard



Neighbourhood street





Mobile city  
Proximity  
Learning  
experiences  
Safe



**Bike parking**

**Sports field  
visited by schools and  
residents**

**Benches to stay**

**Crossing with slow-down  
material for traffic**

**Planters with  
possibility sit down**

**One way street, making cross-  
ings easier for children to  
cross**



# Bike street - Spinozapark

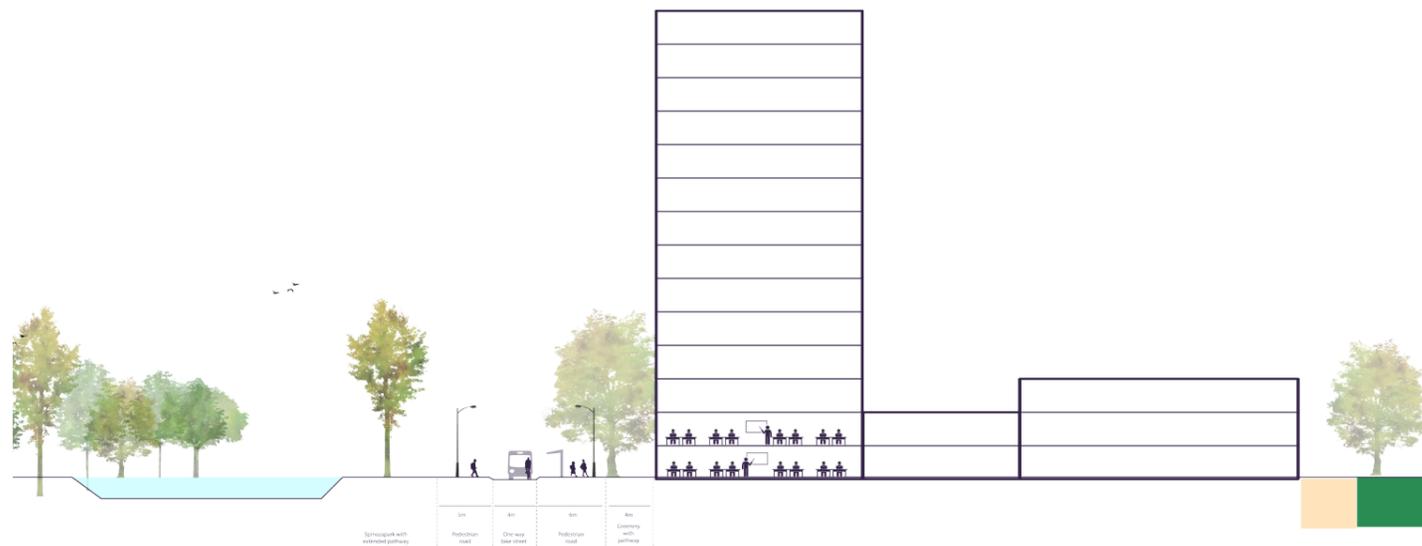
Sports field visited by schools

Planters with possibility to stay

Benches to stay

Crossing with slow-down material for traffic

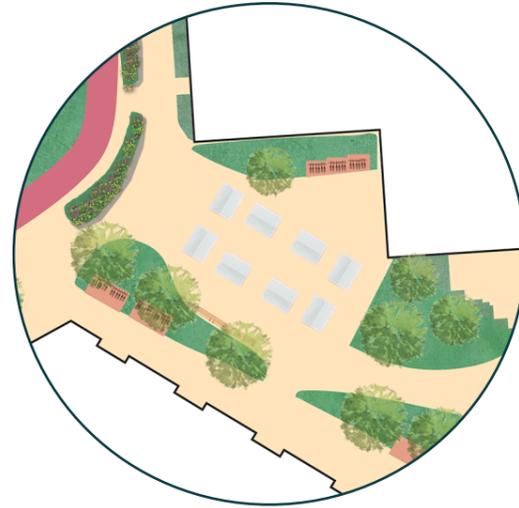
Bike parking



# Timeline



**Bike street**



**Road near school transforms to market square**



**Traffic network**

**2024**

**2035**

**2050**

**2075**



**Re-enforcing places to stay and biodiverse planting**



**Child friendly network**



**Shifting parking places**



**Mobility hubs fully executed**

# Conclusion

“How can a child friendly network facilitate to the needs of a family friendly city, where 7-12 year old children can independently go from A to B safely ?”

- **Essential to recognise needs of caretakers**
- **Decrease perceived unsafety of parents and children**
- **Not too complicated pedestrian crossings**



# Reflection

- **Parent & child perception**
- **Family friendly themes are transferable**
- **Limited to smaller scale interventions rather than bigger networks or highly dense places**





# Cities for Families of Tomorrow

Children's independent mobility  
in Lombardijen – A place to play,  
learn and grow

## Graduation Presentation

Claudia Engel

20th of June 2024