

AGE-FRIENDLY URBANISM

A pattern language for age-friendly communities in the Netherlands.

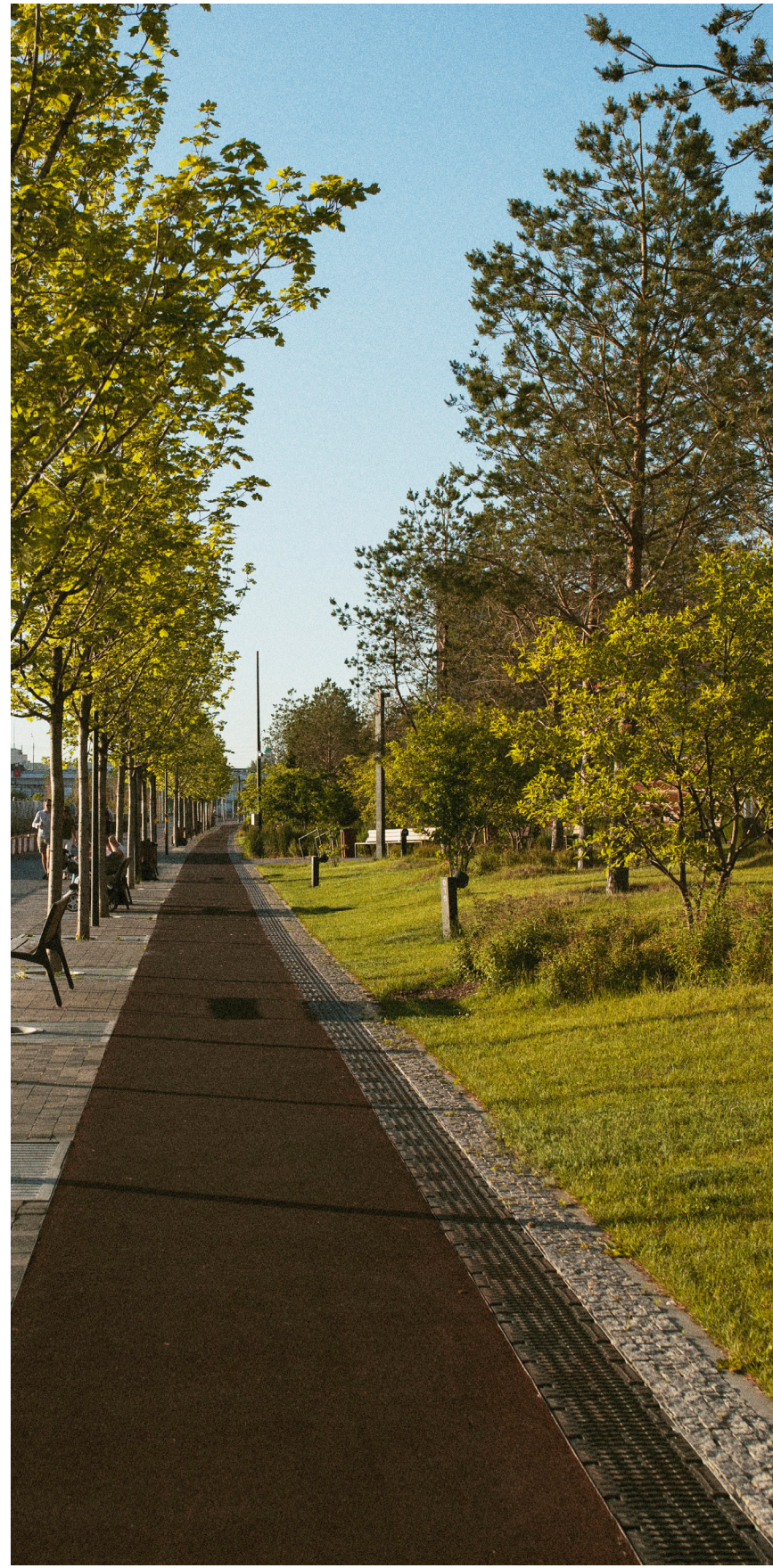
Lotte Wiegers
5071569

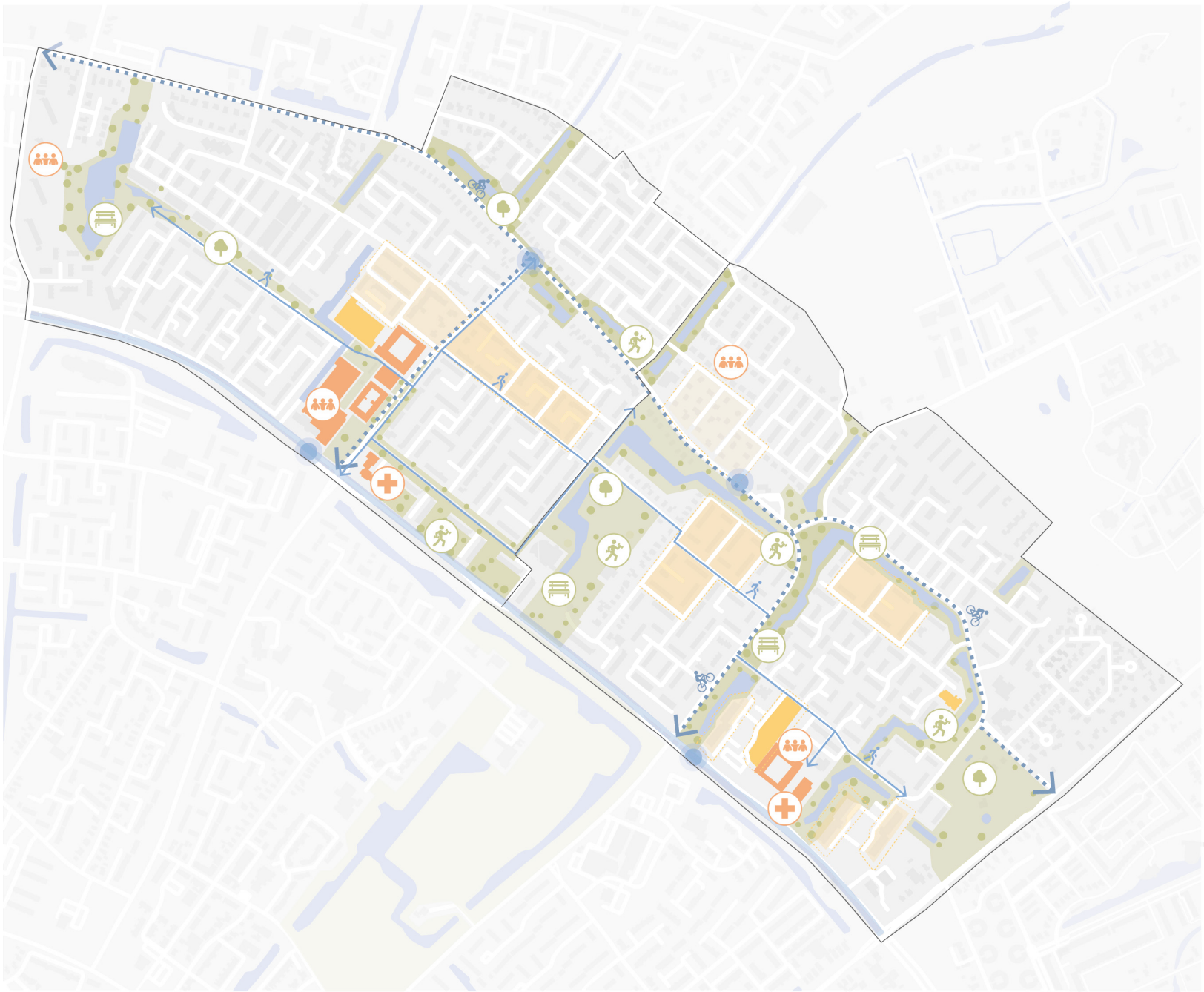
P5 presentation
19-06-2025

Mentors
Remon Rooij
Martijn Lugten

Delegate
Alexander de Ridder

Urbanism MSc 2025





P5 |

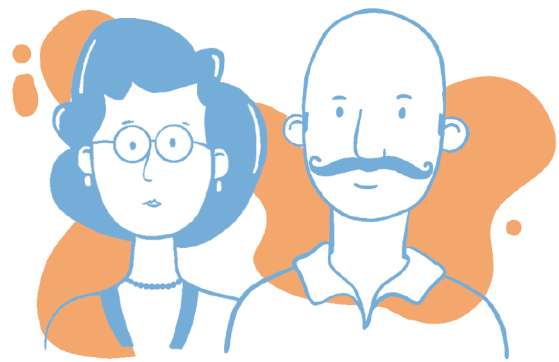
SHADED AREAS

Shade provided by buildings and trees provides comfortable outdoor spaces while mitigating climate threats.



related to:

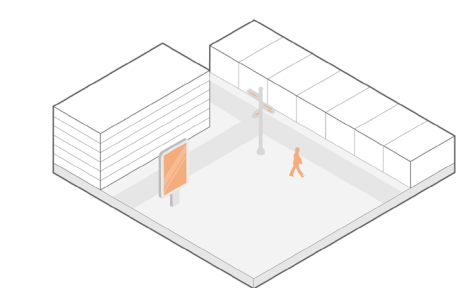
P1, P3, P4



S3 |

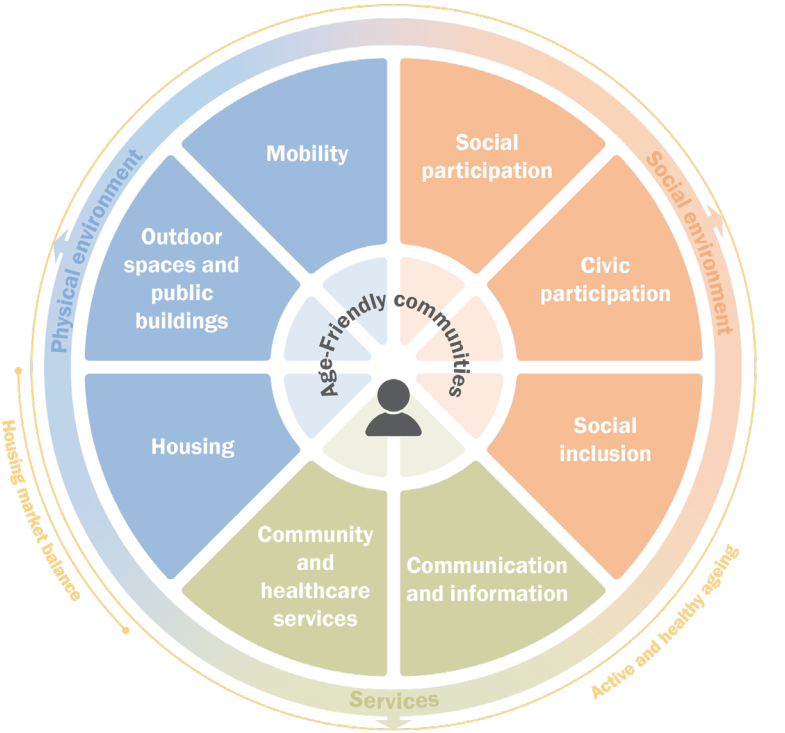
INFORMATION

The accessibility to information benefits the social inclusion of older individuals in the community.



related to:

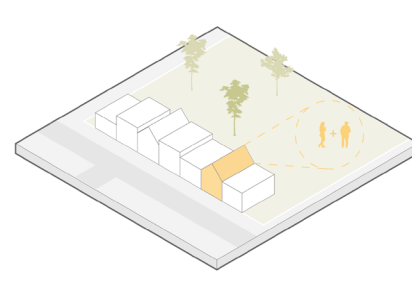
S2, S6



H11 |

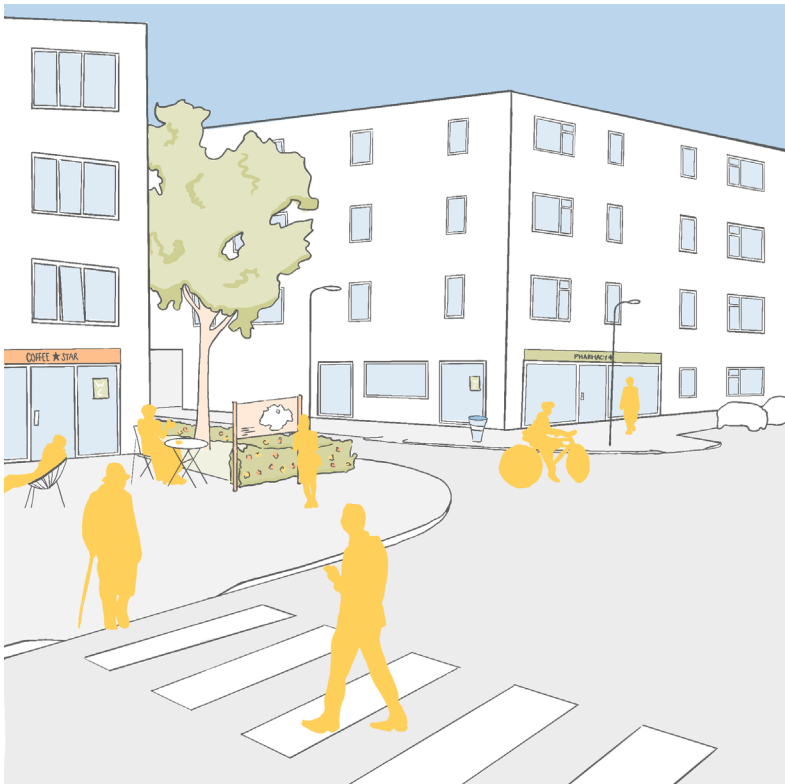
DUO-HOUSING

Duo-housing helps both residents in maintaining independence while socially supporting each other.



related to:

H1, H2, H6



M6 |

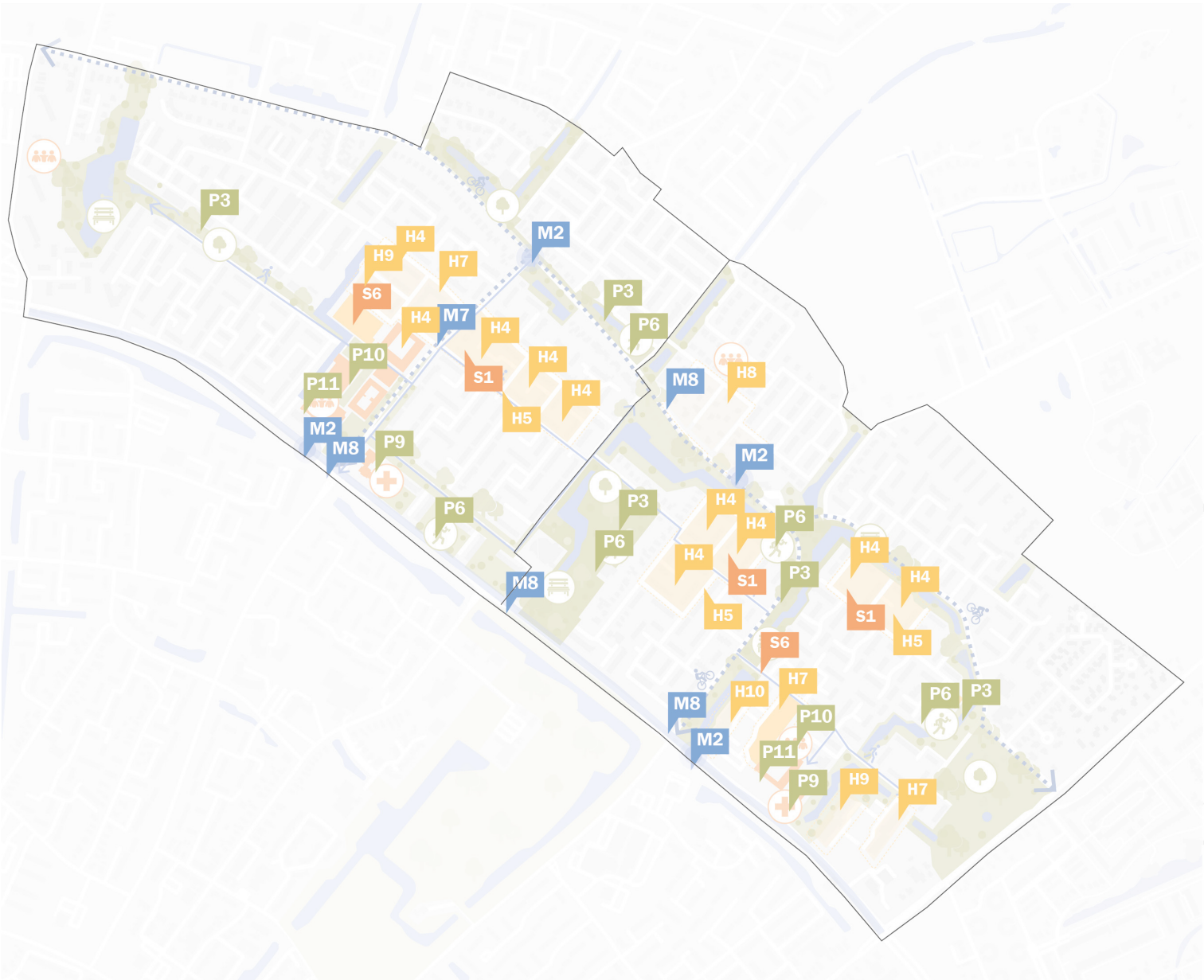
SLOW DOWN THE CAR

Smart implications reduce the use of the car and slow the speed, avoiding busy and hazardous traffic.



related to:

M5, M7



*“How could **age-friendly** spatial planning and strategy in Dutch cities support **active and healthy ageing** for elderly and contribute to a more balanced **housing market**?”*

Subquestions:

- 1** *“How do the current physical, social, and municipal factors influence age-friendliness and the quality of life for elderly residents in Apeldoorn?”*
- 2** *“What are spatial and systemic patterns of age-friendliness related to urban planning and design?”*
- 3** *“What would the age-friendly community pattern language look like in Apeldoorn?”*
- 4** *“How can the pattern language and framework be transferable for other cities?”*

Content

<i>Introduction</i> <i>Ageing population</i> <i>Quality of life</i> <i>Age-friendly framework</i>	<i>Pattern language</i> <i>Methodology</i> <i>Age-friendly pattern set</i> <i>Patttern examples</i>	<i>Implementation</i> <i>Assessment</i> <i>Vision</i> <i>Future possibilities</i>	<i>Conclusion</i> <i>Research question</i> <i>Strategy</i> <i>Transferability</i>
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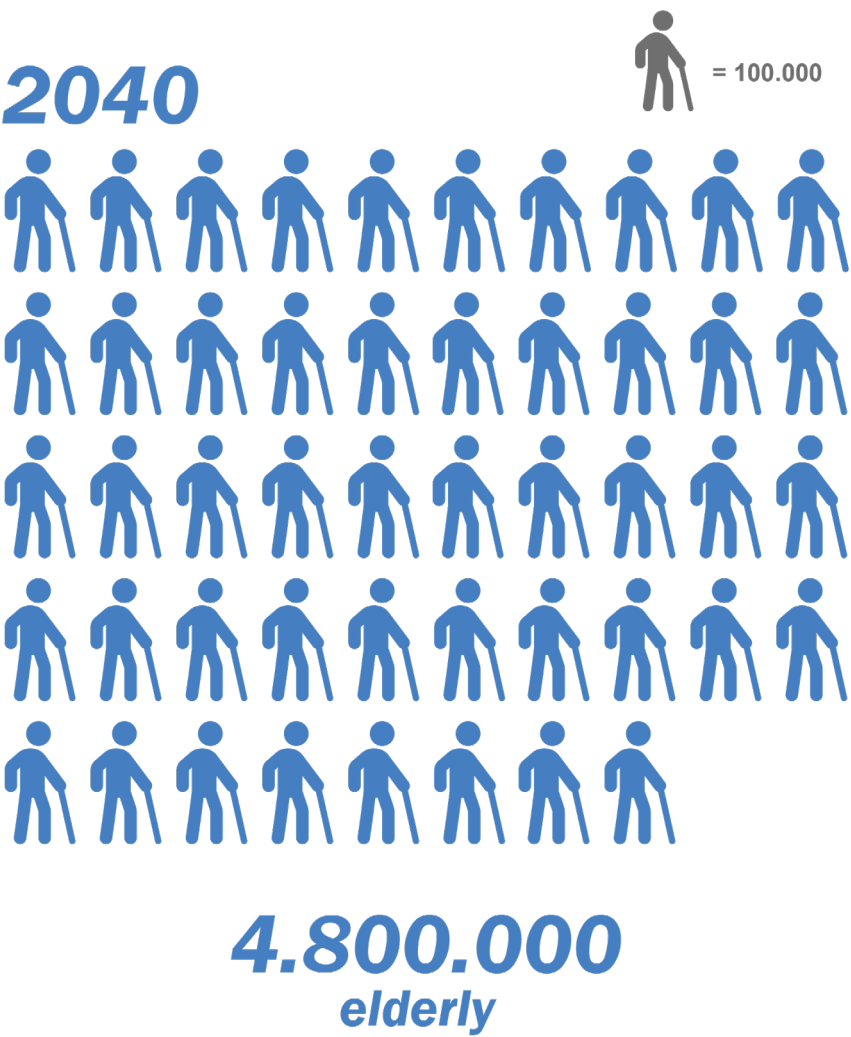
Introduction
Ageing population
Quality of life
Age-friendly framework

Introduction

Ageing population

Quality of life

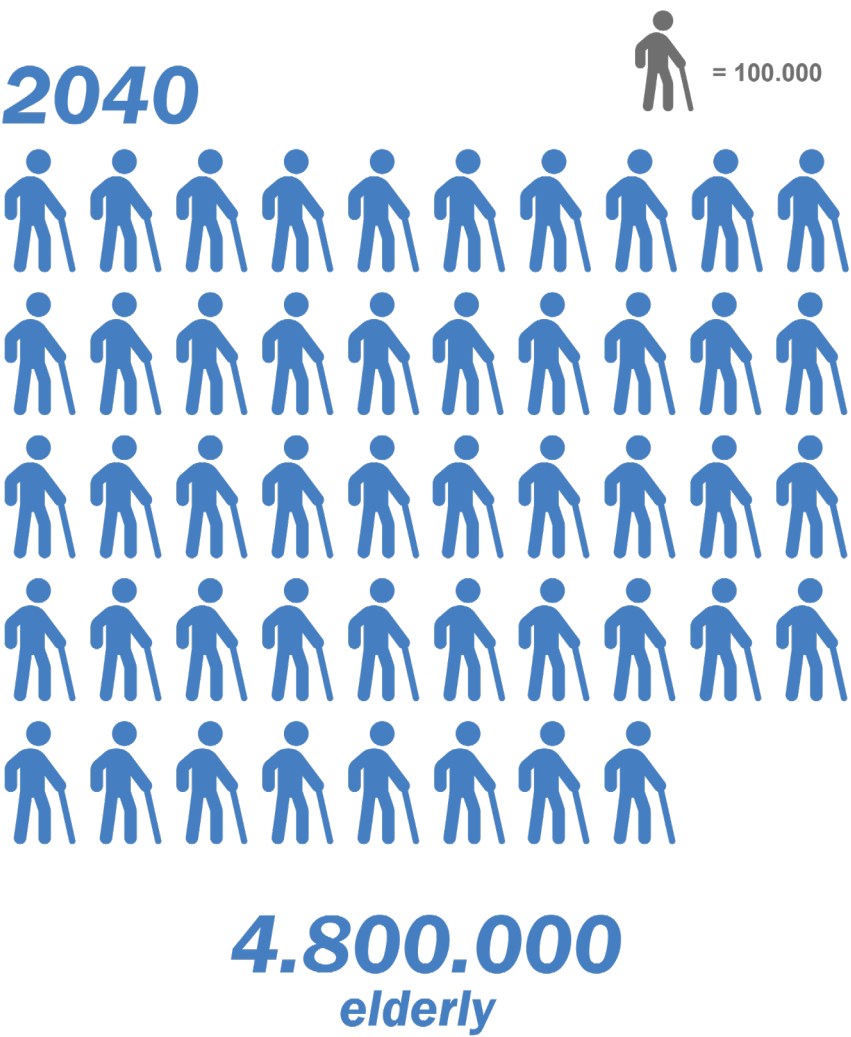
Age-friendly framework



Private space



Public space



Woningmarkt


Trouw.. (2025).

Woningtekort? Niet echt. Er is vooral een tekort aan kleinere woningen

Martijn Roessingh
redacteur woningmarkt
15 januari 2025, 22:00

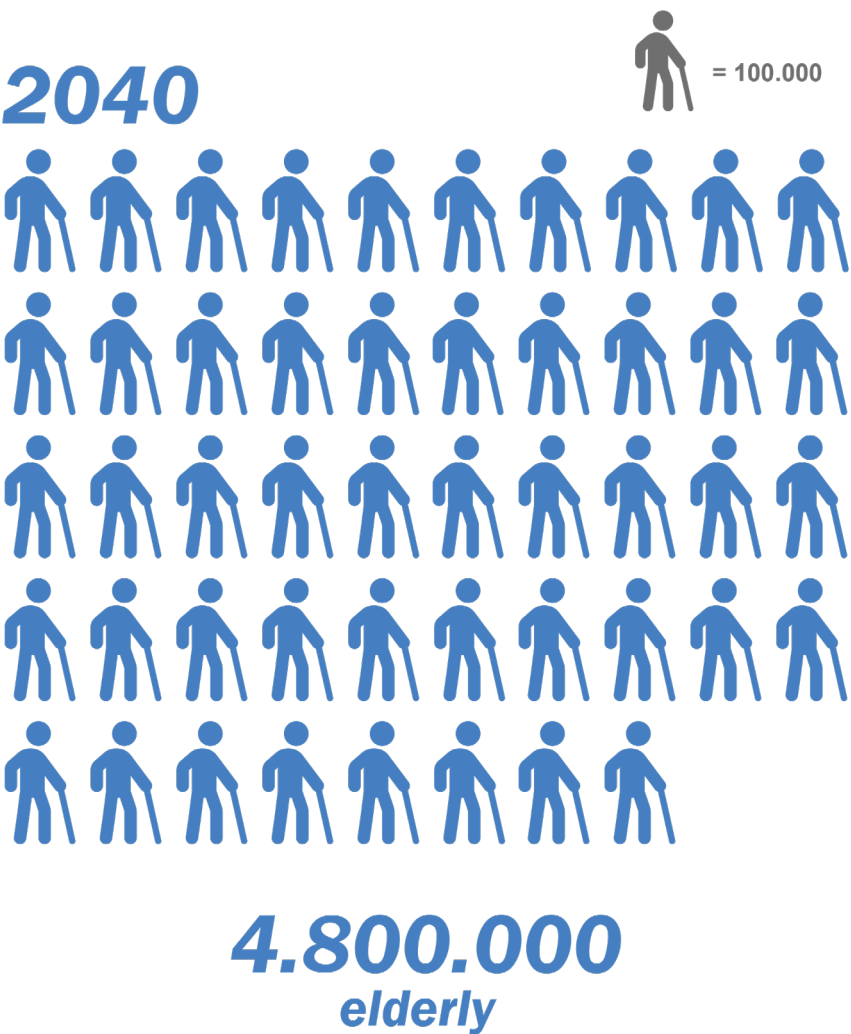
RTV Noord. (2024).

Steeds meer ouderen wonen thuis met verpleegzorg: 'Een verpleeghuis lijkt me niks'

 **Eva Hulscher** 16 september 2024, 12:02 • Aangepast 16 september 2024, 18:15
• 5 minuten leestijd



Public space



Woningmarkt

Trouw. (2025).

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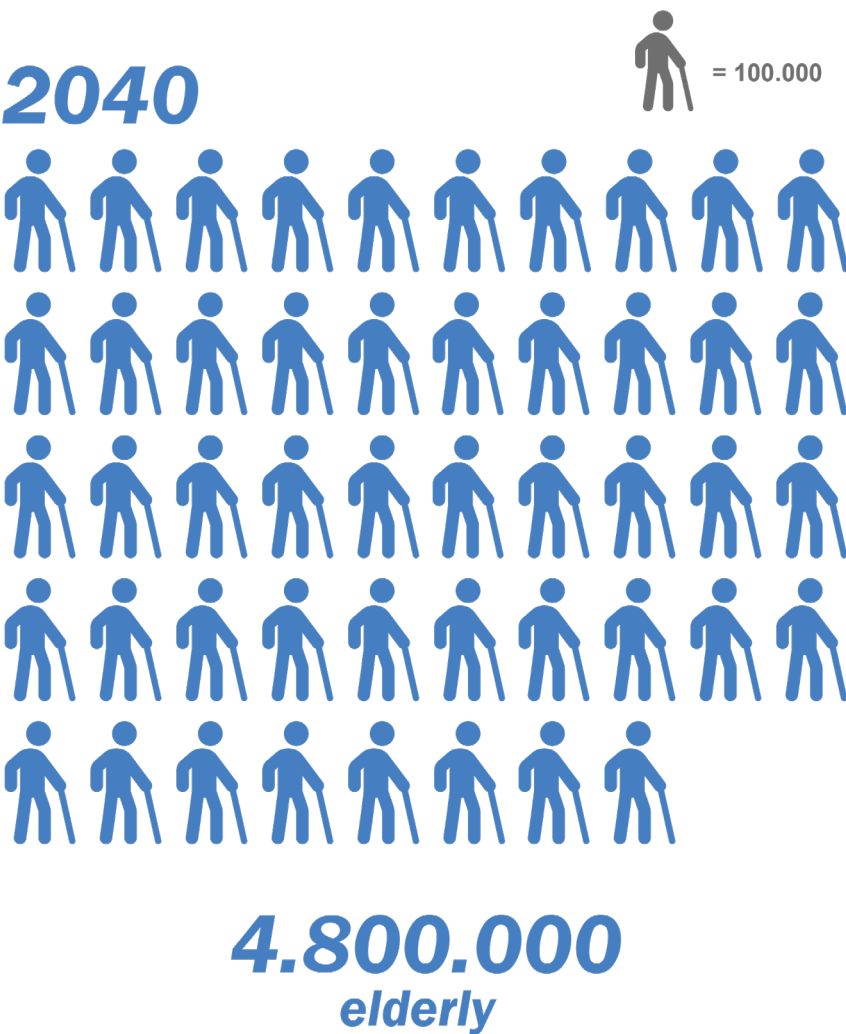
Van Der Parre, H. (2021, December 30). NOS.

Grootste problemen op de woningmarkt

Percentage gemeenten dat een probleem noemt



Public space



Trouw. (2025).

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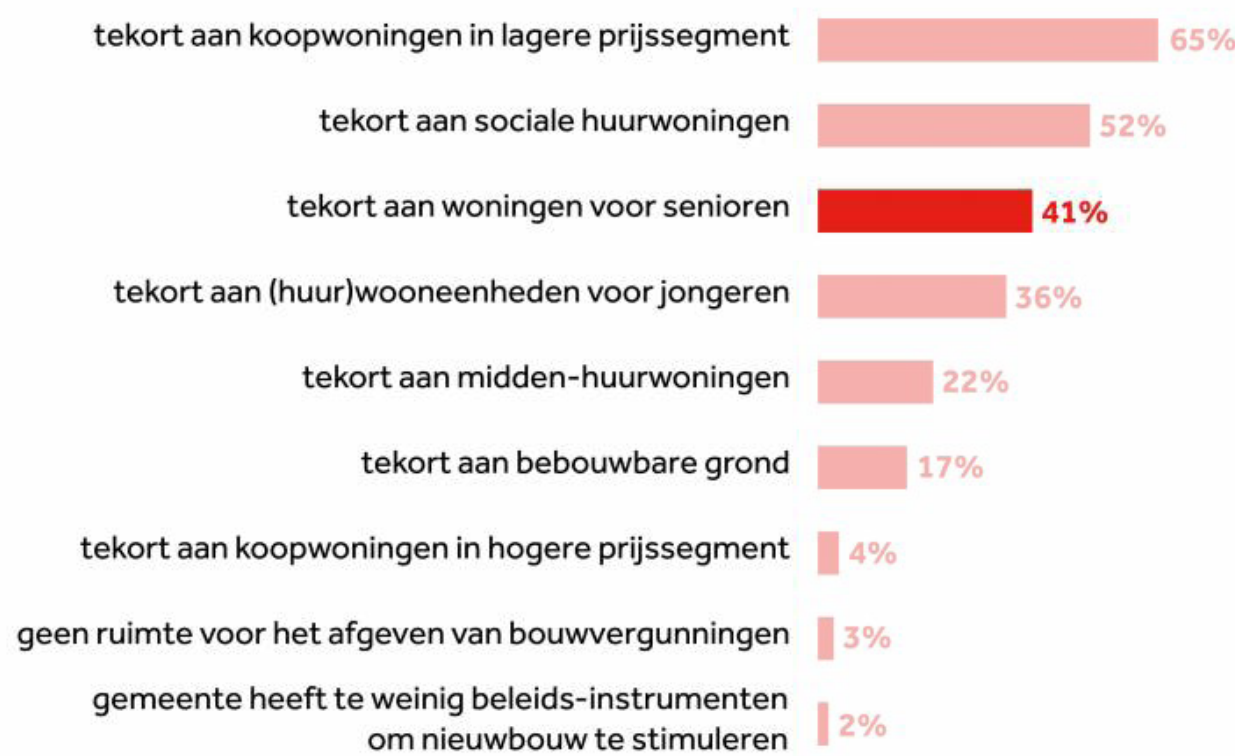
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Van Der Parre, H. (2021, December 30). NOS.



Nieuws

Ouderen mijden uitjes vanwege gebrek aan openbare toiletten: ‘Senioren worden gespannen’

De helft van de ouderen slaat weleens een dagje uit over omdat er te weinig openbare toiletten zijn in Nederland. Dat blijkt uit onderzoek van het Nationale Seniorenpanel. De ouderen geven Nederlandse openbare wc's daarnaast een dikke onvoldoende: een 4,5.

Sanne Schelfaut 13 maart 2025, 08:46

Het Parool. (2025).



Knack. (2024).

Ann Peuteman
Redactrice bij Knack • 16-08-2024, 11:00 • Bijgewerkt op: 16-08-2024, 12:43



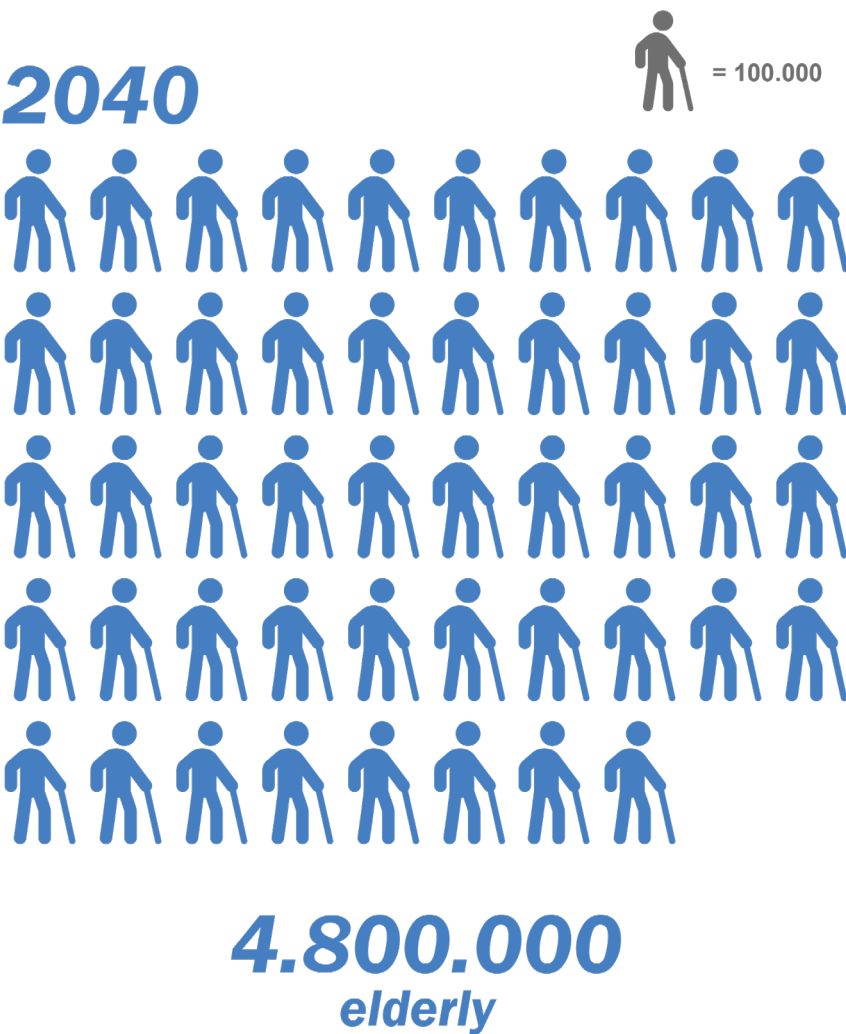
▲ Het sociale netwerk van ouderen wordt steeds belangrijker, zeggen experts. © Getty Images

Veel ouderen zonder sociaal netwerk ongerust: 'Wie zorgt voor mij als het nodig is?'

Ouderen zullen vaker een beroep moeten doen op hun kinderen. Maar wat als je geen kinderen hebt en je sociale netwerk klein is? Wie zorgt er dan voor jou? Het baart ouderen zorgen. Toch zijn er mogelijkheden, zeggen experts. „Er is genoeg, het is alleen een oerwoud en bijna niet te vinden.”

Ellen van Gaalen 24-01-25, 16:00 • Laatste update: 24-01-25, 16:22

AD. (2025).



Trouw. (2025).

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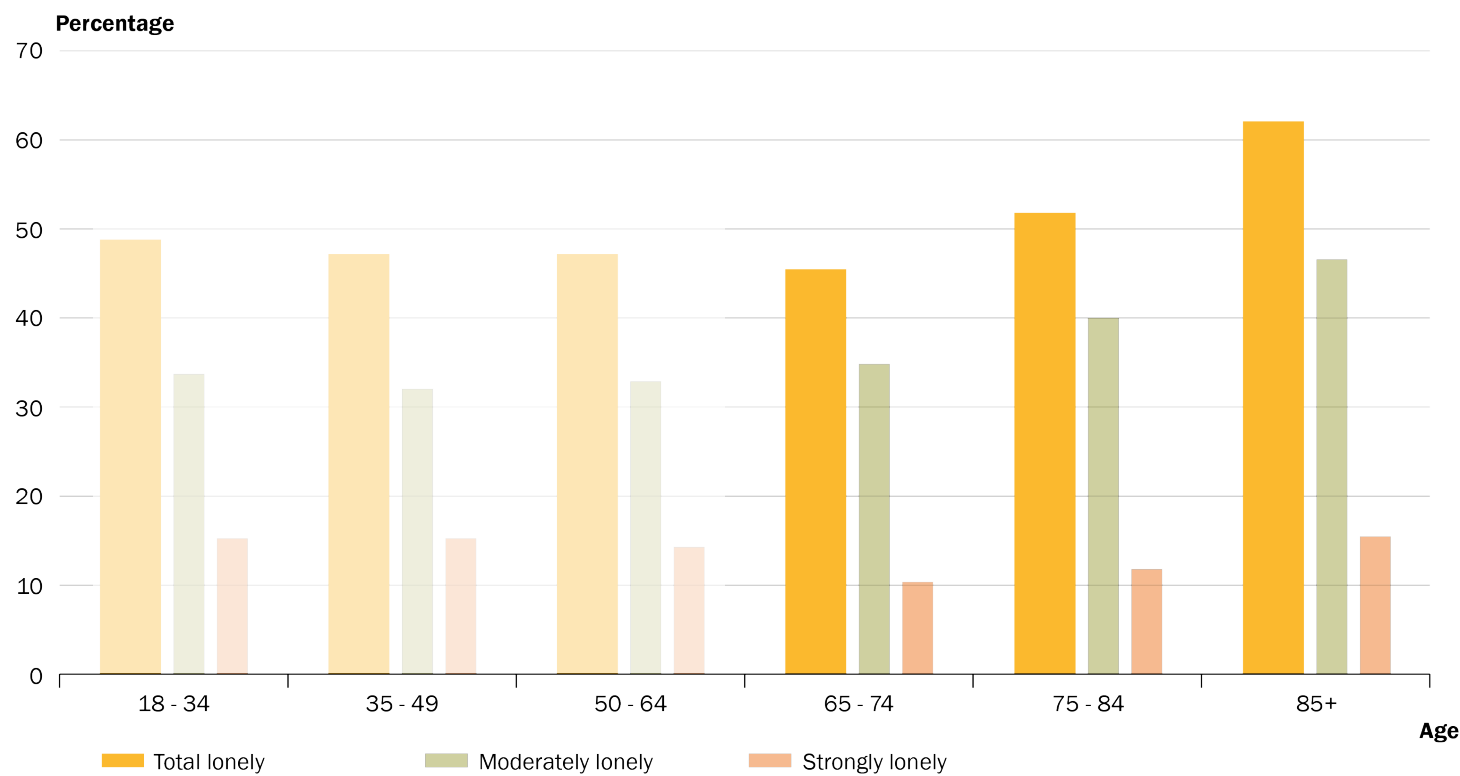
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Ann Peuteman
Redactrice bij Knack • 16-08-2024, 11:00 • Bijgewerkt op: 16-08-2024, 12:43 •

Volksgezondheid en Zorg. (2024)



Introduction

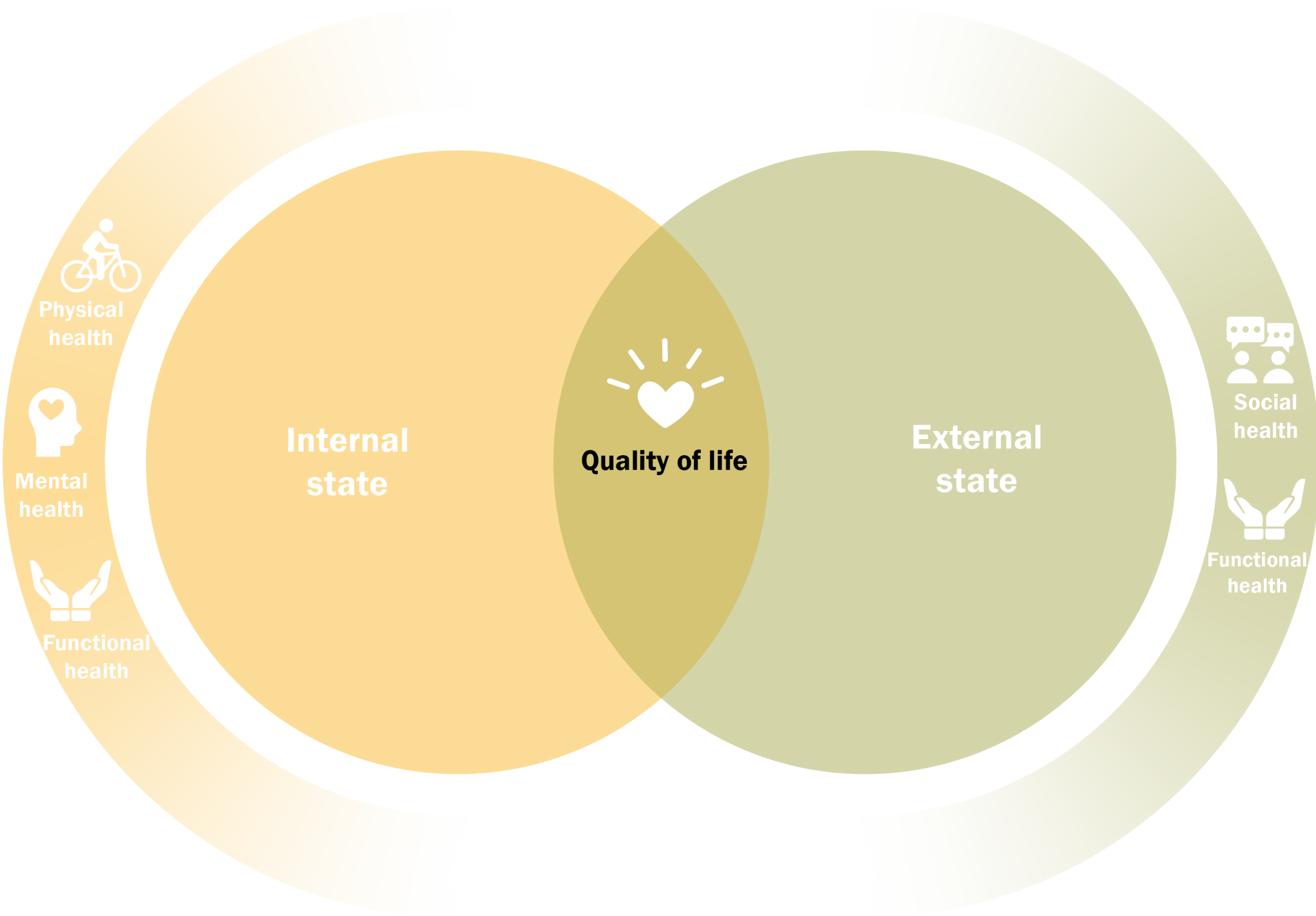
Ageing population

Quality of life

Age-friendly framework

Quality of life

The relationship between how an individual views their internal and external state.

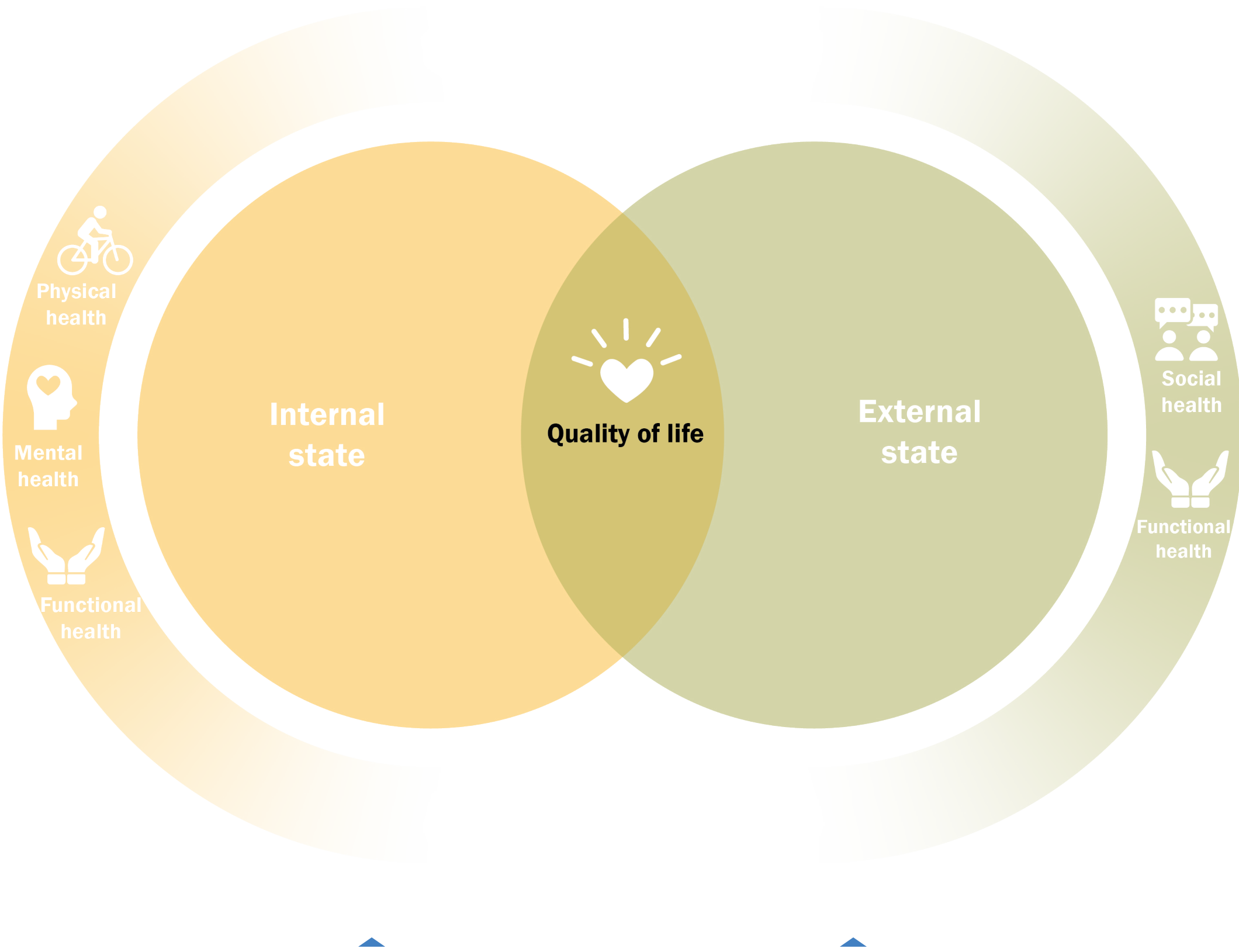


Introduction

Ageing population
Quality of life
Age-friendly framework

Quality of life

The relationship between how an individual views their internal and external state.



Active and healthy ageing

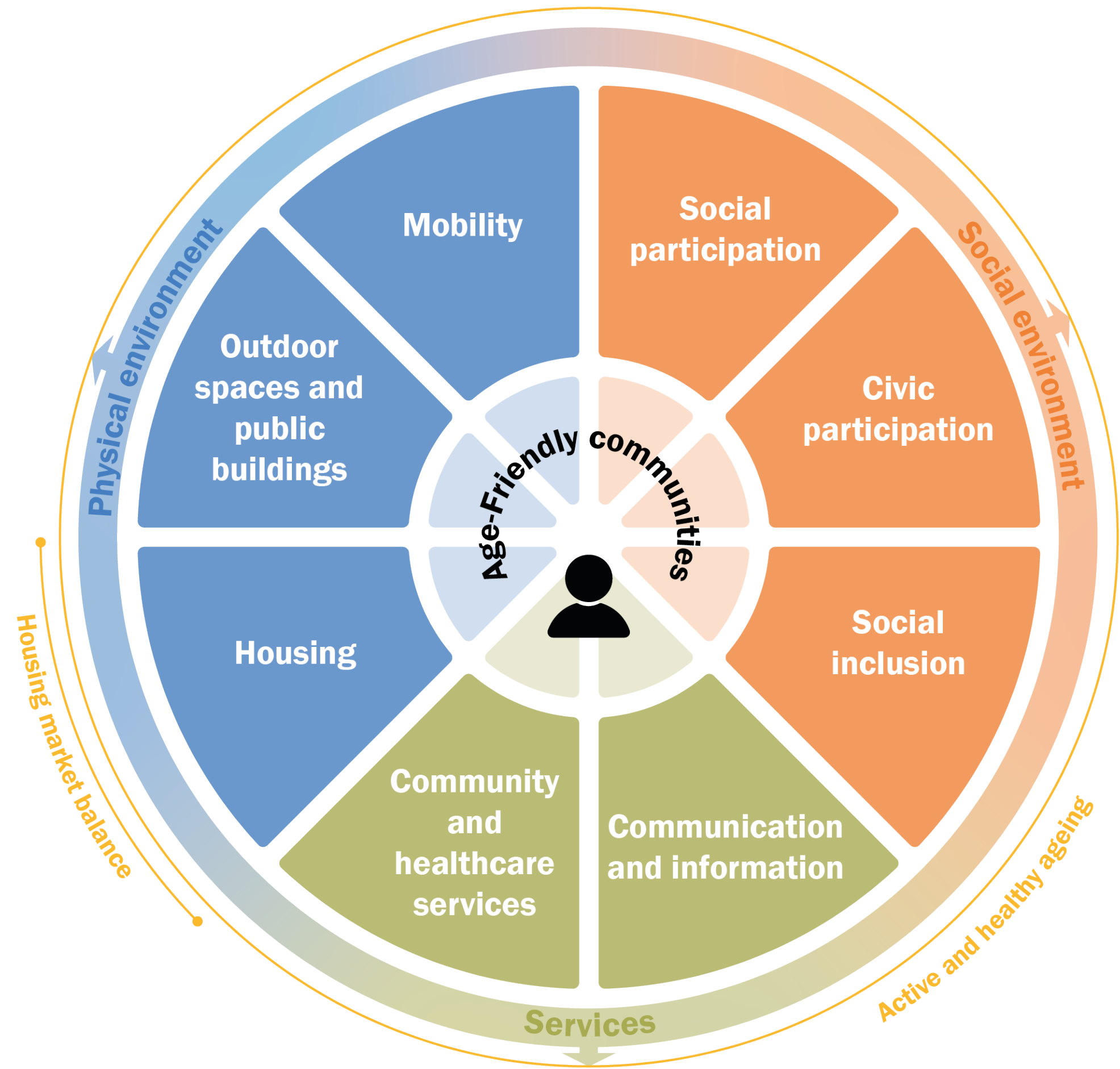
An individual's opportunity to continue to participate in a community beyond employment or physical activity and maintain their functional ability as they age.

Introduction

Ageing population
Quality of life
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Age-friendly community (AFC)

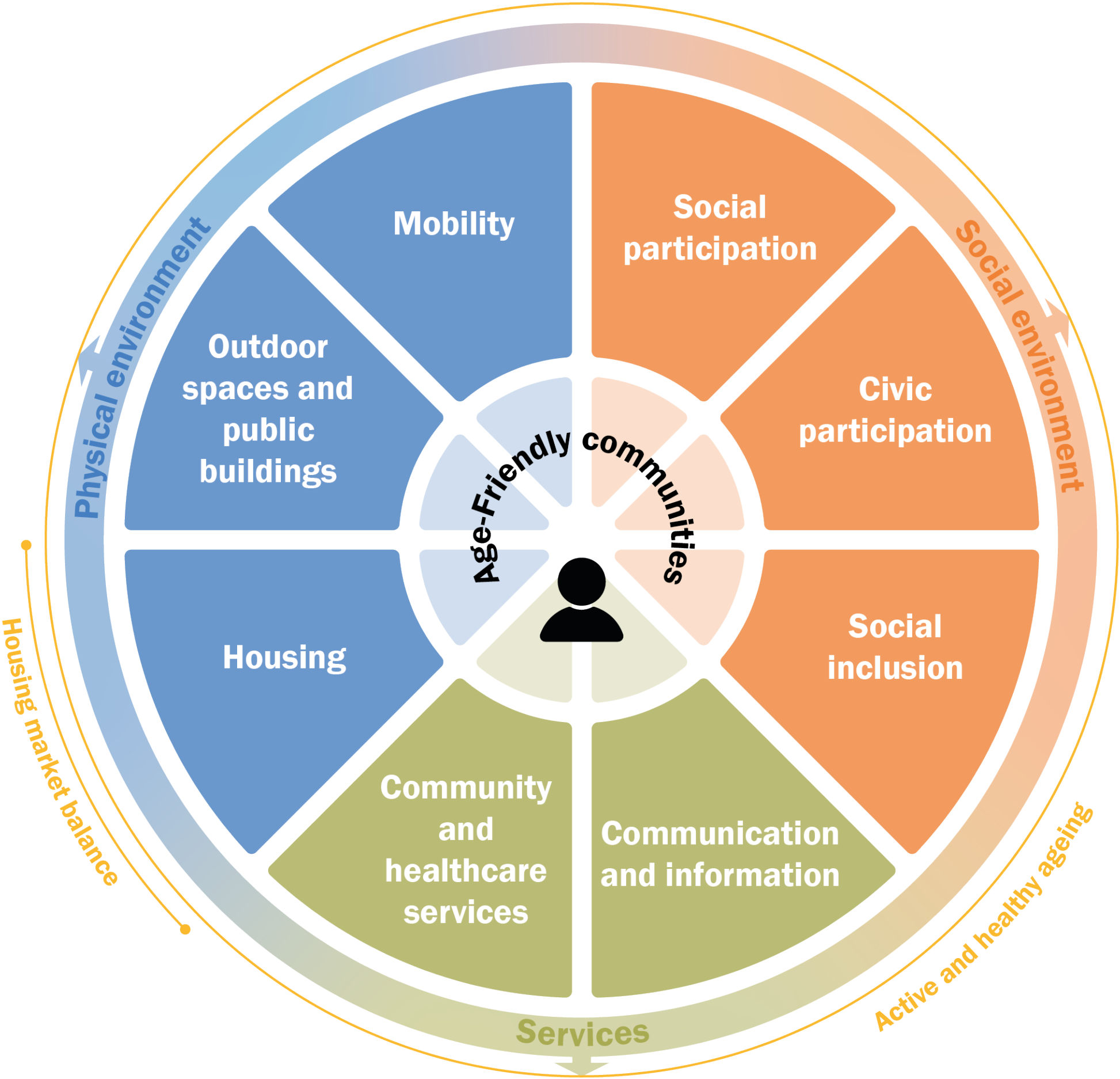
A community that presents a supportive environment for active and healthy ageing, where people can age in place and maintain a high quality of life.



Introduction

Ageing population
Quality of life
Age-friendly framework

“How could **age-friendly** spatial planning and strategy in Dutch cities support **active and healthy ageing** for elderly and contribute to a more balanced **housing market**?”



Introduction

Ageing population

Quality of life

Age-friendly framework

Pattern language

Methodology

Age-friendly pattern set

Pattern examples

Pattern Language

Methodology
Age-friendly pattern set
Pattern examples

A
PATTERN
LANGUAGE

TOWNS • BUILDINGS • CONSTRUCTION

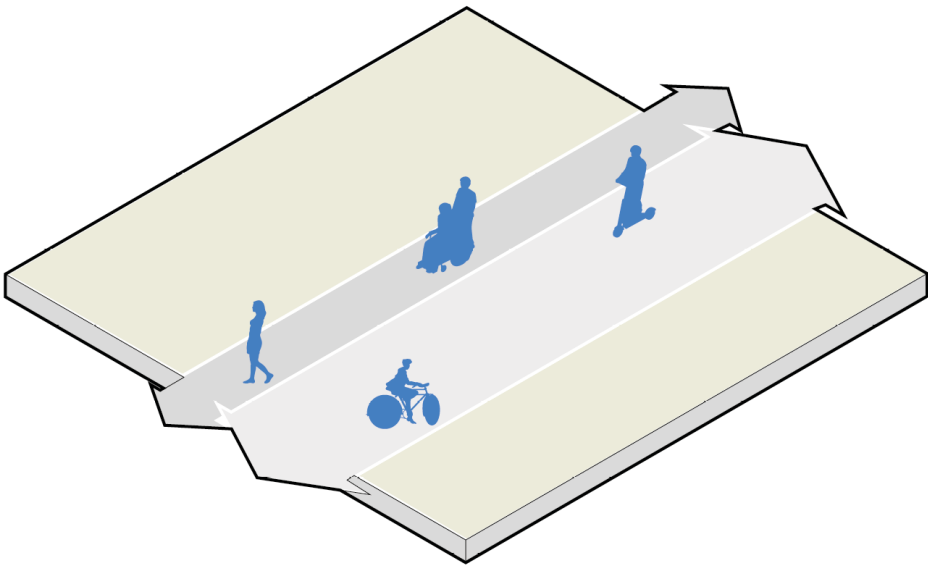
Christopher Alexander
Sara Ishikawa Murray Silverstein
with
Max Jacobson Ingrid Fiksdahl-King Shlomo Angel

NEW YORK
OXFORD UNIVERSITY PRESS
1977

M5

INFRASTRUCTURE FOR
WALKING AND BIKING

A good infrastructure supporting active mobility for walking and cycling allows elderly to stay active and independent.



related to:

M2, M6, M7, M8, M9, M10, M11, M12, M13, P1, P4, P9, P10, S5

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theoretical background

Older adults often rely more on walking and public transportation as their main mode of transport. Active mobility, supported by appropriate infrastructure, is essential for maintaining independence and promoting health (Salmistu & Kotval, 2023). In contrast, the lack of supporting infrastructure, such as unsafe sidewalks with obstacles and crossings with high car speeds, can limit older adults’ ability to stay active and in turn accelerate the decline in mobility (ARUP, 2019).

practical implication

Infrastructure that supports active mobility and walkability for older adults includes accessible walkways and bicycle paths, clear street zoning that designates specific areas for different modes of transport, and reduced car speeds in areas where pedestrians and cyclists have priority. Additionally, features that enhance visibility, safety, and encourage are essential in creating walkable and cyclable infrastructures that foster active mobility and independence.

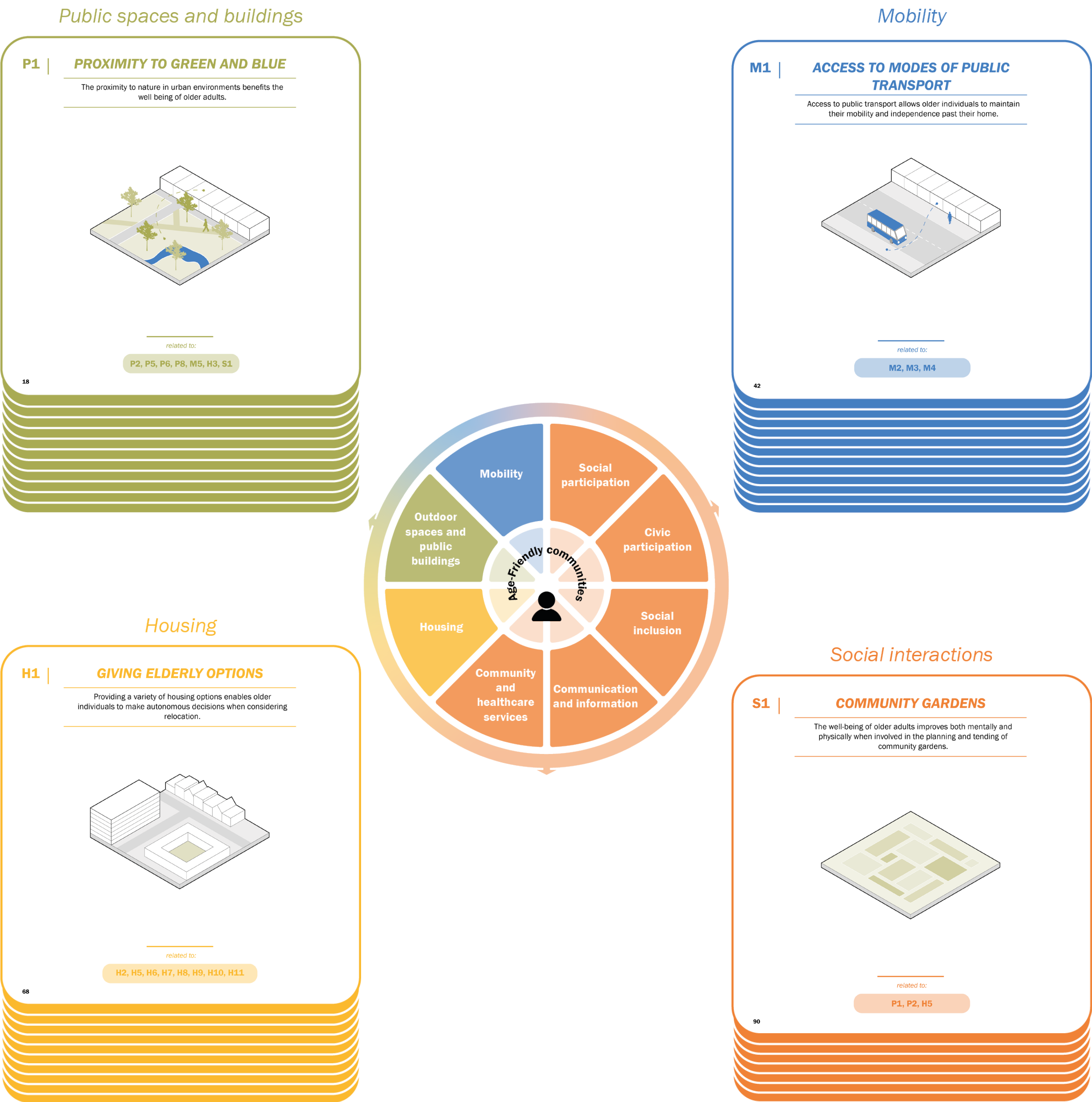
Scale: object
building
block
street
neighbourhood
city

Age-friendly to: elderly specific
children
all ages
individuals with
declined mobility

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Pattern Language

Methodology
Age-friendly pattern set
Pattern examples



Pattern Language

Methodology
Age-friendly pattern set
Pattern examples



Introduction

Ageing population

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Patttern examples

Implementation

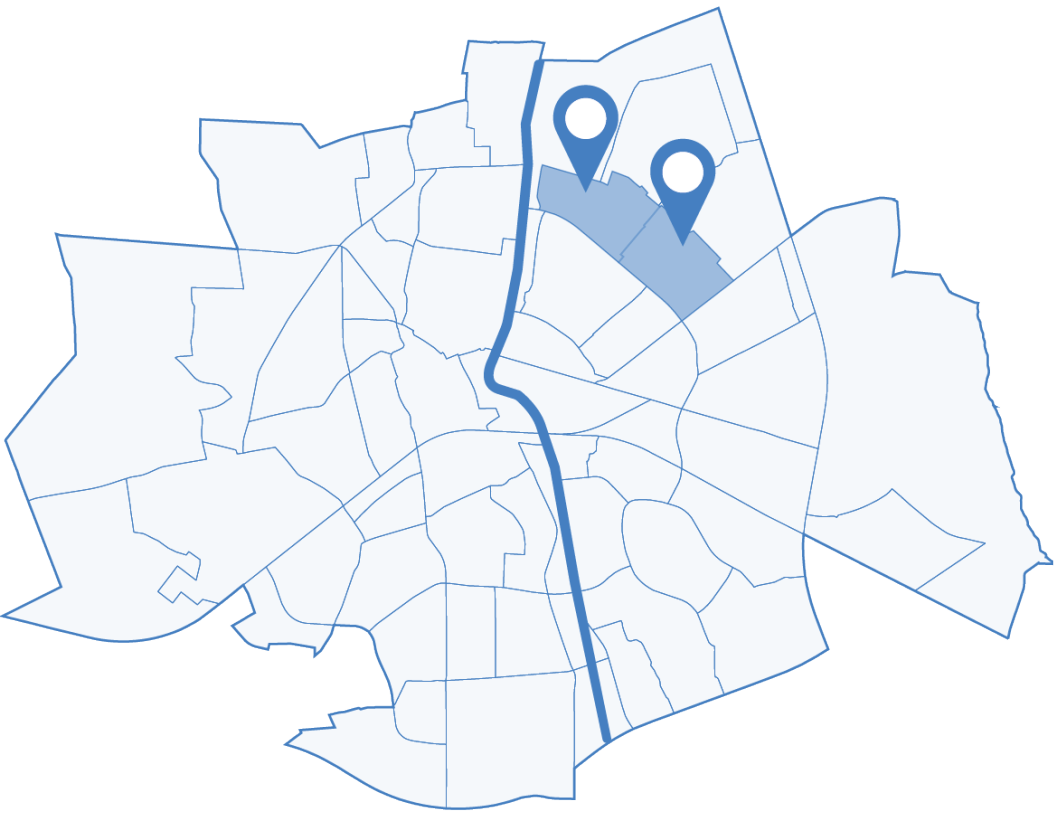
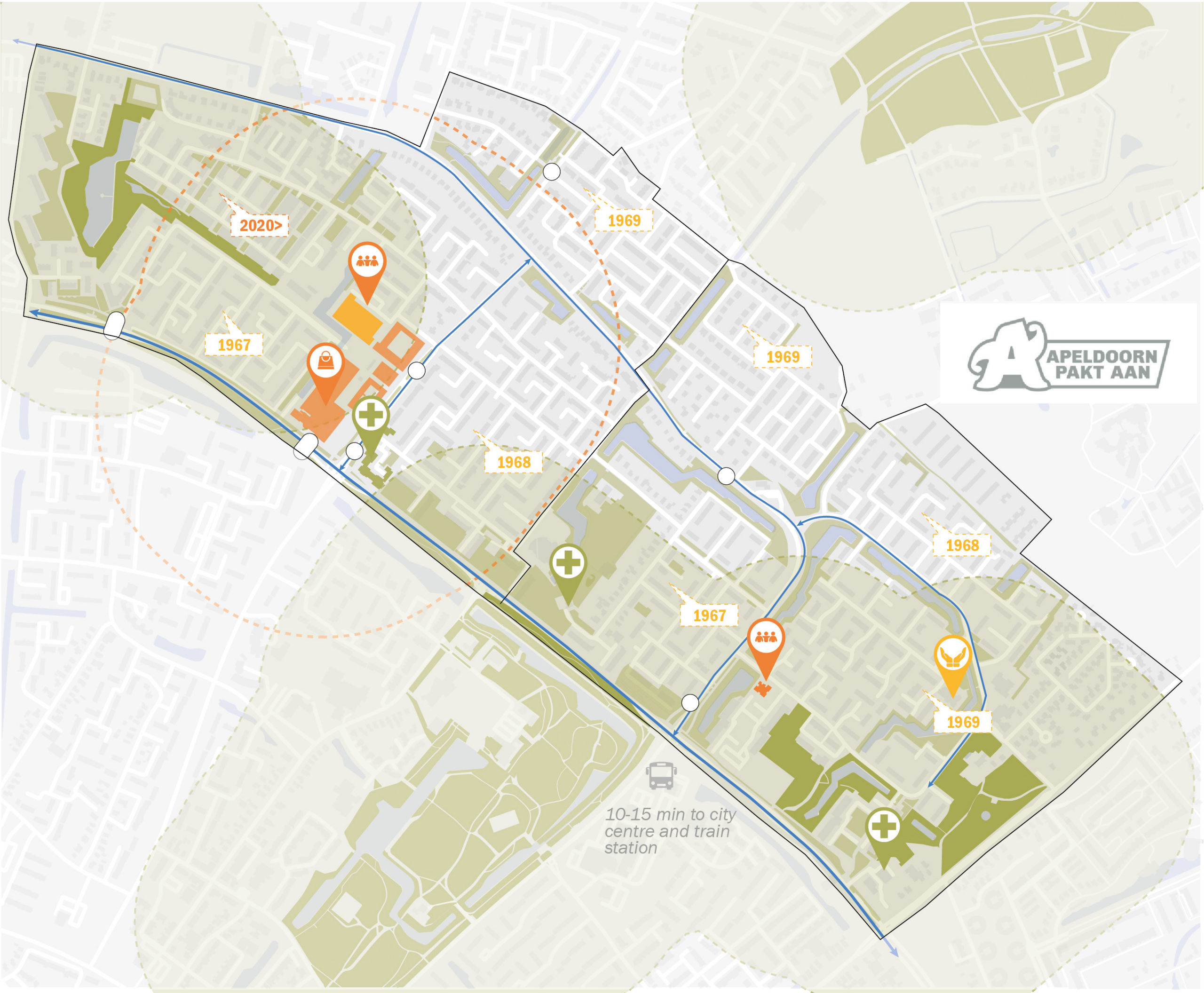
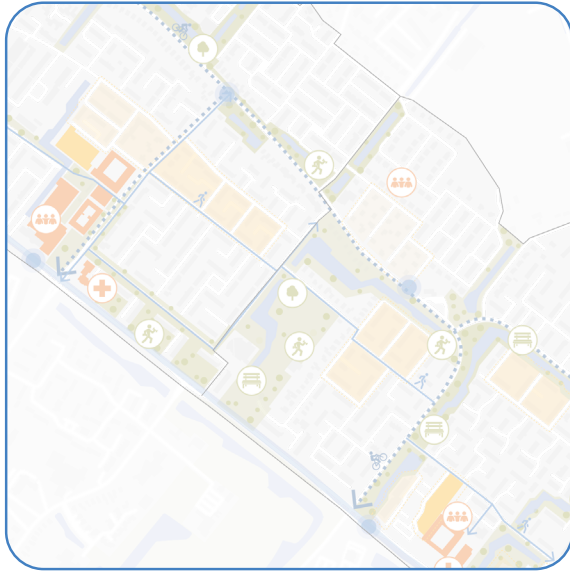
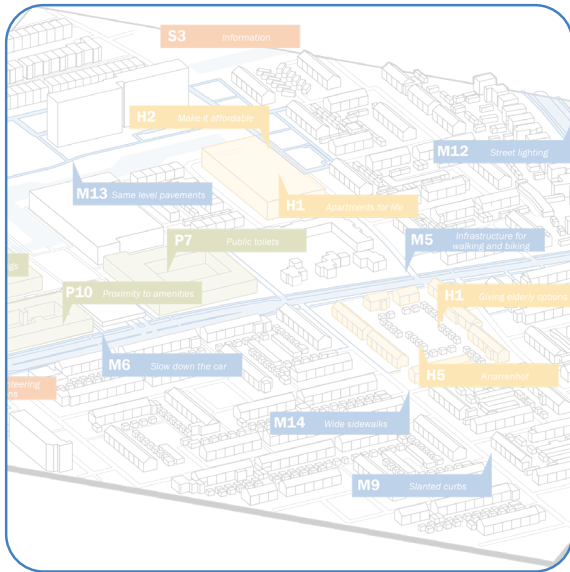
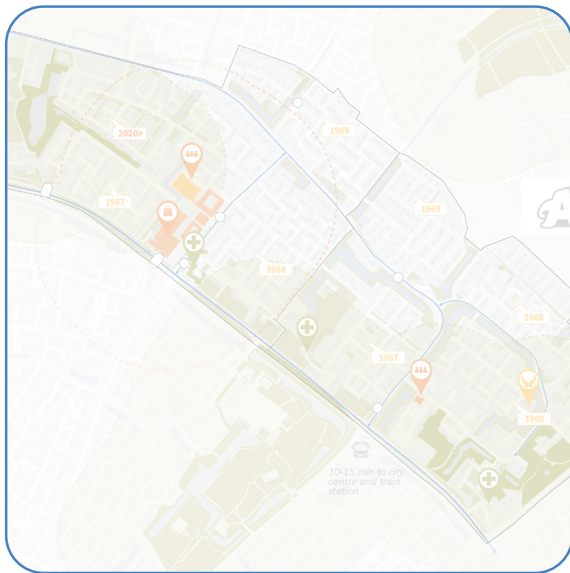
Assessment

Vision

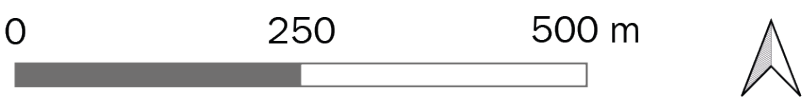
Future possibilities

Implementation

Assessment
Vision
Future possibilities



- proximity to park
- social hub
- frequently used area
- car-oriented roads
- busstop
- 1969 year of construction
- assisted living location
- healthcare facility
- meeting place
- assisted living location
- amenities
- parks
- buildings
- grass
- water
- neighbourhoods

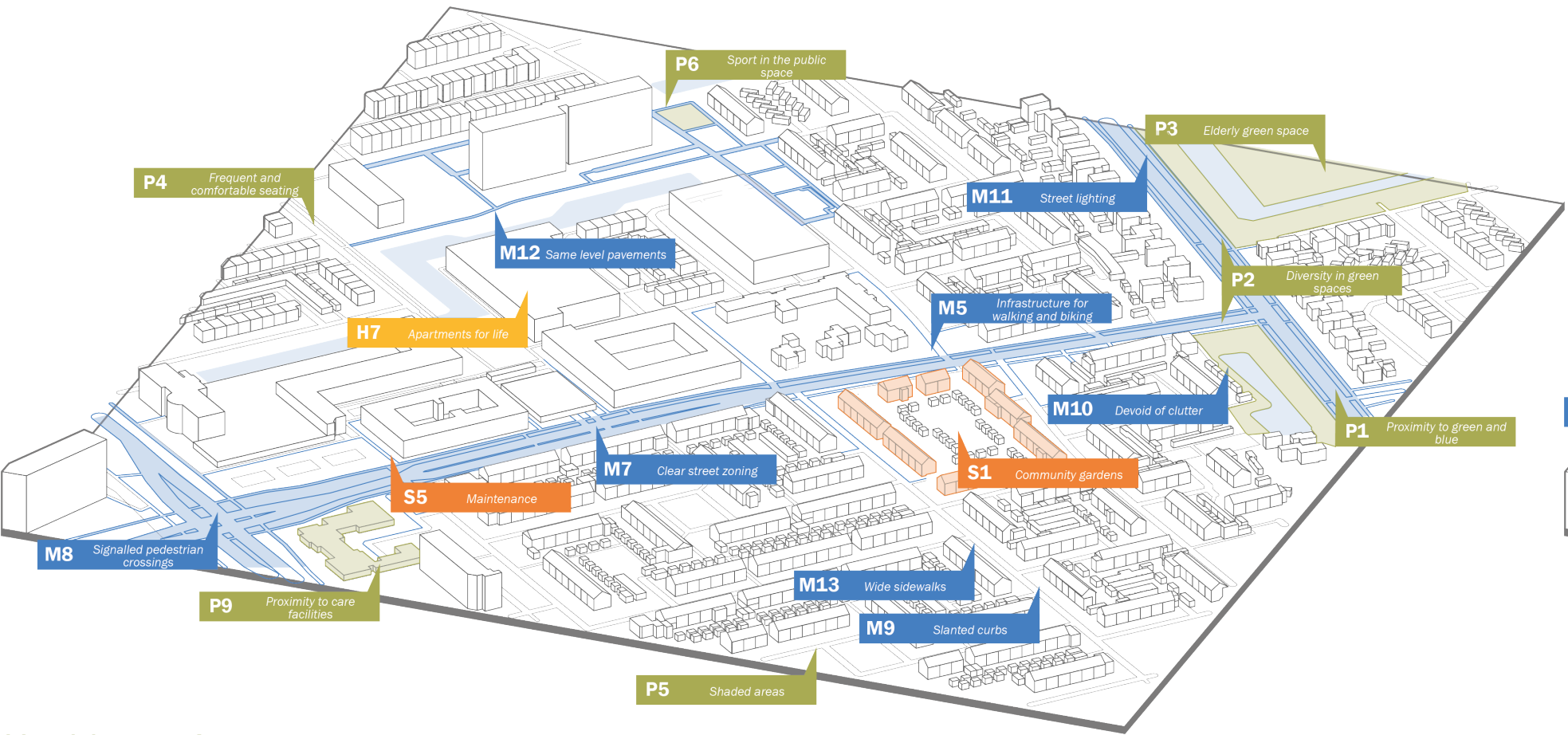
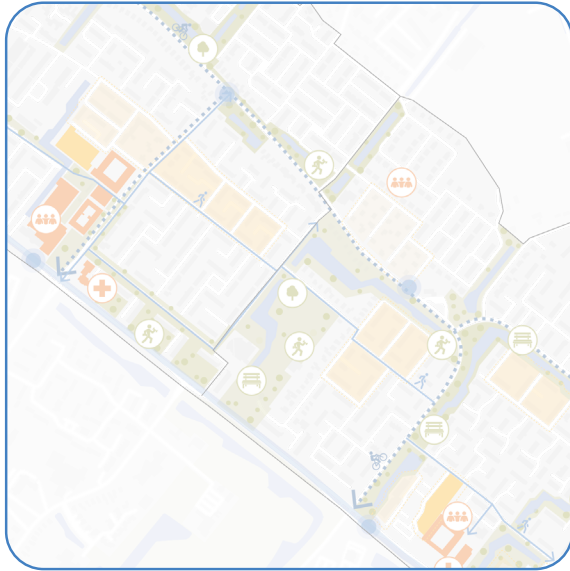
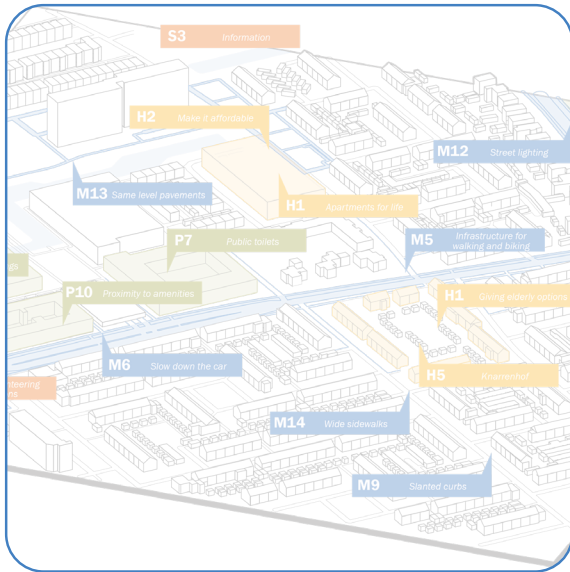
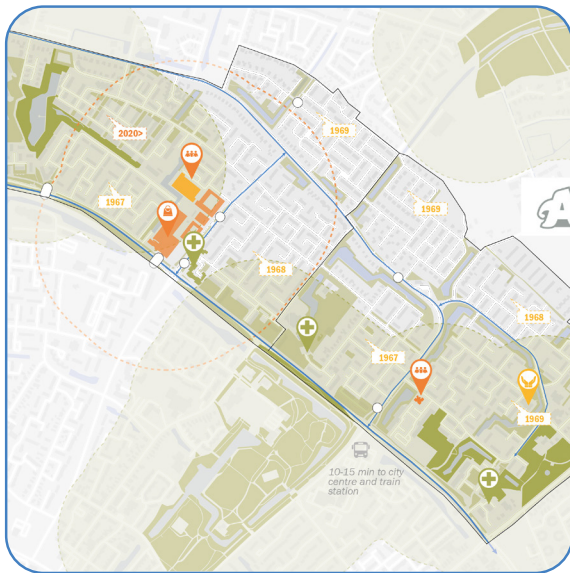


Implementation

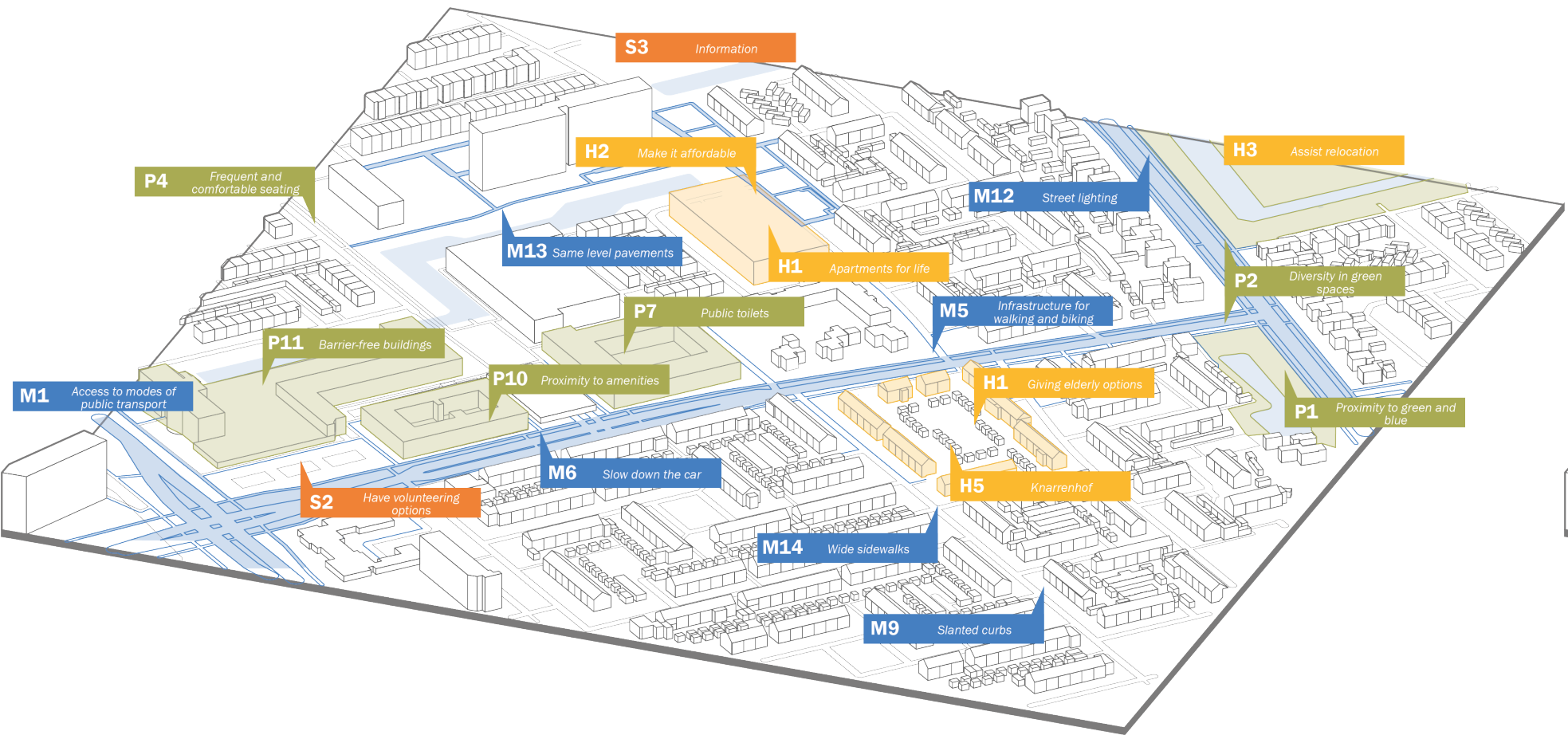
Assessment

Vision

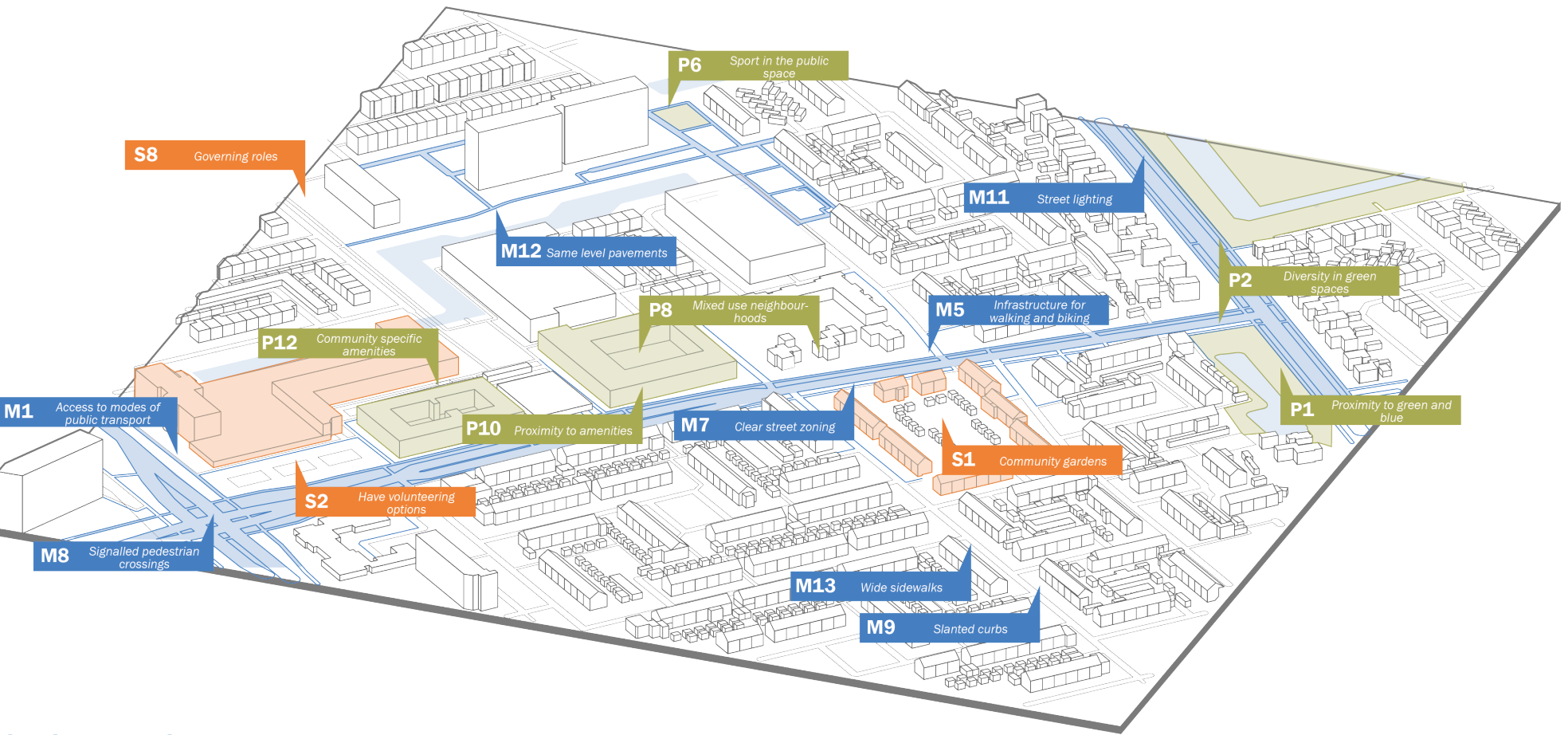
Future possibilities



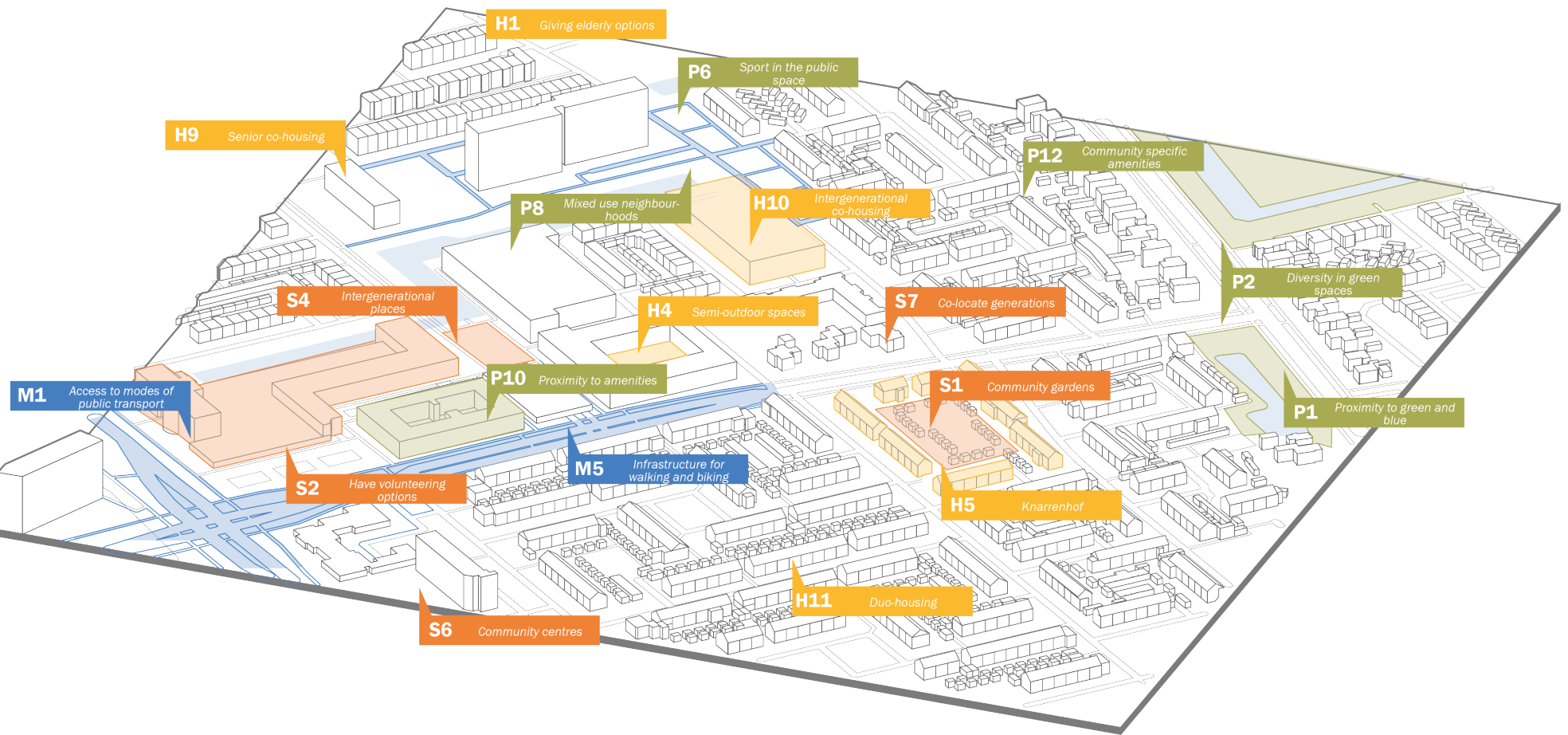
Healthy ageing



Independence



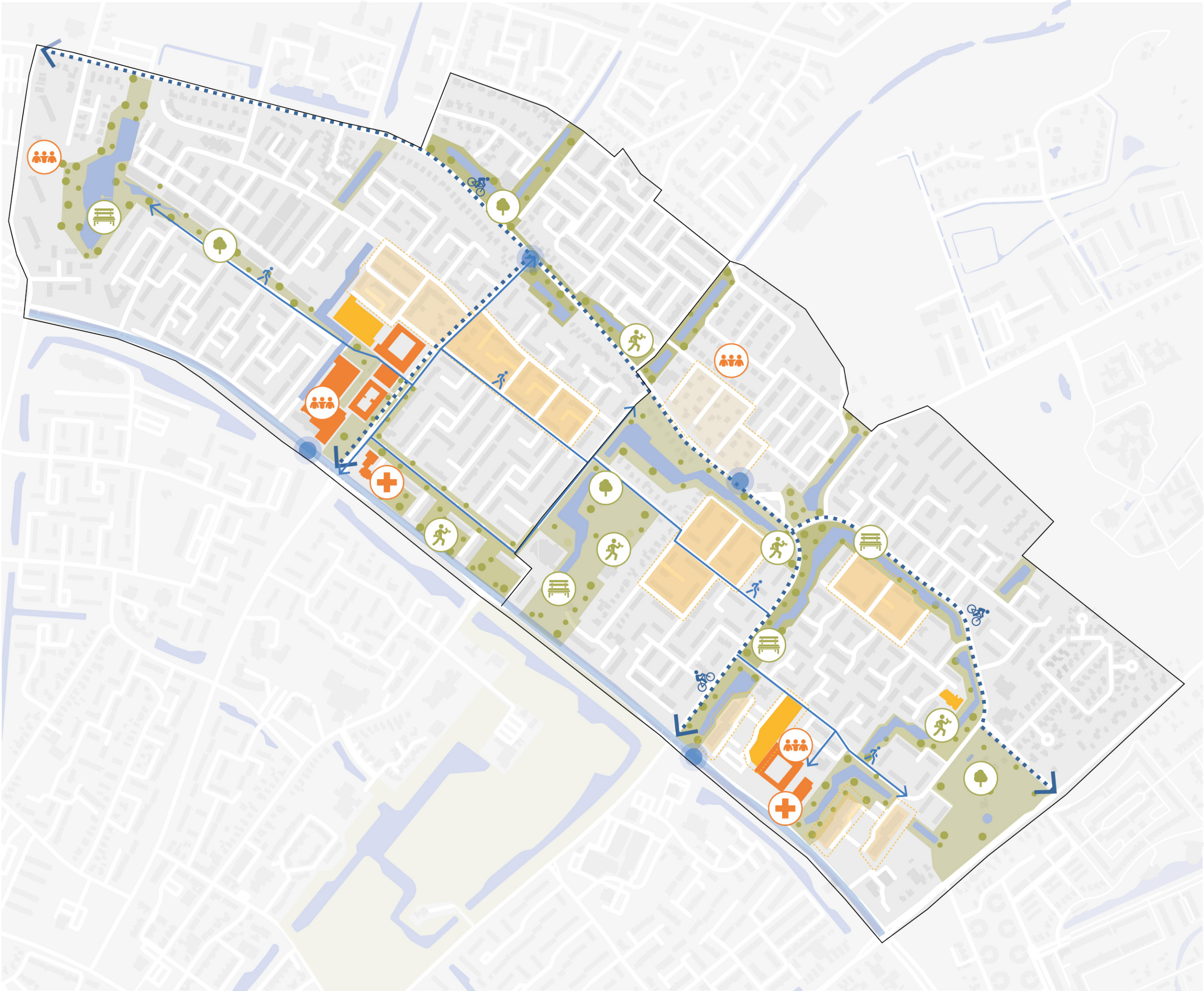
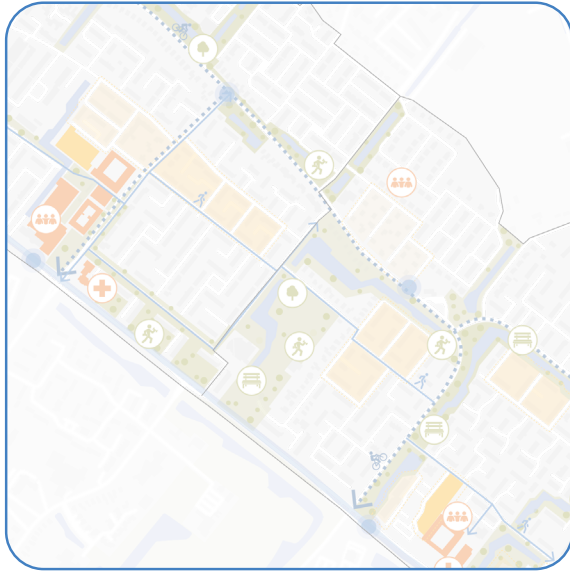
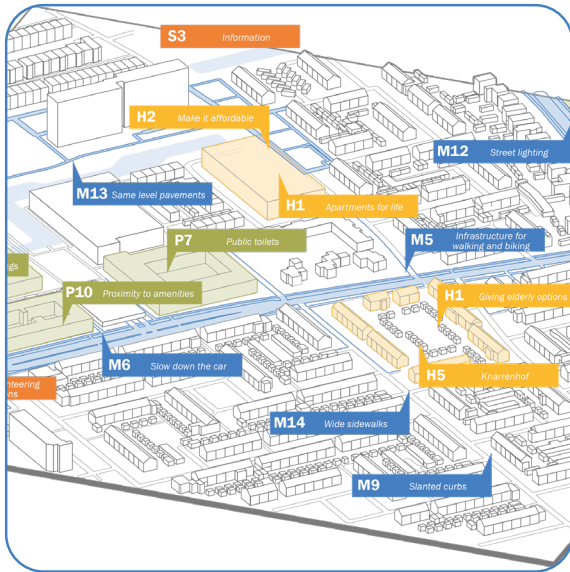
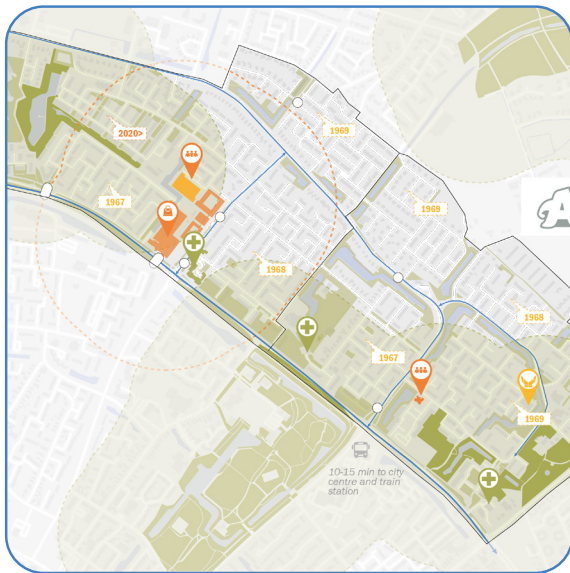
Active ageing



Social engagement

Implementation

Assessment
Vision
Future possibilities



25% senior housing
strategic placement to amenities

improved infrastructure for slow mobility
enabling independence and social interactions

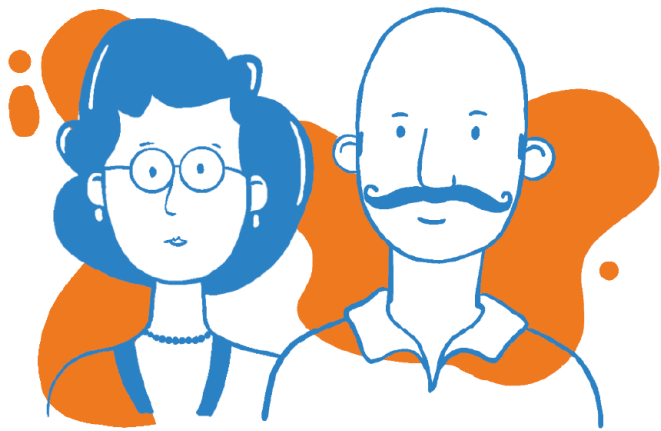
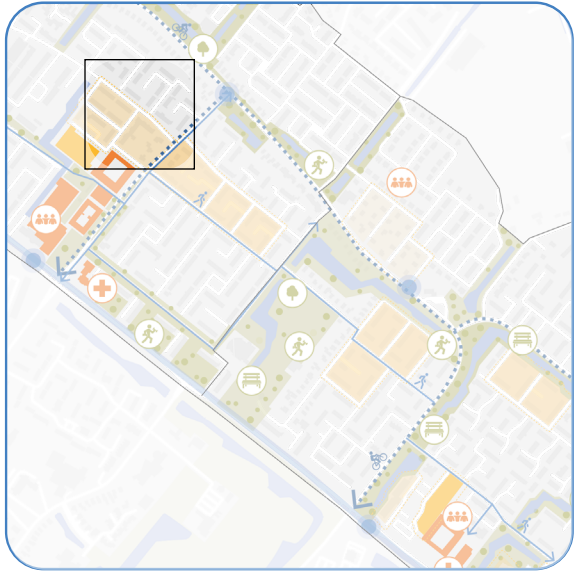
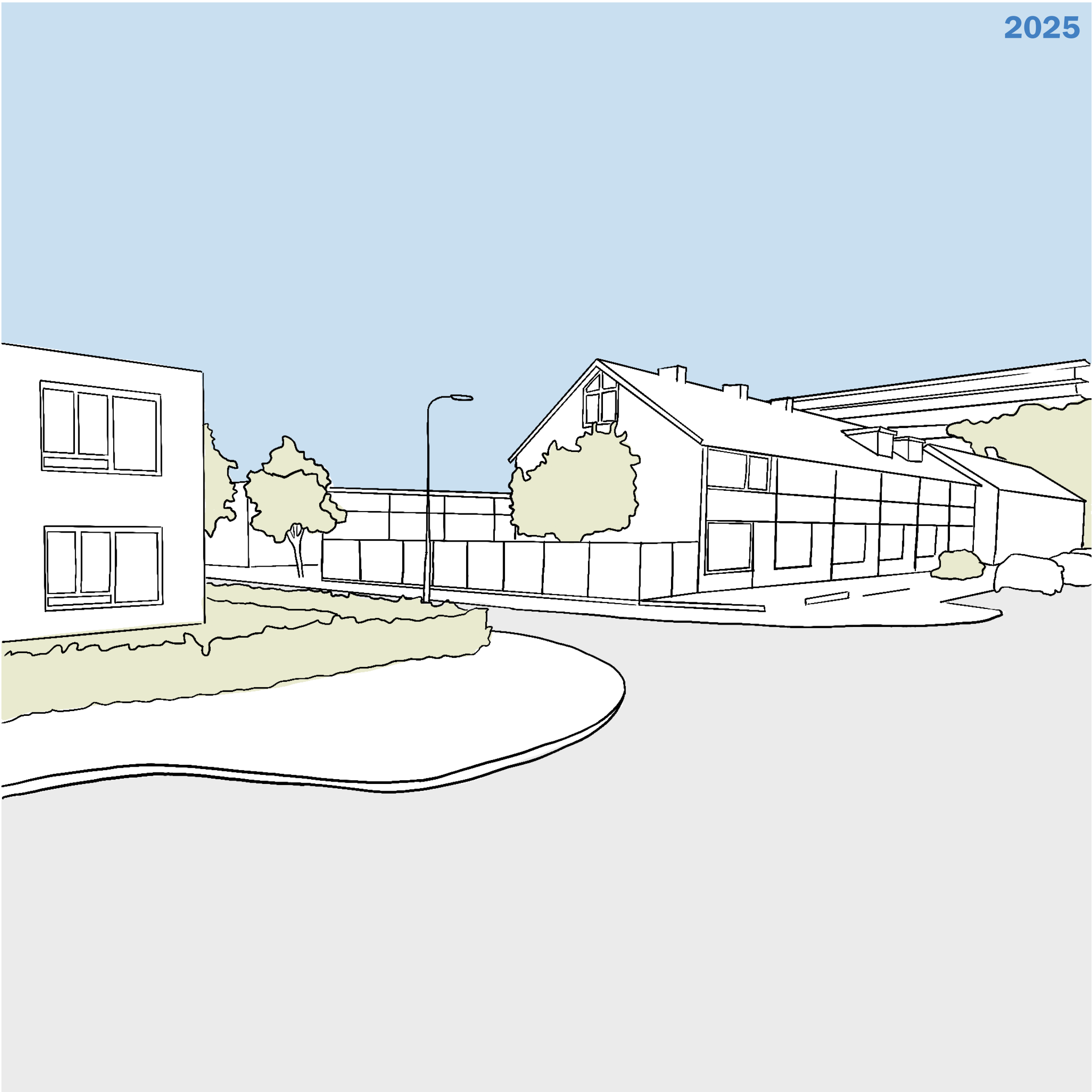
environmental and health benefits
reduce of heat-related risks
lowering levels of loneliness reduces dementia

- Social hub
- Healthcare
- Public building
- Busstop
- Pedestrian-oriented roads
- Bicycle-oriented roads
- Green space - sport
- Green space - rest
- Green space - enjoy
- Diversity of green space
- Kangoeroe living
- Intergenerational living
- Knarrenhof
- Assisted living location
- buildings
- parks
- water
- neighbourhoods



Implementation

Assessment
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Future possibilities

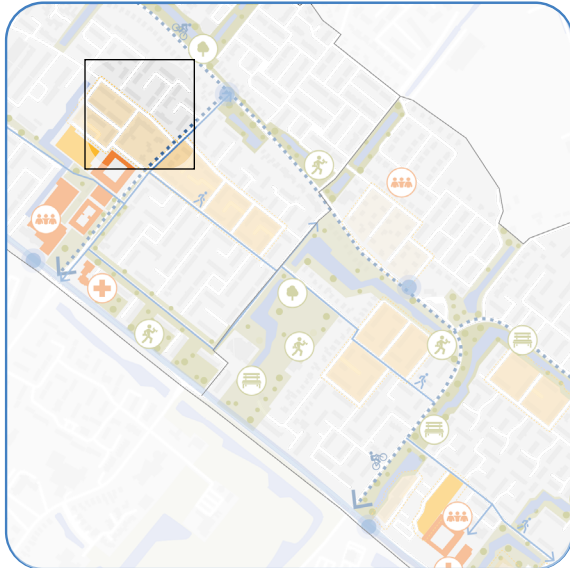
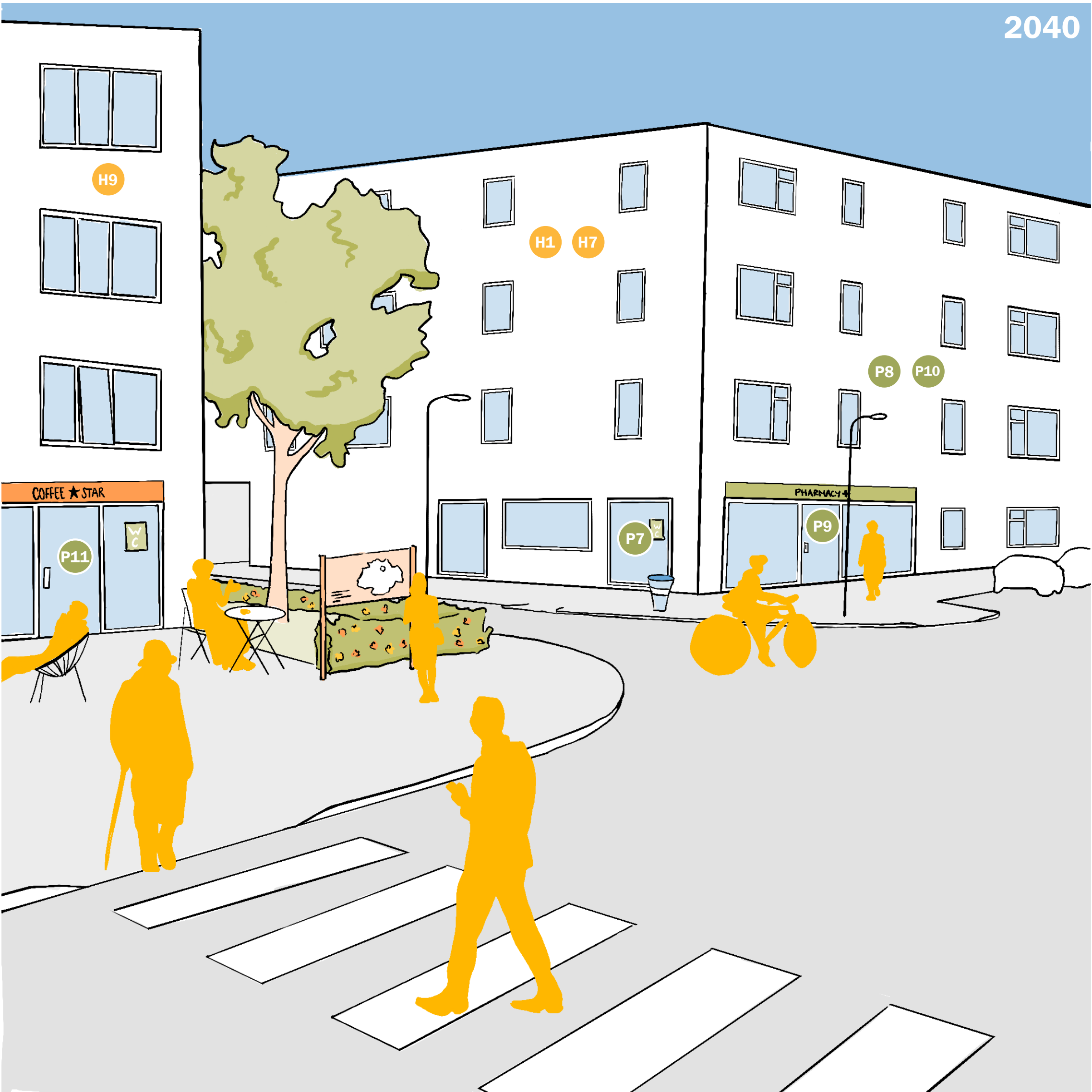


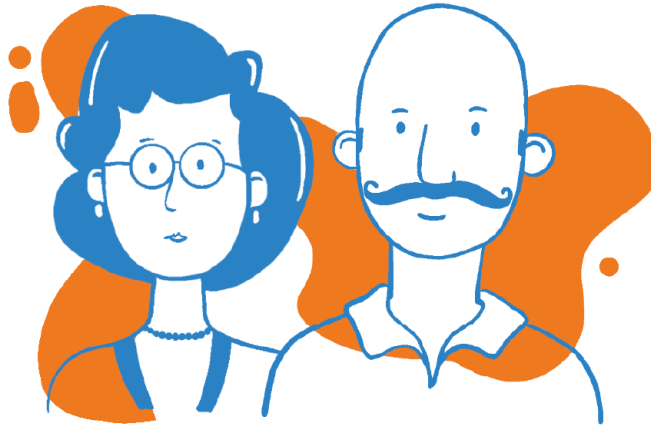
Jan & Maria

AGE
Maria: 66 years
Jan: 70 years
HOUSE
owner-occupied detached house
HOUSEHOLD
Together
NEIGHBOURHOOD
Sprenkelaar

Implementation

Assessment
Vision
Future possibilities





AGE
Maria: 81 years
Jan: 85 years

HOUSE
An apartment for life

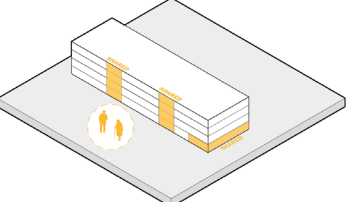
HOUSEHOLD
Together

NEIGHBOURHOOD
Anklaar

Jan & Maria

H9 | SENIOR CO-HOUSING

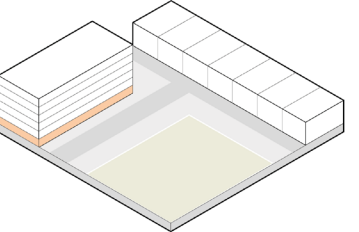
Older adults find social support and interaction in their collaborative living arrangements with like-minded neighbours.



related to:
H1, H2, H3

P8 | MIXED USE NEIGHBOURHOODS

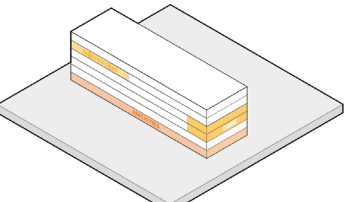
Multifunctional neighbourhoods allow elderly to reach amenities and facilities in a short distance.



related to:
P1, P7, P9, P10, P11, P12, S2

H7 | APARTMENTS FOR LIFE

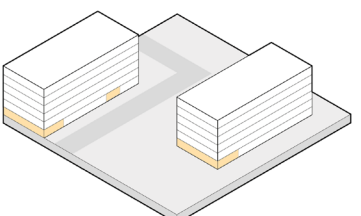
Apartments for life caters to all older residents, whether living independent or in need of assisting care.



related to:
H1, H2, H3

P7 | PUBLIC TOILETS

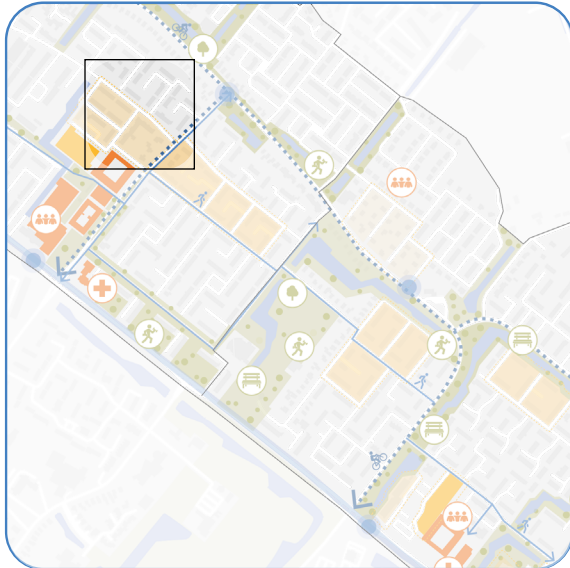
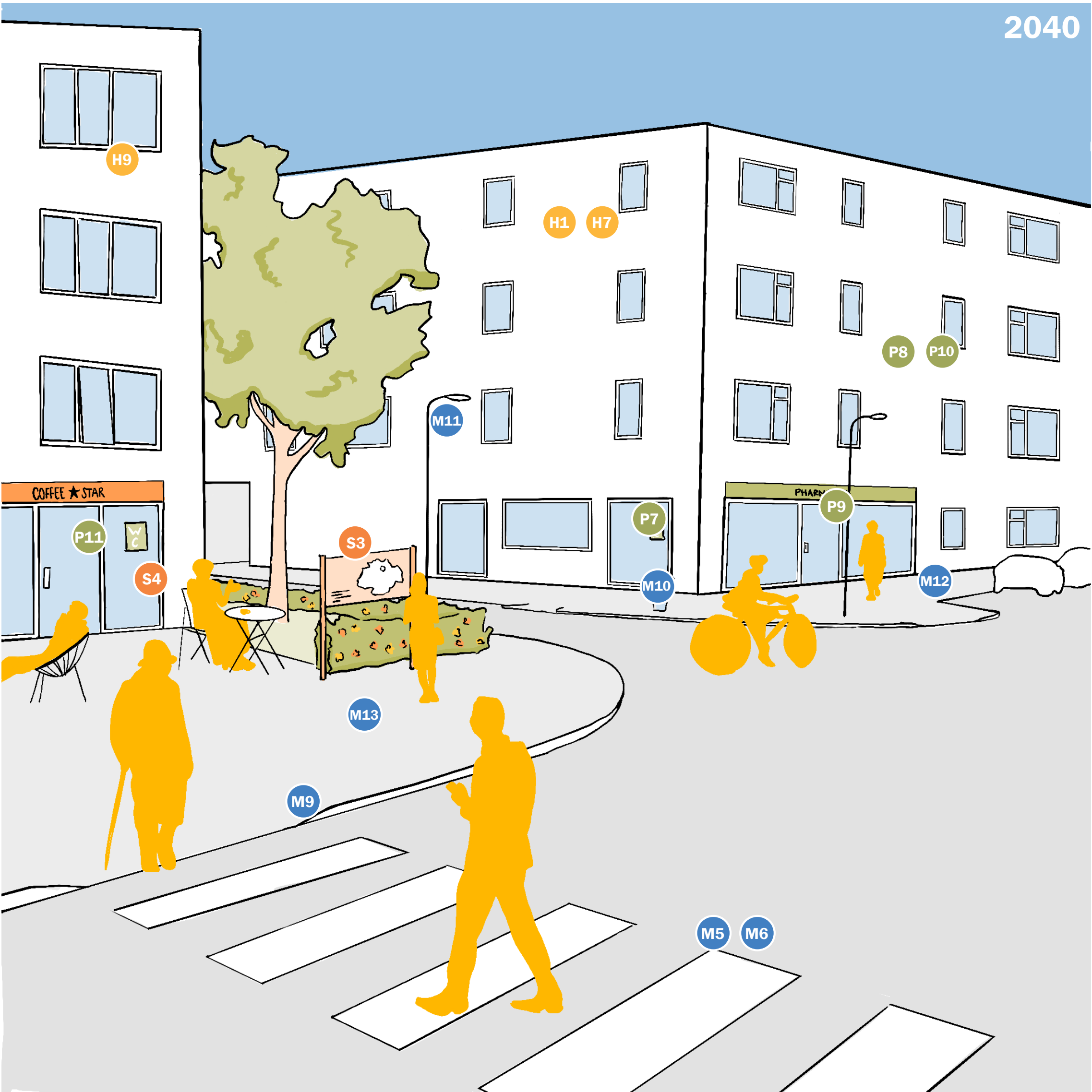
Accessibility of qualitative public toilets encourage daily outdoor activity.



related to:
P8, P11

Implementation

Assessment
Vision
Future possibilities





AGE
Maria: 81 years
Jan: 85 years

HOUSE
An apartment for life

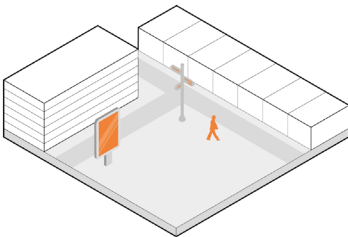
HOUSEHOLD
Together

NEIGHBOURHOOD
Anklaar

Jan & Maria

S3 | INFORMATION

The accessibility to information benefits the social inclusion of older individuals in the community.

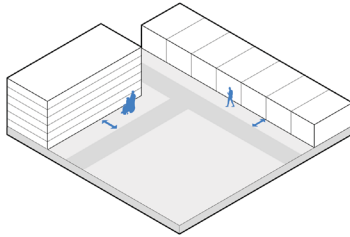


related to:

S2, S6

M13 | WIDE SIDEWALKS

Wider sidewalks ensure a safe walking environment for elderly without the risk of falling.



related to:

M5, M9, M12

S4 | INTERGENERATIONAL PLACES

Intergenerational places increase the social inclusion and cohesion by connecting younger and older generations.

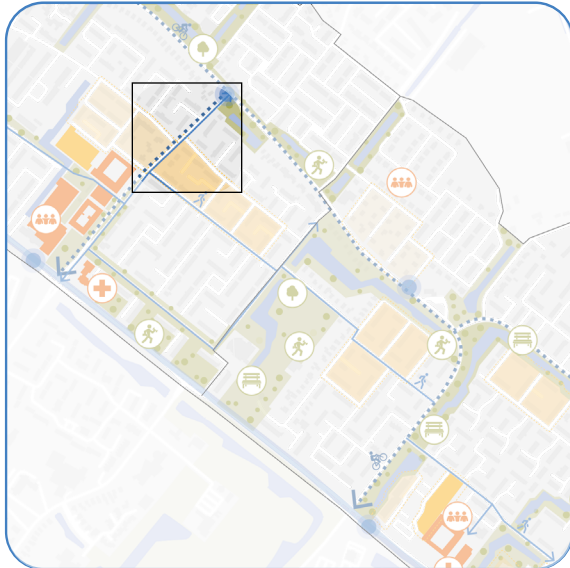
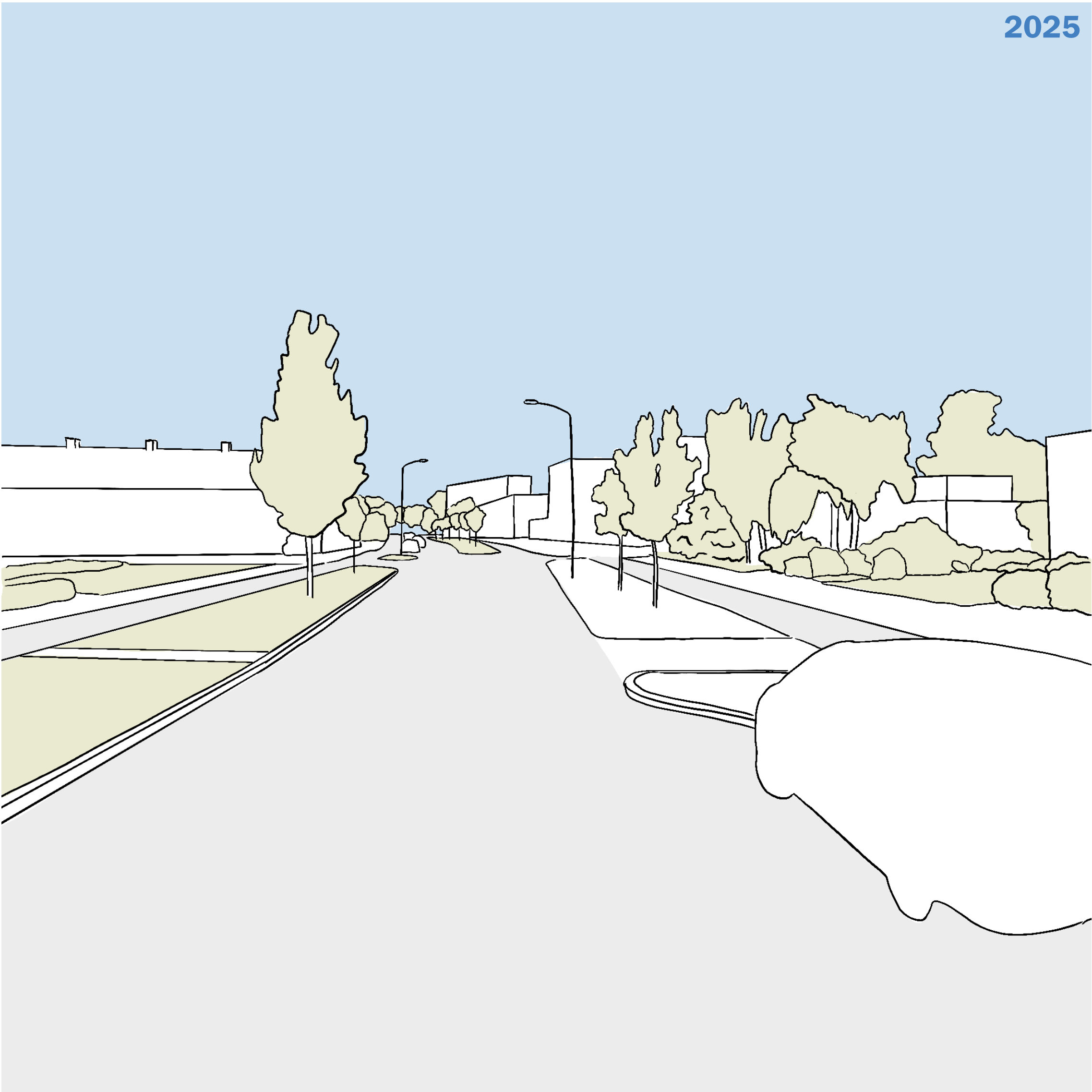



related to:

S6, S7, H5, H10

Implementation

Assessment
Vision
Future possibilities





AGE
69 years

HOUSE
A seniorcomplex apartment

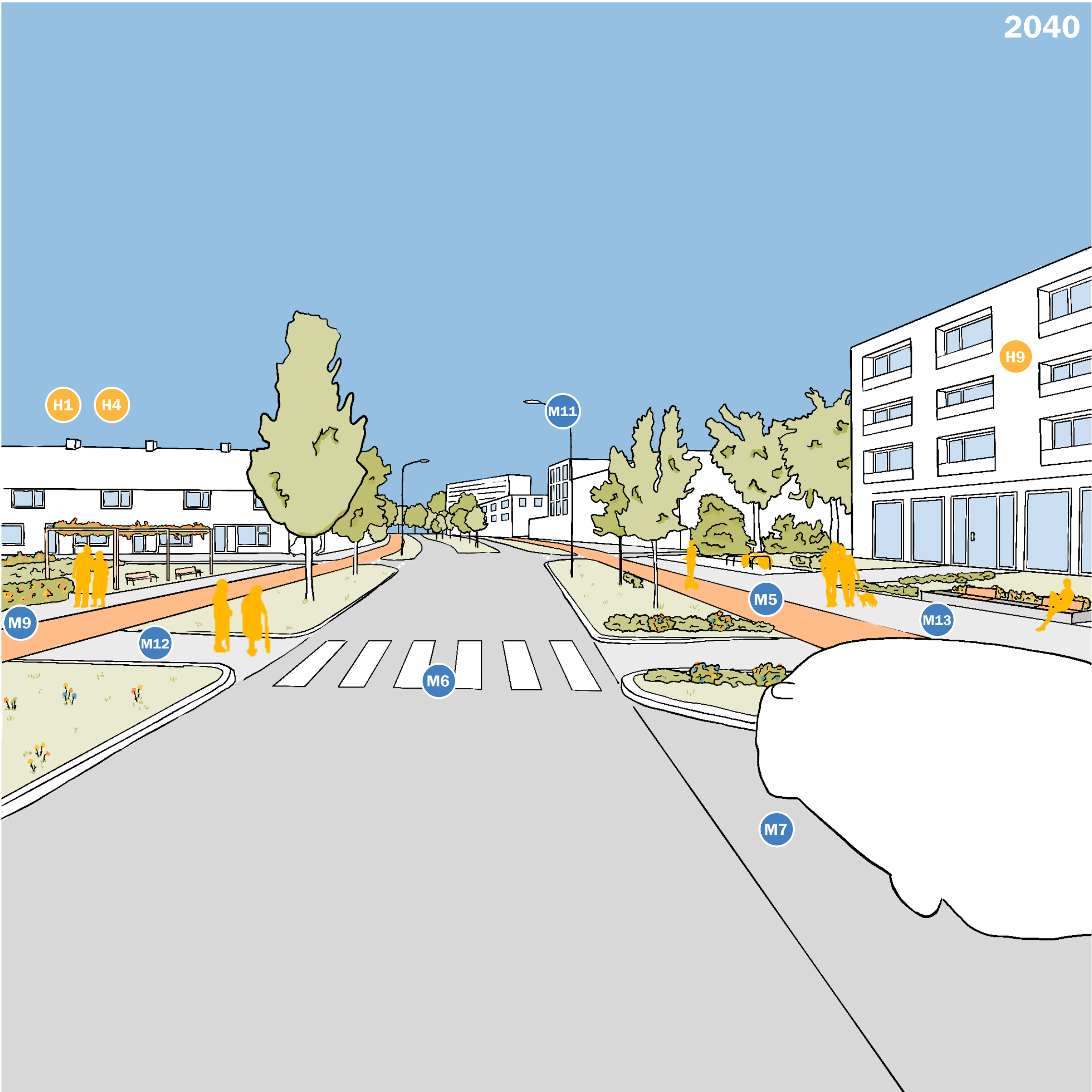
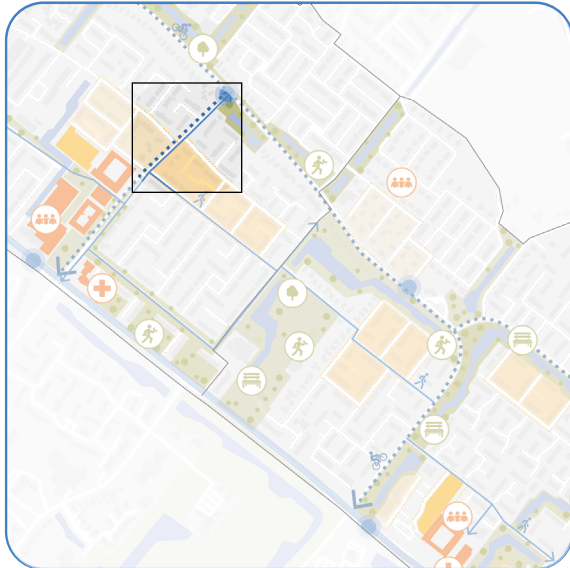
HOUSEHOLD
With her husband

NEIGHBOURHOOD
Near the city centre

Anneke

Implementation

Assessment
Vision
Future possibilities



Anneke

AGE
84 years

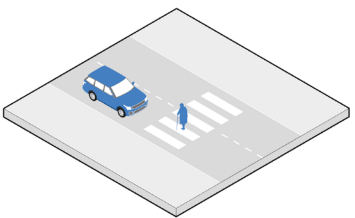
HOUSE
A seniorcomplex apartment

HOUSEHOLD
With her husband

NEIGHBOURHOOD
Near the city centre

M6 | SLOW DOWN THE CAR

Smart implications reduce the use of the car and slow the speed, avoiding busy and hazardous traffic.

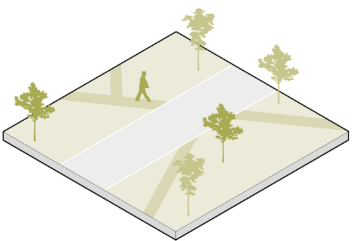


related to:

M5, M7

M12 | SAME LEVEL PAVEMENTS

Smooth and even pavement without obstacles ensure a safe walking environment for elderly without the risk of falling.

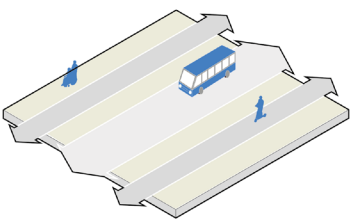


related to:

M5, M9, M13, S5

M7 | CLEAR STREET ZONING

Clear street zoning supports elderly in navigating infrastructure and decreases feelings of unsafety.

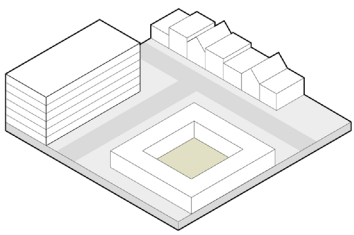


related to:

M5, M6

H1 | GIVING ELDERLY OPTIONS

Providing a variety of housing options enables older individuals to make autonomous decisions when considering relocation.

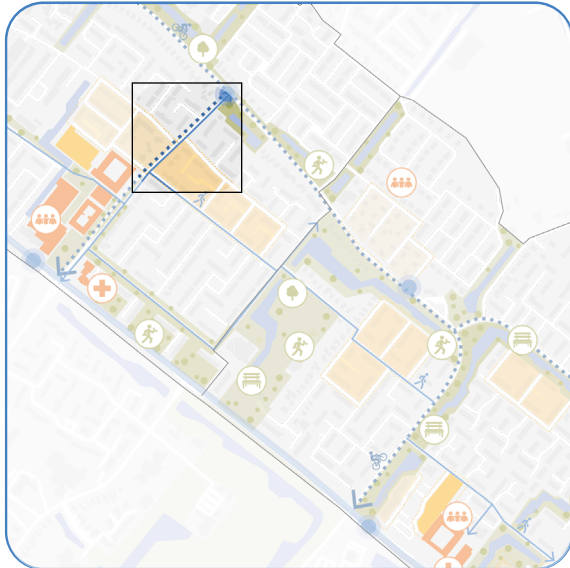



related to:

H2, H5, H6, H7, H8, H9, H10, H11

Implementation

Assessment
Vision
Future possibilities





Anneke

AGE
84 years

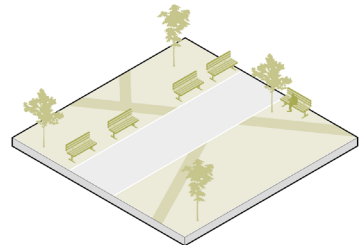
HOUSE
A seniorcomplex apartment

HOUSEHOLD
With her husband

NEIGHBOURHOOD
Near the city centre

P4 | FREQUENT AND COMFORTABLE SEATING

Frequent and inviting seating along paths and within parks encourages older adults to go outdoors.



related to:
P2, P3, P5, M5

S5 | MAINTENANCE

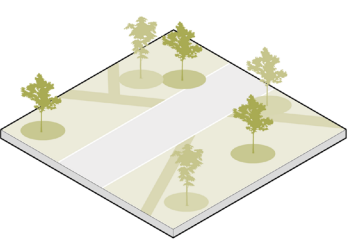
Maintenance is necessary in order to keep the neighbourhood accessible for older individuals



related to:
M5, M9, M10, M11, M12

P5 | SHADED AREAS

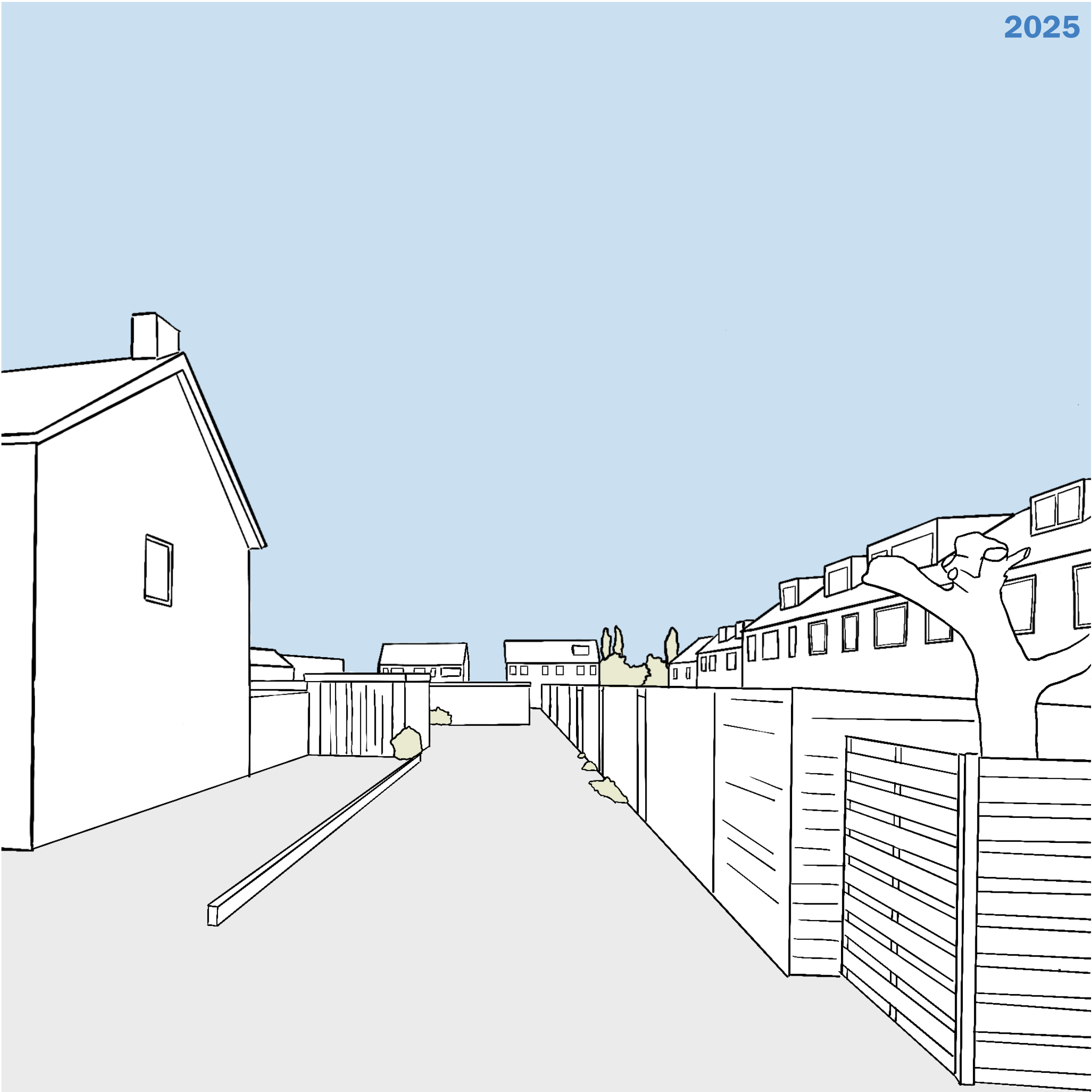
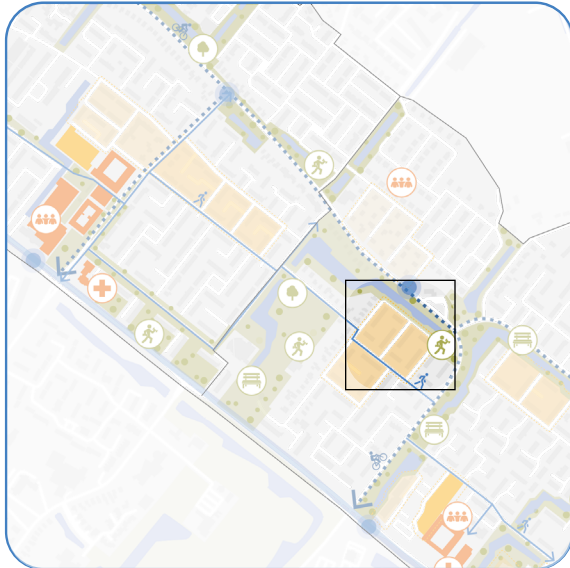
Shade provided by buildings and trees provides comfortable outdoor spaces while mitigating climate threats.



related to:
P1, P3, P4

Implementation

Assessment
Vision
Future possibilities

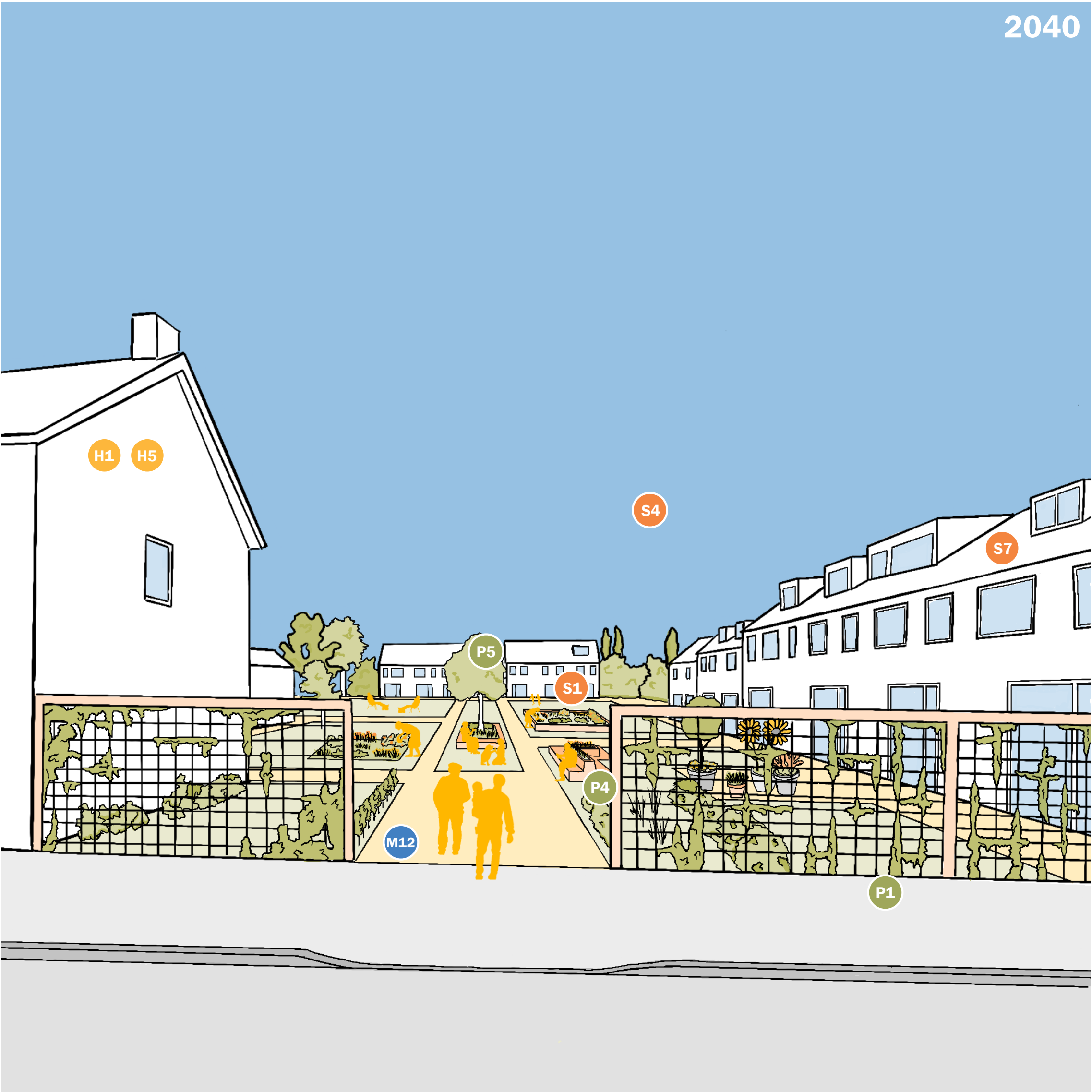
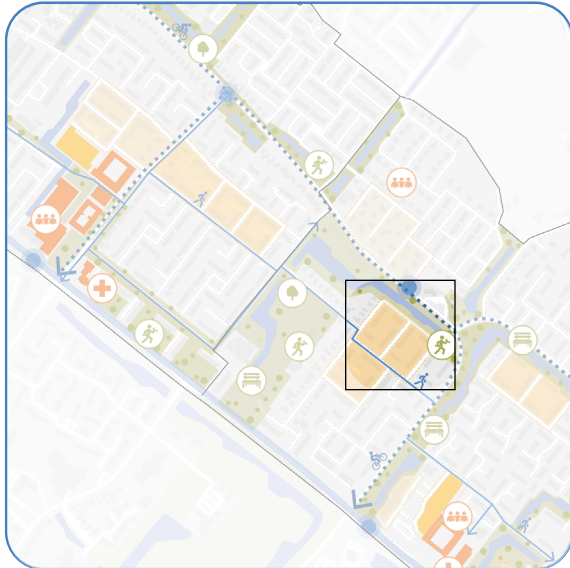


Paul

- AGE**
66 years
- HOUSE**
A rental terraced house
- HOUSEHOLD**
Alone
- NEIGHBOURHOOD**
Anklaar

Implementation

Assessment
Vision
Future possibilities



Paul

AGE
81 years

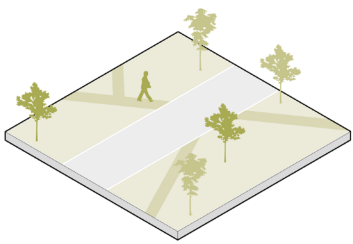
HOUSE
A Knarrenhof

HOUSEHOLD
Alone

NEIGHBOURHOOD
Anklaar

M12 | SAME LEVEL PAVEMENTS

Smooth and even pavement without obstacles ensure a safe walking environment for elderly without the risk of falling.

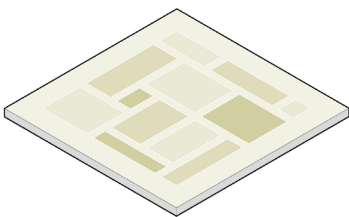


related to:

M5, M9, M13, S5

S1 | COMMUNITY GARDENS

The well-being of older adults improves both mentally and physically when involved in the planning and tending of community gardens.

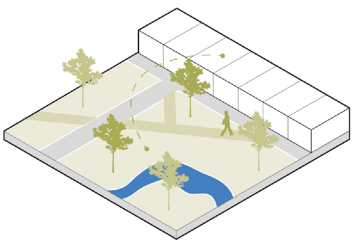


related to:

P1, P2, H5

P1 | PROXIMITY TO GREEN AND BLUE

The proximity to nature in urban environments benefits the well-being of older adults.

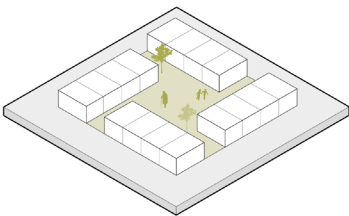


related to:

P2, P5, P6, P8, M5, H3, S1

H5 | KNARRENHOF

Elderly living in a Knarrenhof are socially supported by their neighbours while maintaining their independence.

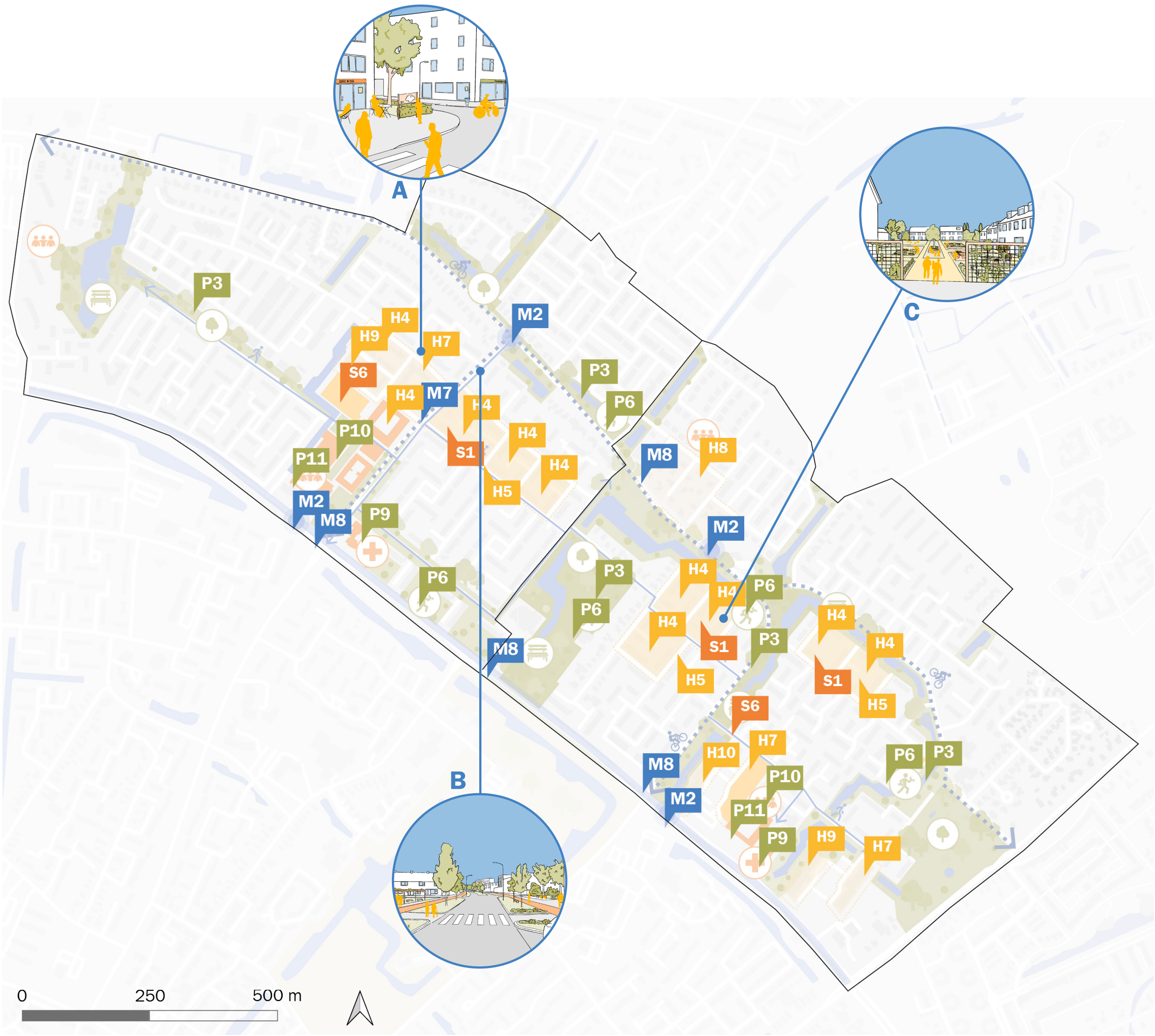


related to:

H1, H2, H3, H4, S1, S4

Implementation

Assessment
Vision
Future possibilities



AGE
Sandra: 61 years
Dirk: 55 years
HOUSE
A rental terraced house
HOUSEHOLD
Together

Sandra & Dirk

TOWN
Teuge

Introduction

Ageing population
Quality of life
Age-friendly framework

Pattern language

Methodology
Age-friendly pattern set
Pattern examples

Implementation

Assessment
Vision
Future possibilities

Conclusion

Research question
Transferability and limitations

Conclusion

Research question

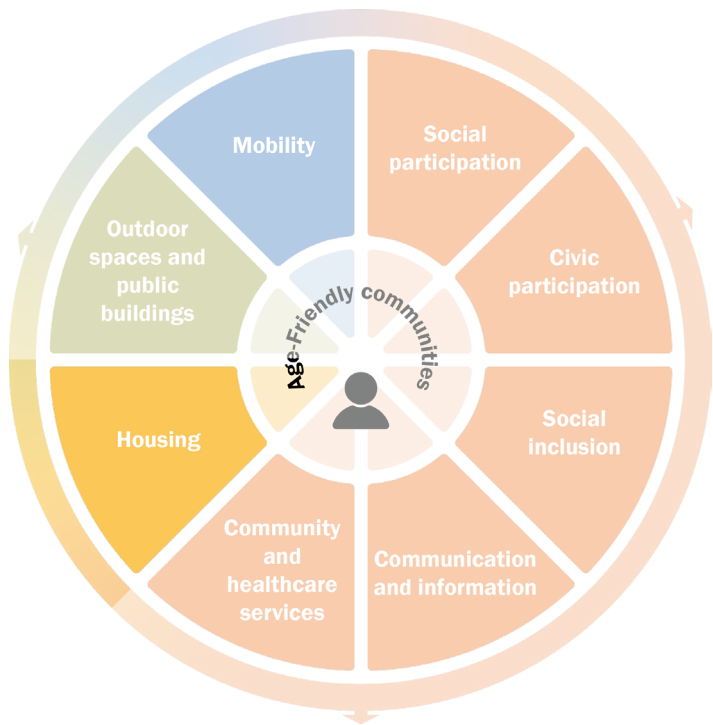
Transferability and limitations

*“How could **age-friendly** spatial planning and strategy in Dutch cities support **active and healthy ageing** for elderly and contribute to a more balanced **housing market**?”*

*Age-friendly spatial planning and strategy in Dutch cities is highly **context-dependent**, but **through the pattern language** provides a means to **enhance quality of life** for older adults by supporting active and healthy ageing and enabling **suitable housing** options for ageing in place. In doing so, it not only **improves** the quality of life of the elderly, but also contributes to unlocking housing for younger generations, **offering a pathway** toward a more balanced housing market.*

Conclusion

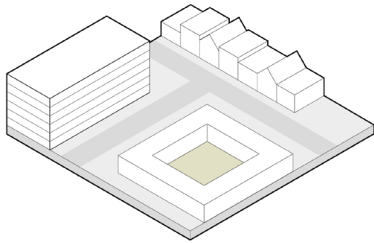
Research question
Transferability and limitations



H1

GIVING ELDERLY OPTIONS

Providing a variety of housing options enables older individuals to make autonomous decisions when considering relocation.



related to:

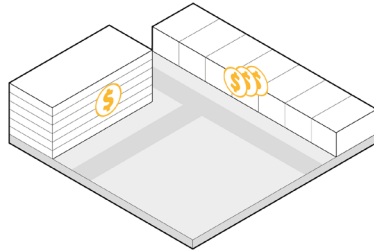
H2, H5, H6, H7, H8, H9, H10, H11

68

H2

MAKE IT AFFORDABLE

Social and affordable housing options offer opportunities for elderly to consider their preferred living arrangement in later life.



related to:

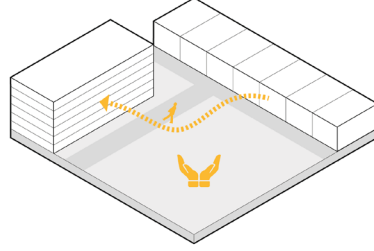
H1, H5, H6, H7, H8, H9, H10, H11

70

H3

ASSIST RELOCATION

Assisting elderly in their relocation process increases the accessibility to live in a suitable dwelling.



related to:

H1, H2, H5, H7, H8, H9, H10

72

rehousing chain up to 5 relocations

not seen as a solution but as an intermediate goal to a well-functioning housing market.

H4

SEMI-PUBLIC OUTDOOR SPACES

Semi-public outdoor spaces benefit the well-being of older adults and enables independence and social inclusion.



related to:

H5, P1, P2

74

H5

KNARRENHOF

Elderly living in a Knarrenhof are socially supported by their neighbours while maintaining their independence.



related to:

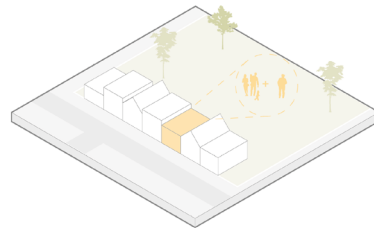
H1, H2, H3, H4, S1, S4

76

H6

LIVING WITH FAMILY

Living with family allows elderly to live in a safe environment close to family members.



related to:

H1, H8, H11

78

H7

APARTMENTS FOR LIFE

Apartments for life caters to all older residents, whether living independent or in need of assisting care.



related to:

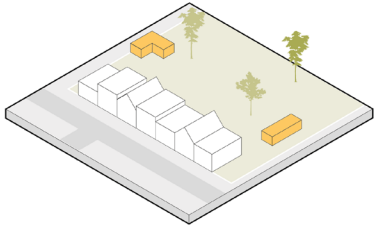
H1, H2, H3

80

H8

KANGAROO HOUSING

A kangaroo house enables older adults to be supported by small care services, while maintaining independent.



related to:

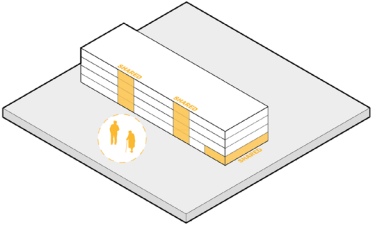
H1, H2, H3, H6

82

H9

SENIOR CO-HOUSING

Older adults find social support and interaction in their collaborative living arrangements with like-minded neighbours.



related to:

H1, H2, H3

84

H10

INTERGENERATIONAL CO-HOUSING

Older adults find social support and interaction in their collaborative living arrangements with younger generations.



related to:

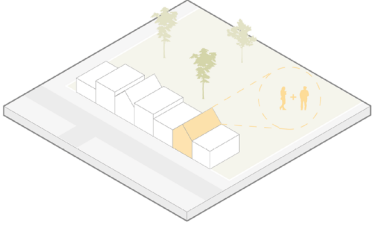
H1, H2, H3, S4

86

H11

DUO-HOUSING

Duo-housing helps both residents in maintaining independence while socially supporting each other.



related to:

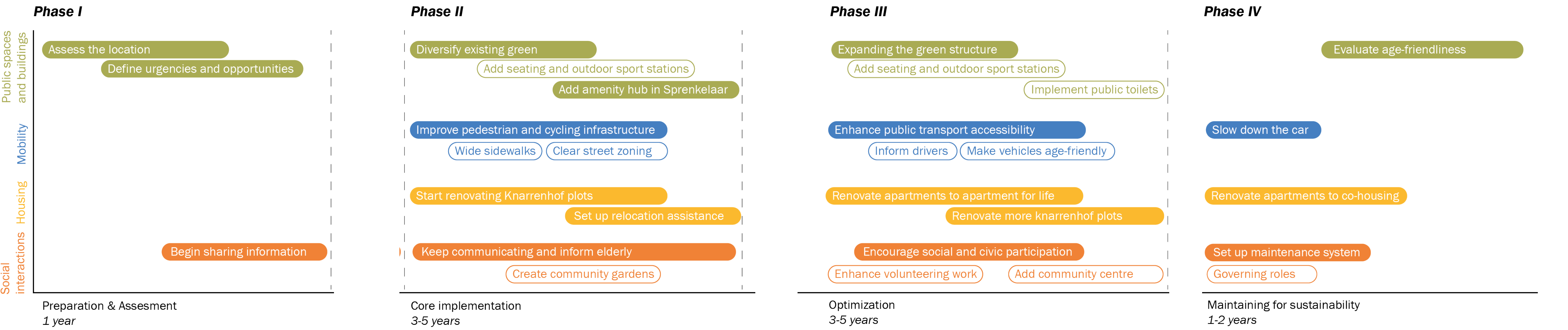
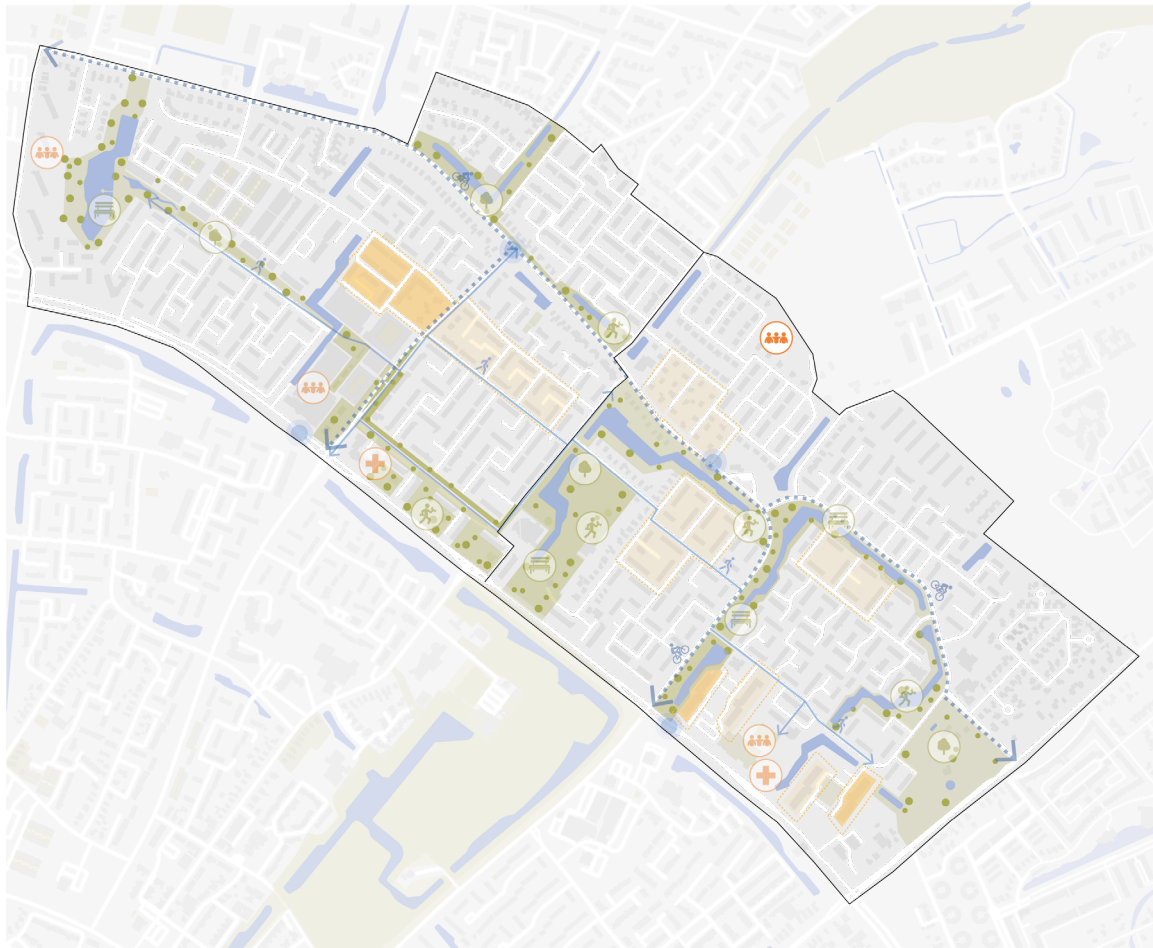
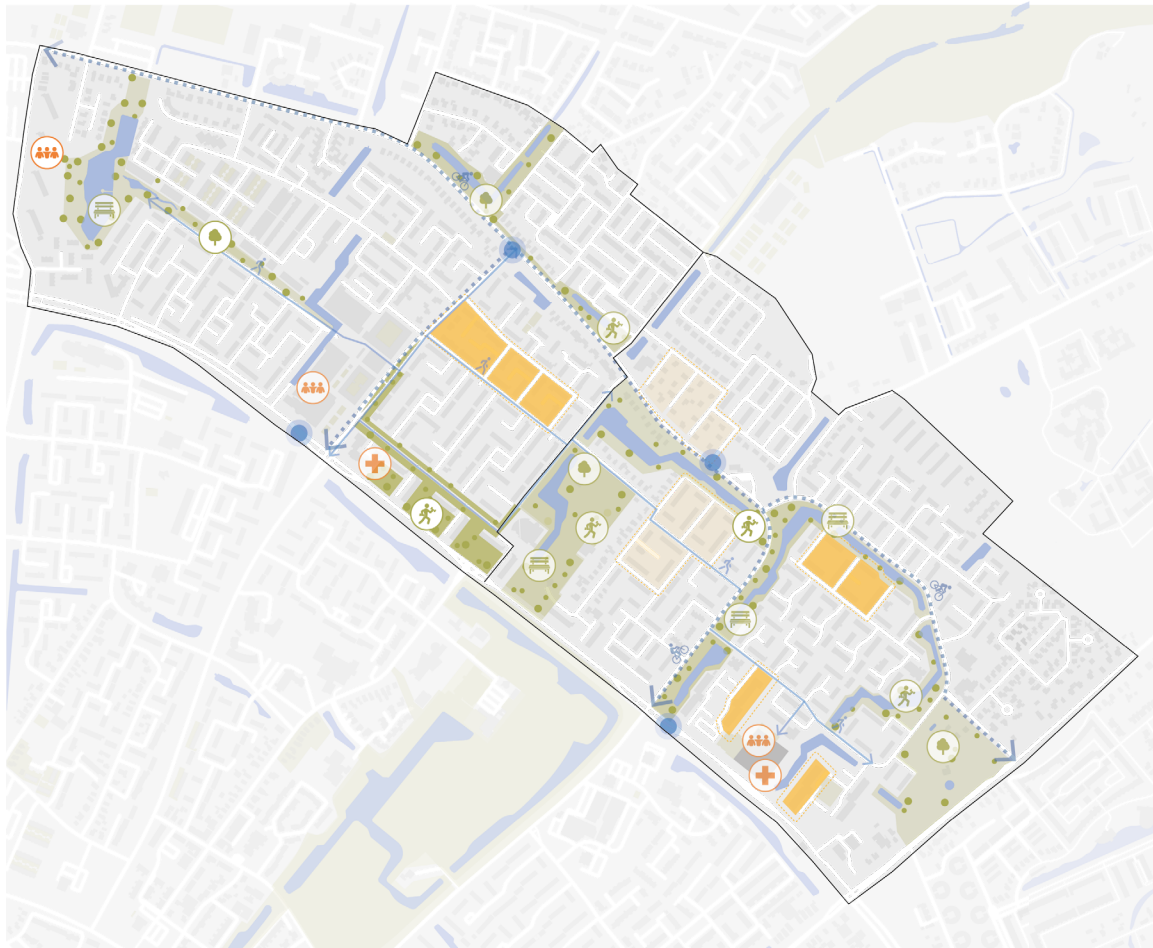
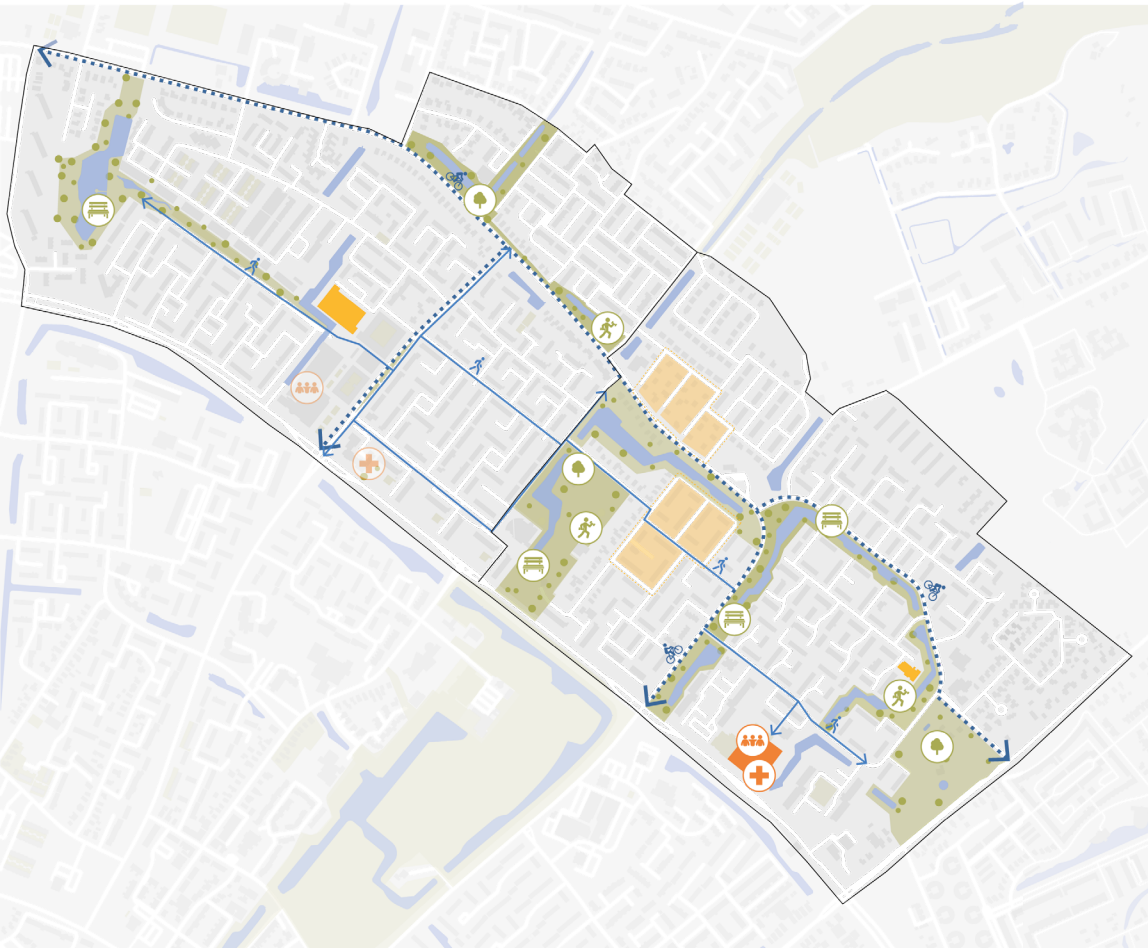
H1, H2, H6

88

Conclusion

Research question
Transferability and limitations

selection, prioritisation, and application

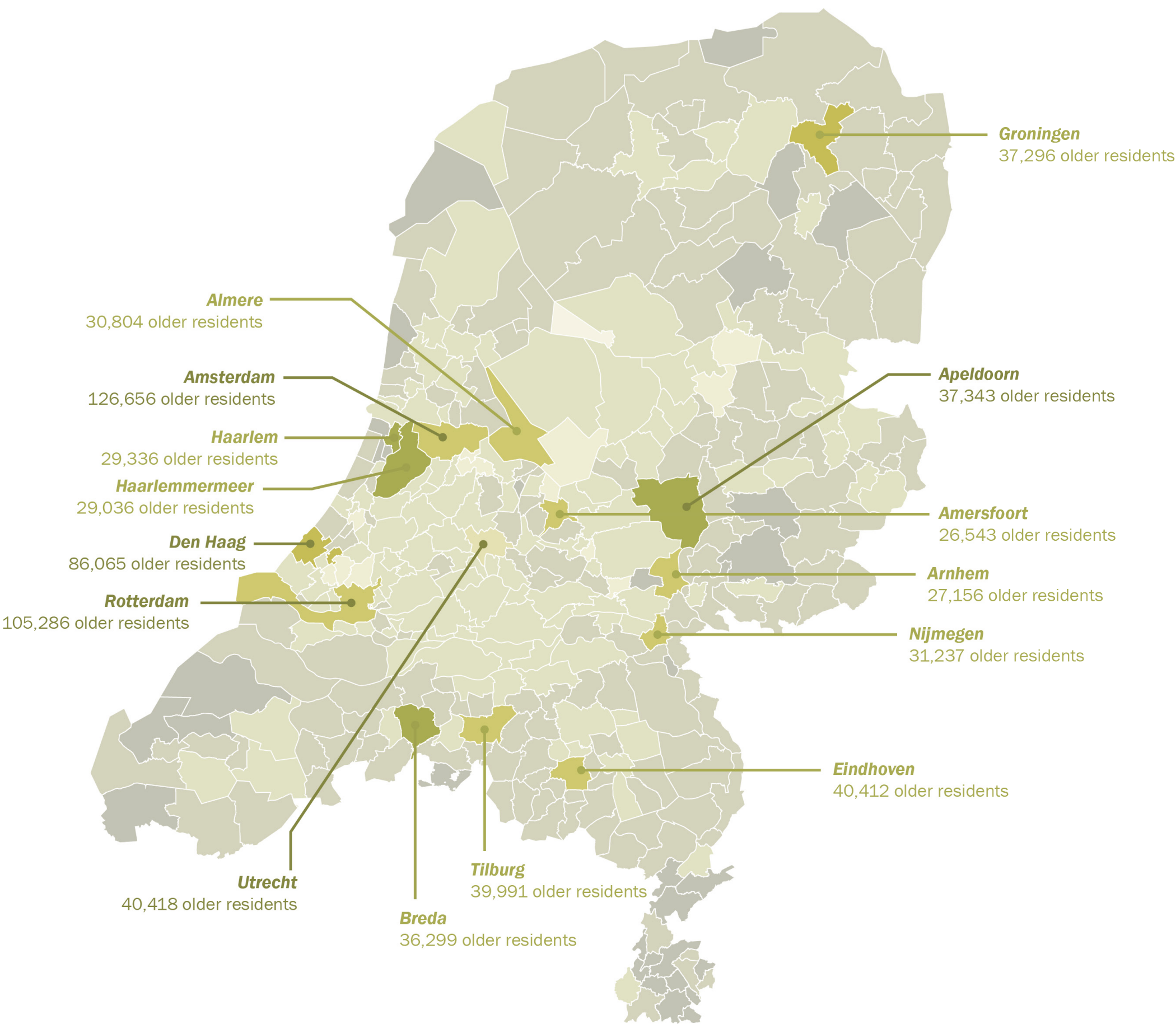


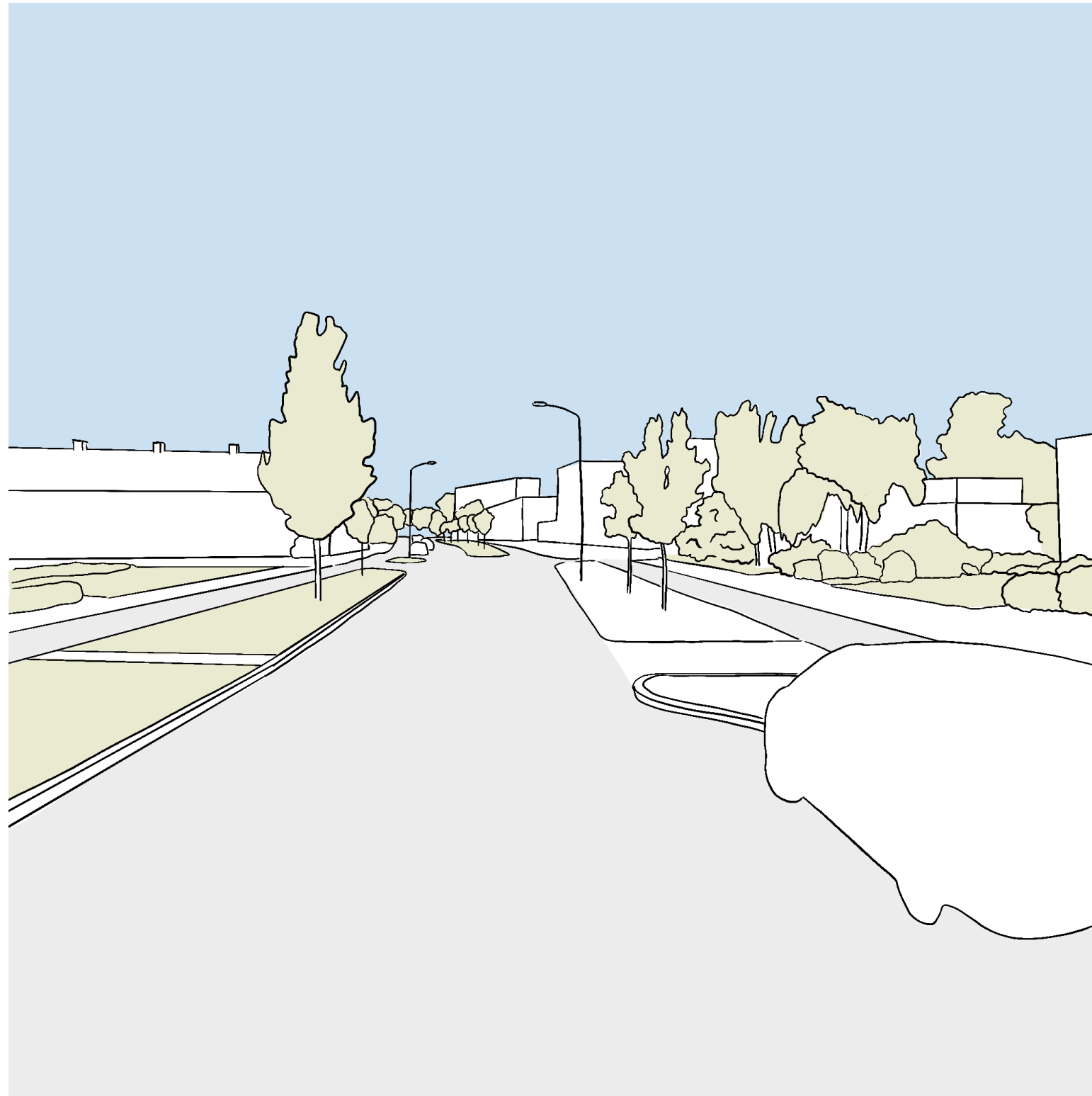
Conclusion

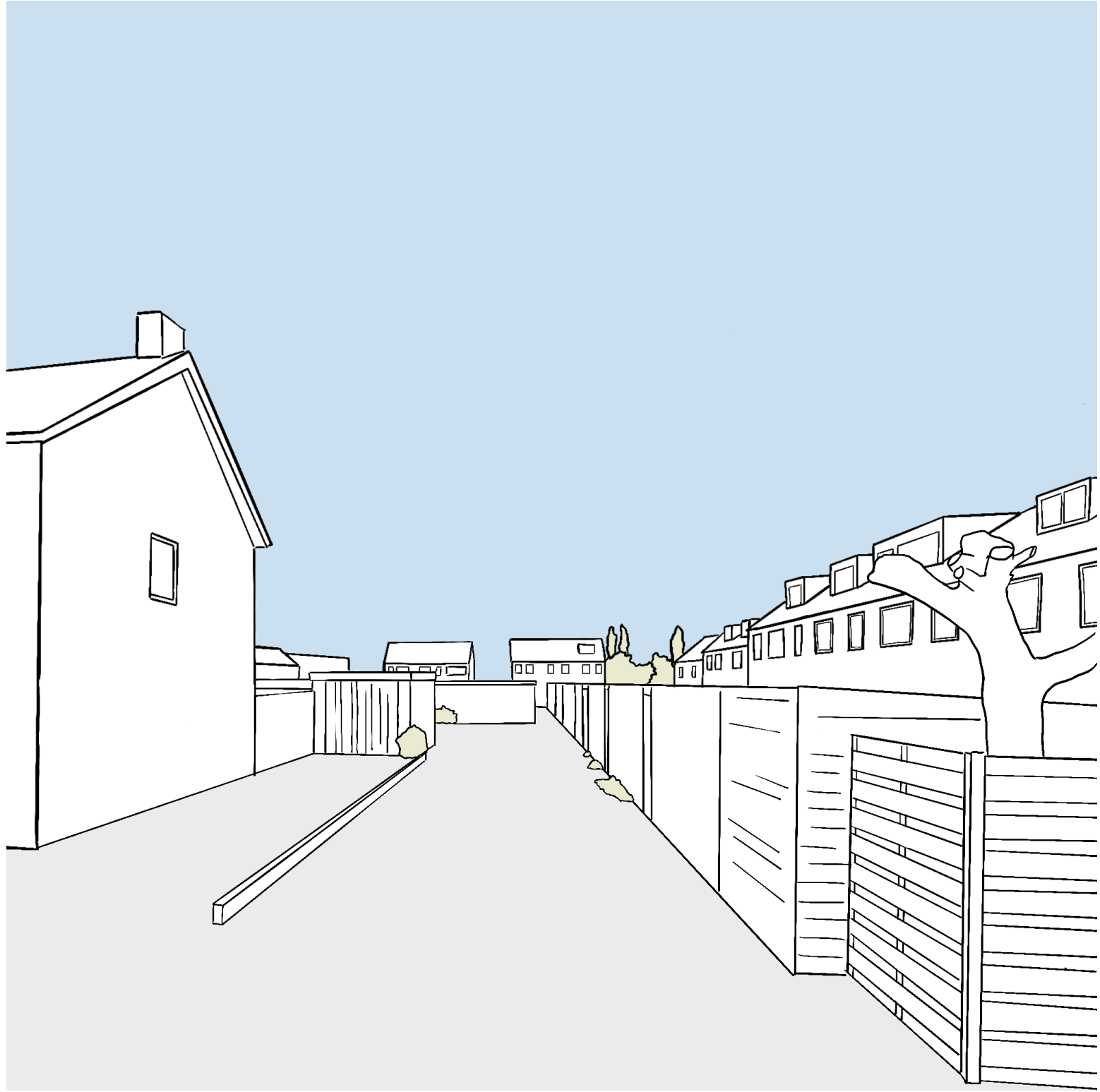
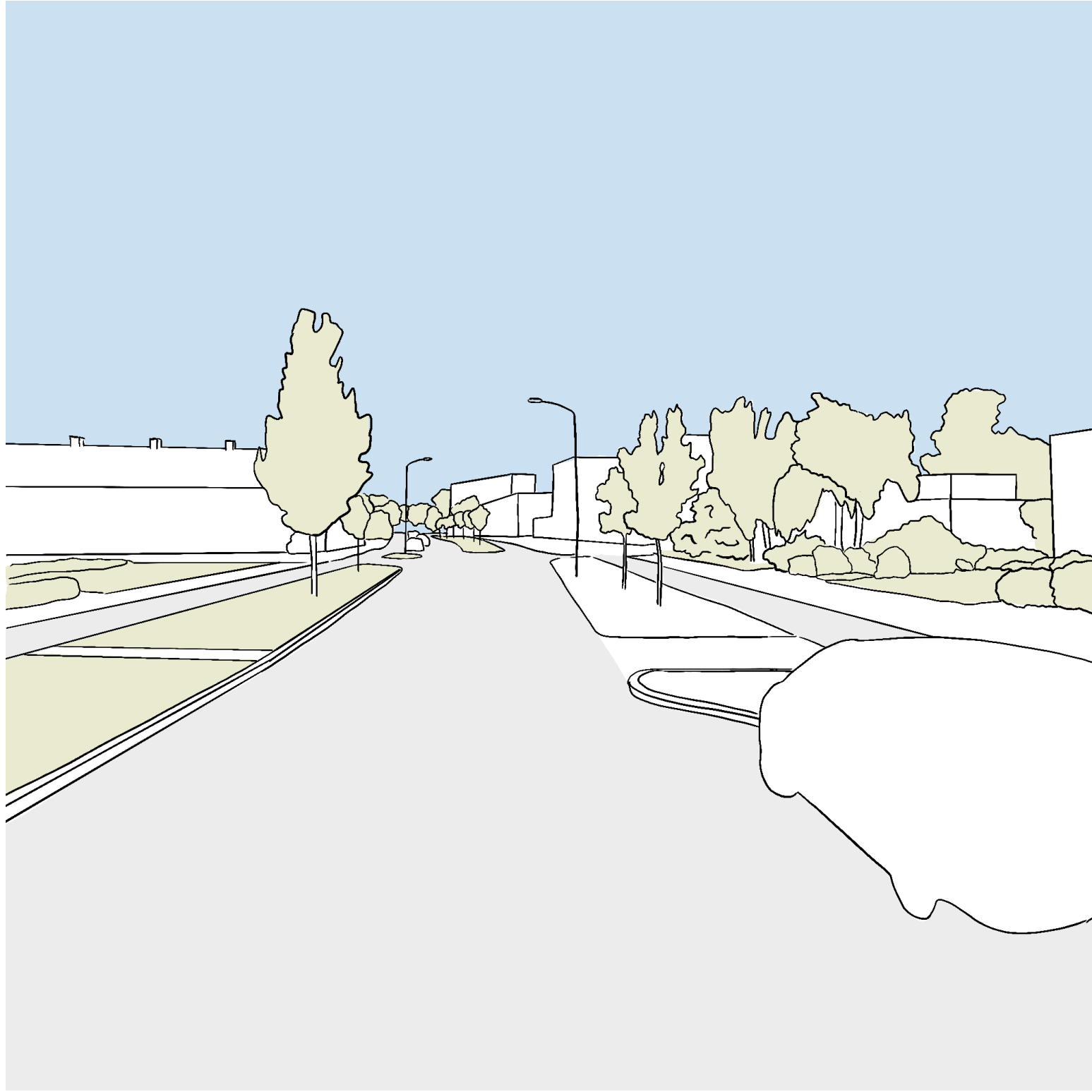
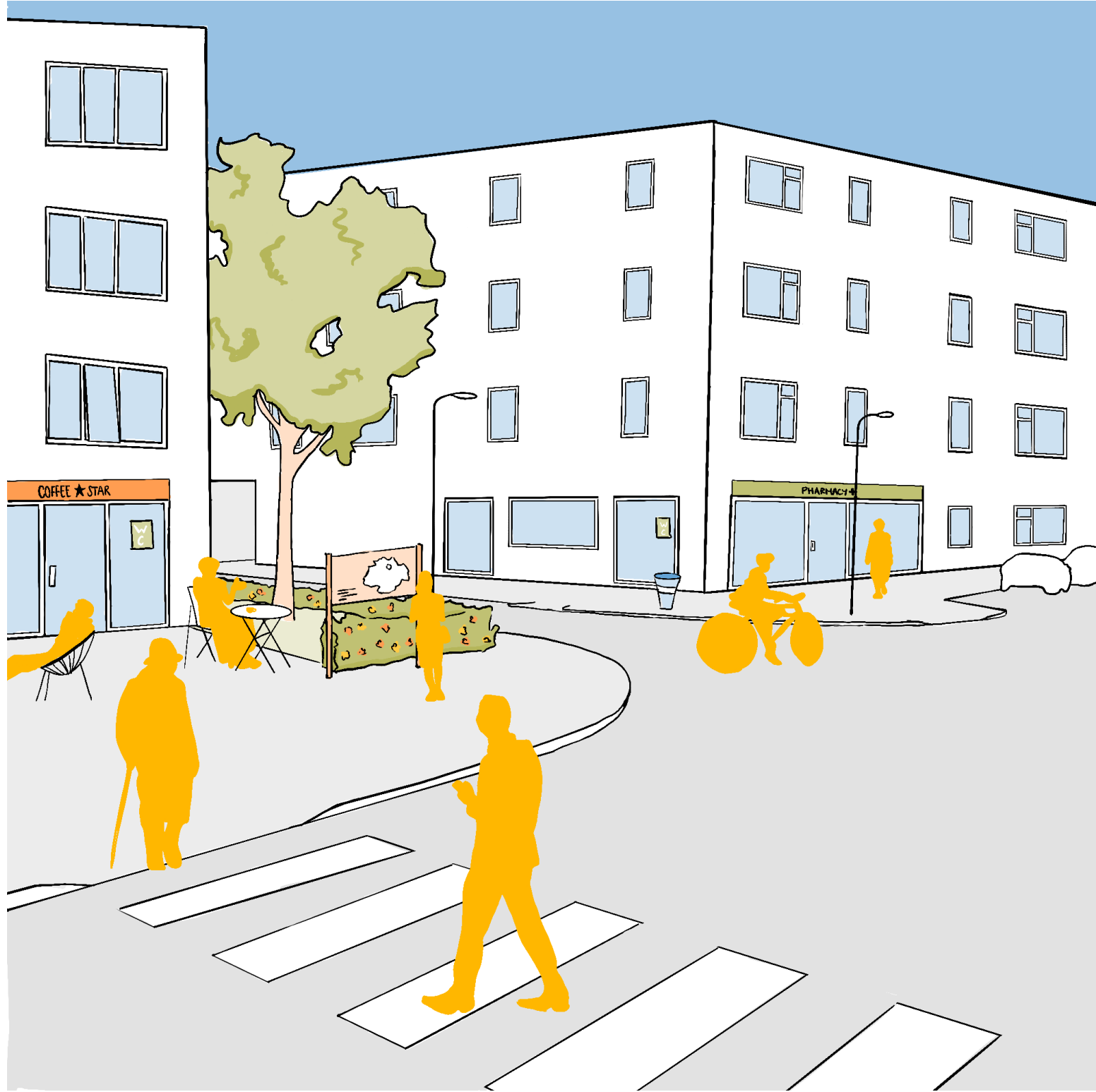
Research question
Transferability and limitations

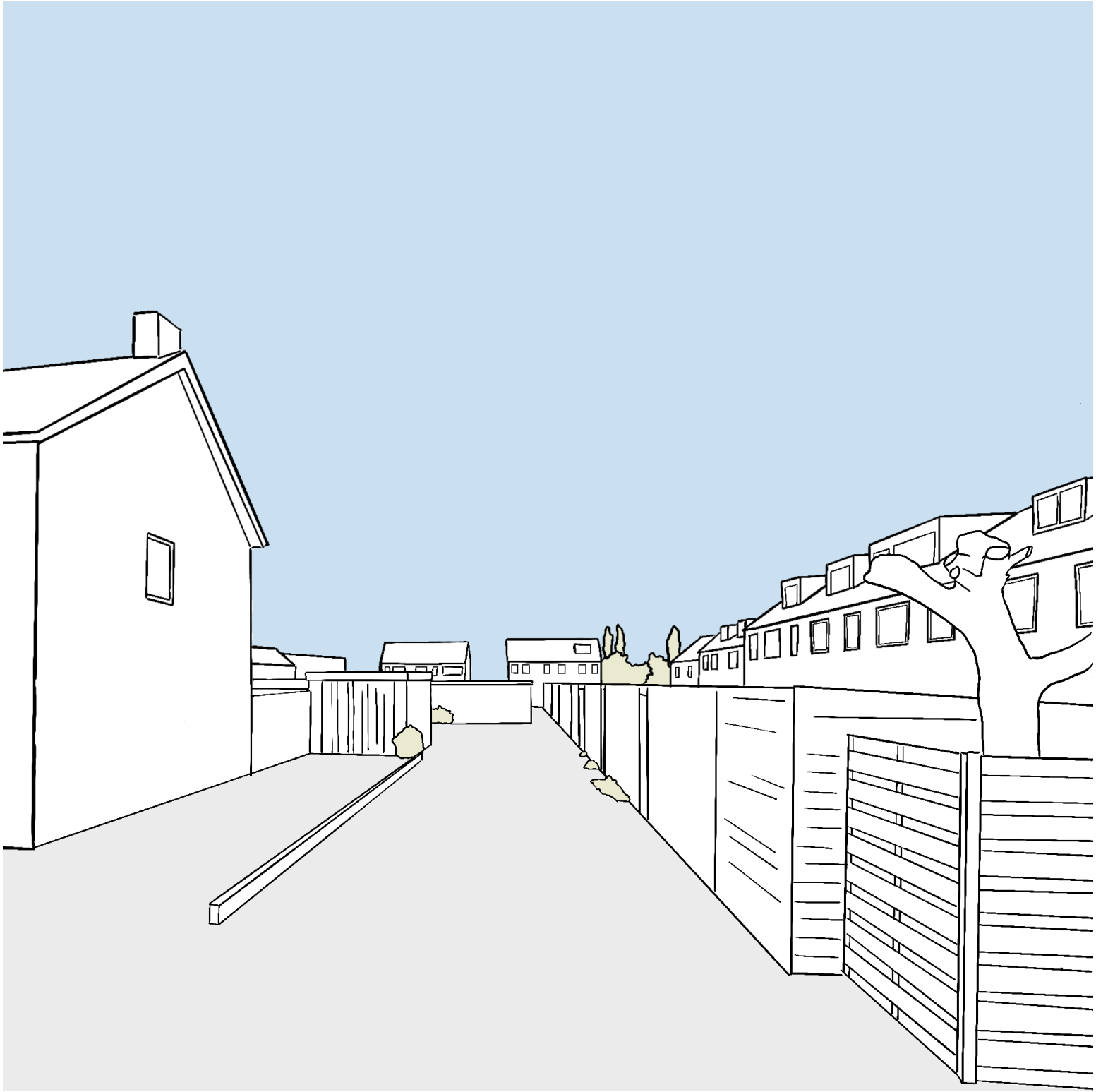
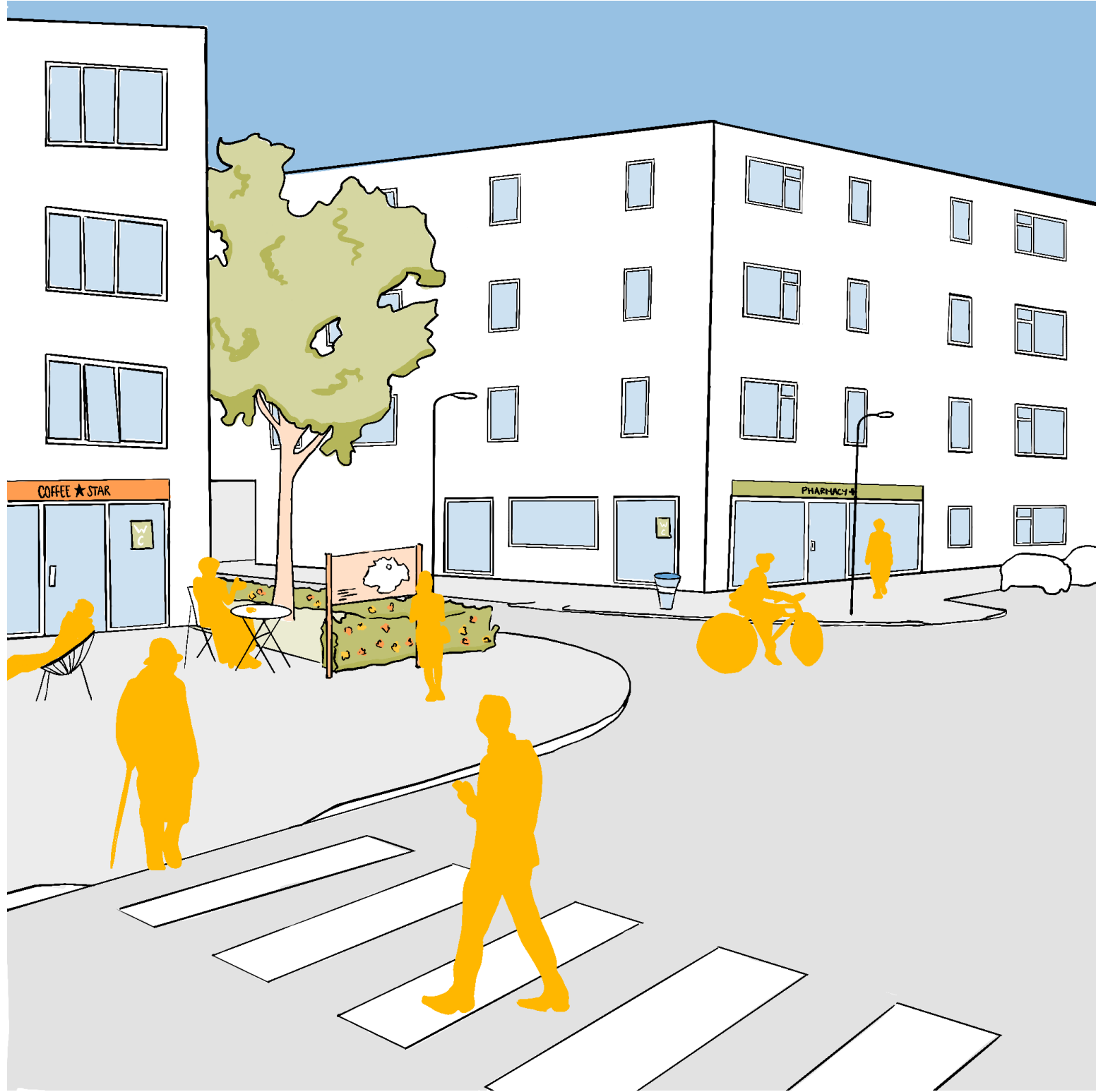
global value
post-war neighbourhood example

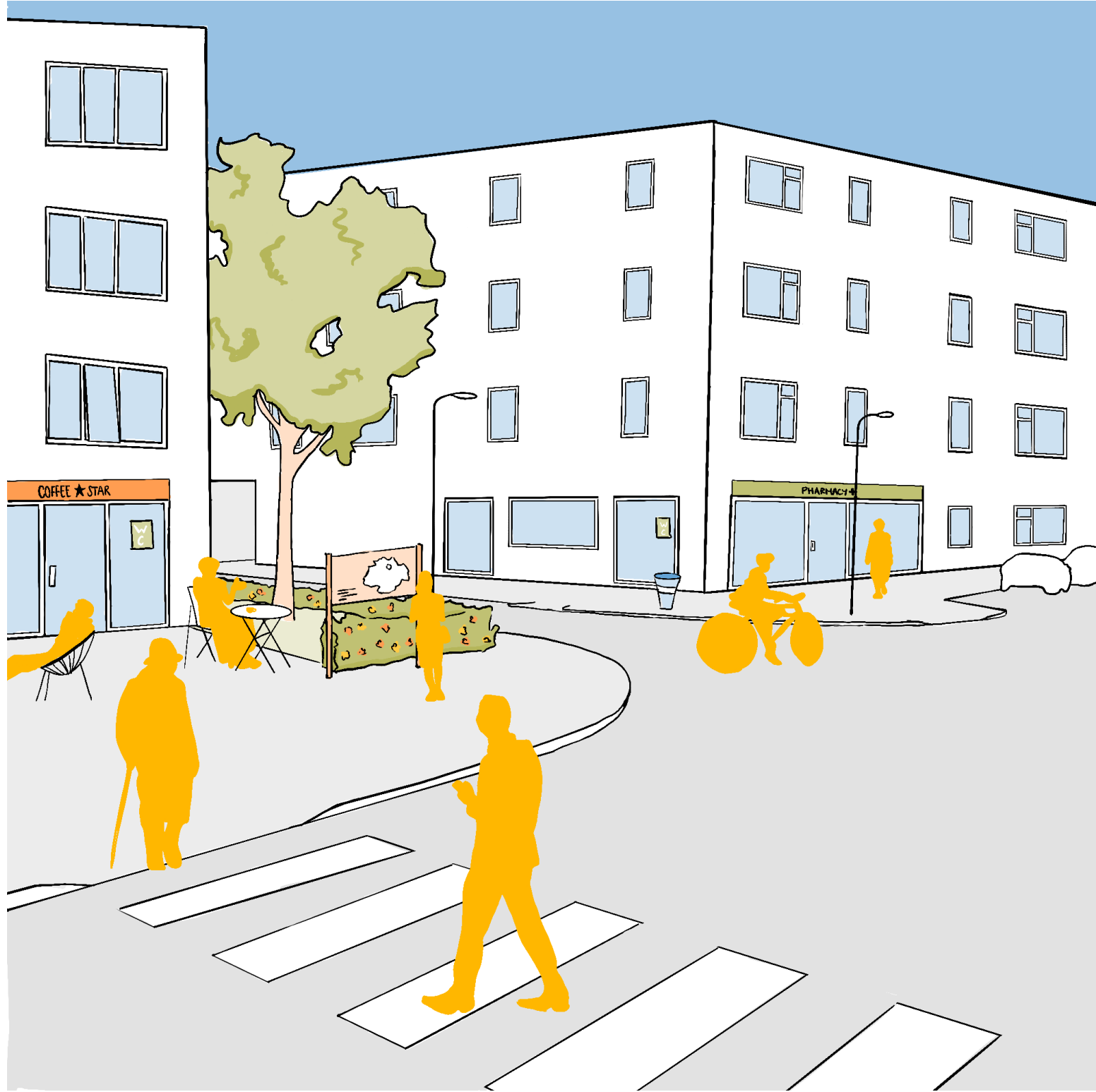
interdisciplinary nature
prescribe or impose specific lifestyles

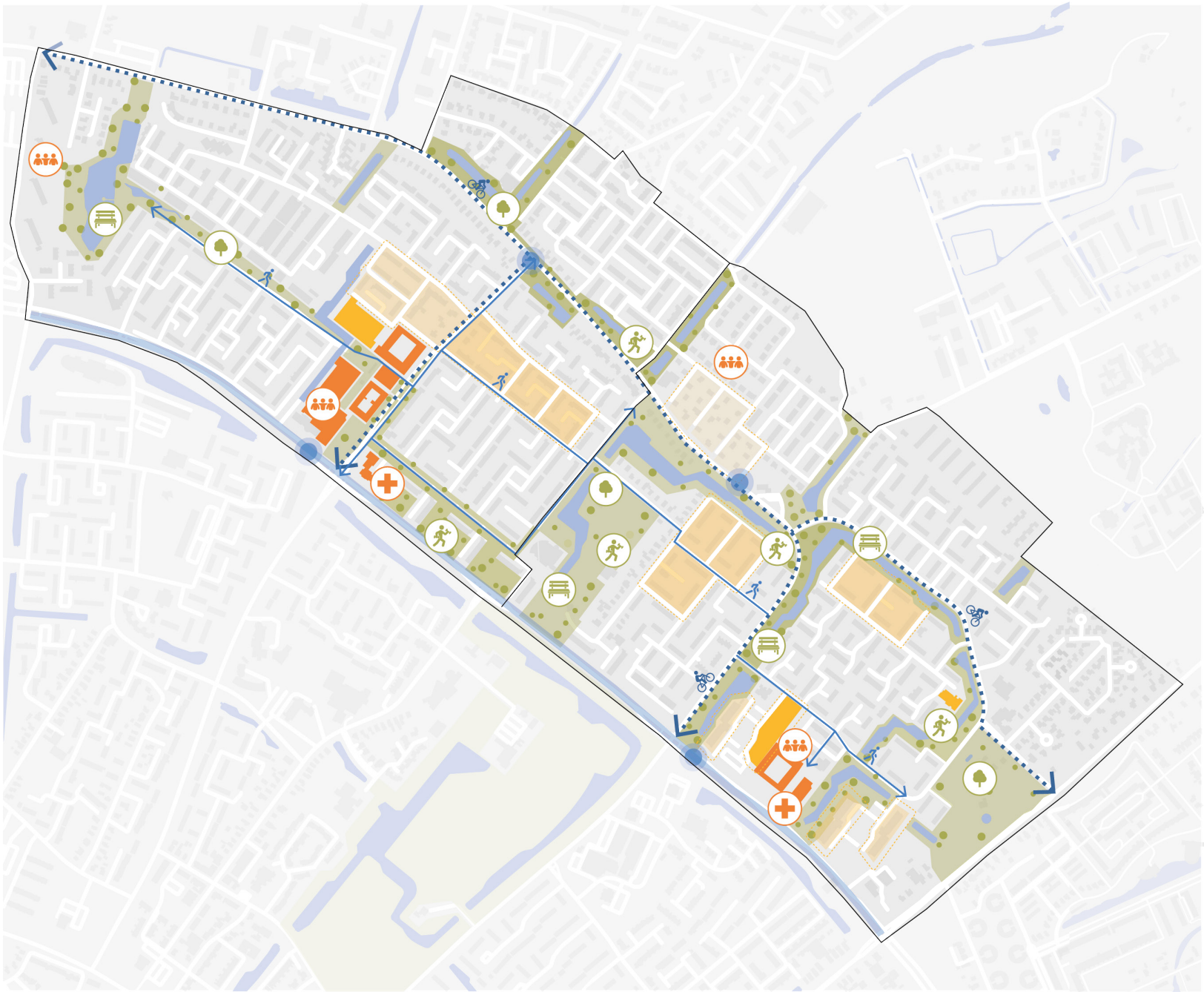






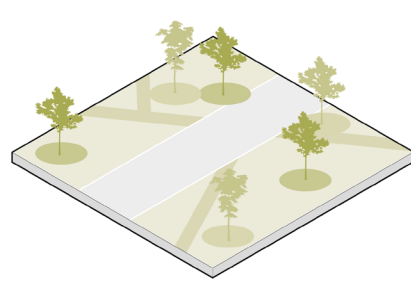




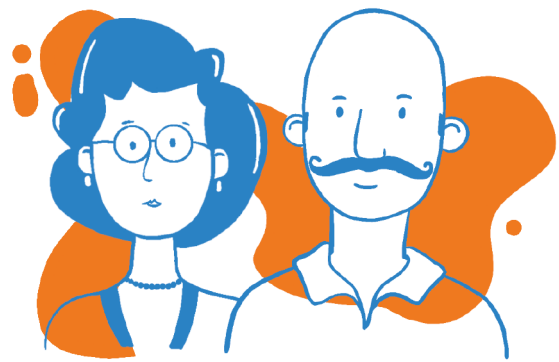


P5 | SHADED AREAS

Shade provided by buildings and trees provides comfortable outdoor spaces while mitigating climate threats.

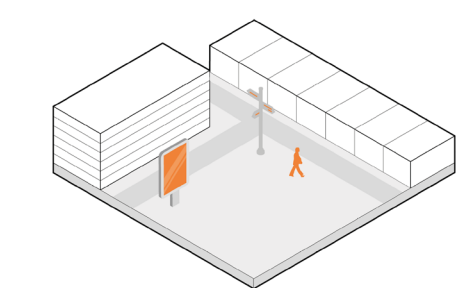


related to:
P1, P3, P4

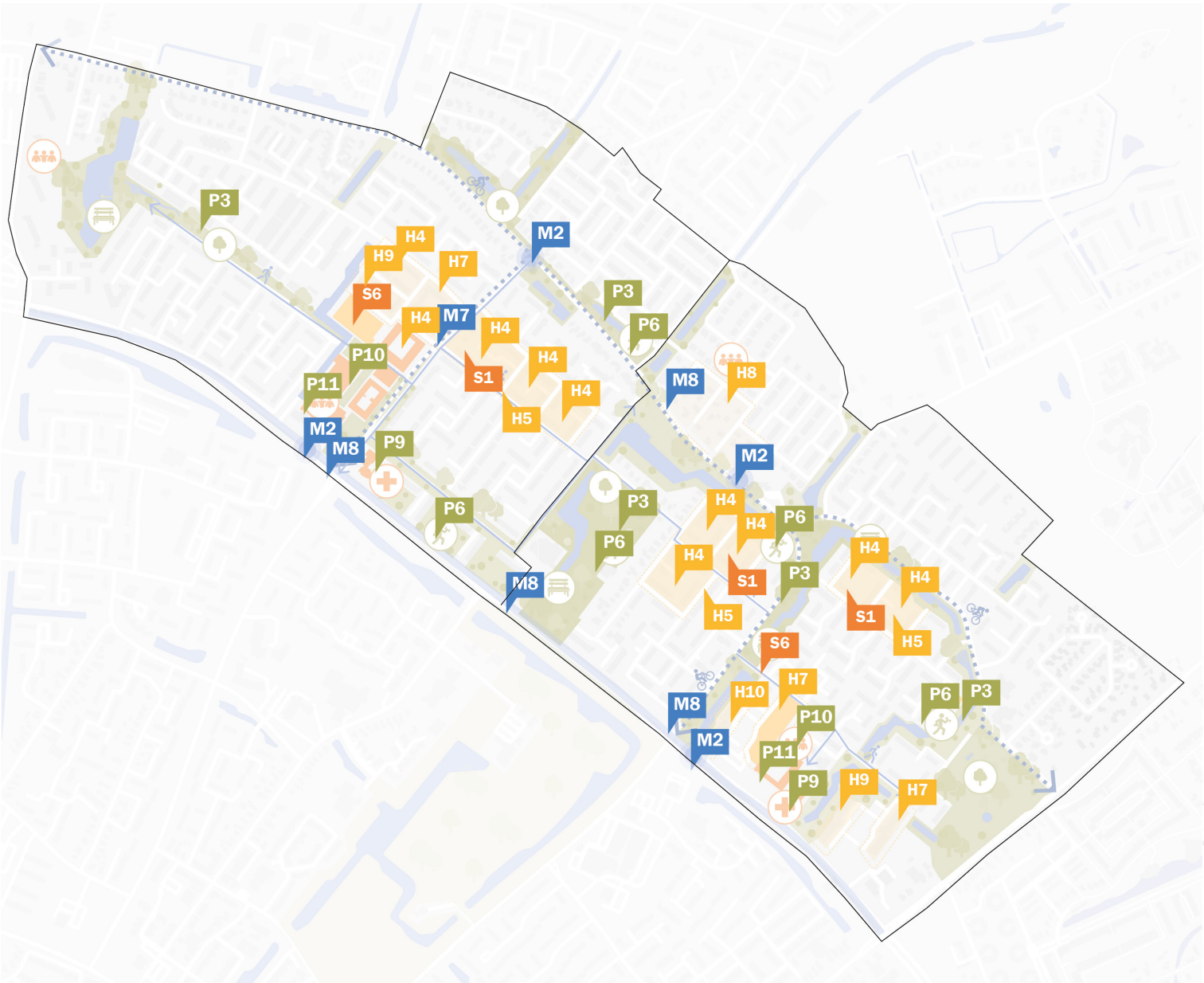
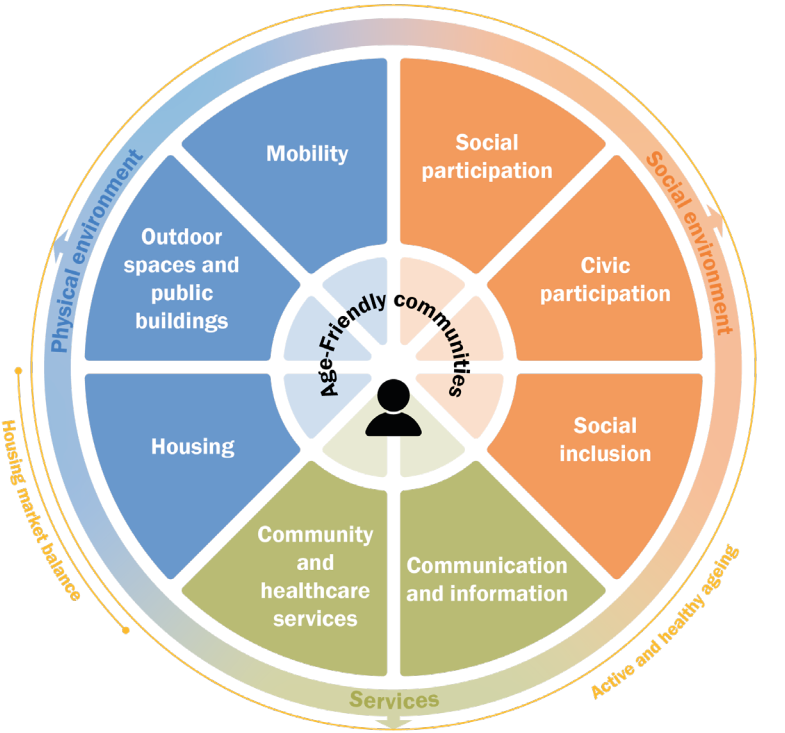


S3 | INFORMATION

The accessibility to information benefits the social inclusion of older individuals in the community.

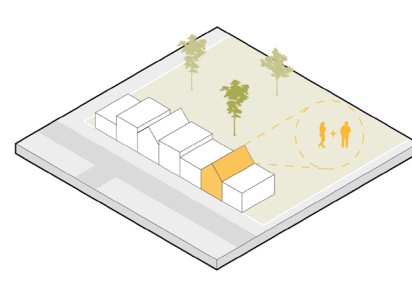


related to:
S2, S6

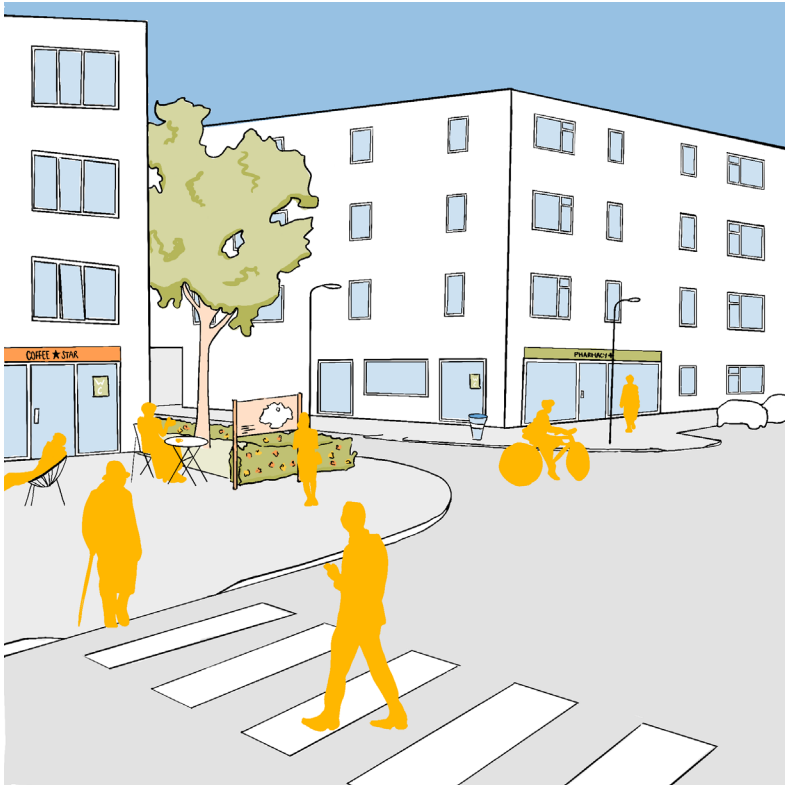


H11 | DUO-HOUSING

Duo-housing helps both residents in maintaining independence while socially supporting each other.



related to:
H1, H2, H6



M6 | SLOW DOWN THE CAR

Smart implications reduce the use of the car and slow the speed, avoiding busy and hazardous traffic.



related to:
M5, M7

