



SOOTHING URBANISM

RESTORING MENTAL HEALTH
OF DIVERSE INDIVIDUALS
THROUGH PUBLIC SPACE
DESIGN



CAMPINGSPOORT AMSTERDAM
Alles voor Campers - Caravans - Kamperen - Tuin of Strandhuis



AMSTERDAM

20-GJB-4

2-VBL-59



WPC
NOTOR
NICH!



BESTEVAERSTRAAT
BOS EN LOMMER

13116
P

%↑40



BUILT ENVIRONMENT

urban density
functional mix
green
walkability
accessibility
public transport
cultural facilities
active environment
etc.

INDIVIDUAL BIOLOGICAL CHARACTERISTICS

age
gender

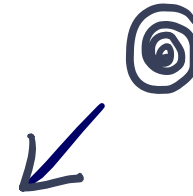


INDIVIDUAL SOCIOLOGICAL CHARACTERISTICS

educational level
citizenship
activity status
residential stability

SOCIAL ENVIRONMENT

social disorder
psychical disorder
crime
vandalism



Mental Health is a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his/her community.

URBAN STRESS v. RESTORATIVE SETTINGS





Costs Versus Quality





Mental Health

Mental health is an integral part of our well-being



Urbanization

With a rising number of 55% of people living in urban environments



Segregation

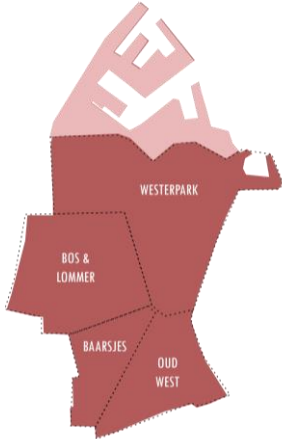
One of the larger problems of modern cities today. Exclusion, inequity and gentrification.



Main research question:

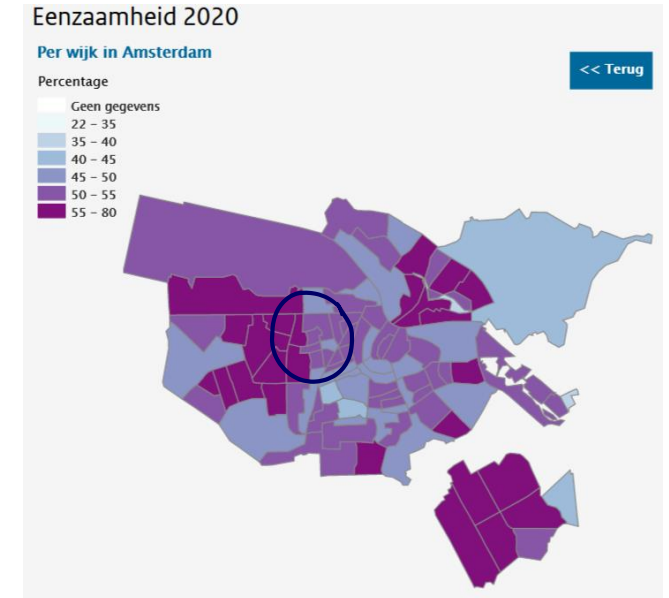
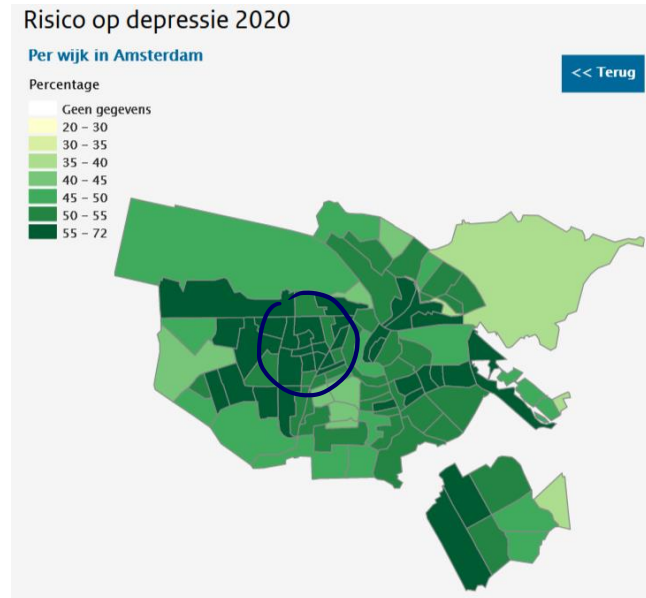
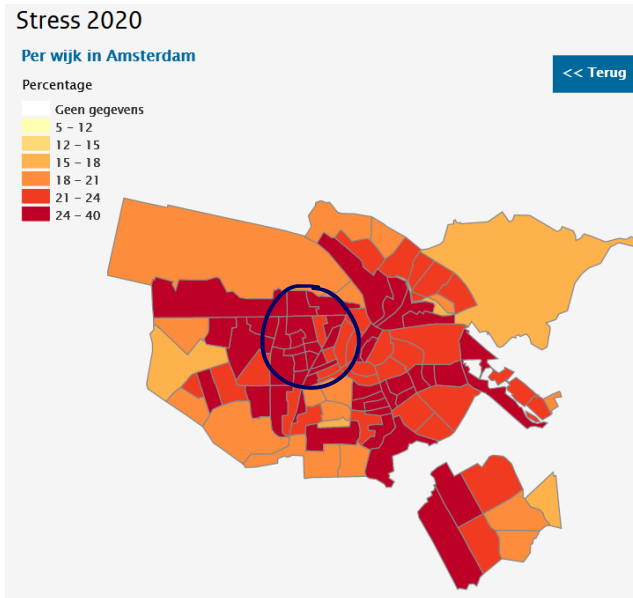
To what extent can public space design restore mental health of diverse individuals within the densifying urban context?

CASE STUDY: BOS & LOMMER, AMSTERDAM WEST



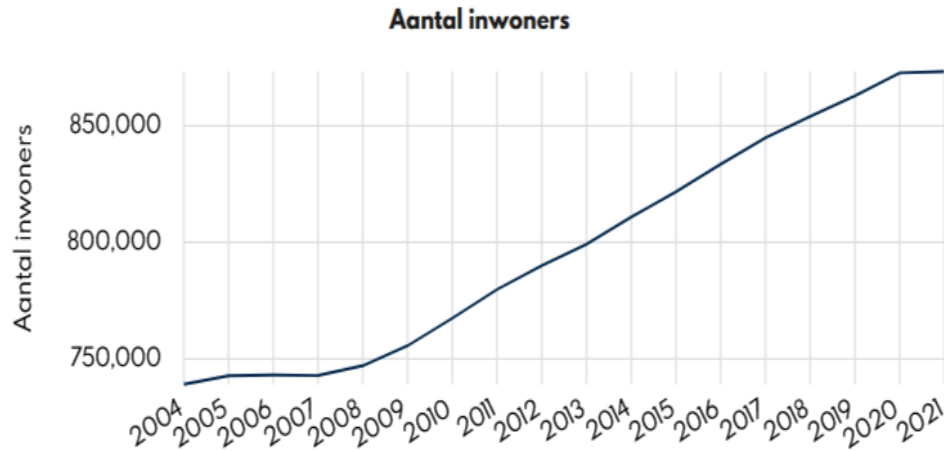
PROBLEM ANALYSIS CASE STUDY

URBAN STRESS



PROBLEM ANALYSIS CASE STUDY

POPULATION GROWTH



Het Parool

Opinie: 'Amsterdam moet zich erop voorbereiden de eerste Nederlandse miljoenenstad te worden'

Amsterdam gaat groeien en die groei is niet tegen te houden. Dus kunnen we onze stad er maar beter op aanpassen, stelt Hala Naoum Néhmé. Zo is het tijd om de Amsterdamse metro serieuzer te nemen, evenals de masterplannen in stadsdelen Noord, Nieuw-West en Zuidoost.

Hala Naoum Néhmé 27 augustus 2022, 03:00

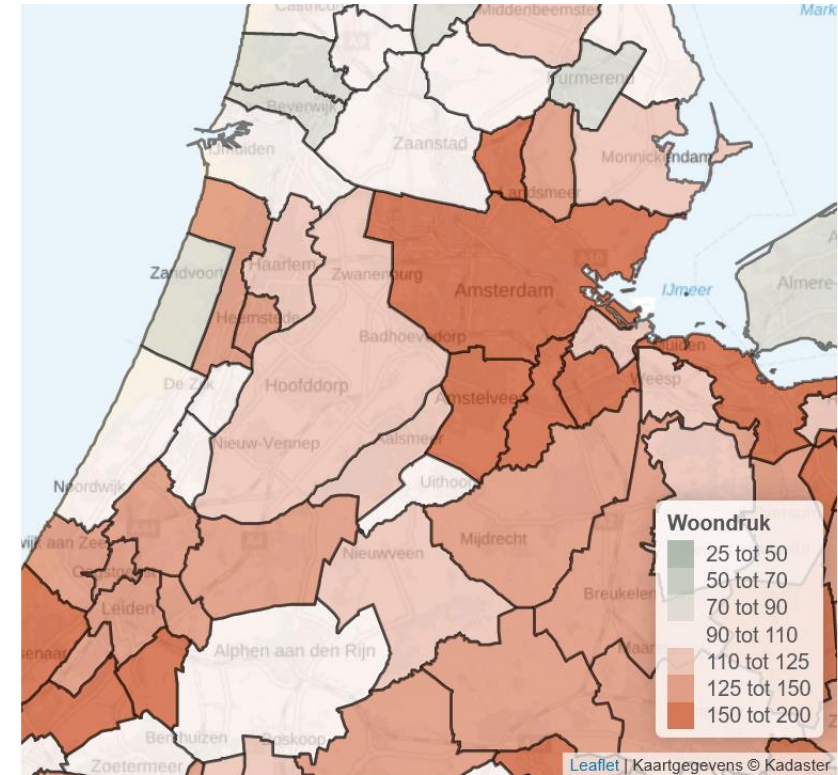
Het Parool

Woningnood groeit: Amsterdam komt duizenden huizen tekort voor kwetsbare groepen

Amsterdam komt in 2030 zo'n 10.000 tot 15.000 woningen tekort voor kwetsbare groepen. Vooral mensen in de daklozenopvang hebben het zwaar. Wethouder Zita Pels (Volkshuisvesting) zegt 'pijnlijke keuzes' te moeten maken om de kwetsbare groep te verkleinen.

David Hielkema 27 juni 2022, 03:00

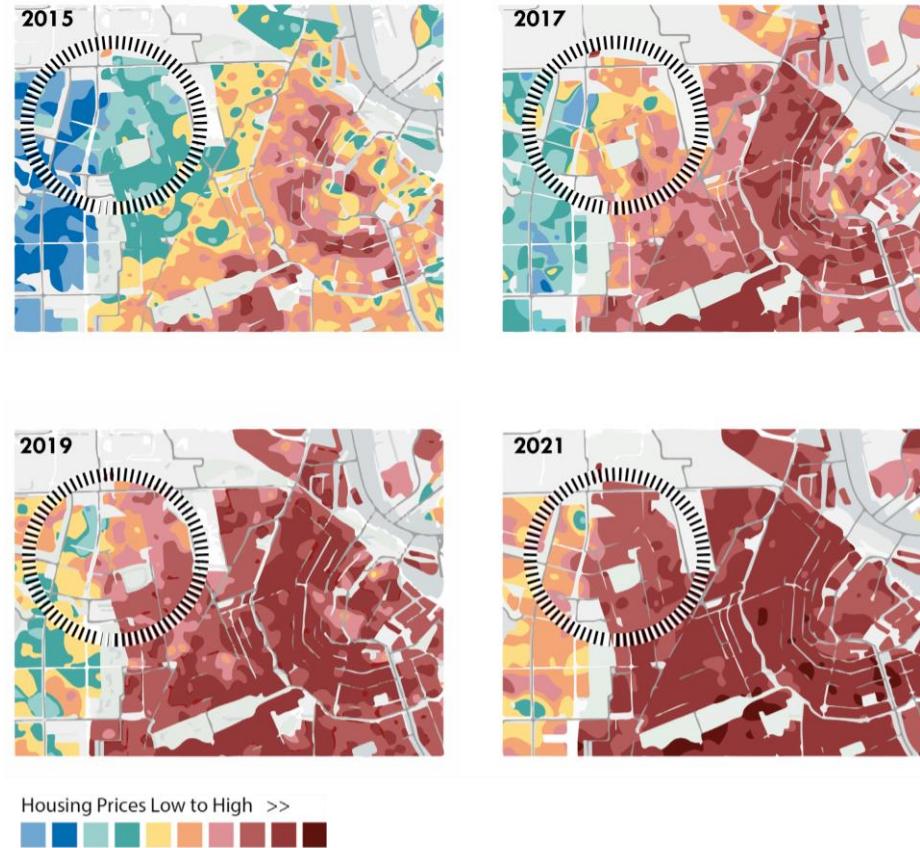
HOUSING SHORTAGE



For every 150 households looking for a place in Amsterdam there are 100 houses available.

PROBLEM ANALYSIS CASE STUDY

SEGREGATION

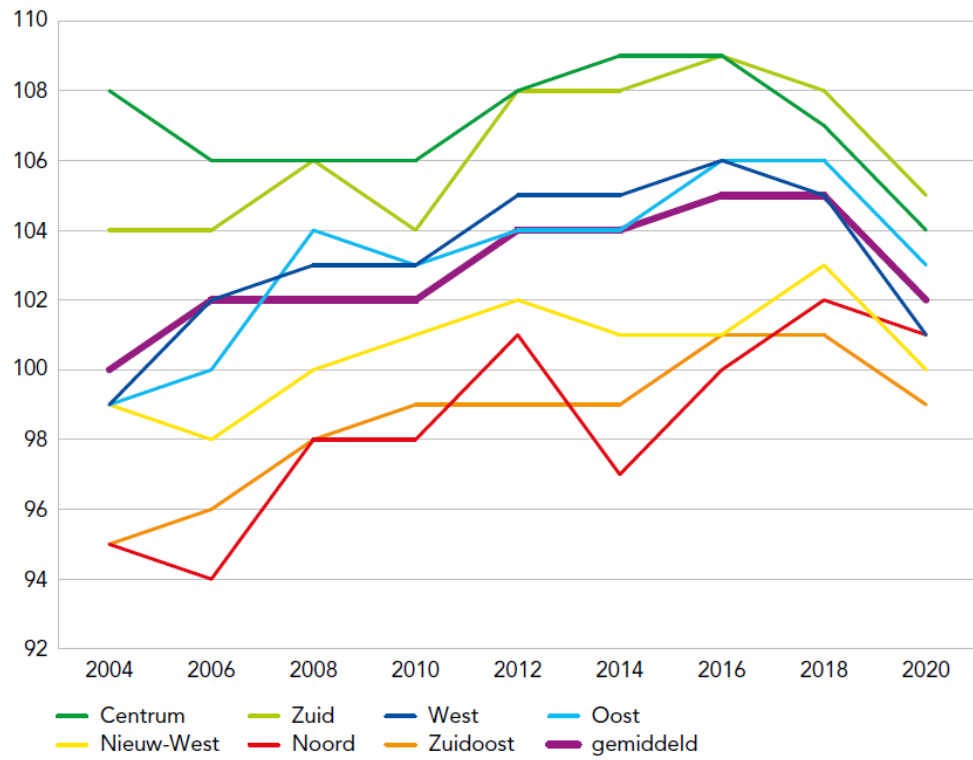


Average prices for owner-occupied homes more than doubled since 2015.

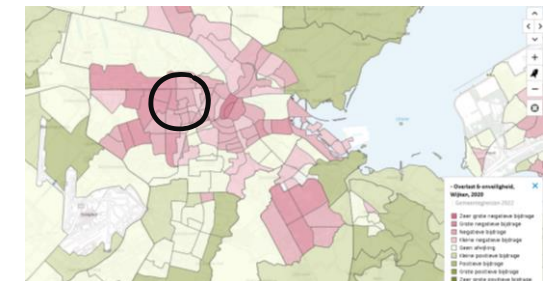
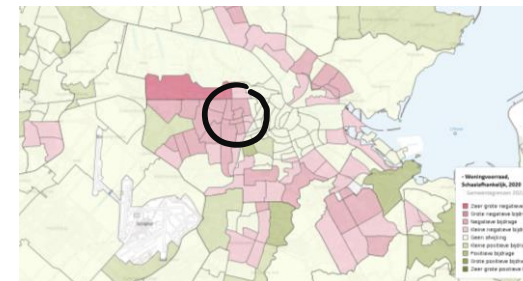
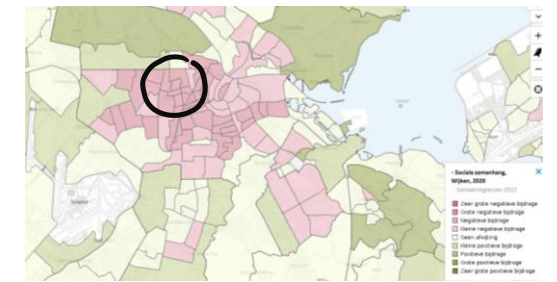
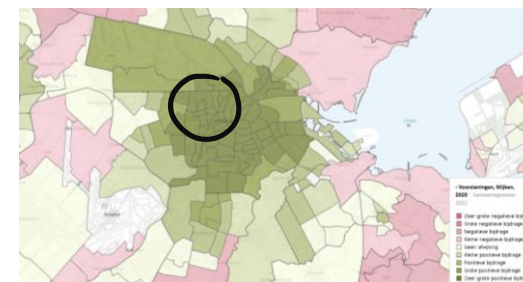
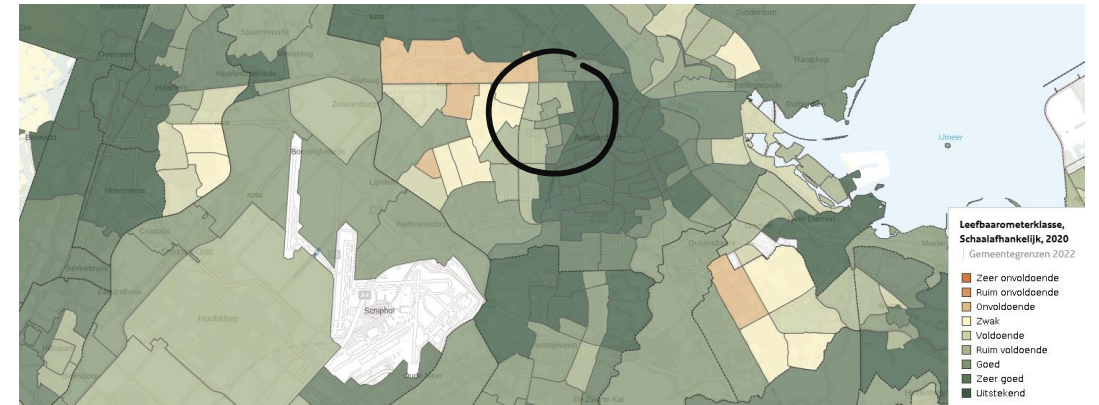
PROBLEM ANALYSIS CASE STUDY

LIVEABILITY

Afb. 2.8 Leefsituatie naar stadsdelen, tweejaarlijkse cijfers 2004 t/m 2020 (in indexcijfers, 2004 = 100 gemiddeld, afgeronde cijfers)



Source: Staat van de stad (2020)



PROBLEM FIELD

Elevated risks

City dwellers have an elevated risk for mental health issues like; stress, depression and anxiety. (UD/MH, 2022)

Population growth

Cities all over the world are getting more and more dense because of population growth. (Zumelzu, 2021)

The main reasons behind the large increase of mental disorders all around the world are population growth and aging. (McCay & Bremer, 2017)

Public space design

The relation of spatial design and mental wellbeing is therefore starting to emerge as a fundamental concept, especially considering increasing densification within cities. (Zumelzu, 2021)



Urbanization

Acceleration of urbanization processes and its spatial implications are argued to have an negative impact on inhabitants mental well-being. (Zumelzu, 2021)

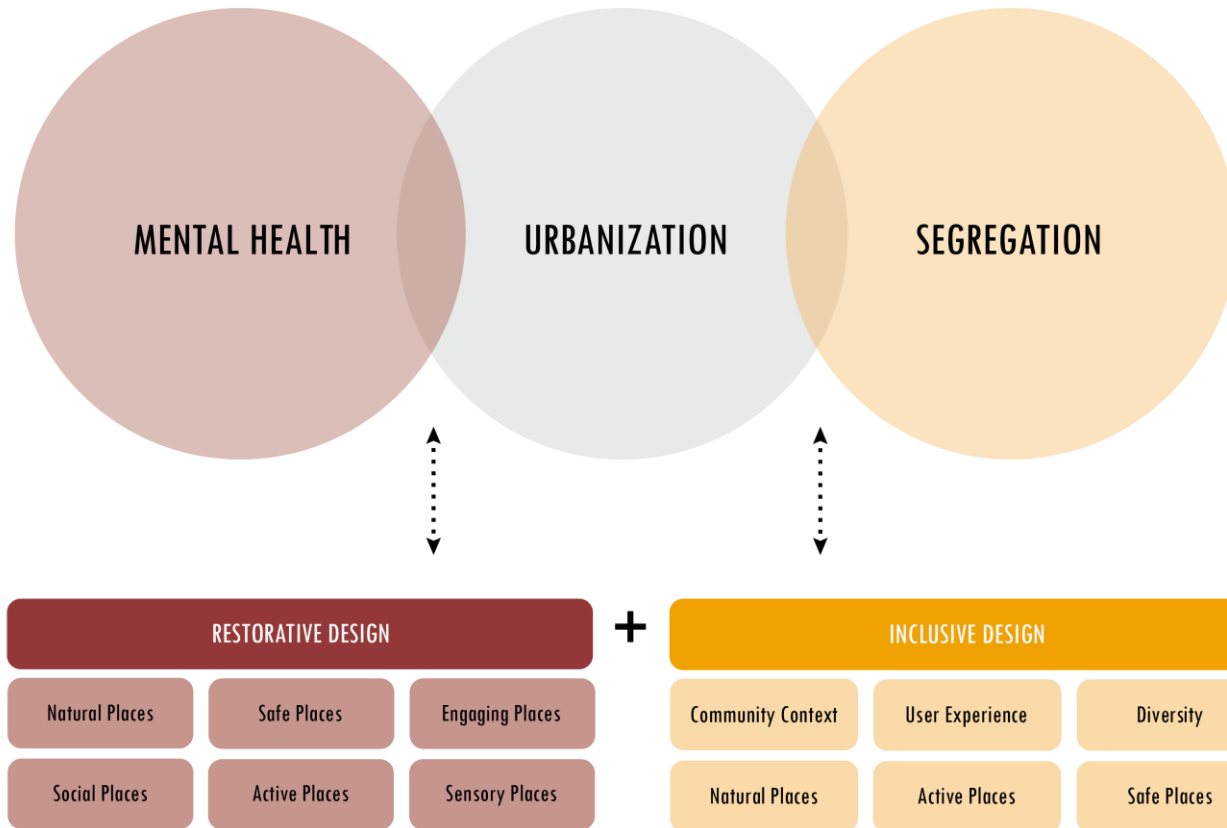
Inequality

Promoting good mental health depends on the population being able to benefit. With urban densification the risks of segregation become larger. (McCay & Roe, 2021)

Environmental Influences

Empirical evidence tells us that environmental factors can have both positive and negative influences on mental health. (Hajrashoelih et al, 2018)

CONCEPTUAL FRAMEWORK



Restorative

Stress Regulation
 Climate Mitigation
 Cognitive Health
 Social/ Mental Well-Being
 Autonomy
 Experience
 Quality (liveability)
 Community (trust, belonging, social cohesion, social capital, participation)

Green places
 Blue places
 Active places
 Sensory places
 Playable Places
 Neighbourly places

Accessibility
 Diverse
 Safety
 Exposure to restorative settings
 Housing
 (Health) Equity

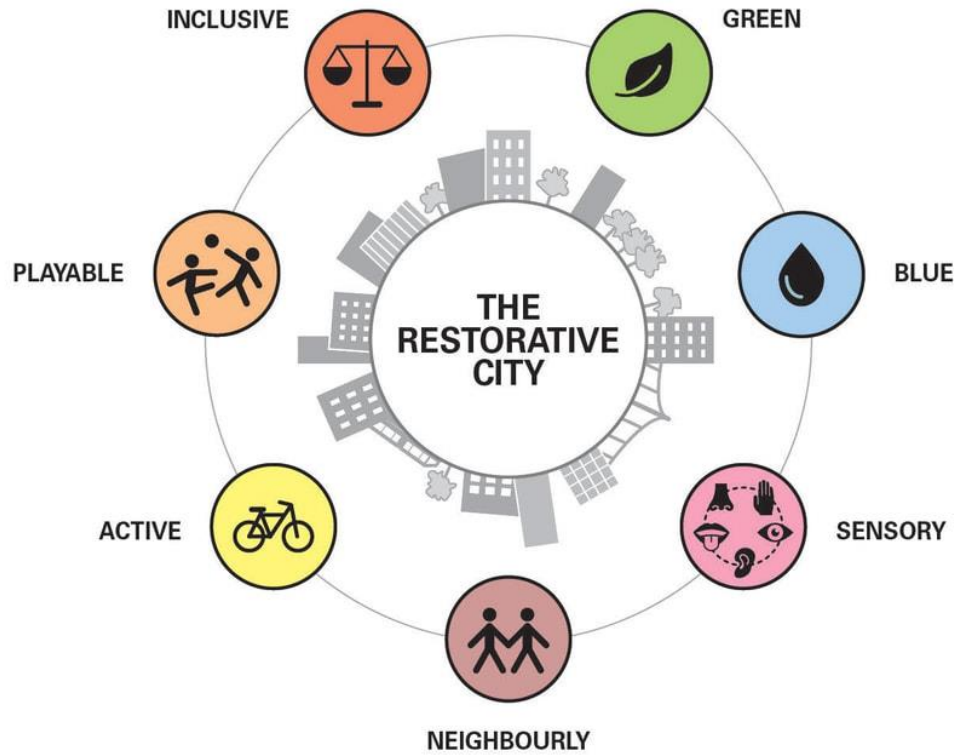


Inclusive

Community Context
 Equity
 Social Capital
 Participation
 Investment
 Stability

Natural Elements
 Active Use
 Accessibility & Access
 Safety
 Community
 Maintenance
 Experience
 Placemaking
 Diversity
 Mixed Use
 Flexibility

DESIGN CONCEPTS



CATEGORIES



MENTAL WELL-BEING

This category all about stress regulation and health regulation. This is the start and urgency of this project and in the end it should be assessed if the design reaches the goal that is within this topic.



SOCIAL CONTEXT

This category includes all topics from the two design methods that include social elements, like for example research to the community context and existing social structures.



ENVIRONMENTAL ASPECTS

Within this category the spatial elements that play a role in restorative and inclusive design. These can be used to review the current situation. Among others, this includes the implementation of natural elements in the urban fabric.



ECONOMY

Some conditions or policies are prerequisites to create a restorative or inclusive design. These factors are included within this fourth and last category.

SIX ENVIRONMENTAL THEMES



R+I

GREEN/BLUE
(NATURAL)

R+I

SAFETY

R+I

ACTIVE

R+I

SOCIAL
(INCLUSIVE, COMMUNAL
& NEIGHBOURLY)

R

ENGAGING
(PLAYABLE)

R

SENSORY

ENVIRONMENTAL THEMES - GUIDING PRINCIPLES



NATURAL ENVIRONMENT



NATURAL ENVIRONMENT

green structures
blue structures
engaging
sensory experience
water/green elements

recharge
diversity
security
quality
activities

SOCIAL ENVIRONMENT



SOCIAL ENVIRONMENT

participatory
diversity
engaging spaces
flexibility
natural environment

3th places/ social interaction
(health)equity
(social) security
accessability
sense of belonging

SAFE ENVIRONMENT



SAFE ENVIRONMENT

maintenance
lighting
sightlines
"eyes on the street"
social interaction

ownership
surveillance
wayfinding
quality
slow traffic



RECHARGE

It is important to offer green spaces that provide people with the opportunity to recharge. This spaces should cater different needs, including; shaded spots, spots in the sun, more secluded seating areas and seating arrangements that promote social interaction. Ample seating areas can also increase the likelihood of active behaviour by providing enough space to rest. (Roe & McCay, 2021)



DIVERSITY

Diversity within the natural environment offers a multitude of activities (relaxing, sports, social interaction) appealing to various people with different tastes/ interests. (McCay et al., 2019) This increases the ability of the environment to foster fascination in its users and makes them compatible for different target groups. These are two of the characteristics catering restoration according to the 'ART'. (Kaplan, 1995)



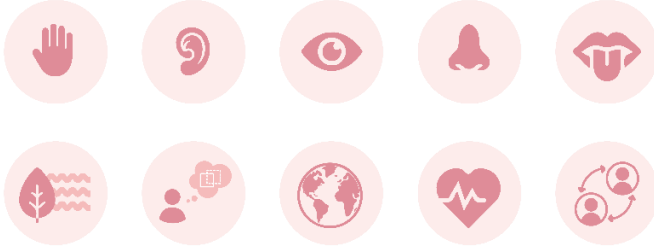
SECURITY

There is no assurance that the mere presence of natural environments will achieve its positive potential on mental well-being. If spaces have poor qualities and do not offer security this will cause people to develop negative feelings. (McCay et al., 2019) It will also decrease optional activities of users such as, leisurely walks or spontaneous gatherings. (Hanafi et al., 2013)

ENVIRONMENTAL THEMES - GUIDING PRINCIPLES



SENSORY ENVIRONMENT



SENSORY ENVIRONMENT

smell
sound
taste
touch
sight

natural elements
cultural/societal values
familiarity
health
sixth sense

ACTIVE ENVIRONMENT



ACTIVE ENVIRONMENT

rewarding
diversity
sports
proximity
walkability

public transport
shared mobility
security
quality
bikeability

ENGAGING ENVIRONMENT



KIDS ENVIRONMENT

creative
sports amenities
diversity
educative
natural environment

interactive
multifunctional
security
quality
activities



WALKABILITY

Urban designers can prioritise walkability by designing pedestrian-friendly streets and pathways. Wide pavements, abundant greenery, and comfortable seating areas can create an inviting atmosphere for pedestrians. Additionally, implementing traffic-calming measures and reducing car traffic in certain areas can further enhance walkability.



SECURITY

There is no assurance that the mere presence of active environments will achieve its positive potential on mental well-being. If spaces have poor qualities and do not offer security this will decrease their active behaviour and cause them to develop negative feelings. (McCay et al., 2019; Hanafi et al., 2013) Urban designers should prioritise the implementation of adequate lighting, clear signage, and well-maintained infrastructure to ensure the safety of pedestrians and cyclists.

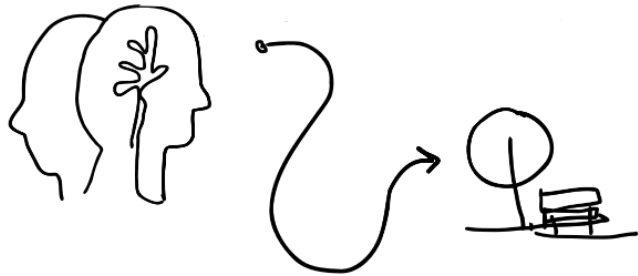


DIVERSITY

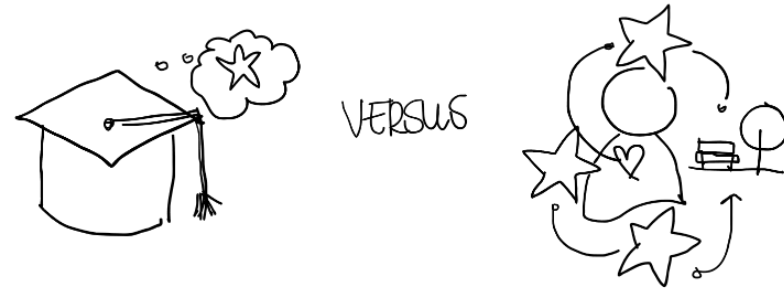
Diversity in facilities and active infrastructures cater to the diverse interests of visitors and inhabitants. Urban designers should strive to create a variety of amenities suitable for different age groups, abilities, and interests. This may include skate parks, fitness zones, community gardens, and cultural spaces. Collaborating with local communities and conducting user surveys can help identify specific needs and preferences. (Roe & McCay, 2021; Gardner, 2018)

METHODS – ANALYSIS

1. TESTING ACADEMIC KNOWLEDGE
APPLICABILITY/ SPATIAL IMPLEMENTATION



2. COMPARING ACADEMIC KNOWLEDGE WITH
PERCEIVED EXPERIENCE



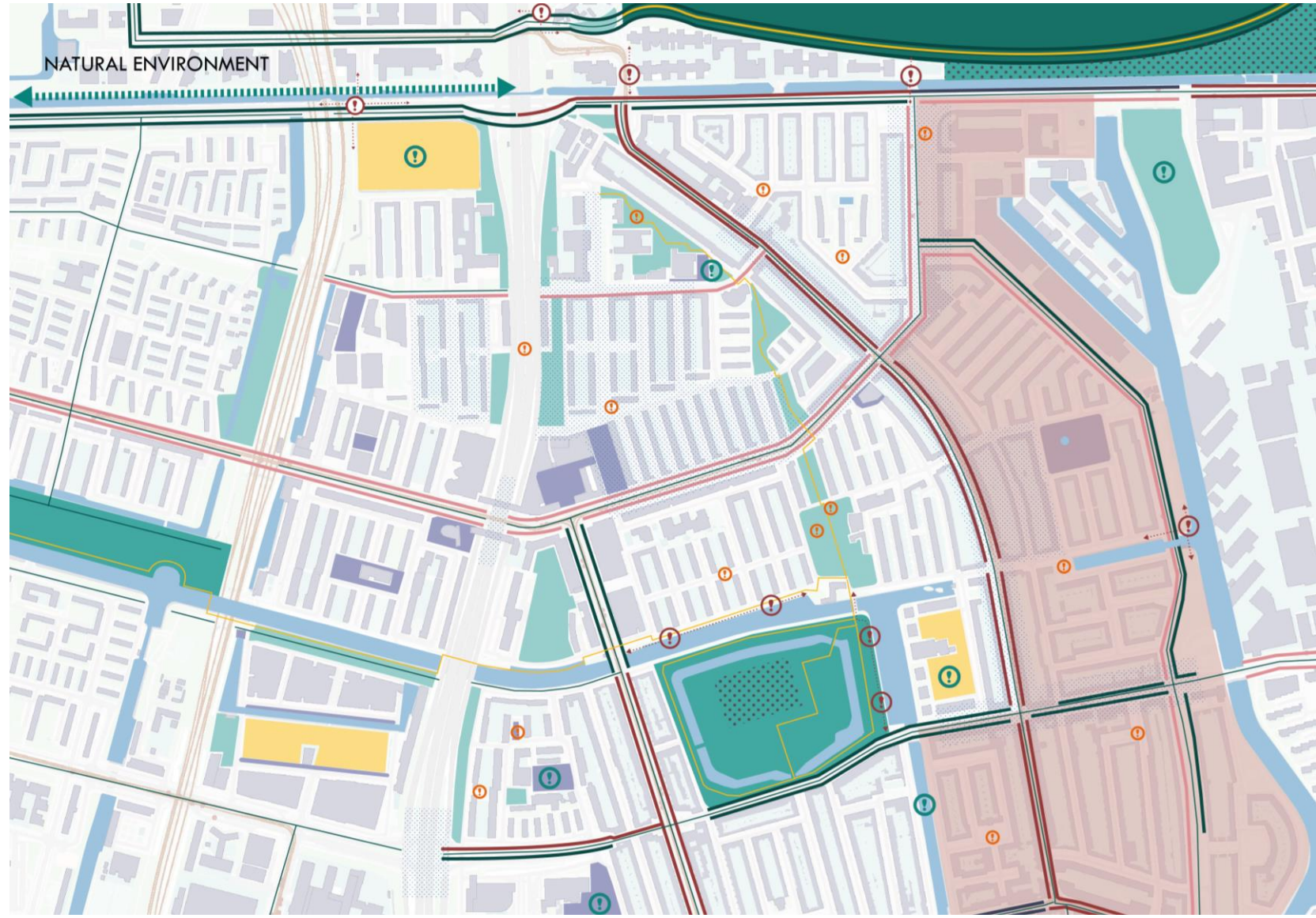
3. COMPARING PERCEIVED EXPERIENCE OF
MARGINALIZED GROUPS WITH MORE
POPULAR EXPERIENCES



NATURAL ENVIRONMENT



- high quality green
- city park
- other green
- sports park
- square w/ green elements
- barbeque area
- corridor
- groenarme buurt
- watervolast
- improvement area street green
- improvement area bicycle route
- improvement area green spaces
- recreational route (pedestrian)
- “hoofdbomenstructuur”
- good quality
- improvement area trees
- spatial improvement area
- improvement area trees and spatial aspects



NATURAL ENVIRONMENT – CONCLUSION ACADEMIC PERSPECTIVE



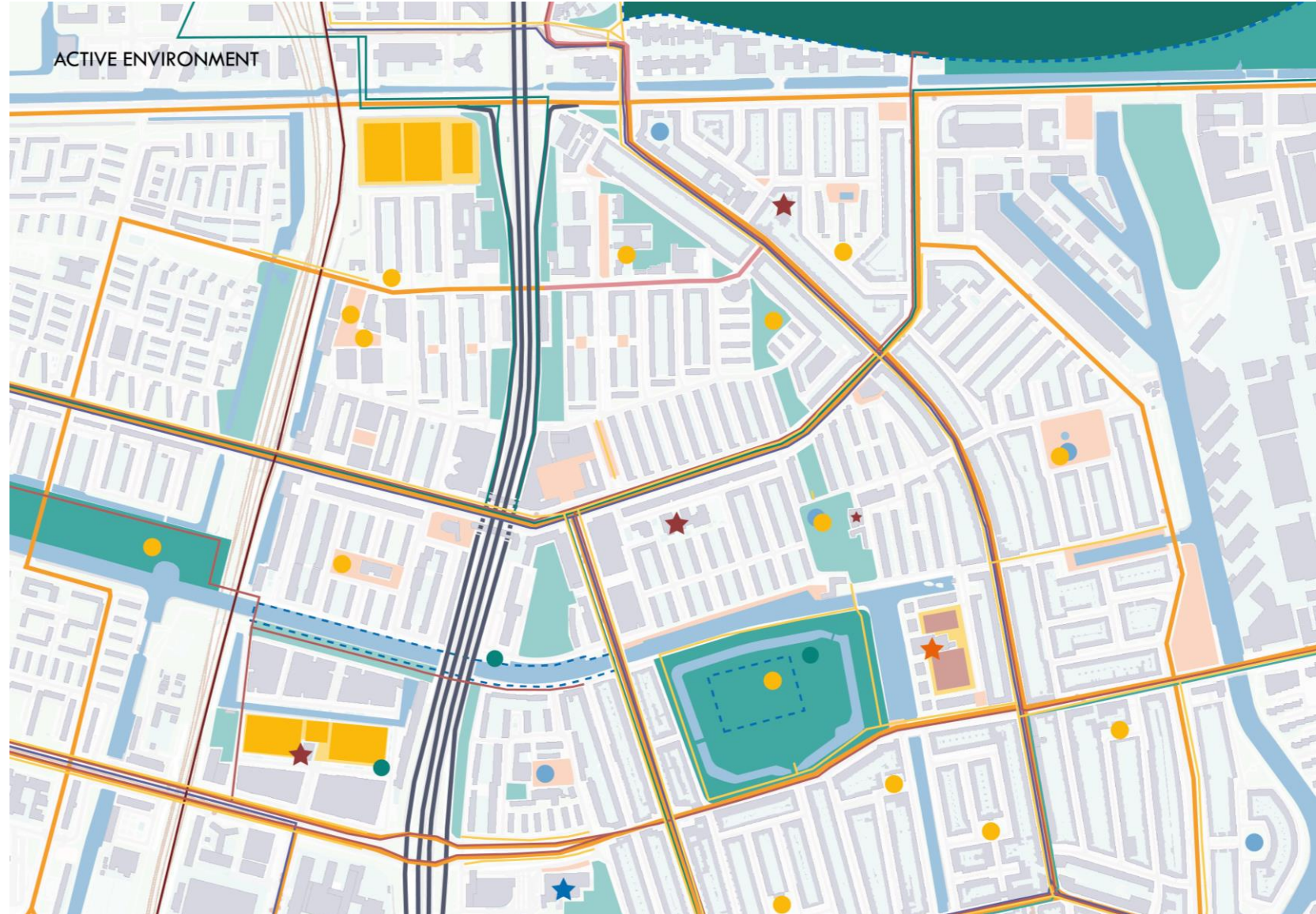
- NEGATIVE
- POSITIVE



ACTIVE ENVIRONMENT



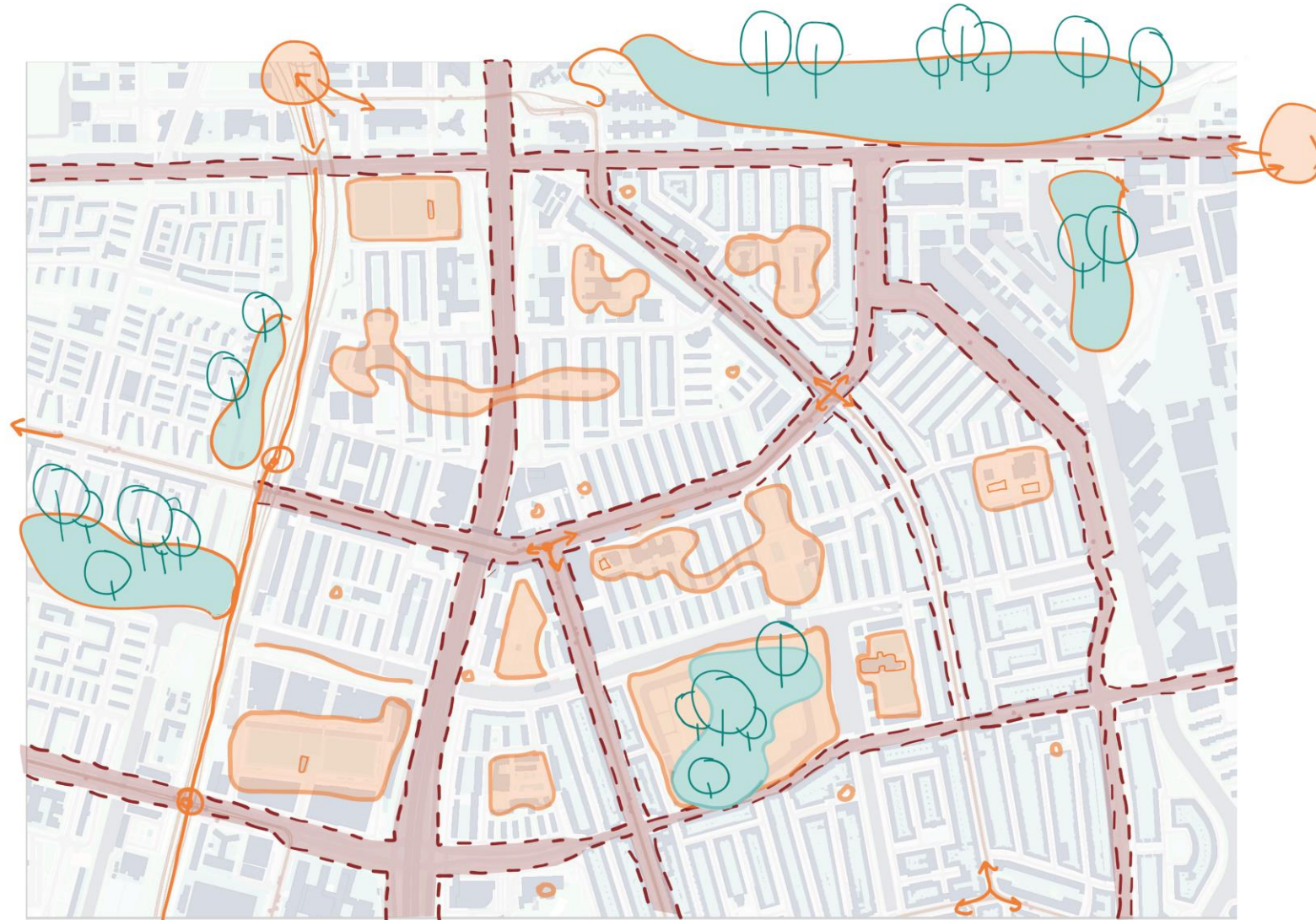
- soccerfields
- tennisfields
- soccer
- bootcamp/fitness
- basketball
- ★ sporthall
- ★ swimminghall
- ★ tennishall
- ⋯ running route
- plusnet tram
- plusnet bus
- plusnet metro
- plusnet pedestrian
- plusnet bikes
- 30 km/h
- 50 km/h
- 80 - 120 km/h
- high quality green
- city park
- other green
- sports park
- public space w/ benches



ACTIVE ENVIRONMENT – CONCLUSION ACADEMIC PERSPECTIVE

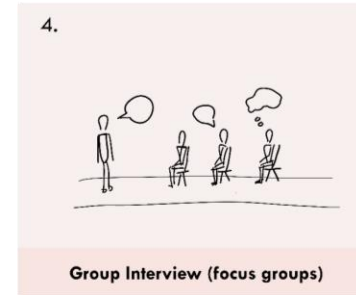
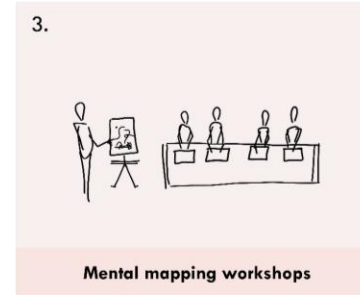
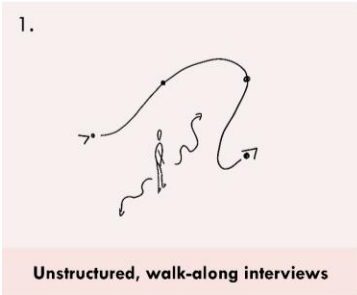


- NEGATIVE
- POSITIVE
- POSITIVE IMPACT
NATURAL
ENVIRONMENT



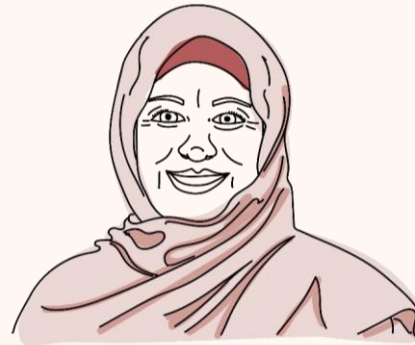
TARGET GROUP - ANALYSIS

By amplifying their voices this research aims to foster a larger understanding on differences in experience and needs of diverse inhabitant groups



MEN (30-50)

FATHERS
ISLAMIC



WOMEN (50-75)

DOCK KNITTING GROUP
MOROCCAN



BOYS (14-18)

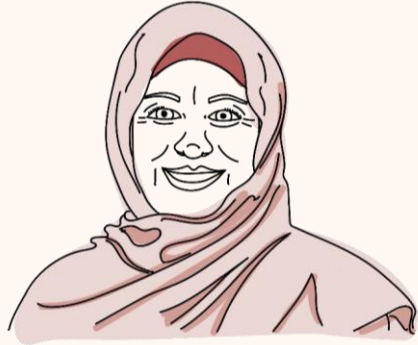
DOCK YOUTH CENTRE
AFRICAN BACKGROUND



WOMEN (40-65)

DISTANCE TO LABOUR MARKET

EXEMPLARY PARTICIPANT



GREEN/BLUE

A collection of six circular icons in shades of green and blue, representing environmental and water-related themes.

SAFETY

A collection of four circular icons in shades of blue, representing safety and accessibility themes.

ACTIVE

A collection of six circular icons in shades of orange and red, representing active living and community themes.

SOCIAL

A collection of six circular icons in shades of yellow and orange, representing social interaction and community.

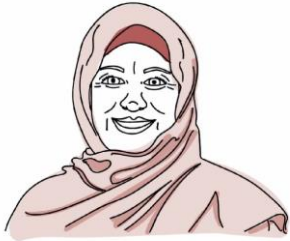
PLAYABLE

A collection of three circular icons in shades of blue, representing playability and recreation.

SENSORY

A collection of four circular icons in shades of pink and red, representing sensory experiences and awareness.

EXAMPLES OF INSIGHTS



CONFLICT WITH THEORY



MEN'S ENVIRONMENT



WOMEN'S ENVIRONMENT



EXEMPLARY PARTICIPANT



GREEN/BLUE 	SAFETY 	ACTIVE
SOCIAL 	PLAYABLE 	SENSORY



= veel wapens en mensen gevonden

EXAMPLES OF INSIGHTS



AESTHETICS



MEN'S ENVIRONMENT

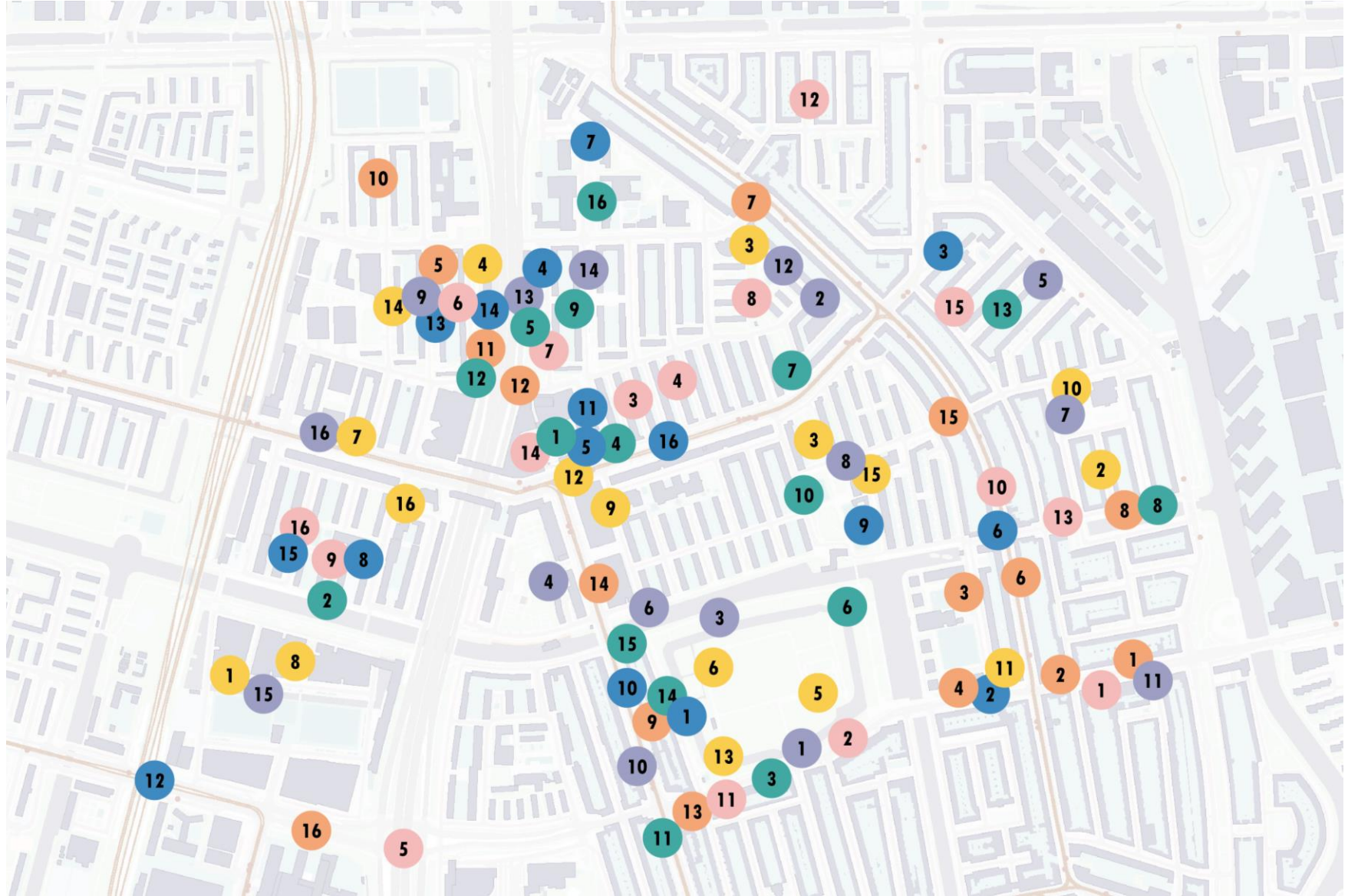


SAFETY CONFLICT

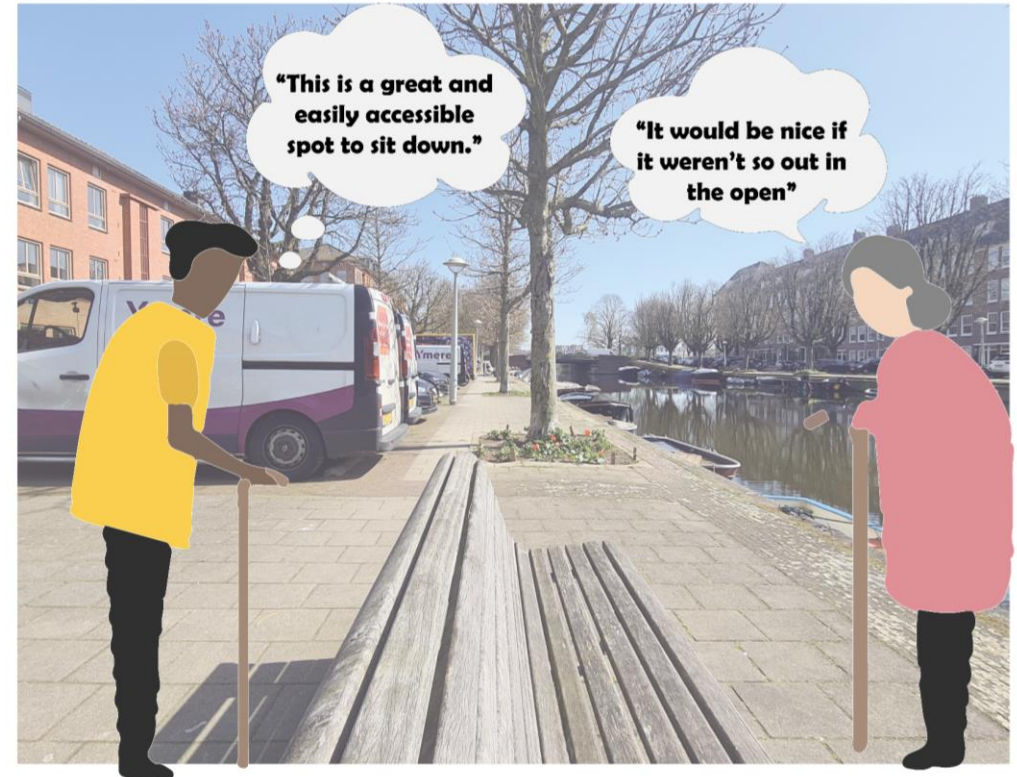


LIVED EXPERIENCE – CONFLICTS

- NATURAL
- SAFETY
- ACTIVE
- SOCIAL
- ENGAGING
- SENSORY



CONFLICTS – NATURAL ENVIRONMENT



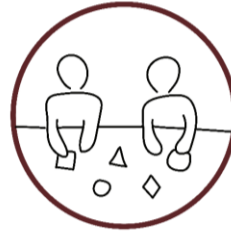
CONFLICTS – ACTIVE ENVIRONMENT



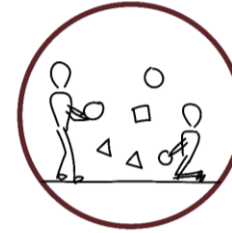
CONFLICT RESOLUTION



**Informed decision making
through participation**
(focus group interviews)



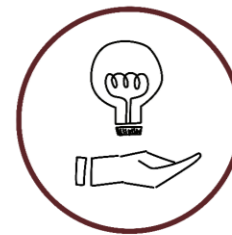
Cocreation - Design
(focus group workshops)



Cocreation - Execution
(active participation by actually
making things / physical changes)

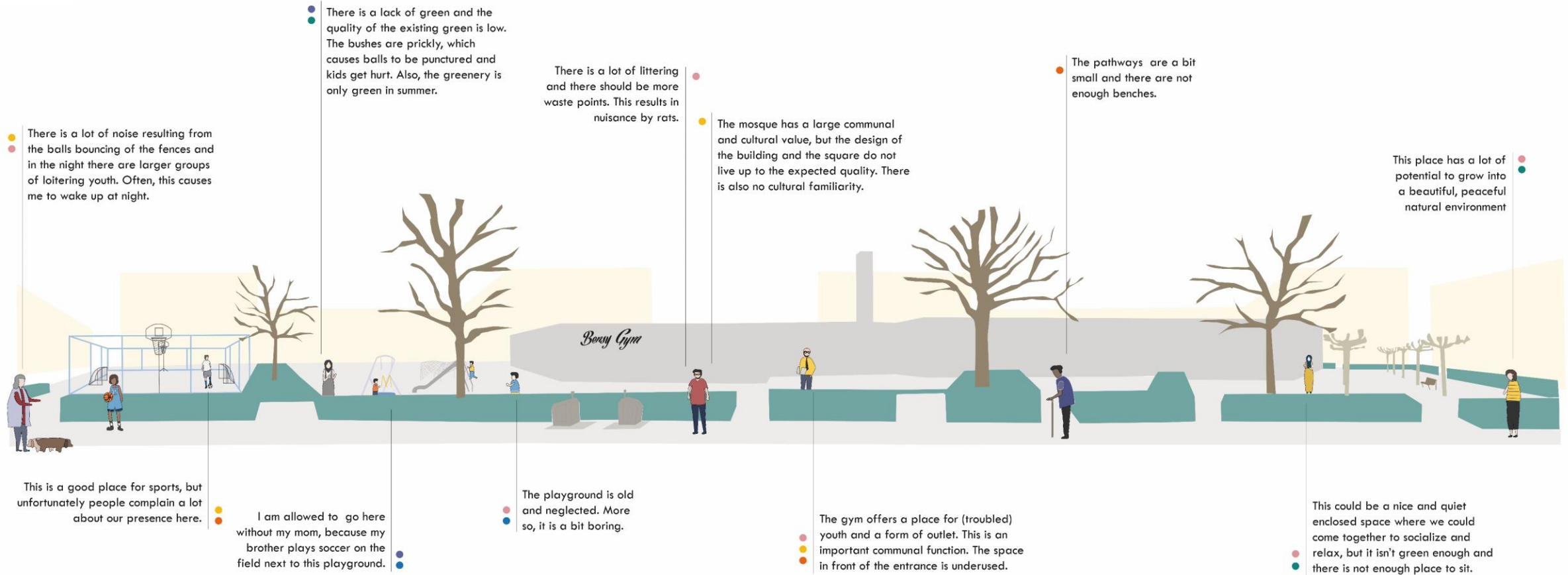


Conflict Resolution
(as an urban designer this is where
you should make the decisions)

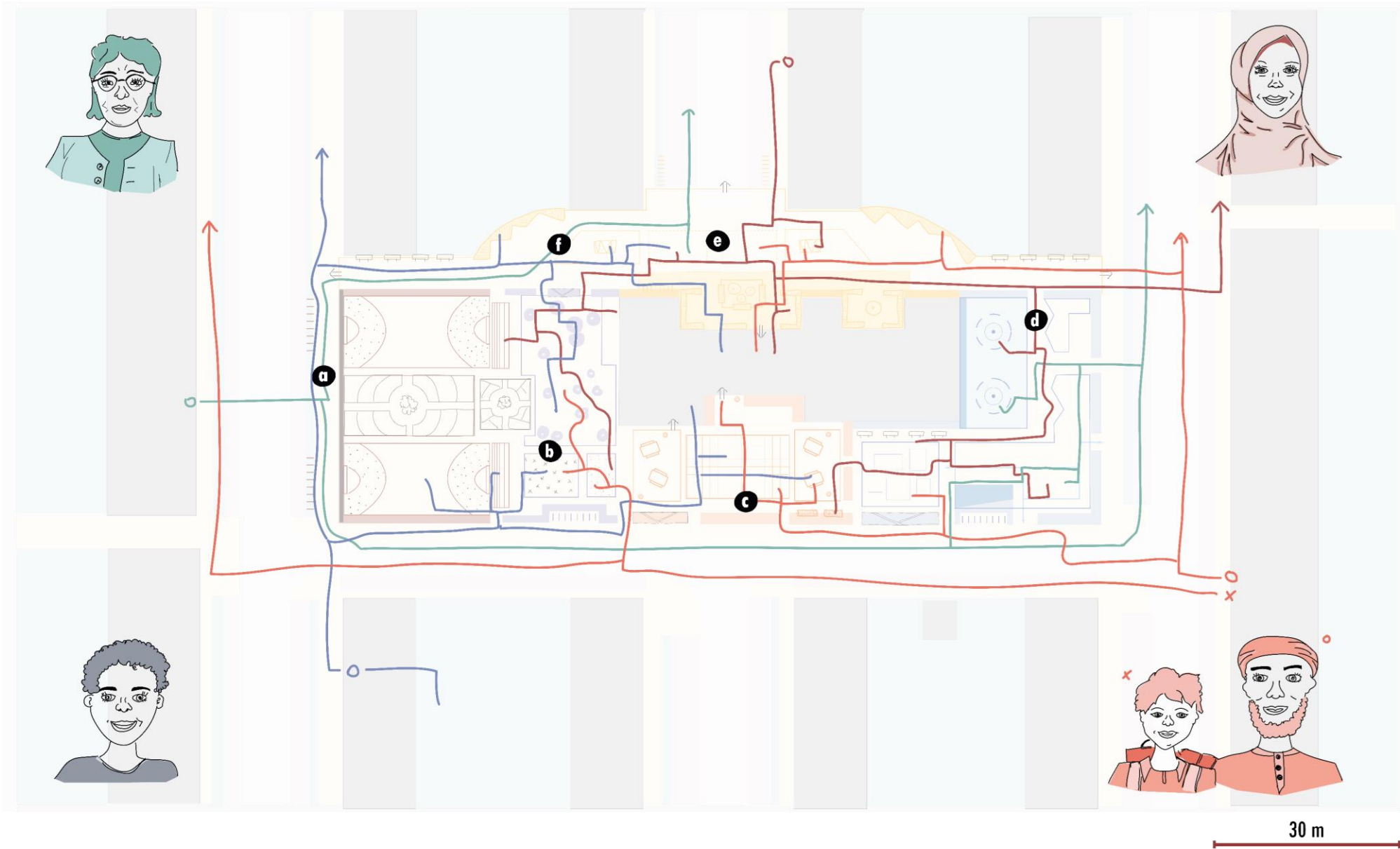


Designers Choice
(to decrease stress and segregation
these are actions the designer needs
to perform)

EXAMPLE: CONFLICTS “ERNEST STAES PLEIN” (M)



EXPECTED MOVEMENT USER GROUPS



COCREATION: CHOICE FOR A TYPOLOGY IN SPORTS FIELDS OR ANOTHER ACTIVE FUNCTION

DESIGN: SIMILAR PLANTINGS ENCLOSING THE SQUARE FOR A SENSE OF UNITY

COCREATION: DESIGN AND FUNCTION PAVILJON ARE COCREATED WITH THE NEIGHBOURHOOD

DESIGN ENTRANCE AREA MOSQUE WITH AN ENCLOSED SEATING AREA

DESIGN MEN'S AREA SEATING: SEATING ORIENTATION LEANING AWAY FROM PASSING WOMEN

DESIGN: QUIET ZONE, RELAXING AND FEELING SURROUNDED BY NATURE

COCREATION: DESIGN OF SEATING IS DETERMINED BY TEENAGE GIRLS FROM THE NEIGHBORHOOD

COCREATION: THE ARRANGEMENT AND DESIGN OF SEATING ARE DETERMINED BY TEENAGE GIRLS FROM THE NEIGHBORHOOD

FLEXIBLE SPACE

PAVILJON

THE PLANTS ARE PLANTED TOGETHER WITH THE RESIDENTS

CONFLICT RESOLUTION: SOUND CONTROL AREA WITH TREES AND A SOUND WALL WITH A GREEN EXTERIOR THAT STILL GIVES THE POSSIBILITY TO WATCH THE KIDS

DESIGN WOMEN'S AREA SEATING: ENCLOSED FOR SAFETY FEELING. SURROUNDED BY GREENERY.

COCREATION: INCREASE OF FAMILIARITY AND OWNERSHIP BY DESIGNING A PATTERN FOR THE SURFACE

SAFE ENVIRONMENT: CREATE SIGHTLINES FROM THESE SEATING ELEMENTS TOWARDS THE KIDS AND YOUTH SPACES

DESIGN: DIFFERENT TYPE OF TILES TO FRAME THIS AREA

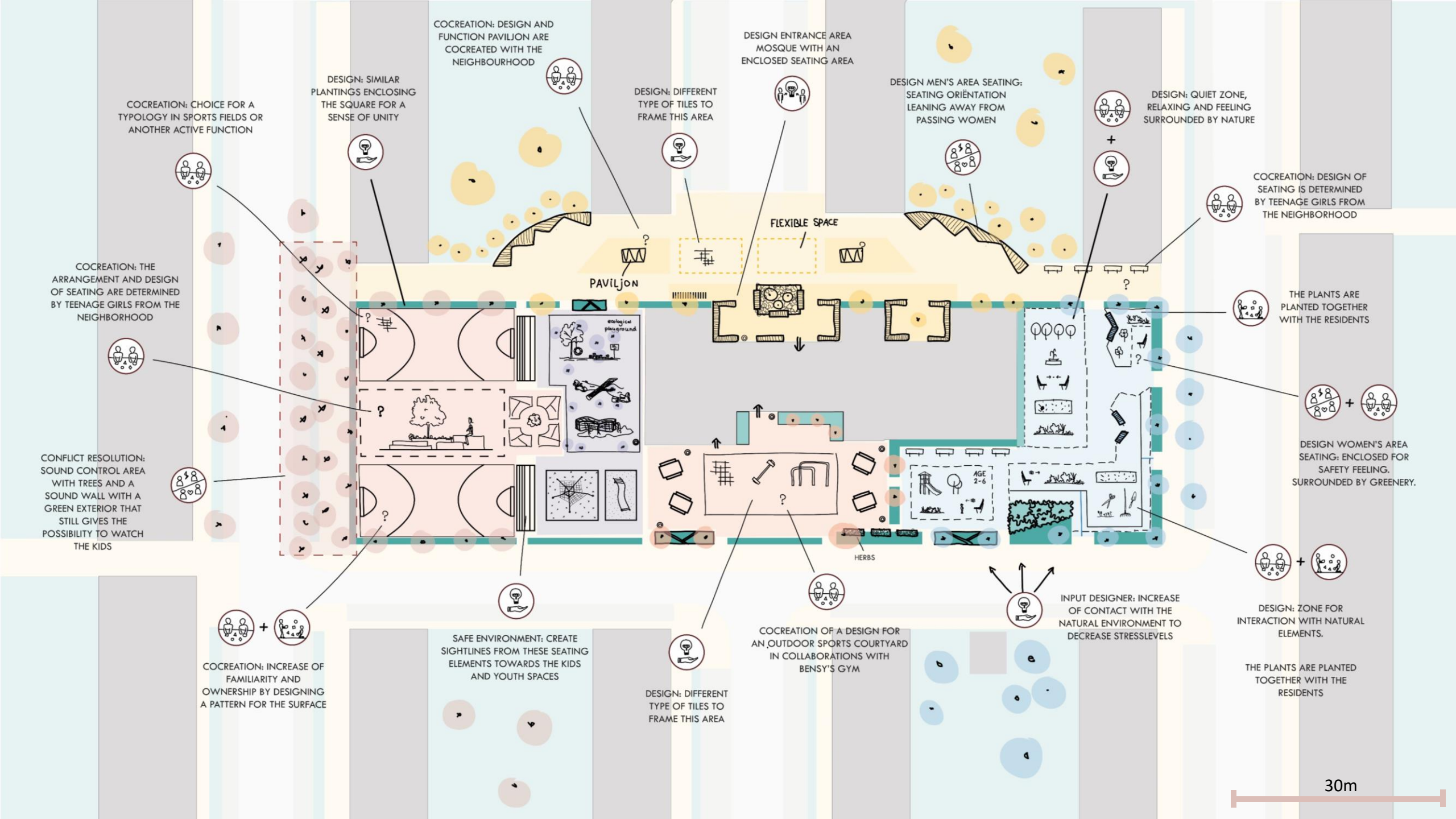
COCREATION OF A DESIGN FOR AN OUTDOOR SPORTS COURTYARD IN COLLABORATIONS WITH BENSY'S GYM

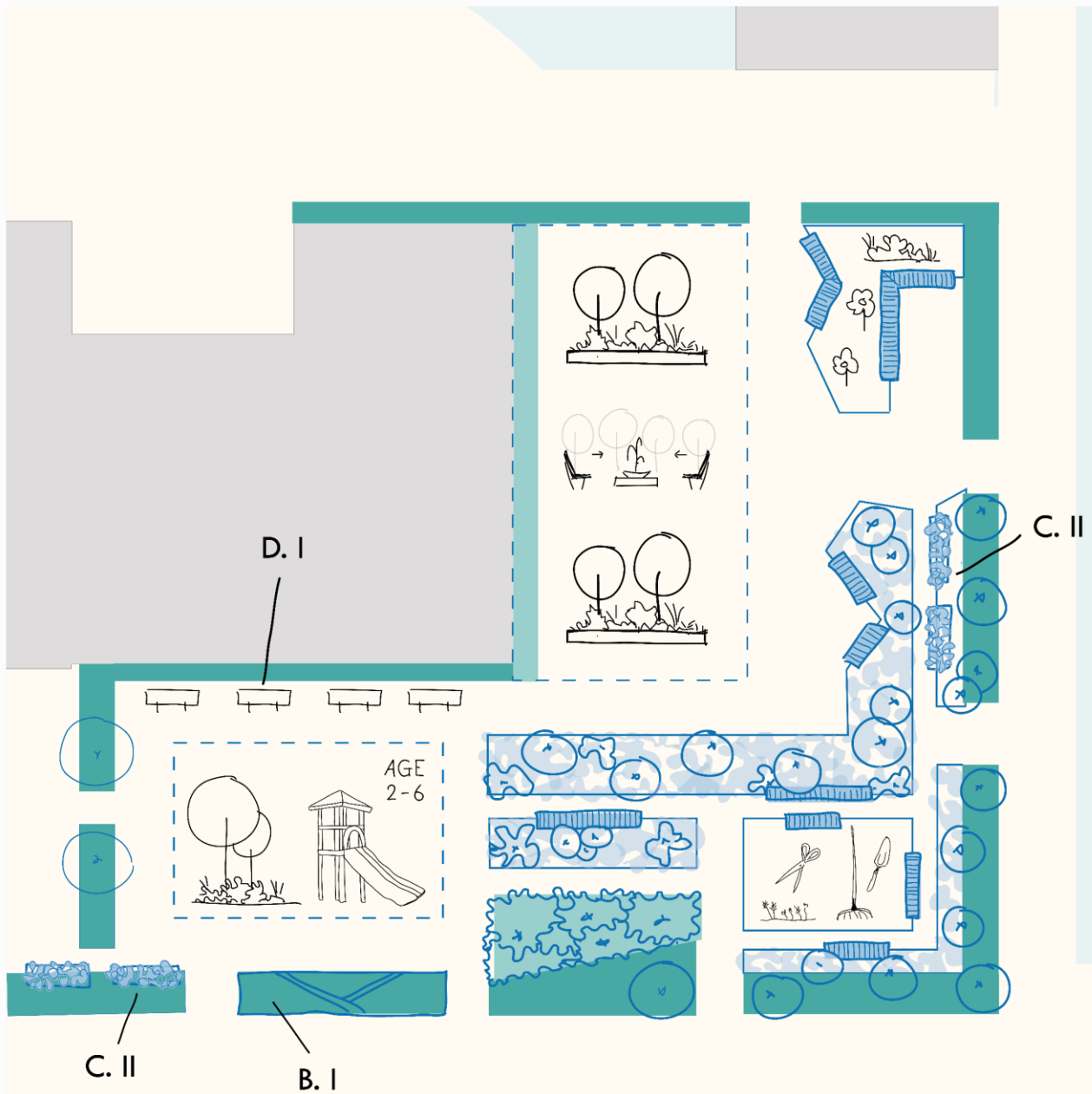
INPUT DESIGNER: INCREASE OF CONTACT WITH THE NATURAL ENVIRONMENT TO DECREASE STRESSLEVELS

DESIGN: ZONE FOR INTERACTION WITH NATURAL ELEMENTS.

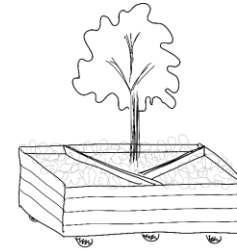
THE PLANTS ARE PLANTED TOGETHER WITH THE RESIDENTS

30m





B. I

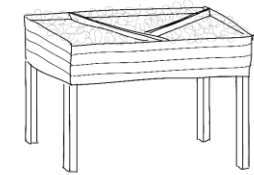
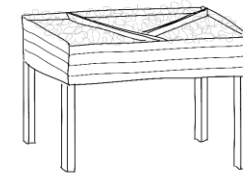


B. II

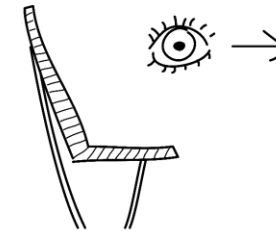
Bicycle Parking



C. II



D. I



C.

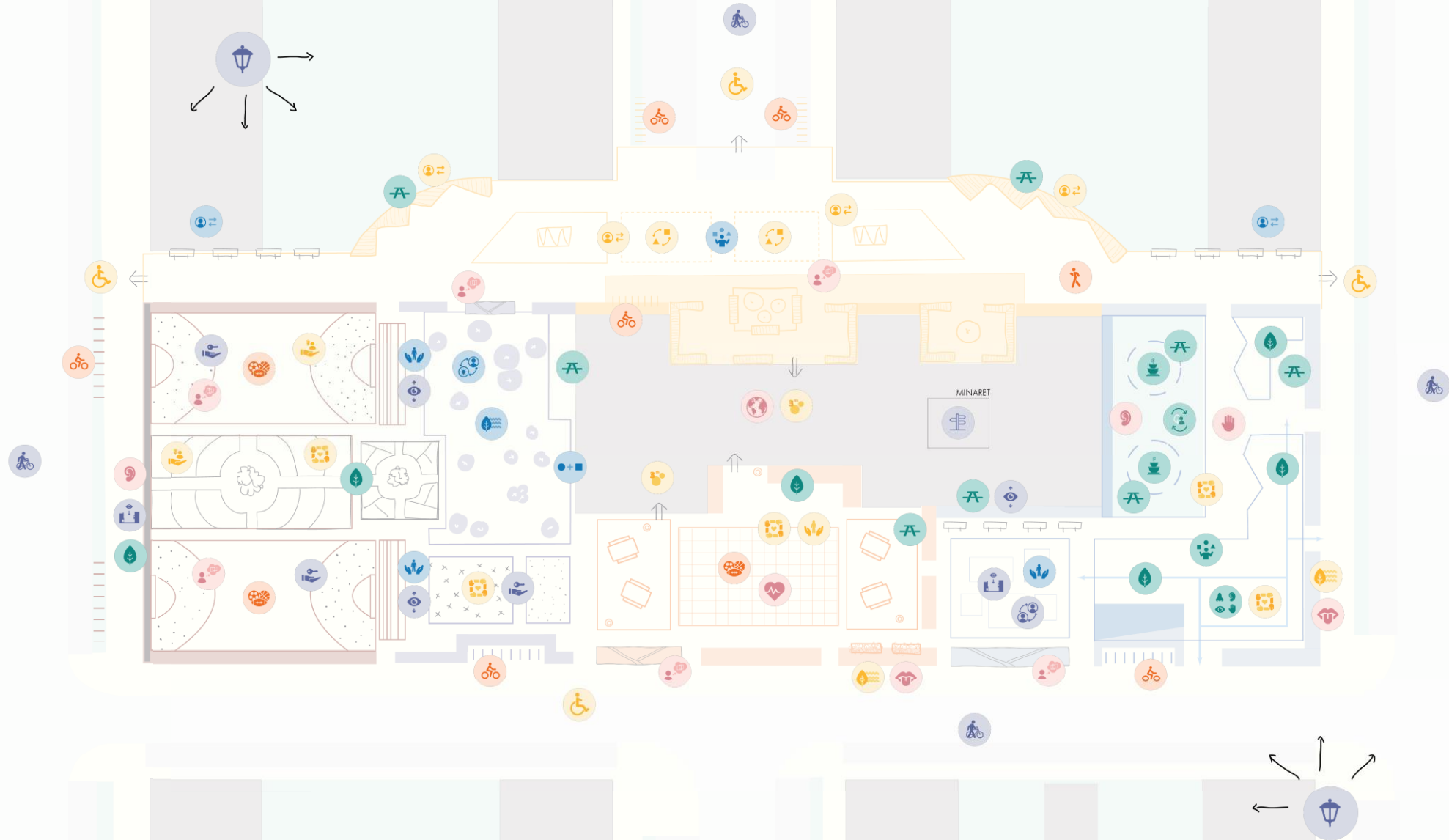


C.

NEW



CONCLUSION ERNEST STAES



30 m



SOOTHING URBANISM

RESTORING MENTAL HEALTH
OF DIVERSE INDIVIDUALS
THROUGH PUBLIC SPACE
DESIGN