



A HOLISTIC APPROACH TO URBAN HEALTH

45 INTA CONGRESS

FROM THE CITY TO THE CIVITAS _ Territories and Health, wellbeing innovation and urban agriculture

HELLE JUUL, MAA, MNAL, PH.D - Board member INTA

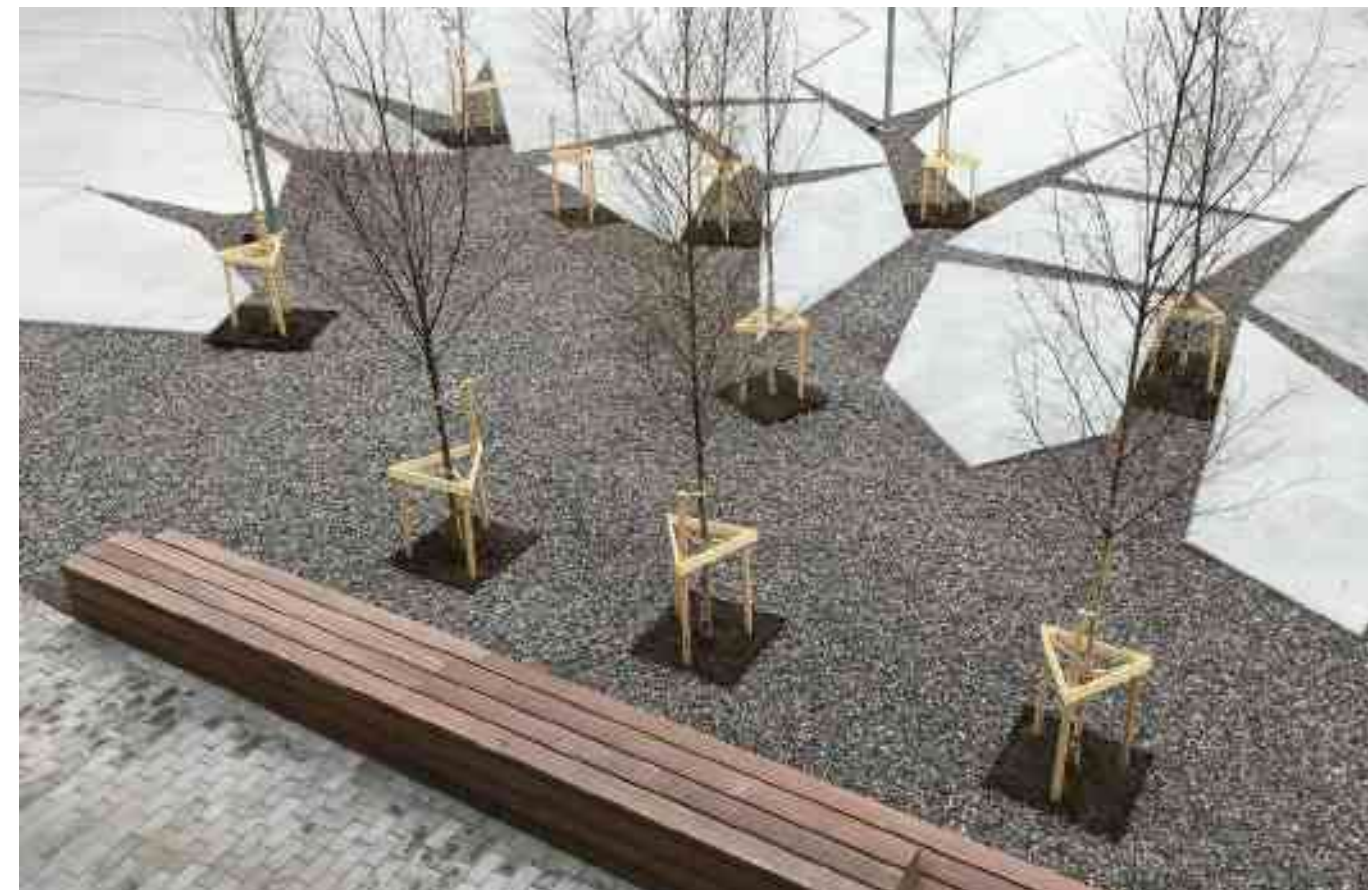
FOUNDING PARTNER JUUL | FROST ARCHITECTS, COPENHAGEN / STOCKHOLM

JUUL | FROST ARCHITECTS

BUILDING + BUILT STRUCTURE



CITY + SPACE + LANDSCAPE



PUBLIC SPACE

RESEARCH + DEVELOPMENT

- URBAN PLANNERS
- ARCHITECTS
- LANDSCAPE ARCHITECTS
- CONSTRUCTING ARCHITECTS
- PHILOSOPHER
- INTERNS / STUDENTS
- ACCOUNTANT
- OFFICE MANAGER
- COMMUNICATION MANAGER
- OFFICE DOG CHILI

OUR "BATTLEFIELD"

Realised and in progres:
555.420 sqm

Total construction costs:
10.440.500.000 DKK

Housing units:
4.940



A CROSS DISCIPLINARY TEAM



Flemming Frost
Founding Partner, CEO
Architect MAA/MSA



Helle Juul
Founding Partner, CEO
Architect MAA/MNAL, PhD.



Søren Askehave
Partner | Head of Office
Architect MAA



Christian Hanak
Partner | Market
Development
Architect MAA



Line Stybe Vestergaard
Partner | Urbanity & Landscape
Landscape architect MAA / MDL



Philip Krogh
Partner | Nordic Market
Architect MAA



Robert Fekete
Partner | Head of
Stockholm
Architect SAR / MSA

GLOBAL AGENDAS AND A “NEW” APPROACH



1946: WHO

The constitution of the World Health Organization is signed by 61 nations on 22 July 1946.

*“Health is a state of complete **physical, mental** and **social** well-being and not merely the absence of disease or infirmity.” - WHO’s Health definition*

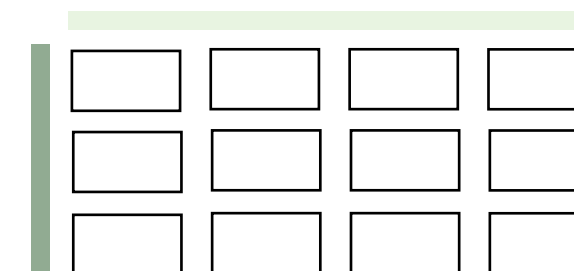
2015: UN SDGS

At the UN's annual general assembly in September 2015, the world's nations adopted the SDGs.



2019: CITY OF WELL-BEING

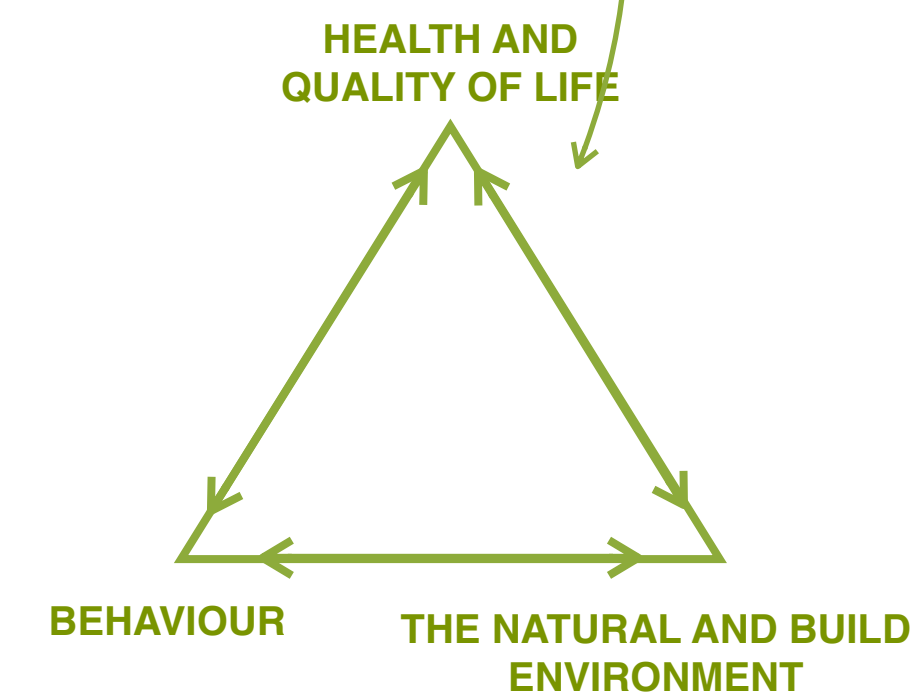
Method toolbox by Juul Frost Architects



2020: THE URBAN HEALTH CULTURE OF THE FUTURE

Research + development project by Juul Frost Architects.

*How can a **holistic approach** create physical changes that support the development of health-promoting lifestyles in the city?*



GLOBAL AGENDAS



Climate challenges



Urbanization



Mobility



Health challenges



Demographic Changes



City / Country



THE URBAN HEALTH CULTURE OF THE FUTURE

HOLISTIC TOOLS TO PROMOTE PHYSICAL,
MENTAL AND SOCIAL WELL-BEING IN THE
BUILT ENVIRONMENT

URBAN HEALTH CULTURE - WHY AND HOW ?

How do we create an urban mindset about health and how to integrate and work with health in an urban context ?

What added value does the promotion of well-being create for the city, the citizens, and the developer?

WHY THE URBAN HEALTH CULTURE OF THE FUTURE?

← from research to practice →

MENTAL NEEDS



17%

In the population as a whole, suffer from **poor mental health**.

SOCIAL NEEDS



12,4%

or around one in eight Danes exhibit signs of **loneliness**.

PHYSICAL NEEDS



52,6%

of the adult population is moderately or severely **overweight**.

In total, 58.1% of the adult population does not meet the WHO minimum recommendation for physical activity.

PLANNING & BEHAVIOUR



Health and well-being is most often **not phrased explicitly or stated as a need or strategic aim**.

Health and well-being are often **indirectly addressed** with concepts such as pedestrian-friendliness, social sustainability or opportunities in everyday life.



”Det er vigtigt at få forskning ud at virke.”

– Morten Kløcker Grønbaek, Læge, Direktør, professor, dr.med., Statens Institut for Folkesundhed



”Det är viktigt att strategin är politiskt ägd och att förvaltningarna gör dem trygga i sina val.”

– Christer Larsson, Tidl. Stadsbyggnadsdirektor og Ansvarlig for ”Politik for gestaltad livsmiljö”, Riksdagens politiske m for arkitektur-, form- og designområdet



”Trivsel findes ‘mellem ørene’; det er en kropslig fornemmelse, en følelse, der kommer og går, men er ikke tilfældig.”

– John Pløger, Professor emeritus, Universitetet i Agder”



”Ensomhed er noget, der udvikles inden i os selv, det er den følelse, der opstår, når man ikke får opfyldt sit sociale behov.”

– Jesper Lund Bredesen, Læge, Divisional Director, H. Lundbeck A/S



”Polyfoni som planmæssig strategi kan således udfordre de konventionelle plantermer og give rum for attraktive uforudseelige scenarier og resultater.”

– Peter Hanke, Dirigent, Associate Fellow ved Oxford University, Saïd Business School



”Noget af det, vi er i gang med at afprøve, er at opbygge det, vi kalder for handlefællesskaber. Det vil sige, at vi engagerer individer og grupperinger i at skabe noget konkret sammen på et sted.”

– Katrine Winter, Antropolog og boligsocial leder, AKB Taastrupgaard



”I virkeligheden opnår de fleste mennesker hoveddelen af deres fysiske aktivitet som en del af deres daglige gøremål.”

– Jasper Schipperijn, IProfessor MSc, og Ph.D, institut for Idræt og Biomekanik, Syddansk Universitet



”Ser vi mon ind i en slags genfødsel af ‘landsbyen’, som konsekvens af at man ikke længere får en stor del af sine sociale behov dækket via arbejdsplads-livet? Og vil det øge inklusionen/mindske ensomheden hos den enkelte?”

– Karin K. Peschardt, Landskabsarkitekt, ph.d., strategisk planlægger, Holbæk Kommune, plan og erhverv og Bodil V. Henningsen, Arkitekt, master i strategisk planlægning, Aalborg Kommune, byudvikling og byggeri



”En grundpræmis for fremtidens sunde byer må være at sikre, at alle mennesker og sociale grupper indtænkes, blandes og inddrages, og at der skabes rum og rammer til alle i byen – også dem, der ikke ligner os selv.”

– Rasmus B. Andersen, Arkitekt, Teamleder Byudvikling og faciliteter, DGI

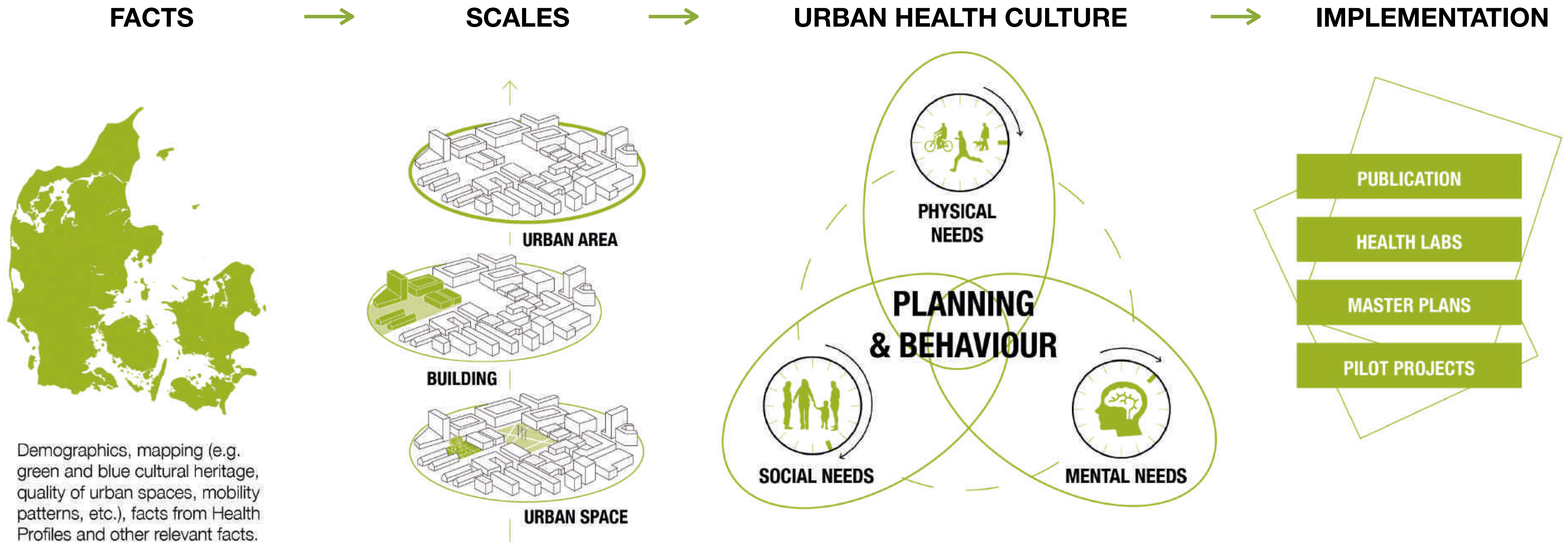
”Loneliness is something that develops within ourselves, it's the feeling that arises when you don't get your social needs met.”

Jesper Lund Bredeesen, Divisional director, Lundbeck - member of think tank

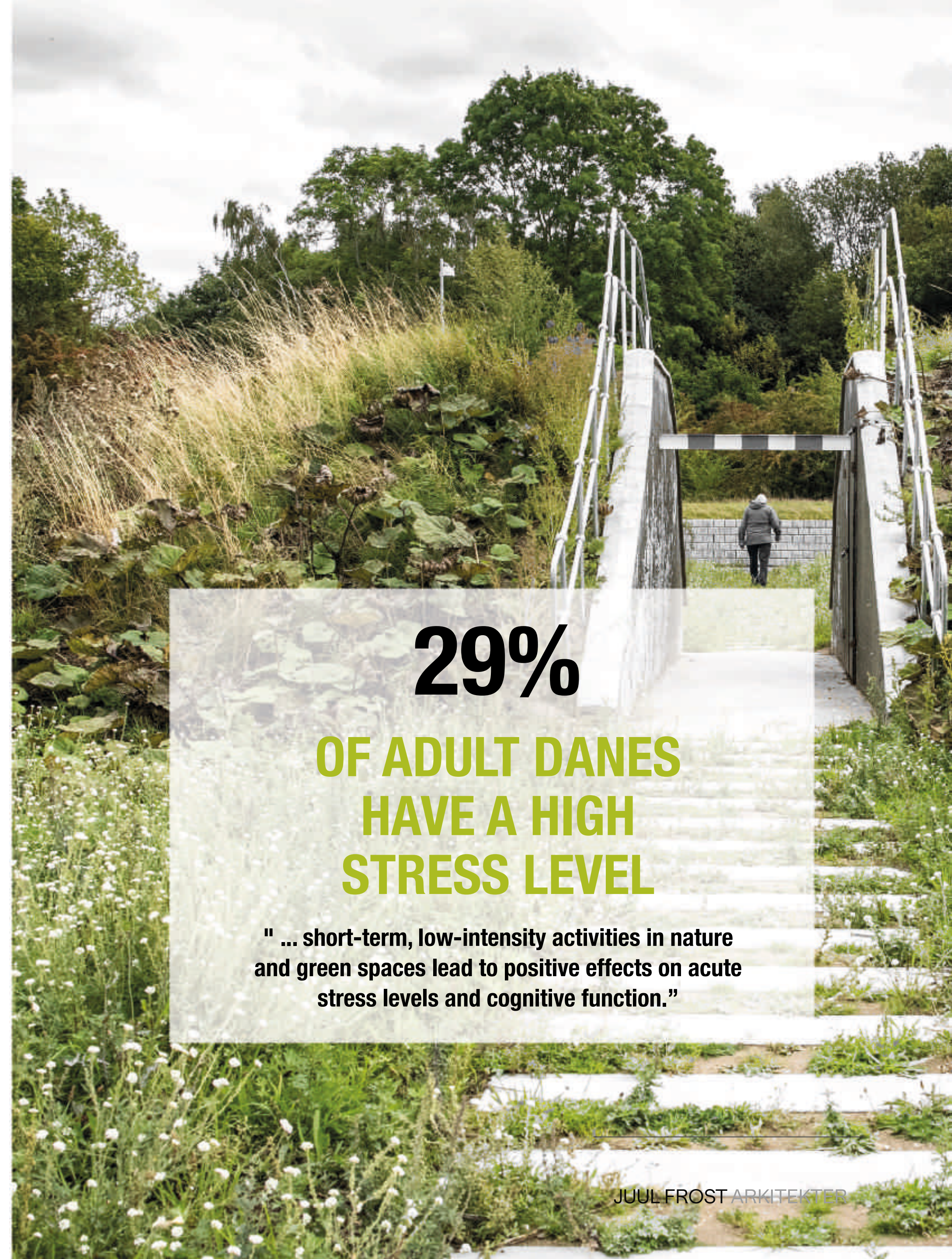
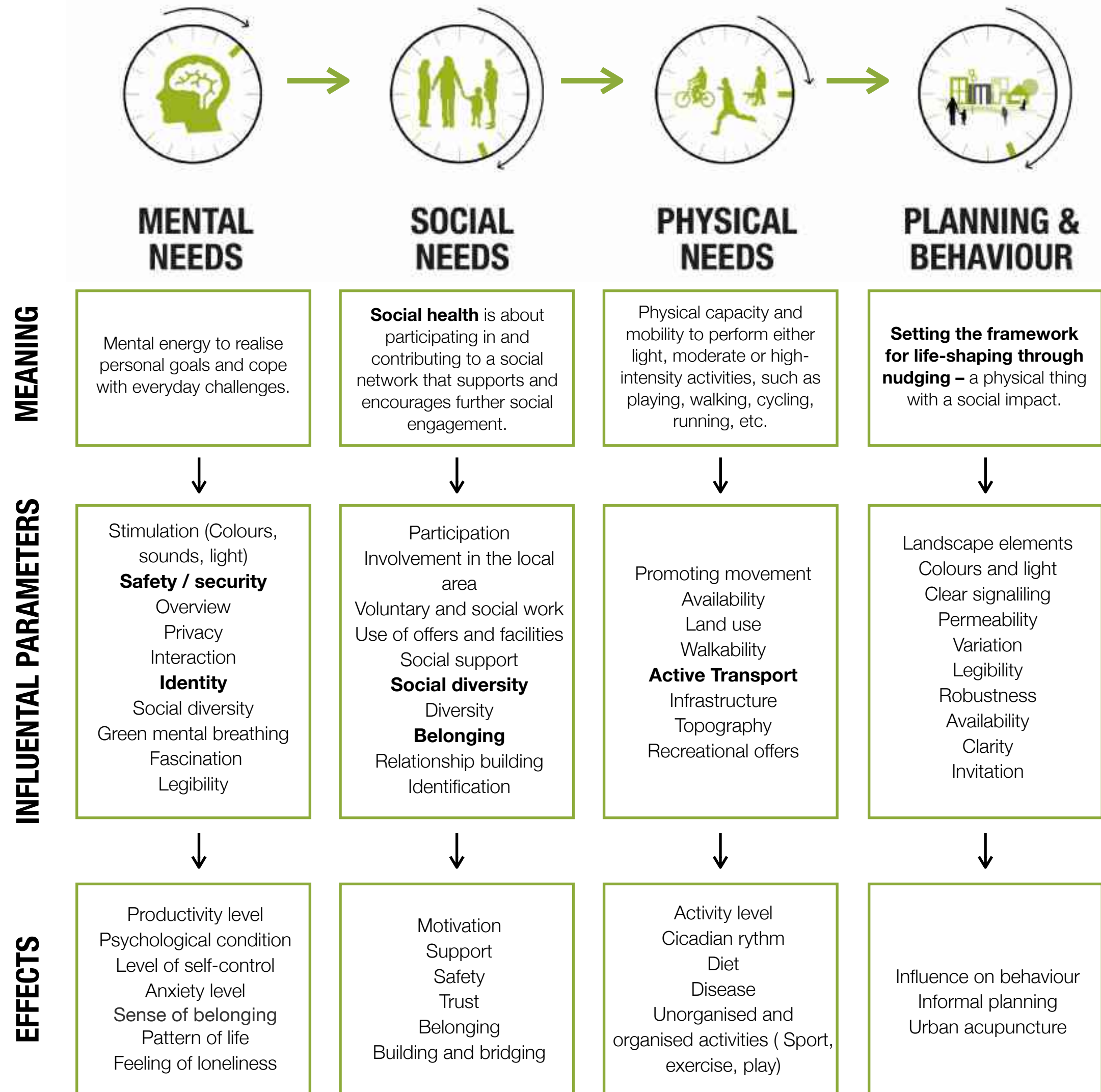


A HOLISTIC APPROACH

The aim of the urban health culture of the future is to proactively ensure the connection between health and planning.



A HOLISTIC APPROACH



29%
OF ADULT DANES
HAVE A HIGH
STRESS LEVEL

" ... short-term, low-intensity activities in nature and green spaces lead to positive effects on acute stress levels and cognitive function."

CATEGORIES OF NEEDS

Tools to promote physical, mental and social health in the built environment



MENTAL NEEDS

Mental energy to realise personal goals and cope with everyday challenges.

Stimulation (Colours, sounds, light)

Safety / security

- Overview
- Privacy
- Interaction
- Identity

Social diversity

Green mental breathing spaces

Fascination

Legibility (Orientation)

- Productivity level
- Psychological condition
- Level of self-control
- Anxiety level

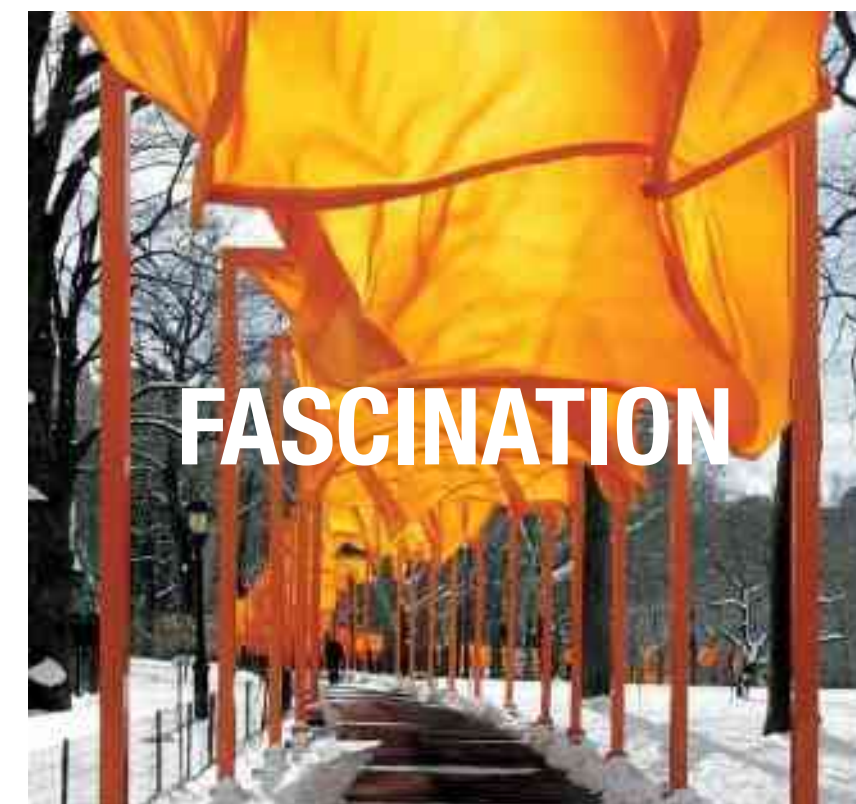
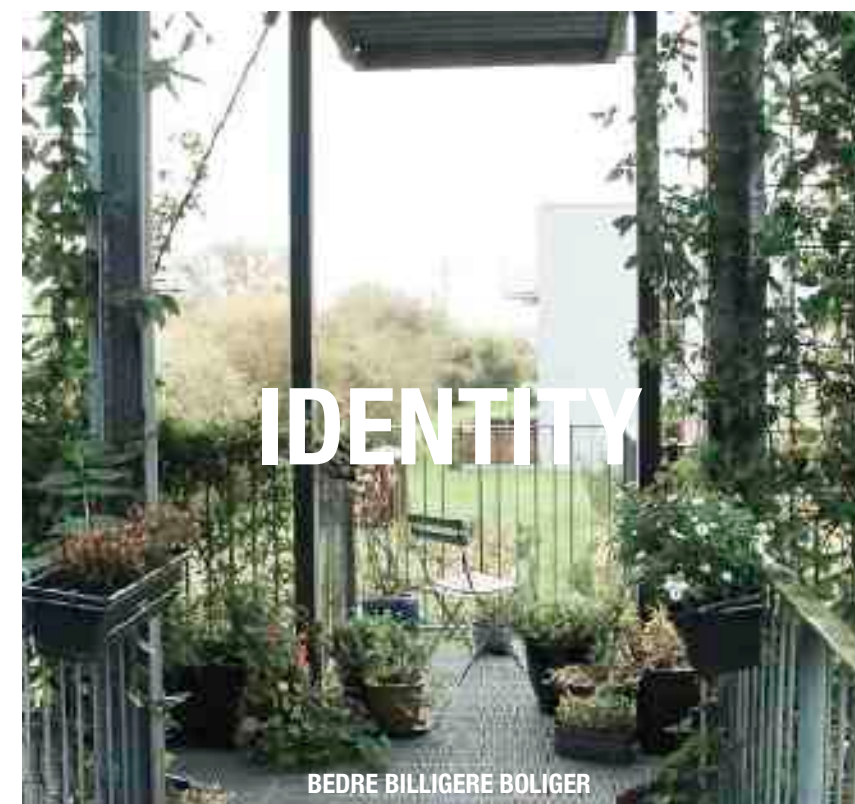
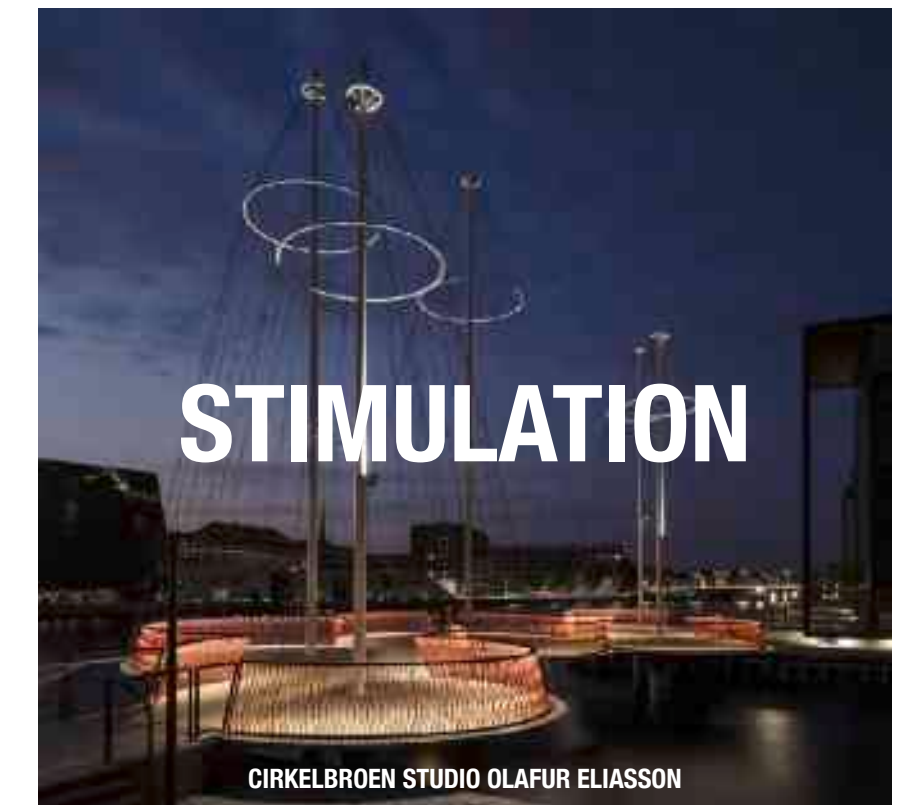
Sense of belonging

- Pattern of life
- Feeling of loneliness

MEANING

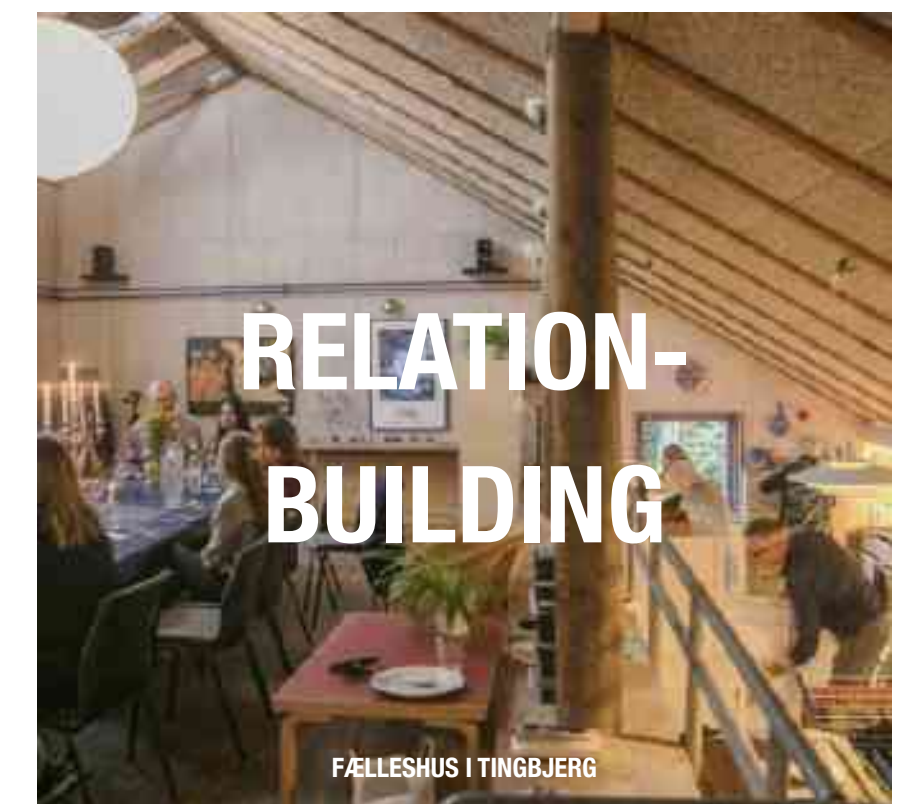
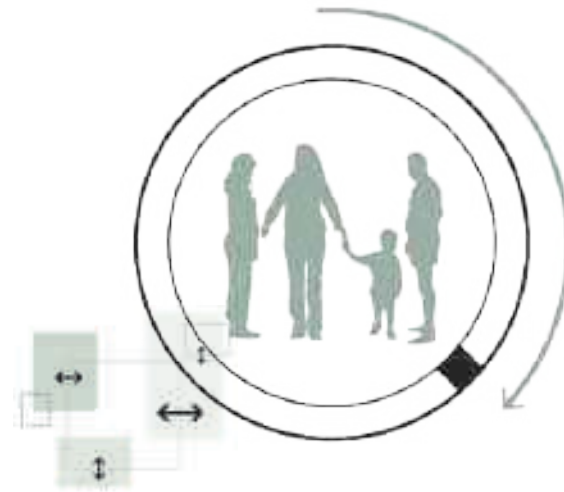
INFLUENTIAL PARAMETERS

EFFECTS



CATEGORIES OF NEEDS

SOCIAL NEEDS



MEANING

Social health is an expression of taking part in and bridging to a social network that supports and **encourages further social engagement.**

INFLUENTIAL PARAMETERS

Social health is an expression of **taking part in** and bridging to a social network that supports and encourages further social engagement.

EFFECTS

Building and bridging communities
 Safety / Security
 Confidence
 Affiliation
 Support
Interest / motivation

CATEGORIES OF NEEDS

PHYSICAL NEEDS



MEANING

Physical capacity and range of motion to perform either light, **moderate or high intensity activities**, such as play, walking, cycling, running etc.

INFLUENTIAL PARAMETERS

Movement-promoting nature (frequency, intensity, duration)

Availability

Land use (urbanization, walkability, mixed use)

Infrastructure / transport

Topography

Presence (access to green areas, recreational facilities and public spaces)

EFFECTS

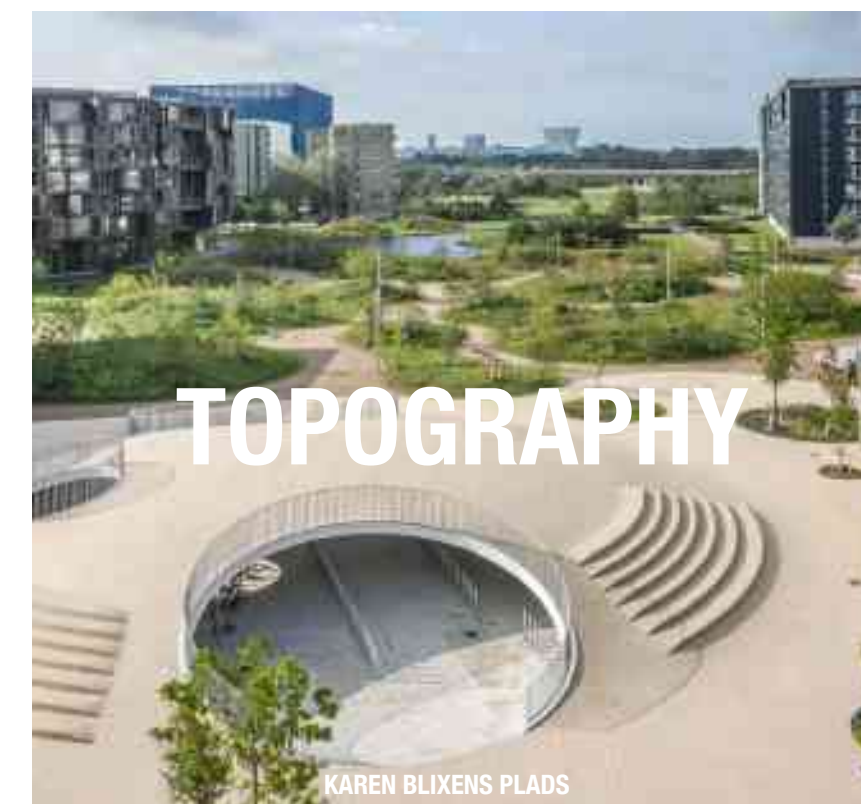
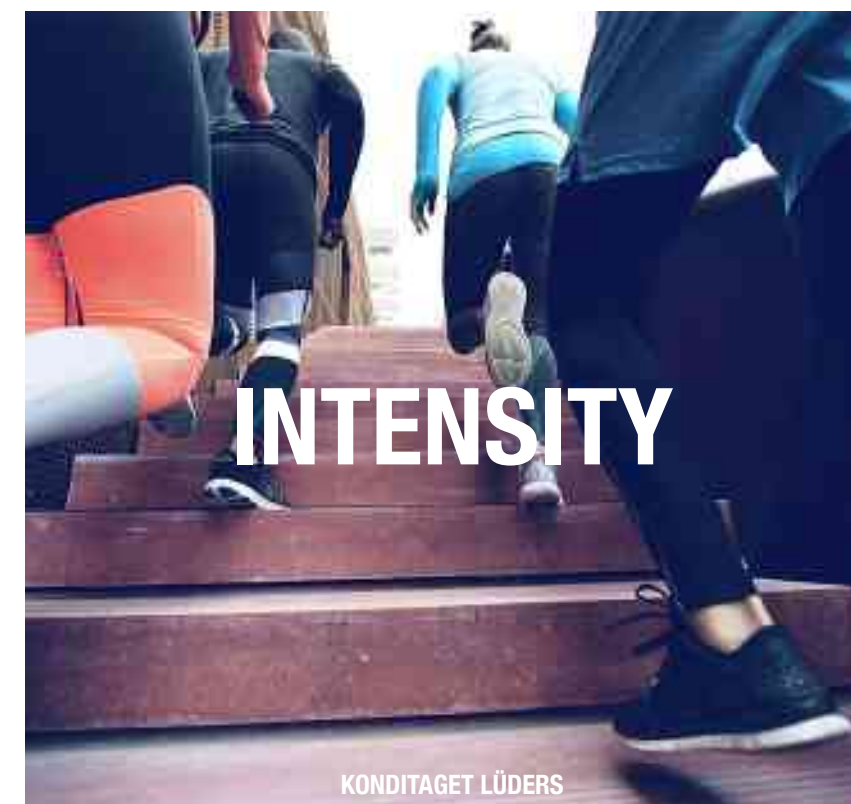
Activity level

Rhythm of the day

Broom

Diseases

U- and organized activities (sports, exercise, play)



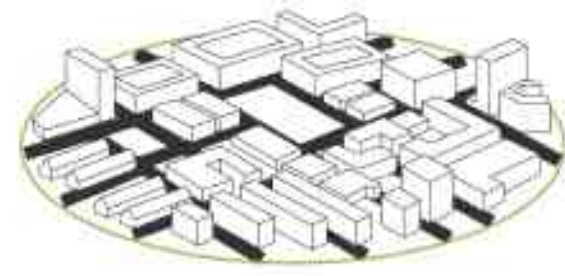


CASES

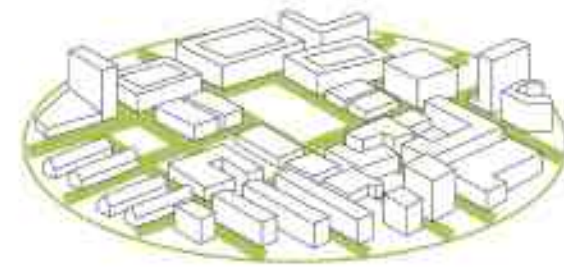
INTERNATIONAL AND SCANDINAVIAN CASES



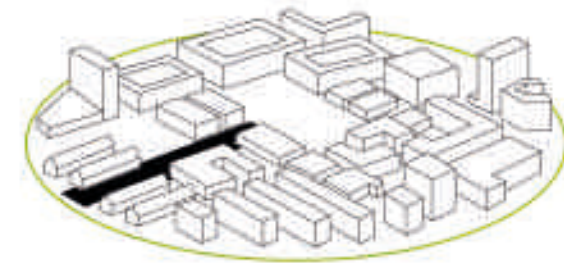
URBAN AREA



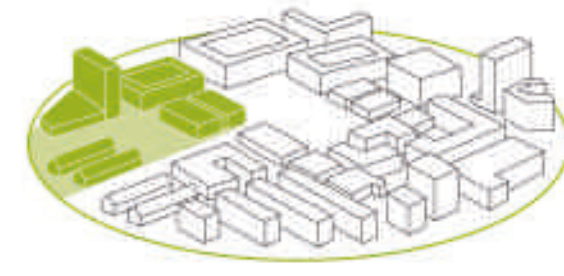
ROAD NETWORK



PATHS / CONNECTIONS



INDIVIDUAL STREET

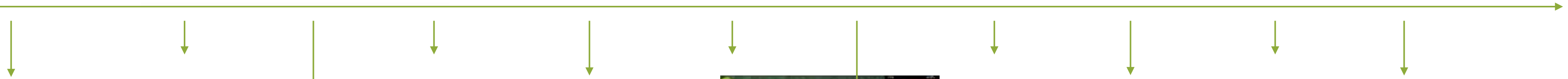


BUILDING



URBAN SPACE / GREEN SPACE

SCALE



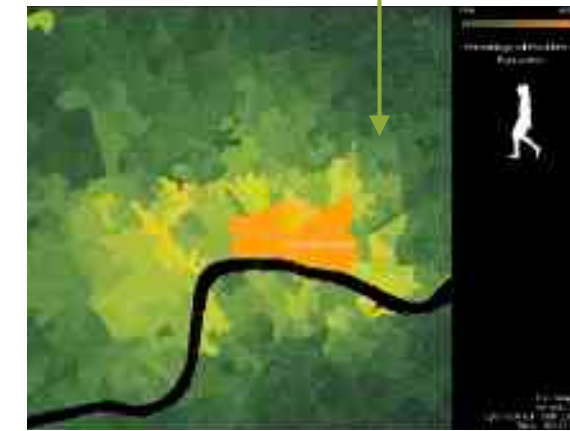
20 MIN CITY



REINVENTING PARIS



SOCIAL STREET, SAXOGADE, CPH



WALKABLE LONDON



DALSTON, LONDON



PULSPARKEN, ODENSE



BO 01, MALMØ



GREEN BIKE PATHS, CPH



KICKSTART TORNHØJ, AALBORG ØST



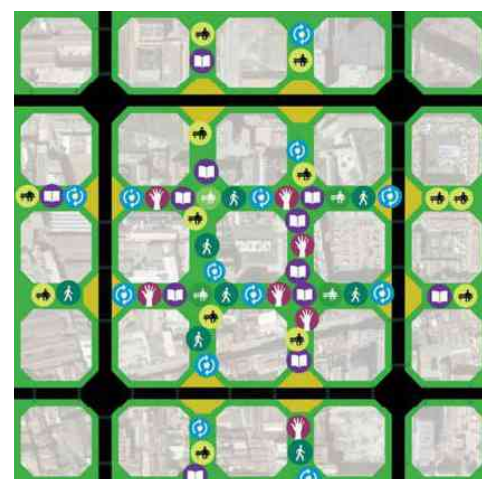
VAPNAGAARD URBAN GARDENS, ELSINORE



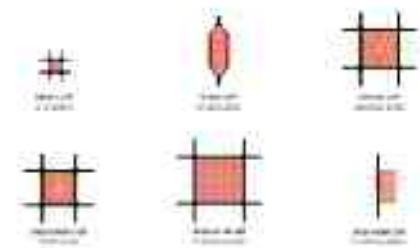
GILLETT SQUARE



BROOKLYN BRIDGE PARK



SUPERBLOCKS, BARCELONA



CELLULAR URBANISM, ROBIN RENNER



BIOPHILIA IN ARCHITECTURE

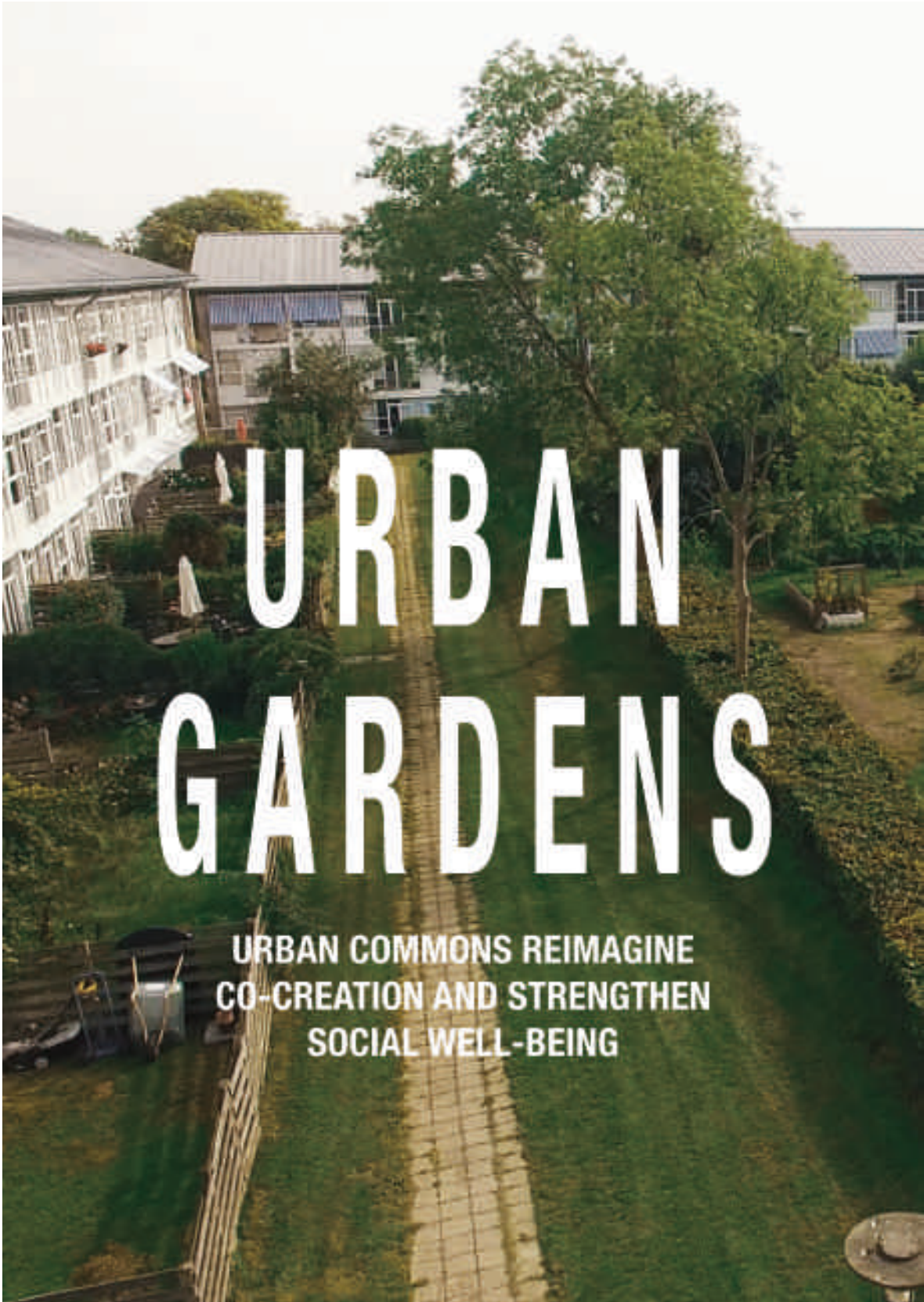
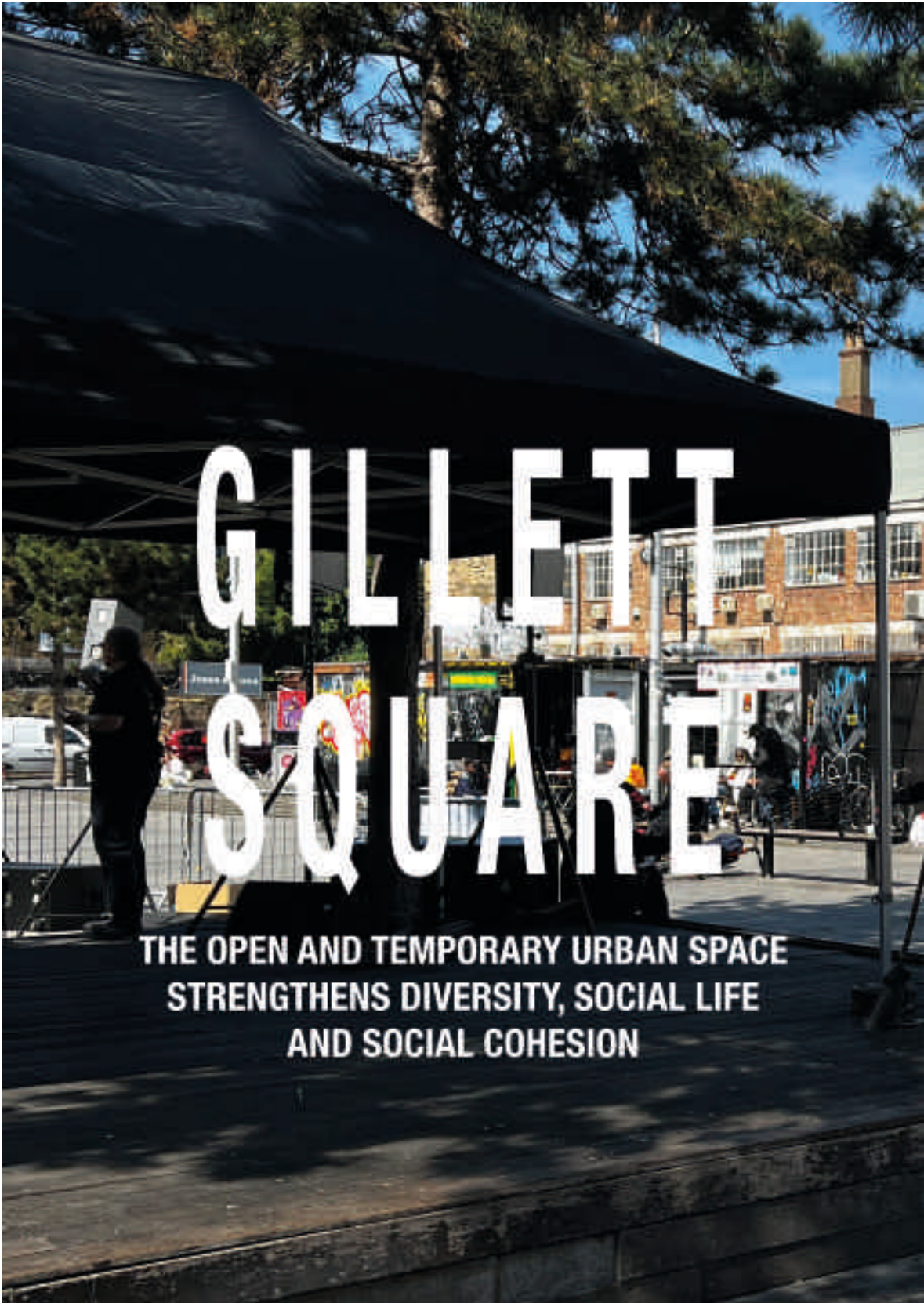
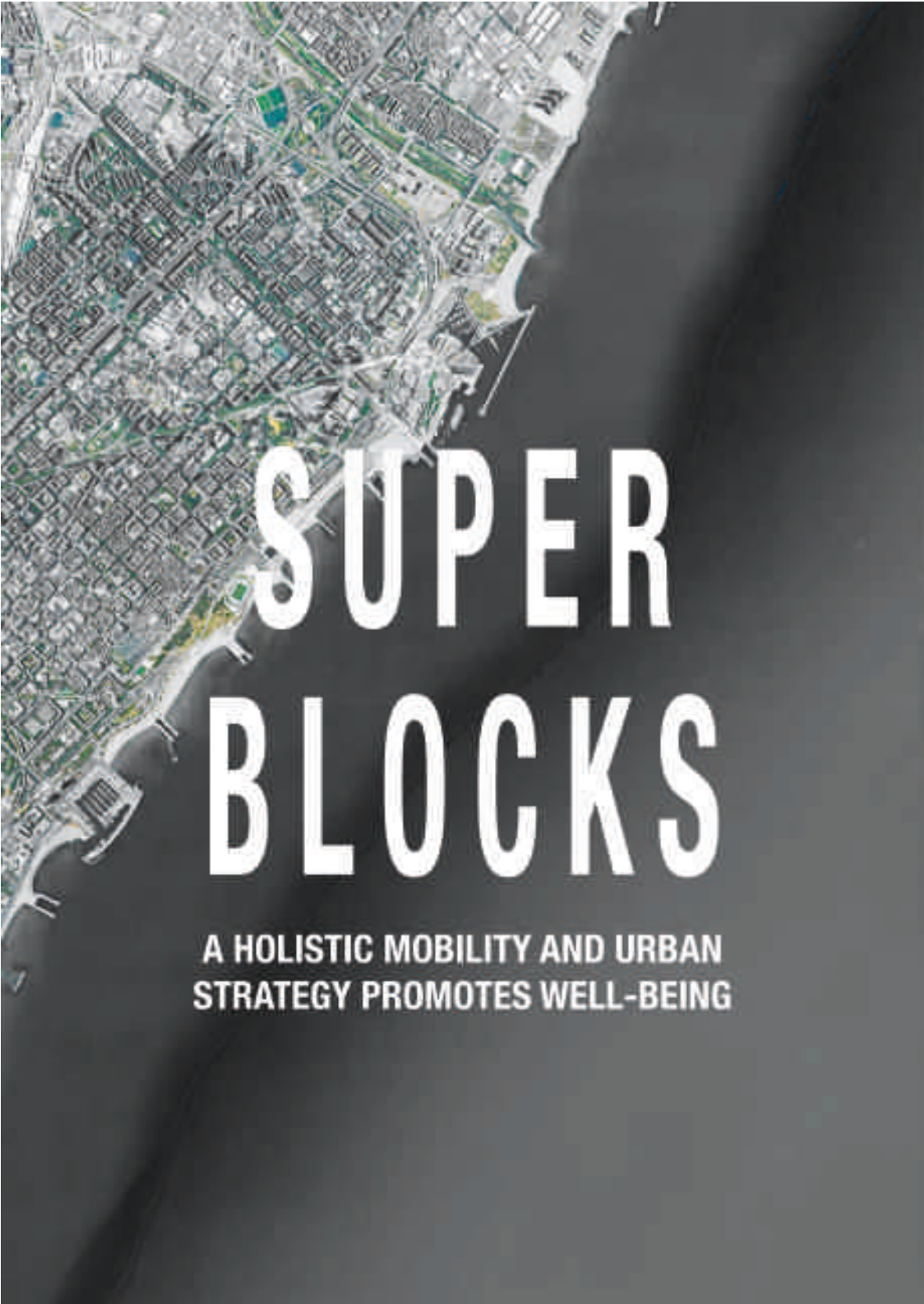
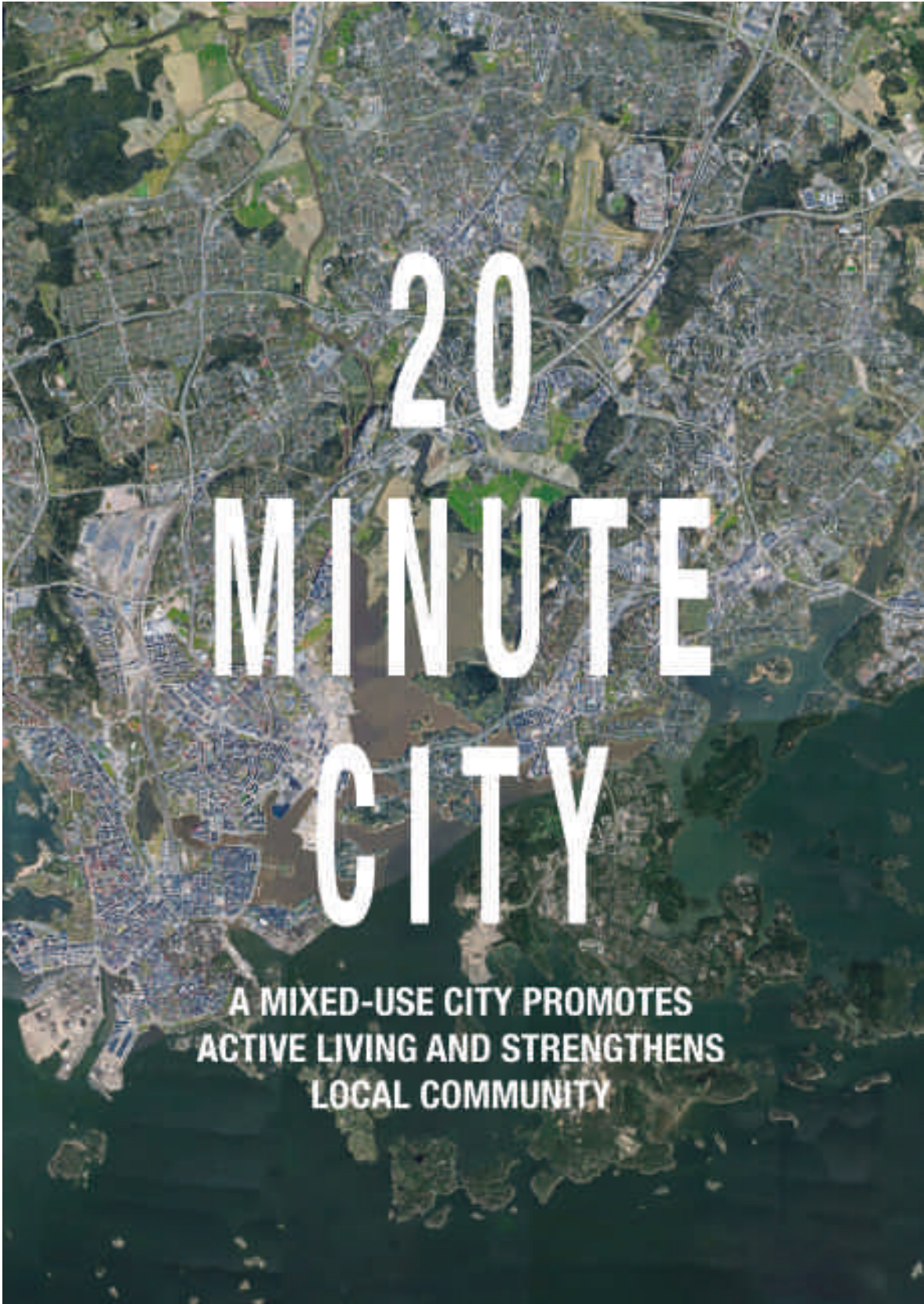


WELL BUILDING CERTIFICATION



URBAN ACUPUNCTURE

SELECTED CASES





SUPERBLOCKS

A HOLISTIC MOBILITY AND URBAN STRATEGY PROMOTES WELL-BEING

CASE SUPERBLOCKS



Cerdà plan: Hygiene

The Catalan civil engineer Ildefonso Cerdà (1815-1876) is the main architect behind the district L'Eixample (the extension), which today forms the main part of the center of Barcelona.



Mobility plan

Urban Mobility Plan of Barcelona, 2013-2018.



Implementation and temporary measures

Today, the superblock concept is implemented in 13 areas.

CASE SUPERBLOCKS

Where Barcelona

Architect/landscape architect Urban Ecology Agency and Barcelona Municipality

Client Barcelona Municipality

When 1993 – now

Why?

- 44% of Barcelona's inhabitants are exposed to higher levels of **air pollution** than recommended by the WHO
- 50% of the population in the Eixample district is exposed to an unacceptable **noise level** (above 65 dbA).
- The large asphalt road surfaces also create **heat islands**, and the city is on average 2 degrees warmer than the surrounding areas.
- Barcelona only has **1.85m² of green space per capita** in the Eixample district, whereas the WHO recommends 9m² per capita.

Interventioner

- Integrated mobility and urban space strategy
- Implementation of temporary measures for traffic and in urban areas
- Implementation of permanent urban spaces and green areas



“These measures have great potential to impact on the health of the population,
Barcelona Public Health Agency



CASE

IMPACT MEASUREMENT: SUPERBLOCKS

Barcelona Public Health Agency (ASPB)

How?

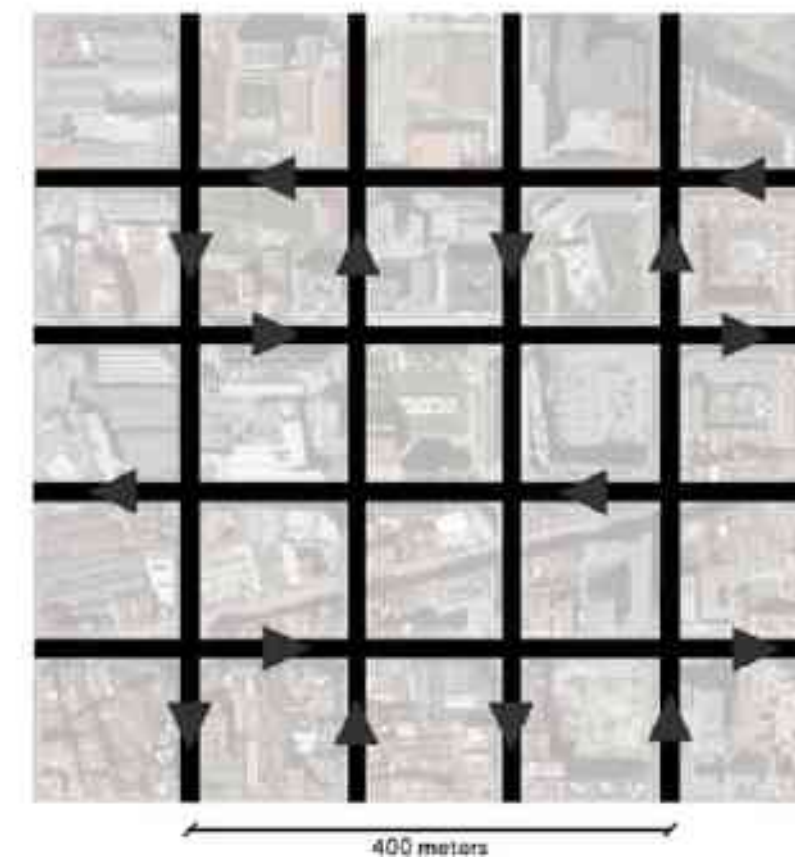
The evaluation was carried out using quantitative and qualitative methods:

- environmental measures of air quality,
- an observational study of physical activity
- an audit to assess the change in the walkability of the neighbourhood
- a pre-post intervention health survey
- a qualitative study with focus groups
- two ethnographic guerrillas, which combine observation with semi-structured interviews.

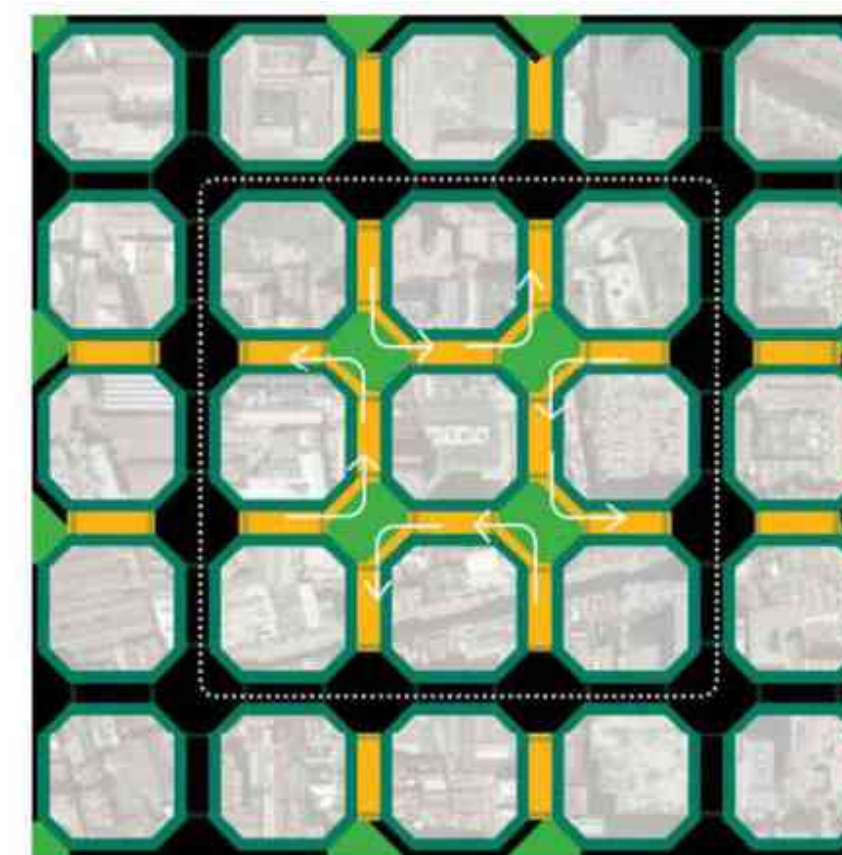
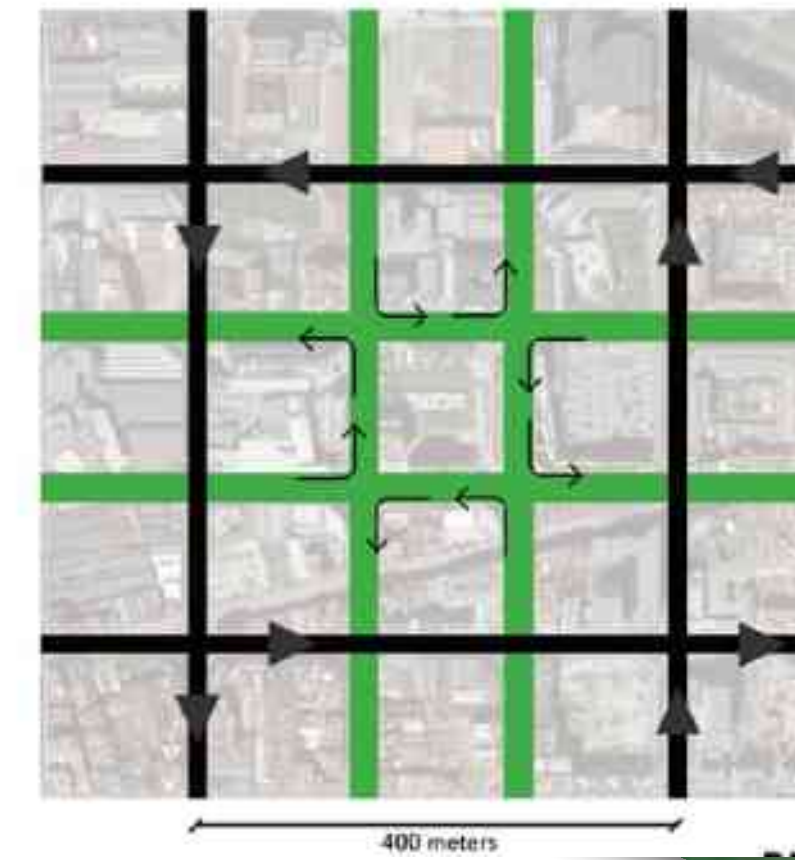
Effects

- There is a perceived gain in **well-being, tranquility, quality of sleep, reduction of noise, reduction of pollution** and **increase in social interaction**;
- **Air quality measures show improvements** to the intervened areas where the streets are pacified and the number of cars is reduced.;
- These measures have **great potential to impact on the health of the population**, if they are implemented extensively.

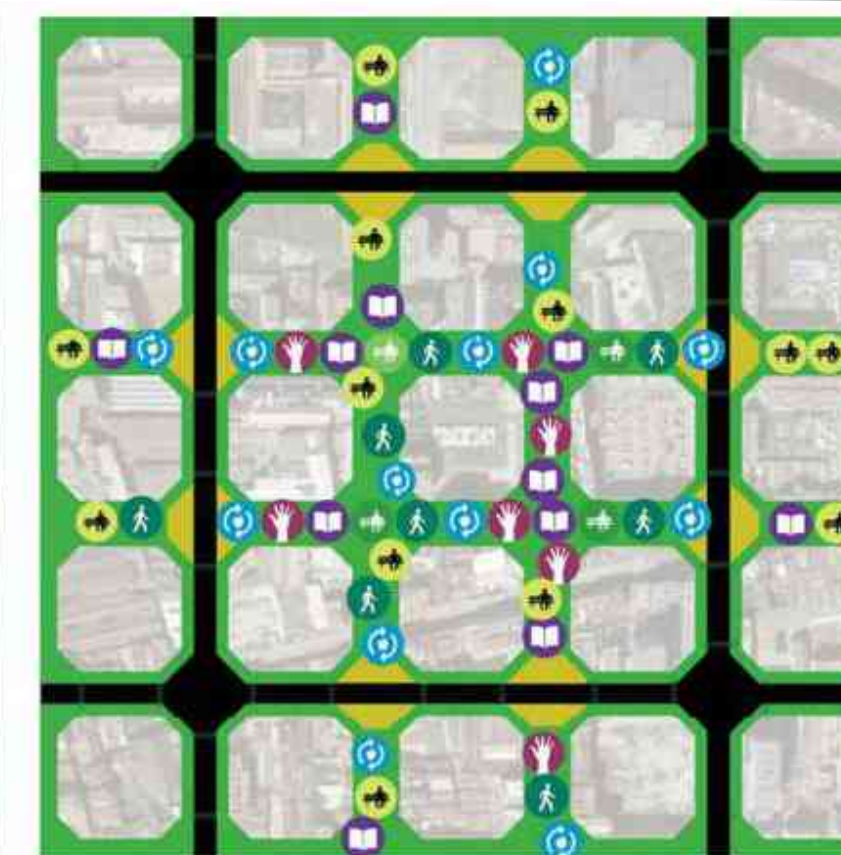
CURRENT SITUATION



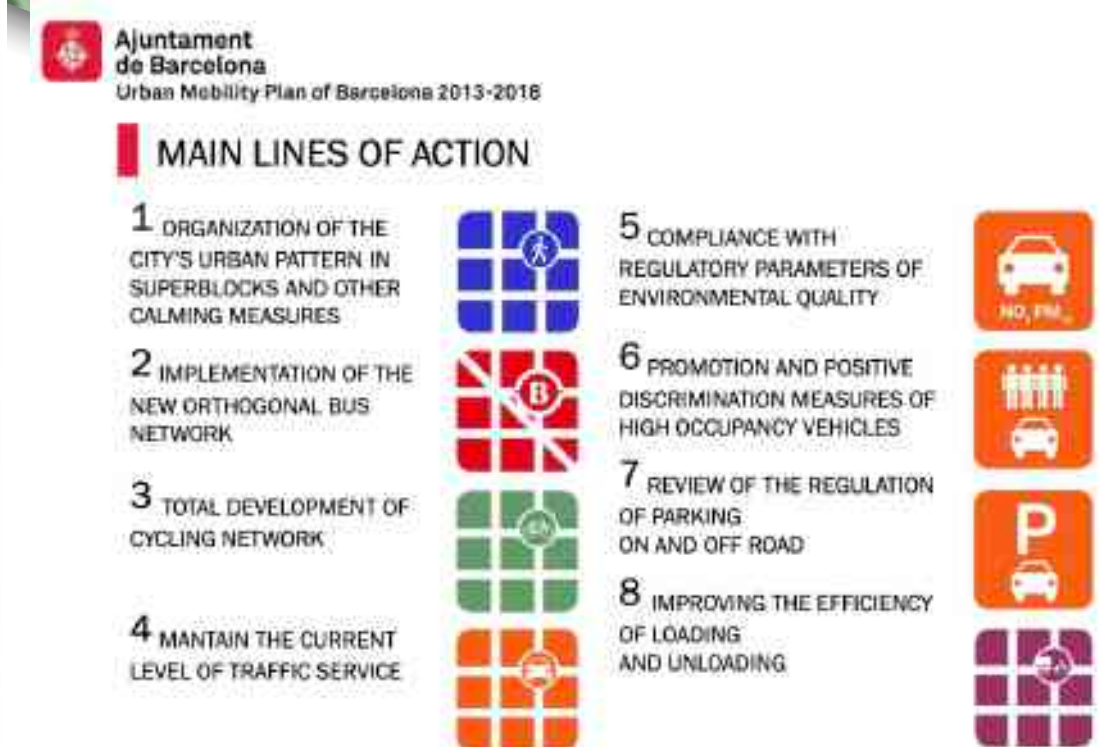
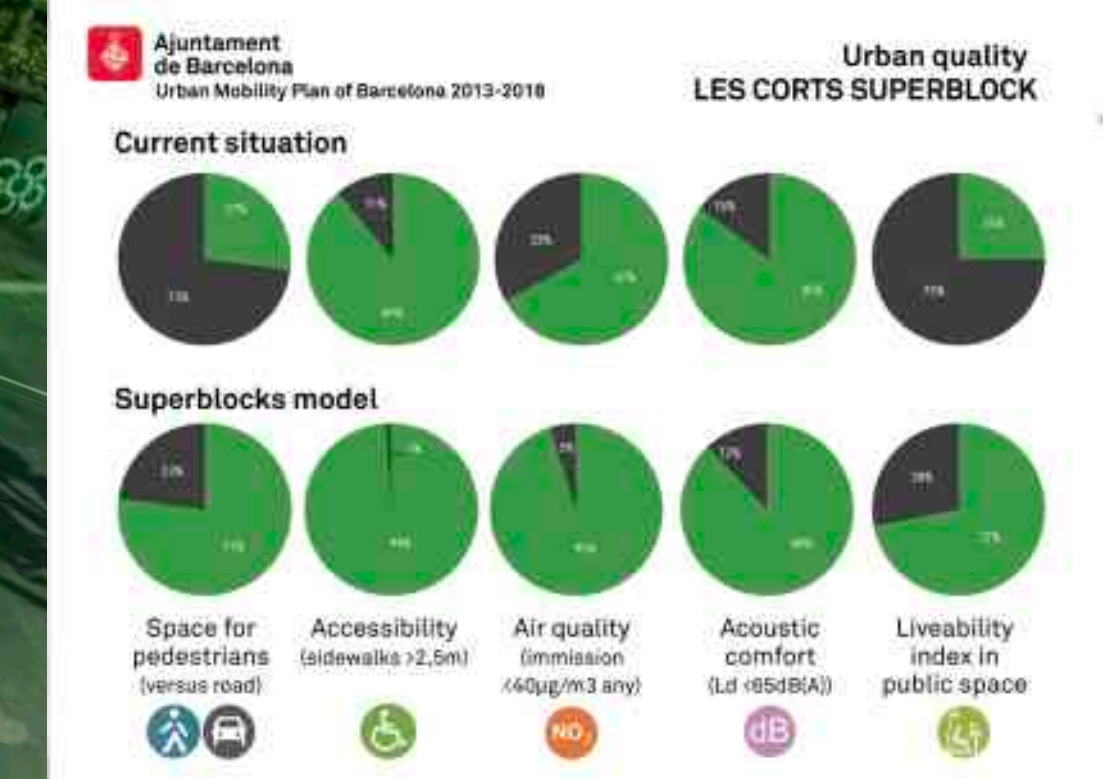
SUPERBLOCK



Phase 1



Phase 2



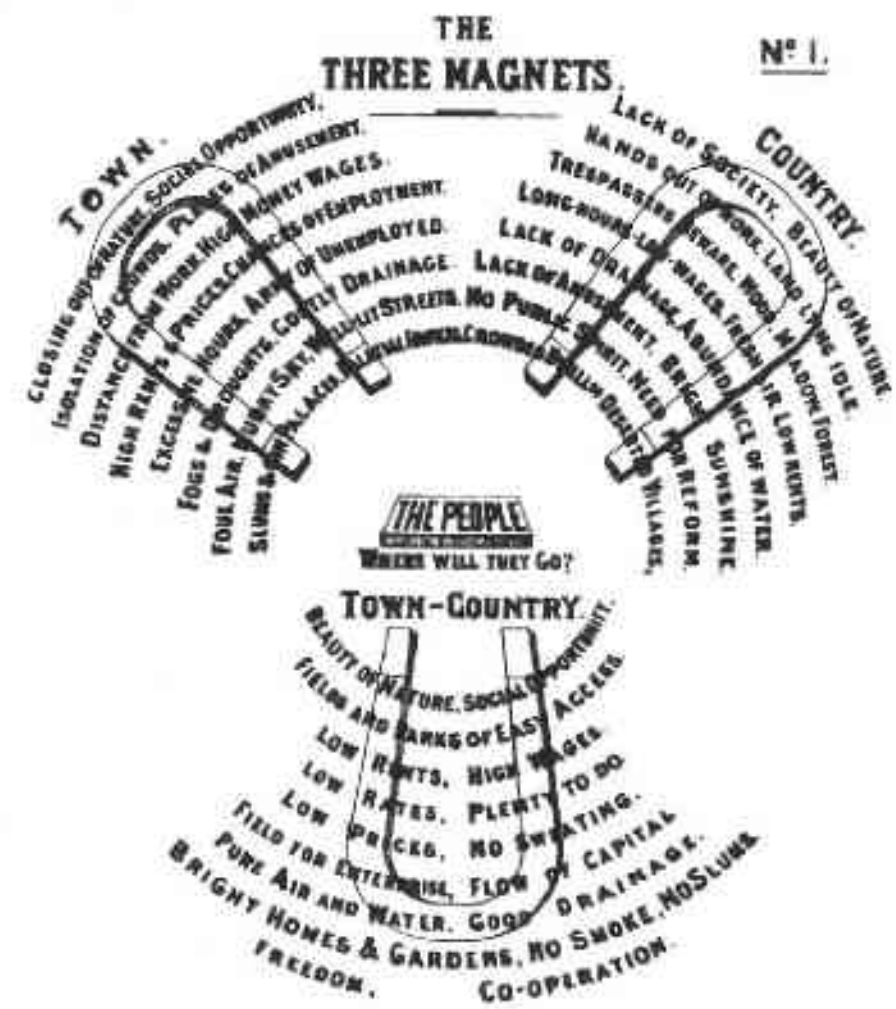
An aerial photograph of a city, likely Seattle, showing a dense urban grid, green spaces, and water bodies. A white circle highlights a specific area in the lower-left quadrant of the image.

20 MIN. CITY

**A MIXED-USE CITY PROMOTES ACTIVE LIVING
AND STRENGTHENS THE LOCAL COMMUNITY**

CASE

20 MIN. CITY



The Garden City

“Where will people go?” - Ebenezer Howard set up three magnets, respectively 'city', 'country' and 'city-country'. This became the theoretical basis for the garden city, 1902.

Implementation

Tapiola, Helsinki was built in the 1950s and 60s by the Finnish Housing Fund and was designed as a garden city.

Jane Jacobs

In the book "**The Death and Life of Great American Cities**", 1961, Jacobs focused on the use of sidewalks and described the benefits of **safe, diverse and lively streets** through short blocks, population density and functional diversity.

Guidelines

20-Minute Neighbourhoods – Creating Healthier, Active, Prosperous Communities. 2021.

CASE

20 MIN CITY

Where United Kingdom

Arkitekt/landskabsarkitekt Town and Country Planning Association

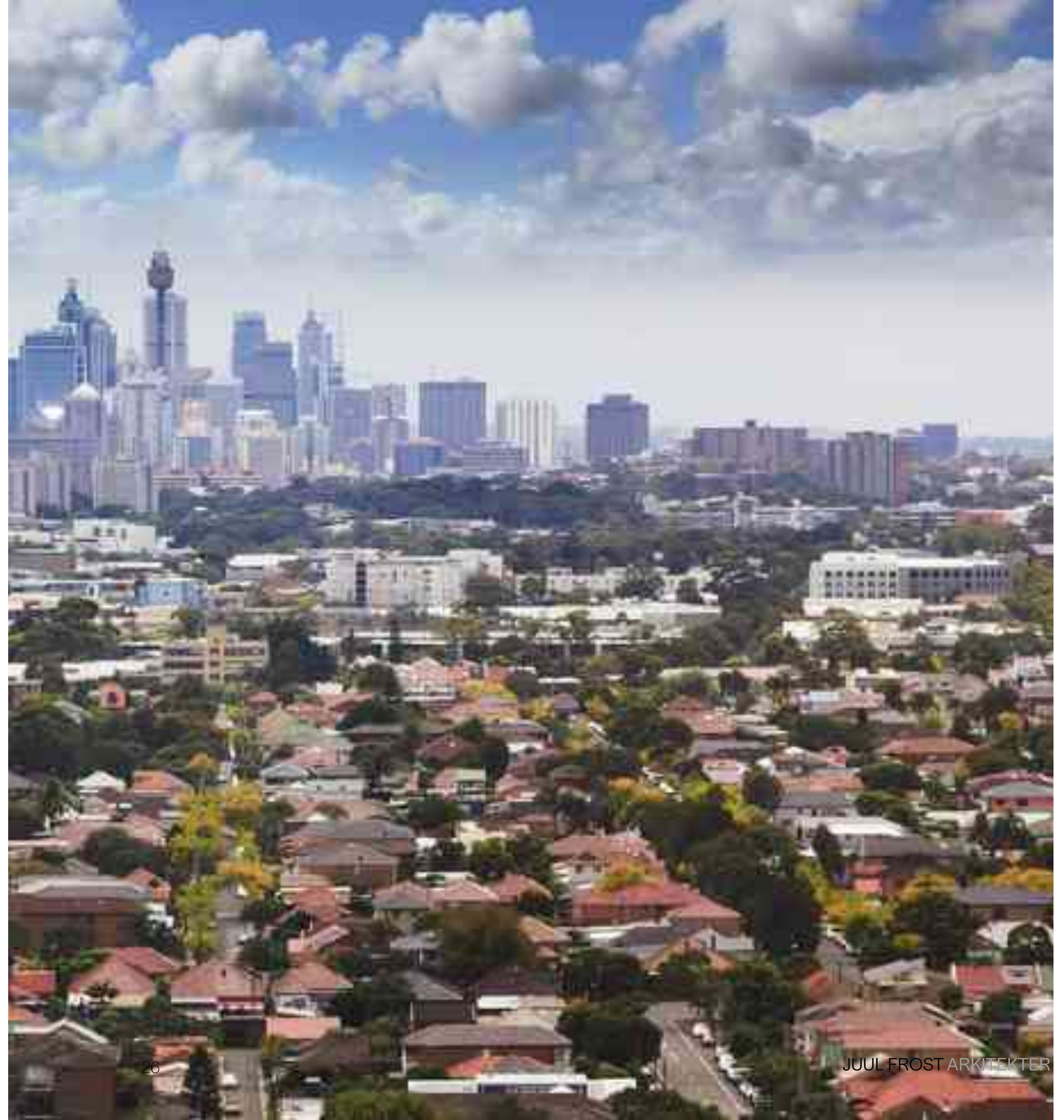
When 2021

Why?

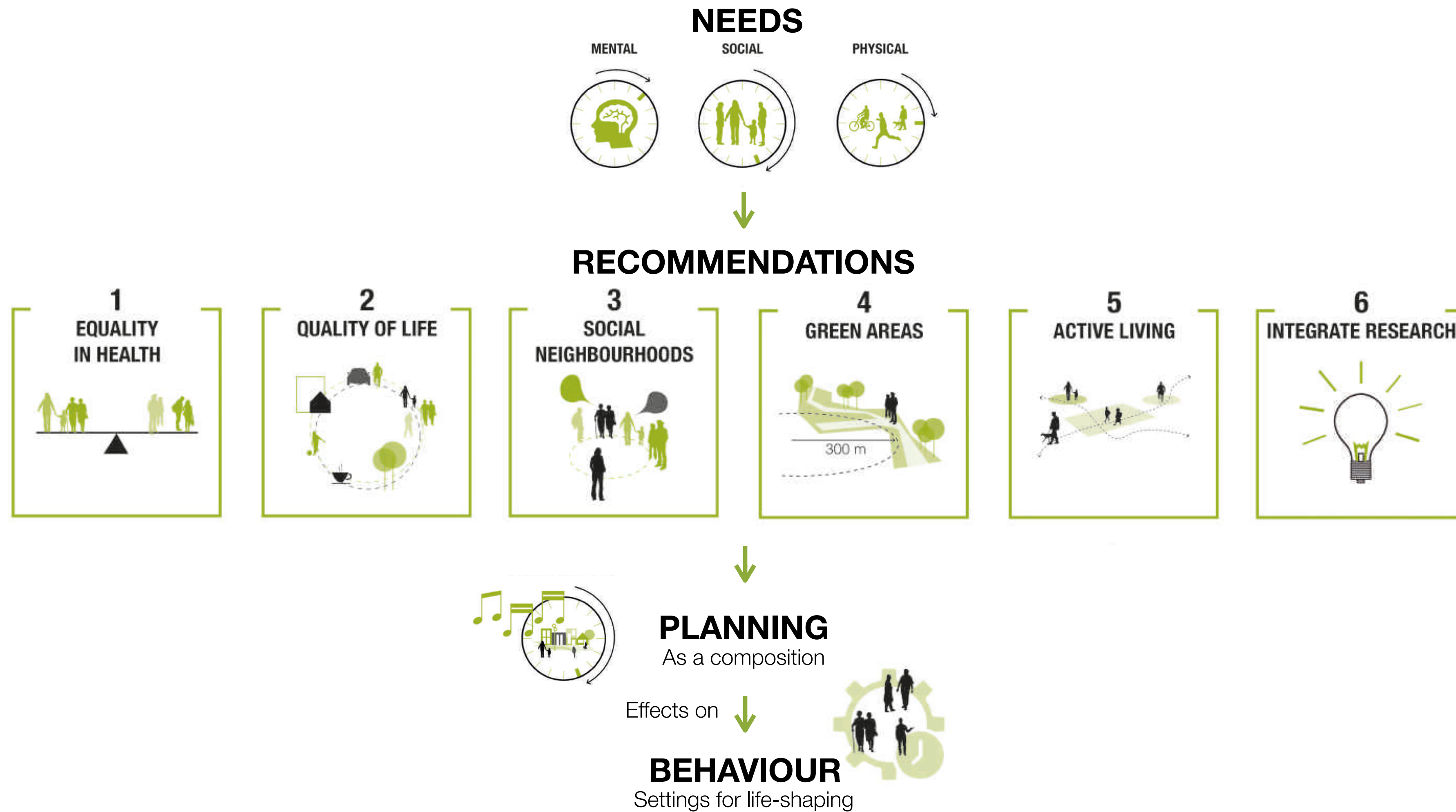
- Need to **reduce CO2 emissions.**
- There is a need for increased physical activity every day.
- Community problem; increased loneliness.

How?

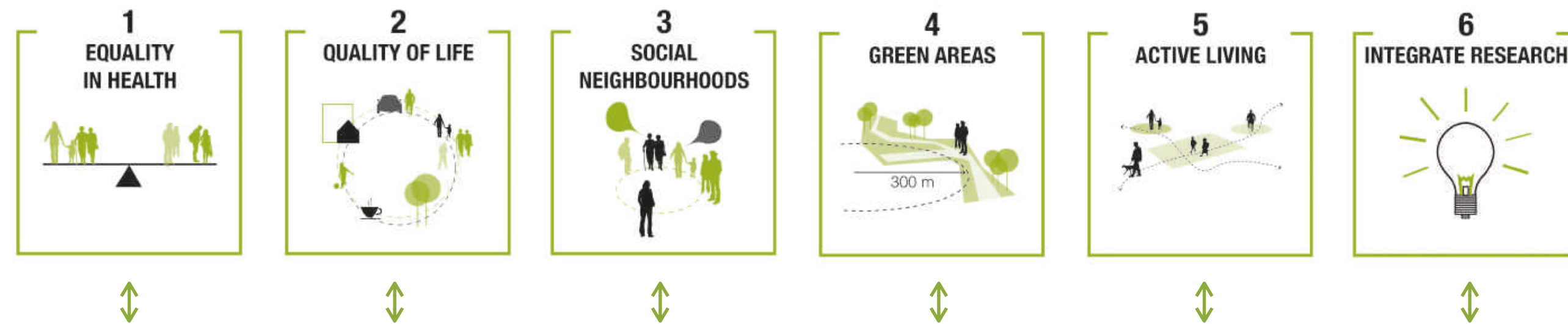
- Address **everyday needs within 20 minutes**
- Active transport **promotes physical health**, neighborliness and security
- An **adaptable planning concept**



HOLISTIC RECOMMENDATIONS _ THE MATRIX



HOLISTIC RECOMMENDATIONS



MUNKEBJERG PARK



BETTER AFFORDABLE HOUSING



SAMARA MASTERPLAN



INTEGRATE RESEARCH



PULSPARKEN



FILMHUSENE VÆRLØSE



APPLIED RESEARCH

FROM RESEARCH TO PRACTISE

**FACTBOX: MIX USE NEIGHBORHOOD
HOUSING, STUDENT, FAMILY AND SENIOR,
DAYCARE, COMMERCE, BUSINESS, PARC
88.500 SQM
GREEN ROOFS**

MUNKEBJERG PARK

MUNKEBJERG PARK

INFLUENTIAL PARAMETERS ON HEALTH



MENTAL NEEDS

- Sense of safety / security
- Identity of place /
- Sense of belonging



SOCIAL NEEDS

- Social diversity / Diversity in dwellings
- Different degrees of public and private.
- Social meeting spaces
- Identification



PHYSICAL NEEDS

- Walkability
- Recreational offers
- Supporting active living
- Access to green areas



PLANNING & BEHAVIOUR

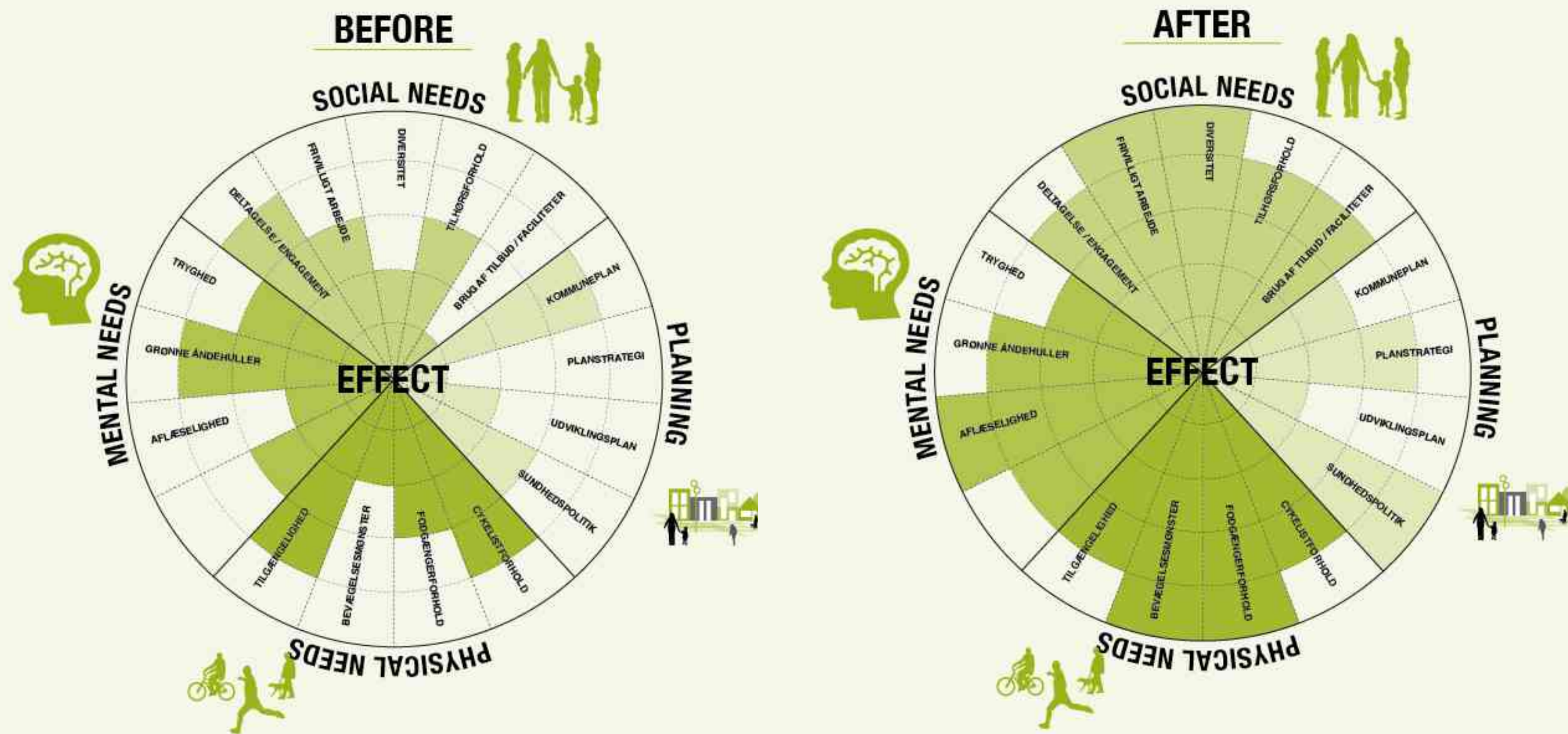
- Landscape elements
- Permeability
- Holistic approach
- Health will be explicitly expressed



PROGRAMME

HOLISTIC RECOMMENDATIONS

INTEGRATE RESEARCH



Communicate evaluations in an added value compass, comparing selected parameters before and after changes.



OUR SHARED RESPONSIBILITY