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
OUR “BATTLEFIELD”

Realised and in progress:
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?
THE URBAN HEALTH CULTURE OF THE FUTURE

HOLISTIC TOOLS TO PROMOTE PHYSICAL, MENTAL AND SOCIAL WELL-BEING IN THE BUILT ENVIRONMENT
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?
In total, 58.1% of the adult population does not meet the WHO minimum recommendation for physical activity.

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 Knolker, Arbejdslæge, Direktør, professor, D Mam, Rådmand for Folkedomhed

”Det er vigtigt at strategin er politisk ågd og at forvaltningerne gør dem trygge i sine valg.”
– Christel Larsson, direktør for ’Politik for god folkehelse’.

”Trivsel findes ’mellem ørene’; det er en kropslig forommelse, en følelse, der kommer og går, men er ikke tilfældigt.”
– John Plöger, Professor eremitus, 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 Brocksen, Læge, Divisional Director, H. Lundbeck A/S

”Polyfoni som planmæssig strategi kæn således udfordre de konventionelle plantermer og give rum for attraktive uforudseelige scenarier og resultater.”
– Peter Hanka, Director, Associate Fellow ved Oxford University, Said 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.”
– Karina Winter, Samfundsgeograf, forsker, Statens Institut for Folkesundhed

”I virkeligheden opnår de fleste mennesker hovedfeltet af deres fysiske aktivitet som en del af deres daglige gøremål.”
– Jasper Schippgen, Profesør for fysiologi, H. Lundbeck A/S

”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. Frandsen, Regionchef for sundhedsforvaltning, Aalborg Kommune

”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 at være – også der, der ikke ligner os selv.”
– Rasmus S. Andersen, Arkitekt, Teamleder Byutvikling 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 Bredesen, 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.

Demographics, mapping (e.g. green and blue cultural heritage, quality of urban spaces, mobility patterns, etc.), facts from Health Profiles and other relevant facts.
A HOLISTIC APPROACH

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

SOCIAL NEEDS
Social health is about participating in and contributing to a social network that supports and encourages further social engagement.

PHYSICAL NEEDS
Physical capacity and mobility to perform either light, moderate or high-intensity activities, such as playing, walking, cycling, running, etc.

PLANNING & BEHAVIOUR
Setting the framework for life-shaping through nudging – a physical thing with a social impact.

MEANING

INFLUENTIAL PARAMETERS
Stimulation (Colours, sounds, light)
Safety / security
Overview
Privacy
Interaction
Identity
Social diversity
Green mental breathing
Fascination
Legibility

Participation
Involvement in the local area
Voluntary and social work
Use of offers and facilities
Social support
Social diversity
Diversity
Belonging
Relationship building
Identification

Promoting movement
Availability
Land use
Walkability
Active Transport
Infrastructure
Topography
Recreational offers

Landscape elements
Colours and light
Clear signalling
Permeability
Variation
Legibility
Robustness
Availability
Clarity
Invitation

Productivity level
Psychological condition
Level of self-control
Anxiety level
Sense of belonging
Pattern of life
Feeling of loneliness

Motivation
Support
Safety
Trust
Belonging
Building and bridging

Activity level
Cicadian rhythm
Diet
Disease
Unorganised and organised activities (Sport, exercise, play)

Influence on behaviour
Informal planning
Urban acupuncture

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)

MENTAL BREATHING SPACES

INTERACTION

SAFETY

IDENTITY

MENTAL

STIMULATION

INTERACTION

ATMOSPHERE

MENTAL

BREATHING

SPACES

STIMULATION

INTERACTION

ATMOSPHERE

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MENTAL

BREATHING

SPACES

STIMULATION

INTERACTION

ATMOSPHERE

IDENTITY

FASCINATION

LEGIBILITY

PRODUCTIVITY LEVEL
Psychological condition
Level of self-control
Anxiety level
Sense of belonging
Pattern of life
Feeling of loneliness

MEANING

EFFECTS

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

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

PHYSICAL NEEDS

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

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)

Activity level
Rhythm of the day
Broom
Diseases
U- and organized activities (sports, exercise, play)
INTERNATIONAL AND SCANDINAVIAN CASES

URBAN AREA
ROAD NETWORK
PATHS / CONNECTIONS
INDIVIDUAL STREET
BUILDING
URBAN SPACE / GREEN SPACE

SCALE

REINVENTING PARIS
SOCIAL STREET, SAXOGADE, CPH
WALKABLE LONDON
DALSTON, LONDON
PULS Parker, ODENSE

20 MIN CITY
BIG O1, MALMØ
GREEN BIKE PATHS, CPH
KICKSTART TORNHØJ, AALBORG ØST
GILLETT SQUARE

SUPERBLOCKS, BARCELONA
CELLULAR URBANISM, ROBIN RENNER
BIPHILIA IN ARCHITECTURE
WELL BUILDING CERTIFICATION
VAPNAGAARD URBAN GARDENS, ELSHORE
URBAN ACUPUNCTURE

BROOKLYN BRIDGE PARK
WALKABLE LONDON
DALSTON, LONDON
PULS PARKER, ODENSE

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BROOKLYN BRIDGE PARK
SELECTED CASES

20 MINUTE CITY
A mixed-use city promotes active living and strengthens local community

SUPER BLOCKS
A holistic mobility and urban strategy promotes well-being

GILLETT SQUARE
The open and temporary urban space strengthens diversity, social life and social cohesion

URBAN GARDENS
Urban commons reimagine co-creation and strengthen social well-being
SUPERBLOCKS

A HOLISTIC MOBILITY AND URBAN STRATEGY PROMOTES WELL-BEING
Cerdàs plan: Hygiene
The Catalan civil engineer Ildefons 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

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.

Intervention
• 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

SUPERBLOCKS CASE

BEFORE

ACTIVE
MOVEMENT

MOBILITY
STRATEGY

SOCIAL
INTERACTION

REVERSIBLE
STRATEGY

Increased and safe movement in the neighbourhood
which integrates urban strategies
positive effect and increased well-being for local residents and users
creates opportunity for experiments
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.
20 MIN. CITY

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

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

RECOMMENDATIONS

1 EQUALITY IN HEALTH
2 QUALITY OF LIFE
3 SOCIAL NEIGHBOURHOODS
4 GREEN AREAS
5 ACTIVE LIVING
6 INTEGRATE RESEARCH

NEEDS
MENTAL  SOCIAL  PHYSICAL

PLANNING
As a composition
Effects on
BEHAVIOUR
Settings for life-shaping
HOLISTIC RECOMMENDATIONS

1. EQUALITY IN HEALTH
2. QUALITY OF LIFE
3. SOCIAL NEIGHBOURHOODS
4. GREEN AREAS
5. ACTIVE LIVING
6. INTEGRATE RESEARCH

MUNKEBJERG PARK

BETTER AFFORDABLE HOUSING

SAMARA MASTERPLAN

INTEGRATE RESEARCH

PULSPARKEN

FILMHUSENE VÆRLØSE
FROM RESEARCH TO PRACTISE

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

INTEGRATE RESEARCH

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