

1/2 Footprint, 2/1 Comfort is a residential project shaped by the contemporary challenges of nature and human, embedded by the value it adds on all scales.

Urban scale - Connection to its surroundings





A bridge away from the vibrant Tramkade

's-Hertogenbosch



Footprint

-M²

-500m<sup>2</sup> collective outside space

-CO2

minimum number of cars required

Anonymity

anonymity of the ensemble is prevented by the integration into the urban structure

## Comfort

Facilities

tailored facilities within the ensemble

Biodiversity

a green waterfront at walking distance

Connections

improved connections for slow traffic

De Bossche Stadsdelta





Waterfront as a place for recreation and social interaction



1.2 A street as the collective outside space on the ground floor emphasizes the routing to the waterfront. In contrast to the courtyard, the street as an urban architectural means, encourage the residents to enjoy the green qualities the city already comprises.



# Embedded by sharing qualities







## A home to compose



3. The project's story began with the search for a circular building system that could be part of resident's intrinsic motivation. This, to make people aware of the potential and urgence of a circular built environment. By giving the people not only the knowledge, but also to provide them with the skills and possibility to work with such a system, circularity will be integrated into their living habits.

Guidelines in the design of user-friendly Modular infill systems for assembly and disassembly



Connectors are integrated into the product

The product consists of 1-4 connectors



The product consists of 1-4 components



The product comprises of 1-2 types of connectors



Assembly and disassembly can be completed easily without damage to the product



Double the size of the connector is provided as tolerance



Connection is freely accessible, ample space for hands and/or tools

The product comprises of 1-2 types of components



Product has market-standard dimensions and movable by hand ( $\leq 1000x600x100$ )



<7,5

i) i)

Product has a market standard dry connection-system, during disassembly the connector will stay intact (integrated connector/ clips/ velcro/ magnets/ screws/ bolts and nuts)

The product is manageable with one hand (<7,5kg)



Components can be interchanged with eachother and other systems





Х

An assembly and disassembly video is available

Footprint	
-M²	
1/2 m²'s space	to own
-CO2	
use of renewab	le materials
Waste preven	tion
davaa suutabla a	

elements







## Day

Double use of furniture results in 1/2 of the  $m^{2}$ 's to own and 2/1 $m^{2}$ 's to use. With this system, a 3-room apartment of  $75m^{2}$  will only require just 50m<sup>2</sup>.





The Modular infill system toolbox

Night

170mm

100mm

*Installation space ceiling:* - space for cables 70mm -sound insulation (wood fibre insulation) 30mm - wooden slats 60x30mm



Installation space floor: - space for piping 140mm - sound insulation 30mm



Vertical section 1:50



# A familiar neighbourhood



The resident's private living area is extended with  $2,5x m^2$  outside space that is shared with all neighbours on one floor. This area is divided in a variety of spaces, responding to different times during the day and during the seasons.



+800



1. A place to enjoy in every weather condition



2. A sheltered place to retreat for a moment

Elevation north-west A wooden frame to appropriate.

Ν

 $\otimes$ 

1:150

1:100

Section fragment A-A A variety of open and sheltered outside spaces.



4. By splitting the ensemble into smaller building blocks with a maximum of ten neighbours on each floor, familiar and safe neighbourhoods will arise. Research found that each neighbour knows nine people by face as well as by name (Sikkel, 2020).



 $2/1 m^2$  to use Familiarity

with the shared outside spaces, familiarity among neighbours is enhanced, increasing trust and the sense of safety.





3. The load-bearing structure that encourages its use





With this project, I noticed that as an architect you start to design comfortable spaces. However when making a composition of these, you start to notice that the space inbetween is even more important to create a comfortable living environment for the residents and all that surrounds it.

# A Collective body

5. A collective body that connects all the different<br/>building blocks, let residents be able to enjoy all<br/>different qualities the ensemble comprises. Fol-<br/>building the body, one comes along places with<br/>a alocaking studio or a<br/>a generative field spaces that<br/>i alored facilities such as a cooking studio or a<br/>ta field space the body that architectural interven-<br/>tions. These interventions encourage residents due<br/>temselves to undertake different activities due<br/>to the balance in present elements and empty<br/>space.





1:20







The Collective body flowing through the building ensemble



## Footprint

## Anonymity

anonymity with the ensemble is prevented by the connecting collective body that encourages residents to explore the other blocks and its qualities.

## Comfort

### Facilities

defined places with tailored facilities adjacent to collective body.

### Spaces to use

spaces designed with small architectural interventions to encourage activities by the neighbours themselves.

## Familiarity

familiarity among and interaction between neighbours is enhanced by the collective body.

## Sense of safety

with the presence of different residents at different times, collective supervision will increase the sense of safety within the ensemble.







The balustrade as a small architectural intervention, encouraging and supporting different activities.

3.