

Creating a **sustainable, livable, and efficient urban district** and **mobility hub**

Aarhus H area | 31 October, 2019

UNS



**How can we improve public
city life and connectivity for
everyone?**

THREE PRINCIPLES

Collaborating to
create **joint value**

Designing for the future:
Designing for **health**

Incorporating
(digital) technology

ABOUT UNSTUDIO



93 Projects in design phases
175 Total staff
23 Nationalities
87 Built projects



UNStudio Amsterdam
Founded 1988



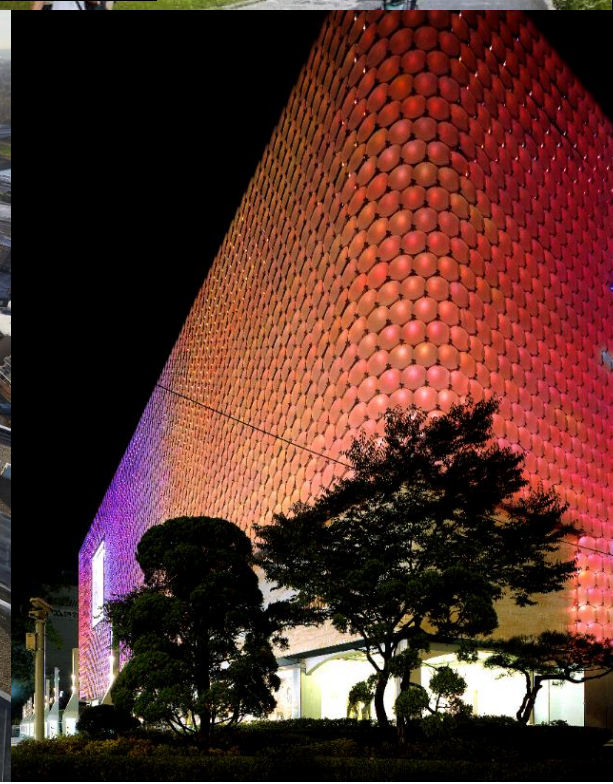
Frankfurt
Germany (est. 2018)
Staff: +/- 4

UNStudio
Shanghai
Founded 2009
UNStudio Hong Kong
Founded 2009



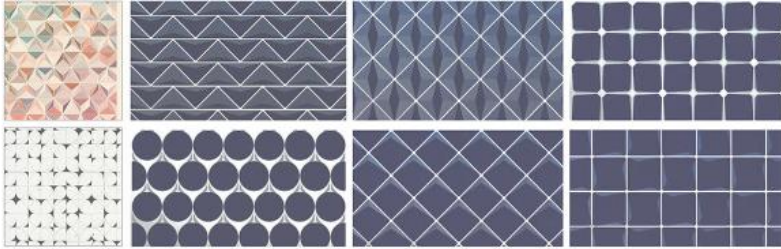
UNS
UNSTUDIO

Founded by
Ben van Berkel
&
Caroline Bos



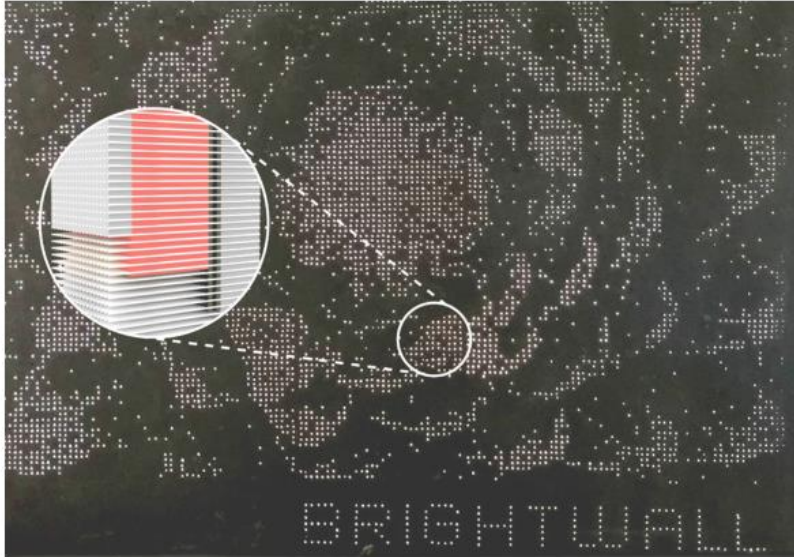


UNSknowledge



Sustainability

Photovoltaic Modules: Collaboration with Construct PV, Part 1



Materials

Translucent Concrete: Collaboration with BrightWall

Sustainability

Photovoltaic Modules: Collaboration with Construct PV, Part 2



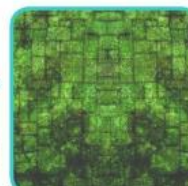
Sustainability

Study: Mission Sustainable, Part 2

STANDARD PRACTICE



IMAGE OF GREEN



Parameters

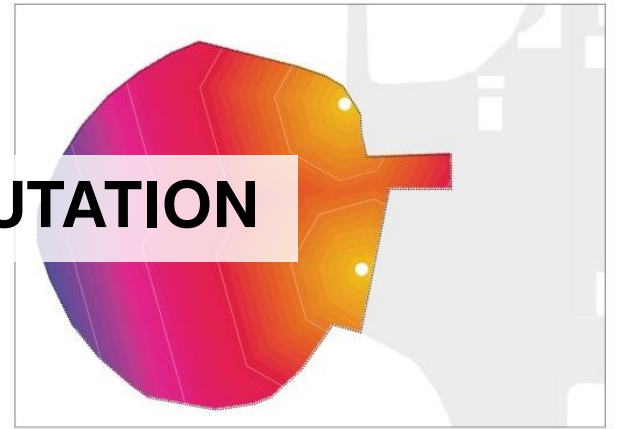
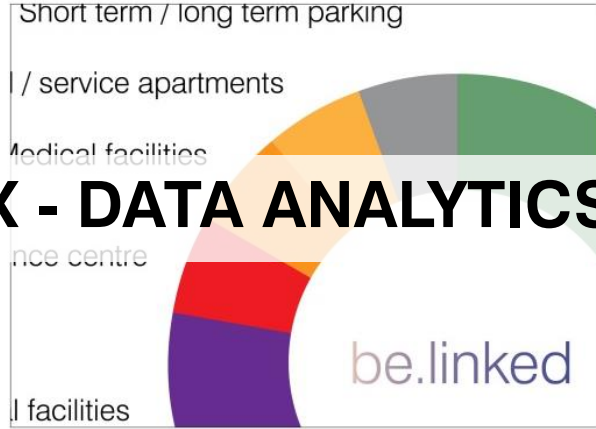
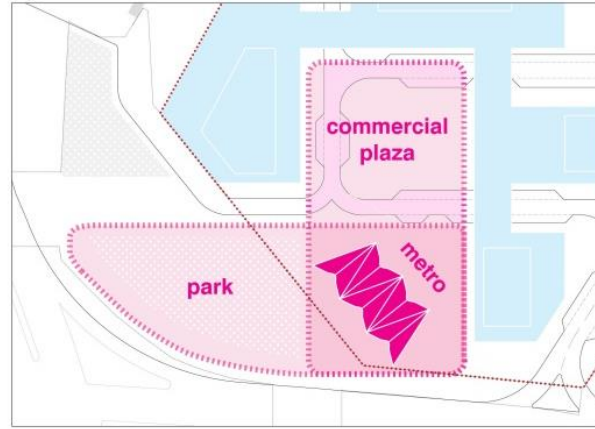
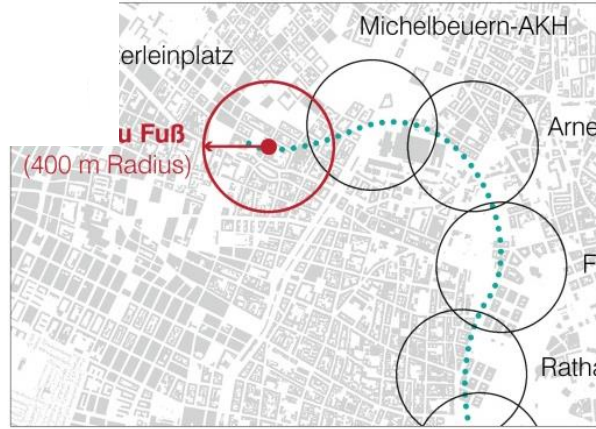
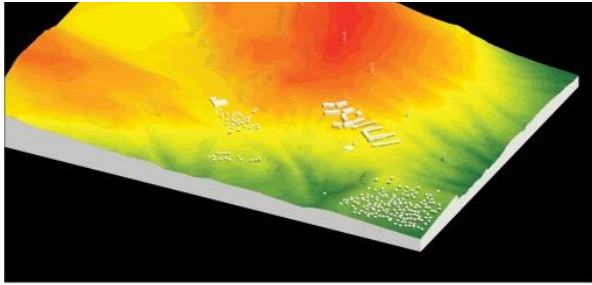
Study: Block Strategies, Part 1



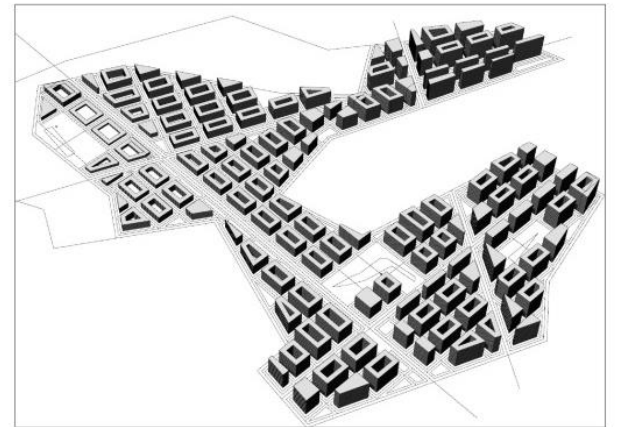
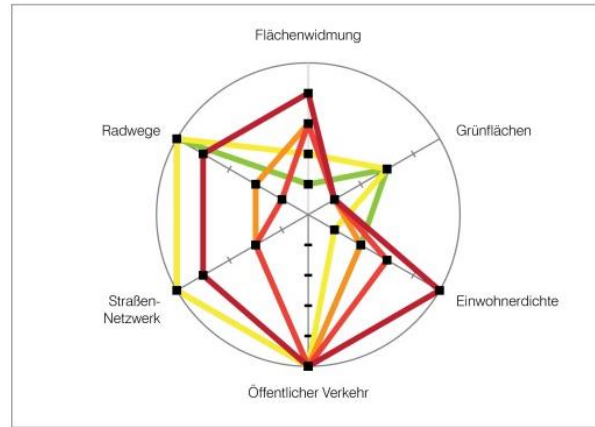
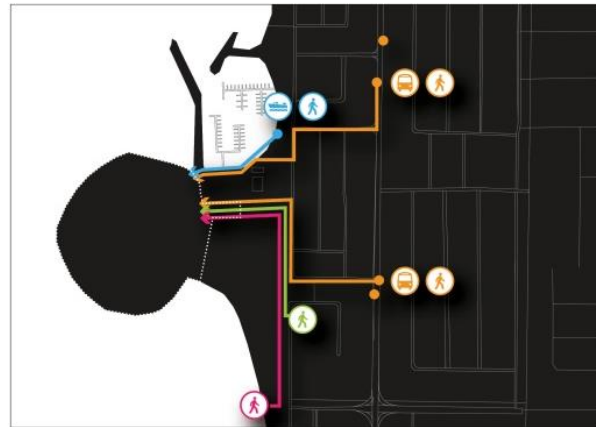
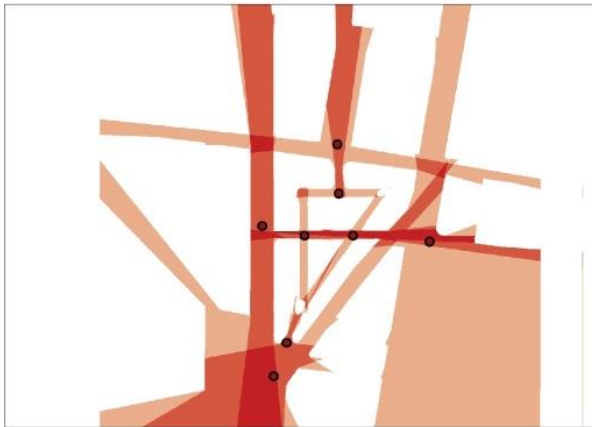
Organisations

Study: Theatre Analysis

UNS urban



OUR TOOLBOX - DATA ANALYTICS / MAPPING / COMPUTATION



UNSFutures

MOBILITY FLAGSHIP STORE



Second life of 'obsolete' infrastructure

THE NEW CITY INTERFACE

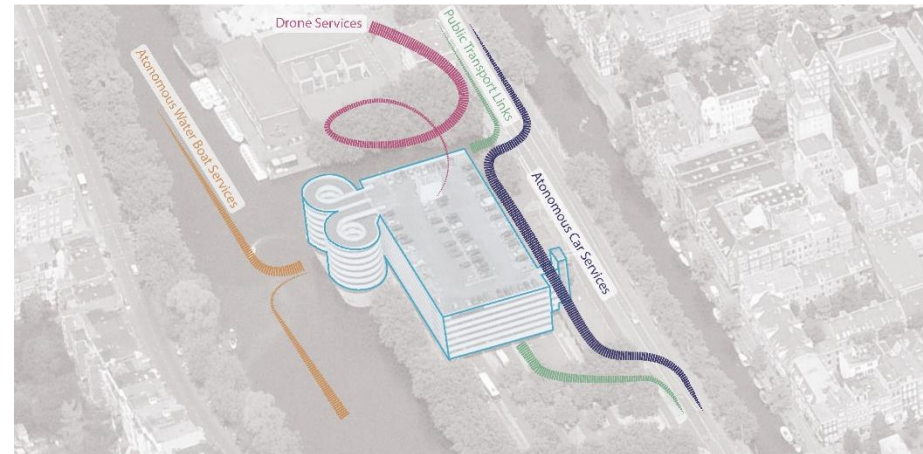


The future of the transportation hub

BUILDING AS BATTERY



AUTONOMOUS MOBILITY CENTRE



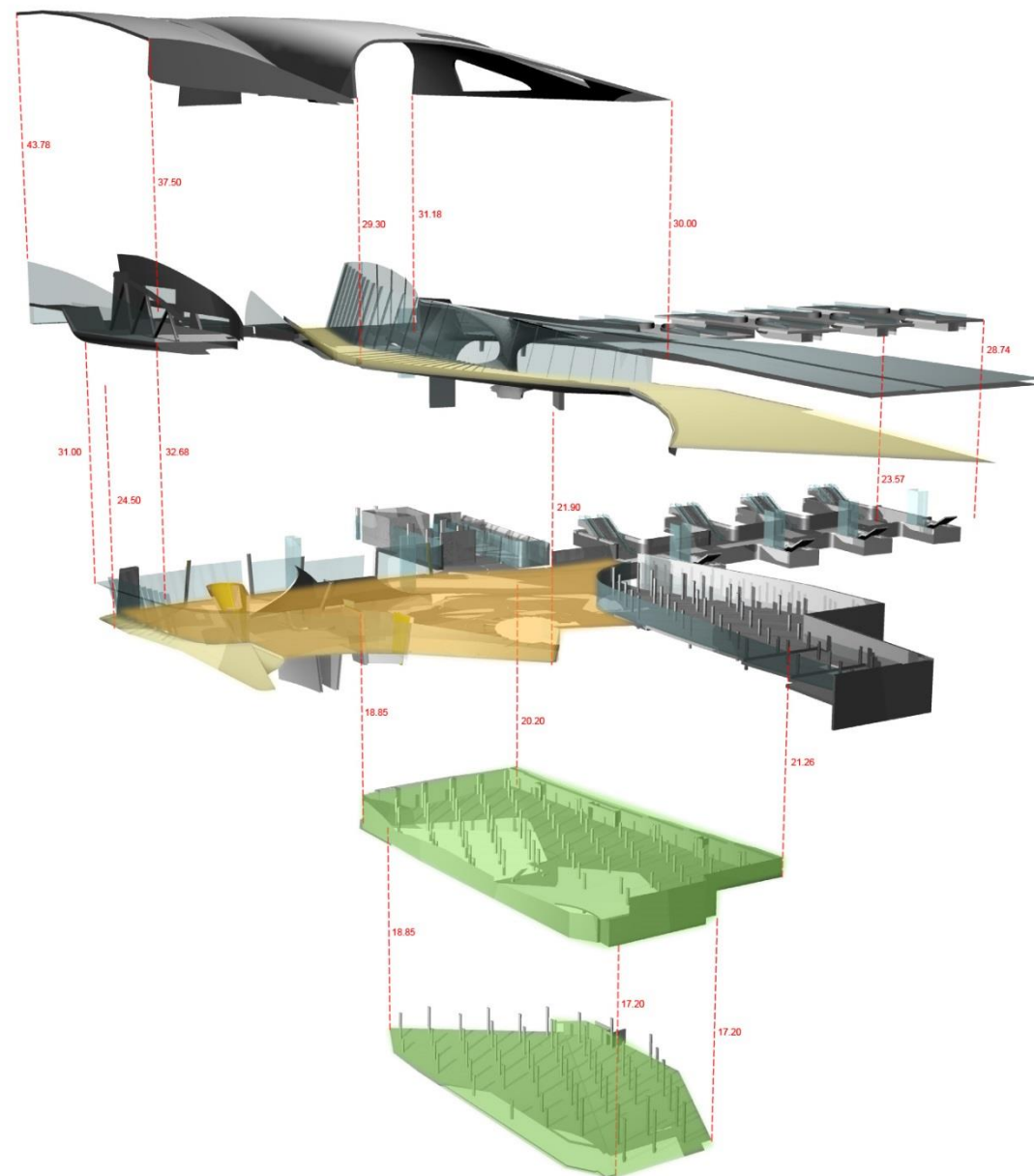
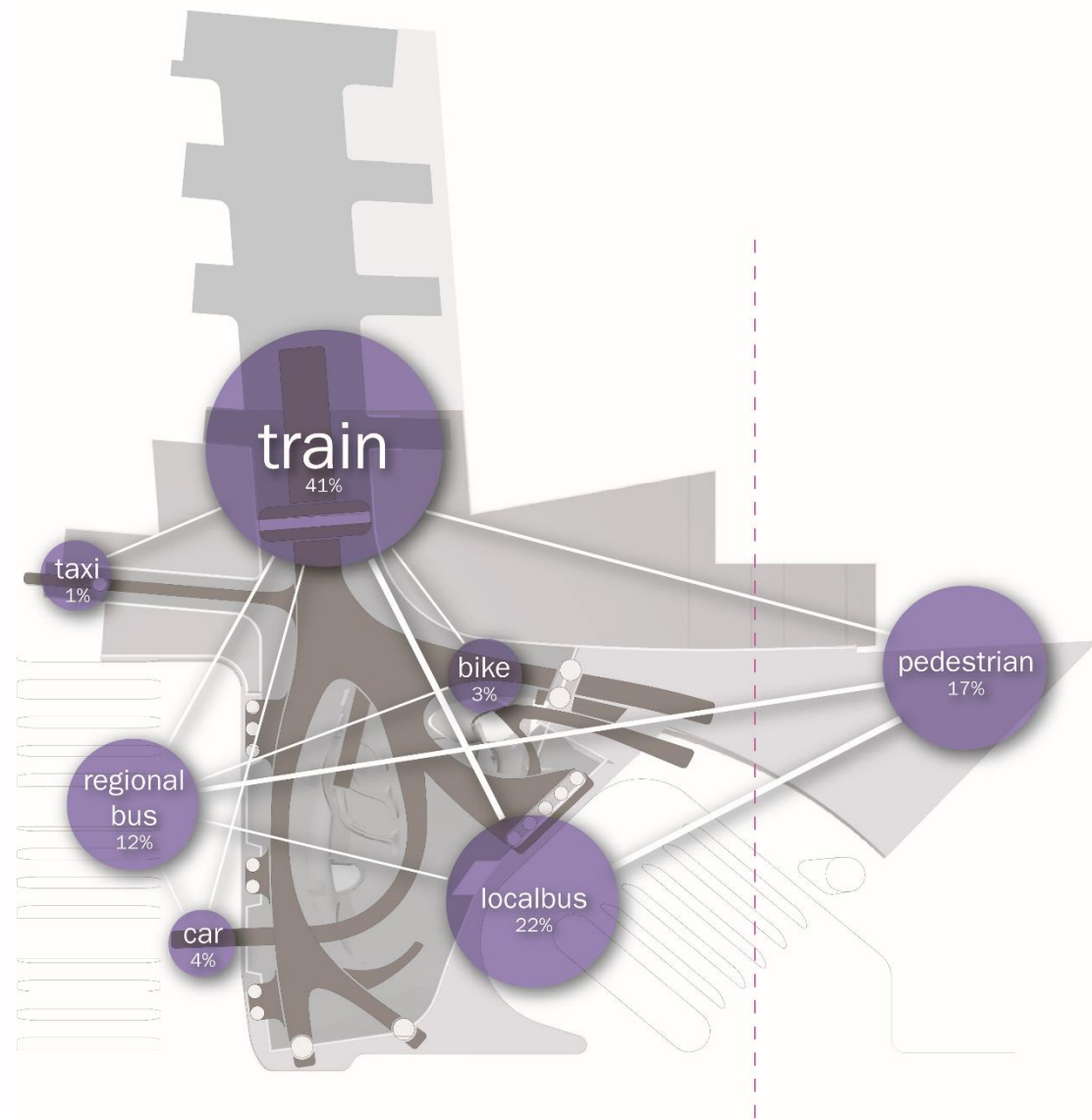
FUTURE MOBILITY+

**How can innovation drive
technological solutions AND
result in memorable spaces?**



ARNHEM CENTRAL MASTERPLAN

UNSTUDIO





ARNHEM CENTRAL STATION

UNSTUDIO



ARNHEM CENTRAL STATION

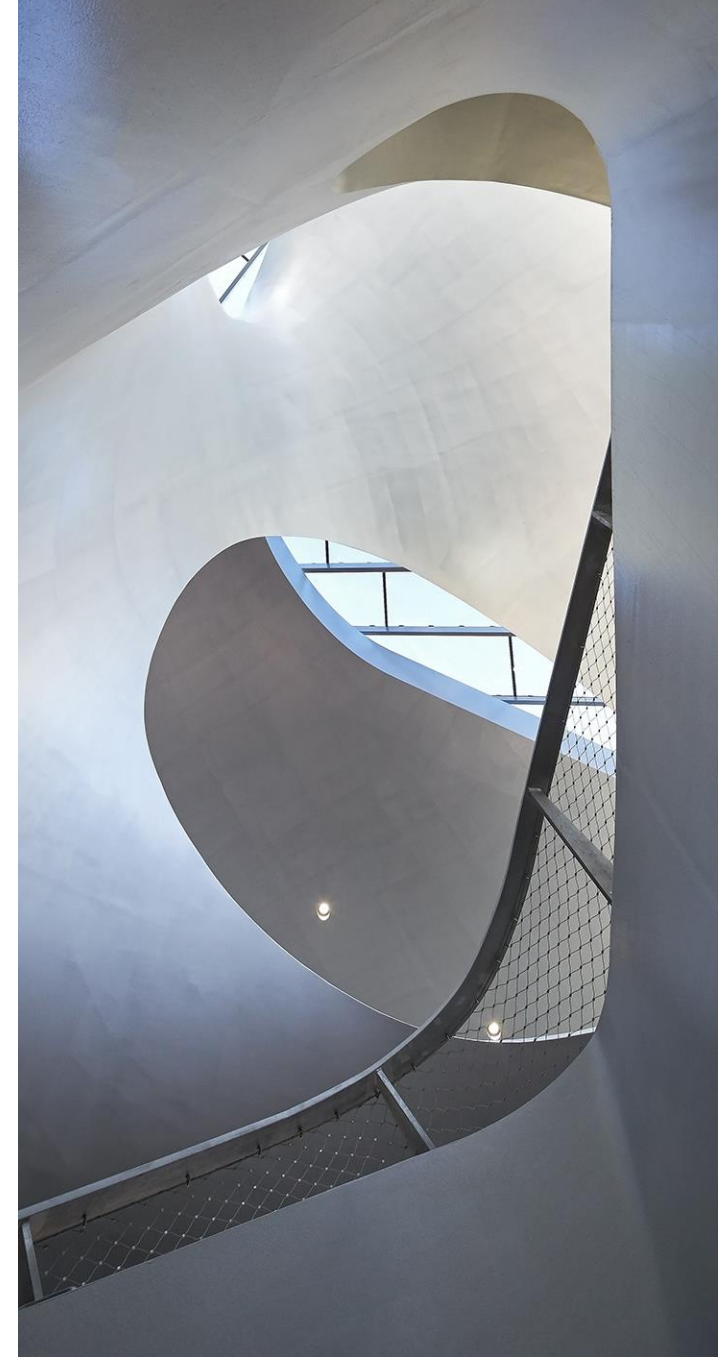
UNSTUDIO



ARNHEM CENTRAL STATION



UNSTUDIO



ARNHEM CENTRAL MASTERPLAN

UNSTUDIO



ARNHEM CENTRAL MASTERPLAN

UNSTUDIO

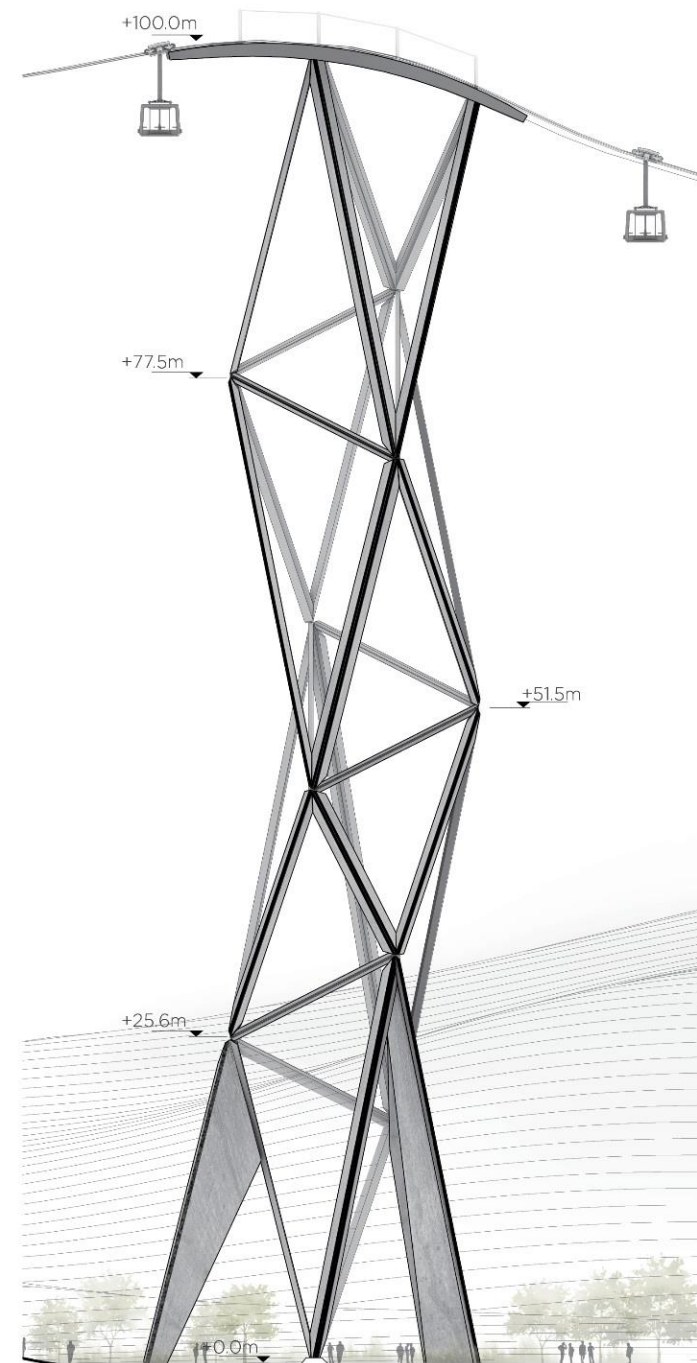
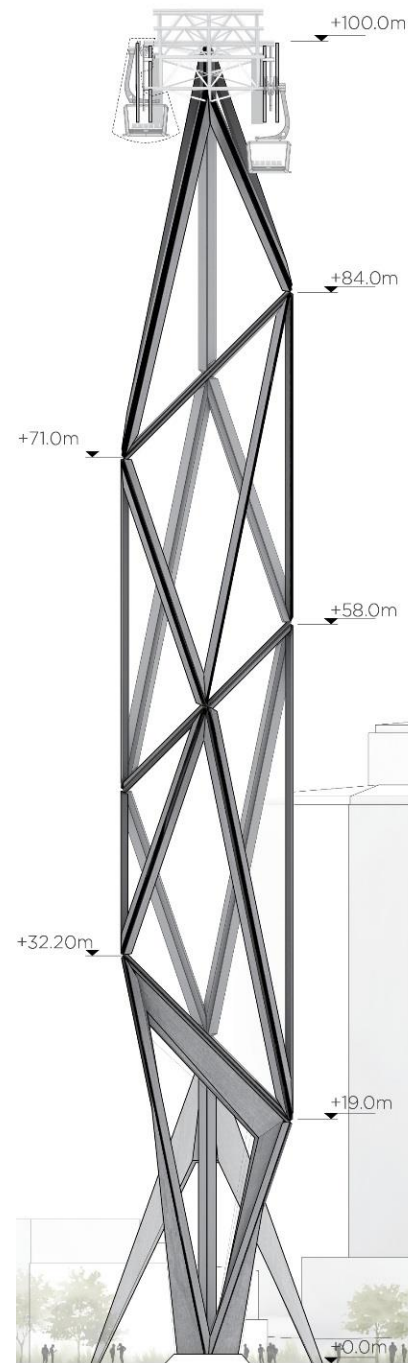
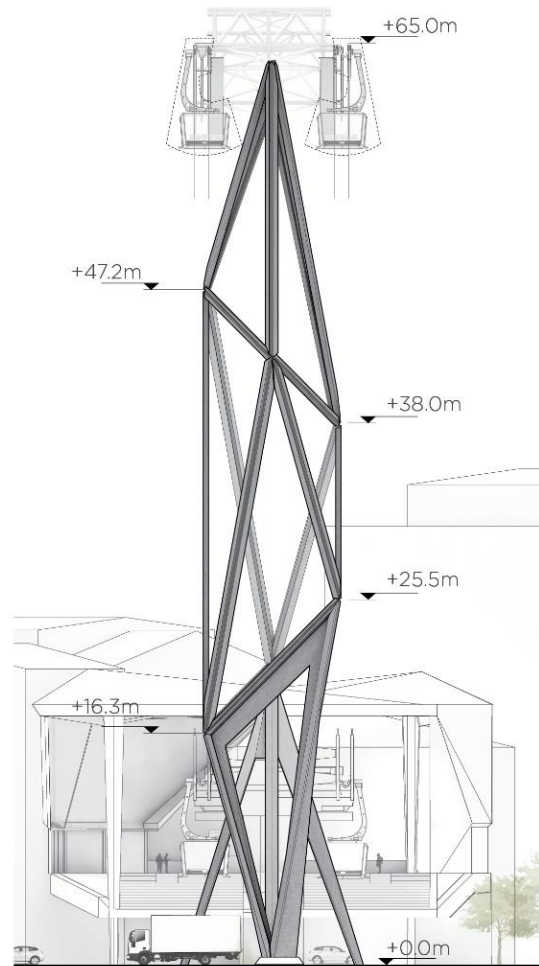
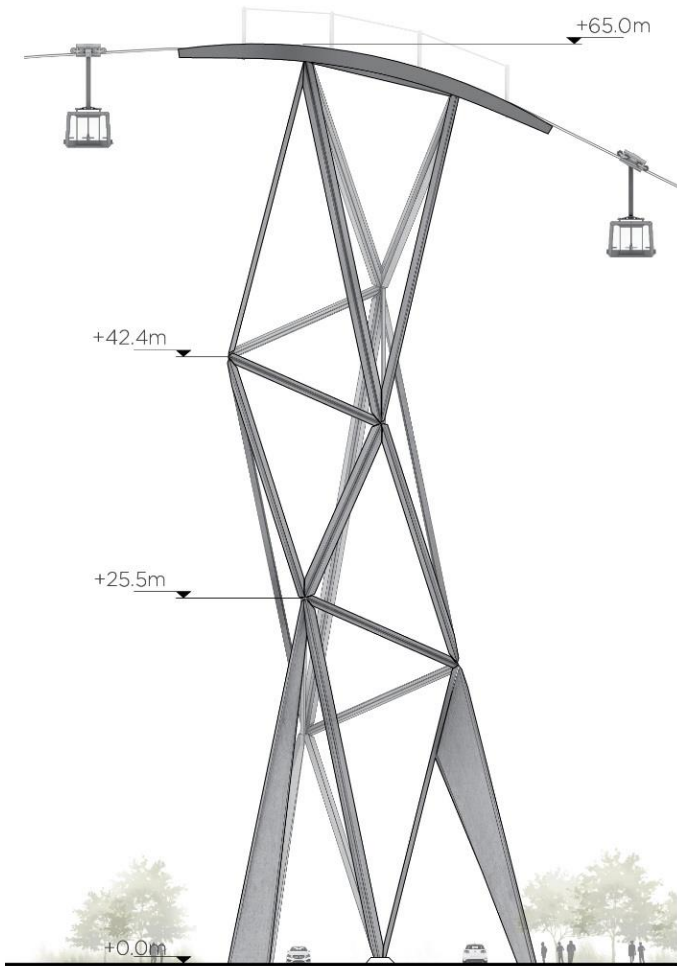
Mobility new views on infrastructure and transportation



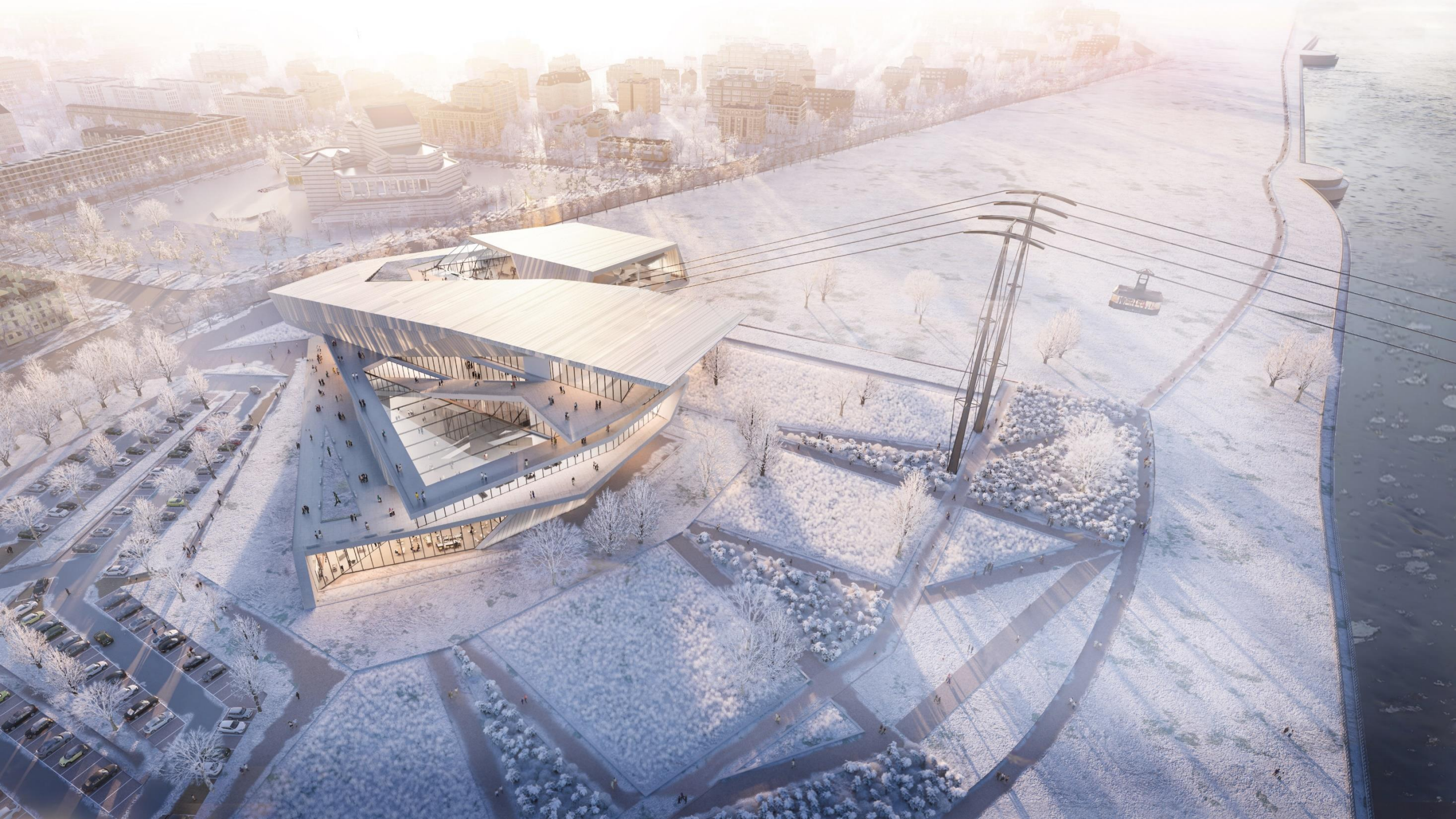


GOTHENBURG CABLE CAR

UNSTUDIO



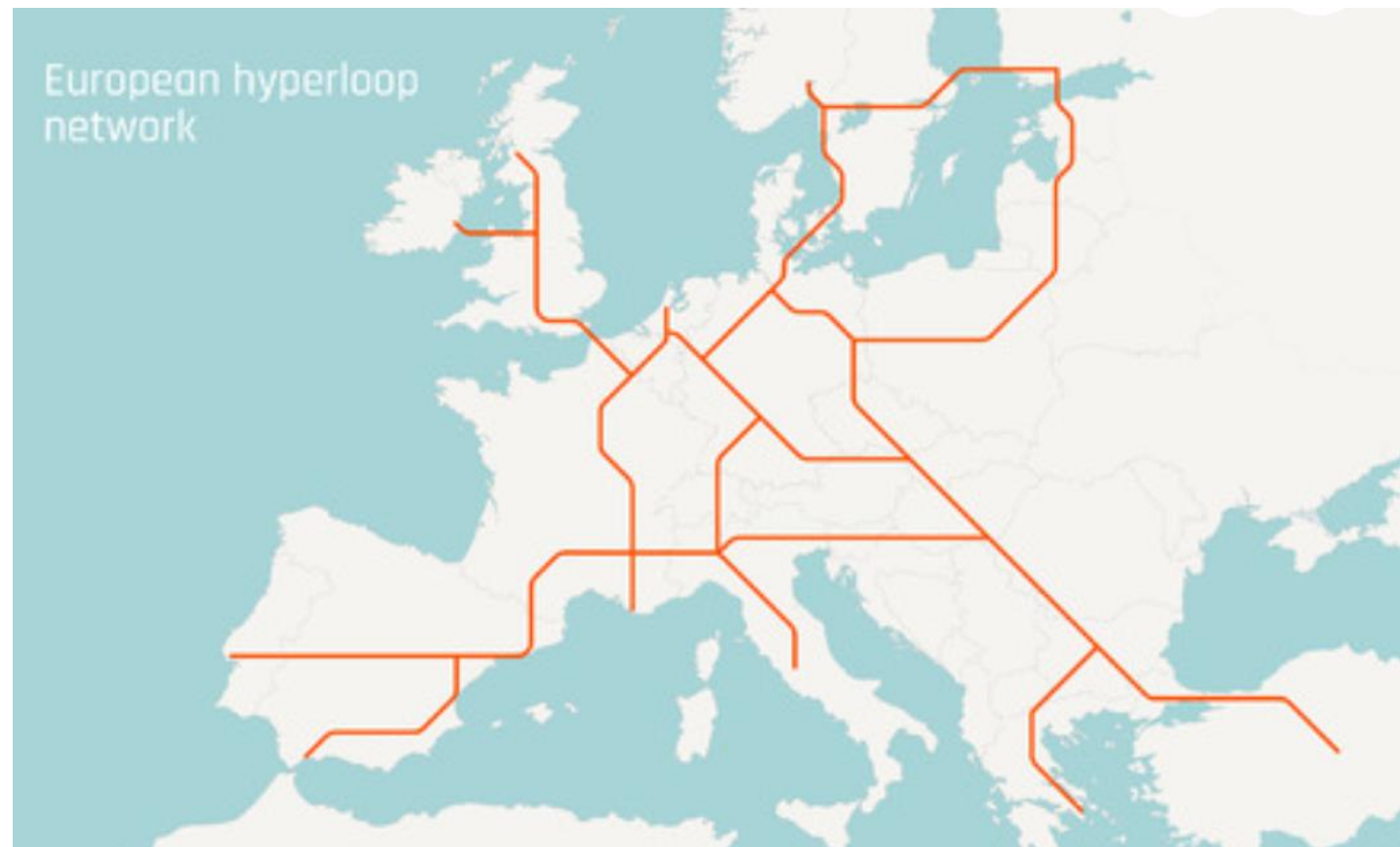
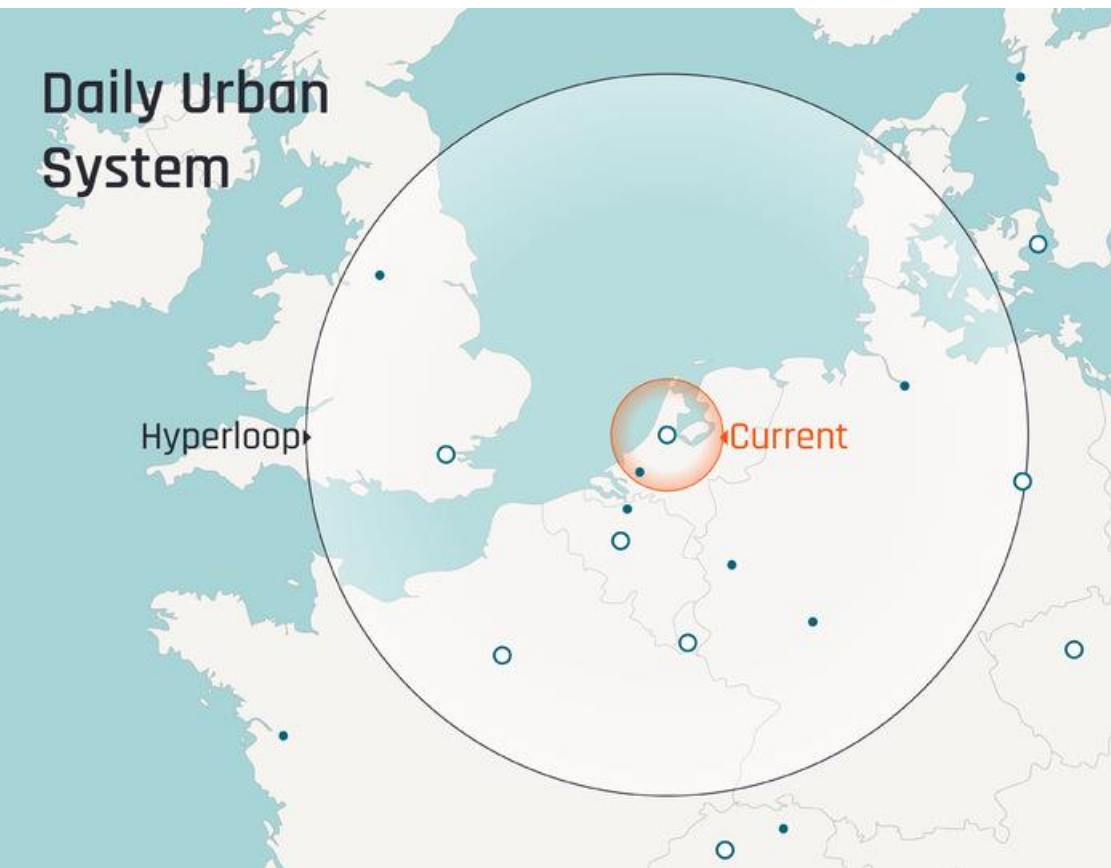






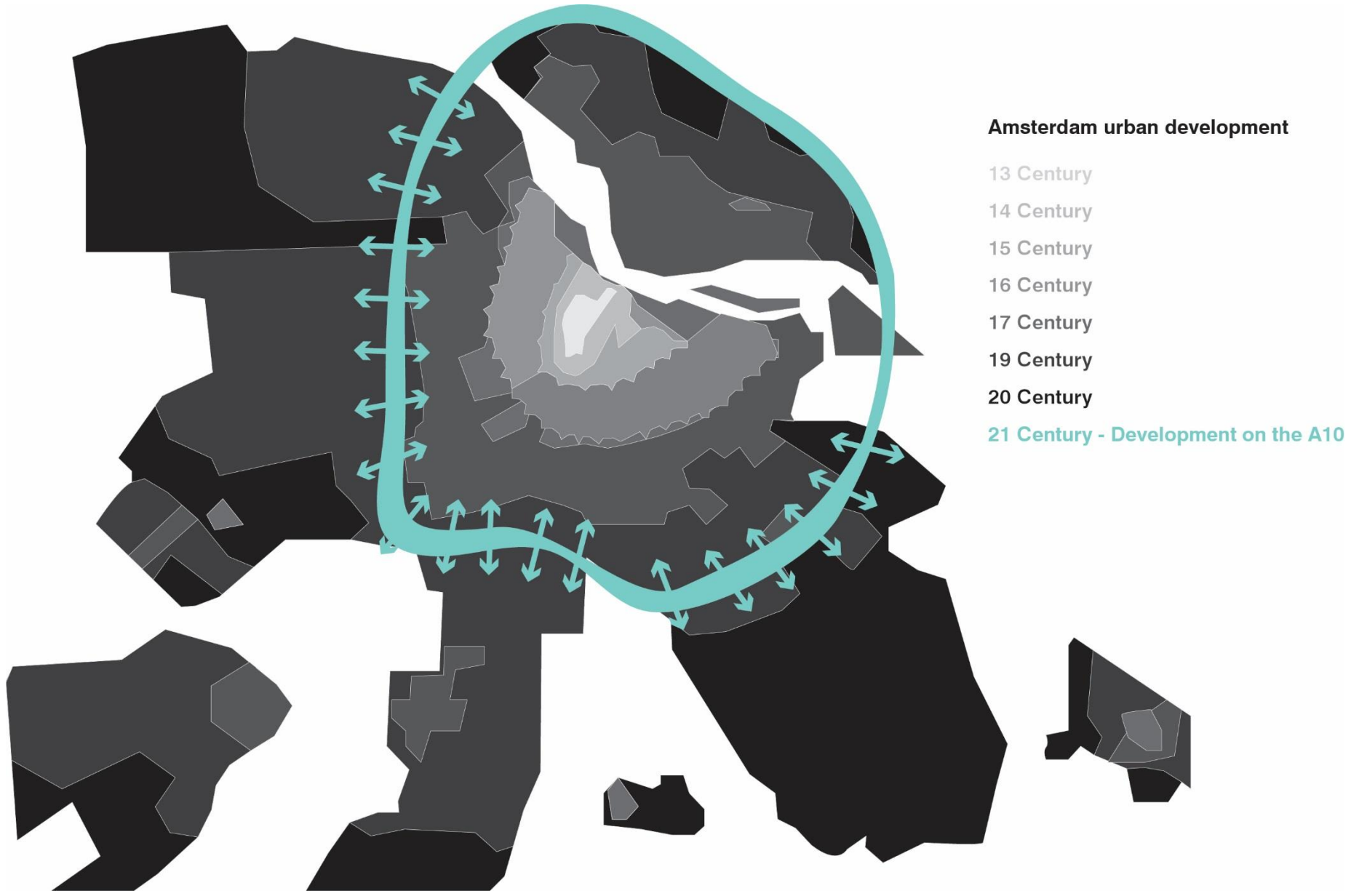
HYPERLOOP

UNSTUDIO

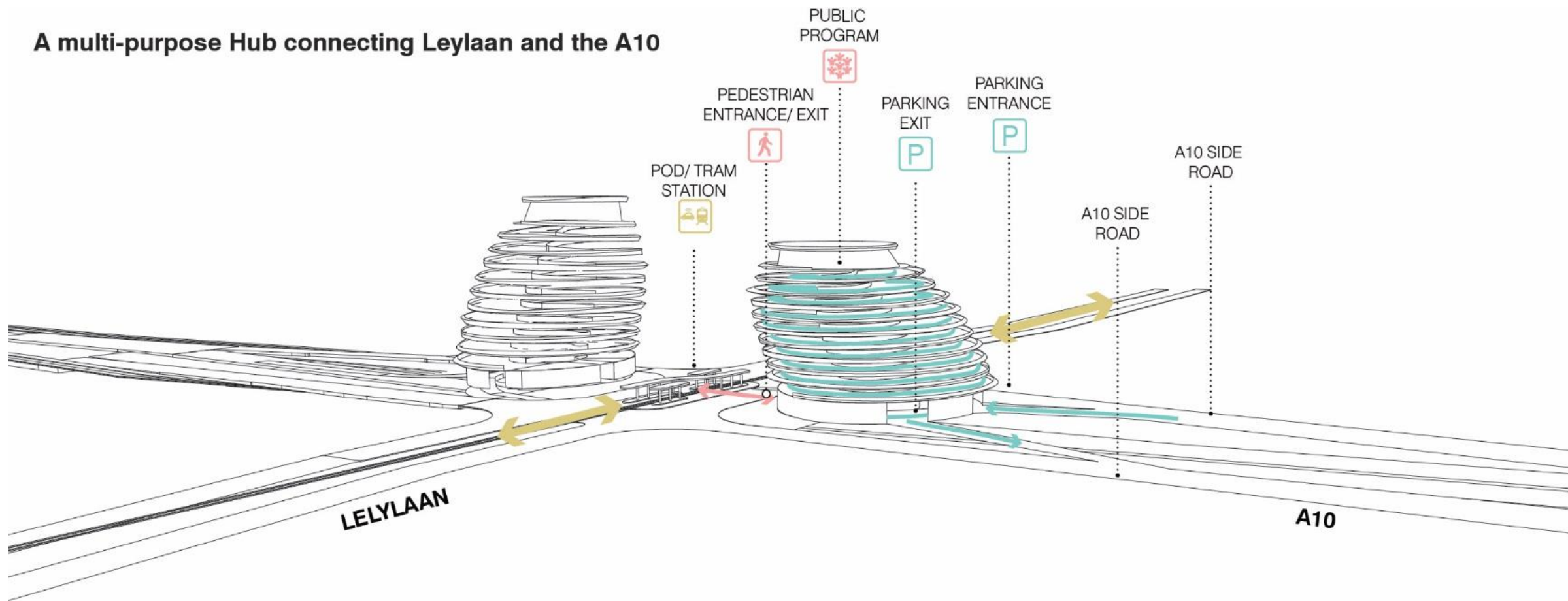








A multi-purpose Hub connecting Leylaan and the A10





A10 - FUTURE FARMS

UNSTUDIO

**Designing for the future
means designing for health**

An architectural rendering of a smart district. The scene is a vibrant, pedestrian-friendly urban space. In the foreground, a paved plaza with geometric patterns is populated with people walking, pushing a stroller, and riding bicycles. To the left, two small, white, autonomous shuttles are parked. The middle ground features a large, modern building with a curved glass facade and a prominent digital display showing data and maps. The building is surrounded by lush green trees and landscaped planters. To the right, a modern building with a wooden slat facade is visible, and a group of people is seated at an outdoor cafe under a white umbrella. The overall atmosphere is bright, sunny, and community-oriented.

SUSTAINABLE AND SELF SUFFICIENT

FUTURE-PROOF

HEALTHY LIVING

BRAINPORT SMART DISTRICT



150 HA SITE
1,500 HOUSING UNITS
12 HA BUSINESS PARK

BRAINPORT SMART DISTRICT

WATER

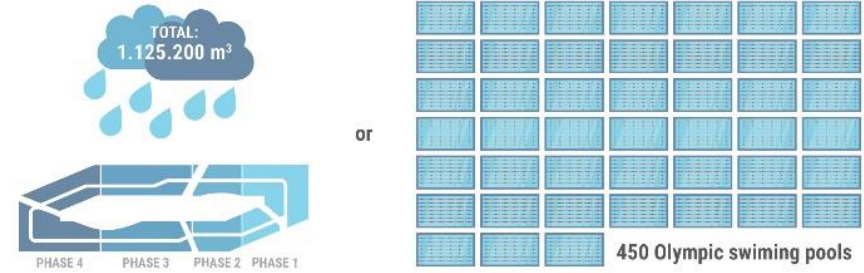


COLLECT / PURIFY/ SHARE

BRAINPORT SMART DISTRICT

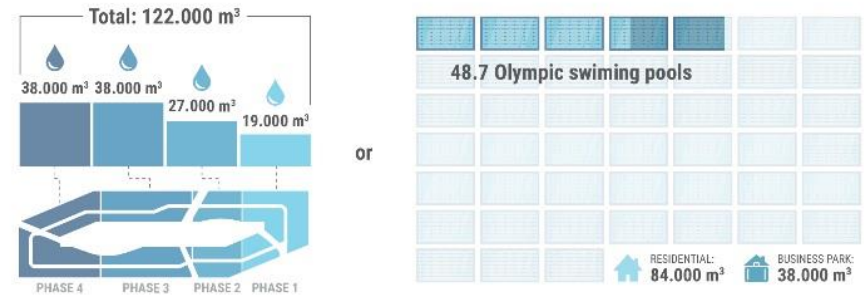
WATER

RAIN WATER FALLING ON THE AREA PER YEAR:



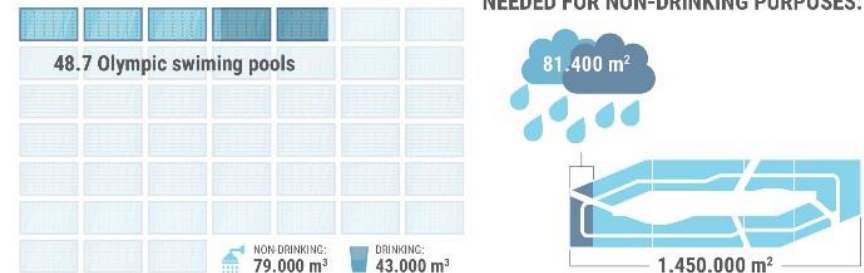
NEEDS

WATER DEMAND PER YEAR:



STRATEGY

POSSIBLE SCENARIOS:



RAIN WATER COLLECTION SURFACE NEEDED FOR NON-DRINKING PURPOSES:

PRODUCTIVE LANDSCAPE



LOCAL / HEALTHY / SUSTAINABLE

BRAINPORT SMART DISTRICT

🌿 **FOOD**

NEEDS

AVERAGE DUTCH DIET

- 1% Eggs
- 1% Fish
- 2% Fats
- 6% Cakes
- 6% Herbs, Sauces, Soures
- 7% Potatoes
- 8% Meat
- 11% Alcohol
- 16% Grains
- 17% Vegetables, Beans, Nuts, Olives & Fruits
- 25% Dairy

STRATEGY

SPATIAL REQUIREMENTS

FOR POTATOES, VEGETABLES & LEGUMES = 7% DIET

20 ha of growing surface

or

0,8 ha with aquaponic system

11,4 ha of growing surface

SCENARIO

FOOD PRODUCTION

GLOBAL

REGIONAL

LOCAL

ENERGY















REDUCE / PRODUCE / MANAGE

BRAINPORT SMART DISTRICT

NEEDS





	PHASE 4	PHASE 3	PHASE 2	PHASE 1
ELECTRICITY	 4.000 MWh	 3.700 MWh	 2.700 MWh	 1.900 MWh
PV	47.000 m ²  18.000 panels	43.000 m ²  16.000 panels	31.000 m ²  12.000 panels	22.000 m ²  8.000 panels
HEAT	 4.000 MWh	 4.000 MWh	 2.500 MWh	 3.000 MWh

STRATEGY

-  1. REDUCE
-  2. SYNERGIZE
-  3. PRODUCE
-  4. MANAGE

SPATIAL REQUIREMENTS FOR ELECTRICITY NEEDS

 or 

140.000 m² PV 3,25 windmill

INNOVATION ON ALL SCALES – NEIGHBOURHOOD

INCLUSIVITY

CIRCULARITY

GREEN ENERGY

Living

Working

Sharing

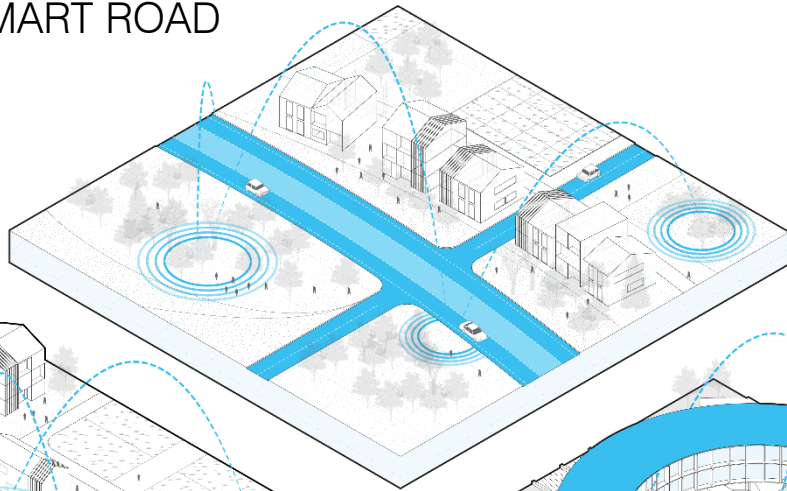
Landscape Green

Urban Green

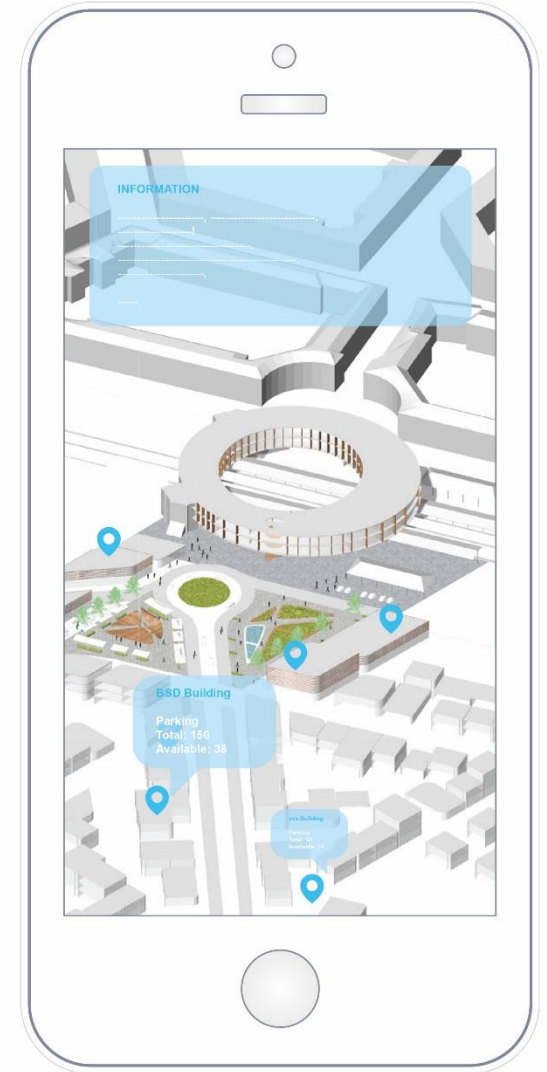


DATA UNIVERSE

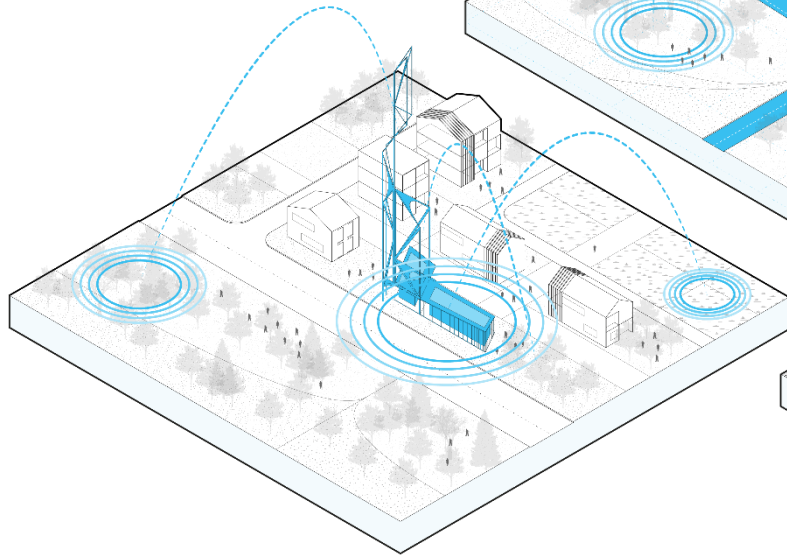
SMART ROAD



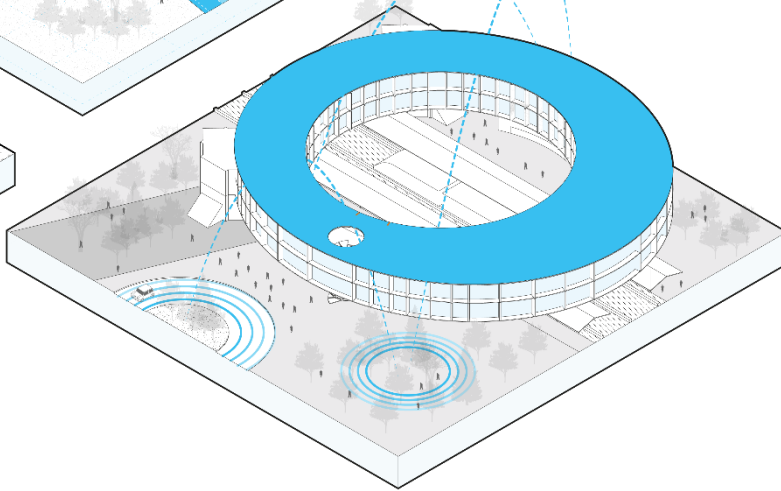
THE BSD PLATFORM



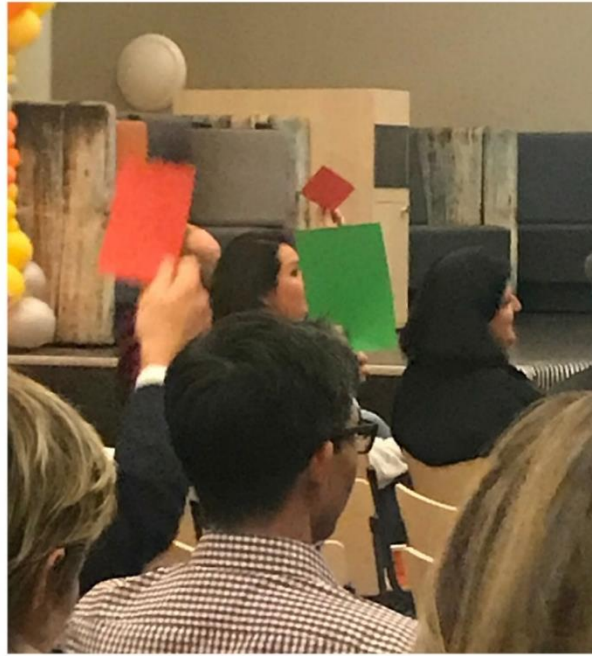
DATA CENTRE / COMMUNITY SPACE



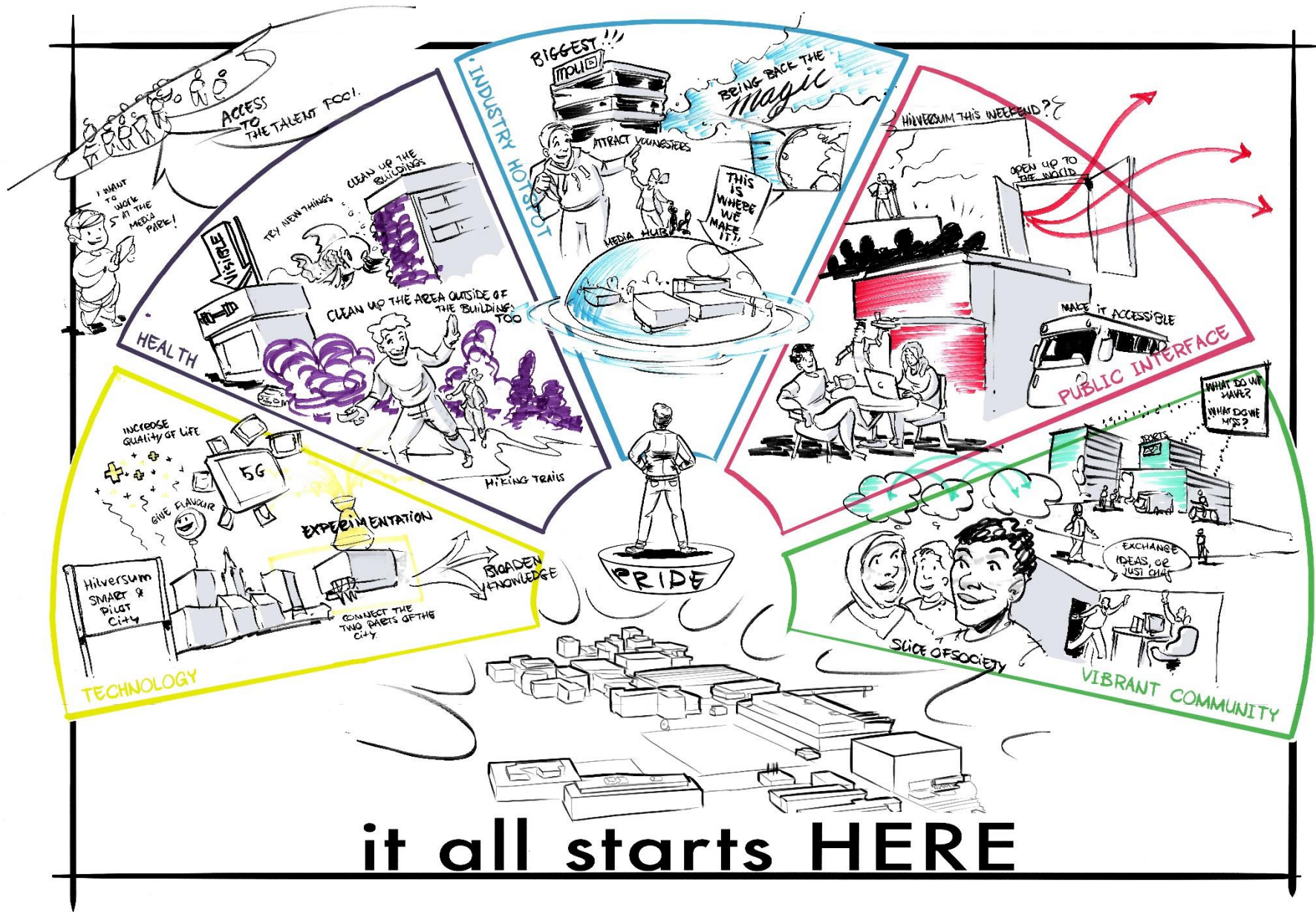
THE RING / BROADCASTING INNOVATION



CONTINUED PARTICIPATION







**Mixed use, intensive,
integrated, human scale**

GREEN SPINE

VERTICAL URBAN LANDSCAPES

FUTURE GARDENS

URBAN RESORT CONSERVATORY

GREEN SPINE ALONG TOWERS

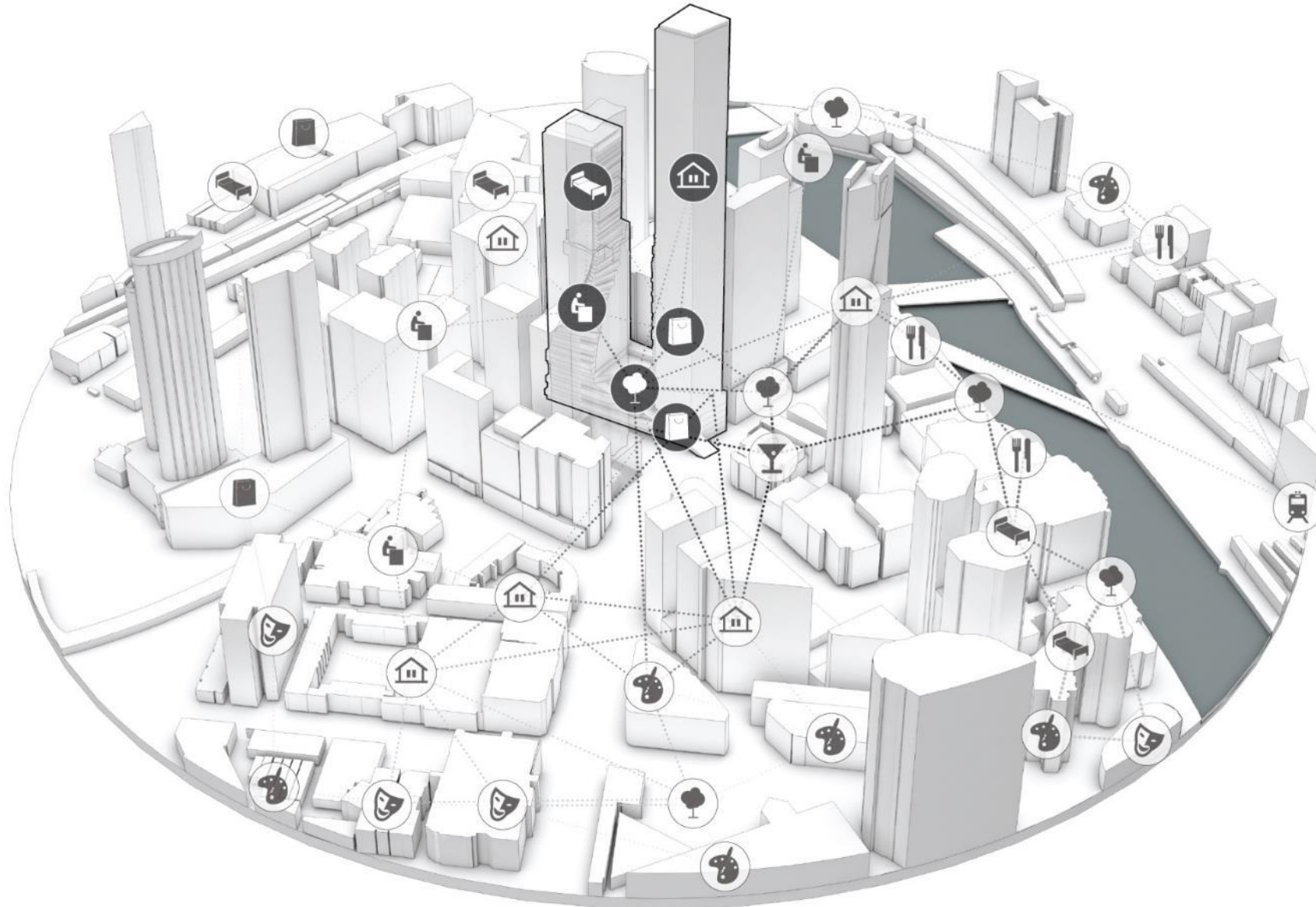
GREEN SPINE CONNECTING WITH SOUTHBANK BOULEVARD

SOUTHBANK BOULEVARD TO THE BOTANICAL GARDENS



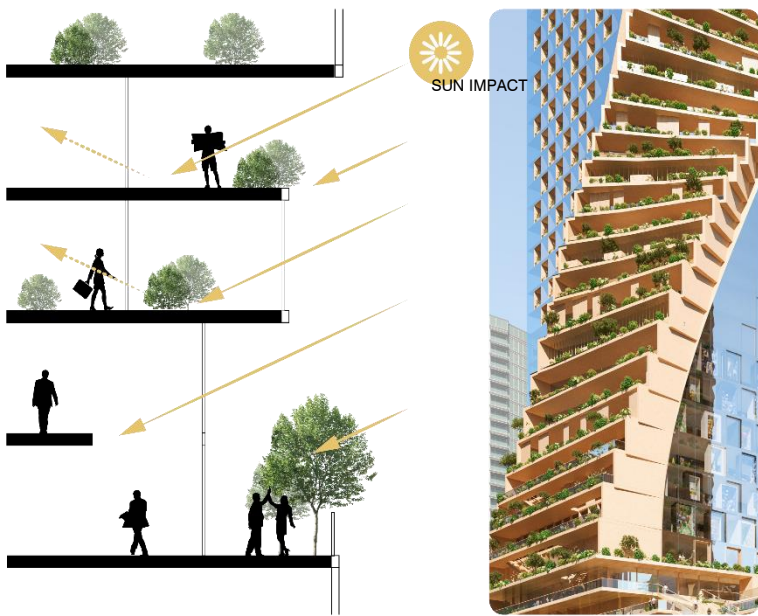
CITY IN A BUILDING IN A CITY

BUILDING AS INTEGRAL PART OF THE CITY NETWORK

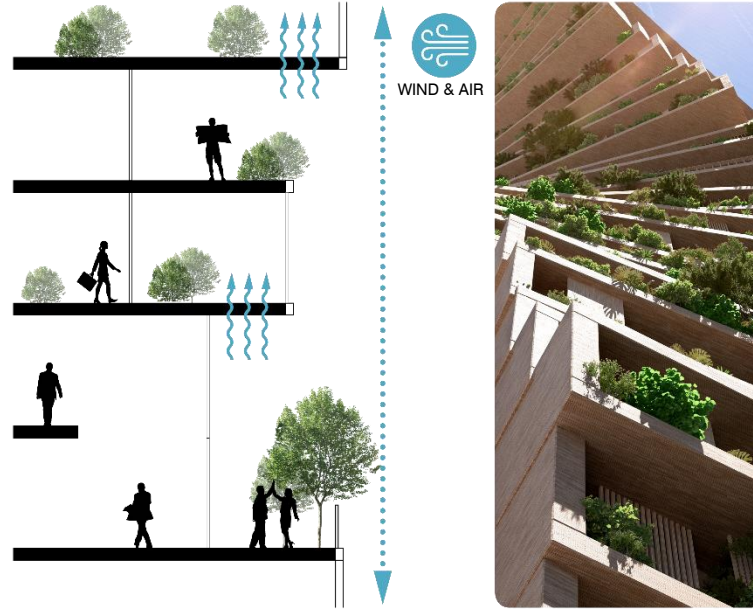


MICROCLIMATIC DESIGN + CONTEXT

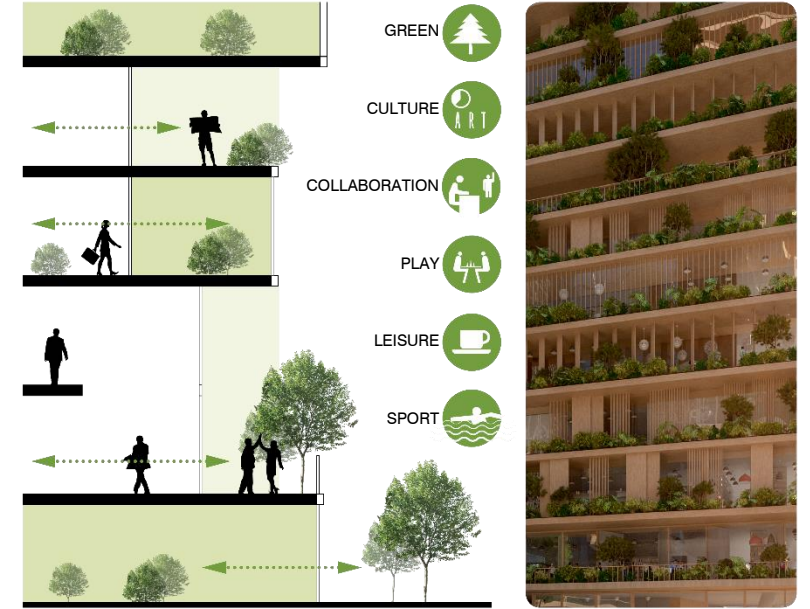
SYNERGY WITH CITY OF MELBOURNE URBAN FORESTS



THERMAL COMFORT THROUGH DIFFERENT DEPTHS OF SHADE



CANTILEVERS BREAK VERTICAL WINDS AND VENTILATE



UNIQUE OUTDOOR SPACES AND CONNECTIVITY

PROGRAM NETWORK

ALLOCATION



URBAN RESORT



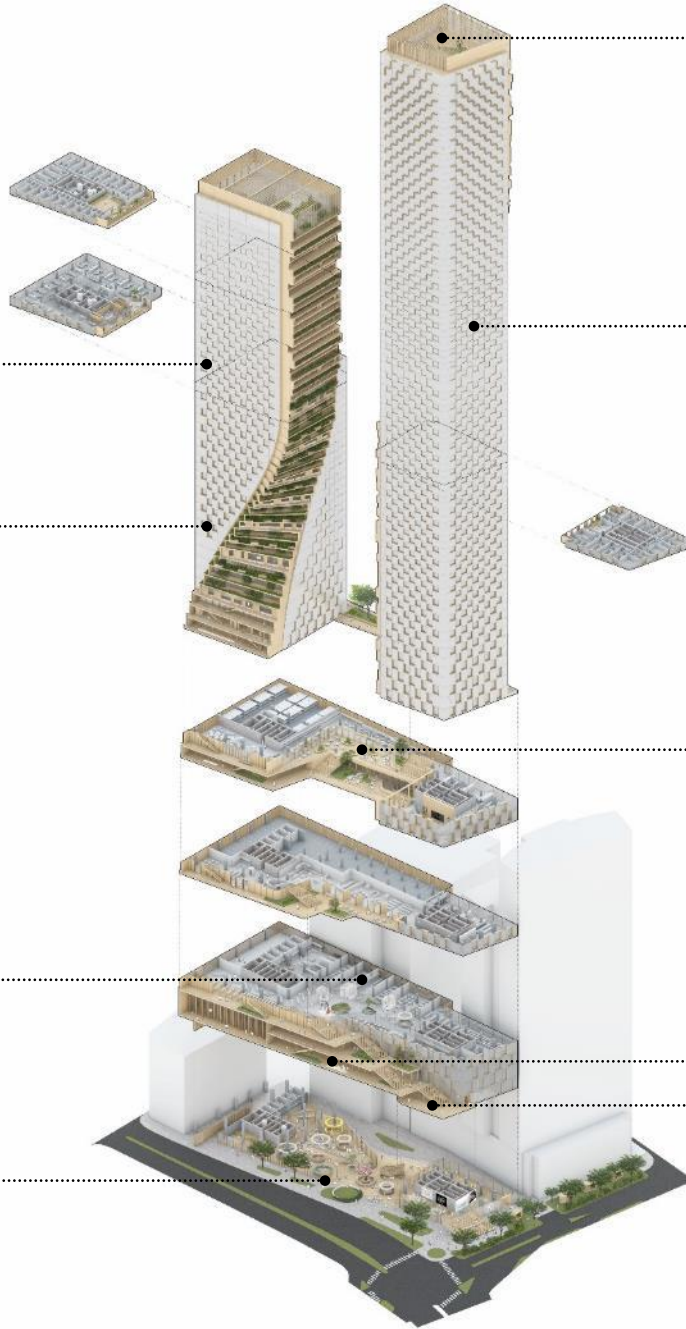
FUTURE OF WORK



LIFESTYLE LAB



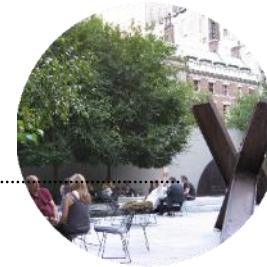
THE MARKETPLACE



FUTURE GARDENS



SUPER LIVING



THE GARDEN



TOWN SQUARE



SOUTHBANK BOULEVARD
SQUARE

THE MARKETPLACE // TOWN SQUARE

POROUS GROUNDS // FLEX ENTERTAINMENT



PLACEMAKING AND CULTURE // FUTURE CITY + STUDIO DRIFT

CULTURAL CONSULTANTS + LEAD ARTIST



EXHIBITION PLATFORMS

EXHIBITION SPACE FOR
FESTIVALS, PERFORMANCES AND INSTALLATIONS





THANK YOU