

03.07.2024

“THE HUMAN BODY SHOP”

I. INTRODUCTION**II. RESEARCH & DESIGN BRIEF****III. CONCEPT****IV. IMPLEMENTATION****V. CONCLUSION**

**HAVE YOU BEEN TO THE
HOSPITAL LAST YEAR?**

1,893 HOSPITALS

16,800,000 PATIENTS

20% OF THE POPULATION



CRITICAL INFRASTRUCTURE

INTRODUCTION

THE LAST RESORT



*Hospitals are the most critical buildings within society,
but are only part of it during times of necessity.*

INTRODUCTION

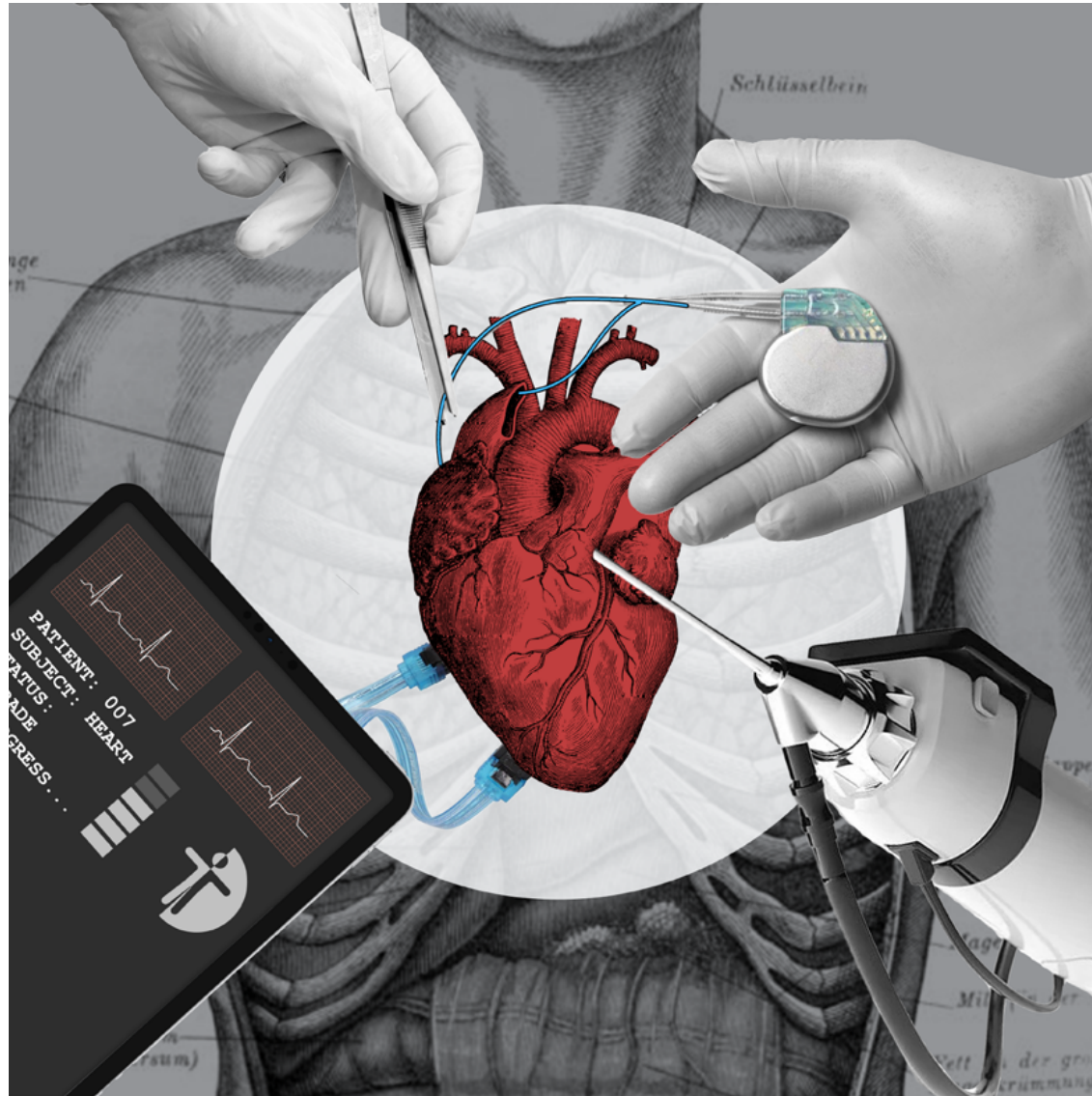
THE LABYRINTH



The highly complex program and dominant circulation of the 'healing machine' has created a labyrinth within the built environment; a labyrinth that society rather avoids, than partake, discover, and be associated with.

INTRODUCTION

BUILDINGS TO BODIES



*Innovation in the field of human body augmentation has started the transition of buildings, to bodies as a healing machine.
Not only changing the human body, but also the hospital as we know it today.*



Corridor

The surge in human body augmentation, technology, and development will require a specialised hospital structure that is optimised, flexible, and open to society and its discourse.

INTERWOVEN WITH THE EVERYDAY



Courtyard

*Creating a new hospital typology, that intertwines the threshold between hospital, and society;
by interweaving the everyday activities happening in a park, neighbourhood, and city. Park + Shopping Mall + Theme Park = IoAB*

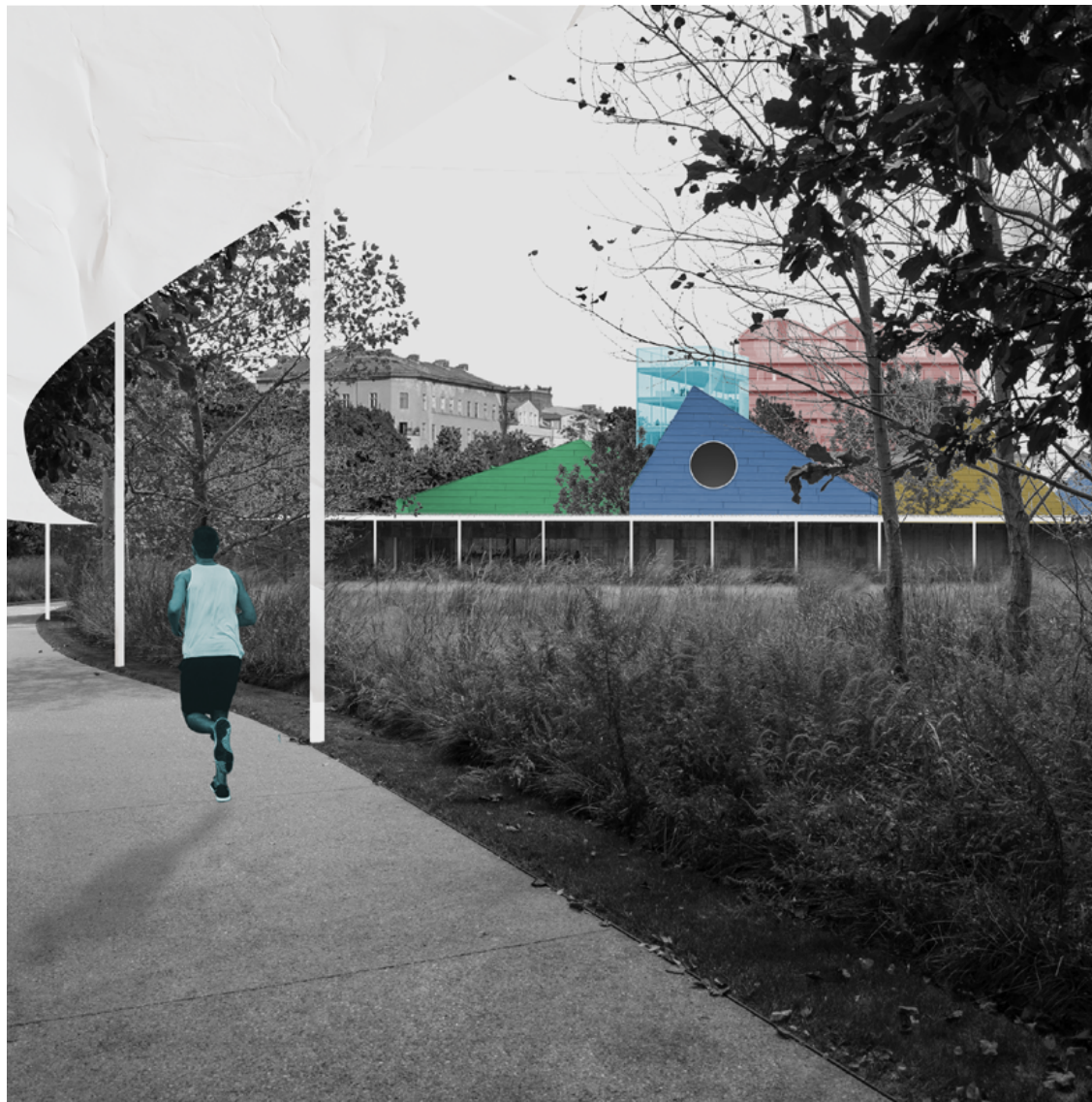
INTERWOVEN WITH THE EVERYDAY



Courtyard

*Creating a new hospital typology, that intertwines the threshold between hospital, and society;
by interweaving the everyday activities happening in a park, neighbourhood, and city. Park + Shopping Mall + Theme Park = IoAB*

EXTENSION OF THE CITY



Park

*Creating a new hospital typology, that intertwines the threshold between hospital, and society;
by interweaving the everyday activities happening in a park, neighbourhood, and city. Park + Shopping Mall + Theme Park = loAB*

INTRODUCTION
PART OF SOCIETY



City

Introducing a new hospital, that is not only part of society when in need, but part of society every day.

I. INTRODUCTION

II. RESEARCH & DESIGN BRIEF

III. CONCEPT

IV. IMPLEMENTATION

V. CONCLUSION

MAIN RESEARCH QUESTION

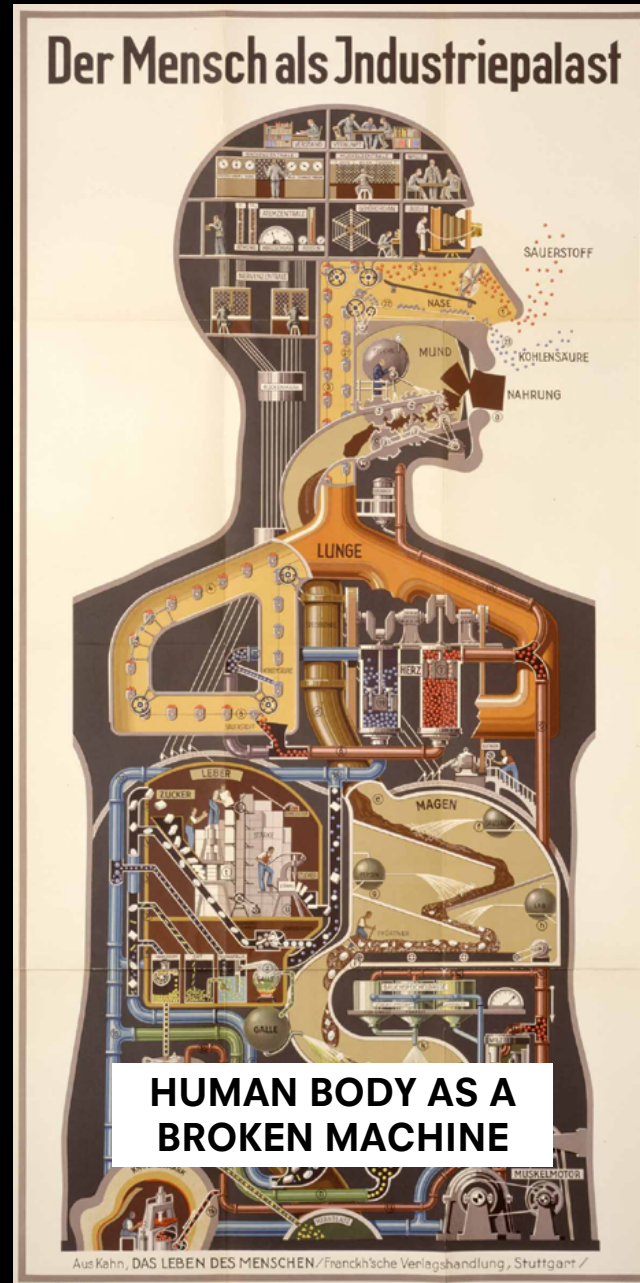
**“HOW WILL HUMAN BODY AUGMENTATION
REFLECT CHANGE IN THE HOSPITAL
TYPOLOGY OF THE FUTURE?”**

MAIN RESEARCH QUESTION

**“HOW WILL HUMAN BODY AUGMENTATION
REFLECT CHANGE IN THE HOSPITAL
TYPOLOGY OF THE FUTURE?”**

“WHAT IS HUMAN BODY AUGMENTATION?”

RESULT



Man as Industrial Palace, Fritz Kohn, 1926.

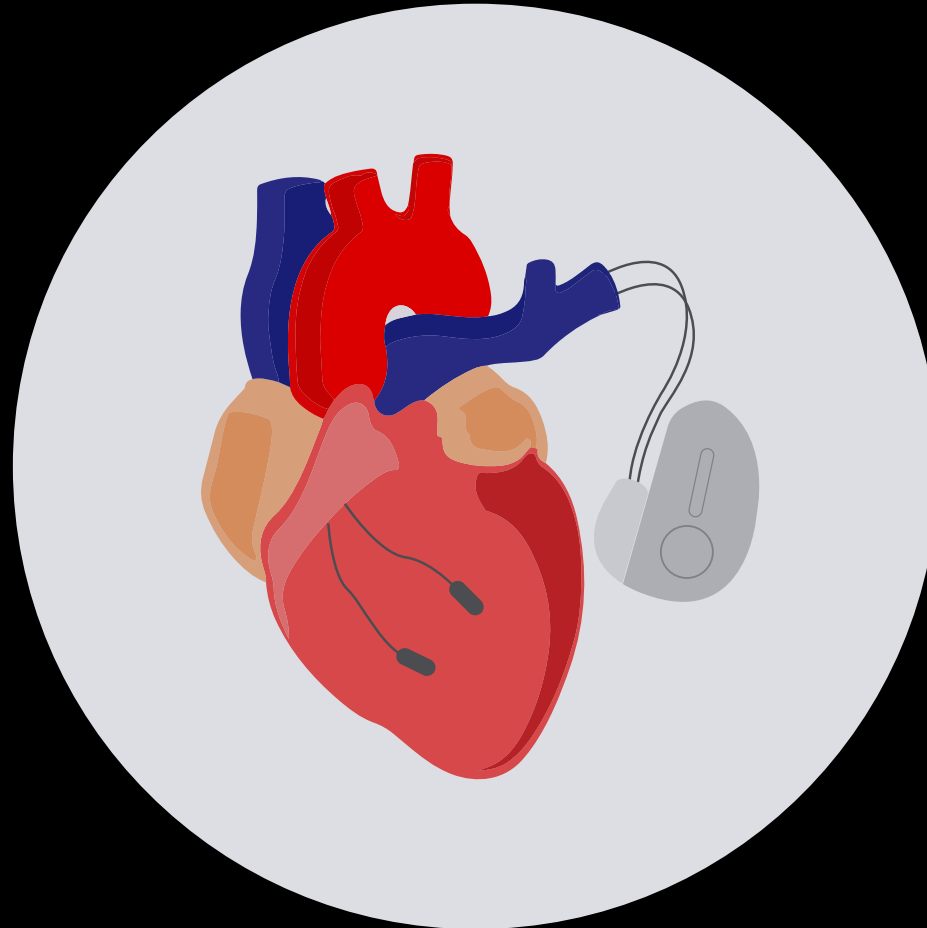
PATH TOWARDS THE FUTURE



from **buildings** as a (healing) machine
to **bodies** as a (healing) machine.

OVERVIEW

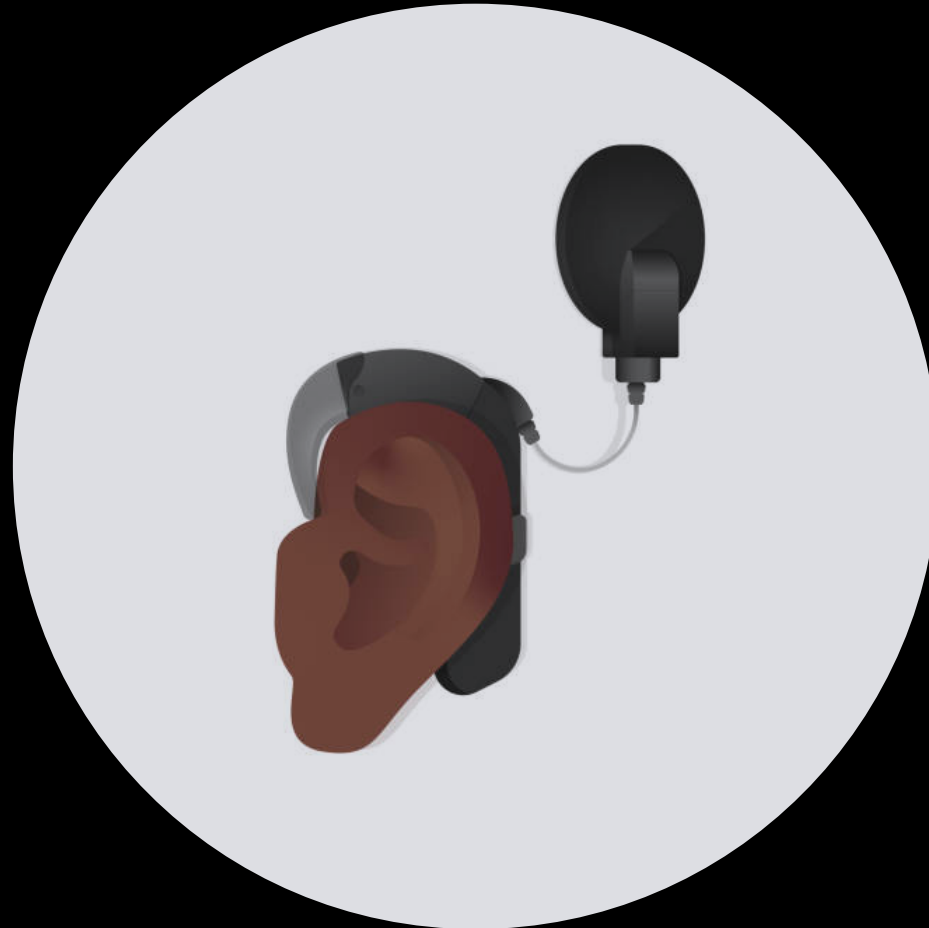
BIO-ELECTRONICS



PACEMAKER

- 1958 -

OVERVIEW



COCHLEAR IMPLANT

- 1982 -

OVERVIEW



BIOMECHATRONICS

- 2010 -

OVERVIEW



BRAIN PROSTHESIS

- 2011 -

OVERVIEW

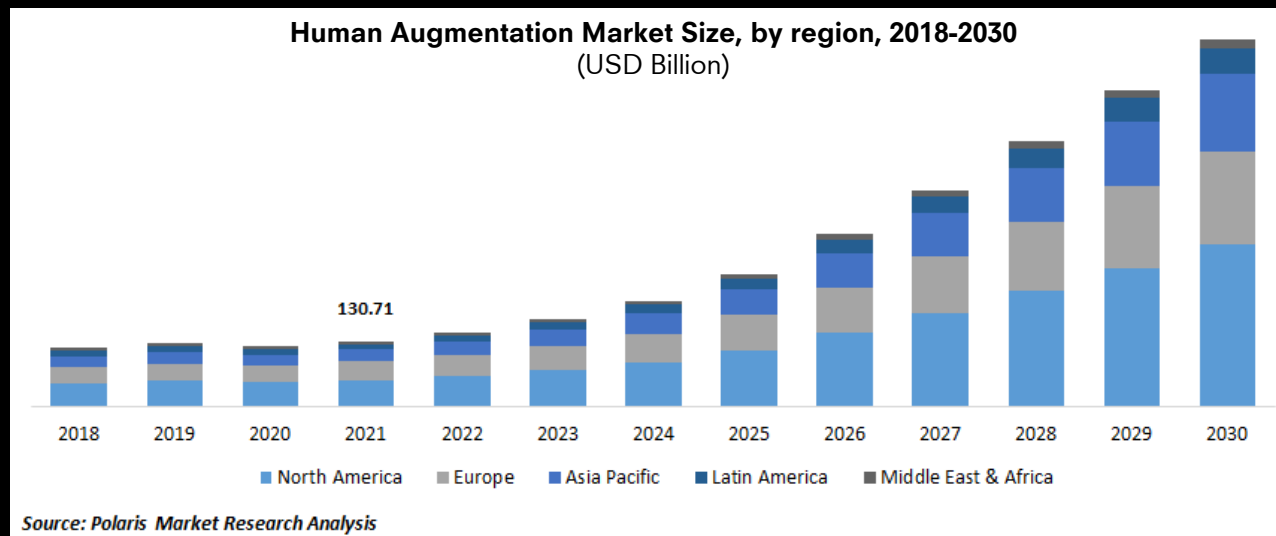


EXOSKELETON

- 2015 -

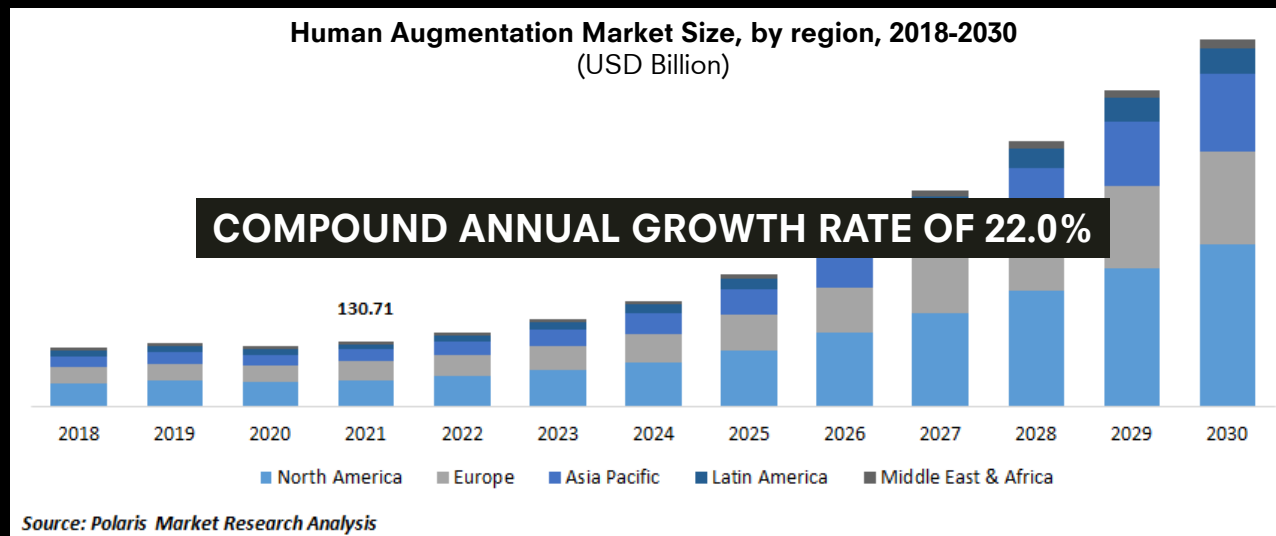
DEVELOPMENT

"BODY AUGMENTATION"

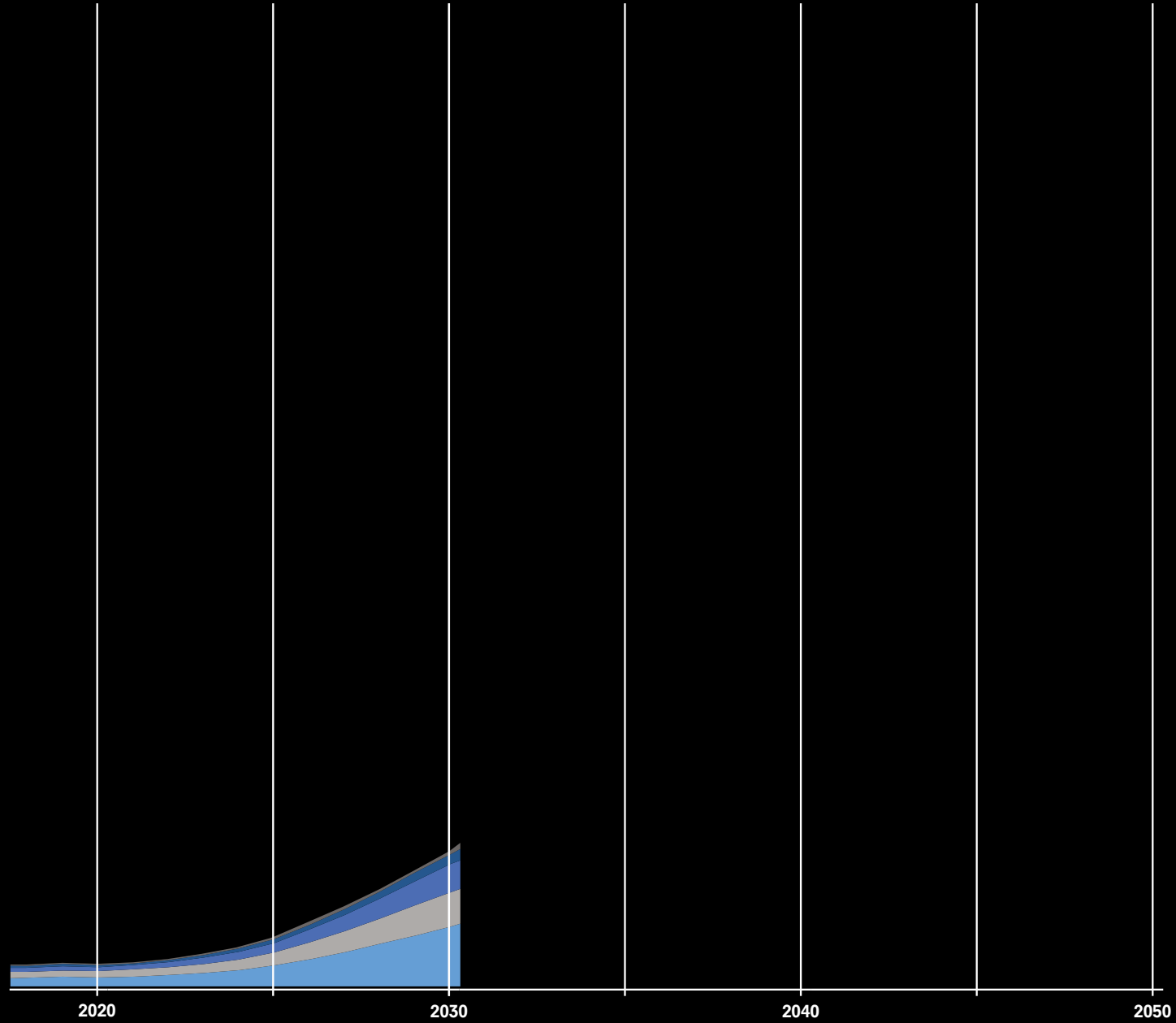


DEVELOPMENT

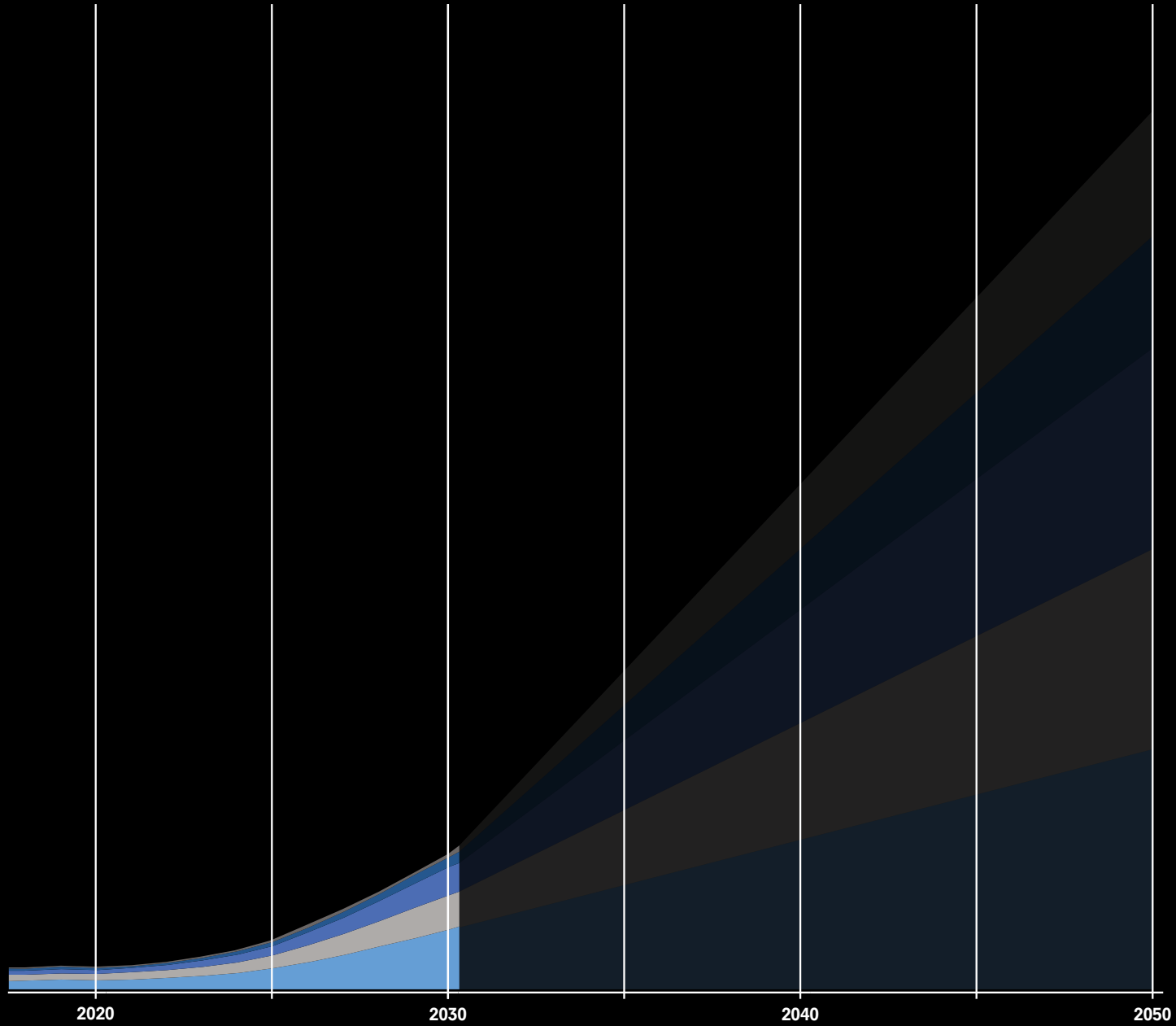
"BODY AUGMENTATION"



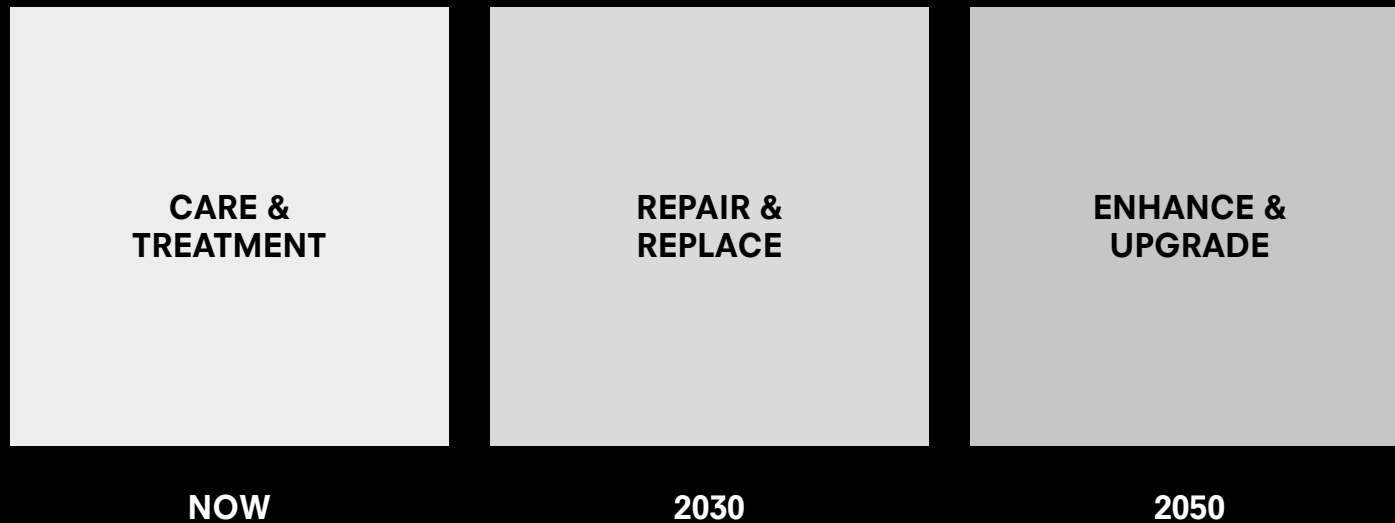
CURRENT DEVELOPMENT



FUTURE DEVELOPMENT



CHANGING ROLE OF THE HOSPITAL



HOW WILL THIS AFFECT THE BUILDING?

BUILDING - IMPLICATIONS

SPECIALISED

FLEXIBLE

MULTI-PURPOSED

TRANSPARENT

PART OF THE CITY

MATERIALISATION

WHAT WILL THE FUTURE LOOK LIKE?

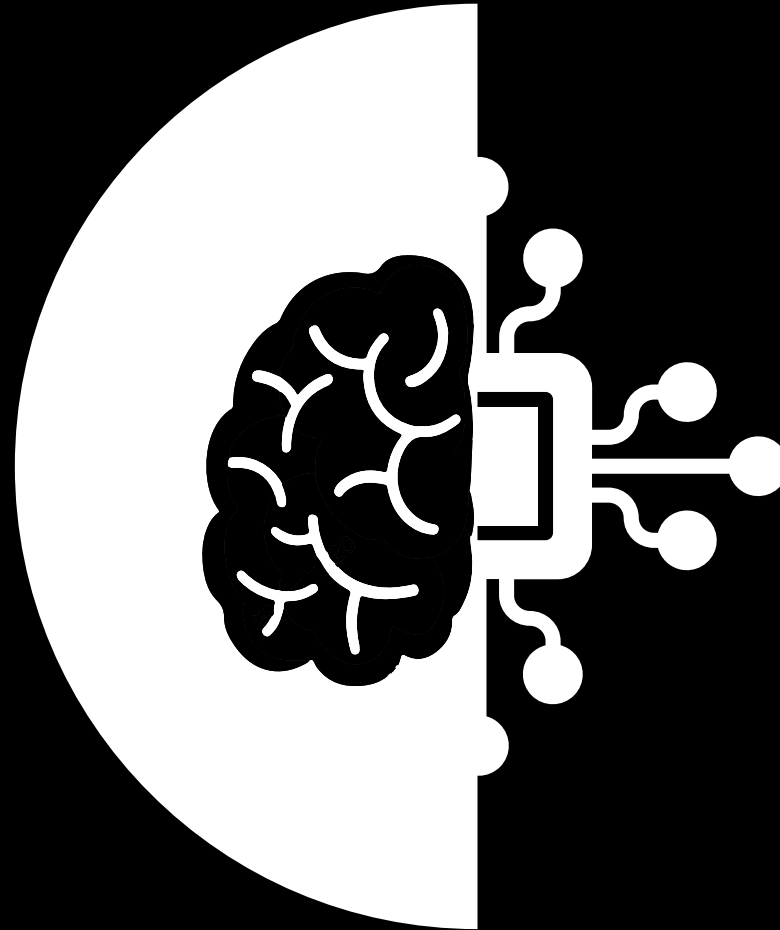
2054?

PROPOSAL



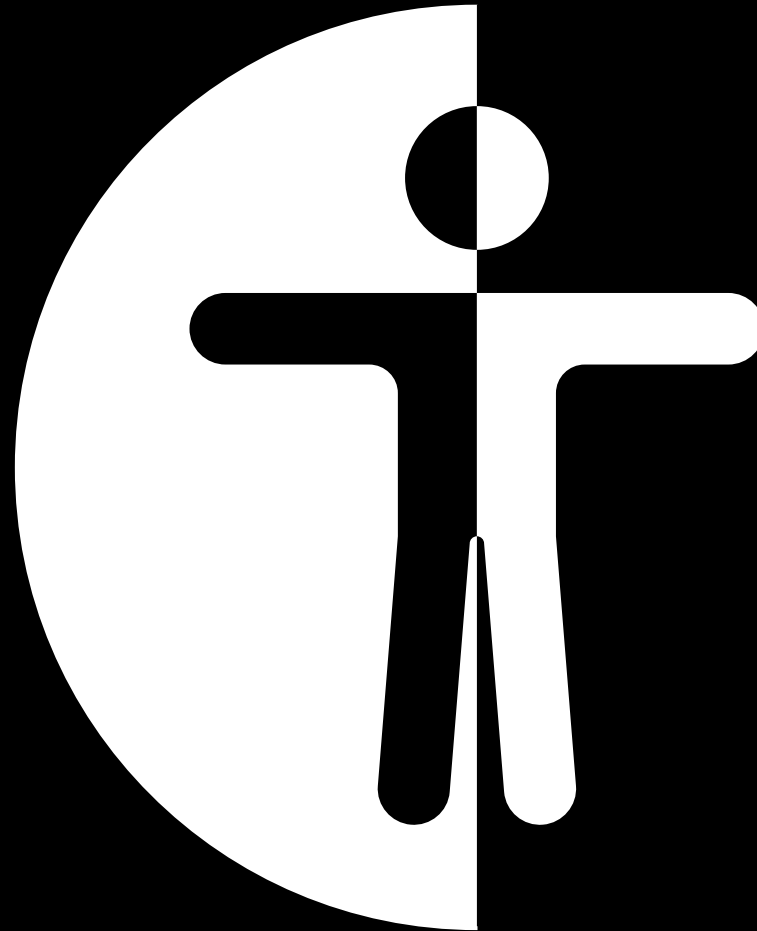
**Institute of
Augmented Bodies**

SPECIALISATION



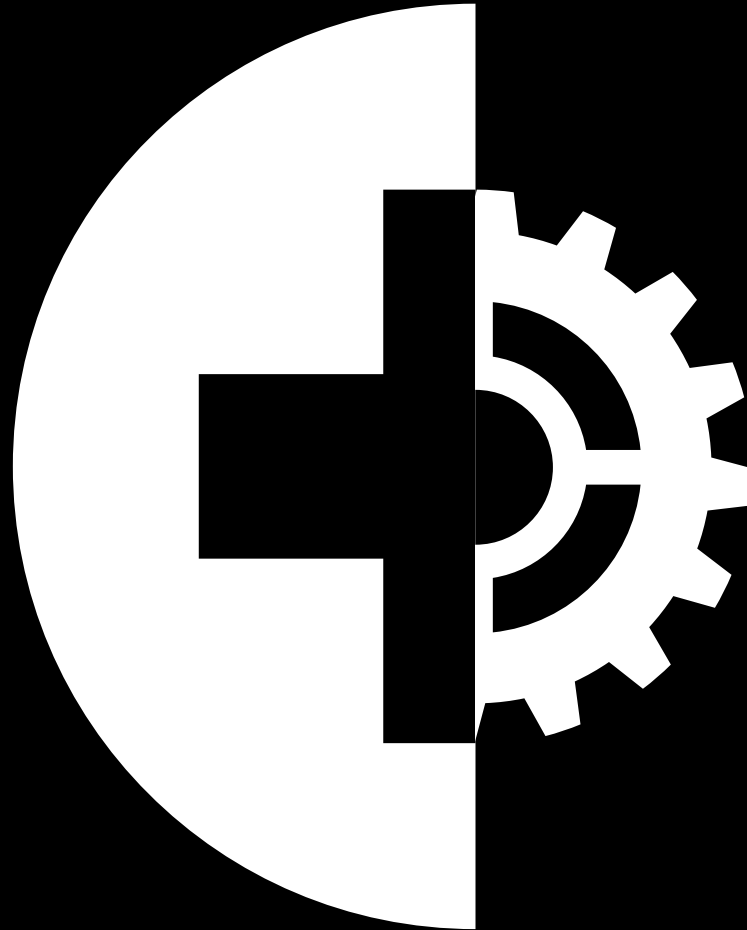
MIND

SPECIALISATION



BODY

SPECIALISATION



DOCTORS & ENGINEERS

MAIN RESEARCH QUESTION

**“HOW WILL HUMAN BODY
AUGMENTATION REFLECT CHANGE IN THE
HOSPITAL TYPOLOGY OF THE FUTURE?”**

- 1 - “How will augmentation change the hospital process for the human body, and thus the building program?”
- 2 - “How can we create a living hospital structure, that can grow, upgrade, and get augmented through time?”

MAIN RESEARCH QUESTION

**“HOW WILL HUMAN BODY AUGMENTATION
REFLECT CHANGE IN THE HOSPITAL
TYPOLOGY OF THE FUTURE?”**

WHO WOULD FUND THIS CHANGE?

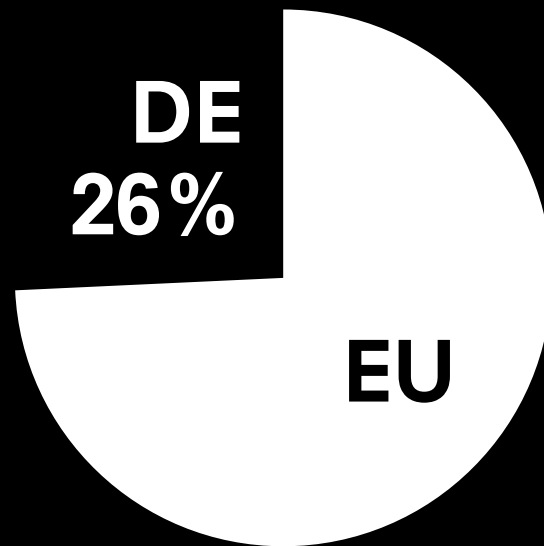
GERMAN HEALTHCARE MARKET

SYNLAB logo featuring the word "SYNLAB" in a bold, sans-serif font, followed by a stylized graphic of two curved lines.SIEMENS logo in a bold, sans-serif font.FRESENIUS logo, featuring a stylized "F" icon followed by the word "FRESENIUS" in a bold, sans-serif font.SARTORIUS logo in a bold, sans-serif font.ZEISS logo in a bold, sans-serif font.Dräger logo, featuring the word "Dräger" in a bold, sans-serif font.BIONTECH logo in a bold, sans-serif font.

GLOBAL MARKET LEADERS

- 
1. US
 2. GERMANY
 3. JAPAN

MedTech Europe, Fitch Solutions (2023)

EUROPEAN MARKET**MEDICAL DEVICE MARKET**

GERMANY
\$42 BILLION

EUROPEAN UNION
\$160 BILLION

The German medical device market is one of the most lucrative healthcare markets worldwide, accounting for roughly USD 42 billion annually, or 26.4% of the European market total.

International Trade Administration - U.S. Department of Commerce (2023)

LEADER OF THE EU

GERMANY AS HEADHUNTER OF
THE HEALTHCARE QUALITY & INDUSTRY



GERMAN HEALTHCARE MARKET



1/6 JOBS LINKED TO THE HEALTHCARE SECTOR
678.2 BILLION EURO, 12% OF GERMANY'S GDP

FUTURE

2054?

NEW COMPETITOR

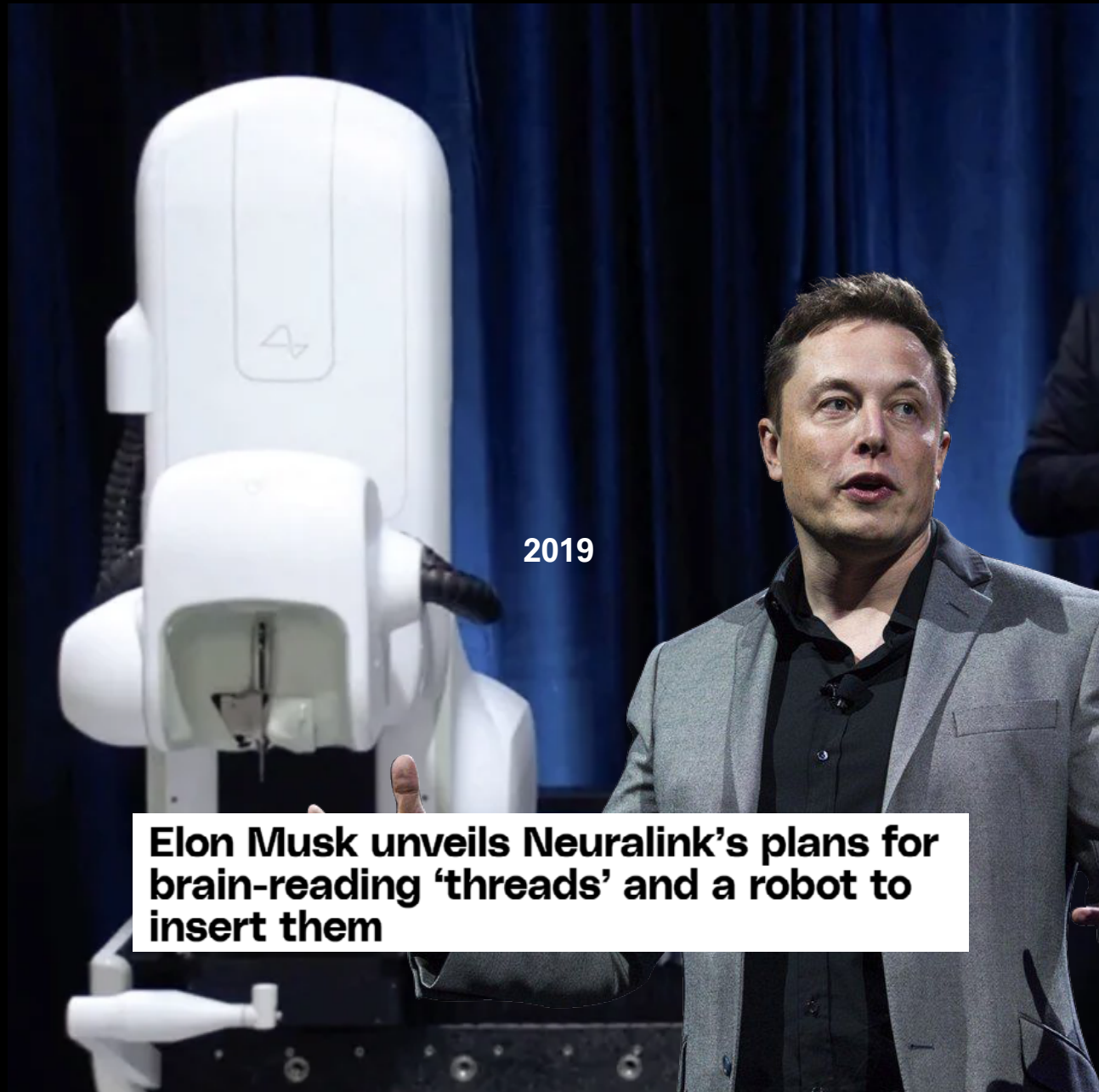
HISTORY

**Elon Musk Launches Neuralink to
Connect Brains With Computers**

2016



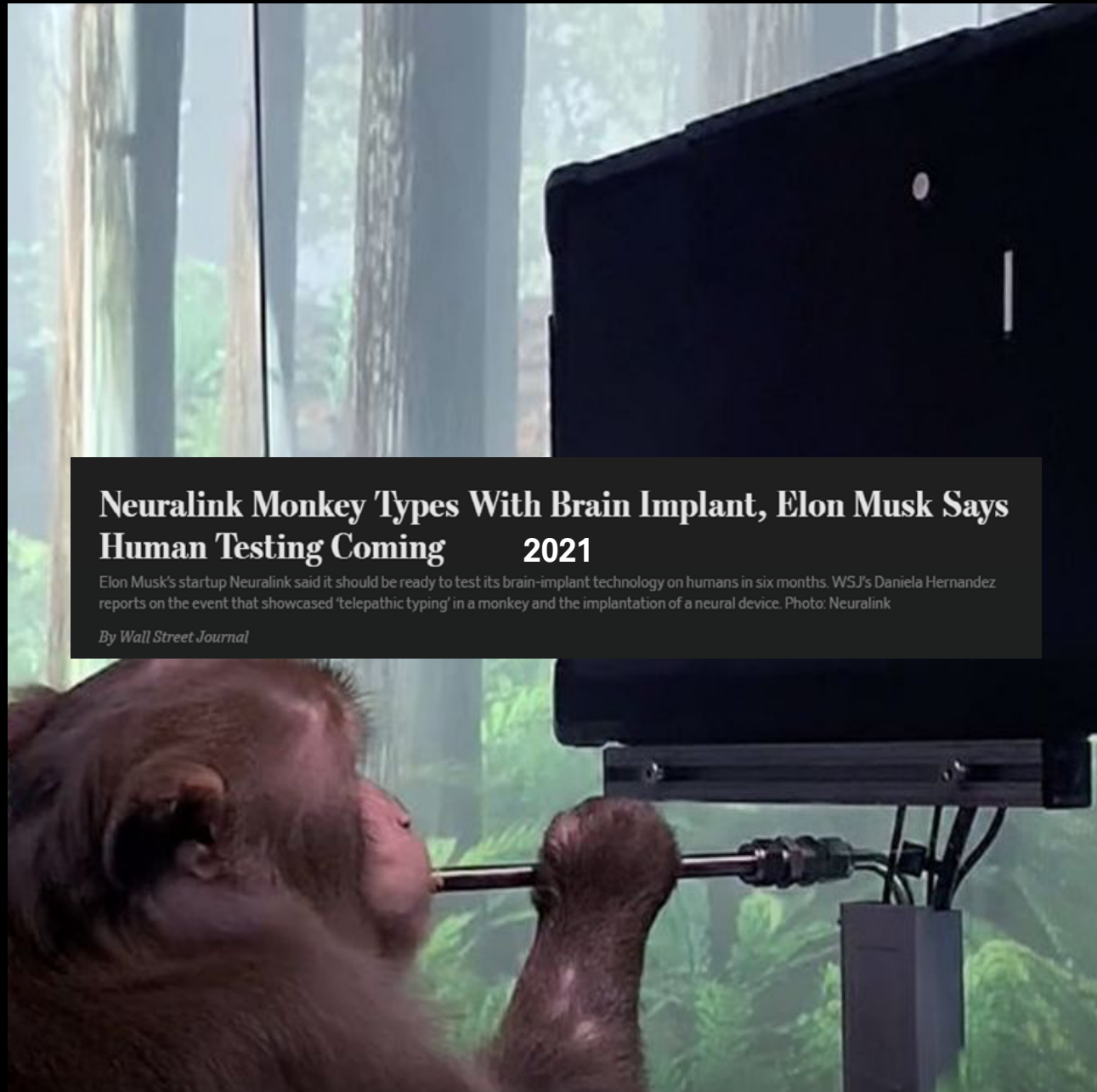
HISTORY



2019

Elon Musk unveils Neuralink's plans for brain-reading 'threads' and a robot to insert them

HISTORY



HISTORY

Future of Health

Musk's Neuralink to start human trial of brain implant for paralysis patients

Reuters



2023

HISTORY

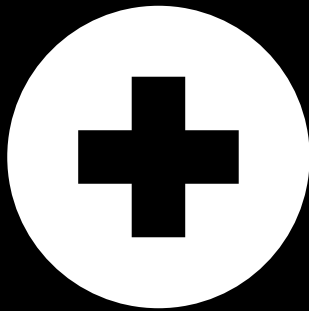


BREAKING NEWS Elon Musk reveals first human has received BRAIN implant from Neuralink 'and is recovering well'

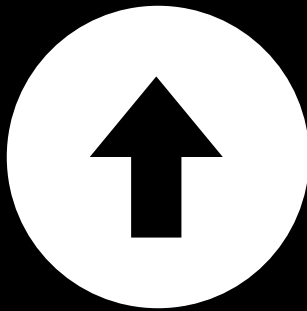
2024



FUTURE AMBITIONS



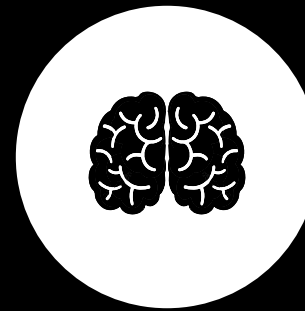
**Treating Neurological
Conditions**



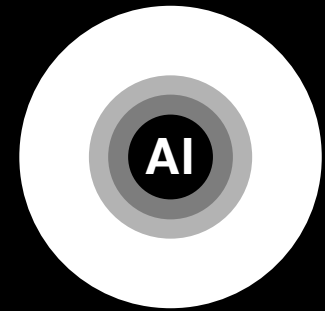
**Enhancing Human
Cognition**



**Human & Technology
Symbiosis**



**Understanding
the Brain**



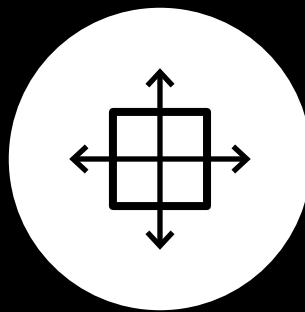
AI & Human integration

“CLIENTS”**NON-PROFIT****MAX PLANCK INSTITUTE
OF HUMAN DEVELOPMENT****PRIVATE****NEURALINK****PUBLIC****HUMBOLDT UNIVERSITY
OF BERLIN**

PROJECT AMBITIONS



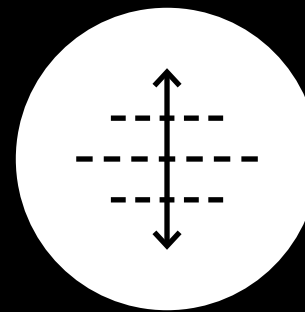
Specialised = Size



Room for expansion



Public Engagement



Low Threshold



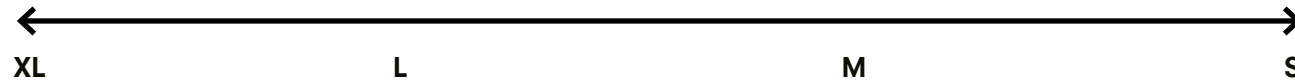
Part of Society

MAIN RESEARCH QUESTION

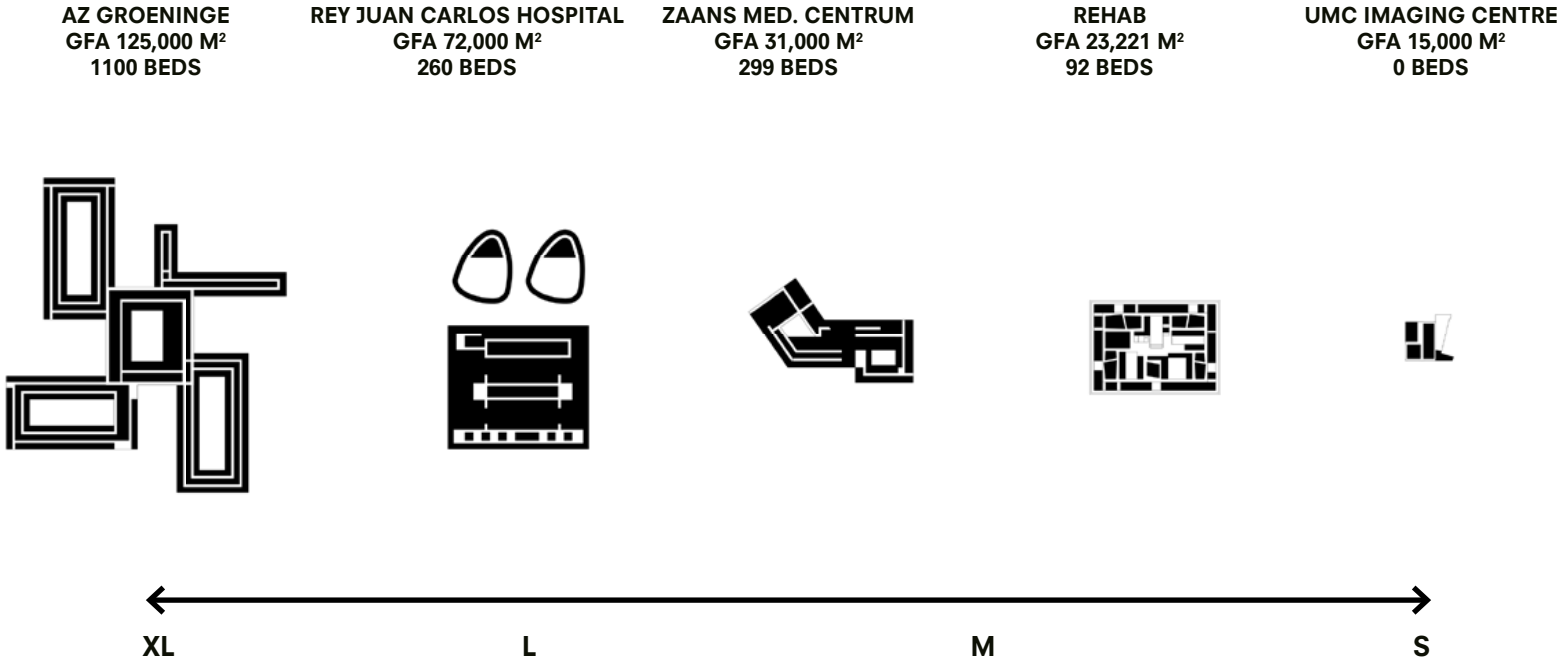
**“HOW WILL HUMAN BODY AUGMENTATION
REFLECT CHANGE IN THE HOSPITAL
TYPOLOGY OF THE FUTURE?”**

“WHAT DOES A HOSPITAL ENTAIL?”

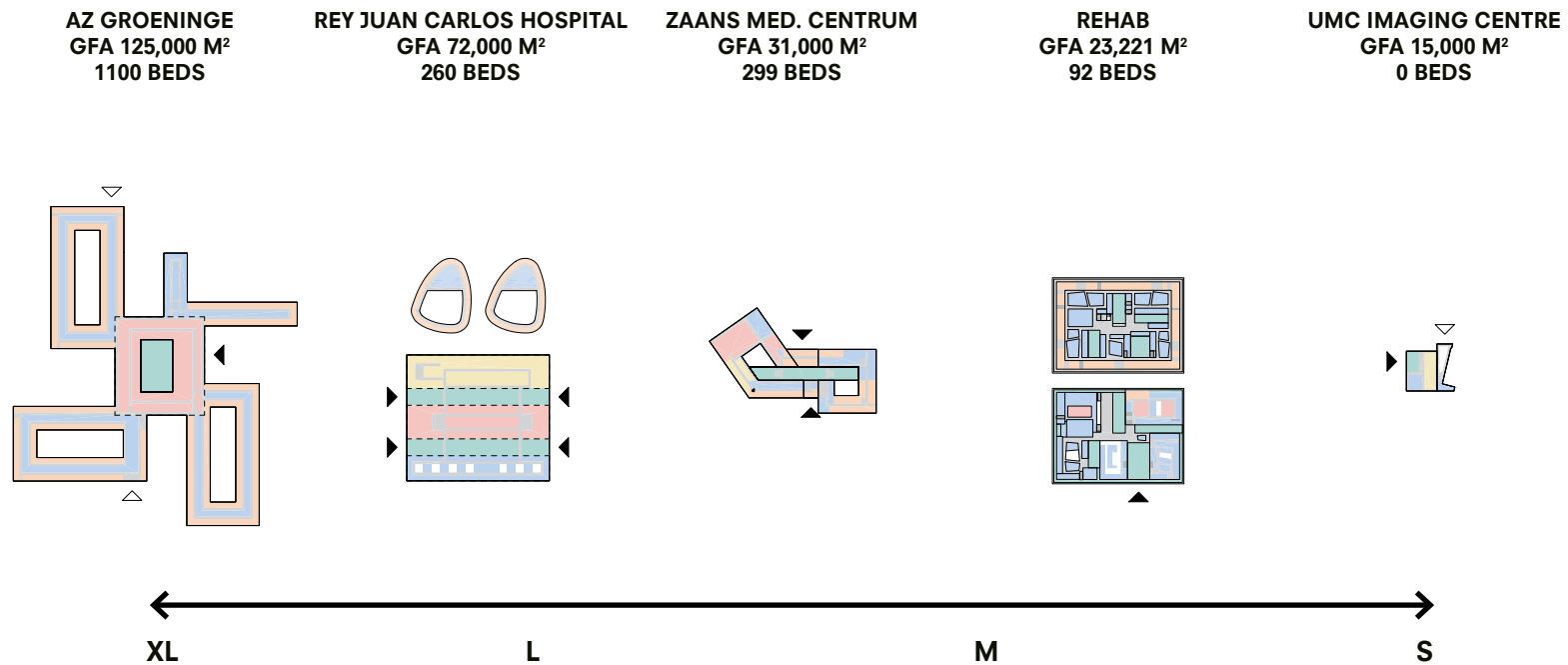
CASE STUDIES



PROGRAM BENCHMARKING



P. 62²





“HOT FLOOR”

“HOTEL”



“OFFICE”



15th FLOOR

15th FLOOR

15th FLOOR

"PUBLIC"



“CIRCULATION”

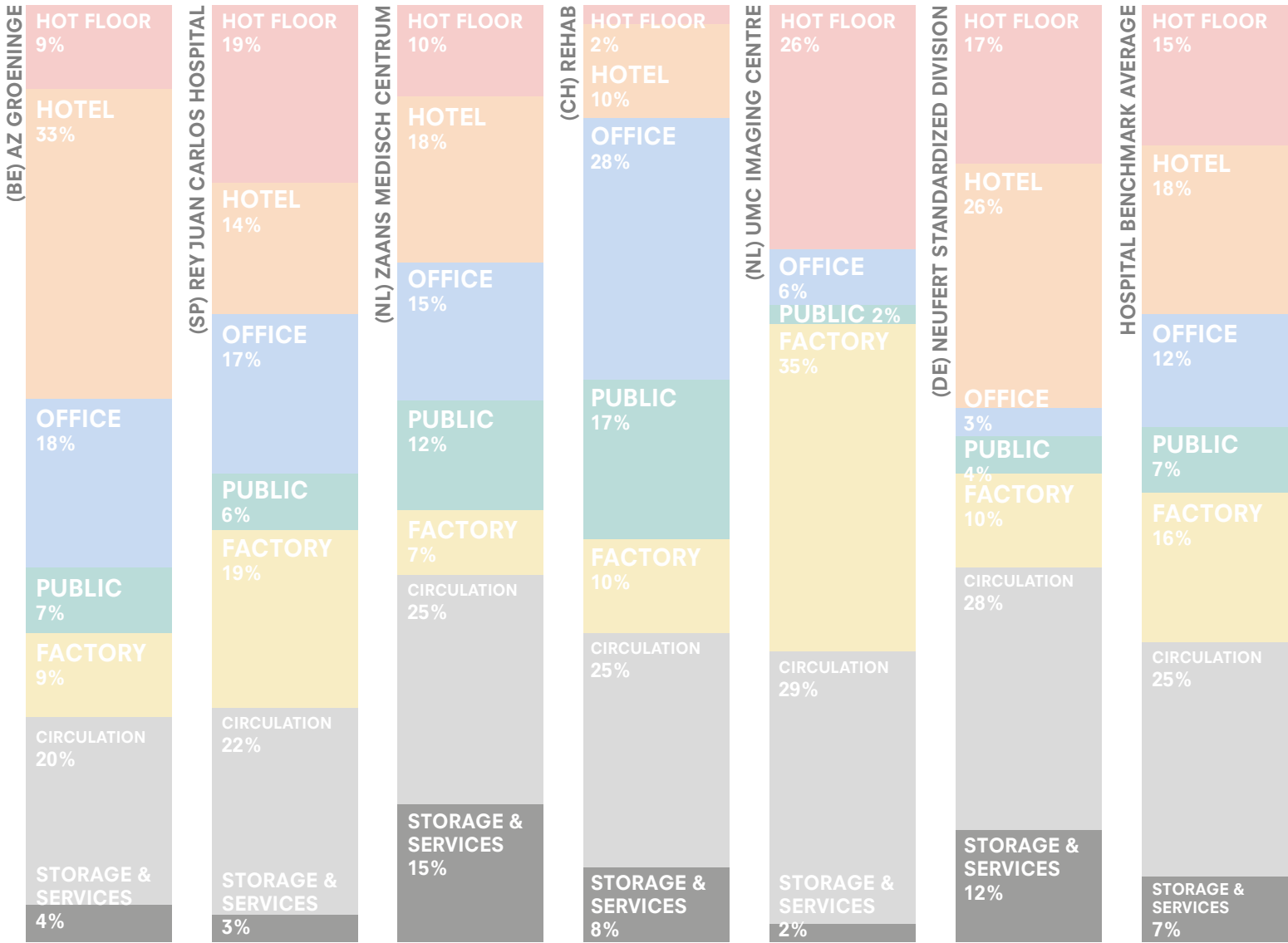


“STORAGE & SERVICES”


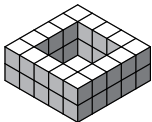

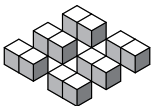
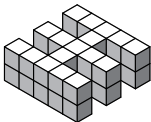
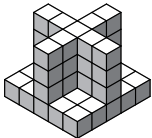

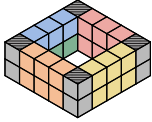



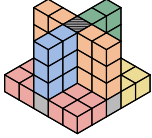

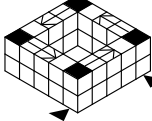

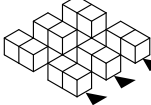
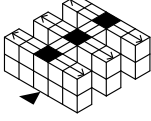
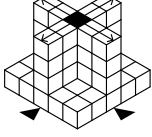


“FACTORY”

PROGRAM BENCHMARKING



ORGANISATION STRATEGIES

	CROSS	COURTYARD	LINE	CAMPUS	COMB	HYBRID
STRUCTURE						
ORGANISATION						
FLOWS						

NICKL-WELLER, C., & NICKI, H. (2021). ARCHITECTURE FOR HEALTH. BRAUN PUBLISHING.

MAIN RESEARCH QUESTION

**“HOW WILL HUMAN BODY AUGMENTATION
REFLECT CHANGE IN THE HOSPITAL
TYPOLOGY OF THE FUTURE?”**

“WHAT WILL CHANGE IN THE FUTURE?”

SPECIALIZED FACILITIES AND EQUIPMENT

FROM GENERAL HOSPITAL TO A SPECIALISED HOSPITAL

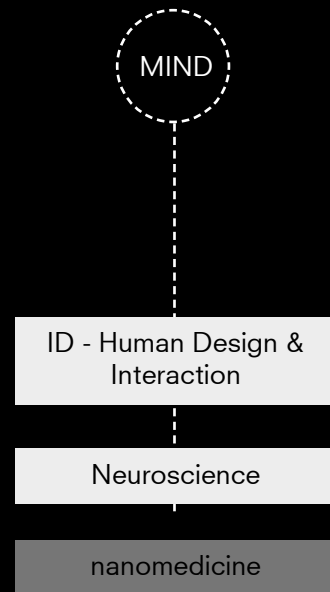
FUSION OF BODY AND MATERIAL



"CUSTOMIZED"
PATIENT EXPERIENCE

FUSION OF BODY AND MATERIAL

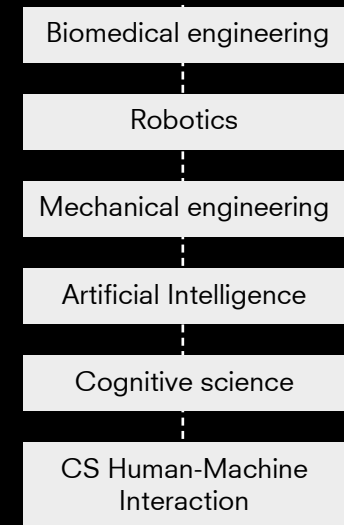
ORGANIC MATERIAL



BODY

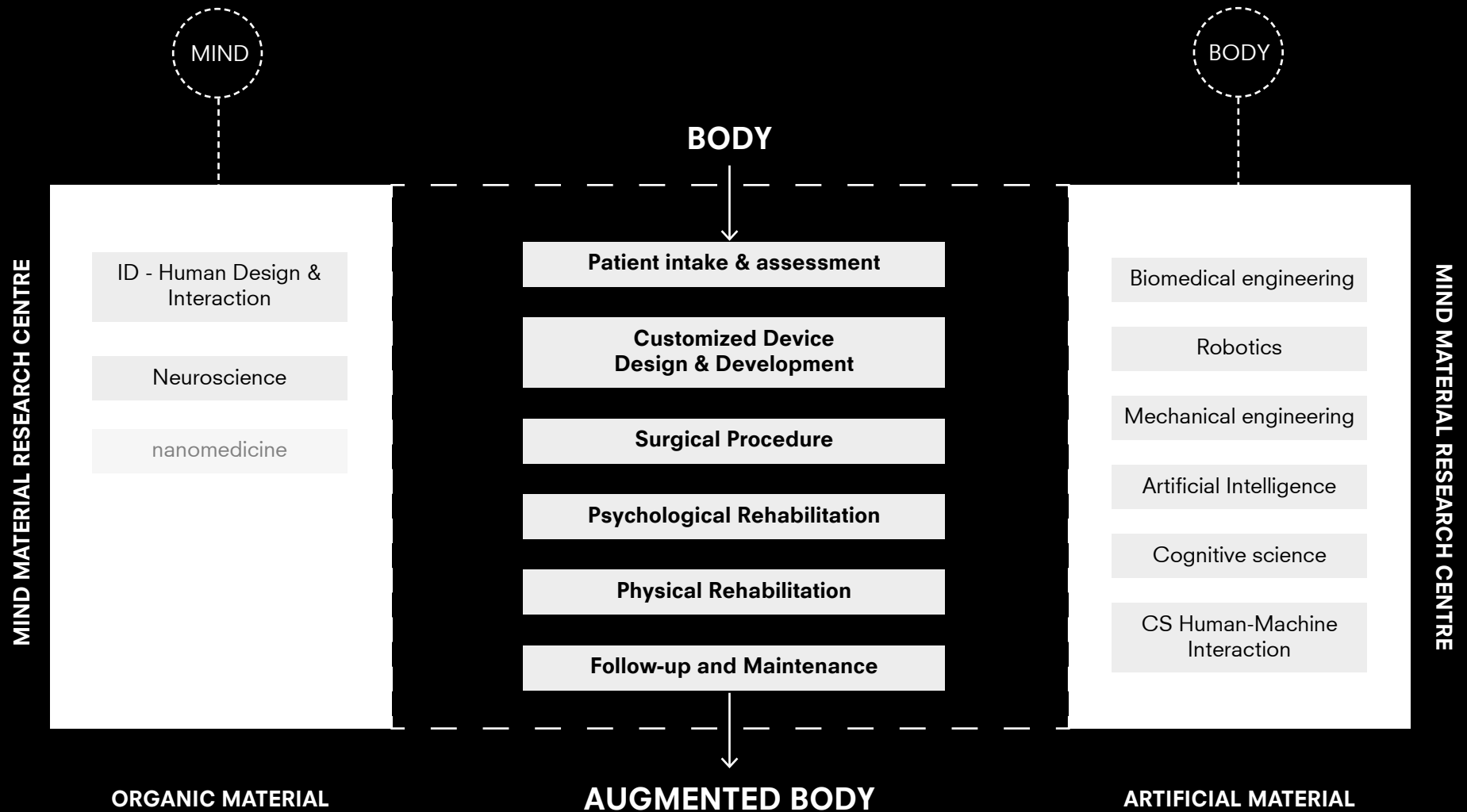


BODY



ARTIFICIAL MATERIAL

FUSION OF BODY AND MATERIAL



INTEGRATION OF RESEARCH AND DEVELOPMENT FACILITIES

AUTOMATION & OPTIMISATION

FROM PASSIVE HOSPITAL TO AN ACTIVE HOSPITAL

AUTOMATION & OPTIMISATION

HOT FLOOR

HOTEL

OFFICE

RESEARCH

PROGRAM

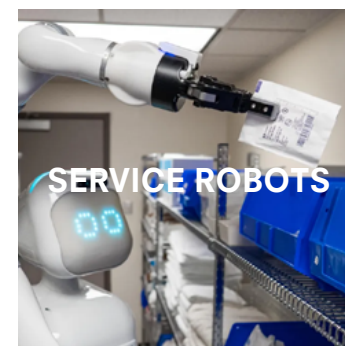
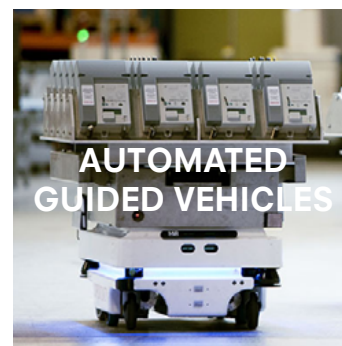
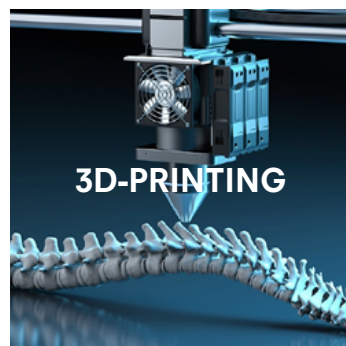
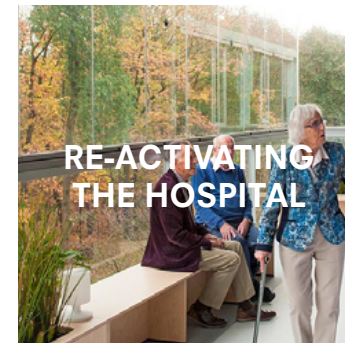
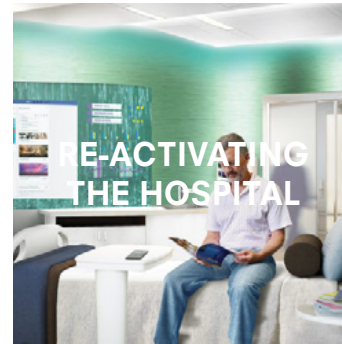
PUBLIC

FACTORY

CIRCULATION

STORAGE
& SERVICES

AUTOMATION & OPTIMISATION



AUTOMATION & OPTIMISATION

**+ INCREASE OF
OPERATION ROOM SIZE**

**- DECREASE OF
INPATIENT BEDS**

**- DECREASE OF
INPATIENT BEDROOM
SIZE**

**- DECREASE OF
WAITING AREAS AND
PRIVATE OFFICE
SPACE**

**+ INCREASE IN
BACK OF HOUSE**

**- DECREASE IN
FRONT OF HOUSE**

SPATIAL

**+ INCREASE OF
SHARED AND PUBLIC
SPACE**

**+ INCREASE IN
WORKSHOP AND
PRODUCTION AREA**

**+ SEPERATED
CIRCULATION
FOR HUMAN AND
AUTOMATED FLOWS**

**- DECREASE OF
STORAGE AREA**

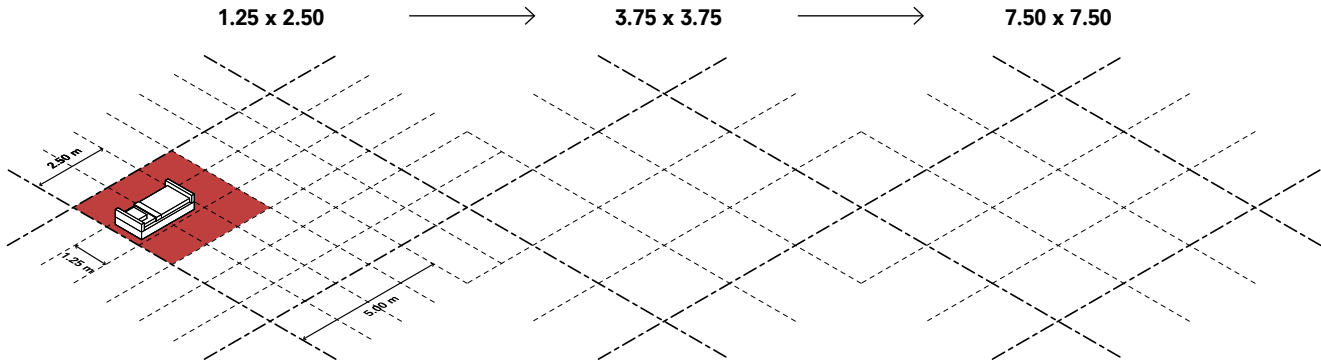
AUTOMATION & OPTIMISATION

FROM PASSIVE HOSPITAL TO A FLEXIBLE HOSPITAL STRUCTURE

SUB-RESEARCH QUESTION

**“HOW CAN WE CREATE A LIVING HOSPITAL
STRUCTURE, THAT CAN GROW, UPGRADE,
AND GET AUGMENTED THROUGH TIME?”**

MODULAR GRID

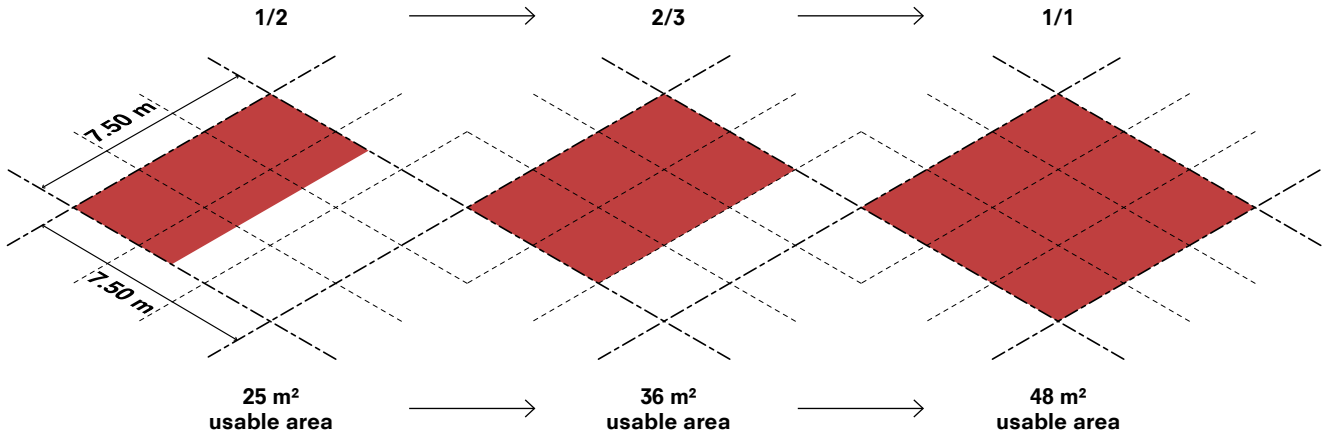


PATIENT ROOM AS STARTING POINT

7.5 X 7.5 MODULE

NICKL-WELLER, C., & NICKI, H. (2021). ARCHITECTURE FOR HEALTH.

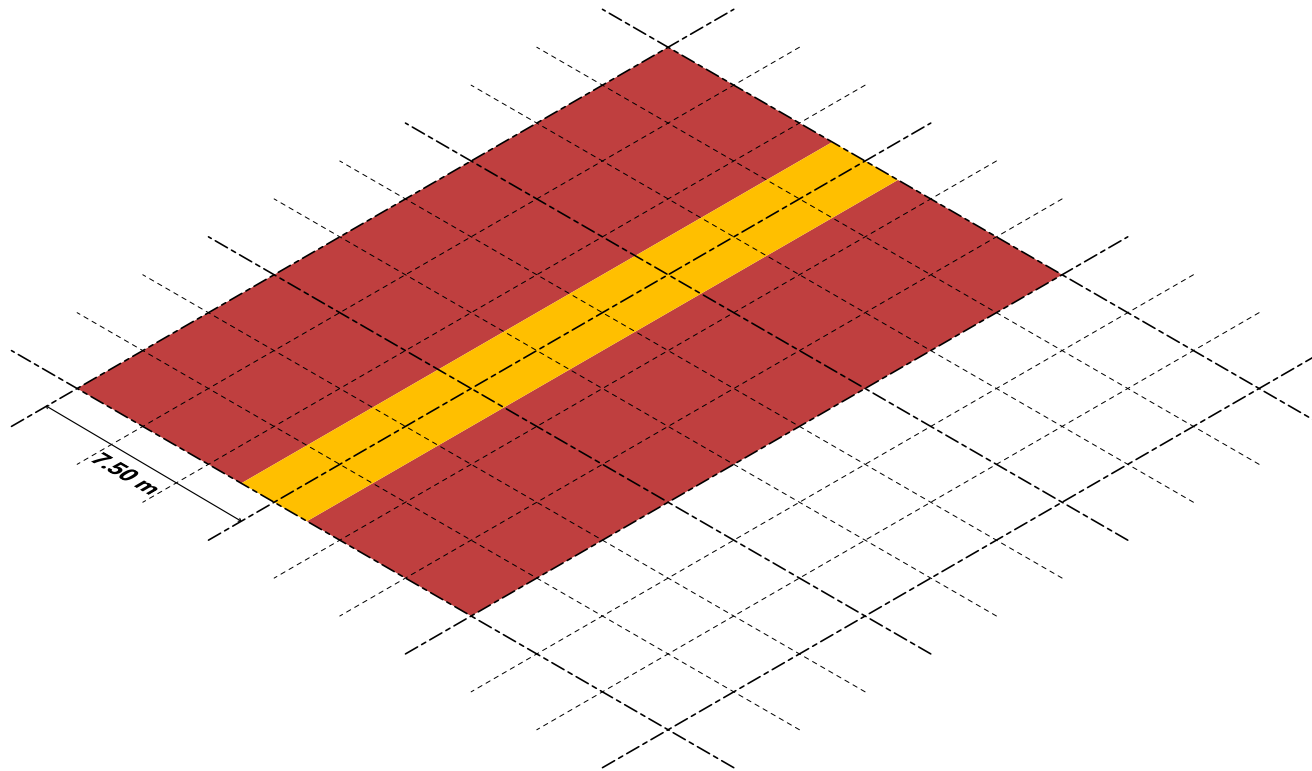
MODULAR GRID



MODULAR SIZING ORDER

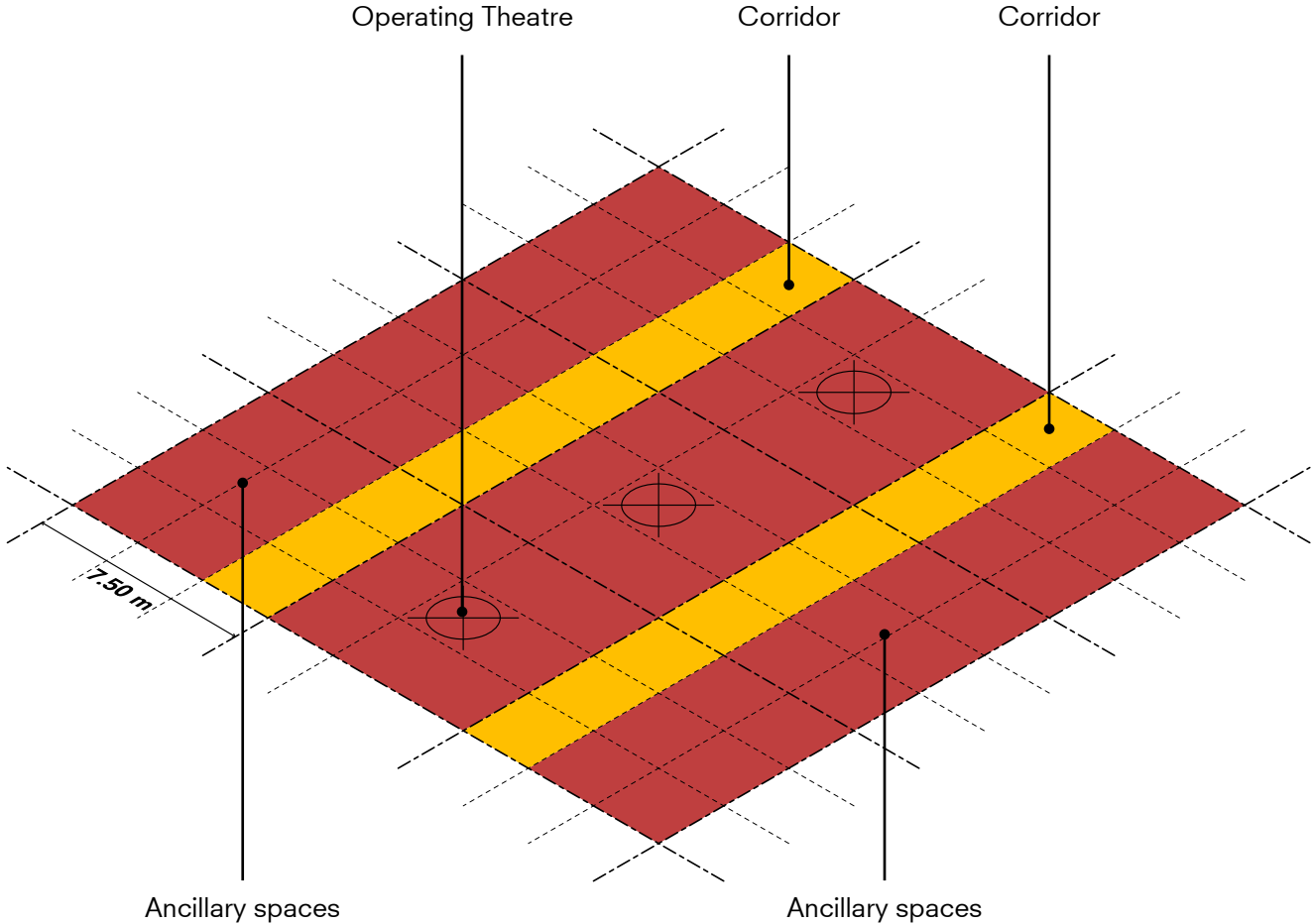
NICKL-WELLER, C., & NICKI, H. (2021). ARCHITECTURE FOR HEALTH.

MODULAR GRID



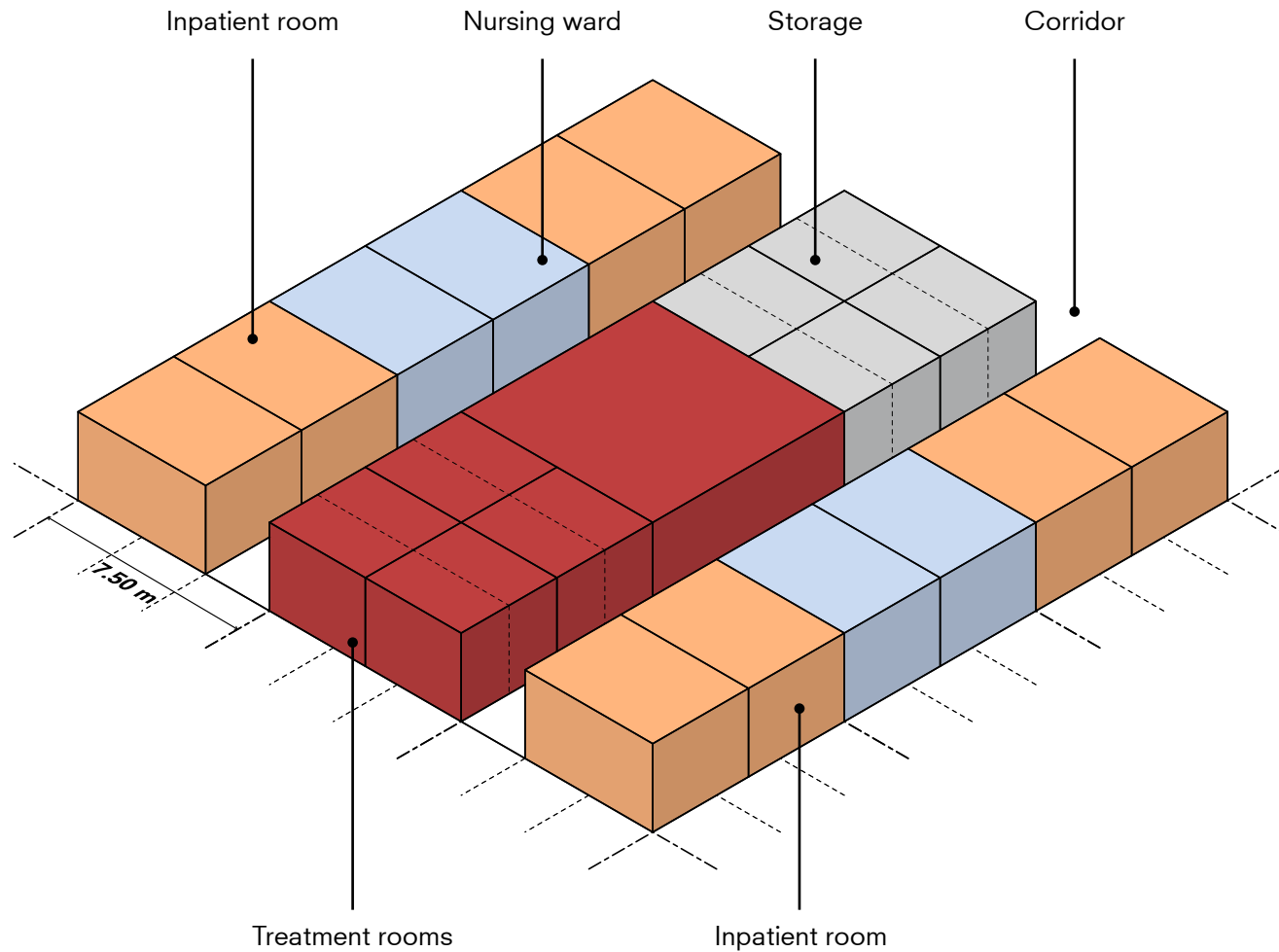
INPATIENT DEPARTMENT - 15M WIDE

MODULAR GRID



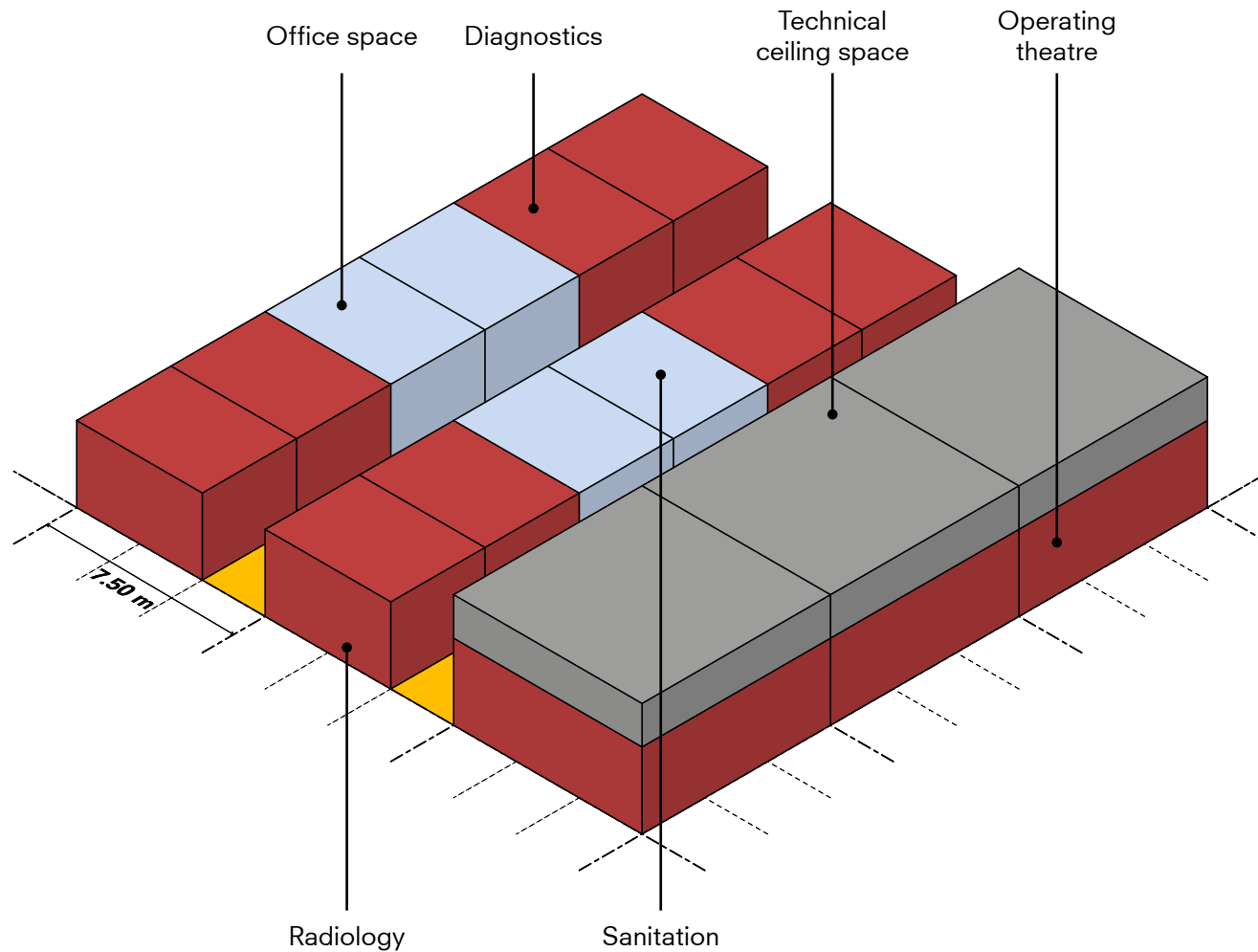
HOT FLOOR - 22,5M WIDE

MODULAR GRID



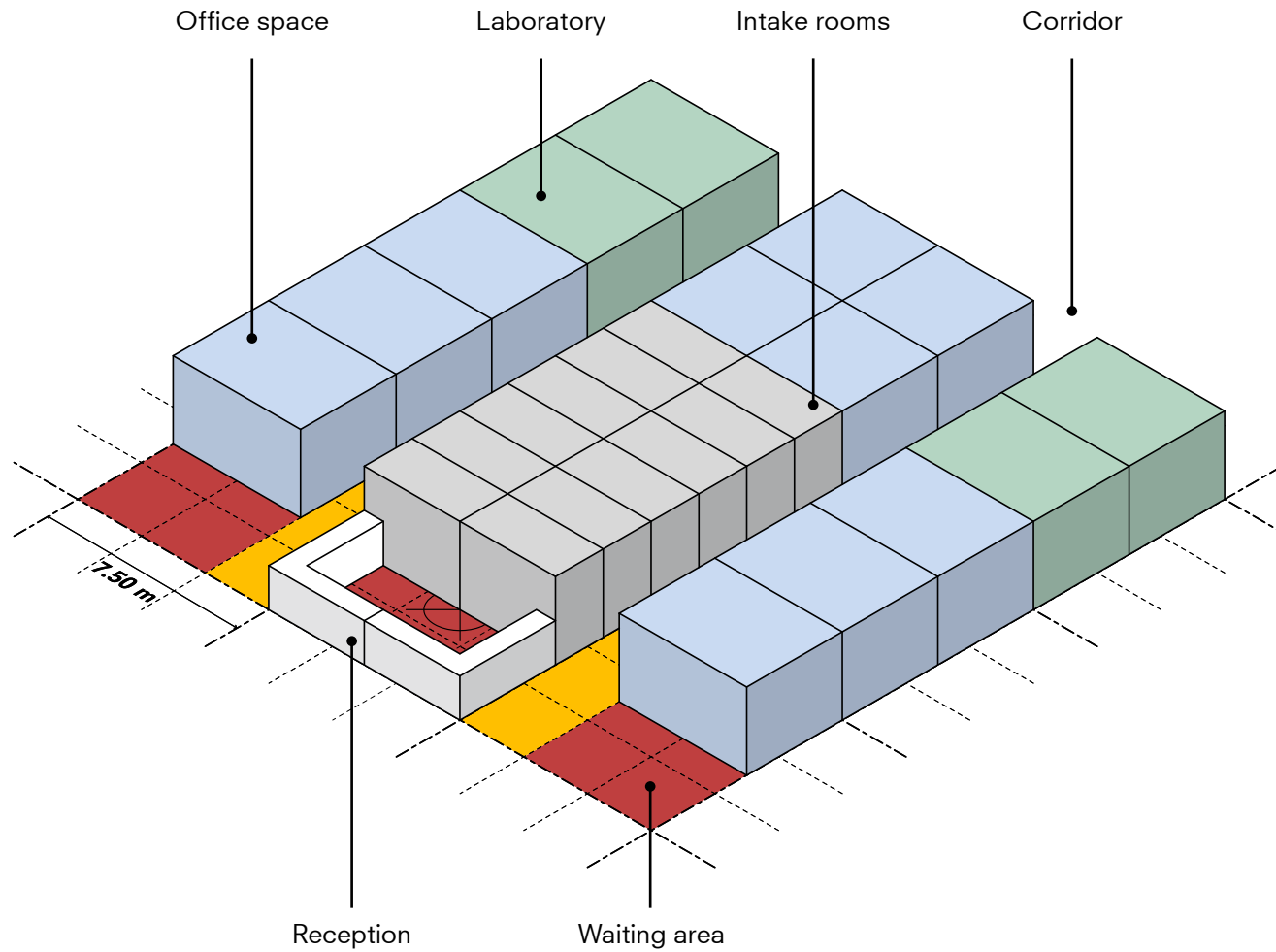
HOTEL - INTENSIVE CARE DEPARTMENT

MODULAR GRID



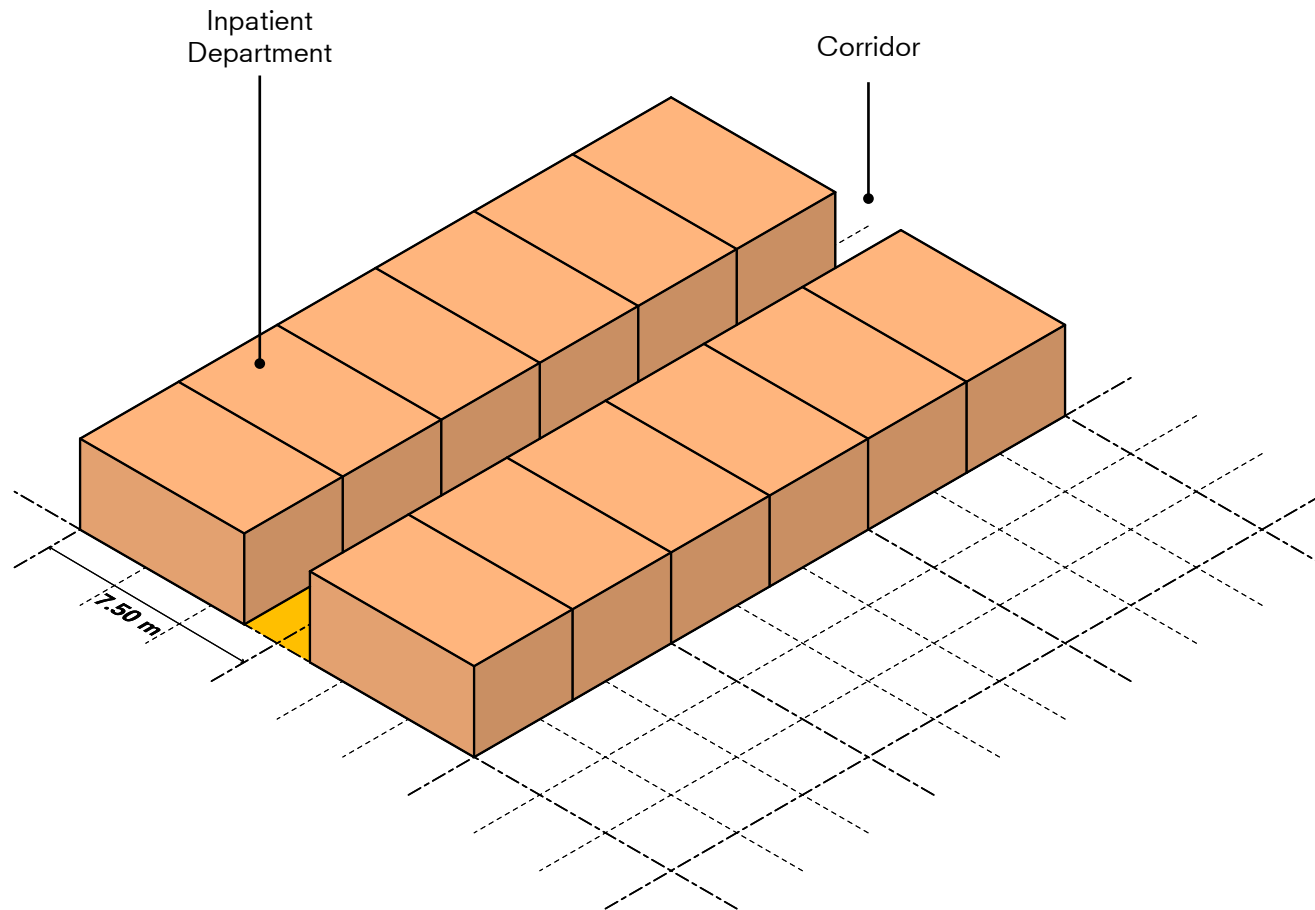
HOT FLOOR - DIAGNOSTICS & OPERATION

MODULAR GRID



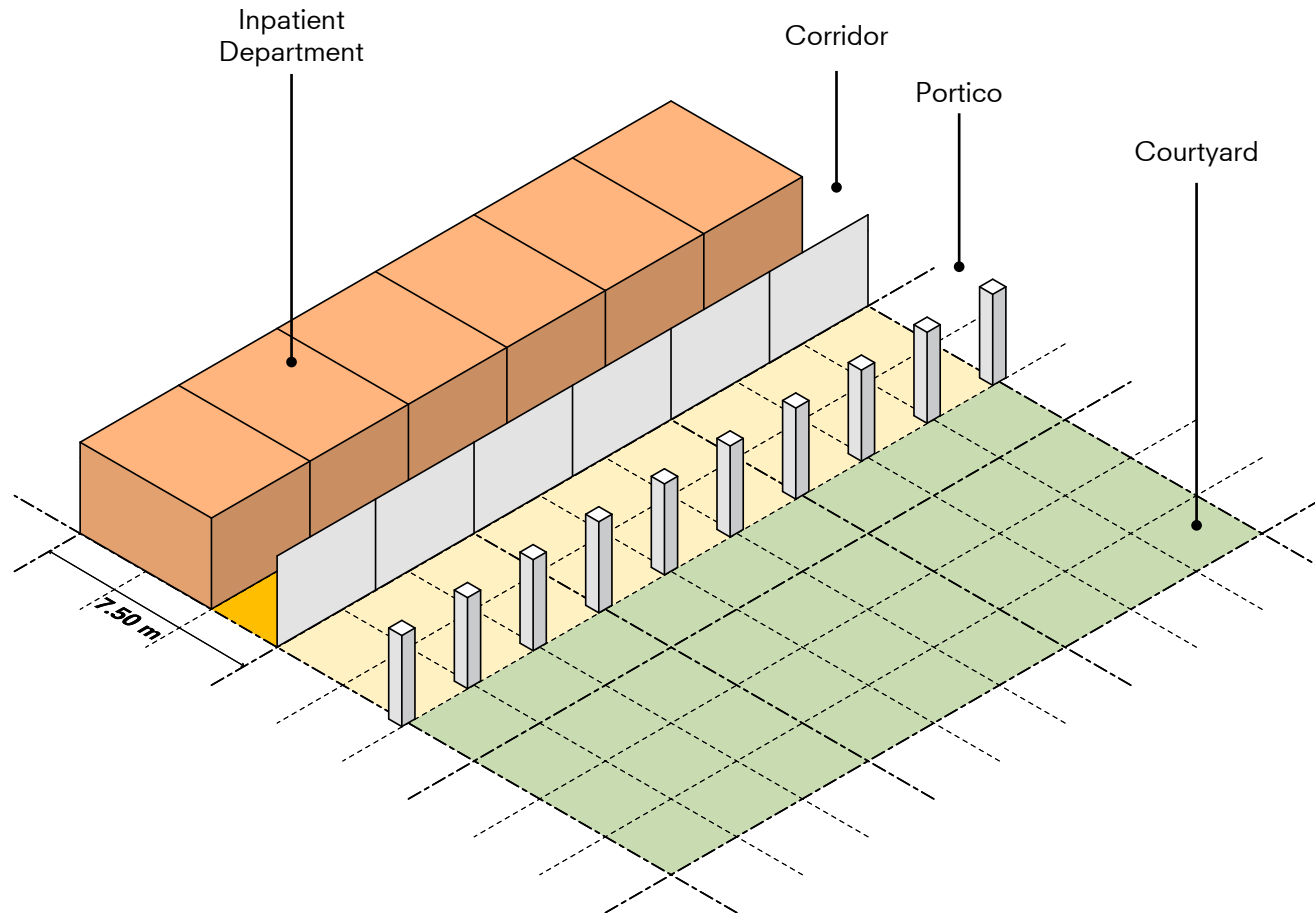
OFFICE - OUTPATIENT DEPARTMENT

MODULAR GRID



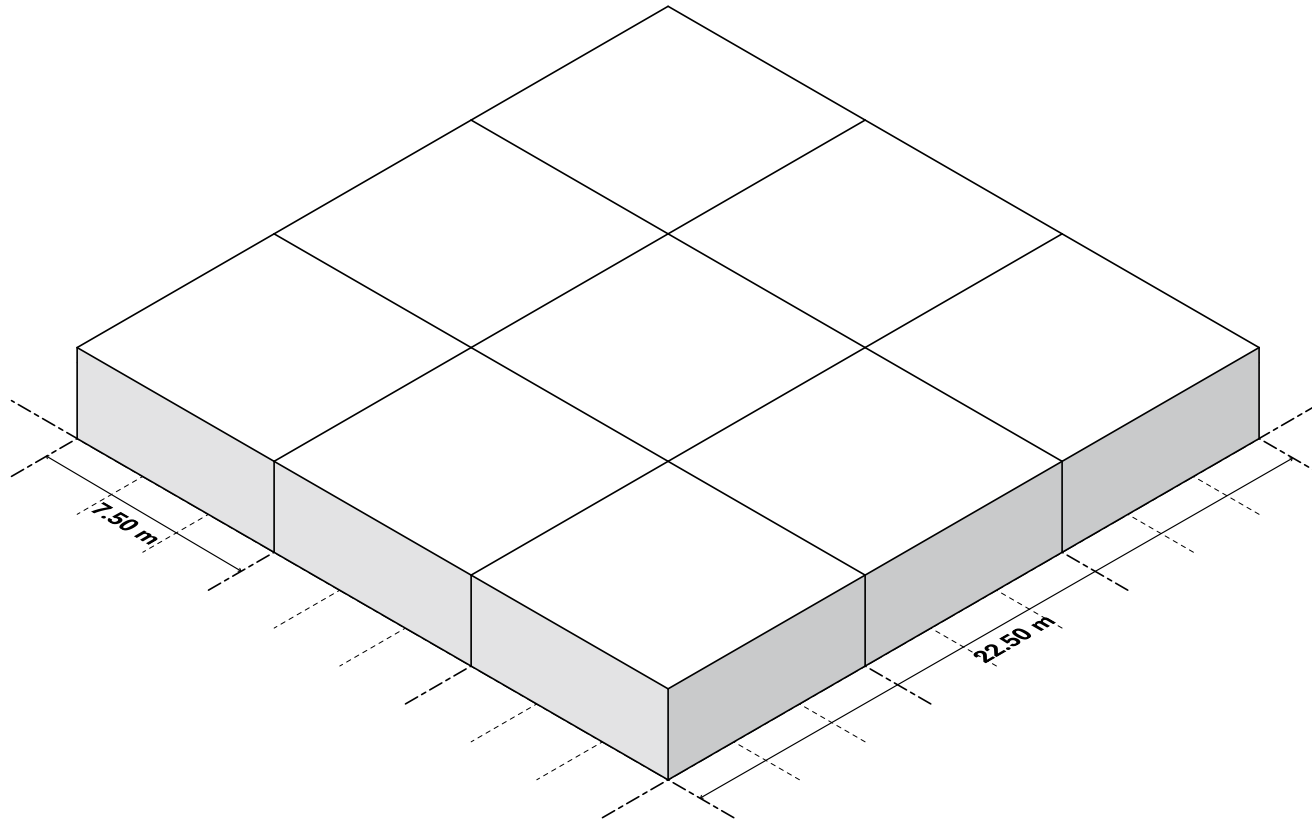
HOTEL - INPATIENT DEPARTMENT

MODULAR GRID



INPATIENT DEPARTMENT - COURTYARD

MODULAR GRID

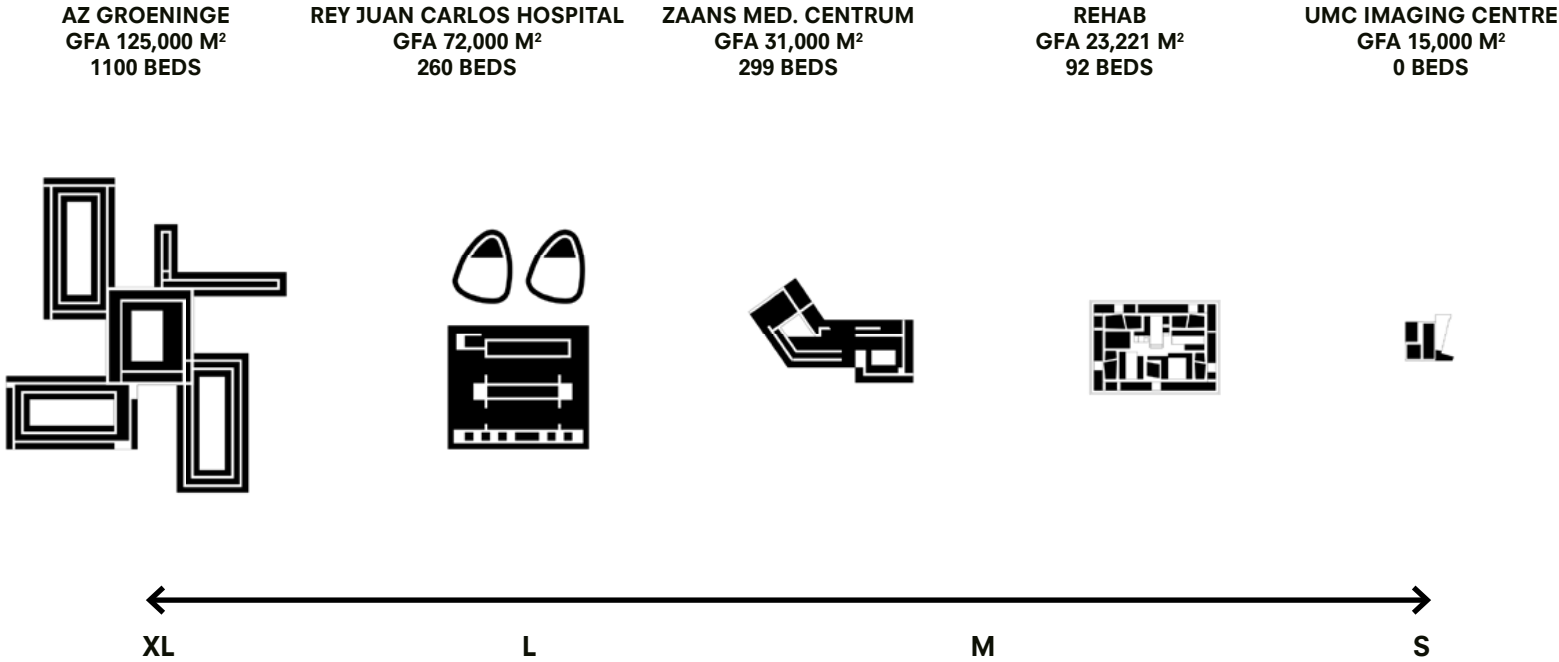


STANDARDISED MODULE 7.50 X 7.50 / 22.50 X 22.50

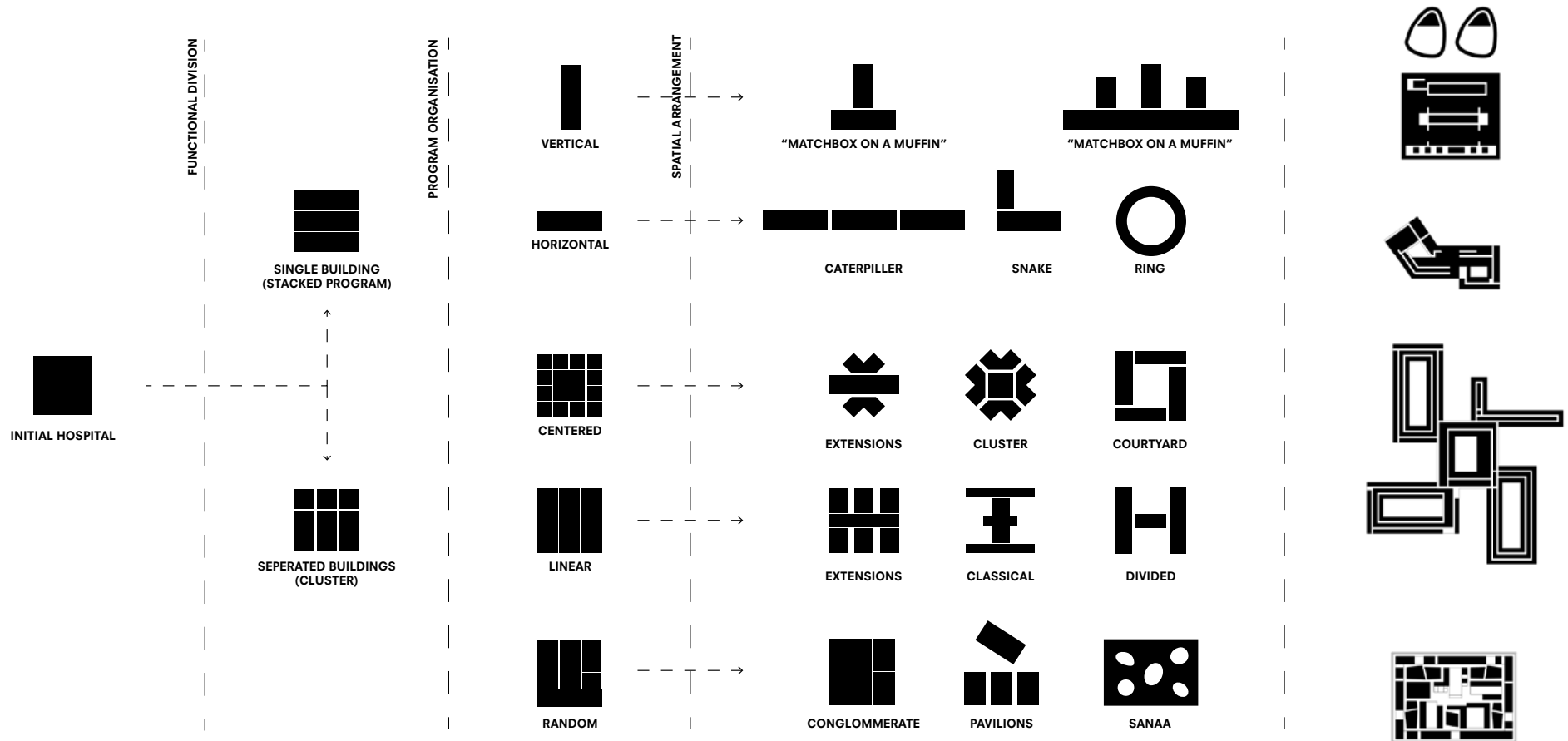
REDEFINING THE IMAGE

FROM A CLOSED HOSPITAL TO AN OPEN HOSPITAL

PROGRAM BENCHMARKING


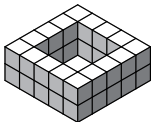

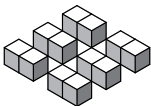
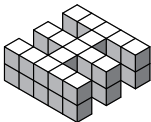
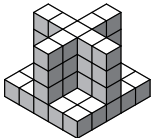

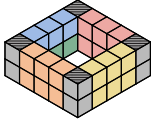



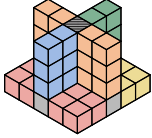

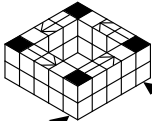

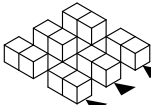
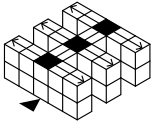
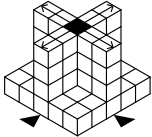


ORGANISATION STRATEGIES



THE ARCHITECTURE OF HOSPITALS, COR WAGENAAR (2006)

ORGANISATION STRATEGIES

	CROSS	COURTYARD	LINE	CAMPUS	COMB	HYBRID
STRUCTURE						
ORGANISATION						
FLOWS						

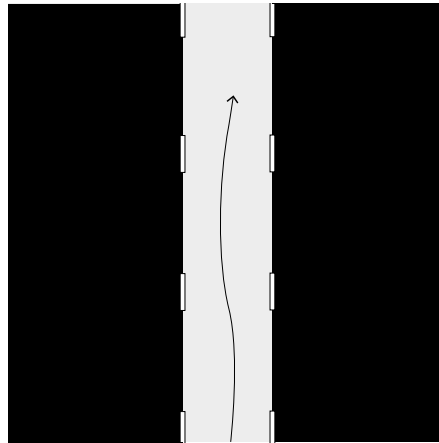
NICKL-WELLER, C., & NICKI, H. (2021). ARCHITECTURE FOR HEALTH. BRAUN PUBLISHING.

REDEFINING THE IMAGE

FROM A HOSPITAL FOR ONLY PATIENTS TO
A HOSPITAL FOR SOCIETY

REDEFININIG THE STANDARD - CIRCULATION

"THE STANDARD"



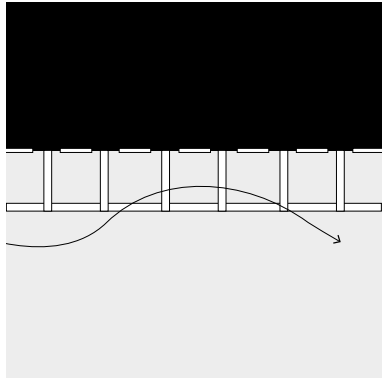
CORRIDOR

[2.25 - 3.00 M WIDE]

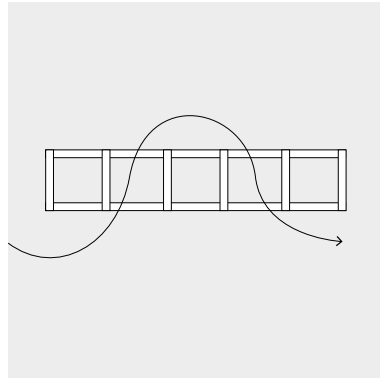
CONCLUSION #1

RE-DEFINE PUBLIC SPACE

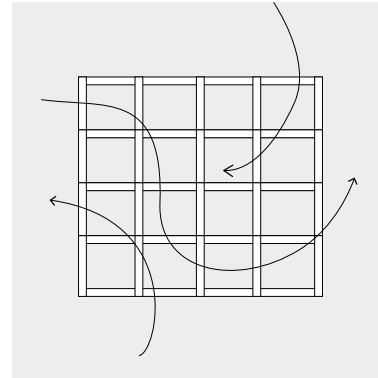
PUBLIC TRANSITION SPACES



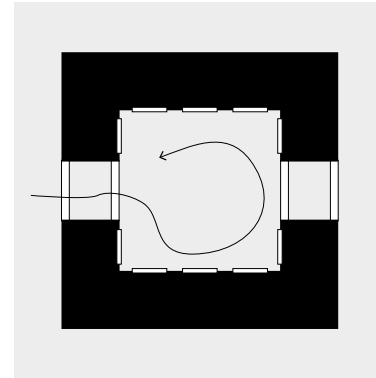
PORTICO



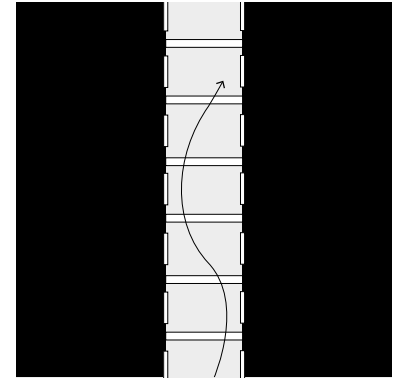
LOGGIA



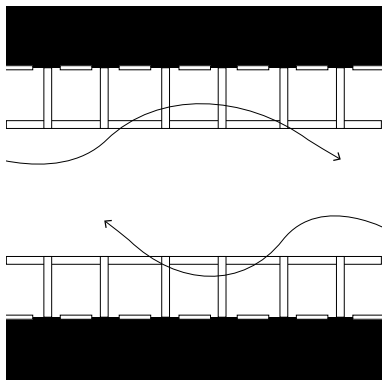
COVERED SQUARE



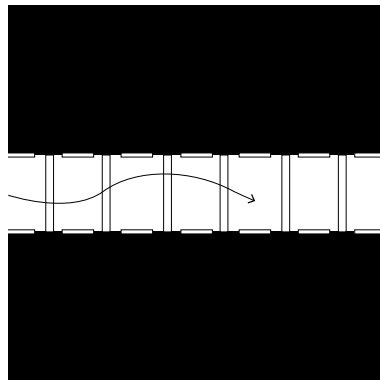
URBAN COURTYARD



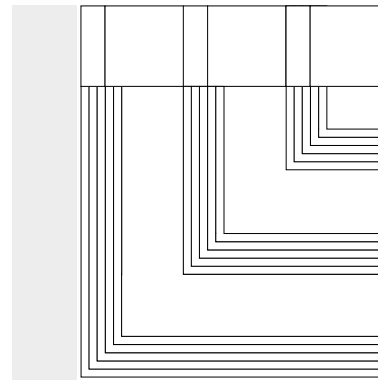
GALLERY



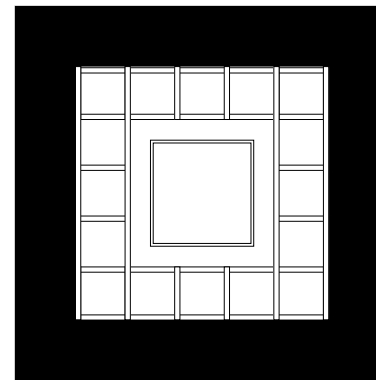
STREET



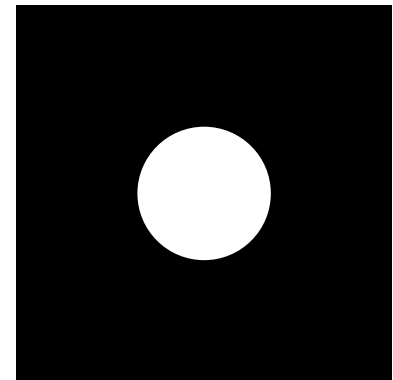
BRIDGE



STAIRS



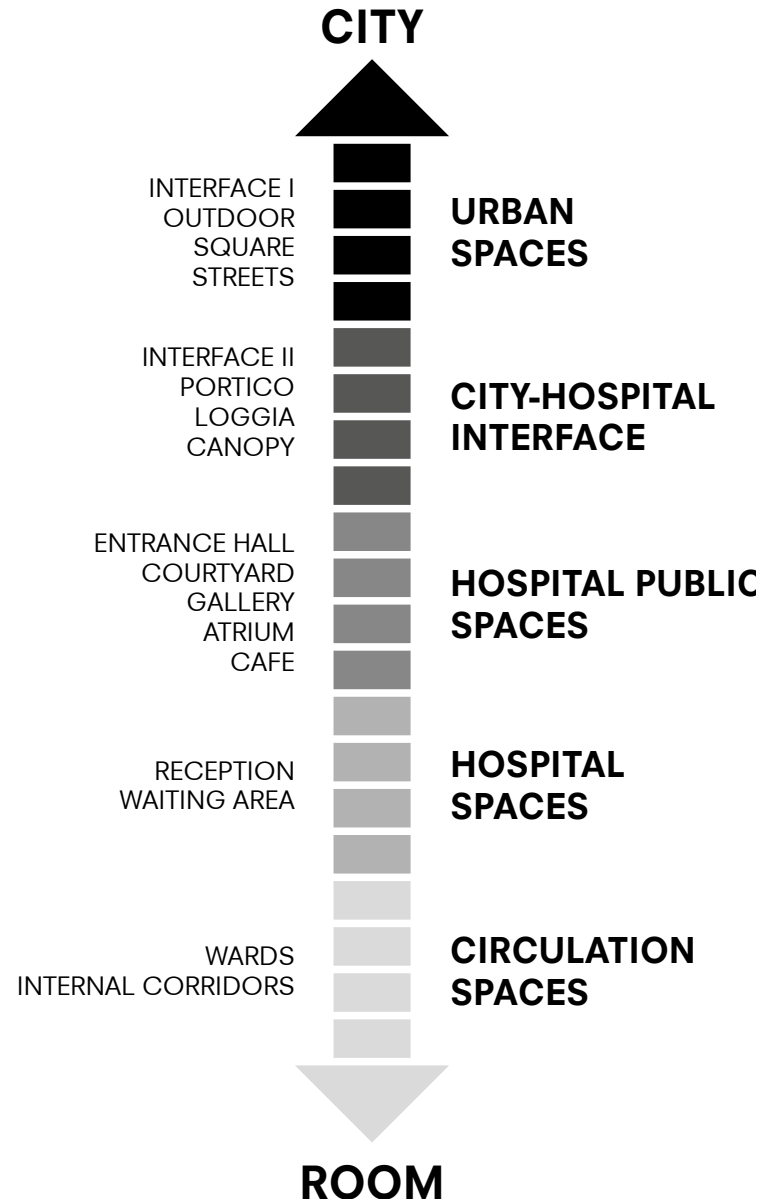
GREEN COURTYARD



URBAN TERRACE

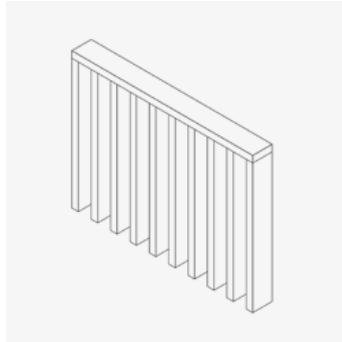
THE ARCHITECTURE OF PUBLIC SPACE (2023)
MARIA CLAUDIA CLEMENTE, FRANCESCO ISIDORI

PUBLIC SPACE AS TRANSITION SPACE

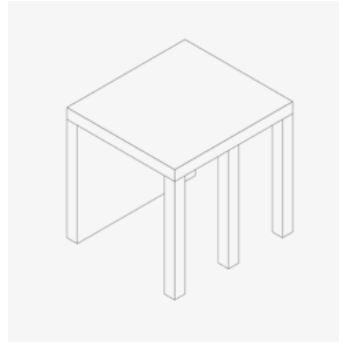


DESIGNING PUBLIC SPACES IN HOSPITALS - NICOLETTA SETOLA, SABRINA BORGIANNI (2016)

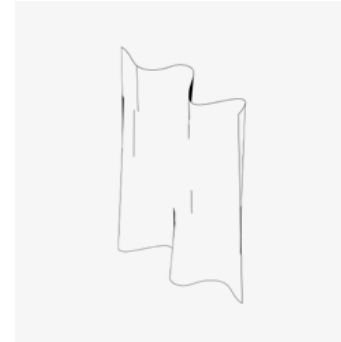
ARCHITECTURAL THRESHOLDS



fence



portico



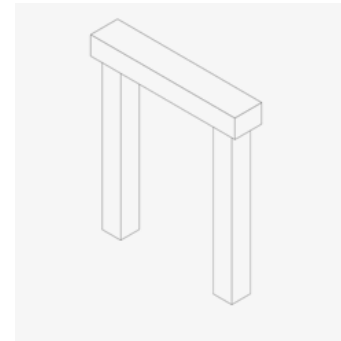
curtain



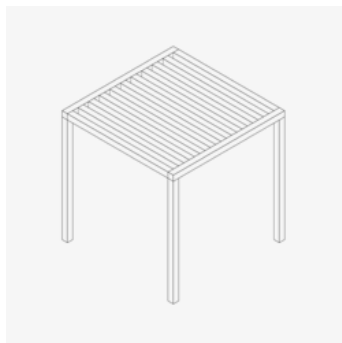
door



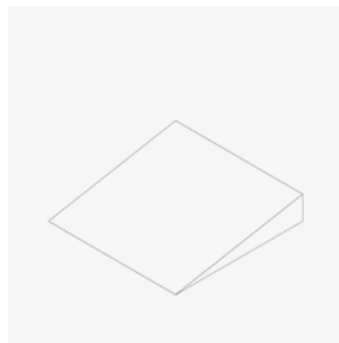
+ more



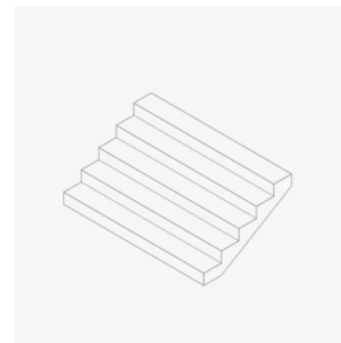
gateway



pergola



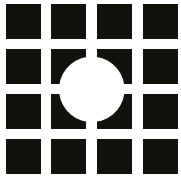
slope



stairs

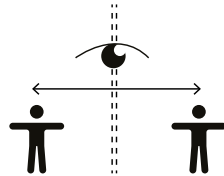
BUILDING ACCESSIBILITY

A pattern language: towns, buildings, construction - relevant patterns



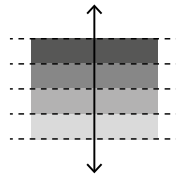
#106 - Positive Outdoor Space

The design of intentional outdoor space, that invites the public through natural extensions of the sidewalk or street, where the thresholds are formed by the building itself, landscaping, or street furniture.



#162 - Street Windows

To facilitate interaction between indoor and outdoor activities on the street, street windows need to facilitate transparency, which can stimulate interest and engagement between the interior and exterior world.



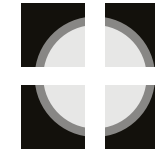
#112 - Entrance Transition

Creating a transition area between the street and the building's interior helps ease the movement from public to private space and can make the entrance more inviting. This can be achieved through architectural elements like a recessed doorway, a canopy, steps, or different pavement materials.



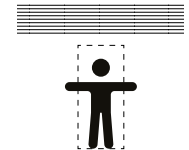
#136 - Building Fronts

This principle focuses on how the front of the building interacts with the public space. A continuous and engaging front can define the street edge and contribute to a sense of security and comfort for pedestrians. Variations in depth and height can add interest and break the monotony, making the facade more dynamic.



#150 - Activity Pockets

Niches or small semi-public spaces within the plinth can encourage people to stop, sit, and interact. The pockets could include features like benches, display windows, art, installations, or greenery.



#204 - Human Scale

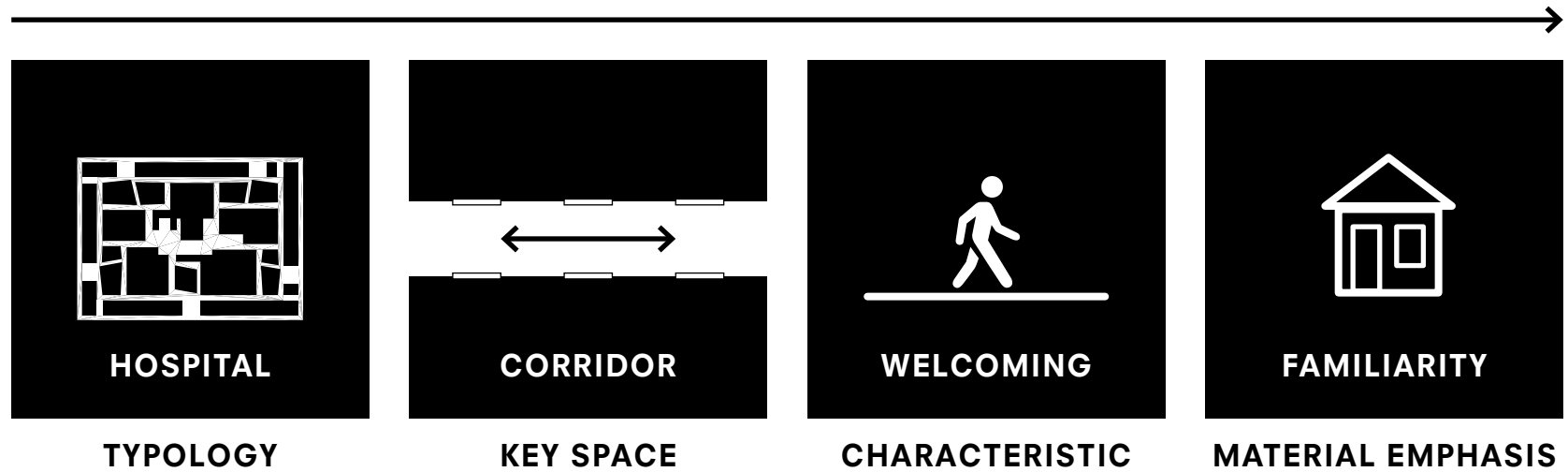
By considering the scale and size of architectural elements like doorways, windows, and other details, the principle of human scale can be taken into account to ensure that they are relatable to that of the human body. Textures, materials, and elements visible at eye level should be refined and engaging to draw people in and make the public space more vibrant and interactive.

Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Angel, S. (1977). A pattern language: towns, buildings, construction (Vol. 1, Issue 5). <https://ci.nii.ac.jp/ncid/BA00163982>

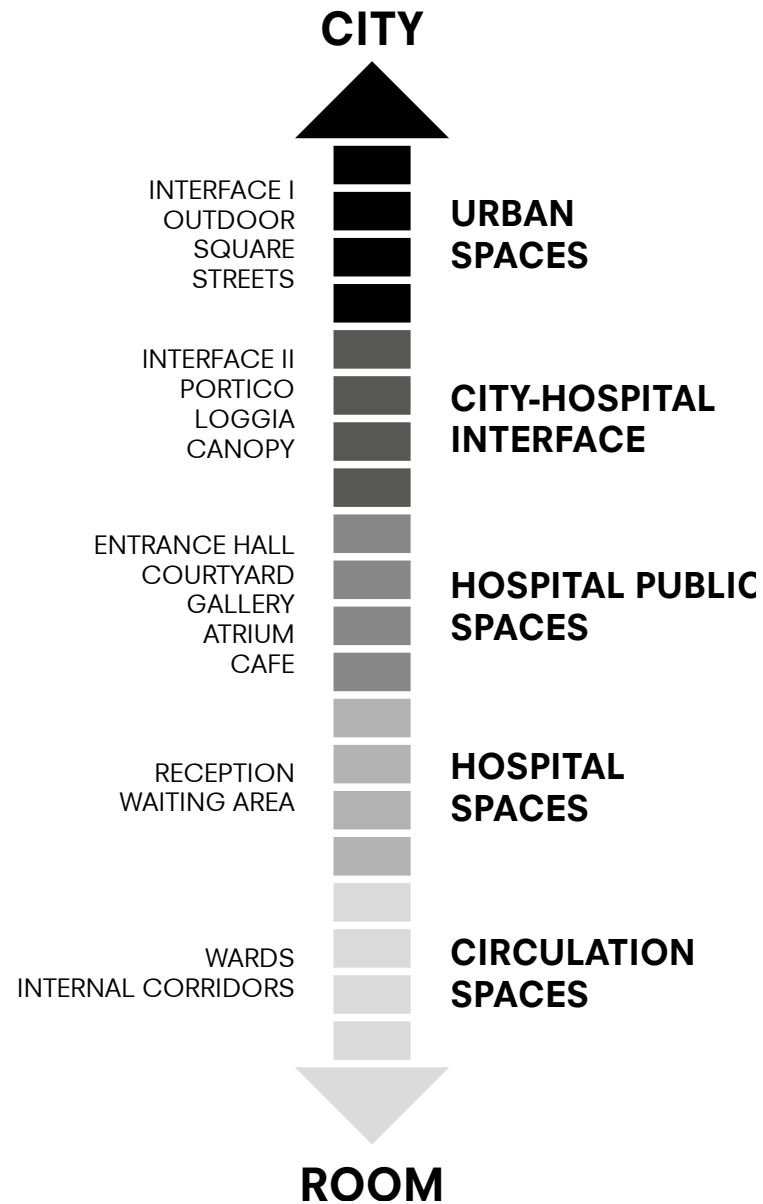
CONCLUSION #1

RE-MATERIALISE

REDEFINING PUBLIC SPACE

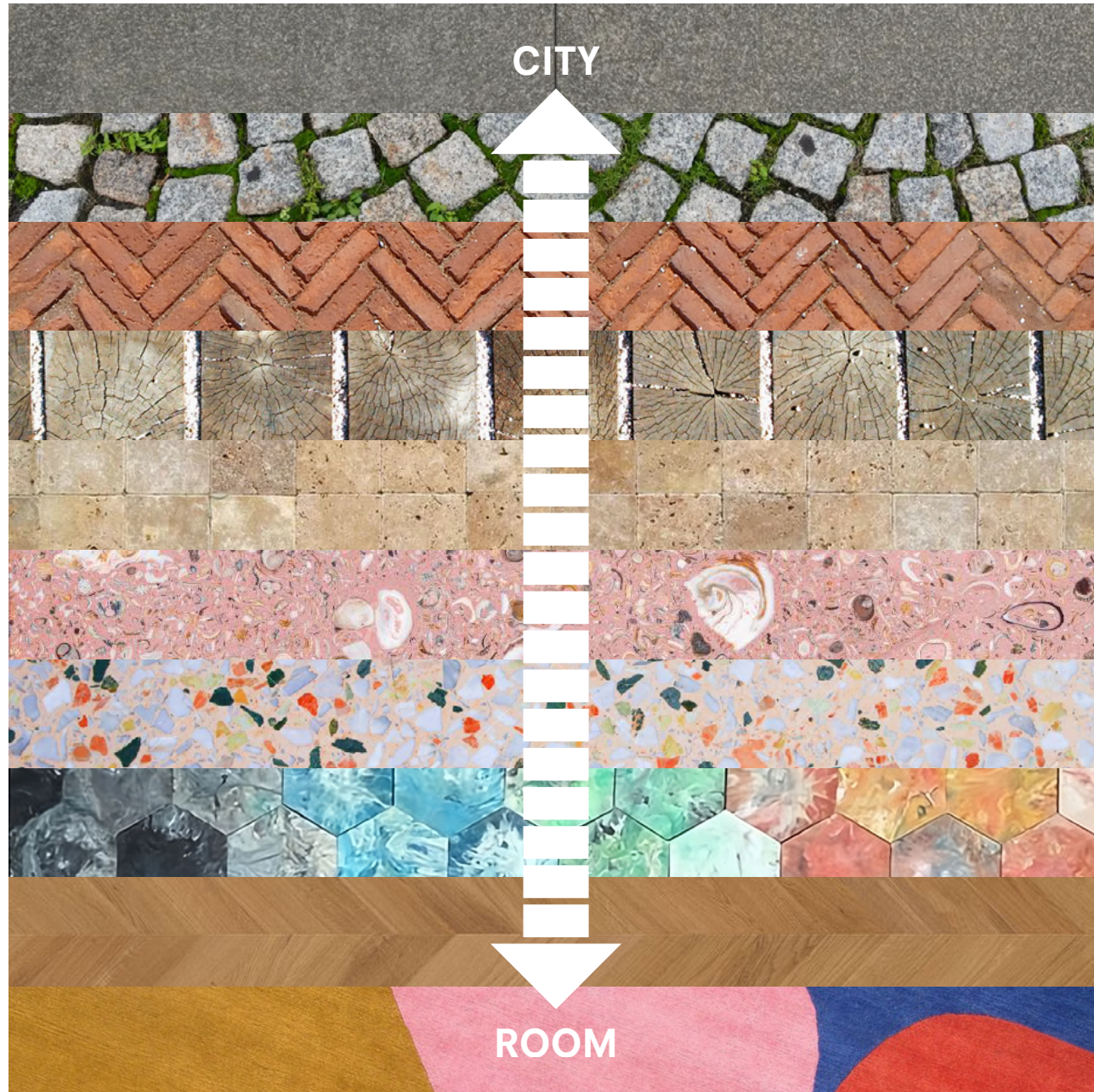


PUBLIC SPACE AS TRANSITION SPACE

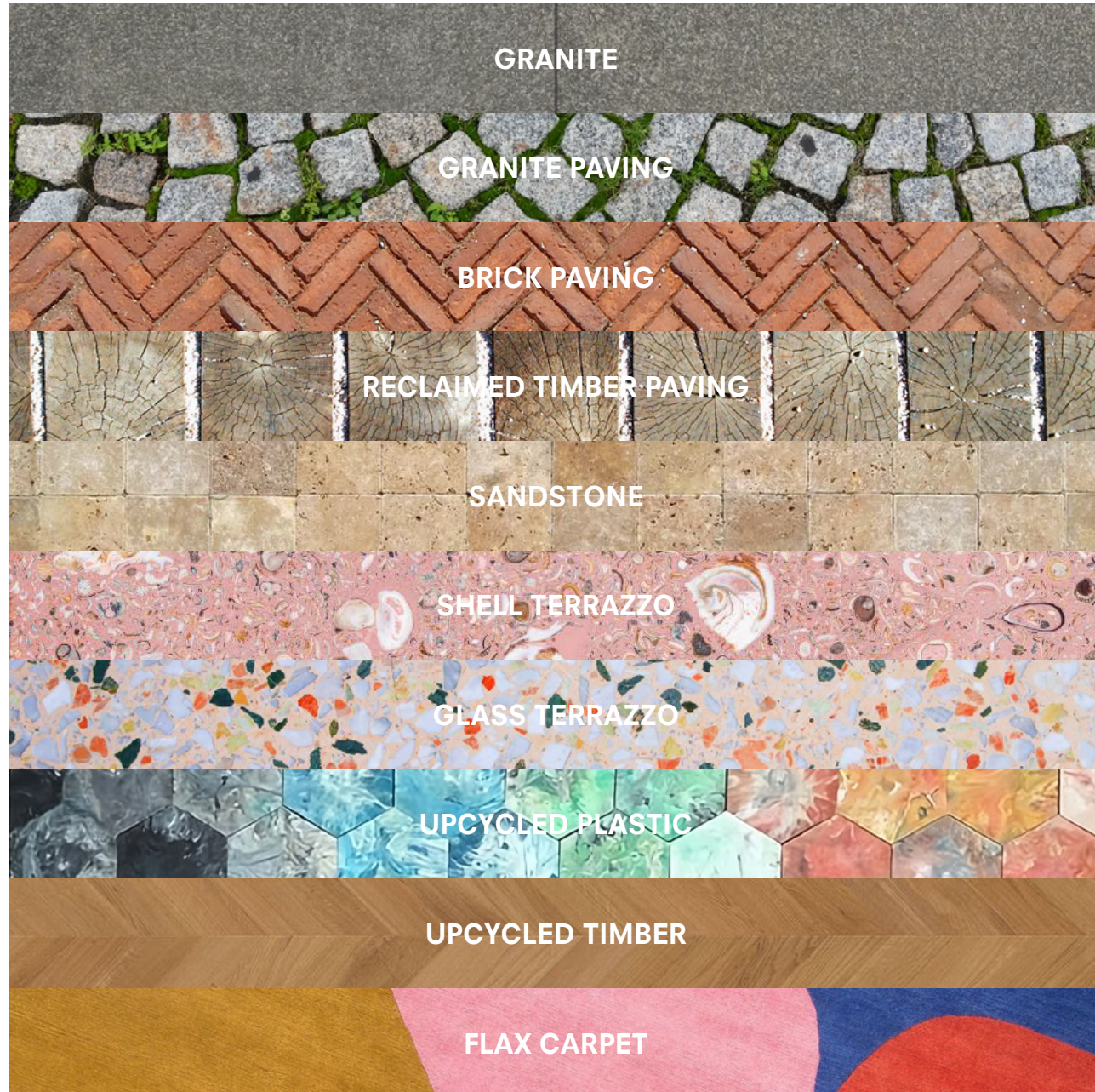


DESIGNING PUBLIC SPACES IN HOSPITALS - NICOLETTA SETOLA, SABRINA BORGIANNI (2016)

NOTION OF FAMILIARITY



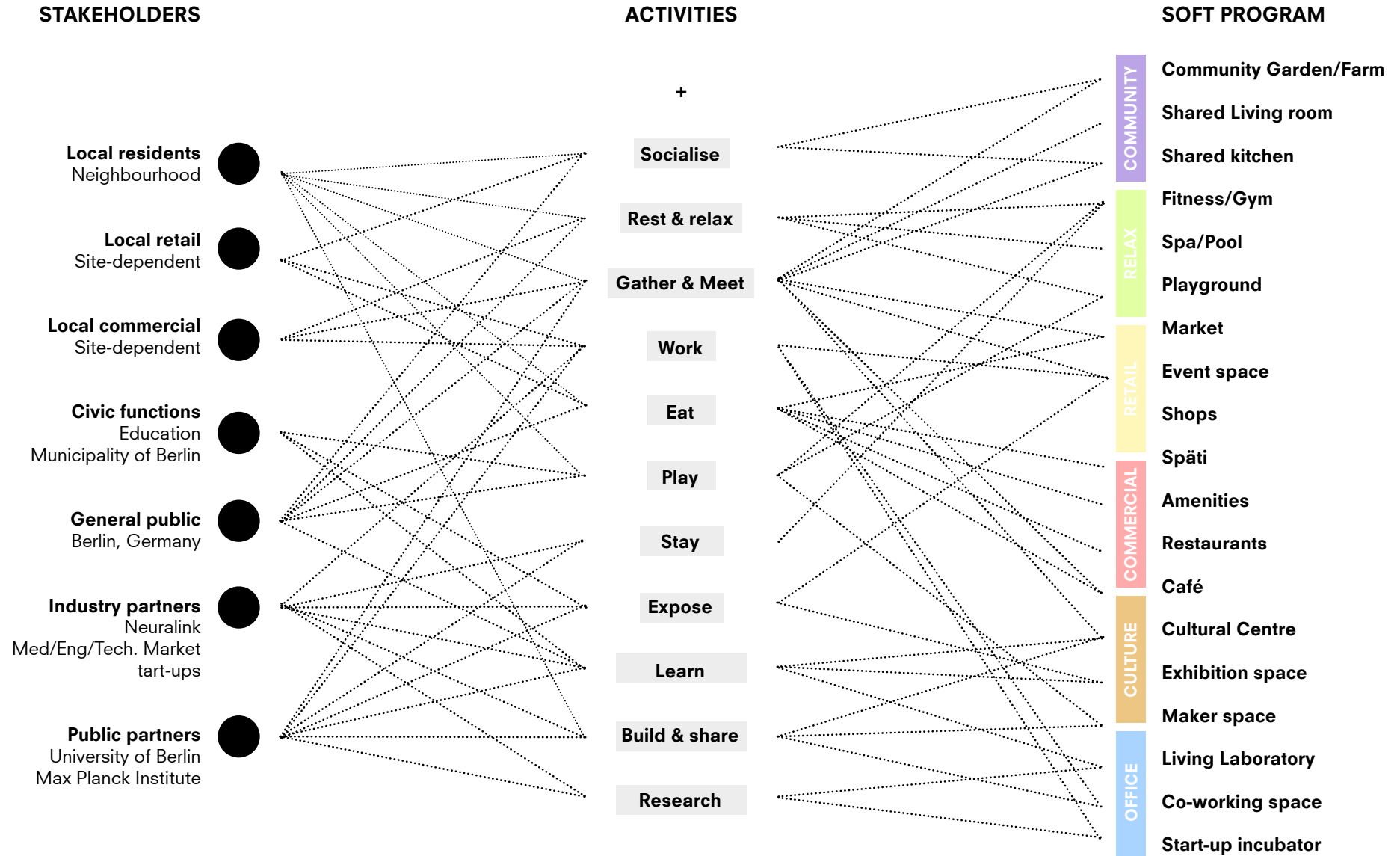
MATERIAL REPRESENTATION



CONCLUSION #1

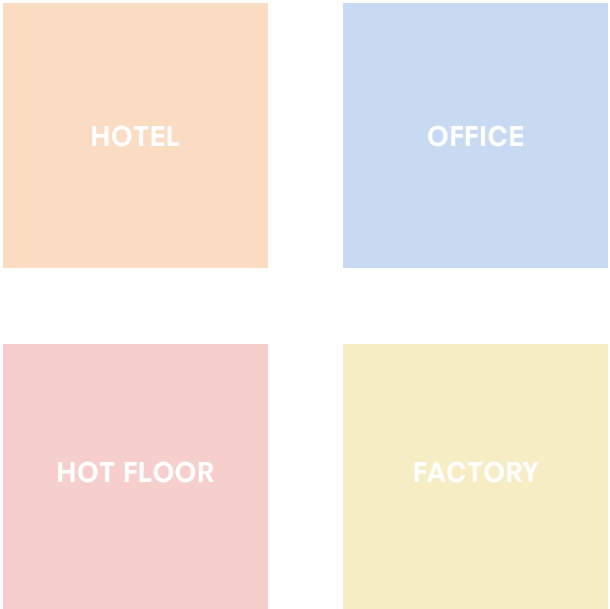
RE-PROGRAM

INDICATIVE ADDED PROGRAM



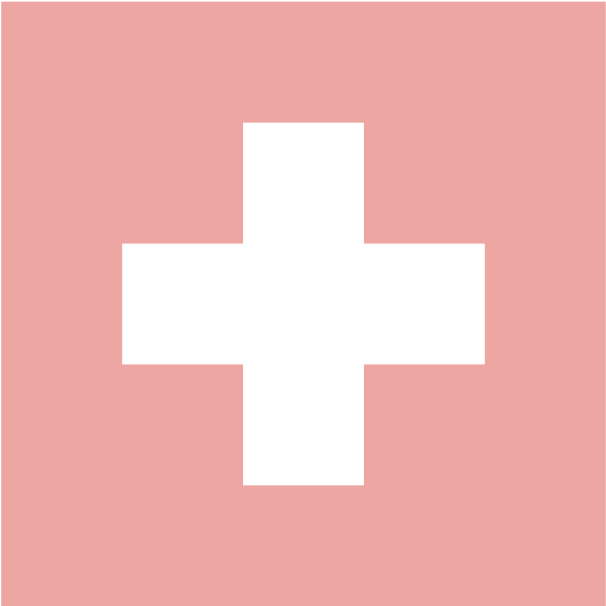
PROGRAM MIX

CORE PROGRAM



PROGRAM MIX

CORE PROGRAM

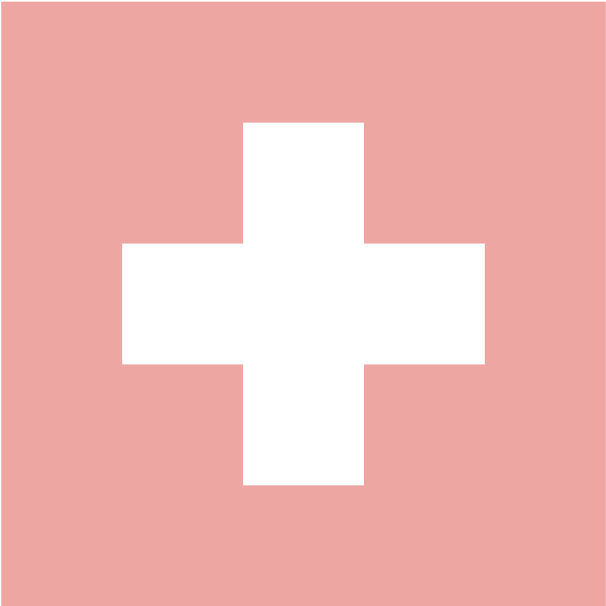


program

PROGRAM MIX

CORE PROGRAM
+
SOFT PROGRAM

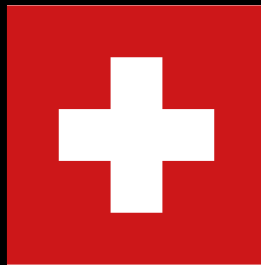
- Community Garden/Farm
- Shared Living room
- Shared kitchen
- Cultural Centre
- Exhibition space
- Maker space
- Market
- Event Space
- Shops - Späti



- Living Laboratory
- Co-working space
- Start-up incubator
- Fitness/Gym
- Spa/Pool
- Playground
- Amenities
- Restaurants
- Café

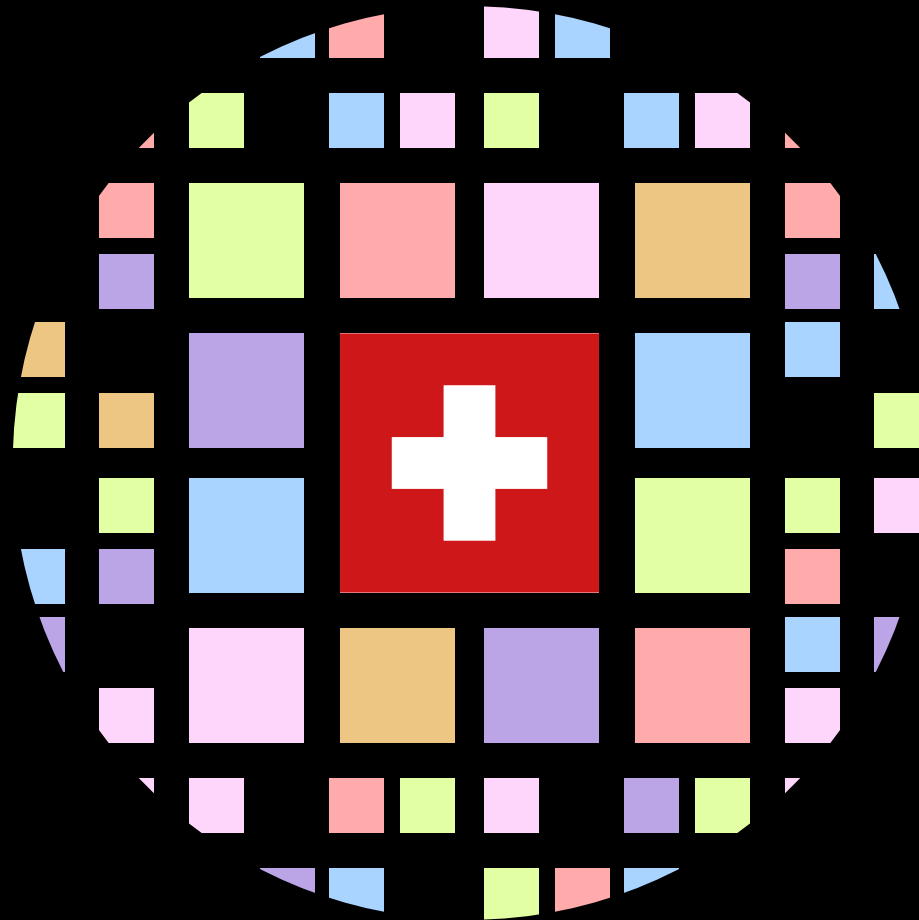
**BUILDING A HOSPITAL,
IS NOT ABOUT DESIGNING ONE BUILDING,
IT IS A NEW PART OF THE URBAN FABRIC,
AN EXTENSION OF SOCIETY,
AND A PART OF THE CITY.**

REDEFINING THE IMAGE



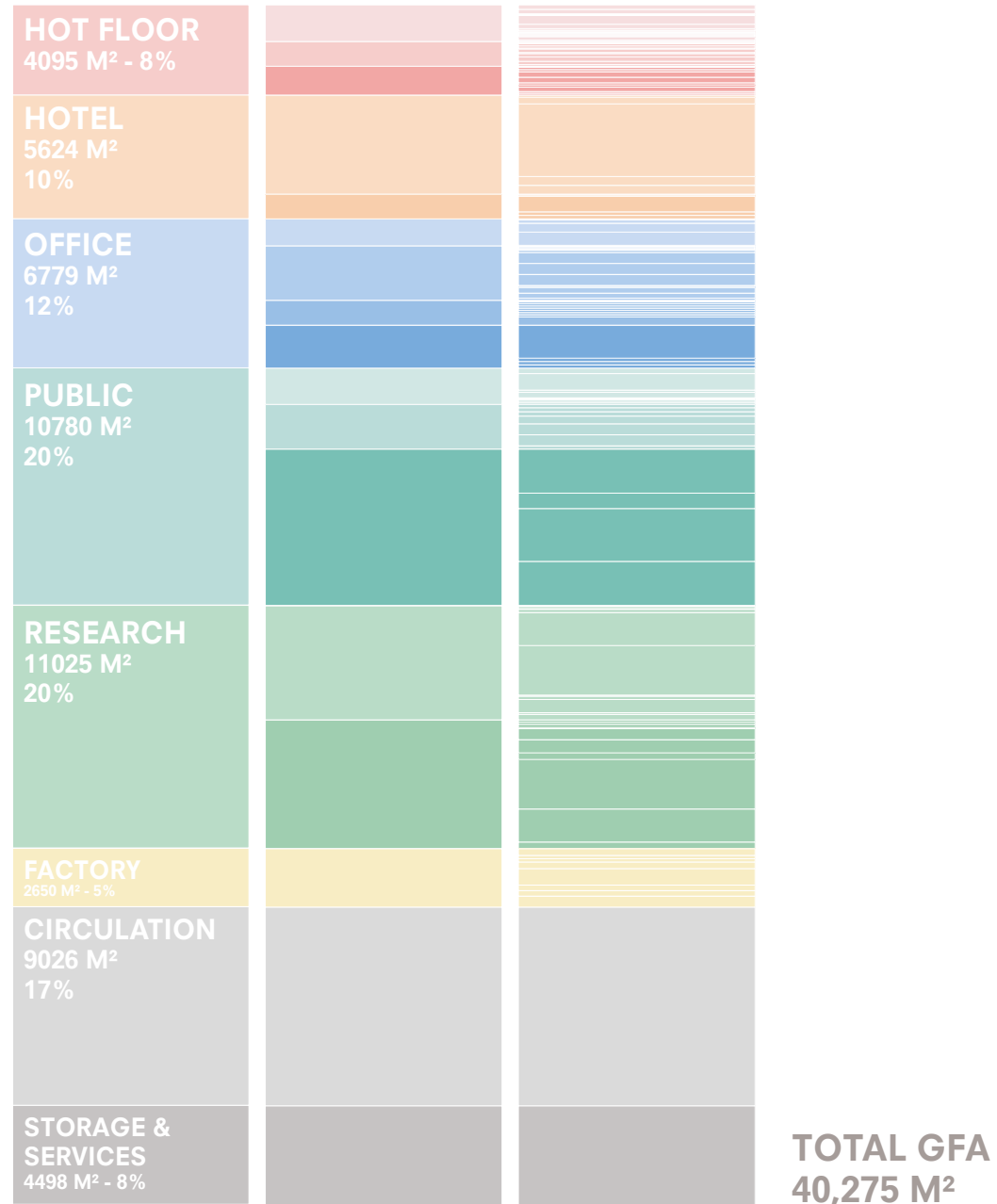
FROM SINGULAR IN-USE

REDEFINING THE IMAGE



TO MIXED-USE FOR SOCIETY

PROGRAM BREAKDOWN



WHERE?

IMPLEMENTATION
GERMANY



BERLIN



FRIEDRICHSHAIN - KREUZBERG



IMPLEMENTATION
GÖRLITZER PARK



site

GÖRLITZER PARK



1961

site

NEIGHBOURHOOD PROTEST

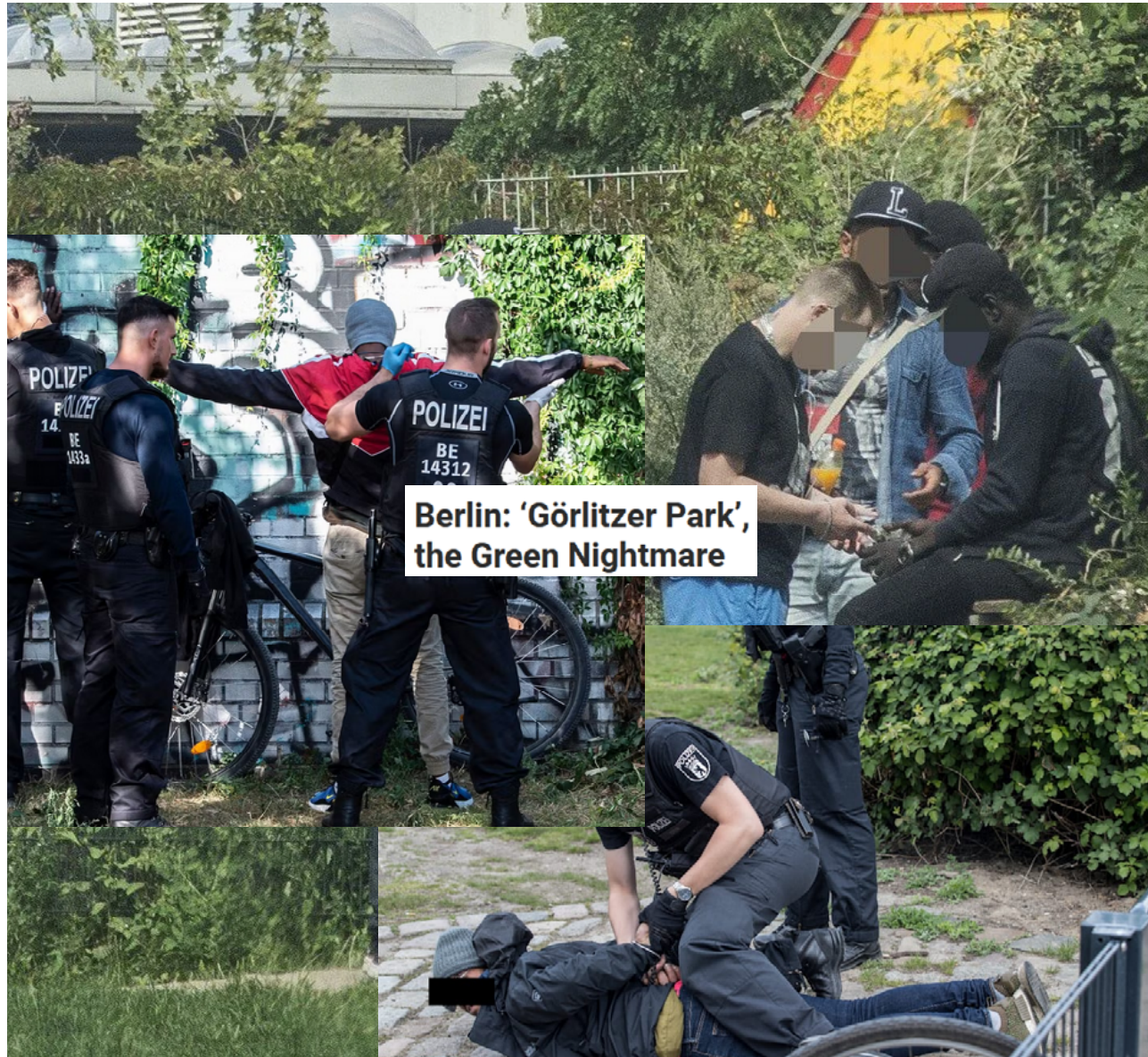


site

TERRAIN VAGUE



TODAY



2024

**THE HOSPITAL SHOULD NOT
ONLY AUGMENT THE HUMAN BODY,
BUT ALSO ITS SURROUNDINGS.**

BUILDING - IMPLICATIONS

SPECIALISED

FLEXIBLE

MULTI-PURPOSED

TRANSPARENT

PART OF THE CITY

MATERIALISATION

I. INTRODUCTION

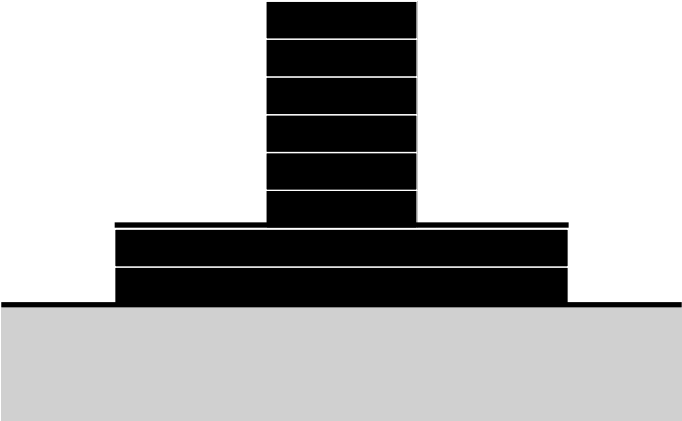
II. RESEARCH & DESIGN BRIEF

III. CONCEPT

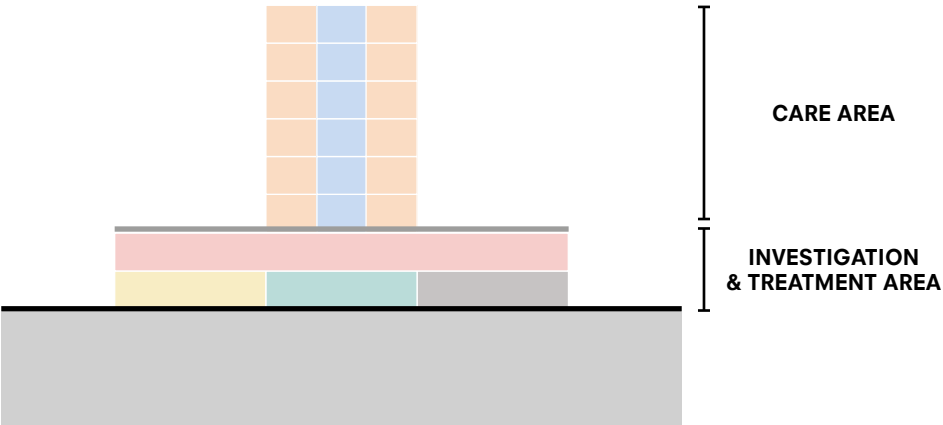
IV. IMPLEMENTATION

V. CONCLUSION

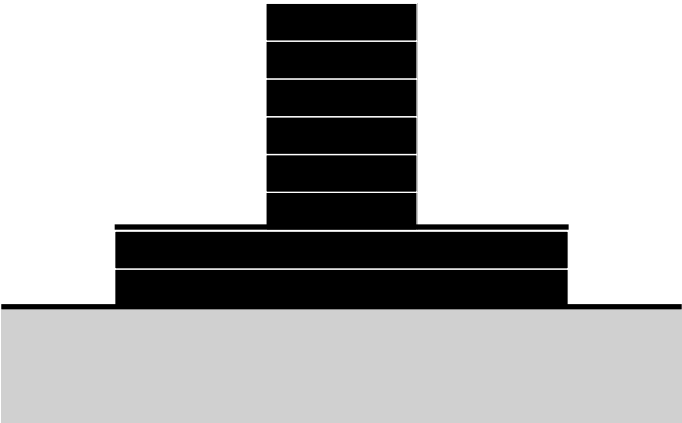
“PODIUM-TOWER” TYPOLOGY



VERTICAL PROGRAM SEPARATION

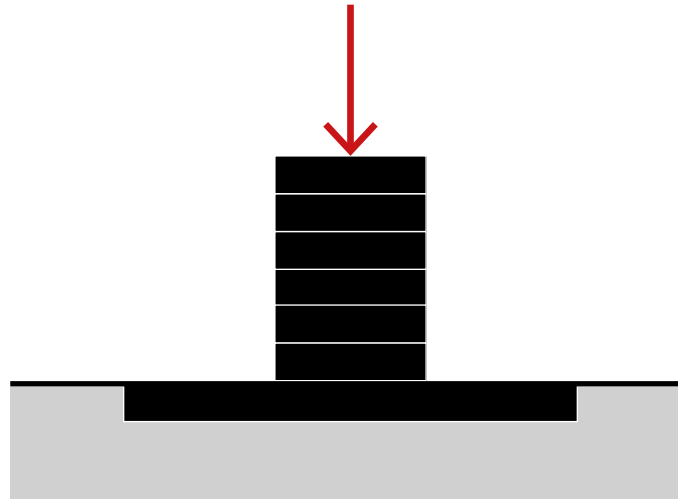


EXISTING HOSPITAL
TYPOLOGY



DESIGN DEVELOPMENT

**HIDE THE “MACHINE”
UNDERGROUND**



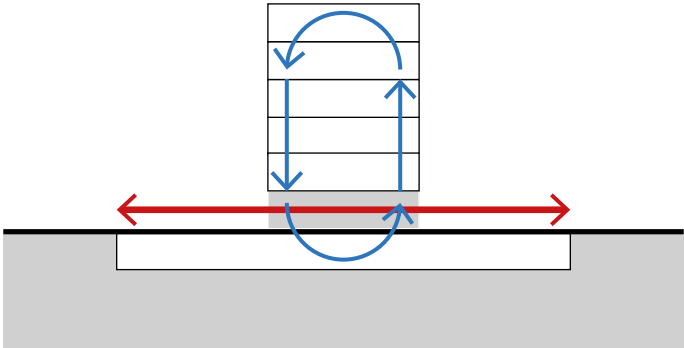
DESIGN DEVELOPMENT

**OPEN UP THE GROUND FLOOR
FOR PUBLIC FLOW**



DESIGN DEVELOPMENT

INTERLINK FLOWS
BETWEEN PUBLIC AND PRIVATE



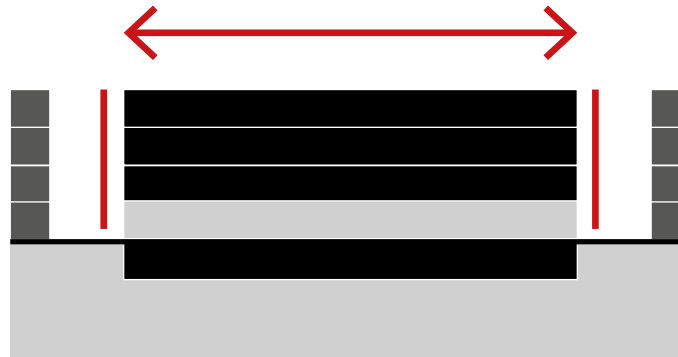
DESIGN DEVELOPMENT

**OPEN UP THE GROUND FLOOR
FOR PUBLIC FLOW**



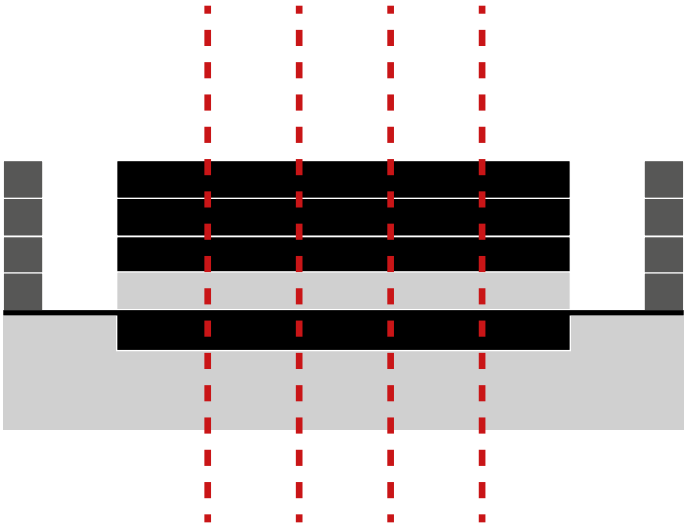
DESIGN DEVELOPMENT

**EXTEND THE TOP TO CREATE
A BERLIN BUILDING BLOCK**



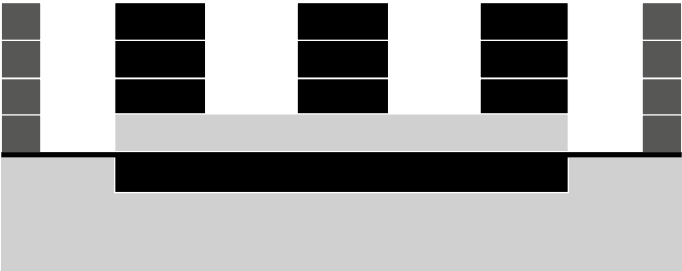
DESIGN DEVELOPMENT

MAKE INCISIONS TO
SPLIT THE BERLIN BUILDING BLOCK



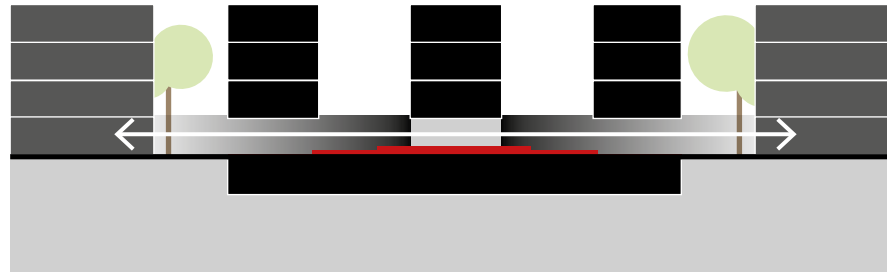
DESIGN DEVELOPMENT

OPEN UP THE INNER COURTYARD
TO CREATE SPACE FOR THE PUBLIC



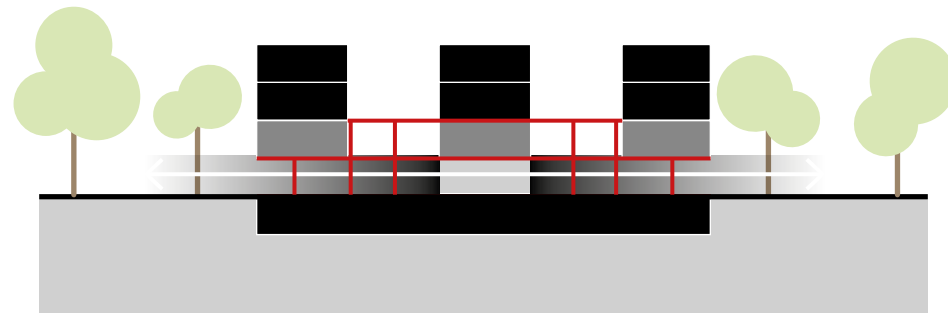
DESIGN DEVELOPMENT

**USE THE POSITIVE SPACE
AS TRANSITION SPACE FOR THE CITY**



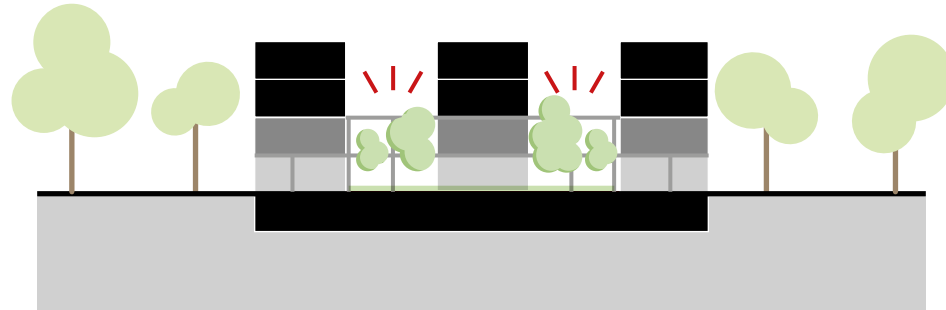
DESIGN DEVELOPMENT

**USE THE POSITIVE SPACE
AS TRANSITION SPACE FOR THE PARK**



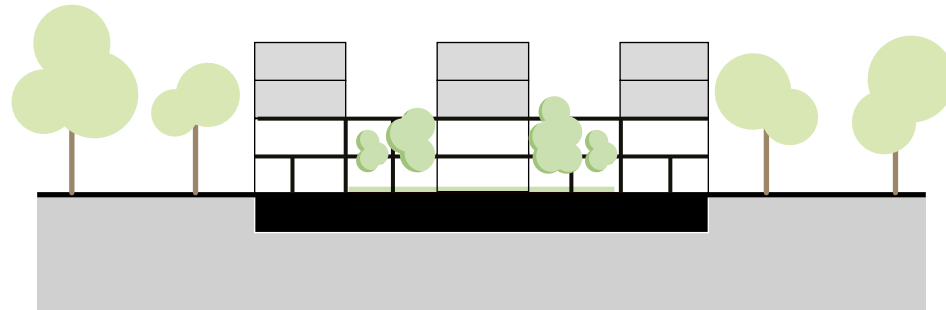
DESIGN DEVELOPMENT

**AND AS OPPORTUNITY FOR CREATING
QUALITY PUBLIC SPACES WITHIN GÖRLİ**



DESIGN DEVELOPMENT

**A PLACE OF SYNTHESIS
AND FOR SYMBIOSIS**

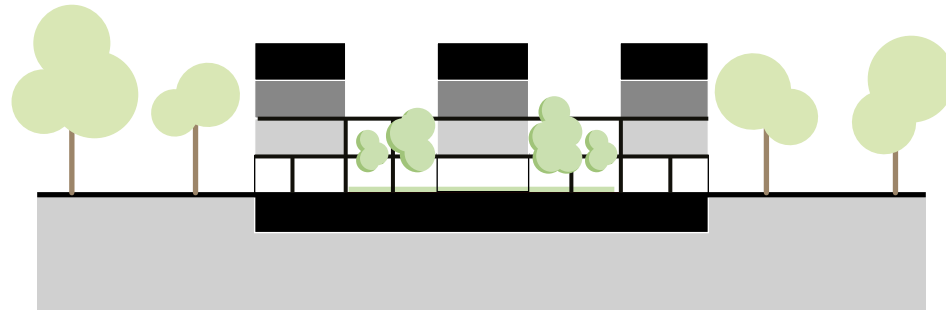


**HUMAN
& MACHINE**

**AN AUTOMATED BASEMENT
FOCUSED ON MACHINE EFFICIENCY
& AN UPPER WORLD FOCUS ON HUMAN FREEDOM**

DESIGN CONCEPT

A NEW HOSPITAL TYPOLOGY



A SYMBIOSIS BETWEEN THE HOSPITAL & SOCIETY

I. INTRODUCTION

II. RESEARCH & DESIGN BRIEF

III. CONCEPT

IV. IMPLEMENTATION

V. CONCLUSION

XL - L - M - S - XS

XL - L - M - S - XS

“SITE - MASTERPLAN”

XL - **L** - M - S - XS

“STRUCTURE”

XL - L - **M** - S - XS

“PROGRAM - FLOWS”

XL - L - M - **S** - XS

“TRANSITIONS”

XL - L - M - S - XS

“DETAILS”

XL - L - M - S - XS

XL - L - M - S - XS

“SITE - MASTERPLAN”

IMPLEMENTATION
GERMANY



BERLIN



FRIEDRICHSHAIN - KREUZBERG

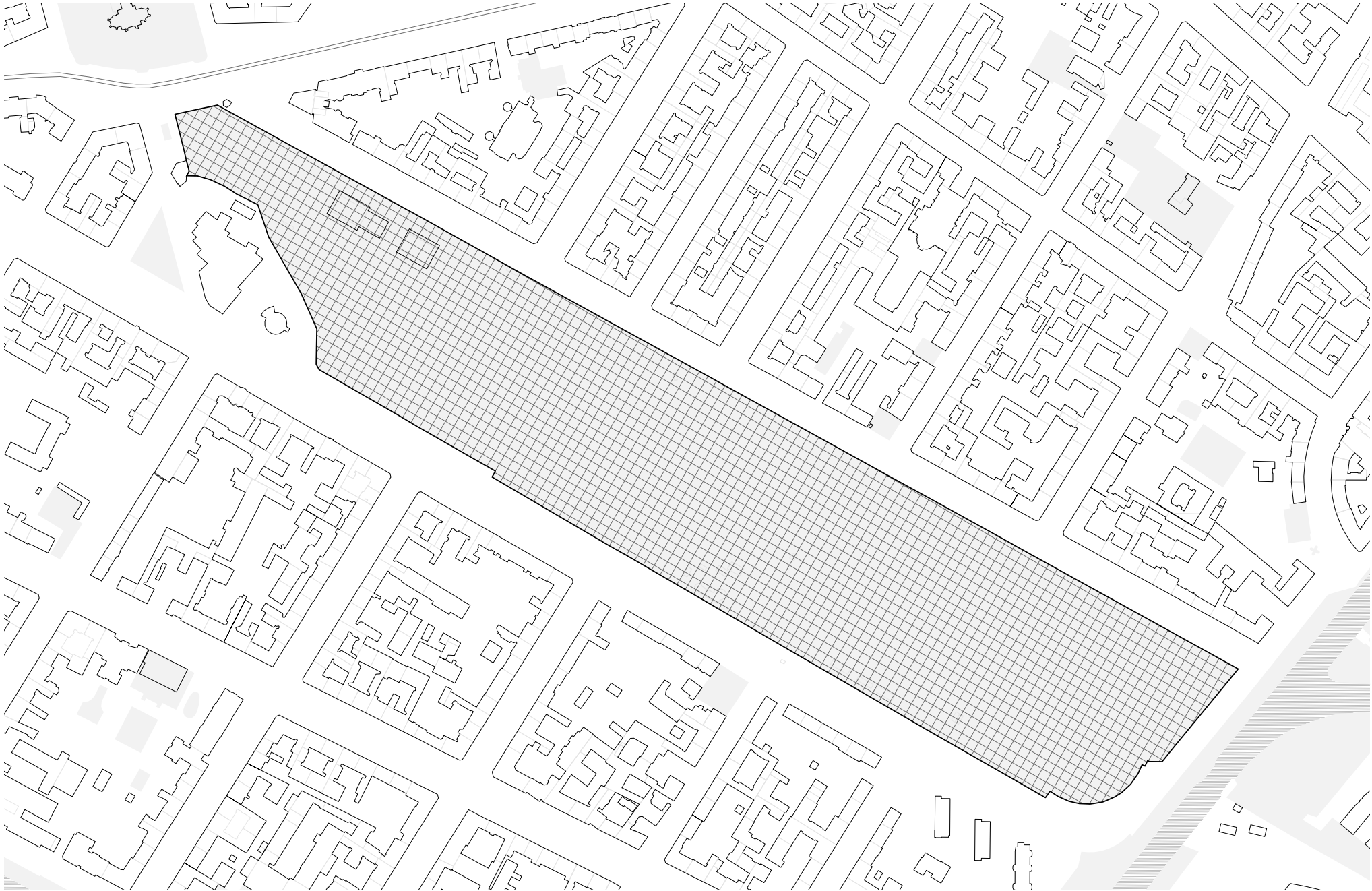


IMPLEMENTATION
GÖRLITZER PARK

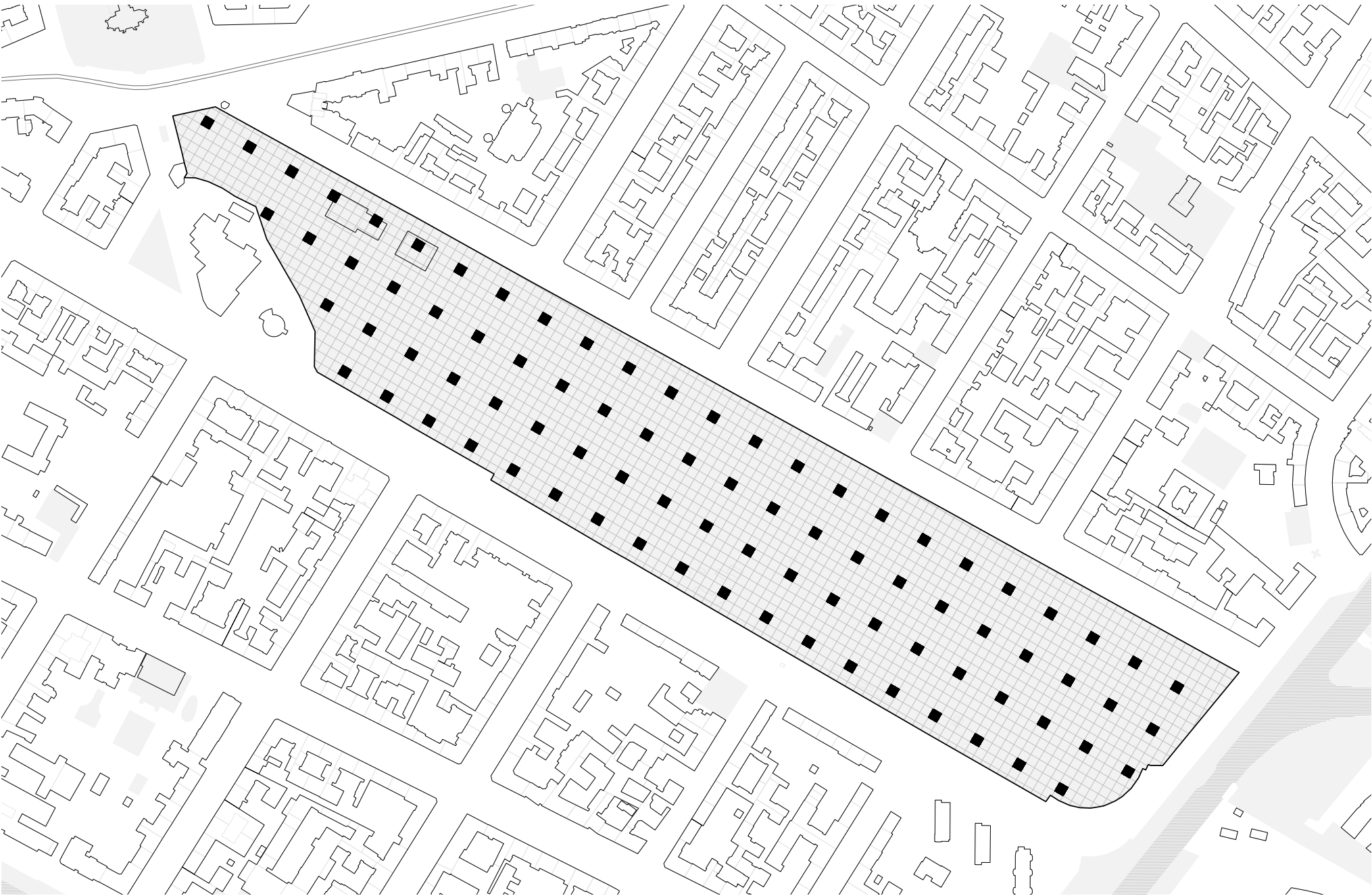


SITE - GÖRLITZER PARK

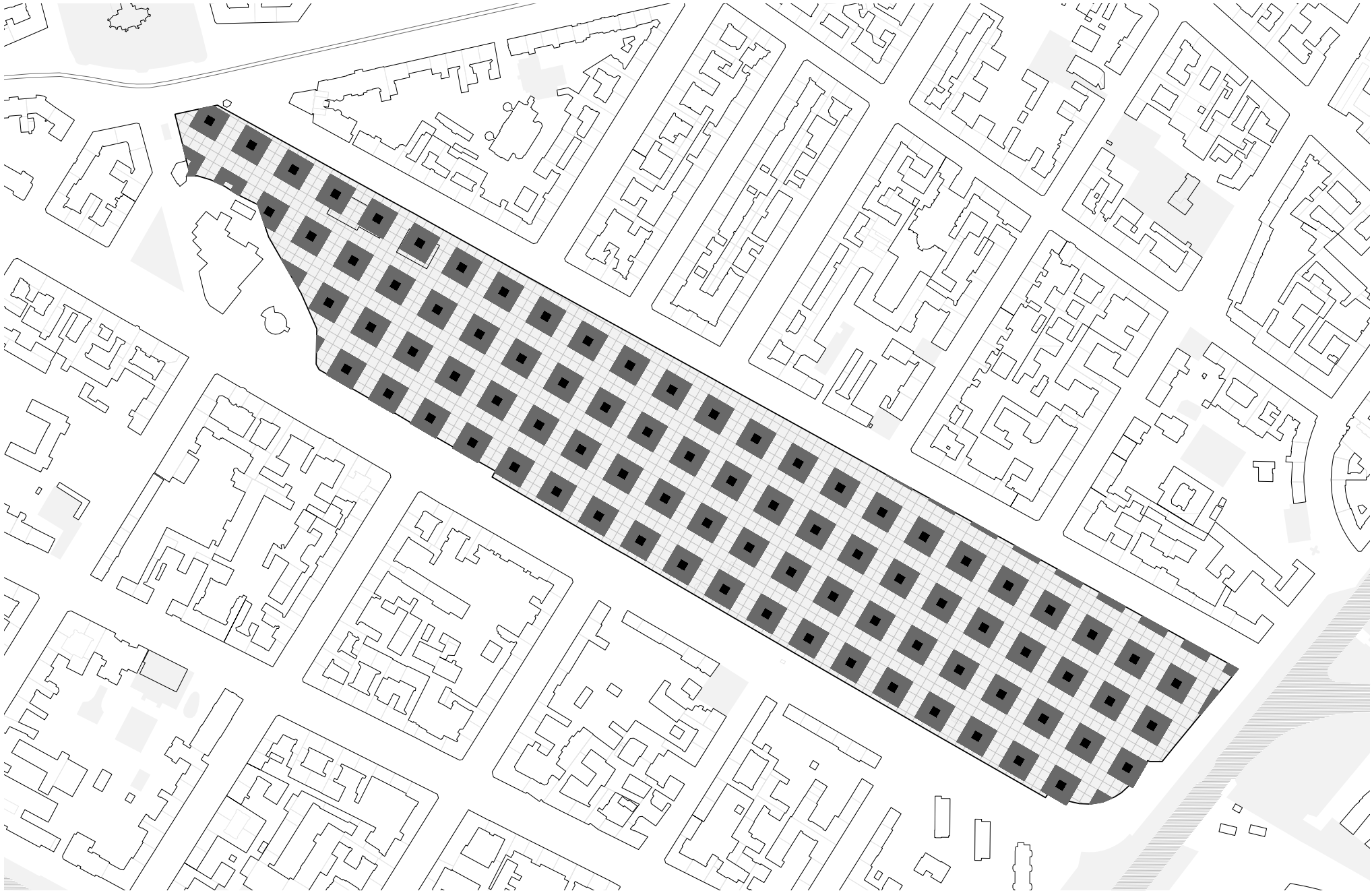
GRID PROJECTION



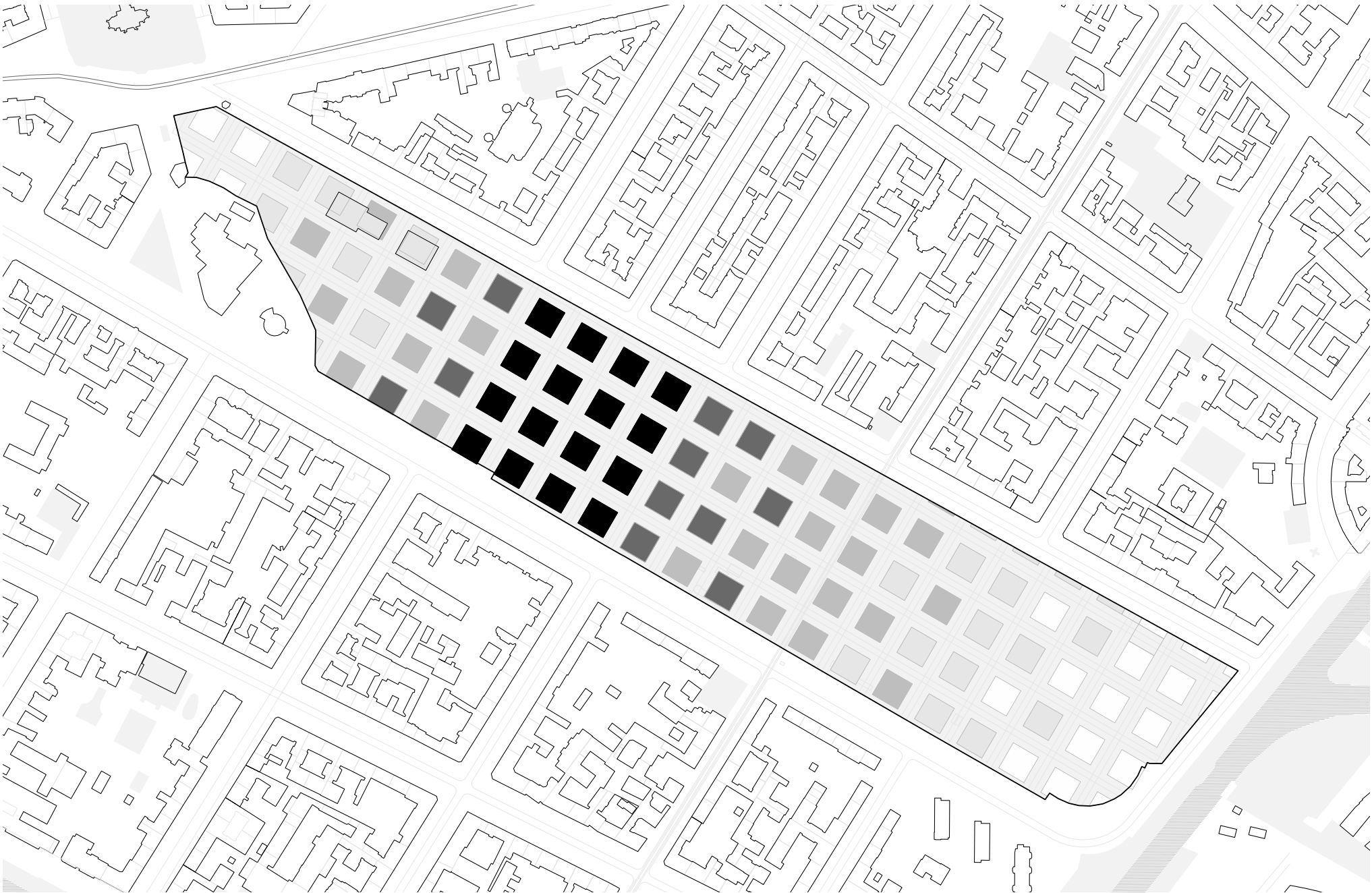
CORES



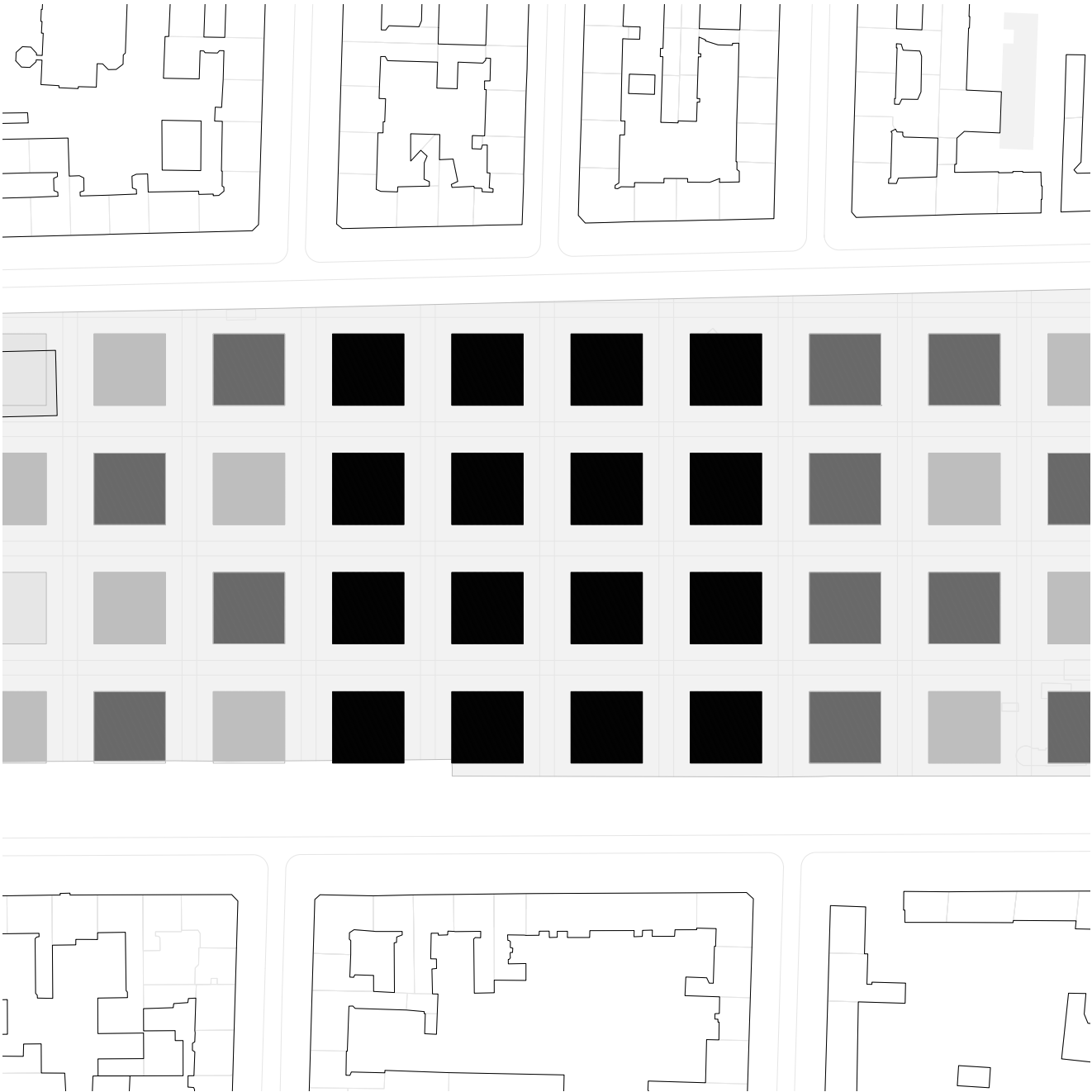
MEGA PATTERN STRUCTURE



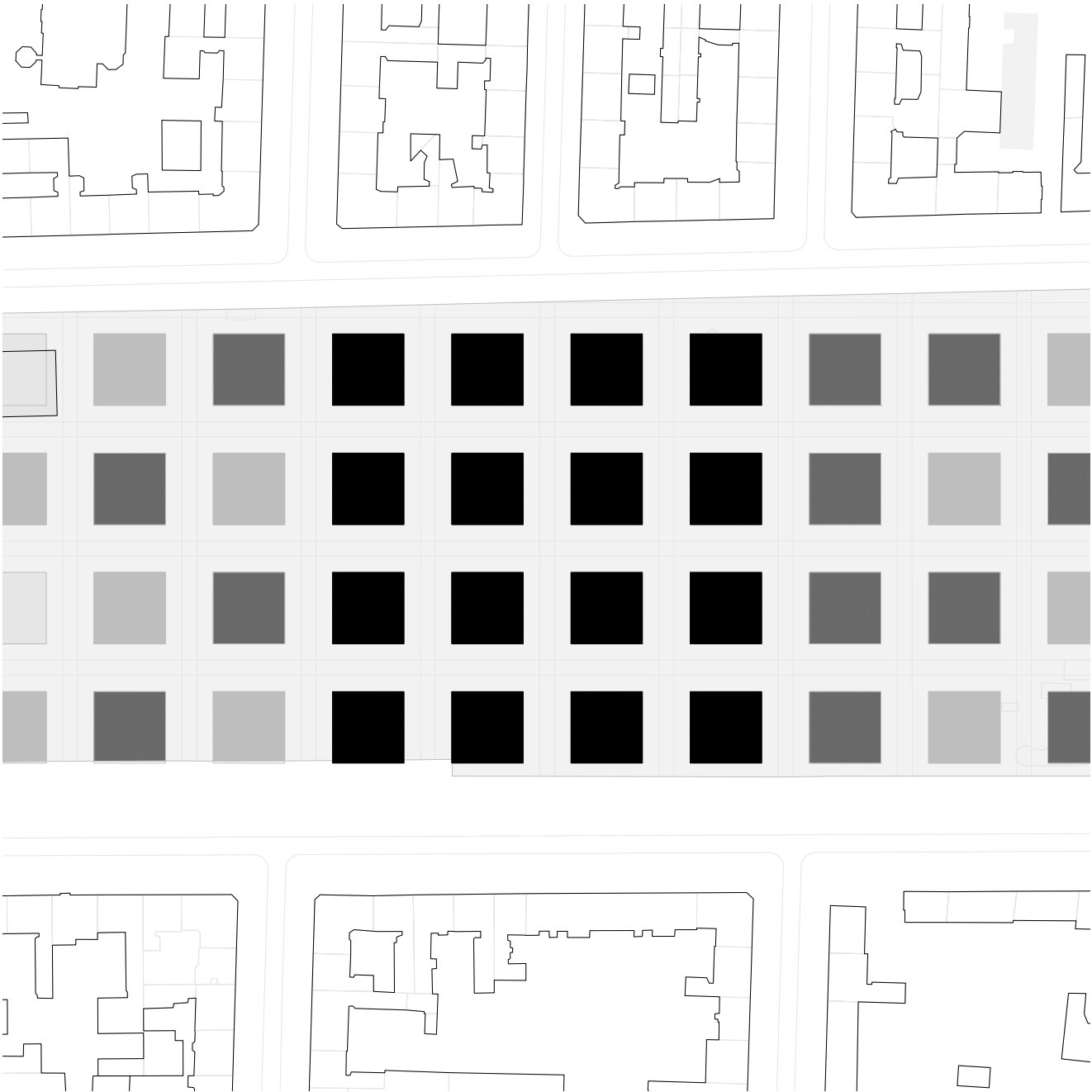
‘MASTERPLAN’



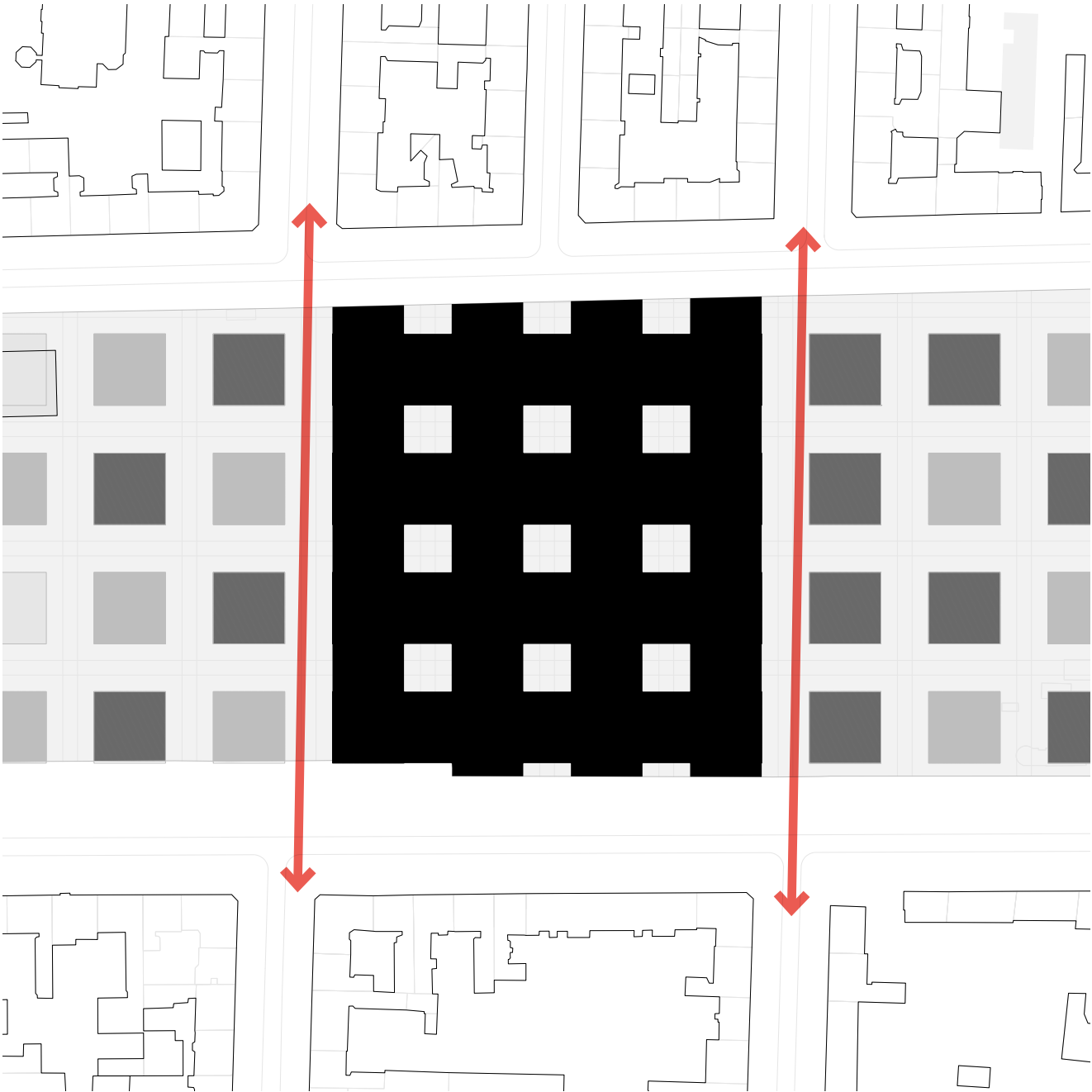
URBAN IMPLEMENTATION



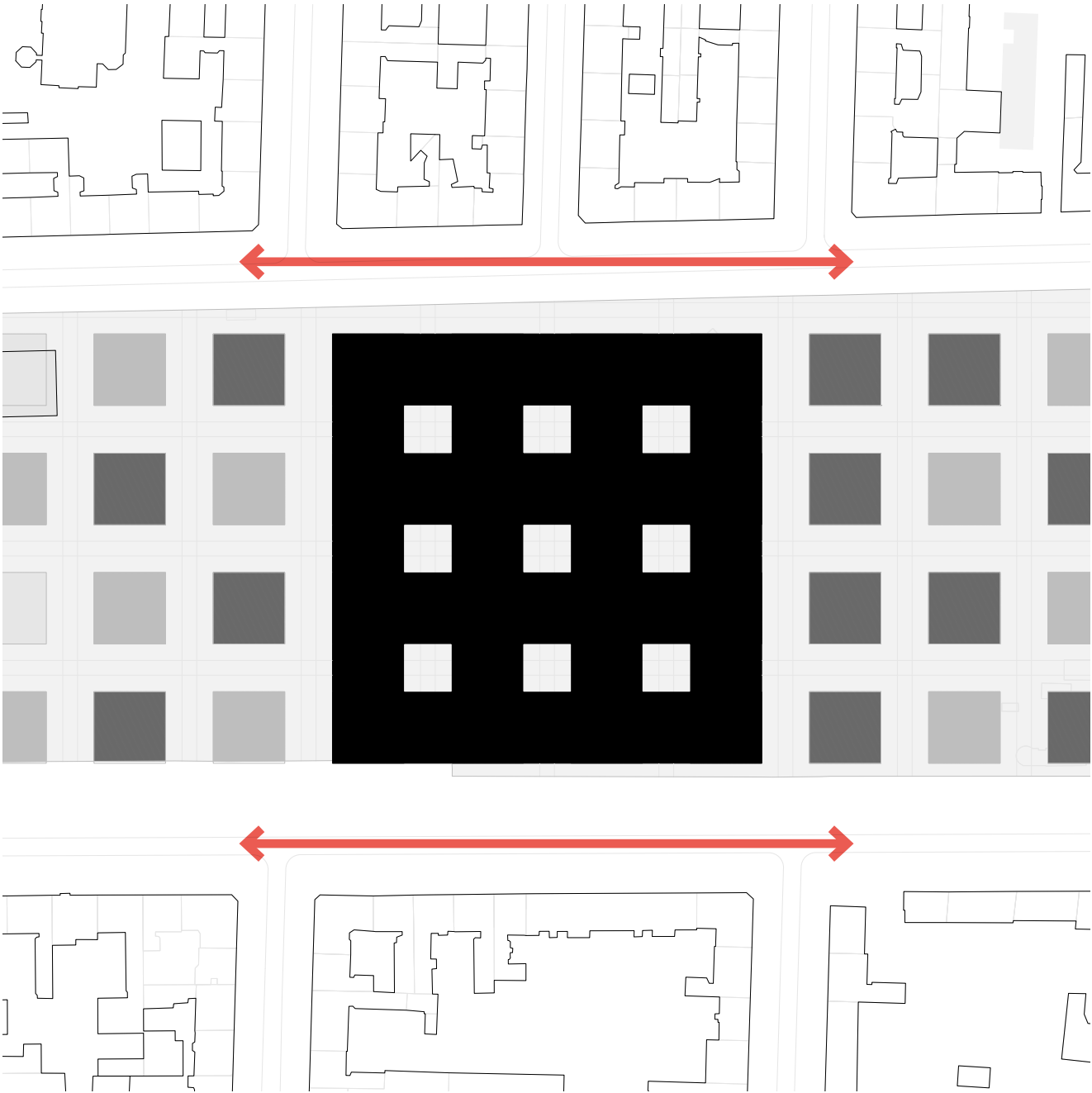
URBAN IMPLEMENTATION



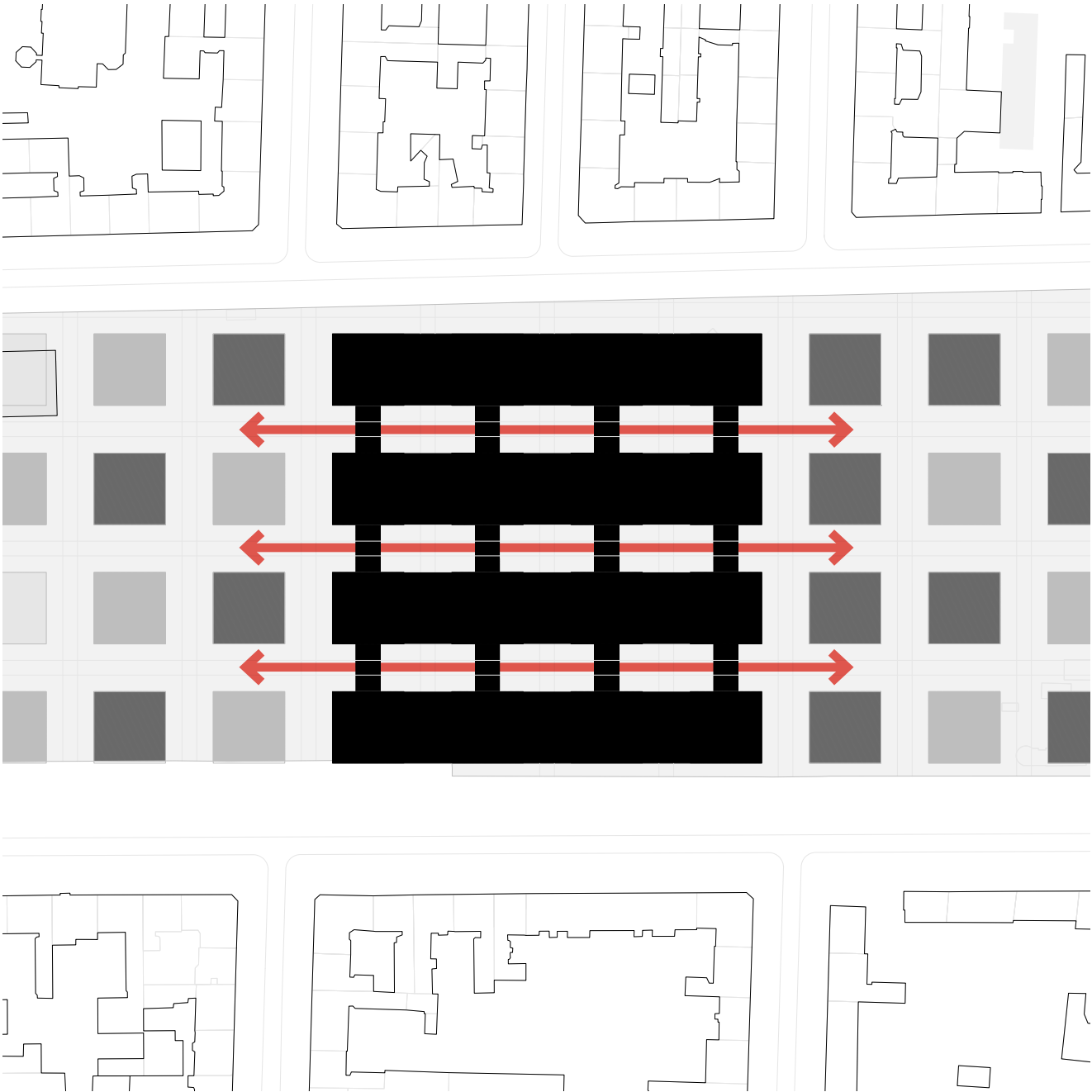
URBAN IMPLEMENTATION



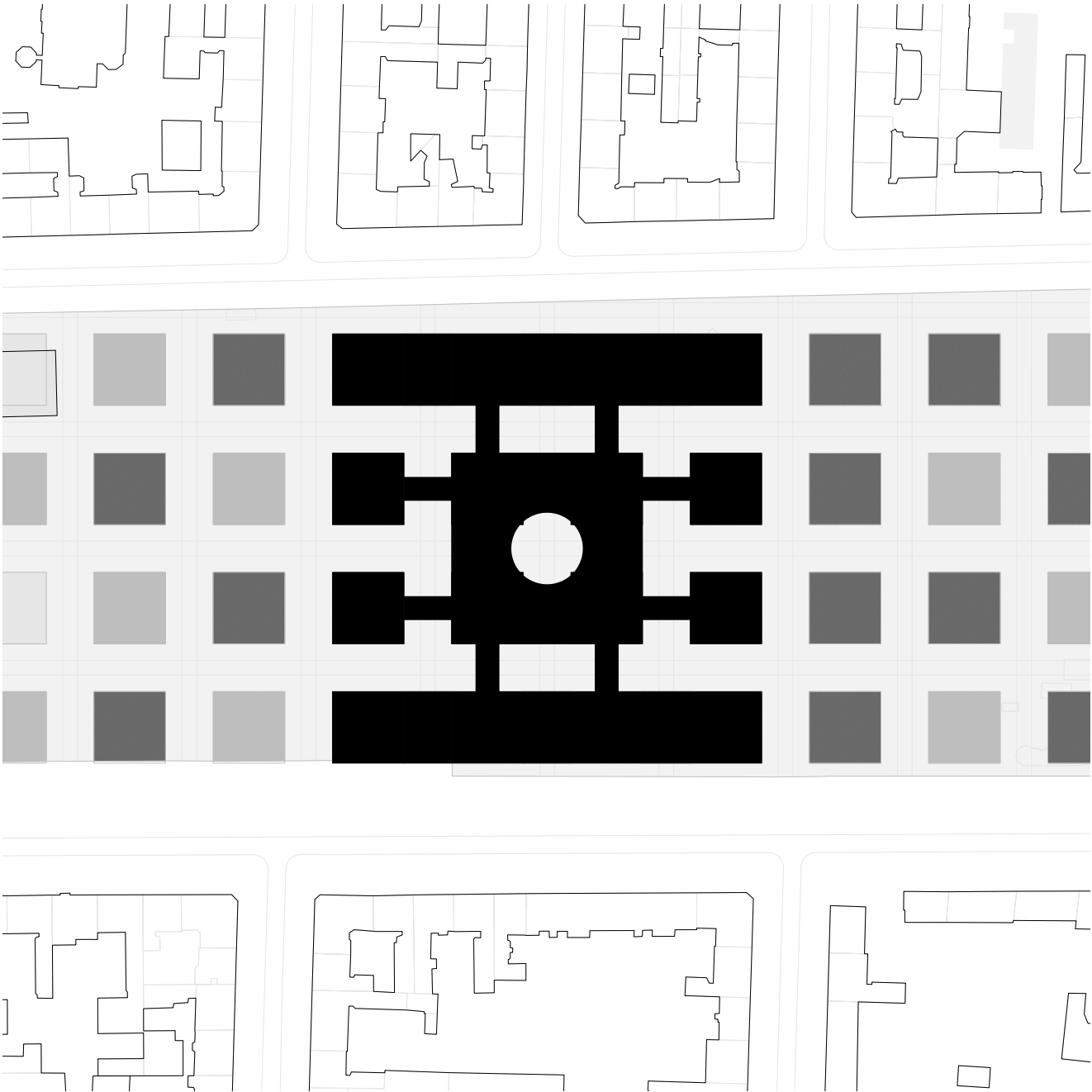
URBAN IMPLEMENTATION



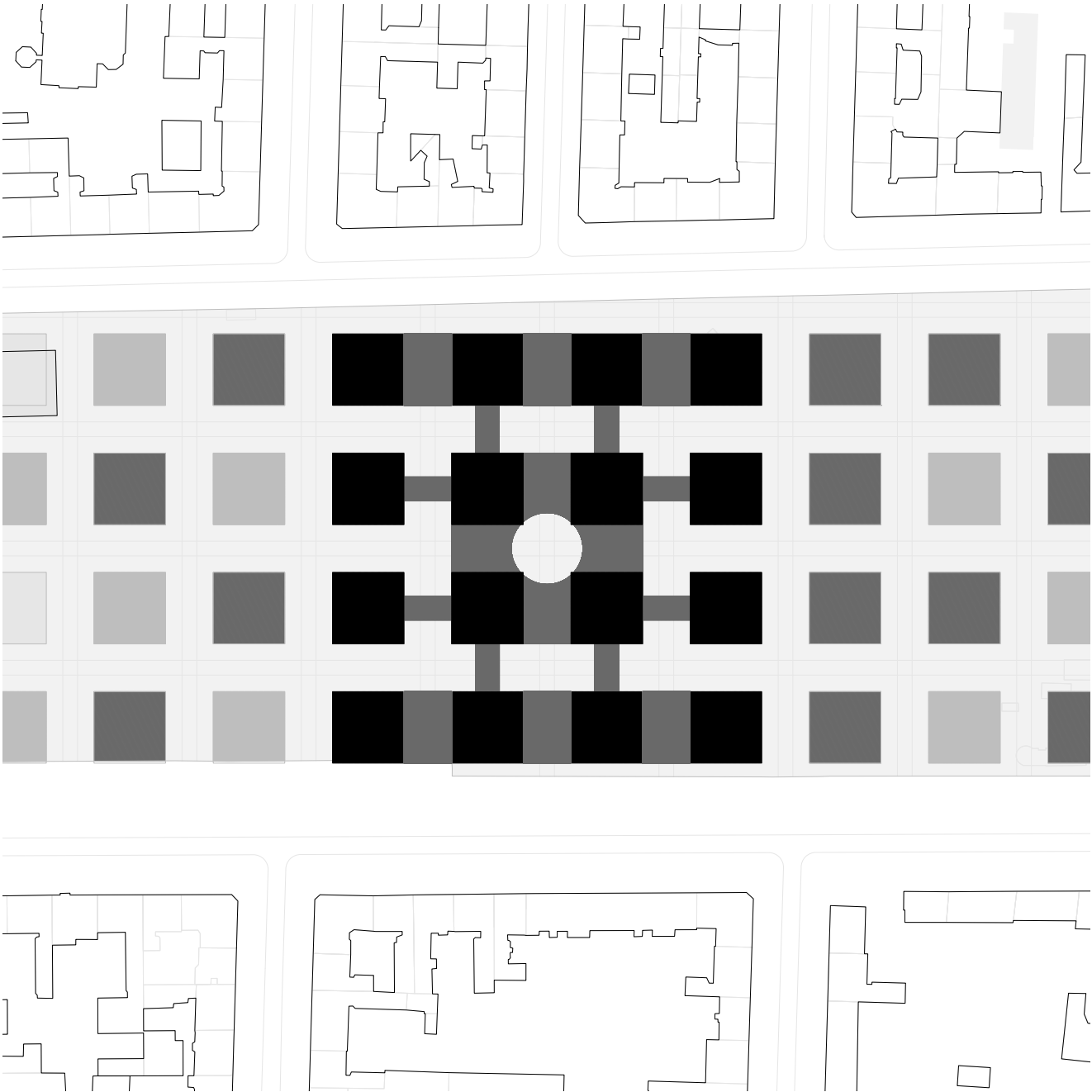
URBAN IMPLEMENTATION



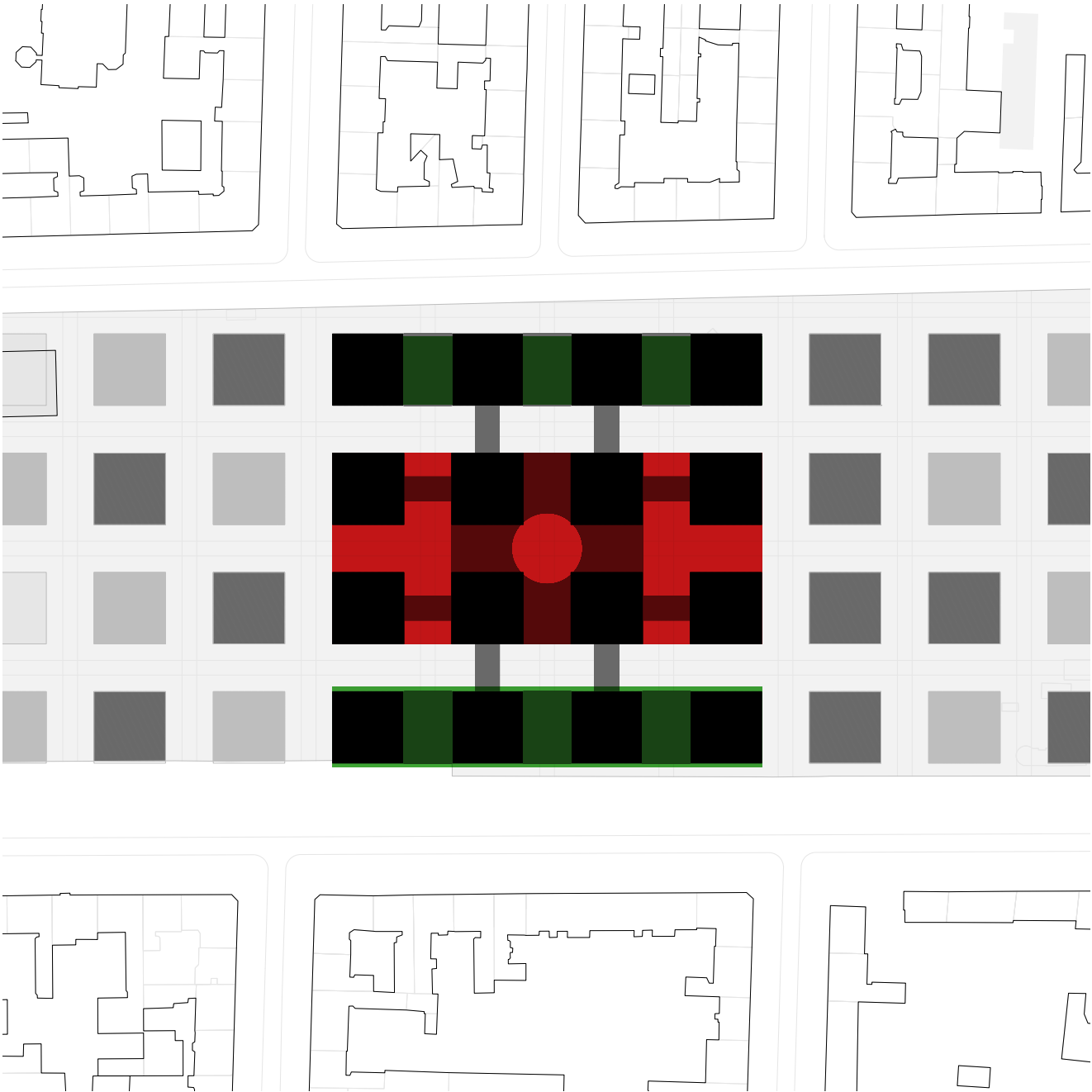
URBAN IMPLEMENTATION

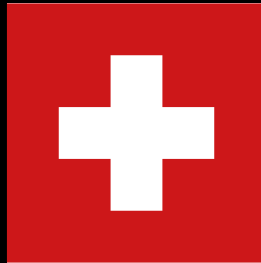


URBAN IMPLEMENTATION

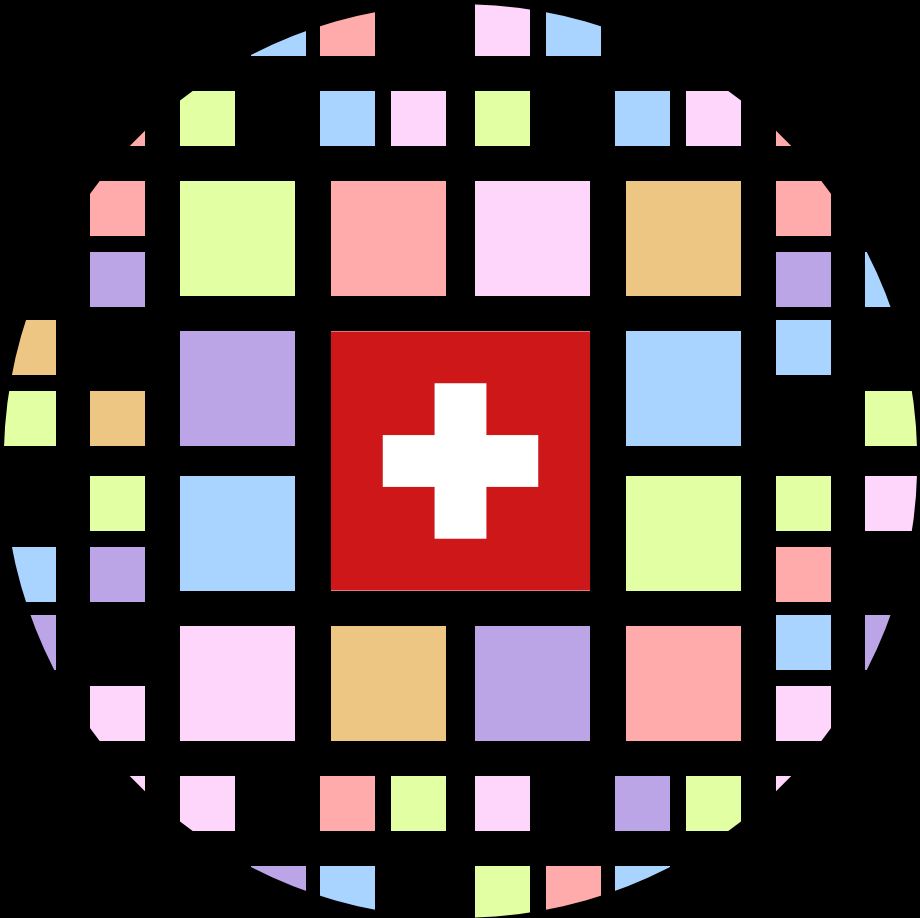


URBAN IMPLEMENTATION



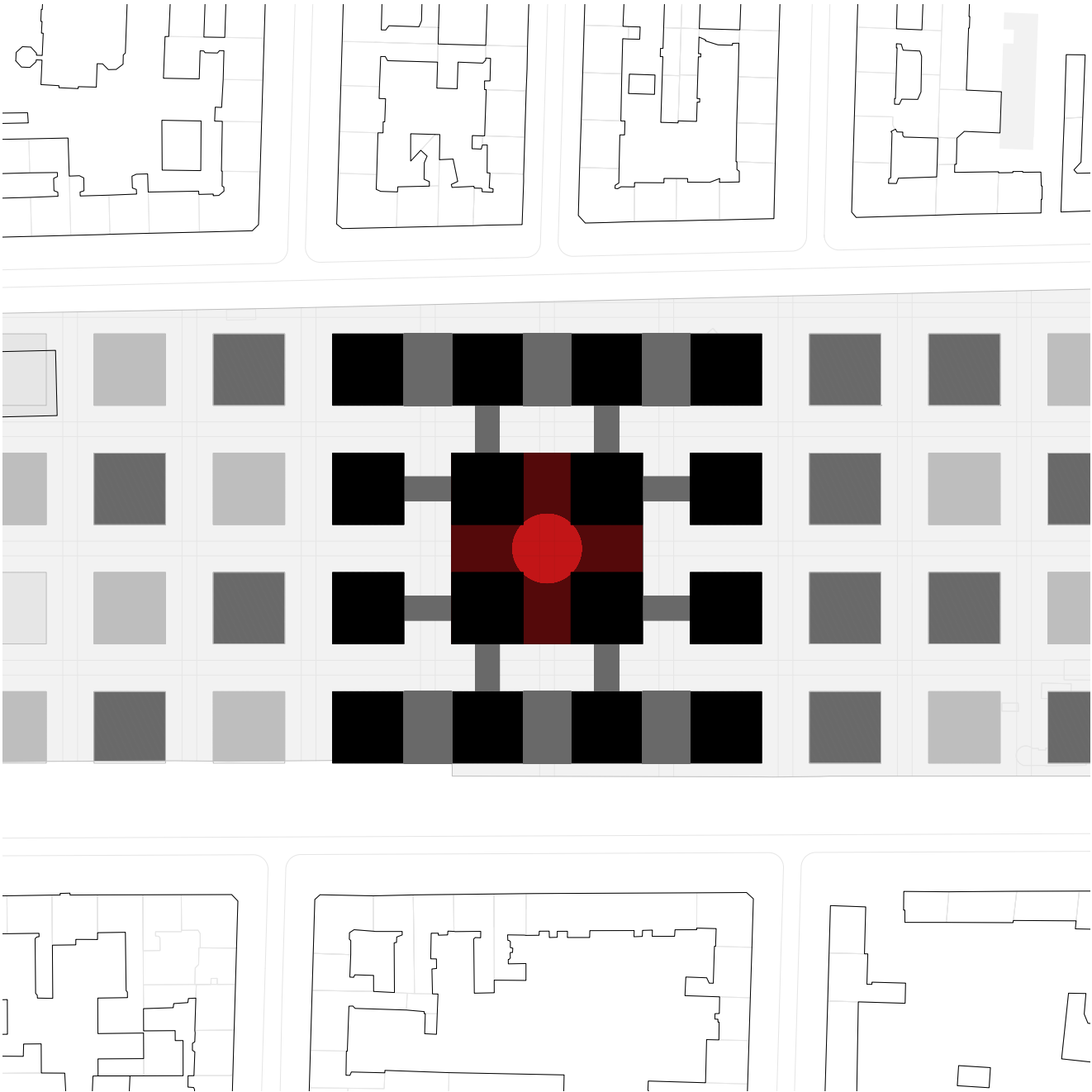
REDEFINING THE IMAGE**FROM SINGULAR IN-USE**

REDEFINING THE IMAGE

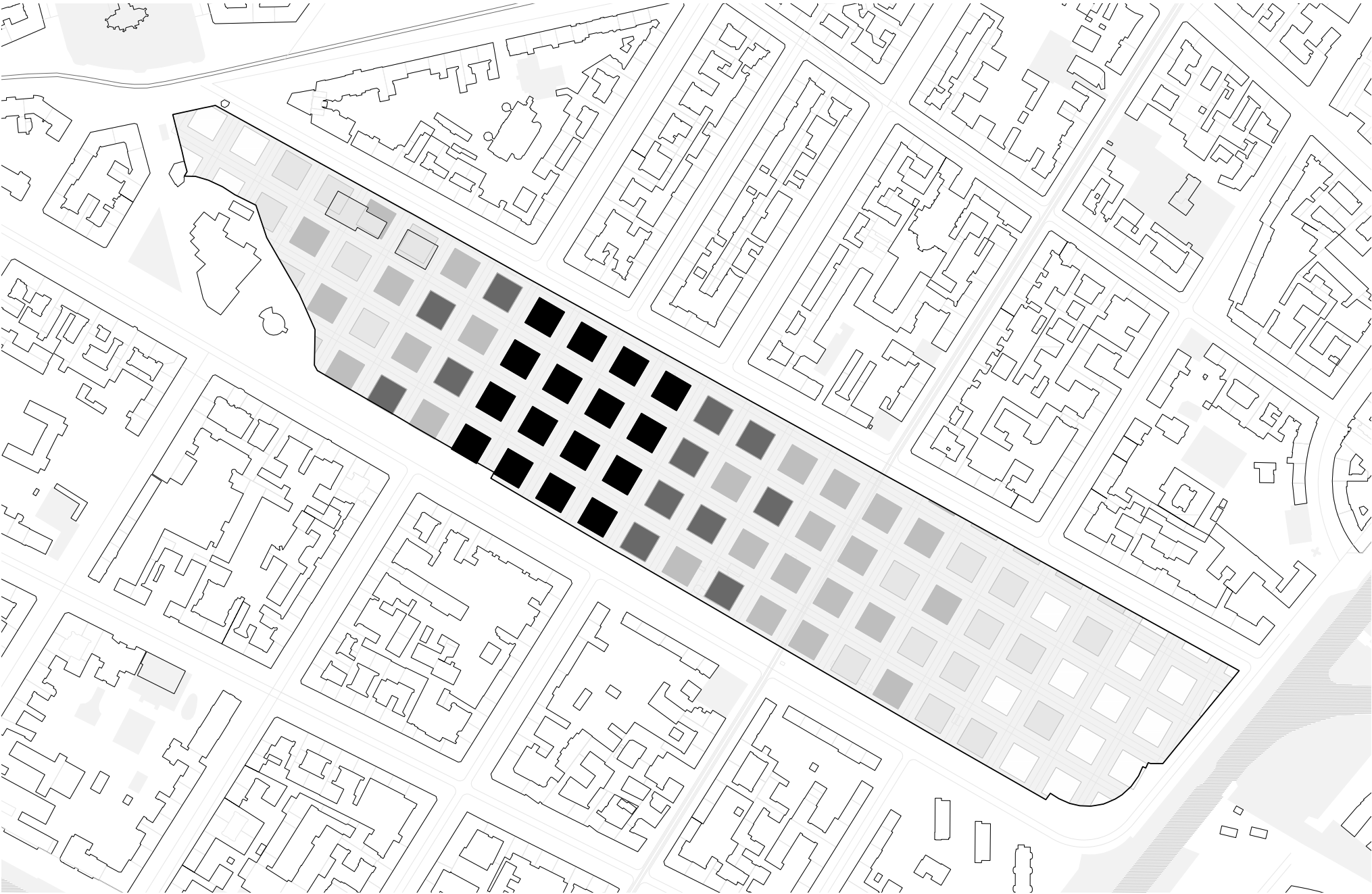


TO MIXED-USE FOR SOCIETY

URBAN IMPLEMENTATION



‘MASTERPLAN’















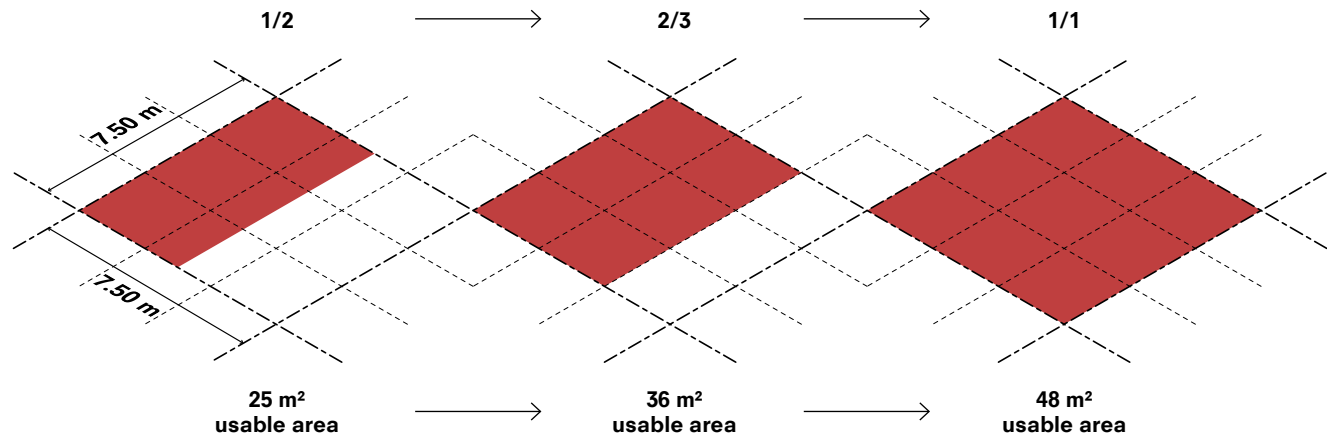
R1_EXTENSION OF THE URBAN FABRIC



XL - **L** - M - S - XS

“STRUCTURE”

7.8 - 8.4 M



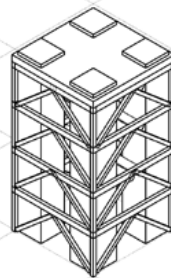
MODULAR SIZING ORDER

NICKL-WELLER, C., & NICKI, H. (2021). ARCHITECTURE FOR HEALTH.

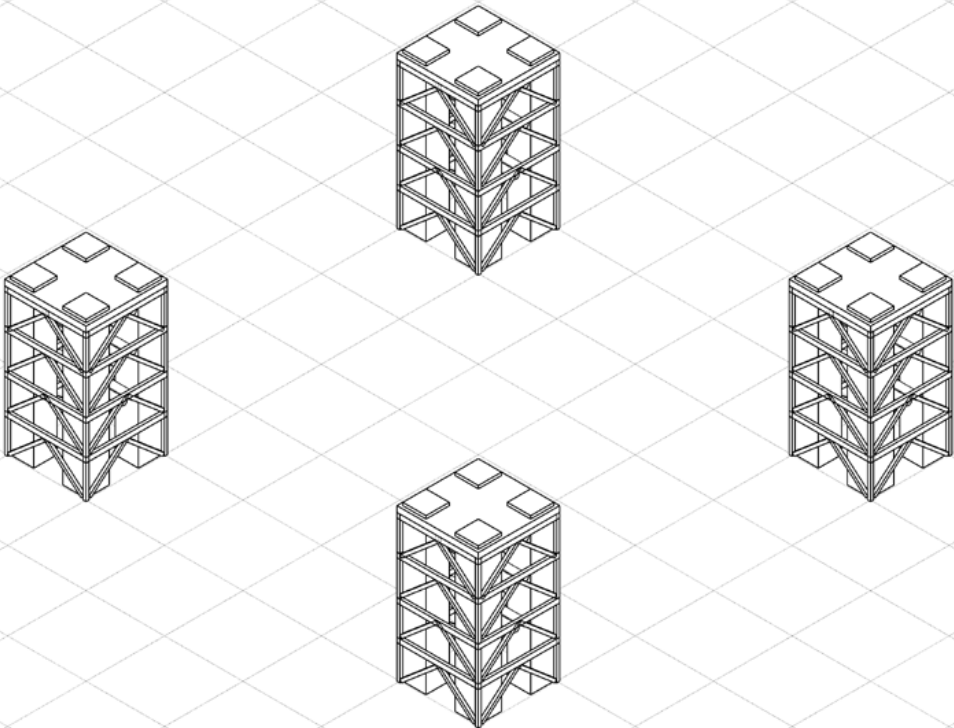
MODULAR 8.1 X 8.1 GRID

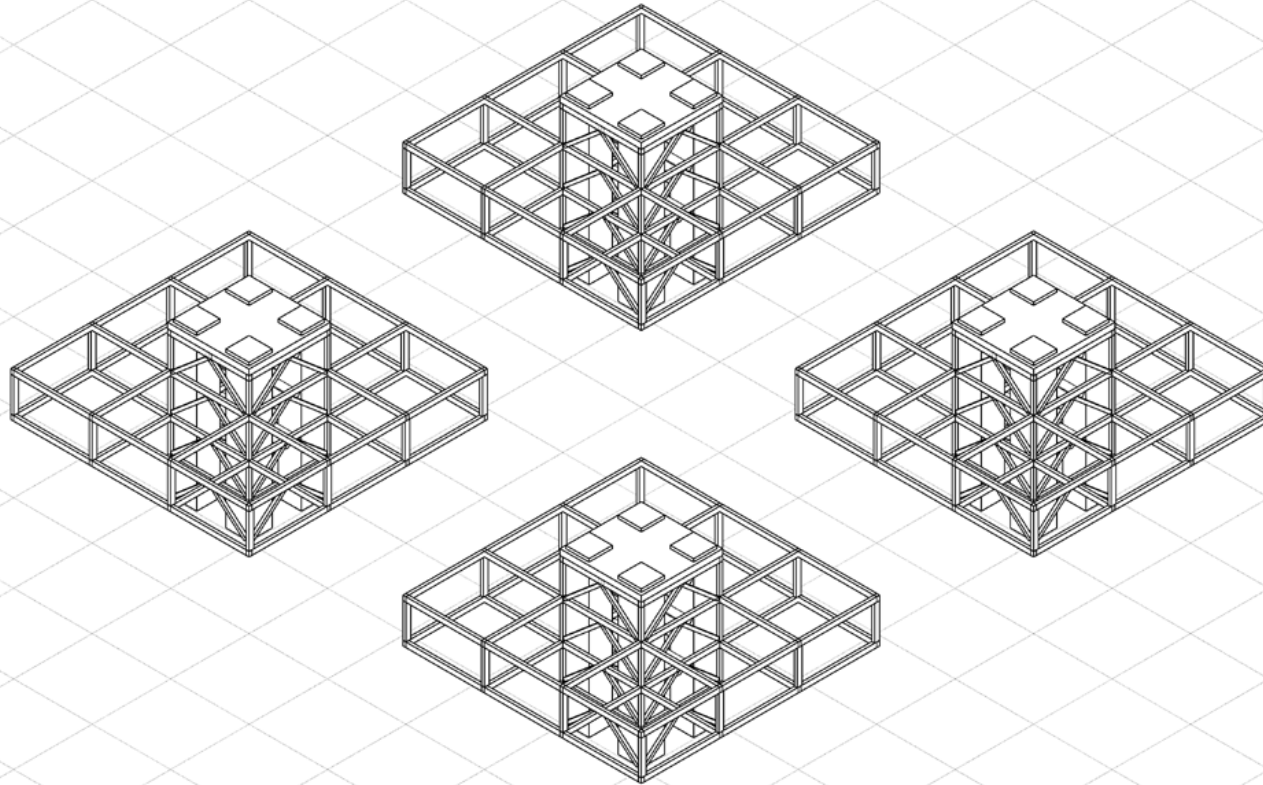


INFRASTRUCTURAL CORE

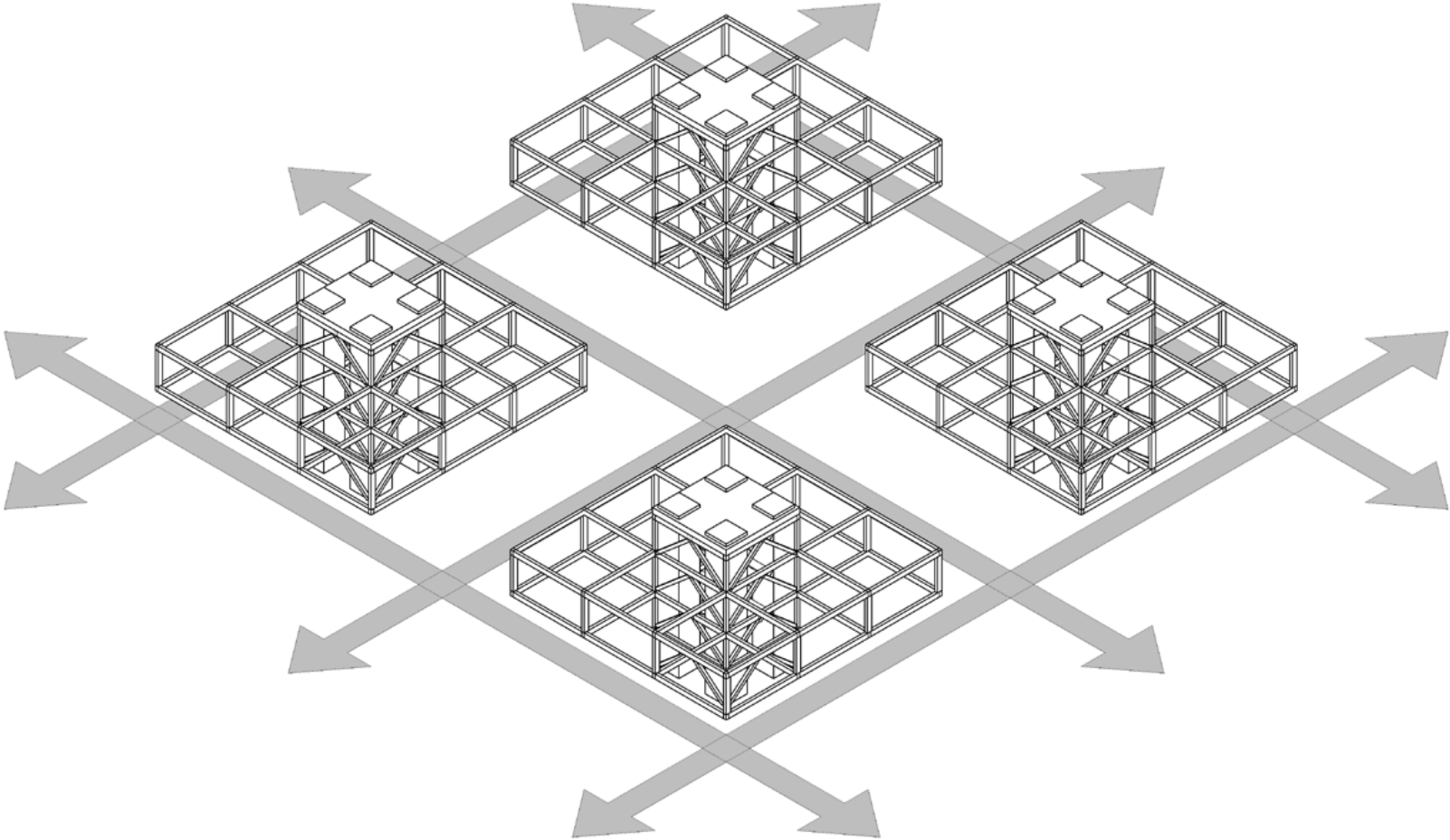


INFRASTRUCTURAL NETWORK

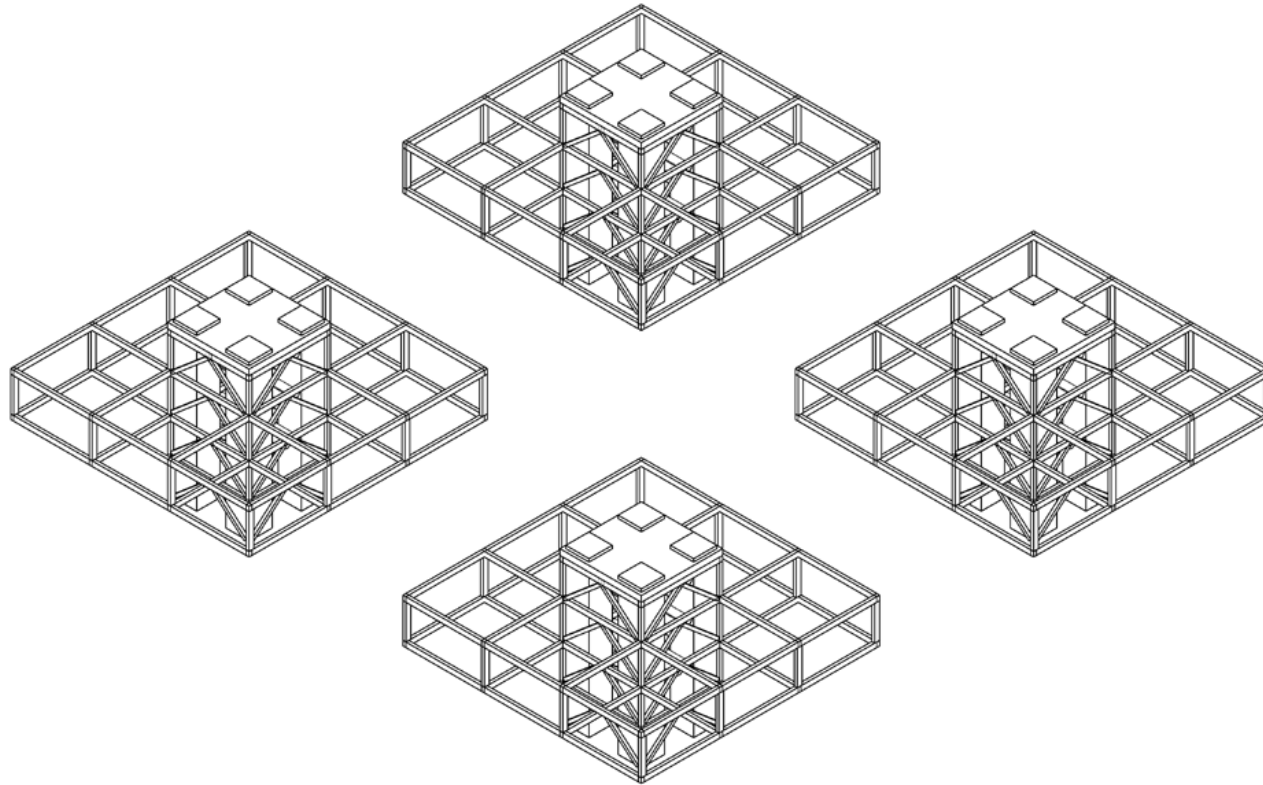


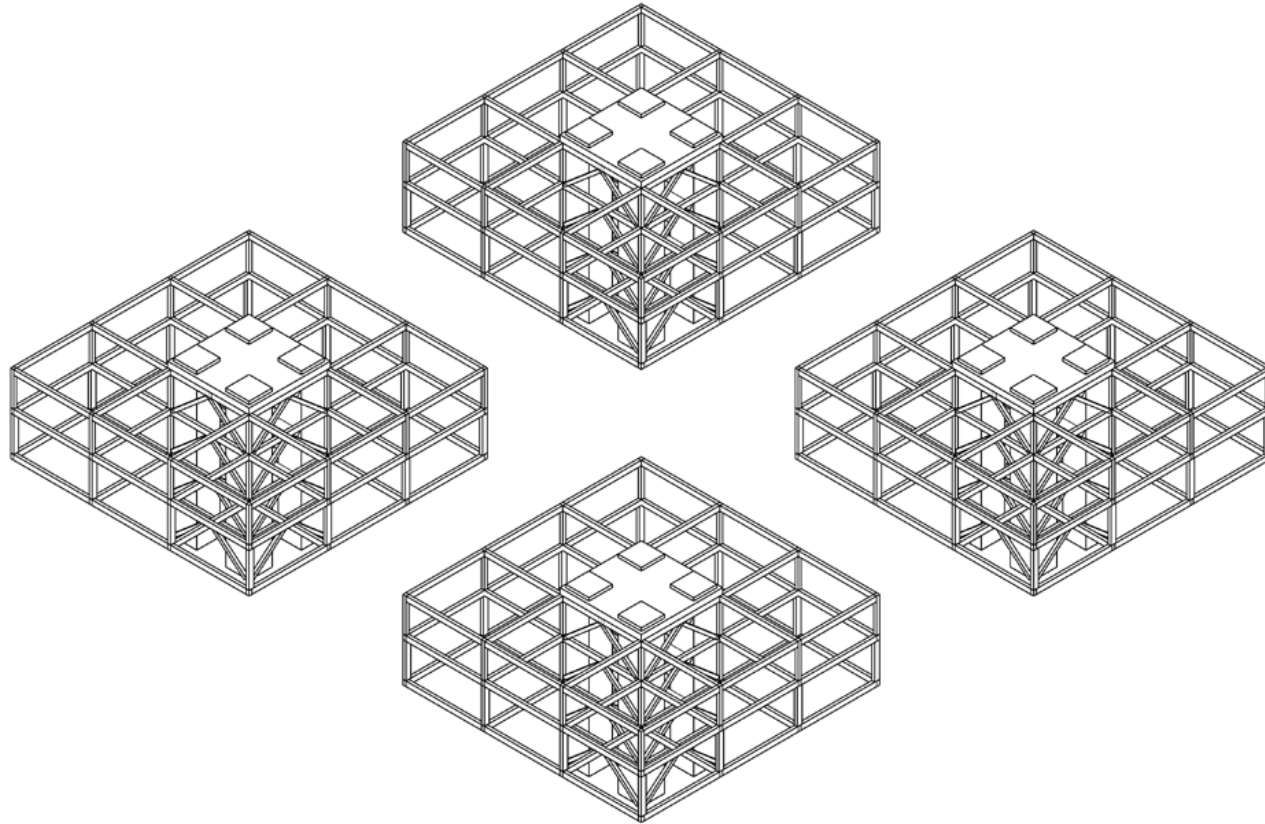
VIERENDEEL TRUSS

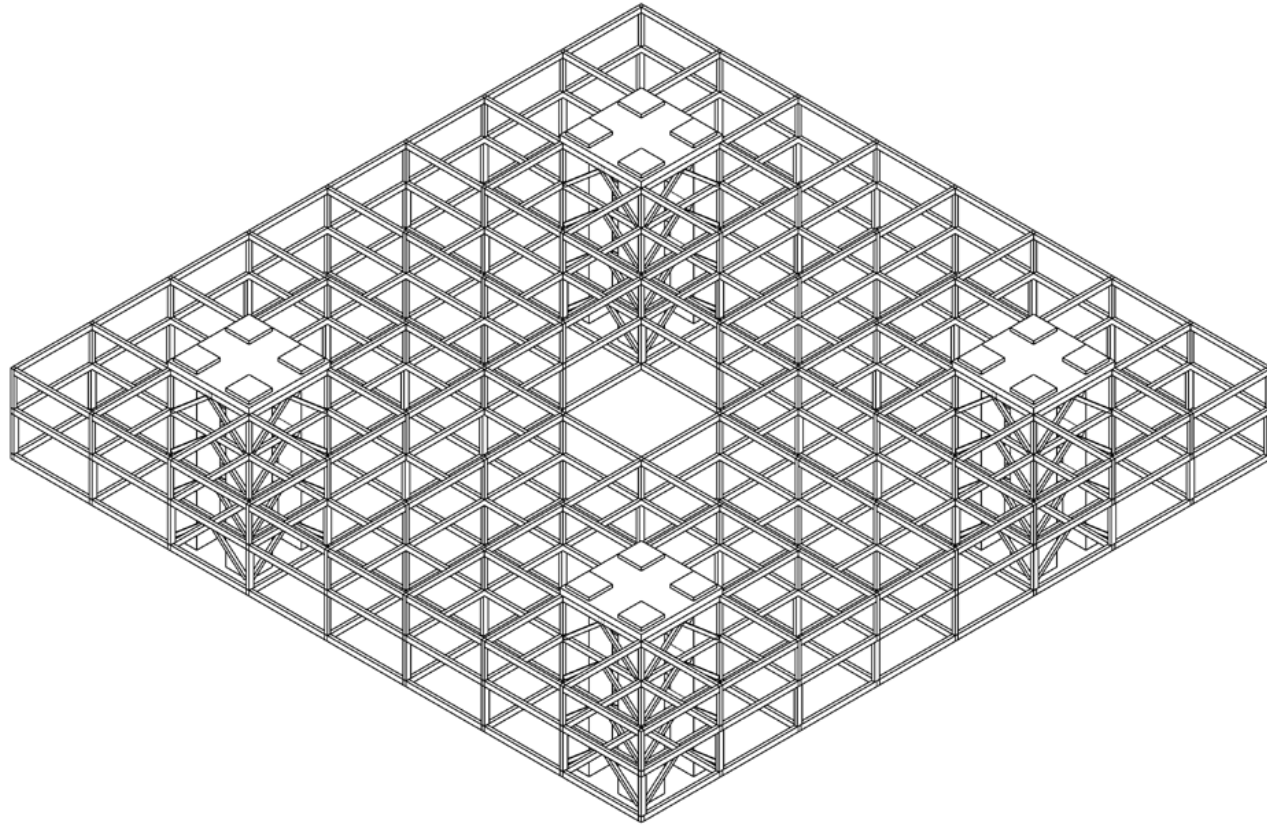
OPEN PLINTH

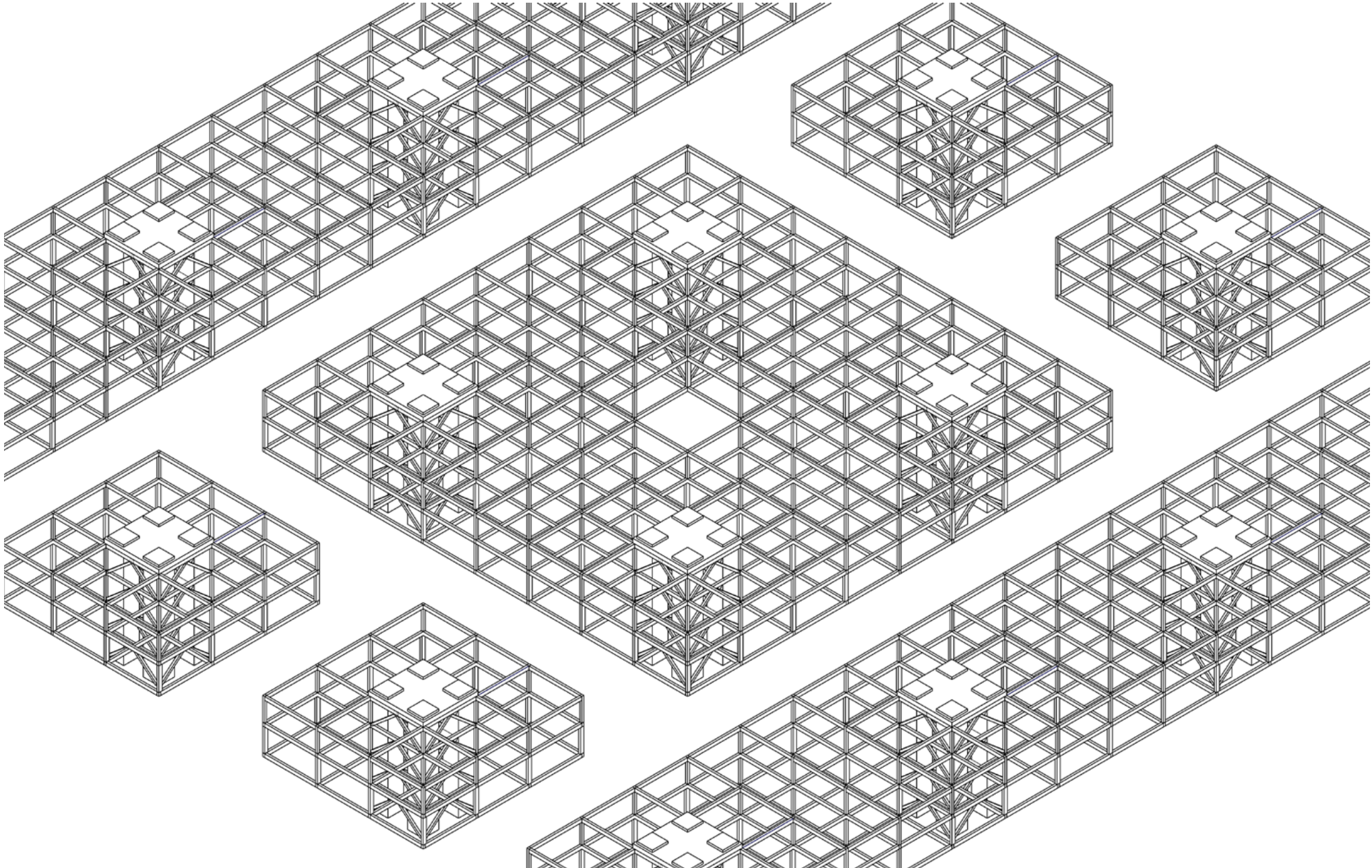


FLOATING SLABS

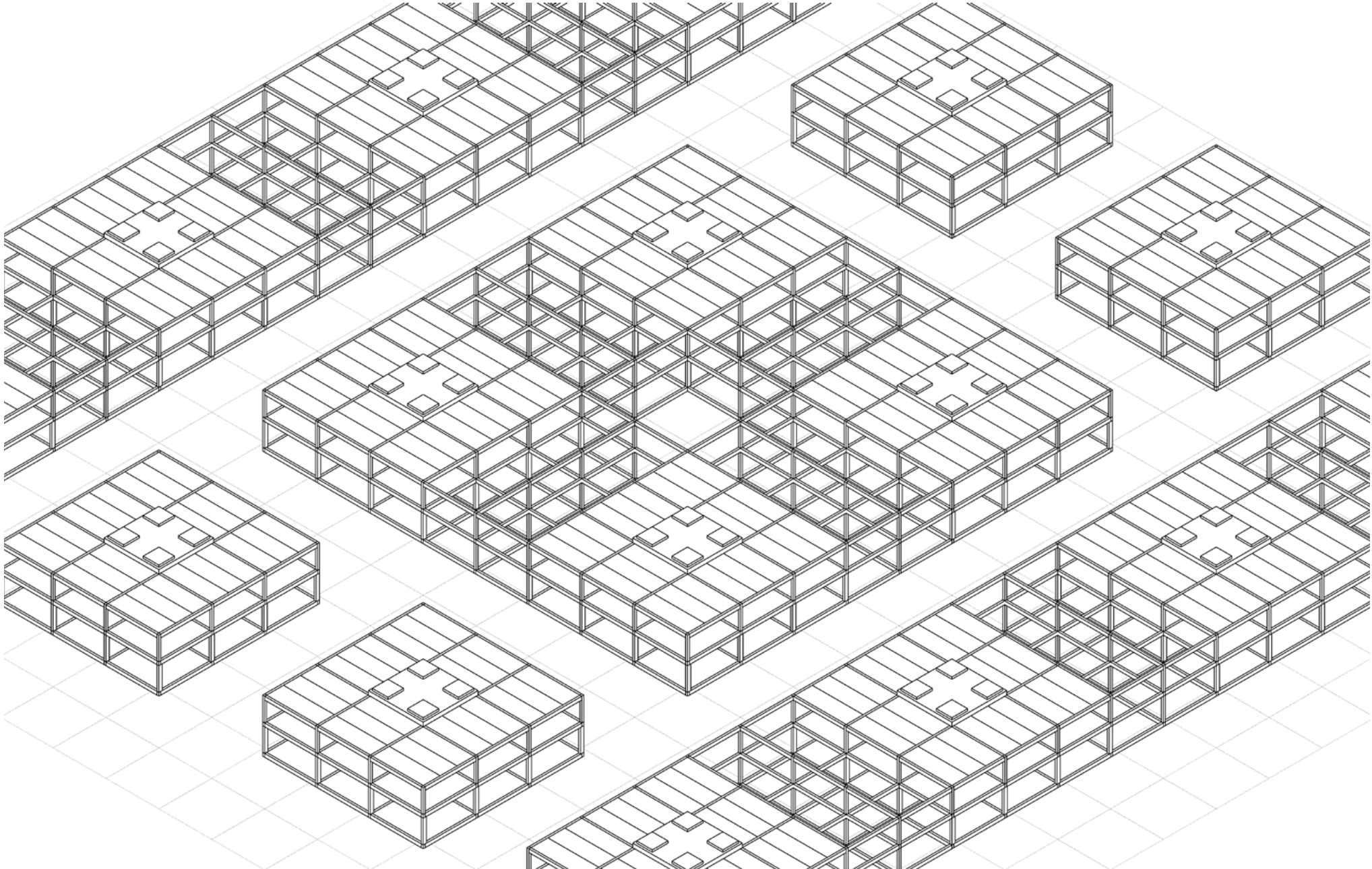


TOPPING UP

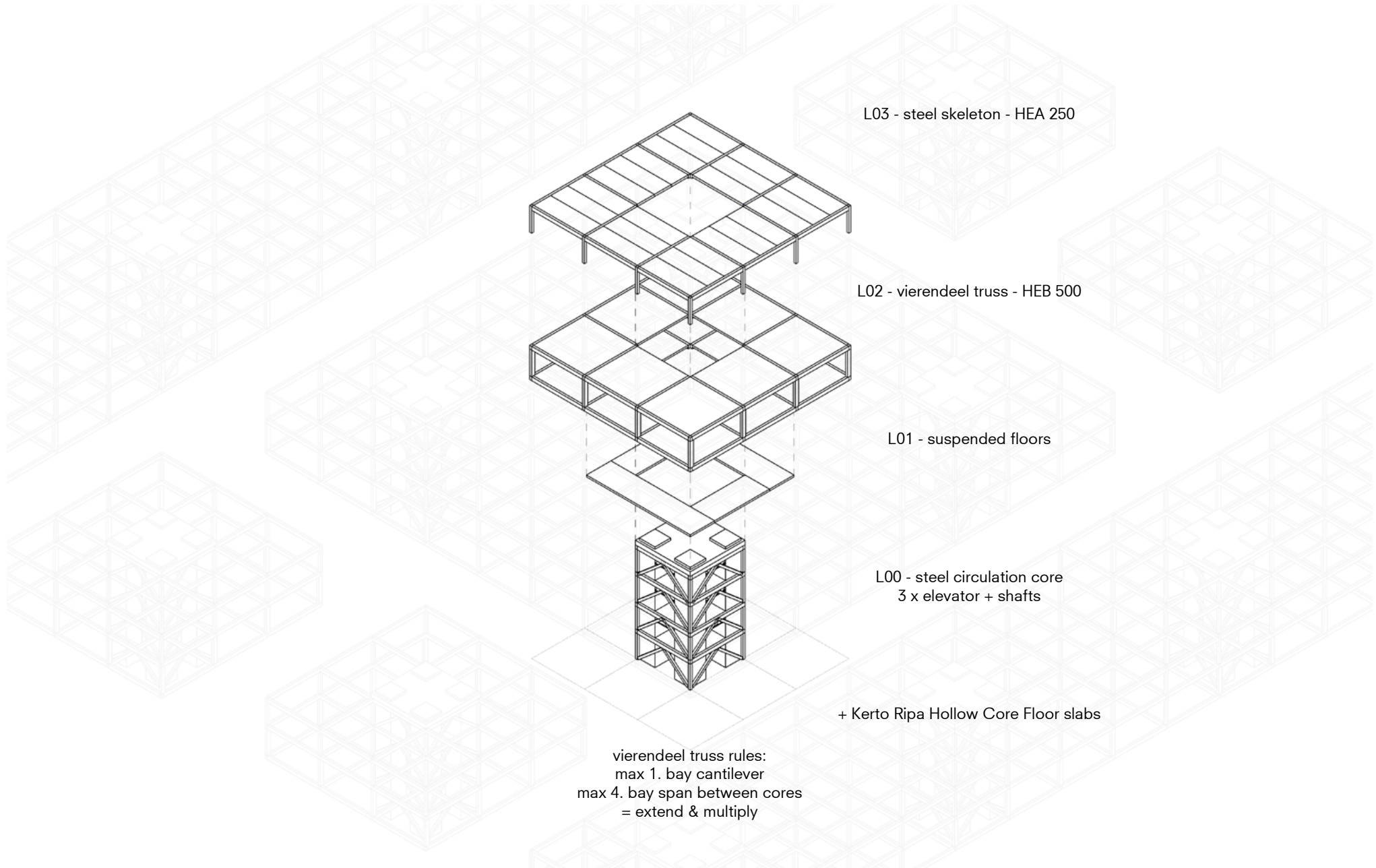
CONNECT

MULTIPLY

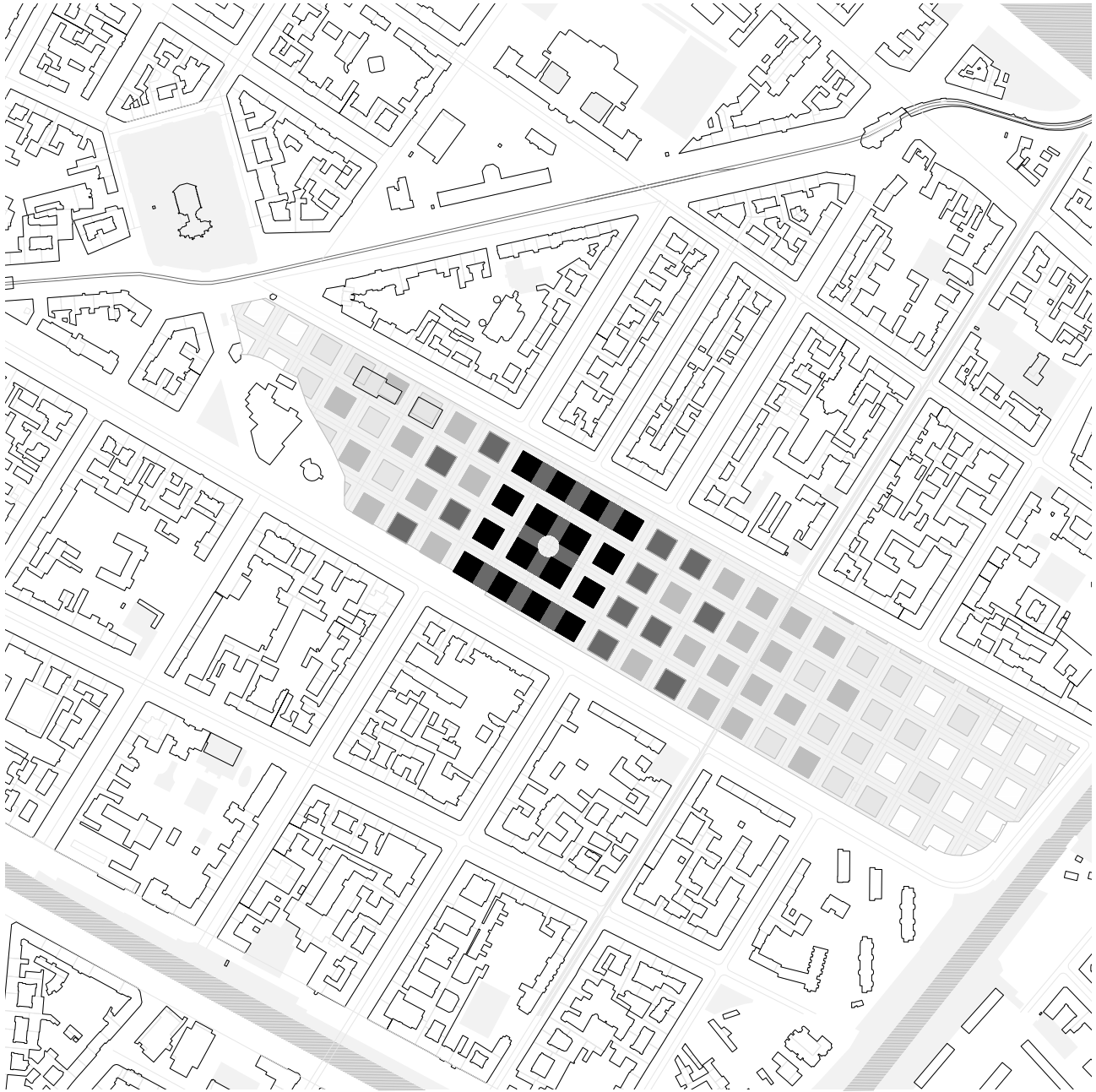
MEGA STRUCTURE



META STRUCTURE



IMPLEMENTATION
SITE PLAN



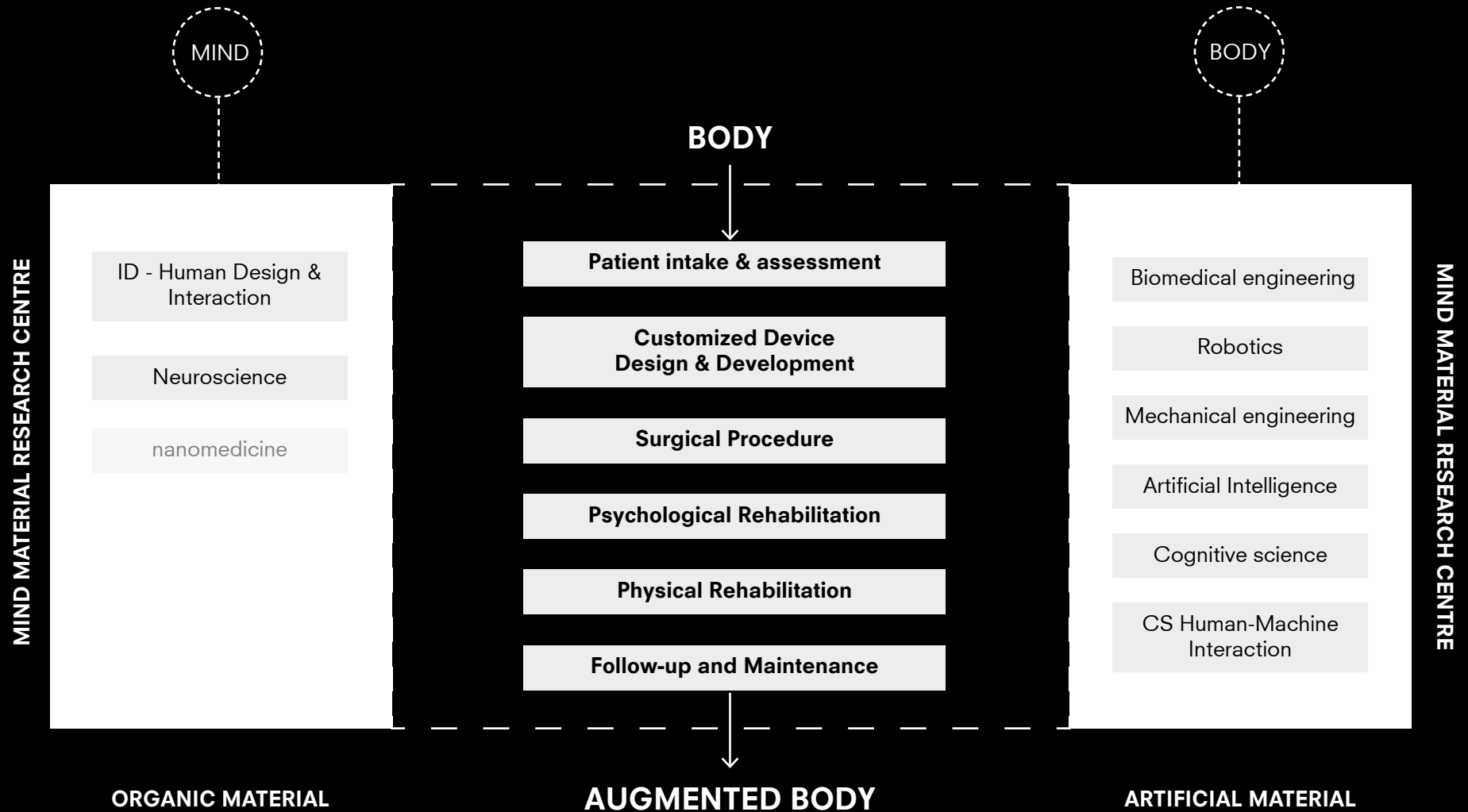


XL - L - **M** - S - XS

“PROGRAM - FLOWS”

HOW IS IT ORGANISED?

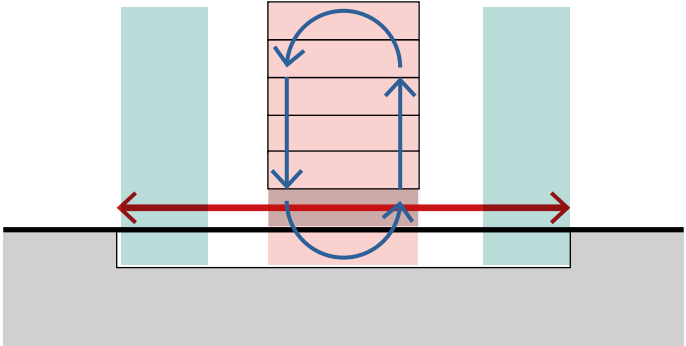
FUSION OF BODY AND MATERIAL



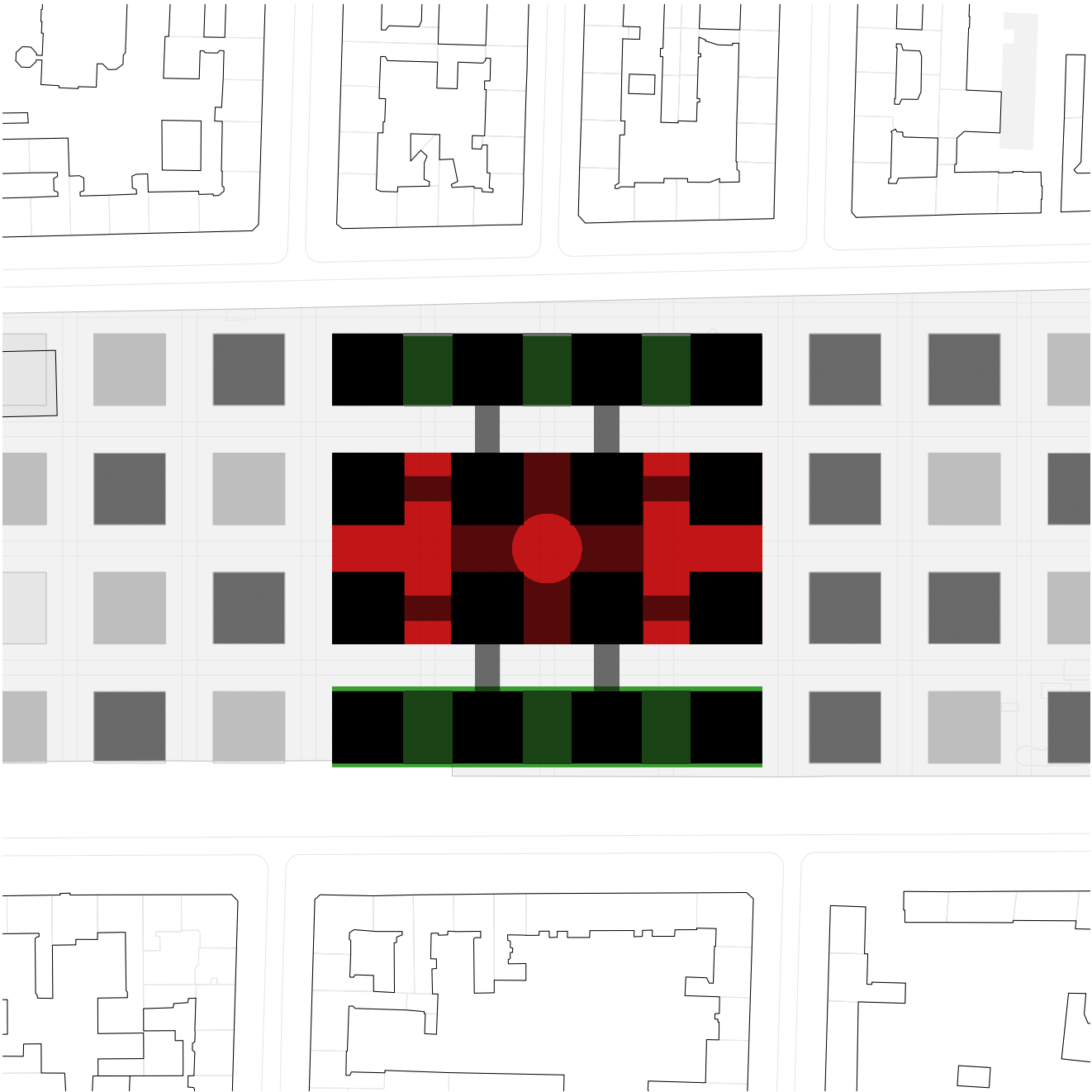
INTEGRATION OF RESEARCH AND DEVELOPMENT FACILITIES

DESIGN DEVELOPMENT

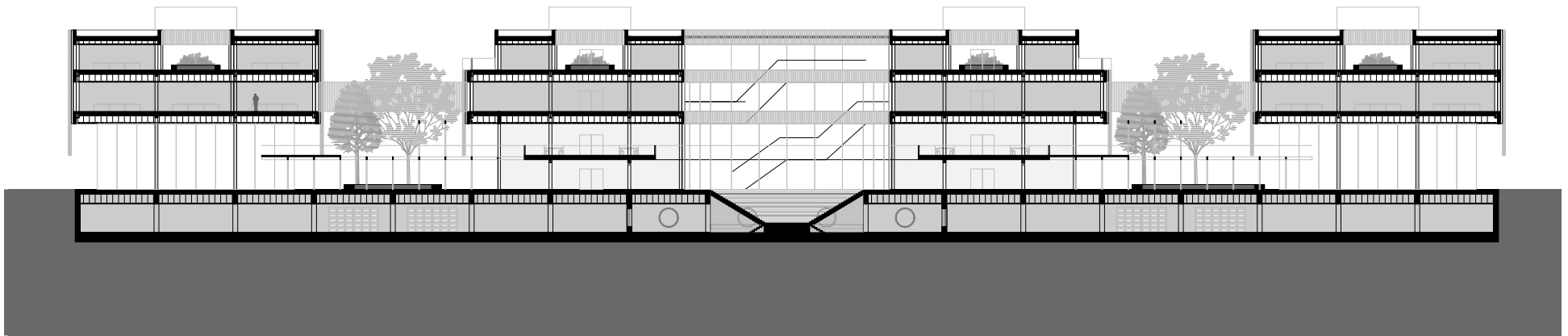
INTERLINK FLOWS
BETWEEN PUBLIC AND PRIVATE



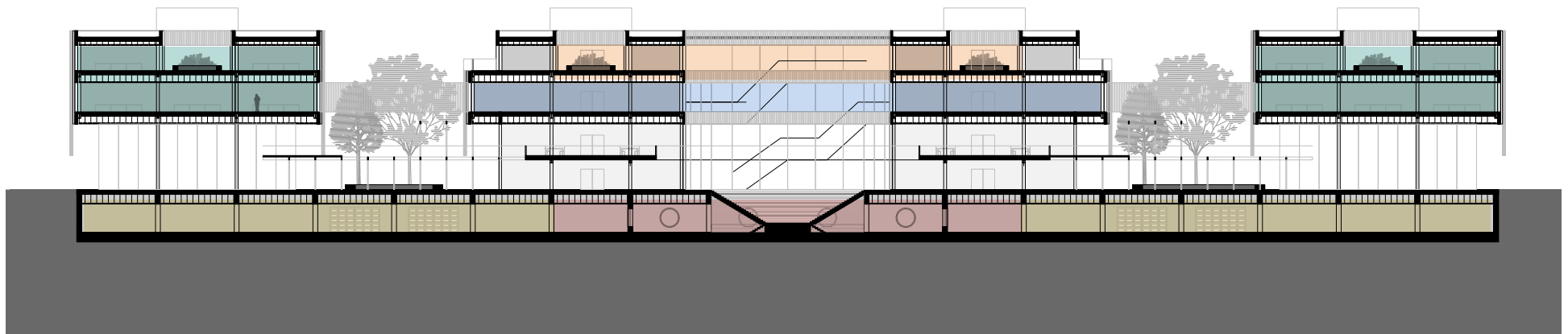
URBAN IMPLEMENTATION



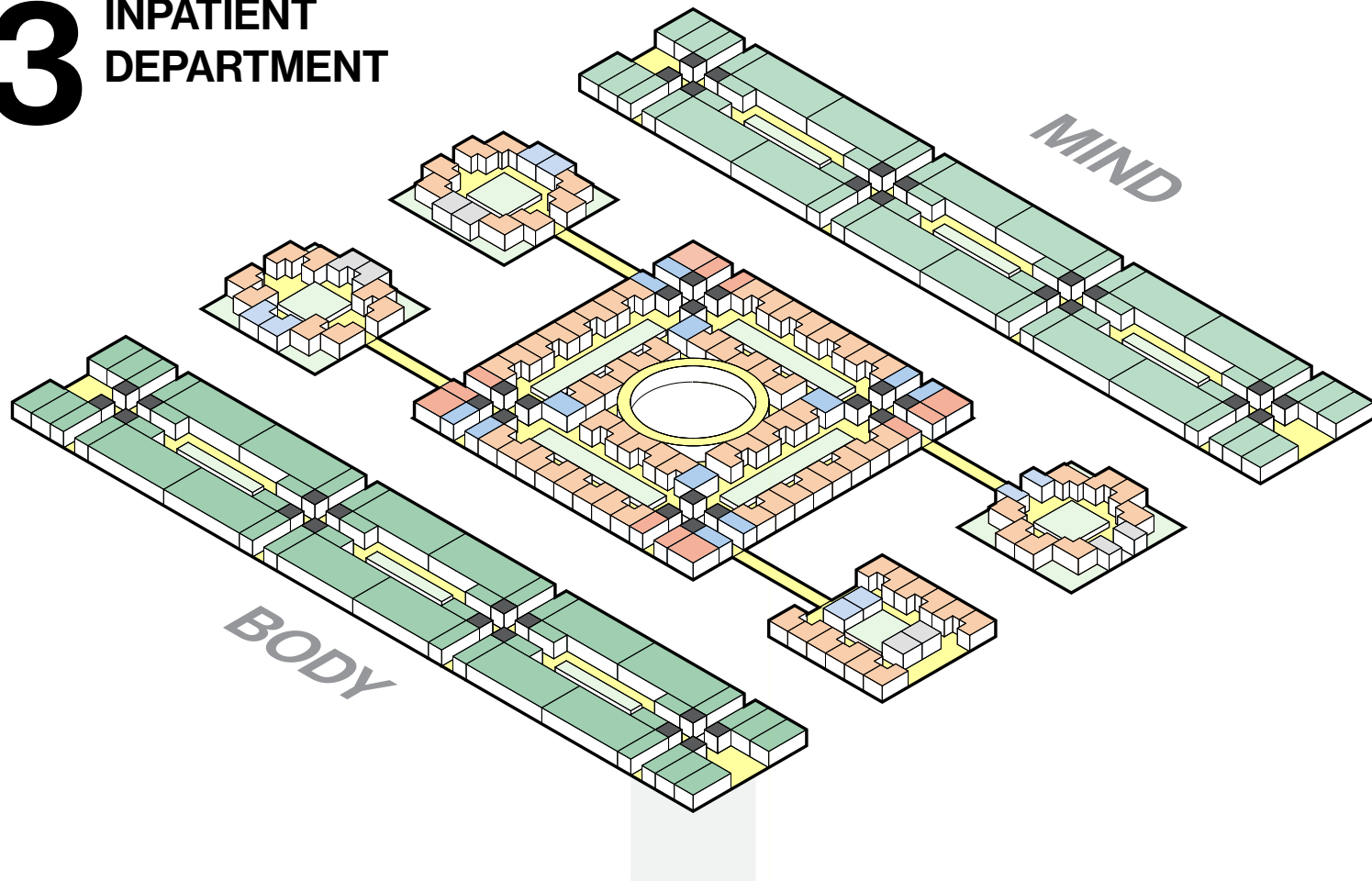
SECTION - MID



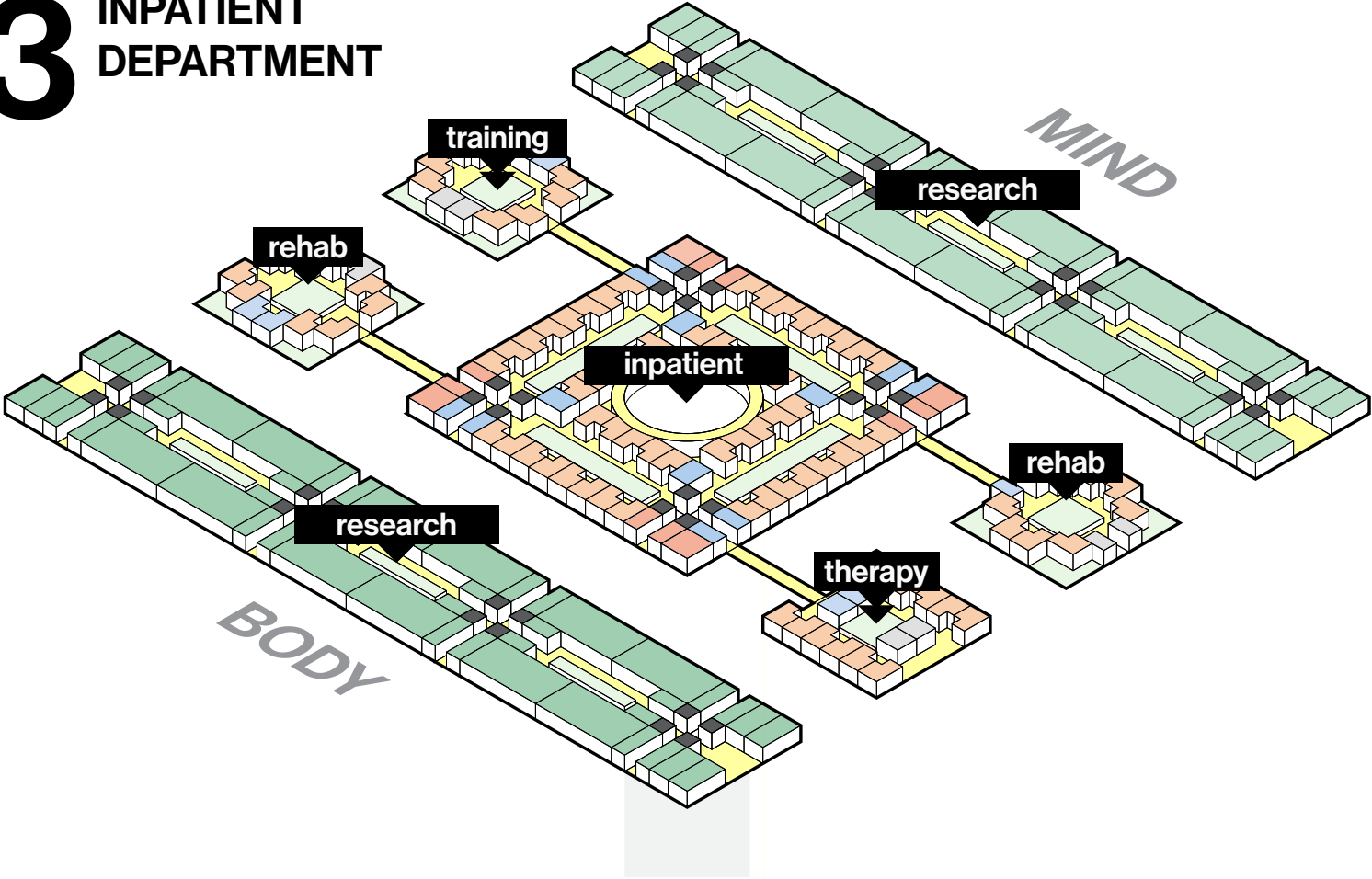
SECTION - MID



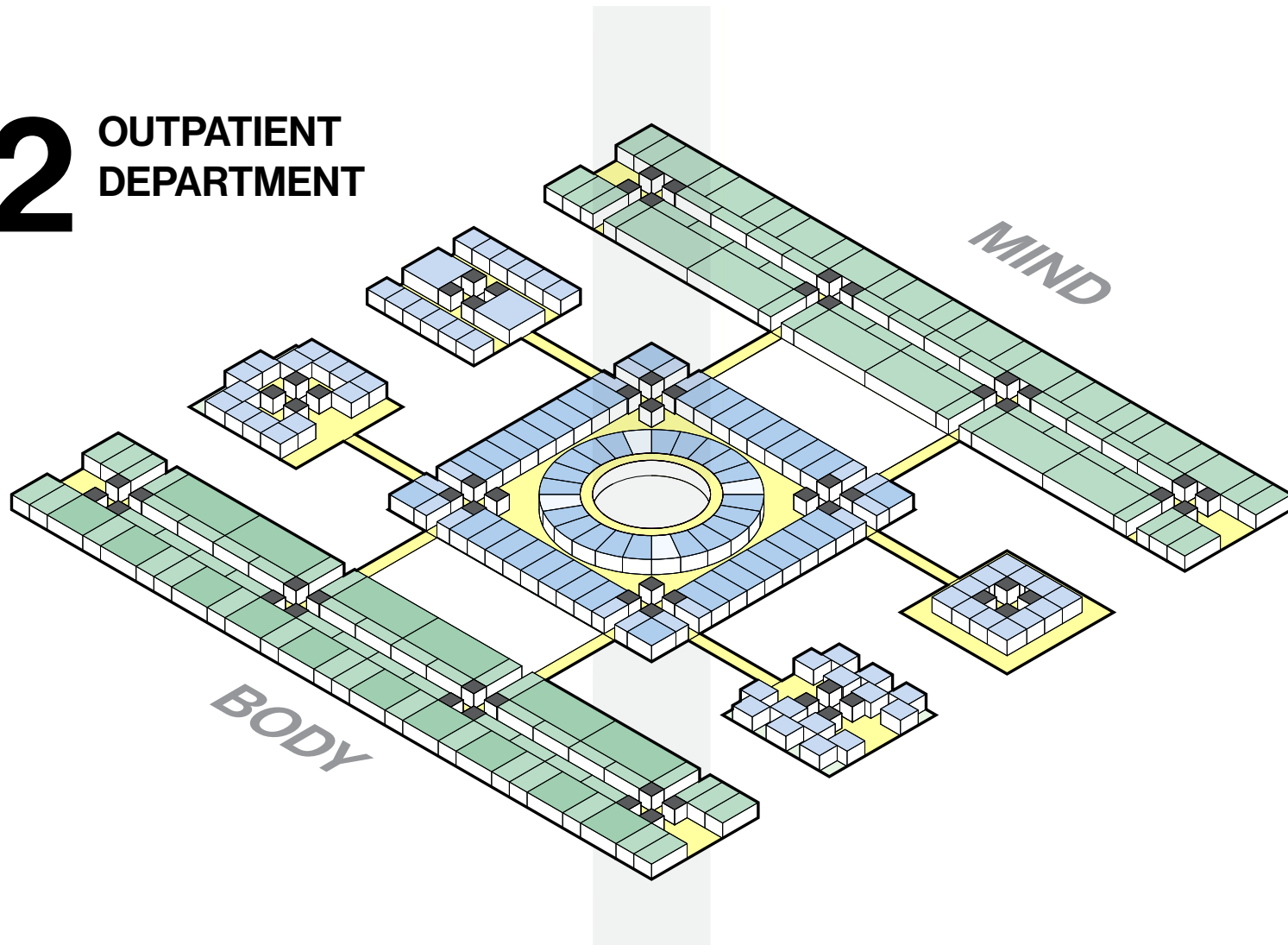
03 INPATIENT DEPARTMENT



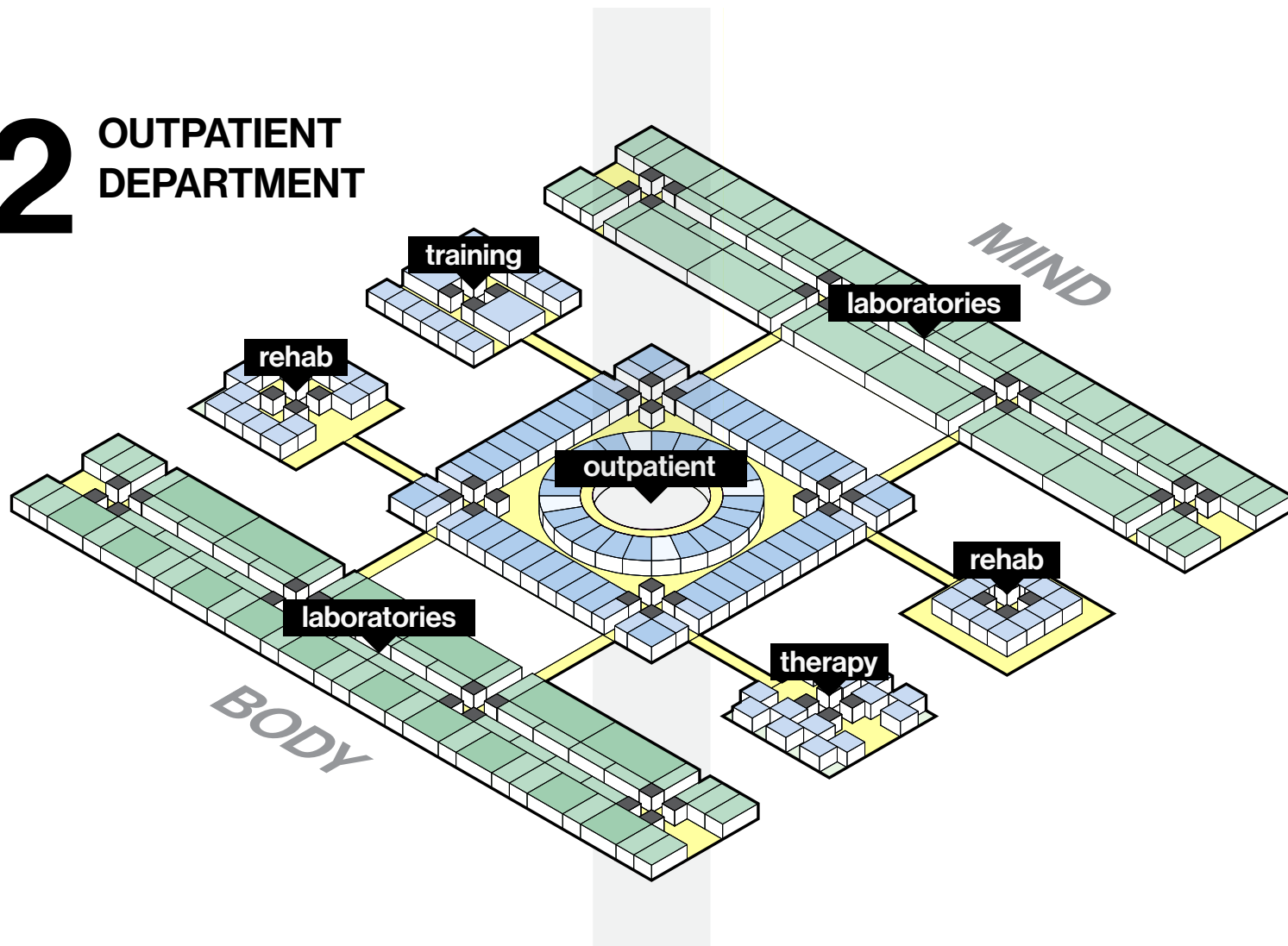
03 INPATIENT DEPARTMENT



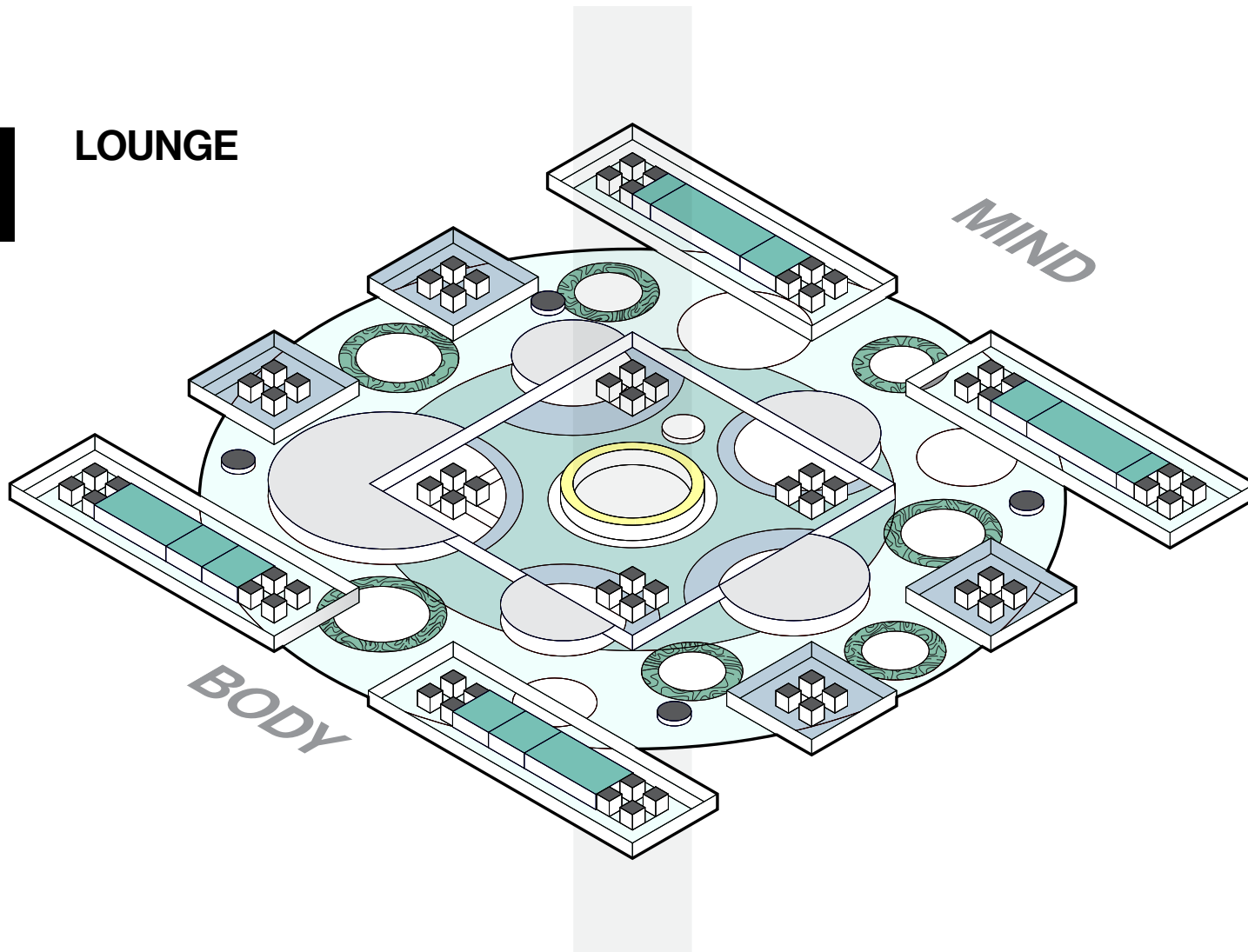
02 OUTPATIENT DEPARTMENT



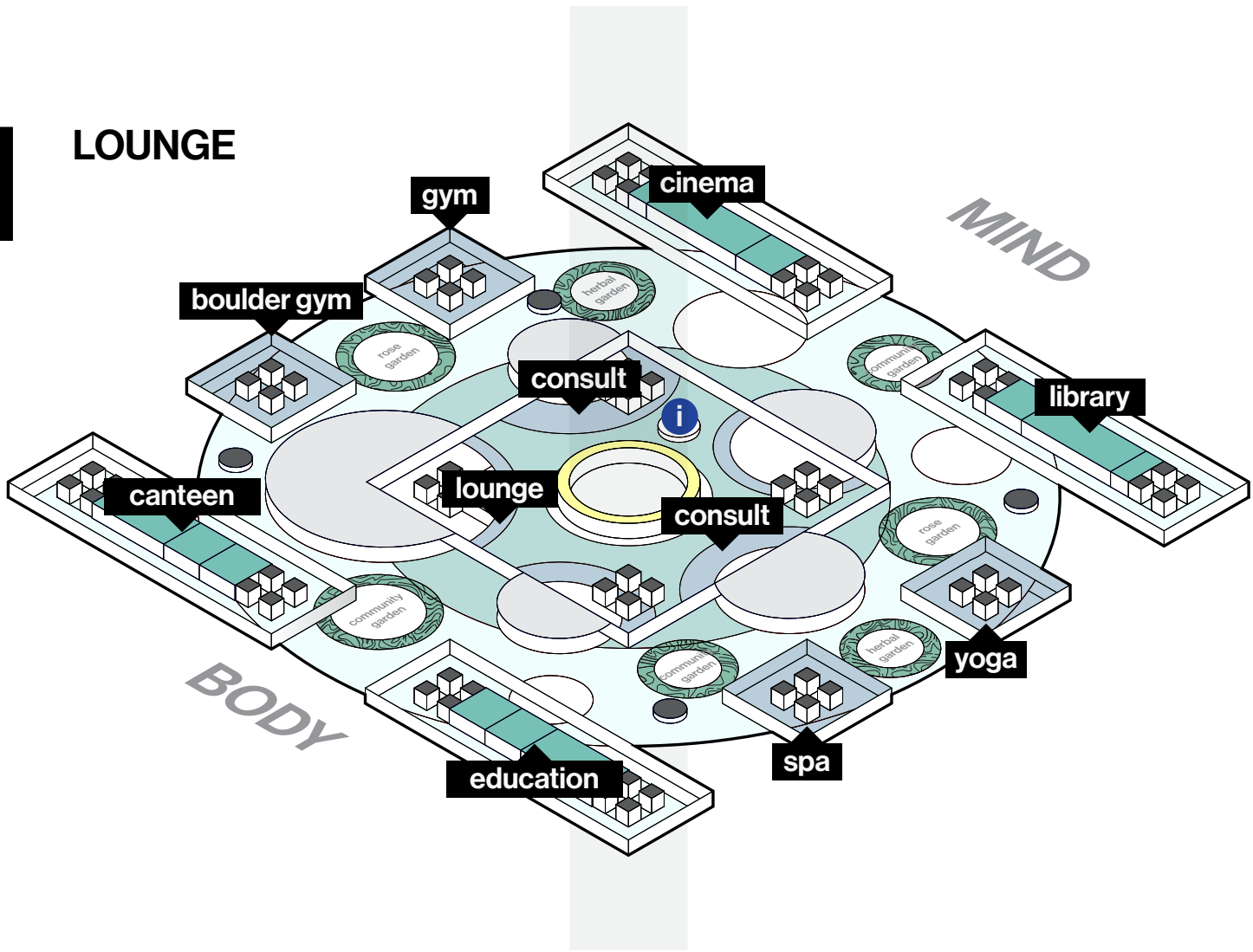
02 OUTPATIENT DEPARTMENT



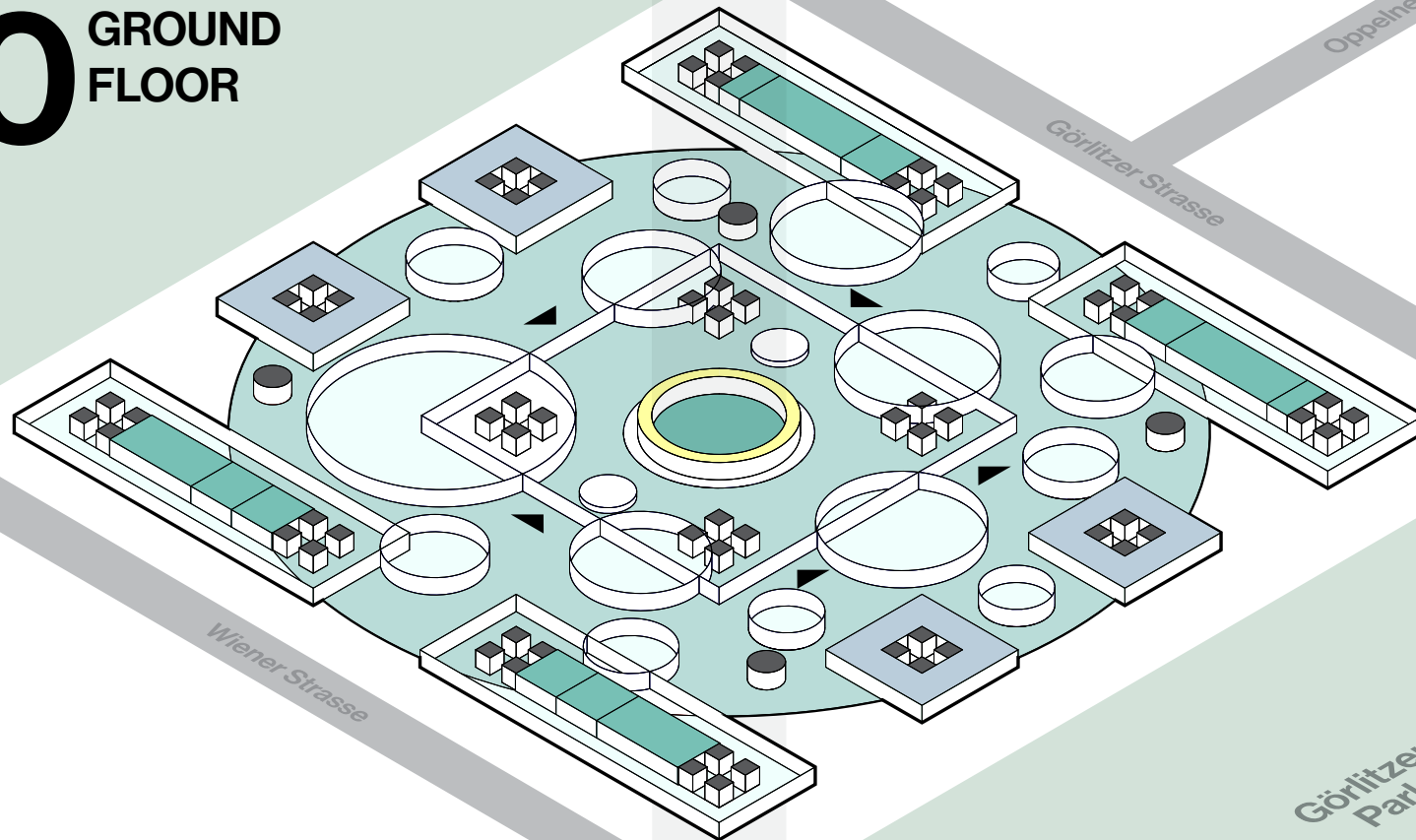
01 LOUNGE



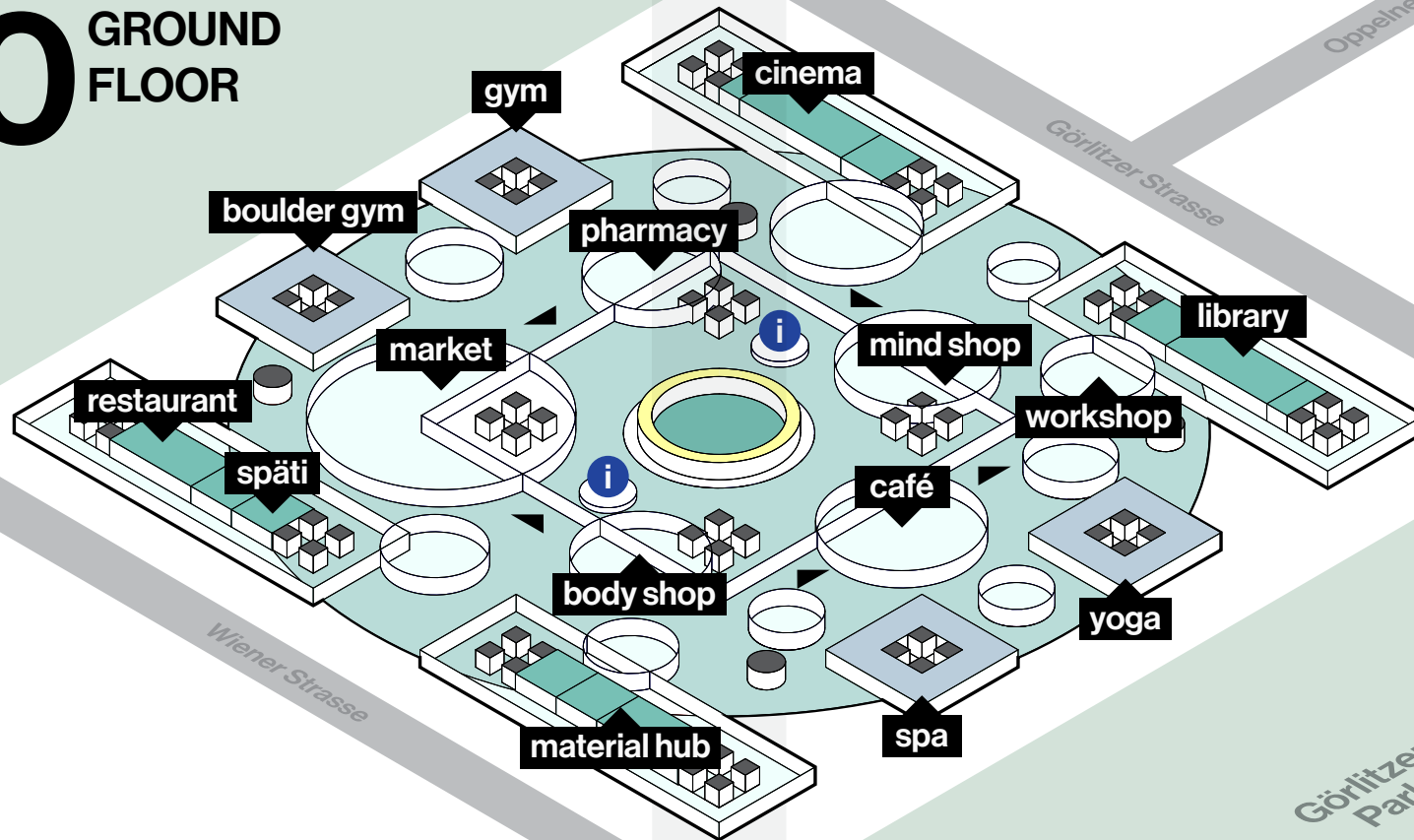
01 LOUNGE



00 GROUND FLOOR

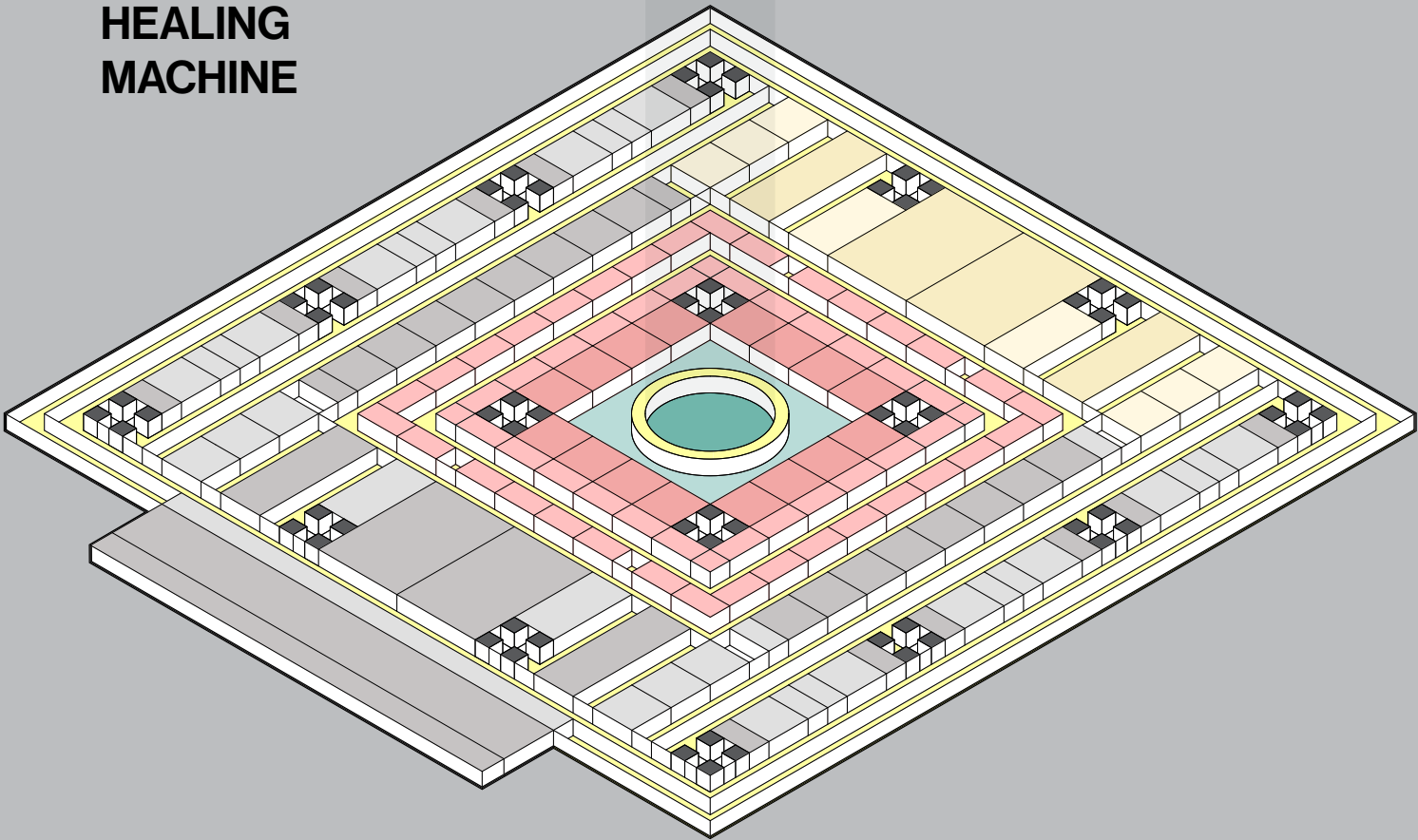


00 GROUND FLOOR



-1

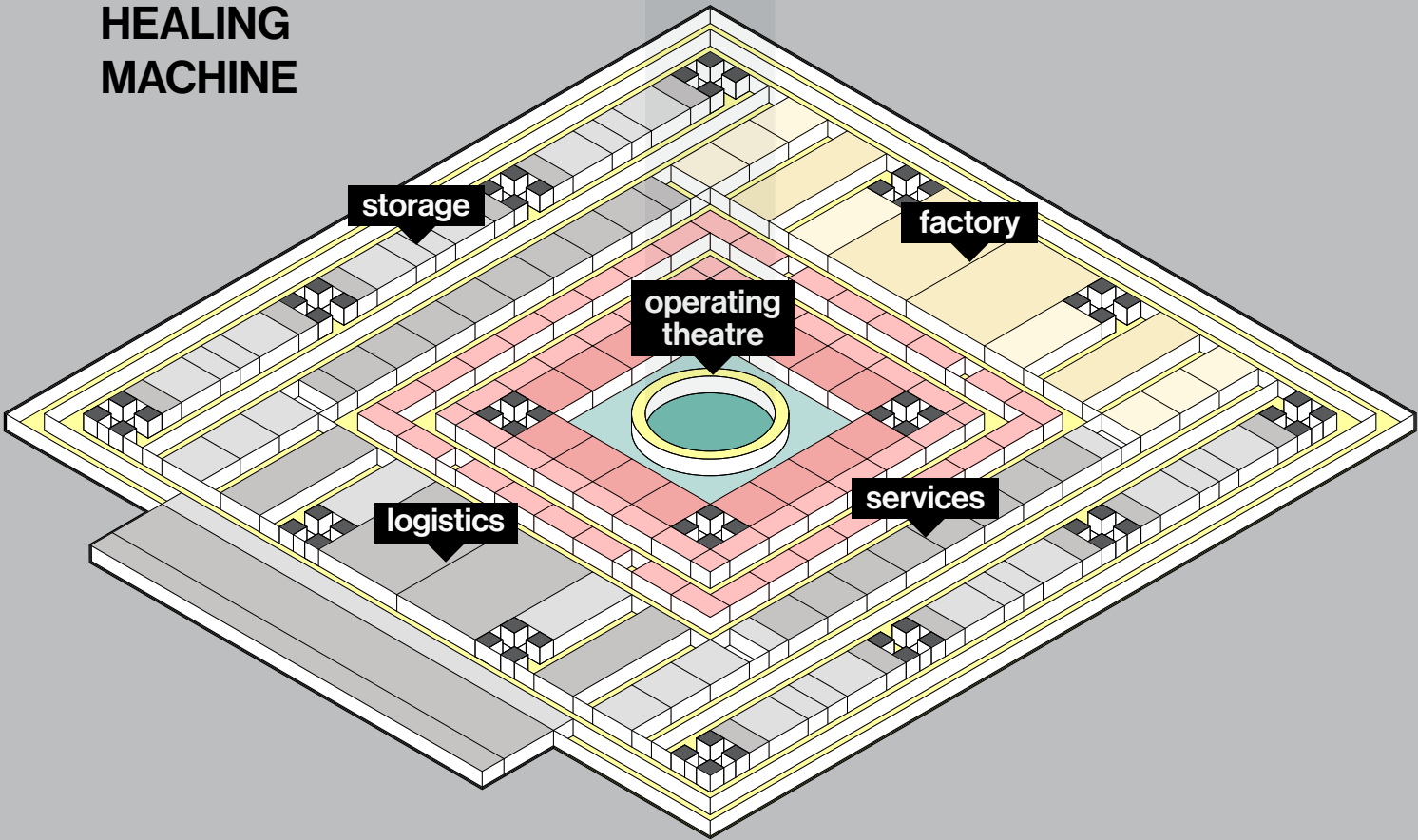
HEALING
MACHINE



- HOT FLOOR
- HOTEL
- OFFICE
- PUBLIC
- RESEARCH
- FACTORY
- CIRCULATION

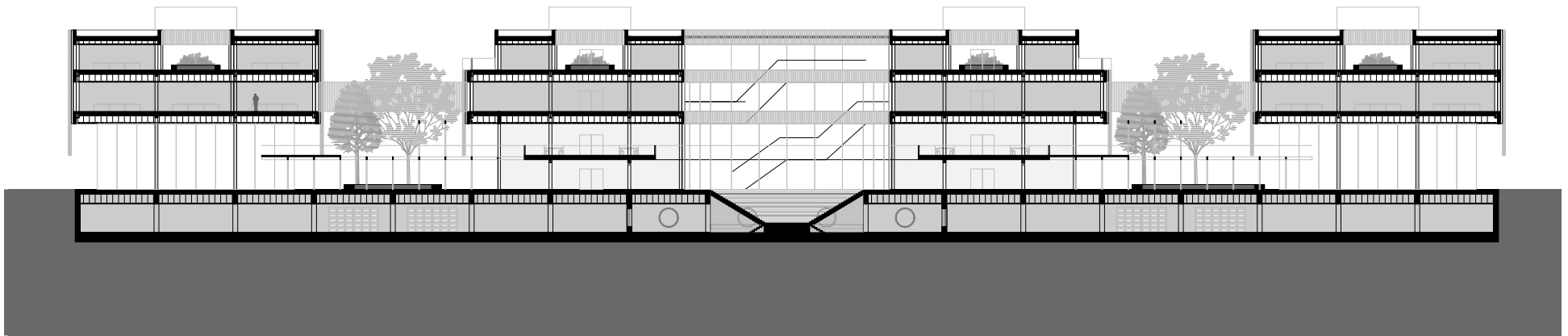
-1

HEALING MACHINE

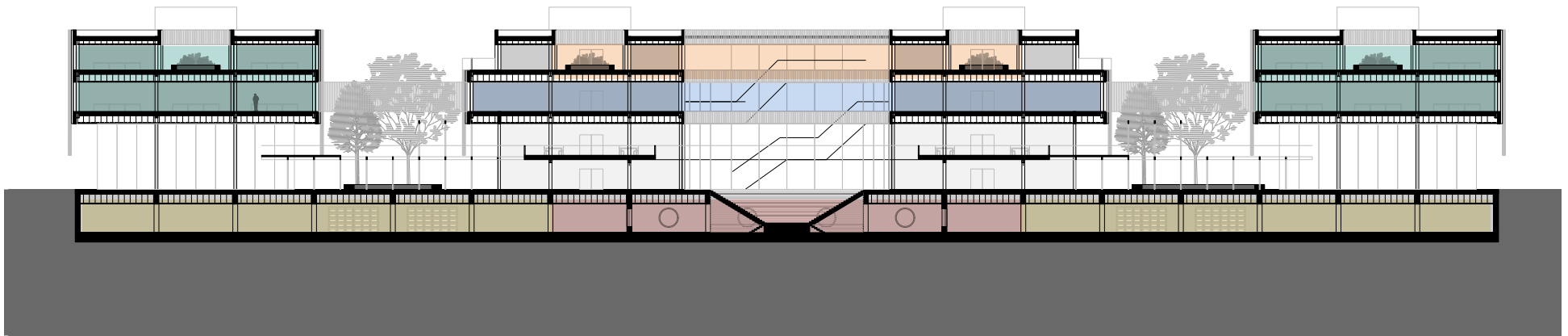


- HOT FLOOR
- HOTEL
- OFFICE
- PUBLIC
- RESEARCH
- FACTORY
- CIRCULATION

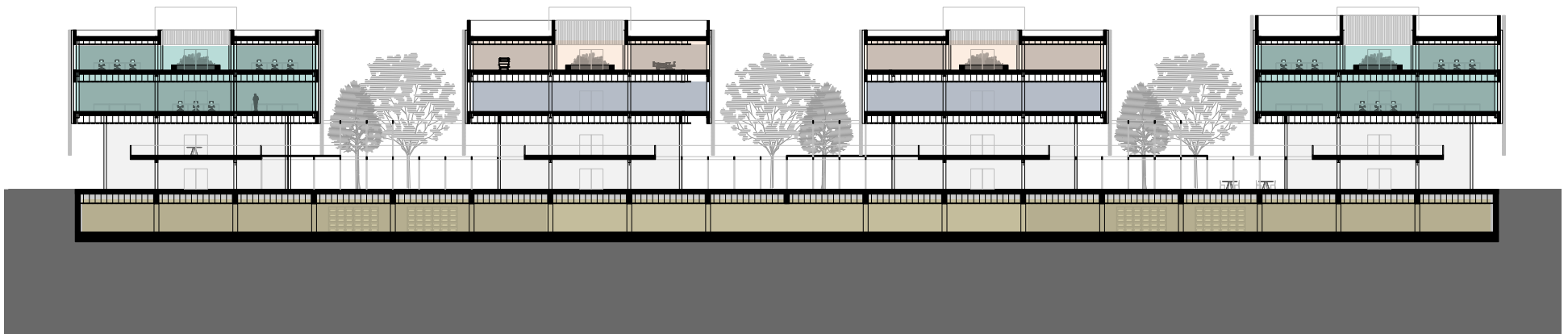
SECTION - MID



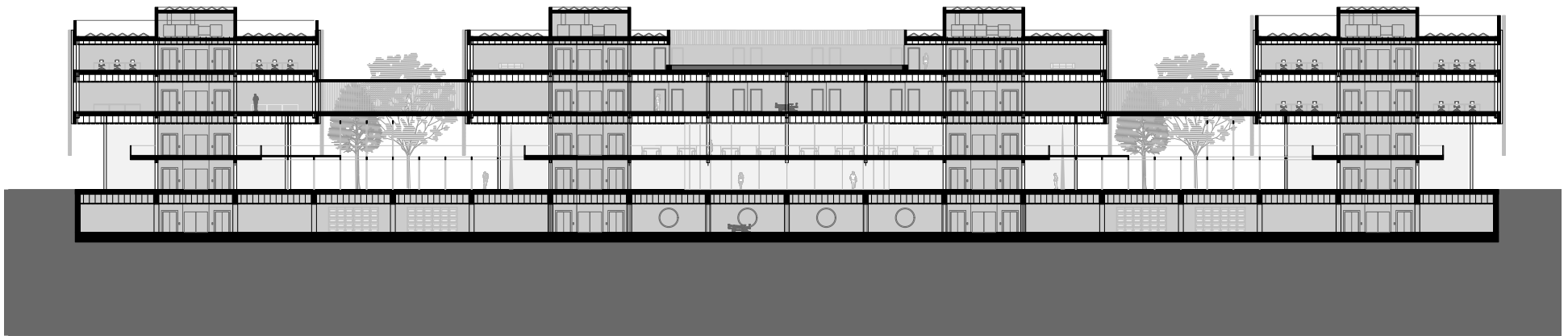
SECTION - MID



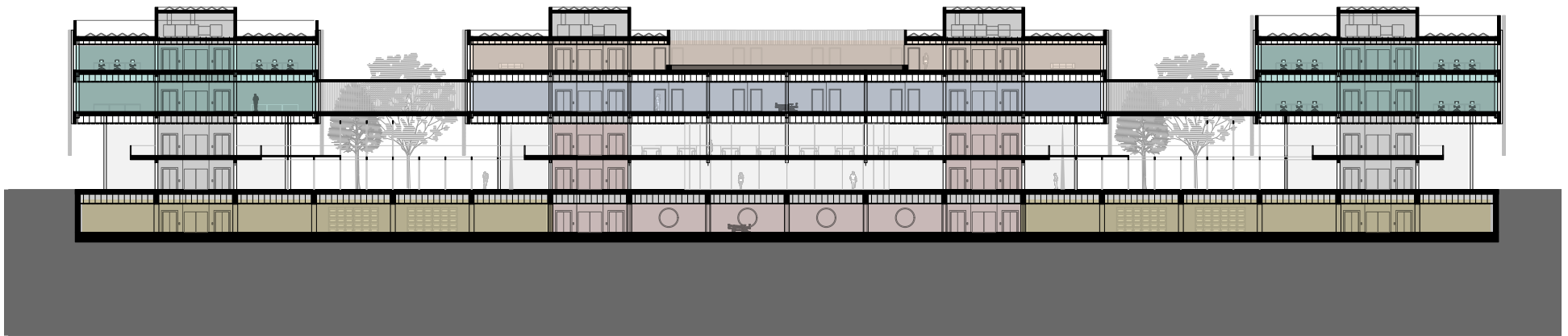
SECTION - SPLIT



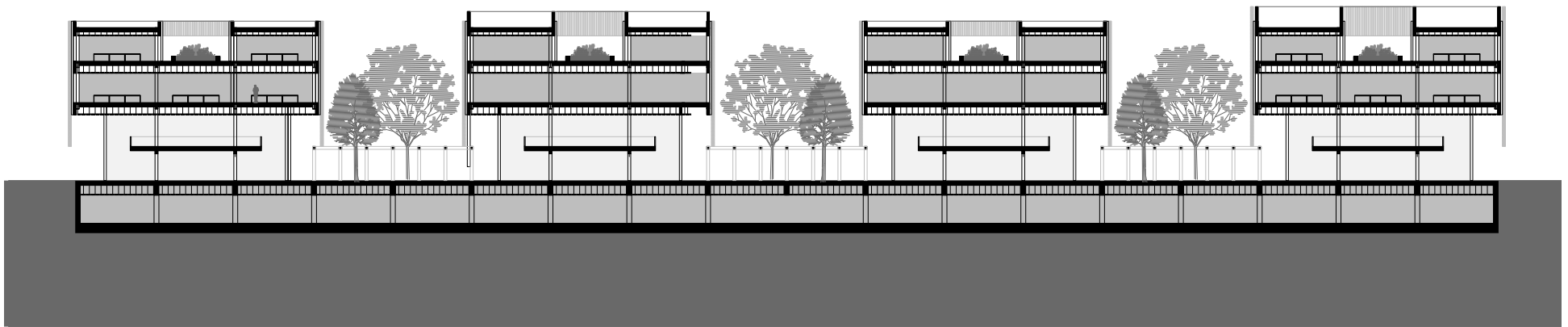
SECTION - CORE



SECTION - CORE



SECTIONS

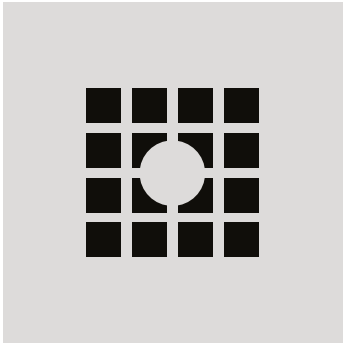


XL - L - M - **S** - XS

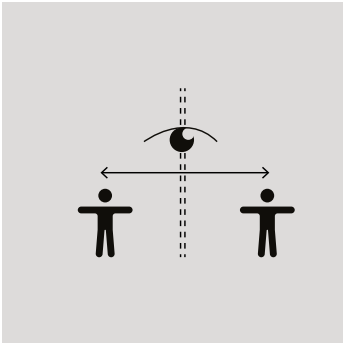
“TRANSITIONS”

BUILDING - ACCESSIBILITY

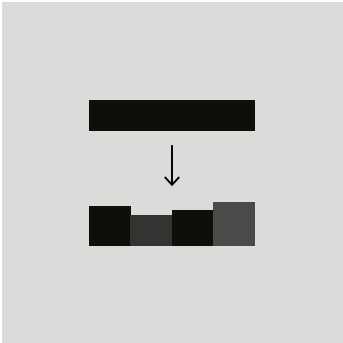
A pattern language: towns, buildings, construction - relevant patterns



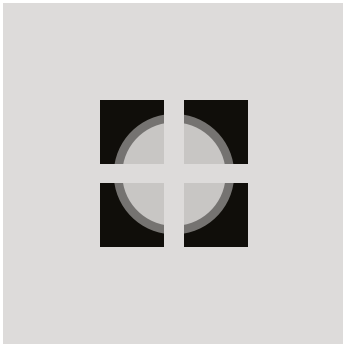
#106 - Positive Outdoor Space



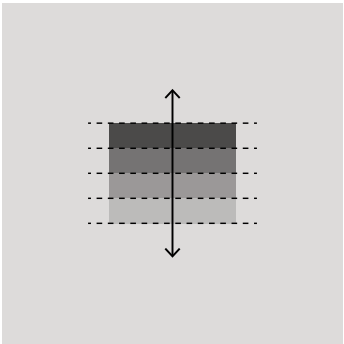
#162 - Street Windows



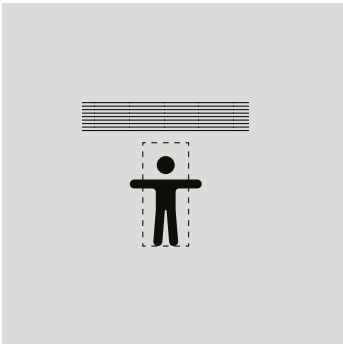
#136 - Building Fronts



#150 - Activity Pockets

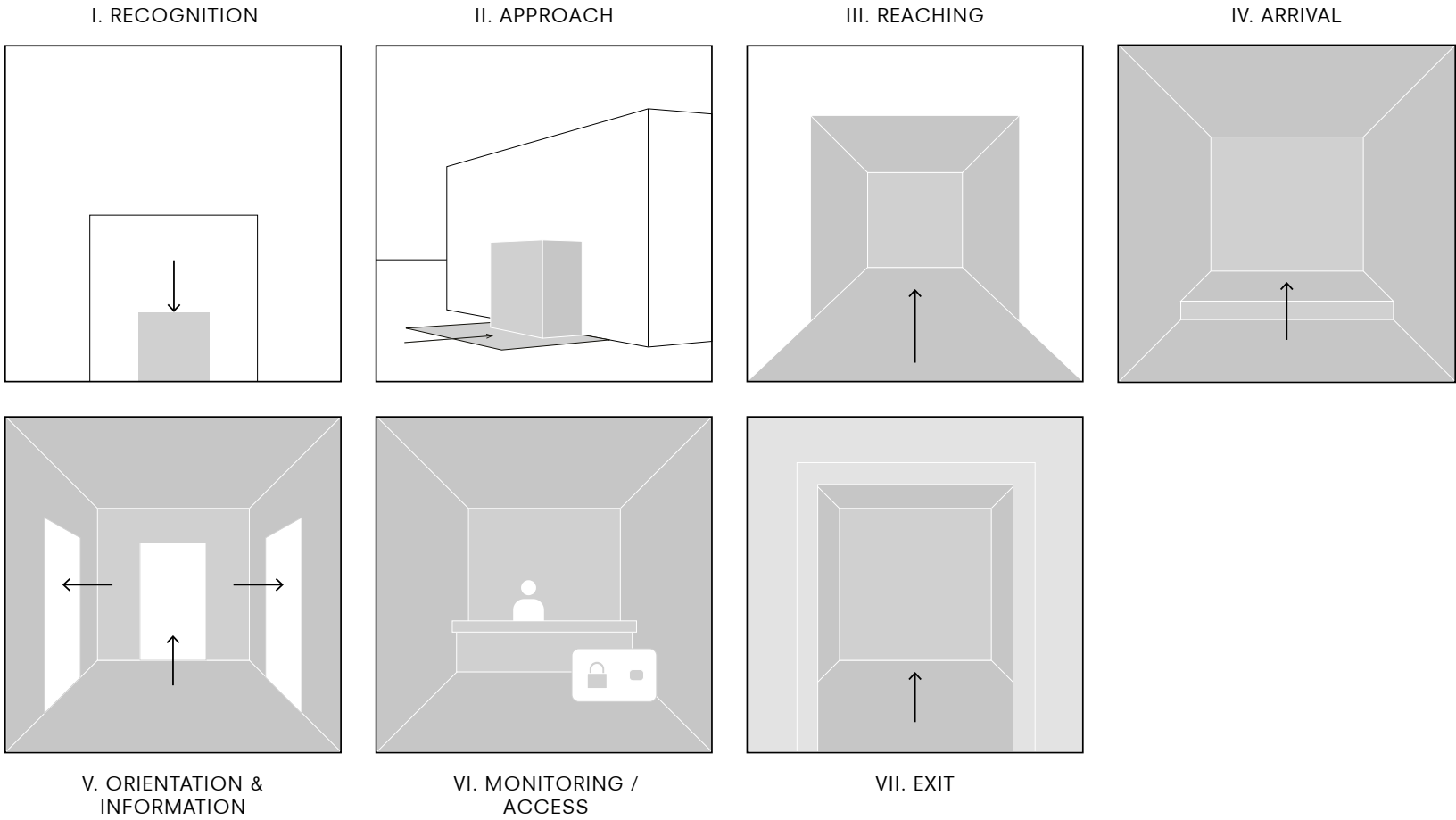


#112 - Entrance Transition



#204 - Human Scale

Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Angel, S. (1977). A pattern language: towns, buildings, construction (Vol. 1, Issue 5). <https://ci.nii.ac.jp/ncid/BA00163982>

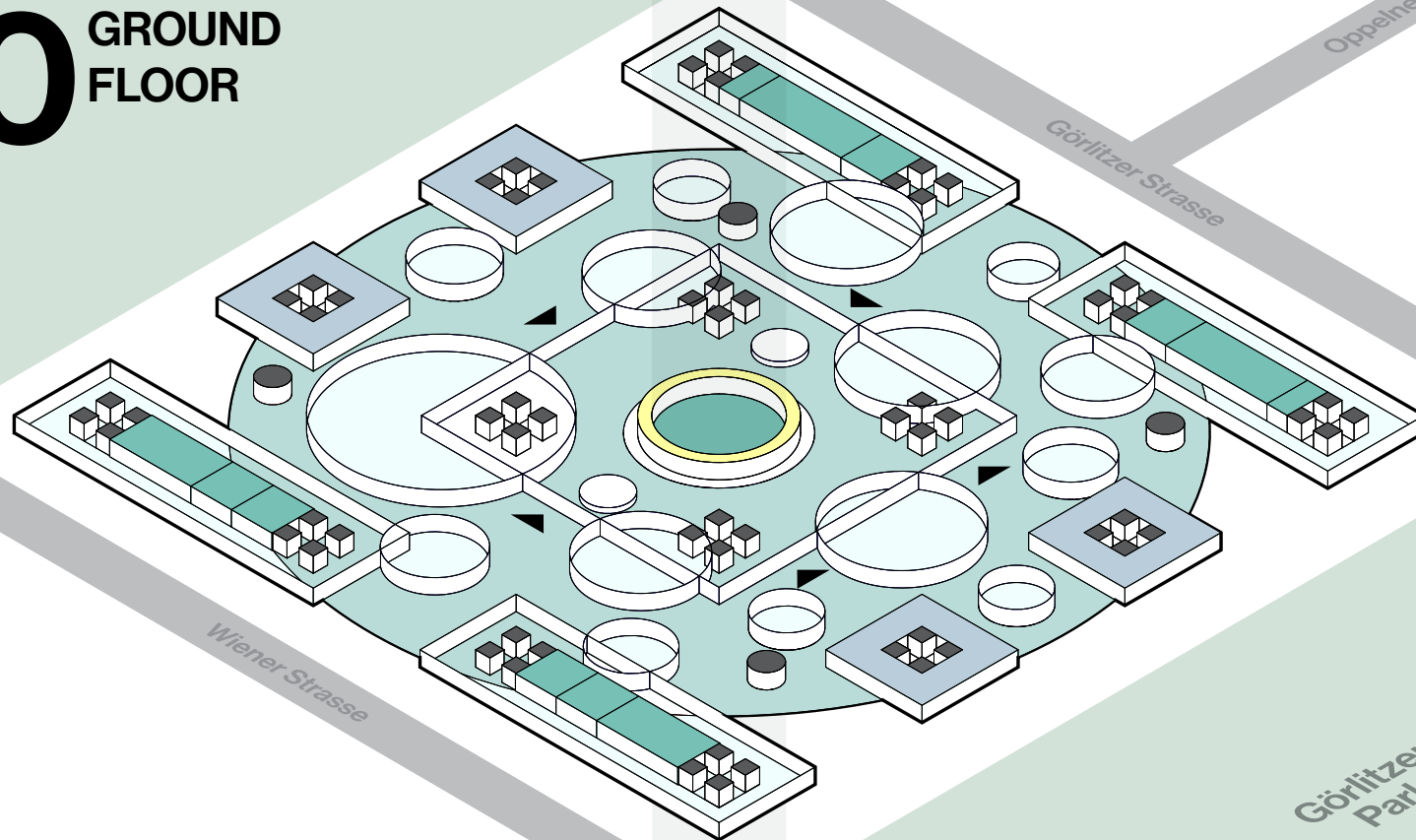


BOETTGER, T. (2014B). THRESHOLD SPACES: TRANSITIONS IN ARCHITECTURE. ANALYSIS AND DESIGN TOOLS. BIRKHÄUSER.

URBAN IMPLEMENTATION



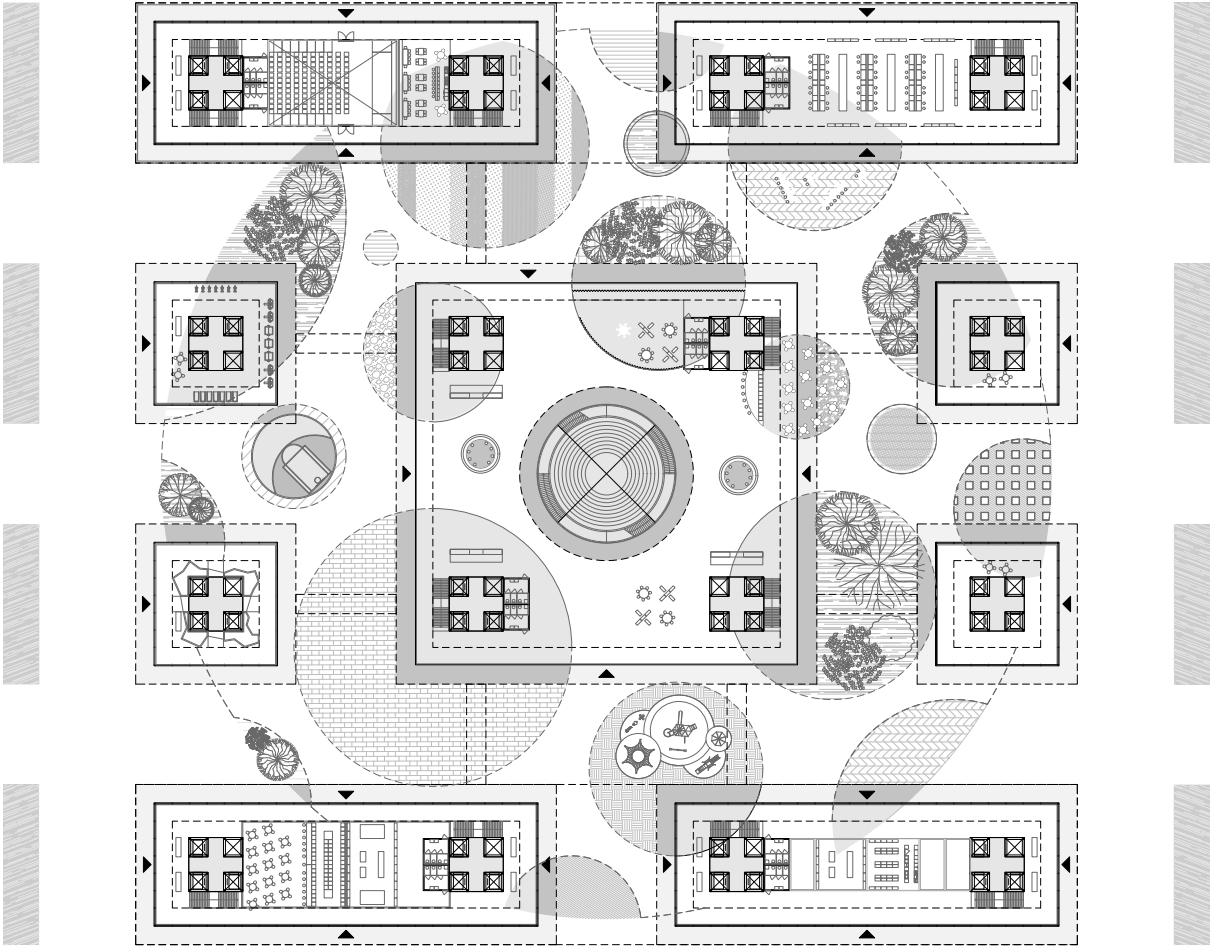
00 GROUND FLOOR



FLOOR PLANS

L00

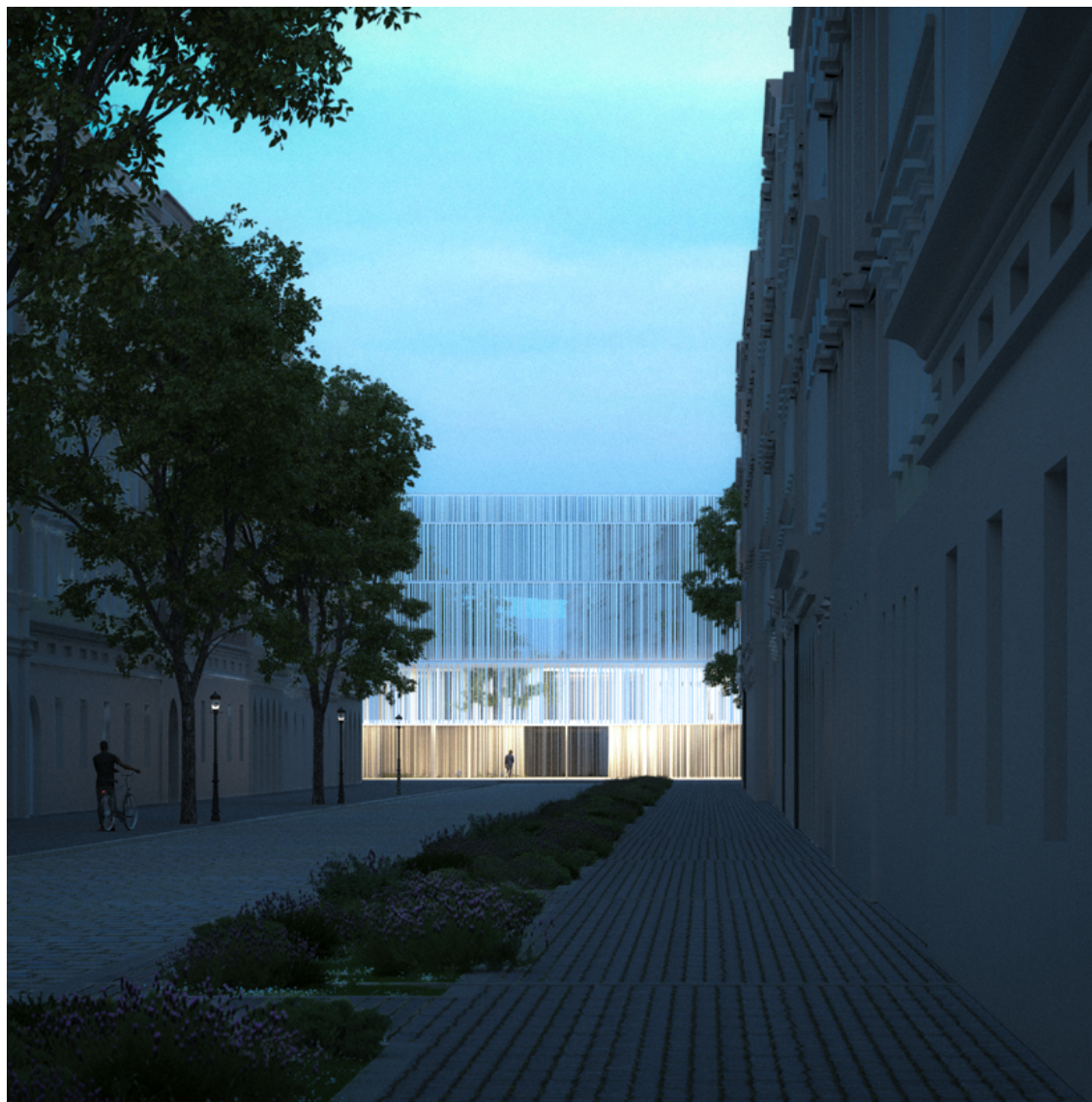
- PROGRAM OVERVIEW
- A - PUBLIC PROGRAM**
- 1 - AMPHITHEATRE
 - 2 - RESTAURANT
 - 3 - CINEMA
 - 4 - GYM
 - 5 - BOULDER GYM
 - 6 - WORKSHOP
 - 7 - SPATI - SHOP
 - 8 - EXHIBITION
 - 9 - HAIR DRESSER
 - 10 - FLOWER KIOSK
 - 11 - MATERIAL HUB
 - 12 - PHARMACY
 - 13 - MED RETAIL
 - 14 - TOILETS
- B - OUTDOOR PROGRAM**
- 1 - MARKET SQUARE
 - 2 - CAFE SQUARE
 - 3 - PLAYGROUND
 - 4 - BASKETBALL COURT
 - 5 - COMMUNITY GARDEN
 - HERBS & VEGETABLES
 - 6 - SKATE PARK
 - 7 - GREENHOUSE
 - 8 - WORKSHOP AREA
 - 9 - ENCLOSED GARDEN
 - 10 - SUNKEN GARDEN
- C - HOSPITAL PROGRAM**
- 1 - CHECK-IN DESK
 - 2 - WAITING AREA

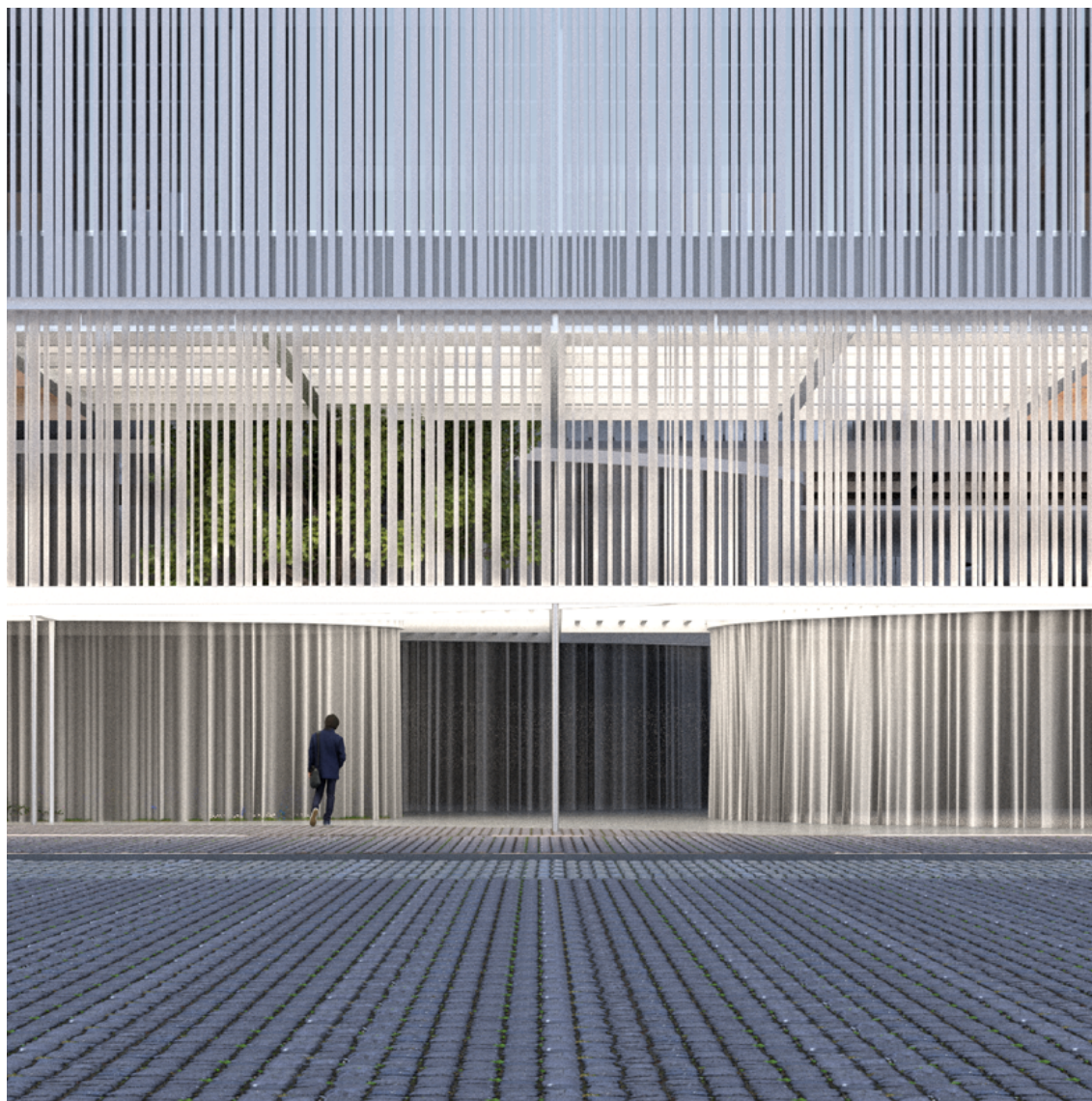


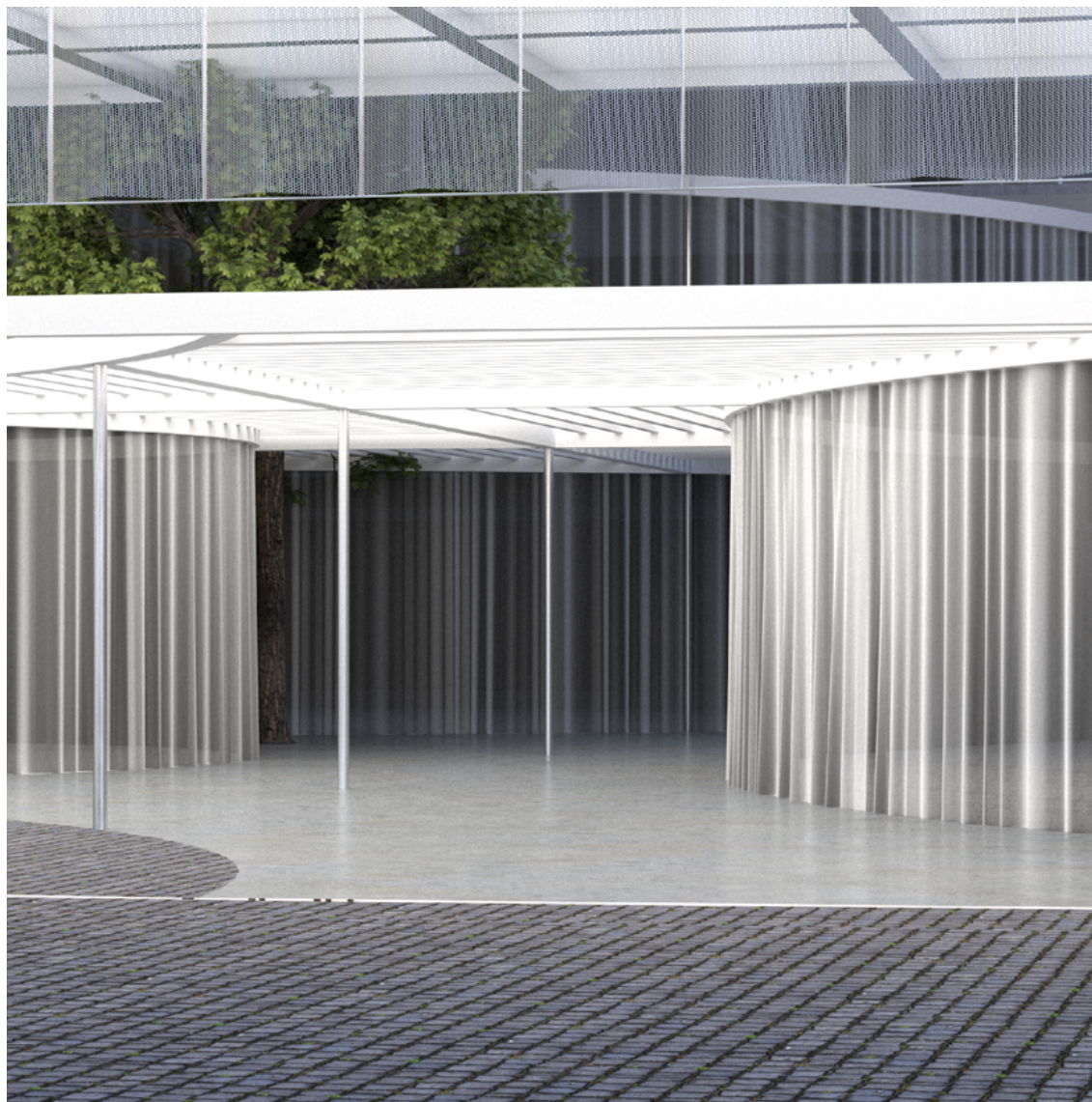
R1_EXTENSION OF THE URBAN FABRIC



R1_EXTENSION OF THE URBAN FABRIC

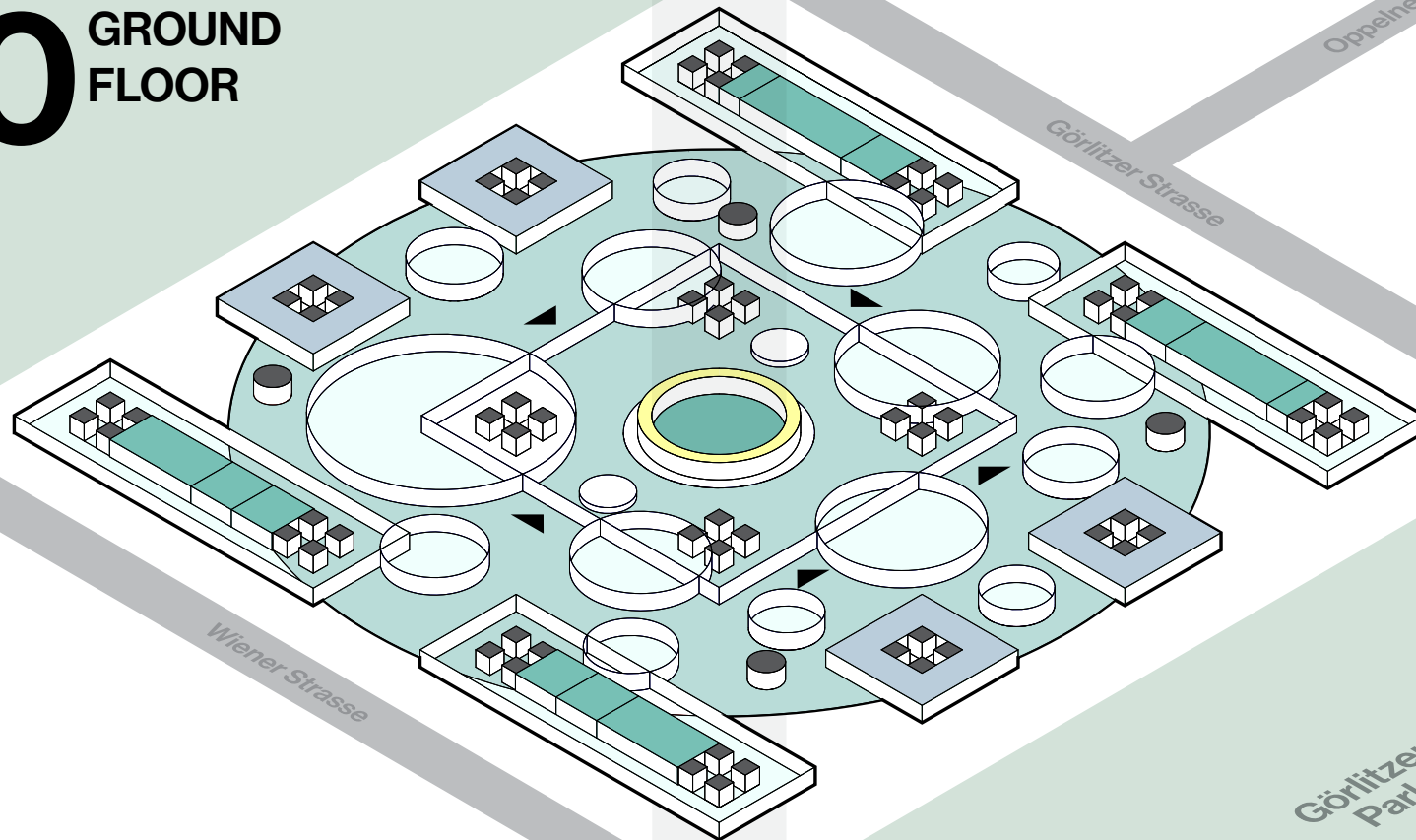




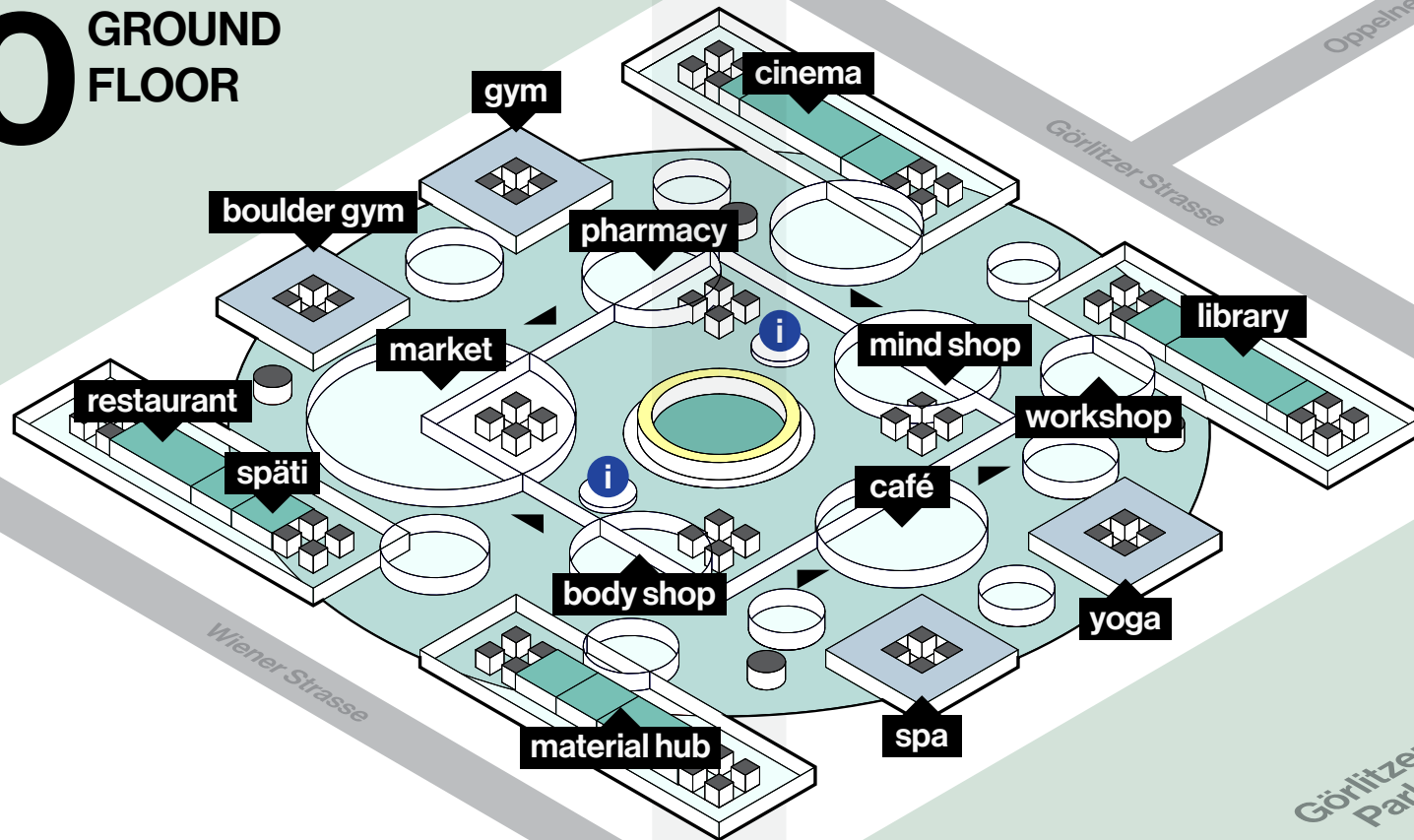




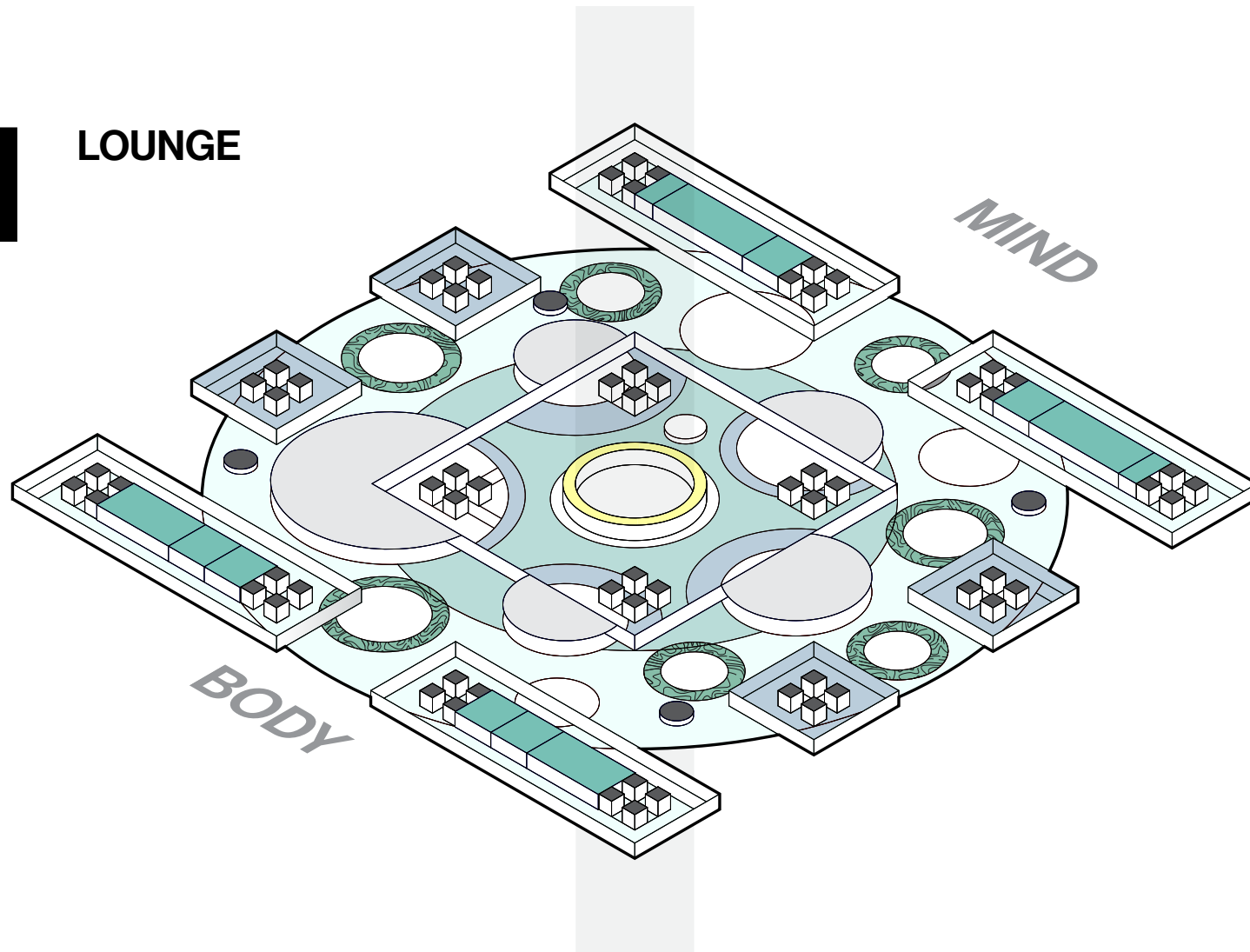
00 GROUND FLOOR



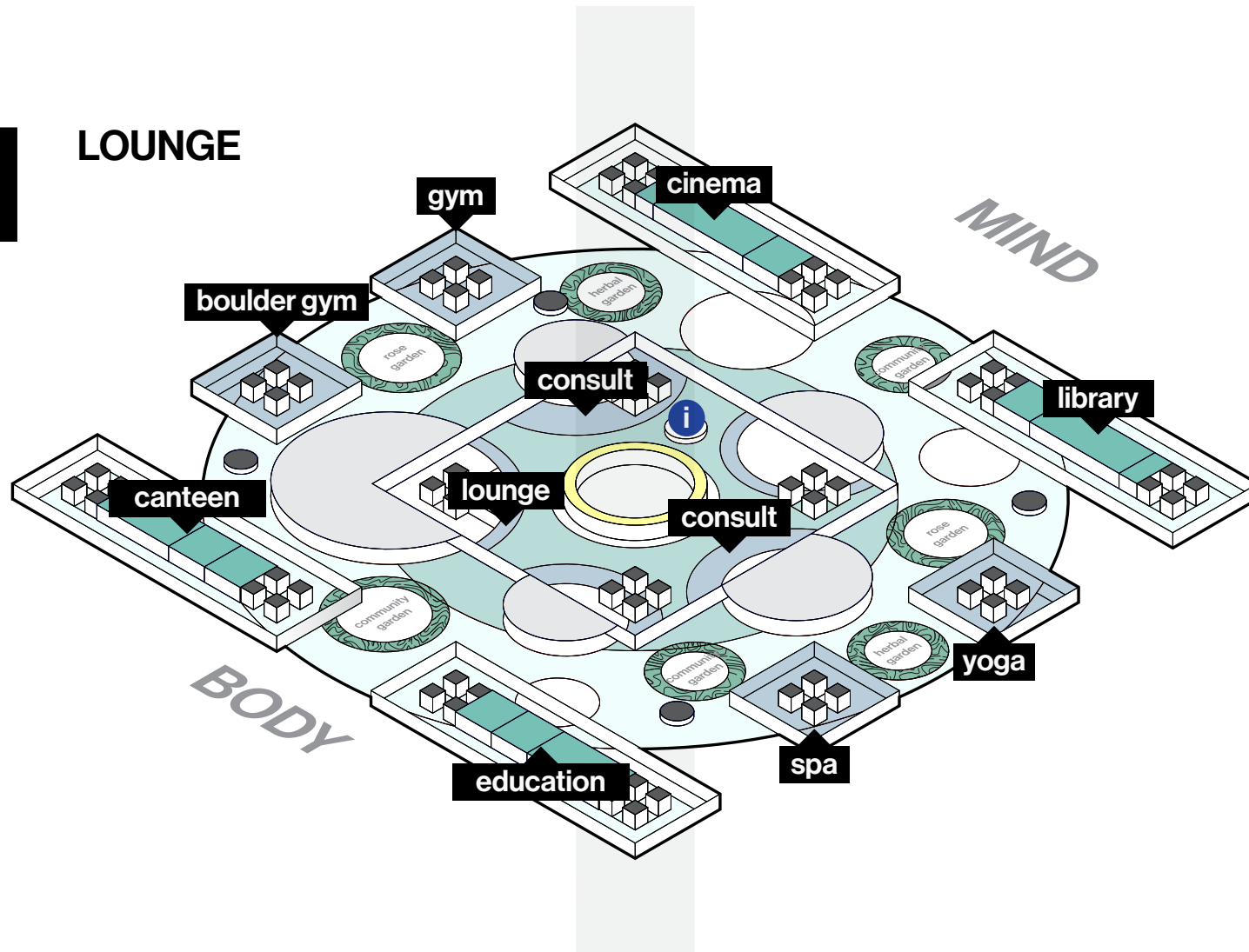
00 GROUND FLOOR



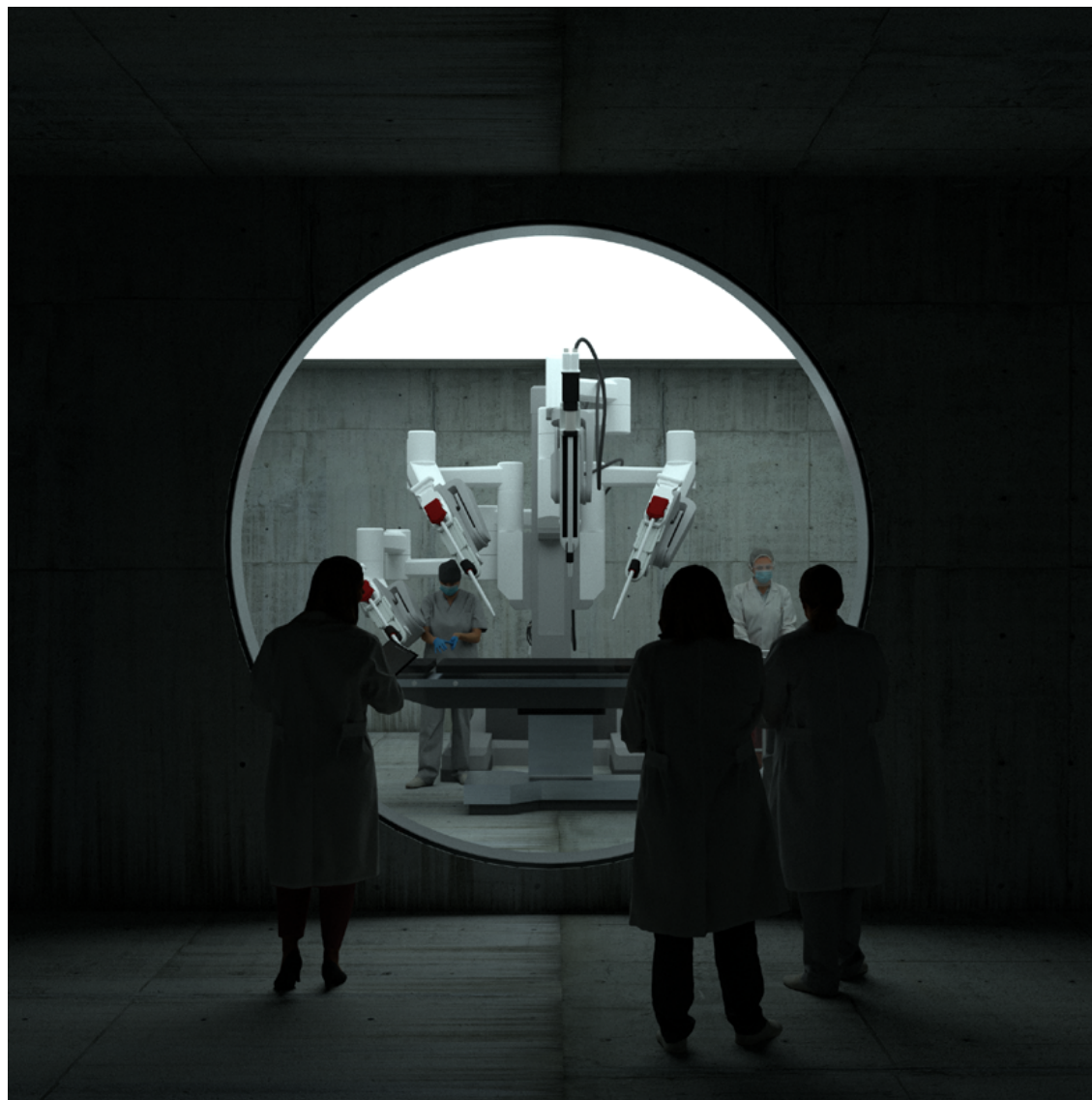
01 LOUNGE



01 LOUNGE











R1_EXTENSION OF THE URBAN FABRIC



XL - L - M - S - XS

“DETAILS”

Biomedical Waste Production in Hospitals

Hospitals, including AIIMS Delhi, generate a significant amount of waste from their medical activities. In 2018, AIIMS Delhi produced 74,500 kilograms of waste per month, or close to 2,500 kilograms each day. This included:



**24,000 kilograms
of yellow waste**



**23,500 kilograms
of plastic and rubber
waste**

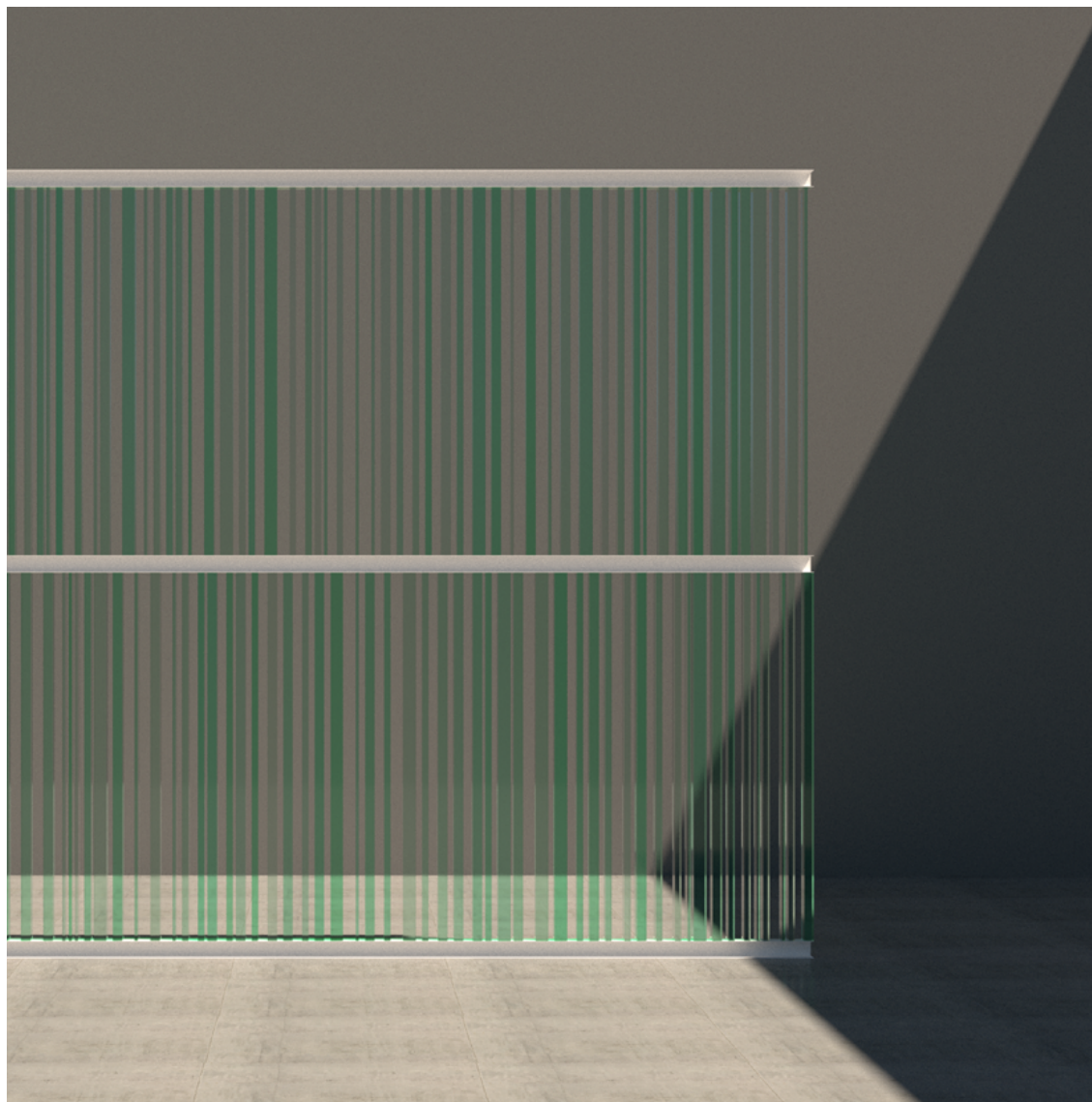


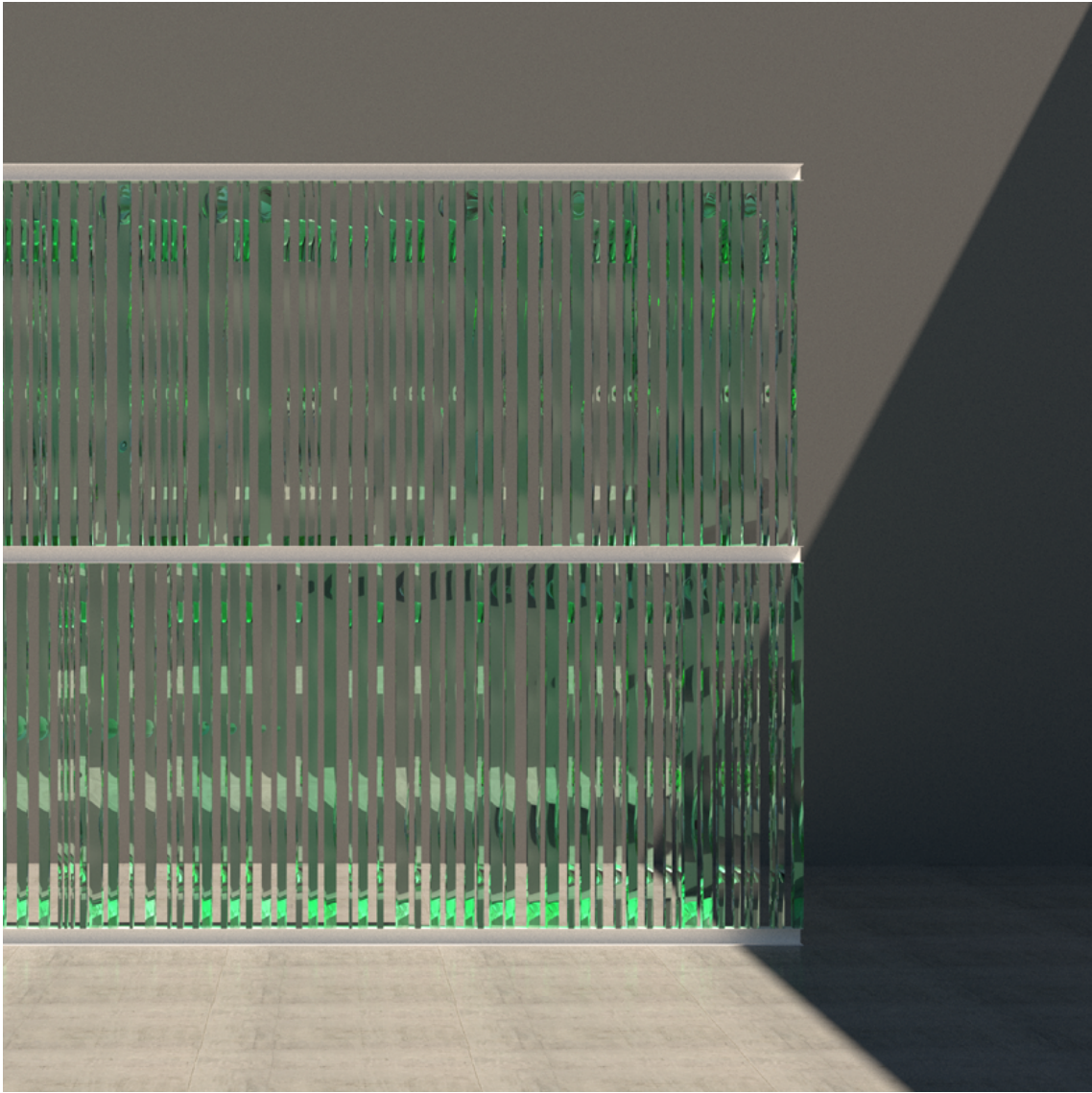
**500 kilograms
of sharp waste**

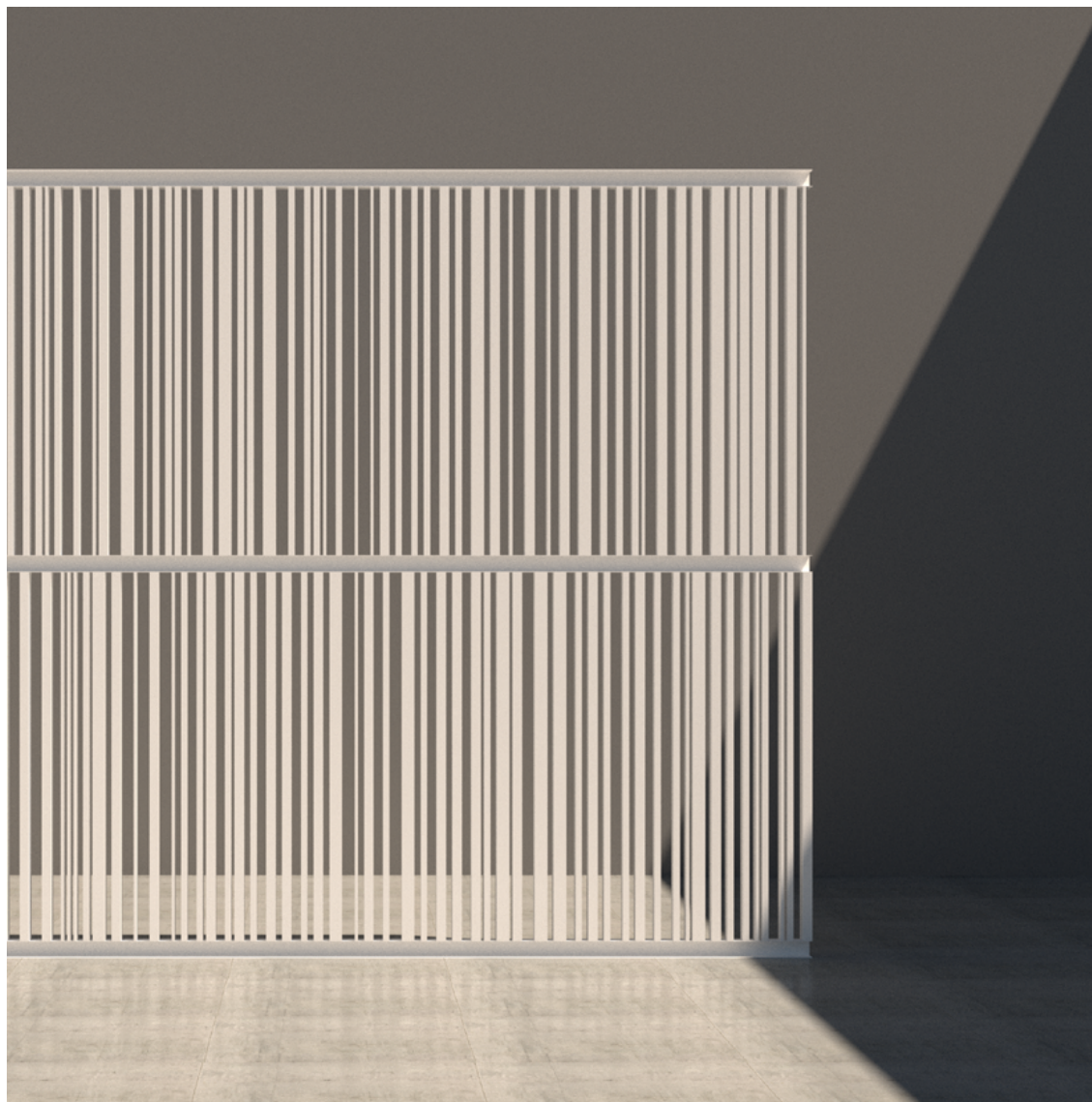


**26,200 kilograms
of glass waste**











ANNE HOLTROP - CAST GLASS TESTS

RECYCLED GLASS PANELS



RECYCLED GLASS PANELS

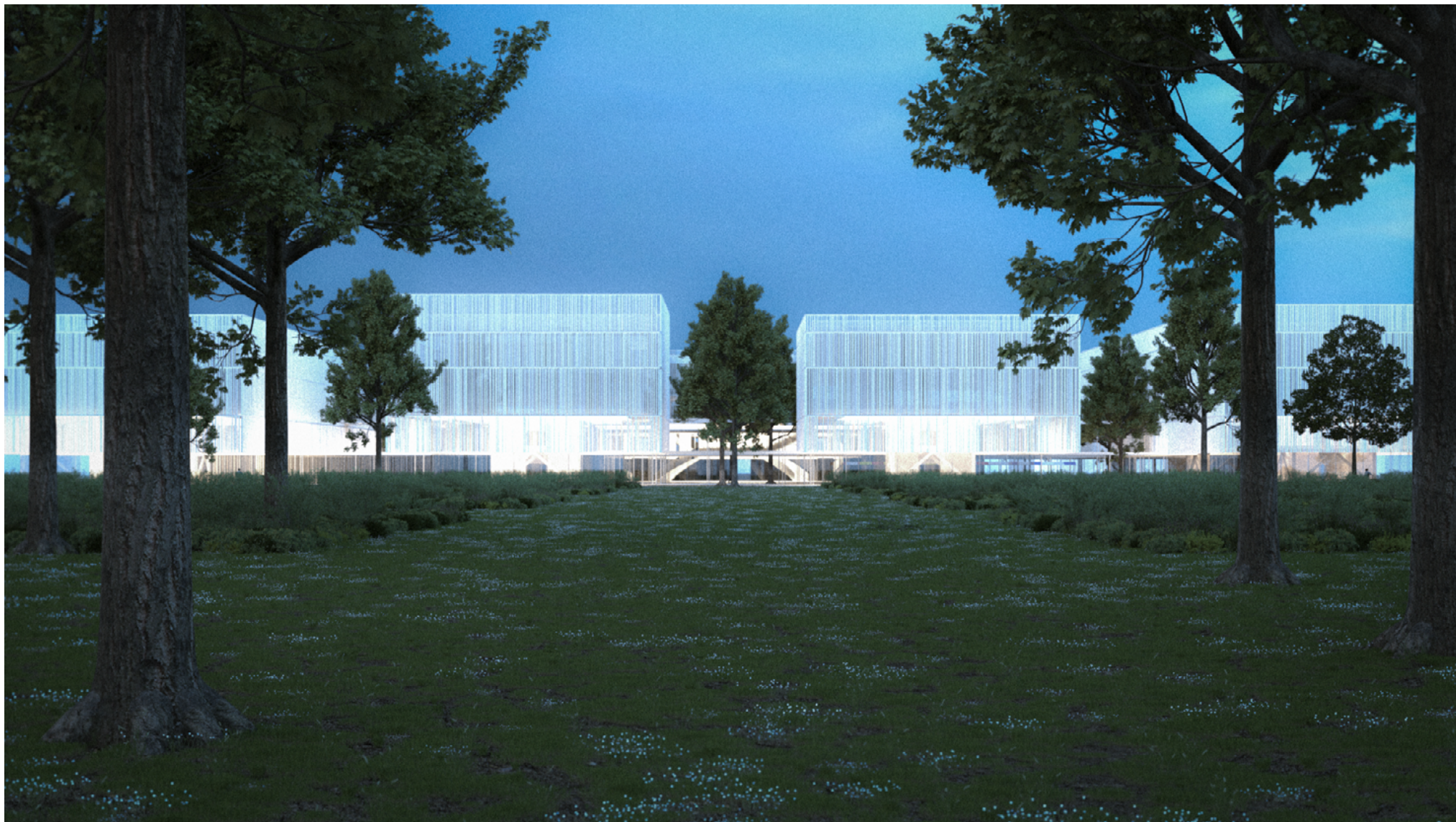
IMPRESSION



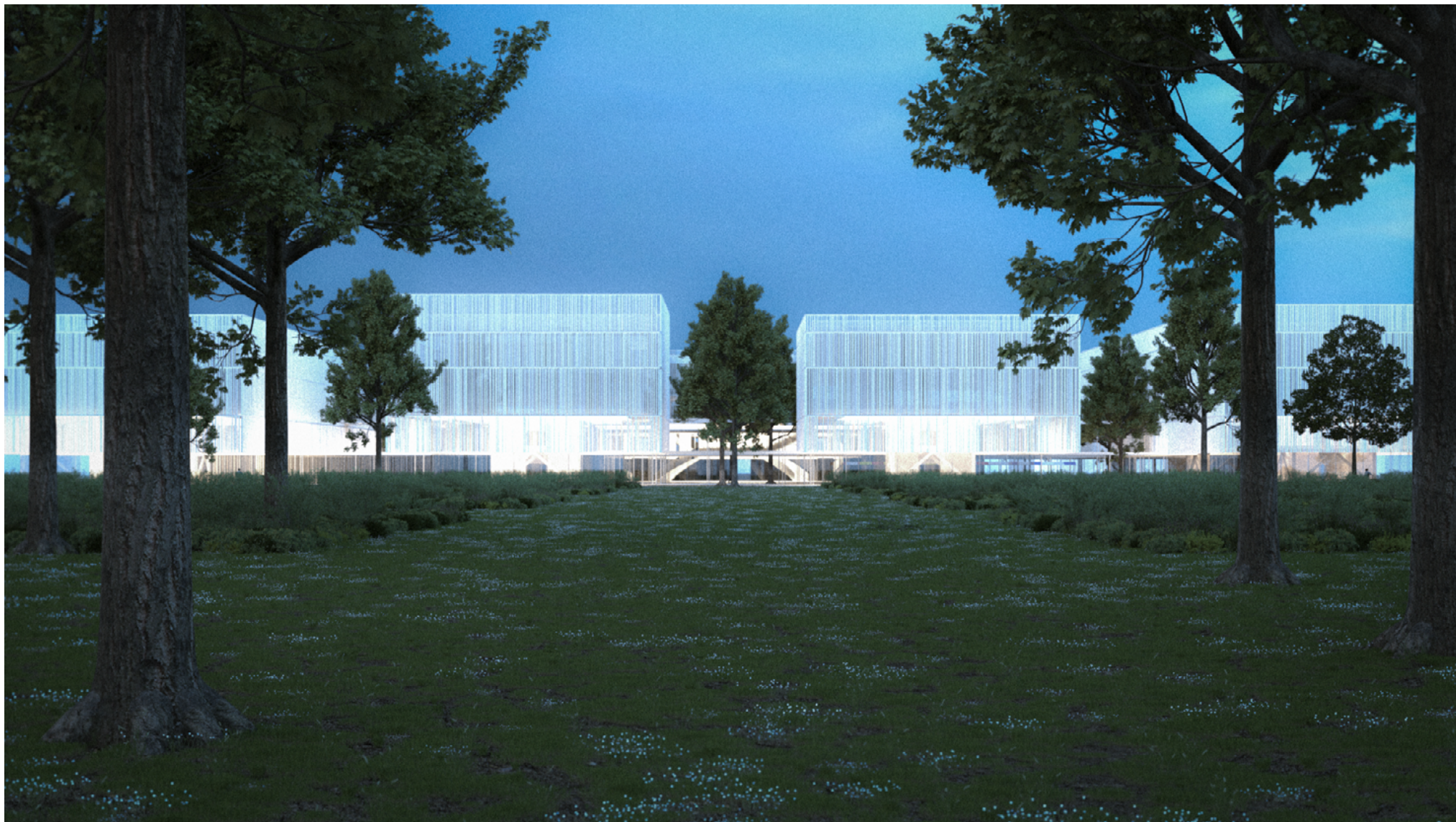
IMPRESSION













R2_INTERSECTION

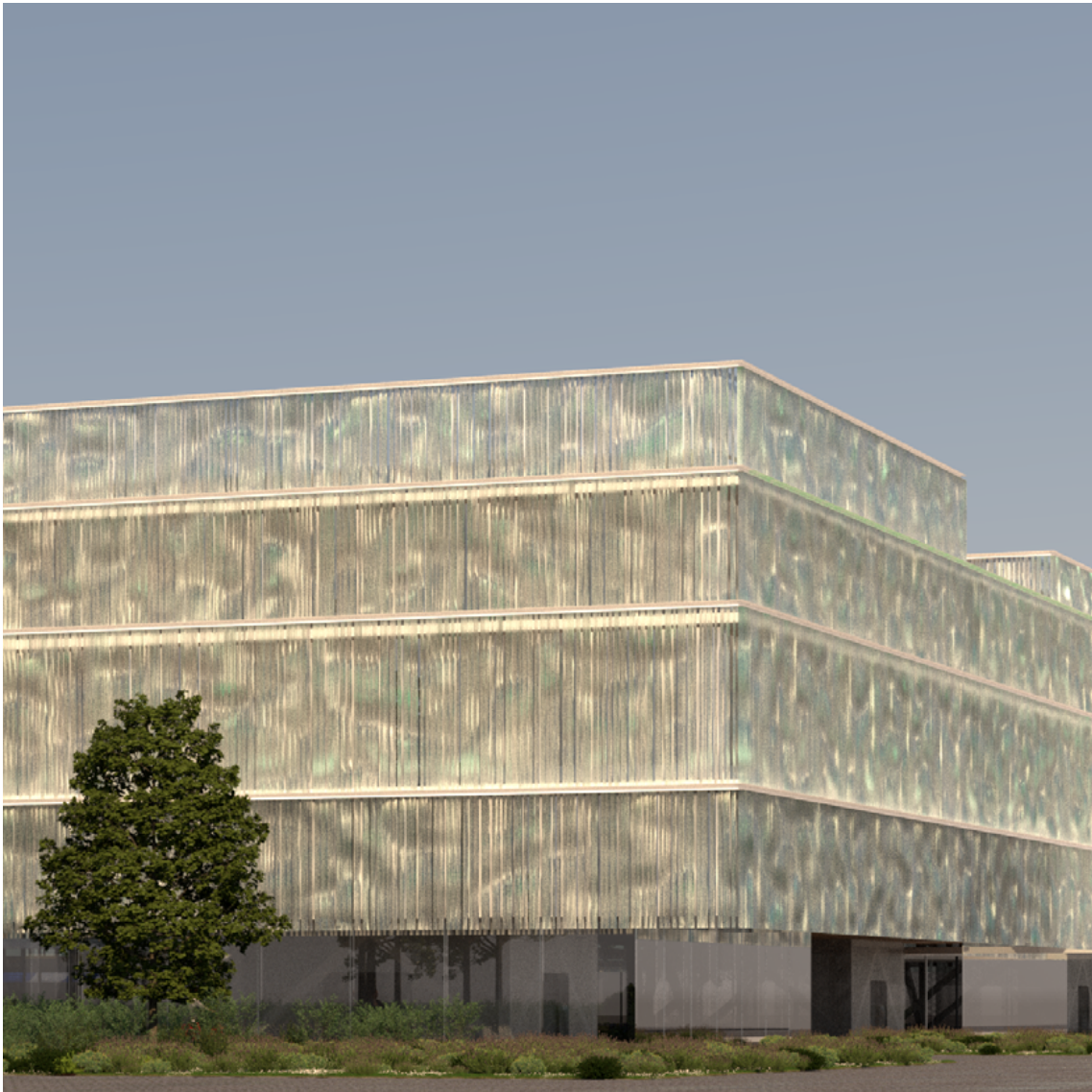


R2_INTERSECTION





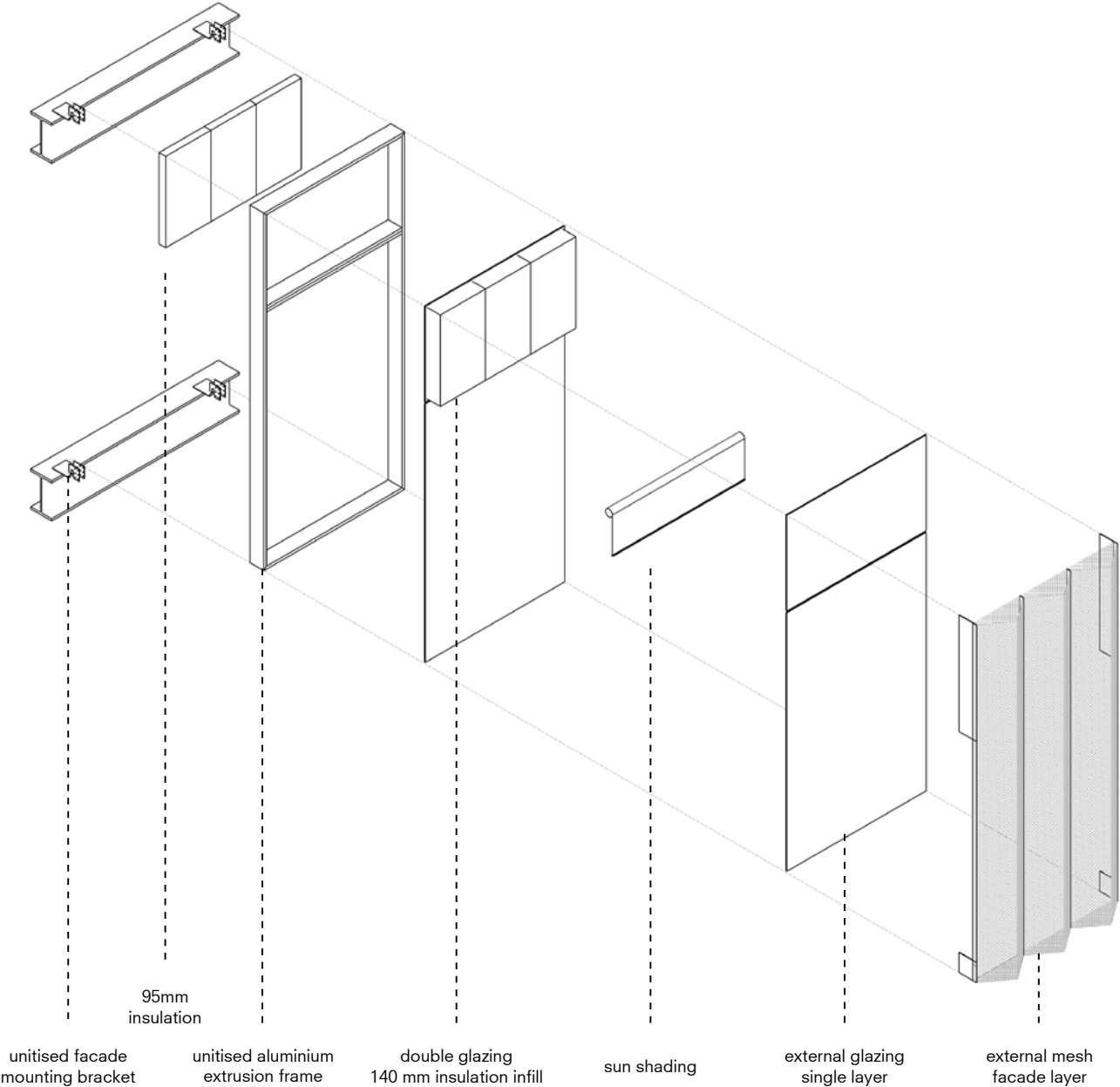
IMPRESSION



IMPRESSION



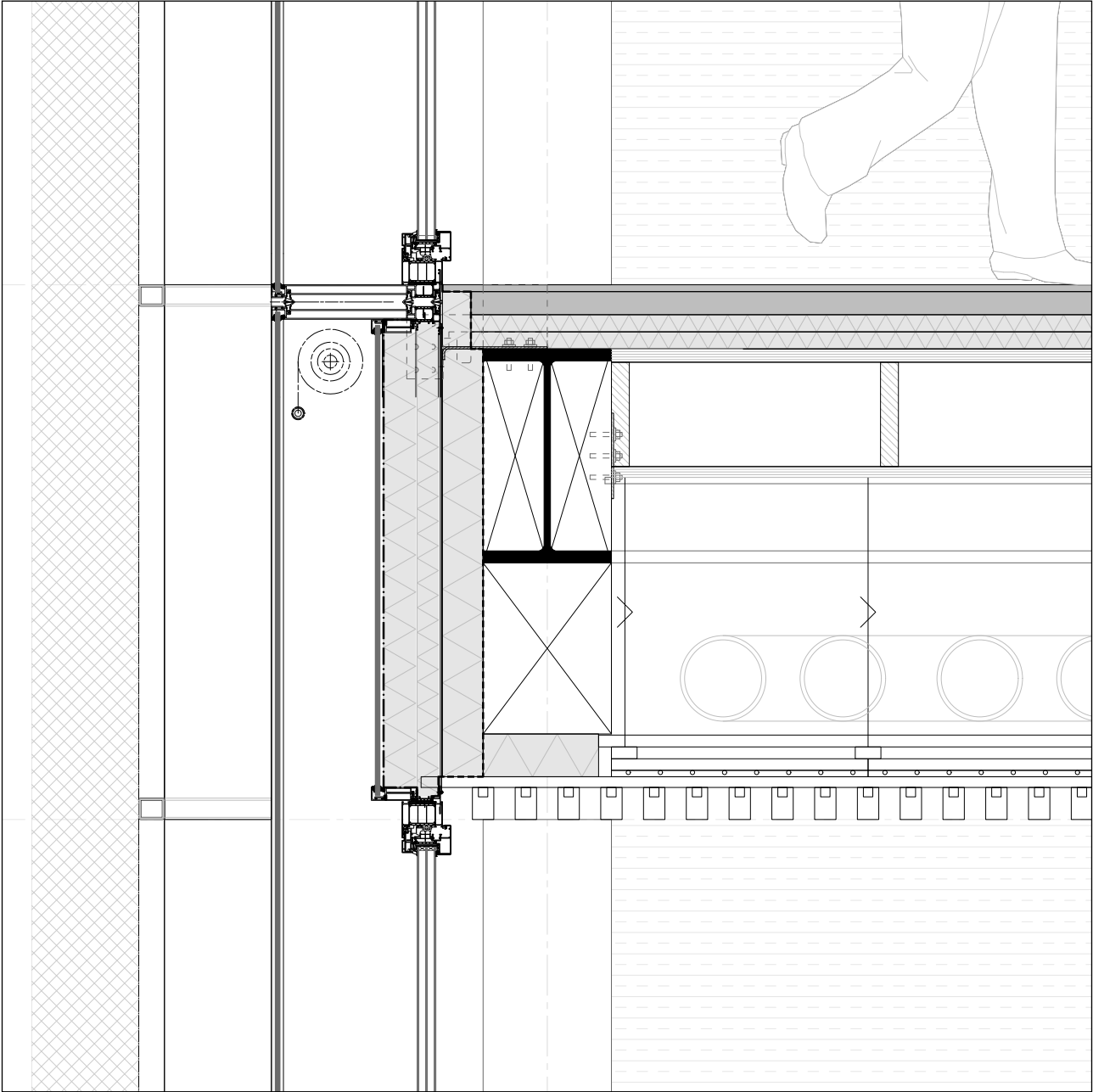
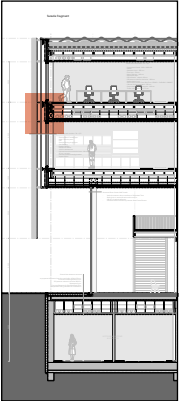
UNITISED FACADE MODULES



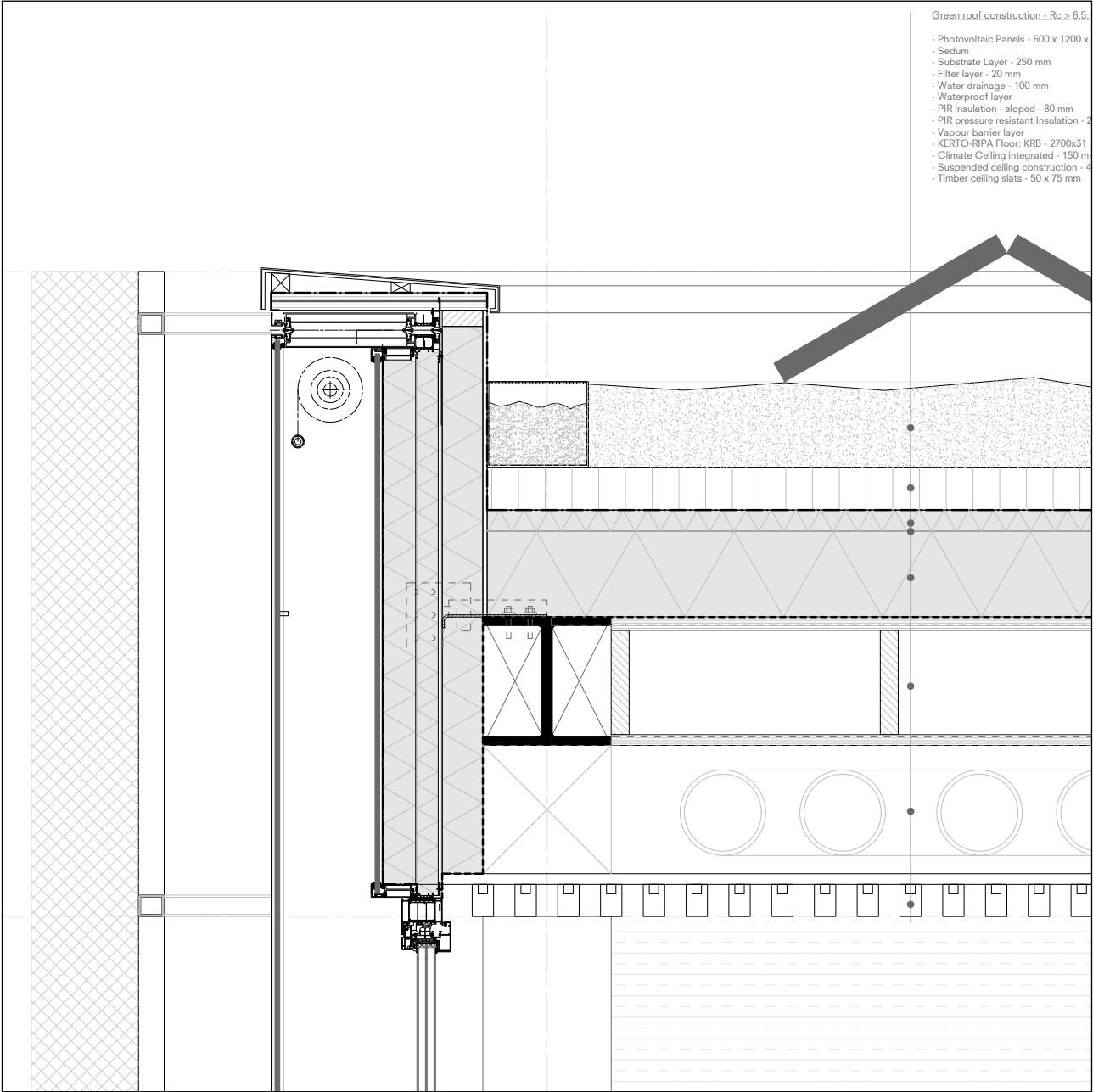
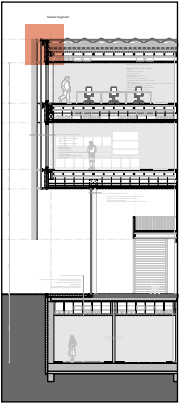
Architectural section drawing of a building, showing multiple levels and structural details. The drawing includes a vertical scale on the left, ranging from 0.00 to 4.00 meters. Key components and annotations include:

- Ground Floor Structure:**
 - on proposed old piers from the north side of Bathy 12 m
 - Concrete column (cylindrical) type
 - PM (proposed) column (cylindrical) 200 mm
 - Concrete Reinforcement in the form of Reinforced Concrete with 800 mm reinforcement
- Mezzanine Level:**
 - Vertical concrete structure - No. 1 (B.1)
 - Concrete Reinforcement (cylindrical) type
 - PM (proposed) column (cylindrical) 200 mm
 - Concrete Reinforcement in the form of Reinforced Concrete with 800 mm reinforcement
- Other Levels and Spaces:**
 - Ground Floor Structure - No. 1 (B.1)
 - Concrete Reinforcement (cylindrical) type
 - PM (proposed) column (cylindrical) 200 mm
 - Concrete Reinforcement in the form of Reinforced Concrete with 800 mm reinforcement
 - Vertical concrete structure - No. 1 (B.1)
 - Concrete Reinforcement (cylindrical) type
 - PM (proposed) column (cylindrical) 200 mm
 - Concrete Reinforcement in the form of Reinforced Concrete with 800 mm reinforcement

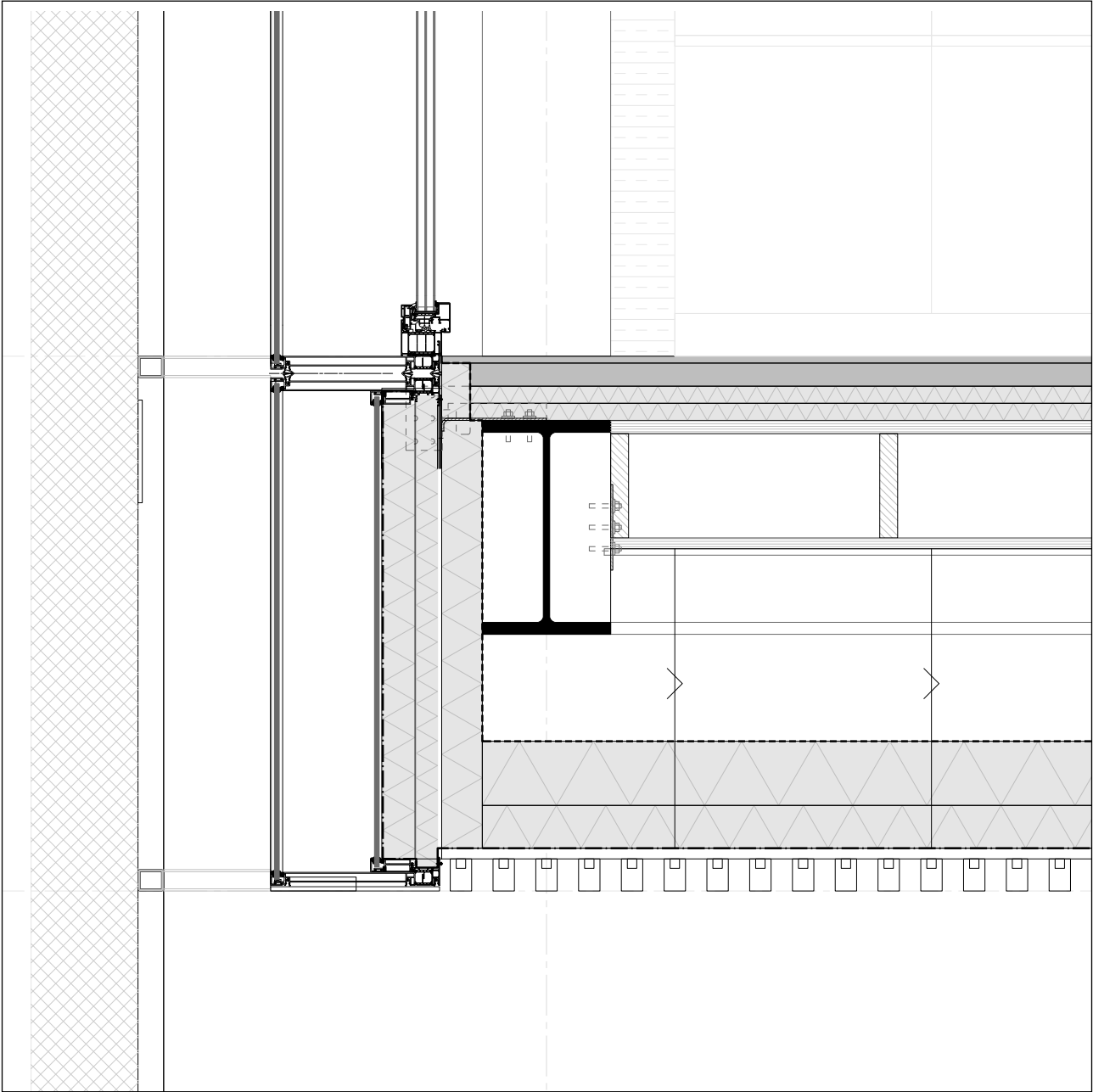
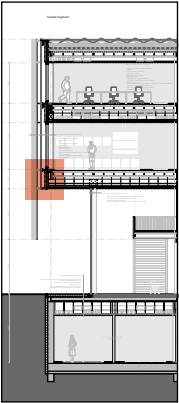
FACADE DETAILS



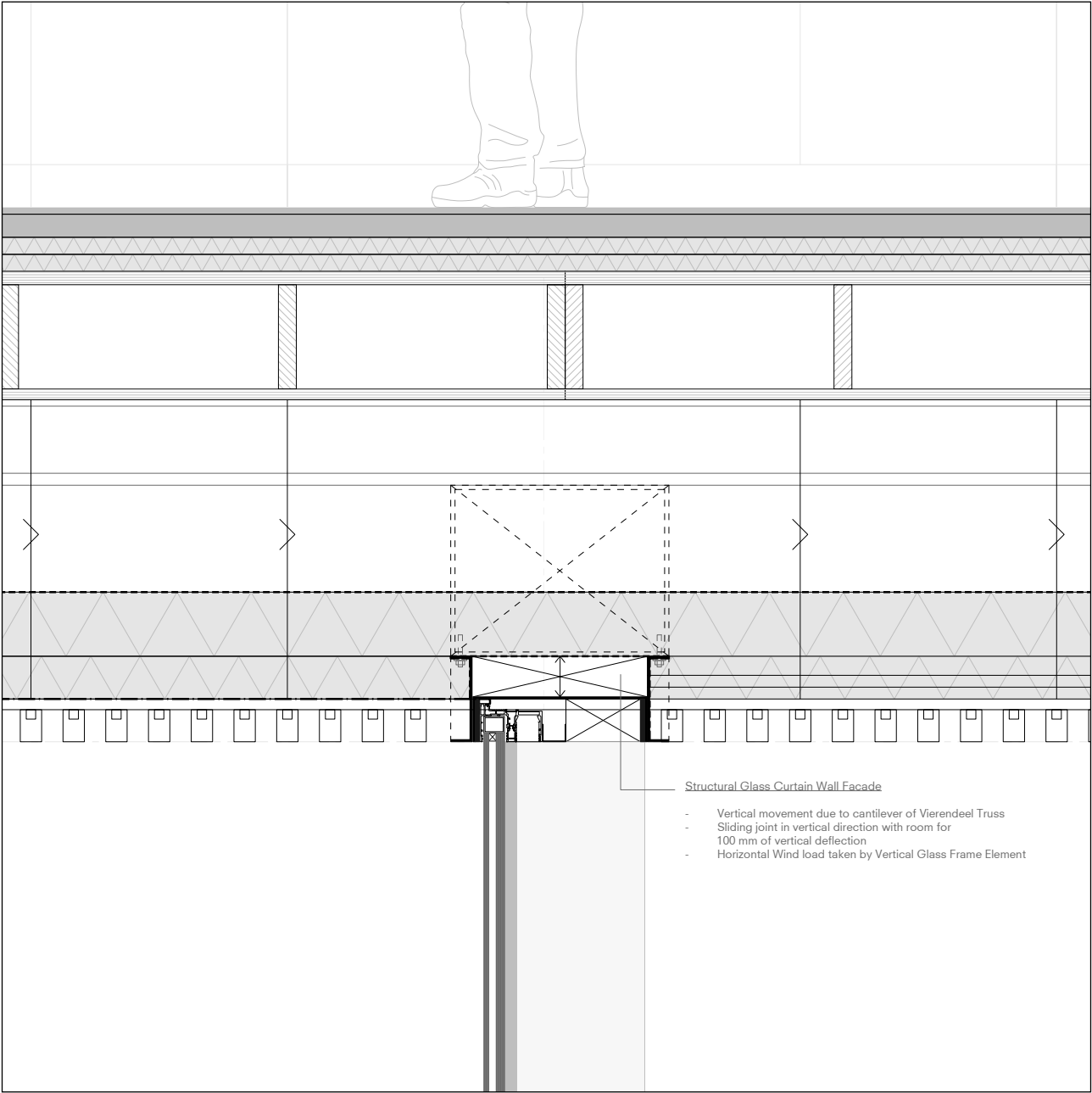
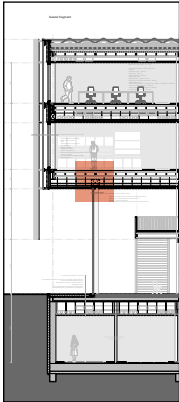
FACADE DETAILS



FACADE DETAILS



FACADE DETAILS

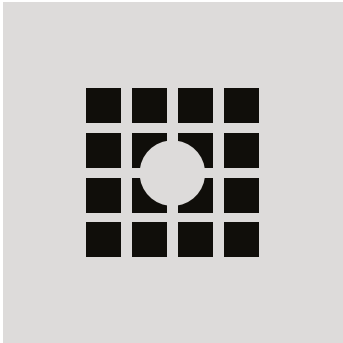


- Structural Glass Curtain Wall Facade
- Vertical movement due to cantilever of Vierendeel Truss
 - Sliding joint in vertical direction with room for 100 mm of vertical deflection
 - Horizontal Wind load taken by Vertical Glass Frame Element

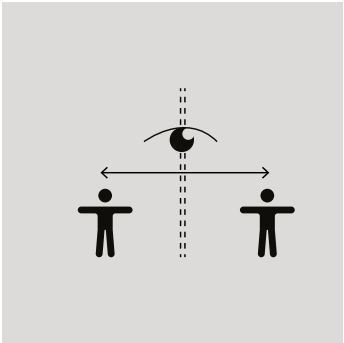
INSIDE - OUTSIDE TRANSITION?

BUILDING - ACCESSIBILITY

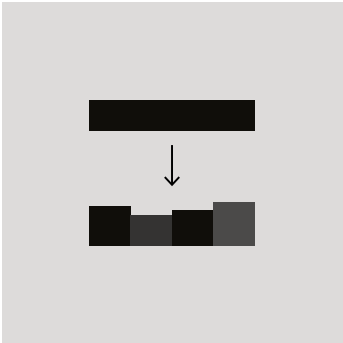
A pattern language: towns, buildings, construction - relevant patterns



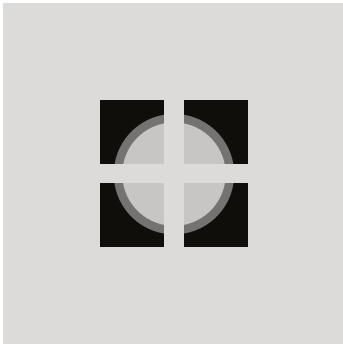
#106 - Positive Outdoor Space



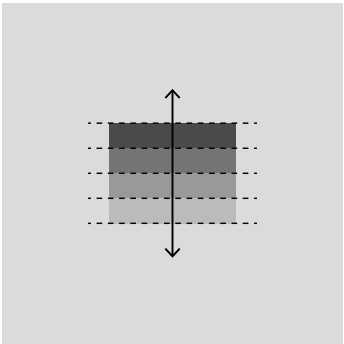
#162 - Street Windows



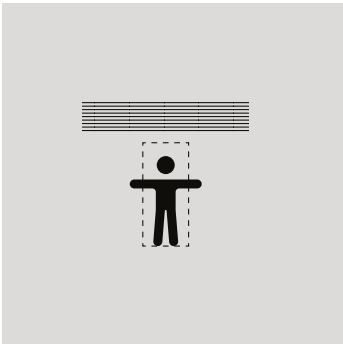
#136 - Building Fronts



#150 - Activity Pockets



#112 - Entrance Transition

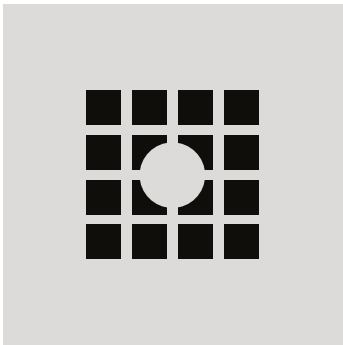


#204 - Human Scale

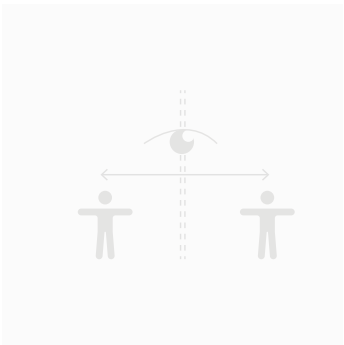
Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Angel, S. (1977). A pattern language: towns, buildings, construction (Vol. 1, Issue 5). <https://ci.nii.ac.jp/ncid/BA00163982>

BUILDING - ACCESSIBILITY

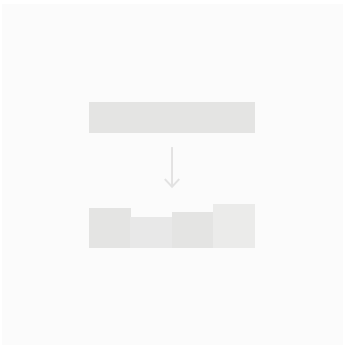
A pattern language: towns, buildings, construction - relevant patterns



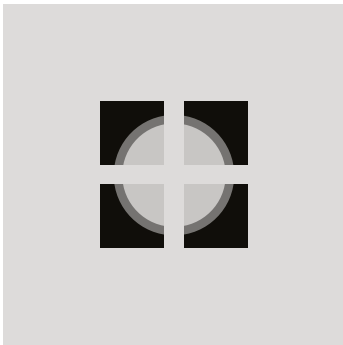
#106 - Positive Outdoor Space



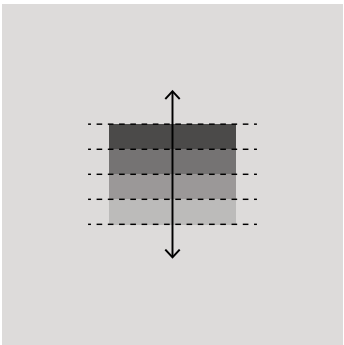
#162 - Street Windows



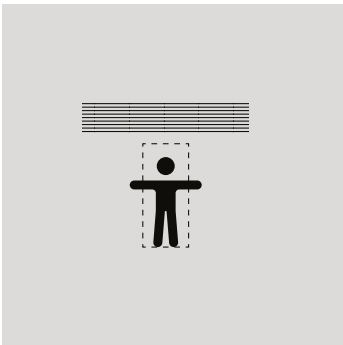
#136 - Building Fronts



#150 - Activity Pockets



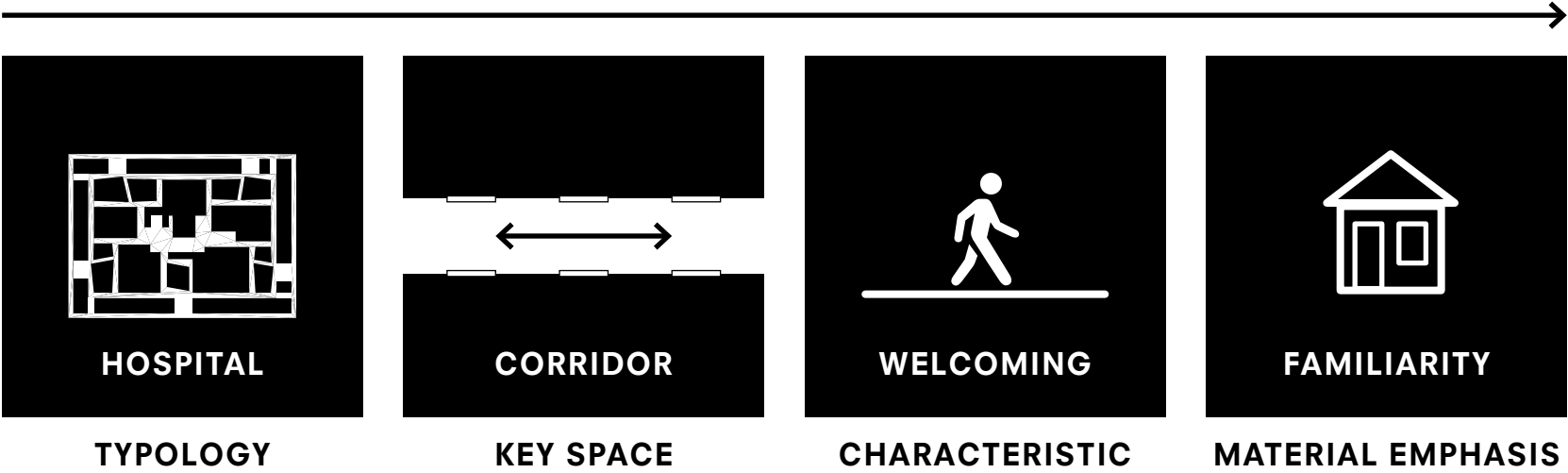
#112 - Entrance Transition



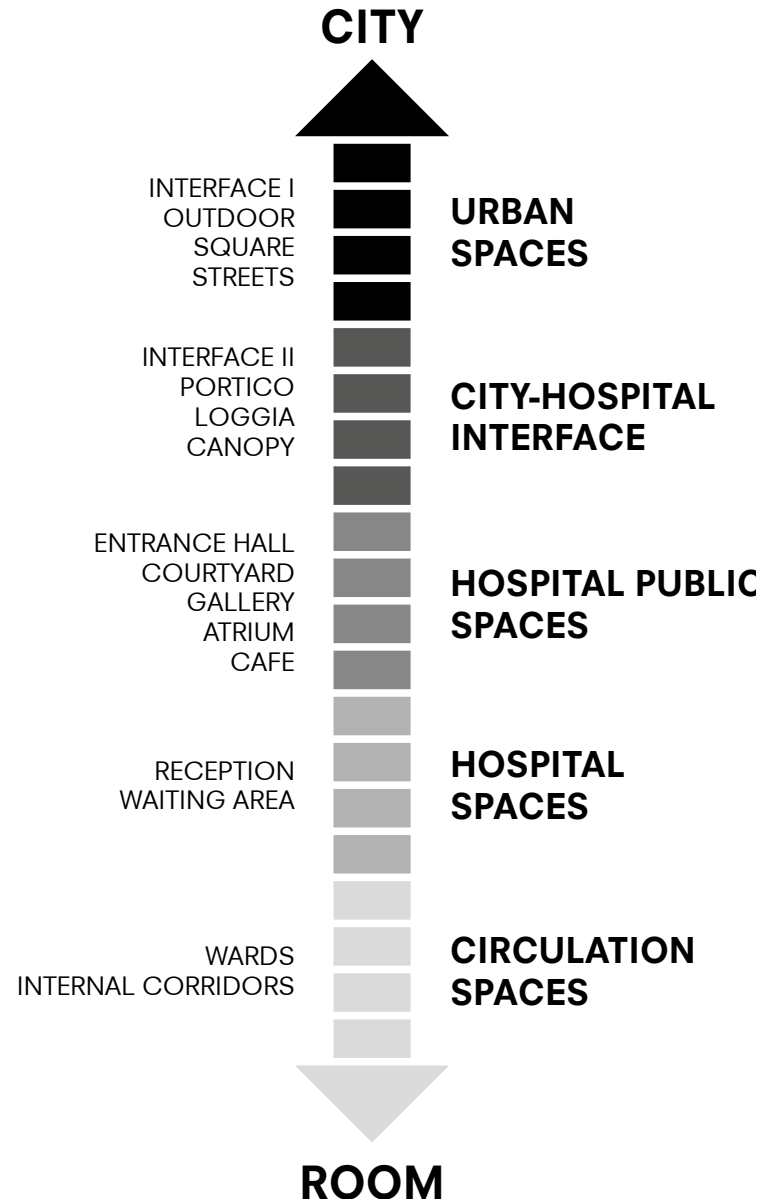
#204 - Human Scale

Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Angel, S. (1977). A pattern language: towns, buildings, construction (Vol. 1, Issue 5). <https://ci.nii.ac.jp/ncid/BA00163982>

REDEFINING PUBLIC SPACE



PUBLIC SPACE AS TRANSITION SPACE

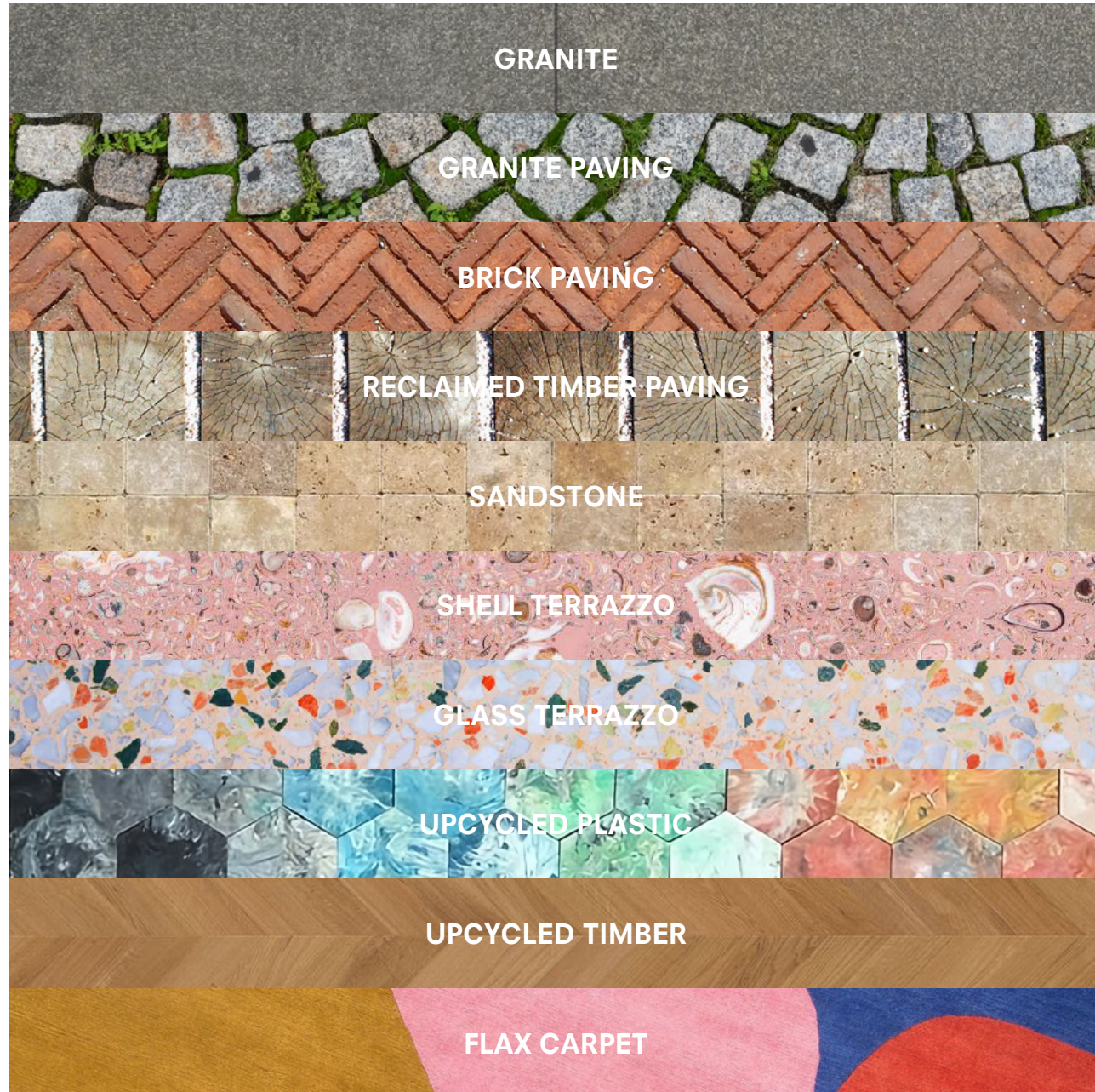


DESIGNING PUBLIC SPACES IN HOSPITALS - NICOLETTA SETOLA, SABRINA BORGIANNI (2016)

NOTION OF FAMILIARITY

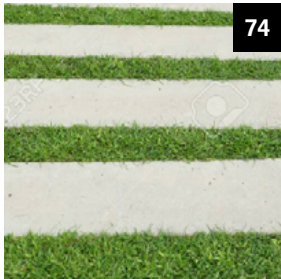


MATERIAL REPRESENTATION



MATERIAL INDEX

“MATERIAL ATLAS”



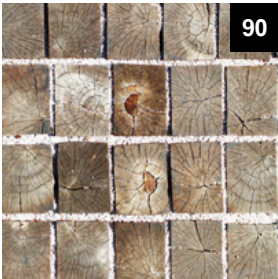
74

Plattenbau slabs



48

Granite paving



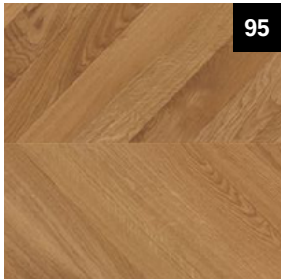
90

Reclaimed timber paving



50

Sandstone



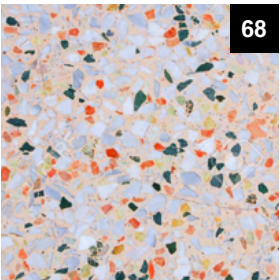
95

Upcycled timber



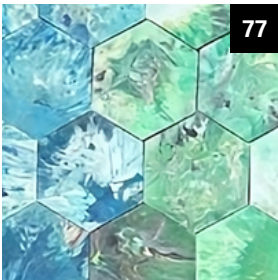
72

Re-used brick paving



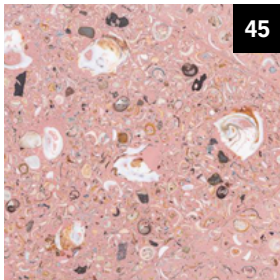
68

Recycled Glass Terrazo



77

Upcycled plastic tiles



45

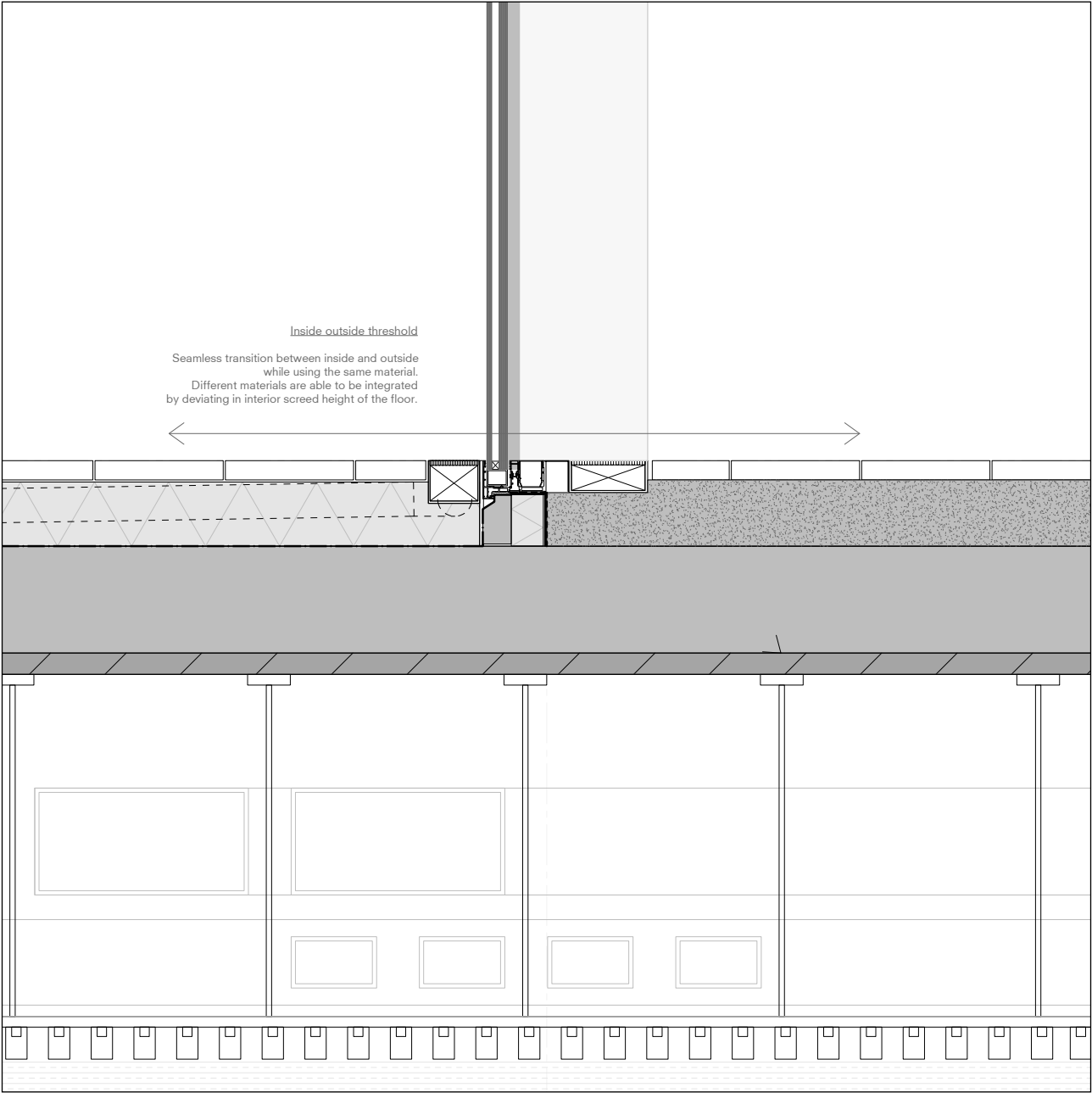
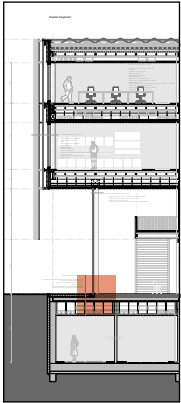
Shell Terrazzo



81

Flax Carpet

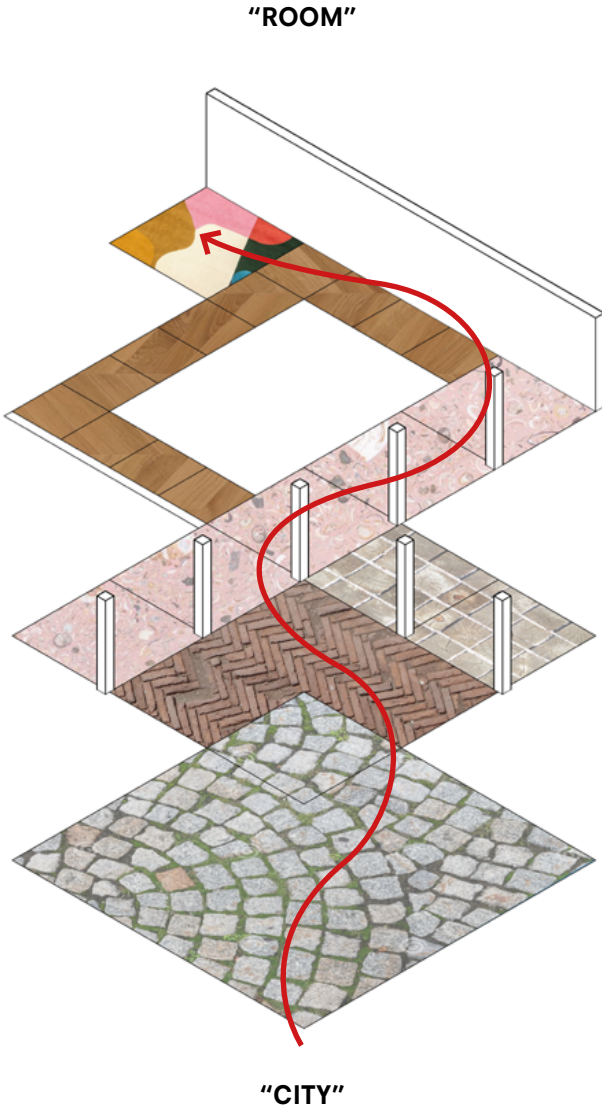
FACADE DETAILS



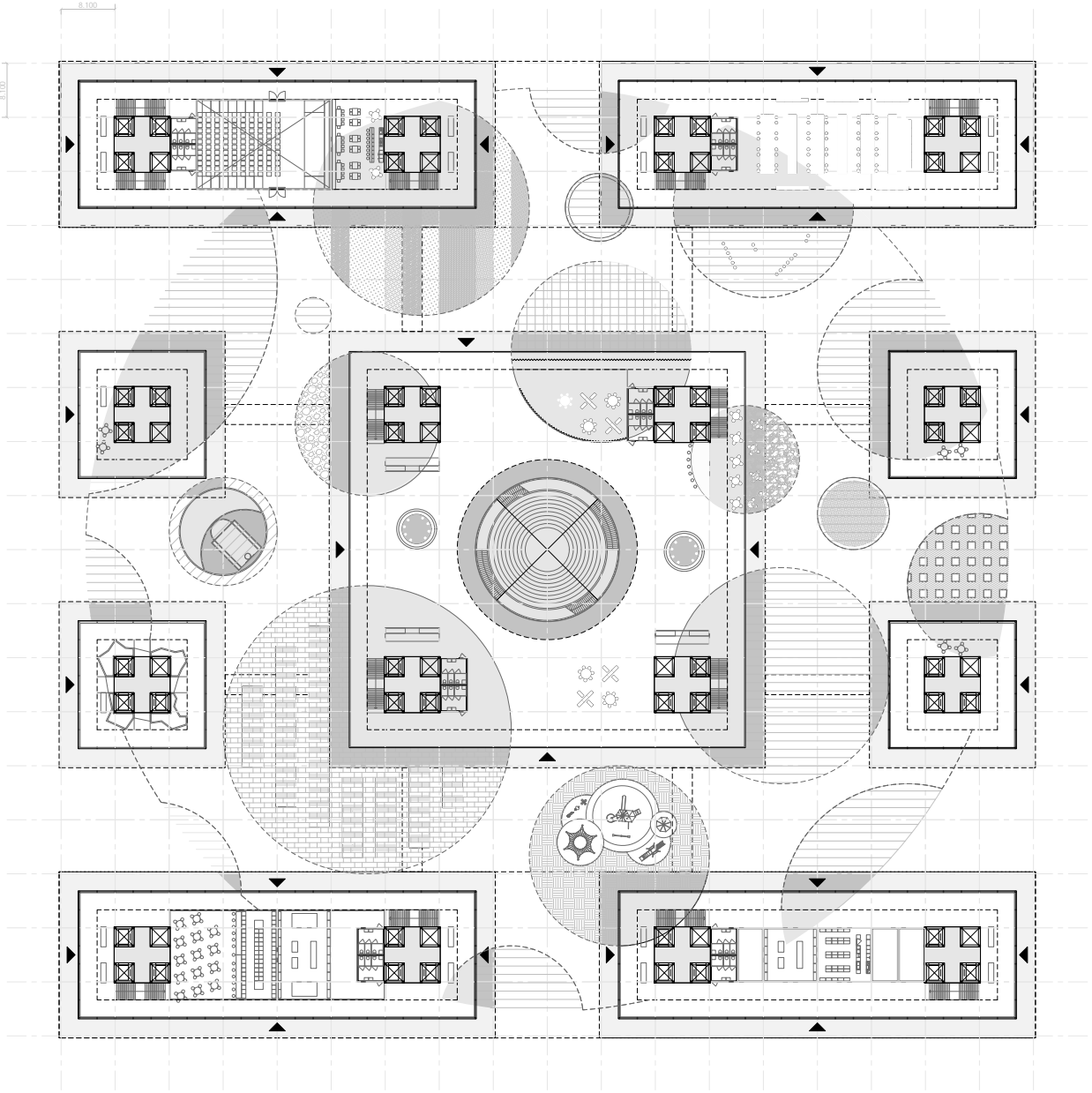
Inside outside threshold

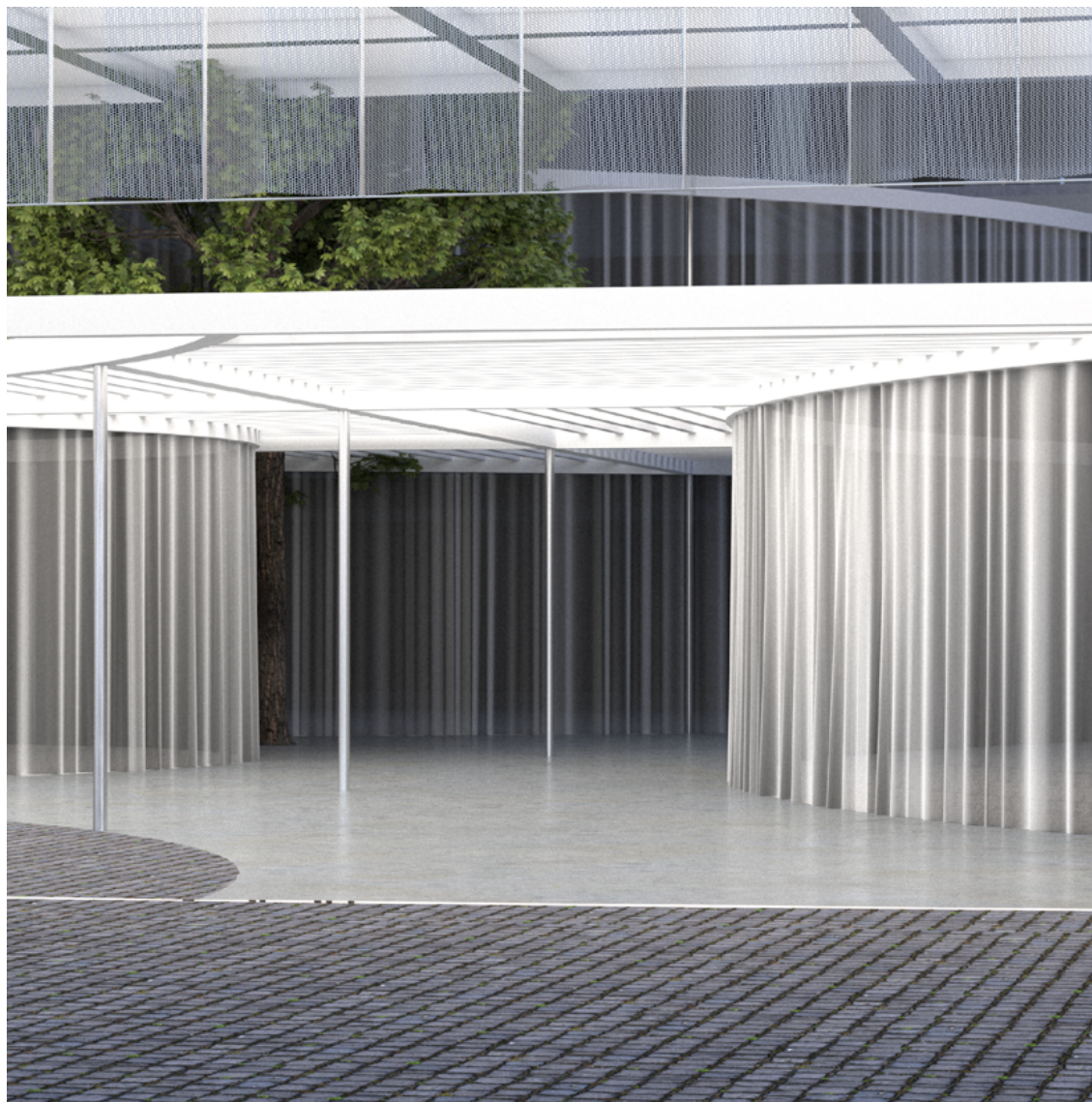
Seamless transition between inside and outside
while using the same material.
Different materials are able to be integrated
by deviating in interior screed height of the floor.

MATERIALIZED KEY SPACE



MATERIALIZED KEY SPACE





SANAA - HIROSHI SENJU MUSEUM

I. INTRODUCTION

II. RESEARCH & DESIGN BRIEF

III. CONCEPT

IV. IMPLEMENTATION

V. CONCLUSION

MAIN RESEARCH QUESTION

**“HOW WILL HUMAN BODY
AUGMENTATION REFLECT CHANGE IN THE
HOSPITAL TYPOLOGY OF THE FUTURE?”**

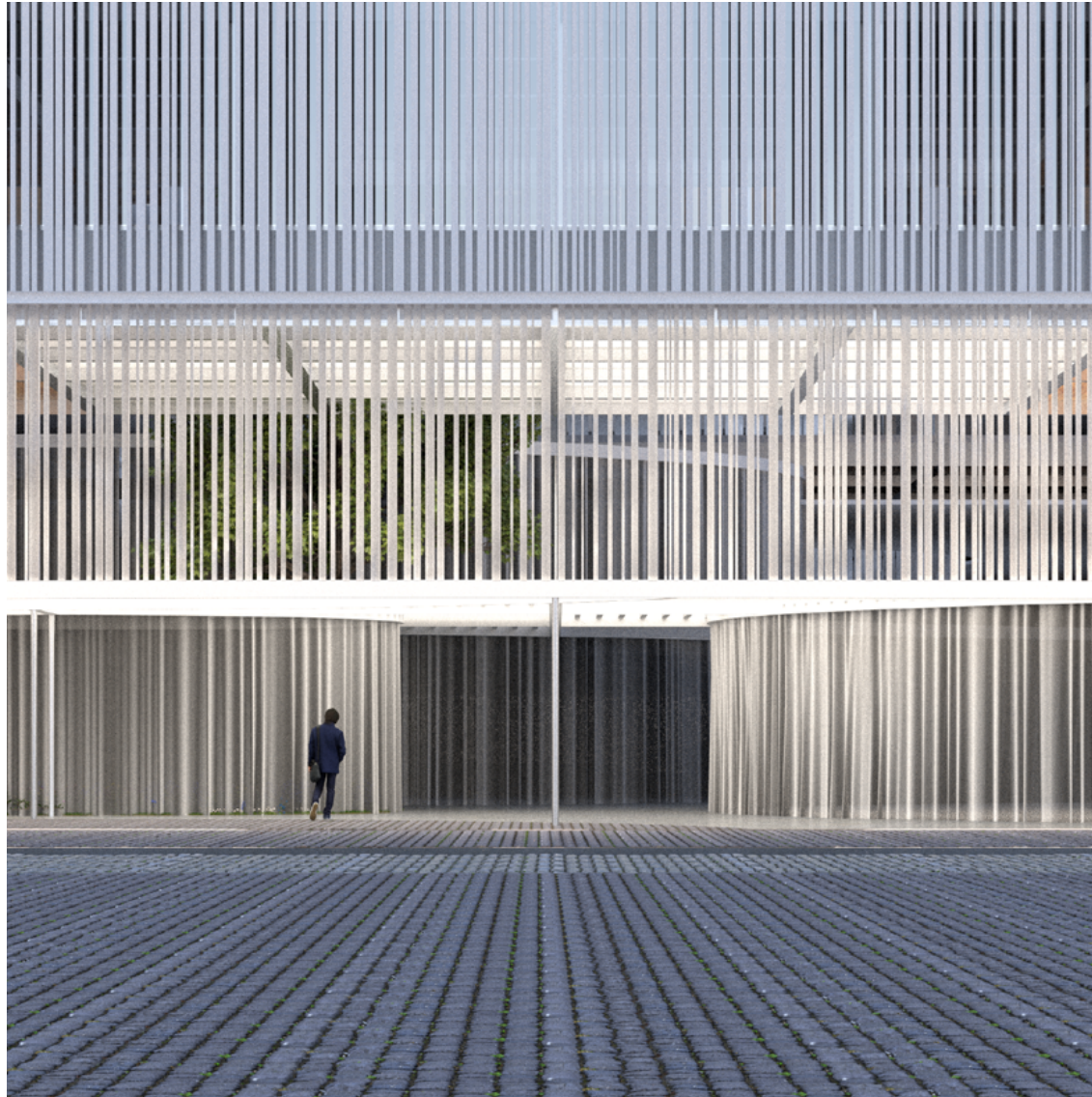
- 1 - “How will augmentation change the hospital process for the human body, and thus the building program?”
- 2 - “How can we create a living hospital structure, that can grow, upgrade, and get augmented through time?”





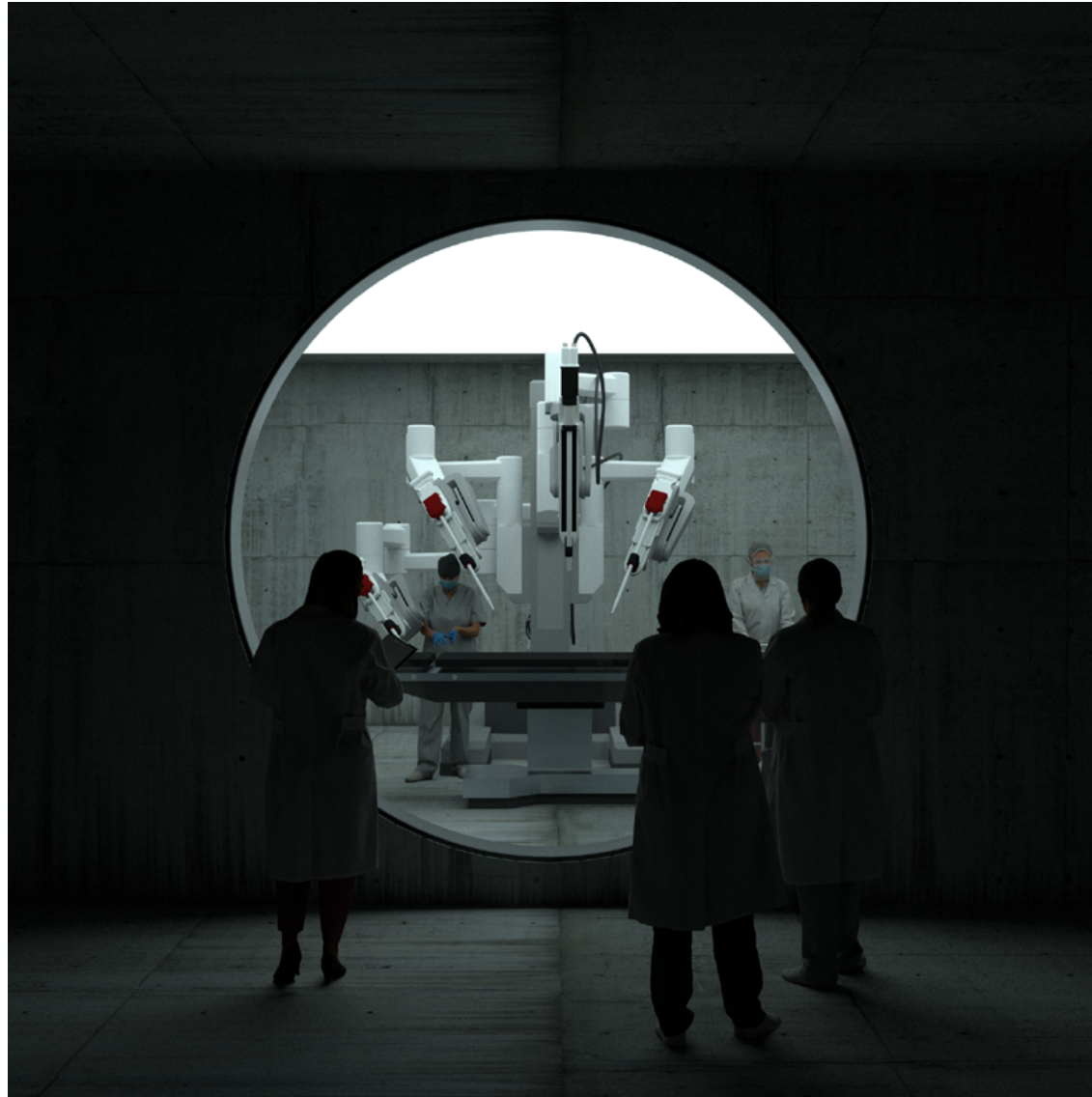
PART OF THE CITY















XL - L - M - S - XS

BUILDING - IMPLICATIONS

SPECIALISED

FLEXIBLE

PART OF THE CITY

TRANSPARENT

ACCESSIBLE

MATERIALISATION

“THE HUMAN BODY SHOP”

XL - MASTERPLAN

PART OF THE CITY

L - STRUCTURE

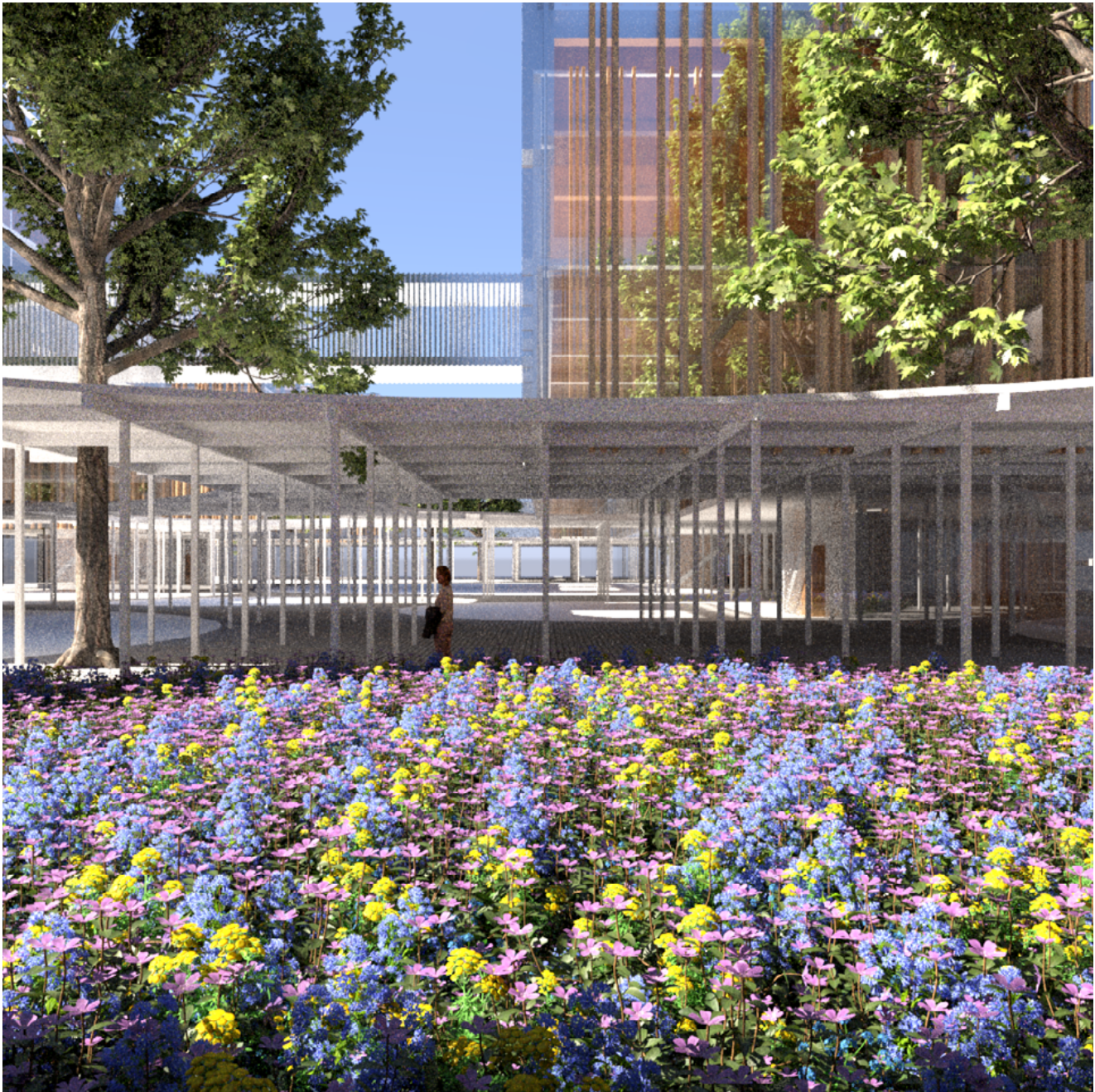
FLEXIBLE

SPECIALISED

S - TRANSITIONS

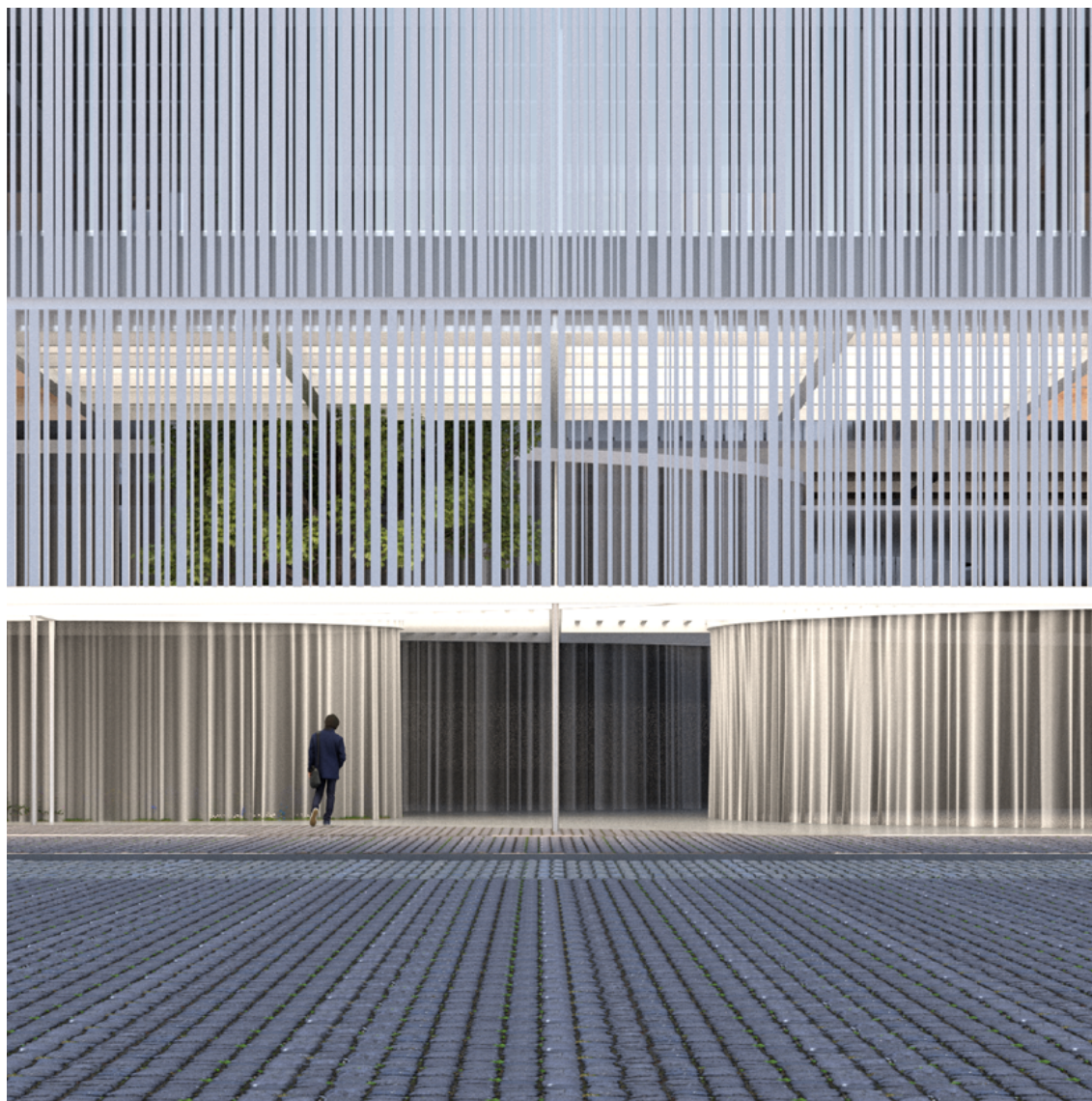
ACCESIBLE

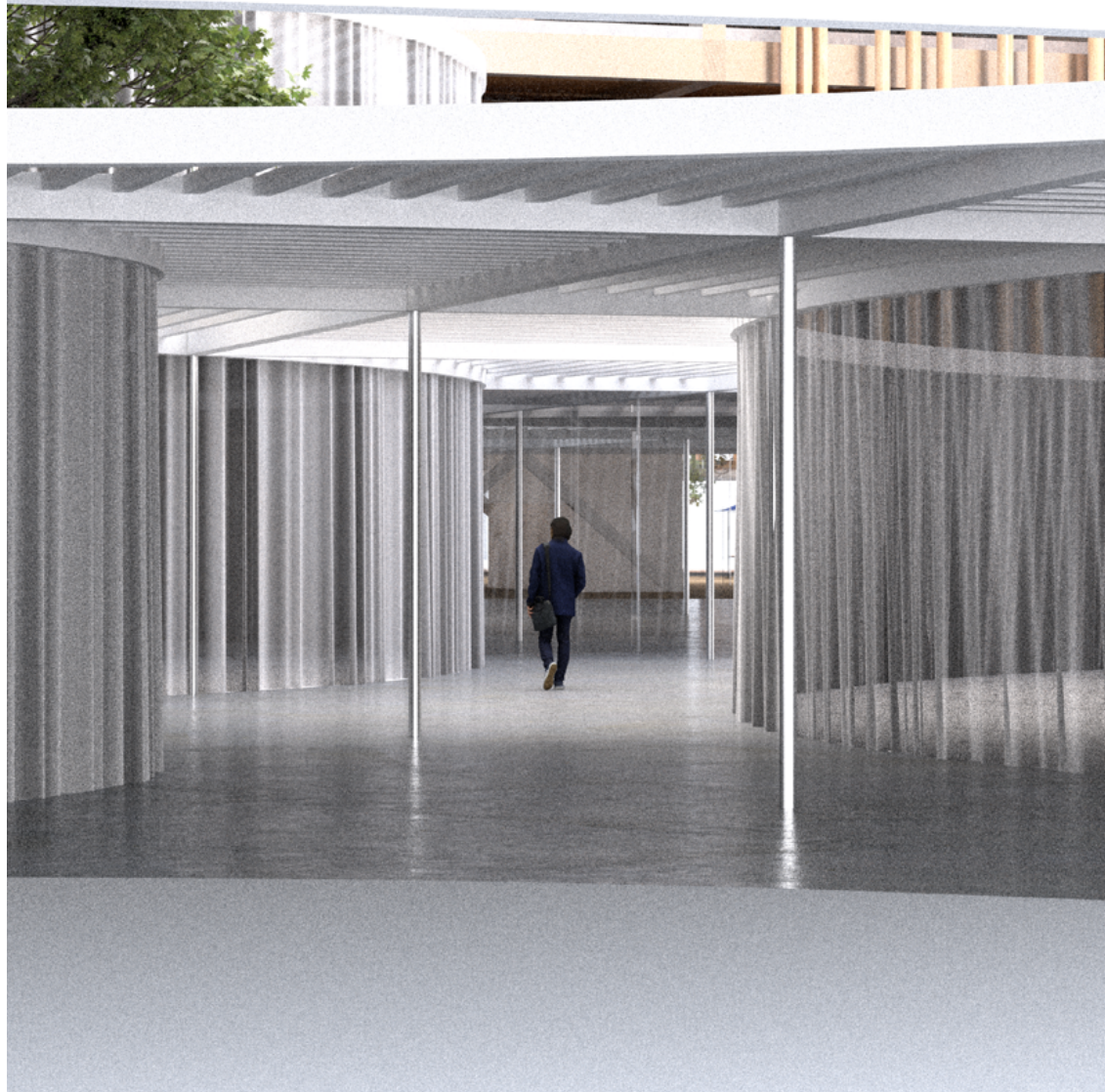
MODULAR



R4_ATRIUM

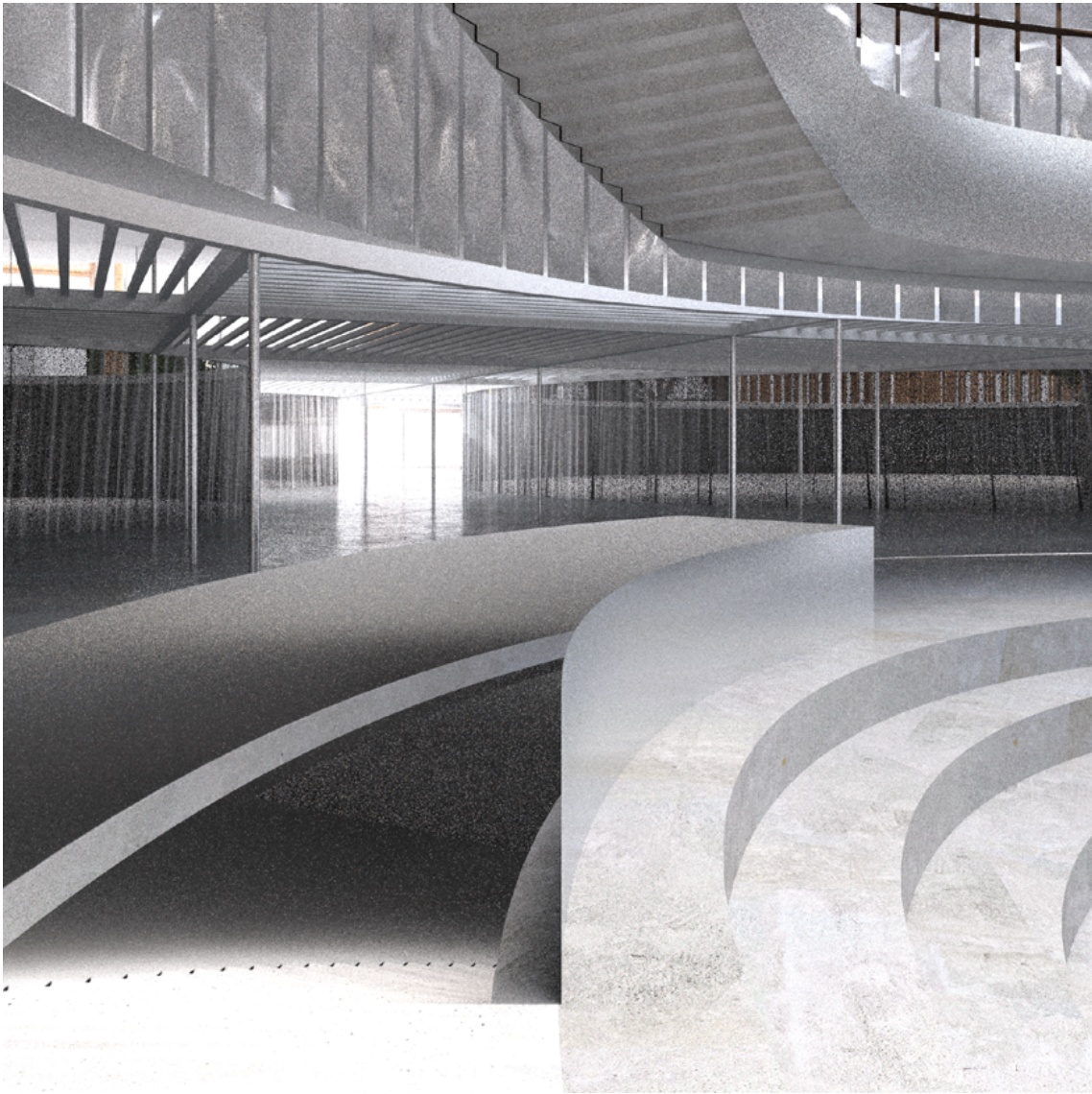




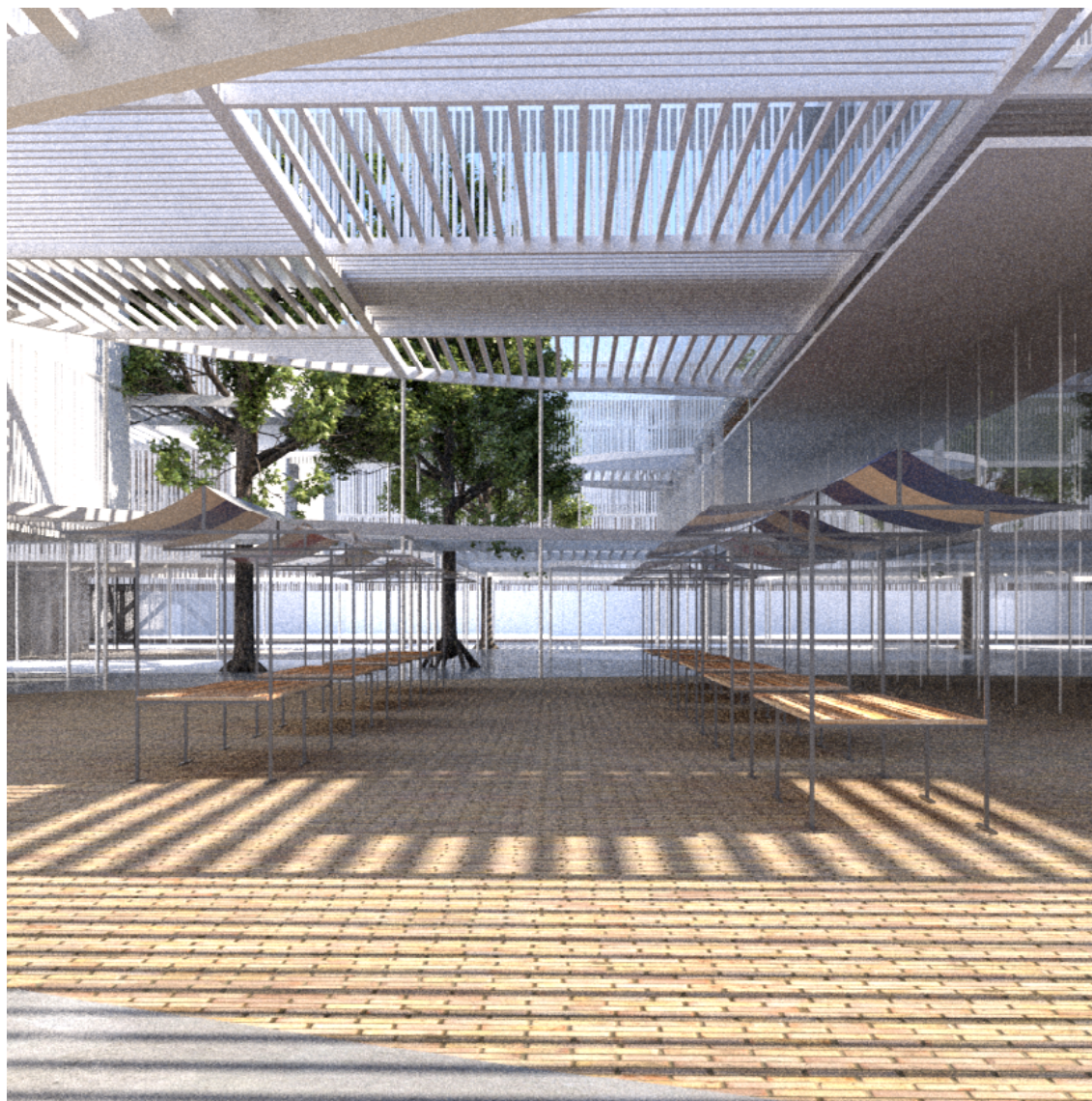


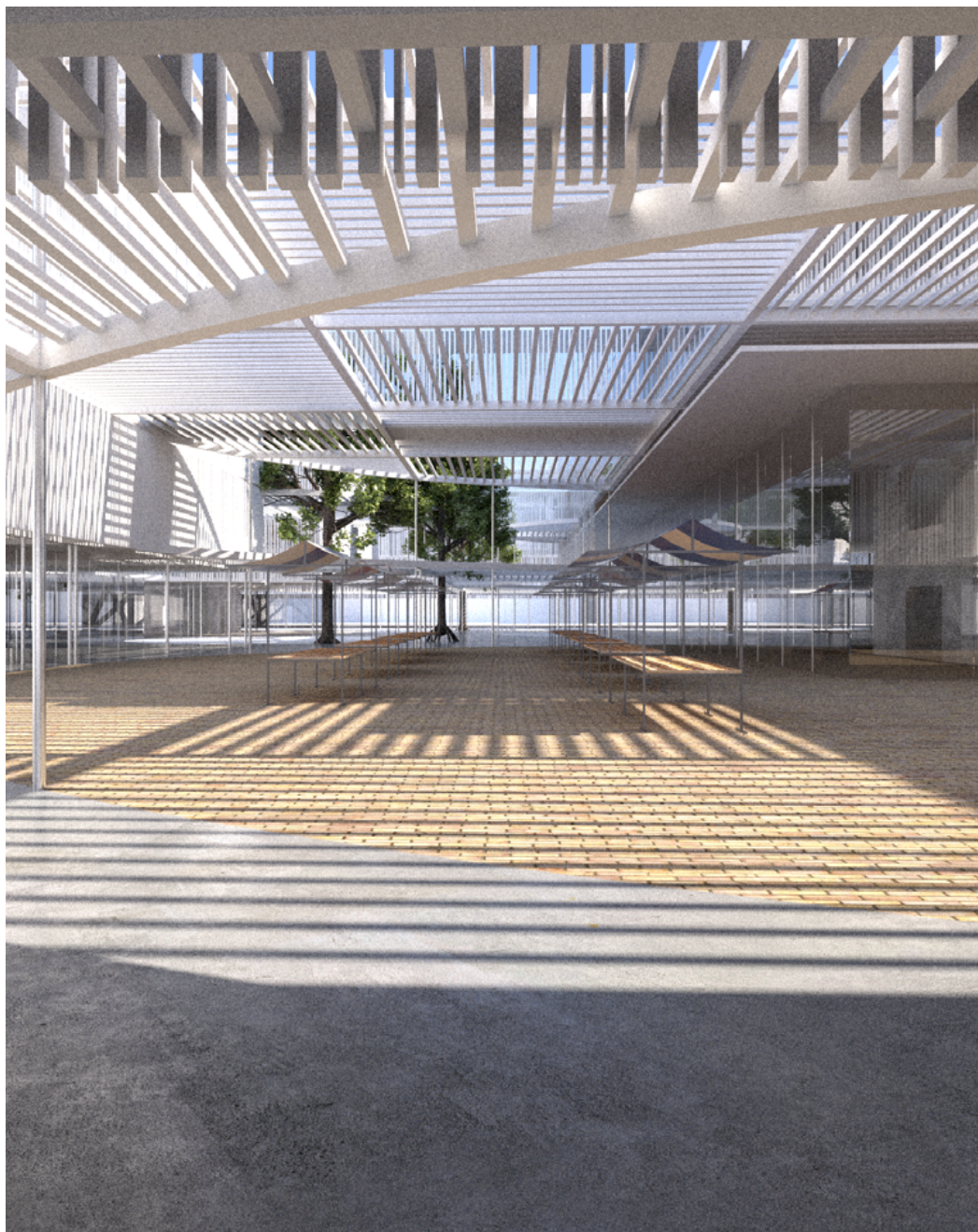


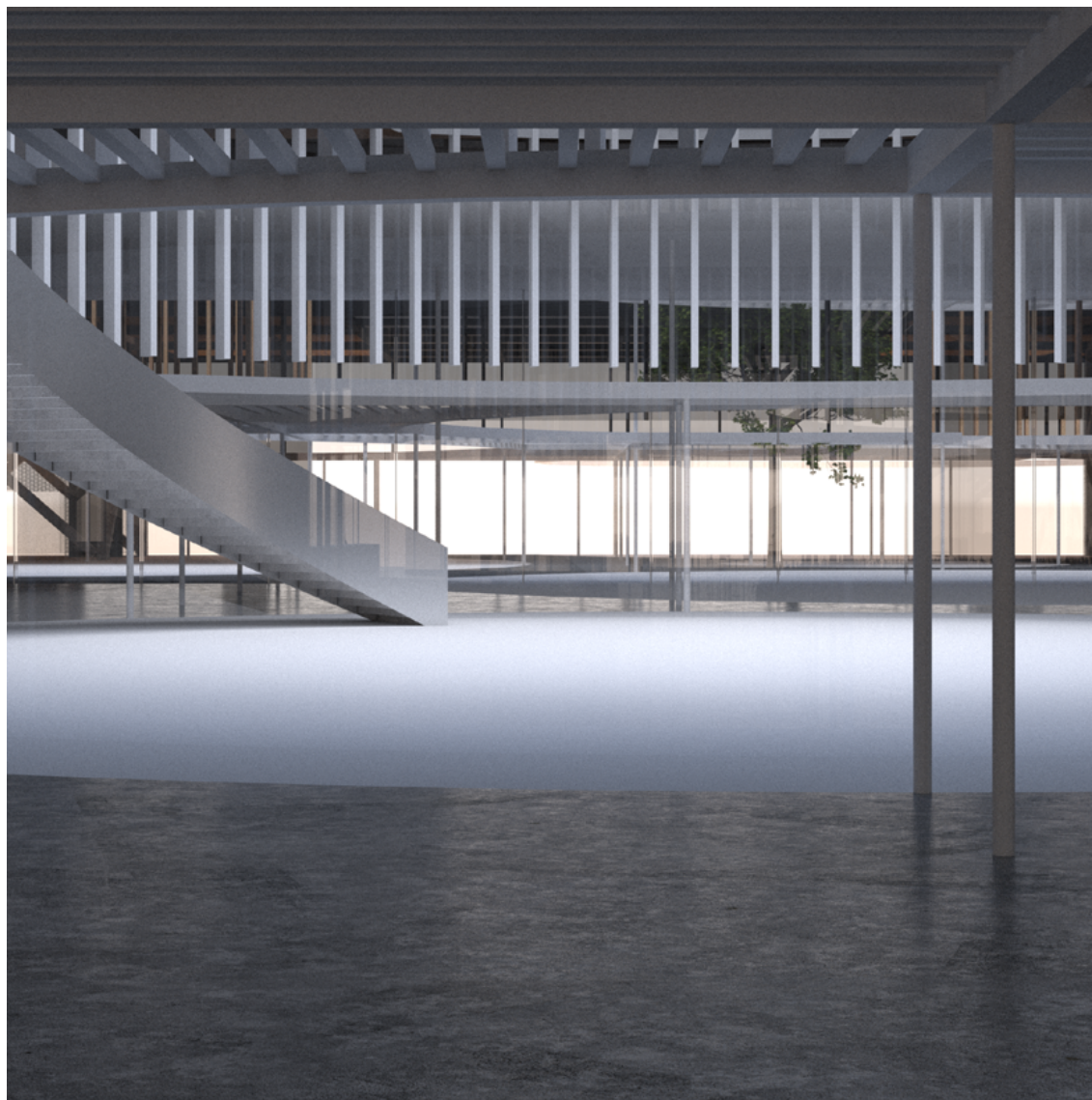


















facade

IMPRESSION



facade

IMPRESSION



development

IMPRESSION



