



COMPLEX PROJECTS

CENTER RE-GEN

A collective of Regenerative bodies

Harit Naik

14/06/2024

REGENERATIVE
MEDICINE

Hospital **OUTLINE**

INTRODUCTION

RESEARCH

PROJECT

PROGRAM

SITE

CONCEPT DIRECTION

CONCLUSION

Hospital OUTLINE

INTRODUCTION

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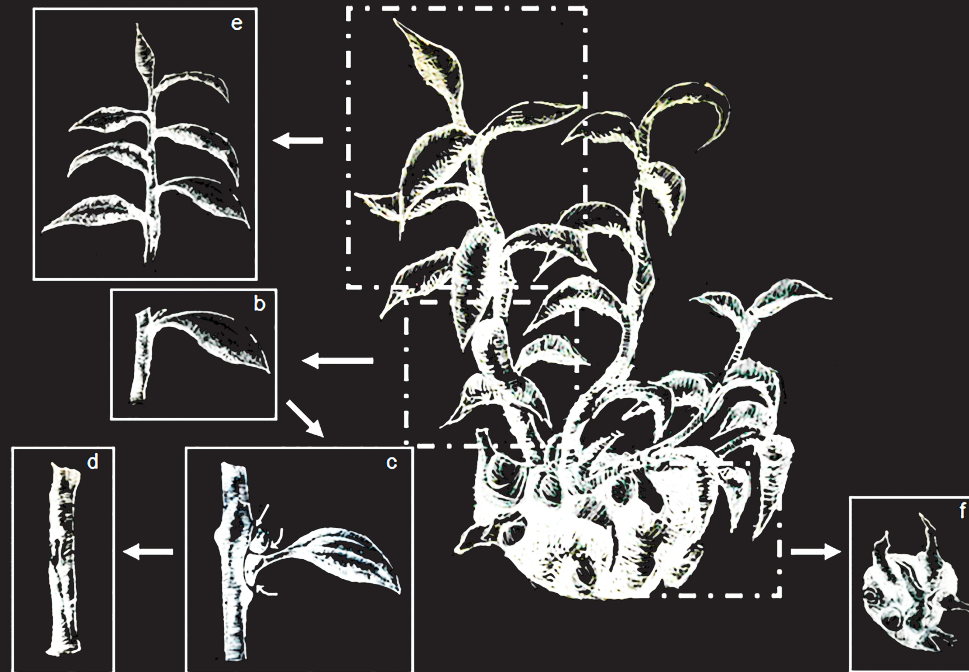
PROGRAM

SITE

CONCEPT DIRECTION

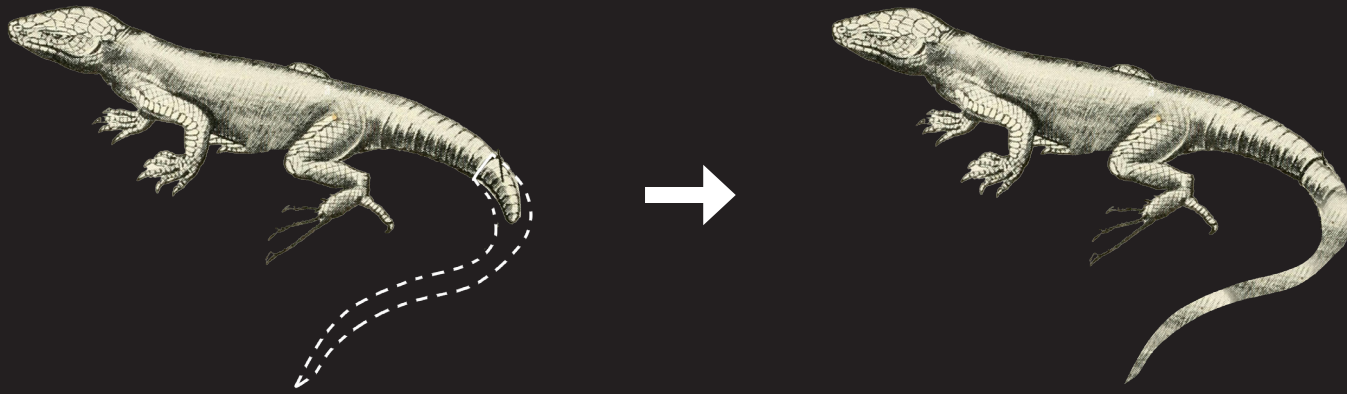
CONCLUSION

TODAY



Plants regenerate

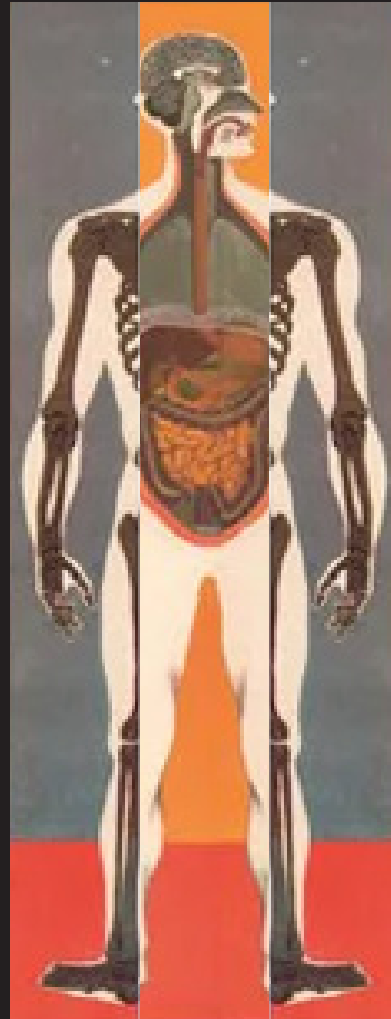
TODAY



Animals regenerate

BUT WHAT ABOUT HUMANS??

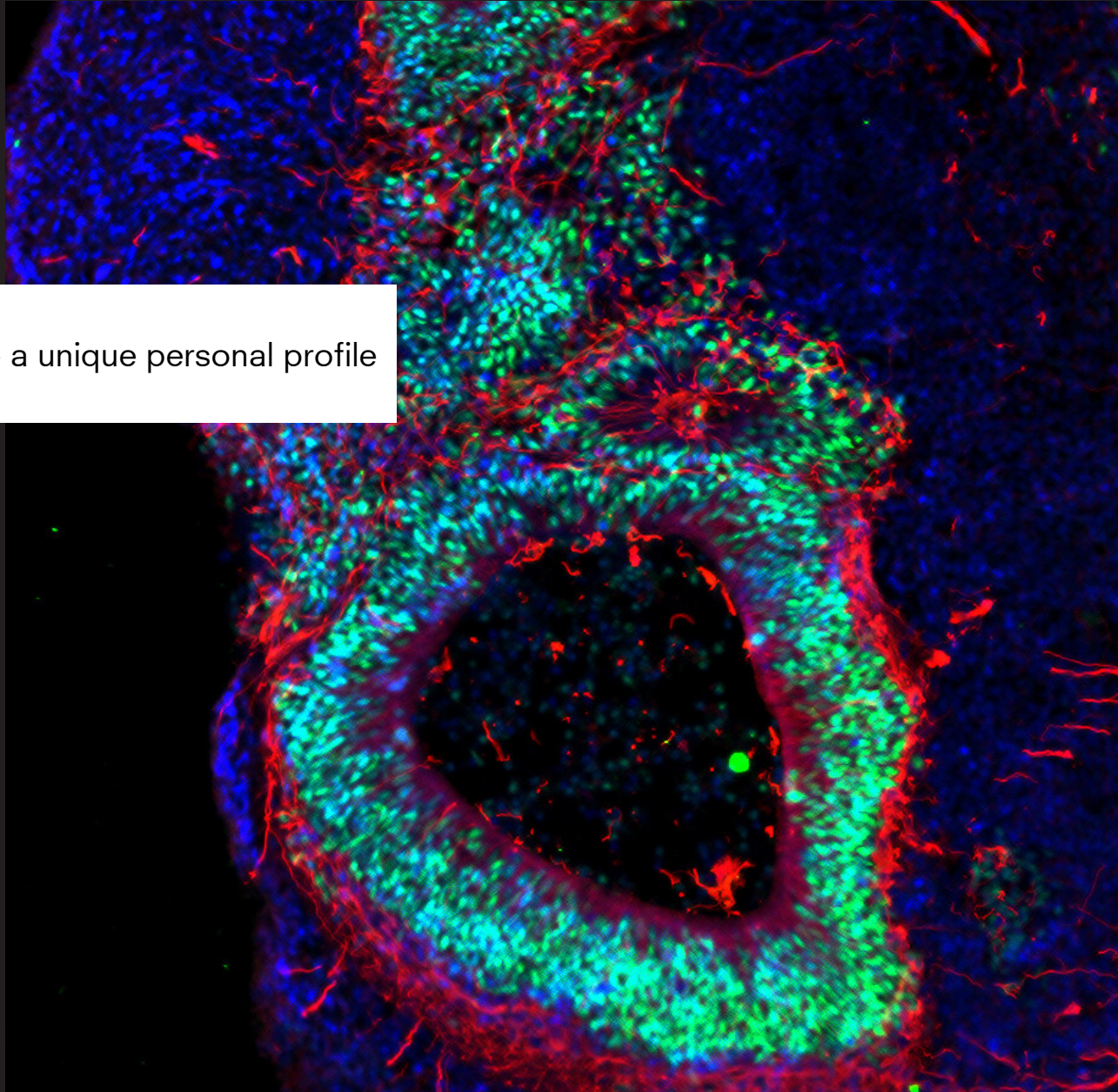
TOMORROW



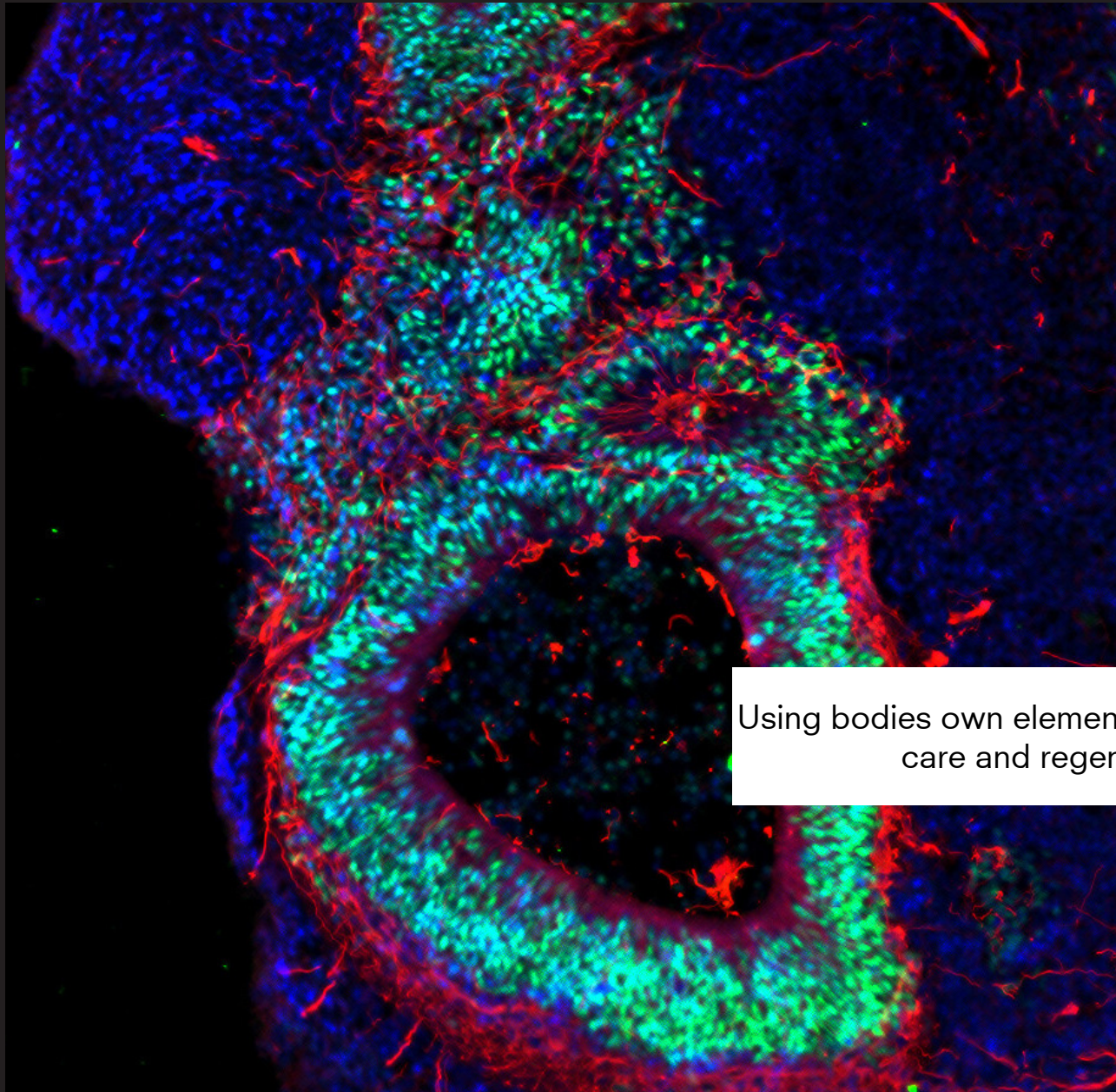
Humans regenerate

A PATH TOWARDS FUTURE

STEM CELLS - a unique personal profile



A PATH TOWARDS FUTURE

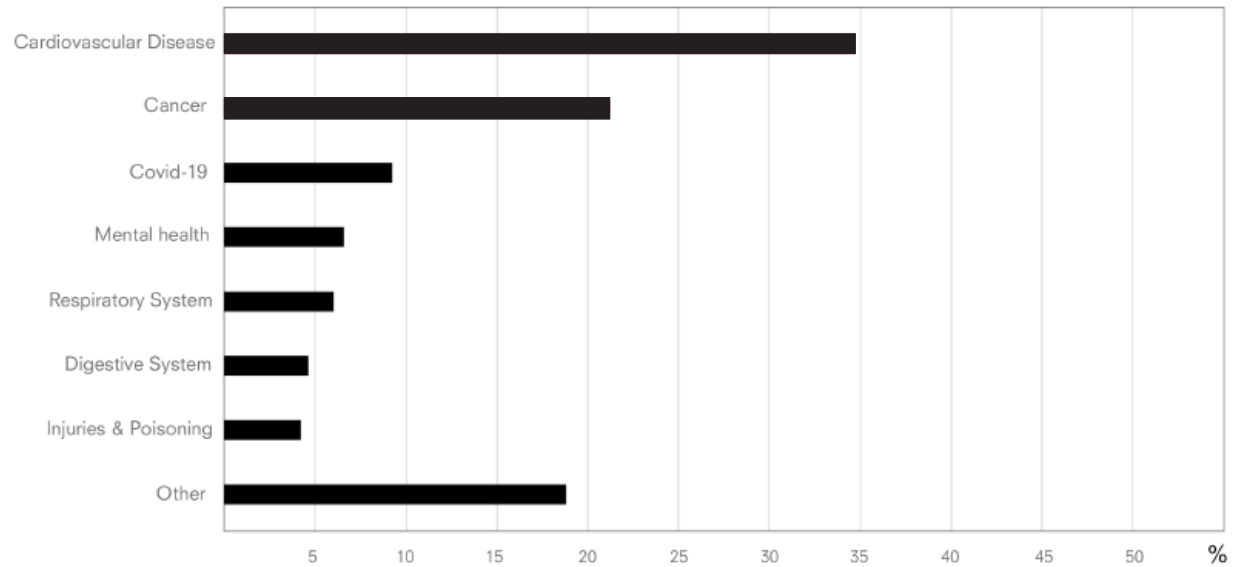


Using bodies own elements to personalise
care and regenerate

But why is it needed?

introduction

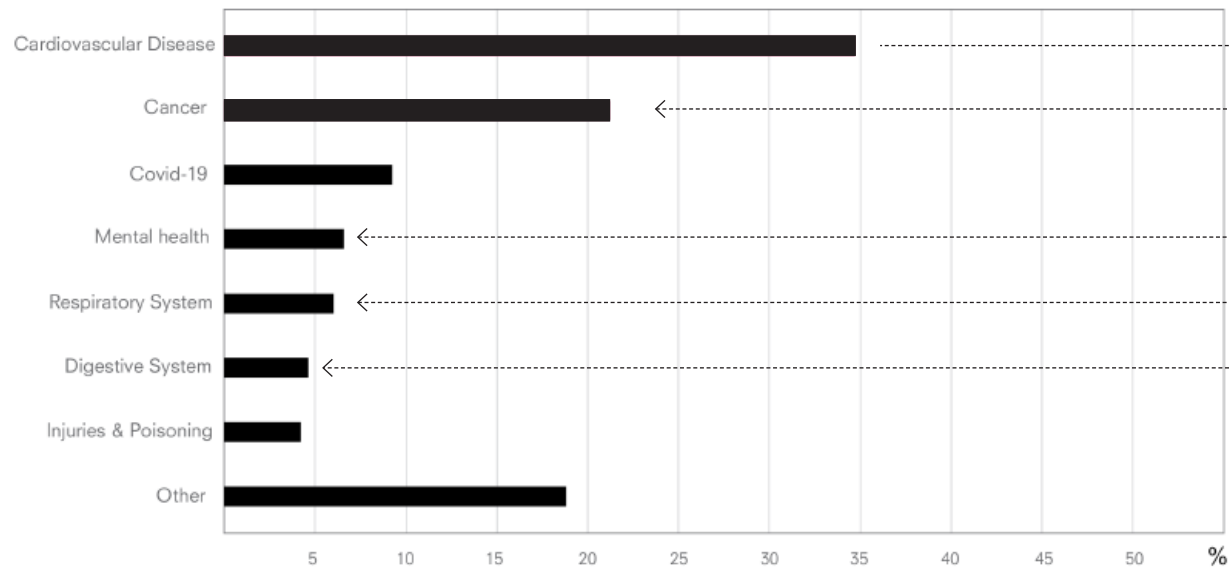
CAUSES OF DEATHS



Source - IPSOS global health monitor, surveyec - July-Aug 2022

introduction

CAUSES OF DEATHS

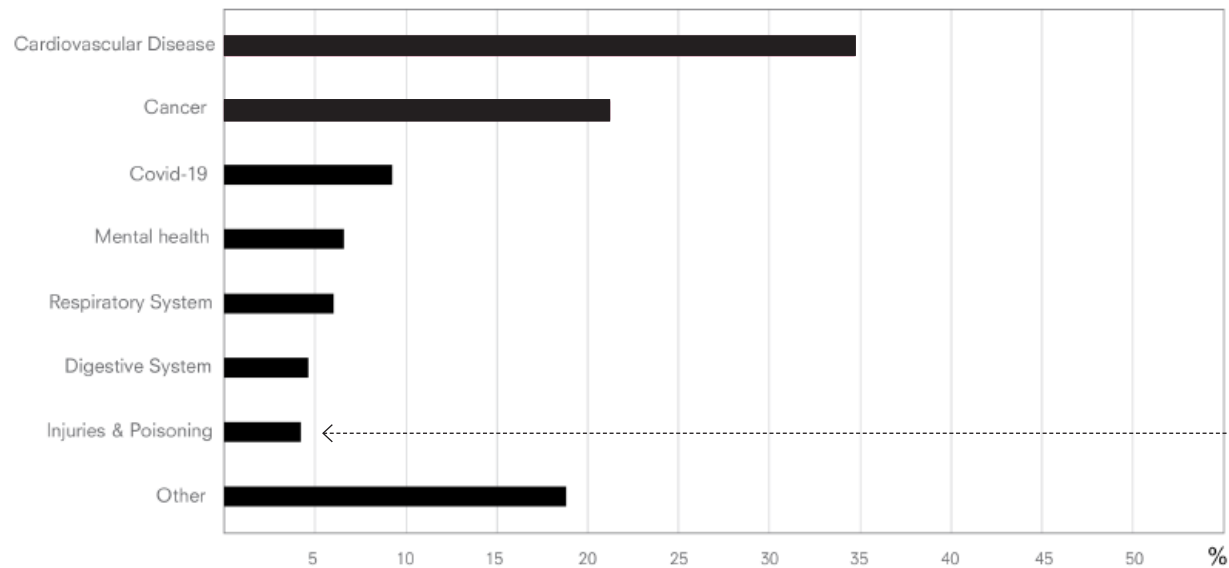


Chronic diseases
sometimes passes
from generation to
generation and have
no cure. making
more than 70% of all
hospital fatalities

Source - IPSOS global health monitor, surveyec - July-Aug 2022

introduction

CAUSES OF DEATHS



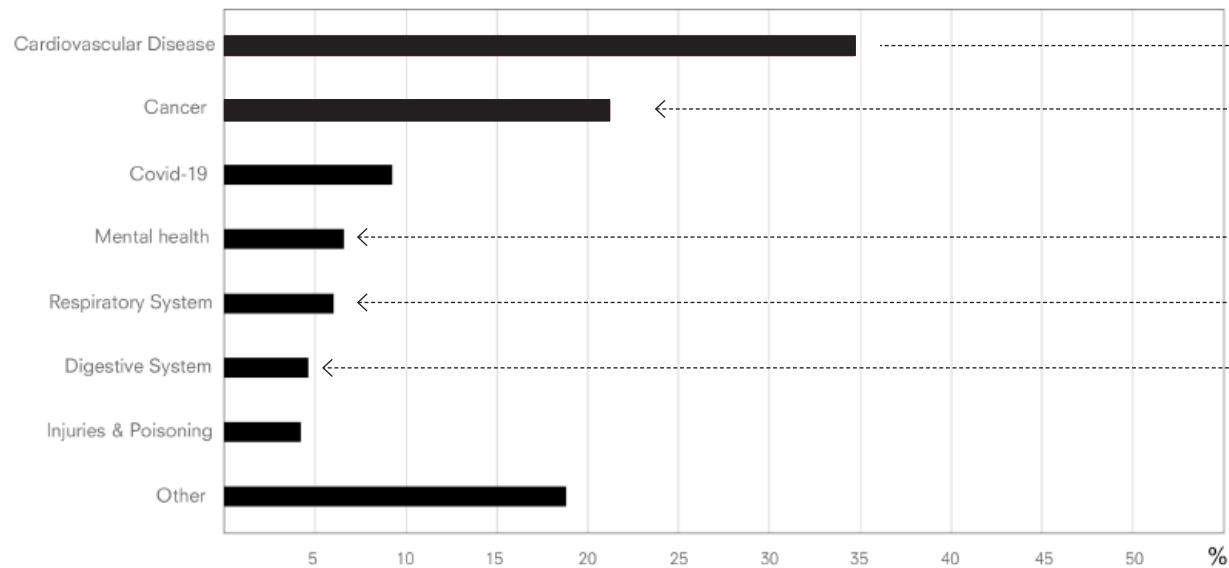
Injuries

A sudden rise in the number of people getting injured due to random and unpredicted activities.

Source - IPSOS global health monitor, surveyec - July-Aug 2022

introduction

CAUSES OF DEATHS



Degenerative diseases
with rise in the old age population there is a major rise in degenerative diseases and they tend to occupy the hospital more than others.

Source - IPSOS global health monitor, surveyec - July-Aug 2022

CURRENT SCENARIO

Today, **80%** of people over age of 65 have at least one **chronic disease**

Chronic disease accounts for **77%** of total disease in Europe

One in six people in the EU have a mild to **severe disability**.

Rising **old age** populations and **related degenerative health issues**

INTENSIVE TREATMENT PROCEDURES

Rising deaths and **body deformation** due to ineffective care for
major **bodily injuries**

Deaths due to long waiting lists for **organ transplant** and rejection
of foreign organ

CURRENT SCENARIO

Today, **80%** of people over age of 65 have at least one **chronic disease**

Chronic disease accounts for **77%** of total disease in Europe

One in six people in the EU have a mild to **severe disability**.

Rising **old age** populations and **related degenerative health issues**

INTENSIVE TREATMENT PROCEDURES

STANDARDIZED FOR ALL

Deaths due to long waiting lists for **organ transplant** and rejection
of foreign organ

CURRENT APPROACH

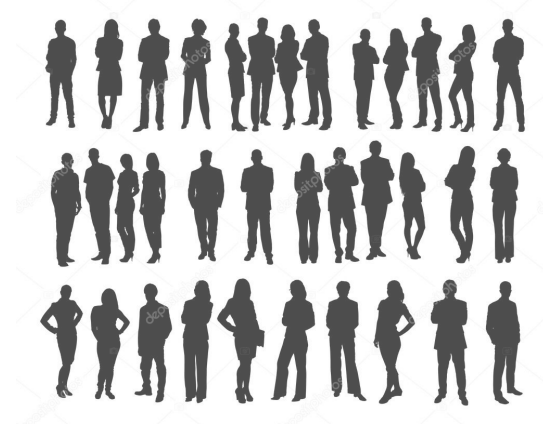


Traditional **'One size fits all'**
approach.
All patients with the same diagnosis receive
same treatment

A PATH TOWARDS FUTURE



Traditional **'One size fits all'**
approach.
All patients with the same diagnosis receive
same treatment



'Personalized medicine'
approach
Treatment strategy based on patients
unique profile

introduction

A PATH TOWARDS FUTURE

From

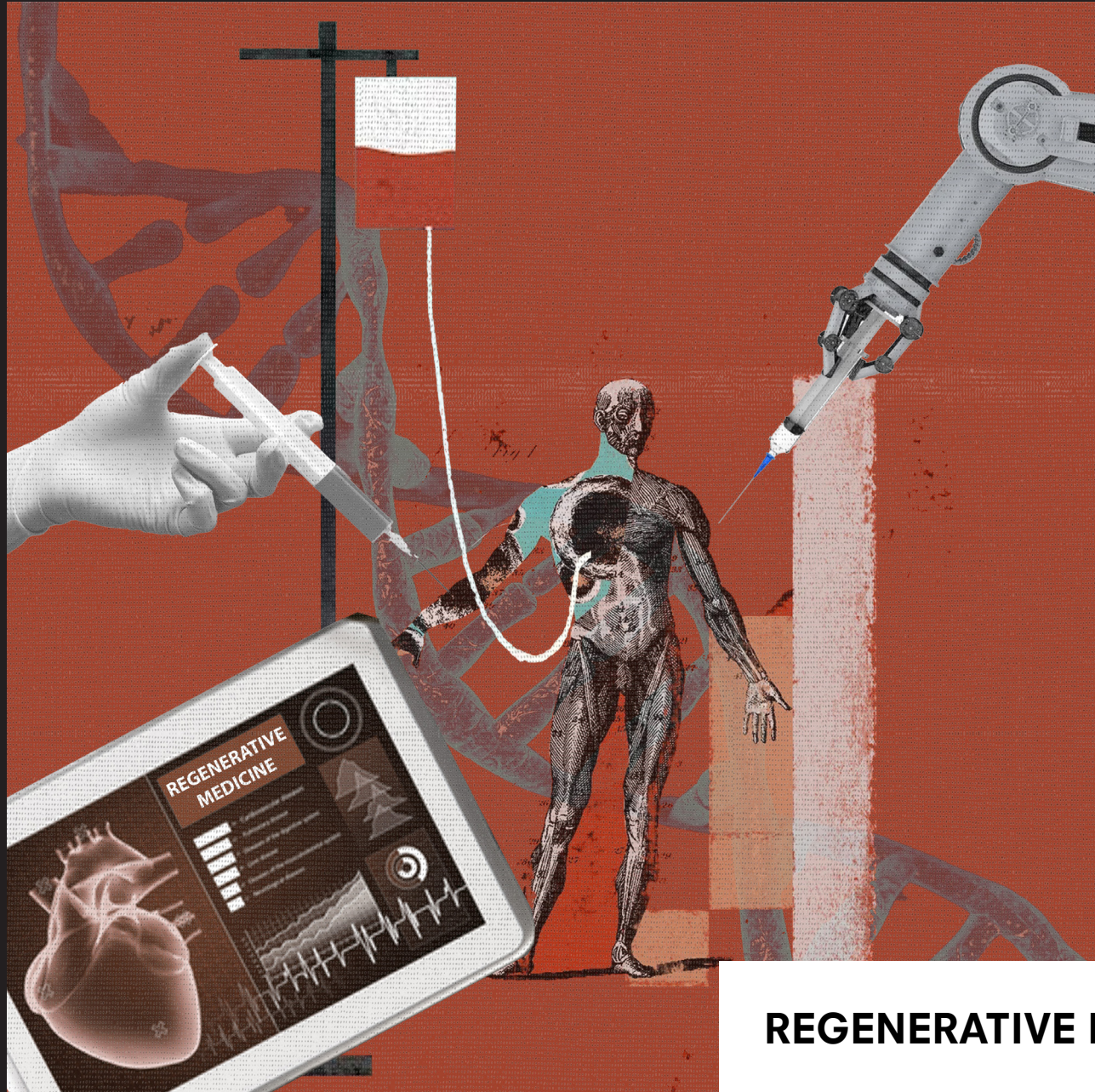
bodies as entities of **REPAIR**

to

bodies as entities of **HEALING AND REGENERATION**

introduction

A PATH TOWARDS FUTURE



REGENERATIVE MEDICINE

REGENERATIVE MEDICINE

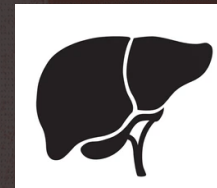
Regenerative medicine deals with the “process of replacing, engineering or regenerating human cells, tissues or organs to restore or establish normal function”.



precision medicine



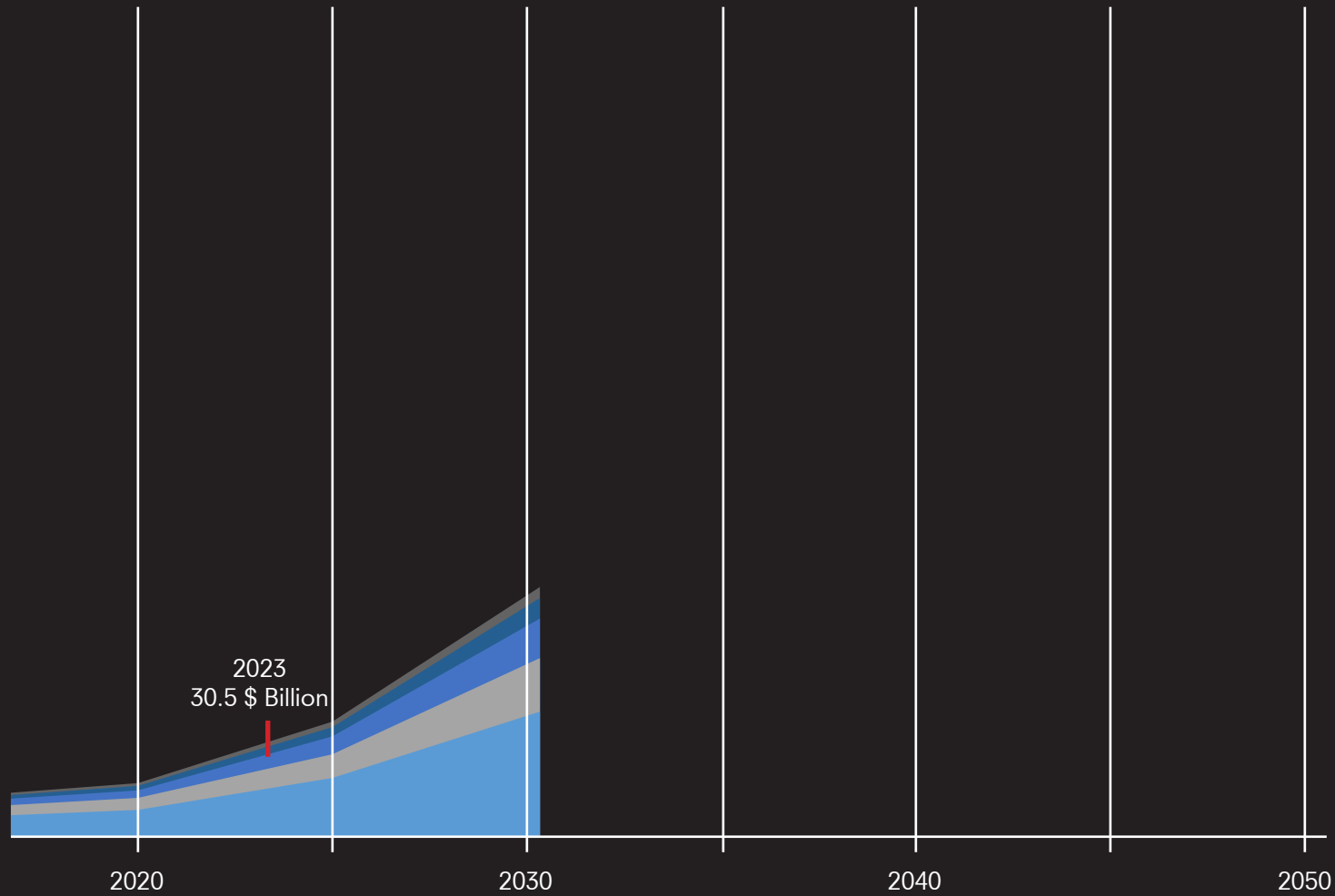
gene based therapies



tissues and organ
production

CURRENT DEVELOPMENT

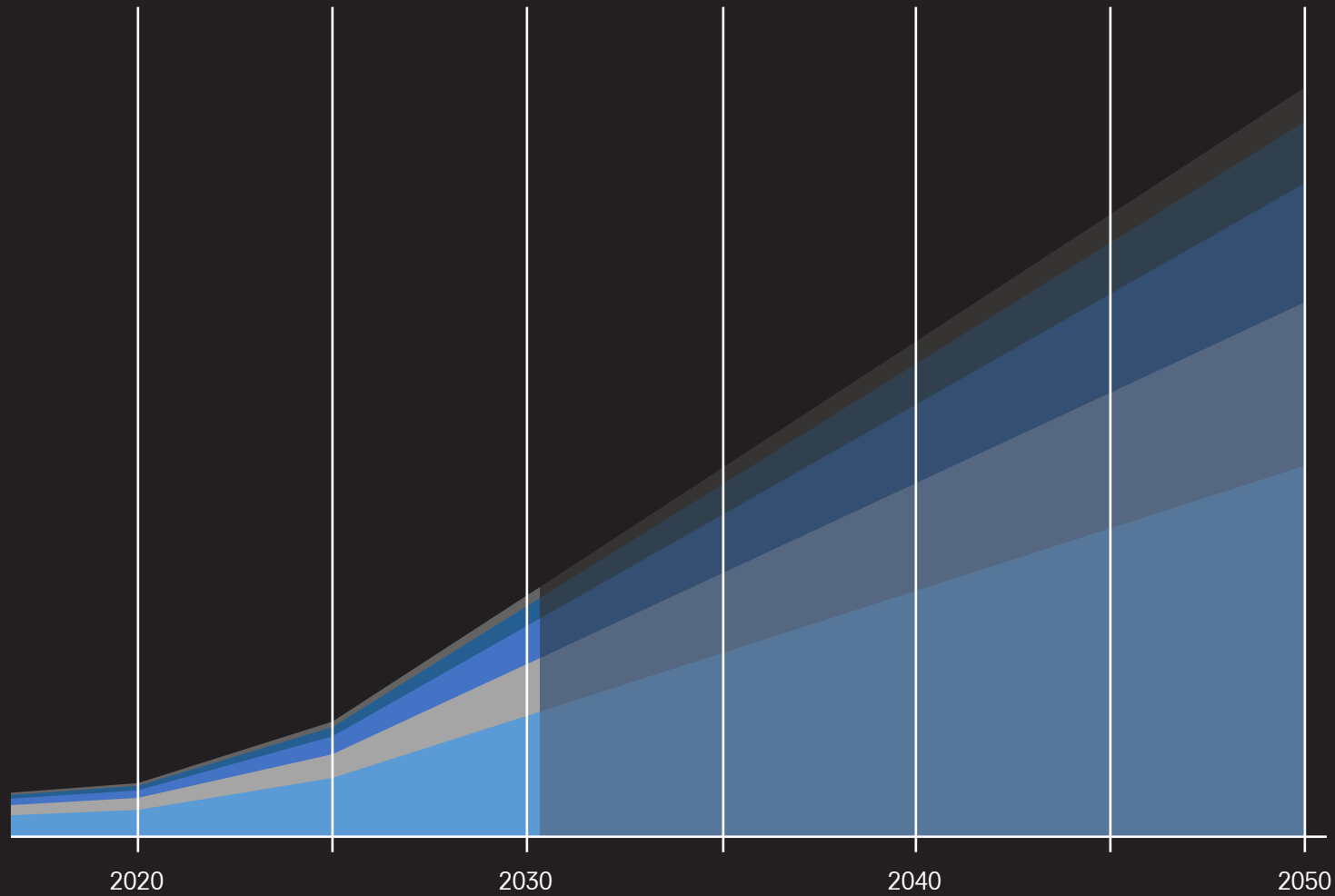
Compound annual growth rate of more than 18%



Source - Polaris market research analysis

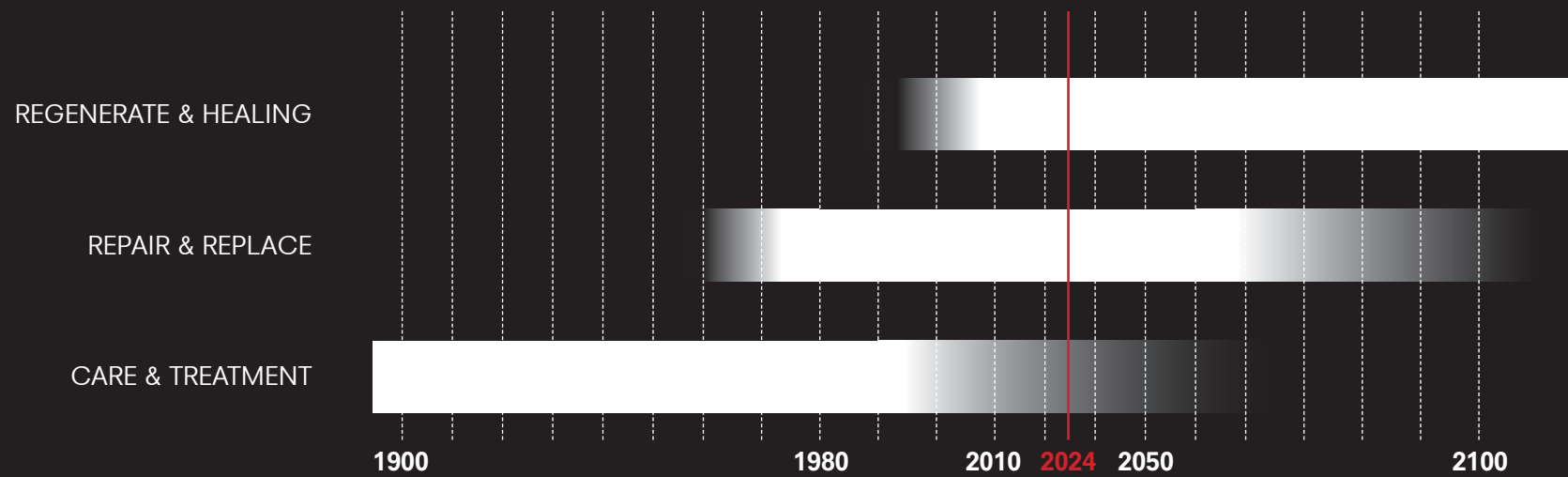
introduction

FUTURE DEVELOPMENT



Source - Polaris market research analysis

CHANGING ROLE OF FUTURE HOSPITAL



CHANGING ROLE OF FUTURE HOSPITAL

FROM **REACTIVE**
TO **PREVENTIVE AND REGENERATIVE** HEALTHCARE

How will the hospitals support this change?

Hospital OUTLINE

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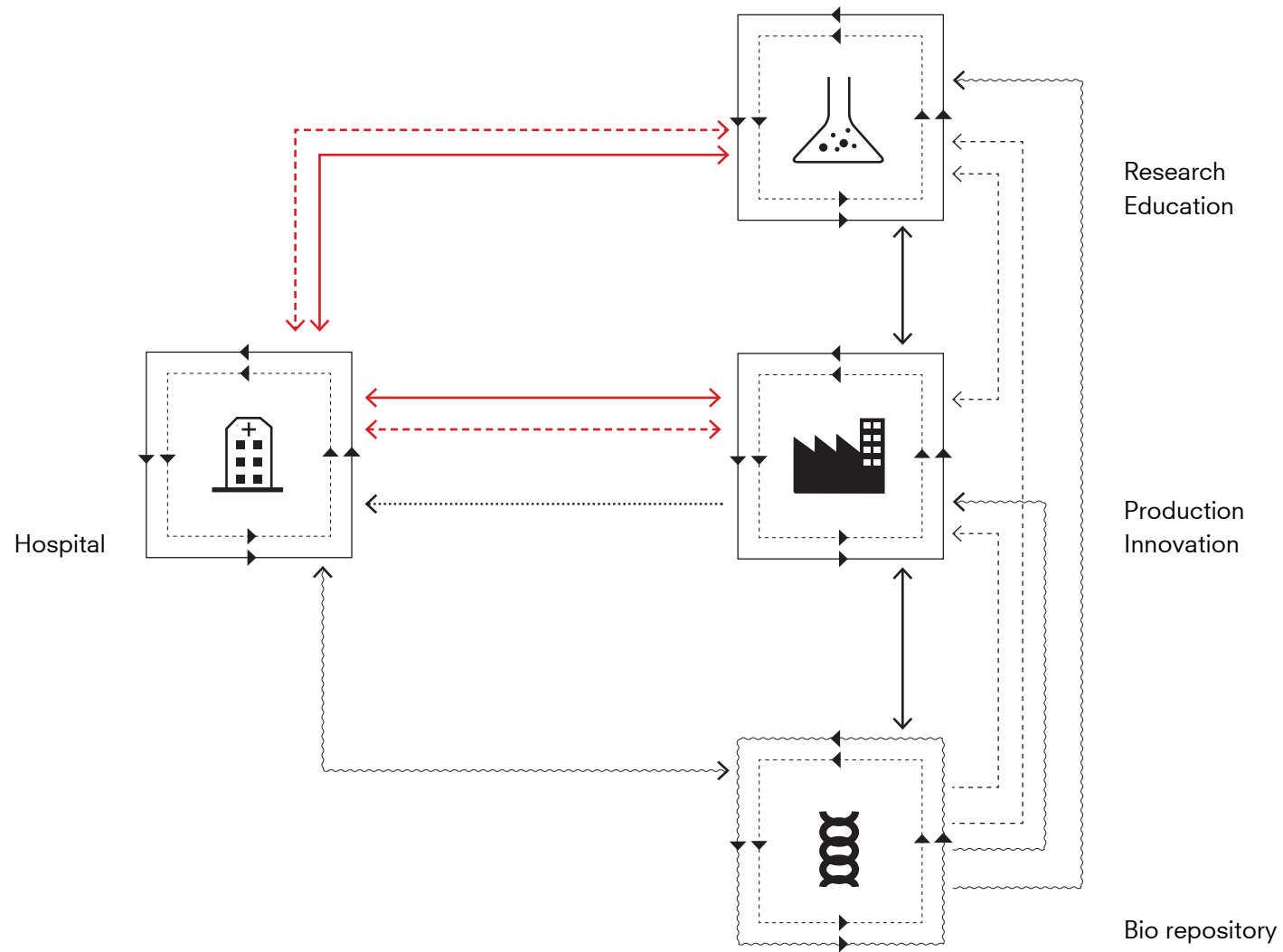
SITE

CONCEPT DIRECTION

CONCLUSION

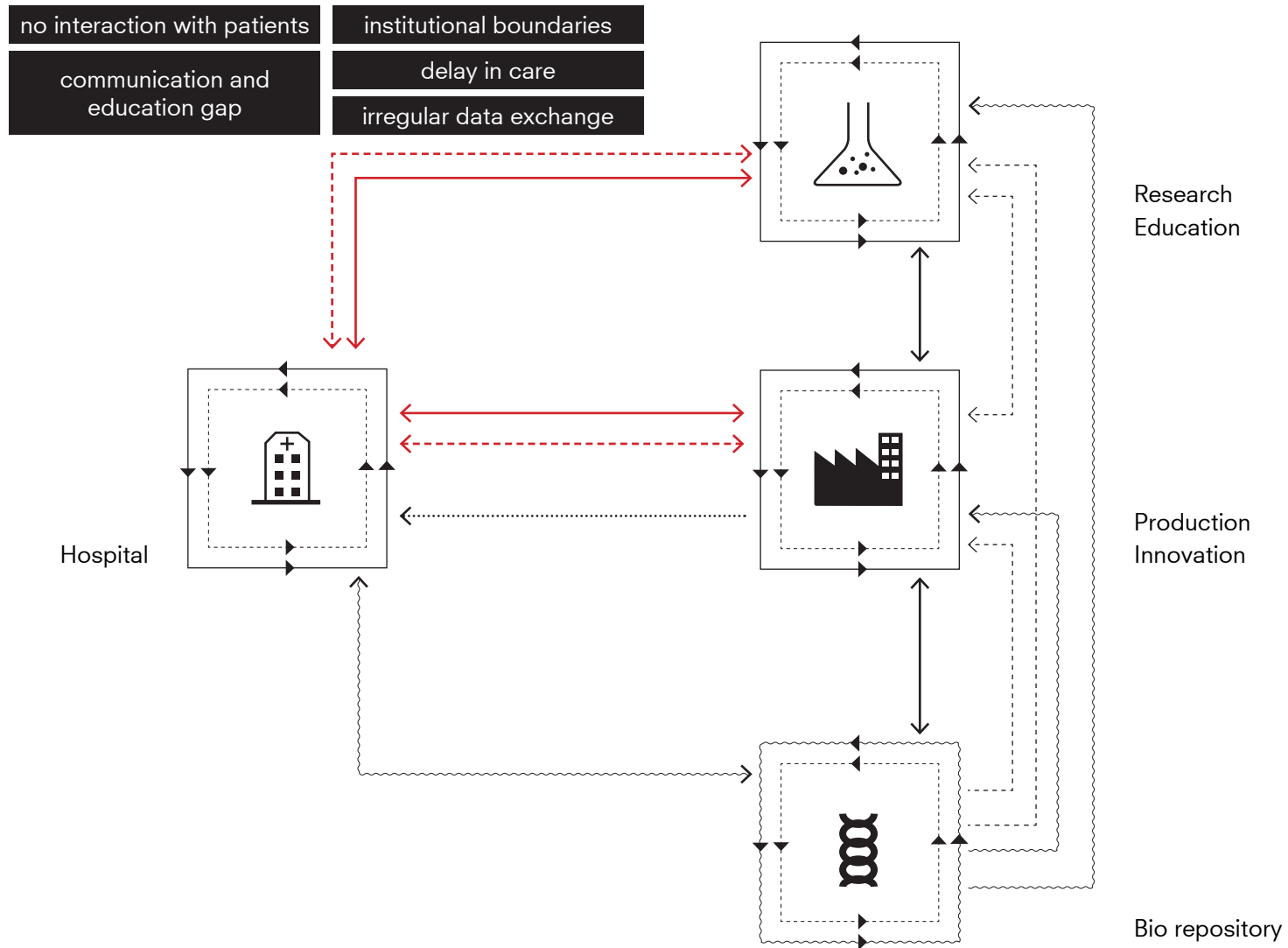
research

INSTITUTIONAL BOUNDARIES



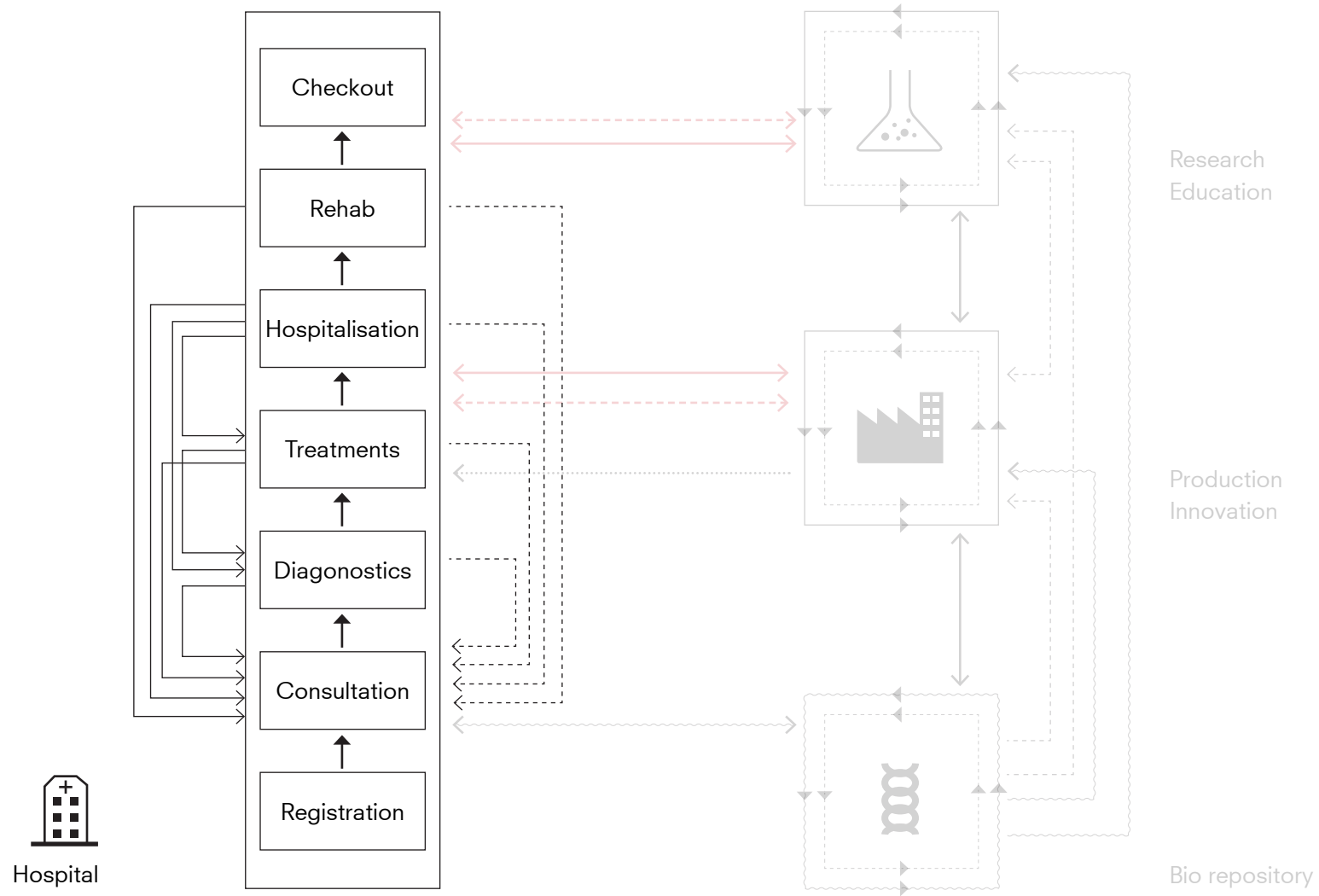
research

FRAGMENTED



research

DEPARTMENTAL



DEPARTMENTAL HURDLES



research

STERILE AND INHUMANE

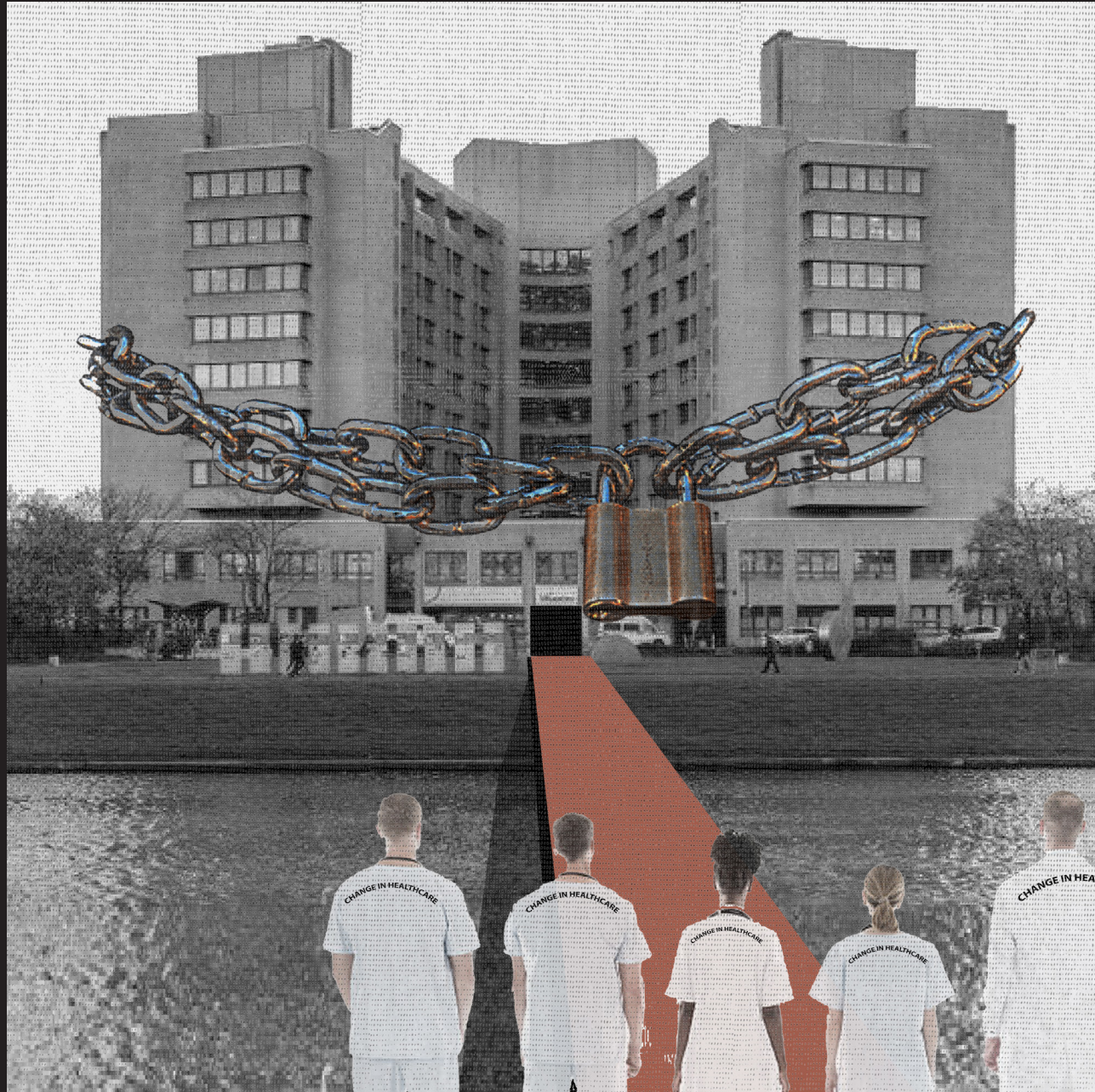


research

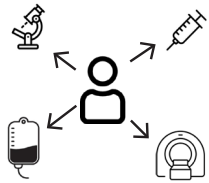
STERILE AND INHUMANE



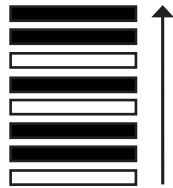
research
STATIC



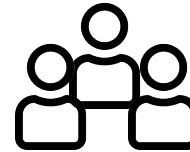
OBSERVATIONS OF EXISTING MODEL



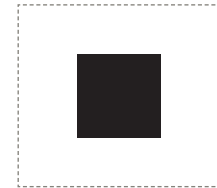
FRAGMENTED



DEPARTMENTAL



GENERALISED and
STERILE



STATIC

research

BUILDING NEEDS

Not to forget in the spirit of ingenuity, regenerative medicine is a **collaborative effort.**

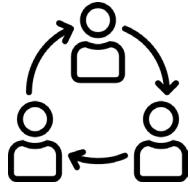
- Yannas IV. Tissue and Organ Regeneration in Adults. Springer, NY, USA (2001).

A successful regenerative medicine initiative requires the expert knowledge of **scientists, engineers, physicians, researchers and many others** in a multidisciplinary effort....

- Hutmacher, D. W. (2006) 'Regenerative medicine will impact, but not replace, the medical device industry', Expert Review of Medical Devices

The new ecosystem need to **co-locate** outpatient, inpatient, rehabilitation, wellness and prevention, ancillary support spaces, and industry (research and development) **all under one roof.**

BUILDING IMPLICATIONS



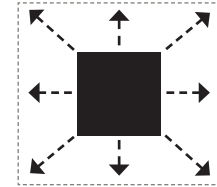
COLLABORATIVE



FAST AND OPTIMISED
MOVEMENT



PERSONALISED AND
SPECIALISED



ACTIVE AND FLEXIBLE

BUILDING IMPLICATIONS



COLLABORATIVE



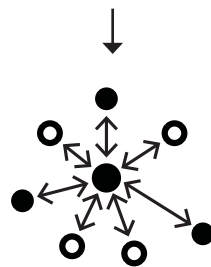
FAST AND OPTIMISED
MOVEMENT



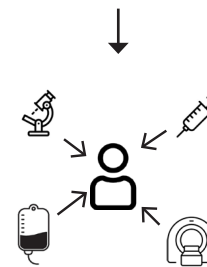
PERSONALISED AND
SPECIALISED



ACTIVE AND FLEXIBLE



DECENTRALISED



PATIENT CENTRIC



CENTER RE-GEN

Hospital for regenerative medicine
and Bio repository

MAIN RESEARCH QUESTION

“HOW DOES THE ARCHITECTURAL DESIGN OF A HOSPITAL FACILITATE THE PRODUCTION AND DELIVERY OF PERSONALISED REGENERATIVE MEDICINE WHILE ENHANCING PATIENT CARE AND EXPERIENCE?”

SUB-RESEARCH QUESTION

“HOW DOES THE ARCHITECTURAL DESIGN OF A HOSPITAL FACILITATE THE PRODUCTION AND

1. DELIVERY OF PERSONALISED REGENERATIVE MEDICINE WHILE ENHANCING PATIENT CARE
2. AND EXPERIENCE?”

1. How will this collaboration change the hospital process and thus the building?

2. How can we create an patient centric hospital design enhancing care and experience?

Hospital OUTLINE

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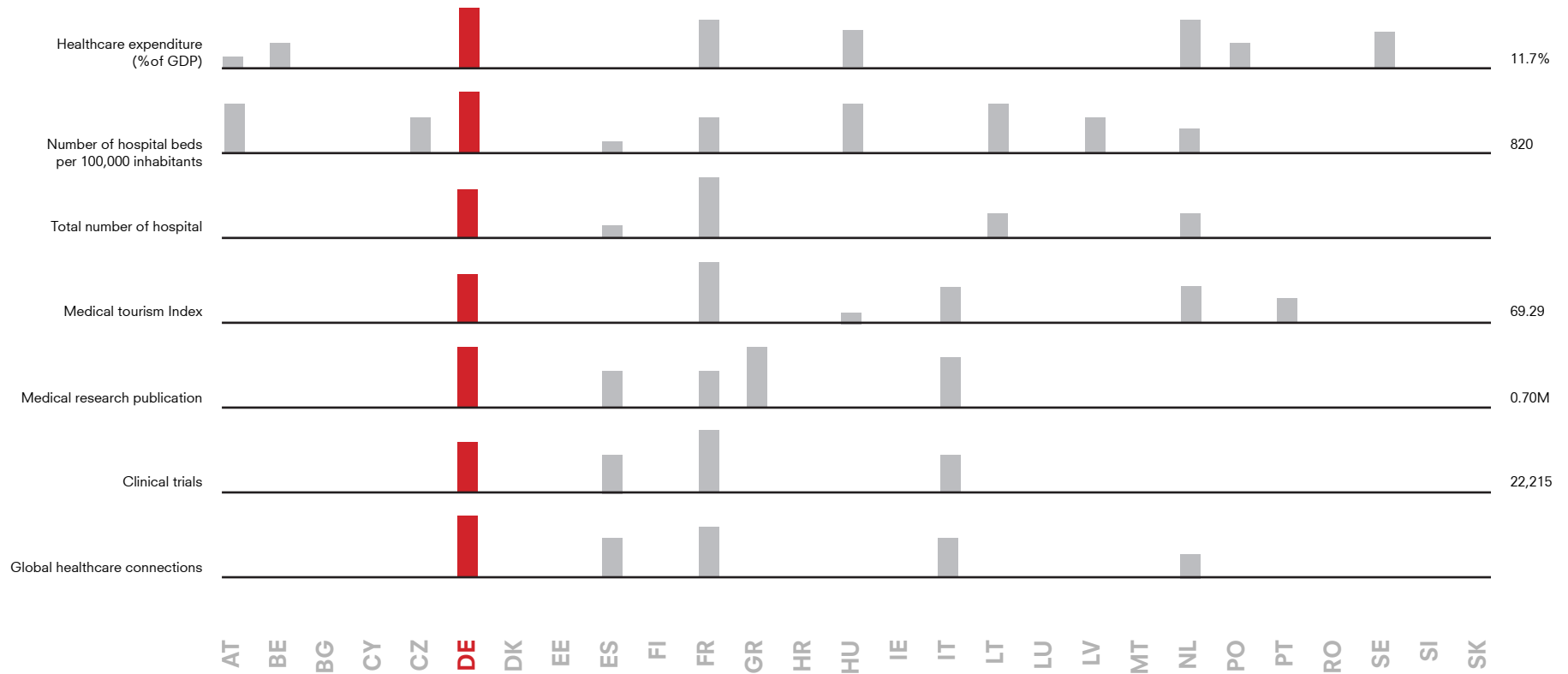
client

GLOBAL LEADERS

A minimalist world map with a red puzzle piece highlighting Germany. The map is composed of simple black outlines for continents and countries. A black rectangular box is overlaid on the map, containing white text. The red puzzle piece is located in the position of Germany in Central Europe.

**GERMANY AS THE GLOBAL LEADER OF
HEALTHCARE INDUSTRY AND EDUCATION
WITH BERLIN AS ITS MAIN HOTSPOT**

LEVEL OF GERMAN HEALTHCARE



client

BERLIN & REGENERATIVE MEDICINE



**'THE STATE OF BERLIN SETS A FOUNDING STONE
FOR BERLIN AND BRANDENBURG CENTER FOR
REGENERATIVE MEDICINE'**

PAST



2006

2009

2019

2022

2023

FUTURE

client

BERLIN & REGENERATIVE MEDICINE



'CHARITE AND OTHER HOSPITALS AND RESEARCH INSTITUTES JOIN THE CHANGE,

Einstein center for regenerative therapies, by charite

PAST



2006



2009



2019



2022



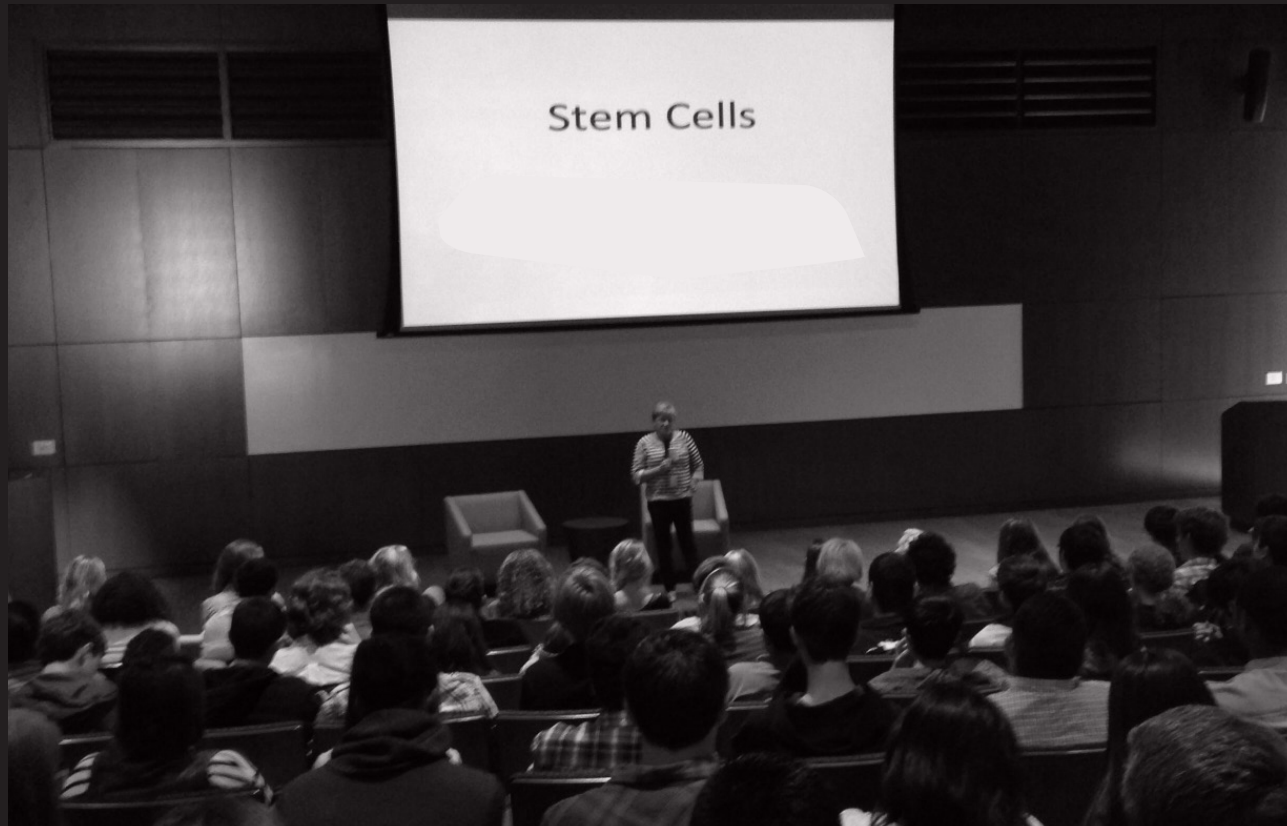
2023



FUTURE

client

BERLIN & REGENERATIVE MEDICINE



**'THE STATE OF BERLIN HOSTS CONSORTIUM AND
CONFERENCES FOR REGENERATIVE MEDICINE'**

PAST

2006

2009

2019

2022

2023

FUTURE

client

FUTURE OF BERLIN



'THE STATE OF BERLIN, BAYER AND CHARITE ARE PLANNING A HEALTHCARE LIGHTHOUSE PROJECT IN THE MITTE BOROUGH'

focusing on cell based treatments and regeneration.

PAST



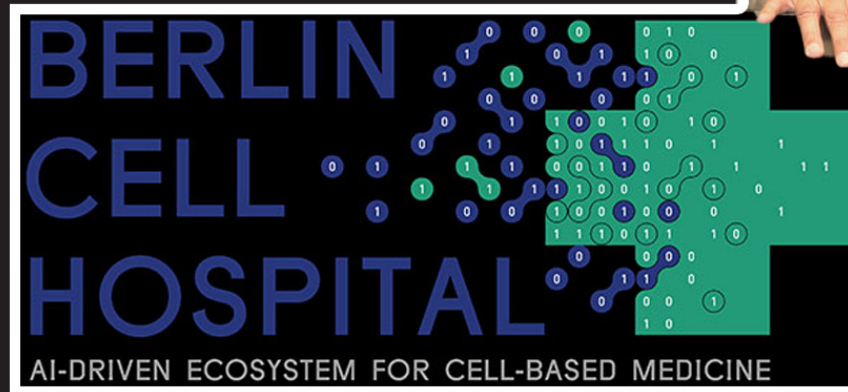
FUTURE

client

FUTURE OF BERLIN

**'BERLIN TO BECOME FIRST CITY TO HAVE
A SPECIALISED HOSPITAL FOR CELL /GENE
THERAPIES AND REGENERATIVE THERAPIES'**

By Charite, BIH, BIFOLD, and Max Delbruck center for molecular medicine



PAST

2006

2009

2019

2022

2023

FUTURE

client

FOCUS

**One time solution to Chronic
diseases and old age problems**

**Understanding the healing power
of Human body**

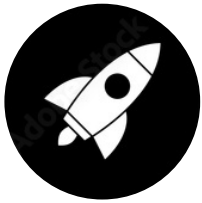
**Human and technology symbiosis
AI driven systems**

**Realising the potential of
Collaborations**

**A holistic approach to health and
well being - more patient centric**

client

CLIENT QUALITIES



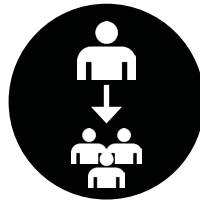
Progressive

experimental and progressive stance towards innovation and in the field of regenerative medicine and future



Frontrunners

industry leaders and fast growing in the sector of regenerative medicine and care



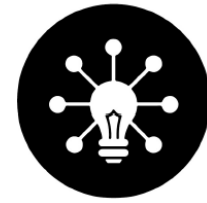
Support and Inspire

support and educate the rising talents in the field of regenerative medicine



Global connections

Global connections with rising actors in other countries



Diverse expertise

knowledge in various supporting fields to regenerative medicine and bio banking

client

MAIN STAKEHOLDERS

Medical Partners



client

MAIN STAKEHOLDERS

Medical Partners



Research and operation
Partner



BIH Regeneration
BIH Center for Regenerative Therapies (BCRT)

MAX
DELBRÜCK
CENTER



SECONDARY STAKEHOLDERS

Medical Partners



Research and operation
Partner



International Supply
chain



SECONDARY STAKEHOLDERS

Medical Partners



Research and operation Partner



International Supply chain



Administration



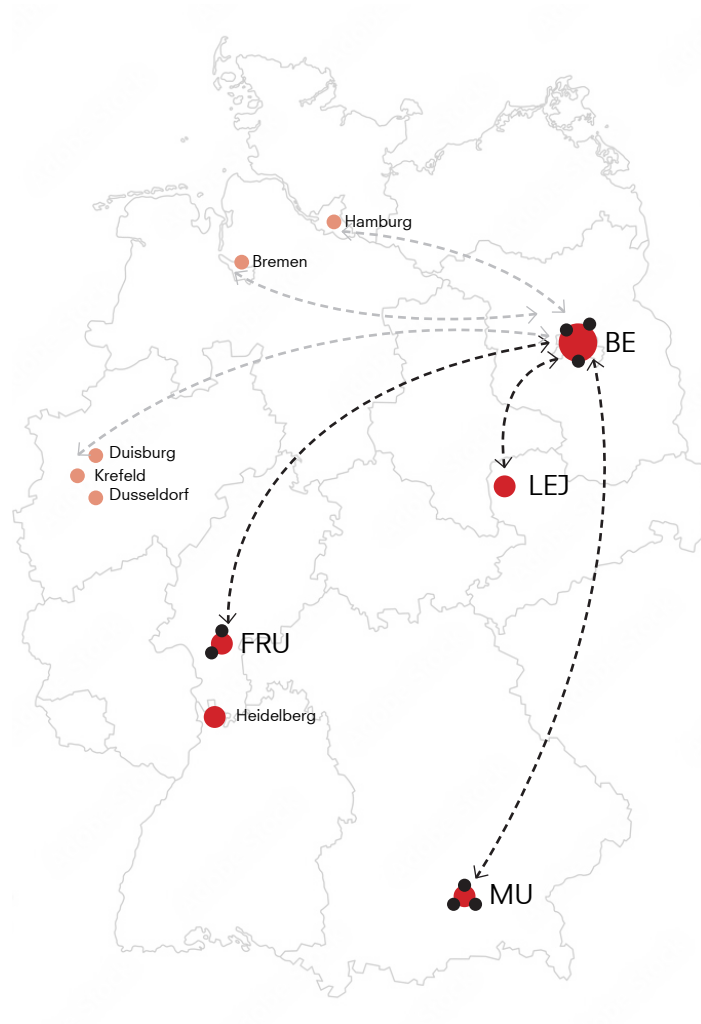
Federal ministry of health



Berlin State government



BERLIN AND EUROPEAN CONNECTION



client

BERLIN AND GLOBAL CONNECTION



Hospital OUTLINE

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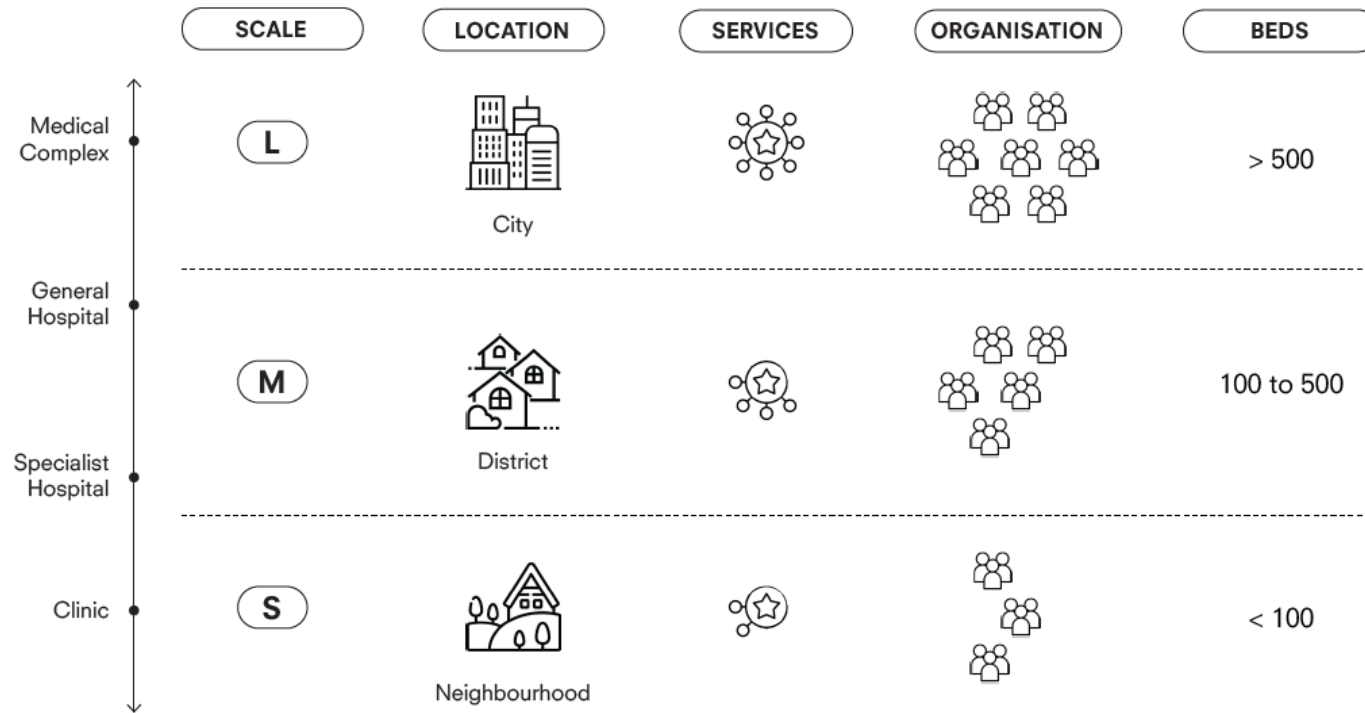
CONCEPT DIRECTION

CONCLUSION

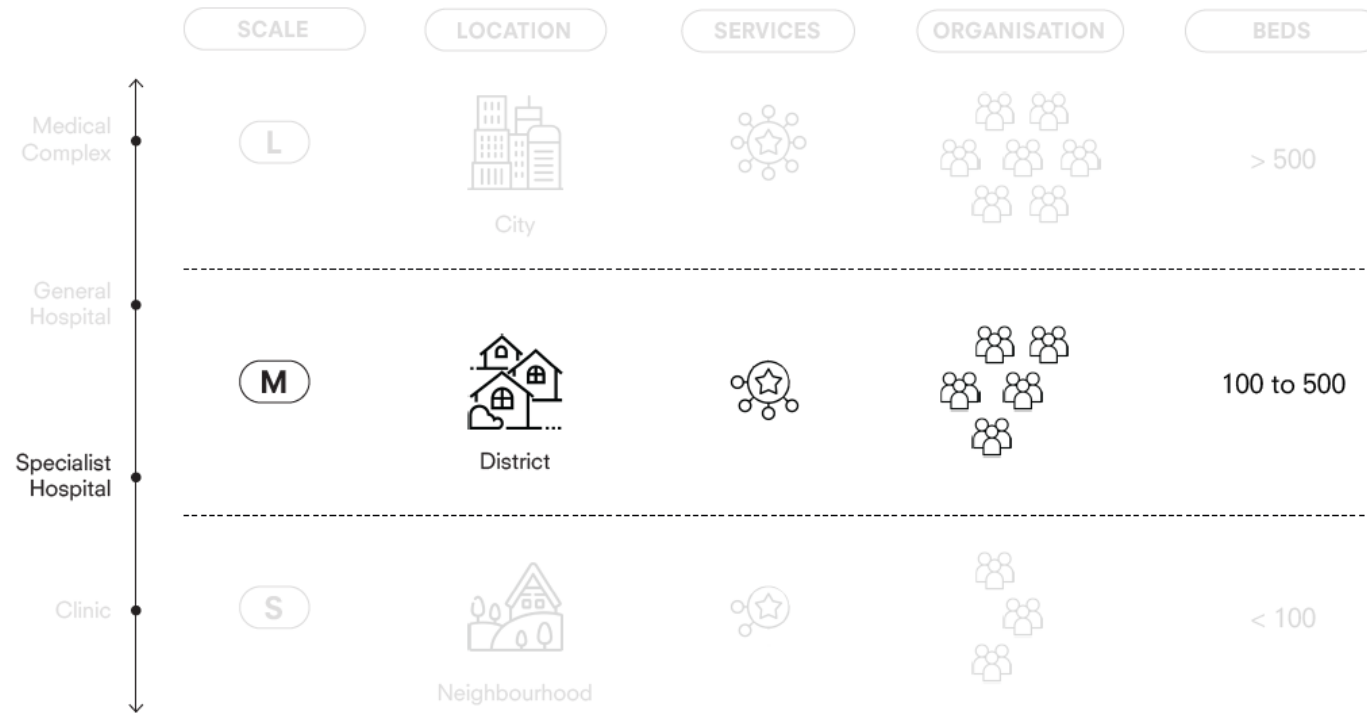
program CAPACITY

SCALE	LOCATION	SERVICES	ORGANISATION	BEDS
L	 City			> 500
M	 District			100 to 500
S	 Neighbourhood			< 100

program CAPACITY



program CAPACITY



program

MEDIUM - SPECIALISED



Center for surgical medicine

Architect - Heinle, Wischer und Partner
Location - Dusseldorf, Germany
Completion - 2011
Client - University hospital Dusseldorf
Area - 20,632 sqm
Capacity - 316 beds



Cancer center at Guy's

Architect - Rogers Stirk Harbour + Partners with Stantec
Location - London, UK
Completion - 2016
Client - Guy's & St. Thomas' NHS foundation trust
Area - 20,000 sqm



Zaans medical center

Architect - Heinle, Wischer und Partner
Location - Dusseldorf, Germany
Completion - 2011
Client - University hospital Dusseldorf
Area - 20,632 sqm
Capacity - 316 beds

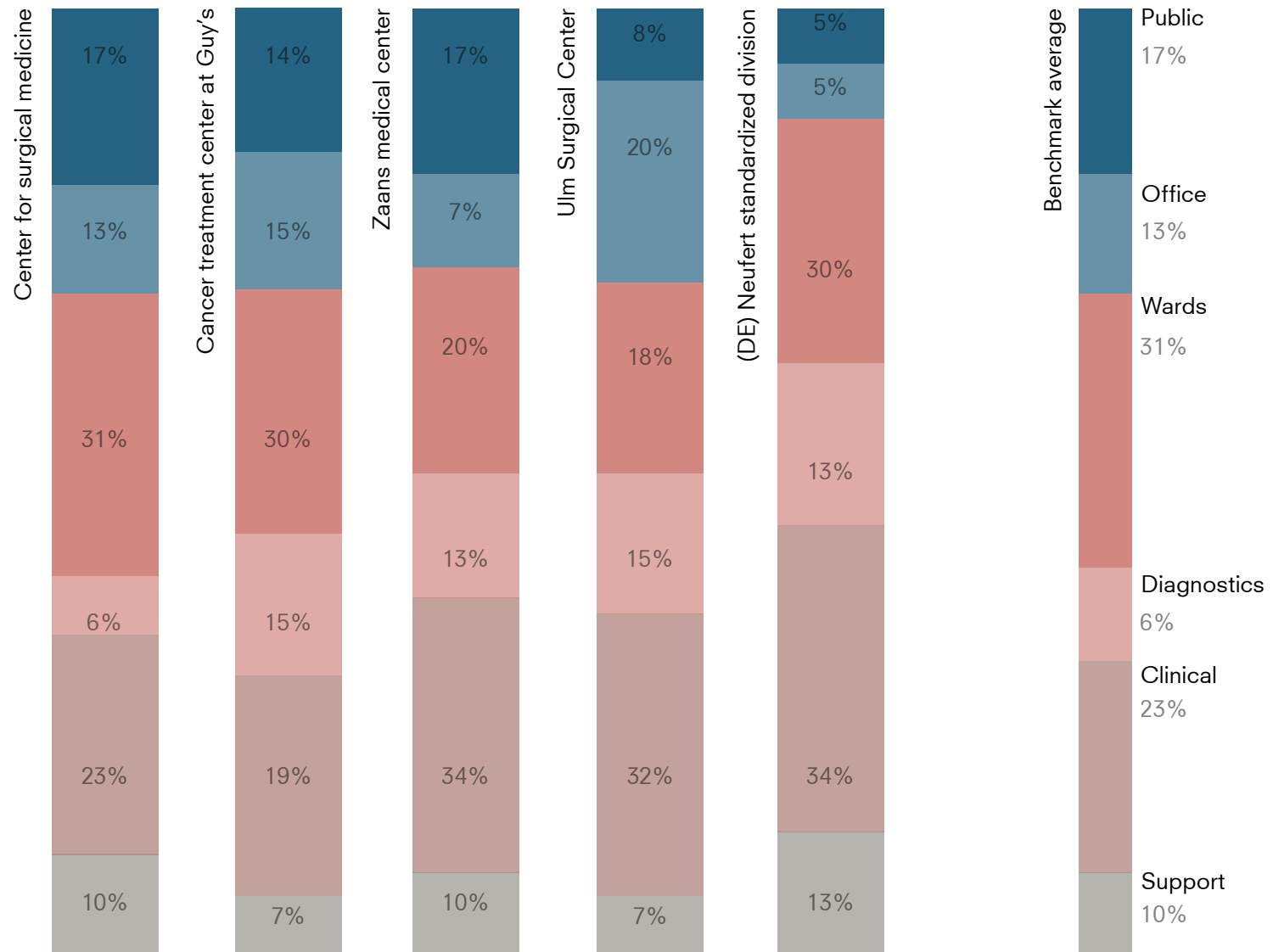


Ulm Surgical Center

Architect - KSP Jürgen Engel Architekten
Location - Ulm, Germany
Completion - 2012
Client - Universitätsklinikum Ulm
Area - 68,500 sqm
Capacity - 235 beds

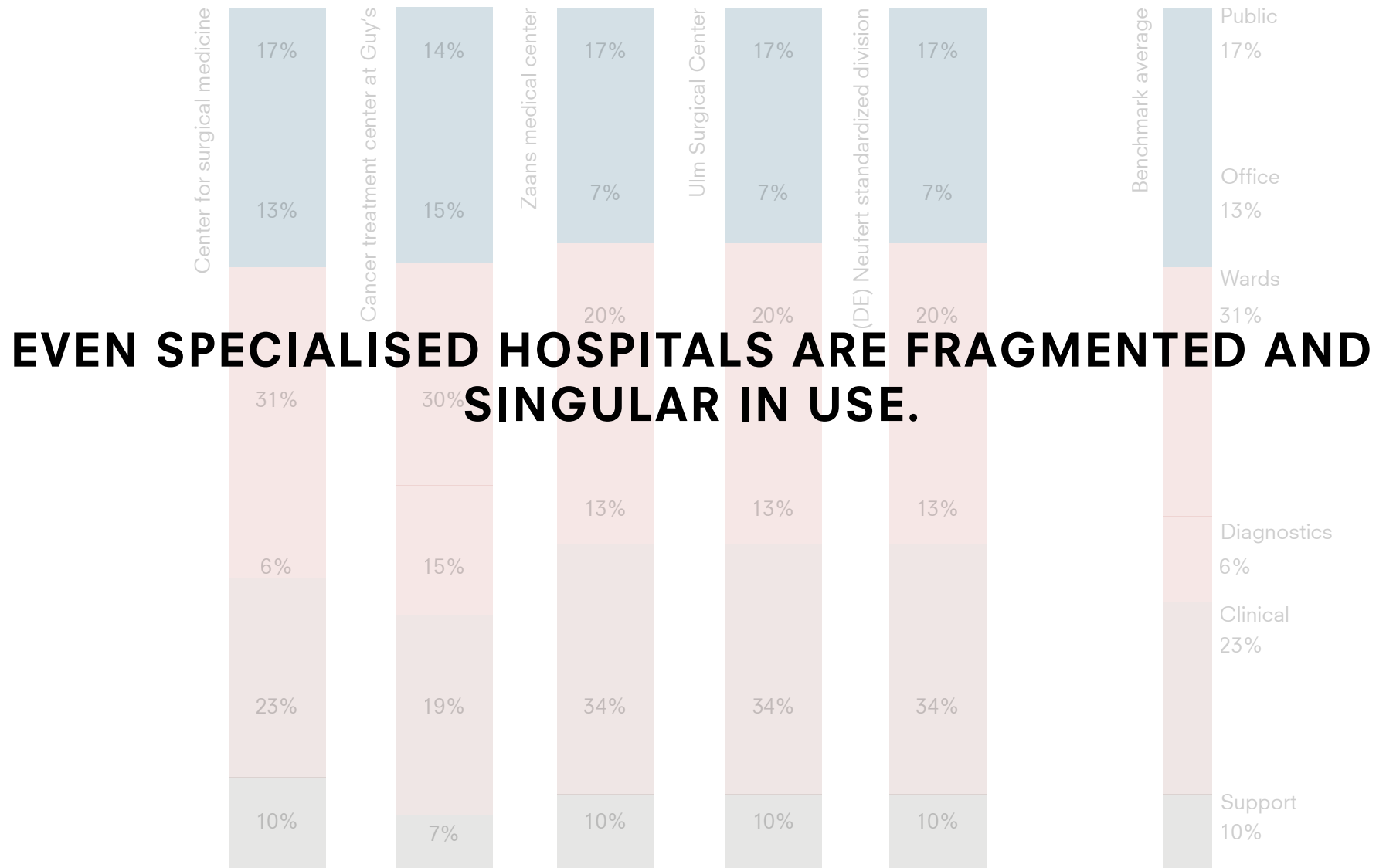
program

SPECIALISED HOSPITAL



program

OBSERVATION



program

COLLABORATIVE CARE



FROM **FRAGMENTED** SETUP
TO **COLLABORATIVE** SETUP

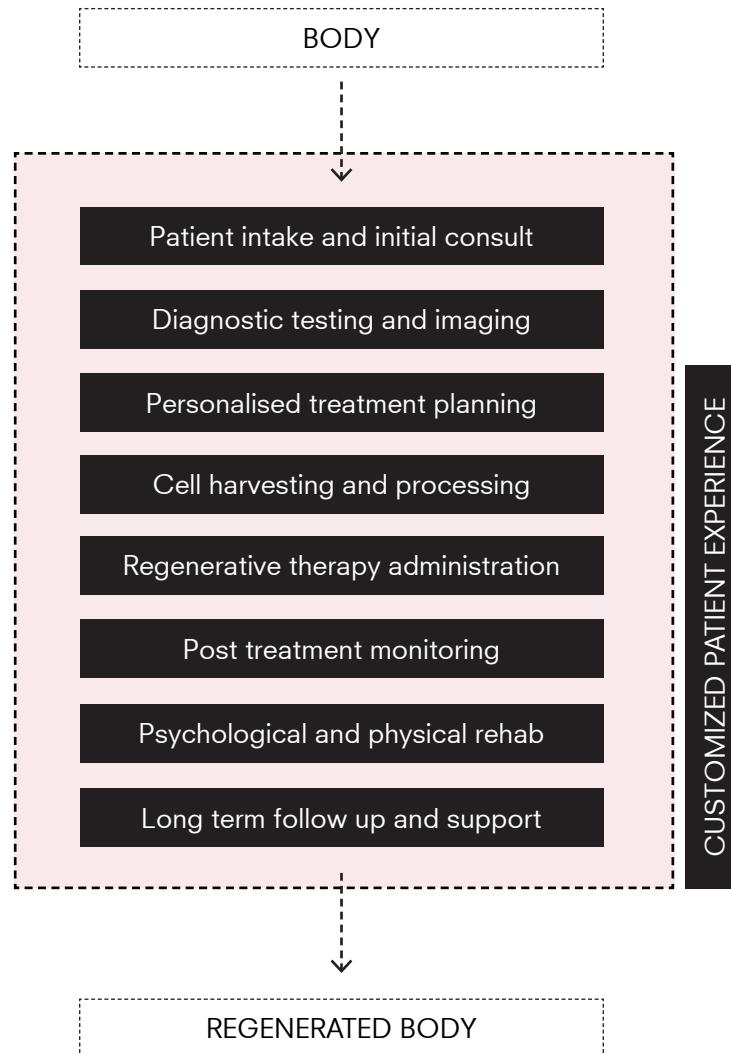
program

HUMAN BODY REGENRATON



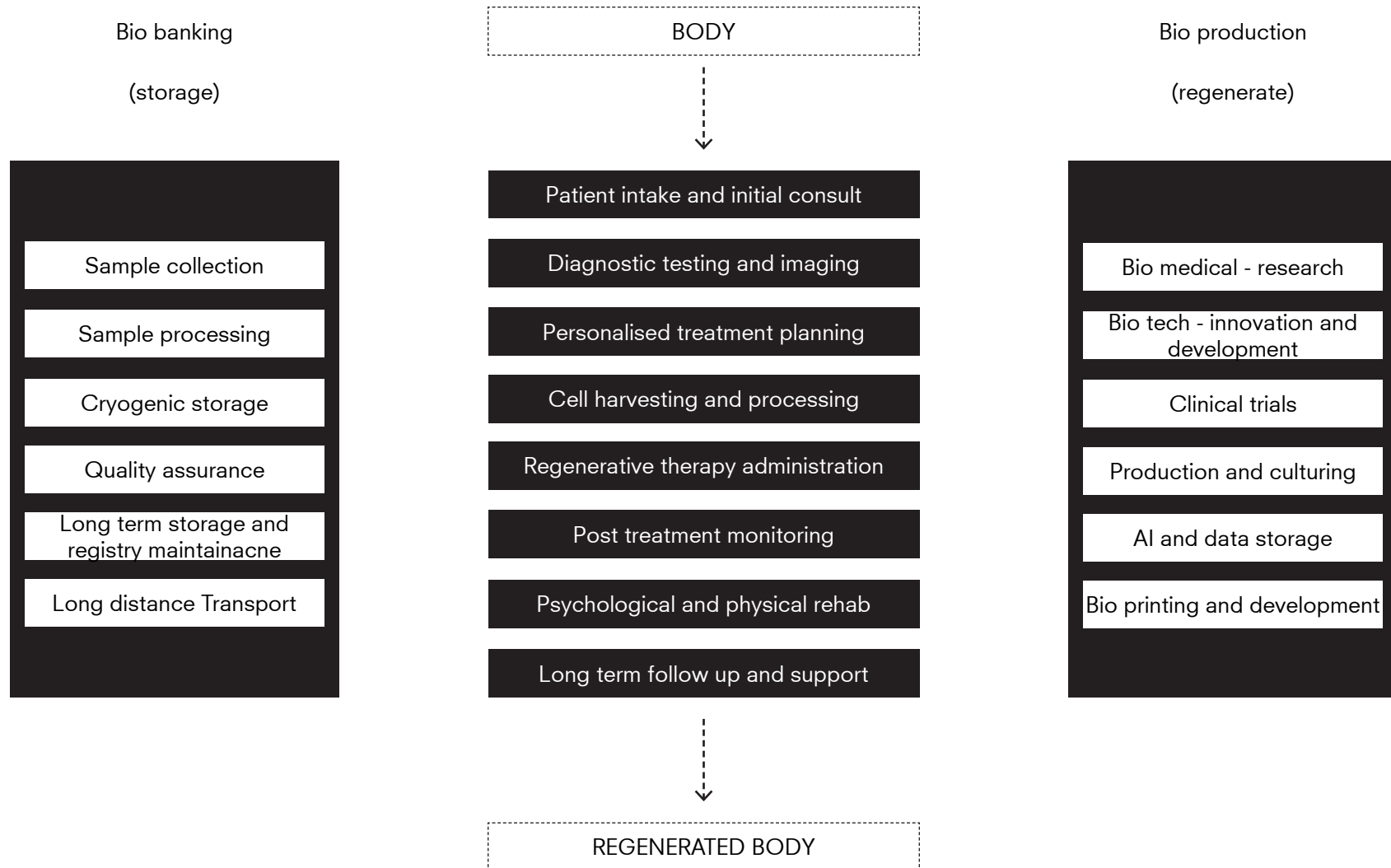
program

HUMAN BODY REGENRATON



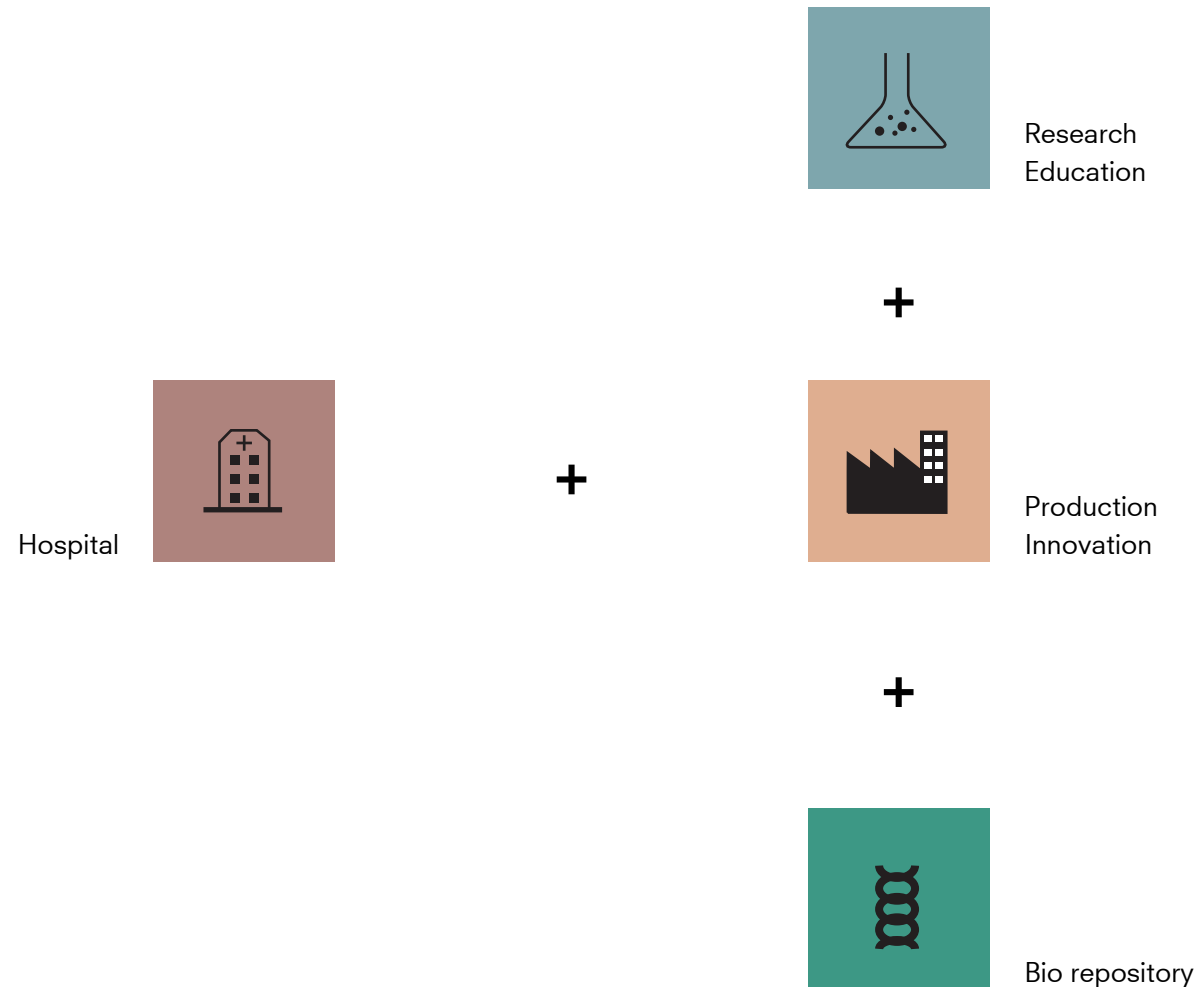
program

HUMAN BODY REGENRATATION



program

COLLABORATION



program BENCHMARKING

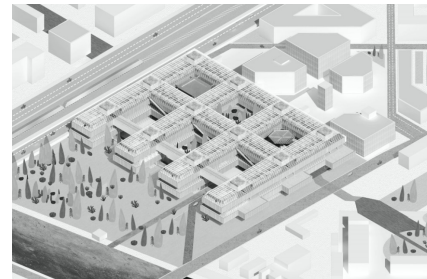
Sanford Consortium for
Regenerative Medicine



Ray and Dagmar Dolby
Regeneration Medicine Building



+



Organ factory,
(CP student project)

+

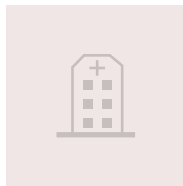


Production



Production

Hospital



+

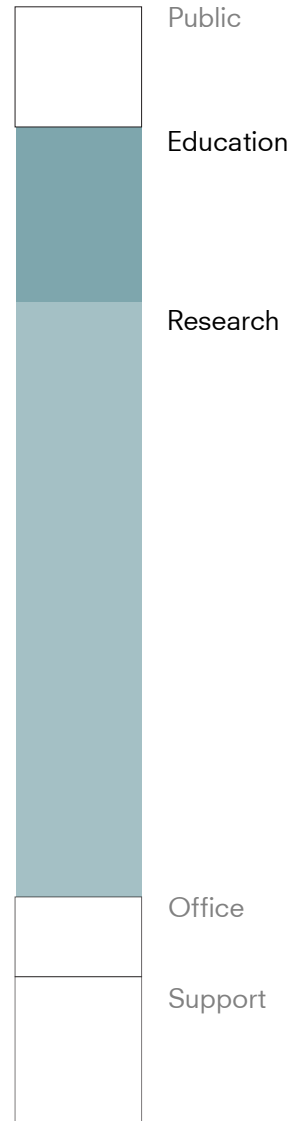
RESEARCH AND EDUCATION

Sanford Consortium for
Regenerative Medicine



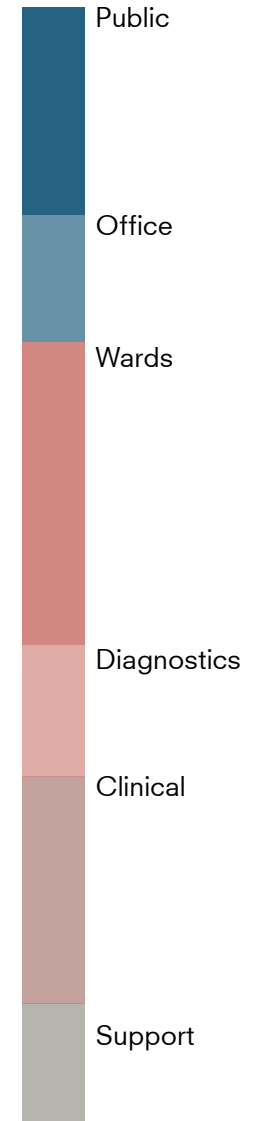
Area - 15,000 sqm

Ray and Dagmar Dolby
Regeneration Medicine Building



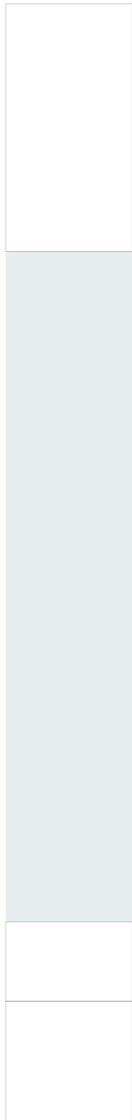
Area - 6,634 sqm

Center ReGen



RESEARCH AND EDUCATION

Sunshine coast
university hospital



Akershus University
Hospital



Average

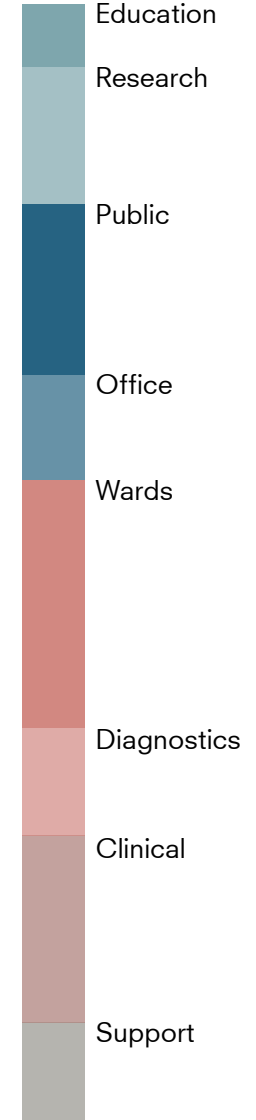


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Center ReGen



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program

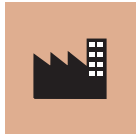
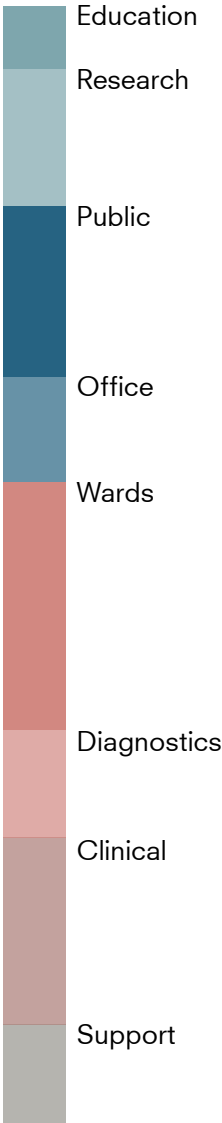
PRODUCTION/ FACTORY

Organ Factory



Area - 80,000 sqm
Factory - 8,000 sqm

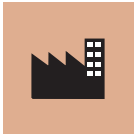
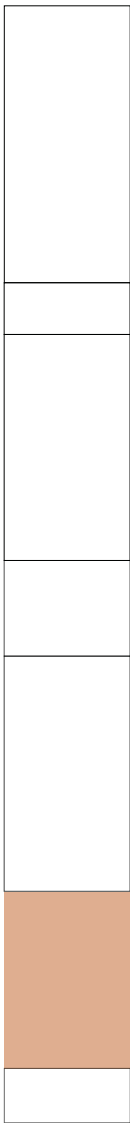
Center ReGen



program

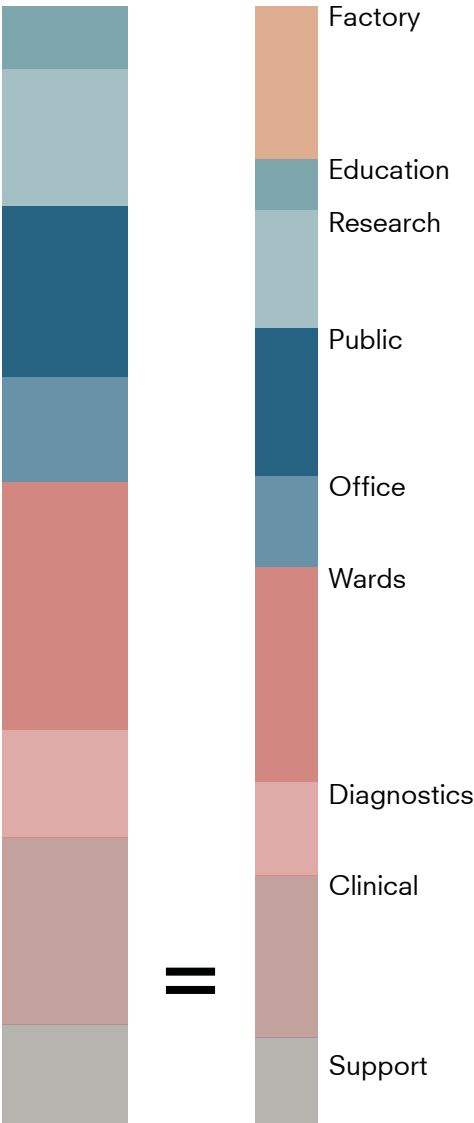
PRODUCTION/ FACTORY

Organ Factory



+

Center ReGen



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program

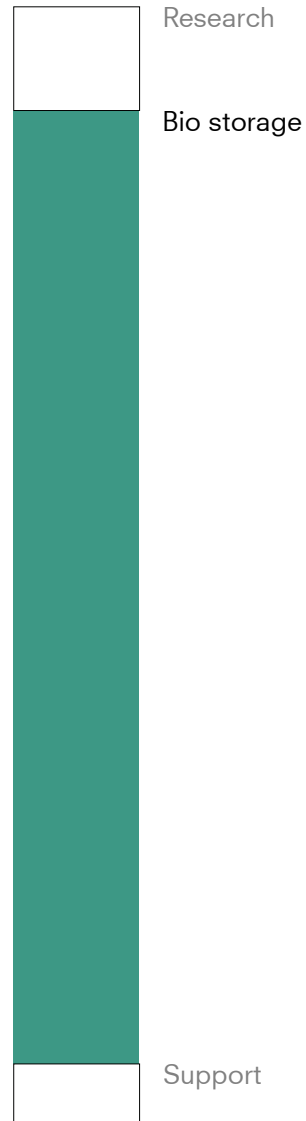
BIO REPOSITORY

Bio repository



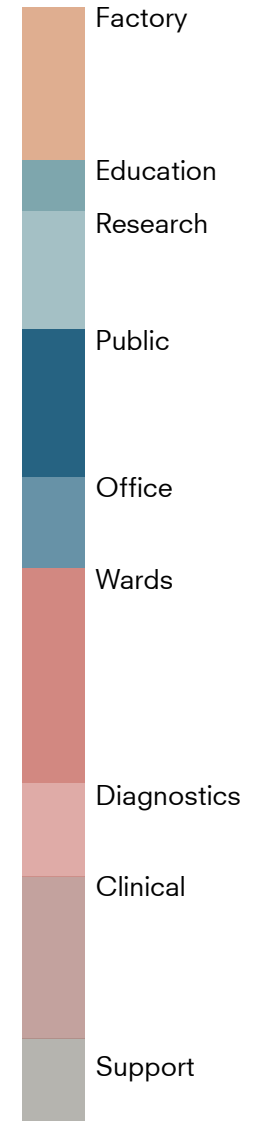
Area - 5,000 sqm

Bio bank
berlin



Area - 1,550 sqm

Center ReGen



program

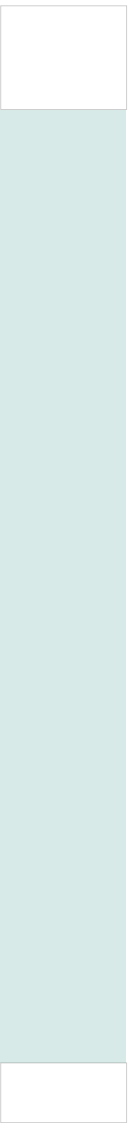
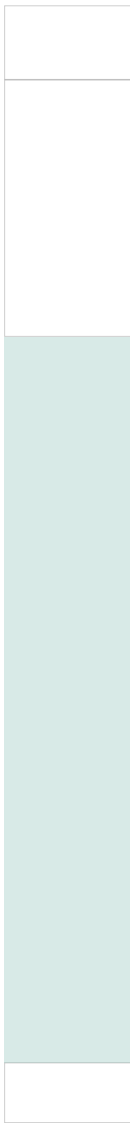
BIO REPOSITORY

Bio repository

Bio bank
berlin

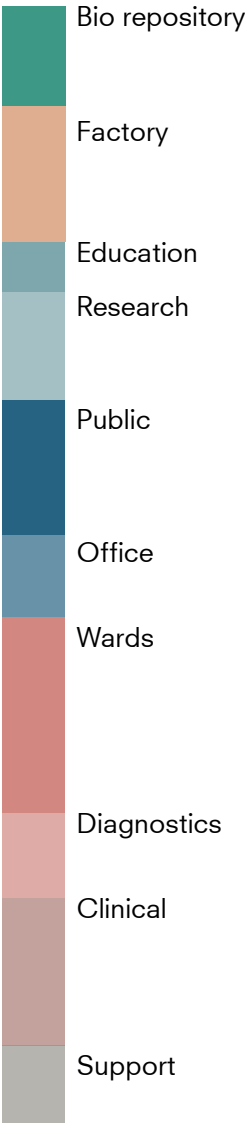
Average

Center ReGen

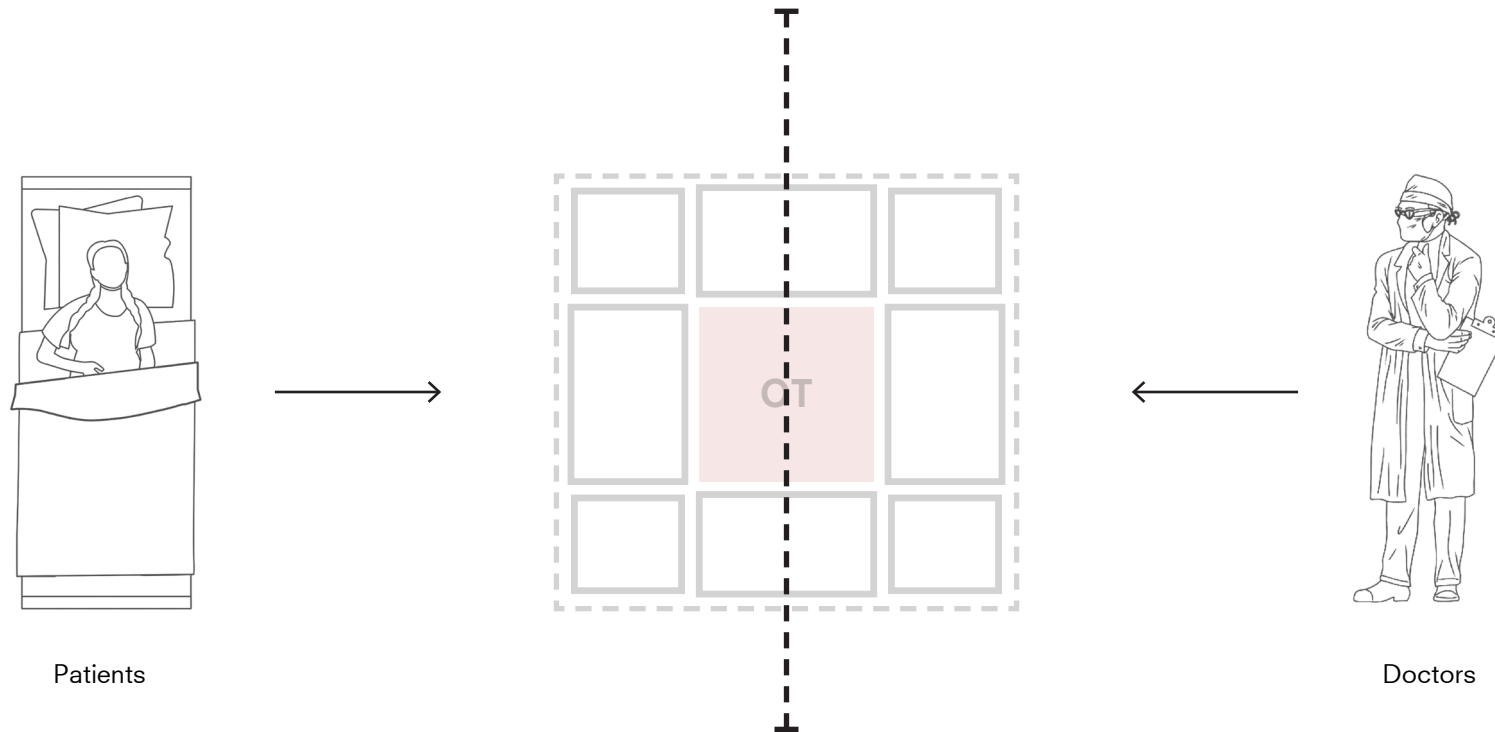


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SURGICAL SETTING - KEY SPOT OF COLLABORATION

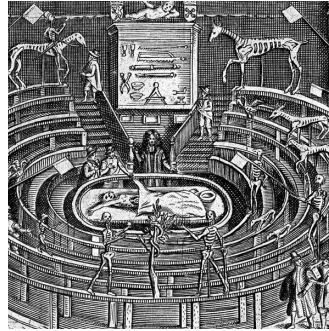


program

HISTORIC EVOLUTION



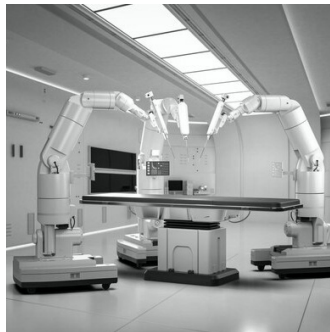
General open
setting
pre-modern



Theatre setting
1937



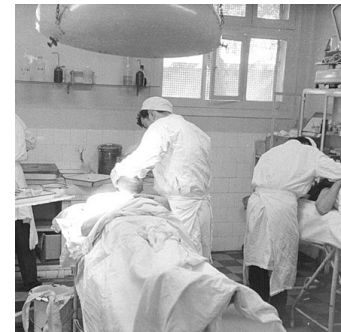
Centralised
setting
1955



AI and robotic
based setting
current - future

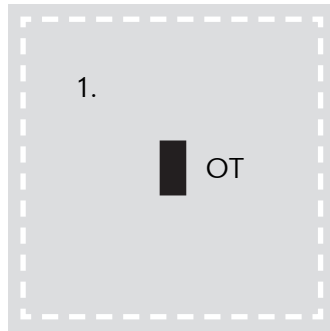


Hybrid setting
2010 - current



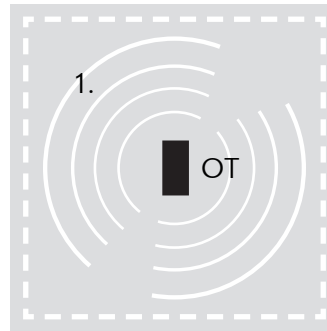
Cleanroom
setting
1966

program HISTORIC EVOLUTION



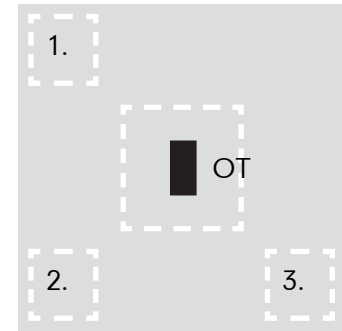
Area -

1. Common space for other procedures and waiting



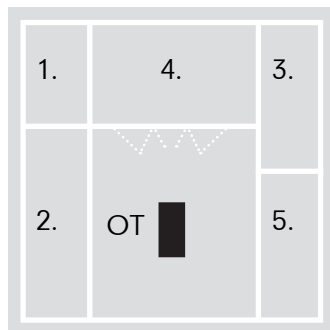
Area -

1. Seating for viewers



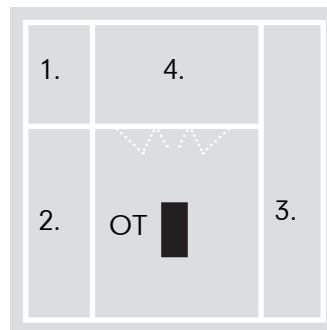
Area - 50

1. Diagnostic space
2. Pre-op preparation
3. Storage



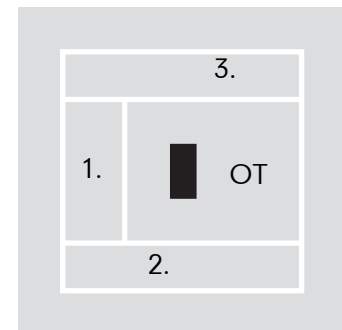
Area - 200

1. Anesthesia and equipment
2. Pre-Op space
3. Cleaning space and storage
4. Diagnostic space (flexible)
5. Control room and data center



Area - 150

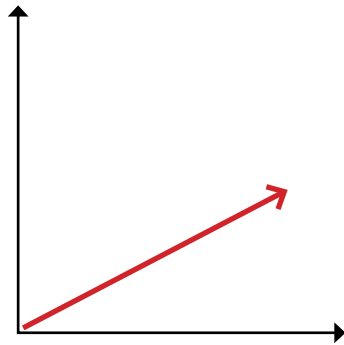
1. Anesthesia and equipment
2. Pre-Op space
3. Cleaning space and storage
4. Diagnostic space (flexible)



Area - 100

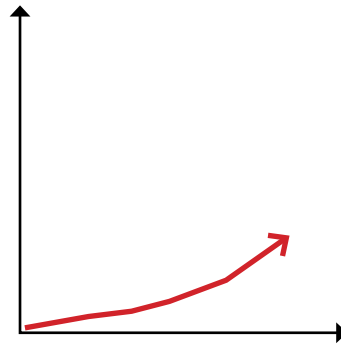
1. Anesthesia and equipment
2. Pre-Op space
3. Cleaning space and storage

program OUTCOMES



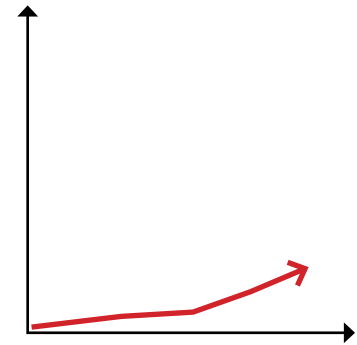
Area

Area of surgical setting is increasing with time



Multifunctionality

Surgical setting is becoming more multifunctional accomodating multiple functions working in collaboration

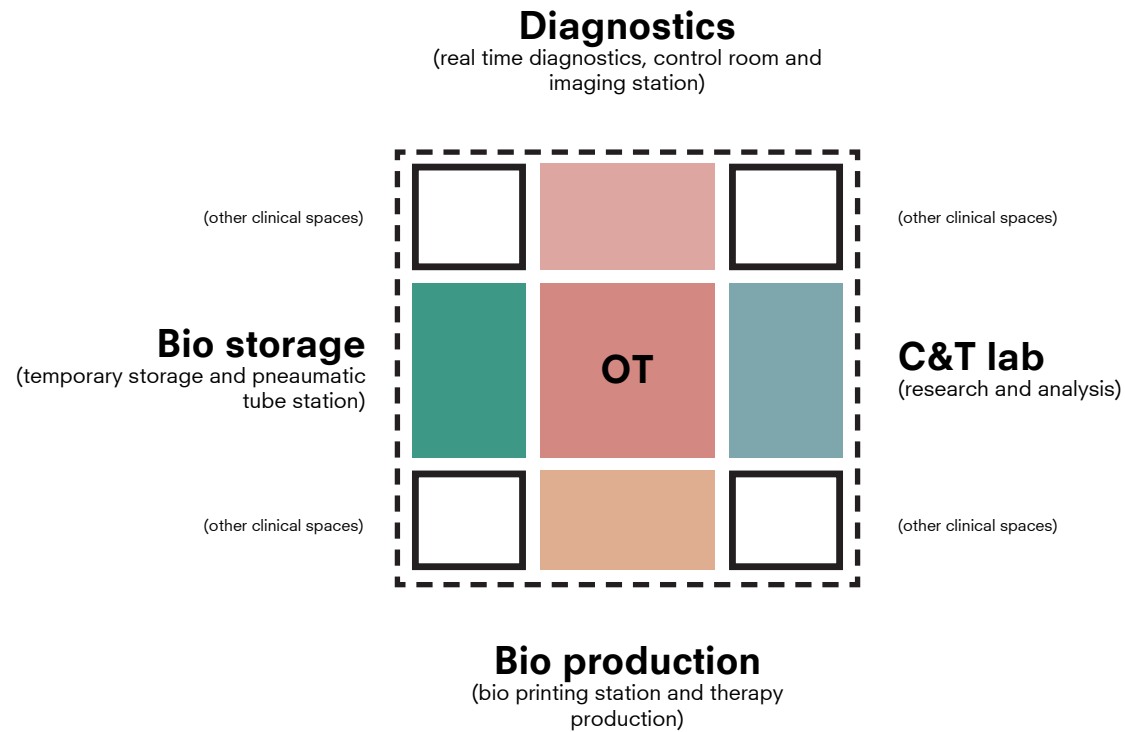


Flexible layout

With time the layout which used to be very strict is becoming more flexible, being used for differenet programs

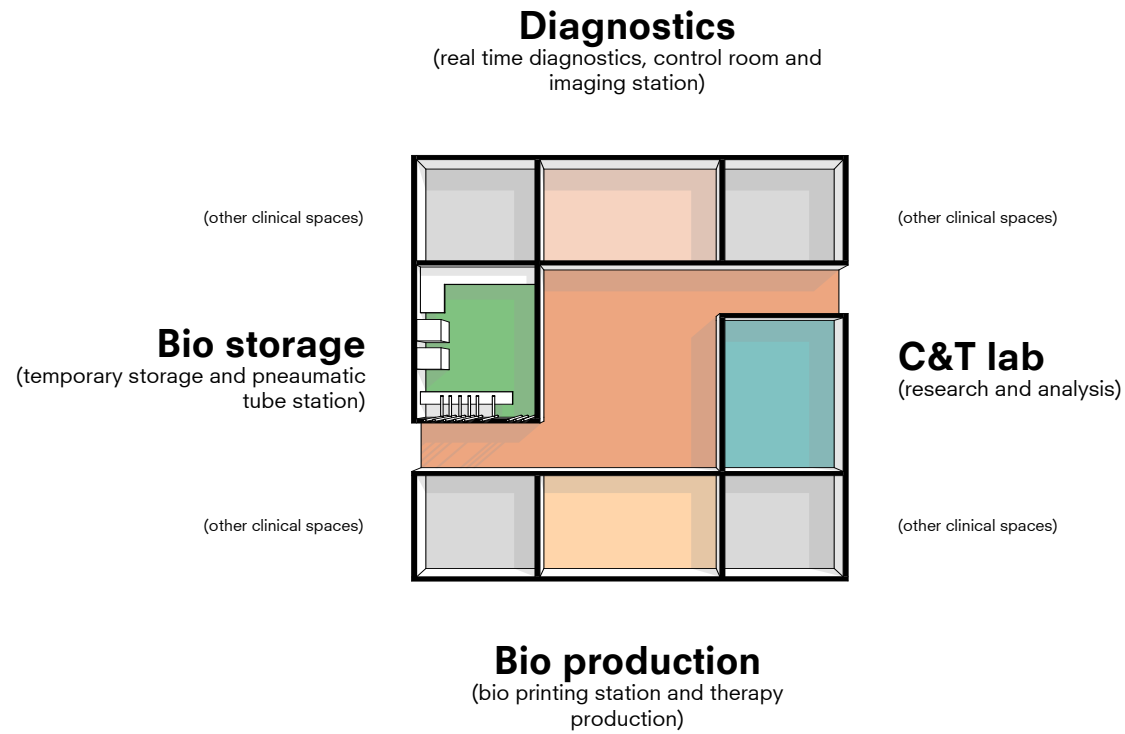
program

SURGICAL MODULE



program

SURGICAL MODULE



program

SURGICAL MODULE

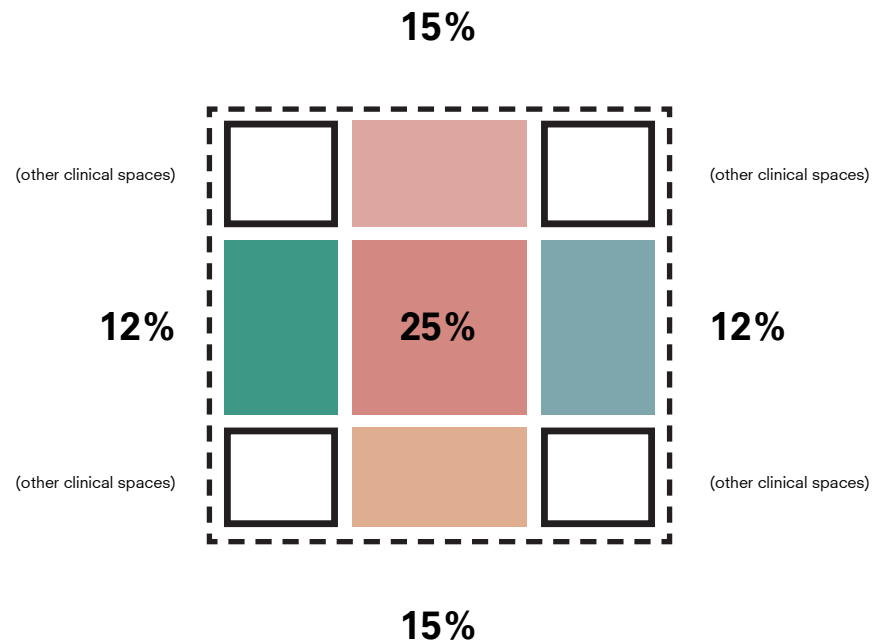


BENCHMARKING PARTS OF SURGICAL SETTING



program

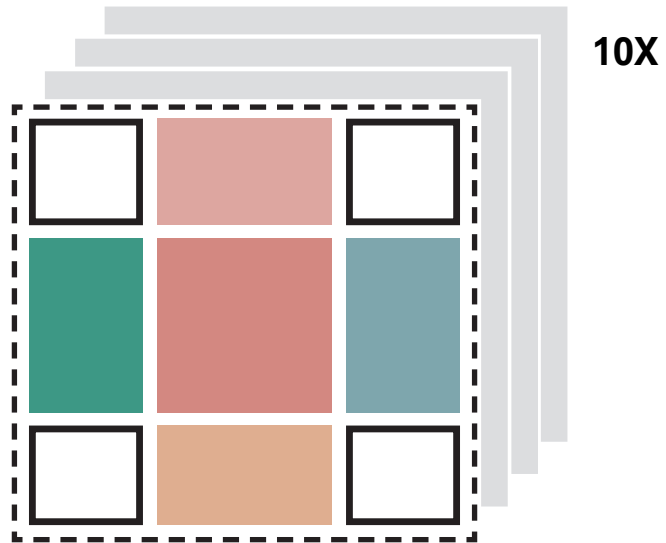
SURGICAL MODULE



Total area - 350 sqm

program

REPETITION

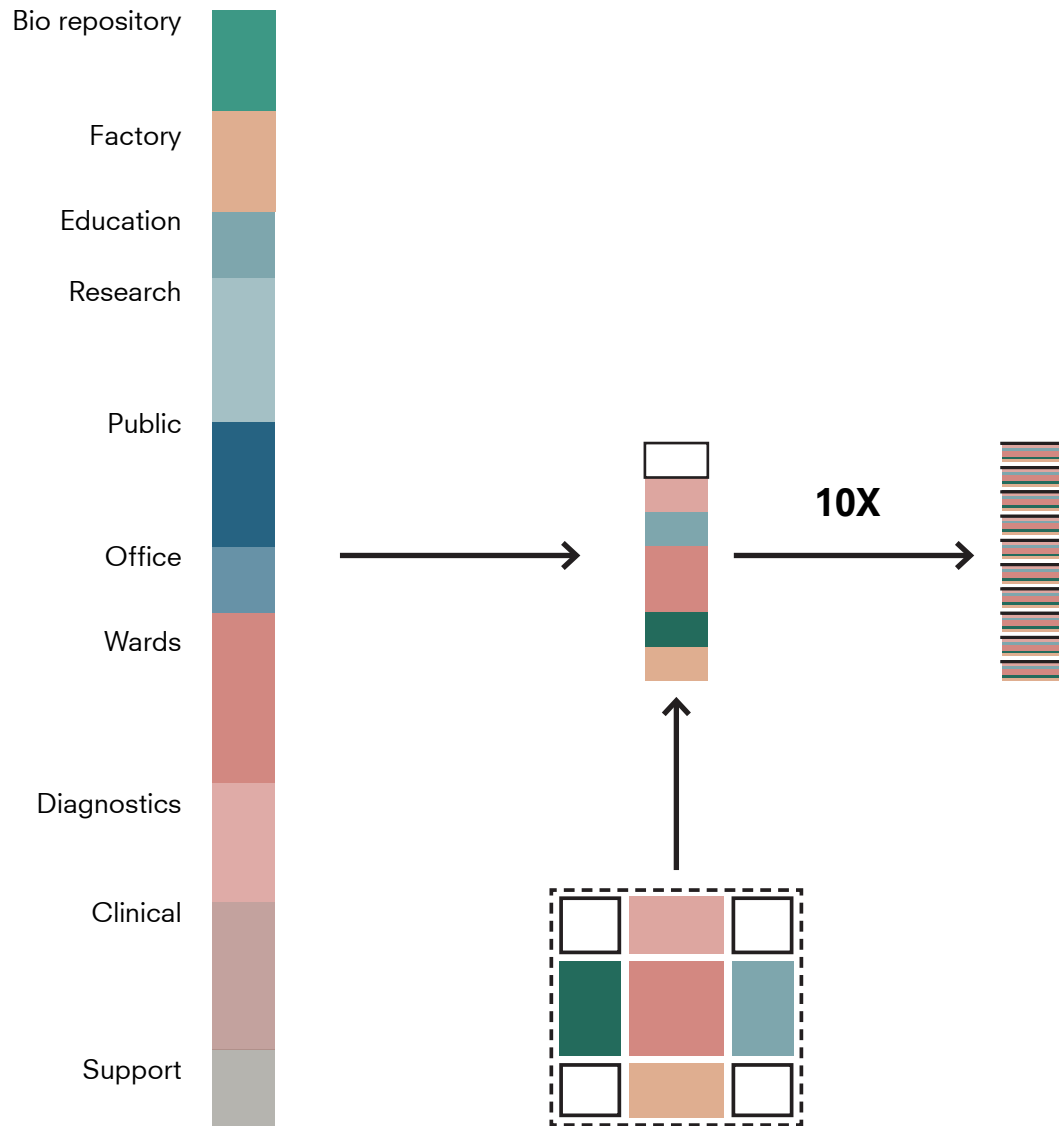


Total area - 3,500 sqm

10X

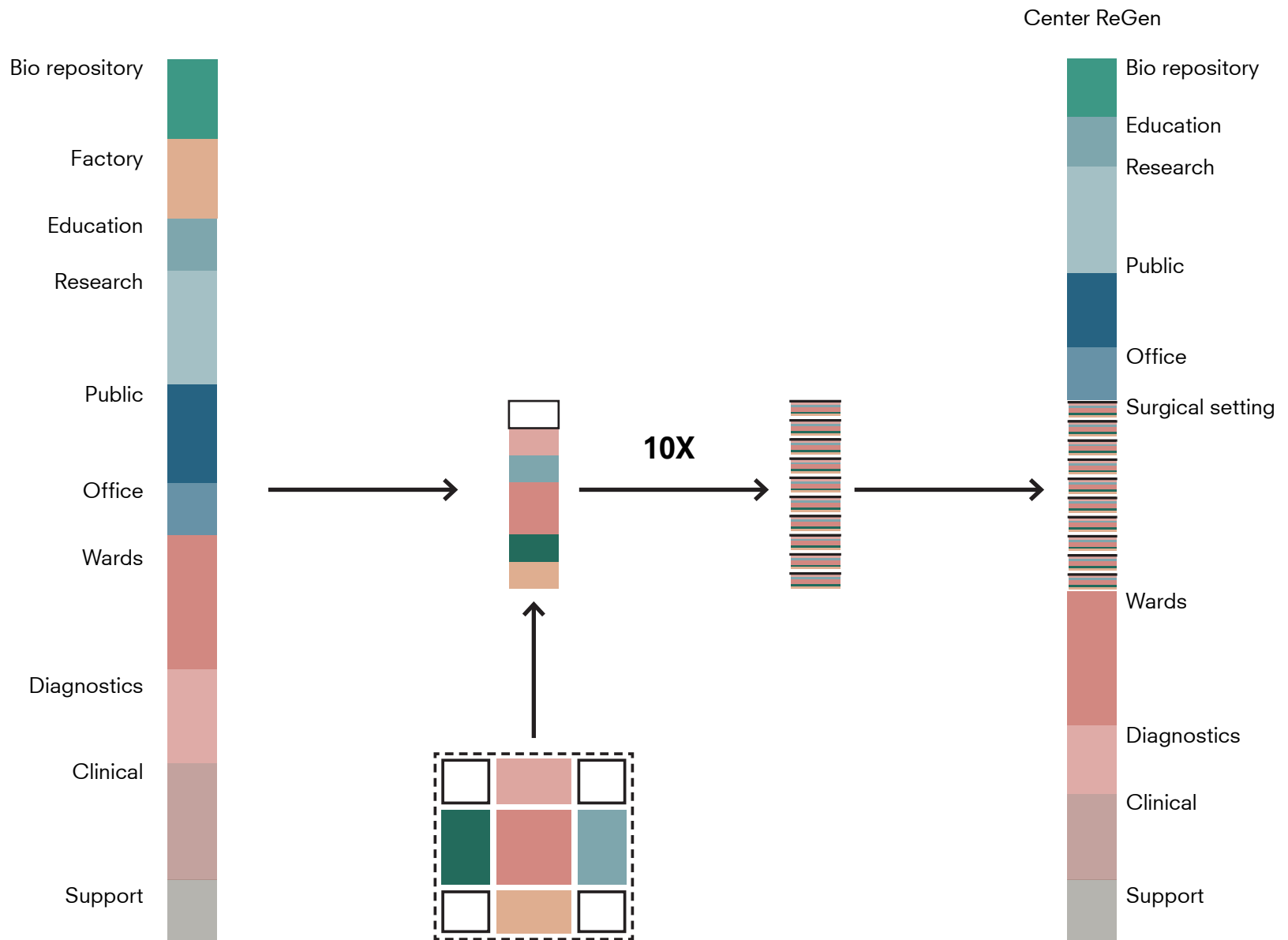
program

BIO REPOSITORY

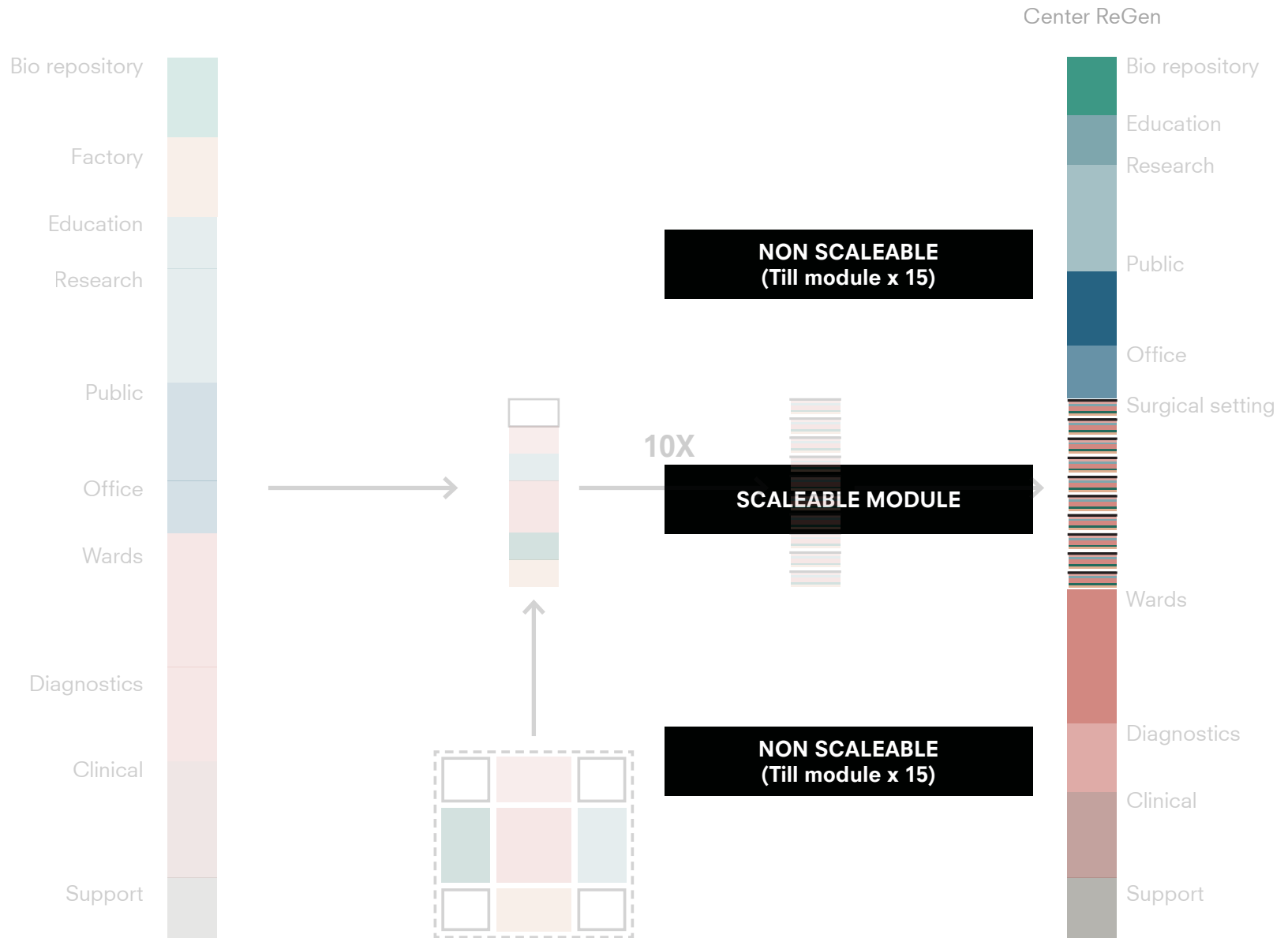


program

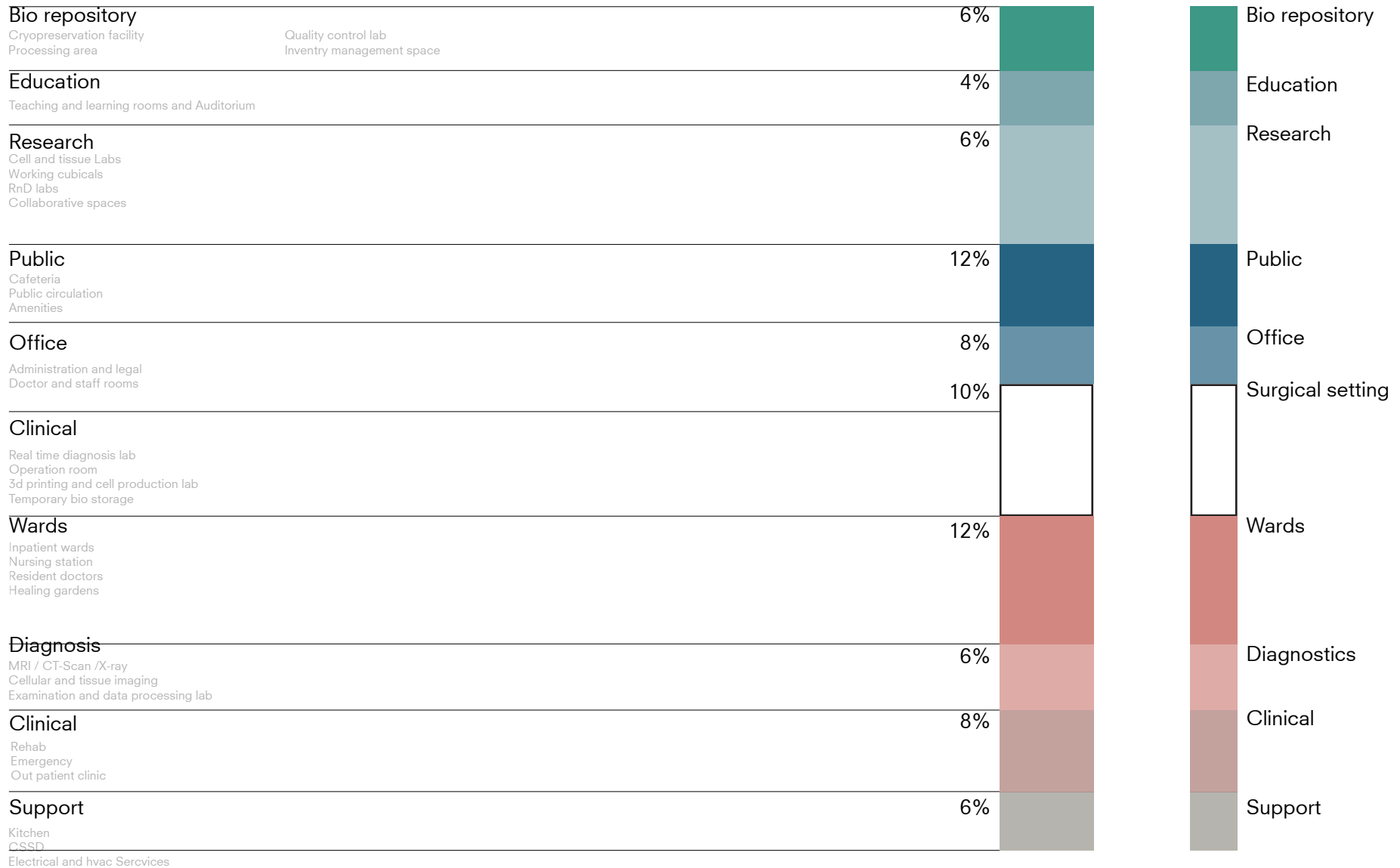
BIO REPOSITORY



program BIO REPOSITORY



program BIO REPOSITORY



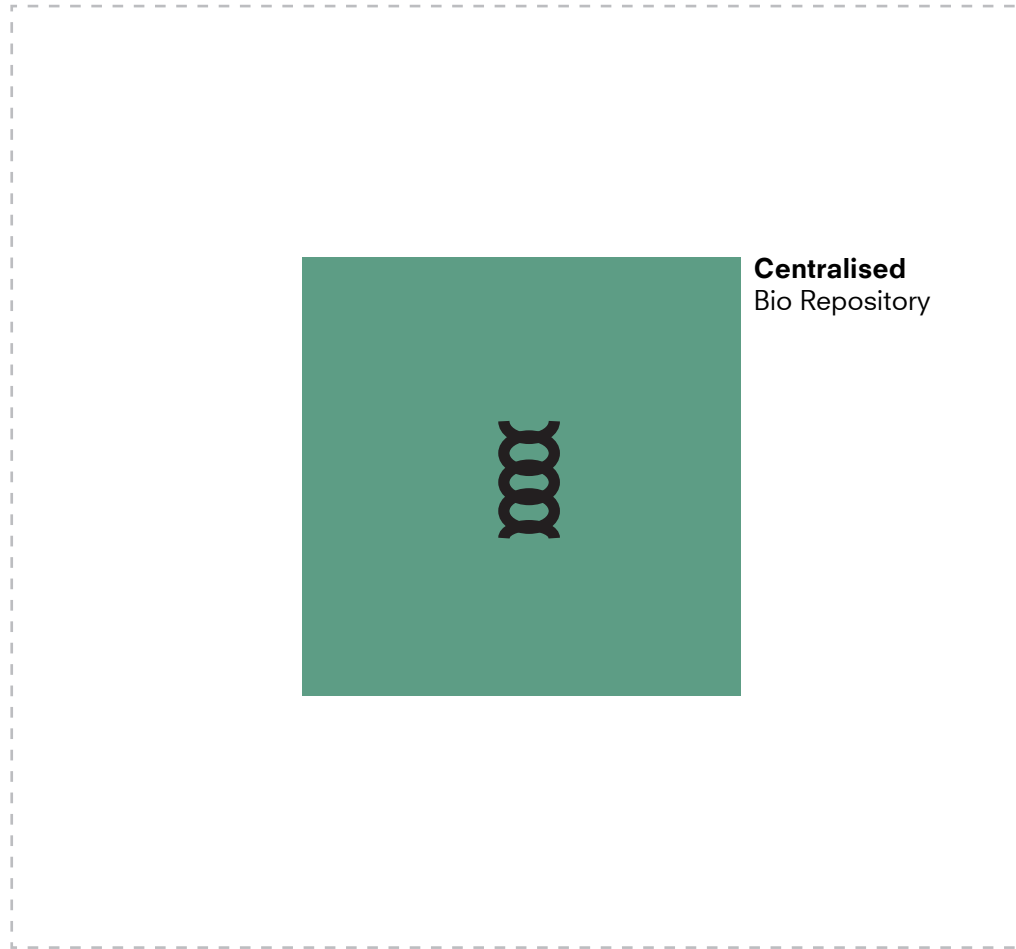
Gross floor area 36,000 sqm

Hospital
OUTLINE

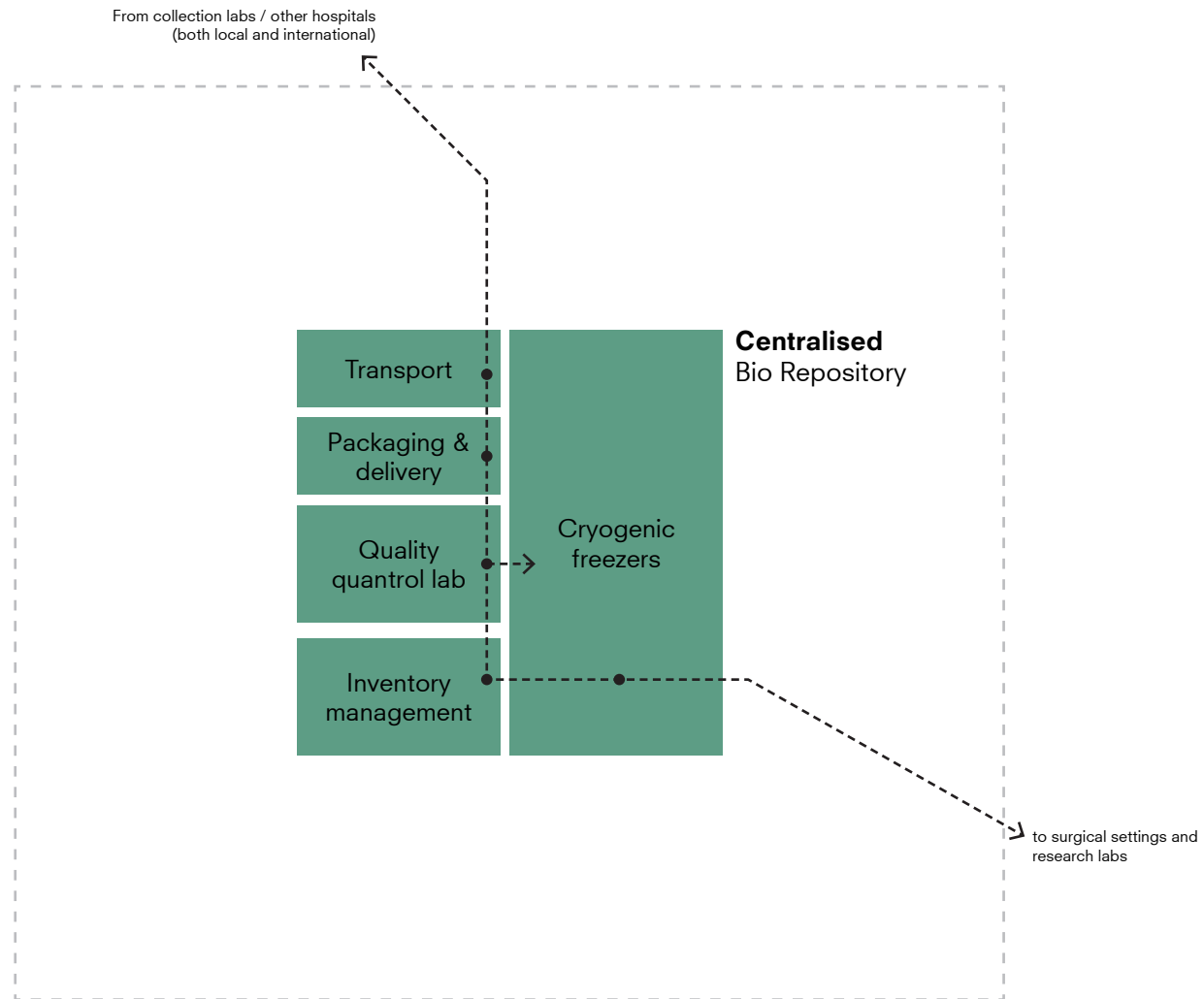
FROM **DEPARTMENTAL** SETUP
TO **OPEN & DECENTRALISED** SETUP

program

ANCHOR POINT

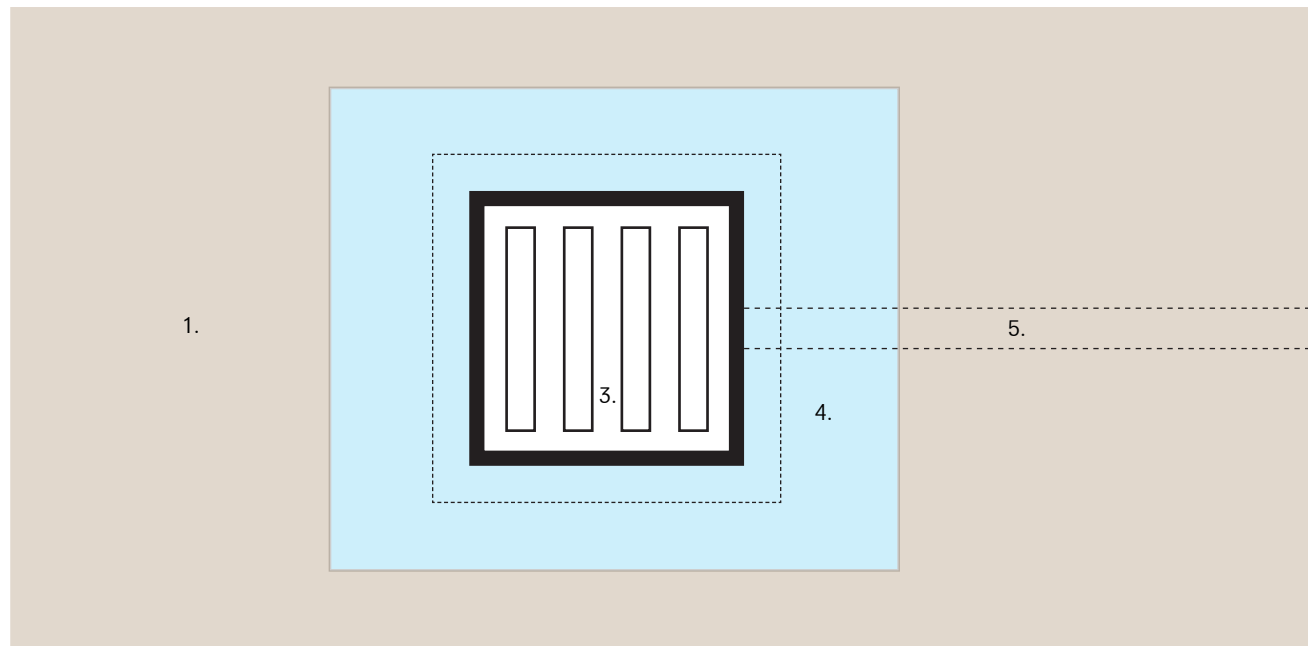
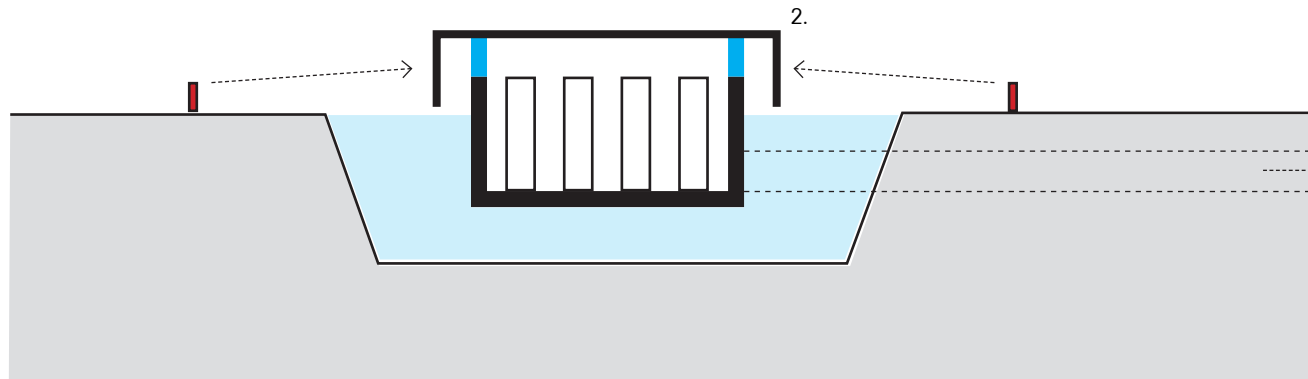


program COMPONENTS



program

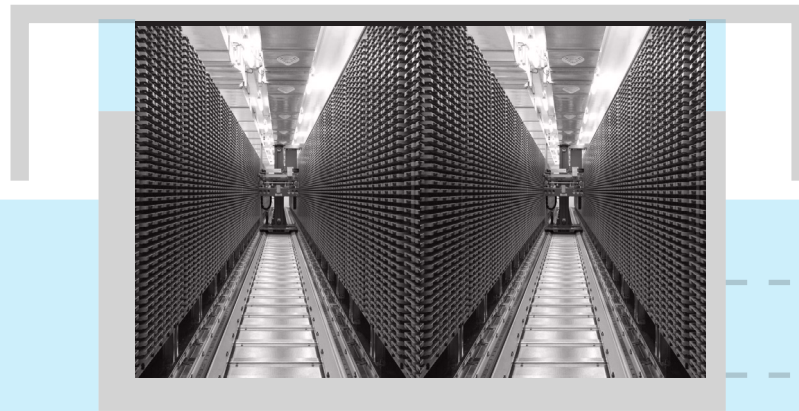
BIO BANK - SECURE YET OPEN



1. Public square
2. Digital display
3. Cryogenic freezers
4. Water as thermal buffer and safety
5. Connection to hospital

program

CRYOGENIC PRESERVATION



Samples stored in individual boxes for each person.

Fully automated transport and delivery

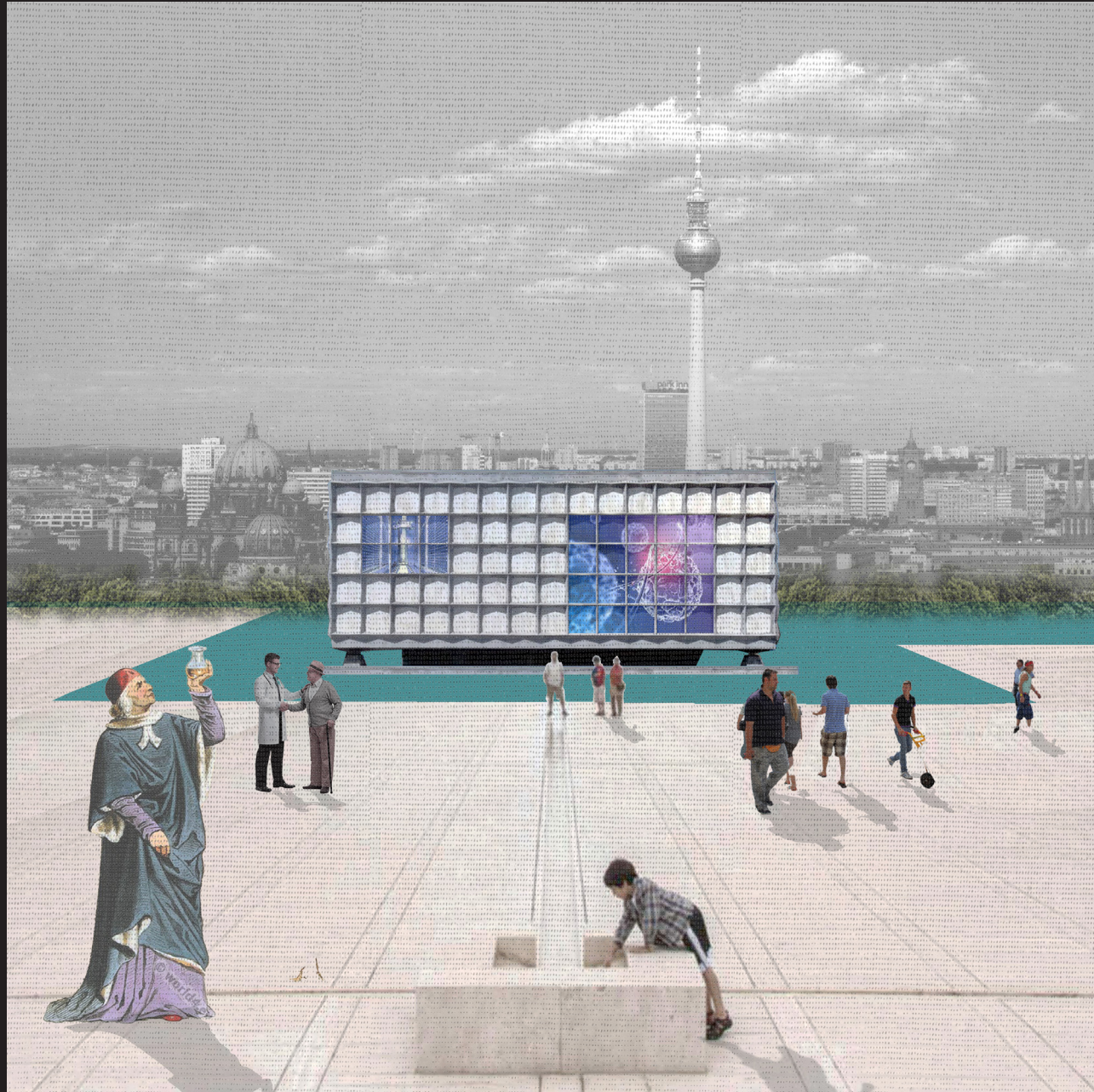
limited human access - for maintenance and emergency

Minimum temperature
-100 to -150C

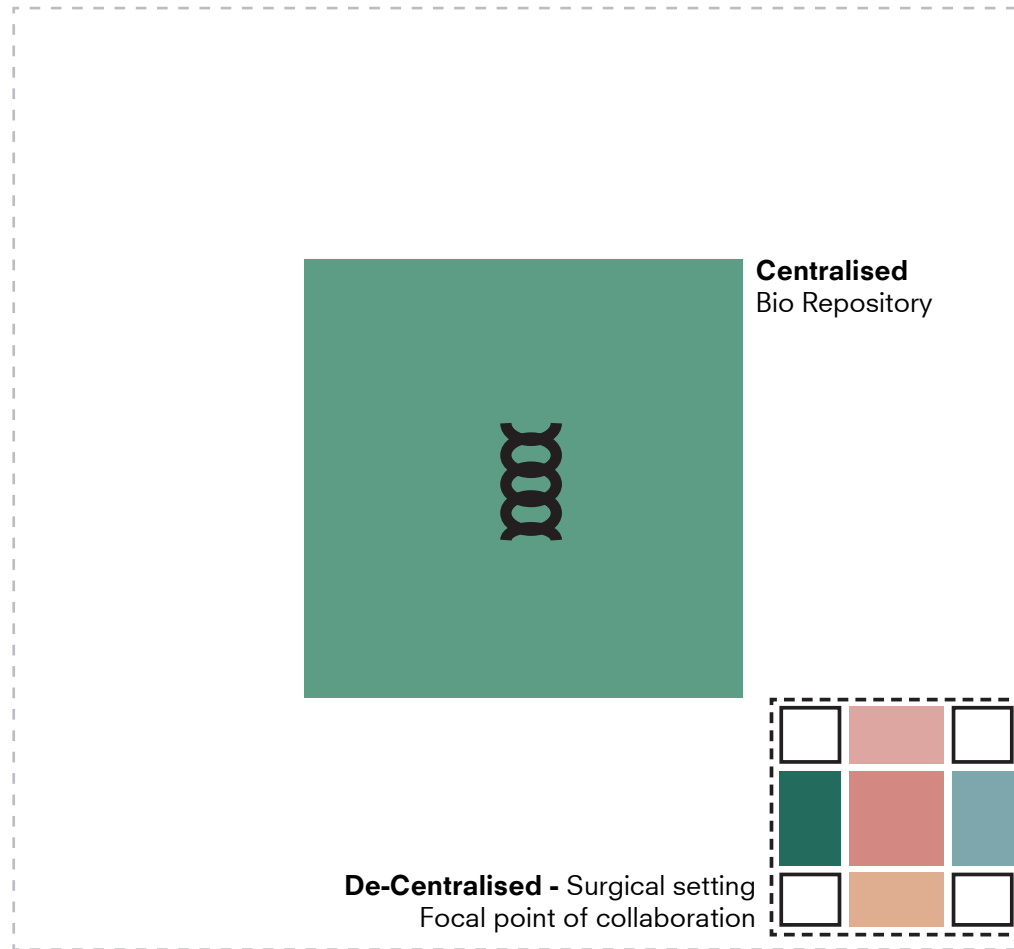
Hybrid system - uses liquid nitrogen and other energy source to maintain the temperature

program

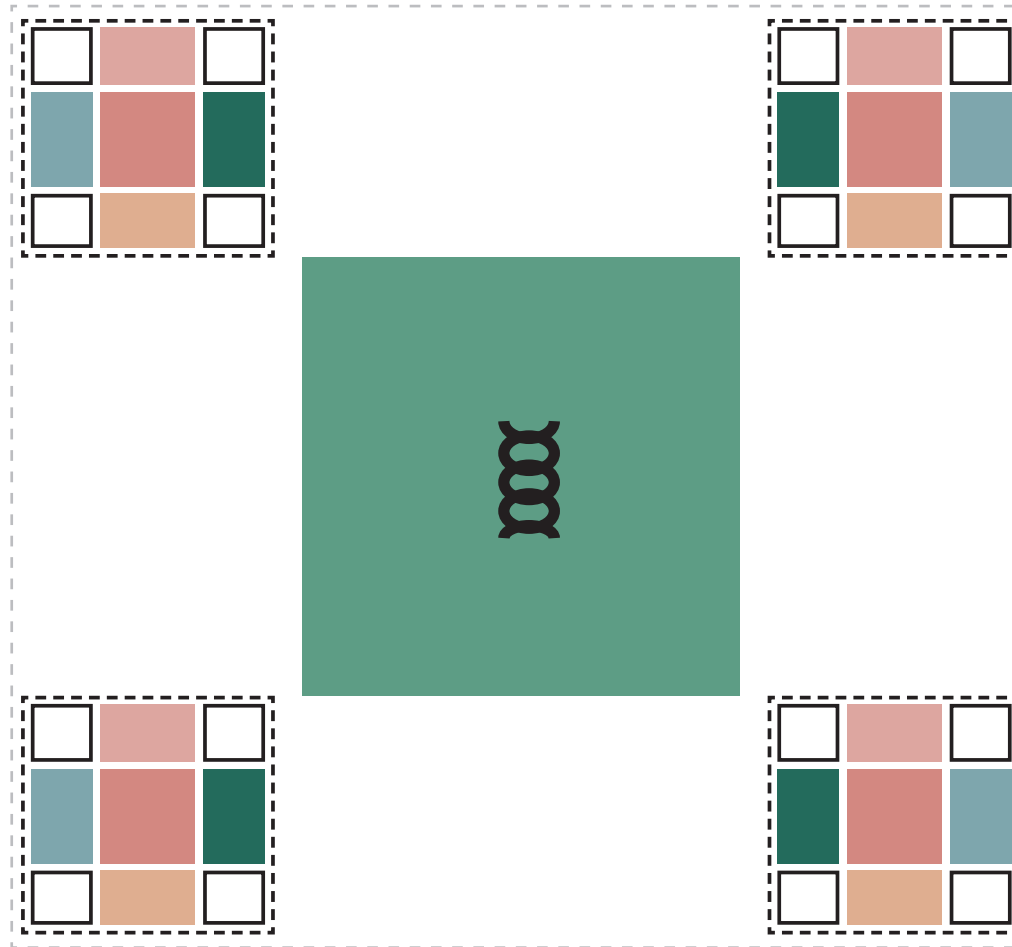
BIO BANK - A PUBLIC DISPLAY



PROPOSED ARRANGEMENT

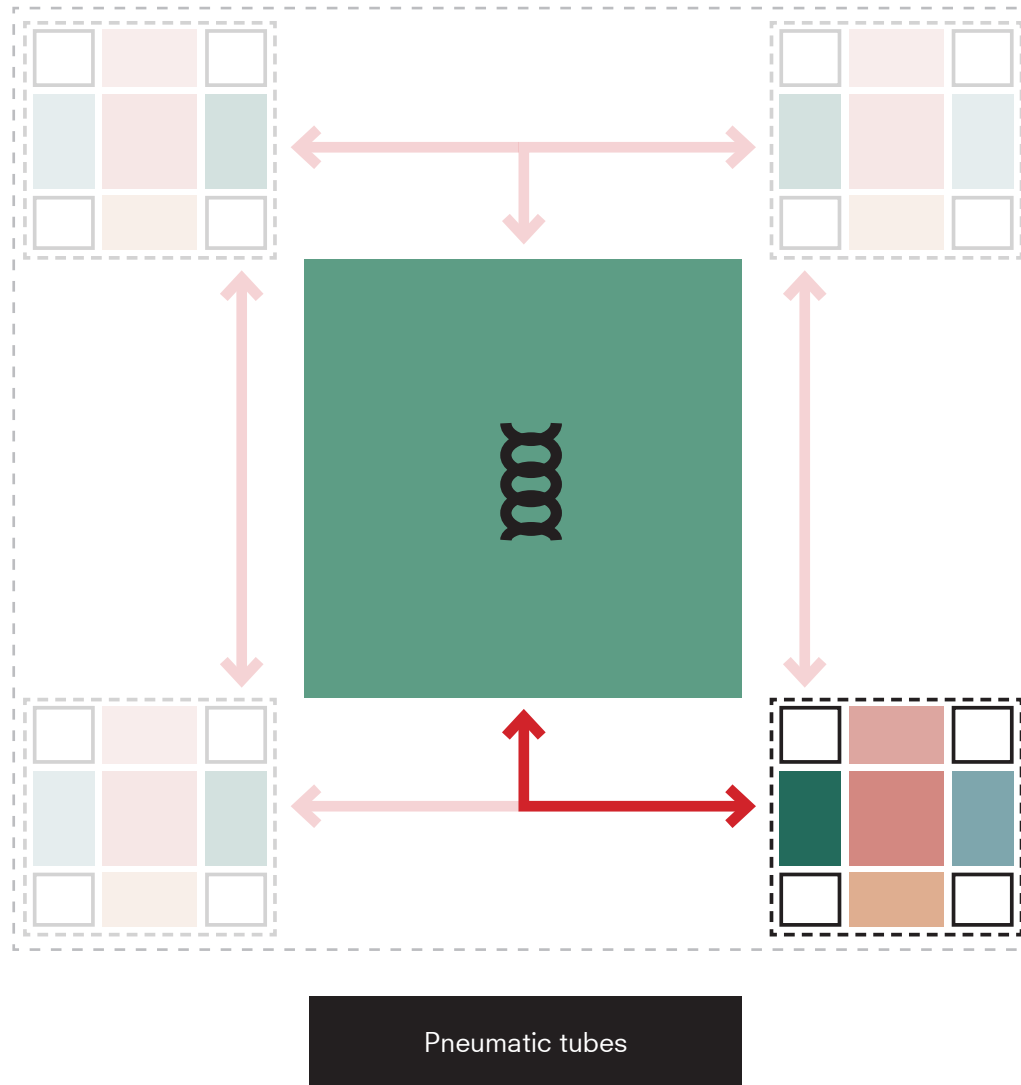


DECENTRALISED ARRANGEMENT



program

CONNECTION



program

ARCHITECTURAL EXPRESSION



Hospital corridors

program

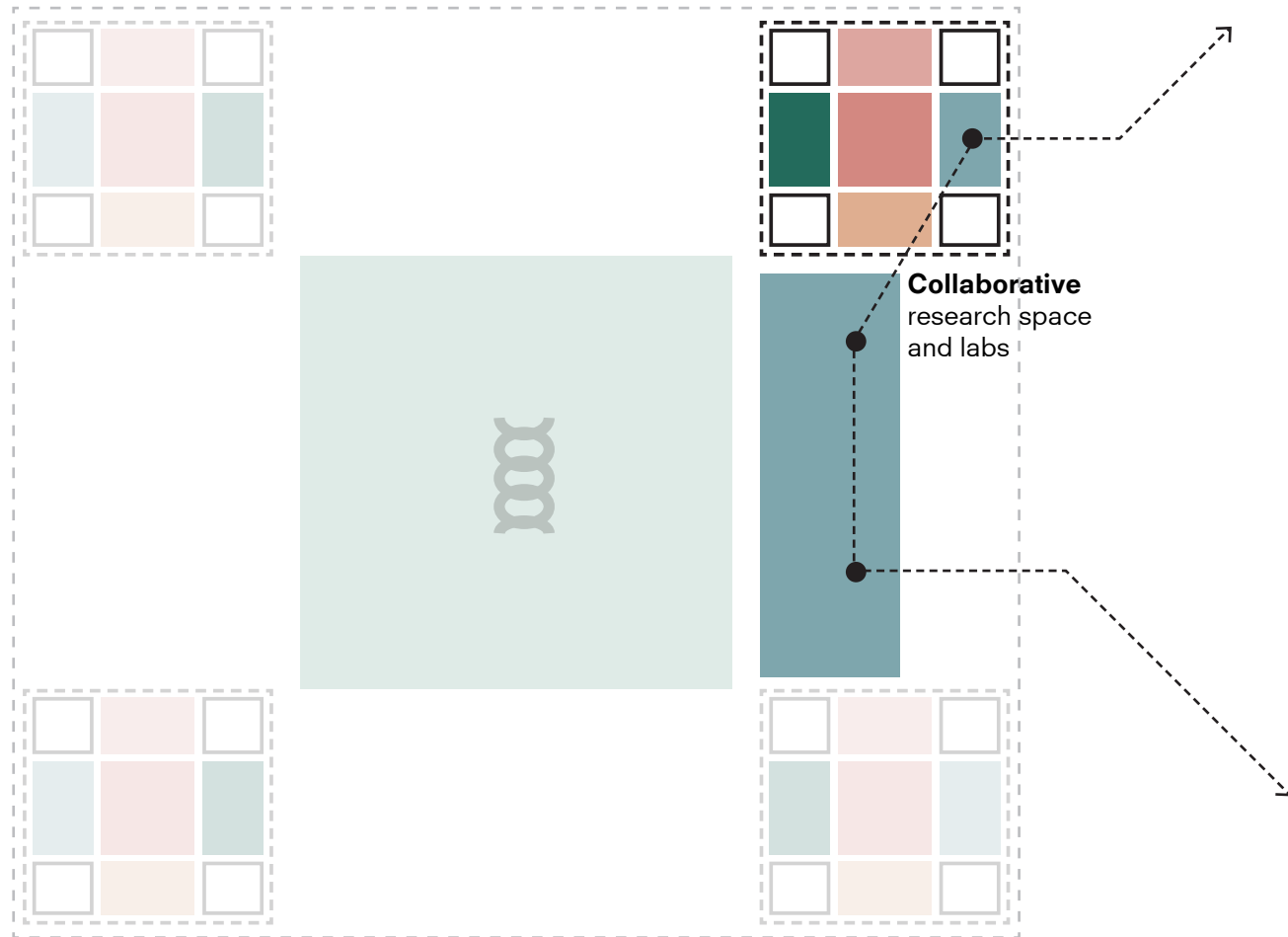
PNEUMATIC TUBE TRANSPORT



Hospital lobby

program

RESEARCH LABS



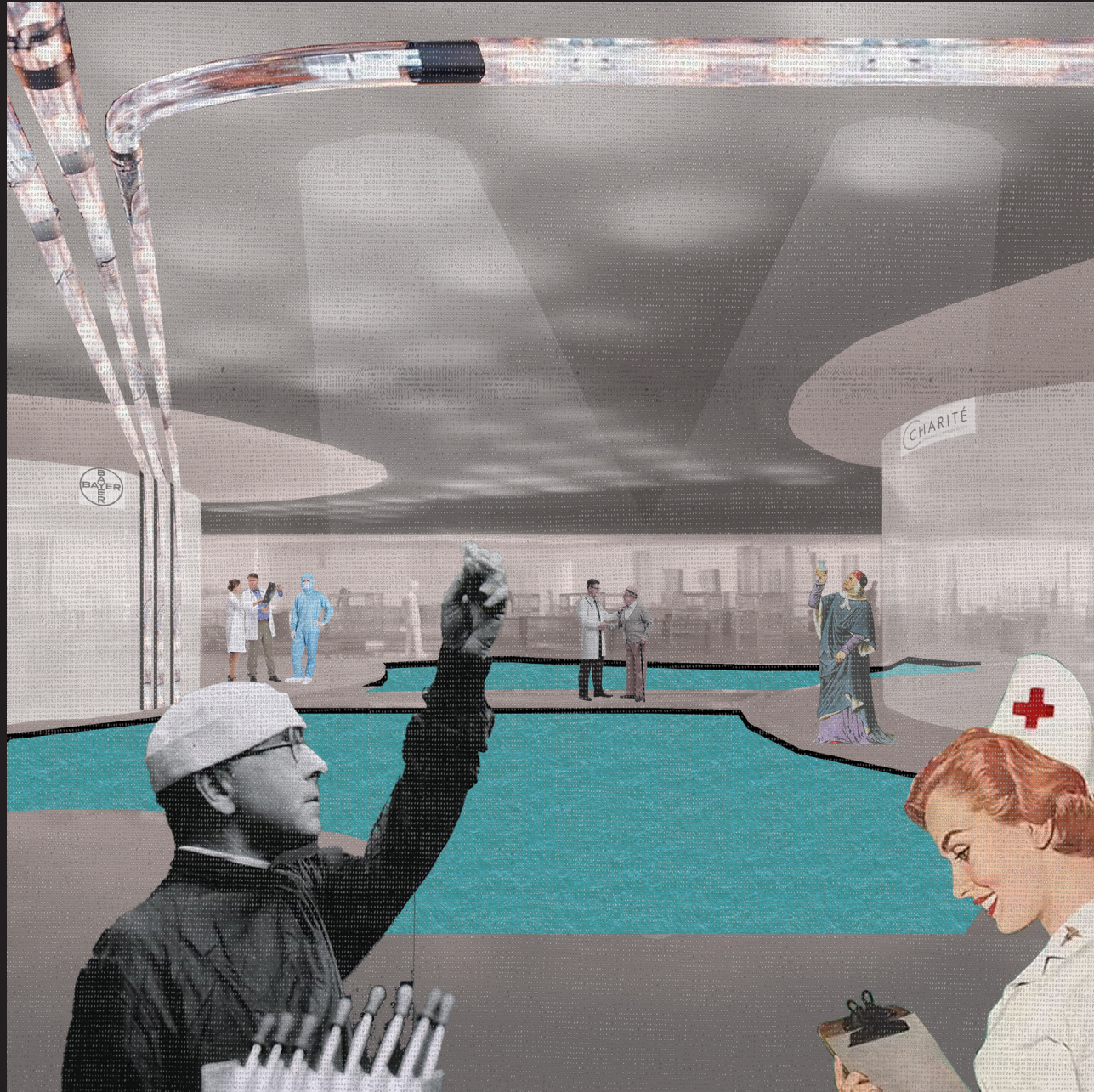
program
FACT



Vibration isolation tables

program

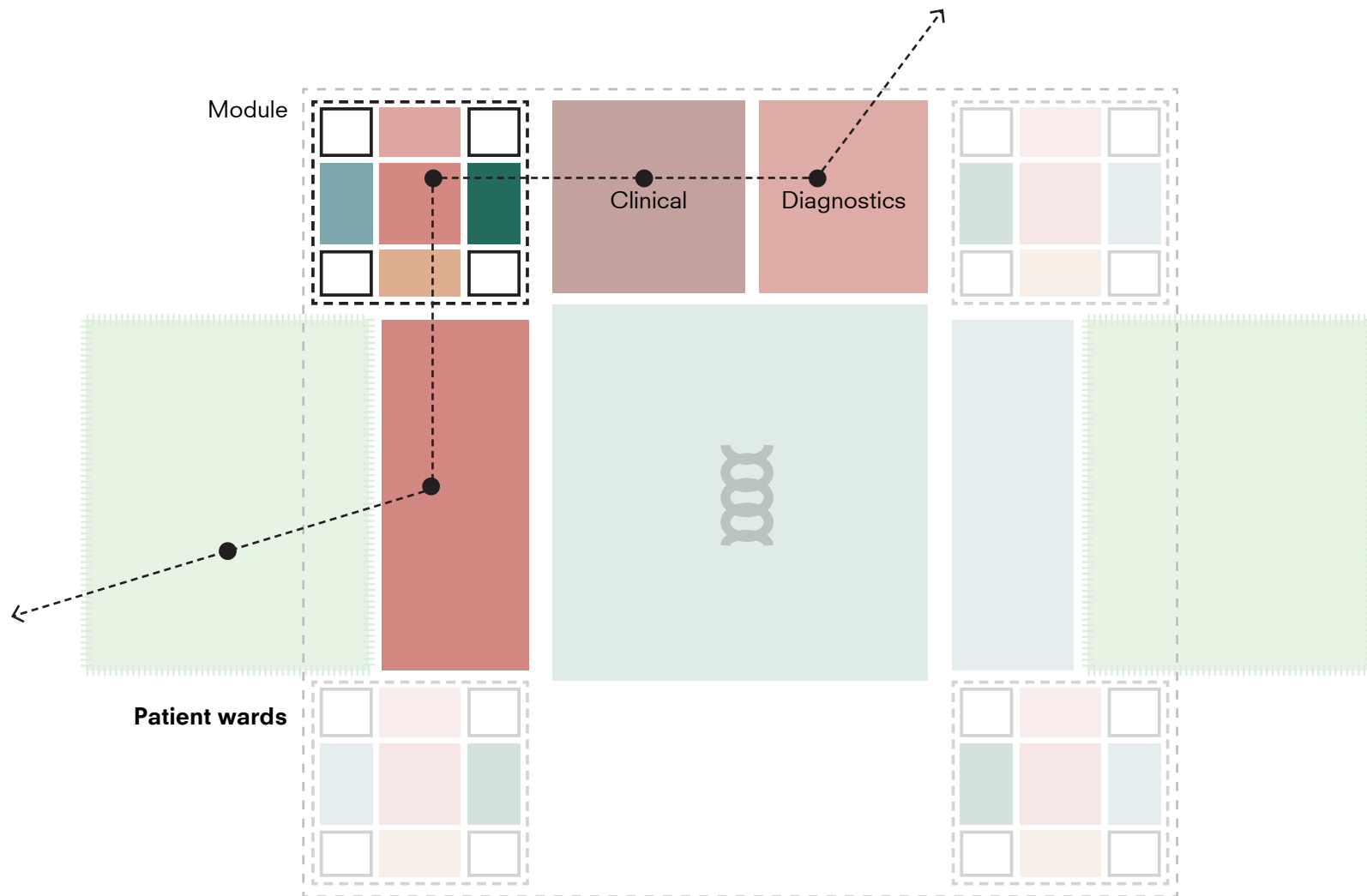
FLOATING RESEARCH SPACES



Hospital
OUTLINE

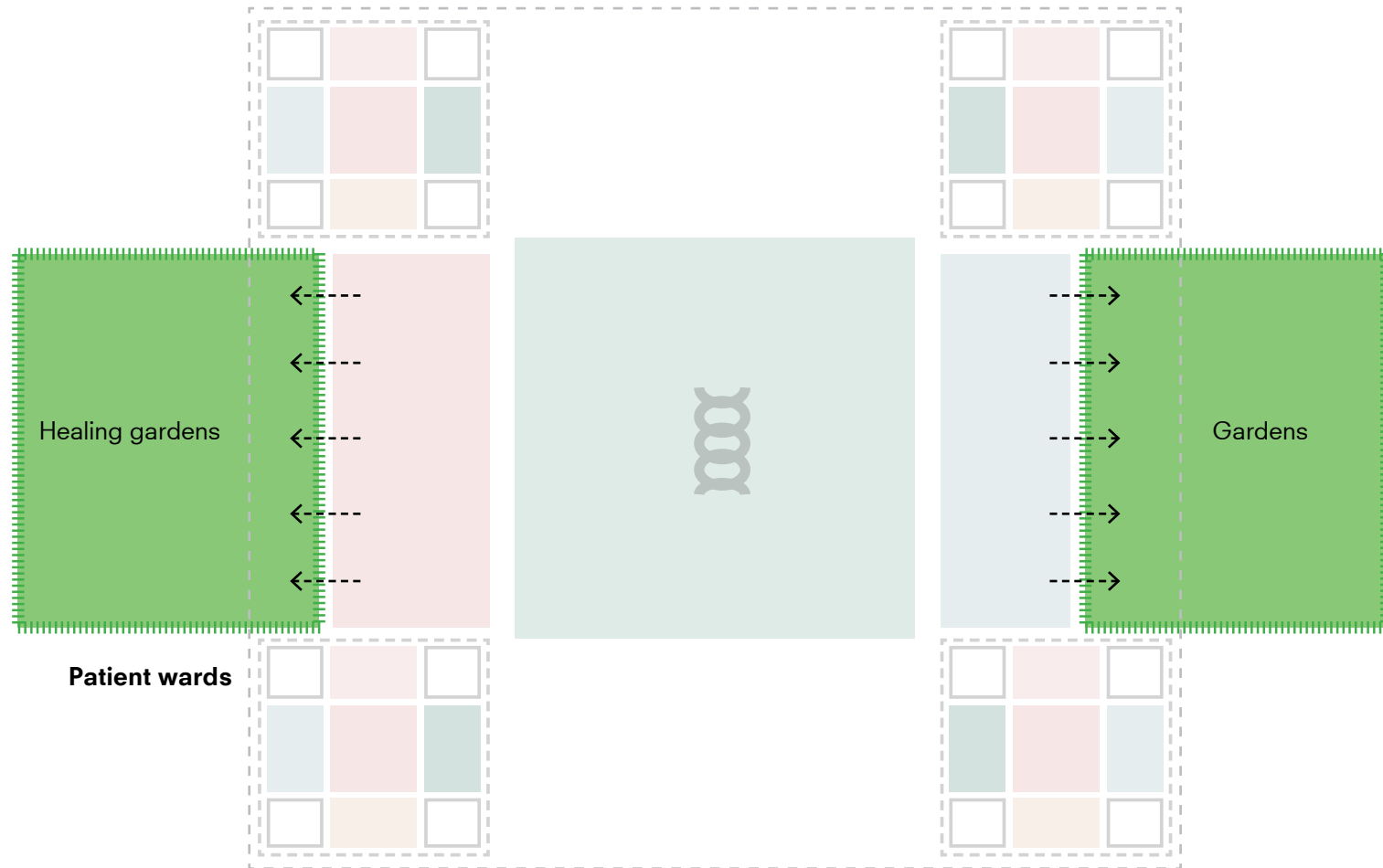
FROM **STERILE** HOSPITAL
TO **HUMAN/ PATIENT CENTRIC** HOSPITAL

research CONNECTION



program

CONNECTION



program

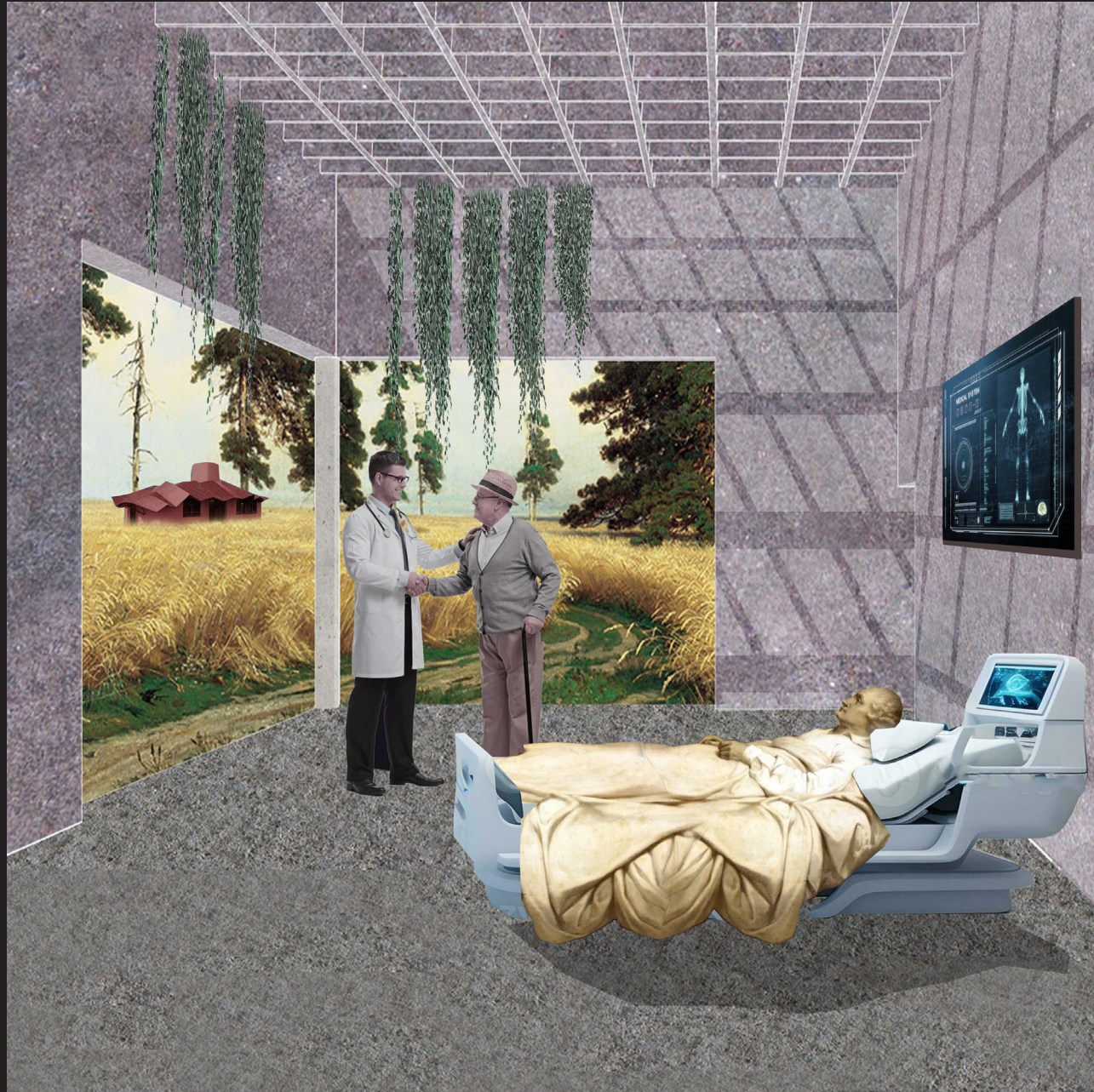
PATIENT ROOM



Pre - OP

program

PATIENT ROOM



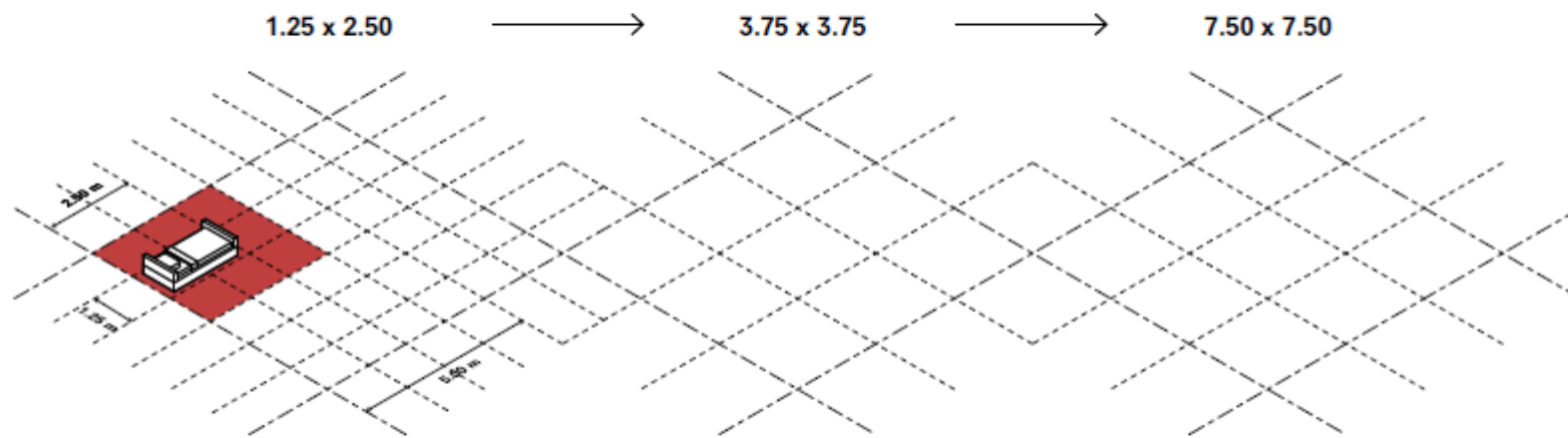
Post - OP

Hospital
OUTLINE

FROM **STATIC** BUILDING
TO **FLEXIBLE** BUILDING

program

SIZING

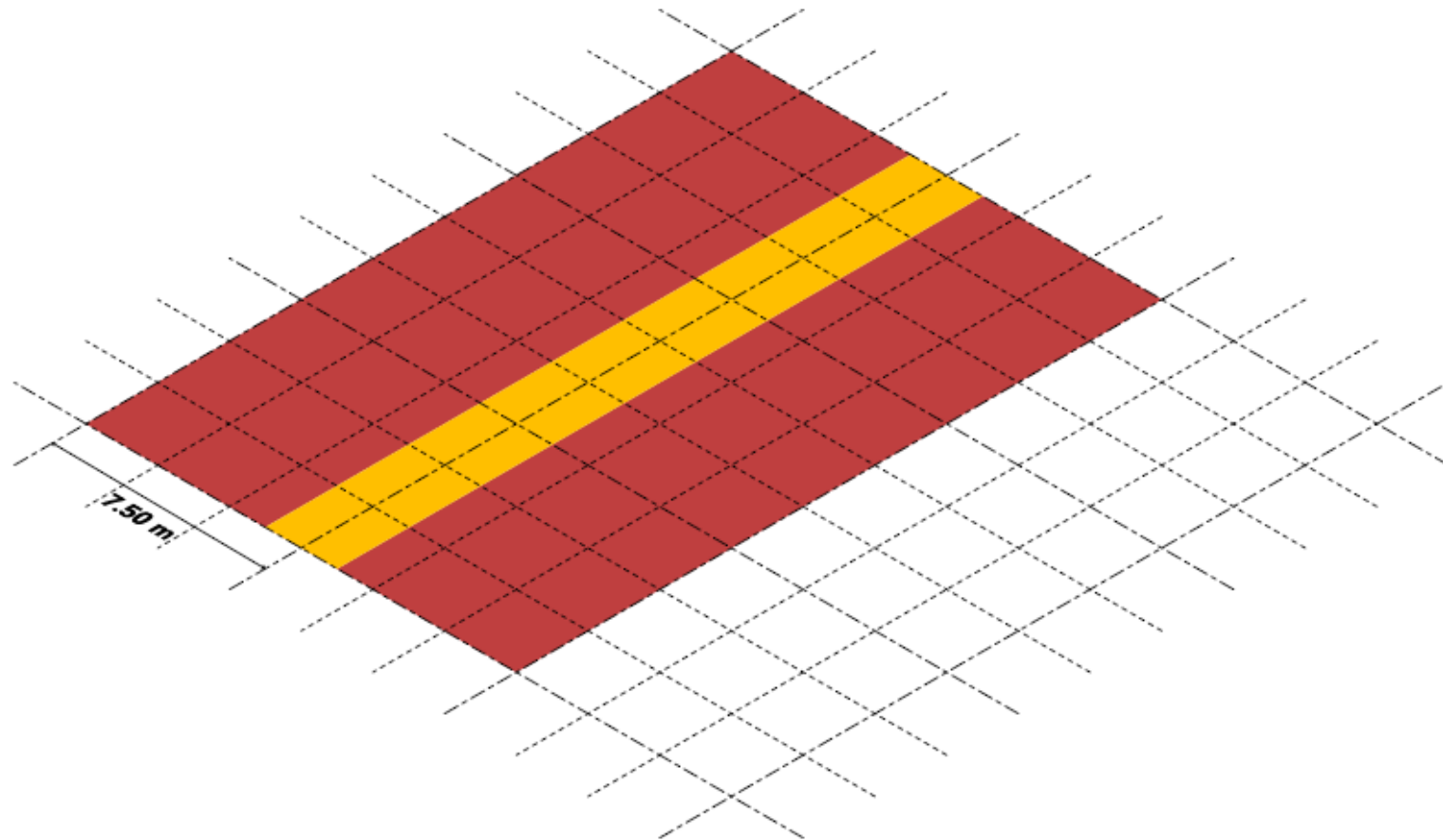


PATIENT ROOM AS STARTING POINT

7.5 X 7.5 MODULE

program

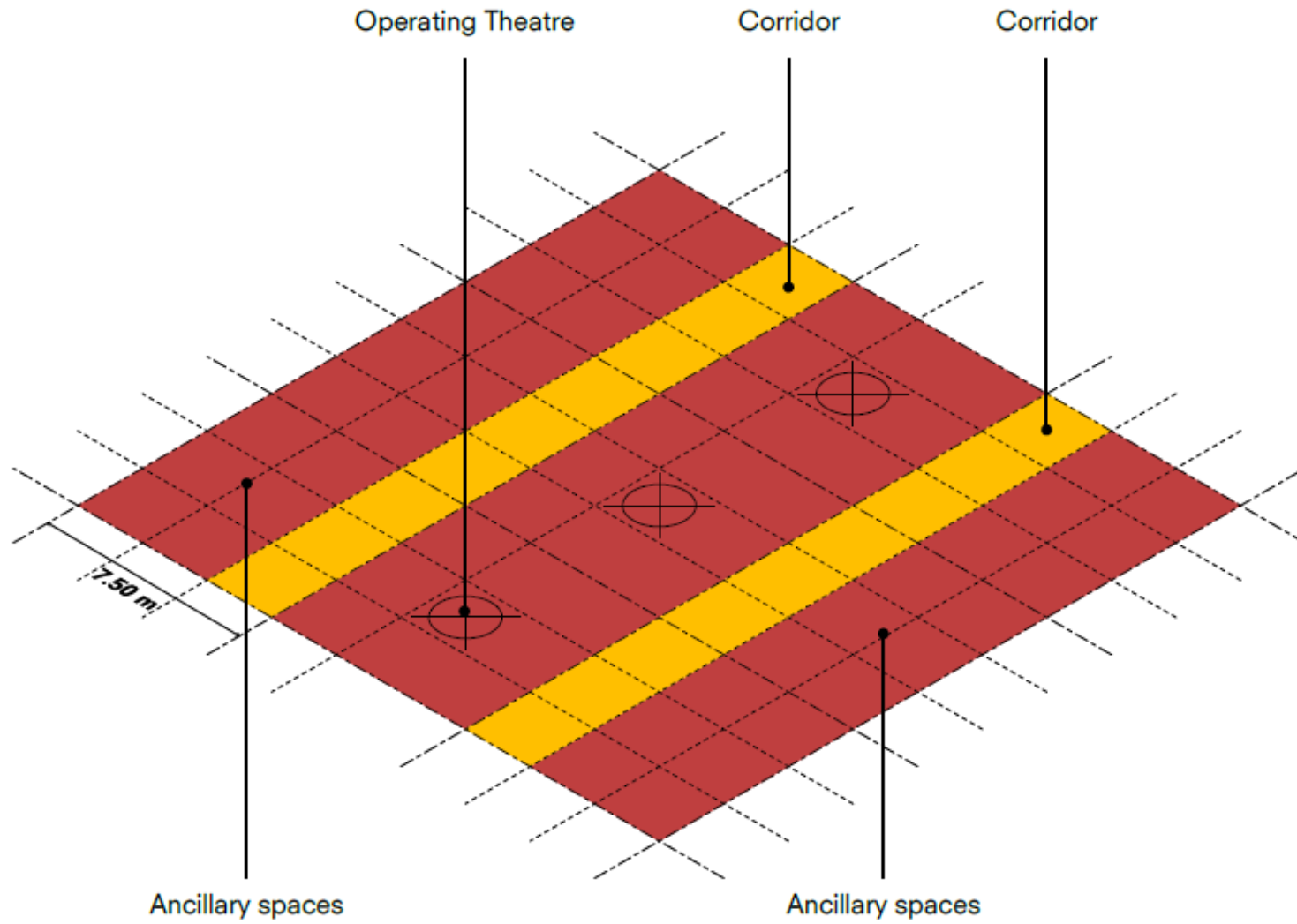
SIZING



INPATIENT DEPARTMENT - 15M WIDE

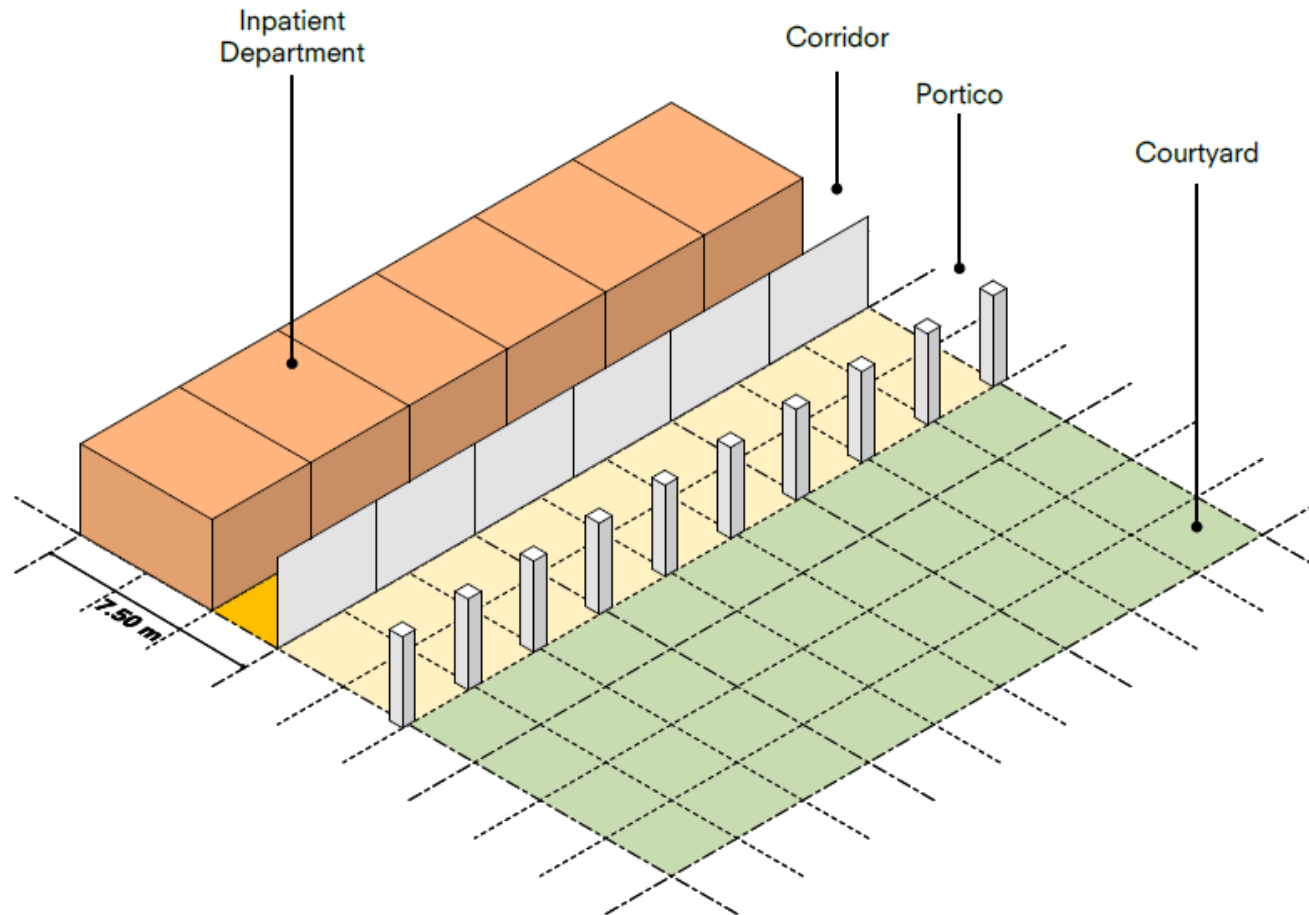
program

SIZING



HOT FLOOR - 22,5M WIDE

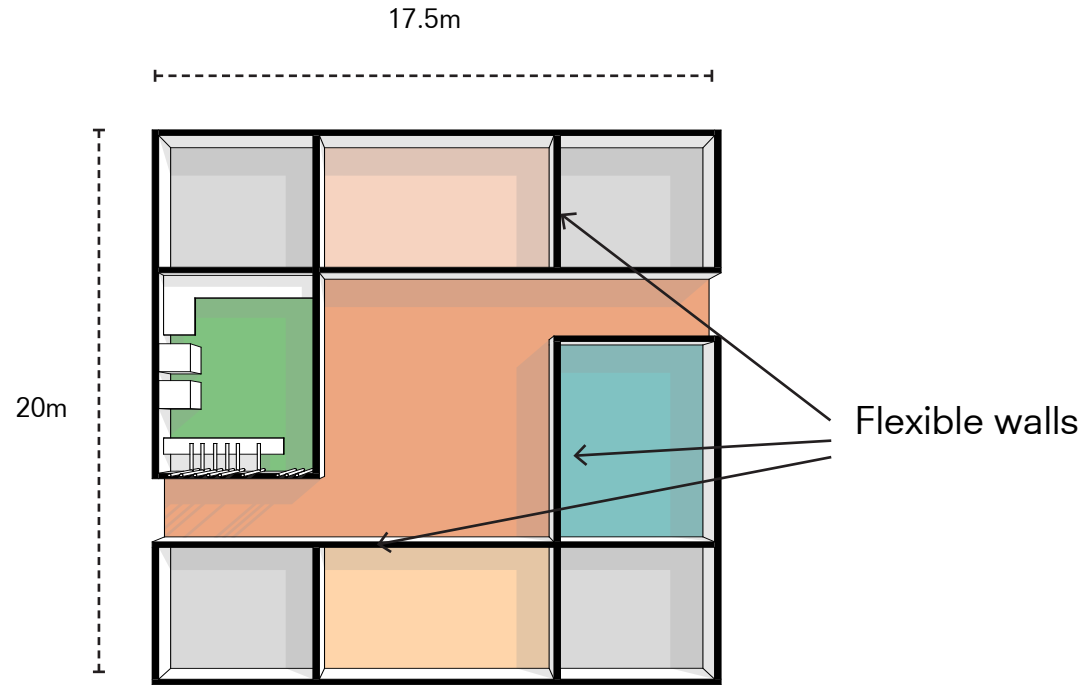
program SIZING



INPATIENT DEPARTMENT - COURTYARD

program

FLEXIBLE MODULE



Ability to change the configuration
as per needs and requirements when used in different
environments, of small or large scale hospitals

Hospital
OUTLINE

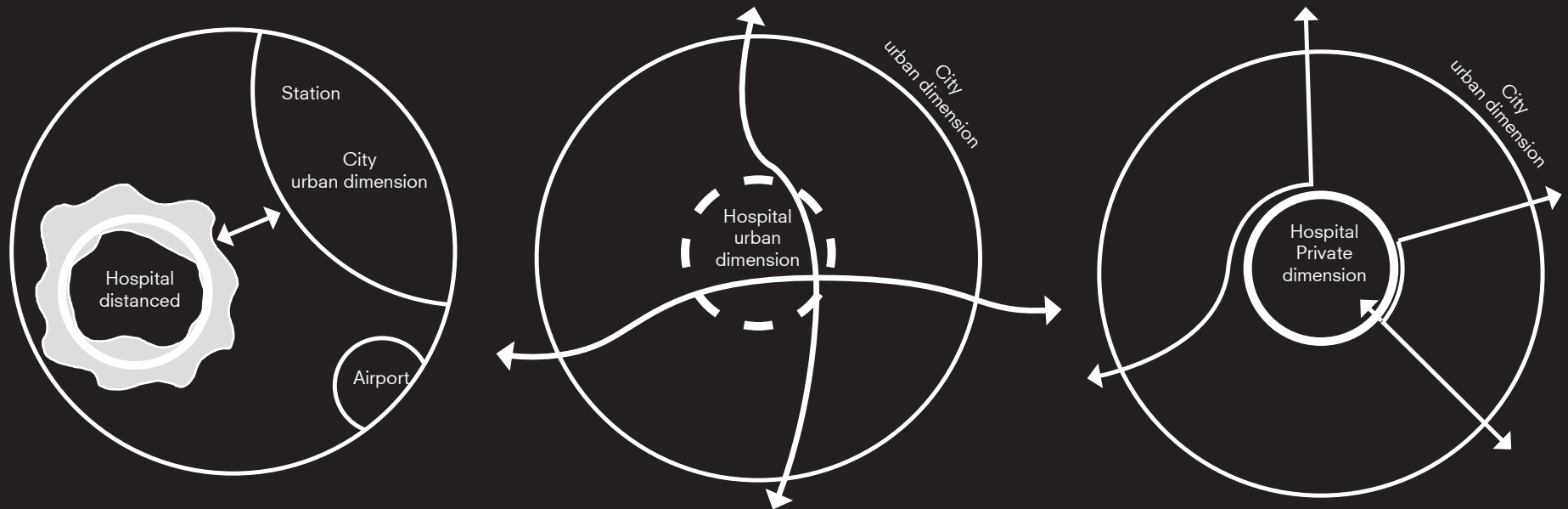
FROM **ISOLATED** HOSPITAL
TO **PART OF THE CITY**

Hospital
OUTLINE

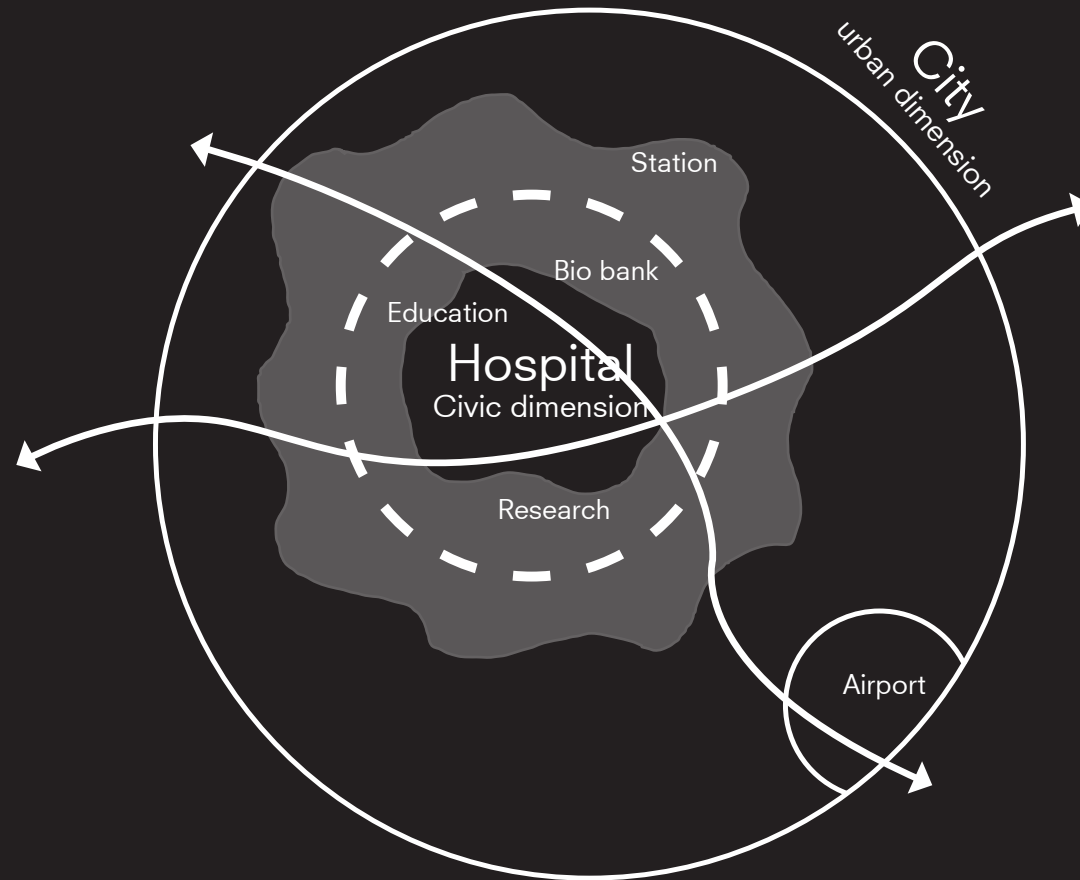
RE-DEFINE PUBLIC CONNECTION

Hospital

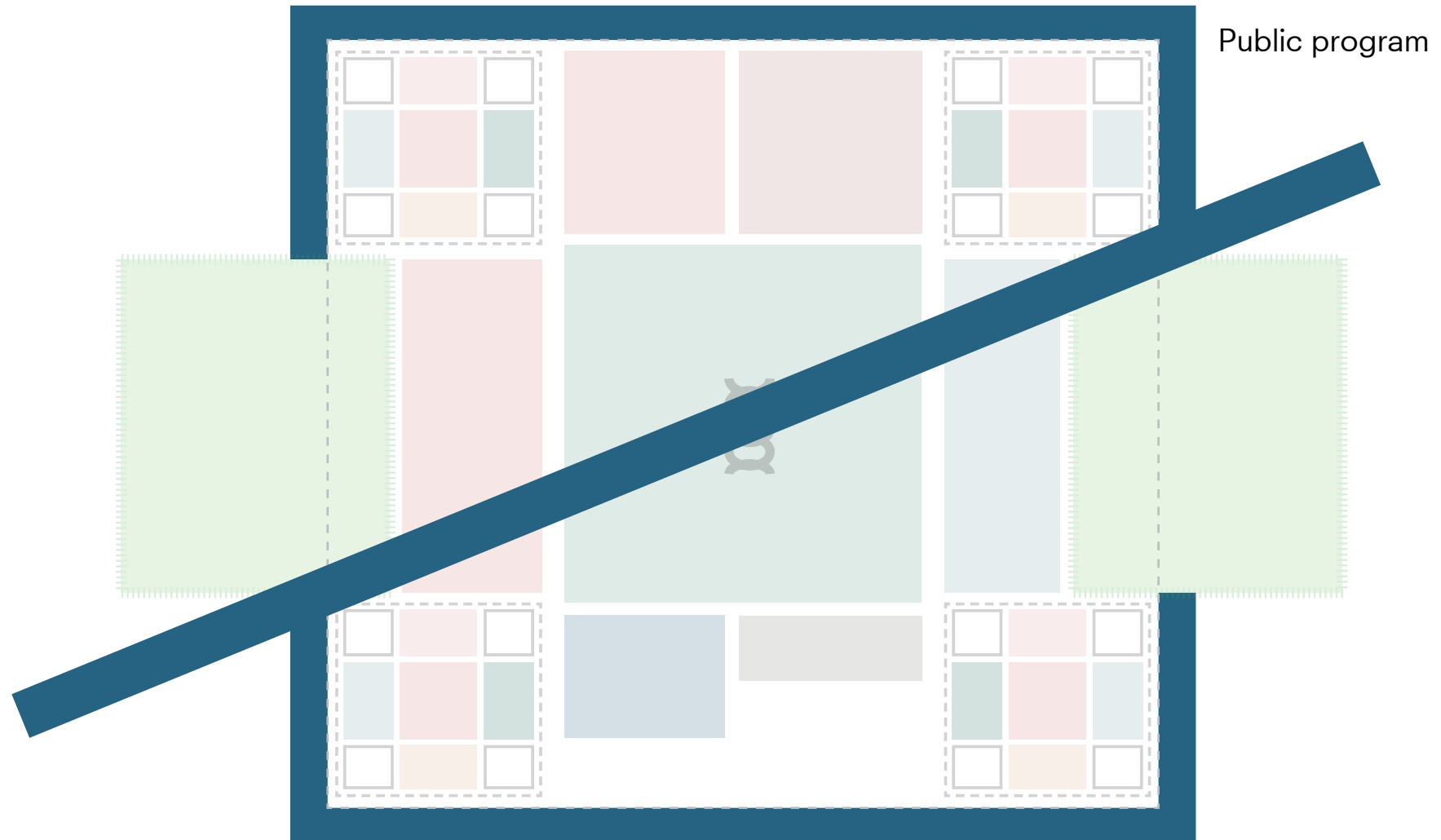
CONNECTIONS IN THE PAST



Hospital CONNECTION - FUTURE

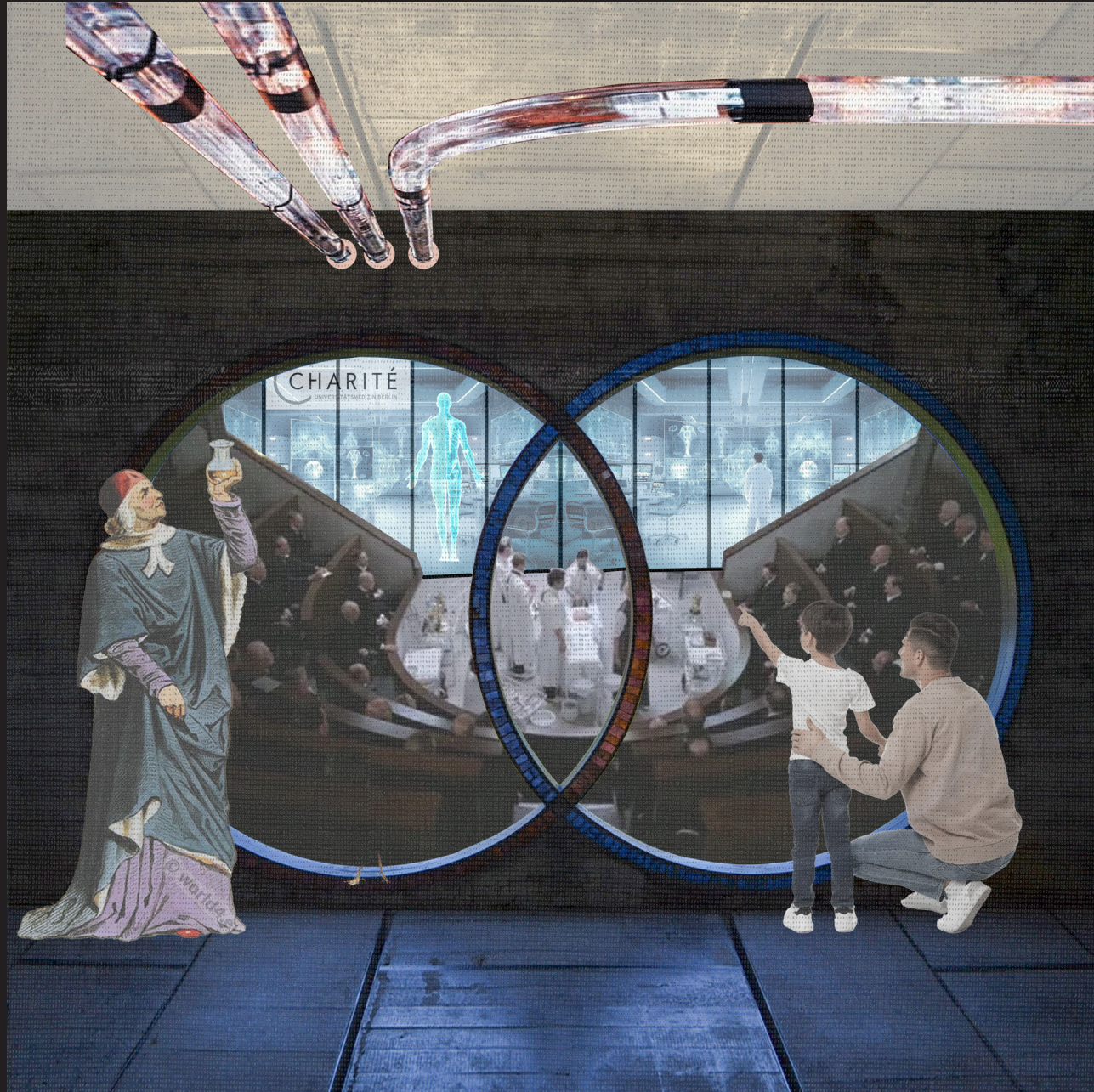


PORUS URBAN CONNECTION



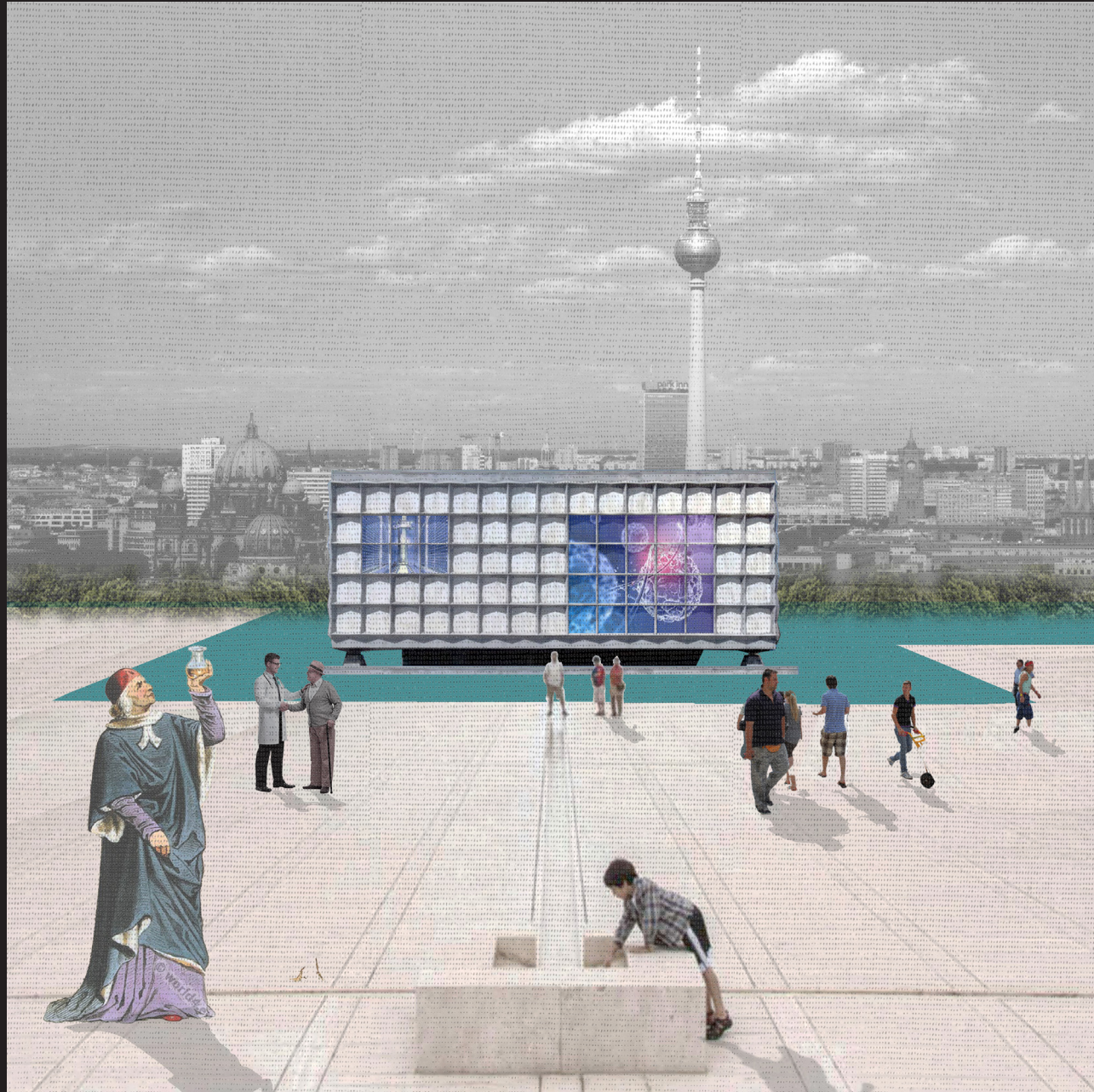
program

PUBLIC DISPLAY - ENGAGEMENT



program

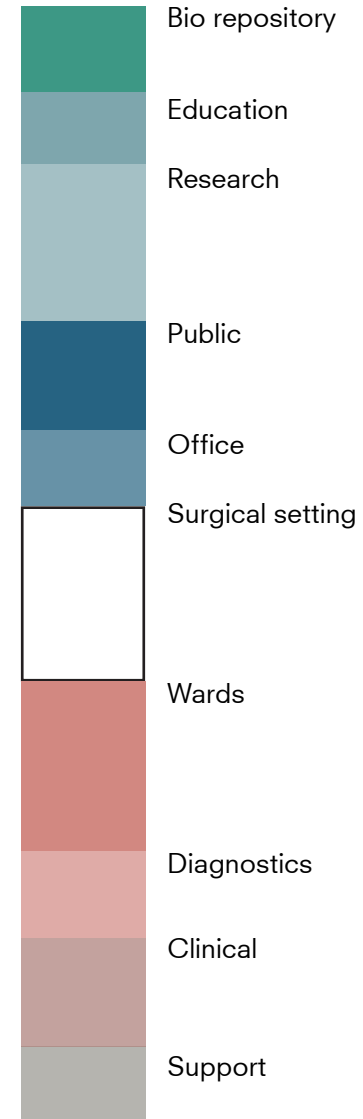
URBAN CONNECTION



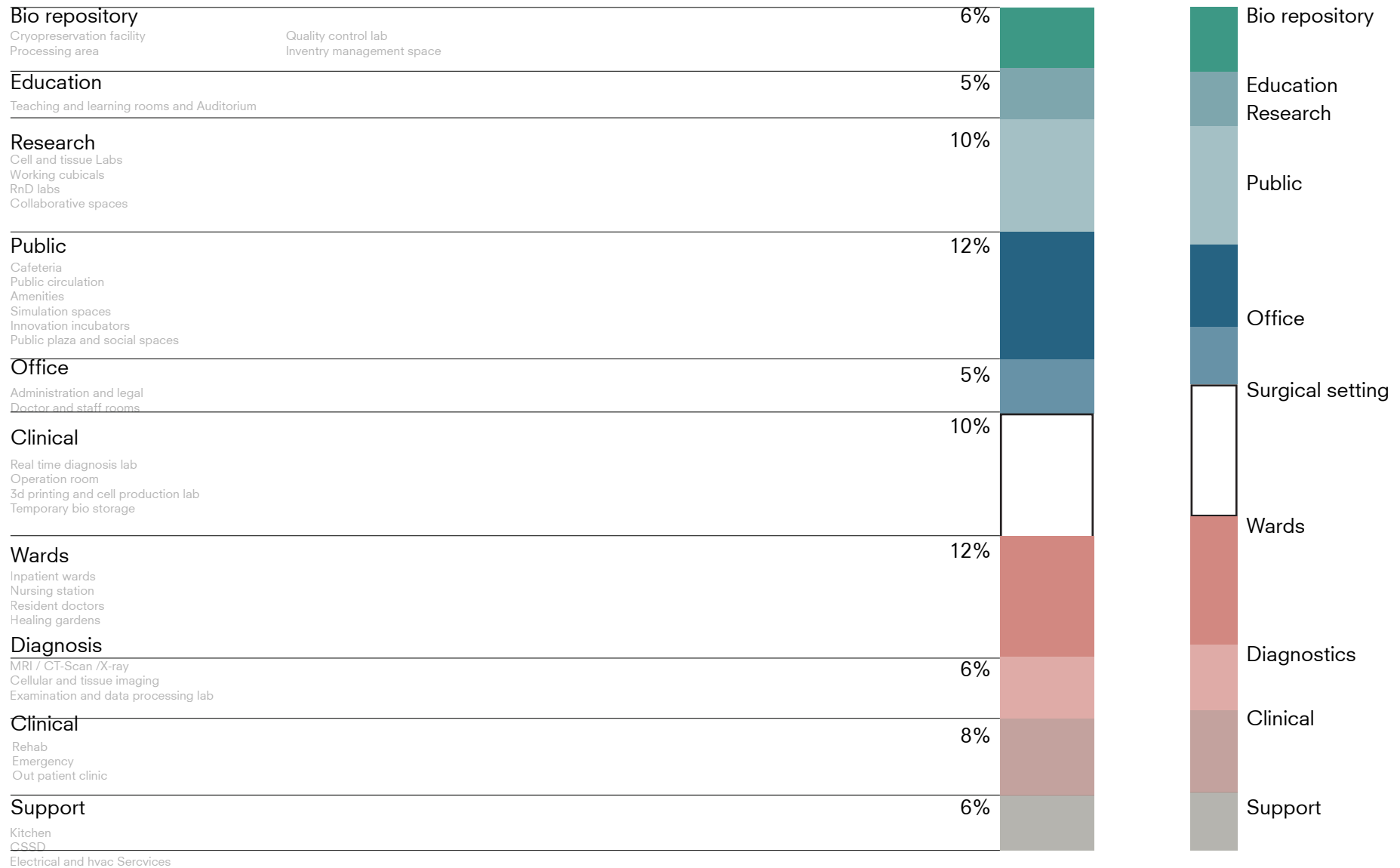
program

ENHANCING PUBLIC SPACES

Simulation spaces
Innovation incubators
Public plaza and
social spaces



program FINAL PROGRAM



Gross floor area

40,000 sqm

Hospital OUTLINE

INTRODUCTION

RESEARCH

CLIENT

PROGRAM

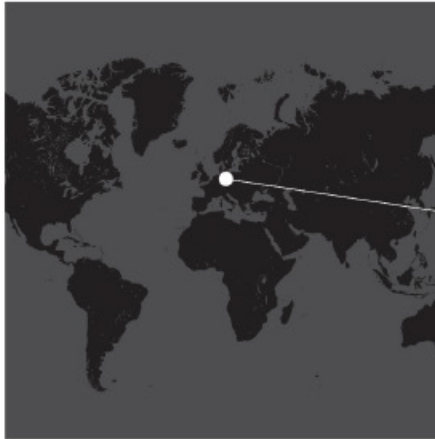
SITE

CONCEPT DIRECTION

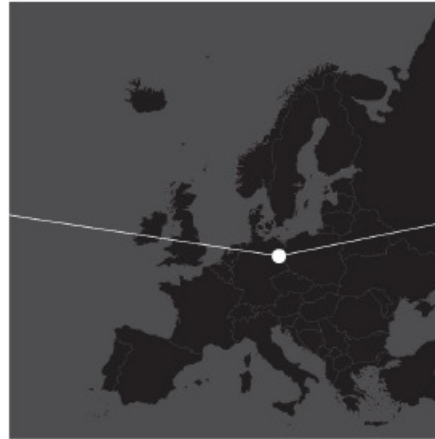
CONCLUSION

site

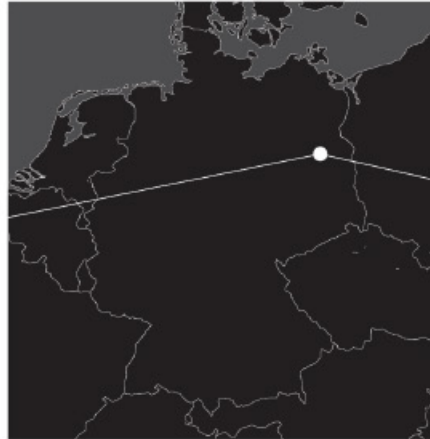
BERLIN



WORLD
global scale



EUROPE
continent scale

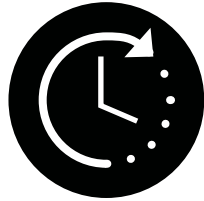


GERMANY
national scale

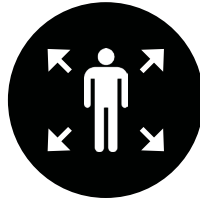


BERLIN
city scale

REQUIREMENT MATRIX



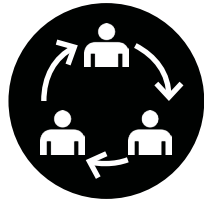
Travel time 2.0



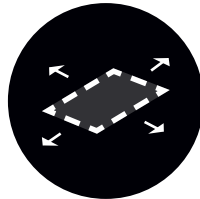
Reachability 2.0



Travel experience



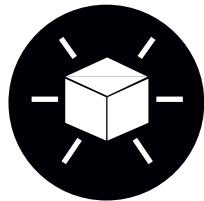
Collaborative nexus



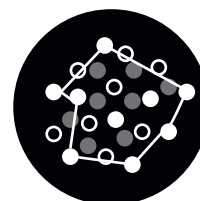
Expandability



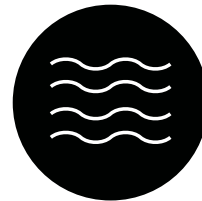
Healing landscapes



Prominent location



Safety

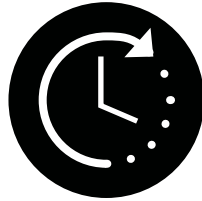


Proximity to water

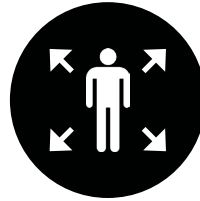
site

REQUIREMENT MATRIX

Mobility requirement



Travel time 2.0

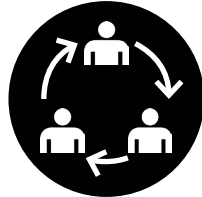


Reachability 2.0

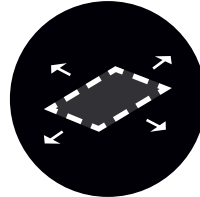


Travel experience

Hospital requirement



Collaborative nexus

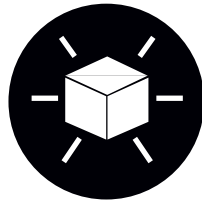


Expandability

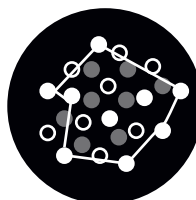


Healing landscapes

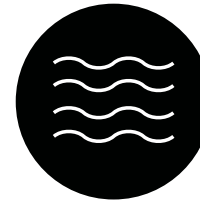
Project requirement



Prominent location



Safety

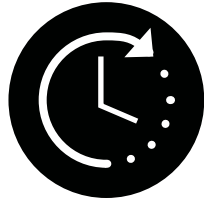


Proximity to water

site

LARGE SCALE

Mobility requirement



Travel time 2.0

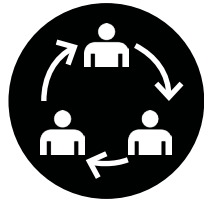


Reachability 2.0

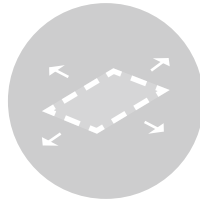


Travel experience

Hospital requirement



Collaborative nexus



Expandability

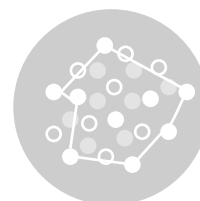


Healing landscapes

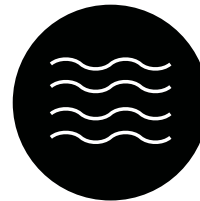
Project requirement



Prominent location



Safety



Proximity to water

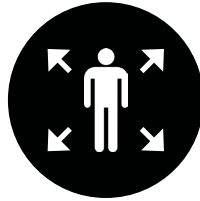
site

MEDIUM SCALE

Mobility requirement



Travel time 2.0

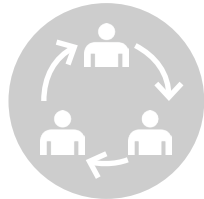


Reachability 2.0

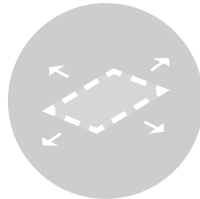


Travel experience

Hospital requirement



Collaborative nexus

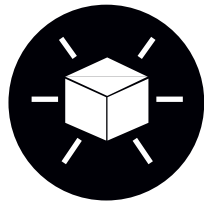


Expandability

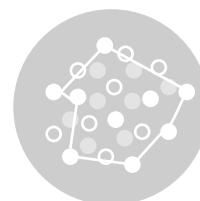


Healing landscapes

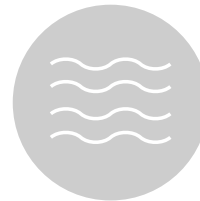
Project requirement



Prominent location



Safety



Proximity to water

site

SMALL SCALE

Mobility requirement



Travel time 2.0

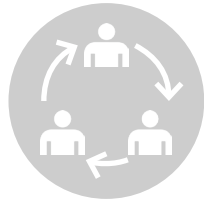


Reachability 2.0

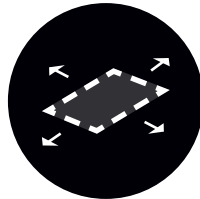


Travel experience

Hospital requirement



Collaborative nexus



Expandability

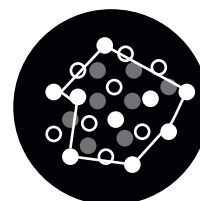


Healing landscapes

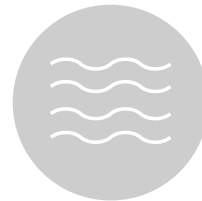
Project requirement



Prominent location



Safety



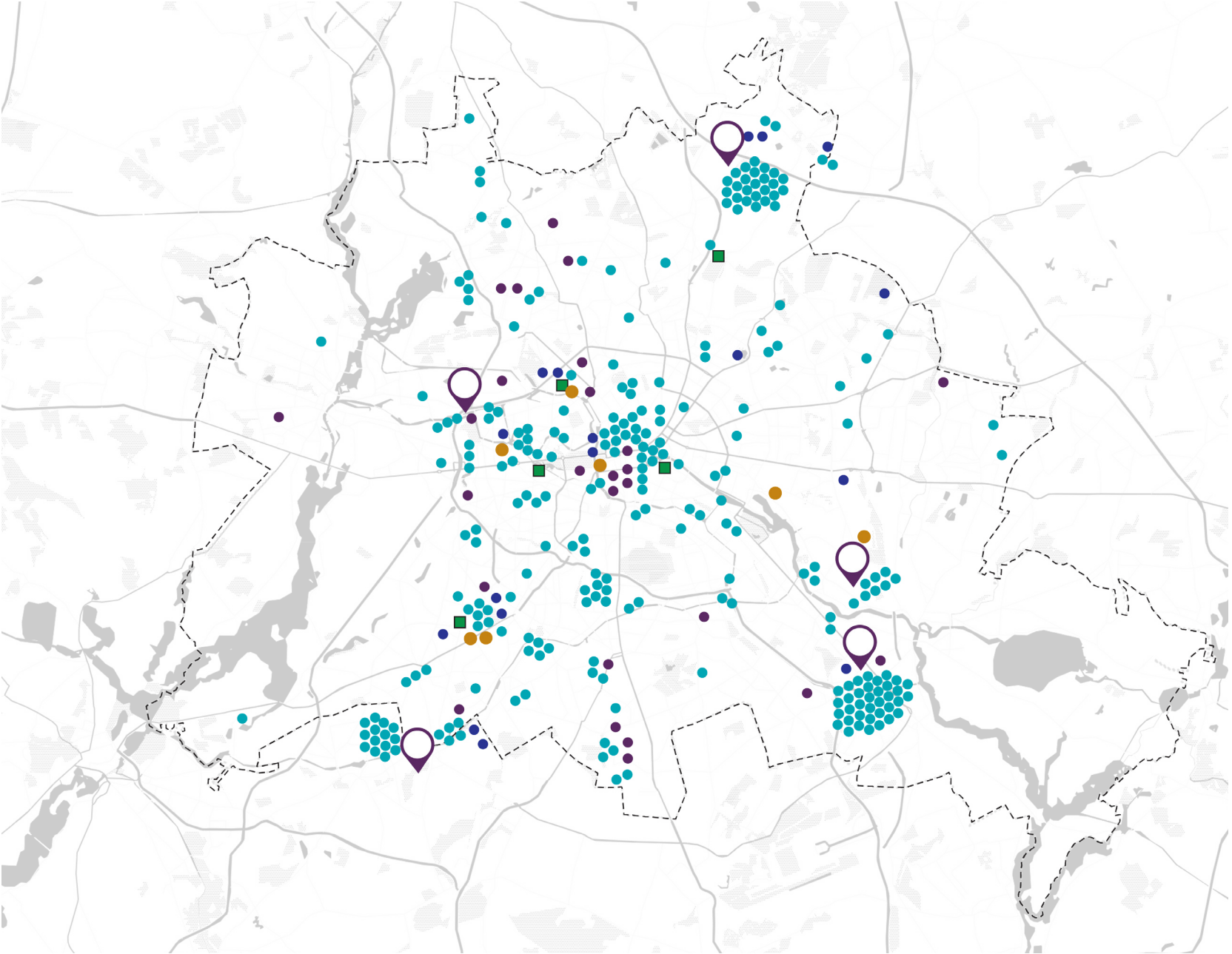
Proximity to water

site

BIO TECH CLUSTER



Collaborative nexus



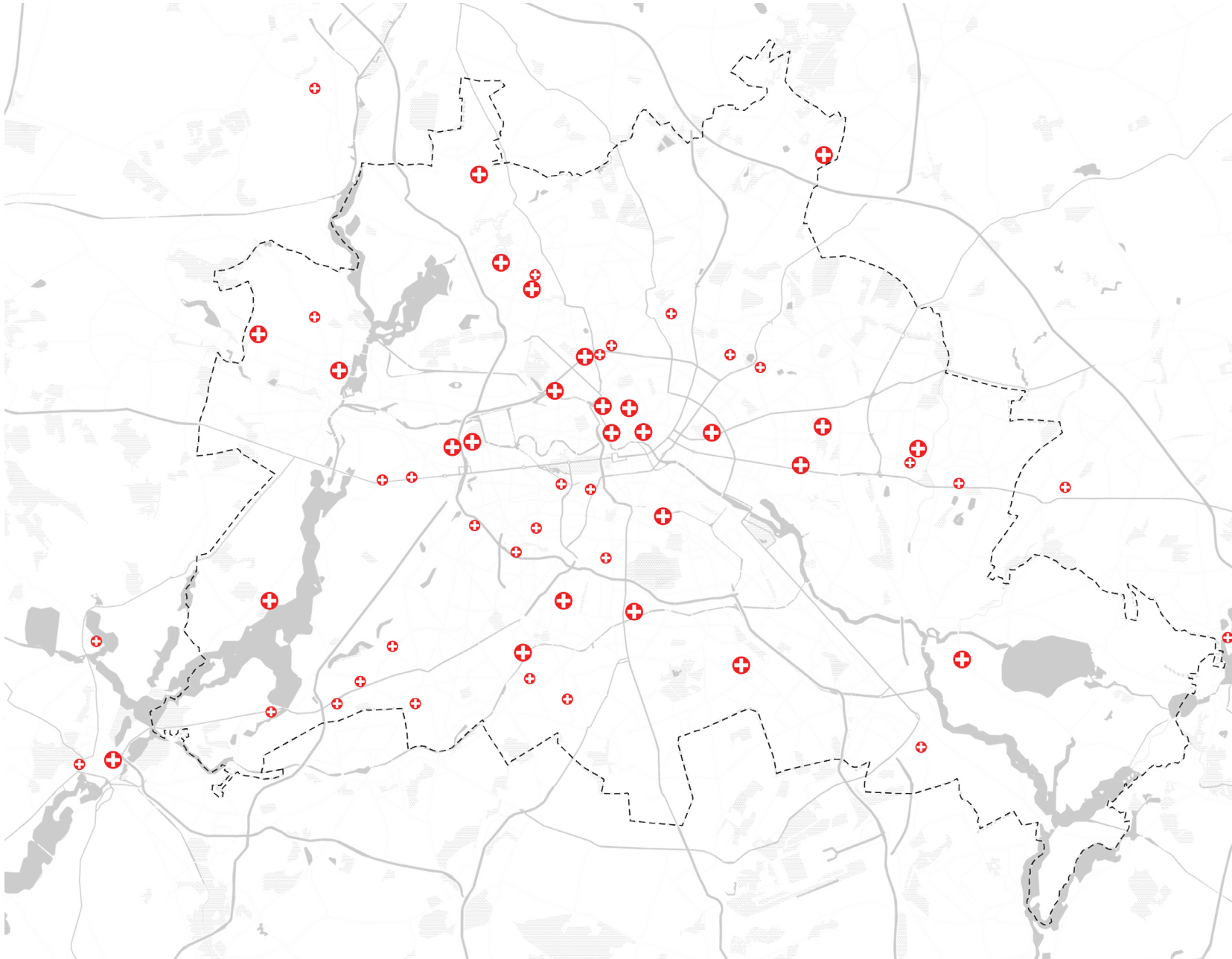
Collaborative nexus

site

HOSPITAL NETWORK



Collaborative nexus



site

GREEN SPACES



Collaborative nexus



Healing landscapes

site

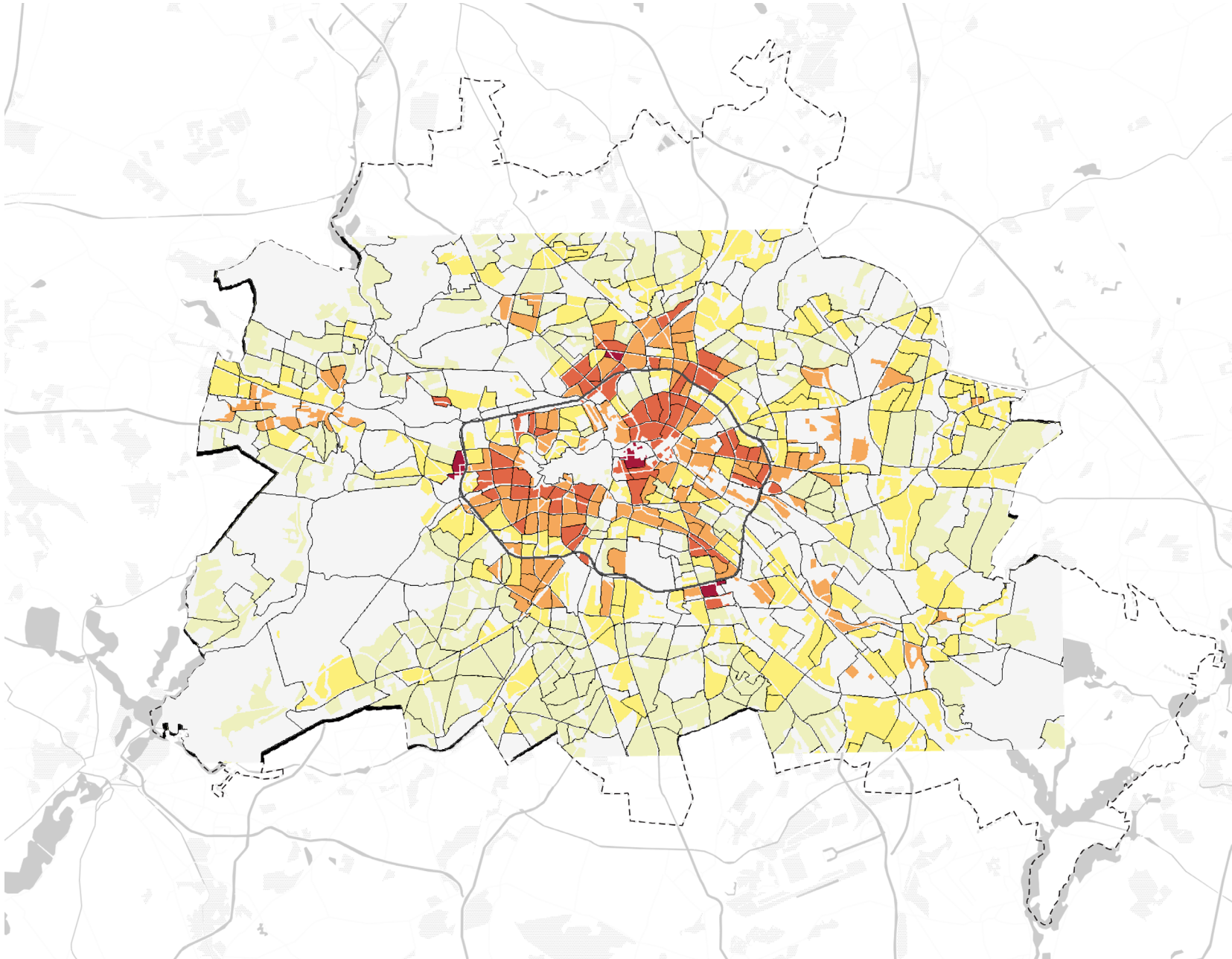
LIVABILITY - ENVIRONMENT



Collaborative nexus

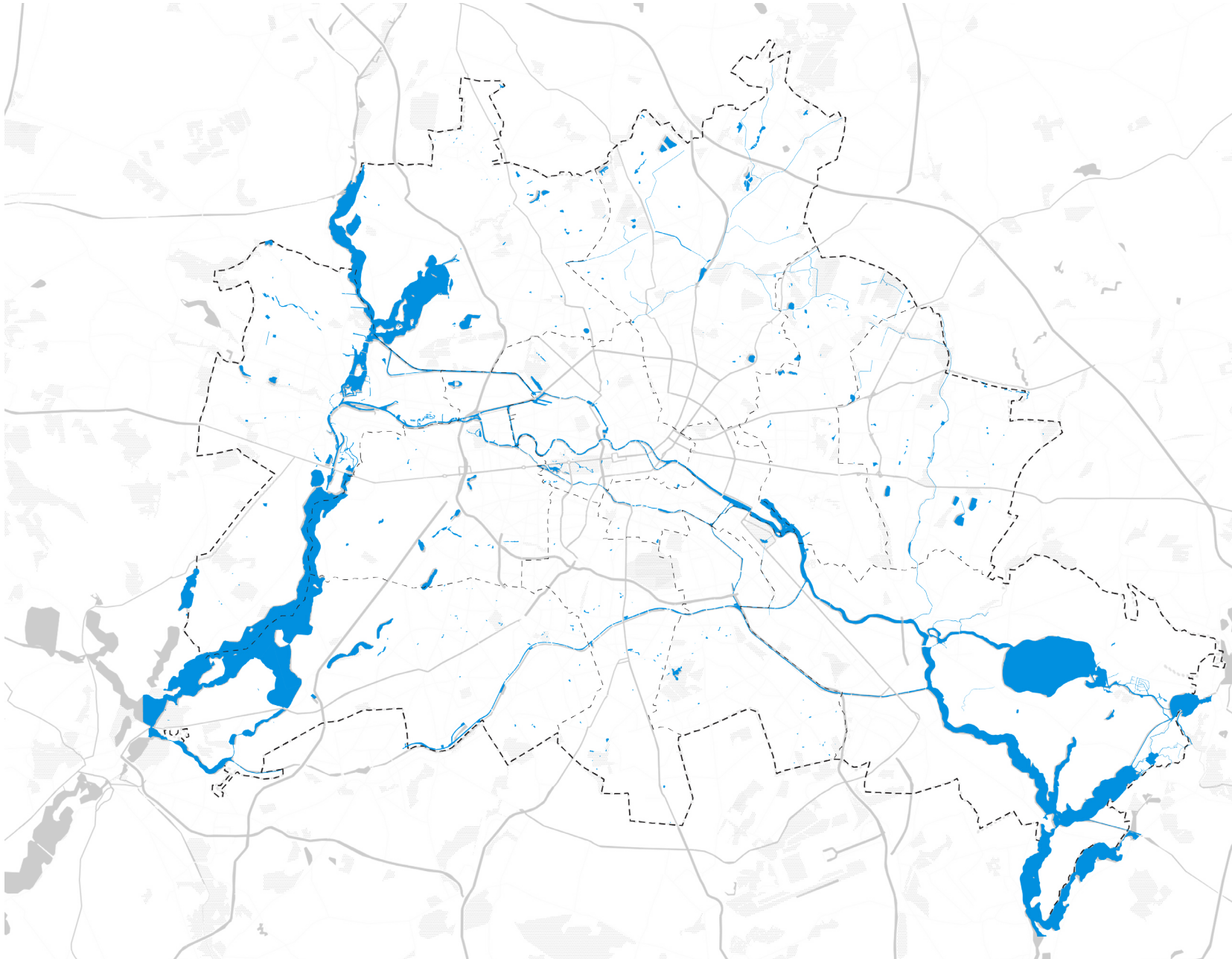


Healing landscapes



site

WATER SOURCE



Collaborative nexus



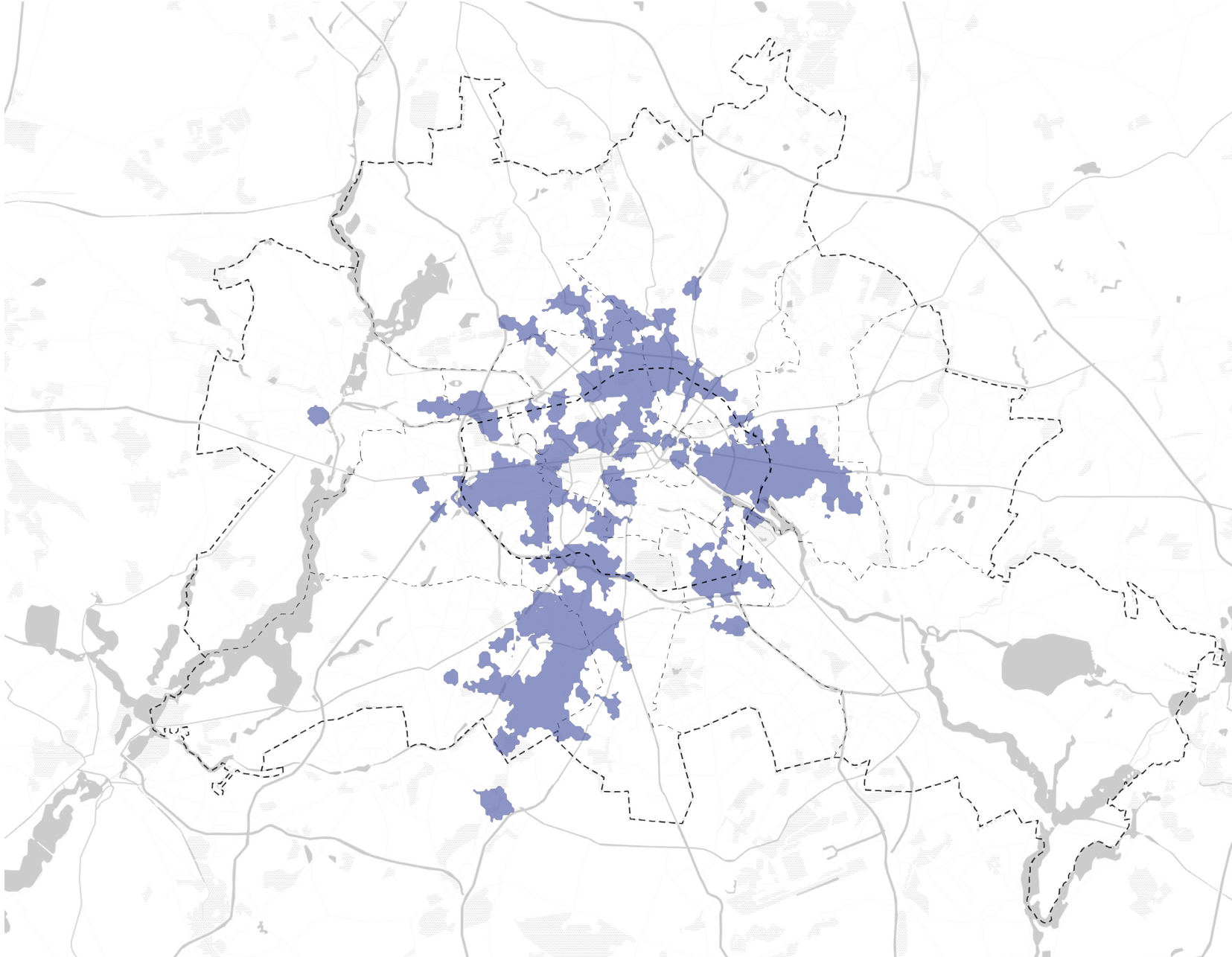
Healing landscapes







Proximity to water

site

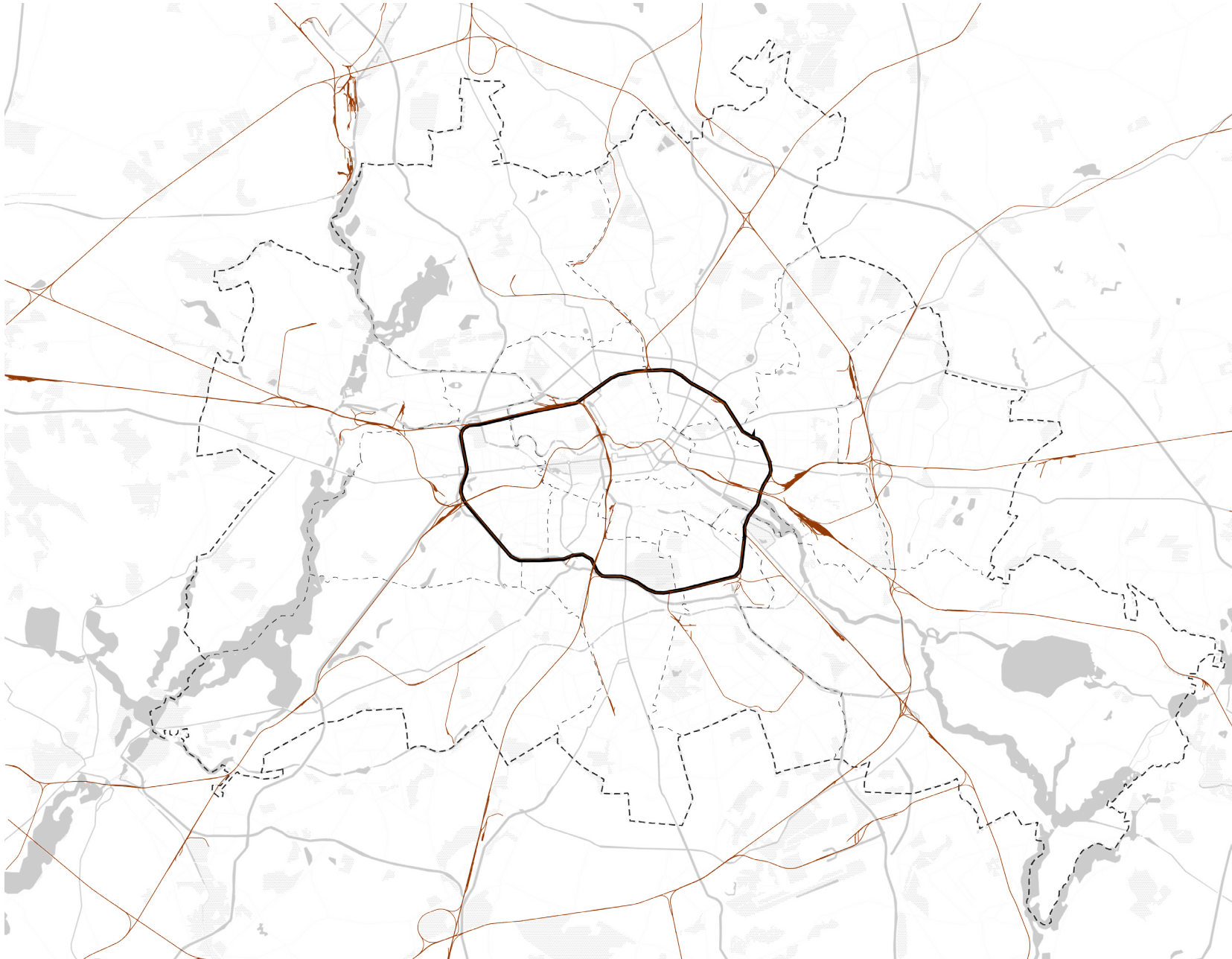
TRAVEL TIME








-  Collaborative nexus
-  Healing landscapes
-  Proximity to water
-  Travel time 2.0

site

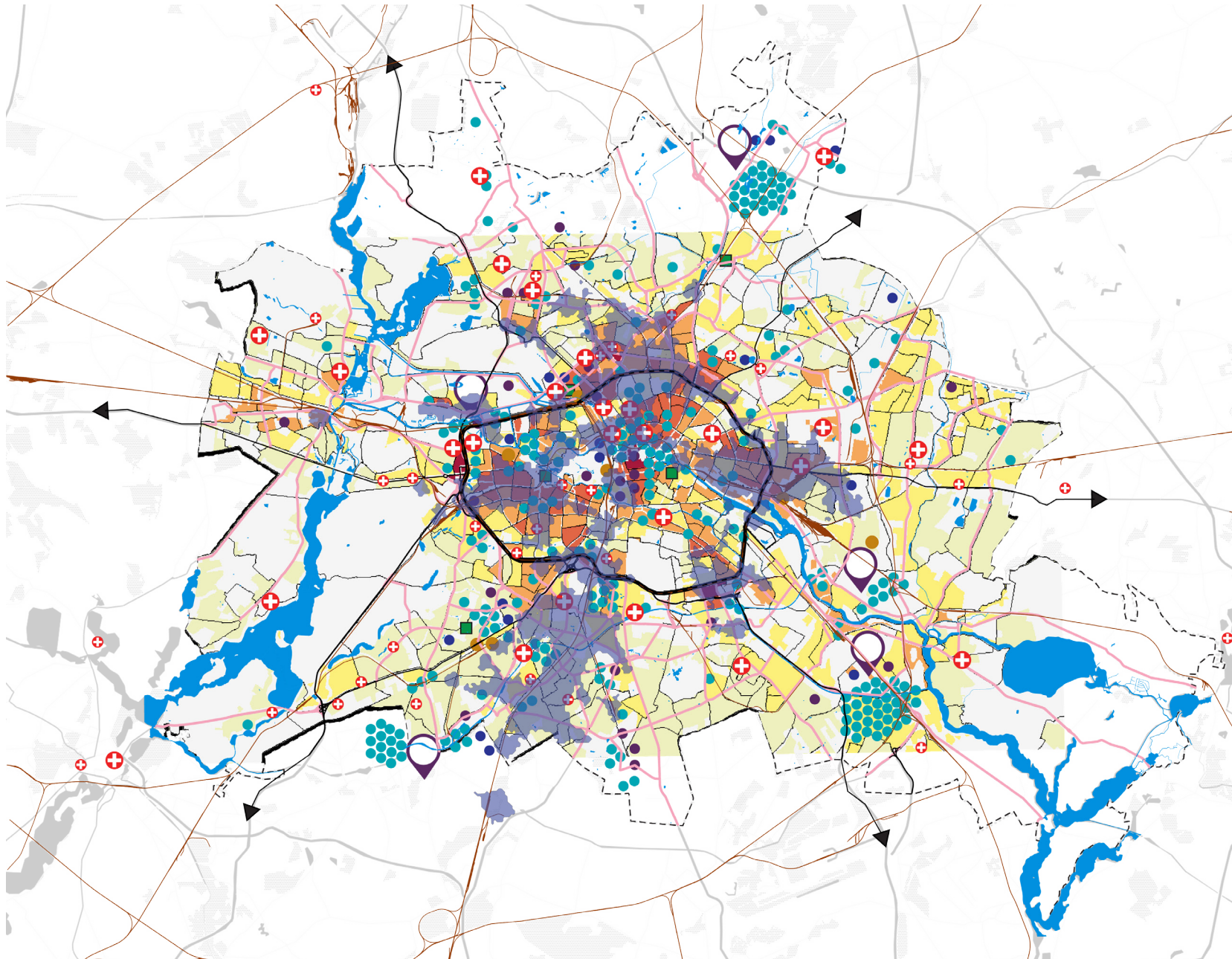
REACHABILITY



-  Collaborative nexus
-  Healing landscapes
-  Proximity to water
-  Travel time 2.0
-  Reachability 2.0

site

CONSOLIDATED



-  Collaborative nexus
-  Healing landscapes
-  Proximity to water
-  Travel time 2.0
-  Reachability 2.0
-  Prominent location

site

FOCUS ZONE

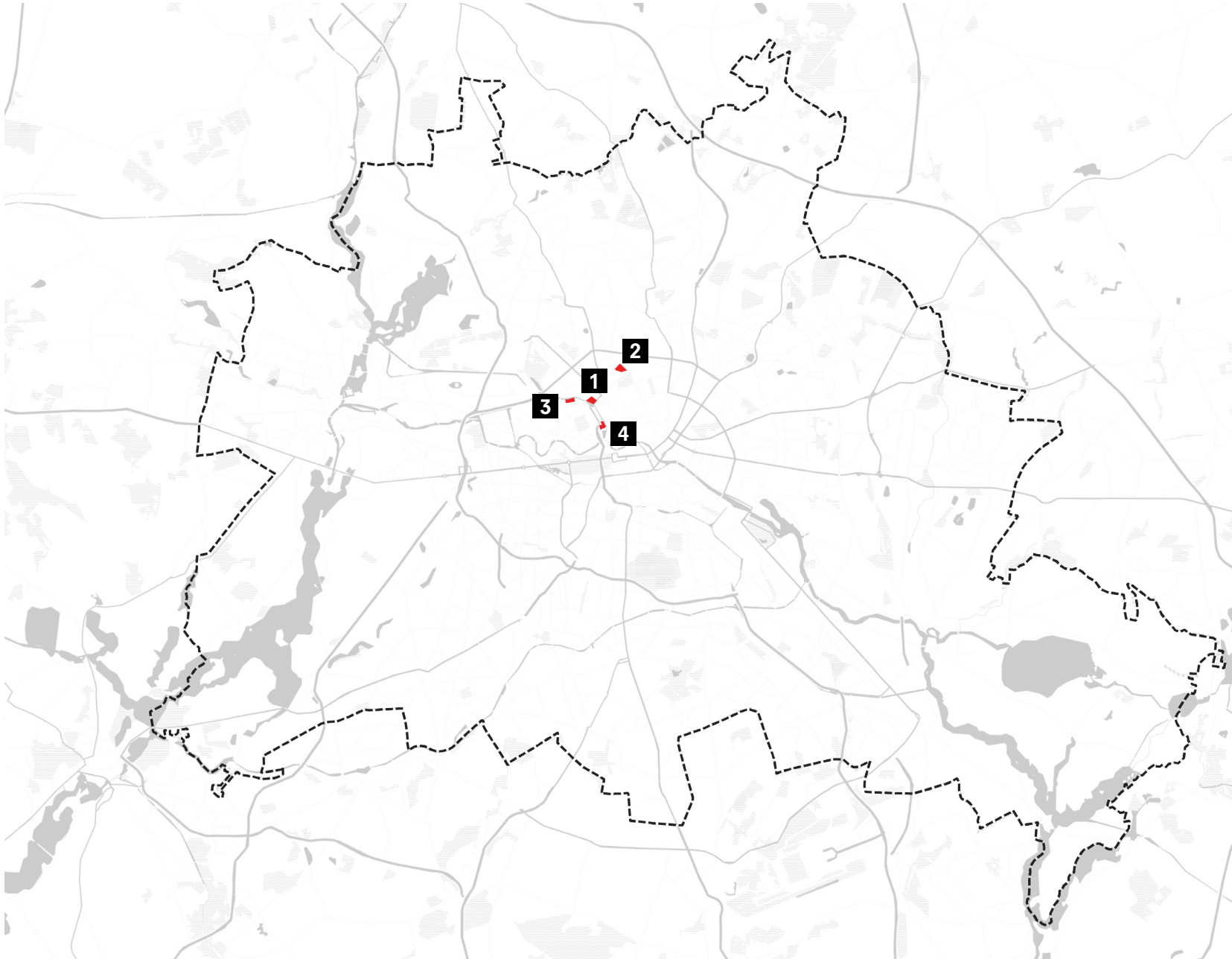


-  Collaborative nexus
-  Healing landscapes
-  Proximity to water
-  Travel time 2.0
-  Reachability 2.0
-  Prominent location

site

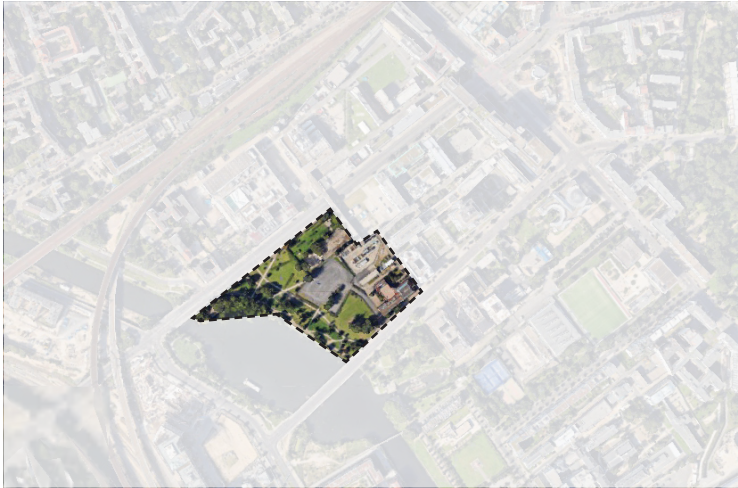
POTENTIAL LOCATIONS

- 1** Nordhafen
- 2** Blochplatz
- 3** Moabit power station
- 4** Döberitzer Grünzug park



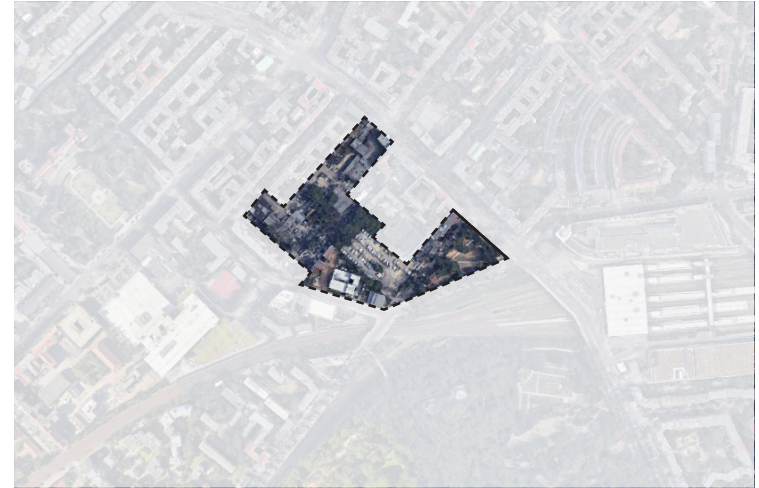
site

POTENTIAL LOCATIONS



SITE - 1

area - 40,000 sqm
shape - irregular
topography - sloped



SITE - 2

area - 55,000 sqm
shape - irregular
topography - flat



SITE - 3

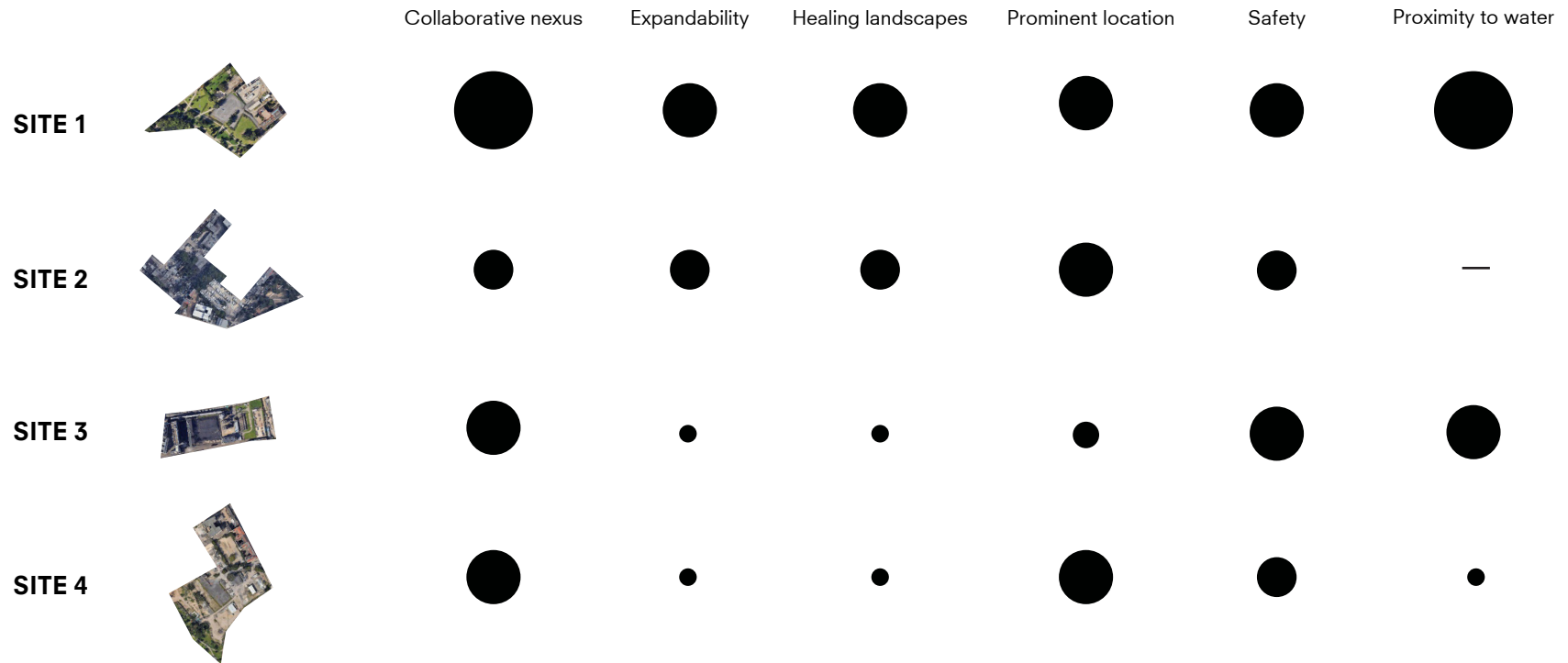
area - 30,700 sqm
shape - trapezoid
topography - sloped



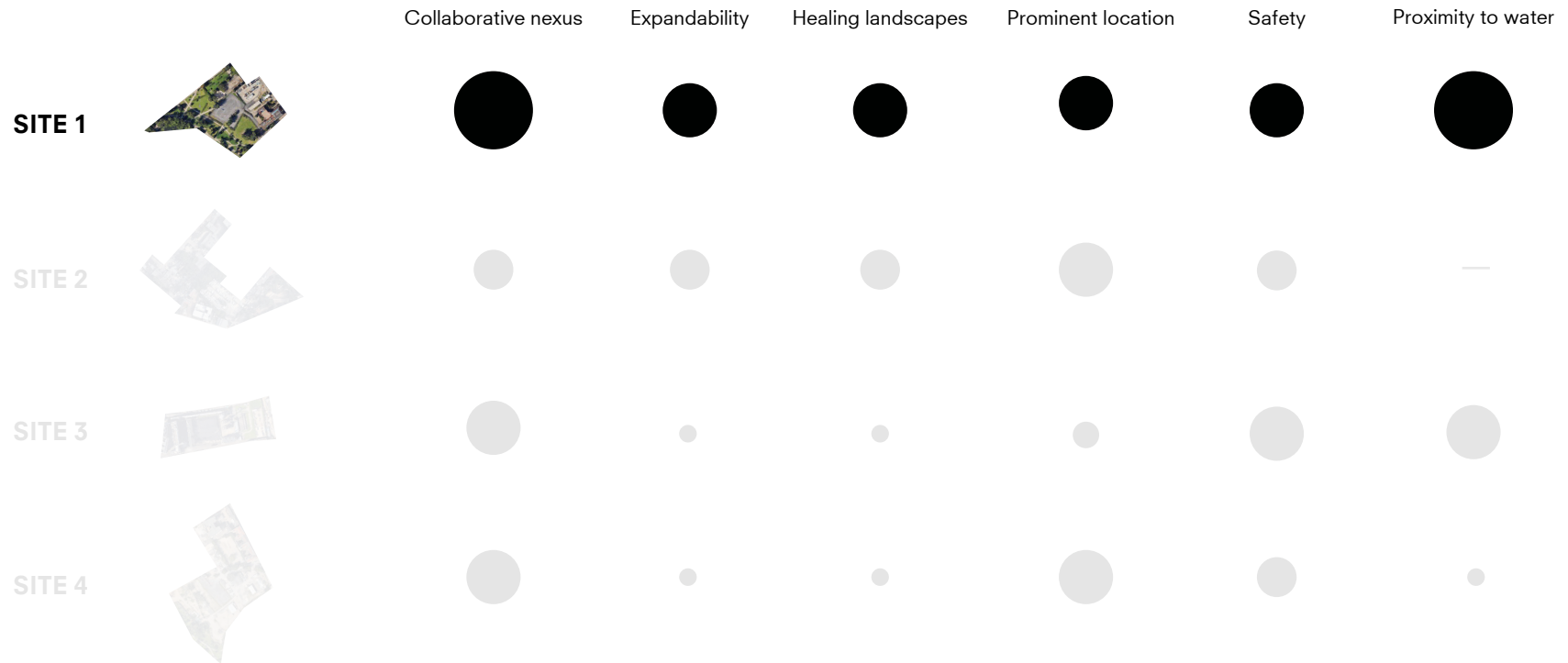
SITE - 4

area - 52,000 sqm
shape - irregular
topography - flat

site COMPARISONS



site COMPARISONS



site

NORDHAFEN



site

NORDHAFEN



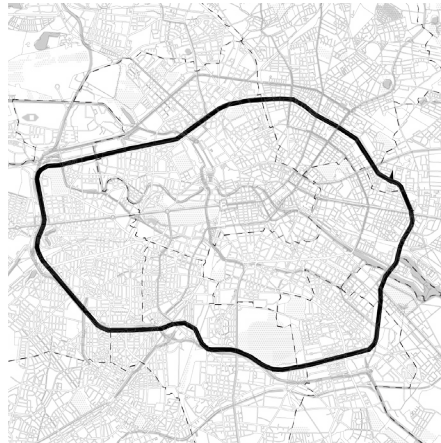
site

SITE OVERVIEW

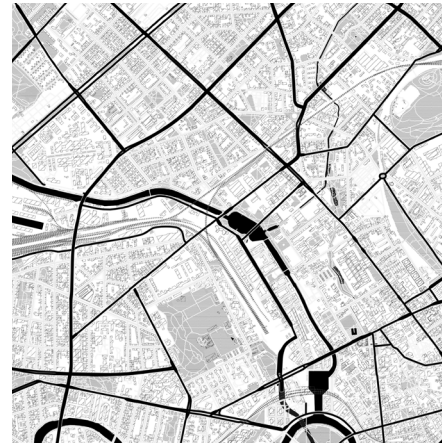
THE BERLIN STATE



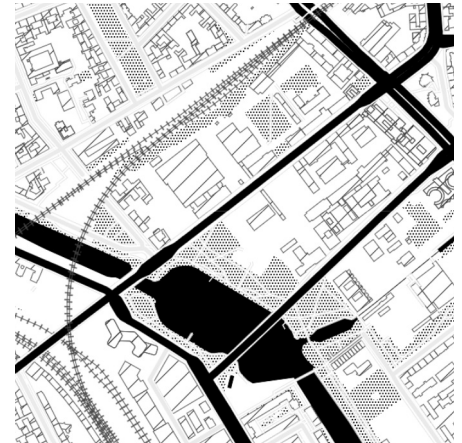
THE S-BAHN RING



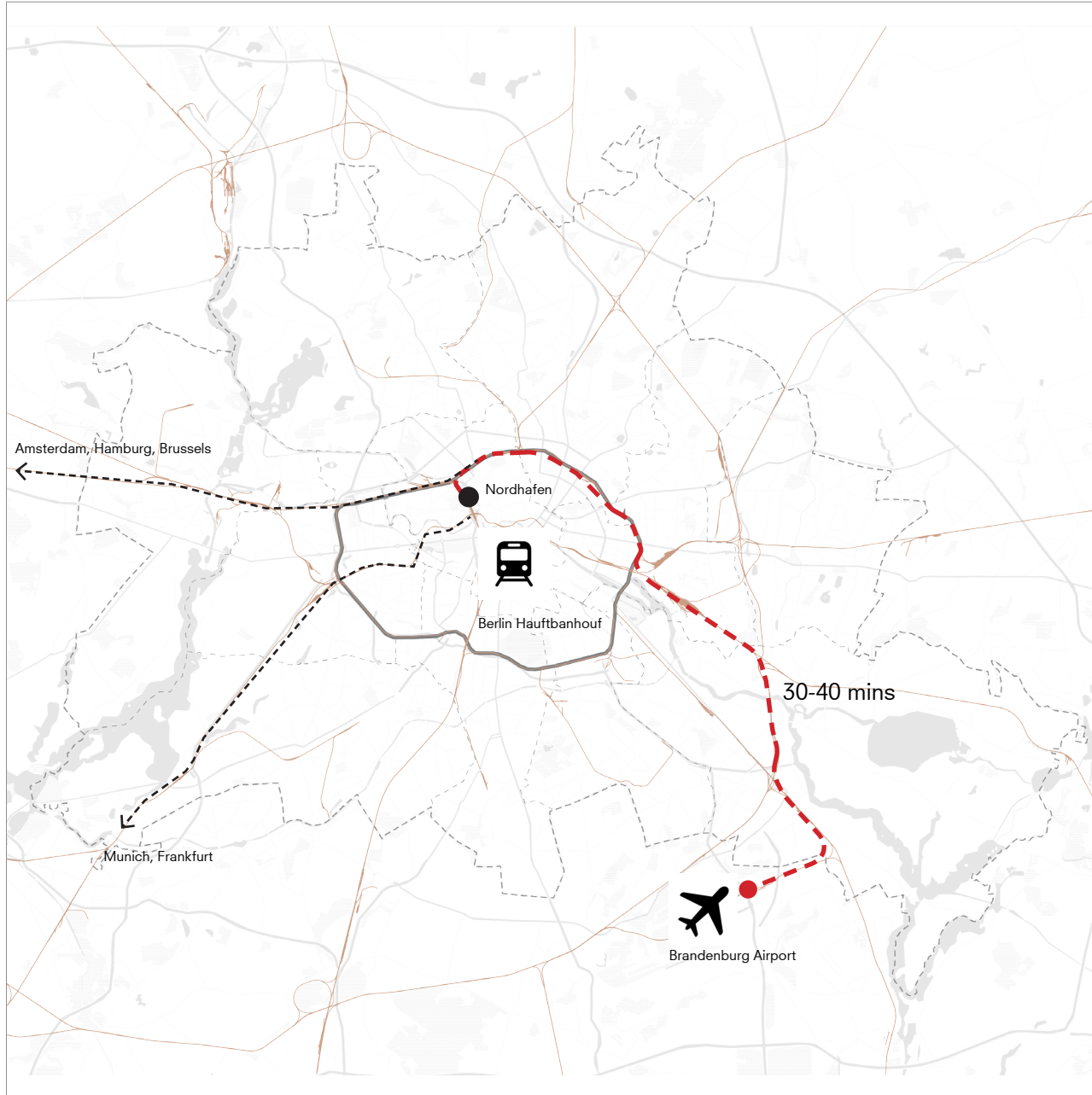
THE CELL CLUSTER



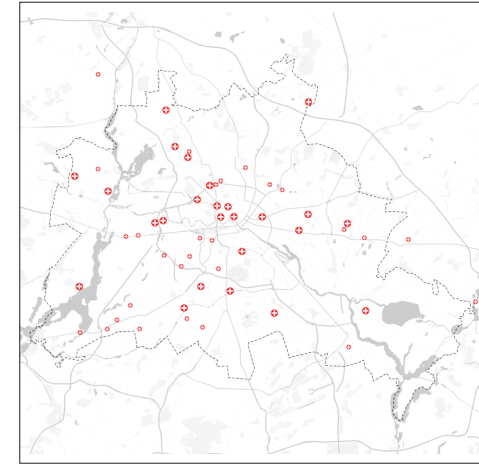
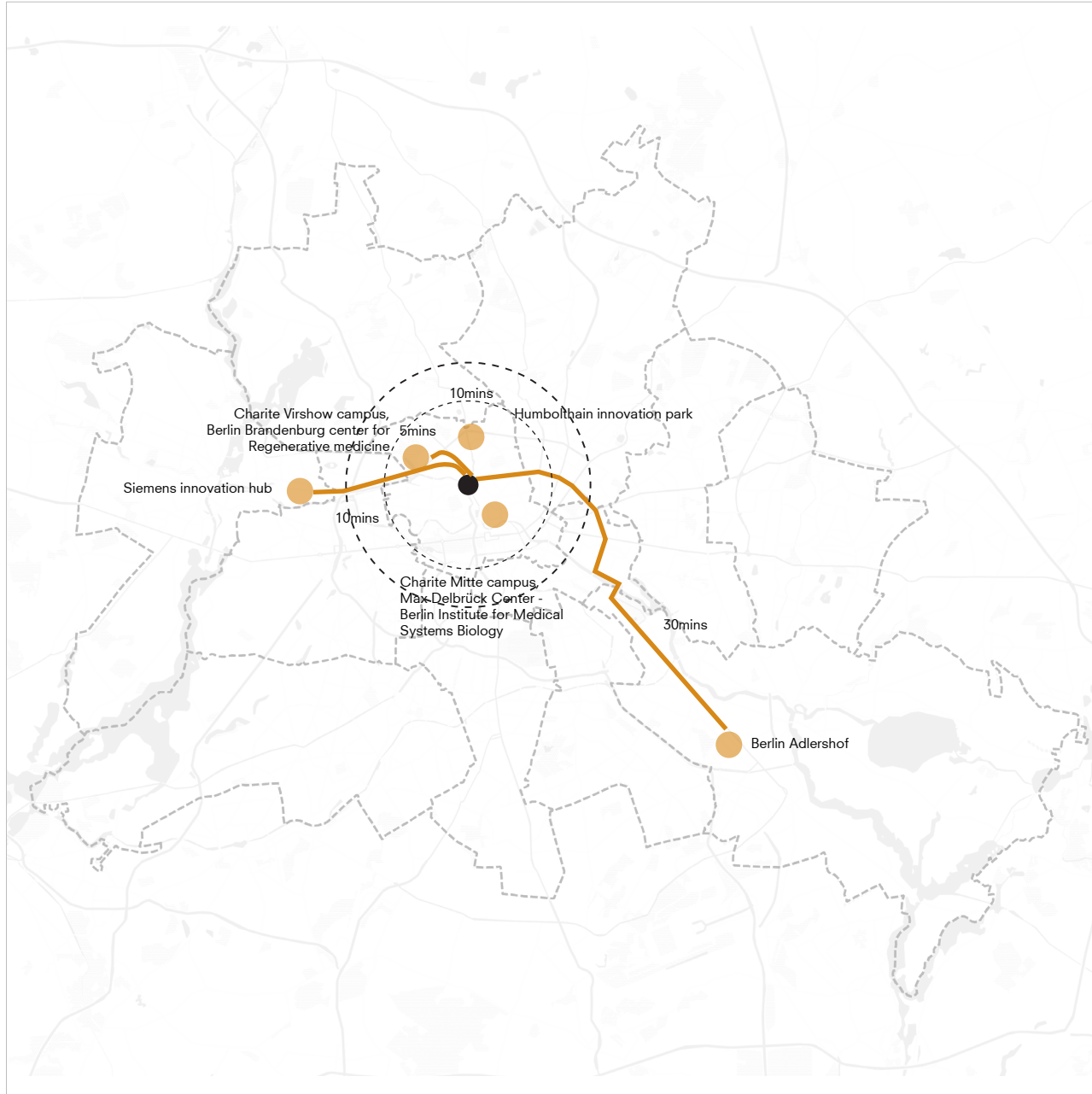
NORDHAFEN



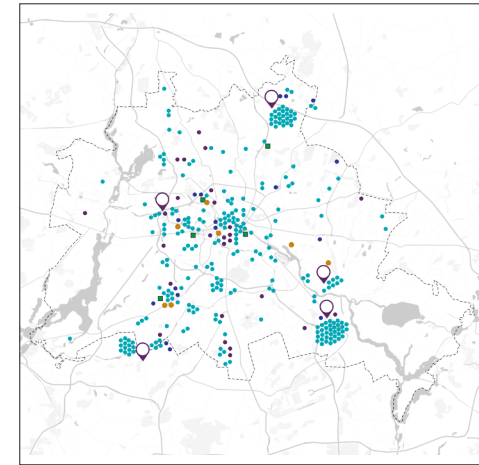
INTERNATIONAL CONNECTIVITY



COLLABORATIVE NEXUS



Existing hospitals



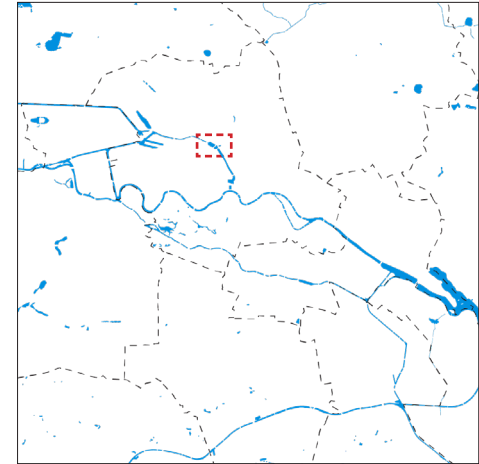
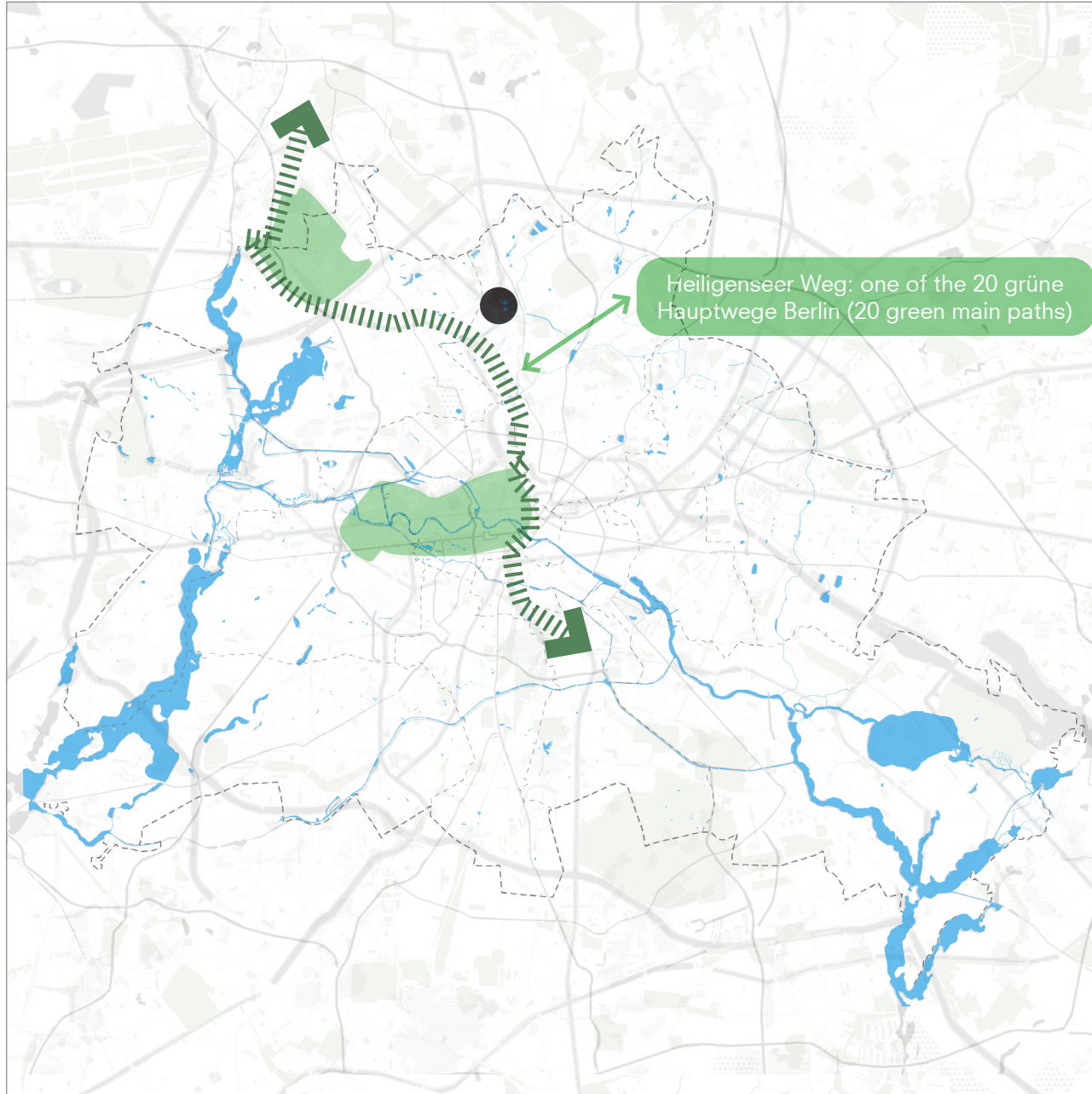
Existing Bio- tech industries and research

● Site demarcation

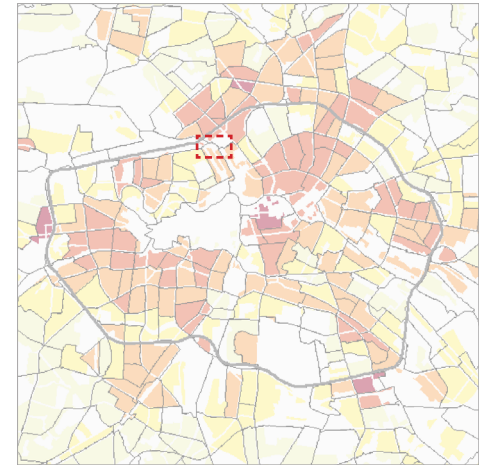
Health cluster

Innovation cluster

HEALING ENVIRONMENT

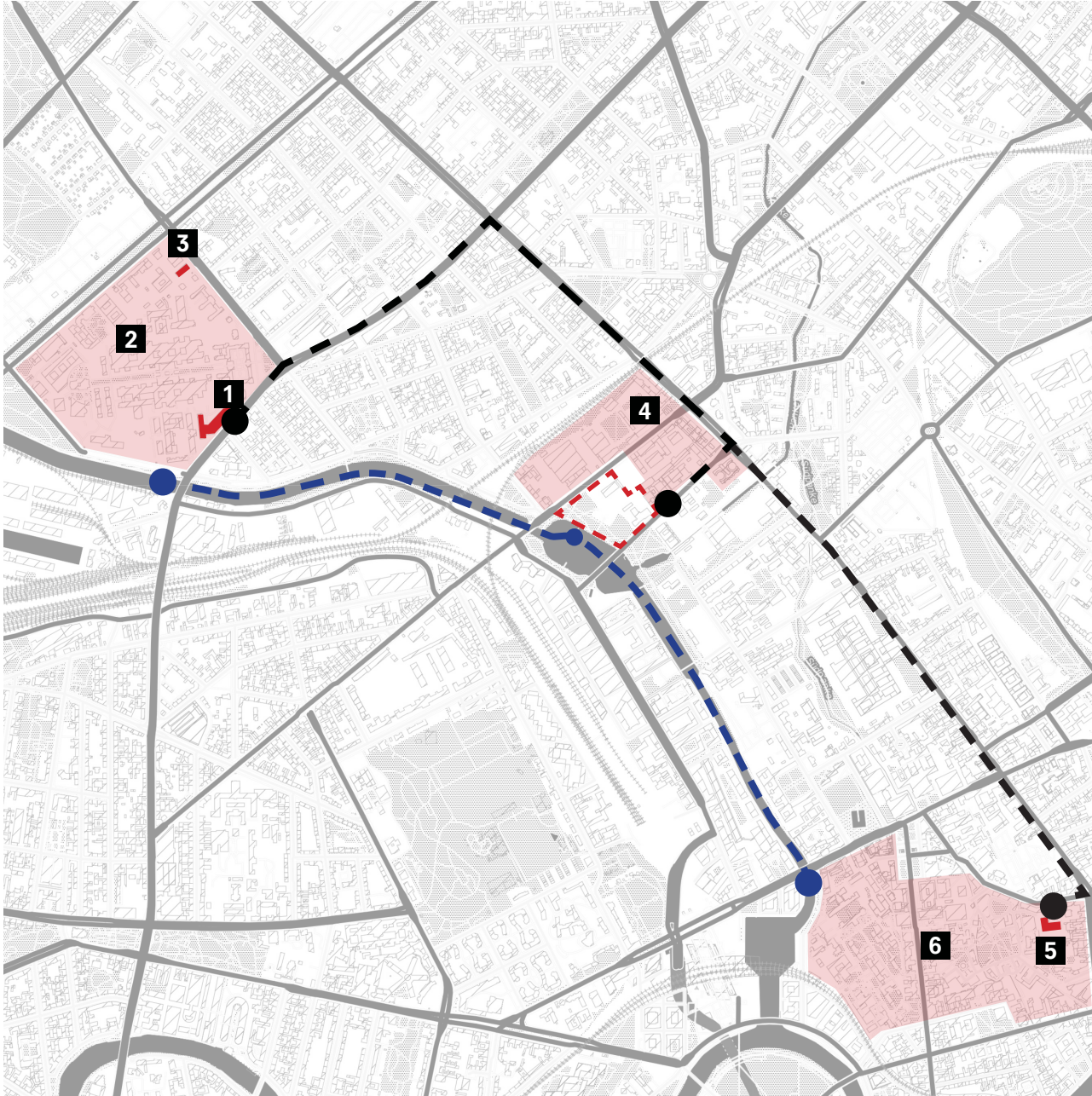


Water - Spree



Liveability (noise, air pollution)

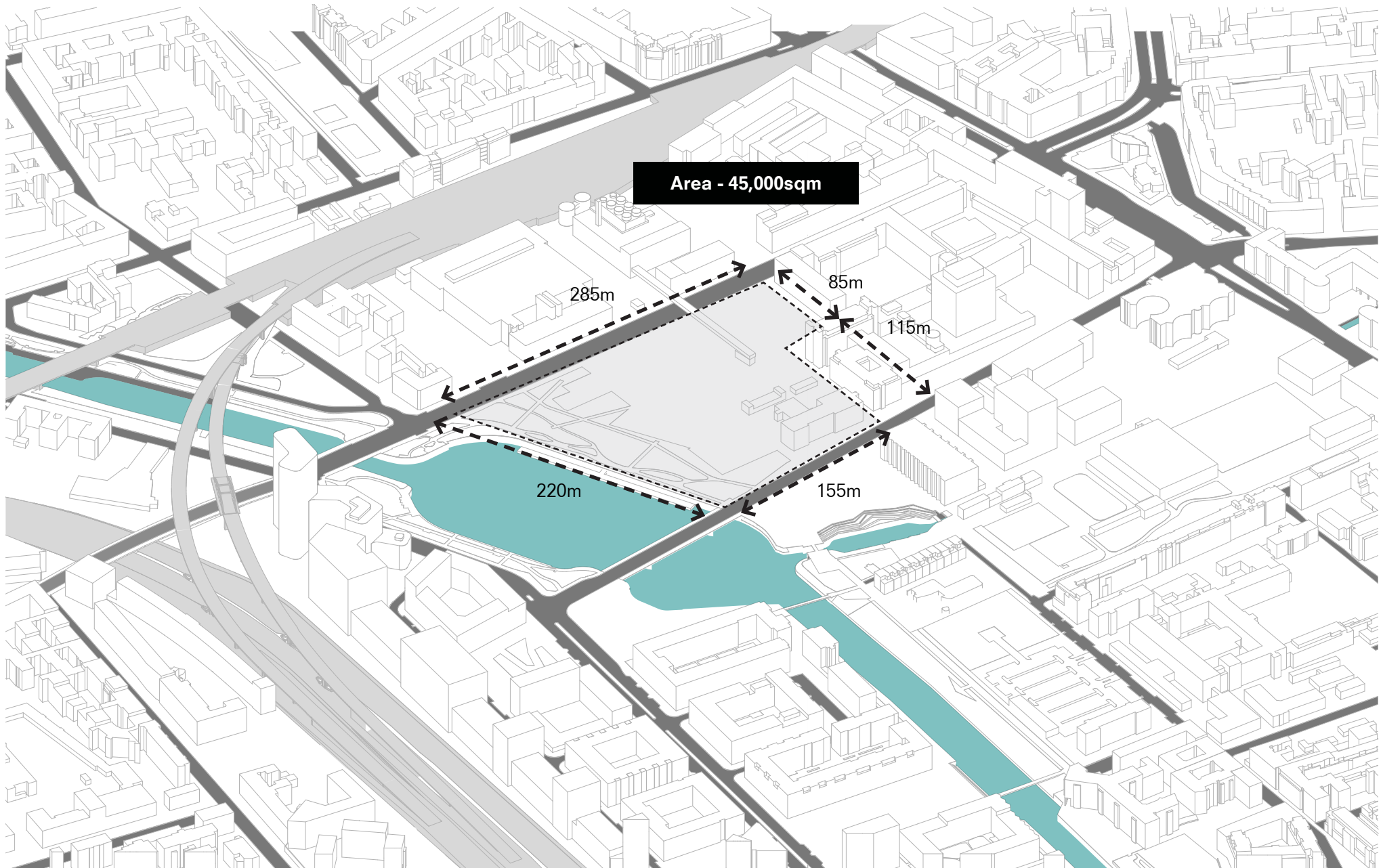
REGENERATIVE MEDICINE CORRIDOR



- 1** BIH center for regenerative medicine
- 2** Charite virchiow campus
- 3** Center for advanced therapies
- 4** Bayer Pharma
- 5** Max delbruck center
- 6** Charite campus Mitte

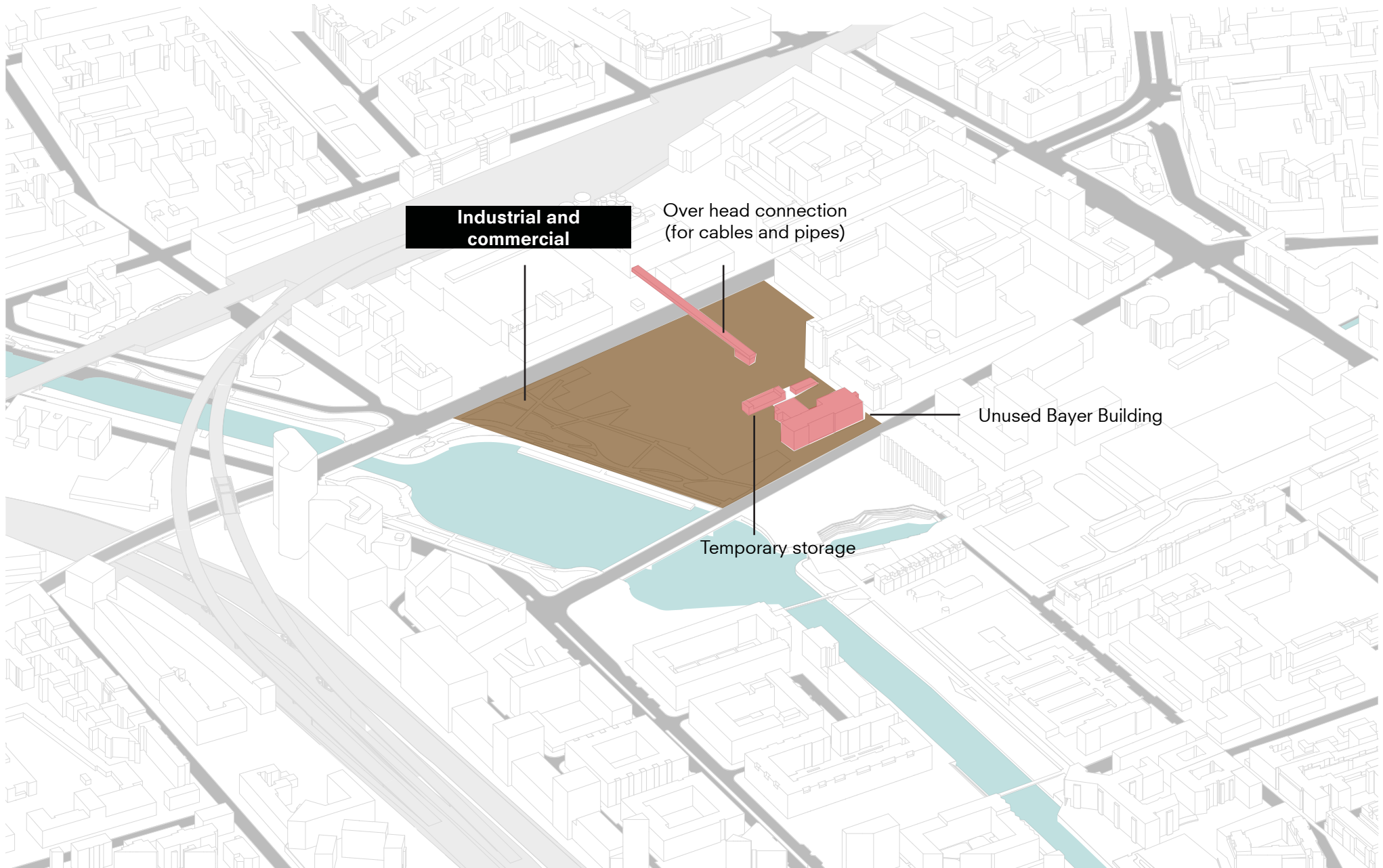
site

PLOT BOUNDARY

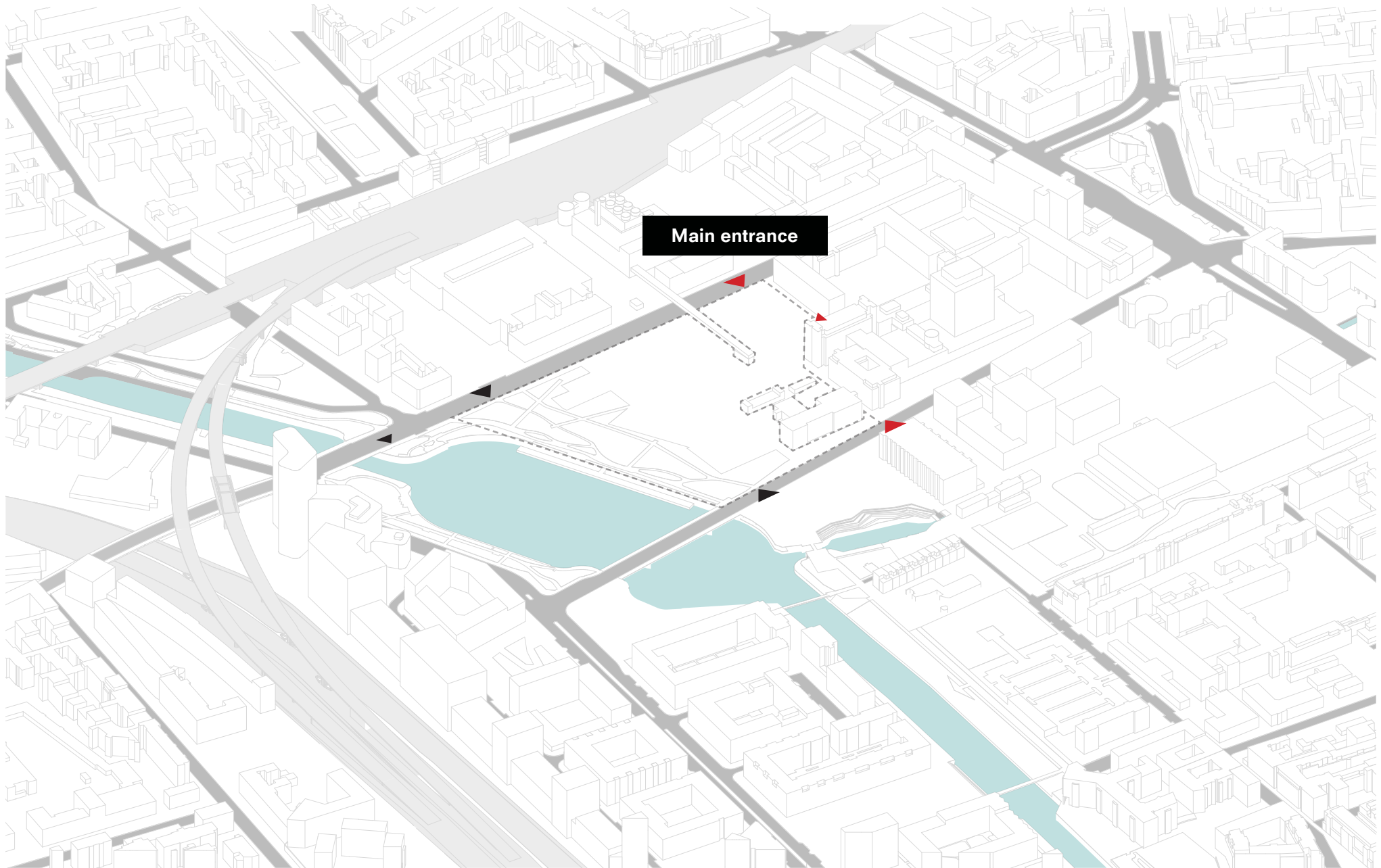


site

CURRENT USE

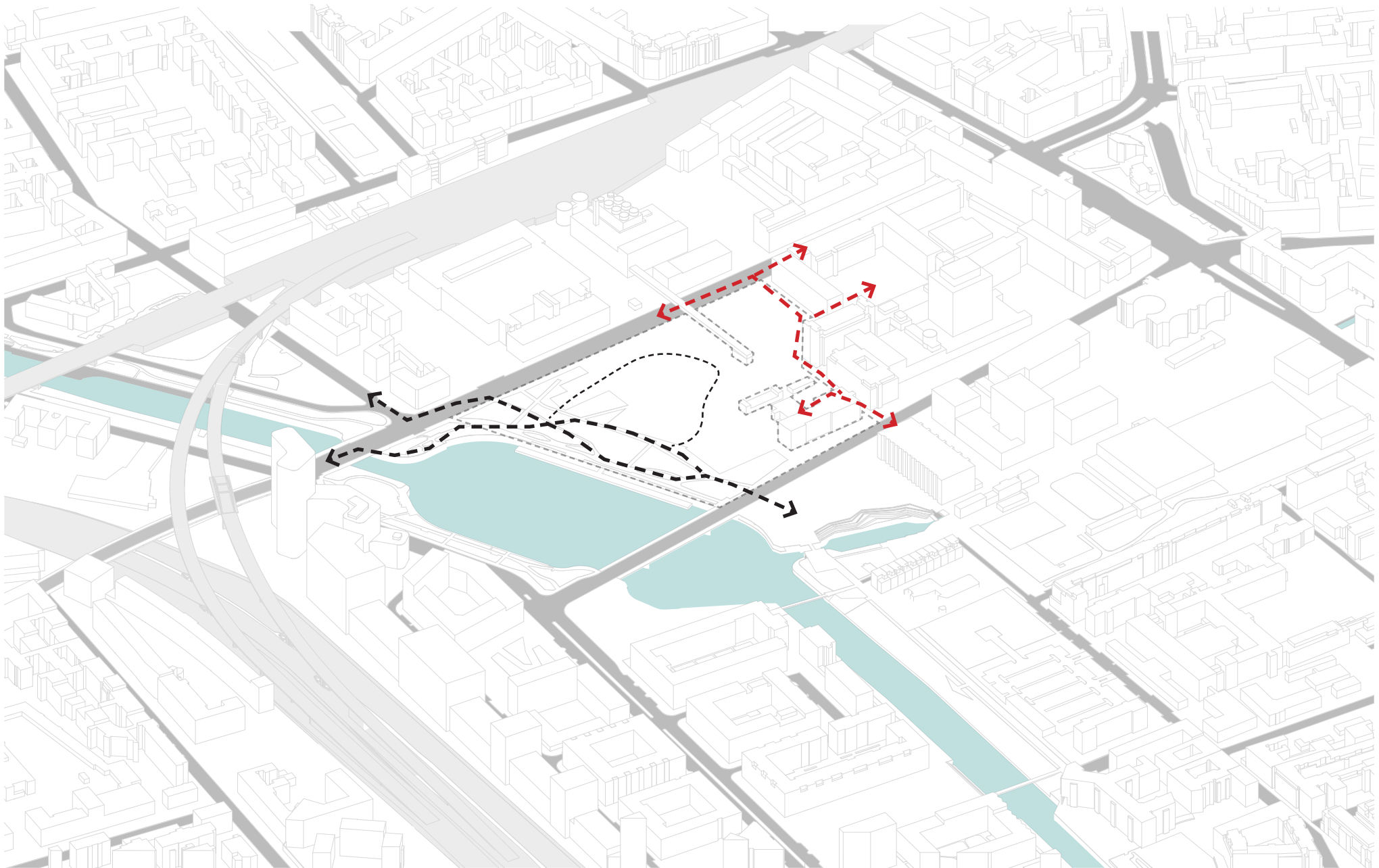


site
ACCESS



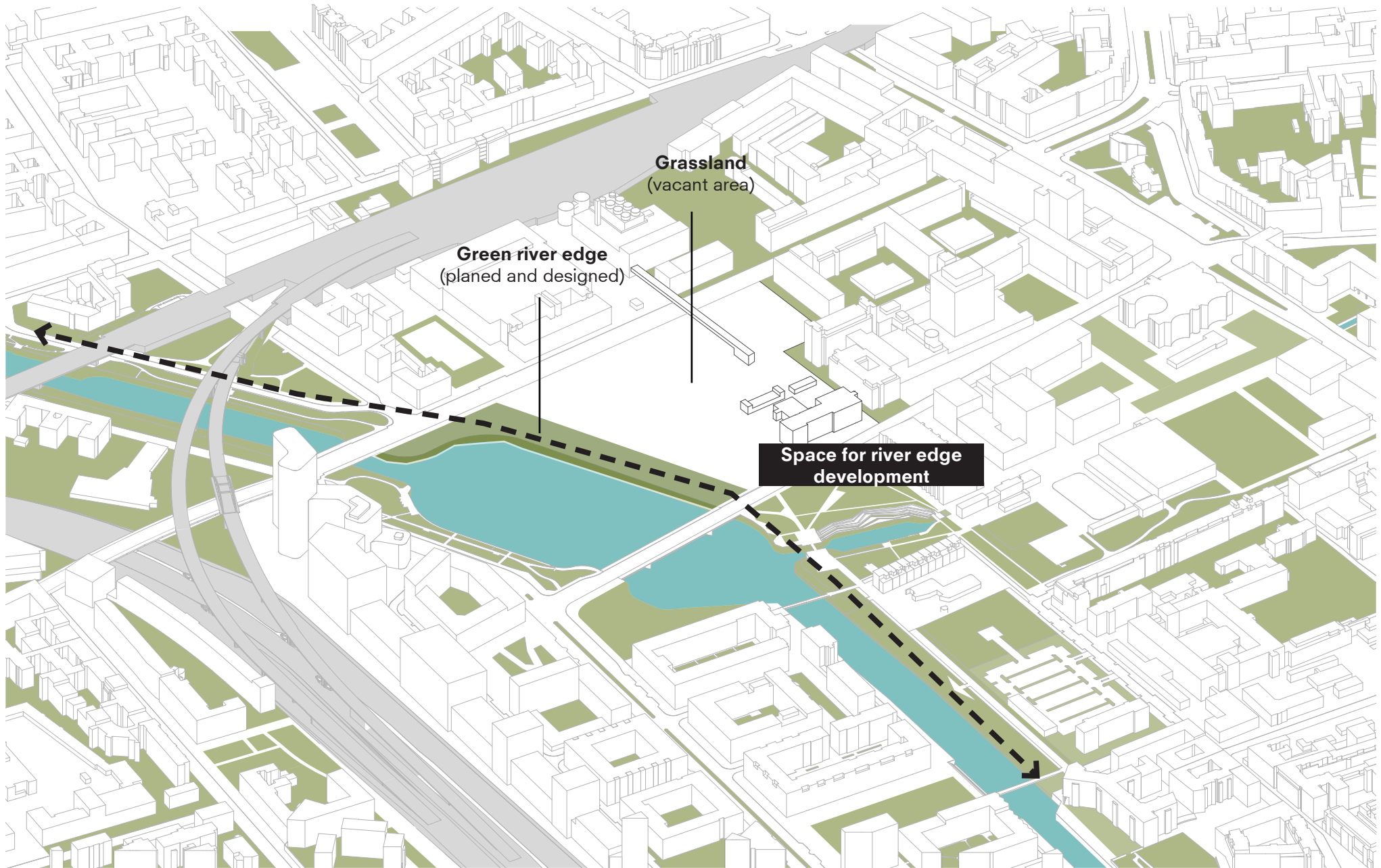
▲ Bayer pharma access ▲ Public access

site
FLOWS



◀ Bayer pharma access ▶ Public access

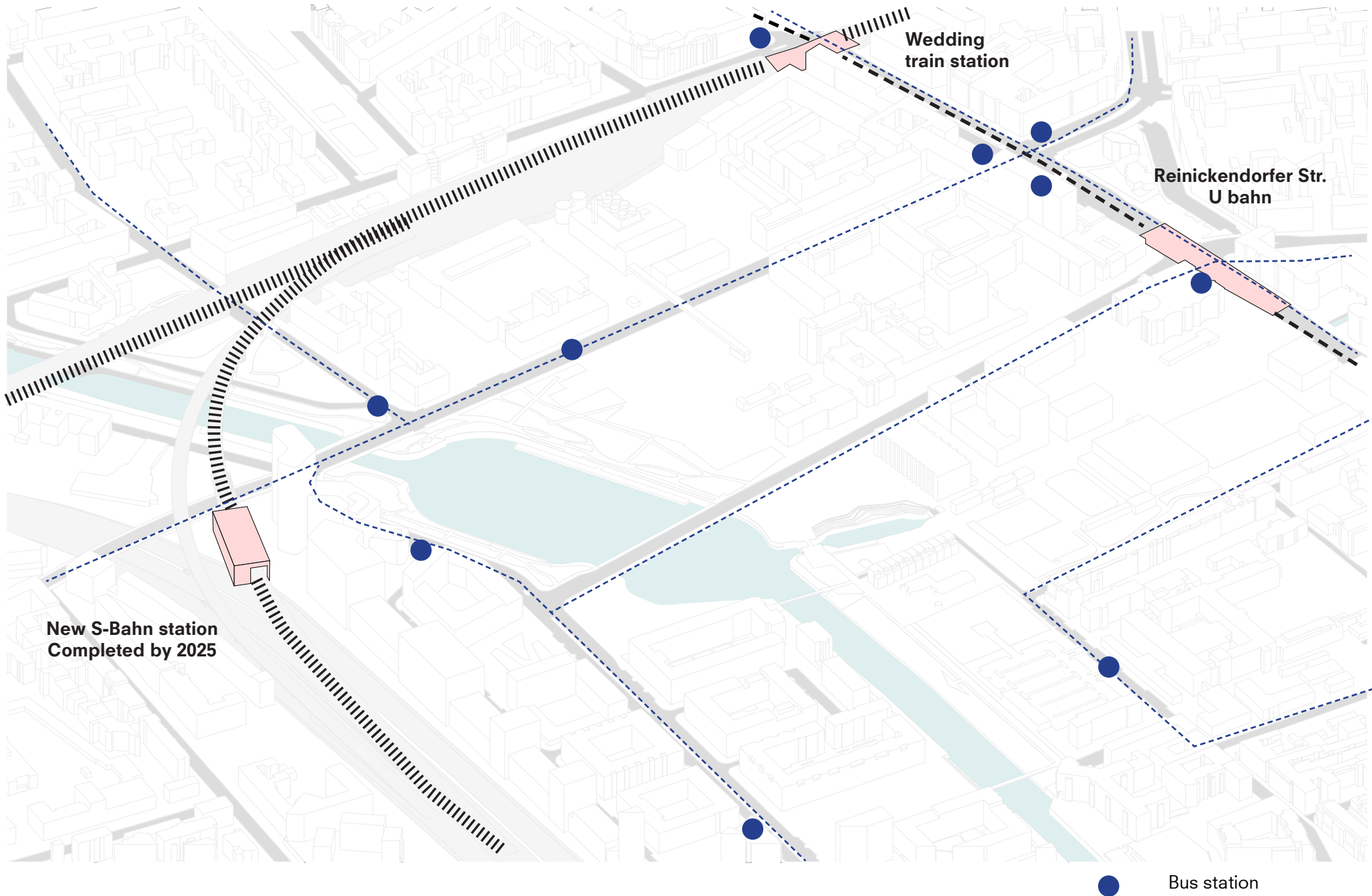
site FLOWS



◀ Bayer pharma access ▶ Public access

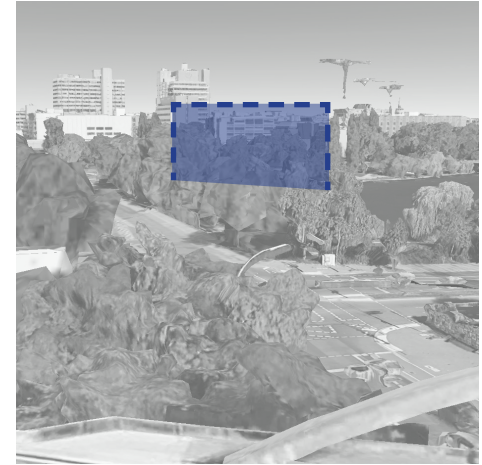
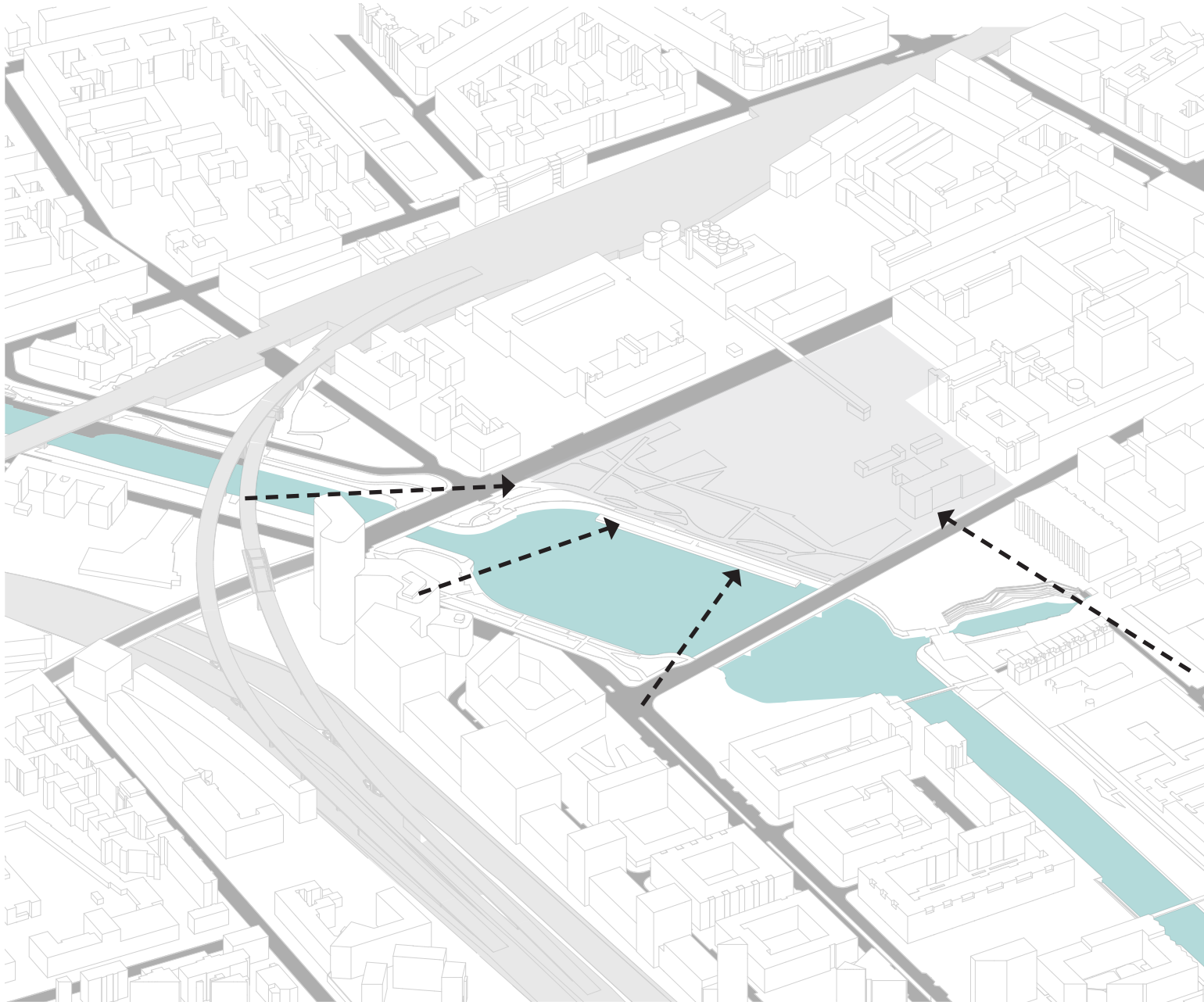
site

PUBLIC TRANSPORT CONNECTIVITY

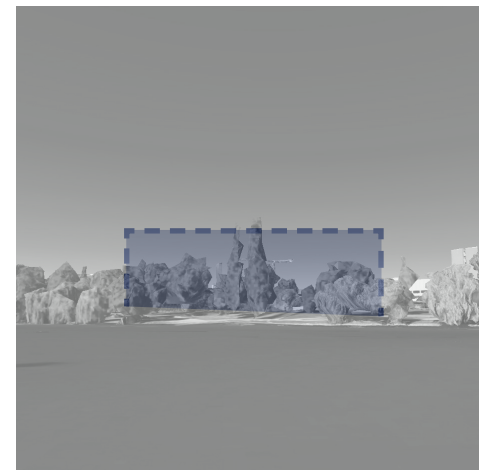


site

VISIBILITY



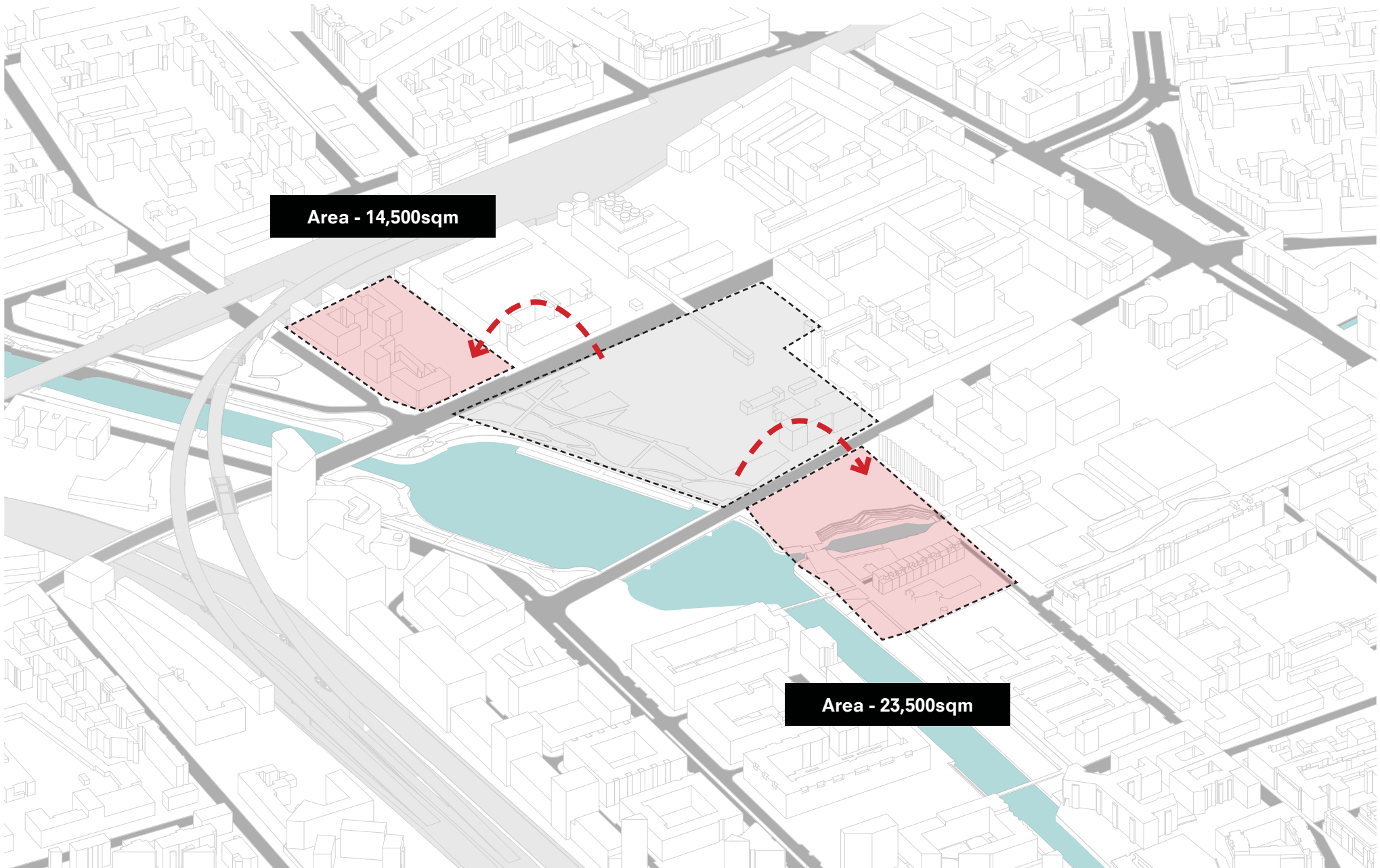
View from train line



View from water

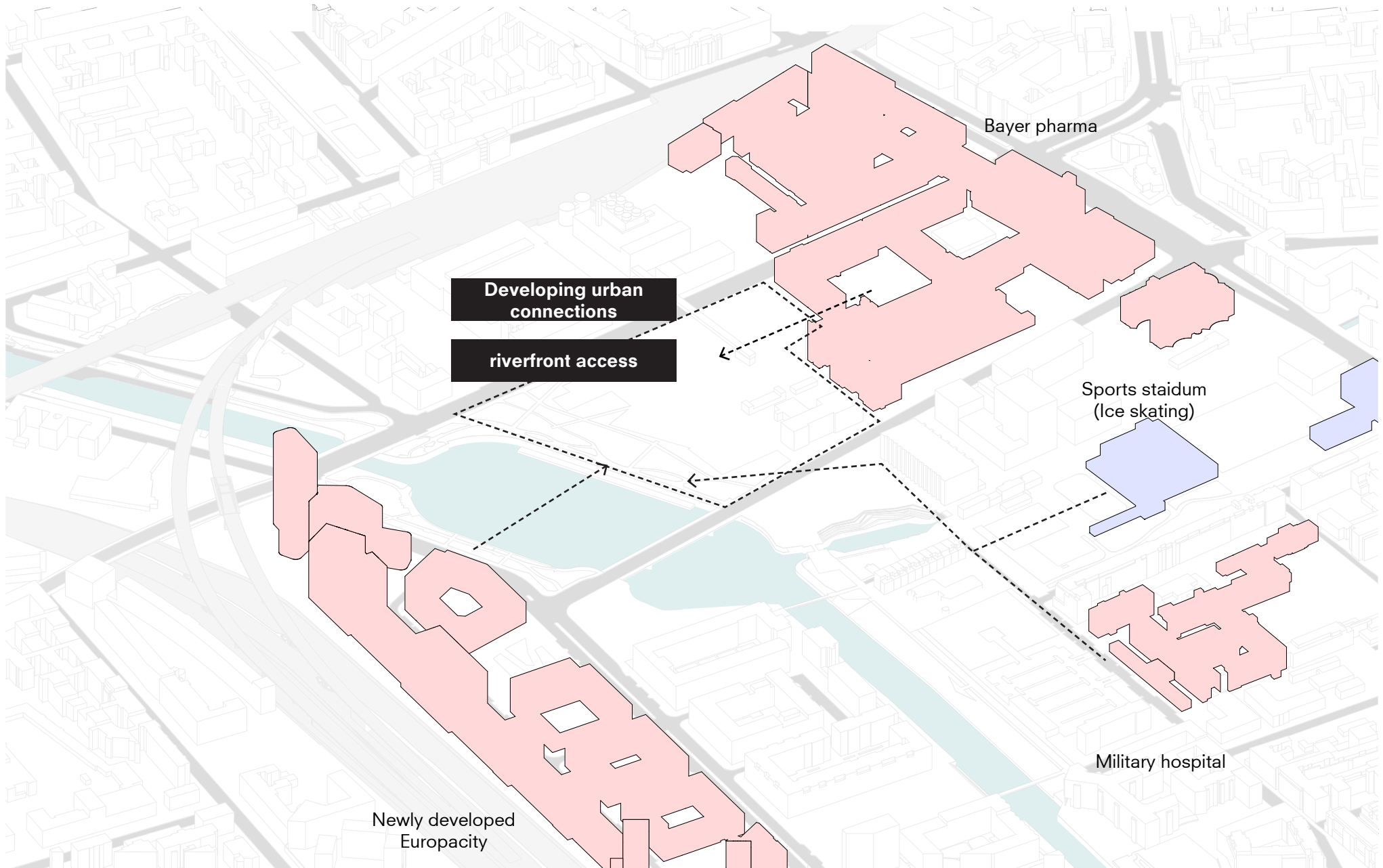
site

FUTURE EXPANSION



site

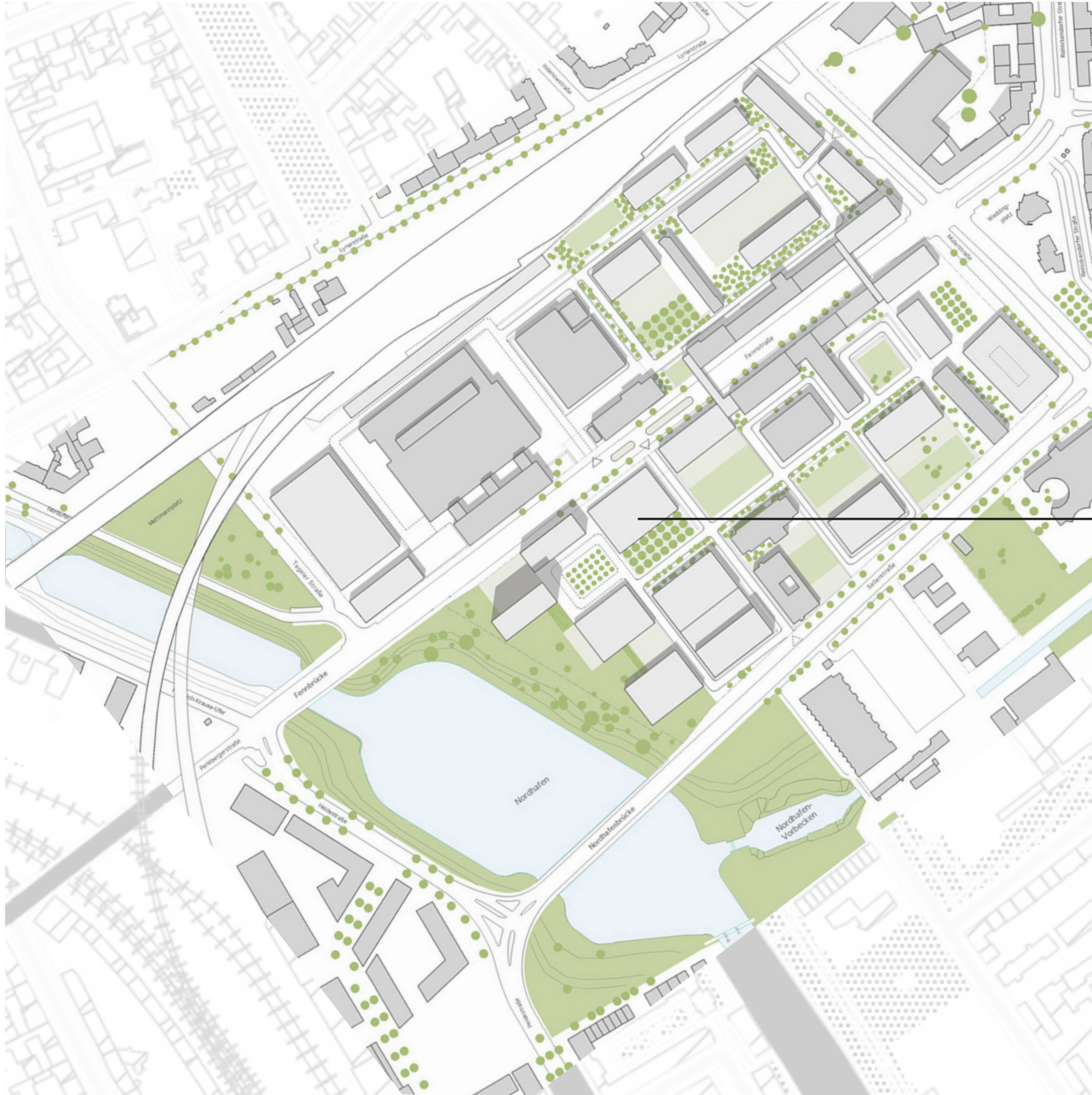
MAJOR LANDMARKS



● Bus station

site

PROPOSED BUILT CONTEXT

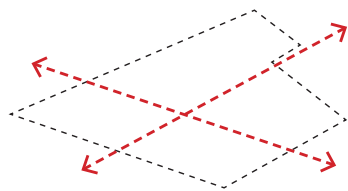


Bayer Co - lab

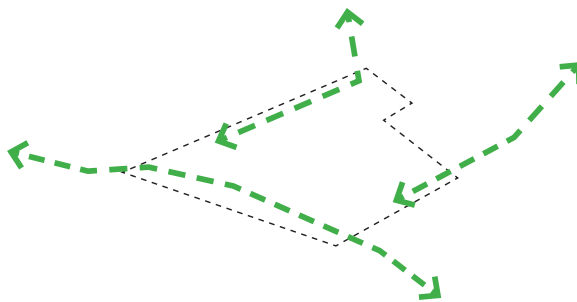
Bayer Proposed master plan for 2050

site

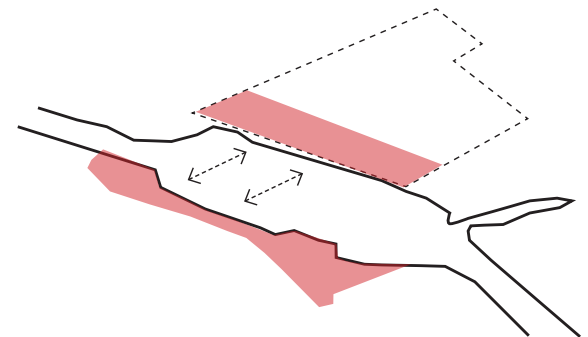
DESIGN STRATEGIES



Respond to the
public movement



Connection to the
bigger greens

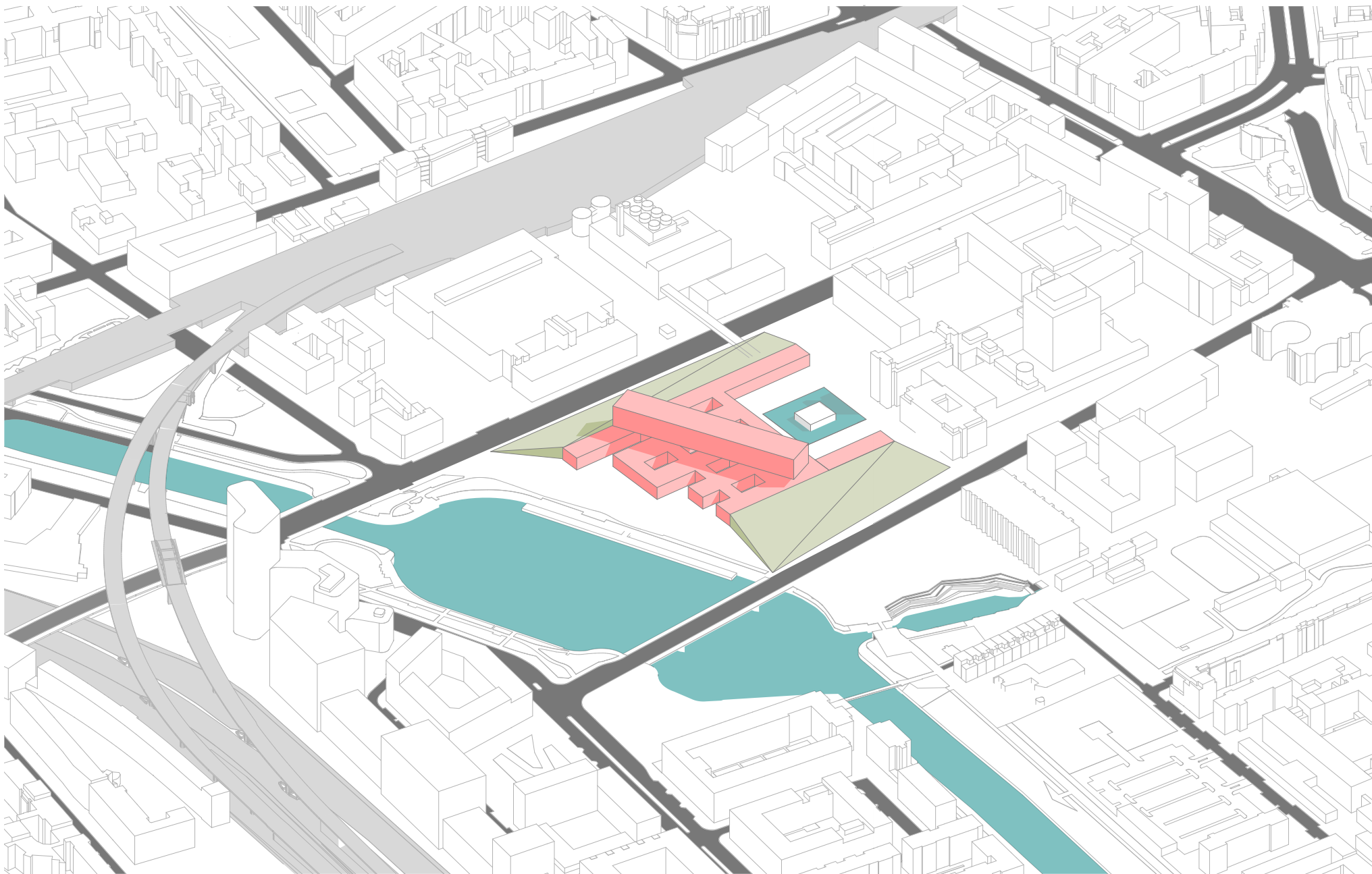


Create
connections to the
opposite front

MASSING

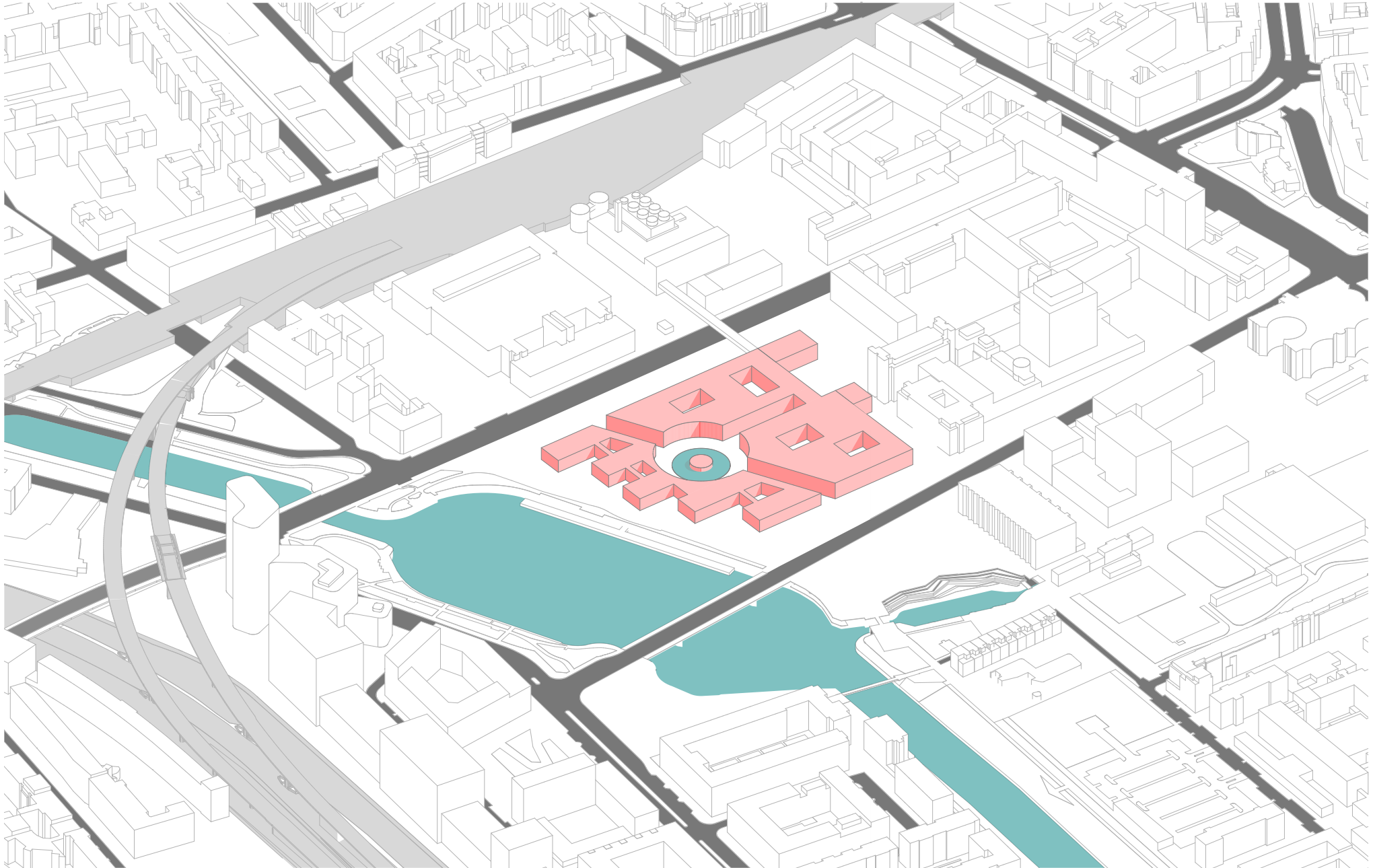
Solution

MASSING OPT 1



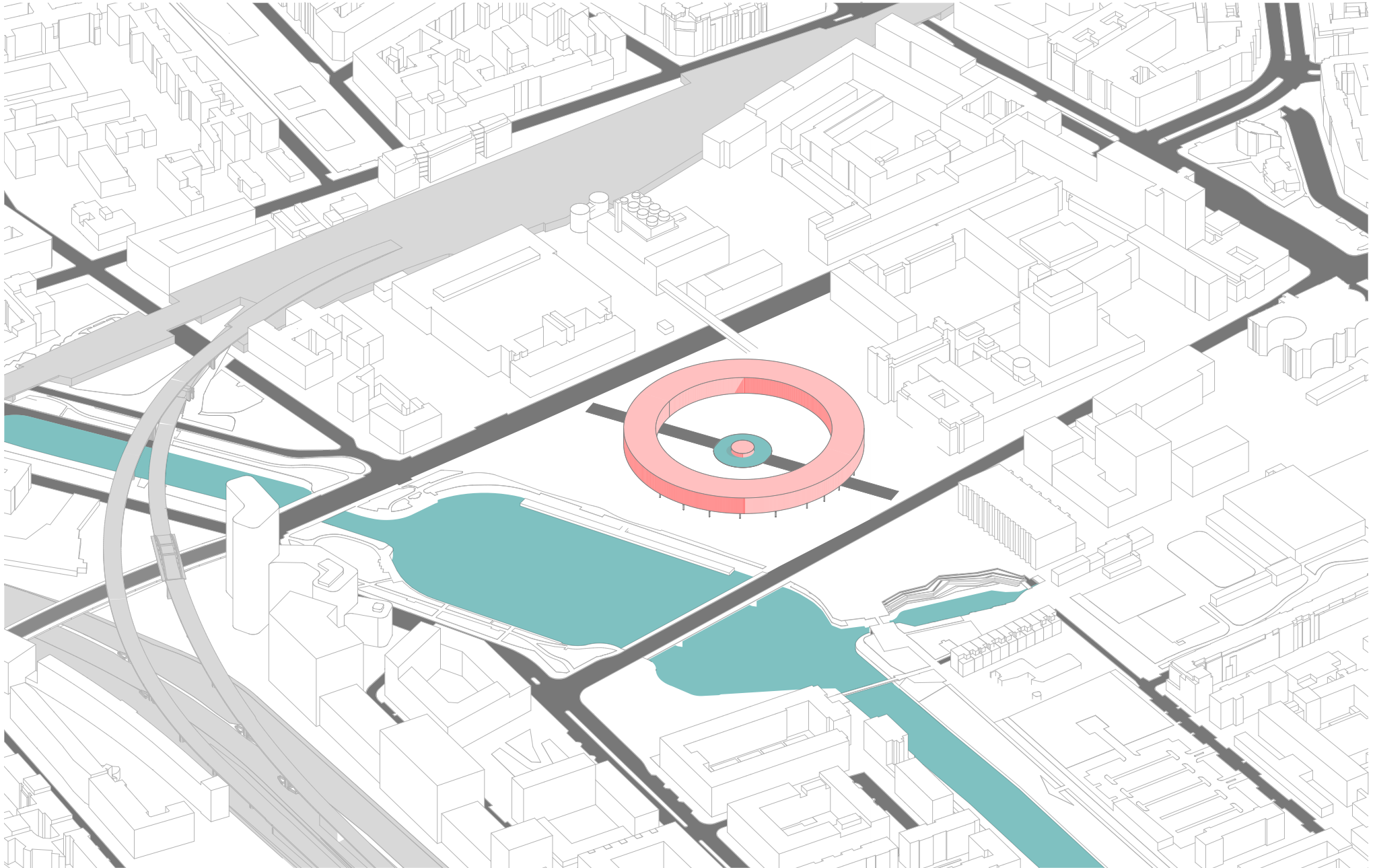
Solution

MASSING OPT 2



Solution

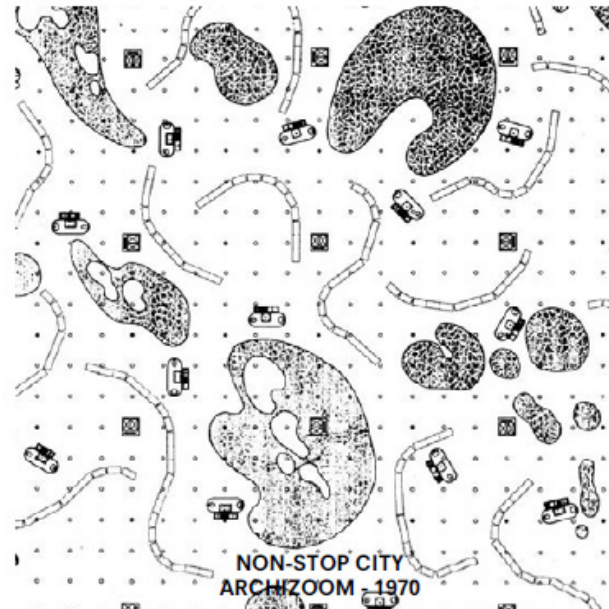
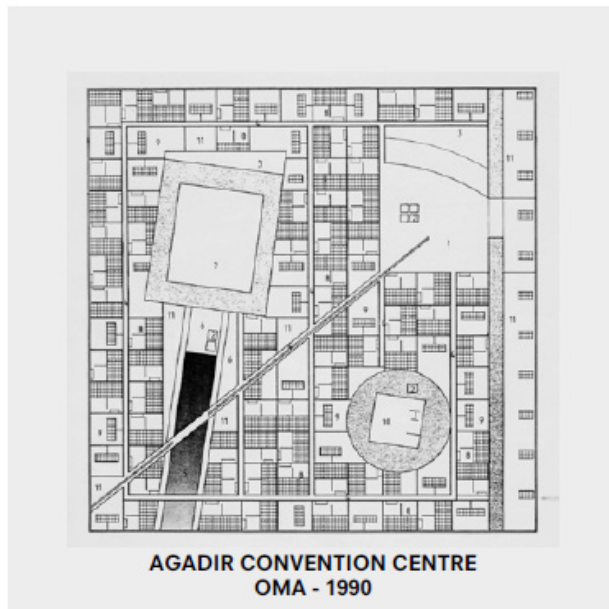
MASSING OPT 3



ARCHITECTURAL EXPRESSION



BUILDING STRUCTURE



CONCLUSION

FROM:

REACTIVE TO PREVENTIVE AND REGENERATIVE HEALTHCARE

**FRAGMENTED TO COLLABORATIVE
DEPARTMENTAL TO OPEN AND DECENTRALISED
STERILE TO HUMAN/PATIENT CENTRIC
STATIC TO FLEXIBLE
ISOLATED TO PART OF THE CITY
PASSIVE TO REGENERATIVE**

NEXT STEPS

PASSIVE TO REGENERATIVE

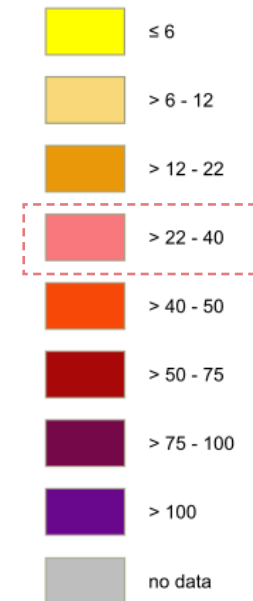
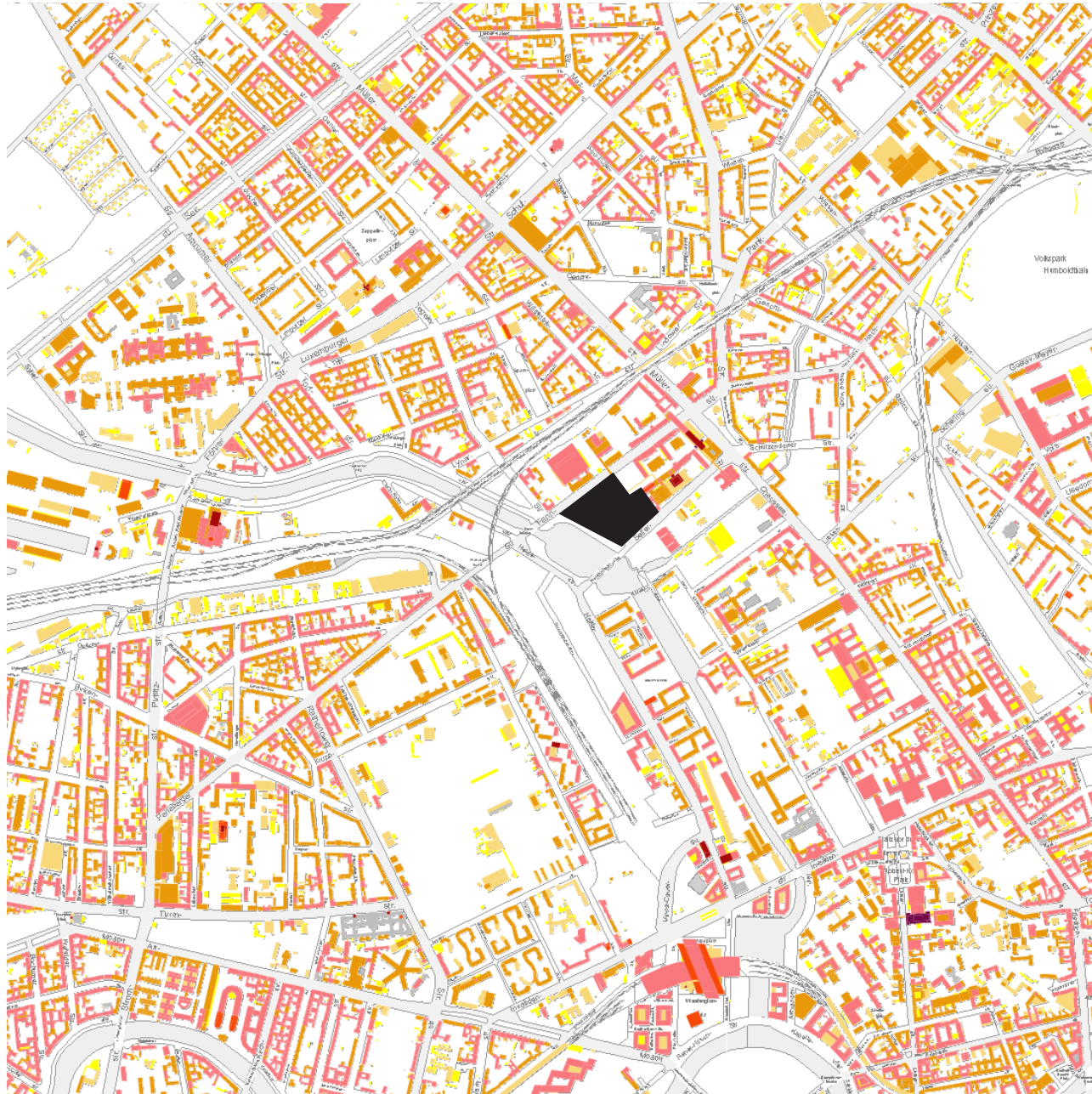
Sustainable strategies to make the building regenerative it self..

BUILDING DESIGN AND IMPLICATIONS

STUDY OF TECHNICAL CONSIDERATIONS OF HOSPITAL DESIGN

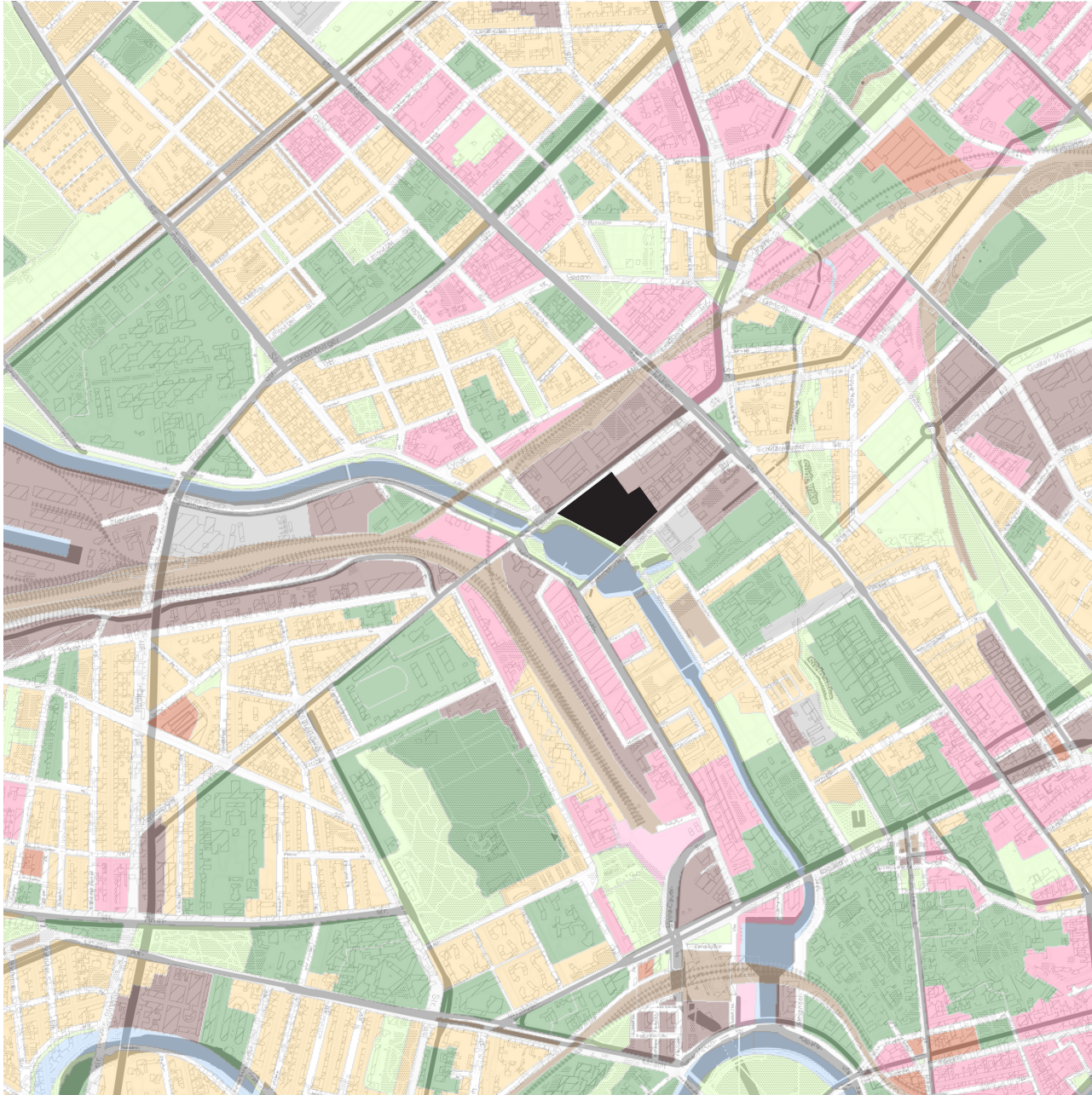
site

BUILDING HEIGHT



site

HEALING ENVIRONMENT



- Housing area
- Mixed area
- Core area
- Commercial and industrial area
- Public / special area
- Utility area
- Weekend cottage / allotment-garden-type area
- Traffic area (without roads)
- Construction site
- Green and open space
- Body of water