

COMPLEX PROJECTS

# FORTRESS WITHOUT BARRIERS

Maintaining Accessibility in the Face of Security

Michael J. Fajtl

19/01/2024

**Introduction**

**Research**

**Concept**

**Design**

**Conclusion**

# FORTRESS WITHOUT BARRIERS:



Introduction

# BODIES & BUILDING

ONE OF BERLIN

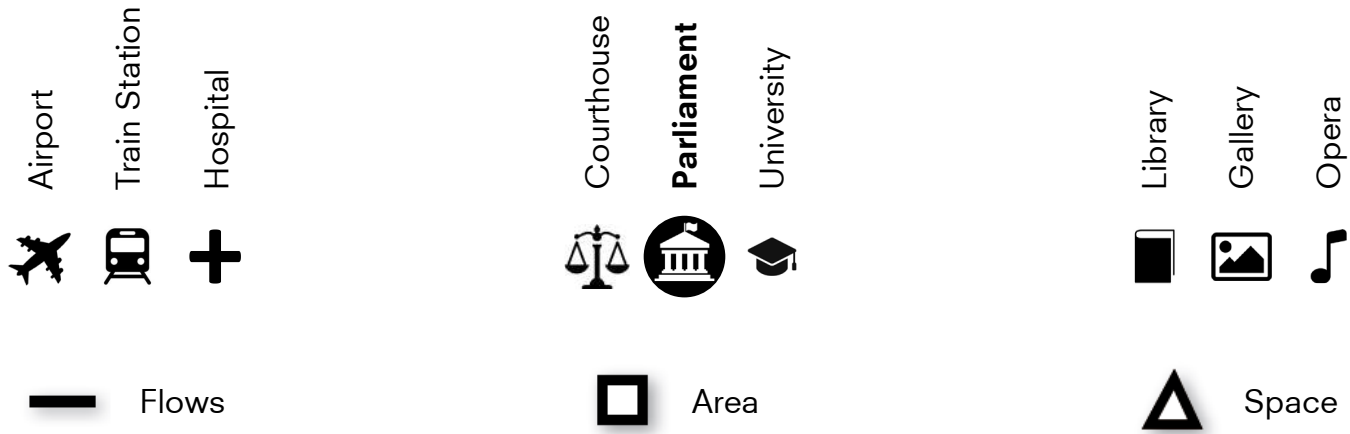




Introduction

# BODIES & BUILDING

## ONE OF BERLIN



Introduction

# PARLIAMENT



# PARLIAMENT TYPOLOGY

parliament

noun

UK  /'pɑ:ləmənt/ US  /'pɑ:lɪmənt/

---

**etymology:**

parler (“to speak”) + -ment (indicating action or state resulting from them)  
 (“discussion, meeting, negotiation; assembly, council”)

**Parliament** is about (collective) **Decision Making**

# TOPIC & STATEMENT



# RESEARCH QUESTION:

“How can we design  
a **highly secured** institutional building,  
while remaining **accessible** to the public?”



# SCENARIO

## A New Defence Ministry Headquarters

### CLIENT

The only place where military (security) and government (openness) institutions merge

### SCALE

City within a city as a large scale test that must be both secured and traversable

### PROGRAMME

The most private (bunker) to most public (civic) functions in the same space



Introduction  
**GOALS**



Connection to  
**urban fabric**



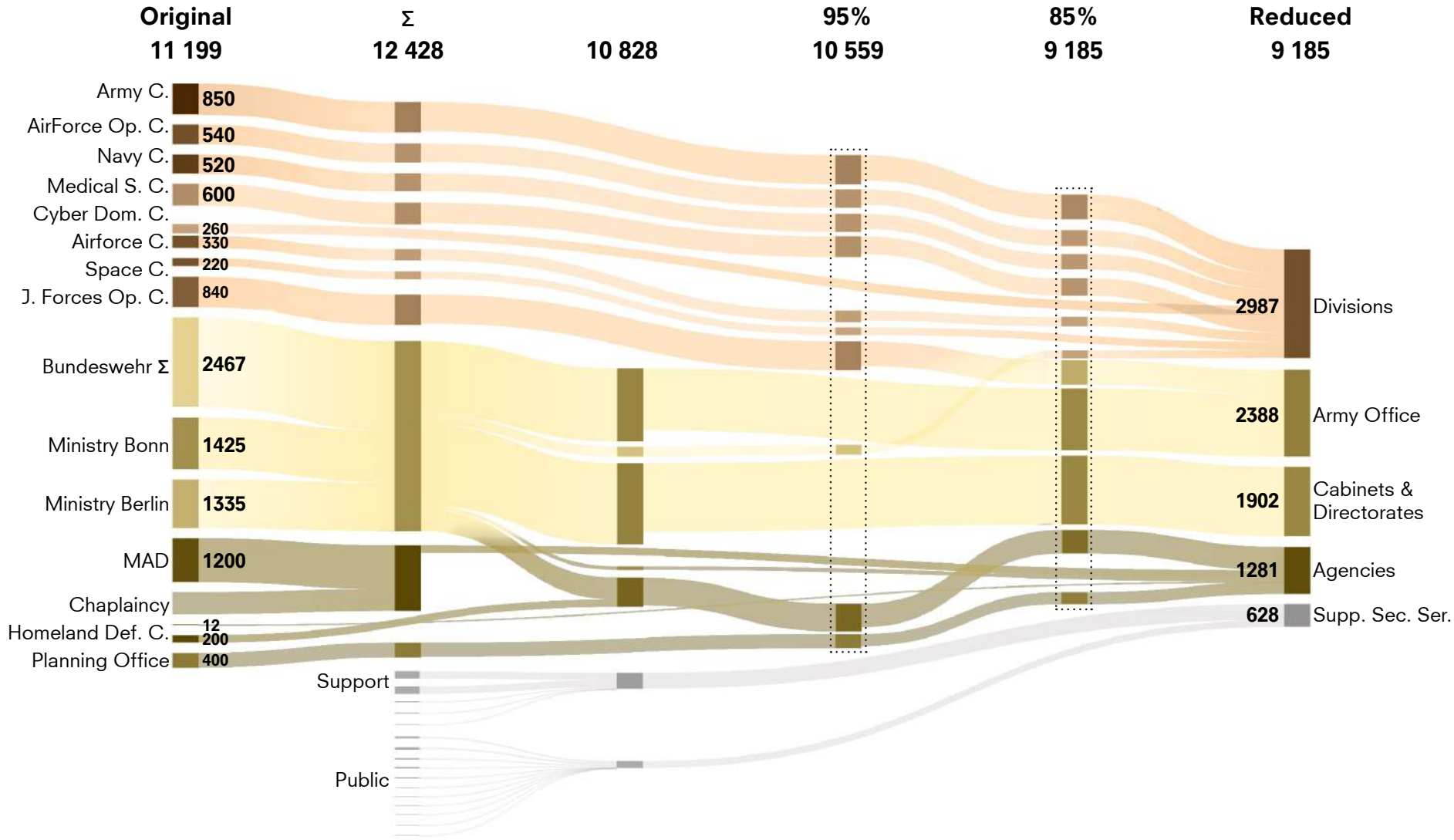
Interaction with  
**people**



Creation of  
**image/icon**

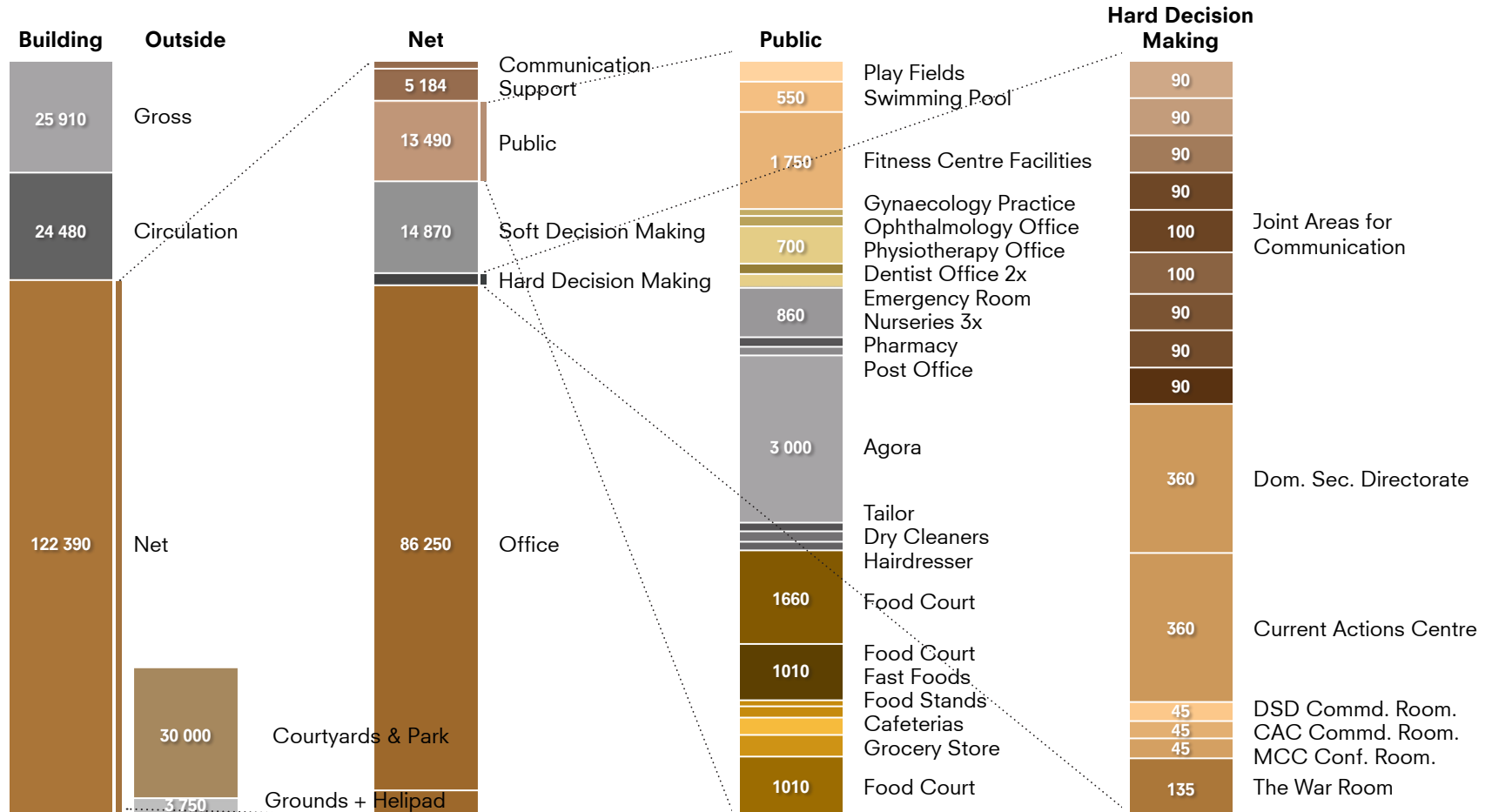
# Introduction

## CLIENT & USERS



# PROGRAMME & BENCHMARKING

**Total**  
**172 700 m<sup>2</sup>**





Introduction

# LOCATION & SITE





**Introduction**

**Research:**

**Client**

Programme

Site

**Concept**

**Design**

**Conclusion**

Research  
**STATE**  
Completing The Move



Federal Ministry  
of Defence

+



“ “So far, territorial management tasks have been spread across many areas...we will bundle them in Territorial Leadership Command of the Bundeswehr in Berlin.”  
-Christine Lambrecht  
Minister of Defence ”

“  
(the setup in Bonn)  
Cannot just stay as it is.  
-Thomas de Maiziere,  
Defence Minister ”

“  
It makes sense to bring the functions of government together, step by step, in the coming years.  
-Wolfgang Thitse,  
Parliamentarian ”

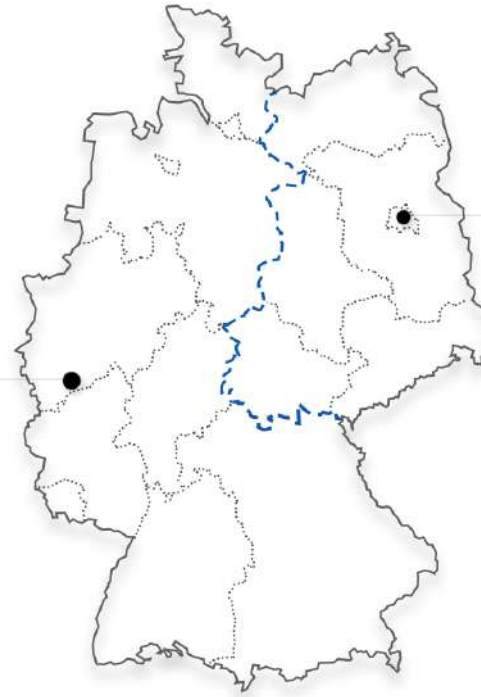


Research  
**STATE**  
Currently

**Hardthöhe, Bonn**



**Benderblock, Berlin**



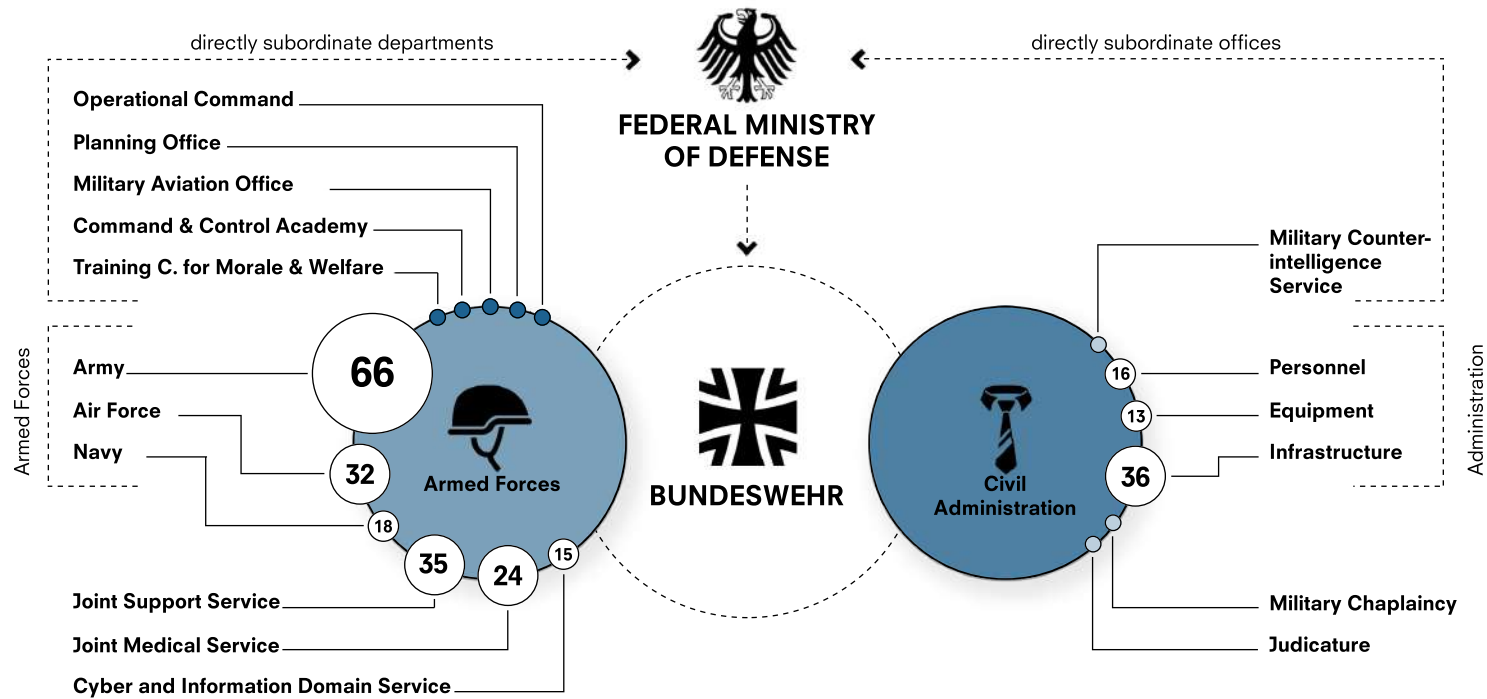
Research  
**PREVIOUS PROJECTS**

1956	1976	1992	1999	2001	2002	2003	2014	2017	2021
Hardthöhe	Chancellery (Bonn)	Bundeshaus Plenary Chamber (Bonn)	Reichstag Dome	Chancellery (Berlin)	Paul-Löbe- Haus	Marie- Elisabeth- Lüders-Haus	Federal Intelligence Service Headquarters	Ministry of Interior	Maritime Operations Centre
Brutalism			Postmodernism - Glass				Postmodernism - Mass		

# Research ORGANIZATION

## Determining Users

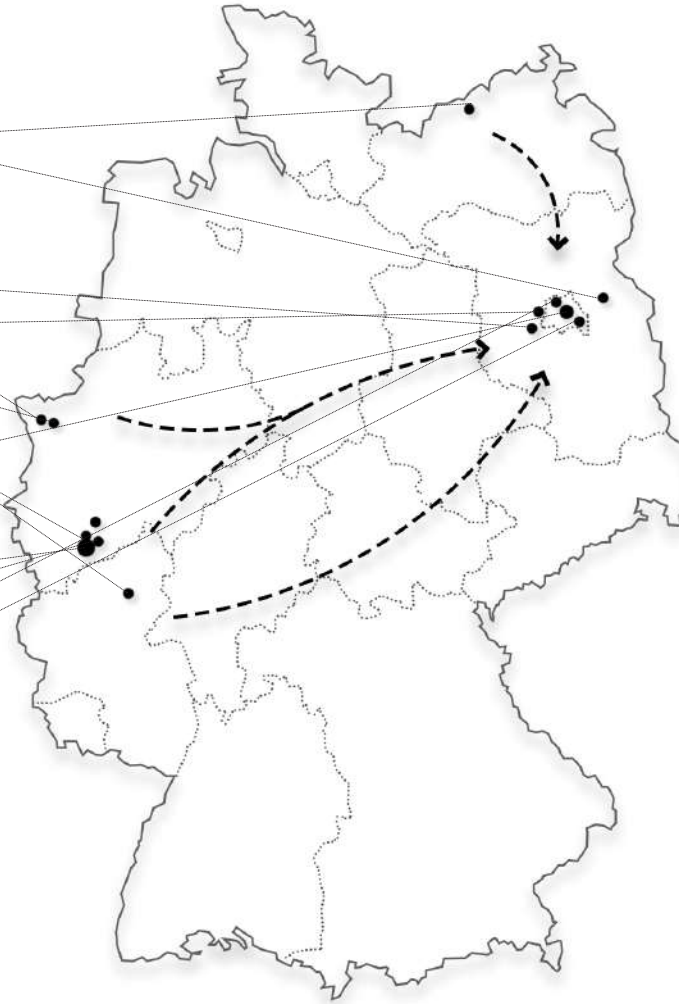
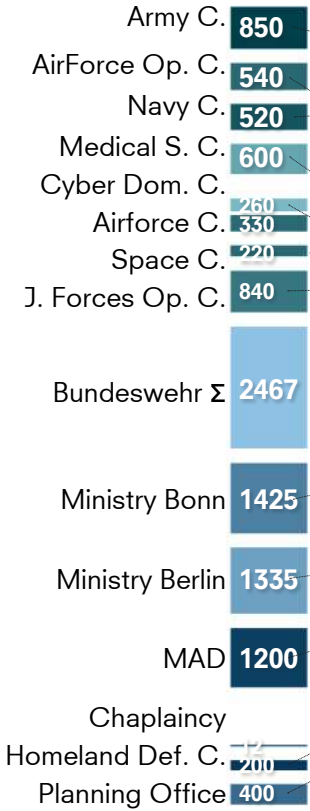
Numbers of Employsis in thousands:



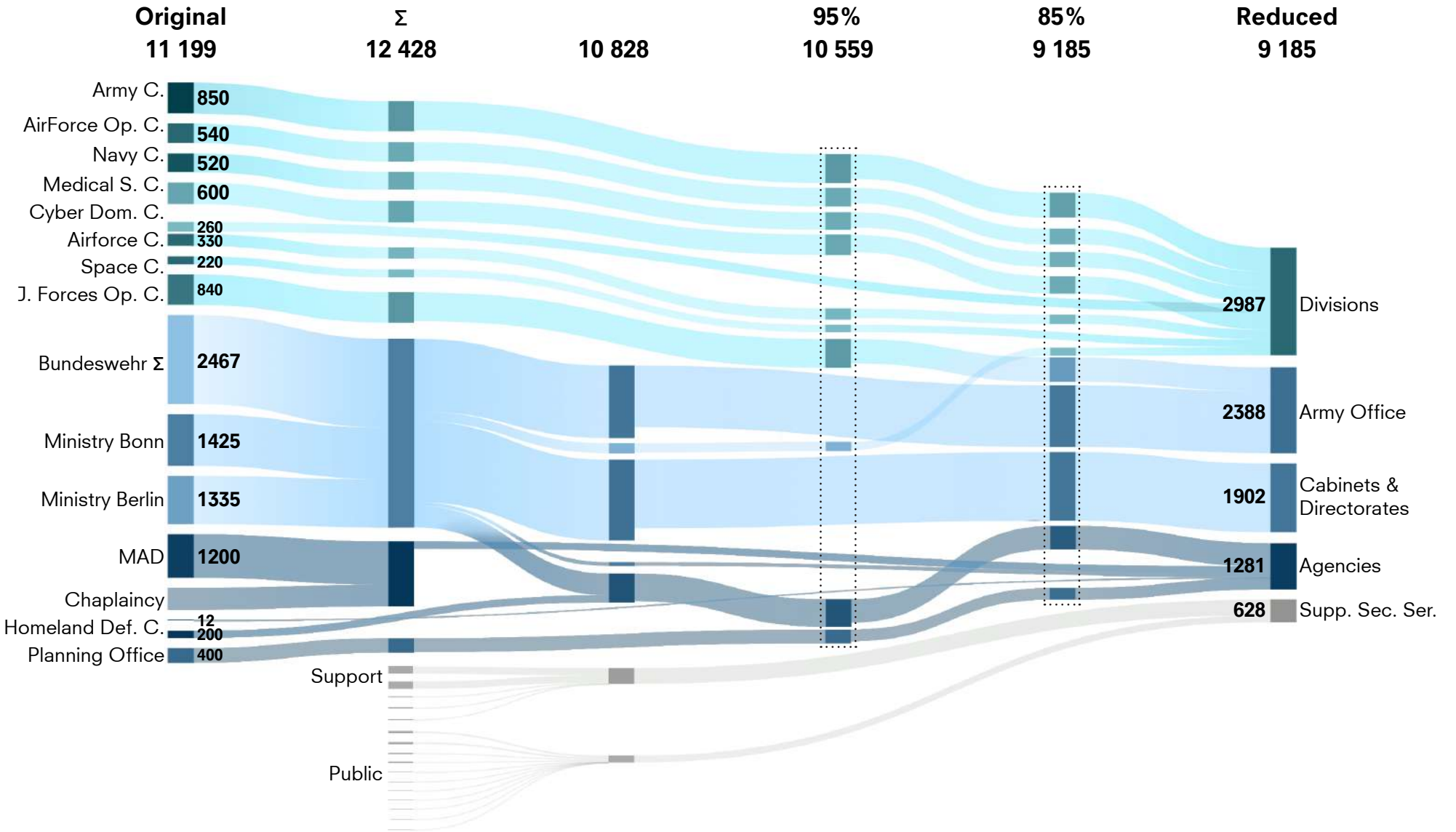


# Research STATE Determining Users

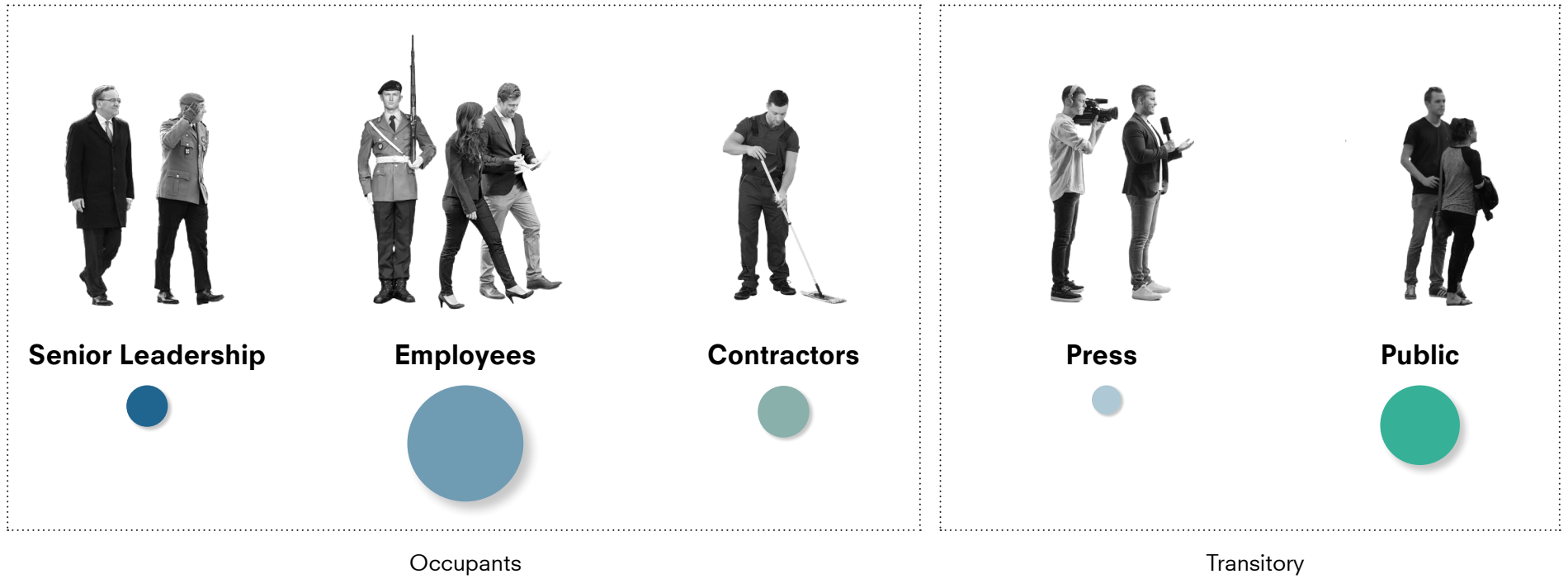
## Original



# Research STATE Determining Users



Research  
**USER GROUPS**



# Research SECURITY

## Security Checks

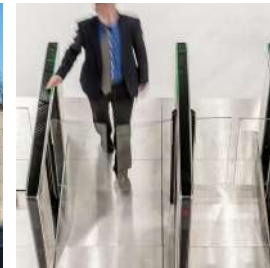
Ü3  
**Top Secret**  
Need-to-know



Ü2  
**Secret**  
Guided Tours by  
Reservation



Ü1  
**Confidential**  
Guided Tours by  
Reservation

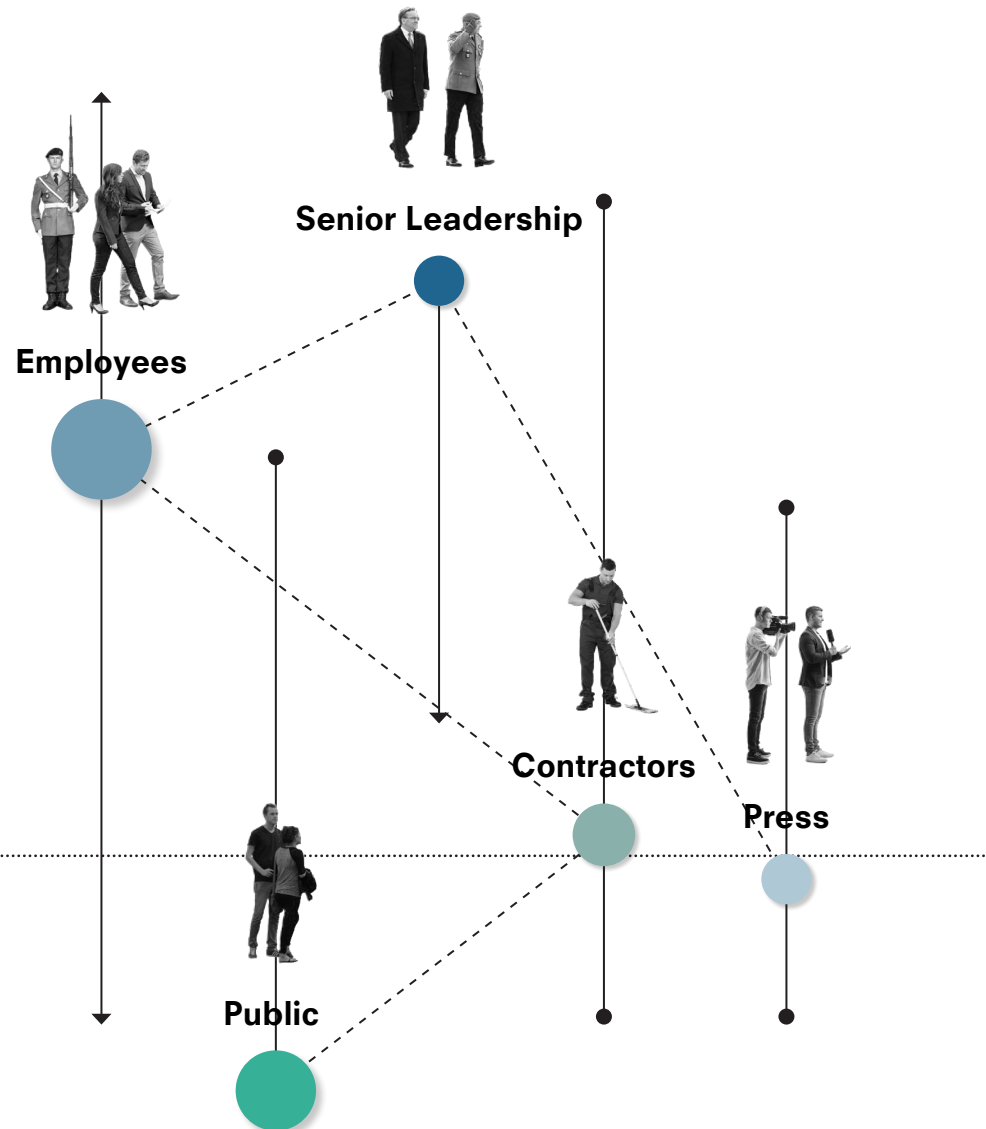
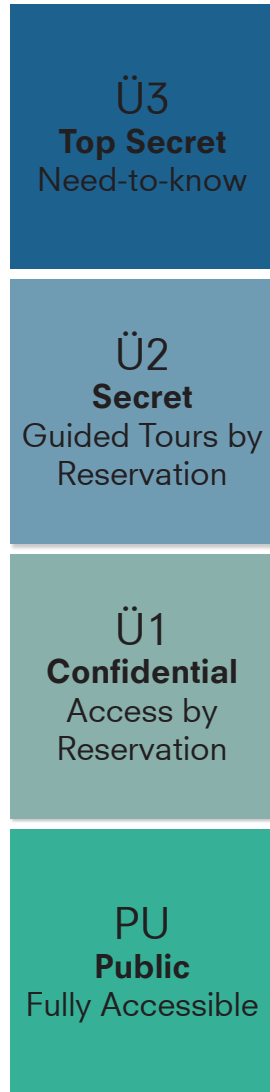


PU  
**Public**  
Fully Accessible



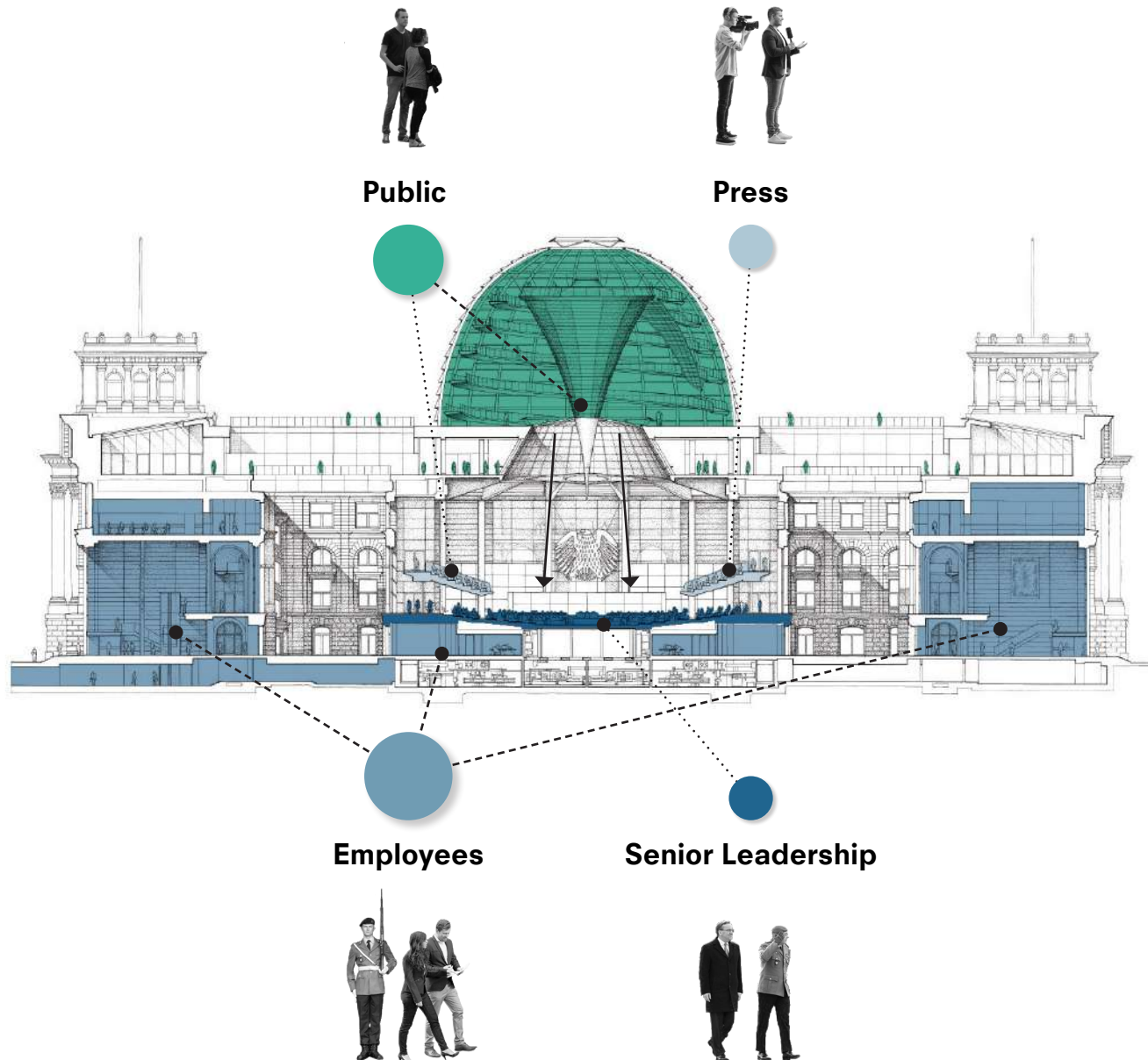
# Research USER FLOWS

Security Checks





Research  
**PUBLIC IMAGE**



**Introduction**

**Research:**

Client

**Programme**

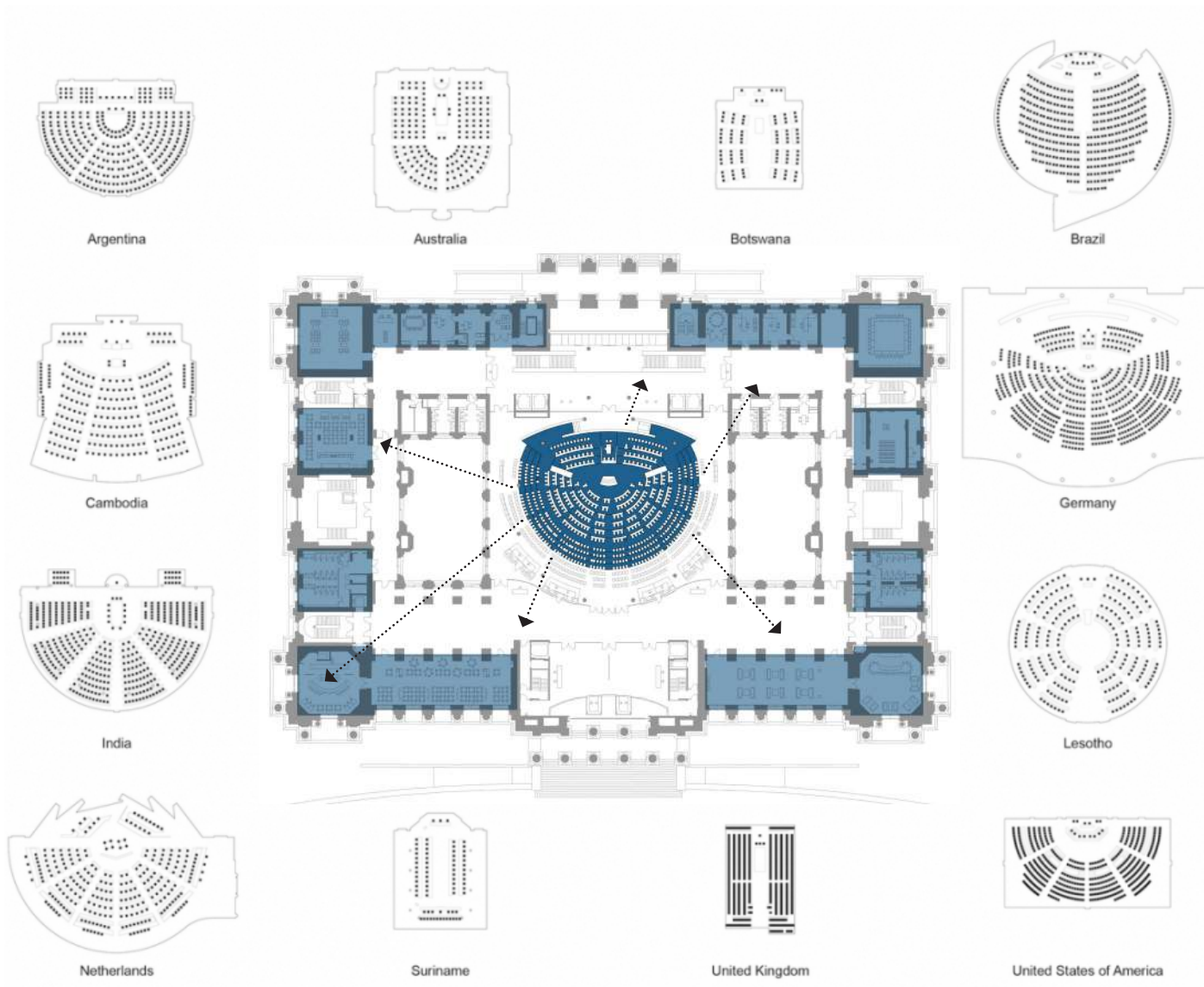
Site

**Concept**

**Design**

**Conclusion**

# Research PLENARY ROOM





# Research

# PRECEDENTS

## Ministries Around the World



**NATO**

2010-2016  
254 000 sqm  
3 800 p



**UNITED STATES**

1941-1943  
603 870 sqm  
23 000-30 000 p



**CHINA**

76 000\*sqm



**JAPAN**

1999-2007  
252 378\*sqm  
10 000 p



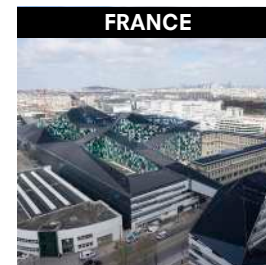
**INDIA**

(new under construction)  
7 000 p



**UNITED KINGDOM**

1959  
79 980\*sqm



**FRANCE**

2012-2015  
163 000 sqm  
9 300 p



**CANADA**

1960-1997  
207 000 sqm  
8 500 sqm



**RUSSIA**

1940-1952



**ITALY**

1928  
62 335 sqm



**BRAZIL**

1964\*  
20 000\*sqm



**SOUTH KOREA**

2003\*  
276 000 sqm  
4 000 p



**AUSTRALIA**

1960-1990  
87 500\*sqm



**SPAIN**

1950s\*  
44 500\*sqm



**NETHERLANDS**

1850s\*  
30 000\*sqm



**TÜRKIYE**

2021-  
900 000 sqm  
15 000 p



**TAIWAN**

2014  
166 500\*sqm  
3 000 p



**POLAND**

1935 to 1945\*  
40 100\*sqm



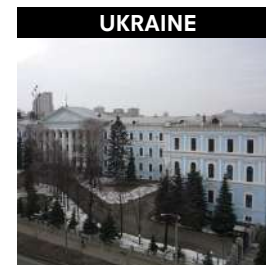
**ISRAEL**

2003-2005  
41 000\*sqm



**EGYPT**

2016-  
4 700 000 sqm



**UKRAINE**

1847  
53 750\*sqm

Research  
**PRECEDENTS**  
Characteristics



Symmetrical



Formal



Stacking



Inner Courtyards



Mid Rise



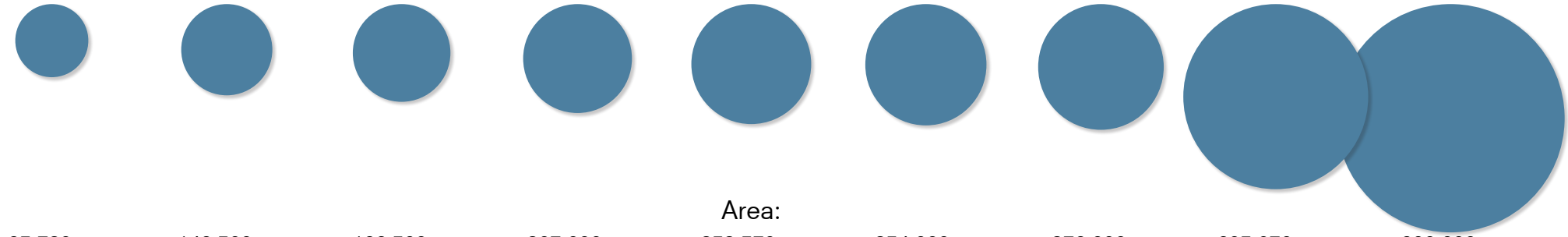
Perimeter Security



# Research PRECEDENTS Area

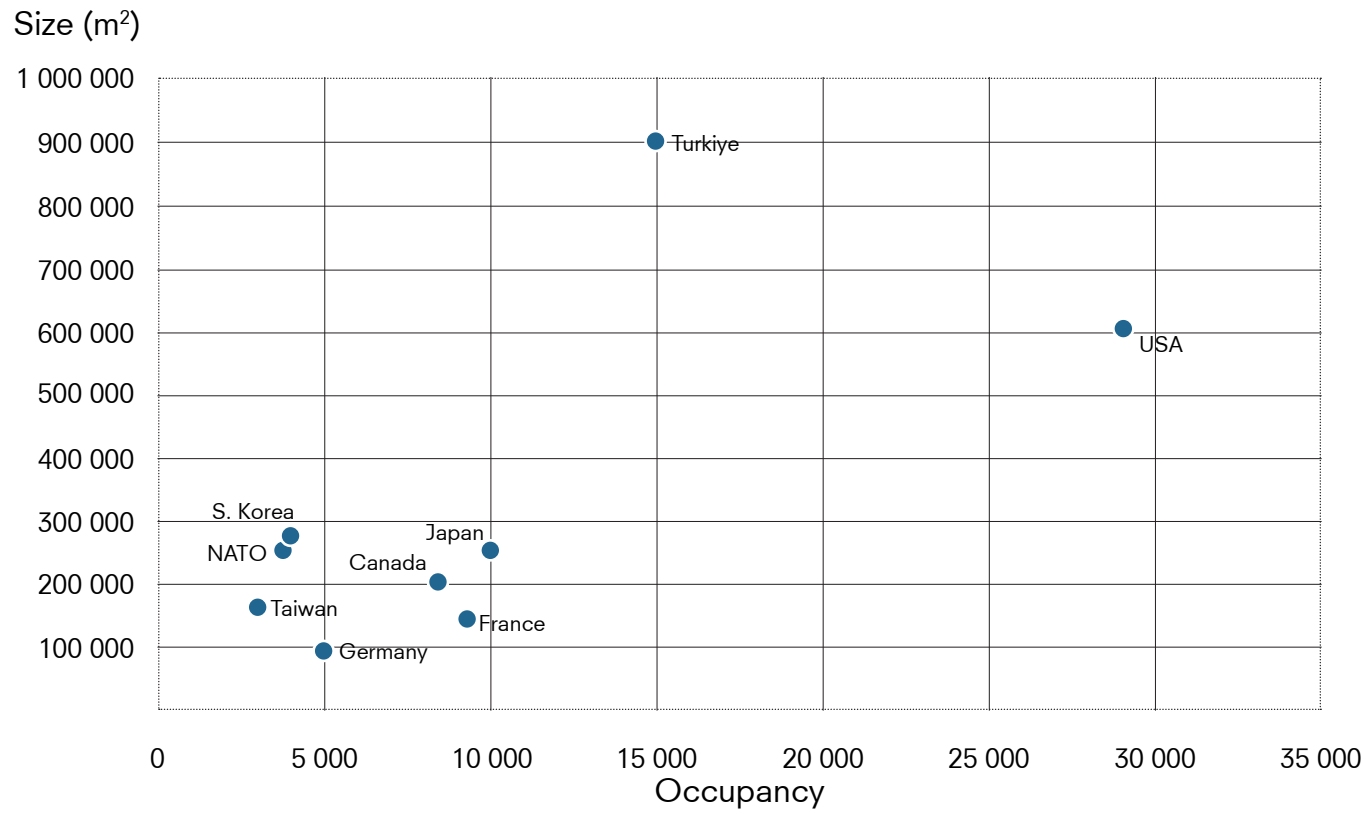
Occupants:

5 000      9 300      3 000      8 500      10 000      3 800      4 000      23 000      15 000

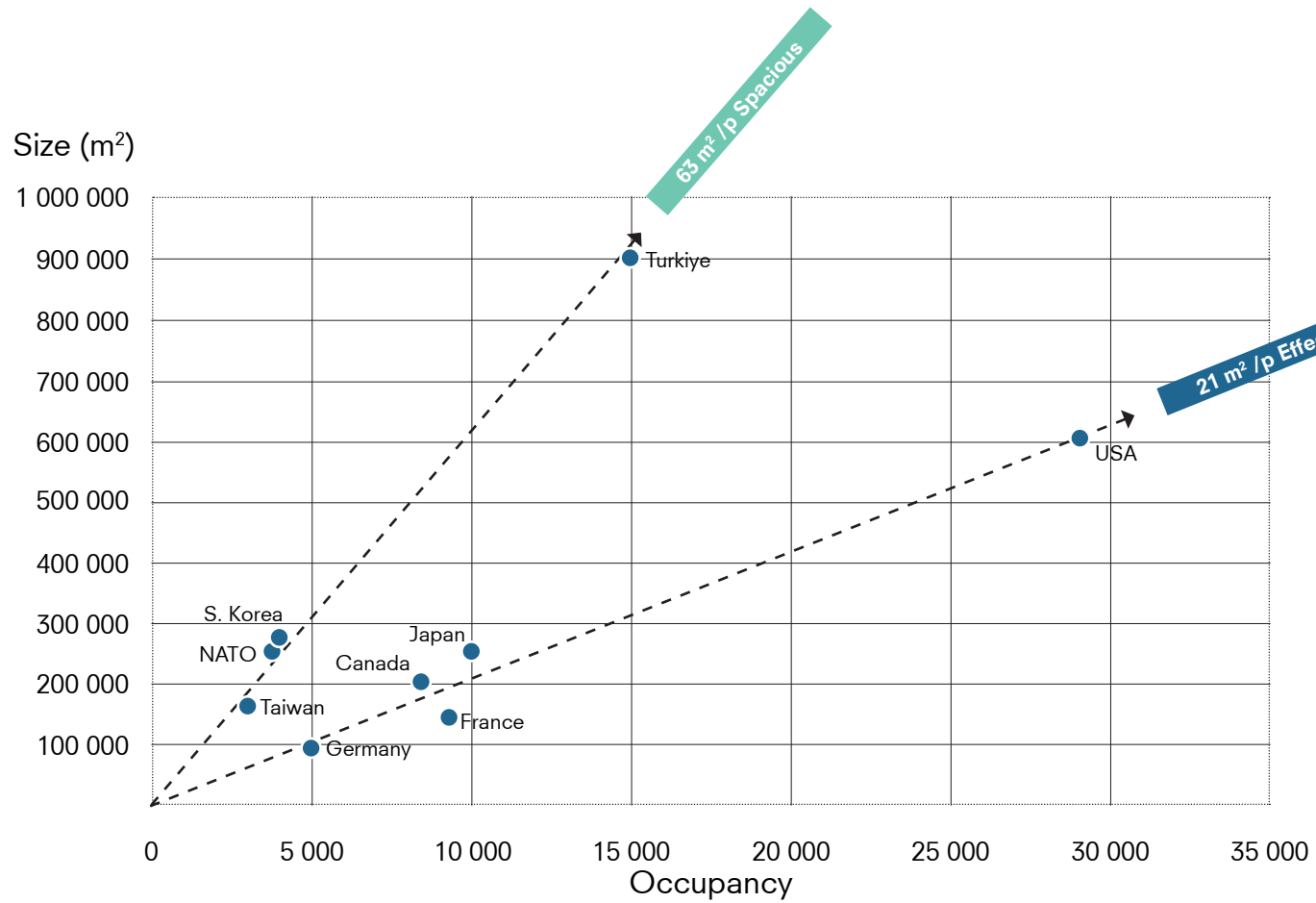


93 720 m<sup>2</sup>      146 500 m<sup>2</sup>      166 500 m<sup>2</sup>      207 000 m<sup>2</sup>      252 378 m<sup>2</sup>      254 000 m<sup>2</sup>      276 000 m<sup>2</sup>      603 870 m<sup>2</sup>      900 000 m<sup>2</sup>

Research  
**PRECEDENTS**  
Area



# Research PRECEDENTS Area



# Research PRECEDENTS Analysis



**NATO**

2010-2016  
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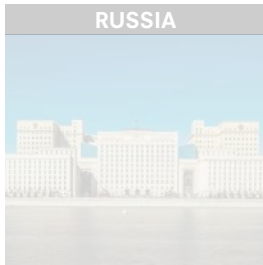
**FRANCE**

2012-2015  
163 000 sqm  
9 300 p



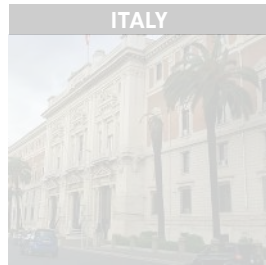
**CANADA**

1960-1997  
207 000 sqm  
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1940-1952



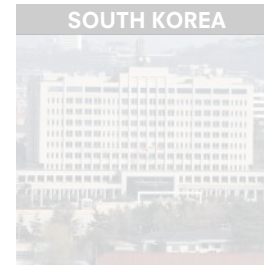
**ITALY**

1928  
62 335 sqm



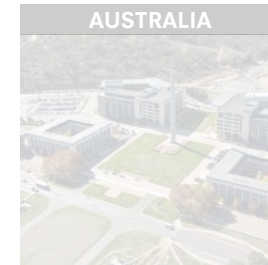
**BRAZIL**

1964\*  
20 000\*sqm



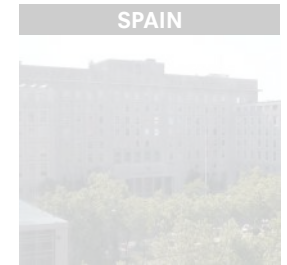
**SOUTH KOREA**

2003\*  
276 000 sqm  
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**AUSTRALIA**

1960-1990  
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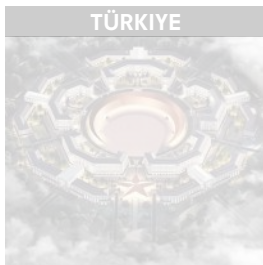
**SPAIN**

1950s\*  
44 500\*sqm



**NETHERLANDS**

1850s\*  
30 000\*sqm



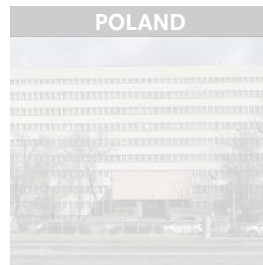
**TÜRKIYE**

2021-  
900 000 sqm  
15 000 p



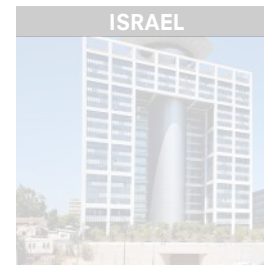
**TAIWAN**

2014  
166 500\*sqm  
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**POLAND**

1935 to 1945\*  
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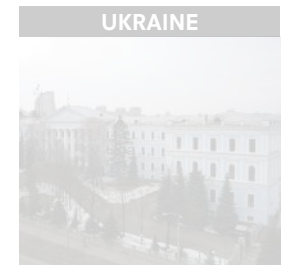
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2003-2005  
41 000\*sqm



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Research

# BENCHMARK AND METHOD



Size and  
**Occupancy**



Use and  
**Programme**



Flows and  
**Security**



Image and  
**Impact**



Research

# THE PENTAGON

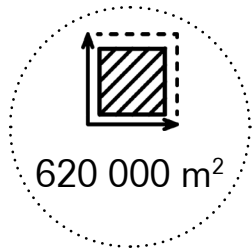
Size and Occupancy



Research

# THE PENTAGON

## Size and Occupancy



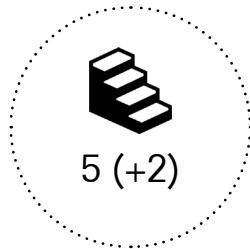
gross area



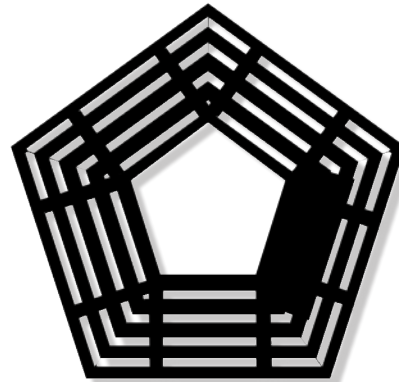
office area



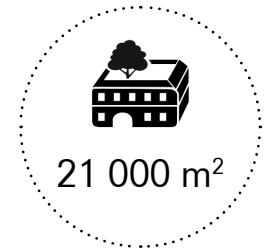
parking



floors



footprint



courtyard



employees



personnel

# THE PENTAGON

## Use and Programme

### Underground Complex

- Current Actions Center
- Emergency Conference Room
- Operation Deputy's Conf. Rm.
- Joint Chiefs of Staff Conf. Rm.

### Main Programme

- Offices
- Meeting Rooms
- Press Rooms
- Memorials & Exhibits
- Central Courtyard

### Support

- Emergency Room
- Pharmacy
- Retail
- Distributed Food Stands
- Food Buffet
- Adjacent Swimming Pool
- Helipad
- Memorial
- Metro Station
- Bus Port

Research  
**THE PENTAGON**  
Urban Impact



Research  
**THE PENTAGON**  
Urban Impact

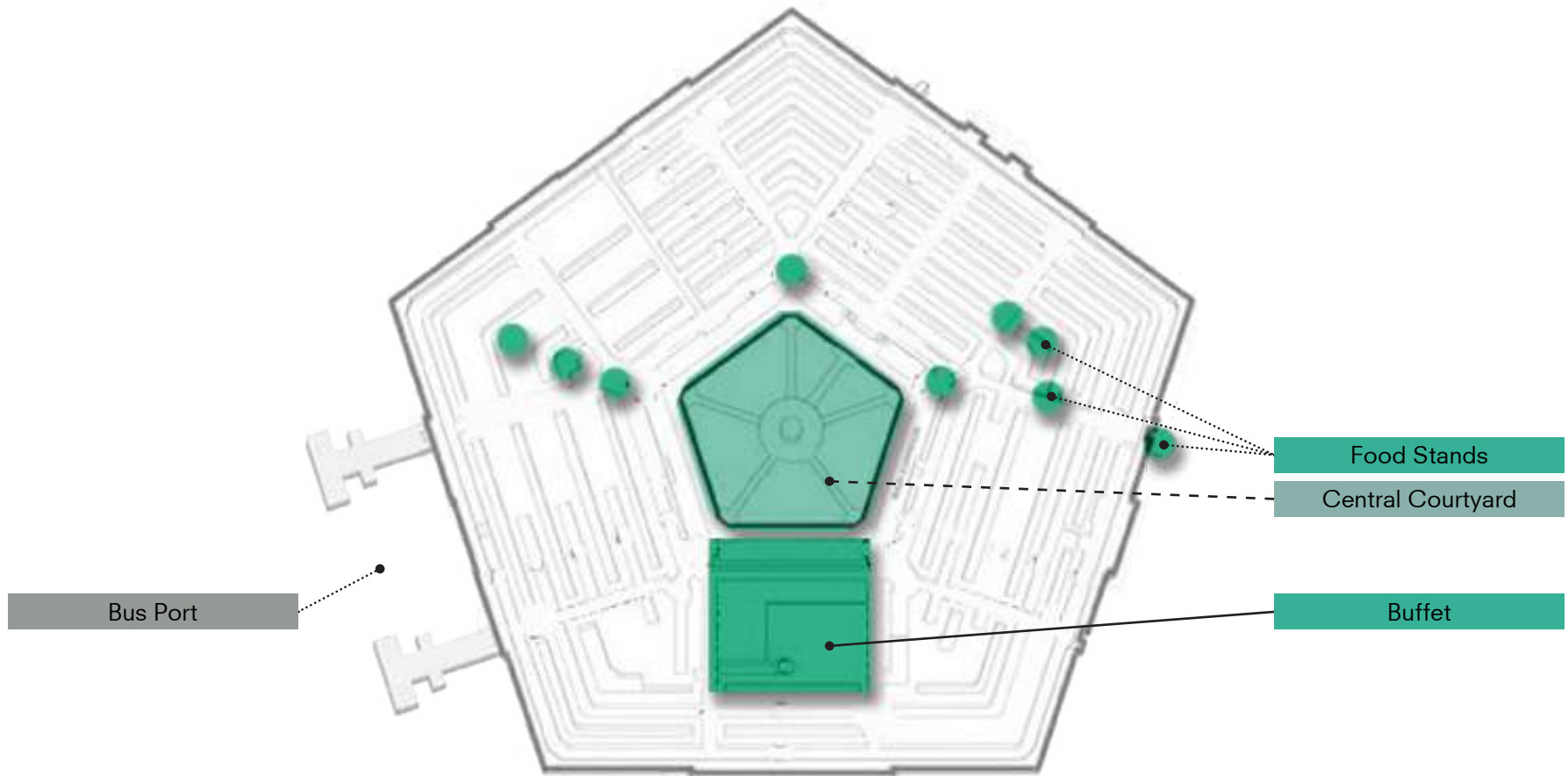




Research

# THE PENTAGON

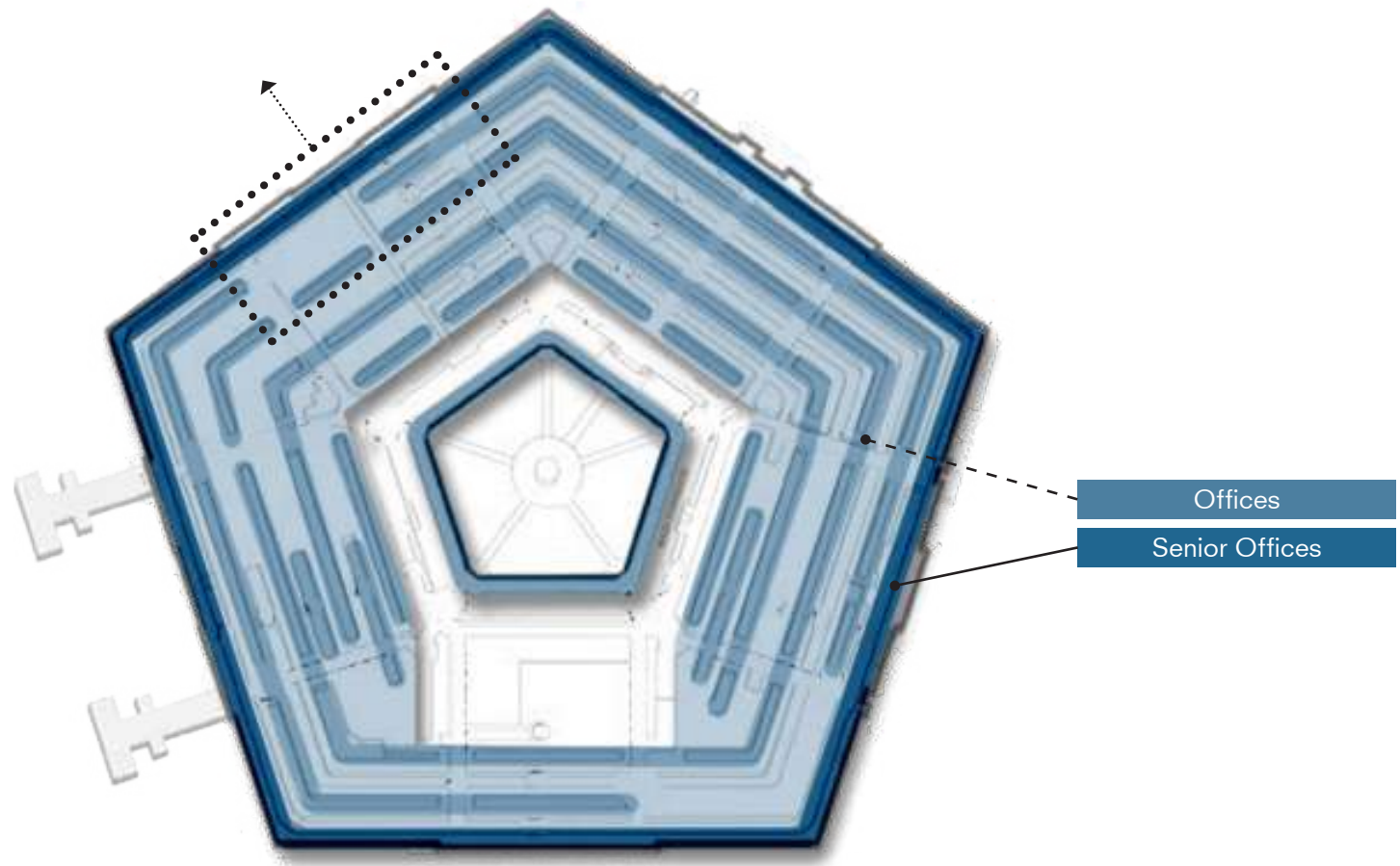
Use and Programme



Research

# THE PENTAGON

Use and Programme

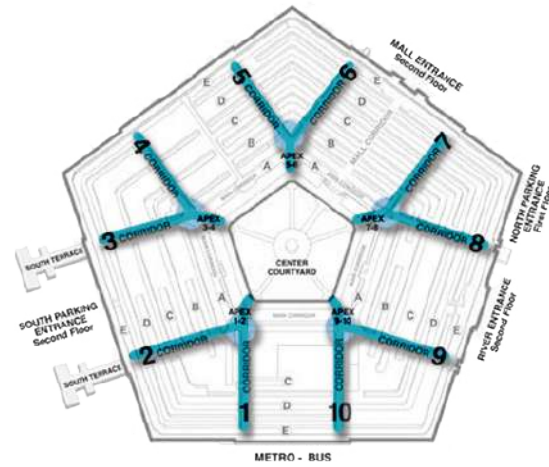
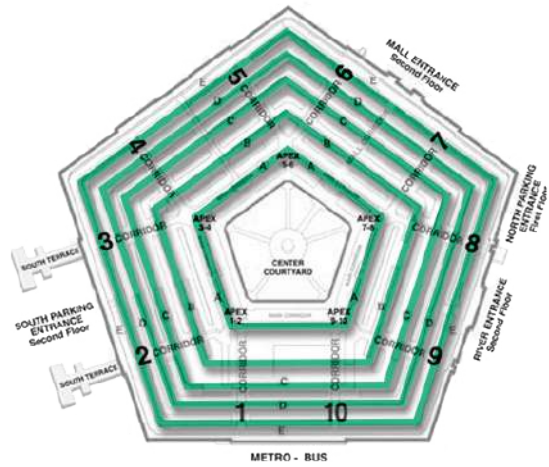




Research

# THE PENTAGON

## Flows and Security



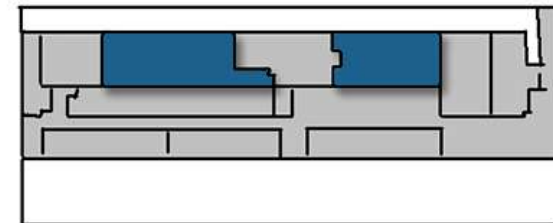
Research

# THE PENTAGON

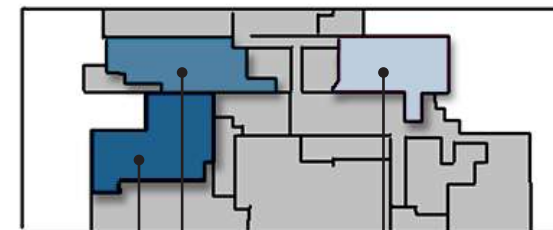
## Flows and Security

### National Military Command

- Labyrinth of rooms that consolidate intelligence and convey it to commanders in real-time
- Wartime tactical command and control capabilities
- 3 armed checkpoints, top secret clearance, and need to know



UPPER LEVEL - THIRD FLOOR



LOWER LEVEL - SECOND FLOOR

Joint Reconnaissance Center  
Current Actions Center  
Emergency Conference Room



Research

# THE PENTAGON

## Flows and Security

**Current Actions Center**



- Command and Control of ongoing military Activities and monitoring of worldwide events

**Emergency Conference Room**



- Principal and aides meeting for high-level discussions and briefings
- Critical Meetings during an ongoing crisis

**Operation Deputy's Conf. Rm.**



- Briefing and operations rooms for each "department"

**Joint Chiefs of Staff Conf. Rm.**

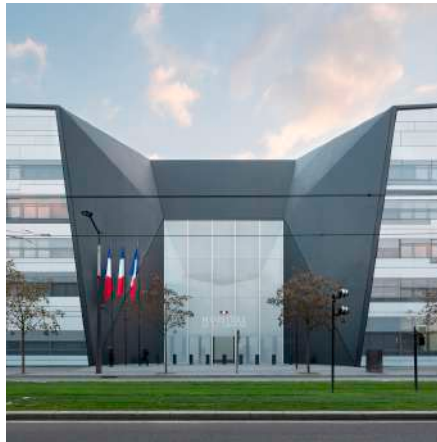


- Classified discussions among top leadership including wartime decisions
- Off the record and advisory only

Research

# HEXAGONE BALARD

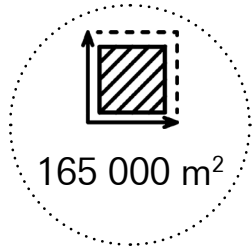
## Size and Occupancy



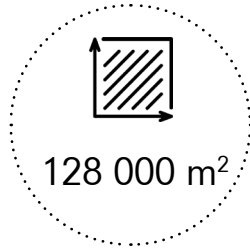
Research

# HEXAGONE BALARD

## Size and Occupancy



gross area



net area



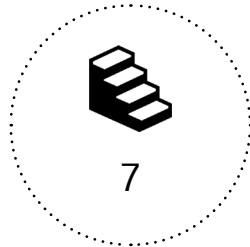
footprint



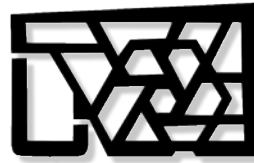
gardens



offices



floors



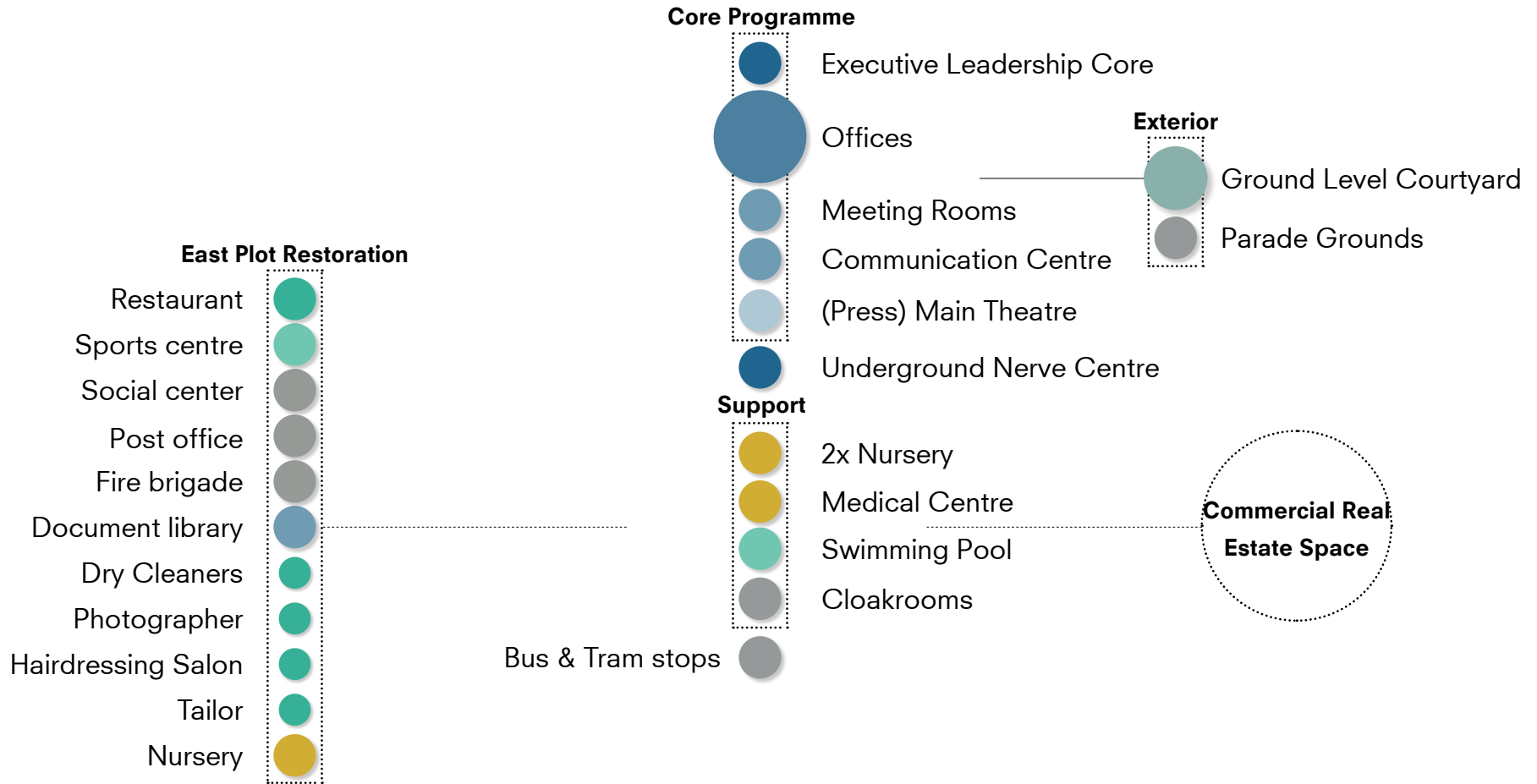
employees



personnel

# HEXAGONE BALARD

## Use and Programme

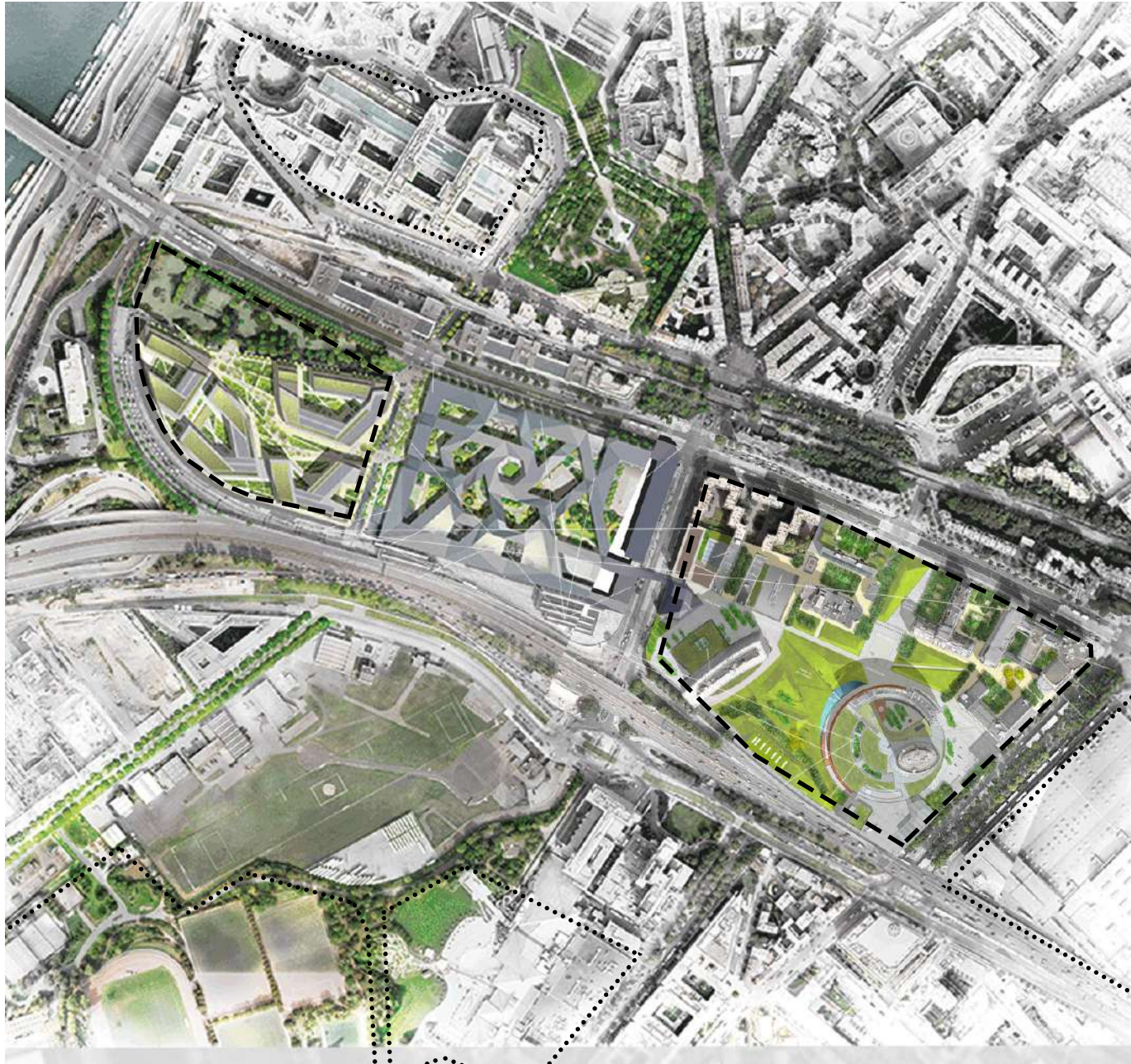




Research

# HEXAGONE BALARD

Urban Impact





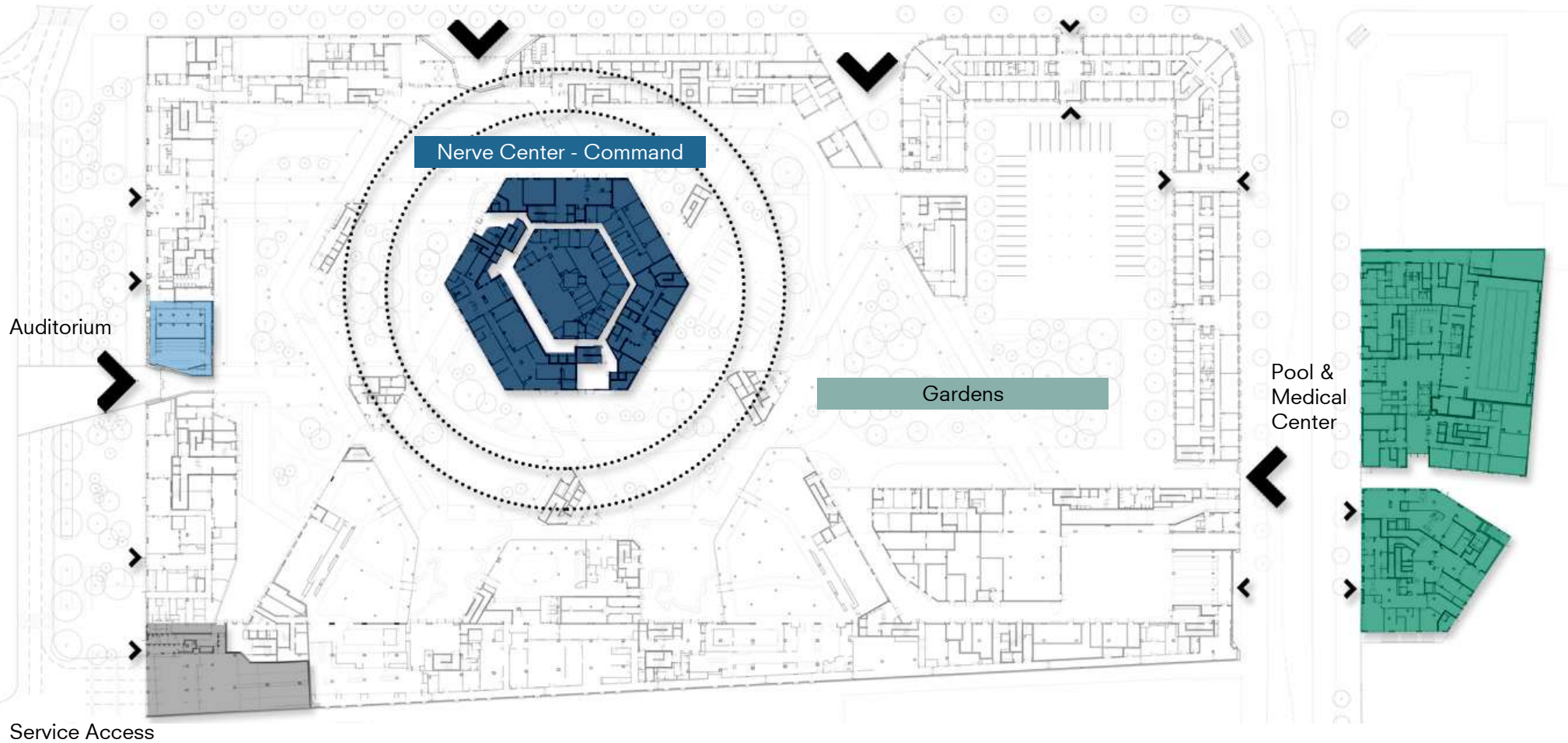
Research  
**HEXAGONE BALARD**  
Urban Impact



Research

# HEXAGONE BALARD

## Use and Programme

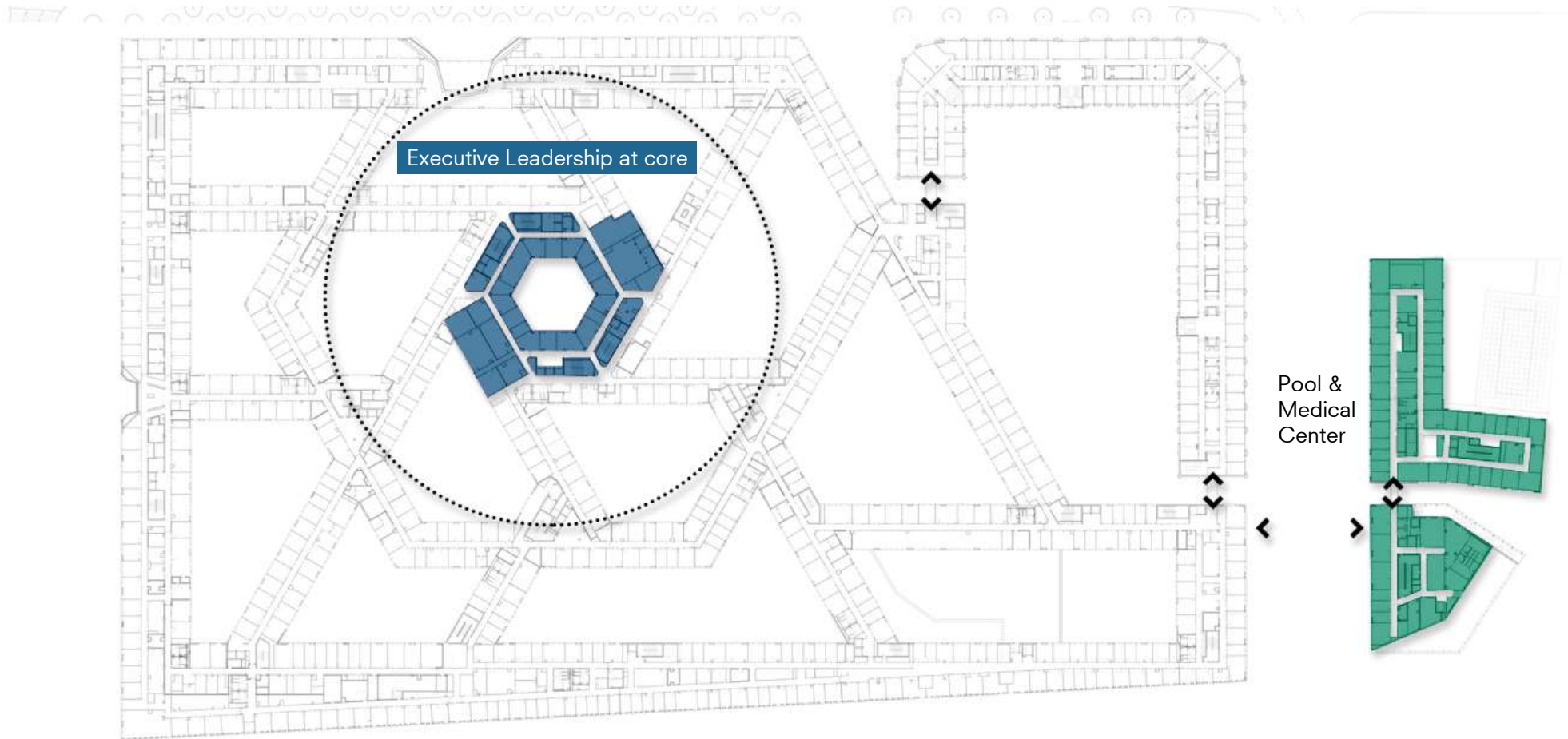


Research

# HEXAGONE BALARD

## Use and Programme

Executive Leadership at core

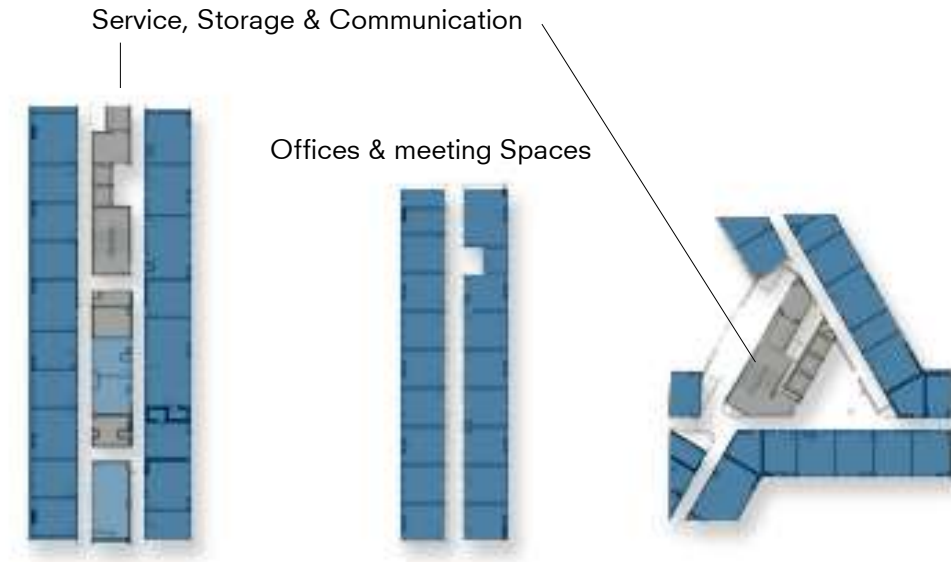


Research

# HEXAGONE BALARD

## Use and Programme

### Generic Programme



### Specific Programme

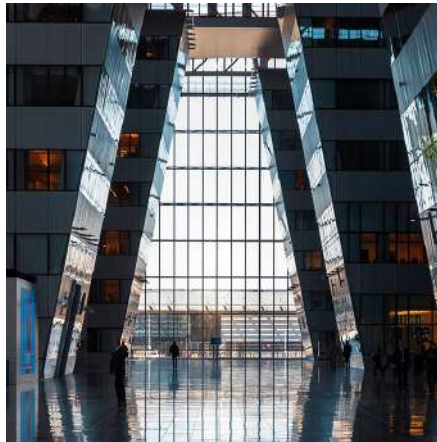




Research

# NATO HEADQUARTERS

## Size and Occupancy

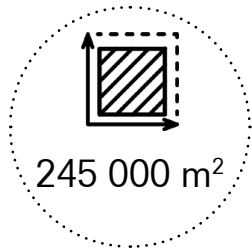




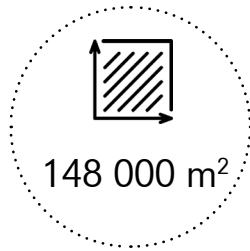
Research

# NATO HEADQUARTERS

## Size and Occupancy



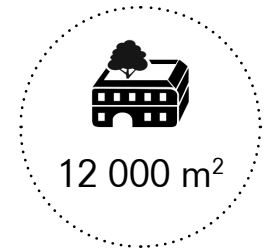
gross area



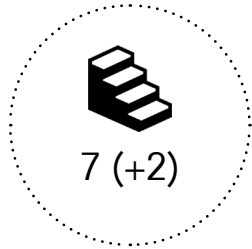
net area



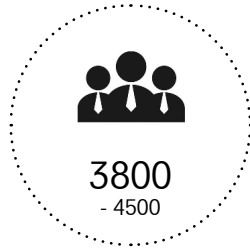
footprint



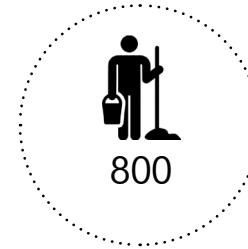
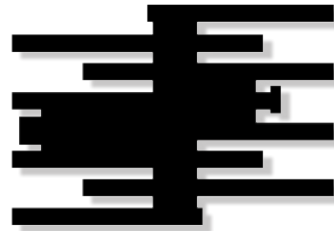
courtyards



floors



employees



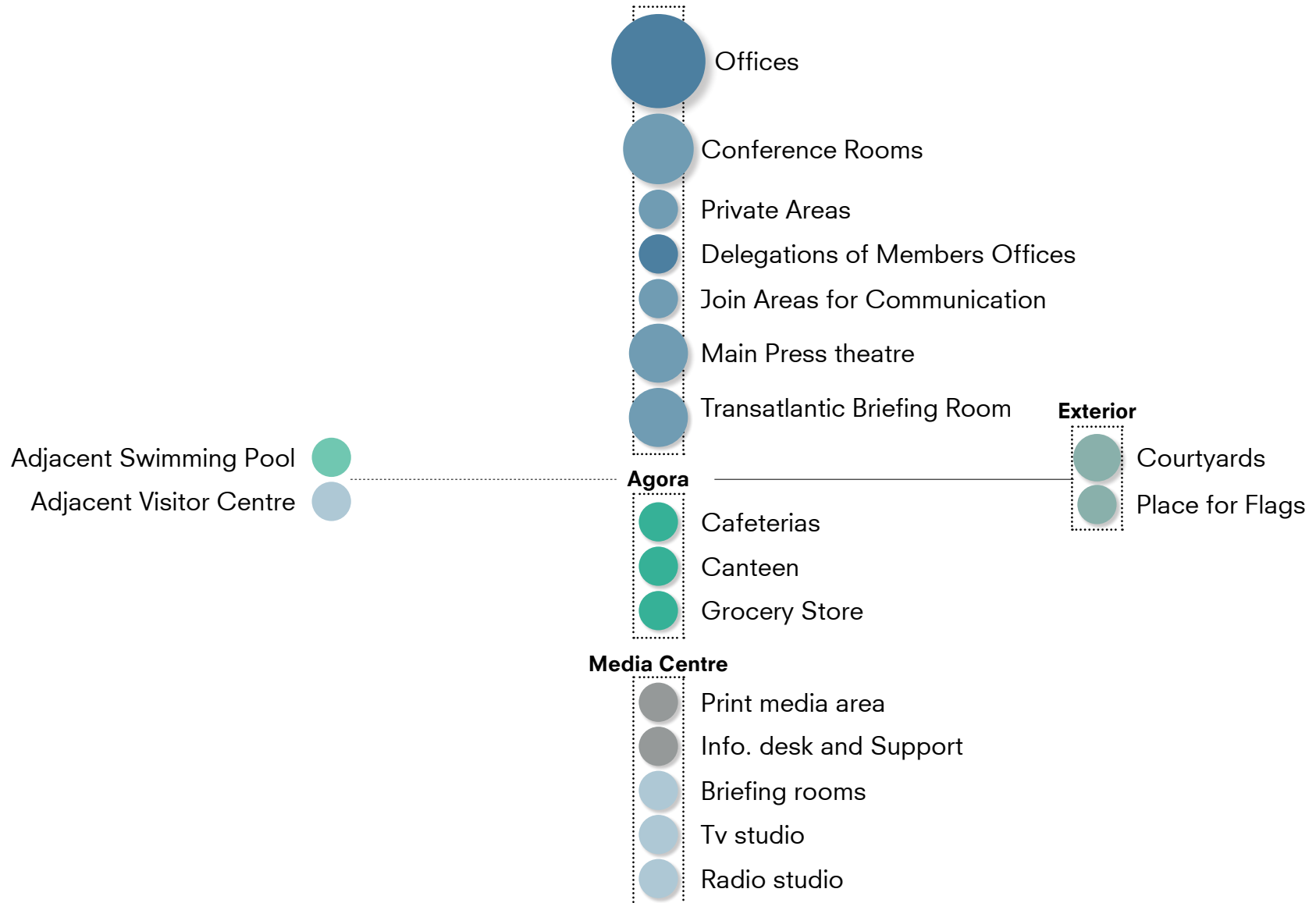
personnel



visitors

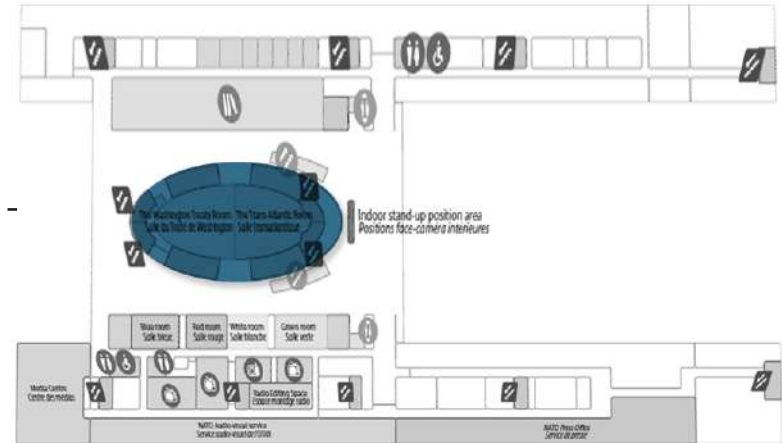
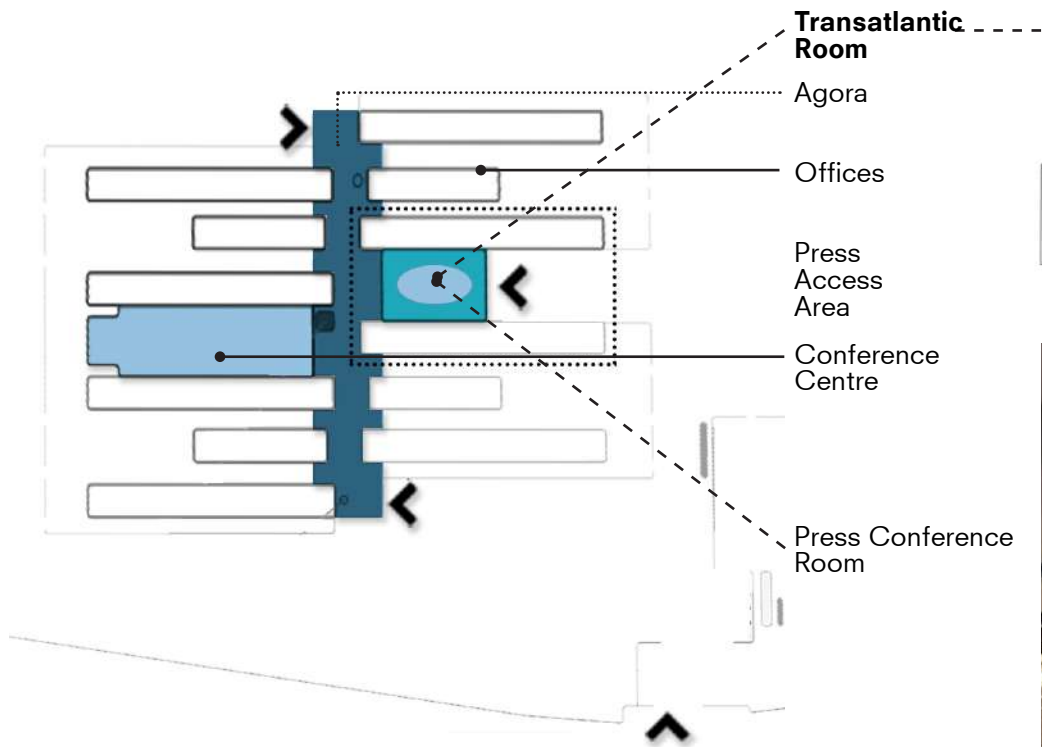
# NATO HEADQUARTERS

## Use and Programme



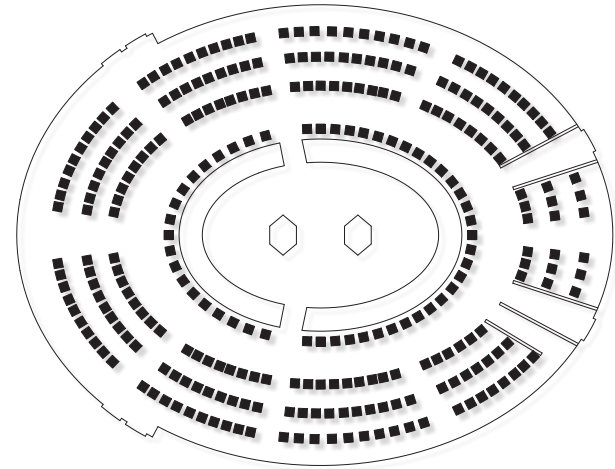
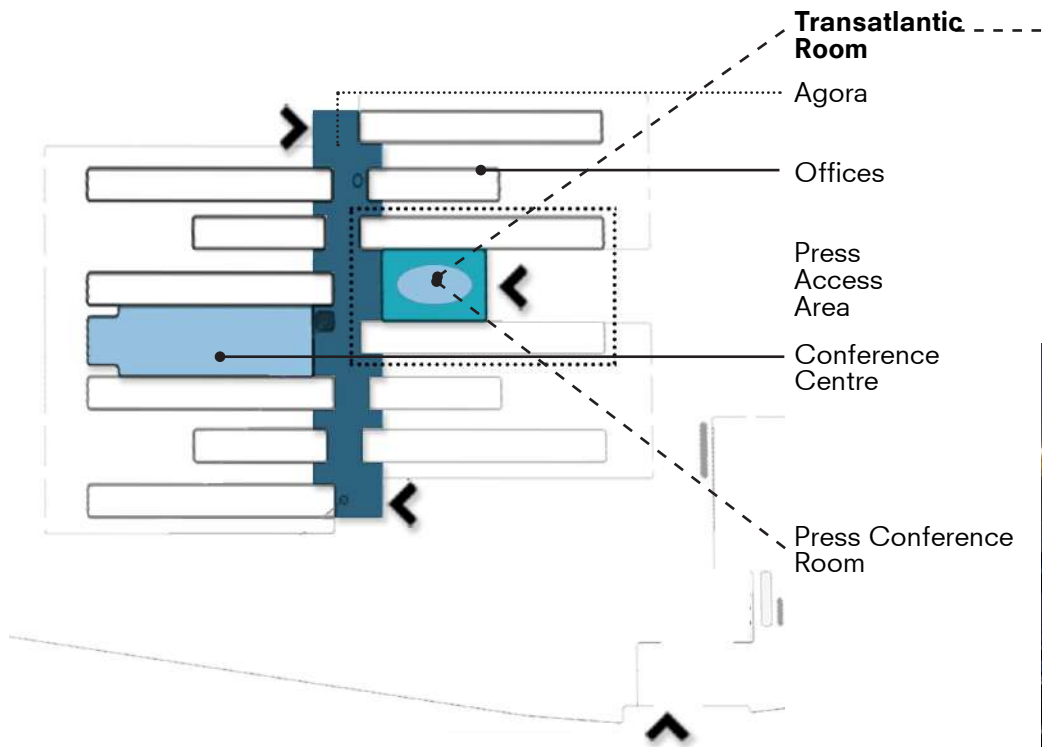
# NATO HEADQUARTERS

## Use and Programme



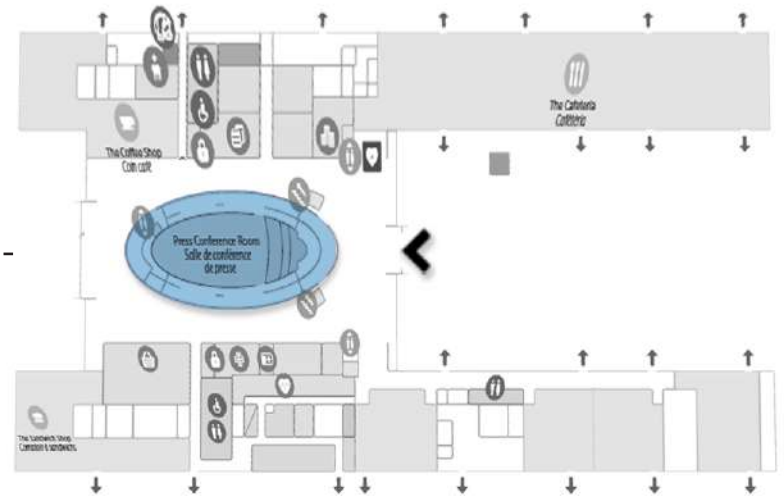
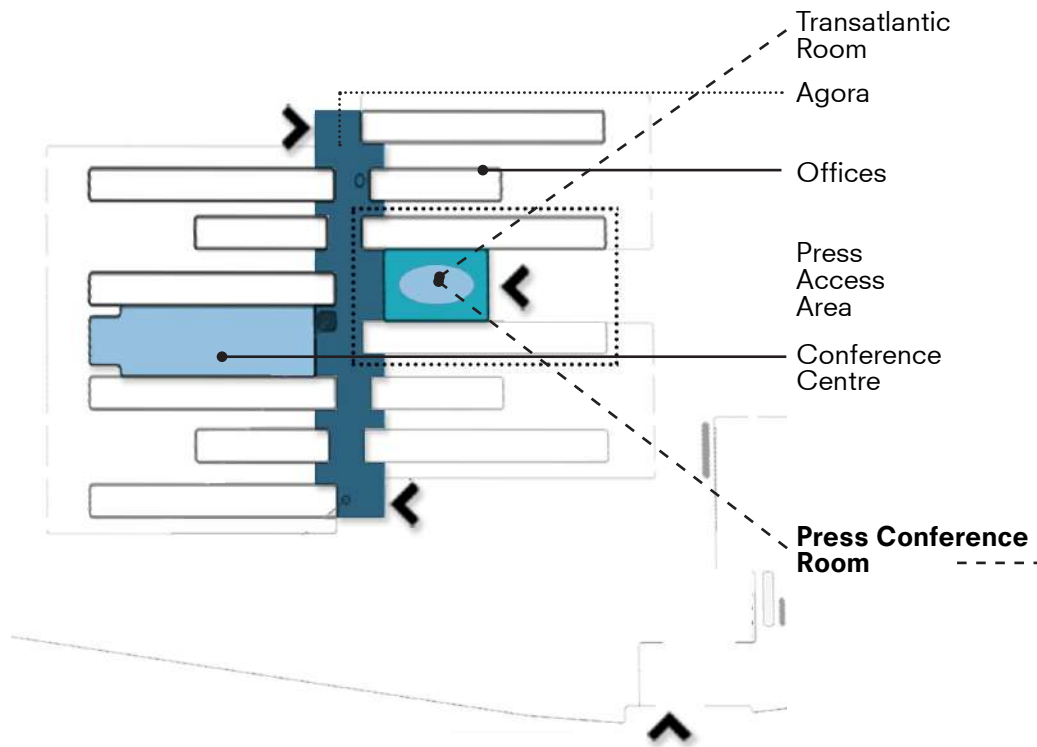
# NATO HEADQUARTERS

## Use and Programme



# NATO HEADQUARTERS

## Use and Programme

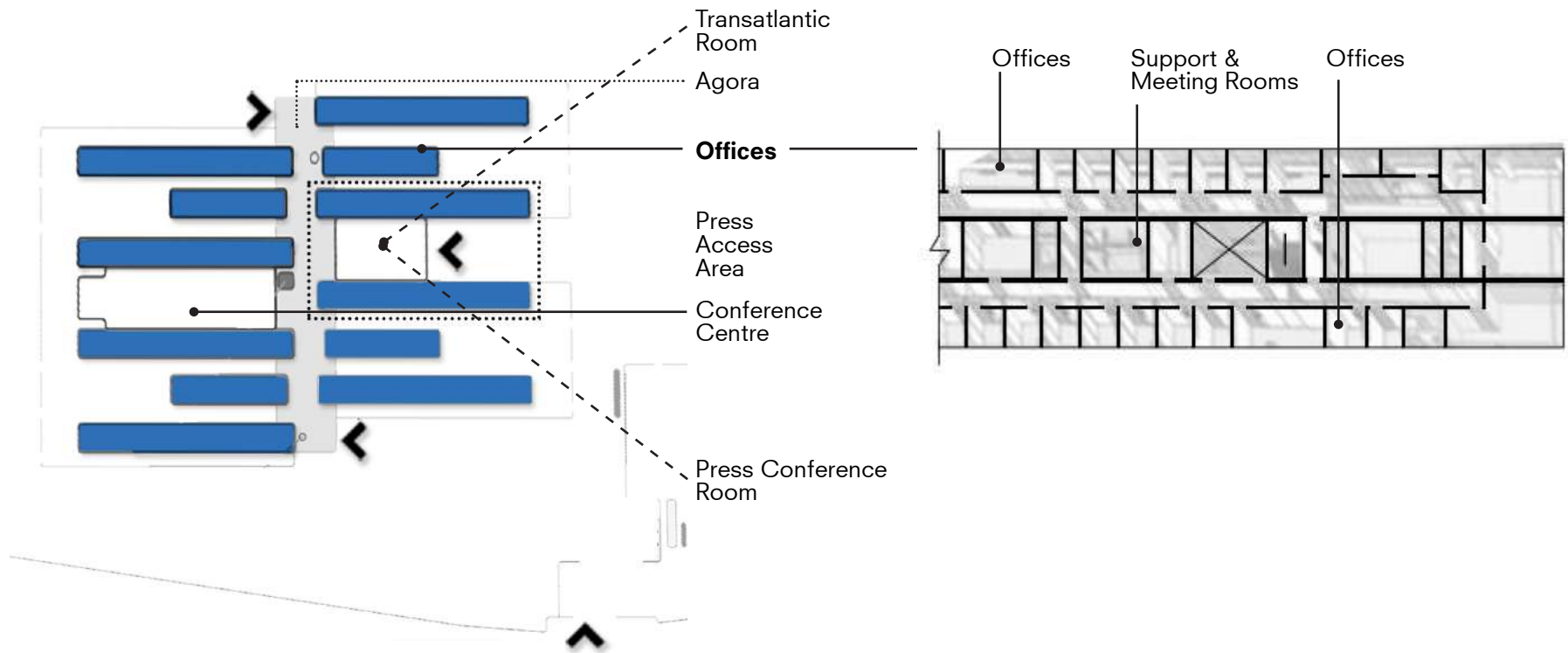




Research

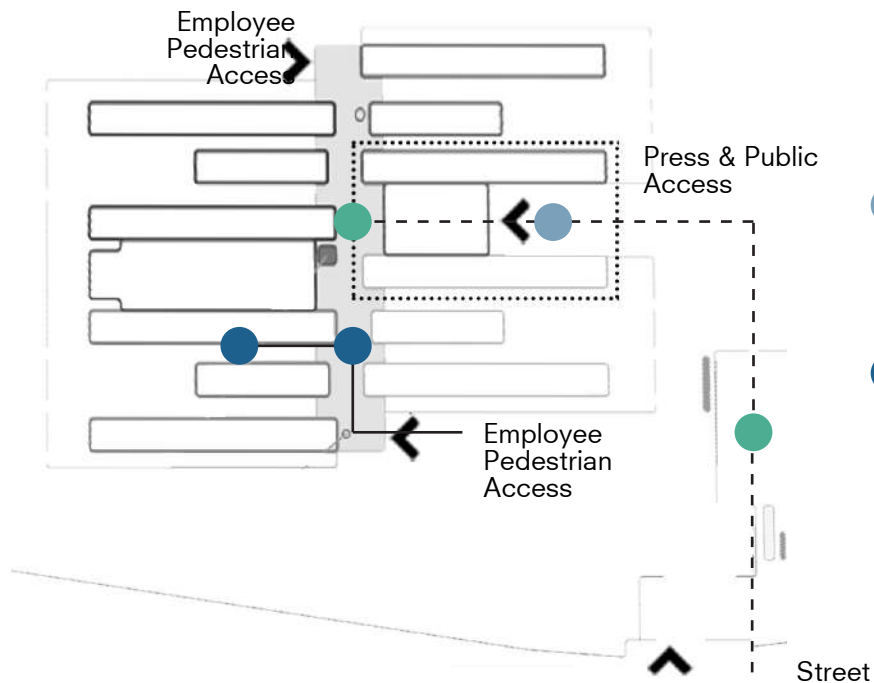
# NATO HEADQUARTERS

## Use and Programme



# NATO HEADQUARTERS

## Flows and Security



### Public

- Guided tours for general public by reservation, >28 days in advance
- Limited capacity, Outreach is part of NATO key mission
- No luggage, no phones, photos

### Press

- Access to the Press Area (presumably with an issued pass)

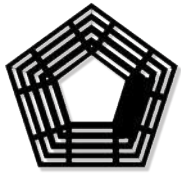
### Delegation Members

- Delegates enter on a pass basis (check at pedestrian access), 1 week advance request
- No transmission devices in conference rooms

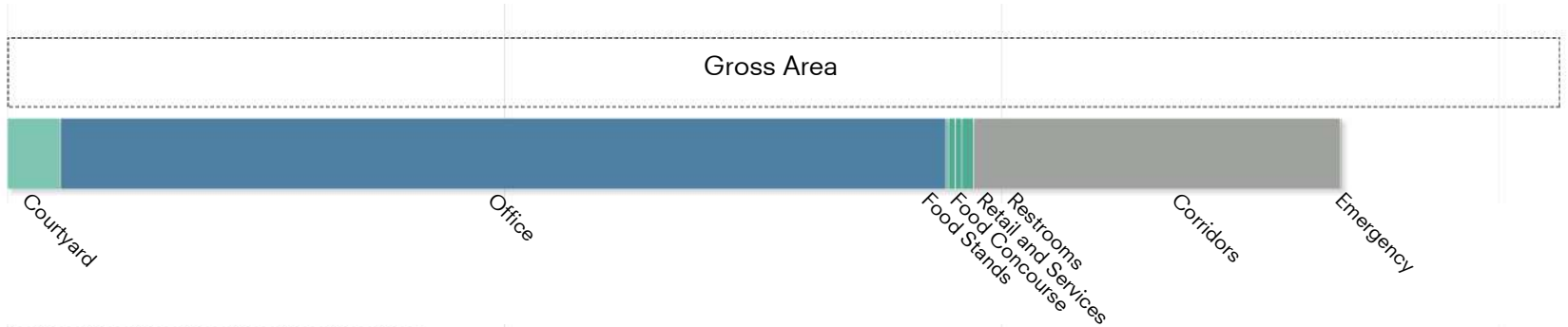
# Research

## CAPACITY

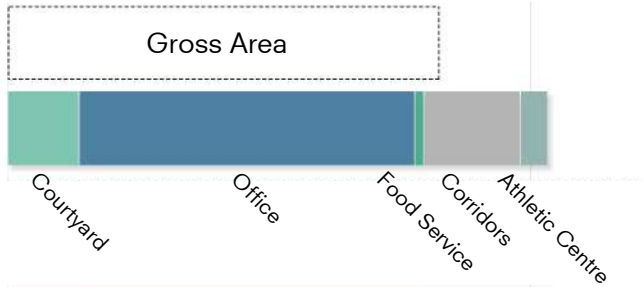
### Size and Programme



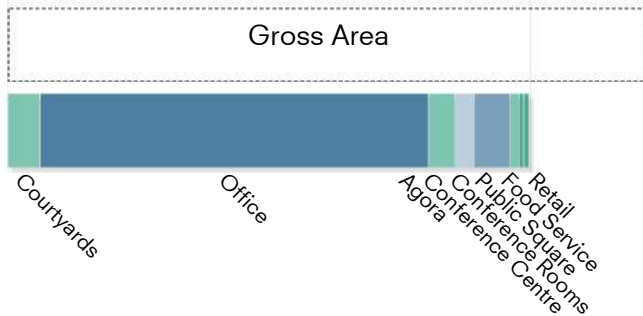
PENTAGON



HEXAGONE BALARD



NATO Headquarters



**Introduction**

**Research:**

Client

**Programme**

Site

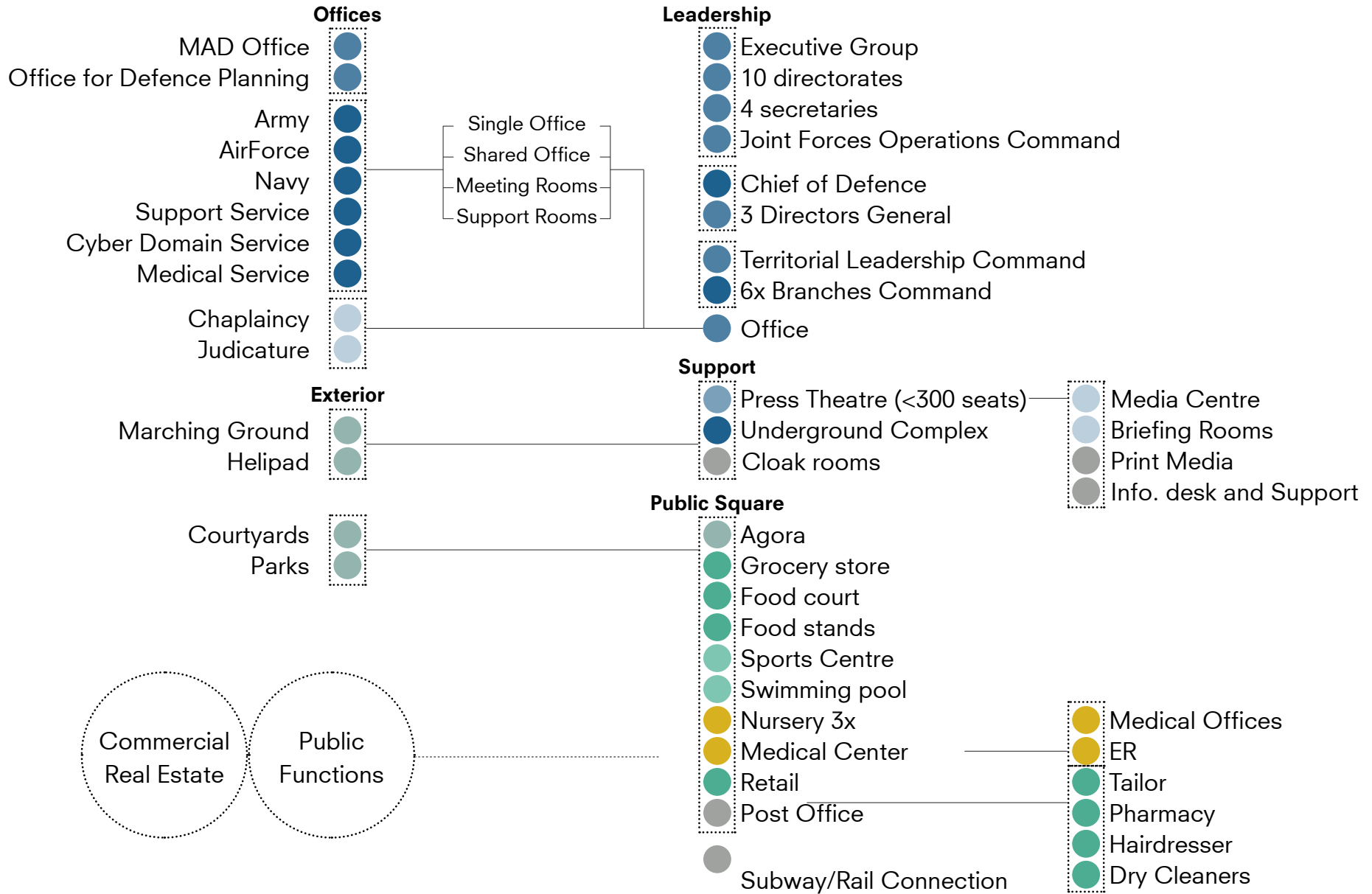
**Concept**

**Design**

**Conclusion**

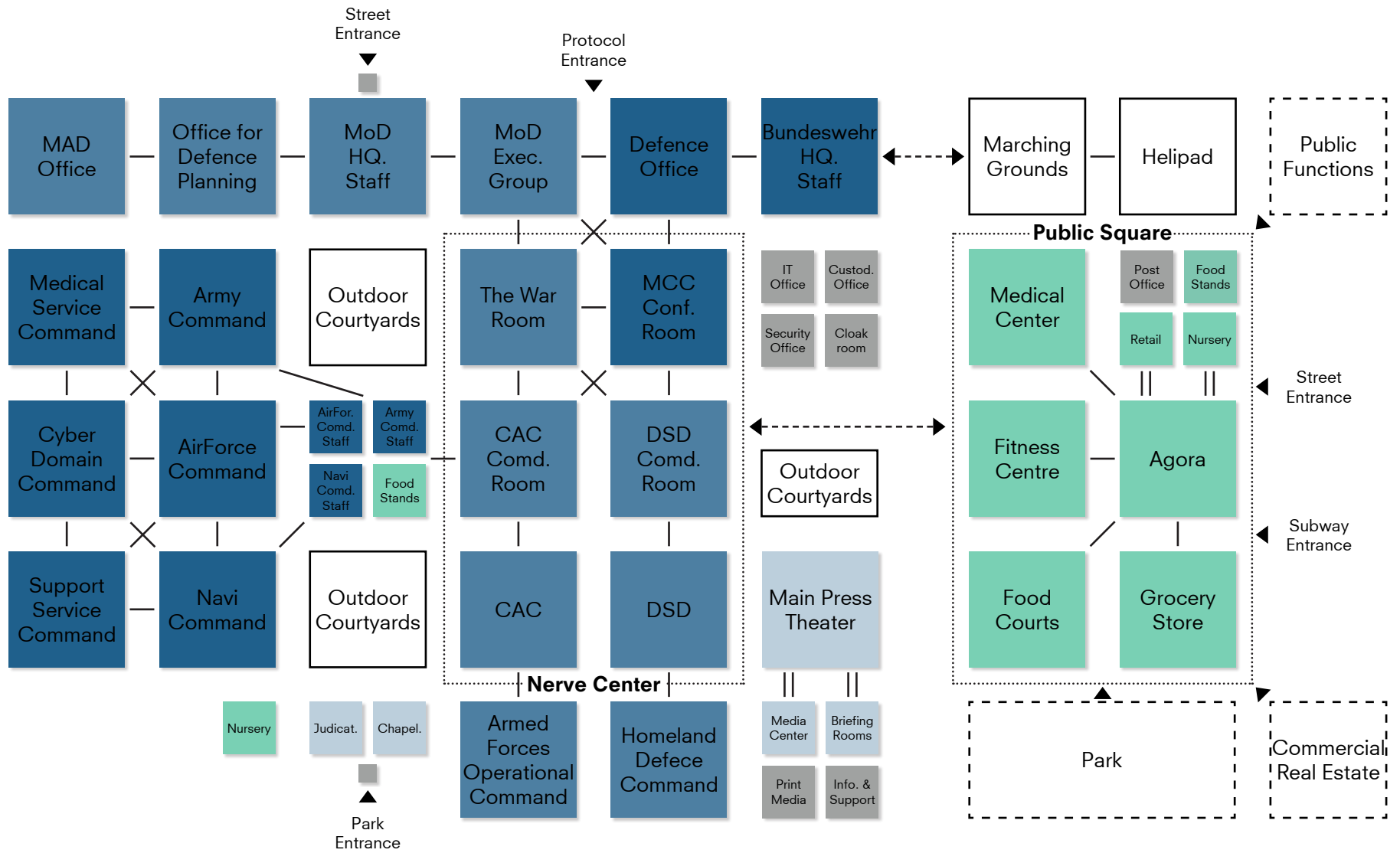
# Research

## DNA

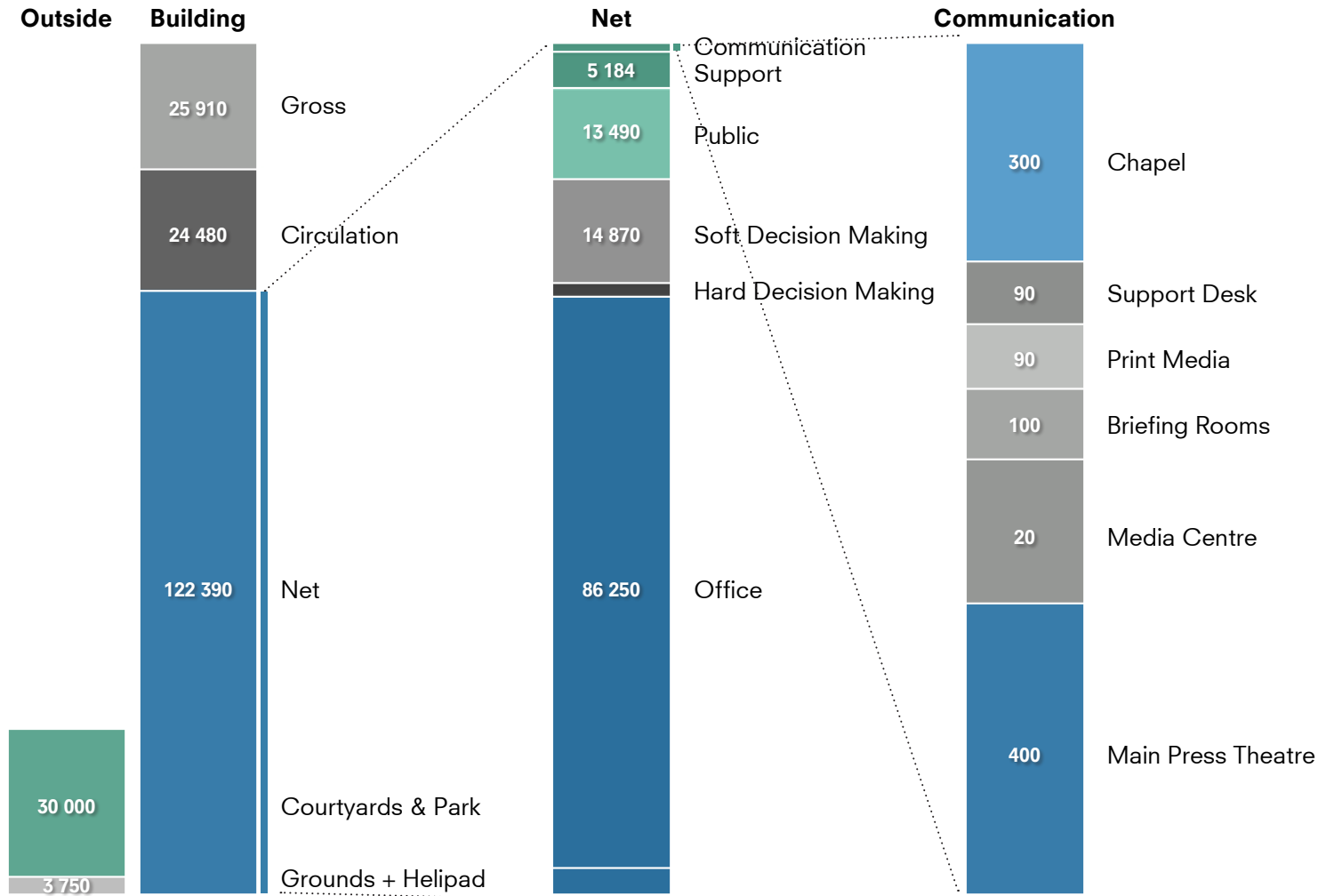




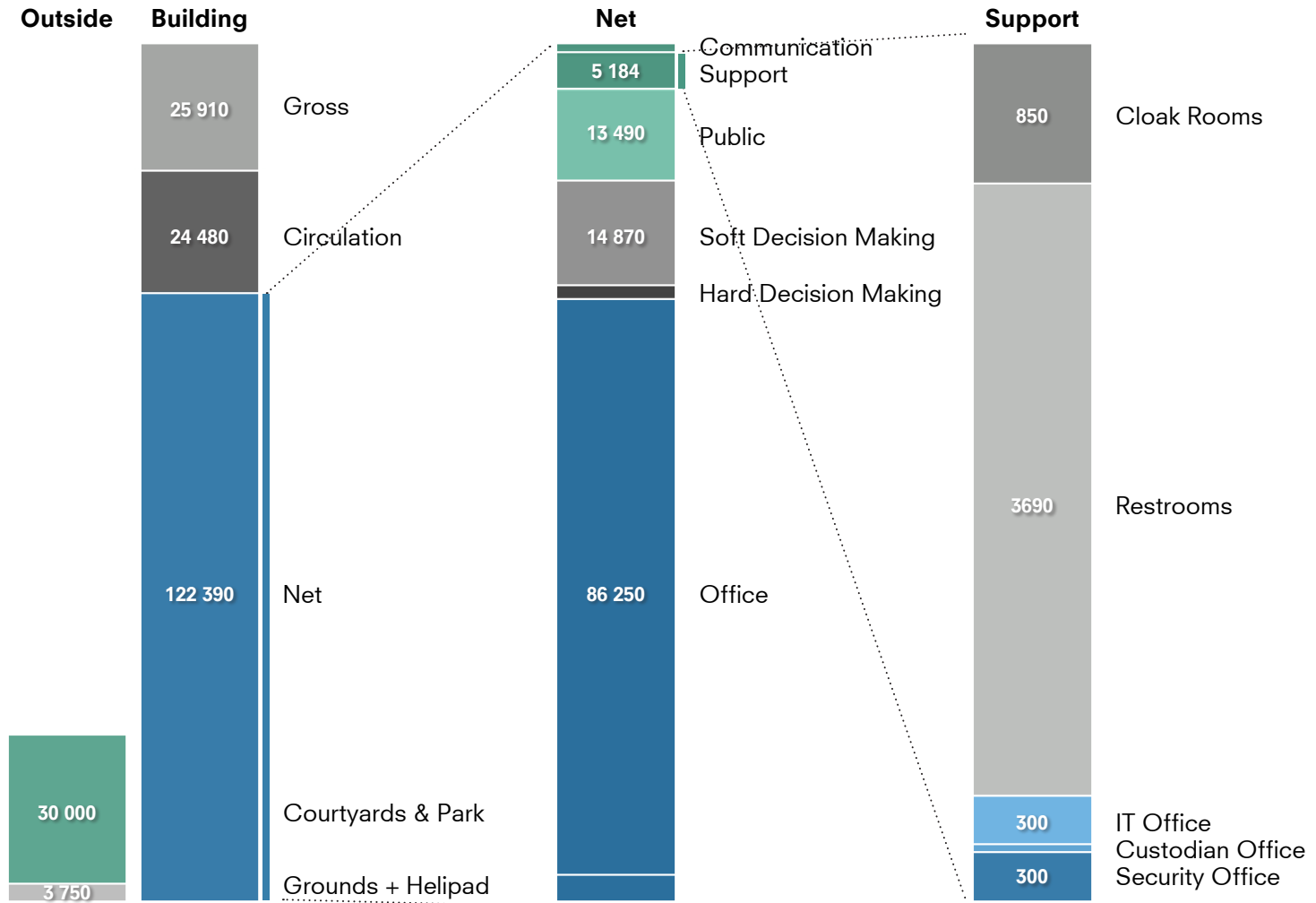
# Research RELATIONSHIPS



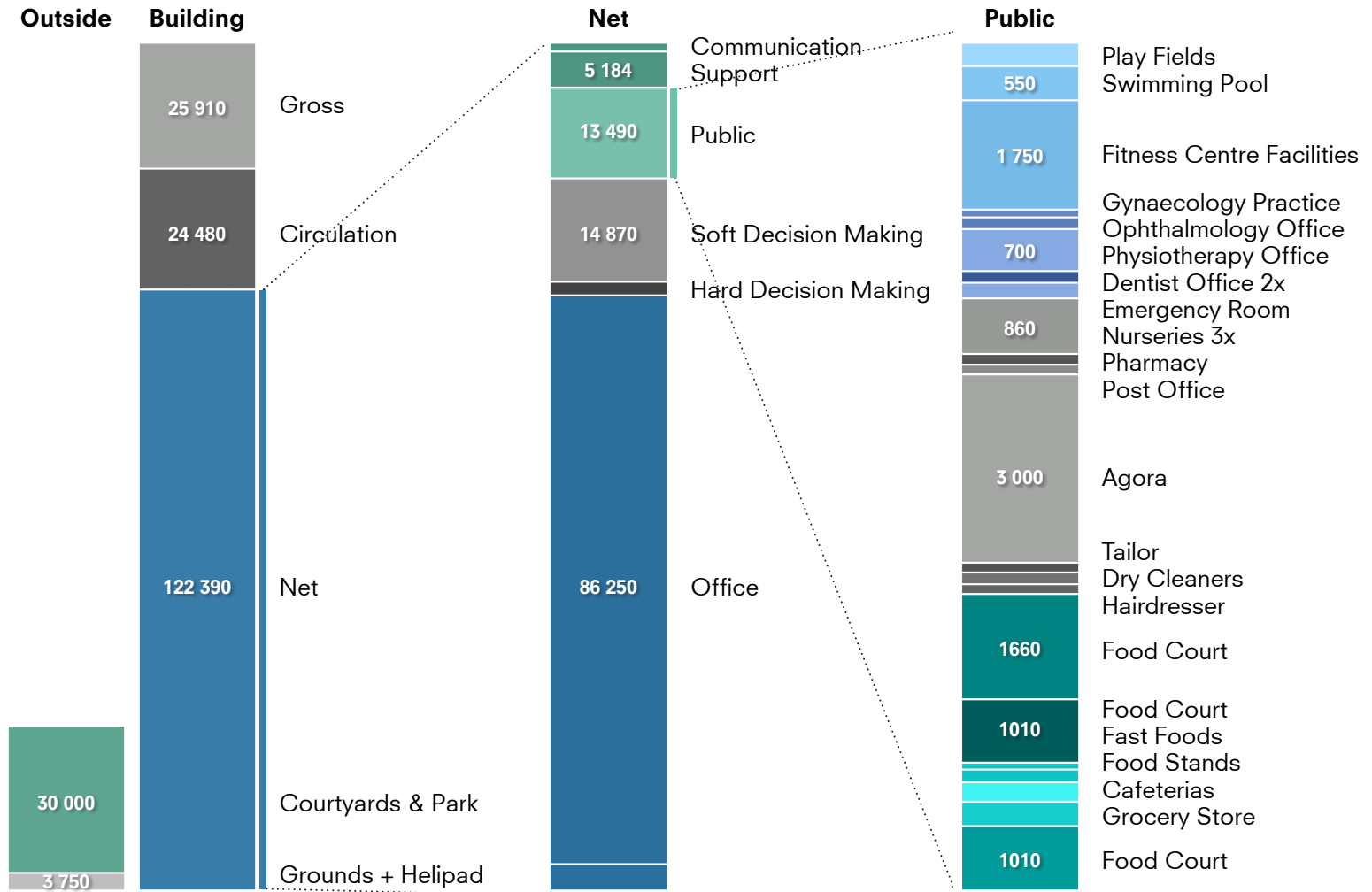
# Research SECTIONS



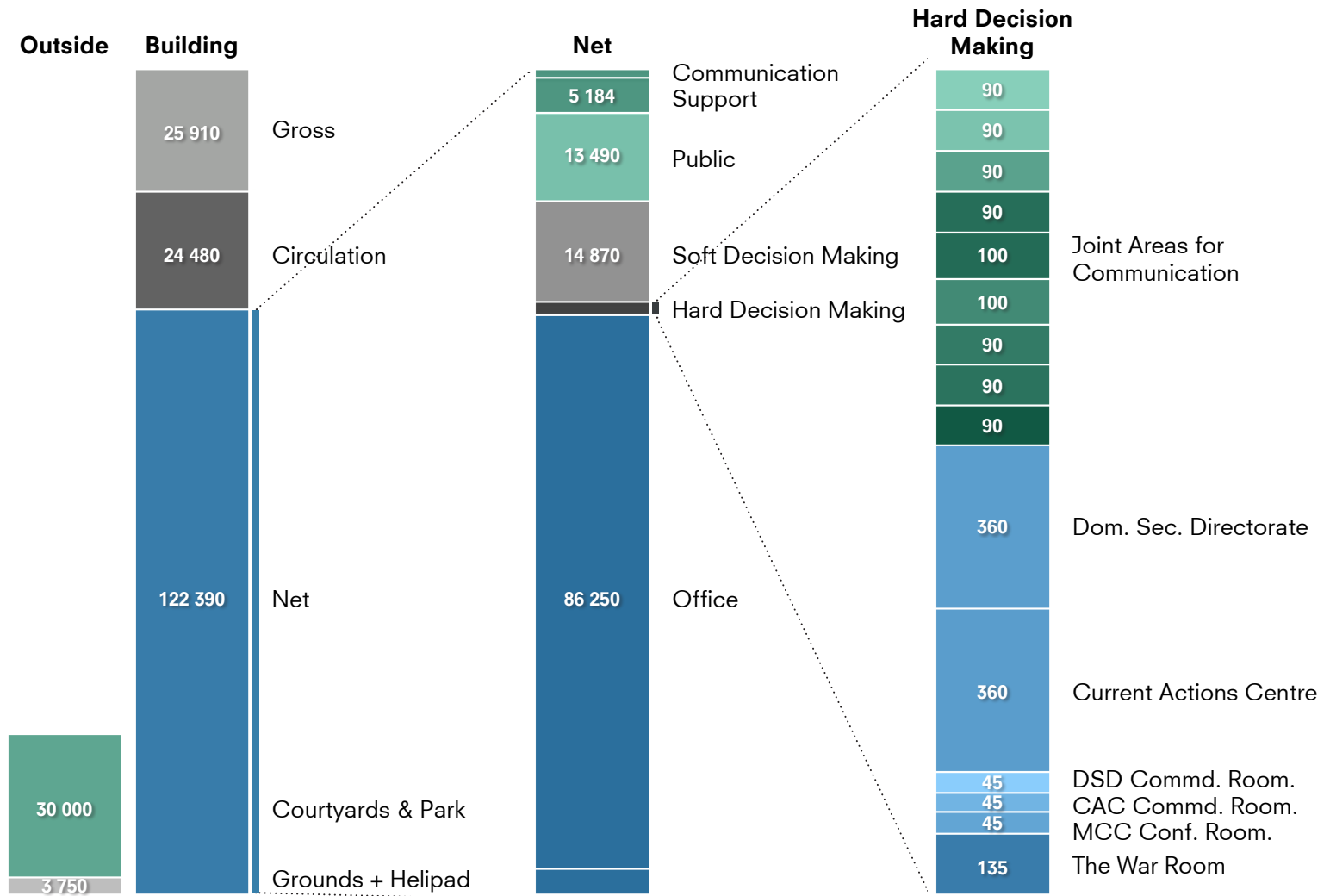
# Research SECTIONS



# Research SECTIONS

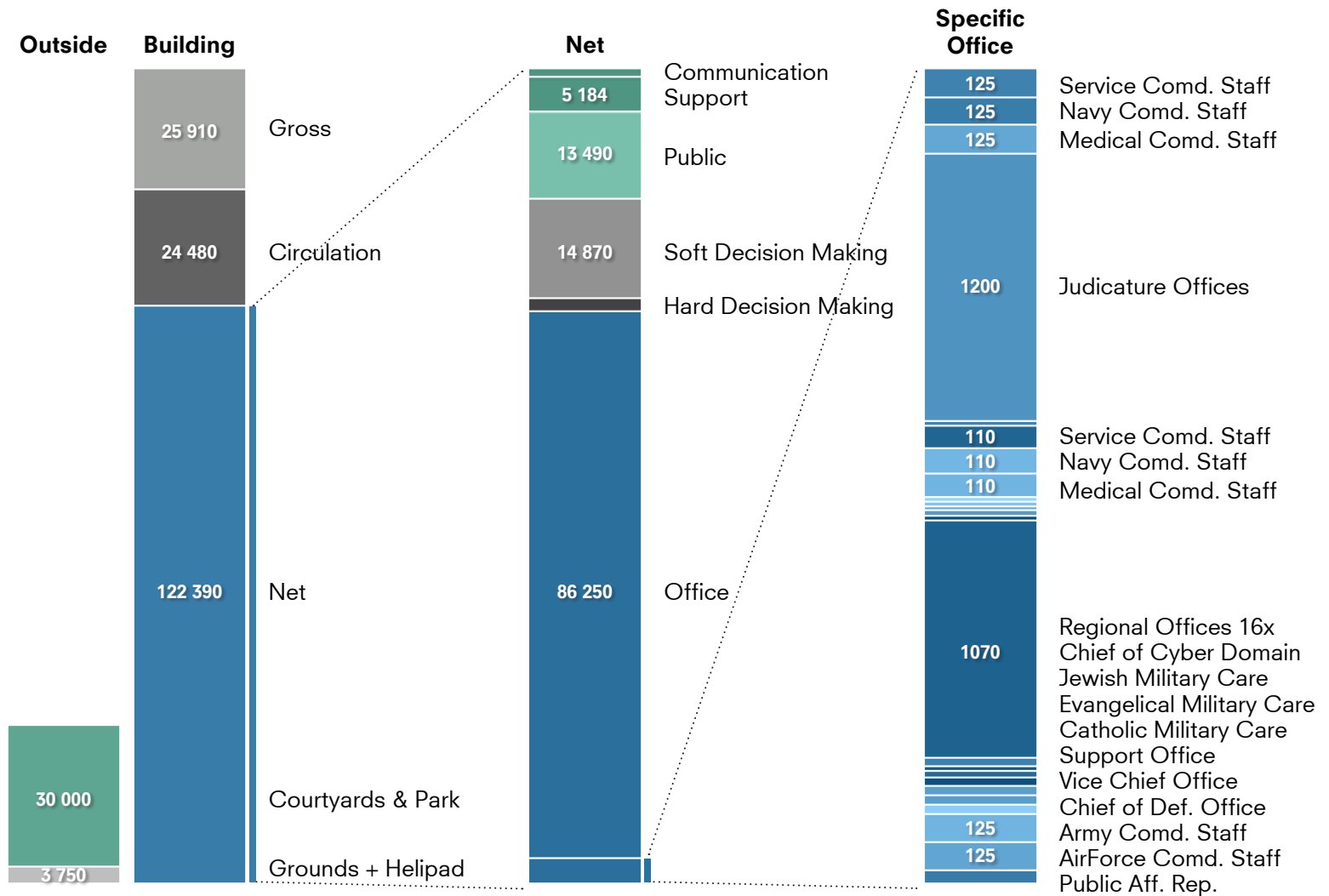


# Research SECTIONS

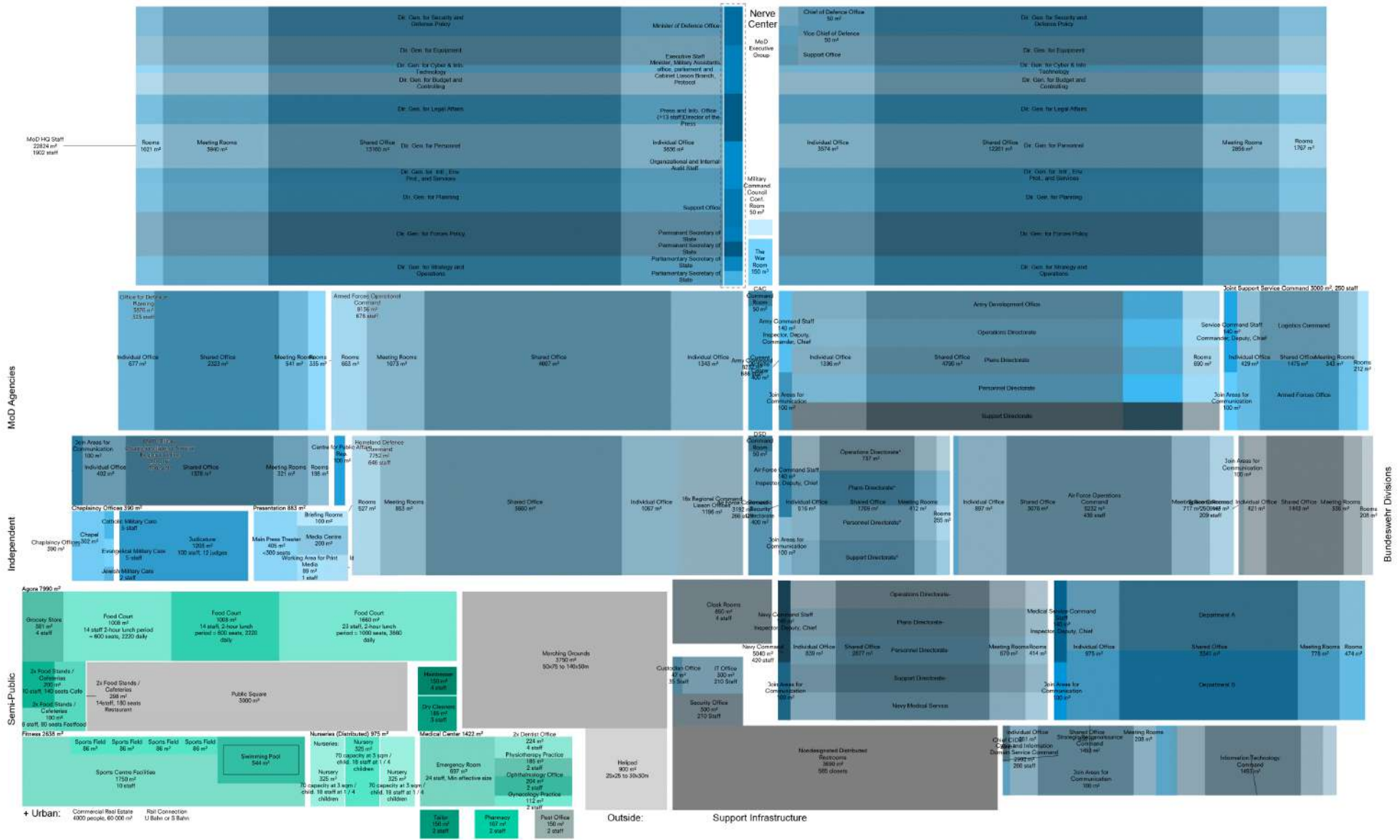




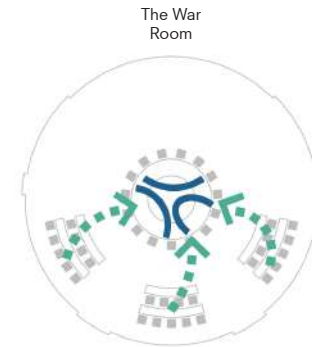
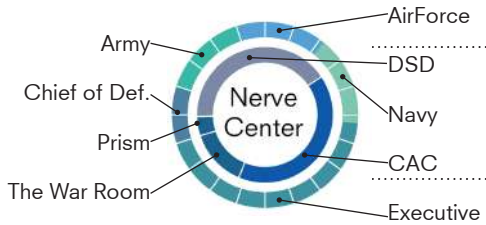
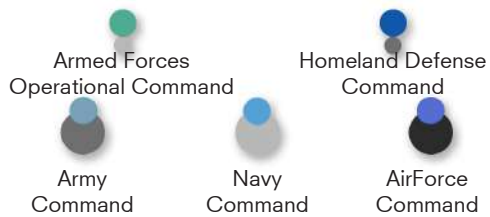
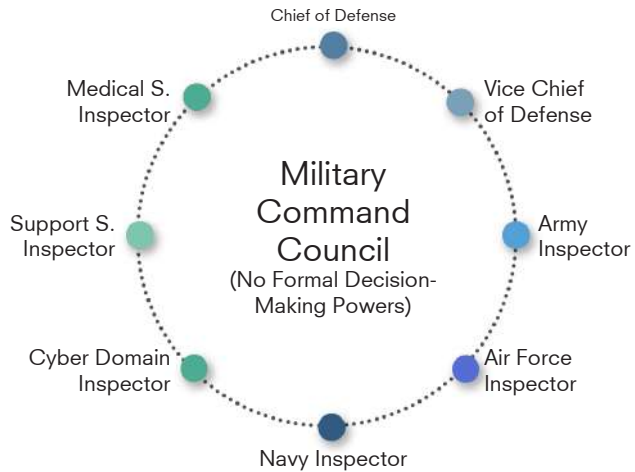
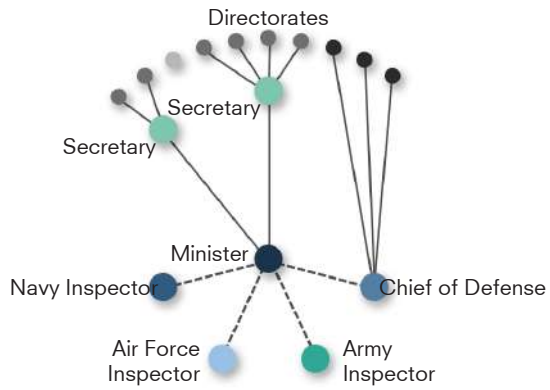
# Research SECTIONS



# Research AREAS



# Research NERVE CENTER



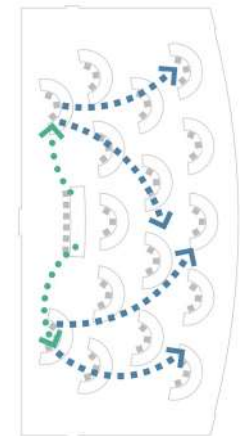
Military Command Council Conference Room "Prism"



Current Actions Center

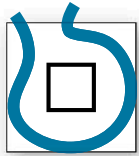


Domestic Security Directorate

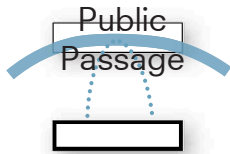


# Research PUBLIC SQUARE

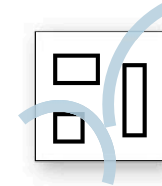
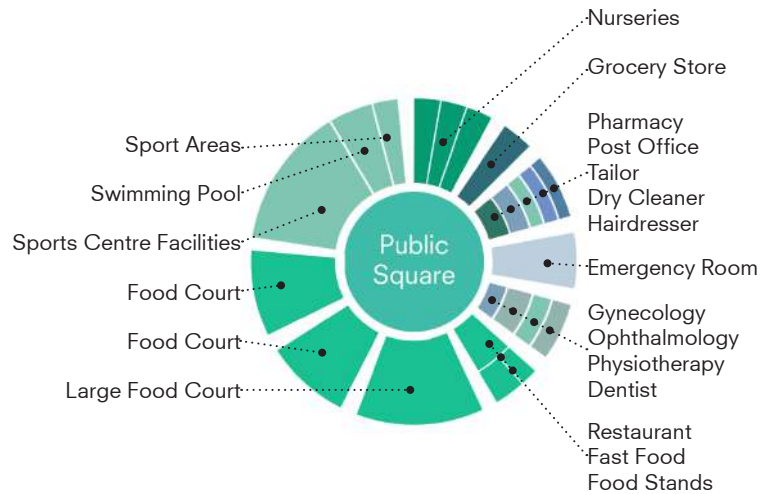
How to involve the public within a secure area, visually, by circulation, and programme?



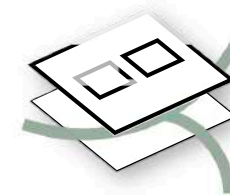
Core



Gallery



Islands



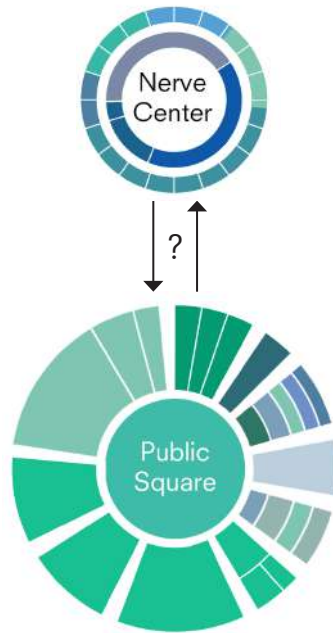
Vertical



Keycard  
Access

Research

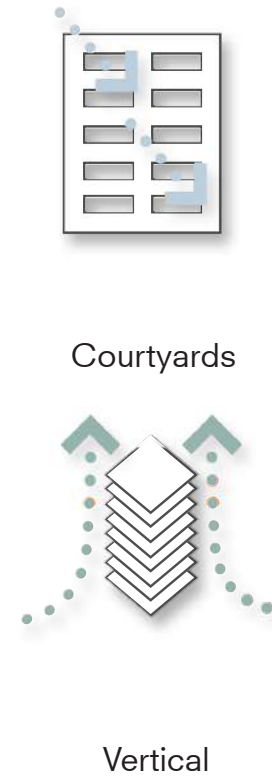
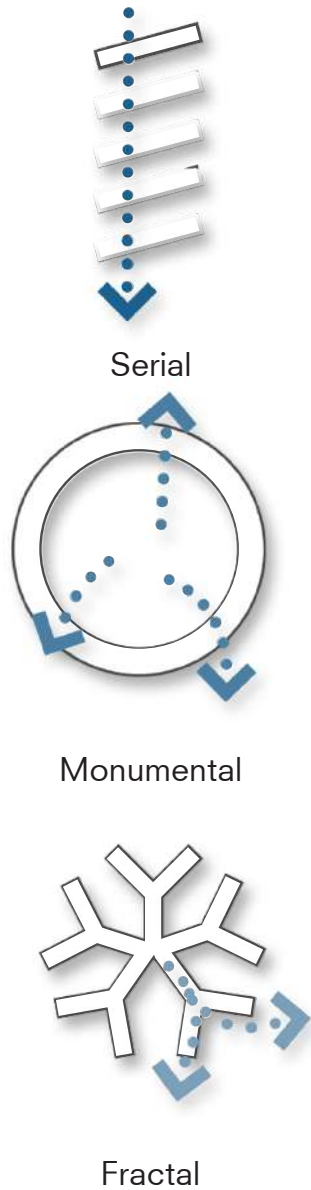
# SECURITY & ACCESSIBILITY



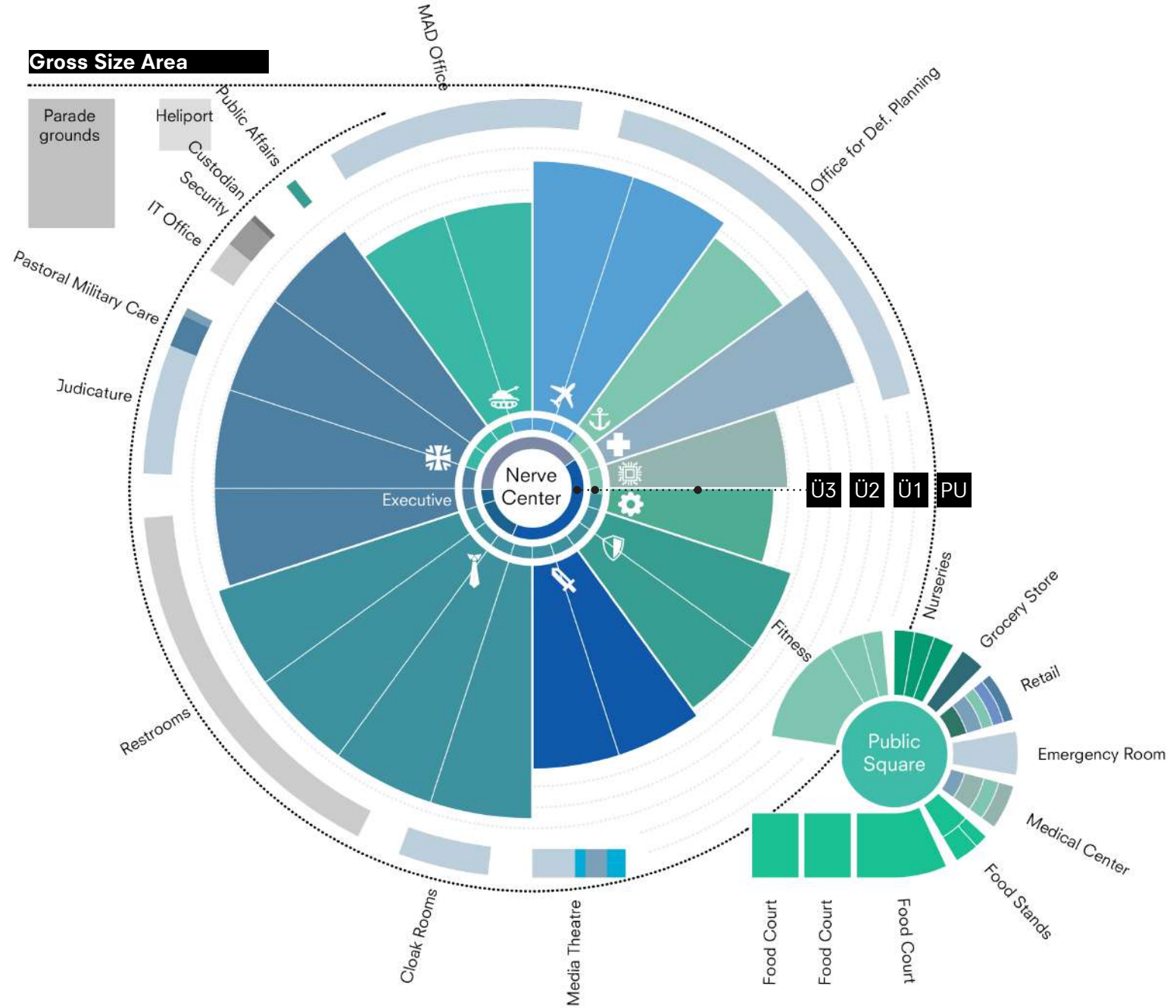


# OFFICE STACKING STRATEGY

How to organize such an immense amount of programme area? Whether using one or a combination of, Headquarters of Defence are often it's own campus or town.




# Research AREA



# Research CHARACTERISTICS

## Urban

**Building on Axes**




Bilateral or radial symmetry?

**Public Building**



Urban connections around the site?

**Campus Building**




Is the complex inclusive or comprehensive?

**Building Address**



Where is the address of the ministry?


**Stackable Building**



Fractal, vertical, or serial repetition of spaces?

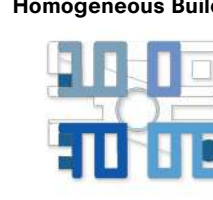
## Program

**Building for Public**




Is the ministry building for public?

**Homogeneous Building**



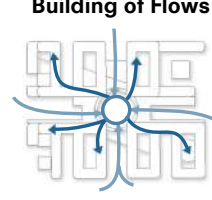
Laying out office space in the most efficient manner?

**Flexible Building**



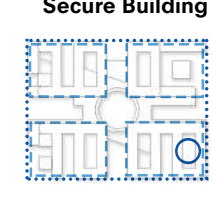
What does flexibility of the ministry mean?

**Building of Flows**



How to combine administrative flows?


**Secure Building**



How to guarantee high-security?

## Building

**Rational Building**



Expand existing, demolish, or new construction?

**German Building**




What does a German institution look like?

**Sustainable Building**




How does sustainability manifest?

**Future Building**



How can a building remain relevant in the long-term?

**Transparent Building**



What does open-access mean?

**Introduction**

**Research:**

Client

Programme

**Site**

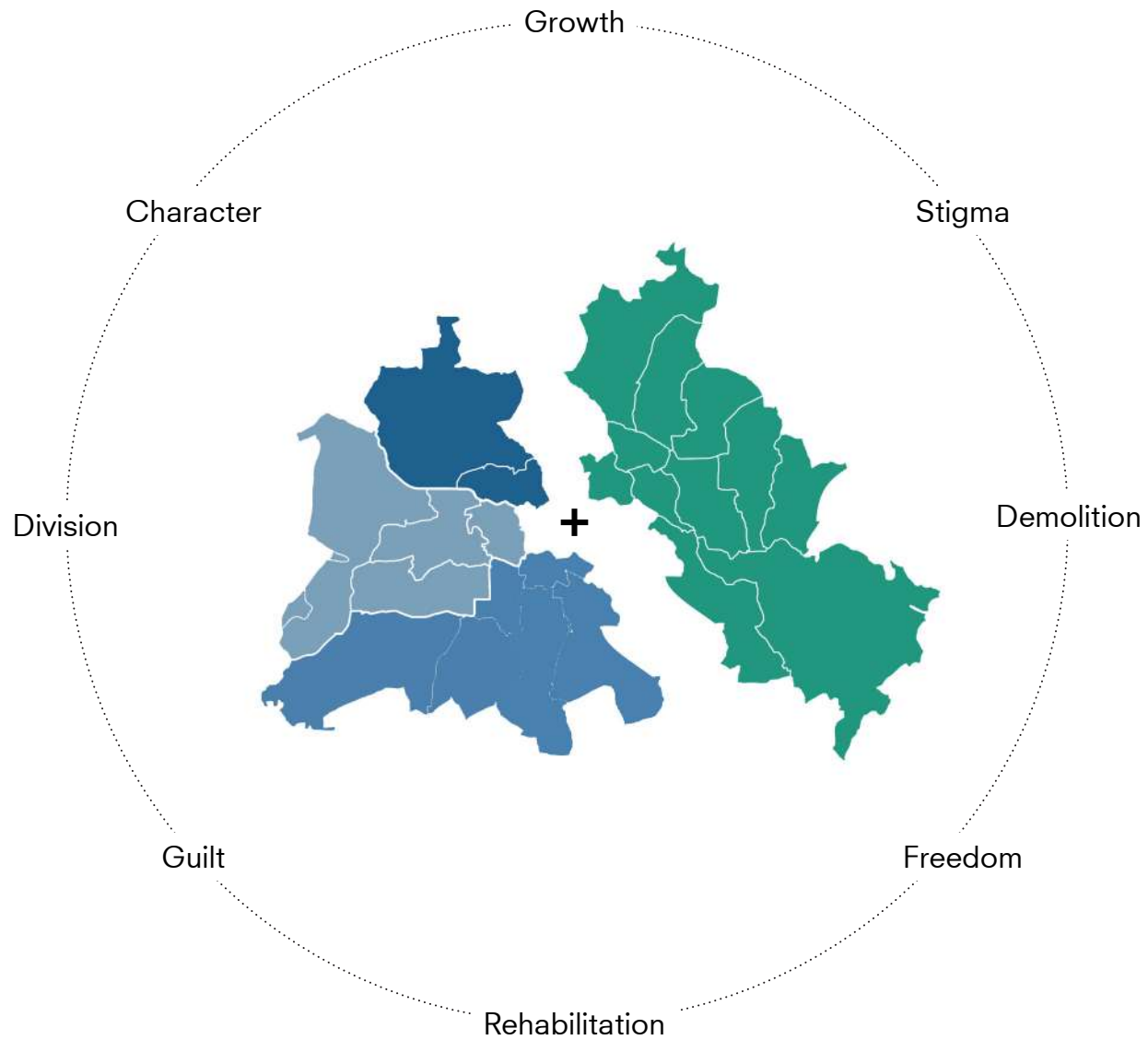
**Concept**

**Design**

**Conclusion**

Research

# WHY BERLIN



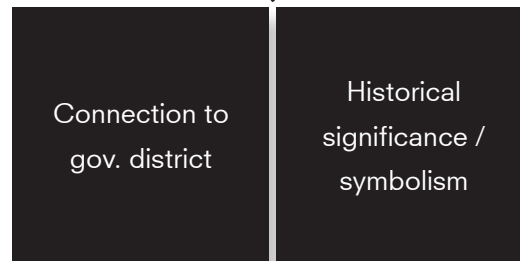


Research

# CLIENT CRITERIA

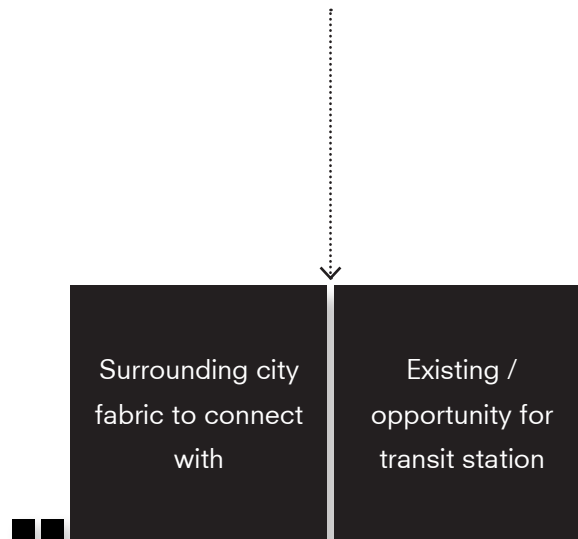


Plot criteria:

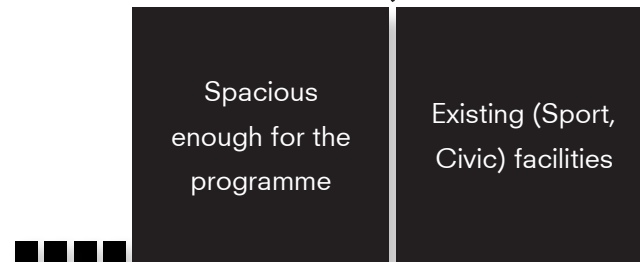
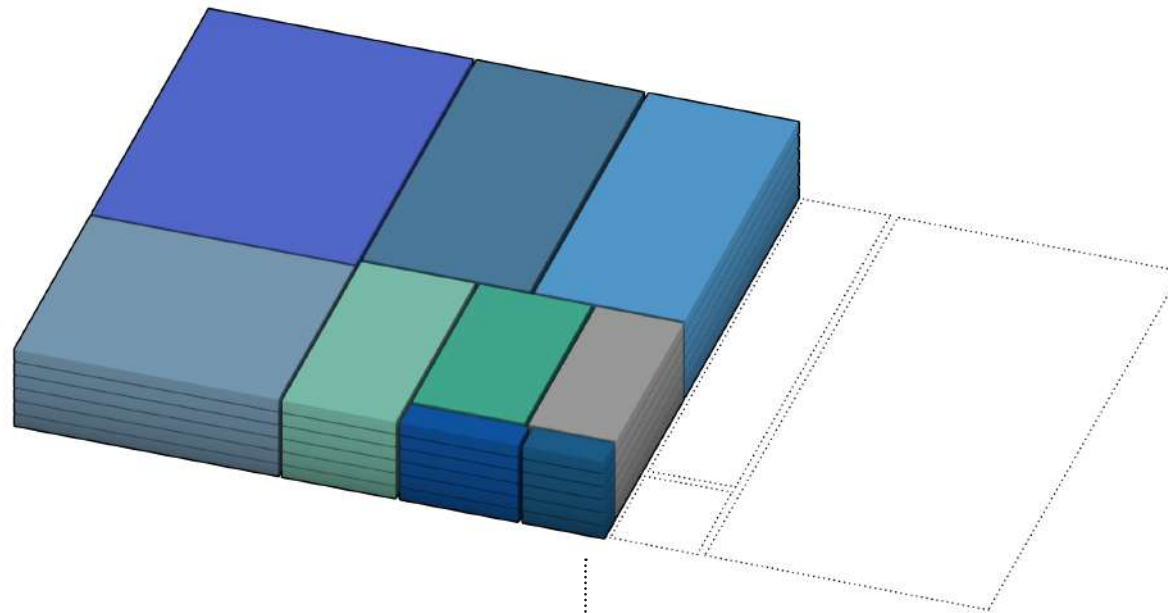


# QUESTION CRITERIA

“How can we design  
a **highly secured** institutional building,  
while remaining **accessible** to the public?”



# PROGRAMME CRITERIA



# ECONOMIC CRITERIA

## Financial:

Delta Land Value

On "Fertile Ground", to have the largest impact on Berlin's economy and people.

## Social:

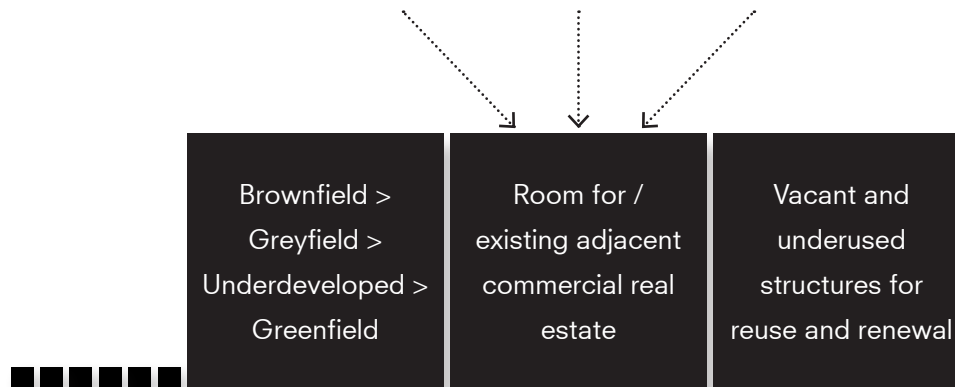
Job Density

In an area with a lower density of jobs, to create them where it's the needed the most.

## Functional:

Inhabitant Density


By placing the buildings in less residential areas, gentrification for housing is minimized.



# URBAN SPACE CHARACTERISTICS

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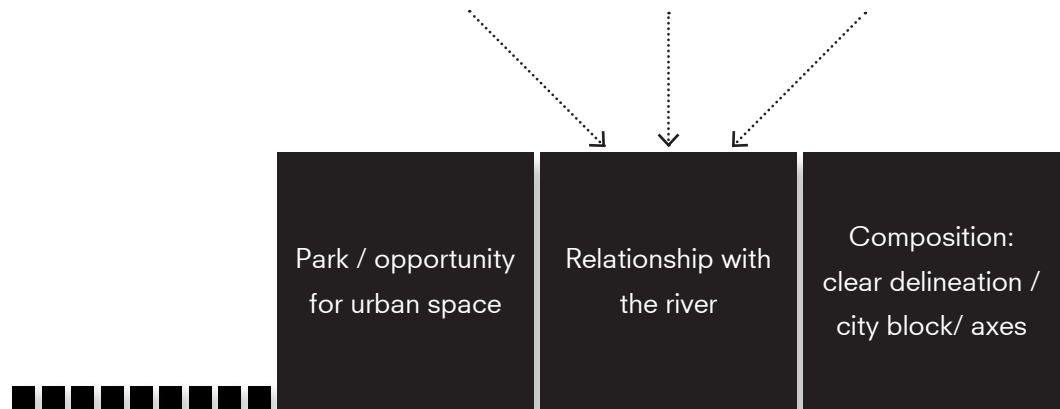


How can a building remain relevant in the long-term?

**Transparent Building**



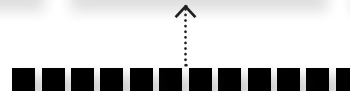
What does open-access mean?



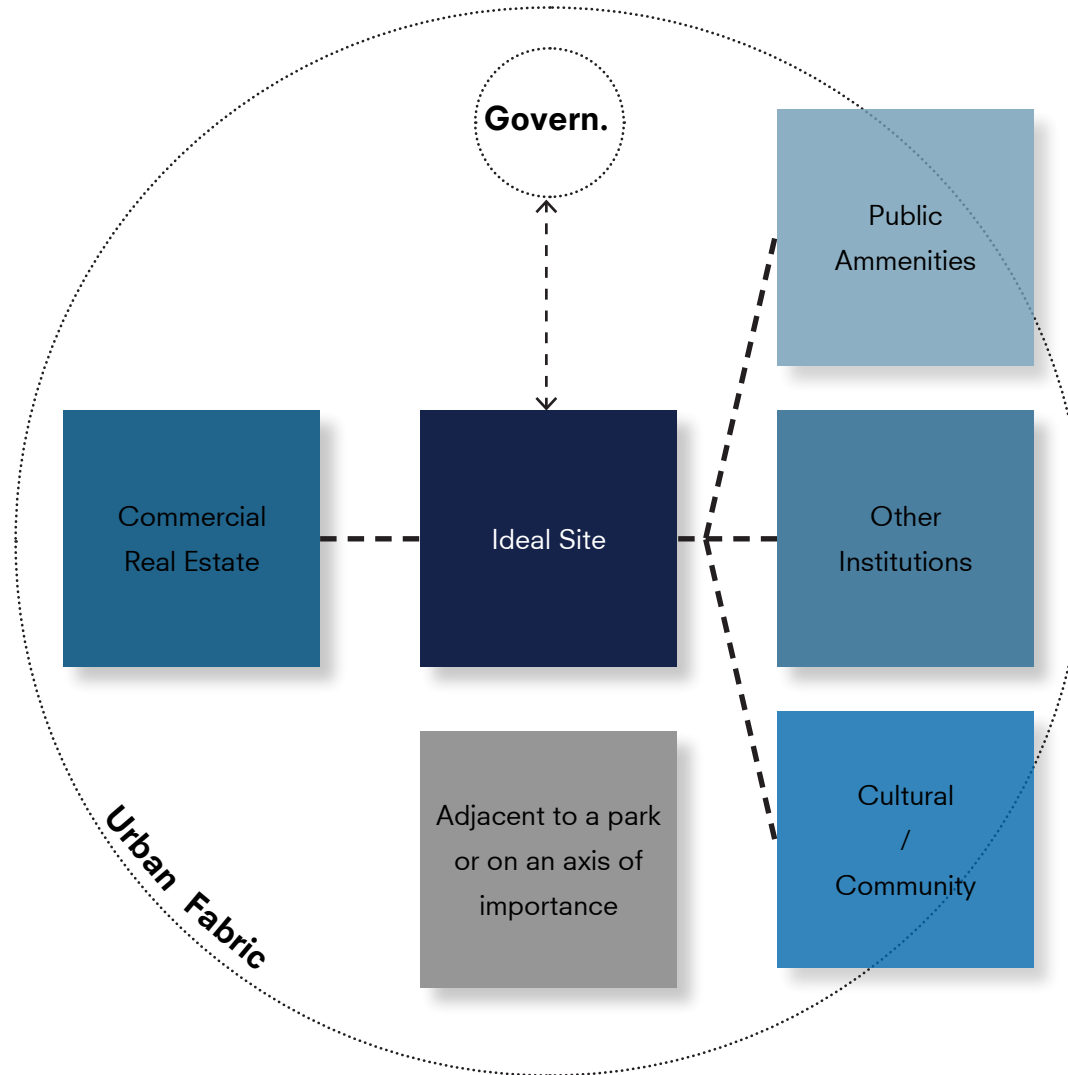


# Research PLOT CRITERIA

<b>Pivotal:</b>	Brownfield > Greyfield > Underdeveloped > Greenfield	Spacious enough for the programme	Surrounding city fabric to connect with
<b>High Priority:</b>	Room for / existing adjacent commercial real estate	Connection to gov. district	Existing / opportunity for transit station
<b>Priority:</b>	Relationship with the river	Park / opportunity for a urban space	Historical significance / symbolism
<b>Low Priority:</b>	(Sport) facilities	Composition: clear delineation / city block / axes	Structures for reuse and renewal



# Research IDEAL SITE



# SITE QUESTION

“Where can a building reinvigorate the urban area  
by connecting commercial, institutional, and public functions  
...  
while fulfilling its areal and relationship requirements?”

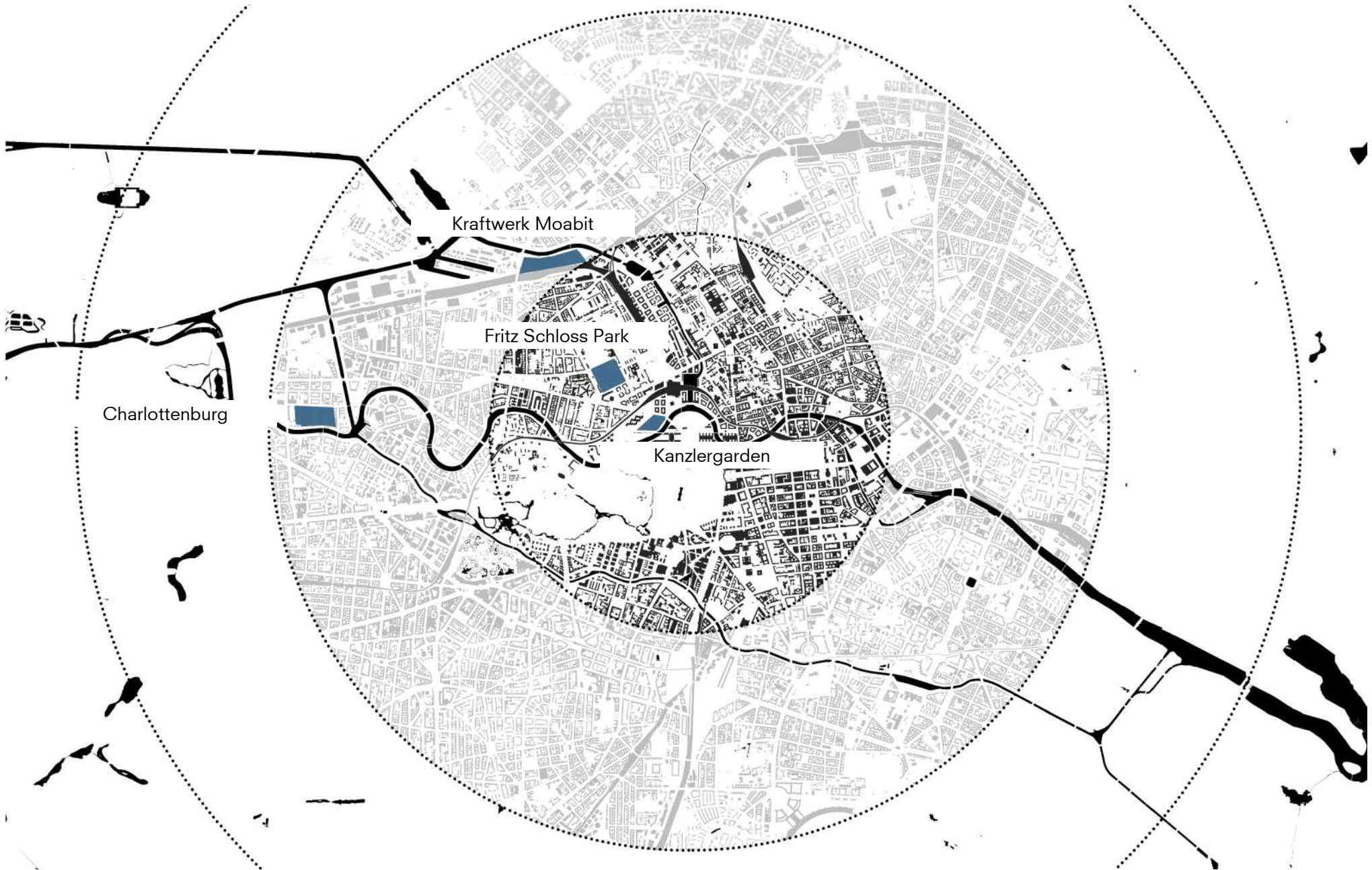
Research

# APPLIED CRITERIA





Research  
**POTENTIAL SITES**





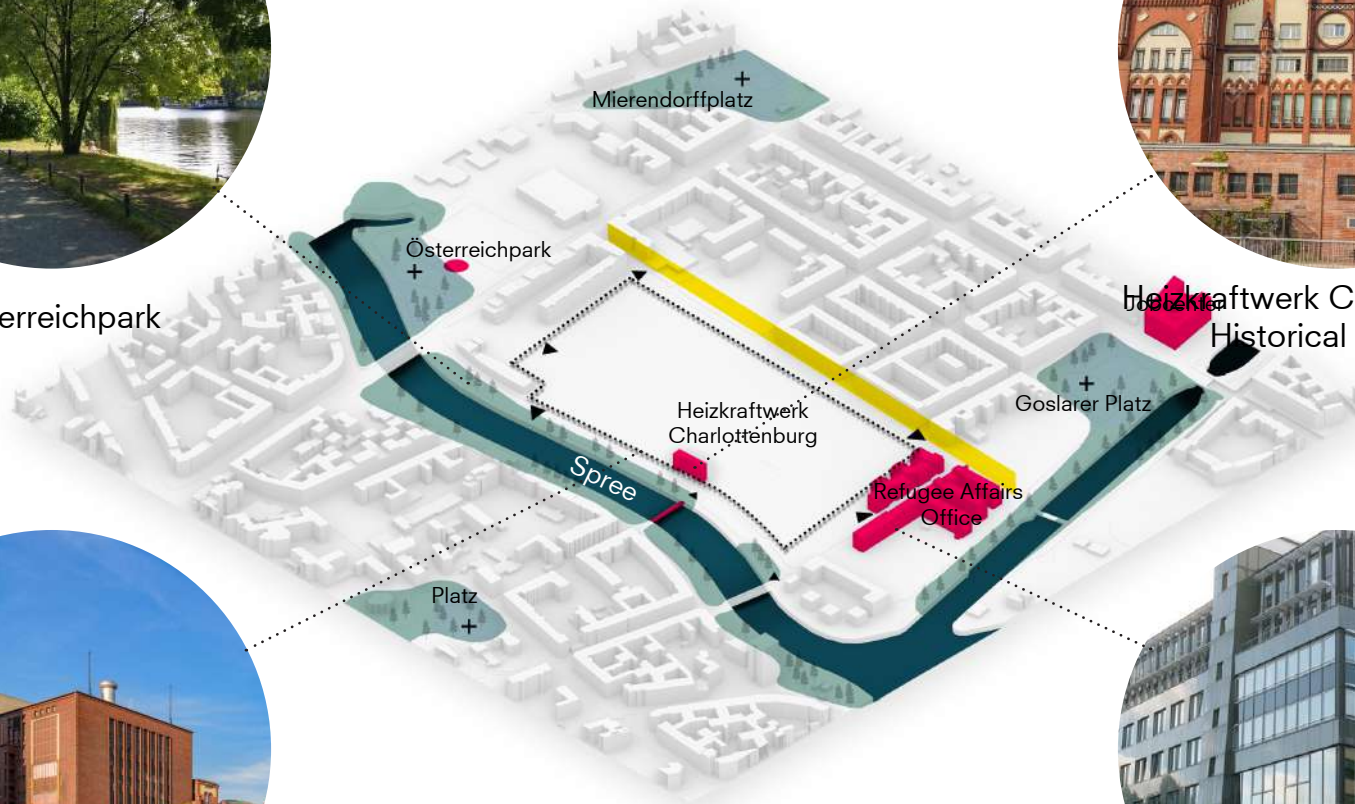
Research  
**CHARLOTTENBURG**  
Composition



Österreichpark



Heizkraftwerk  
Historical Facade



Spree River



State Office for Refugee Affairs

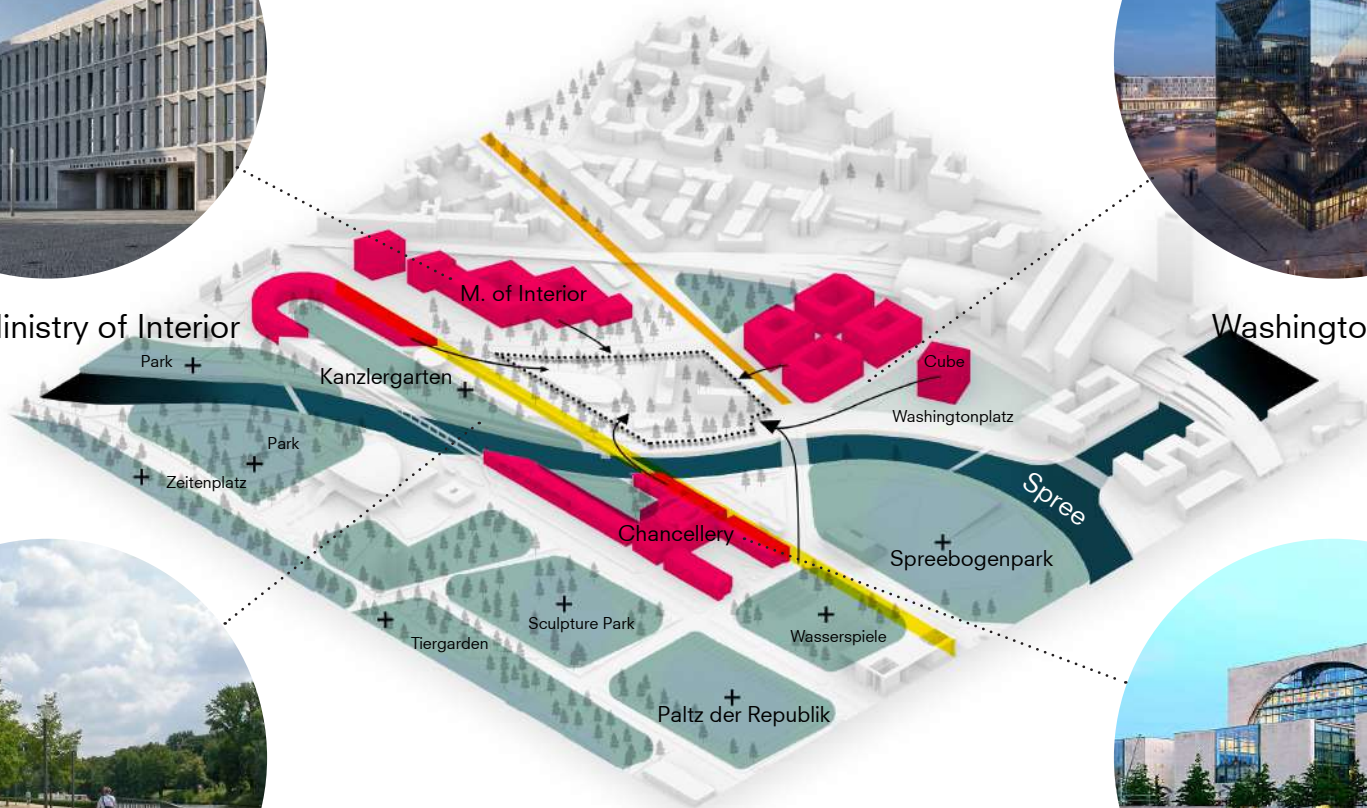
Research  
**KANZLERGARDEN**  
Composition



Federal Ministry of Interior



Washingtonplatz



Moabiter Werder Promenade



German Chancellery



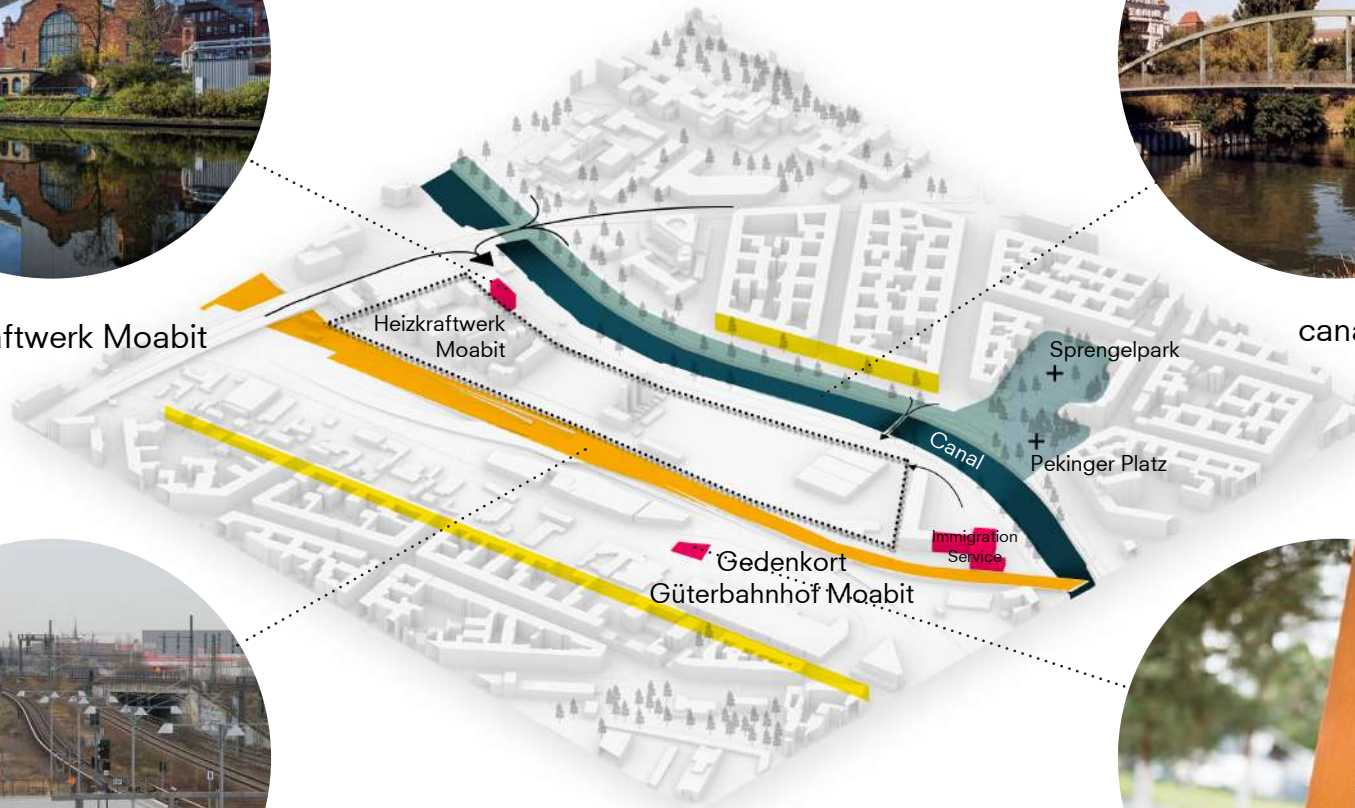
Research  
**KRAFTWERK MOABIT**  
Composition



Heizkraftwerk Moabit



canal

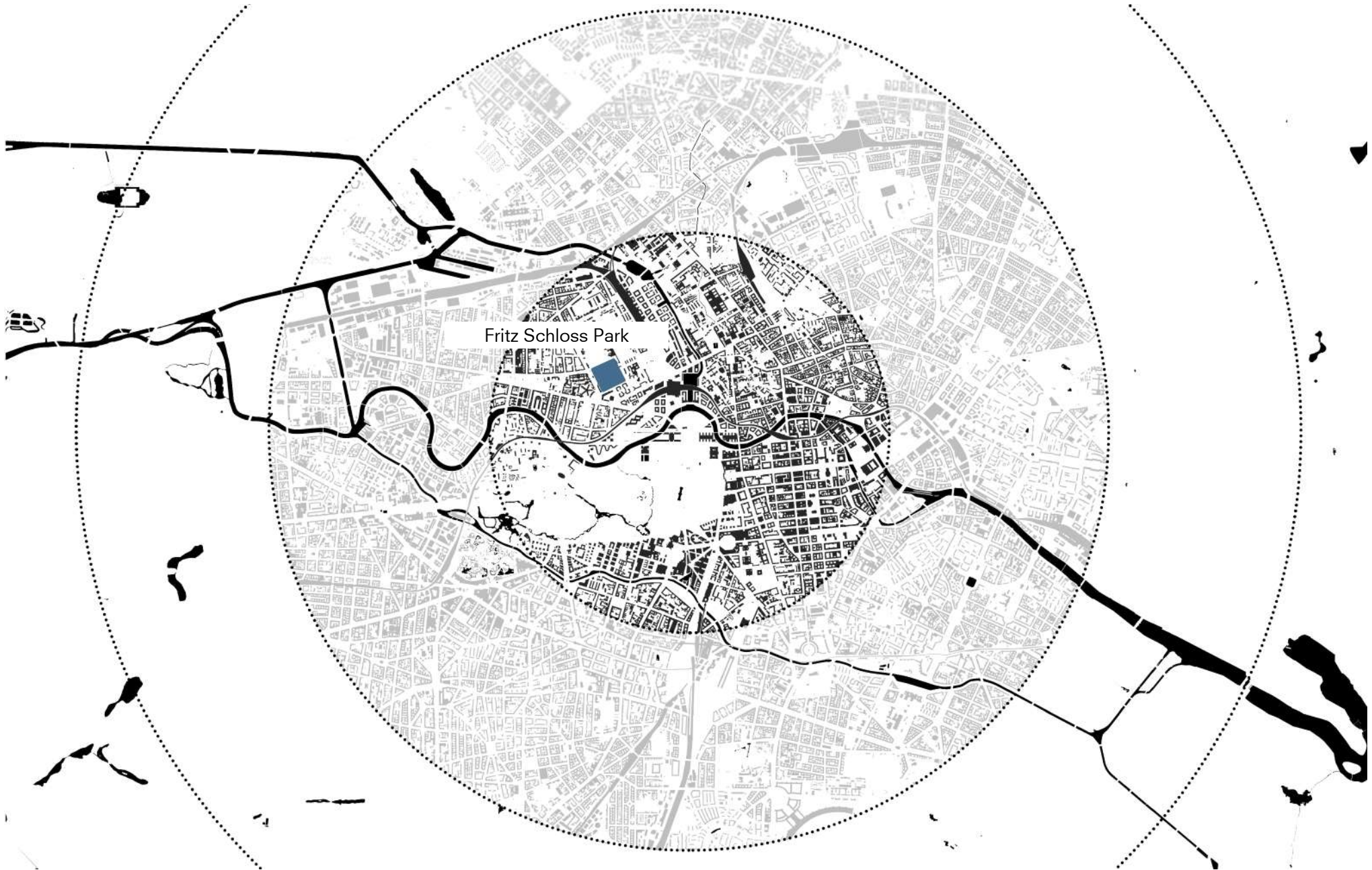


Berlin Ring Railroad



Gedenkort Güterbahnhof Moabit

# FRITZ SCHLOSS PARK





Research

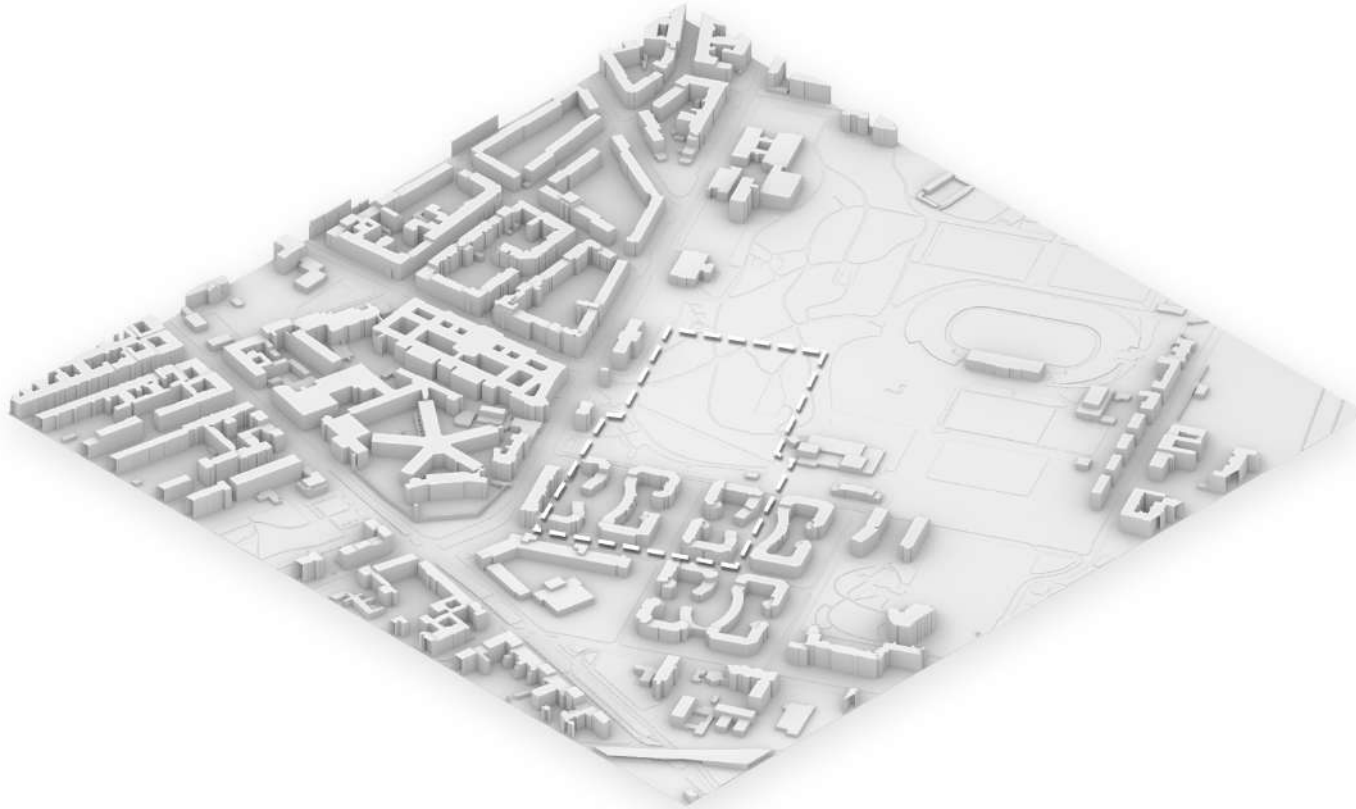
# FRITZ SCHLOSS PARK



Research

# FRITZ SCHLOSS PARK

1990 State

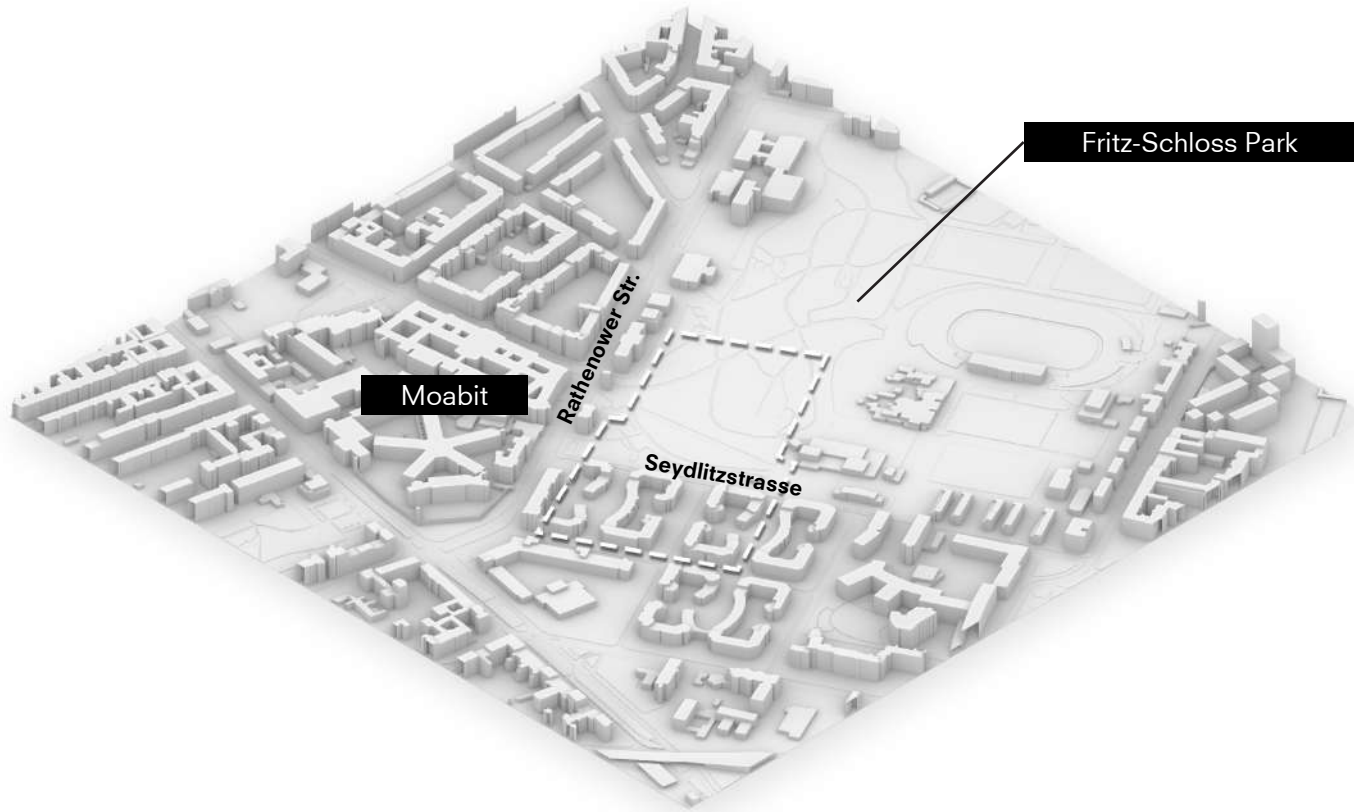




Research

# FRITZ SCHLOSS PARK

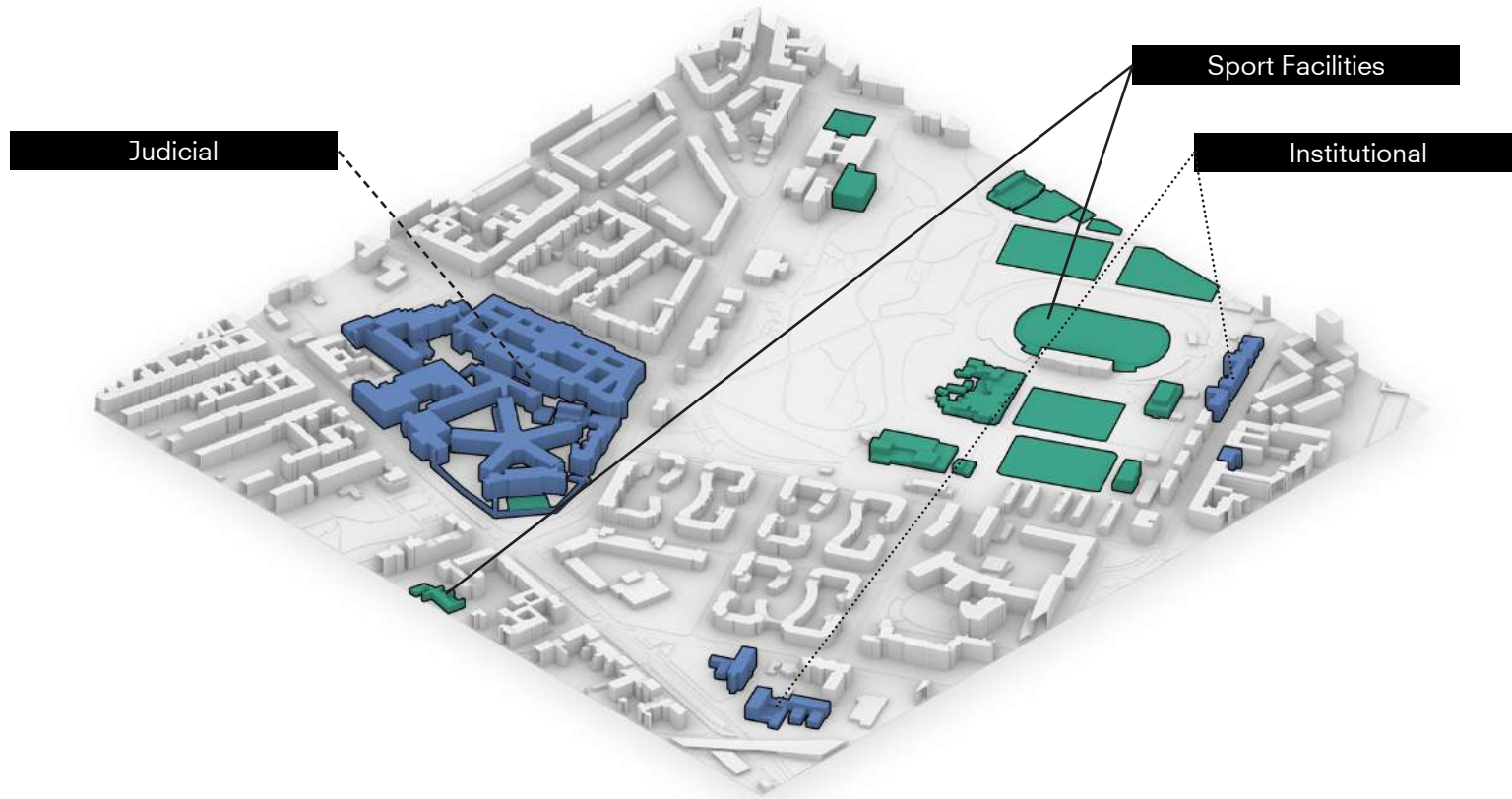
Current State



Research

# FRITZ SCHLOSS PARK

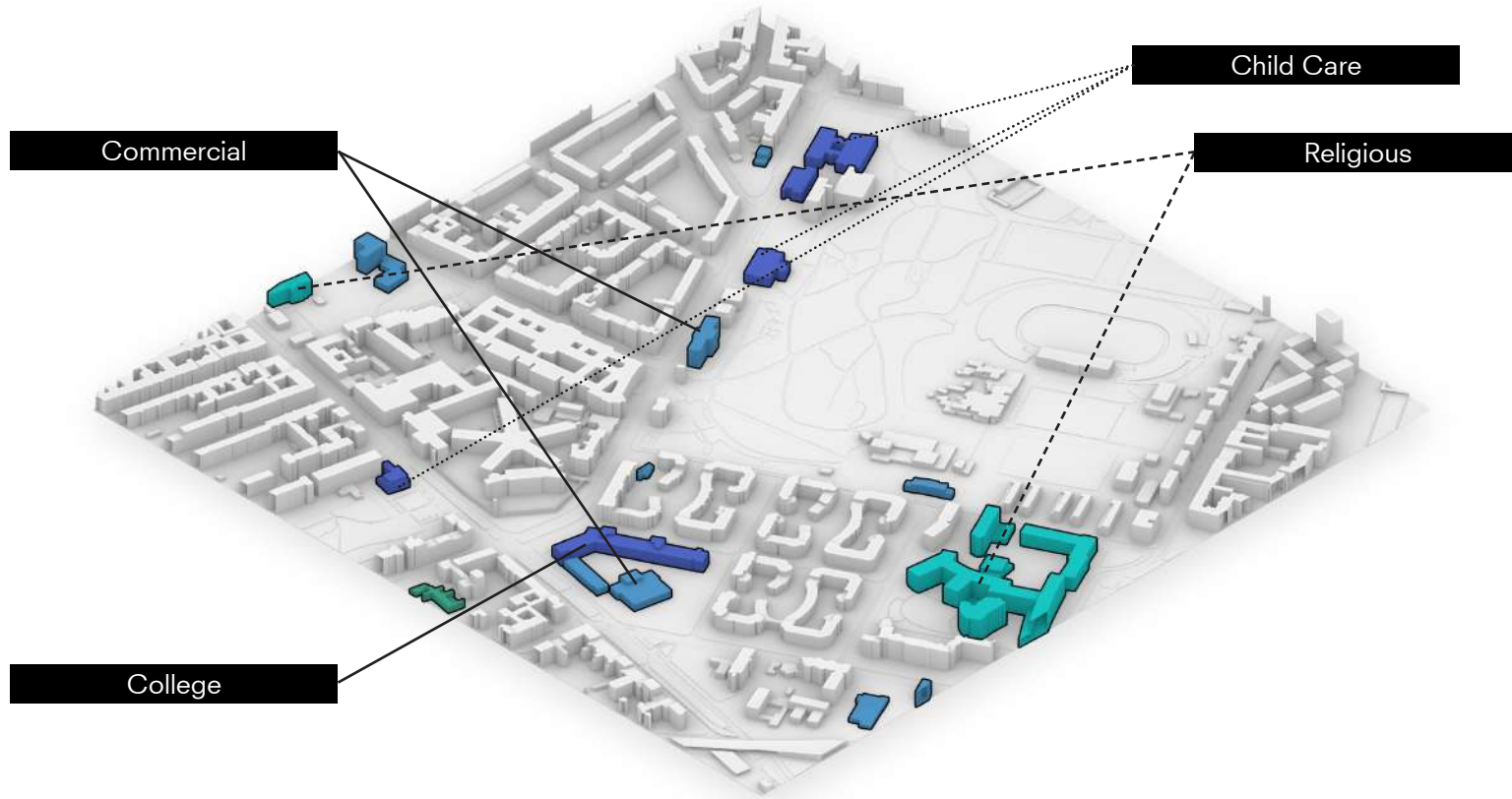
Current State



Research

# FRITZ SCHLOSS PARK

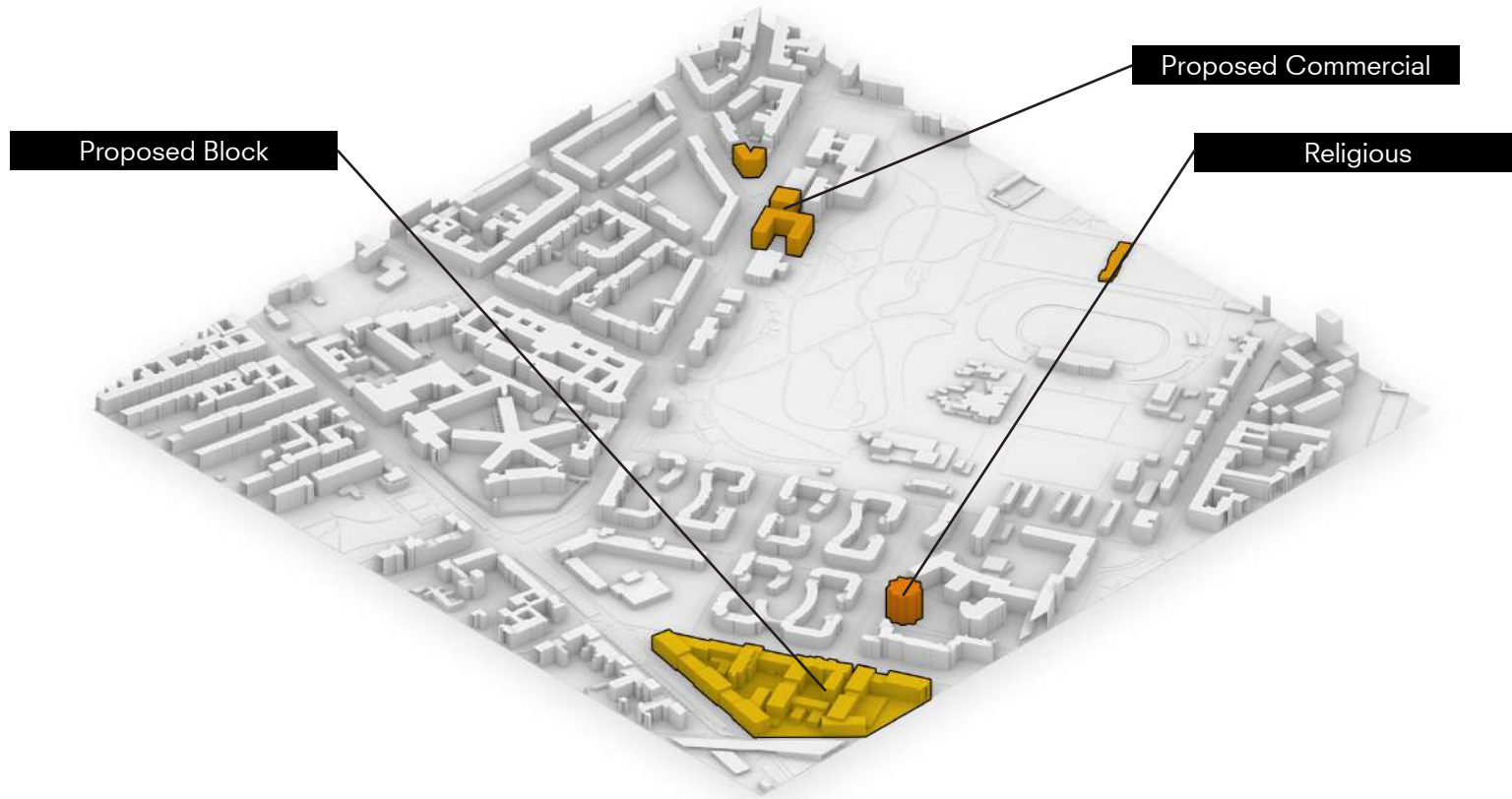
Current State



Research

# FRITZ SCHLOSS PARK

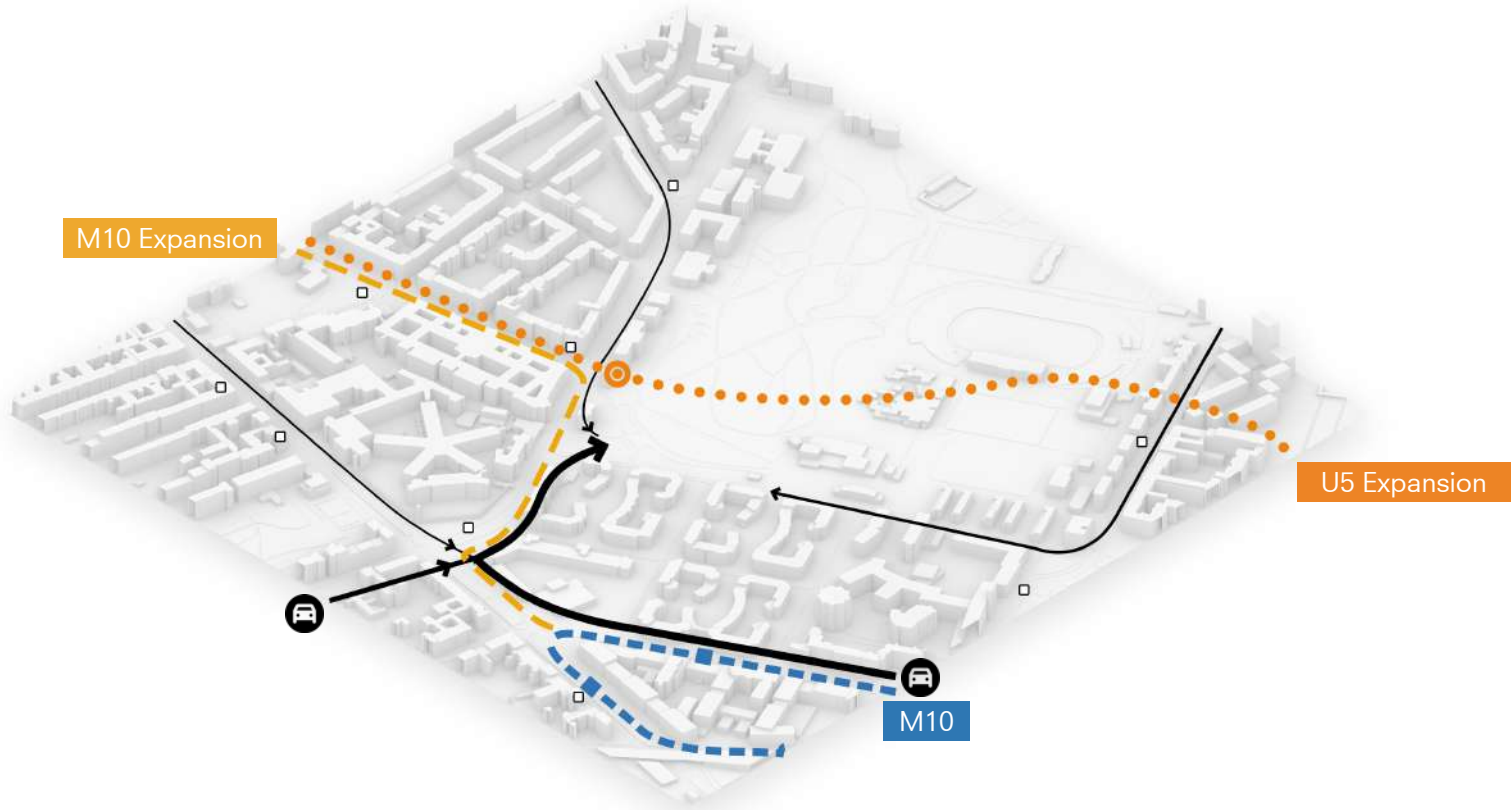
Future State



Research

# FRITZ SCHLOSS PARK

## Transit





Research

# FRITZ SCHLOSS PARK

## Composition



# Research TIMELINE

## Parade Grounds



1870 - (1918)

Parade ground of the 2nd. Guard Uhlán Cavalry Regiment of Prussian Army

## Olympics



1936

Summer Olympics  
Sports fields & Poststadium

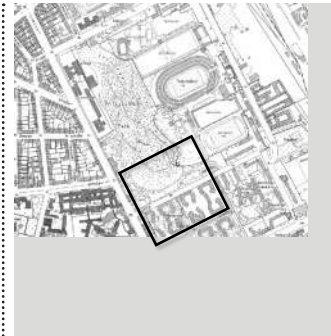
## Debris Dumping Ground



1945 -1955

Dumping Ground for Debris

## Park & Sports



1955 -2000

Schuttberg: Hill made of rubble  
Memorial to Trümmerfrauen: the women who helped clear rubble and rebuild the city after the war.

## Reinvestments



2000s

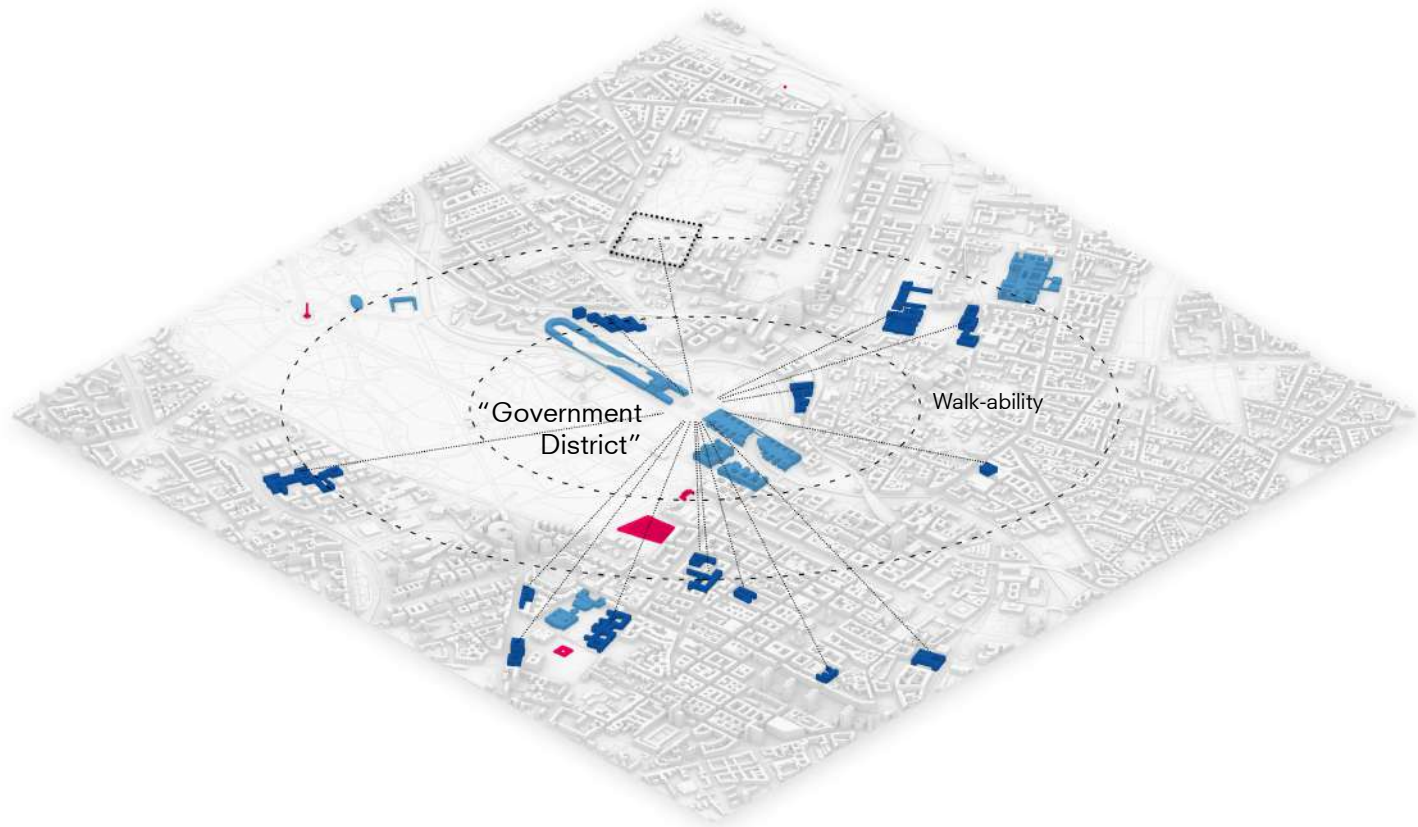
Additions to fitness facilities  
Park Redesigns

Research

# LARGE SCALE

Government

- Government Offices
- Federal Ministries
- Relevant Citymarks



Research

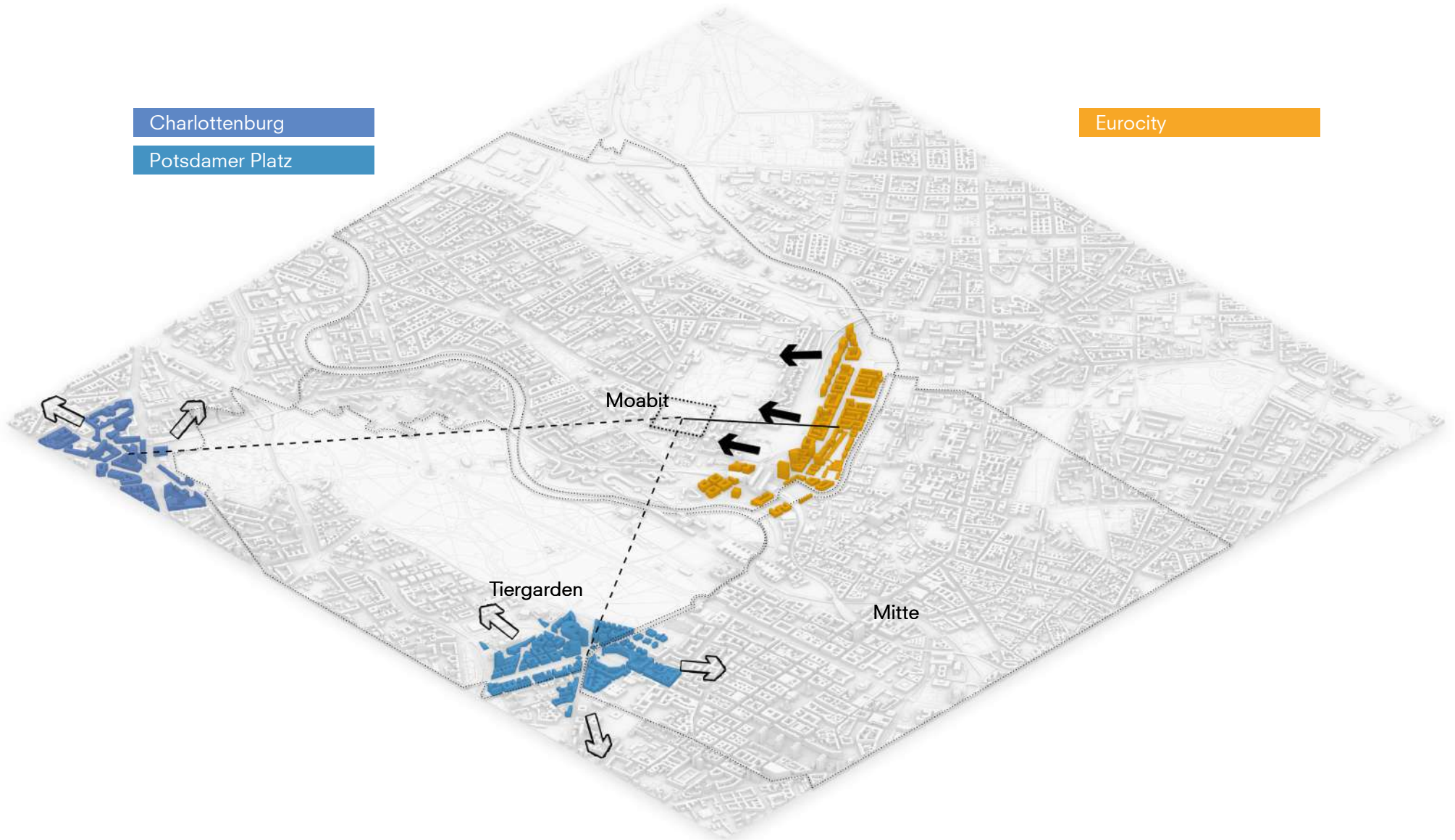
# LARGE SCALE

## Centres & Developments

Charlottenburg

Potsdamer Platz

Eurocity

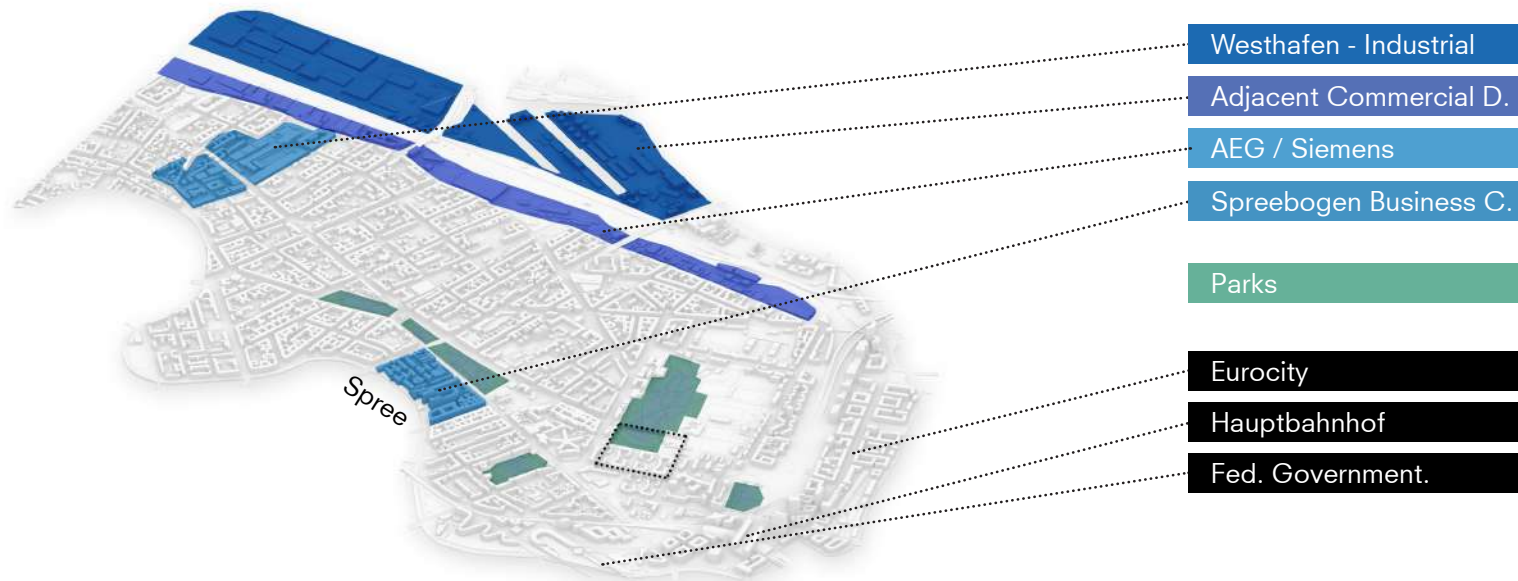




Research

# LARGE SCALE

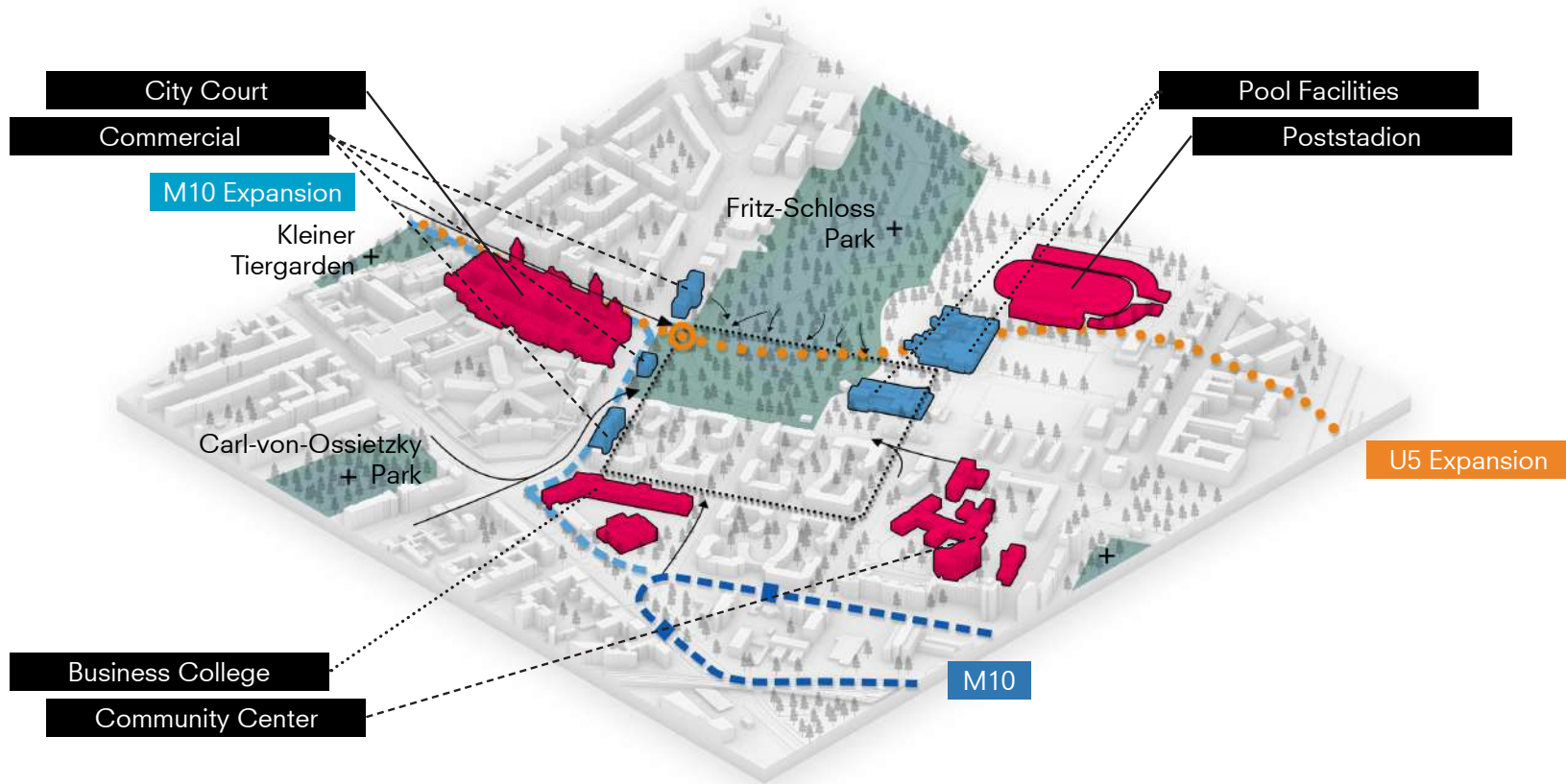
## Moabit Neighborhood



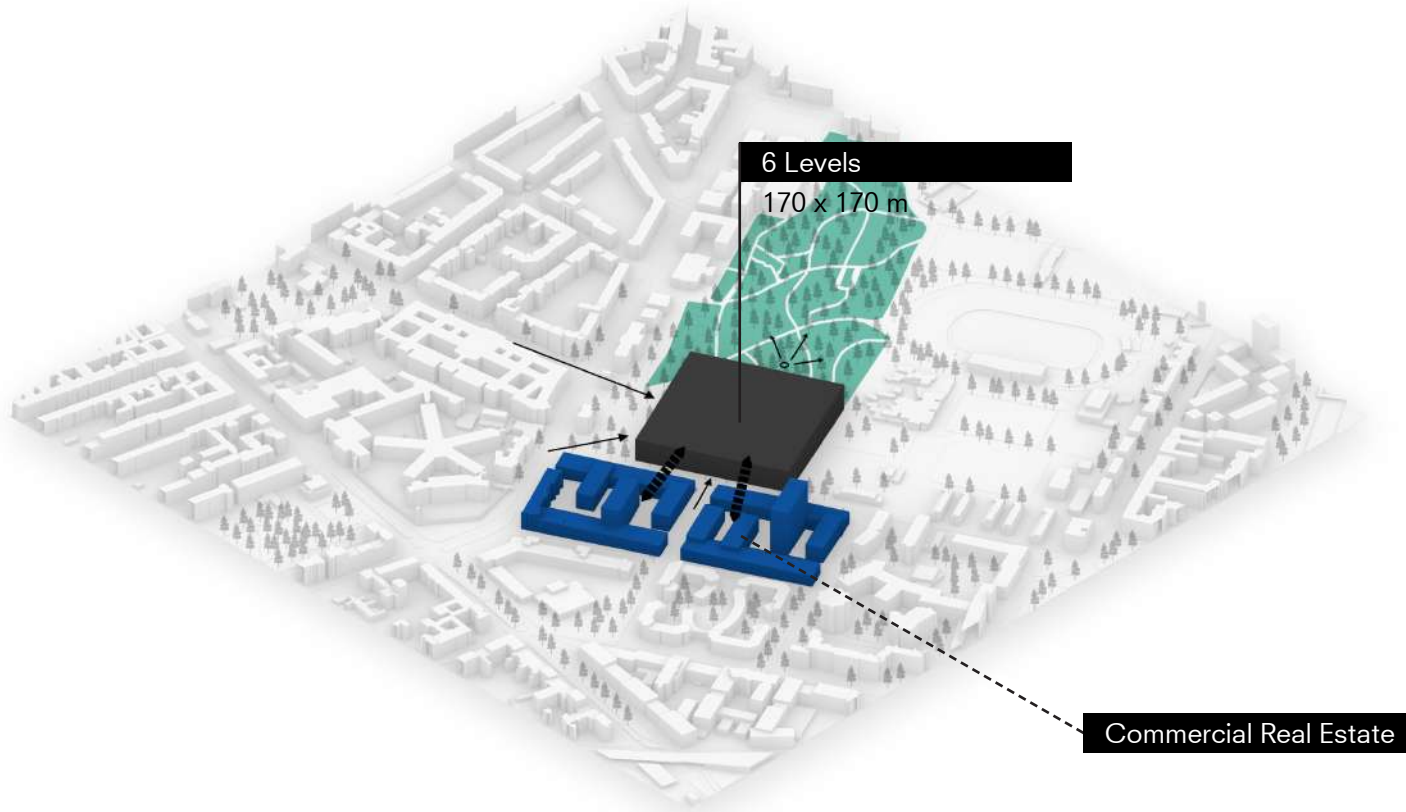
- Working class, 78 000 inhabitants (190 000 in 1910)
- Issues with drug trafficking, abuse and crime
- Lower rents, younger population, beginnings of gentrification



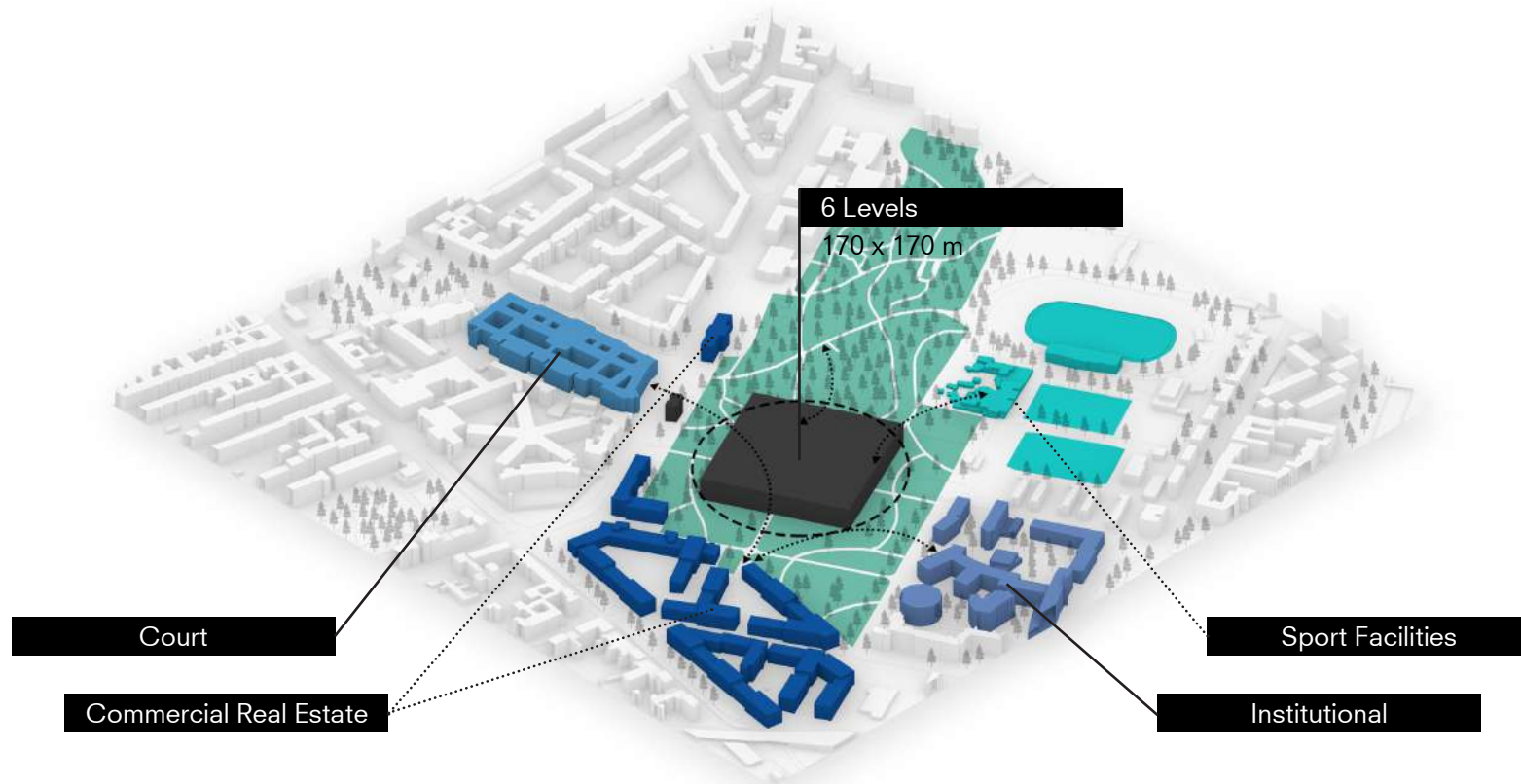
Research  
**MEDIUM SCALE**  
Snapshot



Research  
**MEDIUM SCALE**  
Strategy



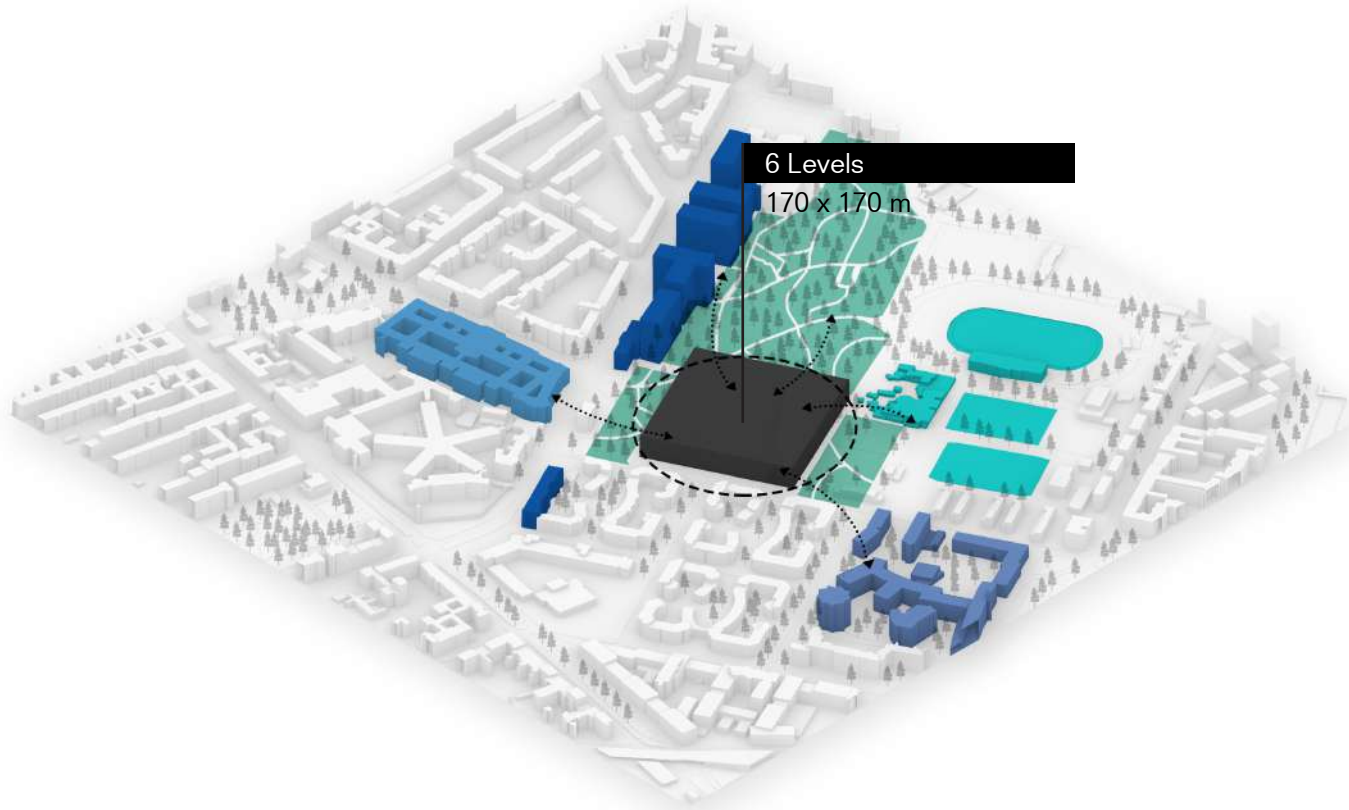
Research  
**MEDIUM SCALE**  
Strategy



Research

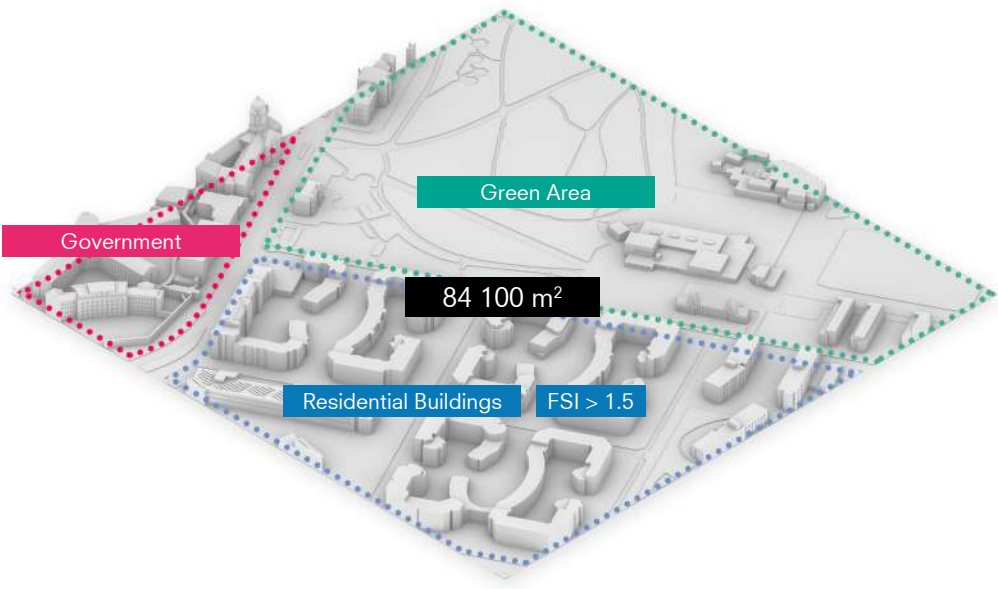
# MEDIUM SCALE

Strategy

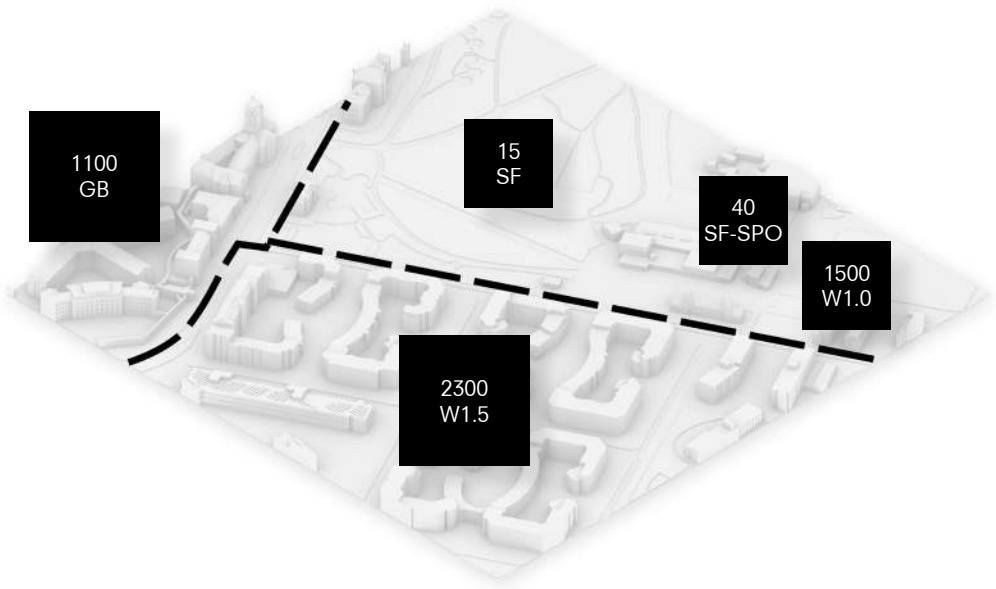


# Research SMALL SCALE

Land Use



Land Value

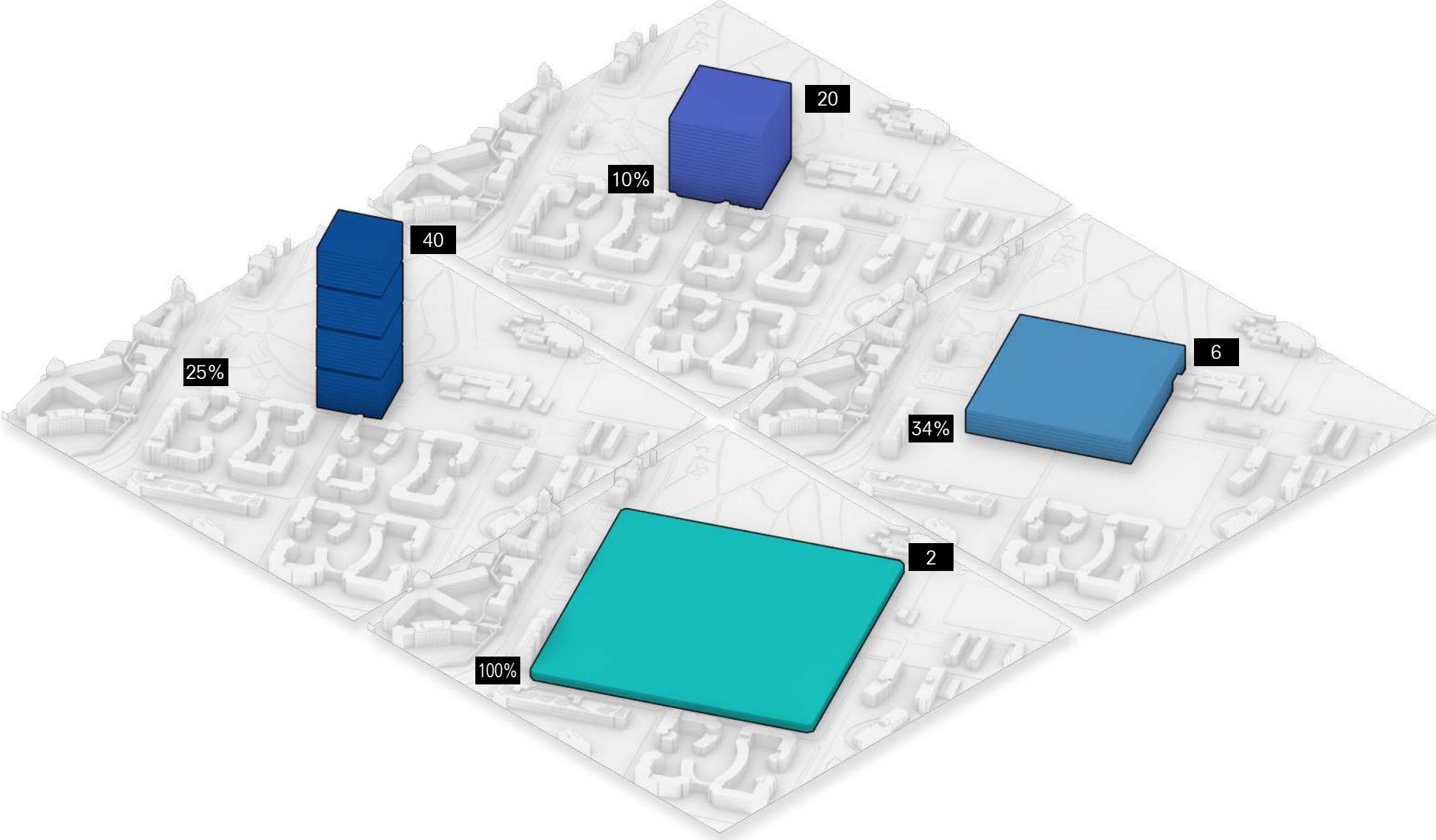




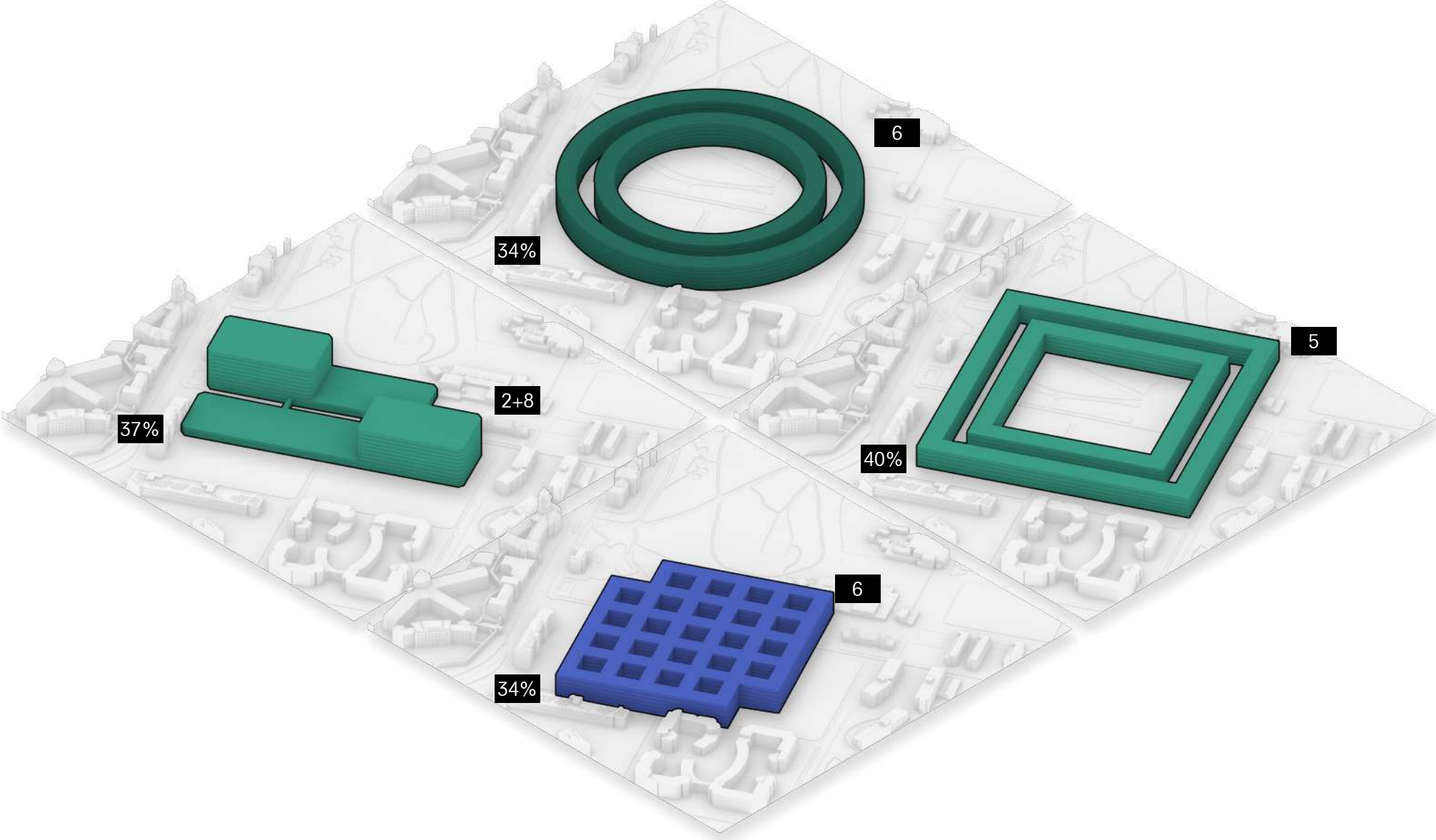
Research  
**SMALL SCALE**



Research  
**SMALL SCALE**  
Massing Spectrum

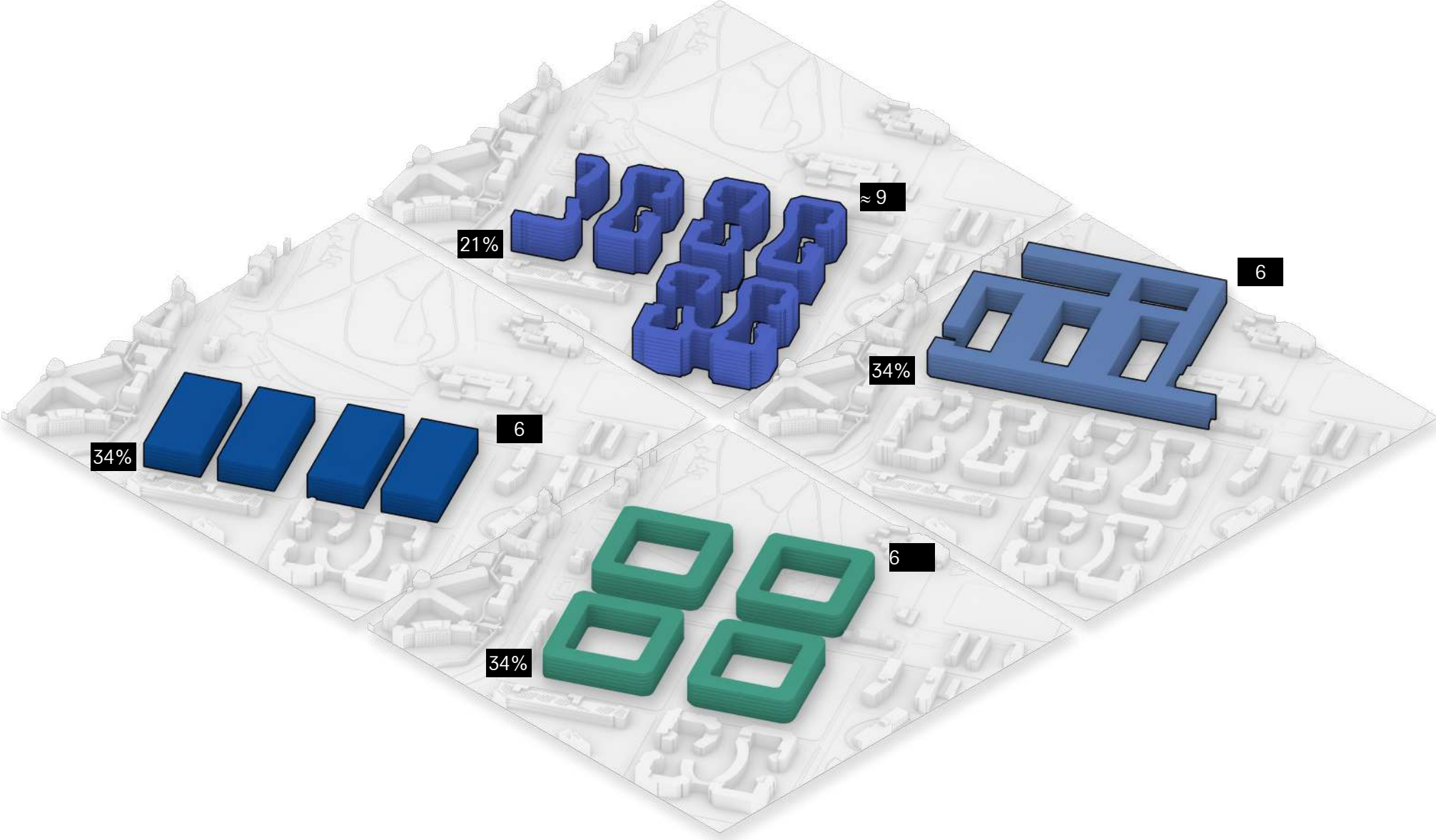


Research  
**SMALL SCALE**  
Massing

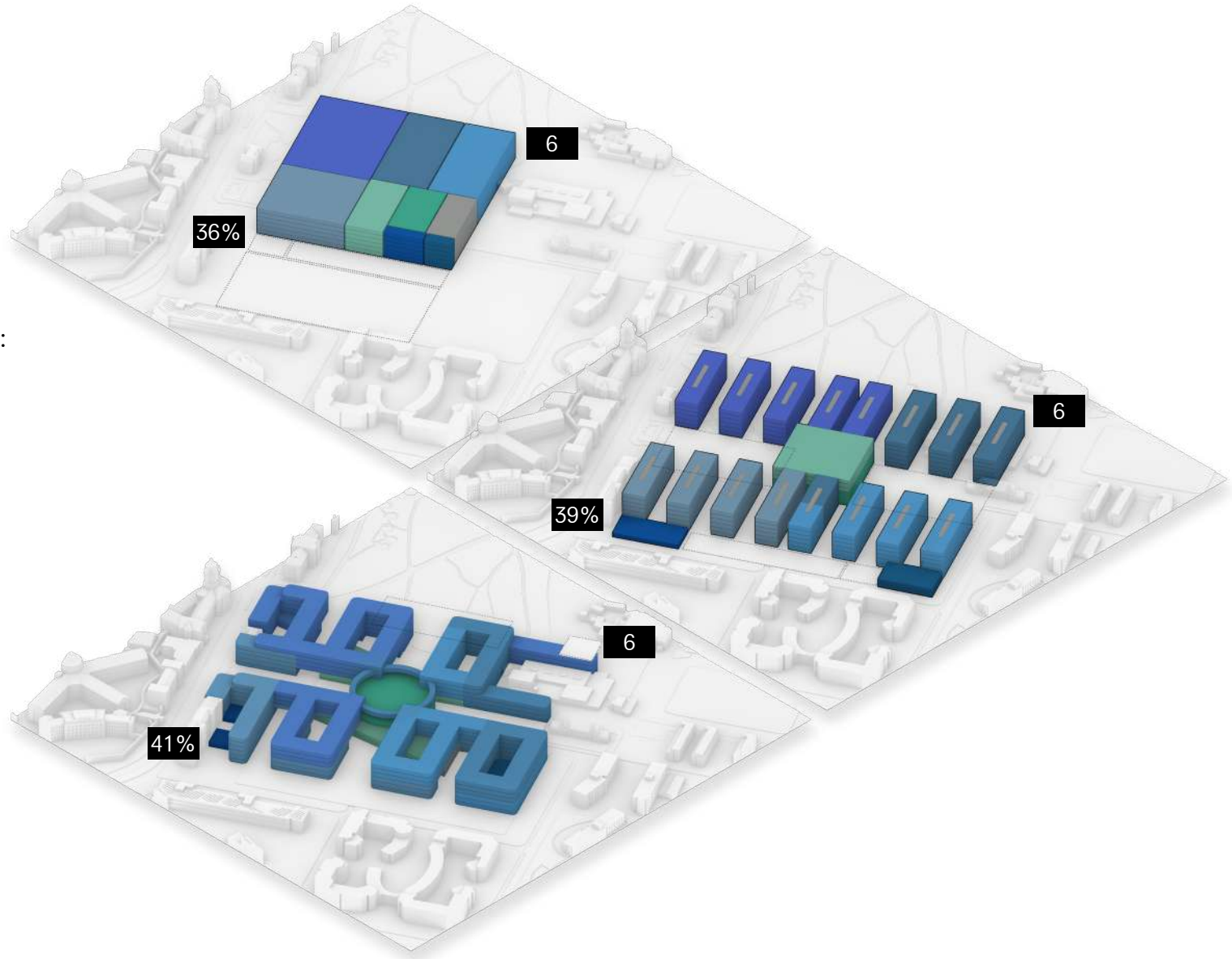




Research  
**SMALL SCALE**  
Muted Massing



# CURRENT MASSING



Programme Considerations:

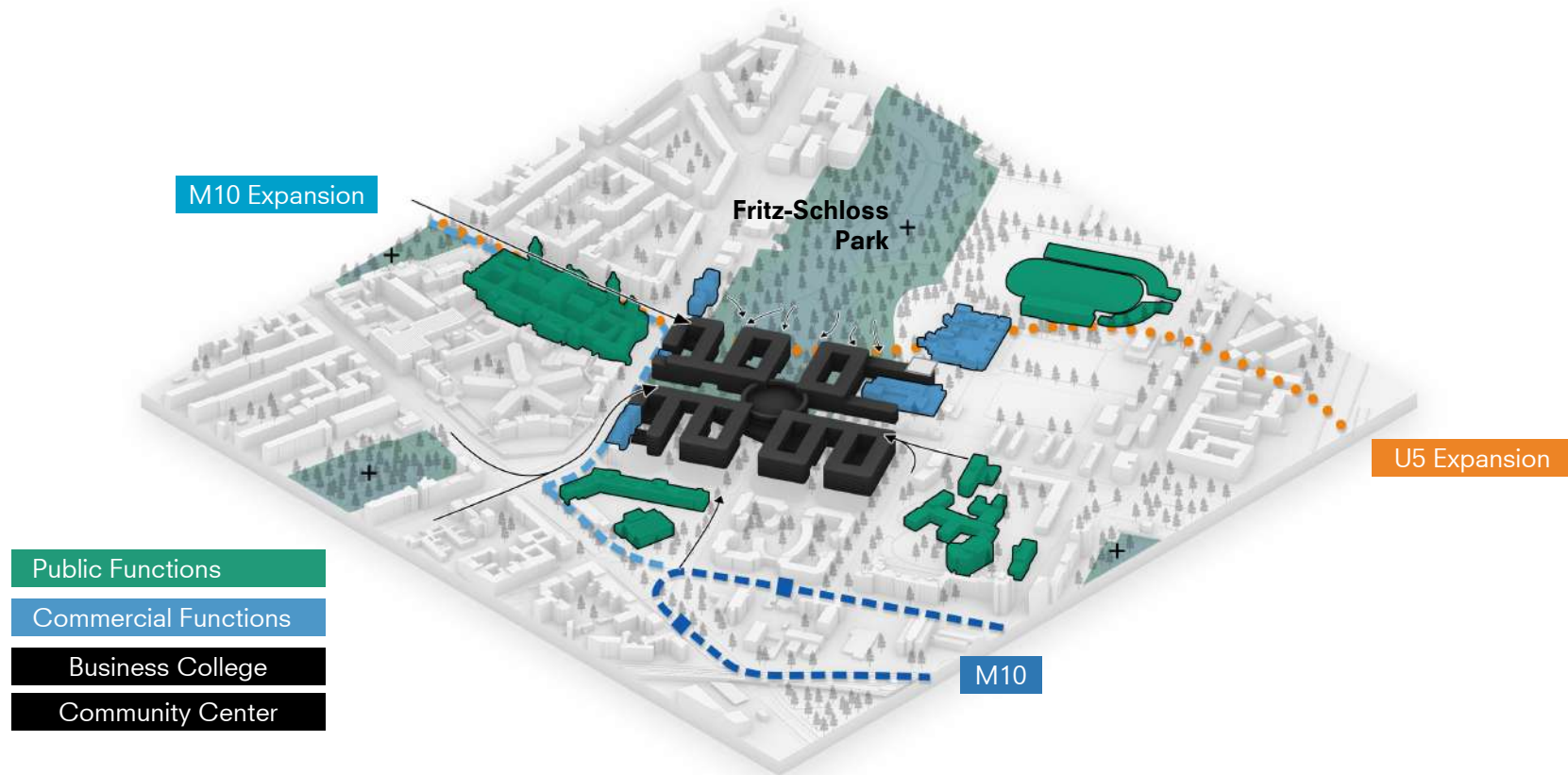
Site Considerations:

Client Considerations:



Research

# SITE ANALYSIS



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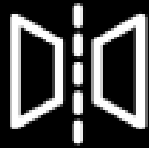
**Research**

**Concept**

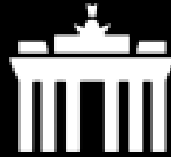
**Design**

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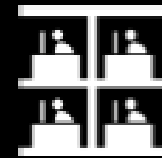
# MOD CHARACTERISTICS:



Symmetrical



Formal



Stacking



Inner Courtyards

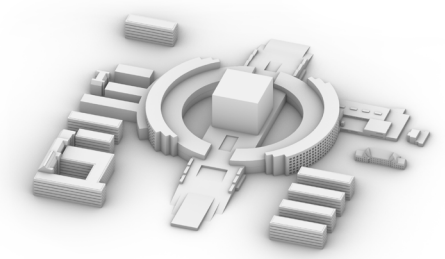
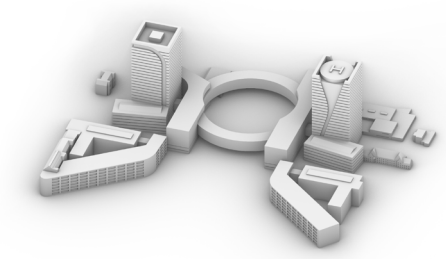
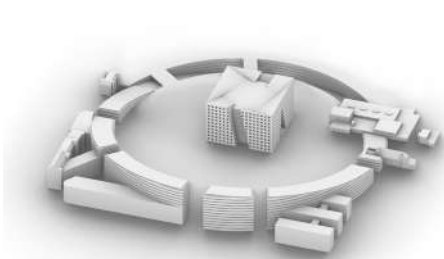
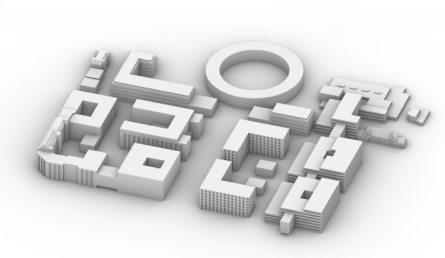
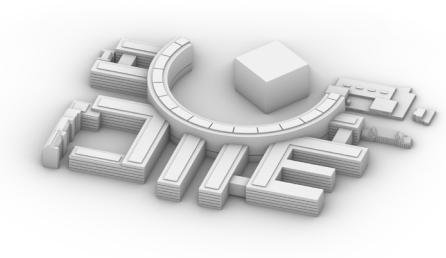
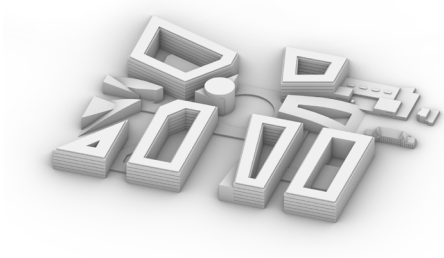
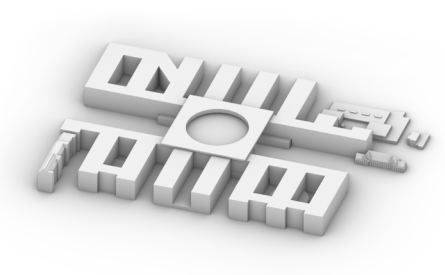
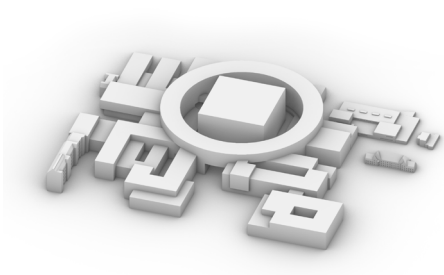


Mid Rise



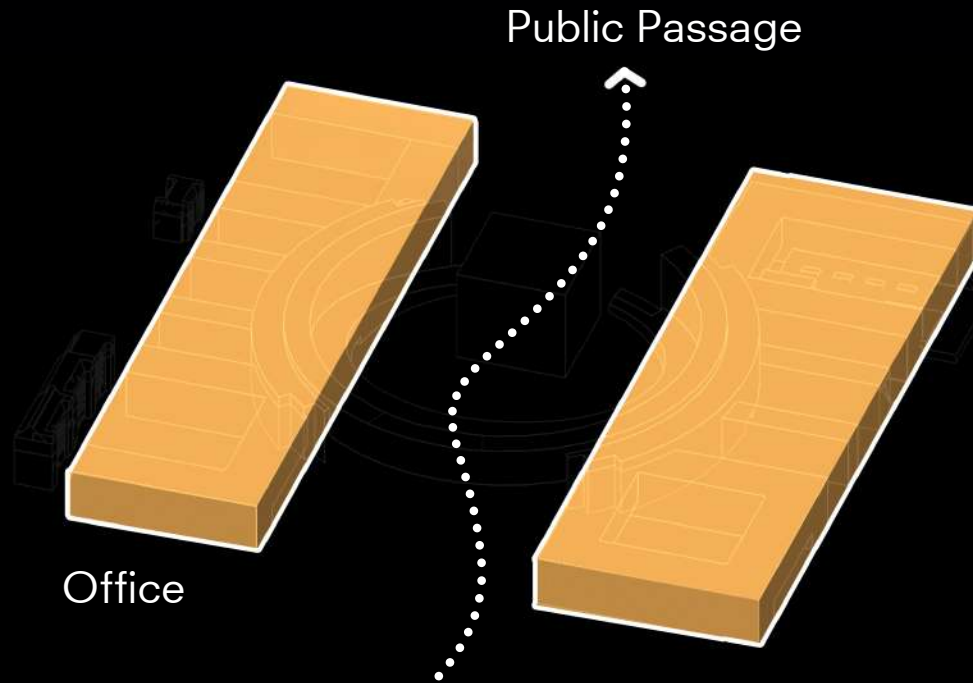
Perimeter Security

Concept  
**EARLY SCHEMES**



Concept

# FORM DEVELOPMENT

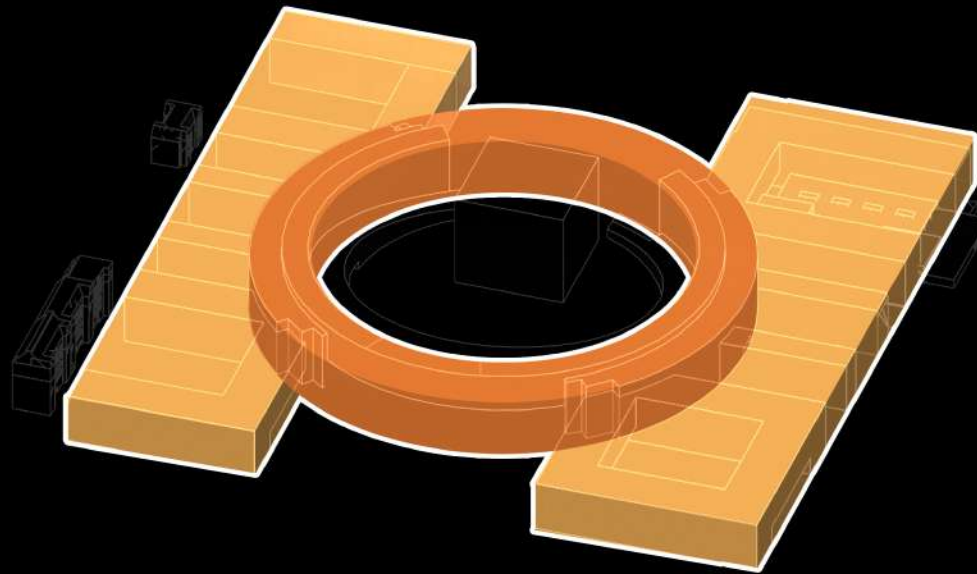




Concept

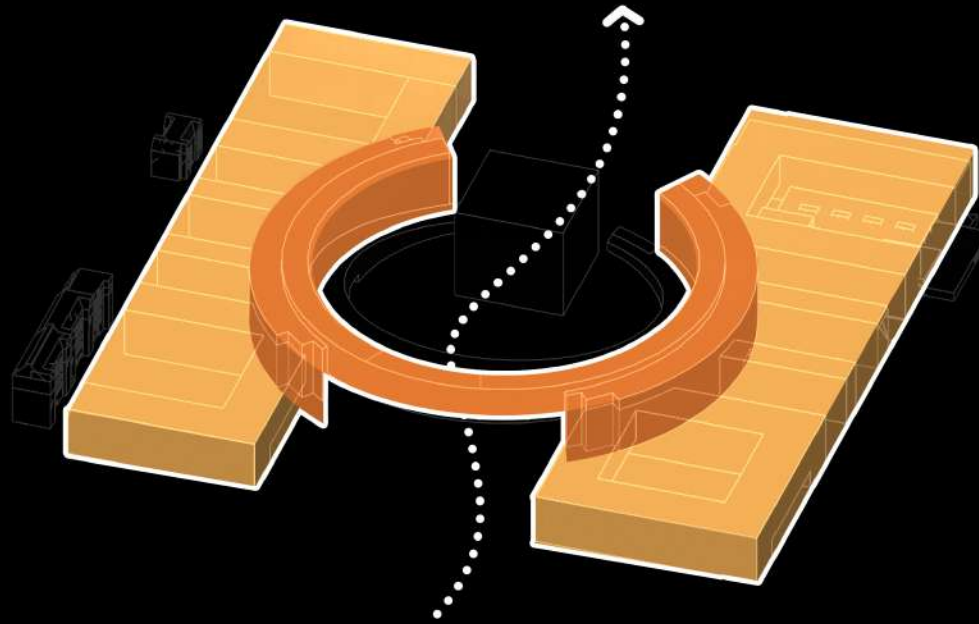
# FORM DEVELOPMENT

Protected Public Square



Concept

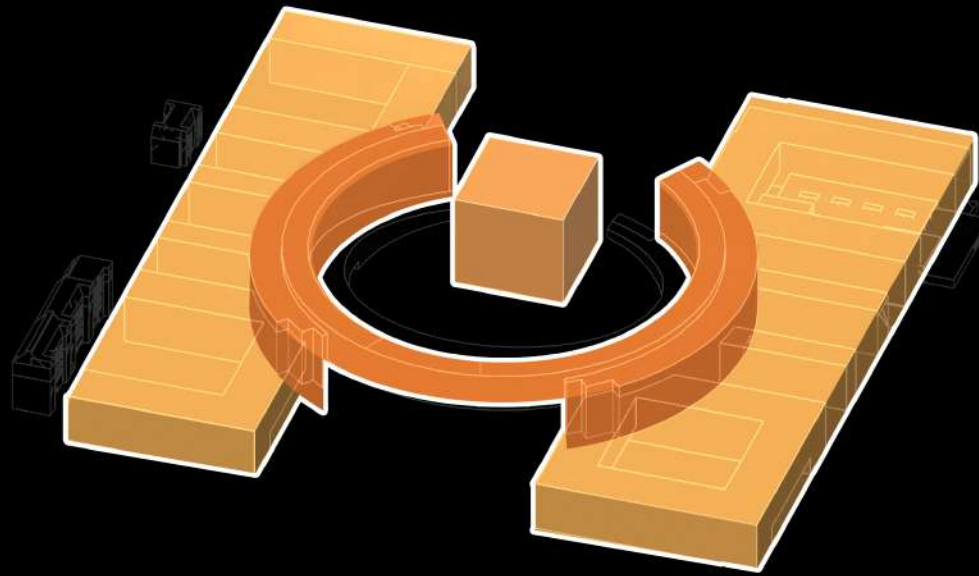
# FORM DEVELOPMENT



Concept

# FORM DEVELOPMENT

Nerve Center



Concept

# FORM DEVELOPMENT

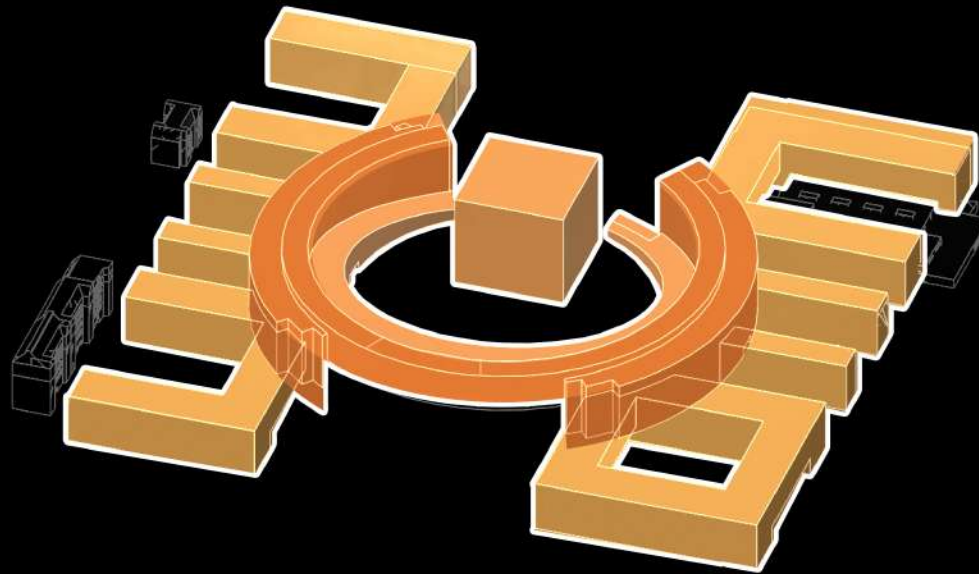
## Ascending Forum



Concept

# FORM DEVELOPMENT

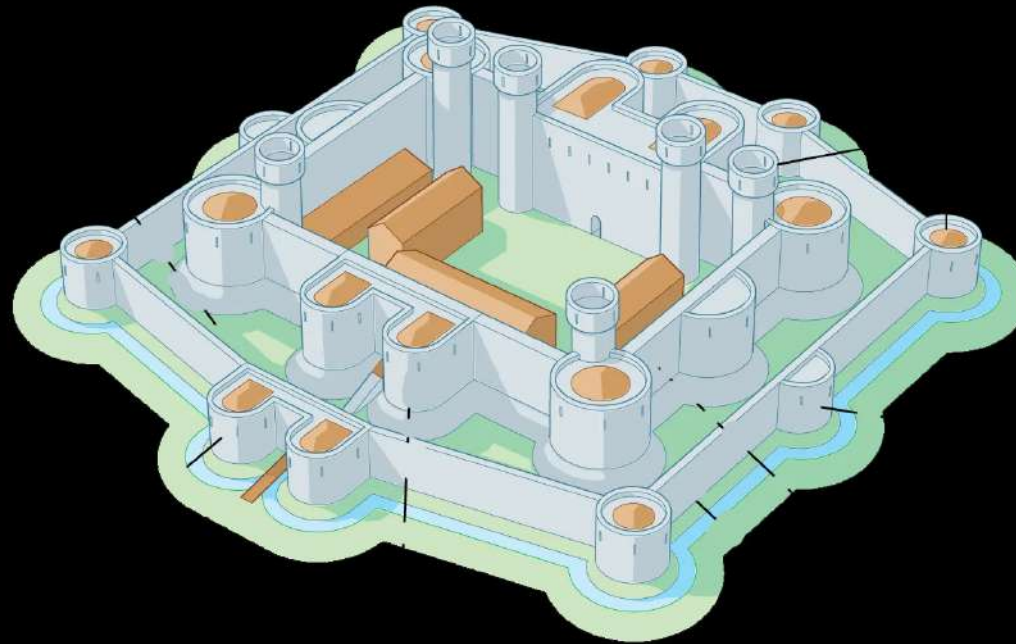
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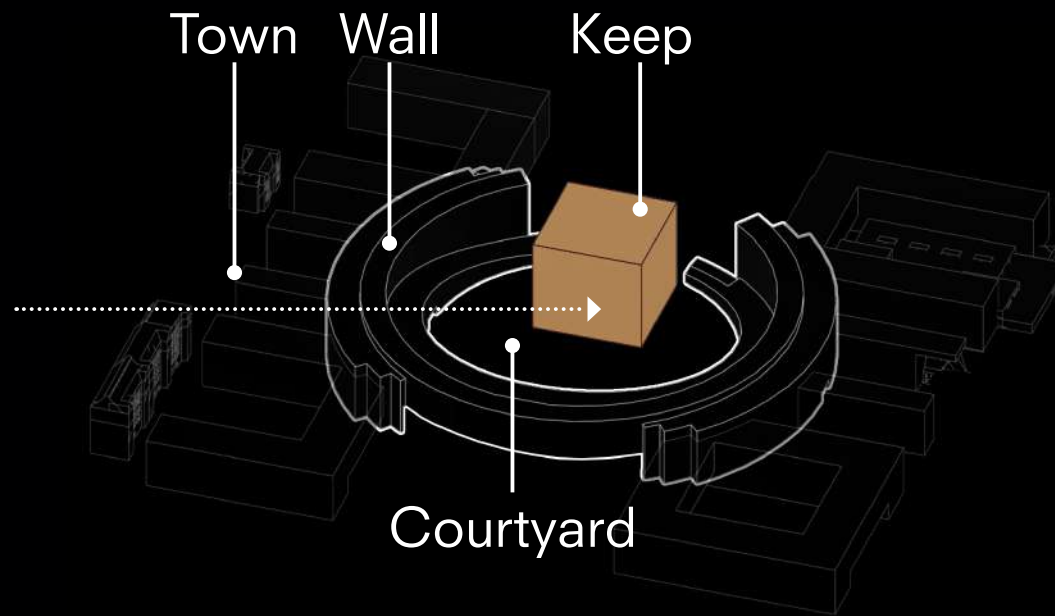


Concept

# FORM = CASTLE

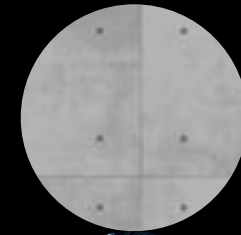


Concept  
**FORTRESS**



Concept

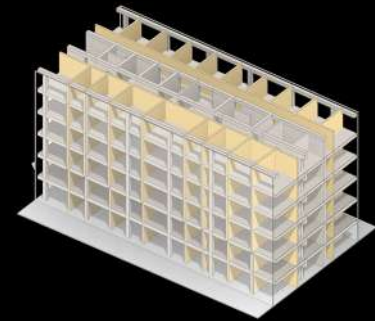
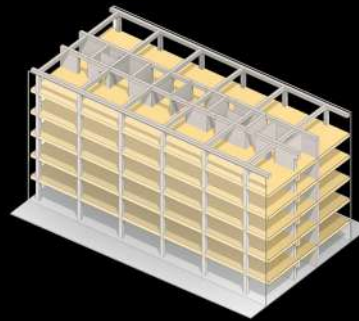
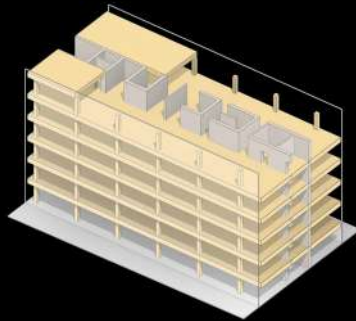
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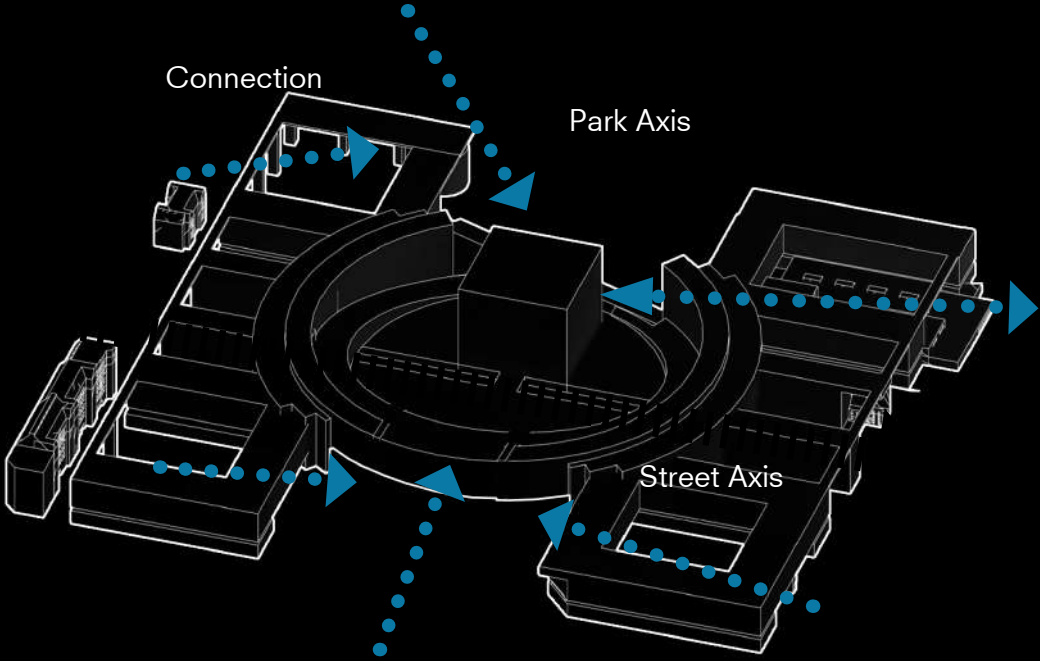
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Courtyard

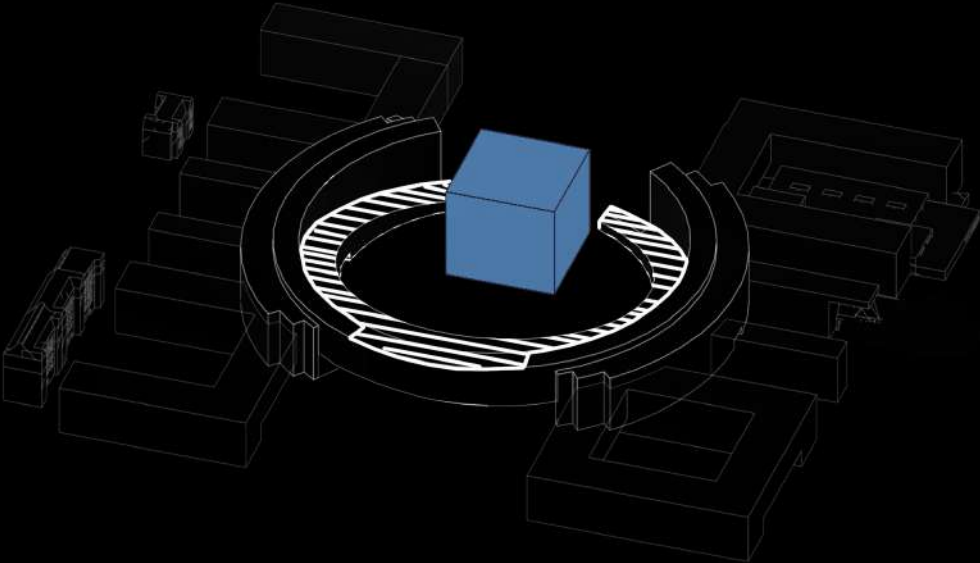


Concept  
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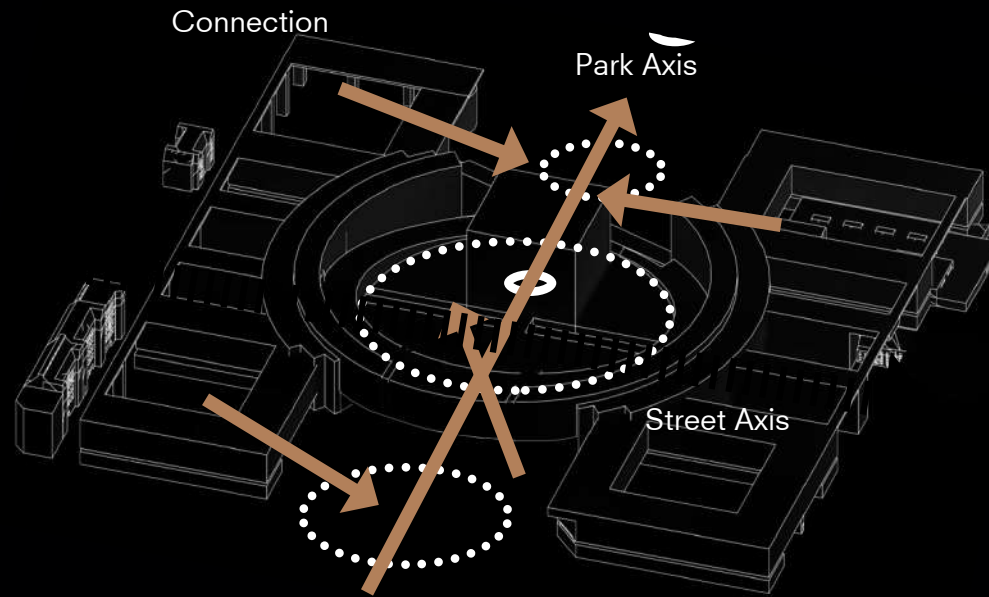
Concept

# ASCENDING FORUM





# Concept **AXIS:**



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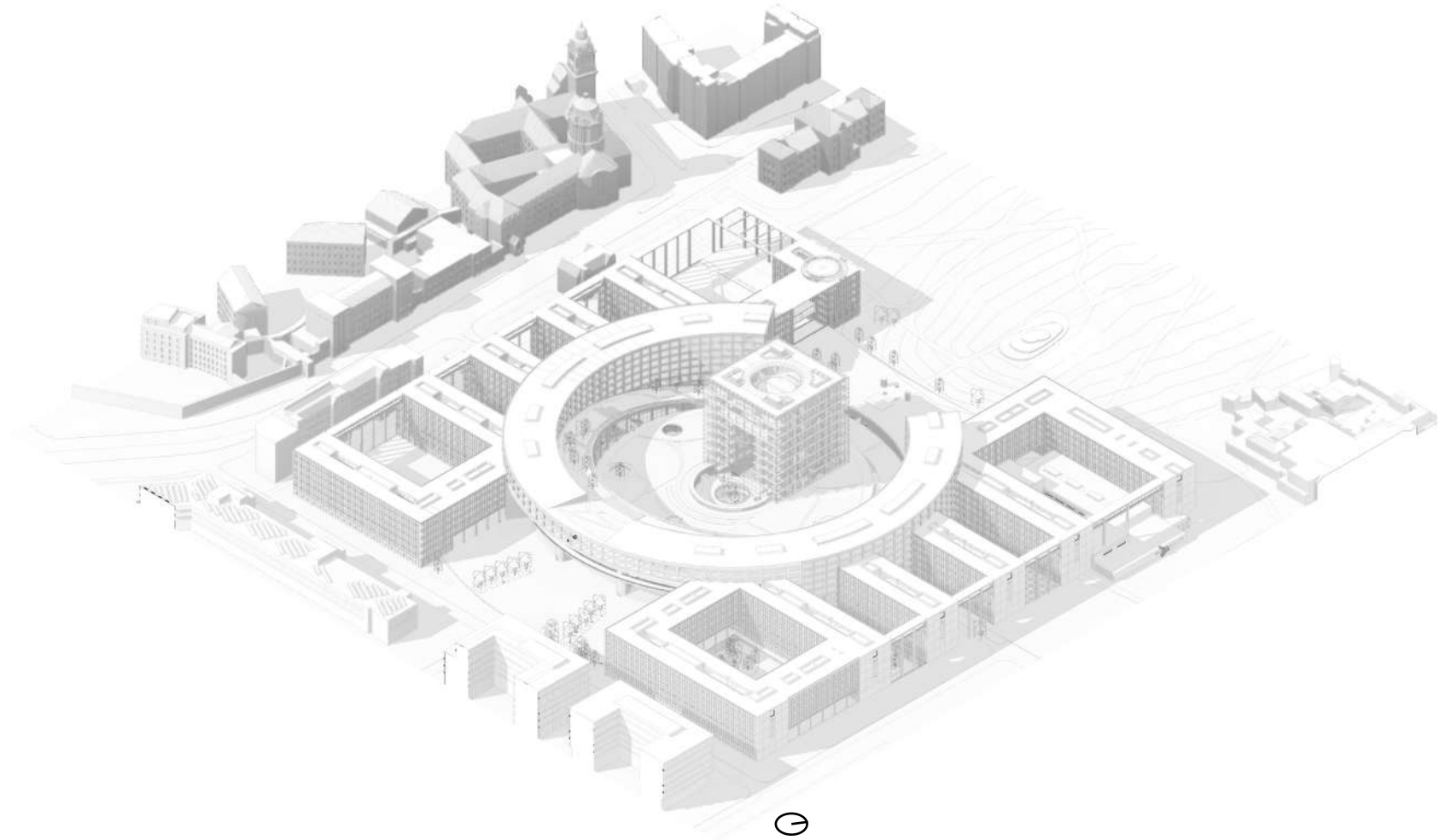
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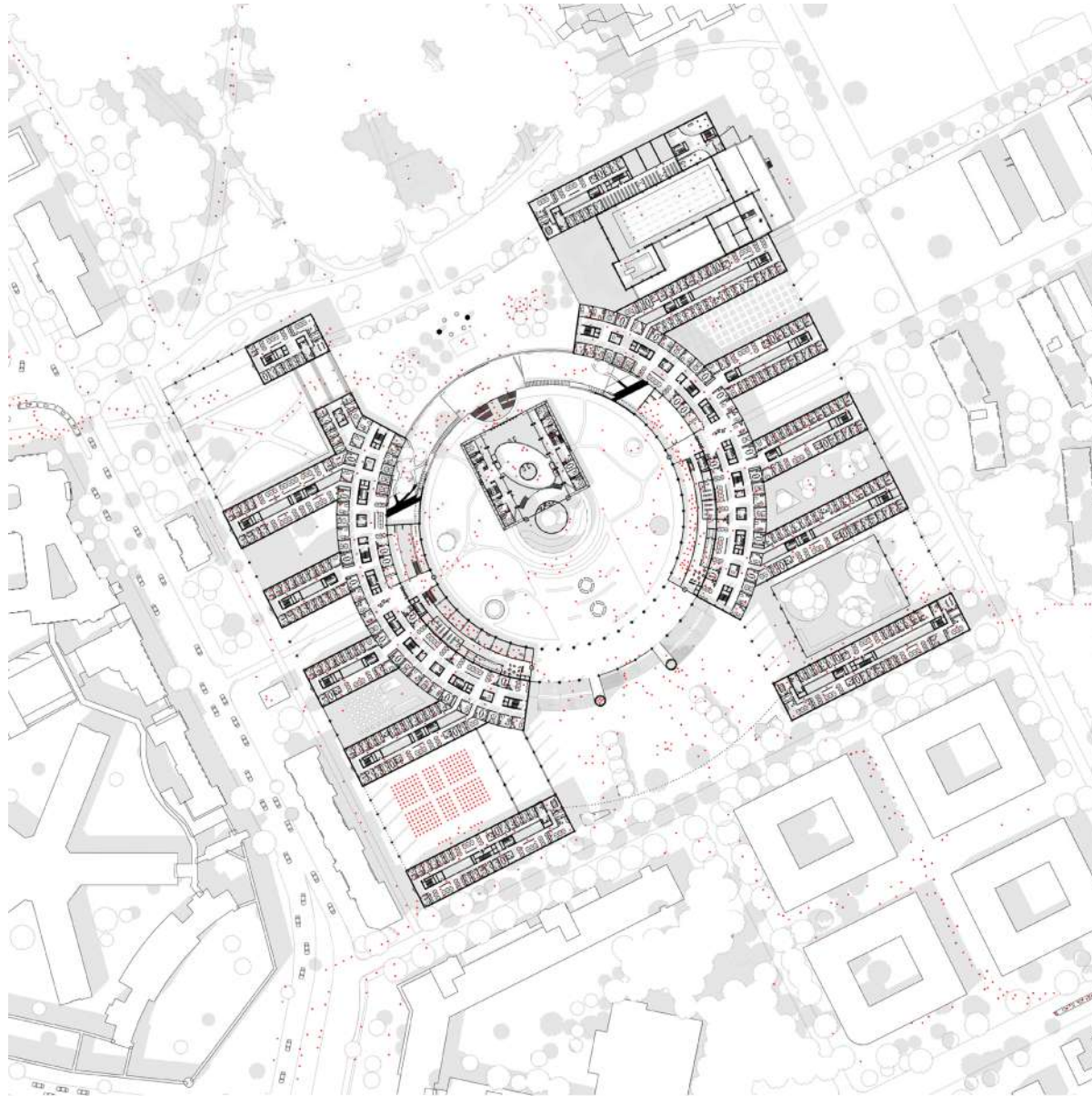
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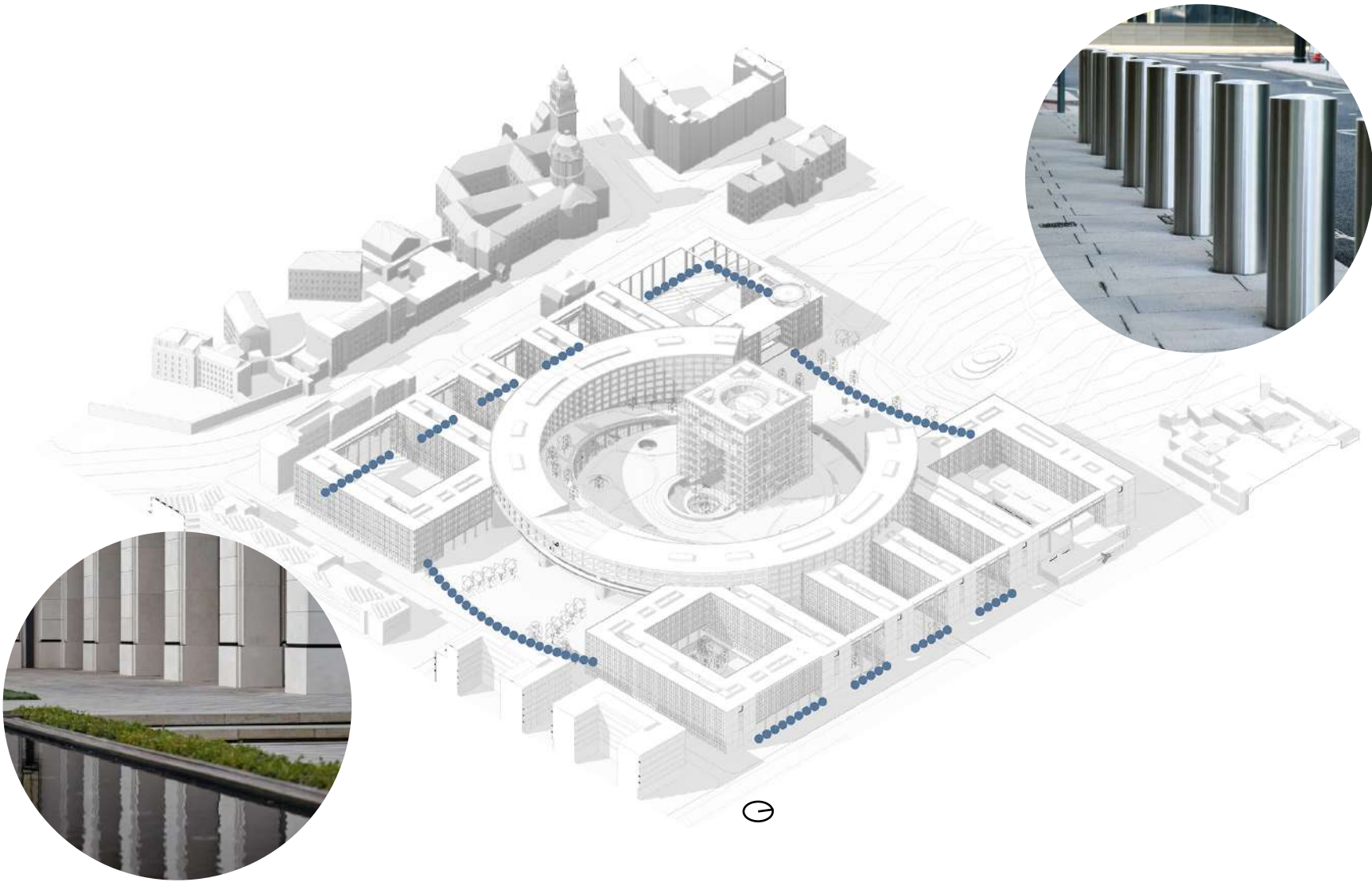
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# URBAN IMPLEMENTATION

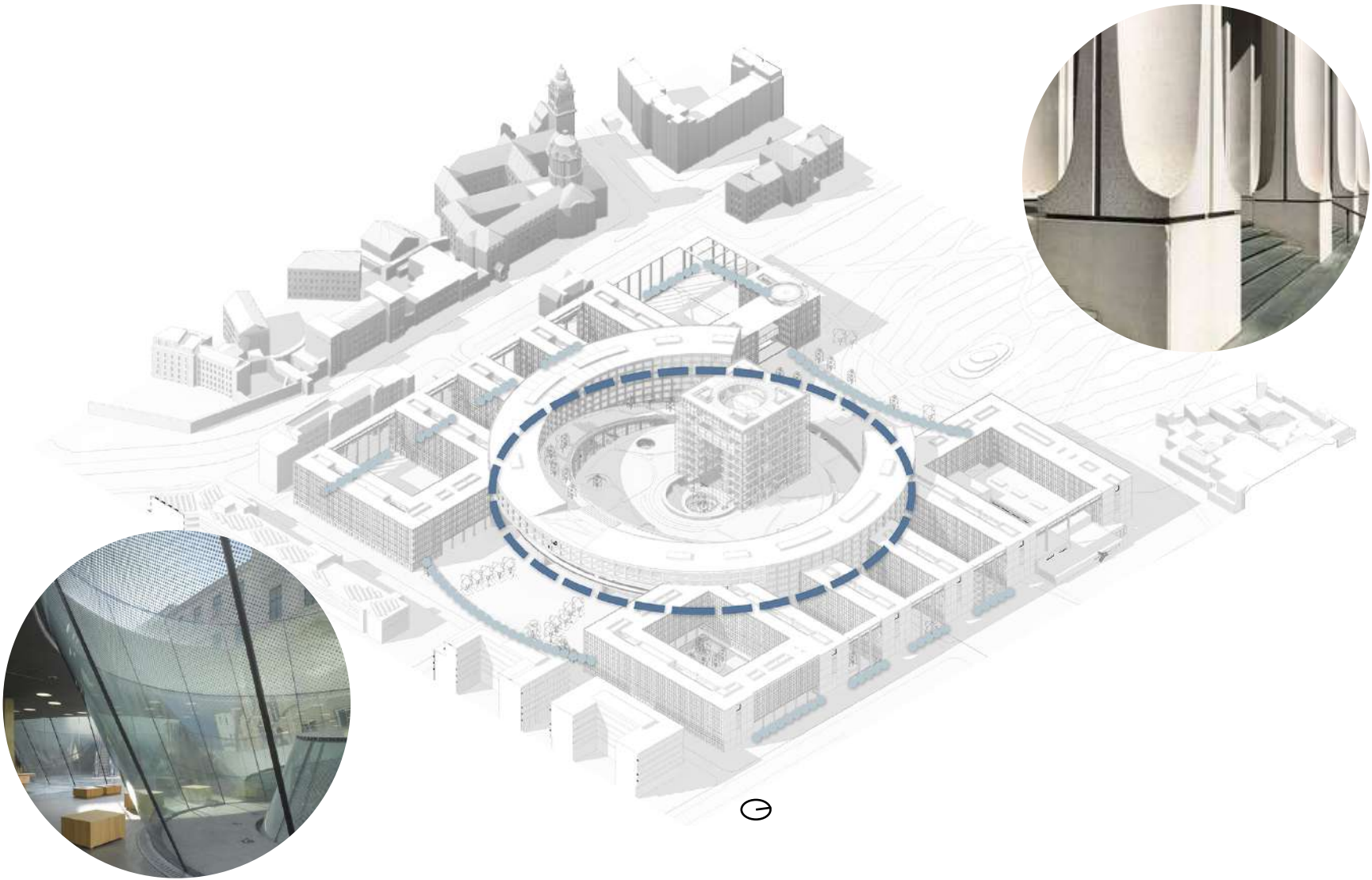


Design  
**SECURITY LEVELS**  
Barriers

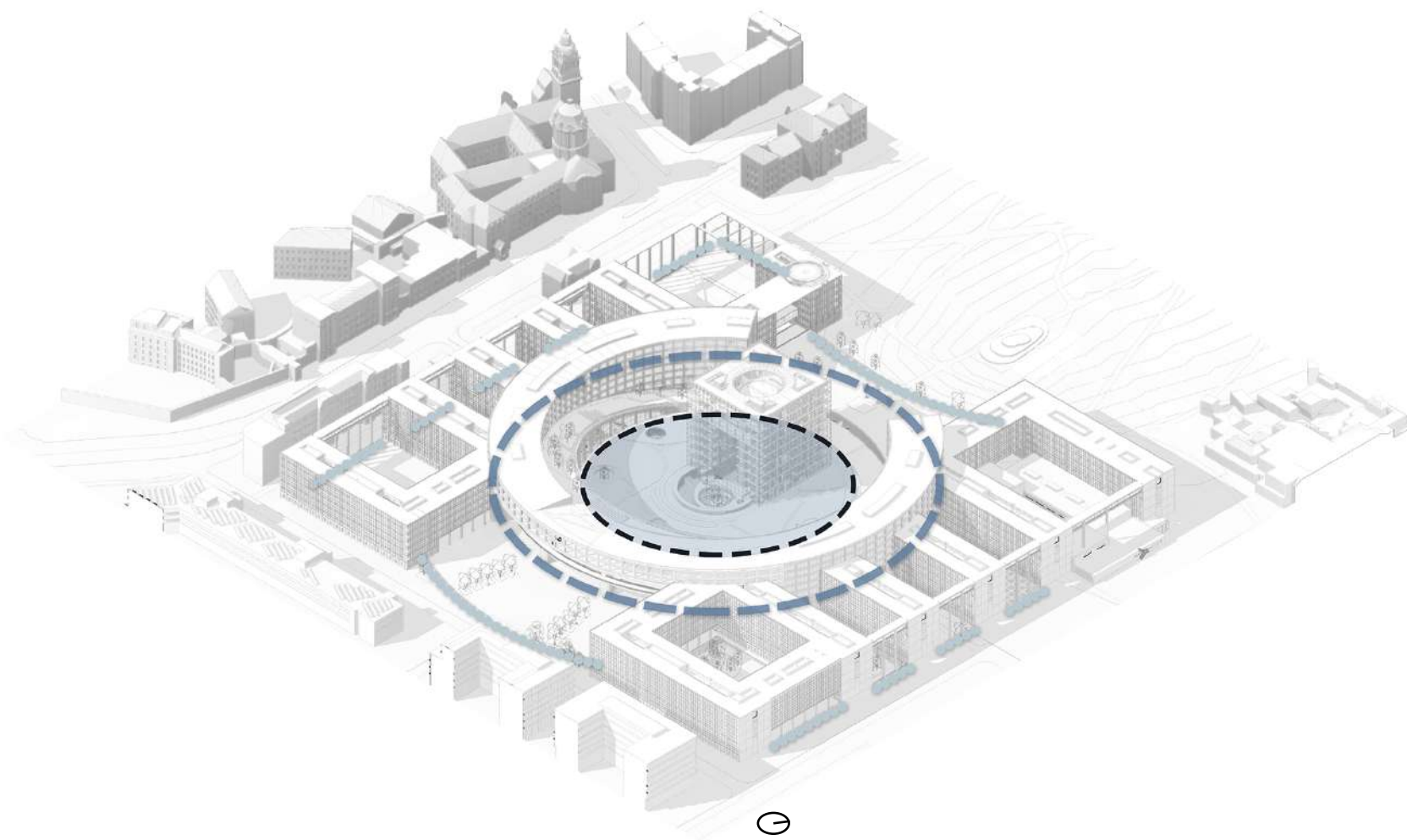




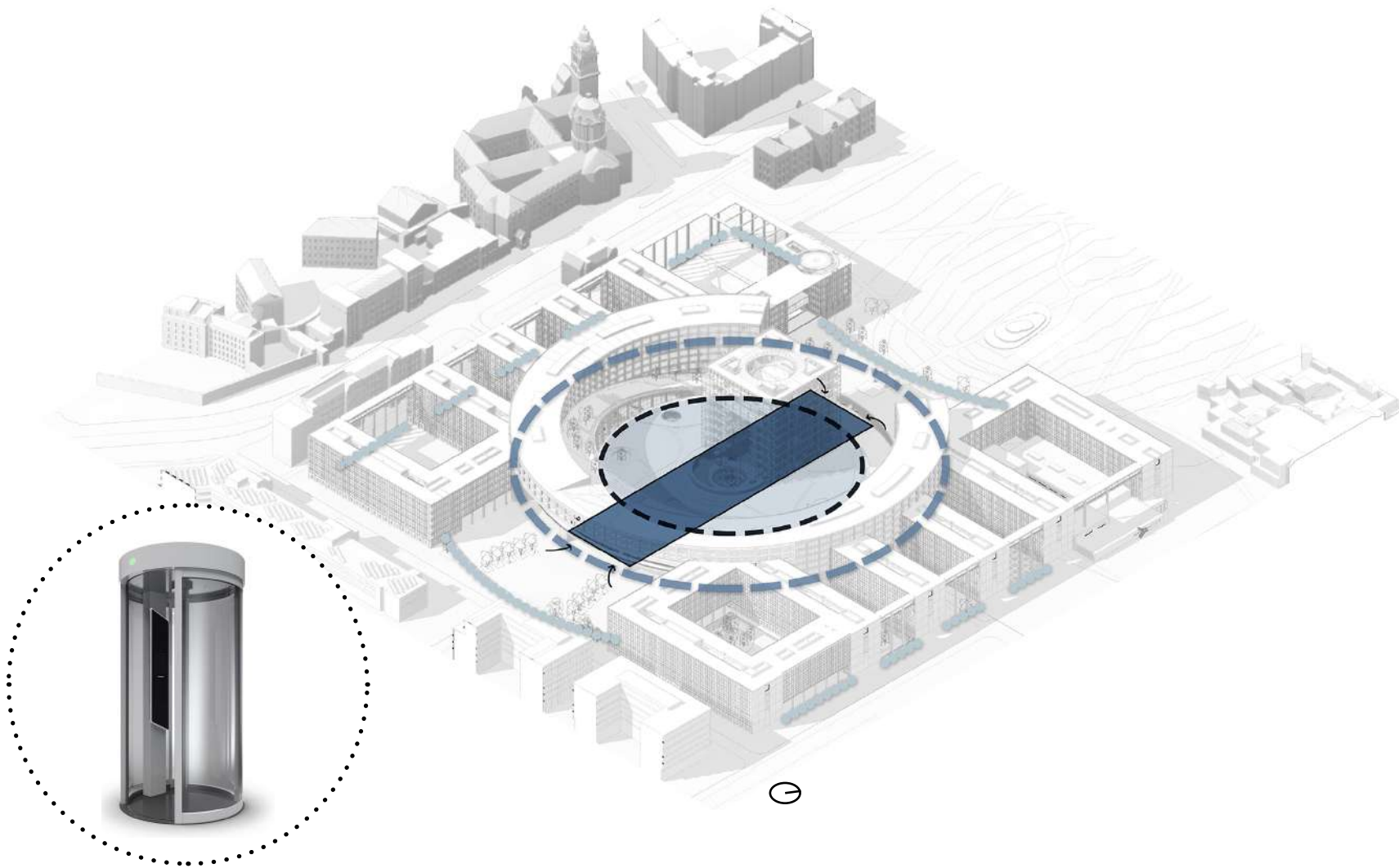
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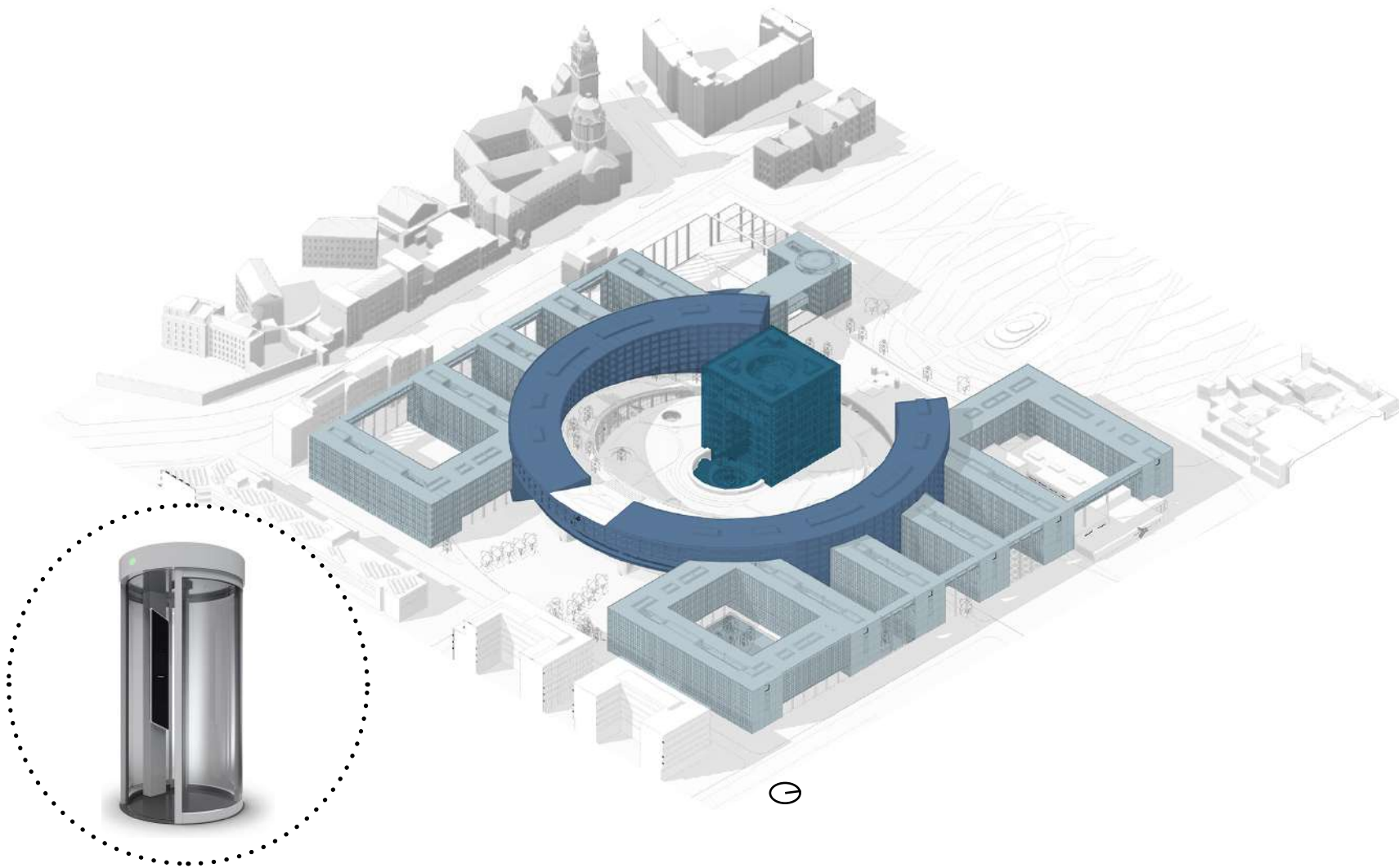
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**SECURITY LEVELS**  
Panopticon



Design  
**SECURITY LEVELS**  
Secured Spine

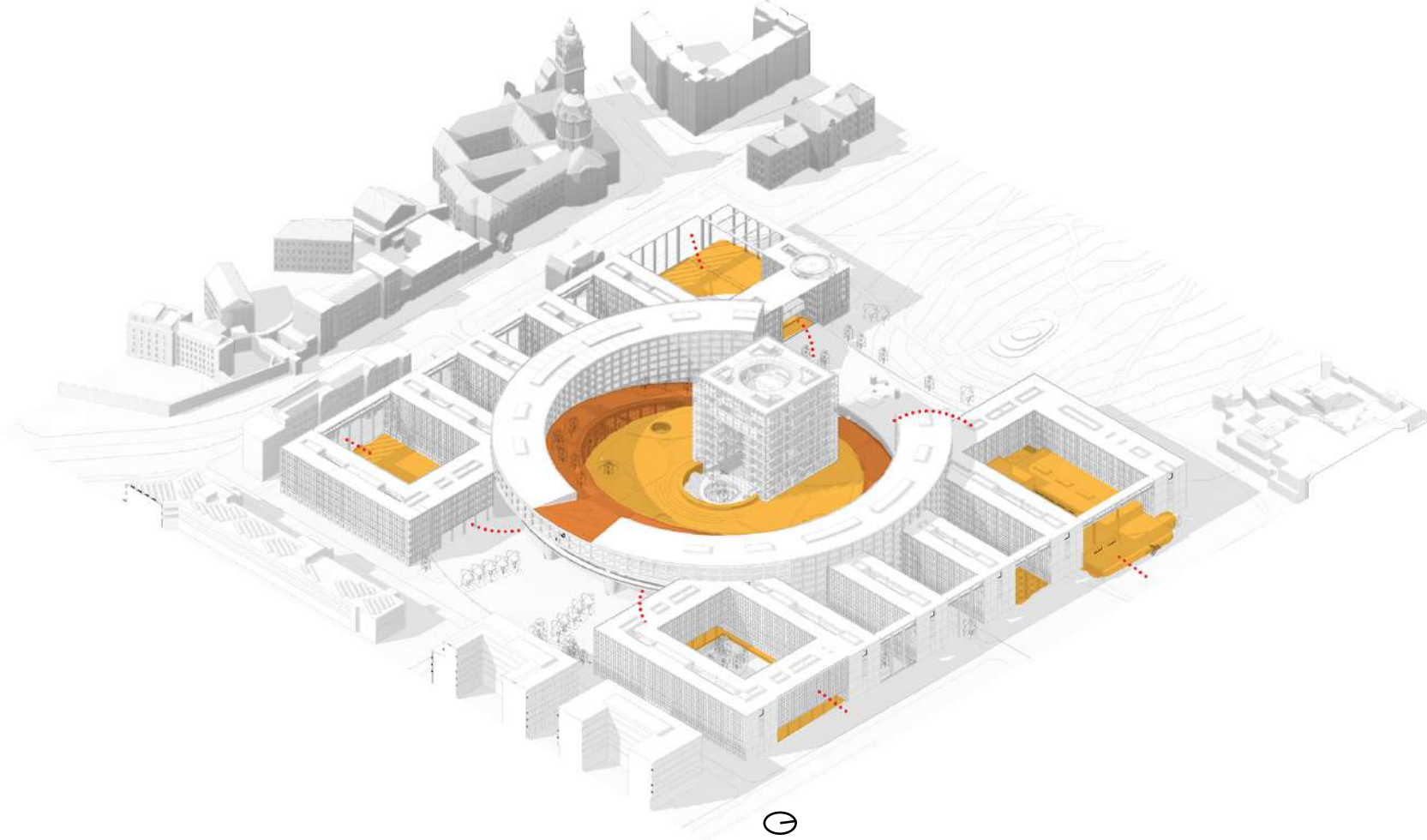


Design  
**SECURITY LEVELS**  
Employees



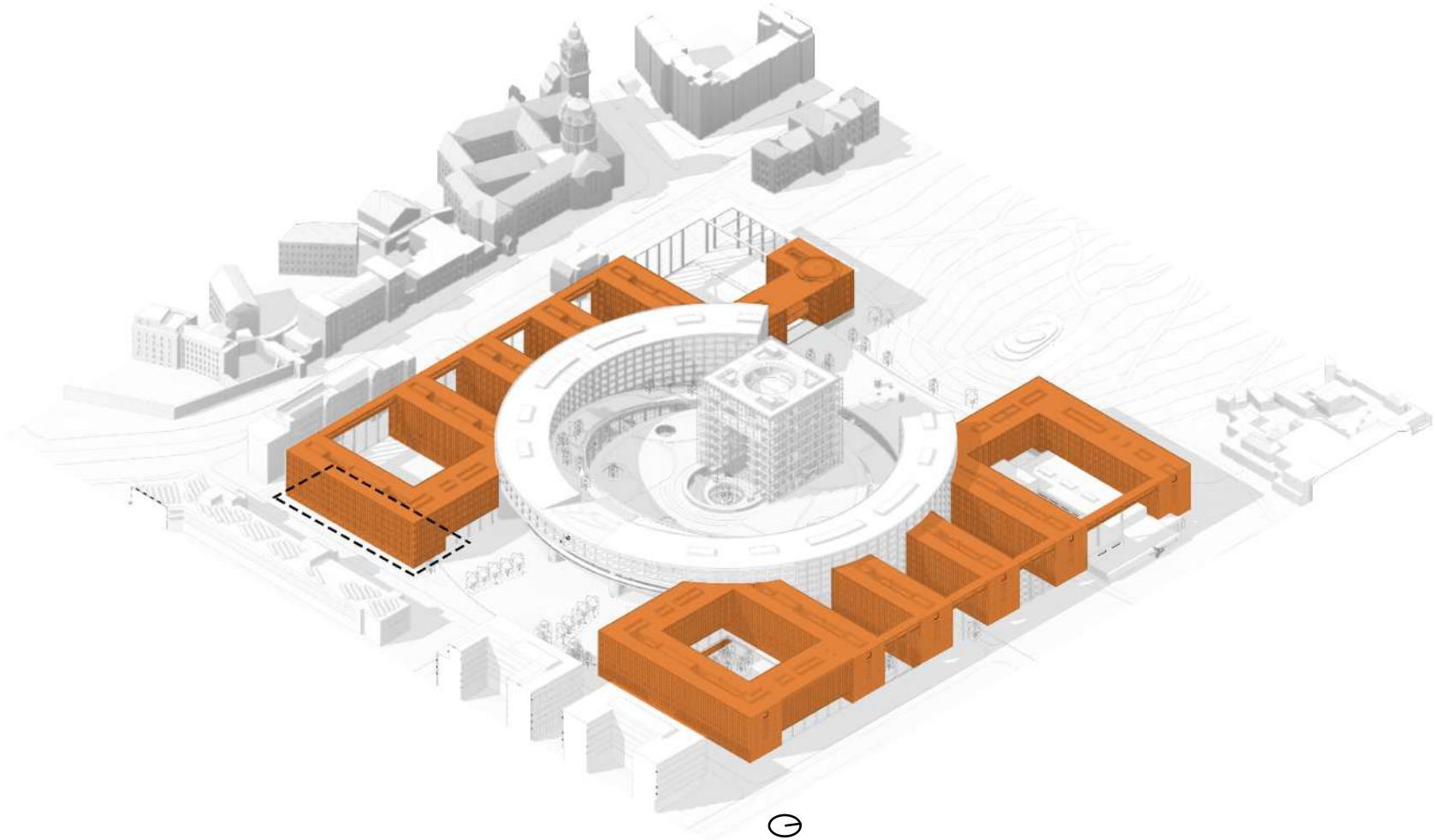


Design  
**SECURITY LEVELS**  
Public

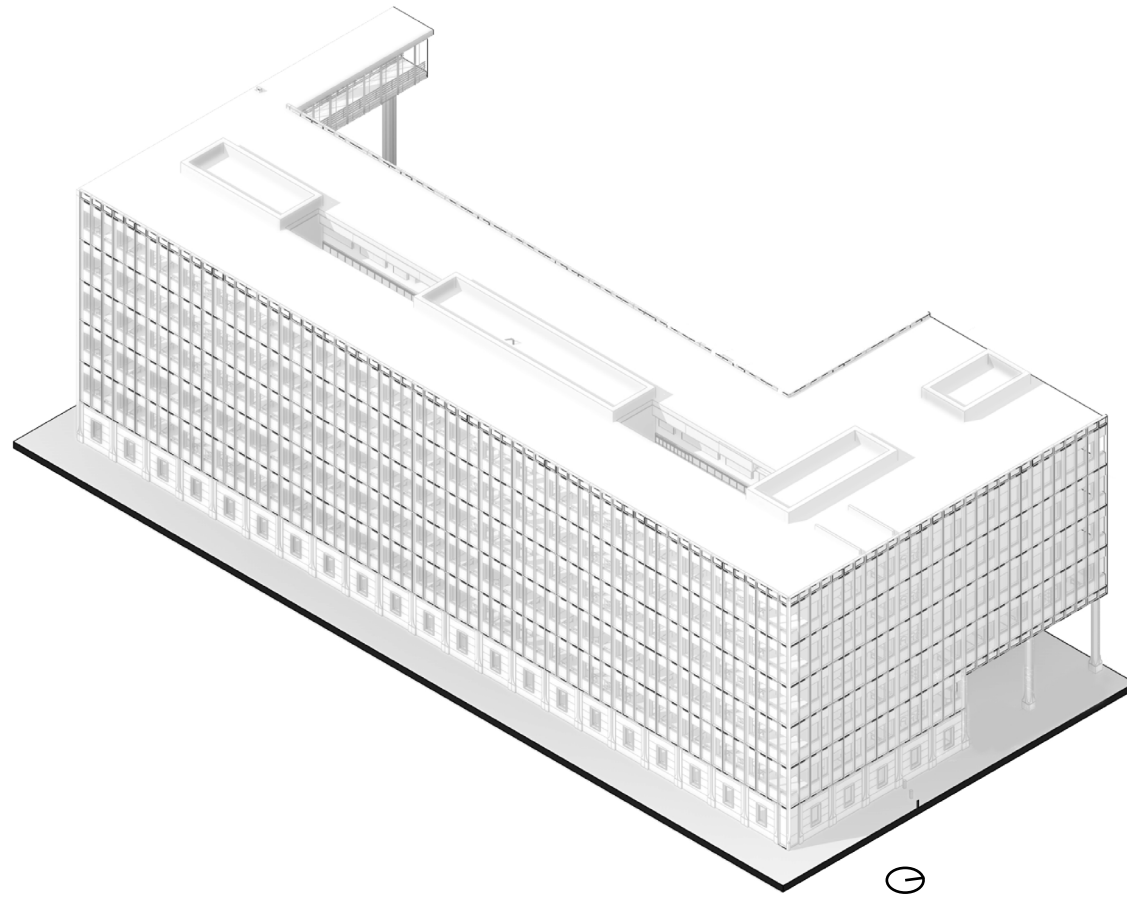




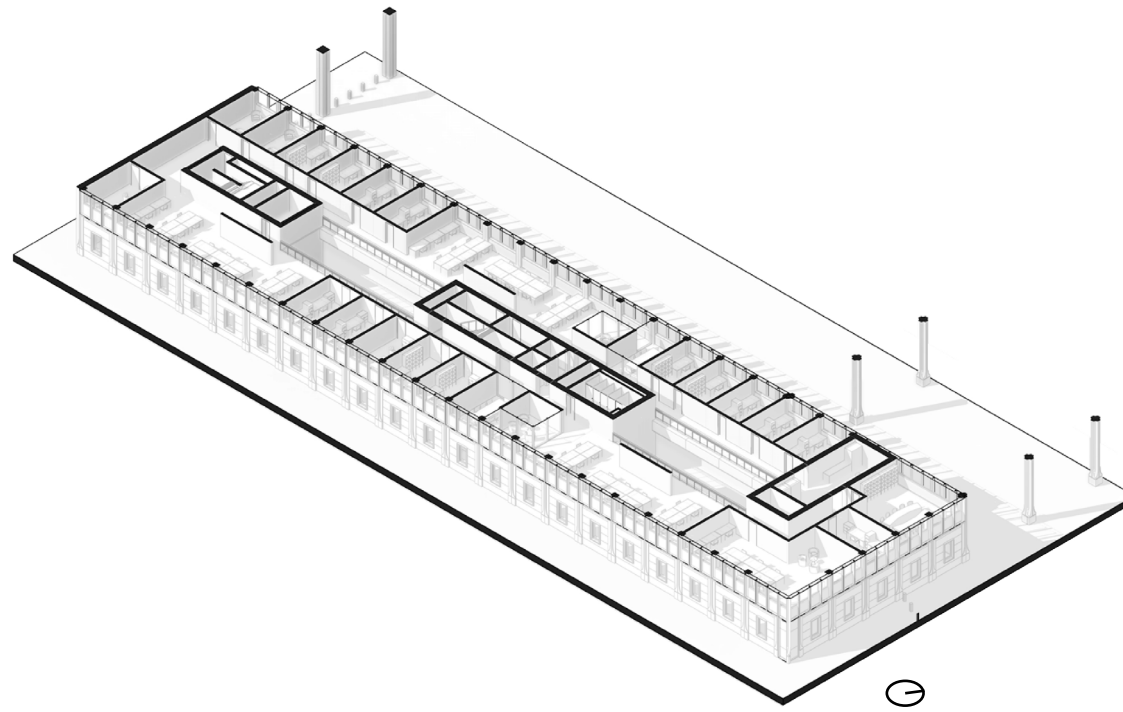
Design  
**OFFICE WING**



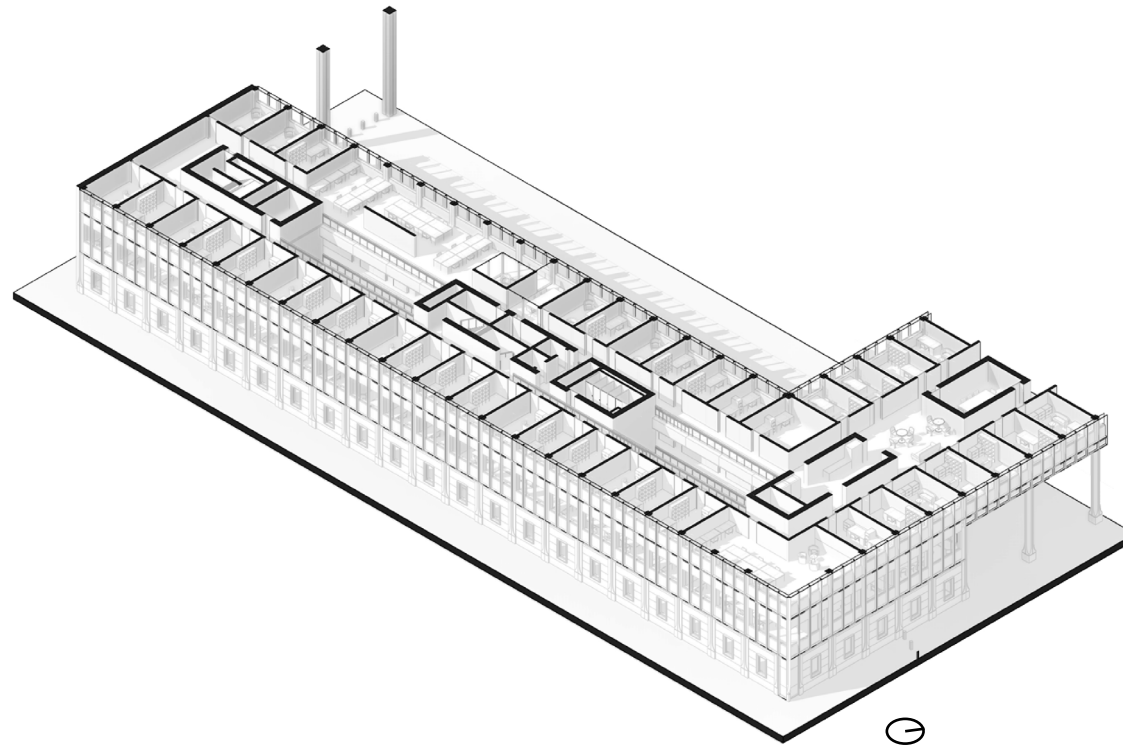
Design  
**OFFICE WING**



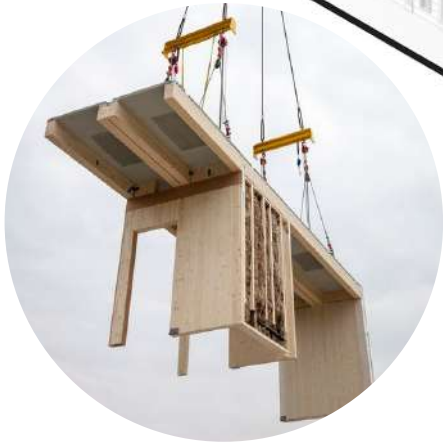
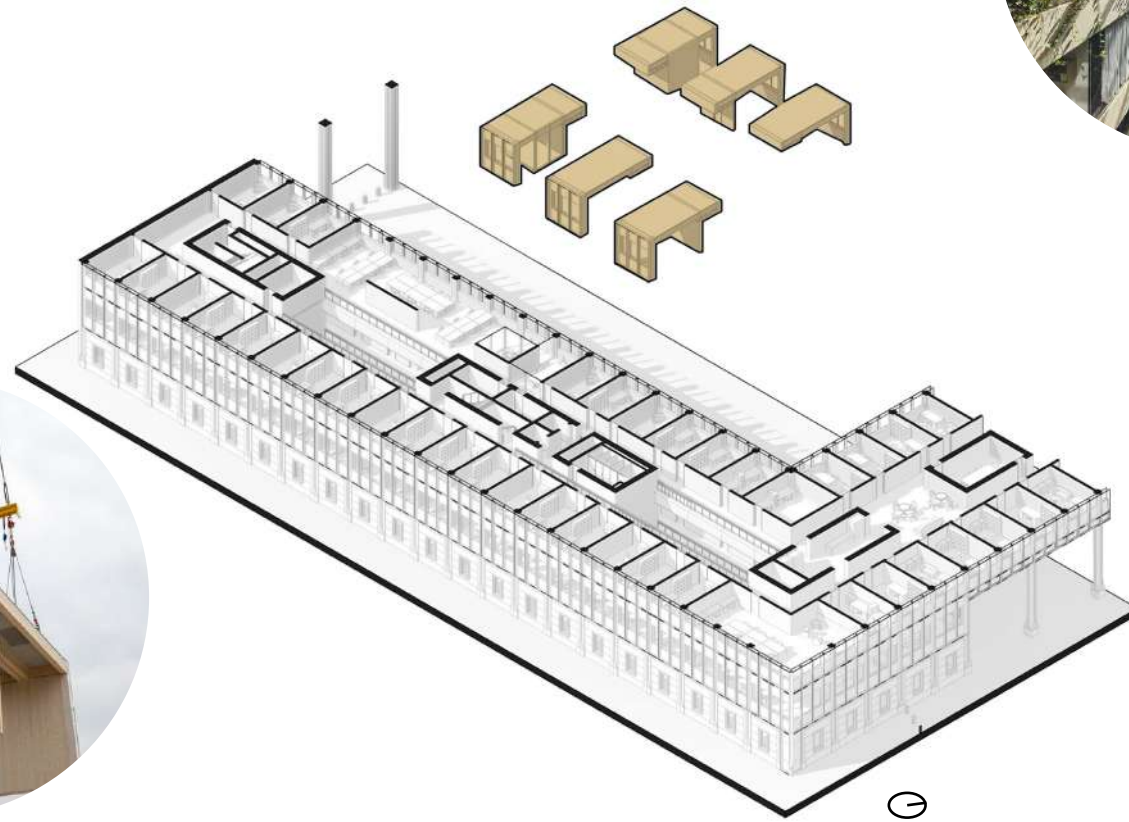
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Design  
**OFFICE WING**  
Second Floor

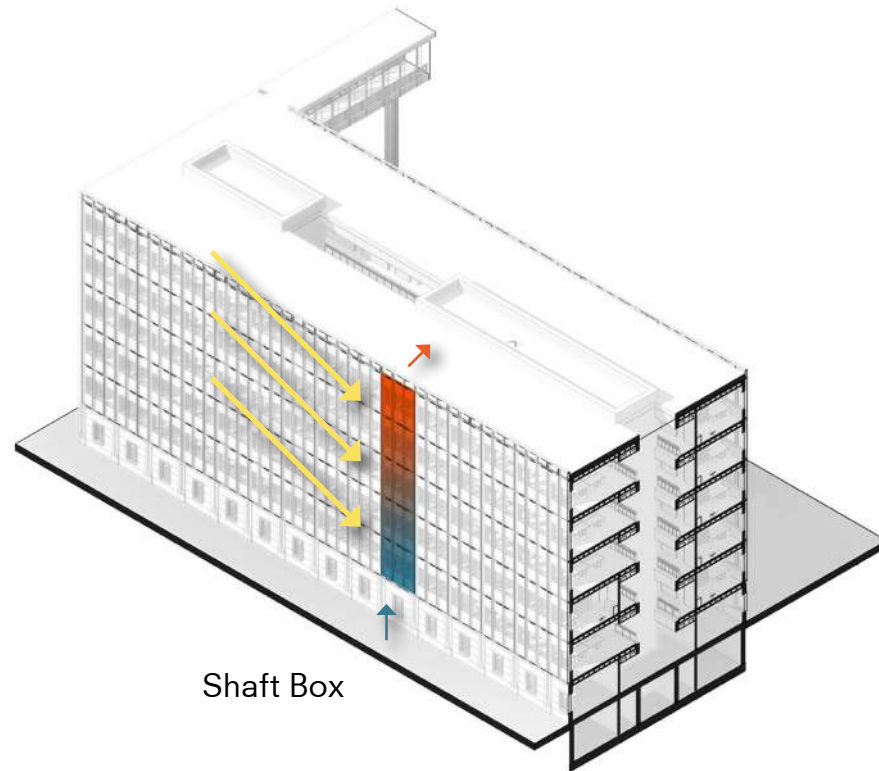


Design  
**OFFICE WING**  
Structure





Design  
**OFFICE WING**  
Section



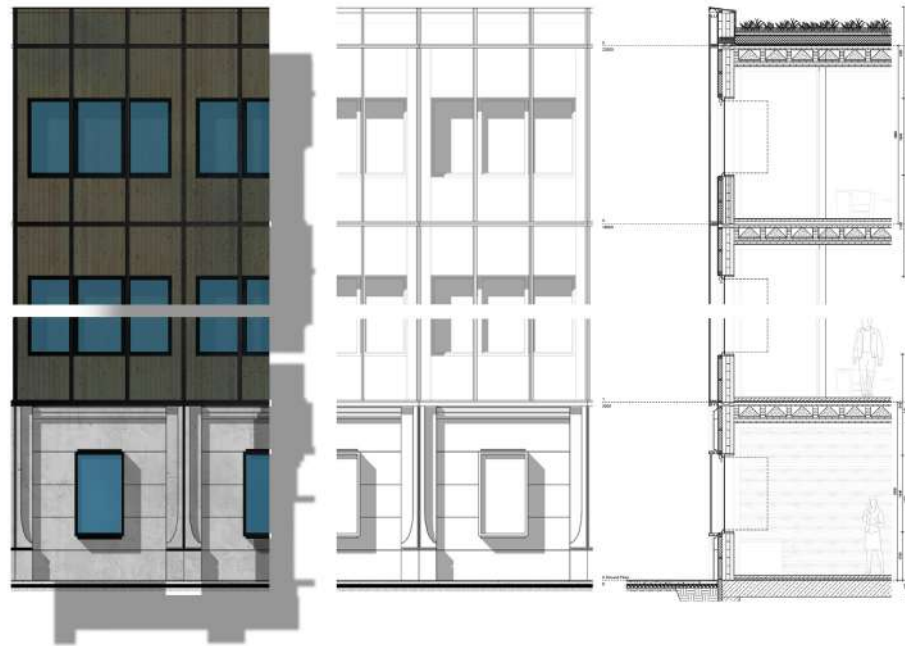
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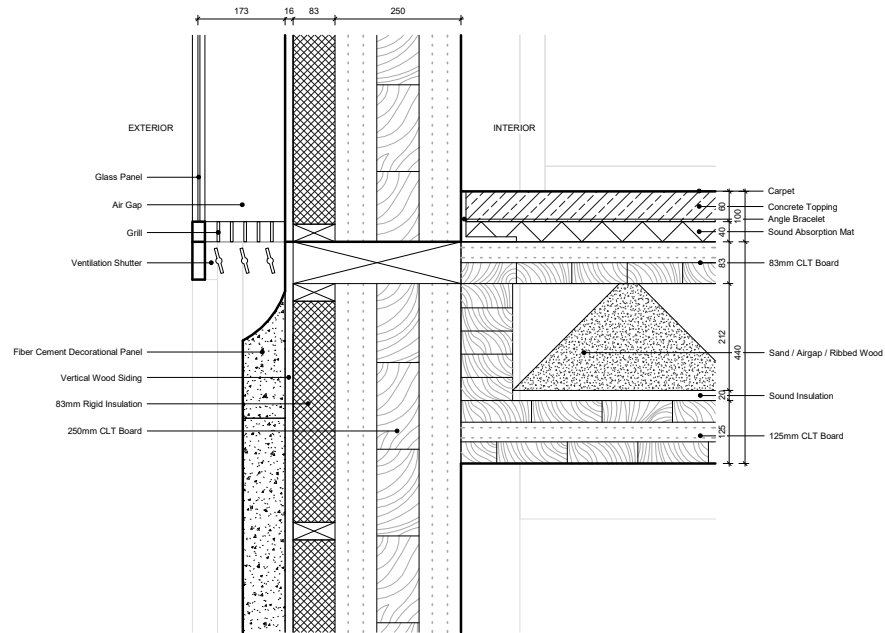
Design

# OFFICE WING

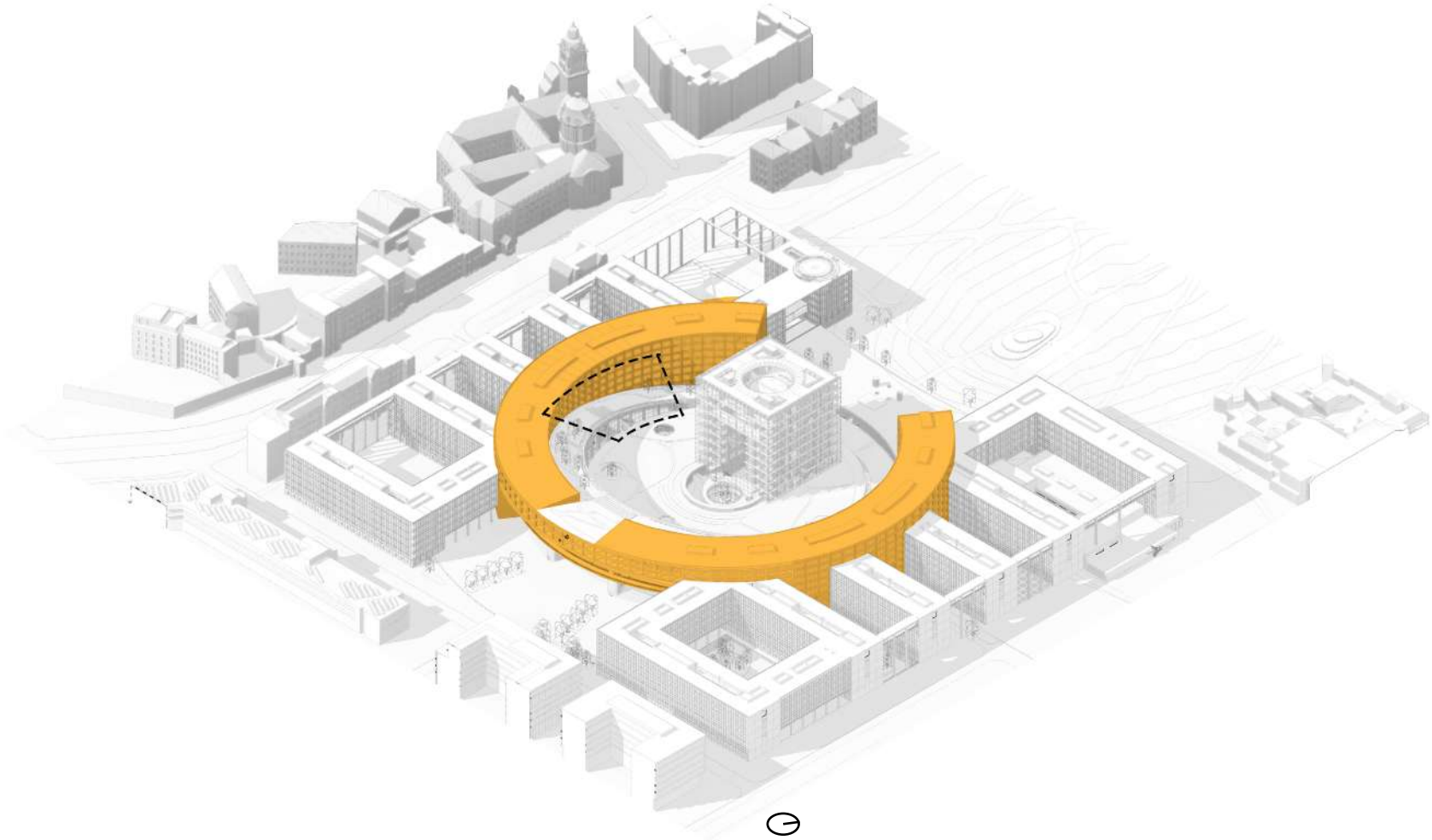
Facade Fragment: Module



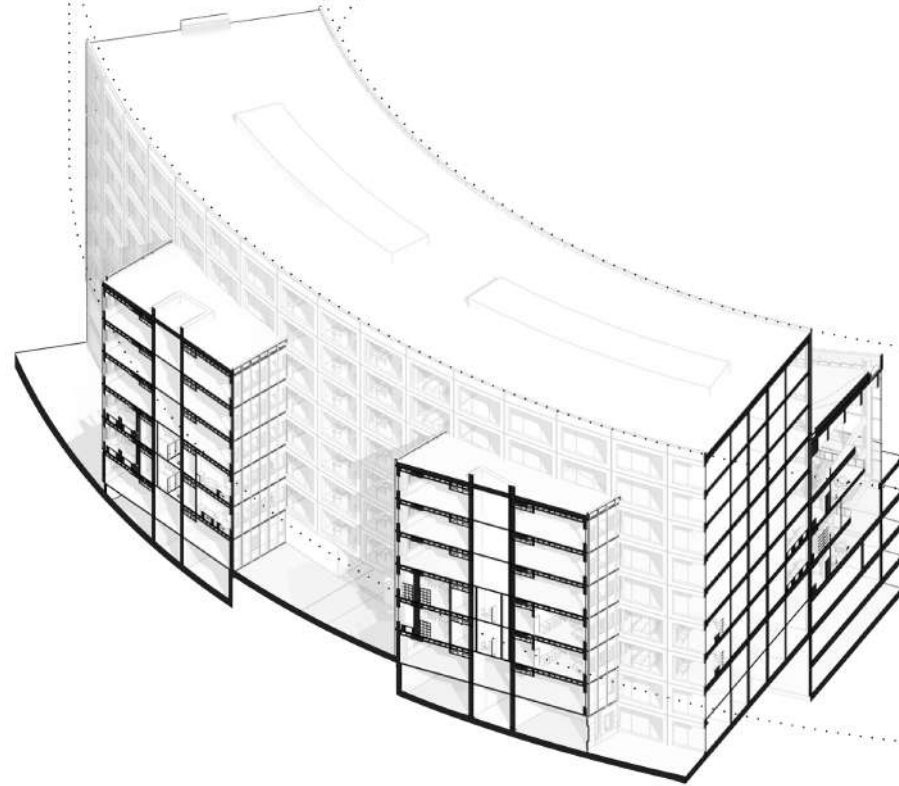
Design  
**OFFICE WING**  
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Design  
**RING WALL**  
Overall

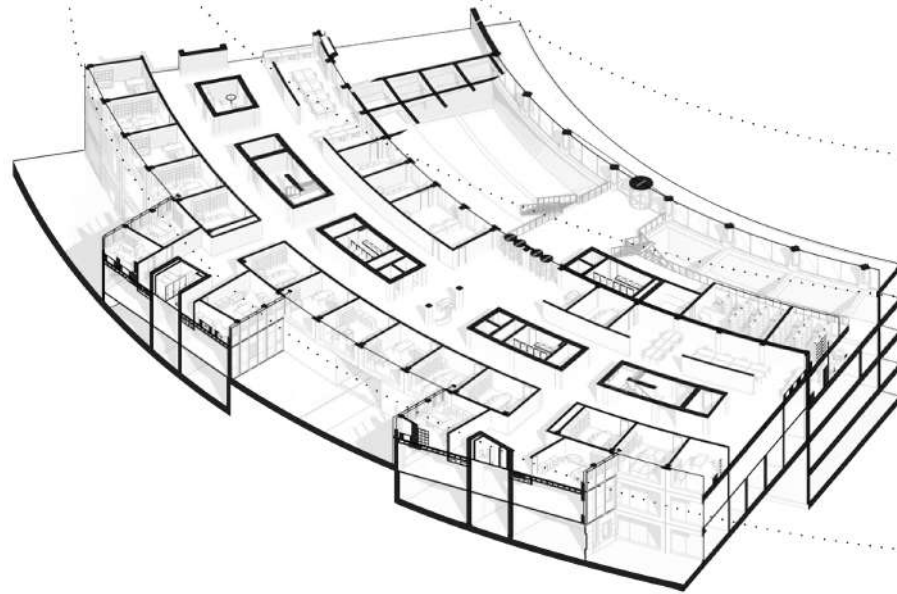


Design  
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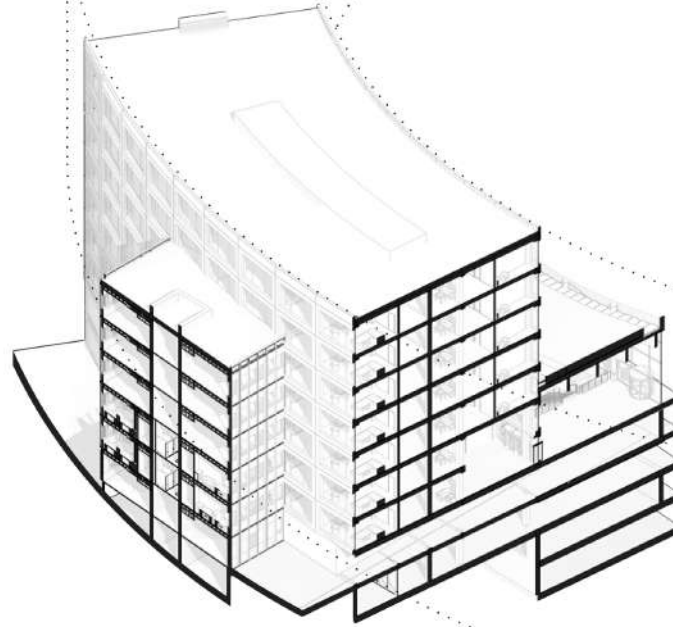




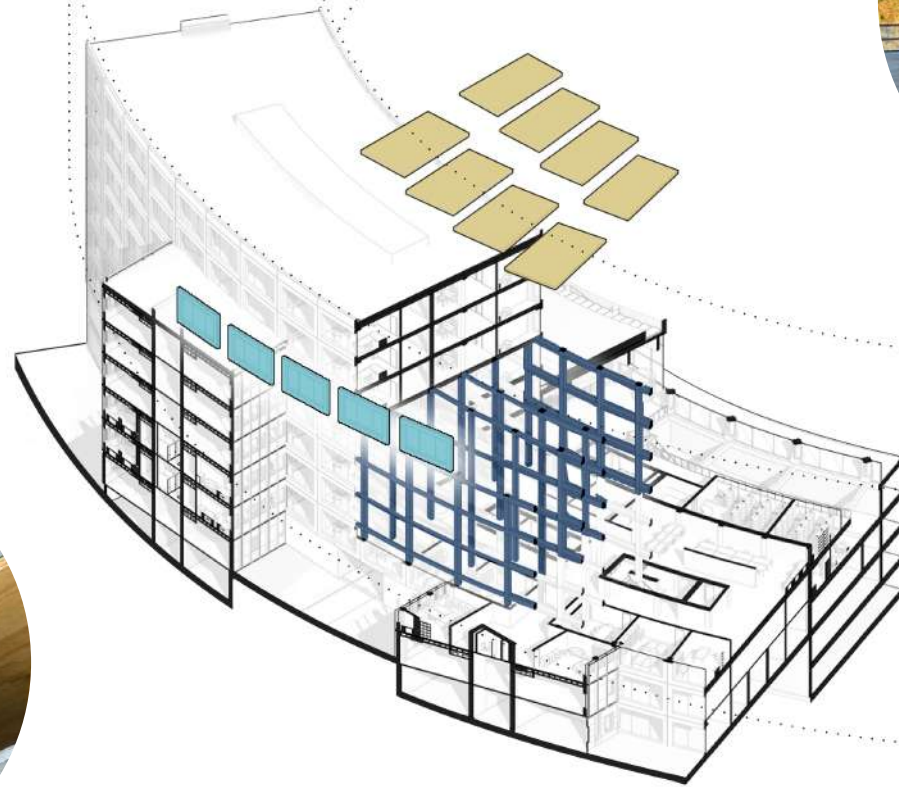
Design  
**RING WALL**  
First Floor



Design  
**RING WALL**  
Section



Design  
**RING WALL**  
Structure



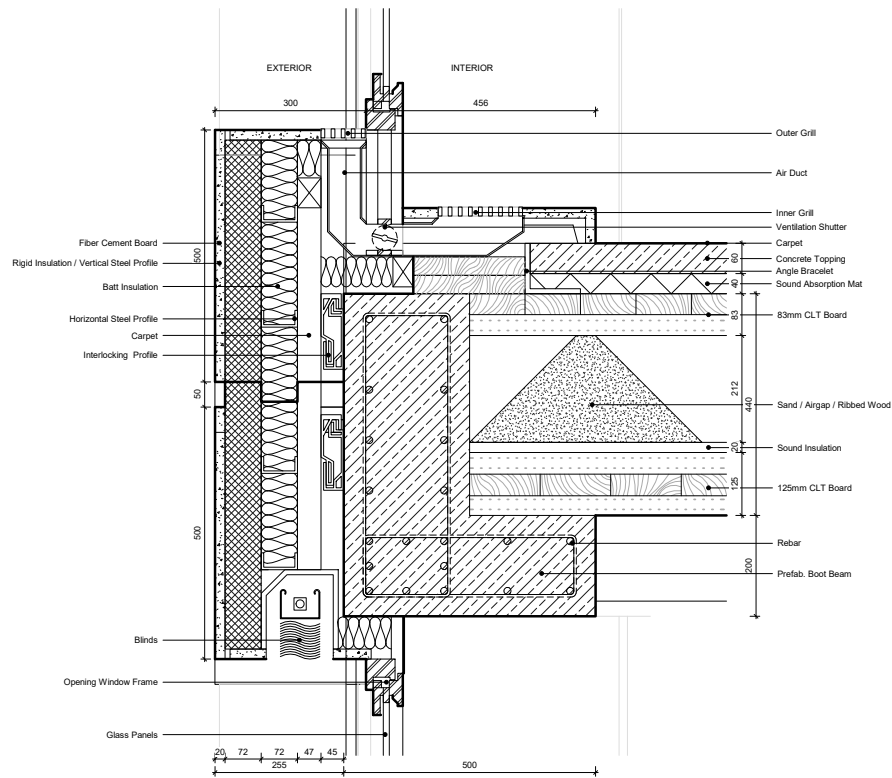
Design  
**RING WALL**  
Facade Fragment: Panels



# Design

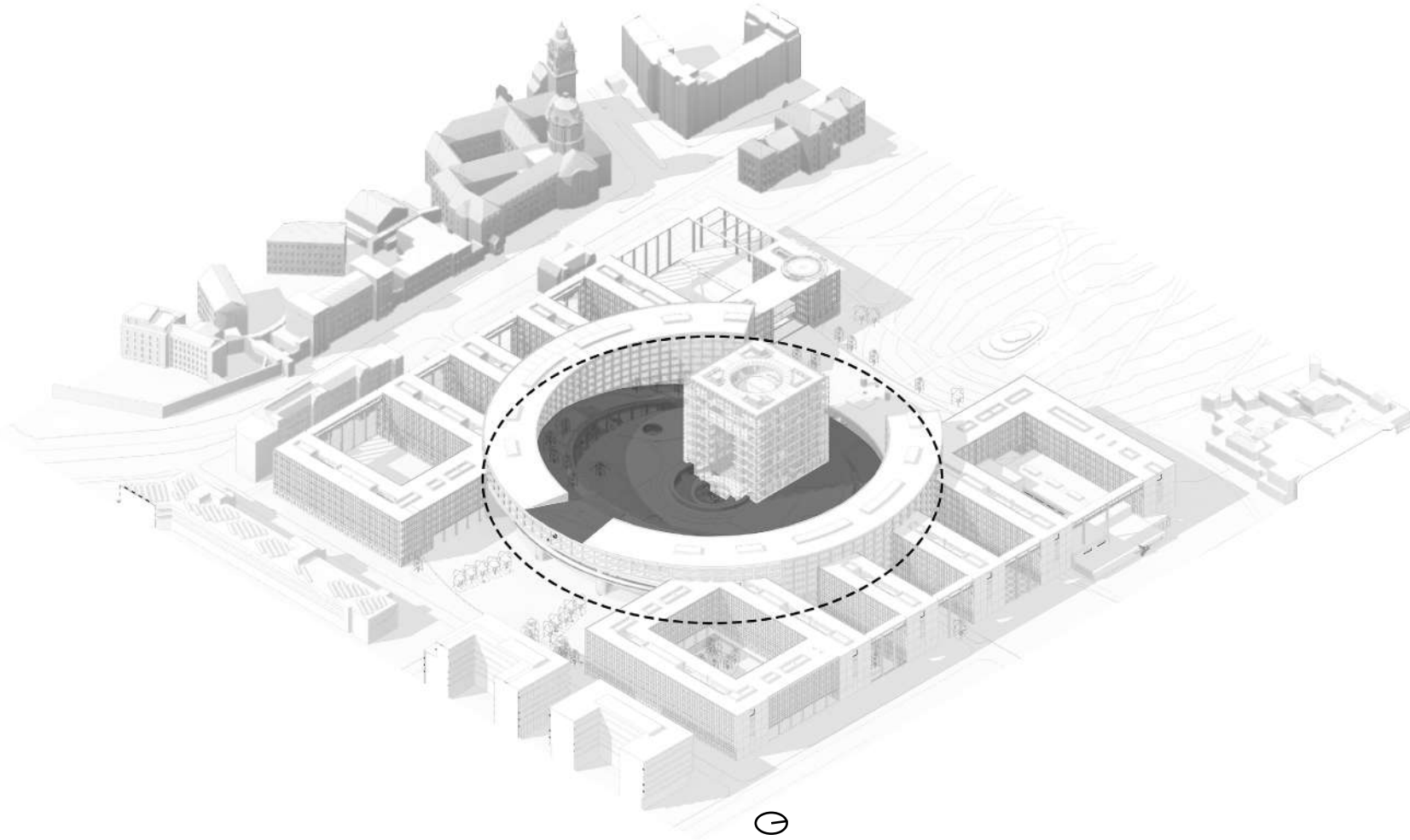
# RING WALL

## Detail: Facade Panel

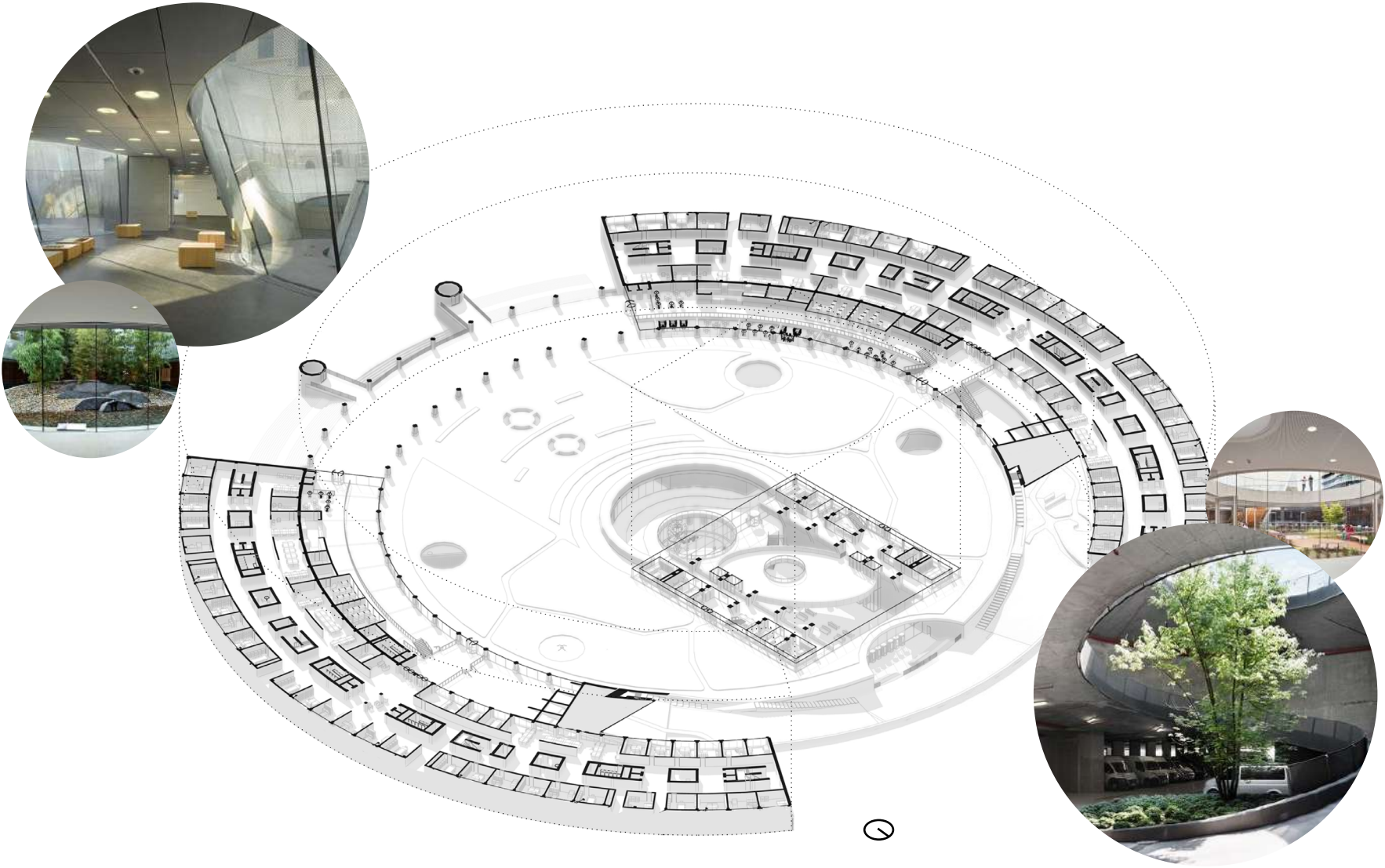




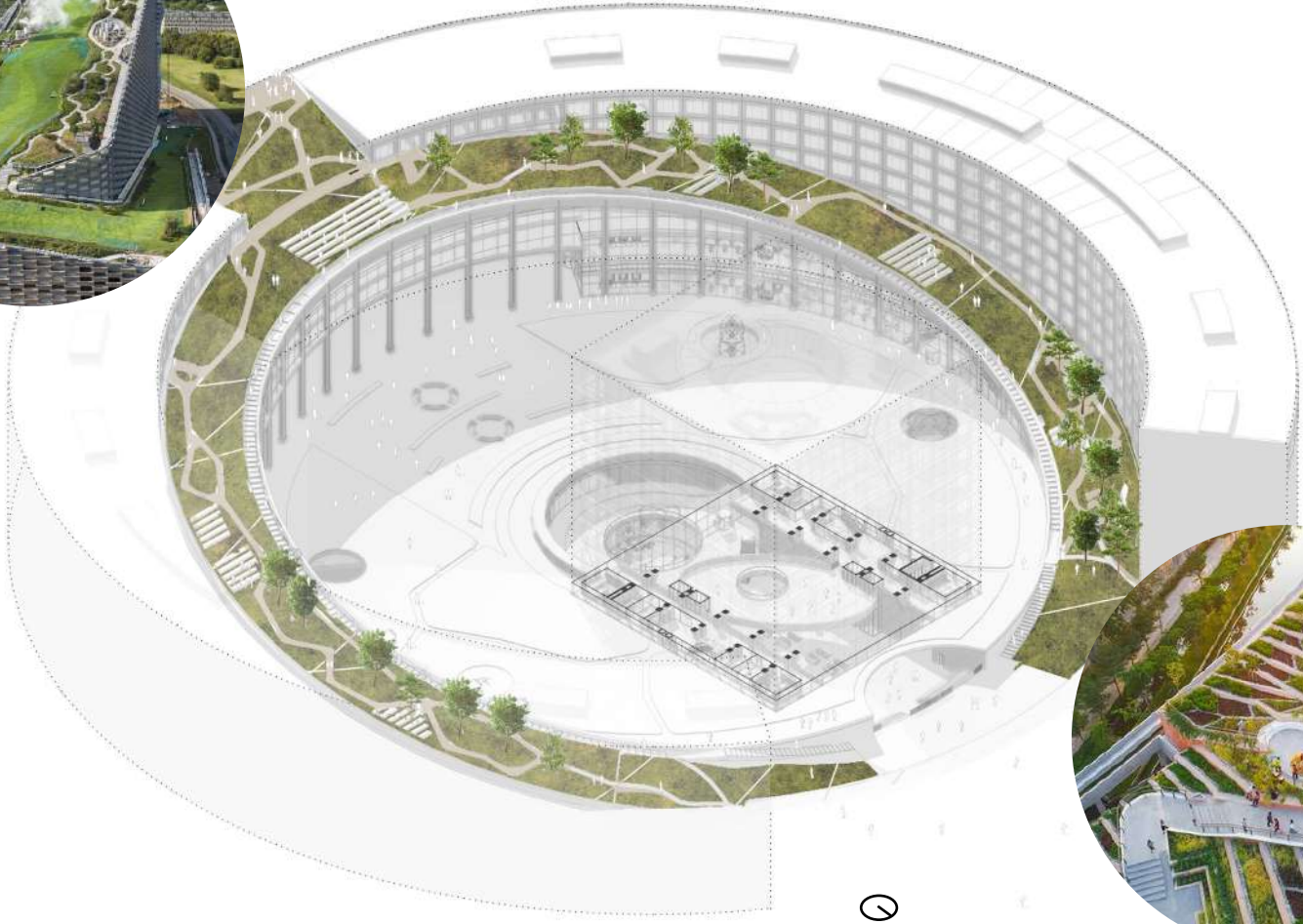
Design  
**PUBLIC COURTYARD**



Design  
**PUBLIC COURTYARD**  
First Floor

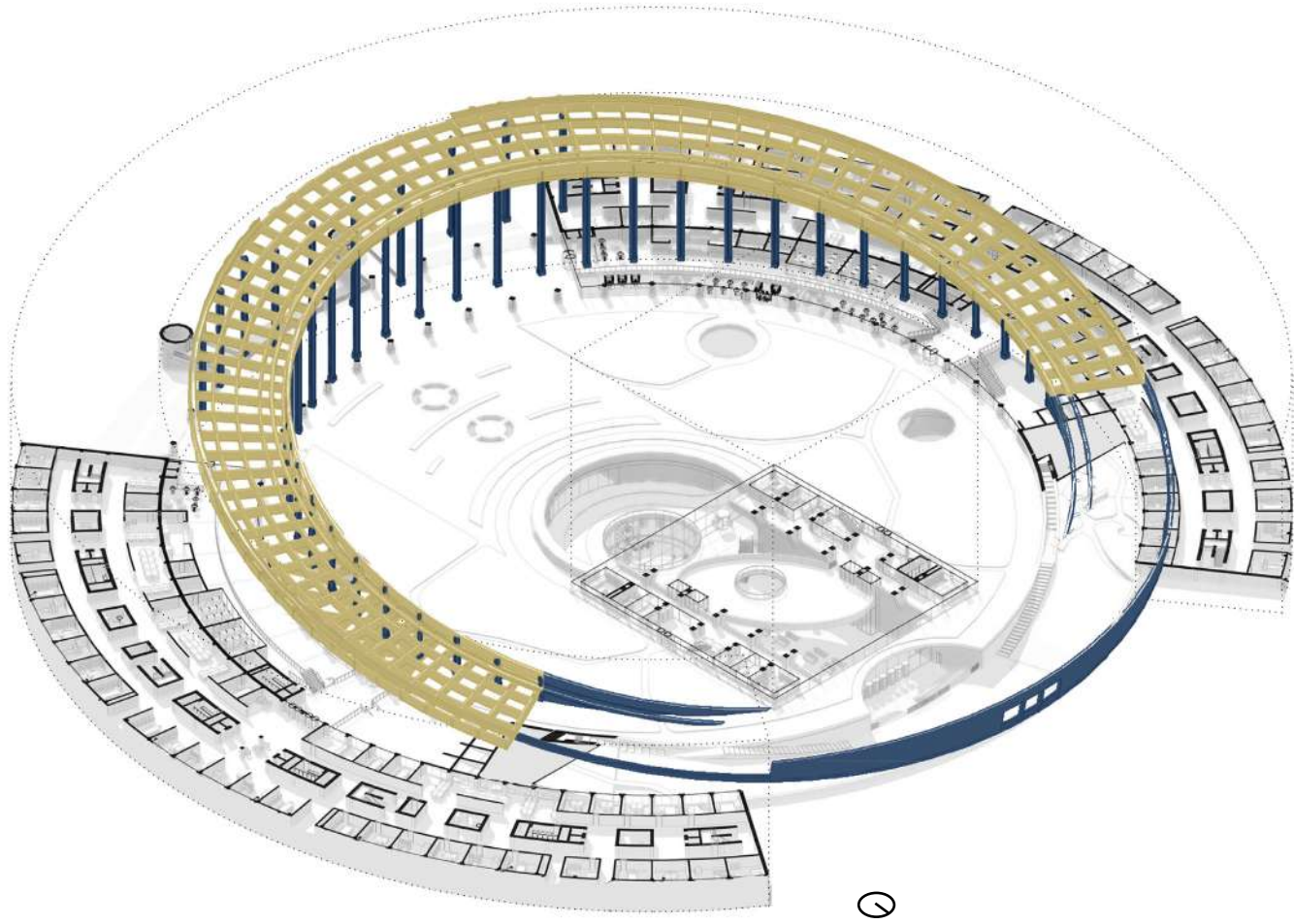


Design  
**PUBLIC COURTYARD**  
First Floor

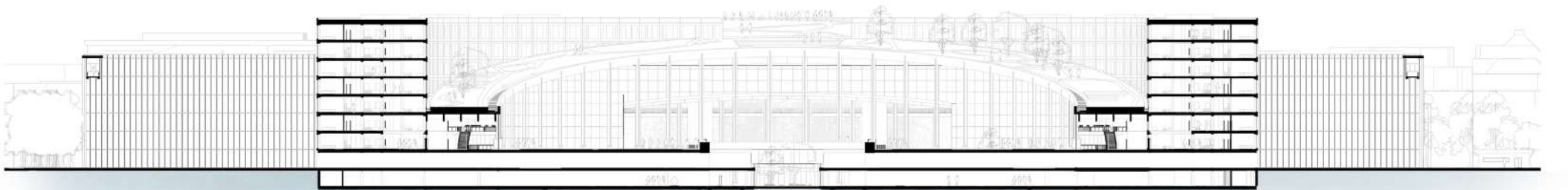
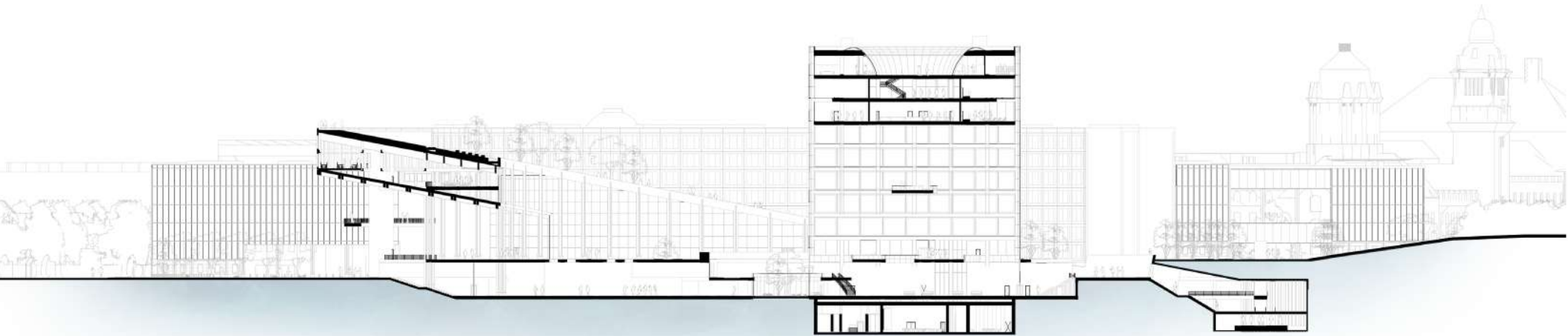




Design  
**PUBLIC COURTYARD**  
First Floor



Design  
**SECTIONS**  
Courtyard & Nerve Center

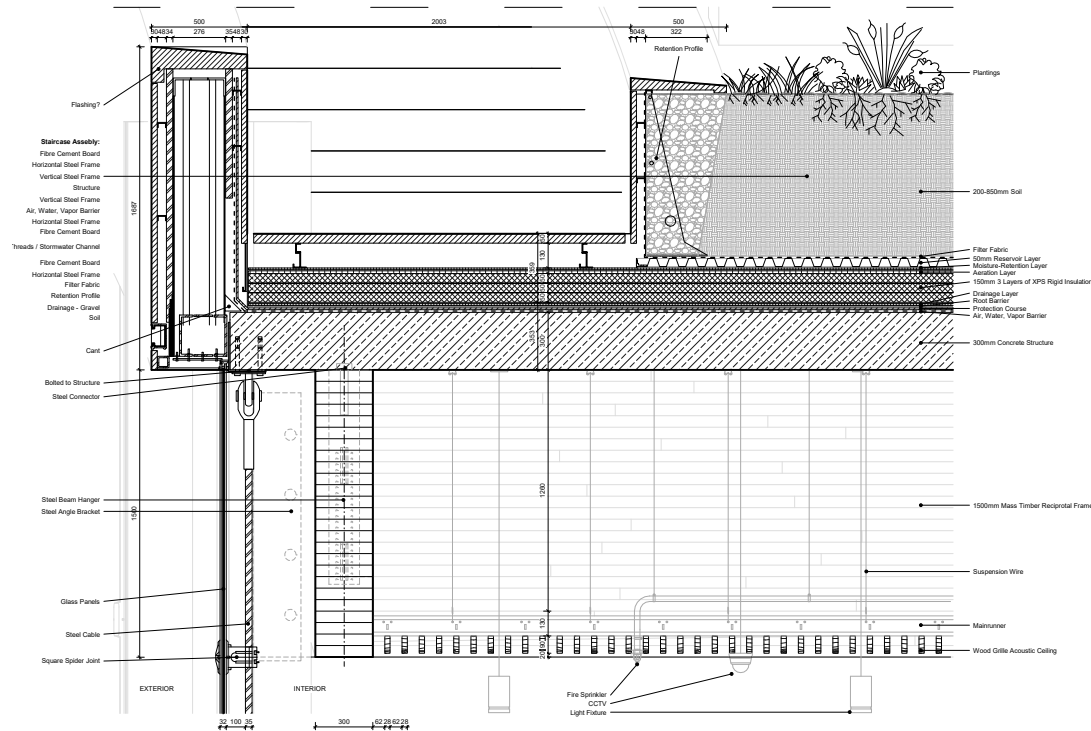
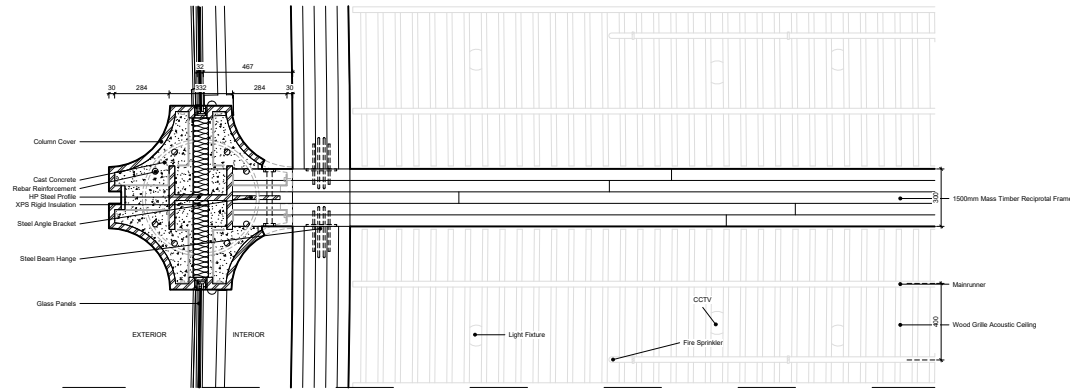




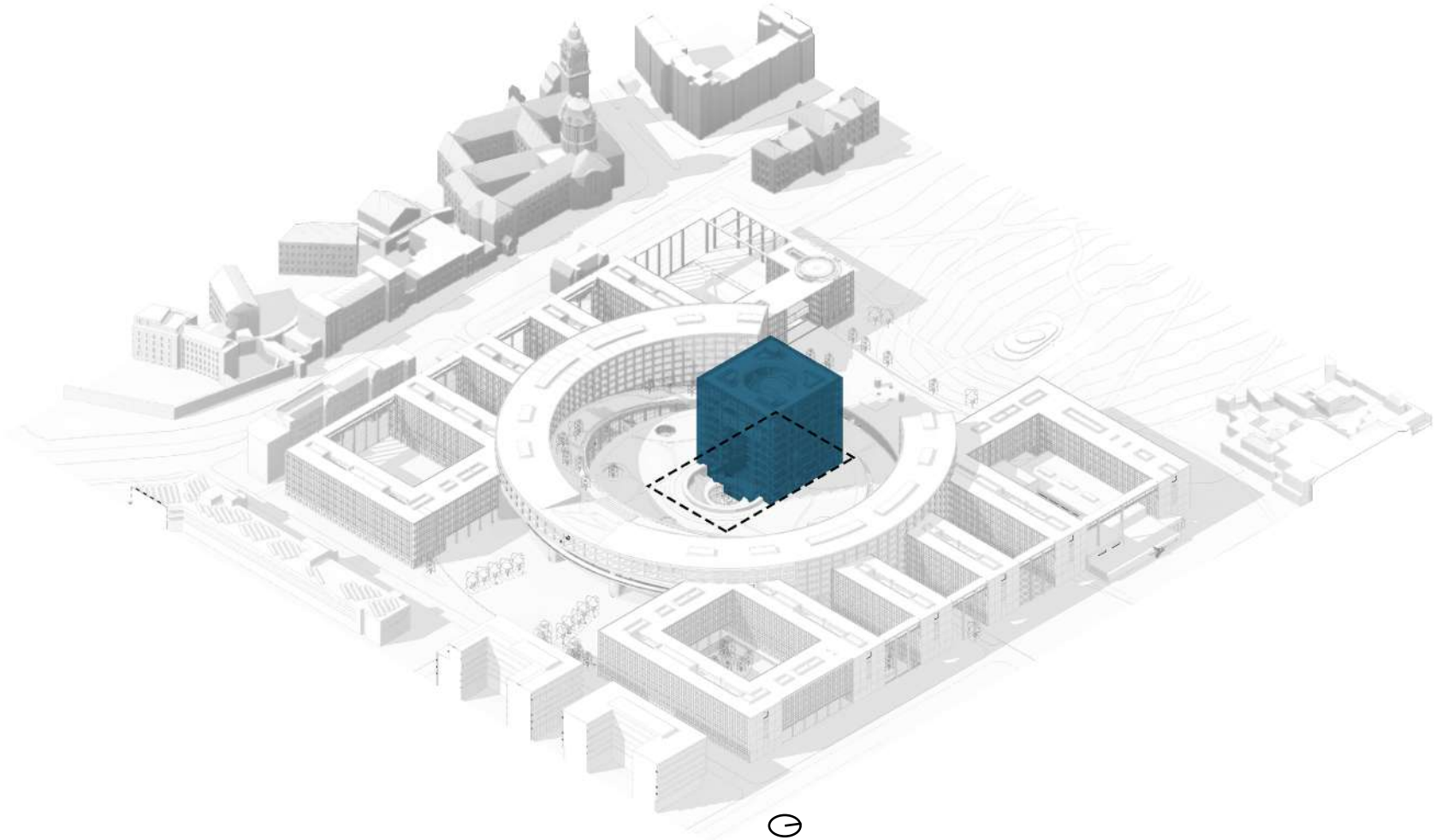
# Design

# PUBLIC COURTYARD

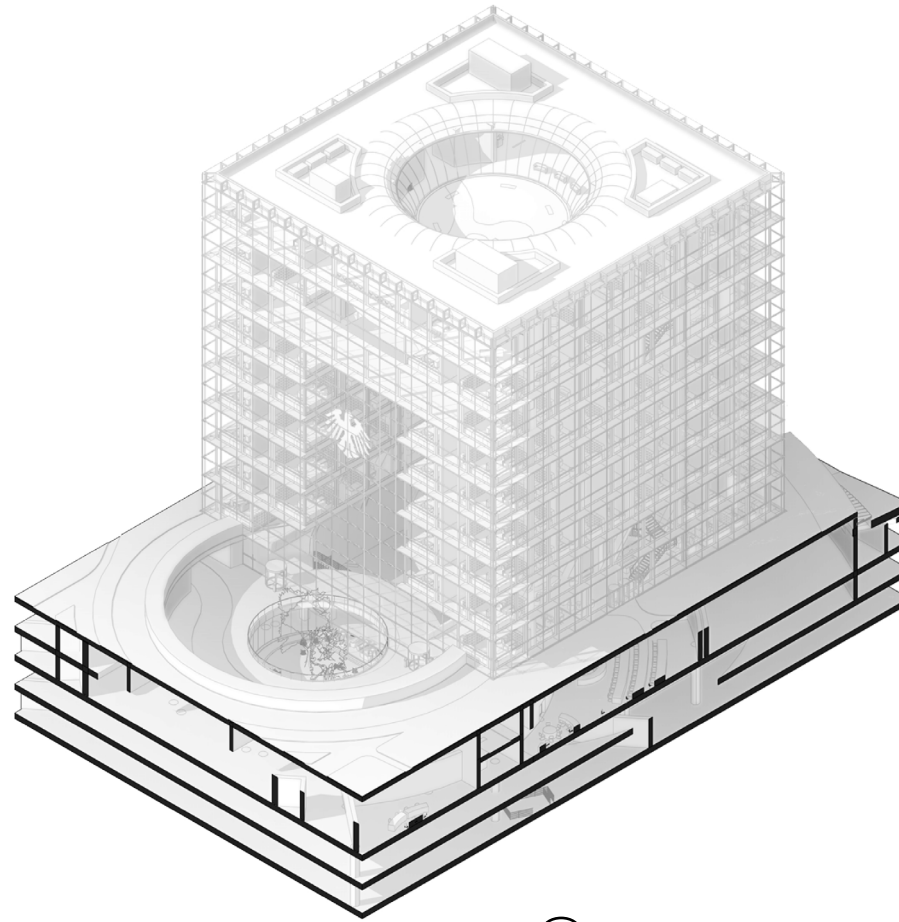
## Detail: Inclined Park Walkway



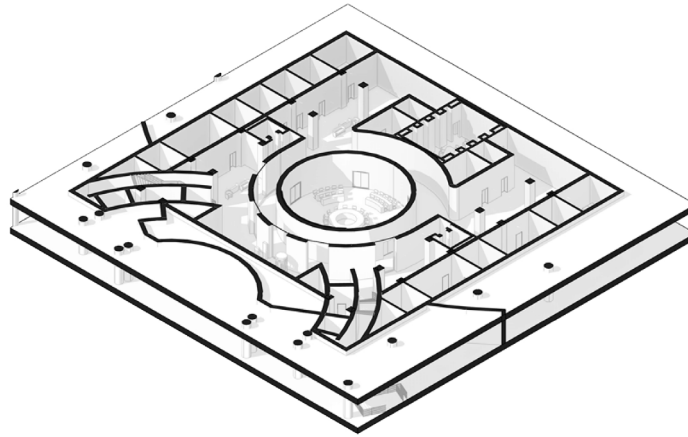
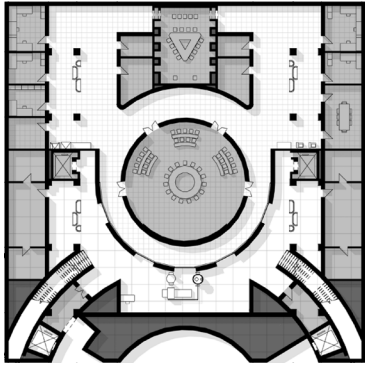
Design  
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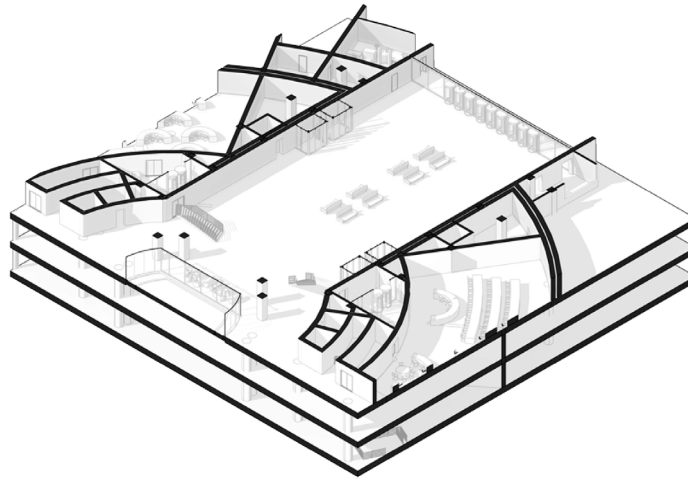
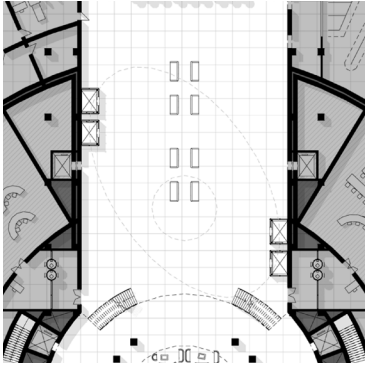
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Design  
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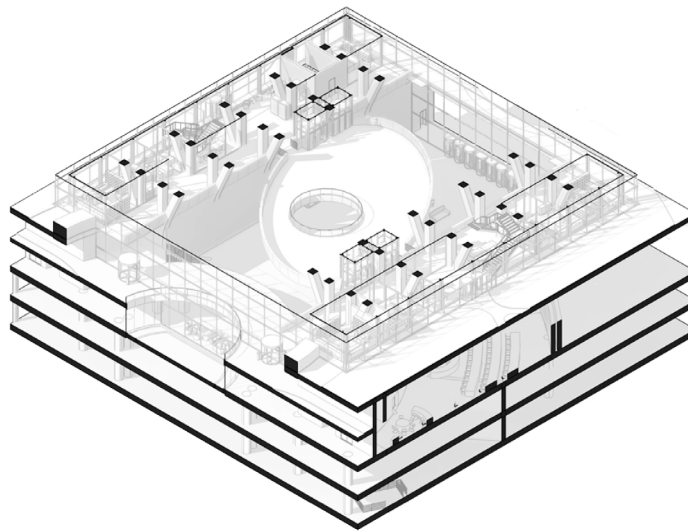
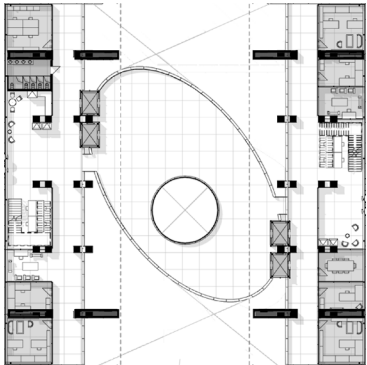


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level -1

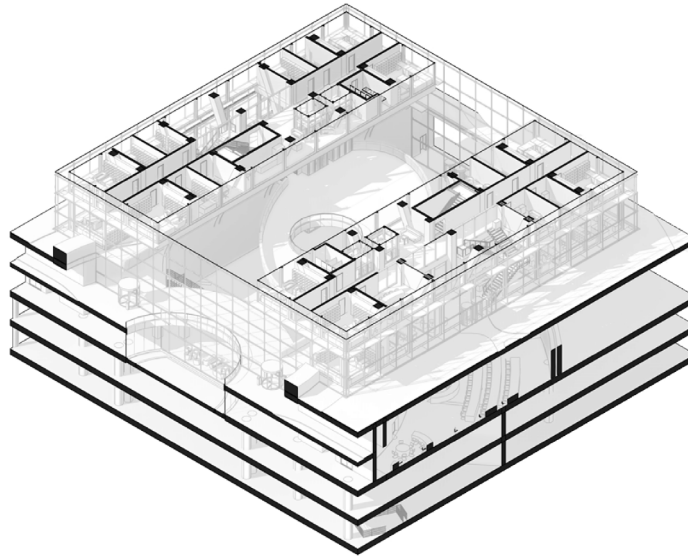
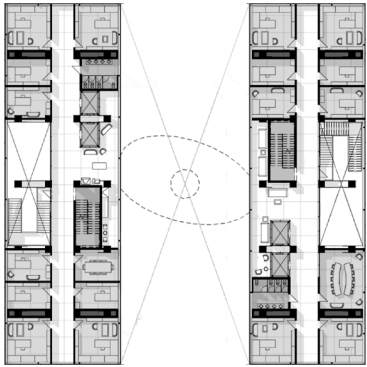




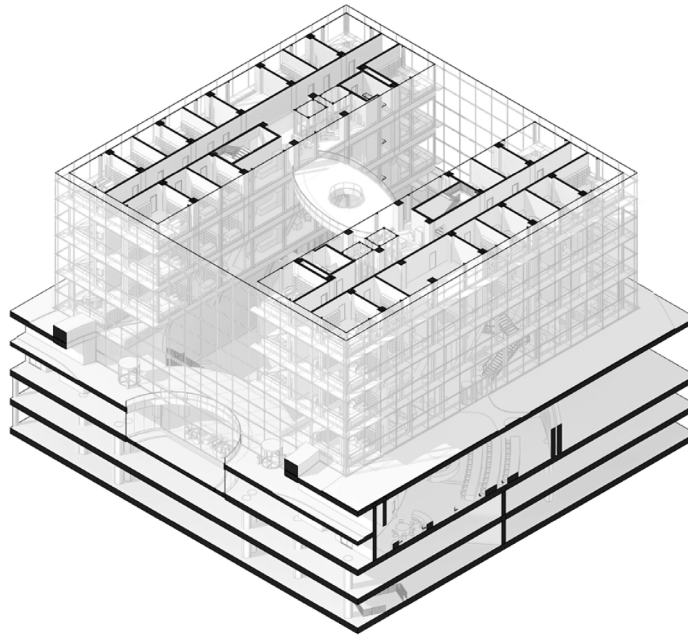
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**NERVE CENTER**  
Level 1



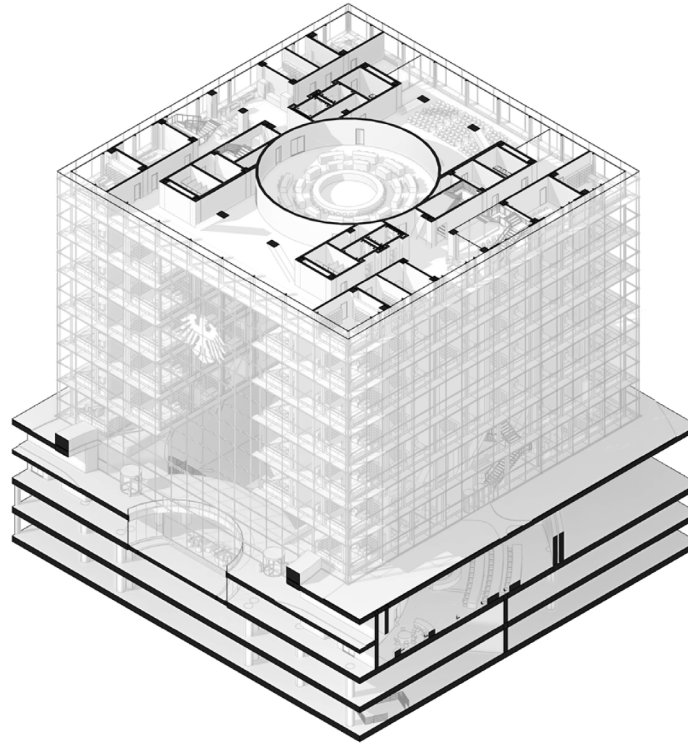
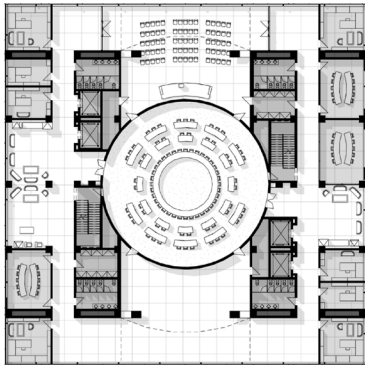
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Level 2



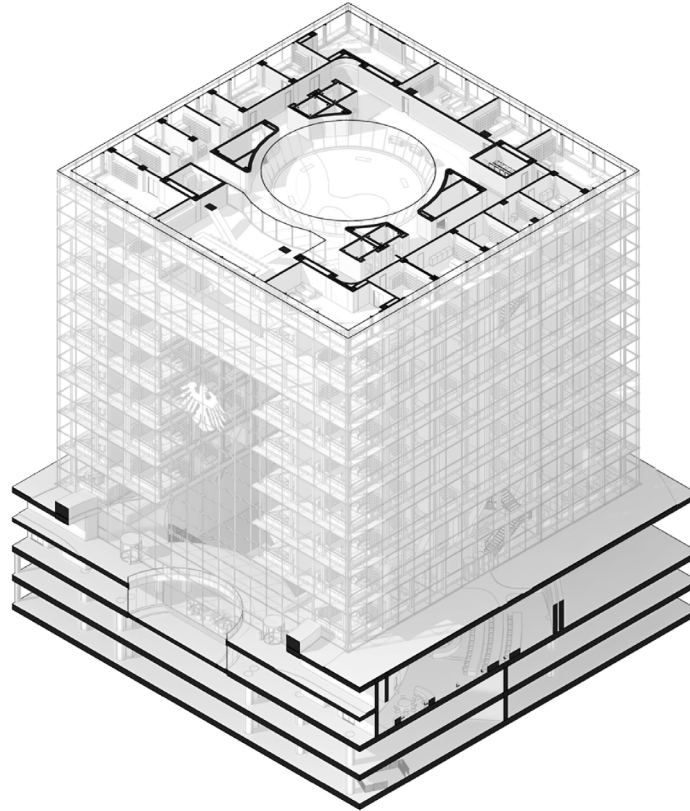
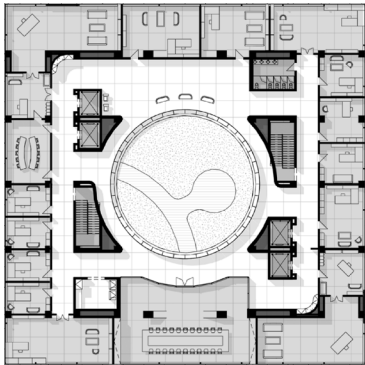
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Level 4



Design  
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Level 7

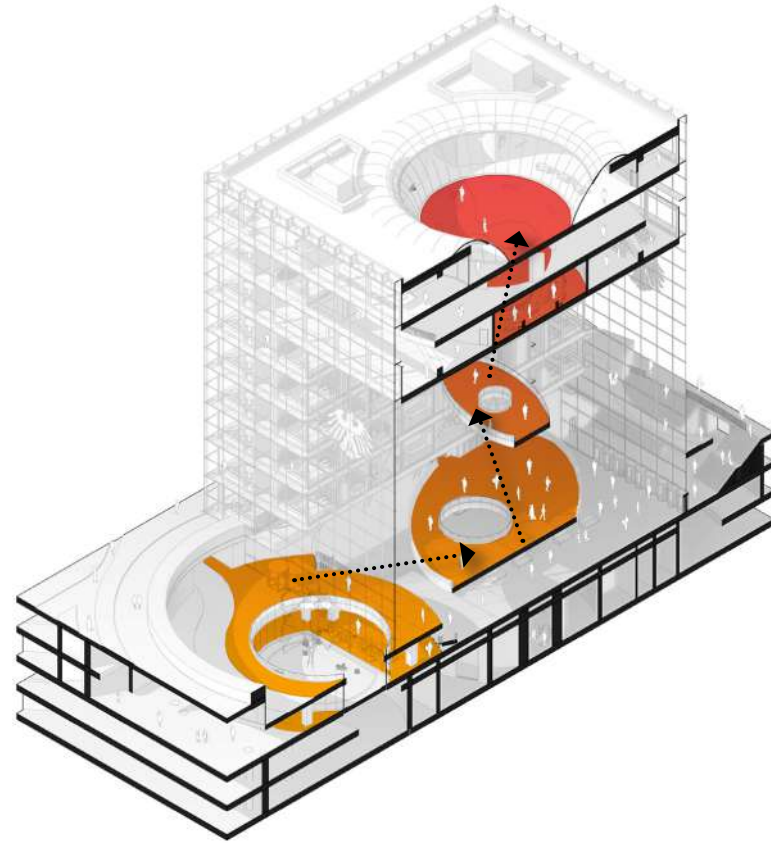


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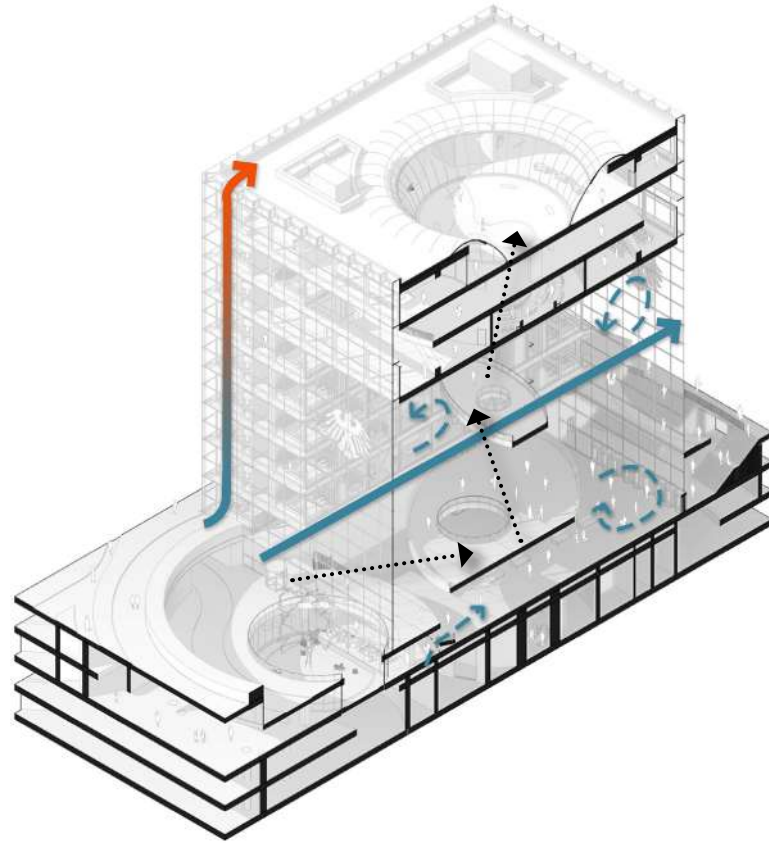




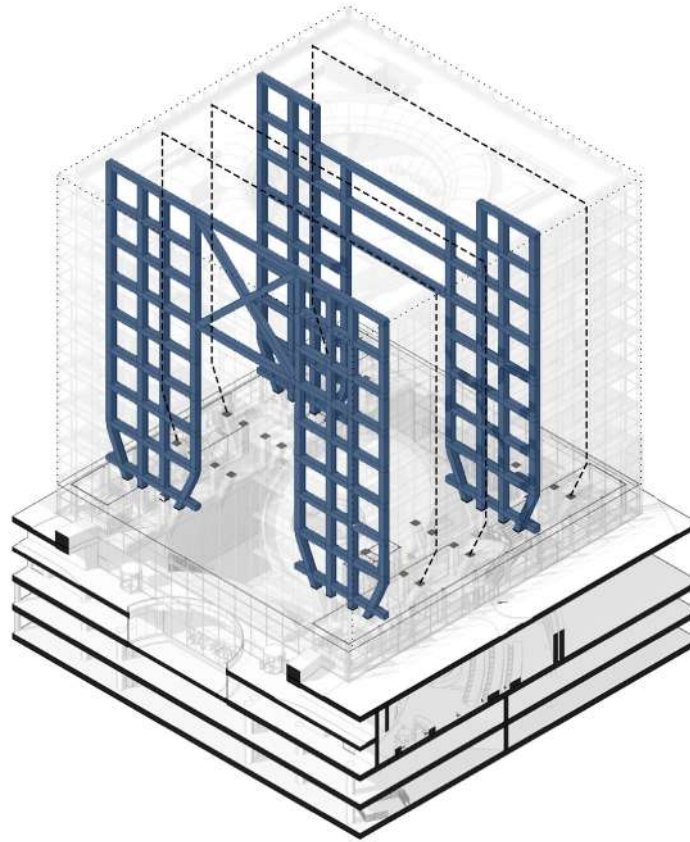
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Section



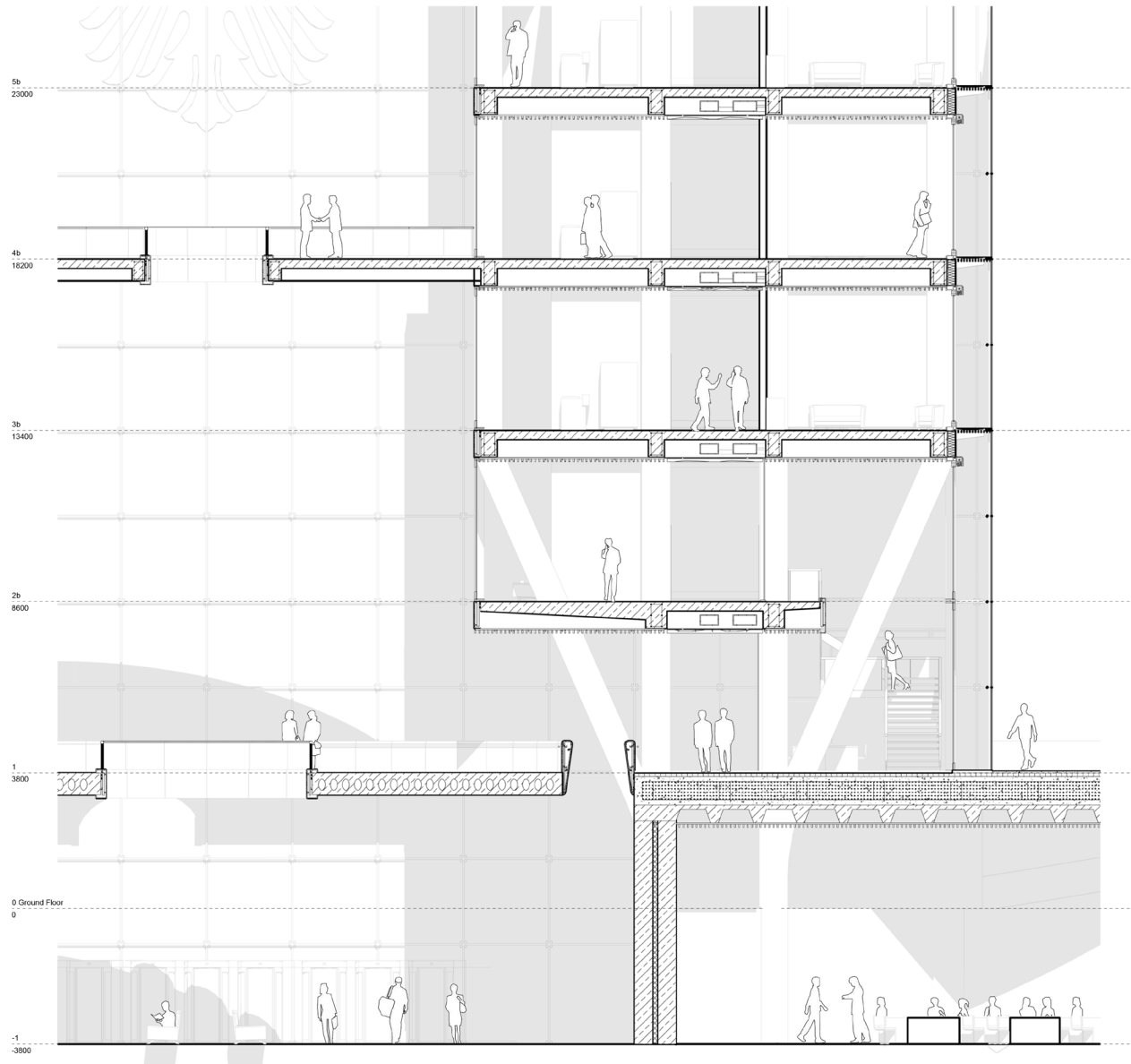
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Design  
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Structure



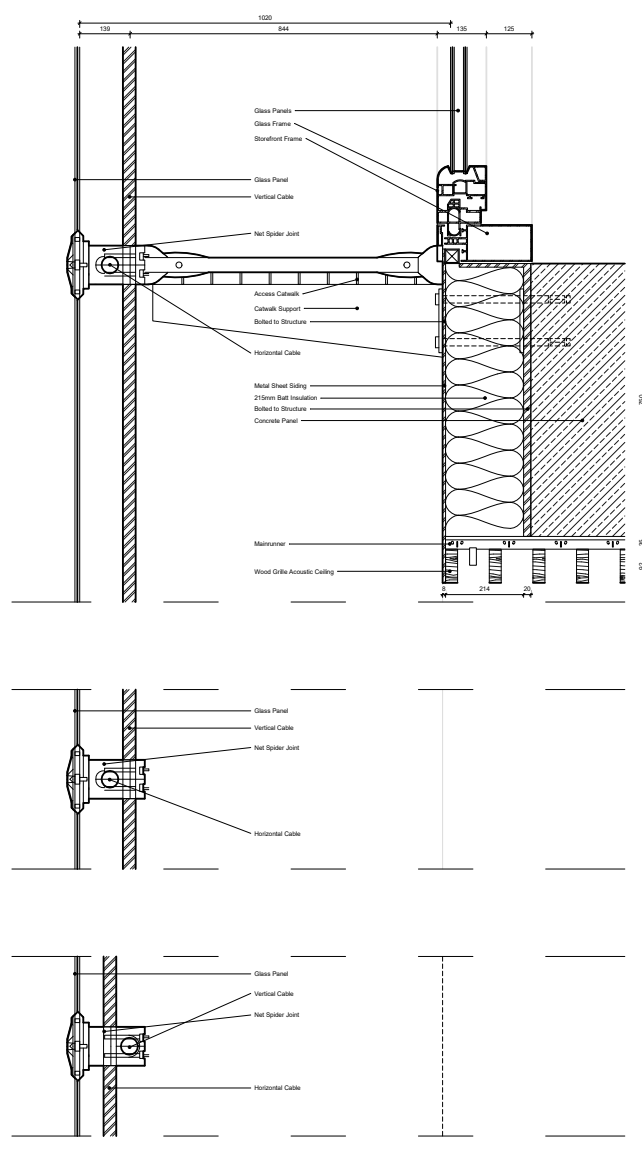
Design  
**NERVE CENTER**  
Interior Fragment



# Design

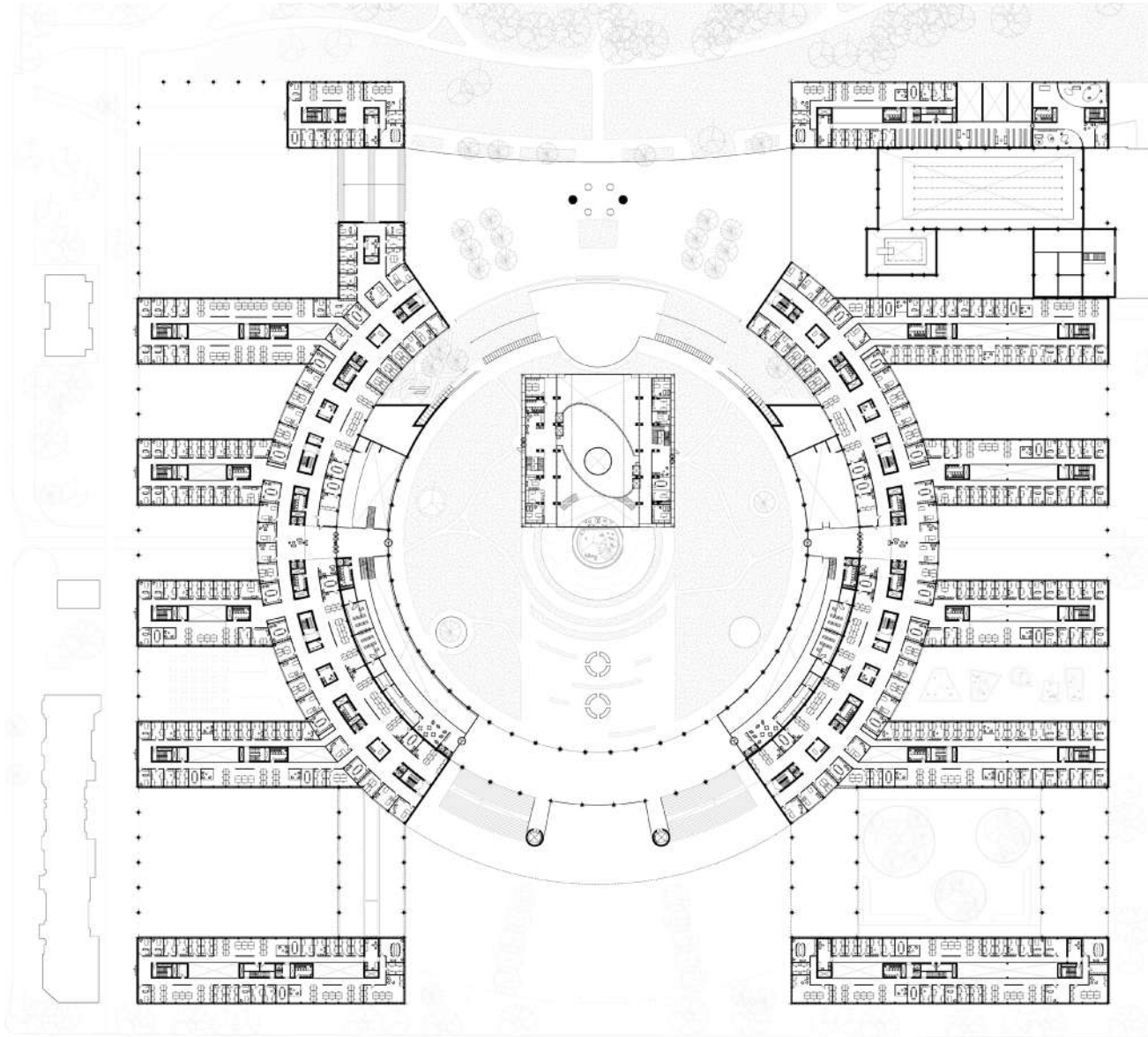
## NERVE CENTER

### Detail: Double Facade

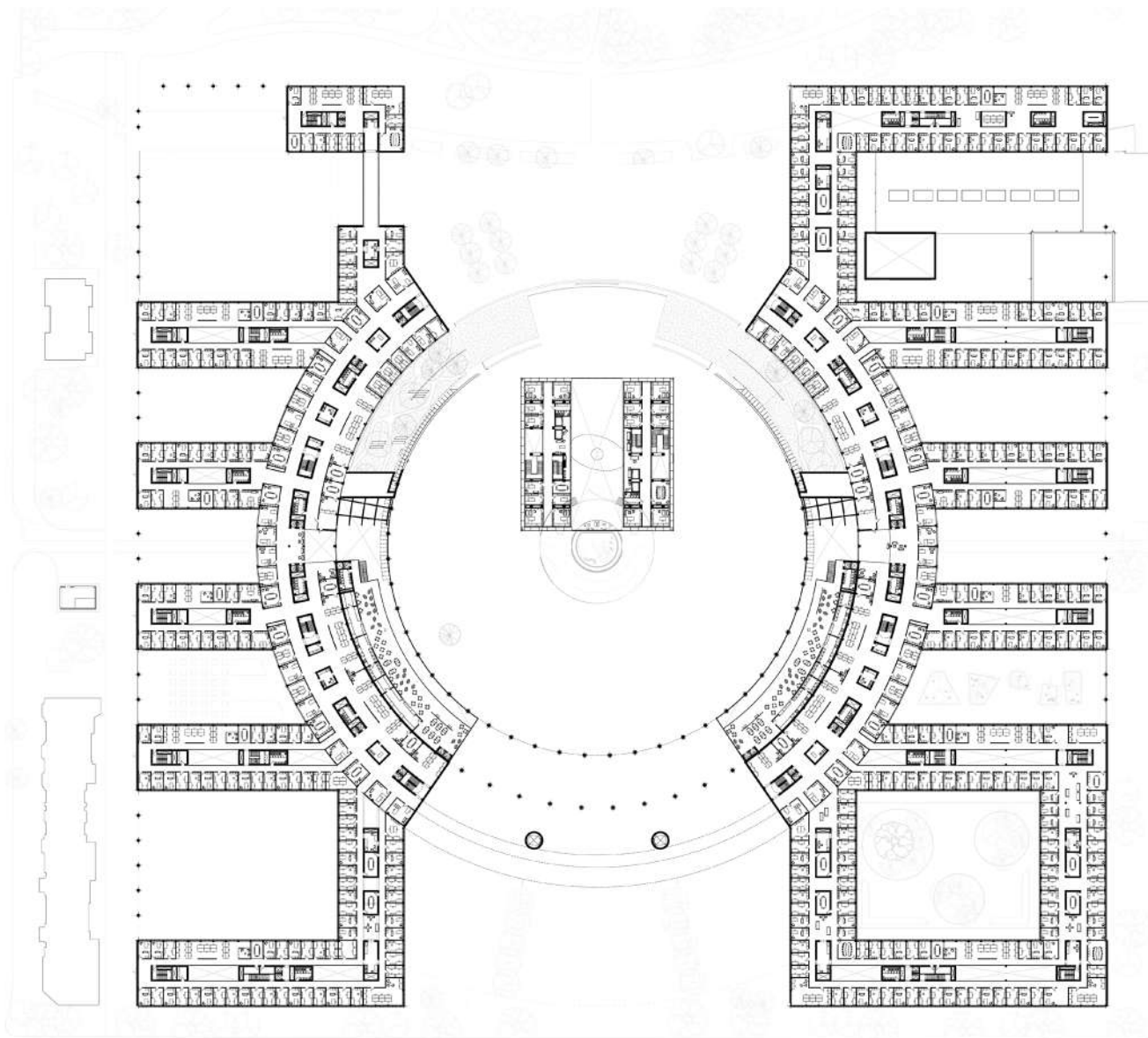




Implementation  
**FIRST FLOOR**  
Courtyard

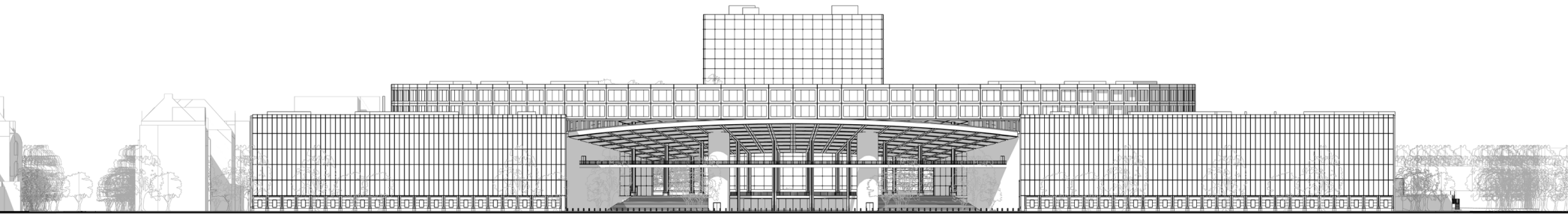


Design  
**SECOND FLOOR**  
Connection



Design

# SOUTH ELEVATION



Design

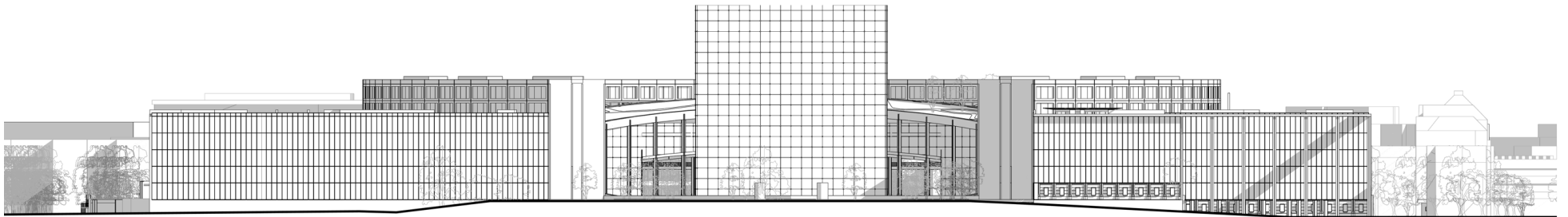
# SOUTH ELEVATION





Design

# NORTH ELEVATION

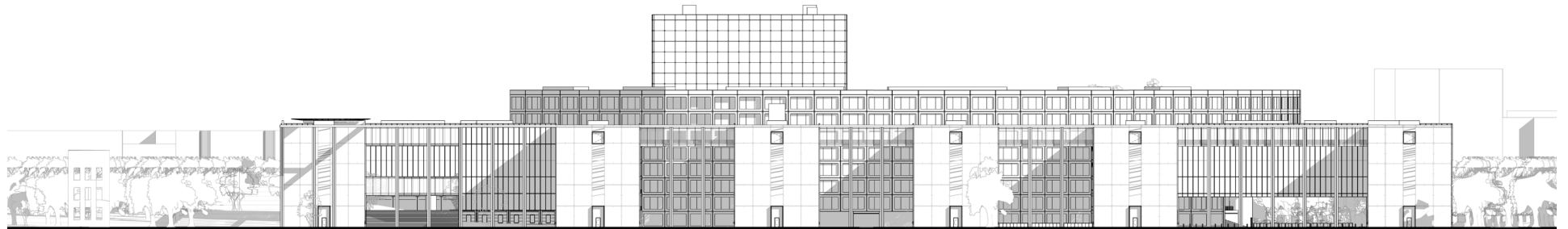




Design  
**NORTH ELEVATION**  
Nerve Center



Design  
**WEST ELEVATION**



Design

# CENTRAL COURTYARD



Design  
**AERIAL**





Design  
**MODEL**





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## Conclusion

# ON DESIGN

- Good cumulation of all my studies
- **Thorough** project on many aspects of design and building construction
- Not managed to produce a smooth design process with a **holistic design solution**
- Final product intricate but also complicated
- Initial idea should have been a **simpler form**

Conclusion

# ON CONCEPT

- Proven **possible, not practical** or desirable
- The lessons learned can be **implemented in other** typologies



An aerial, high-angle photograph of a modern architectural complex during the golden hour of sunset. The central focus is a large, curved, multi-story building with a prominent, elevated walkway or balcony that follows the curve. The building's facade is composed of a grid of windows, and the warm light of the setting sun casts long, soft shadows across its surfaces. In the background, other buildings and a city skyline are visible, all bathed in the same golden glow. The sky is a pale, hazy yellow. The text "THANK YOU" is superimposed in the center of the image in a bold, white, sans-serif font with a subtle drop shadow.

**THANK YOU**