

COMPLEX PROJECTS
OPERA HOUSE

INSIDE-OUT

Youp van Terheijden

Juli-03-2025

INTRODUCTION

How did theatres shift from city stages to hidden stages?



Ancient Greek Theatre of Epidauros

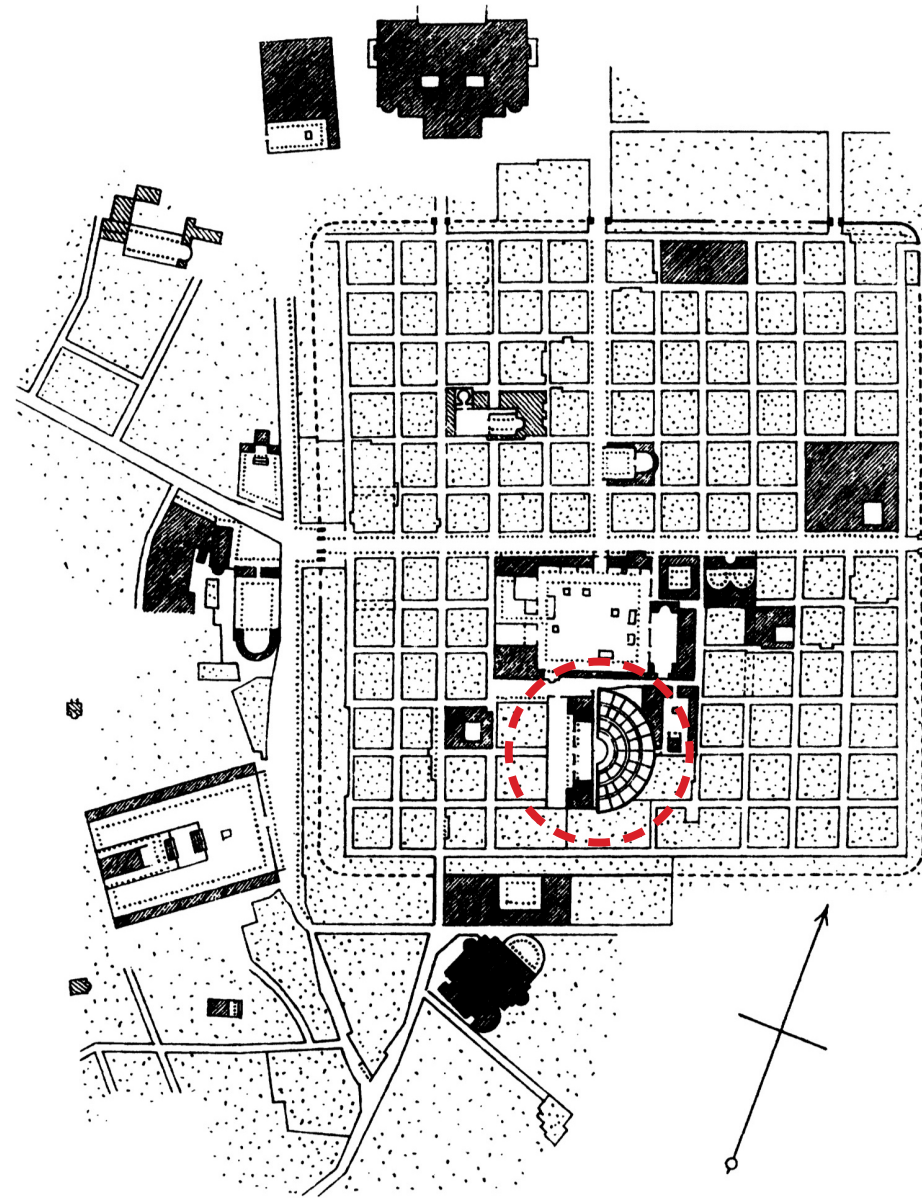


Auditorium of Teatro alla Scala

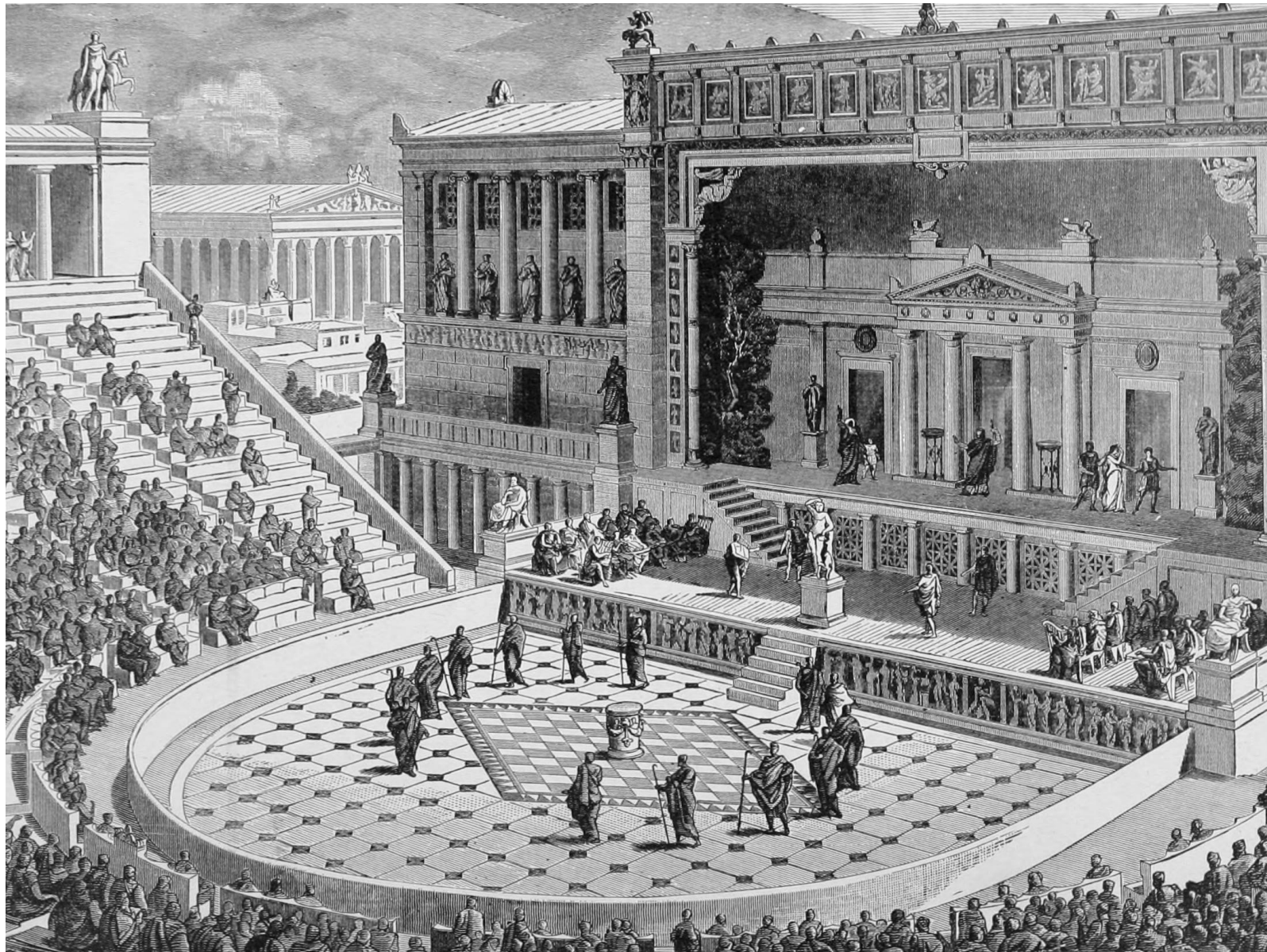
Interior of La Scala Opera, Milan in the 19 century

Introduction

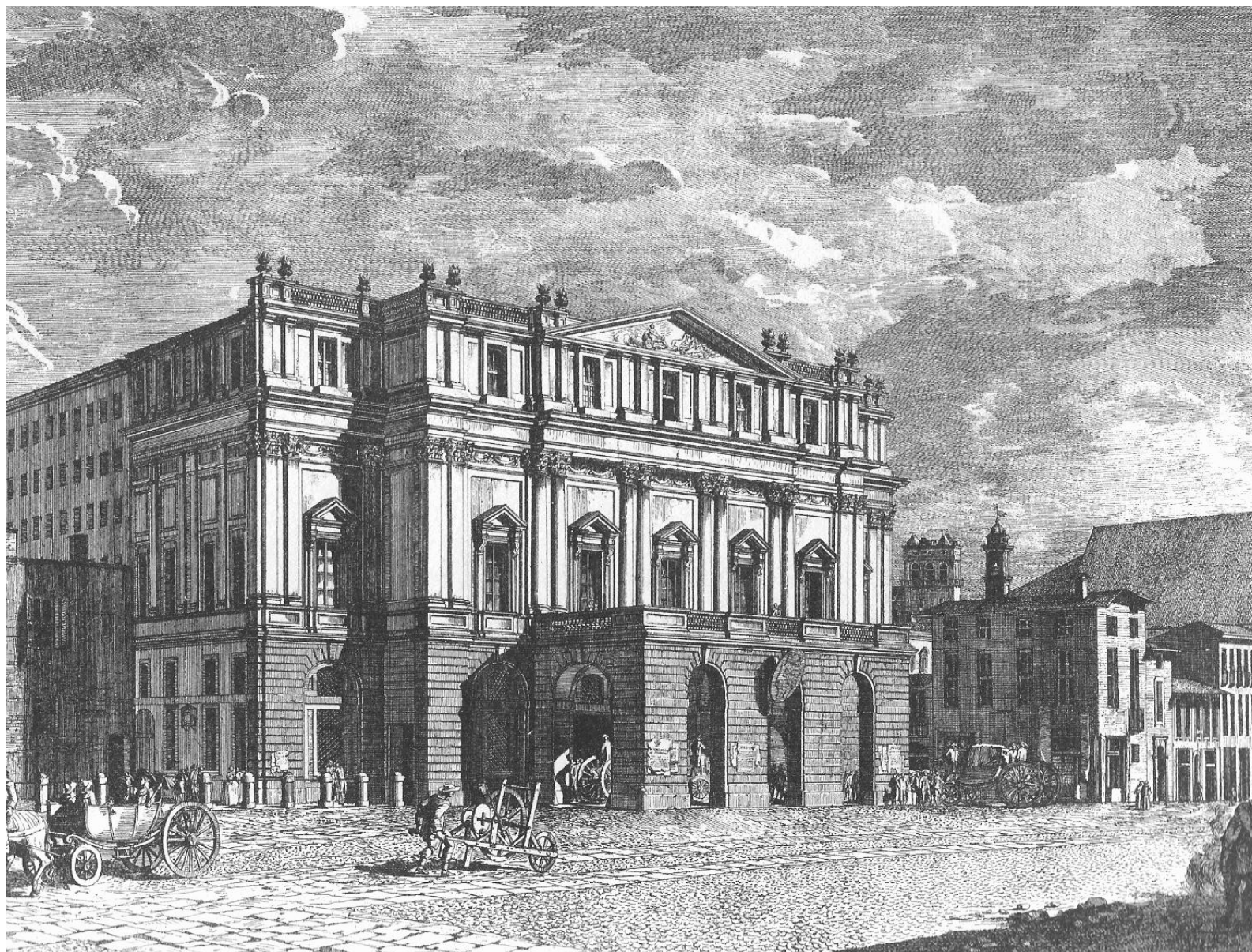
THEATRE AND CITIES



Timgad, 100 AD (Carlson, 1988)



Theatre of Dionysus, Athens



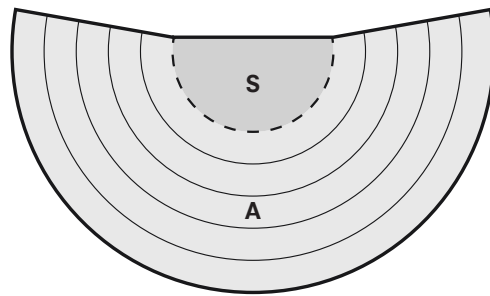
Teatro alla Scala (1778), Milan



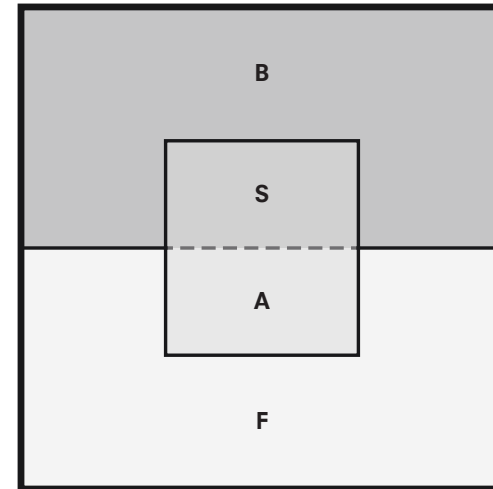
Palais Granier (1875), Paris

Introduction

EVOLUTION OF THE THEATRE



ANCIENT GREEK

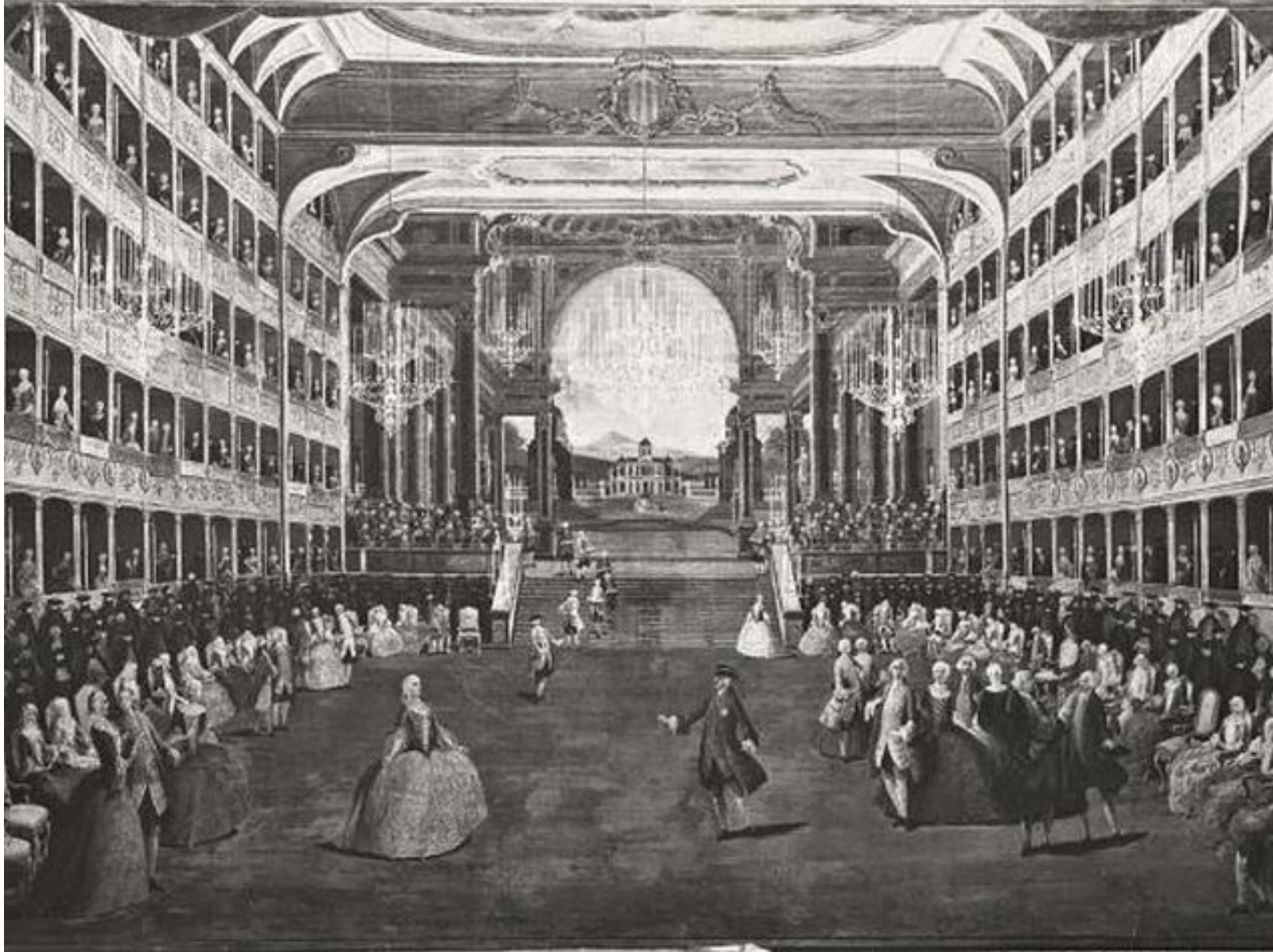


MODERN

Carlson, M. (1988). The Theatre as Civic Monument.

Introduction

SOCIETY AND OPERA



Interior of Teatro San Cassiano, ca. 1637

Introduction

SOCIETY AND OPERA



Interior of Teatro alla Scala, ca. 1830

A detailed black and white engraving of the interior of the La Scala Opera House in Milan. The image shows the ornate architecture, including the tiered balconies filled with spectators, the decorative ceiling with a central chandelier, and the stage with a painted backdrop of a landscape. The text "OPERA AS MEETING PLACE FOR ALL" is overlaid in the center.

OPERA AS MEETING PLACE FOR ALL

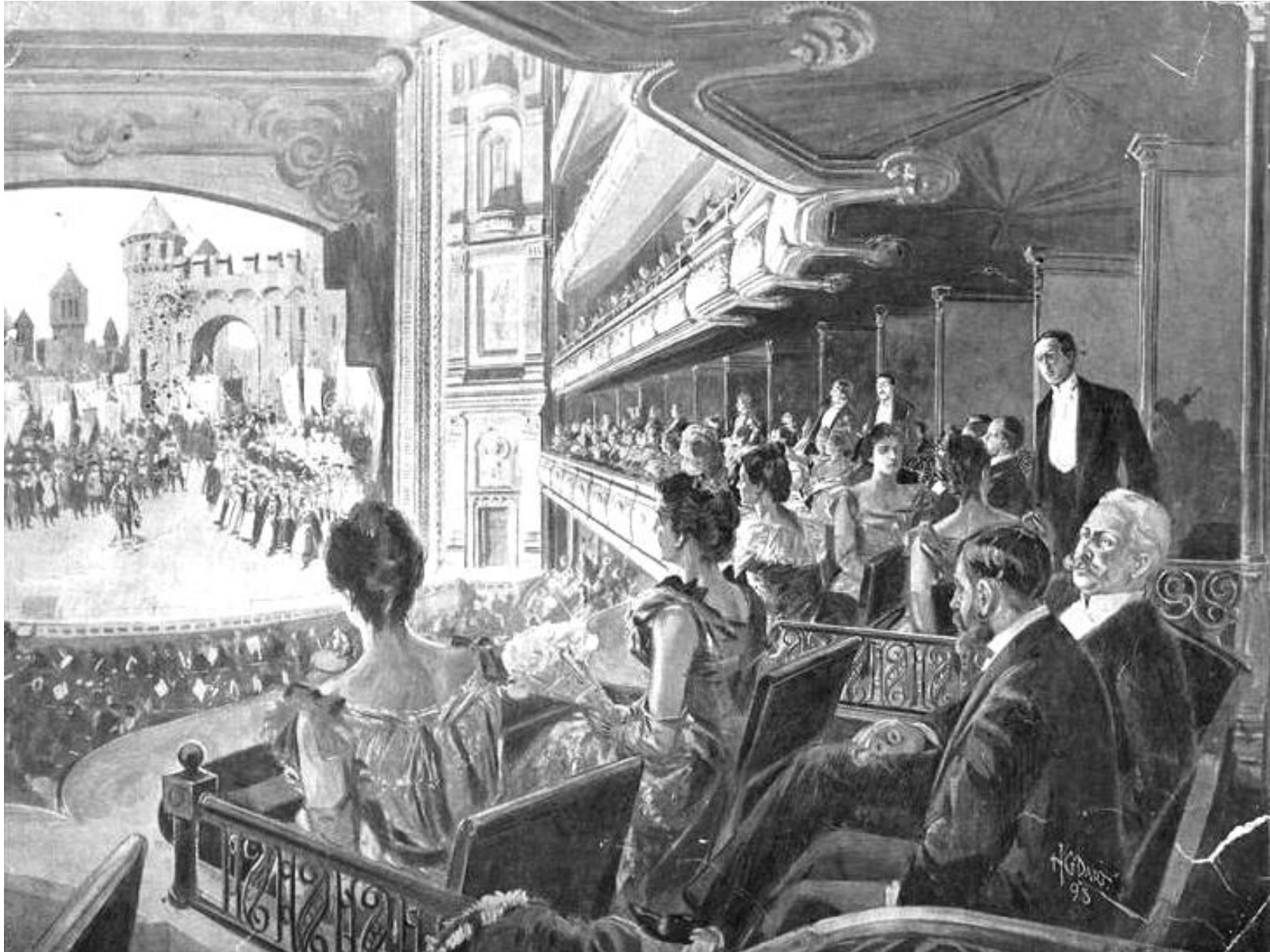
(Zelevich, 1993, p. 262).

"By the late eighteenth century and in the nineteenth century the opera played a preeminent role in the cultural life of Europe. [...] The opera house became the meeting place of all classes in society"

(Zelevich, 1993, p. 262).

Interior of La Scala Opera House in the 18th century

THE CHANGE OF OPERA



Audience at Metropolitan Opera, ca. 1890

Introduction

THE CHANGE OF OPERA



Audience at Teatro alla Scala, 1933



OPERA AS 'HIGH CULTURE'

(Storey, 2003, p. 12)

"[...] it did not become unpopular; rather it was made unpopular. It was actively appropriated from its popular audience by elite social groups determined to situate it as the crowning glory of their culture – so-called 'high culture'."

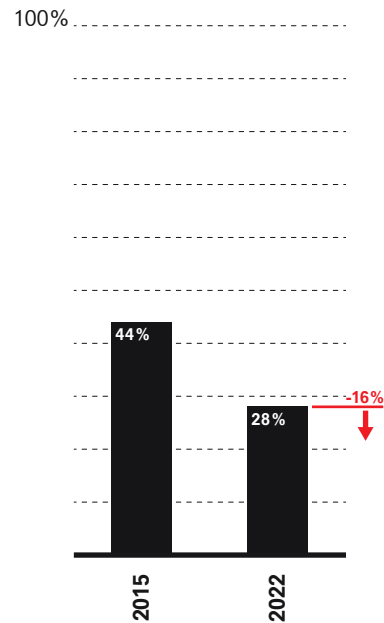
(Storey, 2003, p. 12)

Introduction

OPERA TODAY

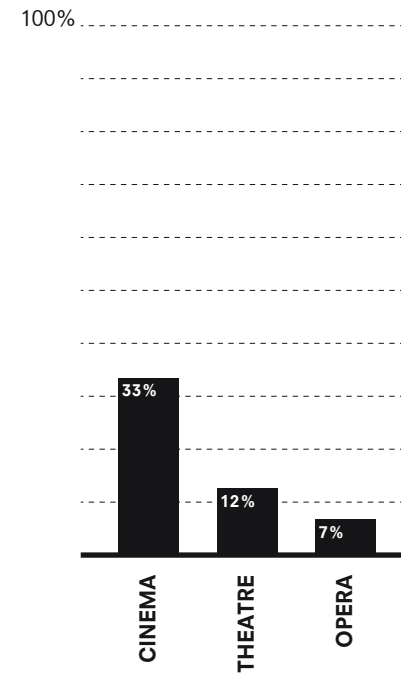
ATTENDING CULTURAL ACTIVITIES IN EUROPE

participating in any cultural activity at least once a year
(% of population aged 16 and over)



ATTENDING CULTURAL ACTIVITIES IN ITALY

participating in any cultural activity at least once a year
(% of population aged 16 and over)



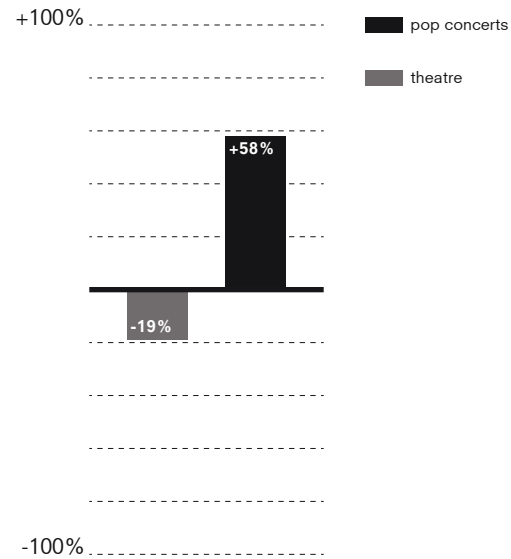
Culture Statistics, Eurostat (2022)

Introduction

OPERA TODAY

ATTENDANCE AT LIVE PERFORMANCES IN ITALY

increase and decrease in attendance of live performances in Italy
(difference between 2018 and 2022)



Minicifre della Cultura, Ministero della Cultura (2023)

Introduction

OPERA TODAY



Inauguration of the 2022-2023 opera and ballet season of Teatro alla Scala, 2022



**"[...]FROM ENTERTAINMENT
ENJOYED BY THE MANY INTO
CULTURE TO BE APPRECIATED
BY THE FEW."**

(Storey, 2003, p. 12)



Vienna State Opera, Vienna



Palais Granier, Paris



Teatro alla Scala, Milan



WHERE IS THE OPERA?



Auditorium of Palais Granier, Paris



Auditorium of Teatro alla Scala, Milan



OPERA IS HIDDEN



Snohetta, Oslo Opera House (Oslo, 2007)



Snohetta, Oslo Opera House (Oslo, 2007)



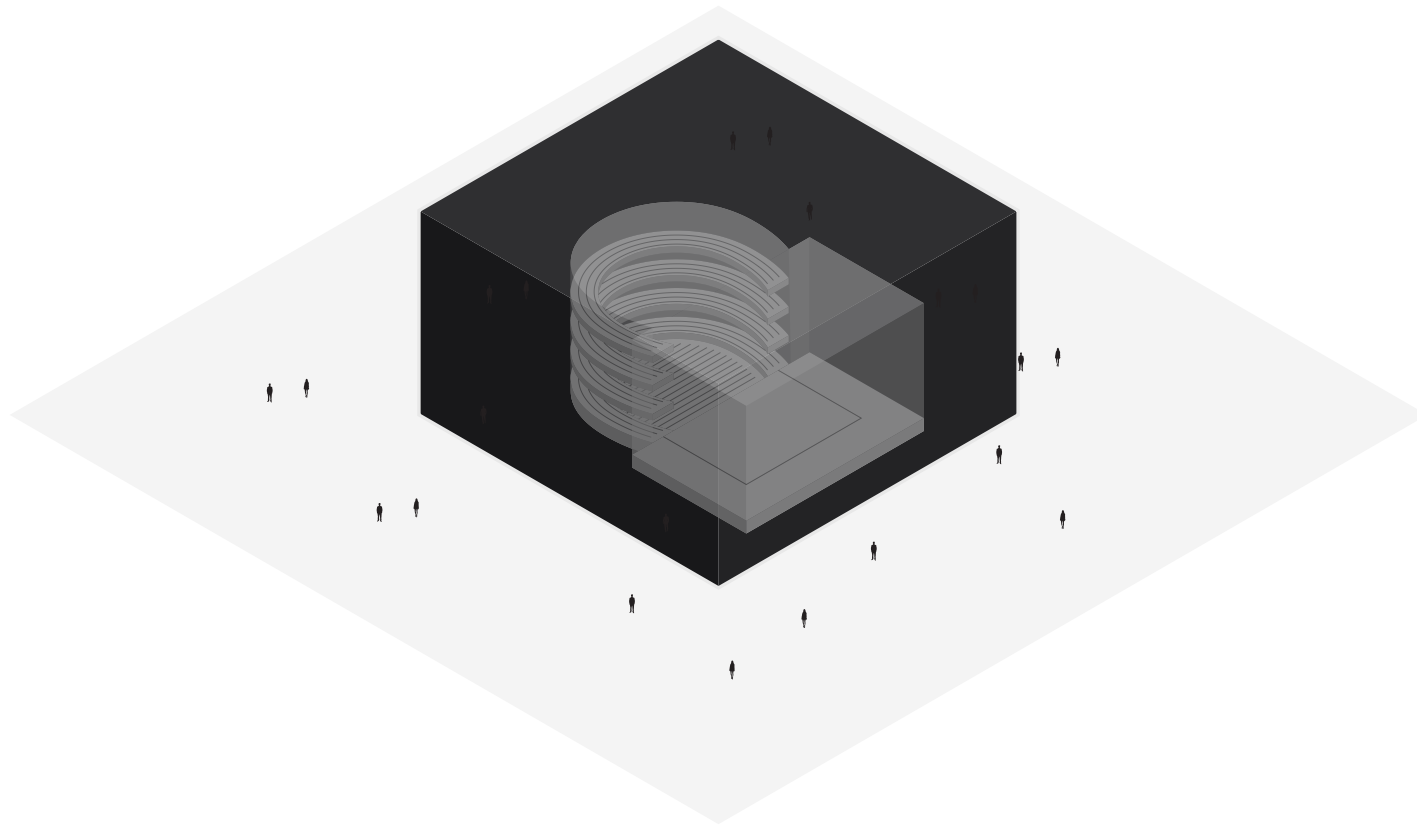
OMA, Casa da Musica (Porto, 2005)



OMA, Casa da Musica (Porto, 2005)

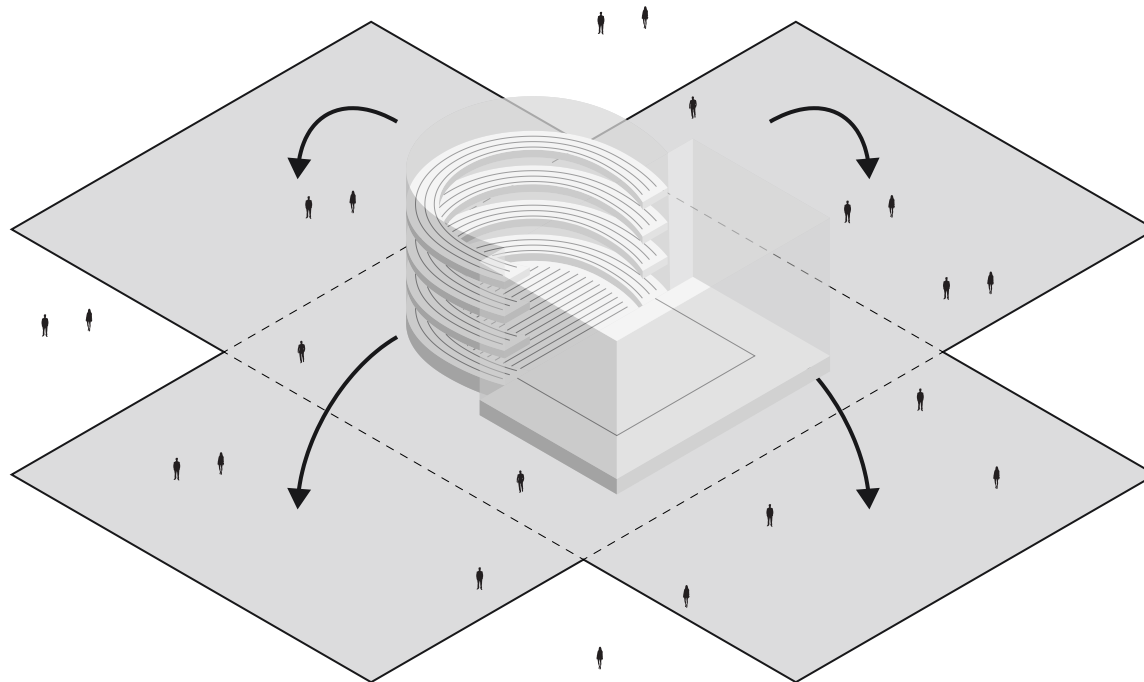
Introduction

'INSIDE' OPERA



Introduction

'INSIDE-OUT' OPERA



Introduction

WHAT IF?



Street performance in front of Centre Pompidou, Paris



WHAT IF?

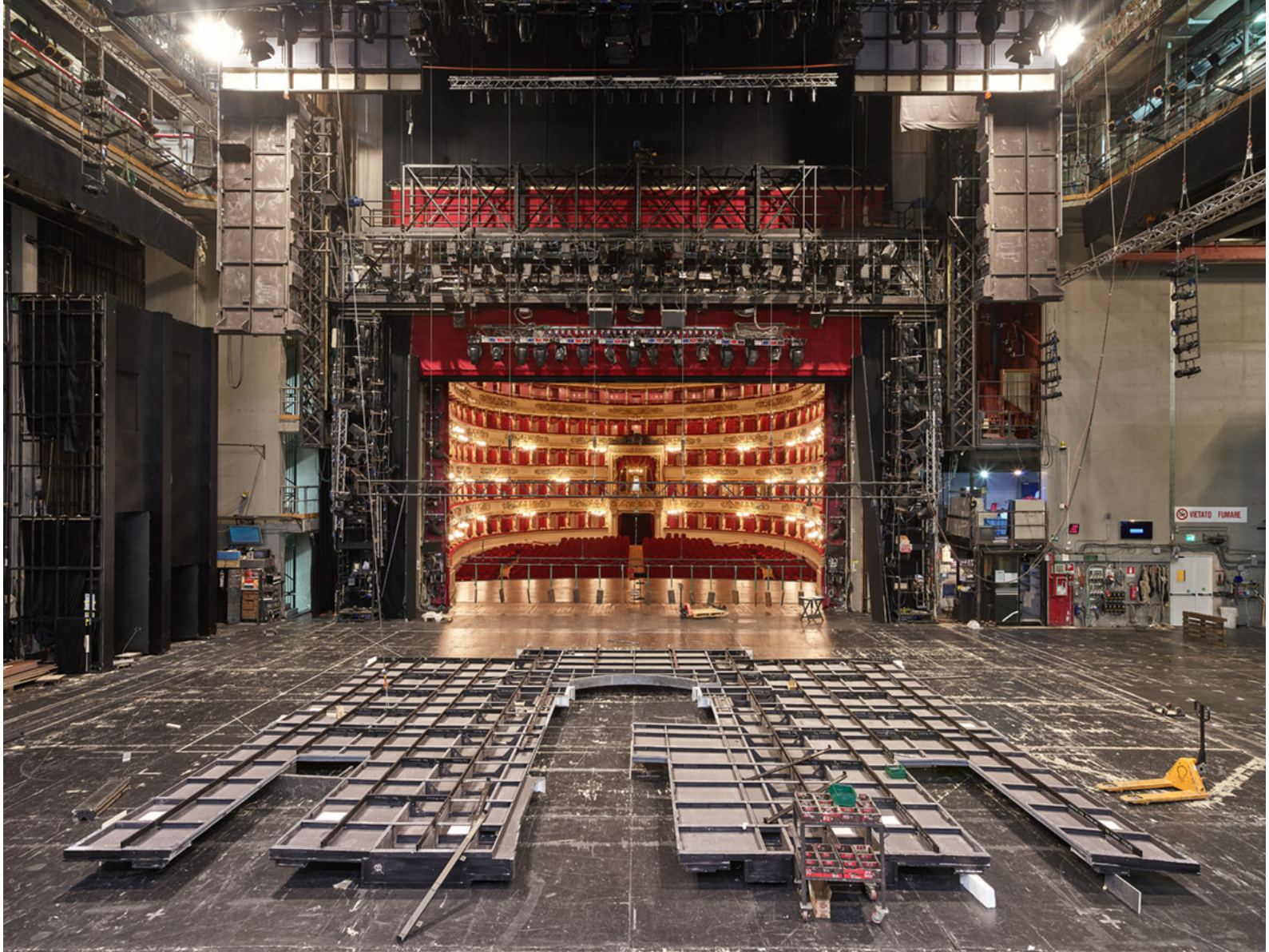




THE OPERA BECOMES PART OF THE PUBLIC SPACE?



Auditorium of Teatro alla Scala, Milan




Backstage of Teatro alla Scala, Milan



Auditorium of Teatro alla Scala, Milan



Opera Andrea Chénier, Teatro alla Scala, 2020



**“People are craving experience—
they are desperate for experience”**

(Lambert, 2012, p. 38)

OPERA AS MODERN PERFORMANCE



A black and white photograph of a public square, likely Piazza del Duomo in Milan, featuring the Galleria Vittorio Emanuele II. In the center, a man and a woman in 19th-century period clothing are dancing on a dark, rectangular platform. The man is wearing a light-colored shirt and dark trousers, while the woman is in a long, flowing dress. They are surrounded by other people in the square, some sitting on the ground and others walking. The background shows the grand architecture of the square, including the large arches of the Galleria. The sky is filled with dramatic, dark clouds. The text "WHAT IF?" is overlaid in large, white, sans-serif capital letters across the center of the image.

WHAT IF?





RESEARCH QUESTION

How can the architecture of an opera house reposition the cultural relevance of opera in contemporary society?

DESIGN BRIEF



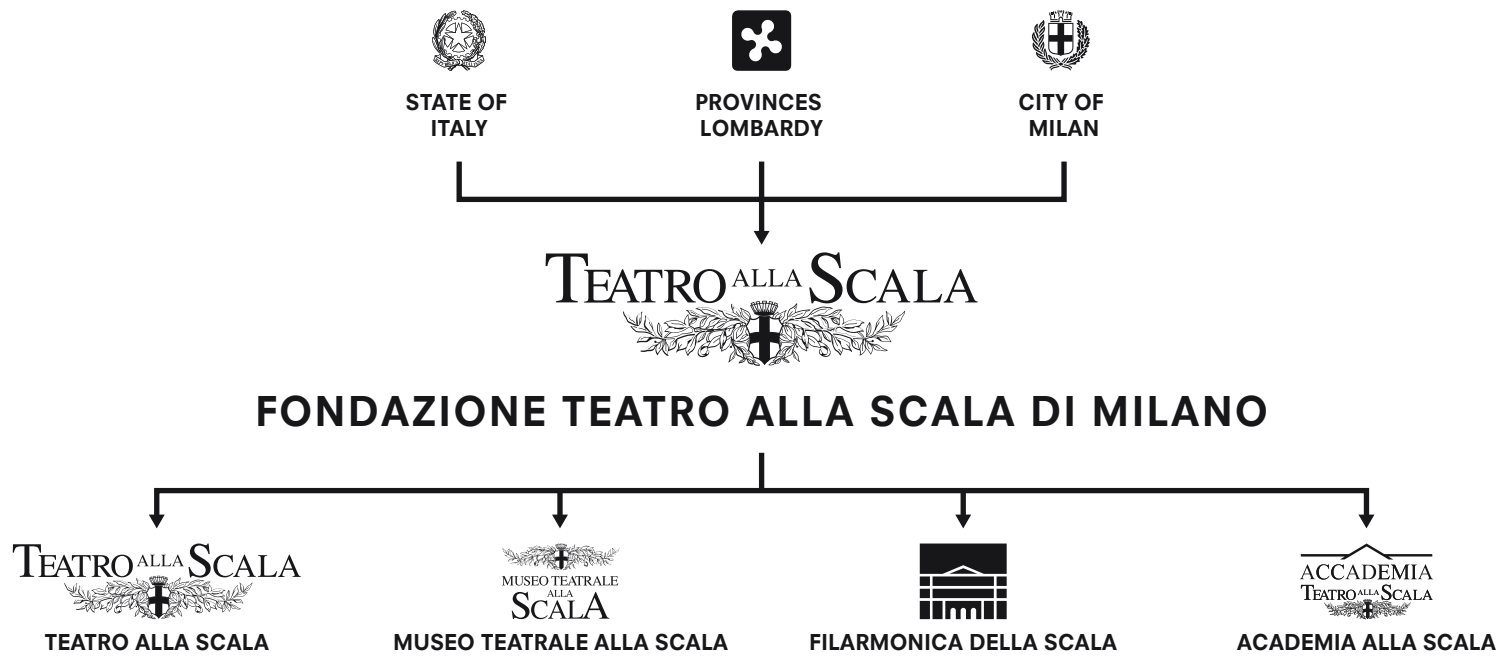


Design brief

CLIENT



CLIENT

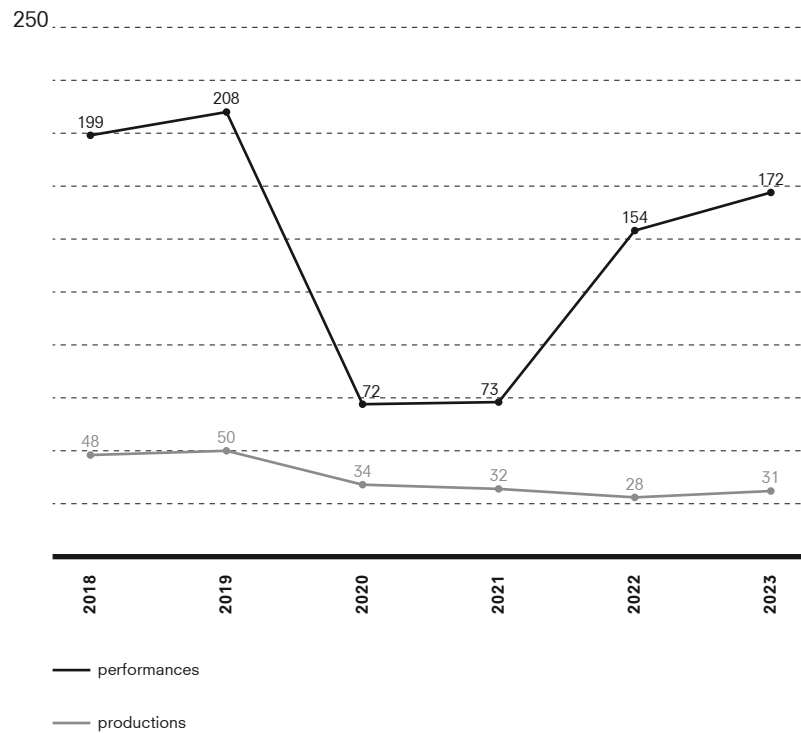


Design brief

STATISTICS OF SCALA

PRODUCTION AND PERFORMANCES

Total number of productions and performances /year



OCCUPANCY RATE

Total occupancy rate /year



Fondazione Teatro alla Scala di Milano. (2024). BILANCIO 2023.

Design brief

THE SCALE OF SCALA

L

International



* La Scala, a world-renowned opera producer, is the global heart of opera, bringing its productions worldwide.

M

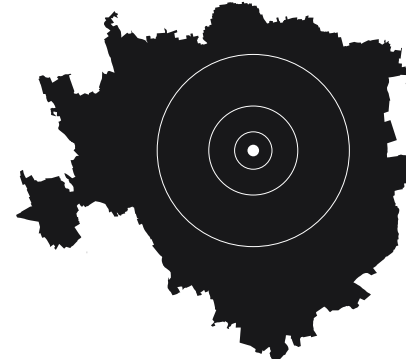
National



* La Scala, Italy's opera capital, hosts and produces the most operas in the country each year.

S

Milan



* La Scala is an integral part of Milan's history and culture.

Design brief

INDUSTRIES OF MILAN

CARS



FASHION



DESIGN



Design brief

INDUSTRIES OF MILAN

CARS



FASHION



DESIGN



OPERA



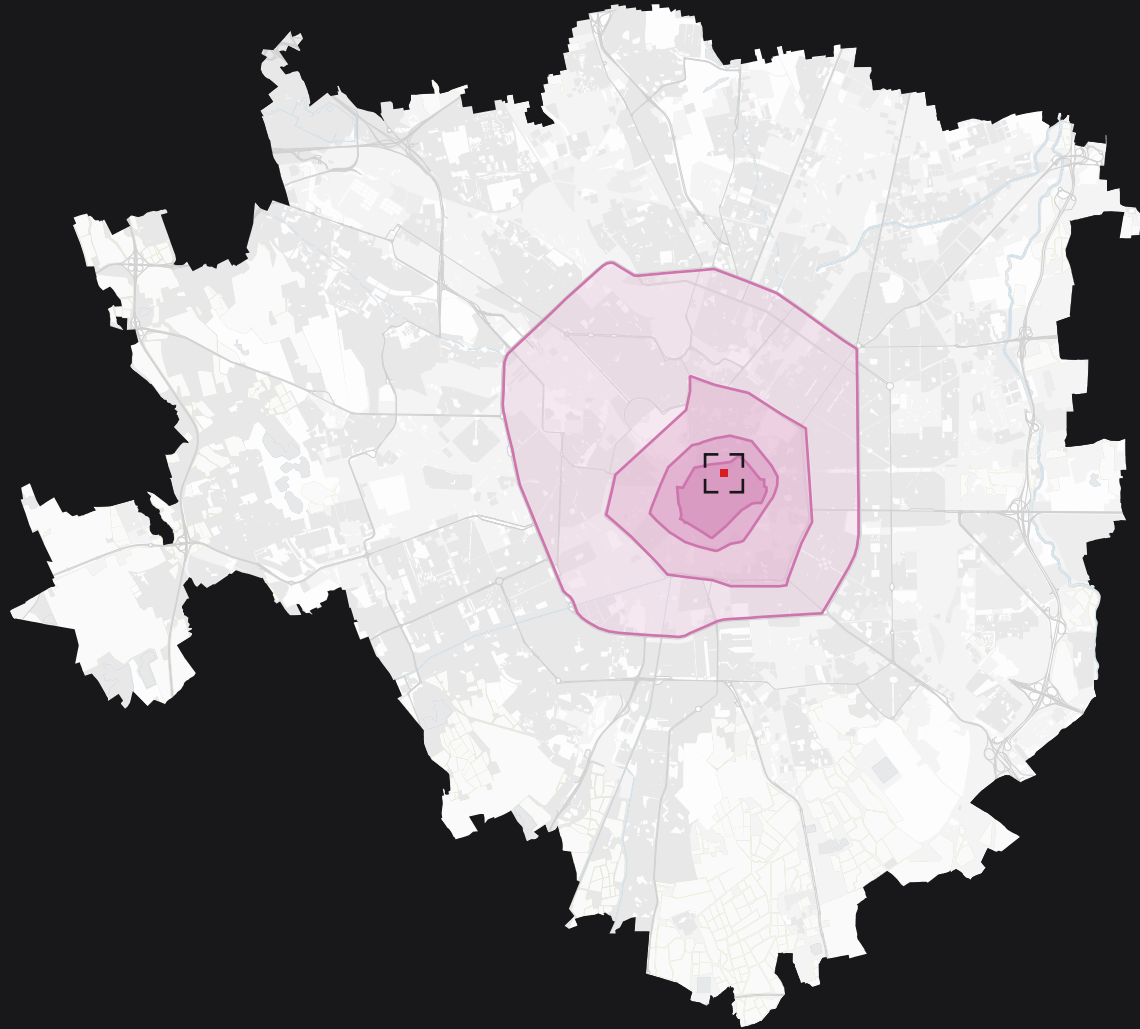
Design brief

TEATRO ALLA SCALA

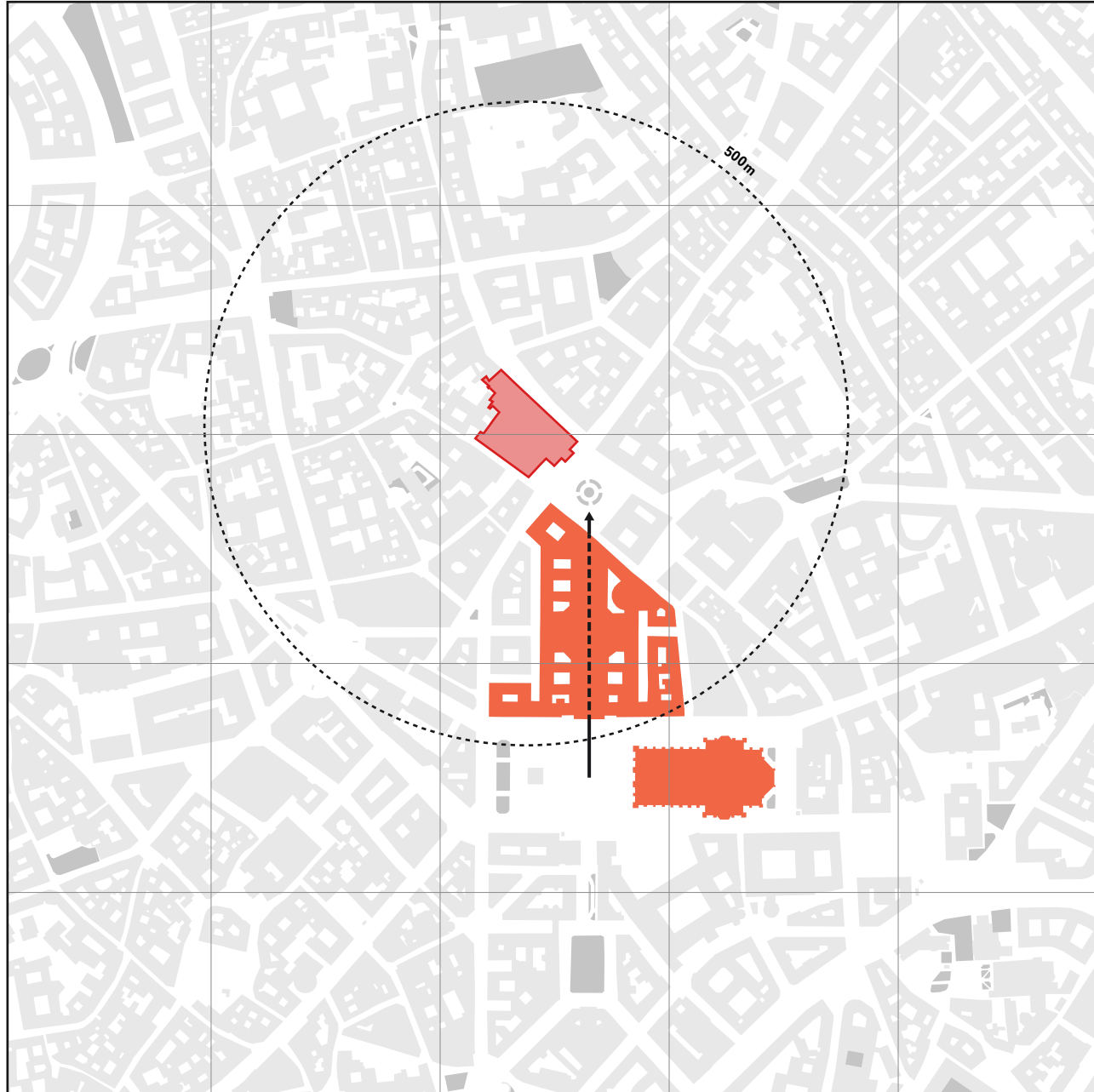


Design brief

CITY CENTRE



HISTORICAL CONNECTION



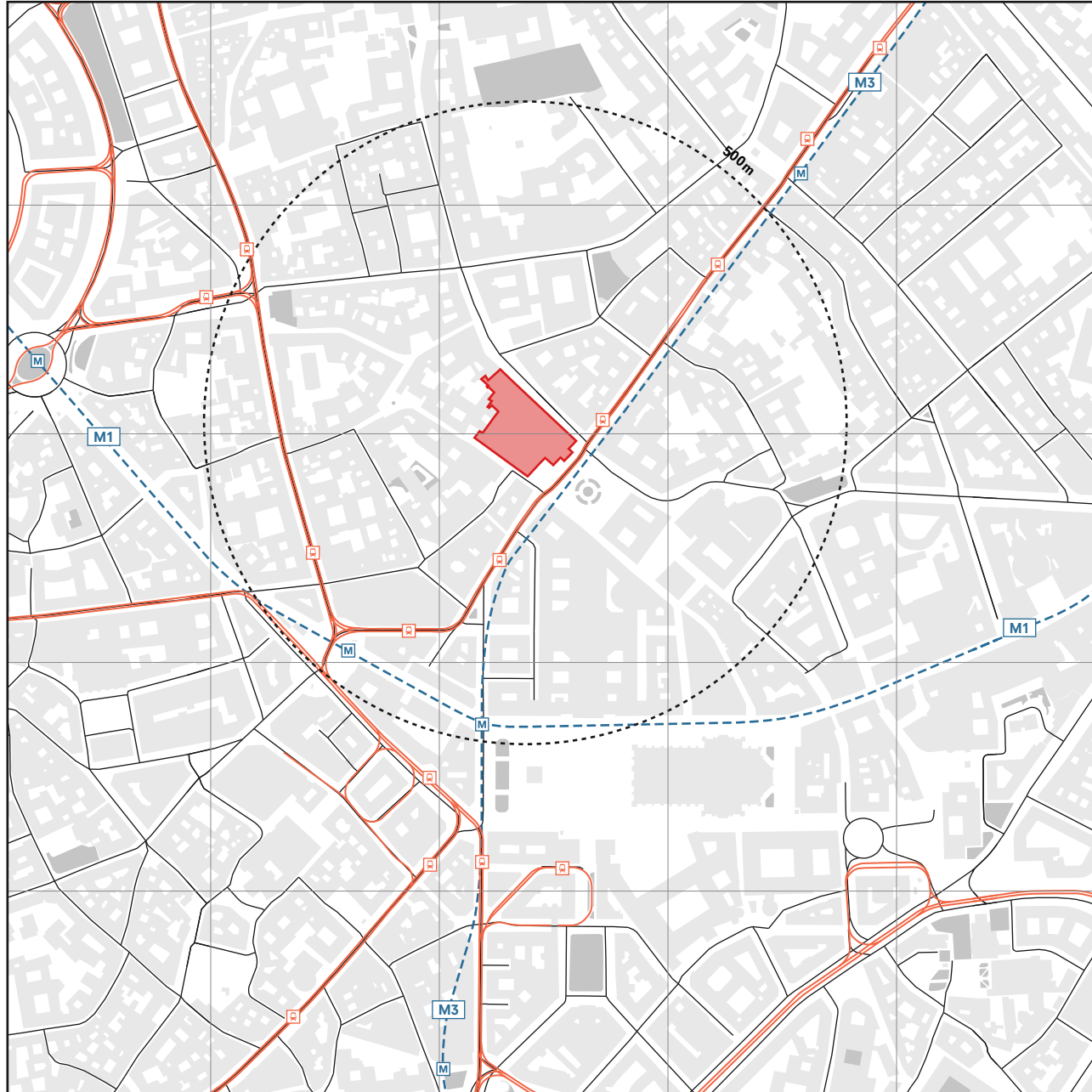


Galleria Vittorio Emanuele II

Duomo di Milano

Design brief

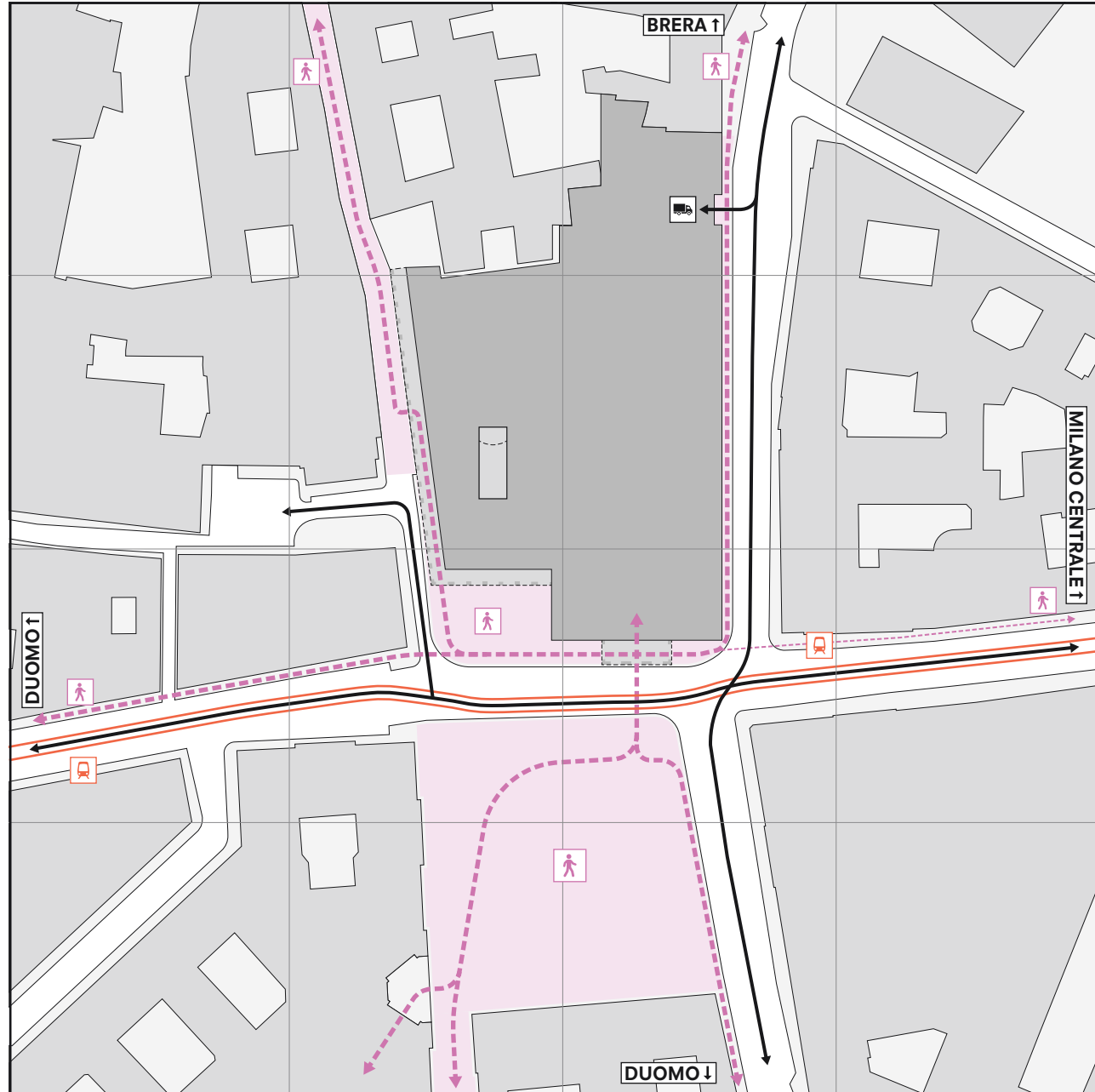
PUBLIC TRANSPORT



PLOT INFORMATION



EXISTING ACCESSIBILITY

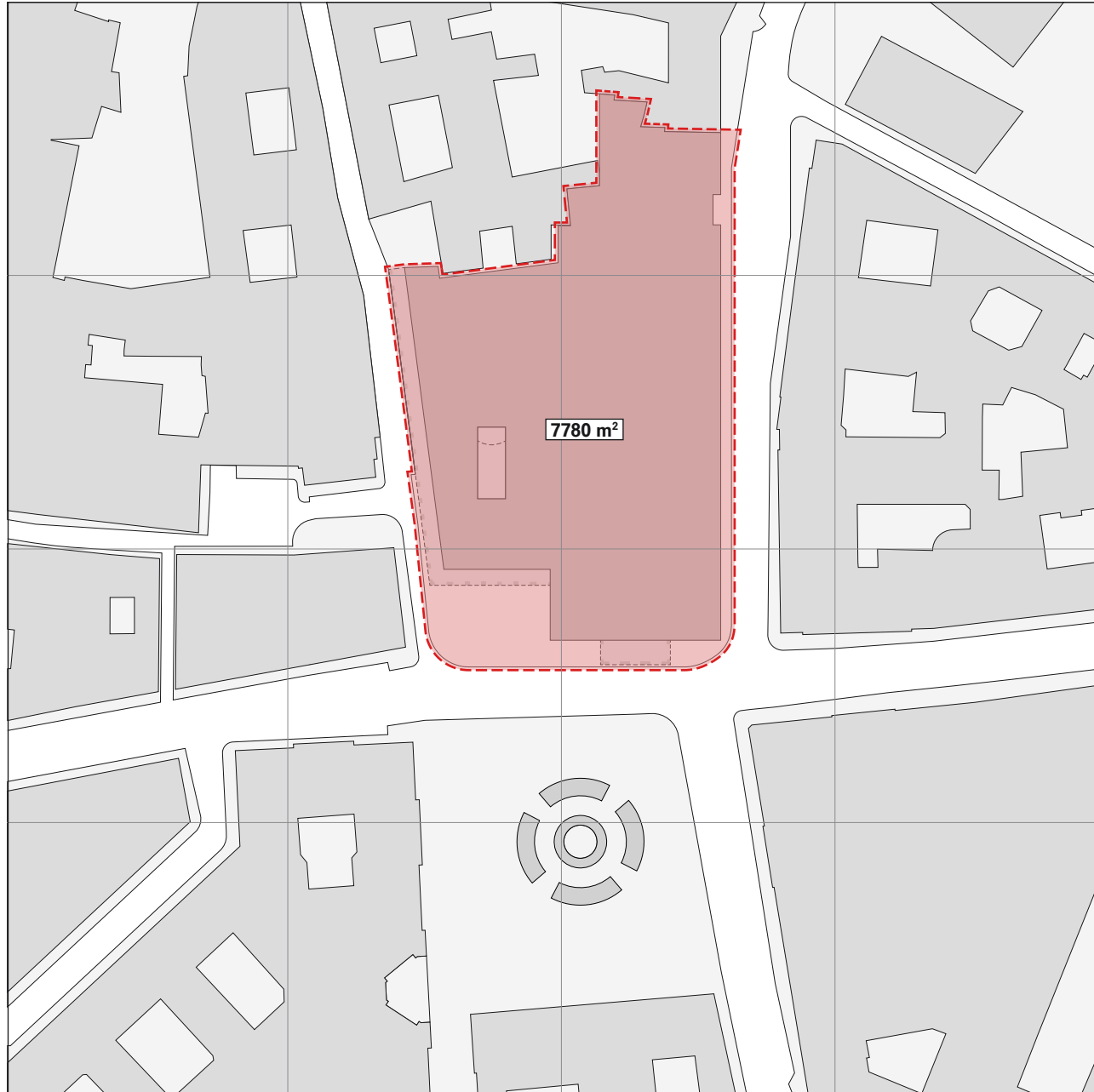


Design brief

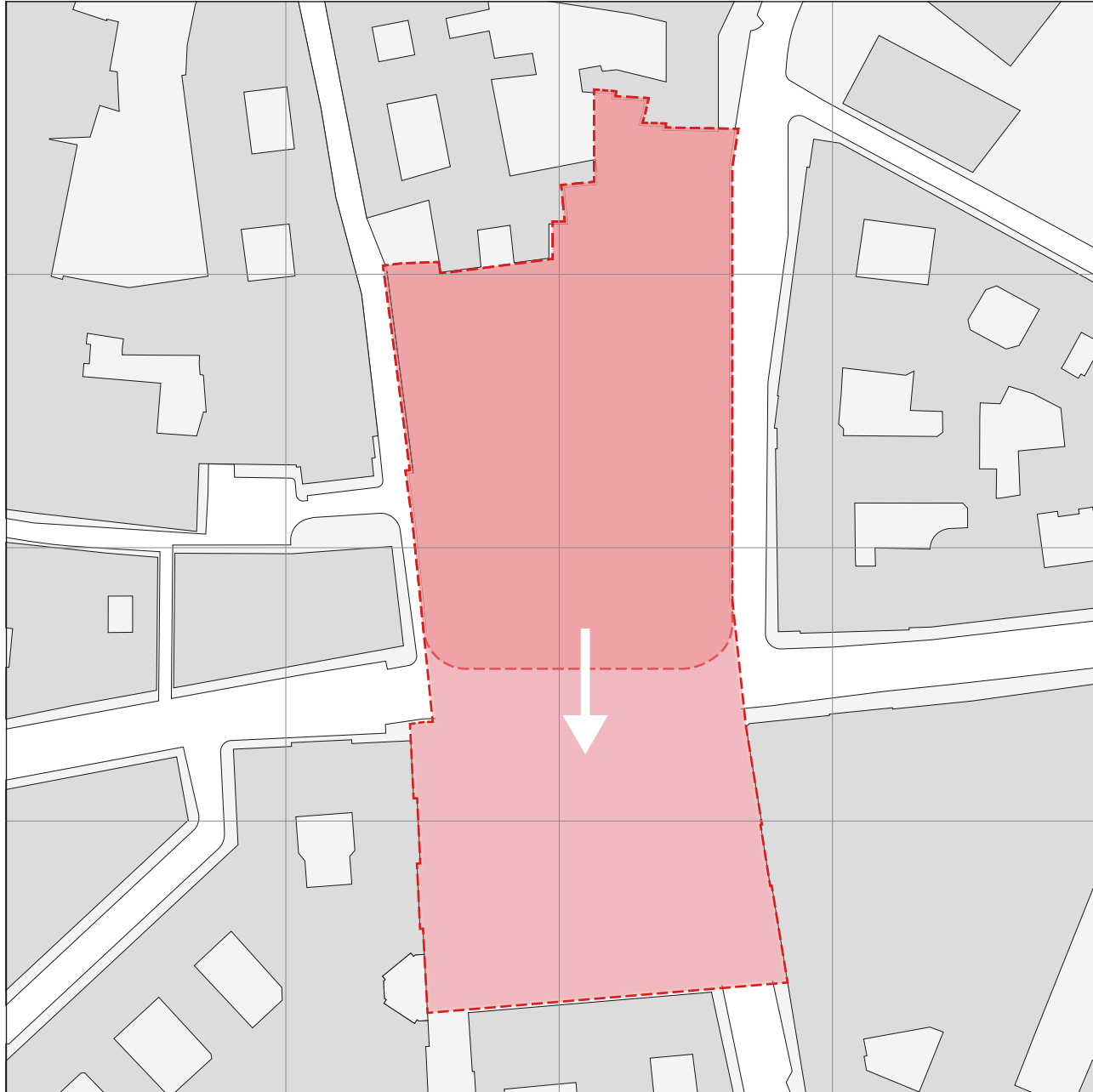
PLOT INFORMATION



PLOT INFORMATION



PUSHING THE PLOT BOUNDARY



Design brief

PLOT INFORMATION

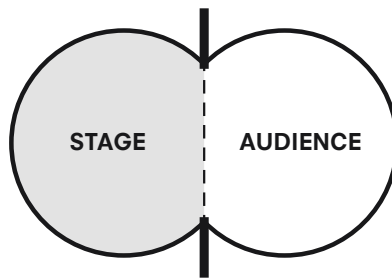


Design brief

THEATRE CONFIGURATION

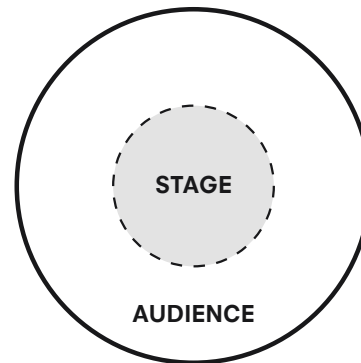
PROSCENIUM THEATRE

Linear



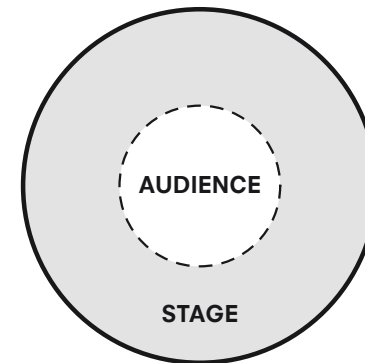
CENTRAL THEATRE

Non-linear



PERIPHERAL THEATRE

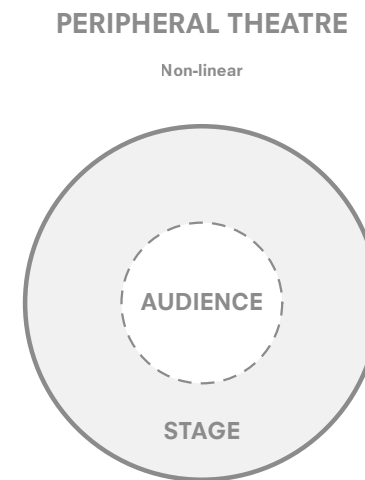
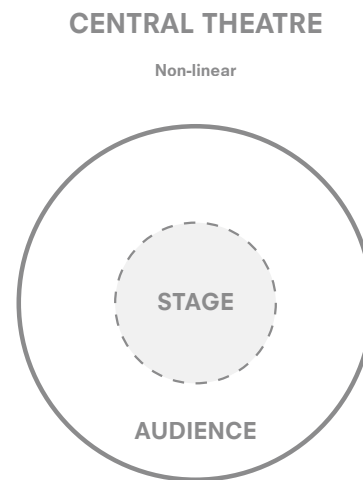
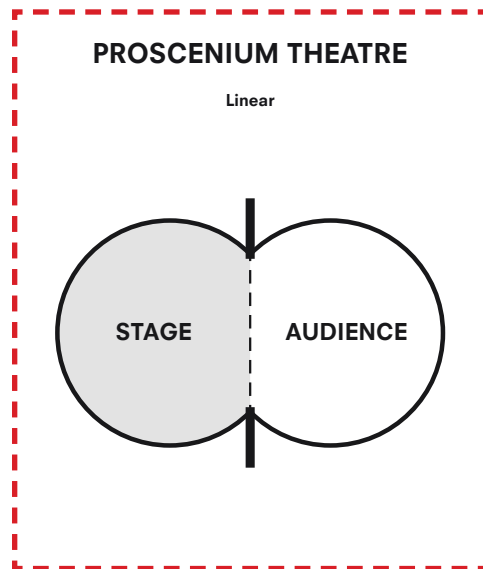
Non-linear



Bowman, N. A. (1964). The Ideal Theatre: Emerging tendencies in its architecture.

Design brief

OPERA CONFIGURATION



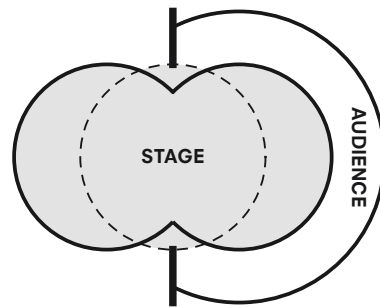
Bowman, N. A. (1964). The Ideal Theatre: Emerging tendencies in its architecture.

Design brief

NEW OPERA EXPERIENCE

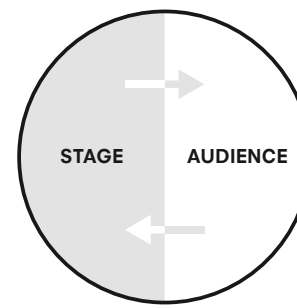
TRUST STAGE

Non-Linear



OPEN STAGE

Non-linear



Bowman, N. A. (1964). The Ideal Theatre: Emerging tendencies in its architecture.

Design brief

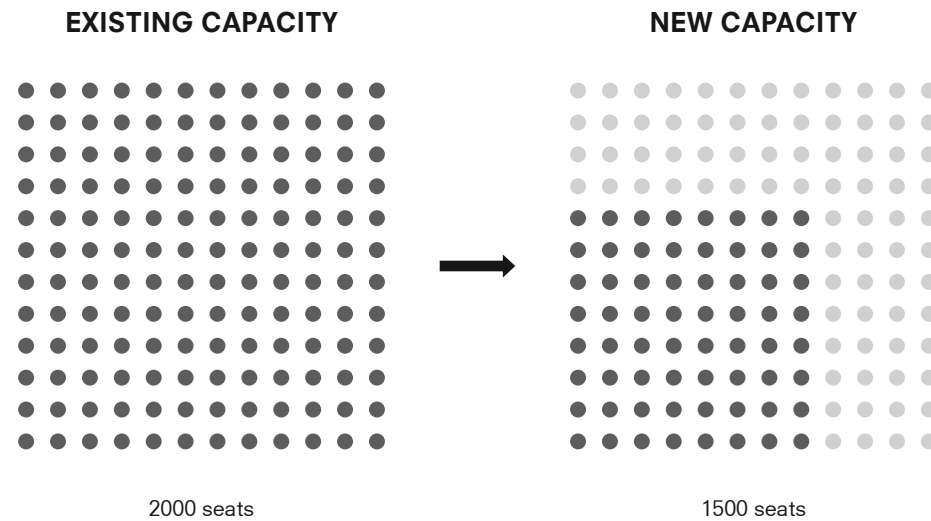
NEW OPERA EXPERIENCE



OMA, Faena Forum (Miami 2022)

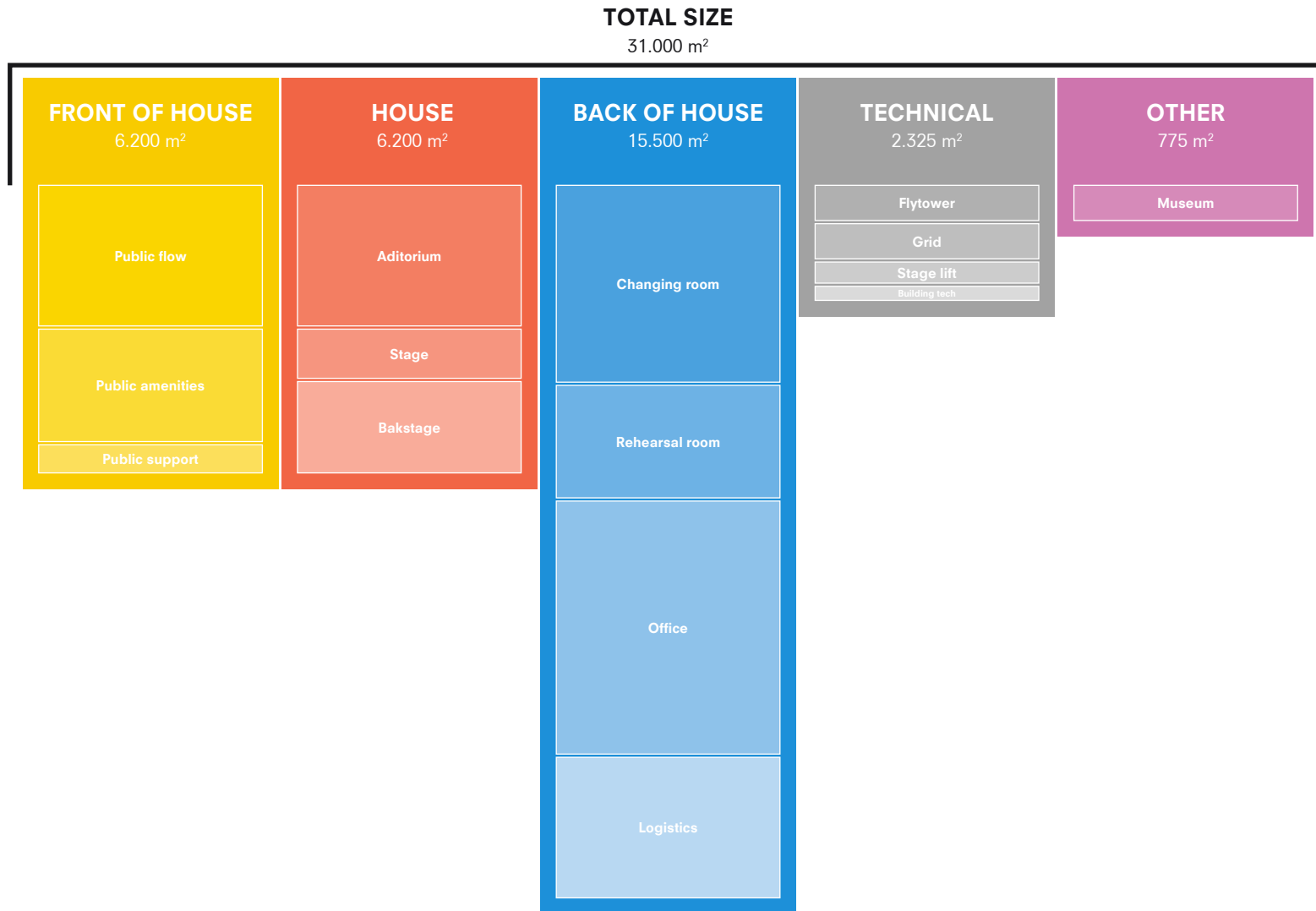
Design brief

NEW CAPACITY



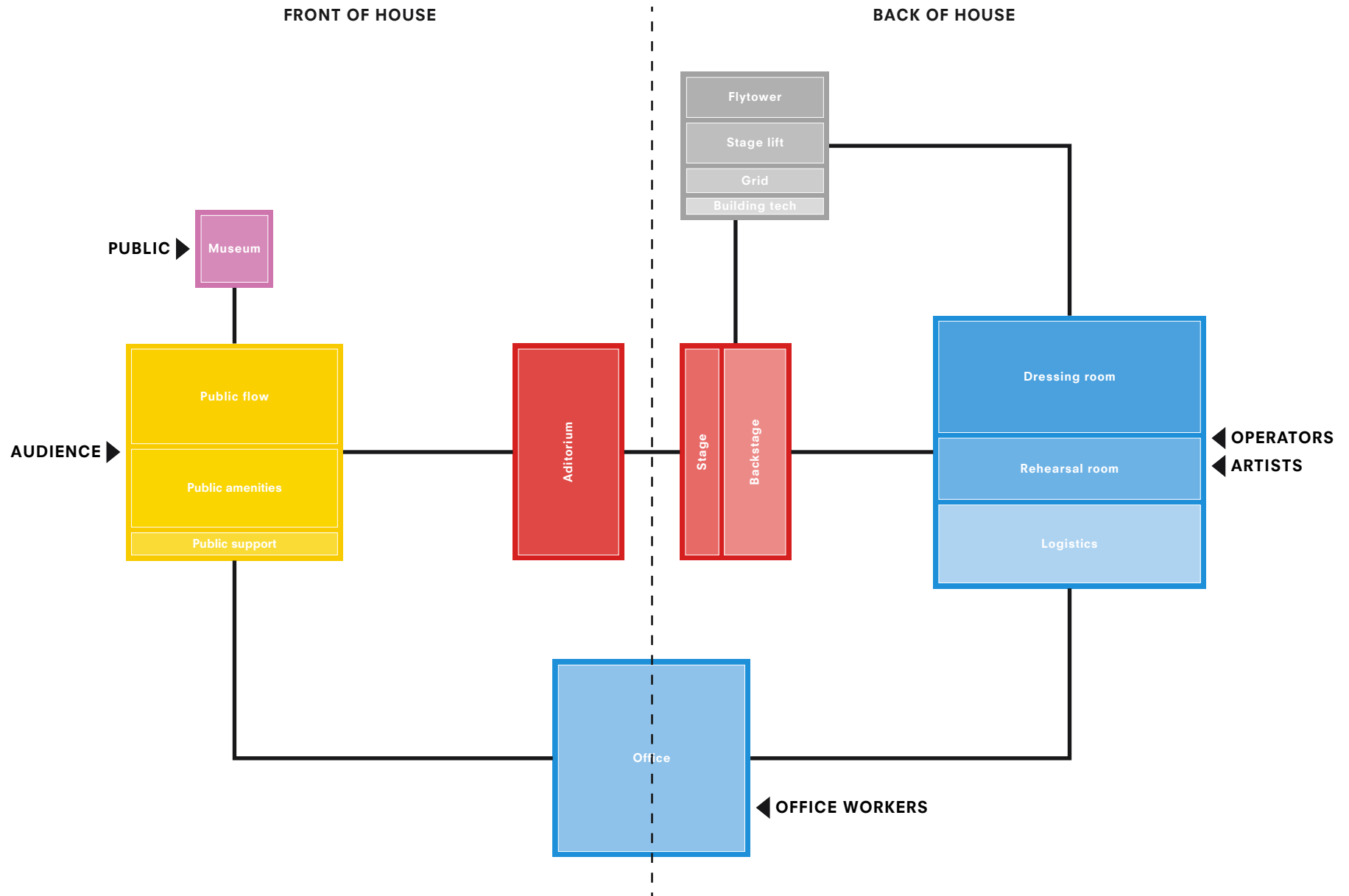
Design brief

PROGRAM SIZE



Design brief

PROGRAM RELATION



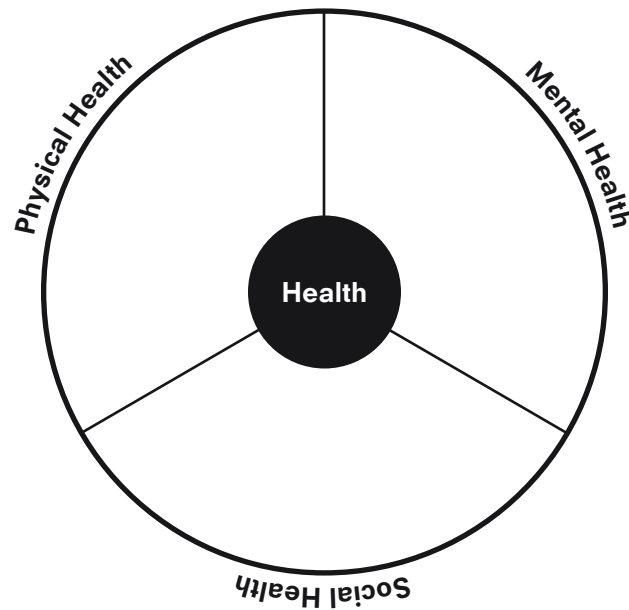


[illegible]



Design brief

HEALTH

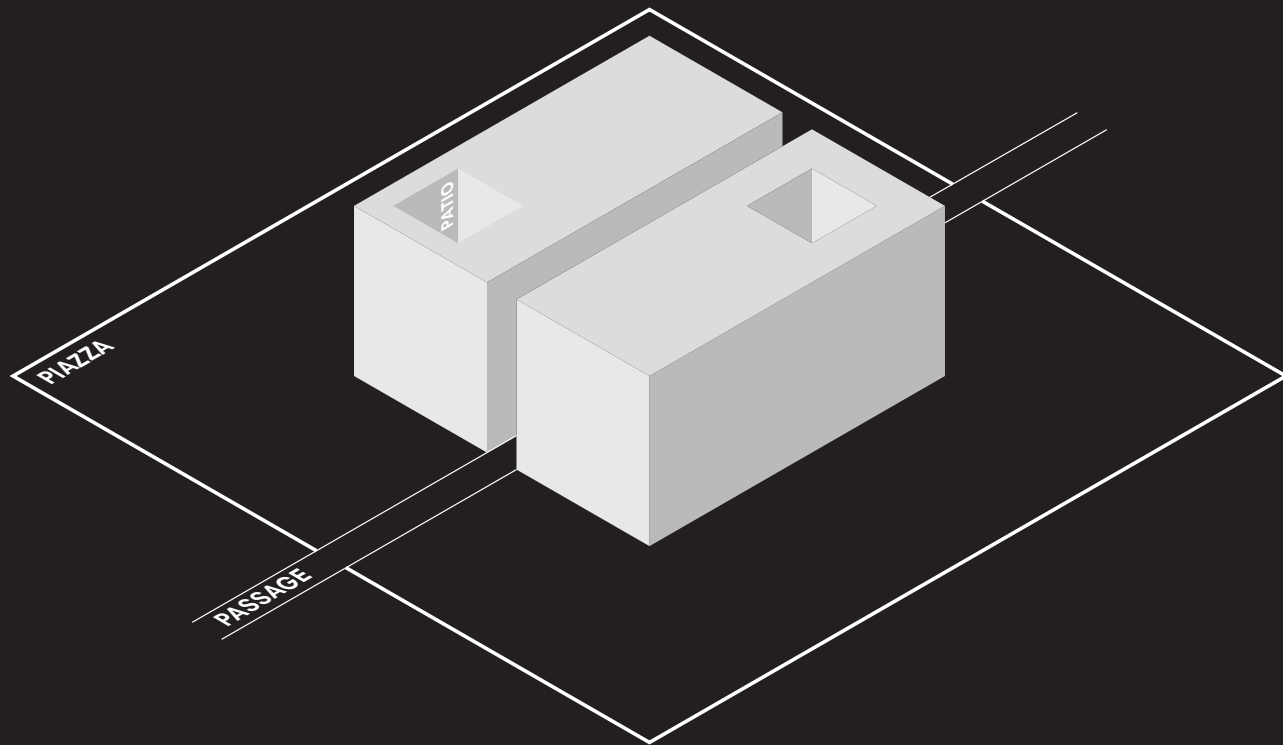


"HEALTH IS A STATE OF COMPLETE PHYSICAL, MENTAL, AND SOCIAL WELL-BEING."

World Health Organization (WHO), 1948

HEALTH AND SPATIAL CONTEXT

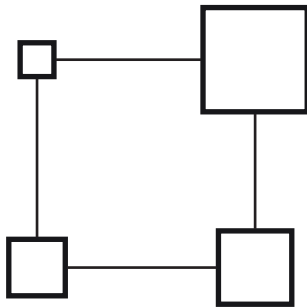
“How can the design and planning of public spaces in Milan be optimised to enhance physical and mental health for its residents?”



DESIGN IMPLEMENTATIONS

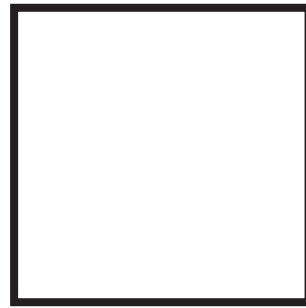
XL

HEALTH BELT



L

PIAZZA



M

PASSAGE

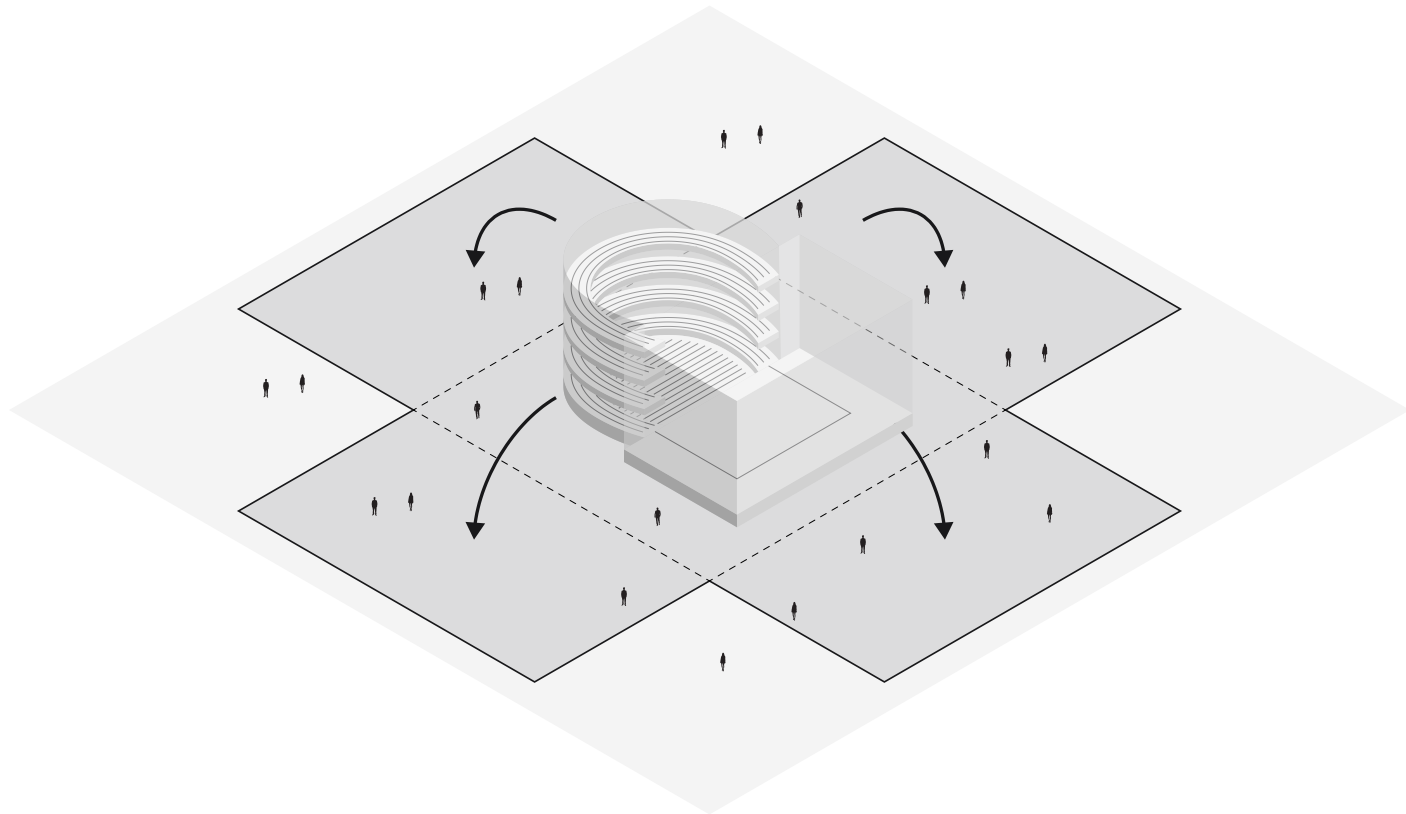


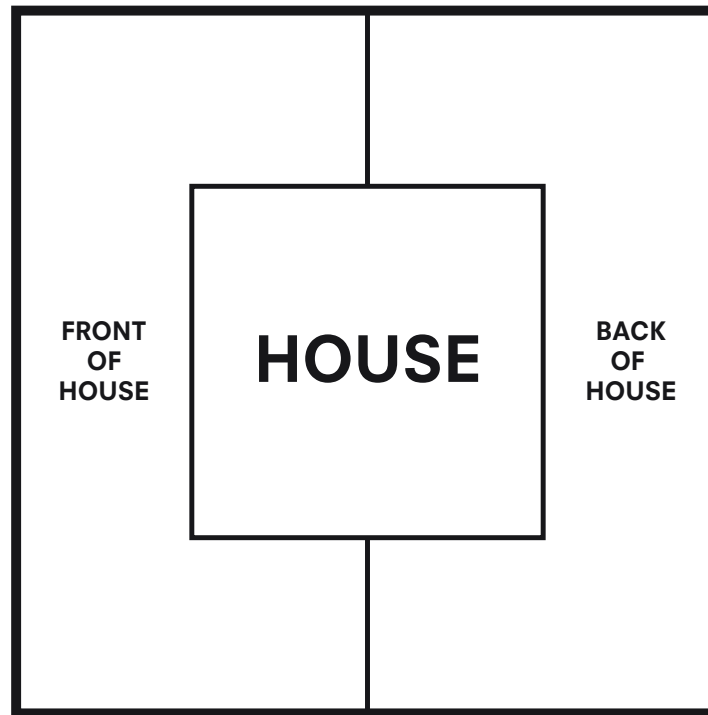
S

PATIO



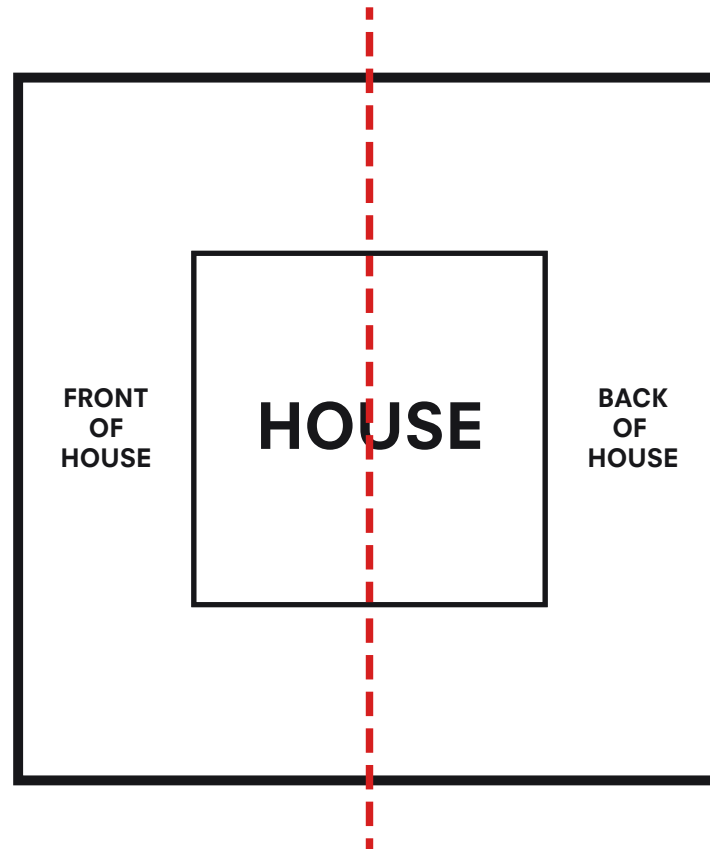
CONCEPT





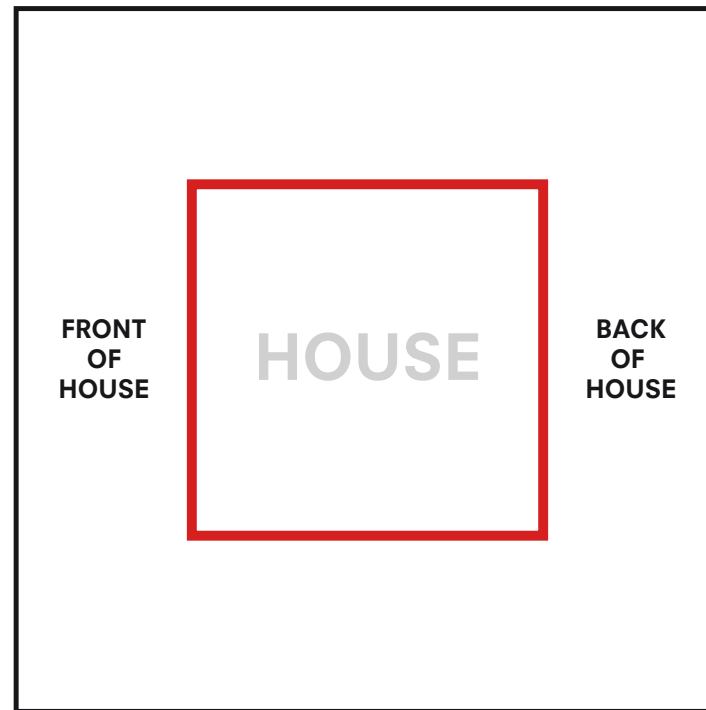
TYPICAL THEATRE

the programme organisation characteristic of conventional theatres



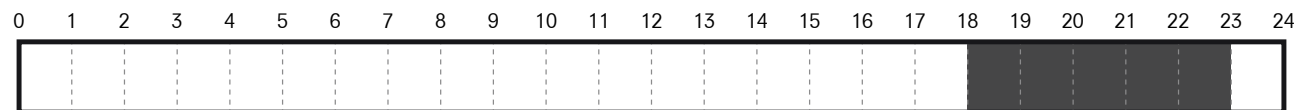
TYPICAL THEATRE

create a separation between front-of-house and back-of-house (public and non-public)

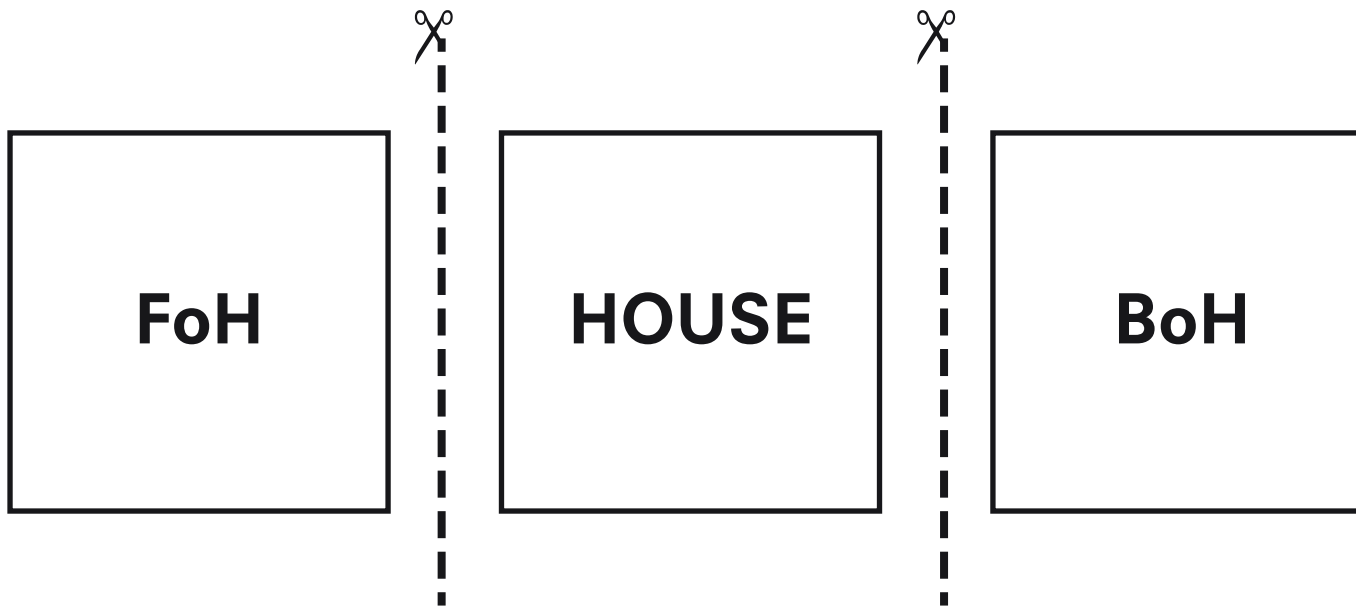


TYPICAL THEATRE

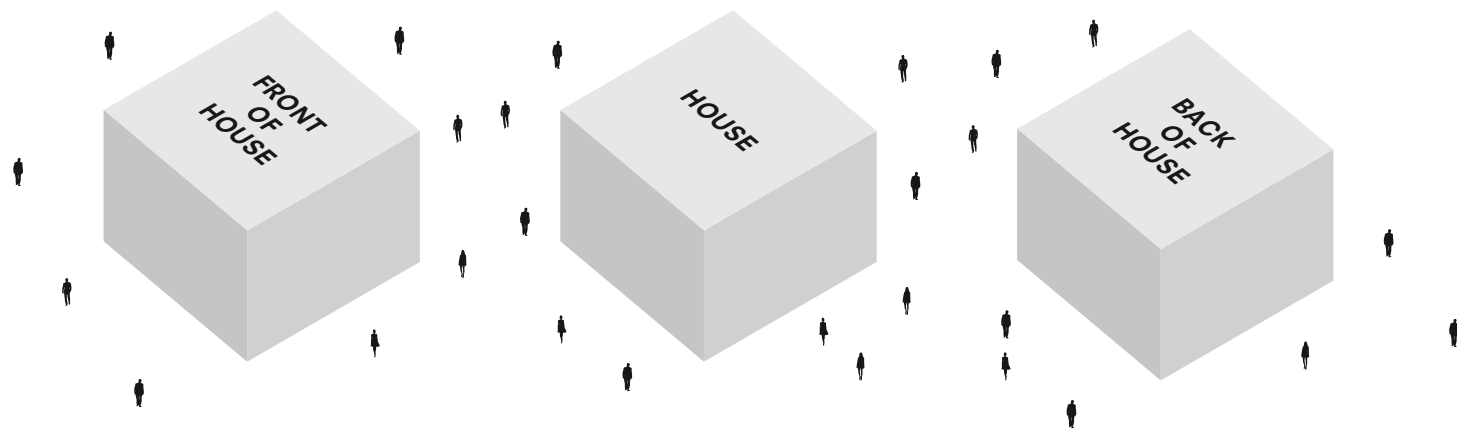
it hides the core programme from the outside



THEATRE PROGRAM TIMETABLE

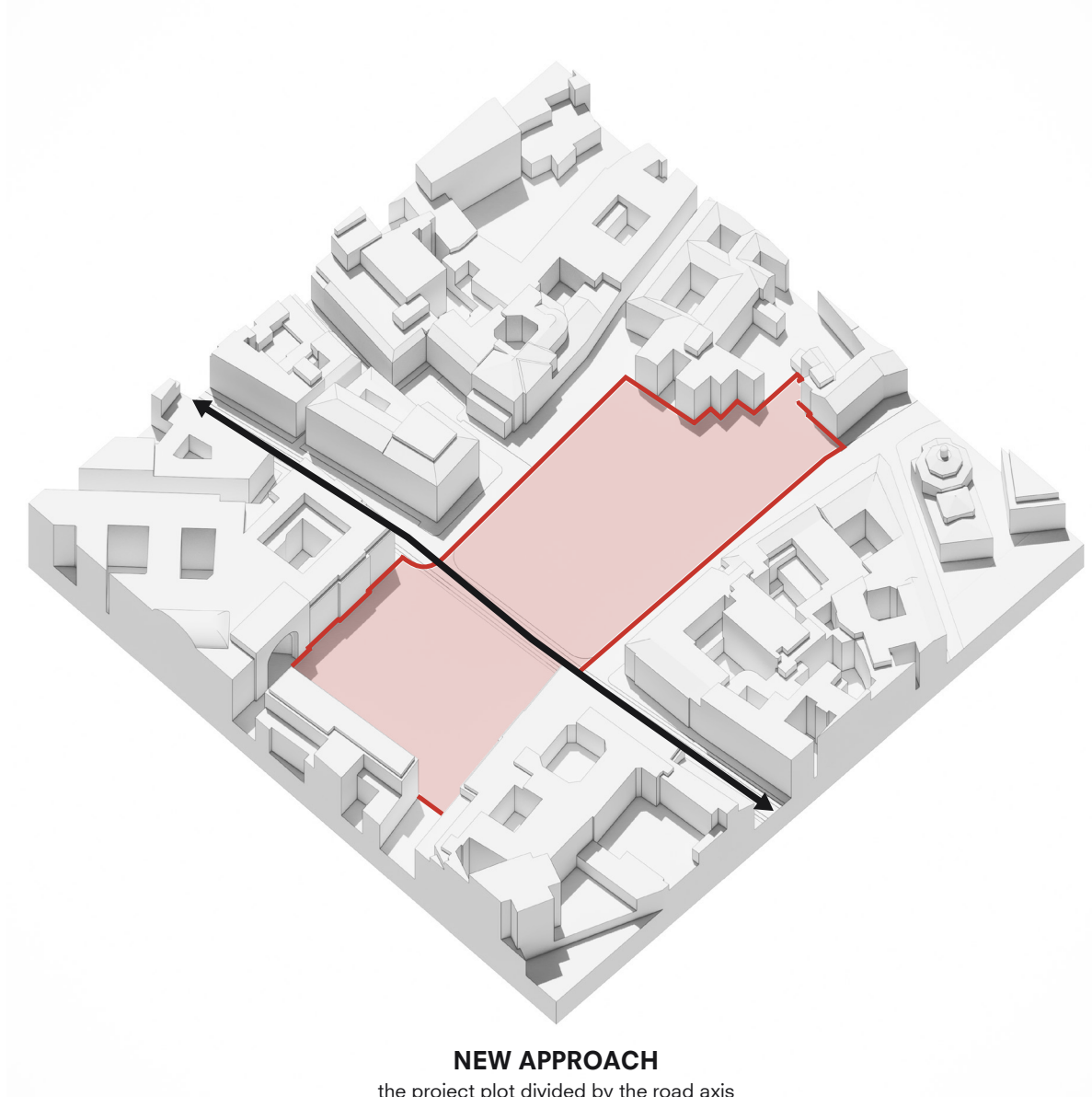


NEW APPROACH
'cutting up' the programme

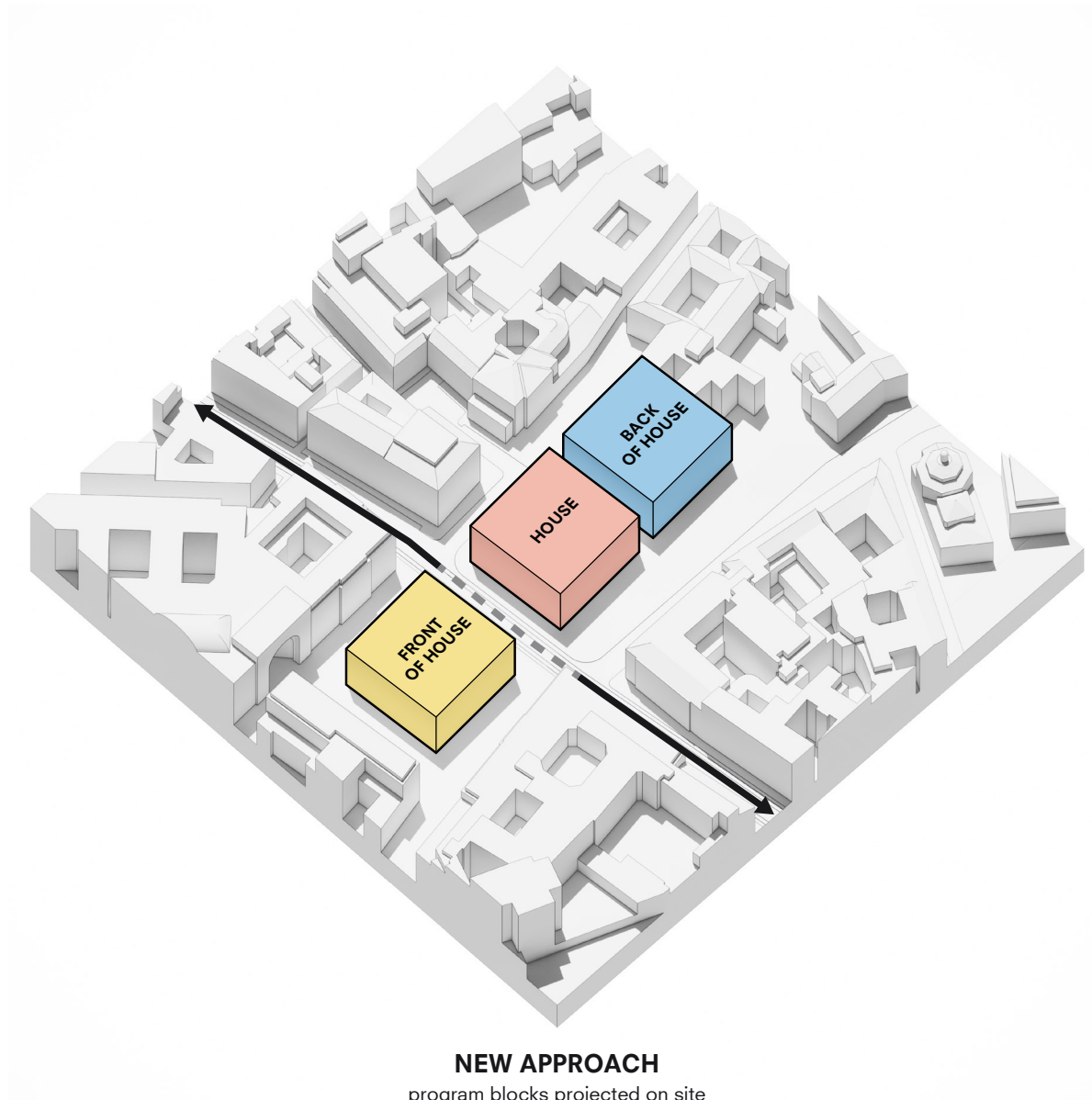


NEW APPROACH

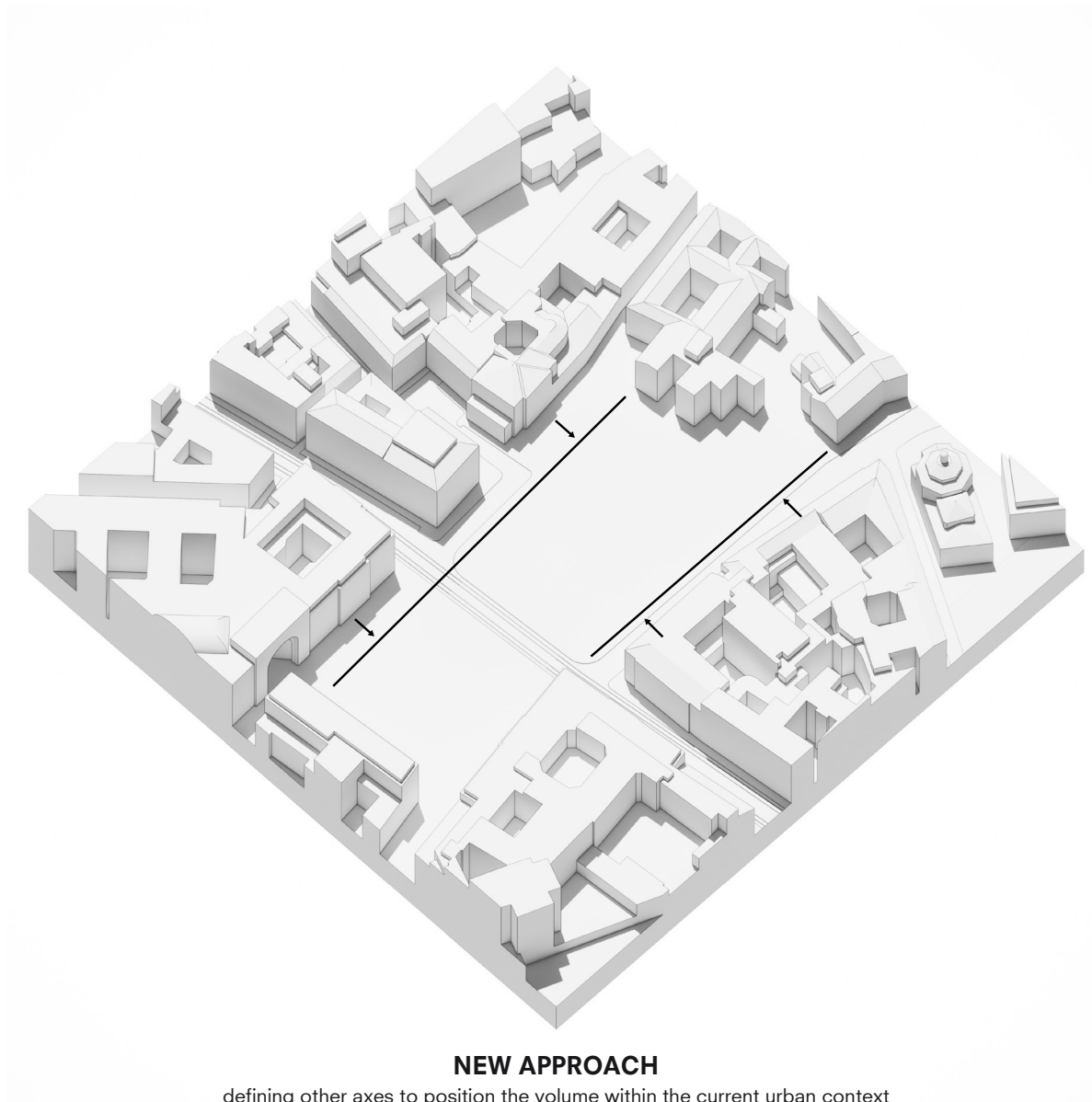
to engage the public space inside the theatre



NEW APPROACH
the project plot divided by the road axis

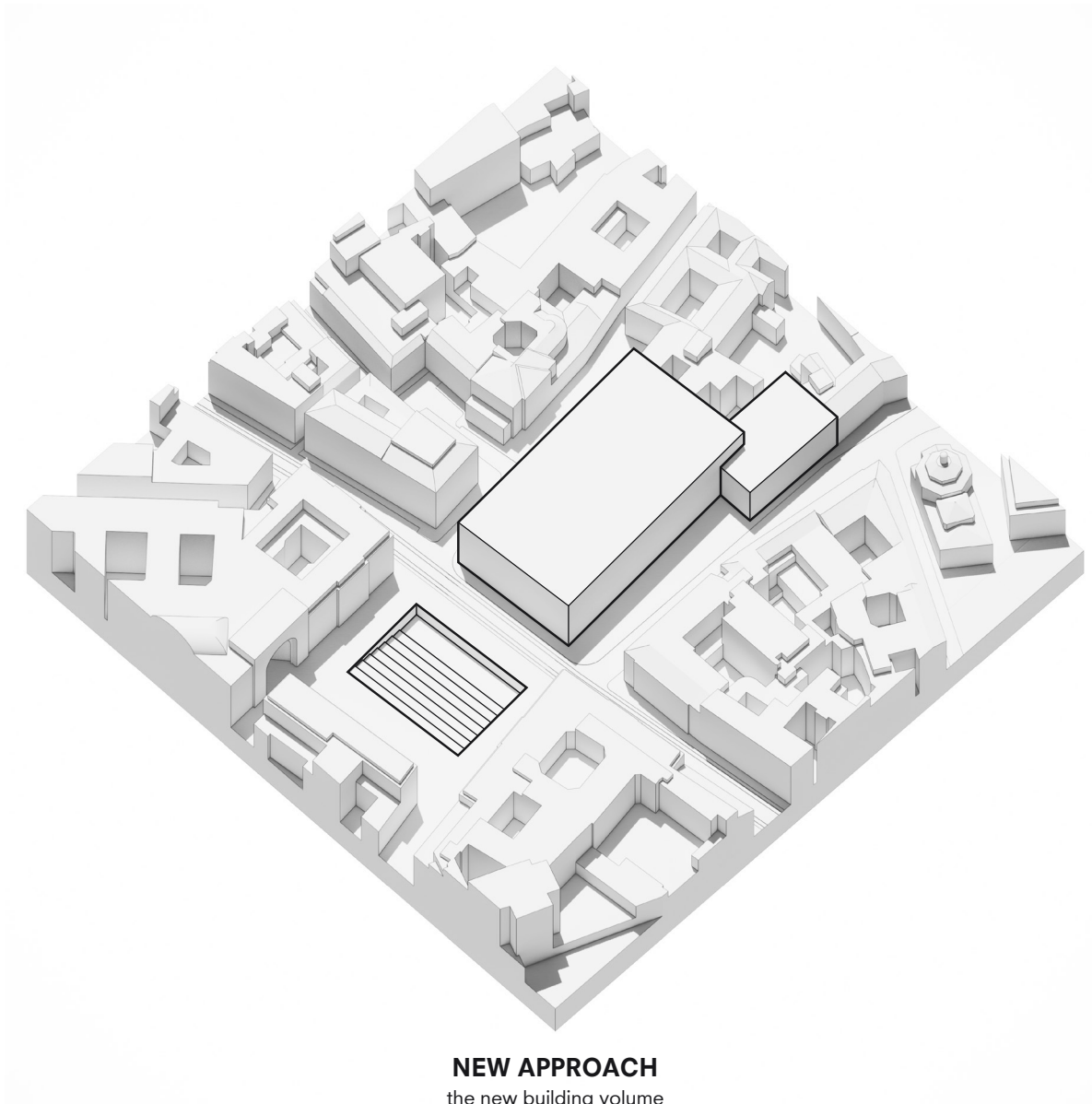


NEW APPROACH
program blocks projected on site

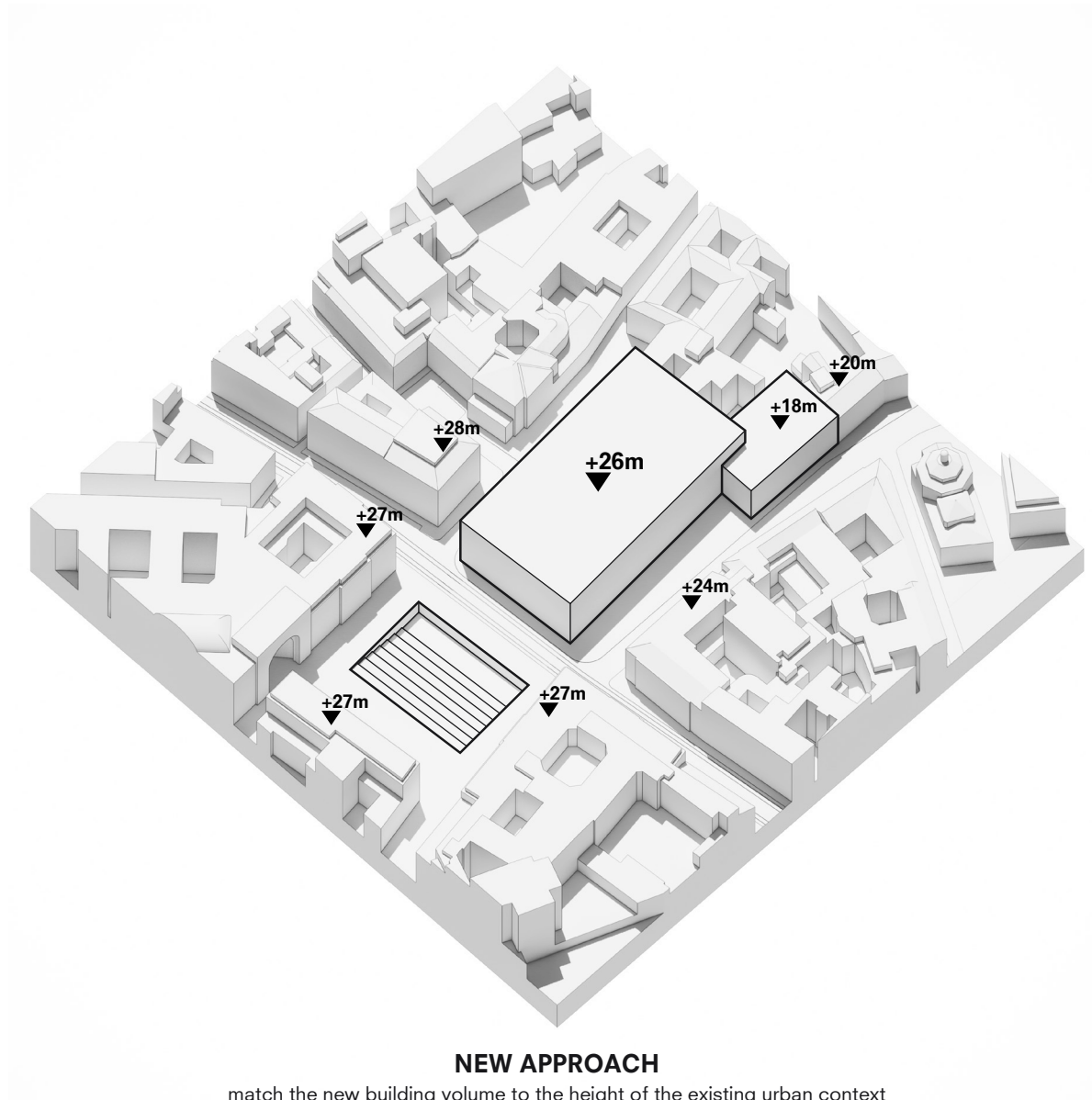


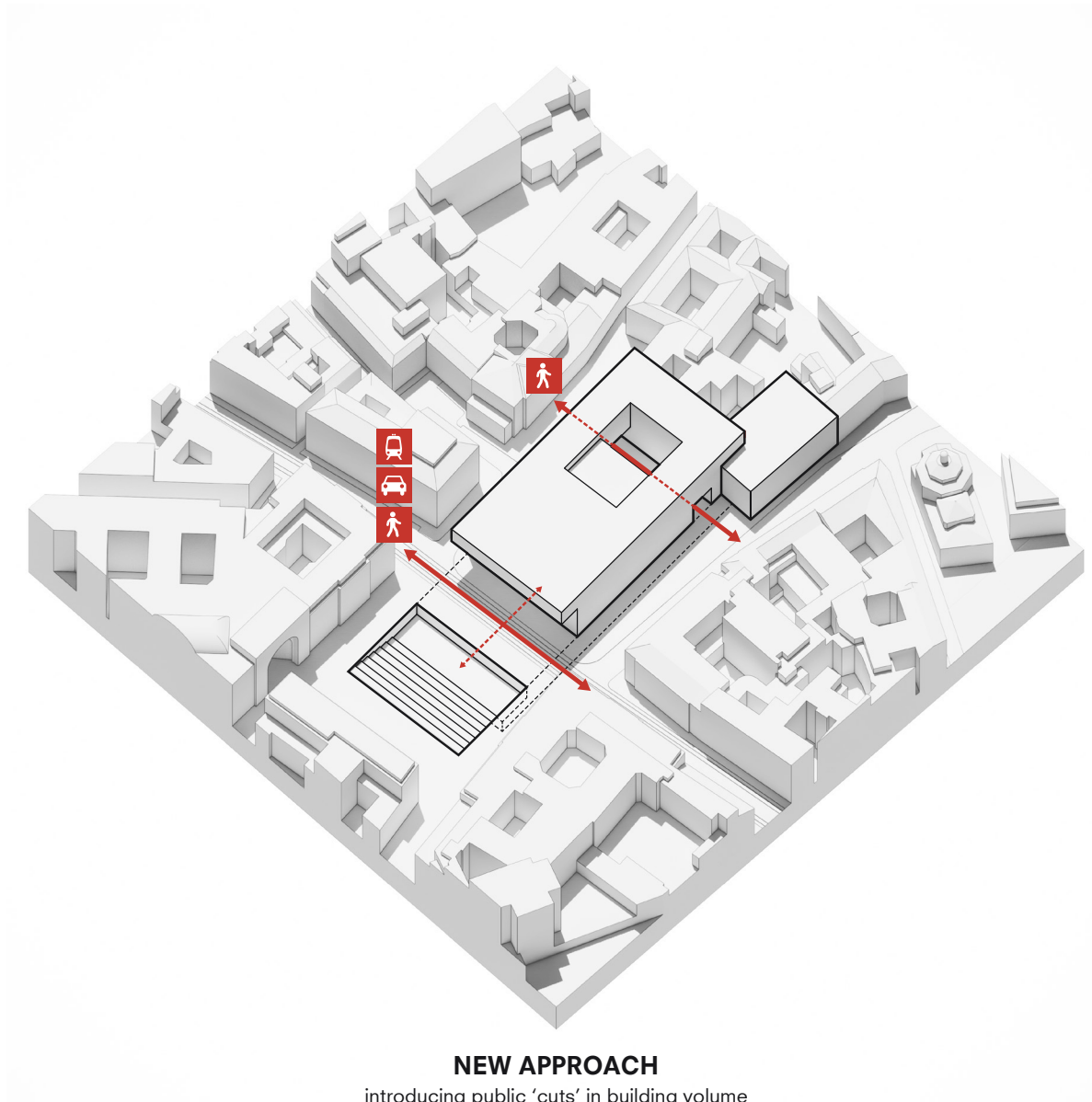
NEW APPROACH

defining other axes to position the volume within the current urban context



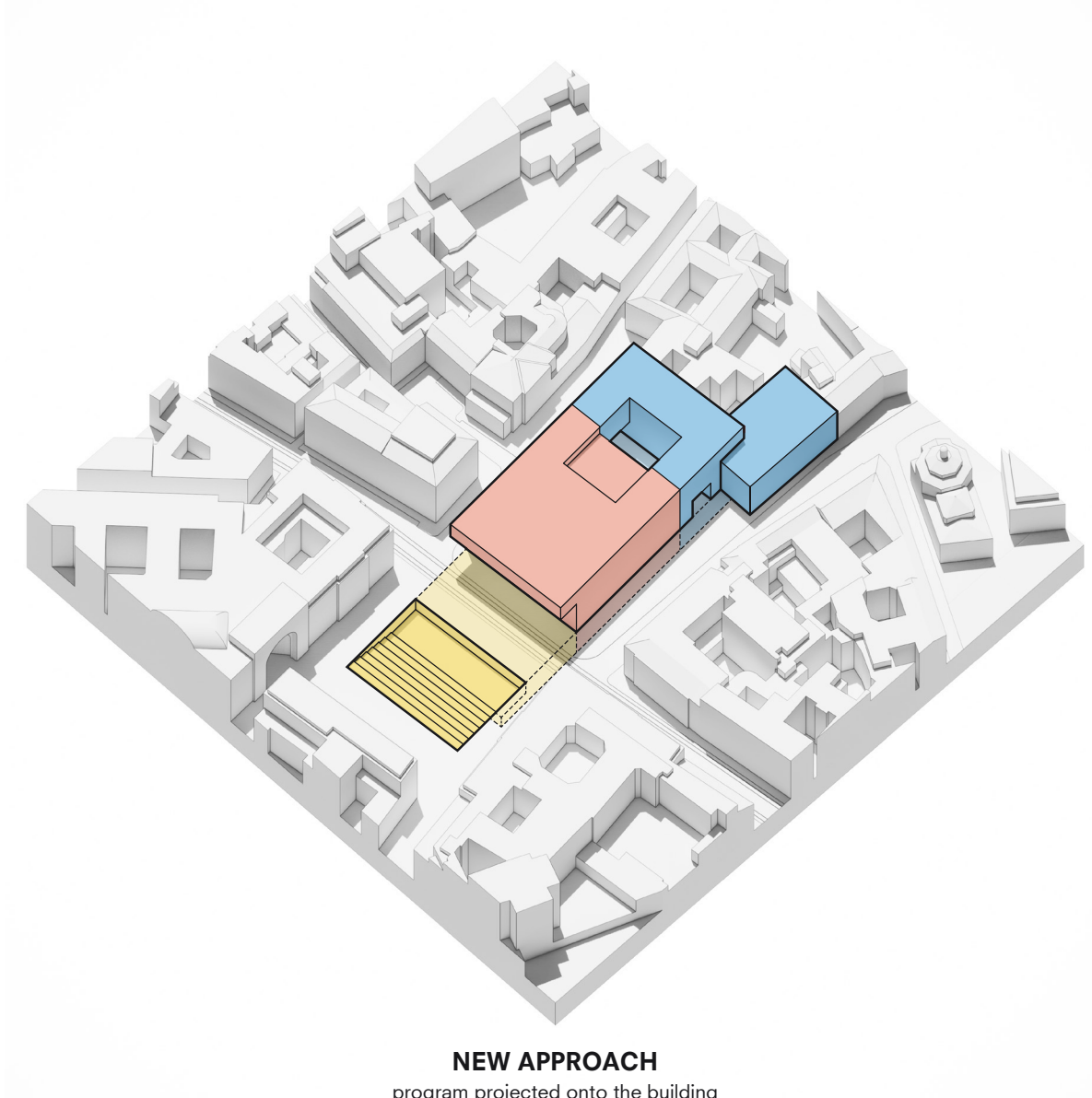
NEW APPROACH
the new building volume





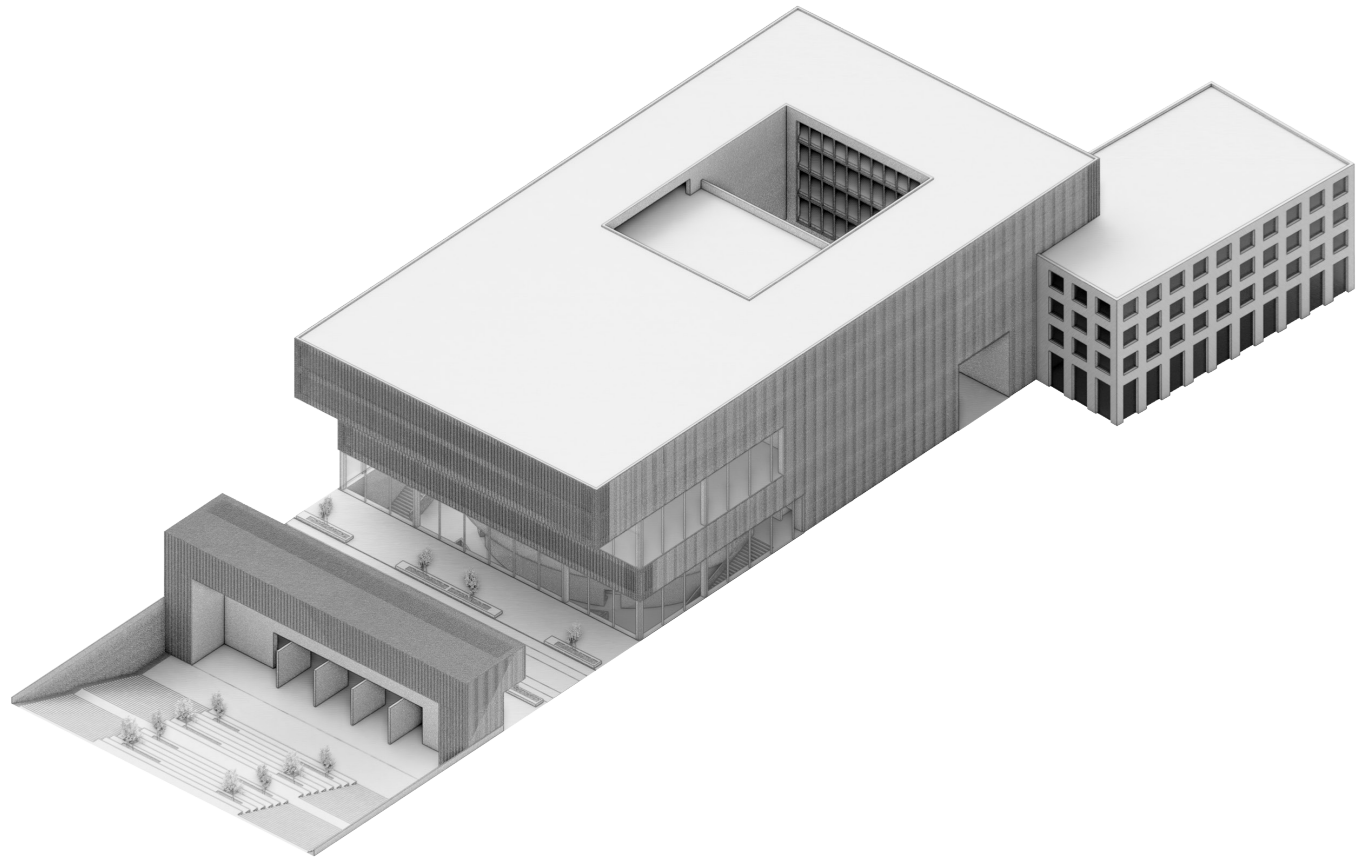
NEW APPROACH

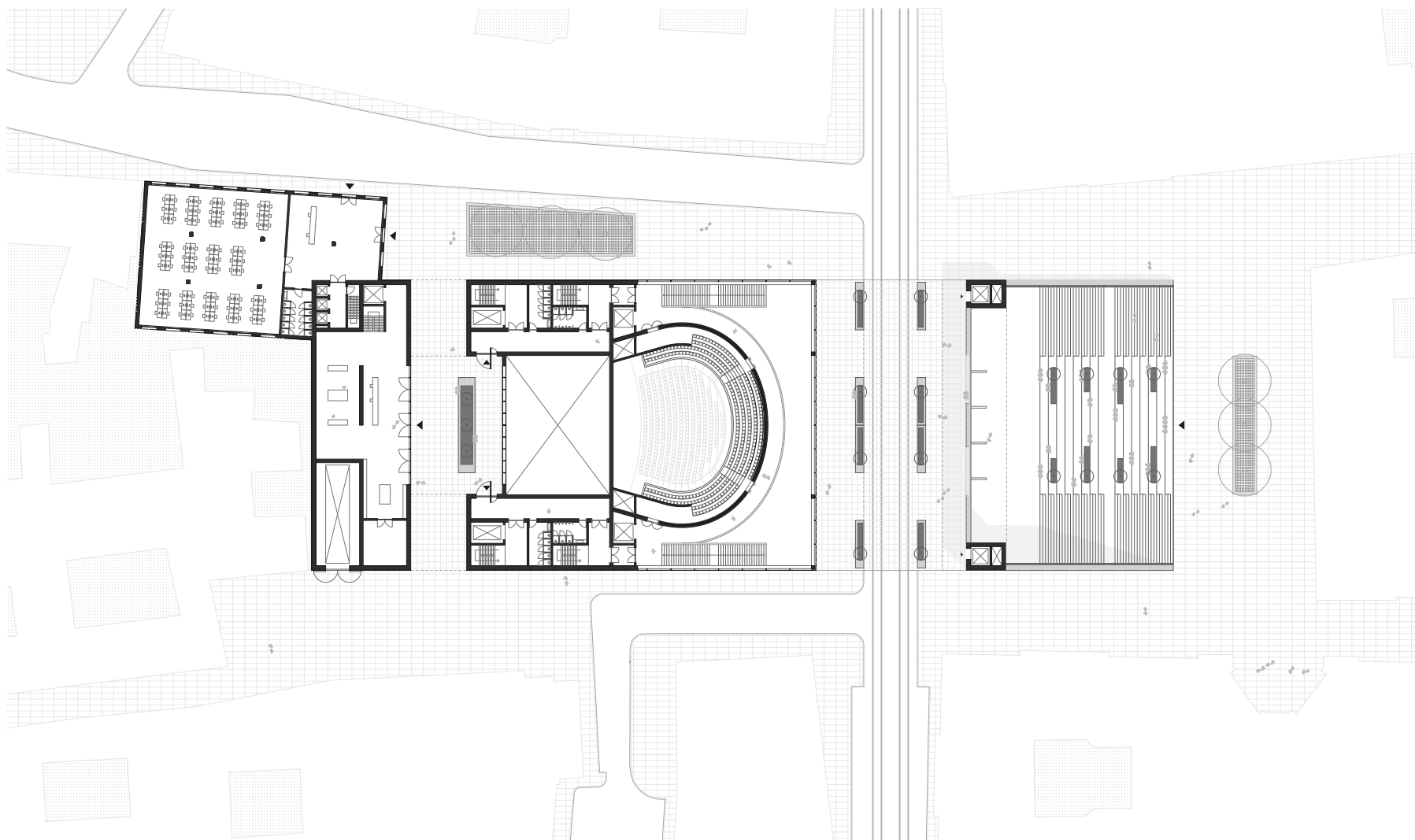
introducing public 'cuts' in building volume

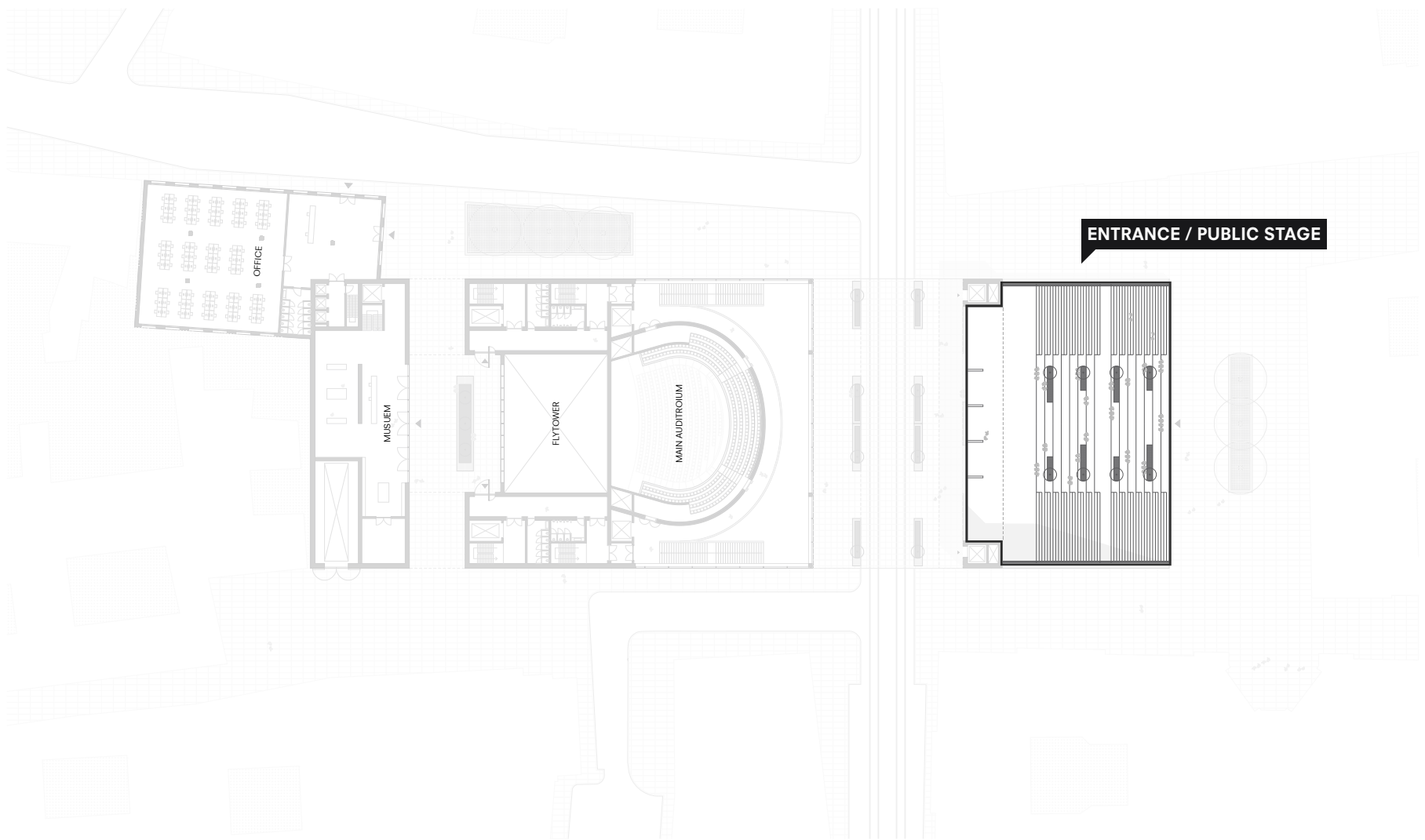


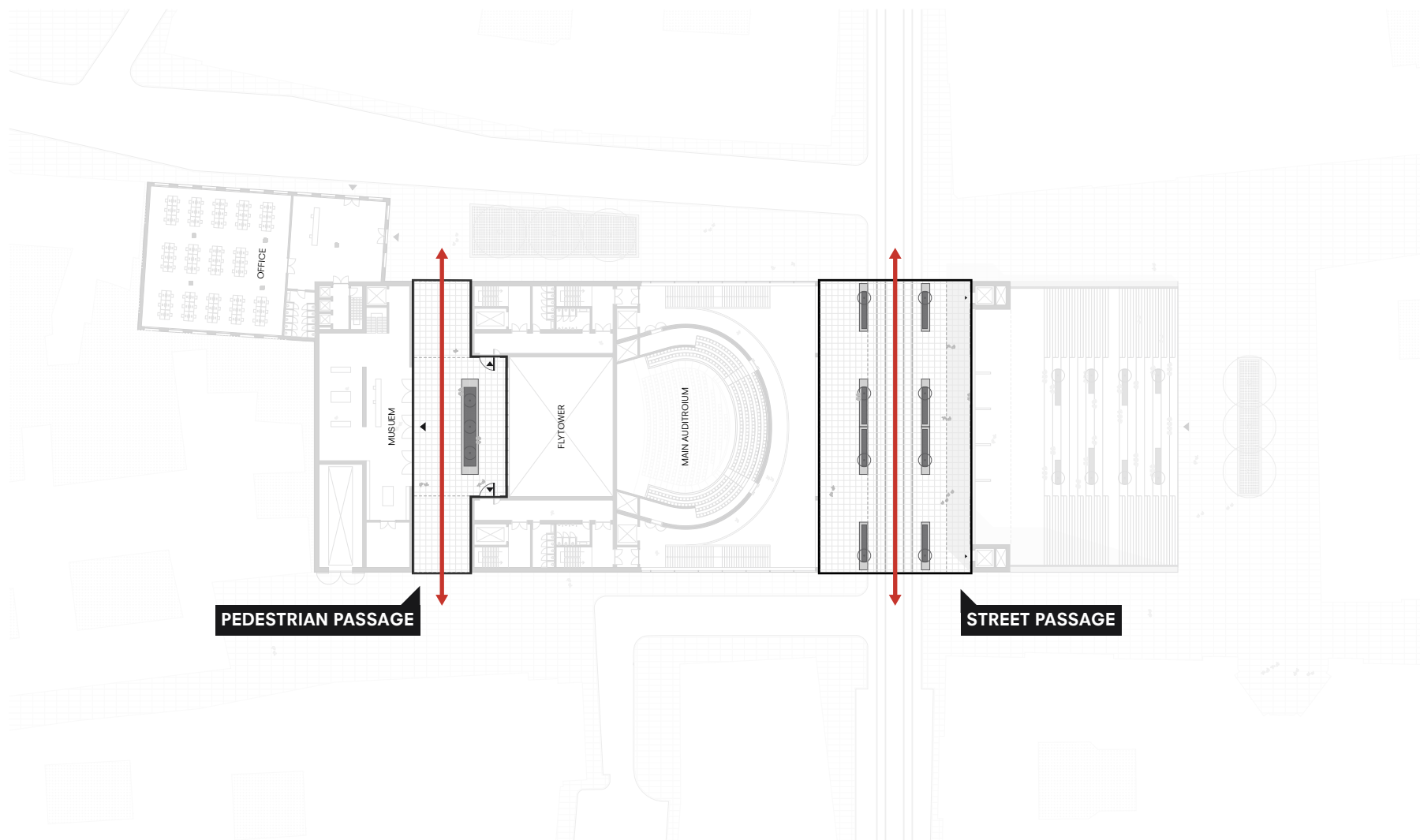
NEW APPROACH
program projected onto the building

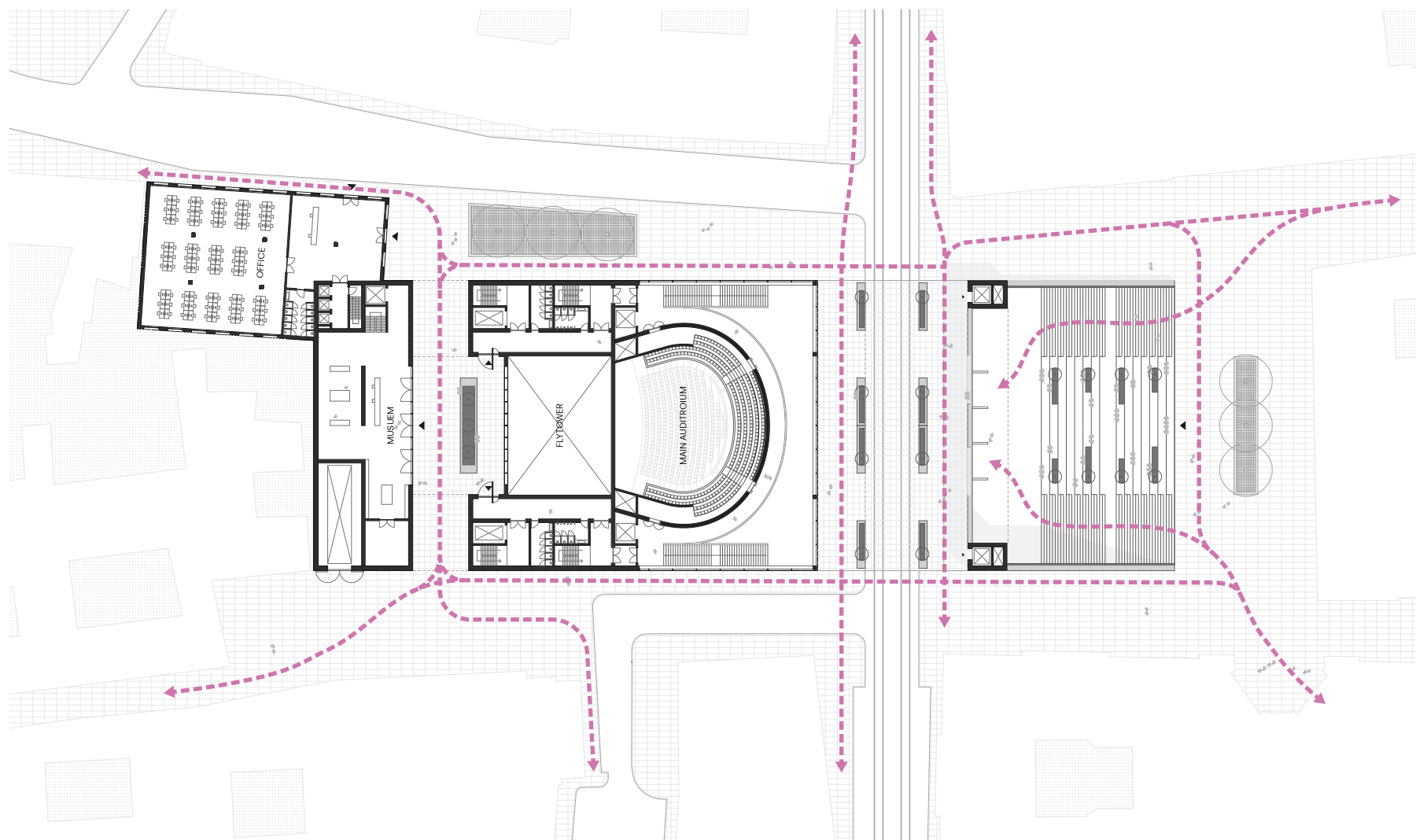
IMPLEMENTATION

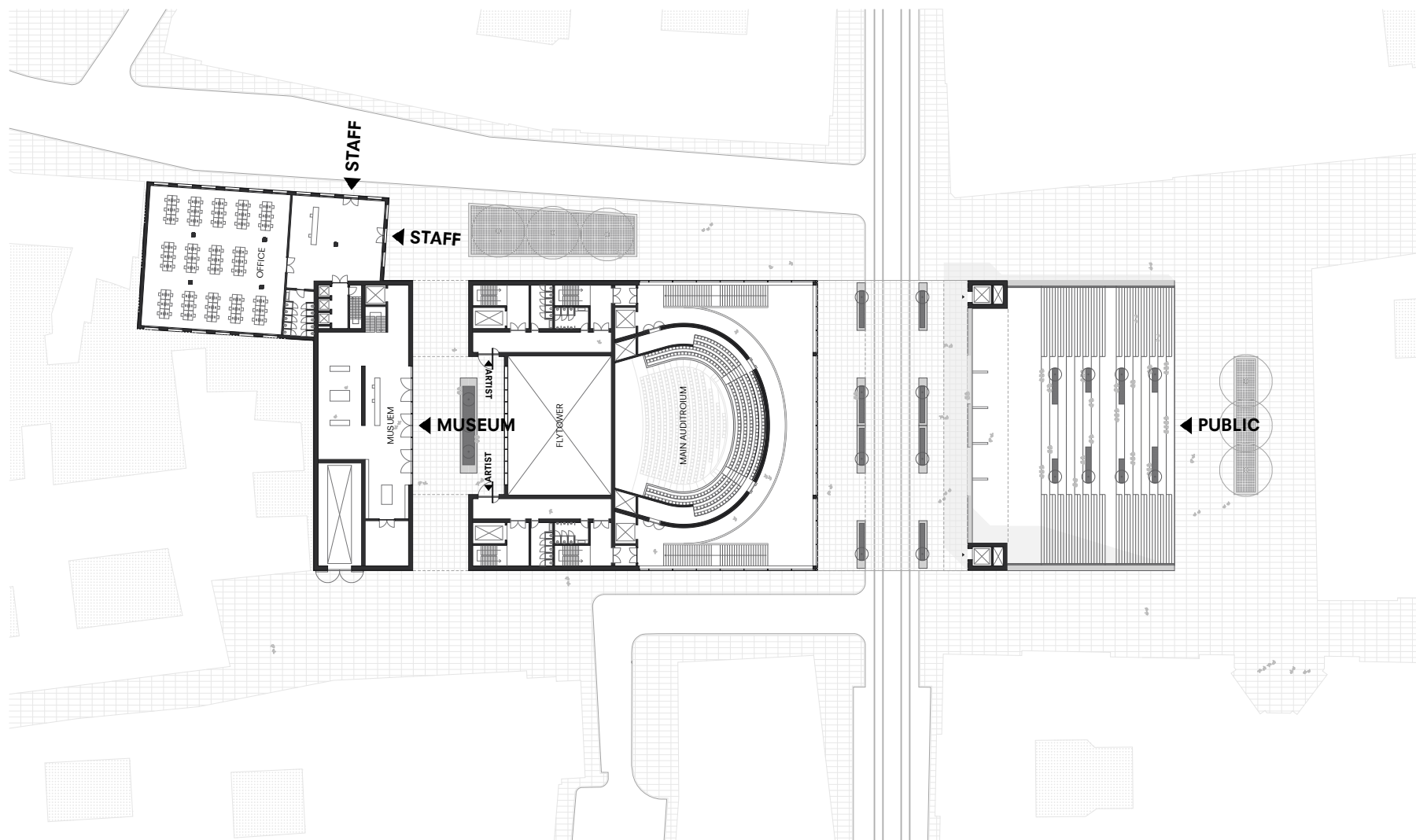


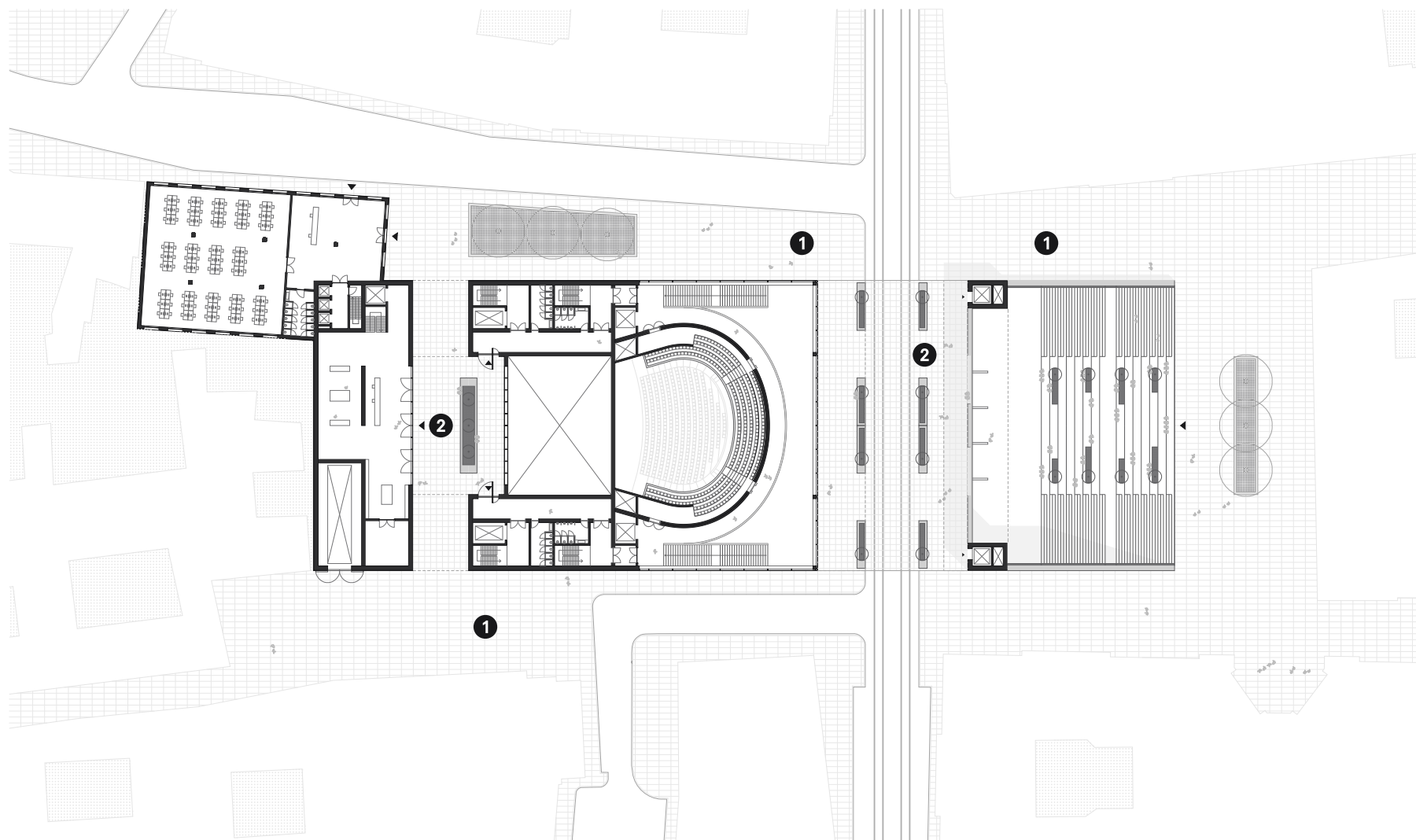










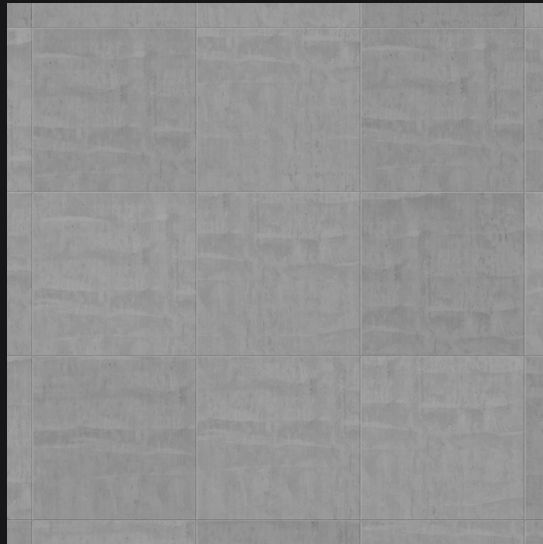


Implementation

MATERIALS

POLISHED CONCRETE TILES

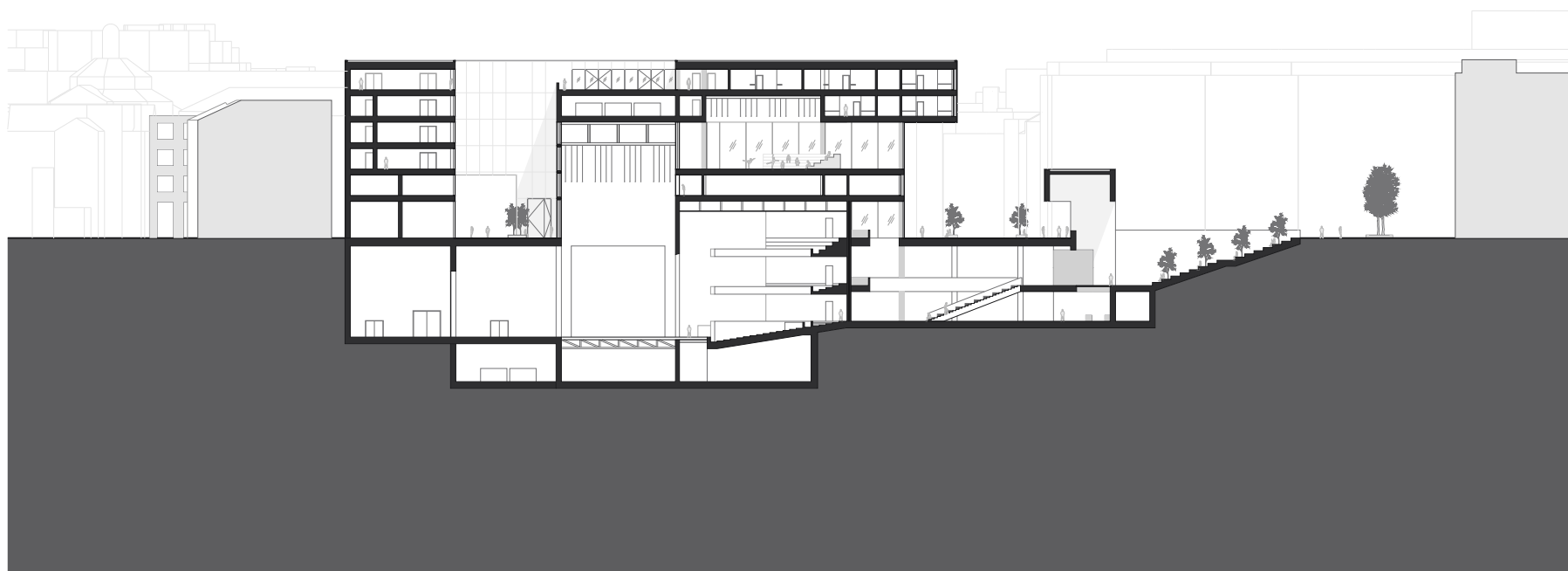
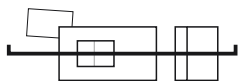
pavement within building boundaries

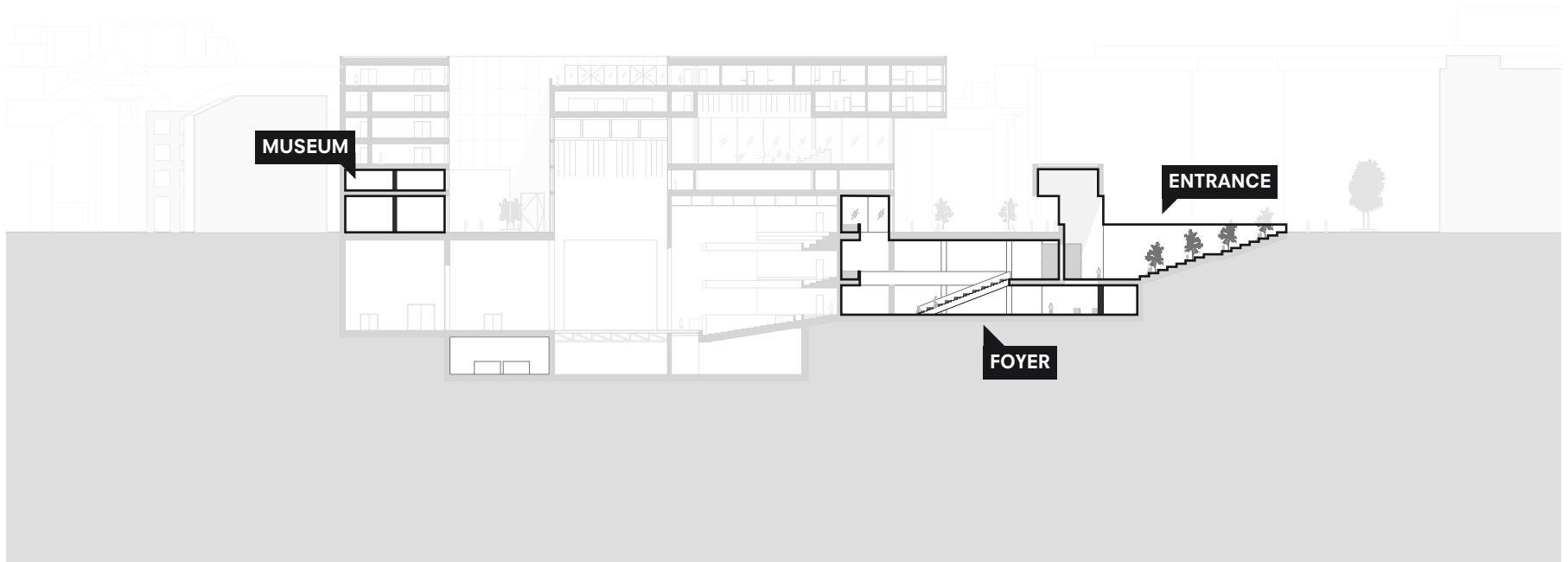
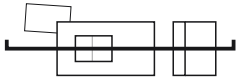


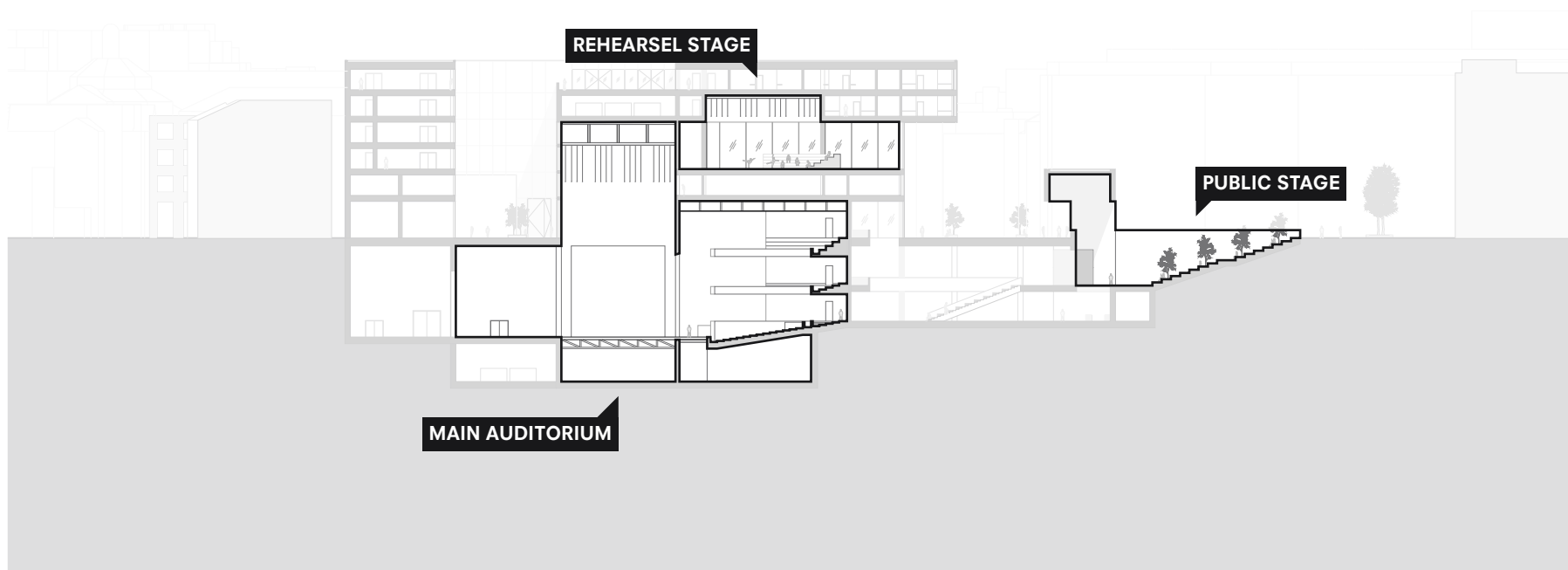
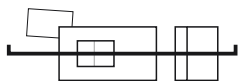
WHITE MONTORFANO GRANITE

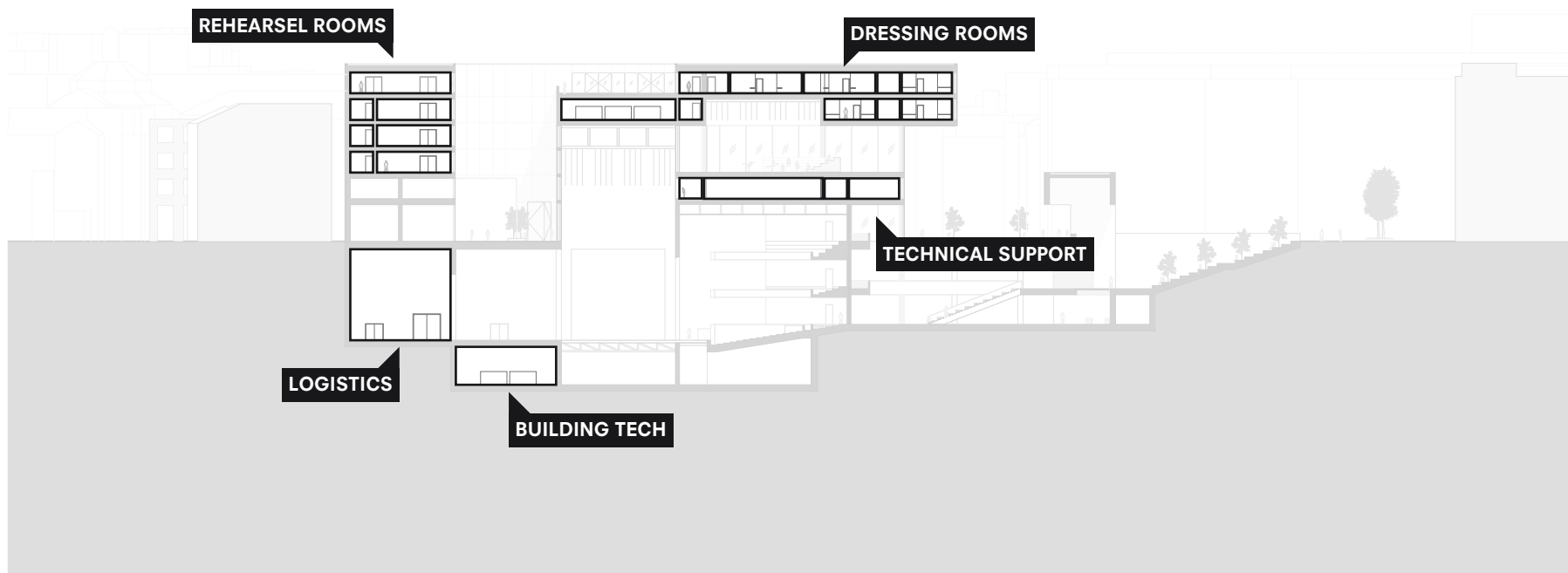
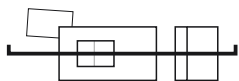
existing pavement

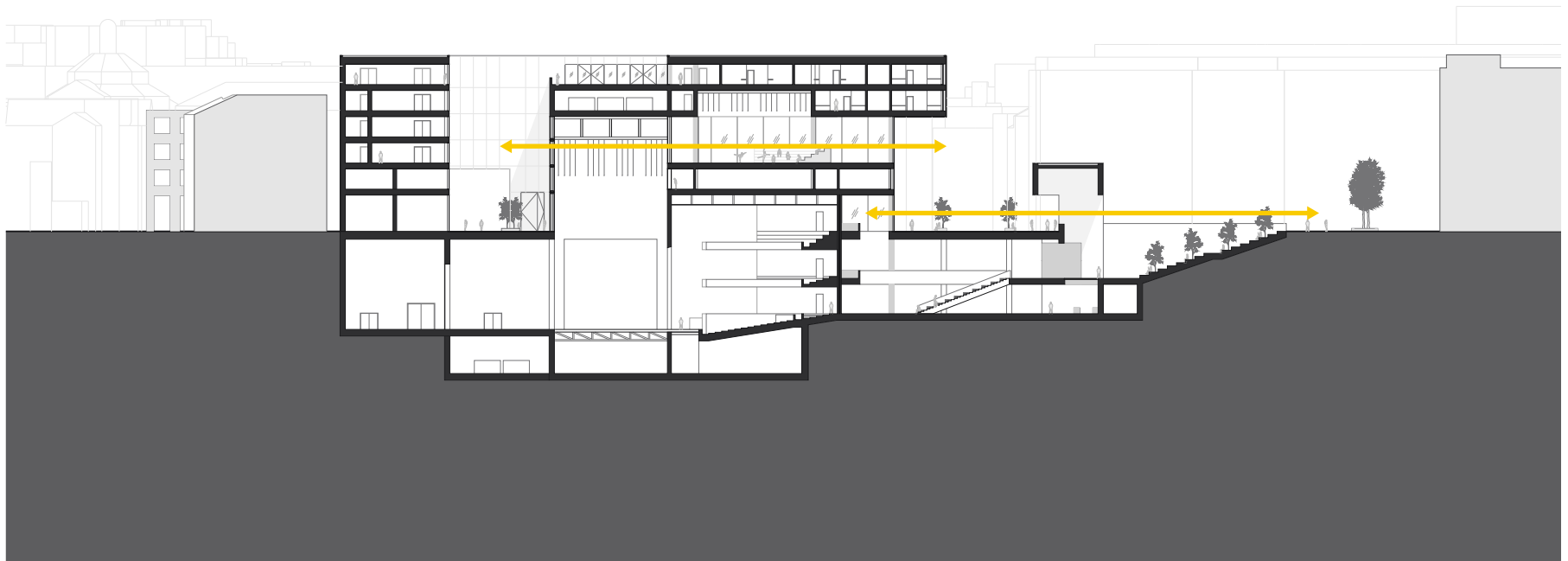
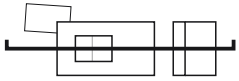


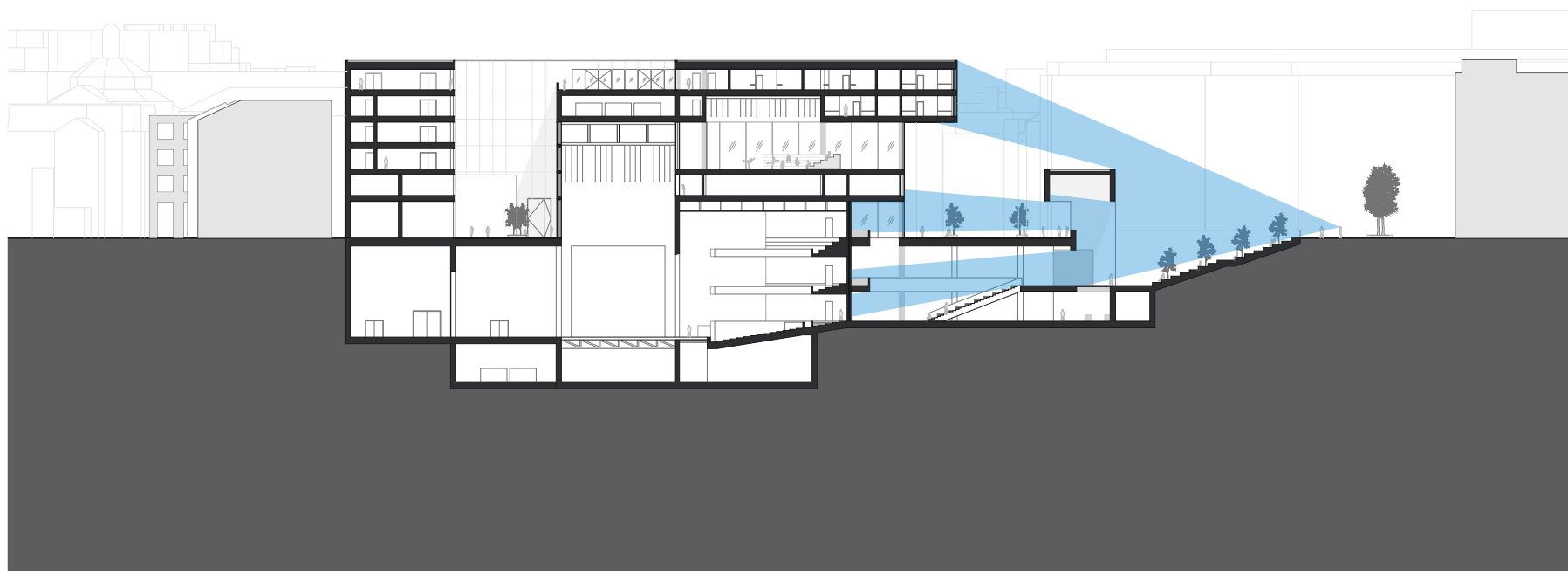
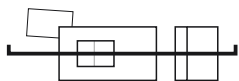




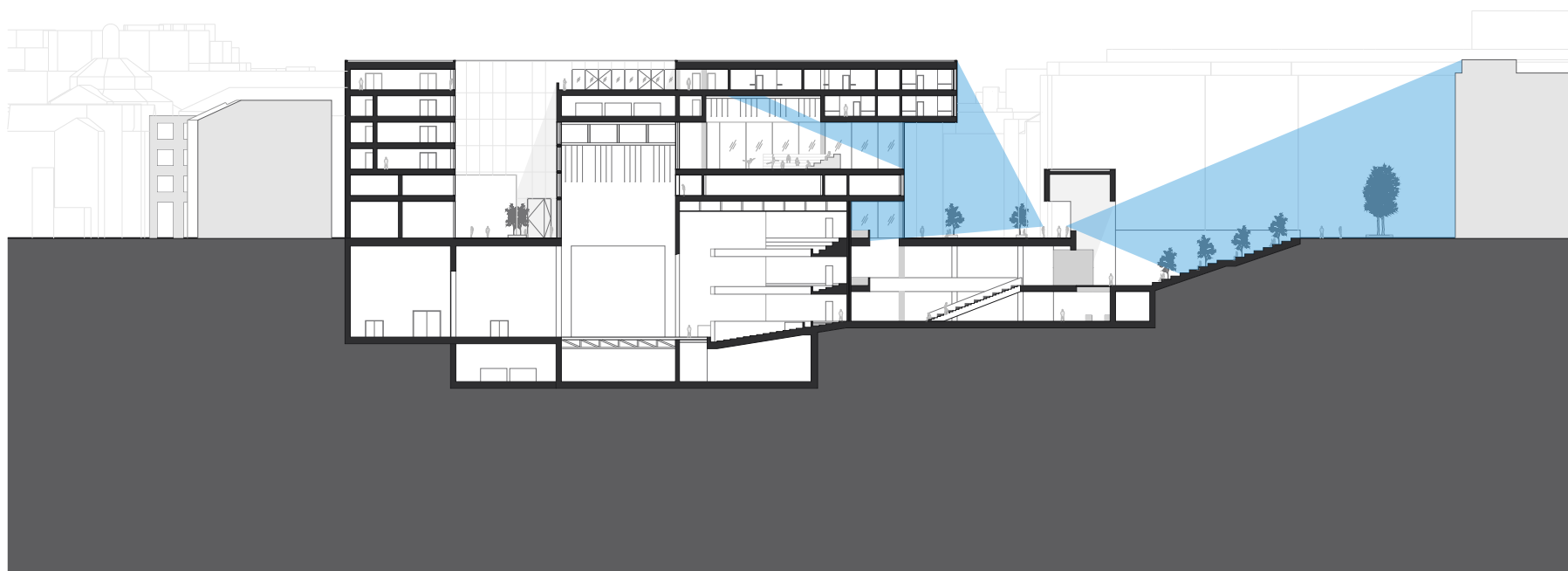
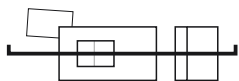






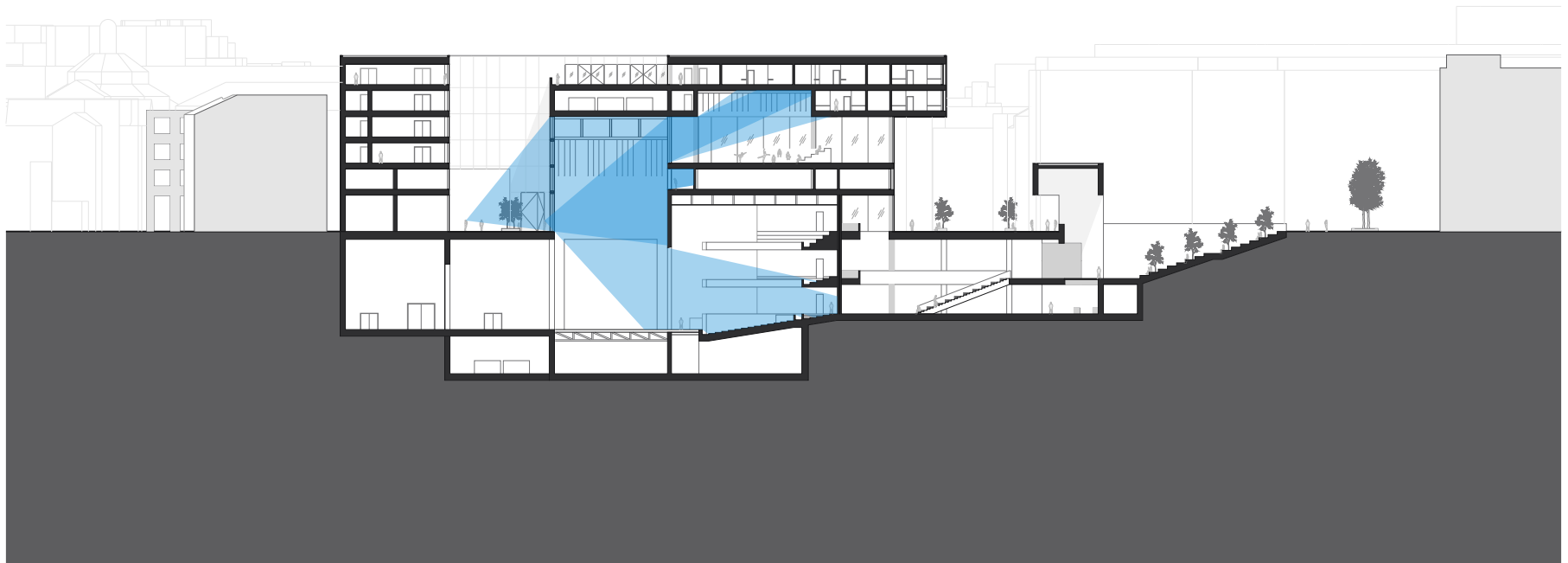
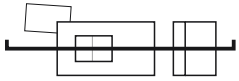














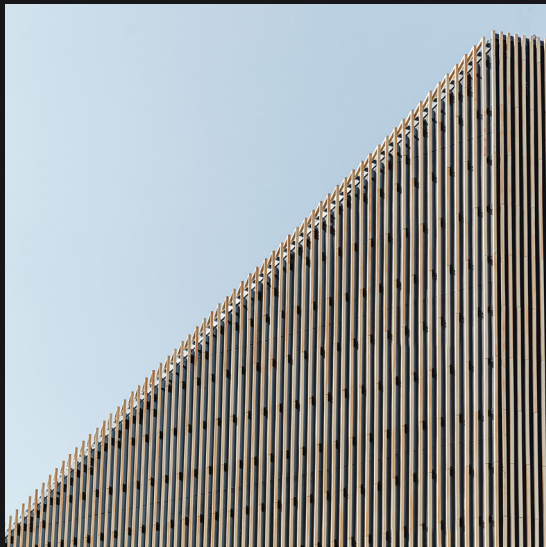




Implementation

MATERIALS

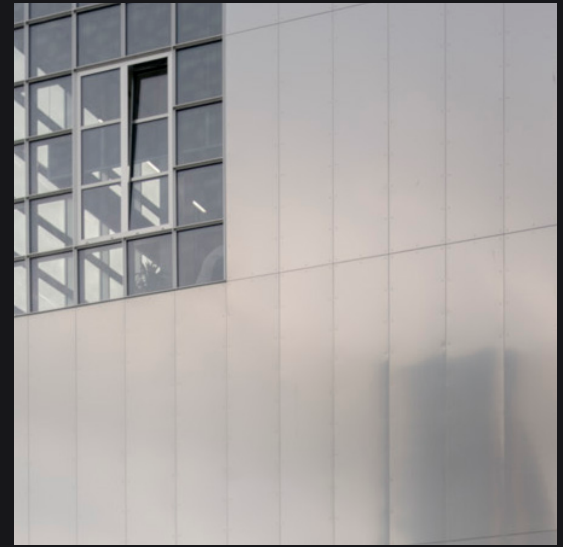
CERAMIC SQUARE SLABS



CERAMIC COLOR



POLISHED ALUMINIUM

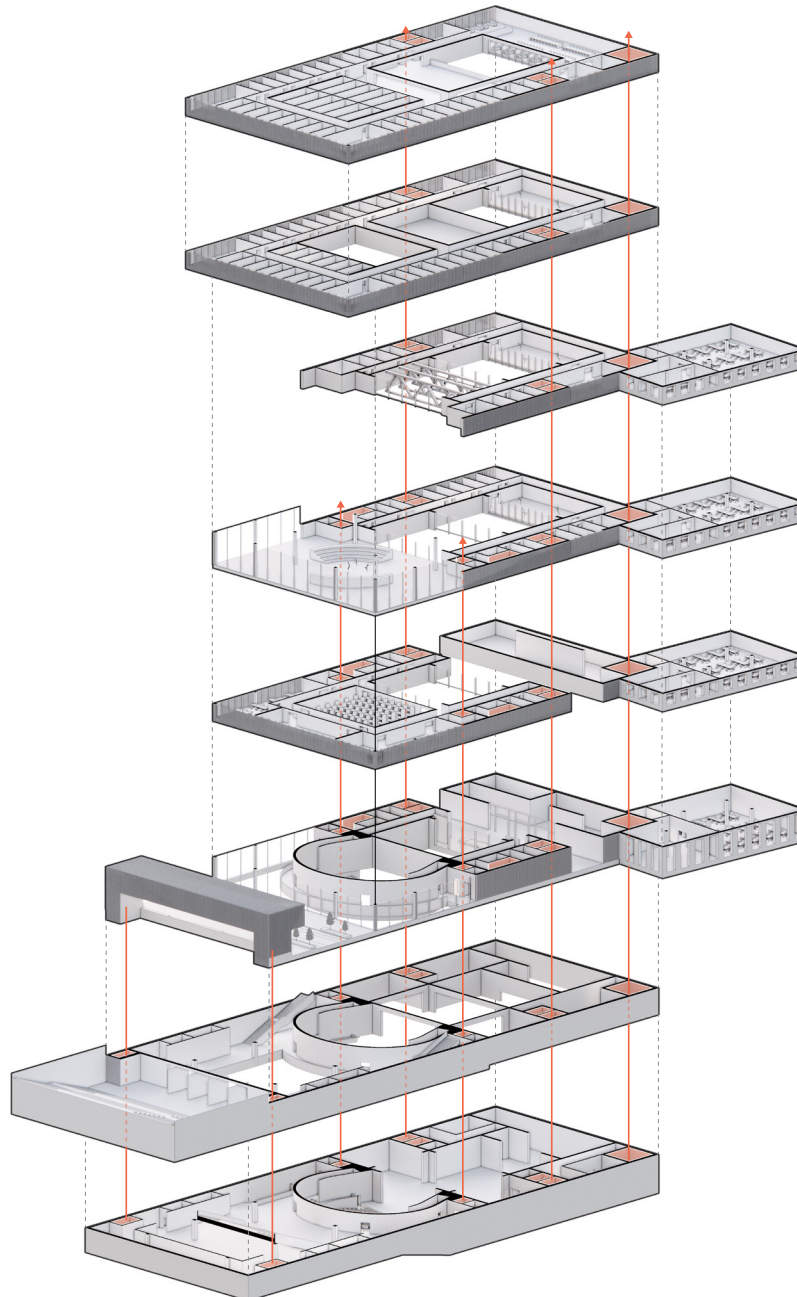


L+5
 dressing rooms
 staff kitchen
 staff & artist bar + canteen

L+3
 office
 rehearsal rooms

L+1
 museum
 office
 technical support
 storage

L-1
 entrance
 foyer
 main auditorium

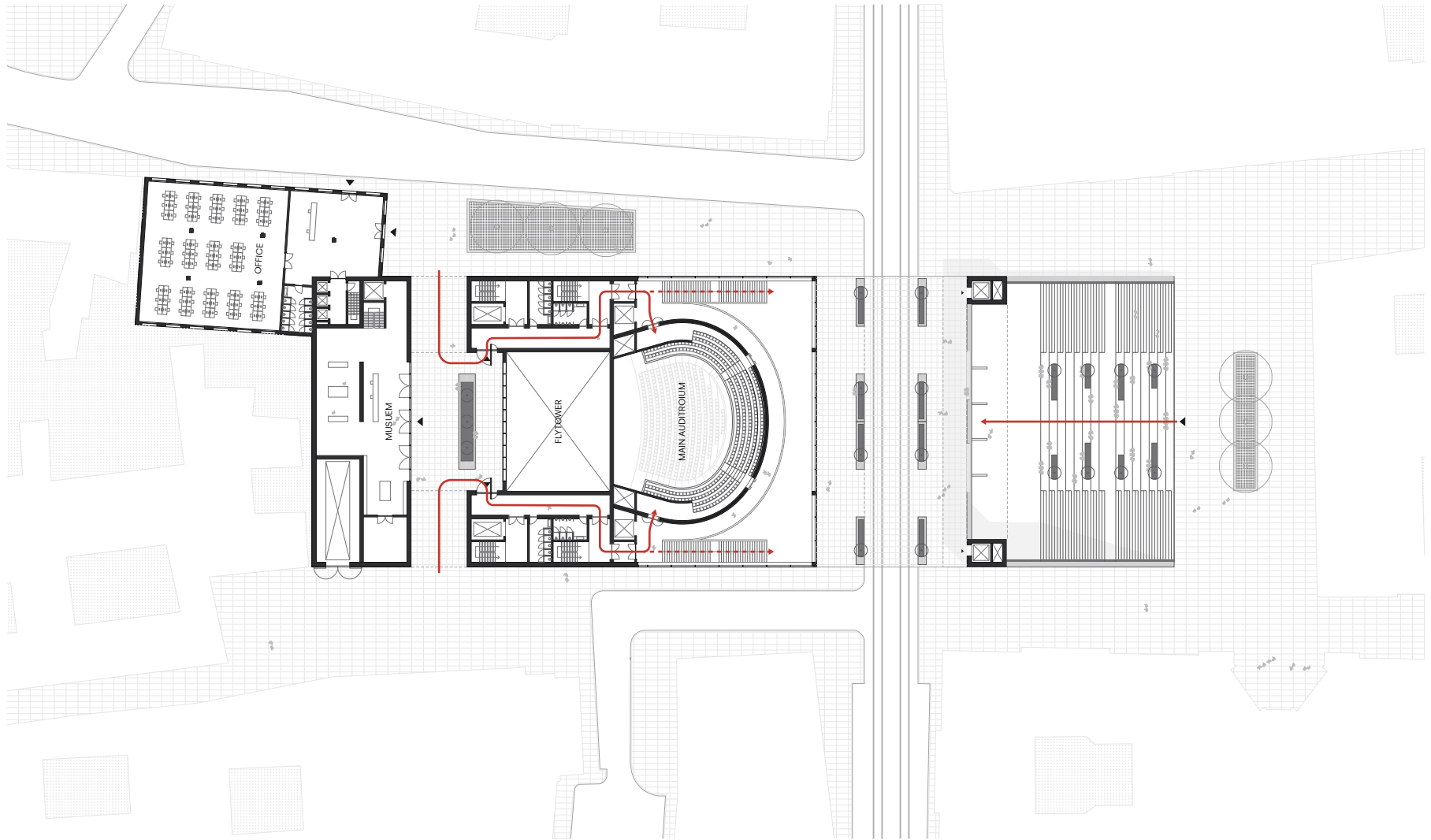


L+4
 rehearsal rooms
 dressing rooms

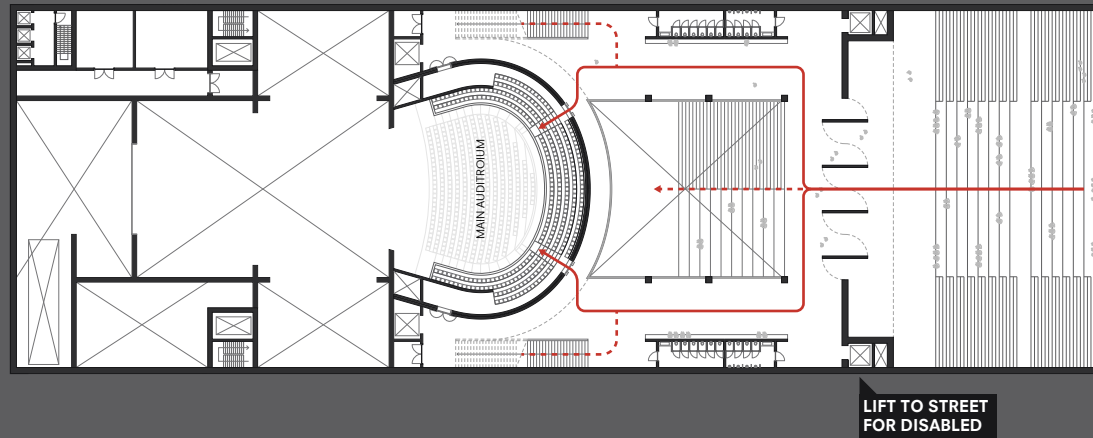
L+2
 rehearsal stage
 office
 rehearsal rooms
 dressing rooms

L+0
 main auditorium
 museum
 office

L-2
 foyer
 cloakroom
 bar
 main auditorium
 logistics



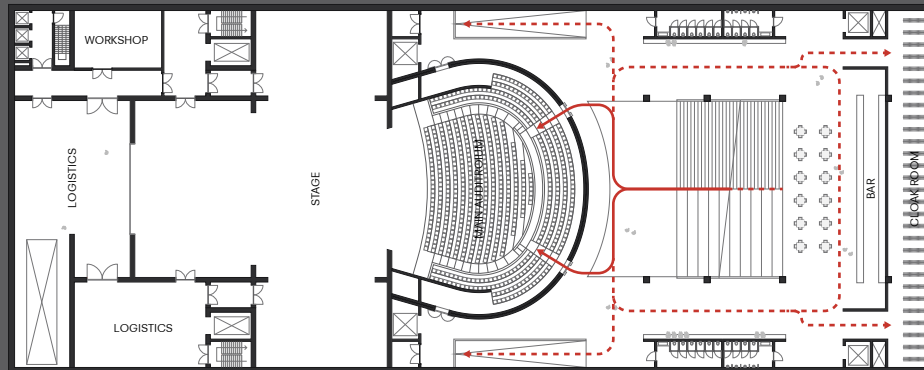






Implementation

L-2



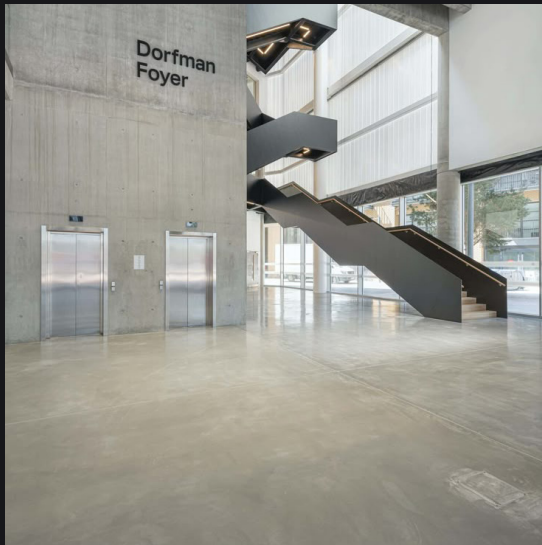
LIFT TO STREET
FOR DISABLED



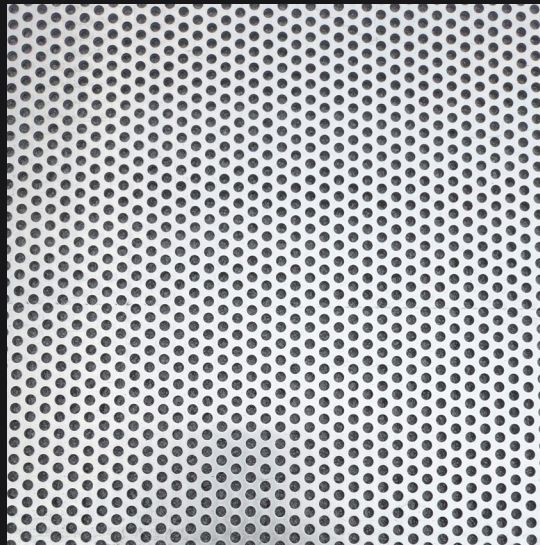


MATERIALS

CONCRETE WALLS & FLOOR

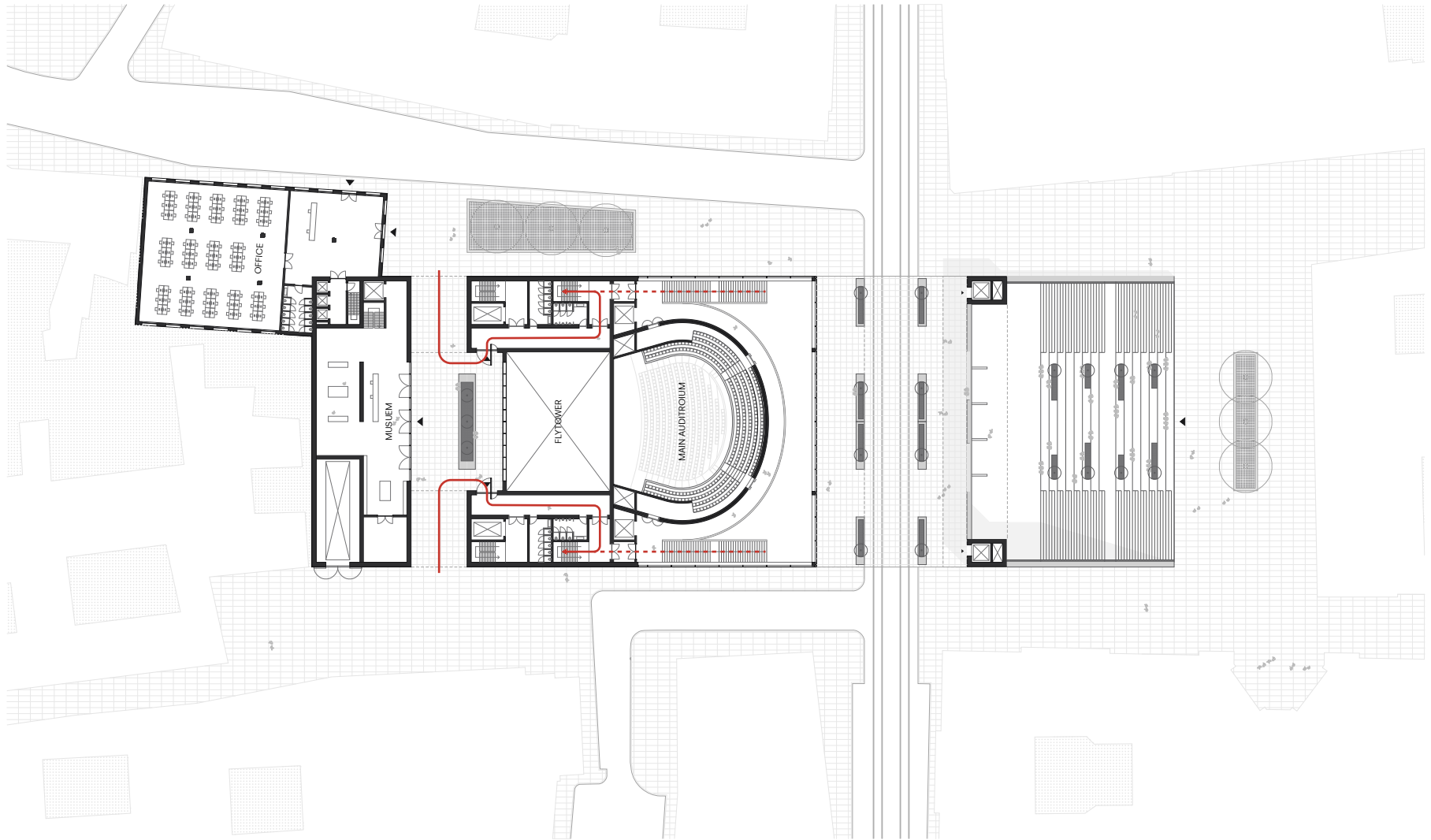


POLISHED ALUMINIUM PERFORATED



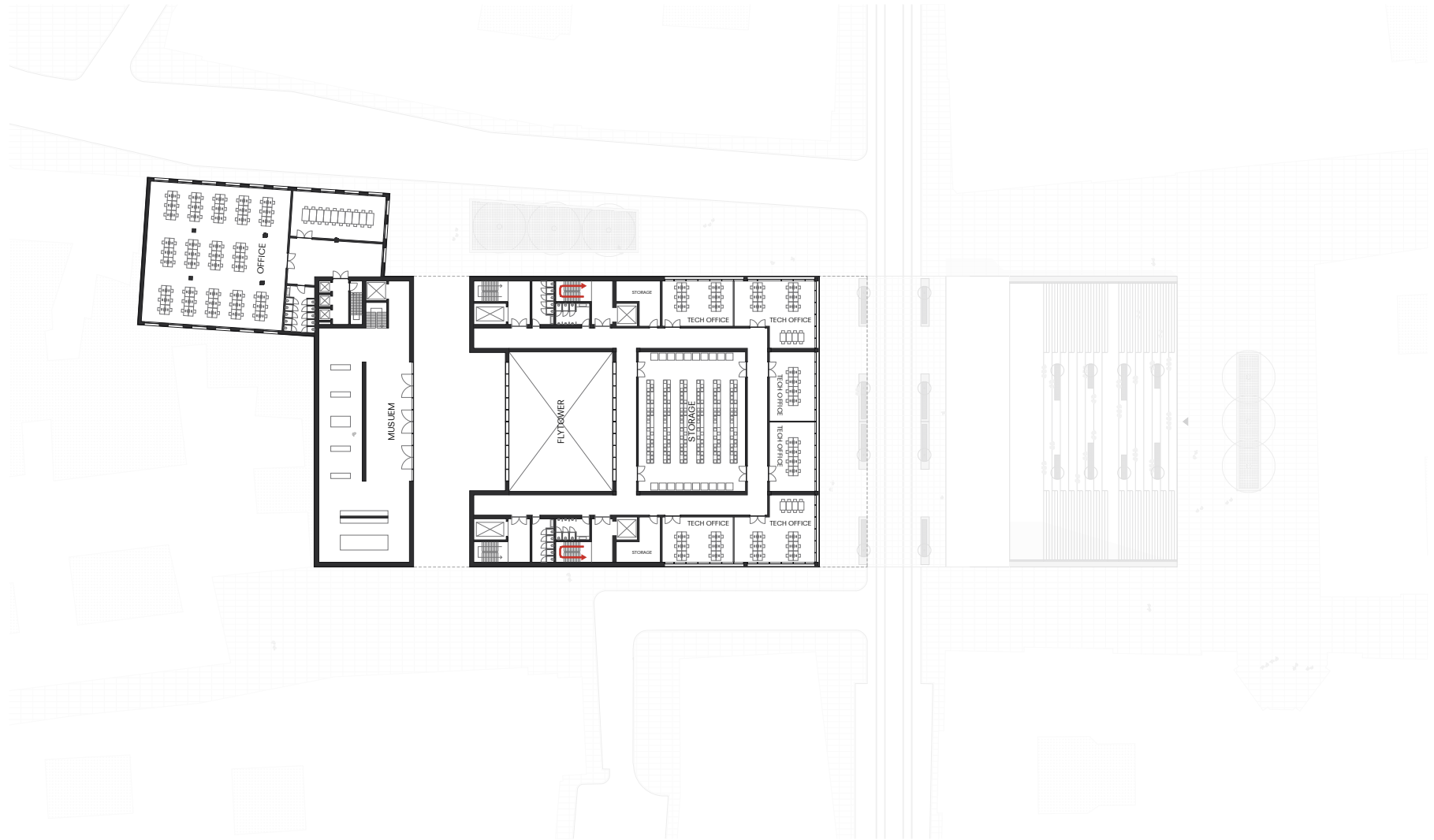
GRAY-VEINED WHITE MARBLE

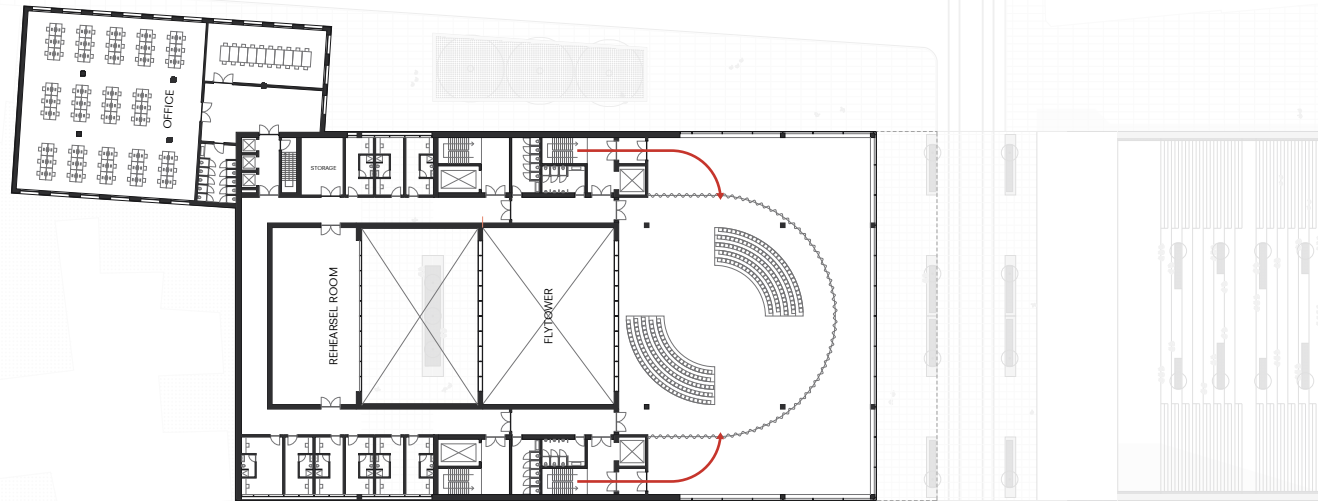




Implementation

L+1



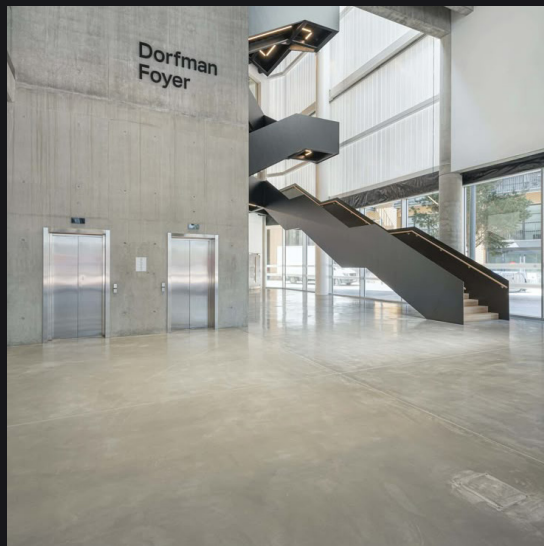




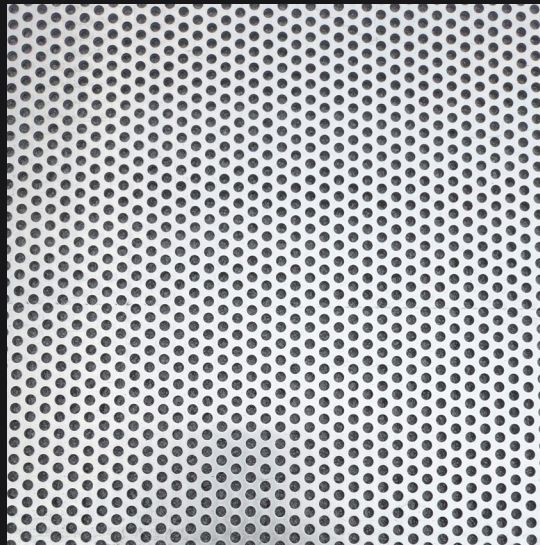
Implementation

MATERIALS

CONCRETE WALLS & FLOOR



POLISHED ALUMINIUM PERFORATED



CURTAINS

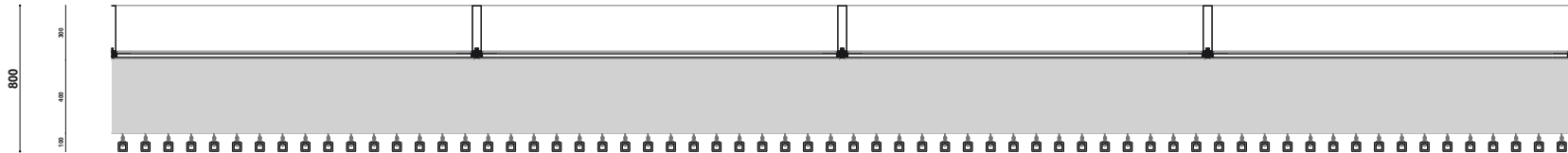


DEVELOPMENT

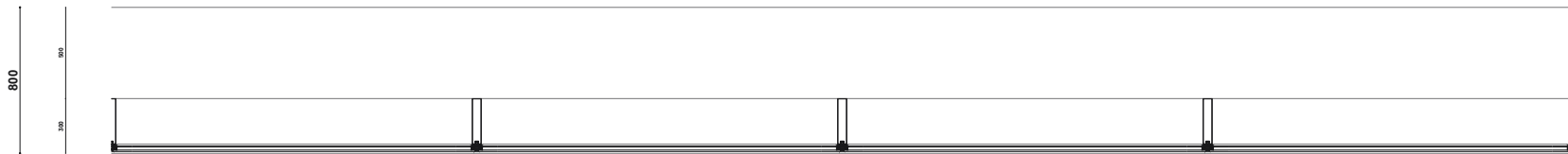


Development FACADE

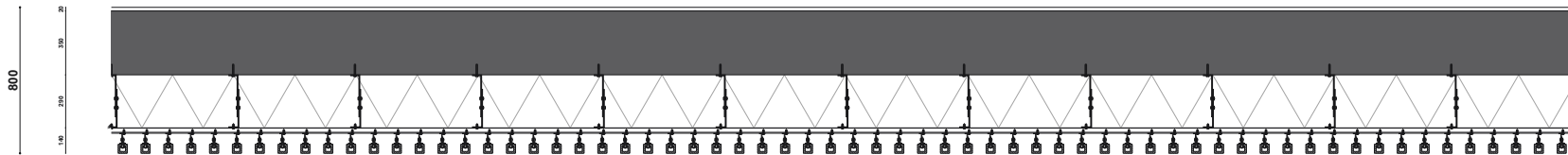
SEMI OPEN FACADE



OPEN FACADE



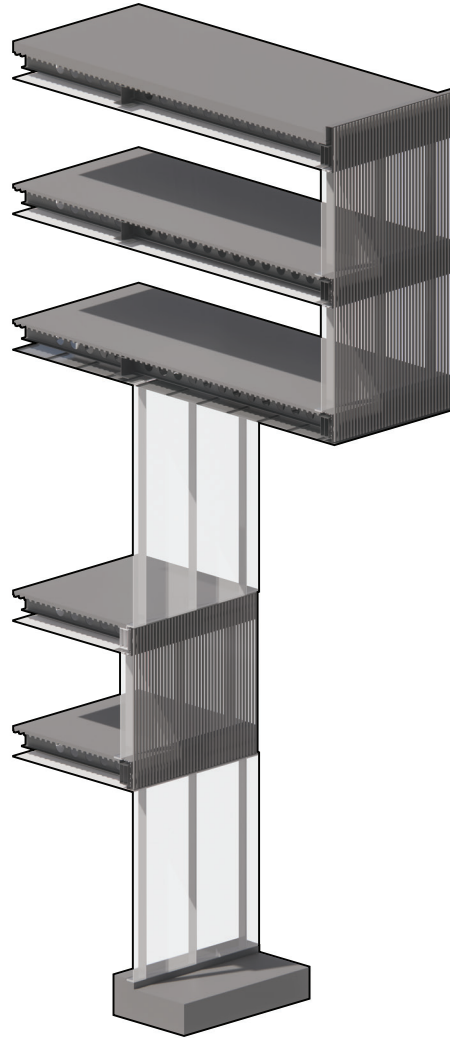
CLOSED FACADE



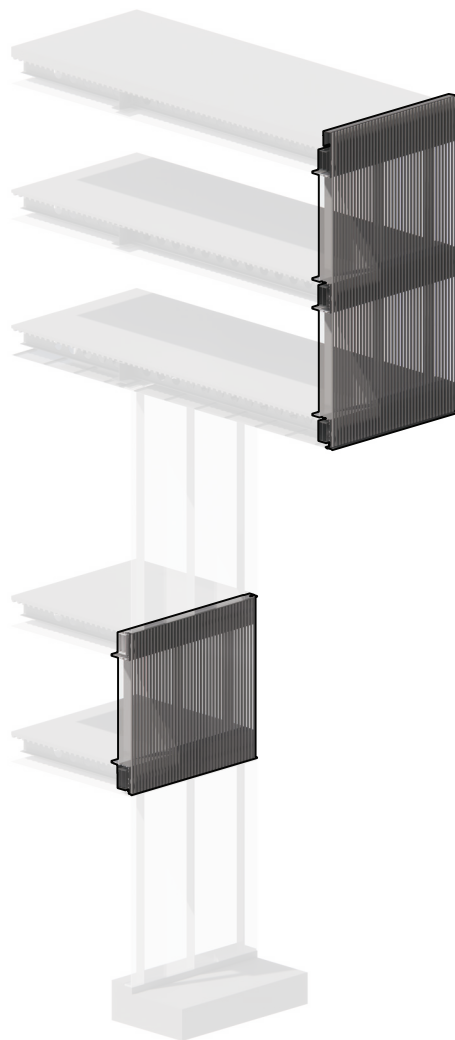
CLOSED FACADE (OFFICE)

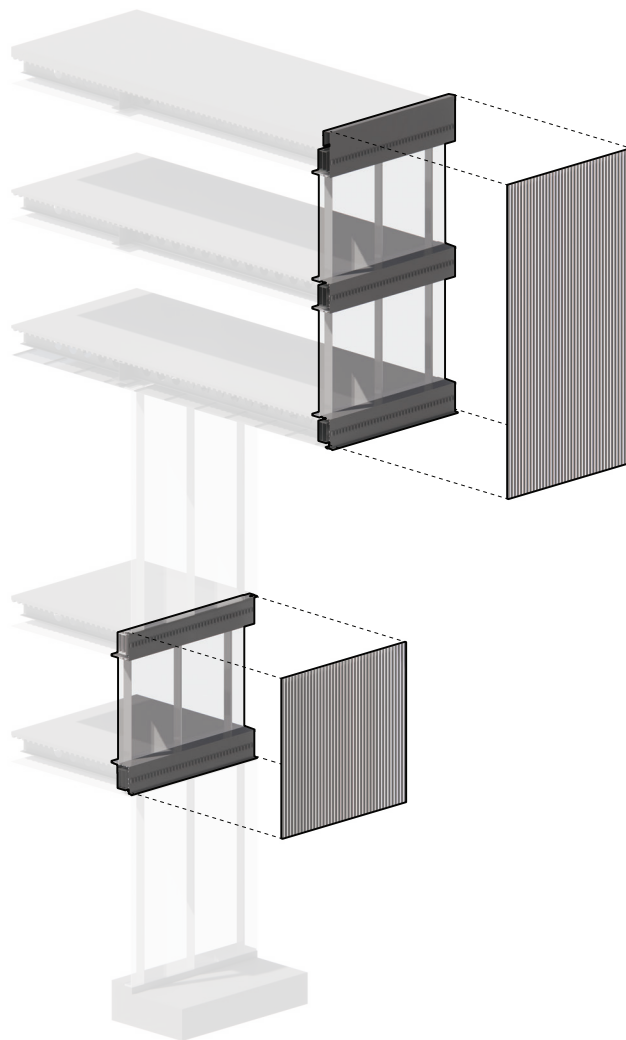


Development **FACADE**









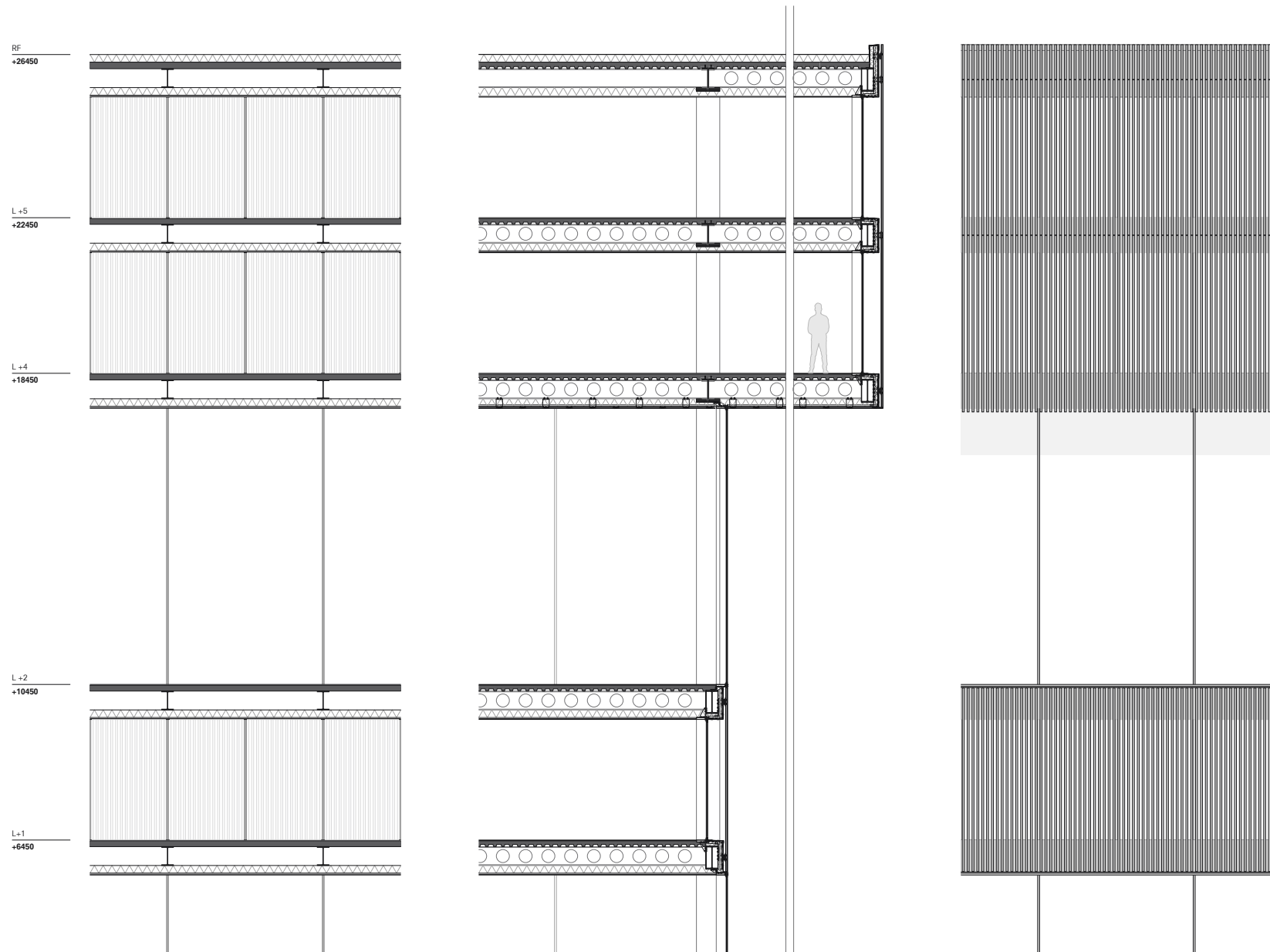


TERRART®-BAGUETTE, NBK

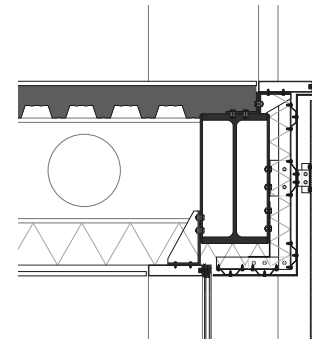
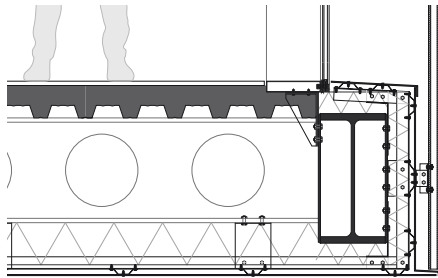
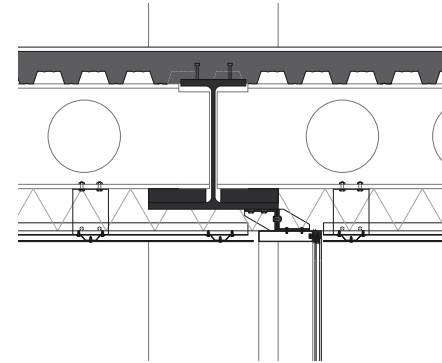
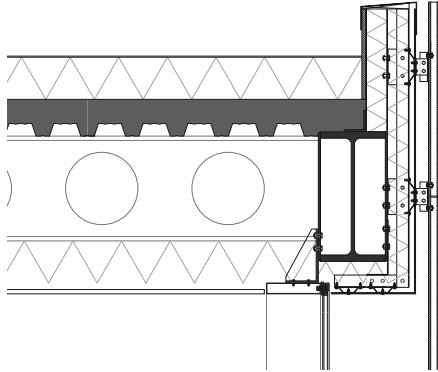


Tingbjerg Library, Cobe, Copenhagen Denmark

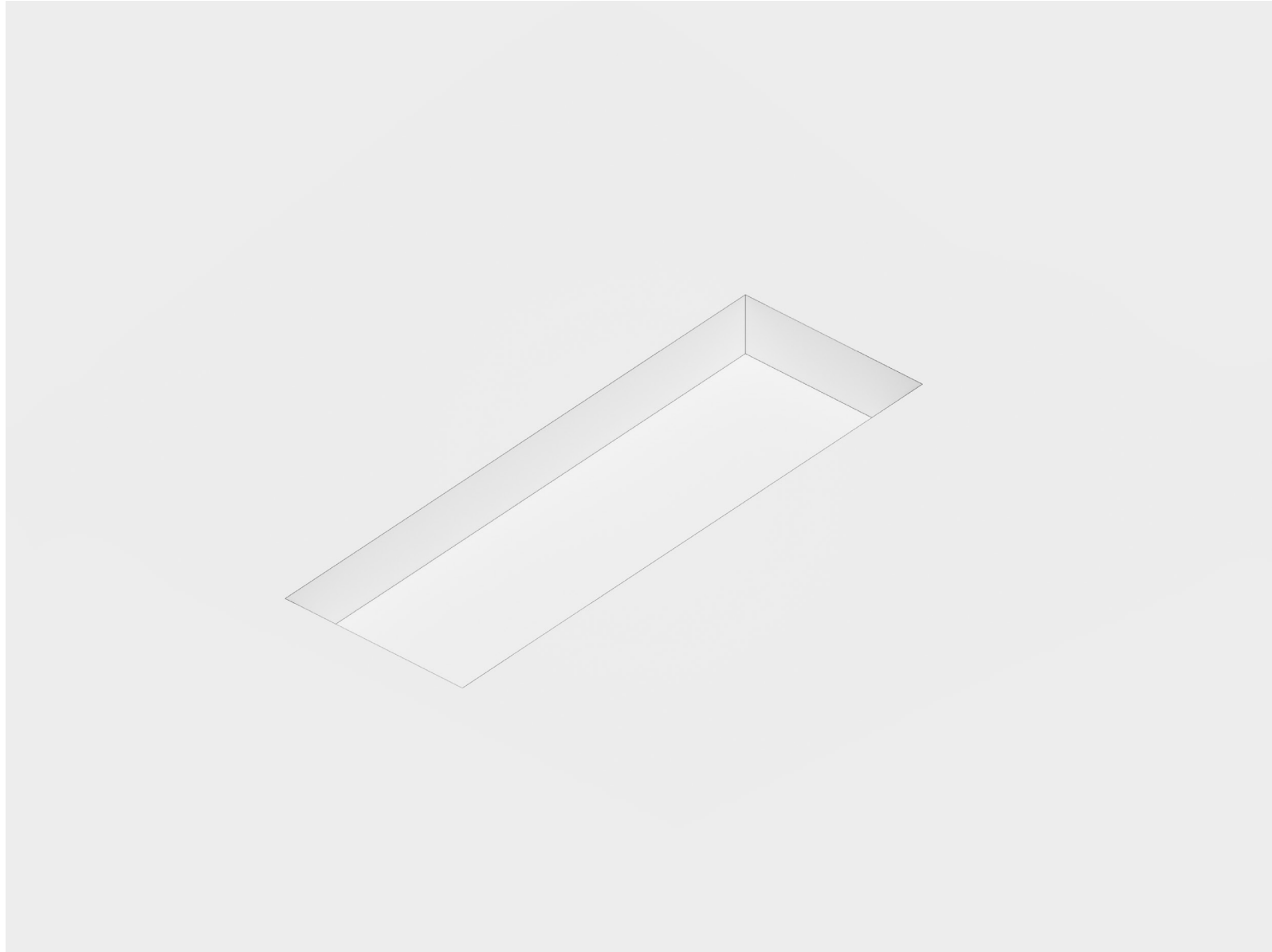
Development FACADE



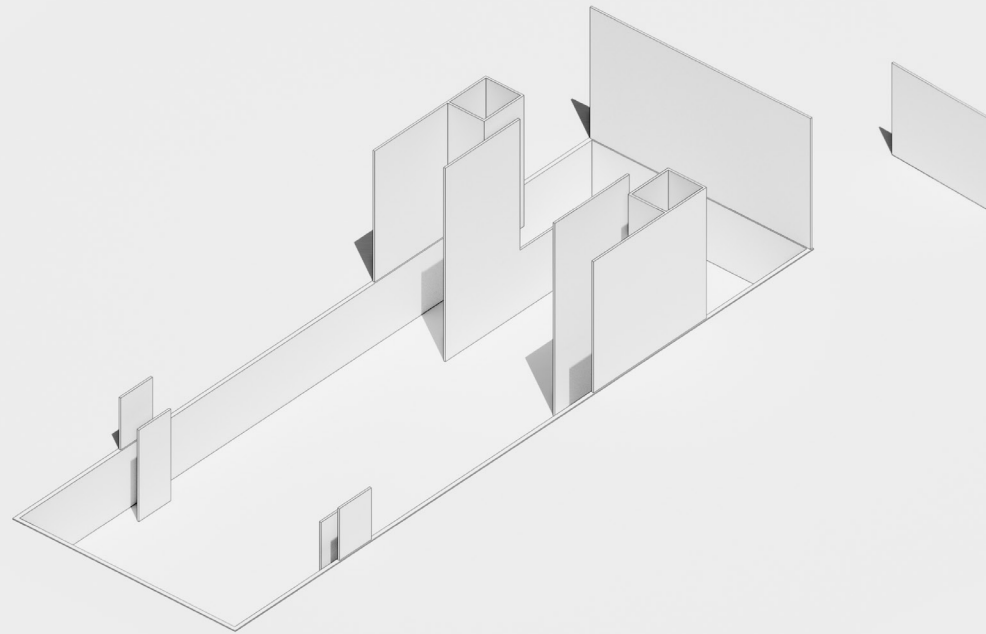
Development **DETAIL**



Development **STRUCTURE**

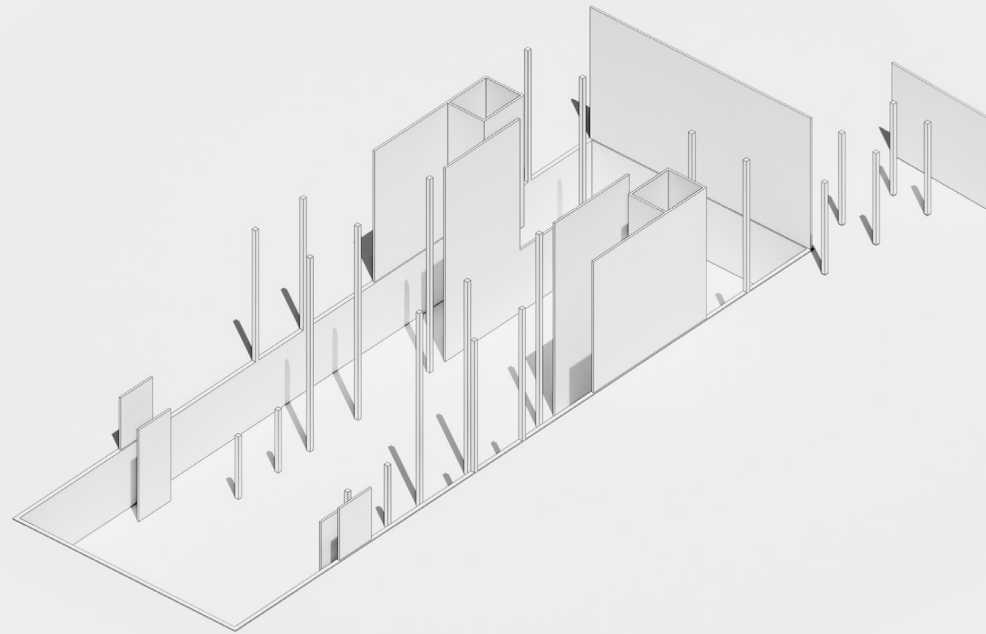


Development **STRUCTURE**



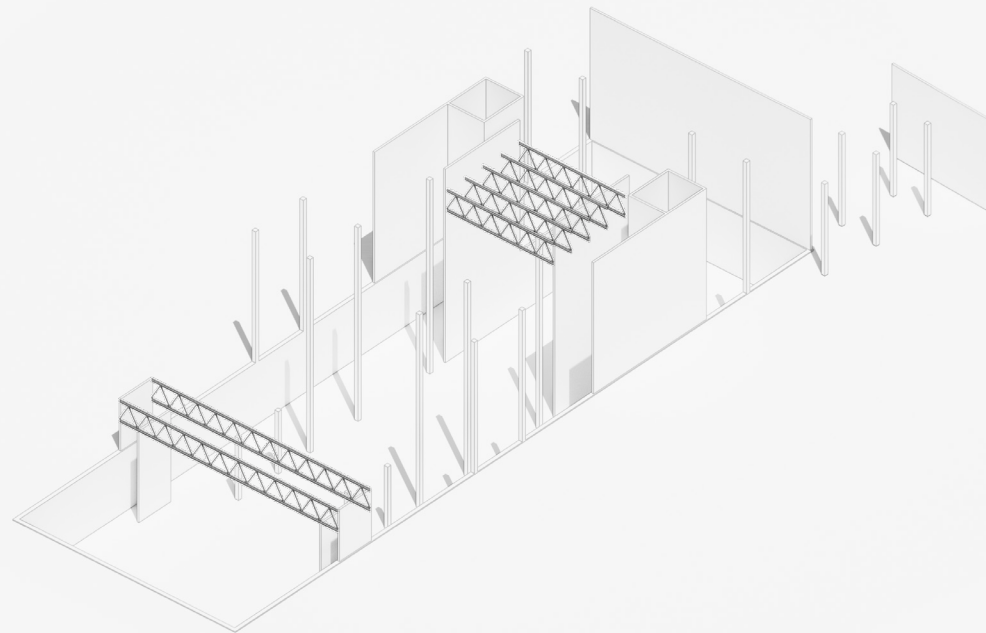
CONCRETE CORES

Development **STRUCTURE**



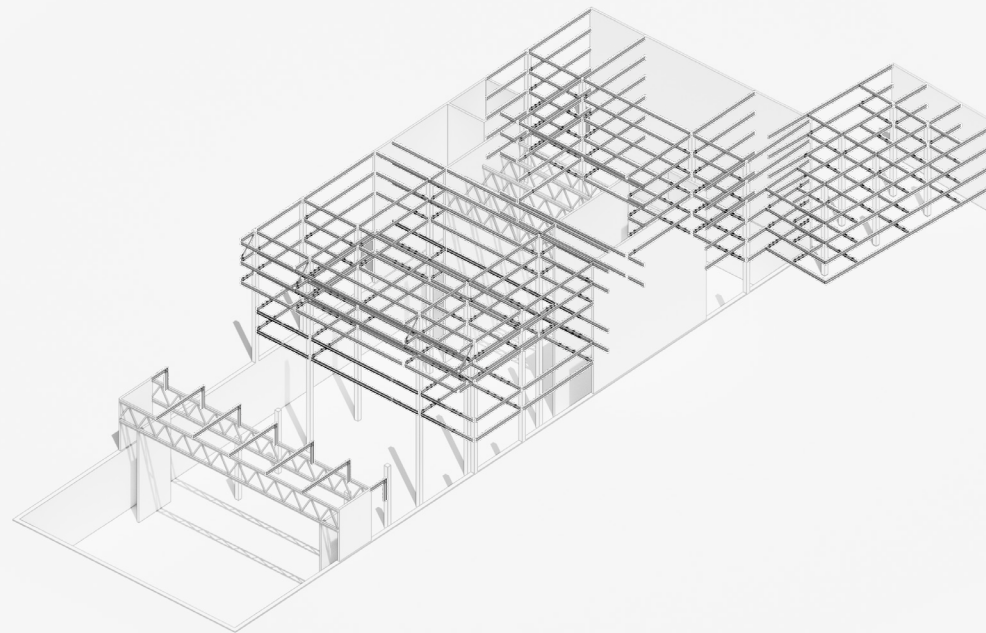
CONCRETE COLUMNS

Development **STRUCTURE**



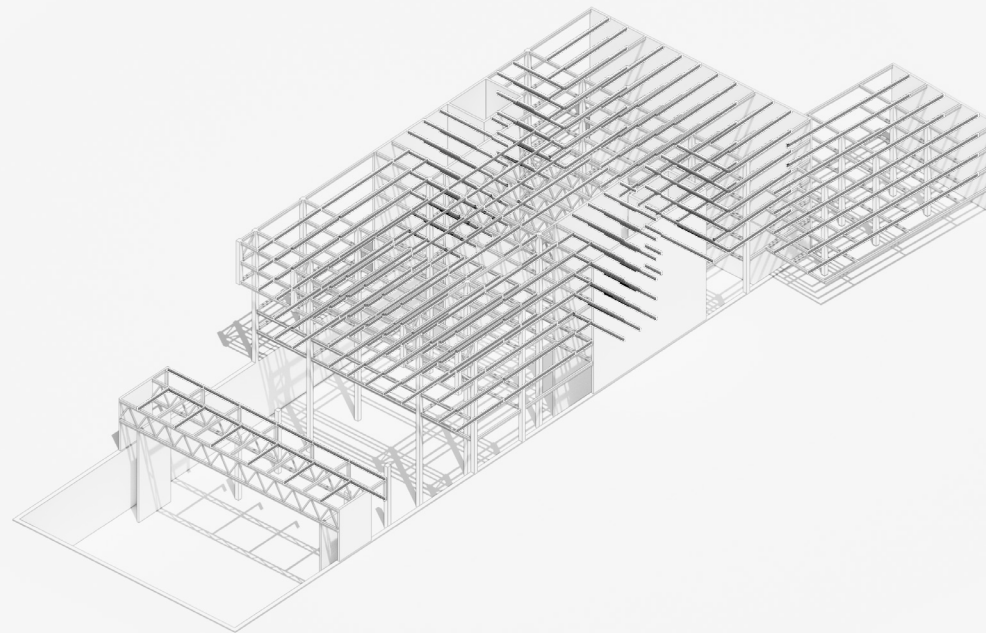
LARGE STEEL TRUSSES

Development **STRUCTURE**



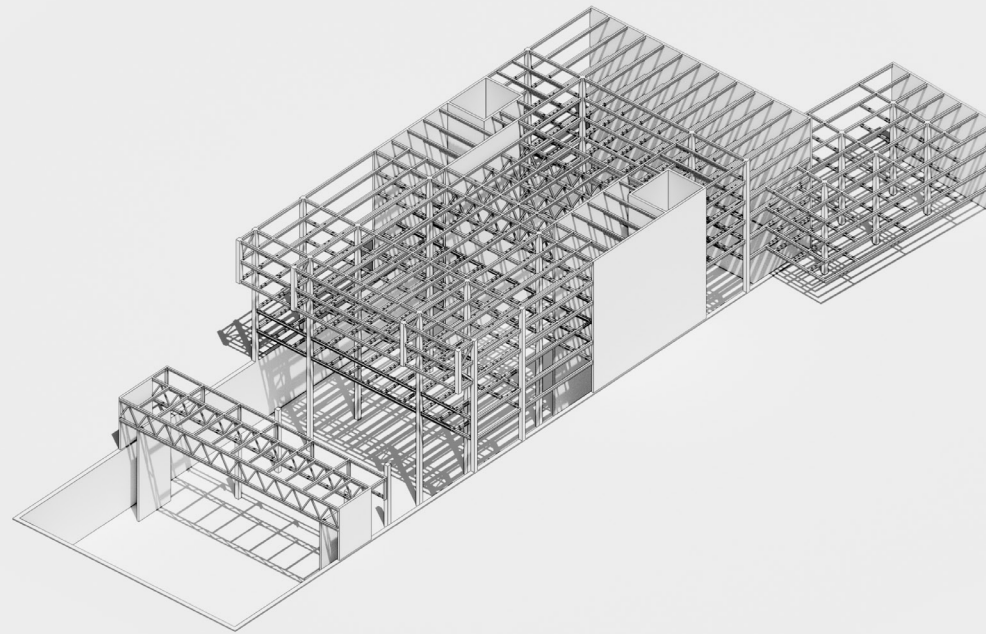
PRIMARY STEEL STRUCTURE

Development **STRUCTURE**



SECONDARY STEEL STRUCTURE

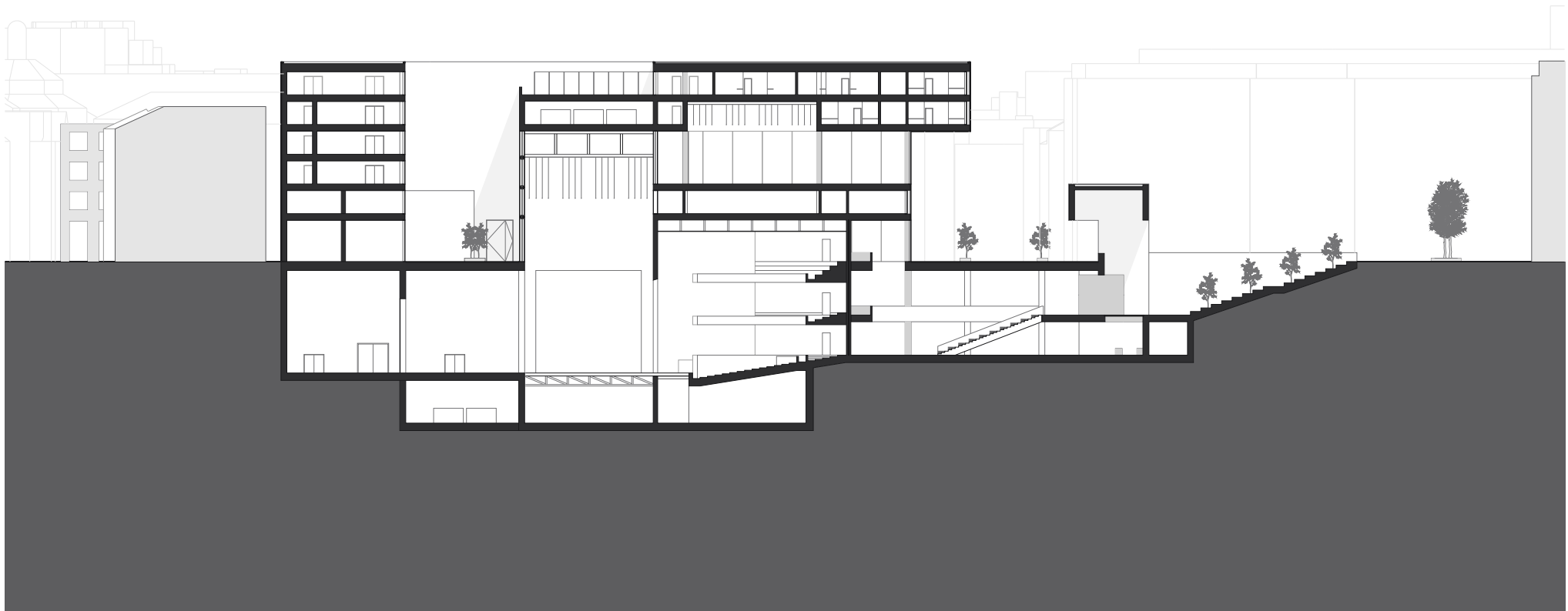
Development **STRUCTURE**



TOTAL STRUCTURE

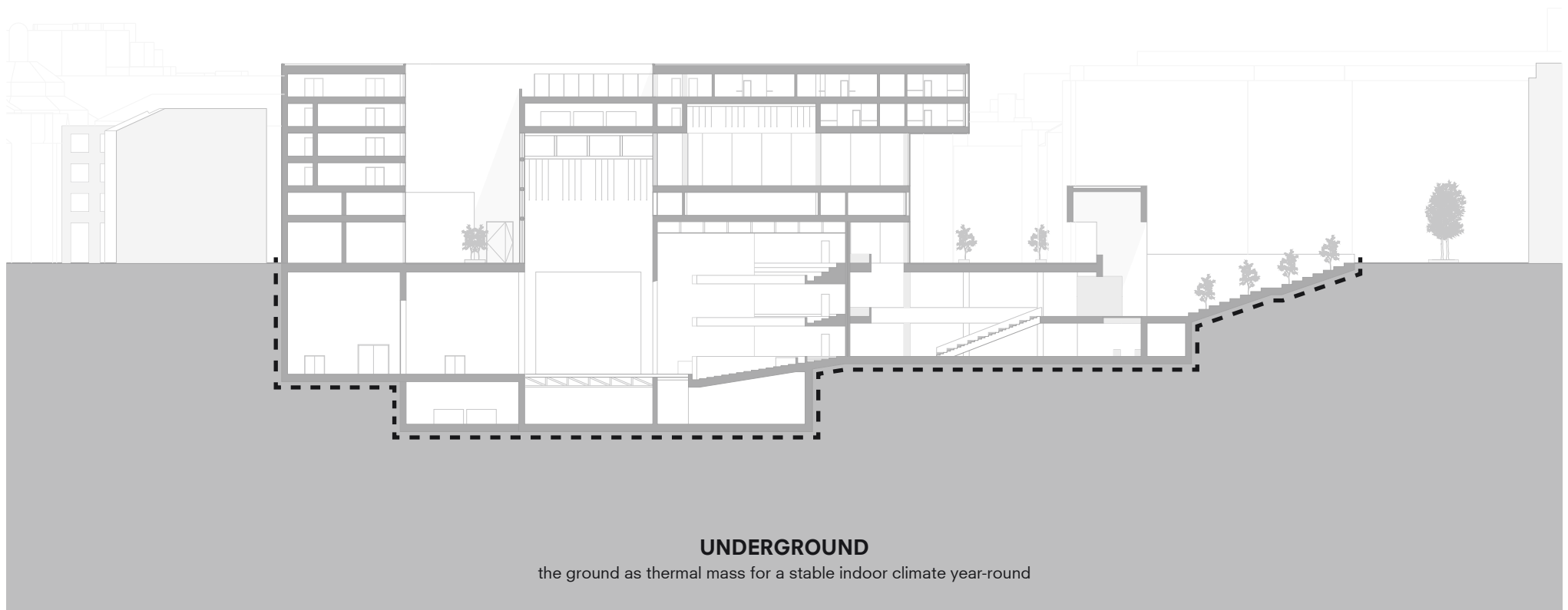
Development

SUSTAINABILITY



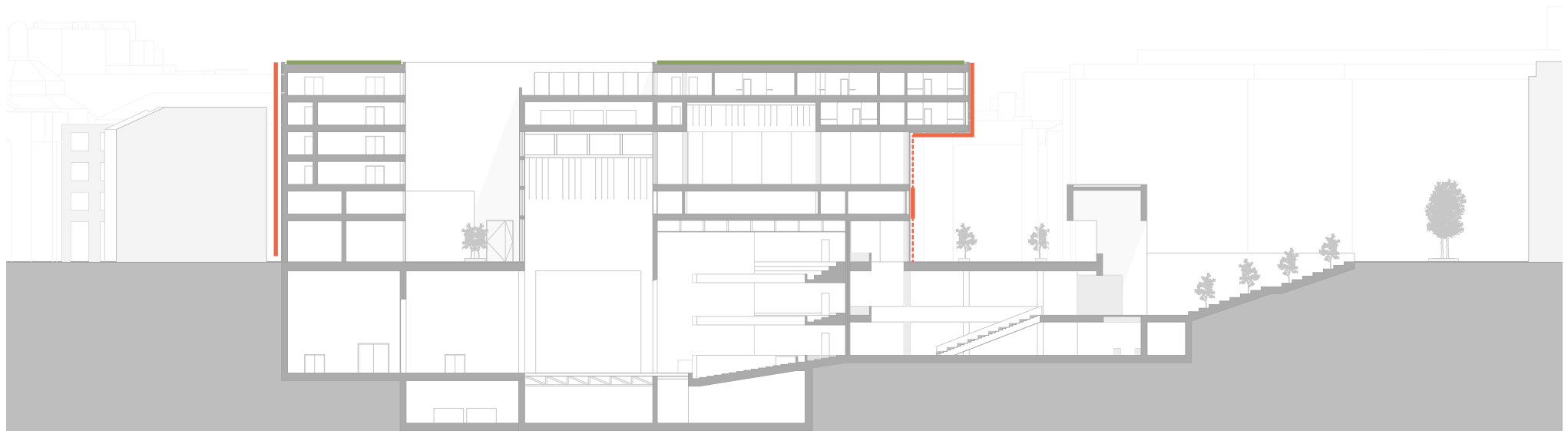
Development

SUSTAINABILITY



Development

SUSTAINABILITY

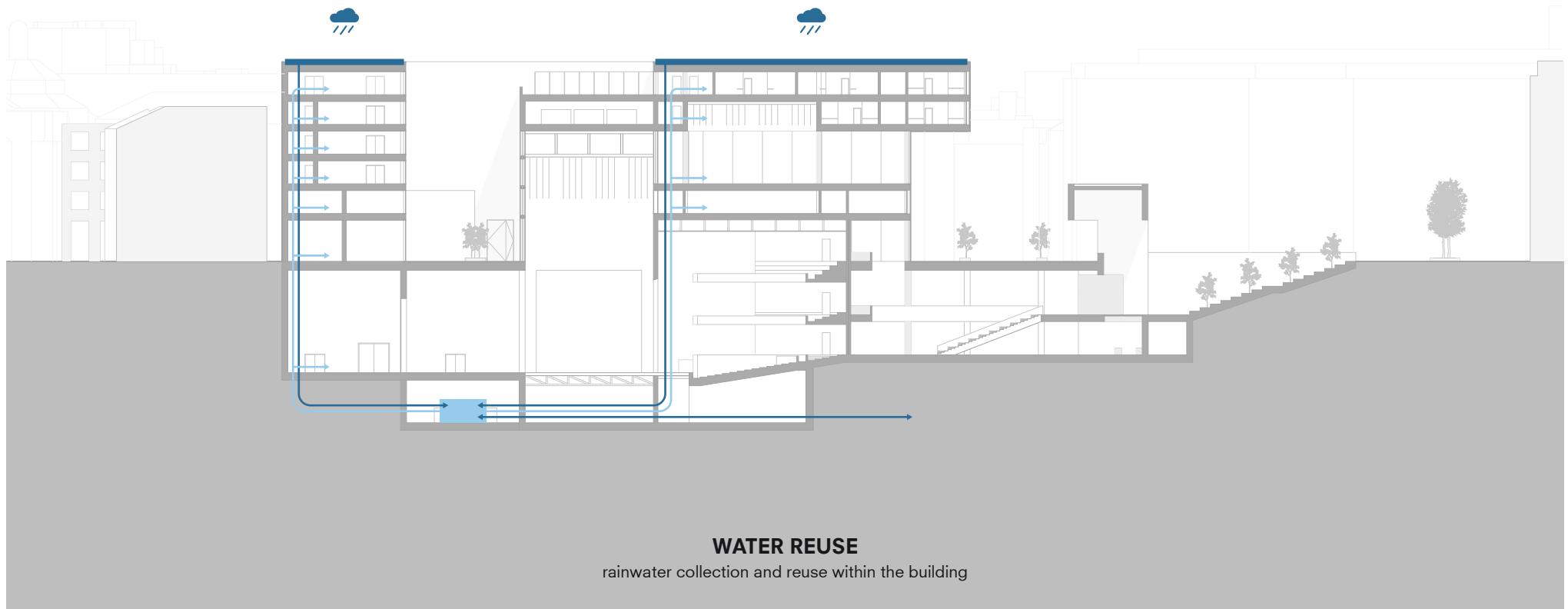


HEAT-ABSORBING FACADE

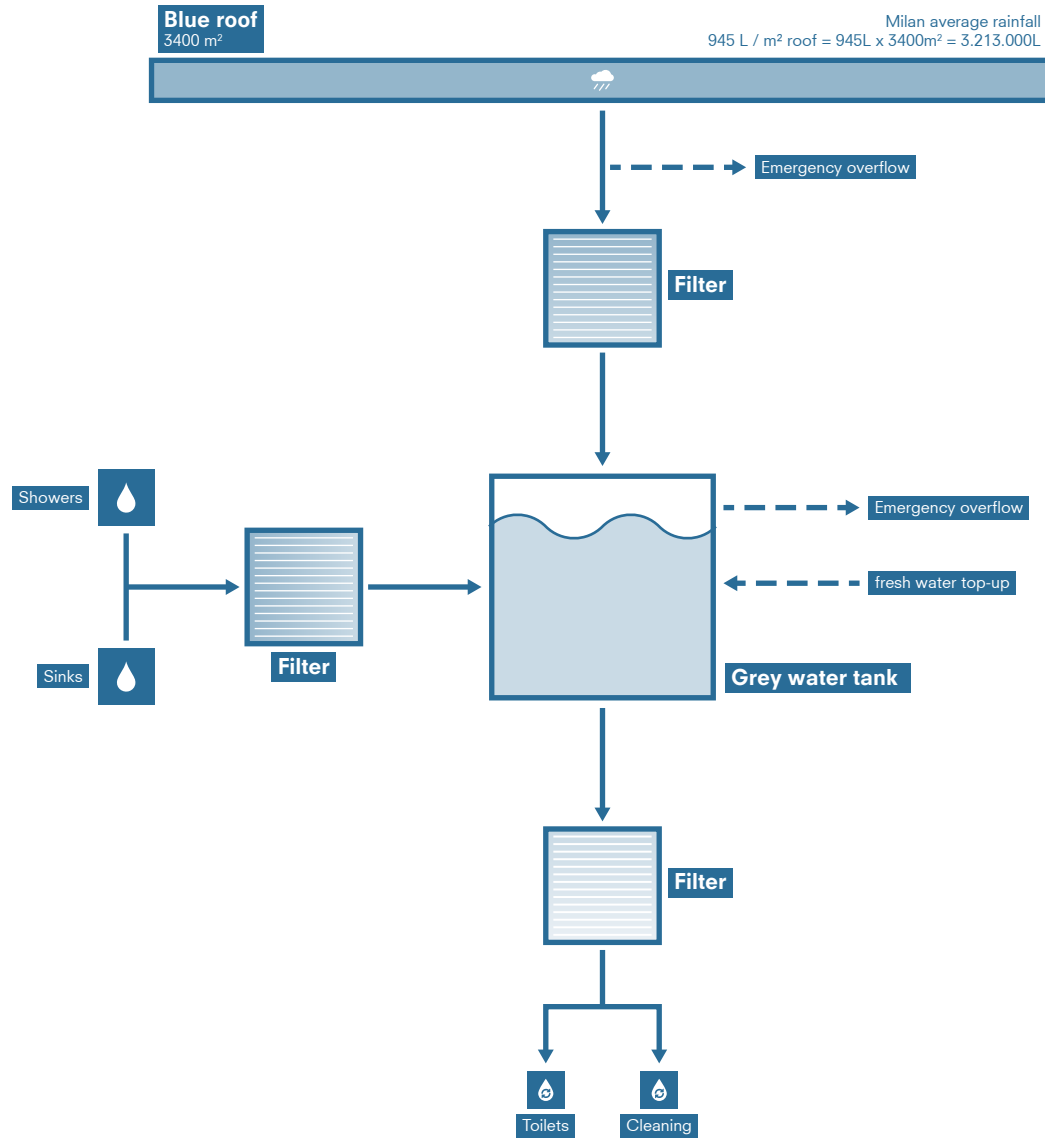
the ceramic facade absorbs heat, becoming a thermal shield for the entire building

Development

SUSTAINABILITY

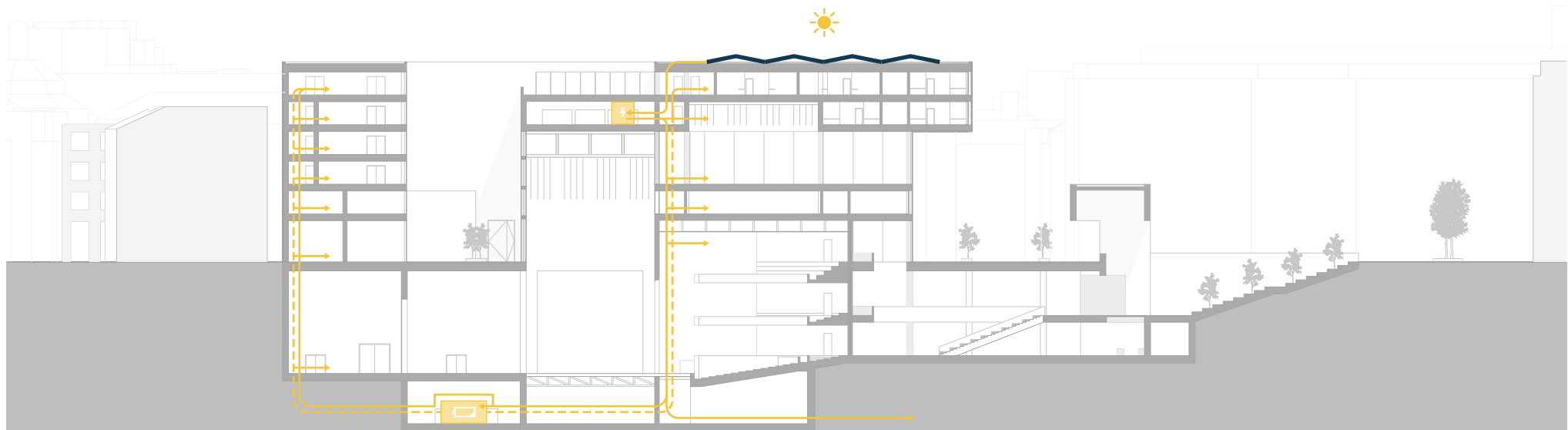


Development BLUE SYSTEM



Development

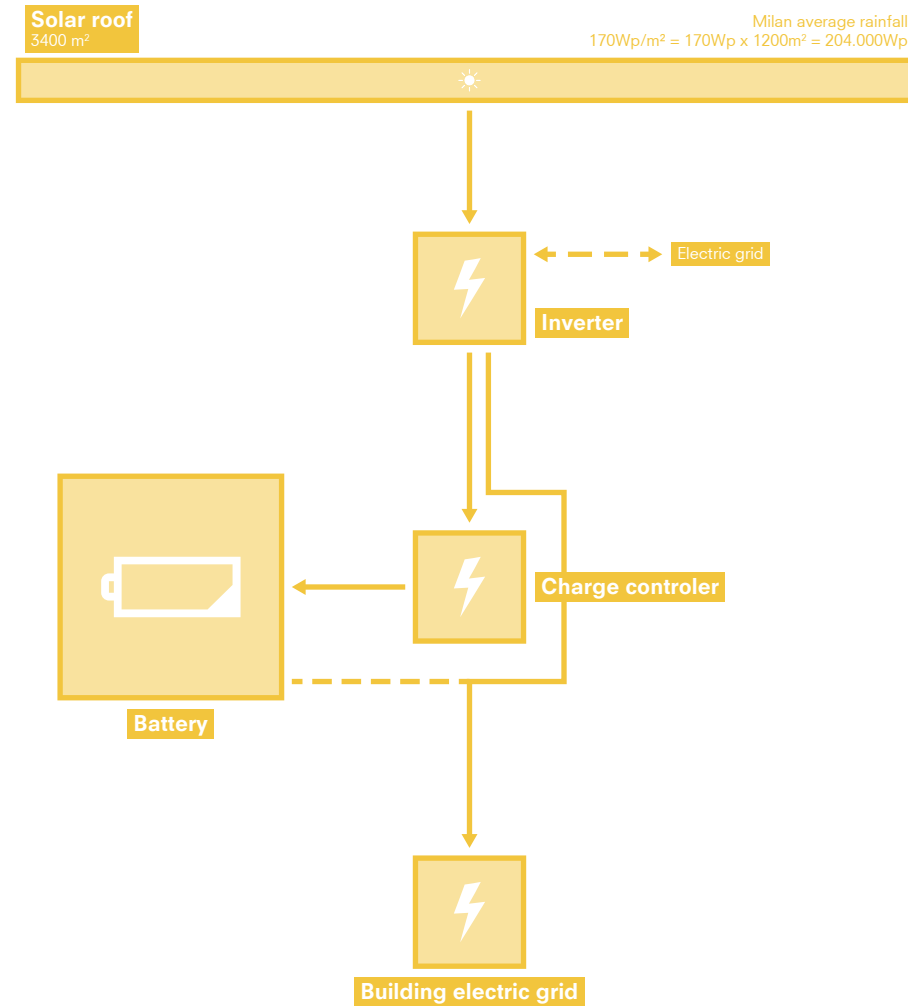
SUSTAINABILITY



ENERGY PRODUCTION

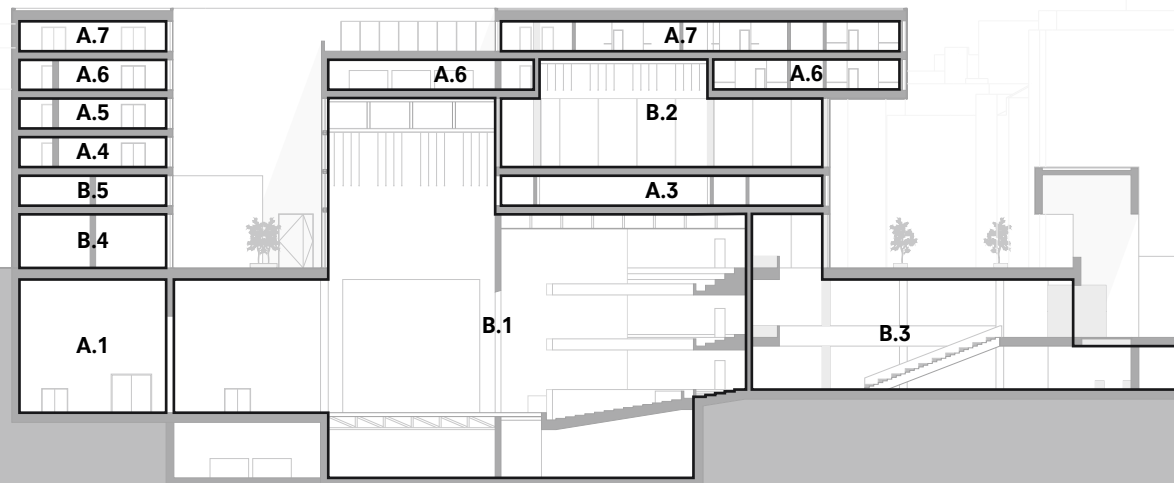
generating and storing solar energy to increase the building's self-sufficiency

Development ENERGY SYSTEM



Development

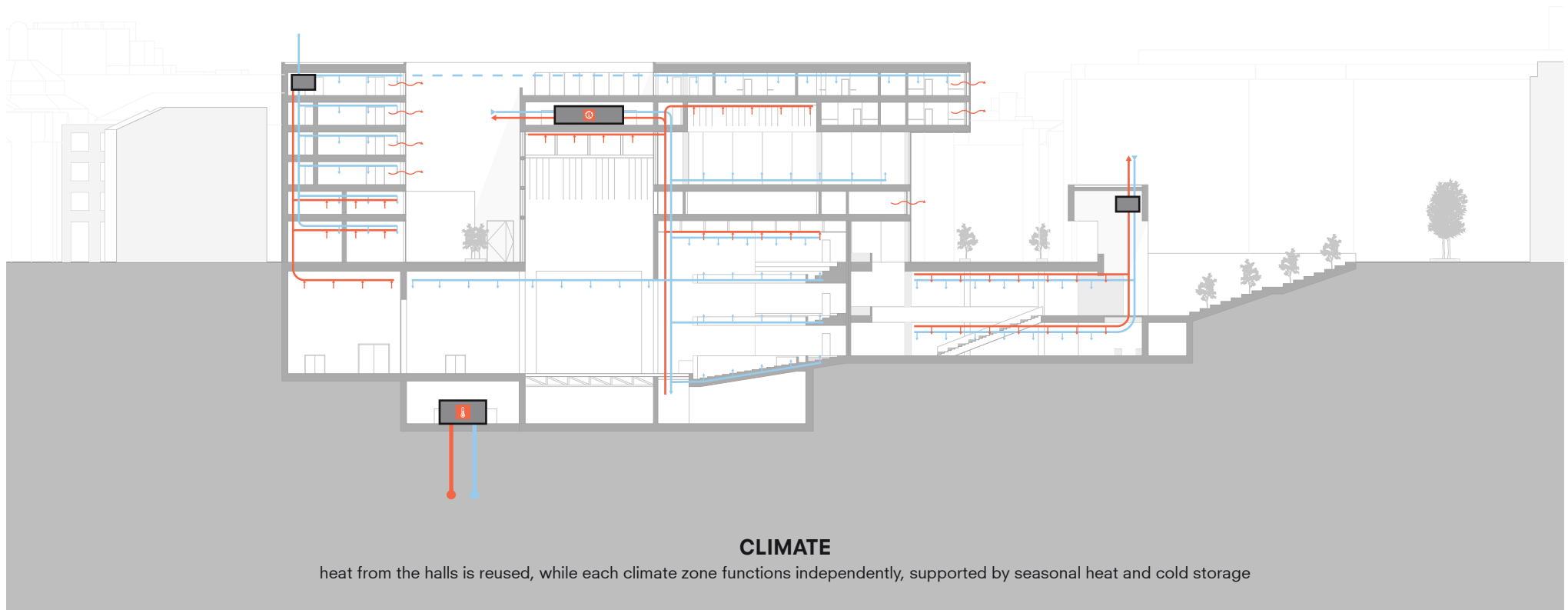
SUSTAINABILITY



CLIMATE ZONES

different climate zones provide the right conditions for each function

SUSTAINABILITY

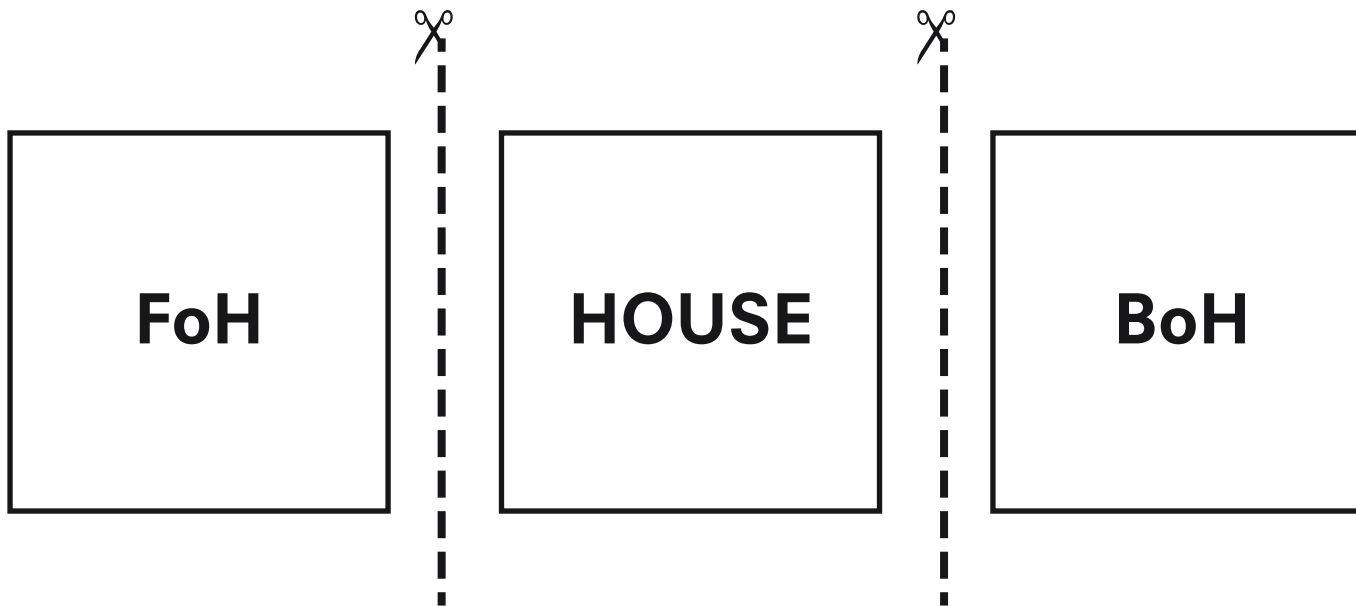


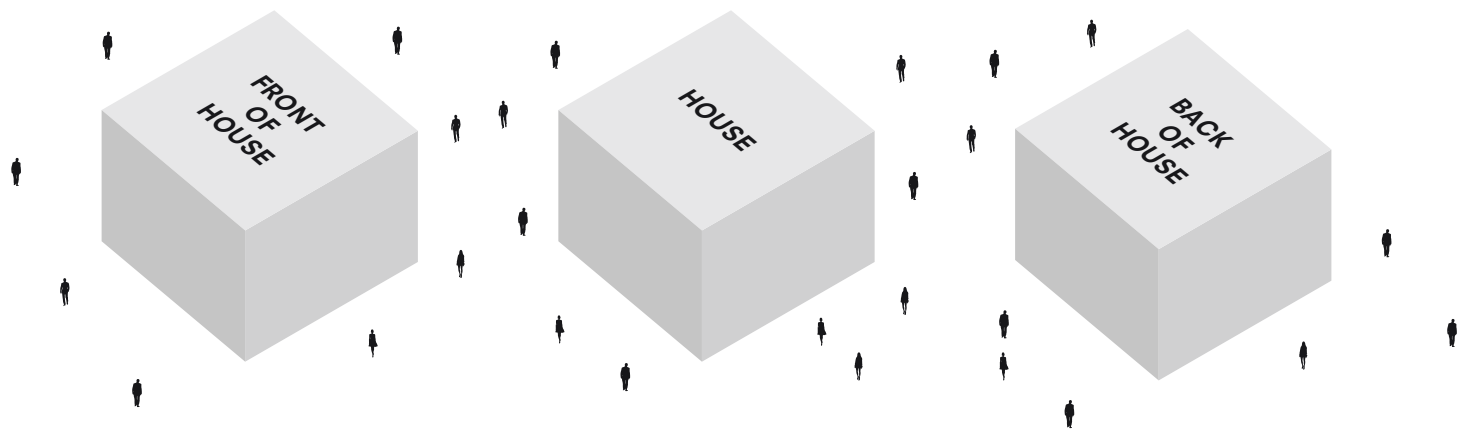
CONCLUSION

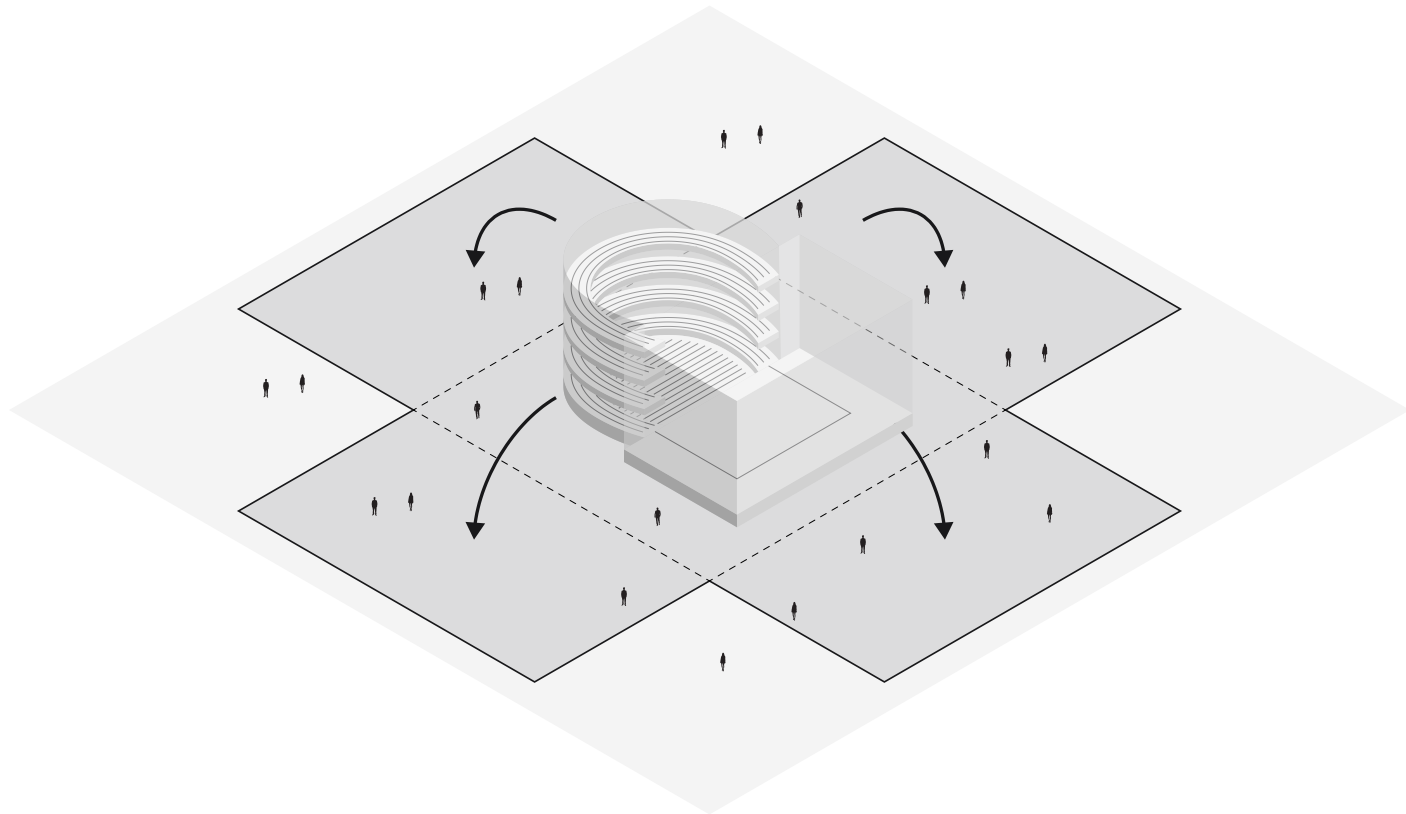




How can the architecture of an opera house reposition the cultural relevance of opera in contemporary society?





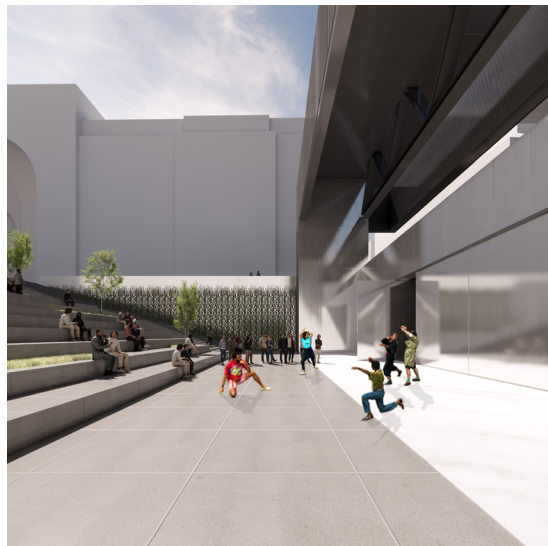








OMA, Faena Forum (Miami 2022)











OPENING OPERA

Europa riconosciuta

Antonio Salieri

Thank you.