COMPLEX PROJECTS GRADUATION STUDIO BERLIN OPEN DEPOT Public Art Depot for Germany

Public Art Depot for Germany Laura Kemp - TU Delft 01/11/2023

INTRODUCTION RESEARCH DESIGN BRIEF DESIGN

ambitions solutions implementation

5. CONCLUSION

1. INTRODUCTION

2. RESEARCH

3. DESIGN BRIEF

4. DESIGN

ambitions solutions

implementation

5. CONCLUSION

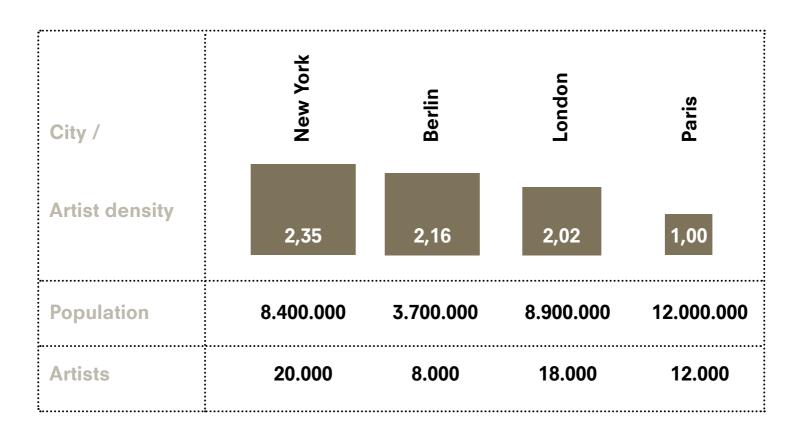
Introduction **BERLIN ART SCENE**

Leonid



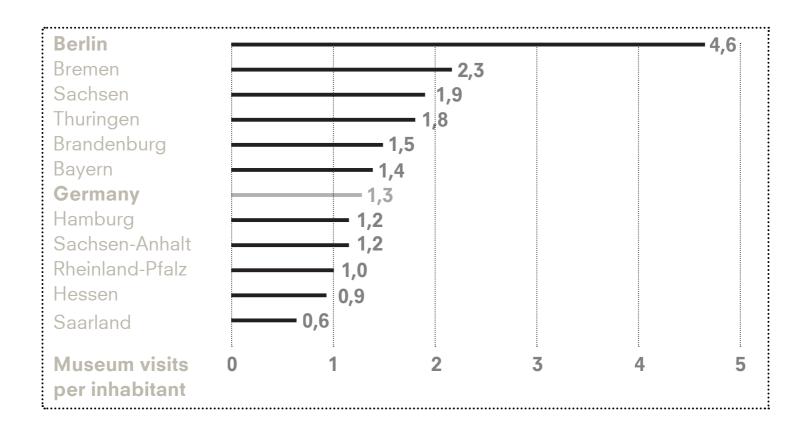
'My God, Help Me to Survive This Deadly Love', graffiti art by Dmitri Vrubel, 1990.

Research MUSEUMSCAPE **CURRENT TRENDS**



Artist density in Berlin is higher than in London and Paris

Research MUSEUMSCAPE **CURRENT TRENDS**



Museum visits are highest in Berlin [per inhabitant by federal state]

Institute for Strategy Development IFSE, 2023

complex

projects

1. INTRODUCTION

2. RESEARCH

3. DESIGN BRIEF

4. DESIGN

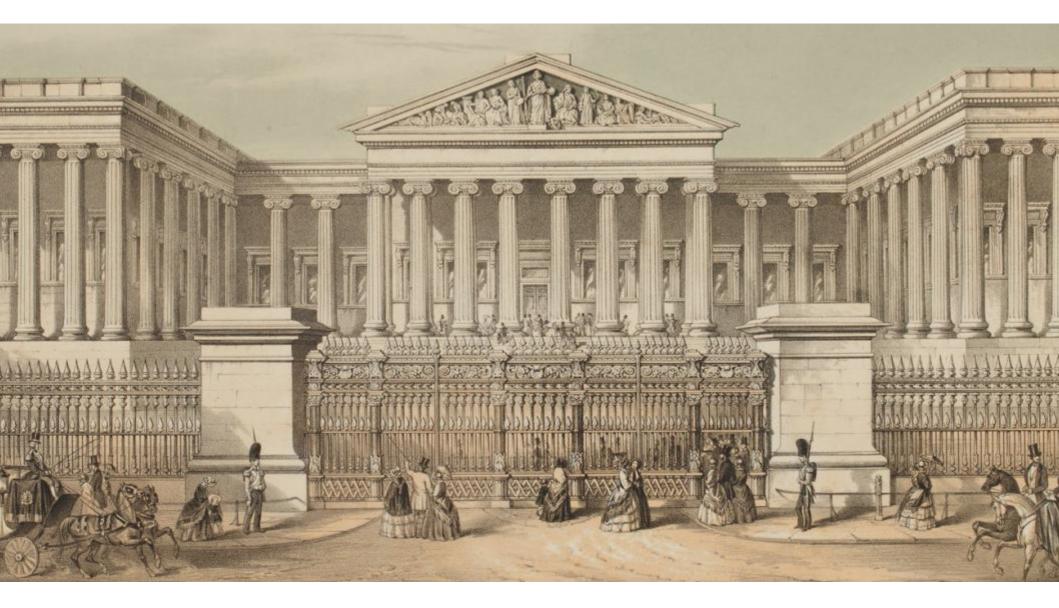
ambitions

solutions

implementation

5. CONCLUSION

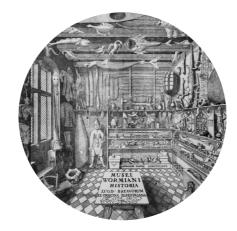
Research **HISTORY OF THE MUSEUM**



Research HISTORY OF THE MUSEUM



530 BC



1599

Research **HISTORY OF THE MUSEUM**



530 BC



1599





Ennigaldi-Nanna's museum (530 BC), Wunderkammer (1599), British museum virtual reality exhibition (2023). UNESCO Heritage, 2023.

Research **MUSEUM TYPES**

Aeronautical museums

Archeological museums

Art museums

Automobile museums

Chemical museums

Ethnological museums

Historical museums

Interactive science museums

Literary museums

Maritime museums

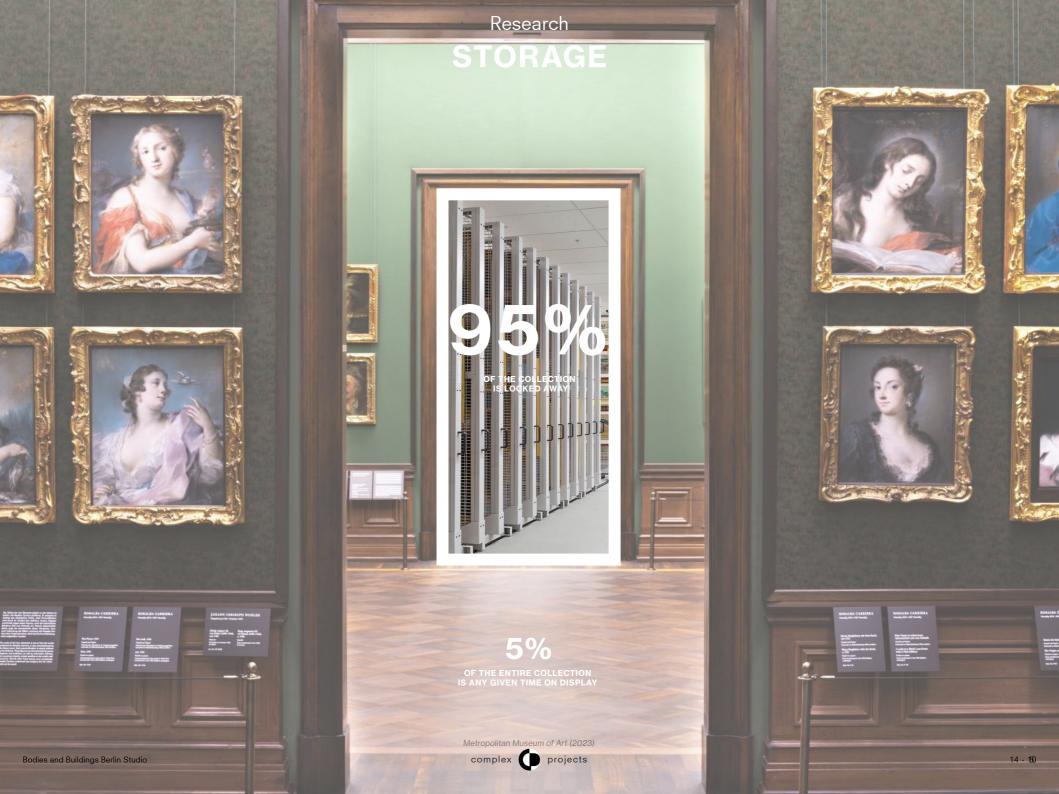
Music museums

Natural history museums

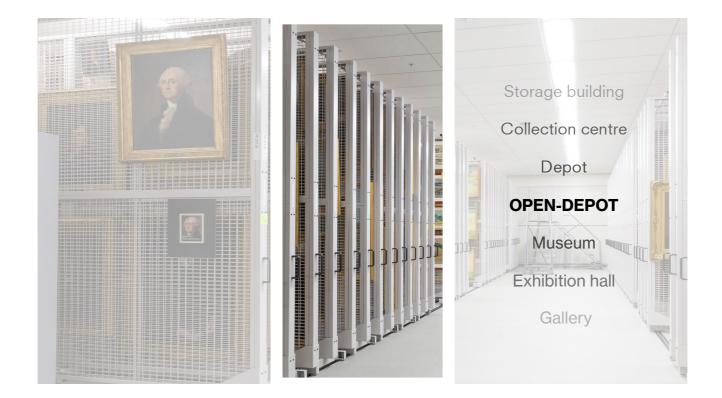
Virtual museums



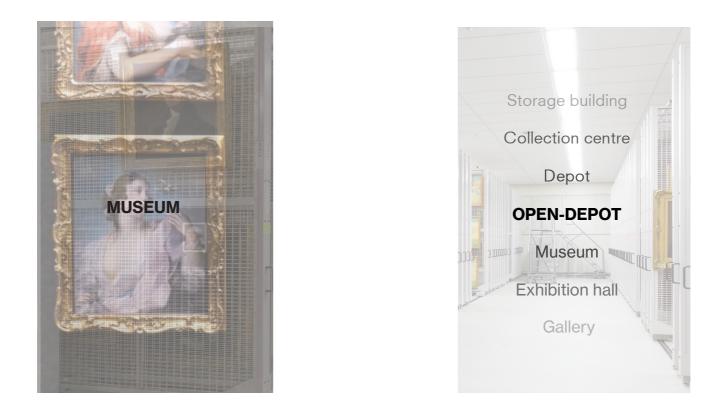




Research NEW TYPOLOGY **OPEN-DEPOT**

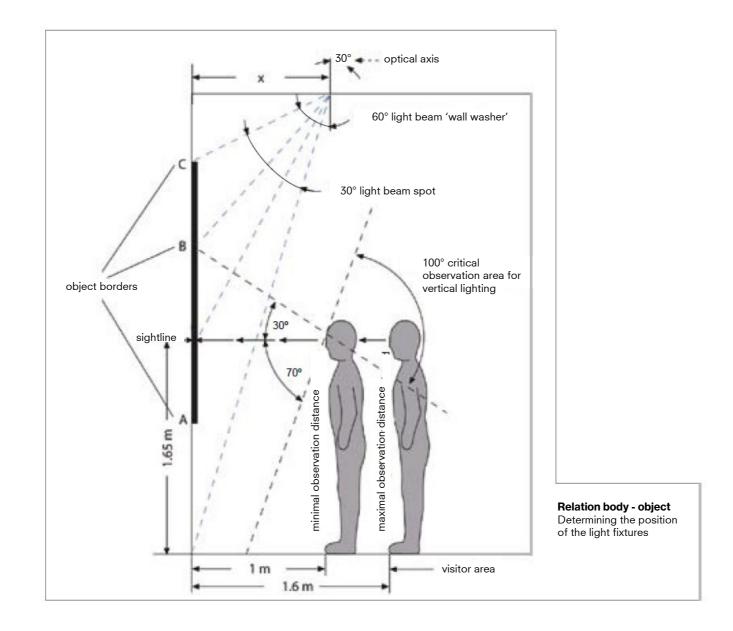


Research **OPEN-DEPOT**

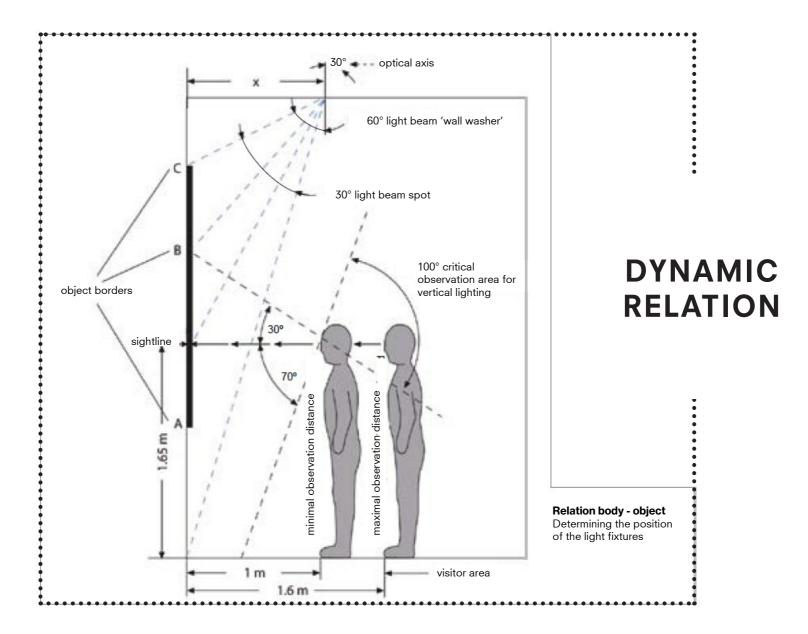




Research RELATION **BODY - OBJECT**



Research RELATION **BODY - OBJECT**



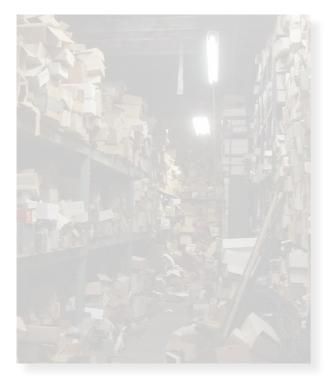
Research **MUSEUMSCAPE UNDER PRESSURE**

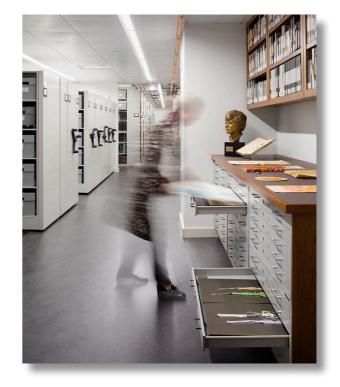




Museumscape Berlin: insufficient storage facilities inaccessible for research and public not meeting sustainability standards

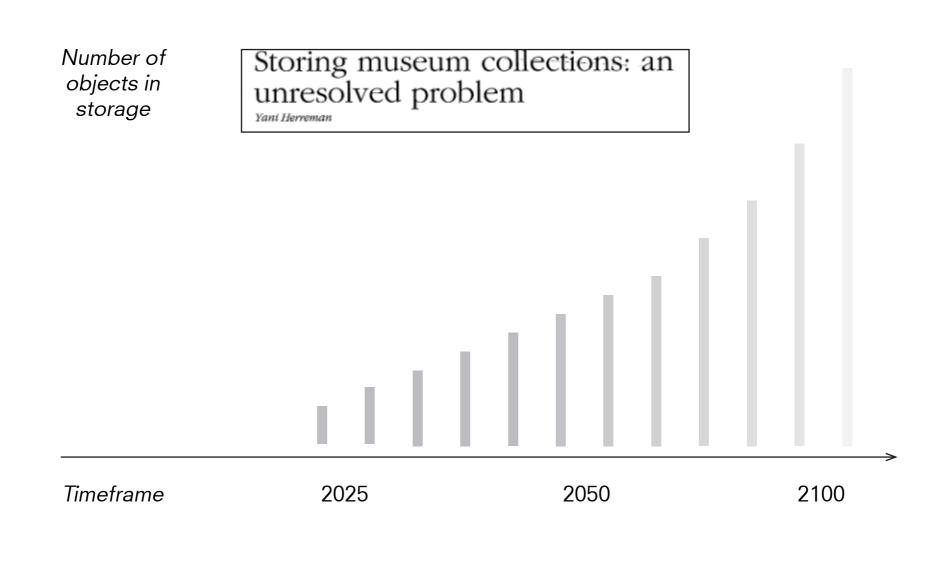
Research **MUSEUMSCAPE UNDER PRESSURE**





Project ambition: sufficient storage facilities accessible for research and public meeting sustainability standards

Research GROWING COLLECTIONS



Research THE COLLECTION **GROWTH**

Growth and change of the collection requires a space that is adaptable



ALTERNATIVE STORAGE AND EXHIBITION

Research **RESEARCH QUESTION**

How can an **open-depot** be designed as a space that offers a new dimension to the art experience and at the same time facilitate future **change** of the art collection?

1. INTRODUCTION

2. RESEARCH

3. DESIGN BRIEF

4. DESIGN

ambitions

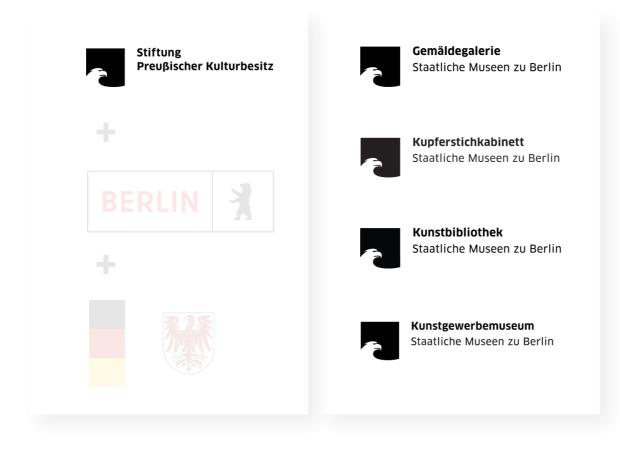
solutions

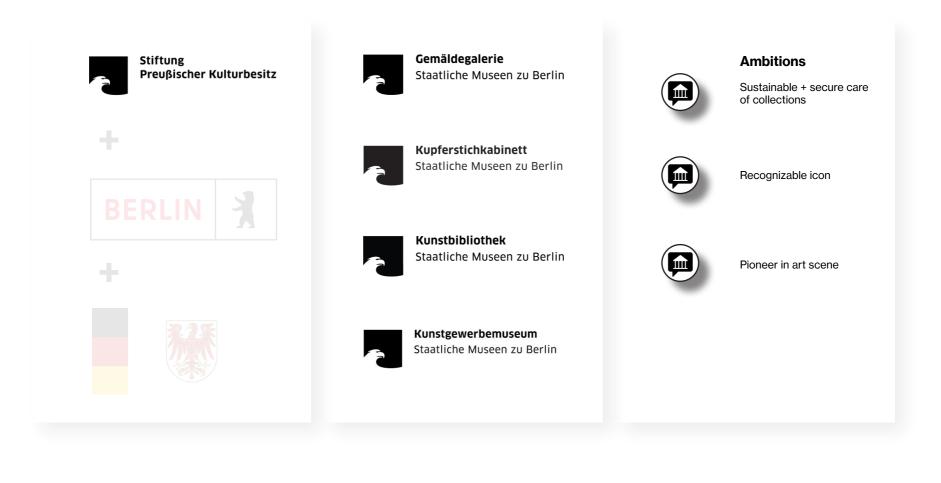
implementation

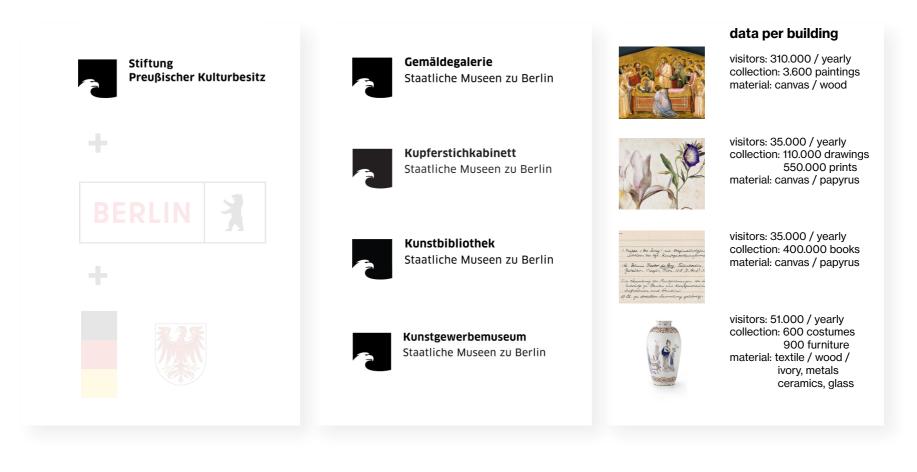
5. CONCLUSION

CLIENT, USER, COLLECTION









VISITORS

LOCALS

TOURISTS

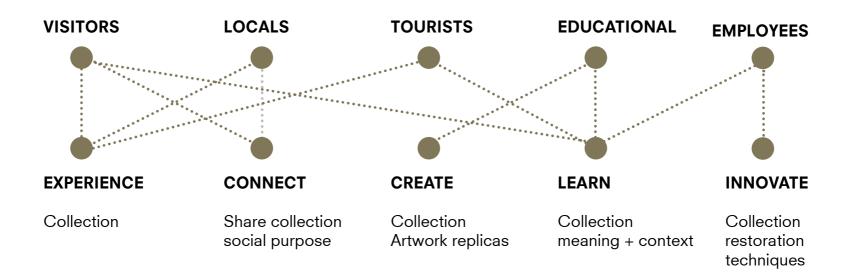
EDUCATIONAL

- 1. Locals
- 2. Tourists
- 3. Educational
- 4. Employees
- Visitors from Berlin / Germany Speak the German

International visitors from abroad Speak the German Primary school High school University

EMPLOYEES

Art handlers Restoration experts Administation management Guides Technical staff Security staff Cleaning staff BOD staff



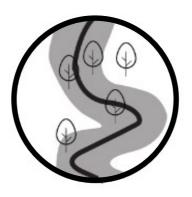
SITE







Criteria I In or next to greenery

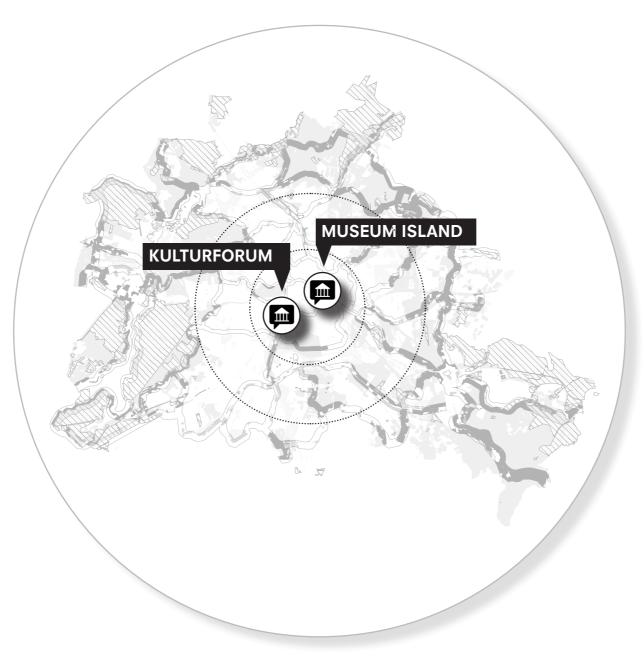


Criteria II Connected to green corridor



Criteria III Not in protected environment





Site MUSEUM CLUSTERS

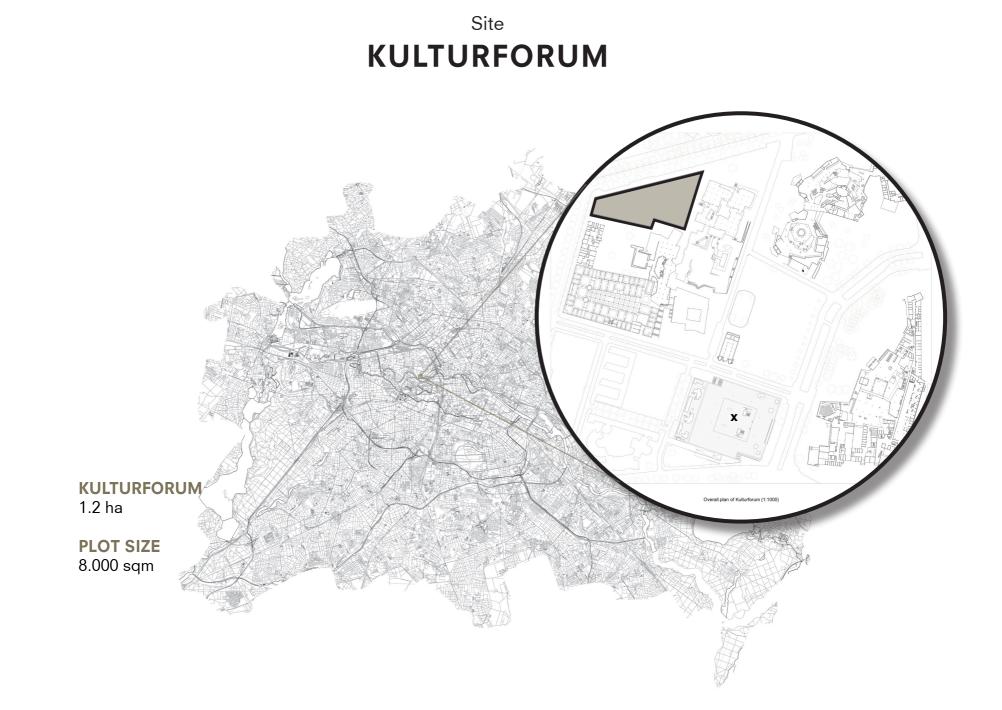


Site TIMELINE

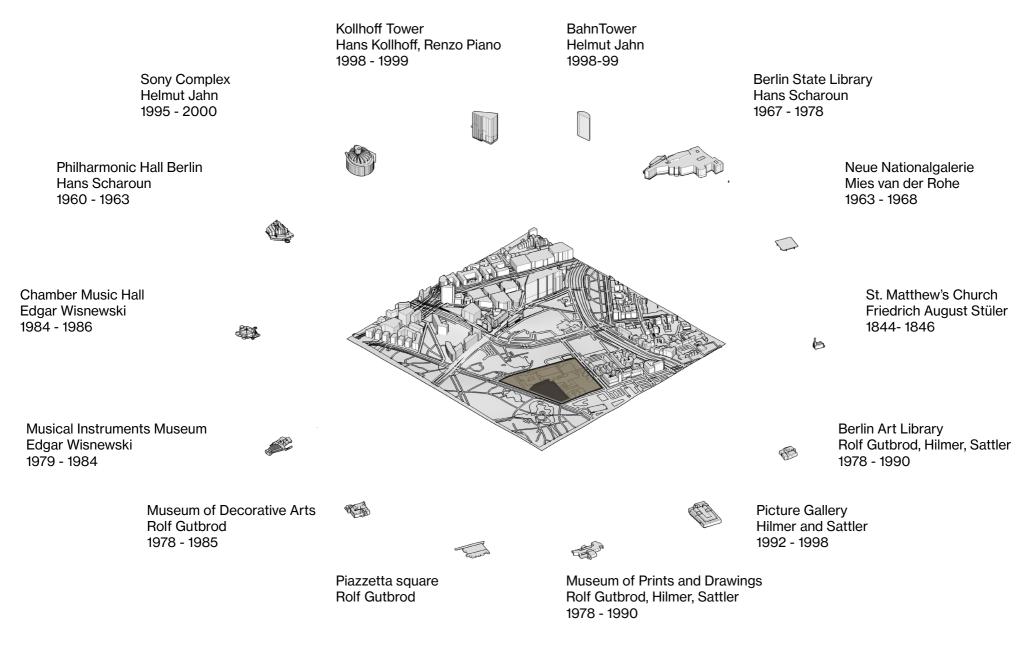
Bombing and extensive destruction of Tiergarten district	Reconstruction of St. Matthew's Church (originally built in 1846)	by Hans	Gallery by of dwig Mies van cra	the Arts and (C afts museum	mmermusiksaal Chamber Music Hall) by Edgar Wisniewski,	Kupferstichkabinett (Museum of Prints and Drawings) and Kunstbibliothek (Art Library) opened	Piazzetta is studied because of problems. Use is for storage, however there is parking shortage	Museum of The 20th Century design process phase Herzog and de Meuron	Your 20-min Artdepot
1943-1945	1956	1963	1968 1	978-1985	1987	1994	1999	2016	2030
1940-1950	1950-1960	1960-1970	1970-1980	1980-19	90 1990	0-2000 2000	0-2010 2	010-2020	020-2030
1946	1961	1968	1967-78	1984-1985	1989	1998	2010	2020 - 2020	6
Collective plan among others b Prof. H. Scharou with ideas for complete redesign of Ber	y construction of in, the " Relief Road " through the Tiergarten (now	New National Gallery by Ludwig Mies van der Rohe	Construction of the New State Library (Stabi) according to Scharouns design	Musikinstrumen enmuseum by Edgar Wisniewsk Kunstgewerbe museum, Museu Decorative Arts v designed by Gutt	ki. m of was	Vall Gemäldegaler (Old Master Paintings)open	The 20th Ce	entury Museum of Th or site 20th Century	ne





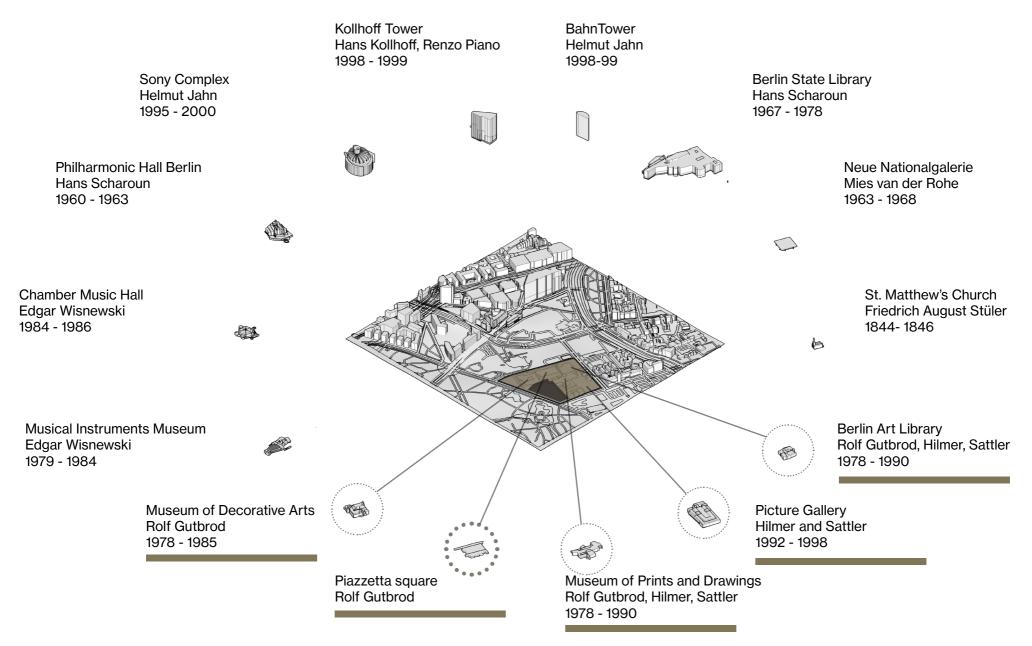


Site CULTURAL PROGRAM

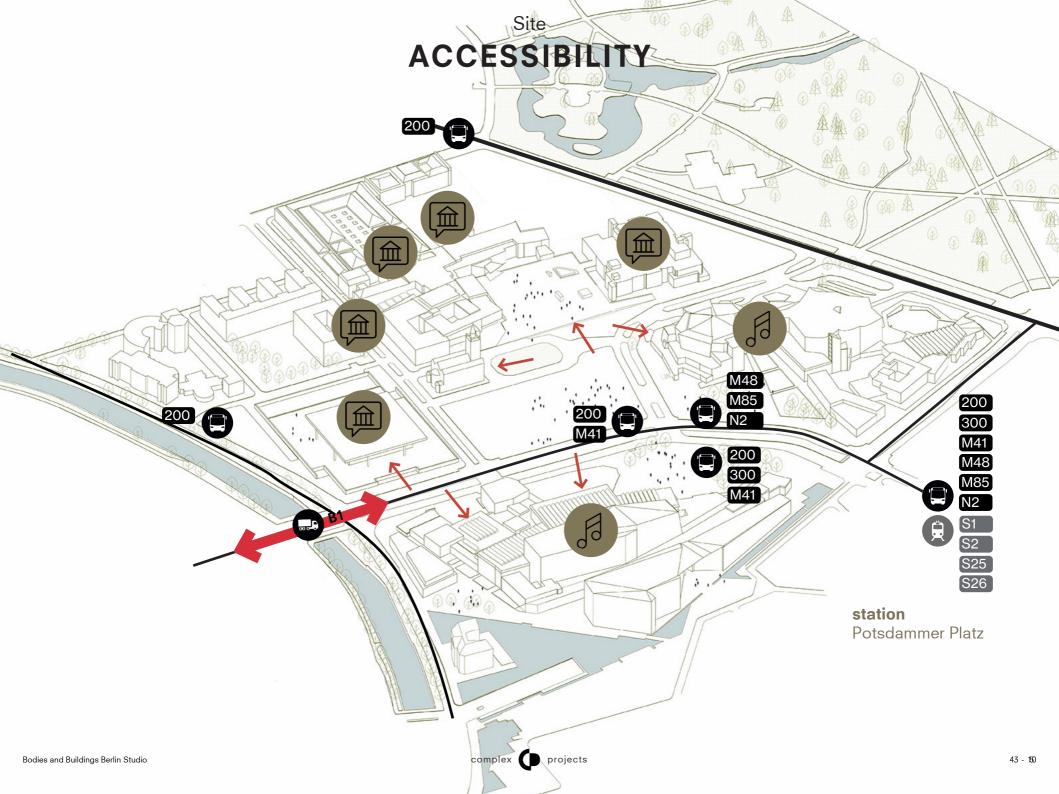


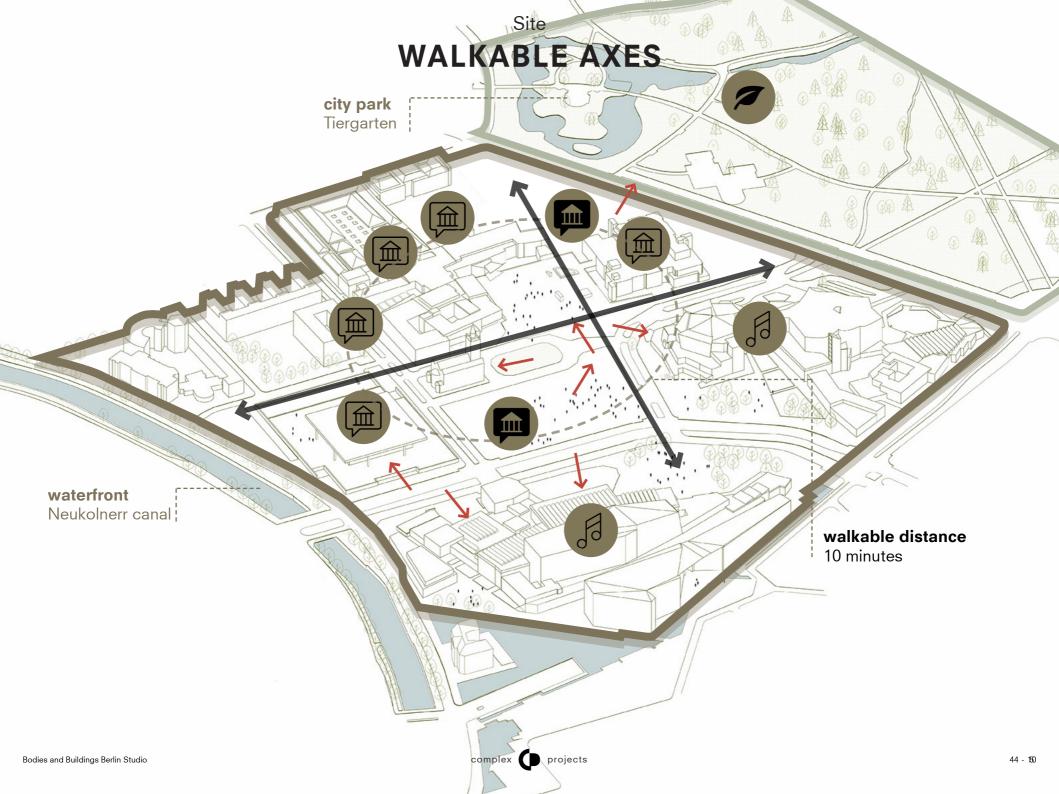
Isometry of existing buildings at the Kulturforum

Site STORAGE PROBLEMS

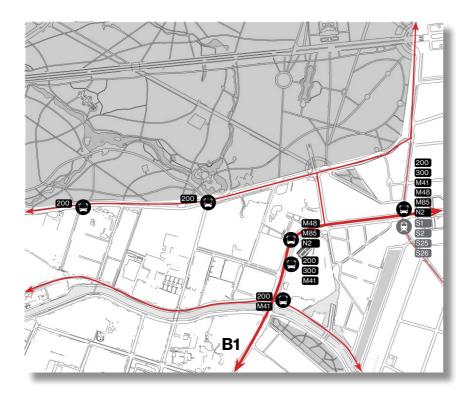


Isometry of existing buildings at the Kulturforum



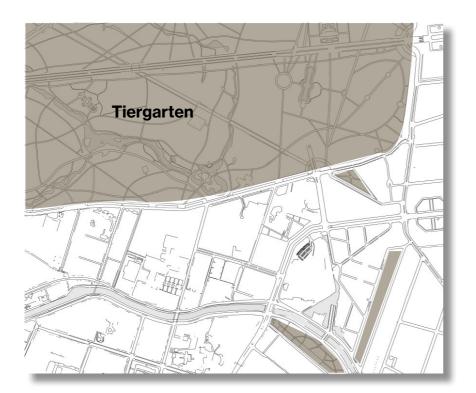


Site ACCESSIBILITY POTENTIAL





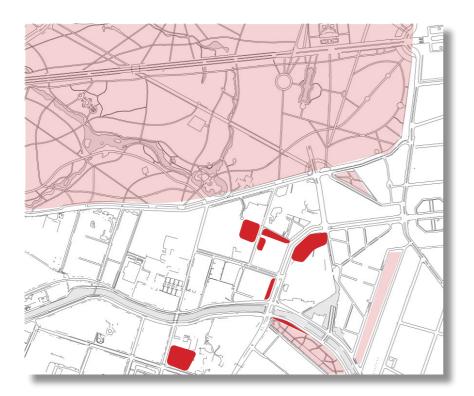
Site GREEN POTENTIAL





Greenery network

Site **PUBLIC SPACE POTENTIAL**





Public square Piazzetta square at Kulturforum Site SITE AMBITION



Improve accessibility Tiergarten and Kulturforum



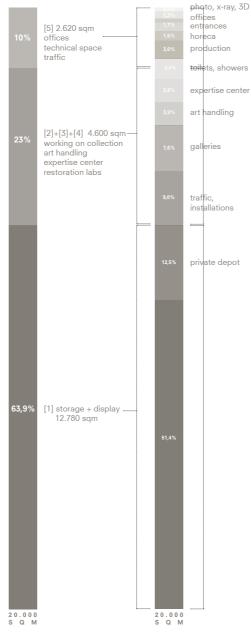
Increase attractive public space at Kulturforum



Clear routing at Kulturforum

PROGRAM

Program **PROGRAM BERLIN OPEN DEPOT**





ART HANDLING



RESTORE



STORAGE



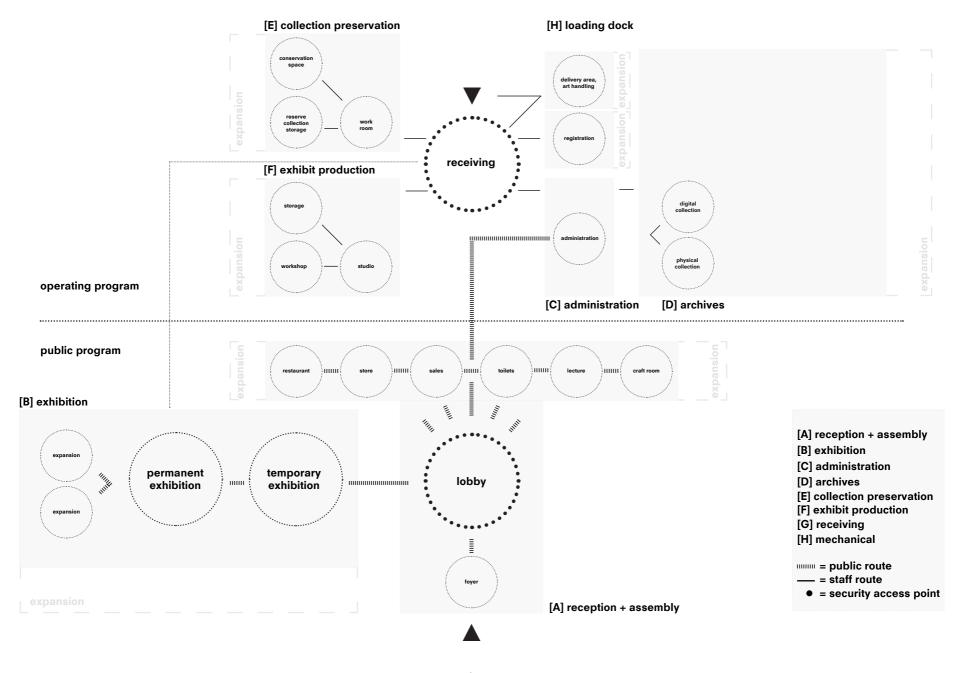
EXPERIENCE



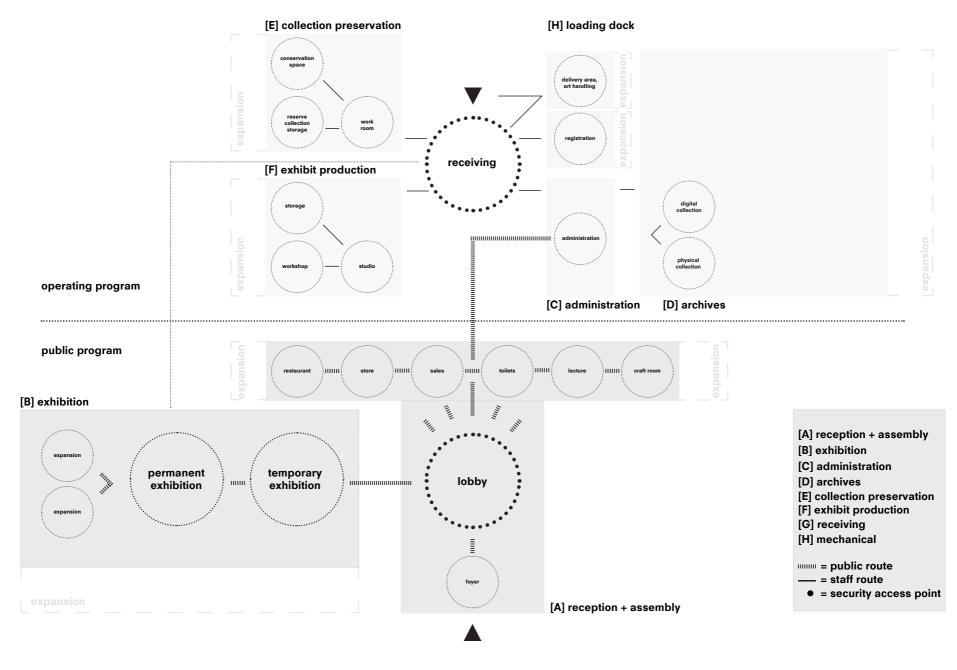
Pictures: Boijmans van Beuningen (2019) by MVRDV



Program **PROGRAMMATIC RELATIONS**

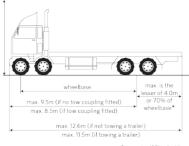


Program **PROGRAMMATIC RELATIONS**



[H] loading dock

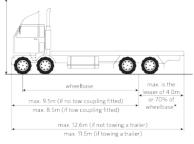




*see notes if fitted with a rear steering axle

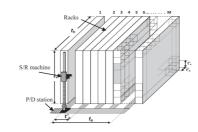






*see notes if fitted with a rear steering axle

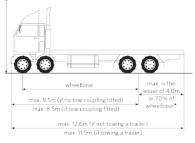








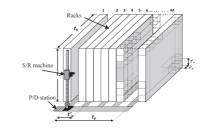


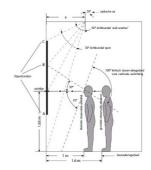


*see notes if fitted with a rear steering axle











storage depot







Design Brief CLIENT, SITE & PROGRAM



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Stiftung Preussischer Kulturbesitz (SPK), Prussian Cultural Heritage Foundation



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Site

Kulturforum, Berlin, Germany

Program

20.000 sqm Storage + Display

INTRODUCTION RECAP DESIGN BRIEF

3. CONCEPT

4. DESIGN

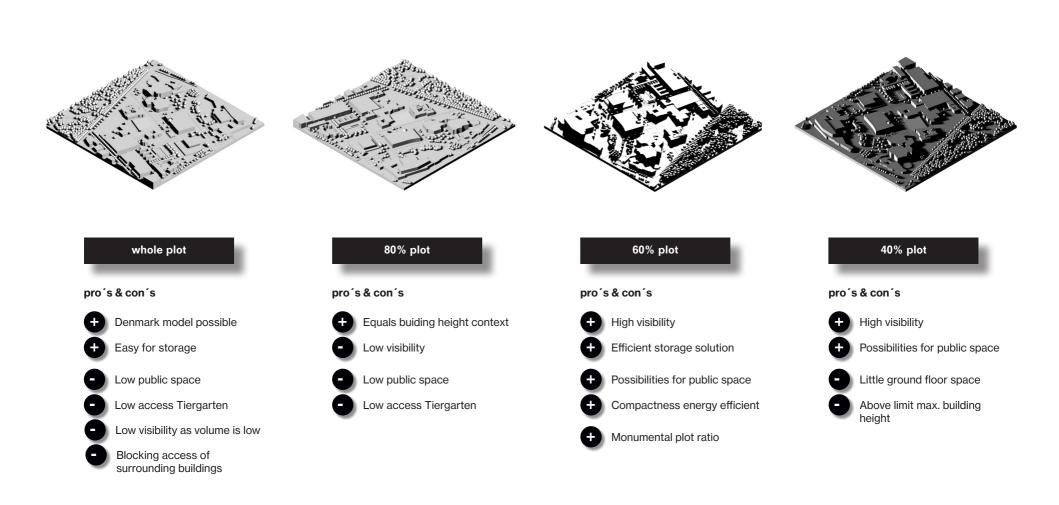
ambitions

solutions

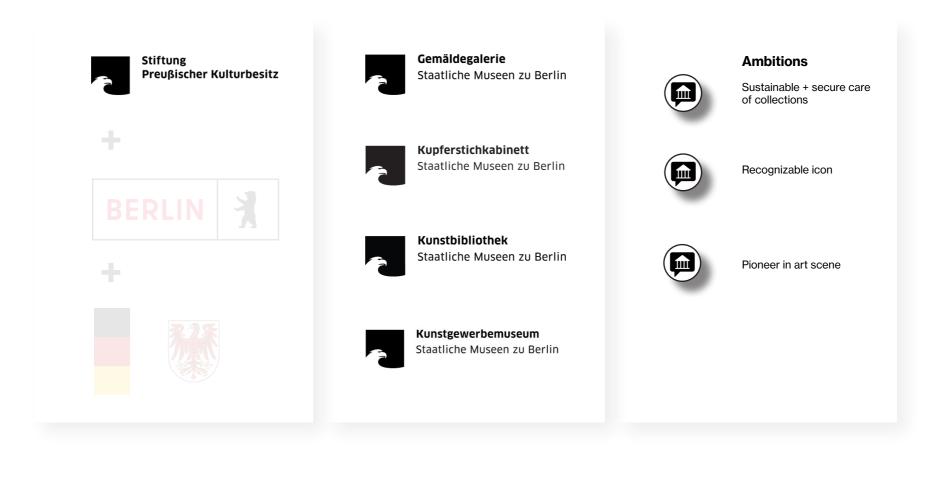
implementation

5. CONCLUSION

Concept MODEL STUDIES



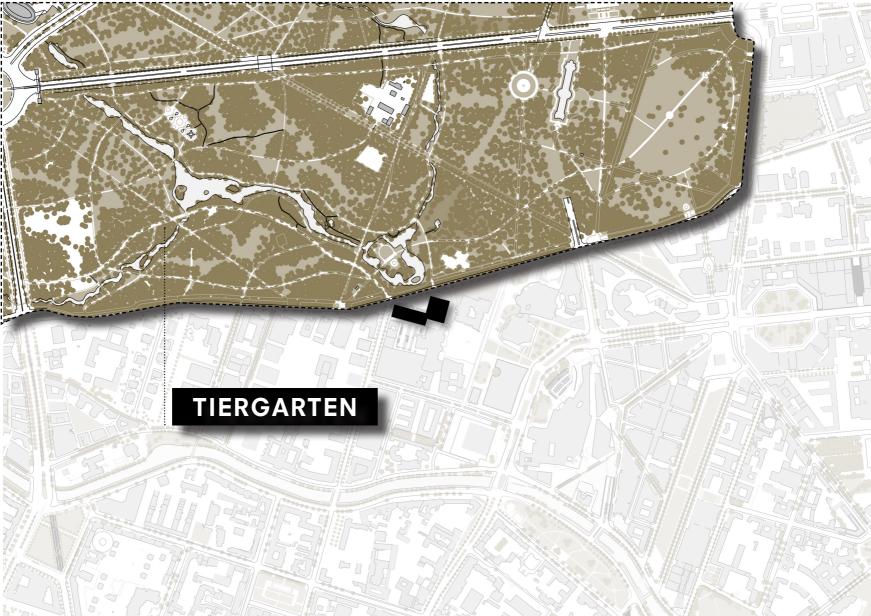
Concept CLIENT AMBITIONS



Concept CLIENT AMBITIONS

- 1 Improve accessibility Tiergarten Kulturforum
- 2 Introduce a new landmark
- **3** Activate green lines introduced by the city's urban vision

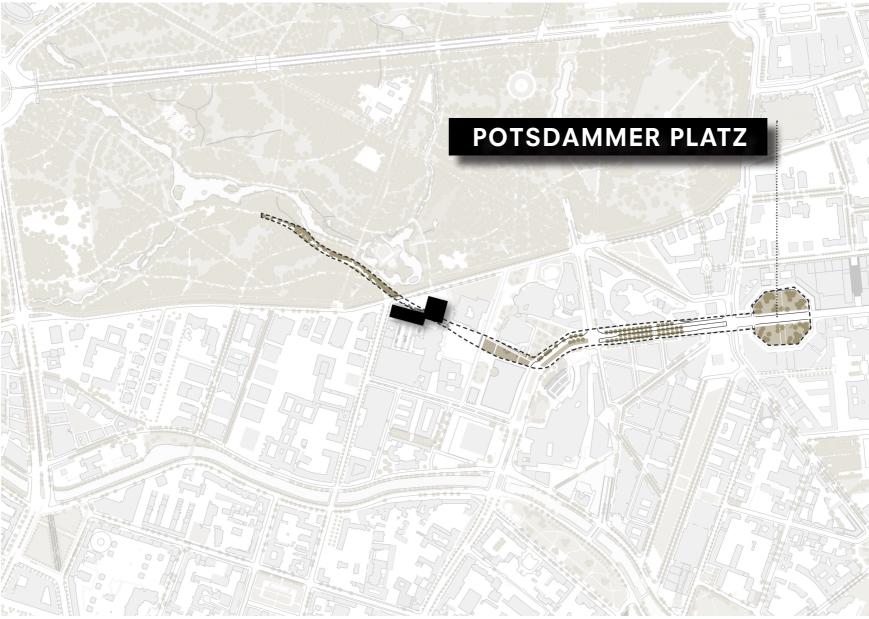
Concept





site situation - building in urban system 1:5000 (

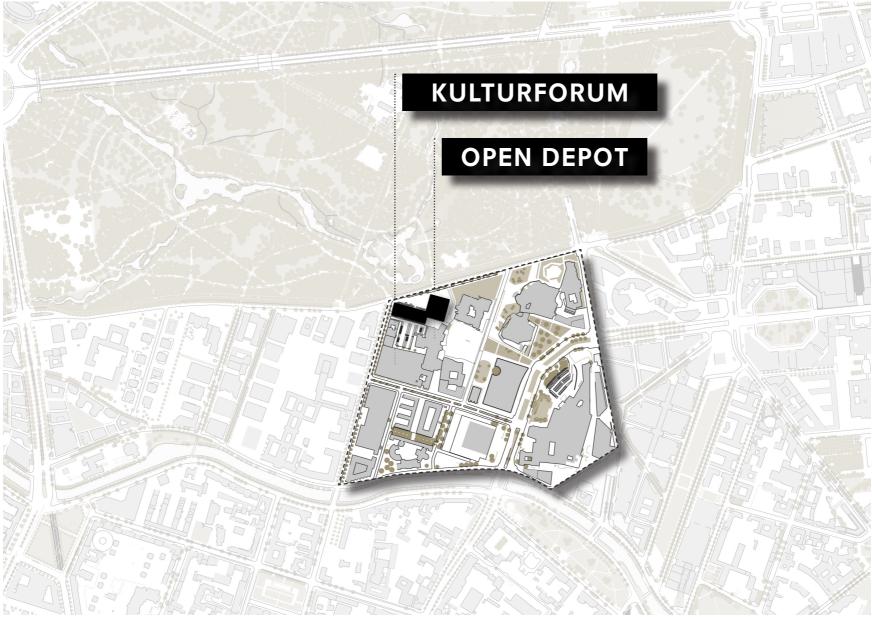
Concept





site situation - building in urban system 1:5000 (

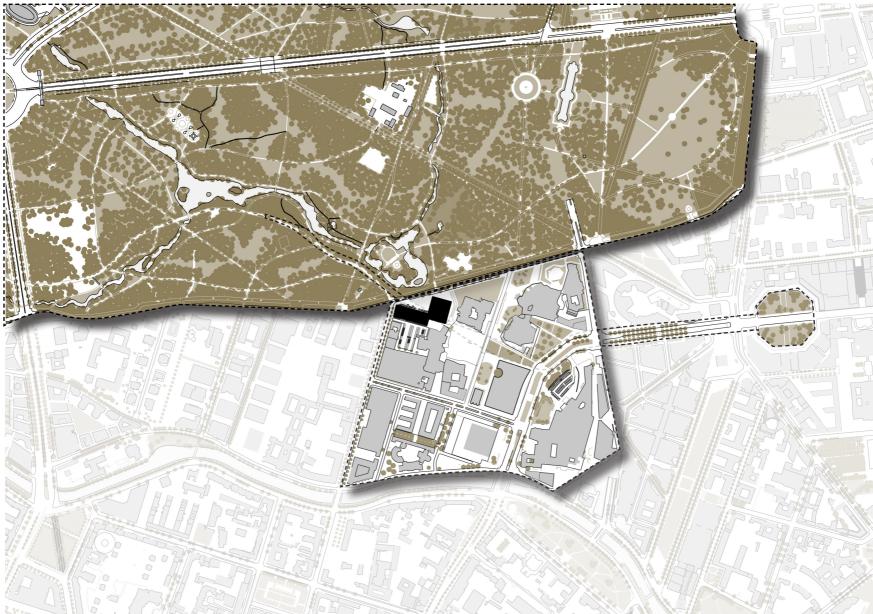
Concept





site situation - building in urban system 1:5000 (

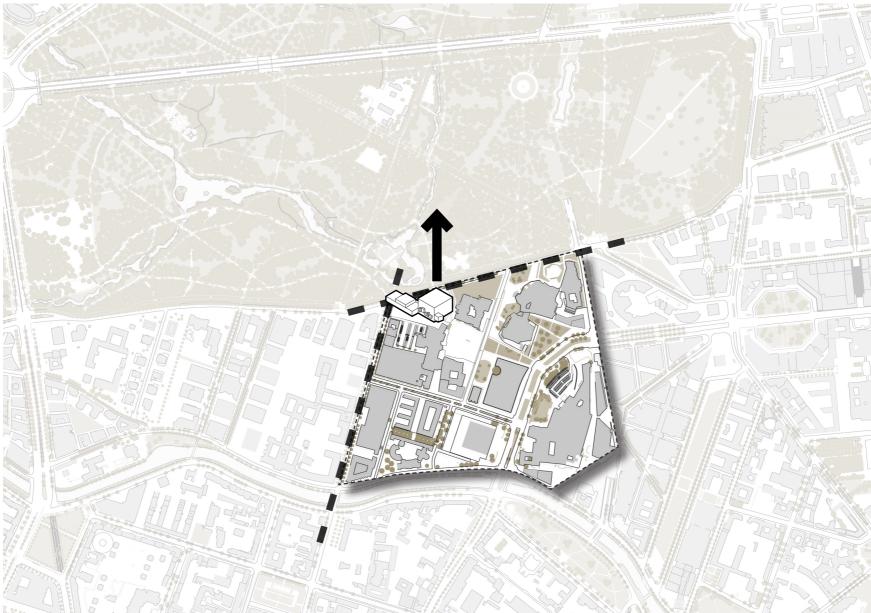
Concept CONNECT EXISTING VALUES





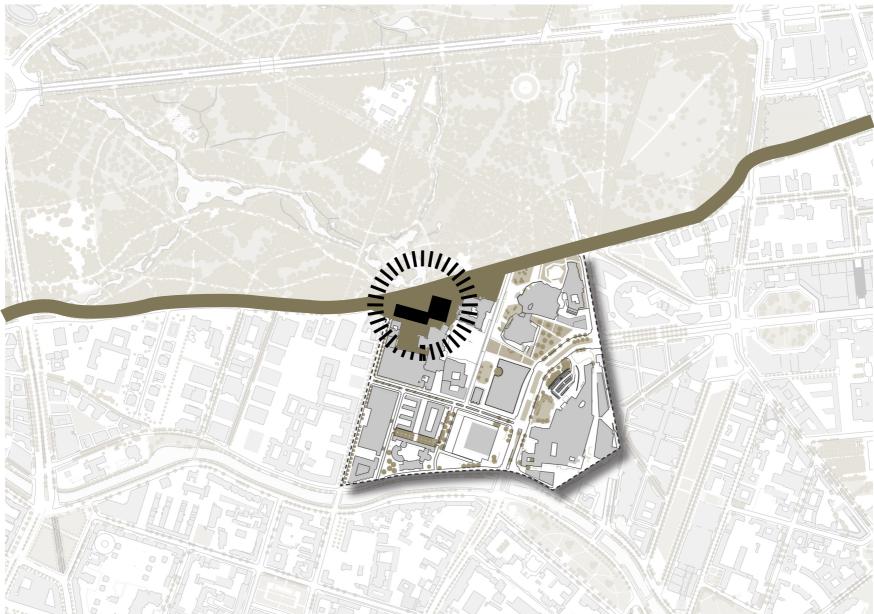
site situation - building in urban system 1:5000 () ambition: connection Tiergarten - Kulturforum

Concept RECOGNIZABLE ICON





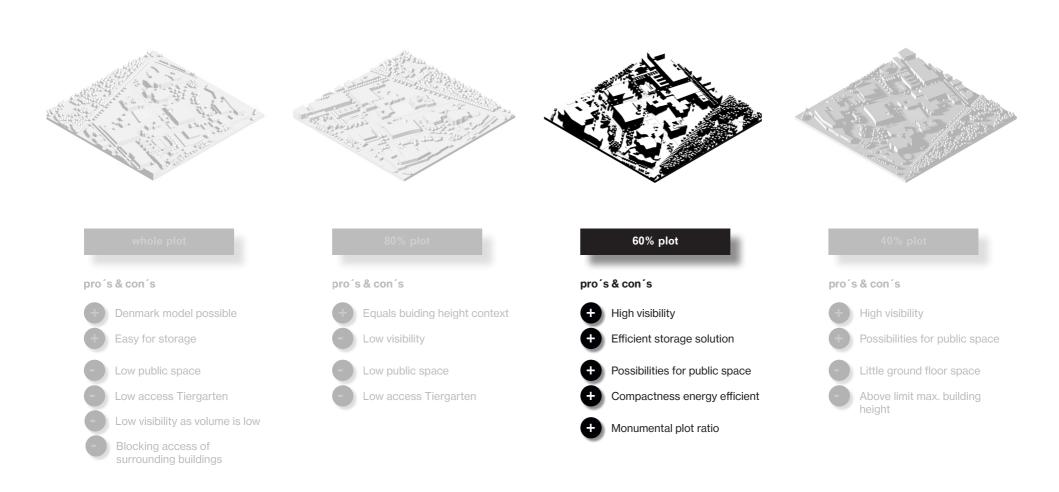
Concept ACTIVATE GREEN CORRIDOR



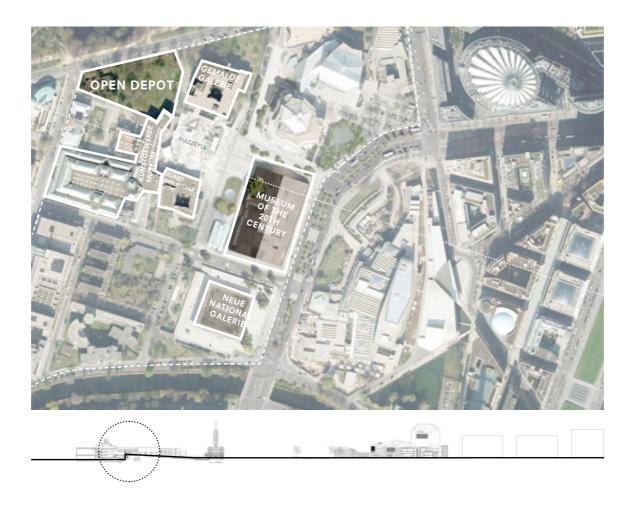


site situation - building in urban system 1:5000 $^{(\!\!\!\!\!)}$ ambition: activate green lines of urban vision

Concept MODEL STUDIES

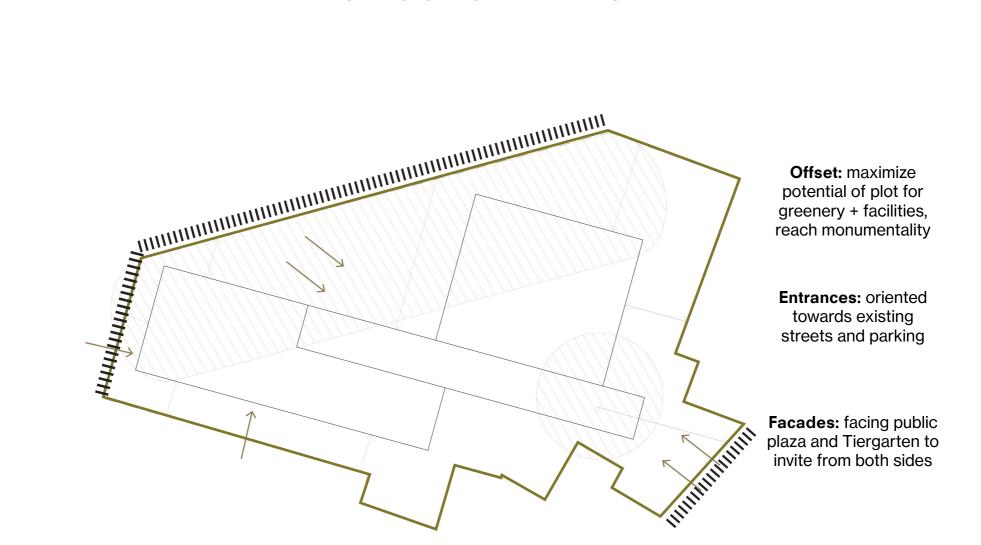


Concept PLOT CONSTRAINTS



HEIGHT DIFFERENCE

Concept PLOT CONSTRAINTS



PLOT CORNER

Concept BERLIN OPEN DEPOT



accessible collective heritage

intersection past & future

Concept KEY SPACES

EXHIBITION + DEPOT

THE REAL PROPERTY OF

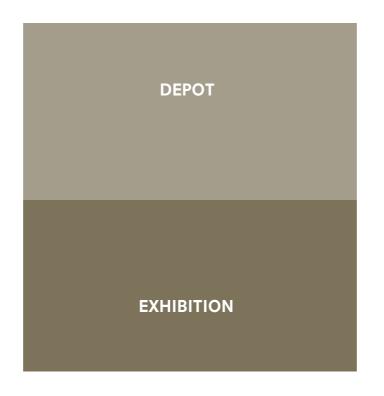
Concept PROJECT GOAL **UNLOCK THE SAFE**







Concept PROJECT GOAL **UNLOCK THE SAFE**

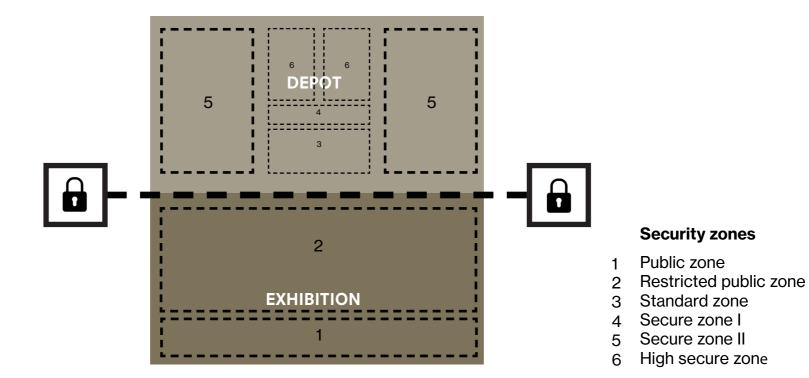


2?

Concept DESIGN CHALLENGES

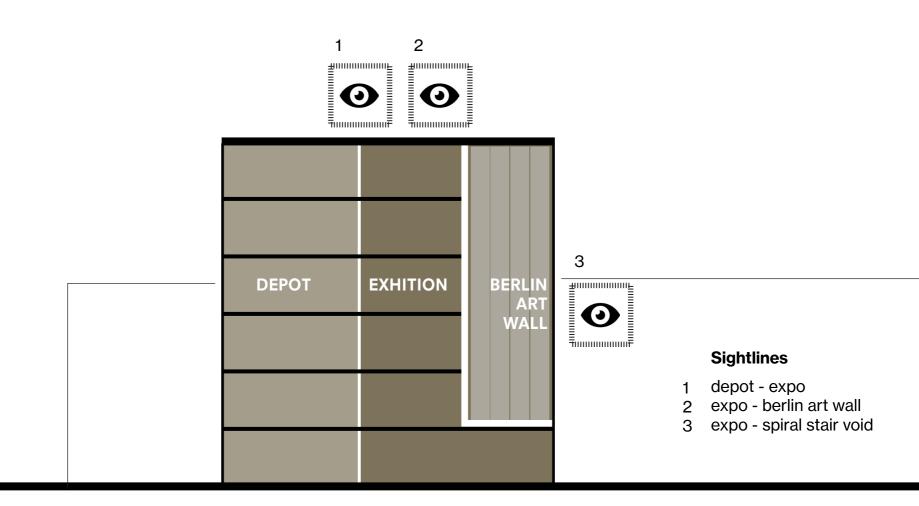
1. SECURITY 2. VISIBILITY 3. CONNECTION TIERGARTEN - KULTURFORUM 4. LOGISTICS 5. FLEXIBLE FUNCTIONAL SEPARATION 6. CLIMATE-TECHNICAL

Concept **1. SECURITY**



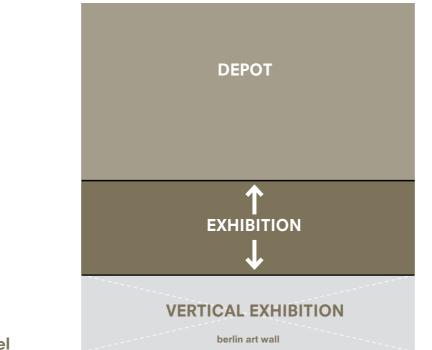
TWO MAIN ZONES





EXHIBITION STAGES

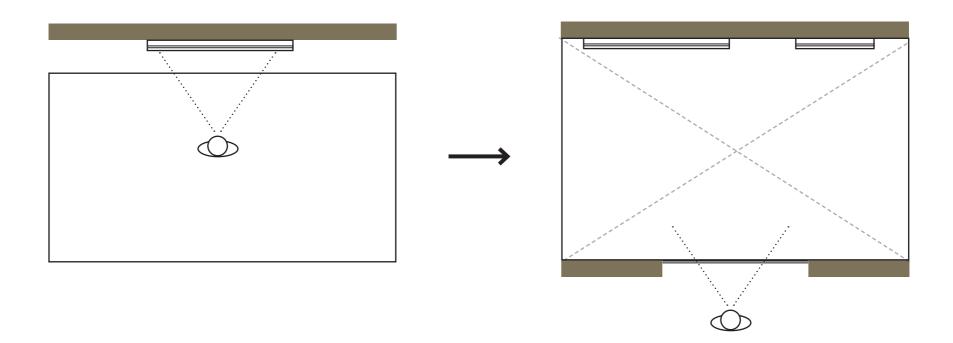
Concept 2. VISIBILITY - ART BALCONY



gallery level

DOUBLE VISIBILITY

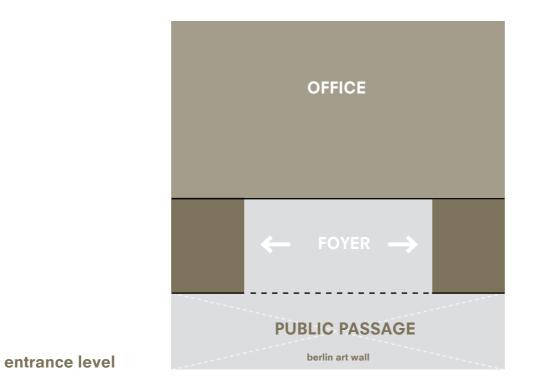
Concept
2. VISIBILITY



VERTICAL ART VITRINE: NEW PERSPECTIVE

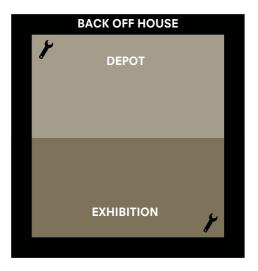
Concept

3. CONNECTION TIERGARTEN - KULTURFORUM



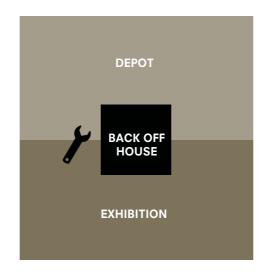
PUBLIC INDOOR STREET

Concept
4. LOGISTICS

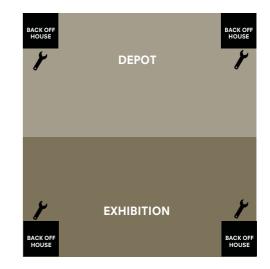


1. BACK OFF HOUSE AROUND

blocking views blocking daylight



2. BACK OFF HOUSE CENTRALIZED

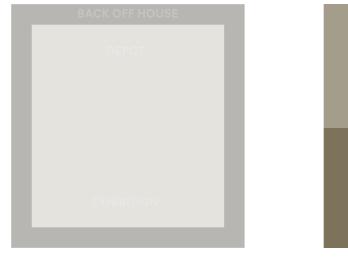


3. BACK OFF HOUSE DECENTRALIZED

problematic for climate, security, logistic efficiency

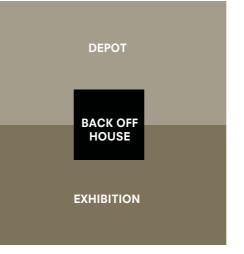
SERVICE BLOCK

Concept 4. LOGISTICS

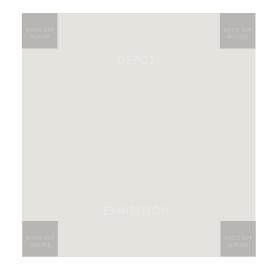


1. BACK OFF HOUSE AROUND

blocking views blocking daylight



2. BACK OFF HOUSE CENTRALIZED

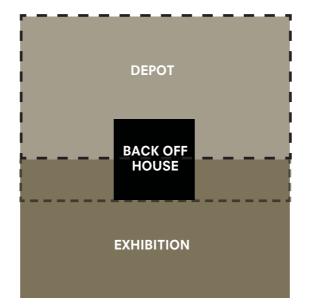


3. BACK OFF HOUSE DECENTRALIZED

problematic for climate, security, logistic efficiency

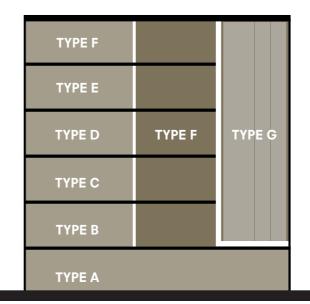
CENTRALIZED

Concept FLEXIBLE FUNCTIONAL SEPARATION



ADAPTABLE ZONE

Cocept 6. CLIMATE TECHNICAL



CLIMATE ZONES

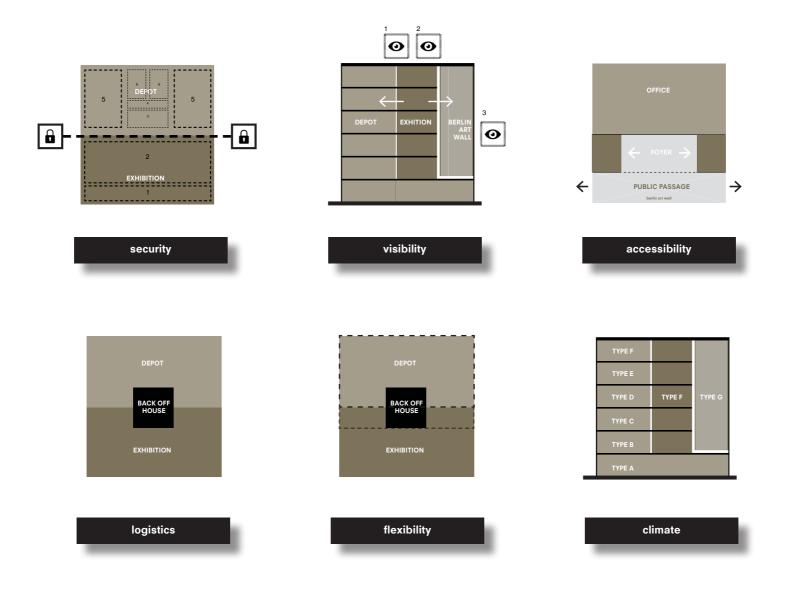
Research DETAIL **OPTIMAL CLIMATE**

climate requirements of archives per material

collection	temperatuur	relative humidity
paintings, paper, wood, textile	18 °C ± 2 °C	51 ± 1½ %.
stone (marble, etc)	18 °C ± 2 °C	51 ± 1½ %
metals (silver, gold, iron, etc.)	18 °C ± 2 °C	40% ± 2/3 %
photography (black and white)	18 °C ± 2 °C	40% ± 2/3 %

technical tools: heating, air cooling, humidification and dehumidification

Design CHALLENGE SUMMARY

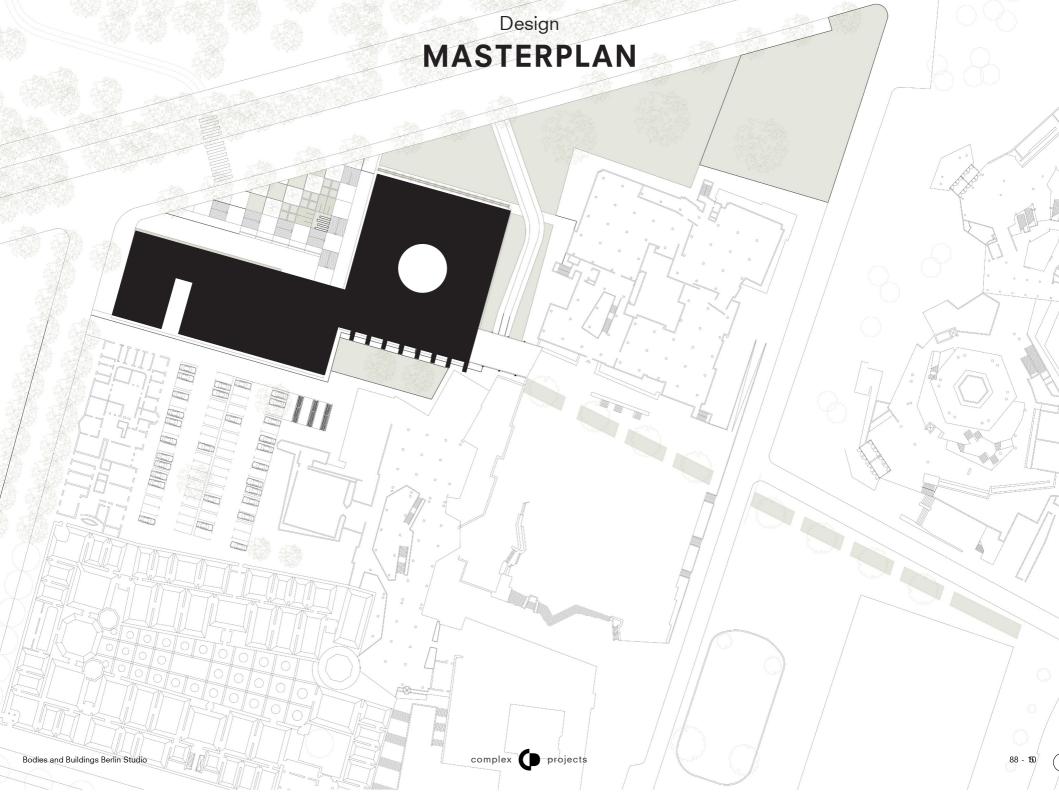


INTRODUCTION RECAP DESIGN BRIEF CONCEPT

4. DESIGN

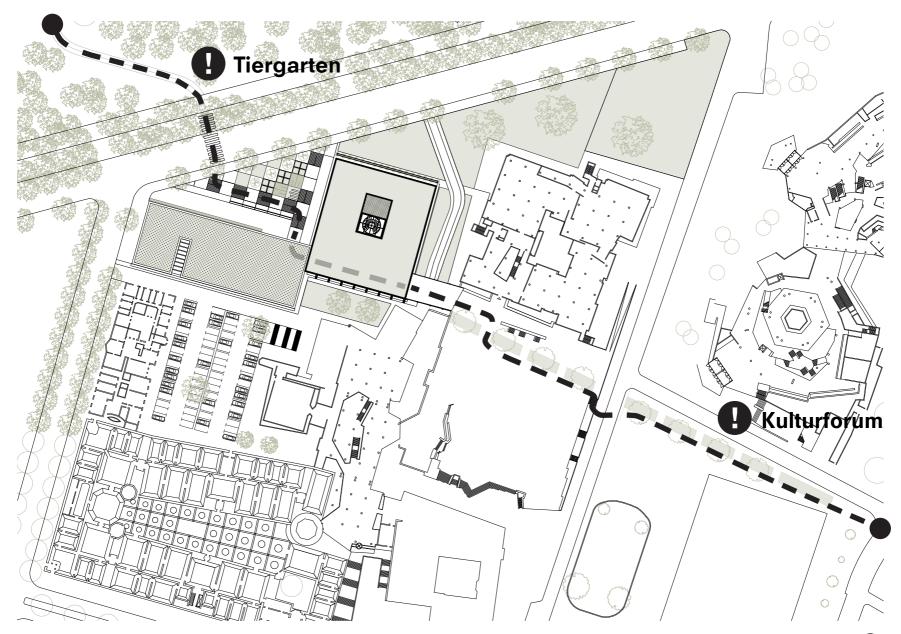
implementation experience adaptability

5. BUILDING TECHNOLOGY

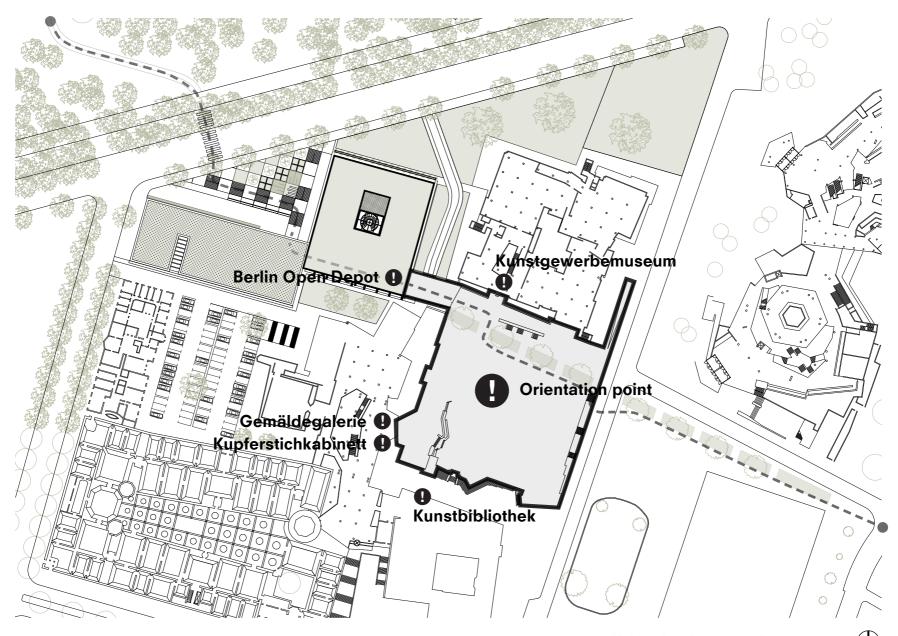




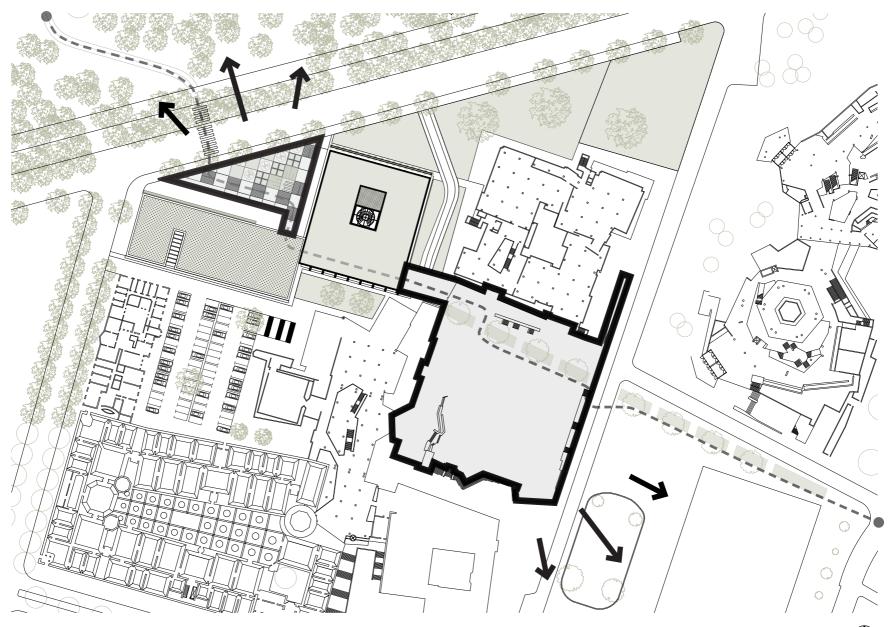
Site GREEN CORRIDOR



Site CLEAR ROUTING

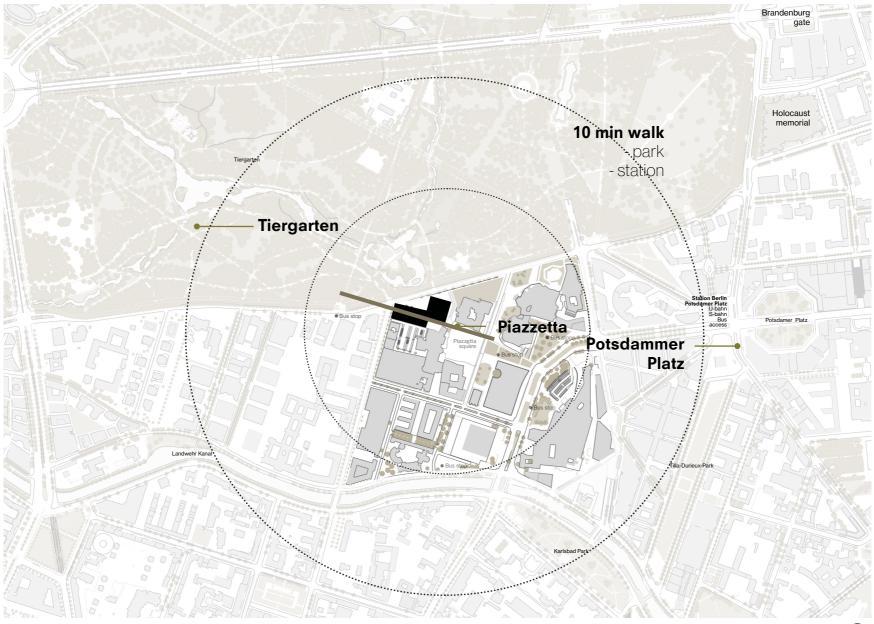


Site **DOUBLE STAGE**





Site KULTURFORUM



Design URBAN SECTION



Design URBAN IMPLEMENTATION

Visitor

201

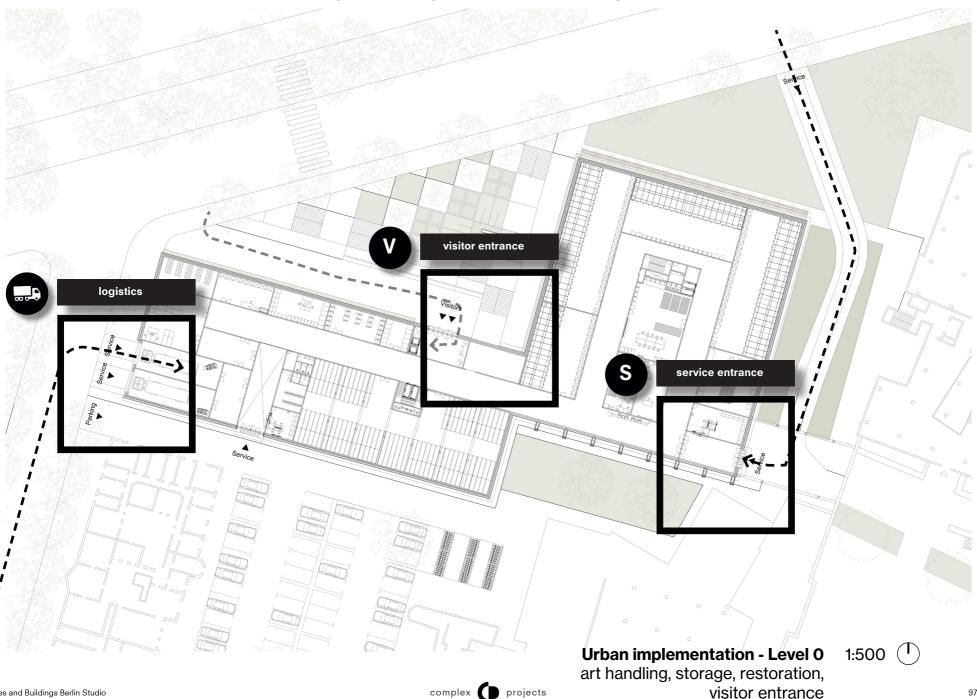
Service



arkin

96 - 150

Design **SERVICE ENTRANCE**



Design

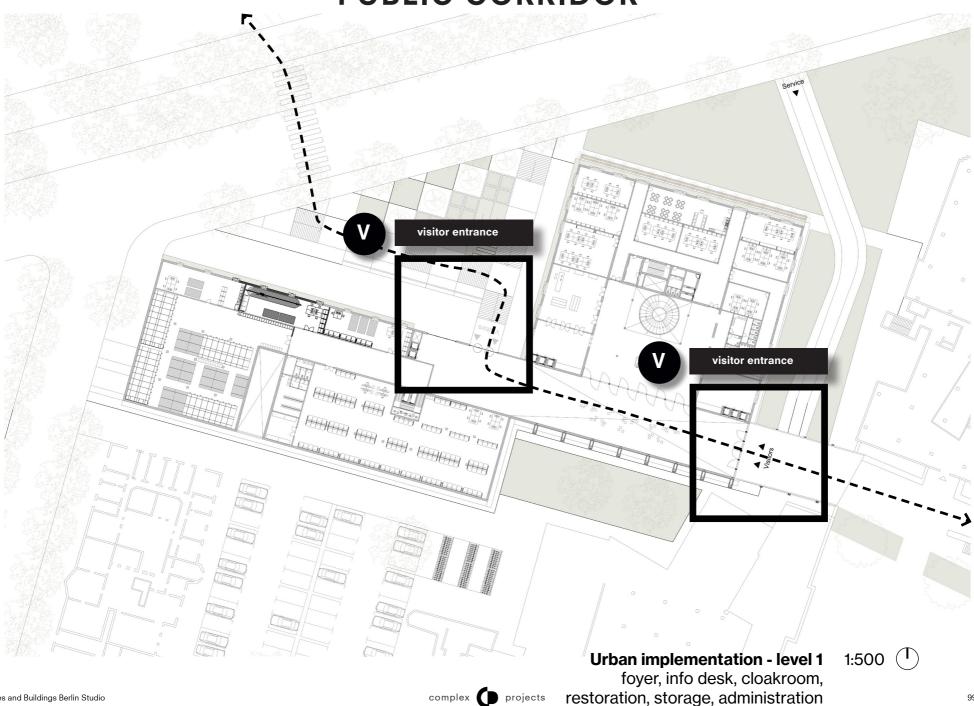
Urban implementation - level 1

▲ Visitors

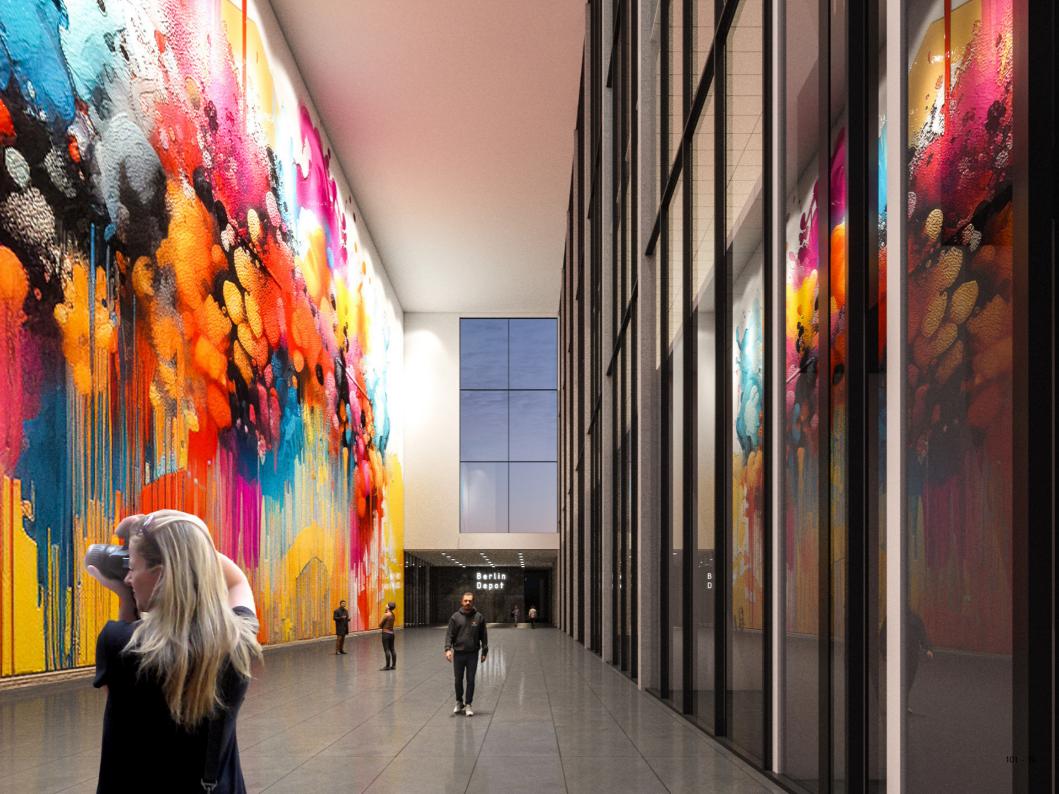
Service

1:500 (T)

Design **PUBLIC CORRIDOR**

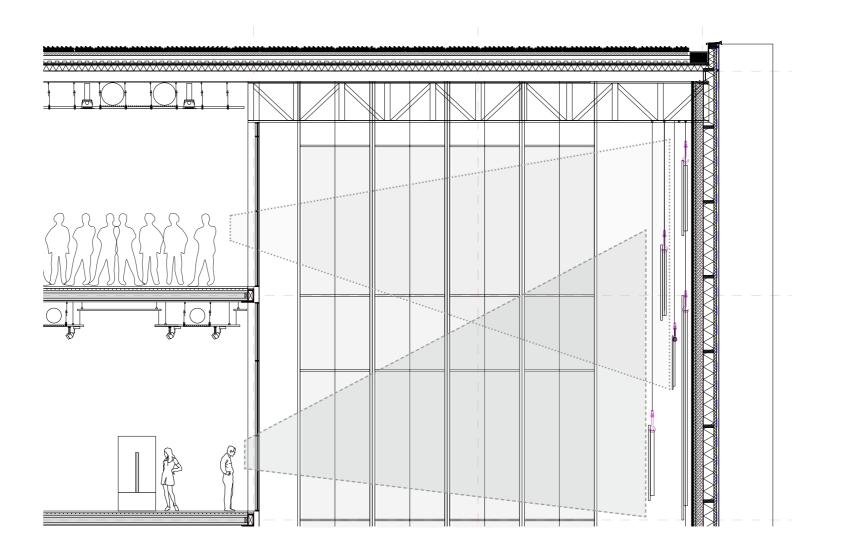




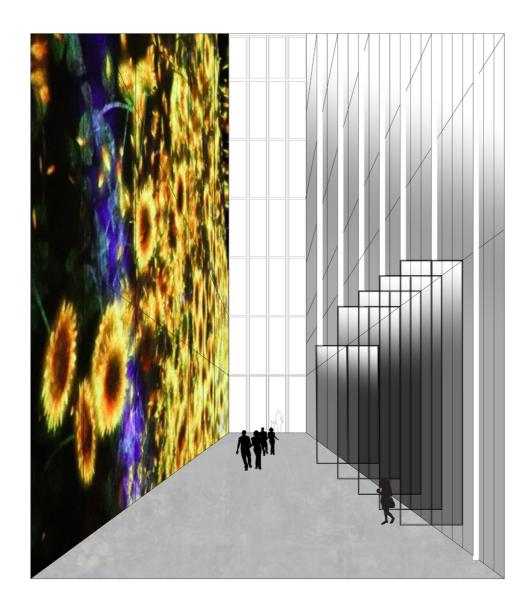




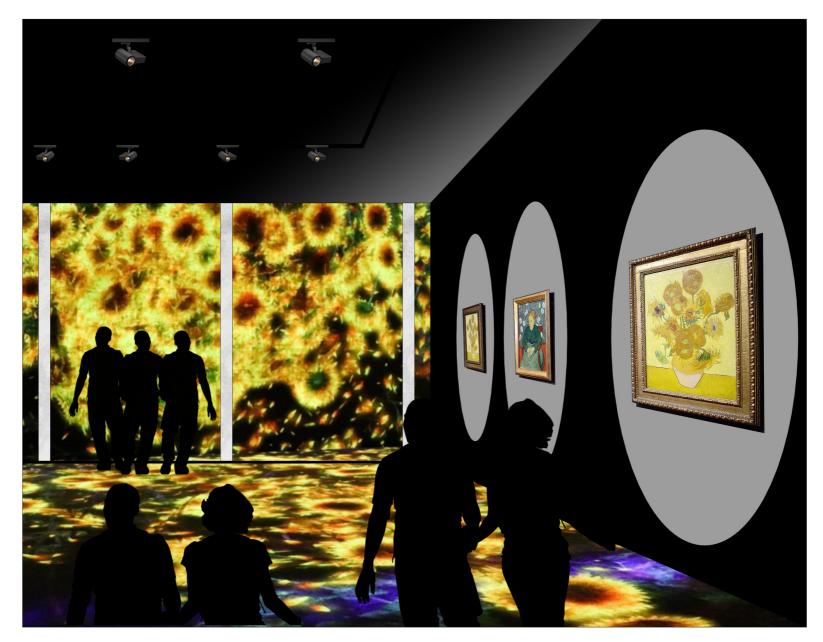
Design BERLIN ART WALL



Design BERLIN ART WALL



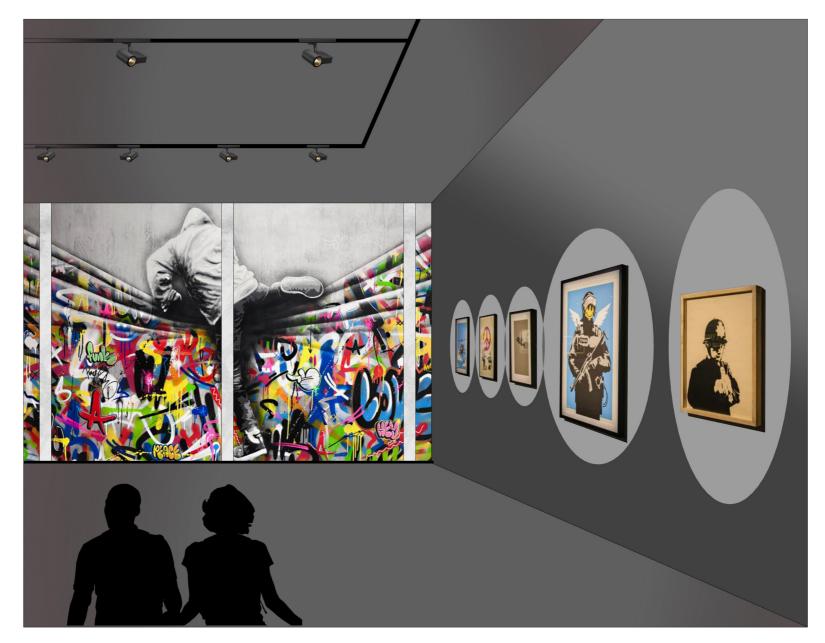
Design DIGITAL EXHIBITIONS



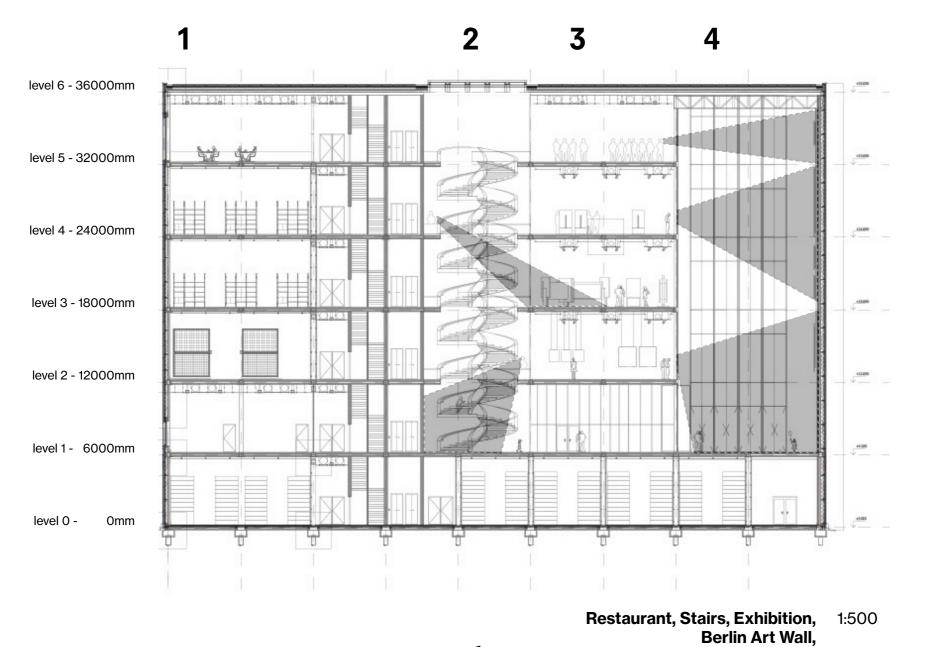
Design TYPICAL EXHIBITIONS



Design MULTIFUNTIONAL EXHIBITION SPACE

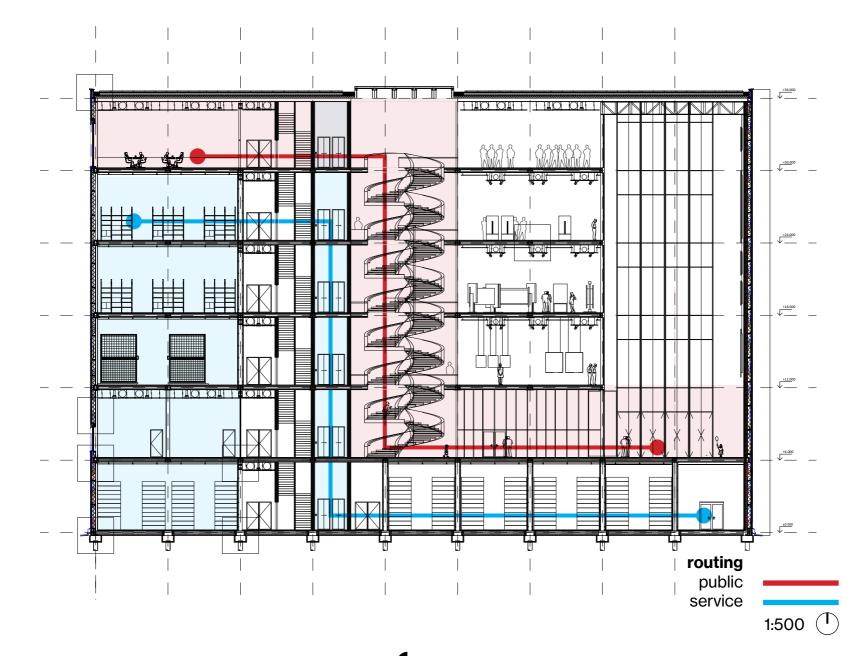


Design SIGHTLINES AND EXPERIENCE



Bodies and Buildings Berlin Studio

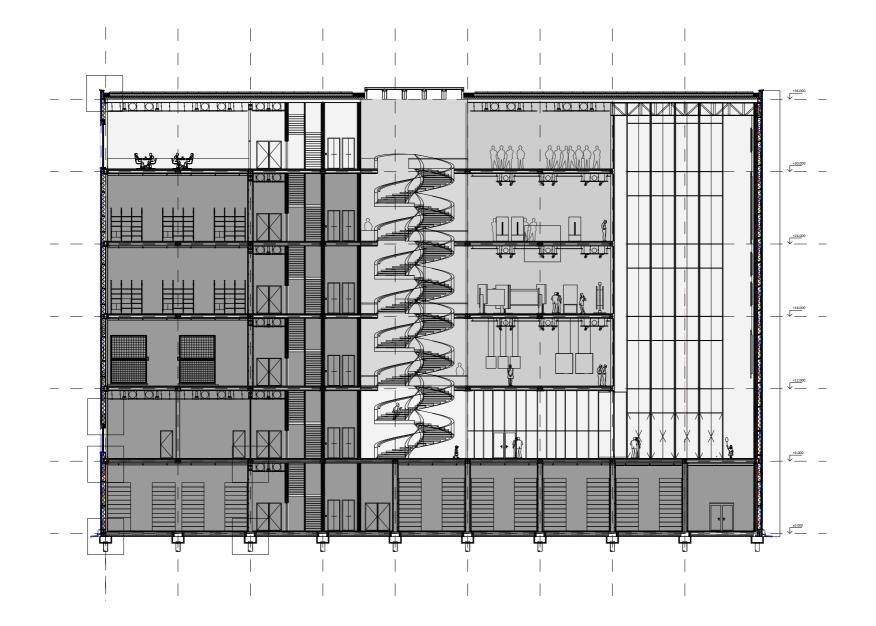
Design ROUTING











Design DATA POINT: STORAGE SYSTEM

High density mobile systems

Defines capacity building



collection: 3.600 Paintings and framed artwork material: canvas / wood

collection



collection: 110.000 drawings 550.000 prints material: canvas / papyrus

collection: 400.000 books

material: canvas / papyrus



interruption voi de interruption voi de interruption de collecti



collection: 600 costumes 900 furniture material: textile / wood / ivory, metals ceramics, glass

storage system

category: large size options: floor or ceiling rail storage: movable racks standard system sizes: 3m w / 3,35m h / 3,70 d

category: small size options: height, configurable storage: flat cabinet drawer standard system sizes: 1,40m w / 0,45m h / 1m d

category: small size options: height storage: movable shelves standard system sizes: 1,40m w / 0,45m h / 1m d

category: medium size options: height storage: movable shelves standard system sizes: 2,40m w / 2 m h / 1,20m d

storage system

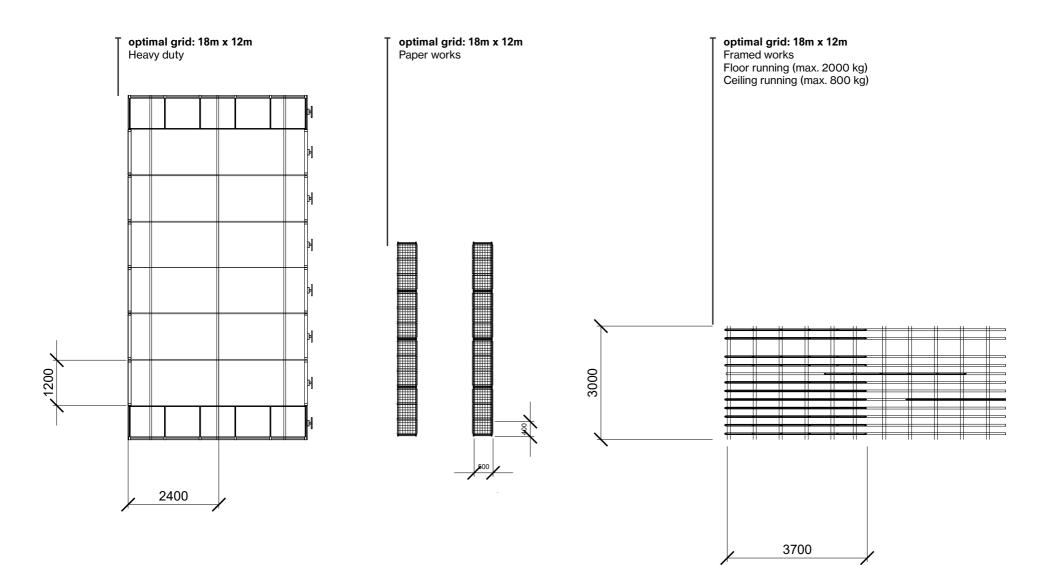




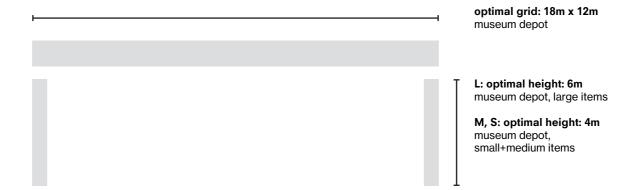




Design Brief STORAGE SYSTEM **DIMENSIONS**



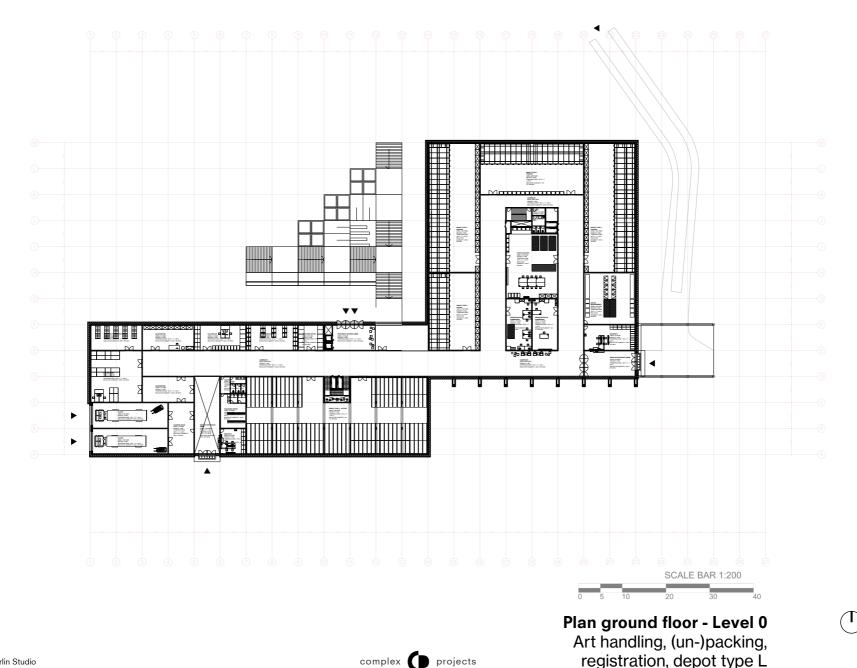
Design Brief STORAGE SYSTEM **OPTIMAL GRID**



Grid + High density mobile systems provide flexibility

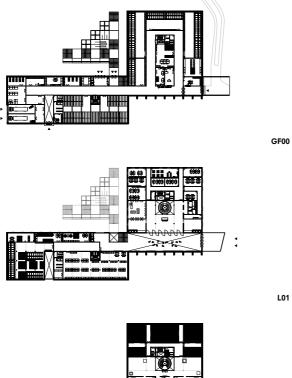
Ceiling height density mobile systems provide flexibility

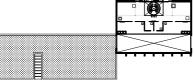
Design **STORAGE GRID**



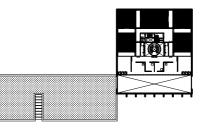
Bodies and Buildings Berlin Studio

Design ADAPTABILITY

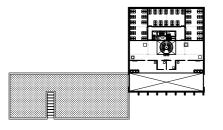




L02 - A



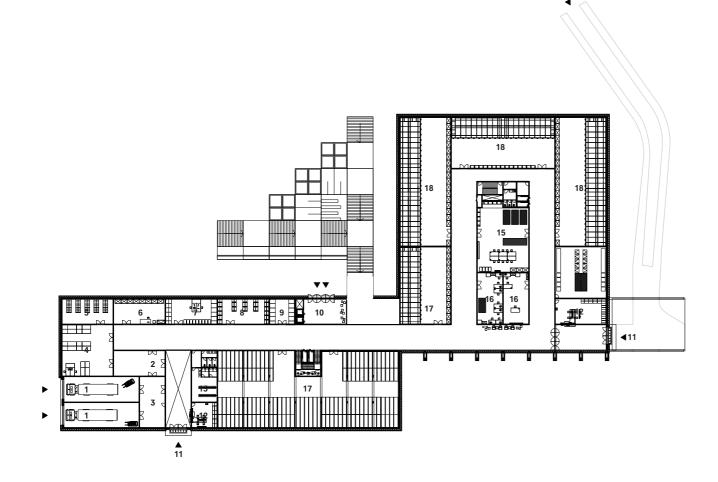
L02 - B





L03 - B

Design LEVEL O **TIERGARTEN**



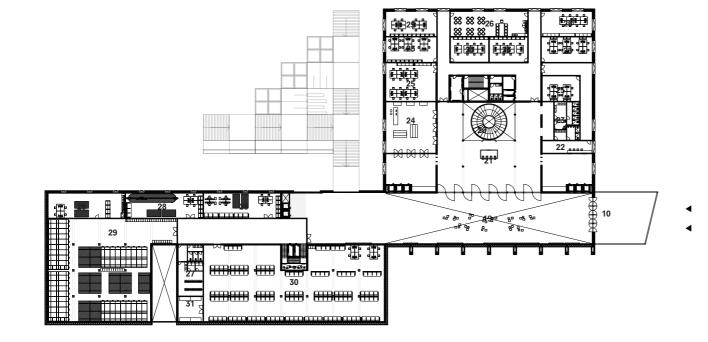
Legend

- 1. Sluice
- 2. Loading deck
- 3. Protocol space
- 4. Packaging space
- 5. Packaging material storage
- 6. Quarantine
- 7. Coldspace
- 8. Decontamination / cleaning
- 9. Nitrogen space
- 10. Visitor entrance
- 11. Service entrance
- 12. Security
- 13. Changing room
- 14. Cleaning, waste management
- 15. Registration & numbering
- 16. Photo atelier & digitalisation
- 17. Depot Type L, active
- 18. Depot Type L, passive



floorplan - level 0 depot, registration, art- & service entrance (\square)

Design



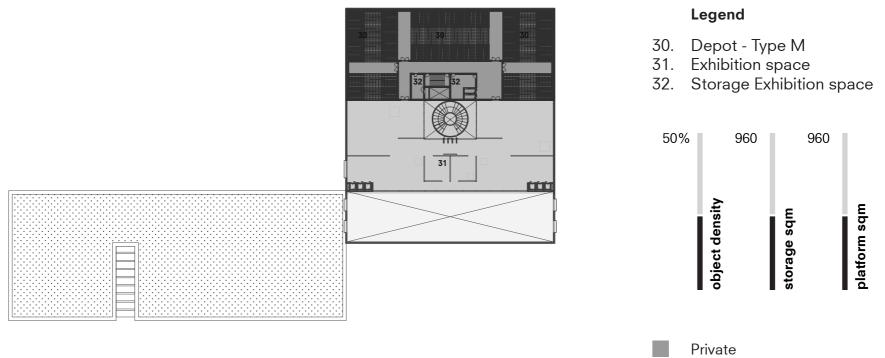
Legend

- 19. Public indoor street
- 20. Foyer
- 21. Infodesk, ticketing, audiotour
- 22. Wardrobe & lockers
- 23. Toilets
- 24. Museumshop
- 25. Administration
- 26. Canteen
- 27. Changing room
- 28. Restauration studio
- 29. Depot Type L, heavy duty
- 30. Depot Type M
- 31. Technical space



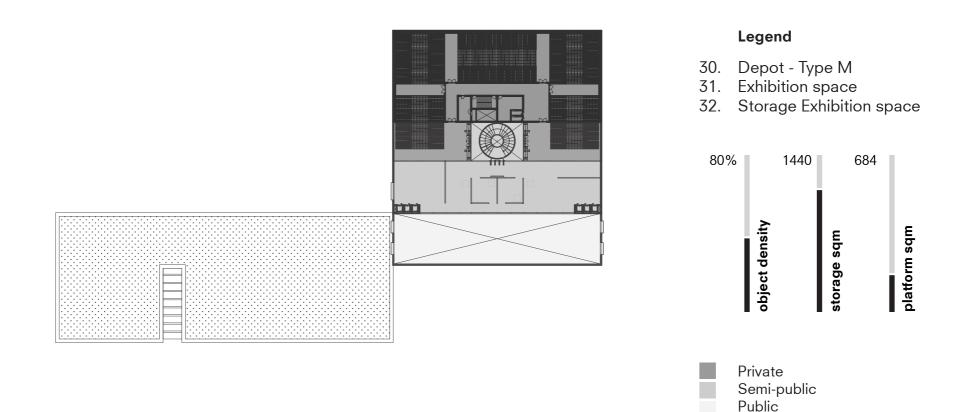
floorplan - level 1 public entrance, administration, restoration, storage (\mathbf{T})

Design LEVEL 2 **TYPE M**

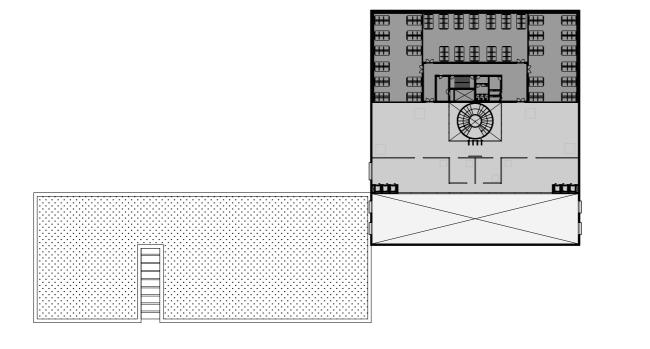


Semi-public Public

Design LEVEL 2 **TYPE M**

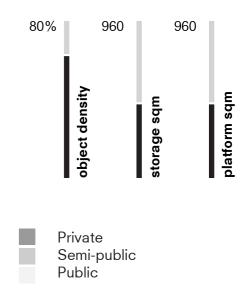


Design LEVEL 3 **TYPE S**

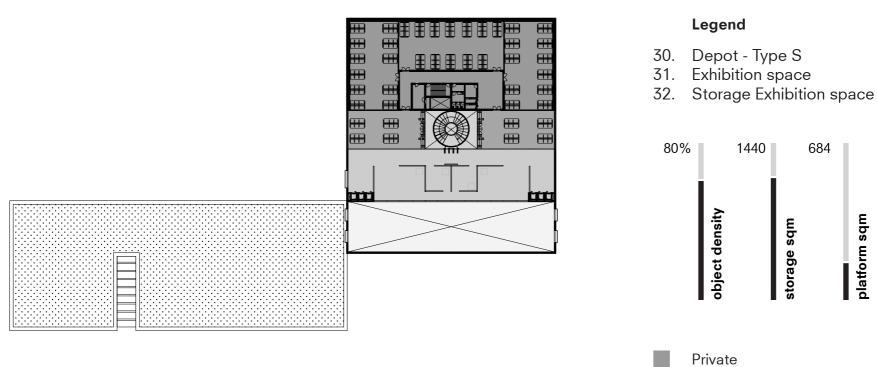




- 30. Depot Type S
- 31. Exhibition space
- 32. Storage Exhibition space



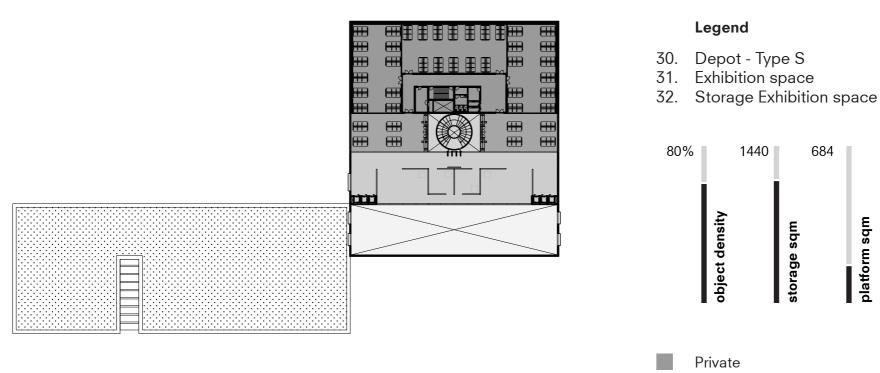
Design LEVEL 3 TYPE S



Semi-public Public

platform sqm

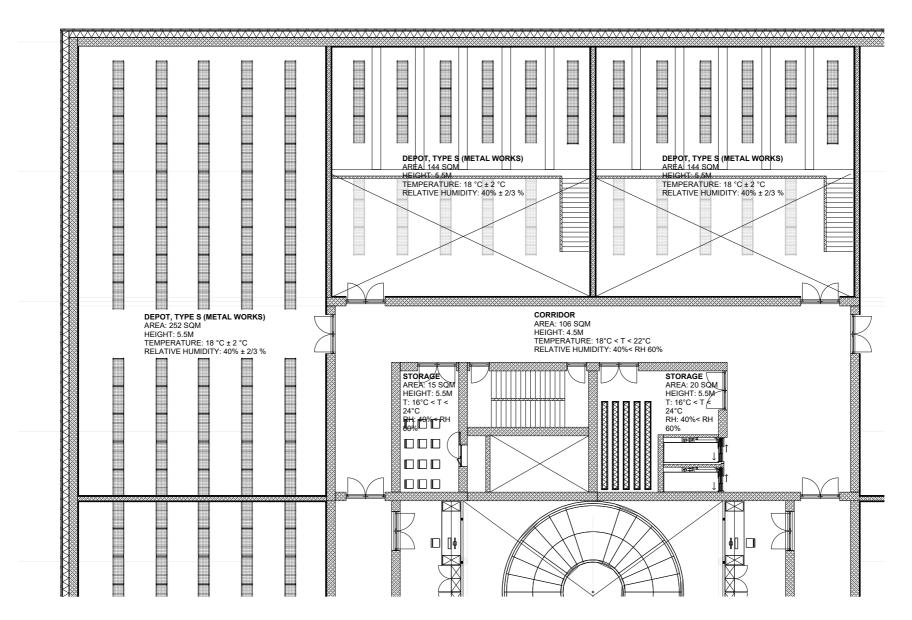
Design LEVEL 3 TYPE S

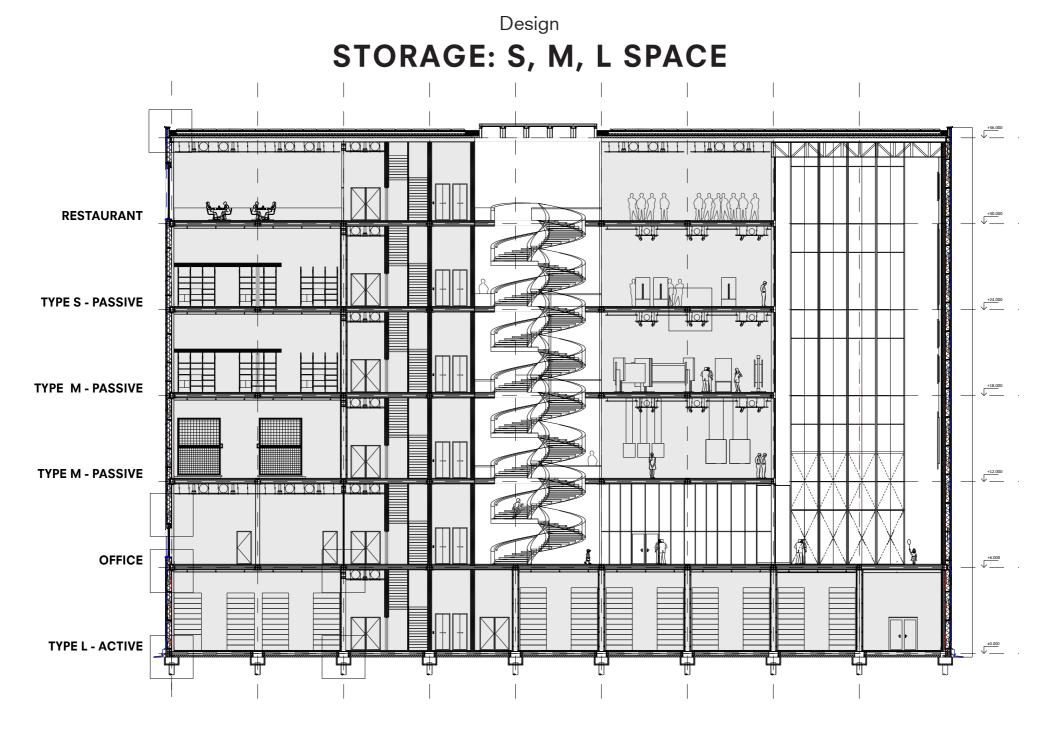


Semi-public Public

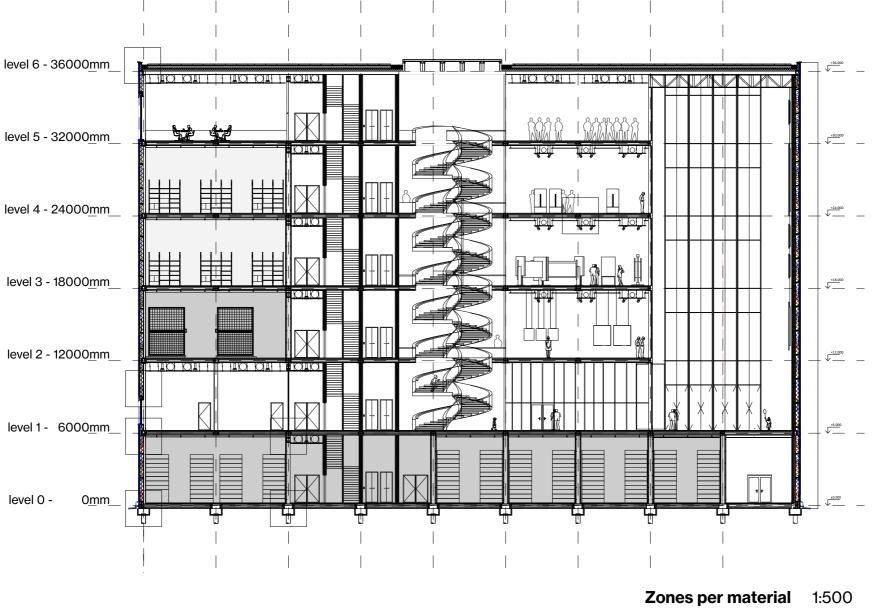
platform sqm

Design DENSIFICATION

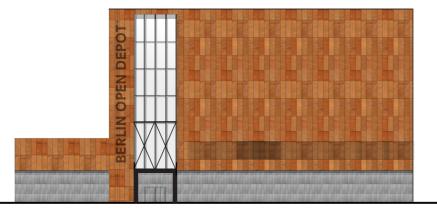




Design SECTION **TYPE S, M, L**



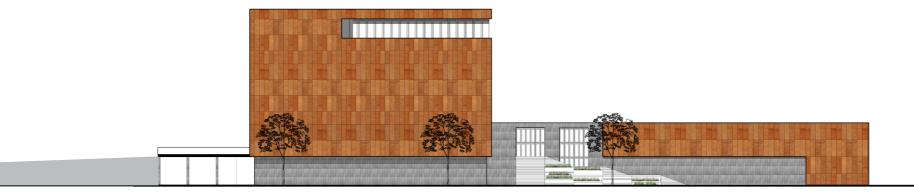








Design





Design SOUTH FAÇADE

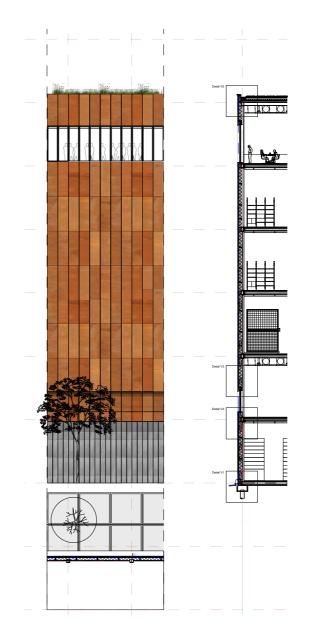


Building WEST ELEVATION



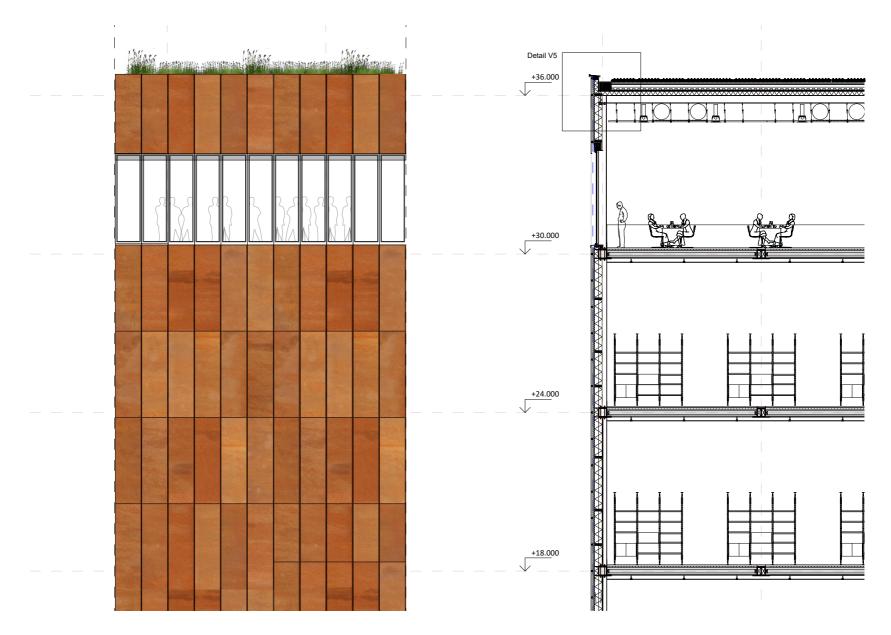


Building **FAÇADE FRAGMENT**



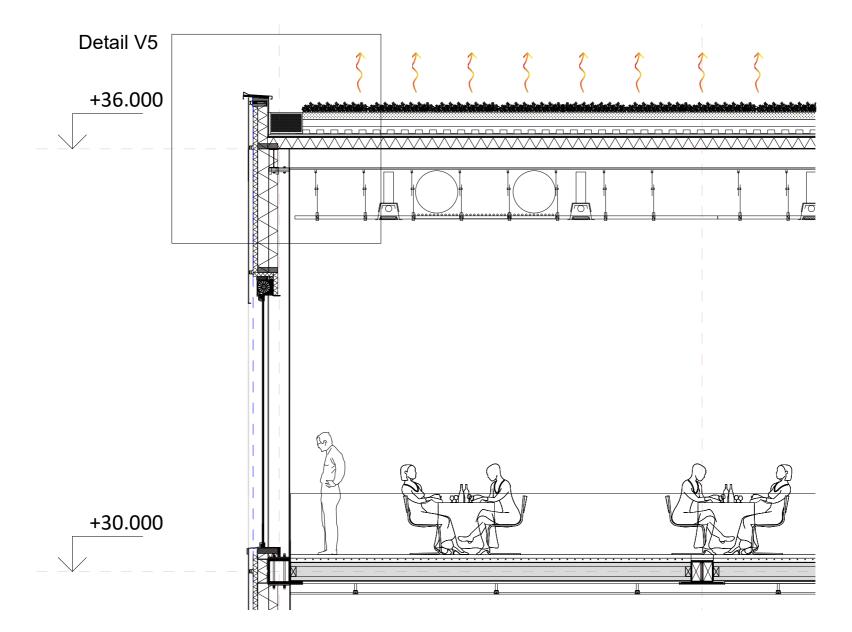
Façade fragment 1:200

Building ENVELOPE FRAGMENT



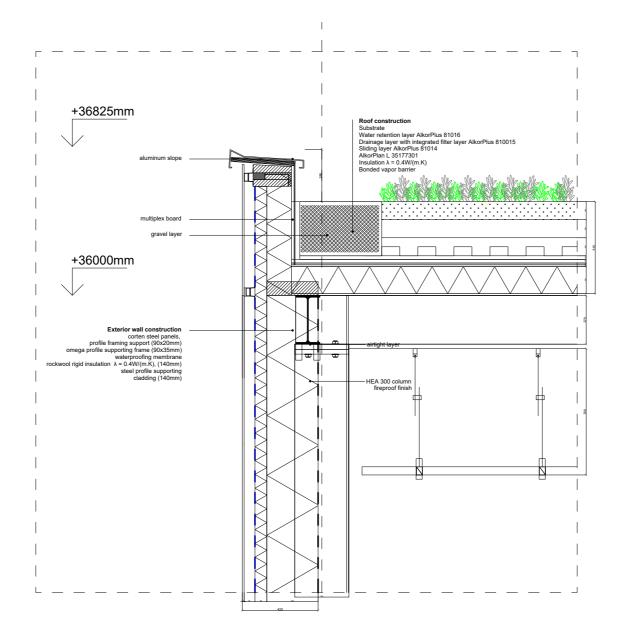
Façade fragment 1:100

Building ENVELOPE FRAGMENT

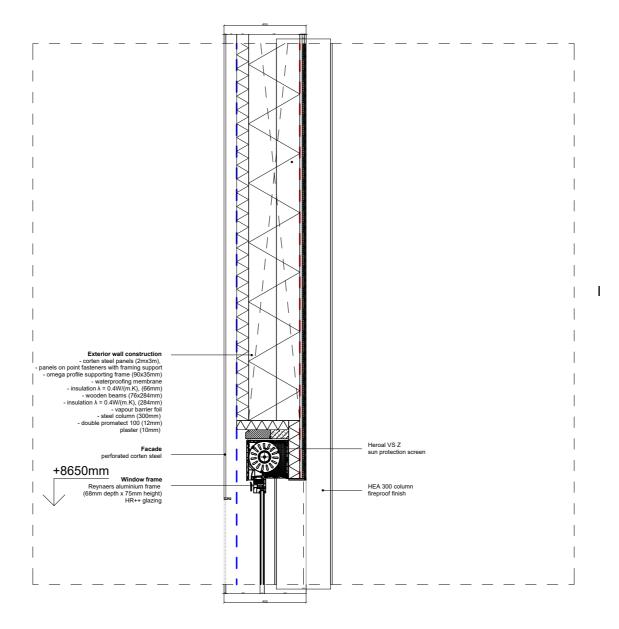


Façade fragment1:50Urban Heat Island Measure

Building GREEN ROOF **DETAIL**

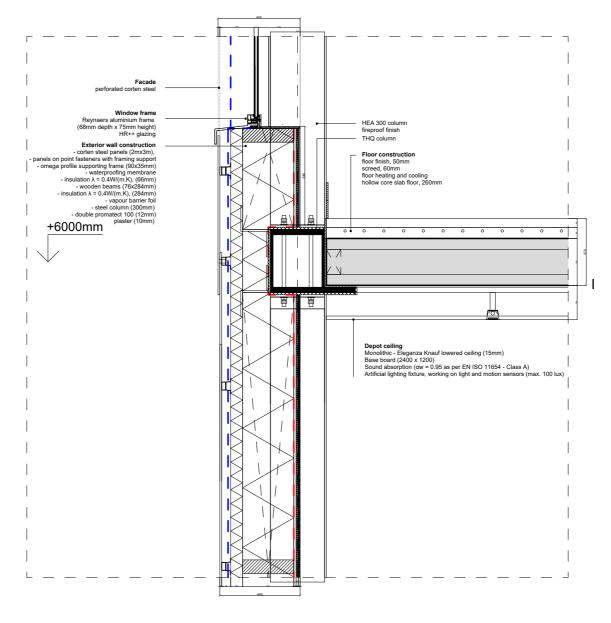


Building EXTERIOR OPENING **DETAIL**



Detail sun protection 1.10 Restaurant and event space

Building EXTERIOR FACADE **DETAIL**

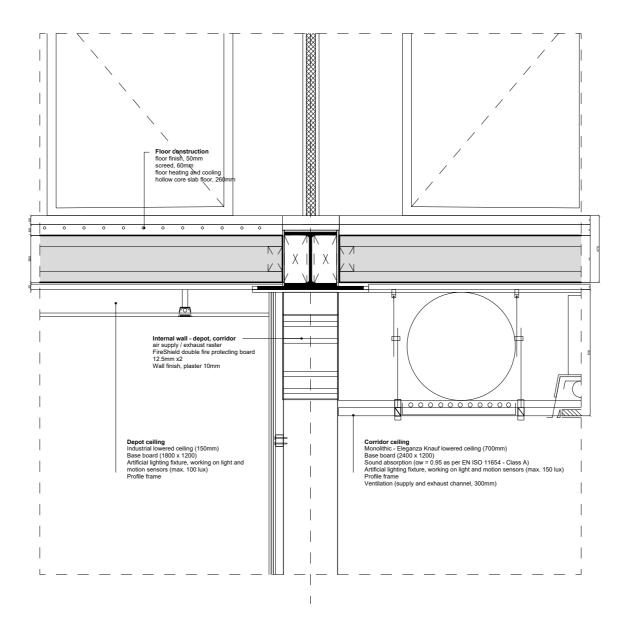




Berlin Depot



Building INTERIOR WALL **DETAIL**



Detail floor and wall 1.10 Depot versus corridor

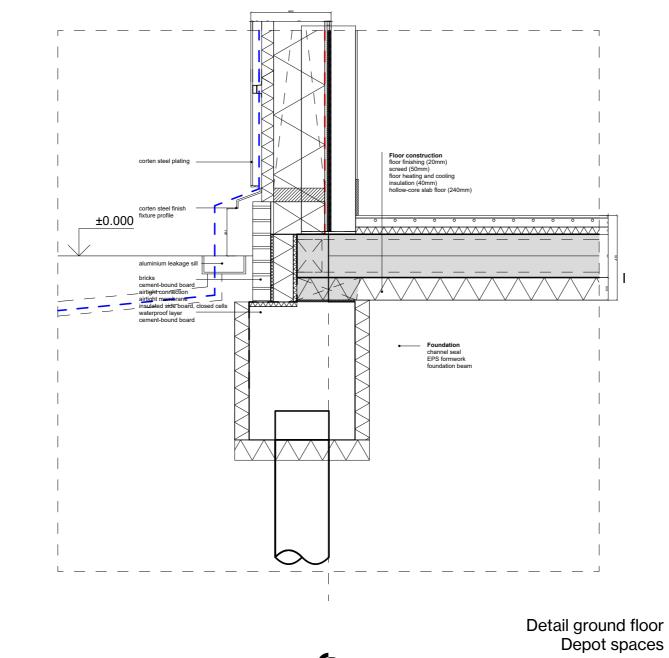
Building DETAIL **LIGHTING**

space	artificial / daylight	light system	lux
exhibition	artificial / daylight	ceiling spots	200
depot	artificial	movement sensor	50
restoration	daylight	north oriented	50

purpose museum lighting: optimal and attractive vision + minimum damage

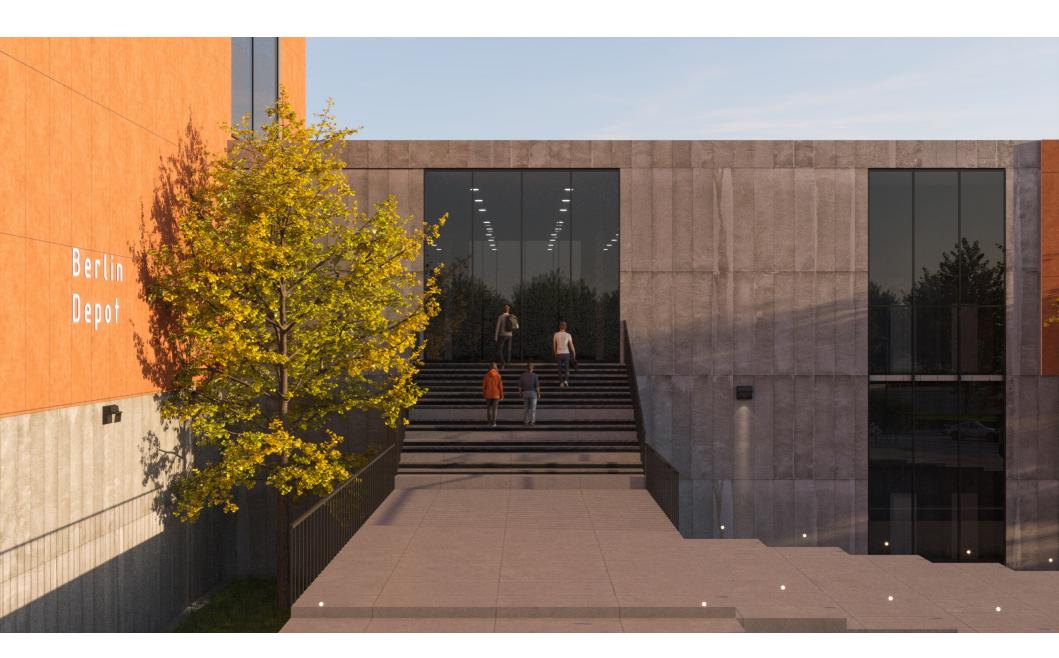
museum-depot lighting

Building GROUND FLOOR **DETAIL**



construction

1.10





BERLIN OPEN DEPOT

IN THE BOARD

THANK YOU.