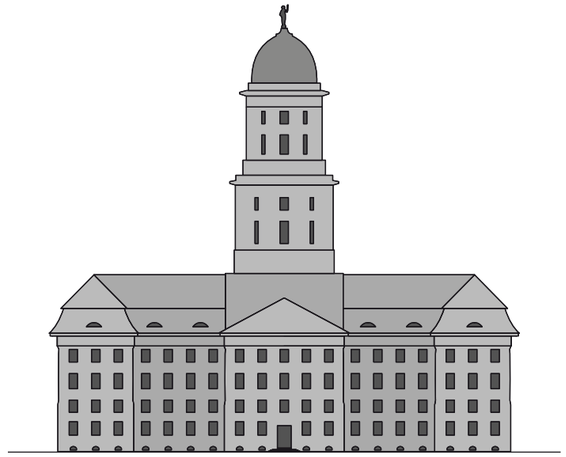


More than 50 students of the Technical University Berlin analysed monument protection objectives with regard to overcoming potential barriers, using the examples of the Neue Nationalgalerie, St Hedwig's Cathedral and the Altes Stadthaus in Berlin. They had a basic knowledge of barrier-free building. Part of the aim of the task was to preserve the original fabric and the cultural heritage; however, students needed to adapt some of the features to meet contemporary social requirements to constitute a "design for all".

Berlin

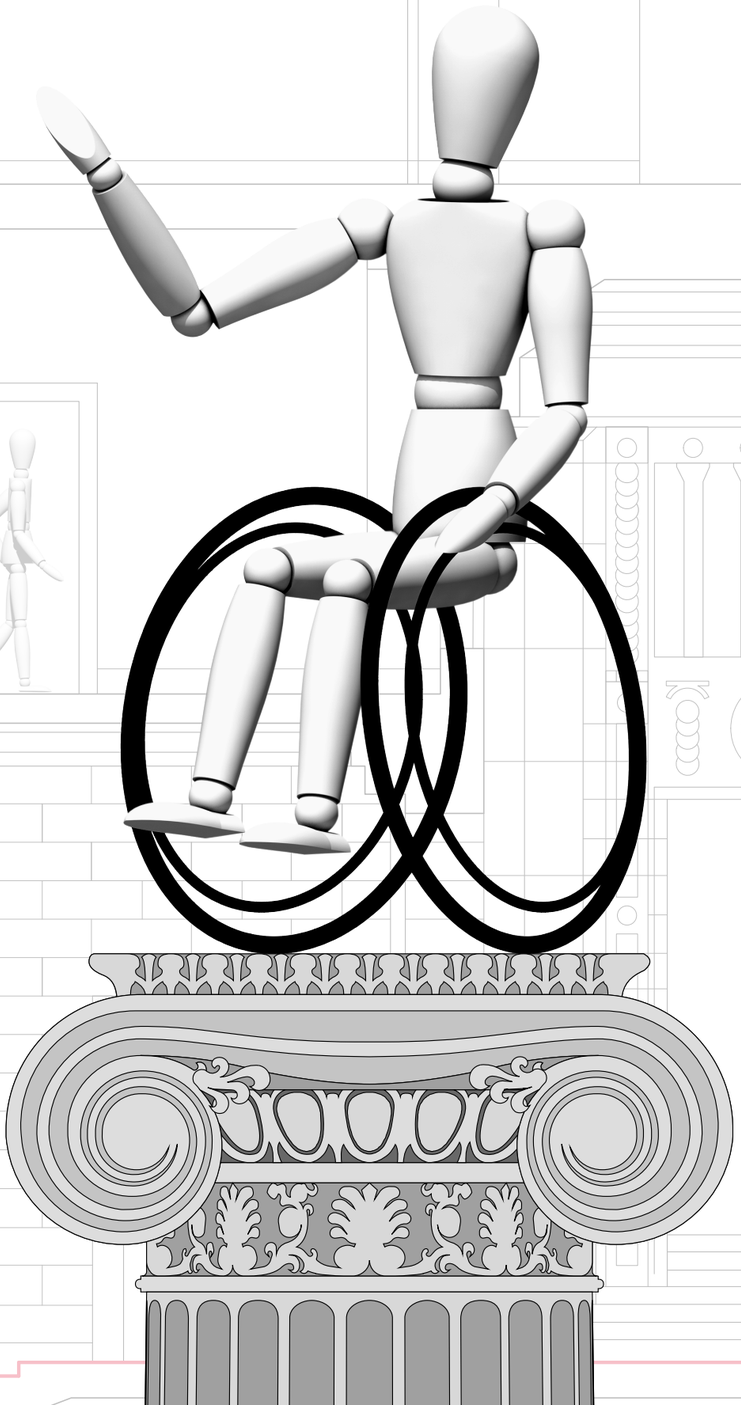
Senate Department
for Urban Development
and the Environment

Landesdenkmalamt

Beiträge zur Denkmalpflege (english version)

Cultural Heritage and Barrier-free Accessibility

Guideline and Student Projects



Beiträge zur
Denkmalpflege,
Heft 43
(english version)

Cultural Heritage and Barrier-free Accessibility

Guideline and Student Projects

Beiträge zur Denkmalpflege in Berlin, Heft 43
(english version)

Contents

Preface by the Head of the Berlin Conservation Office

Prof. Dr. Jörg Haspel
Head of the Berlin Conservation Office
and Director of the Landesdenkmalamt Berlin
(Berlin Monument Authority)

In Berlin's heritage law of 1995 it states in § 11 (6):

> ***"In all their decisions the monument authorities take into consideration the needs of people with reduced mobility."***

This statement confirms the self-evident obligation of the monument authorities to explore every possibility of providing equal participation in public life for everyone.

In Berlin, we are fortunate that the Senate Department for Urban Development and the Environment and its coordination office "barrier-free building and planning" have done excellent preparatory work. Under the direction of Ingeborg Stude two brochures have been published on planning and building in public buildings and in public open spaces – a wonderful example of an administration planning ahead and avoiding conflicts.

All this groundwork proves that the problems in connection with providing barrier-free access are not or hardly ever caused by monument protection matters or by a lack of cooperation by the monument authorities. Instead, the greatest barrier is the historic building itself with all its fixed constraints, usually making standard solutions impossible. It is common practice to then blame the monument authorities so as to have an excuse for not having to look for more labour- and time-consuming, as well as more expensive solutions. However, only about 3% of the building stock in Berlin is on the monument list.

Also in view of the above-quoted legal regulation I personally don't find it helpful, at least not for Berlin, to call for ever new regulations. Instead, I would advocate a cooperative and pragmatic approach, through de- bureaucratisation, simplifications, and speeding-up of administrative actions without changing the law. In short: I'm in favour of multi-lateral communication at an early stage, creating preventative action tools, and improving early-warning systems.

In listed buildings just as in buildings not on the monument list the ideal approach would be to look for intelligent, feasible, aesthetic and monument-compatible solutions together with the parties concerned and with representatives of the administration and the planning offices. Each new good example provides another design for all stepping stone towards a more accessible environment.

My wish and hope are that this publication will help to bring together different, but nonetheless justified approaches to accessibility and monument conservation, and that it will be an incentive to create new and forward-looking ideas.

Message from the Deutsches Nationalkomitee für Denkmalschutz

Dr. Oliver Karnau
Deutsches Nationalkomitee für Denkmalschutz (German National Committee for Monument Protection)

It is very important that disabled people are not excluded from experiencing and making use of our cultural heritage. An inheritance implies that anyone can participate in that inheritance. Experiencing culture means taking part fully in society; culture facilitates dialogue and brings people together. This also applies to monuments which are an indispensable part of our cultural heritage.

At the same time, we are called upon to preserve this heritage. After all, future generations also have a right to experience and enjoy their cultural heritage. If one removes historic buildings or parts of them, one cannot simply rebuild them without irrevocably changing the cultural heritage.

Based on past experience, however, this fundamental conflict can be resolved, even if this fact is sometimes disputed. In a fair dialogue based on understanding solutions can be found and can do justice to all aspects of responsibility. Monument conservationists are well-trained in integrating different interests in their considerations: usage, structural and fire protection requirements, etc are regularly taken into account equally. This also applies to listed theatres, schools, hospitals or kindergartens.

One of the major goals of the Deutsches Nationalkomitee für Denkmalschutz is to communicate clearly the concerns of monument protection and conservation to politicians, local governments and the general public alike. Therefore we regard it as vital to tackle topics that are important to society as a whole. Among these topics are migration, energy management, and general demographics. It is reported that one in ten inhabitants in Germany has a disability. This proportion will increase as our society grows older. In the course of demographic change – an essential topic of the future – we will also have to address how to make historic monuments barrier-free. An additional positive side-effect of this will be that barrier-free monuments will be more easily accessible to push-chairs and prams as well as people with walking frames.

For this reason, we organised several events on this forward looking topic in 2013 and 2014 and published an initial information leaflet which can be obtained free of charge (www.dnk.de). The presentations given at our conference in 2014 will be published in the series of the Deutsches Nationalkomitee.

In conclusion, I am pleased that you have also continued to work on this topic in Berlin. I hope your publication will be widely distributed and that it will receive the attention it deserves!

Barrier-free Access to and Use of Architectural, Archaeological and Garden Monuments*

Dr. Anna Maria Odenthal
Landesdenkmalamt Berlin
(Berlin Monument Authority)

Guideline

for the conservation-related assessment of construction measures in order to respect the rights of the disabled and the concerns of people with reduced mobility in connection with cultural heritage-law authorisation procedures, according to § 11 (6) Berlin Heritage Law of April 24, 1995 (GVBl, p. 274), most recently revised by article II of the Law, July 8, 2010 (GVBl, p. 396)

Relevant conventions and laws all agree on the shared aim to enable and guarantee people with disabilities to live a self-determined life and to participate in social and cultural life on an equal footing with others.

The UN Convention on the Rights of Persons with Disabilities of 2006, ratified by Germany in 2009, specifies universal human rights not only for people with disabilities. Instead, it is based on the central aspect of inclusion in society. Communities are legally bound to make sure that the public has unhindered access to means of transport, public facilities and services. In addition, access to cultural institutions, events and services is to be ensured by appropriate measures. This also applies "where possible" to monuments and sites of national cultural importance.

On the basis of the Federal Act on Equal Opportunities for Disabled Persons agencies and other institutions of federal administration are obliged to make sure that public new and converted buildings, and other public facilities, including pathways, squares and streets as well as all public transport are barrier-free, in compliance with the generally accepted rules of technology and the relevant federal legislation. However, this does not restrict the validity of regulations pertaining to German State Law, such as the heritage laws of the individual German states (Länder).

Based on article 11 of the Constitution of the state of Berlin, all authorities, corporate bodies, institutions and foundations under public law are bound by Berlin's Equal Opportunities Act to provide equal living conditions for people with and without disabilities. With the introduction of an extraordinary right to file an action in the Equal Opportunities Act accessibility can be legally enforced by means of objection and legal protection.

Berlin's building law specifies the requirements for barrier-free building, including the standards introduced for new constructions and significant alterations in existing buildings.

With regard to listed buildings and complexes it is a requirement, based on the settled case-law and the constitution, that the concerns of people with reduced mobility always need to be balanced with heritage protection concerns in all decisions pertaining to the cultural heritage law. Moreover, as early as in 1999, Berlin's heritage law was the first German heritage law to clarify in § 11 (6) that in future heritage authorities need to consider the concerns of the disabled in all their decisions. There is no doubt that the wish to have barrier-free access to monuments is not merely a private but also a public concern.

* The Guideline is based on the Rahmenrichtlinie of 2012 of the Thuringian Heritage Conservation Authority (in: Arbeitshefte des Thüringischen Landesamtes für Denkmalpflege und Archäologie, Neue Folge 41, p. 160f.). I would like to thank my colleagues, notably Dr. Heribert Sutter, for allowing me to use part of the text. I would also like to thank the legal adviser of the Berlin Monument Authority, Gregor Hitzfeld, for adapting the Rahmenrichtlinie to the legal basis in Berlin. An in-depth revision and revision of the Guideline was carried out by the head of the coordination office for "barrier-free building and planning" at the Senate Department for Urban Development and the Environment, Ingeborg Stude.

Awareness of this obligation under constitutional law and heritage law and the changing access needs and requirements has led to Berlin's monument authorities actively campaigning for accessibility. This applies both to privately and publicly used buildings and open spaces.

Berlin's monument authorities involved in the approval procedure investigate all applications with an open mind and a positive attitude. They will also help builders and applicants to find heritage-compatible and creative solutions and will advise on alternative options.

As cultural heritage buildings/spaces, which must be preserved by monument authorities for the benefit of the general public, are usually unique and the only remaining witness of our architectural and cultural history, it is not possible in most cases to find standardised solutions to overcoming barriers. Each case needs to be examined individually as to what impact a particular measure will have on the monument in question. Any potential damage to a monument must be balanced against the potential improvement to the quality of life of everyone, including those with disabilities.

Berlin's monument authorities use the following questions as orientation for the required case-by-case examination and the assessment of the impact of constructional interventions (e.g. lifts, stair lifts, ramp facilities, tactile and acoustic aids, and other constructional facilities):

- Which parts of a particular architectural, archaeological or garden monument are worth protecting?
- Which parts contain authentically preserved original substance in the relevant historic layers?
- Where in the interior are permanent fixtures and decorations worth protecting?
- What impact does the implementation of an intervention have on the monument stock concerned? Are there effects which will permanently harm the heritage qualities of the protected property and which contradict public preservation concerns?
- What defines these effects and which specific heritage qualities do they impact?
- Are they irreversible interventions in the building fabric or in permanent fixtures that will destroy or considerably damage heritage value?
- Do alternatives exist that are reversible or at least partly reversible?
- Do measures in the interior of a building or less visible areas have less impact than on the outer shell?

- Where do discretionary powers exist and how can they be explored?
- Where are the limits and how can they be communicated?
- Are there alternative options?
- Can the use of a mobile installation be a temporary compromise while a final constructional solution is sought?
- Are design and aesthetic solutions being researched or found which are in line with the relevance of the cultural monument?
- What are the demands by the people concerned, the associations and representatives of the disabled? Which of these requirements are irrefutable? Is there scope for compromise?
- Has an overall concept been prepared for barrier-free access to a specific architectural, archaeological or garden monument, taking into consideration the surroundings (parking spaces, public transport, road space, lighting, signage, etc)? Isolated individual measures will not promote accessibility or monument protection.

In addition, it is advisable to include the following considerations:

Experts on barrier-free building are still rare. However, an increasing number of planning offices are aware of the value and necessity to extend their knowledge with a view to "design for all". Already at an early stage, individual responsibility should be allocated and the type and extent of expert involvement clarified. The "concept of accessibility" has already become mandatory for projects in the state of Berlin (ref. http://stadtentwicklung.berlin.de/bauen/barrierefreies_bauen/de/handbuch.shtml).

- Have the concepts taken into account solutions of high design and aesthetic qualities which do justice to the cultural monuments and their setting, and are they adequate in their functionality and how they will be perceived?
- Has the full technical and creative potential of available solutions been fully explored and adapted to the specific situation? Have special solutions been considered and examined in a goal-oriented way?
- Does the final design retain the right sense of proportion between accessibility, user needs and public interest in preserving the cultural heritage?
- "Design for all" means comfort for all! Are special solutions for disabled people part of the plan, or is the aim to achieve extended user options or appreciation in a property value?

- Are the extended user options causing unacceptable damage or even destroying a monument from a conservation point of view? Or, without these extended options, would it be possible to provide reduced barrier-free aspects in line with heritage law rules?

- Is the extent to which a building must be converted in order to make it barrier-free limited to a level of functionality or are requirements designed to meet maximum demands at the expense of the monument?

The monument authority's experts have to assess whether the reasons for the intervention to achieve accessibility have been plausibly presented and whether final plans have been created taking into account the heritage point of view.

Recommendations, alternatives and reasons for a negative expert assessment on a particular case need to be well-founded and justified in detail. An examination of planning alternatives as well as coordination and mediation talks between applicants, representatives of the disabled and the state and church authorities involved should be offered.

In an official authorisation report, the heritage authorities provide a professionally grounded and detailed proportionality assessment, an evaluation of the level of interest, and discretionary consideration. The authorisation may contain stipulations, conditions or recommendations. This ensures an appropriate and competent barrier-free design. Furthermore, the authority's decision can be publicly represented and communicated and, if necessary, investigated in its entirety by the law courts.

The Exhibition

Model+Design
Technical University Berlin

Presentation at the Architekturforum of the TU Berlin

The exhibition "Denkmalschutz und Barrierefreiheit" (Monument Protection and Accessibility) was first presented on February 4, 2015 at the TU Berlin, Forum of the Institute of Architecture. The interest and the number of visitors were overwhelming. Several advocates of accessibility enjoyed the works of the students. Distinguished representatives of different institutions attended the opening:

- Bundesamt für Bauwesen und Raumordnung (BBR) (Federal Office for Building and Regional Planning),
- Bundeskompetenzzentrum Barrierefrei (Federal Competence Centre Barrier-Free),
- Deutscher Blinden – und Sehbehindertenverband (DBSV) (German Association for the Blind and Visually Impaired),
- Prussian Palaces and Gardens Foundation Berlin-Brandenburg,
- Prussian Cultural Heritage Foundation,

Impressions of the opening of the exhibition

- Archdiocese of Berlin,
- Behindertenverband (Association of the Disabled) Leipzig,
- David Chipperfield Architects,
- Architektenkammer (Chamber of Architects) Berlin-Brandenburg,
- Wohnungsverband (Housing Association) Berlin-Brandenburg,
- Representatives of the Senate Department for Urban Development and the Environment,
- Representatives of the Berlin Monument Authority,
- Representatives of various district offices in Berlin,
- Architects and landscape architects.

The travelling exhibition on monument protection and accessibility which focuses on the Neue Nationalgalerie, the Altes Stadthaus and St Hedwig's Cathedral will be shown in Berlin's districts over the next few months before touring Europe to campaign for "a monument for all", rethinking and thinking ahead, also with the aim of training architectural students.

The Exhibition System

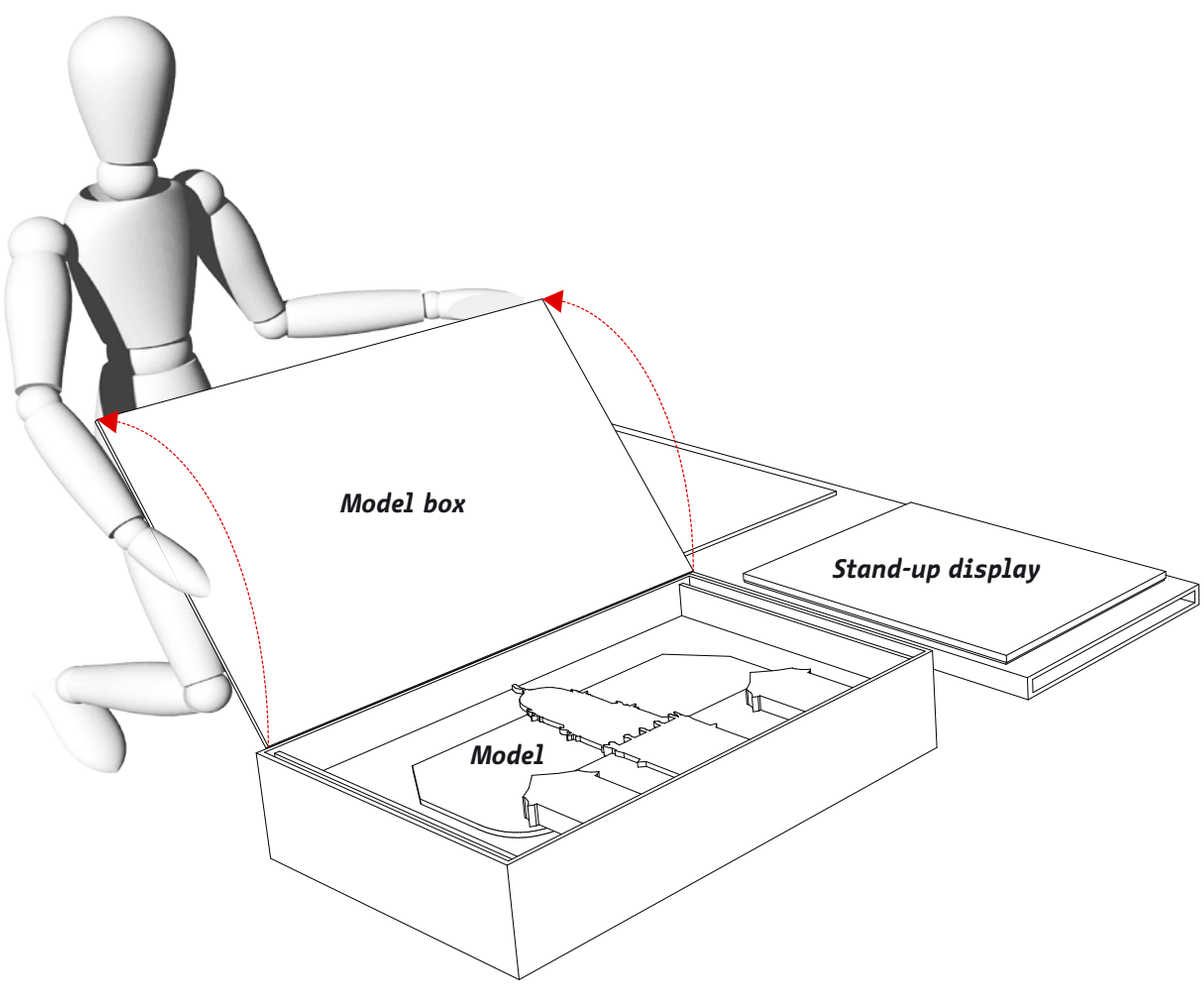
Model+Design
Technical University Berlin

Setup, Dismantling and Transport

The exhibition system is adaptable, easily set up and dismantled, and not least it is inexpensive. The exhibition is designed as a travelling exhibition which is easily transported from one place to the other in a pick-up truck. The exhibition is accessible for everyone.

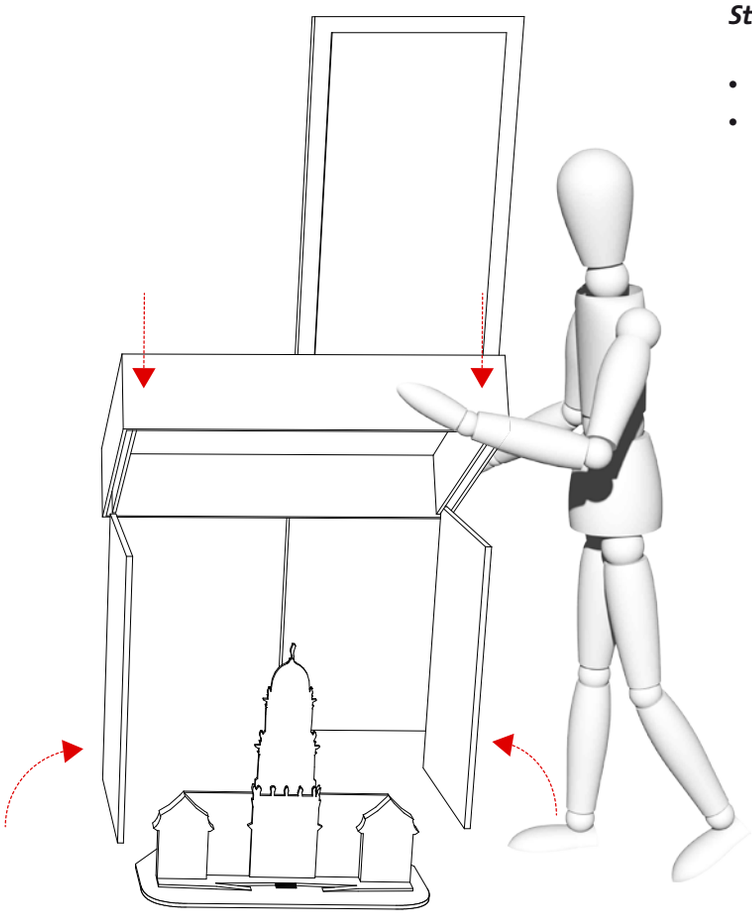
Step 1 – Unpacking

- Box and stand-up display
- Take models out of the box



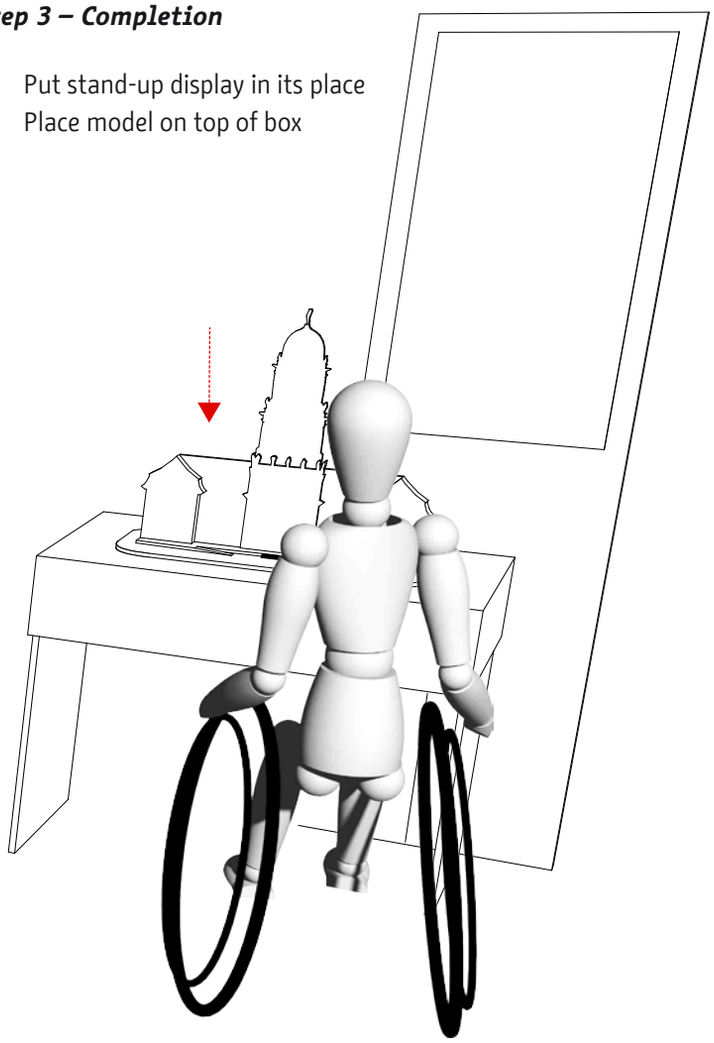
Step 2 – Setup

- Place stand-up display in an upright position
- Place box upside down on the feet of the stand-up display
- Connect box with stand-up display



Step 3 – Completion

- Put stand-up display in its place
- Place model on top of box



New Aims – New Paths

Dr. Anna Maria Odenthal
Landesdenkmalamt Berlin
(Berlin Monument Authority)

Those who want to achieve new aims must be willing to strike new paths.

As representative of the Berlin Monument Authority, and together with the coordination office "barrier-free building and planning" of the Senate Department for Urban Development and the Environment and representatives from Model+Design at the Technical University Berlin, I was very pleased to supervise a seminar dealing with the compatibility of monument protection and accessibility. I gained a great deal from this experience.

Three outstanding listed monuments in Berlin dating from different periods in the history of architecture were selected for this project: the baroque St Hedwig's Cathedral, the historistic Altes Stadthaus and the Neue Nationalgalerie, a famous example of modern architecture.

During the preparatory phase of the project these three distinguished buildings were used to introduce the framework conditions and specifications, the scope for action and the degrees of difficulty. On this basis a broad spectrum of possibilities was defined, within which there were no limits to the imagination and creativity of the 50 students. During implementation of the project, the inventiveness, creative ambition and infectious intensity of the individual designs resulted in an abundance of inspiring and innovative proposals.

As a conservationist I am very pleased about the results and the overall success of this project, and very grateful to all participants for their high level of commitment.

This is by no means the beginning of our discourse on the compatibility of monument protection and accessibility. We will only have achieved our goal when, right from the start, providing barrier-free access to existing buildings such as listed monuments is considered to be as vital in all planning procedures, tendering and upgrades as are currently all aspects of climate and fire protection as well as health and safety issues.

Our greatest trump card are all our young architects who no longer consider the job of creating accessibility to be merely mandatory, but as an artistic challenge.

Here are three theories:

1. Accessibility starts in the head.

2. Accessibility is not an expense factor but an investment in the future.

3. It is something that concerns all of us.

Monuments for Everyone? Ideas for Everyone!

Ingeborg Stude
Senate Department for Urban Development and the Environment, coordination office "barrier-free building and planning"

What types of idea come about when students of architecture are asked to focus on heritage-compatible and barrier-free approaches with regards to three important historic buildings in Berlin?

50 students of the TU Berlin, equipped with a basic knowledge of barrier-free building and aims and objectives of monument protection, investigated the Neue Nationalgalerie, the St Hedwig's Cathedral and the Altes Stadthaus in Berlin with regard to existing barriers and ways of overcoming these. On the one hand, they were given the task to preserve the original fabric and its specific character. On the other hand, they were to make it possible for as many people as possible to have a part in our cultural heritage in its modern use.

> ***Is it really a contradiction to preserve historic buildings in line with monument conservation specifications for monument conservation and at the same time make them accessible to everyone?***

It is the social challenge of the UN Convention on the Rights of Persons with Disabilities to promote a life that is inclusive.

For this to be implemented, planning processes have to be started with an inclusive planning concept. Future planners are developing an important innovative approach to equal participation in public social life. Construction planning has become particularly relevant in this process.

A monument should and must be alive. Churches and museums were built for people. They can only serve their purpose if they are accessible and can be experienced by everybody. What prevents us from barrier-free conversions of monuments? Is it mostly barriers in our heads?

Within the Senate Department for Urban Development and the Environment two seemingly incompatible areas of responsibility are beginning to merge – barrier-free building/design for all and monument protection. They found a progressive and creative partner at the TU Berlin, Model+Design, and together they have set out to overcome ever more barriers, to create good examples and, most of all, to draw young people's attention during their training to vital future planning goals of our society.

As a result, innovative ideas have been developed as first evidence of the fact that inclusivity is feasibly. It seems that it is in fact the challenge and the apparent impossibility which have led to unexpectedly interesting ideas which are both ethical and aesthetic.

For their designs the young people reflected together on the relation between the building project and target groups, i.e. people with disabilities. Apart from their design work they also developed an important social awareness for their future profession. The results show the students' great energy and commitment. I would like to express my joyful thanks to all involved.

Model+Design for all

Burkhard Lüdtke
Head of Model+Design, IfA
Technical University Berlin

Teaching

The subject Model+Design teaches students und future architects design techniques and methods that enable them to present and communicate their ideas in three dimensions. We use physical and spatial scale model making in order to find and present solutions for complex problems and questions.

The development of display options enabling blind or visually impaired people to experience three-dimensionality has recently become a focus of our teaching.

The successful results in the field “design for all” have paved the way for the practical implementation and have led to several international awards.

The Seminar “Monument Protection and Accessibility”

The main question of this seminar, carried out in cooperation with the heritage conservation authority and the coordination office “barrier-free building and planning” at the Senate Department for Urban Development and the Environment, was: “How can we create aesthetic-functional accessibility options for disabled people in three selected listed buildings?”

The Problem

Wanting to leave historic monuments as they are is not in the interest of people for whom these monuments remain inaccessible due to the way they were built.

Methods of Resolution

Our students developed varied, innovative, surprising and committed design options to solve the problem of accessibility without compromising the quality of the buildings. Following the motto “The best design is that which is hardly noticeable” they aimed for an inconspicuous symbiosis of preserving the historic fabric while adding the necessary intervention.

We can only speak of a sensuous and sensible design, when concerns of accessibility and challenges of listed architecture have been aesthetically and functionally harmonised.

Model+Design for All

Our goal is to implement the subject Model+Design for All at the TU Berlin. There is a stable and expandable basis for this; this seminar and successful partnerships in the past are proof of this.

St Hedwig's Cathedral

Topography

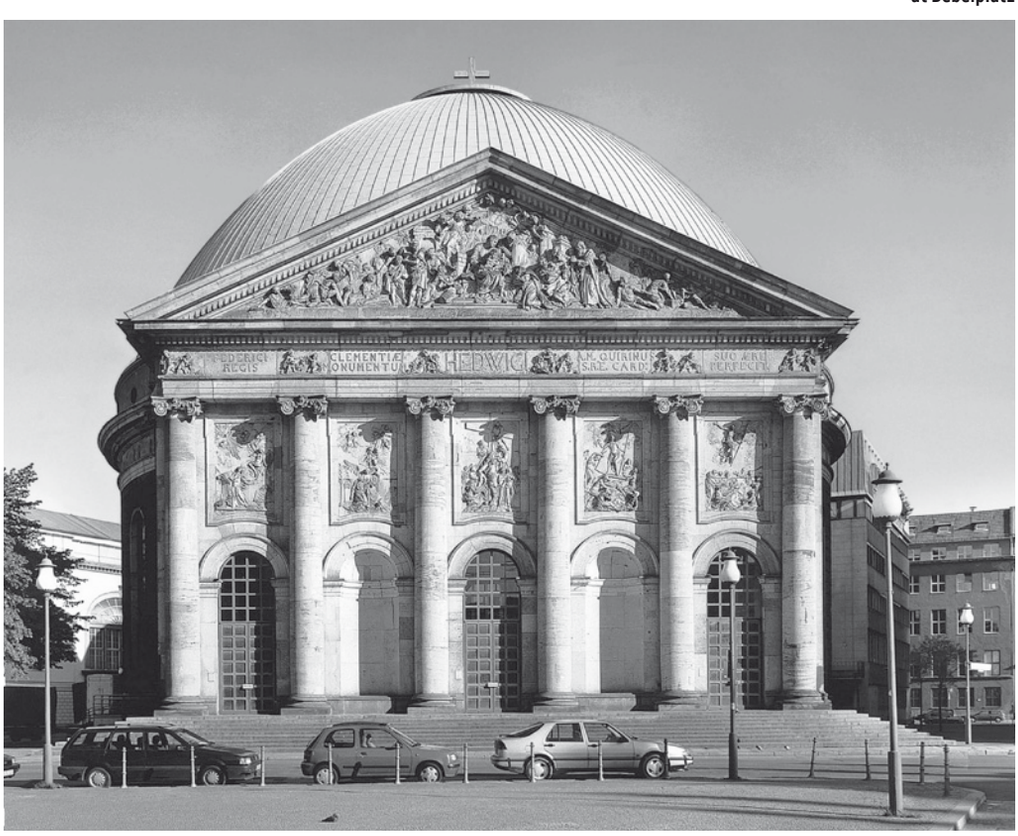
St Hedwig's Cathedral in Behrenstraße on the southeast corner of Bebelplatz was part of the baroque planning for a "Forum Fridericianum". In 1747, King Frederic II allocated the empty space behind the opera house to the Roman Catholic parish, which did not yet have its own place of worship.

Based on indications by Frederic II, Georg Wenzeslaus von Knobelsdorff designed a centrally planned building inspired by the Pantheon in Rome. In front of a domed rotunda is a portico, the triangular pediment of which sits on six Ionic three-quarter detached columns. Between the columns, round-arched porches alternate with niches. Above, the sopraporti show reliefs of scenes from the New Testament.

These reliefs based on designs by Georg Franz Ebenhech were carried out by Theodor Wilhelm Achtermann in 1837. Achtermann also made the model for the pediment relief showing the Adoration of the Magi. It was only completed in 1897 by Nicolaus Geiger in a neo-baroque style.

The church building south of the opera house blends into the built-up area around Bebelplatz. Although the main facade of the church, which stands at an angle to the square, faces the western part of the square, it nonetheless dominates the eastern part and thus provides a link between the two halves of Bebelplatz, separated by the opera house.

St Hedwig's Cathedral at Bebelplatz



© Landesdenkmalamt Berlin

Interior of the upper church

© Landesdenkmalamt Berlin

St Hedwig’s Cathedral

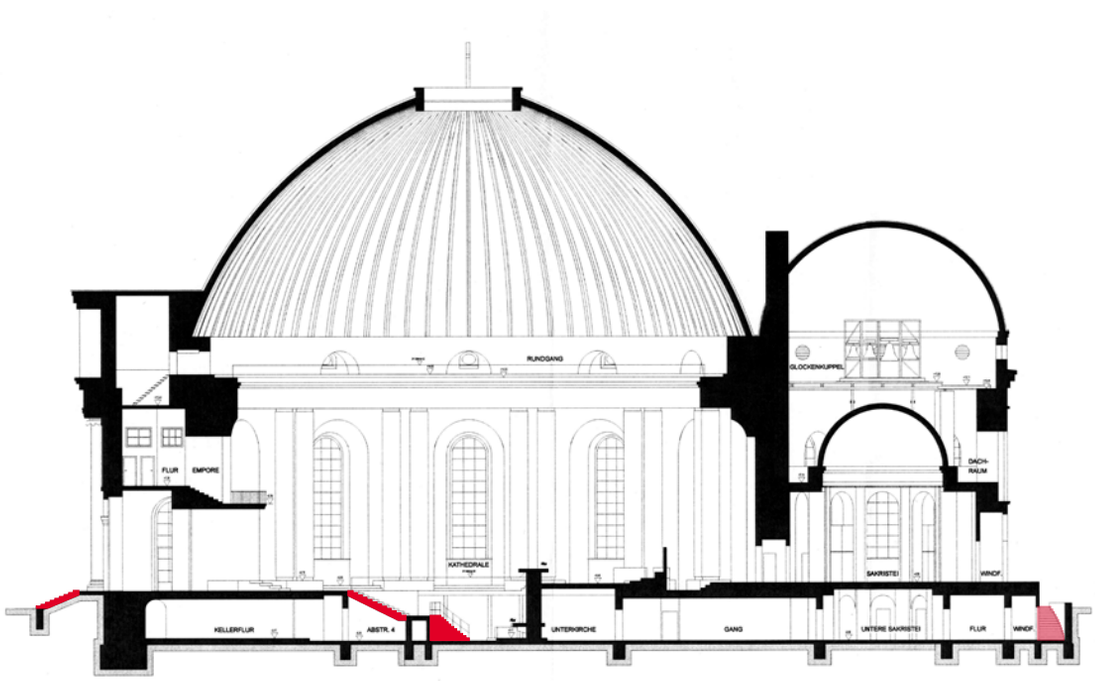
Johann Boumann the Elder supervised the construction of the church building between 1747 and 1773. By 1755 the building shell was completed; however, the consecration only took place in 1773. In accordance with the designs published in a series of engravings by Jean Laurent Legeay in 1747, which deviated from the completed building, the church was altered in 1886-87 by Max Hasak. He replaced the dome’s tiled roof by a copper roofing and crowned it with a lantern and cross. In 1930 the St Hedwig’s Church was raised to the status of a cathedral, the episcopal church of the diocese of Berlin. The church’s interior was redesigned by the Viennese architect Clemens Holzmeister in 1930-32.

In March 1943 the dome was destroyed and the cathedral burned down to the outer walls. The Düsseldorf architect Hans Schwippert oversaw the rebuilding between 1952-63 . The exterior of the centrally planned building was restored to its original appearance; only the silhouette of the dome’s concrete shell construction was changed.

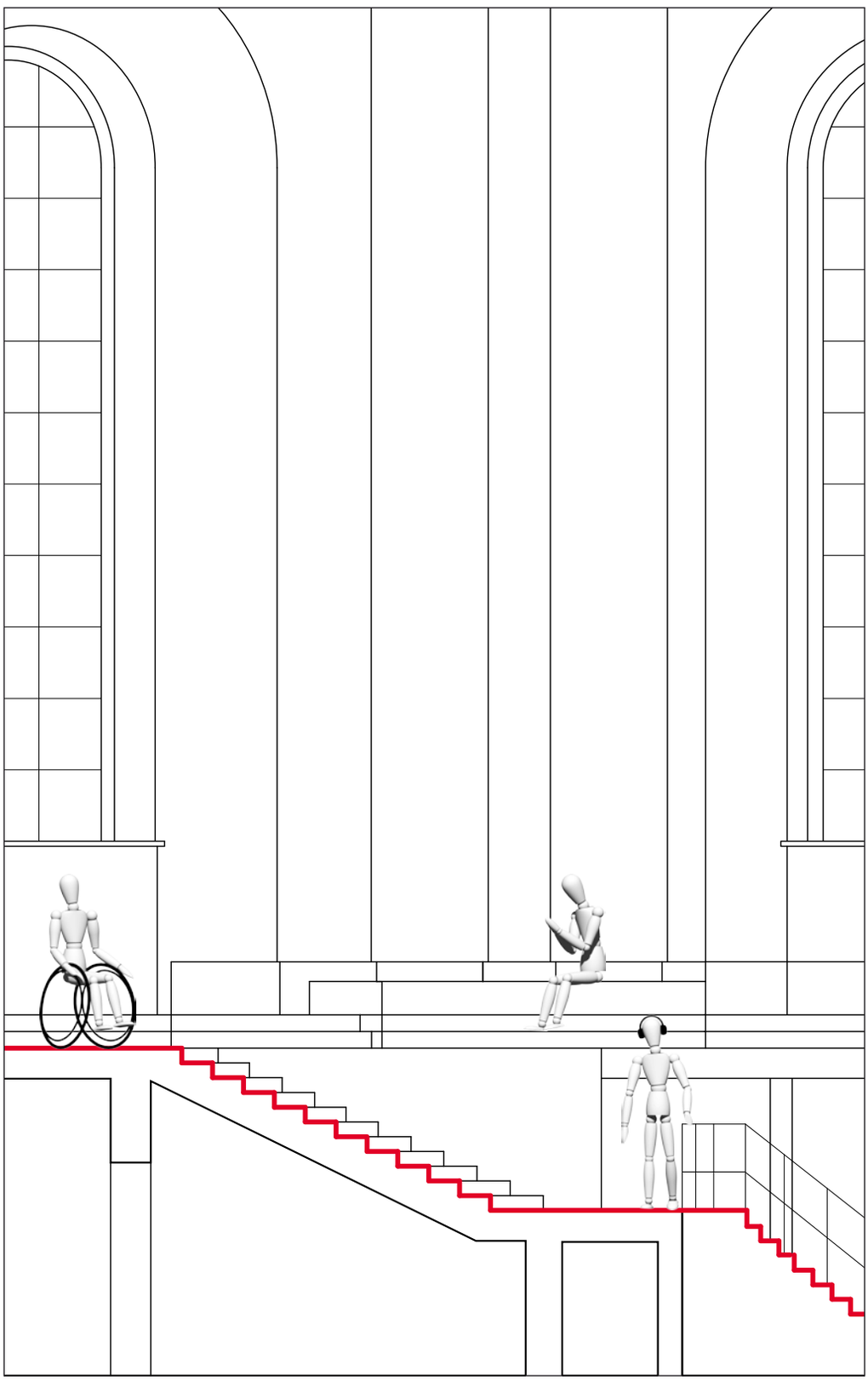
The facade is characterised by simple imitated ashlar stone finishing, tall undecorated round-arched windows and a circumferential cornice. In the course of the redesign of the interior after the war the preserved architectural elements such as wall niches, double columns and dome received a contemporary shape and colouring.

The most conspicuous change was to open up the lower church, thus expanding the central space significantly. The banister around this opening made of bronze and crystal glass as well as the three-metre cross in the dome were made by the sculptor Fritz Kühn. The lower church chapels house the graves of Berlin’s bishops .

Cross section of the building with barriers marked in red



Barrier between upper
and lower church



Outside Area

Design by Anna Büchsel,
Julia Singer and Pamela Wüst

Project 1 St Hedwig's Cathedral

The project deals with the space of the square and street around the church. The entire Bebelplatz is not barrier-free and provides no direction especially for visually impaired people.

The idea is to bring the street in front of the church and the square to one level. This ensures that road users give right of way to pedestrians.

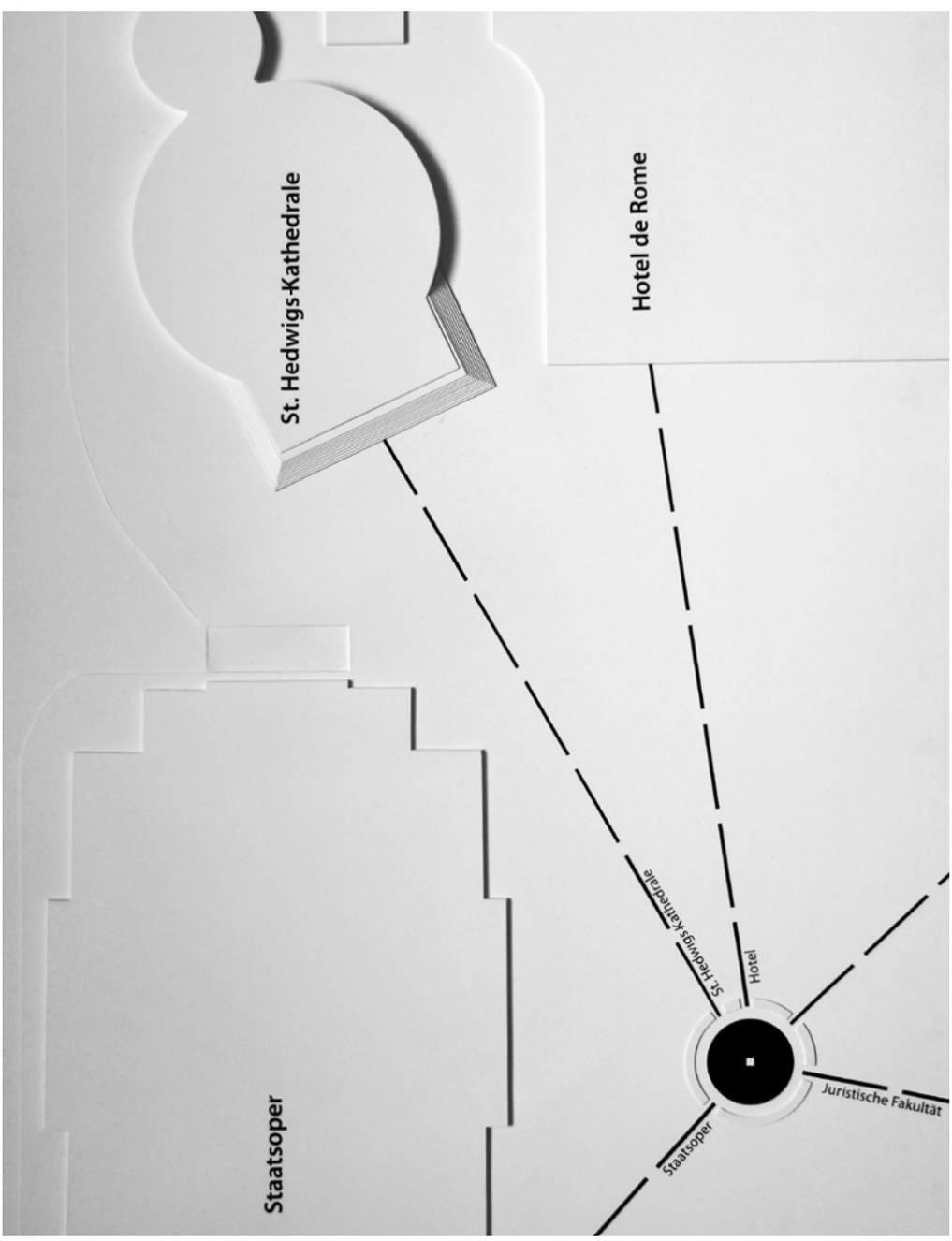
Visualisation – paving as guidance system, Bebelplatz

Visualisation – tactile guidance elements integrated into the seating

New Orientation System

The existing paving is taken up and the new paving is laid as a guidance system, structuring the square and providing direction. From the memorial to commemorate the burning of books in 1933 markings in the pavement lead to every adjacent building as well as to the underground station. Around the memorial, barrier-free seating is arranged with tactile information about buildings nearby in the arm rests.

Model of site plan of Bebelplatz with orientation system



Rays of Light

Design by Christa Elizabeth Beckmann
and Mariska Saapke Flau

Project 2 St Hedwig's Cathedral

The focus of this design is the conversion of the interior of St Hedwig's Cathedral. The design is meant to maintain the church's function as a meeting place and offer an aesthetic and functional solution respecting the fundamental aspects of religion. A special requirement is therefore to emphasise the connection between the crypt and the light. Moving the stairs from the centre to the sides of the round church makes it possible to perceive the interior as one big and uniformly designed space. Radial glazing is set into the floor of the ground floor so that enough light shines into the crypt. The light can be seen as an analogy. On the one hand, as a symbol of divinity it lights up the round church from the rooflight of the dome; on the other hand, it provides the rays that shine all the way down to the crypt and visualise life after death.

Visualisation of the upper church

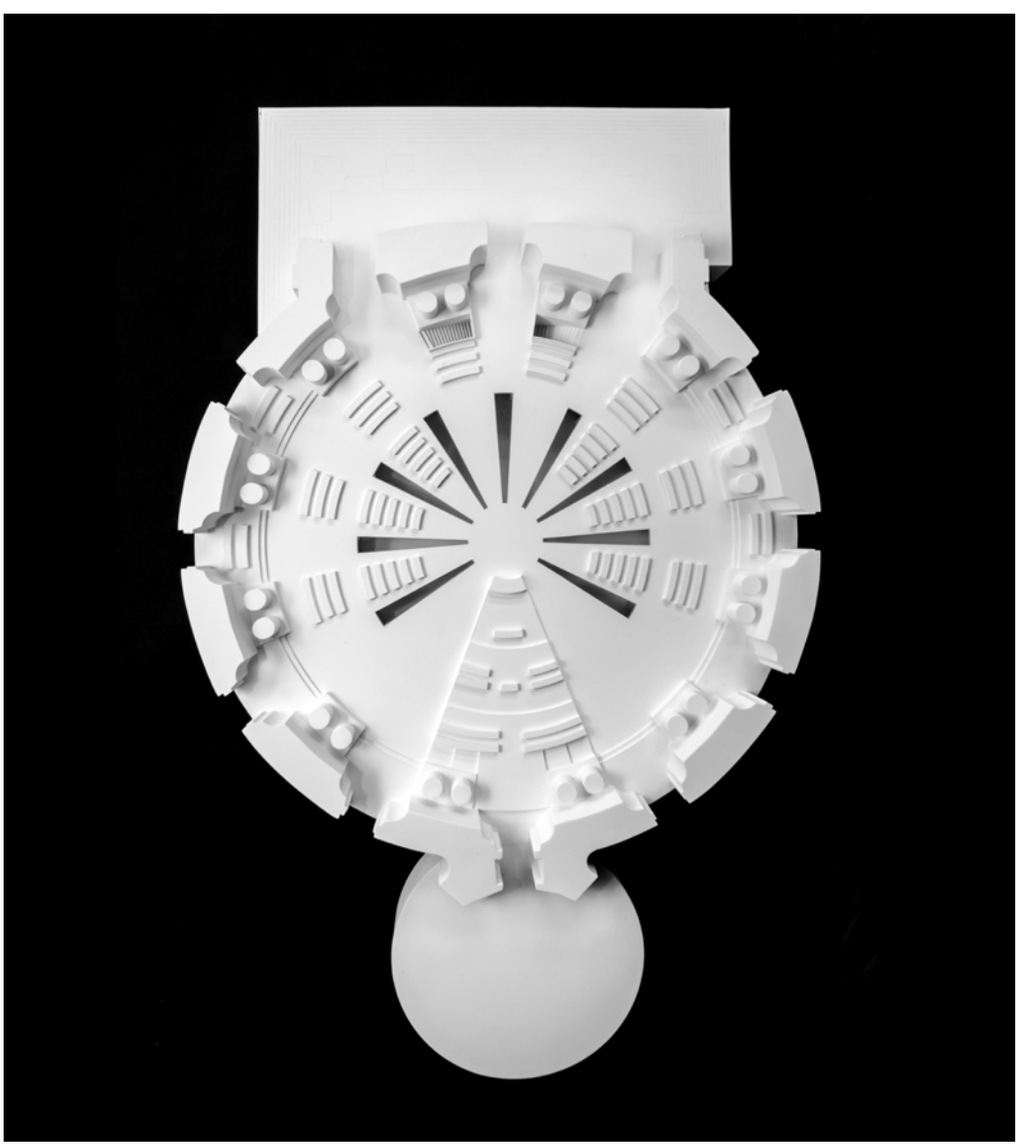
Visualisation of the lower church

Rearrangement of the Interior

By the way the radial glazing is arranged a visual subdivision of the interior is achieved. Pews are placed “Between the rays”. They are arranged in three quarters of the circle. In the remaining quarter where the altar is situated several steps lead up enabling the congregation to have a direct view of the choir and the altar.

The centre is intended to be used for special occasions, such as Holy Communion, weddings or baptisms. The choir of St Hedwig’s Cathedral is situated behind the altar so that all three doors at the main entrance can be used once again. From the middle entrance stairs on the left and right sides lead down to the crypt. Thus, the specific functions of the altar and the crypt are again appreciated in their own rights; they no longer “compete” with each other aesthetically.

Model of the ground plan of the upper church



Entrance Base

Design by Ivo Manov, Sebastian Stahmer and Julien Engelhardt

Project 3 St Hedwig's Cathedral

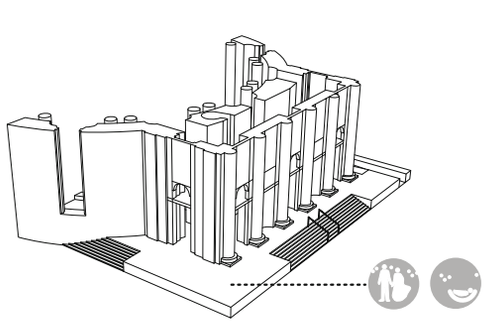
The concept is to replace the access to the cathedral, which at present consists of steps, by a simple base. On the side facing Bebelplatz a ramp is installed.

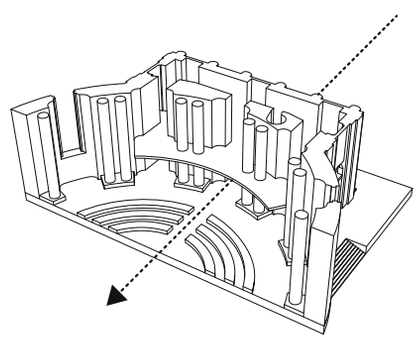
Outside, this base provides new space where people can linger. For instance, a wedding party can gather here. Before mass, this area can also serve as a meeting place for the worshippers. On the side, the base is accessible via a ramp, in the middle by steps with handrails.

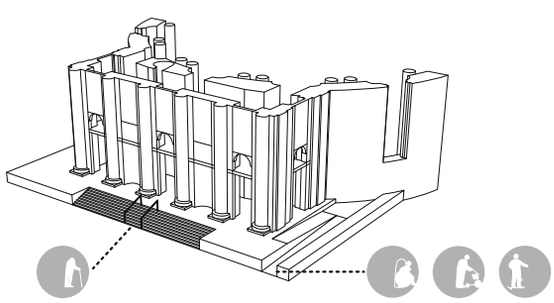
The step risers are given markings that guide visitors safely towards the reactivated main entrance. Inside, the pews are rearranged so as to offer a clear pathway towards the centre.

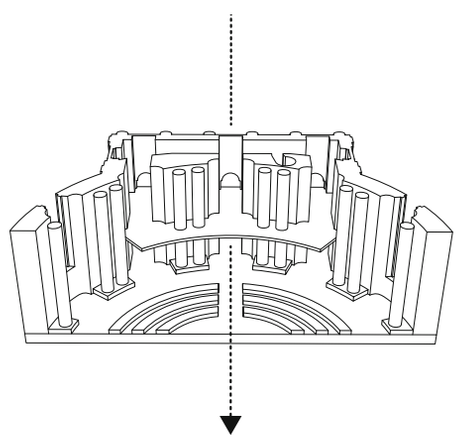
The two galleries are interconnected. The choir is moved from the space in front of the middle entrance to the central gallery upstairs. In addition, the organ is repositioned to the left and right of the choir on the gallery. Consequently, the cathedral is once again accessible by the main entrance.

Concept pictograms barrier-free access

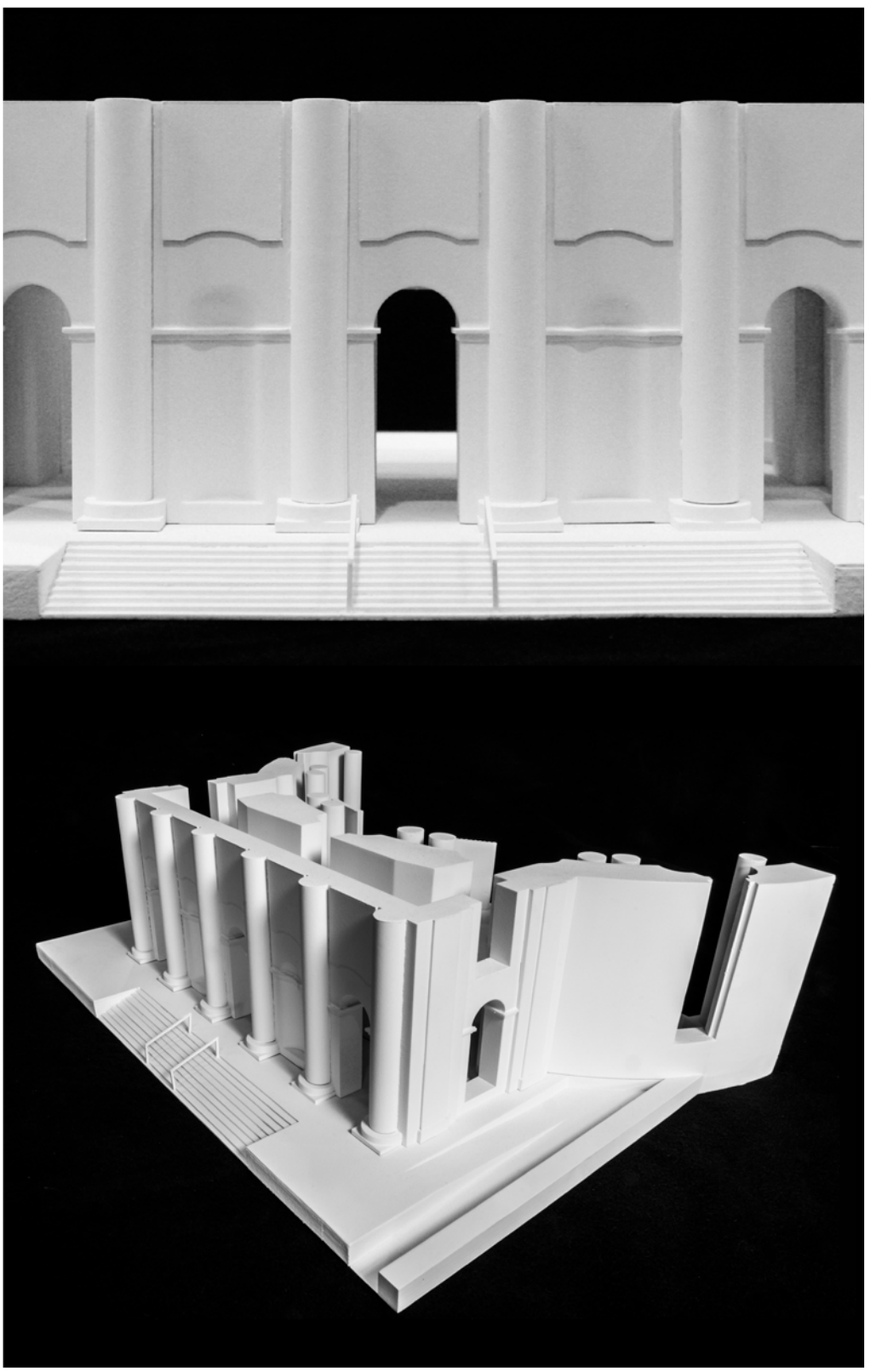








Model of the entrance base leading to the cathedral



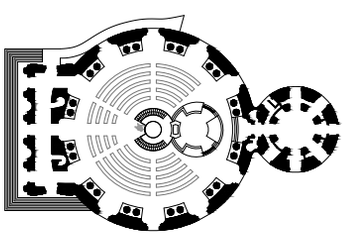
Central Focus

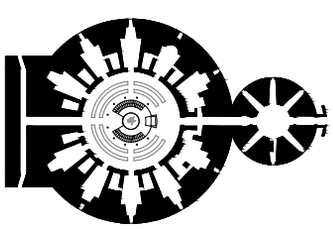
Design by Cassandra Donath, Marlene Bühner, Jennifer Moser and Sebastian Genzel

Project 4 St Hedwig's Cathedral

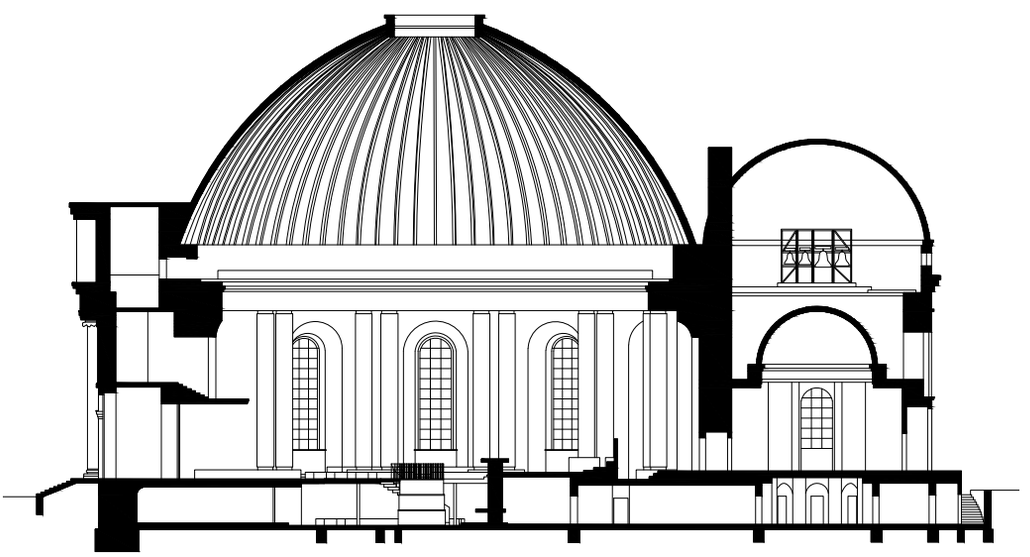
Visualisation of the interior

Ground plans of upper and lower church



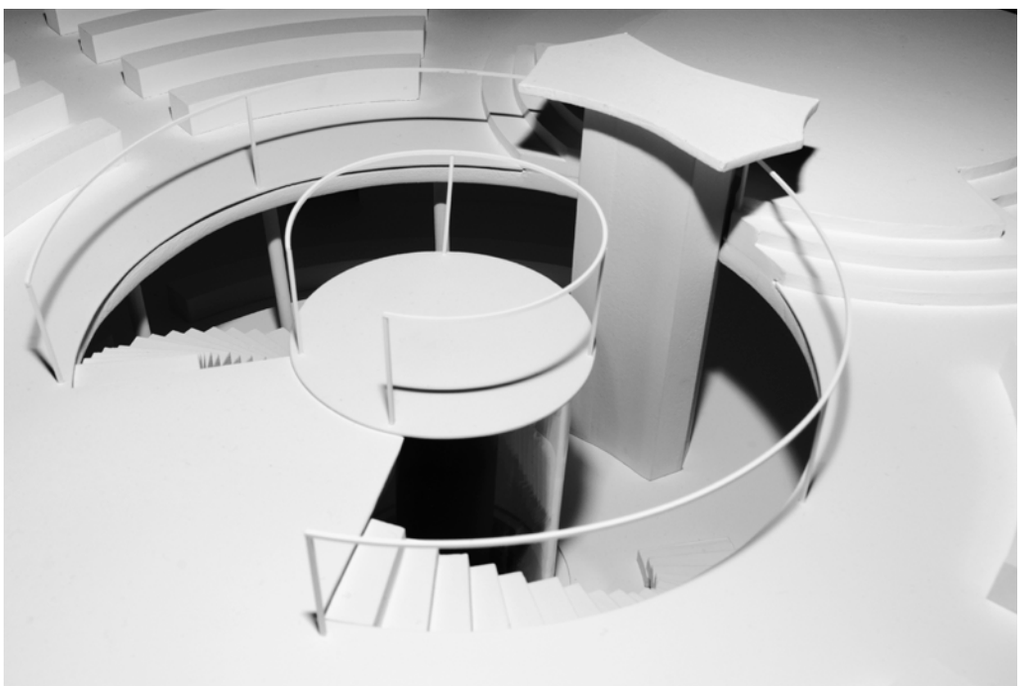


Longitudinal section of the building, platform with hydraulic lift in the centre

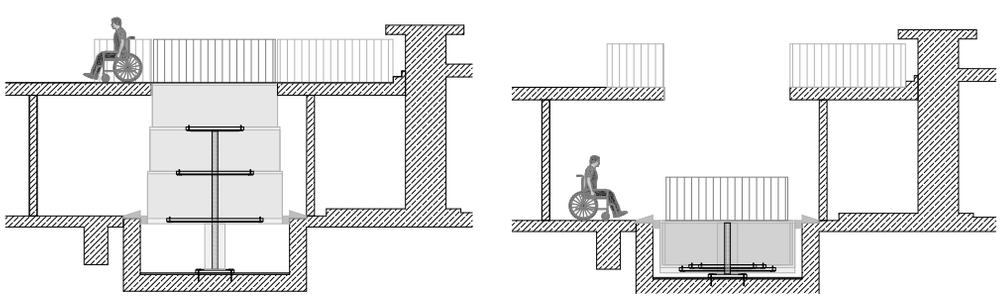


In the upper and lower church the aisles and the pews are completely rearranged. The existing stairs leading down to the lower church are removed. The space for seats in the upper and lower church is enlarged. A central platform in front of the altar provides access to the seats in the lower church. Following the church's original furnishing the pews are placed radially towards the centre. This orientation is emphasised by the position of the altar and the preacher in the centre.

Model of platform with hydraulic lift



Functional schematic of platform with hydraulic lift



The platform with a diameter of 2.58 m provides enough space for accompanying persons. An even, non-slip floor covering guarantees a high degree of safety.

A hydraulic lift moves the platform up and down stopping on three different levels. A hydraulic cylinder links hydraulic control and motor as already applied in many industrial sectors. We believe that in future hydraulic technology will also be used for public buildings.

Ramp

Design by Fidias Javier Curiel Castejon,
Felix Kambach, Robin Ruhnau and Jana Schall

Project 5 St Hedwig's Cathedral

Dividing the space into upper and lower church is an impressive concept for the cathedral's interior. The altar with cross and tabernacle forms the centre of the church. Originally, the congregation gathered around the altar in radially arranged pews. This arrangement is to be re-established.

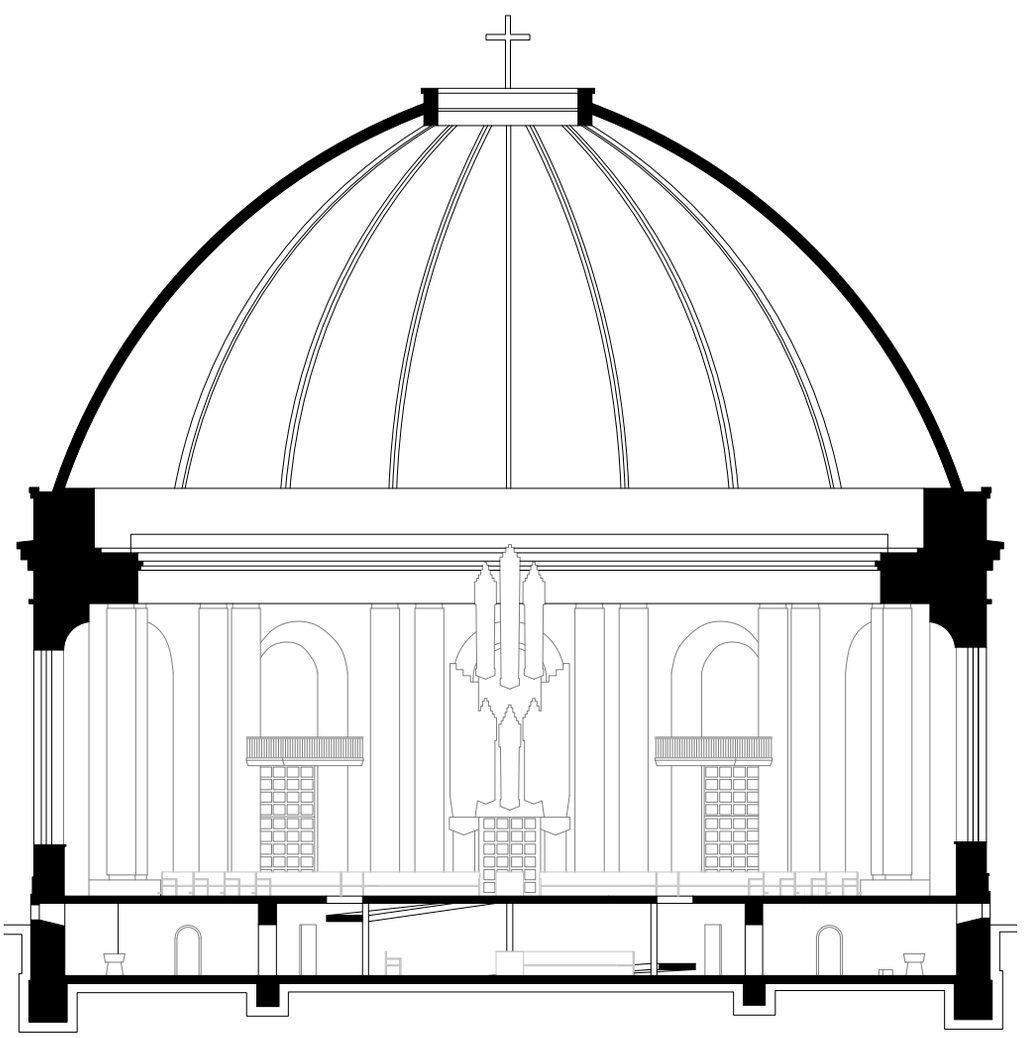
In comparison to the upper space the lower space appears more private and calmer. The two levels are facing each other and are connected by the altar. Today, broad stairs separating out into two flights of stairs lead from the upper to the lower church. At present, the lower church does not allow barrier-free access.

A round-shaped ramp as central connecting element is designed to enable all church visitors to be able to access to the lower church. Thus, the two levels will remain connected and two special new spaces are created.

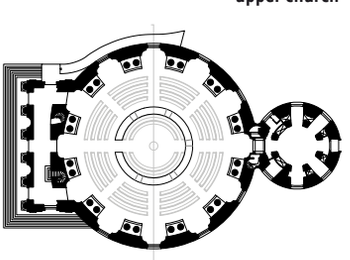
Model of the ramp

Visualisation of the ramp
in the lower church

Cross section
of the church



Ground plan of the
upper church



Centrally Symmetric Access

Design by Anna Katharina Blume,
Julius Blencke and Maximilian Kempf

Project 6 St Hedwig's Cathedral

The existing ramp which allows people with reduced mobility to enter only the main space of the cathedral is replaced by hydraulic steps built into the stairs of the main entrance. This creates a central entrance for everybody.

The added ramp is removed; instead, two ramps leading downwards are placed in a centrally symmetric position. The cathedral itself benefits from this alteration, as it lifts it visually from the city around it, In addition, and more importantly, direct access to the lower church is provided for the first time to people with reduced mobility. As upper and lower church had previously been separated as part of optimising the interior, this entrance will from now on serve everyone equally.

Interior

By installing a lift in the vestibule, access to the upper and lower storeys is possible without having to leave the church. The cathedral's interior benefits from the rearrangement in several ways.

Visualisations of the interior

The situation is improved for the entire congregation, not just for:

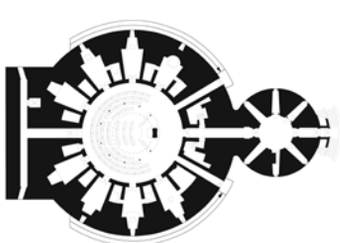
- visually impaired and blind persons who can use the floor joints which are aligned with the position of the pews as orientation. By closing off the opening to the lower church they are able to walk around easily in front of the altar
- people with reduced mobility who have more space for movement due to the wide aisles between the pews and the reopened main door
- those with hearing impairment, as a “tidier” and more harmonious sound is achieved by moving the choir upstairs.

The choir has now been placed as part of the congregation. The arrangement of the pews is more harmonious, and by separating the upper and lower church by means of a translucent floor these two spaces can now be used simultaneously without loss of visual contact.

The light coming through the opening in the dome shines all the way into the lower church and maintains the connection between the different levels.

Model of the ground plan

Ground plan of the lower church



Altes Stadthaus

Altes Stadthaus

Topography

After long discussions about the location Stadtbaurat Ludwig Hoffmann erected a second town hall between 1902 and 1911, southeast of the so-called Rotes Rathaus and beyond the Molkenmarkt.

This building in Jüdenstraße 34-42, which has since the end of the Second World War been called Altes Stadthaus (Old Town Hall), demonstrated the growing importance of Berlin's magistrate in the expanding imperial capital.

The building housed offices for one thousand civil servants and a grand hall. Inside, it was a modern administration building; outside, a prestigious Wilhelminian building.

The imposing structure, whose four wings and middle sections are based on the original block of streets, has a high rusticated base with pilasters and Tuscan columns on all four facades. It is divided up into side and central projections.

Above the triangular pediment of the main facade towards Jüdenstraße and resting on a cubic base, is a domed round tower accentuated by columns on two levels. Its shape resembles the towers at Gendarmenmarkt.

Great Hall (Bärensaal)

The rich sculptural decorations, originally consisting of 21 tower sculptures and eight colossal vases at the foot of the dome, were placed in open-air storage in 1976-77; only a few sculptures have been preserved. After the completion of the renovation works copies of these were placed in the original spots.

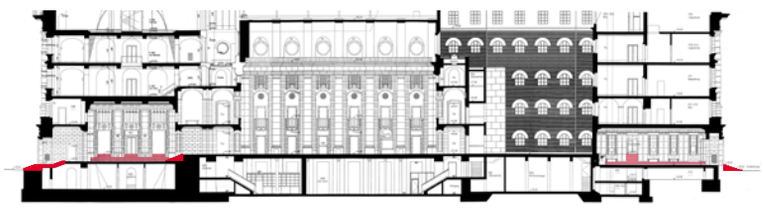
The tall mansard roof of the Stadthaus was replaced by an attic storey with hipped roof in 1960-61 when the building was converted to house the Council of Ministers of the GDR. In 1998-99 the roof's original shape was reconstructed on the western side of the building towards Jüdenstraße.

Originally, the Stadthaus was completely surrounded by buildings and narrow streets. For that reason Hoffmann designed the exterior (with the exception of the tower) to be seen from a short distance, not from afar. He decided that there was no need for a clear distinction of the storeys, a base and a much taller portal for the main entrance in Jüdenstraße.

The passer-by's gaze would therefore be guided up to the facade which was completed by a projecting cornice. By means of layered detailing which was skilfully applied, the facade's rustication and colossal order was reduced to a more human scale.

Altes Stadthaus

Cross section of the building with barriers marked in red

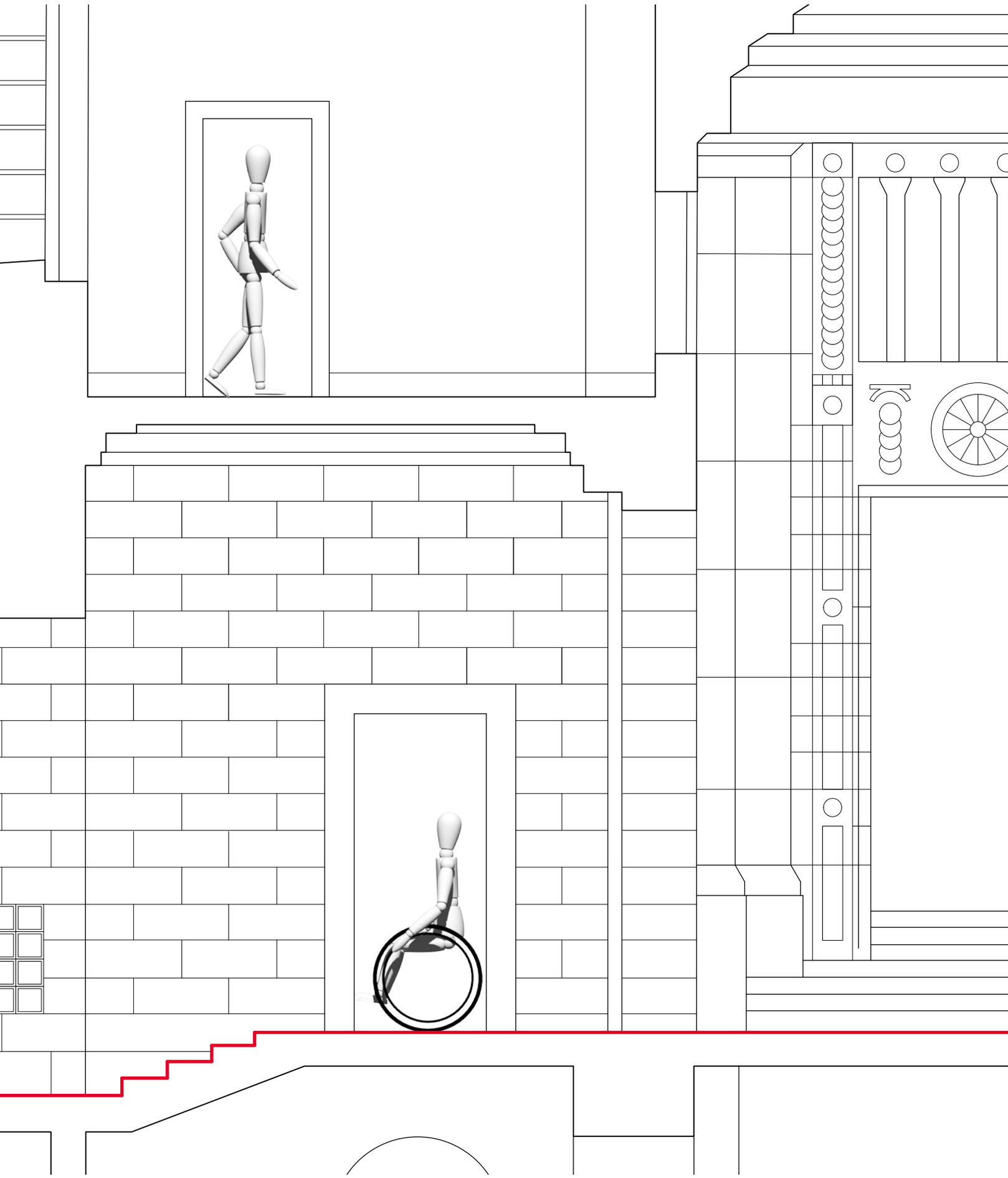


The angles created by the trapeziform ground plan and corner and central projections jutting out towards Klosterstraße and Jüdenstraße lead to interesting overlaps and enhance the main facades with a lively appearance.

The main facade and the tower could only be seen at the same time from the side and from a foreshortened perspective along Jüdenstraße.

The restoration of the imposing space on the ground floor of the middle section, the barrel-vaulted Great Hall (Bärensaal), providing space for 1500 people and with Art Nouveau decorations, was completed in 1999.

The Altes Stadthaus with all its artistic details is one of the most important works by Stadtbaurat Ludwig Hoffmann.



Ramps

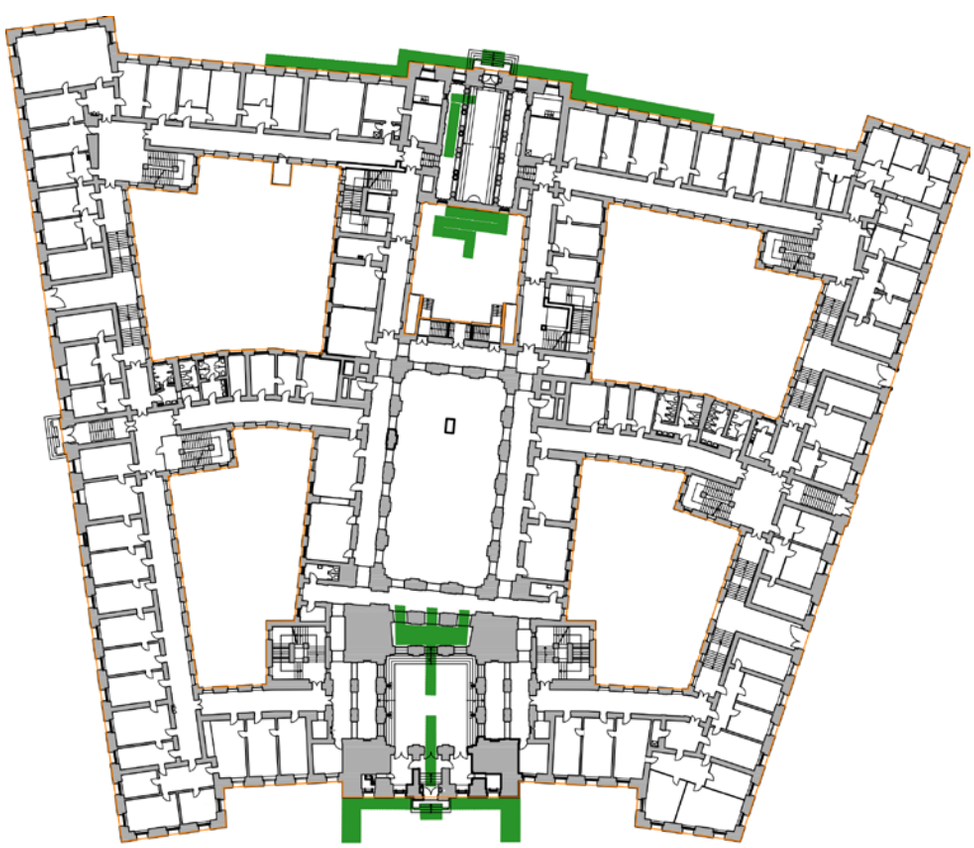
Designed by Markus Dreyer,
Benjamin Fink and Sebastian Labis

Project 1 Altes Stadthaus

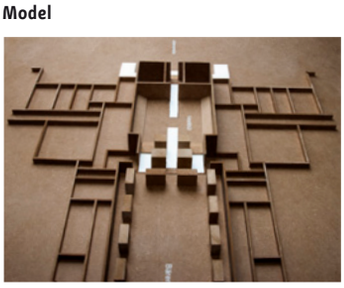
Although there are several lifts in the administration building, especially on the ground floor, access for people with reduced mobility is not possible without help from others. The staff entrance in Klosterstraße and the main entrance in Jüdenstraße can only be accessed by means of stairs.

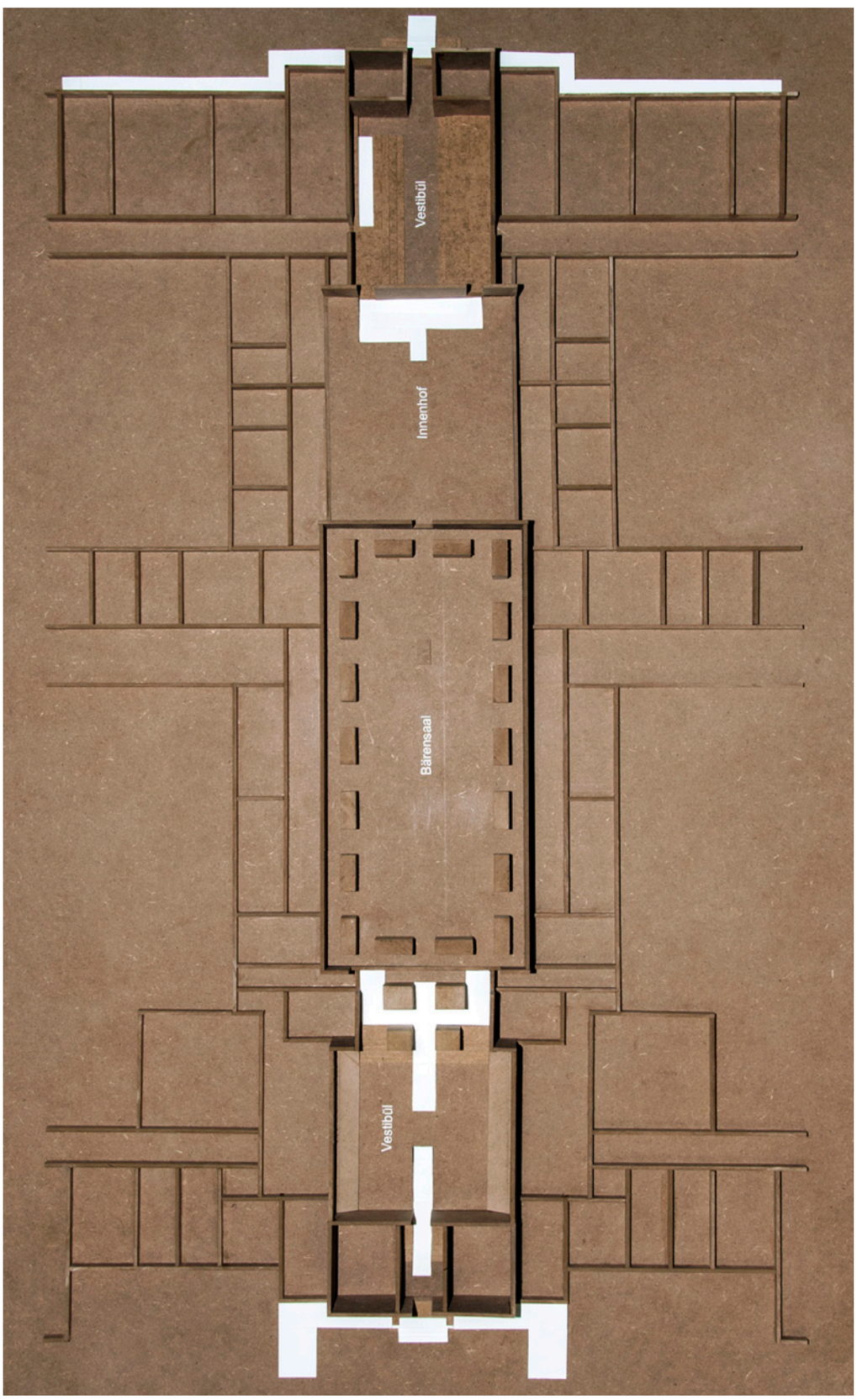
The goal of our project is to preserve as much building fabric as possible, considering that this is a listed building, while making the entire ground floor accessible. Ramps made of stone segments are added at both entrances in Klosterstraße as well as in Jüdenstraße and broader stairheads achieved by moving the steps forward. Material and width of the joints in the lower sections of the exterior walls are maintained. In the vestibule in Jüdenstraße ramps made of the same stone are added. Existing marble slabs are then placed on top and adjusted. In contrast, in the vestibule in Klosterstraße the aim is to reduce material. A ramp is cut out of the existing stone material, thus allowing barrier-free access to the inner courtyard. The window facing the courtyard is replaced by an opening down to floor level. There is another dug-out ramp which is covered with large stone slabs in place of the existing cobble stones. The Bärensaal as link between the two entrances and the levelled ground floor with its lifts now provide barrier-free access to the Altes Stadthaus.

Ground plan indicating the paths with ramps



Model





Model

Three Variations

Design by Josefine Nemetz, Maika Schulz and Christoph Hildebrandt

Project 2 Altes Stadthaus

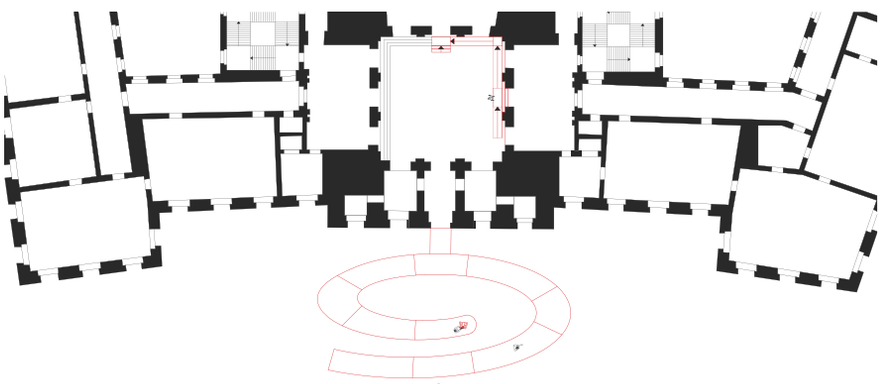
The actual distinguished entrance to the Altes Stadthaus is given a new appreciation through three designs for the space at the front, one being conformist, another reformist and the third confrontational. The emptiness of the existing square is filled by a variety of options for accessibility together with various information media, e.g. tactile models, information panels and advertising columns. This gives the building – especially the facade – more depth and makes it more attractive.

The square is divided into sectors by simple ramps and platforms restoring once again an orderly structure. The height difference in the levels between the exterior and the vestibule is evened out by means of barrier-free access outside the building.

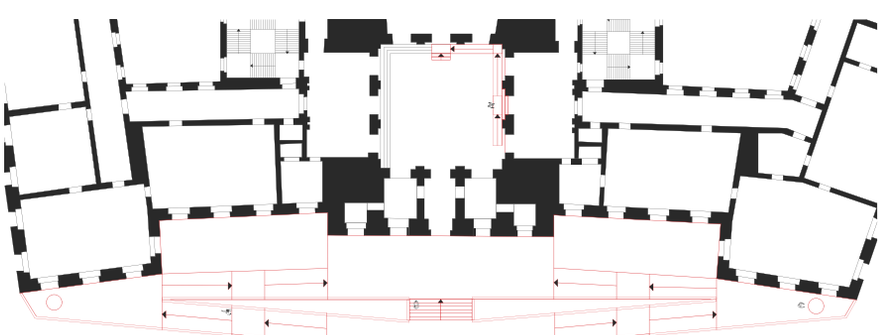
At public events, translucent concrete combined with a light installation consisting of guiding strips in the ground can also help provide accessibility. This also clarifies the difference between daily use and special use. The design can be adjusted to a specific type of use.

Model – confrontational design

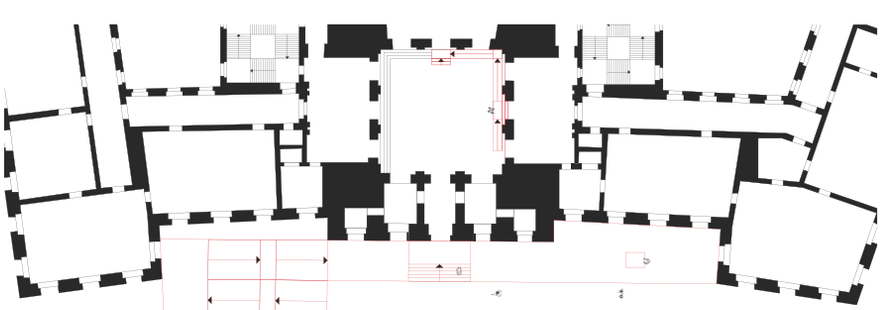
Confrontational design



Conformist design



Reformist design



Exhibition in the Vestibule

Design by Marina Kolovou-Kouri,
David Scharf and Josephine Fröhlich

Project 3 Altes Stadthaus

The focus of this project is the actual main entrance to the building, which is used by up to 1000 officials every day. In contrast to the imposing facade the two main stairs are hardly noticeable in the cityscape.

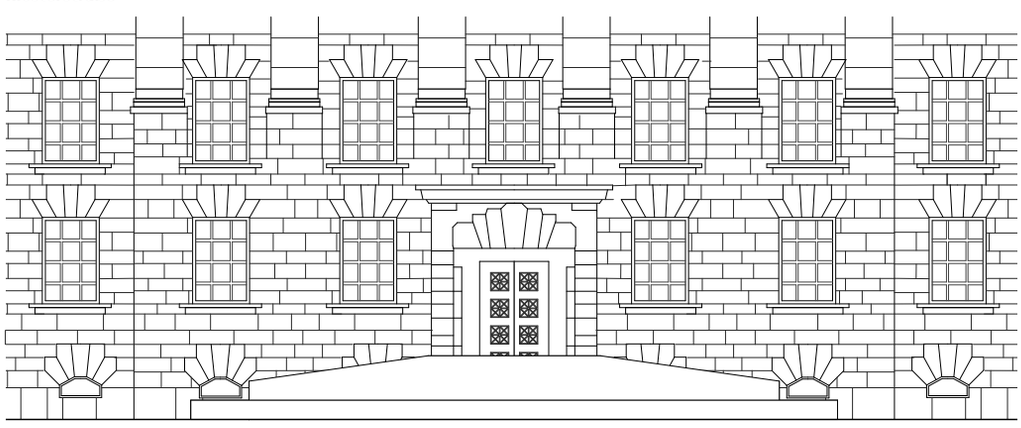
The top step of the existing stairs is 60 cm deep. Considering that a wheelchair user needs a movement area of 1.2 x 1.2 m this is not deep enough.

In our project a superstructure includes the entire existing stairs. With its classical design this barrier-free solution blends into the Renaissance facade giving it a dignified appearance in the cityscape. The gently inclining ramp and easily accessible stairs are hidden behind the facade. Two plain walls serve as both banister and protective upstand. Thanks to the slight slope of 4%, there is no need to include banisters and intermediate landings in the front section of the ramp.

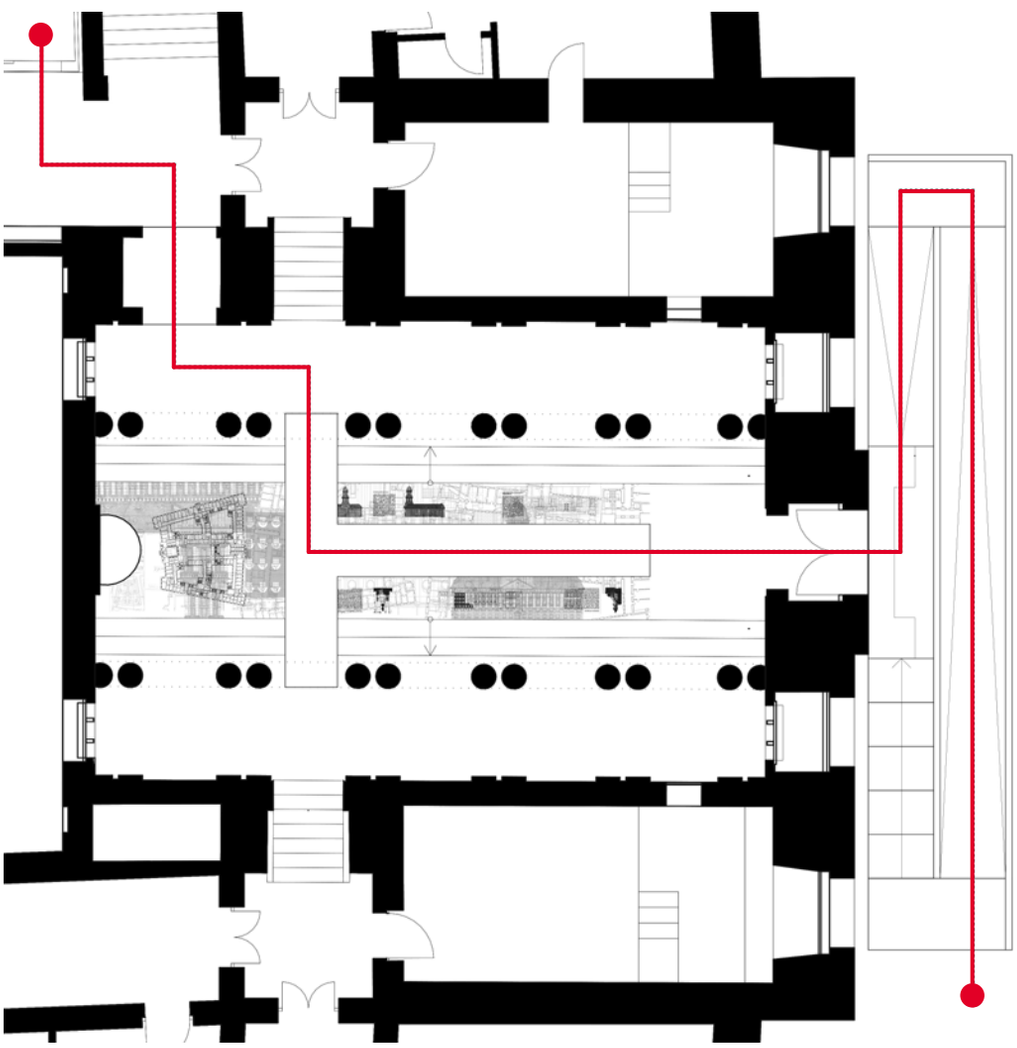
The grandly designed entrance hall is based on Roman palace architecture, its major decorative feature being a fountain on the main side of this space. On both sides of the hall there are colonnades. We want to enhance the status of this rather unattractive space by adding a T-shaped ramp that allows users to reach the next level without steps. A new lighting system gives this space, currently quite dark, a clear orientation. Furthermore, an exhibition space is created.

The current dazzling light from below is replaced by indirect lighting from above. This structures the space and improves orientation. By means of a hydraulic lift it is possible to reach the next level. The historic wall that needs to be removed is integrated into the hydraulic lift, thus preserving the perspective balance of the space. Security monitoring takes place via CCTV from outside.

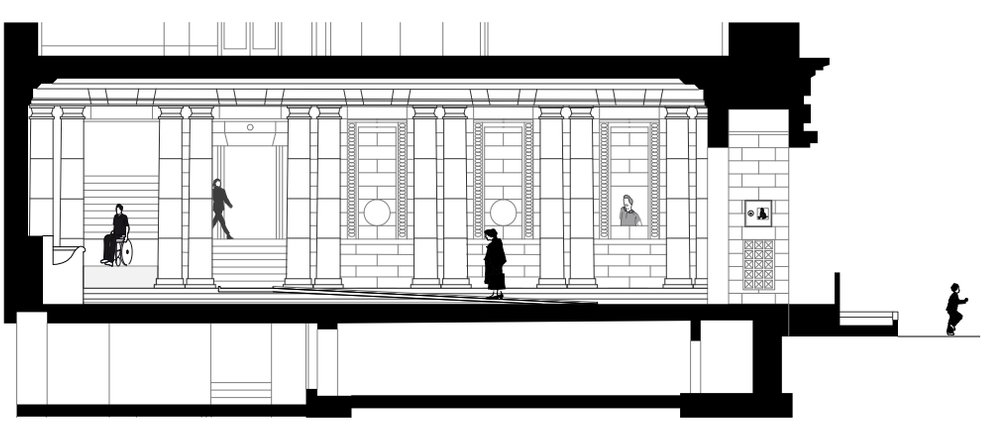
View of entrance
Klosterstraße



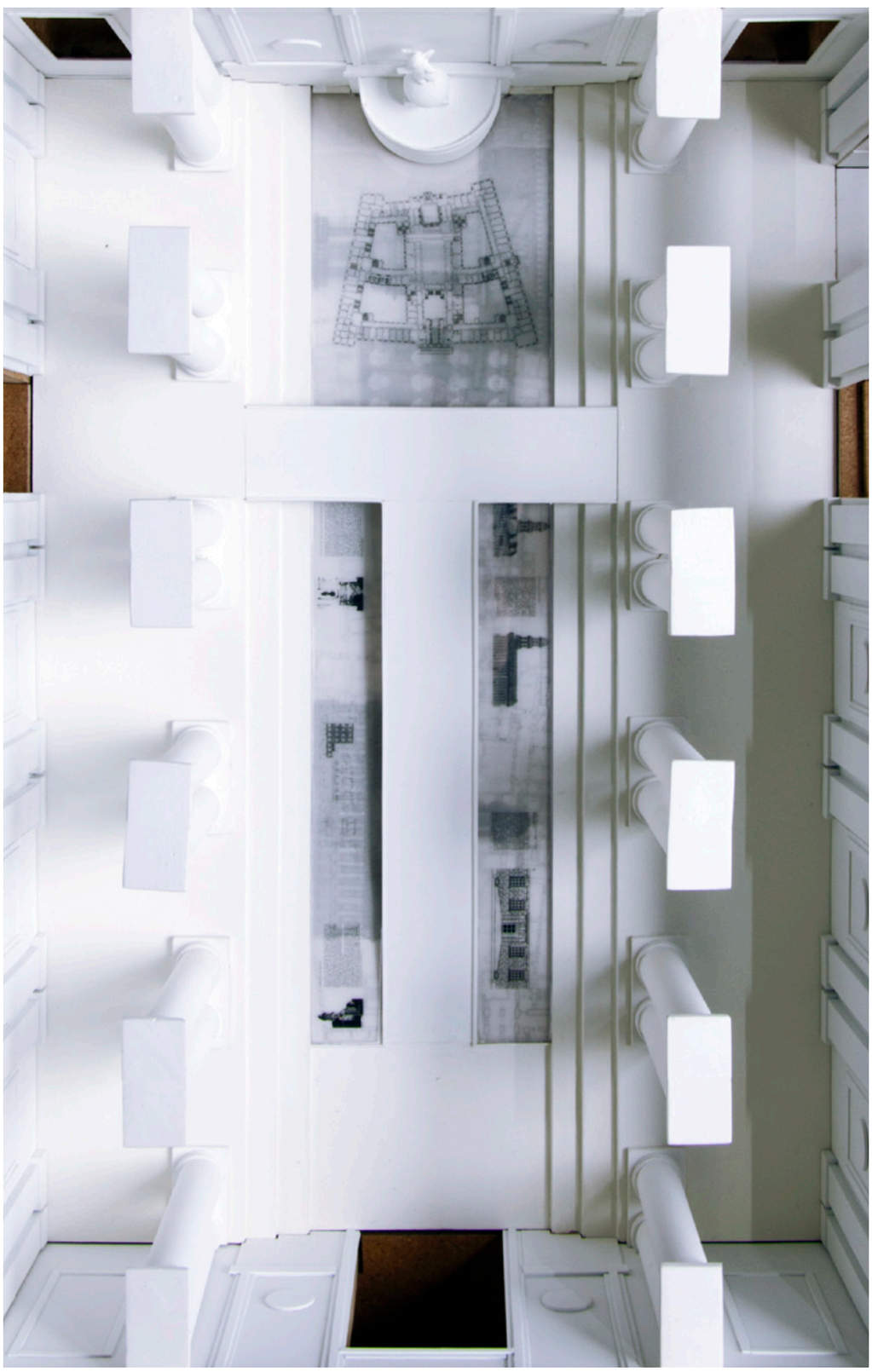
Ground plan of exhibition
in the vestibule, barrier-free



Section of exhibition in
the vestibule, barrier-free



Model of exhibition in the vestibule



Design by Esra Eldemir,
Ruven Rotzinger, Janine Henkel,
Ömer Acer and Friedrich van Berkel

Project 4 Altes Stadthaus

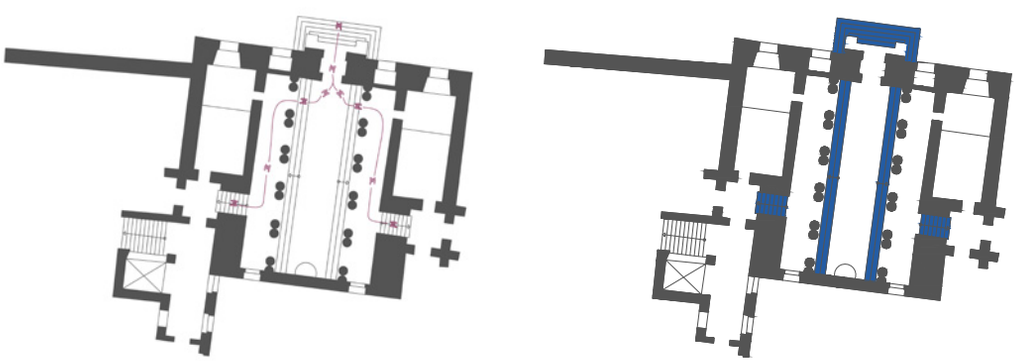
This project deals with how to make the main entrance accessible. At present, barrier-free access is not possible or only to a limited degree. Although there is an lift to the upper storeys, they cannot be reached by mobility impaired people using the stairs.

At the entrance to the building the existing stairs are moved towards the street providing space for a ramp. Inside the building, hydraulic steps are installed in the existing stairs.

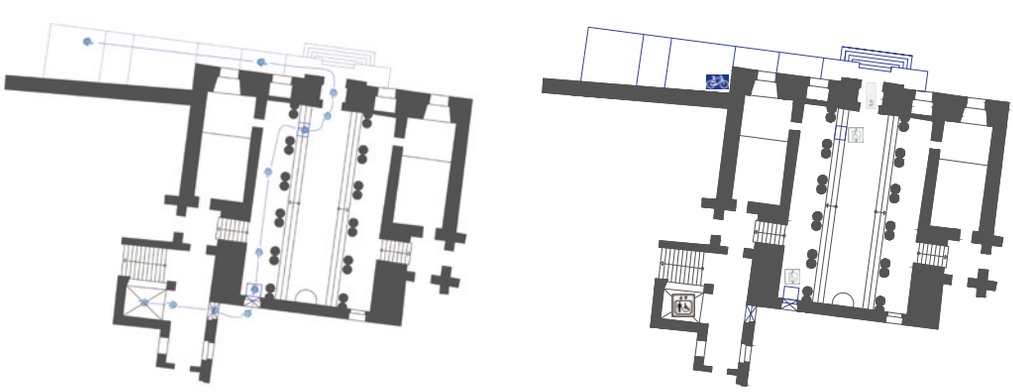
The steps can be lowered so that they form one even platform. This platform then rises to the level where the stairs finish.

At the rear window a hydraulic lift is installed. To be able to reach the lift without barriers the existing windows are changed into doorways.

Accessing the entrance area with barriers and stairs



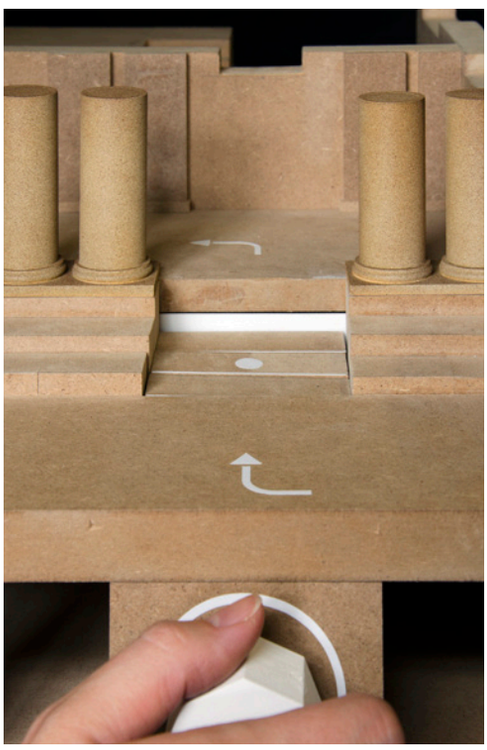
Accessing the entrance area without barriers

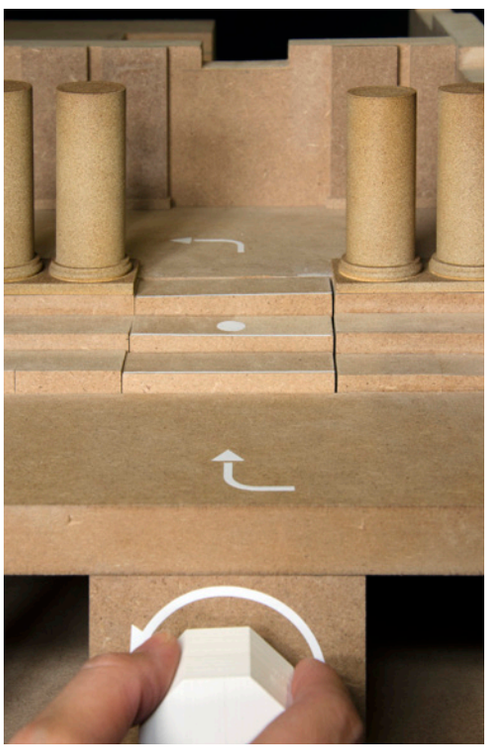


Access to entrance in Klosterstraße

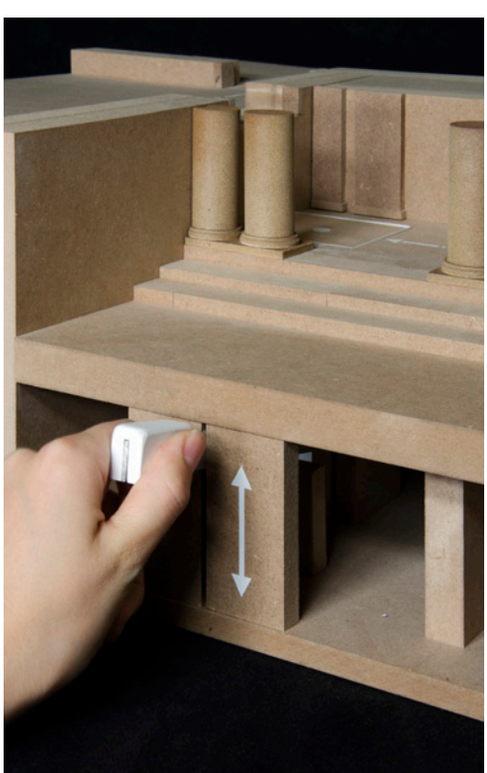
Access to vestibule in Klosterstraße

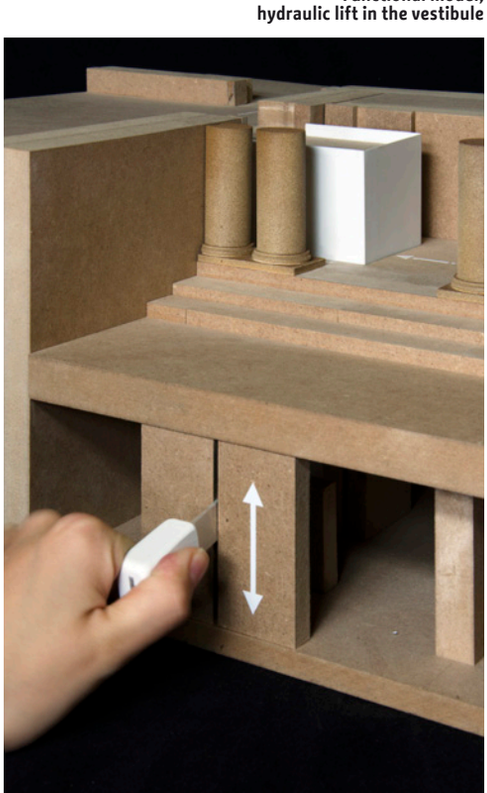
Functional model,
hydraulic steps in the vestibule





Functional model,
hydraulic lift in the vestibule





Neue Nationalgalerie

Topography

The Neue Nationalgalerie, Potsdamer Straße 50, built in 1965-68, is considered one of the great monuments of 20th century architectural history

Ludwig Mies van der Rohe, who had emigrated to the United States in 1938, was commissioned to do this work in 1961 on the occasion of his 75th birthday. The Senate of Berlin had also intended this to be a belated expression of appreciation for this architect who had been driven out by the Nazis. In spite of the very modern appearance of the Neue Nationalgalerie (New National Gallery), Ludwig Mies van der Rohe's design referred to the classical tradition

Frontal view
Neue Nationalgalerie

of European architecture, especially to the work by Karl Friedrich Schinkel. It is a modern version of a classical temple. On top of a granite-clad base forming a wide terrace Ludwig Mies van der Rohe placed a free-standing exhibition hall, glazed in its entirety, on a square ground plan. The projecting flat roof structured like a grid rests on eight anthracite-coloured steel posts. Already in the 1950s, the architect had developed the idea of a large square roof on eight pillars. The temple-like building of steel and glass which can be accessed via wide flights of steps combines opposing principles of architecture, i.e. monumentality and transparency. On the one hand, the building dominates the cityscape; on the other hand, the glass fronts provide a seamless transition from the interior to the exterior.

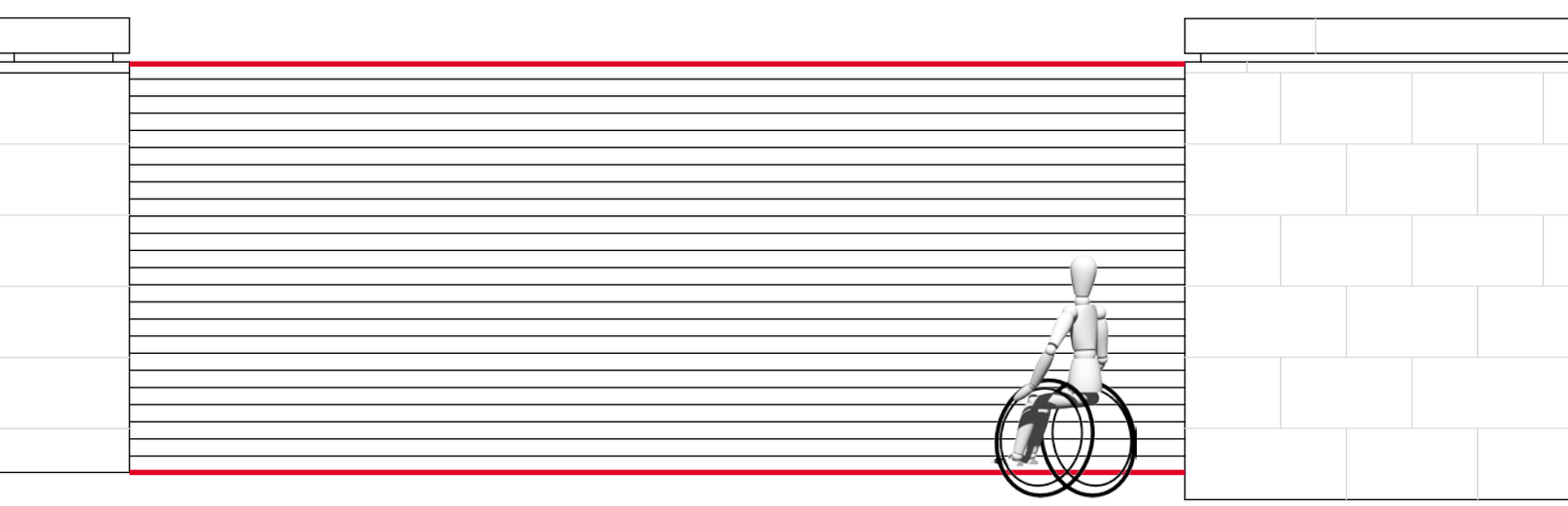
Neue Nationalgalerie

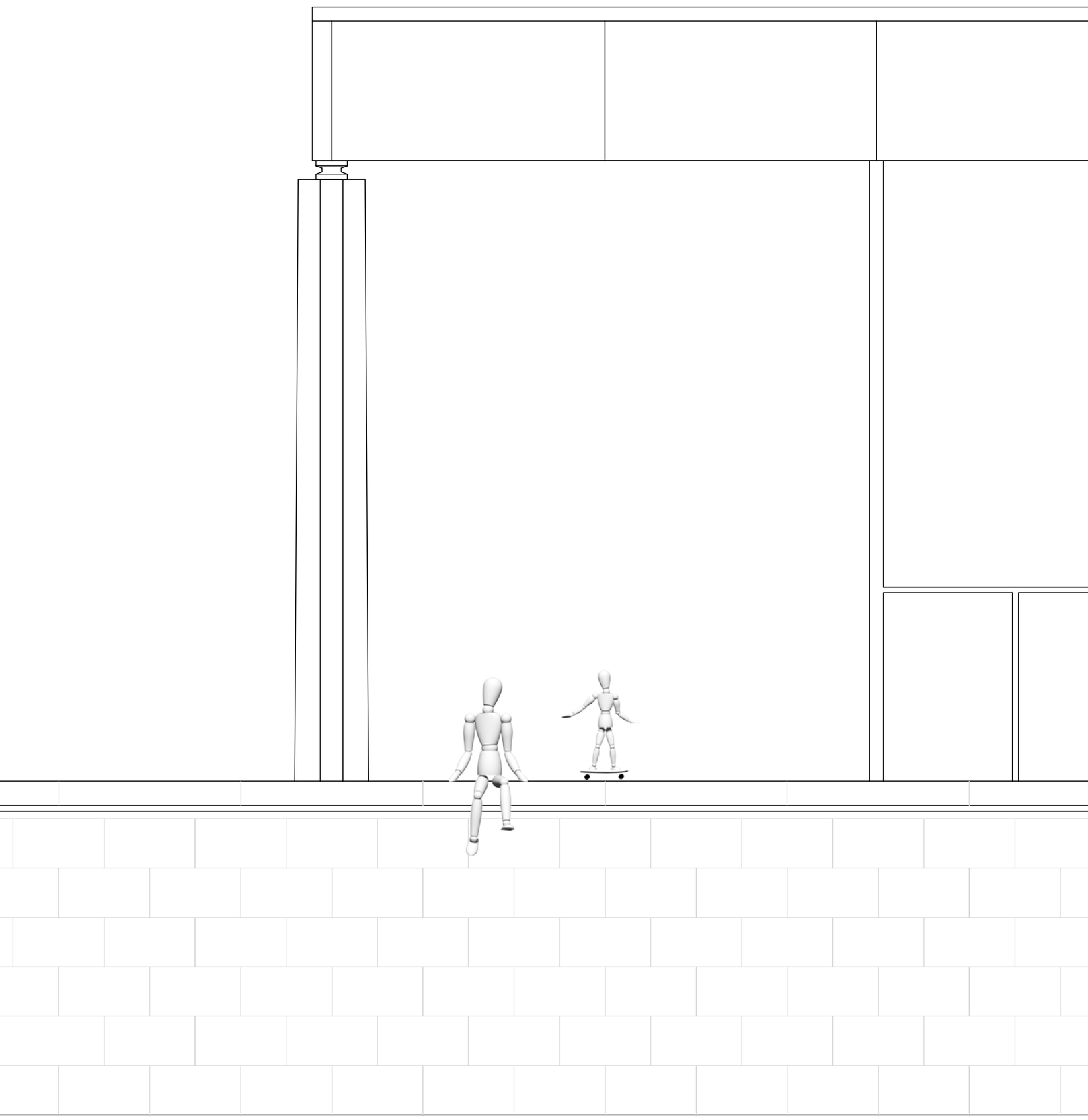
Frontal view and longitudinal section of the building with barriers marked in red

Owner: Bundesamt für Bauwesen und Raumordnung / Drawing: adb Ewerien und Obermann Architekten

Ludwig Mies van der Rohe perceived the temple-like hall as “absolute architecture”. The column-free, adaptable interior was designed as exhibition hall. The actual museum space, the offices as well as the library and storage area are situated in the largely windowless semi-basement.

There is a walled sculpture courtyard connected to the museum building. Its granite-slab covering has several rectangular openings for plants and a water basin. Mies van der Rohe also designed the external area which emphasise his comprehensive artistic objective. The terrace, the sculpture garden and the tree-covered outer areas are all based on a strict geometrical basic grid. This grid provides a scale which enables the spectator to comprehend the dimension of the building. To a considerable extent, the image of the Neue Nationalgalerie is characterised by the tall sculptures on permanent display on the terrace. With their organic forms they are a dynamic contrast to the geometrical and austere steel-and-glass architecture. This applies to the biomorphic, expansive steel sculpture by Alexander Calder (“Têtes et Queue”) of 1965 and the bronze sculpture “Three Way Piece No. 2: Archer” of 1964-65 by Henry Moore, made up of rounded shapes.





Ramp

Design by Leon Giseke,
Luisa Hansel and Betül Ergin

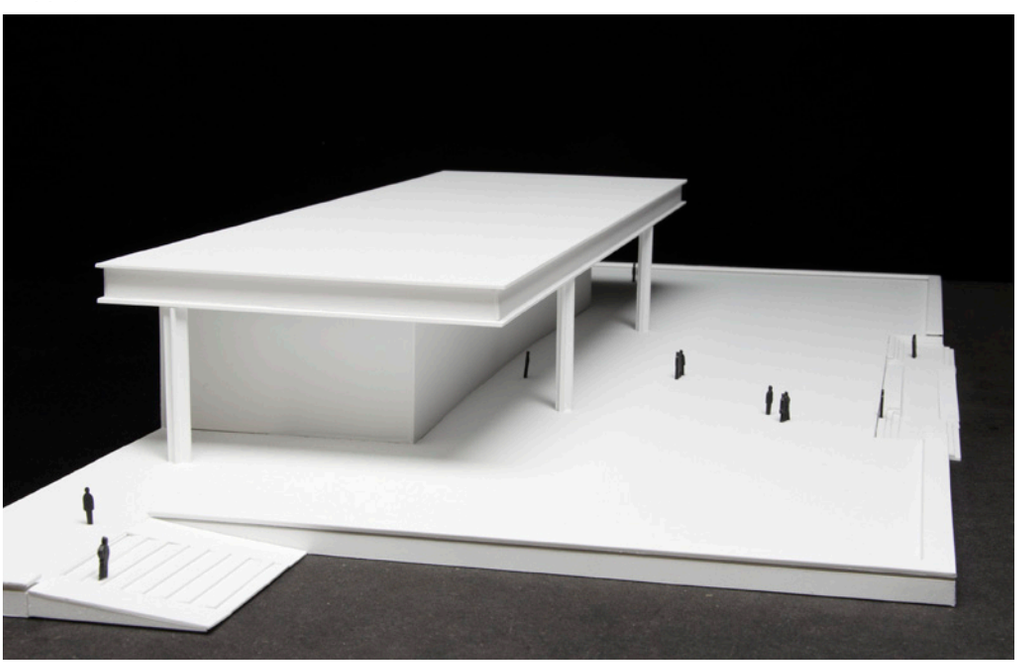
Visualisation of ramp project

Project 1 Neue Nationalgalerie

The concept reflects the specification by means of selective, focused interventions in different parts of the building. Among these are the installation of a passenger lift in the main entrance and a hydraulic lift at the southeast entrance to the sculpture garden.

Barrier-free access to the main entrance on level 0 is provided by a long, flexible ramp at the centre of the main stairs. In addition, audio guides and RFID technology as well trained staff are helping to make the inner and outer areas of the museum accessible in line with “design for all” and without the need for additional constructional interventions.

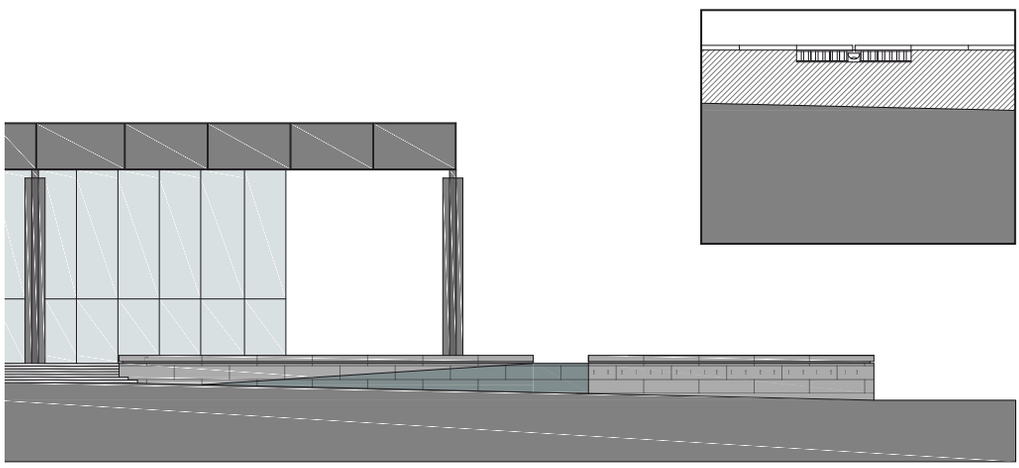
Model of ramp project



Luminous Guidance System

Design by Mai Tran, Armina Liukaj, Francesca Baldi and Dario Attico

View and detail of guidance system



Project 2 Neue Nationalgalerie

A system of fluorescent strips guides visitors from the urban space into the museum.

The luminous guidance system follows the existing joint pattern, which means it is integrated into the existing joints.

The barrier-free path leads to the lift inside the building via centrally symmetric ramps fitted into the existing stairs. Illuminated ramps made of glass on both sides of the main stairs preserve the symmetry of the entire building complex.

Model with guidance system

Ramp cut into Structure

Design by Evamaria Christel,
Maren Krause and Martin Kupfernagel

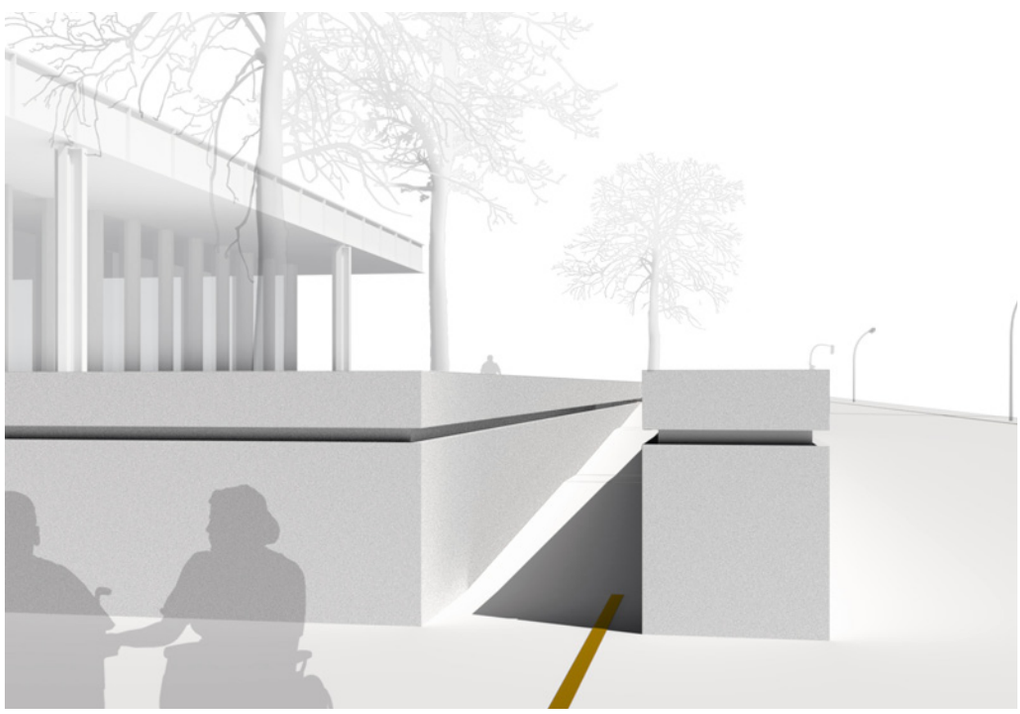
Project 3 Neue Nationalgalerie

The museum is accessible to everyone thanks to a guidance system leading visitors safely from the urban space into the building and out again.

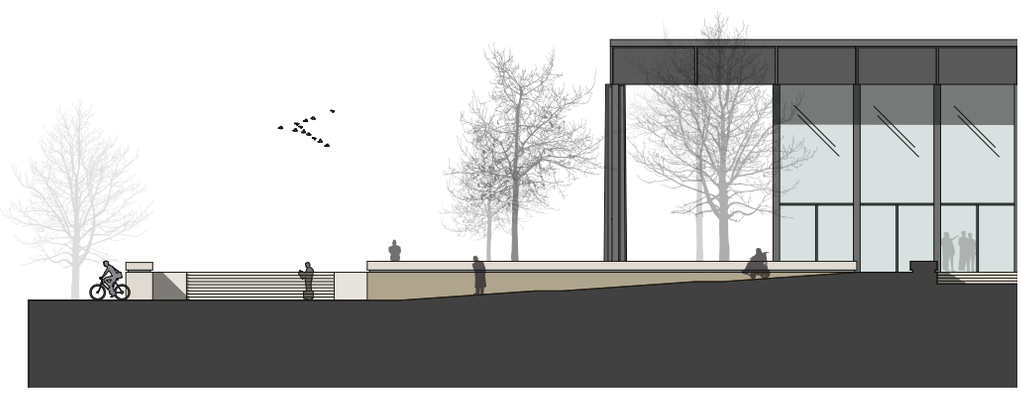
A respectful handling of the listed building, in accordance with Mies van der Rohe's design, is of great importance for any architectural interventions.

The overall concept is not supposed to be compromised by annexes or conversions while alterations are to be clearly recognisable. This guiding principle led to the idea of a ramp gently cutting into the structure for making the higher platform accessible.

Visualisation of the cut



Section of the ramp

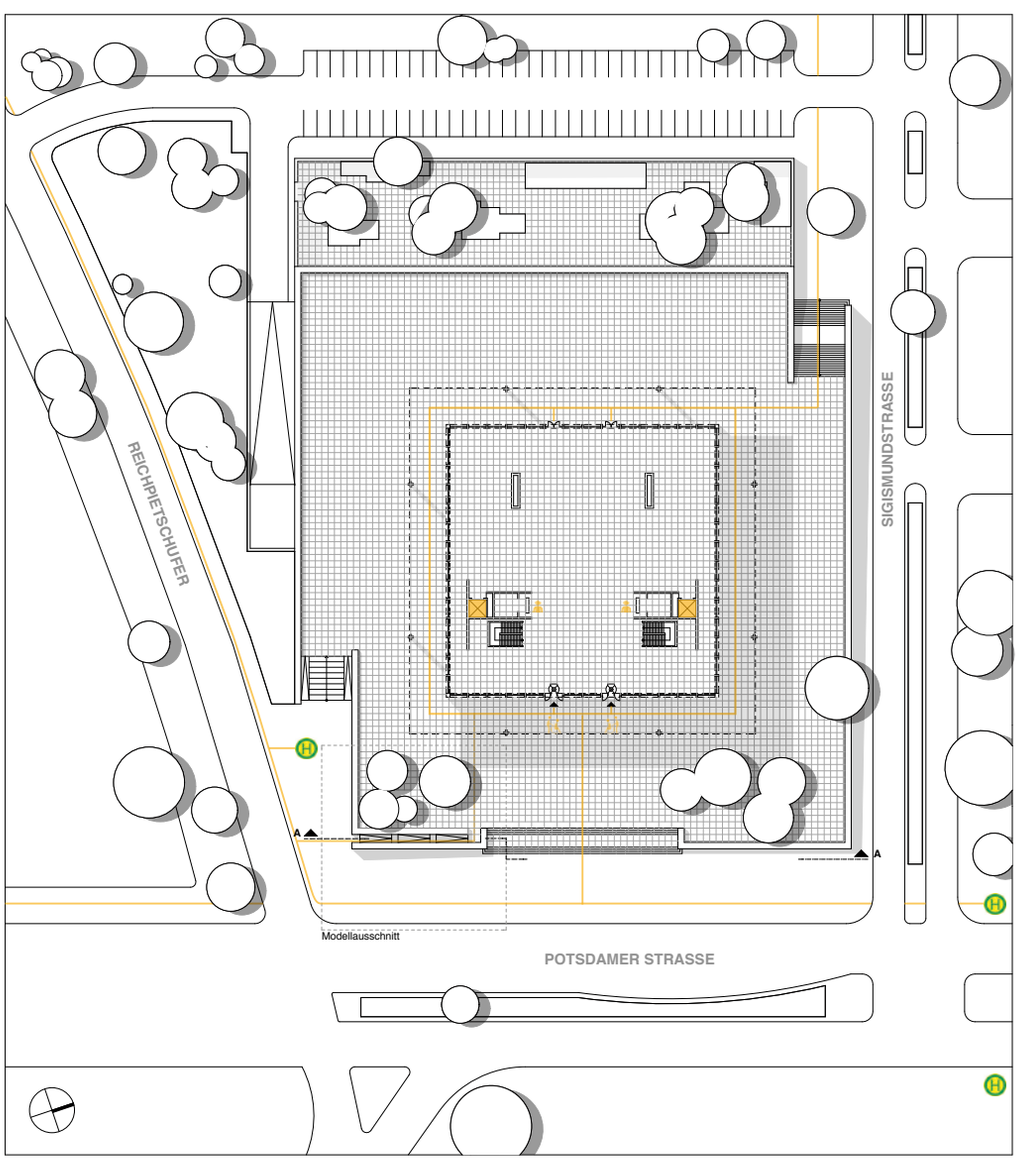


This cut will enable visitors to visualise the original picture. Moreover, the surfaces will be of a different material - this will offer a clear distinction between existing fabric and intervention.

The design of the ramp is based on the parameters of the existing structures; it gently fits into the width of the joints used for the exterior areas.

On the surface of the ramp the joint pattern of the existing structure is adopted. The guidance system continues on upwards to the surface of the platform. No visible structural interventions are planned in the exhibition areas so as to preserve the original appearance of the interior.

Ground plan
of the ground floor



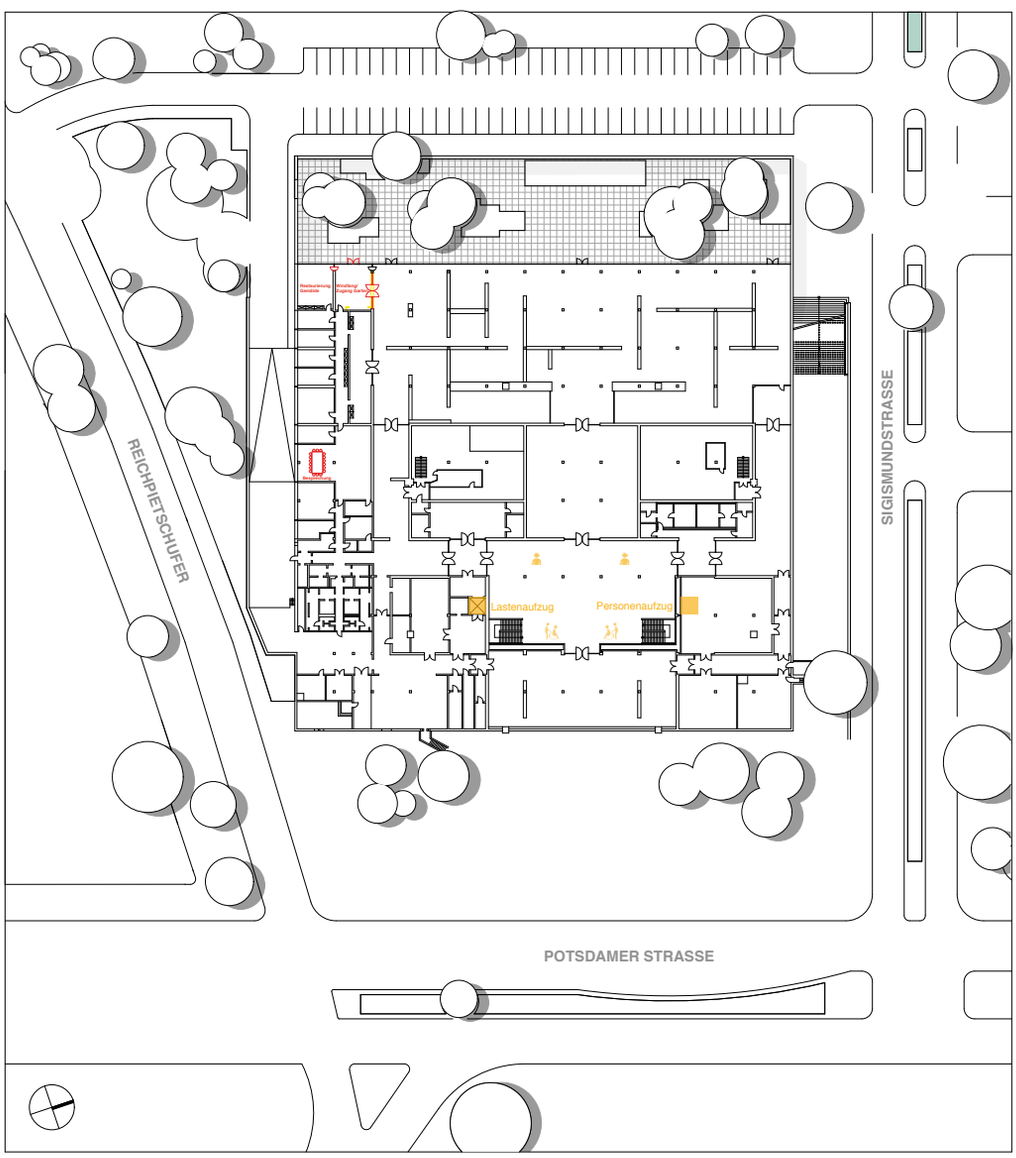
From main and side entrances trained staff or technical equipment such as audio guides will provide further guidance for visitors.

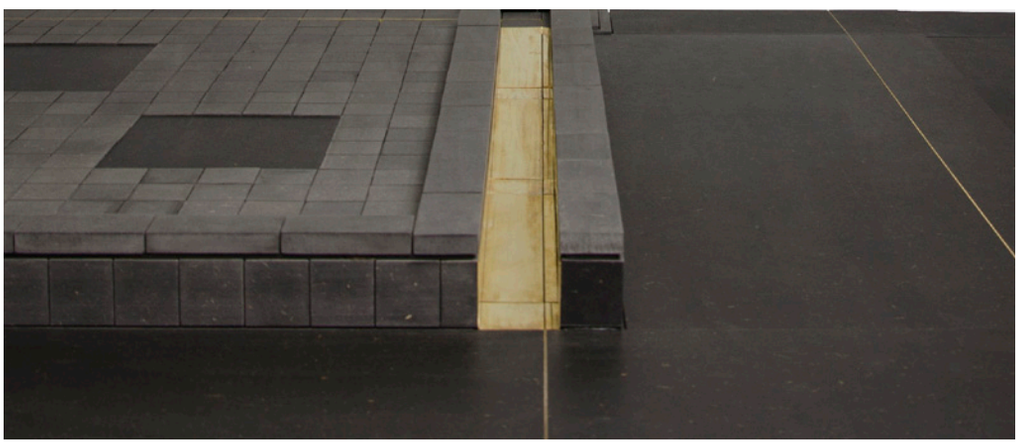
Visually impaired people orientate themselves by means of acoustic signals in the floor. Concealed hollow floor slabs can be used for different sound signals which are picked up by a white cane.

A passenger lift opposite the goods lift provides access without barriers to the exhibition space.

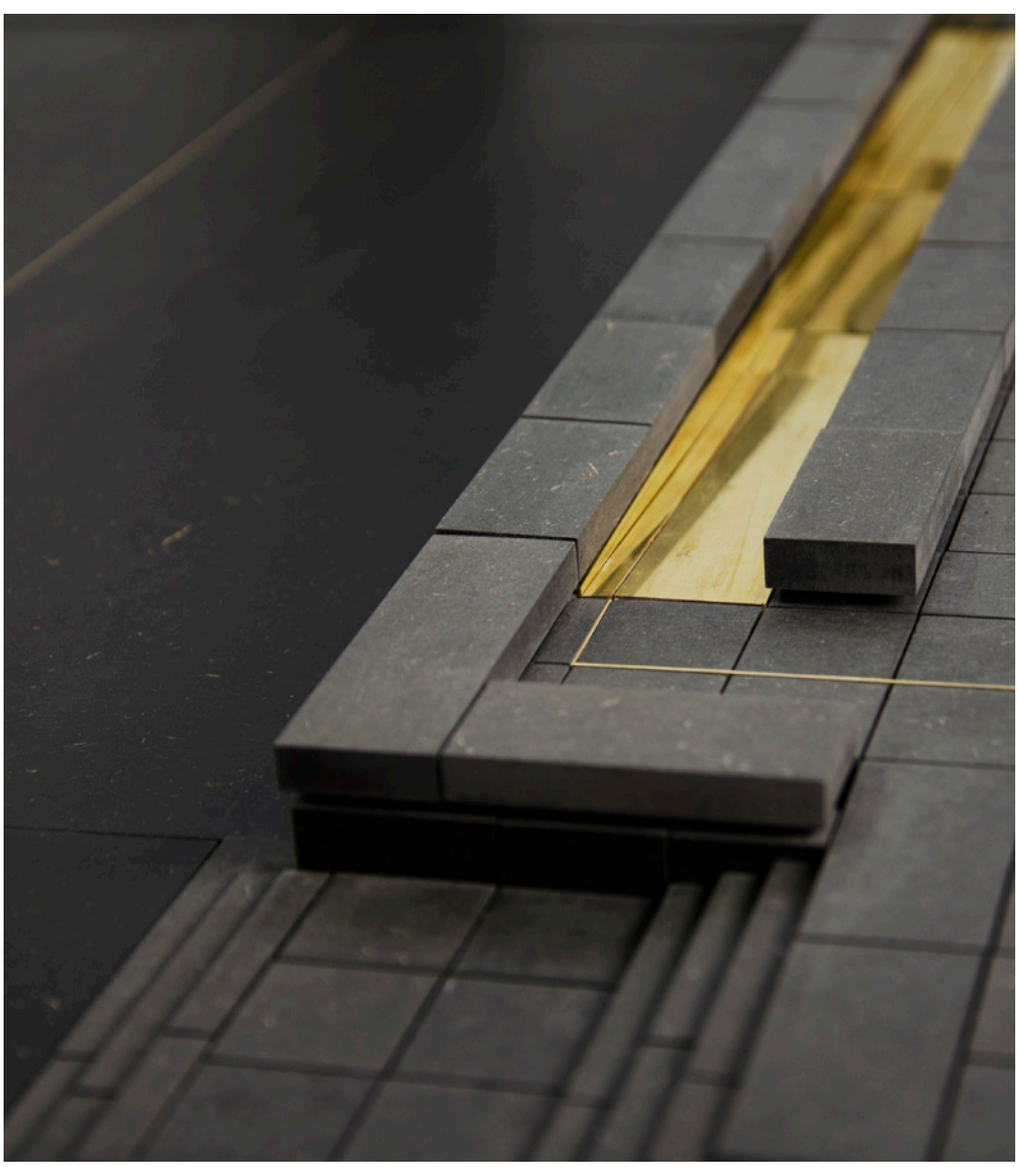
The conversion of rooms in the semi-basement into a vestibule creates access to the sculpture garden, thus leaving the listed glass facade as it is.

Ground plan of the semi-basement





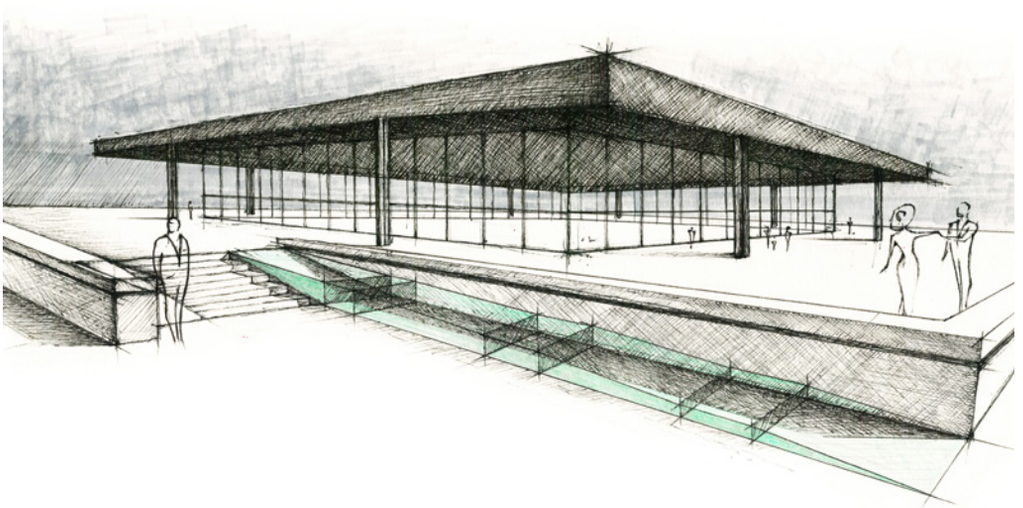
Model



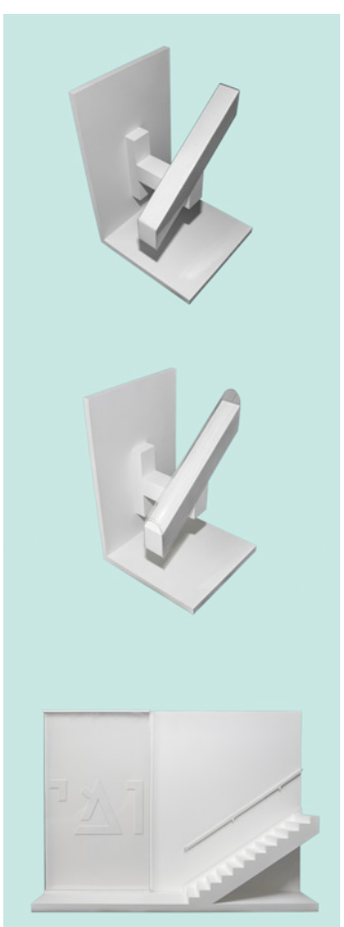
Transparency

Design by Marc Wendland, Argyn Rakhimov and Teymur Osmanov

Perspective of the exterior with ramp



Models of the stairs inside and of the handrails



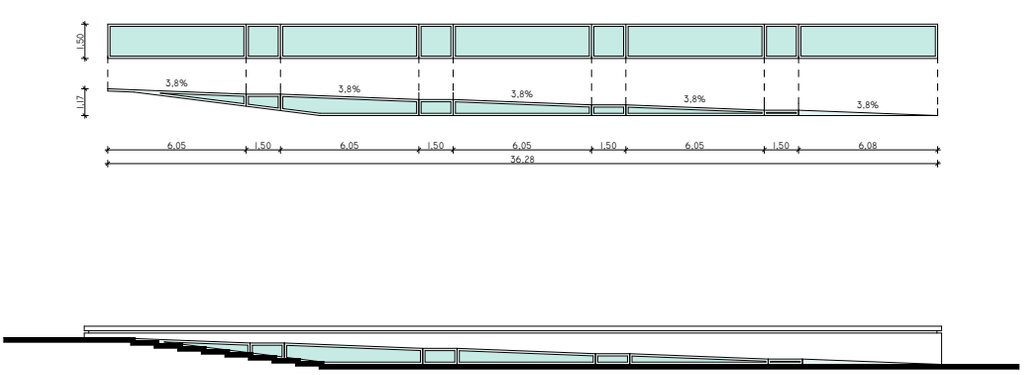
Project 4 Neue Nationalgalerie

The Neue Nationalgalerie, marked by the excellent translation of Mies van der Rohe's architectural vocabulary, the distinguished structural elements and the flowing spaces, is considered to be one of the icons of modern architecture. The coherence of the overall concept and Mies' clear lines also provided the motto for making the building accessible.

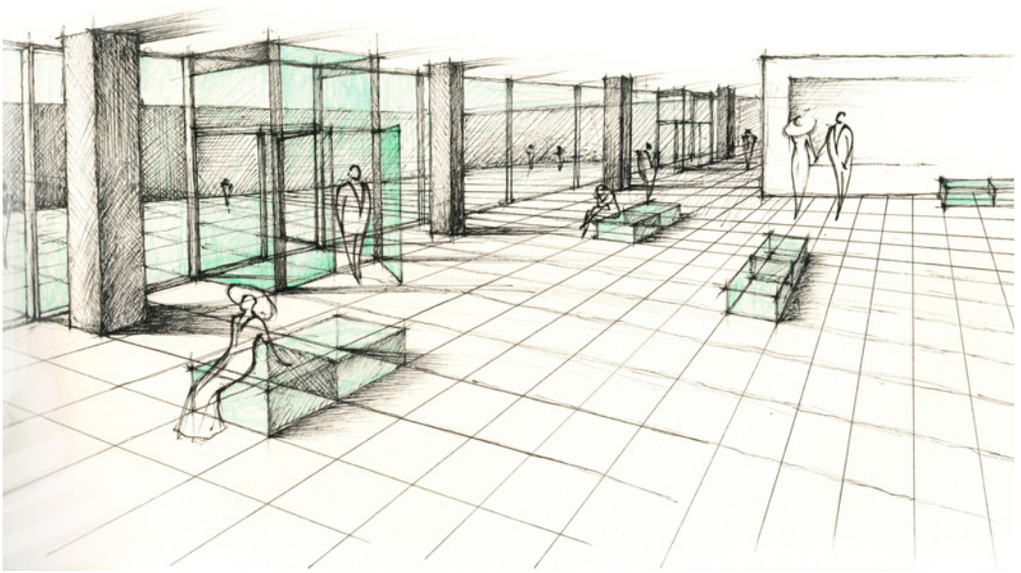
Various larger and smaller structural measures fit into the concept elaborated by Mies van der Rohe. They blend in seamlessly and subtly into the architectural context while yet being recognisable.

To make the various structural alterations visible and at the same time keep them inconspicuous, we decided to have transparent structural elements throughout the building.

Inclines of the ramp



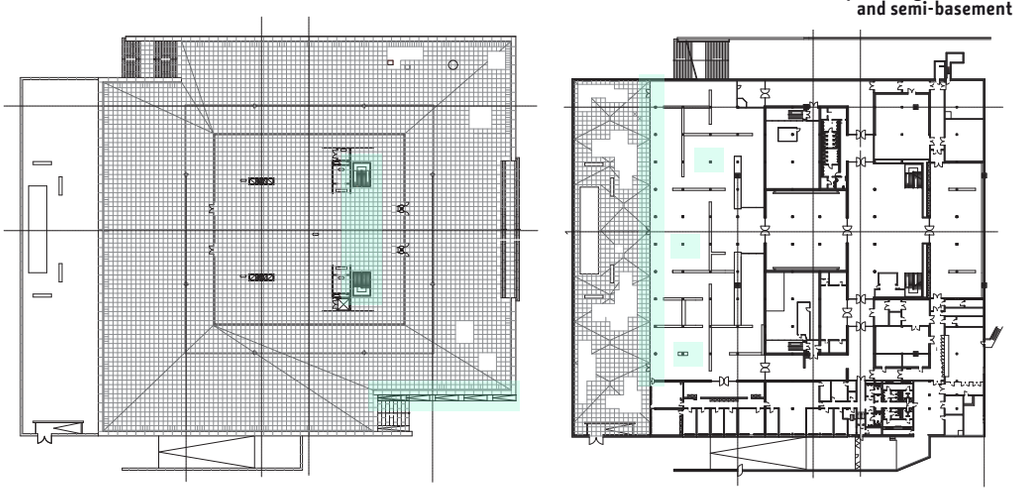
Perspective of the inside exhibition area



The structural interventions comprise the following measures:

- Barrier-free access to the platform by means of a ramp
- Fitting handrail sheathing to the sharp-edged handrails along the stairs in the foyer
- Eliminate risk of injury by removing the steel barrier projecting into the space in front of the first step of the foyer stairs; remove trip hazard by installing a floor-to-ceiling glass pane
- Install glass cube seats in the entire exhibition area and create two vestibules allowing use of the walled sculpture garden

Ground plans of ground floor and semi-basement



Symmetric Ramps

Design by Matthias Franke,
Nefeli Konstantopoulou and Tobias Zahn

Project 5 Neue Nationalgalerie

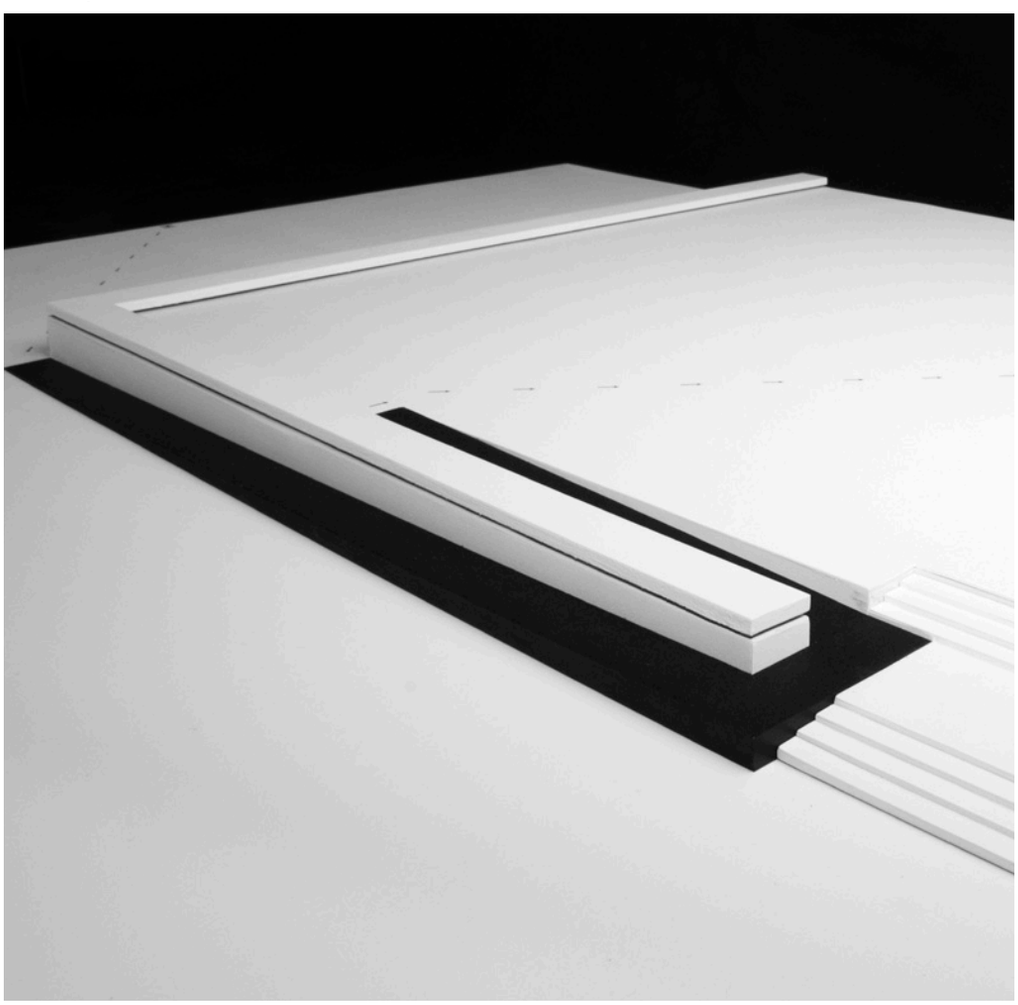
The building's architectural relevance and its legal status as a listed monument demands great care with regard to altering the exterior and adding extensions.

To preserve the appearance of the existing building and to work in accordance with the original design simple ramps are constructed along the base of the building, parallel to Potsdamer Straße.

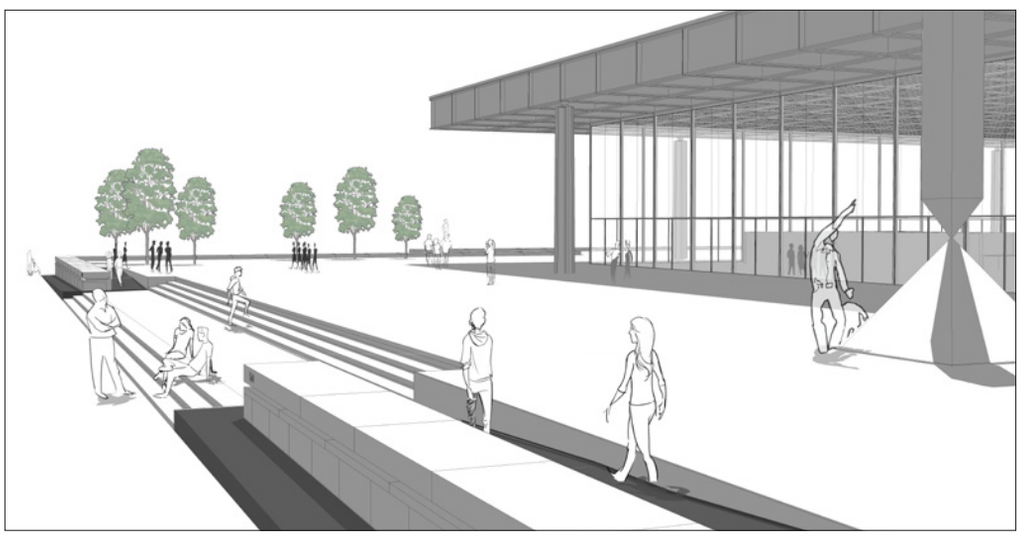
These ramps are made of the same material as the existing base. The landing in the central axis of the main entrance is designed to serve as the ramps' intermediate landing.

Starting from the intermediate landing, the ramps cut into the base behind the existing sheathing and run in a centrally symmetric way towards the entrance on the access level. This could be a solution to preserve and continue with Mies van der Rohe's unique artistic style outside, while yet making the building accessible to all.

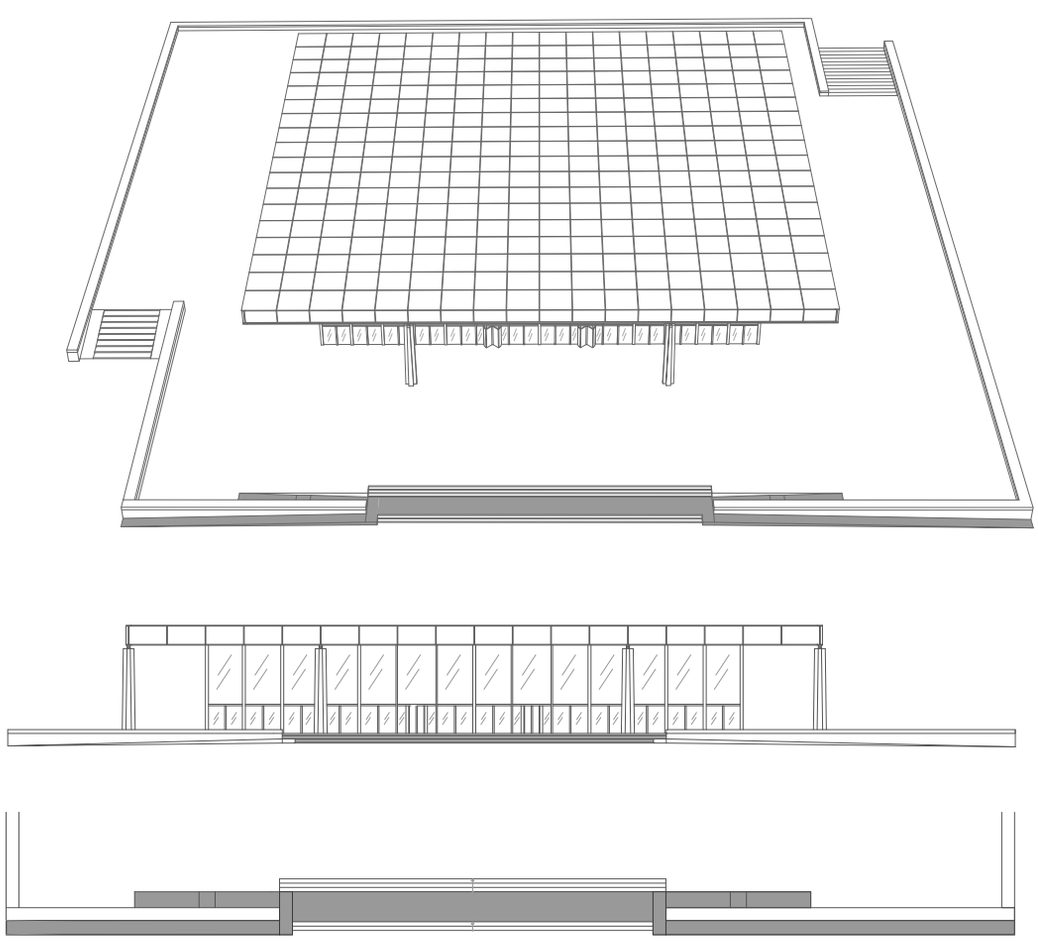
Model of the ramp



Perspective of the outside area with ramp



Perspective of the entire complex



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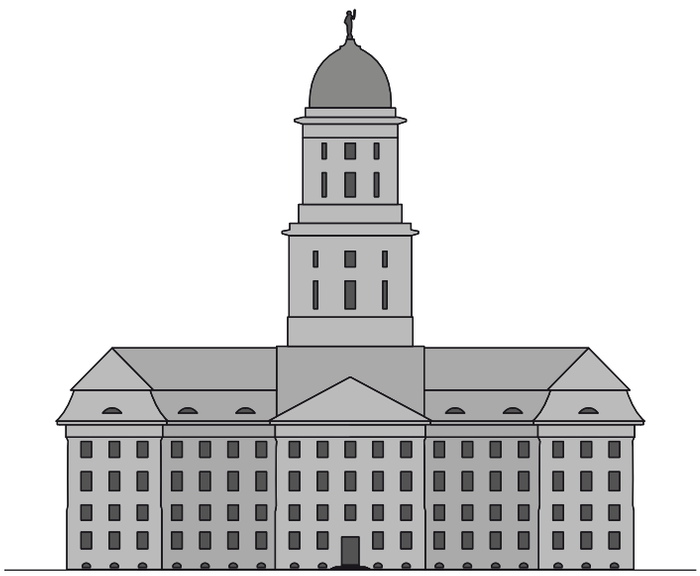

More than 50 students of the Technical University Berlin analysed monument protection objectives with regard to overcoming potential barriers, using the examples of the Neue Nationalgalerie, St Hedwig's Cathedral and the Altes Stadthaus in Berlin. They had a basic knowledge of barrier-free building. Part of the aim of the task was to preserve the original fabric and the cultural heritage; however, students needed to adapt some of the features to meet contemporary social requirements to constitute a "design for all".

Berlin

Senate Department
for Urban Development
and the Environment

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