

ARCHITECTURE





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"The reconstruction creates a fresh experience and understanding of the relationships between the most prominent sites and buildings in central Berlin. The open portals connect the squares around the castle to its inner courtyards to form a spacious public space in the heart of Berlin."

Franco Stella

Since the 18th century, the Berlin Palace, created by architect and sculptor Andreas Schlüter, has been regarded as one of the most notable secular Baroque buildings north of the Alps. Gutted by fire and partially destroyed following bombing raids in February 1945, it was demolished in 1950. In this, its new incarnation, created by architect Franco Stella, the building's architecture, urban design and content all combine to forge connections with the present.

FROM THE BERLIN PALACE TO THE HUMBOLDT FORUM

Here, where the newly-built palace now stands in Berlin Mitte, is where Prince Elect Friedrich II laid the foundation stone for his new residence on 31 July 1443. 'Zwing Cölln' was the name given to the complex which served to emphasise the Hohenzollerns' claim to a permanent residence in the new twin city of Berlin/Cölln, and to develop it into a royal abode. In the decades that followed, the complex underwent continual expansion and rebuilding by the Brandenburg prince electors, and gradually developed into a Renaissance palace.

Under Prince Elector Friedrich III – King Friedrich I in Prussia from 1701 onwards – it underwent its most significant transformation in artistic and historical terms: the palace became the king's residence. The architect and sculptor Andreas Schlüter set altogether new standards by partially encasing the building with a Baroque façade based on Italian examples. With its Schlüter courtyard, opulent façades and inner rooms, the Berlin Palace was regarded as one of the most notable examples of secular Baroque architecture north of the Alps. It subsequently developed into an urban centre and architectural reference point for the Baroque city's increasing expansion to the west. The subsequent construction of the Eosander Portal and the dome also opened up the urban space along Unter den Linden.

Severely damaged in World War II, the palace was demolished in 1950 at the instigation of Walter Ulbricht, and the cleared space was used as a festival and parade ground. In 1976, the Palace of the Republic was built on the eastern part of the former palace site. Asbestos contamination in the Palace of the Republic led to the closure of the building in 1990; following a resolution of the German Bundestag in 2003, the building was demolished between early February 2006 and early December 2008.

Reasons for the closure and demolition of the palace had mounted early on in the 'palace debate'. In 2002, the German Bundestag decided by an almost two-thirds majority to reconstruct the Berlin Palace's Schlüter Baroque façades. In doing so, it was following proposals from Historische Mitte Berlin — an international commission of experts — for its utilisation as the Humboldt Forum in the Berlin Palace.

THE DEBATE



© Stiftung Humboldt Forum im Berliner Schloss / Catherine Feff / SHF / Photo: Alexander Schippel

The politically and symbolically charged nature of this site, and its eventful history, make it understandable why in the years after 1990 the future of this very special building site provoked fierce and emotional debates which continue - with varying emphases - to this day. What should the centre of Germany's capital city look like? Was maintaining the status quo conceivable? Did the Palace of the Republic have a viable future, despite the asbestos contamination and loss of its purpose? Or did recourse to the past offer the opportunity to heal all wounds? Was reconstruction of a palace demolished 40 years previously even a practical possibility? Or would a more radical new beginning be more appropriate after all the building up and tearing down? And what should its function be?

Every variant had its supporters and opponents. The future of the Spree island was a subject of discussion not just in Berlin, but

across the whole of Germany. The idea of palace reconstruction gained ever more traction after the construction of the palace simulation in 1993/94, and through the work of the palace association.

Finally, at the end of extensive deliberations, the International Commission of Experts Historische Mitte Berlin, which was set up in 2000, recommended the construction of a building with the outward appearance of the Berlin Palace, to be the Humboldt Forum. The German Bundestag approved this recommendation, voting by a large majority in 2002 to establish the Humboldt Forum with the reconstruction of the Berlin Palace's significant historical façades, and further clarifying the objective in 2007. The members of the Bundestag were guided by the idea that this prominent site in the centre of the capital should be used for cultural exchange. The development of the Berlin Palace area

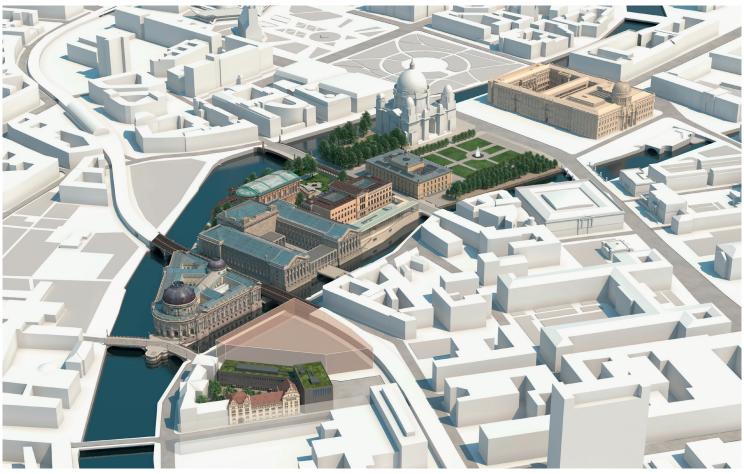
would create a centre for cultural encounters, for dialogue between the cultures of the world and for science of national and international significance.

While during the first ten years the primary concern was the question of whether reconstruction of the Berlin Palace was warrantable, after the turn of the millennium the fate of the Palace of the Republic moved ever more to the fore.

In recent years, the debate has shifted to the question of how the concept and content of the Humboldt Forum accord with the reconstructed shell of the palace. The decisions leading to the structural form and concept of the Humboldt Forum can only be understood against this background.

THE PARTIALLY RECONSTRUCTED PALACE AS THE HUMBOLDT FORUM

THE ARCHITECTURAL COMPETITION



3D model Museum Island and Humboldt Forum © bpk/Stiftung Preußischer Kulturbesitz, ART+COM

The resolution of the German Bundestag on 4 July 2002 envisaged a partial reconstruction of the Berlin Palace. The recommendation was made to align the development of the Schlossplatz with the proportions of the Berlin Palace. The parliament also decided to reconstruct the three outer Baroque façades, including the shell of the dome, along with the Schlüter Courtyard's three Baroque façades. The reconstruction of the palace façades was intended to honour Andreas Schlüter's artistic mastery and restore the Lustgarten area's urban beauty.

These specifications were adopted by the international architectural competition launched in 2007 by the Federal Office for Building and Regional Planning on behalf of 'Berliner Schloss – Humboldt Forum' – a newly-established foundation of owners and operators. No specifications were made however for the pre-Baroque transverse building between the Schlüter courty-

ard and Eosander courtyard, or the Renaissance wing in the east. The intention was that the Berlin Palace always remain recognisable from the outside as both a partial reconstruction and a new building – and its eventful history should not be completely obscured by the reconstruction, but should rather be clearly visible in the contrast between past and present.

The result was announced in 2008: the jury unanimously chose the entry from Italian architect Franco Stella, who was awarded first place and recommended for implementation. The jury commended the logic, geometry and consistency of the model, praising the design's 'successful natural urban integration of the reconstructed palace as the Humboldt Forum'. The sensitive handling of the modern east façade was particularly commended. A diagonal passage running through the building will also create a further open urban space — an

independent idea from the architect to enhance the Schlüter courtyard.

FRANCO STELLA



© Photo: Luca Girardini, 2017

Franco Stella (b. 1943 in Thiene in the province of Vicenza) studied architecture and urban development at the University of Venice (IUAV). He was a student under Giuseppe Samonà, one of the most prominent architects and urbanists of the 20th century. In the 1970s he worked with the gruppo architettura of Aldo Rossi and Carlo Aymonino.

Stella runs an architectural practice in Vicenza and Berlin. He was a lecturer in architectural and urban design at the IUAV between 1972 and 1989, and at the University of Genua from 1990 to 2012. He was a jury member on the urban design competitions for the Berlin Spreebogen and the Spree island.

Franco Stella's contemporary façades and construction elements are influenced by the architectural design principles of Italian

neorazionalismo, while the storey structure and scale remain true to the Baroque façades.

THE ARCHITECTURE



© Stiftung Humboldt Forum im Berliner Schloss / Photo: Alexander Schippel

Based on the original design by Andreas Schlüter (1659–1714), the Humboldt Forum in the Berlin Palace has been built as a four-wing construction with four main floors. Both the reconstructed and the new structures blend harmoniously together into architectural ensembles which, according to Stella, recall the palazzo, the piazza, the theatre, and the city gate - classical architectural and urban elements that were characteristic of the Baroque palace's ideal. The reconstructed Baroque façades to the north, south and west give the building an imposing urban presence. The façade structure of the modern design extending along the east wing completes the building, creating a unified structural concept. Set back from the river bank, this wing offers a first in the history of the site: a public space on the Spree with cafés and restaurants. The size, depth and proportions of the windows reference the loggia façade that Stella's competition entry had originally proposed for the east wing on the Spree.

Six completely reconstructed, imposing courtyard portals and portal passageways create close architectural and substantive links with their surroundings. Their reconstruction reunites the squares located inside and outside the Palace into an expansive public space. They lead to three inner courtyards which subdivide the building: the glass-roofed Foyer to the west; the Passage in the centre; and the Schlüter Courtyard to the east. The Passage and the Schlüter Courtyard are accessible at any time of the day or night, allowing the Palace to be crossed in a north-south direction between the Lustgarten and the Schlossplatz.

THE SCHLÜTER COURTYARD



Schlüterhof © Stiftung Humboldt Forum im Berliner Schloss / Photo: Alexander Schippel

With its magnificent façades and portals, loggias and rich figural decoration, the approximately 50×80 metre Schlüter Courtyard forms the architectural heart of the palace. Characterised by courtly ceremony and grand gestures, in its time this square was regarded as one of the most impressive examples of Baroque architecture.

As set out by the architect, the three façades, along with the portals to the north, east and south, were reconstructed as faithful reproductions of the original. Portal 5 to the Lustgarten stands opposite the identical Portal 1 to the Schlossplatz. The Humboldt Forum's development concept also includes, for the first time, a courtyard entrance via Portal 6, situated in the east wing. The architectural rationalism of Stella's modern west side adopts the proportions of the Baroque structures, creating a contemporary completion to them. All this creates a vibrant urban space — a piazza with cafés, restaurants and businesses.

THE PASSAGE



© Stiftung Humboldt Forum im Berliner Schloss / Photo: Alexander Schippel

Stella's newly-created Passage — the central courtyard of the new palace — extends in a north-south direction between Portal 4 on the Lustgarten and Portal 2 on Schlossplatz, giving Berlin a new street that is open day and night. The dimensions of this long rectangular space — around 17 metres wide and 77 metres long — are reminiscent of the cortile degli Uffizi in Florence. Even the modern longitudinal façades, the architectural order of their columns forming a via colonnata, are a modern reference to the Uffizi architecture of Giorgio Vasari, Stella has declared. The newly-designed and the reconstructed façades balance one another perfectly, creating a very special spatial experience.

THE FOYER



Foyer of the Humboldt Forum with Installation from Salapanga Falkner & Larass GbR © Stiftung Humboldt Forum im Berliner Schloss/David von Becker

Franco Stella has designed the Foyer as a 'theatre of the present': a spacious entrance hall with open porticoes and galleries. Cubic in shape, with a side length of around 35 metres, it is topped by a steel-framed glass roof. Galleries extend over four floors in its three modern-proportioned sides. The western side is dominated by Portal 3: the masterpiece created by Eosander, the Palace's second great Baroque architect. Known as the Eosander Portal, the entire structure of this colossal gateway, originally constructed in 1713, has been completely reconstructed, with its outer and courtyard sides as well as the architectural order of the columns in the inner passageway, and the dome – a 19th-century addition. It is based on the triumphal arch of Septimius Severus at the Forum Romanum in Rome.

THE PALACE DOME



© Stiftung Humboldt Forum im Berliner Schloss / Photo: Alexander Schippel

The reconstructed palace dome, with its significant and location-defining architecture, once more completes the west wing of the Berlin Palace. Modelled on the original building erected in 1850, the octagonal tambour rises above a rectangular base, the tip of its cross reaching 70 metres above street level. The cross references the dome's former use as the Palace chapel.

THE FAÇADES

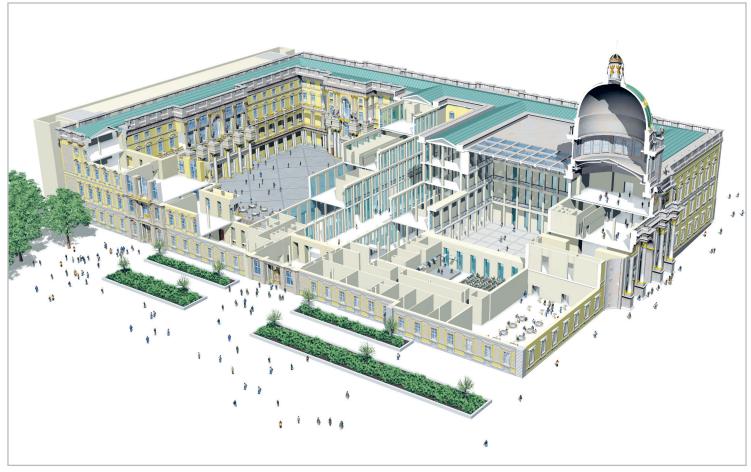


Façade Detail of the Schlüter Courtyard © Stiftung Humboldt Forum im Berliner Schloss / Photo: Alexander Schippel

In both their craftsmanship and artistic and technical implementation, the reconstructed Baroque façades have remained as true to the original as possible. In order to produce the more than 2,800 sandstone figures required, the Stiftung Humboldt Forum established the Schlossbauhütte in Spandau in summer 2011. First, the sculptors, plaster moulders and stucco artists modelled the – sometimes colossal – decorative elements in clay. They then made plaster casts, and finally carved them from sandstone using the traditional pointing technique. Modern materials and techniques were also sometimes used to produce the models. For example, the elements of Portal 4, which had remained preserved at the State Council building, were made using 3D printing as a model for duplication by the stone sculptors. In addition, restorers have reconditioned the original preserved sculptures and fragments for incorporation into the façades or as exhibits in

the Sculpture Hall in the Humboldt Forum. A further 22,000 machine-made sandstone pieces have also been installed in the historic façades.

THE HUMBOLDT FORUM



© Stiftung Humboldt Forum im Berliner Schloss / Golden Section Graphics

On the ground floor of the Humboldt Forum are the entrance hall and stair hall, the foyer, halls for events and special exhibitions, permanent exhibitions on the history of the site, including the sculpture hall and the video panorama, together with museum shops, cafés and restaurants.

The Berlin Global and Humboldt Lab exhibition and event spaces, as well as workrooms, are located on the first floor. Collections from the Ethnologisches Museum and the Museum für Asiatische Kunst are on display on the second and third floors. Between the collections there is also approximately 3,500 square metres of temporary exhibition space. Part of the basement houses the preserved sections of the Palace Cellar and an exhibition of archaeological finds. The remaining area of the basement, which covers the entire site, and the whole

of the attic are used for building services and logistics.

TECHNICAL BUILDING DESIGN



Stair Hall © Stiftung Humboldt Forum im Berliner Schloss / Photo: Alexander Schippel

Around 100,000 cubic meters of concrete and 20,000 tons of steel were used for the building: a reinforced concrete construction fronted by an independent 60 cm deep brick wall. It stands partly on concrete piles buried up to 40 metres deep, and partly on the remaining foundations of the Palace of the Republic. The tunnels of the U5 U-Bahn line also had to be taken into account when constructing the foundations which ascends and descends diagonally under the building.

Insulation, heating, cooling and air regulation: an efficient energy concept was central to sustainable building planning. Construction was calculated to comply with German Energy Saving Ordinance (ENEV) 2009, which substantially reduces primary energy requirements by a third, thanks to very well insulated windows and walls.

In addition, thanks to the favourable hydro-geological conditions of the subsoil in the centre of the Spree Island, the Humboldt Forum makes use of geothermal energy for its heating requirements. This was achieved by the development of two geothermal probe fields (115 geothermal probes with a depth of about 100 metres in the southern Lustgarten) and 54 foundation piles (about 40 metres deep).

Further aspects of the sustainable energy concept include an efficient air-conditioning system with multiple cooling networks and building zone activation: additional cooling or warming of floors on storeys using geothermal energy.

THE OUTDOOR AREA



East Façade © Stiftung Humboldt Forum im Berliner Schloss/Photo: Alexander Schippel

The exterior areas of the Berlin Palace open up new access ways to the historical centre. On the eastern side, a new path to the Spree has been created: a 90-metre ramp linking the riverbank path with the Humboldt Forum. The ramp, along with all the other open spaces, was planned by bbz Landschaftsarchitekten Berlin. To the north, to the right and left of Portal 4, the new Palace Terraces make their mark on the Lustgarten area. Made of granite, the Palace Terraces offer a green setting with a view to the square, the Lustgarten, cathedral and Altes Museum, as well as Unter den Linden. On the terraces themselves, a planting pattern inspired by the historical design of garden architect Peter Joseph Lenné is taking shape, allowing visitors to experience the research and work of Alexander von Humboldt in the form of vegetation tableaus. They represent the three time zones of the continents which Humboldt visited: Eurasia, South America and North America.

With the opening of the 'Museumsinsel' underground station on the U5 line the area to the west known as the Schlossfreiheit has gained nearby access to the U-Bahn. The Monument to Freedom and Unity is also currently under construction at this location. The design of the Schlossplatz on the southern side of the Humboldt Forum adopts an open square design. The Stiftung Humboldt Forum is keeping an area free here for the Palace Fountain, also known as the Neptune Fountain, which is currently situated in front of the Rotes Rathaus, and is to be placed in front of Portal 2 in line of sight of Breite Strasse, where it once stood before the demolition of the Palace.

CHRONOLOGY

1443

Ceremony to mark the laying of the Palace's foundation stone

1698-1716

Construction of the Baroque palace

1844-1846

Palace Terraces, Lustgarten

1845-1854

Palace chapel and dome

C. 1901

Palace Terraces — Schlossfreiheit and Schlossplatz

1943-1945

Wartime destruction of the Berlin Palace

SEPTEMBER-DECEMBER 1950

Detonation/ demolition of the Berlin Palace

1951 TO 1973

Parade ground (with tribune)

1976-2009

Palace of the Republic (Construction: 1973 to 1976)

JUNE 1993-SEPTEMBER 1994

Construction of the Palace mock-up

2002

The German Bundestag votes to reconstruct Schlüter's Baroque facades for the Berlin Palace and follows the usage plan recommended by the Historic Centre of Berlin (an international commission of experts) for the Humboldt Forum in the Berlin Palace.

2008

Franco Stella is announced as the winner of the competition.

2009

The Stiftung Humboldt Forum im Berliner Schloss is founded as construction client and owner

2011

The political parties CDU/CSU, SPD, FDP and Die Grünen approve funding for construction in the Budget Committee of the German Bundestag.

2012

Construction work begins on the foundations for the Humboldt Forum.

2013

The foundation stone for the Humboldt Forum is laid

2015

The topping-out ceremony takes place.

2016

Steering committee members Neil MacGregor, Hermann Parzinger and Horst Bredekamp begin organizing cultural activities.

2018

The first exhibits are moved in. The steering committee hands off planning and steering to director Hartmut Dorgerloh.

2020-2022

The Humboldt Forum is completed and begins opening in stages.

ARCHITECTURE

Dates and information

BUILDING

20.529 m² Ground Floor space with courtyards

Total floor space (with basement) including

rooftop restaurant

96.356 m²

Area of the archaeological monument /

archaeological window

ca. $1.800 \, \text{m}^2$

Building height, upper edge of dome

Building height, upper edge of dome with cross

35 m 70 m

Concrete 100.000 m³

20.000 t Steel

DISTRIBUTION OF SPACE BY FLOOR

Ground Floor

Event areas	1.200 m ²
Foyer	1.300 m^2
Passage	1.300 m^2
Schlüterhof	4.000 m ²
History of the site	1.500m^2
Special exhibitions	1.500 m ²
Catering and Shops	1.700 m ²

First Floor

Berlin Exhibition (Kulturprojekte Berlin and 4.000 m²

Stadtmuseum Berlin)

Humboldt Lab (Humboldt-Universität zu Berlin) 1.000 m² Workshop rooms (Stiftung Humboldt Forum im 1.500 m²

Berliner Schloss)

Second and Third Floor

Ethnologisches Museum / Museum für Asiatische

13.900 m²

Temporary exhibitions with introductory rooms

 $3.500 \, m^2$

FACADES

RECONSTRUCTED FACADES

Façade length c. 750 lfm Façade area c. 22.500 m² Sandstone c. 9.000 m³ Windows 513

CONTEMPORARY FACADES

Façade length c. 400 lfm Façade area c. 11.400 m^2 Windows

Sculptural models required for the decorative

sandstone elements

c. 300

Decorative sandstone elements c. 2.800

ADDITIONAL ELEMENTS

COSTS

Lifts 24 **Escalators** 6

The costs currently budgeted for the construction of the Humboldt Forum are 682 million euros, of which the Federal Government will pay 570 million and the State of Berlin 32 million euros. Reconstruction of the Baroque façades is financed exclusively by donations in the sum of 80 million euros from private sponsors. An additional amount of around 17 million euros has also been donated for 'optional construction' (complete historical reconstruction of the dome and inner Portals 2, 3 and 4 with

passageways).

ARCHITECTURAL DESIGN Franco Stella Architetto

PLANNING & IMPLEMENTATION Franco Stella Berliner Schloss - Humboldt Forum PG

(Project joint venture: Franco Stella Architetetto, Hilmer & Sattler

und Albrecht Gesellschaft von Architekten mbH

Baumanagement Berlin GmbH)

PROJECT MANAGEMENT

Detlef KrugOverall project management, technicalHerman DuquesnoyOverall project management, commercialSigurd HauerProject management, building interior

Peter Westermann Project management, building envelope and reconstruction

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