Well done!

Cost Time Quality ✓

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‘What’s wrong with Germany?’ was the headline on the cover of the international trade journal Mark – Another Architecture ten years ago. Since then, we have continuously received negative reports about delays and cost increases in building and construction projects. The reputation of the proverbially efficient German engineering has obviously suffered internationally and nationally. Increasingly costly and time-consuming projects continue to erode the feasibility of construction projects. In addition, a growing number of legal requirements and technical standards over the past ten years make construction more complicated and expensive.

In this situation, we looked for references where construction projects were completed on budget, on scheduled costs, and with high quality. Our aim is to use these reference projects to demonstrate what can be done despite all adversity and promote a desire for dedicated and professional design and construction with a focus on results. For high-quality Baukultur and successful construction projects based on collaboration between all stakeholders – clients, designers, and the construction industry.

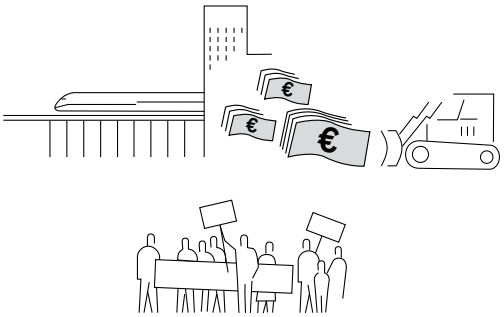
The selection of prime examples in this brochure is based on a call for projects aimed at designers and associations, to which many responded. We rely on the information we have received and are thankful for the participation and insight into the conditions that made the project possible. We have made a structural selection from the projects – by typology, degree of difficulty, expressiveness of the result, and conformity to cost and schedules. To provide a more nuanced view of the situation, we describe four lighthouse projects and 32 additional successful projects. Our intent is not to sweep existing problems under the carpet, but rather to show what is needed to make projects more effective.

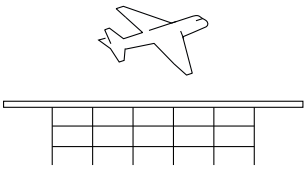
The answer is – no surprise – more Baukultur on all levels: in ‘Phase Zero’, during the professional collaboration, and in the high design standard across all disciplines and trades. If you browse through the results or take a closer look, you will come to the same conclusion as we did: Baukultur obviously helps as a guideline to get costs and schedules right. The good news is that there are already numerous other examples throughout Germany where complex construction tasks have been completed to a high standard of Baukultur within a sensible cost and time framework. We want the word to spread and catch on.

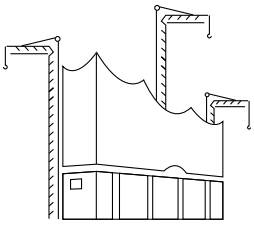
Yours Reiner Nagel

“Well done!”

For decades, ‘made in Germany’ has been synonymous with quality in engineering and management, including and especially in construction. For some years, the construction industry has been experiencing a noticeable decline in reputation. The Berlin Airport, the Elbphilharmonie concert Hall in Hamburg and the new station Stuttgart 21 – all prominent construction projects. Yet due to significant delays and cost increases, they are by no means the embodiment of successful construction processes in Germany. Negative examples attract the attention of the press and public. Those involved in planning are generally suspected of not having their own building projects under control. In retrospect, the architecture or engineering was not the problem in any of the described cases. On the contrary: All three construction projects featured impressive outstanding design and planning. A significant cause of cost and schedule problems was related to problems within the client’s project management.







The public agrees. Only 3 % of those questioned in a recent population survey conducted by the German Federal Foundation of Baukultur have the impression that the majority of the major projects in Germany are completed within budget and on time. 94 % do not believe that that is the case. Two thirds believe that the clients, politicians or the administration are responsible for the problems.

The press has also declared exploding costs to be a law of nature and has been quick to identify the culprits: Architects are a risk factor and the costs quoted by politicians are not to be trusted. In fact, the problems cannot be denied. In 2019, the “OI+BAU - Optimisation of the Initiation of Complex Construction Projects” research project, experts from the construction industry, property management and industrial construction at the Technical University of Braunschweig comprehensively investigated the conditions for complex construction projects. What the public assumes to be commonplace is partly confirmed by researchers: In recent years, around 40 % of major projects have failed to meet their budget and around 35 % of them did not meet their deadlines. And it makes little difference whether the client is public or private. Neither size nor complexity are insurmountable. Instead, causes are inadequate management skills, extensive requirements and regulations, unpredictable bankruptcies and crippling litigation, a poor planning culture, and what the research project states as the core of the problem is an inadequate project preparation.

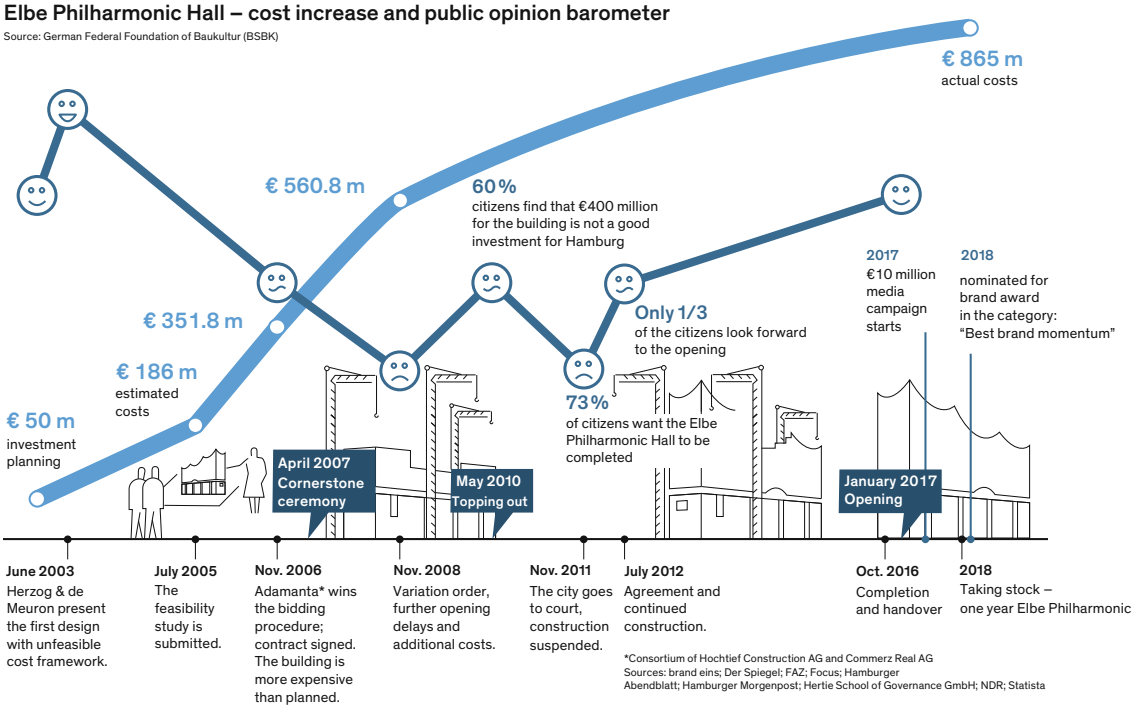
Do clients, designers and contractors now find themselves in a straitjacket that not only makes Baukultur difficult but also prevents it? After all, when costs and time get out of control, it becomes particularly difficult to maintain the quality standard. And then it turns out that what looks bad is often the result of an ineffective and inefficient process.

Lessons have now been learned. The 'Phase Zero' stage prior to major projects is increasingly being implemented, including for the municipal theatres ("Städtische Bühnen") in Frankfurt. This phase provides a credible basis for a political and social debate about the building work ahead. This is still not the case in smaller towns and communities, where those in charge unexpectedly find themselves in a client role that they have never played before and will not experience again – a 'once in a lifetime' event, so to speak. Projects like multi-purpose halls costing double-digit millions or new replacement buildings for listed schools, begin with a rather one-dimensional approach to project development and design, without a design competition or a process for the direct commissioning of designers. As a result, not only do the architecture and townscape suffer, but the whole Baukultur is harmed. This affects interdisciplinary collaboration and often leads to a poor balance when it comes to climate compatibility and life cycle costs.

Building is a complex challenge with many stakeholders. New developments are not always predictable, and control of all areas is virtually impossible. The industry is currently suffering from general price increases due to supply shortages and rising energy costs. Nevertheless, there are various control mechanisms to bring a project into line and keeping it there: A structurally established phase zero is certainly the basis on which a cooperative team of everyone involved in the construction project can work towards joint success. Firstly, we present examples to show how this recipe for success works, since it is also true that good examples do exist: projects, large and small, that have been delivered on time, on budget and with high quality. They show that in many cases, Germany still has what it takes! Take a look at our collection of buildings that represent and inform so many areas of our lives. In the epilogue, we then discuss what it will take to ensure that more construction projects succeed.

Elbe Philharmonic Hall – cost increase and public opinion barometer

Source: German Federal Foundation of Baukultur (BSBK)



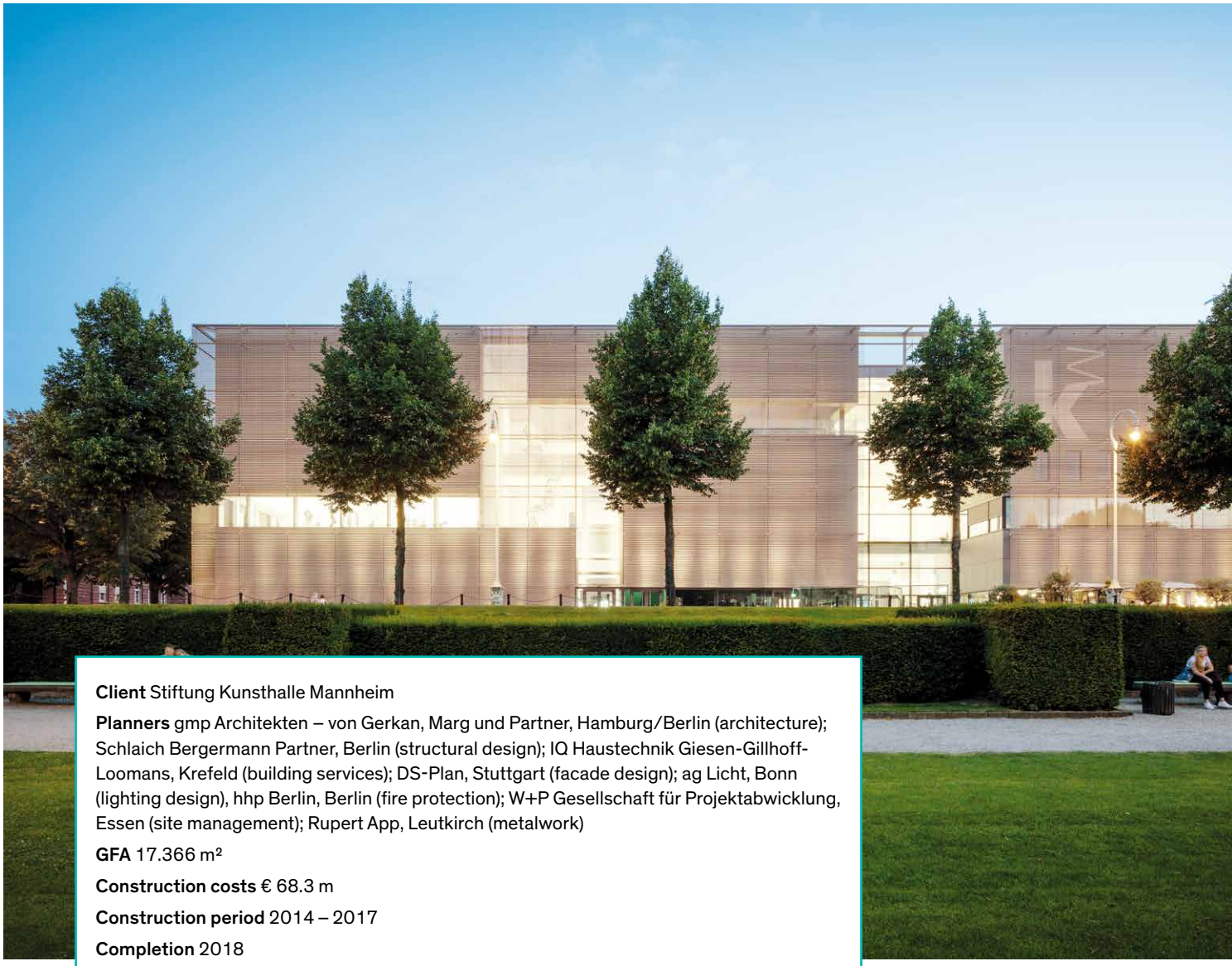
*Consortium of Hochtief Construction AG and Commerz Real AG

Sources: brand eins; Der Spiegel; FAZ; Focus; Hamburger Abendblatt; Hamburger Morgenpost; Hertie School of Governance GmbH; NDR; Statista

Projects

Lighthouse Projects

Kunsthalle Mannheim Art Museum



Client Stiftung Kunsthalle Mannheim

Planners gmp Architekten – von Gerkan, Marg und Partner, Hamburg/Berlin (architecture); Schlaich Bergermann Partner, Berlin (structural design); IQ Haustechnik Giesen-Gillhoff-Loomans, Krefeld (building services); DS-Plan, Stuttgart (facade design); ag Licht, Bonn (lighting design), hhp Berlin, Berlin (fire protection); W+P Gesellschaft für Projektabwicklung, Essen (site management); Rupert App, Leutkirch (metalwork)

GFA 17.366 m²

Construction costs € 68.3 m

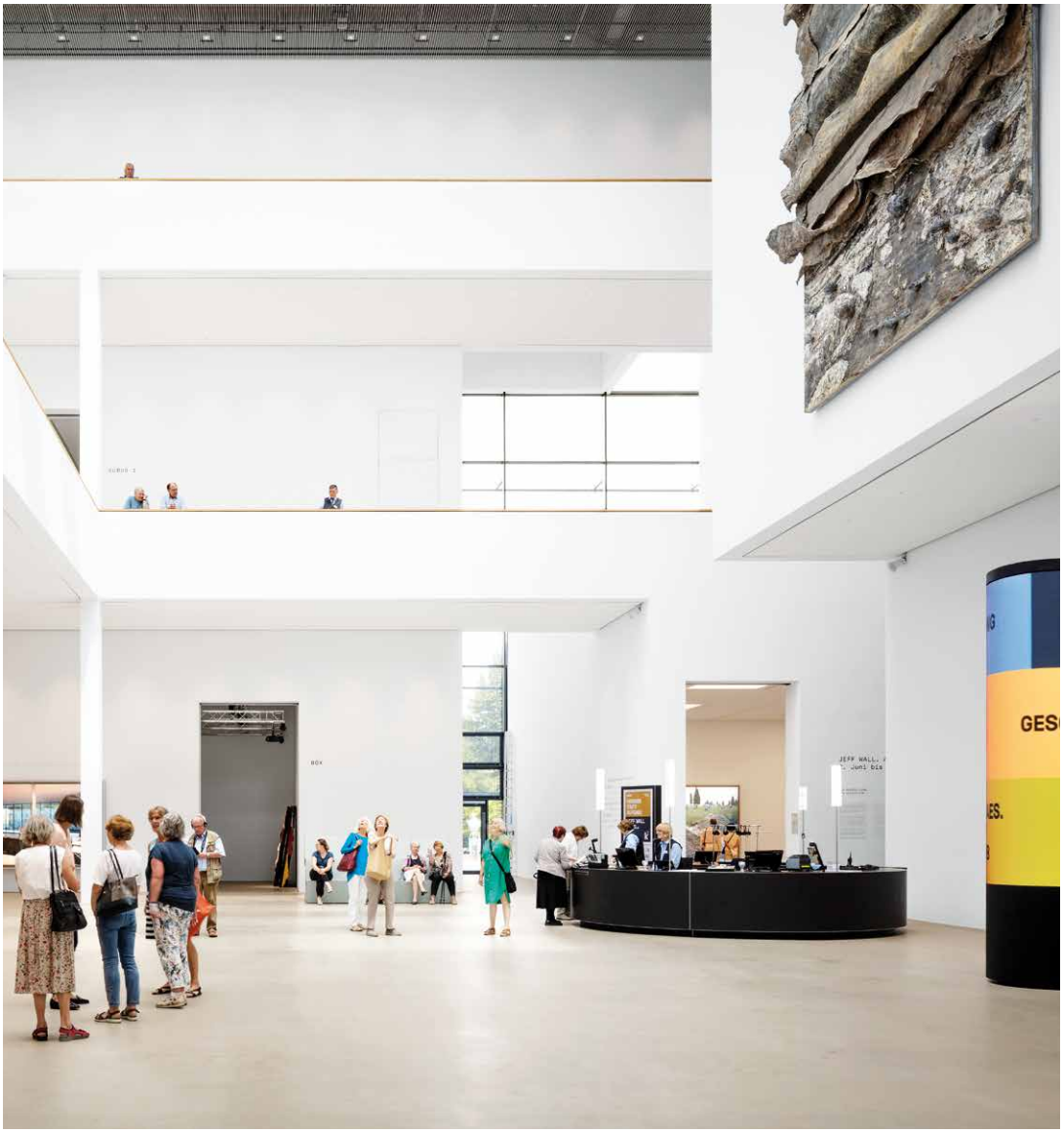
Construction period 2014 – 2017

Completion 2018

Photography Marcus Bredt, Berlin

The Kunsthalle Mannheim Art Museum opened in 1907, the city's 300th anniversary, as part of an international art and horticultural exhibition. In 2017, the new building is one of the largest contemporary new museum buildings in Germany. The design by architects Gerkan, Marg und Partner (gmp) won an international competition and was selected for construction. Spanning an exhibition area of 13,000 square metres, the renowned collection can now be presented under suitable technical conditions.

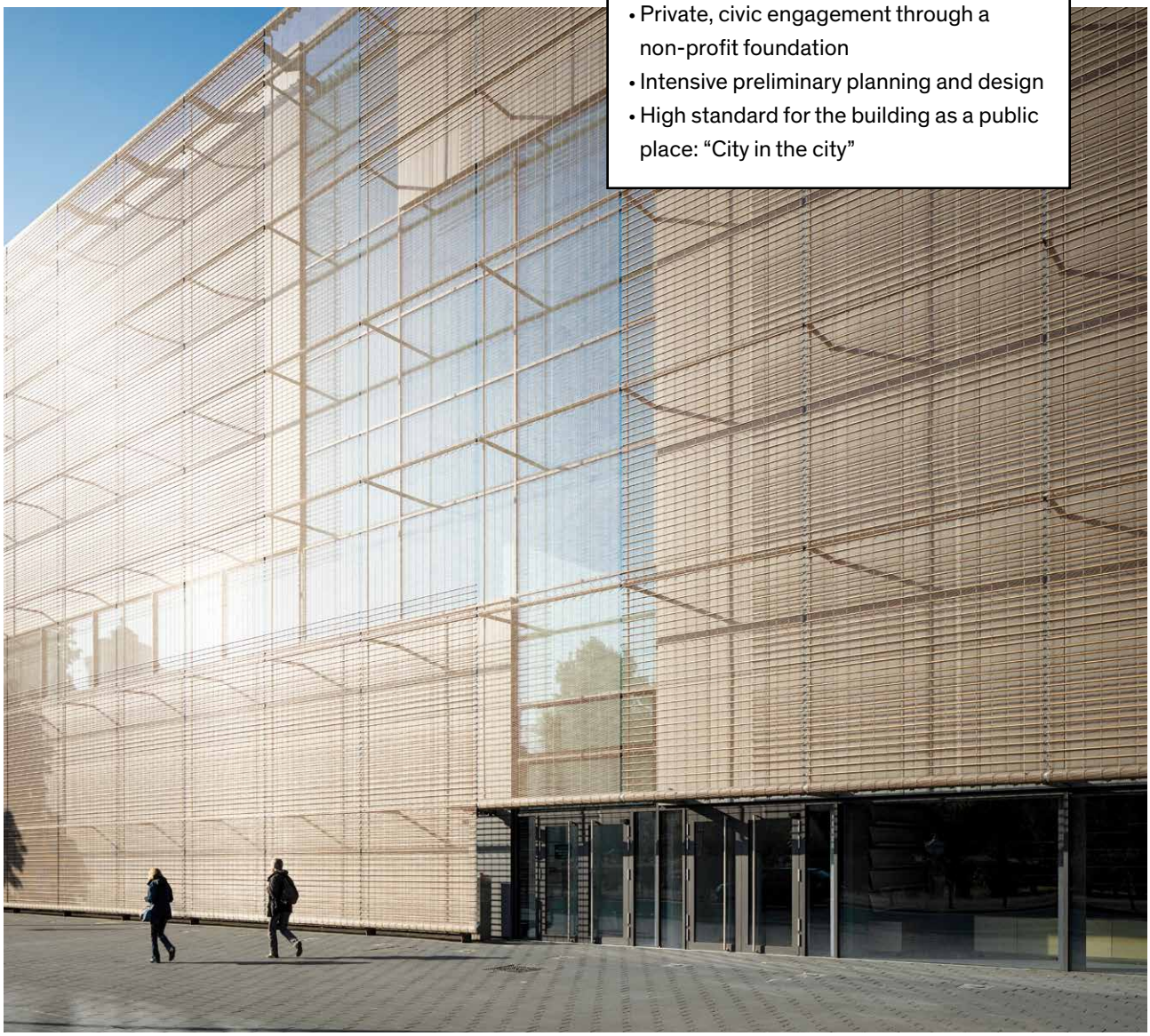
The building was erected by the private non-profit Kunsthalle Mannheim foundation at the request of the city and its citizens. Prerequisite for its realization was the availability of private funds.



Hans Werner Hector has been a long-standing patron of the art museum programme, and with his early announcement of a € 50 million donation, finally set the course for the option of a new building. The city contributed 12 million and the public donated another approximately € 6 million euros. With total construction costs of € 68.3 million, the new museum remained within the budget that had been estimated five years earlier. The complex museum building was completed in just two and a half years. To quote the architect Meinhard von Gerkan, 'Architecture as art in social use is a product of the free spirit and of material commitment – in this case, particularly due to the strictly limited budget and cost discipline of the Kunsthalle Mannheim foundation. It is not at least because of this economic „emergency" that we have dedicated ourselves to the „virtue" of architectural minimalism".

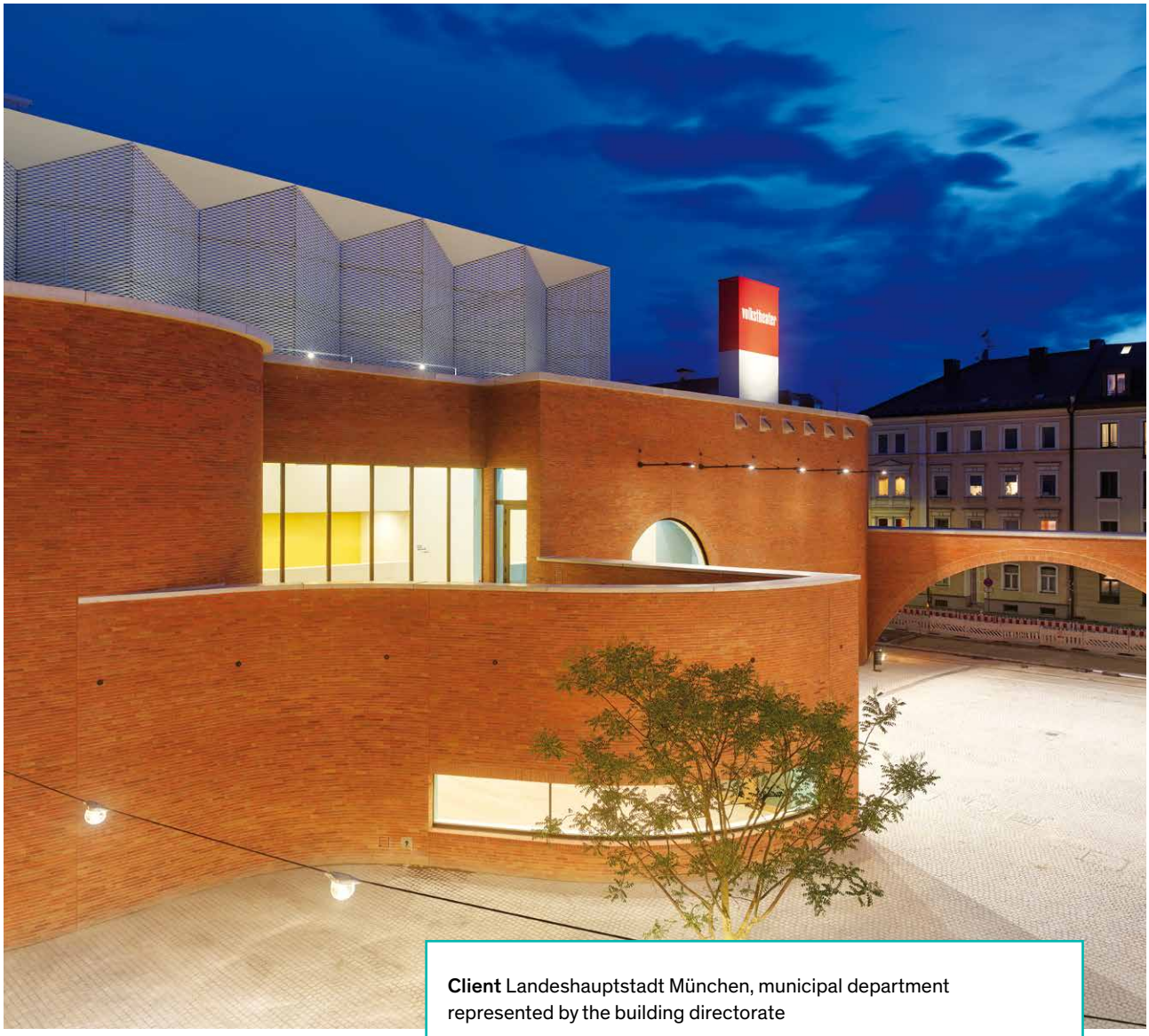
ASPECTS OF SUCCESS

- Design selection on the basis of an international competition
- Private, civic engagement through a non-profit foundation
- Intensive preliminary planning and design
- High standard for the building as a public place: “City in the city”



The new museum on Friedrichsplatz is designed as a ‘city within a city’. It will be attached to the existing Art Nouveau building, called the Billing Building, which was renovated in 2013. Within a cubature, there are individual spaces for exhibition and event spaces, which are structurally connected by galleries, terraces and bridges, surrounding a central atrium. In analogy to the elements of the city – building and block, street and square – the architects have created varied circular routes for the visitors through enclosed and open spaces with changing vistas and outlooks. Yet, by replicating the ‘city of squares’ approach used on a larger scale in Mannheim, the clear structure ensures easy orientation and navigation. At the same time, every situation on the route through the exhibitions continuously offers new impressions.

Münchner Volkstheater (Munich Municipal Theatre)



Client Landeshauptstadt München, municipal department represented by the building directorate

DBF contractor Georg Reisch GmbH & Co. KG, Bad Saulgau

Planners LRO Lederer Ragnarsdóttir Oei, Stuttgart (architecture); itv Ingenieurgesellschaft für Theater- und Veranstaltungstechnik, Berlin (theatre and stage design); Wolfgang Sorge Ing. Büro für Bauphysik, Nurenberg (building and room acoustics); SSF Ingenieure, Munich and others (structural design); Werner Schwarz, Ingenieurbüro, Stuttgart (electrical design); M. Oelmaier Ingenieurbüro, Biberach a.d. Riss (fire protection); K+P Kaufer Passer, Starnberg/Tuttlingen (building services); Pfaller Ingenieure, Nurenberg (project management)

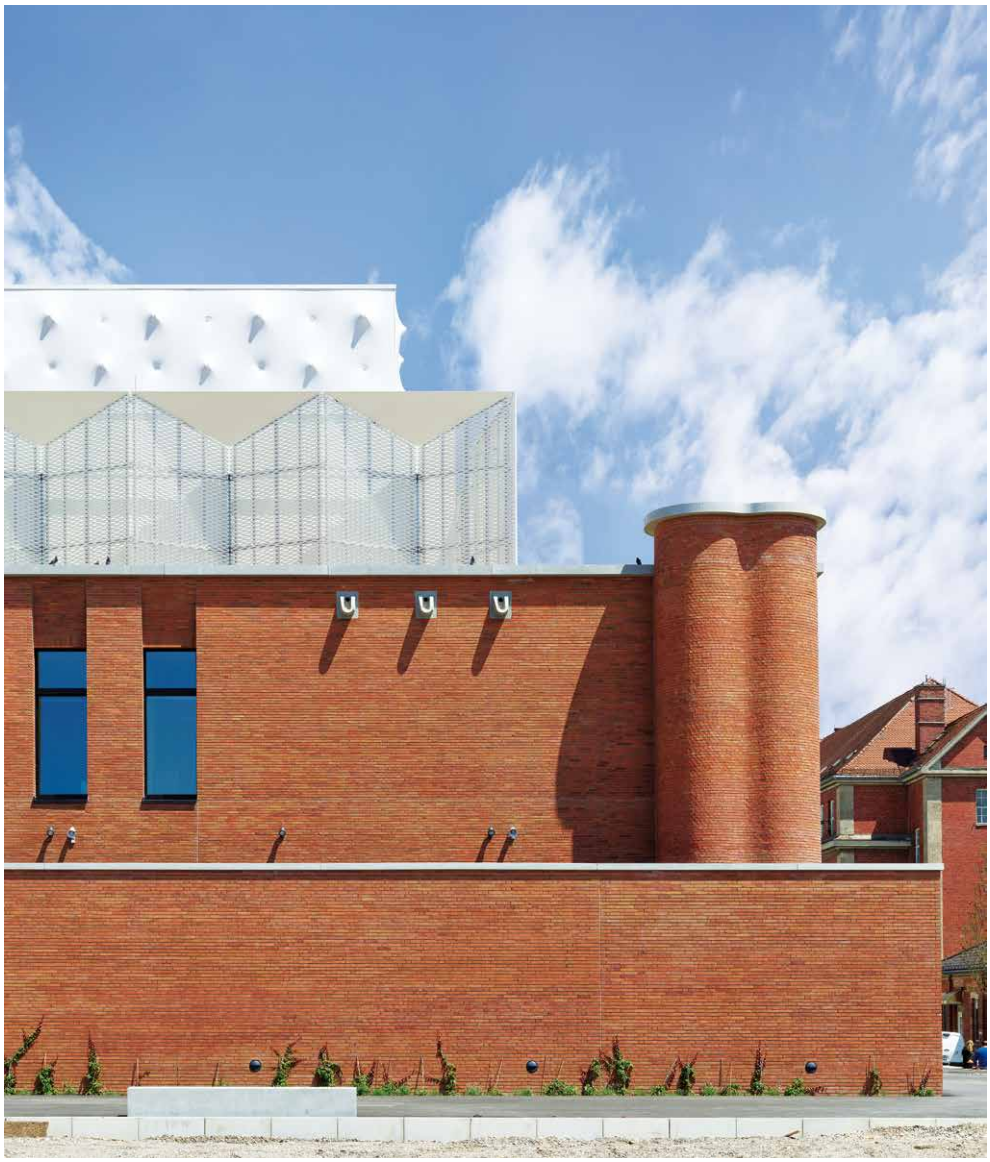
Procedure for DBF contractor package 12/2016 – 1st prize

Construction costs € 130.7 m

Construction period 2018 – 2021

GFA 30,134 sqm

Photography Roland Halbe

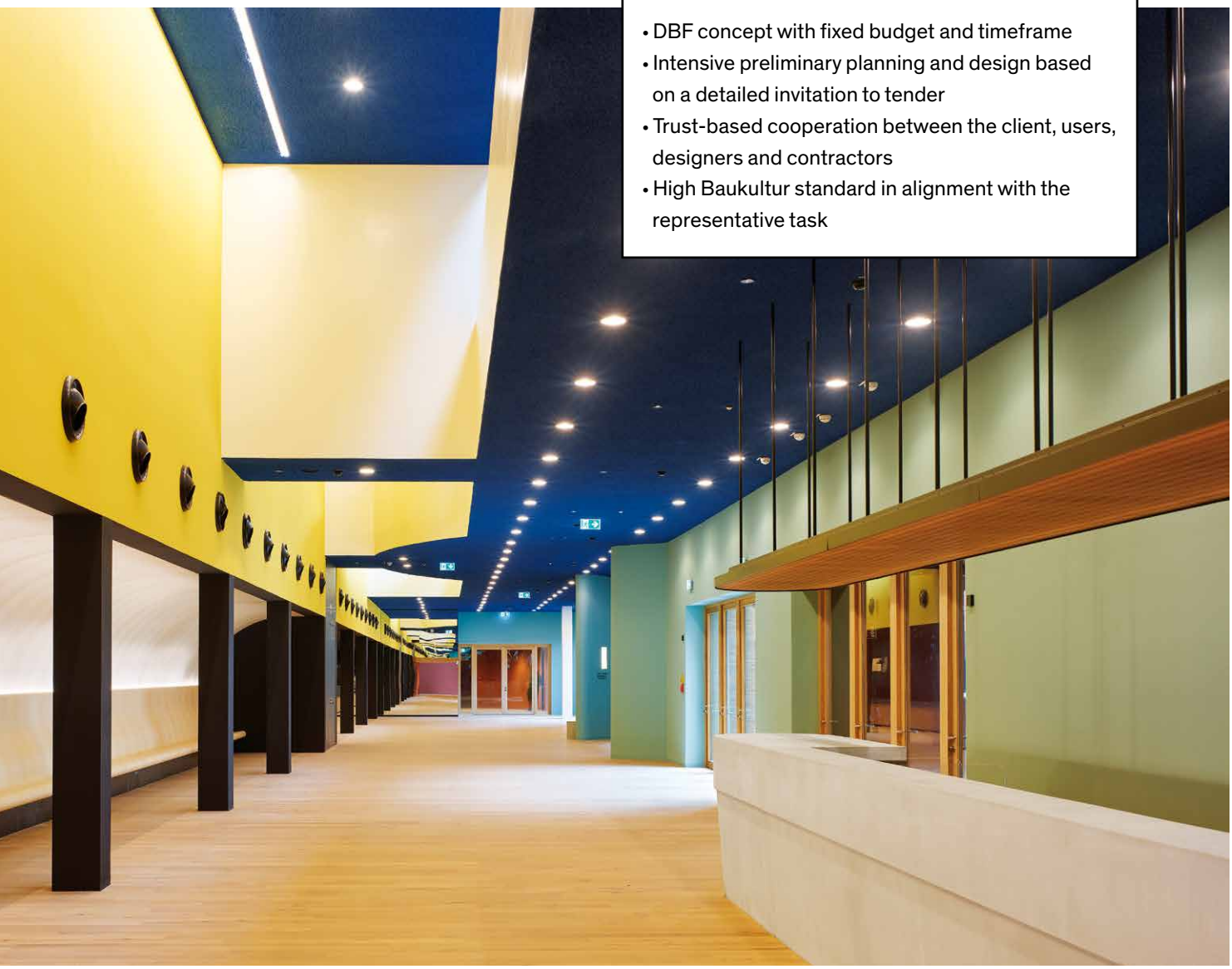


After a construction period of only two and a half years, Munich's municipal theatre officially opened in October 2021. The tender and contract award process entailed a procedure with the City of Munich as the client. The objective was to create a suitable theatre within a fixed financial and time frame, to be realised through a (DBF) contract. The tender was based on a detailed functional specification of over 1,000 pages and an associated detailed space and function matrix. The Europe-wide tender and competition process attracted nine bids, of which five were shortlisted. In the end, the contractor Georg Reisch, and the design team, consisting of LRO Lederer Ragnarsdóttir Oei for the architecture, itv-Ingenieurgesellschaft for the theatre and stage design, and Wolfgang Sorge for the building and room acoustics, were chosen.

The new theatre venue is located on the site of the City of Munich's former slaughterhouse and stockyard. The architects describe one aspect of the challenges in designing the theatre as follows: 'On the one hand, the task requires outstanding architecture, as it is a building with which the public sector shows what it understands Baukultur to be.

ASPECTS OF SUCCESS

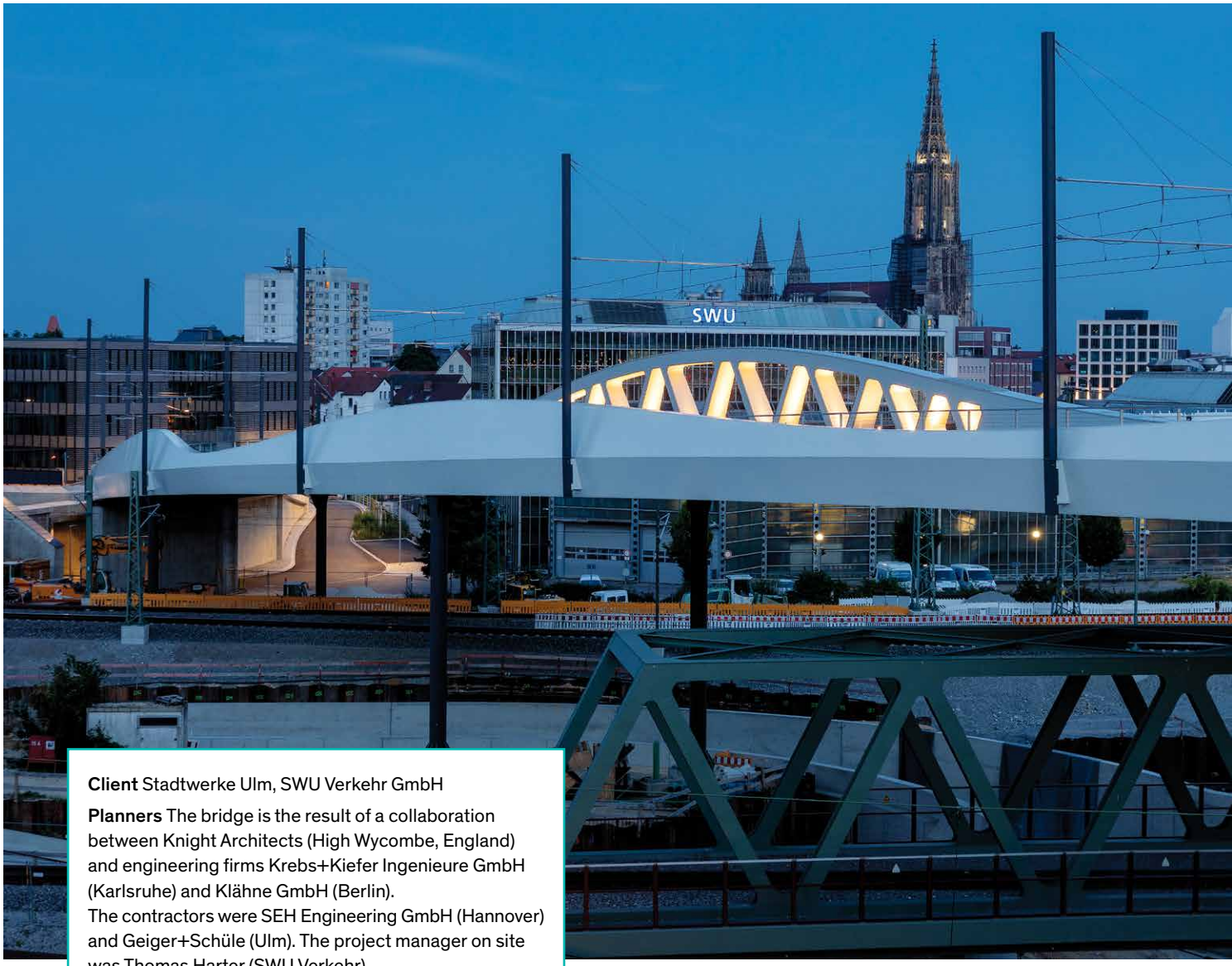
- DBF concept with fixed budget and timeframe
- Intensive preliminary planning and design based on a detailed invitation to tender
- Trust-based cooperation between the client, users, designers and contractors
- High Baukultur standard in alignment with the representative task



On the other hand, the mainly representative standard for the effect in the urban space also applies to the foyer and, with some restrictions, to the front of the building. In the latter, the technical conditions of the acoustics and lighting have a major influence on the interior design. The stage curtain forms the boundary between those spaces that pose a particular aesthetic challenge and those that, due to their functional relationships – combined with their extreme technical conditions – require a completely different approach. While the smaller part has to please the audience, the rear, much larger area of a theatre is used for production and performance operations.'

A building with three halls was created: A main auditorium for 600 people with an orchestra pit and a revolving stage, and two additional stages complete with workshops, event rooms and storage spaces. The 27-metre-high stage tower, around which the auditoriums are arranged, is located in the middle. The listed buildings of the stockyard administration gave rise to the decision to use red brick for the new building as well. Behind a six-metre-high segmental arch, the courtyard to the main entrance opens up, marked by a stele featuring the word 'Volkstheater' (municipal theatre).

Kienlesberg Bridge, Ulm



Client Stadtwerke Ulm, SWU Verkehr GmbH

Planners The bridge is the result of a collaboration between Knight Architects (High Wycombe, England) and engineering firms Krebs+Kiefer Ingenieure GmbH (Karlsruhe) and Klähne GmbH (Berlin).
The contractors were SEH Engineering GmbH (Hannover) and Geiger+Schüle (Ulm). The project manager on site was Thomas Harter (SWU Verkehr)

Design and construction period 2012 – 2018

Total cost approx. 20 m euros

Length 270 m

Photography Andreas Meichsner

The Kienlesberg Bridge is the result of a design competition organized by the city of Ulm 2011 and is a good example of successful collaboration between the client, architects and engineers. Since its opening in 2018, the bridge has become a highly frequented transport junction, providing a new connection for trams, cyclists and pedestrians, while redefining part of Ulm‘s urban infrastructure.
With the completion of the bridge, a direct connection has been created between Eselsberg, where the university is located, and the city centre.

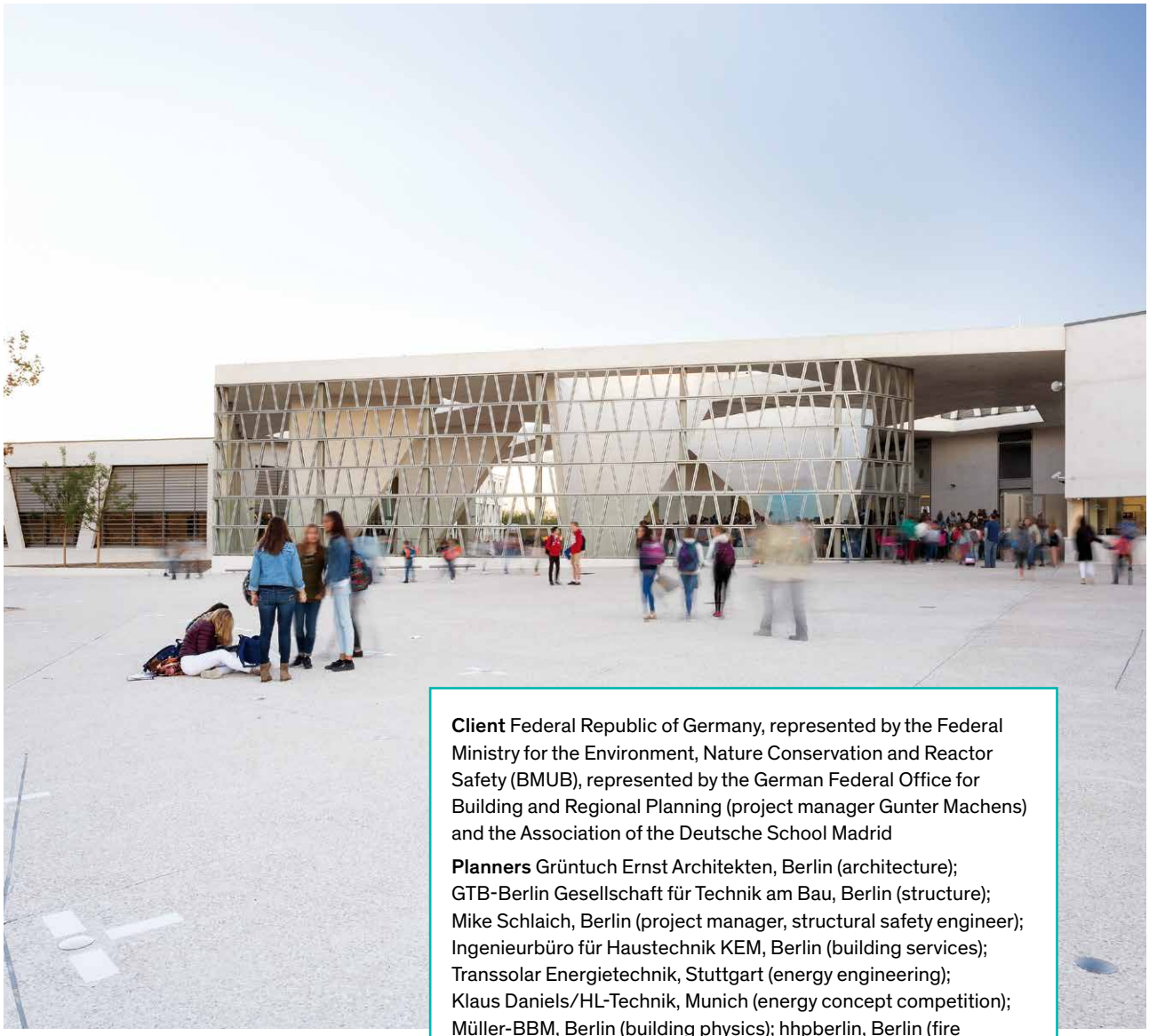
This type of routing not only contributes to more efficient organisation of local transport, but also overcomes urban barriers such as the railway tracks and creates new perspectives. In several places, the bridge offers seating as well as vantage points from which passers-by can overlook the railway area. The night-time lighting, the view of the Ulm Minster and the bridge‘s architectural language all contribute to the citizens’ identification with their new structure.
The collaboration between the City of Ulm, the municipal works companies and the design team resulted in a synthesis of functionality, user-friendliness and aesthetics. The technical execution of the bridge demonstrates the successful interaction of excellent engineering and architectural design. The asymmetry of the structure is a response to the complex circumstances of the site, and its uniqueness characterises the appearance of the location.

ASPECTS OF SUCCESS

- Design for an engineering structure that is the result of a design competition
- Intensive preliminary planning and design with the city and Deutsche Bahn
- Close collaboration between the client, engineering firm and architect
- High Baukultur standard creates added value for the urban surroundings

The interdisciplinary team developed a structure which is distinguished by its combination of trusses and Vierendeel girders and a design based on the neighboring Neutor Bridge, a listed building. Mayor Tim von Winning sees the Kienlesberg Bridge as proof that a careful and well-thought-out planning and design phase is essential for long-term construction projects, that will have a lasting influence on the cityscape. The project clearly demonstrates that a period of intensive preparation period is essential for the creation of structures that aim to harmonise functional, technical and aesthetic standards.

Deutsche Schule Madrid School



Client Federal Republic of Germany, represented by the Federal Ministry for the Environment, Nature Conservation and Reactor Safety (BMUB), represented by the German Federal Office for Building and Regional Planning (project manager Gunter Machens) and the Association of the Deutsche School Madrid

Planners Grüntuch Ernst Architekten, Berlin (architecture); GTB-Berlin Gesellschaft für Technik am Bau, Berlin (structure); Mike Schlaich, Berlin (project manager, structural safety engineer); Ingenieurbüro für Haustechnik KEM, Berlin (building services); Transsolar Energietechnik, Stuttgart (energy engineering); Klaus Daniels/HL-Technik, Munich (energy concept competition); Müller-BBM, Berlin (building physics); hhpberlin, Berlin (fire protection); Úrculo Ingenieros, Madrid (fire protection/building services); Lützow 7 Garten- und Landschaftsarchitekten, Berlin (outdoor facilities); Lichtvision, Berlin (lighting design); GuD Consult, Berlin (geotechnical engineer); Carsten Nicolai, Berlin ('Kunst am Bau' programme); Folke Hanfeld, Berlin ('Kunst am Bau' programme); Saint-Gobain Glass, Aachen (glazing)

Design and construction period 2010 – 2015

Location Calle Monasterio de Guadalupe 7, 28049 Madrid-Montecarmelo, Spain

Construction costs EW-Bau (preliminary planning and design): approx. € 50 m net; Final cost: approx. € 55 m net

Photography Celia de Coca, Madrid, Spain

The Deutsche Schule Madrid school was founded in 1896 and is thus one of the oldest German international schools abroad. The new building on a 35,000 square metre site on the northern outskirts of Madrid was officially opened in 2015. The school was completed in a construction period of just three years, and with a construction volume of around 61 million euros, it is one of the federal government's largest civil construction projects abroad to date. The architectural design was created by Grüntuch Ernst Architekten, who were the winners of the invitation-only, single-stage design competition, which required prior expression of interest, organized by the German Federal Office for Building and Regional Planning. A primary and secondary school for 1,500 pupils with canteen, cafeteria, assembly hall, gymnasium and underground car park as well as nursing school for 300 children have been built on the extensive site in the Montecarmelo district.

The German School in Madrid is an important place for cultural exchange in the city. The different uses were allocated to separate buildings on the new site, which are linked together by a perforated roof structure. The three main buildings for the nursery, primary school and secondary school each enclose an inner patio, that reinterprets the concentrated atmosphere of a monastery in a contemporary way, while at the same time opening up to the landscape of the adjacent sierra.

ASPECTS OF SUCCESS

- Design selection on the basis of an international competition
- Intensive preliminary planning and design
- Close collaboration between the client, engineers and architects
- High standard of all participants in a prestigious international project

The geometric open space of stairs, ramps and offsets, that connects the buildings, reflects the topography of the site and, together with the vivid play of light and shadow of the perforated roofs and facades, emphasises the differentiated spatial situations.

School buildings play a key role in the communication of Baukultur and sustainability. Reminiscent of traditional simplicity and incorporating technical and innovative sophistication characterises the design stance and approach of the German School's design and building services. A thermal labyrinth underneath the building based on traditional air conditioning, solar panels, solar thermal energy and a combined heat and power plant ensure the energy-efficient supply of energy for the school with extensive use of renewable energy. The ensemble was built using monolithic reinforced concrete. The striking white concrete and open layout form a natural cooling system and the design reflects the culture of central Spain.

Projects

Other Projects

Canteen and Building 6 at FH Erfurt

Client Freistaat Thüringen Landesamt für Bau und Verkehr, Erfurt **Architects** KSP Engel **GFA** 35,000 m² **UA** 15,022 m² **Construction costs** (CG 300 – 400) € 43.69 mln **Design period** 08/1996 – 11/2016 **Construction period** 12/2001 – 12/2017 (1st phase – 5th phase) **Photography** Adrian Schulz

The Erfurt University of Applied Sciences site was extended and refurbished in five consecutive construction phases without interrupting daily operations. The design includes a new concept for the canteen and the refurbishment of Building 6. A new building on the inner courtyard serves as an extension. Together with the old building, now there is space for around 400 guests in the canteen. The two upper floors of the old building house the faculty and seminar rooms. Both, the new façade structure and the choice of materials echo elements of the existing building.

Member of Parliament offices in the Luisenblock, Berlin

Client Federal Republic of Germany represented by the German Federal Ministry for Housing, Urban Development and Building, represented by the German Federal Office for Building and Regional Planning **Architects** Sauerbruch Hutton with Kaufmann Bausysteme GmbH and PRIMUS developments GmbH **Construction period** 2020 – 2021 **Total cost** approx. € 70 m **Photography** Jan Bitter

Following the 2017 elections, the Deutsche Bundestag needed new offices for its members of parliament very quickly. In a competitive tendering procedure, the design was awarded to Sauerbruch Hutton with Kaufmann Bausysteme and PRIMUS developments. In a very complex environment, the colourful building is impressive thanks to its generous feel and structural simplicity. Everything was ready to move in after a construction period of only 15 months. After a design and construction period of only 20 months, the project was completed four weeks earlier than scheduled.

Rathaus Bissendorf – new town hall

Client Gemeinde Bissendorf **Architects** blocher partners **Structural engineer** Ehlers-Unland, Osnabrück **Building services** Jager+Partner, Osnabrück **Electrical design** ISR Ing.-Büro Schlegel&Reußig GmbH, Lange **Building physics** DS-Plan, Stuttgart **Outdoor facilities** Glück Landschaftsarchitektur, Stuttgart **Surveyor** Vermessungsbüro Flüssmeyer, Osnabrück **Design and construction period** 2013 – 2015 **Total cost** € 3.7 m **Photography** Christian Richters

The new town centre in Bissendorf is a result of a project competition for the new town hall building and its surroundings. The Bürgersaal (civic hall) and new administration building connect with the Catholic parish church to form a distinctive ensemble. In all decisions, from the overall concept to material choices and the construction, the designers took into account the effects on costs and durability without making any design compromises.

Landratsamt Neustadt a.d. Waldnaab

Client Landkreis Neustadt a.d. Waldnaab represented by Landrat Andreas Meier **Planners** Bruno Fioretti Marquez, Häffner + Zenk Planungsgesellschaft mbH, Greiner Architekten, capattistaubach Landschaftsarchitekten, ifb Frohloff Staffa Kühl Ecker, BSK Büro Siegfried Kleber, Müller BBM GmbH
Design and construction period 2016 – 2019 **Construction costs** € 7.17 m net (CG 100 – 700) **Photography** Stefan Müller, Frieder Salm

The Landratsamt (district administration) in Neustadt an der Waldnaab was successfully extended with a hybrid building made of concrete and timber, adding to the existing heritage ensemble of the old and new palace. In early 2016, Bruno Fioretti Marquez won an invitation-only design competition with 19 participants for the extension of the district administration. The architects have designed a public building with constantly surprising spatial impressions at a sensitive location in terms of urban planning and historic preservation.

AIZ – Akademie der Deutschen Gesellschaft für Internationale Zusammenarbeit (GIZ) on the Campus Kottenforst, Bonn

Client Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH **Architects** Waechter + Waechter Architekten BDA, ap88 Architekten, **Landscape Architects** Angela Bezzenberger with Riehl Bauermann Landschaftsarchitekten, merz kley partner ZT GmbH, HL-Technik Engineering GmbH, Müller-BBM GmbH, GROSSMANN Bau GmbH & Co. KG **Design and construction period** 2014 – 2017 **Costs** CG 200 – 500 (net) € 9.46 m **Construction costs** CG 200 – 500 (gross) €11.25 m **Photography** Thilo Ross Photography: Heidelberg, Achim Birnbaum Architekturfotografie, Stuttgart

The new building of the Academy for International Cooperation (AIZ) is used as a seminar and training centre for developing expertise in working in an international context. The design involves a timber frame with a constant column grid with efficient spans. Due to the clear structure, the number of different joints was reduced to a minimum, enabling optimum use of the advantages of a modular construction.

Hafenpark, Frankfurt am Main

Client Stadt Frankfurt am Main, Grünflächenamt **Landscape Architects** SINAI Gesellschaft von Landschaftsarchitekten mbH **Site management** Götte Landschaftsarchitekten, Frankfurt am Main **Structural design** Ingenieurbüro für Bauwesen Wetzel & von Seth, Berlin **Water** Ingenieurbüro Obermeyer, Potsdam **Consultant** concrete jungle / Jürgen Horwarth **Design and construction period** 2010/11 – 2015 **Construction costs** € 5.2 m **Photography** Nikolai Benner

The Hafenpark in the Frankfurter Osten area of Frankfurt am Main is adjacent to the green and strolling promenade on the banks of the river Main and is a contemporary public park with diverse uses: Sports facilities and playgrounds are interwoven with natural recreational areas. From these apparent opposites of exuberant activity and peaceful space, fun sports and nature experiences, an atmospheric and structural composition is created that lends the park its special character. The programme originated from an online survey conducted by the City of Frankfurt.

Park am Gleisdreieck, Berlin

Client State of Berlin represented by Grün Berlin GmbH **Landscape Architects** Atelier Loidl Landschaftsarchitekten Berlin GmbH; BBS Landscape Engineering GmbH **Design period** 02/2007 – 04/2011 **Construction period** 06/2008 – 05/2013 **Construction costs** € 18 m (gross) **Photography** Leonard Grosch, Atelier Loidl

The disused Deutsche Bahn railway property in the middle of the Berlin, which extends from the Landwehr Canal at Potsdamer Platz to the Yorck Railway Bridges, was turned into an inner-city park. The 10-hectare western part of the park is the urban counterpart to the more peaceful and natural Ostpark in the east – with different areas for games, playing, sports, movement and recreation.

Baakenpark im Baakenhafen Quarter, Hamburg

Client HafenCity Hamburg GmbH **Landscape Architects** Atelier Loidl Landschaftsarchitekten Berlin GmbH, BBS Landscape Engineering GmbH, Grundbauingenieure Steinfeld und Partner GbR, Sellhorn Ingenieurgesellschaft mbH, Umtec.Hilpert Projektsteuerung **Design period** 11/2012 – 02/2016 **Construction period** 06/2014 – 05/2018 **Construction costs** € 15.3 m gross **Photography** Leonard Grosch, Mark Pflüger (Atelier LOIDL)

Since 2018, the man-made peninsula created from sand from the Elbe river, located in the former Baakenhafen harbour basin has formed a green centre for the eastern Hafencity. The disjointed shoreline and spectacular topography together with the wild tree stocks create diverse spaces and make the just 1.6-ha park seem significantly bigger.

Museum and Kulturforum Südwestfalen, Arnsberg

Client Hochsauerlandkreis district, represented by Landrat Dr. Karl Schneider, Meschede **Planners** Bez + Kock Architekten Generalplaner GmbH, Martin Bez, Thorsten Kock, BBM Bodem Baumanagement, wh-p Ingenieure AG, Wiederkehr Landschaftsarchitekten, GBI Gackstatter Beratende Ingenieure, Henne & Walter Ingenieurbüro für technische Gebäudesysteme, Wolfgang Sorge Ingenieurbüro für Bauphysik **Exhibition concept**: Dr. Ulrich Hermanns Ausstellung Medien Transfer GmbH **Design period** 10/2016 Old building renovation, 05/2017 new build **Completion** 08/2018 Old building renovation, 09/2019 new build **Total cost** approx. € 12.5 m **Photography** Brigida González

The Sauerland Museum was extended to become the Museums- und Kulturforum Südwestfalen (South Westphalia Museum and Cultural Forum). The historical building from 1605 was renovated and the permanent exhibition in it was redesigned. As a result of the extension, prestigious temporary exhibitions can now be displayed. The façades with Gauinger travertine cladding emphasise the sculptural appearance of the building.

Anneliese Brost Musikforum Ruhr, Bochum

Client City of Bochum, Central Services, Bochum **Planners** Bez + Kock Architekten Generalplaner GmbH, Martin Bez, Thorsten Kock, HOAI phase 8: Stein Architekten, Marienkirche Church Renovation: Bernhard Mensen, CONVIS Baumanagement & Projektsteuerung GmbH, Mathes Beratende Ingenieure, Ingenieurbüro für technische Gebäudesysteme Henne & Walter, GBI Gackstatter Beratende Ingenieure GmbH, Müller-BBM, Bartenbach GmbH, CUT GmbH, Ingenieurbüro für Licht, Medien und Design, City of Bochum, Environmental and Parks and Gardens Department **Design start** 07/2012 **Completion** 10/2016 **Construction costs** approx. € 38.9 m **Photography** Brigida González

The new building for the Anneliese Brost Musikforum Ruhr is part of the development of the creative inner-city neighbourhood. The historical Marienkirche Church, as the central foyer of the building, is the identity-establishing, urban and functional centre of the music forum. Structures on both sides of the church are directly aligned with the length of the nave and interlock with it on the inside.

Städtische Bibliothek Heidenheim (Town Library)

Client Stadt Heidenheim, represented by the building department **Architect** Max Dudler, Berlin **Site supervision** Architekturbüro Manfred Schasler, Berlin **Structural engineer** wh-p GmbH Beratende Ingenieure **Building services** Herp Ingenieure GmbH & Co. KG **Electrical design** Conplaning GmbH **Building physics / Acoustics** Wolfgang Sorge Ingenieurbüro für Bauphysik GmbH & Co. KG **Fire protection design analysis** Müller BBM GmbH **Outdoor facilities design** Hager Partner AG **Design period** 2014 – 2017 **Total cost** € 18.5 m **Photography** Stefan Müller

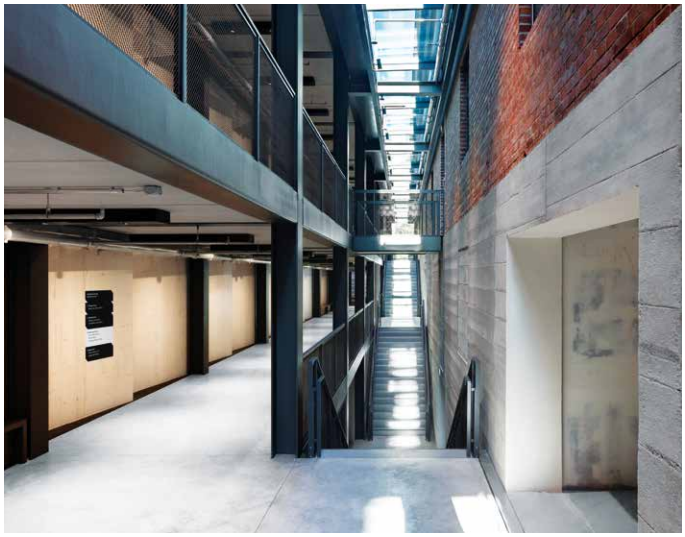
Heidenheim's new library is the result of a two-phase design competition. The striking building was designed by Max Dudler and sits in harmony with its surroundings. In the form of an abstract silhouette of a city it marks the boundary between the historic city centre and heterogeneous post-war developments. In addition to the library's wide range of services, a public media centre, event rooms, a city archive and a café have turned the building into a social meeting place.

Museum Brandhorst, Munich

Client The highest building authority in the Bavarian State Ministry of the Interior, State Building Office Munich **Architects** sauerbruch hutton **Design and construction period** 2005 – 2009 **Photography** © Noshe

Brandhorst Museum is home to an important private collection of modern and contemporary art of the 20th and 21st century, mainly paintings. The building consists of an elongated block and the head building, which marks the northeast corner of Munich's Kunstareal (art site). 36,000 glazed ceramic rods in 23 colours give the building an unmistakable appearance, an urban image of enormous presence and an incomparable signal effect. Inside, the architecture is restrained in order to showcase the art.

Isarphilharmonie concert hall, Munich



Client Gasteig München GmbH **Planners** gmp Architekten – von Gerkan, Marg und Partner, Hamburg/Berlin (architecture); Züblin Timber, Aichach (timber structure); Schlaich Bergermann Partner, Stuttgart (structural design); Nagata Acoustics International, Tokyo, Los Angeles, Paris (acoustics design); Nüssli Gruppe, Hüttwilen (general contractor) **Construction period** 2018 – 2021 **Construction costs** € 43 m **Photography** Hans Georg Esch

A temporary concert hall has been set up in Munich Sendling as an interim location for the Gasteig, a well-known cultural centre and home to the Munich Philharmonic Orchestra. As a temporary venue, the modular new building for a concert hall with 1,800 seats, together with the foyer in the remodelled Hall E, forms the heart of the new cultural location. The design aims for an economical realisation of the construction with the possibility of being dismantled later on.

Grimmwelt Kassel museum

Client documenta Stadt Kassel **Architects** kadawittfeldarchitektur GmbH, Aachen **Project management** DU Diederichs Projektmanagement AG & Co.KG, Wuppertal **Structural design** Bollinger + Grohmann, Frankfurt am Main **Exhibition concept** hürlimann+lepp, Zürich **Exhibition architecture** Holzer Kobler Architekturen, Zürich **Site supervision** ATELIER 30 Architekten GmbH, Kassel **Building physics** TOHR Bauphysik GmbH & Co. KG, Bergisch-Gladbach **Lighting design** Lichtvision Design & Engineering GmbH, Berlin **Fire protection** Neumann Krex & Partner, Niestetal **Landscape Architects** City of Kassel, Environmental and Parks department **Design start** 2011 **Construction period** 2013 – 2015 **Total cost** CG 200 – 700: € 16.5 m **Photography** Jan Bitter

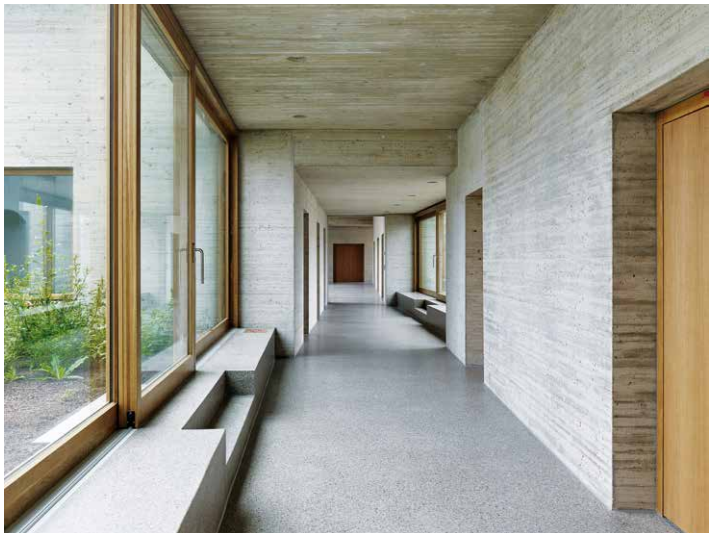
The new exhibition building on the Kassler Weinberg presents the works of the Brothers Grimm. The new building is a central component of the overall concept, which also includes the Grimm Memorial and a separate Grimm Department in the Murhardt Library in the Hessian State Museum in the immediate vicinity. The building translates the historical and topographical setting into an open spatial structure.

Concert Hall, Blaibach

Client Gemeinde Blaibach **Initiator / Operator** Thomas Bauer, Uta Hielscher (Kulturwald GmbH) **Planners: Architect** Peter Haimerl . Architektur **Site supervision** Karl Landgraf, Peter Haimerl . Architektur **Structural design** Thomas Beck, A.K.A. Ingenieure **Master builder work** Alt Franz Bau-GmbH **Heating / ventilation** Cirtec Michael Hopf **Electrical design** Planungsbüro Stefan Schmid **Acoustic design** Müller-BBM **Facade concrete and concrete formwork** Fleischmann & Zankl **Tribune metalwork** Metallbau Gruber **Interior concrete formwork** Gföllner, Fahrzeugbau und Containertechnik **Design period** 01/2013 – 09/2013 **Completion** 09/2014 **Total cost** € 1.6 m (€ 5,350 / m² usable area) **Photography** Edward Beierle

In 2012, the Blaibach municipality in the Bavarian Forest acquired various properties in order to revitalise the heart of the town as part of the initiative 'Ort schafft Mitte' ('Town creates Centre'). Five projects, including the new village square, form the centre of the town with the concert hall as its heart. Its granite facade draws on Blaibach's quarryman tradition. The monolithic, tilted building opens upwards onto the new village square.

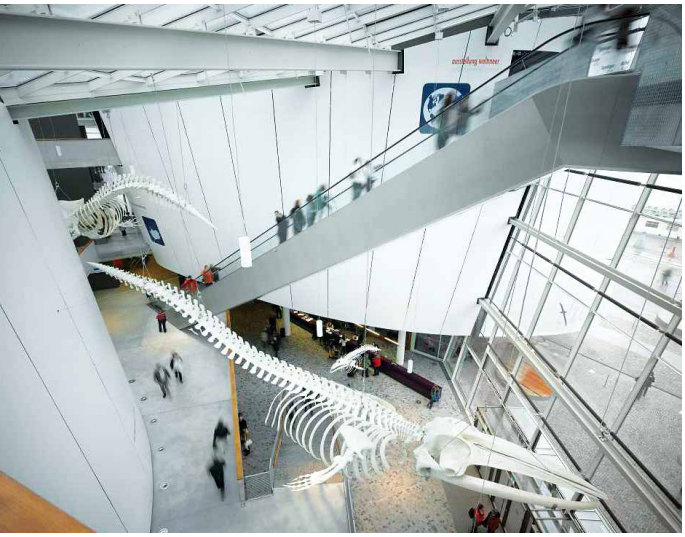
Structural modification and extension of Wittenberg Castle



Client Lutherstadt Wittenberg **Architects** Bruno Fioretti Marquez Architekten **Site supervision** AADe Atelier für Architektur & Denkmalpflege, DGI Bauwerk Architekten GmbH **Structural design** ifb Frohloff Staffa Kühl Ecker **Outdoor space design** SALEG Sachsen-Anhaltische Landesentwicklungsgesellschaft mbH **Building physics** BBS Ingenieurbüro **Fire protection** Sachverständigenbüro Arnhold **Engineering / electrical engineering** INNIUS DÖ GmbH / Anders electro GmbH **Design and construction period** 2011– 2017 **Total cost** € 16.1 m **Photography** Stefan Müller

The task was to modify the ensemble for exhibition purposes, for a Reformation history library, and for a seminary. Among other renovations, two new staircases were created to access different levels of the interior that has already been modified multiple times. Key to the project success was the close collaboration of the architects with local craftsmen from medium-sized businesses, who not only had the knowledge but also contributed the enthusiasm to tackle special challenges.

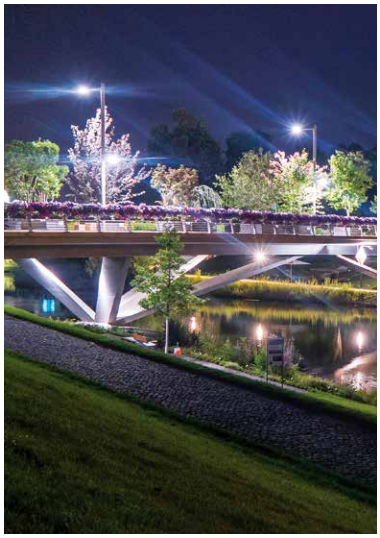
Ozeaneum Stralsund museum



Client Deutsches Meeresmuseum Stralsund **Planners** Behnisch Architekten, Behnisch & Partner, Atelier Lohrer, argea fassbender heppert, Leitfaden Design, Prof. Nagel, Schonhoff & Partner, Schweitzer GmbH Beratende Ingenieure, OCKERTUNDPARTNER, Ingenieurbüro Horstmann + Berger, Ingenieurbüro Walter Bamberger **Design and construction period** 2002 – 2008 **Construction costs** € 60 m **Photography** Frank Ockert, Roland Halbe

The Deutsche Meeresmuseum (German Oceanographic Museum) was already the largest natural science museum on Germany's Baltic Sea coast as it extended its programme with the opening of the 'Ozeaneum'. The architectural concept is an open building, that lets in daylight from all sides. The building consists of four individual structures, that divide up the building volume and integrate it into the surrounding cityscape.

Bleichinsel Bridge, Heilbronn



Client City of Heilbronn **Engineers** schlaich bergermann partner, JV: ARGE Adam Hörnig, Aschaffenburg / Stahlbau Magdeburg, Magdeburg **Design period** 09/2012 – 09/2014 **Construction period** 08/2014 – 10/2015 **Photography** schlaich bergermann partner, sbp/Andreas Schnubel

The new Bleichinsel Bridge over the Alt-Neckar tributary is a four-lane integral road bridge with footpaths and bicycle paths on the side. Due to its particular position in a flat river meadow, the structure that was chosen is a composite construction with concrete deck slab on the top and steel box girders as longitudinal beams. This design largely removed the need for temporary scaffolding and minimised the intervention in the landscape as well as shipping traffic during the construction period.

Kochertal Bridge, Geislingen

Client Federal Republic of Germany represented by the Regierungspräsidium Stuttgart Building Department 47.2 / East, Ellwangen field office **Engineers** Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG, Leonhard Weiss GmbH & Co. KG, Ingenieurgruppe Bauen, Dr.-Ing. Dietmar H. Maier, Regierungspräsidium Stuttgart Ref. 47.2 **Design period** 02/2007 – 09/2013 **Construction period** 06/2013 – 08/2015 **Total cost** € 19.5 m gross **Photography** Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG Leonhardt Weiss GmbH & Co. KG

The Kochertal Bridge is considered to be an outstanding example of German engineering and is already a heritage building. Spanning a total length of 1,128 metres, it is not only one of the longest viaducts in Germany, but with a height of 185 metres, it is also the highest German bridge structure. The repair and strengthening work, which aimed to maintain an identity-establishing engineering structure for the future, was performed on a one-piece deck while traffic on the bridge continued.

New Kattwyk Railway Bridge, Hamburg

Client Hamburg Port Authority **Engineers** Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG, Sellhorn Ingenieurgesellschaft mbH, Ingenieurbüro Dipl.-Ing. H. Vössing GmbH, IRS Stahlwasserbau Consulting AG, DriveCon GmbH, PPL Architektur und Stadtplanung, Max Bögl Grouü, Neumarkt HC Hagemann GmbH & Co. KG, Heijmans N.V. Rosmalen, SEH Engineering GmbH **Design period** 08/2009 –11/2016 **Construction period** 04/2016 –12/2020 **Total cost** € 205 m gross **Photography** Lina Nguyen Photography

The existing Kattwyk Bridge is a lifting bridge for railway and road traffic across the Süderelbe shipping lane in Hamburg. It has connected Moorburg and Wilhelmsburg since 1973. With the new Kattwyk Railway Bridge, one of the largest lifting bridges in the world has been built in Hamburg's port. The 287-metre-long structure is an important infrastructure project of the Hamburg Port Authority, which above all serves to deconcentrate traffic in the port, as the new bridge separates road and rail traffic.

Chemnitz Station Transformation

Client Verkehrsverbund Mittelsachsen **Planners** Grüntuch Ernst Architekten (architecture), BuroHappold Engineering, Berlin (structure/building services) Dr.-Ing. Wolfgang Stucke / Dr.-Ing. Thomas Klähne, Berlin (checking engineers) Ingenieurgesellschaft Lachmann-Dominok, Oelsnitz (building services) Topotek 1 Gesellschaft von Landschaftsarchitekten, Berlin (outdoor facilities), Lichtvision Design, Berlin (lighting design) Random International, London (art) **Design period** 2007 – 2012 **Construction period** 2011– 2014 **Completion** 2016 **Construction costs** approx. € 9.5 m net **Photography** Jan Bitter

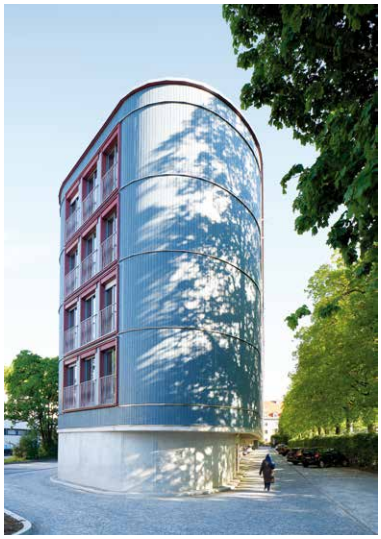
An open, contemporary entrance to the town – that is the initial impression that the transformed main station with its new square gives to people arriving by train. To achieve this, the existing concourse built in the 1970s was dismantled down to its load-bearing structure and demonstratively opened up. A flowing public space has been created, that sits as if under an 'urban canopy'. The station serves as a public square that continues beyond the hall into the city space and links the previously disconnected station concourse with the urban context.

Zugspitze Cable Car, Garmisch Partenkirchen

Client Bayerische Zugspitzbahn Bergbahn AG **Planners: Principal designer** ARGE BauCon - Hasenauer - AIS JV; comprising BauCon ZT GmbH, Zell am See (AT); AIS Baumanagement GmbH, Zell am See (AT); Architekturbüro Hasenauer, Saalfelden (AT) **Design start** 2013 **Construction period** 2015 – 2017 **Total cost** € 55 m **Photography** Hasenauer.Architekten

The top station of the Zugspitze cable car was a major design challenge in terms of its structural design and the geology. The station was integrated into an existing building. Cable forces on the south edge made a bold cantilevering of the building possible, thus creating a remarkable panoramic view for visitors. Extensive cost tracking together with the client was a basic requirement for the budget control aspect.

Parking lot superstructure at Dantebad, Munich



Client Gewofag Holding GmbH, Munich **Architects** Nagler Architekten with B&O Wohnungswirtschaft GmbH Bavaria **Structural engineer / concrete** r.plan GmbH, Chemnitz **Structural engineer / timber structure** Ingenieurbüro für Baustatik Franz Mitter-Mang, Waldkraiburg **Building services design** Ing.-Büro Scheerer, Bad Reichenhall **Electrical design** EBB GmbH, Blankenheim **Landscape architect** terra.nova Landschaftsarchitektur, Munich **Energy design** Ingenieurbüro für Bauphysik Horstmann + Berger, Altensteig **Fire protection design** PHIplan Ingenieurbüro für vorbeugenden Brandschutz, Grabenstätt/Winkl Planungsbüro Färber, Munich **Design and construction period** June to December 2016 **Total cost** € 9.881.664 gross **Photography** Stefan Müller-Naumann

This extraordinary pilot project has set new standards. The building forms a street-side spatial edge above a row of public car parks and has created new living space in a short space of time. After commissioning and inspection, planning permission was granted in six months and the timber construction was completed in a year, demonstrating in an innovative way how urban space can be creatively organised and used in the future.

Paul-Zobel-Strasse, Berlin

Client HOWOGE Wohnungsbaugesellschaft mbH **Architects** Heide & von Beckerath **Site management** Beusterien . Architektur-Büro B.AB **Structural design** StudioC Nicole Zahner **Building services** IG-W **Traffic design** Hoffmann-Leichter Ingenieurgesellschaft mbH **Design start** 02/2016 **Construction period** 05/2017 – 11/2018 **Total cost** € 7.490.500 **Photography** Andrew Alberts

In the courtyard of a slab housing complex that occupies the edge of the block, the two eight-storey apartment blocks are a sensible form of redensification. There is not only space for 70 flats here, but also for communal living, and the planners know how to make creative use of a tight framework and think about flexibility from the outset. The ideas led to an extensive initial feasibility study and resulted in clever floor plan types and a partly open distribution of functions, right through to a strategically planned production of the components.

Jewish community centre and synagogue, Regensburg

Client Jüdische Gemeinde Regensburg (K.d.ö.R.) **Planners** Staab Architekten, ERNST2 Architekten AG, IB Drexler + Baumruck, Dr. Gollwitzer – Dr. Linse Beratende Ingenieure im Bauwesen mbB, Levin Monsigny Landschaftsarchitekten, Wamsler Rohloff Wirzmüller FreiRaumArchitekten GbR, WBP Winkels Behrens Pospich, Melzl Planung GmbH, Licht Kunst Licht AG **Design start** 09/2015 **Completion** 02/2019 **Construction costs** new build: € 6.5 m, existing building: € 2.5 mln, total: € 9 m **Photography** Marcus Ebener

The site located within Regensburg's old town, named a UNESCO World Heritage Site in 2006, whose appearance is protected by specific requirements regarding scale, roof shapes, facade design, material and colour. The new building provides a space in which the Jewish community can come together naturally and with assurance. Particular construction challenges were mastered through careful design and to a high standard.

St. Michael Catholic Church Centre, Poing

Client Katholische Kirchenstiftung St. Michael represented by Erzbischöfliches Ordinariat Munich Department 2: Construction and art **Architects** meck architekten, Munich **Landscape Architects** lohrer.hochrein landschaftsarchitekten und stadtplaner gmbh **Design start** 2011 **Construction period** 2015 – 2018 **Total cost** € 12.3 m net **Photography** Florian Holzherr, Michael Heinrich

Situated at the transition to the landscape, the new church acts as a keystone in the sensitive urban planning situation. The bell tower and the rectory are reduced in height. They form the spatial edges for the church square and thus the street-side frame for the church. Upon entering, a space of light opens up, reaching towards the sky. In analogy to the Trinity, three large openings of light characterise the various liturgical sites and ceremonies.

Luckenwalde Fire Station

Client Stadt Luckenwalde **Architects** pussert kosch Architekten, Dresden **Structural design** Mayer-Vorfelder und Dinkelacker Ingenieurgesellschaft für Bauwesen GmbH und Co KG, Dresden **Landscape Architects** atelier 8 Landschaftsarchitekten, Baruth/Mark **Building services** Peter Voigtlaender, Luckenwalde **Other participants** Dipl.-Ing. Andreas Fritsche SFH Ingenieure, Dresden, and Bauphysik@integrierte Planung Kai Rentrop, Dresden **Design and construction period** 2013 – 2016 **Construction costs** € 3.1 m (CG 300 – 400), € 5.6 m (CG 200 – 700) **Photography** Dietmar Strauss

The new fire station is a good fit with the urban planning typology of the northwest solitaire buildings in Luckenwalde. The various functional areas are visible from the outside. The different heights and configurationsof the building sections create an exciting and varied composition, while the design language with slight curves at the outer corners and a homogeneous façade material hold the individual areas together.

Main fire and rescue station, Krefeld

Client City of Krefeld **Architects** SUPERGELB ARCHITEKTEN, ARGE GATERMANN + SCHOSSIG mit Plg Gestering, Knipping, De Vries **Design and construction period** 2013 – 2016 **Construction costs** € 15.3 m (gross) **Photography** SUPERGELB ARCHITEKTEN

The fire station is functional, durable, low-maintenance and designed for efficient communication. The square at the front and the foyer with its art wall create a public space that can be used or various events, which shifts the fire service further into public awareness. Members of the fire service were involved in the entire design and construction process from the outset.

Bildungscampus Luise Büchner (educational campus), Darmstadt

Client Wissenschaftsstadt Darmstadt, represented by Immobilienmanagement Darmstadt Dipl. Ing. Birgit König-Ehmke, Sachgebietsleitung Schulen Süd **Architects** Waechter + Waechter Architekten BDA PartmbB, Prof. Felix Waechter and Sibylle Waechter with ap88 Architekten Partnerschaft mbB **Landscape Architects** foundation 5+ landschaftsarchitekten bdla, Kassel Building physics: Müller-BBM GmbH, Planegg **Structural design** merz kley partner ZT GmbH, Dornbirn **Building services** ITG Braun Ingenieurbüro für technische Gebäudeausrüstung GmbH, Saarbrücken **Fire protection** Ingenieurbüro Tichelmann & Barillas, Darmstadt **Design start** 2016 **Completion** 2021 **Total cost** € 34.28 m gross **Photography** Brigida González, Stuttgart

A new primary school with gymnasium and a day care centre have been built for the Luise Büchner educational campus on the conversion site of the former Lincoln barracks in Darmstadt. The skeleton structure on both floors with economical spans and bracing cores is a cost-effective construction. The thorough planning enabled a fast construction process thanks to a high level of prefabrication.

Grammar School, Langenhagen

Client City of Langenhagenn **Architects** gernot schulz : architektur GmbH; Architect from phase 6: Ernst2 Architekten AG **Landscape Architects** urbanegestalt PartGmbB **Structural design** w-hp GmbH **Building services** Ingenieurgesellschaft Grabe mbH **Electrical design** Ingenieurbüro Schlegel & Reußwig GmbH **Construction period** 2020 – 2023 **Construction costs** €103 m **Photography** HG Esch

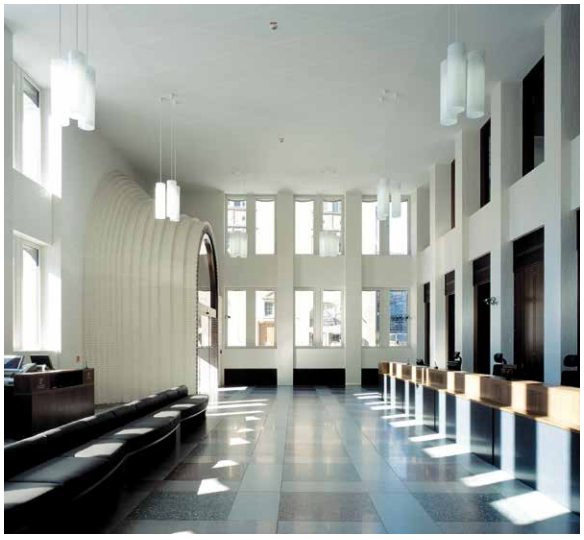
In the new seven-form grammar school featuring sports and playground areas, a spacious assembly hall and a canteen provides space for around 1,900 students and teachers. The complex building is designed for short routes and provides a harmonious room layout. By using materials made from renewable raw materials in the finishes and fitout, facade and structure, the building is intended to serve as a model and a study object for lessons and also ensures a high feel-good factor.

Structural alteration of Kindergarten Campus, Merseburg

Client Studentenwerk Halle (Saale) AÖR **Architects** Aline Hielscher Architektur **Site supervision** Büro Thomas Zaglmaier **Outdoor facilities design** Sascha Kleine **Structural design** DSH GmbH **Thermal insulation, heating ventilation and BSE** Wohlrab, Landeck & Cie **Fire protection** Joachim Maske **Electrical design** Schimmel + Schönemann **Kitchen design** Triebe und Triebe GbR **Construction costs** CG 300 – 400: € 1.4 m net **Usable area** 630 m² **HOAI phases** 1 – 8 **Design and construction period** 2020 – 09/2023 **Photography** Célia Uhalde

On the campus of the Merseburg University of Applied Sciences is a student hall of residence with a two-floor extension from the 1960s. This extension has now been converted into a day care centre. The almost cathedral-like, single-sided room of the university's former telephone system in the basement has been converted into an activity room for the children, while the building's existing 3-metre grid proved surprisingly flexible for accommodating group rooms, a kitchen and sanitary facilities.

Bremer Landesbank



Client Bremer Landesbank **Architects** Caruso St John Architects, London, Münster **Design and construction period** 2013 – 2016 **Construction costs** € 50 m **Photography** Hélène Binet

The bank building in the direct vicinity of the mediaeval town hall and the cathedral is intended to convey a dignified, restrained impression, but above all, present an open and honest appearance. The distinctive brick facade is comprised of 64 different brick shapes, which form a three-dimensional facade relief. A large archway frames the entrance and leads into a spacious counter hall in the corner of the square.

Epilogue

We asked ourselves, “What does it take to make a building project successful?” and set out to identify success factors that would enable us to design and build to a higher standard of Baukultur within the cost and time constraints.

The main objectives in construction, which project managers are often commissioned to monitor are to stay on budget, on schedule, and meet quality requirements. Recited in that order and frequently almost like a mantra. As soon as cost or schedule problems arise, quality is usually the first to fall behind. This is structurally the most difficult to achieve because costs and deadlines can be reproduced with digital formats and monitored with lists, while the assessment of quality requires experience and Baukultur knowledge. A well-known example is the construction of Berlin’s central station: where the internal decision by Deutsche Bahn to complete the project in time for the 2006 World Cup meant that almost a third of the design‘s distinctive roof had to be removed. And the planned, spatially sculptural vaulted ceiling was replaced by a flat ceiling. A comparatively trivial and temporary event caused lasting damage to the Baukultur in Germany – also in terms of location policy.

Conversely, the high design quality of the project examples in this publication is striking. Architectural clarity and the art of engineering are obviously no problem for on-budget and on-schedule completion. On the contrary: We believe that the architectural work can be a powerful motivational model for all participants in a project. So we do not need to eliminate the project manager‘s mantra, but perhaps rearrange it to “1. quality, 2. cost, 3. time”. Prioritising in this order will generally guarantee success for construction projects and clients in the short term. In the long term, they pay off over the life cycle and for society.

A crucial aspect of the implementation is ‘Phase Zero’. Even before the specific construction task is defined, a first analysis should be carried out in Phase Zero taking into account the specific conditions of a site, the wishes of the client and users, the planning circumstances, and thus all the factors affecting the budget and the schedule. In the best case scenario, this will avoid mistakes, establish productive communication, improve quality and workflow, and even save time and money over the life of the project. Phase Zero is an early investment with a proven return.

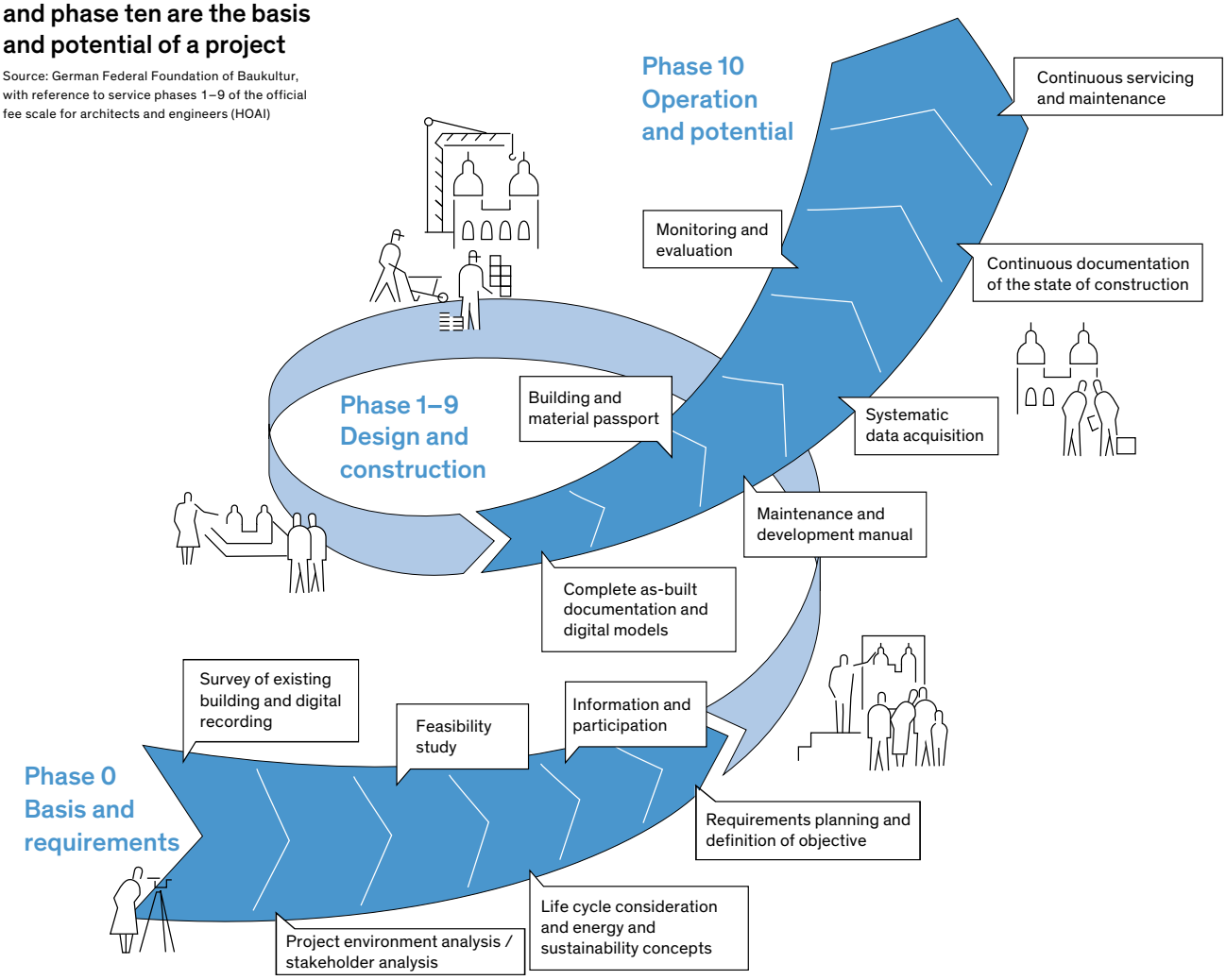
The next step is to integrate all of the project‘s findings and framework conditions and translate them into a high quality design. Competitions, expert reports and workshops help to develop a solid vision for the rest of the project. A result-oriented design process supporting cooperation between client, designers and contractors is based on this.

The principles for the each step can perhaps be summarised as follows: Approach the building task with sound judgement and a sense of proportion from the outset / know that Baukultur is a basic requirement and not a luxury / rely on expertise and experience / encourage or even require alliances and cooperations / (pre)plan carefully and prudently at the right points / allow feedback and necessary adjustments at an early stage / take a solution-oriented approach to the work and act quickly.

The Federal Foundation of Baukultur is working to increase the amount of Baukultur in Germany. For a good ten years now, the Foundation has been working to strengthen Phase Zero, which needs to be structurally established and the appropriate framework conditions created. As a federal foundation, one of our core interests is to actively pursue and practice a location policy for Germany as an architecture, technology and economic hub and to firmly establish Baukultur at the international level.

Project stages phase zero and phase ten are the basis and potential of a project

Source: German Federal Foundation of Baukultur, with reference to service phases 1–9 of the official fee scale for architects and engineers (HOAI)



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The third person plural form is used where applicable for better readability. This form is also explicitly nonbinary and gender-neutral and always refers to all genders.

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