

Baukultur Report

Heritage – Presence – Future

2018/19



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Reiner Nagel
Schiffbauergasse 3, 14467 Potsdam, Germany

Management:
Belinda Rukschcio (BSBK)
Organisational Support: Lisa Kreft (BSBK)

Editors:
Belinda Rukschcio with Niklas Nitzschke, Jonathan Bratz, Lisa Kreft, Jana-Isabell Knufinke, Louisa Schwöpe (BSBK), and Heiko Haberle

Editors, Images, and Graphics:
Belinda Rukschcio with Jonathan Bratz, Sarah Manz (BSBK), and Anna Schuster

Contractors:

Deutsches Institut für Urbanistik GmbH (Difu),
Zimmerstraße 13–15, 10969 Berlin, Germany
Daniela Michalski (Project Management), Prof. Martin zur Nedden, Julia Diringer, Franciska Frölich von Bodelschwingh, Josefine Pichl; student assistants:
Sonja Spital, Deniz Ucar

Studies:
Kapellmann Rechtsanwälte: Prof. Dr. Klaus Oehmen;
synergon Stadtentwicklung Sozialraum Kultur:
Jörg Beste; Wuppertal Institut für Klima, Umwelt,
Energie: Dr. Henning Wilts

Translation:
Dr. Inez Templeton

Proofreading:
Tammi L. Coles

Corporate Design and Graphic Design:
Heimann + Schwantes
www.heimannundschwantes.de

Information Graphics:
Erfurth Kluger Infografik
www.infografiker.com

Photographs:
Andreas Meichsner Photography
www.andreasmeichsner.de

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Core Messages of the Baukultur Report 2018/19

Continue building mixed quarters

The densification of existing quarters reduces the new designation of settlement and traffic areas, and contributes to the improvement of the Baukultur diversity of use and design quality. The possibilities range from vacancy, open, or fallow land activations to structural measures such as closing gaps between buildings, the addition of storeys, and supplementary buildings. In addition, well-designed public spaces and a balanced infrastructure offering have a positive effect on participation and user behaviour. They strengthen the identity of a place and the solidarity of its inhabitants.

Important recommendations for action on the way to mixed quarters:

→ Create Baukultur guiding principles

The built environment holds an important key to character and identity in future-oriented transformations. Baukultur guiding principles have a positive effect on the further development of cities, places, and landscapes. They ensure the preservation of regional diversity, local recognition, and common values.

→ Design public spaces for people

Whether in dense cities or as a village meeting point, public green and open spaces create added value for all citizens. With participation, commitment, and good design, urban fallow land and open spaces can be activated with relatively little effort, which has a positive effect on the quality of life.

→ Use mobility as an opportunity for conversion culture

The conversion and expansion of transport infrastructures has great potential for design and structural improvements. In the age of a global and mobile society, transit areas increasingly take on the role of a local business card with an identity-creating effect.

Establish conversion culture

In the further development of built structures, existing qualities can be recognised, valued, and maintained. Conversion culture goes beyond purely economic evaluation and includes social and environmental interests. Qualified craftsmanship techniques, sustainable building materials, and flexible solutions ensure Baukultur values – from smaller renovation measures, through energy renovation, to city-compatible new buildings.

Important recommendations for action on the way to conversion culture:

→ **Retain and develop existing structures**

Additions, extensions, and conversions can represent contemporary solutions for existing buildings. These measures contribute to environmental and economic sustainability. In the process, the continuity of identity-creating regional elements has to be ensured.

→ **Strengthen the historical context as a starting point for new construction**

Baukultur becomes apparent by means of historical layers whose special features make up the essence of a place. New building structures upgrade places – provided the projects relate to local qualities and develop them further.

→ **Secure material and immaterial values**

Only through a specific mediation can Baukultur values be recognised and maintained. Thereby, society assumes the role of steward of the material and immaterial heritage for the next generation. This responsibility is to be perceived to be a joint task of politics, administration, economy, and citizenship.

Design successful processes

The future of our built environment is a task for society as a whole, and it has to be continually redefined and shaped. In large parts, construction processes are regulated and set. However, the Baukultur success factor is based on an open and solution-oriented planning process, in which all Baukultur actors as well as users are involved. For a well-designed development of existing building stock, thorough “Phase Zero” planning and an active operation in the “Phase Ten” are particularly important.

Important recommendations for action on the way to successful processes:

→ **Establish responsible land and property policy**

Land is an irreplaceable commodity of extraordinary social and political importance. Municipal land ownership thus forms the basis of urban development planning for the common good.

→ **Secure Baukultur values together**

The further development of the built environment requires alliances at all levels and in all disciplines. The best solutions for complex questions and processes arise in the interaction of different experiences and approaches.

→ **Anchor design tools**

Federal structures and a heterogeneous building stock make a functioning measures catalogue on conversion culture necessary. This can be identified and used effectively at all levels.

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Introduction

Davos was covered in snow when the European ministers of culture met there in January 2018 on the sidelines of the World Economic Forum to discuss and adopt the Davos Declaration 2018. The Swiss Federal Office of Culture had invited participants in order to point out the need for a more comprehensive Baukultur. This was done, to quote the Davos statement, “knowing that everywhere in Europe a general loss of quality in the built environment and open landscapes is apparent, which manifests in a trivialisation of building, a lack of design values and interest in sustainability, in increasingly faceless agglomerations and irresponsible land consumption, in a neglect of the historical building stock, and in the loss of regional identities and traditions.” This clearly states the current challenges.

Two thousand and eighteen is a special year for Baukultur. The construction industry is booming. Affordable apartments are desperately needed in large cities. The signs point to mass instead of class. In small towns and rural areas, vacant town centres in some places signal an increasing lack of prospects. At the same time, the European Year of Cultural Heritage 2018 is taking place, followed in 2019 by the 100th anniversary of the Bauhaus. Once again after 1975, the focus is on dealing with the built heritage. The title of the European Monument Preservation Year at that time was “A Future for Our Past”. It caused a rethinking of the historic city and paved the way for the modern preservation of monuments. This time the title is “Sharing Heritage”. It deals with communicating Baukultur as well as raising awareness of the value of built heritage and our regional and European identities.

At present, a nationwide debate is taking place about Heimat (home). The reasons for this are social erosion processes, which are also expressed in a divergence of urban and rural prospects for the future. The spatial dimension of Heimat is linked to places that give people stability and identity. The individual characters of our built cities and communities create the basis for social participation and everyday life routines, which enable sustainable integration. Polycentric Germany benefits in particular from its Baukultur diversity. The Federal Foundation sees great potential in Baukultur measures and strategies to

remedy existing shortcomings and to set a positive example for the future of cities and municipalities. So-called Baukultur municipalities lead the way with well-designed buildings and public spaces. Through active societal discussion and participation, they create stable neighbourhoods and social spaces that promote solidarity and integration.

In Germany, much continues to be planned and built. Increasing pressure to build affordable housing in major cities has led to increased space and resource constraints. The investment volume in new buildings – one-third – occupies a comparatively high proportion. Nevertheless, two-thirds of all construction investments go into the existing building stock and the renovation of the infrastructure. Here, through interdisciplinary and thought-out planning, we can establish a new culture of conversion and create direct added value for the cityscape and public spaces.

Baukultur qualities emerge where all actors involved in the process and along the value chain have Baukultur skills and work together professionally. The Federal Foundation therefore sees its task to address architects and engineers, the real estate industry and the housing sector, users, the construction industry and the building materials industry equally and to connect them in a cooperative, results-oriented way. Around three million people in Germany contribute to planning and building each day and create Baukultur values. For the first time, the Federal Foundation has made an attempt in the current Baukultur Report to graphically depict a desirable constructive cooperation of all building professionals through a “Baukultur functional chain” (see pp. 44/45). The effective starting points for good Baukultur appear along the recurring processes “Develop – Plan – Build – Operate”.

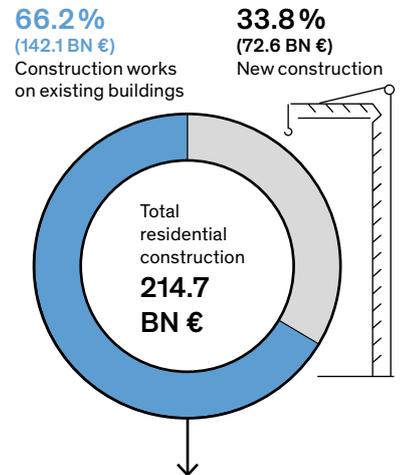
The present Baukultur Report 2018/19 deals with the topic “Heritage – Presence – Future” in continuity with the previous reports and the resolutions passed by the Bundestag (Bundestag printed matter 18/4850 and 18/11384). Under the headings “Built Living Spaces – Focus City” as well as “City and Village”, the focus was on the Baukultur requirements of our cities, towns, and cultural landscapes. Thereby, the realisation has grown that the Baukultur significance of the built heritage, the formative building stock, and the respective everyday architecture are inherent in all cities and communities. Identity, character, and attractiveness to tourists are often attached to historic buildings or old town areas. However, of one million cultural monuments in Germany, one-third is in urgent need of renovation or is even endangered.

In addition to the description of the current starting position of Baukultur in Germany, the report examines the challenges of presence and heritage. This is done with a focus on three topics: How do we lead the existing building stock into the future, how can a new conversion culture be established, and which processes lead to good results?

The Baukultur Report was systematically developed with the help of many experts and relevant experiences. In addition to the Board of Trustees and the Advisory Board, the Federal Foundation was advised by an interdisciplinary advisory group. The basis was developed by the Deutsche Institut für Urbanistik (German Institute for Urban Studies). Three specialist studies supplement this: “Monument Preservation in Federal Germany” by synergon; “Building Materials and Material Cycles” by the Wuppertal Institut für Klima, Umwelt, Energie (Wuppertal Institute for Climate, Environment, Energy); and “Construction in the

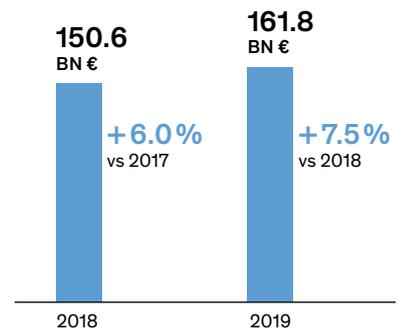
Proportion of construction works on existing buildings and new constructions in residential construction 2017

Source: DIW Berlin 2018



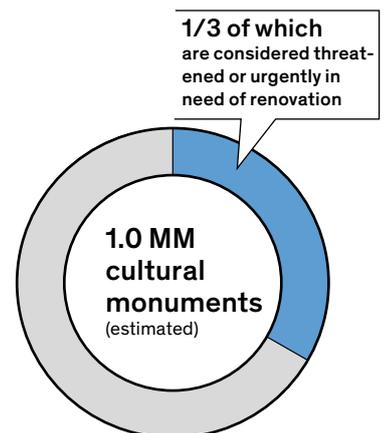
Forecast investments in existing residential construction

Construction work and change in %



Endangered cultural monuments

Source: State Minister for Cultural and Media Affairs 2018; Destatis 2018

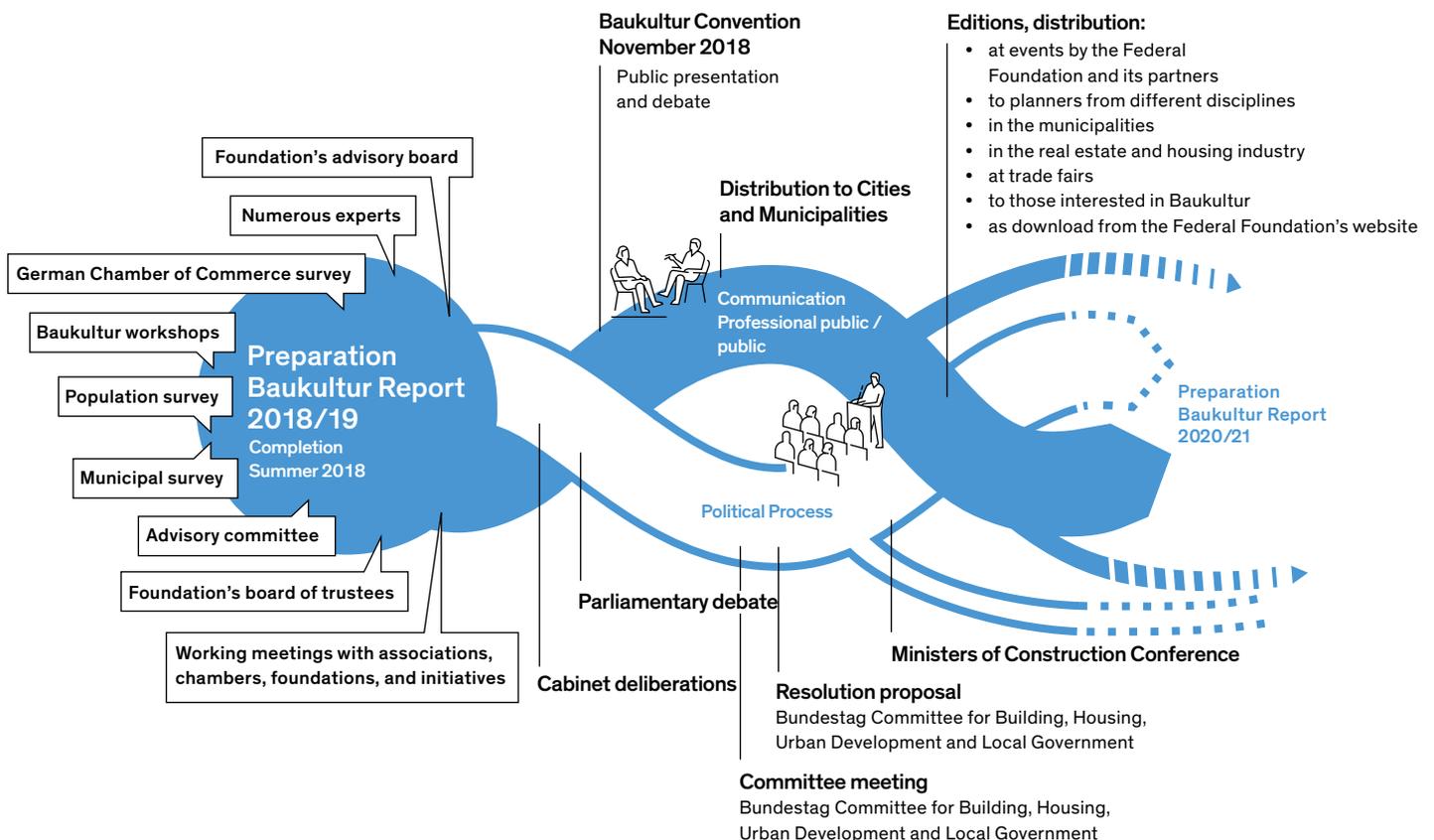


Building Stock, Redevelopment, and Monument Protection” by Kapellmann Rechtsanwälte (Kapellmann Attorneys-at-Law). On this basis, a series of expert discussions, Baukultur salons, and the central Baukultur workshops took place. In each case, the topics were the reflection of the questions raised and an exchange of experiences. In Mainz it was about “Historical Strata of the City”, in Bochum about “Conversion Culture”, in Frankfurt am Main together with the Deutsche Bahn AG about “Infrastructure.Innovation.Baukultur”, and in Karlsruhe about “The City and Bicycle Mobility”. Many have actively followed the participation format of the Federal Foundation in the workshops, including planners of various disciplines, representatives of municipalities and associations, as well as the interested public. Finally, a central discussion took place with construction-related associations and stakeholders. The knowledge-based principles were expanded by three Federal Foundation surveys: a population survey, a survey of cities and municipalities, and a survey of the German Chambers of Industry and Commerce, as representatives for their members. It soon became clear that in dealing with our built heritage and presence lies one of the essential tasks but also opportunities for the future.

Priority for the existing building stock, endogenous development instead of expansion into new construction areas, and a constructive involvement of the residents in planning processes were already key findings in the previous report. They are even more so when, beyond the demonstrable individual projects,

The Political and Social Path of the Baukultur Report 2018/19

Source: Federal Foundation of Baukultur 2018

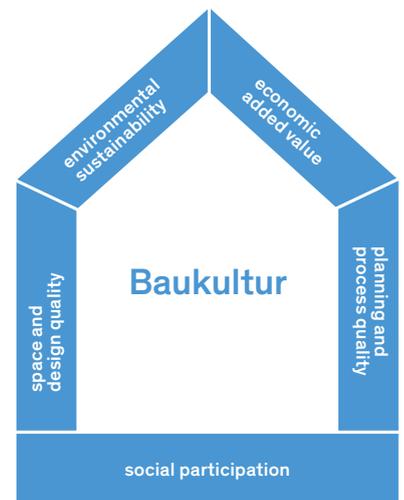


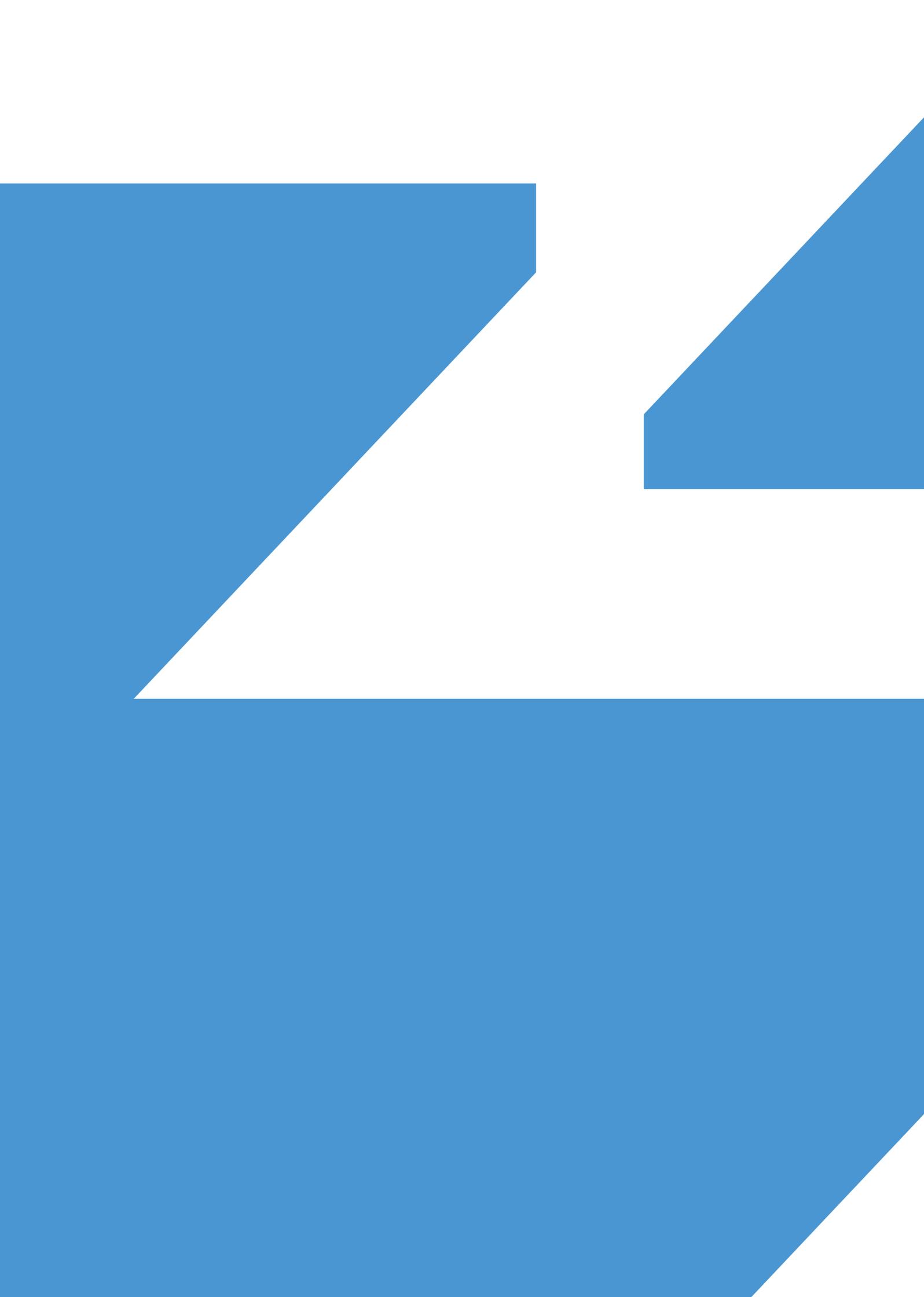
we think about the more than 90 % of our built environment, whose projection into the future is already established today but is still open to good or bad design options. What is needed are sustainable construction projects that not only take account of environmental and social standards and are economically feasible, but which are also appropriate in terms of space and design for themselves and their neighbourhoods, as a result of a consensus-oriented planning culture. From the point of view of Baukultur, the classic and frequently quoted triangle of sustainability is more likely to be a house of holism. In order to achieve more acceptance for sustainable construction projects in existing buildings, Baukultur intervention must be called for. The famous Goethe quote “You only see what you know” describes the need to have background knowledge for a reflective look at things. This applies in a special way to the possibilities of the building stock, which we have before our eyes each day. And it is important to review and adapt rules and norms and to create a sense of shared responsibility, in order to further develop our existing environment proficiently and with a sense of proportion. Again the statement from Davos: “Baukultur promotes dynamic and diversely used quarters. It creates a built environment that takes up contemporary cultural expressions, while respecting cultural heritage. It ensures sustainable living conditions and strengthens social resilience by providing adequate, affordable, and accessible housing”.

Reason enough, then, to investigate more intensively the topic of the built heritage that shapes our environment and the question of an appropriate transformation of our existing building stock in the future, to shed light on opportunities and risks and to provide recommendations for action. This concern is the basis for the Baukultur Report 2018/19 “Heritage – Presence – Future” and its recommendations for action.

From the Sustainability Triangle to the Holistic Building

Source: Federal Foundation of Baukultur 2018





Shape the Future – Preserve and Continue Building The Starting Position

The pressure on city centres persists, while the urban sprawl of urban and local peripheries continuously progresses. Against this background, the question of dealing with the existing built stock is becoming increasingly urgent. This is because existing architectures and infrastructures are not just culturally significant, they also have environmental and economic value that is often not recognised or is underestimated. The lack of awareness leads to decay or demolition and, thus, to the irretrievable loss of valuable building stock. From a Baukultur point of view, a change of mentality, special commitment, and early intervention are important to prevent irreversible negative impacts on our cities and towns. The interactions between historically developed structures and societal demands are therefore the starting point of the Baukultur Report 2018/19. Sustainable development over the long term can only be achieved with the existing building stock. This means many opportunities for an increase in Baukultur. We just have to recognise and use them.

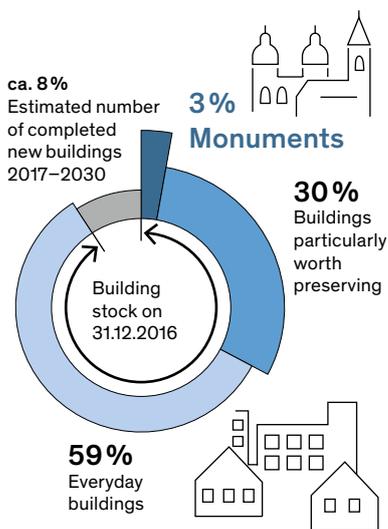
Presence and Heritage

Baukultur heritage is reflected in historically developed structures. Buildings and landscapes that characterise places provide regional diversity, create connections, and contribute to a sense of identity. However, the preservation of Baukultur heritage and the further development of the cities and municipalities are in a constant field of tension with changing challenges. Economic criteria have a decisive influence on the debates about demolition and preservation. This debate is often decided at the expense of today's still underappreciated building year categories.

Building stock until 2030 old and new

According to estimates by the Federal Foundation of Baukultur

Source: BDA NRW 2016; BBSR 2016; Wuppertal Institut 2017; Destatis 2017



The European City

To a great extent, the cities of tomorrow exist today. The existing settlement area is continually being supplemented, but the supplemental building blocks only account for a small proportion. According to estimates by the Federal Foundation of Baukultur, new buildings will account for only 8–9% of the built environment in 2030. The Chair of Urban Development and Design at the BTU Cottbus has presented a comprehensive study to analyse and evaluate the structural changes of Brandenburg's cities in the last 25 years. The new building blocks added after German reunification each make important additions to the repair and further development of the city structure. However, the existing development has the larger share in terms of surface area. Thus in the future, the main focus must also be on the existing building stock.

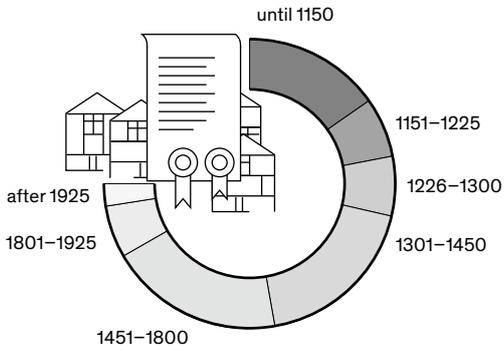
Temporal Layers of European Urban Development The essential architectural feature of the European city is its diversity. Different architectural epochs characterise today's appearance of the cities, different temporal layers combine to form an overall picture. However, the Baukultur heritage of the respective temporal layers has not been preserved unchanged. Due to wartime destruction, abandoned building stock, repairs and restorations, changed user requirements, and design transformations, the traces of the individual epochs remain more like fragments in the city, which are continuously supplemented with new buildings and structures. Therefore, the settlement structure – from the founding to the present day – feature different temporal layers. The mixture of old and new – of preservation and further development – justify the cultural wealth and liveliness of cities and communities in Germany.

Medieval historic city centres were characterised by compact settlement forms with marketplace, town hall, and churches as dominant urban development features. The burgher houses were mostly built of timber framing, and later also in combination with stone or as pure brick buildings. Closed streets and squares emerged in small-scale parcelling. Many of the 11,300 cities and municipalities in Germany still have this historic city centre; the Vereinigung der Landesdenkmalpfleger Bundesrepublik (VdL, Association of Regional Monument

Historical layers of urban development in Germany

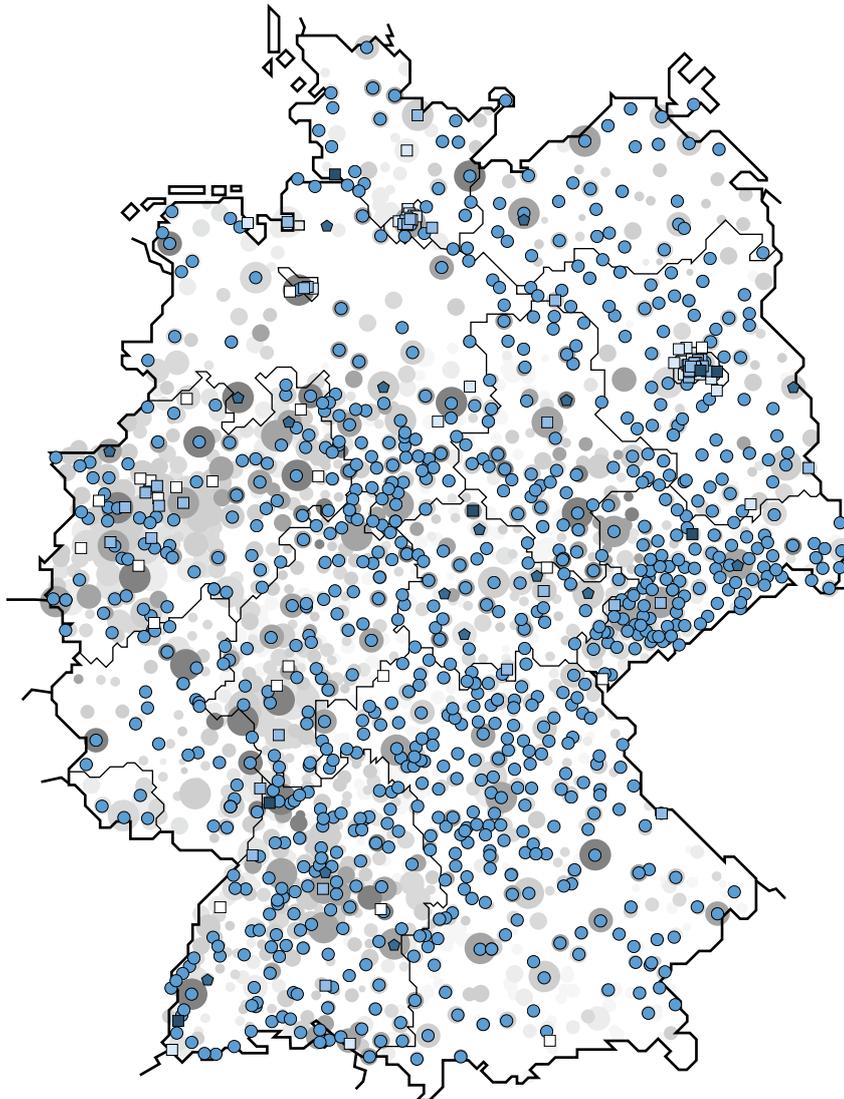
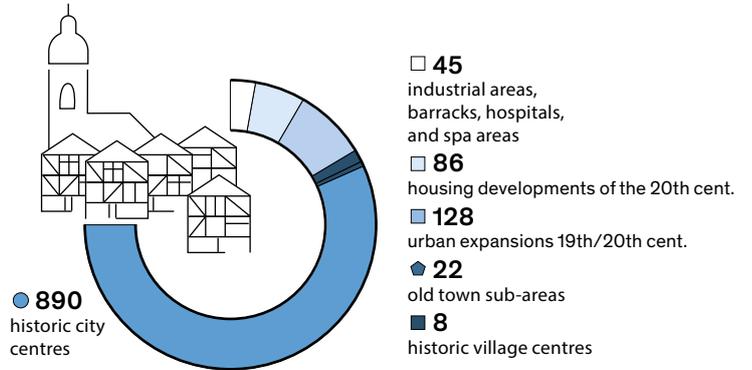
Foundation phases of cities (town law communities)

Selection over 5,000 inhabitants, status 2002
Source: Herbert Popp 2002



City centres and city areas with special monument significance

Source: Vereinigung der Landesdenkmalpfleger in der Bundesrepublik Deutschland 2010



Predominantly historic centres

Two-thirds of the surveyed municipalities claim to have a centre characterised by historic buildings. M3

Preservationists in the Federal Republic) has identified 890 of them in the National Atlas as historically significant. Particularly in Saxony, a relatively large number is concentrated in connection with still preserved historic city centres.

Some city foundations – such as Karlsruhe, Mannheim, or Erlangen – date back to the Renaissance (16th and early 17th centuries) or the Baroque period (17th and 18th centuries). Their city layouts follow geometric patterns and are characterised by visual axes, a frequent row arrangement of buildings, and hierarchically arranged building complexes. Cities such as Berlin and Dresden were structurally adapted in parts to their function as royal seats during the Baroque period.

In turn, the industrial expansion of the Gründerzeit (Founder Epoch) is strongly characterised by a closed block structure with multistorey residential buildings, featuring common services/facilities or commercial units on the ground floors and rear courtyards. Workers' neighbourhoods were originally built compactly and tightly with tenements. Today, they are located around the historic city centres or close to former industrial sites and have good transport links. Open spaces here are predominantly designed as city squares.

So-called Modernism began in the early 20th century and emerged as a counterpart to the Gründerzeit tenements. The settlements are divided and broken up by light, air, and greenery. Their residential density is lower, and the closed perimeter block development has light courtyards or was completely abandoned in favour of a semi-open or open construction. Annoying usages were outsourced; instead, manageable neighbourhoods were created that are characterised by residential and communal service facilities. The generous open spaces are a common feature. The residential quarters were located in another ring around the existing cities, and in terms of the existing settlements are still well connected to the city centre. Yet, the first large housing estates – such as Berlin-Siemensstadt or Karlsruhe-Dammerstock – also emerged to cope with the housing shortage of the 1920s. In Frankfurt am Main, Ernst May realised extensive construction programmes with up to 15,000 residential units in blocks of flats and terraced houses. A streamlined construction and functional design made the apartments affordable. In this context, the “Frankfurt Kitchen” was created – the world's first space- and function-optimised fitted kitchen.

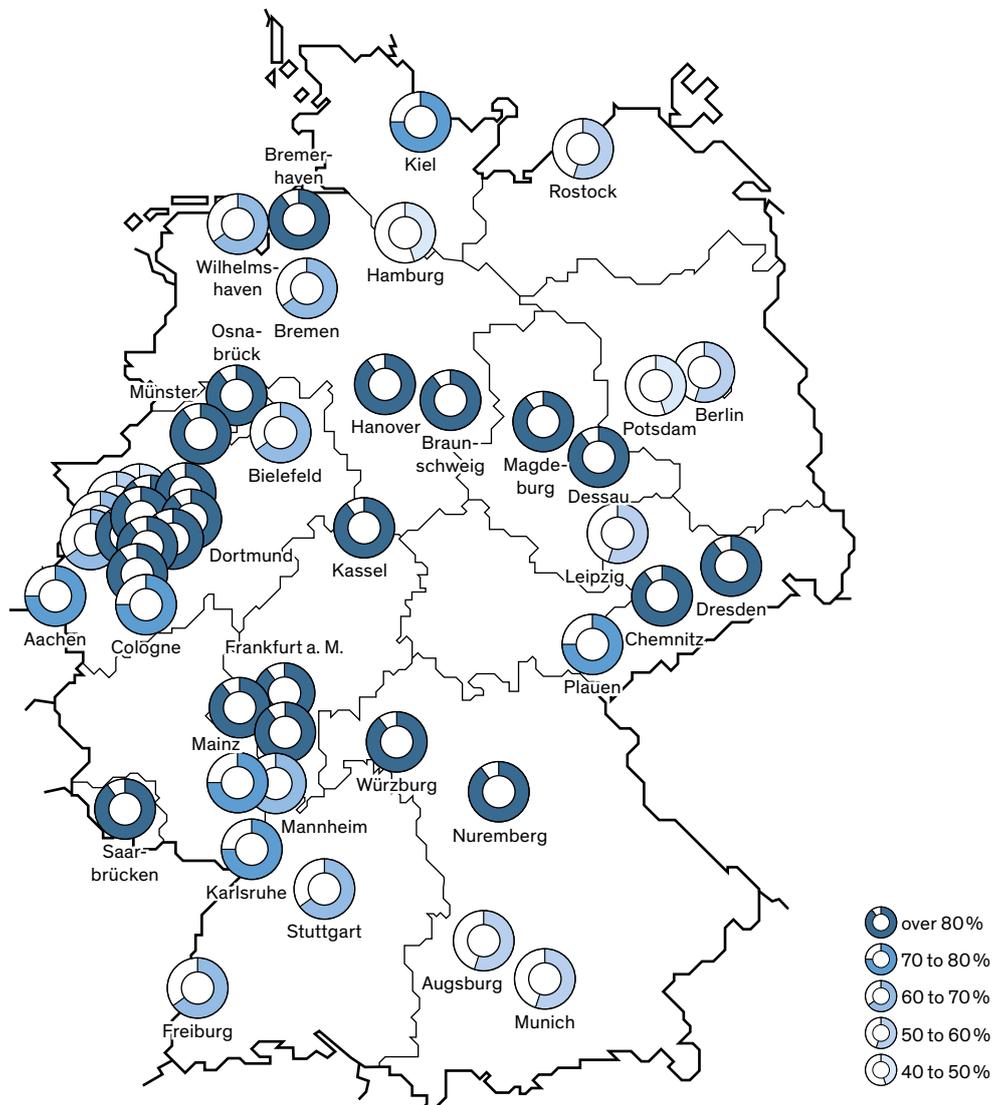
The Bauhaus was also leading the way during this period. The School of Art and Architecture was founded in 1919 in Weimar by Walter Gropius and later relocated to Dessau. The newly built workshops in Dessau, with their glazed façades, are the epitome of modernity. In 1933, the Bauhaus was dissolved under pressure from the National Socialists.

Buildings of the post-war era shape the cities in both parts of Germany in different ways. Depending on the degree of wartime destruction, many of Germany's city centres were rebuilt by closing building gaps and solitary development of the post-war era. Many of these buildings are characterised by simple design, which was determined by material shortages. In many places, however, reconstructions (e.g. New Palace in Stuttgart) or reconstructed urban spaces (e.g. Prinzipalmarkt in Münster) were also created with the help of building rubble. In addition, new housing developments were created according to the urban development model of the structured and spacious city. The new purely residential quarters were completely detached from the block structure, and instead built as settlements in Zeilenbau (linear blocks) with extensive green and open spaces between the buildings.

War damage in major cities 1939–1945

Inner cities with degree of destruction of residences over 40 %

Source: Volker Bode 2002



With the founding of the German Democratic Republic (GDR), the further development of settlements in Germany took place in different ways, although parallels can be seen in the comparison of the respective planning ideas. In East German cities, the reconstruction and further construction was under the increased influence of Soviet planning ideas and construction methods. From the mid-1950s to the 1960s at the latest, industrial building with uniform building types became the design basis. In the late 1960s and 1970s, even the city centres were often radically replanned. The historical city layout lost its importance, was abandoned, and after the demolition of historic buildings in some instances rebuilt differently. From the 1980s, this approach was aggravated by the economic crisis in the GDR. In Halle, Rostock, and Gera, there were extensive losses of historic city structures, but in some cases historical city plans were also reconstructed. At the same time, major new residential areas developed on the peripheries of cities. However, the lack of money also meant that

today many East German towns are still in possession of historic building stock. Instead of demolition and redesign, they were left to decay and could be saved after reunification.

In cities in the Federal Republic of Germany (FRG), the guiding principles of the traffic-oriented, structured, and spacious city – often in conjunction with the demolition of areas – and later “urbanity by density” determined the development of settlements. New housing estates often emerged as single-family housing areas, which were connected via arterial roads to the core cities. Similarly, so-called satellite towns were built, which feature a high number of storeys and strong density and have their own district centres. New, inner-city construction projects from this period are characterised by a large construction volume and the building material concrete. At the same time came criticism of the new design. Using the example of Berlin, in 1965 the influential architectural publication “Die gemordete Stadt” (The Murdered City) by Wolf J. Siedler illustrated the negative effects of post-war modernism on the city structure and deplored the loss of the emotional urban experience. Under the heading “A Future for Our Past”, The European Monument Protection Year 1975 led to a rethinking in professional circles and the population. From the 1980s on, the urban planning concepts in the FRG and GDR finally changed – urban renewal and monument preservation gained in importance. The idea of the environmental city and the revitalisation of old buildings formed new focal points of urban development. On the other hand, construction activity was strongly influenced by the development of new single-family housing areas. After reunification, this form of suburbanisation also took place in the new federal states.

Identity and Character of the European City The European city is structurally equated with the city of short distances and the human scale, because the origins of urban settlements are based on compactness and mixed use.

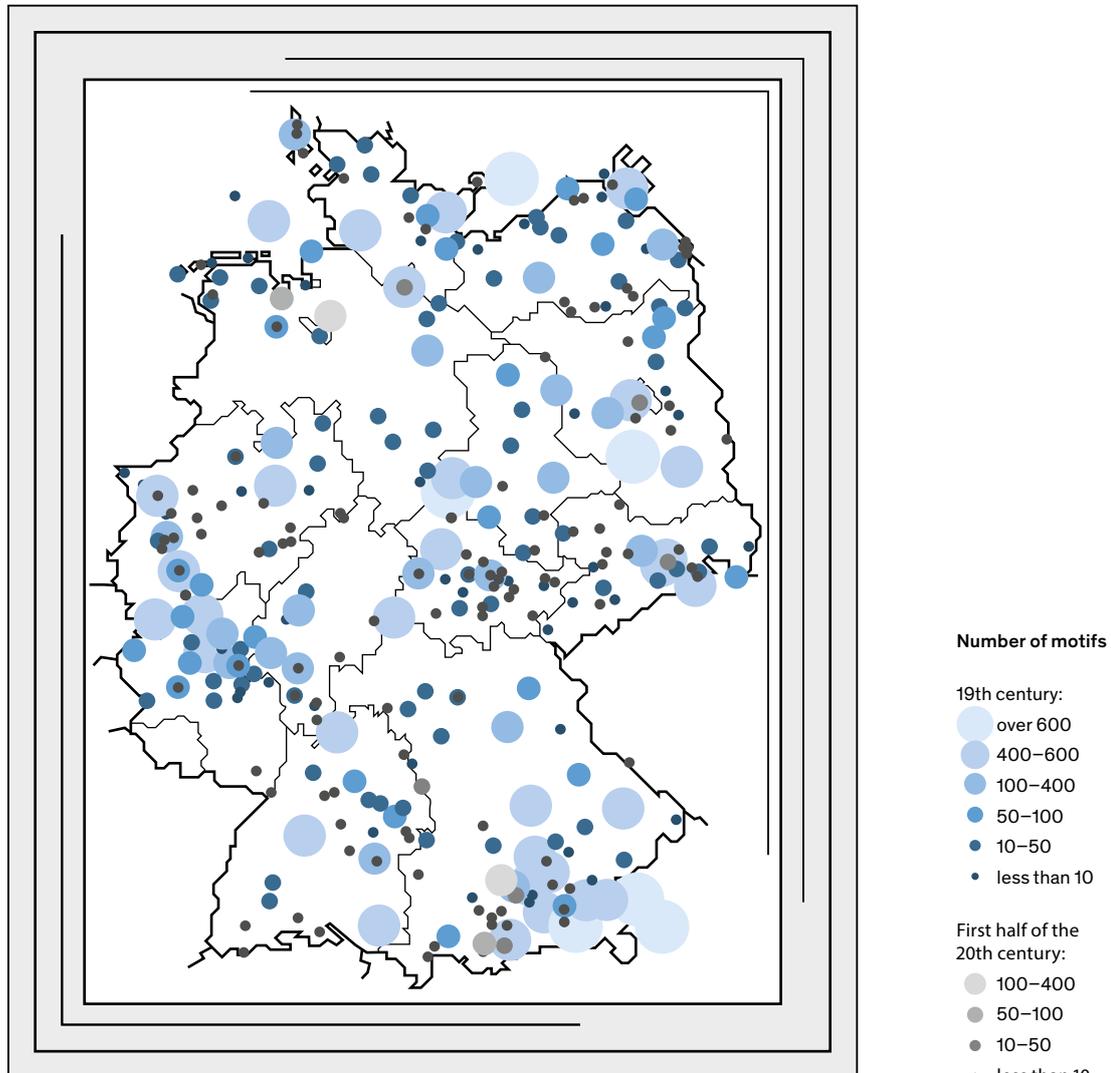
With increasing levels of suburbanisation and functional separation, the original idea of the European city has been lost in many places. By contrast, the ideal of mixed usage, compactness, and short distances is still the guiding principle of urban development. This idea was renewed in 2007 with the “Leipzig Charta zur nachhaltigen europäischen Stadt” (Leipzig Charter for the sustainable European City). In essence, the Charter establishes a commitment for EU Member States to pursue integrated urban development strategies and discourage the exclusion of deprived urban areas.

The origin of a shared history of settlements and the agreement to shared values are the basis for the European Cultural Heritage Year 2018, under the motto “Sharing Heritage”. For this purpose, the federal government has launched the competition “Europäische Stadt – Entwicklung aus dem Bestand” (European City – Development from the Existing Building Stock) and called upon municipalities nationwide to develop concepts, strategies, and projects in the context of the European city’s Baukultur heritage. Baukultur was used for the first time as an international term in the Davos Declaration 2018, adopted at the European Conference of Cultural Ministers for the Cultural Heritage Year 2018. Baukultur encompasses the entire building stock – including monuments and other elements of cultural heritage – as well as the planning and design of contemporary buildings, infrastructures, public space, and landscapes. In times of increasing urbanisation, shrinking (especially in rural areas), as well as scarcity of resources and space

Beautiful German landscapes

Popular landscape painting motifs

Source: Cornelia Fölber and Sabine Tzschaschel 2002



requirements for settlements and traffic, there is an urgent need for an enhancement of the built environment. The Davos Declaration should therefore make the strengthening of high-quality Baukultur an international political concern.

Open Spaces and Cultural Landscapes in Transition Each phase of urbanisation has also given rise to different open spaces. In the Middle Ages, city squares primarily served market events and gatherings. Gardens were found mainly in castle or monastery facilities. In the Baroque period, gardens were built around the residences, first as strictly geometrical baroque gardens (e.g. the Herrenhäuser Gardens in Hanover), later as landscape parks or landscaped gardens with flowing elements (e.g. the Prince Pückler Park Branitz in Cottbus or the Garden Kingdom Dessau-Wörlitz). At the beginning of the 19th century, in addition to the home gardens of the city dwellers, public gardens and garden restaurants increasingly emerged outside or on the outskirts of the city centres.

Until the middle of the 19th century, public spaces were more likely to have aesthetic-representative functions. At least in the course of industrialisation, the recreational function became a special concern. The idea of the garden city emerged and in the increasingly more densely built-up cities, the Volkspark (people's park) served as a recreational area.

With the idea of the structured and spacious city, the post-war years also set certain priorities. In the 1950s and 1960s, generous green areas in the settlements, as well as public green areas experienced a further increase in importance. Openness, free forms, species-rich and structured planting, artistic installations, and above all fountains are among the specific features of parks of the time. They also emerged in the course of national garden shows or international horticultural exhibitions and were conceived as flowing cultural landscapes. The Rheinpark in Cologne, which was created for an exhibition in 1912 and was given its present dimension for the BUGA Köln in 1957, is exemplary of many of these parks.

Classic motifs of landscape painting often represent the coherent interaction of wide, characteristic cultural landscapes and regional compact settlements or individual buildings. Just as different open spaces shape the cities, historic buildings and cultural monuments have an effect on the cultural landscape. Often there are deliberately created visual and path relationships, as well as specific topographical locations that justify the location of a chapel, pilgrimage church, or castle. Likewise, bridges are part of the designed cultural landscape. Many historic railway bridges are cultural assets of outstanding importance – such as the Göltzschtal Bridge in the Vogtland, the Hohenzollern Bridge in Cologne, the Müngsten Bridge in Solingen, the HÖchbrücke in Rendsburg, or the Chemnitztal Viaduct in Chemnitz. The average age of railway bridges in Germany is 88 years old; the oldest structures date from the early days of the railway from 1835.

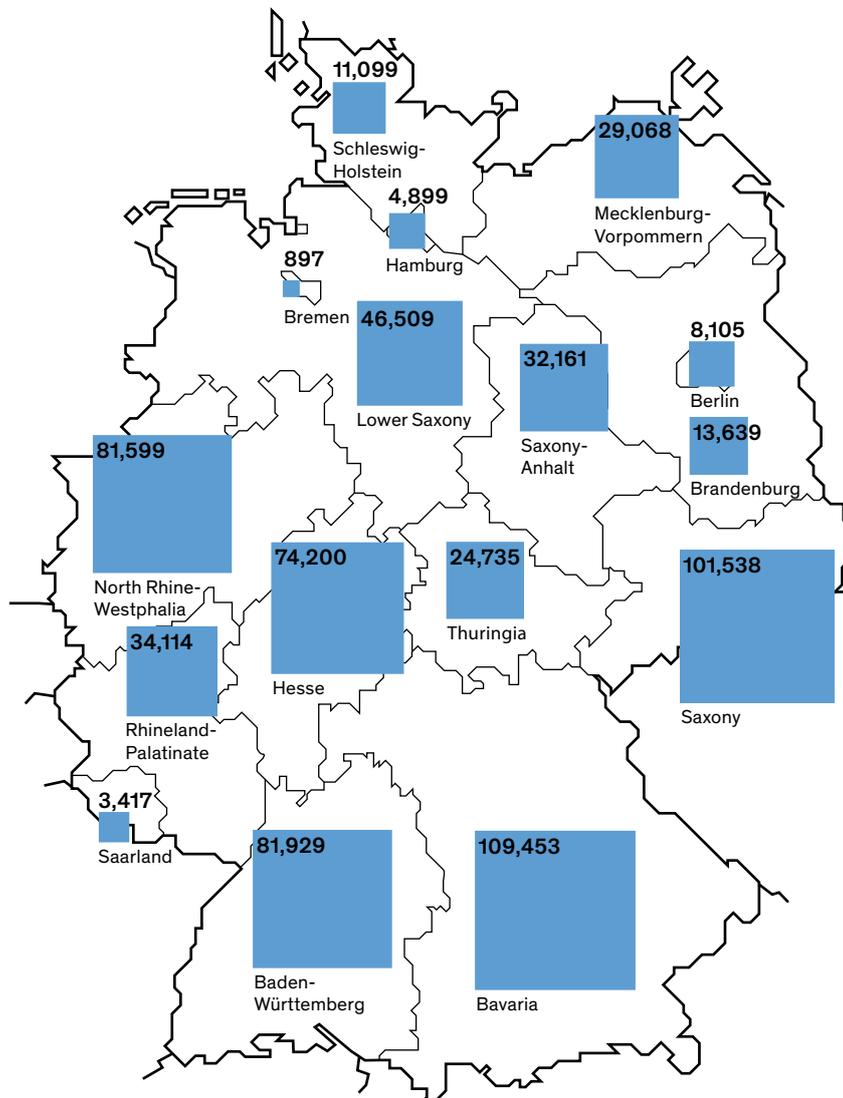
Just how important and formative civil engineering structures are for the cultural landscape is illustrated by the German Bridge Construction Prize awarded by the Federal Chamber of Engineers and the Association of Consulting Engineers, as well as the “Historisches Wahrzeichen der Ingenieurbaukunst in Deutschland” (Historic Landmark of Civil Engineering in Germany) award. Since 2007, the Federal Chamber of Engineers has annually honoured historically important engineering structures, including bridges, towers, and tunnels. They are taken from a list of 80 proposals prepared by a scientific advisory board. Suggestions for extending the list are possible, provided that the engineering structures are located in the federal territory and older than 50 years. In addition to the Göltzschtal Bridge, awards were also given to the Alte Schiffshebewerk in Niederfinow, the lighthouse “Roter Sand” northwest of Bremerhaven, and the Alte Elbtunnel in Hamburg. In the summer of 2018, the Ludwig-Donau-Main Canal was the 22nd structure to be awarded the title. On the occasion of the awarding of the title, the Federal Chamber of Engineers published a publication on the landmarks, paying tribute to the technical and creative achievements that are associated with the structures.

Attractive landscapes

44 % of the population consider the landscape in and around their community to be particularly worth seeing. In small communities with up to 5,000 inhabitants, this is even 59 %. Parks and green spaces, rivers, lakes, and public spaces are more frequently visited than museums and cultural institutions **P1**

Number of monuments by federal states

Source: Destatis 2018



Total
657,362
Monuments

of which:
630,655
Individual monuments
24,113
Ensembles, memorial
areas, etc.
2,594
Garden monuments

not shown:
837
Mobile monuments
784,151
Ground monuments

Structure and Status

Monuments City- and townscapes are the result of different temporal layers. Representative of the individual construction periods, buildings, ensembles, and city areas are protected. This way, the temporal layers remain readable for future generations. Placing the area under protection is the task of monument preservation. How to deal with the temporal layers is the task of monument preservation and the owner. Differing interests can lead to conflicts. Thus in terms of Baukultur, actors should work together at an early stage in a solution-oriented manner. Because even if city centres, buildings, squares, or parks are protected, they must be constantly adapted to current needs. The result is a melange of buildings and settlement forms, which create the starting point for further development of existing stock in the sense of preserving, converting, and further building.

According to the VdL, the share of monuments in Germany's building stock is 3%. There are also ground and garden monuments, as well as mobile

Baukultur Creates Strong Locations

The Glass Cathedral by Walter Gropius – Progressive Industrial Architecture in Amberg



An architectural treasure awaits its recognition in Amberg in the Upper Palatinate. The Rosenthal firm's "Glass Cathedral" is considered the last work by Walter Gropius. Because it still produces wine glasses for the company Riedel, it has been preserved as a living monument. The factory's client was the entrepreneur Philip Rosenthal. The desire for humane working conditions connected the architect and the client. For the glass factory of the Rosenthal subsidiary Thomas Glas, this meant more daylight and less heat. Gropius and his colleague Alexander Cvijanovic designed a gable hall of about 100 metres in length, which is naturally exposed on the roof and the sides. Fresh air enters the hall from the green courtyards; openings in the gable ensure rapid heat dissipation. The serial construction and the limited choice of glass and concrete emphasise the industrial character. From both sides of the "central nave", glazed corridors between the courtyards lead to flat halls for final processing, warehouses, and workshops. These flat building components are sloped on the exteriors,

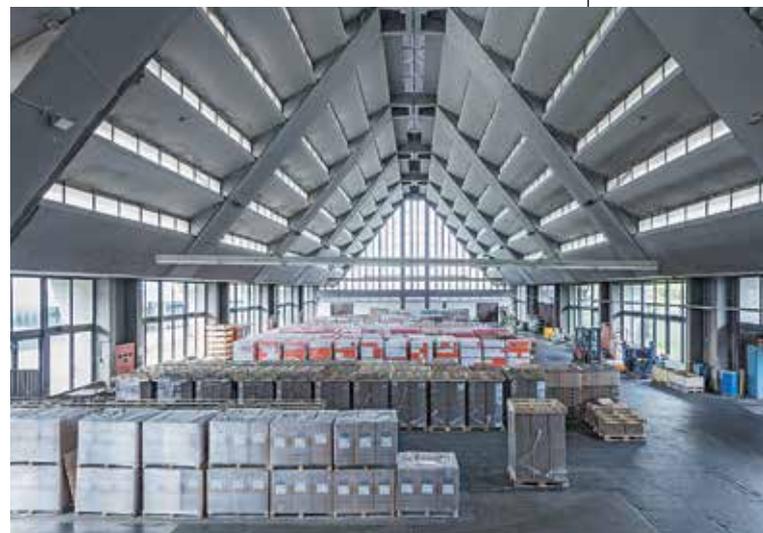
so that only the actual "cathedral" – glowing in the dark due to the furnace fire – rises from the landscape. Gropius was unable to witness the opening of the factory in 1970. Unfortunately, the fact that Gropius and Cvijanovic designed the factory precisely for the functional requirements of the time makes operation difficult today. Originally, four mixing units, melting furnaces, and cooling tracks were located in the hall. The glasses were mouth blown. The company Nachtmann, which produces here today, only uses a large and generally automated production line. A crane cannot be retrofitted because of spatial reasons as well as the precisely dimensioned statics. The draught disturbs the machinery and the glass walls must be protected from forklifts with guard rails. At the time of its completion, the glass factory was celebrated as a milestone in industrial construction. For many in Amberg, the factory is a current or former workplace, but as identity-creating landmark it has thus far hardly been noticed – despite monument protection. However, the city



administration has recognised the potential of the Glass Cathedral – especially in the run-up to the years 2019 (100 years Bauhaus, 50th anniversary of Gropius's death) and 2020 (50th anniversary of the Glass Cathedral). Nevertheless, one should not lose sight of the fact that the building was explicitly planned as a production site and luckily still used as such. No alternative usage concept and certainly no vacancy could be more promising and better guarantee the structural maintenance than the current operations. However, this need not contradict well thought-out and targeted corporate planning and communication work with the building, as long as it takes into account the production and corporate development concerns and involves the users. As production is still taking place, the UNESCO-protected Fagus Factory by Gropius serves as a model: and picks up on the successful trend by wineries to combine architecture, wine shops, and production. Here it can be assumed that not only Riedel Glass, but also the city of Amberg can achieve an image boost. The fact that Rosenthal once actively used its advanced factory architecture as part of its corporate communications should be confirmation. If the balancing act between the preservation of the monument and the preservation of production succeeds, the Glass Cathedral can send important signals: monuments are part of everyday life; even younger industrial architecture is worth preserving; and last but not least, industrial construction was once an important design task for builders, architects, and engineers and should be again.

Facts

Planning and Construction: 1967–1970 Developer: Rosenthal AG, Selb Planners: The Architects Collaborative (TAC), Boston; Walter Gropius, Alexander Cvijanovic User: Kristall-Glasfabrik Amberg GmbH Size: 11,500 m ²	Length of the Hall: 100 × 27 × 20 m Cost: ca. 12 MM DM (1970) More information in the project description in the appendix
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- BAUKULTUR AT A GLANCE**
- Monument during operations
 - Functional disadvantages due to new work processes
 - Untapped potential as landmark
 - Balancing interests of monument protection, marketing, and users is desirable



monuments, such as images, altars, or organs. They are recorded in a monument list by the regional monument authorities. The number of monuments on the respective state lists can only be compared with each other with difficulty, because some federal states, for example, record individual gravestones and building elements as their own monuments, while elsewhere several buildings are collected under one monument number. The monument list is open and is updated continuously. Most states apply the “*ipsa lege*” principle, whether as declaration or memorandum. To place an object under protection, a separate administrative act is no longer necessary. Instead, monuments are automatically protected as soon as their monument worthiness has been determined. Tedious procedures for protecting monuments are thus eliminated. Decisive is the time gain – for example, in the case of ground monuments, which are often discovered only at short notice during a construction project. But the building stock also benefits. Since the change of law to the *ipsa lege* principle, the number of protected monuments in Hamburg has more than doubled in 2013 from 1,900 to 4,800 – albeit with the same personnel resources. In NRW the *ipsa lege* principle is not applied, the inclusion in the monument list is based on a complex and cumbersome two-stage process.

Monuments do not have to satisfy a standard of beauty in the traditional sense of the term, but are representative of a particular architectural epoch in the region. The residential complex “Pallasseum”, which was completed in 1977 and has been considered a social hotspot over the years, is a case in point. Social offers and structural measures were used to enhance the value of the project. In 2017, the concrete construction was placed under protection. Monuments can also be considered “uncomfortable”, if the occasion and context for the building’s construction are rejected from today’s perspective. The buildings from the time of National Socialism are an example of this. In Nuremberg, the buildings of the former Nazi Party Rally Grounds were put under protection in 1973, even if the preservation, handling, and reuse of the area are difficult and require explanation. The buildings are representative of their time, and their protection is a matter of preserving the history. The art historian Norbert Huse dealt with the difficult handling of unpopular buildings in his 1997 publication “Unbequeme Baudenkmale: Entsorgen? Schützen? Pflegen?” (Uncomfortable Architectural Monuments: Discard? Protect? Maintain?). A certain building age is not a prerequisite for being a monument. According to the Bavarian Monument Protection Act, a building must only be “from the past” in order to be enabled gain the status of a monument.

Not least due to the shortage of personnel in the state monument authorities, not all monument-worthy buildings are recorded. Predominantly recorded are buildings from before 1918 and largely from the 1920s and 1930s. The monument status of post-war modernism is still being discussed controversially. Half of the nationwide building stock was built between 1949 and 1990. Above all, the buildings from the 1960s and 1970s and erected in serial construction settlements lead to contentious debates in both the new and in the old federal states. The research project funded by the Bundesministerium für Bildung und Forschung (BMBF, Federal Ministry of Education and Research) and completed in 2017 – “Which monuments of which Modernity? Recording, Evaluating, and Communicating the Architectural Heritage of the Second Half of the 20th Century” – is dedicated to dealing with controversial buildings of the 1960s and 1970s.

This is because a growing appreciation of so-called brutalism has meanwhile become noticeable. This is shown by the popularity of projects such as “Big Beautiful Buildings” from the state initiative StadtBauKultur NRW 2020, or the exhibition “SOS Brutalismus” at the Deutsches Architekturmuseum (DAM) in Frankfurt am Main 2017, in whose database 1,100 buildings worldwide are displayed, 123 thereof acutely endangered and 336 under monument protection. According to the DAM, the concrete giants receive a lot of attention through social media, such as Instagram with 13,000 subscribers or through the Tumblr portal with 10,000 subscribers.

Much of the building stock of the post-war period was demolished in the course of the urban redevelopment, before the monument value was recognised. The remaining stock now comes into focus. In Halle (Saale), placing the Neustadt under protection is being discussed, while in the city centre post-modern prefabricated buildings from the 1980s have already been protected. In Berlin, one of the largest residential buildings in Europe – the motorway construction Schlangenbader Straße from 1973–1980 – has stood under monument protection since 2017. Only a few protected objects can be found in Germany from the 1980s. In Stuttgart, the New State Gallery – built 1979–1984 – was protected as a key work of post-modernism. At the beginning of 2018 protected status was awarded to Hanse-Viertel, a Hamburg-based shopping arcade from the 1980s in the city centre, which had previously been the subject of a demolition discussion. And in Berlin, the Nikolaiviertel is protected, which represents the GDR's changed construction policy on the occasion of the city's 750th anniversary. For this occasion, historic buildings from the 16th to 18th centuries were restored and partially reconstructed, new apartment blocks in prefabricated building received historic-looking design elements.

Preservation-worthy Structures Other important components of cities and municipalities are buildings that shape the city and the surrounding area. According to estimates by the Bund Deutscher Architekten (BDA, Association of German Architects), they make up an average 30 % of the settlement stock in Germany and are generally regarded as preservation-worthy in municipal administrative practice. In 2014 in their publication “The Particularly Preservation-worthy Buildings in Integrated Urban Development”, the Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety) identifies the buildings, building ensembles, and parts of settlements whose design transformation or demolition contribute to a loss of the characteristic appearance of a city and would adversely affect the ability to experience built local and urban history. For example, the Gründerzeit city quarters are generally counted along with the building stock of a municipality that characterises the cityscape, without each building being a protected building. However, social, environmental, cultural, and quantitative aspects can also be considered preservation-worthy. Likewise, an authentic substance with original materials and surfaces can be a feature of buildings or infrastructures worth preserving. The Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR, Federal Institute for Research on Building, Urban Affairs and Spatial Development) is currently carrying out a “Practical Test on Especially Preservation-worthy Buildings”, in which suitable tools for recording are being tested. For Brandenburg, action approaches

Monument status, especially for older buildings

93 % of the surveyed municipalities claim to have monuments from the 1920s and 1930s. With decreasing building age, the frequency of monument status also decreases. 52 % of municipalities have monuments from the 1950s and 32 % from the 1960s. Buildings from the 1970s are protected by 15 % of cities and towns, and 5 % of municipalities have monuments from the 1980s. [M11](#)

Municipal stocktaking

According to a municipal survey for the Baukultur Report, every third municipality records preservation-worthy buildings in their municipality. [M23](#)

have already been outlined in the publication “Particularly Preservation-worthy Buildings in the State of Brandenburg”.

In contrast to monument protection, the stock category of preservation-worthy buildings is hardly defined. Internal administrative responsibilities, as well as the consequences resulting from a specification as a preservation-worthy building are not clearly regulated. According to the Baugesetzbuch (BauGB, Building Code), the Baukultur preservation and the further development of the urban design and of the local and landscape image are to be listed as the principles of urban land use planning, and are therefore not among the issues to be considered in the context of the assessment. In addition, buildings that are preservation-worthy and that shape the cityscape are not legally secured. The municipalities' specifications and stocktaking are purely informal and do not constitute a tool for protecting the respective building from design transformation or demolition. However, they justify a special funding requirement in the programme “KfW-Effizienzhaus Denkmal” (KfW Efficiency Building Monument).

Everyday Architecture The category of the remaining, as yet undefined, building stock includes the great wealth of general everyday architecture and currently accounts for around 67% of the settlement stock. Everyday buildings are considered functional buildings without any special functional or architectural claim. However, that does not mean that they are not valuable from a Baukultur point of view. They contain at least economic and environmental values as a resource for new uses and Baukultur advancement, and are also places of residence, work, and leisure for millions of people. These existing values are almost always ignored in the business and economic analysis of building projects. Certification systems are usually only used for vacant land or new buildings and not for renovations. In the Baukultur Report 2014/15 by the Federal Foundation of Baukultur, the surveyed municipalities named features that justified the Baukultur quality of a building from a municipal point of view: Baukultur not only includes design qualities but also craftsmanship and material quality, consideration of social concerns, an integrated situation, and a resource-saving construction method. Everyday buildings, which make up the majority of cities, have to meet the corresponding quality requirements so that they enrich the built environment. In view of the enormous volume of new construction work in cities and towns, these criteria are currently more relevant than ever.

Preservation Status

Perennial Task of Urban Renewal The heterogeneous settlement stock in Germany also shows differences in terms of the state of its preservation. Due to the high use of subsidies, many of the historic city centres, particularly in the new federal states, present themselves today with a Baukultur cityscape renovated to the highest standards. Nevertheless, in most cities in eastern Germany, there are still unrenovated buildings that have been empty since the 1990s or longer. In these areas, continuous investment in urban renewal has generally prevented the building fabric from being neglected to such an extent. Ruinous buildings are an exception here. Instead, a general renovation backlog and the creative transformation of city and townscapes are apparent.

Nationwide, of the estimated one million cultural monuments in Germany, one-third is considered endangered or in urgent need of renovation. In addition, there are the everyday buildings in need of renovation and buildings with preservation-worthy building material. They also have to be repaired and modernised at regular intervals in order to remain usable and sustainable. The renovation of private buildings is the responsibility of the respective owner. Not every owner is financially capable of doing so, and neglected structures are inevitably the consequence. There are also significant renovation backlogs for municipal real estate. Although funding programmes by the federal government, federal states, and municipalities – in particular urban development subsidies – create important investment incentives in this context, which would cease without funding, funding programmes are limited in time and degressive.

Historic Large Facilities Throughout Germany, there is also the problem of vacant large structures. Often these are historically important building complexes such as barracks, railway facilities, monasteries, or industrial ensembles whose use has long been abandoned. In the new federal states, they have often been empty since the 1990s, and their structure is deteriorating steadily. A repair or renovation becomes more urgent with each passing year. For the affected municipalities, it is often difficult, complex, and time-consuming. There is a lack of

Renovation needs for private property

78 % of the surveyed municipalities name the renovation of private buildings as a current task within the framework of the further development of existing buildings. In this context, 58 % of the municipalities surveyed see a (very) high renovation backlog for buildings from the period 1949–1969. 56 % confirm this for the building age class 1919–1948 and 55 % for buildings from before 1918. In every third municipality, there is also a need for renovation of private buildings from the period 1970–1990.

[M18](#) + [M21](#)

Baukultur Transforms Monuments Renovation and Expansion of the Michaelsberg Abbey, Siegburg

Receiving two awards at the world's largest real estate fair is exceptional recognition for a project – especially when, compared with the competing projects, it is a relatively small conversion and extension in the protected building stock. The former Michaelsberg Abbey was converted into a modern conference and educational institution and supplemented by a new building. In the process, the well-known silhouette – which is considered to be Siegburg's landmark – was not changed. The awards at the MIPIM in Cannes in the categories "Best Hotel & Tourism Resort Award" and "Special Jury Award" confirm the growing interest of the global real estate market in monument stock. In the more than 950 years of its existence, the abbey has experienced changing uses as a church, barracks, mental asylum, prison, youth hostel, and sanatorium. The baroque building complex was built after a fire in the 18th century and has been preserved until today. New features combined with high-quality architecture now ensure the continued existence of the property, which is owned by the church.

Facts

Planning and Construction: 2013–2017
Developer: Archdiocese Cologne,
Department of Finance/Construction/Law
Planners: Büro MSM Meyer Schmitz-
Morkramer
Size: Abbey 15,330 m² GFA;
New Construction: 7,734 m² GFA

Cost: Total investment 47 MM euros
(of which 6 MM euros due to hail damage)

More information in the project description
in the appendix



BAUKULTUR AT A GLANCE

- Transformation of a protected property with contemporary architecture
- Retention of the historic silhouette
- Security of location through expansion of uses

Demolition mainly due to poor building structure

86 % of municipalities surveyed say buildings have been demolished in the last five years, probably due to poor building structure. The most frequently demolished buildings in the municipalities were buildings dating from the period 1949–1969. [M7](#) + [MB](#)

post-utilisation concepts, and the necessary investments tie up the municipal budget for years. Even subsidies are usually only a “drop in the bucket”, so that, in many places, clubs and initiatives are established to save the structures. Since 2005 in Blankenburg, the association “Rettung Schloss Blankenburg e. V.” (Rescue Blankenburg Castle) has been striving for the preservation of the castle, the symbol of the city. For its commitment, the association received the German Prize for Monument Protection in 2014. If the necessary renovation of large structures is delayed or stopped and if there is a lack of usage prospects, the ensembles increasingly deteriorate. The BBSR publication “Innovationen für Innenstädte – Nachnutzung leerstehender Großstrukturen” (Innovations for City Centres – Post-utilisation of Vacant Large Structures) was published in 2015. However, the important insights it contains are still insufficiently put into practice. Thus, a key role falls to buildings in a central location – such as train stations – as important urban spatial and identity-creating elements. Nevertheless, Deutsche Bahn has sold around 2,100 station buildings in recent years. In 2015, 1,000 properties were sold to London-based Patron Capital; the remaining 1,000 station buildings were acquired by municipalities and private investors. In the meantime DB Station & Service AG still operates about 900 station buildings at about 5,400 stations, with the aim of reducing them to 500 by selling or dismantling them. In contrast, in the current coalition agreement, the government has set up the “Tausend Bahnhöfe” (Thousand Train Stations) funding programme “to increase the attractiveness of smaller stations in particular, which include railway facilities and the station environment”. The Federal Foundation welcomes this integrated approach to securing location-defining station buildings and their surroundings. Most of the station buildings are from the founding years of the railway, with steam locomotive operation, and are on average 80 to 100 years old. Empty station buildings are negative business cards for cities and towns. DB Station & Service AG therefore only sells the buildings individually, preferably directly to the local authorities. With private or commercial prospective buyers, attention is now increasingly paid to their usage concepts.

Problem Real Estate The repair and modernisation of private building stock is sometimes deliberately neglected. Owners leave their buildings vacant, or use the tight housing market and rent them at high prices, despite considerable structural and hygienic deficiencies. The so-called problem or junk properties affect a place’s overall appearance and negatively impact the entire development of the real estate market. As early as 2009, it was pointed out at a conference of the Stiftung Schloss Ettersburg that there was a significant decrease in value of buildings adjacent to a problem property. So that municipalities are able to counteract this effectively, in 2014 the BMUB published municipal guidelines on the use of legal instruments in dealing with neglected real estate. Since 2017, the state of North Rhine-Westphalia has provided financial support to affected municipalities with the “Modellvorhaben Problemimmobilien im Kontext der Zuwanderung aus Südosteuropa” (Model Project Problem Real Estate in the Context of Immigration from South-eastern Europe) so that they themselves can acquire, repair, refurbish, or demolish problem real estate.

From a Baukultur perspective, special attention to and quick intervention in neglected buildings are important, preventing negative effects on the

environment and a negligent loss of building stock. An active approach to building owners is usually the first step in municipal action. Especially in larger cities, however, further measures against the dilapidation of neighbourhoods due to problem real estate seem necessary. Thus with its own website, the Berlin police department warns of junk real estate brokers. For years, the city of Bremerhaven has been collecting neglected buildings in a “junk real estate cadastre” – here mostly due to a surplus in the housing market – and applies its municipal right of first refusal in order to buy, renovate, or demolish the properties. The city of Duisburg has currently set up a “Taskforce Problem Real Estate” and has had corresponding buildings vacated. Just as quickly as neglected objects can trigger trading-down effects in neighbourhoods, the repair and renovation of problem properties can also have positive effects on the urban development environment. They have a key role to play. For example, the “Heimathafen” project in Dortmund Nordstadt is currently being supported by the urban renewal programme “Soziale Stadt NRW Dortmund Nordstadt” (Social City NRW Dortmund Nordstadt). With the support of the BDA Dortmund, the Social City Foundation is activating a problem property. Both in the conversion of the dilapidated building as well as during the subsequent use – as an educational and consulting facility – long-term unemployed residents and refugees are professionally qualified and employed.

Baukultur Challenges in Germany

There is still a shortage of good, solid, and affordable housing in metropolitan areas. What is built is too little and to some extent unwanted. Increasingly, there are demands for new building standards that can offer faster and simpler solutions for the current imbalance. While the new building debate is now being conducted at all levels, the existing building stock is receiving too little attention. However, this may be precisely the key to a future-oriented, overall measure that addresses the housing problem and at the same time commits itself to endogenous development.

Polycentric Germany

Migration Flows and Swarm Behaviour The population in Germany is growing: by 2035, more than 83.1 million people will live here. This is the conclusion of the study “Bevölkerungsentwicklung in den deutschen Bundesländern bis 2035” (Population Development in the German Federal States until 2035) by the Institut der deutschen Wirtschaft (IW, Institute of German Business). At the end of 2016, 82.5 million people lived in Germany. In addition to an increased birth rate, the reason for the population growth is primarily immigration. In 2015, more than half of the immigrants came from Europe – mostly from Romania and Poland – plus asylum seekers from crisis and war zones. The migration flow is changing the composition of the population, especially in the cities, according to the 2017 BBSR study “Internationalisierung der Städte” (Internationalisation of Cities). In the period from 2010 to 2015, the population in the 41 large cities studied grew from 17.9 million to 18.9 million. Immigration makes cities more heterogeneous. The increase in the foreign population, which grew from 2.58 million to 3.36 million in the same period, is a major factor.

In addition, recent migration patterns have led to a redistribution of the population in the federal territory and in the cities. The professional career, the availability of jobs, the establishment of a family, and the cost of renting or buying a property influence internal migration. In the study “Schwarmstädte in Deutschland” (Swarm Cities in Germany) by the Bundesverbands deutscher Wohnungs- und Immobilienunternehmen (GdW, Federal Association of German Housing and Real Estate Companies), the migration behaviour in certain life stages and situations was examined. Above all, the study identifies migration flows of younger people, who initially move to large cities and metropolitan areas for training or university education and then start their careers. The destinations of these migration flows are called young swarm cities. The existing liveliness and urbanity radiates a high power of attraction. The availability of a job itself in a swarm city is less crucial. The GdW study also finds increased migration among older age groups. They leave the cities and move to recreation and health resorts away from the cities – for example, in the coastal regions or the foothills. This also shifts the concentration of population groups in the space. At the same time,

the age group 35- to 44-year-olds is moving to the peripheries of the city, where life in the countryside, good access to the city, and affordable housing are offered.

In places with migration inflows and outflows, the composition of the population changes. The swarming behaviour of young generations takes place at an unexpected speed and concentration. New swarm cities emerge when the previously favoured cities are too expensive and too crowded. A weakening of this development is not expected – every new age group concentrates itself even more, so that the attractiveness of a swarm city increases further from the perspective of the age group. This creates a rapidly growing demand for housing, which is confronted with planning and construction practices that do not correspond with short-term demand. The cities are faced with the challenge of ensuring quality standards in the construction process and creating sustainable and liveable residential quarters, despite the time pressure.

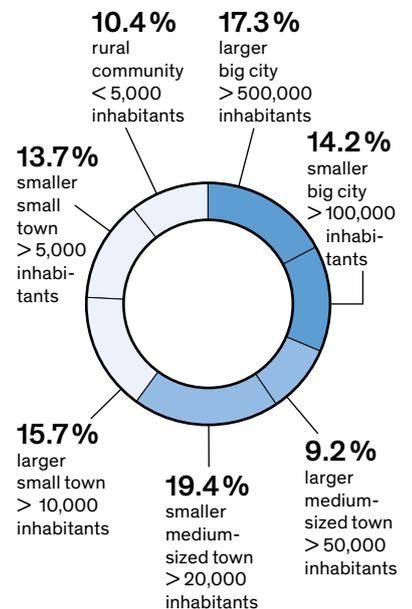
Living Space Significant gaps in the coverage of building demand for multistorey housing construction exist in the cities. Particularly in the metropolises of Berlin, Hamburg, Munich, and Cologne, the demand for construction has not been sufficiently fulfilled in recent years. According to calculations by the Pestel Institut, in order to meet the demand for living space in the period from 2016 to 2020, around 400,000 apartments would have to be built annually. Yet this need not only focuses on the big cities, it also affects growing rural areas nationwide. Already in 2015, this demand was clearly undershot with only 248,000 completed apartments. Since then, construction activity has increased, with nearly 278,000 apartments completed in 2016 and a further increase in 2017 to around 285,000 completed apartments. In 2016, a total of around 25.2 million m² of living space was newly built in Germany. Around 44 % of these completed habitations were in single- and two-family homes. At 60 %, the living space contained therein accounts for the largest share of the total living space completed in 2016. However, this form of housing does not cover the actual need for compact and diverse structures in the cities. In addition, single- and two-family homes generate comparatively high land consumption and contribute to further urban sprawl on the outskirts of towns and municipalities.

Rising demand and persistently low levels of new construction activity are why, according to Deutsche Bank's 2018 housing and housing market report, rising prices and rents are expected to persist. According to the BBSR, rents for first and renewal lettings in 2016 increased by 4.9 % over the previous year to an average of 7.65 euros/m² net base rent (quoted rents). As a result, the 4 % mark was clearly exceeded (2015: 3.3 %) for the first time. According to GdW, the nationwide spread of rents is around 4 euros/m². According to the Mietspiegelindex 2017, the average comparable rent in Munich was 10.22 euros/m², while in Schwerin it was 5.81 euros/m². At the same time, the proportion of occupancy-linked social housing in cities is steadily declining. In 1990, 2.87 million social housing units were still on the market and only 1.24 million in 2016 – and the downward trend continues. The current coalition agreement is reacting to this situation. On the one hand, the creation of housing is anchored – 1.5 million apartments and homes are to be built in the legislative period, both freely financed and publicly funded. On the other hand, affordable housing is to be secured in the existing building stock. In 2017, about 60 % of federal funding was spent on new construction and around 40 % on existing buildings.

More inhabitants in smaller communities than in big cities

Inhabitants by city and community type in 2016 as a percentage of the total population

Source: BBSR 2018



Satisfaction with the size of the residence

64 % of the population consider their living space to be just right. 26 % want to have more living space available. 9 % of respondents would also be satisfied with less living space. P8

The need for already scarce housing is also influenced by changing living and housing models. While the share of single-person households was 33.6 % in 1991, it rose to around 41 % by 2016. According to a 2018 study by the Hans-Böckler-Stiftung, single occupants reside in almost 50 % of all households in the 77 large German cities. This is in contrast to the housing stock, which has only 2.5 million very small apartments with 6.7 million single-person households. At the same time, the demands on housing space and living area are increasing. According to the Federal Statistical Office, living area per person in 2000 was still 39.5 m² per person and increased to 46.5 m² per person by 2016. Currently, analyses show that the tense housing situation in major cities will lead to stagnation or a decline in per-capita living area, and that only weakened growth may take place. The pluralisation of lifestyles – patchwork families as well as more individual employment biographies and life courses – also influences the demand on the housing market. The need for more flexible housing space is increasing because, with the more individual life models, the need for community and support in the living environment also grows. New forms of communal living – which create opportunities for close contact and at the same time retreat, with a mix of closed and communal spaces – are already taking this into account in many places. There are currently around 750 collective housing projects registered nationwide on the housing project portal from Stiftung trias.

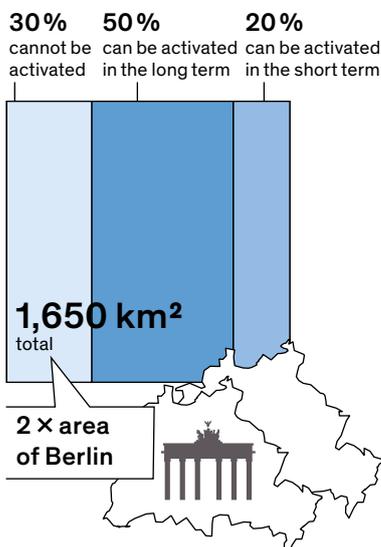
Dense Cities The migration to cities continues; a mitigation of urban growth is not to be expected. This is accompanied by an increasing demand for settlement areas. Settlement density per square kilometre in urban districts increased by 2.5 % between 2010 and 2014. In order to adapt the growing demand for living area to the 30-ha land-use target per day – and thus to the principle of economical land consumption – endogenous and infill development strategies are necessary. The 2014 BBSR study “Flächenverbrauch, Flächenpotenziale und Trends 2030” (Land Use, Land Potentials, and Trends 2030) recorded an endogenous development potential of approximately 1,200 to 1,650 km² nationwide, of which 20 % – i.e. about 300 km² – can be activated at short notice. Infill development potential exists in cities on fallow land and in vacant lots. Other important options include upgrading, demolition, and construction on underutilised land; restructuring of land and rear courtyards; decommissioning oversized traffic areas, abandoned military and industrial sites; and converting vacant buildings.

Infill development is compatible only to a certain extent. Cities must also be able to cope with climate change and provide sufficient measures to prevent heat islands or infiltration areas. In addition, open spaces are important for a high-quality living and housing environment. Strategies for sustainable development are required. The 2014 ExWoSt project “Städtebauliche Nachverdichtung im Klimawandel” (Urban Infill Development in Climate Change) has examined various structural infill development strategies based on case studies on their climate compatibility.

In addition, with the increasing density in cities, there is a greater proximity or closeness among the city dwellers and thus decreasing privacy. Thus infill development strategies are not only a matter of quantity (i.e. the coverage of the increased demand for housing), but also quality (i.e. the creation of quality residential locations). This is what the survey and study “Umweltbewusstsein in

Activation potential of fallow land and vacant lots

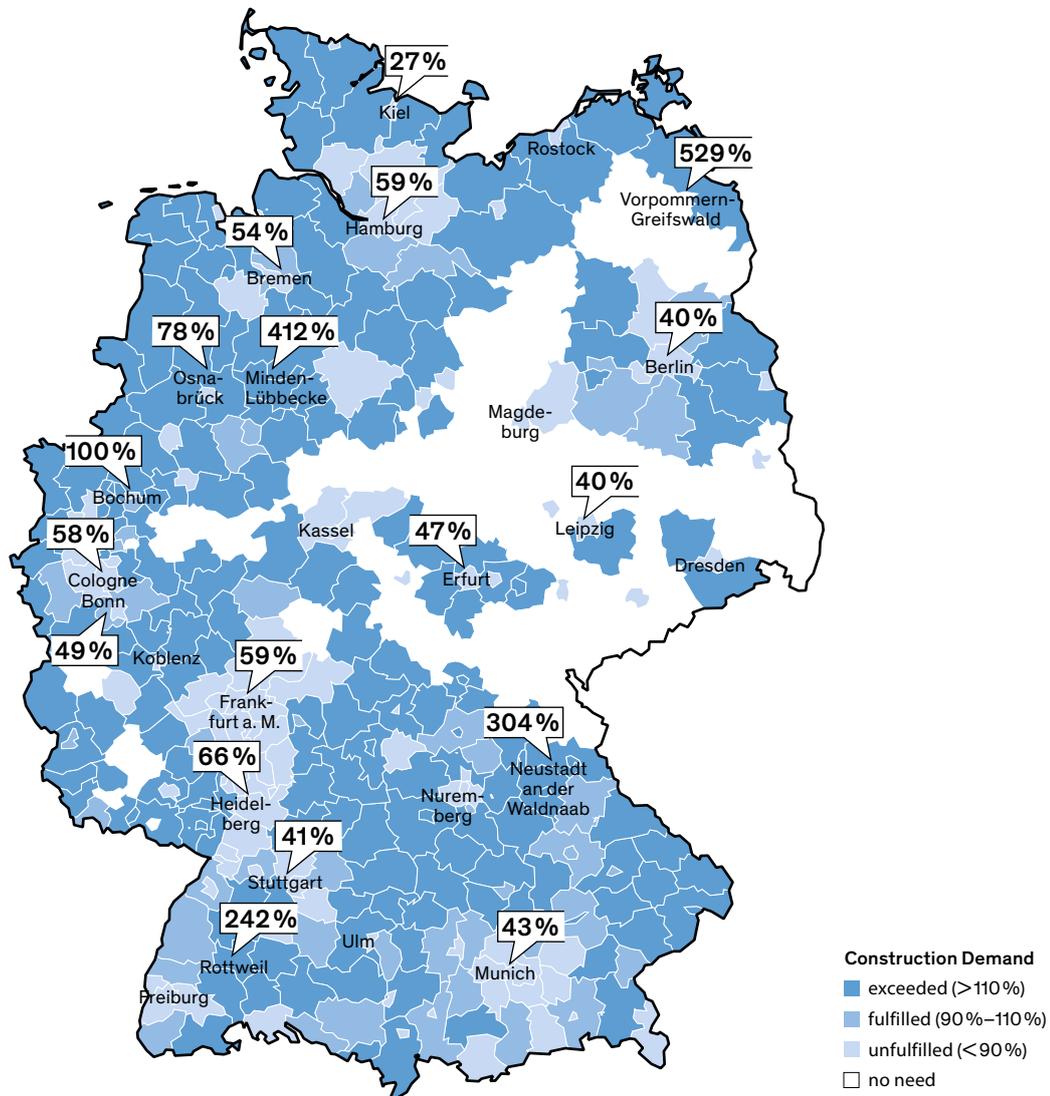
Extrapolation maximum scenario
Source: BBSR 2014



Lack of housing in the cities, too much new construction in the countryside

Construction demand analysis by IW Köln 2011 to 2015

Source: Institut der deutschen Wirtschaft 2017



Deutschland 2016” (Environmental Awareness in Germany 2016) by the German Environment Agency (UBA) suggests. Around 54 % of respondents said that they see an important future task in the development of “urban and rural areas oriented to human needs”. The results of the survey for the Baukultur Report 2016/17 showed that, with 21%, the city does not lead the popularity rating for desired housing: 33 % of the population surveyed would like to live in medium-sized and small towns, and even 45 % in a rural community.

Density in the city has an impact on the health and psyche of city dwellers. In the 2017 publication “Stress and the City”, psychiatrist and stress researcher Mazda Adli addresses stress factors in cities. He focuses on the correlation between health issues and urban development. The juxtaposition of density and social isolation creates a city-specific stress. In the city-rural comparison, the risk of suffering from certain mental illnesses is increased in the cities. The most prominent stress factor in the city is noise. The building use ordinance, with its building area typologies, is an attempt on the urban development level

Problematic vacancy

According to surveyed citizens, the biggest problems with regard to the building stock are seen particularly in building vacancy and decay (12 %) as well as the stagnant renovation of buildings and the housing shortage (11 % each). ^[P2]

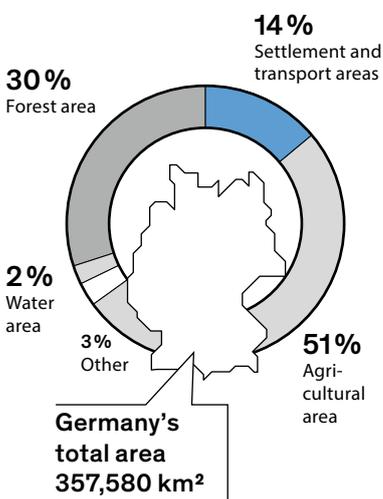
Deserted single-family homes

7 % of the surveyed municipalities claim to have significant vacancies in single-family housing areas. Of these, every second municipality has shrinking populations. In small cities with a population of up to 20,000 residents, the vacancy rate in single-family housing areas is 11 %. ^[M19]

Land use 2016

Percentage of types of use in Germany's total area

Source: Destatis 2017



to separate noise sources from each other. Today, new planning approaches are needed so that places to live and work are mixed again, without getting in each other's way. In demand are differently designed urban spaces, which stimulate spontaneous processes of appropriation and participation and provide opportunities for contact and interaction, likewise well-designed public spaces for rest and retreat.

Emptied Spaces In contrast to the increasing density in the cities, smaller towns and municipalities in rural areas without links to the metropolises are recording a decline in population. With the migration of young people and the growth of older populations, the demands for housing, services, and local amenities are changing. The operators of social and local supply services are withdrawing due to falling demand. The offer of basic necessities is decreasing and the danger of desolation of town centres is increasing. With the migration of the population, there is also a housing surplus.

The emptying usually does not affect the entire municipality, but subspaces. Even in growing cities, there can be emptied urban areas. Perspectively, settlements with single- and two-family homes from the post-war period are particularly affected by vacancy. The buildings neither meet today's energy and living standards, nor do they offer sufficient potential to meet the individual housing desires of new residents. Evidence of the explosive nature of developments has been around for some time; they were already explained in the previous report. For many communities, the donut effect poses a double problem: vacancies in the town centre and faceless, entertainment-intensive single-family housing areas on the periphery. Despite existing surpluses and building vacancies, however, municipalities set aside new single-family housing areas and expect an influx there.

Vacant and decaying buildings have a negative impact on the overall appearance of the townscape. An appropriate demolition or preservation strategy and a related analysis of the Baukultur values of the existing building stock are not pursued everywhere. Municipalities are required to recognise fallow areas and vacancies at an early stage, and to react with conversion and temporary use concepts. In order to counteract the growing differences between city and village, the GdW and the Federal Foundation of Baukultur propose in a joint position paper the promotion of stable, middle-class towns in rural regions and their development into sustainable anchor cities. Regional policy and planning are required to identify these cities, to bundle offers and facilities, and to develop sustainable locations.

Trends and Required Action

Land Consumption In 2016, 51% of German land was used for agriculture, almost 30% was forests, 14% settlement and traffic infrastructure, and 4% other areas. The most consistently growing area for years has been settlement and traffic infrastructure. Between 1992 and 2016, it has grown by 26% from 40,305 km² to 50,799 km². Partly responsible for this is the continuous construction of single-family homes. The settlement area occupies almost 65% of the settlement and traffic infrastructure. Residential areas accounted for

the largest share with 42 %. According to the Federal Statistical Office, every inhabitant of Germany occupies 618 m² of settlement and traffic infrastructure.

The need for settlement and traffic infrastructure is putting pressure on agriculture around the cities in particular. In Münster alone, about 100 ha of arable land were lost permanently last year – around 140 football fields. Thus, land consumption for settlements and transport not only has environmental and social consequences but also negative economic ones. The federal government's national sustainability strategy aims to reduce land consumption to less than 30 ha per day by 2030. Between 2010 and 2013, land consumption for settlement and transport averaged 73 ha. By 2016, consumption could be reduced to 61.5 ha per day. Despite the decline in recent years, reaching the 30-ha target is a long way off. A study by the BBSR predicts that in 2030, per-day consumption will settle at around 45 ha, but will not continue to decline. In this trend calculation, the currently attracted building activity has not yet been taken into account.

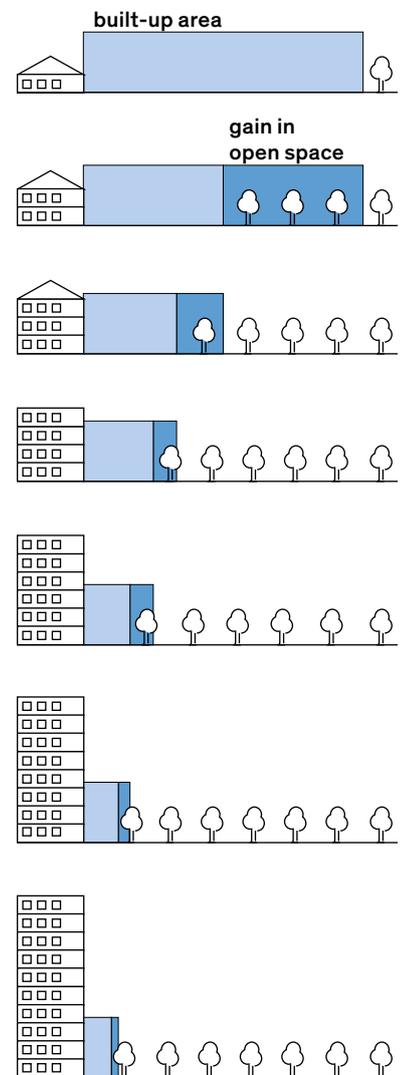
Alongside sustainability goals, programme and project funding was introduced at the federal, state, and municipal levels to curb land consumption for settlements and transport infrastructure. The potential of tradable land certificates among the municipalities in the federal territory was examined in the “Planspiel Flächenhandel” (Area Trade Simulation) by the UBA in the period from 2013 to 2017. In 2016, the website “Aktion Fläche” (Action Area) was launched as an information and communication portal for local community actors on behalf of the UBA. Since then, it has been used to network and implement area-saving instruments. Successful endogenous development approaches in rural areas were also identified and published in the “Kerniges Dorf” (Robust Village) competition by the Federal Ministry of Food and Agriculture (BMEL). Since 2010, Baden-Württemberg has been providing the municipalities with subsidies for over 200 projects under the state programme “Flächen gewinnen durch Innenentwicklung” (Land Acquisition through Endogenous Development), which pursues an efficient use of land. At the same time, the state government included area parking clauses in technical and in funding regulations. At the municipal level, the “Jung kauft Alt” (Young Buys Old) funding programme – which supports young families in acquiring their own, at least 25-year-old property – is still exemplary in the municipality of Hiddenhausen (NRW).

Despite considerable scientific, social, and legal efforts, the goal of conserving space in the daily construction practice receives too little attention. For this problem, there is no knowledge deficit, but rather awareness and implementation deficits. At the latest since 2007, the BauGB has created sufficient grounds to give priority to endogenous development. With the recent amendment to the planning law of 2017 and the introduction of the building area category “Urban Area” – which allows a greater spatial interconnection of housing and trade, as well as higher density – the topic has been taken up again. Nevertheless, it will be necessary in many places to open up new areas for housing construction. For this reason, with the addition of section 13b of the BauGB – which is limited until the end of 2019 – the federal government has provided an opportunity to also use outlying areas as building land in a fast-track procedure. From the Baukultur perspective, well-designed, permanent urban peripheries are to be developed in each case and, with a view to the 30-ha target, space-saving planning, and building as a whole to be taken into account.

Densification – gain in usable area

From the 6th floor, savings in built-up area is negligible

Source: Roland Rainer 1957



The need for renovation of roads and bridges ...

72 % of municipalities see the renovation of public buildings and 65 % the renovation of municipal infrastructures as currently important tasks. The need for renovation of schools and educational buildings is considered by 55 % of the municipalities to be (very) high, 41 % say this for municipal housing stocks. Of the municipalities surveyed, 75 % consider the renovation backlog for municipal streets and 56 % for municipal bridges to be (very) high. [M18](#) + [M22](#)

... is consistently determined

67 % of the population surveyed think there is a greater need for construction or renovation in their own municipality with regard to roads and bridges. 53 % see this in the area of schools and educational institutions. The larger the population of the municipality, the more the population is of the opinion that there is a greater need for construction and renovation. [P2](#)

Renovation Backlog For the quality of life of our built spaces, the maintenance, necessary renovation, and further development of buildings and infrastructures are central. In addition, the building stock must be more energy efficient due to climate change. Even though energy consumption in private households has fallen slightly in recent years according to the UBA, the proportion is still just over a quarter of total final energy consumption. The federal government's energy efficiency strategy therefore pursues the goal of making the building stock climate-neutral by 2050. Since around 70 % of the residential buildings were built in the period from 1949 to 1978, and thus before the first thermal insulation ordinance was issued, there is a considerable need for energy renovation here. The renovation rate, which currently stands at around 0.85 %, is considered an indicator of the progress of energy-efficient building renovation. To achieve the federal government's goals, it must increase to 2–3 % per year.

In the area of transport infrastructure, there has also been a long-term renovation backlog. On the part of the municipalities, the financial shortage that has existed for years is responsible for this, among other things. The Deutsche Städtetag (DST, Association of German Cities) reports that at least 2.7 billion euros are missing each year for the maintenance of municipal traffic routes and public transport. According to the KfW Municipal Panel 2017, municipalities estimate that the investment backlog amounts to a total of 34.4 billion euros in their transport infrastructure. Overall, although a decline in the perceived backlog of investment has been recorded compared to previous years, the renovation backlog is still immense for all municipalities with more than 2,000 inhabitants, according to the representative extrapolation. It amounts to a total of 126 billion euros in 2017. From a Baukultur point of view, the investments that have not yet been made represent a great design potential, which should be exploited through integrated planning and implementation processes. For the municipalities, especially those with a difficult budgetary situation, this investment backlog proves to be problematic. They lack the financial leeway to rectify the renovation backlog. In this context, the DST calls for federal funding for municipalities, which is to be invested independently of the budgetary situation, and for municipal investment capacity to be strengthened in general.

Digitisation For the creation of equivalent living conditions in the city and village, fast broadband is an absolute prerequisite. With Industry 4.0, the importance of digital processes and the use and analysis of locally available data in production are growing. Knowledge-based and creative professionals also depend on a powerful connection to the digital world. As a result, network expansion is also becoming an important location factor. However, there are major differences between network expansion in Germany's cities and rural areas. A survey conducted by TÜV Rheinland in 2016 found that 90 % of households in urban areas had fast Internet access (i.e. ≥ 50 Mbit/s), compared with only 36.2 % of households in rural areas. Here, the nationwide network expansion is still lagging behind, because it is hardly profitable for private companies and therefore not very attractive. An alternative approach to broadband deployment is being explored in the Modellvorhaben der Raumordnung (MORO, Regional Planning Model Project), "Digitale Infrastruktur als regionaler Entwicklungsfaktor" (Digital Infrastructure as a Regional Development Factor) from the Federal Ministry of Transport and Digital Infrastructure (BMVI).

In seven model regions, self-initiative is supported by local actors, and financing and organisational models for improving regional broadband coverage are being tested.

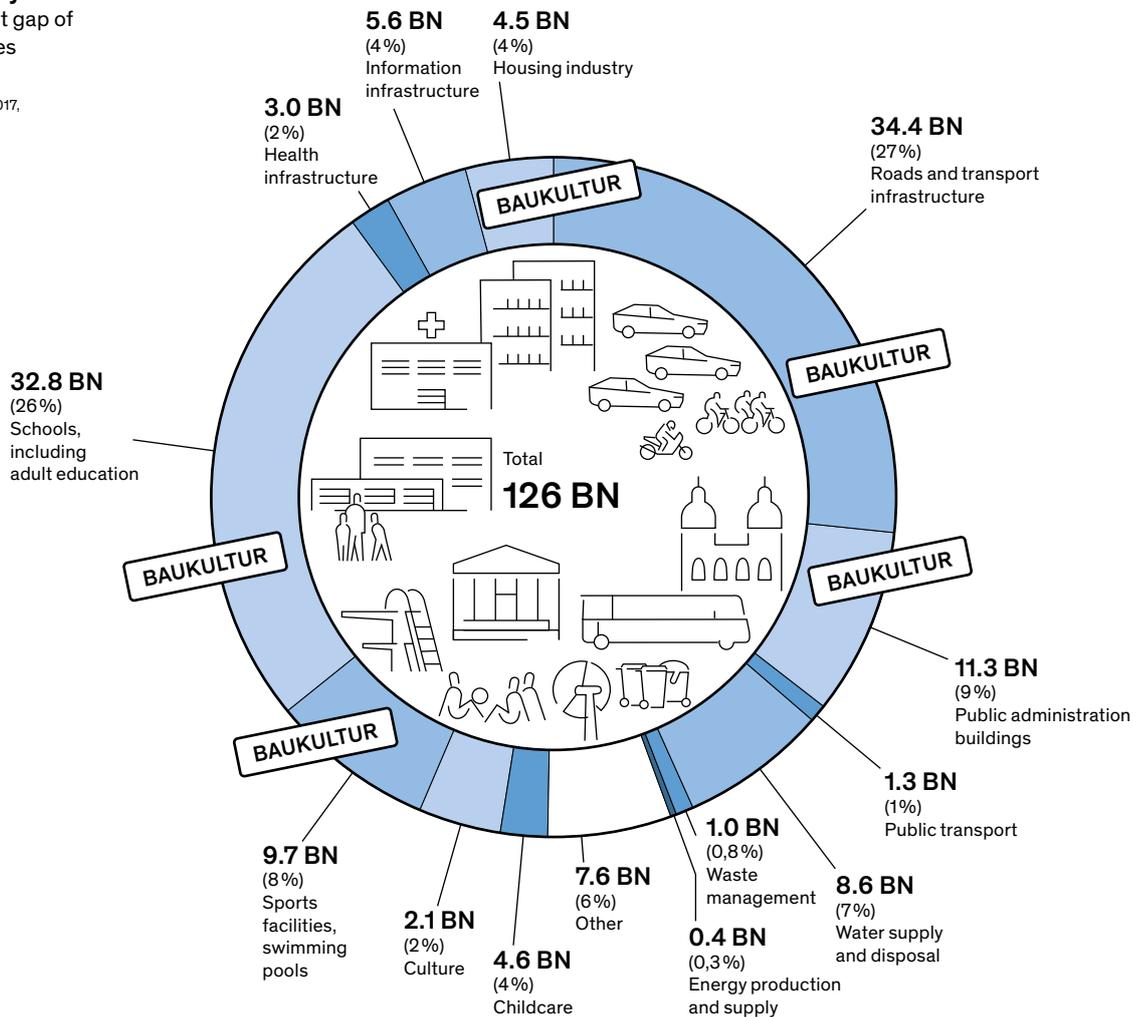
In 2017, together with members of Netzallianz Digitales Deutschland, the BMVI launched the “Zukunftsoffensive Gigabit-Deutschland” (Gigabit-Germany Initiative for the Future), with the aim that government and business will together invest around 100 billion euros in the expansion of a high-performance broadband network by 2025. The coalition agreement 2018 emphasises the intention to use investments to create future-proof spaces and equal living conditions in urban and rural areas. In the legislative period, a public financing requirement of 10 to 12 billion euros is expected. Here, too, infrastructure investments can be incorporated into an overall package of Baukultur upgrades.

Serial Building Construction projects are under considerable time pressure to create sufficient living space in the cities as quickly as possible. This entails the danger of architectural arbitrariness and creative monotony. Good, solid construction must be aware of the period for which the building is being erected. This requires that the construction and floor plans should be designed

Keep Baukultur in mind during necessary renovations

Perceived investment gap of German municipalities in Euros 2016

Source: KfW Municipal Panel 2017, conducted by Difu 2016



to be sufficiently flexible and adaptable, so that later conversion and further building are possible. Moreover, the location choice is also a high priority.

In response to the question of how affordable housing can be provided in a short time, serial building is being tested time and again. In the 1920s, the first prefabricated housing estate was built in Berlin-Friedrichsfelde with the Splanemann-Siedlung, and especially in the post-war period multistorey housing complexes in serial construction were erected in both East and West Germany. This modular design is currently being discussed again for multistorey housing, so that time- and cost-efficient housing can be created. To prevent concerns about the “prefabricated buildings of tomorrow”, in 2017 the “Bündnis für bezahlbares Wohnen und Bauen (Alliance for Affordable Housing and Building) organised a Europe-wide competition, “Rahmenvereinbarung serielles und modulares Bauen” (Framework Agreement Serial and Modular Construction). The aim is to sign a framework agreement with the winners of the competition and the building industry for the construction of multistorey residential buildings in the same construction style. It is crucial that a sufficient

Baukultur Goes into Series Production

The Splanemann-Siedlung – Germany’s First Prefabricated Building

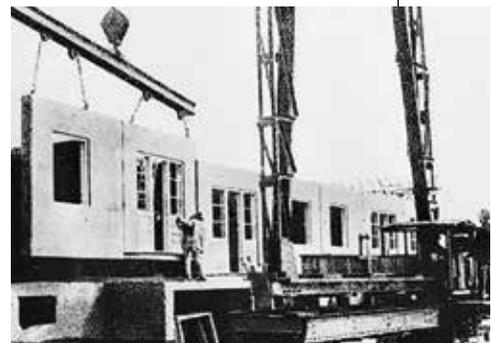
The first industrially manufactured prefabricated housing estate in Germany is located in Berlin-Lichtenberg. The 1920s ensemble for soldiers and survivors of the First World War was originally to be built using conventional construction. Building site visits to New York and Amsterdam, however, gave the Berlin City Planning Officer Martin Wagner the idea of a serial prefabrication with concrete – an unusual building material at the time. On-site, concrete slabs approximately 25 m² and weighing 7 tons were produced. With the completion in 1930, the experiment initially ended for an efficient living space in series. The shape of the plot and the weight of the slabs prevented a cost-effective process. The appearance of the estate was also criticised as being too monotonous. The result was 31 buildings with 138 flats. Of these, 20 flats were destroyed in the Second World War and not rebuilt. Tenant and front gardens were provided for the cultivation of fruits, vegetables, and flowers. The estate received its name from German resistance fighter Herbert Splanemann. After the end of the GDR, the property went back to the original builders, Sozialverband Reichsbund der Kriegs- und Wehrdienststopfer (Social Association Reich Federation of War and Military Service Victims), who sold the ensemble in 1997 to a private buyer. Meanwhile, the renovated estate – with its 27 buildings – is valued for its urban planning and architectural detail; it has been under monument protection since 1981.

Facts

Planning and Construction: 1924–1930
 Developer: Gemeinnützige Reichsbund-kriegersiedlung GmbH
 Planners: Wilhelm Primke, Architekturbüro Primke und Goettel, and Martin Wagner, architect, urban planner, and at the time head of Berlin’s municipal planning and building control office

Size: Housing estate with 27 two- and three-storey buildings, 118 housing units (originally 31 buildings with 138 housing units)

More information in the project description in the appendix



BAUKULTUR AT A GLANCE

- Inhabited construction experiment from the 1920s
- Careful renovation and modernisation of an estate under monument protection
- Diversity through urban development and architectural detail

degree of individuality and diversity is implemented in the construction and materiality of the buildings so that localised adjustments are feasible. Only well-designed and structurally optimised structures should go into series production.

Real Estate Market The real estate and construction industries make a significant contribution to gross value added in Germany. The volume of construction in Germany in 2017 was around 310 billion euros: 215 billion euros were used for residential buildings, 95 billion euros for non-residential buildings. The largest share of the construction volume went into the existing building stock – 66 % of the funds used for housing construction were used for construction services in the housing stock, while non-residential buildings accounted for 62 %. The construction services in existing buildings include repair services, modernisation of buildings and flats, including conversion and expansion measures.

According to the results of the Postbank study “Wohnatlas 2017” (Housing Atlas 2017), the purchase prices for residential property will continue to rise in about half of German cities and districts in the future. The largest price increases are forecast for regions in southern Germany. A study by the market research company Verband deutscher Pfandbriefbanken (Association of German Pfandbrief Banks) found that the transaction volume for real estate sales in Germany almost tripled between 2010 and 2017, from 20.5 billion euros to 59.4 billion euros. At around 30.2 billion euros, foreign real estate buyers now account for more than half of the transactions. In Berlin, two-thirds of real estate sales are already made to foreign investors. Munich, Frankfurt, Hamburg, and Berlin are among their favourite investment destinations in 2018, according to a ranking by the consulting firm PwC. This is due to the still increasable real estate prices in German cities – compared with European metropolises – and the comparatively easy access to the real estate market. It is mainly exchange-listed owners who determine the transaction process. Thereby primarily smaller and mid-sized holdings are traded, as the BBSR 2017 has determined.

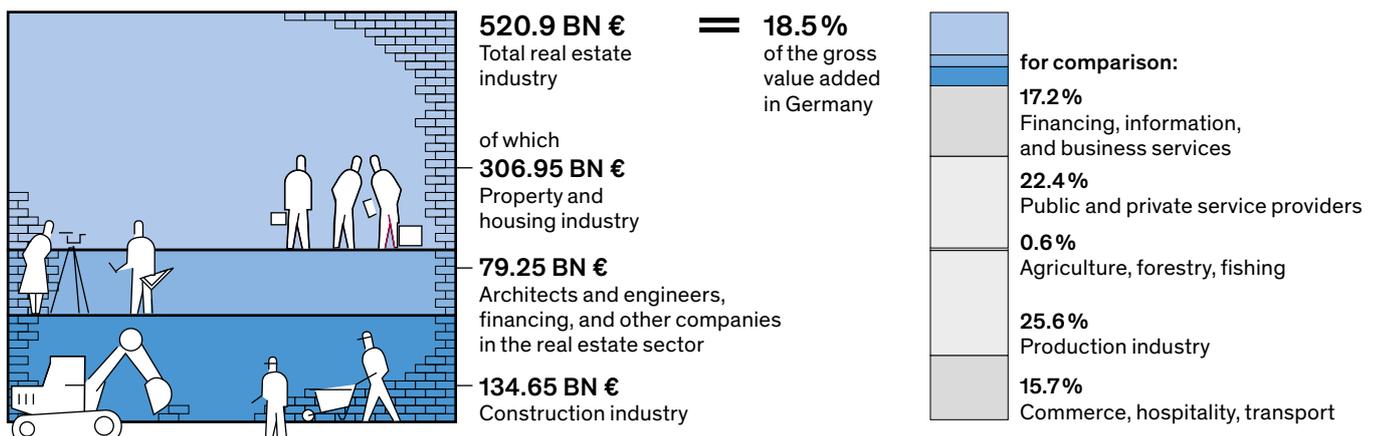
With increased investor interest and transaction business in the real estate market, the traditional client is largely lost. It is problematic if instead of a solid

Demand for new single-family homes prevails

96 % of the surveyed municipalities believe that new building plots for single-family homes will be in (very) great demand in the future. 92 % see a (very) strong demand for new housing in the city centre, 90 % confirm this for city-centre rental flats in the existing building stock. [M26](#)

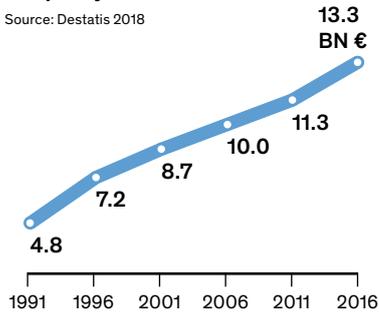
Gross value added by economic sector 2016

Source: GdW Federal Association of Housing and Real Estate Companies 2017



Revenues from Property Tax B

Source: Destatis 2018



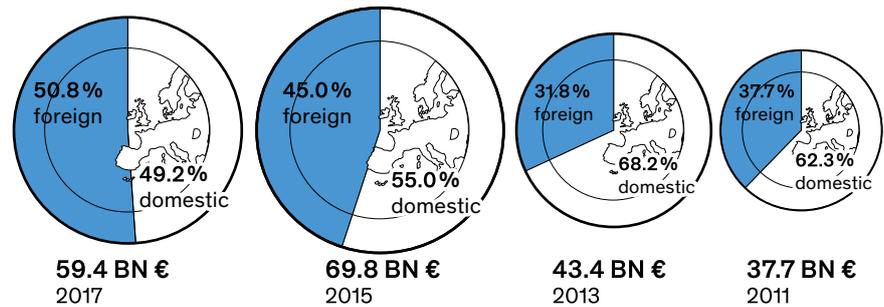
permanent letting and leasing, only property and building speculation result. In this context, monuments are increasingly becoming a focus. Project developers confirm that new construction projects in combination with historic building stock can currently be well marketed. Condominiums in buildings that are historically and culturally valuable become capital investments. Interesting for investors is not least the tax depreciation of monuments. If no funding is used, the owner can claim the costs for the acquisition, renovation, and maintenance of a protected building for tax purposes by deducting the allowance for depreciation (AfA) for several years. For an owner-occupied property, it is 9% annually for a period of ten years, for a non-owner-occupied monument building 9% annually per year for eight years, and 7% annually for a further four years. Thus, investment costs for investors can be refinanced in a relatively short time to 100%.

Development of Land Value The rapid growth of large cities is leading to shortages and more expensive housing space and building land. Thus, undeveloped land is the subject of speculation. The price of land in major cities has risen sharply over the last five years: in Berlin by about 345%, in Frankfurt by about 105% between 2012 and 2017. In Munich, land prices for housing construction have tripled in the last ten years. The term “landbanking” refers to an investor’s logic of action, which follows from the positive price trend: for investors it is more lucrative to allow the land to lie fallow and to sell it a few years later at a profit.

Meanwhile, more than every second euro comes from abroad

Development of investment in real estate (only purchases over 10 MM €)

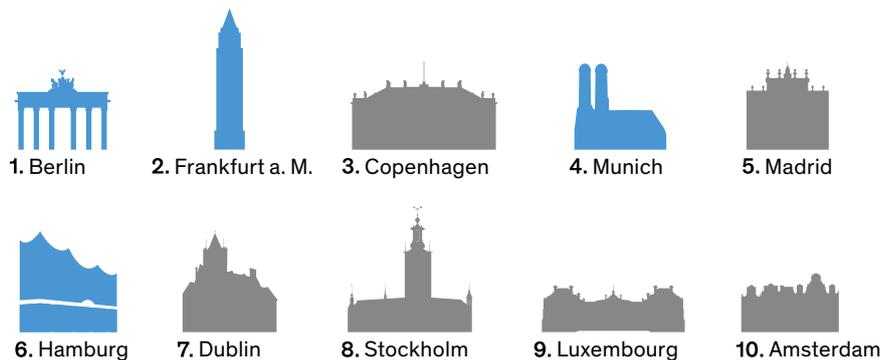
Source: Die Zeit 2018



The most sought-after city in Europe is Berlin

In 2018, financiers preferably want to invest in these European cities:

Source: Die Zeit 2018



In such cases, speculation and profit maximisation jeopardise the urban need to create liveable, attractive, and identity-creating buildings and neighbourhoods that will benefit the entire urban population. As a consequence, the city's goal to provide affordable housing for the population and newcomers also falls behind.

Land policy is pivotal in the current debate on socially equitable and sustainable urban development. The “Münchener Aufruf für eine andere Bodenpolitik” (Munich Call for a Different Land Policy) makes clear the urgency that the topic currently has for municipalities. For liveable cities, it is essential that local authorities take the lead again when it comes to building land mobilisation and land use. The “Bodenpolitische Agenda 2020–2030” (Land Policy Agenda 2020–2030) from the Deutsches Institut für Urbanistik (Difu, German Institute for Urban Affairs) and the Bundesverband für Wohnen und Stadtentwicklung e. V. (vhw, Federal Association for Housing and Urban Development) formulates concrete proposals on how to move away from the highest bidding process at all levels of government to a concept-oriented bidding process. A position paper by the DST on the reorientation of housing and building land policies also deals with the role of land policy in a fair and high-quality development of cities and municipalities. Other possibilities have to be considered – for example, through land funds and foundations, community land trusts, or, above all, through leasehold.

The current discussion about the reform of land tax, which is the most important source of municipal revenue after trade tax, can influence real estate speculation. The revenue from property tax is rising steadily. If in 1991 it amounted to 4.8 billion euros, it stood at 13.3 billion euros in 2016. So far, property tax has been charged on the basis of unit values for land and buildings, based on the years 1964 (West Germany) and 1935 (East Germany). However, in the spring of 2018, the Federal Constitutional Court declared these tax bases no longer realistic; a new regulation is to be presented by the end of 2019. In the coalition agreement 2018, the introduction of a so-called property tax C is pursued. In the future, a higher property tax will be levied on previously undeveloped but building-ready land, in order to promote the mobilisation of building land. The model also provides for a tax to be levied on buildings, which may inhibit the willingness of property owners to invest in the renovation of their properties. Alternatively, the alliance Grundssteuer: Zeitgemäß! (Property Tax: Up-to-date!) proposes levying the property tax in the future on a pure land value tax – i.e. only the taxation of land. With this approach, necessary investments in buildings for preservation and maintenance are not blocked, but targeted investment pressure is exerted on undeveloped land. Both models serve to counteract land speculation and to promote housing construction. In any case, the goal is a sustainable endogenous development through the expeditious use and development of land reserves.

Influencing Factors in Building Stock Development

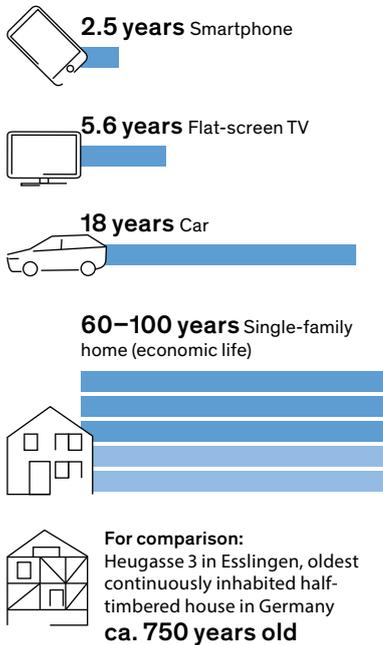
Lifespan and Useful Life of Buildings Existing quarters are under increasing pressure to adapt. The idea of transformation initially contradicts the usual life span of buildings. In general, a distinction is made between a technical lifespan of structures or their components, and its economic useful life. The behaviour of the owners and users, external influences (e.g. climatic conditions), as well as material properties and construction methods influence the technical

Post-war modernism especially under pressure

Buildings demolished most often are from the period 1949–1969. 70 % of municipalities state that in the past five years, a demolition of buildings from this period has taken place. In second place is the building year category 1919–1948. Here, 60 % of the surveyed municipalities indicate that a demolition has taken place. The most common reason for the demolition measures is the poor building fabric; 86 % of municipalities confirm this. The focal points of the demolition measures in the municipalities also coincide with the assessment of the need for renovation and renewal. Three out of four municipalities think that this is (very) high in the building year category 1949–1969. [M6](#) + [M7](#) + [M8](#)

Lifetime of products

Source: German Federal Environment Agency 2016; Entsorgung Punkt DE GmbH 2014; BSBK; www.merian.de 2013



lifespan. With proper maintenance, the technical lifespan can be significantly extended. The economic useful life is at the discretion of the owner. Based on a cost-effectiveness analysis, costs, benefits, and returns are compared, from which the economic useful life is determined. The average economic useful life of single-family homes is 60–100 years, for rental housing 60–80 years. Significantly shorter are the economic useful lives of commercial and industrial buildings, hotels and clinics (40–60 years), and shopping centres (30–50 years). A differentiated analysis of the economic useful life also results from the varied ownership structures. For example, commercial owners often seek an early return on investment and set the useful life to be 15 to 20 years. Social, economic, and political influences affect the economic useful life. As a result, the economic value of a building can be significantly shortened compared to its technical lifespan, especially if the location loses significance or the requirements for function and design change. In practice, buildings are demolished before the underlying economic useful life is reached. Since the post-war period, the lifespan of buildings has been ever shorter.

There are different reasons for the fast pace. Local conditions, changing user groups, inflexibility of constructions and floor plans, poor craftsmanship, health-endangering building materials, and even neglected maintenance and refurbishment are among them. Economic, environmental, social, and political influences also determine the future viability and lifespan of buildings. In recent years alone, demographic change and climate change have made aspects such as accessibility or energy efficiency new assessment criteria. If there is no structural adaptation, buildings no longer meet today's requirements. Funding programmes by the EU, the federal government, and the states make a significant contribution to the restructuring and modernisation of the existing building stock, and a large part of the settlement stock can be permanently maintained. However, according to the municipal survey, building demolitions are taking place in all building year categories of the last century. First and foremost, the building fabric of post-war modernism is under pressure. In particular, it does not meet contemporary standards with regard to energy.

Legal Framework Legal framework conditions also affect the building stock and its further development. Comprehensive structural changes to historic buildings are often not possible due to the monument protection requirements. But there are also legal restrictions for the remaining building stock. First, a building enjoys grandfathering for the originally intended use of the building. If the legal framework changes, there is a so-called passive grandfathering. Thus, the owner is entitled to preserve a building and to use it as before, even if this would no longer be permitted under applicable law. Active grandfathering includes a right to the approval of measures necessary for the functional use of the building.

According to building code regulations in the federal states, in addition to the erection and demolition of a building, the modification and change of use of building structures require a building permit. A change in a physical structure is understood as not only insignificant transformation of the building, i.e. in particular changes to the construction or the external appearance. Modernisation measures are also usually changes in the sense of the building regulations. A change in use occurs, for example, in the course of the conversion of commercially used rooms into living space and vice versa. The approval

procedure can come to the conclusion that reutilisation ideas are not compatible with the legal framework. For example, if a block of flats approved in 1900, which did not require the creation of parking lots, is now to be used for commercial purposes, under the current building law the required parking spaces must be provided on the property – even if the building remains unchanged.

Retail Example Not only residential buildings, but also commercial buildings are exposed to influences that make continuous use of the buildings more difficult. Investments and conversions are needed to preserve buildings and make them usable for the future. Retail space in the German retail trade amounted to around 118.6 million m² in 2016, thus stagnating compared to previous years. At the same time, however, the number of small shops is falling, especially in the area of food suppliers. While in 2006 there were still a total of 17,400 small grocery stores, by the end of 2016 there were only 8,750 – half within ten years. Accordingly, with a constant total sales area in Germany, the respective space requirement of the individual providers increases. In particular, historic city centres – with their small, parcelled-out building structures – often cannot cover this space requirement. In the Frankfurter Allgemeine Zeitung (FAZ), the development of a functional change was noted. The city centre no longer supplies people with goods, but with experiences. The proportion of gastronomy to new lettings is increasing; according to the FAZ, it is currently 20 %.

The developments in online commerce additionally complicate the future viability of fixed providers. In 2015, e-commerce sales in Germany amounted to around 52.8 billion euros, which corresponds to 8.5 % of total retail sales. For 2017, a sales volume of 73 billion euros is likely. According to the Federal Statistical Office, 57 % of the population in Germany used the Internet for shopping. Almost half of the sales volume was accounted for by online marketplaces such as Amazon or eBay. The developments have noticeable consequences for the city centres and their historic building stock. According to a recent industry survey conducted by the Handelsverbands Deutschland (HDE, German Retail Association), almost one-third of retailers with fewer than five employees rate the current business situation as bad. More than one-third of them expect continuing declines in sales. In particular, retailers in the city centre complain about the business situation – 44 % of them say the situation has deteriorated for their own business. With the action days “Heimat shoppen” (Home Shopping), the Industrie- und Handelskammern (IHKs, Chambers of Commerce and Industry) would like to counteract this and develop consumers’ awareness for local shopping. The BBSR publication “Online-Handel – Mögliche räumliche Auswirkungen auf Innenstädte, Stadtteil- und Ortszentren” (Online Commerce – Potential Spatial Implications for Inner Cities, Neighbourhoods, and Town Centres) concludes that the city centres of large cities and strong medium-sized cities remain stable and attractive retail locations, but the crowding out of owner-managed businesses is expected here due to rising rents.

The competition is exacerbated by factory outlet centres. Developers and operators are intensively searching for locations in Germany, because the centre density here – with 14 existing outlets and 16 planned projects – is classified as rather low compared to countries such as Switzerland or Austria. These locations additionally weaken the inner-city retail trade. Already in

Location in the city centre particularly in demand ...

46 % of the Chambers of Commerce and Industry (IHKs) surveyed on the topic “Baukultur” estimate that only 15 % of their businesses would consider the use of the historic building stock for commerce and industry as feasible and even image-building. However, 91 % of IHKs surveyed say that their businesses see a future for commercial buildings in the city centre. [IHK 2](#) + [IHK 5](#)

... nevertheless, there are often vacancies in the historic centres

65 % of the municipalities state that significant vacancies are to be found in the historic centre. In 22 % of the municipalities, commercial areas also have vacancies. [M19](#)

the Baukultur Report 2016/17, the results of the municipal survey pointed out that the presence of large-scale retail offers outside of the municipality or in neighbouring municipalities affects inner-city retail trade.

Diversity of Actors

Complexity of Projects Structural measures in the settlement context are becoming increasingly complex. Traditionally, different disciplines were involved in building. Spatial concept, façade design, statics, building construction, building material science – already in the design phase, numerous technical requirements are placed on a good planning team. However, the topics and tasks have become more complex in recent years. Buildings must be optimised in terms of energy, adapted to changing climatic conditions, and aligned with increasing fire protection requirements. The increase in building regulations and DIN standards, which apply to existing measures and new construction projects, illustrates this. There are 580 DIN standards that are relevant for the Construction Tendering and Contract Regulations (VOB). This makes new construction projects difficult; and with regard to old building structures, the application of today's regulations is associated with additional complications.

New expectations regarding the involvement of user groups are added to this, and they lead to a changed or elaborate participation culture and public relations work. As a result, no actor can single-handedly keep track of or even be responsible for a construction project. The complexity is also increasing at the urban planning level. Using the example of the discussion about preservation-worthy building structures that shape the cityscape, it becomes clear that alone in assessing the need for preservation, a variety of actors must be included so that creative qualities – as well as environment, energy, or social aspects – are included in the assessment. A similar variety of actors also determines the planning and implementation of infrastructures. Thus, flood protection is no longer just a question of hydraulic engineers. Riparian zones today have to serve flood protection, climate adaptation, and recreation equally.

In times when an integrated strategy is becoming more necessary in urban development, job profiles are increasingly differentiating. A common basic knowledge is still taught in the three-year bachelor's degree programme in the respective courses, but at the latest from the master's, a specialisation on partial aspects of the individual disciplines occurs, so that as a result many experts and few "all-rounders" are trained. In a key issues paper from the State Chambers of Engineers and published by the Federal Chamber of Engineers, the authors formulate their concern regarding the diversification of study programmes through the bachelor's and master's degrees, and advocate a clear legal definition of the professional title. As a consequence of diversification, planners and architects are now expected to have more communicative and moderating skills. The ability to communicate among graduates is currently one of the most important skills that employers expect from job starters, according to a survey by competitionline.

In addition to constructive and computational competence, historical knowledge is also indispensable for engineering planning in existing buildings. Technical know-how and knowledge of building history must be brought

together. However, the history of construction engineering is generally not represented as a compulsory or optional subject at the German universities and colleges; with a few exceptions, the training of prospective civil engineers is ahistorical. In the interest of the development of all participating disciplines involved in a new conversion culture, the integration of teaching content on the history of building construction and construction engineering into the curricula of civil engineering is therefore recommended. The history of construction engineering is a basic subject for building in the existing stock.

The juxtaposition of expert knowledge and sectoral responsibilities also creates difficulties in practice. For example, many railway bridges in Germany are under monument protection. However, the stock of vault bridges alone has been reduced by 400 to 6,200 structures since 2011. Although in many cases, a renovation of the structures would be possible, a replacement is usually carried out. The decisive reason for this is the financing by the federal government, regulated in the Leistungs- und Finanzierungsvereinbarung (LuFV, Performance and Financing Agreement). This allows the use of the funds expressly only for new construction measures. This means that the option “preservation” in the course of the construction programmes by the Deutsche Bahn is usually not financeable. In order to open the option “preservation instead of demolition and new construction” in such cases, a corresponding possibility is to be agreed in the “LuFV III”, which is to be renegotiated in 2019.

Structures in Monument Protection Monument protection and monument preservation are tasks of the federal states. They regulate the responsibilities and the tasks of the institutions in monument protection laws. Monument protection in Germany is correspondingly complex and multilayered.

As a rule, the highest monument protection authority is located at the responsible state ministry or in the city-states with the senate authority. Their task includes the enactment of the respective monument protection laws as well as the technical supervision of their mandated, subordinate monument authorities. The state conservation authority is responsible for special questions regarding monument preservation at the state level. The authority takes over the consultation of the lower monument authorities, and in individual cases also the monument owner. In addition, it draws up expert reports, represents the interests of monument preservation in public planning and construction measures as a public authority, and is usually responsible for the management of monument lists, including the recording of ground monuments. In some states, such as Bavaria, the district governments take over some of the tasks as a top monument protection authority. With the VdL, Germany has formed an association that regularly publishes recommendations or worksheets.

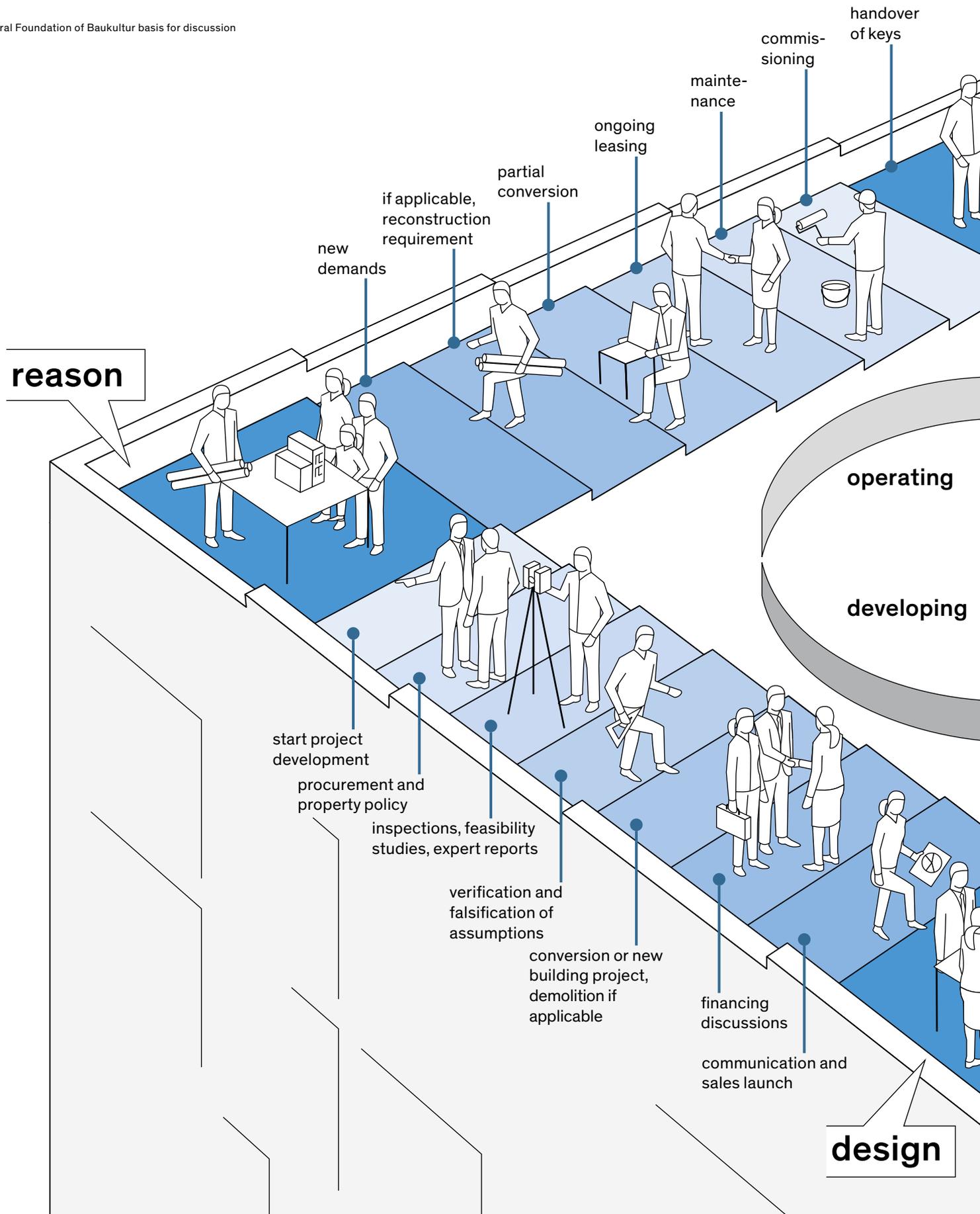
The lower monument authorities are located directly in the municipal or district government. The small area states and the city-states can tailor their hierarchies to their needs. They are responsible for advising monument owners and handling inquiries, applications, objections, and building permits. In addition, they are public authorities in the context of municipal construction management procedures. Whether the lower monument protection authority is located with the district or the city depends on the number of inhabitants. Usually, monument protection is assigned to the building code authority, which is located in the district governments in municipalities

Monument authority often located in the city government

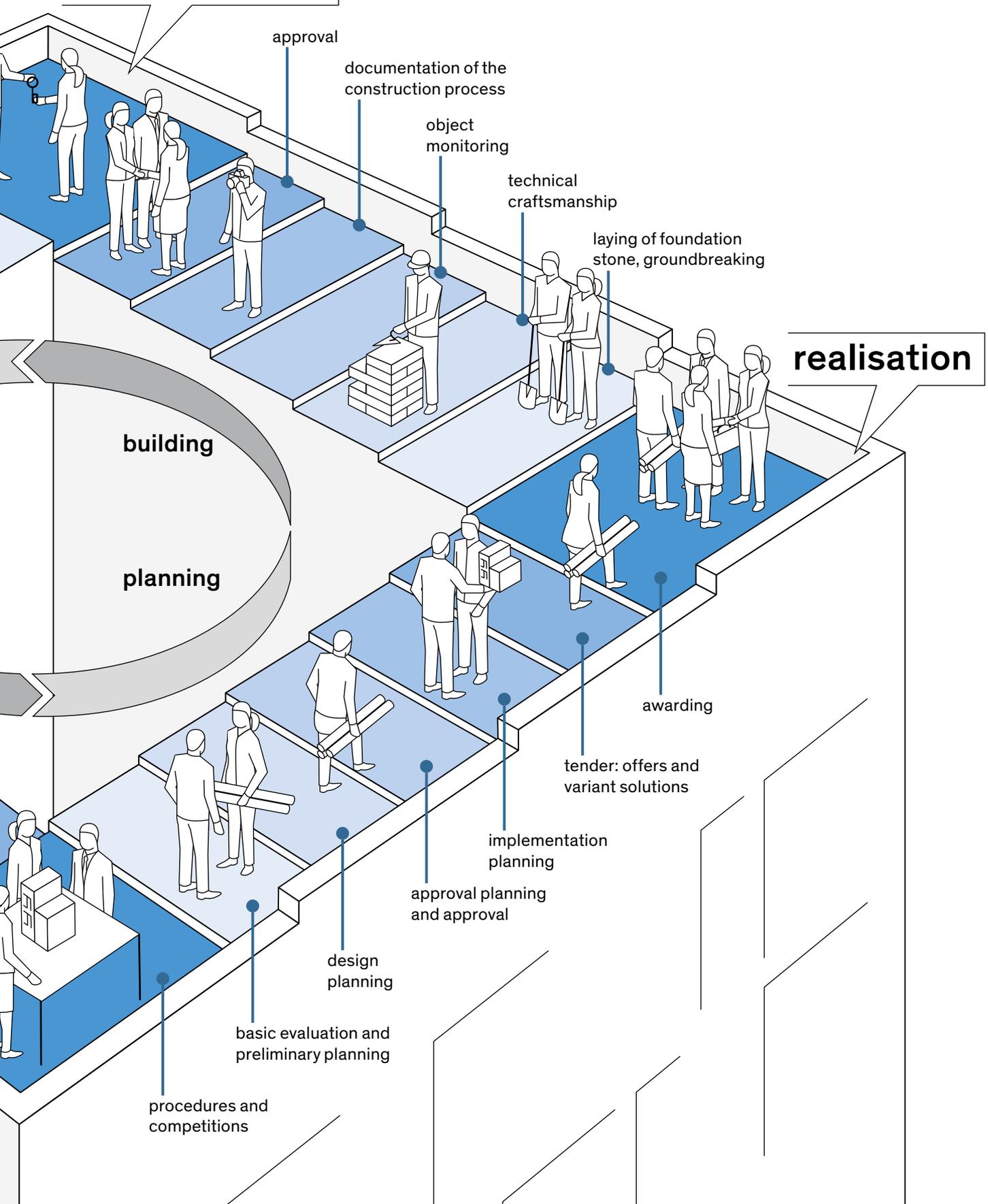
The lower monument protection authority is located in the city government. 43 % state that this task is undertaken by their district administration, in 3 % other institutions are responsible. [IM12](#)

Baukultur functional chain – a cyclical process

Federal Foundation of Baukultur basis for discussion



commissioning



with under 30,000 inhabitants. An exception is North Rhine-Westphalia, where all lower monument protection authorities are part of the municipal administration. Contrary to the regulations in the other states, they also maintain the monument lists.

Even if monument protection and preservation are primarily the responsibility of the federal states, the preservation of important national cultural monuments at the federal level is one of the focal points of cultural policy. The Deutsche Nationalkomitee für Denkmalschutz (DNK, German National Committee for the Protection of Historic Monuments) is a platform for the preservation of monuments at the federal level. As a technical and political body, it functions at the interface between the technical level, governments, and administrations. The members of the DNK include representatives from politics, business, churches, municipal associations, the media, and other institutions.

Internationally, the International Council on Monuments and Sites (ICOMOS), a non-governmental organisation (NGO), is committed to the preservation of the historic cultural heritage. For example, the volunteers act as advisors and reviewers in the work of the World Heritage Committee and in the fulfilment of the UNESCO World Heritage Convention. At the national level, they advise UNESCO World Heritage sites.

In addition, numerous professional and private actors, networks, and associations campaign in different ways for the preservation of Baukultur heritage. On the one hand, they are based on the special interest in monument protection and preservation; on the other hand, they often arise in response to the shortage of staff at state institutions. For example, various foundations have been formed that are committed to the care of architectural or ground monuments. Representatives of this are the Deutsche Stiftung Denkmalschutz (German Foundation for Monument Protection) and the Prussian Palaces and Gardens Foundation Berlin-Brandenburg. The latter manages and administers around 800 ha of protected parks, in addition to the historic buildings.

The understaffing in the offices will intensify – in many occupational fields, historic preservation is characterised by a shortage of skilled workers. According to the assessment by the DNK, there is already a lack of qualified junior staff today. At its annual conference in 2017, the DNK has therefore resolved the appeal “Berufliche Perspektiven in der Denkmalpflege stärken und vermitteln” (Strengthen and Promote Career Perspectives in Monument Preservation). In addition to technical knowledge, a particular challenge in monument preservation – and sometimes also with handling preservation-worthy structure – are the skills in dealing with historic materials and construction methods. For centuries, craftsmanship skills have always evolved and found answers to the respective current requirements. Traditional techniques have always been a high priority in Germany. Germany is also known internationally for its highly qualified craftsmanship businesses. For the preservation and further development of the architectural heritage, it is essential to preserve, document, and utilise craftsmanship knowledge as an innovation pool. The Federal Ministry for Education and Research (BMBF) has commissioned the transdisciplinary research, documentation, and education project “Objekte der Köpfer – Materialisierungen handwerklichen Erfahrungswissens zwischen Tradition und Innovation” (OMAHETI, Objects of Experts – Materialisation of Artisanal Tacit Knowledge between Tradition and Innovation). In Switzerland, the Federal Office of

Culture offers on its website a publicly accessible online database on traditional craftsmanship, which has been developed as part of a research project. In addition to the idea of preserving knowledge, the aspect of potential innovation plays an important role in both projects.

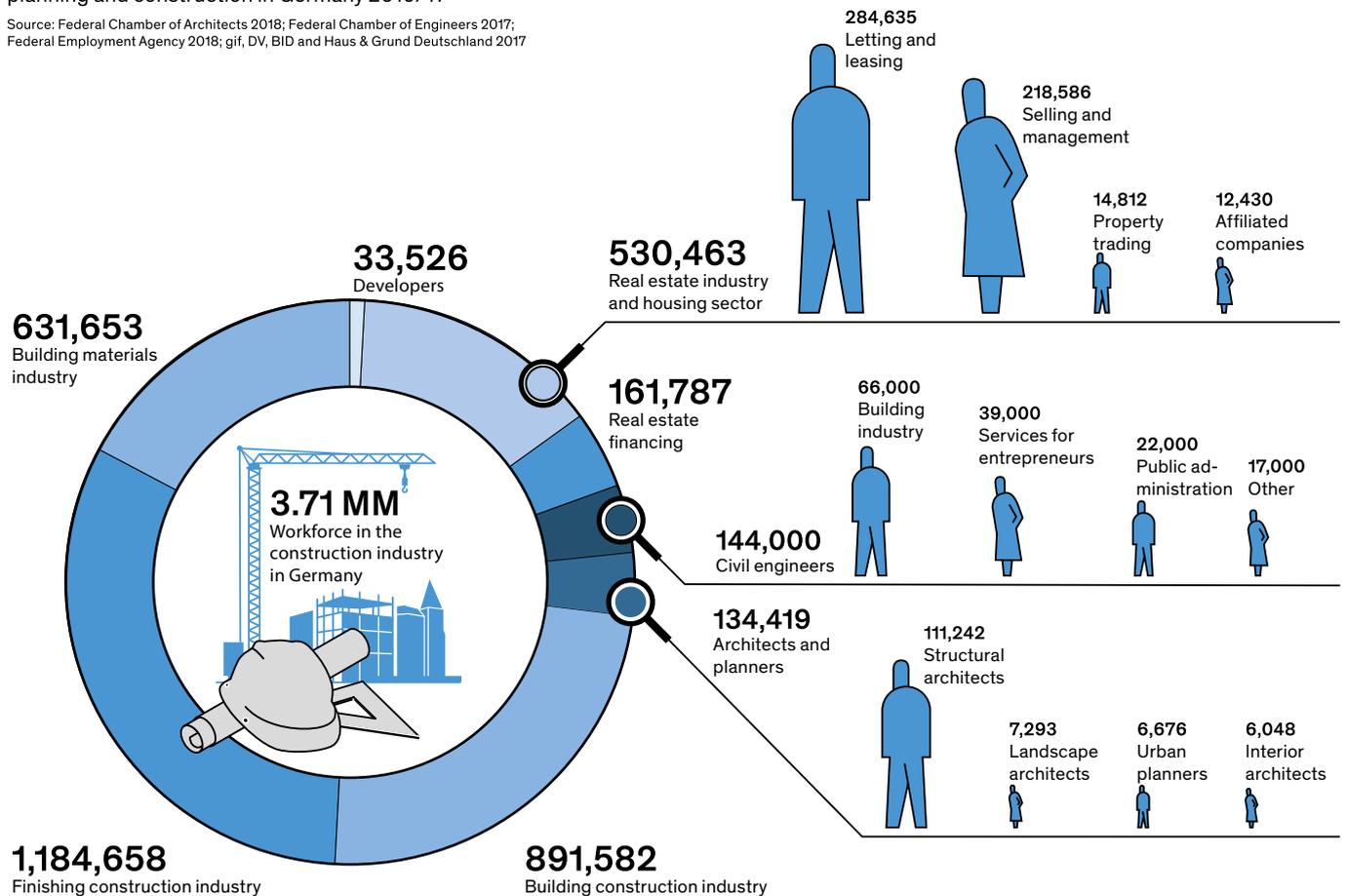
If there is economic viability for good craftsmanship, solid training will continue to bring its building potential into the future. However, the demographic change in Germany and the increasing desire of young people for academic training will increase the skills shortage that is already noticeable today. According to estimates by the Zentralverbands des Deutschen Handwerks (Central Association of German Craftsmanship), over the next five to six years a generation change will take place in 200,000 companies. However, the search for successors is difficult for companies without heirs and particularly in rural areas.

Financial Resources in Monument Protection In 2013, public budgets provided 494 million euros for monument protection and preservation. This corresponds to a share of 5 % of the total public cultural expenditures of federal, state, and local governments. However, compared to the previous year, public funds declined. The largest share of financing is borne by the federal states. However, the federal government is also involved in the framework of its cultural policy. Between 1950 and 2017, a total of 670 monuments, historic parks and

Employer Construction

Total workforce of selected professions in planning and construction in Germany 2016/17

Source: Federal Chamber of Architects 2018; Federal Chamber of Engineers 2017; Federal Employment Agency 2018; gif, DV, BID and Haus & Grund Deutschland 2017



gardens, as well as sites of national significance were preserved and restored in the monument conservation programme “National wertvolle Kulturdenkmäler” (Valuable National Cultural Monuments). In addition, a special cultural heritage preservation programme was launched in 2007, with 400 million euros available. The restoration of the Berlin State Opera Unter den Linden or renovation measures of the Klassik Stiftung Weimar and the Prussian Palaces and Gardens Foundation in Berlin-Brandenburg were financed with this. Nine other special conservation programmes with a total of around 240 million euros for projects by the states, municipalities, churches, and other project promoters complement the funding offers at the federal level.

Independent of the monument status, the federal government provides funds annually in the framework of urban development, which receive matching funds from states and programme municipalities. With around 8 billion euros in federal funding, almost 3,900 measures were funded between 1971 and 2012 in the Städtebauliche Sanierungs- und Entwicklungsmaßnahmen (Urban Renovation and Development Measures) programme. In the meantime, urban development funding is divided into various individual programmes that pursue different priorities. In 2017, 790 million euros in federal funds were available in urban development subsidies for overall urban development measures in existing neighbourhoods. The Städtebaulicher Denkmalschutz (Urban Development Monument Protection) funding programme, with a share of 110 million euros in federal funding, specifically focuses on preservation-worthy historic city centres and urban areas of Germany. It was first launched in 1991 for the new federal states. Since 2009, the programme has also been used in the old states. The renovation of historic buildings depends crucially on the financial support of the public sector. Yet despite the high financial commitment of the federal government and the states, Baukultur heritage is additionally dependent on the financial and often voluntary commitment of external actors. Without the numerous professional and volunteer helpers, it would not be possible to preserve and renovate Baukultur heritage to the extent and with the quality that is found in Germany.

Excursus

Urban Development Monument Protection

The funding programme, Städtebaulicher Denkmalschutz (Urban Development Monument Protection), is part of the urban development funding of the federal and state governments. It sees itself as an impetus for an integrated urban development that uses the Baukultur heritage as a starting point for the further development of the European city. The programme is exemplary throughout Europe for the successful and future-oriented handling of old towns, established quarters, historic settlements, and building ensembles.

In 1991, the programme was introduced in the new states and initially served, in particular, to safeguard historic buildings from the threat of deterioration. The federal and state governments each contribute 40 % and the municipalities 20 % of the eligible costs in the new states. In 2009, the programme was extended to the old states, with federal, state and local governments bearing the same costs.

Since its foundation, the programme has been supported by an interdisciplinary group of experts. In regular working meetings, results and questions are discussed in exchange with politicians from the federal, provincial, and municipal levels, as well as monument authorities. The annual Bundeskongress Städtebaulicher Denkmalschutz (Federal Congress of Urban Development Monument Protection) strengthens institutional cooperation, and in 2004 the Bundestransferstelle Städtebaulicher Denkmalschutz (Federal Transfer Office for Urban Development Monument Protection) was established.

The linking of urban development and monument protection, the involvement of civil society, and the establishment of effective platforms and instruments for knowledge transfer form the cornerstones of the programme's success as a federal network.

Social Perception

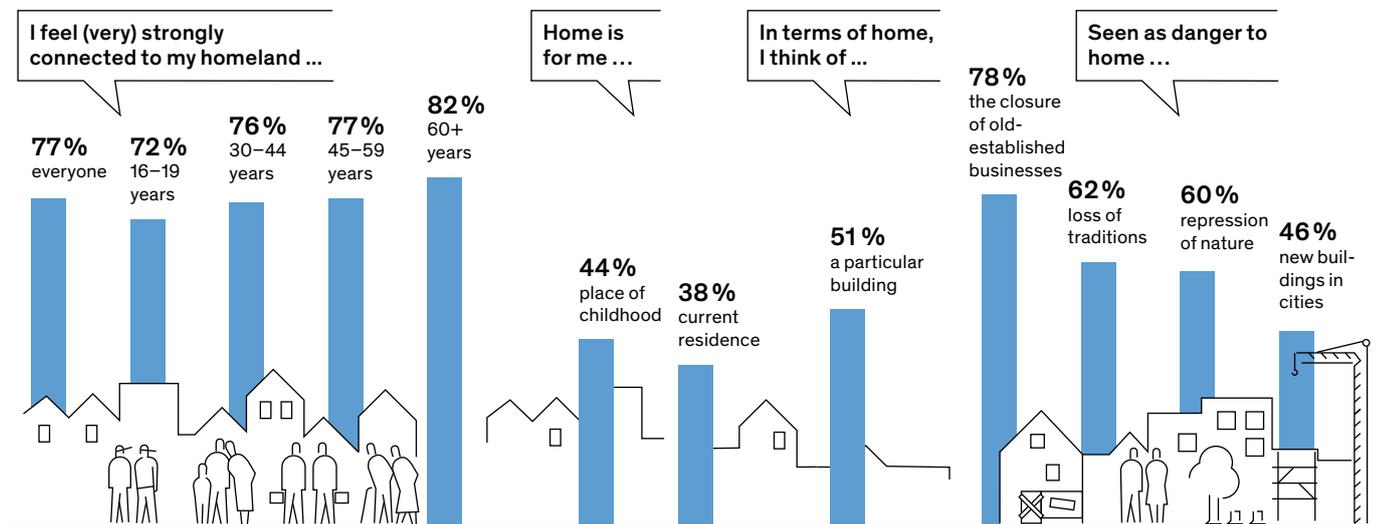
Historic cityscapes enjoy a special social popularity – they have always been projections of identification and longing, and determine the attractiveness of an entire city. Civic initiatives and cultural heritage associations are important pillars for the Baukultur preservation and development of the city. However, European cities attract not only residents, but also visitors and investors. Thus, the Baukultur opportunities for the cities and municipalities lie in high-quality endogenous development projects and the creation of acceptance for construction projects through their accountability. The tourist administration of Baukultur attractions requires a balance between visitor numbers and authentic city life.

Acceptance and Appreciation

Civic Engagement Large parts of the population campaign for the care and preservation of Baukultur heritage in Germany. The large number of cultural heritage associations in Germany alone testifies to the active interest in the history of cities and towns. In the online directory, where clubs and associations can register for free, there are currently 858 homeland clubs listed. In actual fact, there are many more. In the municipal survey for the Federal Foundation’s Baukultur Report 2016/17, 72 % of the municipalities surveyed stated that there are associations – including cultural heritage associations – involved in Baukultur topics in their own municipality. Furthermore, civil or civic engagement for Baukultur heritage is formed when vacant historic buildings deteriorate or are threatened with demolition. Decisions on the preservation or demolition of buildings have a major impact on the built neighbourhood and the identity of a place. According to a study by the Institut für Demoskopie Allensbach (Allensbach Institute) in the FAZ, just over half of the citizens associate the term “home” with a specific building. From the point of view of the residents, this threatens not only the loss of a building, but also of identification and homeland.

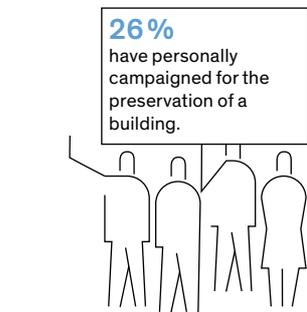
Local connection

Source: Institut für Demoskopie Allensbach 2018

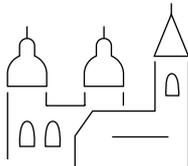


Civic engagement

Source: Population and Municipal Surveys for the Baukultur Report 2018/19



42% can imagine donating money for the preservation or renovation of a building, of which
56% up to 50 Euro,
29% up to 100 Euro.



42% of the surveyed municipalities claim to have civil/civic engagement for buildings threatened with demolition.

This is why in cities like Leipzig, Halle (Saale), Chemnitz, Görlitz, Erfurt, Dresden, and Zittau, the association HausHalten e. V. (HouseHold) successfully used the idea of the “guard houses” for the use and stimulation of previously vacant buildings and shops that are under monument protection or shape the cityscape. New residents or users take over the operation costs of the vacant building and secure the preservation through their own manual labour, which relieves the respective owners of the investment pressure. In Weimar, students in 2010/11 successfully campaigned for the preservation of the canteen from 1982 and ensured that an important heritage of the modernism from East Germany was placed under protection. Appropriate engagement emerges from a site-specific context and sometimes only seems temporary. However, such initiatives are important for Baukultur, especially if the public sector cannot take steps for the historical heritage in a comparable way, due to insufficient staffing or financial resources. Many monuments are renovated by individuals with private means and passion. In particular, popular buildings, castles, and gardens enjoy great approval in the milieu of monument preservation supporters. Post-war modernism or structures generally perceived as less than beautiful have it harder. Overall, the label monument is associated with a high “award” and communicative responsibility. Those responsible for monument preservation and urban design must also be aware of the consequences of the reverse conclusion, according to which a non-monument is considered insignificant and expendable.

Also at the regional level, there is engagement for historical heritage, especially for empty and substance-endangered objects. The Denkmalradar (Monument Radar) of the Leipziger Denkmalstiftung (Leipzig Monument Foundation) indicates on the Internet threatened monuments in central Germany and publishes exemplary post-utilisation concepts for already saved structures. In the Denkmalnetz Bayern (Bavarian Monument Network), Bavarian citizens’ initiatives have joined together to volunteer for monument protection and preservation and to assure each other of support, among others, with the appeal “Denkmal in Not” (Monument in Distress). Similar to the National Trust in the United Kingdom (UK), the planned Verein Kulturerbe Bayern (Bavarian Cultural Heritage Association) has set itself the goal of acquiring and renovating substance-endangered buildings and putting them to meaningful use. The state of Bavaria will financially sponsor the association, which otherwise aims – like its British model – for support from association members, volunteers, and donors.

Willingness to Donate When monuments get into distress and are endangered in their substance, the population’s strong connection with historic buildings also shows financially. The willingness to support the preservation and renovation of endangered structures through donations is high. In 2015, 18.6 million euros went to private donations for monument protection. In addition, there are funds that are indirectly earned from the population through lottery revenues. According to research by the Federal Foundation of Baukultur, these amounted to at least 80 million euros in 2016. The Deutsche Stiftung Denkmalschutz – the largest private initiative for endangered monuments and protected parks and gardens in Germany – receives part of its money, which is used for projects, from the Glücksspirale (Lucky Spiral). The foundation has supported over 5,000 monuments nationwide since 1985 with more than half a billion euros, with around 400 projects a year. The donations are indispensable if the valuable Baukultur

stock in Germany is to remain. From the population's point of view, the public sector does not sufficiently fulfil the task of preserving monuments. According to a recent survey by the ZEIT-Stiftung (ZEIT Foundation) on protection-worthy buildings and cultural assets, only 41 % of people are satisfied with the government's commitment to the building heritage. A drop from more than 50 % in 2012. Satisfaction has even halved in eastern Germany to less than a third. With regard to their own community, just under 60 % of the population believe that enough is done to preserve historic buildings, but over a quarter regard the measures taken so far as inadequate.

The longing of society for an old cityscape also leads to a very positive attitude toward reconstruction measures. The population survey for the Baukultur Report found that 80 % of the surveyed population supported reconstructions of historic buildings. 64 % are in favour of the new building no longer being used for its original purpose; donations are also made for this. More than 100 million euros have been collected for the reconstruction of the Dresden Frauenkirche, 80 million euros so far for the rebuilding of the Berlin Palace.

Building Epochs Old buildings generally enjoy a high status in the population. In the Forsa survey conducted by the ZEIT-Stiftung, 76 % of citizens said they would miss something if their city or community no longer had older, historic buildings, and almost all newer or more modern buildings. According to the representative questionnaire "Denkmalgeschützte Immobilien in Deutschland" (Monument-Protected Real Estate in Germany) by the Institut für Demoskopie Allensbach, young people in particular are interested in living in a restored historic building: 46 % of those surveyed between the ages of 30 and 44 show a corresponding interest. Basically, 40 % of the population is willing to pay a higher rent for living in a protected building compared to other equivalent apartments, 31% would accept a higher price for the special atmosphere when buying a protected property. The high status of old buildings was also recognisable in the current population survey for the Baukultur Report. Municipalities appraise the architectural value of buildings more positively, the older they are.

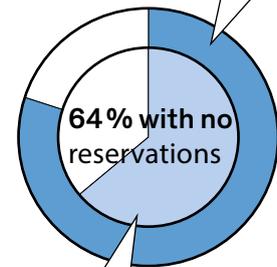
Not all building epochs are valued equally by the population. Although according to ZEIT, the positive attitude toward monument protection prevails, half of the population nevertheless thinks that often buildings are also classified as monuments whose preservation is unnecessary. As a result of the Allensbach survey, the population ranks the popularity of the half-timbered house in first place, while the objectivity of Bauhaus – one of Germany's most important cultural exports – is among the least popular, among the younger generation as well as the general public. Only 10 % can imagine buying a property in the "Bauhaus style". Especially with regard to this situation, it is important to sensitise the population for the diverse concerns of monument protection.

It also makes a difference whether one judges a building epoch as a visitor or as a user. For instance, the generally popular half-timbered houses are often difficult to market in the housing market due to the usually low storey heights, small spaces, and lack of garden or balcony areas. There are around 2.4 million half-timbered buildings in Germany, 2.2 million of which are residential buildings and many of them are not recognisable as half-timbered – 80 % of them are plastered. In North Hesse, there are villages whose building stock consists of up to 90 % half-timbered structures, but which are strongly characterised

High approval for reconstruction

Source: Population survey for the Baukultur Report 2018/19

80 % of citizens are in favour of the reconstruction of completely destroyed buildings based on a historical model.



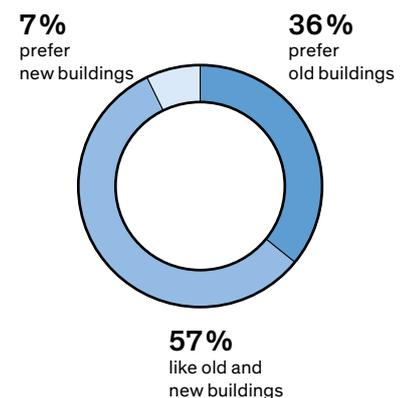
80 % of advocates are in favour of reconstruction, even if the building today is used for other purposes.

Living in old building stock preferred

91 % of the surveyed municipalities rated the population satisfaction rate in the Gründerzeit city extension areas as high and (rather) high, 87 % mean this in terms of historic city centres and inner-city areas of the post-war era. In large housing estates from the 1960s to the 1980s, almost 64 % rate home satisfaction as high and (rather) high. ^{M20}

Population prefers old buildings

Source: Population survey for the Baukultur Report 2018/19

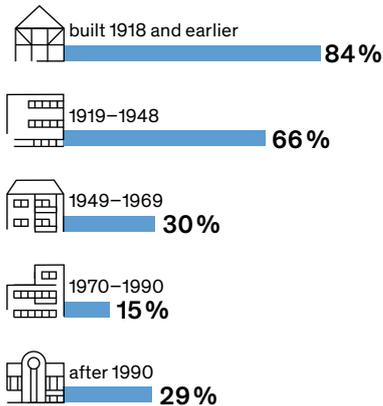


Higher appreciation with the increasing age of the building

Source: Municipal Survey for the Baukultur Report 2018/19

How do the surveyed municipalities assess the Baukultur value of their buildings?

As high or very high:



by vacancy. Due to the increasing building shortage, more than ten years ago in Wessfried, Hesse a civic group was formed, to voluntarily take care of the marketing of the vacant real estate. With the financial support of the BMUB, among others, the group has set up a Fachwerkmusterhaus Wohnen (Half-Timbered Model House Living) to illustrate renovation options.

In addition, the acceptance and appreciation of the built stock changes at regular intervals. Gründerzeit buildings, which have been in high demand on the housing market for many years, have only gained popularity again since the 1980s. At that time, the buildings were modernised and equipped with bathrooms and heaters. With the current increasing demand for smaller apartments, other building year categories – such as the 1920s and 1930s – are now coming more into focus. However, they also often need to be adapted structurally so that they correspond to the population's current housing needs. So the layouts of a Bauhaus settlement were changed in the settlement Blumläger Feld southeast of the Celle old town, because the small dwellings – in part with rooms that were on only 6 m² – were not rentable. Two model apartments still illustrate the original condition. Above all, buildings from the 1950s need to be renewed and optimised with regard to energy. The attitude toward the building stock from the 1960s to the 1980s is currently very different. In particular, the building stock in large housing estates has a negative image in large parts of the population, due to their many storeys, high density, and mostly uniform appearance. However, they are often appreciated by people living there. Even those who have grown up are now moving back home after schooling for example, to the Märkisches Viertel or the Gropiusstadt in Berlin. To the extent that there is a negative attitude towards this building year category, this also applies to the use of exposed concrete, which is often perceived by the population as unaesthetic, as TU Dresden determined in a 2013 survey.

Baukultur and Tourism

Built Tourist Attractions Historical temporal layers give cities identity and distinctiveness. They make it possible for the population to identify with their place of residence, decide on the attractiveness of urban areas and city quarters, and they are touristic flagships. Especially in the historic city centres, residents and visitors expect and appreciate historic buildings, typical regional architectural styles, and urban architecture. Here, one encounters the building epochs with which the population feels most strongly connected. In 2016, the Institut für Handelsforschung (IFH, Institute for Trade Research) in Cologne investigated the factors influencing the attractiveness of city centres. A total of 121 cities participated in the study. Ambience and flair were identified as the most important indicators of the attractiveness of a city centre, retail and leisure activities are other essential factors. Leipzig, Erfurt, Heidelberg, Hilden, and Wismar were able to score points in the individual location sizes. Quedlinburg, with more than 2,000 historic half-timbered houses, received the highest mark in the area of ambience and flair, and was awarded the best rating for overall attractiveness in the size category of up to 25,000 inhabitants. According to the population survey for this Baukultur Report, the majority of the population considers the old town to be worth seeing. However, there is also criticism, especially in the development of city centres in recent years. The Baukultur heritage not only attracts residents, but above all visitors. The 2016

Forsa survey by the ZEIT-Stiftung illustrates the connection between Baukultur and travel behaviour with figures: 75 % of the participants stated that they had visited a culturally significant building in the last twelve months. According to Deutscher Tourismusverband e. V. (DTV, German Tourism Association), 80.5 million short breaks (2–4 days) were undertaken in Germany compared to 68.7 million vacation trips (5 days or more); 75 % of the short breaks were undertaken within Germany. The visit to cultural or historic sights is number one of the domestic travel activities. The most popular destinations included the cities of Berlin, Munich, and Hamburg. According to ITB World Travel Trends 2015/16, continued growth is expected for city breaks. The municipal survey for the Baukultur Report 2014/15 also highlighted Baukultur's touristic added value: 76 % of the municipalities stated that Baukultur is (very) important for tourism in the municipality. The Baukultur historical heritage and tourism are inextricably linked. This has a direct impact on the use of services in the centres, as the municipal survey for this Baukultur Report shows. With a view to visitor numbers, the cities and municipalities are well advised to qualify their historic building stock and use it as a flagship. However, tourist offers do not prevail among the majority of municipalities, but complement the other functions of a vibrant centre in a responsible manner: gastronomy, retail, public and cultural institutions, services, and housing.

Titles and Awards A special distinction of Baukultur heritage – such as the recognition as a UNESCO World Heritage Site – also has a direct influence on the population's travel behaviour. Worldwide, the World Heritage List currently includes 1,092 natural and cultural sites in 167 countries, 44 of which are in Germany. The Aachen Cathedral was first on the list in 1978. In 2016, two buildings of the Stuttgart Weißenhofsiedlung from 1927 by the Swiss architect Le Corbusier were recognised as World Heritage Sites. Most recently, in Germany in 2018 the Naumburg Cathedral and the Viking-era trading post Hedeby, including the Danevirke fortification, were added to the list of World Heritage Sites. Many people only become aware of the value of their historic city through an award and then learn to appreciate it. This is apparent, for example, on the annual World Heritage Day, which has been held annually since 2005 and is strongly accepted by the population. All in all, according to estimates by the UNESCO-Commission, 60 to 70 million people visit World Heritage Sites in Germany every year. The 2015 results report "Regionalwirtschaftliche Effekte UNESCO Welterbe Völklinger Hütte" (Regional Economic Effects of the UNESCO World Heritage Site Völklinger Hütte) shows that since the award as a World Heritage Site in 1994, the number of visitors is steadily rising. The Zollverein Coal Mine in Essen has registered a forty-fold increase in the number of visitors since the award as a World Heritage Site, and additionally states that the UNESCO title plays a decisive role in the visit for 62 % of all international guests.

However, the award is not a matter of course. It can serve as a drawing card, but must attract investment in a contemporary touristic offer. Thus, the region of the World Heritage Site Upper Middle Rhine Valley lamented a decline in overnight stays by 4 % between 2000 and 2004. Unsuccessful investments in gastronomy and the hotel industry are also regarded as a reason, as are infrastructural deficiencies – such as the missing bridge between the two banks of the Rhine or the noise pollution caused by freight traffic. The title UNESCO World Heritage Site implies a Baukultur commitment to historical heritage and requires

The old town is worth seeing ...

54 % of the population consider the old town or the city or town centre in their own town or community to be worth seeing. With increasing city or municipality size, the town centres are gaining importance for surveyed citizens – 72 % of them in cities with more than 500,000 inhabitants name the old town or the city centre the top attraction. **P1**

... but is not always developing positively

Nearly half of those surveyed say that their city centre or the centre of their community has developed positively in recent years, but more than a quarter find that the centre of their municipality has become more of a disadvantage. In particular, the inhabitants of municipalities with 100,000 to 500,000 inhabitants see the developments of recent years critically. **P3**

planning diligence. Management plans identify buffer zones that show sight axes and examine the impact of planned uses and construction on the protected ensemble. Negative effects of new building projects can lead to a planning stop or to the withdrawal of the title of a World Heritage Site. A title was withdrawn (in Germany in 2009) – the reason was the construction of a four-lane bridge over the Elbe Valley in Dresden. Threatening the withdrawal, the World Heritage Site is first included in the UNESCO Red List. Since 2017, Vienna has been on the list, among others. From the point of view of the World Heritage Commission, the planned construction of a high-rise building on Vienna's Heumarkt would detract from the ensemble's overall impression.

At the European level, the European Heritage Label has been awarded since 2011 by the European Parliament and the Council of the European Union. In the view of the EU Commission, the label should strengthen citizens' sense of belonging to the EU, facilitate access to European cultural heritage, and raise awareness of European identity. Germany has been involved in the initiative since 2012, and in 2015 Hambach Castle and the town halls of Münster and Osnabrück were awarded due to their political and historical significance. Member States may preselect up to two sites every two years, from which a maximum of one site is selected by a European jury. Correspondingly, awarded sites exemplify cultural heritage and their significance for the whole of Europe; moreover, the seal increases the awareness of the sites among the population and visitors.

Visitor interest in attractions that belong to certain categories, labels, or topic groups is large. They are accordingly used as tourist flagships and made part of themed routes. The "Route of Industrial Heritage" in North Rhine-Westphalia is an example of this – it illustrates the industrial heritage of the Ruhrgebiet on a 400-kilometre circuit. The LWL Industrial Museum Henrichshütte in Hattingen or the UNESCO World Heritage Site Zeche Zollverein in Essen are included, as well as the Villa Hügel of the industrialist family Krupp. The European Route of Brick Gothic or the UNESCO Route "Visionaries and Pioneering Thinkers" – with the Berlin Modernism Housing Estates, the Luther memorials in Eisleben and Wittenberg, and the Bauhaus and its sites in Weimar and Dessau – follow similar tourist concepts. Thematic routes are also used at the local level for tourism. Berlin has a route of industrial culture, in Brandenburg six cycle routes link the interesting historic city centres. Cultural tourism makes a significant contribution to the transfer of knowledge and awareness of the Baukultur heritage, and is at the same time an opportunity for the municipalities to highlight their Baukultur uniqueness and distinctiveness.

Germany's landmarks per hashtags on Instagram

Source: Travelbird 2017



Berlin Television Tower
307,515

Cologne Cathedral
174,435

Speicherstadt Hamburg
109,275

Sanssouci Palace Potsdam
79,934

Frauenkirche Dresden
77,996

Attraction and Authenticity The effect of identity-creating methods, buildings, and ensembles is important for the touristic attractiveness of municipalities and means quality of life and identification for the population. Therefore, the balance between visitors and authentic city life must be maintained, which is not possible everywhere. The traffic congestion of centres and neighbourhoods as a result of tourism, the price-increasing effects of offers on retail trade and gastronomy, as well as the competition between living space for the population and accommodation offers are the result of rampant tourism. The *Süddeutsche Zeitung* titled a map with the location of most popular attractions in Germany with the word "Rummelplätze" (fairgrounds). The Cologne Cathedral (6.5 million visitors in 2014) and Neuschwanstein Castle (1.6 million domestic and foreign

visitors) are among them. With more than 4.5 million hashtags on Instagram, the Berlin Wall occupies the leading position among German structures, especially among younger people.

A harmonious mixture of typical residential and working situations and touristic meeting places contributes to the revitalisation of the cityscape. If the touristic attractiveness is too high, negative consequences for the urban development environment can emerge. Conflicts arise above all in the housing market, when individual quarters in the city are withdrawn from the local housing market via online rental portals. The problem is less private individuals, who as single providers make their apartment or individual rooms only temporarily available, but profit-oriented or commercially acting owners who have discovered Airbnb as a business model. They purchase a large number of flats that are rented as supposedly private residences. According to research by the Tagesspiegel, this accounts for about 6,100 flats in Berlin. Alone between 2014 and 2017, the number of commercial suppliers on Airbnb increased by 15 % in the capital, also to the detriment of the original sharing economy idea. The lucrative marketing opportunities remove significant attractive housing for the local population from the market and increase rents in cities experiencing growth pressures on the whole.

If there are attempts to displace the indigenous population, the misappropriation of living space can be banned in the affected cities or districts with a housing shortage. The transformation of an apartment into a holiday flat is thus subject to approval and is usually denied. Municipalities can also deliberately allow or exclude holiday flats as a use by setting up or changing development plans. The problem of subletting private or supposedly private flats via platforms such as Airbnb remains unresolved with these control mechanisms. In Palma de Mallorca, Airbnb was banned. For the first time, Amsterdam ventures into new territory with a decision that restricts the renting of flats to tourists to 60 days a year. There are also restrictions and requirements with regard to retail, gastronomy, and the hotel industry. Since 2017, in certain areas, no new tourist-only shops have been allowed and the opening of new hotels has also been ruled out.

Centres are important for tourism

More than half of the surveyed municipalities confirm that tourism has a (rather) high significance for the uses in the centre. This is especially true for the new federal states. Gastronomy, services, and retail are of (rather) high importance for 93 % of municipalities, followed by public facilities, housing, culture, and leisure. [\[M4\]](#)

Investment in Existing and New Buildings

Building Costs Today's new buildings are far from enjoying the same esteem as historic buildings. The critical attitude is particularly evident in construction projects that change the existing environment too much and bring no obvious added value to local residents. Moreover, if monetary reasons are responsible for inappropriate or scale-busting projects in existing neighbourhoods, residents resist.

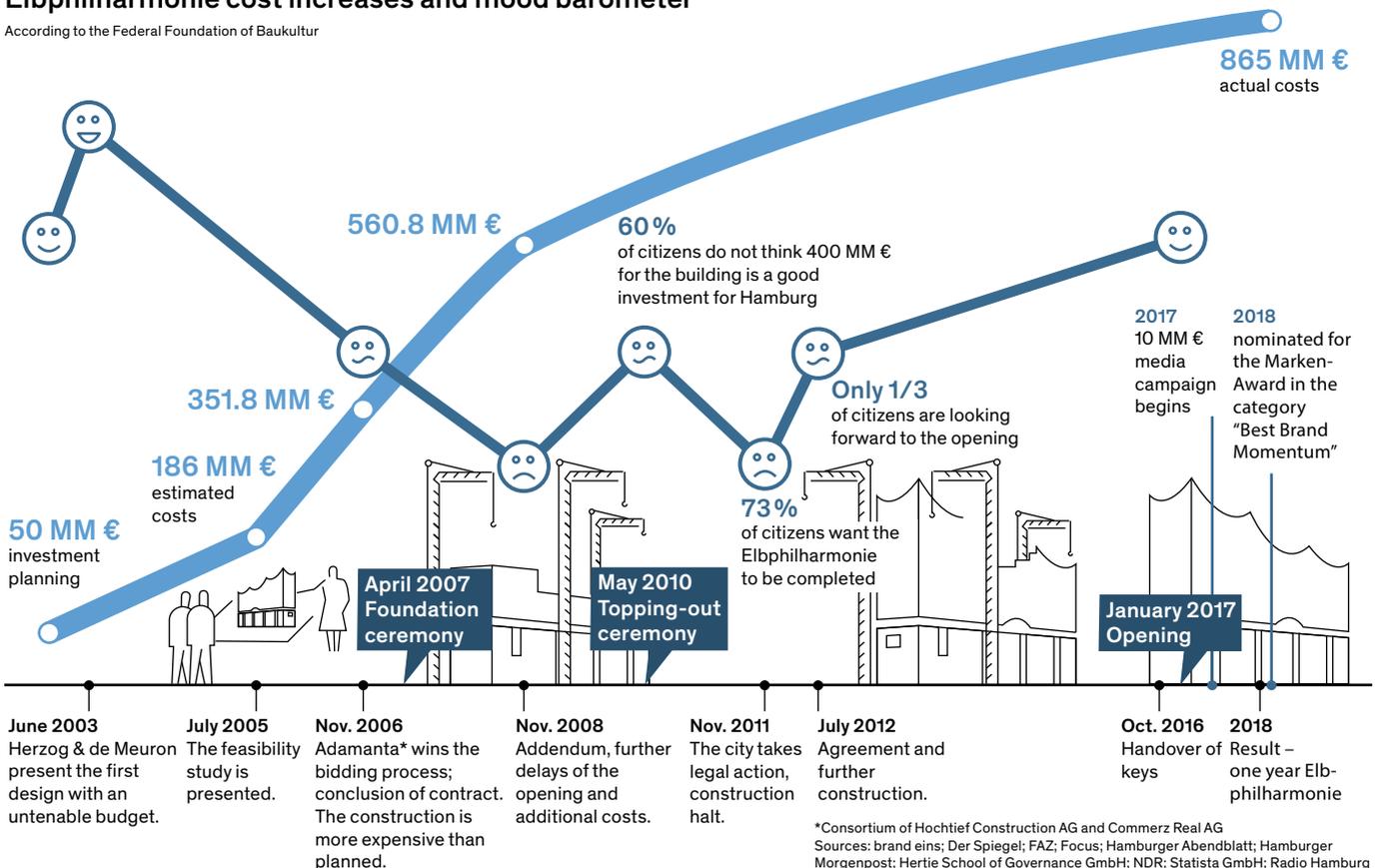
In housing construction, land prices are usually the cost drivers. According to analyses by the BBSR, the average land prices for private homes nationwide increased by 27 % from 129 euros/m² to 164 euros/m² between 2011 and 2016, and in the big cities by 33 % from around 250 euros/m² to just under 350 euros/m². The Ministry of Urban Development and Environment in Hamburg has examined – in cooperation with the Arbeitsgemeinschaft für zeitgemäßes Bauen e. V. (ARGE, Institute for Sustainable Construction) – the construction costs in the Hanseatic city in multistorey housing construction for the years 2014 to 2016. Urban

requirements such as rainwater retention, green roofs, or accessibility requirements for buildings have not been identified as cost drivers. Above all, underground garages, cellars, higher energy standards, balconies and loggias, as well as façade design have proven to be cost-intensive. The latest amendment to the Energieeinsparverordnung (EnEV, German Energy Saving Ordinance) alone caused a cost jump of around 7 %, according to the Zentralverband des Deutschen Baugewerbes (ZDB, Central Association of the German Construction Association). In addition, increasing material and personnel costs and longer processing times in the approval process make construction more expensive. The construction costs – which arise during conversion measures as well as new buildings – are reflected noticeably for residents in the rents and in the rent index for their quarters. The BBSR housing market survey for the first half of 2017 came to the conclusion that new contract rents for flats in Germany increased by 4.4 % to 7.90 euros/m² (net base rent). According to the Federal Statistical Office, an average of 35 % of German household income is spent on housing, including ancillary costs and housing maintenance. The proportion of households spending more than 40 % of their income on housing rose to 15.6 % in 2015. In its sustainability strategy, the federal government has set itself the goal of reducing the share to 13 % by 2030.

Large projects are also under special scrutiny by the population. If unforeseen costs or delays occur, this usually has a negative effect on the acceptance of the project. For the renovation of representative buildings – such as the Deutsches Museum in Munich, the Cologne Opera Quarter, the Staatsoper Unter den Linden or the Pergamon Museum in Berlin – hundreds of millions are necessary,

Elbphilharmonie cost increases and mood barometer

According to the Federal Foundation of Baukultur



and often unplanned cost increases. The renovation costs of the Opern- und Schauspielhaus (Opera and Playhouse) in Frankfurt are now so extensive that further proceedings are uncertain. However, due to hesitant or missed investments, the perspective investment costs continue to add up.

The Hertie School of Governance has examined the construction costs of 170 major public infrastructure projects realised between 1960 and 2014. On average, the cost increase is 73 % per project. This is met with incomprehension among the population and the rejection of new or complex construction investment by the public sector. There are considerable differences in the assessment by the population, which also have to do with the given acceptance of the respective project. According to a representative survey, 73 % of Hamburgers were in favour of the completion of the Elbphilharmonie during the construction phase, on the condition that above all transparency in the current proceedings was established on all points of criticism and a foreseeable opening date was guaranteed. The acceptance of construction projects stands and falls accordingly with the integrity of assumptions in Phase Zero, the comprehensibility and understanding of obstacles, and the professional readjustment in the construction phase.

Willingness to Invest While the municipalities are strongly responsible for the attractiveness of the centres, private property owners are each responsible for the appearance of their buildings. Ownership entails responsibility – this is already stated in Article 14 of the Basic Law. A building owner is required to take care of and maintain the property and, if it is a monument, to do so on the basis of the monument protection law and the building code. If the obligation is not fulfilled, the responsible monument authority can also order certain measures for the preservation of the monument. Within the scope of economic reasonableness, the owner has to bear the costs; for unprofitable costs in the case of a renovation, different subsidy programmes are usually available. Alternatively, tax depreciation options can be claimed. However, economic reasonableness is often not given and, by implication, the argument for a seemingly inevitable demolition.

The willingness to invest for the care of the property depends not least on whether owners use their property themselves or rent it. In 2011, 43 % of the housing stock was used by the owners themselves, according to the census. In 2014, the Federal Ministry for Economic Affairs and Energy (BMWi) assumed that around 46 % of residential buildings were owner-occupied property. About 88 % of single-family homes and 59 % of two-family homes were owner-occupied. In contrast, multifamily buildings are – depending on their size – 77 % to 86 % leased. The willingness to renovate and invest in one's own property also depends on the age structure of the building owners. According to BMWi, half of the owners of owner-occupied properties are over 60 years old. In this age group, the willingness to renovate and often also the financial investment opportunities declines. Thus it becomes understandable that older building owners, in particular, are no longer investing in their property. On average, multifamily buildings in Germany are fully renovated every 75 years, according to a 2014 survey by the German Institute for Economic Research and Ista Germany. Building owners are therefore obliged to renovate their building at least once in their lives. The calculated renovation cycle suggests that – in particular for the buildings of the post-war modern era and thus also for numerous single-family

Long-term care: single-family housing estates of post-war modernism

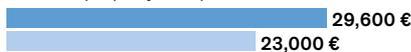
76 % of the surveyed municipalities state that the need for conversion and renewal in the building year category 1949–1969, when most single-family housing estates developed, is considered high. [\[MG\]](#)

Development and follow-up costs

for street, canal, drinking water, and electricity per housing unit (average cost level 2017)

Source: Gertz Gutsche Rügenapp Stadtentwicklung und Mobilität GbR 2017

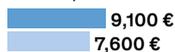
Single-family homes on large plots
1,000 m² property area per unit



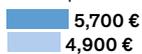
Single-family, semi-detached, and town houses
620 m² per unit



Single-family homes, some semi-detached houses
400 m² per unit



Town houses, free-standing multifamily buildings
160 m² per unit



Compact multifamily buildings
100 m² per unit



■ first production

■ operation, maintenance, and renewal for the next 25 years

homes – a renovation has to be carried out shortly. However, it is precisely here that a generational change is emerging that prevents investment in the existing building stock, because renovation measures only pay for themselves over a longer period of time. As many of the owners stay as long as possible in the owner-occupied home when they are older, the buildings will not be vacant until a major renovation backlog has formed. This makes it difficult to market many single-family homes, in particular.

So that existing single-family housing areas have a future, it is valid to motivate owners with incentives for more comprehensive renovations, or at least partial renovations, among others. The promotion of energy-efficient renovations, which is currently a focus of funding policy, is not sufficient as an incentive. The prospect of an amortisation of investments through lower energy consumption does not provoke interest in old age. According to a survey by the Dachverbands Deutscher Immobilienverwalter e. V. (Umbrella Organisation of German Real Estate Managers) and KfW, in general 68 % of the owners expect low energy savings through an energy renovation, 60 % see no added value in a renovation. By contrast, a far more effective funding instrument could be the financial support for age-appropriate renovation. 70 % of today's over-50s do not currently live in an age-appropriate manner; according to Prognos, in 2014 there was a supply shortfall of up to 2 million age-appropriate flats. Precisely these funding opportunities for smaller construction measures represent an important incentive to reinvest in the building.

New Homes Despite the population's high appreciation of historic buildings, the desire for a newly built home is persistently high. According to the survey "Wohnträume 2016 – So möchten die Deutschen leben" (Dream Homes 2016 – How Germans Want to Live) by Interhyp, the single-family home comes first. Four out of five respondents are convinced that they can experience their dream home more in their own property than in a rental property. One's own garden is first on the list of the important aspects that are associated with a family home. With 91 %, almost all owners of a property are very satisfied with it, and 69 % of the owners assume a gain in value. A majority of those who still want to build fear a high burden of loans and unforeseen additional expense; the main obstacle turns out to be, above all, the difficulty of finding a suitable plot of land, in view of the current strong demand.

According to the Federal Statistical Office, out of a total of 109,990 newly built residential buildings in 2016, 97,022 – or 88 % – were buildings with only one or two apartments. This entails high investment costs for the private developers. In 2016, 919 billion euros in housing loans were granted by banks in Germany. In comparison, in 1991 it was 273 billion euros. In contrast, residential construction loans were only granted to companies in 2016 in the amount of 358 billion euros; in 1991, the level was 193 billion euros. On average, the construction costs for a home amount to around 200,000 euros, plus the cost of the land. The federal government promotes the construction of homes in a variety of ways. The 2018 coalition agreement also includes promotional measures such as building costs children's allowance – with fears of counterproductive effects on the area savings target due to the designation of new single-family housing areas. Here, the expansion of communication by emphasising the information is required, so that the building costs children's allowance can also be used in

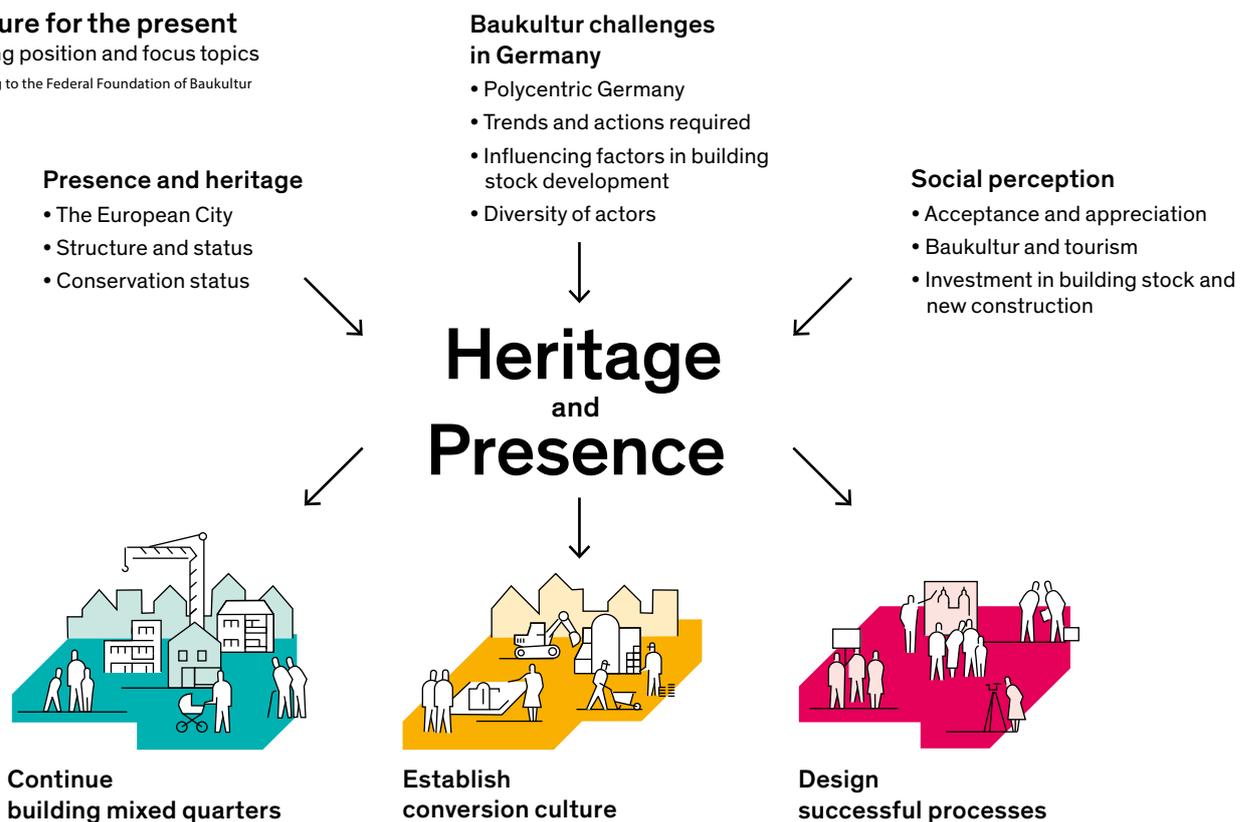
multistorey properties and in existing real estate. Funding measures for conversion measures can strengthen structurally weak regions and the acceptance of the building stock. At the municipal level, the funding programme “Jung kauft Alt – Junge Menschen kaufen alte Häuser” (Young Buys Old – Young People Buy Old Buildings), which is offered in several federal states, has had a positive effect.

According to the Interhyp survey, overpriced rents are one of the main reasons urbanites want to move to surrounding communities. Politicians are being increasingly called upon to create affordable housing in the cities and to promote the construction of owner-occupied homes accordingly. In contrast, small and medium-sized cities in rural areas can seize the opportunity to mobilise and upgrade their existing vacancies with newcomers. Nevertheless, the ongoing provision of new building land does not present the right option at current levels. Because in addition to the risk of vacancies in existing single-family housing areas and the depopulation of town centres with simultaneous growth and densification on the outskirts – the so-called donut effect – homes incur high investment costs for the municipalities, especially with regard to the production, operation, and renewal of roads, sewers, drinking water, and power lines. Structural densification, on the other hand, leads to savings in land consumption and subsequent costs. On average, a doubling of the structural density in peripheral areas halves the development and permanent subsequent costs. According to the city of Freiburg, even 1,000 euros in public expenditures per residential unit in the centres are offset by around 25,000 to 47,000 euros in external development. For that reason, it is the task of Baukultur to promote quality infill development projects – above all in existing buildings and, if necessary, with new ones – and thus to convince local municipalities and the population.

A future for the present

Starting position and focus topics

According to the Federal Foundation of Baukultur





Shape the Future – Existing and New Buildings The Focus Topics

The development of the existing building stock is a task for society as a whole, with great Baukultur potential: a sensitive and innovative approach to the built heritage can lead to new uses, social participation, and a new design language. The focus topics “Continue Building Mixed Quarters”, “Establish Conversion Culture”, and “Design Successful Processes” present future-oriented projects and explore perspectives for the sustainable use of the built environment.

Continue Building Mixed Quarters – Leading Established Structures into the Future

The densification of existing quarters reduces the new designation of settlement and traffic areas and contributes to the improvement of the Baukultur diversity of use and design quality. The possibilities range from activating vacant, open, or fallow land, to structural measures, such as infill construction, additional storeys, and supplementary buildings. In addition, well-designed public spaces and a balanced infrastructure offering have a positive effect on participation and user behaviour. They strengthen the identity of a place and the solidarity of its inhabitants.

Infill Development Strategies

Restructuring and Conversion Infill potential can be found above all in former industrial sites and vacant lots. In addition, abandoned military facilities and former port or railway areas are helping cities and communities nationwide to develop urban areas that can be developed to meet new needs. In Germany, fallow land accounts for around 44 % of the existing land potential, in big cities even up to 90 %. Due to their size and significance for the urban area, the development of fallow areas requires cities to play a leading role in the development and planning process. Also, because many stakeholders are involved – in most cases, monument and nature conservation to investigate or eliminate contaminated sites, as well as to coordinate demolition and new construction – control by planning authorities or development agencies is required. At best, the city is the owner of the land, has a right of first refusal in the event of a sale, or can actively seek to acquire the properties. In other constellations, a close cooperation between the city and the project developer is necessary so that infill development can succeed in a manner that is compatible with the neighbourhood.

A large-scale example in this context is the Mitte Altona, Hamburg's second-largest urban development project. On a total area of 75 ha – which was partially freed by the decommissioning of a freight yard, the fallowing of old brewery areas, and the move of the long-distance railway station from Altona – a new residential district with approximately 3,500 flats is being built. The surrounding, formerly separate districts have the opportunity to grow together through new paths, generous parking, and open spaces. In Potsdam, the rapidly growing city has decided to build a new district with 3,500 residential units in the district of Krampnitz. A 140 ha, abandoned military area is being mobilised for development after many years of vacancy and difficult ownership structures. In the new district, former barracks buildings under monument protection are preserved through reutilisation. However, different types of housing and

Potential of fallow land

39 % of the surveyed municipalities are currently dealing with fallow land in the course of infill development. The frequency of corresponding projects increases in proportion to the number of the cities' inhabitants. In the new states, every second municipality deals with the conversion of fallow land. [M18](#)

ownership are also made possible by new construction. For the intermingling of the district, social infrastructure facilities and multifunctional building units are intended for non-intrusive commercial trade. An urban development / landscape architectural competition was organised for the quality assurance of the building project. Such strategies and instruments are important for projects of this size, because interdisciplinary planning teams can avoid creative and functional monotony. A later land sale and development by different developers – urban businesses, construction communities, building groups – also allows for more Baukultur quality.

The current demand for housing makes it possible to remedy numerous urban development shortcomings in cities and in communities in the catchment area of major cities. Even for long-unused and abandoned settlement structures, new perspectives are created through conversion. One example of this is the 200-ha site of the former lung health centre Beelitz-Heilstätten near Potsdam, which was built at the beginning of the 20th century and has already been reused several times. The site has been fallow since 1994 and has severely deteriorated accordingly. Some 750 new flats will be built there together with a school, a day-care centre, and a supermarket. A regional train ensures a fast connection with Dessau and Berlin. Until the structural development begins, the area will be opened to groups of visitors, because building ruins from the past have always had their own charm. In Beelitz, a high footbridge leads through the site and between the dilapidated buildings as a treetop path and informs visitors about the imminent transformation project.

Potential through Using Building Gaps Gaps between buildings are valuable and usually ripe for development building land in established existing quarters. They are in integrated locations and often have technical and social infrastructure for potential new residents. Closing building gaps is therefore one of the most important measures in an infill development strategy. In addition, closing the gap serves as a city repair – especially on corner properties – making an important contribution to the streetscape. The share of vacant space in the cities and municipalities is high; according to the UBA, it is 56 %. With a total of about 150,000 to 176,000 ha of endogenous development potential, the building gap potential represents a considerable area. However, the reserves differ regionally. Western German cities in particular have building gap reserves. The city of Cologne had already decided in 1990 to establish a building gap programme, and since then has built on 3,800 plots from around 6,000 building gaps. According to their own data, this resulted in more than 22,000 new flats. Creative solutions can be implemented on the sometimes very small plot widths. For example, in a protected row of houses in Cologne-Ehrenfeld, a contemporary working and residential building was erected on a plot of land three metres in clear width and seven metres in depth; in 2017, it was awarded the Cologne Architecture Prize. Stuttgart states that since 1990 around 1,900 building gap plots with construction possibilities for approximately 10,000 residential units have been recorded in the city. By 2017, 1,030 properties with over 6,100 residential units had been overbuilt. The city estimates that the use of 135 ha of building land on the outskirts was avoided.

The closure of gaps between buildings enriches the neighbourhood, particularly if the new building is oriented to the existing building stock. Meanwhile,

Building gaps in focus

73 % of the surveyed municipalities rank infill development and the closing of gaps between buildings among the current tasks in the existing building stock's further development. 90 % of all surveyed cities with more than 100,000 inhabitants carry out building gap closures, especially in the centre.

[M18](#)

Baukultur Develops New Quarters Conversion Area Turley – Urban Mix with Citizen Participation



What may have been a great liability just a few years ago is a unique opportunity in times when living space is scarce. In Mannheim, ten US barracks with a total area of more than 500 ha are waiting for reuse. In a participatory process documented in “white papers”, citizens were able to contribute their ideas at events, by mail, or online. Many saw the Turley Barracks, which were vacated in 2007, as a mixed and urban expansion with various forms of living, culture, and commerce because of their central location. In 2012, the urban project development company MWSP purchased the site in the Neckarstadt-Ost district. The fact that most buildings in “Turley” were built between 1899 and 1901 was an advantage over the newer barracks. Planned according to US construction law, they do not exist under German law – thus cannot be readily used or redesigned.

The eastern part of Turley, which had a huge car park and several workshops, was developed rather densely with housing by different investors. In addition, there are some com-

mercial and two assisted living facilities, as well as Umbau2 (Conversion2) and the Solidarischen Wohn- und Kulturraum SWK (Solidary Living and Cultural Space SWK), two housing projects that form part of the nationwide apartment building syndicate.¹ The western part of Turley is dominated by the former Kaiser Wilhelm barracks. The monument-protected residential and outbuildings, with typical red sandstone façades, are gathered around the 1-ha roll-call square, which will remain as a district park. The buildings on the southern edge near the busy Friedrich-Ebert-Straße are being converted by an investor for commercial, gastronomic, and cultural uses and supplemented by new buildings. These include the historic riding hall and a chapel. A dance school and a day-care centre have already opened. Rental flats and condominiums are being developed in most of the barracks buildings.

In the citizen participation, the building association 13haFreiheit (13haFreedom) had already introduced its ideas of a solidary, collaborative, and low-cost living together. This resulted

in the housing project 472, which also belongs to the building association syndicate. Together with the building association, the syndicate formed a GmbH, which acts as developer and landlord. As association members, the tenants are also landlords at the same time. In a barracks building on the northern edge of the Appellplatz, 29 housing units were created for singles, couples, families, and shared flats – some have been expanded as maisonettes, others are wheelchair accessible. The large variety of different housing types should later allow home exchanges within the community, with changing living conditions. The wide barracks corridors serve as a meeting place, as do the large, new balconies. In addition to the private cooking facilities, there is a communal kitchen, as well as a common room with a library, workshops, a laundry room, a music room, a hobby room, and a bicycle cellar.

In the Turley Barracks, different property developers provide a mix of functions and concepts. Local initiatives help to create affordable housing for various user groups and to establish structures for living together at an early stage. Commercial investors, social sponsors, and self-managed projects have joined forces to form an advisory board focused on future development – for example, with regard to the old casino, which is to become a community centre. In 2017, a district party was held for the first time and the “Turley News” regularly reports on planning progress and local life.

¹ With this non-commercial investment company, real estate is transformed into common property and thereby withdrawn from speculation. The goal is the creation of long-term affordable housing.

Facts

Planning and Construction: 2012–2022
 Project Developer: MWS Projektentwicklungsgesellschaft mbH
 Planners: AS+P Albert Speer + Partner GmbH (urban development); S null neun Architektin (project 472); various others for individual projects

Size of the Turley Conversion Area: 12.6 ha
 More information in the project description in the appendix



- BAUKULTUR AT A GLANCE**
- Undeveloped area becomes new district
 - Use determination with citizen participation
 - Urban functional mix
 - Different forms of living
 - Different developer models
 - Conversion in line with monument preservation specifications



there is also an interest from supermarket chains, due to pressure from cities to make available housing space for rental on underused property through their shops. The trend has different causes. Especially in the metropolises, supermarkets compete with housing construction for undeveloped or conversion areas. The concept of both building a shop and providing affordable housing on the property makes it easier for food suppliers to obtain approval for newly planned locations. At the same time, they secure potential customers. In some cases, however, urban requirements also require a combination of uses – for example, if existing supermarkets are to be converted and the development plan provides for a higher utilisation of the property. In Berlin-Prenzlauer Berg, TREI Real Estate – the Tengelmann Group's real estate company – is currently planning the reconstruction of two existing supermarkets. Supermarkets with rental flats on the upper storeys will soon be built on the underutilised property.

For existing quarters, this development may become an opportunity to strengthen the mix of uses in the neighbourhood and to spatially reconceive previously underutilised land. Because suppliers such as Ikea, which have so far opened branches at motorway intersections outside the city centres, are now also pushing into the city centres, one of the most important Baukultur tasks is to sensitise companies and project developers to the special urban planning and design requirements in the existing quarter. Above all in the historical context, it requires a special sense for the characteristic features in the urban context. For this reason, for example, the Ministry of Regional Development and Transport in Saxony-Anhalt has for the first time also made the adjacent existing buildings of the vacant lots a competitive object in this year's "Mut zur Lücke" (Courage for the Gap) competition.

Adding Storeys On behalf of eleven construction and real estate associations, TU Darmstadt and the Pestel Institut examined the potential of adding storeys to roofs and published it in the "Deutschland-Studie 2015. Wohnraumpotentiale durch Aufstockungen" (Germany Study 2015. Housing Potential through Adding Storeys). Accordingly, it is possible in German growth regions to build a total of up to 1.5 million flats through loft conversion and adding storeys. In Berlin alone, the potential here is more than 5 % of the current housing stock; a similar analysis is available for the Frankfurt am Main region. According to the Berlin Tenants' Association, Gründerzeit buildings in the capital still have a theoretical expansion and extension potential of up to 52,000 apartments. If one adds the potential of the buildings from the 1950s to the 1970s, a reserve of up to a total of 100,000 dwellings can result. The senate administration concludes that in the last few years around one-third of the constructed flats in the city have been created by loft conversions and the addition of storeys.

Since there is a particular demand for adding storeys primarily in densely populated neighbourhoods with little development potential, new penthouses can at least lead to a partial relaxation of the market. Socially, these additions offer added value to the neighbourhoods, because they lead to a new mix of residents. Economically, the expansion of roofs pays off especially with simultaneous renovation of the property and appropriate cross-subsidisation. Above all, the positive energy balance, the avoidance of land use, and the conservation of resources are to be regarded as advantageous in the case of adding storeys. However, the BBSR has pointed out in the online publication "Potenziale und

Rahmenbedingungen von Dachaufstockungen und Dachausbauten" (Potential and Framework Conditions for Adding Storeys and Roof Expansions) that the measures primarily serve the medium and higher residential market segment. Meanwhile, penthouses are so expensive that they can hardly make a direct contribution to cost-effective housing. Apartment seekers in the lower price segment can only benefit from the newly created living space on the roofs via so-called trickle-down effects.

From a Baukultur point of view, adding storeys give rise to particular opportunities in the quarter to add a modern temporal layer to the cityscape. Examples such as the Wohnkrone in Hanover show that even difficult day-to-day architecture in the quarters can receive new attention and acceptance as a result of the additions. Furthermore, new and modern forms of living can be tested in integrated locations, which enrich the housing market and, if necessary, in individual cases help to avoid housing construction on the peripheries of the cities. Adding storeys is also being discussed internationally as a contribution to defusing the

Baukultur Surprises with Unusual Ideas

Living on a Car Park – Infill Development in Hanover's City Centre

In order to gain new living space in dense inner cities, storeys are being added to existing residential buildings in many places. Roofs of department stores or car parks are utilised much less frequently, despite the fact that large building sites can be gained without having to seal new surfaces. The car park on Windmühlenstraße, built in 1964 in the split-level principle in Hanover's city centre, needed renovation. As in many other German car parks, the top level was often empty. As the owner, a subsidiary of the urban real estate company Hanova organised a competition that was won by Cityförster. Above the top level of the car park, another storey emerged with twelve apartments grouped around a green courtyard. In order to be recognisable in the urban space, the development was built on the outer edges, so that a lively roof landscape was created through the change of building volume and roof terraces. On the ground floor, access is via a private entrance and a foyer, which is located in the adjacent pedestrian zone. Directly below the apartments, the top level of the parking garage is reserved for residents and their guests. The façade of the car park, which is made of mosaic bricks and exposed concrete, was replaced by the architects of ASP Schneider Meyer with white aluminium sheets that trace the staggered levels. The building itself and its infrastructure are better utilised with the additional residential use. The result is a transferable solution, as new living space can be created on top of buildings with large building depths.

Facts

Planning and Construction: 2012–2016

Developer: Union Boden GmbH (today Hanova), Hanover

Planners: Cityförster architecture + urbanism PartGmbH, Hanover (residential crown); ASP Architekten Schneider Meyer Partnerschaft mbB, Hanover (conversion of the car park and façade); Vogel Ingenieure im Bauwesen, Hanover

Size: 1,250 m² GFA (Wohnkrone), 12 flats

Cost: 3.71 MM euros (Wohnkrone, cost group 300–400)

More information in the project description in the appendix



BAUKULTUR AT A GLANCE

- Renovation and appreciation of the existing structure
- Activation of unused roof areas
- Housing as supplementary function
- Better utilisation of the car park
- Development of the city centre as residential area

housing shortage. The investor group Shiva Ltd. In 2017, together with the non-profit Architecture Foundation, organised the “Antepavilion” competition in the UK for the first time. They were looking for experimental, initially temporarily constructed structures and objects that fit well into highly dense, existing neighbourhoods. A construction made of wood and recycled Tetra Pak material was created on a former factory building on the Regent’s Canal in London, which is to remain intact for the time being because of its high-tension design. The competition and the pavilion have sparked a citywide discussion about potential for adding storeys and affordable living space in times of housing shortages.

Public Spaces

Preservation Means Maintenance Public spaces are very important as meeting, communication, and recreational areas. In the cities, outdoor and green areas also offer a retreat from stress, density, and the hectic pace. They compensate for inhabitants’ often non-existent own gardens, especially in inner-city locations and historic quarters. In order to ensure that valuable historical and architectural space is not lost in the course of infill development, a responsible approach to the preservation of landscapes and gardens and the enhancement of existing open spaces are required. Some open and garden spaces are already protected in the municipalities as garden monuments. These include many historic parks and gardens, designed historic areas or objects, ramparts, promenades, cemeteries, meadows, and avenues. In the protected settlements of the 1920s and 1930s, the public and semi-public open spaces – such as front gardens and rear courtyards – are usually of special quality and under protection.

The protected open spaces require regular investment in care and enhancement. In the urban development funding programme Städtebaulicher Denkmalschutz, the preservation and redesign of streets and plaza areas of historical, artistic, or urban significance form a separate funding category. Accordingly, the city of Brandenburg on the Havel has reconstructed the garden monument Sankt-Annen-Promenade with programme funds. The city of Jüterbog in Brandenburg has made the medieval suburbs and ramparts, among others, part of the programme area and enhanced not only the buildings, but also the public spaces.

Post-war parks are currently experiencing a changed appreciation. The recently completed research and information project Nachhaltig gut – Das Stadtgrün der Nachkriegsmoderne (Sustainably Good – The Urban Green of Post-war Modernism), which was funded by the Deutsche Bundesstiftung Umwelt (DBU, German Federal Environmental Foundation) and operated by the Technical University of Berlin with several cooperation partners, had as its goal the large-scale coverage and analysis of the facilities of post-war modernism. Both the public and the professional community were called upon to report historically valuable gardens. As a result, a guide to “Erkennen typischer Merkmale des Stadtgrüns der Nachkriegsmoderne” (Recognising Typical Features of Post-war Modernism’s Urban Green Spaces) was published, providing inspiration for present and future urban design. However, it is also pointed out that a lack of appreciation, financial shortages, or transformations have led to a large loss of substance. In the case of a renovation of these facilities, it is therefore particularly important to make the formative elements the basis of a renovation and to

provide the surrounding neighbourhoods with an identity-creating, Baukultur, and historically valuable open space.

Yet preserving the quality of public spaces also means cultivating the cityscape, because with their façades buildings act as plaza and spatial borders. Accordingly, the garden city of Hellerau in Dresden, which was created in 1908 as the first German garden city, is a programme area in urban development monument conservation. Funding is used here for the renovation of buildings, so that the typical townscape remains based on the historical model. Equally, however, the quality assurance of urban furniture – by means of a design statute or the regulation of outdoor advertising – is an important contribution to the preservation and maintenance of public spaces. Already in the Baukultur Report 2014/15, it was pointed out that a clear approach on the part of cities is required to protect the public space from overloading or disfigurement. This is all the more true when it comes to historic inner-city quarters that are subject to strong commercialisation. For example, when renovating buildings, scaffolding is often used for large-format advertising posters. With its guideline for advertising in the cityscape, Munich's goal is to keep monument protection, cityscape, and advertising in harmony. Oversized advertising on scaffoldings and façades to be renovated is limited to a maximum of nine months and reduced to a certain size, so that, for example, in the course of renovating a protected building, there is still place for a visualisation of the façade. Advertising on church façades that are undergoing renovation must be coordinated with the Staatlichen Bauamt (State Construction Office) and the Archbishop's Office. As the first in Europe, the French city of Grenoble has gradually eliminated advertising in public areas completely since 2015.

Further Development of Green Infrastructures The cities are becoming structurally denser. Between 2010 and 2015 alone, 78 large cities in Germany grew by more than 1.2 million inhabitants or 4.9 % according to the BBSR. Therefore, especially in growing cities, it is necessary to intensify the maintenance and redevelopment of green and open spaces. In some cases, the usage pressure on central green spaces is increasing in such a way that the ongoing renovation of the heavily used facilities is required. The results of the 2015 study on natural sciences by the BMUB and the Bundesamts für Naturschutz (BfN, Federal Agency for Nature Conservation) show how important urban nature is for people's well-being; 80 % of respondents think public parks are "very important". The population survey for the Baukultur Report 2014/15 has also confirmed the importance of green spaces in the city. For 86 %, a residence close to nature and larger parks is a high priority. Green and open spaces increase the quality of stay in the cities and significantly improve the living environment of the inhabitants. Investments in public space and new green spaces also create a range of additional synergy effects. An attractive environment increases the willingness of owners of adjacent properties to invest. In the sense of a Baukultur Pareto principle, great benefits for the quarter are achieved with comparatively little effort.

The importance of public green space is also reflected in the planning activities of cities and municipalities, as the Baukultur Report's current municipal survey shows. With the help of ERDF funding, the 5-ha Park am Weserwehr was built in Bremen, and serves as a recreational area for the adjoining district of Hemelingen, which is underserved by green spaces. This principle of "double

Open spaces are an issue

Nearly half of all surveyed municipalities are concerned with the enhancement or expansion of green spaces and parks in the course of existing stock development. [M18](#)

Baukultur Cleans Up Sieg River Exposure – Quality of Stay through Restoration



The city of Siegen has solved a number of urban planning problems with well thought-out and consistent open space planning: the car-friendly city has been partially deconstructed, the Sieg River restored, and the city centre has been made attractive again for the retail trade and above all as a place to spend time.

The starting point was already envisaged in 1991, but only accelerated from 2007 onwards because ongoing construction deficiencies forced demolition of the Siegplatte, a 260-meter-long overbuilding of the Sieg River with parking spaces, which revealed only a narrow strip of the river. The Regionale South Westphalia offered the opportunity to acquire funding that would not have been granted for a renovation of the Siegplatte. At the same time, flood protection was to be ensured, bridges replaced, adjacent streets and squares redesigned, the city walls renewed, and the connections between the newer lower town on the west bank and the older upper town on the east side improved. Large sections of the

population and retailers saw the loss of parking spaces as critical. However, traffic planners were able to prove with expert reports and at discussion events that there were enough underused parking garages in the city centre.

In 2009, representatives of the retail trade were also involved in the redesign jury. After the victorious concept from the landscape architects from Atelier Loidl and the engineering office BPR, a long flight of steps with wooden platforms was erected on the west bank in place of the Siegplatte – like a tribune overlooking the river. The lower level is barrier-free and accessed via ramps. The Sieg River, made accessible by the steps, features natural, leafy banks and islets created with Regionale South Westphalian funds. The steps take into account that with flooding, the amount of water can increase tenfold, which was previously simulated on a model at the university. The narrow passage on the opposite side of the river, which ran along the back of the building on Sandstraße, was widened by balconies that can be used gastronomically.

The Sandstraße itself was built back from four to two lanes. The adjacent pedestrian zones received new paving, benches, tree beds, and playground equipment.

Part of the overall concept to revitalise the city centre was the reutilisation of the Lower Castle on the east side for the University of Siegen. The castle had previously been used as a public building, court, and prison. Now, students enliven the riverbank and the bridges upgraded to plazas.

The conversion of the city was accompanied by active public relations – for example, with its own website – and numerous participation formats. In 2012, school classes painted the entire Siegplatte and turned it into an oversized work of art. The demolition that followed was celebrated with a city festival. Thereby, pieces of the broken Siegplatte were also sold as souvenirs. The proceeds went to the renovation of the city wall at the Lower Castle. Construction site tours were offered on a weekly basis, sometimes personally by the mayor or head of municipal planning. In 2016, the opening of the large flight steps was once again celebrated with a big party. The removal of the Siegplatte, as a concrete problem area and development obstacle, has embedded the city in a comprehensive concept for urban renewal. Since its demolition, Siegen's residents no longer come to their city centre by car for shopping, but use it as a living space. The effort is also paying off economically: in all of the surrounding streets, shop vacancies have decreased significantly.

Facts

Planning and Construction: 2011–2016
 Developer: Stadt Siegen
 Planners: Atelier LOIDL Landschaftsarchitekten, Berlin; BPR Dr. Bernhard Schäpertöns Consult, Munich

Size: 3.4 ha
 Cost: 14 MM euro

More information in the project description in the appendix.



- BAUKULTUR AT A GLANCE**
- Clear definition of urban development problems and competition for the solution
 - Deconstruction of the car-friendly city
 - Restoration of the Sieg River
 - Settlement of the university
 - New public spaces, upgrading of the cityscape
 - Active public relations

endogenous development” – in which reserves of land not only benefit structural infill development, but also the development of open space – distinguishes many current projects of various sizes. In Karlsruhe, for example, the new district Südstadt Ost was completed in 2017 with more than 2,000 residential units on a former railway site, which is gaining in identity, not least because of the new, approximately 9 ha City Park.

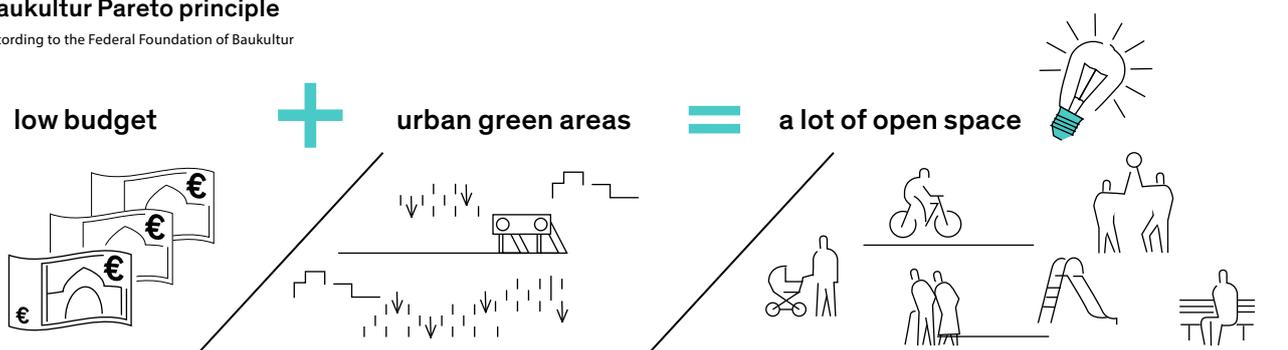
In many places, the format of the Federal or State Garden Show helps to use the development of open spaces as an engine for urban development and to sustainably enhance the existing building stock. In Erfurt, for example, the open spaces of Petersberg Citadel in the immediate vicinity of the cathedral will be redesigned in the course of the Federal Horticultural Show 2021, and secured as a recreational area for the old town in the long term. In Apolda, the Thuringian State Garden Show 2017 served the enhancement of the entire city – through 50 projects from the upgrading of the train station and the surrounding area, through the development of neighbourhood green spaces, to the redesign of the marketplace – the new green space structure runs from the outskirts of the city to its centre. At the Federal Garden Show Heilbronn 2019, the green park initiative initially creates the development requirements for the new city quarter Neckarbogen on a former port and industrial area.

The white paper “Stadtgrün 2017” from the BMUB contains current recommendations for action for regional landscape planning as well as for municipalities. Nationwide, cities can apply for funding for the qualification and further development of urban green spaces in the city planning promotion programme Zukunft Stadtgrün (Future Urban Green Spaces), which was revamped in 2017. Since 2014, green measures have also been eligible for funding in the other federal-state programmes for urban development. At the European level, the European Green Capital Award creates an incentive for municipalities to develop strategies for environmentally friendly and sustainable urban development. In 2017, Essen received the award and thus serves as a role model for all cities in Europe that are undergoing structural change and want to manage the transformation process by upgrading green infrastructures, among other strategies.

Adaptation to Climate Change Green and open spaces are not only crucial for a high-quality living environment, they also assume important climatic functions. Green areas and large parks promote the circulation of fresh air. Parks, meadows, and fallow areas are habitats for a variety of animals and plants and increase biodiversity in the city. Green urban spaces prevent heat islands,

Baukultur Pareto principle

According to the Federal Foundation of Baukultur



because their trees provide shade and reduce the heat load. This is especially important in the densely built-up historic quarters in the centres of cities and towns. Since many cities in Germany were founded near a river, historic city centres can benefit above all from the proximity to the water. The historic districts, which are often underserved with open spaces, clearly gain in quality of stay through the inclusion of riverbanks and water edges that are designed to be user-friendly. In the historic centre of the Lutherstadt Wittenberg, as in many other old towns, an uncovered historic brook runs through the historic streets and shapes the cityscape. Elsewhere, as in the UNESCO World Heritage town of Regensburg, flood protection measures on rivers are associated with a restoration and design of the riverbank areas for recreational purposes. In Siegen, the redesign of the inner-city riverside is part of a comprehensive renovation project to upgrade the city centre.

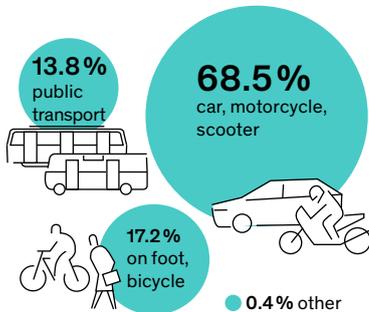
Increasingly, object-related measures to adapt to climate change are also being pursued. This includes green roofs. Hamburg was the first city in Germany to develop a green roof strategy. The goal is to plant at least 70 % of both the new buildings and the appropriate, flat or sloped roofs suited for renovation. Parts of these roofs should also serve the residents as open and usable areas. A Hamburg subsidy programme for green roofs will provide investment incentives for builders and building owners until 2019. Structural densification should thus also have a green added value and contribute to an improved living environment. Not every quarter and certainly not every building stock is suitable for such a strategy. In historic quarters, there are usually only a few flat roofs that are eligible for greening. In addition, urban design reasons in the historical context speak against a greening of the roof landscape or the construction of flat, green roofs. In some cases, green roofs – which can be used as roof gardens – can enrich existing inner-city neighbourhoods. Above all, in densely populated city centres, they contribute to a diversity of offers on the housing market, which is important if as many inhabitants as possible are to be won over for an inner-city residential location. In 2009, for example, in the course of inner-city infill development with the new Hanse-Carré in the pedestrian zone, Münster realised flats above business premises, which are allocated roof gardens. From the street, the green spaces are not visible. The street scene is characterised by gabled roofs, which fit well into the urban development context.

Even more so than roof gardens and green façades, rear courtyards have the potential to serve climate adaptation, and enhance the living environment. In the historic city centres, especially in the densely-built Gründerzeit quarters, there are still completely sealed rear courtyards in many places, which are used for parking or for outbuildings. An unsealing, restructuring, and greening would bring a significant improvement in the quality of stay, at least in semi-public space. In the Hanseatic city of Lübeck and in Wernigerode, the courtyards are even among the city's trademarks. Many cities, such as Bergen in Lower Saxony, have decided on a façade and courtyard programme and provided funding for upgrading measures. As far back as the 1990s, the city of Munich decided on an open space designation for the entire city area, in order to ensure high-quality greening of building plots and counteract the desolation of the cityscape.

Mode of transport to work

Percentage of workforce, who travel to work with the following modes of transport in 2016

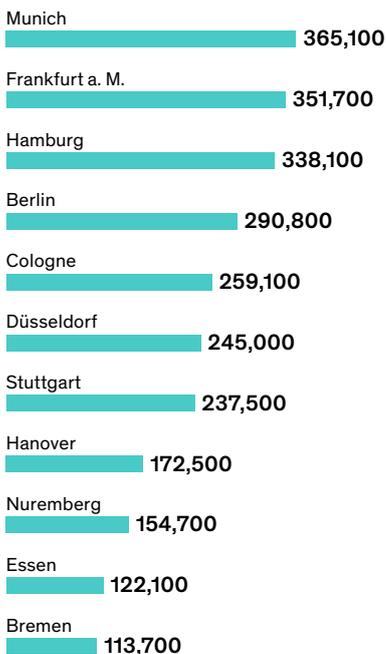
Source: Destatis 2017



Arrival from the surrounding area

Commuters to German cities in 2016

Source: BBSR 2017



New qualities for transport areas

Two-thirds of the surveyed municipalities are currently working on the issue of "accessibility in public space", and around one-third regard the conversion and dismantling of transport areas as a current task. Especially in cities with more than 100,000 inhabitants, street spaces are being converted or taken back. [M18](#)

Mobility in the 21st Century

Motorised Public Transport (MPT) The dominance of car traffic in urban and rural areas not only burdens the environment and health, but also conditions a large portion of public space through standardised road traffic areas. According to a BBSR study, 60 % of the working population commutes to work. In addition to the health risks associated with commuting, the high traffic volume causes restrictions in the flow of traffic. According to Destatis, most people still use their own cars to commute. In 2016, 68 % used the car for their commute to work.

According to a survey by the UBA and the BMUB from 2016, 91 % of the population say that less traffic would improve their lives; 36 % support a total closure of the city centres for individual traffic. Despite the stated policy goal to expand the environmental network, motorised private transport is increasing: 4 million new passenger cars were registered in 2017, and thus 1.8 % more than in the previous year. Every fourth new car in Germany was an SUV. In addition to new registrations, traffic in the cities is increasing due to delivery traffic related to increasing mail order business. Some cities are so heavily used by vehicular traffic that the pollution level in the air exceeds the maximum permitted levels. For individual streets, cities may now temporarily impose a ban on diesel vehicles, due to a decision in February 2018 by the Federal Administrative Court in Leipzig. From a Baukultur perspective, a modal split that improves environmental performance data in favour of the environmental network would also benefit public buildings in the city. In rural areas with reduced bus schedules, people are still dependent on cars. Here, alternative offers are needed to adapt routes and their management to the family and financial situation of inhabitants.

Urban mobility concepts, as implemented in the DomagkPark Munich, are breaking new ground in this regard. Electric-assisted cargo bikes, scooters, and bicycles are made available to residents for their transport routes, which can be booked via the Internet or telephone. For rural areas, Deutsche Bahn is currently testing a free and driverless bus shuttle for six people in the Bavarian town of Bad Birnbach. At the centre of such concepts is transport networking; thereby the car will remain an important part of the system. In an international comparison, Germany is the leader in car sharing. According to the Bundesverband CarSharing e.V. (bcs, German CarSharing Association), 2 million people used car sharing in Germany at the beginning of the year 2018. Meanwhile, car sharing is offered nationwide in 677 cities and communities. Karlsruhe is the leader with 2.71 car-sharing vehicles per 1,000 inhabitants. However, of 46 million cars, currently only 17,000 are car-sharing vehicles, which corresponds to a share of 0.00037 %. In theory, a car-sharing vehicle replaces ten cars – but only in combination with public transport offerings do they contribute to the reduction of motorised private transport. The noise pollution in cities can be reduced by environmentally friendly modes of transport, over-dimensioned traffic space can be regained, and the quality of life for residents increased.

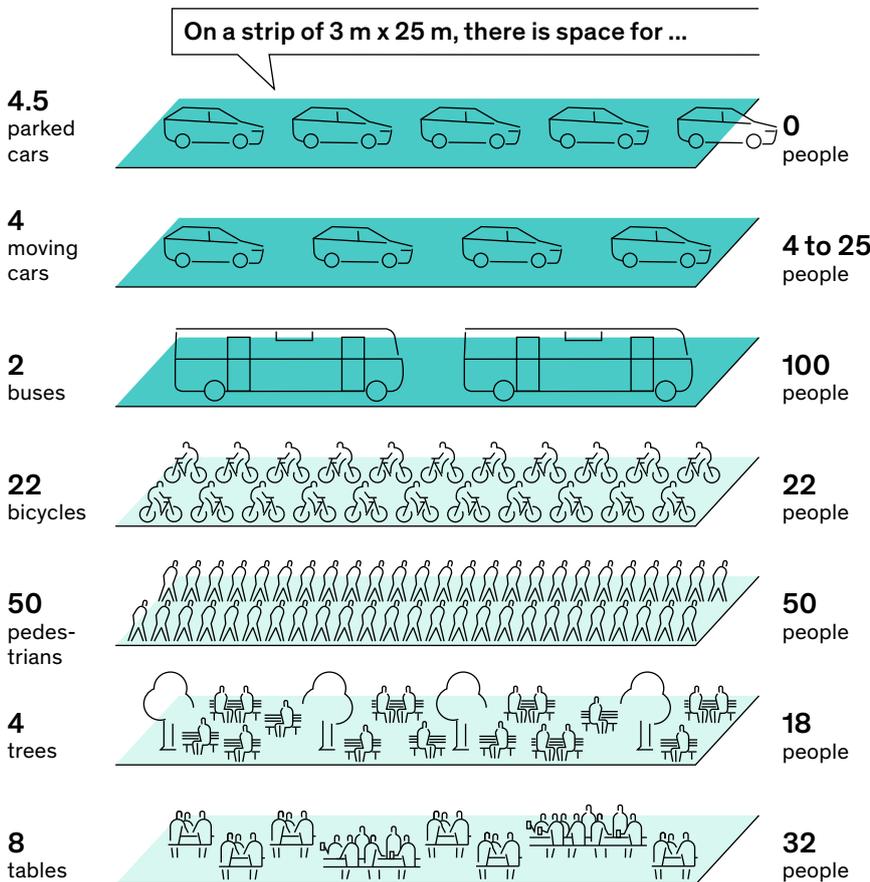
Area Factor Automobile The rising volume of cars has a direct impact on land consumption. The reduction in the design speed for road construction and the mixed use of transport areas have a land-saving effect. The prerequisite for this is the greater harmonisation of speeds of the various transport users. A general reduction in the traffic speed would support the mixed use of traffic areas and

is a prerequisite for so-called shared spaces, in which all types of traffic use the street space on an equal footing. Shared spaces are barrier-free and are increasingly being recognised by municipalities as an opportunity to create new qualities of stay in the city. In the Schönebeck historic district, the transformation of the marketplace – with public participation – into a shared space was a strategy against vacancy and desolation. Even in inner-city residential areas, the idea of the shared space can contribute to improving the quality of the living environment, as realised, for example, in Maaßenstraße in Berlin-Schöneberg.

The widening of sidewalks, pedestrian crossings, separate bicycle lanes on streets, orderly parking spaces, the planting of trees and flowerbeds, and the strengthening uses related to spending time are urban design measures that support considerate behaviour among road users and evidently improve the cityscape. For the conversions in the Friedrich-Ebert-Straße, the City of Kassel won the German Traffic Planning Award 2016 “Kommunale Hauptverkehrsstraßen planen und gestalten, Stadt- und Gemeindestraßen als Aufenthaltsraum zurückgewinnen!” (Planning and Designing city and Municipal Roads as Recreational Space!) from the Vereinigung für Stadt-, Regional- und Landesplanung (SRL, Association for Urban, Regional and Land Planning). The tram and the car traffic were bundled on one surface, creating space for wider sidewalks. A median strip as a crossing aid for pedestrians, integrated bicycle facilities, and the barrier-free construction of several tram stops complete the conversion. In order to increase

Diversity of possible uses on 75 m²

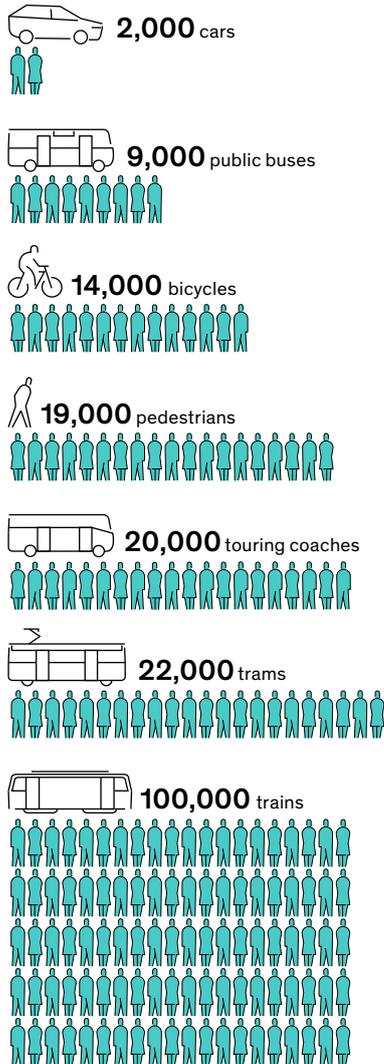
Source: National Association of City Transportation Officials 2016



Number of people by modes of transport

One figure corresponds to a thousand people, who can be transported on average over a 3.5-metre-wide route per hour

Source: Süddeutsche Zeitung; Movum; Federal Environment Agency 2016



Too few bicycle paths ...

More than half of the population surveyed say that there is an overall shortage of bicycle paths in the cities. [P3](#)

... and many of them are in need of renovation

49% of the surveyed municipalities say that the renovation backlog for bicycle paths is (very) high. [M22](#)

the attractiveness of Stuttgart's city centre for pedestrians, the administration is also focusing on the dismantling of traffic areas: 14 main traffic routes are to be upgraded in the city centre, and 16 so-called Flaniererrouten (strolling routes) are planned. Parking spaces are omitted in favour of sidewalk cafés in the centre.

The accommodation of stationary traffic takes up a lot of space. Currently, experts assume that about 2.5 to 3 parking spaces are planned per car, which are intended for motorised private transport. With approximately 46 million cars in Germany and a floor area of approximately 12.5 m²/car, all standing cars occupy an area of 575 km² with one parking space per car – more than the area of Cologne (405.01 km²). With three parking spaces per car, the space taken up is 1,725 km², which is roughly twice the area of Berlin. The concentration of stationary traffic in multistorey car parks and district garages is one way of reducing the high land consumption. Municipal parking guidance systems help to promote a high utilisation of car parks. If municipal transport companies also manage car parks at the same time, such as in Wiesbaden and Osnabrück, cross-financing of public transport is also made possible. Increasing the cost of parking in public places compared with car park fees, as practised in Denmark or the Netherlands, also supports the bundled accommodation of stationary traffic in car parks. This creates opportunities to use former parking space in another manner and enhance the cityscape. In Hanover, former car parks and open spaces at Klagesmarkt and Steintor are being reclaimed and upgraded through partial construction for endogenous development and greening as a recreational space, as a measure in the dismantling of the car-friendly city.

Strengthen the Environmental Network To strengthen the environmental network, the repair and renovation of existing infrastructures, as well as their new construction and adaptation are required. Above all, more bicycle paths are desired by the population. The BMVI provided more than 130 million euros in 2017 for the promotion of cycling. The funds for the development of bicycle paths have been increased from 60 million to a total of 100 million euros per year. An additional 25 million euros were provided in 2017 for bicycle fast lanes.

Currently, bicycle fast lanes or bicycle highways are increasingly being discussed in major cities. In 2015, the Radschnellweg Ruhr (RS 1) was opened, connecting Mülheim an der Ruhr and Essen. Cyclists can get to their destination faster without traffic lights and intersections, an alternative in rush-hour traffic. Deutsche Bahn is considering, in cooperation with the municipalities, opening railway side and utility roads next to tracks for bicycle traffic; there is currently a project for a connection between Frankfurt and Darmstadt. Berlin is also examining twelve possible routes for bicycle express roads, of which three will probably be realised in a first step. On the other hand, bicycle lanes that give the cyclist priority over the car are already more widespread. The city of Karlsruhe, which was designated in 2011 as a “bicycle-friendly city”, has now inaugurated the twelfth bicycle street in the city. Other cities in Europe are already more forward-looking with their investments in transport infrastructure. In Copenhagen, there are bike paths up to four metres wide in almost every important street on both sides of the roadway, and cyclists can use their own underpasses at many intersections. In addition, several bicycle highways were realised. Cyclists are preferably let through by phased traffic lights both in the city centre and on bicycle highways with intersections.

A high-performance environmental network also includes the expansion of public transport services. The federal and state governments have increased the regionalisation funds for transit and regional rail transport from 2016 by 600 million euros to 8 billion euros. To promote the construction and expansion of municipal public transport projects, the federal government will grant the federal states 333 million euros per year by 2019 under the Municipal Transport Finance Act (GVFG).

The city of Munich informs the public on its website “Gscheid mobil” about possibilities for managing routes in the city through a combination of public transport, car-sharing vehicles, and the Munich bicycle-hire system. It is important that sharing offers are provided at selected locations and traffic junctions and are not distributed indiscriminately across the urban space. They particularly have an added value, if they are specifically combined with public transport stops. For this reason, the federal government subsidy programme also financially supports the establishment of intermodal transport mobility stations – for example, for pedestrian and bicycle traffic, car sharing, and public transport. Since the end of 2017, municipalities have received funding even if they had already begun construction measures before applying. The exemption is considered an emergency federal programme to improve urban air quality.

The new networking offers rely heavily on the user’s digital coordination. However, good public offers and public transport, in particular, must always be efficient and user-friendly in their own right, because not all people are so tech-savvy that they can fully exploit the technical possibilities of smartphones, tablets, and PCs – and an ageing population sets limits to digital mobility.

Transformation in the Quarter

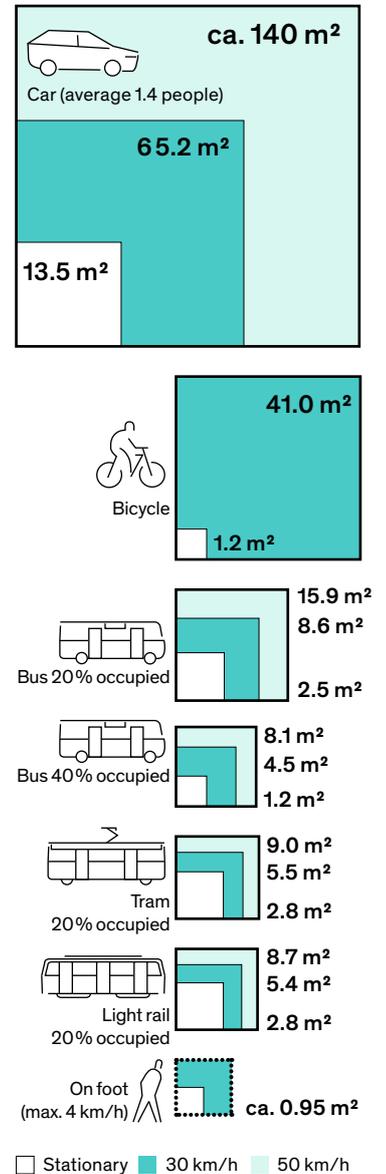
New Living and Working The mix of uses – residential, work, retail – is important for the design of urban and vibrant quarters. Purely residential areas are no longer contemporary. They lead to long journeys to the workplace and other facilities for everyday necessities. Conversely, purely commercial areas no longer meet today’s needs. The areas were functionally separated from the residential areas in the 1960s to the 1980s mainly due to emissions – noise and odour pollution. Today, the reasons for the former separation of functions have not been completely resolved, but to the greatest extent possible. Technologicalisation and digitisation have created industries that are less noisy than in previous decades. Digitisation also leads to significantly lower space requirements. Companies in the creative industries, as well as in the IT and start-up scenes, make it easy to mix living and working in the city. They are looking precisely for the urban environment in which different types of business settle next to each other and create synergies. Locations with an attractive environment and a good public transport network are in demand.

For this reason, vacant office, commercial, and industrial buildings in well-developed locations are suitable for both living and various commercial sectors. In addition, logistics companies are pushing into the cities, which is the result of growing online commerce and requires logistics space close to the centre, in response to the growing demand for “same-day” or even “same-hour” deliveries. This creates new work potential and opportunities for the use of existing

Land consumption of different modes of transport

Area per transported person in m²

According to Martin Randelhoff 2018



Business in interior and exterior locations ...

Almost half of the Chambers of Industry and Commerce see a future for business complexes in an integrated situation. Slightly more than half expect commercial settlements to expand through specialty stores and logistics centres in outlying commercial parks. **IHK 4 + IHK 5**

... also over several storeys

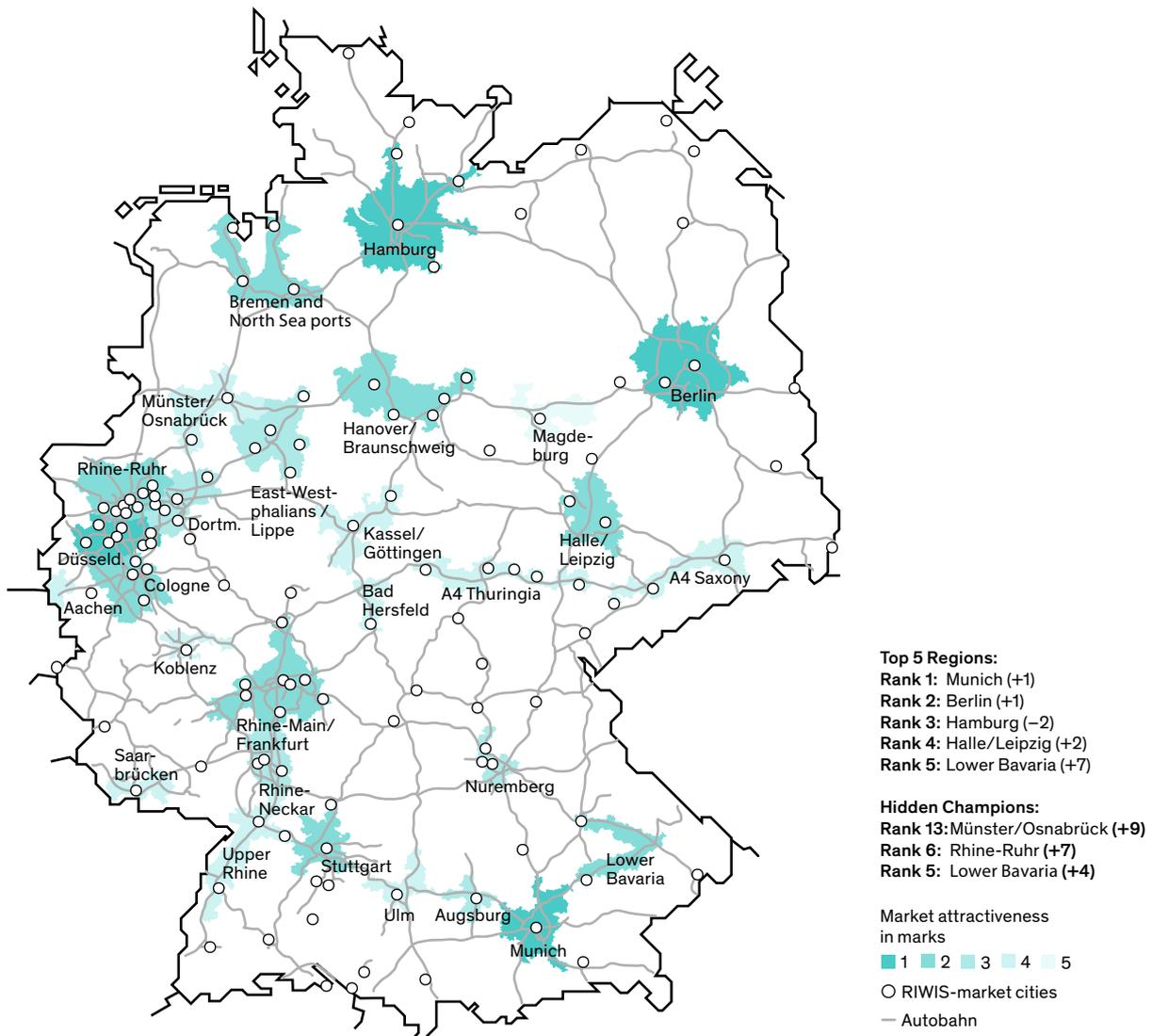
Every second Chamber of Industry and Commerce thinks that their companies consider the placement of retail and commercial properties in multistorey buildings across the "urban area" as possible. **IHK 3**

structures. Real estate experts assume that in the future more urban, multistorey warehouse space will be in demand. As a result, however, even more delivery vehicles will be moving through the cities. To counteract this, the Fraunhofer Institute together with Velo-Carrier – the electric bike delivery service in Stuttgart – started a pilot project. By the end of 2019, an inner-city car park will be used as a storage area to solve the problem of the last mile. The daily need for storage space is reserved per app. After receiving the parcels, they are delivered to the respective customers by means of electric freight bicycles. Inner-city car parks are increasingly being recognised as unconventional construction sites. Outdated typologies thus experience a contemporary adaptation, which has a positive effect on urban space. For example, a day-care facility with a garden was built on a car park in Nuremberg. In this context, new scope and flexibility in the design of appropriately mixed neighbourhoods also makes possible the new building area category "urban area", in particular.

Increasing digitisation also opens up new opportunities for location-independent work. In so-called co-working spaces, flexible workplaces can be

Logistics regions

Source: Bulwiengesa AG 2016



rented in an open-plan, fully equipped office. The model has already established itself in larger cities and offers many creative professions and self-employed people, who primarily need Internet access for their jobs, to work from any location. At the same time, they can benefit from the advantages and synergies that happen through the exchange with other users. This reduces commuter flows to more remote workplaces and creates opportunities to revitalise empty buildings in well-connected locations. In the small town of Lüchow in Lower Saxony, the landmark Old Post Office was transformed into the Postlab Kreativlabor (Postlab Creative Laboratory). The result is attractive jobs for creative people, freelancers, and start-ups, as well as a lively meeting place for the region. Between 2015 and 2016, the number of co-working spaces in Germany increased from 8,700 to 11,300. In Berlin alone, over 100 offers have emerged in recent years. It is estimated that more than 1.1 million people used a similar workspace in 2017.

The classic commercial area is thus increasingly losing importance. For the meaningful continued use of vacant commercial areas, the BBSR has examined in the ExWoSt project Nachhaltige Entwicklung von Gewerbegebieten (Sustainable Development of Commercial Areas), how these areas can be qualified in terms of energy, function, and creativity, and adapted to future requirements. The focus is on modernisation, upgrading of open spaces and public transport connections. In order to counteract vacancies in ghostly former office parks or building complexes, qualification strategies for corresponding locations are already being pursued in some cities. In the Frankfurt-Niederrad office park, the mixed Lyoner Quartier for living and working is emerging from a combination of measures – conversion, demolition, and infill development. In Cologne, existing buildings were converted into a residential quarter on the 4.6-ha former Gerling Group Headquarters and supplemented by new buildings. They were also active in Düsseldorf. The former office complex of the Thyssen Trade Center, a bow-shaped building from 1991, now offers mid-range rental apartments for 1,300 people under the name “Living Circle”. The project has been awarded the Deutscher Bauherrenpreis 2018 (German Developers’ Prize).

Smart Cities and Buildings A vision on which many cities already work in cooperation with companies is the idea of the smart city. Smart cities aim to increase the efficiency of infrastructures and buildings with the help of new digital technologies. Intelligent power grids, energy storage to balance energy production and consumption, digital traffic management and information systems to reduce congestion, automated driving for trains, self-driving vehicles – all of these are components of a “smart” city. For the population, digital parking management as well as the right means of transport for the fastest, safest, or lowest CO₂ route to work can be accessed per app. In Oldenburg, a “smart” quarter is currently being built to test different technological solutions for the smart city. The Free and Hanseatic City of Hamburg is currently working on the development of a “Smart Port” – an intelligent infrastructure for the port. In addition, a “digital control centre” works on a cross-departmental strategy: street lights that turn on when a cyclist approaches, and traffic lights that respond to approaching buses. At the building level, urban focus is on “smart buildings”, which are highly energy efficient and not only consume energy, but also produce it at the same time. The room temperatures are adjusted to the daily routine of

the residents using a sensor. It is expected that around 720,000 smart-home households will exist in Germany in 2018, and by 2020 an increase to almost 1.5 million households is expected. That would be 3–4 % of households.

The development and use of digital technologies makes urban life in part more convenient, but also more complex and generally speaking more expensive. A substantial change of the built environment is not recognisable. Existing quarters can certainly profit from some digital possibilities. For example, when new technologies are used to provide fast accessibility to locations and smooth traffic flow, neighbourhoods remain attractive both as residential locations as well as for services and commerce. Smart buildings in existing quarters can contribute to enabling technically innovative living in integrated locations, and a corresponding demand in the housing market will not lead to further land reclamation through new construction on the outskirts of the city. Energy-optimised new buildings in vacant lots can also supply neighbouring historic buildings with energy, and thus relieve the burden on the existing building stock.

Yet digitisation alone is not a strategy to lead cities into the future with their existing settlements, because the vulnerability of systems and security risks increase with digital transformation. In addition to their vulnerability in the event of power outages and the high maintenance requirements, the anticipated overburdening of an ageing society also argues against overly complex digital technologies. Add to that external vulnerabilities – hacked and stolen records, unauthorised access to data, and vulnerabilities reached record levels in 2016, according to IBM Report. Likewise, the digital surveillance of public spaces is divisive. Although it promotes the sense of security – a currently important issue for cities and the population at the moment – it also contradicts the idea of a European city with public spaces in which anonymity is maintained.

From a design point of view, smart architecture is neither futuristic nor modern per se. However, there is the danger that good design will once again be forgotten for the residual technological requirements or forgotten completely. In this context, much research is currently being conducted. In 2015, for example, the BMUB and BBSR research project Smart Cities – Entwicklung eines stadtentwicklungspolitischen Handlungsrahmens (Smart Cities – Development of an Urban Development Policy Framework) was launched. The result, among others, was the development of a Smart City Charter, which, building on the Leipzig Charter and other foundations, calls on cities to actively engage with digitisation.

Future Laboratories Existing quarters are important experimental fields for testing sustainable trends and developments. In order to set the right course for the future today, both a forward-looking examination of the most diverse framework conditions and developments is necessary, as well as an engagement with possibilities, visions, and future scenarios. In real laboratories, scientists monitor transformation processes in urban development – for example, the introduction of new mobility or energy systems – and record their impact on practice. For instance, in Detmold the University of Applied Sciences Ostwestfalen-Lippe is currently investigating the trial use of cargo bikes in the city to relieve the city of motorised traffic in the future. The state of Baden-Württemberg has been supporting real laboratories since 2015 with its own funding programme. Among other things, self-propelled transport vehicles are being tested in Heilbronn to

reduce traffic, and in Tübingen, together with the population, they have sought ways to supplement urban space with renewable energy sources. Real laboratories are also being promoted at the federal level, for example since 2016 through the funding initiative Solares Bauen/Energieeffiziente Stadt (Solar Building / Energy-efficient City) from the Federal Ministry of Education and Research. Here, too, the neighbourhood level serves to test and explore new technologies in favour of energy optimisation.

In a similar way, the International Building Exhibitions (IBAs) are testing the concrete structural experiment. IBAs are a tool for forward-looking ideas. They are temporary laboratories that were first launched in 1901. In the meantime, temporary planning and participation processes, as well as permanent buildings are the focus of an IBA. The exhibitions take place on the initiative of a city or region. Accordingly, there is no regular cycle, but different maturities and now parallel initiatives. Between 2019 and 2023, the IBA Thuringia “StadtLand” will take place to deal in particular with the topics “energy transition” and “demographic change” in rural areas. In 2020, Basel will host a supranational IBA in the tri-border region of Germany, France, and Switzerland. The IBA Heidelberg (2012 to 2022) is currently running. Here, processes and construction projects are to be initiated, evaluated, and implemented throughout the city on the subject of the “knowledge society”. The IBA 2027 Region Stuttgart deals with future working and living environments in the post-fossil energy age. Due to the large number of IBA initiatives, the BMUB has initiated a quality offensive in close cooperation with the IBA Experts’ Council and submitted a revised “Memorandum zur Zukunft Internationaler Bauausstellungen” (Memorandum on the Future of International Building Exhibitions), which should provide municipalities with orientation in the development and realisation of the format.

Experiments, real laboratories, model projects, and the results of IBAs can set priorities for further funding policy at the federal and state levels, sensitise relevant actors and the population of a city or region to important topics, and give impulses to other municipalities as “good examples”. Because they usually focus on existing urban spaces, they provide valuable insights for a high-quality development of the building stock in the course of infill development. Especially against the background that good building should take into account a long time frame, temporary test phases allow trying out, practising, and experimenting with potential innovations. As in the construction law, the experimentation clauses – with which the realisation of experimental and innovative projects is allowed to deviate from the applicable law with the aim of later normalising the experience gained if necessary – are also experimental fields and, in the urban development context, important for an increase of Baukultur in the cities.

Establish Conversion Culture – Conserving Resources through Intelligent Building Stock Development

In the further development of built structures, existing qualities are to be recognised, valued, and maintained. Conversion culture goes beyond purely economic evaluation and includes societal and environmental interests. Qualified craftsmanship techniques, sustainable building materials, and flexible solutions ensure Baukultur values – from smaller conversion measures, through energy renovation, to urban-compatible new buildings.

Mainly build in the existing stock

53 % of the municipalities surveyed are dealing with conversions and additions to the settlement stock. In cities between 50,000 and 100,000 inhabitants, it is even 75 %. For 46 %, conversion is a current topic of existing building stock development. [M18](#)

Sustainability of the Existing Building Stock

Conversion and Expansion In addition to regular maintenance and renovation, the structural adaptation to changing demands also ensures the sustainability of buildings. For vacant or underused structures, a conversion creates new possibilities. Almost every historic building structure that has survived to date has undergone changes over the years, at least in terms of building technology and sanitary facilities. Existing buildings can be activated through an intensive examination of the existing stock, a viable utilisation concept, and the adaptation of building structures to today's usage requirements. Sometimes minor structural measures are sufficient to upgrade unattractive architecture, as the example of the wine shop in the Palatinate (p. 83) shows. From today's perspective, however, difficult structures or floor plans require clearer interventions. Thus in Hannoversch Münden, only the merger of five half-timbered houses enabled a successful hotel utilisation. In Lübeck, the salt storehouses next to the Holsten Gate were converted into a common shop unit by removing the partitions. In many places, the gutting of historic buildings enables the revitalisation of Baukultur heritage through contemporary uses.

The conversion and reutilisation of large structures make even more extensive construction measures essential. The multi-award winning conversion of the prison in Luckau shows how a formerly inaccessible terrain with difficult building structures could be successfully transformed into a lively inner-city quarter.

In the case of a monument, a successful structural adaptation to today's ideas always requires compromises. The design spectrum is large and, as a result, the result of an intensive negotiation between city planners, architects, and monument preservationists. The aim of the compromises should always be to enable a use, because for the preservation of a building this is elementary. In this context, such inconspicuous solutions as the example of the Mannheim

Baroque Palace (p. 96) are not always found; here, the additional space requirements could be covered by the expansion of the basement floor. However, the recognisable addition of a new temporal layer can also be a creative theme, such as the award-winning reconstruction of the Neues Museum in Berlin.

The trade press regularly presents international and national examples of conversions and superstructures, reutilisations, and supplementary buildings. The topic is equally in demand among the population. Magazines such as Häuser, Schöner Wohnen, Living at Home, or Das Haus are also increasingly addressing life in historic buildings and the conversion of existing buildings. This interest offers optimal conditions for a development of the existing building stock, which is supported by many. In municipal practice, however, it also shows how difficult the conversion of existing and historic building structures is in part. The current situation is also difficult in an increasingly digitized planning practice and a building code that focuses on new building standards. New building planning will of course apply Building Information Modeling (BIM) in the future, while old buildings often lack plan documents and an evaluation of the existing stock. Structurally, conversion thus continues to fall behind. Consequently, digital construction files for existing buildings should be created.

Hardly any conflicts?

More than 90 % of the urban planning / urban development offices of the surveyed municipalities describe cooperation with monument preservation as (very) good. However, 22 % have conflicts with monument preservation due to the adaptation of floor plans and 17 % due to the reutilisation of buildings. [M13]+[M14]

Baukultur Revives Business

Value-Added Factor Architecture – Conversion of a Warehouse in Heuchelheim-Klingen

The Meyer winery on the Palatine Wine Route had produced some successful wines under its junior chef Andreas Meyer. However, the winery itself did not do justice to the image boost. Tastings could only take place in a room in the residential building on a small scale and after preregistration. To reduce constraints and gain new customers, Meyer wanted to set up a wine shop in an adjacent warehouse, thereby optimising processes and gaining space for events. Since the budget was limited, the architects of the Werkgemeinschaft Landau chose a very balanced approach in its simplicity. A third of the inconspicuous hall from the 1970s was cut off, the façade of gas concrete blocks broken. The industrial construction remained visible: the concrete floor was polished, the support structure and the masonry were painted white. Oak room furniture with an integrated counter divides the interior, in which the wines can be presented openly and tasted at the tables. The exterior of the hall was enhanced by a dark coat of paint and an accent on the distinctive roof finish. The wine shop was completed in just five months. It stands for a rejuvenated image of wine production and regional tourism. The project was awarded the Architecture Prize Wine 2016. Since the conversion, the Meyer winery has increased sales by a third.



Facts

Planning and Construction: 2013–2014	Cost of Wine Shop: 170,000 euros
Developer: Weingut Karl-Heinz and Andreas Meyer GbR	Total Investment: 285,000 euros
Planner: Werkgemeinschaft Landau	More information in the project description in the appendix
Size: 130 m² useable area	

BAUKULTUR AT A GLANCE

- **Balanced handling of commercial building stock**
- **Image boost through architecture**
- **Better customer approach**
- **Optimisation of processes**
- **Measurable economic success**

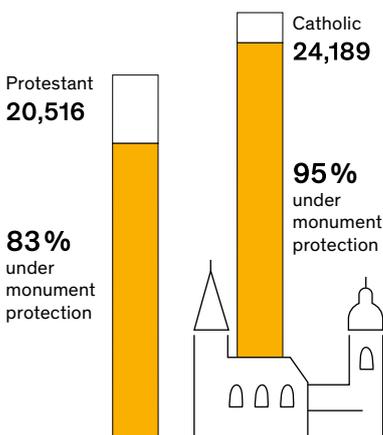
Demolition also without compelling reason

64 % of surveyed municipalities state that unsuitable floor plans or building layouts have led to a demolition of buildings over the past five years. 47 % of the municipalities surveyed estimate that the demolition occurred due to investor pressure. M8

A demolition should be the last resort in the conflict of interest between owners, city planners, architects, and monument preservationists. There should be time to wait – especially for vacant monuments – because conditions and usage requirements often change unexpectedly, so that seemingly difficult structures are suddenly functional and exciting in terms of design. It is advisable to look at the object not only singularly, but also in its environment, and to make it the planning subject of a strategic site discussion and development. The macro view of location and environment can lead here to new usage-related solutions. From a Baukultur point of view, there are numerous reasons to continue building and changing not just monuments, but existing buildings as a whole. It would be negligent not to exploit the potential in the building stock. A creative examination of existing buildings leads to sophisticated and enriched cityscapes. Giving up prematurely for reasons of alleged lack of adaptability or lack of cost-effectiveness leads to irretrievable losses. On the other hand, the continued building of existing structures as well as the recognisable merging of different temporal layers can lay the foundation for the “monuments of tomorrow” – on the level of the quarter as well as the object. Maintaining distinctive and valuable building materials is part of an attentive material culture and has an identity-creating effect. This can be seen in the example of the Silver Tower in Frankfurt am Main. The office and administration building of the 1970s was upgraded and renovated by the architecture office schneider + schumacher architects, retaining the characteristic aluminium façade, and was awarded the design prize of the Wüstenrot Stiftung in 2017. For buildings or building materials that are not to be rescued, which are demonstrably harmful to health, the demolition of buildings is required. In these cases, replacing new buildings can and should make a significant improvement in urban design possible. Before a demolition, however, the Baukultur value, the material and immaterial benefits, and the grey energy bound in the building should be included in the assessment.

Current number of churches and chapels

Source: EKD 2017; Deutsche Bischofskonferenz 2017



Church Conversions Social change processes are particularly noticeable in special structures like religious buildings. There is a remarkable collection of church buildings in Germany, in all sizes and in all settlement structures – from the village chapel, to the multifunctional community centre of the post-war settlement, and the metropolitan cathedral. The two major denominations alone had approximately 45,000 religious buildings in 2016: around 24,000 churches and chapels belong to the Catholic church, and 20,500 belong to the Protestant church. In addition, there are a few hundred Protestant and Catholic churches in state or municipal ownership. Most of the sacral buildings are under monument protection, supplemented by other protected properties such as vicarages, residential homes, convent buildings, monasteries, and cemeteries. Between 2000 and 2017, the Catholic dioceses in Germany have given up the sacred use of nearly 500 church buildings and demolished about 140 churches. Between 1990 and 2017, the Protestant church no longer used over 700 church buildings sacredly; of these, about 280 were sold and over 100 were demolished.

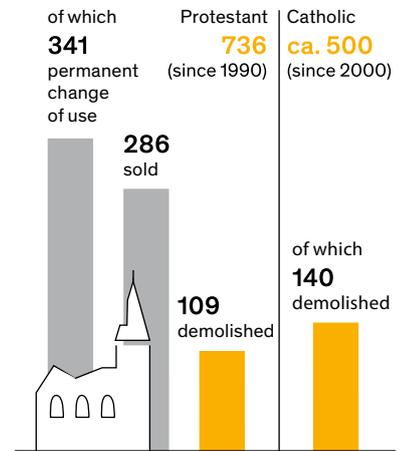
Churches are often the definitive, sometimes the only, carriers of Baukultur tradition in the village and city. The number of cases of therefore carries the risk of major Baukultur, architectural, and urban development losses, because it is difficult to find viable and adequate uses for the large assembly rooms. Reutilisation in densely populated contexts often leads to unexpectedly great

difficulties, for example with regard to fire protection requirements, meeting place requirements, or parking space entitlements. In addition, closures and demolitions also have enormous consequences for the social fabric of the respective quarters, because the loss of sacred spaces is often accompanied by other utilisation tasks, such as the closure of community halls, group rooms, libraries, clothing banks, or day-care centres. The overall social effects are severe. After all, more than 1 million people work for the Catholic and Protestant churches, plus 1.2 million volunteers. This makes the two churches the largest employer in Germany after the state.

Due to the historical, Baukultur, social, and identity-creating qualities of churches and chapels, it is worthwhile – as in almost no other building typology – to make every effort on the part of the public, church, or private parties to preserve the buildings in their ecclesiastical use or, if necessary, develop them further with meaningful uses and adequate design. Accordingly, there are numerous activities by different actors to promote necessary conversion concepts. The fourth competition Land und Leute (Land and People) by the Wüstenrot Stiftung is dedicated to village churches, monasteries, and other ecclesiastical buildings. In 2014, the state initiative StadtBauKultur NRW produced the publication “Kirchen geben Raum – Empfehlungen zur Neunutzung von Kirchengebäuden” (Churches Give Space – Recommendations for the New Use of Church Buildings). In 2016, the Wüstenrot Stiftung praised the nationwide competition Kirchengebäude und ihre Zukunft (Church Buildings and their Future). The prize was awarded to a church in Olpe, which will continue to have a sacred use but will be more open to the city district after the conversion. Since 2017, the Landesinitiative StadtBauKultur NRW, together with the Chamber of Architects and Engineers in NRW, the participating (arch-)bishoprics and regional churches, have been offering support services for parishes and municipalities that are in need of conversion or reutilisation. As part of the IBA Thuringia, the Evangelical Church in Central Germany is testing new possibilities of use with the project Stadtland: Kirche.

Cessation of churches and chapels from church use

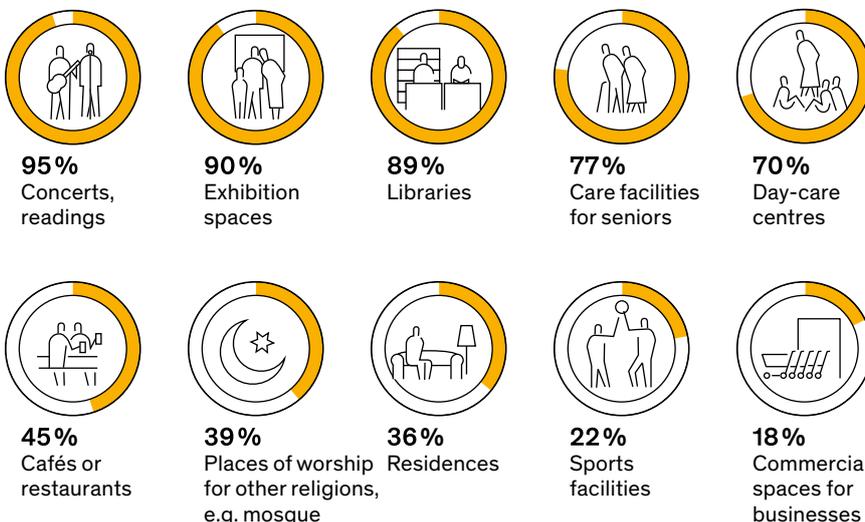
Source: Kirchenamt der EKD Hannover 2016; www.katholisch.de 2017



Acceptance of the conversion of churches and chapels

Approval for new potential uses

Source: Population Survey for the Baukultur Report 2018/19



Reutilisation with concept as a matter of priority

In 40 % of the municipalities, churches have fallen out of use in the last five years or church vacancies are indicated in the coming years. Already 30% of municipalities have concrete experiences with one or more church closures. Above all, communities with more than 50,000 inhabitants are strongly affected. The majority of the affected municipalities develop conversion concepts for the church buildings. [M10](#)+[M11](#)

There are already numerous examples of church uses that testify to creativity. The Preis der Stiftung KiBa 2018 – Kirche in Szene setzen (Prize of the Stiftung KiBa 2018 – Church Takes Centre Stage) was given to the chapel of the Dorotheenstädtische Friedhof I from the 1920s in Berlin, which was furnished with a light installation. In Cologne, the former Luther Church became the Kulturkirche (Cultural Church) of Cologne, and in Lippstadt the Protestant Jacobi Church in the historic centre has been used for several years multifunctionally – both as a church and as an event centre for concerts, lectures, readings, and exhibitions. Assisted living is housed in a monument-protected church in Viersen-Dülken, and in Aachen the former St. Elisabeth church became a “digital church” with office and commercial spaces. However, new uses in sacred buildings are judged differently by the population. In particular, cultural uses find a high approval. Less accepted are gastronomy, apartments, sport, and trade uses. From the point of view of Baukultur, every preserved church is a piece of the rescued identity of the European city. Here, conversions should remain close to the original purpose and reversible.

Craftsmanship There have to be investments in the repair and renovation of buildings at regular intervals, so that the building remains usable and sustainable. The craftsmanship with which buildings and structures are built and renewed is of considerable importance. In the municipal survey for the Baukultur Report 2014/15, the surveyed municipalities ranked craftsmanship as the fourth most important aspect of Baukultur with 85 %. Thereby craftsmanship quality in Germany ensures, among other things, that many tradesmen from the construction industry are required to have a master craftsman’s certificate. In the renovation and extension of housing, masons and concrete workers, carpenters and roofers, stonemasons, and heat, cold, and sound insulators, rank among the licensed crafts, as well as plasterers, painters, and refinishers. Exempted from the master craftsman’s certificate requirement are, among others, tile and mosaic layers, pavers, concrete block and terrazzo manufacturers, as well as and screed layers.

In the commissioning, public developers are bound to certified craftsmanship businesses; private developers can do a lot of work on their own, depending on their personal abilities, but in case of doubt they have to bear liability or insure accordingly. If subsidies are used, private developers must also be responsible for the professional and proper execution of the renovation work. Repair and renovation of monuments also require coordination with the monument preservation authority before they are approved. They also have to be approved by the monument authority after the measures have been completed. In this way, it is ensured that the building measures are aligned with the historical model and serve the preservation of the authentic appearance as well as the preservation of the building fabric.

In order for the renovation of a historic building to succeed properly and professionally, craftsmanship businesses must also have a great understanding of historical craftsmanship techniques and traditional construction methods – in addition to a high level of expertise and knowledge of current building materials and technologies. Otherwise, the renovation work not only affects the historic appearance, it also quickly leads to structural damage to the building. Historical craftsmanship techniques are part of the intangible cultural heritage UNESCO has honoured since 2003. Among others, these include

gilding techniques in church painting, the preparation and application of traditional lime mortar, and covering thatched roofs. Examples such as the Kulturpalast in Dresden or the train station Sangerhausen illustrate the specific features and renovation conditions that younger building epochs also entail.

At the moment, craftsmanship businesses are benefiting from a good order situation, as the Zentralverband des Deutschen Handwerks (ZDH, Central Association of German Crafts) notes in its 2017 economic report. However, historical craftsmanship and building materials are not always used in the course of technical and economic progress. On the one hand, trends in industrialisation and digitisation turn historical knowledge and skills into a specialism with a manageable market. On the other hand, standardisation, current guidelines, and corresponding warranty conditions present hurdles for the use of historical techniques and materials. In addition, tender procedures with unspecific contract notices and too large lots form an obvious obstacle to highly qualified craftsmanship businesses. According to a 2010 survey conducted by the Beratungsstelle für Handwerk und Denkmalpflege (Advisory Centre for Crafts and Monument Preservation), the qualification “restorer in the craft trade” is relatively seldom demanded in the case of tenders for measures on monuments. Even with individual specialisations, due to inaccurate formulations in the text of the claim, it is seldom the case that a professional order is placed. For example, the item for windows on historic buildings is usually listed only as “glass” or “antique-like glass”. However, correct glazing for all protected buildings from before 1906 would require hand-blown cylindrical glass, as was the case at the Justizpalast in Munich and at the Marienkirche in Wittenberg. If this is not explicitly required, specialised companies in the tendering process are subject to competition that can offer their simpler services significantly cheaper. The public sector can put these and other inhibiting factors to the test in procurement procedures and reduce them in favour of greater consideration of qualitative aspects.

Various prizes and honours show just how remarkable the achievement of sensitively executed renovations is. Since 1993, the Deutsche Stiftung Denkmalschutz and the ZDH have honoured private owners of monuments and the craftsmanship businesses commissioned by them for exemplary renovation services. It is awarded annually in two federal states. The annual KfW award Bauen (Building) also honours the rebuilding, cultivation, and modernisation of existing buildings as well as exemplary new buildings. In 2018, developers will be honoured on the theme “Ästhetisch und effizient Wohnraum schaffen und modernisieren” (Creating and Modernising Living Space Aesthetically and Efficiently). From a Baukultur point of view, however, even “brushstroke renovations” – i.e. small upgrading measures on the building – make an attractive contribution to the preservation of the historic building stock. Especially old buildings, which have already set patina, are living witnesses to Baukultur history. The timely and professional repair is the simplest, gentlest, and most cost-effective type of monument preservation, as the Stiftung Preußische Schlösser und Gärten Berlin-Brandenburg writes in its latest publication “Zwischen Welt und Erbe” (Between the World and Heritage).

Energy Renovation

Status Quo and Objectives To reach climate goals, the energy renovation of the existing building stock is important. According to the Bundesverband deutscher Wohnungs- und Immobilienunternehmen e. V. (GdW, Federal Association of German Housing and Real Estate Companies), since 1990 about 66 % of the housing stock has been subject to energy renovation measures, more than half of which were full renovations. By contrast, the umbrella organisation Deutscher Immobilienverwalter e. V. (Association of German Property Managers) came to a different conclusion: 90 % of all energy renovation measures are only partial renovations. Also, the quality of the earlier measures does not meet today's requirements, because only since the introduction of the EnEV 2002 do certain energy conditions have to be met for the renovation, extension, conversion, or expansion of existing buildings.

The EnEV requires energy-saving construction and heating technology in buildings. Since its introduction in 2002, this ordinance has been continuously tightened, with the last amendment being made in 2016. The subject of the amendment was a further 25 % reduction in primary energy demand limits for new buildings compared with the EnEV 2009. There was no tightening for the refurbishment of the existing building compared to 2009. For protected and preservation-worthy buildings, the EnEV stipulates diverging requirements. If there are fears that the appearance will be impaired by energy measures, the requirements of the EnEV can be waived. The suspension of a further tightening of the EnEV in the current legislative period favours the optimisation of technical standards and can promote Baukultur concerns. At present, existing buildings in the building year category 1949–1978 – the so-called post-war modern – take the largest share of final energy consumption for space heating and hot water, with 43 %. Especially the buildings of the 1950s and 1960s often have weak points in thermal insulation, outdated building technology, damp cellars, single-glazed windows, and damaged, uninsulated roofs. Single- and two-family homes also have a significant impact on energy consumption; according to the 2016 building report by the Deutschen Energie-Agentur (dena, German Energy Agency) their share is 63 %. Since the buildings of the post-war period and especially single- and two-family homes account for a large part of the settlement stock in the federal territory, their energy optimisation is important. On the one hand, if the renovation stops, the federal government's necessary climate targets cannot be achieved; on the other hand, the buildings would not be marketable in the long term with regard to their standard of living and comfort. Apart from that, this means that the discussion about the assessment and protection of post-war modernism comes under considerable time pressure. In many places, the cityscape will have already changed before the monument value of this building year category was included. As an interim step, municipalities can make exemptions under the EnEV possible with a provisional determination of the buildings worth preserving, thereby counteracting a premature deterioration of the cityscape.

The EnEV has been criticized, among others, for its mechanical impact and the so-called rebound effect. Increasing efficiency reduces energy costs for the consumer. As a result, more energy is often consumed, as long as the consumer does not incur higher total costs – a zero-sum game for the savings effect. In

Energy renovation has the highest priority

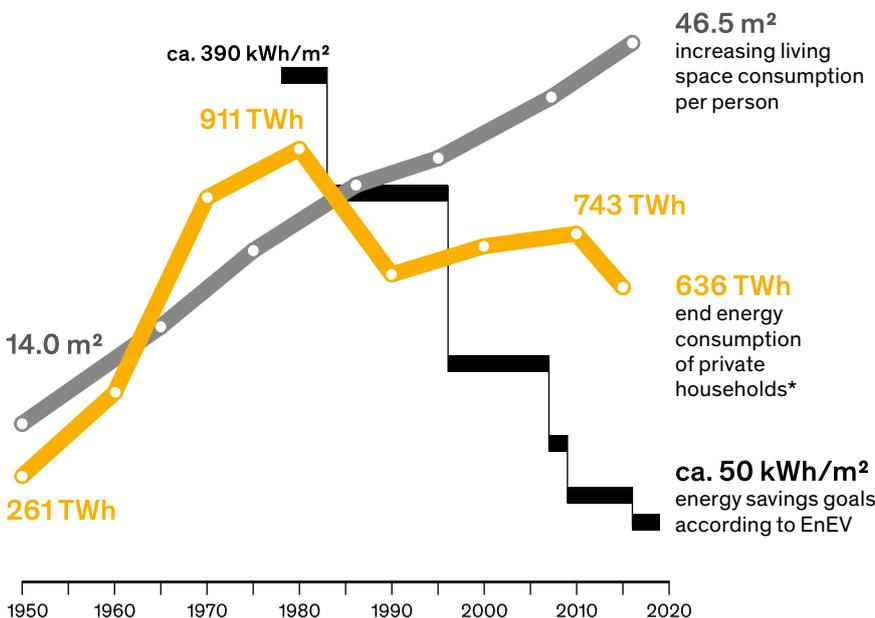
71 % of the surveyed municipalities confirm that energy renovation is one of their municipality's current tasks for existing building stock's further development. 52 % state that buildings in their municipality have been demolished in the last five years due to poor energy standards. [M8](#) + [M18](#)

addition, the steadily increasing living space per capita has a negative effect. In the construction industry, the EnEV 2016 is viewed critically for other reasons. The demands made on new buildings are classified as unprofitable. According to the Freier Immobilien- und Wohnungsunternehmen (BFW, Federal Association of Independent Real Estate and Housing Companies) construction costs have risen again by 7 % due to the new EnEV regulation. Capital expenditure and profits are no longer in a balanced relationship. Thus, the EnEV makes it more difficult to provide affordable housing in new buildings. In addition, the last amendment also does not take into account a building's grey energy, which is the amount of energy needed for the raw material extraction, processing, packaging, and transportation until the building's construction. The consideration of grey energy is indispensable not only for a transparent life cycle assessment, but above all for the prioritisation of a building stock mobilisation over primary energy intensive new construction projects.

The federal government has launched various subsidy programmes to promote the energy-efficient renovation of existing buildings. These include, for example, the programme Energieeffizient Sanieren (Energy-efficient Renovation), which provides funding for both individual renovation measures as well as overall measures for private property owners. Overall measures aim at a KfW energy-efficient building standard. The energy-efficient standard refers to the EnEV. For example, a KfW energy-efficient building with the achieved standard 55 requires only 55 % of the energy that a comparable reference building must meet as a maximum, according to the EnEV. KfW supports the standards 55, 70, 85, 100 and 115 in the case of a renovation. For protected buildings that are particularly worth preserving, the "KfW Energy-efficient Monument Building" reduces the minimum technical requirements. Thus, an annual primary energy requirement of 160 % and a transmission heat loss of 175 % are sufficient compared to the 100 % that the EnEV stipulates for a new building.

Rebound Effect

Source: BBSR 2014; dena Deutsche Energie-Agentur; Destatis 2012; INSM – Initiative Neue Soziale Marktwirtschaft 2009



*until 1989: old federal states, including small consumers, converted from SKE to TWh

Baukultur Combines Old and New

Kulturpalast Dresden – Advanced Architecture for a Modern Variety of Uses



The Kulturpalast Dresden shows how the monument-protected building stock of East German post-war modernism can be revitalised through changes in use and supplementation. The building, by a collective around the architect Wolfgang Hänsch, was opened in 1969 between Old and Neumarkt as a city hall. For many Dresdeners, it is still connected with beautiful memories of events experienced. After a demolition came up for debate, the building was placed under monument protection in 2008. At about the same time, however, it was decided that the multifunctional hall should be replaced by a concert hall for the Dresden Philharmonic – against criticism from parts of the population and government, as well as the architect Wolfgang Hänsch. The competition for the conversion was won by Gerkan, Marg and Partners (gmp) in 2009. With 1,750 seats, the new hall is about one-third smaller than its predecessor. Although it is indeed designed in a spatially complex manner based on the vineyard principle, it is nevertheless axisymmetric. This allows the mental connection to

the overall structure with its clear lines. The use of wood, the white ceiling and parapets, and the red seating create visual references to the foyers. Around the hall, administrative and technical rooms for the new Dresden central library were rebuilt on the first and second storeys. They can be accessed via the concert hall's break foyer, so that this area is also lively during the day. The former studio stage on the first storey is now used as a music library.

In the foyers, the interior at the time of construction was restored according to monument preservation specifications – including everyday elements, but also building art. Many high-quality materials – granite on the walls, marble on the columns, Macassar veneer for the handrails – could be preserved, along with railings, lamps, and doors. The characteristic ceiling cladding of plasterboard with small squares was reproduced. A so-called crane ceiling with three-dimensional wings moved from the former restaurant into a reading room in the library. Deliberately reduced in design in line with the



existing building, the library had a red carpet that can now be found again in the upper foyer, as in the original state. On the first floor, the 45-meter-long wall frieze “Unser sozialistisches Leben” (Our Socialist Life) by Heinz Drache and Walter Rehn was restored, as were the five bronze entrance doors to the Altmarkt, on which the sculptor Gerd Jaeger has presented the city of Dresden’s history.

Externally, the Kulturpalast appears as if it has hardly changed. On the west side, “Der Weg der roten Fahne” (The Path of the Red Flag) – another large-scale mural by a collective of artists around Gerhard Bondzin – was repaired. The roof structure of the hall retained its metallic cladding. However, the copper-coated slabs, which had only been installed in 1986, gave way to an energy-optimised clear glass. Now, the colourful inner life of the Kulturpalast can also be experienced in the urban space.

Below the concert hall, the cabaret theatre Die Herkuleskeule was given its new venue. The Stiftung Sächsischer Architekten (Foundation of Saxon Architects), the State Chamber of Architects, and the Free State of Saxony invite visitors to lectures and exhibitions in the newly founded Zentrum für Baukultur Sachsen (ZfBK, Centre for Baukultur Saxony) on the ground floor, which is accessible from the outside.

The combination of different facilities has created a real “culture palace” that not only attracts lovers of classical music in the evenings, but also during the day library users of all ages, restaurant visitors, and those interested in Baukultur. The open foyers, the large glass surfaces, and several entrances ensure a connection with the urban space. The conversion and expansion have unleashed new impulses without the building having lost its value as a monument, as a place of collective memory, and as an identity creator.

Facts

Planning and Construction: 2010–2017
 Developer: KID Kommunales Immobilienmanagement Dresden GmbH & Co KG
 Planners: gmp von Gerkan, Marg und Partner, Hamburg; Professor Pfeifer und Partner, Ingenieurbüro für Tragwerksplanung, Cottbus; Planungsgruppe M+M AG, Dresden; ARGE Ingenieurbüro Rathenow, Dresden; Solares Bauen GmbH, Freiburg i. Br.

Size: 37,000 m² GFA
 Cost: 89.6 MM euros (gross cost group 300–600)

More information in the project description in the appendix



BAUKULTUR AT A GLANCE

- Convert and expand instead of conserve
- New design refers to the existing building
- Preservation of characteristic materials, building components, and art
- Energy renovation of the façade
- Lively location at all times of day



Energy upgrading holds potential for conflict

In 46 % of the municipalities surveyed, there were conflicts with monument preservation with regard to the energy renovation of buildings. [M14](#)

In comparison: if existing buildings remain unrenovated, the average consumption of a multifamily dwelling that has not been substantially renovated with regard to energy is around 350 %, and that of a single-family dwelling over 400 %, according to dena. The exemptions for monuments and preservation-worthy buildings are logical. However, in view of the proportion of everyday buildings in Germany's entire building stock, this is only an inadequate, albeit important contribution to Baukultur in cities and communities. It would be crucial to work toward Baukultur compatibility in all supported energy measures.

Baukultur Compatibility In cities, energy renovation measures often lead to conflicts between urban development or building permit authorities and monument preservation. Above all, if the planned measures include the insulation of external façades, compromises for preservation-worthy or protected buildings are difficult to find. With the insulation of the outer shell, valuable Baukultur façade elements, characteristic window distributions, window depths, and window openings often disappear, and projections and recesses are reshaped through an exterior wall insulation. Not only at the level of the object, but also at

Baukultur Reveals Qualities

Renovation and Conversion of an Office Building in Munich

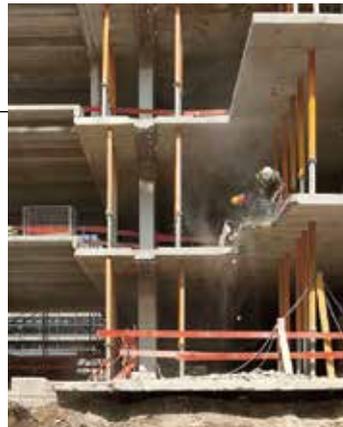
In 2009, Münchener Rückversicherungs-Gesellschaft AG (Munich Re) acquired a neighbouring building near the English Garden in Munich to expand its headquarters. Nine-metre-deep interior areas without daylight and the new usage requirements made a general renovation and expansion of the 26-year-old building necessary. For this, an invited, two-stage architectural competition was announced the same year. The Sauerbruch Hutton office was awarded the contract, which also provided for a comprehensive energy renovation. The appearance was made contemporary with a new exterior façade. Generous cuts in the gridded existing structure made two covered atria possible for natural cross ventilation. Improvements also resulted in the relocation of the main entrance and the expansion by a fifth floor. Environmental and spatial requirements were taken into account during the conversion. The resulting Baukultur added value is also shown in the details. The revealed concrete structure received an increase in quality, which corresponds to a new exposed concrete surface. Added to this are the environmental gains. With the primary energy saved through the conversion, the building could theoretically be heated for 34 years.

Facts

Planning and Construction: 2011–2014
Developer: Münchener Rückversicherungs-Gesellschaft AG, Munich
Planner: Sauerbruch Hutton

Size: 49,800 m² GFA

More information in the project description in the appendix



BAUKULTUR AT A GLANCE

- Conversion and expansion instead of demolition and new construction
- Energy concept as essential component of the architectural competition
- Visualisation of existing qualities through spatial incisions

the neighbourhood level, a gradual change of the typical cityscape to a characterless appearance is to be feared. The insufficient consideration of the Baukultur is persistently reflected in the current practice of energy renovation.

With 3 %, the share of monuments in the building stock has only a negligible impact on the nationwide energy balance. From the Baukultur point of view, the preserved appearance is to be given priority in case of doubt, because many historic quarters already have exemplary energy conditions due to the high structural density and the compact building forms and construction methods. However, if historic buildings have to undergo energy renovations – in particular settlements of the 1920s and 1930s, as well as the post-war modern era – the Baukultur and monument preservation compatibility has a high priority. This succeeds in the preservation-worthy building stock through a changed prioritisation of the possible individual measures. The biggest effect for saving energy is the renewal of the heating system. Municipalities should clearly highlight this efficiency factor during consultations on the energy renovation of private real estate and advertise accordingly. Second in effectiveness are windows and the insulation of external façades. Energy-optimised windows can be produced comparatively easily in accordance with monument protection specifications or according to a historical model. Again, municipalities are called to promote a window exchange. Insulations on the roof and in the cellar have additional savings effects. The exterior façade has only minor effects for the building's energy optimisation and should be the last option. But even if the insulation of the façade is unavoidable, solutions can be found in line with monument protection specifications, as the example of a protected brick settlement in Hamburg shows. In the double-shell masonry, the intermediate space was filled with in-situ foam and not only ensures improved thermal insulation, but also stabilises the masonry.

Throughout the city, the Free and Hanseatic City of Hamburg is making exemplary progress to harmonise Baukultur and energy renovation. The city has created a qualification opportunity as a "brick consultant", whose job it is to advise the owners both from an energy and an urban design point of view. Unlike the energy consultants, the professional title is protected and can only be obtained through training provided by the Chamber of Architects. The subsidised measures are commissioned and remunerated by the Hamburgischen Investitions- und Förderbank (Hamburg Investment and Development Bank). With the support of a committee of employees from the Behörde für Stadtentwicklung und Wohnen (BSW, Ministry of Urban Development and Environment) and representatives from the housing industry, it is clarified whether a building is brick-relevant. As part of the KfW funding programme Efficient Monument Building, the federal government has also introduced the Energieberater für Baudenkmale und sonstige besonders erhaltenswerte Bausubstanz (Energy Consultant for Monuments and other Preservation-worthy Structures). The qualification of such a consultant has to be recognised by the responsible coordinating body. Corresponding training will be offered by the Chambers of Architects, among others.

The renovation of the half-timbered building Lange Gasse 7 in Quedlinburg shows how a high-quality renovation of a monument can succeed. The exemplary renovation proves that even without the insulation of the exterior façade, heating demand in the low-energy building standard can be achieved. In the pilot project, various measures – different interior insulation systems, ceiling structures,

heating systems, and window types – were tested. Ultimately, environmental interior insulation systems – made of lightweight wood loam and thermal insulation loam, among others – in conjunction with different heating systems (under-floor heating, floor-to-ceiling wall heating, panel radiators). If the external façade does not represent a protection-worthy component, the energy renovation of the existing building can certainly also be used to improve the appearance. In Munich-Haidhausen, for example, an office building from the 1950s received an entirely new façade through energy-efficient refurbishment. A pilot project of the BMUB in Neu-Ulm from 2017 is pursuing a more technologically sophisticated approach. With two residential blocks from the 1930s, the Energy-efficient Building Plus standard was achieved with the help of high-quality insulation and modern building technology for the use of renewable energies. The buildings now generate more energy than they consume. The BMUB-funded model serves as an example for the further development of existing buildings in terms of energy efficiency and production. The Senate Department for Urban Development and Environment in Berlin illustrates in the publication “DenkMal energetisch” successful examples for the energy renovation of monuments. In addition, important savings potentials for which cities and municipalities can raise awareness – such as user behaviour in the building – are addressed.

Baukultur compatibility also means that housing must remain affordable in the cities. Increasing base rent after an energy renovation should be compensated by saved additional costs. In the extensive renovation of the Märkisches Viertel in Berlin, this largely occurred as a result of the evaluation of the owner Gesobau. Individual energy measures can also be part of regular maintenance without a comprehensive energy renovation being undertaken. In some cases, minor preservation measures can help to upgrade existing buildings and adapt them to today’s living standards.

Neighbourhood-based Approaches Neighbourhood-related measures are another important step towards energy-optimised cities and building stocks. Especially historic quarters with many monuments are thus relieved of the pressure to optimise the individual buildings in terms of energy. For this purpose, KfW is providing the Energetische Stadtsanierung (Energy-efficient Urban Renovation) funding programme with an annual amount of 50 million euros from the Energy and Climate Fund. The funding programme is aimed at energy-efficient neighbourhood concepts and renovation managers who implement measures from the concept. The concept should also take into account Baukultur issues. The 65 pilot projects include, among others, the historic settlement centre of the city of Herbolzheim in Baden-Württemberg with half-timbered houses and burgher houses from the Baroque period, as well as the Kernstadt Nord quarter in Speyer. In Herbolzheim, a combined woodchip and gas heating system was built on the former town hall car park to supply the surrounding buildings with local heat. A renovation manager supervised the implementation of the measure. In Speyer, the area under investigation included around 1,200 buildings of various sizes, architectural styles, uses, and building conditions – many of which are buildings under monument protection. Before concrete measures are implemented here, workshops with architects, craftsmen, energy consultants, and the monument protection authority are to be initiated with the aim of jointly developing technical compromise solutions for climate protection and

monument protection. In general, the networking of the various actors in the district – both at the concept level and in the implementation of funded pilot projects – is beneficial for the Baukultur quality of the measures. The BMUB has published the results for all pilot projects in 2017 in the publication “Energetische Stadtsanierung in Praxis III” (Energy-efficient Urban Renovation in Practice III).

There are other examples of how to take account of the existing building stock in the energy renovation of neighbourhoods. Hamburg is expanding its district heating network and is currently investing in an aquifer heat storage system with which waste heat – for example, from industrial plants, data centres, or cold storage facilities – could be cached for winter heat demand. A quarter of a million households and commercial areas are to be supplied with this heat. Successful solutions can also be found on a small scale. The award-winning Schottenhöfe in Erfurt illustrated in 2012 the possible shared supply of monuments by supplementing new buildings with the plus energy standard, and thus clearly promoted the neighbourhood-based approach to the energy renewal of historic quarters. The city of Iphofen has developed an energy usage plan in this context, which among other things plans to expand the district heating network so that additional roof structures for the production of renewable energies will become obsolete. This preserves the appearance of the historic roof landscape.

Resources and Material Cycles

Material Stock and Recycling The building stock is characterised by different building year categories and their materials. The amount of total material consumption is also different, and is heavily dependent on the construction activities in the individual year categories. Until 1870, much was built with straw, loam, wood, and sometimes also with bricks. The building year categories 1871 to 1918 and 1919 to 1948 are characterised by a high proportion of solid bricks. With the changes in the construction method for ceiling and floor slabs – around 1919 – concrete gained in importance. By 1949, at the latest, concrete was the most commonly used building material, leading to less use of wood and solid brick. Since 1995, concrete has been the main component of a building with approximately 70 %. In addition to the different material compositions, regional differences can also be determined, which are due to climatic influences. From the point of view of Baukultur, these structural characteristics are advantageous for a local identity. However, a particular challenge in building stock development is that, after a short time, buildings are no longer exclusively characterised by typical materials from the period of origin. Through renovation and conversion, a mix of different building materials and construction methods is created. Thus, a building from the 1920s that was rebuilt in the 1950s receives similar structural or health-endangering properties as the corresponding new buildings of this time.

With their existing structures, cities bind a multitude of building materials and thus resources and materials. This deposit is also referred to as anthropogenic storage. As the stock of material continues to grow through periodic new construction projects, the anthropogenic material storage is permanently under construction. It can be considered raw material storage of the future and forms the basis for the idea of urban mining. This means that already built materials are

Baukultur Opens New Perspectives

Mannheim Baroque Palace – Contemporary Studying in an Architectural Monument



Historic buildings often offer few expansion possibilities, especially if extensions are to remain as invisible as possible. Thus, the cellar in the Mannheim Baroque Palace was developed and enlarged under the palace garden. The second largest baroque palace in Europe, after Versailles, is not preserved as a museum like comparable structures, but has served as the location of the University of Mannheim for decades. Also among the users is the Mannheim Business School (MBS), a spin-off of the university education established in 2005 for management education. However, due to increasing numbers of students and growing renown, the previous rooms were neither large enough nor contemporary or representative. Moreover, with its rather rigid structure of narrow but deep rooms, the palace offered hardly any possibilities for conversion, and an extension would have seriously disturbed the monument. Therefore, the decision was made to build an underground extension of an old heating system with a coal cellar in the western courtyard of the Ehrenhof, based on a

design by the architects schneider + schumacher. The financing was provided by the MBS, which receives the right of use for twenty and optionally ten further years. Then the centre falls to the university as landlord.

Initially, workers had to dig to a depth of seven metres in the palace, which was only possible with small excavators, tracked vehicles, and conveyor belts due to the limited space available and the valuable building fabric. The breaching of the outer foundations also had to be particularly low in vibrations. Detected cavities in the foundations were repaired. The actual new building was built outside the palace walls.

Access is via a historic arcade on the ground floor, in which a box with the required ancillary rooms has been put. From a mezzanine you can see – though already underground – through a wide glass front into the palace park. Thanks to the large ceiling, one can already see almost the entire study and conference centre. Nowhere do walls obstruct the view, because room divisions in the upper areas have been made

in glass. The resulting mirroring and reflections increase the space visually.

The spatial programme was developed directly from the teaching activities: first, the students gather in a lecture hall, then work on case studies in small groups, which are then presented in the plenary. This required two lecture halls, a meeting area, and ten open niches for group work. Five of them are arranged on the mezzanine, the remaining five below. The two all-red lecture halls can accommodate 60 people each. Like anatomical theatres, they are cut as depressions in a base. The windows bring daylight into the lecture halls, which is spread by a vaulted ceiling supported by indirect lighting. An open assembly area and a conference room separated by sliding doors are located directly on the concave curved glass front. Comparable to a precisely set piece of land art, it is the only visible intervention in the palace garden. The fact that the lawn lowers like an amphitheatre in front of the glass front enhances the quality of stay: a certainly most welcome gain, given that the palace garden has been cut up by the expansive access routes to and from the nearby Rhine bridge for the car-friendly city.

Contemporary architecture and landscape architecture, together with a sophisticated daylight and artificial light concept, form a natural unity with the architectural monument – completely in the spirit of architect Michael Schumacher, who wanted nothing less than to make the baroque palace “even more beautiful”.

Facts

Planning and Construction: 2014–2017
 Developer: Vermögen und Bau
 Baden-Württemberg, Amt Mannheim und
 Heidelberg
 Planners: schneider+schumacher
 Planungsgesellschaft mbH, Frankfurt;
 Planungsbüro Borst, Leimen;

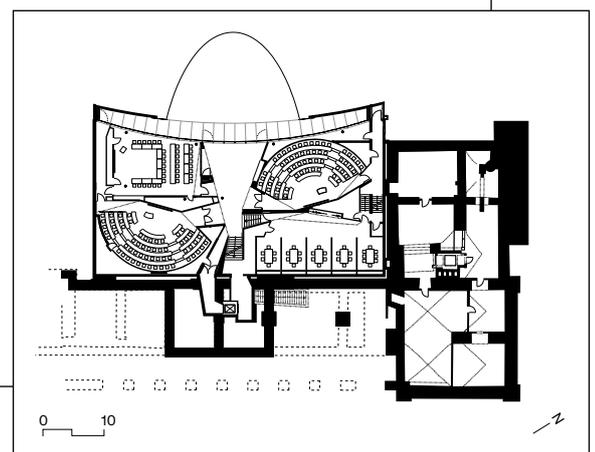
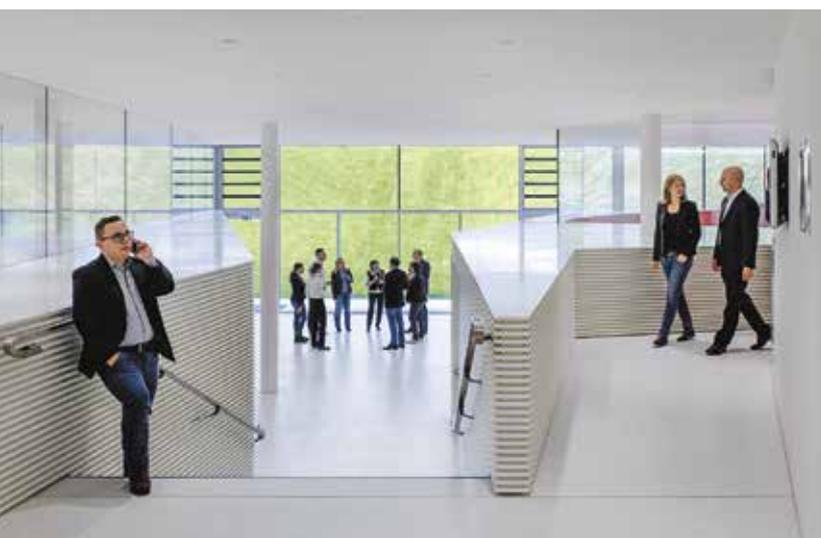
Ingenieurgruppe Bauen, Mannheim
 Size: 1,700 m² GFA
 Cost: 9 MM euros

More information in the project description
 in the appendix



BAUKULTUR AT A GLANCE

- Utilisation of obsolete technical ancillary rooms
- Activation of basement levels through extension and exposure
- Further development of the monument, contemporary architecture, and use
- New open space quality
- Forward-looking financing and operating concept

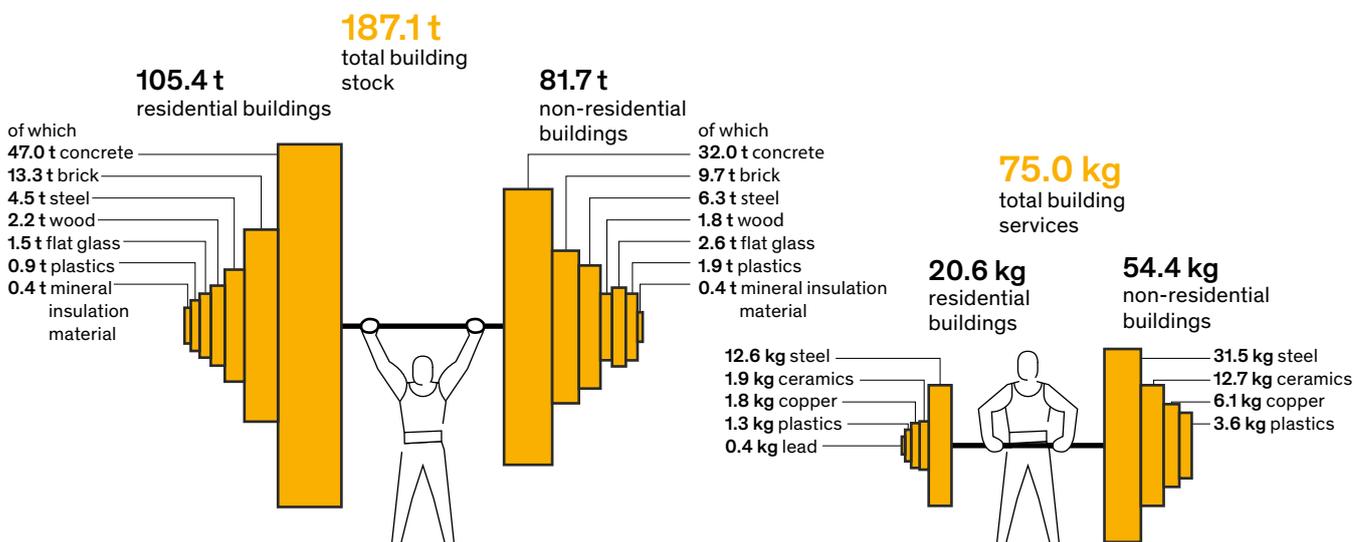


used as secondary raw materials in the course of a demolition, and thus the consumption of primary raw materials is reduced. The use of these building materials, which have already been used over the years and centuries, contributes significantly to the preservation of Baukultur and the local identity of cities – an approach that can also be described as the “materialisation of history”.

The use of recycled materials cannot fully compensate for the future material requirements for construction activities. This is not least due to the low demolition rate in Germany. There are approximately 22 million buildings in Germany, around 18.8 million of which are residential buildings. In 2016, a total of 17,650 complete buildings – including 7,278 residential buildings – were demolished. Thus, the demolition rate is about 0.08 %. Every year, 200 million tons of construction and demolition waste account for 55% of the total demand in Germany. Some 80 % of the construction and demolition waste is recycled, yet only a small part of it as recycled construction material in building construction. In 2010, the recycling rate in building construction was 6.6 %. The processed objects are predominantly used in road construction for landscaping and path construction. This is termed “downcycling”, because the recycled building materials are used in areas that no longer make special demands on the material. The cautious handling of the topic is due in particular to a rather negative image, as well as a lack of knowledge and experience in dealing with secondary building materials. Furthermore, additional costs for the selective demolition of recyclable materials, complex treatment processes, and lack of sales markets cause an adverse market situation. Nevertheless, the potential of recycling is increasingly recognised in the construction industry. This is confirmed by the study “Bauwirtschaft im Wandel. Trends und Potenziale bis 2020” (Construction in Transition. Trends and Potential until 2020) by Roland Berger GmbH and Uni-Credit Bank AG, which see business potential that can be expanded in the recycling of building materials and urban mining.

Building material stock per inhabitant in Germany 2016

Source: Wuppertal Institut 2017



At the municipal level, only a few pilot projects have been implemented thus far. In 2013, the Kunstmuseum in Ravensburg was made of recycled bricks and – according to architect Arno Lederer – was creatively given its “own charm” in the process. On the other hand, the recycling idea is more frequently used in the renovation of historic buildings than in new construction projects. At least for monuments, authentic building materials are given priority in a renovation. For example, the Bavarian State Chancellery promotes the use of historic building materials in projects in the LEADER funding guidelines for the period 2014 to 2020/23.

Recoverable and Non-recoverable Materials The recycling of building materials has a centuries-old tradition. Of course, building materials from destroyed buildings were reused until the early 20th century, and the reconstruction of war-torn cities was often made from rubble. But as building materials change, so does the recyclability. Many of the building materials used in the last century are now classified as hazardous to the environment and health. In particular, dealing with asbestos – which has been used in a variety of products since about 1930 and has been banned since 1993 – becomes a major challenge when demolishing or renovating existing buildings. According to the Federal Environment Agency, about 4.4 million tons of asbestos were used between 1950 and 1985, and a large number of buildings were built or renovated using building materials containing asbestos; 3,000 to 5,000 different products were used. In addition, it can be assumed that building materials made of old mineral wool were used in all buildings constructed or renovated before 2000, from which cancer-causing fibre dusts are released during interventions. Synthetic materials – for example, the carcinogenic pentachlorophenol – were also used for a long time as wood preservatives and today make the recycling process more difficult. The BMUB lists further building materials hazardous to health in its guideline “Nachhaltiges Bauen” (Sustainable Building) – including, for example, lead, which was frequently used for drinking water pipes between 1920 and 1949.

Even today, the pollutant contents of a new product are often not sufficiently evaluated prior to marketing, so that both their hazardous effects and their later recyclability are unclear. On the part of the construction industry, attention should be paid even more to the ease of reprocessing and product labelling of systems, so that it is easier to recycle building materials in the future. In particular, the thermal insulation composite systems (ETICS), currently used widely, are still considered non-recyclable. This is the conclusion of the study “Rückbau, Recycling und Verwertung von WDVS” (Dismantling, Recycling, and Utilisation of ETICS) by the Fraunhofer Institute for Building Physics and the Forschungsinstitut für Wärmeschutz e. V. (Research Institute for Thermal Insulation). New findings are expected in this context from a Europe-wide project launched in 2017, which aims to produce high-quality recycled materials from polystyrene insulation, but the results will not automatically be transferable to all types of insulation.

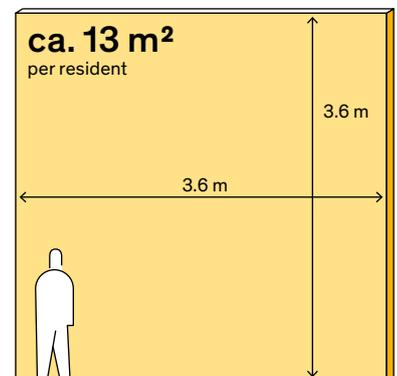
By contrast, wood is easily recyclable. Also materials such as metals and steel – which are used for building services – can be recycled. While a building undergoes several renovation cycles and can last for many hundreds of years, the lifecycle of building services usually only lasts about 20 years. A prerequisite for recyclability is that the built-in building services can be separated from the building fabric – thus no merger of building services and building construction

Built thermal insulation systems in Germany 1960–2017

Source: Destatis 2018; Fraunhofer IBP; Statista 2017; www.branchenradar.com 2018



With about 83 MM inhabitants that is



Baukultur Reactivates Places of Encounter

Sangerhausen Train Station – Becoming the City’s Welcome Gate with New Uses



As in many small towns, Deutsche Bahn has also abandoned its station building in the city of mining and roses of Sangerhausen in southwest Saxony-Anhalt. With the demise of mining in 1990, economic change began in the region; as a result, Sangerhausen lost almost a third of its population. Parts of the old town could be redeveloped with funds from the Saxony-Anhalt urban development subsidy, but the northerly-lying station had been virtually empty since the late 1990s. Inaugurated in 1963, the building is considered the first new station building in the GDR and, together with the forecourt and a round kiosk, is a protected building. In 2009, the city bought the ensemble – consisting of a spacious lobby with two side wings – and sold it in 2012 to its urban housing association SWG. Through cooperation of various municipal institutions and the settlement of public institutions, the station could be revived.

Initially, however, it had to be ensured that, in addition to the local approval authorities, the Federal Rail Authority would

not also be responsible. For this purpose, the station building had to be detached from all railway facilities. The renovation concept by the Leipzig S&P-Gruppe provided for a substantial preservation of the original building fabric, especially in the reception hall and on the façades to the forecourt. These are provided with upright blue clinker bricks that have been refurbished. On the left wing, two doors were closed and the remaining window sections adapted. Because of the protected façade, an interior insulation was chosen. In order to prevent the station concourse from overheating in the summer, an energy-optimised post and beam façade was rebuilt according to the historical model, with smoke ventilation openings integrated. The original station clock has been supplemented by the lettering “Bahnhof” (station), which matches the design. In the hall, the almost undamaged terrazzo floor slabs were cleaned and integrated into a colour-matched guide rail for the blind. Even the pendant luminaries from the period of construction only needed cleaning – likewise the colourful wall

mosaic by Wilhelm Schmied. It shows motifs from the everyday life of Mansfeld Land: agriculture, mining, and metallurgy, but also a group of cyclists. Plaster surfaces were restored according to their original version, so that the harmonious colour concept of blue, light red, beige, and grey can be experienced once again. The display window of the reception building was extended into the hall. A bookshop has now moved in there. In the hall, a staircase leading into the former Mitropa restaurant was removed and benches were created from its stone steps. The right wing, which once served as a luggage depot and workshop, received larger windows and is now recognisable as part of the overall system. In it there is a restaurant with public sanitary facilities. The city library and a public office have moved into the left wing. Accommodated in the main building, among others, are tourist information, a municipal meeting room, two shops, as well as a Deutsche Bahn travel centre, and a service point for the local transport operator Abellio Rail Mitteldeutschland. In the forecourt, a bicycle pavilion was built and a taxi rank made available. Easily accessible by public transport, the station is animated by additional public traffic and new user groups. As a welcoming, living monument, Sangerhausen has received a new flagship with the station.

Facts

Planning and Construction: 2014–2016
 Developer: SWG Städtische Wohnungsbau GmbH Sangerhausen
 Planners: S&P Sahlmann Planungsgesellschaft für Bauwesen mbH, Leipzig; plandrei Landschaftsarchitektur GmbH, Erfurt; Ruffert Ingenieurgesellschaft für Tragwerksplanung mbH, Erfurt; HKL Ingenieurgesellschaft mbH, Erfurt

Size: 4,200 m² GFA
 Cost: 7 MM euros
 Subsidies: 5.8 MM euro, NASA: REVITA- und Schnittstellenprogramm, SALEG

More information in the project description in the appendix



BAUKULTUR AT A GLANCE

- Public-public partnership
- Urban housing association as developer
- Clear mission statement and professional process support
- Synergy effects by combining different municipal uses
- Revival through new user groups
- Preservation of original building fabric in line with monument protection specifications

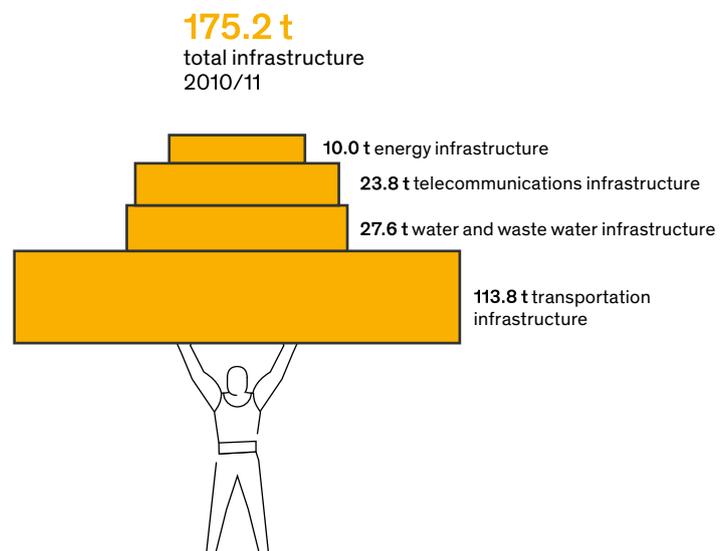


has occurred. Currently, the opposite trend can be observed. In this context, today planners and the construction industry carry the responsibility. Decorative features, such as bathroom tiles, return to the material cycle after about 20 to 25 years in the course of renovations. They can be easily reused if properly dismantled. Preserving original bathroom tiles of yesteryear professionally allows the preservation of authentic interiors in the historic building stock. Accordingly, a tile business in Hamburg buys old remainders after company closures and earns 3 million euros in annual sales with this business idea.

Historic building materials are already playing a pioneering role in this regard. Initiatives have already emerged for individual building materials and components, such as the Internet-aided Archiv historische Dachziegel (Historic Roof Tile Archive), which is supported by the Bundesverband der deutschen Ziegelindustrie e. V. (Federal Association of the German Brick Industry), among others. In the business association Historische Baustoffe e. V. (Historic Building Materials), several providers of historic building materials and antique building materials have merged and work closely together with monument preservation authorities on the reuse of building components. Municipalities are also showing occasional commitment in this area. For example, the World Heritage City of Quedlinburg has been collecting and storing historic building materials, windows, and doors as part of a non-commercial project since the early 1990s, and procuring them on request for suitable renovation projects. The offer of building component exchanges is aimed both at private individuals as well as craftsmanship businesses, construction companies, planning offices, demolition companies, and authorities. In Germany, eleven building component exchanges have been set up since 2006 with the help of funds from the DBU. Five of the existing building component exchanges have merged in the Germany's building component network and offer building components online. In Austria, the project consortium BauKarussell was awarded the Wiener Umweltpreis (Vienna Environmental Prize) 2018 for the reuse of building materials on a large scale. Together with builders and project developers, it was possible to avoid 450 tons of waste

Material storage infrastructures per inhabitant in Germany

Source: Wuppertal Institut 2017



by means of the environmentally friendly dismantling of two buildings in Vienna; 171 tons of contaminants were removed and another 74 tons of waste could be sorted for recycling. At the same time, workers from social economy enterprises were qualified.

Corresponding business models illustrate how the use of primary raw materials can be reduced and sustainable development promoted. Nevertheless, they are currently still niche phenomena. It is important that these approaches gain in importance and establish themselves on the broad market, because they notably combine Baukultur appreciation with the circular economy. Important for the perspective reuse of building materials would also be the nationwide inventory in a resource cadastre, which quantitatively and qualitatively records the stock of bound materials. Thus, the periods for the availability of the built materials and the associated waste streams or recovery could be estimated. This basis of data is necessary to improve recycling possibilities. On behalf of the Federal Environmental Agency, a model for the mapping of the anthropogenic storage is currently being drafted. Among others, the data should include information on the duration of certain materials in different sectors – such as transport, energy supply, and construction – as well as their spatial and temporal availability as secondary raw materials.

Sustainable Building Building in cities and metropolitan areas is one of the largest resource consumers. Alone 60 % of global material use, 50 % of waste, and 35 % of energy use and emissions are caused by construction activities. Continuing urbanisation processes and economic growth are leading to further increases in demand for raw materials. In Germany, 517 million tons of mineral raw materials – metals, industrial minerals, stones, and earth – are used every year; 90 % of the extracted mineral raw materials are used solely in the construction sector. The current increase in construction activity, in particular in large cities, results in an increased demand for raw materials. The worldwide scarcity of raw materials – such as copper and sand – is given little attention in this context, if there is an urgent need for short-term new construction projects in municipalities. At the urban development level, the construction of multifamily dwellings, in particular, while simultaneously reducing the construction of single and two-family homes contributes to a sustainable construction method. At the building level, the reutilisation of existing buildings is still one of the most effective measures in terms of resource conservation. If new construction cannot be avoided, the building should be used as long as possible. The longevity of the materials used and the adaptability of the building structure to changing requirements are important parameters in this context. In addition, the “Triple-Zero-Prinzip” (Triple Zero Principle) by Prof. Dr. Werner Sobek offers orientation towards a consistently sustainable approach: buildings and city districts are to be constructed in such a way that no more energy is consumed than generated from renewable energies (Zero Energy), no CO₂ emissions (Zero Emissions), and full recycling (Zero Waste) is possible.

The Block Research Group (ETH Zurich) is pursuing another approach. Their research focuses on supporting structures, in which the use of materials can be reduced to a minimum. Gothic sacred buildings and traditional construction methods using local materials serve here as role models.

A sustainable, resource-saving construction method can also be promoted by a stronger use of wood as a building material. In general, the topic of “timber construction” is gaining importance in Germany. In 2016, the timber construction quota for new multifamily dwellings almost doubled from 2.3 % to 4 %. For comparison: in Switzerland, the timber construction rate of apartment buildings was 10.3 % in the same year. On the one hand, wood is regarded as climate-neutral due to its ability to store carbon under sustainable management. On the other hand, as a renewable raw material wood can replace building materials that are produced from finite resources. In the 2013 study published by the TU Darmstadt, “Vergleichende Ökobilanzbetrachtung und Lebenszyklusanalyse mit erweiterten Betrachtungen” (Comparative Life Cycle Assessment and Life Cycle Analysis with Extended Considerations), the potential of lightweight wood constructions versus solid construction in terms of Germany’s climate protection targets became apparent. Lightweight construction methods can massively reduce CO₂ emissions. In the programme ProgRess and the continued development “ProgRess II”, the federal government is working to strengthen the use of construction products from renewable raw materials and the demolition of buildings that are no longer usable for the recovery of building materials. In the ZukunftBau funding initiative, the Runder Tisch Nachhaltiges Bauen (Round Table Sustainable Building) project develops solutions for greater consideration of the demolition and recycling friendliness of buildings, with the help of the Bewertungssystem Nachhaltiges Bauen (BNB, Assessment System for Sustainable Building). Furthermore, there is a guide from the BMUB for sustainable construction, in which a resource-friendly construction method is presented. Since 2013, the guide has been binding for the BMUB; for states and municipalities it is recommended. For orientation, however, it is aimed equally at the private sector.

The Bavarian environmental guidelines provide for the consideration of wood as a building material wood in all planning considerations. The State Ministry of the Interior, Construction, and Transport and the State Ministry of Nutrition, Agriculture, and Forestry have jointly published the booklet “Holz – zeitlos schön” (Wood – Timelessly Beautiful) to promote examples of the building material. The tax office in Garmisch-Partenkirchen, a dormitory in Herrsching near Munich, and many other objects illustrate the freedom of design that the building material opens up for architecture – not only in rural areas, but also in urban settings. Wood can also play a role in infill development in the existing building stock. Two convincing examples can be found in housing estates of the 1950s in Hamburg-Alsterdorf (completed in 2010) and in Munich on the Innsbrucker Ring (completed in 2012).

New Building in the Historical Context

Low appreciation for new buildings

The surveyed municipalities are rather critical of the Baukultur value of building projects that have developed in their city since 1990. Nearly a third thinks that the Baukultur value is (rather) high, 69 % think that the Baukultur value is (rather) low. MS

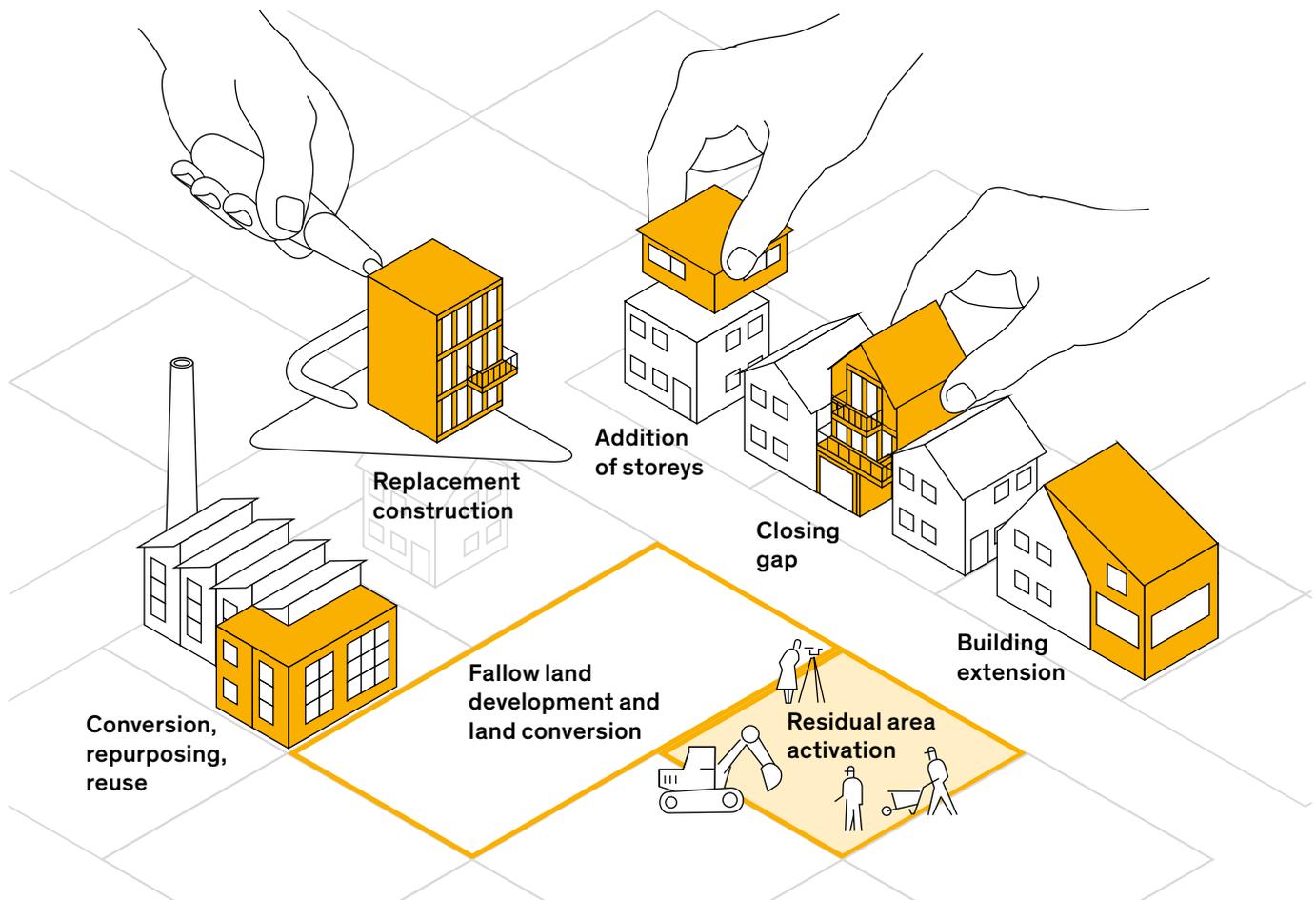
Quality A high-quality continued building of cities and communities requires building in integrated locations. Qualities arise when building projects, as a new temporal layer, embed themselves in the existing urban structure in a meaningful, enriching, needs-based, and user-friendly way

At the urban development level, the Danish architect and urban planner Jan Gehl has named the quality feature of a “city of visual contact”. Scale, pleasant climatic conditions, and positive sensory impressions are just as important as

sights, places for communication, seating, or the protection against traffic and accidents. At the object level, good, inner-city, new construction projects react to their urban environment and connect to existing buildings. This is especially true for historically sensitive situations. Here references to the settlement history, to regional building traditions and building materials, as well as the orientation to the scale of the existing buildings are important starting points, in order to do justice to the “Genius loci”. The expert group for urban development monument preservation appointed by the federal government has named important indicators, in this regard, for how new construction projects can be fit into the environment. The group points out in its 2015 position paper that attention must be paid to the consideration of local building traditions, and a thorough examination of the urban development context has to take place. The state of Brandenburg has developed a “Checkliste Baukultur” (Baukultur Checklist) for property owners and builders – especially in small towns and communities – which enquires about design aspects such as local building materials, healthy construction products, the scale, and the consideration of the local colours in planned construction projects. Assistance for municipalities is also provided by design statutes, in which the external design of existing or new buildings in a predominantly

Possibilities for conversion

According to the Federal Foundation of Baukultur



Baukultur Creates Identity

Iphofen's Historic Townscape – Design of a Lively Centre



With 4,600 inhabitants, the Lower Franconian town of Iphofen is indeed small, but it has a historic town charter and a completely preserved city wall. The 300 historic properties, including 130 individual monuments and several wineries, are supplemented with new buildings. The old town is popular as a place of residence, workplace, and tourist destination; thanks to a local building materials manufacturer, which is active worldwide, the economic situation is excellent. However, neither the intact town centre nor the economic location advantage is a sufficient reason for Iphofen's success. Decisive are the forward-looking ideas for the townscape, for Baukultur, and for cohabitation, in which investment has been made for decades. Clear rules were set up and the population was convinced through mediation and consulting. Since 1980, Iphofen has taken part in urban development measures. In order to preserve the old town as a contemporary residential area, the renovation process was extended to private property. Thus in order to preserve the historic appearance of the town,

a design statute was passed in 1984: it requires the preservation of the small-scale development structure, and prohibits, inter alia, flat roofs, visible brickwork, metal and plastic façade cladding, roughcast, as well as shutters and gutters that do not consist of copper or galvanised sheets. In the first instance, this sounds strict, but the developers receive funding and personal consultation based on their resources. The residents of the old town should not have more expense than builders in a new development area. "We are not a hindrance agency. We want there to be building", says Mayor Josef Mend, who also wants to convey the long-term economic value added of the monuments that are renovated with preservation specifications. Particularly successful measures are awarded a prize every three years.

The consideration of the individual object instead of the work with abstract plans and instruments also takes place during the energy renovation. A municipal energy use plan contains information on individual measures for various

types of buildings, such as roof insulation, window replacements, interior insulation, and insulation plaster. Styrofoam is largely dispensed with, because the Franconian sandstone does not tolerate it. All public and many private buildings are supplied by a heating network, which runs on wood chips from the nearby forest.

Numerous new buildings show that the design rules do not harm creativity. Their architecture may be contemporary, but it has to be integrated – and above all it has to good in terms of design and craftsmanship. With the opening of the wine shop in 1999, the local wine industry received a showcase. In 2010, a modern extension for a private art museum followed. In 2015, the municipal service centre was completed. The complex – which consists of an old schoolhouse – contains city administration offices, the tourist office, the city archives, the library, and several shops.

In Iphofen, urban development policy is supported across party lines. Helpful in the implementation is a continuity of staff in the construction department and the mayor's office, which considers planning to be a matter of chief importance. Iphofen has created rules and incentives and thus strengthened its character. The interaction between landscape, culture, gastronomy, and architecture has meanwhile also been successful in the market niche of Franconian wine tourism. At the same time, the individual old town properties have become attractive for young families as a residential area. From the overall picture down to the last detail, everything follows the idea of a desirable place to live, about which Mayor Mend says, "We do not want to live in a museum. Our old town is residential space, living space, and workplace."

Facts

Urban Renewal: since 1980
 Design Statutes: since 1984
 Important New Buildings: since 1999
 Planners: SBS-Planungsgemeinschaft, Harmut Schließer; Plan & Werk Büro für Städtebau und Architektur, Bamberg; Böhm & Kuhn Architekten, Iphofen

(wine store, museum, service centre);
 Architektur Büro Jäcklein, Volkach (service centre)

More information in the project description in the appendix



- BAUKULTUR AT A GLANCE**
- Living and working in historic town centre
 - Design rules for renovations and new buildings
 - Consideration of individuation objects instead of abstract tools
 - Financial support and personal consultation
 - Energy use plan
 - Architecture as part of a tourist niche
 - Baukultur a matter of chief importance



historic environment is specified. Design statutes are part of the building regulations and are regulated in the respective state building regulations or integrated into urban development planning instruments. The job of developers is to find a design vocabulary and design that can be integrated into existing buildings. On that note, the city of Güstrow has for the first time also awarded the annual developers' prize for exemplary renovations in the Old Town to a new building with residences for seniors. According to the jury, the building wins them over with its high-quality and self-confident architecture without "showing off" in the process.

Using typical regional building materials, suitable proportions, or roof shapes, numerous references to the urban planning context can be made. New buildings do not thereby inevitably receive a traditional appearance. Construction traditions can also be cited with modern design elements. For example, the new art museum in Ahrenshoop recalls the characteristic thatched houses in coastal regions just with its cubature. In contrast, the metal façade speaks a purely modern architectural language. In turn, the Landesmuseum am Domplatz in Münster captivates with its modern cubature, with a pointed building edge and recessed forecourts. The building material used is the local beige-grey sandstone in combination with bright concrete and plaster surfaces, so that the new building fits in well with the historically significant environment. The extension of the Melanchthonhaus, which was built on a vacant lot in Wittenberg in 2013, corresponds to a modern-style front gable comprising a low saddle roof with building elements of the neighbouring structures. The masonry deliberately avoids competition with the historically valuable plaster façades of the adjacent buildings. In Iphofen, the integration of new buildings into the historic city centre also succeeds through the use of building materials and types of construction that are related to the neighbourhood.

Just how important the quality of new buildings in the historical environment is for the population is shown by the Gemeinschaft zur Förderung Regionaler Baukultur e. V. (Community for the Promotion of Regional Baukultur). Here, committed citizens across Germany have joined forces with professionals to form a network. Working at the city level, the aim is to increase the awareness of citizens and politicians, developers, architects, craftsmen, and building contractors, for site-specific building in the historical context in projects that impact the cityscape.

Reconstruction The significance of historic buildings for an attractive, identity-creating cityscape is also evident in the political decisions made in many places to implement new construction measures as a reconstruction. At least since the reconstruction of the war-torn cities, many restored buildings have dominated the cityscape – for example, in Berlin the Charlottenburg Palace, the Rotes Rathaus, the Brandenburg Gate, or the Oberbaum Bridge. Today they are natural and touristic parts of the cityscape.

There are different motives in the cities and communities for deciding on a reconstruction. Some cities, with their façade rebuilt according to a historical model, pursue the goal of preserving a largely intact historic cityscape and avoiding disruptive design elements. In other places, it is not about the preservation of an intact cityscape, but the restoration of formerly identity-creating buildings. Examples in this context are the reconstructed

Knochenhaueramtshaus (Butchers' Guild Hall) in Hildesheim from the 1990s or the reconstruction of Herrenhausen Palace in Hanover 2008.

Many reconstructions have in common that they only externally reflect a historical appearance and simulate former city spaces with their façades. The interior construction of the buildings, the spatial sequences, and the building services usually correspond to today's ideas, technologies, and regulations. This makes them inauthentic structures, which are controversial among experts. Opinions differ as to whether reconstructions are legitimised solely on the basis of authentic relics or even due to precise construction documentation. Frankfurt is currently exploring its urban roots with the Römer-Neubau, with meticulousness and admirable craftsmanship. Urban society and guests are convinced by the results. Thereby, it is forgotten that with the Technical Town Hall of 1970 previously on this location, an important building of the post-war modern era was demolished. Reconstruction wishes are therefore obviously based on temporal layers, craftsmanship, fragmentation, and a mixture of what is currently perceived by the majority as beautiful. The restoration of a temporal layer can be important for the identity of a city. Basically, the further development of authentic cityscapes, which takes into account the concerns of Baukultur and avoids historical backdrops, is a central task of urban planning.

The decision between the reconstruction of a lost temporal layer and a modern-style solution can only be made site-specific and with the involvement of citizens. The aim of Baukultur is to preserve as many temporal layers in cities as possible, and to connect them with one another through the good design of public spaces. This creates vibrant places that have grown over many centuries and also illustrate this long development period.

Urban repair reconstructions refer not only to the detailed restoration of individual buildings, but also to the restoration of the historical city plan. In the reconstruction of war-torn cities, this principle was also applied nationwide. The Prinzipalmarkt in Münster, which was recreated in the 1950s on the basis of a historical model with simplified forms, is still exemplary today for a reconstructed urban space. Only a few cities, such as Hanover, opted in part for new plans, in the sense of the car-friendly city. Meanwhile, the oversized traffic areas are being scaled back.

When urban repair takes place, the medieval city layout is usually taken as a model. In the urban development funding programme Städtebaulicher Denkmalschutz, the restoration of the historical city plan constitutes a separate funding object. For example in Lübeck, a UNESCO World Heritage City, two blocks are currently being rebuilt in the old town. The new residential and commercial buildings follow the historical city layout with their buildings and in their parceling. The gabled roof landscape is also based on historical models. The façades, on the other hand, represent contemporary building. Even outside the programme, current projects like the construction of the "new Old Town" on the Römerberg in Frankfurt am Main show that the historical city layout and its qualities are experiencing a new appreciation.

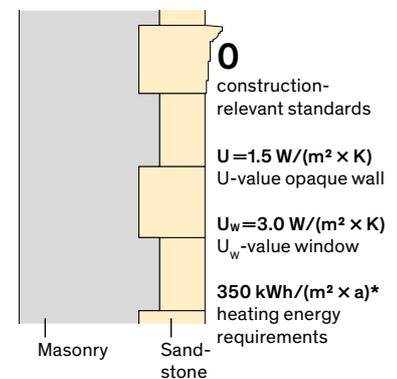
Especially if the restoration of the historical city plan loses younger temporal layers, with which some population groups already identify themselves, such urban repairs are discussed controversially. For example, Berlin has been discussing the planned restoration of the historical city layout between the Rotes Rathaus and Alexanderplatz for many years. Ultimately, the decision was made

Berlin City Palace

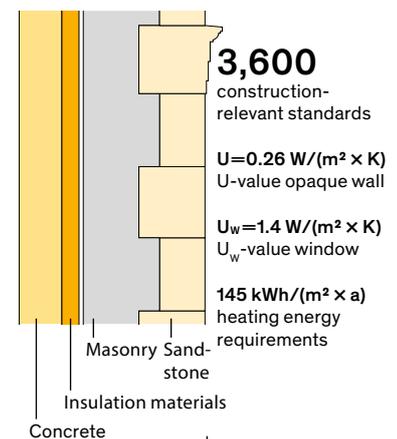
From building tradition to building technology

Source: Stiftung Humboldt Forum im Berliner Schloss 2018

Wall structure 1918



Wall structure 2018



* Assuming the same usage as for the rebuilding

against a development on old parcel structure and for the preservation of public space, which is characterised by the former GDR modernity. In many cities, whose historical urban layout was transformed in the post-war period, the question arises of which formative temporal layer should be maintained or restored. These site-specific debates about the different temporal layers of a city and their importance for local identity are important, so that professional expertise as well as the desire of the population can contribute to the further development of cities. This includes a critical examination of the qualities of past models and ideas, as well as the negative effects of individual temporal layers and deformations. Not everything has to be preserved. If urban planning or design reasons speak against the preservation of a temporal layer, change is important and constructive.

Design Successful Processes – Baukultur as the Result of Interdisciplinary Planning

The future of our built environment is a task for the whole of society, and it has to be continually redefined and redesigned. In large parts, construction processes are regulated and set. However, the Baukultur success factor is based on an open and solution-oriented planning process, in which all Baukultur actors and users are involved. For a well-designed building stock development, thorough “Phase Zero” planning, and an active operation in the “Phase Ten” are particularly important.

From Phase Ten to Phase Zero

Thinking about Operations: Phase Ten According to the principle of a utilisation cycle, after completion of a construction project, a supplementary Phase Ten follows: ideally, a very long period of operation through the use and maintenance of the structure. For successful operation, maintenance, regular renovations, and structural adaptations belong to day-to-day business. Especially for municipalities, this results in a comprehensive range of tasks in the field of building stock development. The state capital Hanover, for example, has to manage and maintain a portfolio of 471 properties with more than 1 million m² of net floor space. Because existing public real estate must be regularly adjusted to new requirements – for example in the areas of climate protection, accessibility, and inclusion – investments must be made on a regular basis. Many municipalities also outsource the management of their holdings to municipal companies. For example, the Free and Hanseatic City of Hamburg has transferred the renovation and management of school buildings to Gebäudemanagement Hamburg GmbH (GMH, Building Management Hamburg) as well as the Schulbau Hamburg (SBH, School Construction Hamburg). Another classic delegation is the maintenance and administration of municipal housing stocks by municipal housing companies. Building stock management is one of their core tasks, alongside the creation of new affordable housing. In contrast to yield-oriented real estate companies, sustainable building stock preservation is the focus. It is not just about maintaining the status quo, but also about the future viability of the buildings through regular upgrading measures – even beyond the operational depreciation of buildings. According to a study by Scope Ratings AG in 2015, public housing companies continually invested more in the building stock for this than private companies – an average of 6 euros per square metre per year. Across Germany, construction work in the amount of around 131 billion euros was carried out by housing companies on existing buildings in 2015.

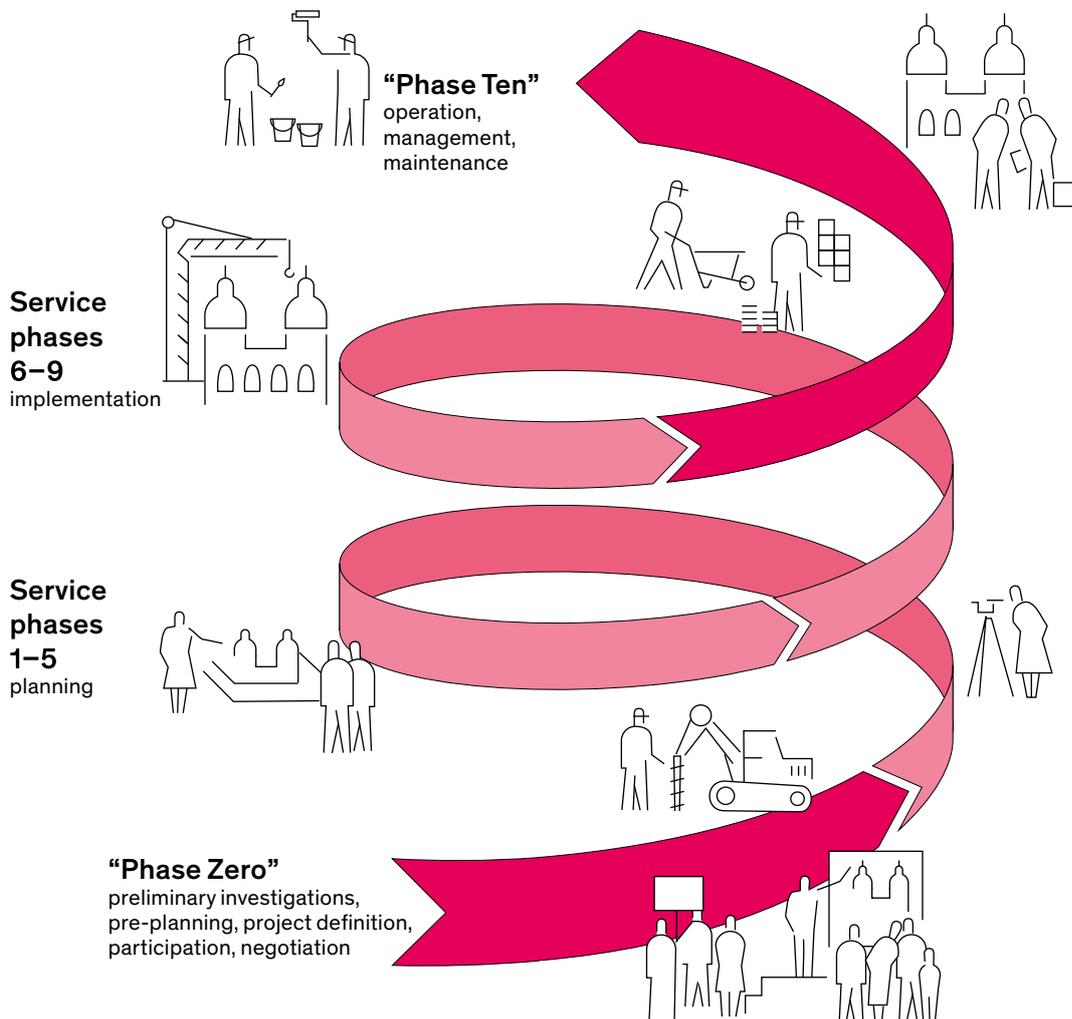
For comparison: 36 billion euros flowed into the construction of single- and two-family homes, 22 billion euros in the construction of multistorey apartments.

If there are major changes or new conditions for the building stock, such as vacancy or conversion requirements, the Phase Ten returns to the Phase Zero. Then the starting point has to be reanalysed and further development options identified. The building goes through the cycle of planning, construction, and operation once again. In order to create continuous added value – not only at the building level, but also on the neighbourhood level – close contact between the city and the owner is important in every phase of planning and conversion. This is easier if, for example, the city has a strong partner on its side in the area of housing with its own municipal housing companies. But also in the area of commerce and in a heterogeneous ownership structure, active cooperation between the city and different actors is important. The municipality's forward-looking engagement – not only with its own properties, but also with the entire building stock – is essential for the preservation and sustainability of existing quarters. After all, demolition and replacement construction do not

Project levels “Phase Zero” and “Phase Ten” and the HOAI service phases

(HOAI = Official Fee Scale for Services by Architects and Engineers)

According to the Federal Foundation of Baukultur



represent the ideal case if the initial situation changes, rather the continuous, gradual optimisation of existing buildings and infrastructures.

Preliminary Planning: Phase Zero The determination of needs occurs at the beginning of every development process. In times when infill development always has to be carried out in alignment with a climate-adapted open space development, the fundamental question arises as to whether construction should be made at all. Within the settlement context, as a rule, land-use planning and development planning provide information about this. However, careful consideration of future needs and land allocation is required, particularly in the case of larger fallow areas and the development of new construction sites on the outskirts of the city. The neighbourhood may have a deficit of free space, which can be reduced if development is dispensed with. In this sense, a good Phase Zero takes an unbiased look at all possibilities. If the land or the fallow area is also to be used structurally, the Phase Zero begins with the demands that arise from the neighbourhood. The sensible development of a property results from the existing quarter. If a balanced mix is to be maintained in the neighbourhood, the future housing supply must fit into the existing structures accordingly. If there is a deficit – for example, of student apartments despite the proximity to higher education institutions – the new development concept should take this into account. If an increasing age of the inhabitants is emerging, barrier-free housing or supervised offers are to be included in the considerations.

Thus, integrated planning does not start with the construction task and the involvement of all building stakeholders, but requires a forward-looking view of the municipalities before the actual building task is formulated. This will only succeed with an active role of the planning authorities and an active land and property policy, so that in the course of infill development the sensible development of the building stock is prioritised. Exemplary in this context is the Berlin housing construction company Degewo AG, which is actively tackling Phase Zero as part of its new construction programme. At the beginning of each planning, it is checked whether there is a need for development at this location or whether securing the open space has priority. The basic determination of the requirements is comparatively easy, because the state is a Degewo shareholder and provides targeted areas. On the other hand, more persuasion is needed if a city wants to help shape the development of land that it does not own. In this case, it is the task of the city administration to agree early on with the property owner about a strategy. Purposely deployed district managers can fulfil these tasks. As part of the federal-state programmes for urban development funding, district management is used on a small scale at the level of the programme area. In the KfW programme Energetische Stadtsanierung, a renovation manager is sponsored, who exclusively deals with the implementation of measures in district's energy concept. Furthermore, in view of the current demand for new buildings, growing cities in particular should be able to provide district management in their administrations or housing companies, which identifies the space and usage requirements at district level and makes them the basis for further development.

The result of a thorough Phase Zero is the decision as to whether and to what extent a selected location is suitable for future building projects. Preliminary technical examinations, competitions, and feasibility studies can also support a

good Phase Zero in this sense. In the ideas competition for the new construction of the Kammerspiele (chamber theatre) in Ingolstadt, for example, the competition participants had to propose a suitable location for the expansion of the theatre, given several options. On the basis of the competition entries, the jury was able to deal with the effects of a new building in different places and thus came to a clear decision. In contrast to the usual phases of the HOAI, which begins with Phase One – the basic determination for concrete building projects – Phase Zero is still free and unrestricted with regard to planning decisions to be made. This greatly expands the responsibility and required competencies of the planning professions.

Participation Creates Security Baukultur as a result of preliminary planning can only succeed on the basis of a comprehensive, integrated process. Regardless of the size, new construction projects can no longer be tackled today without the full participation of various stakeholder groups. If conventional participation formats are first used in the context of land-use planning, when the concept for a construction project has already been developed, participation in Phase Zero starts much earlier. Exemplary here, among others, is how the city of Braunschweig has proceeded. It has involved the population in its strategic reflections on how and where the city should develop in the future. Several expert groups and citizen workshops formed central components of the integrated urban development concept. The expert group Flächenentwicklung (Area Development) identified infill development potential within the city, which were put up for discussion at citizen workshops. For example, the population was able to articulate its own ideas even before the beginning of potential infill development projects and point out the necessary development of recreational areas. Development potential and needs of the population can be well reconciled in such a process. As a result, clear planning goals can be derived that take local residents into account, while at the same time, in the case of conflicts of interest between different user groups, comprehensible decisions are possible – in favour of or at the expense of individual groups.

At the object level, the planning results are also more suitable and better, the more precisely the framework conditions and user interests are determined in advance and different groups of actors are involved. This is accompanied by a high level of acceptance and satisfaction of all those involved with the results of the planning. This idea was also the basis of the Schulen planen und bauen (Planning and Building Schools) competitions, which were awarded by the Montag Stiftungen (Montag Foundations) in 2012 and 2015. Five school construction projects each – both conversion and new construction planning – were selected in the competitions and received funding for the implementation of a Phase Zero, including professional guidance by school construction consulting teams. The goal of the Phase Zero was the development of a sustainable substantive and spatial concept, which ensures the efficiency, suitability for needs, and sustainability of the construction project. During the planning, interdisciplinary teams – comprised of an architect and an educator – supported the technical interaction between government, administration, and schools. For example, in Bremen, where a school building from the 1950s was to be expanded, the spatial programme of the new building was worked out with all those involved and adapted to the pedagogical concept of the future school. In Wuppertal, Phase Zero was promoted

during the conversion of a high school in order to develop a sustainable spatial programme that takes into account new demands on learning areas, break rooms, and self-learning locations. In the meantime, the spatial programme has been adopted for every school construction project in the city. The documentation of the processes and results of the pilot projects impressively underlines the importance of Phase Zero for qualified project development, because positive effects have emerged for all participants. The schools benefit because the new spatial profile is tailored to the pedagogical concept. The needs of teachers and students have been incorporated into the planning, and contribute to the fact that they gladly spend time in the school and have optimal learning conditions. The school authorities and the municipality gain by the high acceptance, which results from the consideration of the needs. The construction is treated better, has fewer conversion requirements, and generates fewer costs in the long term. In addition, the good image of the school location makes a positive contribution to the overall image of the district and the city.

Responsibility for the Building Stock

Recording and Maintaining the Building Stock Inventories and tools to monitor developments are essential to avoid or correct negative trends. Identifying and differentiating the building stock according to various aspects enables municipalities to identify requirements for further development, including appropriate planning methods.

Especially in the area of funding by federal and state governments, there are certain inventories in the building stock that are made a condition for eligibility. For example, the monument status and the presence of preservation-worthy buildings constitute the funding requirement in KfW's Effizienzhaus Denkmal (Energy-efficient Monument) programme. Funds for a building are only granted if the application is accompanied by a certificate from the respective municipality confirming the value of the monument or classification as a particularly valuable building substance. In Rhineland-Palatinate and other federal states, conceptual and planning preparations – among others, in terms of urban development grievances and renovation and development goals – are a funding requirement. The basis for this is appropriate surveys on the condition of the building substance and the need for renovation. According to the municipal survey, funding has a major influence on the further development of the building stock, and the various federal and state programmes directly influence the data collected in the municipalities.

The conclusions drawn from the observation of the building stock in the municipalities vary. In order, for example, to reduce urban development grievances and a recognisable renovation backlog, municipalities have the option of deciding on a renovation statute for a specific area under § 142 of the BauGB. The aim of a comprehensive renovation process is to achieve significant improvements in the area, including land value increases, which will be siphoned off by the municipality as compensatory amounts following implementation of the overall urban development measure – including for the renovation expense of roads, paths, and squares. In a simple renovation process, only slight increases in land value are to be expected. Here no increases in value are siphoned off,

Expanded stocktaking, especially in the new federal states

Nearly 90 % of the surveyed municipalities claim to record the monument status of buildings, around half of them record types of usage, and about one third each record the building year categories, the preservation-worthy building fabric, and the renovation needs of buildings. With the exception of the monument status, the building information is collected mainly from municipalities of the new federal states. Monuments are recorded equally nationwide. [M23](#) + [M24](#)

Baukultur Promotes Communication

Urban Neighbourhood in Krefeld – Development of a Former Velvet Weaving Mill



The Krefelder Südweststadt is characterised on the one hand by visible poverty and vacancy, on the other hand by well-preserved Gründerzeit architecture and active district initiatives. The social life in the neighbourhood was meant to be the starting point for the reactivation of a textile factory, which was converted in 1970 to offices of the city administration and has stood empty since 2008. The potential of the location was determined in 2012 by the architectural practice Heinrich Böll and the economist Dieter Blase. Two years later, the city conceded the former velvet weaving mill to the Montag Stiftung Urbane Räume (Montag Foundation Urban Spaces) for 60 years in a hereditary lease. A rent is not due as long as the leases from the project benefit the district. With this real estate development oriented towards the common good, existing mixed structures are to be strengthened.

Gradually, the project company founded by the foundation and the Böll office began repair work. Because of the relatively tight budget of 8 million euros, most of it was limited to a basic

renovation and the renewal of the technical infrastructure. Work began with an office building from 1960, which became a “pioneer building”. With the estimated 200,000 euros, the building could be made usable again and the fire protection ensured. The space was awarded to freelancers, students, and district-affiliated companies and initiatives that pay only 3 euros base rent. The tenants not only took over the final construction, but also perform voluntary “quarter-hours” in the neighbourhood – one per square metre per year. This can be homework help, reading aloud in the nursing home, or the upkeep of tree beds on the sidewalks.

The adjacent gatehouse from 1950 was restored to its original structure. Because of the larger interventions, the office and studio spaces here cost 7 euros base rent. On the ground floor, a neighbourhood café is operated. A dismantling of the office structure from the time as a city administration also took place in the two historic factory buildings from the end of the 19th century. Thirty-seven apartments between 25 and 110 square



metres were built here, including 13 social housing units. The investment costs were based on the target of a maximum of 8 euros base rent, and in the subsidised apartments 5.25 euros. The small budget benefited the monument structure, because as few interventions as possible were made and many surfaces have retained their patina. Common balconies were created toward the courtyard, which were removed from the façade for monument protection reasons and at the same time used as an opening. Thus a second stairwell could be avoided. Because tenants were sought early, they were able to get involved in the planning. The inhabitants of these apartments also perform quarter-hours.

The interior of the block is occupied by a factory hall, which has been transformed into a rainproof public meeting place for the entire district by means of urban development subsidies. At a district party, various uses were tested and wishes collected. In a specially developed board game, spaces and financing were then negotiated. There is room for sport, a stage, a lounge, a repair workshop and, where the roof was removed, for urban gardening – as well as for other ideas. The development should become the impulse for the neighbourhood. In addition to this new public space, the quarter benefits from around 2,500 hours of volunteer work per year and around 60,000 euros in surplus rental income. Initiatives from the district can apply for funds, which are then decided by a “neighbourhood council”. Thus real social benefits are created for the city and its inhabitants.

Facts

Planning and Construction: 2013–2017
 Developer: Urbane Nachbarschaft
 Samtweberei gGmbH
 Planners: Heinrich Böll, Essen; Strauß & Fischer Historische Bauwerke, Krefeld;
 landscape planning: DTP Landschaftsarchitekten, Essen; Elke Lorenz
 Landschaftsarchitektin with Friedrich

Wissmann, Düsseldorf; AKP, Krefeld;
 Ingenieurbüro INCO, Aachen
 Useable Area in Buildings: 4,700 m²
 Open Spaces (Shed Hall): 3,000 m²
 Total Cost: ca. 8 MM euros

More information in the project description
 in the appendix



BAUKULTUR AT A GLANCE

- Property allocation in a hereditary lease and earmarked use of rent
- Integration of social housing
- Few structural interventions make low rents possible
- Surpluses serve the common good
- Volunteer work by tenants in the neighbourhood
- New public meeting place



Subsidy programmes often in large cities

80 % of the surveyed municipalities state that subsidies are used for the further development of the building stock. At 93 %, large cities with more than 100,000 inhabitants make the most use of assistance through subsidy programmes. [M24](#)

Lack of investment in private property

According to the surveyed municipalities, the biggest obstacle to the further development of the building stock is the owners' lack of investment willingness or ability – 75 % of municipalities see this as the greatest difficulty. Complex ownership structures are mentioned by just under 70 % of respondents. [M25](#)

Municipal support preferred in smaller communities

8 % of the municipalities surveyed have issued a modernisation and repair offer to a private owner in order to effect a renovation. When the instrument is used, it is in particular the municipalities in the new states that make use of it, and mainly in small to medium-sized cities between 20,000 and 50,000 inhabitants. [M24](#)

Upgrading through use

38 % of the surveyed municipalities pursue the strategy of (intermediate) acquisition of buildings for the further development of existing buildings. 28 % develop utilisation concepts for vacant buildings in order to create incentives for investors. [M24](#)

instead development contributions are collected from the residents. In both processes, private owners have tax incentives under § 7 of the EstG to invest in the renovation of their buildings.

Despite tax incentives, sometimes owners refrain from necessary renovation measures. The reasons for this are a lack of financial means, generation change, or difficult ownership structures – for example, owner communities with correspondingly high need for coordination. With the modernisation and repair offer under § 177 BauGB, an instrument is available to the municipalities with which they can force the renovation of a building. However, the instrument is rarely used in municipal practice, because the owner only has to bear the profitable costs of the renovation. The municipality bears the unprofitable costs incurred in the course of modernisation and repair. Many municipalities are reluctant to do this, especially those with budget woes. However, because intensive communication with the owner is the rule prior to an appropriate bid, it is often possible to work toward a voluntary, contractual modernisation agreement. Alternatively, the municipality can offer to acquire the property, in order to actively take control of the further renovation process.

In many places, the acquisition of buildings has also proved to be an effective strategy for actively managing the renovation process and thus the preservation and maintenance of existing buildings. Above all, if buildings are empty for years, with the (intermediate) acquisition the municipality can effectively contribute to preserving historic and cityscape-defining buildings. Like many other cities, the shrinking city of Naumburg has had good experiences with the (intermediate) acquisition. Already in the 1990s, it allowed vacant real estate and land to be purchased by the commissioned DSK Deutsche Stadt- und Grundstücksgesellschaft. In the 2000s, the old town project “Dieses Haus will LEBEN” (This Building Wants to Live) was initiated. For initially 15 municipal properties, possible uses for the buildings were shown by the preparation of a preliminary planning and processing of appealing exposés. That way, 14 buildings could already be procured. The campaign Dieses Haus will LEBEN also sold four inner-city fallow areas for new development.

According to the survey, comparatively few municipalities have set up a real estate exchange for the marketing of their vacant buildings. Around 500 municipalities throughout Germany use the municipal real estate portal KIP, which can be used as a location marketing and urban development tool according to local needs. To cope with vacancies – in particular monuments – municipalities can also fall back on civil society initiatives as well as the support provided by the State Monument Authorities. Among other things, the Bavarian State Office for Monument Preservation offers a contact person for saleable monuments and provides links to mostly regional monument exchanges. Detached from the monument status, a model real estate portal was developed on a regional level in the project Innenentwicklung und Ortskernrevitalisierung im Schweinfurter Land (Endogenous Development and Local Revitalisation in the Schweinfurt Land). The member communities then market their stock of building gaps, vacancies, courtyards' and residential buildings at risk of vacancy. Vacant but developed plots of land in the construction areas of the 1960s to the 1990s make up more than 50 % of all available building options in the municipalities.

Mobilisation of Land Reserves A decisive contribution to strengthened endogenous development is the use of gaps between building and fallow areas. Different instruments are available to the municipalities for mobilisation. Recording the land reserves also forms the basis here. The status quo is documented in building land cadastres and area monitoring, whereby the building gap register is much more frequently used than area monitoring.

Recording land reserves ideally prepares the mobilisation of land potential for structural or other uses. Here, however, the municipalities face numerous obstacles that are often difficult to overcome. Existing building rights are not used by the owners, and areas are deliberately withheld for potentially more profitable future requirements. Thus, the development possibilities in the stock are not exhausted. To counteract this, municipalities can issue a building order. The prerequisite for this is that the property is within the scope of a development plan or is located within the developed districts. The building order obliges the owner to develop the property in accordance with the development plan or to adapt an existing building to the stipulations. However, this option is rarely used by the municipalities, because in the case of a persistent refusal of the owner to an expropriation procedure, the municipality must take over the land and develop it accordingly. Many municipalities shy away from this, not least because of the rise in land prices in many places or because of budget restrictions, which municipalities with budget woes are subject to.

In this context, the idea of the endogenous development measure (IEM) is currently being discussed and tested in a BBSR simulation game. The basic idea of the measure is to create a powerful instrument against uncooperative owners, which impacts the area and is not only property-related. Scattered potential of interior building land could be covered by an IEM statute or an IEM development plan, so that it is to be developed within a certain period of time. This minimises the administrative burden and increases the effectiveness compared to the building order. If this construction obligation is not met, the municipality should be granted an active purchase right in order to take control of the development.

However, there are also instruments that are less rigorous or obligatory, and instead create incentives for endogenous development. What is important here is the basic self-understanding of the municipality that building stock policy is a central task. Exemplary in this context are places like Barnstorf in Lower Saxony, where a decision of principle was made for sustainable land management: residential and commercial areas should only be gained through endogenous development, land recycling, and reutilisation. A building gap cadastre supports the mobilisation of land reserves; the municipal funding guideline “Leben mit-tendrin” (Living in the Thick of It) creates a financial incentive for the construction or acquisition of buildings within the town centre. The Lower Saxon town of Bispingen has also taken the decision not to designate any new residential areas in order to divert interest to the old building stock. The Storchennest (Stork Nest) project brings together the owners of older buildings and young families who are looking for such a property, in order to initiate an intergenerational cohabitation and joint assumption of responsibility for the building. With regard to shop vacancies, Städtische Wohnungsgesellschaft Bremerhaven mbH (STÄWOG) has developed the campaign Springflut Bremerhaven (Bremerhaven Spring Tide). It creates incentives for traders, by making vacant commercial units in the pedestrian area available for pop-up stores at a low cost.

Municipal instruments for vacancies ...

32 % of the surveyed municipalities maintain a vacancy cadastre; in particular, small and medium-sized municipalities with up to 50,000 inhabitants use this instrument. 13 % say they have set up a real estate exchange. [M24](#)

... and for recording land reserves

60 % of the surveyed municipalities maintain a building gap cadastre, and almost every third municipality operates an area monitoring. While the building gap cadastre is used in all parish sizes, the area monitoring increases with increasing population. [M24](#)

Little support for endogenous development

Only 5 % of the surveyed municipalities have created municipal support services for private developers to promote endogenous development. Relevant offers are most often found in large cities with more than 100,000 inhabitants. [M24](#)

Baden-Württemberg promotes endogenous development of villages and towns in rural areas with a statewide programme. Municipalities receive funding for hard-to-market inner-city areas, and private homeowners are financially supported in the renovation of inner-city buildings from the 1960s and older. The state-owned funding programme Flächen gewinnen durch Innenentwicklung 2017 (Gaining Land through Endogenous Development 2017) also supports concepts for the timely mobilisation of inner-city areas for housing construction. Bavaria offers its municipalities in rural areas a free, database-supported vitality check for endogenous development. Topics such as land use, population development, supply, and the labour market are recorded, endogenous development potential identified, and options for action pointed out. Such support offers on the part of the states are important, so that endogenous development does not remain a selective undertaking, but prevails as a nationwide strategy.

Active Land Management of municipal land ownership is also the basis for targeted control of infill development. Examples such as the car park development on Munich's Dantebad, which was awarded the Bauherrenpreis 2018, show that cities in possession of land not only carry out forward-looking planning, but can also respond to short-term needs. In order to increase municipal land stockpiles, municipalities have a right of first refusal for certain sites according to the BauGB: in the scope of a zoning or development plan in the current procedure; in a redistribution area; in a formally defined redevelopment area; in an urban development area; in the scope of a preservation statute; in the scope of a land-use plan, which presents the undeveloped land in the outer area as housing construction area; or in § 34 areas, in which the land can be developed predominantly with residential buildings. Although municipalities have many options to acquire land and actively develop it, administrative costs and high land prices – especially in large cities – keep municipalities from buying. The “Bodenpolitische Agenda 2020–2030” (Land Policy Agenda 2020–2030) from the Difu and the vhw accordingly calls for a price-limited right of first refusal for municipalities and a general right of first refusal even for municipalities with a budgetary supervision concept. In addition, the endogenous development should justify a sufficient public interest reason to exercise the right of first refusal.

With an active purchasing policy for the development of strategic land reserves, municipalities assume responsibility for optimising land use, development, and design in accordance with urban development, social, environmental, and urban economic criteria. Even in the case of resale, the municipal influence on planned construction projects increases considerably if the city or municipality can act as owner. In doing so, it has the opportunity not only to influence the design quality of projects, but also to pay attention to the ability to integrate into existing settlements. The support of initiatives or individuals striving to maintain and develop the building stock is possible in the context of municipal property policy – among others, through the assignment of land in leasehold. The prerequisite is a fair contract that takes into account the interests of leasehold owners and recipients. These include, for example, a socially acceptable ground rent, which is not at 4–6 % as currently, but for example at 2–3 %. For municipalities, the instrument is an advantage, because the land remains permanently in municipal ownership. It is also possible to influence property developments in the building stock by means of private lease, leasehold, or lease agreements.

Half of the municipalities use the right of first refusal

Half of the surveyed municipalities use the municipal right of first refusal for building stock development. Above all, medium-sized towns with between 50,000 and 100,000 inhabitants make use of their right; large cities with 100,000 or more inhabitants acquire undeveloped land most infrequently. [IM24](#)

Further design leeway and control possibilities are created by the municipalities, if the highest offer is not awarded in the allocation of municipal real estate, but criteria such as urban planning, design, and social or ecological aspects are taken into consideration in the context of a concept assignment. The competitive procedure offers non-profit-oriented actors – such as cooperatives, welfare-oriented (possibly municipal) housing associations, or owner-occupier building groups – the possibility, above all, to realise projects that serve to create affordable housing. In top price procedures, these groups often lose out in favour of conventional building investors. Concept award procedures have so far been used mainly in large cities – as a rule these are municipalities with a tight housing market. For example, there are experiences in Frankfurt am Main, Hamburg, Hanover, and Stuttgart. Increasingly, however, the instrument is also being discussed in small and medium-sized cities such as Göttingen. Here, the concept award for a new construction area should also take into account housing policy criteria, the diversity and the proportion of flats that are barrier-free and accessible for the disabled, the quality of urban planning, as well as environmental, energy, and transport criteria. Important in these content-oriented procurement procedures is the open and comprehensible communication of the decision. Regular implementation of concept procedures will then have a positive effect on the willingness of private landowners to participate.

The approach of the “Transparente Liegenschaftspolitik” (Transparent Property Policy) in Berlin also shows how municipal property can be developed sustainably and strategically. The concept has created guidelines for dealing with state-owned land. A portfolio analysis is used to take stock of all properties and to cluster these areas. The land is subdivided into four categories: areas that are necessary for the city’s tasks; areas that are needed in perspective against the background of safeguarding public services; land that can be sold; areas of public interest, and therefore allocated through concept-oriented procedures. The result is a structured overview of the city’s property assets, which can be used as a basis for deciding on the objectives of a sustainable urban development policy.

More and more municipalities are realising that not only can they steer spatial development more closely with a well thought-out land policy, but that they can also better implement demands for quality design of urban space with the help of private real estate law than with cumbersome public planning law. At the same time, a social building stock development can be achieved, by creating affordable housing and stabilising neighbourhoods through the diversification of the resident and housing supply structure. It is the responsibility of the public sector to create better conditions for an active land policy at all levels.

Design Tools

Design Opportunities through Building Law The approval of new buildings or conversions within a built-up area occurs on the basis of § 34 of the BauGB – “Zulässigkeit von Vorhaben innerhalb der im Zusammenhang bebauten Ortsteile” (The Permissibility of Development Projects within Built-up Areas). Decisive for the approval is whether a construction project fits into the specific character of the immediate environment. Assessment criteria are the type and measure of the

Speculation and profit orientation detrimental for the building stock

For undeveloped properties, 50 % of the municipalities see an object-oriented profit orientation and 40 % of the respondents see increased land speculation as a barrier to building stock development. [M25](#)

Key provision § 34 of the BauGB

87 % of the surveyed municipalities state that permits are granted (more often) on the basis of § 34 of the BauGB. In contrast, 78 % of municipalities respond that construction projects are (more) often approved on the basis of a zoning plan. [M17](#)

Baukultur Prevents Land Usage

Building over a Car Park at Dantebad – Gain through Double Use



Endogenous development is reaching its limits in many places. Yet even in densely built-up, large cities building land can still be found – and not just green areas, but already sealed terrain: car parks, for example. Shortly after Munich had taken in a large number of refugees in the fall of 2015, the city launched the housing programme *Wohnen für Alle* (Housing for All), aimed at refugees and low-income households. Because ideas for the rapid creation of housing were necessary, an older concept by the building contractor Ernst Böhm for building over car parks now appeared promising. For reasons of cost and time, only one area in the city's possession was considered a location. In the Gern district, a 4,000-m² parking lot was ultimately found between a sports field and the Dantebad. The project was declared a top priority and decision-making channels were shortened. In regular planning sessions with the senior mayor, the administrative bodies involved, and the urban housing company Gewofag – which acted as the client – the project was concretised. The required number of car parks

per accommodation unit was lowered by the city from 1.0 to 0.2. Instead of awarding individual contracts, the assignment to a general contractor was permitted as part of the *Wohnen für Alle* programme.

The company Ernst Böhms with the architect Florian Nagler won the tender in early 2016. Nagler designed a 110-metre-long and 12-metre-wide structure on stilts. Visible on the ground floor are the stairwells in each of the two rounded ends of the building, where the bicycle and garbage rooms are also located. Cars continue to park in between. This base and the arcades were executed in reinforced concrete, the flats made of prefabricated wooden elements. Façade sections up to ten metres long were installed directly from the truck as prefabricated parts, including windows and façades, and the bathrooms were delivered as fully equipped boxes. Shell construction and development are partially identical, thus the wood remained visible on the undersides of the roof plank boards. The four-section timber construction took only eight weeks

and the entire construction only six months. Just one year had passed between the commissioning and the completion in early 2017.

A total of 100 flats were created, most of them single flats of 24 or 31 m², plus some wheelchair accessible units of 43 m². Every third apartment is slightly wider, but less deep, so that the long arcade receives small expansions where residents can spend time. There are common areas in the rounded ends with cooking facilities, a laundry room, and substitute cellar spaces. On the roof, a terrace with benches and raised beds forms a central meeting place. The base rent depends on the subsidy level and is between 5.75 and 9.40 euros. Because the residents of the neighbourhood feared a house inhabited exclusively by single young men, 14 family-friendly apartments with 2.5 rooms were also built. The allocation of the apartments was carried out by the municipal social services department. About half were given to recognised refugees, the rest to former homeless people, students, and others entitled to social housing. Care was taken to ensure a balanced mix and, in particular, consideration of women. The newly created housing community is not left to itself, but supported by social education workers.

With little intervention in the building site and without additional sealing, not only were 107 out of 111 parking spaces preserved, but valuable housing for disadvantaged groups was also created in the housing market, and even open space on the roof. The city of Munich also sees this pilot project as a model for building over supermarket car parks.

Facts

<p>Planning and Construction: January–December 2016 Developer: Gewofag Projekt GmbH Planners: Florian Nagler Architekten, München; terra.nova Landschaftsarchitekten, München; Ingenieurbüro für Baustatik Franz Mitter-Mang, Waldkraiburg; r.plan GmbH, Chemnitz; B&O Wohnungs-</p>	<p>wirtschaft GmbH Bayern, Bad Aibling Size: 4,630 m² GFA, 100 residential units Cost: 7.25 MM euros (cost group 300–400)</p> <p>More information in the project description in the appendix</p>
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- BAUKULTUR AT A GLANCE**
- Very short planning and construction period
 - Housing construction as top priority
 - Short decision-making channels and little bureaucracy
 - Building over urban building site
 - High degree of prefabrication through timber construction
 - No loss of space or function, instead gain
 - No further land consumption or sealing



structural use, the construction method, and the site area that is to be built over – on the basis of these characteristics, the construction project must fit into the specific character of the immediate environment. Thus, § 34 of the BauGB is one of the key provisions, because it directly conveys building rights. The courts confirm the legal claim under which an authorisation is enforceable. The municipal survey for the current Baukultur Report has shown that inner-city construction projects in the surveyed municipalities are more frequently approved in accordance with § 34 of the BauGB than on the basis of a development plan.

The judgement on the permissibility of a project according to § 34 of the BauGB is based on urban development criteria. In contrast, design aspects – such as roof shapes – are secondary to the insertion features. For example, a planned flat roof in an environment where gabled roofs are predominant does not lead to a failure of building law. In order for new construction projects to blend creatively with their surroundings, additional tools are required. With design statutes for their old towns, many municipalities – such as Iphofen and Quedlinburg – make concrete specifications for building materials, roof pitches, or window distributions. In historic quarters, the resolution of a preservation statute according to § 172 of the BauGB is also a good way of avoiding damage to the city and townscape caused by construction projects in the existing building stock. It serves to protect the cityscape, the urban character, and landscape or the totality of facilities that are of urban development, historical, or artistic significance. The dismantling, modification, change of use, or the erection of structural works requires here an authorisation in addition to the building regulation. This may be denied if the structure interferes with the urban design of the area.

In addition, informal instruments – such as monument preservation value maps, cityscape analyses, design manuals, or urban development frameworks plans – serve both as a technical basis for formal statutes as well as for the sound communication of Baukultur values to the population. For example, the Hanseatic city of Lübeck has undertaken a cityscape analysis in preparation for the renovation of the old town, created a cityscape atlas, issued a design and maintenance statute, and subsequently worked out a master plan. All planning and projects in the old town must be based on the goals set by the framework plan, which has already been updated several times. Doubts are also dealt with by a design advisory board. For the city centre of Biberach an der Riss, the cityscape analysis resulted in a cityscape statute, which must be taken into account as a local building regulation. With the cityscape analysis for the historic city centre, the city of Göppingen illustrates the different levels of scale that can be considered with informal instruments. The examination ranges from the urban development and design principle, through the plot structures, to the existing building types and façade divisions. In this way, municipalities create an effective and comprehensible argumentation and examples that help – especially in construction consultancy – to secure structural qualities.

Building consultancy is offered frequently

62 % of the municipalities surveyed offer conversion and building consultancy for the further development of the building stock. At 82 %, it is above all large cities with more than 100,000 inhabitants that keep such offers available. [M24](#)

Building Consultancy and Design Advisory Boards Prior to a construction project, building consultants inform about legal and formal proposals. On the municipal level, building consultations take place in the urban planning and construction offices; in addition, freelance planners also offer advice. An extended range of consulting services for design issues can significantly increase the Baukultur quality of construction projects. The publication “Kommunale

Kompetenz Baukultur” (Municipal Baukultur Competence) published by the BMUB in 2012 emphasises the relevance of municipal overall Baukultur strategies for comprehensible and solution-oriented building consulting. Building consultations are a voluntary offer. Even more important is an open dialogue at eye level with the clients and in conjunction with other advisory services, such as design advisory boards. With their professional competence, interdisciplinary design advisory boards also contribute to a noticeably higher quality of projects in terms of Baukultur. From their external perspective, the independent advisory boards advise the city on new construction or conversion projects and, above all, ensure that construction projects fit into the cityscape. However, they have no decision-making power. In addition to the professional and creative competence of the advisory board members, a clear added value is created by the committee if a broad discussion on new construction projects in existing quarters or in the historical environment is suggested. If the advisory board meets in public, it also makes an important contribution to greater public acceptance of the new construction project and the conveyance of Baukultur. Thus, advisory boards not only advise municipalities, but also promote the overall debate on good planning and building in cities and communities. Almost 100 design advisory boards were known in Germany when the Federal Foundation of Baukultur presented the Baukultur Report 2014/15. They were mainly located in larger cities. Municipalities are increasingly recognising the quality gain that cityscape-defining projects are experiencing through these boards. The number of firmly established design advisory boards has meanwhile increased to 129.

In some places, however, there are also misgivings about outside influence. In smaller towns and communities, it is usually the organisational and financial burden that is considered too high, or the small number of annual construction projects speaks against an institutionalised advisory body. In order to increase openness towards design advisory boards, the chambers in seven federal states are now working on the dissemination or introduction of mobile design advisory boards that can be temporarily called up by the municipalities. The Baukultur Report 2016/17 already referred to the mobile design advisory board format, which offers opportunities for rural communities in particular. In this context, support programmes can also provide a meaningful boost. For example, the state of Baden-Württemberg supports the establishment and further development of municipal and intermunicipal design advisory boards, with up to 50 % of the incurred material expenses for a period of two years. Ten municipalities are currently making use of this financial support. Not least because of the funding, Baden-Württemberg – in addition to North Rhine-Westphalia – is currently focusing on a spatial focus with a view to the number of design advisory boards.

With its activities, the Federal Foundation endeavours to make networks of interested municipalities and their design advisory boards more interconnected. In 2016, the first nationwide networking meeting of design advisory boards took place within the framework of the Baukultur Convention. There was not only an exchange of experience among the advisory boards in attendance, but an informative framework was also offered for interested municipalities that do not yet have an advisory board. A second networking meeting took place in Freiburg in October 2017, and more are to follow. The BBSR research project Perspektiven für die Baukultur in Städten und Gemeinden – Mehr Qualität durch

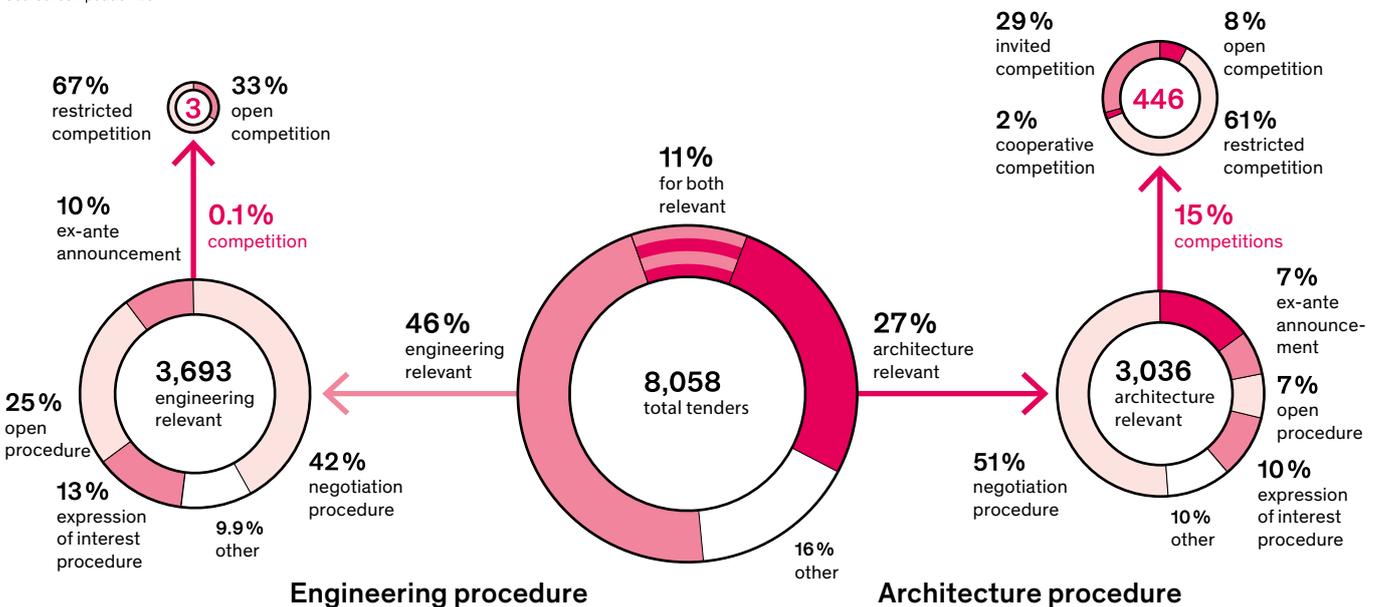
Gestaltungsbeiräte (Perspectives for Baukultur in Cities and Communities – More Quality through Design Advisory Boards), whose results were published in 2017, also examined the spatial distribution and the added value of the work of design advisory boards. Among other things, the recommendation was made to tailor the instrument to the individual needs of the municipality in order to gradually make it part of a Baukultur strategy. Interested municipalities are also supported by the BDA publication “Gestaltungsbeiräte. Mehr Kommunikation, mehr Baukultur” (Design Advisory Boards. More Communication, more Baukultur), in which concrete projects are documented that have gained in quality through the participation of a design advisory board.

Competitions and Awards Comparable to the discussion encouraged by design advisory boards about new buildings in sensitive locations, the conflict within a planning competition also promotes the Baukultur knowledge and opinion-forming process. The struggle for the best solution enables more quality from urban development, architectural, structural, or artistic projects in the building stock with the greatest possible transparency and plausibility of the award. As a result, competitions ensure an intensive examination of the task, produce a broad approval of the project, demand quality from the planners involved, and ensure this through the (jury) decision.

However, a BBSR study from 2013 found that the number of public sector competitions continued to be low, and in particular that open planning competition was more of an exception in the building sector. Since 2011, a strong increase in tenders for engineering and architecture-relevant planning services has been noticeable. In 2016, just over 8,000 tenders were published on the platform competitionline, which represents an increase of almost 100 % compared to 2013. The number of competitions advertised is barely significant. A total of 449 competition entries were published in 2016, of which 446 were relevant for architects and 3 for engineers. In the field of engineering, competitions are almost

Tenders by professional groups and types of procedures

Source: competition 2017



non-existent. The Baukultur Report 2016/17 also found that only around one-third of the municipalities surveyed had carried out a competition for centrally located or landmark building projects. Competitions have demonstrable added value for portfolio development, especially if the bidding is addressed to interdisciplinary planning teams. It could also be proved that competitions have no negative impact on planning and construction time or costs.

However, the execution of a competition alone is no guarantee for a successful result, because the quality of the contributions depends crucially on the tender. The general conditions and planning requirements determined in the Phase Zero should therefore be incorporated in the competition specifications. The jury also has an influence on a quality result. Interdisciplinary juries help to ensure that various topics and aspects are specifically taken into account in the decision.

The Federal Chamber of Engineers also advertises competitions, with a view to the participants, for interdisciplinary teams. It recommends interdisciplinarity in the fields of façades and energy technology; high-rises; exhibition halls; museums; road, rail, and pedestrian bridges; energy generation facilities and sewage treatment plants; railway stations, airports, and port facilities. It is important that the entire interdisciplinary team is not only involved in the competition process, but also in the realisation in the case of a commission. Only in this way can the integrated approach be implemented. In 2016, the Planungs- und Ideenwettbewerbe (Planning and Idea Competitions) committee of the Bavarian Chamber of Civil Engineers published a flyer on the “Förderung interdisziplinärer Wettbewerbe” (Promotion of Interdisciplinary Competitions) and recommended – for the exemplarily performed planning task Erneuerung einer Brücke im Landschaftsschutzgebiet (Renewal of a Bridge in the Protected Landscape Area) – a cooperation between the engineer, the landscape planner, and the architect.

In all phases of planning and construction, the participation and meshing of different disciplines is important. The joint resolution of the Chamber of Engineers and the Chamber of Architects of Baden-Württemberg puts this in a nutshell. They call for better conditions for interdisciplinary cooperation in construction, the involvement of all disciplines in planning “at eye level”, as well as the interdisciplinary networking of disciplines already during formal education. Baukultur arises when all disciplines contribute equally to the qualification of the built environment.

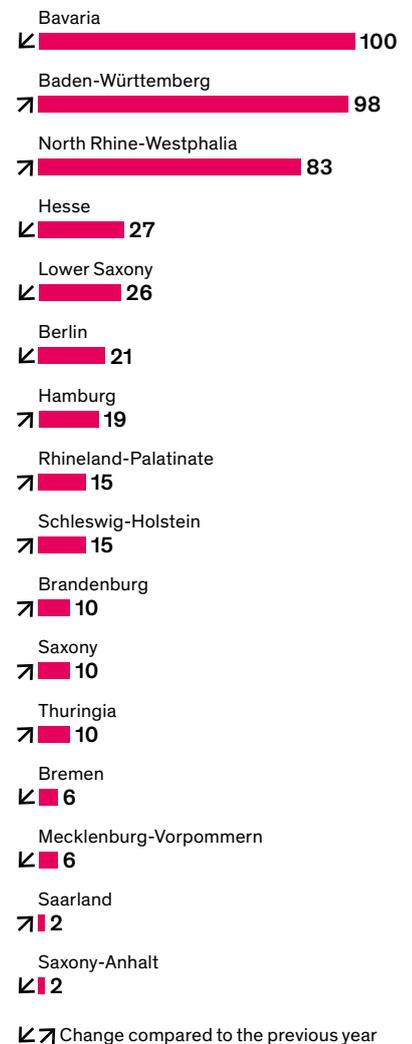
Integrated Planning and Building

Baukultur Cross-sectional Task Converting and building in the existing building stock requires the consideration of a variety of framework conditions, which are not always obvious and sometimes seem contradictory – such as setting the endogenous development goal and preserving high-quality open spaces in the existing stock. The allegedly easier alternative is often seen in new building on the periphery, yet this creates additional problems such as making village centres desolate, growing traffic flows, and monofunctional settlement areas. On the other hand, the further development of the building stock represents a permanently sustainable task, and the associated challenges can only be achieved within the framework of an integrated planning process and

Competitions in Germany

Engineering and architecture relevant by federal states 2016

Source: competition 2017



Baukultur Ensures Values

Quedlinburg Old Town – World Heritage Title as Motor



The old town of Quedlinburg am Harz – with more than 2,100 half-timbered houses and a medieval cityscape – has been a UNESCO World Heritage Site since 1994. The renovation of the old town – which was characterised by decay, demolition, and emigration – tentatively proposed during the last years of the GDR, has since been systematically implemented. Various planning tools have been created under the umbrella of the required World Heritage Management Plan. However, Quedlinburg's tight budgetary situation made implementation not always easy, because "one also has to be able to afford subsidies".¹ Therefore, usually only programmes with low own contributions can be recognised. Helpful here were donations from the Deutsche Stiftung Denkmalschutz, which sees Quedlinburg as an important field of activity. Not only were numerous individual monuments rescued with their support, but also a Jugendbauhütte (youth masons' guild) was set up to learn traditional craft techniques. In addition, the Deutsche Fachwerzentrum (German Centre for

Half-timbered Construction), which bundles, mediates, and applies knowledge about the renovation of historic buildings, has its headquarters in the city. The Open Monument Day is always celebrated as a city festival in Quedlinburg, and features a "monument breakfast" where associations and citizens network with each other.

The city itself maintains a unique depot of historic building materials, which has already salvaged over 700 doors, 127,000 roof tiles, and 18,000 bricks and passed them on to builders free of charge. These elements make it possible to react particularly well to the design statutes, which target the historically established small scale and the diversity of the city- and roofscape: where elsewhere uniformity is desired, in Quedlinburg ridge lines, eaves, roofs, bases, and wall heights should stagger in relation to neighbouring buildings. Over 80 new buildings in the old town already prove that such rules can be implemented. An important milestone in 2013 was the barrier-free redesign of the marketplace, which also integrated



equipment for events and catering in line with the cityscape – with underground hydrants, power connections, and ground sockets for sunshades. As early as 2006, the abbey garden south of the Schlossberg had been restored and partially reactivated for agricultural use. In recent years, a securing and new installation of the terraces on the Schlossberg followed, whereby vegetable gardens were created, which local residents manage.

Despite difficult economic conditions, it now pays off that Quedlinburg has concentrated earlier than other cities on its city centre. Not only is the number of tourists increasing, but since the 1990s, also the number of old town inhabitants – with growing numbers of young families. Similarly, types of housing suitable for seniors and social housing for around 1,000 residents in 53 vacant historic buildings have emerged. Quedlinburg's self-definition as a competence centre for renovation and preservation has secured more than 500 jobs in regional crafts. However, only about 70 % of the stock has been renovated and many buildings are still in acute danger. In this case, the UNESCO title will not be a hindrance, but will be helpful and unlock potentials.

1 Stadt Quedlinburg: 20 Jahre UNESCO-Welterbe. 2 Jahrzehnte Stadtsanierung, p. 115

Facts

UNESCO World Heritage Site: since 1994
 Size: 84.3 ha
 Inhabitants (2016): 4,854
 Total Buildings: 3,562
 Half-timbered Structures: ca. 60 %
 Building Year Category: ca. 70 % built before 1918

Individual Monuments: 1,720
 Private Ownership: ca. 90 %
 Renovation Level (2018): ca. 70 %
 Total Funding: ca. 140 MM euros

More information in the project description in the appendix



BAUKULTUR AT A GLANCE

- World Heritage title recognised as an opportunity
- Definition as competence centre for historic Baukultur
- Detailed analysis and mapping of the building stock
- Preservation of the small-scale structure and clearing of visual axes
- Collection and transfer of historic building materials
- Revival of the old town as a residential location for different groups
- Tourist marketing

cross-departmental cooperation at all levels of urban development. This is because the interests of other specialist departments are much more pronounced when planning in existing buildings than in a new building.

Overall, the complexity of ideas and projects has increased and, consequently, cooperative processes are becoming more important. The example of new forms of mobility makes it clear that not only within the administration, there is a need for stronger networking between urban planning and traffic planning. An exchange between municipalities and industry or the real estate industry is just as important as the integration of civic engagement. And finally, integrating the public is fundamental, because without the population as users, new mobility offers remain theory and reutilisation concepts for buildings and fallow areas lack connection to the urban development context.

Particularly profitable for the development of the building stock are actors who take into account not only their individual projects, but also the consequences for the existing quarter. For this reason, the Montag Stiftungen are important partners in some cities, because they support neighbourhood initiatives that jointly develop real estate while taking into account the common good of the quarter. These and similar initiatives need a permanent contact person in the administration, who integrates them at eye level in the development of neighbourhoods. As a result, different experts continuously contribute their expertise to Baukultur.

For good reason, since 2012 the federal government has made an integrated planning concept, which was developed with the participation of the public, a precondition in all urban development programmes, and also provides funding for the development of integrated concepts. In the urban redevelopment programme, urban development concepts are available in almost 90 % of the programme municipalities, and in almost 10 % they are in the process of being developed. In fact, individual measures are best served by an integrated overall approach. Thus, funding programmes make a significant contribution to integrated building stock development in municipal practice.

In its position paper “Städte in Deutschland 2030” (Cities in Germany 2030), the Deutsche Akademie für Städtebau und Landesplanung (DASL, German Academy for Urban Planning and Regional Planning) demands that state support and financing programmes consistently require and support interdisciplinarity. The Deutsche Städtetag (DST, German Association of Cities) formulated in its position paper “Planungs- und Baukultur in der integrierten Stadtentwicklung” (Planning and Baukultur in Integrated Urban Development) together with the Deutschen Städte- und Gemeindebund (DStGB, German Association of Towns and Municipalities), inter alia, the goal to further strengthen the developers’ function of cities and municipalities, and to counteract the reduction of competence in administration. Planning and building services, especially in the conceptual phase, should be handled by the authority itself. This requirement is elementary and expedient. Because in local government, the knowledge of the many different specialist departments is bundled and quickly networked. In view of the complexity of an integrated urban development strategy, however, the qualification profile for a job in planning and construction management must be expanded accordingly, according to the DST.

The municipal survey for the Baukultur Report 2016/17 showed that only very few municipalities in Germany exercise this design competence. Only 9 %

of respondents stated that they did not award an urban development framework plan or an urban development preliminary draft to external third parties. Some 11% work on the land use planning themselves and 3% on the development plans. It would be an important and proper step for municipalities to take on more responsibility at the conceptual level, so that the quality of the building stock is improved. The task of planning authorities is not only managing, moderating, and advising, but also controlling and designing.

Model Baukultur Communities Integrated strategies for urban development spread their effect over all levels of a city. Based on the individual object, Baukultur quality has an effect on the district and on the entire city. The award-winning concert hall in the Bavarian town of Blaibach, which was already presented in the Baukultur Report 2016/17, illustrates the effects Baukultur can have. As part of the statewide model project *Ort schafft Mitte* (Town Creates Centre) – to combat desolation and vacancy in rural communities – a modern concert hall was built in the middle of a marketplace through a private initiative. It serves as a venue for the annual music festival *Kulturwald* and is also available to local and regional associations, initiatives, and artists. Thus, the building not only revives the village, which was once threatened by vacancy, but also gives a strong boost to cultural tourism beyond the municipal boundaries. Also in the Bavarian market town of Winklarn, the aim is to actively counter the vacancy problem with a conversion project. The Centre for Baukultur and Monument Preservation is to be set up in a partially vacant and protected former estate. In the first construction phase, part of the complex has already been converted into a public event hall and senior citizens' flats, with the support of urban development subsidies and monument preservation. After completion, the Centre for Baukultur and Monument Preservation will primarily be dedicated to the preservation and activation of historic buildings. Thereby, the geographical proximity to the Czech Republic should be used for transnational cooperation.

Baukultur is developing in cities due to many individual projects in different locations and over a long period of time. The Association of German Architects and Engineers honours this Baukultur achievement by regularly portraying a selected city in a complete edition of the association's journal. In 2017, projects from Münster were presented, and included the upgrading of inner-city urban space through the conversion of an old parking garage into a residential and commercial building. The continuous growth and change of the settlement structure requires quality at every site and at every building task – especially in Baukultur communities. The term "Baukultur community" goes back to the Austrian Baukultur Community Prize, which is regularly awarded by the Verein Land-Luft. In Germany, between 2011 and 2013, in the BBSR research project *Baukultur in ländlichen Räumen* (Baukultur in Rural Areas) and between 2014 and 2016 in the BBSR research project *Baukultur konkret* (Baukultur Concrete), the association supported communities and initiatives in rural areas committed to Baukultur. But even in medium and large cities, a holistic approach to Baukultur is possible and necessary. The city of Kassel made this claim a commitment and in 2017 enacted a "Charta für Baukultur" (Charter for Baukultur). The charter formulates binding content and procedures. Architecture, urban development, open space design, and traffic planning and mobility can be found in the thematic fields, as well as different historical layers, environmental or demographic

aspects. Most importantly, however, the charter is supported by all actors in politics and administration and updated every five years. In this way, the city also ensures – also under changed framework conditions and actor constellations – that a common quality standard is pursued at all levels of urban development, and thus is a reliable partner for citizens and investors.

Communication and Networking Integrated planning and action also means integrating Baukultur into public life. This is not only a matter of communicating and networking in professional circles, but also of sensitising and inspiring the population for Baukultur issues. For example, in public buildings – such as city halls, schools, or museums – that already fulfil a Baukultur educational mission by virtue of their function, creative spaces could be provided for Baukultur communication. The visualisation of success also contributes significantly to general awareness raising. Good examples must therefore be disseminated and promoted so that awareness for built qualities develops. This is where the communication mission of the Federal Foundation of Baukultur comes in, which sets itself the task of conveying good examples – as with the Baukultur Report.

The Arbeitsgemeinschaft Deutsche Fachwerkstädte (German Half-timbered Cities Working Group) deals specifically with the needs of half-timbered towns nationwide. It was founded in 1975 and today counts 350 cities with 250,000 half-timbered buildings as its members. In 2018, the goal of further work was agreed: “To make half-timbered houses liveable (future-oriented) with new technology”. To show what living in a half-timbered house could look like in 2020, the Arbeitsgemeinschaft Deutsche Fachwerkstädte e. V. and the Hessenpark e. V. are working on a joint model house with a modern heating system, environmentally friendly materials, and a preparation of the technical interior furnishings to the latest standards. The topping out ceremony will be in 2018.

The working group Historische Stadt- und Ortskerne in Nordrhein-Westfalen (Historic City and Town Centres in North Rhine-Westphalia) – in which a total of 56 municipalities participate – has existed since the 1980s. In 2016, they agreed on a “Zukunftsprogramm 2030” (Future Programme 2030), with central cornerstones for coping with current challenges in the historic building stock. In Brandenburg, 31 cities are networked in the working group Städte mit historischen Stadtkernen des Landes Brandenburg (Cities with Historic Town Centres in the State of Brandenburg) and are working on joint projects, such the handbook published in 2010 “Fahrradfreundliche historische Stadtkerne” (Bicycle-friendly Historic City Centres). Baden-Württemberg’s Netzwerk Baukultur (Baukultur Network) organises a statewide conference once a year; good examples are presented on the Internet platform Baukultur Baden-Württemberg. Under the title “Weiterbauen” (Further Building), an event format exists in Hamburg to connect citizens, architects, and universities. The state initiative StadtBauKultur NRW wants to strengthen the awareness and commitment to Baukultur among citizens, builders, professionals, and municipalities. The view beyond the municipal horizon is worthwhile. Thus, the appeal to the municipalities is “Connect with each other and benefit from your experience!” As a municipality, Koblenz has committed to raising awareness of Baukultur qualities and involving the public in the city’s current construction projects, with the platform “Schau-fenster Baukultur” (Showcase Baukultur). The Zentrum für Baukultur Sachsen (Centre for Baukultur Saxony) was established in the Kulturpalast Dresden,

newly opened in 2017, as an open corner shop; in addition to conveying Baukultur heritage, current trends in architecture and urban planning are shown. One focal point is the raising of Baukultur awareness among young people. As part of the project Stadtentdecker by the Brandenburg Chamber of Architects – within the framework of the Architektur + Schule (Architecture + School) placement programme – students, planning participants, and those responsible for the project jointly confront questions about the built environment. Involving young generations in participation projects is, on the one hand, essential for their Baukultur education; on the other hand, new perspectives can be conveyed to those responsible.

In addition, nationwide events such as the Tag der Architektur (Architecture Day) by the Chambers of Architects with on-site visits, lectures, and open offices are highly effective. Year 2019 marks the 100th anniversary of the founding of the Bauhaus. The Bauhaus Archive/Museum of Design Berlin as well as the Bauhaus Dessau Foundation and the Klassik Stiftung Weimar will offer numerous events and shows, such as the exhibition “Versuchsstätte Bauhaus: Eine Arena moderner Orte” (Bauhaus Experimental Centre: An Arena of Modern Places) in Dessau. Activities are also planned for the Bauhaus anniversary in a total of twelve states. The Bauhaus Netzwerk Krefeld (Bauhaus Network Krefeld) was founded in Krefeld in 2015, and in 2019 it will be looking for traces of modernity in Krefeld with an exhibition.

In order to reach groups of people who do not feel attracted by the classic formats – such as publications, exhibitions, or information events – additional formats are required, like the social media hashtag “#Betonperle” (Concrete Pearls) during the exhibition SOS Brutalismus – Rettet die Betonmonster! (SOS Brutalism – Save the Concrete Monsters). With this keyword, photos of self-discovered brutalist buildings could be shared with other people. In Siegen, urban redevelopment was accompanied by city celebrations, a website, and construction site tours by the mayor and city councillors. An unusual path is also the project “Salz und Sup” (Salt and Soup) in the city of Stuttgart. The city organises joint city tours in selected neighbourhoods, followed by cooking together in the flat of a participant. Thereby, both living together in the city and in the neighbourhood, as well as concrete project ideas for the upgrading of the neighbourhood are up for discussion.

Baukultur is the result of a variety of influences and negotiation processes. If the widest possible range of actors contributes to the quality of the built environment, much has been gained for Baukultur. The goal is that sustainable sense of responsibility for the settlement stock grows for all those involved. Continuous optimisation of existing buildings and infrastructures not only gives the historic heritage a future, but also preserves the architectural and cultural diversity.

Recommendations for Action from the Baukultur Report 2018/19

Continue building mixed quarters

The densification of existing quarters reduces the redesignation of settlement and traffic areas and contributes to the improvement of the Baukultur diversity of use and design quality. The possibilities range from the activation of vacant, open, or fallow areas, to structural measures, such as infill construction, additional storeys, and building additional structures. In addition, well-designed public spaces and a balanced infrastructure offer have a positive effect on participation and user behaviour. They strengthen the identity of a place and the solidarity of its inhabitants.

Create Baukultur guidelines

The built environment provides an important key to character and identity in future-oriented transformations. Baukultur guidelines have a positive effect on the development of cities, places, and landscapes. They ensure the preservation of regional diversity, local recognisability, and common values.

- Endogenous development sites should be given priority during the simultaneous strengthening of existing neighbourhoods. Municipalities should also recognise unconventional places as construction sites. Baukultur is effective as a source of inspiration.
- Municipalities should address new actors and sensitise them to structural qualities. Close cooperation between municipalities and investors ensures infill development that is compatible with the quarter.
- New forms of work have to be used as opportunities for the existing stock. Digital infrastructures and compatible businesses make it possible to establish new jobs in existing buildings with manageable effort.

Design public places for people

Whether in dense cities or as a village meeting point: public green and open spaces create added value for all citizens. With participation, commitment, and good design, urban fallow areas and open spaces can be activated with relatively little effort, which has a positive effect on the quality of life.

- Municipalities should enable active citizenship in the design of public spaces and promote civic engagement.
- Historic open spaces and green spaces are to be preserved and maintained. Green infrastructures should be developed to strengthen public services and the common good. Green strategies are an integral part of urban development and must be strengthened.
- Adaptations to climate change should be used for Baukultur upgrades. The element of water should be more strongly identified and actively used in urban planning.

Use mobility as an opportunity for conversion culture

The conversion and expansion of transport infrastructures have great potential for design and structural improvements. In the age of a global and mobile society, transit spaces increasingly take on the role of a local business card with an identity-creating effect.

- New technologies contribute to the reduction of traffic and fine dust pollution. In particular, the expansion of the environmental network of public transport as well as pedestrian and bicycle traffic should be used to improve the design of public spaces.
- A network of different modes of transport should contribute to the reduction in land consumption and competition for land. Baukultur contributes to this through the design of new spaces, transport infrastructures, and street furniture.
- Existing and new transport infrastructures are central elements of public services and formative elements of public spaces. They have to be well designed and maintained.

Establish conversion culture

In the further development of built structures, existing qualities are to be recognised, valued, and maintained. Conversion culture goes beyond purely economic evaluation and includes social and environmental interests. Qualified craftsmanship techniques, sustainable building materials, and flexible solutions ensure Baukultur values – from smaller conversion measures, through energy renovations, to city-compatible new buildings.

Retain and develop existing structures

Additions, extensions, or conversions can represent contemporary solutions for existing buildings. These measures contribute to environmental and economic sustainability. Thereby, the continuity of identity-creating regional elements must be ensured.

- Existing buildings can often be updated with minimal intervention. Every conversion must bring about a design improvement. Historic structures must not give way to short-lived trends.
- The promotion of energy-saving renovation measures should be linked to Baukultur criteria and always accompanied by building consultation. In energy balances, the resources used (grey energy) are to be factored in and the neighbourhood-based approach appreciated.
- Qualitative aspects are to be taken more into account in the award of contracts and specified on the basis of specific tender texts. The existing building stock needs skilled craftsmen.

Strengthen the historical context as a starting point for new construction

Baukultur becomes apparent by means of historical layers, whose special features constitute the essence of a place. By inserting new architectural structures, places can be upgraded, provided that they are seen as a further development of Baukultur values.

- City repairs have to deal intensively with the existing building stock and its qualities. They are to be open and comprehensible, and included in action and design solutions.
- The expertise of different specialist disciplines is required to identify and take into account temporal layers worth preserving. In dialogue with the population, Baukultur qualities are already to be negotiated in a forward-looking Phase Zero.
- The urban compatibility of new buildings must be ensured with a “Baukultur Checklist” for developers and owners. Building projects must show that they have been site-specifically planned and implemented.

Secure material and immaterial values

Only through targeted mediation can Baukultur values be recognised and maintained. Society is assigned the role of steward for the next generation’s material and immaterial heritage. This responsibility is to be perceived as a joint task of politics, administration, economy, and society.

- In education, the teaching of the importance of Baukultur and built heritage is to be anchored more strongly. A transfer of knowledge of historical building traditions and built qualities is required to secure long-term Baukultur values.
- Historic building component exchanges can help save on construction costs, reduce energy consumption, reduce building waste, and extend the life of valuable building components. The securing, storage, and reuse of historic, local building components strengthens the appearance of a place.
- The reuse of materials by a local building materials trade promotes the existing building stock and supplements conventional market offers. In construction projects, the integration of resource-saving and sustainable building materials – such as wood or recycled concrete – should be worked toward more strongly.

Design successful processes

The future of our built environment is a task for society as a whole, which has to be continually redefined and shaped. To a large extent, building processes are regulated and set. However, the Baukultur success factor is based on an open and solution-oriented planning process in which all Baukultur actors and users are involved. For a well-designed building stock development, through “Phase Zero” planning and an active operation in the “Phase Ten” are particularly important.

Establish responsible land and property policy

Land is an irreplaceable property of extraordinary social and political importance. Therefore, municipal land ownership forms the basis of urban planning developments for the common good.

- Municipalities should operate a responsible land and property policy for their own benefit. At the same time, the existing quarters must be in the foreground and further development must start with them.
- Land in public ownership should be increasingly allocated in the socially compatible leasehold and in the concept procedure. In doing so, building cooperatives and owner-occupying building groups are to be included.
- Municipalities, municipal authorities, and private owners should include and consider the entire building stock for a forward-looking neighbourhood development. A strong cooperation between municipalities and owners in the “Phase Zero” and “Phase Ten” development options.

Secure Baukultur values together

The forward-looking development of the built environment requires alliances at all levels and fields. Finding solutions to complex questions and processes requires individual expertise and views.

- The federal government, federal states, and municipalities should perceive their function as role models in Baukultur more strongly. Qualified planning competitions and broad public communication on efforts, benefits, and risks promote a general understanding of (conversion) building measures.
- The participation of different disciplines and actors is an essential part of building stock development. The federal, state, and local authorities are called upon to consider interdisciplinarity more strongly, especially in competitions and awards.
- The real estate industry and private owners are increasingly to be gained for investment in the building stock. Tax incentives, easy access to subsidies, and expert support from “Baukultur experts” can make a significant contribution here.

Anchor design tools

Federal structures and a heterogeneous building stock make a comprehensible catalogue of measures for conversion culture necessary. Well-functioning tools are to be found and implemented at all levels.

- Laws, guidelines, and regulations must be reviewed for their function and manageability in dealing with heritage and building stock. A reduced and comprehensible catalog of measures as well as technically trained participants are essential for a qualified building stock development.
- Planning tools – such as landmark preservation master plans, cityscape analyses, design guides, and vacancy registers and building gap cadastres – should be anchored in municipal practice and called for in the framework of funding programmes.
- Municipalities should network and sensitise the population to the value of their existing building stock through flagship projects. The communication of Baukultur to a broad public requires places of information and temporal formats.

Appendix

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The Glass Cathedral in Amberg (p. 20)

Location: 92224 Amberg

Project: Glass factory with central production hall and two side halls, gatehouse, and two residential buildings

Hall Construction: Entrance frame made of prefabricated u-shaped concrete profiles at a distance of 9 metres; transverse stiffening by prestressed concrete slabs forming the roof cladding; spaces between the slabs furnished with vertical wire-glass windows (by Ira Diana Mazzoni)

Use: Production site for glassware (at present mainly wine glasses)

Planning and Construction Period: 1967–1970

Size: property: 4.8 ha, constructed area: 11,500 m², hall: 100 × 27 × 20 m

Cost: ca. 12 MM DM

Developer: Rosenthal AG, Selb

Planners: The Architects Collaborative (TAC),

Boston: Walter Gropius, Alexander Cvijanovic

User: Kristall-Glasfabrik Amberg GmbH

Personnel: once up to 500, today ca. 150

Additional Information:

- Peter Geiger: Ein Stück Oberpfalz in Boston. In: Onetz 2.7.2017: <https://www.onetz.de/amberg-in-der-oberpfalz/kultur/amberg-ist-gropius-stadtein-stueck-oberpfalz-in-boston-d1679866.html>
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- <https://tourismus.amberg.de/index.php/kultur/gebaeude/walter-gropius-glaskathedrale.html>
- <https://tourismus.amberg.de/index.php/kultur/gebaeude/walter-gropius-glaskathedrale.html>

Michaelsberg Abbey, Siegburg (p. 25)

Location: 53721 Siegburg

Objectives and Measures: New construction and conversion of Michaelsberg Abbey to conference centre and hotel

Uses: Hotel, gastronomy, conferences, education, offices, administration, institute, sacred building, parking

Planning and Construction: May 2013–May 2017

Size: Abbey 15,330 m² GFA; new construction 7,734 m² GFA

Cost: Total investment 46 MM euros (of which 6 MM euros due to hail damage)

Financing, Operation: Financing: Archdiocese of Cologne, Department of Finance/Construction/Law;

Operation: KSI, Katholisch-Soziales Institut

Process:

- 2012: Architectural competition
- May 2013: Planning begins
- July 2014: Construction begins
- May 2017: Completion

Developer: Archdiocese of Cologne, Department of Finance/Construction/Law

Architecture: MSM Meyer Schmitz-Morkramer, Cologne

Landscape Planning: FSWLA

Structural Engineering: Finck Billen Ingenieur-gesellschaft GmbH & Co KG

Structural Analysis: Ingenieurbüro Feld

HVAC, ICA: Ingenieurgesellschaft TEN GmbH

Fire Protection: Ingenieurbüro Gehlen

Building Physics: ISRW Klapdor

Geotechnical Expert: Ingenieurbüro Vogt

Surveying: Vermessungsbüro Koch/Dipl. Ing. Ulrich Epp

Health and Safety Coordinator: MPlus GmbH

Awards: Iconic Awards 2017 (Winner); German

Design Award 2018 (Special Mention); MIPIM Award

2018 in the category "Best Hotel & Tourism Resort";

MIPIM Award 2018 "Special Jury Award"

Additional Information:

- www.msm-architektur.com
- www.tagen.erzbistum-koeln.de
- www.db-bauzeitung.de/aktuell/neu-in/siegburg
- www.german-architects.com/de/architecture-news/bau-der-woche/behutsame-umwidmung

Splanemann-Siedlung (p. 36)

Location: 10319 Berlin

Project: Housing estate with 27 two- and three-storey buildings, 118 residential units (originally 31 buildings with 138 residential units)

Construction: Concrete slabs fabricated on-site: roofs, cellars, floors/ceilings, and chimneys in traditional brick construction

Use: Housing

Planning and Construction Period: Development

plan 1924–25, Construction period 1926–1930

Developer: Gemeinnützige Reichsbundkriegersiedlung GmbH

Planners: Wilhelm Primke, Architekturbüro Primke und Goettel, and Martin Wagner, architect, urban

planner, and at the time head of Berlin's municipal

planning and building control office

Execution: "Occident" Deutsche Baugesellschaft mbH

Additional Information:

- Museum Lichtenberg: <http://www.museum-lichtenberg.de>
- Landesdenkmalamt Berlin: Wohnanlage Splanemannstraße: <http://www.stadtentwicklung.berlin.de>
- Katharina Kaufmann (2014): Die Platte im Wandel. Diplomarbeit an der TU Graz, Institut für Wohnbau: <http://www.iwtugraz.at> (Stand 05/2018)
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- wordpress.com: Berliner Siedlungen. Siedlungen der Moderne im Schatten des Welterbes. Splanemann Siedlung: <http://www.berlinsiedlungen.wordpress.com/splanemann-siedlung>
- www.deacademic.com: Splanemann-Siedlung: <http://www.deacademic.com/dic.nsf/dewiki/1312401>
- Die Welt 18.09.1997: Eine Bauweise, viel älter als die DDR: <http://www.welt.de/print-welt/article641396/Eine-Bauweise-viel-aelter-als-die-DDR.html>

Turley Conversion (p. 64)

Location: 68167 Mannheim

Objectives and Measures: Urban mix of different forms of living, work, research, community needs, and neighbourhood culture; renovation in line with monument preservation specifications; green spaces with recreational quality; connection to existing infrastructure and neighbourhoods

Uses: Rental and owner-occupied flats; communal forms of living; supervised and inclusive residential facilities; offices; community centre; day-care

centre; dance school; gastronomy

Planning and Construction: 2012–2022

Size: 12.6 ha

Process:

- Since 1947: Use of the barracks by the US Army
- 2007: US Army leaves the location
- 2012: The area is acquired by the urban project development company MWSP as the first of the Mannheim conversion areas by the Institute for Federal Real Estate
- 2012: Foundation of a users' advisory board
- From 2012: Competitions for different construction sites
- 2013: Completion of demolition work in the area not under monument protection
- From 2014: Renovation and conversion of the protected buildings
- 2014: First users move into the existing buildings
- 2014: Workshop process for design of green areas
- From 2015: Development and new buildings in the eastern area
- 2016: First completions
- 2017: First district festival
- 2018–2019: Design of the open green spaces
- 2020: Planned completion of all construction phases

Participation, Formats: large-scale participation process on the conversion areas of the city of Mannheim and documentation in white papers; users of the neighbourhood exchange views with the Turley Advisory Board; district newspaper and district festivals

Developer: MWS Projektentwicklungsgesellschaft mbH

Urban Development: AS+P Albert Speer + Partner GmbH, Frankfurt am Main

Architecture: s null neun Architekten (Projekt 472), Mannheim

Architecture, other project: United Architects, Berlin; Schmucker und Partner, Mannheim; Motorlab Architekten, Mannheim; Storch + Federle Architekten, Mannheim; Florian Krieger, Darmstadt; Kaupp + Franck Architekten, Mannheim; MVRDV, Rotterdam; Christoph Mäckler Architekten, Frankfurt am Main

Landscape Planning: Wewer Landschaftsarchitektur, Frankfurt am Main

Awards: Hugo-Häring-Auszeichnung for the project Homerun, Turley (2017); Contracting-Preis from the Ministerium für Umwelt, Klima und Energiewirtschaft, State of Baden-Württemberg, for the project Umbau2 (2017); Immobilien-Marketing-Award for the project Homerun, Turley (2016)

Additional Information:

- Achim Judt (MWSP): Vortrag auf der Baukulturwerkstatt "Historische Schichten der Stadt" am 11.5.2017: <https://www.bundesstiftung-baukultur.de/konversion-alte-flaeche-neue-nutzung>
- <http://www.13hafreiheit.de/startseite.html>

- <http://www.konversion-mannheim.de/buergerbeteiligung/weissbuchprozess>
- <http://www.konversion-mannheim.de/flaechen/turley-areal>

Living on a Car Park, Hanover (p. 67)

Location: 30159 Hanover

Objectives and Measures: Renovation of a car park; static strengthening and addition of storeys with flats; new façade

Uses: Car park, 12 flats, offices, retail shop

Planning and Construction: 2012–2016

Size: 1,250 m² GFA

Cost: Cost group 300+400: 3.71 MM euros (residential construction)

Process:

- 2012: Competition
- 2013–2015: Planning
- 2016: Execution

Development: Union Boden GmbH (today Hanova), Hanover

Architecture, adding storeys with residential construction: Cityförster architecture + urbanism PartGmbH, Hanover

Architecture, conversion car park and façade: ASP Architekten Schneider Meyer Partnerschaft mbB, Hanover

Structural Engineering: Vogel Ingenieure im Bauwesen, Hanover

Awards: BDA Preis "max45". Junge Architekten in Niedersachsen (2017); award as Best Practice Example for the BMBF Initiative "Zukunftsstadt" (2015)

Additional Information:

- Madeleine Buck: So lebt es sich auf dem Dach eines Parkhauses. In: Hannoversche Allgemeine Zeitung, 3.4.2017: <http://www.haz.de/Hannover/Aus-der-Stadt/Uebersicht/So-lebt-es-sich-auf-dem-Dach-eines-Parkhauses>
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- <http://bda-niedersachsen.de/awards/wohnrone-parkhaus-windmuehlenstrasse/>
- http://www.cityfoerster.net/arbeitsfelder/wohnrone_parkhaus_windmuehlenstrasse-36-1.html

River Exposure in Siegen (p. 70)

Location: 57072 Siegen

Objectives and Measures: Exposure and restoration of the Sieg River by dismantling the 5,100 m² Siegplatte; construction of an open staircase as a riverbank development; pedestrian-friendly redesign of squares, streets, promenades, and bridges; construction of a bridge as a connection between the upper and lower town; settlement of the university in the city centre; renovation of the city wall; strengthening the city centre as a lively public place

Planning and Construction: 2011–2016

Size: 3.4 ha

Cost: 14 MM euros

Funding: Restoration of the Sieg as a project of the Südwestfalen Regionale 2013, funds from the "Aktive Stadt- und Ortsteilzentren" urban development promotion by the state of North Rhine-Westphalia

Process:

- 1991: First idea to dismantle the Siegplatte in the framework plan Siegen-Mitte
- Intermediately: several expert reports verify the poor structural condition of the Siegplatte
- 2007: Revisiting the idea with the University of Siegen
- 2008: Expert opinions on the removal of parking spaces and the impact on retail
- 2009–2010: Competition "Siegen zu neuen Ufern"
- 2012: Demolition of the Siegplatte and city festival
- 2012: Launch of the project website www.siegen-zuneuen-ufern.de
- 2012–2016: Renovation of bridges and redesign of streets and squares
- 2013: Construction of the new Oberstadtbrücke
- 2013–2014: Renovation of the city wall
- July 2014 – July 2015: New staircase and riverside wall; restoration of the Sieg riverbed
- September 2016: Ceremonial opening with the Siegener Uferfest

Participation, Formats: Information and involvement of the population through postcard campaigns, posters, construction newspapers, project website; survey on the location of two sculptures; demolition festival with art event for school classes on the Siegplatte; free construction site tours

Developer: City of Siegen

Landscape Planning: Atelier LOIDL Landschaftsarchitekten, Berlin

Structural Engineering: BPR Dr Bernhard Schäperts Consult, Munich

Other Partners: University of Siegen; Gebr. Schmidt Bauunternehmen, Rüdersdorf; Heinrich Weber GmbH, Siegen; Fritz Meyer GmbH, Altenkirchen; ARGE Siegufer B+H Bau GmbH

Awards: Deutscher Landschaftsarchitektur-Preis, category "Grüne Infrastruktur" (2017); Deutscher Städtebaupreis, Commendation (2016); Westfalen-Sprung. Martin-Leicht-Preis für Stadt- und Regionalentwicklung (2015); competition "Ausgezeichnete Orte im Land der Ideen", Winner and Public Award (2013); Polis Award, category "Lebenswerter Freiraum" (2018)

Additional Information:

- Bernd Joosten (Atelier LOIDL): Vortrag auf der Baukulturwerkstatt "Umbaukultur" am 8.9.2017: <https://www.bundessstiftung-baukultur.de/gruenere-stadt-zu-neuen-ufern-siegen>
- Stadt Siegen: Siegen – Zu neuen Ufern: Eine Dokumentation 2009–2016
- <http://www.siegen-zu-neuen-ufern.de>
- Heiko Haberle: Sieg für die Stadt. In: Deutsches Architektenblatt 04.2018

Meyer Winery (p. 83)

Location: 76831 Heuchelheim-Klingen

Objectives and Measures: Representative architecture that reflects the high quality of the wines; partial transformation of a warehouse into a wine store; improvement of processes; stronger customer loyalty

Use: Wine shop with event area

Planning and Construction: July 2013 – August 2014

Size: 130 m² Useable area

Cost: Total investment: 285,000 euros, wine shop: 170,000 euros

Funding: Promotion of individual agricultural investments and the common organisation of the wine market (EU funding): 24,000 euros

Developer: Weingut Karl-Heinz und Andreas Meyer GbR

Architecture: Werkgemeinschaft Landau

Award: Architekturpreis Wein (2016)

Additional Information:

- <https://www.diearchitekten.org/main-menue/baukultur/wein-architektur/architekturpreis-wein-2016/ergebnis/weingut-meyer-heuchelheim-klingen-pfalz/>
- <http://www.wgld.de/projekte/vinothek-weingut-meyer>

Kulturpalast Dresden (p. 90)

Location: 01067 Dresden

Objectives and Measures: Replacement of the multipurpose hall with a concert hall, integration of other cultural uses, renovation of the foyer and the external appearance in line with monument preservation specifications, energy renovation

Uses: Concert hall for the Dresdner Philharmonie, central library, cabaret theatre "Die Herkuleskeule", Baukultur Centre, Capital of Culture office, restaurant

Planning and Construction: 2010–2017

Size: Total GFA: 37,062 m², concert hall Dresdner Philharmonie: 1,750 seats incl. 18 wheelchair spaces, cabaret hall: 240 seats incl. two wheelchair spaces, central library: 5,463 m²

Cost: 89.6 MM euros (cost group 300 and 600)

Process:

- 2009: International competition
- 2010: Planning begins
- 2013: Construction begins
- 2015: Topping-out ceremony
- April 2017: Opening

Participation, Formats: Operators, users and planners visited different concert halls in order to evaluate them acoustically; information events with construction site concerts by the Philharmonic on the occasion of the topping-out ceremony

Developer: KID Kommunales Immobilienmanagement Dresden GmbH & Co KG

Architecture: gmp von Gerkan, Marg und Partner, Hamburg

Structural Engineering: Professor Pfeifer und Partner, Ingenieurbüro für Tragwerksplanung, Cottbus

Building Physics, Building and Room Acoustics: Peutz bv, Mook, the Netherlands; ADA Acoustic Design Ahnert, Berlin

Fire Protection: hhpberlin Ingenieure für Brandschutz, Berlin

Stage Technology: theapro, theater projekte daberto + kollegen, Munich

Building Services: Planungsgruppe M+M AG, Dresden; ARGE Ingenieurbüro Rathenow, Dresden und Solares Bauen GmbH, Freiburg im Breisgau

Lighting Design: gmp mit Conceptlicht, Traunreut

Additional Information:

- Bettina Klemm: Zurück zum alten Charme. In: Sächsische Zeitung 30.10.2016
- Frank Maier-Solgg: Wider den Abriss. In: Deutsches Architektenblatt 08.2017
- Bernhard Schulz: Zurück zur Moderne. In: Baumeister 10.2017
- Stephan Schütz (gmp): Vortrag in der Baukulturwerkstatt "Umbaukultur" am 8.9.2017: <https://www.bundessstiftung-baukultur.de/die-zukunft-von-damals-kulturpalast-dresden>

- <http://www.gmp-architekten.de/projekte/kulturpalast-modernisierung-und-sanierung-neubau-konzertsaal.html>
- [https://de.wikipedia.org/wiki/Kulturpalast_\(Dresden\)](https://de.wikipedia.org/wiki/Kulturpalast_(Dresden))

Munich Re (p. 92)

Location: 80805 Munich

Objectives and Measures: General energy and architectural renovation of an office building from 1980

Uses: Office building

Planning/Construction Period: 2011–2014

Size: 49,800 m² GFA

Process:

- 2009: Competition
- 2011–2014: Execution

Developer: Münchener Rückversicherungs-Gesellschaft AG, München

Architecture: Sauerbruch Hutton, Berlin, Matthias Sauerbruch, Louisa Hutton, Juan Lucas Young

Project Management: Obermeyer Project Management GmbH, Munich

Tender and Construction Supervision: CL MAP GmbH, Munich

Building Services: ZWP Ingenieur-AG, Berlin

Structural Engineering: Werner Sobek Ingenieure Stuttgart GmbH

Landscape Architecture: Adelheid Schönborn Gartenarchitektur, Muhr am See

Fire Protection: hhpberlin, Munich

Building Physics: Müller-BBM GmbH, Berlin

Additional Information:

- <http://www.sauerbruchhutton.de/index.php?lang=de#projekte>
- <https://inspiration.detail.de/technik-schwungvoll-gestaltete-fassade-sanierung-der-munich-re-in-muenchen-113402.html>

Mannheim Business School (p. 96)

Location: 68131 Mannheim

Objectives and Measures: Construction of a new study and conference centre in the basement level of the Mannheim Palace and subterranean extension into the palace garden; the least possible interference with the protected building and the park; as much daylight as possible

Uses: Two lecture halls, an assembly area, ten group study rooms

Planning and Construction: 2014–2017

Size: 1,700 m² GFA

Cost: 9 MM euros

Financing, Operation: Takeover of the total costs by MBS, in return the right of use for a maximum of 30 years, use thereafter subject to rent

Process:

- 2013: Call for tenders for the negotiation process
- 2014: Award
- 2015: Construction approval and construction begin
- 2016: Start of structural work and topping-out ceremony
- 2017: Opening

Participation: Close coordination with the Regional Authority for Monument Preservation

Developers: Vermögen und Bau Baden-Württemberg, Amt Mannheim und Heidelberg

Architecture: schneider+schumacher Planungs-gesellschaft mbH, Frankfurt am Main

Landscape Planning: Planungsbüro Borst, Leimen
Structural Engineering: Ingenieurgruppe Bauen, Mannheim

Structural Analysis: Ingenieurbüro Bräuer + Späh, Mannheim

Electrical engineering, Elevator: sbi GmbH,

Schneider Beratende Ingenieure, Walldorf

Heating, Sanitation: Ingenieurbüro htp, Weinheim

HVAC, ICA: Planungsbüro Schmitt, Epfenbach

Fire Protection: Kempen Krause Beratende

Ingenieure GmbH, Köln

Building Physics: Hüttinger Ingenieurgesellschaft für Bauphysik mbH, Lehrensteinsfeld

Geotechnical Expert: RT Consult GmbH, Mannheim

Surveying: Ingenieurbüro Weese + Zuber GmbH, Nußloch

Health and Safety Coordinator: Thurm Sicherheits-technik, Olpe

Additional Information

- <https://www.german-architects.com/de/architecture-news/bau-der-woche-deutschland/keller-im-gruenen>
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- Christoph Günßer: Helle Höhle. In: Deutsches Architektenblatt 03.2018

Train Station Sangerhausen (p. 100)

Location: 06526 Sangerhausen

Objectives and Measures: Revitalisation of the former station building as an attractive gateway to the city; settlement of municipal uses with the public-public process; renovation of the lobby and façades in line with monument preservation specifications; free layout design with park and ride facility, bicycle, and taxi ranks

Uses: Library, city office, tourist office (urban uses), railway service station, restaurant, snack bar, bookshop, offices

Planning and Construction: 2014–2016

Size: Total Area: 8,500 m², Building: 4,200 m² GFA

Cost: Total Investment: 7 MM euros cost group 200-400, 700: 5.9 MM euros

Financing, Funding: Urban development funding: 2.2 MM euros, subsidy from the Nahverkehrsservice Sachsen-Anhalt GmbH: 2.8 MM euros

Process:

- 2009: Acquisition of the building by the city of Sangerhausen
- December 2012: Acquisition by SWG Städtische Wohnungsbau GmbH Sangerhausen
- 2013: Europe-wide call for tenders, determination of project controller, planning begins
- May 2014: Start of award procedure for general contractor
- May 2015: Construction begins
- September 2016: Opening

Developer: SWG Städtische Wohnungsbau GmbH Sangerhausen

Architecture: S&P Sahlmann Planungsgesellschaft für Bauwesen mbH, Leipzig

Landscape Planning: plandrei Landschafts-architektur GmbH, Erfurt

Structural Engineering: Ruffert Ingenieurgesell-schaft für Tragwerksplanung mbH, Erfurt

Building Physics: HKL Ingenieurgesellschaft mbH, Erfurt

Additional Information:

- Cornelia Heller: Ein starkes Stück Ostmoderne: <https://www.db-bauzeitung.de/db-metamorphose/ein-starkes-stueck-ostmoderne/>
- https://swg-sangerhausen.de/_aktuelles/news/details/zur-geschichte-des-bahnhofs-sangerhausen.html
- <http://www.sangerhausen.de/aktuelles/922-feierliche-wiedereroeffnung-des-bahnhofgebaeudes-in-sangerhausen>
- https://de.wikipedia.org/wiki/Bahnhof_Sangerhausen

Historic Townscape Iphofen (p. 106)

Location: 97346 Iphofen

Objectives and Measures: Urban renewal with design regulations and individual construction consulting; creation of incentives for private builders; municipal energy usage plan; integrated urban development concept; creation of social housing; renovation of city walls and town hall

New Buildings: Wine shop; Knauf-Museum; city history barn with interactive city model; municipal service centre with city administration, tourist information, archive and library; extension of the senior citizens' centre; new day-care centre

Funding: Urban development fund; urban preservation of historic monuments programme; municipal support programme for renovation measures in the area of design statutes (maximum amount per property 20,000 euros); funding through tourism associations, wine funds, and European awards

Process:

- Since 1980: Urban renewal
 - Since 1984: Design statute
 - Since 1999: Important new buildings
 - 2015: Completion of municipal service centre
- Participation, Formats:** individual developer consulting; annual town hall meetings; if necessary, workshops; every three years awards for private urban renewal measures; publication of book about 37 years of urban renewal

Urban Development Concept: Plan & Werk Büro für Städtebau und Architektur, Bamberg

Architecture (selection): Böhm & Kuhn Architekten, Iphofen (wine shop, museum, service centre);

Architekturbüro Jäcklein, Volkach (service centre)

Partners: Landratsamt Kitzingen, Landesamt für Denkmalpflege, Regierung Unterfranken

Awards (selection): Bauen im Bestand. Recognition for the service centre, Bayerische Architektenkammer (2017); Monument protection medal for special services in monument protection, Bayerisches Landesamt für Denkmalpflege (2015); Historische Stadtkerne – integriert denken und handeln, Award from the BMVBS (2013); Stadt bauen, Stadt leben, National Prize for integrated urban development from the BMVBS (2009)

Additional Information:

- Heiko Haberle: Die meistern das schon. In: Stadtaspekte "Land in Sicht", Oktober 2016
- <https://www.stadt-iphofen.de/bau-gewerbe/energienutzungsplan/>
- <https://www.stadt-iphofen.de/bau-gewerbe/gestaltungssatzung-stadtsanierung/>

Urban Neighbourhood in Former Velvet Weaving Mill (p. 118)

Location: 47798 Krefeld

Objectives and Measures: small-scale and non-profit development of a former textile factory as a location for living, working, and public meetings; impulse for district development; better cohabitation in the neighbourhood and more opportunities for social participation

Uses: 37 residential units, of which 13 publicly funded (2,800 m²); offices (1,700 m²); Lenz culture and neighbourhood café (180 m²); factory hall as "open space with roof" and for parking spaces (3,000 m²)

Planning and Construction: 2012–2017

Size: 6,700 m² GFA, ca. 4,700 m² useable area plus 3,000 m² factory hall

Cost: Total Investment: 8 MM euros, cost group 300 structure: 3.47 MM euros; cost group 400: 1.07 MM euros

Financing, Funding: Own capital: 1.6 MM euros; external financing (GLS Bank, Hannoversche Kassen): 3.1 MM euros; state development loans: 2.2 MM euros; Stadtumbau West (only shed hall): 1.1 MM euros

Process:

- 2012: Structural feasibility study
- 2013: Development of a joint action programme of the Montag Stiftung Urbane Räume and the city of Krefeld; residents' survey; first public information and ideas evening
- 2014: unanimous council decision on the transfer of the property by leasehold over 60 years; planning workshop for dealing with the factory hall followed by a feasibility study; official project start; foundation of Urbane Nachbarschaft Samtweberei gGmbH as a subsidiary of Carl Richard Montag Förderstiftung; conclusion leasehold contract; three-month repair of the pioneer house as the first building measure; first project call in the district; small student competition with the University of Applied Sciences Niederrhein for the development of the CI of the "Nachbarschaft Samtweberei" project; celebratory opening of the former mill as part of the completion of the pioneer house; people interested in housing assemble as group
- 2015: first "Viertelsratschlag" as trend-setting district assembly; first Cherry Blossom Festival together with the resident Bürgerverein Bahnbezirk; renovation of the gatehouse; commissioning of the neighbourhood lounge ECKE as a cooperation project of the UNS with the local sponsor of child/youth work and family education "Bürgerinitiative Rund um St. Josef"
- 2016: Construction begin on the protected factory buildings for residential purposes and on the factory; interim evaluation
- 2017: Completion of the flats; structural completion of the factory hall and neighbourhood party; participatory process of further use of the hall; opening of Lenz, the culture and neighbourhood café, operated by the non-profit organisation "Kette und Schuss"; full occupancy in the old velvet weaving mill

Participation, Formats: annual project calls (disposition fund of 5,000 euros); project round tables; co-determination bodies ("Viertelsrat", "Viertelsratschlag"); neighbourhood lounge ECKE; tenants' voluntary "quarter hours"; participatory development of uses and interior design of the factory hall

Developer: Urbane Nachbarschaft Samtweberei gGmbH (UNS)

Architecture: Heinrich Böll, Essen; Strauß & Fischer Historische Bauwerk, Krefeld

Landscape Planning: DTP Landschaftsarchitekten, Essen; Elke Lorenz Landschaftsarchitektin with Friedrich Wissmann, Düsseldorf

Structural Engineering: AKP, Krefeld

Building Physics: Ingenieurbüro INCO, Aachen

Other Partners: City of Krefeld, State of NRW, NRW.Urban

Awards: NRW-Landespreis für Architektur, Wohnungs- und Städtebau (2017); Deutscher Städtebaupreis – Special Prize – Commendation (2016); Polis Award in the category Social Neighbourhood Development – Winner (2016); Polis Award in the category Public Commitment – Recognition (2016); Ort des Fortschritts NRW (2015)

Additional Information:

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- www.samtweberviernetz.de

Building over a Car Park at Dantebad (p. 122)

Location: 80637 Munich

Objectives and Measures: Living space for recognised refugees as well as people entitled to social housing; pilot project of the special programme Wohnen für Alle; quick realisation as timber construction with a high degree of prefabrication; urban densification without sealing of areas; maintain as many parking spaces as possible

Uses: 100 flats (86 studios, 14 2.5-room flats), common rooms, roof terrace

Planning and Construction: January–December 2016

Size: Property: 3,860 m², GFA: 4,630 m², Living space: 3,615 m²

Cost: 7.25 MM euros (cost groups 300 and 400)

Financing, Funding: Funding within the framework of the housing construction emergency programme of the city of Munich and income-based funding

Process:

- January 2016: Planning begins
- May 2016: Commissioning of general contractor
- June 2016: Construction begins
- December 2016: Completion
- January 2017: Occupation

Participation: Citizens' information event; urban design commission

Developer: Gewofag Projekt GmbH, Munich

Architecture: Florian Nagler Architekten, Munich

Landscape Planning: terra.nova Landschaftsarchitekten, Munich

Structural Engineering (timber construction): Ingenieurbüro für Baustatik Franz Mitter-Mang, Waldkraiburg

Structural Engineering (concrete): r.plan, Chemnitz

General Contractor and Construction

Management: B&O Wohnungswirtschaft, Bad Aibling

Awards: Deutscher Bauherrenpreis in the category serial and modular building (2018)

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- <http://www.gewofag.de/web.nsf/id/wohnen-fuer-alle-dantebad-gewofag>

Urban Renewal in Quedlinburg (p. 128)

Location: 06484 Quedlinburg

Objectives and Measures: Preservation and development of the UNESCO World Heritage Site in five fields of action: 1) architectural and historical heritage – preserving the World Heritage Site; 2) mediation and education – knowing, understanding, and communicating the World Heritage Site; 3) living, working, shopping, and transport – living in the World Heritage Site; 4) tourism, culture, and gastronomy – experiencing and enjoying the World Heritage Site; 5) urban greenery, gardens, and cultural landscape – relaxing in the World Heritage Site

New Buildings (selection): (priority to close gaps with residential buildings) Gildschaft 10; Reichenstraße 16; Schmale Straße 54–58; Breite Straße 11 (in connection with renovation of Breite Straße 12); Schmale Straße 9, 10, 11, 15; Ballstraße 21 (in connection with renovation of Ballstraße 22); residential and commercial building Steinbrücke 17/ Carl-Ritter-Str. 1–2; reconstruction of residential and commercial building Altetopfstraße 21; new building Lyonel-Feiningergalerie

Renovations (selection): Castle, residence building with museum; town hall, with installation of a city model; Palais Salfeldt, with Deutsche Stiftung Denkmalschutz conference and event centre; Blasiestraße 11 as Deutsches Fachwerkzentrum; Haus der Städteunion, Hohe Straße 8; large building of the Nordharzer Städtebundtheater; commercial buildings Steinbrücke 4, 5, 7, 8; in addition, numerous successful individual examples by private developers

Square and Garden Designs (selection): Market-place, abbey garden, Schlossberg, Carl-Ritter-Platz, Mathildenbrunnen/Pökenstraße, Platz am Kornmarkt

Depot of Historic Building Materials: Cost-neutral, material support for renovation projects: three to four rescue operations per week; 50 to 60 applications per year with numbers increasing; inventory digitally catalogued according to dimensions, types, and styles. Thus far recovered: 1,300 doors; 218,000 roof tiles; 18,000 bricks; 400 m³ sandstones; 50 m³ wooden beams, battens and boards. Thus far given out: 700 doors, 127,000 roof tiles, 16,000 bricks, 250 m³ sandstone (including for city walls and Schlossberg renovation).

Financing, Funding: Diverse programmes from state, federal government, and the EU: e.g. "Stadtumbau Ost", EFRE, "Investitionen in nationale Welterbestätten", "Nationale Projekte des Städtebaus", Mittel der Beauftragten für Kultur und Medien, URBAN21, LEADER. Important support from the DSD, which has taken over the entire

municipal own contribution in the urban development subsidy over some years, so that funds can be passed on to private investors despite the World Heritage city's budget crisis. In addition, there are some private foundations (coordinated by the DSD) and occasionally an inheritance earmarked for use in the redevelopment area.

Process:

- Since 1991: Programme municipality in the funding programme urban development monument protection and adoption of the first design statute
- Since 1992: Programme municipality in urban development renewal
- 1993: Return of the cathedral treasury
- 1993: Adoption of the first preservation statute and formalisation of the redevelopment area
- 1994: Inclusion in the UNESCO World Heritage List
- 1995–1997: Funding for 53 objects through the programme Sozialer Wohnungsbau für leer stehenden Wohnraum
- 1998: Ceremonial opening of the first nationwide Open Monument Day as supraregional event
- 2000–2007: Funding of 20 projects through the state initiative URBAN 21
- 2001: Founding of the association UNESCO-Welterbestätten in Deutschland e. V. with headquarters in Quedlinburg
- Since 2001: Programme municipality in funding programme Stadtumbau Ost
- Since 2001: Part of the "Gartenträume – Historische Parks in Sachsen-Anhalt"
- 2006–2010: IBA 2010 "Stadtumbau Sachsen-Anhalt"
- 2007: 1st Quedlinburg monument breakfast as part of Open Monument Day
- 2009–2013: Creation of the World Heritage Management Plan with its sub-concepts
- 2009–2014: Funding through the programme Investitionen in nationale Welterbestätten
- 2014: Celebrations for 20 Years UNESCO World Heritage Site Quedlinburg
- 2016: Renovation of the Schlossberg as a national urban development project

Participation, Formats: Workshops; citizen and local resident meetings as warranted; individual developer consulting for planned renovation and new construction projects, as well as for funding opportunities; regular coordinating meetings with the monument authorities and with ICOMOS; participation in trade fairs

Important Stakeholders: Redevelopment agency BauBeCon; private developers; planning offices; Deutsche Stiftung Denkmalschutz; Deutsches Fachwerkzentrum Quedlinburg e. V.; monument protection authorities, incl. ICOMOS; urban development monument protection expert group; regional craftsmanship businesses (mostly specialists for timber frame renovation)

Awards (selection): State of Saxony-Anhalt Integration Award for the Deutsches Fachwerk Zentrum, Project "Integrativer Ort BauDENKMAL!" (2017); Saxony-Anhalt architecture prize, award for Breite Straße 11/12 (2016); national prize for craftsmanship in monument preservation, 1st Prize for Pölle 46 (2015); state competition "Auf dem Weg zur barrierefreien Kommune", 3rd Place (2013); national competition "Historische Stadtkerne – Integriert denken und handeln", recognition (2013); Architekturpreis Sachsen-Anhalt, award for Klink 9 (2010); Romanikpreis to Prof. Behrens establishing the Münzenbergmuseums (2008); national prize

for craftsmanship in monument preservation, 2nd Prize Hölle 10/11 (2008); gold medal for outstanding achievements in monument preservation in Europe, award for the fair "Denkmal" (2000)

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Design Successful Processes – Baukultur as the Result of Interdisciplinary Planning

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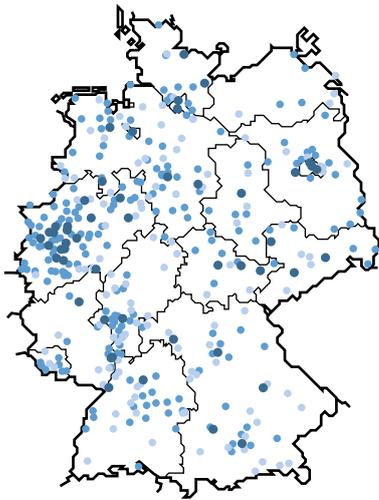
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Population of the surveyed cities and municipalities

- up to 20,000 (small town)
- up to 100,000 (medium-sized city)
- over 100,000 (large city)

M1 Which regional structural type would describe your municipality?

Big city	12,7 %
Medium-sized city near a big city	30,2 %
Small town near a big city	13,4 %
Medium-sized city on the periphery	18,4 %
Small town on the periphery	12,3 %
Rural community	13,0 %

M2 How do you assess the demographic and economic structural development of your municipality?

Population growth	
Growing strongly	9,2 %
Growing	44,9 %
Stable	28,1 %
Shrinking	16,5 %
Shrinking strongly	1,2 %

Economic development

Growing strongly	4,7 %
Growing	43,9 %
Stable	47,1 %
Shrinking	4,0 %
Shrinking strongly	0,2 %

M3 Does your municipality have a centre that is characterised by historic buildings?

Yes	63,2 %
No	36,8 %

M4 What importance do the following uses have for the centre?

	high importance	rather high importance	rather little importance	little importance
Housing	47,2 %	40,5 %	11,8 %	0,5 %
Retail / services / gastronomy / commercial	56,7 %	36,4 %	6,9 %	0,0 %
Public facilities (education, social, administration)	47,7 %	42,7 %	9,1 %	0,5 %
Culture and recreation	34,4 %	41,3 %	22,2 %	2,1 %
Tourism	28,0 %	26,1 %	30,6 %	15,3 %
Other	85,7 %	14,3 %	0,0 %	0,0 %

M5 How do you assess the Baukultur value of the buildings (architecturally or regarding urban development) that were created during the listed construction phases in your municipality?

	high	rather high	rather low	low	Not available
1918 and earlier	57,8 %	27,0 %	8,4 %	4,6 %	2,2 %
1919 to 1948	18,7 %	47,0 %	25,3 %	7,8 %	1,2 %
1949 to 1969	6,8 %	23,2 %	53,5 %	15,2 %	1,2 %
1970 to 1990	2,2 %	12,7 %	60,2 %	23,9 %	1,0 %
after 1990	2,7 %	26,5 %	48,6 %	20,4 %	1,7 %

M6 How high do you estimate the need for renovation and renewal in the described building year categories?

	high	rather high	rather low	low	Not available
1918 and earlier	20,3 %	48,7 %	26,4 %	2,7 %	2,0 %
1919 to 1948	16,4 %	52,2 %	28,2 %	2,5 %	0,7 %
1949 to 1969	17,0 %	59,2 %	19,9 %	3,6 %	0,2 %
1970 to 1990	8,5 %	37,9 %	44,4 %	8,5 %	0,7 %
after 1990	0,2 %	2,9 %	41,9 %	53,0 %	1,9 %

M7 Have there been demolitions in your municipality during the last five years in the described building year categories?

	yes
1918 and earlier	53,8 %
1919 to 1948	60,2 %
1949 to 1969	69,8 %
1970 to 1990	51,8 %
after 1990	6,6 %

M8 For what reasons were the buildings (presumably) demolished?

Poor building fabric	86,1 %
Unsuitable floor plans / building layouts	63,5 %
Bad energy standard	51,6 %
Urban design reasons	23,6 %
Investor pressure / utilisation pressure / infill development	46,9 %
Vacancy	6,2 %
Other	8,7 %

M9 Is there or was there civilian / civic engagement for buildings threatened with demolition? If so, in which form?

Yes	42,4 %
No	57,6 %

Forms of civic engagement

Homeland associations, among others (e.g. historical society, monument association)	47,4 %
Citizen initiatives / interest groups	62,3 %
Fundraising	2,9 %
Community foundations, citizens' funds, sponsoring associations	6,9 %
Private commitment (individuals)	10,3 %
Other	13,1 %

M10 In your municipality have churches fallen out of use in the last five years, or are church vacancies looming in the coming years?

Churches have already fallen out of use	50,6 %
Church vacancies are looming	26,5 %
Churches have already fallen out of use and more cases are looming	22,9 %

If churches have fallen out of use, have conversion concepts been developed or has the conversion already taken place?

Conversion concept is being developed	43,0 %
Conversion is already completed	37,2 %
Church currently being converted	0,8 %
All answer options	19,0 %

M11 Are there buildings in your municipality with monument status from the following years?

1920s to 1930s	93,8 %
1950s	52,1 %
1960s	31,8 %
1970s	14,9 %
1980s	4,8 %

M12 Where is the monument authority for your municipality located?

City government	53,3 %
Administrative district	43,6 %
Different regulation	3,1 %

M13 How do you assess the cooperation between urban development / planning and monument preservation / lower monument protection authority in your municipality?

Very good	33,7 %
Good	56,7 %
Not very good	8,4 %
Poor	1,2 %

M14 What conflict issues exist between urban development and monument preservation in your municipality?

Adaptation of floor plans	21,7 %
Additions / superstructures	44,6 %
Conversion of buildings	17,9 %
Demolition	50,0 %
Energy renovation	46,4 %
Advertising facilities	25,9 %
Infill development / new construction in historical environment	47,9 %
Design details (buildings / open spaces)	2,4 %
Other	5,4 %

M15 How important are the topics "endogenous development" and "building stock mobilisation" currently in your municipality?

Very important	57,6 %
Important	37,4 %
Rather unimportant	4,3 %
Unimportant	0,7 %

M16 Is there an objective in your municipality to primarily pursue endogenous development and building stock mobilisation? If so, is there a voluntary commitment through a city council resolution?

Yes, with city council resolution	27,5 %
Yes, on other basis	31,1 %
No	37,1 %
Yes, by city council decision and on other basis	4,3 %

M17 What tools do you use in your municipality for the approval of inner-city construction projects?

	frequently	rather frequently	rather infrequently	infrequently	never
Approval according to § 34 BauGB	56,2 %	30,4 %	10,5 %	2,9 %	0,0 %
Approval based on a B plan	39,4 %	38,4 %	17,1 %	3,9 %	1,2 %

M18 Which tasks in connection with the further development of the stock (buildings, ensembles, quarters, areas) are currently in your municipality?

Renovation of private building stock	77,6 %
Renovation of public building stock	71,5 %
Renovation of municipal infrastructures	64,5 %
Energy renovation	70,8 %
Conversions and extensions	52,5 %
Reutilisation / vacancy management	45,6 %
Conversion / demolition of traffic areas	31,1 %
Infill development	73,2 %
Brownfield revitalisation	38,8 %
Accessibility in public spaces	62,6 %
Upgrading / expansion of green areas and parks	47,3 %
Other	4,2 %

M19 Are there significant vacancies in your municipality in the following urban areas?

Historic city centre	64,5 %
Gründerzeit urban expansion areas	15,4 %
Areas near the city centre from post-war period	18,7 %
Large housing estates from the 1960s to the 1980s	25,7 %
Single-family housing areas / settlements	6,5 %
Commercial areas	21,5 %

M20 How do you assess the population's housing satisfaction in the following urban areas?

	high	rather high	rather low	low
Historic city centre	23,3 %	63,7 %	12,5 %	0,5 %
Gründerzeit urban expansion areas	33,7 %	57,8 %	7,3 %	1,3 %
Areas near the city centre from post-war period	21,5 %	67,1 %	10,9 %	0,5 %
Large housing estates of the 1960s to the 1980s	6,9 %	56,5 %	32,5 %	4,1 %
Single-family housing areas / settlements	62,5 %	37,0 %	0,5 %	0,0 %

M21 In your estimation, how high is the renovation backlog of private buildings in your municipality in the following building year categories?

	very high	high	rather low	low	mostly renovated
1918 and earlier	11,3 %	43,6 %	28,6 %	6,3 %	10,2 %
1919 to 1948	7,8 %	48,3 %	31,2 %	7,3 %	5,5 %
1949 to 1969	11,0 %	46,7 %	30,6 %	7,1 %	4,6 %
1970 to 1990	3,4 %	29,2 %	47,3 %	16,3 %	3,9 %
after 1990	0,3 %	2,6 %	28,2 %	60,2 %	8,8 %

M22 In your estimation, how high is the renovation backlog in the following municipal infrastructures in your municipality?

	very high	high	rather low	low	mostly renovated
Municipal bridges	15,8 %	39,9 %	30,3 %	10,2 %	3,8 %
Municipal roads	19,2 %	55,7 %	20,2 %	3,9 %	1,0 %
Energy supply	1,8 %	13,2 %	51,3 %	26,4 %	7,3 %
Water supply and disposal	3,8 %	23,0 %	43,1 %	26,0 %	4,1 %
Bicycle paths	9,5 %	39,5 %	36,8 %	10,8 %	3,5 %
Footpaths	6,0 %	40,5 %	40,3 %	10,8 %	2,5 %
Educational buildings / schools	12,7 %	42,2 %	24,7 %	9,2 %	11,2 %
Public transport	3,0 %	23,7 %	45,2 %	24,0 %	4,1 %
Public green spaces	3,0 %	25,5 %	45,5 %	20,3 %	5,8 %
Administration buildings	10,6 %	28,9 %	39,2 %	14,1 %	7,3 %
Social institutions	4,0 %	30,7 %	44,8 %	14,7 %	5,9 %
Municipal housing stocks	8,6 %	32,6 %	36,3 %	14,8 %	7,7 %
Other	52,9 %	47,1 %	0,0 %	0,0 %	0,0 %

M23 Account for the building stock in your municipality according to the following criteria:

Usage types	50,3 %
Building year categories	32,6 %
Monument status	88,4 %
Preservation-worthy building fabric	33,7 %
Building condition / need for renovation	29,1 %
Other	4,4 %

M24 Which instruments and procedures do you use in your municipality for the further development of the existing stock (buildings or areas)?

Vacancy cadastre	31,7 %
Building gaps cadastre	60,0 %
Area monitoring	32,0 %
Renovation / repair offers	8,2 %
Building order	7,5 %
Municipal right of first refusal	50,4 %
(Intermediate) acquisition of buildings / areas	37,5 %
Use of funding programmes	80,6 %
(Re)construction consulting	61,7 %
Development of usage concepts as an incentive for investors	28,3 %
Real estate exchange	13,1 %
Municipal support services	5,1 %
Other	5,1 %

M25 Which obstacles / difficulties exist in the further development of the existing stock (buildings, ensembles, quarters, areas) in your municipality?

Increased land speculation	41,7 %
Object-oriented yield orientation	53,4 %
Difficult ownership structure	68,7 %
Lack of owners' investment willingness or ability	75,0 %
Unsuitable building structures	36,7 %
Unfavourable area layouts	34,7 %
Particular interests of inhabitants	41,7 %
Contaminated sites	24,0 %
Other	6,8 %

M26 How do you assess the demand in your municipality in the following areas?

	very high	high	rather low	low
Rental flat in existing building	40,0 %	50,1 %	9,9 %	0,0 %
Owner-occupied flat in existing building	26,9 %	47,7 %	21,8 %	3,6 %
Rental flat in new inner-city building	45,6 %	46,1 %	7,4 %	1,0 %
Owner-occupied flat in new inner-city building	42,6 %	39,7 %	13,2 %	4,4 %
Building plot in new residential areas on the outskirts	64,0 %	31,2 %	4,3 %	0,5 %
Building plot in new residential areas on the outskirts	8,5 %	36,8 %	51,0 %	3,8 %
Existing commercial real estate	6,8 %	35,7 %	52,5 %	5,0 %
Commercial building land on the outskirts	21,4 %	34,3 %	29,9 %	14,4 %

M27 What additional support do you need in your municipality to qualify the existing stock?

Additional federal funding programmes	59,5 %
Higher funding in existing federal funding programmes	47,3 %
Additional state support programmes	63,5 %
Higher funding in existing state support programmes	50,3 %
Specialist events	24,6 %
Publications / collections of good examples	25,4 %
Construction consulting by external parties	29,2 %
Other	14,6 %

Breakdown of other entries

Improve municipalities' financial resources, reduce municipalities' own contribution, higher lump sums	14,8 %
Improve staffing of local government	9,3 %
Additional funding options for specific individual issues (without mentioning the funding provider)	13,0 %
Improvement of funding conditions, flexibility, bureaucratic simplification	25,9 %
Further entries	40,7 %

M28 Do you know the Federal Foundation of Baukultur and the regularly published Baukultur Report?

Knowledge of the Federal Foundation of Baukultur	
Yes	66,6 %
No	33,4 %

Knowledge of the Baukultur Report

Yes	50,8 %
No	49,2 %

M29 If you know the Baukultur Report, how relevant is it for your everyday practice in the municipality?

Important	4,7 %
Rather important	31,3 %
Rather unimportant	58,3 %
Unimportant	5,7 %

On behalf of the Federal Foundation of Baukultur, forsa Politik- und Sozialforschung GmbH carried out a representative survey on the subject of "Baukultur and Structural Infrastructure". In the framework of the investigation, a total of 1,204 randomly selected people aged 18 years and over were interviewed in private households in Germany. The survey was conducted from 14 to 26 June 2017, using computer-assisted telephone interviewing. The findings are presented in the following results report. The results obtained can only be transferred to the totality of the adult population in Germany with a possible margin of error in all sample surveys (in the present case +/- 3 percentage points).

P1 Attractions in own city or municipality

Someone visiting for the first time would be shown:

	Total *)	New states	Old Länder
The old town or the city / village centre	54 %	51 %	54 %
Landscape	44 %	45 %	44 %
Parks or green spaces	38 %	38 %	38 %
Churches	34 %	46 %	32 %
Rivers or lakes	33 %	43 %	31 %
Castle	28 %	28 %	28 %
Public spaces	26 %	20 %	28 %
Museums	21 %	25 %	20 %
Cultural institutions, e.g. theatres or opera houses	15 %	21 %	15 %

*) Percentages greater than 100, because multiple answers are possible

Someone visiting for the first time would be shown

Location size (inhabitants)	Total. *)	to 5.000	5.000 to 20.000	20.000 to 100.000	100.000 to 500.000	500.000 and more
The old town or the city / village centre	54 %	37 %	43 %	58 %	60 %	72 %
Landscape	44 %	59 %	55 %	45 %	33 %	24 %
Parks or green spaces	38 %	17 %	27 %	39 %	51 %	58 %
Churches	34 %	40 %	35 %	28 %	38 %	31 %
Rivers or lakes	33 %	33 %	30 %	25 %	35 %	47 %
Castle	28 %	24 %	26 %	24 %	36 %	34 %
Public spaces	26 %	16 %	17 %	23 %	29 %	55 %
Museums	21 %	15 %	14 %	16 %	29 %	40 %
Cultural institutions, e.g. theatres or opera houses	15 %	5 %	7 %	9 %	27 %	38 %

*) Percentages greater than 100, because multiple answers are possible

P2 Opinions about the existing building stock in own community

P2a Biggest problem with regard to existing building stock in own community *

	Total
Vacancy in buildings/businesses (in need of renovation), building decay	12 %
Renovation backlog of buildings (lack of money)	11 %
Lack of housing, lack of affordable housing / building land	11 %
Condition of roads and bridges	9 %
Condition of public buildings and facilities	8 %
Renovation of schools and kindergartens	7 %
Attractiveness of the city centre	4 %
Monument protection and preservation	3 %
Construction sites (overall)	3 %
Churches and cathedrals	3 %
Train station	2 %
Transport problems	2 %
Car parks	2 %
Gymnasiums and sports halls	2 %
No problems	1 %

*) open query; answers from 2 %, multiple answers possible

P2b Attractiveness of the existing building stock or building in their city or community is overall considered:

You find the building stock or the buildings in your city or municipality all in all:

	very attractive	attractive	less attractive	not at all attractive
Total *)	7 %	56 %	32 %	4 %
New states	8 %	64 %	25 %	3 %
Old states	7 %	55 %	33 %	4 %
18- to 29-year-olds	8 %	60 %	28 %	3 %
30- to 44-year-olds	7 %	61 %	28 %	3 %
45- to 59-year-olds	6 %	51 %	36 %	4 %
60 years and older	8 %	56 %	32 %	3 %
Location size (inhabitants)				
Under 5.000	6 %	58 %	31 %	5 %
5.000 to 20.000	6 %	57 %	30 %	4 %
20.000 to 100.000	6 %	54 %	36 %	3 %
100.000 to 500.000	6 %	48 %	40 %	5 %
500.000 and more	11 %	65 %	20 %	1 %

*) Percentage totals with less than 100 % = "don't know"

P2c Construction or renovation needs in own city or community (I)

There are major construction or renovation needs in the following areas:

	Total *)	New States	Old States
Roads and bridges	67 %	69 %	67 %
Schools and educational institutions	53 %	49 %	54 %
Railway stations or stops	34 %	31 %	35 %
Opens spaces and parks	21 %	23 %	20 %
Large housing estates	20 %	25 %	19 %
Public buildings, such as town halls, museums, universities	17 %	10 %	19 %
Hospitals	12 %	5 %	13 %
Commercial and industrial facilities	11 %	15 %	11 %
Churches	9 %	11 %	9 %
None	9 %	9 %	9 %

*) Percentage greater than 100, because multiple answers are possible

There are major construction or renovation needs in the following areas:

Location size (Inhabitants):

Location size (inhabitants)	Total *)	to 5.000	5.000 to 20.000	20.000 to 100.000	100.000 to 500.000	500.000 and more
Roads and bridges	67 %	58 %	60 %	69 %	75 %	77 %
Schools and educational institutions	53 %	36 %	43 %	54 %	65 %	72 %
Railway stations or stops	34 %	19 %	29 %	36 %	40 %	45 %
Opens spaces and parks	21 %	19 %	18 %	18 %	24 %	30 %
Large housing estates	20 %	9 %	10 %	15 %	32 %	45 %
Public buildings, such as town halls, museums, universities	17 %	13 %	14 %	15 %	22 %	26 %
Hospitals	12 %	7 %	8 %	14 %	10 %	22 %
Commercial and industrial facilities	11 %	8 %	12 %	13 %	12 %	10 %
Churches	9 %	13 %	9 %	8 %	8 %	10 %
None	9 %	16 %	13 %	7 %	3 %	2 %

*) Percentage total greater than 100, because multiple answers are possible

P3 Assessment of transport infrastructure and the city centre**P3a How has the city centre developed in recent years?**

	more to the advantage	more to the disadvantage	Neither *)
Total	48 %	26 %	24 %
New states	74 %	12 %	14 %
Old states	44 %	29 %	25 %
18- to 29-year-olds	54 %	20 %	23 %
30- to 44-year-olds	47 %	25 %	25 %
45- to 59-year-olds	43 %	30 %	26 %
60 years and older	51 %	27 %	22 %

Location size (inhabitants)

Under 5.000	53 %	19 %	26 %
5.000 to 20.000	49 %	27 %	22 %
20.000 to 100.000	51 %	27 %	21 %
100.000 to 500.000	43 %	33 %	22 %
500.000 and more	45 %	23 %	30 %

*) Percentage totals with less than 100 % = "don't know"

P3b Assessment of transport infrastructure (I)

In their own city / community, there are not enough:

	enough	not enough *)
Pedestrian areas	79 %	19 %
Car parks	45 %	52 %
Bicycle paths	42 %	55 %

*) Percentage totals with less than 100 % = "don't know"

P3c Assessment of transport infrastructure (II)

In their own city / community, there are not enough:

	Bicycle paths	Car parks	Pedestrian areas
Total	55 %	52 %	19 %
New states	59 %	49 %	17 %
Old states	54 %	53 %	20 %
18- to 29-year-olds	49 %	57 %	13 %
30- to 44-year-olds	51 %	50 %	18 %
45- to 59-year-olds	55 %	50 %	20 %
60 years and older	60 %	53 %	22 %

Location size (inhabitants):

Under 5.000	53 %	39 %	24 %
5.000 to 20.000	53 %	41 %	17 %
20.000 to 100.000	53 %	51 %	18 %
100.000 to 500.000	63 %	61 %	20 %
500.000 and more	56 %	75 %	21 %

*) Percentage totals with less than 100 % = "don't know"

P4 Attitudes to Baukultur: old building, new building, and reconstruction**P4a Which buildings are preferred: old buildings or new buildings?**

Preferred are:

	Old buildings	New buildings	both
Total *)	36 %	7 %	57 %
New states	45 %	2 %	53 %
Old states	35 %	8 %	58 %
Men	33 %	8 %	58 %
Women	39 %	5 %	56 %
18- to 29-year-olds	37 %	15 %	48 %
30- to 44-year-olds	36 %	8 %	55 %
45- to 59-year-olds	36 %	6 %	58 %
60 years and older	36 %	2 %	62 %

Location size (inhabitants):

Under 5.000	36 %	8 %	57 %
5.000 to 20.000	33 %	6 %	61 %
20.000 to 100.000	35 %	7 %	58 %
100.000 to 500.000	41 %	4 %	55 %
500.000 and more	40 %	10 %	50 %

*) Percentage totals with less than 100 % = "don't know"

P4b Has too much been demolished in the city or community?

It seems that too much has been demolished in the city or community:

	yes	no
Total *)	14 %	81 %
New states	12 %	84 %
Old states	14 %	81 %
18- to 29-year-olds	11 %	82 %
30- to 44-year-olds	11 %	83 %
45- to 59-year-olds	16 %	78 %
60 years and older	14 %	82 %

Location size (inhabitants):

Under 5.000	11 %	87 %
5.000 to 20.000	12 %	84 %
20.000 to 100.000	13 %	82 %
100.000 to 500.000	18 %	75 %
500.000 and more	16 %	76 %

*) Percentage totals with less than 100 % = "don't know"

P4c Opinions on the reconstruction of historic buildings

The reconstruction of completely destroyed buildings based on historical models is generally good:

	yes	no
Total *)	80 %	15 %
New states	74 %	22 %
Old states	81 %	14 %
Men	76 %	18 %
Women	83 %	12 %
18- to 29-year-olds	86 %	11 %
30- to 44-year-olds	83 %	11 %
45- to 59-year-olds	76 %	17 %
60 years and older	77 %	17 %

Location size (inhabitants):

Under 5.000	77 %	16 %
5.000 to 20.000	81 %	14 %
20.000 to 100.000	80 %	14 %
100.000 to 500.000	79 %	16 %
500.000 and more	79 %	17 %

*) Percentage totals with less than 100 % = "don't know"

P4d Reconstruction even when the building is used differently? *)

An old building should be rebuilt, even if today it is only used for other purposes:

	yes, also rebuild for other purposes	no, **) refrain from rebuilding
Total	80 %	16 %
New states	86 %	10 %
Old states	79 %	16 %
Men	82 %	14 %
Women	78 %	17 %
18- to 29-year-olds	79 %	13 %
30- to 44-year-olds	83 %	11 %
45- to 59-year-olds	82 %	14 %
60 years and older	75 %	22 %

Location size (inhabitants):

Under 5.000	82 %	12 %
5.000 to 20.000	77 %	17 %
20.000 to 100.000	80 %	17 %
100.000 to 500.000	83 %	12 %
500.000 and more	78 %	17 %

*) Basis: Respondents who generally find the reconstruction of historic buildings good

**) Percentage totals with less than 100 % = "don't know"

P4e Willingness to donate for the preservation or renovation of buildings

It is conceivable to donate money for the preservation or renovation of a building:

	yes	no
Total *)	42 %	48 %
New states	49 %	43 %
Old states	41 %	48 %
Men	43 %	49 %
Women	41 %	46 %
18- to 29-year-olds	43 %	47 %
30- to 44-year-olds	45 %	43 %
45- to 59-year-olds	39 %	49 %
60 years and older	42 %	50 %
Location size (inhabitants):		
Under 5.000	34 %	49 %
5.000 to 20.000	43 %	46 %
20.000 to 100.000	40 %	52 %
100.000 to 500.000	49 %	40 %
500.000 and more	42 %	49 %
Household income:		
Under € 1.500	40 %	48 %
€ 1.500 to under € 3.000	41 %	49 %
€ 3.000 or more	46 %	45 %

*) Percentage totals with less than 100 % = "don't know"

P4f Willingness to donate for the preservation or renovation of buildings *)

Roughly the following amounts would be donated for the preservation or renovation of buildings:

	up to 50 euros	up to 100 euros	up to 500 euros	up to 1,000 euros **)
Total	56 %	29 %	5 %	1 %
New states	60 %	22 %	5 %	1 %
Old states	55 %	30 %	4 %	1 %
18- to 29-year-olds	50 %	28 %	3 %	1 %
30- to 44-year-olds	60 %	25 %	5 %	1 %
45- to 59-year-olds	53 %	29 %	8 %	2 %
60 years and older	58 %	32 %	3 %	1 %
Household income:				
Under € 1.500	69 %	16 %	2 %	1 %
€ 1.500 to under € 3.000	60 %	26 %	3 %	1 %
€ 3.000 or more	47 %	38 %	8 %	2 %

*) Basis: respondents who would be willing to donate for the maintenance / renovation of buildings

**) Percentage totals with less than 100 % = "don't know"

P4g Personal engagement for the preservation of a building

They have already made a personal commitment to the preservation of a building:

Total *)	26 %
New states	33 %
Old states	25 %
Men	29 %
Women	23 %
18- to 29-year-olds	23 %
30- to 44-year-olds	22 %
45- to 59-year-olds	27 %
60 years and older	30 %
Location size (inhabitants):	
Under 5.000	25 %
5.000 to 20.000	23 %
20.000 to 100.000	22 %
100.000 to 500.000	36 %
500.000 and more	29 %
Household income:	
Under € 1.500	24 %
€ 1.500 to under € 3.000	25 %
€ 3.000 or more	26 %

*) Percentage totals with less than 100 % = "don't know"

P5 Opinions on the reutilisation of church buildings**P5a Acceptance for possible uses for former church buildings (I)**

The following uses for former church buildings are considered:

	appropriate and acceptable	inappropriate and unacceptable *)
Utilisation of churches ...		
For cultural events, e.g. concerts, readings,	95 %	3 %
As exhibition spaces	90 %	7 %
As library	89 %	7 %
As care facility for seniors	77 %	18 %
As day-care centre	70 %	26 %
As gastronomy area for cafés and restaurants	45 %	49 %
As place of faith for other religions, e.g. as mosques	39 %	53 %
As residences	36 %	57 %
As sports areas	22 %	73 %
As commercial space / for businesses	18 %	76 %

*) Percentage totals with less than 100 % = "don't know"

P5b Acceptance for possible uses for former church buildings (II)

The following uses for former church buildings are considered inappropriate and unacceptable:

	Total *)	New states	Old states	18- to 29-year olds	30- to 44-year olds	45- to 59-year olds	60 years and older
For cultural events, e.g. concerts, readings, etc.	3 %	3 %	3 %	4 %	5 %	3 %	2 %
As exhibition spaces	7 %	3 %	8 %	6 %	5 %	7 %	10 %
As library	7 %	9 %	7 %	5 %	6 %	8 %	9 %
As care facility for seniors	18 %	25 %	16 %	21 %	16 %	20 %	15 %
As day-care centre	26 %	38 %	23 %	30 %	20 %	26 %	28 %
As gastronomy area for cafés and restaurants	49 %	53 %	49 %	40 %	41 %	49 %	60 %
As place of faith for other religions, e.g. as mosques	53 %	57 %	52 %	44 %	47 %	59 %	55 %
As residences	57 %	33 %	37 %	37 %	39 %	38 %	31 %
As sports areas	73 %	74 %	73 %	62 %	66 %	72 %	83 %
As commercial space / for businesses	76 %	78 %	76 %	73 %	69 %	76 %	83 %

*) Percentage totals with less than 100 % = "don't know"

Results broken down by location size (inhabitants):

Location size (inhabitants)	Total *)	to 5.000	5.000 to 20.000	20.000 to 100.000	100.000 to 500.000	500.000 and more
For cultural events, e.g. concerts, readings, etc.	3 %	1 %	3 %	5 %	4 %	3 %
As exhibition spaces	7 %	9 %	9 %	6 %	6 %	6 %
As library	7 %	11 %	9 %	7 %	5 %	5 %
As care facility for seniors	18 %	29 %	17 %	20 %	15 %	11 %
As day-care centre	26 %	37 %	26 %	27 %	22 %	17 %
As gastronomy area for cafés and restaurants	49 %	57 %	53 %	49 %	38 %	48 %
As place of faith for other religions, e.g. as mosques	53 %	63 %	55 %	50 %	50 %	47 %
As residences	57 %	61 %	59 %	62 %	46 %	52 %
As sports areas	73 %	77 %	77 %	73 %	67 %	68 %
As commercial space / for businesses	76 %	75 %	78 %	77 %	76 %	73 %

*) Percentage totals with less than 100 % = "don't know"

P6 Satisfaction with available living space

Would personally prefer more living space than today:

	yes, more living space	no, living space just right	no, less living space *)
Total *)	26 %	64 %	9 %
New states	25 %	70 %	5 %
Old states	26 %	63 %	10 %
18- to 29-year-olds	47 %	50 %	3 %
30- to 44-year-olds	37 %	58 %	4 %
45- to 59-year-olds	20 %	68 %	11 %
60 years and older	13 %	73 %	13 %
Renters	42 %	52 %	6 %
Owners	14 %	74 %	12 %
Location size (inhabitants):			
Under 5.000	21 %	62 %	17 %
5.000 to 20.000	20 %	68 %	12 %
20.000 to 100.000	21 %	69 %	8 %
100.000 to 500.000	33 %	62 %	5 %
500.000 and more	42 %	54 %	3 %
Household income:			
Under € 1.500	33 %	59 %	8 %
€ 1.500 to under € 3.000	25 %	64 %	10 %
€ 3.000 or more	25 %	66 %	9 %

*) Percentage totals with less than 100 % = "don't know"

P7 Awareness of the Federal Foundation of Baukultur in comparison

The following foundations are known – at least by name

	Total *)	New states	Old states	Men	Women	18- to 29-year-olds	30- to 44-year-olds	45- to 59-year-olds	60 years and older
Stiftung Warentest	96 %	95 %	96 %	94 %	97 %	96 %	98 %	95 %	93 %
Bertelsmann Stiftung	79 %	82 %	79 %	79 %	80 %	77 %	80 %	79 %	81 %
Robert-Bosch-Stiftung	42 %	41 %	42 %	44 %	41 %	46 %	46 %	38 %	40 %
Deutsche Stiftung Denkmalschutz	41 %	51 %	38 %	37 %	44 %	39 %	34 %	42 %	44 %
Volkswagenstiftung	21 %	20 %	21 %	23 %	19 %	23 %	17 %	14 %	28 %
Deutsche Bundesstiftung Umwelt	9 %	10 %	9 %	8 %	9 %	9 %	9 %	8 %	9 %
Körber-Stiftung	5 %	3 %	6 %	6 %	5 %	6 %	7 %	5 %	5 %
Bundesstiftung Baukultur	1 %	1 %	1 %	1 %	1 %	2 %	2 %	0 %	1 %
None	2 %	1 %	2 %	2 %	1 %	2 %	1 %	3 %	1 %

*) Percentage total greater than 100, because multiple answers are possible

The Federal Foundation of Baukultur approached the 79 Chambers of Industry and Commerce in Germany with an online survey tool.

IHK 1 Does the term “Baukultur” play a role in the communication with your companies?

Yes	21 %
Yes, increasingly	11 %
Yes, however decreasingly	0 %
No	68 %

IHK 2 Is the historic building stock in the city centres usable for commerce (or business)?

Good and image-enhancing	14 %
Feasible	47 %
Problematic	39 %

IHK 3 Given the scarcity of space and the new building area category “urban area”, do you see the possibility of housing retail (e.g. discounters) and commercial properties in multistorey buildings?

Yes	18 %
Partly	32 %
Difficult	29 %
Probably not	21 %

IHK 4 Which development perspectives do you see for specialist stores, logistics centres, and general commercial settlements in outlying business parks?

Long-term withdrawal from the area (demolition)	4 %
Qualification in the building stock, conversion, or replacement construction	44 %
Growth in size and area (expansion)	52 %

IHK 5 For which building types do you see a probably a future / no future?

	probably a future	probably not a future
Logistic centres	4 %	0 %
Ports / industrial buildings	96 %	4 %
Commercial real estate	92 %	8 %
Office building in the city centre	88 %	12 %
City logistics locations	88 %	12 %
Specialty stores (furniture stores / garden centres)	87 %	13 %
Shopping centre	75 %	25 %
Office building in town	54 %	46 %
Local supply centres on the periphery / on the outskirts	54 %	46 %
Commercial property in an integrated position	52 %	48 %

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About the Way to Construct Enduring Works

How long

Do works endure? As long,

As long as they are not completed.

Since as long as they demand effort,

They do not decay.

Inviting further work

Repaying participation

Their being lasts as long as

They invite and reward.

Useful works

Require people

Artistic works

Have room for art

Wise works

Require wisdom

Those devised for completeness

Show gaps

The long-lasting

Are always about to crumble

Those planned on a really big scale

Are unfinished.

Bertolt Brecht

from: Bertolt Brecht: Poems 1913–1956, edited by John Willett and Ralph Manheim
(New York: Routledge Theatre Books, rev. edition 1987)

The Baukultur Report 2018/19 is the third report on the state of Baukultur in Germany under the auspices of the Federal Foundation of Baukultur. In addition to a population survey and a municipal survey, a survey was conducted among the Chambers of Industry and Commerce of Germany. Particularly important survey results are listed alongside the main text.

In addition to the survey results, the appendix also contains supplementary profiles for the projects presented in the main section. The numerous sources and publications used to produce the report and the detailed picture credits are also in the appendix.

To improve readability, the report uses only the masculine form, which is to be understood here explicitly as gender-neutral; what is meant is always all genders.

The names and titles of institutions, research programmes, ministries, etc. are written in full on their first occurrence, followed by the abbreviations and translations in parentheses; the abbreviations are then subsequently used in the text.

Our built heritage of tomorrow is made up of today's heritage. While the debate about new building in Germany is now being held at all levels, the existing building stock still receives too little attention. At the same time, two-thirds of the construction work in this country is being invested in existing buildings and their renovation, conversion, or expansion, which is an increasing trend. Against this background, the question of dealing with our built living spaces is becoming ever more urgent, because existing architectures and infrastructures are not only culturally significant: they have social, environmental, and economic values, in which the key to a forward-looking Baukultur lies.

The interactions between historically established structures and today's societal demands form the starting position of the Baukultur Report. Within the thematic areas "Continue Building Mixed Quarters", "Establish Conversion Culture", and "Design Successful Processes", methods for a qualitative and sustainable further development of the built environment are shown. With the present Baukultur Report, the Federal Foundation of Baukultur is addressing the situation of Baukultur in Germany 2018/19. It emphasises the importance and potential of our existing building stock, in order to open up new perspectives for our built heritage.