

Excellence Defined. Sustainable building with a systems approach.

Ensure the quality of your sustainable buildings in planning, construction, and operation. The DGNB system helps you get there.



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Elbarkaden, Hamburg, New Office and Administrative Buildings, Version 2009
DGNB Pro-Certificate in Gold
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THE GROWING MARKET OF SUSTAINABLE BUILDING.

Sustainability is now a crucial topic in the construction and real estate sectors. Increasingly, ecological, economic, and sociocultural issues are focal points in the planning, construction, and operation of buildings. The German Sustainable Building Council (DGNB for Deutsche Gesellschaft für Nachhaltiges Bauen) is the partner you need to harmonize these aspects. With our comprehensive expertise, we help you systematically optimize and document the quality of your projects in addition to helping you get specific information and qualifications in this crucial field.

Climate change, resource scarcity, and the financial crisis – society today faces a wide range of challenges and has to assume responsibility for current problems, rather than pass them on to future generations. Fortunately, we also have technical solutions on hand. As a result, sustainability has become the principle of our age. Sustainable development is only possible if ecological, economic, and social goals are simultaneously and equally pursued.

Our built environment can make a decisive difference in sustainability. According to The German Federal Ministry for the Environment buildings account for roughly one third of the resource consumption in Germany. Their share of waste production and carbon emissions is similar. The aim of sustainable building is to systematically reduce these figures and simultaneously focus on future developments in these fields. Sustainable building furthermore provides extensive social and economic benefits. In the context of these challenges and opportunities, the German Sustainable Building Council has developed one of the world's leading assessment systems for sustainable buildings: the DGNB Certification System.

THE DGNB CERTIFICATION SYSTEM. UNIQUE AND HOLISTIC.

The DGNB Certification System is indispensable for anyone who plans sustainable buildings and wishes to document their quality. It is based on the interdisciplinary expertise of DGNB members and covers all relevant fields in the planning, optimization, and assessment processes. Its flexibility has allowed it to be adapted to a wide range of building types, which now make up a comprehensive portfolio. It is the only certification system that allows a building's entire lifecycle to be monitored and optimized systematically according to unified standards – and for its specific qualities to be displayed transparently.

There are numerous certification system for sustainable building, but the DGNB Certification System is unique. It is not only practical to apply and flexible to adjust to future or local requirements, but it is also the only system worldwide that covers all of a property's lifecycle phases. Each building can be assessed and certified on the basis of different phases – new buildings, modernizations, and existing buildings. In this way, the DGNB System offers maximum transparency and comparability for the construction and real estate sectors.

Private-sector investors and building owners benefit from the certification system, as do cities and communities who are looking for a reliable and affordable way of efficiently reaching and documenting their sustainability targets.

DGNB CERTIFICATION OVER THE COMPLETE BUILDING LIFE-CYCLE WITH A UNIFIED APPROACH



Comprehensive assessment. Focus on economics.

Whether you are working with new buildings, existing real estate, or modernization projects – and whether you are dealing with individual buildings or entire city districts – our unified assessment system covers all of the main aspects of sustainable building: environmental, economical, sociocultural and functional aspects, technology, processes, and the building site. The first four evaluation areas have equal weight in the assessment, making the DGNB System the only one that pays as much attention to the economic side of sustainable building – such as by assessing lifecycle costs – as to environmental criteria. In addition, the focus of the assessment is on the building's entire lifecycle, giving the DGNB System a unique, comprehensive quality perspective for the construction and real estate sectors.

Unparalleled flexibility. Nationally and internationally.

The system's great flexibility allows it to be easily adapted to various building types. In addition, the system can easily react to future technical and societal changes and adapt to the climatic, construction, legal, and cultural features of other countries.

Our international DGNB Partner Network can therefore provide a DGNB System tailored to your local needs. And in countries where a partner organization has not yet been set up or a system adaptation has not yet been completed, the DGNB offers certification based on EU laws, standards, and technical guidelines. In this way, we can set the same standards and use the same approach internationally to provide investors, building owners, and users with unparalleled comparability, transparency, and security.





Certifying existing buildings. Assessing potential.

Existing buildings make up the largest part of our built environment. The potential to promote sustainable building in this area is therefore especially high. Most building owners and investors, however, need an assessment of the building and its properties before they make a decision on certification. To be able to estimate a building's potential in terms of its overall performance, all of the issues covered in the DGNB System must be taken into consideration in this assessment. The newly developed DGNB Existing Building Assessment makes this a smooth process. For more information, see page 10.

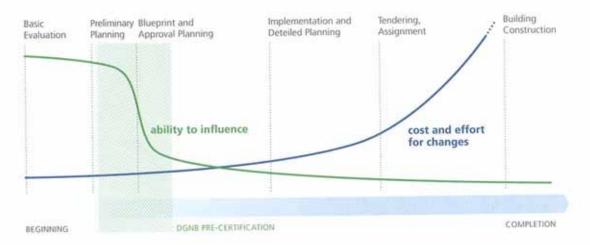
Sustainable planning. With the DGNB Pre-Certificate.

The sooner DGNB criteria are included in the planning phase, the better. Pre-certification allows you to optimize a project and provide binding documentation for real estate purposes with a view towards sustainability from the outset. This approach offers a number of benefits in planning, construction, and marketing. The early definition of all essential sustainability criteria sets clear targets for everyone involved, which increases transparency, strengthens risk management, and provides a safe basis for the planned performance targets. The same holds true for financing. And of course, the quality label also increases attractivity and rental and sales success. For you, that means greater financial security at an earlier stage.

Ensuring quality. Broad expertise and clear processes.

The criteria in the DGNB Certification System are practical, transparent, and highly developed. To ensure their quality, we pursue a process in which every new occupancy profile in the system – new buildings, existing buildings, and modernizations – undergoes various development phases and passes through DGNB committees to get the broad expertise of DGNB members. On the basis of this expertise, each occupancy profile is further optimized to consistently ensure its quality.

IMPORTANCE OF THE DGNB PRE-CERTIFICATE



Rewarding quality. Your benefits at a glance.

Holistic approach. Focus on economics.

- Comprehensive quality perspective: technology, the process, and the site are added to the three classic aspects of sustainability – environment, economics, and society – to cover all of the issues relevant to sustainable building.
- Economics given equal weight: the building's economic sustainability is given as much consideration as environmental, sociocultural, and technological aspects.
- Considering lifecycle costs: by taking into account the building's overall lifecycle, operating costs can be optimized early on.

Optimization during planning. Ensuring success early on.

- Assessing overall performance: the DGNB system provides targets – not individual measures – for a building's overall performance, thereby promoting innovative building concepts.
- Promoting integrated planning: in particular, DGNB pre-certification supports integrated planning, providing optimization potential early on for construction, management, conversion, and dismantling with an emphasis on optimizing costs.
- Targeted planning and monitoring: a systematic definition of sustainability targets based on the DGNB criteria catalog raises the awareness of implementation early on for everyone involved and serves as a central instrument for quality assurance during the construction phase.

Building for people. Great user satisfaction.

- Healthy users: the DGNB System takes into account user well-being and health, thereby reducing illnesses.
- Live-in owners benefit: the DGNB System focuses on the building's overall lifecycle from the outset, thereby reducing costs and optimizing processes in operation.

A systematic approach. Nationally and internationally applicable.

- Precise assessment: individual profiles based on the unified DGNB System are available for different building types to ensure market-ready certification.
- Internationally applicable: the DGNB system can be adapted to climatic, construction, legal, and cultural conditions and is already in use in several countries.
- Comparability: buildings that are DGNB-certified are comparable at both the national and international level.

Transparency and security on the market. Documenting quality.

- Increasing market opportunities: the DGNB
 Certificate increases selling and renting potential since it demonstrates a building's high quality to owners and users
- Quality from the outset: the DGNB Pre-Certificate gives building owners and users confidence during the early planning stage that the building's performance targets will be reached when it is finished.
- Ensuring further rentals: demand for certified buildings continues to grow, so that the risk of vacancies in such real estate is reduced.
- Simplifying financing: faster and less expensive loans are available for properties that apply for DGNB Certification.

Specific and feasible. Reaching environmental targets.

 For future generations: DGNB-certified buildings consume fewer resources during construction, have lower greenhouse gas emissions, and can largely be recycled; they therefore actively protect our environment.

A STRONG NEW ECONOMIC FACTOR. THE DGNB CERTIFICATE FROM THE INVESTOR'S AND OPERATOR'S VIEWPOINT.



Christoph Kraus, Real Estate Officer at Lidl

For us, it is important to know that we are on the right path with our sustainability efforts, and assessment from a neutral third party like the DGNB is very helpful in finding that out. As a chain, however, our goal in developing environmentally friendly new branches was to combine sustainability with a serial construction concept. And we reached that goal. Lidl is one of the first companies that received DGNB Certification for a basic construction blueprint. Now, we can ensure that the next generation of all of our branches fulfills the highest sustainability standards.



Prof. Dr.-Ing. Kunibert Lennerts, ikl Ingenieurbüro Prof. Dr.-Ing. Kunibert Lennerts Grahh

Because the DGNB is based on a lifecycle assessment, proper attention is finally paid to the usage phase and related services. Our goal is to further develop this approach and provide a way to constantly share ideas between research and practice. As an internationally recognized institution with members from all sectors of real estate, the DGNB is the ideal platform for that purpose. We therefore take part, both as the KIT (Karlsruhe Institute of Technology) and as a consulting engineering firm, in the further development and dissemination of the DGNB system as well as in auditor training.



Jürgen Kolper, CEO, PATRIZIA Project Development

With our objective of developing and promoting environmentally and economically sound real estate, we are convinced that sustainable building and attractive, modern living go hand in hand. We share and support the philosophy of the German Sustainable Building Council (DGNB) and joined the council in mid-2010. As a DGNB member we benefit from expert technical know-how, and we could likewise contribute our expertise during the development of the "New Residential Buildings" Occupancy Profile — an exchange which is of great benefit to both sides.



THE DGNB EXISTING BUILDING ASSESSMENT. EVALUATING SUSTAINABILITY OBJECTIVELY.

The DGNB Existing Building Assessment is a powerful tool that provides building owners, investors, and users with a crucial, objective initial assessment of the extent to which their existing building already roughly fulfills the sustainability criteria in the DGNB System. Furthermore, it is the only objective instrument that allows entire real estate portfolios to be assessed uniformly – even internationally.

The DGNB Existing Building Assessment evaluates the sustainability of existing real estate based on the DGNB criteria catalog. Regardless of certification, the Assessment provides investors, building owners, planners, and project developers with an accurate appraisal of a building's quality and performance in the fields relevant to sustainable building. The assessment tool shows how current building management can be optimized to improve sustainability. Furthermore, the building and its occupancy-specific design – such as handicapped accessibility, efficient use of space, and technical quality aspects – are taken into consideration.

Transparent and efficient. A sound basis for decisions.

The DGNB Existing Building Assessment takes a comprehensive look at real estate and provides a reliable, verifiable depiction of a building's quality so that conclusions can be drawn about probable maintenance problems and risks in operating the building or facility. At the same time, optimization and modernization strategies in all aspects of sustainable building can be developed to build upon this status quo. Facility managers and users thus both benefit from the DGNB Existing Building Assessment. An experienced reviewer checks the results of the assessment to ensure they are plausible, and the DGNB provides the building owner with a written report. In addition, the building owner receives an official document including the results of the project's assessment. The relevant results of the DGNB Existing Building Assessment can, of course, also be taken up directly in the certification process for existing buildings. In this way, we ensure utmost efficiency.

DGNB EXISTING BUILDING ASSESSMENT BRINGS TRANSPARENCY TO THE REAL ESTATE PORTFOLIO



OF MUNICIPALITIES AND COMMUNITIES. WITH TRANSPARENCY AND RELIABILITY.

Even before people began talking about switching to renewable energy, a large number of municipalities and communities had already made sustainable building a central part of their policies. New concepts are needed. A number of municipalities and communities have therefore launched model projects to readjust their long-term planning. In communities, the need for a reliable foundation for sustainability targets is growing. Here, the DGNB and its certification system are in great demand, especially with its new occupancy profiles for city districts.

With its independent and transparent Certification System for ensuring quality, the DGNB is considered a highly competent partner for municipalities and communities in the field of sustainable building. By certifying city districts along with educational facilities, residential, administrative, and mixed-use buildings, the DGNB System offers authorities the right tools to implement and document their sustainability targets. When the DGNB Certificate for city districts was first applied, international urban development projects in Germany, Luxembourg, and Switzerland received the award.

Broad range of information for officials. Specific and individual.

To support municipalities and communities in realizing their targets, the DGNB also offers public officials on-site training sessions on the central issues of sustainable building. In addition, we are setting up an event series dealing specifically with the interests and questions of municipalities. We also conduct field trips to certified public-sector buildings, where you can experience concrete implementations of sustainable building.







WHAT THE DGNB OFFERS. COMPREHENSIVE EXPERTISE FOR YOUR SUCCESS.

The DGNB brings together everyone involved in sustainable building. Everyone can provide their individual knowledge – and access the expertise of others. In this way, a unique, comprehensive knowledge platform is created for sustainable building, and everyone can use it in the way they need to be successful. Benefit from it yourself – and get to know us and our attractive services.

The DGNB brings together experts from throughout the industry. Our members meet and share ideas in various DGNB committees, thereby successively expanding the entire community's expertise. We provide this comprehensive, independent specialist knowledge to everyone involved in sustainable building, not only as part of the DGNB Certification System, but also through a number of other services. You can therefore benefit in a number of ways. Help shape sustainable building as a DGNB member – in addition to numerous discounts, you will experience the synergy of our unique network as you share and gain expertise. Take part in the DGNB Academy's professional seminars based on your needs. And use the DGNB Navigator on our pioneering online knowledge platform for construction products.

The DGNB working groups. Add your expertise. Experience the synergy.

Every DGNB working group is interdisciplinary and brings together experts from various sectors of the industry. In this way, everyone can add their own individual expertise to the professional knowledge of other members. The result is a powerful synergy within a network of experts, on the basis of which the criteria for the DGNB Certification System, among other things, are incrementally developed. Become part of this network as a DGNB member.

THE DGNB ACADEMY AT A GLANCE



The DGNB Academy. Providing individual expertise. The right service for everyone.

The DGNB's goal is to provide its expertise on sustainable building to all involved and interested parties - from building owners to architects, developers, contractors, tradespeople, and students. To this end, the DGNB Academy was founded. It offers everyone an opportunity to receive further training to suit their specific needs. The DGNB Academy is divided into three segments. First, it provides a broad professional audience with general basic knowledge about issues pertaining to sustainable building. Second, those who see the DGNB Certification System as a career opportunity can get the expertise they need to use the system nationally and internationally. And third, our seminars and on-site training sessions, specifically designed for the needs of your particular company, provide a wide range of knowledge on special issues within sustainable building. For an overview of the current range of courses, click on Academy at > www.dgnb.de.

DGNB Events. Ideal platforms for effective networking.

In various event formats, we present both our knowledge and the people behind it to the interested public. In particular, Consense – our international tradeshow and congress on sustainable building, investing, and operating – offers you an ideal platform where you can find out the latest news and systematically expand your own network.

Furthermore, we organize an annual DGNB Members Day for our members, where they can become more familiar with the work that DGNB committees do and with the people on those committees. On DGNB field trips, you can experience sustainable building on the site of a certified project and meet building owners, auditors, architects, and even DGNB board members. We also provide the latest DGNB news at major tradeshows within the real estate and construction sectors, such as BAU and Expo Real. Take advantage of these opportunities to experience the synergy and stay abreast of the latest changes. For an overview of DGNB events, click on Events at a www.dgnb.de.

The DGNB manual. Everything at a glance.

The DGNB manual provides the full range of expertise in sustainable planning, construction, management, and assessment in accordance with the DGNB Certification System. An indispensable DGNB tool and reference work, it is currently available for the occupancy profiles of "New office and administrative buildings, version 2009" and "New residential buildings, version 2011." The DGNB manual offers step-by-step instructions and covers all aspects that have to be taken into consideration for DGNB certification. Detailed descriptions clearly and thoroughly illustrate the topics that the DGNB system covers, along with the individual criteria for specific occupancy profiles — including the procedures for calculations and assessments.

CONSENSE - IDEAL EXCHANGE PLATFORM





DGNB Software. Sustainable planning the easy way.

With the DGNB Software based on our comprehensive expertise, we have come up with an ideal tool for architects, planners, and auditors for planning and assessing sustainable buildings. The user-friendly program allows you to run through a number of draft scenarios and optimize your project. At a glance you can see where the design still needs to be changed to receive bronze, silver, or gold certification. The DGNB Software supports auditors during the assessment phase. Once they have entered their project data, the program calculates how well the building performs in the six categories according to the individual criteria. The output data already fulfill our documentation requirements and are processed with a simple mouse click. All of this makes the software an indispensable tool during the certification process. To order DGNB products, click on Shop at a www.dgnb.de.

The DGNB Navigator. Expertise and transparency in product selection.

If you want to plan and build sustainably, you need to choose the right products. But that requires sound

knowledge about the environmental impact of products, lifecycle data, and other crucial sustainability factors. With its leading knowledge pool, the DGNB has this information and provides it in an easy-to-use format: the DGNB Navigator, the pioneering platform for construction products. Furthermore, the DGNB Navigator tells manufacturers which properties a product has to have and how they have to be documented for sustainable building. This unique online platform is therefore a crucial interface between the various parties involved in the planning and construction process and product manufacturers. Sign up for free here:

• www.dgnb-navigator.de.

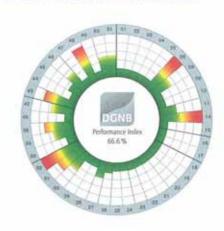
Accessing DGNB expertise. Supporting research and pilot projects.

We provide our expertise on sustainable building in various ways in both national and international research projects. In addition, we can provide our expertise to our members for example in pilot projects as a part of public-private partnerships in other countries. As a central knowledge platform, the DGNB also acts as a consultant, especially for interested public officials who need support for their individual strategies or sustainable building targets both at the municipal and at the state level.

THE DGNB NAVIGATOR. TRANSPARENT PLATFORM FOR BUILDING PRODUCTS.



THE DGNB SOFTWARE. TRANSPARENT PLATFORM. PLANNED TOTAL PERFORMANCE AT A GLANCE.



Benefiting as a DGNB member. An overview of your benefits.

Sharing expertise efficiently and actively.

The DGNB is a dynamic society of experts from all fields of sustainable building. Our members help set up a comprehensive, independent knowledge platform – and can access this bundled expertise by taking part in DGNB committees, such as in the further development of the DGNB Certification System, the sharing of knowledge via the DGNB Academy, our events, and the DGNB Navigator. In addition, we regularly provide all of our members with exclusive information about the DGNB and sustainable building.

Synergetic effects from targeted networking.

Regularly share knowledge with other experts at DGNB events and tradeshows, where you can also make contact with potential new partners and customers. In addition, you can use our international partner network to enter new markets, and take advantage of special DGNB terms for the German Ministry of Economic Cooperation and Development's (BMZ) develoPPP.de program for your business plans abroad.

Strengthening your corporate communication.

DGNB membership and the use of the DGNB logo in your communication is a sign of your competence in and commitment to the growing market of sustainable building. It thus strengthens your image and position in this competitive market. Product manufacturers can also use the DGNB Navigator – the pioneering website for construction products – as an ideal platform for presenting and marketing their products.

Exclusive special terms.

Take advantage of numerous discounts for certification, the DGNB Academy, our events, and our wide range of quality products. In addition, we will be happy to help you find and take advantage of the best financing options for your projects.

AN ATTRACTIVE FUTURE MARKET. SUSTAINABLE BUILDING FROM THE AUDITOR'S VIEWPOINT.



Engineer Amelie Lerch, Project Manager, Witte Projektmanagement GmbH

We are a founding member of the DGNB and have been involved in the effective and economical application of the certificate since the first pilot phase. Sustainability, however, was one of our priorities in our work even before the DGNB was founded. Certification provides a great degree of planning security. We use it today to comprehensively assess real estate across its entire lifecycle according to various aspects of sustainability. In this way, a building's performance becomes measurable and comparable. The DGNB Certificate has now become a quality label for the entire building and is increasingly in demand among banks and investors. We are pleased to continue taking part in the further development of the various DGNB Certification criteria and occupancy profiles.



Steffen Klingler, Executive Director, KOP GmbH

Because the construction and real estate sectors are so important for future development, sustainable building has become an indispensable part of responsible action. Technological and societal challenges have to be overcome and reflected in the quality of urban space and buildings. A building's performance defines its quality. It is equally the task of architects, investors, planners, auditors, and building owners to analyze, plan, optimize, and ensure this performance – all the while with an eye on affordability.



Engineer Michaela Lambertz, Drees & Sommer Advanced Building Technologies GmbH

As auditors, we take a holistic look at projects and help building owners, planners, and tradespeople design sustainable real estate. We help optimize building concepts by finding the middle ground between environmental, economical, and sociocultural aspects. To develop sustainable projects and control the certification process, you need special planning expertise from various fields and knowledge about costs and management in addition to familiarity with the DGNB system. The sustainability criteria serve as guidelines for everyone involved in the project. It is a wonderful task and a good feeling to know that you, as an auditor, are improving the environmental impact and sustainability of buildings.



Dr. Thorsten Huff, makon GmbH & Co. KG

The current dynamic development of building certification shows that the DGNB Certificate meets the market's and society's demands. But the certificate is not by any means simply a way of marketing high-quality building properties; rather, it has proven to be a way of ensuring quality during the construction process when it is consistently applied both to new buildings and modernization projects because of its wide scope. In the future, the focus will increasingly be on existing buildings. Experience from the projects I had the privilege of directing shows that, contrary to what a lot of people believed in the beginning, building certification does not entail extra work, but rather truly creates added value for the building, users, and the environment.





HOLISTIC PLANNING, BUILDING, AND MANAGEMENT. THE DGNB SYSTEM IN PRACTICE.

The DGNB Certificate covers all aspects of sustainable building at a high level, and remains identical across building types and even entire city districts. It is based on two core catalogs consisting of clearly defined criteria. The criteria are weighted according to their importance to the particular occupancy profile and used to design an assessment matrix. In accordance with DGNB principles, the city district profile is a logical extension of the building profiles, as it focuses particularly on the area between buildings and on the city district's location.

The criteria in the DGNB's core system define sustainable building in six fields. The quality of the site does not play a role in the assessment of a building's overall quality. In contrast, site quality is a criterion for the assessment of city districts.







CORE CATALOG FOR BUILDINGS

CORE CATALOG FOR CITY DISTRICTS

P Environmental Quality

- Life Cycle Assessment
- Local Environmental Impact
- Environmentally Friendly Material Production
- Primary Energy Demand
- Drinking Water Demand and Wastewater Volume
- Land Use

- Life Cycle Assessment
- Water and Soil Protection
- Change in City District Climate
- Biodiversity and Interaction
- Consideration of Possible Environmental Impacts
- Land Use
- Total Primary Energy Demand and Renewable Primary Energy
- Energy-Efficient Development Structure
- Infrastructure with Low Resource Consumption, Groundwater Management
- Local Food Production
- Water Cycle

Economic Quality

- Building-Related Lifecycle Costs
- Value Retention, Suitability for Third Party Use
- Lifecycle Costs
- Fiscal Effects on Municipality
- Value Retention
- Efficient Use of Space

Sociocultural and Functional Quality

- Thermal Comfort
- Indoor Air Quality
- Acoustic Comfort
- Visual Comfort
- User Influence on Building Operation
- Quality of Outdoor Spaces
- Safety and Security
- Handicapped Accessibility
- Efficient Use of Floor Area
- Suitability for Conversion
- Public Access
- Cycling Convenience
- Design and Urban Planning Quality through Competition
- Integration of Public Art
- Site Features

- Social and Functional Diversity
- Social and Labour Infrastructure
- Objective / Subjective Security
- Quality of Open Areas in Public Spaces
- Noise Protection
- Proportion of Open Areas
- Handicapped Accessibility
- Occupancy Flexibility and Development Structure
- Adaptation to Urban Development Plan
- Urban Planning Design
- Use of Existing Buildings
- Public Art

(continuation)

CORE CATALOG FOR BUILDINGS

(continuation)

CORE CATALOG FOR CITY DISTRICTS

Technical Quality

- Fire Prevention
- Indoor Acoustics and Sound Insulation
- Building Envelope Quality
- Backup Capacity of Technical Building Systems
- Ease of Cleaning and Maintenance
- Resistance to Hail, Storms, and Flooding
- Ease of Dismantling and Recycling
- Pollution Control
- Noise Emission Control

- IT and Communication Infrastructure
- Energy Technology
- Waste Management
- Rainwater Management
- Dismantling, Sorting, and Recycling of the Infrastructure
- Maintenance, Servicing, Cleaning
- Quality of Transport Systems
- Quality of Road Infrastructure
- Quality of Public Transport Infrastructure
- Quality of Cycling Infrastructure
- Quality of Pedestrian Infrastructure

>>> Process Quality

- Comprehensive Project Definition
- Integrated Planning
- Comprehensive Building Design
- Sustainability Aspects in Tender Phase
- Documentation for Facility Management
- Environmental Impact of Construction Site / Construction Process
- Construction Quality Assurance / Quality Control Measures
- Systematic Commissioning

- Participation
- Concepts Developed in Competitive Bids
- Integrated Planning
- Community Involvement
- Controlling
- Environmental Impact of Construction Site / Construction Process
- Marketing
- Quality Assurance and Monitoring

Site Quality

- Site Location Risks
- Site Location Conditions
- Public Image and Social Conditions
- Access to Transportation
- Access to Specific-Use Facilities
- Connections to Utilities

Integrated as a Criterion for Assessment

Gold, silver, or bronze. Performance-based scoring.

The points granted by the auditor, planner, or architect for each individual criterion and the weighting of the criteria collectively produce the score for the overall building and the six evaluation areas. The score shows the extent to which the requirements are fulfilled. If the score is 50 percent, for instance, the building will receive a bronze certificate. If the score is 65 percent, a silver certificate is granted. A gold certificate requires a score of 80 percent.

The goal is to promote a standard of high quality for buildings. The performance in each of the evaluation areas relevant to the score therefore has to be of a certain nominal level for a certificate to be issued. For instance, gold requires a Nominal Performance Index of at least 65 percent in the first five topical categories. Silver requires a score of at least 50 percent; bronze, at least 35 percent.

Precise adjustments. The weighting of criteria.

To make the DGNB Certificate as informative and precise as possible, we have clearly defined targets for all criteria. Each criterion can receive points based on its documented or calculated quality. At the same time, it is possible to increase the weighting of each criterion as much as three-fold or to disregard it entirely based on its societal or political relevance and its importance for the specific occupancy profile (see the scoring matrix on page 23).

GOLD, SILVER, BRONZE – EVALUATION BASED ON NOMINAL PERFORMANCE INDEX

Total Performance Index	Nominal Performance Index	Awards				
from 50%	35%	Bronze DGNB				
from 65%	50%	Silver Figh				
from 80%	65%	Gold Pari				

ACCURATE AND CLEAR. THE ASSESSMENT MATRIX OF THE DGNB CERTIFICATE.

EVALUATION AREA	CRITERIA GROUP	CRITERIA	CRITERIA POINTS ACHIEVED	CRITERIA POINTS MAX, POSSIBLE	WEIGHTING	WEIGHTED POINTS ACHIEVED	WEIGHTED POWITS MAX, POSSIBLE	GROUP POINTS ACHIEVED	GROUP POINTS MAX. POSSIBLE	GROUP PERFORMANCE INDEX	GROUP	TOTAL PERFORMANCE INDEX
_		Global Warming Potential	10.0	10:0	3	30.0	30.0	-		89 3%	22.5%	
	LIFE CYCLE ANALYSIS	Ozone Depletion Potential	10.0	10.0	1	10.0	10.0					
-		Photochemical Ozone Creation Potential	10.0	10.0		10.0	10.0					
A		Acidification Potential	10.0	10.0	- 1:	10.0	10.0					
2	GLOBAL AND LOCAL ENVIRONMENTAL IMPACT RESSOURCE CONSUMPTION AND WASTE	Eutrophication Potential	7.1	10.0	1	7.1	10.0					
ENVIRONMENTAL QUALITY		Local Environmental Impact	8.2	10:0	3	24.6	30.0	178.5	200.0			
8		Sustainable Use of Resources / Wood	10.0	10,0	-1	10.0	10.0					
SE		Nonrenewable Primary Energy Demand	10.0	10.0	3	30.0	30.0			- 0.———		
9		Total Primary Energy Demand and Proportion of Renewable Primary Energy	8.4	10.0	2	16.8	20.0					
	GENERATION	Drinking Water Demand and Volume of Waste Water	5.0	10.0	2	10.0	20.0					
_		Land Use	10.0	10.0	_ 2	20.0	20.0	1	_			
CONDMIC	UFE CYCLE COSTS	Building-Related Life Cycle Costs	9.0	10.0	3:	27,0	30.0	47.0	50.0	94.0%	22.5%	
ECON	ECONOMIC PERFORMANCE	Suitability for Thiry-Party Use	10.0	10:0	2	20.0	20.0	47.0	30.0	374.02.78		
		Thermal Comfort in Winter	10.0	10.0	2	20.0	20.0				22.5%	
6.5		Thermal Comfort in Summer	10.0	10.0	3	30.0	30.0					
5	HEALTH, COMFORT	Indoor Air Quality	10.0	10.0	3	30.0	30.0					86.3 % (Gold)
SOCIOCULTURAL AND FUNCTIONAL QUALITY	AND USER	Acoustic Comfort Visual Comfort	10.0	10.0	3	25.5	30.0					
MAL	FRIENDLINESS.	User Influence on Building Operation	6.7	10.0	2	13.4	20.0					
6		Quality of Outdoor Spaces	9.0	10.0	1	9.0	10.0	251.1		89.7%		
3		Safety and Security	8.0	10.0	1	8.0	10.0		280.0			
2	FUNCTIONALITY	Accessbility	8.0	10.0	2	16.0	20.0	2914				
K		Efficient Use of Floor Area	5.0	10.0	1	5.0	10.0					
3		Suitability for Conversion	7.1	10.0	2	14.2	20.0					
8		Public Access	10.0	10.0	2	20.0	20.0					
8		Cycling Convenience	10.0	10.0	1	10.0	10.0					
	AESTHETIC QUALITY	Design and Urban Planning Quality through Competition	10.0	10.0	3	30.0	30.0					
		Integration of Public Art	10.0	10:0	1:	10.0	10.0					
-	TECHNICAL QUALITY OF BUILDING DESIGN AND SYSTEMS	Fire Prevention	8.0	10.0	2	16.0	20.0			74.0%	22.5%	
Ę		Indoor Acoustics and Sound Insulation	5.0	10.0	- 2	10.0	20.0					
N On		Building Envelope Quality	7.7	10,0	2	15.4	20.0	74.0	100.0			
ECHNICAL DUALITY		Ease of Cleaning and Maintenance	7.1	10.0	2	14.2	20.0					
12		Ease of Dismantling and Recycling	9.2	10.0	2	18.4	20.0					
_	QUALITY OF THE PLANNING PROCESS	Comprehensive Project Definition	8.3	10.0	- 3	24.9	30.0			82.0%	10.0%	
		Integrated Planning	10.0	10.0	3	30.0	30.0					
ž.		Comprehensive Building Design	8.6	10.0	3	25.8	30.0					
PROCESS QUALITY		Sustainable Aspects in Tender Phase	10.0	10.0	2	20.0	20.0	100 F	230.0			
GSS S		Documentation for Facility Management	5.0	10.0	2	10:0	20.0	188.6				
780		Environmental Impact of Construction Site / Construction Process	77	10.0	2	15.4	20.0					
		Prequalification of Contractors	5.0	10.0	2	10.0	20.0					
	CONSTRUCTION QUALITY	Construction Quality Assurance	7.5	10.0	3	30.0	30.0					
_		Systematic Commissioning	112	10.0	-	44.5	30.0				_	
SITE QUALITY	SITE QUALITY	Site Location Risks	7.0	10.0	2	14.0	20.0					
		Site Location Conditions	7.1	10.0	2	14.2	20.0					
		Public Image and Social Conditions	1.0	10.0	2	2.0	20.0	93.3	130.0	71.8%		
		Access to Transportation Access to Specific Lice Earlities	9.7	10.0	3	19.4	30.0					
		Access to Specific Use Facilities Connection to Utilities	9.4	10.0	2	18.8	20.0			_		
		Contection to Daillies	7.4	100	- 6	0.61	20.0					

Example of an assessment matrix of a DGNB gold certified building, occupancy profile "New Office and Administrative Buildings, version 2009"

Multifaceted and comprehensive. An overview of Occupancy Profiles.

The DGNB Certification System now has a wide range of Occupancy Profiles. You can now plan, build, manage, and certify new office and administrative buildings, educational facilities, commercial and industrial buildings, residential buildings, hotels, and even entire city districts on a unified basis. For existing buildings, the only Occupancy Profile available to date is Office and Administrative Buildings. The DGNB's working groups are, however, currently working up a number of additional Occupancy Profiles.

To keep up with the growing demand for the DGNB Certificate across various building types, we continue to expand our service range. In particular with the certificate for city districts, but also with certificates for educational facilities and residential and administrative buildings, the DGNB System provides municipalities with a powerful tool for the implementation and documentation of their sustainability targets.

Below is a brief overview of the current Occupancy Profiles for certification as of September 2011. For a detailed and constantly updated overview, see Certification System on our website at a www.dgnb.de.

New Office and Administrative Buildings

This certificate is available for all buildings used mainly as offices or for administrative purposes. Aside from environmental and economic aspects, the focus of the assessment is on user comfort – such as noise, temperature, and appearance – which greatly affect the performance and motivation of workers.

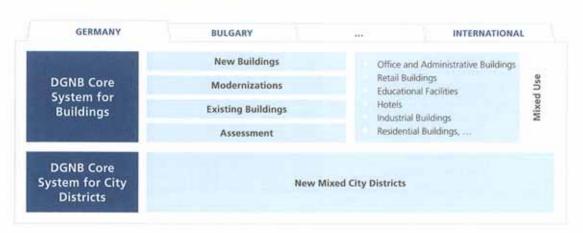
Modernization of Office and Administrative Buildings

This Occupancy Profile was designed for existing buildings used mainly as offices or administrative buildings with modernized facades, building services, etc. The assessment focuses on operational costs and payback periods; in other words, the Certification System is especially suitable as an optimization tool for architects and building owners in the planning phase.

Existing Office and Administrative Buildings

This Occupancy Profile is used for office and administrative buildings that have been in operation for at least five years and have not been comprehensively modernized during that time. The assessment is based on actual measurements of consumption. In this way, the certificate demonstrates how sustainably a building is being operated and what the quality of the property is, for instance in terms of handicapped accessibility, space efficiency, and technical quality.

APPLICATIONS OF THE DGNB CERTIFICATION SYSTEM



New Residential Buildings

This certificate is awarded to residential buildings with more than six units. The focus of the assessment is on the comfort and well-being of users. Such criteria as noise protection, spatial flexibility, and indoor air quality are therefore weighted more heavily. Likewise, low operating costs, value retention, and the quality of the apartments themselves also play a crucial role in the assessment.

New Hotels

Special industry requirements have to be taken into account for hotels. This Occupancy Profile therefore also pays special attention to comfort in addition to environmental and economic factors. In addition, the hotel's number of stars is taken into account, and the site quality is assessed based on the occupancy type; the requirements for urban hotels with good transportation infrastructure differ from those for remote country hotels. Operating and maintenance costs are another crucial aspect, and they are mainly determined in the (pre-)planning phase.

New Educational Buildings

In the occupancy profile for educational buildings, the DGNB provides another crucial variant of its Certification System for kindergartens, schools, adult educational facilities, universities, and rooms mainly used for seminars and lectures and as classrooms. The modular assessment also allows for the adjacent use of offices, kitchens, cafeterias, libraries, and sports facilities within the same building. In contrast, gymnasiums, libraries, and cafeterias in separate buildings are not taken into consideration. The design of outdoor facilities is of great importance for users and is therefore also assessed.



New Retail Buildings, Consumer Markets

This Occupancy Profile includes supermarkets and retail chains, such as drugstores and home improvement stores. The overall performance of the building and its interior is included in the assessment. The assessment focuses on energy consumption and utilities because of the high level of consumption in such retail buildings. The aspect of family friendliness was also integrated.

New Retail Buildings, Shopping Centers

Shopping centers are defined as centrally planned, largesurface facilities with a concentration of retailers, restaurants, and service providers. In assessing shopping centers, the focus is primarily on utility connections and retail areas, including their interiors. In contrast, tenant interiors are not as important. Furthermore, energy consumption and family friendliness play a crucial role in this Occupancy Profile.

New Industrial Buildings, Logistics Buildings

Logistics buildings are used for the distribution, delivery,

and sale of goods. The service life of logistics buildings is shorter than that of other Occupancy Profiles at 20 years. Furthermore, location plays a greater role in this profile. Accessibility for people and goods is also an important aspect in the assessment.

New Industrial Buildings, Production Sites

This Occupancy Profile covers all buildings where goods and commodities are made from raw materials or precursor products with the input of labour and energy. A short service life of 20 years is also used to assess such buildings. An important feature of the DGNB assessment of production sites is the separate assessment of labour/production areas and offices.

New Buildings in Mixed City Districts

Half of the world's population already lives in cities. By 2050, that figure is expected to rise to 70 percent. And because cities concentrate resource and energy consumption, emissions, and soil sealing, future-proof concepts are especially needed here. To this end, the DGNB has dealt



intensively with the special sustainability issues for city districts – and has developed its own catalog of core criteria on this basis for new buildings in mixed city districts. This Occupancy Profile also complies with the basic DGNB philosophy and takes the following fields into account: Environmental Quality, Economic Quality, Sociocultural and Functional Quality, Technical Quality, and Process Quality. Site Quality is integrated here as a criterion for assessment. And of course, great emphasis was placed on practicality in the certification of city districts.

In its all-encompassing scope, the new Occupancy Profile covers all of the relevant issues in sustainable building: from a district's structure to the proportion of open spaces, occupancy flexibility, sustainable mobility, and questions of maintenance, management, and cleaning. A life cycle assessment is also conducted for city districts as is done in the assessment system for buildings.

The assessment focuses on the areas between buildings in a district, such as sidewalks, bike lanes, roads, and green spaces. In addition, overriding concepts are also taken into consideration, for instance for energy, water, and waste. The basic conditions for the development of buildings in the district play a major role. The buildings themselves do not need to be certified for district certification.

Because city districts are developed over a long time frame in multiple phases, a pre-certificate and a certificate can be awarded in accordance with the DGNB philosophy. However, in this case two types of certificates are awarded in light of the long construction phase. The first certificate, which has a term of five years, can be awarded when 75 percent of utility connections have been completed. The second is of unlimited duration and is awarded when 75 percent of the buildings have been completed.



A GREAT OPPORTUNITY FOR BUILDING CULTURE. SUSTAINABILITY FROM THE ARCHITECT'S VIEWPOINT.



Justus Pysall, PYSALL Architekten

In addition to high functional and spatial quality, the goal of every construction project is to trigger emotions – positive feelings and reactions. The way to do so depends on current sentiment and culture and on the location and climate, which are multifarious and often uncontrollable. Along with the building's performance and low resource consumption during construction/operation, dealing with the local parameters is, however, a controllable challenge that every building has to face – provided it is holistically designed. The DGNB successfully helps you face this challenge by providing its research and Certification System. My goal in participating is to ensure that enough space for the "uncontrollable qualities" in sustainable buildings is provided in addition to the "hard facts."



Jürgen Koch, Dipl.-Ing. Architect BDA/VDI

DGNB – Sustainable Building Madelng. Germany. In 2025
8 million people will live on the Earth; 70% of those will live in cities. Buildings are responsible for more than 40% of global CO₂ emissions. The many buildings certified by the DGNB, such as the first Gold-certified retail building in Berlin, successfully combine sustainability, energy efficiency, renewable energy, and cost effectiveness. As a quality standard for sustainable building, the DGNB Certificate is an outstanding evaluation tool to establish sustainable German architecture and building technology internationally – perfectly supporting the millennium goal of CO₂ reduction and resource protection. Misconceived pluralism must not be allowed to weaken the chances of "Madelng. Germany" sustainable buildings. We need a sustainability standard for buildings – that's the DGNB Certificate.



Astrid Wuttke, Member of the Board, schneider+schumacher Planungsgesellschaft mbH

Sustainable buildings are enduring and beautiful — with an emphasis on "and". Creating beautiful things which do not last is equally as pointless as creating something durable which is unappealing and therefore not worth preserving. Buildings which strive to meet these requirements must be flexible, yet also landmarks; they must be inexpensive but feature a distinctly identifiable form; they must fit into their surroundings without being subordinate to them. Enduring and beautiful — in new construction just as in existing buildings. With this aspiration we have been a member of the DGNB since 2008. The DGNB System supports us perfectly — it allows our work to meet the complex requirements which characterize modern buildings with playful delight.



THE GERMAN SUSTAINABLE BUILDING COUNCIL. DESIGNING THE FUTURE.

The DGNB's constantly growing community of members shares one primary goal: the consistent pursuit of construction that is sustainable and therefore also economically efficient and focused on comfort. We do so by systematically sharing expertise, providing further training for market players, and raising awareness about the issue among the general public. In addition, we work with our members to further develop the criteria for one of the world's leading certification systems for sustainable buildings.

As a nonprofit and non-governmental organization, the DGNB's bylaws stipulate that it must serve the general good. To practice what we preach, we primarily focus on developing forward-looking criteria to increase building quality in environmental economic, sociocultural, and technical terms. Building owners and investors can then not only plan, construct, and operate their projects affordably and with little environmental impact, but also ensure the well-being of building users.

Gaining and providing knowledge. The DGNB's core competencies.

The DGNB is a strong community of a wide range of players from throughout the construction and real estate sectors. The DGNB's interdisciplinary committees bring together researchers and practitioners to ensure the high quality and neutrality of our comprehensive expertise, which returns to society via various channels. In this way, the DGNB Certification System is continually and jointly further developed.







The DGNB Academy is another pillar of our comprehensive knowledge pool. Here, we offer the industry's entire expertise for (further) training in the growing market of sustainable building. With the DGNB Navigator, we have developed a pioneering online platform for construction products where all of the relevant information about the sustainability aspects of individual products is bundled. For more about our services, see page 12.

concepts accordingly. The result is buildings for the future with a high quality standard documented by the DGNB Certificate in gold, silver, or bronze. This informative quality label is valuable for both the construction and real estate sectors. Even abroad, the DGNB system's great flexibility allows it to be easily adapted to the requirements of other countries, thereby ensuring the international comparability of certified projects.

Continual further development. The DGNB Certification System.

The central building block of our work is the DGNB Certification System. As a high-performance, transparent, and user-friendly tool for the planning, assessment, and certification of sustainable buildings, it is one of the leading systems worldwide, mainly because of its comprehensive quality concept, which takes into account six evaluation areas – environmental, economic, sociocultural and functional aspects, technology, processes, and the building site – and is based on a holistic view of the building's entire lifecycle. It is therefore possible to define sustainability targets as early as the planning phase and optimize

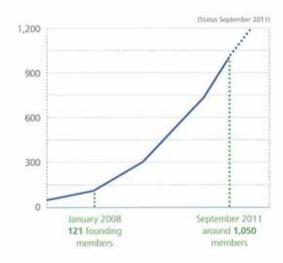
Further growth. Even in volunteerism. The DGNB's members.

The DGNB's importance and expertise continue to grow, most importantly through the growth of our member base. When it was founded, it already had 40 member organizations from the construction and real estate sectors. By the time the first event was organized at the beginning of 2008, that figure had risen to 121. Within just four years, the DGNB has grown to more than 1,050 members. At the same time, a growing number of national and international building owners and investors have relied on the DGNB's expertise as early as the planning phase of their sustainable projects. The constant further

DGNB ORGANIGRAM



DGNB MEMBERSHIP GROWTH



development of the DGNB Certificate is one major reason. The development of the certificate is carried out primarily by a number of working groups. In our committees, nearly 500 expert volunteers promote sustainable building. The strength of our system lies in this broad expertise.

Providing expertise. Internationally. The DGNB worldwide.

The DGNB is the leading interdisciplinary organization for sustainable building in Germany. Internationally, the DGNB also plays an important role. We are thus able to provide our expertise to a wide range of European R&D projects.

In addition, we are also deeply involved in leading global networks, such as the World Green Building Council, the global umbrella organization for the national chapters, where the DGNB performs various tasks in central committees. We are represented on the WGBC Board and also active in the Rating Tool Committee and the Council Development Committee. In the Sustainable Building Alliance, which brings together leading European organizations for building certification, we are also working to provide greater transparency in European assessment systems with our expertise. At the same time, we continue to expand our international DGNB partner network. In these and other ways, we are establishing the DGNB System for global application.

DGNB INTERNATIONAL NETWORK



World Green Building Council

The DGN8 is a member of the WGBC and active in the following central committees:

- · Board of Directors
- · Rating Tools Committee
- Council Development Committee

European Regional Network des WGBC:

- · Steering Committee
- · Policy Task Force
- Education Task Force

Sustainable Building Alliance

The DGNB is applying its expertise to increasing the transparency of European Assessment Systems:

· Board member

EU Projects

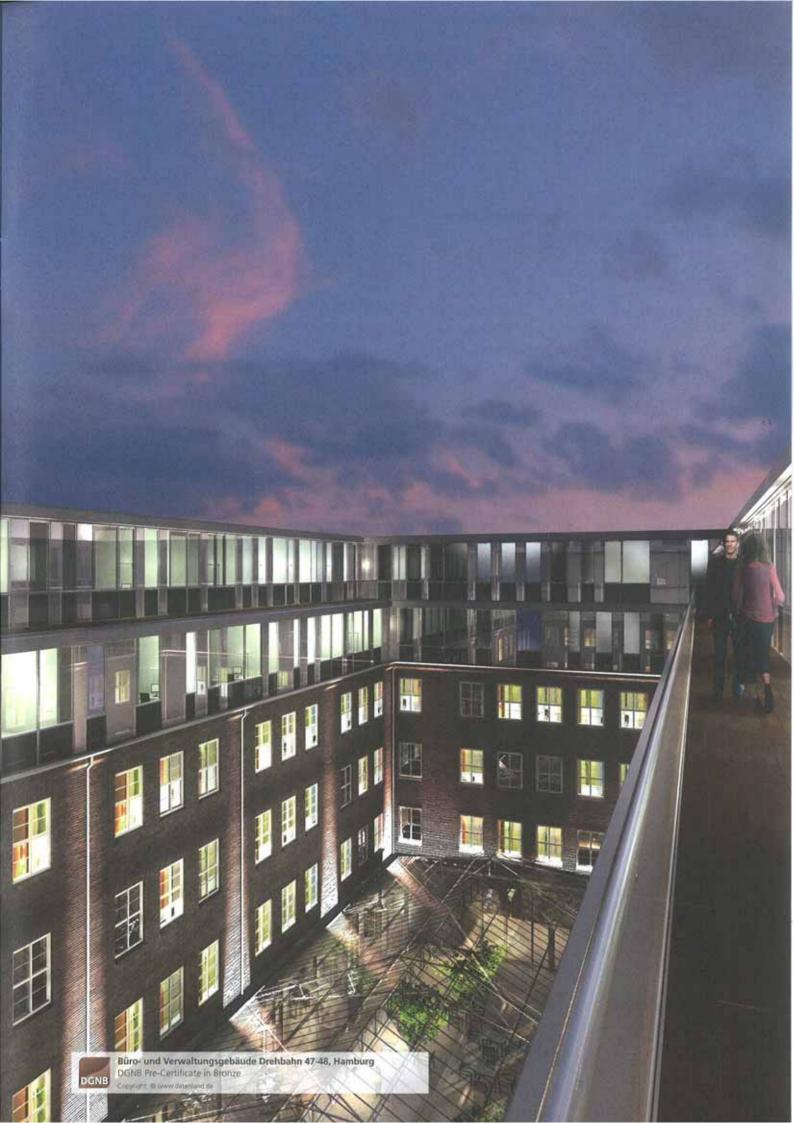
The DGNB is bringing its knowledge to a number of R&D projects in Europe:

- Open House
- Green Conserve
- Construction 21

DGNB Partner Network

To offer DGNB Certification internationally, we are building a network of international partners who are bringing adapted versions of our system to the market:

- Bulgaria
- China
- Denmark
- Austria
- Switzerland
- Slovenia
 Thailand
- Hungary



Effective cooperation. The central bodies in DGNB System Development.

The DGNB's headquarters bundle the expertise of our members and process operations. It answers to the Board of Directors and works with the DGNB committees such as the Certification System Committee to coordinate the system's quality assurance. It is also the central point of contact for members, new partners, and potential partners. DGNB members elect the Board of Directors, which represents their interests.

Board of Directors



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Dipl.-Ing. Johannes Kreißig, Deputy Executive Director, Executive Board Member

The DGNB Certification System Committee



Dr.-Ing. Peter Mösle, Drees & Sommer Advanced Building Technologies GmbH, Chairman Topics: energy, building services,



Dr.-Ing. Wolfram Trinius, Ingenieurbüro Trinius, Deputy Chairman Topics: lifecycle costs



Martin Hoffmann, GFÖB/ARCADIS Deutschland GmbH Topics: comfort, building acoustics, construction materials, and pollutants



Matthias Fischer, University of Stuttgart Topics: eco-balances



Fleur Keller, Hascher + Jehle Pfanungsgesellschaft mbH Topics: functionality and design



Christian Wetzel, CalCon Holding GmbH Topics: value retention and location



Jan Zak, engineering firm Prof. Dr.-Ing. Kunibert Lennerts GmbH Topics: processes



Rolf Messerschmidt, Joachim Eble Architektur Topics: open areas, climate



Stefan Werrer, Freelance Architect Topics: urban development, sites



Manfred Wacker, University of Stuttgart Topics: mobility