



Basic structure of the DGNB System



The sustainability concept of the DGNB System has a broad scope and goes beyond the well-known "Three Pillars" model. It comprehensively covers all the fundamental aspects of a sustainable building. These encompass the following six topics: ecology, economy, sociocultural and functional aspects, technology, processes and site. The first three topics are weighted equally in the evaluation. This makes the DGNB System the only system to place equal importance on both the economic and the ecological criteria of a sustainable building. The qualities that fall outside of the scope of the "Three Pillars" model have an interdisciplinary function within the DGNB System and have different weightings. The scores attained in the assessment are always evaluated on the building's entire life cycle.

Overview of the criteria*

TOPIC	CRITERIA GROUP	CRITERIA NAME
 ENVIRONMENTAL QUALITY (ENV)	EFFECTS ON THE GLOBAL AND LOCAL ENVIRONMENT (ENV1)	ENV1.1 Building life cycle assessment
		ENV1.2 Local environmental impact
		ENV1.3 Sustainable resource extraction
	RESOURCE CONSUMPTION AND WASTE GENERATION (ENV2)	ENV2.2 Potable water demand and waste water volume
ENV2.3 Land use		
ENV2.4 Biodiversity at the site		
 ECONOMIC QUALITY (ECO)	LIFE CYCLE COSTS (ECO1)	ECO1.1 Life cycle cost
	ECONOMIC DEVELOPMENT (ECO2)	ECO2.1 Flexibility and adaptability ECO2.2 Commercial viability
 SOCIOCULTURAL AND FUNCTIONAL QUALITY (SOC)	HEALTH, COMFORT AND USER SATISFACTION (SOC1)	SOC1.1 Thermal comfort
		SOC1.2 Indoor air quality
		SOC1.3 Acoustic comfort
		SOC1.4 Visual comfort
		SOC1.5 User control
		SOC1.6 Quality of indoor and outdoor spaces
		SOC1.7 Safety and security
	FUNCTIONALITY (SOC2)	SOC2.1 Design for all
 TECHNICAL QUALITY (TEC)	TECHNICAL QUALITY (TEC1)	TEC1.1 Fire safety
		TEC1.2 Sound insulation
		TEC1.3 Quality of the building envelope
		TEC1.4 Use and integration of building technology
		TEC1.5 Ease of cleaning building components
		TEC1.6 Ease of recovery and recycling
		TEC1.7 Immissions control
		TEC3.1 Mobility infrastructure

TOPIC	CRITERIA GROUP	CRITERIA NAME
 PROCESS QUALITY (PRO)	PLANNING QUALITY (PRO1)	PRO1.1 Comprehensive project brief
		PRO1.4 Sustainability aspects in tender phase
		PRO1.5 Documentation for sustainable management
		PRO1.6 Urban planning and design procedure
	CONSTRUCTION QUALITY ASSURANCE (PRO2)	PRO2.1 Construction site/construction process
		PRO2.2 Quality assurance of the construction
PRO2.3 Systematic commissioning		
PRO2.4 User communication		
PRO2.5 FM-compliant planning		
 SITE QUALITY (SITE)	SITE QUALITY (SITE1)	SITE1.1 Local environment
		SITE1.2 Influence on the district
		SITE1.3 Transport access
		SITE1.4 Access to amenities



* All criteria must be considered as part of the certification process. If any of the criteria was not processed, certification cannot be awarded.




Please note:

The DGNB accepts no liability for the accuracy or applicability of this content to actual construction projects and strongly recommends that you consult a DGNB-certified auditor or consultant to ensure that it is correctly and successfully applied to projects in practice.

Weighting of the criteria

TOPIC	CRITERIA GROUP	CRITERION	OFFICE	EDUCATION	RESIDENTIAL	HOTEL	CONSUMER MARKET	SHOPPING CENTRE	DEPARTMENT STORE	LOGISTICS	PRODUCTION	ASSEMBLY BUILDINGS	
ENVIRONMENTAL QUALITY (ENV)	EFFECTS ON THE GLOBAL AND LOCAL ENVIRONMENT (ENV1)	ENV1.1	8 9.5%	8 9.5%	8 9.5%	8 9.5%	8 9.5%	8 9.0%	8 9.5%	8 9.5%	8 9.5%	6 7.5%	
		ENV1.2	4 4.7%	4 4.7%	4 4.7%	4 4.7%	4 4.7%	4 4.5%	4 4.7%	4 4.7%	4 4.7%	4 5.0%	
		ENV1.3	2 2.4%	2 2.4%	2 2.4%	2 2.4%	2 2.4%	2 2.3%	2 2.4%	2 2.4%	2 2.4%	2 2.5%	
	RESOURCE CONSUMPTION AND WASTE GENERATION (ENV2)	ENV2.2	2 2.4%	2 2.4%	2 2.4%	2 2.4%	2 2.4%	2 2.3%	2 2.4%	2 2.4%	2 2.4%	2 2.5%	
		ENV2.3	2 2.4%	2 2.4%	2 2.4%	2 2.4%	2 2.4%	3 3.4%	2 2.4%	2 2.4%	2 2.4%	3 3.8%	
		ENV2.4	1 1.2%	1 1.2%	1 1.2%	1 1.2%	1 1.2%	1 1.1%	1 1.2%	1 1.2%	1 1.2%	1 1.3%	
ECONOMIC QUALITY (ECO)	LIFE CYCLE COST (ECO1)	ECO1.1	4 10.0%	4 10.0%	4 10.0%	4 10.0%	4 10.0%	4 10.0%	4 10.0%	4 10.0%	4 10.0%	4 12.9%	4 10.0%
		ECO2.1	3 7.5%	3 7.5%	3 7.5%	3 7.5%	3 7.5%	3 7.5%	3 7.5%	3 7.5%	3 7.5%	3 9.6%	3 7.5%
	ECONOMIC DEVELOPMENT (ECO2)	ECO2.2	2 5.0%	2 5.0%	2 5.0%	2 5.0%	2 5.0%	2 5.0%	2 5.0%	2 5.0%	2 5.0%	0 0%	2 5.0%
SOCIOCULTURAL AND FUNCTIONAL QUALITY (SOC)	HEALTH, COMFORT AND USER SATISFACTION (SOC1)	SOC1.1	4 4.1%	4 3.6%	4 4.3%	4 3.9%	4 4.5%	4 4.5%	4 4.5%	4 4.5%	4 4.3%	4 4.3%	4 4.1%
		SOC1.2	5 5.1%	5 4.5%	5 5.4%	5 4.9%	4 4.5%	4 4.5%	4 4.5%	5 5.4%	5 5.4%	5 5.1%	
		SOC1.3	2 2.0%	3 2.7%	0 0%	3 2.9%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	3 3.1%
		SOC1.4	3 3.1%	3 2.7%	3 3.2%	2 2.0%	3 3.4%	3 3.4%	3 3.4%	3 3.2%	3 3.2%	3 3.2%	3 3.1%
		SOC1.5	2 2.0%	2 1.8%	2 2.1%	2 2.0%	2 2.3%	2 2.3%	2 2.3%	0 0%	0 0%	0 0%	0 0%
		SOC1.6	2 2.0%	2 1.8%	2 2.1%	2 2.0%	2 2.3%	2 2.3%	2 2.3%	5 5.4%	5 5.4%	5 5.4%	2 2.0%
		SOC1.7	1 1.0%	2 1.8%	1 1.1%	2 2.0%	1 1.1%	1 1.1%	1 1.1%	4 4.3%	4 4.3%	4 4.3%	2 2.0%
	FUNCTIONALITY (SOC2)	SOC2.1	3 3.1%	4 3.6%	4 4.3%	3 2.9%	4 4.5%	4 4.5%	4 4.5%	0 0%	0 0%	0 0%	3 3.1%


 Relevance factor
 Share of total score

TOPIC	CRITERIA GROUP	CRITERION	OFFICE	EDUCATION	RESIDENTIAL	HOTEL	CONSUMER MARKET	SHOPPING CENTRE	DEPARTMENT STORE	LOGISTICS	PRODUCTION	ASSEMBLY BUILDINGS
	TECHNICAL QUALITY (TEC)	TEC1.1	4 2.5%	4 2.5%	4 2.5%	4 2.5%	4 2.9%	4 2.9%	4 2.9%	4 2.7%	4 2.7%	4 2.6%
		TEC1.2	3 1.9%	3 1.9%	3 1.9%	3 1.9%	0 0%	0 0%	0 0%	0 0%	0 0%	2 1.3%
		TEC1.3	4 2.5%	4 2.5%	4 2.5%	4 2.5%	3 2.1%	3 2.1%	3 2.1%	4 2.7%	4 2.7%	4 2.6%
		TEC1.4	3 1.9%	3 1.9%	3 1.9%	3 1.9%	3 2.1%	3 2.1%	3 2.1%	3 2.0%	3 2.0%	3 2.0%
		TEC1.5	2 1.3%	2 1.3%	2 1.3%	2 1.3%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	2 1.3%
		TEC1.6	4 2.5%	4 2.5%	4 2.5%	4 2.5%	4 2.9%	4 2.9%	4 2.9%	4 2.7%	4 2.7%	4 2.6%
		TEC1.7	1 0.6%	1 0.6%	1 0.6%	1 0.6%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	1 0.7%
		TEC3.1	3 1.9%	3 1.9%	3 1.9%	3 1.9%	3 2.1%	3 2.1%	3 2.1%	3 2.0%	3 2.0%	3 2.0%
			PROCESS QUALITY (PRO)	PRO1.1	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%
PRO1.4	3 1.6%			3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%
PRO1.5	2 1.1%			2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%
PRO1.6	3 1.6%			3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%
PRO2.1	3 1.6%			3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%
PRO2.2	3 1.6%			3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%
PRO2.3	3 1.6%			3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%	3 1.6%
PRO2.4	2 1.1%			2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%
PRO2.5	1 0.5%			1 0.5%	1 0.5%	1 0.5%	1 0.5%	1 0.5%	1 0.5%	1 0.5%	1 0.5%	1 0.5%
	SITE QUALITY (SITE)	SITE1.1	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%
		SITE1.2	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%
		SITE1.3	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%	2 1.1%
		SITE1.4	3 1.7%	3 1.7%	3 1.7%	3 1.7%	3 1.7%	3 1.7%	3 1.7%	3 1.7%	3 1.7%	3 1.7%

Relevance factor

Share of total score

The DGNB logic of the award

	 Platinum	 Gold	 Silver	 Bronze*
Total Performance Index	≥ 80%	≥ 65%	≥ 50%	≥ 35%
Min. Performance Index	65%	50%	35%	-- %

* this award is only valid for the passed certificate or for the certificate "Buildings in operation".

Figure 1: The DGNB award allocation principles

The DGNB System uses performance indices to grade buildings. The total performance index is calculated using all six topics, taking their individual weighting into account. The platinum certificate is the most prestigious award issued by the DGNB.

Total performance indices of 50% or more earn the building DGNB Silver certificate. Total performance indices of 65% or more are awarded a DGNB Gold certificate. To merit a DGNB Platinum certificate, the project must be awarded a total performance index of at least 80%.

The DGNB is committed to encouraging high quality standards in every aspect of a building. This is why the certificate awarded is not based on the total performance index alone. In order to obtain a particular award, a certain minimum performance index must be achieved in each of the relevant topics (with the exception of "site quality"). For example, to obtain a platinum certificate, a performance index of no less than 65% for each topic is required. For a gold certificate a performance index of no less than 50% for each topic is required. For a silver certificate, the threshold is 35% for each topic.

DGNB pre-certificate

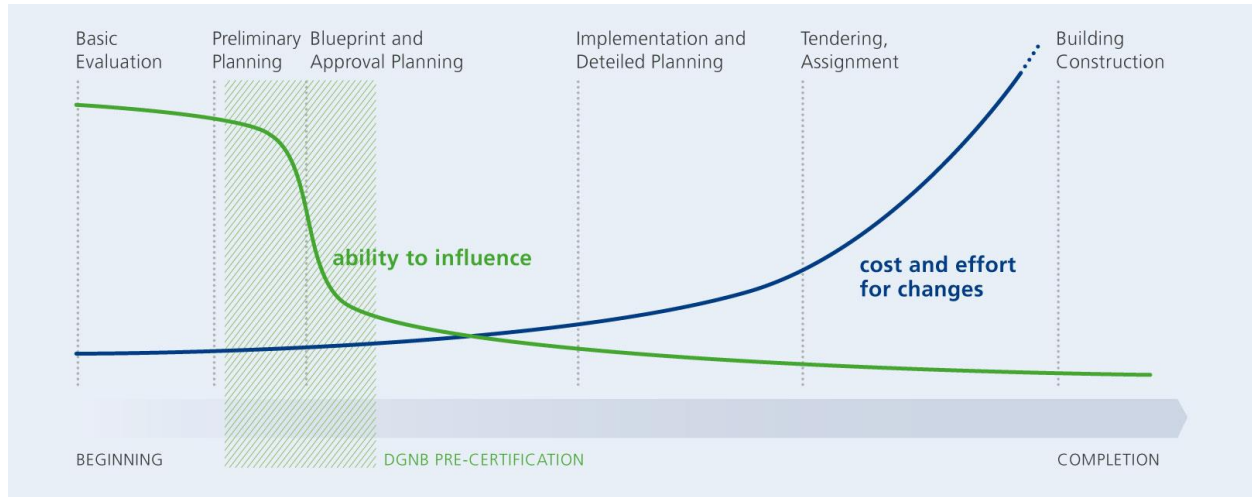


Figure 2: cost / effort / time ratio chart

One of the DGNB's objectives is to lay the foundations for certification at an early stage of the design process. A joint application for both the pre-certificate and the certificate is submitted, and an agreement with a rate of charges is drawn up based on this. There is the possibility to submit selected criteria for final consideration as early as the pre-certificate stage, and have the DGNB conduct their final assessment for the certificate on the basis of these.

The current scale of charges and more detailed information on the pre-certificate can be found on the DGNB website.

General principles

The general principles for applying the DGNB System are explained below. For further information, please refer to the DGNB Guideline for Certification (working title).

Definitions

The DGNB design area is the area considered for the classification of a project within a specific scheme or more than one (mixed use) and for identifying the primary use and other secondary uses in a building.

This area is defined as follows:

$$(1) \\ A_{\text{DGNB}} = \text{UA} - \text{VA} + \text{CS}$$

with:

A_{DGNB}	DGNB design area [m ²]
UA	Usable floor area [m ²] [T&D_04]
VA	Vehicle parking area [m ²] [T&D_04]
CS	Circulation space in corridors and halls [m ²] [T&D_04]

Primary use

The scheme with the largest proportion of the overall DGNB design area is referred to as "primary use". If the building is **mixed use**, then the scheme occupying the largest area is referred to as "primary use". If assignment to one main category is not clear-cut (e.g. 40% **office**, 40% **residential**, 20% **department stores**), the primary use must be decided by the auditor, who should justify his decision.

Secondary use with an area \geq 15% of the DGNB design area

One or more uses that are categorised under a scheme other than the primary use and that occupy \geq 15% of the DGNB design area are referred to as "secondary use". The areas designated to a secondary use must be assessed using the corresponding scheme. Buildings with primary and secondary uses (any secondary uses \geq 30% of the overall DGNB design area) must comply with the application rules for **mixed use**.

Secondary use with an area $<$ 15% of the DGNB design area (sub-use)

One or more uses that are categorised under a scheme other than the primary use and that occupy $<$ 15% of the DGNB design area (or a total of $<$ 30% if there are multiple uses) are referred to as "sub-use". These areas must be allocated to the primary use and assessed in accordance with the primary use scheme.

If there are multiple sub-uses that occupy \geq 30% of the DGNB design area in total, the sub-use occupying the largest area is considered as the secondary use.

If the areas occupied by the sub-use are \geq 400 m² or \geq 10% of the DGNB design area, documentary evidence must be provided for indicator 1 in criterion "SOC1.2 – Indoor air quality" and criterion "SOC2.1 – Design for all" that the minimum requirement has been met in each case. When individual regulations for sub-use exist, these are listed in the relevant scheme in the section entitled "Scheme-specific information".

Certiability according to the building's completion status

As a general rule, a building must be completed when the documentary evidence is submitted to the DGNB for conformity assessment.

Fittings are the only exception to this rule. A room is considered to be completed for the purposes of DGNB certification when the enclosing faces (walls, ceilings, floors, etc.) have finished surfaces (paint, floor coverings, etc.) and at least basic lighting has been installed.

1. The following must be completed:
 - a. All circulation spaces CS ([T&D_04]
 - b. All vehicle parking areas (usable area 7 - UA 7) ([T&D_04]
 - c. Outdoor areas that are located within the system boundary and are to be included in the DGNB certification.
 - d. The fittings in at least 80% of the DGNB design area.
2. In contrast to 1d, if there are tenant obligations in place for the remaining areas, it is considered completed when there are fittings in at least 25% of the DGNB design area. The completed areas and areas covered by tenant obligations, for which documentary evidence of this is provided, must occupy at least 80% of the DGNB design area.
3. In contrast to 1d and similar to 2, for primary and secondary uses in mixed-use buildings, it is considered completed when there are fittings on at least 25% of the DGNB design area (on a proportional basis) if there are tenant obligations in place for the remaining areas. The completed areas and areas covered by tenant obligations, for which documentary evidence of this is provided, must occupy a total of at least 80% of the DGNB design area.
4. As an alternative to points 2 and 3, an option is available to have a building that is ready for interior finishing certified. The "Ready for Interior Finishing" DGNB certificate (working title) can be used to certify buildings for which a firm decision has yet to be made with regard to some or all of the fittings for which the tenant is responsible. In order to receive this certificate, the common areas must be completed; these must be proportionally assessed in addition to the rented areas in which interior finishing work has already been completed. Incomplete finishing work will be reflected in the certification result. It is possible to have the building evaluated subsequently once further interior finishing work has been completed, e.g. by means of interior certification. An overview of the criteria to be assessed for the "Ready for Interior Finishing" DGNB certificate (working title) can be found on the DGNB website.

System boundary and minimum requirements

Unless otherwise specified in the individual criteria, only the building and open spaces directly allocated to it are taken into consideration for the assessment. Some criteria stipulate or allow for the assessment of outdoor areas.

The building will be primarily used in accordance with its scheme.

In addition, the following DGNB minimum requirements apply:

1. Indoor air quality (minimum requirements in accordance with SOC1.2 criterion)
2. Design for all (minimum requirements in accordance with SOC2.1 criterion)
3. Fire safety (minimum requirements in accordance with TEC1.1 criterion)
4. Statutory requirements: The statutory requirements that apply to the building to be certified must be fulfilled.

Where individual regulations with regard to minimum requirements exist, these are listed in this document in the section titled "Scheme-specific information".

Current validity of expert reports, analyses and simulations:

Expert reports, analyses and simulations must make reference to the current planning status or the building as it was actually constructed. If expert reports and simulations made reference to a previous planning status, evidence must be provided to clearly demonstrate that they continue to be valid and relevant.

Required documentation that must be submitted for the project (certificates)

The required documentation must be produced in accordance with the requirements described in the criteria.

Alternatively, the following forms of documentation can be provided:

Alternative evidence

The requirements of the criterion/indicator remain unchanged.

The criteria specify the required or permissible forms of documentation. The evidence can be provided in another form as long as it clearly demonstrates that the objective of the criterion/indicator has been achieved. Before submitting documentary evidence in an alternative form, the proposed alternative form must be agreed with the DGNB certification body. The decision lies with the DGNB certification body.

Documentation for innovation areas (to replace "Individual project solutions")

If a criterion for an indicator allows for an alternative solution in the form of an innovation area, the indicator in question can be fulfilled by this solution. This enables the objective of a criterion/indicator to be fulfilled by a quality of the building that has previously not been described in this way in the criterion/indicator. Before submitting documentary evidence in an alternative form, the proposed alternative form must be agreed with the DGNB certification body. The decision lies with the DGNB certification body.

Simplified means of providing documentary evidence

Instead of the required documentation, documentation for some criteria can be supplied using a documentation template (can be downloaded from the internal section of the DGNB website). The template must be signed by the people named on the template. By signing the document, the signatories confirm that the requirements listed in the criterion have been fulfilled. The DGNB reserves the right to request individual pieces of documentary evidence on a random basis at a later date as part of the conformity assessment.

Evaluation points

The DGNB has defined target values for every criterion. To fulfil the objectives, evaluation points are awarded in each case. Depending on their scheme, some criteria are weighted differently based on how essential they are to the scheme in question.

Key to how the evaluation is presented

The maximum number of evaluation points that can be obtained is specified for each indicator; as illustrated below, the scoring appears differently depending on whether points can be awarded using interpolation, whether points can be added or whether there are different options to choose from:

How it appears for interpolation:

Biotope area quality		
Biodiversity index		0–30
Property-specific biodiversity index = (total (sub-areas * specific biodiversity indices) * (floor space index) / (plot area))		
■ Property-specific biodiversity index = 0,25		30
■ Property-specific biodiversity index ≤ 0		0

How it appears when there are different options to choose from (either/or):

Temperatures during the heating period		
Room temperature control during the heating period		
Office		Max. 15
■ Temperature can be adjusted in the room		8
■ Temperature can be individually adjusted by the users or user group (1 to 3 people)		15

How it appears when points can be added:

Parking space situation		
Delivery zone		
Shopping centre	Department stores	Logistics
■ Separate entrances for passenger cars and HGVs		+7.5
■ There are no restrictions on using the delivery zone and this does not affect ongoing operations		+7.5

Overfulfilment of a criterion due to bonuses

For some criteria, it is possible to obtain additional points due to circular economy bonuses or Agenda 2030 bonuses, meaning that the number of points awarded could exceed the maximum number of points for that particular criterion. These additional points can only be credited within a main criteria group/topic and cannot be transferred to other qualities. The foreword provides an overview of all the available bonuses.

Scheme-specific information

The primary use of each of the schemes is defined below.

Office

Offices are any building that is used primarily for office and administrative activities (UA 2 – Office space [T&D_04])

Education

This scheme encompasses all educational buildings, such as:

- a. General education schools
- b. Vocational schools
- c. Special needs schools
- d. Further education and training institutions
- e. Kindergartens

The primary use of these buildings is rooms for education, training, seminars, lectures, workshops and classrooms. Secondary uses in the building being assessed, such as offices, kitchen, dining hall, laboratory, library, gym, etc., are assessed within the same scope. Separate buildings such as sports halls, libraries, canteens, etc. are excluded from this.

Individual regulations for secondary use:

If the areas occupied by the secondary use are $\geq 200 \text{ m}^2$ or $\geq 10\%$ of the DGNB design area, documentary evidence must be provided for indicator 1 in criterion "SOC1.2 – Indoor air quality" and criterion "SOC2.1 – Design for all" to demonstrate that the minimum requirement has been met in each case.

Residential

Residential buildings are any building that is used primarily for residential purposes.

This scheme applies to multiple-family dwellings with > 6 accommodation units. It can be applied to boarding schools, halls of residence and nursing homes in agreement with the DGNB office.

For buildings with ≤ 6 accommodation units, there is the "New buildings: small residential buildings" scheme.

Individual regulations for secondary use:

If the areas occupied by the secondary use are $\geq 200 \text{ m}^2$ or $\geq 10\%$ of the DGNB design area, documentary evidence must be provided for indicator 1 in criterion "SOC1.2 – Indoor air quality" and criterion "SOC2.1 – Design for all" that the minimum requirement has been met in each case.

Retail buildings: Consumer market Shopping centre Department stores

Retail buildings are buildings used for selling of goods and do not host any significant processing or production activities on site.

Consumer market

Extensive sales area for one or more users. Partial product assortment or full product assortment (from 800 m^2). The entire building is assessed, including the interior finishing (costs of structural components - construction works and costs of technical components - installations[T&D_05]).

The DGNB defines the following as consumer markets:

Supermarkets, discount stores and specialist retail stores (e.g. drugstores, building supplies stores, etc.).

Shopping centre

Shopping centres are large facilities built on the basis of a central planning concept and cater for short-, medium- and long-term demand. A large number of retail outlets, food outlets and service businesses of varying sizes are densely packed in one area and the facility is centrally managed. The system takes into consideration the central infrastructure, utility and business operation areas with interior finishing (costs of structural components - construction works and costs of technical components - installations [T&D_05]) and some of the tenant fit out.

Shopping centres are distinguished from department stores in that shopping centre owners do not trade on their own but act only in the capacity of landlord and centre management. Department store owners, on the other hand, generally combine trading on their own with managing the property.

Department stores

The scheme Department stores encompasses a retail establishment that sells a wide variety of goods. These usually include ready-to-wear apparel and accessories for adults and children, yard goods and household textiles, small household wares, furniture, electrical appliances and accessories, and, often, food. A department store has several departments housed under the same roof to facilitate buying, customer service, and merchandising.

Department stores can include general areas such as customer toilet facilities, car parks and staff rooms for the employees working in the rented trading spaces. In contrast to shopping centres, department stores do not have a central shopping street. This set of criteria is based on the criteria set for shopping centres. The system takes into consideration the central infrastructure, utility and business operation areas with interior finishing (costs of structural components - construction works and costs of technical components - installations [T&D_05]) and some of the tenant fit out.

Industrial buildings: **Logistics** **Production**

Logistics

Logistics buildings are defined as buildings used in the distribution and delivery of goods. This scheme is also used to certify high-bay warehouses.

Scope:

If the usable floor area for permanent workspaces is more than 400 m², or if there are more than 20 permanent workspaces in the building, the indicators for the share occupied by offices must also be assessed in criteria SOC1.1 and SOC1.4.

Individual regulations for secondary use:

If the areas occupied by the secondary use are $\geq 10\%$ of the DGNB design area, documentary evidence must be provided for indicator 1 in both criterion "SOC1.2 – Indoor air quality" and criterion "SOC2.1 – Design for all" to demonstrate that the minimum requirement has been met in each case.

Production

Production buildings are any building in which merchandise or consumer goods are manufactured from raw materials or primary products using energy, labour, etc.

Individual regulations for secondary use:

If the areas occupied by the secondary use are $\geq 10\%$ of the DGNB design area, documentary evidence must be provided for indicator 1 in both criterion "SOC1.2 – Indoor air quality" and criterion "SOC2.1 – Design for all" to demonstrate that the minimum requirement has been met in each case.

Hotel

Hotel buildings are any building that provides the main range of services offered by hotels. These include, for example:

1. Accommodation service (lodging/reception): Includes reception, housekeeping and reservation
2. Food and beverages (F&B): Kitchen, restaurant, bar, room service and catering service
3. Logistics: Purchasing office, goods inspection, storage
4. Administration: A combination of management, bookkeeping/accounting, controlling, secretarial staff, marketing/sales, HR department and workshops/maintenance.
5. Additional services: e.g. telephone/fax, internet connection, television, laundry service, fitness and wellness facilities, conference room rental, entertainment programmes

The main function of a hotel varies from hotel to hotel: They can be health resorts and wellness hotels (spa), holiday or sports hotels, or business, conference and seminar hotels.

Accommodation in the hospitality industry that does not fall under the definition of a hotel is any facility that does not offer all of the main range of services offered by hotels. This includes, in particular, B&Bs, guest houses, inns, hostels, halls of residence, serviced or self-catering accommodation such as apartments, shelters, lodges and chalets, campsites, holiday houses and flats, youth hostels, Friends of Nature guest houses, dormitories and villas, and any other types of accommodation available for rental.

Resorts are in a separate category, which is not covered by the 2020 version.

Assembly buildings

The scheme “Assembly buildings” are structures or parts of structures that are intended for the simultaneous presence of many people at events, in particular educational, economic, sociable, cultural, artistic, political, sporting or entertaining, as well as bars and restaurants. This scheme is to be applied to all buildings or parts of buildings that fall under the respective regulations for Assembly buildings in accordance with the building regulation codes or the state regulations on the construction and operation of “Assembly buildings” (if defined by the local building code, alternatively scheme can be defined via [PCQ](#) - “General certification inquiry”). This usually includes buildings with (assembly) rooms for more than 200 people or buildings that can accommodate more than 200 visitors, whereby the (assembly) rooms have common escape routes (with the exception of schools and laboratories).

Under the scheme “Assembly buildings”, the following building type can be considered:

- Congress building;
- Fair and city halls;
- Theaters and concert halls;
- Museums;
- Cultural, civic centers and libraries;
- Certification is generally also possible for “Assembly buildings” that are not listed above. Communication with the DGNB office regarding the scheme specific / project specific questions via the PCQ format is essential.

Note: In some criteria, the above-mentioned building types are summarized in the different categories. This varies from criterion to criterion according to Appendix 1. If it is not possible to clearly assign the building to certain type or different assignment makes sense due to special features, it is advisable to communicate with the DGNB office.

Other “Assembly buildings”, not listed above can be also certified. Coordination with the DGNB with regard to the assignment to a building type is also recommended here.

Project-specific flexibility

Variable indicators within criteria

In the scheme, there is the option of treating an indicator that is marked as “variable” as an “irrelevant” indicator. Such an indicator does not have to be processed for the project certification if irrelevance of content of an indicator can be proved. The "not relevant" indicator then does not have to be processed. A reason why the indicator is "not relevant" must be attached to the submission documents.

Variable indicators enable a better mapping of the actual events in the project. This changes the weighting of the remaining indicators within a criterion. The conversion of the evaluation of the remaining indicators (achievable project-specific points per indicator) takes place in a comprehensible manner within the scope of the weighting.

In criteria with variable indicators, the degree of fulfillment is determined as follows:

$$\text{Criterion with variable indicators} = \text{CLP}_{\text{ist}} / \text{CLP}_{\text{max, relevant}} * 100$$

where $\text{CLP}_{\text{max, relevant}}$ represents the total of points of the countable indicators relevant for the specific project.

Variable indicators can be found in the following criteria:

Criterion	Variable Indicator
■ SOC1.1	Indicator 3: Radiation temperature asymmetry and floor temperature / heating period
■ SOC1.4	Indicator 4: No glare in daylight

Mixed use

Application rules for mixed use

Minimum requirements

The DGNB minimum requirements (exclusion criteria) stipulated in the criteria for the scheme in question must be fulfilled, for both the primary use and all secondary uses.

Secondary requirements

The secondary requirements only need to be fulfilled at whole-building level.

Partial certification

If a proper distinction can be made between the different uses, an application for partial certification can be submitted. The use that is to be assessed must be clearly defined and must be agreed with the DGNB on a case-by-case basis (project-specific certifiability enquiry – see DGNB website). The following parameters should be complied with:

- Separate energy performance certificates must exist for the different sub-areas
- Separate entrances to the building must exist
- Different uses can be identified, e.g. from the façade design
- Technical building equipment in the different sub-areas functions independently of each other

Further information on mixed use can be found on the DGNB website.

Terms and definitions

In the DGNB System some terms and definitions are repeatedly used in different criteria, for this reason these are described here in detail once and then briefly mentioned in the relevant criteria by means of the following reference symbol [T&D_xx].

T&D_01. Official scale of fees for services by architects and engineers (HOAI)

For the purpose of DGNB certification the terminology and chronology of the service phases is based on the German official scale of fees for services by architects and engineers (namely the *Honorarordnung für Architekten und Ingenieure* or abbreviated as *HOAI*).

This document defines 9 service phases (see Table 1) for the provision of architectural services during the building development process and it is mentioned in the following criteria: ENV1.1 “Building life cycle assessment”, ECO1.1. “Life cycle cost”, PRO1.1 “Comprehensive project brief”, PRO1.6 “Procedure for urban and design planning”, PRO2.3 “systematic commissioning”.

Table 1: Service phases according to the official scale of fees for services by architects and engineers (HOAI)

	SERVICE PHASE	DESCRIPTION
1	STRATEGIC DEFINITION (GRUNDLAGENERMITTLUNG)	Identifying framework and context for addressing the requirements of the design brief.
2	CONCEPT DESIGN (VORPLANUNG)	Outline options and proposals for addressing the requirements of the design brief.
3	DEVELOPED DESIGN (ENTWURFSPLANUNG)	Preparing the final design proposal meeting the requirements of the design brief.
4	PLANNING APPROVAL (GENEHMIGUNG-SPLANUNG)	Preparing and submitting document package required for planning approval and any other relevant approval processes.
5	TECHNICAL DESIGN (AUSFÜHRUNGSPLANUNG)	Preparing finished working drawings and detail specifications ready for construction.
6	TENDER PREPARATIONS (VORBEREITUNG BEI DER VERGABE)	Conducting quantity surveys and preparing specifications of services put out to tender.
7	TENDER SUPPORT (MITWIRKUNG BEI DER VERGABE)	Obtaining cost estimates, calculating overall cost and supporting the selection of bidding contractors.
8	CONSTRUCTION (OBJEKTÜBERWACHUNG)	Supervision of construction works on site.

9

COMPLETION AND DOCUMENTATION
(OBJEKTBETREUUNG UND DOKUMENTATION)

Compiling snagging lists and supervising snag remediation (*property management including warranty tracking*)
Documenting condition of the building after final completion.

T&D_02. Level(s) - Building sustainability performance

Level(s) is a voluntary reporting framework to improve the sustainability of buildings. Using existing standards, Level(s) provides a common EU approach to the assessment of environmental performance in the built environment and an easy starting point to introduce sustainability into your work.

Within the Level(s) framework, each indicator is designed to link the individual building's impact with the priorities for sustainability at the European level. This focuses the Level(s) user on a manageable number of essential concepts and indicators at building level that contribute to achieving EU and Member State environmental policy goals.

For more information about Level(s):

<http://ec.europa.eu/environment/eussd/buildings.htm>

[http://ec.europa.eu/environment/eussd/pdf/Level\(s\)_flyer-EN-web.pdf](http://ec.europa.eu/environment/eussd/pdf/Level(s)_flyer-EN-web.pdf)

T&D_03. EnEV - Energy Performance Certificate (EPC) according to the DIN 18599

The Energy Saving Ordinance *EnEV (Energieeinsparverordnung)* is a German regulation defining minimum requirements with regards to buildings' energy efficiency and it is applicable for both new buildings and renovation of existing buildings.

The EnEV Energy Performance Certificate (*Energieausweis*) gives the complex information about the energy quality of a building envelope and installations which serve the building or its parts. The certificate refers to the energy demand of heating, water heating, ventilation and cooling. It also includes the recommendations for the possible improvements of the energy performance of the building. The certificate is valid for the 10 years from the issue date. There are two types of EPC, the energy demand certificate and the energy use certificate. The demand certificate is based on the analysis of the technical performance while the use certificate verifies the actual energy consumption in the last 3 years. The certificate can be issued by qualified and licensed experts.

The document includes the following information:

- general information about the building: building type, address, year of the construction, number of dwellings, size of a useable area, source of energy, type of the ventilation and cooling systems
- energy efficiency class of the building (from A+ to H)
- the annual primary energy demand [kWh/(m²·a)] in comparison to reference values such as a minimum statutory energy performance requirements
- the annual final energy demand [kWh/(m²·a)] in comparison to reference values such as a minimum statutory energy performance requirements
- CO₂ – emission [kg/(m²·a)] (voluntary)
- the energy quality of a building envelope U-value [W/(m²·K)]
- renewable energy – how many % of the demand is covered by particular renewable sources of energy (only in case of new buildings)
- if the energy use certificate is being issued, additionally the following data are required:
 - energy efficiency class of the building (from A+ to H) based on the average energy use from last 36 months

- energy use in particular years

The German requirements comply with the EU regulations such as the Directive 2010/31/EU of The European Parliament and of the Council of 19 May 2010 on the Energy Performance of Buildings (available in different languages: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0031>).

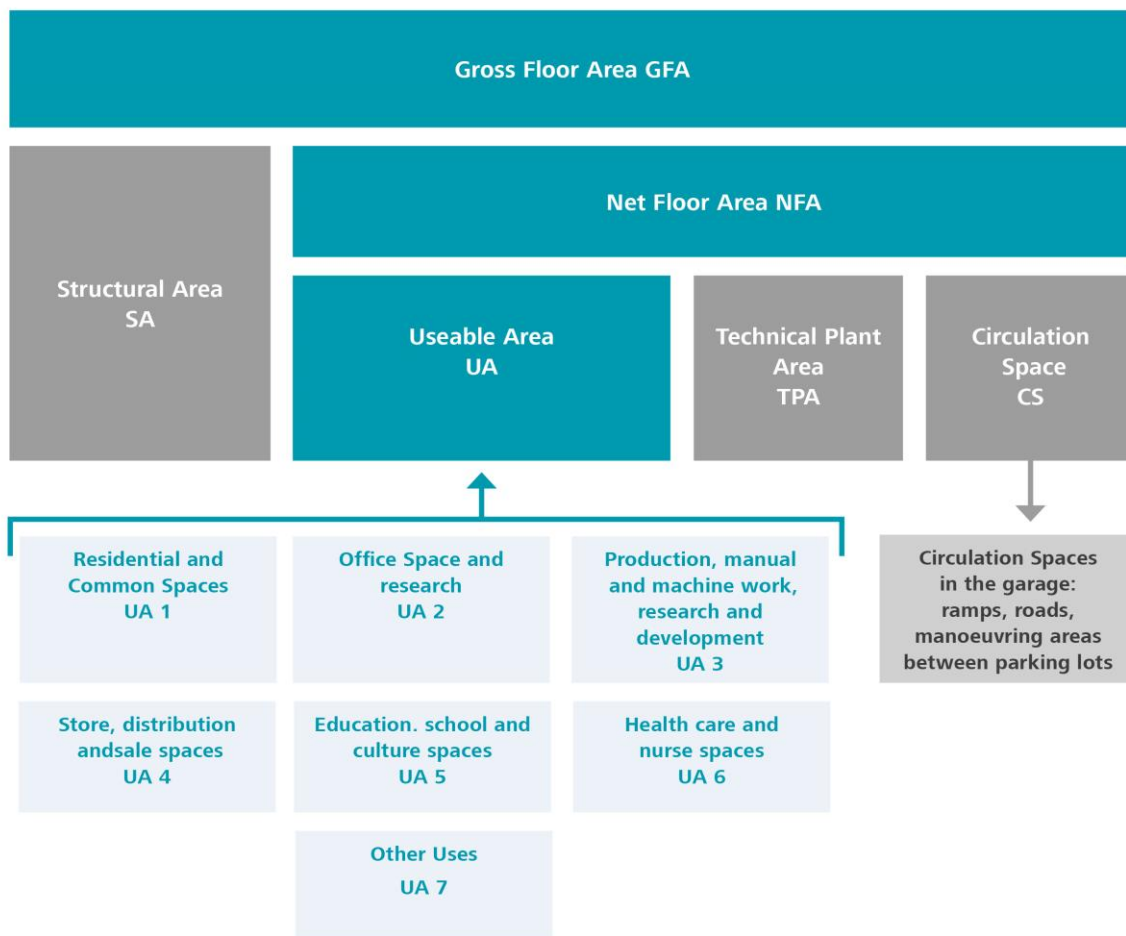
However, the content of the energy performance certificate may vary depending on local conditions of a country. The EnEV certificate can be replaced by the EU Energy Performance Certificate, building energy performance simulation or by a local one (criterion ENV1.1 provides the detailed information about the alternatives regarding the building energy performance documentation)

T&D_04. Areas and volumes of buildings

Areas and volumes of a building are defined according to the German DIN 277-1:2016-01: Areas and volumes of buildings – Part 1: Building construction (*DIN 277-1:2016-01: Grundflächen und Rauminhalte im Bauwesen – Teil 1: Hochbau*).

This standard refers to particular surface areas within the building (see Figure 1) and has been adopted by DGNB to standardise calculations. Please note that the definitions of floor areas vary depending on the country and for the purpose of the DGNB certification the surface calculations have to be conducted as described below.

Figure 3: Definition of areas according to DIN 277-1:2016-01



Gross Floor Area – GFA (in German *Brutto-Grundfläche - BGF*)

Sum of all floor areas within all floors of the building. The following areas are NOT included in the GFA:

- areas within a floor plan that do not exist e.g. airspace area over atriums, galleries or ceiling openings
- areas e.g. at the attic which do not have access, are not walkable or not being used because of other reasons
- areas exclusively dedicated to servicing, maintenance, inspection and maintenance of structure and technical systems (e.g. unusable roofs, fixed access ladders and roof gangways, servicing gangways in suspended ceilings, crawl space, catwalks in suspended ceilings)
- external parts of the building that are not structurally connected to the building (e.g. external stairs, external ramps, pergolas, outdoor sitting areas, terraces)

Net Floor Area – NFA (in German *Netto-Raumfläche NRF*)

Sum of all useable areas within all floors of the building. It includes useable areas UA (in German *Nutzfläche NUF*), technical plant areas TPA (in German *Technikfläche TF*) and circulation space CS (in German *Verkehrsfläche VF*):

$$\text{NFA} = \text{UA} + \text{TPA} + \text{CS}$$

Following elements are included in the NFA:

- exposed installations
- objects that are permanently built-in (e.g. ovens, heating and air-conditioning appliances, baths and showers)
- brick facing and cladding that is not floor to ceiling height
- build-in furniture (e.g. build-in wardrobe, shelving)
- movable partitions (e.g. curtains, folding partition walls)
- areas of the walk-in installations and elevator shafts where clear cross section > 1,0m² when not walkable, considered as part of SA

For the determination of NFA the measurements between building structure at the level of the floor or ceiling covering are considered. Structural and artistic offsets, skirting boards, kerbs, undercutting, nosing such as projecting parts of windows and doors are not considered.

Base surface of a sloping structures (e.g. stairs, ramps or tribunes) are to be added in case they do not overlap with other floor areas.

Floor areas under the lowest staircase or ramp are assigned to the floor plan level on which the staircase or ramp begins. According to their use, they are shown as usage area (UA), technical plant area (TPA) or circulation space (CS).

Base areas of installation and elevator shafts with a clear cross-section > 1.0 m² are only determined in the plan view planes as net floor area (NFA) when walkable. Otherwise, their base area is added to the structural area (SA).

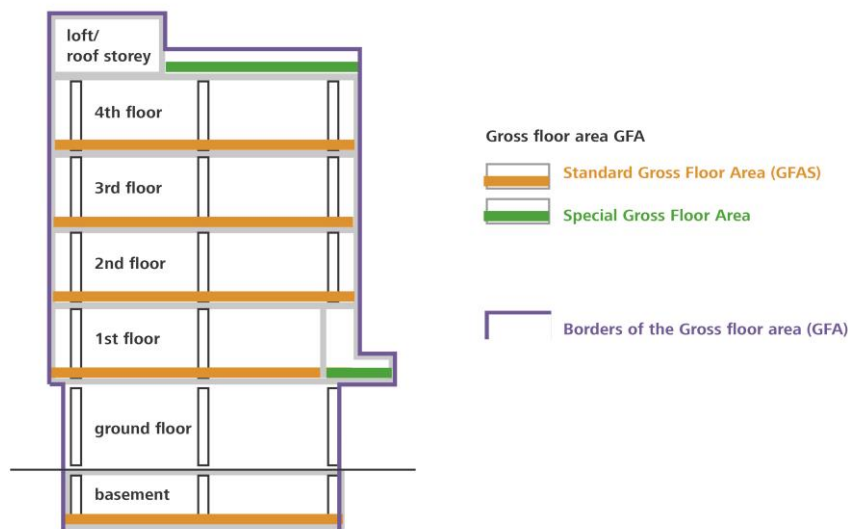
Standard Gross Floor Area (GFAs) and Net Floor Area (NFAs)

Includes those parts of GFA/NFA which are covered by a roof and fully enclosed (floor, ceiling and wall enclosure) (see figure 2). Rooms that are partially enclosed by the waterproofed or open-work structures are not included (e.g. perforated garage gate, shutters)

Special Gross Floor Area and Net Floor Area

Refers to all rooms and floor areas based on GFA/NFA and are structurally connected to the building but not fully enclosed such as loggias, balconies, terraces on flat roofs, courtyards, entrance areas, external stairs (see figure 2).

Figure 4: Definition of standard and special GFA/NFA



Translation:

DG = loft/roof storey

4. OG = 4th floor

3. OG = 3rd floor

2. OG = 2nd floor

1. OG = 1st floor

EG = ground floor

KG = basement

Heights (h) can be deleted from the drawing and only surface accepted by DGNB to be highlighted on the scheme.

For determining the gross floor area (GFA), the outer dimensions of the building structures, including clothing (e.g. outside of plaster layers or outer shells of multi-shell wall constructions), must be set at the height of the top of the floor or ceiling coverings.

Structural Area – SA (in German *Konstruktions-Grundfläche KGF*)

All areas under the building structure in each level through which they lead as a construction. (e.g. walls, columns, pillars, chimneys):

$$SA = GFA - NFA$$

For the determination of SA the measurements of the building structure together with the clothing at the level of the floor or ceiling covering are considered.

Wall openings (e.g. doors, windows or passageways), installations and elevator shafts that are not walkable or ≤ 1,0m²

Instead of a determination based on individual dimensions of the structure, the structural area (SA) can be determined as the difference between the gross floor area (GFA) and the net floor area (NFA).

Usable Area – UA (in German *Nutzungsfläche NUF*)

Part of the area used for the essential purpose of the works is determined as usable area (UA). The usable area (UA) can be further subdivided according to Table 2.

Table 2: Type of usable area (UA)

USE GROUP	FLOOR AREAS AND ROOMS
1 – Residential and common spaces (UA 1)	1.1 Living spaces 1.2 Common rooms 1.3 Break rooms 1.4 Waiting rooms 1.5 Dining rooms
2 – Office space (UA 2)	2.1 Office rooms 2.2 Open-plan offices 2.3 Meeting rooms 2.4 Design rooms 2.5 Rooms with counter(s) 2.6 Control rooms 2.7 Surveillance rooms
3 – Production, manual and machine work, research and development (UA 3)	3.1 Workshops (where these are permanent working areas) 3.2 Technological laboratories 3.3 Physics, engineering physics and electrical engineering laboratories 3.4 Chemistry, bacteriology and morphology laboratories
4 – Store, distribution and sale spaces (UA 4)	4.4 Acceptance and distribution areas (where these are permanent working areas) 4.5 Sales rooms 4.6 Showrooms 3.2 Workshops (where these are permanent working areas)
5 – Education, school and culture spaces (UA 5)	5.1 Classrooms with fixed seating 5.2 General classrooms and practice rooms without fixed seating 5.4 Dedicated classrooms and practice rooms without fixed seating 5.5 Library rooms 5.6 Assembly rooms or areas 5.7 Stages, studios 5.8 Exhibition rooms

6 – Healthcare and nurse spaces (UA 6)	Rooms for general examination and treatment (for primary medical care, consultation, etc.), rooms for special examination and treatment (for endoscopy, physiology, dentistry, etc.), operating rooms, maternity rooms, rooms for radiation diagnostics and radiotherapy, rooms for physiotherapy and rehabilitation, bed rooms , Intensive care rooms
7 – Other uses (UA 7)	Storage rooms, bicycle storage, refuse collection rooms, vehicle parking areas (garages, halls, protective roofs), passenger accommodation areas (railways and piers, etc.) technical installations for the operation of equipment specific to use (computerised server room, compressor room for a workshop compressed air system, switching rooms for medical facilities, control rooms, control centers, etc.), technical installations for the supply and disposal of other structures (power stations, gasworks, transformer stations, sewage treatment plants, etc.), shelters Sanitary facilities (toilets including vestibules, wash-rooms, shower rooms, sauna rooms, cleaning rooms, etc.), changing rooms (closet rooms, dressing rooms, etc.), cleaning locks

Gross Volume – GV (in German *Brutto-Rauminhalt BRI*)

Gross volume (GV) includes the volume of all rooms and building structures that are above the gross floor area (GFA) of the building. The gross volume (GV) is enclosed by the outer boundary surfaces formed by the structural building blocks, exterior walls and roofs including dormers or roof skylights.

The volume of the following elements does not belong to the gross volume (GV):

- deep and shallow foundations;
- light wells;
- external stairs and external ramps not connected to the structure by building constructions;
- entrance roofing;
- roof overhangs, as far as they do not represent coverages for space contents of area (S) according to 5.6.2;
- projecting sun protection systems;
- chimney heads, ventilation pipes or ventilation ducts that extend beyond the roof covering;
- skylights $\leq 1.0 \text{ m}^3$;
- pergolas and paved patios or terraces.

The gross volume (GV) is to be determined from the calculated gross floor areas (GFA) and the associated heights. The heights for the determination of the gross volume (GV) are the vertical distances between the surfaces of the ceiling coverings in the respective floor plan planes or, in the case of roofs, the surfaces of the roof coverings. The height of the lowest floor of the building is defined as the distance from the underside of the subfloor and floor slabs, which do not serve the foundation, to the top of the ceiling covering the level above it. In the case of structures or parts of buildings which are bounded by non-vertical or non-horizontal surfaces, the volume shall be determined according to appropriate geometric formulas. For the heights of room contents of the area S (special case) the upper edges of the limiting building constructions (eg parapets, attics, railings) are decisive.

T&D_05. Cost Groups (*Kostengruppe*) according to German DIN 276-1:2008

Cost Groups are categories of associated costs being incurred during a building development process. Particular costs are identified and classified according to their character and belong to the following main groups:

COST GROUP	BUILDING COMPONENT
100	Site
200	Clearance and development
300	Structural components – construction works
400	Technical components – installations
500	External works
600	Furnishings, furniture and artistic appointments
700	Incidental buildings costs

For simplification the cost group numbering (100 to 700) is not considered in the international version of the DGNB System. We will only refer to the **building components** (structural and building components according to their main and sub-levels) as described in details in Appendix 1 of criterion ECO1.1 “Life cycle cost”.

These are mentioned in the following criteria: ENV1.1 “Building life cycle assessment”, ENV1.3 “Sustainable resource extraction”, ECO1.1 “Life Cycle cost”, PRO1.5 “Documentation for sustainable management”.

T&D_06. German Information Centre for Construction Costs

The German Information Centre for Construction Costs (namely the Baukosteninformationszentrum or shortly BKI) is a German institution operated by the German Chambers of Architects, that created and operates the BKI-database, a complex database of construction costs. Based on the calculation of several thousand real projects, the BKI-database is a professional and annually updated source of information for cost planning of construction works.

The information given by the database contains the cost parameters (proportion of costs from particular cost group in relation to a certain reference unit based on the German DIN 277 [T&D_05]) and planning parameters (value that determines the ratio of certain areas in relation to the Usable Area and the Gross Floor Area [T&D_04]) for different building types.

This database is a source of information for architects, engineers, experts and professionals that work in the field of cost estimation of construction projects in the initial service phases [T&D_01].

The German Information Centre for Construction Costs is mentioned in ECO1.1 “Life cycle cost”.

For more information (website only available in German language): <http://www.bki.de/ueber-uns.html>

Appendix 1

Assembly buildings

The following buildings can be covered using the scheme “Assembly buildings”:

- Congress building;
- Fair and city halls;
- Theaters and concert halls;
- Museums;
- Cultural, civic centers and libraries;

Note: In some criteria, the above-mentioned building types are sometimes summarized in the different categories. Allocation of the buildings to the relevant types can be found in the following table:

Criterion	Variable Indicator
ENV1.1	<ul style="list-style-type: none"> ■ Type I: Buildings without hall character; ■ Type II: building with hall character;
ECO2.1	<p>Indicator 6</p> <ul style="list-style-type: none"> ■ Type I: Buildings such as congress buildings, theaters and concert halls, museums, cultural and community centers and libraries; ■ Type II: Buildings such as B. Exhibition and city halls;
SOC1.3	<ul style="list-style-type: none"> ■ Type I: Buildings such as Congress building; ■ Type II: Buildings such as Theaters and concert halls; ■ Type III: Buildings such as Museums, cultural, civic centers and libraries; ■ Type IV: Buildings such as Fair and city halls;
SOC1.4	<ul style="list-style-type: none"> ■ "Type I areas" (Note: The evaluation takes place via Education); ■ "Type II areas" (Note: The assessment is carried out via Logistics);
TEC1.2	<ul style="list-style-type: none"> ■ Type I: Buildings such as congress buildings, cultural, civic centers and libraries; ■ Type II: Buildings such as Theaters and concert halls, exhibition halls and city halls, museums;

Note: The detailed description of the assignment can be found in the respective criteria in APPENDIX A - DETAILED DESCRIPTION under “IV. Usage-specific description ”.