ÖGNB

Österreichische Gesellschaft
für Nachhaltiges Bauen

IBO

Österreichisches Institut für Bauen und Ökologie GmbH

ÖSTERREICHISCHES
ÖKOLOGIE INSTITUT

Sponsor of the

SB13
Graz
SUSTAINABLE BUILDING CONFERENCE 2013
25.–28. SEPTEMBER 2013, TU GRAZ, AUSTRIA

Non-profit association ÖGNB

The Austrian Sustainable Building Council (ÖGNB) was initiated and founded in Austria in January 2009, by a number of renowned and independent institutions (see below) in the field of sustainable building.

Membership is open to all who are interested, to institutions and businesses seeking to participate actively in **supporting the Austrian building industry in the transition towards sustainable building.**

The Austrian Sustainable Building Council is a non-profit association which addresses everyone interested in promoting sustainable building in Austria.

ÖGNB decision-making bodies include businesses, science and the public sector equally; attention is paid to ensure that there is no absolute majority in the body of one stakeholder group.

The ÖGNB network

Bau.Energie.Umwelt.Cluster NÖ (Construction.Energy.Environment. Cluster Lower Austria) Haus der Zukunft (Building of Tomorrow), IG Lebenszyklus Hochbau (IG Life-cycle Building Construction), klima:aktiv, nextroom, Staatspreis Architektur und Nachhaltigkeit (National Award for Architecture and Sustainability), …

ÖGNB fosters the exchange of information and variable forms of cooperation, e.g. participation in working groups or joint development of contents. It provides the ÖGNB building assessment system as well as technical support, e.g. for the scientific Council of the Environment and Building Initiative.

Das Programm Cluster Niederösterreich wird mit EU - Mitteln aus dem Europäischen Fonds für regionale Entwicklung (EFRE) und Mitteln des Landes Niederösterreich kofinanziert.

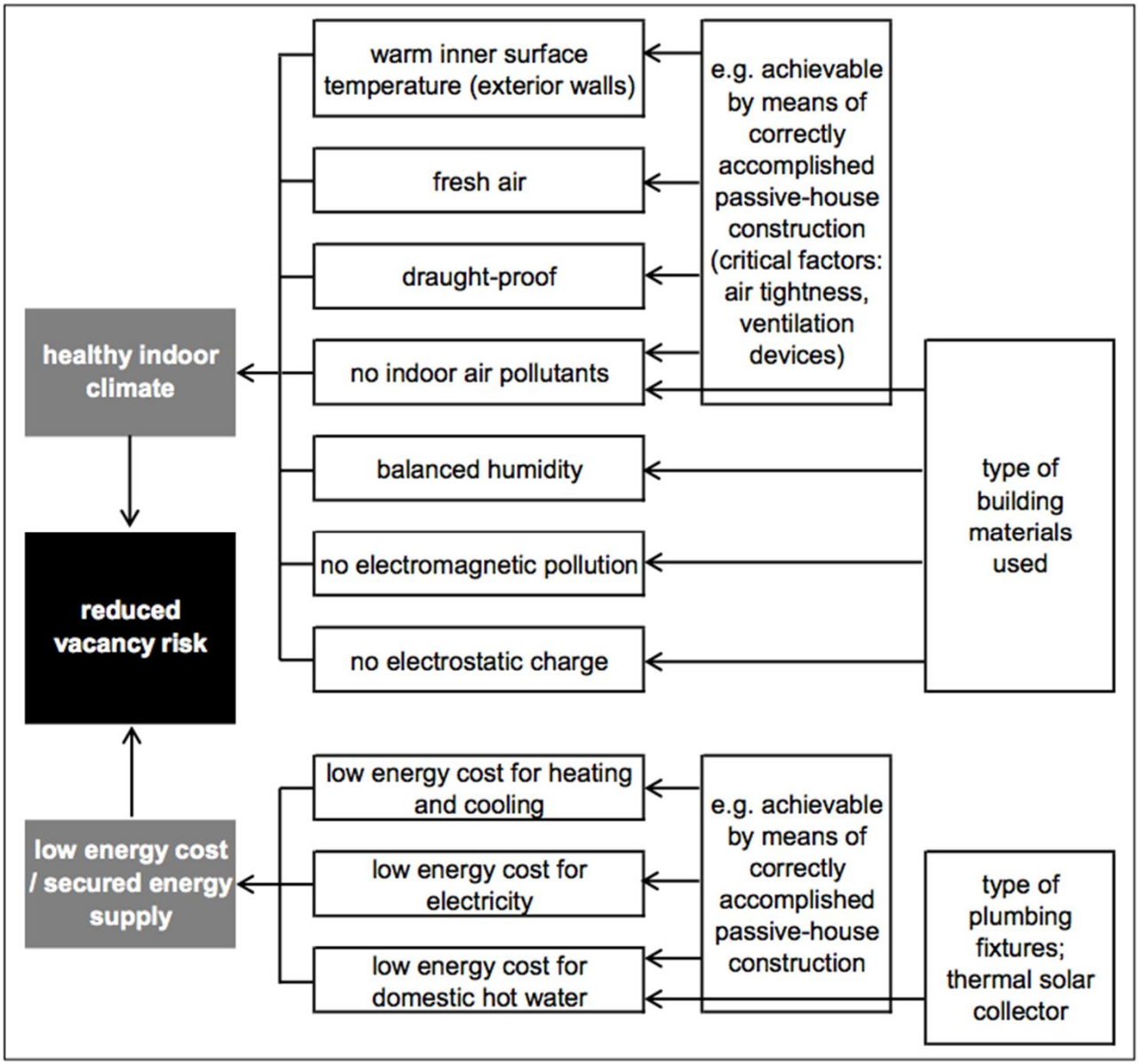
ÖGNB sustainable building assessment quality label

The ÖGNB quality label is based on the TQB assessment system.

TQB (Total Quality Building) is a planning, assessment and quality control tool for the building sector tailored to Austrian construction practice.

It includes a criteria and goal catalogue, which defines requirements for sustainable buildings, and the procedure for assessing and receiving an energy performance certificate (“Building Passport”).

First of all, TQB aims at building optimization in the planning stage.



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Building quality aspects and vacancy risk

Other building related risk aspects

TQB categories and criteria	Information provided by the data collection report	Relevant legal framework	Comments on reasons for a better sales potential of buildings with very good energy performance in terms of energy efficiency and renewable energy use
Energy consumption	Heating energy consumption (represents the quality of the building envelope, basic energy efficiency indicator) Efficiency of the heating and cooling system Primary energy demand (represents the overall efficiency)	(1) Energy Performance of Buildings Directive (Directive 2010/31/EU) (2) Ecodesign Directive (Directive 2009/125/EC) (3) Renewable Energy Sources Directive (Directive 2009/28/EC) (4) Energy Efficiency Directive (Directive 2012/27/EU)	(1) The recast of the Directive 2002/91/EC was adopted with extensions to cost optimality and requirements regarding Nearly Zero Energy Buildings: energy efficiency becomes even more important as well as building integrated renewable energy technologies. (2) The recast of the Directive 2005/32/EC was adopted with an extension to energy related products. Labelling of products (e.g. pumps and fans) will lead to a fast development of energy efficiency standards, comparable with the development, which has taken place in the field of household appliances. (3) A defined share of renewable energy supply has to be achieved and building integrated technologies play an important role. (4) Energy efficiency targets have to be achieved and there are specific policy instruments addressing the building sector. The public administration leads by example and through commitment to build or rent only buildings, which comply with ambitious energy standards.
Energy production	Renewable energy technologies on site: e.g. photovoltaic plant for electricity production e.g. solar-thermal plant for domestic hot water production		

Johann-Böhm-Straße Kapfenberg

Fotos Kapfenberg: DI Dr. Karl Höfler, AEE - Institut für Nachhaltige Technologien

Johann-Böhm-Straße Kapfenberg

Fotos Kapfenberg: DI Dr. Karl Höfler, AEE - Institut für Nachhaltige Technologien

Johann-Böhm-Straße: Assembly of the facade

Fotos Kapfenberg: DI Dr. Karl Höfler, AEE - Institut für Nachhaltige Technologien

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Renovation of a multi-flat house of the 1960s to a plus-energy building

Supported by the research programme

„Haus der Zukunft Plus“

of the Austrian Federal Ministry for Transport, Innovation and Technology

bmvit

Johann-Böhm-Straße:
Renovation to a Plus-Energy Building

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Development of a method for optimizing the renovation of houses, built from 1945 to the 1980s.

Fotos Kapfenberg: DI Dr. Karl Höfler, AEE - Institut für Nachhaltige Technologien

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klima:aktiv
Die Klimaschutzinitiative
des Lebensministeriums

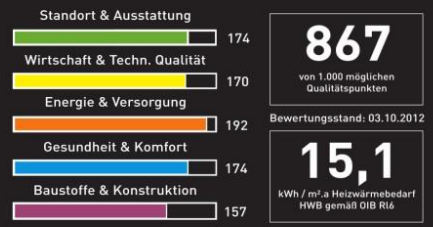
Johann-Böhm-Straße, Kapfenberg

Architektur: Nussmüller Architekten ZT GbmH
Bauphysik : Rosenfelder & Höfler GmbH & Co KG
Begleitung: ARGE Nachhaltigkeits-bewertung der TU Graz
Bauherr: Siedlungsgenossenschaft Ennstal

Objektadresse: 8605 Kapfenberg, Johann-Böhmstraße 34 - 36

In Kapfenberg entsteht gegenwärtig die erste Plus-Energie-Sanierung eines Wohnbaus in Österreich. Das architektonisch und energetisch extrem ambitionierte Bauvorhaben wird als Leuchtturmprojekt beispielgebend für die Sanierung von Geschosswohnbauten sein. Der als Plusenergiegebäude konzipierte Wohnbau setzt sich eine Reduktion um 80 % des Energieverbrauchs, 80% Anteil erneuerbarer Energie an der Energieversorgung und um zumindest 80% geringere CO2-Emissionen im Betrieb als Ziel. Das Gebäude aus den 50er Jahren wird gezielt mit Modulbausystemen erweitert, welche auch für andere Bauwerke zur Verfügung stehen.

ÖGNB und TQB werden gefördert von:
HAUS der Zukunft
bmvit



867
von 1.000 möglichen Qualitätspunkten

Bewertungsstand: 03.10.2012

15,1
kWh / m².a Heizwärmebedarf
HWB gemäß OIB RL6

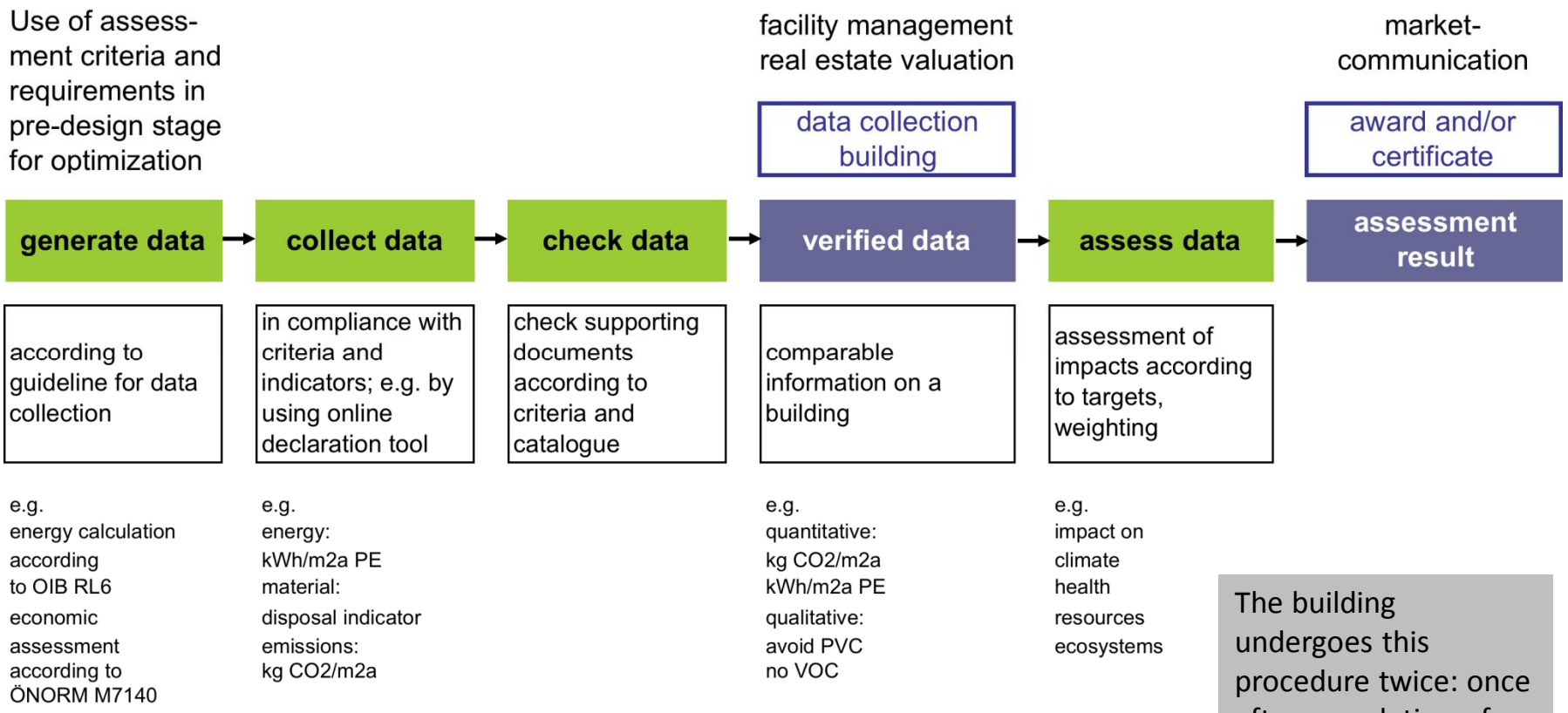
klima:aktiv Gold

lebensministerium.at

943
von 1.000 möglichen Qualitätspunkten

15,1
kWh / m².a Heizwärmebedarf
HWB gemäß OIB RL6

Elements of Assessment Procedure



Elaboration of supporting documents according to national standards, to reduce cost

The building undergoes this procedure twice: once after completion of design and once after building construction

Objective: To facilitate integrated design for high performance buildings

To use assessment criteria as guideline for building optimisation

Advantages of Certification Schemes

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1. At the company level

- To use the assessment criteria for revising the design targets in order to go for a high quality building
- To use the assessment scheme for quality control
- To assess the quality of a building and to use the assessment result in market communication

2. At the political level

- To contribute to the transition of the construction sector towards sustainability by
  - creating awareness on building quality in order to raise demand for high quality buildings in terms of reduced resource consumption;
  - using voluntary schemes in order to prepare the construction sector for mandatory regulations to come.

http://download.nachhaltigwirtschaften.at/hdz_pdf/oesterreich_demonstrationsgebaeude.pdf

Roles of Building Assessment and Building Certificates for Companies

- **Criteria framework represents a design tool for building optimisation**: based on the assessment criteria, the builder defines mandatory requirement profiles for the different planning fields (architectural concept, technical building equipment, energy concept,…)
- **Evaluation tool for quality control:** the building is assessed twice, at the end of the planning as well as at the end of the construction process
- **Certificate serves** to assure a **high degree of capital preservation for investors**
- **Certificate serves as a marketing instrument:** to demonstrate outstanding building quality

Giefinggasse, Wien: ENERGYbase Client: Wiener Wirtschaftsförderungsfonds	Office building with research infrastructure New construction	
Innsbruck, Tirol: Josef-Franz-Huter-Straße / Sieglanger Client: WE Wohnungseigentum Tiroler gemeinnützige Wohnbau GmbH	Residential building New construction	
Niklasdorf, Steiermark: Eine Welt Handel AG Betriebsgebäude Client: Eine Welt Handel AG	Whole sale store New construction	
Linz, Oberösterreich: Passivhaussanierung Markartstraße Client: GIWOG	Residential building Renovation	
Ludesch, Vorarlberg: Gemeindezentrum Ludesch Client: Marktgemeinde Ludesch	Community centre New construction	
Kierling, Niederösterreich: Passivhaussanierung Kierling Planung Client: BUWOG	Residential building Renovation	
Schwanenstadt, Oberösterreich: Passivhaussanierung Schule Schwanenstadt Client: Stadtgemeinde Schwanenstadt	School building Renovation	
Stadl-Paura, Oberösterreich: ChristophorusHaus Client: MIVA	Multifunctional building New construction	

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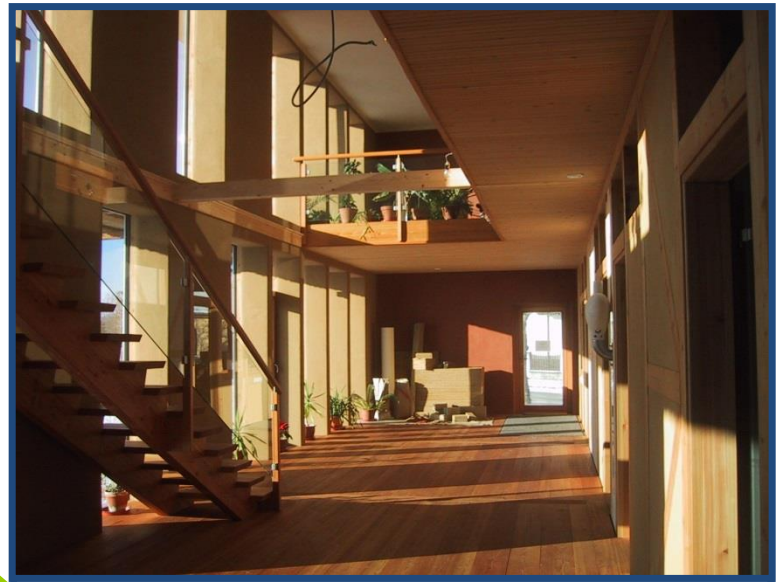
Various criteria frameworks are available for new construction and renovation and all types of building use

Buildings assessed with TQB (2009, examples)

klima:aktiv - good for the climate

INDOOR

ENVIRONMENT



Individual benefits

→ **Increase demand for klima:aktiv buildings**

→ **More CO_2 savings**

Dissemination pogram to accelerate market uptake: klima:aktiv building standard

- Criteria system
  - **A Design and Construction**
    - Several Subcriteria
  - **B Energy and Supply**
    - Several Subcriteria
  - **C Materials and Structure**
    - Several Subcriteria
  - **D Comfort and Indoor Air Quality**
    - Several Subcriteria

in compliance with the energy certificate according to EPBD 2002/91/EU

- Categories A B C D are the same for residential buildings and all types of non residential buildings; subcriteria are different.