



Federal Institute for
Research on Building,
Urban Affairs and
Spatial Development

within the Federal Office for
Building and Regional Planning



The Network for Sustainable Federal Building as an Instrument of Quality Assurance in the Implementation of the Assessment System BNB in the Public Sector

Dipl.-Ing. Andreas Rietz, Architect BDB

Federal Institute for Research on Building, Urban Affairs
and Spatial Development (BBSR), Germany



Organisers:



International Co-owners:



Sustainable Buildings
and Climate Initiative
Promoting Policies and Practices for Sustainability



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Organisers:



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International Co-owners:



Sustainable Buildings and Climate Initiative
Promoting Policies and Practices for Sustainability



Global Alliance
for Buildings and
Construction

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Evaluation of Sustainability in the Public Sector in Germany



Organisers:



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



HKGBC
香港綠色建築議會

Chart 3



SBE
SERIES

International Co-owners:



IGBC



iISBE



UNEP
Sustainable Buildings
and Climate Initiative
Promoting Policies and Practices for Sustainability



IFBC



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Network for Sustainable Federal Building

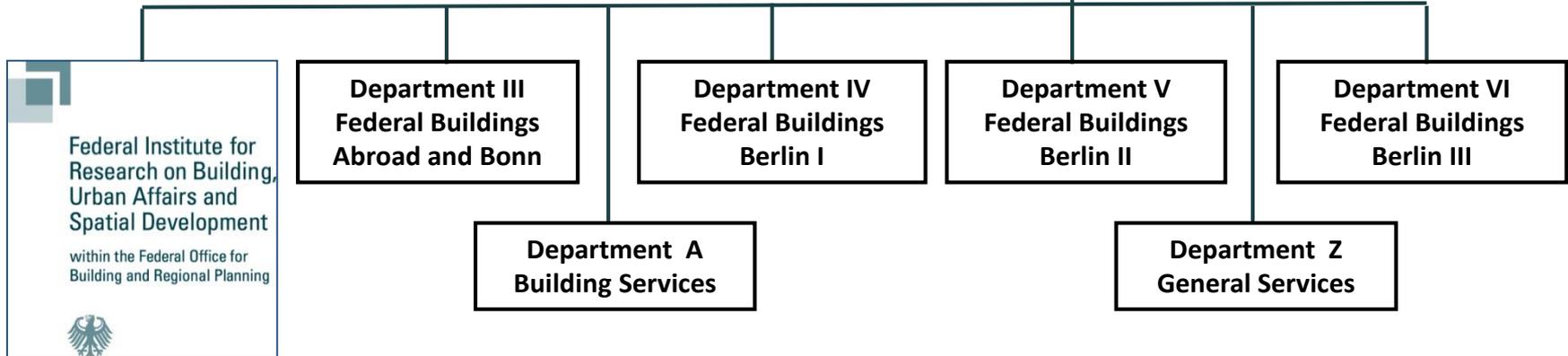
Federal Office for Building and Regional Planning (BBR)



Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety



Federal Office for Building and Regional Planning (BBR)



Research

Supreme Federal Building Authority



Organisers:



Chart 4



International Co-owners:



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Guideline and Assessment System BNB

Interrelations

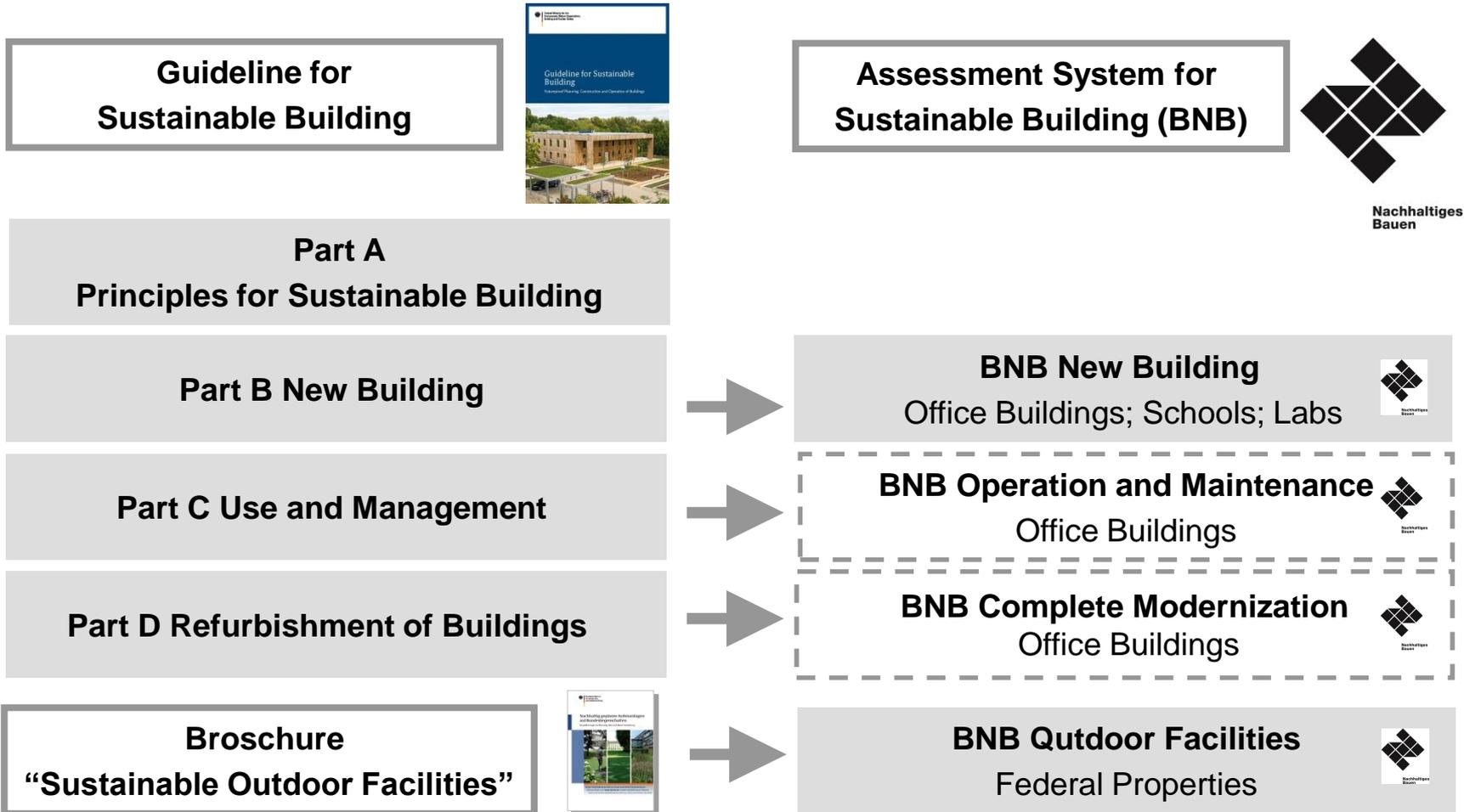


Chart 5



Guideline and Assessment System BNB

Main Criteria Groups



Organisers:



Chart 6



International Co-owners:



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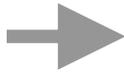
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Guideline and Assessment System BNB

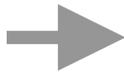
Main Criteria Groups

**Ecological
Quality**



10 Criteria: Energy, Ecobalance - LCA, Pollutants, Water, Terrain, Wood

**Economical
Quality**



3 Criteria: Life Cycle Costs, Space Efficiency, Capability of Conversion

**Sociocult. +
funct. Quality**



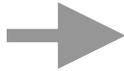
12 Criteria: Building Physics, Health (VOC), Acoustics, Daylight, Accessibility, Competitions

**Technical
Quality**



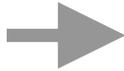
6 Criteria: Sound and Heat Insulation, Cleaning, End of Life, Recycling

**Process
Quality**



8 Criteria: Integral Planning, Concepts, Quality Management, Documentation

**Location
Characteristics**



6 Criteria: Risks and Qualities, Transport Connection, Utilities

Guideline and Assessment System BNB

New Quality Standard for Federal Buildings

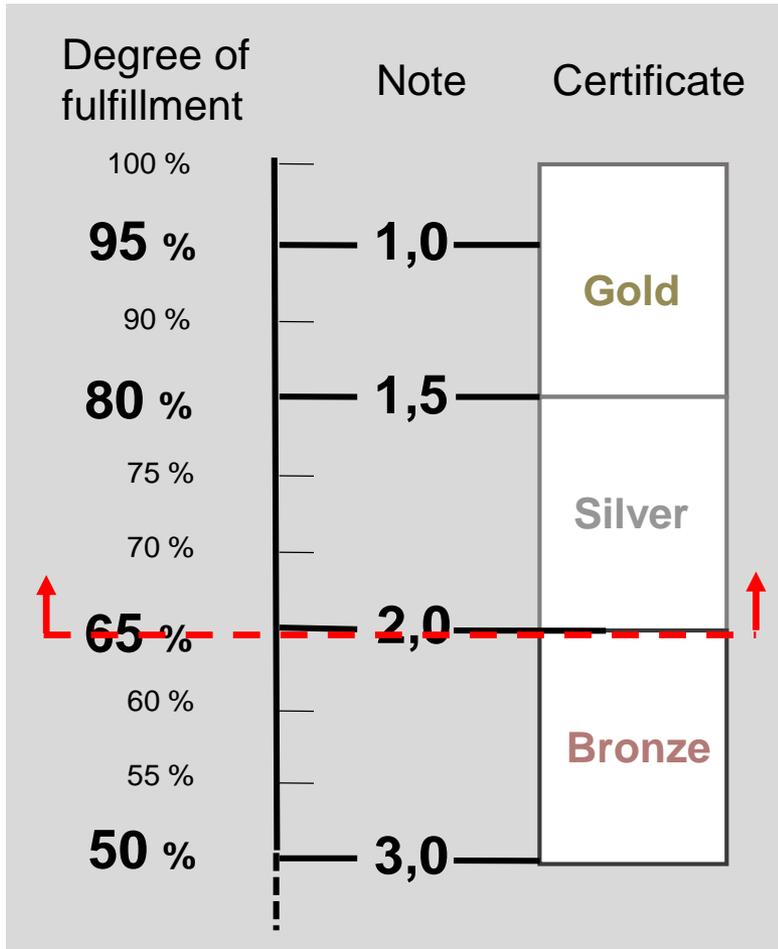


Chart 8



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Development of Instruments and Tools



Organisers:



Chart 9



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WECOBIS

Web-based Building Material Information System

WECOBIS
Ökologisches Baustoffinformationssystem

Bauproduktgruppen Grundstoffe Planungs- & Ausschreibungshilfen myWECOBIS Service

Aktuelles

- [ZukunftBAU Broschüre](#)
- [Aktuelle Sonderthemen](#)
- [Flammschutzmittel](#) / → [Formaldehyd](#) / → [Biozide](#)
- [Planungs- & Ausschreibungshilfen](#)

Wecobis - Ökologisches Baustoffe

WECOBIS bietet für die wichtigen Bauprodukte strukturiert aufbereitete, herstellereigene umweltrelevante Aspekte einschließlich

WECOBIS is a web portal providing basic knowledge for healthy and ecofriendly construction. WECOBIS categorises environmental and health aspects according to the life cycle and to the quality levels described in the criteria under the Assessment System BNB.

eBNB – Building Evaluation and Documentation Database

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

ÖKOBAUDAT

Sustainable Construction Information Portal

Start Database Archive Info Links

DE EN

ÖKOBAUDAT

The ÖKOBAUDAT platform is provided as a standardized database for ecological evaluations of buildings by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety. Building materials, construction and transport processes are described regarding their ecological effects. ÖKOBAUDAT offers both generic datasets and specific environmental declaration datasets from diverse companies or associations.

Data published in ÖKOBAUDAT are publicly available at no charge and can be used for life cycle assessment of building components and buildings. The owner of the datasets remains responsible for the datasets (contents, values).

ÖKOBAUDAT 2016-I (18.05.2016) – EN 15804 and BNB compliant data for more than 700 different building products

ÖKOBAUDAT (current ver construction of federal buil than 700 different building database that completely c Principles for acceptance c online search in the respec

Contact

Should you have any questions on ÖKOBAUDAT, please do not hesitate to contact Referat II 6 Bauen und Umwelt at Bundesinstitut für Bau-, Stadt- und Raumforschung - BBSR (Federal Institute for Research on Building, Urban Affairs and Spatial Development).

E-Mail: referat-2-6(at)bbr.bund.de

ÖKOBAUDAT - online database, containing quality-checked LCA datasets for all relevant building materials used in the construction sector. This database is accessible free of charge as part of the Assessment System for Sustainable Building (BNB). It forms the basis for the ecological analysis of buildings. (www.oekobaudat.de/en)



Organisers:



Chart 11



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eLCA

Life Cycle Assessment Tool



Terms eLCA in beta

Please keep in mind that ELCA is currently in a beta stage.

The ELCA login information may not be disclosed.

Publications are permitted only with approval of the BBSR.

The product is in beta. Please report Identified errors.

Deposits into eLCA component templates are configured exclusively for the scope of the LCA exemplary constructions. The component templates are pre-use check-intensive. The component templates used must be adapted to each project to the specific circumstances.

Participants of the expanded beta be asked

Verification:

- the calculation results
- the stored useful lives
- the deposited bulk densities
- the stored conversion factors

Furthermore, they may like you create high publication in the System.

anmeldung@bauteileditor.de

Log In

Log In | imprint

User name*

de | en | es

Password*

The Life Cycle Assessment Tool – eLCA is an easy-to-use and computer-based tool used for quantitative calculations and the assessment of environmental factors (ecobalance). It supports users in complying with these requirements across the entire planning and building process.



Organisers:



Chart 12



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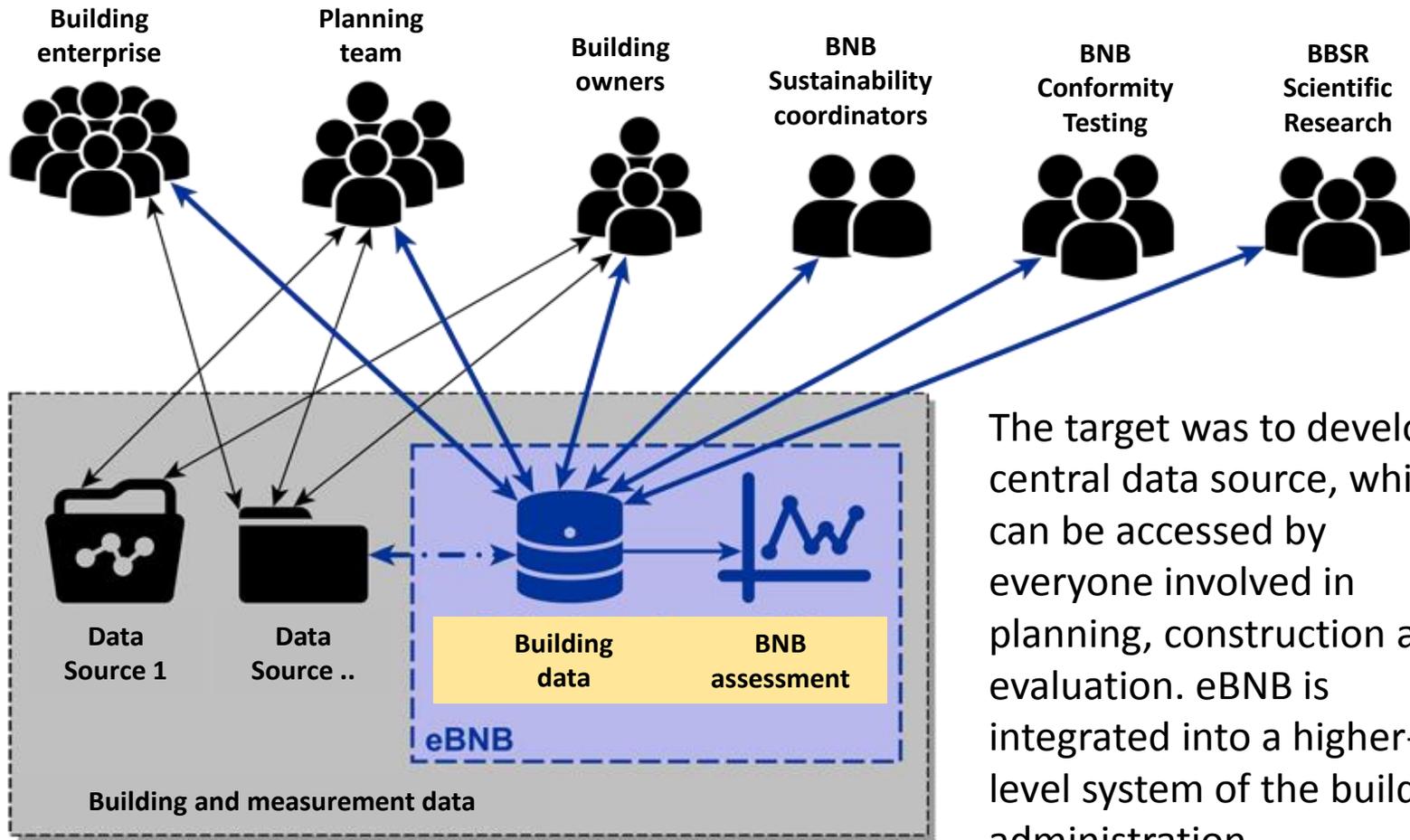


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eBNB

Building Evaluation and Documentation Database



The target was to develop a central data source, which can be accessed by everyone involved in planning, construction and evaluation. eBNB is integrated into a higher-level system of the building administration.

Implementation of the Sustainability Assessment



Organisers:



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Model role of the Federal Government

New Quality Standard for Federal Buildings



Selected Projects:

- Federal Constitutional Court
- Environmental Agency, UBA 2019 Berlin – New Building
- Federal Ministry of Education and Research in Berlin
- Environmental Agency, Dessau New administration building
- UN Campus Bonn – New building
- German Center of Aircraft and Space in Cologne – New Building
- German Embassy Washington – Modernization
- German School - Brussels



Chart 15



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New Administration Building Federal Environmental Agency, Berlin



- New administration building for about 32 employees in a research campus
- “Zero Energy Building” - therefore the building fulfilled already the standard required by the European Union from 2019
- 100 % use of renewable energy
- Certificated with BNB Gold standard
- Innovative building components



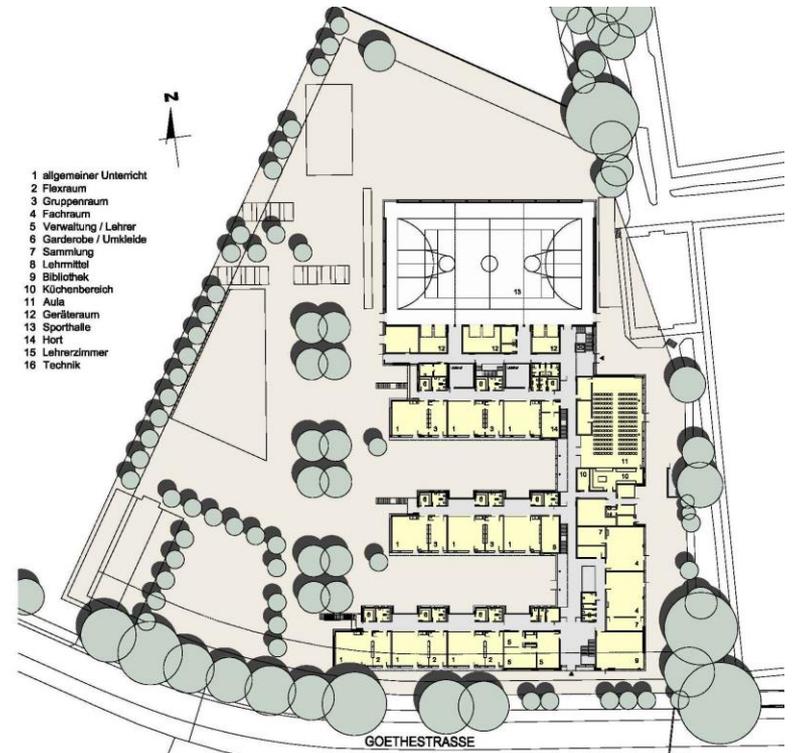
Complete Refurbishment Federal Constitutional Court, Karlsruhe



- The BNB “Complete Refurbishment” module was in 2012 evaluated in a field study
- The Federal Constitutional Court was the first project evaluated with this BNB “Complete Refurbishment” module
- Certificated with BNB Silver standard
- The building is of outstanding importance in his architecture and a listed building

Transfer to municipal projects

City of Hohen Neuendorf / New Primary school



- One of the first municipal projects with BNB Certification
- New building for a plus energy primary school with an integrated triple sports hall
- Integrated design process considering significant technical, energetic and functional requirements
- Innovative building components

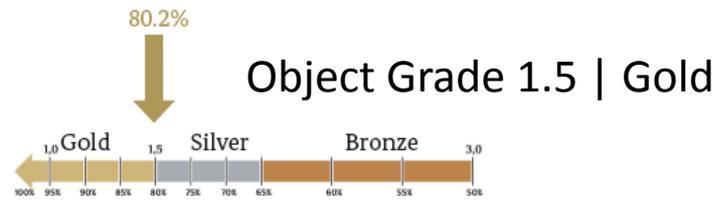


Chart 18



Conclusion



Chart 19



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Conclusion

- Sustainable procurement is a fundamental principle of the of the Federal Government in Germany
- The German assessment system addresses important climate-relevant effects
- The Guideline for Sustainable Building was implemented into the practical work of the Federal Building Authorities
- The Assessment System Sustainable Building (BNB) has been successfully applied for federal buildings
- The instruments for a practical application are available
- Now the challenge is to introduce the BNB Assessment System in the municipal sector and residential construction



Organisers:



Chart 20



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Thank you

E-Mail: andreas.rietz@bbr.bund.de
Telefon: +49 (0)3018 401 – 2750
www.nachhaltigesbauen.de



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