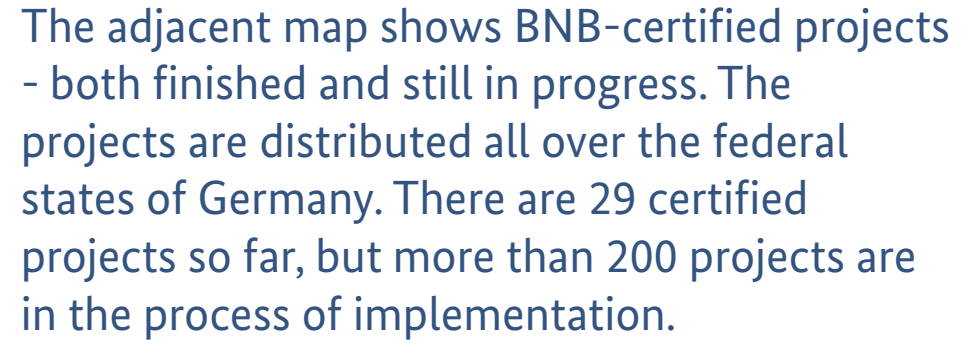




Building the Future

ZUKUNFT BAU
FÖRDERN FORSCHEN ENTWICKELN

Application of the Assessment System BNB



Most projects are federal properties, but there is also a growing number of municipal and private buildings implementing the certification with the BNB-System.

Ministry of Education and Research, Berlin



Office and Administration New Construction | Grade 1.3 | GOLD

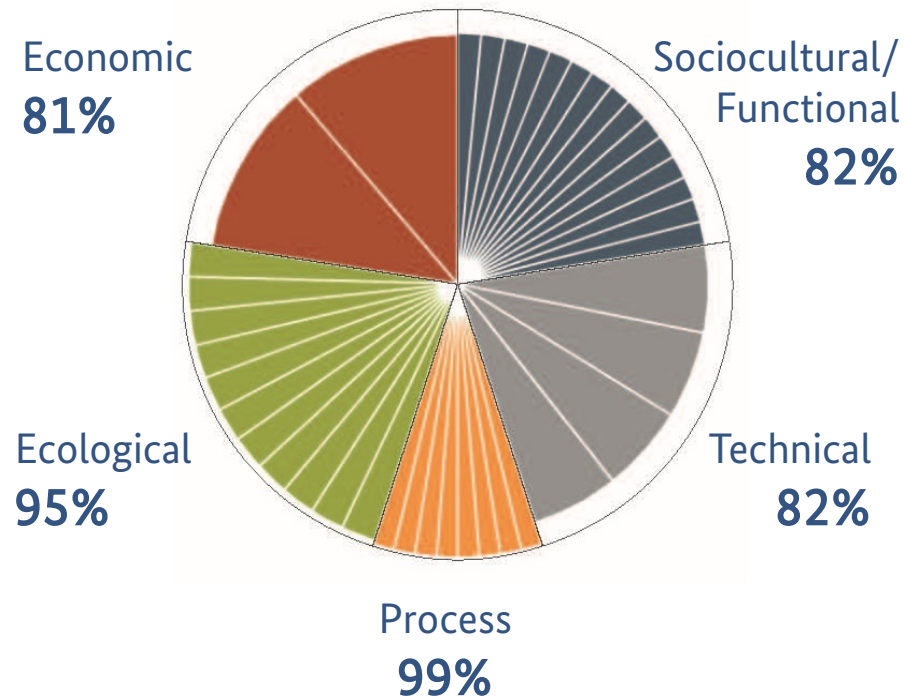
The new building of the Federal Ministry of Education and Research (BMBF) in Berlin is the first civilian building project implemented by the Federal Government in the context of a Public Private Partnership (PPP), and is also the first project of this size and type awarded with a BNB Gold certificate.



Nachhaltiges
Bauen

Ministry of Education and Research, Berlin

Weighting of Assessment Quality 86.2 %



Office Building (New Construction) Gold according to BNB_BN 2011

Client

Institute for Federal Real Estate

Architect / Planner

Christian Pelzeter, Heinle, Wischer und Partner

Auditor

Thomas Thümmeler, WS GreenTechnologies GmbH

Completion

August 2014

Gross Floor Area (GFA)

58,273 m²

Gross Construction Costs

€ 114.5 million

Construction Costs (KG 300, 400)

1,151 €/m²_{GFA} (net)

Operation Costs

772 €/m²_{GFA} (net)

Life Cycle Costs

1,922 €/m²_{GFA} (net)

Primary Energy Demand total (LCA)

101 kWh/(m²NFA_aa)

Global Warming Potential (LCA)

21.86 kg CO₂ eqv./ (m²NFA_aa)

Federal Constitutional Court, Karlsruhe



© Stephan Baumann, bild_raum, Karlsruhe

Office and Administration | Complete Refurbishment Grade 1.7 | SILVER

The Federal Constitutional Court is in the city centre of Karlsruhe, close to the public park of Schlossplatz and a Botanical Garden.

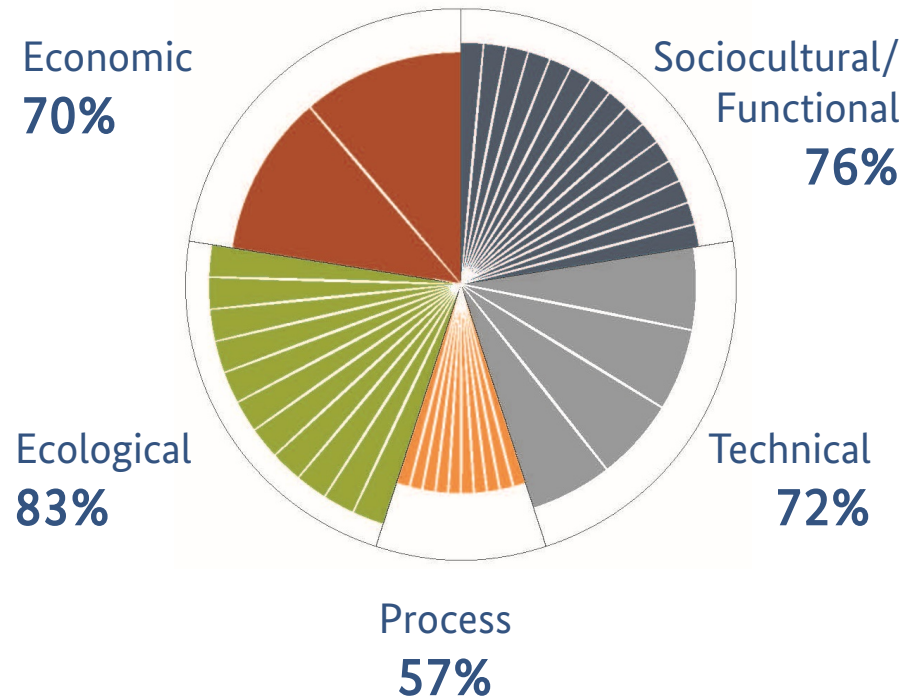
The challenge was to preserve the distinctive, transparent architectural language as an expression of a representative and broad understanding of democratic jurisdiction. However, at the same time a contemporary, energy-efficient building that provides a comfortable indoor climate for the next life cycle should be realised.



Nachhaltiges
Bauen

Federal Constitutional Court, Karlsruhe

Weighting of Assessment Quality 73.3 %



Office Building (Refurbishment)

Silver according to BNB_BN 2011

Client

Institute for Federal Real Estate

Architect / Planner

Christian Pelzeter, Heinle, Wischer und Partner

Auditor

Thomas Thümmeler, WS GreenTechnologies GmbH

Completion

August 2014

Gross Floor Area (GFA)

58,273 m²

Gross Construction Costs

€ 114.5 million

Construction Costs (KG 300, 400)

1,151 €/m²_{GFA} (net)

Operation Costs

772 €/m²_{GFA} (net)

Life Cycle Costs

1,922 €/m²_{GFA} (net)

Primary Energy Demand total (LCA)

101 kWh/(m²NFA_aa)

Global Warming Potential (LCA)

21.86 kg CO₂ eqv./ (m²NFA_aa)

Center for Neurodegenerative Disease, Bonn



© Steffen Vogt für wulf architekten

Laboratory | New Construction Grade 1.4 | GOLD

The building is located on the campus of the University Hospital Bonn, as part of the German Center for Neurodegenerative Diseases (DZNE).

Three organically shaped buildings are connected by circulation areas, where spacious seating offers meeting points.

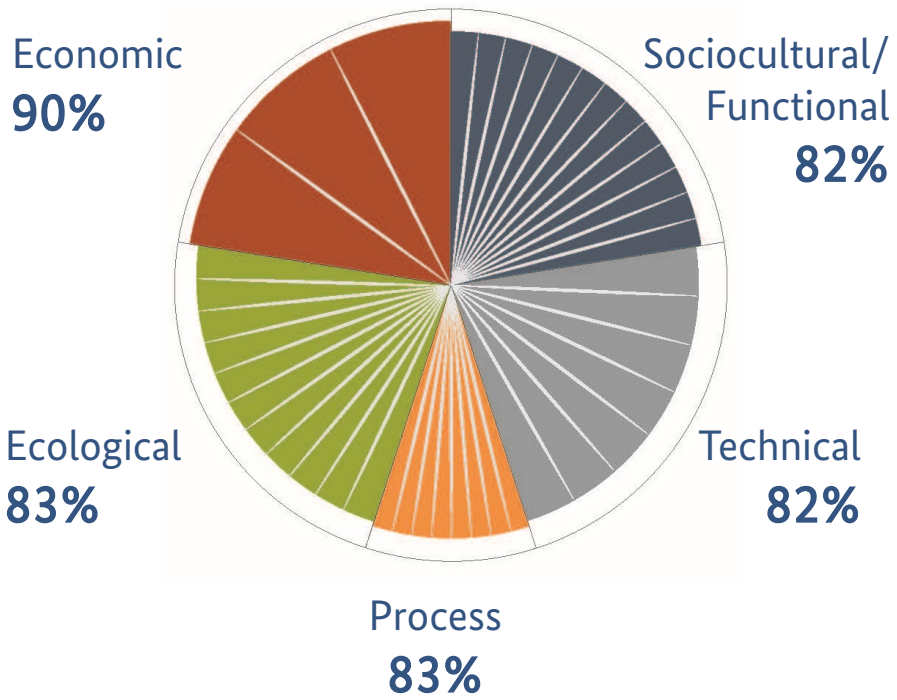
They consist of a main building including the entire general facilities, entrance hall, cafeteria, lecture hall, library, clinical research, MRI and administration representing a central research building providing all laboratory facilities and offices, and the preclinical institute.



Nachhaltiges
Bauen

Center for Neurodegenerative Disease

Weighting of Assessment Quality 84.1 %



Laboratory Building (New Construction)	Gold according to BNB_LN 2014
Client	DZNE e. V., Bonn
Architect / Planner	wulf architekten gmbh, Stuttgart
Auditor	Johannes Hopf, DS-Plan GmbH, Stuttgart
Completion	April 2017
Gross Floor Area (GFA)	35,938 m²
Gross Construction Costs	€ 127 million
Construction Costs (KG 300, 400)	2,296 €/m² _{GFA} (net)
Operation Costs	1,588 €/m² _{GFA} (net)
Life Cycle Costs	4,579 €/m² _{GFA} (net)
Primary Energy Demand total (LCA)	343 kWh/(m²NFA _a a)
Global Warming Potential (LCA)	67.6 kg CO ₂ eqv./ (m²NFA _a a)

Day Care Centre, Ulm



© Staatliches Hochbauamt Ulm/Botzenhardt Fotografie

Educational Building| New Construction Grade 1.6 | SILVER

The building is designed on a regular grid in timber frame construction and thus offers maximum flexible indoor use. The project has been realized as a highly efficient building based on the passive house standard with a high proportion of renewable raw materials.

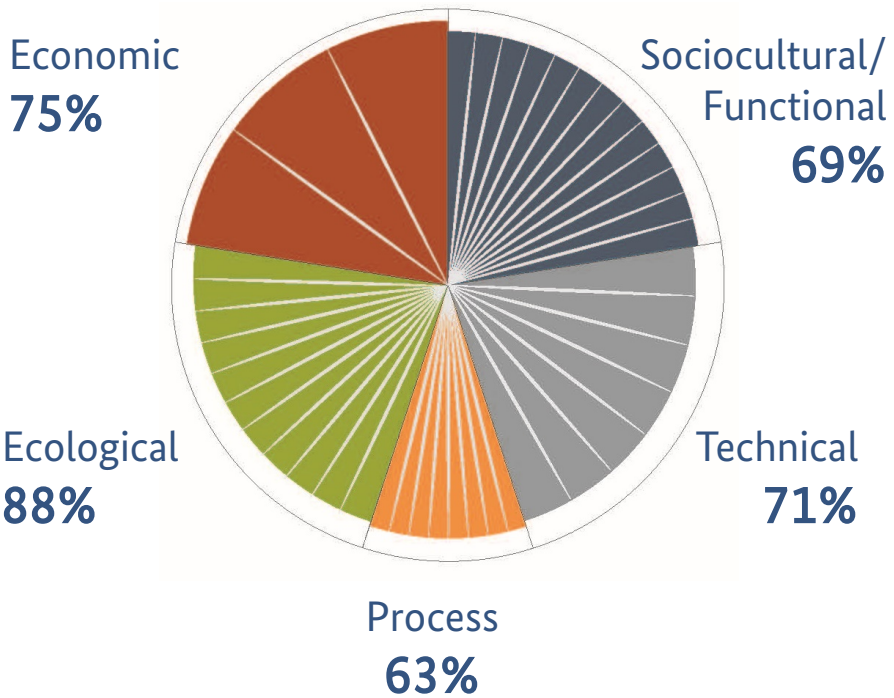
The result is a single-storey building in timber frame construction including an extensively greened flat roof. The facade is designed as a rough-cut timber formwork.



Nachhaltiges
Bauen

Day Care Centre, Ulm

Weighting of Assessment Quality 76.4 %



Laboratory Building (New Construction)	Silver according to BNB_UN 2013
Client	Ministry of Defense
Architect / Planner	Günter Hermann Architekten Stuttgart
Auditor	Iris Schaaf, Staatliches Hochbauamt Ulm
Completion	September 2015
Gross Floor Area (GFA)	1,120 m²
Gross Construction Costs	€ 39 million
Construction Costs (KG 300, 400)	1,695 €/m² _{GFA} (net)
Operation Costs	806 €/m² _{GFA} (net)
Life Cycle Costs	2,886 €/m² _{GFA} (net)
Primary Energy Demand total (LCA)	265 kWh/(m²NFA _a a)
Global Warming Potential (LCA)	34,8 kg CO ₂ eqv./ (m²NFA _a a)



More Sustainable Buildings in Germany



© Henning Koepke München

*German Aerospace Center e.V. (DLR)
BNB: Office and Administration / New Construction / Silver
Design: Birk Heilmeyer und Frenzel
Audit: Landesbaudirektion Bayern*



More Sustainable Buildings in Germany



© Dr. Günter Löhnert

*Primary School Niederheide
BNB: Educational Building | New Construction | Gold
Design: IBUS Architekten und Ingenieure GbR
Audit: Dr. Günter Löhnert, sol-id-ar planungswerkstatt*

More Sustainable Buildings in Germany



© quatsi.tv GmbH & Co.KG

*Federal Environment Agency, Berlin-Marienfelde
BNB: Office and Administration / New Construction / Gold
Design: Braun-Kerbl-Löffler
Audit: Nicolas Kerz, BBSR*

More Sustainable Buildings in Germany



© Andreas Süß

HOWOGE Treskow-Höfe, Berlin
NaWoh: Seal of Quality
Design: Ligne Architekten
Audit: HOCHTIEF Building GmbH



More Sustainable Buildings in Germany



© Ferdinand Heide Architekt

*University of Regensburg –
Auditorium and Disposal Building
BNB: Educational Building | New Construction | Silver
Design: Ferdinand Heide
Audit: Oberste Baubehörde Bayern*

More Sustainable Buildings in Germany



© Jürgen Landes

*University of Applied Sciences Erfurt –
lecture hall and laboratory building
BNB: Educational Building | New Construction | Silver
Design: Gerber Architekten
Audit: Jürgen Norwig, TMBLV*



More Sustainable Buildings in Germany



© Jürgen Landes

*Max-Planck-Institut, Köln
BNB: Laboratory Building / New Construction / Silver
Design: hammerskrause architekten
Audit: ee concept GmbH*



More Sustainable Buildings in Germany



© Sprinkenhof AG

*Department of Urban Development and Environment, Hamburg
DGNB: Office and Administration / New Construction / Platinum
Design: Sauerbruch Hutton
Audit: Dr. Günter Löhnert, sol-id-ar planungswerkstatt*



More Sustainable Buildings in Germany



© Hager Partner AG

*Bundestag, Inner Courtyard
BNB: Outdoor Facilities / Bronze
Design: Hager Partner AG
Audit: LA.BAR Landschaftsarchitekten bdla*



More Sustainable Buildings in Germany



© Fischerhaus GmbH & Co. KG

*Fischerhaus Musterhaus, Günzburg
BNK: Very Good
Design: Fischerhaus GmbH & Co. KG
Audit: Rainer Limbrunner*

More Sustainable Buildings in Germany



© GAP Architekten

*Paul-Wunderlich-Haus, Eberswalde
DGNB New Building: Platinum /
DGNB Existing Building: Platinum /
BNB Use and Operation: Award
Design: GAP Architekten
Audit: Dr. Günter Löhnert, sol-id-ar planungswerkstatt*

Building the Future

Visit us: www.nachhaltigesbauen.de

Get in contact: nachhaltiges-bauen@bbr.bund.de

For more detailed information see Poster 13 - 17