More than green: The DGNB certification system for sustainable buildings and districts

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The DGNB

The Knowledge Platform for Sustainable Construction

DGNB Academy
DGNB Navigator
DGNB System
The DGNB in Numbers

>2,100

DGNB certifications worldwide

2,700 experts worldwide

1,200

Member organizations

6 qualities

- Environmental quality: 22.5%
- Economic quality: 22.5%
- Sociocultural and functional quality: 22.5%
- Technical quality: 22.5%
- Process quality: 10%
- Site quality:
Rating Tool: Based on a Checklist

Input: ✓ Photovoltaic system, ✓ Water-saving fittings, ✓ Greening
Output: x Geothermal energy, ✓ Small wind turbine, x Lighting control

Based on a Checklist? ?
Certification System: Evaluation of the Performance

Input
- Water
- Material
- Energy

Output
- Waste water
- Waste
- CO2

System boundary
DGNB System – A holistic Approach

Environmental quality
22.5%

Economic quality
22.5%

Sociocultural and functional quality
22.5%

Technical quality
22.5%

Process quality
10%

Site quality
What makes the DGNB System unique?

Developed by members for members

- **Life cycle** incorporated in all calculations
- **Equal consideration** for Ecological, economic, socio-cultural and aspects
- **Overall-performance oriented**, rather than focus on individual measures
Sustainable Building - DGNB System Certificates

- Performing buildings
- Existing buildings
- Interiors
- Renovation
- Design quality
- New construction
- Districts

www.dgnb-system.de
Schemes Districts

- Urban districts
- Office and business districts
- Event areas
- Industrial locations
Certification of Districts and Industrial Locations

Urban District
Version 2016

Business District
Version 2016

Industrial Location
Pilotversion 2014

Event Area
Pilotversion 2016
Urban Districts
Urban Districts

www.maidarcity.com
Criteria Overview Districts (Version 2016)

- LCA - emissions. environmental effects
- biodiversity
- city climate
- environmental risks
- Water and soil protection
- LCA - resource consumption
- Water cycle systems
- land use
- Lifecycle costs
- Fiscal effect on the municipality
- Resilience and adaptability
- Space efficiency
- stability of value
- Thermal comfort in open space
- Open space
- Emissions / immissions
- Accessibility
- Urban Design
- Social and functional mix
- Social and economic infrastructure
- Energy infrastructure
- Waste Management
- Smart Infrastructure
- Mobility infrastructure
- Integral planning
- Participation
- Project management
- Governance
- Monitoring
DGNB University Cooperation

Goals

Promotion of Sustainable Planning and Building

Networking: Intensification of professional exchange between the universities

Teaching:

• Integration of the DGNB Basic Knowledge

• Educational opportunities for students and employees with trainings for the degree DGNB Registered Professional

Research: Initiation and implementation of common research projects with municipalities and companies
Partners of the DGNB University Cooperation

New Partners since „University Day“ 2015

- GUC Cairo
Performing Buildings – Evaluation Criteria at a Glance

1. Strategy and communication
2. Facility Management
3. Resource efficiency
4. Procurement
5. Maintainance of value and operational costs
6. Satisfaction of users
7. Sociocultural offers
8. Security and responsibilities of the operator
9. Mobility offers

DGNB Certificate „performing buildings“

- Processes 25%
- Technic 10%
- Economy 20%
- Socioculture 15%
- Environment 30%
DGNB Building and Operation Standard Certification

Certificate
Necessary Documentation according to DGNB requirements

Standard Certification
Based on the Building- or Operational standard applies to all projects
“Interiors“ - Evaluation Criteria at a Glance

- Conception and conditions for optimal usage
- Quality of project preparation
- Procedures for design conception
- Indoor air quality
- Acoustic comfort*
- Visual comfort
- Quality of spaces
- Health-promoting offers*
- Accessibility for all

*only office

Deconstruction and Recycling

DGNB Certificate „Interiors“

Processes 12%  
Technic 6%  
Environment 29%  
Socioculture 37%  
Economy 16%

Environmental impact during life cycle

Responsible procurement: Wood and natural stone

Risks for local environment

Energy efficiency and climate protection

Life cycle costs

Flexibility and adaptability*
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