OUR CONTRIBUTION TO GREEN BUILDING CERTIFICATES – DGNB



The international market for green construction projects is growing steadily, together with an increasing trend for green building rating systems.

The reduction in energy consumption (linked to greenhouse gas emissions), the business benefits (including about 8% savings in operating costs and 7% increase in building asset value) and the health and well-being of occupants, are the most important reasons behind the sustainability-building certification trend.

Our commitment is to help make cities the best places to live with innovative and sustainable passenger transportation systems. For us, sustainability is not a buzzword limited to energy efficiency. It is holistic, encompassing a “zero accidents” goal for our employees and subcontractors, as well as building an equal opportunity culture in our industry.

Our promise: Our elevators, escalators and moving walks contribute to greener and more sustainable buildings and help to achieve better performance in different green building rating systems.

Our sustainability priorities

Environment

Climate: We tackle the challenges of urbanisation while making buildings smarter and more sustainable.

Social

Safety: We make safety a priority for our employees and subcontractors.

Employees: We champion diversity and inclusion in the workforce and create a workplace where everyone can develop their full potential.

Society: We assume responsibility in the communities we operate in by promoting social collaboration and supporting community development.

Governance

Partners: We foster relationships with our customers and business partners based on trust, transparency, mutual respect, shared values and benefits.

Compliance: We believe in conducting business with integrity.

What is DGNB?

DGNB is a certification system developed in 2007 by the DGNB – German Sustainable Building Council (Deutsche Gesellschaft für Nachhaltiges Bauen). It is a voluntary standard that focuses on the integrated evaluation of economic and environmental aspects, as well as user comfort. It provides an objective description and assessment of the sustainability of buildings and urban districts. Quality is assessed comprehensively over the entire life cycle of the building.

Applied outside Germany, the DGNB system is adapted to regional requirements. DGNB therefore has its own associated systems in Austria, Switzerland, Denmark and Spain.

Leading system for building certification in Germany and urban district certifications in Europe



Top 1 Top 10

Over 5,000 certified projects* in more than 29 countries.

*Data source: https://www.dgnb.de/en/council/facts-and-figures/

DGNB's certification schemes

Depending on the characteristics and requirements of the building, the DGNB Certification System is available for various schemes. The certificate's schemes are grouped into four main categories and include schemes for office and administrative buildings, retail buildings, industrial buildings, hotels, residential buildings, mixed-use buildings and educational facilities.

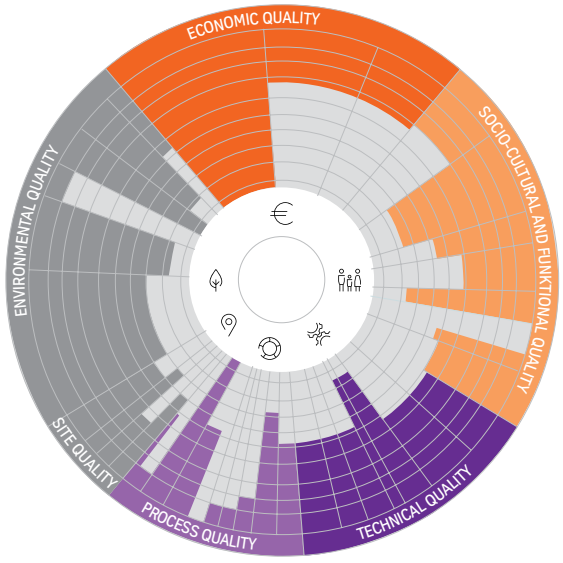
Only through these schemes it is possible to plan, construct, operate and certify on a uniform basis. Further schemes are continuously being devised in working groups, e.g. for hospitals. The main categories for the DGNB certificate schemes are:

- Existing buildings
- New construction
- Interiors
- Districts

DGNB's categories and performance rating

The DGNB assessment system covers all of the six key quality aspects of sustainable buildings: environmental, economic, sociocultural and functional aspects, technology, processes and site.

Each quality section includes a set of sustainability criteria. The DGNB has defined target values for each criterion. Up to 10 evaluation points are awarded for reaching the target specifications. Depending on the scheme, some criteria are weighted differently.



Environmental quality

Economic quality

Socio-cultural and functional quality

Technical quality

Process quality

Site quality

Schematic illustration of how the categories are weighted and awarded points according to DGNB.

The concrete score for the six topics is calculated from the combination of the evaluation points with the relevant weighting. The total score for the overall project is calculated from the five quality sections based on their weighting. Site Quality is considered separately and this aspect of the building is included in the commercial viability criterion. With urban districts, on the other hand, Site Quality is included in all criteria.

The DGNB evaluates according to the total performance index but also promotes a uniform quality standard requiring a minimum performance index to be awarded Platinum, Gold, Silver or Bronze.

Total Performance Index	Minimum Performance Index	Awards
from 35%	–%	Bronze*
from 50%	35%	Silver
from 65%	50%	Gold
from 80%	65%	Platinum

You can find further information here: www.dgnb.de
* This award is only valid for existing buildings

DGNB requests for elevators and escalators

Based on the DGNB Scheme 2018 version.

Elevator and escalator systems are not considered separately in the DGNB system. However, they are considered as part of the technical building services. The certificate currently only takes account of the roof, facade and rainwater components and the proposed refrigeration engineering in its consideration of environmentally hazardous materials.

Overall, building projects applying for a DGNB certification usually define three requirement levels for the manufacturers and product suppliers (such as elevators and escalators), during the planning and construction of the project.



REQUIREMENTS	ASSESSMENT CRITERIA	OUR PRODUCT'S CONTRIBUTION
Requirements for the products to be used	At this level, product declaration sheets or product conformity certificates (with information on materials) are required for the different components of the elevator such as coating of metal components, aluminium and stainless steel cladding, plastics (e.g. elastic floor coverings, electric cables and cable jackets, assembly adhesives and sealants for joints, natural stone, wood and wood materials).	As part of TK Elevator's commitment to sustainability, we promote the use of low-pollutant and sustainable materials from our own materials suppliers. Inert and recyclable materials are used for all elevator and escalator systems - glass, steel (approx. 80%), plastics, halogen–free cabling, paper and cardboard. We will provide the corresponding product declaration sheets to grant compliance with the requirements regarding the presence of hazardous substances (e.g. SVHC from REACH, VOC, solvents, heavy metal contents in adhesives, sealing materials, paints etc.) or environmentally friendly material extraction (FSC certification of the wood used for decorative laminates in the elevator cabin). Most of our elevator systems, e.g. synergy and evolution, have obtained EPDs, according to the Product Category Rules of the International EPD® system. Our escalators and moving walks can contribute to sustainability based on their LCA (Life Cycle Assessment) reports, which include third-party critical review. Our factories in Germany and Spain produce most of our elevators and escalators, as well as their components. We are close to our markets in terms of logistics and transportation, contributing in this way to reducing our carbon footprint.
Requirements at building level	The requirements at this stage aim to preserve during the construction the critical building characteristics, which have already been taken into account in the planning for certification. e.g. freedom from harmful substances, sound insulation and acoustic comfort, joint permeability, etc.	Our project team includes a contact person for green certification issues, as well as a complete project execution plan. If requested, we will provide you a thorough explanation of our internal quality control processes and follow-up, incl. briefing subcontractors and their work with organisational charts and assignment to construction management.
Construction requirements	The contractor and any subcontractors are required to observe and document compliance with the requirements for achieving a low-waste, low-noise and low-dust construction site, as well as compliance with the Federal Land Protection Ordinance and the Ordinance on Contaminated Sites.	We ensure a low-dust, low-noise, low-waste construction site as well as environmental protection according to the ISO 9001 and ISO 45001 management system and quality assurance. Regular checks are carried out by Health & Safety managers and TK Elevator's quality assurance officers.

DGNB references with our products



1

WinX Tower
Frankfurt/Main,
Germany
Architect: KSP Jürgen
Engel Architects
DGNB Platinum
certificate

9 elevators
6 high speed elevators



3

Milaneo
Shopping Centre
Stuttgart, Germany
Architect: TBI
Architecture &
Engineering
DGNB Platinum
certificate

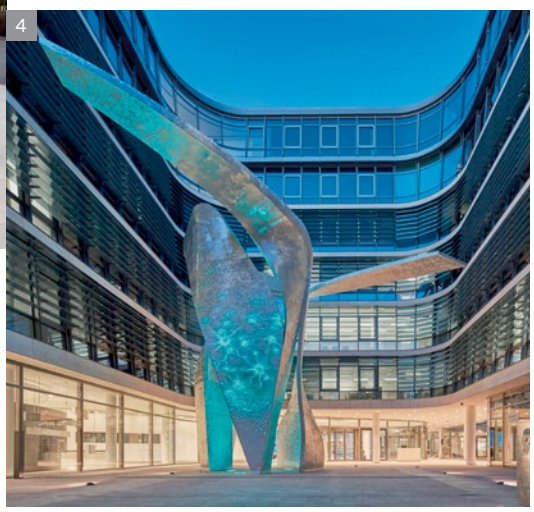
21 elevators
24 escalators



2

thyssenkrupp
Headquarters
Essen, Germany
Architects: JSWD
Architekten + Chaix &
Morel et Associés
DGNB Gold certificate

2 TWIN
30 elevators
3 escalators



4

Siemens
Headquarters
Munich, Germany
Architects: Henning
Larsen
DGNB Platinum
certificate

28 elevators

Image source: Siemens AG

About us

TK Elevator designs and delivers innovative passenger transportation solutions that make cities the best ever places to live.

TK Elevator has over 50,000 highly qualified employees. They develop, manufacture, install, maintain and modernise:

- Passenger and freight elevators
- Escalators and moving walks
- Passenger boarding bridges
- Stair and platform lifts

Our pioneering systems transport people safely and efficiently in many of the world's landmark buildings – from major airports, train stations and shopping malls to the largest office towers and most luxurious hotels, where some of them achieved a Green Building Certificate.

We also provide tailored service solutions to customers in 100 countries, ensuring sustainable working for all our products. We are committed to achieving the highest standards in all our processes and operations with regard to health, safety, environmental protection and the responsible use of energy and resources.

Therefore, most of our operations are certified in accordance with the following international standards:

- Lift Directive 214/33/EU, Annex VI, Module E: Quality Assurance for Safety Components
- Lift Directive 214/33/EU, Annex XI, Module H1: Full Quality Assurance for Lifts
- EN ISO 9001: Quality Management System
- EN ISO 14001: Environmental Management System
- EN ISO 50001: Energy Management Systems
- ISO 45001: Occupational Health and Safety Management System

Please add local address



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The information in this document is generic, for specific project consult your TK Elevator project team.

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