



DGNB Certification for Sustainable Buildings

Dr. Christine Lemaitre | November 5th 2019

Paris, France

Paris Agreement

- ... to keep global warming below 2°C above pre-industrial levels and to make efforts to limit the temperature rise to 1.5°C above pre-industrial levels ...

Buildings are part of the solution



More than **30%**
of global
CO₂-emissions

30%
of global resource use

40% of global energy
demand



Up to **18%** increase in
productivity through natural air
conditioning or a combination of
natural and mechanical air
conditioning



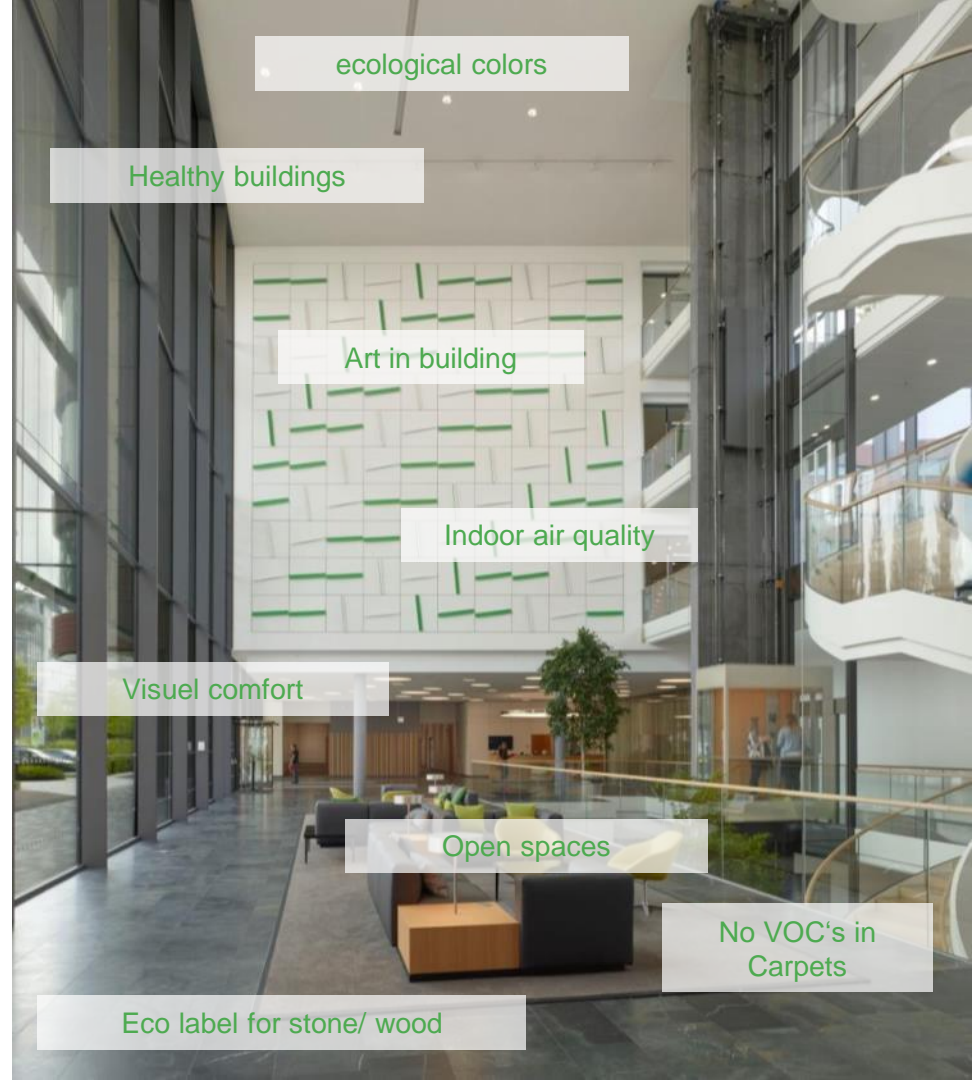
66% drop in
performance from
noise



Our goals

Buildings that are known to be good and districts that are pleasant to live in for architectural environments with a future.

Transformation of the construction and property market, promoting a sensible understanding of quality as a foundation for responsible and sustainable action.



ecological colors

Healthy buildings

Art in building

Indoor air quality

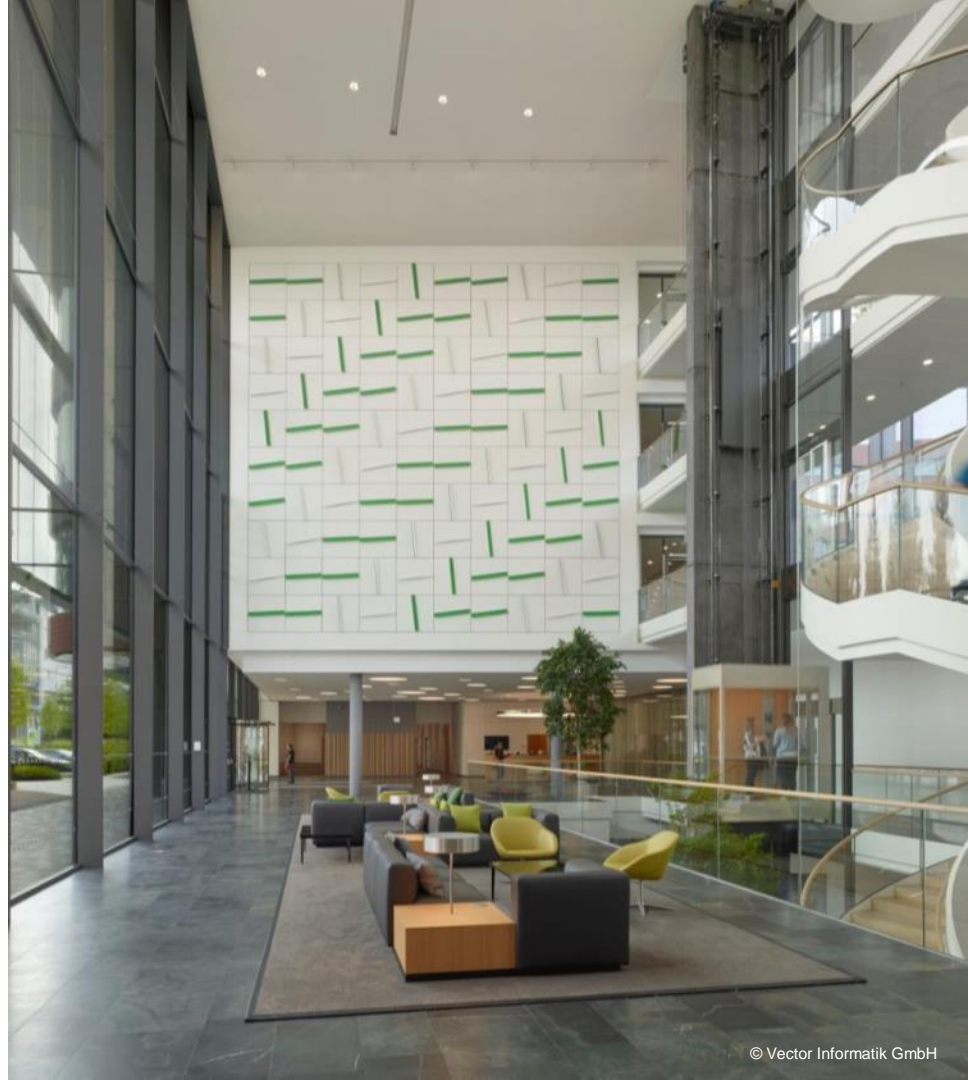
Visual comfort

Open spaces

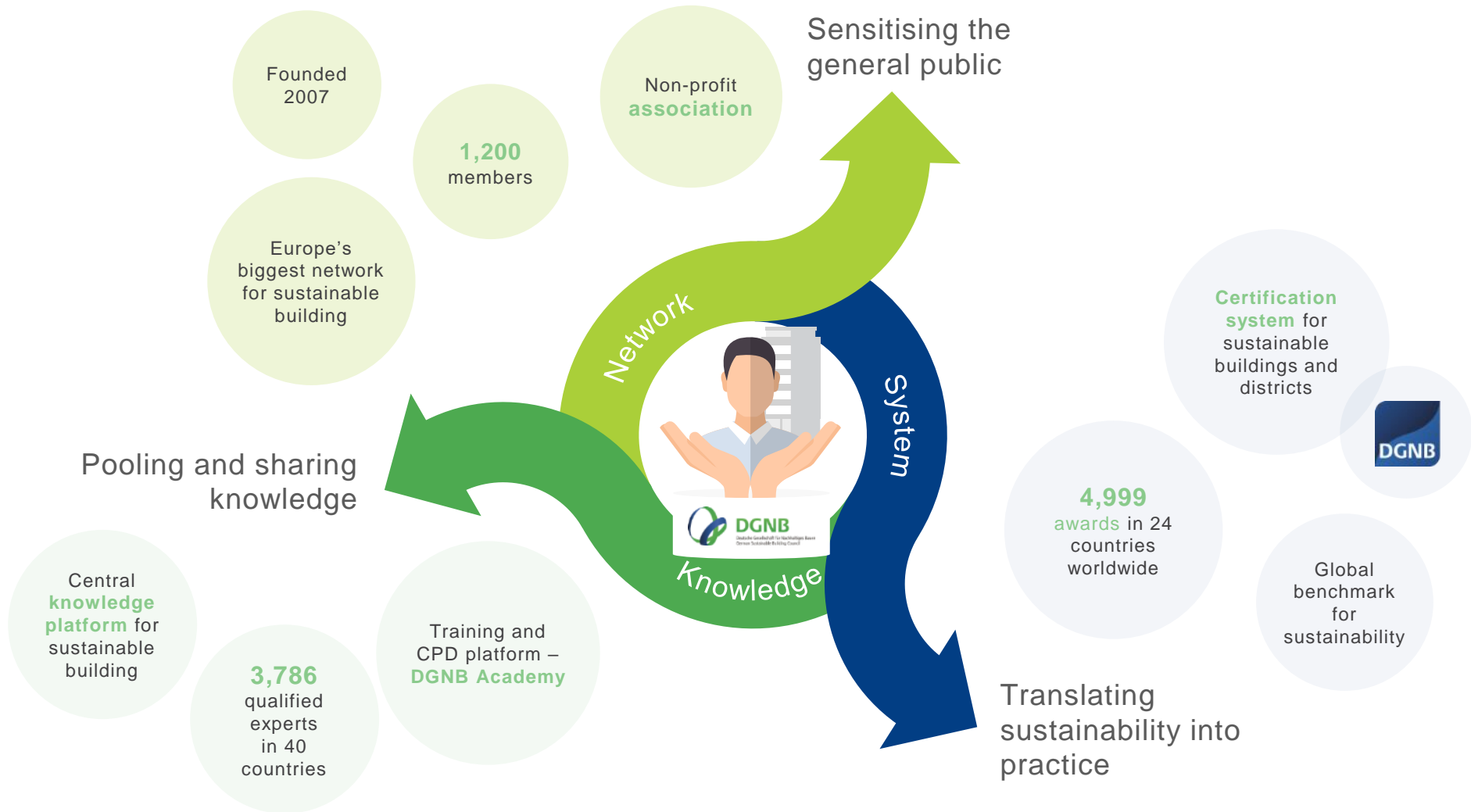
No VOC's in
Carpets

Eco label for stone/ wood

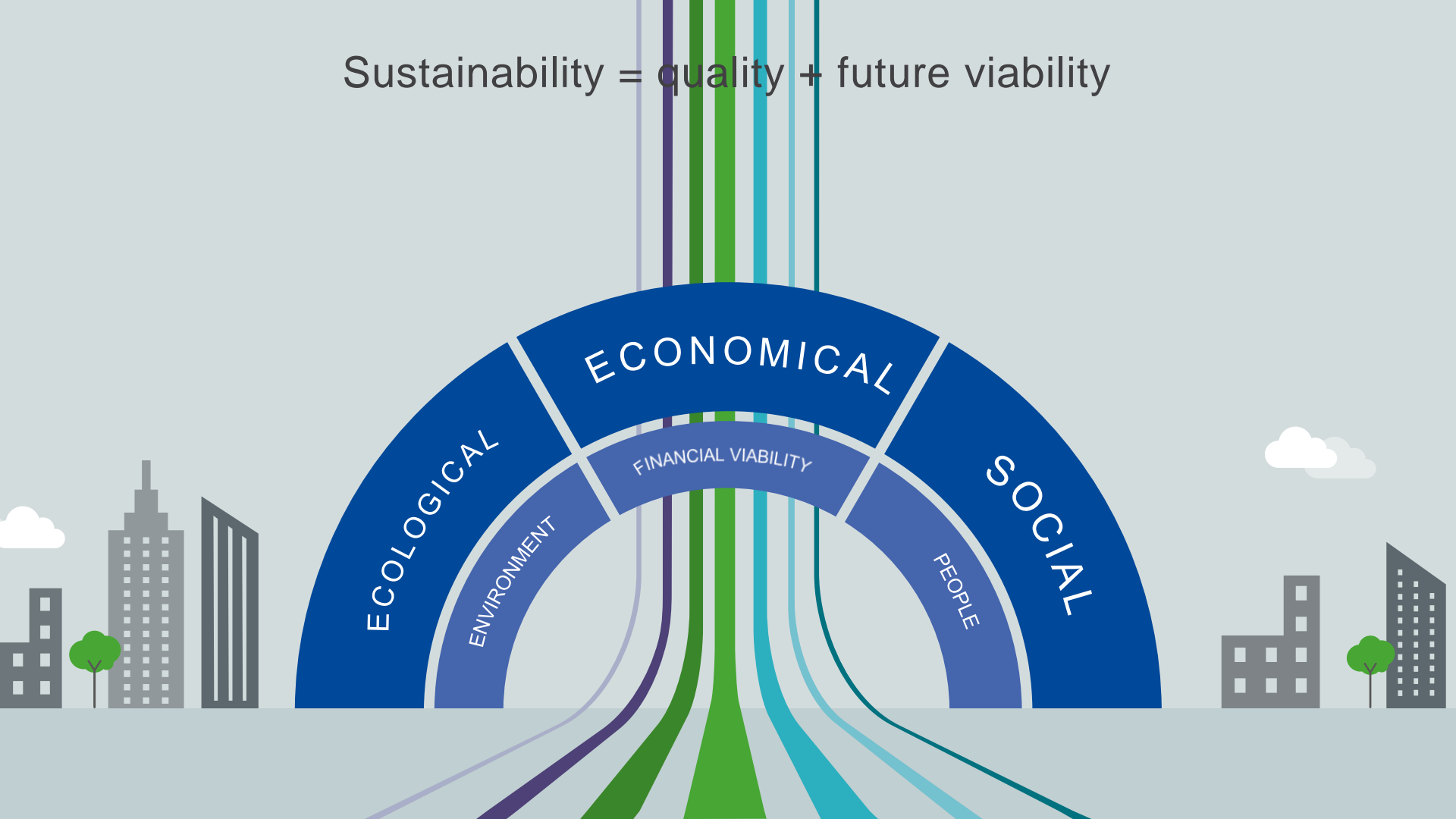
What do we need?
Simply better buildings







Sustainability = quality + future viability



The DNA of the DGNB system



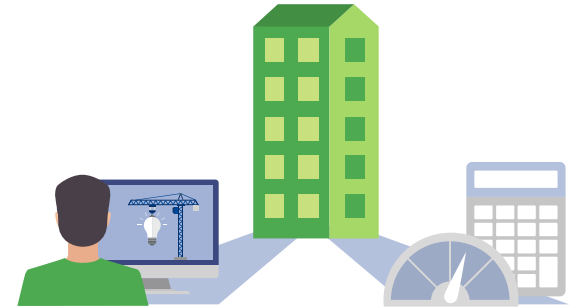
Life cycle assessment

All certifications take the entire life cycle of a building project into account



Holistic

Equal emphasis on three core sustainability factors: environmental, economical and sociocultural



Emphasis on performance

The DGNB System assesses the overall performance of a development and not just individual measures

The DGNB System – holistic approach



More than a system

DGNB quality during the entire life cycle

Use

DGNB certification for buildings in use
(recertification)

Existing buildings | renovations

DGNB certification for existing buildings
DGNB certification for renovations
DGNB certification for building interiors



Planning

DGNB precertification for new buildings
DGNB precertification for sustainable districts
DGNB certification for sustainable districts
(planning/infrastructure)

Construction

DGNB certification for new buildings
DGNB certification for building interiors

DGNB certification for sustainable districts

Use

DGNB certification for buildings in use

More than a system

DGNB quality applicable to all types of building use

Building interiors



Buildings



Districts



DGNB SYSTEM

**CRITERIA SET
NEW CONSTRUCTION BUILDING**



Key topics in new DGNB System



**People: the
main focus**



**The circular
economy**



**Design quality
and Baukultur**



**Sustainable
development
goals (SDGs)**



EU conformity



Innovation

New features

Contribution to overriding sustainability goals



CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) OF THE UNITED NATIONS (UN) CONTRIBUTION TO THE GERMAN SUSTAINABILITY STRATEGY

How will implementing this criterion contribute towards achieving national and international sustainability goals?



Sustainable Development Goals (SDGs)

NO.	INDICATOR	POINTS
1	Biotope area quality	
1.1	Biodiversity index Property-specific biodiversity index = (total (sub-areas * specific biodiversity indices) / (plot area * floor space index)) * 30 points <ul style="list-style-type: none"> Property-specific biodiversity index = 30 Property-specific biodiversity index ≤ 0 	0-30
1.2	AGENDA 2030 BONUS – CLIMATE AND SPECIES PROTECTION GOALS Green surfaces on the building: Property-specific biodiversity index > 30 (for every whole number above this figure +1 bonus point, max. bonus points = 10)	+10
	Shopping centre Business premises Logistics	Max. 15
	<ul style="list-style-type: none"> Separate entrances for passenger cars and HGVs There are no restrictions on using the delivery zone and this does not affect ongoing operations 	+7.5 +7.5
3	Temperatures during the heating period	
3.1	Room temperature control during the heating period	
	Office	Max. 15
	<ul style="list-style-type: none"> Temperature can be adjusted in the room Temperature can be individually adjusted by the users or user group (1 to 3 people) 	8 15

Name of indicators plus any other specific information to note for evaluation purposes

How it appears for interpolation

Bonuses for overfulfilment

Use-specific evaluation


How it appears when points can be added

How it appears when there are different options to choose from (either/or)



Circular Economy

6 INNOVATION AREA



Explanation: If user control means are implemented but cannot be assigned to any of the above categories or measures even though they demonstrably improve users' comfort or well-being, these can be credited in accordance with the evaluation scheme for indicators 1.1-5.1.

As in 1.1-5.1

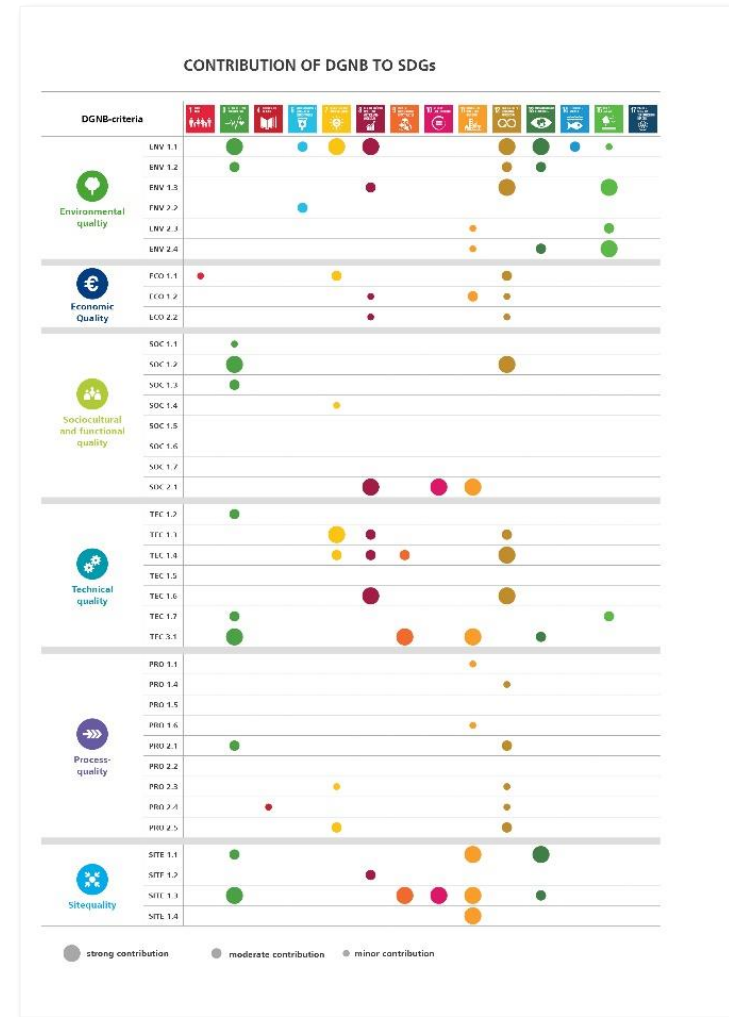
Innovation area



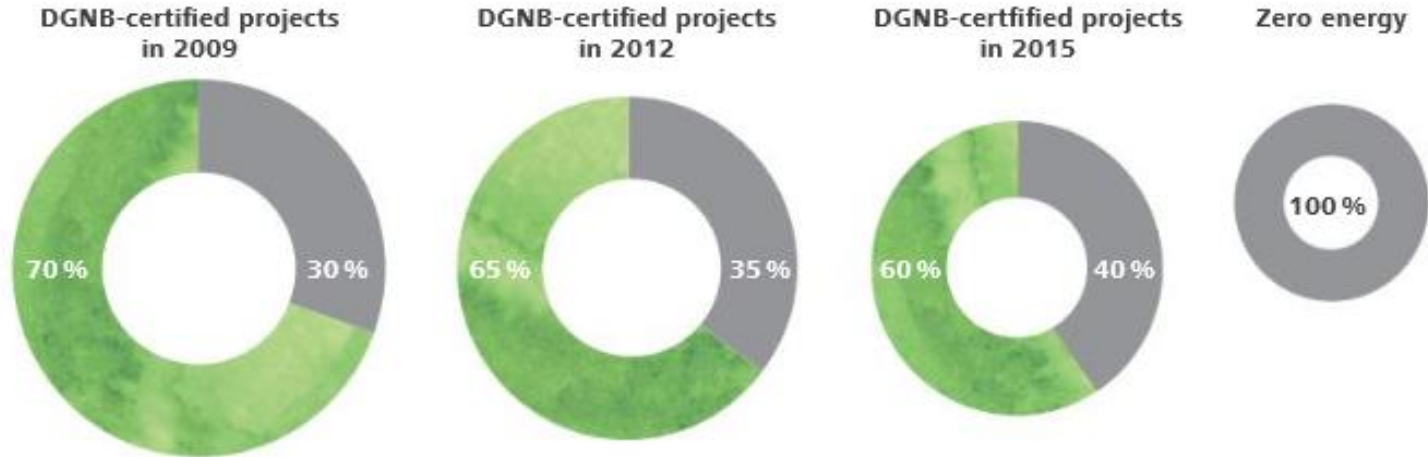
Innovation

SDGs as a core topic of the DGNB system

- **Motivation and Goal**
- Stimulate the sector's contributions to UN's high-level 2030 sustainability goals
- Provide **2030 benchmarks** for today's building practitioners
- **Approach in Version 2018**
- **Linking** the DGNB criteria to 14 SDGs
- Detailed analysis of the **SDG targets** for each DGNB criteria
- Incentive “**Agenda 2030 Boni**” for truly future-oriented performance



Carbon footprint and operational emissions



The life cycle performance of a building improves in line with higher energy efficiency requirements. The challenge is to reduce emissions linked to construction and the use of resources.

- CO₂e in construction
- CO₂e of energy consumption in regular operation

DGNB Buildings in Use

- The climate action certification -

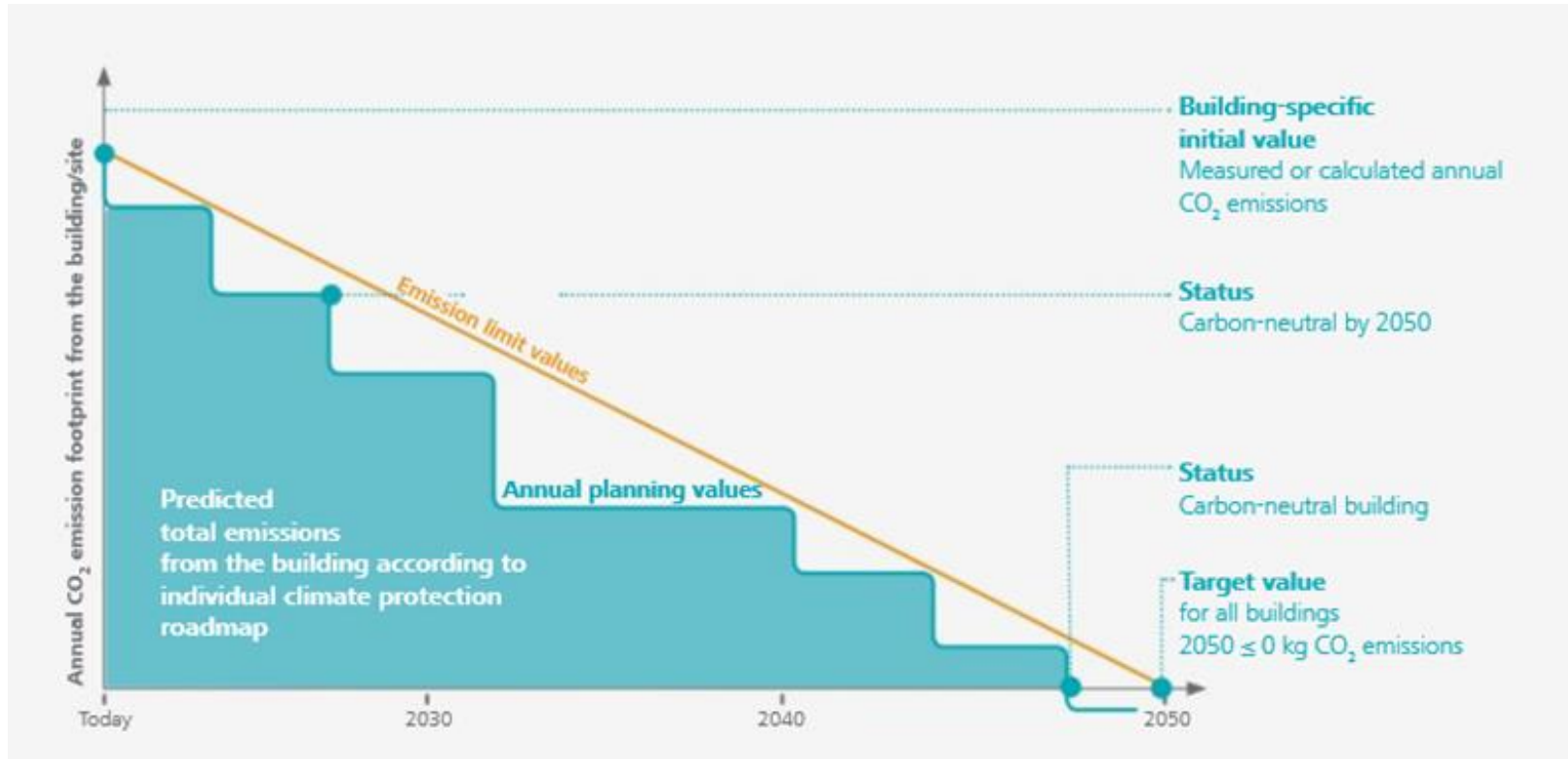
Framework for "carbon-neutral buildings and sites"

Preview version

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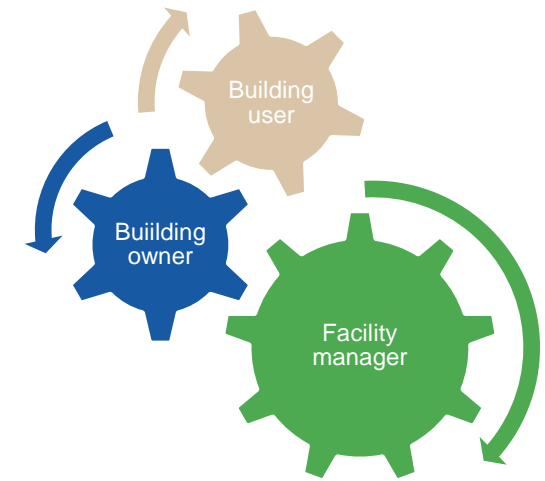
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DGNB System for Buildings In-Use 2019

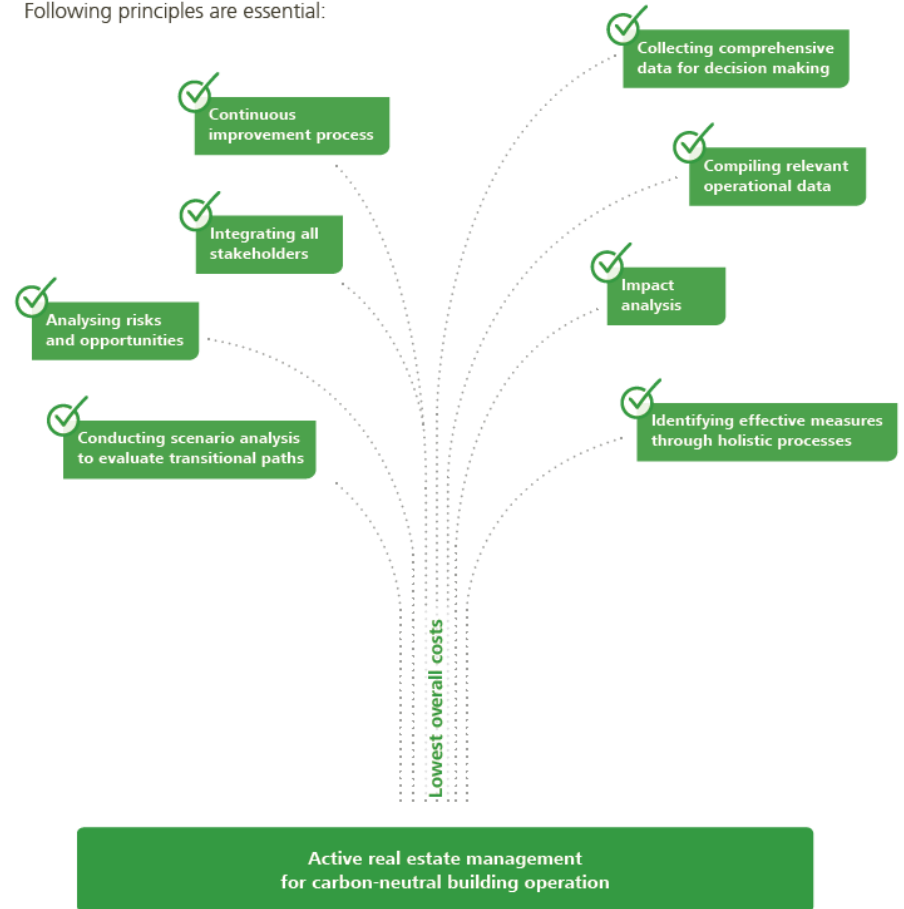
- Transformation and management tool for resilient and sustainable building operation. The recurring process of the system establishes a real estate strategy with long-term vision combining efficiency, climate action and well-being
- Applicable to all building types
- Internationally applicable
- first awards at Expo Real 2019



DGNB System for Buildings In-Use 2019



The evaluation of a building's operation according to the DGNB standard is unique to the building. Following principles are essential:





Climate Positive

An excellence award of the DGNB German Sustainable Building Council

AKTIV-STADTHAUS SPEICHERSTRASSE

Frankfurt
GESCHOSSWOHNUNGSBAU



Eigentümer | ABG FRANKFURT HOLDING GmbH
Architekt | HHS Planer + Architekten AG
Energiekonzept & CO₂-Bilanzierung | EGS-plan Ingenieurgesellschaft mbH



SCHMUTTERTAL GYMNASIUM DIEDORF

Diedorf

WEITERFÜHRENDE SCHULE



Eigentümer | Landkreis Augsburg

Architekt | Kaufmann / Nagler Architekten ARGE
"Diedorf"

Energiekonzept &
CO₂-Bilanzierung | Ip5 Ingenieurpartnerschaft



RATHAUS FREIBURG

Freiburg

RATHAUS / VERWALTUNGSGEBÄUDE



Eigentümer		Stadt Freiburg
Architekt		ingenhoven architects GmbH
Energiekonzept & CO ₂ -Bilanzierung		Drees & Sommer SE



SCHOOL OF DESIGN AND ENVIRONMENT - SDE4

Singapore
EDUCATION



Eigentümer		National University of Singapore
Architekt		Serie Multiply Architects
Energiekonzept & CO ₂ -Bilanzierung		TRANSOLAR Energietechnik GmbH



Klima
Positiv



DGNB

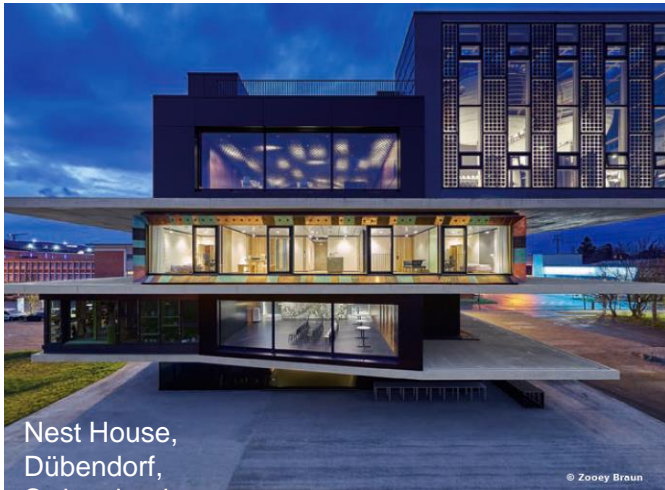
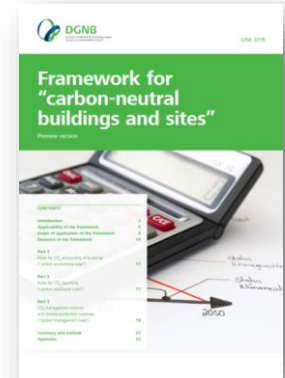
Deutsche Gesellschaft für Nachhaltiges Bauen
German Sustainable Building Council

DGNB Key Topics 2020

1. Zero Carbon Buildings and Cities
2. Circular Economy
3. Digitalization

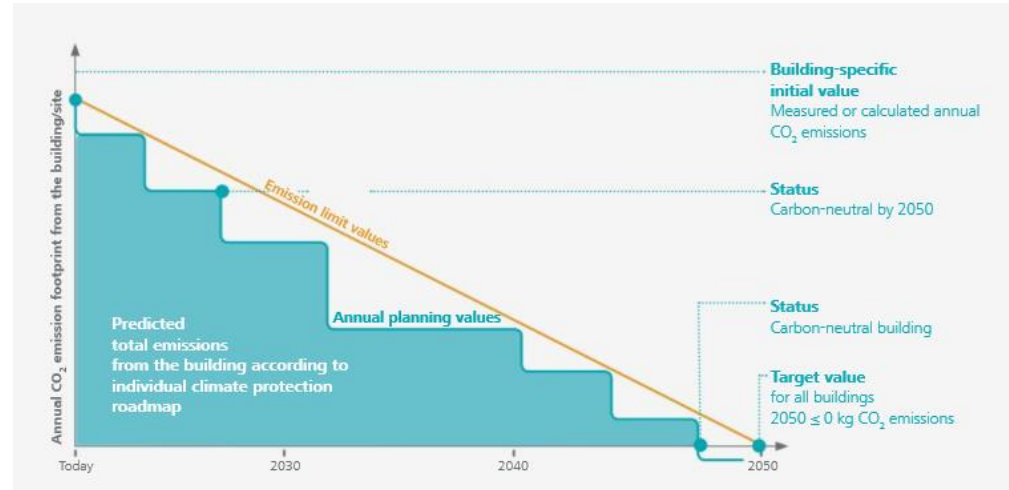


Activ-House, Frankfurt



Nest House,
Dübendorf,
Switzerland

© Zoëe Braun





Shape the future with
the DGNB!

Join us in making
sustainability
the new normal!

Your contact at the DGNB

Thanks for your time



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