

BALANCING THE ECONOMY WITH ECOLOGY

The German Sustainable Building Certification System DGNB

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The DGNB system was developed with the goal to quantify and improve the overall quality of buildings. To achieve this goal, the DGNB follows the approach of the Brundtland commission and its definition of sustainability which consists of three pillars: ecological quality, economical quality and sociocultural quality. Additionally, three further building specific qualities were defined: (design and construction) process quality, technical quality and site quality. With this approach, the DGNB system reaches far beyond existing certification systems such as LEED (US), TREES (TH) or BREEAM (UK). Furthermore, the system offers a vast variety of certification profiles not only for different building uses such as office, residential, healthcare, industrial, commercial, but also for neighbourhoods, districts and even whole cities. The system offers the flexibility to be easily adapted during the certification process in accordance with climates, economic boundary conditions and user behaviours in different countries.

EGS-plan as one of Germany's leading engineering companies in the field of energy efficient and sustainable buildings has with its foreign subsidiary EGS-plan (Bangkok) Co., Ltd. successfully applied the DGNB system on three building projects in Thailand:

The first project was the already existing Häfele Design Centre in Phuket, which achieved a DGNB gold certification. During the pilot certification process, valuable experience with the application of the DGNB system in tropical buildings has been collected.

The second project was the Pruksa+ building in Bangkok. It is a single-family house which was designed for one of Thailand's biggest real estate developer Pruksa to be a pilot project with outstanding sustainability and an innovative energy concept. It comprises many sustainability features such as ecological and healthy building materials, excellent thermal comfort and air quality, reduced water consumption, handicapped accessibility and a flexible media infrastructure like a grand number of receptacles and internet connections. The core of the building concept is the energy concept which consists of a cost optimized combination of passive energy efficiency measures such as an external shading of the facade, thermal insulation of the roof and walls, double glazing and insulated window frames as well as a consequent air-tightness concept of the building envelope. On part of active measures a 5 kWp photovoltaic system covers a significant part of the energy consumption in combination with a small chiller and an ice storage system. For its outstanding energy and sustainability concept, the building was awarded as the first building in South-East Asia with a DGNB Platinum certificate.

The third DGNB project is a sustainable 15,000 m² factory, which is currently under construction. The project proves, that the DGNB system can be applied also in projects with an extremely tight time schedule and budget. The project strives to achieve DGNB Silver certification.

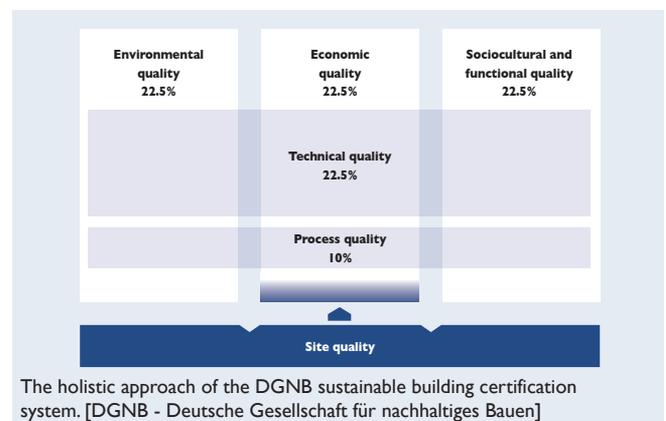
To further promote the DGNB system in Thailand and South-East Asia, EGS-plan has invited the director of the DGNB Dr. Christine Lemaitre to speak on 5th of June at the GTCC event "Sustainable Factories and Industrial Real Estates - The German DGNB Certification System" in Pattaya and on 7th of June at the Renewable Energy Asia 2017 in Bangkok (Green Building session).



The Pruksa+ Single Family House in Bangkok was awarded with the DGNB Platinum certificate. [architecture: unexepected architects Co., Ltd.]



DGNB Gold pilot certification of the Häfele Design Center in Phuket. [architecture: OIA office for interior & architecture Co., Ltd.]



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