

# **GROWING SUSTAINABILITY THROUGH SERVICES AND INNOVATIONS**

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## Our objective

As a reliable partner for safety, security,  
and sustainability, we provide services and  
innovations that help to tackle global challenges.

As part of our sustainability activities, we have established an individual field of activity dedicated to development and advancement of innovative and sustainable services, with a clear objective: as a reliable partner for safety, security, and sustainability, we aim to provide services and innovations that help to tackle critical challenges at global level while providing our customers, the environment, and society with tangible added value.

→ SUSTAINABILITY PUBLICATION 2019,  
OPERATIONAL EXCELLENCE  
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To achieve this we ensure our services are permanently in harmony with ecological, economic, and social aspects. We make sure our services always fulfill rigorous quality standards and are performed with reliability, safety, and security (see also “Operational excellence”). By doing so, we aim to confront global challenges in the field of sustainability in our capacity as pioneers in our industry, employing all our innovative strength and our drive to constantly learn and improve to this end.

Growing sustainability through  
services and innovations

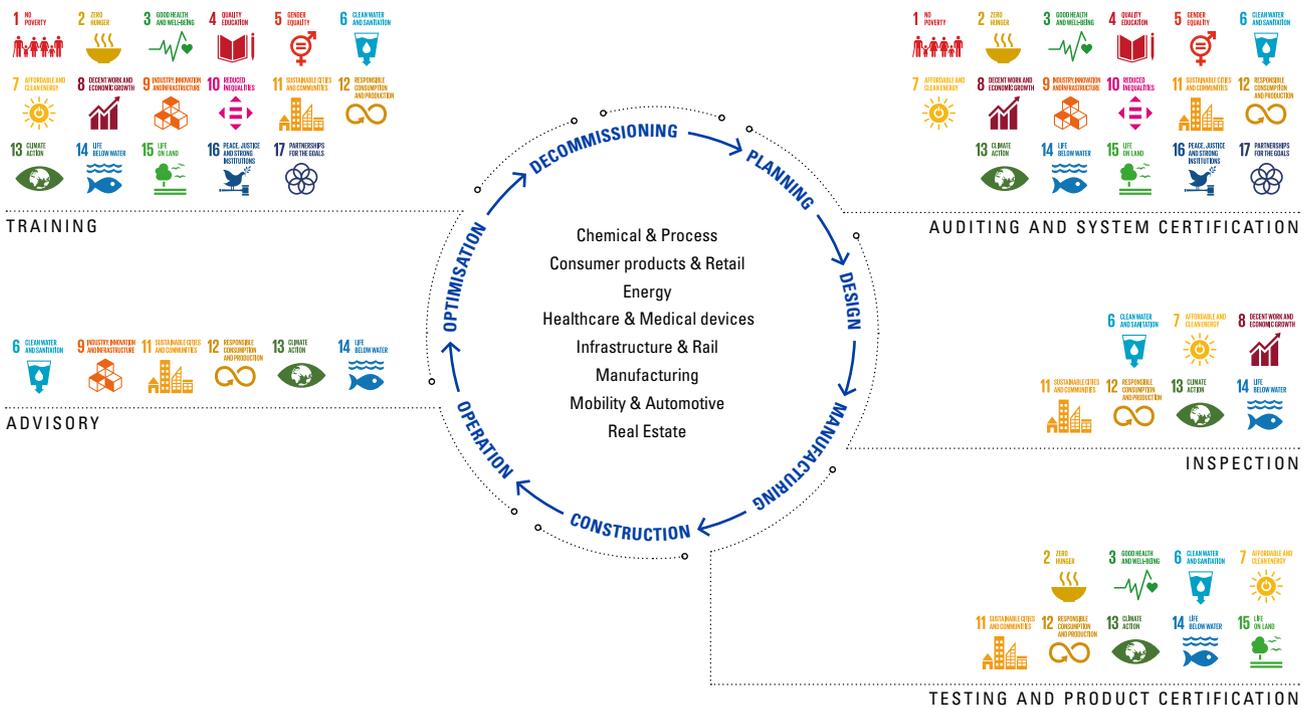
# Sustainability-related services by TÜV SÜD

We already support our customers by helping them to integrate aspects of sustainability into their companies, production processes, and supply chains. These activities play a proactive role in shaping sustainable economic development. TÜV SÜD supports the 17 Sustainable Development Goals (SDGs) of the United Nations. We supply numerous services that enable the defined goals to be achieved.

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## TÜV SÜD Services – Our contribution to reaching SDGs

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In addition, we have singled out the services in which we can offer strategic added value with respect to sustainability for our customers and partners and made them our special focus. Examples are:

## MEASUREMENT, CERTIFICATION, AND TRAINING IN SUSTAINABILITY TOPICS

### → Management system certification and audits

Companies are responsible for the world of tomorrow, by their sustainable business operations and careful use of resources and energy. At the same time, they increase their efficiency, reduce costs, lower risks, and safeguard their own long-term viability. To achieve this, sustainability needs to be managed in a systematic and professional manner.

TÜV SÜD proactively supports companies in establishing and implementing sustainability-focused operations, e.g. by testing and certifying the relevant management systems in accordance with recognized standards. Relevant standards for this process include ISO 14001 for environmental management systems and ISO 50001 for energy management systems. We also conduct energy audits in accordance with EN 16247-1 and supply comprehensive advisory services in the field of energy efficiency.

### → Carbon management – Measuring carbon footprints

To prevent global warming, greenhouse gas levels must be reduced. Increasing numbers of companies are pledging their support for the Paris Agreement climate targets. They are striving to cut their carbon emissions or eliminate them altogether. Support provided by TÜV SÜD includes systematic and coordinated carbon footprint quantification. This carbon accounting can be produced at corporate level as a “corporate carbon footprint” (CCF) covering all emissions throughout the value chain, or as a product-specific “product carbon footprint” (PCF) for the life cycle of a product or service. Its objective is to create transparency, identify emission drivers, and provide impetus for innovations that can reduce consumption of energy and raw materials.

### → Water management – Using water responsibly

Responsible use of water as a resource is likewise becoming an increasingly important focus of sustainable company management. Here too, our experts support our customers in implementing efficient water management systems.

For example, a “product water footprint” quantifies the potential impacts of a product or service on the environment, human health, and resources in relation to water. Measurement covers the complete life cycle from raw materials procurement to final disposal of the product.

**Growing sustainability through  
services and innovations**

→ DGNB  
DGNB.DE/EN

→ BNB  
BNB-NACHHALTIGESBAUEN.DE

→ BREEAM  
BREEAM.COM

→ LEED  
USGBC.ORG

→ HCH  
HAFENCITY.COM

→ FSC  
FSC.ORG

→ PEFC  
PEFC.ORG

→ **Building certification – Proof of enhanced sustainability**

Sustainability certification of buildings is of vital importance for property valuations and transactions. The process guarantees compliance with appropriate standards and provides impartial and visible proof of quality for tenants and investors, thus improving property values. At the same time, certification requirements can be used as an action plan for continual improvement of the building and its management and operating processes with respect to sustainability. We supply certification to standards including DGNB, BNB, BREEAM®, LEED® and HCH to enhance sustainability of new or existing properties. We also provide inspection and advisory services for customers in the field of green due diligence, examining sustainability aspects of their existing property.

→ **Certification of sustainable wood and paper products**

TÜV SÜD's FSC and PEFC certifications contribute to ecologically sound, socially beneficial, and economically viable forestry management. The FSC and PEFC standards support sustainable forestry stewardship at global level. Their clear ecological, social, and economic criteria have set standards for forestry management.

→ **Training**

TÜV SÜD offers a wide range of sustainability-related training. Continuing training and awareness programs support manufacturers, suppliers, and consumers in developing and implementing processes that reflect the principles and values of the circular economy. In addition, TÜV SÜD offers training courses that help to tackle current challenges, e.g. on efficient planning and implementation of digital and sustainable urban models that focus on new technologies, sustainable energy generation, or energy efficiency programs.

## CONTRIBUTING TO SUSTAINABILITY BY FOCUSING ON SUSTAINABLE INDUSTRIES

Watching over our company's sustainable development and the ecological footprint of global society, we work proactively with shapers of ecological change. Our aim in this is to minimize the negative consequences of new technologies for people in line with our mission. We are thus among the leading suppliers of testing, inspection, and certification services for wind energy and work with e-mobility providers in areas such as testing of batteries and charging infrastructures. We provide support for many of our customers in designing sustainable production processes, and also offer services focused on the water economy. We are currently expanding our risk mitigation commitment as a lever for a growing hydrogen economy and are convinced this technology has a viable and valuable future.

## Innovation management

Innovations are the drivers of the success of our strategy. We aim to reinvent testing and inspection services and enhance them with new and additional services. Our long-established proactive Innovation Management System oversees this evolution. In 2019 and 2018 approximately EUR 20 million were invested each year in developing highly innovative projects. Many of the services that emerged from this address topics such as climate change, resource preservation, data protection and privacy, and shaping the personal mobility of tomorrow; in other words, boosting sustainability. By taking action in this way, we help our customers achieve their sustainability targets in our capacity as technical service provider. We support them in improving the social, economic, and ecological impacts of their services, managing sustainability risks, and improving the transparency of their actions.

For the past several years, members of TÜV SÜD's Singapore office have been working on designing non-sewered sanitation systems that do not require connection to water systems or power grids and are safe for people and the environment. Some 4.3 billion people all over the world still lack access to clean sanitation; waste often ends up in ground water or directly on the streets, giving rise to attendant infections. Every year, 350,000 children under the age of 5 die from diarrheal diseases including cholera, which are linked to poor sanitation and contaminated water.

In 2011, the Bill & Melinda Gates Foundation launched the "Reinvent the Toilet Challenge" and initiated a new phase of innovation in basic sanitation services. TÜV SÜD also receives support from the foundation to address the urgent gap in progressing innovative sanitary interventions. For several years now, TÜV SÜD employees at the Singapore office have been actively working on the development of two ISO standards for non-sewered sanitation systems and building up lab testing and certification capabilities in China, South Africa, and Singapore to ensure success in implementing safe and sustainable sanitation solutions for all.

In order to produce tangible results with flexibility and speed, the team first developed a private technical standard which was then transformed into the new ISO 30500 standard. The process of creating this technical guidance at such an early phase of innovation is unprecedented, as standardization does not normally occur until after technology has already achieved maturity. This pioneering early standardization effort for advancing emerging sanitation technologies has become a replicable model in the development of ISO 31800, a second standard for energy-independent community-scale fecal sludge treatment units that recover resources from human wastes stored in septic systems and pit latrines.

Both standards not only reflect the state of the art in sanitation, but also set a clear goal for the development of new concepts. They allow further innovations to grow from standards – and pave the way for safe living conditions for billions of people.