

Sustainability Strategy of TU Dortmund University

Preamble

TU Dortmund University understands sustainability as an integrative concept that ensures the long-term functioning of the global ecological, economic and social system. In this sense, sustainable stands for securing the quality of life of the present generation without restricting or burdening future generations in the shaping of their lives¹. For this, the protection of the environment and socially and economically responsible actions are important foundations. TU Dortmund University contributes to this aim with scientific progress and the transfer of knowledge to society. It is also committed to good working conditions, equal opportunities, equality and the participation of all people in social life, irrespective of their sex, gender, origin, religion and individual or social handicaps.

For TU Dortmund University, sustainability is a joint task in which all its members, professors, employees and students are involved. The importance of sustainability for TU Dortmund University is underlined by the 2015 agreement with the Ministry of Innovation, Science and Research of the State of North Rhine-Westphalia. In this agreement, the university commits itself to developing a university-specific strategy for sustainability and to report on its projects and initiatives. In the *Hochschulvereinbarung NRW 2026*, TU Dortmund University obligates itself to focus sustainability “especially with regard to research projects, teaching and regular operations of the university [...] as well as the corresponding work with public relations [even] more than before”. The topic of sustainability is also included in the Charter of TU Dortmund University (*Grundordnung der Technischen Universität Dortmund*, GO). In Section 1a (1), the Charter states: “In fulfilling its mission, the university shall be conscious of its accountability to society and the environment and thus contribute to protecting the natural foundations of life as well as the sustainable and resource-friendly development of a peaceful, democratic world”.

Thus, sustainable agency is one of the operational and strategic goals of TU Dortmund University. The university advocates the allocation of additional budget of the state North Rhine-Westphalia as well as for other funding to achieve these goals.

Sustainability in Research

Scientists at TU Dortmund University are dedicated to the topic of sustainability in its full spectrum. They research on its ecological, social and economic dimensions. Especially the four interdisciplinary profile areas of TU Dortmund University incorporate sustainable

¹ Weltkommission für Umwelt und Entwicklung, 1987

developments. For example, scientists in the profile "Materials, production technology and logistics" research the entire life cycle of a product. i.e., they investigate basic material properties, product development, production technologies and facilities as well as product logistics. In the area of "Chemical biology, active ingredients and process engineering", researchers investigate how manufacturing and synthesis processes can be made more efficient and resource-conversing. Research in the profile area "Data analysis, modeling and simulation" focuses on the challenges of processing and analyzing very large amounts of data. Through this, the research profile contributes to a better understanding of highly complex scientific processes and systems. In the profile area "Education, school and inclusion", scientists at TU Dortmund University take up issues from the field of social sustainability. On the basis of large-scale empirical studies, among other things, they help to further develop our education system, educational institutions, teaching formats, and teacher training. In addition to this, they also take a look at the implications of education and our social interaction for equal opportunities, inclusion and participation.

In addition to these profile areas, there are many other research projects and initiatives at TU Dortmund University in the context of sustainability. The Department of Electrical Engineering and Information Technology, the Department of Spatial Planning as well as the Department of Architecture and Civil Engineering do research in the field of resource-efficient construction, energy-efficient building operation and energy and infrastructure systems for whole city districts, cities and regions. The Departments of Electrical Engineering and Information Technology, Business and Economics, as well as of Educational Sciences and Psychology develop concepts for the digital transformation of work, production and educational processes.

Sustainability in Teaching

The 17 departments of TU Dortmund University offer thirty Bachelor's and around forty Master's degree programs. Many of these degree programs address sustainability issues. There are courses on sustainable spatial development, resource-efficient construction, energy efficiency, electric mobility, as well as participation, inclusion and diversity. Interdisciplinary degree programs and study projects provide insights that go beyond subject boundaries and promote an understanding of complex interrelationships. All degree programs offered by TU Dortmund University contribute to the acquisition of competencies in the field of sustainability by imparting knowledge about fundamental interrelationships. By studying at TU Dortmund University, students are enabled to help shape the future responsibly and sustainably in research and practice, in disciplinary and interdisciplinary fields of work, and in national and international contexts.

Sustainability in Transfer

TU Dortmund University is both nationally and internationally a pioneer in the transfer of knowledge and technology. It is a co-founder and shareholder of the *TechnologieZentrumDortmund GmbH (TZDO)*. This center is the core of one of the largest technology parks in Europe and promotes in direct vicinity of the campus the application of ideas from science. The university is also one of the leading start-up universities in Germany. Since the beginning of 2017, the Center for Entrepreneurship and Transfer (*Centrum für Entrepreneurship & Transfer, CET*), a central university institution, has initiated and promoted start-ups and the knowledge transfer from science. In order to further strengthen Dortmund as a location for science and research, stakeholders from science, business, the city and society devised the *Masterplan Science Dortmund* in 2013. Of the more than 100 concrete projects described in the Masterplan Science, more than three quarters have been successfully implemented. The creation of a Masterplan Science 2.0, which will build on the successes achieved to date, is already in preparation.

With this strong commitment to knowledge transfer, TU Dortmund University contributes to the transfer of knowledge in the context of sustainability to both economy and society.

Sustainability in Diversity Management

Ensuring equal opportunities and leveraging the potential of diversity are parts of TU Dortmund University's daily activities. With its diversity and equal opportunities management, the university supports socially sustainable developments. The activities of the university in this regard are wide-ranging and systematically anchored in its mainstreaming processes. Projects to ensure equal opportunities, gender equality as well as inclusion and participation are just as much a part of this as projects for educational equity and offers for the compatibility of family and career.

Sustainability in Management and Operation

TU Dortmund University has developed competencies for sustainability tasks and firmly integrated them into its administrative structures and processes. The aspect of ecological sustainability is addressed by the Section Land Management and Sustainability and the Office of Occupational Safety, Environmental and Health Protection. The Section Organizational Development and the ITMC are further developing the digitization of administrative processes. The topic of social sustainability is dealt with by the Staff Unit Equal Opportunities, Family and Diversity, the Department of Disability and Studies (DoBuS) at the Center for Higher Education (zhh), the Occupational Rehabilitation Management, the Personnel Development as well as the Occupational Health Management and the Occupational Idea and Complaint Management.

As one of the largest apprenticeship employers in the city of Dortmund, the university currently trains around 100 young people in 19 different apprenticeship professions. All

successful trainees are initially taken on in a temporary employment relationship. In this way, the university makes a sustainable contribution to addressing the shortage of skilled workers and fulfils its social responsibility as an employer.

Already in 2012, the university founded the interdisciplinary Working Group Sustainability. The Working Group is open to all members of the university and enables students, professors, and employees to discuss 'hands on' new ideas and develop sustainability projects together. This has resulted, for example, in an energy-saving challenge in which administrative and scientific departments competed, which of them could reduce the electricity consumption in their buildings and offices the most. Poster campaigns were used in 2016 and 2018 to promote the responsible use of resources. TU Dortmund University is currently collaborating with the city of Dortmund to set up and expand a bicycle rental system. The university already offers opportunities to move around the campus in a resource-conserving way, e.g., through bike sharing or the job ticket for employees.

In addition to this initiation of sustainability projects, the Working Group regularly obtains an overview of climate-friendly energy supply and energy use. Already today, TU Dortmund University uses natural resources efficiently and in a resource-conserving manner to operate the university. Examples of this are the successive replacement of existing energy supply systems, the continuous renewal of building technology, photovoltaic systems and roof greening. For the catering facilities of TU Dortmund University, equipment and infrastructures were energetically optimized step by step and an energy management system was introduced.

For TU Dortmund University, the focus of the planning and implementation of construction measures is on the realization of building structures that meet current needs and can be used flexibly and over the long term while remaining viable and sustainable even as their useful life progresses. In addition to this, TU Dortmund University intensively advocates the sustainable maintenance of existing buildings and infrastructures in its cooperation with the BLB NRW and the state of NRW.

Together with the *Studierendenwerk Dortmund*, TU Dortmund University commits itself to sustainability in university catering. A common goal is the reduction of meat consumption. For this reason, the range of vegetarian and vegan dishes is continuously expanded. In doing so, the *Studierendenwerk* increasingly uses regional, seasonal and sustainable products and packaging materials. In addition, many of the goods processed and offered at TU Dortmund University are fair trade products.

Outlook

The plans and initiatives of TU Dortmund University in research and teaching, established structures, competencies and projects show that TU Dortmund University already makes a major contribution to sustainable development. An essential basis for this is the joint,

university-wide dialog that has reinforced awareness of sustainability issues. Its success is reflected in the increasing number of ideas for sustainability projects and initiatives, which are submitted to the Working Group Sustainability or the Occupational Idea and Complaint Management, but also in initiatives such as "Scientists for Future" or "Campus for Future". Therefore, the university will continue to rely on the personal commitment of its members and strengthen and promote it.

TU Dortmund University continues to use the ideas and creativity of its members for concrete sustainability projects in the future. Especially the following projects are currently on the agenda:

- Establishment of a scientific forum on sustainability with the aim of promoting dialog between scientists at TU Dortmund University on sustainability topics. The forum is to contribute to the discovery and development of promising approaches for research initiatives and cooperation or new teaching formats. In order to support this project, the information system on research, which is currently under construction at TU Dortmund University, will be expanded to include information on sustainability.
- TU Dortmund University will expand its range of course offers in further training and continuing education to include sustainability topics. The aim is to impart knowledge and skills in the field of sustainability which enable the members to act in a socially, ecologically and economically sustainable manner. The continuing education program should therefore include formats for saving energy and protecting the environment (waste avoidance, use of ecologically compatible working materials). In addition, diversity and gender competencies should be given a stronger focus, e.g., raising sensitization to gender issues or dealing with diversity. The offers for health at the workplace are also to be expanded.
- By 2025, TU Dortmund University aims to be barrier-free in terms of both construction and information transfer. In particular, barrier-free access to information on research, teaching and the university's service offers should be completed and to the barrier-free routing on campus fully available.
- TU Dortmund University is going to establish a "Sustainability Office" in the central administration. This is to be established as a separate subject area, also to support the activities of the Working Group Sustainability, to strengthen the openness towards and enforceability of sustainability projects. Regular and transparent sustainability reporting is to be established, and the opportunities for participation should be expanded, e.g. through ideas competitions or student idea management.
- The university aims to switch its power supply to certified green electricity by 2025. Further contributions to a more climate-neutral energy balance are to be made by a higher home office ratio and a reduction of unnecessary business travel. A voluntary commitment is to be formulated to forego car and air travel for

business trips of less than 1000 km. Overall, TU Dortmund University aims to reduce its air and car travel by 20% in 2025 compared to 2019.

- TU Dortmund University is going to create a concept for sustainable mobility by 2022. Its goal is to improve the accessibility of its campus with climate-neutral and climate-friendly means of transport respectively to offer its members incentives to use environmentally friendly transport. Therefore, plans are to
 - establish 500 additional covered and secured parking spaces for bicycles by 2025, so that especially the owners of high-quality (electric) bicycles are motivated to use their bicycles to commute to work, and
 - increase the number of job tickets for public transport to 500.
- TU Dortmund University is going to define sustainability criteria for the procurement of equipment and materials. The goal is to go beyond the legal sustainability criteria and formulate own and TU-specific requirements (e.g. preference for ecological products at the same price or avoidance of plastics)
- TU Dortmund University is going to reduce its total paper consumption by 10% by the end of 2021 and increase the university-wide share of recycled paper to 80% by 2025.
- The university is going to expand the possibilities for digital work, especially to facilitate work in the home office, e.g. by using digital signatures, digital files, digital mail, or digital recording of the working hours. The goal is to implement the requirements of the eGovernment Act and the Online Access Act before the year 2025 if possible.
- TU Dortmund University is going to launch a project called "Green Campus". Its aim is to develop a concept for creating outdoor "green break areas" or "green lecture halls" on campus.
- The cooperation with the *Studierendenwerk Dortmund* is to be intensified in order to enable healthier nutrition in the long term. If necessary with the participation of nutritionists, a joint concept should be developed for healthy nutrition and a sustainable gastronomy.