

SUSTAINABILITY REPORT 2018





Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Brundtland-Bericht „Our Common Future“: 1987

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Taking Social Responsibility

Given today's countless unsolved global challenges, shaping sustainable development is an indispensable aspect of academic discourse. Protecting the climate, conserving natural resources, preserving biodiversity, and achieving intergenerational justice and equal opportunities are just a few of the tasks we face. What knowledge, technical and social innovation, and skills do we need to create a sustainable future? Universities—as core institutions of the science and education systems—are crucial societal actors in addressing these questions.

The *Sustainability Mission Statement*—adopted by Freie Universität Berlin in 2016—acknowledges our areas of responsibility throughout the university in research, teaching, knowledge transfer, and campus management. This *Sustainability Report 2018* details the focus of our activities and shows the progressive evolution of our commitment to sustainable campus management over the past 17 years. Some of our sustainability research began earlier, even before the Brundtland Report, which introduced the concept of sustainable development to the political arena in 1987.

We are committed to building on the achievements outlined in this report. We want to increase the visibility of, expand upon, and bolster our sustainability activities at our university. We focus, above all, on governance by implementing long-term structures and strategies. Establishing the Unit for Sustainability and Energy Management, forming the Sustainability Steering Committee, adopting the Sustainability Mission Statement, founding the University Alliance for Sustainability, and designing the broad-based participation structure with diverse team-building processes have all been important steps in this direction.

The 17 Sustainable Development Goals (SDGs), adopted by the United Nations General Assembly in 2015, have been critical in sparking academic discourse as well as broader discussions about the societal role of universities. Our conviction demands that we engage in both. Sustainable development aims at fostering integration and networking. This shared mission can only be achieved by engaging and bringing together many individuals from all areas of the university. This report makes clear that sustainable development remains a strategic task at our university.

Univ.-Prof. Dr. Peter-André Alt
President

Dr.-Ing. Andrea Bör
Provost,
Administration and Finance

Managing Sustainability and Enabling Participation

Sustainability is a future-oriented task that can only succeed if consistently embedded throughout the university. At a university with 36,500 students and almost 5,200 employees, 150 study programs, 16 academic departments and central institutes, as well as a campus with 220 buildings, every discipline and administration area is able to contribute.

Given the specific control mechanisms of universities and their segmented, loosely connected structures, integration of sustainability demands more than top-down decisions. Our 17-year history of working in sustainability has revealed that it is about more than just successful management. Only by prioritizing participation and collaboration can such a challenge be successfully addressed at a university. Systematically linking management, networking, and participation is the core mission of the Unit for Sustainability and Energy Management. Our focus, therefore, is directed both inward and increasingly toward the regional and international spheres.

Sustainability topics are at the heart of our university. In 2017, at least 30% of all research projects were related to sustainability and about 15% of courses substantively addressed aspects of sustainability. These projects and courses provide a good foundation for our continuing work. Our action plan includes a substantial expansion in our teaching efforts. For example, this year we will be establishing *Sustainable Development* as a new competence area in the field of the *General Professional Skills Courses* as well as a digital *Sustainability Toolbox* to support students and lecturers.

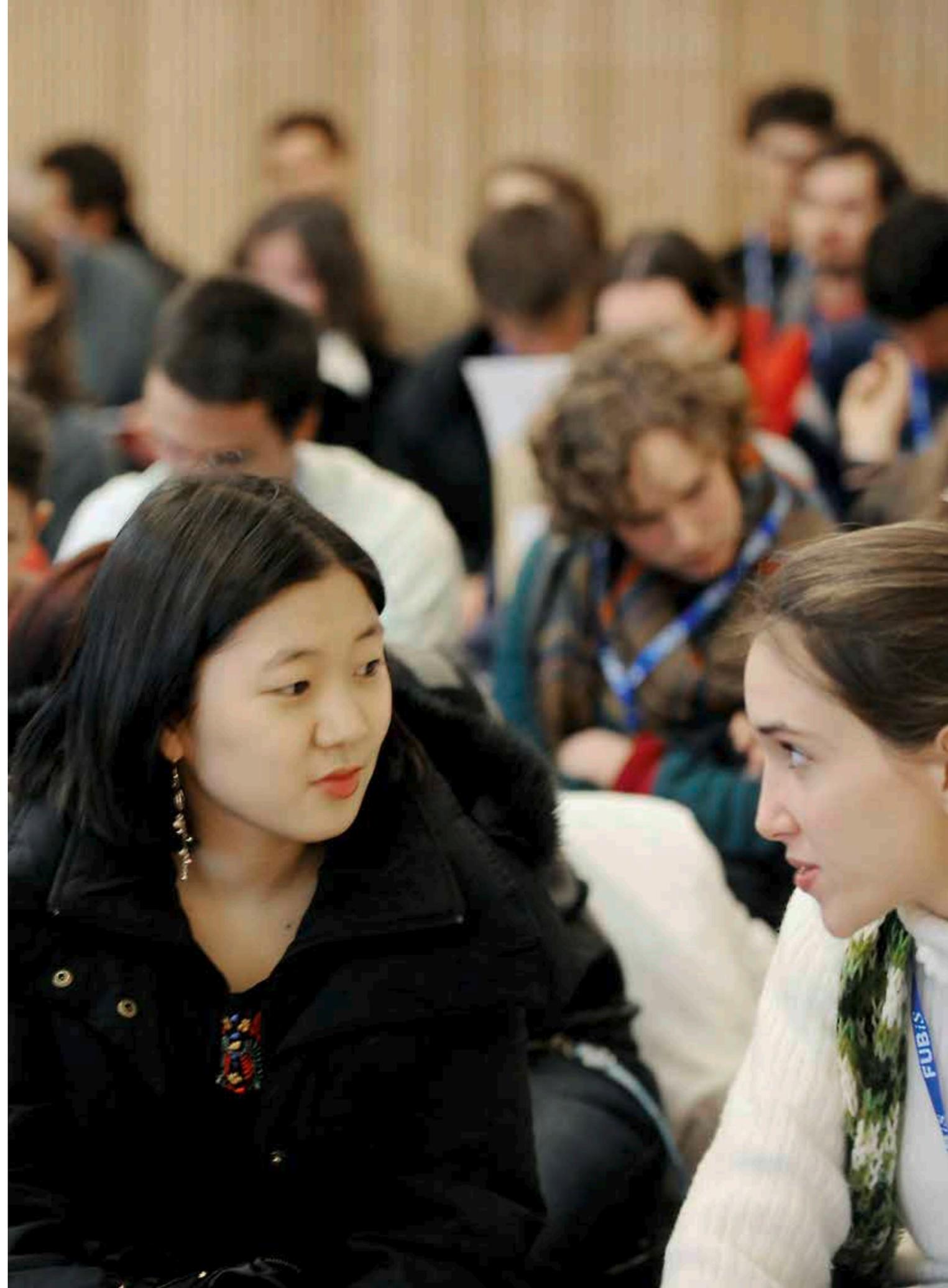
We are also proud of our campus management achievements. We reduced our energy consumption by more than 26% between 2001 and 2011 and have kept it at around this level despite increased enrollment and third-party spending. The university's energy consumption reached a new low point in 2017 on a like-for-like basis, being 28% lower than 2001. Considering the carbon dioxide-free purchase of electricity since 2010, we have reduced our greenhouse gas emissions by 81% compared to 2001.

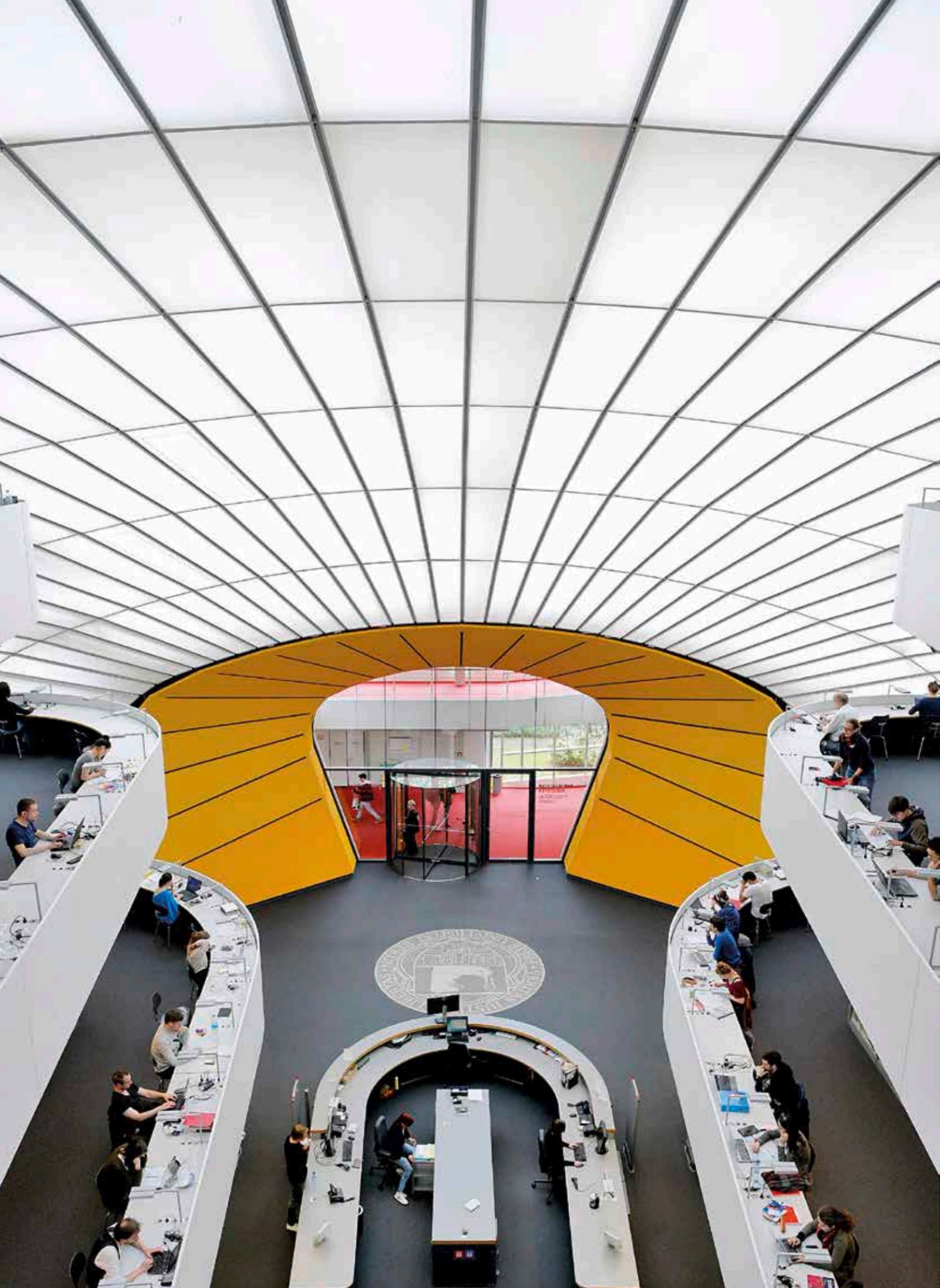
Many stakeholders on campus—sustainability teams, audit teams, and the initiative SUSTAIN IT!—are constantly striving to comprehensively and genuinely practice sustainability at our university.

We are committed to continuing this course and welcome you to join us! We at the Unit for Sustainability and Energy Management would also like to thank all those who helped in preparing this report. We hope you enjoy reading it and appreciate your feedback.



Andreas Wanke
Unit for Sustainability and Energy Management





Shaping Governance and Participation

Universities—as the core institutions of the academic and educational systems—have a special responsibility with regard to sustainable development, and Freie Universität Berlin is committed to this task. It strives to increase sustainability across the university, in research, teaching, knowledge transfer, and campus management. The university is working to create the right conditions within its governance structure and management processes to achieve this goal. It promotes opportunities for all members of the university to participate, as well as a culture that fosters open discussion.

Freie Universität Berlin's Sustainability Mission Statement

In adopting its *Sustainability Mission Statement* in March 2016, Freie Universität Berlin highlighted that sustainability is paramount for the entire university. It demonstrates the university's commitment to strengthening its research and teaching opportunities on future global ecological, social, economic, and cultural issues and to integrating the teaching and learning concept *Education for Sustainable Development*. Freie Universität Berlin also recognizes its responsibility to be a role model in promoting sustainability as a higher education institution.

The *Sustainability Mission Statement* is based on a version drafted in 2015 by the *Sustain it!* initiative. University President, Professor Dr. Peter-André Alt had called upon all members of the university to contribute to the sustainability mission statement. Students and staff—both administrators and faculty—submitted 80 proposals, which were discussed at a workshop in December 2015. The revised version was adopted by the Executive Board in March 2016.

The Unit for Sustainability and Energy Management

The *Unit for Sustainability and Energy Management* was established in 2015 by the Executive Board, to which it reports directly. The unit emerged from the Office of Energy and Environment, which had previously reported to the Division for Engineering and Utilities. The unit systematically coordinates and manages all sustainability-related activities in research, teaching, knowledge transfer, and campus management in accordance with the *Sustainability Mission Statement*. Participation is crucial for this cross-cutting task to succeed.

The unit's tasks include visualizing sustainability-related research and teaching, initiating new teaching formats, coordinating the central steering committee, and establishing sustainability teams at department level. It collaborates with Freie Universität's facility, IT, and procurement management. In addition, the unit is in charge of maintaining the integrated management system, monitoring energy consumption university-wide and facilitating waste management. Furthermore, it represents the university in international sustainability networks. The *University Alliance for Sustainability*—founded together with Freie Universität's strategic partners in 2015 and funded by the German Academic Exchange Service (DAAD)—plays a prominent role in this field of activity.

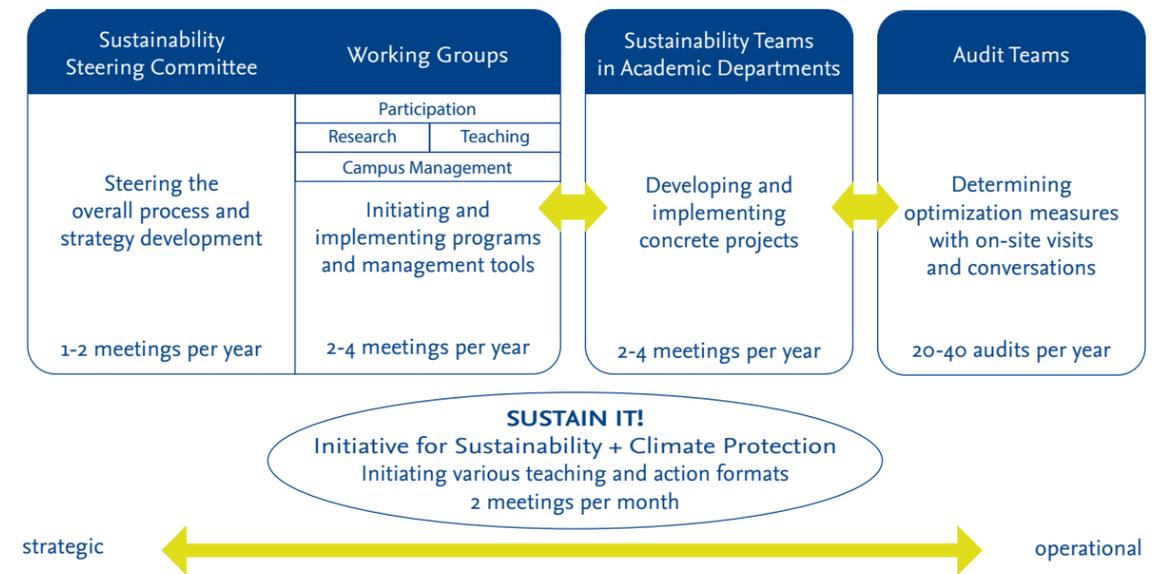
Sustainability Steering Committee

The *Sustainability Steering Committee*—established in 2016—defines the strategy and priorities of sustainability activities in compliance with the *Sustainability Mission Statement*. The committee is supported by four working groups covering research, teaching, campus management, and participation. The Unit for Sustainability and Energy Management coordinates the interdisciplinary and cross-departmental groups.

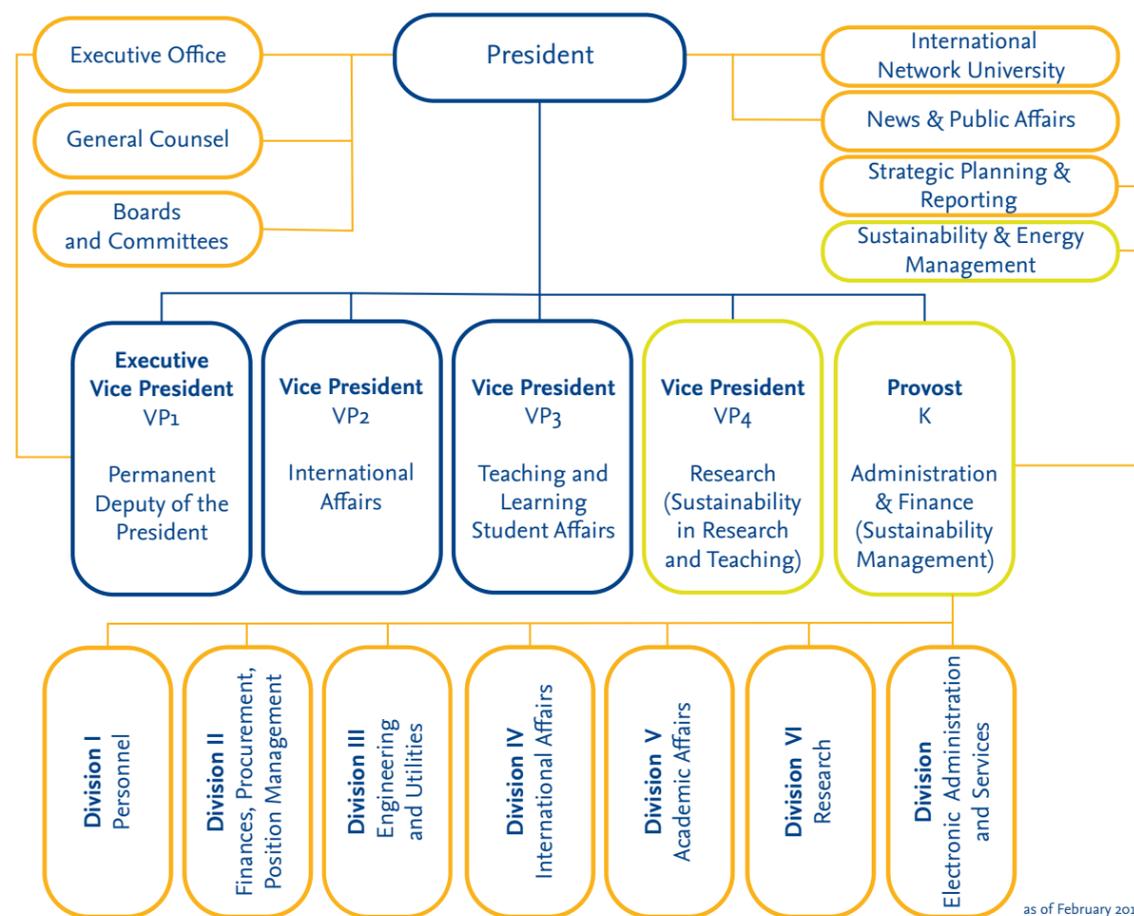
Sustainability Teams

Between 2004 and 2007, internal environmental teams were set up in all departments as part of the ISO 14001 environmental certification process. Their main task was to support the certification process by initiating their own proposals and implementing concrete activities. Each team had 5-14 members from research, administration, and operational management, with the head of each department’s administration serving as the coordinator. The teams—composed of around 120 members campus-wide—focused on aspects of campus management and environmental communication. Currently, the environmental teams are being transformed into *Sustainability Teams* that will be dedicated to an expanded spectrum of sustainability activities.

Sustainability at Freie Universität Berlin - Participation Structure



Organizational Chart - Freie Universität Berlin



Audit Teams

Internal audit teams were first created in 2005 as part of the ISO 14001 certification process. Each consists of cross-divisional representatives from environmental management, occupational health and safety, the staff council, as well as the areas to be audited. The team’s objectives are to discuss measures toward organizational optimization and to ensure environmental regulation compliance. Audit conversations are conducted during on-site inspections and include senior faculty. Annually, up to 40 audits are conducted—all of which are coordinated by the Unit for Sustainability and Energy Management—and up to 20 internal auditors directly contact as many as 100 stakeholders. All of this significantly raises awareness of sustainability and energy issues and ensures that optimization measures are effectively implemented.

SUSTAIN IT! Initiative for Sustainability + Climate Protection

Students and employees of the Environmental Policy Research Center and the Unit for Sustainability and Energy Management founded the *SUSTAIN IT! Initiative for Sustainability + Climate Protection* in 2010. Its aim is to foster interdisciplinary and transdisciplinary discussion on sustainability and to promote networking in research, teaching, and campus management. Sustain it! has engaged thousands of students during four multi-day events called *University Days for Sustainability & Climate Protection*, about 20 hands-on activities and workshops, and the UniGarden project. The initiative has also offered six interdisciplinary courses and two public lecture series since 2013, making sustainability much more visible at Freie Universität Berlin. Sustain it! has received several awards, including being named an *Official Project of the UN Decade of ESD* (Education for Sustainable Development) in 2012 and the *Student Leadership Award* from the *International Sustainable Campus Network* (ISCN) in 2015.

Sustainability Communications

Various forms of communication and interaction are crucial for the university when it comes to sustainability. In addition to its own sustainability website, Freie Universität Berlin dedicated an issue of its science journal *fundiert* to sustainability in 2015. A year later, Freie Universität hosted a video competition called *Diversity* at Freie Universität Berlin. In 2017, a new video competition was held that was dedicated to *Sustainability*. Six times a year, Freie Universität Berlin reports on important university events in a supplement inserted in the daily newspaper, *Der Tagesspiegel*. The online university magazine *campus.leben* offers a new article every day on university life. Both publications regularly report on new research and sustainability activities. Freie Universität also frequently tackles sustainability on social media, especially on Facebook and Twitter.

The new website *Sustainable Development at Freie Universität Berlin*—launched in 2018—offers comprehensive information on sustainability-related activities and opportunities in research, teaching, knowledge transfer, and campus management. The traveling exhibition *Co-Creating Sustainability* documents current sustainability efforts at the university and future objectives. In 2018, Sustain it! is also offering the *Sustainable Events Toolbox*, a practical guide to planning and implementing sustainable events at Freie Universität Berlin. A *Sustainability Campus Tour* will also be developed to bring the topic to life.



As a university consciously aware of its social responsibility, it is our mission to create spaces for thinking and discussion as well as projects that develop strategies and approaches to solve global future issues. [...]

As a cross-cutting approach, the concept of sustainability stimulates dialogue between different stakeholders and levels of the university.

Sustainability Mission Statement of Freie Universität Berlin, March 2016

Climate Protection Agreement

In 2011, Freie Universität Berlin became the first university in Berlin to enter into a climate protection agreement with the State of Berlin for the following four years. The agreement focused on campus-related climate protection measures but also included symposia and co-funding for the educational project *Schools@University for Sustainability + Climate Protection*, which has been extended through 2020.

Freie Universität Berlin implemented almost all of the measures that were its sole responsibility during the reporting period. The like-for-like energy consumption analysis showed that, in 2015, the university consumed less energy than ever before. Consumption, however, was “only” 2.6% below the 2010 level, rather than the 10% reduction envisioned for the Climate Protection Agreement. Deviation from the pledged absolute targets set in the Climate Protection Agreement is due to an over 10% increase in student enrollment during the agreement period and a substantial increase (17%) in third-party research spending. With these factors in mind, the objectives set out in the Climate Protection Agreement were achieved to a greater extent. A follow-up ten-year agreement is expected to be completed in 2018.



University Alliance for Sustainability and International Networks



University Alliance for Sustainability

International Sustainable Campus Network

Green Alliance of Universities for a Sustainable Future

Working Group UNICA GREEN

As an International Network University, Freie Universität Berlin prioritized global cooperation by establishing the *University Alliance for Sustainability* in 2015 with its four strategic partner universities: the Hebrew University of Jerusalem, the University of British Columbia, Saint Petersburg State University, and Peking University. The *Alliance* follows a holistic approach and aims to systematically link research, teaching, knowledge transfer, and campus management activities. International partner universities complement each others' strengths to develop joint research and teaching projects. At the annual *Spring Campus Conference* and regular *Teaching and Management Incubators*, the latest research, best practices, and potential collaborative projects are discussed. In 2016 and 2017, 280 participants from 16 countries attended the first two *Spring Campus Conferences*. The *Alliance* receives funding from the German Academic Exchange Service (DAAD) over six years (2015 to 2020). Freie Universität Berlin is committed to continue the *Alliance* in the long term.

Freie Universität Berlin is also a member of the *International Sustainable Campus Network (ISCN)*, the *Working Group UNICA GREEN*, and the *Green Alliance of Universities for a Sustainable Future (GAUSF)*, which was initiated by Peking University in 2014.

About 80 universities currently belong to the ISCN, including some of the world's best, such as Harvard University, ETH Zurich, the Massachusetts Institute of Technology (MIT), and the University of British Columbia. Since 2016, Freie Universität Berlin has been on the *ISCN Advisory Committee*. The *Network of Universities from the Capitals of Europe (UNICA)*—co-founded by Freie Universität Berlin in 1990—connects universities in European capitals. Since 2014, Freie Universität has been a member of the *UNICA GREEN working group*, which strives to foster the systematic exchange of ideas and experiences among the 49 member universities and organizes annual workshops on various sustainability topics.



Creating Links between Teaching, Research, and Knowledge Transfer

Teaching for Sustainable Development

Education is not just about access to knowledge. Universities are crucial in teaching social and communication skills as well as competencies needed for addressing global problems. Turning knowledge into action is a major challenge that can only succeed with openness to innovative teaching formats and new didactic approaches. The teaching and learning concept *Education for Sustainable Development* (ESD) provides suggestions and tools that Freie Universität Berlin uses to this end. Additionally, it systematically implements research-oriented teaching. In the Winter Semester 2017/18, 641 (15%) of the 4,213 courses offered included a reference to sustainability as defined in the 17 Sustainable Development Goals (SDGs). The Department of Political and Social Sciences places a strong emphasis on sustainability, but many other academic departments also offer a significant number of sustainability-related courses.

Sustainability-Related Courses

Academic Departments	Count
Political and Social Sciences	190
History and Cultural Studies	57
Education and Psychology	55
Philosophy and Humanities	54
Law	52
Biology, Chemistry, and Pharmacy	51
Earth Sciences	48
all other departments & institutes	134
total	641

* Courses related to sustainability dedicate at least one unit of the course to SDGs, while courses with a focus on sustainability impart a fundamental understanding of sustainability.

4,213
Courses (total)

641
Sustainability-Related Courses

155
Sustainability-Focused Courses

The Sustainable Development Goals of Peace, Justice and Strong Institutions, and Quality Education were the top sustainability themes addressed in university courses and at 348 events.



There will be significantly more sustainability-focused courses at Freie Universität Berlin in the future. Currently, the university is preparing a program with the new area *Sustainable Development* in the *General Professional Skills Courses* and creating a *Sustainability Toolbox*. These projects—as well as current teaching and study courses closely related to sustainability—are highlighted below.

General Professional Skills Courses and Teaching-Related Professional Courses for B.A. Students

Freie Universität Berlin introduced *General Professional Skills Courses* (ABV) and *Teaching-Related Professional Courses* (LBW) in the Winter Semester 2004/05, when the university system converted to one with Bachelor's and Master's degrees. In both fields of study, students learn employment and social skills to apply in their professional careers. The module *Gender, Diversity, and Gender Mainstreaming* provides training on gender relations and cultural diversity and empowers students to initiate social change. To increase the visibility and value of the topic, the Teaching Working Group of the Sustain-

ability Steering Committee developed the new competence area *Sustainable Development* within the *General Professional Skills Courses*. The program will officially launch in Winter Semester 2018/19 and will be coordinated by the Unit for Sustainability and Energy Management. The area will include four modules: *Managing Sustainability*, *Researching Sustainability*, *Shaping Sustainability*, and *Communicating Sustainability*. All modules address the 17 Sustainable Development Goals using the criteria of the ESD concept and combine theoretical and practical parts. Pilot courses are already taking place until the program officially starts. A module in *Teaching-Related Professional Courses* is also being planned.

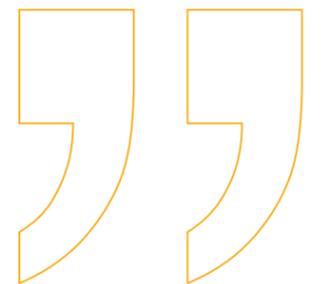
Sustainability Toolbox

The *Sustainability Toolbox* project aims at building an online teaching and learning environment that provides comprehensive information on sustainability topics in teaching, research, and campus management, to be launched in 2018. It expands upon the virtual teaching and learning offerings for the new area *Sustainable Development* as well as for the *University Alliance for Sustainability*. The *Sustainability Toolbox* gives students and lecturers suggestions on how to develop sustainability-related teaching projects and how to engage in interinstitutional learning on sustainable development. The Unit for Sustainability and Energy Management is coordinating this 1½-year project funded by the Center for Digital Systems (CeDiS) of Freie Universität Berlin.

Master's Program in Futures Studies

In 2010, the *Institut Futur* in the Department of Education and Psychology founded Germany's first interdisciplinary and transdisciplinary *Master's program in Futures Studies*. Students from various disciplinary backgrounds learn the basics of Futures Studies and test out fundamental techniques and methods of lecturers from various disciplines including the social sciences, humanities, and natural sciences as well as external lecturers from renowned research institutes, companies, and consulting institutions. This knowledge will arm students with the in-depth knowledge needed to envision potential developments and positive change in order to make scientifically-grounded decisions in politics, business, and society. Since 2010, about 200 students have completed a postgraduate Master's degree in Futures Studies.

This sustainability orientation is symbolised in our teaching through a strategic approach that broadly integrates sustainability issues into the university curriculum and uses the concept of "Education for Sustainable Development".



Lifelong Learning at the Center for Continuing Education

The Center for Continuing Education at Freie Universität Berlin bridges science and society. With a lifelong approach to learning, it offers continuing education and training for employees of Freie Universität Berlin, other universities, research and cultural institutions, and interested citizens.

Employees can build their methodological and social competencies through offerings such as *Project and Change Management*, *Appreciative Communication*, or workplace health promotion events.

The Center specifically targets researchers with seminars on intercultural competence within the context of an internationalized university, and junior scholars and scientists receive support at the *Career Advancement Event*. The guest auditor program *GasthörerCard Classic* allows citizens to attend lectures at Freie Universität Berlin.

In 2010, the Chief Gender Equality Office—in cooperation with the Center for Continuing Education—designed the two-year program *FUTURA*. This structured qualification program professionalizes and qualifies women's representatives as well as gender equality officers and stakeholders.

For environmental reasons, the program for the *Center for Continuing Education* is only available online, rather than in printed format.



The University Campus as a "Living Lab"

Since 2013, *Sustain it!* has been offering interdisciplinary and interactive learning formats that examine future local and global questions on teaching. The didactic focus is on the learning concept *Education for Sustainable Development*. The courses are subject-related and developed in close cooperation with lecturers from the Environmental Policy Research Center and Political Didactics in the Department of Political and Social Sciences. To promote transdisciplinary exchange, practitioners from associations, companies, and non-governmental organizations as well as those from the artistic and cultural communities are also involved. During Summer Semester 2017, the seminar *Participation in Theory and Practice: The Campus as a "Living Lab"* examined and reflected on participation within sustainability discourse. In cooperation with participants from Freie Universität Berlin and civil society, five participatory event concepts were developed. In July 2017, the group implemented these autonomously as part of the *University Days for Sustainability + Climate Protection*.

Gender and Diversity in Teaching Toolbox

The Margherita von Brentano Center and the Chief Gender Equality Office jointly published the *Gender and Diversity in Teaching Toolbox* in 2017. This website offers lecturers and staff at Freie Universität Berlin practical support in expanding their gender and diversity literacy for higher education. The toolbox helps with its extensive information, suggestions, and resources in the planning and design of gender- and diversity-conscious courses.

SUPPORT – Quality Pact for Teaching

Since 2012, the *SUPPORT* project—now in its second phase of funding—has been part of the Quality Pact for Teaching at Freie Universität Berlin. It has three main focus areas: supporting students throughout their studies, including a mentoring program; developing digital teaching and learning environments; and teacher qualification. Continuing education courses in Winter Semester 2016/17 also taught lecturers how to integrate sustainability into their teaching. The Quality Pact for Teaching of the federal and state governments supports this project until 2020.

Quality Management in Teaching

In 2012, during a university-wide participatory process, the Executive Board established quality management as a valuable tool in teaching, providing the framework for the development of quality goals. One of the goals is to arm students with academic and social skills, such as intellectual autonomy, reflectivity, critical thinking skills, and awareness of gender and diversity issues.

Various quality assurance procedures allow for continuous monitoring of study programs and their frameworks, with the aim of quickly identifying any needs. These include surveys of students and graduates, which are regularly conducted and evaluated by the Teaching and Study Quality Center.

Researching and Communicating Knowledge for a Sustainable Future

Excellent research and effective knowledge transfer regarding the causes of global problems are vital for sustainable development. Researching and developing innovative technologies as well as political and societal solutions to tackle global challenges are at the heart of sustainability research. Forward-looking content—such as the 17 Sustainable Development Goals—is now reflected in all disciplines. The visibility of sustainability-related research projects will improve in the coming years through a new internet presence. The Unit for Sustainability and Energy Management is also looking to develop new networking opportunities in order to improve cooperation between various disciplines and stakeholders.

In 2017, 457 out of a total 1,546 research projects (approximately 30%) focused on aspects of sustainable development. Almost all disciplines contribute to sustainability research, but Biology, Chemistry, and Pharmacy; Political and Social Sciences; Earth Sciences; and Education and Psychology are especially relevant.

Sustainability-Related Research Projects

Academic Departments

Biology, Chemistry, and Pharmacy	81
Political and Social Sciences	69
Earth Sciences	62
Education and Psychology	57
Mathematics and Computer Science	29
School of Business and Economics	26
History and Cultural Studies	24
all other departments & institutes	109
total	457

* Research projects related to sustainability address at least one SDG, while research projects with a focus on sustainability center around sustainability and contribute to solving global challenges.

1,546
Research Projects (total)

457
Sustainability-Related Research Projects

158
Sustainability-Focused Research Projects

Related to the 17 SDGs, more than half of the research projects fall under the goals of Peace, Justice and Strong Institutions (67 projects), Life on Land (58 projects), Quality Education (51 projects), Climate Action (45 projects), and Partnerships for the Goals (41 projects).



Several institutes, research centers, and working groups as well as several scientists at the university are engaged in investigating and resolving future global issues. A complete description of all actors and activities is not possible in this report. The research contexts and projects presented below demonstrate the spectrum of sustainability-oriented research.

Future Concept

Veritas – Iustitia – Libertas. International Network University

Freie Universität Berlin's academic strength as a network and research university is demonstrated by its two-time award-winning *Future Concept International Network University* in the framework of the Germany-wide Excellence Initiative (2005–2017). The concept focuses on globally and socially relevant issues such as human-environment interactions, health, and quality of life. It promotes intensive networking in research and teaching regionally, nationally, and internationally. Part of the Future Concept is the successful implementation of equal opportunity and diversity goals.

Sustainability at Universities – HOCH^N

In November 2016, the project *Sustainability at Universities* (HOCH^N): *developing – networking – reporting* began. Funded by the Federal Ministry of Education and Research, it includes several German universities. The project is being implemented under the auspices of the University of Hamburg. Freie Universität Berlin is involved in the work packages Governance and Sustainability Reporting and is represented on the Advisory Board. To facilitate the implementation of sustainability strategies in higher education institutions, a guideline for sustainable development in universities is to be drafted based on the central areas of activity, including Governance, Research, Teaching, Operations, and Sustainability Reporting.

trAndeS–Postgraduate Program on Sustainable Development and Social Inequalities in the Andean Region

Together with the *Pontificia Universidad Católica del Perú* in Lima, Freie Universität Berlin set up a new postgraduate program in 2016—*trAndeS*—to explore the relationship between social inequalities and opportunities for sustainable development in the Andean region. The results should contribute to sustainable development in the region and support the establishment of a regional sustainability network in Latin America. The program is being jointly implemented by the Latin American Institute at Freie Universität Berlin and the Faculty of Social Sciences at the *Pontificia Universidad Católica del Perú*. The German Academic Exchange Service (DAAD) is supporting this five-year project with funding from the Federal Ministry for Economic Cooperation and Development (BMZ).





Monitoring the Education for Sustainable Development (ESD) Global Action Program

Institut Futur at Freie Universität develops and carries out a national monitoring procedure for the implementation of UNESCO's Global Action Program *Education for Sustainable Development* (ESD, 2015–2019) on behalf of the Federal Ministry of Education and Research. The aim of the project is to create a differentiated picture of the program's implementation in Germany and to identify key starting points where the ESD concept can be further systematically embedded. The Institute also prepares strategy and quality development proposals for the implementation of the *National Action Plan on ESD*. To promote the structural integration of ESD in Germany, UNESCO gives out awards to institutions, networks, and municipalities.

Closing Regional Material Cycles and Reducing Emissions

Researchers from the Department of Earth Sciences' *CarboTIP* project investigate the regional utilization of biomass through the production of biocoal and plant-derived carbon substrates. Wood residues and leaves from Tierpark Berlin are charred by pyrolysis. The resulting biochar is composted with the remaining biomass in the Botanic Garden, forming a very fertile substrate. This process reduces disposal and energy costs, substrate and fertilizer purchases, and greenhouse gas emissions. The project is funded by the *Berlin Program for Sustainable Development* (BENE) for three years (2017–2020). Another research project that deals with regional material cycles is *BodenBerufsBildung* (Vocational Training for Soil Professions). This transdisciplinary project looks into the many potential applications of biochar and plant carbon substrates through practical training workshops. The *German Federal Environmental Foundation* (DBU) supports this 2½-year project (2017–2019).

Climate Adaption Strategy Research

Keeping a cool head in hot times: How governance by integrative visions can support cities in achieving heat risk resilience—is a project of the Environmental Policy Research Center that examines how envisioning processes and visions can impact urban climate governance. In a participatory process, selected small towns will develop urban visions on climate change adaptation that pay particular attention to how changes may impact the most vulnerable groups. The Federal Ministry of Education and Research (BMBF) is funding the project as part of its flagship initiative *Zukunftsstadt* (Future City).

DynAge: Disease in Human Aging – Dynamics at the Level of Molecules, Individuals, and Society

Focus Areas contribute to the strategic and thematic design and hone the university's profile by implementing innovative interdisciplinary and transdisciplinary research. In the *Focus Area DynAge*—established in 2013—age-related disease processes are investigated through interdisciplinary research from Freie Universität Berlin, the German Institute for Nutrition Research, the Robert Koch Institute, and Charité – Universitätsmedizin Berlin. The aim of this Focus Area is to gain insight into the origins and development of diseases. This is especially relevant when tackling demographic changes such as an aging population, as these are a sustainable development challenge for many regions.

Collaborative Research Center – Governance in Areas of Limited Statehood: New Modes of Governance?

The study of political conflicts and their social impact plays a central role in realizing sustainable development. The Collaborative Research Center *SFB 700: Governance in Areas of Limited Statehood: New Modes of Governance?* examines the circumstances of governance in political-geographical areas with limited statehood due to, for example, transformation processes, collapse or crisis of the state, and military or other conflicts. The overarching research focuses on governance in the areas of government, security, welfare, and the challenges that arise during policy implementation. Among others, Freie Universität Berlin, the University of Potsdam, and the Federal Foreign Office are partnering in this research project. The German Research Foundation funded the Collaborative Research Center from 2006–2017. This topic will be addressed further by a project within the Horizon 2020 Program.



We understand sustainable science as the discipline that dedicates itself—using an understanding of the planet's limited natural resources—to key global ecological, social, economic and cultural issues.

Sustainability Mission Statement of Freie Universität Berlin, March 2016



Sustainability-Related Start-ups

Stravio UG

a portmanteau of “strategies against violence”, was launched in 2010 and offers scientifically sound prevention and intervention concepts as well as methods to decrease school violence. For example, *Stravio* offers advanced training for teachers and social educators to prevent cyberbullying.

rootAbility gemeinnützige UG

has been developing participatory governance structures for sustainable development at European universities since 2013. The initiative is committed to disseminating, developing, and monitoring student sustainability offices (Green Offices). To date, its model has been implemented at over 30 universities in six European countries.

Turbit Systems GmbH

has been developing solutions for increasing efficiency of wind turbines since January 2017 with a *Berlin Start-up Scholarship*; over 20 companies have already used this innovation throughout Germany.

plilend UG

is a sustainable investment lending platform founded in 2016 that allows individuals to make sustainable investments in companies worldwide.

Chariteam UG

was founded in 2012 in Berlin. With the support of the Federal Ministry of Economics, a *Commitment Database* was created to catalog non-profits in Germany. With over 200,000 clubs and social enterprise entries, it provides the legwork for committed individuals or businesses to bring together teams to affect social change—either in specific neighborhood projects or online via a network of people with the same interests.

Delivering Innovation

Sustainable development is a dynamic process with economic, environmental, technological, and social implications. Innovation is crucial to create effective, targeted change. Therefore, Freie Universität Berlin introduced *Profund Innovation*, the university’s central service unit for knowledge and technology transfer. Profund Innovation advises students and graduates on how to start companies and initiates various interdisciplinary projects, such as the *Funpreneur Competition*.

Introduced in 2010 in cooperation with the School of Business and Economics, the *Funpreneur Competition* is part of the Bachelor’s program in the General Professional Skills Courses, in which business administration and marketing skills are taught. About 25–30 interdisciplinary teams apply annually. Recently, a special prize was offered for socially and/or ecologically pioneering business models.

The winning team of the *Funpreneur Competition* in Winter Semester 2013/14 developed a holistic cultural exchange enterprise along with the launch of a cookbook, *Über den Tellerrand kochen*. The student team highlighted the topic of asylum and refugee policy from a new perspective and—through cooking—has initiated interactive social integration. Meanwhile, the team has evolved its social enterprise into an independent club in Berlin with various offerings. They have created a network of intercultural communities in over 30 cities worldwide. In 2017, more than 10,000 people shared their experiences at approximately 650 cooking, art, and sports courses as part of the network. The association actively promotes both intercultural skills and an open society.

Freie Universität Berlin also supports sustainable start-ups. The *Innovation Marathon: Chemistry Change*, organized in 2017, showed exemplary opportunities to develop a sustainable circular economy in the chemical industry. Together with investors and over 60 representatives from the industry, the start-up scene, politics, science, and the media, seven teams of students and post-docs developed concrete solutions to the question: How can a new era in chemistry be ushered in? The marathon took place over 24 hours.

As a large, internationally oriented academic institution, we see it as our duty to work to develop solutions to urgent ecological and societal problems in our research and teaching.

Sustainability Mission Statement of Freie Universität Berlin, March 2016

Reaching Out to Society

Because sustainable development must be made practical and understandable if it is to succeed, Freie Universität Berlin offers a variety of events and activities to make this cross-cutting issue accessible to the broader public. Lecture series and continuing education as well as innovative, participatory formats open the doors to the university. Lively dialogue with diverse social actors is in line with the university's mission statement. Through these efforts, Freie Universität Berlin contributes to sustainable societal development.

Schools@University for Sustainability + Climate Protection

Schools@University for Sustainability + Climate Protection is an education format for Berlin secondary schools, developed by the Environmental Policy Research Center as part of an international project. Since 2009, *Schools@University* has been opening Freie Universität Berlin's campus to 5th and 6th graders and their teachers, explaining the abstract topics of sustainability and climate protection. Around 3,000 students with 300 teachers from about 100 schools participate in *Schools@University* every year. The project organizes around 80 hands-on workshops at six on-campus sites, transforming lecture halls, the Weather Station, and the Botanic Garden into interactive labs and creative workspaces. The program also offers half-day training sessions for teachers making sustainable development part of the teaching and learning culture, promoting cooperation between schools, the university, and extracurricular learning places in Berlin, and initiating change in schools. Over the years, an academic and regional education network of around 45 institutions and 90 extracurricular environmental and educational actors has been established under the umbrella of the *Schools@University* project. The project has received several awards – including the *Official Project of the UN World Decade for Sustainable Development* three times, the *Official Project of the UN Decade of Biodiversity* in 2012, and the *Werkstatt N Quality Seal* in 2013 by the German Council for Sustainable Development.



17

Schools@University

1,026

Events

24,659

Students

3,181

Teachers

Schools@University in figures 2009 - 2017



SUSTAIN IT! Art Studios

In cooperation with Berlin artists specializing in drama, photography, and sculpture, Sustain it! developed three art studios in order to create self-reflective dialogue spaces that allowed artistic engagement with sustainable development topics. The multi-day, interactive events focused on resource-intensive consumer trends. Through the studios *Art to Stay* in 2012 and 2016, the initiative raised awareness about the possibility of waste-free and enjoyable coffee consumption. The 2011 art studio *Floating Papers, Moving Images* dealt with the resource-intensive use of paper on campus.

University Days for Sustainability + Climate Protection

Sustain it! has organized four *University Days* events since 2011 on future global issues. These week-long projects include a variety of interactive events such as open-space and fishbowl discussions, science slams, hands-on workshops, film events, bicycle repair cafes, and a *Market for Sustainable Opportunities*. The purpose, on the one hand, is to raise awareness among participants of global, societal challenges and, on the other, to show solutions in everyday life. Between 1,000 and 1,500 participants per year have actively participated in the *University Days*, which is now one of the main activities of the initiative and will be offered annually in the future.

Freie Universität Berlin's Offener Hörsaal

For over 20 years, the *Offener Hörsaal* (Open Lecture Hall) program has offered interdisciplinary lecture series for citizens and members of the university.

Sustain it! has organized two sustainability-related lecture series since 2013: *From Knowledge to Change: Sustainability as a Challenge for University and Science* in Summer Semester 2013 and *Out of the Crisis? Paths to a Socio-Ecological Society* in Winter Semester 2016/17. Experts from academia, industry, and public administration presented their approaches to sustainability research and their institutional sustainability strategies, culminating in a panel discussion. Both lectures regularly welcomed 80–100 participants over 16 events.

In Summer Semester 2017, the Unit for Sustainability and Energy Management, together with the Environmental Policy Research Center, organized the lecture series *Transforming Our World: Sustainability at Freie Universität Berlin – The 17 Sustainable Development Goals of the United Nations in the Focus of Scientific and Institutional Practice*. The lecture series addressed thematic contributions by Freie Universität Berlin to the SDGs in research and within the university. These also attracted around 80 visitors per event.

We seek transparent and continuous sustainability dialogue with the university community, civil society, and the public. As an international network university, open-mindedness and a willingness for international cooperation form the core of our institutional self-image.



Sustainability Mission Statement of Freie Universität Berlin, March 2016

Berlin Long Night of the Sciences

The *Berlin Long Night of the Sciences* has been held annually since 2001, and Freie Universität Berlin has opened its campus from the beginning. The family-friendly program highlights the spectrum of subjects offered at the university. In 2017, the 100 participating facilities of Freie Universität Berlin registered more than 20,000 visits. A large number of institutes and initiatives participate regularly with sustainability-related events, including the Institut Futur, Schools@University, the Institute of Meteorology, and the Unit for Sustainability and Energy Management as well as Sustain it!. The events include the *FUTURE Slam—Science Meets the Future*, a wide range of interactive science experiments, presentations on plant diversity, and guided tours that offer a behind-the-scenes look at energy use at Freie Universität Berlin.

Botanical Night and UniGarden

The Botanic Garden Berlin has also been opening its gates for *Botanical Night* since 2009. More than 20,000 visitors attended this two-day event in 2017. The Botanic Garden has been home to *UniGarden*, where Sustain it! provided guided tours and activities during the 2014–2016 Botanical Nights. In cooperation with artists from *sevengardens* Berlin, dyeing workshops allow visitors to try their hand at the ancient cultural technique of coloring with plant substances.

In the project *UniGardening@SUSTAIN IT!*, students from various disciplines and universities, employees from Freie Universität Berlin, and interested citizens have been coming together to cultivate a 500 m² community garden since 2013. The gardeners tend to the herbal spirals and dyeing beds and have built a wild bee hotel. They literally let this interactive *Urban Gardening* learning and meeting place “grow”.

NatLab – Participatory and Experimental Laboratory for School Students

Founded in 2002, *NatLab* is the student laboratory of the Department of Biology, Chemistry, and Pharmacy, where students experience the natural sciences through their own experimentation. This sparks interest in the topic in children and young adults. Sustainability themes and the ESD-concept play an increasingly important role. The experiments developed by scientists are tailored to school curricula, so laboratory visits can also be integrated into lessons. In 2017, about 198 groups of over 5,078 students took up the offer. *NatLab* also organizes regular training events for teachers, which attracted 70 participants in 2017.





Developing the University Campus Sustainably

As a university, Freie Universität Berlin is committed to contributing to the future-oriented development of society. The university sees itself as a place of learning and work that offers a multitude of opportunities to establish exemplary sustainable development solutions. For years, Freie Universität Berlin has prioritized measures to protect resources and climate on its campus.

Managing Operations Systematically

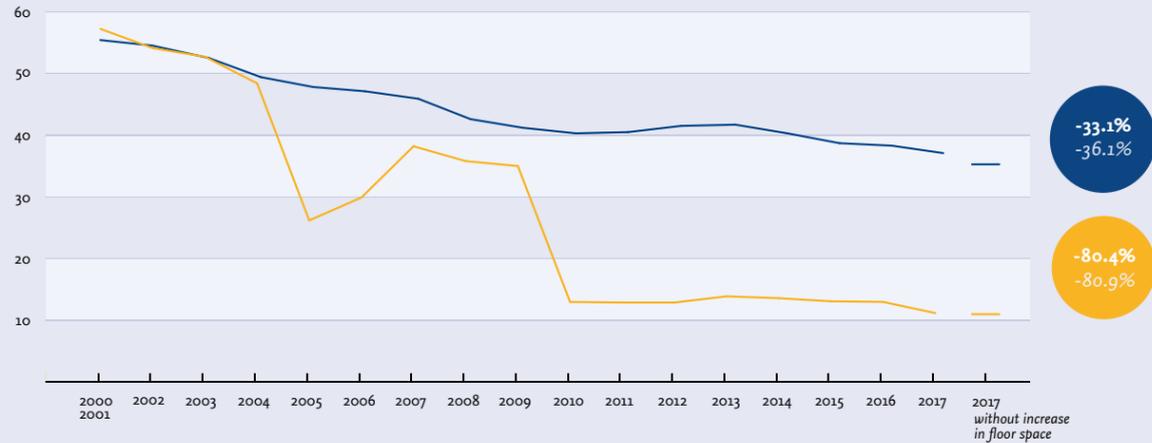
Freie Universität Berlin's environmental management system is in line with the internationally recognized standard *ISO 14001*. First departments began the certification process as early as 2004. Between 2007 and 2013, all university departments achieved recognized standard *ISO 14001* certification. Overall, the systematic implementation of a management system has been very effective. Due to the strong emphasis on aspects of occupational safety and on environmental compliance, questions of resource conservation and strategic issues faded into the background. Consequently, Freie Universität Berlin decided to interrupt the external *ISO* auditing process in 2013 and introduced an integrated management system better able to help the university meet occupational safety requirements. Soon afterwards, the management system *AGUM (Occupational Health and Environmental Protection Management System)* was tailored to the needs of Freie Universität Berlin. *AGUM*—developed in North Rhine-Westphalia—is now used by more than 60 universities. This system improves transparency with regard to regulations and services and ensures continuous improvement. It serves as both a foundation for environmental management and a communication platform and will be accessible to all university members starting in 2018. At the same time, the external auditing process according to the European Union Eco-Management and Audit Scheme (EMAS) will resume.

Using Resources More Efficiently

Energy Consumption and Greenhouse Gases

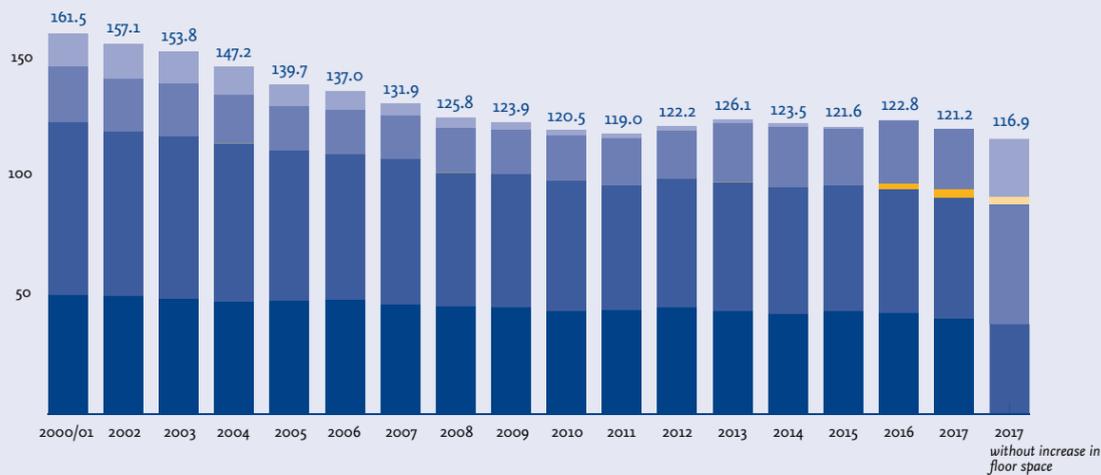
Measuring Freie Universität Berlin's energy consumption is particularly important in determining its carbon and environmental footprint as well as the associated costs. Programs and measures to improve energy efficiency have long been a lynchpin of the campus management's strategy. The university succeeded in reducing its energy consumption between 2001 and 2011 by more than 26%, and annually, by about 42 million kilowatt-hours through a combination of various technical, structural, organizational, and behavioral measures—with floor space remaining stable. Since 2011, energy consumption has remained virtually unchanged, despite a small increase in floor space. In 2017, on a like-for-like basis, energy consumption dropped to its lowest level—with a reduction of 27.6%—since 2001.

CO₂-Emissions 2000-2017
in thousand tons



■ CO₂-emissions based on GEMIS/UBA ■ CO₂-emissions as procured
The energy use includes the energy consumption of canteens and cafeterias of the *studierendenWerk BERLIN*.
italics: without increase in floor space

Energy Procurement 2000-2017
in M kWh weather-adjusted data



■ Electricity ■ District Heating ■ Natural Gas ■ Heating Oil ■ Biogas
The energy use includes the energy consumption of canteens and cafeterias of the *studierendenWerk BERLIN*.
italics: without increase in floor space

Energy Procurement 2000-2017
in percent



This development is all the more impressive given that student enrollment increased by more than 14% between 2010 and 2017 and that third-party spending significantly increased by 23%.

In 2017, Freie Universität saved 4.2 million Euros in energy costs versus the baseline of 2001 and cumulatively over 42.7 million Euros on a like-for-like basis. Energy-related greenhouse gas emissions have diminished by about 36% (based on the Global Emission Model for Integrated Systems [GEMIS] and the Federal Environmental Agency's [UBA] emission factors) and by 81% when factoring in CO₂-neutral electricity purchases. Freie Universität Berlin draws its electricity from the Central Purchasing Department of the State of Berlin, which has procured CO₂-free electricity since 2010 exclusively from renewable energy sources.

Energy Efficiency Programs

Between 2003 and 2011, Freie Universität Berlin's Division for Engineering and Utilities implemented annual, energy efficiency programs focused on modernizing its heating, cooling, and ventilation systems. Roofs and top-floor ceilings in many buildings were insulated and windows refurbished. In conjunction with an energy savings bonus scheme and comprehensive energy controlling, these measures reduced energy consumption in all buildings by an average of 33%. Freie Universität Berlin has invested between 1.5 and 2.5 million Euros annually in these programs, with the payback periods generally being less than five years.

Energy Controlling and Monitoring

Energy controlling and monitoring are crucial in successful university-wide energy management. These measures ensure reliable analyses and consequently, the development of optimization strategies. To this end, developing an energy database and installing energy meters became critical in implementing the university's energy management system. Since 2014, a university-wide, online energy monitoring system has gradually been established and will be completed in 2018. The online system is one of the most important pillars of future campus management. Combining targeted teamwork and communications with operations and departments, the Unit for Sustainability and Energy Management is working to decrease energy usage by an additional 5% by 2022.

Green IT Program

The *Green IT Program*—adopted by the Chief Information Officer (CIO) in 2010—has been crucial in increasing energy efficiency. A comprehensive analysis of IT hardware, which preceded the program, found that IT-related processes accounted for at least 25% of the university's power consumption. The most important measures taken by the *Green IT Program* have, thus, been modernizing the cooling-generation and supply system for the two data centers, centralizing the servers, gradually introducing a central power management system, and applying energy efficiency criteria when purchasing IT equipment.

Bonus Scheme for Energy Savings

When the Energy Savings Bonus Scheme was introduced in 2007, university departments began receiving direct financial incentives to save energy through organizational and behavioral changes. Under this system, a department receives an annual payment from central funds if its energy consumption falls below a previously set baseline. The payment amounts to 50% of the annual cost reduction. If energy consumption exceeds the baseline, however, then 100% of additional costs must be paid from the department's budget. Nearly all the university departments received annual payments since the system launched. The so far highest bonus of 270,000 Euros was paid to the particularly energy-intensive Department of Biology, Chemistry, and Pharmacy.

Combined Heat and Power Plants and Photovoltaic Systems

In 2008, the first photovoltaic system was installed on the physics building. By 2011, eight more solar systems were installed, including one initiated and funded by students. Together, the systems have a capacity of 675 kilowatts, which is equivalent to an annual production volume of about 600,000 kilowatt-hours of renewable electricity. This amount of energy meets the annual electricity needs of, for example, the Department of Political and Social Sciences or 150 four-person households.

In addition, Freie Universität Berlin began operating two combined heat and power (CHP) plants, with two more following in 2014 and 2016. The latter CHP-plant—installed at the Botanic Garden—runs so far on biomethane. These systems have a total electrical output of 715 kilowatts, which generates 4.5 to 5 million kilowatt-hours of electricity a year. CHPs result in primary energy savings of around 23% and about 2,800 metric tons of CO₂ annually.



We know that our credibility will be measured by concrete actions to find sustainability solutions in our area of responsibility in campus management.

Sustainability Mission Statement of Freie Universität Berlin, March 2016



-26%Reduction in energy consumption
between 2001 and 2011**-99%**Reduction in heating oil
since 2001**-36%**Reduction in CO₂-emissions
(based on GEMIS / UBA)
since 2001
without increase
in floor space**-81%**Reduction in CO₂-emissions
(including CO₂-free electricity)
since 2001
without increase
in floor space**-35%**Reduction in heat consumption
since 2001
without increase
in floor space**4.2 million €**Avoided costs due to the reduction
of energy consumption
2017 compared to 2000/01
without increase in floor space**42.7 million €**Aggregate avoided costs due to the
reduction of energy consumption
since 2003
without increase in floor space**9**Photovoltaic systems
with a capacity of
657 kW_p**4**Combined heat and power plants
with a capacity of
715 kW_{el}

Campus Development and Facility Management

Freie Universität Berlin's structural and technical infrastructure is a determining factor for its operational performance. The main goal of campus development is to continuously improve study and research conditions by increasing spatial concentration and by refurbishing and modernizing university buildings, all while working toward cost-effectiveness and energy efficiency. In 2017, the 220 buildings covered around 575,500 m². The completion of the *New Building for Small Departments* in 2015, in particular, allowed for spatial optimization.

As a teaching and research university, Freie Universität Berlin has over 50 laboratory buildings, which account for a considerable percentage of the university's energy and water consumption. In addition to the already mentioned energy efficiency-programs, the Division for Engineering and Utilities of Freie Universität Berlin has consequently implemented various optimization measures that have reduced energy and water consumption in recent years. These included the installation of water-saving circulation chillers and individually adjustable ventilation systems in student laboratories, which can be switched on and off as needed.

The key management tool for Facility Management is a Tenant-Landlord Model, which has been practiced by all academic departments since 2011 and has impacted their budgets since 2012. This tool was implemented at Freie Universität Berlin in all departments, central facilities, and central institutes and will now be used at the university's central administration. Based on a target-actual comparison of both individuals and spaces, increased and reduced expenditures are compared and then incentives for space optimization are developed.

Annual Holidays and Energy Audits

Since the turn of the year in 2012/13, Freie Universität Berlin has been closed during the academic holidays at Christmas/New Year. The annual closing should increase general work efficiency while avoiding unnecessary energy consumption. During this period, ventilation systems and laboratory as well as IT-equipment are switched off wherever possible. University buildings' temperatures are reduced to 12–14°C with a few exceptions. The Unit for Sustainability and Energy Management manages and coordinates this process, which requires close cooperation with specialized departments as well as property, operations, cleaning, and personnel management. These measures have helped save 150,000–250,000 Euros in energy consumption annually. To identify energy optimization opportunities, energy audits are conducted during the holidays.

Procurement

Sustainable procurement means paying attention to not only prices but also aspects such as social responsibility, resource efficiency, and the reduction of greenhouse gases. The price-performance ratio used in making procurement decisions usually considers the entire life cycle of a product or service.

Sustainable procurement has become increasingly important at Freie Universität Berlin in recent years. With an annual budget of around 40 million Euros, the university is an important economic operator and wants to show exemplary leadership with its electronic procurement system. This system increases the transparency of the purchasing process, which results in efficient resource use and cost reductions.

Central Purchasing considers the entire spectrum of sustainability aspects before finalizing contracts. In doing so, it aligns its requirements with the State of Berlin's Procurement and Environment Administrative Regulation (VwVBU). Environmentally friendly products are clearly marked in the procurement system and are prioritized in search results.

Paper and IT equipment are particularly important in this context. Freie Universität Berlin purchased almost 90% certified-recycled paper in 2016. As part of its digitalization strategy, the university also strives to systematically reduce paper use.

The university has developed energy efficiency criteria for purchasing IT hardware that exceed statutory requirements. An essential component of the Green IT program—introduced in 2010—is procuring sustainable IT products. Due to Freie Universität Berlin's comprehensive energy, environmental, and health procurement criteria, the German Environment Agency (UBA) cited the university's environmentally friendly procurement of office equipment as a best practice for the second time in 2016.

Freie Universität Berlin also began reorganizing its printing and copying system in 2017. By 2010, Freie Universität aims to reduce the total number of printers and copiers in use by 50%. New devices will be particularly energy- and cost-efficient.

Water

Freie Universität Berlin developed targeted measures to reduce its water consumption by about 33—to nearly 200,000 m³ per year—within five years (2004–2009). Optimizations made by the Division for Engineering and Utilities, such as upgrading the cooling systems and installing water saving valves and waterless urinals, contributed significantly to these savings. Consumption, however, has turned to the opposite direction since 2015, due to, amongst others, an increased floor space and a new lab building. Furthermore, Freie Universität Berlin built special trench and cistern systems at various locations—for example, at the Earth Sciences Campus in Lankwitz and for the New Building for Small Departments—so that rainwater can seep into the ground and be collected. The collected water is used to irrigate the extensive green spaces on campus. Costs for water use and waste water disposal, including rainwater, amounted to 1.5 million Euros in 2016.

Waste

Classic waste streams—residual, paper, plastic packaging, and glass—make up the majority of waste generated by Freie Universität Berlin. A special type of waste consisting of manure and slurry is produced by the Department of Veterinary Medicine. These waste types combined add up to about 80–90% of the total waste volume, about 67% of which can be recycled. With the introduction of its environmental management system in 2005, Freie Universität Berlin optimized its waste stream separation process. The Unit for Sustainability and Energy Management aims to further reduce residual waste through targeted communication. Most of the waste costs come from disposing residual waste. Total waste disposal costs were around 326,000 Euros in 2017. Currently, revenue can be generated from paper, cardboard, and electronic waste.





There is still room for additional sustainable mobility options beyond those offered by the public transport system, such as optimizing the university's vehicle fleet, minimizing business trips, promoting bicycle use, and establishing a bicycle rental system on the main campus in Dahlem.

Food

The culinary well-being of the students and employees is taken care of by *studierendenWERK BERLIN*, a public non-profit service provider that manages and operates Freie Universität Berlin's 11 cafeterias and dining halls. A unique feature at Freie Universität Berlin is a dining hall with exclusively vegetarian and vegan food. The dishes are organic, seasonal, local, and therefore climate-friendly. The *Veggie Dining Hall* was the first of its kind at a German university. The main dining hall achieved certification under the EU Eco-Management and Audit Scheme (EMAS) in 2016. StudierendenerWERK BERLIN has proven the feasibility of ecological and affordable cooking in a commercial kitchen and supports employees and students in living more sustainably. StudierendenerWERK BERLIN also offers environmental education, for example, with students taking part in the Schools@University for Sustainability + Climate Protection project. Furthermore, it manages the Vegan Climate-Friendly Dishes project. Since its launch in April 2011 through December 2017, 2.85 million climate-friendly meals have been sold in all of its dining halls.

Biodiversity

The Botanic Garden and the Botanical Museum belong to the central facilities of Freie Universität Berlin. The Botanic Garden is one of the world's largest because of the breadth and diversity of its flora, encompassing about 20,000 plant species. Research and development projects at the Botanic Garden support national and international biodiversity programs as well as Freie Universität Berlin's research and teaching.

The Botanic Garden and the Botanical Museum have an extensive collection of live plants in both greenhouses and outdoors, a herbarium of about four million plant specimens, and a botanical library with about 350,000 titles. Regular exhibitions show the natural and cultural history of plants. The Botanical Museum is the only one of its kind in Central Europe.

Freie Universität Berlin's buildings are set in several vast green areas in Berlin's Steglitz-Zehlendorf district and on its own campus. Numerous green roofs also beautify the campus' appearance, improve the local microclimate, and serve as a habitat for insects and birds. Some roofs even contain beehives with additional ecological benefits.

Mobility

Berlin has a well-developed public transport system offering an excellent connection to Freie Universität Berlin for all employees and students. When enrolling at Freie Universität Berlin, students automatically receive a semester ticket for the Berlin area. Since 2004, university employees have been able to purchase a company ticket, which is cheaper than the regular monthly fee. About 500 employees took advantage of this in 2017. Freie Universität Berlin thereby encourages sustainable mobility behavior.

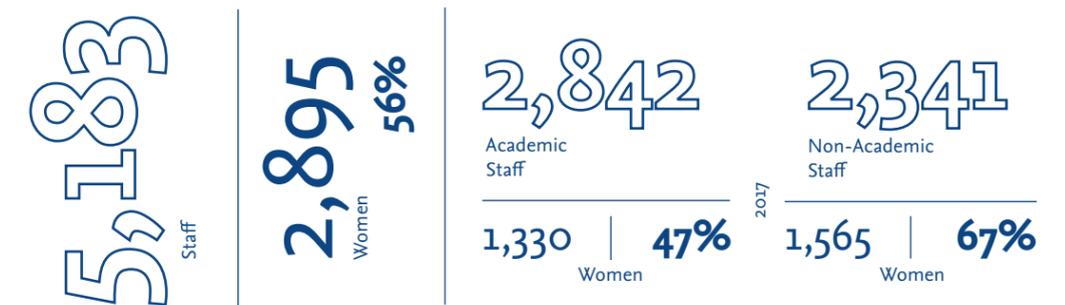




Promoting Gender Equality, Diversity, and Health

Gender Equality Concept

Equality and diversity are important aspects of social sustainability. For over 30 years, Freie Universität Berlin has developed and implemented a gender equality policy. As early as 1989, Freie Universität Berlin introduced the *C1/C2 Program*, its first structured gender-equality measures, which focused on promoting young female scholars. Then, in 2005, a change to the staffing structure led to the *C1/C2 Program* becoming the *W1/W2-Time-Professor Program*. This funding program enabled the establishment of temporary professorships for female scholars as a springboard into their careers and assisted them in applying for permanent professorships. Between 2005 and 2017, 20 out of 23 female scholars from Freie Universität Berlin received temporary or tenured W2 professorships, both within and outside the university, and 12 of them in scientific disciplines.



Despite these successes, a differentiated look at the data also reveals a need for further gender equality efforts. While the percentage of female students at Freie Universität Berlin has been 59% for about 15 years, only 37% of professors in 2017 were female. While this is a 15%-point increase since 2005, much more action is required, especially when it comes to tenure. Only 32% of tenured professorships were held by women in 2017. As of 2017, Freie Universität Berlin had almost 5,200 employees, 56% of whom were women. The percentage of female academic staff was 47% and non-academic staff was 67%. In 2015, the university adopted the *Gender Equality Concept for 2015–2020*. It strives for an approximately gender-equal composition of junior scholars by 2020 as well as a higher proportion of women in both tenured professorships and in the university’s governing bodies. Furthermore, it fully acknowledges the *Diversity Mission Statement*.

Since 2002, Freie Universität Berlin has frequently been awarded the *Total E-Quality Award* for its exemplary promotion of women—including an award for its diversity engagement in 2017—and is one of the top-ranked universities with regard to gender equality issues according to the *Center of Excellence Women and Science (CEWS)*.

Welcome@FUBerlin

To meet the current challenges of immigration, Freie Universität Berlin set up the *Welcome@FUBerlin Program* in November 2015. This program allows qualified, prospective students who had to flee their home country to take German courses, preparatory courses in the *Studienkolleg*, and other select courses free of charge. These options should make it easier for students to prepare for regular university studies. Various institutions on campus—such as the Student Advisory Office and the Language Center—provide support in Arabic, Farsi, English, and German at the beginning of studies. As part of the Buddy Program, students support participants of the *Welcome@FUBerlin Program* by answering questions about their studies and by giving campus and library tours.

Family Support

Since June 2007, Freie Universität Berlin has been certified as an *Audit Family-Friendly University*, and signed on the *Familie in der Hochschule Charter* in June 2015. With its family-friendly HR policy and university structure, Freie Universität Berlin helps university members better reconcile work, study, and academic demands with family responsibilities. Both students and employees can seek confidential advice at the *Dual Career & Family Service* on all matters relating to balancing studies, work, and family.

Personnel Development and Health Management

Freie Universität Berlin started its occupational health management in 2005 with the *FUndament Gesundheit* project and, in 2015, set up the *Unit and Steering Committee for Professional Development* within the HR Department. Important goals include attracting and hiring new employees, strengthening employee health, job satisfaction, and motivation, and helping further develop and secure internal working knowledge from a lifelong learning perspective. One example of a joint project is the *Knowledge Transfer Project*, launched in 2016. A target-group-oriented toolkit will help to transfer and retain the best possible knowledge when facing situations including age-related employee departures. Another exemplary measure of the occupational health management is the annual *Health Day*. This event offers a wide range of interactive workshops and informational sessions focused on raising awareness about important healthcare provision-related topics.

University Sports

University Sports promotes health on campus. A variety of activities—such as the *Pausen Express*, introduced in 2013, which provides a movement break in the workplace—are designed to enhance well-being. Since 2016, the *Refugees Welcome@UniSport* program provides a selection of free University Sports courses for refugees as well as their supporters at the *Welcome@FU Program*. They can participate in selected courses offered by University Sports free of charge. The *Inclusion Sports* program also offers a variety of opportunities, including wheelchair basketball. In 2017, 30% of employees and 17% of students took advantage of University Sports' offerings.



We are a leading educational organization that wants to work together with all members of the university community in creating systematic spaces to learn and experience new ways to shape sustainable development.

Sustainability Mission Statement of Freie Universität Berlin, March



Defining and Implementing Ambitious Goals

This report makes it clear that Freie Universität Berlin's continuous strategies to improve sustainability are supported by a variety of management systems and tools. Defining new qualitative and quantitative goals is an integral part of every management process. By 2020, we seek to achieve the following goals and priorities:

Governance and Participation

Focus of Sustainability Activities until 2020	Actors
Continuing of the central Sustainability Steering Committee and the subject-focused working groups on: teaching, research, campus management, and participation.	Steering Committee, Working Groups Coordination: Unit for Sustainability and Energy Management
Having the environmental management system of Freie Universität be validated in accordance with EMAS (Eco-Management and Audit Scheme), including the continued integration of the occupational safety, health, and environmental management system (AGUM).	Entire University Coordination: Unit for Sustainability and Energy Management
Establishing sustainability teams in academic departments, libraries, and the central university administration to initiate and implement decentralized sustainability-related projects.	Academic Departments, Libraries, Central University Administration Coordination: Unit for Sustainability and Energy Management
Continuing and expanding the University Alliance for Sustainability (UAS) with a mobility program for students, PhD candidates, researchers, and administrators as well as the annual international Spring Campus Conference.	UAS Network Board and Steering Committee Center for International Cooperation (CIC) Division for International Affairs Coordination: Unit for Sustainability and Energy Management
Holding regular meetings for interdisciplinary networking among scientists to promote sustainability issues in research and teaching.	Unit for Sustainability and Energy Management
Developing a concept to introduce ideas and innovation management focusing on sustainability.	Unit for Sustainability and Energy Management

Research, Teaching, and Knowledge Transfer

Focus of Sustainability Activities until 2020	Actors
Introducing Sustainable Development as a competence area, including four modules within the study area General Professional Skills Courses (ABV) for B.A. students in Winter Semester 2018/19.	Teaching Working Group Division for Academic Affairs Unit for Sustainability and Energy Management
Introducing a Teaching Sustainability module into the B.A. curriculum of Teaching-Related Professional Courses for Primary Schools.	Dahlem School of Education Unit for Sustainability and Energy Management
Conducting and evaluating advanced training for lecturers to impart didactic approaches for the teaching and learning concept, Education for Sustainable Development.	Project SUPPORT Unit for Sustainability and Energy Management
Establishing a Sustainability Toolbox, an online teaching and learning platform, with information on sustainability topics in teaching, research, and campus management.	Unit for Sustainability and Energy Management VP4 CEDIS
Developing and implementing sustainability education courses for university employees.	Center for Continuing Education Unit for Sustainability and Energy Management
Implementing participatory sustainability formats (such as lectures, art labs, university days, and sharing projects).	SUSTAIN IT! Initiative for Sustainability + Climate Protection
Continuing Schools@University for Sustainability + Climate Protection.	Environmental Policy Research Center, Department of Political and Social Sciences

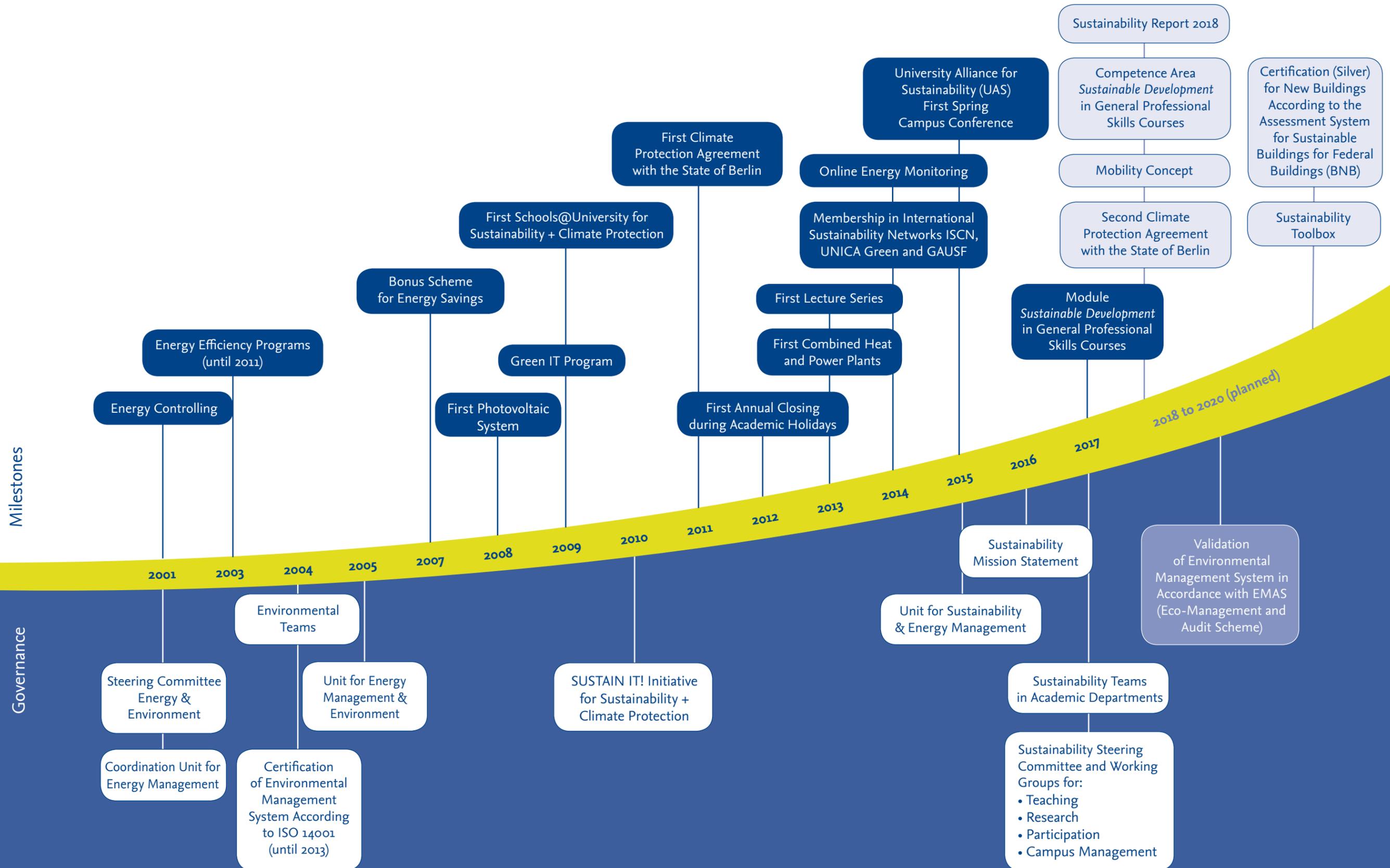
Campus Management

Focus of Sustainability Activities until 2020	Actors
Developing the online energy monitoring system and making it an effective communication tool with the aim of reducing the university's specific energy consumption by another 5% by 2022 (compared to 2016).	Unit for Sustainability and Energy Management Division for Engineering and Utilities Academic Departments
Continuing the bonus scheme for energy savings and the annual closing during the academic holidays.	Unit for Sustainability and Energy Management Division for Engineering and Utilities Academic Departments
Achieving certification of new buildings to at least the Silver Standard according to the Assessment System for Sustainable Building (BNB) set by the German Federal Government.	Division for Engineering and Utilities
Completing the refurbishment of the Chemistry Building at Arnimallee 22 and beginning renovation of the Chemistry Building at Takustr. 3; reducing heat demand by at least 30% after completion of the measures.	Division for Engineering and Utilities
Developing and implementing a bicycle-friendly campus concept through a bicycle-rental system on the Dahlem campus.	Central Unit for Occupational Health Management University Sports Unit for Sustainability and Energy Management
Decreasing the number of printers and copiers by 50% across the university thus saving paper and energy.	Division for Finances, Procurement, and Position Management, Academic Departments Unit for Sustainability and Energy Management
Developing a sustainable mobility concept for Freie Universität Berlin.	Unit for Sustainability and Energy Management Division for Finances, Procurement, and Position Management
Developing an EventN-toolbox for planning and realizing sustainable events at Freie Universität Berlin.	SUSTAIN IT! Initiative for Sustainability + Climate Protection
Setting up a re-use project for office equipment and furniture.	Unit for Sustainability and Energy Management Division for Finances, Procurement, and Position Management

Communication and Networking

Focus of Sustainability Activities until 2020	Actors
Establishing the website Sustainable Development at Freie Universität Berlin with comprehensive information on sustainability activities and opportunities in research, teaching, campus management, knowledge transfer, and networks.	Unit for Sustainability and Energy Management Office of News and Public Affairs
Actively participating in national and international sustainability networks such as HOCH ^N , ISCN, and UNICA GREEN.	Unit for Sustainability and Energy Management
Developing and implementing a sustainability campus tour to show exemplary sustainability projects.	Unit for Sustainability and Energy Management
Regularly publishing sustainability reports.	Unit for Sustainability and Energy Management

From Energy to Sustainability Management



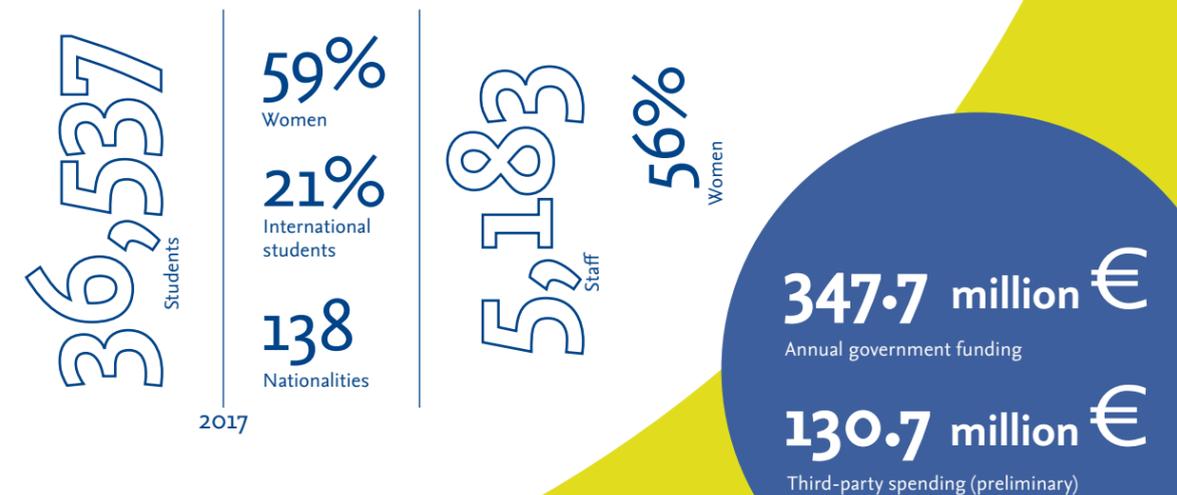
About Freie Universität Berlin

In 1948, professors and students founded Freie Universität Berlin in response to the persecution of students critical of the political system in what was then Universität Unter den Linden, in Soviet-occupied East Berlin. Freie Universität Berlin's orientation toward freedom and internationality continues to shape its development. Remaining true to its history, Freie Universität is committed to social responsibility. With its *Sustainability Mission Statement* adopted in 2016 and its commitment to gender equality and diversity, the university's goal of achieving sustainable development is firmly embedded in its profile.

Freie Universität Berlin is one of Europe's most important research universities and has been a University of Excellence in Germany since 2007. The *Times Higher Education* magazine ranked Freie Universität Berlin as the 7th-best German university (88th worldwide) in 2018. In the 2017 *Universitas Indonesia GreenMetric World University Ranking*—which included 619 universities from 75 countries—Freie Universität ranked 26th worldwide and is the highest ranked German university.

Freie Universität's portfolio ranges from natural and life sciences to social sciences and humanities, as well as to veterinary medicine. The university has 12 faculties (including human medicine, in cooperation with Humboldt-Universität), four central institutes as well as numerous graduate schools, excellence clusters, and interdisciplinary centers.

International collaboration is a high priority. The university currently has partnerships with around 100 academic institutions and seven liaison offices globally. With regard to sustainability, Freie Universität Berlin—with its strategic partner universities—co-founded the *University Alliance for Sustainability* in 2015. Funded by the German Academic Exchange Service (DAAD), the Alliance is vital in creating initiatives and networking.



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Appendix

		2000	2005	2010	2015	2016	2017
Annual government funding [M €]		267.6	292.4	274.2	311.6	318.5	347.7
Third-party spending [M €]		36.7	46.1	106.3	124.3	129.9	130.7 (preliminary)
Third-party spending on sustainability-related research projects [M €]						26.5	31.3 (preliminary)
Students [number]	total	35,283	31,398	32,043	35,413	36,237	36,537
	including women	53%	59%	58%	59%	59%	59%
Doctoral students	total	2,351	2,260	3,902	4,406	4,338	4,205
International students	total	5,481	4,765	6,042	7,358	7,626	7,584
Staff [number]	total		4,497	4,972	5,143	5,181	5,183
	including women		53%	56%	57%	56%	56%
Non-academic staff	total		2,283	2,350	2,357	2,349	2,341
	including women		67%	67%	67%	67%	67%
Academic staff	total		2,214	2,622	2,786	2,832	2,842
	including women		39%	45%	47%	47%	47%
Professors	total		433	475	548	557	562
	including women		20%	31%	38%	38%	37%
Tenured professorships	total		372	310	319	327	343
	including women		19%	25%	31%	31%	32%
Temporary professorships	total		0	31	54	55	58
Junior professorships	total		30	77	106	92	93
Guest professorships	total			57	69	83	68
Student employees [number]	total			1,662	1,713	1,716	1,716
Adjunct teaching staff [number]	total		1,325	1,461	1,094	1,025	957
Number of sustainability-related research projects with third-party funding (out of all projects)*						400 (1,600)	457 (1,546)
Number of sustainability-related courses (out of all courses)						519 (4,171) SuSe 2016	621 (4,087) SuSe 2017
						574 (4,444) WiSe 2016/17	641 (4,213) WiSe 2017/18

		Baseline	2005	2010	2015	2016	2017
Final energy procurement** (weather-adjusted) [MWh]	total	161,462 (2000/2001)	139,705	120,529	121,627 117,431	122,798 118,441	121,194 116,897
	change to baseline		-13.5%	-25.4%	-24.7% -27.3%	-23.9% -26.6%	-24.9% -27.6%
Electricity		50,222	48,059	43,716	43,472 41,216	42,624 40,238	40,517 38,120
District heating		73,399	63,612	55,152	53,345 52,577	52,925 52,094	51,493 50,719
Natural gas		23,774	19,034	19,251	24,303 23,131	24,761 23,620	25,665 24,539
Biogas		0	0	0	0	2,170 2,170	3,354 3,354
Heating oil		14,067	9,000	2,410	507 507	318 318	165 165
Energy cost savings [M €]	annual reductions compared to baseline		1.22	3.19	3.45 3.97	3.17 3.70	3.63 4.17
	aggregated		2.40	14.72	32.87 34.24	36.25 38.16	40.21 42.66
CO ₂ -emissions with GEMIS/UBA-factors [t]	total	55,381 (2000/2001)	47,817	40,327	38,738 37,141	38,329 36,651	37,057 35,387
	change to baseline		-13.7%	-27.2%	-30.1% -32.9%	-30.8% -33.8%	-33.1% -36.1%
Electricity		32,569	29,220	25,093	23,344 22,133	22,974 21,688	21,839 20,547
	change to baseline		-10.3%	-23.0%	-28.3% -32.0%	-29.5% -33.4%	-32.9% -36.9%
CO ₂ -emissions as procured [t]	total	57,194	26,160	12,951	13,075 12,736	13,043 12,700	11,209 10,911
	change to baseline		-54.3%	-77.4%	-77.1% -77.7%	-77.2% -77.8%	-80.4% -80.9%
Electricity		38,118	10,717	0	0	0	0
	change to baseline		-71.9%	-100%	-100%	-100%	-100%
Water use [m ³]		283,009 (2004)	272,016	200,302	218,944	240,034	not available
Waste costs [€]	total	427,862 (2004)	453,794	348,076	339,062	347,527	326,133
	Residual waste		150,594	141,669	142,217	159,058	160,656
Special waste (for example: chemical waste, bulky waste, electronic waste, etc.)		236,373	275,419	202,515	180,004	165,971	138,058
Net floor space (NRF) [m ²]		547,500 (2000)	543,500	546,500	575,500	575,500	575,500

italics: without increase in floor space

* e.g. including post-graduate programs, etc.

** The energy use includes the energy consumption of canteens and cafeterias of the StudierendenWerk Berlin.

Sustainability Report 2018

Freie Universität Berlin

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