Research strategy

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Hochschule für Technik
und Wirtschaft Berlin

University of Applied Sciences

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Hochschule für Technik und Wirtschaft Berlin
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Guiding principles

Research at HTW Berlin has experienced dynamic development in recent years: the group of academics engaged in active research is growing, the number of cooperation partners is at a reliably high level, the volume of third-party funding has increased impressively and high-quality publications have appeared on a regular basis. The growth of a budget-financed, scientific mid-level faculty has also further strengthened the research culture at the University. This present research strategy builds on this excellent foundation. The following guiding principles are fundamental to this undertaking:

HTW Berlin values individual research and the numerous and diverse researchers working at its institution. The University's professors and research assistants, students and doctoral candidates constitute the wellspring for the development of relevant research questions, the elaboration of innovative research methodologies and the generation of new knowledge. It is thus crucial to support researchers at HTW Berlin in the best possible way, to recognise their academic achievements in a wide variety of forms and to broaden the scope for their research activities.
The sheer diversity of the disciplines represented here is one of HTW Berlin's greatest strengths. Increasing the aforementioned disciplinary diversity even further in the coming years and exploiting its potential will constitute an important task of future research funding. For this reason, structures and event offerings are being further developed which strengthen and promote cooperation across disciplines and disciplinary boundaries.

The disciplinary profile of HTW Berlin offers an excellent basis for creating impetus in the Berlin-Brandenburg region and beyond, as well as for shaping the transformation of society responsibly in conjunction with actors from fields as diverse as politics and business, administration and civil society. When it comes to dealing with contemporary crises and adverse issues, great trust is placed in science, as demonstrated during the COVID-19 pandemic. HTW Berlin is rising to this challenge, and intends to continue to ensure that its research makes a significant contribution towards finding answers to the important future questions of our time.

Promoting young academics is a particular concern of the University. HTW Berlin is committed to providing students and doctoral candidates active in research with an excellent standard of mentoring, as well as to guaranteeing the quality of academic training. Those who embark on an academic qualification at HTW Berlin should also be able to complete it both successfully and in a reasonable amount of time. Our guiding principle is that all researchers should be on an equitable footing in order to gain knowledge together.

The University and its academics avail themselves of contemporary scientific communication in order to contribute to the recognition and public discussion of research results. Target-group-specific communication channels ensure that barriers to understanding between science and society are removed and research achievements receive increased publicity. Professional science communication allows researchers access to decision-makers from the fields of politics, administration and business, boosting the profile of the research carried out at the University as a result. This is because the proposal of future responses to current issues must also be communicated, assimilated and subject to further analysis.

HTW Berlin seeks not only to conduct high-quality research, but also to do so in an effective manner. This includes the transparency of methodologies and findings in order to enable further scientific work. To this end, research at HTW Berlin is guided by the principles of Open Science, placing equity, diversity, equality, inclusivity and accessibility at the centre of all areas of academic activity.

The research strategy with its strategic fields of action and goals was adopted by the Academic Senate of HTW Berlin in June 2023. In July 2024, it was supplemented by sections on research focuses and monitoring and also adopted by the Academic Senate.

Research focuses

The University values individual research and the diversity of its researchers. It promotes a variety of research methods and advocates for freedom of research and the creation of space for research activities. The academics are committed to researching various social challenges and are collaborating on five major future topics that have been defined as key research areas for the University. The doctoral centres to be established in future will also be dedicated to these research areas. These relate, respectively, to the optimum use of renewable energies and resource efficiency, innovative methods for health, care and life, potential uses of digital technologies for the economy and society, aspects of sustainable management, entrepreneurship and the future of work as well as artistic and creative approaches from the fields of design and culture to solve challenges facing society as a whole.

Digital technologies for industry and society

In this research area, academics from the disciplines of computer science, engineering, economics and design develop innovative technologies for various fields of application, industries and types of organisation - from SMEs to educational and cultural institutions. They are sought-after partners when it comes to the use of apps, mixed and virtual reality applications, intelligent systems and generative AI. Research is also being conducted into new products, production techniques, forms of organisation and social innovations that are made possible with the help of digitalisation. The guiding principles here are the human-centred design of interaction via technology and the positive social impact of the use of digital media and technologies.

Technologies for health and life

This area of research focuses on interdisciplinary research into innovative methods, products and services for health, care and life. This includes the optimisation of existing and the development of new pharmaceutical and medical technology products, applications and procedures from diagnostics, prevention and therapy to technology-supported care, including robotics, artificial intelligence and virtual reality. The researchers are working on innovative and environmentally friendly biotechnological products as well as production and diagnostic methods. Legal, economic and design-centred aspects are also taken into account for a holistic approach and an efficient and high-performance healthcare system.

Renewable energies and resource efficiency

This research area addresses transformation processes in pursuit of a greenhouse gas-neutral and resource-conserving economy and way of life. Here, the focus is placed on the development of technologies for the energetic and material utilisation of renewable raw materials. Research is being conducted into the possibilities and potential of renewable energies, boosting the flexibility of the entire energy supply system, the coupling of the electricity, heating and mobility sectors and issues of climate adaptation. Among other things, future-oriented buildings and neighbourhoods, sustainable and smart urban development, renewable raw materials, emission-free energy and mobility concepts as well as their economic and business impact are considered in their entirety.

Design and culture

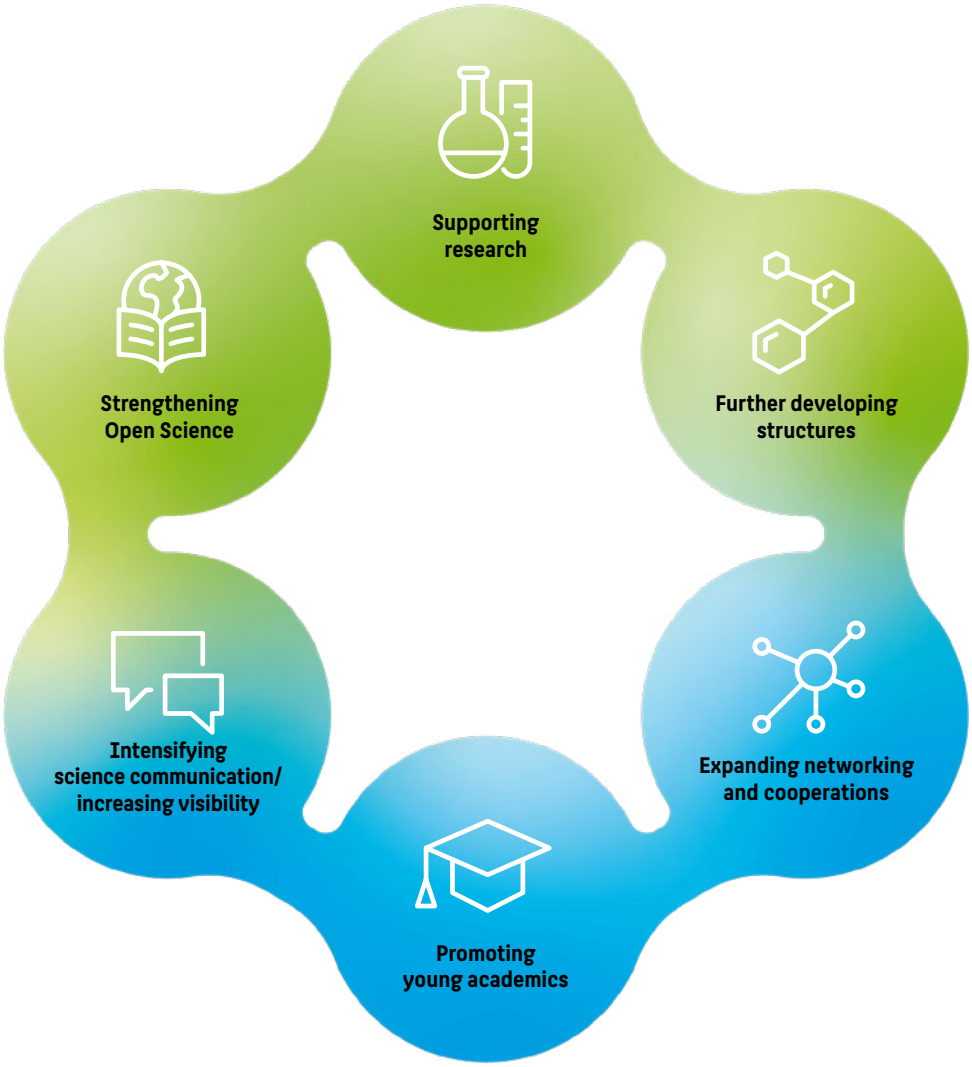
In the research area design and culture, researchers at HTW Berlin are involved in innovations in sectors such as games and fashion as well as in culture, politics and administration. The projects combine creative-artistic and technical perspectives and employ methods such as systemic design, service design and game thinking, which focus on the participation of different stakeholders and are therefore essential for solving challenges facing society as a whole. Research into the preservation and communication of cultural heritage, the digitisation of cultural assets and innovative media and methods in museum communication and design contribute to a broader and deeper understanding of our society and its future.

Sustainable management, entrepreneurship and the future of work

This research area is dedicated to structural changes in modern societies due to globalisation and capital mobility as well as questions of the social, ecological and economic use of resources in companies and civil society organisations. New business models, work processes, forms of organisation and employment are also examined, with a particular focus on the connection between innovation and entrepreneurship. The transformation of organisations and economies is viewed holistically and integrates both micro- and macroeconomic aspects and regulatory and legal aspects of change management towards an efficient economy and a crisis-resilient society.

Strategic fields of action

The strengths and weaknesses, opportunities and risks of research at HTW Berlin were identified within the context of a university-wide discussion process. Six strategic fields of action were derived from these sessions, which are of central importance for the future development of research at HTW Berlin and its positioning as a sustainable, high-impact University of Applied Sciences:



The status quo for each field is outlined initially, followed by goals and measures required to achieve the same. The overriding aim is to ensure that academics at the University enjoy good framework conditions which permit them to implement their research ideas and projects and to have a formative effect on society and the economy. HTW Berlin's goals of gender equality, non-discrimination and diversity awareness receive practical application via the measures outlined in the research strategy.

Supporting research

The commitment to research at HTW Berlin has grown steadily in recent years.[1] The reasons for this are manifold: in addition to the intrinsic motivation of the researchers themselves, their chosen topics, such as digitalisation, energy transition, etc., have been and continue to be in high demand in society and the economy and are supported by funding bodies. Another positive effect has been the development of a scientific mid-level faculty, which has been possible for universities in the State of Berlin since 2018. The staff, who are employed to perform duties related to both their field of expertise and to carry out tasks supporting research, enrich the research culture at the University and promote new forms of exchange and collaboration. However, the central challenge at a University of Applied Sciences with a high number of teaching hours continues to be the lack of time required to ensure good research which ensues as a result – from the process of generating ideas and submitting applications to the realisation and documentation of research projects and the publication of the respective outcomes.

> **HTW Berlin supports and promotes the diverse research activities of its academics. It subjects the support services for research and transfer to continuous development, taking into account the needs of the researchers and external framework conditions in the process.**

Numerous support structures have already been established at HTW Berlin. A research service has been set up in the form of the Cooperation Centre for Applied Science (KONTAKT) that supports researchers with third-party funding applications in a national, European and international context and advises on the initiation and implementation of research partnerships, inventions and patents. In addition, research coordinators in the university faculties provide decentralised support with third-party funding applications, collaborations and academic events. The Committee for Research and Junior Academic Staff (FNK), appointed by the Academic Senate, allocates personnel and non-monetary resources made available by the University and recommends reductions in teaching hours for the realisation of research projects and academic publishing. A research fund in the area of the Vice-President for Research also provides resources for initiating research projects, procuring equipment and materials and publicising outcomes. The budget and human resources departments as well as the Dean's Offices within the faculties continue to provide administrative support during the project's implementation.

1 *Over the last decade, both the number of third-party funding recipients and the number of applications for research funding have doubled. Additionally, the number of projects and the volume of third-party funding have increased 1.6-fold in the last 10 years, while scientific publications have increased 1.3-fold.*

In the coming years, HTW Berlin will continue to develop these research support services and interlink them more closely, thus ensuring that academics enjoy both good conditions for their research endeavours and are able to pursue these at greater lengths.

1. HTW Berlin expands its research and transfer support services.

- In the development of research projects and in the application phase, researchers are supported by financial and human resources (e. g. research funds, the team at the Cooperation Centre for Applied Science (KONTAKT), research coordinators).
- Strategically important major applications receive conceptual and organisational support from the Central Research Service.
- The departments and divisions tasked with supporting the research (KONTAKT, Budget, Human Resources, Faculties) collaborate in order to develop their processes further, particularly as regards the various interfaces.
- Recurring work steps in the context of application and project support

2. HTW Berlin creates a sustainable research environment.

- As part of contract negotiations, HTW Berlin provides basic funding for the prompt commencement of research activities by newly appointed professors. Special support is given to projects in which research activities are also used to further develop teaching.
- The University Board lobbies for increased research periods to be allocated to its employees at the political level.
- HTW Berlin is continuing to develop the concept of a research professorship at the University.
- The University raises awareness among its researchers regarding the principles of good scientific practice and research-related integrity.
- Centralised and decentralised work units support researchers in the field of research data management, e. g. in the preparation of research data management plans.
- An Ethics Committee is established to discuss and respond to ethical questions in research.
- Research consortia and alliances receive internal or external legal advice upon request.

3. The University strengthens its European and international research profile and supports academics in obtaining funding from the EU Framework Programme for Research and Innovation and other programmes.

- The visibility of European and international projects and activities is increased and researchers are provided with advice and support as they hone their international profiles.
- Peer-to-peer consulting is used for knowledge transfer and internal networking, and a mentoring programme between experienced EU researchers and first-time applicants is being expanded.
- The EU Advisory Board, which advises the University Board and consists of professors with experience in the acquisition and management of EU funding, will be consolidated and continued.
- Strategic cooperations are identified and established in collaboration with the International Office.

4. The University raises awareness and trains researchers in measures to disseminate and exploit research results, thereby increasing the impact of their research.

- Awareness of the added value of research in the economy and society (transfer, licensing, further use of research results or software innovations, etc.) is raised and corresponding competences and capacities are developed, e. g. through advisory services and training.
- The University's Intellectual Property (IP) strategy is being subject to further development.
- Impact analyses of selected projects (e. g. from a certain funding volume) are carried out and flagship projects publicised in a targeted manner.

Further developing structures

Research at HTW Berlin relies on the commitment of many individual academics. At the same time, researchers have increasingly expressed the desire to network more with one another and to boost interdisciplinary collaborations across degree programmes and departments in order to be able to better utilise the synergies of different areas of expertise. Many current research topics address complex societal challenges, such as climate change and digitalisation, which require diverse perspectives that can be united at HTW Berlin with its broad range of subjects. However, productive interdisciplinary and cooperative research requires sustainable structures within which it can develop.

> **HTW Berlin supports and promotes the diverse, interdisciplinary research activities of its academics. To this end, it is continually developing academic structures in the fields of research, transfer and innovation. In the process, it takes into account the needs of the University and its academics as well as external stakeholders from business, civil society and politics.**

In 2023, the research landscape at HTW Berlin is characterised by various structural units. Research groups have formed around professors with strong research skills, some of whom have many years of expertise in their respective fields. Academics seeking to pursue interdisciplinary cooperation in a specific topic area can join together to form research clusters. To do so, they must provide evidence of publications and third-party funding and be recognised as a research cluster by the University Council. Ten research clusters exist at HTW Berlin in 2023, which are active in different ways. Thus far, they have not received any financial support from the University, or rather only after submitting a corresponding application, e. g. via the research fund. In addition, the University facilitates the establishment of academic institutions (centres or similar), which are formed by resolution of the respective Faculty Councils and after approval by the University Board. Academic facilities are currently temporary and are also not allocated any human or financial resources from the University. Across from the aforementioned units are the University's research foci, which are depicted in the research map of the German Rectors' Conference (HRK). These combine research clusters on superordinate topics, serving predominantly to position the University within the German research landscape as well as vis-à-vis the various stakeholders such as the Senate Administration, the Board of Trustees, etc. Last but not least, mention should be made of the affiliated institutes as legally independent institutions with which HTW Berlin cooperates in the form of research partnerships, events and collaborative projects.

The future task will be to design the structures in such a way that, on the one hand, they meet the various needs (professional networking, joint applications if necessary, profile building internally and externally, etc.) and, on the other, that the procedures for implementing, running and reversing structures are transparent and comprehensible. In addition to the official structures, unofficial, interdisciplinary networking formats that have been successfully established in recent years, such as research walks, researchers in residence, etc., should simultaneously be continued, and their dynamics should not be slowed down by any pressure to become more formal.

1. At HTW Berlin, research-conscious academics find the structures to match their research needs.

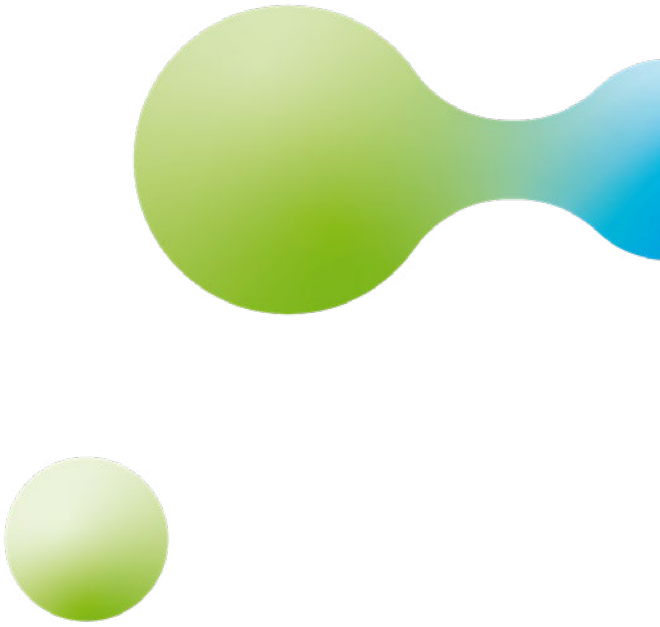
- The criteria for establishing and operating research groups, research clusters and scientific institutions are being redeveloped and the corresponding structures made transparent and visible.
- Newly appointed professors are supported during their integration within the research landscape of HTW Berlin.
- Research assistants (both on a budgetary and on a third-party-funded basis) and doctoral students form an integral part of the emerging and developing structures.

2. HTW Berlin boasts vibrant research structures that address contemporary issues.

- The research priorities, clusters and scientific institutions are regularly analysed and evaluated and, if necessary, adapted to structural and thematic innovations.
- Research clusters receive start-up funding (e. g. funding for student assistants and material resources) and are supported by a central office in public relations and science communication.
- Clusters that have successfully established themselves can be given more stable structures, such as in the form of institutes. Institutes are usually self-financing, primarily through third-party funding. The question of financial leeway, e. g. through retained lump sums, is being examined.
- The University is developing a concept for future cooperation with so-called *An-Institute*, establishments which maintain a contractual relationship with the University.

3. Researchers at HTW Berlin foster exchange across disciplinary and subject boundaries and jointly develop research ideas and projects.

- Formats including the research walk, the research forum and faculty colloquia serve to help researchers get to know each other and exchange ideas and are offered by the decentralised and central units of the University on an ongoing basis.
- At HTW Berlin, spaces are created for researchers to meet and exchange experiences, e. g. through physical and digital co-working opportunities.
- Inter-faculty courses enable students to get involved in joint (research) projects.



Expanding networking and cooperations

HTW Berlin pursues practical and applied teaching and research. Academics at the University are sought-after partners for companies, other academic establishments and organisations such as cultural institutions, associations and societies as well as the administration.[2] The type of cooperative relationships is diverse, ranging from theses and teaching projects and collaborative and contract research to joint participation in large-scale research funding programmes.

> **HTW Berlin involves science, business, politics and civil society in its research activities and complements its own skills through targeted cooperation with appropriate actors. Particular focus is placed on the capital region urban of Berlin-Brandenburg, while cooperations in the national, European and international research area contribute simultaneously to the supra-regional profile of HTW Berlin and its visibility.**

Companies seeking expertise at the University can contact the Cooperation Centre for Applied Science (KONTAKT), which provides support and advice during contact initiation. An online research catalogue also helps in the search for suitable contacts. Numerous meet-and-greet and initial networking events also exist, including digital formats, which are very popular. In recent years, HTW Berlin has attached great importance to the transfer between science and practice and has thus systematised corresponding goals and measures in the form of a transfer strategy in the wake of an externally conducted transfer audit.[3] In 2020, a Transfer Award was created in order to recognise the commitment of professors who dedicate themselves particularly intensively to the topic and also find new, co-creative forms of cooperation. Of the numerous long-standing research partnerships, the Institute for Applied Research (IFAF) Berlin deserves special mention, as it not only promotes cooperation between science and practice in the capital region, but also strengthens collaboration with the other Universities of Applied Sciences in the State of Berlin.

With this research strategy, HTW Berlin is committed to transfer-oriented research. To this end, the University seeks to expand existing partnerships, subjecting these to further development, as well as to enter into new cooperative relationships set to benefit both research at the University and the transfer of its outcomes to the wider economy and society as a whole.

2 *In 2022, HTW Berlin collaborated with around 430 partners within the framework of cooperation agreements, of which 44 % were companies, 24 % universities, 11 % associations and 4 % public authorities, 5 % research institutions, 3 % foundations and museums, and 6 % other cooperation partners.*

3 *Cf.* https://www.htw-berlin.de/fileadmin/HTW/Zentral/ZR_IV_-_KONTAKT/HTW_Berlin_Transferstrategie_2020.pdf.

1. HTW Berlin plays an important role in the academic landscape of the capital region. Stable cooperative relations exist with various academic institutions in Berlin and beyond.

- At HTW Berlin, events and conferences are held to promote professional exchange between academics from the University and other academic institutions.
- Joint appointments, e. g. within the framework of a special professorship ("S professorship") strengthen cooperation with non-university research institutions.
- IFAF Berlin is being further developed and its institutional consolidation pursued.

2. HTW Berlin is a valued and reliable partner as well as a driving force for companies and civil society alike.

- Participation in programmes to strengthen the regional innovation ecosystem (e. g. within the framework of the German Agency for Transfer and Innovation, the Central Innovation Programme for SMEs, etc.) is promoted and supported centrally.
- The University enters into strategic cooperations, e. g. with networks such as the Maschinenraum ecosystem for family businesses.
- An innovation community is being created at HTW Berlin which is designed to establish even closer links between actors from the Berlin innovation ecosystem and the University.
- The current practice of contract research will be evaluated and made more appealing.
- The number of endowed professorships with companies will be increased.

3. HTW Berlin and its researchers are active and visible in the European and international research sector.

- The University supports academics seeking to contribute their expertise to relevant European networks and committees, e. g. by facilitating contacts and covering travel costs.
- HTW Berlin is expanding its international university cooperations for long-term strategic partnerships in the research field.
- The University is boosting its profile at national and international academic conferences and organising specialist conferences and networking events with European partners at its various locations.

Promoting young academics

Two drastic developments have affected Universities of Applied Sciences in the State of Berlin over the past five years: firstly, the 2018–2022 higher education contract made it possible for such universities to employ staff for qualification purposes and appoint them to permanent positions that support research. Secondly, an amendment to the Berlin Higher Education Act (BerlHG) resulted in "the Universities of Applied Sciences (...) in the State of Berlin (being) granted the right to award doctorates in research fields in which they have demonstrated proven research strength over a period of several years" (Section 2(6) BerlHG). Both of these measures are, to a certain extent, "game changers" which, on the one hand, open up completely new opportunities for Universities of Applied Sciences in the development of research environments, and, on the other, also involve the quality-assured training of young academics – a considerable responsibility.

> **HTW Berlin offers an attractive environment for young academics. In doing so, it attaches great importance to individual and needs-based support and is expanding its subject-specific and interdisciplinary qualification offers. The introduction of the right to award doctorates and the further development of a scientific mid-level faculty will help boost the impact of research performed at the University and enhance the existing research culture.**

Between 2018 and 2022, HTW Berlin created 60 positions for research assistants in addition to its externally funded staff positions. Around two thirds of the positions are occupied by staff members pursuing additional qualifications, predominantly doctoral studies. In this context, various opportunities for networking and professional and interdisciplinary exchange were created in both the faculties and at a central level. The offerings created included research schools and doctoral seminars, the "Junge Forschung/Young Research" conference, a "Promotionswerkstatt/Doctoral Workshop", writing consulting and science communication workshops and career planning opportunities, particularly for young female-identifying academics. The research assistants themselves have set up the networking group "WiMi@Lunch" to identify and communicate the concerns and challenges of a status group still new to HTW Berlin. This is because, in many processes at the University, it is still noticeable that the research assistants are not yet sufficiently considered – from practical questions of resources to participation in committees.

HTW Berlin takes its mission of providing the best possible support to all academics at the early stages of their careers very seriously. It intends to continuously develop fitting opportunities for these individuals in the coming years and to create the best possible framework conditions in which researchers – regardless of their respective career levels – can continue to grow.

1. HTW Berlin swiftly implements the right to award doctorates as soon as the necessary prerequisites are fulfilled. In addition, cooperative doctorates continue to be created with universities in the State of Berlin, as well as on a nationwide and international scale.

- Quality-assured doctoral environments are created in a transparent and participatory process, complementing the high-performance research focuses pursued at HTW Berlin.
- The mentoring and qualification of doctoral students are understood as interdisciplinary tasks in which professors as well as the faculties and and administrative units of the University participate.
- The excellent cooperation with the other Berlin-based Universities of Applied Sciences will be continued – in cross-university research environments such as joint qualification opportunities, etc.
- The University continues to support researchers and doctoral students in the realisation of cooperative doctorates.

2. HTW Berlin offers a quality-assured, gender- and diversity-sensitive environment for young academics featuring a comprehensive range of funding options, good working conditions and sustainable career planning.

- HTW Berlin is developing a graduate service with advisory services (admission requirements, mentoring guidelines, etc.) and monitoring.
- Subject-specific and interdisciplinary qualification opportunities are developed according to needs and are offered at the University or with external partners (e. g. at the Berlin Centre for Higher Education (BZHL)).
- The professors tasked with the mentoring of young academics are supported in their task with resources including written guidelines and counselling services.
- The mentoring quality requirements are regulated by corresponding statutes and regulations as well as supervision agreements.
- Doctoral environments are evaluated on a regular basis.
- Academic staff are shown individual career perspectives within the framework of personnel development.

3. Science thrives on exchange and cooperation. HTW Berlin promotes networking in order to increase the resources of its research assistants and doctoral students.

- Spatial proximity is intended to facilitate the exchange of ideas between doctoral researchers, thus creating a stimulating academic atmosphere.
- Offerings such as doctoral workshops, research schools in the faculties, special offers for female-identifying doctoral students, etc. are being expanded.
- Academic staff and doctoral students are integrated within existing research structures (e. g. in research clusters and institutes).
- In the course of implementing the right to award doctorates, a doctoral students' representative body is being elected at the University (cf. § 25, para. 3 BerlHG).

4. The University recognises and appreciates the work of research assistants and young academics. HTW Berlin is shown to be an attractive place for early academic careers, e. g. in the context of Master-in-Research programmes.

- Research assistants receive financial and personnel support from the faculties, the Committee for Research and Junior Academic Staff (FNK) and the research fund, e. g. in the form of student assistants or in the funding of conference travel.
- At HTW Berlin, young academics are able to communicate their research topics via viable formats, e. g. in the series Campus Stories.
- Promising Master's students from HTW Berlin and other universities are specifically addressed and supported with information and advisory services as they pursue their doctorates.
- By integrating research topics within teaching, interest in an academic career is awakened.
- HTW Berlin has also created a Junior Researcher Award.

Intensifying science communication and increasing visibility

The COVID-19 pandemic has brought a great deal of attention to science and the manner of its external communication. It has become clear that, in view of its importance for social, economic and technological developments, science is increasingly tasked with communicating its contents, methodologies and outcomes to target groups outside the research system. Concerned parties, such as the Federal Ministry of Education and Research, the German Science and Humanities Council (WR) and the German Rectors' Conference have initiated processes and published official positions that emphasise the importance of science communication for society as a whole.[4] This strong significance ranges from the provision of information and education to the fundamental establishment of trust in science. Accordingly, science communication is also playing an increasingly important role in research funding programmes at both national and international level.

> **HTW Berlin boosts the visibility of research vis-à-vis the public through its science communication policy. It enhances the reputation of its academics and the institution itself. HTW Berlin supports its academics with a form of science communication which is both dialogue- and target-group-oriented.**

To this end, a position paper was adopted at the University in 2020, which serves as a guiding framework for academics at HTW Berlin and underscores the organisation's commitment to the promotion and support of activities in this area. The defined objectives and rafts of measures also guide this research strategy[5] In addition, the University has established a number of measures in recent years designed to boost the visibility of academics and their research. Interviews, portraits and Campus Stories, which are played out cross-medially via various communication media and channels, all create a strong research profile at HTW Berlin, simultaneously ensuring that research outcomes receive greater communicative reach. Event formats such as the Berlin Science Week, the Transfer Week and the HTW's own Spree Talk give academics the opportunity to present their research to an interested public and to enter into dialogue with the same. Researchers seeking to further develop their activities in the field of science communication and thus also find success in funding applications, for instance, can avail themselves of a portfolio of further training opportunities at HTW Berlin with external experts, e. g. those from the National Institute for Science Communication (NaWik).

4 *Cf.* https://www.bmbf.de/bmbf/de/ueber-uns/wissenschaftskommunikation-und-buergerbeteiligung/wissenschaftskommunikation/factorywisskomm/factorywisskomm.html; https://www.hrk.de/positionen/beschluss/detail/hochschulkommunikation-als-strategische-aufgabe/; https://www.wissenschaftsrat.de/download/2021/9367-21.pdf?__blob=publicationFile&v=10.

5 *Cf.* https://www.htw-berlin.de/forschung/wissenstransfer/wissenschaftskommunikation/

The topic of science communication will continue to gain traction in view of the social challenges of our time. Science communication at HTW Berlin will address relevant issues, create future perspectives, promote curiosity about science and thus strengthen public autonomy in the scientific field.

1. HTW Berlin, its academics and research topics receive a great deal of media attention.

- HTW Berlin provides scientific expertise to the media and for high-profile events.
- The media response received by academics at HTW Berlin is presented in an appreciative manner through appropriate internal communication.
- The University proactively includes its academics in the conversation around anniversaries, major milestones, etc. that are expected to receive media coverage.

2. HTW Berlin's science communication is used to reach a wide range of social environments, specifically accessing new target groups with little prior experience of scientific discourse.

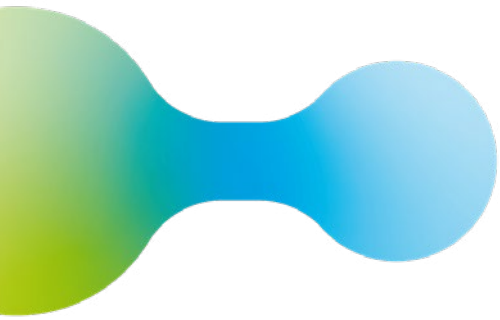
- Formats appropriate to the target groups (e. g. Spree Talk, Children's and Senior Citizens' University, social media) enable the involvement of various social groups and arouse curiosity about science and the topics addressed at HTW Berlin.
- Low-threshold communication formats address children and young people in particular, e. g. through student labs and other events.
- The science communication of HTW Berlin is inclusive and seeks to avoid reproducing stereotypes.

3. Academics at HTW Berlin are sought-after experts for decision-makers in the fields of politics, business and society.

- HTW Berlin provides scientific expertise to decision-makers and for high-profile events.
- Orientation is provided by written guidelines for good scientific policy consultation.
- The academics' dedication to their various tasks is recognised appropriately and communicated internally.

4. HTW Berlin values and supports its communicating researchers.

- Academics involved in teaching, transfer and research projects receive coaching and further training, e. g. on how to anchor science communication in funding applications.
- This appreciation and support is also given to young researchers in order to familiarise them with science communication at an early stage and to emphasise its importance.
- An external advisory board supports HTW Berlin in the further development of its science communication policy.



Strengthening Open Science

Intensive discussions regarding the manner in which scientific findings can be made available more quickly and easily in order to find solutions to urgent problems, as well as to make the scientific research system more accessible to society and the economy, have been pursued for several years now. This is a matter of making products such as research data, publications, software, licences, etc. accessible on the one hand, while, on the other, it is crucial to involve new actors in scientific processes – in short: to implement what is termed "Open Science".

"Open Science means using the tools of the digital age for good scientific practice and thereby strengthening quality assurance, efficient processability, transparency and inclusive accessibility" (German Commission for UNESCO 2020, p. 4)

> **HTW Berlin promotes a culture of innovation that enables creativity and openness to new things. Therein lies the key to shaping a positive and sustainable future for all people. To further increase the impact of research, Open Innovation and Open Science are practised at HTW Berlin. Digital technologies and processes open up new ways of exploring ideas together, as well as new forms of accessing and using knowledge, which in turn can lead to new research outcomes – both at HTW Berlin and elsewhere.**

At the time of writing, HTW Berlin is still in the start-up phase with regards to Open Science. The most developed sub-theme is that of Open Access (OA): In recent years, the proportion of OA publications has increased, with advisory services available at the University Library and an OA Officer. As regards the implementation of research data management, a detailed inventory is currently being created in order to meet the needs of the University's wide range of different disciplines. A field that is still largely new to the University is the co-creative development of research ideas and innovations with representatives from the fields of society and business. To this end, an Open Science WG has been founded, which addresses topics including Citizen Science and Open Educational Resources. Over the next few years, the University seeks to develop procedures and measures pertaining to all the aforementioned aspects in order to raise awareness and qualify and support researchers in this area.

1. HTW Berlin is stepping up its activities in the area of Open Access publications in order to make research processes more efficient and open, to ensure transparency and quality and to consolidate academic freedom.

- A publication fund is being set up to finance Open Access publications.
- Further training on the topic of Open Access is also offered and developed by the library or the library's Open Access team in cooperation with the Open Access Officer.
- Researchers are supported in their endeavours to have their work published in high-quality Open Access journals.

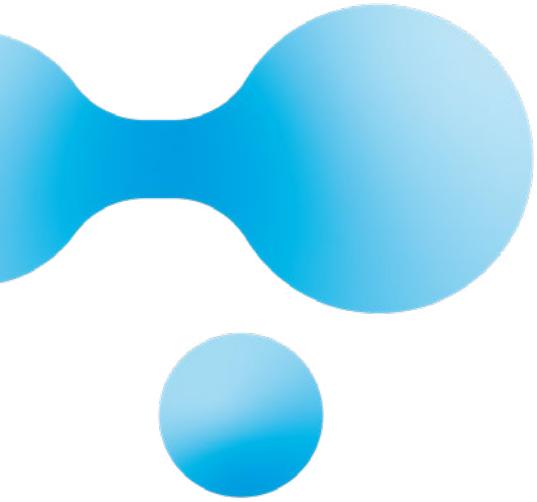
2. Establishing professional research data management helps to facilitate the reusability of research outcomes, thus increasing the impact of research. In particular, the potential for the subsequent use of research data and outcomes is promoted.

- A university-wide working group is developing a research data strategy and policy.
- The advisory services for researchers on the management of research data throughout the research cycle are being developed and expanded.
- Researchers receive further education and qualification opportunities regarding the management and curating of research data and the legal framework conditions.
- A sustainable storage infrastructure for research data is being created at HTW Berlin.
- The potential for the re-use of research data generated at the University is enhanced via access to repositories and with the aid of incentives and information material to make data available in a FAIR[6] manner.

6 *The acronym FAIR stands for **F**indable, **A**ccessible, **I**nteroperable and **R**eusable.*

3. Society and business are more actively involved in the cognitive research processes. This permits a broader transfer of knowledge and social integration.

- Researchers can familiarise themselves with various topics with the help of a set of guidelines and a collection of best practices for Open Science formats.
- New methodological and thematic approaches in the research process, e. g. those concerning Citizen Science, are developed within the framework of further training courses and peer-to-peer learning.
- Existing cooperations to strengthen Citizen Science, e. g. with the Museum für Naturkunde (Natural History Museum), will be expanded.
- Open Science is made visible at the University in the appropriate forms and places, e. g. by highlighting or indexing projects in the HTW research catalogue in which public data is used or a cooperation is desired.



Approaches to measuring success

The quantitative measurement of research performance at HTW Berlin is an integral part of internal and external university monitoring. Every year, the research department evaluates its performance in line with traditional indicators (including third-party funding income, publications, collaborations, inventions and patents) and publishes the "Research, Development and Transfer" magazine in addition to the evaluation report. In future, the aim will be to further diversify the existing indicators in order to do justice to the broad spectrum of research methods and results as well as their qualitative effectiveness. The University will continue to develop its evaluation practice as a learning organisation, with the participation of various regional, national and international expert committees.

Input factors (use of resources) as well as output (e.g. events, publications) and outcome (awareness, satisfaction, etc.) or impact (e.g. spin-offs, contribution to solving social challenges) are analysed with the aim of quality assurance that has an impact in all fields of action. When recording and measuring success, HTW Berlin focuses on research performance, its visibility and the mentoring of young academics. Comprehensive monitoring serves in particular to improve the framework conditions in strategically important research areas and to establish and support the doctoral centres. Among other things, we are paying more attention to the quality of supervision of doctorates and the greater involvement of academic staff and doctoral candidates in the University (e.g. in committees, use of research and transfer services, etc.). Both specialist and interdisciplinary programmes are evaluated and continuously developed.

A steering committee, which meets once a year, is set up to manage quality and monitor the achievement of objectives. In addition to the Vice President for Research, the organisational units and committees responsible for implementing the measures in the individual fields of action are represented here. The results of the monitoring evaluation are reported annually to the University's academic committees by the Vice President for Research.

The present research strategy with its strategic fields of action, research priorities and an initial monitoring approach is being continuously developed. This is in line with HTW Berlin's position as a University of Transformation that interacts with its environment in an alert and curious manner and utilises its diversity productively to develop solutions for the economic and social challenges of the present and future.

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