



UNIVERSITY DEVELOPMENT STRATEGY OF THE UNIVERSITY OF DUISBURG-ESSEN

2023 – 2027

This University Development Strategy is based on the development guidelines (see appendix) passed by the Rectorate on 14 December 2022 and approved by the Senate on 3 February 2023.

This strategy was enacted retroactively on 1 January 2023 as per the resolution by the Rectorate dated 20 December 2023 taking into account the recommendations and statements of the Senate dated 6 October 2023 and following agreement by the University Council dated 24 November 2023.

OVERVIEW

1. Our university	4
2. Outstanding in research	6
2.1 We sharpen our research profile and generate knowledge to meet societal challenges	6
2.2 We nurture bright minds and create optimum conditions for early career researchers	7
2.3 We offer an attractive environment for excellent researchers from all over the world	8
3. Future-oriented teaching and learning	9
3.1 We enhance the appeal of our study programmes	9
3.2 We ensure and improve the quality of our study programmes	10
3.3 We design education processes for sustainable development as part of our social responsibility and we are committed to lifelong learning	11
4. Interacting with society, the political sphere and the economic sector	12
4.1 We practice transfer in exchange with society, politics, and the economy	12
4.2 We pursue common goals with our partners – from inventions to innovations	13
4.3 We make research and its relevance visible	14
5. Commitment to an international university culture	16
5.1 We take responsibility globally, nationally and regionally	16
5.2 We build our university partnerships strategically	16
5.3 In the University Alliance Ruhr and in AURORA we achieve more together	17
5.4 We promote diversity, educational justice, and sustainability	17
6. Creating the conditions for the future of our university	19
6.1 We design a campus that is sustainable and expressive of our identity	19
6.2 We become visible as an attractive employer	19
6.3 We design user-friendly, digital administrative processes	20
6.4 We use resources sustainably in the operation of the university	20
6.5 We implement secure and resilient information-technology systems	20
7. University of Duisburg-Essen, 2023–2027	21
Appendix: Development Guidelines	22

1. Our university

University of Duisburg-Essen is twenty years old. Like the Ruhr region in which it is situated, our university demonstrates the courage to transform, a spirit of pragmatism and a passion for making an impact and getting things done. We accept responsibility and cultivate excellence in all endeavors. We are a university and region known for always being on the move, not for standing still.

We actively take responsibility for the future through strong performance in research and educational excellence. Our value commitments – to openness and internationality, diversity, equal opportunities, and sustainability – are the glue that holds everything we do together. These value commitments guide our conduct, research, teaching and learning, and serve as the benchmark for measuring our future success.

University of Duisburg-Essen is located in a dynamically developing knowledge-intensive region. Together with our neighbouring universities, especially those in the University Alliance Ruhr, with a dense landscape of research organisations belonging to the Max Planck and Fraunhofer Societies, the Leibniz and Johannes Rau Research Foundations, and with strategic partners in business, politics and the public sector, we are a driving force for innovating through science.

For a university, taking responsibility for the future means delivering scientific insights and solutions for a peaceful society, sustainable ways of living and conducting business. It also means imparting students with the knowledge and skills they need to get off to a strong, creative start in the working world. Shaping the future means being ready and willing to change; engaging in work and achieving results that are solid and reliable. Our motto is *Offen im Denken*, and we live up to this. Our program for sustainability is developing in three lines of action: Research for Sustainable Solutions@UDE, Teaching Sustainable Solutions@UDE, and Practicing Sustainability@UDE.

In research, our faculties and inter-faculty research centres are strongly positioned in the disciplines and in interdisciplinary activities. Outward signs of our success include projects funded by the Deutsche Forschungsgemeinschaft (German Research Foundation/DFG): we lead seven (transregional) Collaborative Research Centres and six Ph.D. Research Training Groups, and we are co-applicants in further collaborative projects, including with the Ruhr University Bochum, Technical University Dortmund, the Technical University of Darmstadt and the University of Cologne. In the past years, we have been especially successful in acquiring funds for building new research facilities (e.g. ACTIVE SITES) and major research instrumentation (e.g. a 7-Tesla magnet for ultra-high field magnetic resonance imaging at the Erwin L. Hahn Institute). Many more accomplishments in which we take pride could be listed.

Our research profile flags strategic research areas that focus and structure our work, while building our reputation and visibility beyond our region. These strategic research areas – Bio-medical Sciences, Nanoscience, Urban Systems, Transformation of Contemporary Societies and Water Research – bring individual expertises and interests together to tackle overarching research questions. In short, the whole is more than the sum of its parts. This interdisciplinarity in action makes these research areas especially interesting and attractive platforms for collaboration, also for early career researchers.

Precisely this UDE-specific scientific landscape, cultivated and nurtured over the course of twenty years, with plateaus and peaks, islands and beacons, and first and foremost with numerous bridges to neighbours has led to the specific initiatives with which we aim to move into the next league in outstanding research. Especially impressive is the variety of disciplines from which world-class researchers at the University of Duisburg-Essen are competing in the German Excellence Strategy for the funding period 2026–2032. Virtually all faculties are contributing to our concept outlines, with topics ranging from agonal plurality, the focus of research in the humanities, social, and educational sciences, to cancer research concentrating on tumour cells in a special context, through to transformative materials research, and REASONS, our contribution to the global issue of fresh water.

Transfer is not something we understand as a one-way street, but as an exchange of questions and results within a broader social, political, and economic environment. We recognize basic and applied research as being of equal relevance. Our aim is to develop discourses and cooperations that can make the (perceived) barrier between purely scientific or seemingly theoretical knowledge on the one hand, and inventions, applications and innovations on the other hand more permeable. The level of scientific and technology transfer that is our aim can only succeed in this way. Proof of our commitment to transfer is plenty and well established at the UDE, as evidenced by the activities of our university. The Hydrogen and Fuel Cell Centre (Zentrum für BrennstoffzellenTechnik/ZBT) and the Institute of East Asian Studies are examples of research facilities renowned nationally and internationally, each with hundreds of employees and a clear brand identity. We understand such transfer as part of our social responsibility.

A hallmark of our education, curricula and teaching practice at the UDE is the remarkably diverse range of programs geared toward meeting societal interests and needs. We make strong use of the full spectrum of academic disciplines constituting the UDE as a comprehensive university. From ship technology to supply chain management, communications and water science through to social work, students can choose from among hundreds of exciting study programmes, learn about academic approaches in these disciplines – and of course also conduct

research. Some of our degree programmes are almost unique in Germany, such as the M.A. Socio-Economics or M.Sc. Cyber Physical Systems. The Faculty of Medicine and the University Medical Center Essen offer not only a medical degree programme with nearly 230 students entering each year, but also a new nursing science degree. We continually update and transform degree programmes to ensure their relevance, while daring to experiment. The training of prospective teachers is one of our core programmes, and an educational responsibility we take very seriously. Students in our teacher education programmes have a particularly wide range of options for combining subjects for all school forms in the German system.

The current Rectorate has structured its resorts to delineate clear lines of action. Alongside the Rector and the Chancellor, the University is led by the Vice-Rector for Research and Early-Career Researchers, the Vice-Rector for Curricula, Teaching and Education, the Vice-Rector for University Culture, Diversity and International Affairs, and the Vice-Rector for Transfer, Innovation and Digitalisation. An agile and effective governance structure utilizes participative processes to integrate the creativity, engagement and wide-ranging knowledge of the members of the University. In light of the variety and complexity of tasks and facilities in a university, the balance between freedom and leadership, security and openness, willingness to debate and ability to act require ongoing reconsideration and recalibration. Expanding the scientific capacities of the UDE is directly tied to the strategic recruitment of future faculty members, and the commitment to improvements in the quality of research and education this will bring. We seek to recruit new candidates with outstanding qualifications and experiences in full consideration of the promotion of equal opportunities, diversity and the international composition of our faculty members.

There is no area of the University today that has not been digitalised. In the coming years, UDE will continue to harness the potential of digitalisation and drive the digital transformation forward while also adjusting to the continuously growing requirements in terms of data security. Our digitalisation strategy will aim to achieve that. The academic discipline of computer science at UDE is to receive a new governance, structure and substance: for the first time, our competencies in computer science, business information systems and applied cognitive science are to be bundled and expanded in a new, twelfth faculty.

Based on its mission of working for UDE with passion and expertise, the University's administration has set the goal for 2030 of establishing its role as a future-proof central service provider. With the help of selected strategic goals, it has created a compass for far-reaching change processes. The Centre for Information and Media Services and the University Library see their roles as service providers for the continuously changing requirements of UDE's re-searchers, teaching staff and students as users, and also as pioneers in the application of innovations in research data management, digital teaching and open educational resources. This is clear through examples such as its

leadership role in the DH.NRW (digital university North Rhine-Westphalia) and the initiatives openaccess.nrw and fdm.nrw.

A successful model that is unique in this form is the University Alliance Ruhr, which was founded in 2007. The three major universities TU Dortmund University, Ruhr University Bochum and the University of Duisburg-Essen complement each other perfectly. They joined forces to develop interdisciplinary competence fields. Thanks in part to inter-university research projects funded by the Mercator Foundation among others, as well as the Research Academy Ruhr, this alliance enjoys a reputation extending beyond the region. In 2022, we jointly received official recognition as a well-developed 'research ecosystem' for the establishment of the North Rhine-Westphalia-funded Research Alliance Ruhr. This is where our important projects of common interest take shape, and attract top-flight researchers from around the world. There are four new research centres: Chemical Sciences and Sustainability, Future Energy Materials and Systems, One Health Ruhr – from Molecules to Systems, and Trustworthy Data Science and Security, and a College of Social Sciences and Humanities.

The steep upward trajectory of our still young and – with some 40,000 students – very large University of Duisburg-Essen has over the past 20 years become a prestigious research and education, and our development is a testament to the enthusiasm, great dedication and vast capabilities of all its members. As evidence of this growth trend, between 2018 and 2021 UDE moved up by eight positions in the Funding Atlas published by the German Research Foundation. We are delighted with this impressive leap ahead, which confirms that we are on the right track and further fuels our motivation. UDE researchers, employees and students want more: in all their research, teaching, studying, transfer, management and administration, they expect nothing less than the best of themselves. In short, they are all about drive, not maintaining the status quo.

This University Development Strategy describes our starting point in 2023 and our plans through 2027 chiefly in the present tense.

2. Outstanding in research

UDE's research profile is distinguished by the strategic identification, consistent promotion and systematic advancement of promising, innovative ideas in both fundamental and applied research, extending to the transfer of knowledge into industry and society. The cornerstones of this research profile are currently **five University-wide strategic research areas**, which are shaped and advanced by numerous researchers in **twelve faculties** and **fourteen inter-faculty research centres**. Cooperative research projects have just as vital a place here as excellent individual research.

UDE has set itself the task of identifying talented researchers as early as possible and systematically encouraging and preparing them for a successful career in academia and high-profile endeavours in industry and society. Building on a foundation of consistently research-based teaching, we achieve this objective through the integration of students into relevant research projects and structured doctoral programmes.

One driver of excellent research is the **University Alliance Ruhr**, in which UDE works with its partners according to the maxim 'better together' and which we aim to systematically expand and consolidate. The development of the Research Alliance Ruhr will play a major strategic role in this. Together, the institutions will succeed in pooling top-level international research on pressing issues of the future. Thus, close cooperation within the University Alliance Ruhr is also the logical approach to preparing the applications for the Excellence Strategy of the German federal and state governments.

2.1 We sharpen our research profile and generate knowledge to meet societal challenges

Excellence in research is the bedrock of the national and international visibility that UDE has achieved since its founding. UDE embraces the challenge of further enhancing its reputation in the academic system. In pursuit of this goal, it intends to strategically raise its profile while maintaining its dynamism, harnessing its potential and making UDE even more attractive for Germany-based and international researchers alike. The plans below will have a significant impact on the enhancement of our research profile.

Advancing the **research strategy** within the validity period of this University Development Strategy will be an important component in the further expansion of our research excellence. Alongside the development of our existing research strategy (<https://www.uni-due.de/imperia/md/content/dokumente/forschungsstrategie.pdf>), three working groups established by the Rectorate and consisting of a diverse makeup worked in 2021 on strategic fields of action for the future focus of research at UDE: research governance, early career researchers and appointments,

and funding. Following from this, the implementation of individual measures is to be prioritised.

This includes developing fresh ideas for promoting early career researchers and attracting outstanding international researchers as well as **further developing UDE's strategic research areas, including enhancing their dynamism**. Based on the research governance working group's recommendations, UDE aims to achieve these objectives by defining and applying more specific criteria for establishing, evaluating and, where necessary, transforming strategic research areas. One factor to evaluate will include the degree to which they are networked within UDE and beyond.

UDE is **enhancing its international profile** through the establishment of four joint **research centres** and a **college** within the Research Alliance Ruhr. The Research Alliance Ruhr is the most highly visible among the diverse range of initiatives in the University Alliance Ruhr and receives significant funding from the state of North Rhine-Westphalia. It ensures ideal conditions for excellent interdisciplinary research teams to conduct further research into the pressing issues of the future. In the upcoming years, the Research Alliance Ruhr will act as a catalyst that will help even further exploit the potential that the shared academic environment of the Ruhr area holds for excellent research, outstanding support for early career researchers and international esteem. Researchers in UDE's strategic research areas are instrumental in shaping the four science and technology-based research centres (Chemical Sciences and Sustainability, Trustworthy Data Science and Security, Future Energy Materials and Systems) and the College for Social Sciences and Humanities for social sciences and the humanities.

Both independently and together with partner universities, UDE is participating in many ways in the current call for proposals in the Clusters of Excellence funding line as part of the **Excellence Strategy**. Based on this, an application for funding by the University Alliance Ruhr is planned in the Universities of Excellence funding line. Collaboration in the cluster initiatives and with respect to overarching topics such as diversity, internationalisation, sustainability and research data management is intensive and closely coordinated with the partners in the University Alliance Ruhr and outside it.

The universities in the University Alliance Ruhr have expressed their commitment to a joint **adoption of the established MERCUR funding programme**, whose financing from the Stiftung Mercator foundation expires at the end of 2024. It will evolve in a timely manner into a modified funding programme that will be integrated into the existing structures.

At the University Alliance Ruhr level, a concept for an **overarching ethics commission** is being developed and

the commission set up within the validity period of this University Development Strategy. Rather than replacing the existing commissions at the individual universities, it is designed to provide joint judgments and effectively meet the current challenges (see recommendations from the German Research Foundation and the German National Academy of Sciences Leopoldina for handling security-relevant research responsibly). This commission is also to decide on fundamental ethics issues. Potential topics are the assessment of the impact of research and technology, the politisation of universities, ethically problematic fundamental decisions and dispute resolution.

Sustainability is an overarching topic that most research projects address directly or indirectly, whether in water or energy research, in the nanosciences or in medicine – the range is vast. There are links to it in all the strategic research areas. It is quite clear that pooling and strategically aligning the existing activities and potential can add substantial academic value. For this reason, the Rector set up a working group in 2022 where researchers contribute their proven research expertise on the various facets of sustainability. The medium-term goal here is to make a name for UDE as a research hub for viable transformation, characterised by a farranging, networked and widely visible spectrum of sustainability research.

The **standards of good research practice** are subject to ongoing advancement and rooted in numerous national and international guidelines such as the DFG's code of conduct, 'Guidelines for Safeguarding Good Research Practice'. UDE therefore established new 'Principles for safeguarding good research practice' in July 2023. These principles apply to all members of the University and touch on numerous aspects of research and teaching.

In further enhancing its research profile, UDE also prioritises stable **partnerships with non-university research organisations** that focus more strongly on specialist programmes, which means that they can complement and reinforce the University's research focus areas in a targeted manner. These partnerships are to be further intensified through joint appointments that build viable long-term bridges or through effective initiatives such as the International Max Planck Research Schools, Helmholtz Alliances or Leibniz Institutes/campuses and with the Johannes Rau Research Association institutes. Intensive cooperation with non-university research institutes is also part of the planned excellence clusters.

In order to set up UDE strategically for the long term, a twelfth faculty, the Faculty of Computer Science, is being established early in the term of this Strategy. This strategically fore-sighted decision was the product of a bottom-up initiative of virtually all the discipline representatives. Thanks to its combination of the fundamentals of computer science, software engineering, business information systems and areas within cognitive science/psychology, the new faculty boasts a specific profile in research and teaching in a form that is unique among German universities. In this respect, this faculty will also complement

and underpin the partner universities' computer science competencies.

Our researchers make fundamental contributions to the field of digitalisation and are innovators in digital development also in cooperation with the Centre for Information and Media Services and the University administration. In all this work, digitalisation research is closely linked with a sense of responsibility for the associated risks, opportunities and challenges.

Accordingly, UDE's **new digitalisation strategy** will be rooted in the overarching topics of IT security, sustainability and equal opportunities. The advancement of the digital campus, IT governance and services, digital support processes for research and teaching, transfer and raising digital awareness are based on these overarching topics.

The growing digitalisation of research and publication processes is resulting in extensive changes to research routines in all academic disciplines. This transformation is supported by a tailor-made yet universal digital research data infrastructure. It was with good reason that UDE established itself as the consortium leader for **research data management** in the Digitale Hochschule NRW (digital university North Rhine-Westphalia) group. Within the validity period of this Strategy, internal University structures for service and advice on the creation, provision and archiving of research data will be put in place comprehensively. UDE is also participating in numerous projects (sometimes in a leadership role, sometimes as a participant) to support the expansion of the **National Research Data Infrastructure** and works as part of the CRIS.NRW state-wide initiative to establish a high-performance research information system. Last but not least, UDE is driving the advancement of the open access principle in the academic publication process. The University Library coordinates the **open access** activities and offers organisational, infrastructure and financial support. In these efforts, it works closely with the Graduate Center Plus and the Research Academy Ruhr.

2.2 We nurture bright minds and create optimum conditions for early career researchers

Early career researchers – doctoral candidates, post-doctoral researchers and the junior faculty (habilitation candidates, junior professors and independent junior research group leaders) – are important players in research, most of whom are also in the qualification stage for a career in academia or elsewhere. UDE offers them outstanding working conditions as well as numerous central and faculty-based support measures. For example, University management will be prioritising the stronger, comprehensive establishment of the **principles of good research practice** according to the DFG requirement and advancing them through specific measures in order to spread them throughout UDE and establish them as a firm fixture in daily University life. These measures will include targeted communications with the members of the University and specific educational offerings for both early career researchers and experienced researchers.

Networking at the **junior faculty** level within the University Alliance Ruhr will be strengthened by transferring the established Global Young Faculty programme, which was previously financed by the Stiftung Mercator foundation, to the Research Academy Ruhr and revamping its concept. University management will also promote the creation of additional **structured doctoral programmes** in the years to come.

Excellent postdoctoral researchers often take on key roles in cooperative research projects. To retain them, a coordinated process is being developed to offer this group in particular, as well as others, alternative long-term perspectives besides a career path toward a professorship. UDE aims also to attract more international postdoctoral researchers, particularly to open positions in excellence clusters or other collaborative research projects, and will be expanding its targeted participation in international career fairs and making increasing use of the established Research Explorer Ruhr format.

There are also now more paths to a professorship: **tenure track** professorships are and will remain a firm fixture at UDE in combination with a constantly available pool of variably distributed W1-level positions. The University also plans to deploy an analogue tool for performance-based permanent position prospects for non-professorial academic staff – particularly in the major strategic research areas and around major collaborative projects.

2.3 We offer an attractive environment for excellent researchers from all over the world

UDE aims to make itself even more attractive to excellent **experienced researchers** from around the globe in the years to come. This includes competitive funding as well as the culture that is lived and breathed at the University, particularly interdisciplinarity. In addition, we intend to increase the number of externally funded projects, especially collaborative projects, which are an indicator of an institution that is strong in research and therefore attractive. Finally, the **Research Alliance Ruhr** will be a unique magnet for excellent researchers, thus paving the way for the Ruhr area to become one of Germany's outstanding research hubs that transcends disciplinary and institutional boundaries.

UDE will remain part of the **NRW Rückkehrprogramm** (returning scholars programme) and also pursues the goal of attracting more top-calibre national and international grants and prizes: ERC grants, Humboldt professorships, fellowships and prizes, Sofja Kovalevskaja awards, Heisenberg professorships and others.

The University's continuing participation in the Professorinnenprogramm, a programme for the promotion of female professors, also targets the recruitment of high-performing female researchers in connection with equal opportunity and diversity-oriented parameters and procedures. These include a critical understanding of

performance and excellence, ongoing monitoring of professors' salary rates and setting up unconscious bias training for the people involved in appointment procedures. With these measures, UDE is continuing to pursue the goal of raising the number of female researchers in top-level functions to approach parity. Further improvements in the ability to reconcile work and family, particularly with respect to childcare and creating more opportunities for partners to find a job (i.e. support for dual career couples), will also be decisive in the success of these efforts.

3. Future-oriented teaching and learning

As a University that offers a comprehensive range of disciplines and has a focus on research, UDE is committed to giving its students, who bring diverse educational backgrounds and motivations to their studies and enrich the University community, access to education at a high academic level. UDE promotes student success in specific ways, depending on requirements. It enables **research-based learning** from the start, while also fulfilling its responsibility to minimise obstacles in the education system as far as possible within the scope of a university's duties and possibilities, and to promote **educational justice**. As part of this process, we prioritise strengthening our students' problem-solving skills and their self-efficacy with a particular focus on their social responsibility.

The portfolio of degree programmes at UDE spans a wide range of subject areas and also boasts many special, even unique, programmes of study. Prospective students have especially comprehensive choices in the large variety of engineering programmes, for example, and in teacher training, in which UDE offers degrees for all types of schools in North Rhine-Westphalia.

The existing degree-programme profile at UDE is the product of a dynamic, adventurous degree development policy which will take the long-term prospects for new degree concepts better into account going forward. Our quality management processes with their system accreditation are not an end in themselves; rather, taken in combination with the objectives of the Teaching and Learning Strategy 2025, they serve to advance teaching and learning in an evidence-based way, an aim shared by all stakeholders, who communicate as peers.

Within the validity period of this Strategy, an updated and advanced version of the Teaching and Learning Strategy 2025 (<https://www.uni-due.de/de/universitaet/lehr-lern-strategie.php>) is to be created, consulted on and approved. This process will focus primarily on aspects such as the further integration of digital components into teaching and learning and education for sustainable development.

3.1 We enhance the appeal of our study programmes

After the **number of students** at UDE during the years around the 'double school-leaving' year in Germany (2013) continuously rose and ultimately peaked at approximately 43,000, it has recently stabilised at what is still a very high level (41,100 in the winter semester 2022/23). In the competition with other universities, we face the challenge of expanding tried-and-tested avenues and pursuing new routes to attract first-year students – and this applies to both the bachelor's and master's levels. Despite the general decline in student numbers, UDE still has the medium-term objective of maintaining overall student numbers in excess of 40,000, even though the coming one-year extension of the university entrance qualification period in North

Rhine-Westphalia's schools will inevitably lower demand at least temporarily in the winter semester 2025/26. At the same time, we intend to continue to fulfil our educational mandate of paving the way for first-generation students to enter the University and appealing to high achievers.

To this end, we plan to focus more intensively on the **attractiveness of the degree programmes our faculties offer** and enhance their appeal wherever possible. This will occur as part of the processes in our quality management system with the assistance of external reviewers. Alongside the established degree programmes, the opportunities available in the Faculty of Computer Science, newly established in 2023, are to be presented in a particularly appealing way to prospective students from Germany and other countries. A greater number of specific options for high achievers are to be offered earlier to enable them to comprehensively develop their potential according to the guiding principle of **research-based learning**.

In order to **attract students** in a more strategic and future-oriented manner going forward, the existing portfolio of degree programmes, the potential demand and the communication channels addressing prospective students are to be analysed and optimised in a targeted way. The Rectorate's concerted collaboration with the faculties as well as central units such as the Student Advisory and Career Service Centre, the Centre for Teacher Training, the Centre for Quality Enhancement and Teaching Development and central administration are key to these efforts. The resulting insights are to be used to derive objectives, define concepts and develop specific measures that take target group-specific communication with prospective students into account. To accomplish this, the Rectorate is setting up a coordinating office in the Staff Unit for University Management and Communication that will work closely with the Vice-Rectorate for Studying, Teaching and Education.

Information is to be made easier to find not only on social media but also on the website in order to attract international students in particular. This may involve tools such as chatbots in various languages or translation programs. Appropriate tools will be implemented within the validity period of this Strategy. We are also investigating what interfaces can be expanded or developed.

Furthermore, **administrative processes from application management to enrolment** will be designed from the user's perspective and the campus management system is to be systematically streamlined. First-level support is being upgraded to enhance service quality, in order to remove potential obstacles and enable personal contact. The user friendliness of the website is to be improved on the basis of usability tests, to make it clearly structured, easy to navigate and intuitive. In addition, streamlined explanations are to be offered throughout in two languages to make information more accessible to people who do not

speak German. All this will enable prospective and current students to find all the information about our attractive portfolio quickly and easily.

The proportion of **first-generation students** among first-year students at UDE remains very high (54% in the winter semester 21/22). Ensuring their academic integration – and thus also improving the permeability of the education system as a whole – is the aim of a wide variety of UDE offerings during the **transition from school to higher education** and in the **early stages of studies**. Consultation, information and support offerings (student orientation, preparatory courses, mentoring, etc.) are subject to ongoing review and are improved where necessary; this will also apply to programmes implemented in future. In order to continue to support high-performing students from all backgrounds, UDE is will expand its **scholarship services** with a special focus on acquiring new providers of funding for UDE scholarships.

The hallmark of studies at UDE will continue to be the great value placed on **academic education** combined with acquiring professional skills and the general objective of **personal development**. We aim to prepare our students for a professional life marked by societal megatrends such as digitalisation, internationalisation and sustainability, and equip them to help shape these trends. To that end, the Institute for **Key Academic Competencies** is coordinating the preparation of guidelines for developing, promoting and testing the vital academic skills all students need.

As another factor in making UDE an even more attractive place to study, we are improving **hybrid and digital teaching and learning formats** as a logical complement to face-to-face teaching, which will remain indispensable. The **University Library** with its large pool of offerings plays a key role in this as both a physical space to study and work and as a digital knowledge portal.

UDE is a hub for **teacher education in North Rhine-Westphalia**. It trains teachers for all types of schools in the state and for nearly all subjects. The courses set up in the winter semester 2022/2023 in the teaching qualification programme for special needs education with a focus on emotional and social development as well as language will be expanded in the winter semester 2024/2025 to include the focus area of hearing and communication. UDE thus shoulders additional responsibility in the context of today's education policy challenges by supplying teachers to meet the needs of our region and beyond. Going forward, UDE will continue to energetically engage in projects designed to attract and train more teachers.

3.2 We ensure and improve the quality of our study programmes

High demand and a sustainable underlying infrastructure are significant aspects affecting the quality of study programmes. UDE is intrinsically motivated to continuously evolve its **portfolio of degree programmes** in light

of changing economic and social conditions. That means updating existing programmes, generating attractive new opportunities and also sunsetting low-demand programmes if necessary. Even niche programmes can constitute a successful part of UDE's profile, but they are only implemented when their ongoing viability is assured.

The best calling card for studying at UDE is a successfully completed degree, along with the associated qualifications and skills for starting a career. To fulfil its responsibility for ensuring that educational trajectories succeed, UDE aims to increase its **graduation rate**. To this end, the support opportunities already available during all phases of studies, starting from the choice of a degree programme, need to be developed and supplemented in ways that make sense. An ongoing review of all degree programmes in terms of ways to improve the **student journey** remains a key objective for all those charged with the content design and administrative management of degree programmes.

UDE's integrated **quality management system** links the quality assurance of the degree programmes, institutional evaluations, and target and performance agreements with one another. This integration – in combination with dialogue between University management and the faculties – enables a systematic, regular, data-driven review of studying and teaching, research and support processes. UDE's quality management system first received system accreditation in 2016. Improvements are made on the basis of feedback received from experts in connection with the now completed system accreditation. In addition to the established process of bringing in external expertise as part of institutional evaluation on the faculty level, non-University peers are also to be involved in the review of degree programmes in future. The formats for this are to be created specially for each faculty depending on its size and profile. Previously, UDE's quality assessment processes have been conducted at intervals of three or six years; going forward, this will change to four or eight-year cycles in line with the eight-year system accreditation period. The Digital Transformation and Academic Controlling Division set up in 2022 will successively expand the options for using **academic controlling** as a tool to improve teaching. Our quality management includes systematic **diversity monitoring**.

University Duisburg-Essen aims to expand its didactic advice services for lecturers with regard to e-learning by including advice formats on course development in order to strengthen active learning in a digital context. Teaching staff receive further qualifications in the context of fellowships, coaching and certification programmes.

Making quality-assured, freely accessible **open educational resources** (OERs) available is a chance to promote inclusive, equitable access to high-quality education, establish a sharing culture and thus further enhance the quality of studying and teaching. OERs are also created decentrally and support the acquisition of both subject-specific knowledge and transferable skills, such as developing professional ethics that teach the principles of good research

practice according to the DFG guidelines and are embedded in the subject-specific curriculum (for an example, see the ‘Digitale GWP-Curriculum’ in the Faculty of Chemistry). The University Library will continue to support the teaching staff’s engagement, make information and advice available and work with cross-university networks such as ORCA.NRW to improve the general conditions in this area. It already approved a policy to this effect in 2022. UDE is also using OERs to make its offerings available to society at large.

A wide range of ideas for **improving examination formats** were tested during the Covid-19 pandemic. The task before us now, however, is to continue to explore new and unresolved didactic, technical, organisational and legal issues and generate solutions that will enable us, as a University with a face-to-face premise, to use digital examination formats on a sound legal footing and design them in a skills-based manner. This will build on PITCH, a project funded by the Stiftung Innovation in der Hochschullehre foundation that has been running since 2021 and aims to deliver innovations in examinations and promote transfer and equal opportunity.

3.3 We design education processes for sustainable development as part of our social responsibility and we are committed to lifelong learning

Inspired by UNESCO’s work to promote education for sustainable development, UDE has offered its students a complementary elective certificate in **Education for Sustainable Development** since 2016, which was originally developed as part of a project seminar. During the validity period of this Strategy, subject-specific and methodological qualifications on sustainability topics are to be integrated across disciplines into as many degree programmes as possible; at the same time, aspects of sustainability are to be integrated into the curricula of suitable degrees as in-depth, discipline-specific topics. In addition, sustainability will be both a subject and a sign of quality in studies and teaching at a fundamental level at UDE.

Our guiding principle of lifelong learning means that further education is among the University’s tasks in order to help fill the need for skilled workers apart from regular academic studies. In view of the significant competition among the many (also commercial) providers, it behooves universities to develop further education opportunities based on their specific competencies, in which they can bring their specific strengths or USPs into play. For this reason, we will be developing a **further education concept** during the validity period of this Strategy that will point to ways the UDE’s Ruhr Campus Academy can work with the faculties to generate new, forward-looking opportunities and implement them successfully.

In both further education and in other teaching and learning contexts, UDE will be testing out **micro-credentials** as a meaningful and successful format below the degree level. This is first being rolled out in the European

university network AURORA, where smaller, self-contained units such as micro-credentials are designed to enhance student mobility.

UDE is working with its partner universities in the University Alliance Ruhr and Hochschule Düsseldorf – University of Applied Sciences to set up new further-education master’s programmes in various areas within energy engineering at the EUREF-Campus Düsseldorf. These degrees are designed to fulfil industry’s specific need for suitably trained specialists and also qualify students to pursue an additional academic career.

4. Interacting with society, the political sphere and the economic sector

University research and education gain a special relevance when research results do not remain within the confines of academia but are shared with the institution's surroundings – and that includes civil society, companies and dialogue partners in politics, culture and the media. Producing knowledge and conducting fundamental research are part of any university's central mission. Transferring that knowledge to others and conducting research that is more closely related to practical applications are also among universities' key tasks.

UDE considers this transfer vital. Because we are aware of this responsibility, UDE works to turn insights into shared knowledge and translate invention into innovation – and has also set up the structures required to do so. Examples include eleven affiliated institutes, the large University Medicine organisation and numerous spin-offs that make the impact and relevance of our research felt in society. From the mobility revolution to the transition to new forms of energy, use of resources, biodiversity loss, water management and climate change, UDE intends its research outcomes to interact with its environment. As a high-performance institution, its top-level research delivers science-based approaches to resolving key issues of our time. With academic and technological innovations, we take sociopolitical processes into account and explore transformative potential. At the same time, UDE engages in public dialogue, actively advises policymakers and interacts with the region, cities and schools in areas such as urban district development.

During the validity period of this Strategy, UDE is focusing its definition of its own role in transfer and enhancing its image inside and outside the University. It needs to harness transfer potential and manage the associated activities strategically. It will be expanding strategic partnerships such as those within the University Alliance Ruhr focusing on 'start-up factories' and those that promote social entrepreneurship within the EU network Aurora. Concepts are in development for enhancing research communication and implementing an entrepreneurial mindset in the humanities and social sciences as well as in UDE's culture. Transfer clusters, a partnership model and the master's programme in Sustainable Innopreneurship are new routes being tested.

4.1 We practice transfer in exchange with society, politics, and the economy

Universities traditionally produce students/graduates, academic publications and renown, and successful guidance along academic career paths (doctoral candidates, postdoctoral researchers, habilitation candidates, junior professors). At our University, we see transfer as our responsibility to society to actively manage the dissemination of our research insights to our surroundings and to maintain an active give-and-take with society. We not

only make our out-put available to society, but work with others to find ways to make it usable by as many people and systems as possible.

Our **transfer activities** are divided in to three **categories**, each with a different degree of governance, structuring and support requirements:

- **Direct transfer:** UDE output travels along established routes (e.g. publication in a scholarly journal) straight from researchers and teaching staff, from the faculties and inter-faculty research institutes, to the scientific sphere, the working world and the environment.
- **Professionally supported transfer:** dedicated internal University units provide targeted support for the transfer to and exchange with the scientific, economic and political spheres and with society.
- **Partnership-based transfer:** knowledge is used in innovations and research insights become part of applications and general knowledge through collaboration with strategic partner institutions (e.g. affiliated institutes, the University Hospital, municipalities).

Signs of the success of this transfer at the University of Duisburg-Essen are: patents, technology transfer, spin-offs, projects in industry; outreach activities such as a University-school partnership, the NanoSchoolLab, BarCamps, the Summer University, the Wissenschaftssommer science festival, Freestyle Physics, cooperation with theatres and museums, and many more; activities with a special social responsibility such as those in the University Medicine organisation, the Institut für Stadtteilentwicklung (institute for urban development) and the Hochschulambulanz für Psychische Gesundheit (university mental health clinic); advisory activities, including in scientific advisory boards and expert commissions, and in the media.

As one of the very large universities covering a wide range of disciplines, UDE has a solid basis for diverse and **sophisticated transfer activities**, which are to gain greater visibility, strength and support during the validity period of this Strategy. Best practice examples can benefit all disciplines and increase the range of available opportunities.

In the engineering and natural sciences, for example, the focus is on joint research and development projects with companies, as well as patenting and expert activities, i.e. **classic knowledge and technology transfer**. Affiliated institutes such as the Institute for Environment & Energy, Technology & Analytics build bridges from fundamental research to industrial application. Among many other research projects, the Development Centre for Ship Technology and Transport Systems works with the Research Lab for Innovative Port Technologies, the Test and Control Center for Autonomous Inland Navigation and the Nautical Simulator, on the complex issues surrounding of automated

inland navigation. The activities in the Hydrogen and Fuel Cell Center have a transformative impact on society. New concepts for energy systems, materials and mobility are being developed, and also expanded through strongly application-oriented projects with the Fraunhofer Institute for Solar Energy Systems among others. Another notable example of the focus UDE's research places on transfer is the Centre for Water and Environmental Research. It stands for research excellence at the highest international level and also takes research findings through to implementation and real-world use, for example through biodiversity accompanying projects for the restoration of the Emscher River. The Centre for Water and Environmental Research works closely with the IWW Water Centre in Mülheim an der Ruhr, another UDE affiliated institute and a member of the Johannes-Rau-Forschungsgemeinschaft (the North Rhine-Westphalian research association); it also works on an international basis with partner institutions in South Africa, Israel and Egypt, for example. Here, too, technology transfer from the natural and engineering sciences intersects with social responsibility for the challenges of the future.

In the humanities and social sciences, there is a strong focus on **policy consulting**, e.g. through the NRW School of Governance and the Institute for Work, Skills and Training. UDE researchers have been appointed to major national advisory bodies such as the German Council of Economic Experts ('Five Sages of Economy'), the expert commission for the fourth Federal Government equality report (Sachverständigenkommission für den vierten Gleichstellungsbericht der Bundesregierung) and the Standing Scientific Commission on Education Policy of the Standing Conference of the Ministers of Education and Cultural Affairs. Together with its neighbour universities in Bochum and Dortmund, UDE has created two bodies in Essen – the Institute for Advanced Study in the Humanities and the RWI – Leibniz Institute for Economic Research – that stand for **socially relevant research** and whose reputations extend beyond the region. With the Interdisciplinary Centre for Integration and Migration Research, membership in the German Centre for Integration and Migration Research and an affiliated institute, the Centre for Studies on Turkey and Integration Research, UDE is extraordinarily visible on the national stage, and also internationally thanks to the Käthe Hamburger Kolleg/Centre for Global Cooperation Research. UDE also actively pursues its **commitment to social responsibility** through the European network Aurora, in which the 14 partner universities together chose social entrepreneurship as their focus.

Dynamic exchange with society is also especially active in the multidisciplinary fields within **teacher training** and the educational sciences. Large-scale projects such as the University school, a primary school set up as a kind of real-world laboratory and guided in its construction and development by UDE together with the city of Essen, or long-term projects for **district management** at the Institute of Community Development and Consultation are examples of our multifaceted engagement in the field of teacher training.

The Faculty of Medicine at UDE is part of University Medicine Essen, where academic research and teaching are closely linked with clinical work. Translational medical research is a key transfer area at the University. It is based on fundamental medical research, which is always conducted with a view to the application to illnesses. Translational research takes the results of laboratory experiments to patients' sickbeds. One focus of this is the development of personalised and precision medical treatment for patients suffering from illnesses such as lung cancer and aggressive lymphoma, which is offered, for example, at the West German Tumour Centre. With the Institute for Artificial Intelligence in Medicine, University Medicine Essen has a new research unit that creates the conditions for expanding the 'bench-to-bedside' process to '**bit-to-bedside**'.

In addition to the myriad transfer activities UDE pursues, another example deserving of special mention is the Centre for Social Learning and Social Responsibility (UNI-AKTIV) at the Institute for Scientific Key Competencies. UNI-AKTIV was set up in 2013 as UDE's own coordinating unit to expand **campus-community partnerships** with a special focus on developing and integrating 'service learning'. UDE's commitment to engaging with civil society is also demonstrated through its involvement in events such as WissensNacht Ruhr (Ruhr Science Night) or the Wissenschaftssommer science festival in Essen as well as UDE's own events, including Freestyle Physics and the Summer University.

4.2 We pursue common goals with our partners – from inventions to innovations

Professional structures are an essential requirement for success and attaining goals. At UDE, structures, tools and measures are dynamically adjusted and further developed in line with changing issues and conditions.

In 2022, a **Vice-Rectorate for Transfer, Innovation & Digitalisation** was set up within University management. This firmly established transfer as a field of action in UDE's governance. Together with existing units, structures and partners at UDE, a concept is being developed to boost the integrated promotion of transfer and exchange with the social, economic and political spheres. The aim is to progress from ideas to understanding and shared knowledge, and from inventions to implementation and innovation. To achieve this, the focus areas of research and teaching at UDE are to be supplemented by thematically independent transfer clusters (see below), and also by a partnership model. The latter is intended to enable tools and measures to be developed based on a structured decisionmaking foundation, and to prioritise activities and develop them in a targeted manner.

Communication channels from academia to its surroundings and from society to the University are to be strategically developed in order to make the relevance and use of research even more widely accessible.

In these efforts, diversity, sustainability, internationalisation and digital transformation are key objectives which University management has agreed to reinforce on an ongoing basis, and they are also important guiding principles in promoting transfer at the University.

Institutionally, the Centre for Start-Ups and Innopreneurship at UDE (GUIDE), part of the Science Support Center, has been driving transfer forward since 2020. GUIDE works with a large network of cooperation partners. GUIDE coaches support people interested in starting a company from the idea through to the launch. In addition, GUIDE offers internal and external training as well as advice on funding and patents. It also offers special opportunities for women entrepreneurs, such as the Women Entrepreneurs in Science (WES) mentoring programme. GUIDE establishes close contacts between researchers and players in business and society. Company founders can use two co-creation labs at UDE, Product Innovation and Place Beyond Bytes, to get guidance in implementing their ideas. During the past two-and-a-half years, the GUIDE staff have held 585 consultations, helped launch 31 start-ups and provided support for 20 successful funding applications related to starting a company. UDE and GUIDE work as part of an NRW association for intellectual property in PROvendis.

In order to substantially increase the numbers and the quality of spin-offs and patents at UDE, a concept is to be developed in the near term for the central transfer support structures to proactively approach the faculties and researchers to identify potential for start-ups and patents and implement them systematically.

The universities in the University Alliance Ruhr have together formed the **Founder Initiative Ruhr**. UDE sees significant potential here to use a shared strategy to raise the number of innovative start-ups around research. A wealth of transfer activities are planned with partners such as the RAG-Stiftung foundation, Haniel, Thyssen-Krupp and Evonik.

One measure designed to take the start-up and communication culture to the next level is the planned launch of **transfer clusters**, a new tool. These clusters are to be defined and established according to set criteria on a cross-faculty basis together with partners in business, society and the political sphere. The selection criteria for the transfer clusters are aligned with UDE's strategic positioning and the resulting network policies, with the focus on UDE's strategic partners.

Transfer clusters offer virtual platforms with an industry-wide network. The platforms give UDE outstanding opportunities to position the results of interdisciplinary research in a targeted way so they are usable by members of the network, generally understandable and accompanied by strategic messaging addressed to the network stakeholders. For UDE, this means the potential to match the network partners' needs with UDE's offerings. The goal is to use this interaction to develop a new transfer structure

that is not connected to the traditional research structures. This will enable fast, flexible reactions to calls from various programmes such as EXIST, EFRE Regio NRW or SPRIND-D (e.g. from the Federal Ministry of Education and Research/BMBF, the North Rhine-Westphalian Ministry for Culture and Science/MKW NRW, or the Federal Ministry for Economic Affairs and Climate Action/BMWK).

Spin-offs from the transfer clusters are to constitute another level of the new network. In a next step, a multi-level mentoring network can grow where alumni entrepreneurs can advise fledgling founders and also receive advice from more established business leaders. UDE will benefit from the growth of trustful partnerships that form the seeds for new projects. In another development step, joint transfer clusters with the partners in the University Alliance Ruhr are planned.

Reinforcing fruitful collaboration with the affiliated institutes is to remain a priority. At the same time, UDE will be focusing more strongly on creating **new, application-oriented structures** where necessary. These may also be hubs, real-world laboratories, co-creation labs or new affiliated institutes.

Our number one objective through 2027 is to expand our already extremely diverse and successful collaboration with our partners in the social, economic, political and cultural spheres, working together as peers, and enter into new partnerships. Collaborations in and with the cities of Duisburg and Essen, and within the University Alliance Ruhr, the European alliance Aurora and the region are to be particularly reinforced through transfer networks.

4.3 We make research and its relevance visible

At its core, the objective of **research communication** is to make research insights accessible and comprehensible as well as to help foster an understanding of research methods and results. In this context, it is important to note that research communication is not a one-way process emanating from the University; rather, it also plays a role in bringing ideas and social issues into the research system. At UDE, we see research communication as a complex and multilayered interaction among academia, civil society, business, the media, and the political and cultural spheres. It includes subject-specific exchange within academia, social debate with and about academia, and the research and university communications transmitted through the media, both in legacy media and on digital platforms. **Transparent and understandable communication** and interactions can help make academia and research more trusted, relevant and impactful. As we communicate and share relevant topics and approaches to issues of social and economic policy as well as technology, it is imperative to use understandable language, a range of formats and target group-specific channels with each of the various target groups. The key to success here is the right mix of content, message, target groups and analogue and digital communications with specific language and visual worlds.

We also see the strategic significance of research and university communications for **UDE's positioning and profile-building** in the research landscape and in the public sphere. Communicating research results related to current and forward-looking topics from our wide research spectrum in combination with cross-media communication planning will help to strategically brand UDE as a place where the future is conceived of and shaped in vital, key areas. Wherever social transformations pose questions and challenges, we deliver answers and solutions. Communication from and about UDE as well as our interactions with our stakeholders in the media, the political and industrial spheres, research administration and society all play a role in enhancing our University's reputation as an academic institution committed to strong research and educational justice so that we attract top researchers and engaged, highly driven students. Consequently, we aim to expand our evidence-based, purposefully designed strategic communication and further enhance its efficiency.

UDE aims to develop a **holistic communications strategy** by 2025 that leverages both evidence-based communication and central University communication to enhance our University's profile and reputation. To that end, focus areas for the content are to be defined within this communication strategy as a communication agenda focusing on the short or long-term aim of enhancing our University's profile. In addition, the communicative connection to the general public is to be broken down and considered for the various target groups, formats, tools and myriad communication channels: media relations with both print and digital media, social media, the production of promotional and explainer videos or podcasts, spatial communication (events, interactive exhibitions) and lobbying (university-specific or general).

The communication strategy will be flanked by the development of **standards, guidelines and ethical principles for good research communication** and a research-communication-friendly culture. To raise awareness among more researchers, UDE will establish structures that help interested researchers at all career stages to acquire and improve their research communication skills with the media, the political sphere and the general public. This also includes opportunities for quality assurance in research communication and training for researchers to help them deal with critical topics.

Successful external communication requires good internal communication that helps people identify with the University. Consequently, the communication strategy should also **include internal communication**. With a view to improving and structuring communication within UDE, formats addressing language, information, networking and training for the various target groups are being developed. This is to be accomplished via a network of central and faculty-specific communicators coordinated by the Rectorate Staff Unit for University Management and Communication. Alongside that, the intranet is to be expanded to become an innovative, user-centric platform for information, knowledge and exchange for all staff members, which will help them identify with UDE more closely.

5. Commitment to an international university culture

As an international research hub in the heart of the Rhine-Ruhr metropolitan area, UDE nurtures a university culture that is open-minded and committed to a mission: to combine real educational justice, equal opportunity and inclusion to create an environment of participation where opportunities are exploited and differences do not lead to disadvantages. UDE creates the conditions that enable its students, researchers and staff to strongly identify with their University and thus develop a sense of belonging here. The University cultivates long-term relationships with graduates, alumni and emeritus professors, whether local or international.

5.1 We take responsibility globally, nationally and regionally

UDE has grown to become an international University with a large number of foreign students and hundreds of active international partnerships, including those within the Erasmus programme, in teaching and research. International students and researchers bring new perspectives to the University community and promote excellence in educational and research activities. It is our objective to expand UDE's **diverse and international University community** and thus play a role in keeping the Ruhr region an open-minded metropolitan area that is highly attractive to international researchers and specialists. Building on the foundation of a strong welcoming culture, we aim to improve services for international students and researchers.

In order to step up **student mobility** across the board, UDE must pursue a more in-depth **internationalisation of study programmes**. This will improve the way future outgoing students are prepared to study abroad. For incoming international students, expanding the content that is available in English makes UDE's study programmes more accessible. UDE intends to increase the range of English-language bachelor's and master's degree programmes and integrate foreign-language modules in all programmes if possible during the validity period of this Strategy. In general, UDE's goal is to enter into more **Erasmus partnerships** within the European higher education landscape to raise the number of students studying abroad in Europe, both incoming and outgoing.

Enhancing our **appeal for international researchers and staff** calls not only for expanding the qualification opportunities available in English, but also for more intense collaboration with the cities of Duisburg and Essen. Options are being pursued to enable registration of residence and related legal matters to be taken care of in one central office on campus, using the Welcome and Service Center in Essen as a model. In addition, it is vital to set up an **International House** with accommodations and common rooms for our international guests.

Internationalisation is not a one-way street: by cultivating relationships with international students and researchers who later return to their home countries, UDE also expands its international research cooperations and opens up new avenues for attracting future international students. In this context, a University-wide register and a communication format for **international alumni** as well as friends of UDE is to be developed as a way to help initiate research cooperations and attract foreign students.

5.2 We build our university partnerships strategically

UDE maintains **partnerships** with leading universities and researchers in all regions around the globe. The University's research profile feeds on longstanding research relationships with Radboud University in The Netherlands, Wuhan University in China and Vasyl' Stus Donetsk National University in Ukraine as well as newly emerging institutional cooperations with universities in locations such as Sub-Saharan Africa, Central America and Southeast Asia. During the validity period of this Strategy, a **concept for strategic partnerships** is being developed that defines UDE's criteria and objectives for such standout cooperations. On this basis, UDE aims to initiate and expand additional strategic University partnerships in a targeted manner.

One focus of UDE's expanded university partnerships is to be the development of **cooperations with universities in Western, Central and East Africa**, a region with excellent though acutely underfunded universities and research institutes with which German universities have maintained cooperative relationships to only a relatively minor extent thus far. Initially, a partnership with the University of Ghana in Accra is being set up, flanked by UDE's participation in the development of an NRW-Africa desk in Accra.

In all these efforts, UDE cultivates a type of **research diplomacy** that promotes open-mindedness toward universities and research institutes even during crises. Its research cooperations are committed to maintaining academic freedom, using research results for peaceful purposes and upholding democratic values in the international higher education system. Particularly by entering into new strategic university partnerships in post-conflict societies, UDE plays a role in the ability of research insights to spread throughout global society. The innovative capacity of research and teaching with their international impact can thus deliver ideas for solutions to global challenges and for attaining the UN Sustainable Development Goals.

5.3 In the University Alliance Ruhr and in AURORA we achieve more together

UDE along with its partner universities in the University Alliance Ruhr operates two **liaison offices** for the North America and Eastern Europe/Central Asia regions. In future, these liaison offices are to play an even greater role in increasing student mobility and internationalising degree programmes as well as initiating research cooperations and transfer activities. In addition, a third liaison office is to be set up under the auspices of UDE during the validity period of this Strategy that will both serve the interests of the University Alliance Ruhr and add to UDE's international profile in a unique way.

The **European university network Aurora**, of which UDE is a founding member, will establish sustainable cross-border degree programmes with strong participation on the part of UDE and with fresh EU funding (from 2024 to 2027). To that end, UDE is working together with other higher education bodies in Germany and in North Rhine-Westphalia to reduce obstacles to the accreditation of such degree programmes and to enrolment and the documentation of credits earned in the Aurora network.

5.4 We promote diversity, educational justice, and sustainability

University of Duisburg-Essen has a special responsibility for educational justice, particularly for the academic success and further qualification of first-generation students, people with an immigration background and everyone who comes here.

Humankind makes up only a small fraction of the diversity of our natural environment. We are expanding our focus on diversity to include biodiversity, thus enhancing the appeal and sustainability of our campus environment and its regional surroundings. We are developing sustainable, scientific solutions for a viable society through research, teaching and sustainable campus life. **We bring gender equality, diversity and inclusion together in one concept.** Diversity has been a key pillar of UDE's guiding principles for 15 years. We enshrine our achievements and continue to build upon them.

As a new foundation for further developing a University culture that reflects on discrimination and is critical of racism, we plan to implement a UDE **anti-discrimination policy**, develop unconscious bias training and establish an anti-discrimination officer. Based on a joint agreement and the participation of all UDE members and stakeholders, discrimination and irrelevant criteria will have no place in University processes here. In this context, it is also vital to strengthen and raise the visibility of gender diversity at UDE.

An **expanded definition of family** is part of the core of our University culture. We understand a family to be any communal unit in which people take social responsibility

for one another long-term, with or without children, of the same or different genders, residing alone or with others. This definition will be highlighted (in German) by adding an asterisk to the word *Familie**.

As part of our efforts to enshrine what we have achieved thus far and systematically and comprehensively tackle the connection between difference and disadvantage, UDE integrates equal opportunity, diversity, inclusion and the ability to reconcile work and family in one concept.

This integrative approach is also at the heart of the establishment of a **Diversity Support Centre**. It will bring together on a University-wide level the activities designed to promote women and all genders, develop an inclusive University culture that reflects on discrimination and deals critically with racism, and achieve a balance between studies, work and private life by dealing responsibly with different life stages and situations. Tried and tested tools will be firmly established in this centre, and its offerings will be pooled and made visible in a target-group-oriented Diversity Support Portal. The centre will comprise both the Family Service Office and a newly created Inclusion Coordination Office, which will assist students in matters related to making study materials barrier-free and advise the faculties and teaching staff.

The expertise UDE has gained with respect to students and graduates of the University through **diversity monitoring** is to be extended to include early career researchers as a group. The intention here is to take an evidence-based approach to dealing with the root causes of inequities and disadvantages also at this career stage which may lead people to abandon the qualifications they were pursuing.

UDE plans to set up a new parity concept to build on its successful participation in the **Professorinnenprogramm 2030**, a programme run by the public sector for the promotion of equal opportunity for male and female professors in academia and research at German institutions of higher education. The objective here is to increase the number of women researchers in top positions in the research system. Achieving **gender parity** is also a goal in all committees, at all management levels and at all qualification levels, as is pursuing the ongoing and systematic efforts to close the **gender pay and publication gaps**. This calls for diversity and gender-sensitive recommendations for the selection and appointment commissions, among other measures.

UDE is not only a diverse community itself; we also have established and highly visible **competencies in diversity research** and in sharing the resulting insights with society. By elevating study programmes in nursing and social work to the academic level, we are helping to raise the value and professionalism of traditionally women-dominated fields. With the Interdisciplinary Centre for Integration and Migration Research and the Essen College of Gender Research, two inter-faculty research centres produce knowledge about the relevance of equity and diversity that are also useful for the medical, natural and engineering sciences. The Center for Water and Environmental Research, the

development work that is going into the planned FutureWaterCampus and the UDE-run Research Center One Health Ruhr are generating knowledge about the vast significance of biodiversity for the environment and society.

6. Creating the conditions for the future of our university

Successful studies, good teaching and excellent research require suitable, functioning support processes. The University's central administration and its other central service units provide the necessary high-quality services. But the world and our society are changing. Our University is facing challenges through demographic change, the advancement of digitalisation and climate change that we need to find solutions for together. This means we must further improve established structures and services. UDE is working proactively to shape the conditions the University of tomorrow will need.

This includes developing the campuses and making them more attractive to turn them into spaces where students, staff and the residents of Duisburg and Essen can interact. The **campus development** plan is a strategic guideline that is now being fleshed out.

The University's central administration has embarked on the journey of future-proofing its services with the **'UDE Administration 2030' strategy process**. Based on the way it has redefined itself and the challenges outlined above, it has set itself three strategic goals: making UDE an attractive workplace, optimising process design and using resources sustainably.

These strategic goals have been operationalised through specific objectives, resulting in current and future measures being derived and implemented throughout the validity period of this Strategy. We are aiming for a comprehensive transformative impact.

IT security, data security and data protection have always been high priorities at UDE, and they became still more important following the cyberattack in late 2022. To ensure a crisis-proof IT infrastructure, these issues need to be tackled at a University-wide level. The Centre for Information and Media Services and the central administration will continue to expand the IT security enhancement measures already launched in the wake of the cyberattack in order to implement a **resilient IT infrastructure**. The network with UDE's research units will also be fortified, with the objective of using intensive collaboration to better respond to new requirements.

6.1 We design a campus that is sustainable and expressive of our identity

In 2023, UDE described its medium and longterm real estate strategy through 2030/35 in the campus development plan. This master plan sets forth the major infrastructure development lines that serve as the basis for meeting space-related needs in individual projects in a targeted manner. As the campus development plan is successively implemented, we also aim to react to the changing requirements in terms of building and room quality. The architectural quality of indoor and outdoor spaces is being improved,

and spaces for innovative teaching formats and attractive study areas created. The campus areas are also to be places that enable members of the University to spend time and relax, and encourage conversations among students, researchers and staff. These interactive spaces thus reinforce a sense of community. With an expanded range of spaces for study, sport, play, service and leisure, more of campus life at UDE should be able to extend into the evening hours in future. Sustainable development, climate-neutrality and a new view of mobility are important elements in this.

As a growing University, UDE needs additional space to spread out. The campus development plan contains two major commitments in this regard. In Essen, the **Thurm-feld** development area located north of the main campus provides the potential to realise projects such as the already planned FutureWaterCampus and ACTIVE SITES research buildings. At the Duisburg campus, the **Wedau Nord** area is an excellent strategic option. When the Faculty of Engineering is integrated into the innovation campus that is planned at this site, this will create a close physical network with partners who are interested in sharing in the faculty's research results. At the same time, the University will gain the opportunity to implement future-oriented campus structures independent of existing infrastructure.

The existing premises are to be optimised thanks to **'Zukunft der Arbeit@Arbeitswelt Büro'** (Future of Work@Office Working World), a pilot project that is adapting office structures in administration to present and future work requirements and promoting open, communicative collaboration. The experience gained will be incorporated into future projects to reform the way space is used.

6.2 We become visible as an attractive employer

UDE's future success depends not only on a **strategic appointment policy** but also on our ability to meet staffing needs and recruit bright minds in all status groups. Our University intends to remain viable despite the ever tougher competition for specialists that has resulted from demographic change. To do so, it must be capable of retaining its current staff as well as attracting new employees. UDE must further enhance its reputation as an employer with jobs and fields that offer both appeal and long-term stability. To that end, specific measures aligned with the **strategic goal of enhancing workplace attractiveness** (Arbeitsplatzattraktivität) are to be implemented. They will focus on recruitment, improving working conditions, improving employer branding and personnel development.

It is of vital importance here to focus more strongly than ever before on ensuring that line managers' mindsets and the way they manage their teams follow the agreed **Führungsleitsätze der Universitätsverwaltung** (University administration management guidelines). Overall, this will help to improve staff satisfaction and ensure a viable

personnel structure in the long term. Making workspaces more attractive and office areas more flexible to promote open, cooperative ways of working should also contribute to achieving this objective.

6.3 We design user-friendly, digital administrative processes

The ongoing digital transformation also calls for the transformation of numerous existing administrative processes – whether this due to legal requirements, new technologies or the intrinsic objective of improving processes. Process optimisation will thus play a significant role in the **digital transformation of administration activities**. As a result, digital technologies and solutions will be integrated into all areas of UDE services in order to boost quality and align service processes more closely with various user groups' requirements (i.e. end-to-end processes). With this, administration will do its part to put the University's overall digitalisation strategy into practice.

For such a comprehensive digital transformation to succeed, it will have to go hand-in-hand with a cultural transformation into a process-oriented administration culture with intelligent business process management. Personnel and organisational development is an elementary component in this, as is the involvement of the faculties among others. A workflow management system is also to be established. That will make delivering services efficient, independent of time and location, free of media disruption and transparent.

The change projects required for the digital transformation are coordinated and prioritised as part of a **digitalisation roadmap**. Uniform project management will also standardise the methods with which they are implemented. The project designs will bring user perspectives and the intended results of the processes to the fore. This approach is to be supplemented by organisation development, personnel development and communicative components to equip all administrative staff across the board with the new skills they need to embrace and work with revamped and digitalised administrative processes. The Personnel Development Department will therefore support staff not only in building their computer skills but also in developing a more agile and process-oriented way of working.

6.4 We use resources sustainably in the operation of the university

Climate change and its consequences are a major challenge for University operations. UDE is committed to protecting the environment and using resources responsibly. In a series of fields of action – energy, workplace, digitalisation, procurement, mobility, green spaces and water – pragmatic measures are being taken to make more responsible use of the available resources. They are designed to reduce the University's energy and water consumption as well as carbon emissions. Ultimately, we are aiming for net zero emissions.

In efforts to meet this goal, sustainability will be enshrined as a guiding principle in administration activities and thus become a key perspective in decision-making processes. This calls for intensive communication and expanded knowledge about sustainable alternatives, and also a University-wide structure supporting sustainability including an appropriate system of incentives.

6.5 We implement secure and resilient information-technology systems

There is no area of the University today that digitalisation has not yet penetrated. In the coming years, UDE will increasingly exploit the potential of digitalisation. The digital transformation must go hand-in-hand with improvements in infrastructure, the creation of more suitable spaces and investments in IT-savvy staff. Integrating and coordinating the processes, their components and the players, bringing in new issues around digitalisation and setting up sustainable structures in the faculties and units fall under the purview of the new Vice-Rectorate responsible for digitalisation.

Digitalisation measures only make sense when they strengthen research, teaching and services while also making it easier for UDE members to work and study. People are always the focus. The University is launching and managing cultural and technological change processes related to digitalisation. UDE is expanding its digital awareness offerings for all its members and linking them with personnel development measures. The goal here is to help all UDE members develop digital proficiency.

The more digitalisation permeates University processes, the more relevant cybersecurity becomes. Setting and meeting high standards with regard to our IT infrastructure and security, sophisticated emergency management procedures and awareness on the part of all UDE members are essential. Together we must continuously contribute to the security of our digital ecosystem.

With the aim of implementing a resilient IT infrastructure, an **IT security concept** is being developed which will be supplemented by **UDE IT governance**. An **information security management system** is also being established to provide a framework for continuous improvements to information security. The IT security monitoring board will test and document central and faculty-specific measures in an appropriate, functional and transparent manner. As a central measure, needs-based backup solutions will be developed that cover various attack scenarios and natural disasters.

7. University of Duisburg-Essen, 2023–2027

University of Duisburg-Essen continues to demonstrate, communicate, and promote its scientific performance in research and studying. Research strength, educational justice and sustainability are the principles that guide us as we develop and structure our university. Our actions reflect the responsibility we bear as part of society. Meeting the needs of the future, and continuously improving our ability to do so, means that our actions are thoughtfully, relevant and open to change in a world and a region that are in flux. We are enhancing the appeal of our study programmes and our learning and teaching methods. Our scientific work, our research transfer and digitalisation processes are sustainably promoted, as are our diversity and internationalization initiatives. We are committed to appointing excellent researchers, supporting early career researchers and creating the best possible employment conditions in research, teaching and administration. We are devoted to guiding our students to their degrees, the study and development of future generations that is highly valuable for a changing world. We further develop partnerships – especially within the University Alliance Ruhr.

With this University Development Strategy, we have set ourselves clear goals: Universities of the future will reflect university culture and scientific standards. We aim to significantly develop our campuses so that buildings of the previous institutions become the learning and research areas that meet today's requirements. We are committed to making UDE campus life more sustainable. The architecture and area design of University of Duisburg-Essen play an important role not only for the functionality of the spaces but also for the socialization of our many members the quality of their stay at UDE, and their affinity and connection with our university and the wider Ruhr-region.

The world is growing more digital, and information technology is becoming increasingly smarter. We are happy to join our varied and multifaceted digital expertise and science to one via our new computer science department. We are digitalising our services. We are creating forward-thinking concepts for research information systems and research data management and implementing cutting-edge developments.

We are committed to improving the University of Duisburg-Essen's international visibility and transfer activities. With new strategies to partners both nationally and internationally we will continue to firmly establish our position and reputation in the research and business worlds. We are promoting entrepreneurship with GUIDE and setting up targeted networks. We are using our successful European university network Aurora to initiate joint research projects.

Our sustainability strategy will target significant impacts from UDE research, education and campus life. We value and celebrate the participation of our university members. We address the concerns formulated by UN Sustainable Development Goals across the university, and we see it as

our responsibility to appoint to the specific urgency of climate change and the loss of biodiversity.

Our university produces great intellectual output. We are committed to publicise it transparently. We expand contemporary channels to strengthen interaction with civil and professional sectors of our society. From science communication to student marketing, we aim to reach our target audience via knowledge-lead and enriching discourse.

First and foremost: we are committed making University of Duisburg-Essen a home for excellent scientists, students, and employees. Science is a communal effort. We harness the disciplinary strength of our twelve departments together with our well-established interdisciplinary infrastructure: strong inter-faculty research centres, affiliated institutes and a large university medical center. The University of Duisburg-Essen stands for responsibility, significance, and the future.

Appendix: Development Guidelines

The guiding principles below form the legally required basis for drafting the University Development Strategy. They outline the essence of the content that UDE's University Development Strategy is to comprise in elaborate form. The guiding principles are drafted by the Rectorate in consultation with the Commission for Development Planning and Finance before being submitted to the Senate for approval. On this basis, the Rectorate compiles the University Development Strategy, with the draft being submitted to the Senate for review and ultimately to the University Council for approval.

- (1) The University Development Strategy forms the framework for the **particular strategies** at the University of Duisburg-Essen (UDE). At present, these include the research strategy, the teaching and learning strategy, the internationalisation strategy, the diversity strategy, the transfer strategy and the digitalisation strategy.
- (2) The University Development Strategy covers the **central fields of action** in higher education (research, teaching and learning, promoting early career researchers, transfer) and overarching topics (sustainability, diversity and equal opportunities, internationalisation, digitalisation). The relations between the fields of action and the overarching topics are comparable to a matrix.
- (3) The University Development Strategy defines priorities and focuses on **development goals that are of particular strategic importance for the entire university**. In this context, we demand of ourselves that our research, teaching and learning be outstanding, that we develop sustainable solutions for the world of tomorrow and that we consistently exploit the strengths inherent in diversity and internationalisation.
- (4) Whenever useful and necessary, our particular strategies are updated to adapt to changing challenges, overall conditions and goals. Thus, the **development of new or enhancement of UDE's existing particular strategies** will also be part of our University Development Strategy.
- (5) The higher-level development goals of the University Development Strategy give **impetus** for development projects at faculty or department level, and **best practice models** from individual units are included as examples when implementing goals from the University Development Strategy. Thus, the University Development Strategy allows for an appropriate level of flexibility in the implementation of its goals.
- (6) The University Development Strategy is at the heart of our governance and is complemented by a number of **other tools**. These are the Budget Management Policy, the regulations on the appointment proceedings (including the tenure track regulations) and the quality management system that is part of the university's system accreditation (including institutional evaluation processes and internal target and performance agreements).

Imprint

Published by the Rectorate of the University of Duisburg-Essen
www.uni-due.de

December 2023

Editor: Dr. Marlon Jopp and Annika Hohmann
Layout: Alexander Dorsch

Print: Universitätsdruckzentrum