UNIVERSITÄT GREIFSWALD
Wissen lockt. Seit 1456

Research Strategy of the University of Greifswald

Environment & Society in Transition
Problems and Solutions

Publishing details

ISBN 978-3-86006-494-8
Publisher: Rectorate of the University of Greifswald
Layout & typesetting: Sabine Köditz, University Communications
Cover photos: Jan Reinicke-GCYeTnqJ8NM-unsplash, Anja Lück-Lewerenz, Jan Hilgendorf
Figures: Katharina Riedel (6, 7, 8, 10)
Other photos: AdobeStock-784562025-Saliento, Anna Derksen (15), Gina Heitmann (12, 17), Philipp Marthaler (13), Jan Meßerschmidt (20)
Print: DokuService Knoll, Greifswald

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Last revised: 23 April 2024

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1. Motivation

The University of Greifswald (UG) sees itself as a **research university** that, through its visibility both nationally and internationally, plays a significant role in shaping the academic and scientific landscape in northeast Germany. It is characterised by **excellent research** and **outstanding researchers**, especially in the fields of community medicine, the life sciences and research on the Baltic Sea region. Together with its non-university partners within the Science Net Greifswald, UG strives to find innovative solutions to the major social challenges of our times, including health and disease prevention, the environment and the climate, energy and raw materials, and the opportunities and risks of globalisation. Nevertheless, UG – like all other German universities – faces growing competition for increasingly scarce resources and for the "brightest minds". This is exacerbated by the fact that, to date, UG has been unable to benefit from the privileges of Germany's national Excellence Strategy. As a result, the University does not have the visibility among elite researchers that universities supported by the programme enjoy.

In parallel with this, the demands placed on universities by society have palpably intensified. Communicating research results, addressing the challenges facing society and producing significant input for business and civil society are now among the core duties of the tertiary education sector. Higher-education institutions also play an important role in democratic education and providing evidence-based advice to political decision-makers. Against this background, and given the need to **evaluate key fields of research to date**, it is essential that universities reflect critically and pursue strategic development. This process seizes and builds upon **state-level strategies** such as the Regional Innovation Strategy *(Regionale Innovationsstrategie),* the State Health Promotion and Prevention Strategy *(Landesstrategie zur Gesundheitsförderung und Prävention),* the Mecklenburg-Vorpommern Healthcare Industry Masterplan *(Masterplan Gesundheitswirtschaft MV),* the Vorpommern Strategy *(Vorpommern-Strategie),* the "Strengthening democracy and tolerance together!" *(Demokratie und Toleranz gemeinsam stärken!)* programme and the Mecklenburg-Vorpommern Baltic Sea Strategy *(MV-Ostseestrategie).*

The foremost goal of this strategic process is to **refine the profile of UG, identify unique, location-specific characteristics** and **intensify collaboration with non-university partner institutions** with the aim of **increasing the visibility of Greifswald as a location for research** among various stakeholders and living up to the University's own **aspiration to excellence**, which pertains to **both collaborative and individual research**.

2. Status quo

The University has distinguished itself to date through success in five key fields of research:

(1) **Community Medicine & Individualized Medicine** focuses on the causes and risk factors of diseases along with the provision of medical care to the population. Centred at University Medicine Greifswald (UMG), the aim of this key field of research is to develop universally applicable and innovative methods and concepts, in particular in relation to the causes, prevention and treatment of common clinical diseases. A central instrument for achieving this is the Study of Health in Pomerania (SHIP), a long-term epidemiological study of globally unparalleled complexity.

(2) **Environmental Change: Responses & Adaptation** is a key field of research that connects and integrates natural sciences and the humanities in the context of ecological and environmental research. This stretches from the ecological areas of work to geosciences, mathematics, environmental physics, economics, applied ethics, and law. Its central research topics are the adaptation of species and ecosystems to changing environmental conditions, the sustainable use of natural resources, landscape development, and the innovative implementation of georesources in environmental management.

(3) **Cultures of the Baltic Sea Region** examines cultural identities, cultural exchange, historical transformations and the political significance of (international) institutions from a transdisciplinary perspective. A current focus of this research is fundamental social, ecological, energy-related and political transitions and their narrative construction. It also considers the consequences of the region's geographical location and natural qualities along with the distribution of its population. This key field of research is led by different subject areas in the Faculty of Arts and Humanities as well as by researchers in the fields of geography, theology and law.

(4) **Plasma Physics** deals with the fundamentals of complex plasmas, the formation and properties of heavy elements of the periodic system in astrophysical processes, the fundamentals of magnetically confined high-temperature plasmas, as well as plasma technology and the application of plasmas in pharmacy and medicine. This key field of research is led in particular by two non-university institutes, the Leibniz Institute for Plasma Science and Technology (INP) and the Max Planck Institute for Plasma Physics (IPP), as well as working groups at UG's Institute of Physics.

(5) **Proteomics & Protein Technologies** is a key field of research with several central topics: elucidating the molecular causes of bacterial and viral infectious diseases; protein functional analysis and physiological proteomics of industrially important bacteria for white biotechnology; examining the function and interaction of bacteria from various ecosystems, and developing biotechnological processes for the environmentally friendly production of chemicals and active ingredients. In this key field of research, researchers at the Faculty of Mathematics and Natural Sciences (MNF) and UMG collaborate with their counterparts at the Friedrich Loeffler Institute, the Federal Research Institute for Animal Health.

The establishment of excellent research infrastructure – including three research buildings of national significance, a state-of-the-art computer centre and a university library underpinned by research-focused services – is a vital requirement for internationally recognised cutting-edge research in the key fields of research outlined above and tangibly promotes strongly research-led teaching at UG.

Building on its research strengths to date and in light of current social challenges, the rapid advance of innovation-driven digitisation and global conflicts, the University intends to implement **interdisciplinary, transdisciplinary** and **transsectoral approaches** to further develop and refine the profile of its key fields of research. Today, complex and pressing issues including the impacts of environmental and climate change on people and animals, sustainable energy supplies, healthcare models capable of meeting future challenges, demographic change and the loss of social cohesion can only be tackled through **interinstitutional** and **transsectoral** cooperation.

In order to meet this challenge, UG cooperates with renowned non-university research institutes in the surrounding region, including the Alfried Krupp Wissenschaftskolleg (Institute of Advanced Studies), the Research Institute for Farm Animal Biology (FBN), the Friedrich Loeffler Institute, Federal Research Institute for Animal Health (FLI), the Helmholtz Institute for One Health (HIOH), the Leibniz Institute for Plasma Science and Technology (INP), the Leibniz Institute of Baltic Sea Research Warnemünde (IOW) and the Max Planck Institute for Plasma Physics (IPP).

3. Objectives

This strategy aims to make the best possible use of the available resources and consolidate **interdisciplinary, interfaculty** and **interinstitutional basic** and **applied research** with a pioneering approach. It builds on the university's unique characteristics, existing research strengths and the individual expertise of excellent researchers at UG. The University aims to refine its profile by narrowing its focus from five key fields of research to **three research domains**. These research domains will continue to be supported by the non-university research institutes referenced in Chapter 2. It is hoped that this new focus will enhance the university's international competitive power and enable researchers and other stakeholders to identify more strongly with Greifswald as a location for research. This will increase its appeal for elite researchers from all over the world and improve its chances of securing coordinated research collaborations through the German Research Foundation (DFG), the Federal Ministry of Education and Research (BMBF) and the European Union (EU). At the same time, UG aims to create appropriate working conditions for researchers to promote the development of current and innovative research approaches as effectively as possible.

An important element in successfully securing high-profile joint research projects is networking researchers in all disciplines at an early stage, which will be supported through **implementation and institutionalisation of these highly interdisciplinary research domains**. In addition, the synergy of socially relevant research and research-led teaching will make UG more attractive to prospective students and ensure high-quality training and education for its own early-career researchers from the beginning.

By adopting this new Research Strategy, UG makes a stronger commitment than ever before to fulfil its responsibility to promote the transfer of knowledge to the industry, business and society. The newly defined domains and the associated shift in perspective will promote evidence-based approaches to solving current economic and social challenges such as climate change and environmental degradation, future energy supplies, the fragility of global healthcare systems, demographic change, the increasing prevalence of mental illness, migration, population displacement, democratic deficits, and political polarisation. Key fundamentals for this include scientific communication tailored to specific target groups and suitable forms of participation. UG is thereby increasing its **relevance at state and national level**, supporting **tolerance and democratic education** and providing **future-focused input for civil society**.

4. The University of Greifswald's new research profile

In order to refine its profile, and under the maxim of **"Environment and Society in Transition: Problems and Solutions"**, UG defines three interfaculty and interlinked research domains (see Figure 1):

The interdisciplinary **Baltic Sea Region** research domain (see Chapter 4.1.1) addresses highly relevant issues concerning the transformation of the Baltic Sea region and the associated cultural, societal, ecological, energy-related and political changes. In this context, it also looks to develop strategies to combat current social challenges in the Baltic Sea region. This includes topics such as the region's security architecture, energy supplies and the impacts of climate change.

The interinstitutional **One Health** research domain (see Chapter 4.1.2) brings together different disciplines to facilitate a deeper understanding of the complex correlations between human health, animal health and the health of the environment. This integrated approach aims to develop more effective strategies for avoiding, monitoring and controlling diseases while simultaneously protecting the environment and the health of both humans and animals.

The multidisciplinary **Prevention** research domain (see Chapter 4.1.3) is dedicated to researching and developing solutions at different levels of healthcare and public service provision. This includes analysing the impacts of physical and mental illnesses on people's quality of life and wellbeing. This research domain also thoroughly examines topics such as the provision of public services in rural areas, the universal provision of high-quality (school) education, the significance of gender-sensitive treatment parameters in medicine, and civil protection strategies in times of crisis.

The **interdisciplinary key research topics** (see Chapter 4.2) that are already well established at UG form the foundations of the three research domains. Key research topics including **Environmental Change, Peatlands, Coasts & Oceans, Bioeconomy, Rural Areas, Peripeties & Transformation, Molecular & Individualised Medicine, Community Medicine** and **Infection & Inflammation** already enjoy high visibility and are underpinned by substantial third-party funded projects. By the same token, key research topics with high social relevance, such as **Plasma Physics, Education Research, Medical Humanities**, and **Gender Studies** already contribute significantly to the research profile of UG.

Digitalisation, research data management and **artificial intelligence** provide an essential basis for all forms of future-focused research and are incorporated in a similar way to continued internationalisation efforts and the research-led teaching approach (see Chapter 4.3).

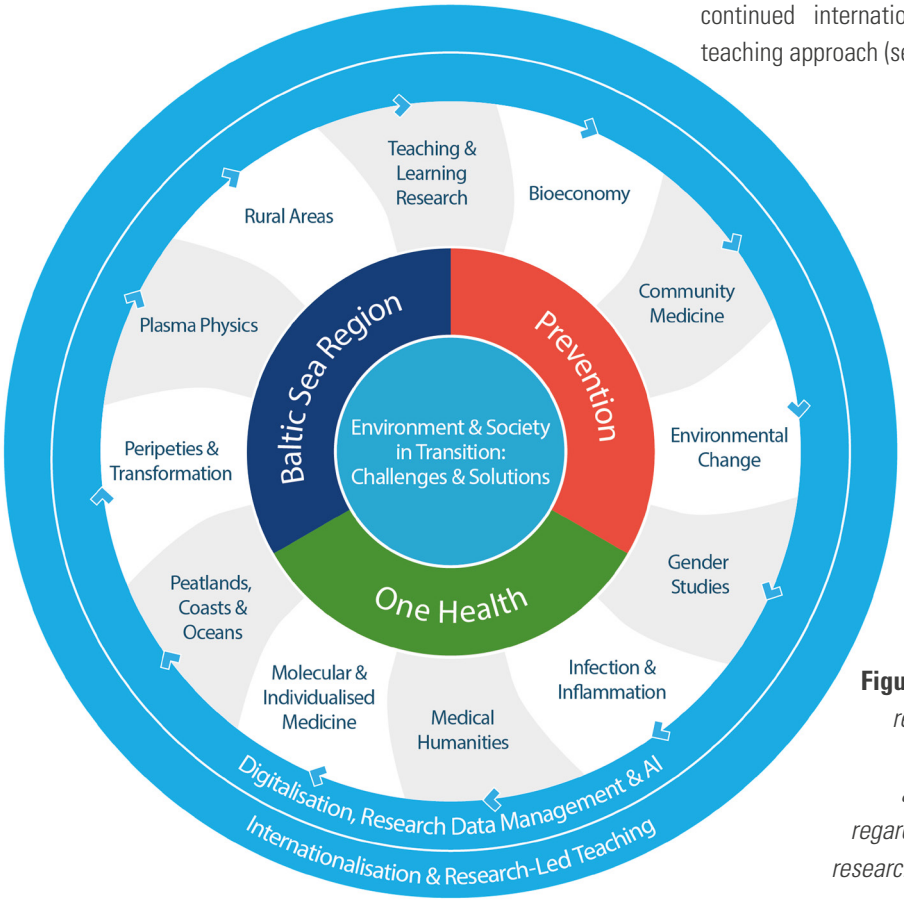

Figure 1: *Schematic representation of the three research domains and 12 key research topics of UG. While the key research topics are organised alphabetically, they should be regarded as dynamic elements, i.e. individual key research topics may con-tribute to several research domains to different extents.*

4.1 Targeted profile refinement through highly relevant, cross-faculty research domains

4.1.1 Baltic Sea Region

Research object and status quo: Interdisciplinary research into the Baltic Sea region in Greifswald is already making a significant contribution within the national and international research environment, providing vital input to drive further developments in this area. The Baltic Sea region has been and continues to be researched in Greifswald through interdisciplinary and international collaboration from the perspective of cultural identities, cultural exchange, historical regions and institutions (see Figure 2). In its Baltic Sea Region research domain, the University collaborates with numerous institutions at national, euroregional and international levels, including a number of partner universities. The subjects located in the Faculty of Arts and Humanities form the basis for long-term research into the Baltic Sea region. The flagship programmes of the previous key field of research, Cultures of the Baltic Sea Region, were three Research Training Groups (RTGs) – "Contact Zone Mare Balticum", "Baltic Borderlands" and "Baltic Peripeties" – that successively secured funding from the DFG from 2000. This long-term groundwork enabled the University to establish the Research Centre for Manors in the Baltic Sea Region and the Interdisciplinary Centre for Baltic Sea Region Research (IFZO).

The IFZO brings together all research activities on the Baltic Sea region and offers research and transfer structures for innovative research issues along with collaborative projects in all subject areas. In addition to expertise in the humanities and social sciences, which allows research into the Baltic Sea region through a temporal dimension, including from the perspective of cultural, linguistic and political science, the IFZO is increasingly addressing issues related to ecology, energy and security in the context of the region's geographical location, natural qualities and population distribution. Drawing on these insights, the IFZO's "Fragmented Transformations" research programme analyses the transformation of the Baltic Sea region and the fundamental social, ecological, energy-related and political transitions underway in the region.

The Baltic Sea region is particularly well suited to the analysis of cultural, political, economic and social interactions and exchange processes. It allows researchers to examine important issues related to cooperation and integration, which have become even more relevant in light of the war in Ukraine, with transferability to Europe and the rest of the world. The problems facing the region today can only be examined through interdisciplinary research with close links between different topics and a long-term historical perspective. Against this background, not only does UG conduct research into current issues, such as security architecture and energy supplies, its researchers also generate

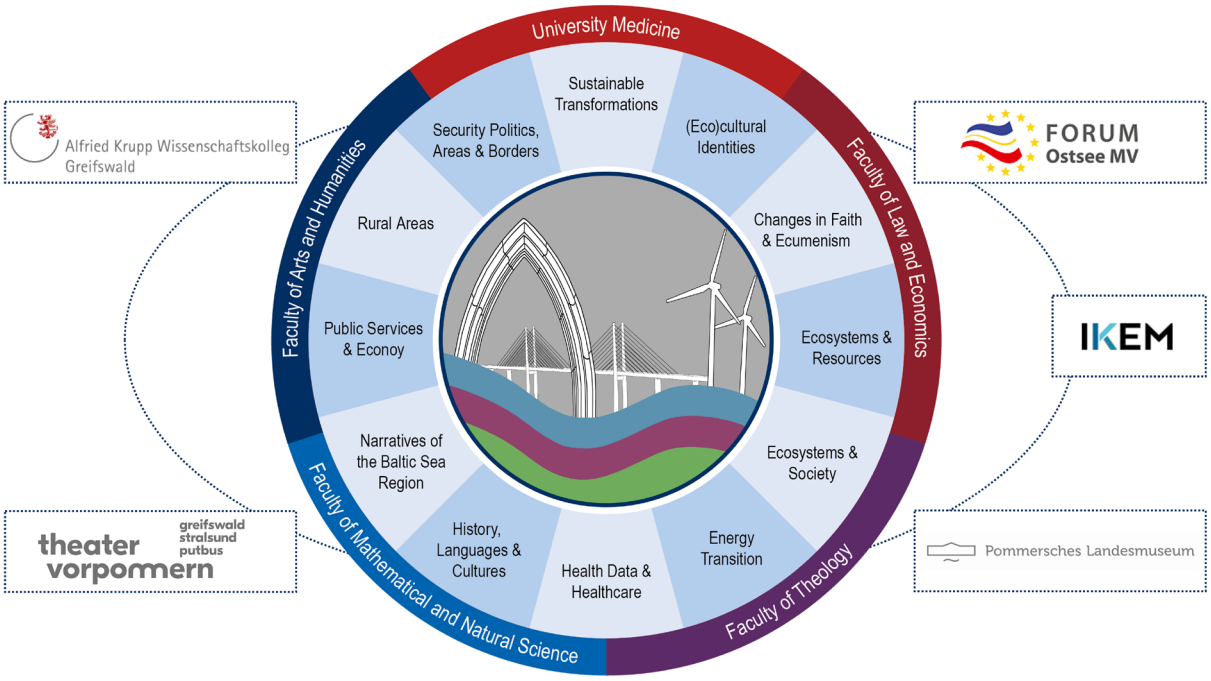

Figure 2: *Schematic representation of the Baltic Sea Region research domain to which all five faculties contribute and which features close, collaborative links with the Alfried Krupp Wissenschaftskolleg, Theater Vorpommern, the Pomeranian State Museum, the Institute for Climate Protection, Energy and Mobility (IKEM) and the MV Baltic Sea Forum. The areas of expertise incorporated into this research alphabetically and are not allocated to individual faculties. domain are organised*

comprehensive, outstanding expertise on the historical and cultural context of the entire Baltic Sea region.

Vision: Greifswald will remain the leading location for research into the Baltic Sea region by building on existing strengths as well as by seizing upon and developing new and relevant research topics. In the future, research into the Baltic Sea region – led by the IFZO as the central institution – will continue to be characterised by interdisciplinary research, international collaboration and the convergence of basic and applied research. Securing third-party funded joint research projects, excellent research collaborations with research institutions throughout the region and continuing relevant appointment practices will strengthen scientific expertise and structures in research into the Baltic Sea region while also consolidating the cross-faculty embedding of this research domain. The IFZO will define over-arching topics (called "streams") for the entire centre, combining as many third-party funded projects of as many different sizes and types as possible. These include (a) "Rethinking the Baltic Sea region – Identities, resilience and cultural heritage", (b) "Securing the future viability of the Baltic Sea region – Interdisciplinary solutions for society and the environment" and (c) "Protecting the Baltic Sea region – Global challenges in a crucial region".

In preparation for new joint applications, work is underway to discuss and develop specific topics with which all faculties can engage in a participatory process. Topics currently under discussion include "Eco-cultural identity", "Disputed resources", "The Baltic Sea region as a time machine for a maritime region in the Anthropocene" and "Resilience". The University plans to put forward proposals for joint, structure-forming third-party funded projects on the basis of research questions that arise from these and other topics.

4.1.2 One Health

Research object and status quo: The One Health research domain will examine the interaction between the health of humans, domestic and wild animals, plants and the environment, which are closely linked and interdependent. Due to its interdependencies and embeddedness in the natural and man-made environment, this research approach is highly interdisciplinary and thereby offers opportunities for researchers from all five faculties to collaborate (see Figure 3). Epidemiology, the molecular basis and combatting of zoonoses – i.e. bacterial and viral infections that can be transmitted between animals and humans – and the examination and combatting of the spread

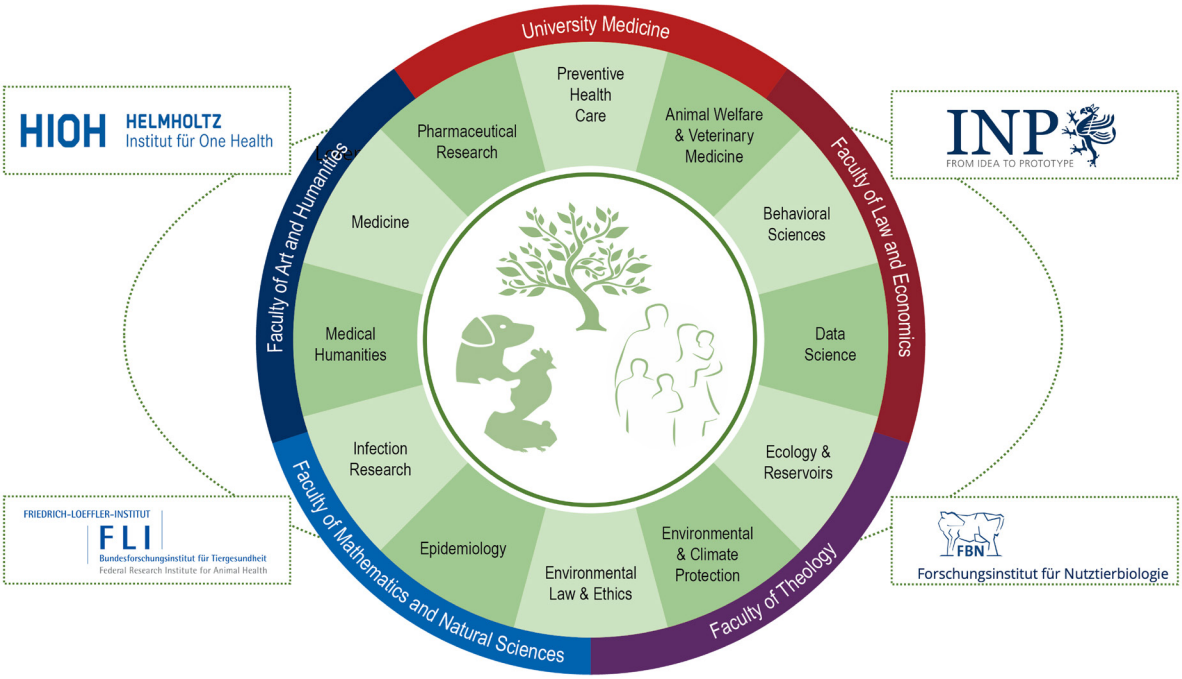

Figure 3: *Schematic representation of the One Health research domain, to which all five faculties and several non-university partners (HIOH, FLI, INP and FBN) contribute. The areas of expertise incorporated into this research domain are organised alphabetically and are not allocated to individual faculties.*

of antimicrobial resistance together form an important area of One Health research. Human medicine, veterinary medicine, the life sciences, and agricultural science play a significant role in this research, as do epidemiology, statistics/mathematics and informatics. Further areas of interest concern the effects of environmental pollution, climate change and changing habitats on humans, animals and ecosystems and their genesis, which necessitate the integration of further disciplines such as geography, science history and environmental sciences. As our environment is shaped by human activities and cultural changes, One Health research also takes account of human behaviour in relation to health and environmental changes. Disciplines such as psychology, law, social science and the humanities make important contributions to our understanding of the interdependency of humans, animals and the environment, facilitating a holistic concept of health through the integration of political and cultural considerations. The One Health approach also strives not only to explain but also to communicate the resulting insights into the interconnected system of humans, animals and the environment. In light of this, educational science, communications science and the arts can also contribute to One Health research.

Greifswald stands out as a research location through its globally unique, wide-ranging and highly complementary expertise on One Health. For many years, UG, UMG and the FLI have successfully conducted research into host-pathogen interactions as the basis for successful prevention and treatment of infectious diseases in humans and animals, which is reflected in countless third-party funded joint projects supported by the DFG, the BMBF and the Mecklenburg-Vorpommern State Government. In the context of cohort studies such as the Study of Health in Pomerania (SHIP) and its veterinary extension SHIP-NEXT One Health, researchers at UMG are examining the influence of environmental and social factors on non-transmissible and transmissible diseases, such as zoonoses. The University has further expertise highly relevant for the One Health approach in relation to pathogen reservoirs, environmental, peatland and climate research, (environmental) ethics, environmental law, psychology, health concepts and their time-specific rationales, as well as rural areas and the interactions between human activities in a given space. For instance, UG led the establishment of the BMBF-funded "T!Raum One Health-Region Vorpommern / Participative Innovation Ecosystem for Healthy Humans, Animals and Environment" initiative, which aims to make Vorpommern a One Health region. The UG/UMG Medical Humanities network strives to foster interdisciplinary and interprofessional exchange on health-related topics and facilitate their integration in teaching and research.

Collaboration with non-university partners supports and enriches the establishment and expansion of the One Health research domain at UG. The HIOH serves as a nationwide beacon in relation to One Health in Germany, as underlined by numerous international third-party funded projects and national projects with local partners such as UG, UMG and the FLI. In addition, the HIOH is one of three offices of the national One Health Platform and thereby promotes the widespread networking of One Health research in Germany. Finally, researchers at the FBN engage with issues of responsible livestock farming in the context of sustainable agriculture.

All partners in Greifswald thereby make valuable contributions to the consideration and development of the One Health concept and its implementation. The region of Vorpommern also appears ideally suited to One Health research and its application. Large areas of intensive agriculture border expanses of broadly untouched ecosystems. Intensive livestock farming across a broad spectrum of husbandry methods comes up against migration routes for wild animals and wintering and breeding areas for migratory birds. Given its location in a euroregional borderland with daily flows of tourists and business travellers, and as a natural border crossing for wild animal populations and livestock transports, the risk of "importing" zoonotic pathogens appears particularly high in Vorpommern. The One Health research domain benefits from the character of the region – a region in transition, serving as a living lab for One Health-related issues, facilitating analysis of resulting conflicts and potential opportunities – and brings together complementary scientific expertise in pursuit of a holistic, forward-looking concept of health.

Vision: Research on topics relevant to the One Health domain is already underway at many UG institutes, University Medicine Greifswald, the FLI and the HIOH. In the future, UG will strive to intensify its well-established collaboration with different university and non-university partners, in particular through successfully securing high-profile joint research projects on different focus topics within One Health research. The Baltic Sea Region (see Chapter 4.1.1) and Prevention (see Chapter 4.1.3) research domains and several of the university's key research topics (see Chapter 4.2) such as Rural Areas, Bioeconomy, Environmental Change, Infection & Inflammation, Community Medicine, Medical Humanities, and Education Research offer a variety of links with One Health research and provide support through complementary expertise. The T!Raum One Health-Region Vorpommern initiative strengthens cooperation and communication in relation to One Health with political, economic and civil society stakeholders in Vorpommern. The fact that research topics are already deeply rooted in the regional population (e.g. through SHIP studies) presents ideal potential to generate strong interest and actively integrate the population into scientific issues, especially in rural areas. There are also already extensive national, euroregional (i.e. the Pomerania euroregion with the Pomeranian Medical University in Szczecin

and the Interreg Baltic Sea Region) and international partnerships. Particularly worthy of note are established links with the World Health Organization and One Health projects in Africa and Asia. The University plans to implement a variety of measures to strengthen its One Health research domain and better exploit the potential of all faculties and non-university partners, namely (a) holding conferences on the topic, (b) providing corresponding start-up funding for One Health research collaborations, (c) establishing international One Health degree courses, (d) making strategic appointments in specified fields and (e) opening up existing networks to all interested researchers.

4.1.3 Prevention

Research object and status quo: The aim of medical prevention is to avoid or reduce the occurrence, spread and negative impacts of illnesses and health disorders and thereby preserve health, quality of life and wellbeing through all stages of life. While adults' need for secondary and tertiary preventive measures – such as screening and rehabilitation programmes – increases with age due to the elevated risk of various diseases, primary preventive measures including vaccination and awareness campaigns appear most effective for children. In a broader sense, however, prevention includes not only medical approaches but also social and political strategies that aim to improve the health and wellbeing of the population as a whole. Accordingly, this research domain also benefits from the expertise of all five faculties (see Figure 4). Relevant areas of expertise include promoting education and social participation, creating healthy living conditions and combatting social inequality and discrimination, which can have a negative impact on health. This also creates strong links with the Baltic Sea Region (see Chapter 4.1.1) and One Health (see Chapter 4.1.2) research domains.

UG and UMG have a strong prevention-oriented research profile in the life sciences. This is reflected in the establishment of three research facilities of national significance – the C_DAT, the C_FunGene and the William B. Kannel Center – and its participation in three German Centres for Health Research (DZNE, DZHK and DZKJ). Key starting points and achievements in the development of research on medical prevention include joint projects such as the "Thrombocytes" Collaborative Research Centre (SFB/TRR 240), the "PRO" Research Training Group (2719), the "MemoSlap" Research Unit (5429), the DFG-funded "Rural Age" Clinician Scientist Programme, the National Research Data Infrastructure (NFDI4Health), the Medical Informatics Initiative (MII), the University Medicine Network (NUM), the BMBF-funded Inclusive Excellence (InkE) project and the Horizon projects EUthyroid2 and EU JoinUs4Health. Expertise in areas of social science such as health economics, health-related law, gender studies and ethics,

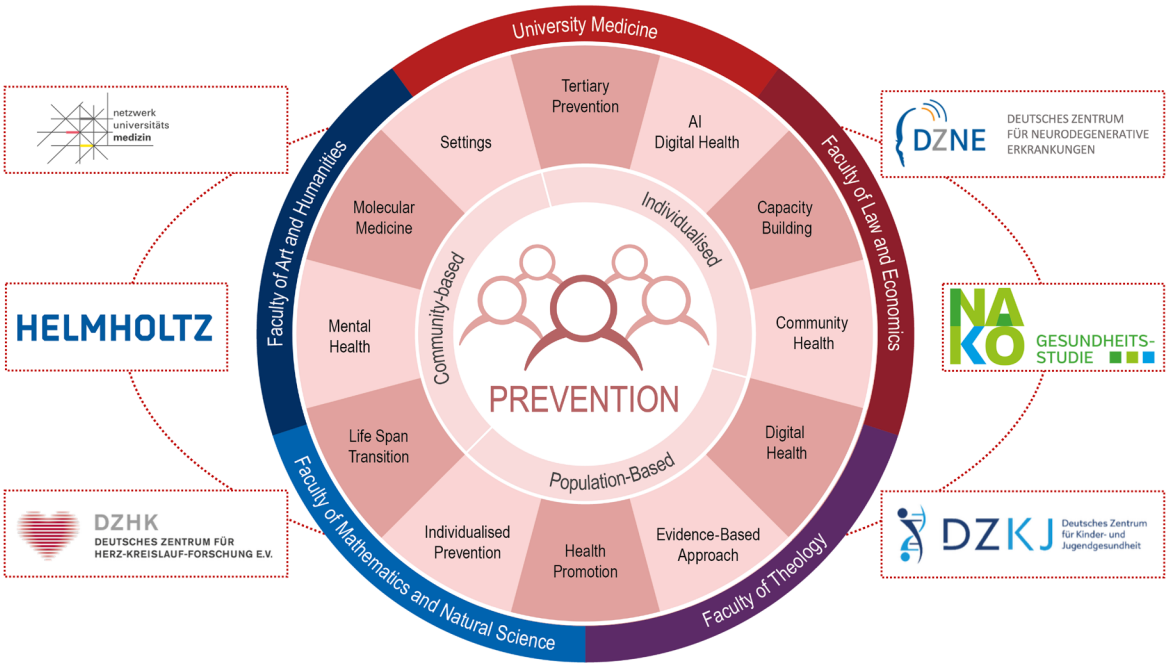

Figure 4: *Schematic representation of the Prevention research domain, to which all five faculties contribute different expertise. There are also close existing links with external partners, such as the Network of University Medicine (NUM), several German Centres for Health Research (DZHK, DZNE and DZKJ), the German National Cohort (GNC) study and various Helmholtz-Gemeinschaft institutions.*

and the strong focus on health and prevention in psychology, are also integral components of the Greifswald research portfolio. The Think Rural consortium researches issues including the challenges of public service provision in rural regions and considers healthcare and disease prevention alongside issues of civil protection. Education research focuses on the provision of public services by means of professional, science-based (school) education. In addition, this research is both strongly anchored at the regional level with a broad professional basis, including numerous links with civil society, and also strongly networked internationally within the Baltic Sea region and beyond.

Against the background of demographic change and the socio-economic circumstances in Mecklenburg-Vorpommern, the Prevention research domain appears both highly relevant and urgently needed. Furthermore, the well-established healthcare system in the state offers good prospects for the exploitation and transfer of research outcomes, further reinforced by the Regional Innovation Strategy and the focus it establishes on "preventive and personalised medicine".

Vision: The aim of the Prevention research domain is to advance research into and the development of integrated, individualised prevention, tailored to the lived-in world, as a cross-sectoral, interdisciplinary approach. The concentrated use of the research expertise and resources available in Greifswald facilitates the effective research, development and realisation of pilot solutions and prototypes as well as sustainable implementation and evaluation at different levels of prevention research, e.g. in the fields of health and education. Broad stakeholder integration and active outreach engagement (in the surrounding region) enable comprehensive social participation and strengthen the practical relevance and transdisciplinarity of prevention measures. In this context, researchers at UG make an effective contribution to the development, analysis and implementation of preventive measures in order to avoid unwanted events and negative trends at the societal, social and individual level – including in relation to health and education – before they occur, or at least delay them. At the same time, prevention research in Greifswald promotes resource efficiency and sustainability by facilitating early and timely measures that avoid or minimise subsequent damage, negative impacts and consequential costs.

Prevention research in Greifswald combines scientific expertise from the fields of medicine, psychology, health economics, gender research, educational science, empirical educational research, teaching theory and law. In the future, it will also be open to input from researchers in other disciplines, such as through collaboration in the medical humanities. At UMG, key research topics such as Community Medicine, Molecular & Individualised Medicine, and Infection & Inflammation, and focuses on cardiovascular diseases, neurological and psychological diseases and cancer, are supported by a state-of-the-art research and research data infrastructure and renowned cohort studies (e.g. SHIP and GNC). These aspects are also strengthened by participation in German Centres for Health Research. UG promotes the interdisciplinary profiling of health-related preventive research and thereby reinforces the input produced by the Chair of Health and Prevention (Faculty of Mathematics and Natural Sciences) and the Chair of General Business Administration and Health Care Management (Faculty of Law and Economics). In addition, the Think Rural consortium offers a future-oriented framework for the networking of UG and UMG researchers who engage in prevention research. Education research develops solutions for the education sector, including for universal provision of high-quality (school) education, professionalisation of teaching and media education. It also contributes to prevention by conducting research into school-based socialisation processes, learners' socio-economic competencies and the formation of beneficial teacher-learner relationships. In the future, this broad base of research will be strengthened with lasting effect by securing cross-faculty, multidisciplinary collaborations.

4.2 Research strengths from traditional and innovative key research topics

4.2.1 Education Research

Society, and especially schools as educational institutions, face numerous challenges at present. These range from demographic change and the consideration of increasing diversity and heterogeneity to the realisation of inclusive teaching/learning settings and digitisation processes. Future teachers must therefore be equipped to address these issues. There is also a focus on individual support and more effective means of developing each learner's potential with the aim of maximising learning achievements and, as a result, moving towards equal opportunities in the education system. UG makes an important contribution to tackling these challenges and preventing possible negative consequences through its Education Research activities, including on teacher professionalisation and teaching quality with regard to inclusion and heterogeneity (the BMBF "LEHREN in MV" project), pupils' school-based development and socialisation processes, their self-efficacy and the teacher-learner relationship (the BMBF "You-Scie-MINT" project and the DFG "BELL" project), and the analysis and interpretation of teaching-learning scenarios from a professional perspective (the "Romantik revisited – Literaturgeschichte im Dialog" ("Romanticism revisited – literary history in dialogue") project, which is supported by organisations including the Commerzbank Foundation, and the "Eye-Tracking" project for which an application is being prepared). In addition to its intrinsic research topics, the future of Education Research also lies in interdisciplinary research perspectives pursued through close collaboration with educational science, educational psychology and teaching theory. Future activities in this area will involve even more targeted collaboration with external partners as the University seeks to fulfil its duty to ensure high-quality (school) education as part of its Prevention research domain.

4.2.2 Bioeconomy

The key research topic of Bioeconomy is an intersectoral economic concept based on biogenic resources, bio(techno)logical processes and biological knowledge. It has an important role to play in the sustainable transformation of our economic system. UG has excellent research expertise not only in basic bioeconomic research but also throughout the entire bioeconomic value chain, from biomass production and land use to material processing to the corresponding products and applications. The BMBF-funded WIR!-Bündnis Plant[3] is a prime example. Bioeconomic research promotes innovation and entrepreneurship, climate protection and environmental conservation, and the associated transformation of society. The recently established international master's degree course MSc Bioeconomy supports the retention of skilled professionals in MV. The transformative nature of bioeconomy makes interdisciplinary and transdisciplinary research approaches particularly important. Bioeconomy also feeds into all three research domains. Biologising the economy, for example, is an issue that concerns the entire Baltic Sea region. Research into phytopharmaceutical ingredients and the suitability of paludiculture products for construction and insulation materials creates a direct link with the One Health research domain, while the increased use of forest ecosystems for medical prevention and therapy purposes ties in with the Prevention research domain. Ultimately, the key research topic of bioeconomy has vast potential to increase the university's external networking in research, teaching and transfer at regional, national and international levels.

4.2.3 Community Medicine

In 1992, the German Council of Science and Humanities recommended that UMG establish Community Medicine as a key field of research, including topics such as health services research and epidemiological research. The Study of Health in Pomerania (SHIP), an epidemiological study that is unique to Germany, has continuously and comprehensively examined the population of Vorpommern across several cohorts since its launch in 1997. University Medicine Greifswald has also been involved in the German National Cohort (GNC) health study, the largest cohort study in Germany, since its launch in 2014. Thanks to its unique focus on community medicine, Greifswald has been made a member of three German health research centres: the German Centre for Neurodegenerative Diseases (DZNE), the German Centre

for Cardiovascular Research (DZHK) and the German Centre for Child and Adolescent Health (DZKJ). In 2021, the German Council of Science and Humanities recommended funding of the € 66 million project to construct the William B. Kannel Center. This facility, which has been classified a facility of "national significance", will be completed by the end of 2026 as a visible location of successful Community Medicine in Greifswald. Since July 2022, the German Research Foundation (DFG) has funded a Clinician Scientist Programme entitled "Rural Age" (Meeting the Challenges of Chronic Age-Related Diseases in Rural Areas), which has strong links to the field of Community Medicine. The continuation of SHIP, the third phase of the GNC study and the opening of the new research facility will play a significant role in shaping future activities in the field of Community Medicine. Community Medicine has strong links with all three new research domains – the Baltic Sea Region, One Health and Prevention – such as through the SHIP-One Health module, in which both subjects and their pets are examined. Its content is also linked to the key research topics of Infection & Inflammation, Molecular & Individualised Medicine, Medical Humanities, Rural Areas and Environmental Change.

4.2.4 Gender Studies

With its Interdisciplinary Centre for Gender Studies (IZfG), the University of Greifswald has expertise in Gender Studies dating back almost three decades. The IZfG is an interdisciplinary institution located within the Faculty of Arts and Humanities and can look back on two postdoc programmes along with countless conferences, lecture series and publications. It aims to network existing projects as well as encourage and support planned Gender Studies research projects. Gender Studies currently represents a unique characteristic for UG within the higher-education landscape of Mecklenburg-Vorpommern. It was also firmly anchored in the university's staffing and curriculum through the creation of a Chair of Gender Studies in 2023. As a broad-based field of research touching on many disciplines in the Faculty of Arts and Humanities (including British and North American studies, German language and literature, history, musicology, political science, Scandinavian and Finnish studies, and Ukrainian studies), Gender Studies represents a key cross-cutting topic for existing research projects and research collaborations such as the IFZO. This is why gender perspectives are already firmly anchored in research into the Baltic Sea region. Through the BMBF-funded "Inclusive Excellence in Medicine" (InkE) project, which has been approved for the period from 01 January 2024 to 31 December 2028 and integrates both University Medicine Greifswald and the Faculty of Arts and Humanities, Gender Studies shall represent a key, cross-faculty research topic at UG. The perception of problems through the lens of Gender Studies will have direct influence on medical diagnosis and treatment, creating a link with the Prevention research domain.

4.2.5 Infection & Inflammation

Infectious diseases are one of the primary causes of morbidity and mortality worldwide. A deeper understanding of the micro-biology, biochemistry, immunology and pathophysiology of these diseases is a decisive factor in developing new treatments and containing outbreaks. Inflammation processes play an important role in many diseases, such as autoimmune diseases, cancer and cardiovascular diseases. An in-depth understanding of inflammation mechanisms and immunology is therefore essential not only for combatting infectious diseases but also for treating other diseases. Infection & Inflammation, a key research topic pursued by UMG, is characterised by extensive interactions with the Faculty of Mathematics and Natural Sciences, the FLI, the INP and, for some time now, with the HIOH. This research is built on long-standing success in securing third-party funds. Examples include two current DFG Research Training Groups: "PRO – Proteases in pathogen and host: Importance in inflammation and infection" (GRK 2719) and "SYLOBIO – Systemic and local reactions in case of incompatibility to biomaterials for joint and skin lesions" (GRK 2901). The key research topic of Infection & Inflammation addresses research issues concerning the diagnosis, prevention and treatment of bacterial and viral pathogens as well as the formation of antimicrobial resistance. This work draws on state-of-the-art multi-omics techniques and epidemiological recording of human-animal-environment interactions. The University also recently established an international master's degree course in this area: M.Sc. Infection Biology & Immunology. Inflammation-driven mechanisms play a material role in the malignant transformation of various

haematological neoplasms and solid tumours. In light of this, two newly established professorial chairs have been established at the Comprehensive Cancer Center in Greifswald on the topics of oncology and immunology. The key research topic of Infection & Inflammation therefore makes a significant contribution to the One Health and Prevention research domains and features interfaces with the key research topics of Medical Humanities, Plasma Physics, Bioeconomy and Gender Studies.

4.2.6 Rural Areas

Challenges currently facing rural areas arise in particular from the demand for universal provision of public services. This concerns aspects such as healthcare provision, combatting criminality and establishing infrastructure to promote entrepreneurial activity. A perception that rural areas are disadvantaged in this regard can damage trust in public institutions, threaten satisfaction with the democratic system and be politicised by populist actors. Scientific analysis of rural areas therefore requires a high degree of interdisciplinarity along with a research orientation that foregrounds the dynamics, transformation and resilience of these areas. Researchers from various disciplines across all UG faculties have been working together to examine rural issues since 2011 in the context of the "Think rural!" consortium. Disciplines including medicine, psychology, health economics, economics, criminology, political science, geography and theology can draw on long-term research projects in this field. Researchers at UG plan and implement collaborative basic research projects focusing on the central topic of Rural Areas as well as application-oriented collaborations. One example is the initiative for proposing a DFG Research Unit "Adaptation processes of public service provision infrastructures in rural-peripheral areas (AdaptInfra)", which feeds into UG's research domains of One Health and Prevention.

4.2.7 Medical Humanities

Given the focus on public healthcare and healthcare tourism in Mecklenburg-Vorpommern, it is essential that expertise on medical humanities is integrated. This political aspiration and its implementation in health policy must go hand in hand with the promotion of medicine and the Medical Humanities. Significant elements of the university's medicine programmes will be reformed in the coming years on the basis of the new professional licensing regulations. These new regulations will place high priority on direct clinical contact with patients and social and communication skills in dealing with patients and in interprofessional teams. This will place a focus on competencies that are researched, discussed, considered and taught not in medicine but in the Medical Humanities. The expertise in the Greifswald Medical Humanities Network is already helping to overcome future challenges. This interdisciplinary, cross-faculty network currently comprises around 30 active members from UG and UMG. It is underpinned by a number of third-party funded projects that are directly linked to the Prevention research domain. These projects address topics including doctor-patient communication (TEMICARE), gender medicine (InKE project), the comprehensibility of preventive measures, the concepts of health and illness, the historical links between words, effects and miracles (DFG-funded Old Germanic studies network), research into health apps (Young Talent Award of the German Academy for Ethics in Medicine) and health-based discourse in mass media, such as the discourse surrounding homeopathy (DFG-funded German language/linguistics project).

4.2.8 Peatlands, Coasts & Oceans

The University of Greifswald is a founding member of the German Marine Research Alliance (DAM) and has successfully conducted research into oceans and coastal areas for a number of years. Examples include the POMPU Research Unit (FOR 2406), which examines microalgal blooms in marine coastal regions and the molecular mechanisms in the microbial degradation of algal polysaccharides. Building on the results produced by the POMPU Research Unit, UG recently submitted an outline for the CONCENTRATE CRC/Transregio (TRR 420) in collaboration with the University of Bremen, which aims to cast light on protein-based and glycan-based microbial mechanisms that contribute to oceanic carbon sequestration. While peatlands account for 13 % of the area of Mecklenburg-Vorpommern, 90 % of these peatlands have been drained, which makes them the state's largest source of greenhouse gases. The University of Greifswald plays a leading role domestically and internationally in both basic and applied research into peatlands, their role in climate change and their paludicultural use, which is also reflected in high-profile publications and renowned research collaborations. The recently submitted WETSCAPES 2.0 CRC/Transregio initiative received a positive appraisal and has now progressed to the full application phase. PRINCESS, a collaborative project supported by the EU BiodivERsA partnership, is coordinated in Greifswald along with model and pilot paludicultural projects supported by the German Federal Ministry of Food and Agriculture (BMEL) and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV). In the future, the University's peatland research will evolve to form a peatland centre of excellence with a firm institutional basis centred around the Greifswald Mire Centre. As a key research topic, Peatlands, Coasts & Oceans is characterised by strong interfaces with the Baltic Sea Region and One Health research domains as well

as the key research topics of Bioeconomy and Environmental Change. In the future, UG intends to intensify its cooperation with the IOW, the HIOH, the University of Rostock and the German Oceanographic Museum in Stralsund in relation to coastal and peatland research projects.

4.2.9 Molecular & Individualised Medicine

Molecular methods and individualised approaches are key drivers of medical progress. The key research topic of Molecular & Individualised Medicine has a long history of success. Since 2001, the Federal Ministry of Education and Research (BMBF) has provided sustained support for molecular medicine at UMG. Examples include the Competence Center for Functional Genomics (ZIK-FunGene) and the Centre for Innovation Competence in Humoral Immune Responses in Cardiovascular Disease. The combination of epidemiological research and molecular medicine laid the foundations for individualised medicine, which was established at UMG in 2009 through the Greifswald Approach to Individualised Medicine (GANI_MED) project. All clinical and experimental institutions use the biobank established in Greifswald and draw on the extensive omics expertise, especially in relation to proteomics and metabolomics. The key research topic of Molecular & Individualised Medicine is of particular relevance to the German Centre for Cardiovascular Research (DZHK), the Comprehensive Cancer Center MV (CCC-MV) and two experimental Research Training Groups – "PRO" (GRK 2719) and "SYLOBIO" (GRK 2901). In the context of the CCC-MV, UMG will establish whole-genome sequencing as a routine part of cancer treatment. Sequencing, which became established as a means of examining the SARS-CoV-2 virus during the COVID-19 pandemic, is also being expanded to a wide range of pathogens for healthcare purposes. The combination of molecular data and healthcare provision data harbours considerable potential. The University therefore plans to intensify its activities in the following areas in the future: research using patient data through the Data Integration Centre (DIZ), machine learning methods including AI, and the recording of health data using wearables. All three development areas within the key research topic of Molecular & Individualised Medicine will make a significant contribution to regional development in the Baltic Sea region, as well as the One Health and Prevention research domains, and have links to other key research topics such as Rural Areas, Medical Humanities and Gender Studies.

4.2.10 Peripeties & Transformation

The vision of the Baltic Sea region as a model region can be attributed to many years of research at UG that examined and established the region as a cross-border contact zone. Decisive events and turning points have shaped – and continue to shape – the Baltic Sea region, from the Fall of the Wall in 1989 to the more recent turning point associated with Russia's war of aggression against Ukraine. UG examines these turning points in an interdisciplinary approach and through international collaboration to further its understanding of the Baltic Sea region. "Baltic Peripeties. Narratives of Revolutions, Reformations and Catastrophes", a DFG Research Training Group operated by UG together with the Norwegian University of Science and Technology in Trondheim and the University of Tartu, plays a leading role in this area. A fundamental premise of this research is the understanding that while datable and identifiable turning points are relevant to developing an understanding of a region, so too is the way in which these turning points are recorded in history and historical narratives, thereby shaping the narrative construction of the Baltic Sea region. The research outcomes to date confirm that these "peripeties" are every bit as relevant to current political convictions and social action, and to economic and ecological decisions, as they are to cultural processes of constructing and allocating meaning. This is not least because, in many cases, entirely conflicting versions of the same event – the same history – can circulate. In the future, the DFG Research Training Group will draw on approaches from the humanities and social sciences to examine how recent "peripeties" and associated broken expectations are reshaping the region.

4.2.11 Plasma Physics

Greifswald is a European hub of plasma research. The Institute of Physics and two non-university research institutes, the IPP and the INP, cover the entire spectrum of plasma physics in one single town. The Institute of Physics focuses on general issues in plasma physics, including astrophysics in particular. In the fusion research activities at the IPP, the globally unique Wendelstein W7-X stellarator is now progressing to the experimental phase. The INP is a frontrunner in the development of low-temperature plasmas for new areas of application. Advances in the production, diagnostics and simulation of plasma processes build on the insights produced in basic research and, through the use of plasma medicine for wound healing and dental treatment, and environmentally friendly plasma applications in agriculture and food processing, contribute in particular to the One Health and Prevention research domains.

4.2.12 Environmental Change

The highly interdisciplinary key research topic of Environmental Change examines ecological environments – including soil, air, water, plants, animals and microorganisms in their habitats; mineral deposits, climatic conditions, atmospheric conditions and their interrelationships with humans; and systemic environments, especially social, economic, political and legal systems. It aims to determine and analyse problems within these environments and highlight appropriate solutions. This should make it possible to develop measures to mitigate the climate crisis, transition to more sustainable agriculture, secure food supplies, and preserve biodiversity, among other issues. In systemic environments, the task is to identify not only hurdles to their formation but also limits on their formation, such as the limits of collective identities, legal constraints (under EU and constitutional law), political constraints, the limits of ecosystems and, in an economic sense, the limits of decision-making units. The key research topic of Environmental Change builds on past and present research projects, including the current key field of research of Environmental Change: Responses and Adaptation, the "Response" Research Training Group (GRK 2010) and the "Volimpact" Research Unit (FOR 2820). Environmental Change as a key research topic focuses on Mecklenburg-Vorpommern because transformational processes can only be successful when anchored and accepted in their local context. In addition, the state represents an ideal model for national and global transformation processes in predominantly rural areas. The regional connection links this key research topic closely with the Baltic Sea Region research domain. Furthermore, issues regarding biodiversity preservation and the sustainable use of ecosystems in the interests of a healthy and health-promoting environment create interfaces with the One Health and Prevention research domains and the key research topics of Rural Areas and Peatlands, Coasts & Oceans.

4.3 Successful research based on service-oriented support structures, research-led teaching and internationality

4.3.1 Data processing, research data management and library services

Modern research, teaching and administration all require functional, reliable and secure information technology. The management of quality-assured research data and implementation of corresponding infrastructure are essential to ensuring the University's ability to compete in the scientific arena in the future, including to meet demands from institutions that provide research funding for long-term research data archiving with the possibility for subsequent re-use. The University Computer Centre (URZ) provides these services in conjunction with the University Library and University Medicine Greifswald.

The University Library is continuously developing its research-related services. This includes pressing ahead with its open access transformation process and implementing science-focused publication services. The Open Access Policy as adopted by the Senate underpins this work. In addition, the University Library contributes to shaping the university's research data management activities and digital humanities initiatives.

4.3.2 Artificial intelligence

The explosive development of innovative AI capabilities is creating new demand for use of these tools in research, teaching and administration. Development and application platforms that are easy to use while offering suitably powerful hardware support must be provided as a central service for the University. This will facilitate responsible use of such methods while ensuring data sovereignty, making it possible to assess opportunities and risks.

4.3.3 Research-led teaching

Students at UG are introduced to research-led learning during their undergraduate studies, helping them to develop their methodological skills and learning how to uncover unanswered questions in their field, define problems, develop their own research questions and then produce evidence-based answers. By the same token, research-led teaching purposefully encourages students to reflect on research outcomes. Teaching staff inspire their students' interest in science by enabling students to

participate in their research. Teaching and research are mutually beneficial and enrich each another. Once these foundations have been laid and scientific curiosity has been piqued, students are likely to take further courses of study and strive to achieve further academic qualifications to engage with increasingly complex research questions in their field.

4.3.4 Internationalisation

The University of Greifswald is an internationally networked, research-focused university. Its internationality and its competitive position internationally are reflected in its researchers' participation in European and global research networks and collaborative endeavours, the resources secured, and the publications this work produces. International researchers and doctoral candidates enrich the University by fostering an academic culture, contributing wide-ranging perspectives and generating synergies through the exchange of knowledge and shared use of resources. UG aspires to significantly increase the proportion of international staff at the university, which will boost both the quantity and quality of research and thereby enhance the university's international visibility.

5. Accompanying measures

Successful research requires specific framework conditions. These include sufficient budgetary resources, adequate equipment, strategic appointments across key research topics, incentives for researchers, long-term support for early-career researchers and measures to promote gender equality and diversity along with advisory and supporting service structures, contemporary and target group-specific scientific communication, and regular, critical evaluation of the university's research domains and key research topics. A detailed description of the design, implementation and financing of the measures roughly outlined in the following will be developed as part of the university's 2035 Strategy.

- **Establishment of a strategic fund to promote cutting-edge research:** Implementation of this Research Strategy will require – subject to the budgetary situation – a central, strategic fund of at least € 2.5 million per year to finance measures including: co-financing of third-party funded projects, start-up funding for collaborative projects, subsidised travel for early-career researchers, supplementary faculty facilities in appointment procedures such as equipment and fixed-term staff, compensation for teaching load reductions in the course of applications for or leadership of joint research projects, and a basic budget for the three research domains for financing e.g. networking events, research prizes and publications. Existing central funding pots (e.g. start-up funding, travel cost subsidies, etc.) will be combined in the strategic fund.

• **Strategic appointments aligned with the research domains:** Where possible and reasonable in terms of the subject area, professorial chairs will be advertised and appointed in line with the research domains and key research topics. In the future, the acquisition of endowed professorships, the establishment of junior professorships and early appointments of professorial chairs to strengthen the key research topics shall be financed by the university governance.

• **Adequate and lasting support for early-career researchers:** The University will continue and develop existing, well-established instruments such as the Graduate Academy, the Käthe Kluth Junior Research Programme, the KarriereWegeMentoring programme, travel cost subsidies for early-career researchers and networking opportunities such as "Forschung-Vernetzt".

• **Gender equality and diversity as fundamental principles in academia and research:** In its teaching and research, UG will integrate the talents and potential of each individual in equal measure, regardless of their gender, heritage or religion, in order to improve the University's prospects for the future and its competitive ability, and to increase its appeal by fostering a modern research environment. The University's gender equality and diversity policy therefore pursues the following objectives: (a) Gender parity across all academic career stages, in particular in the proportion of women in professorial and leadership positions. This requires targeted, gender-sensitive appointment and recruitment strategies based on the cascade model as well as active recruitment of excellent female applicants. (b) Support for female researchers in the qualification phase through the measures outlined in the previous paragraph. (c) Improved compatibility of an academic career with family and care responsibilities. This requires family-friendly leadership and increased measures to create a corresponding work environment. (d) Establishment of contemporary diversity management. All measures required to achieve these objectives must be structurally anchored and have access to the corresponding resources.

• **Topic-specific incentives:** The university governance will invite submissions for one research award for each research domain, provide start-up funding for topic-specific research applications and grant subsidies for publication costs to early-career researchers working on the research domains (see the section on the strategic fund).

• **Teaching load reduction:** The Rectorate will support applications for and implementation of high-profile research projects by reducing mandated teaching loads. It will make representations to the State Government for an up-to-date extension of the possibilities as part of reforms to the Teaching Responsibilities Ordinance (LVVO).

• **Suitable research infrastructure, especially technical equipment:** The University will provide the faculties with a research infrastructure fund increased to € 0.5 million on the basis of the existing distribution key. In the Faculty of Mathematics and Natural Sciences, the fund will finance in particular state-of-the-art laboratory equipment along with the maintenance costs associated with (large) equipment essential to the research domains. At the same time, the Faculty of Mathematics and Natural Sciences will establish technology platforms accessible to all in the interests of optimising utilisation, reducing maintenance costs and facilitating strategic procurement. Independent of the faculties' decisions, the faculty-specific share of the fund can also be used to supplement the information budget (funding for specialist literature, open access publication costs) managed centrally by the University Library.

• **Advisory and support service structures:** The External Funding Department is the central service provider for the full scope of administration of third-party funded projects. Given the targeted increase in third-party funding and the changing requirements of third-party funding providers, it must be allocated sufficient staff resources. The Research Support Centre (ZFF) provides information on current calls for tenders and encourages applications for research projects by means of comprehensive advice and tailored support. In the future, the ZFF will expand networking formats with different stakeholders across all research domains in line with needs and where appropriate.

• Contemporary scientific communication: The University is aware of its responsibility to communicate knowledge appropriately to different target groups in society and highlight the University's services to the region and the economy. University Communications implements this using both established and new formats and proactively supports researchers in communicating research outcomes to a wider society.

• Regular critical evaluation of research domains and key research topics: Regular evaluation (at least every 8 years) ensures that the research domains (a) meet the current requirements of science and society, (b) fulfil academic quality standards and (c) make effective and productive use of resources in accordance with the needs and successes of individual research areas. A

committee will be established to conduct this evaluation. It will comprise external experts, members of the Senate's Research and Structural Committee and relevant stakeholders, and will be coordinated by the Pro-Rector for Research.

6. Networking with non-university, national and international partners to strengthen Greifswald as a unique research location

Four **internationally renowned non-university research institutes** – the IPP, the INP, the HIOH and the FLI – are based in Greifswald. The University maintains close research relationships and makes joint appointments with these institutes. Mecklenburg-Vorpommern is also home to the IOW and the FBN. In the Alfried Krupp Wissenschaftskolleg, UG has an outstanding institution to promote academic excellence that also increases the University's appeal to researchers of national and international renown. Together with UG and UMG, these institutions create a unique environment for research cooperation, especially with regard to the new research domains.

Through its **membership of associations** such as the German Marine Research Alliance (DAM), the Hanse University Alliance and the German University Alliance (UA) 11+, UG has a strong national network and reliable partners for securing multi-location research projects. Likewise, from an international perspective, strategic partnerships, membership of the Baltic University Programme (BUP) and the proposed KreativEU European University provide a robust basis for securing international research funding.

In particular, the University aims to **intensify cooperation with non-university research partners** with the aim of refining its profile and intensifying joint acquisition of collaborative projects. These efforts will benefit from the fact that different institutions have different focus areas that complement and supplement the University's research domains and key research topics, or reinforce them through links to practice. Building on previous successful collaborations in research, teaching and support for early-career researchers, the University will strive to expand its activities in relation to joint appointments and special professorships. For this reason, UG is committed to encouraging **other non-university research institutes** with activities linked to its research domains to **settle in the region**. Initial efforts have already been made to institutionalise the Greifswald Mire Centre as an independent non-university research institute.

7. Summary & added value for Mecklenburg-Vorpommern from the Research Strategy

Mecklenburg-Vorpommern stands to benefit from the reorientation of the University's research domains in numerous respects. By adopting this Research Strategy, UG is setting out a medium-term direction for research while outlining its research objectives transparently for external parties. This transparency is particularly important for business, civil society and other stakeholders, and forms the basis for a fruitful bilateral exchange. This strategy also emphasises the relevance of UG to the sustainability of Mecklenburg-Vorpommern.

The **Baltic Sea Region** research domain examines cultural identities, historical transformations and their narrative construction, and the political significance of (international) institutions from transdisciplinary perspectives. It also supports the initiation of economic and cultural collaboration in the littoral Baltic Sea states, offers expertise in dealing with demographic change, produces concepts for providing services to rural areas, combats the consequences of environmental changes and climate change, opens up new forms of economically viable and sustainable land use, and provides expertise on the energy supply systems of the future. Furthermore, it engages with highly relevant issues of security policy and state cooperation in the Baltic Sea region.

The **One Health** research domain sheds light on the relationship between human health, animal health and a healthy environment, thereby providing important insights into the prevention, treatment and monitoring of transmissible and non-transmissible human and animal diseases. It also works on regional and global concepts for sustainable, environmentally friendly agriculture and improved animal welfare in livestock farming, investigates the impact of environmental pollution on the health of people and animals, and develops strategies to reduce environmental pollution and protect health.

The **Prevention** research domain encompasses analysing the impacts of physical and mental illnesses on people's quality of life and wellbeing. It examines treatment parameters in medicine, develops concepts for the provision of healthcare and other public services in rural and urban areas, supports the healthcare system through its current transformation and, as a result, reduces healthcare costs. This research domain also covers the universal provision of (school) education, including through teacher professionalisation and academic supervision of pupils' development and socialisation processes. This research domain thereby contributes to sustainability and ensuring the socioeconomic wellbeing of the people of Mecklenburg-Vorpommern.

Finally, it is important to emphasise that the research outcomes achieved at UG are incorporated into **policy advice** in various formats and thereby form an evidence-based foundation for political decision-makers.

A key requirement for the future competitive capacity of higher-education institutions in Mecklenburg-Vorpommern is **sufficient, reliable and long-term research financing** because third-party funding is usually only made available to build on substantial groundwork financed by an institution's own budget. Securing joint research projects – and larger projects in particular – requires the institution submitting the application to provide a substantial share of the funding, which cannot be provided from the current budget under the current framework conditions. In addition, large-scale research collaborations increasingly require project spokespeople to be released from their teaching obligations, which is why a permitted reduction of up to 50 % would be conceivable in the reforms to the LVVO. **Targeted, long-term support for the research domains** from the state administration, such as through Mecklenburg-Vorpommern's Excellence Initiative, is imperative for ensuring UG's ability to compete for national and international research funding.

The research landscape in Mecklenburg-Vorpommern is diverse and makes a material contribution to the state's future viability and its ability to create value. This role requires greater acknowledgement from civil society and political decision-makers. A **state-wide research strategy** is long overdue; if such a strategy were oriented towards the strengths of the higher education institutions and non-university research institutes, and created the framework conditions for internationally visible cutting-edge research, it would go a long way to securing the acknowledgement that the research landscape deserves.