

UNIVERSITY OF GRAZ

# Development Plan 2022-2027

*We work for*  
**tomorrow**



## Table of Contents

University of Graz - We work for tomorrow .....	4
Strategic priorities through 2024 .....	7
<b>1 Research and the promotion of young scientists</b>	
<b>– We shape tomorrow’s research agenda .....</b>	<b>8</b>
1.1 Strategic goals .....	8
1.2 Implementation strategies .....	9
<b>2 Studies and continuing education – We teach for tomorrow .....</b>	<b>15</b>
2.1 Strategic goals .....	15
2.2 Implementation strategies .....	16
<b>3 Social commitment – We drive societal development .....</b>	<b>24</b>
3.1 Strategic goals .....	24
3.2 Implementation strategies .....	24
<b>4 Digital transformation – We shape digital transformation.....</b>	<b>33</b>
4.1 Strategic goals .....	33
4.2 Implementation strategies .....	34
<b>5 Cross-cutting issues/collaboration</b>	
<b>– We encourage collaboration.....</b>	<b>40</b>
5.1 Cooperations .....	40
5.2 Staff.....	48
5.3 Campus development and infrastructure.....	52

### Imprint

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The future is being created at this university. It is a place of constructive curiosity and, thus, a place where new ideas are encouraged and supported. We illuminate yesterday with our bright scientific passion, reflect critically on the present and seek solutions for the problems of tomorrow. These things are only possible if we all prioritize research and teaching appropriately and work together actively to meet the challenges facing the University.

University of Graz is internationally recognized, strongly networked and efficient. As one of the largest universities in Austria, it not only is responsible for the people who work and study here, but also for the location itself.

As a general university, University of Graz covers a broad research spectrum, which must be preserved as a strength and unique feature. Even though we will continue to provide targeted support for research conducted in selected areas, attention must be paid to promoting research areas from all branches of science as part of a continual development process. Therefore, we must take care to maintain the diversity of our research areas and provide these areas with the specific resources and freedom they need. All kinds of research should be carried out here, including individual research and research that requires a division of labour and involves university and cross-institutional research groups and alliances of various kinds. Each of these working methods must be given its place as long as the corresponding quality is guaranteed. In addition, interdisciplinary and unconventional research must be further promoted; new areas of research must be developed and tested. To this end, a centre for interdisciplinary studies should be created as a supportive platform, which will initially place an emphasis on questions of digitalization.

One important aspect is the acquisition of third-party funding. The Austrian Government has announced the proposal of a comprehensive excellence initiative to strengthen competitive basic research. "Horizon Europe", the next research framework programme developed by the European Union, will be the largest research programme in the world, funded with around 100 billion euros. We want to develop appropriate strategies so that we can be successful in competing for these funds.

One of University of Graz's strengths is the broad and diverse range of studies offered, based on the concept of research-led teaching. The "traditional" range of studies, which is based on the classical subjects, is thereby increasingly enriched by interdisciplinary curricula. As a general university, University of Graz has the responsibility to ensure the corresponding diversity and quality of the courses and programmes offered. In addition, the local and regional cooperation network should be expanded.

It is important to improve supervisory conditions to meet international standards, both to ensure the quality of teaching as well as provide support for teachers. In addition, we must respond more effectively than before to the students' altered living conditions

by increasing the number of extra-occupational courses, increasing the flexibility of the curricular framework and promoting skill-based learning and teaching.

In view of the rapid changes taking place in our society, it will be necessary to assess the current situation and potentially adapt our study programmes. However, research-led teaching must continue to be our maxim from the very beginning.

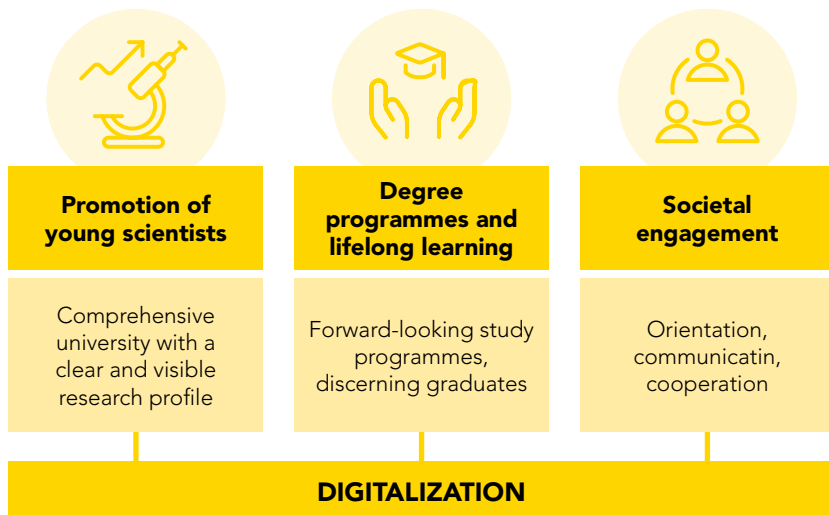
We are dealing with digitalization with increasing frequency - in teaching and research as well as in application. This process is not about digitalization per se, but about the ability to move oneself in the digital world and to actively shape it. We want to address the socio-political questions as well as identify the opportunities and risks that arise from digitalization; it is not enough to simply look at the technological aspects. Here, too, we have a particular strength as a general university.

Internationalization is carried out to reach two strategic goals: On the one hand, University of Graz will retain its identity as an internationally competitive educational institution in the areas of research and teaching; on the other hand, the University environment will be designed as a place of international cooperation and cosmopolitanism. To reach these goals, we have to support the international students and researchers on site and promote multilingualism on campus. Gaining personal experience with different ways of thinking and working has an impact and generally deepens the understanding of cultural and linguistic diversity.

Universities are places where scientific, intellectual, but also human encounters take place. They have a long tradition of holding clear values and promoting integrity, especially with regard to being open to new ideas and dealing with socio-political issues.

We must preserve the university as a place where people think openly and freely - for our own continuing development and that of our society. Reasoning based on facts, intellectual honesty, being open to new things, critical reasoning, appreciation and tolerance are values that should not only be promoted and experienced at universities more than ever before, but also that should be communicated to the outside world. The University should make its knowledge available to the general public, but also take a stand on the issues that concern our society. This also includes promoting exchange across disciplinary boundaries within the University and, in particular, discussions on topics specific to the University.

All of our efforts, however, must be directed to support the people who interact with University of Graz. This applies to our employees in all areas as well as to our students. Promoting talent, ensuring a good working environment and, above all, promoting equality and diversity are important concerns for us that extend into all areas of the University.



University of Graz Development Plan emphasizes three impact dimensions

1. Research and the promotion of young researchers,
2. Degree programmes and continuing education and
3. Societal engagement

This Plan was drawn up with the involvement of the faculties and in consultation with the Senate and the University Council.

The Development Plan is valid for the years 2022–2027 and will be adapted with rolling-wave planning to adjust to current developments. The performance agreements formed with the Federal Ministry of Education, Science and Research for the periods 2022–2024 and 2025–2027 are essentially based on the Development Plan; corresponding projects for medium-term strategy implementation are specified therein. In the target and performance agreements formed by the faculties and administrative units with the Rectorate, the Development Plan will be implemented by taking specific measures. In this way, all employees should be actively involved.

## Strategic priorities until 2024

The development of University of Graz as outlined above will be described in more detail and implemented in the following strategic key areas in the coming years:

### 1. Conduct high-quality research

- Clusters of excellence and emerging fields are eligible to apply for the excellence initiative in the funding programmes
- Develop new research areas
- Emphasize attractive research location
- Expand scientific cooperation network (local and regional)

### 2. Help young researchers develop into top researchers

- Expand high-quality doctoral training
- Offer postdoctoral initiative
- Optimize career model

### 3. Emphasize the attractiveness of the degree programme

- Redesign the degree programmes through modularization
- Offer cross-faculty Master's degree modules
- Improve the students' digital skills

### 4. Improve the ability to study

- Evidence-based optimization of degree programmes
- Offer degree programmes appropriate for the students' altered living conditions
- Expand individual consultation and information offers

### 5. Optimize teaching quality

- Technology-supported multilingual teaching space
- Build an OER platform with different materials
- Establish new forms of teaching evaluation
- Expand and centrally support higher education didactics

### 6. Point out that the University has an impact on society

- Take a position on socially relevant issues
- Strengthen networking between business and university
- Emphasize the impact of scientific findings on society ('transformation(al) excellence')

### 7. Proactively shape digital change

- Create an interdisciplinary Digital Hub
- Expand interdisciplinary research on the digital transformation
- Digitize the university administrative processes
- Improve the employees' digital skills

### 8. Anchor the open science and open innovation themes

- Strengthen open science, open access initiatives and develop digital infrastructures

# 1 Research and the promotion of young scientists

## – We shape tomorrow’s research agenda

One of the University’s central tasks is to conduct high-quality research and to provide excellent training for young scientists. To carry out this task, the University uses various tools and measures. The research work performed by individuals serves as the basis for measuring scientific progress. However, working together in larger groups to address a specific topic can often significantly support scientific work and help to develop expertise in the respective subject areas. Teamwork is a particularly important tool in the area of doctoral education, ensuring the highest quality training of these young scientists. These principles are applied and practiced by striving to reach the strategic goals outlined below.



### 1.1 Strategic goals

1. The Fields of Excellence will be further developed, evaluated, appropriately structured and adapted in order to clearly present and support research activities at University of Graz. A central strategic goal is to prepare applications that are optimally positioned within the framework of the FWF’s planned Excellence Initiative and increase our participation in Horizon Europe.
2. The local and regional cooperations will be deepened to further strengthen the established cooperations with the partner universities and institutions regarding research and the promotion of young scientists to ensure the operation and acquisition of the required infrastructure. In particular, the flagship projects of the Graz Center of Physics (University of Graz and Graz University of Technology) and the Cori Institute of Experimental and Computational Metabolism (University of Graz, Graz University of Technology, Medical University of Graz and Austrian Academy of Sciences) will be carried out within this framework of cooperations.
3. University of Graz is actively contributing to the digital transformation of society through its research. To this end, the University is expanding its interdisciplinary digitization research, using this to acquire more third-party funding—especially at European level—and ensuring the excellent quality of its research by enabling the use of state-of-the-art digital methods and research infrastructures. These plans will be carried out in particular by creating and defining the orientation of new professorships to be filled and establishing bridge professorships.

4. The number and quality of applications for third-party funding that are submitted will be increased, providing appropriate support measures and incentives for applications for funding from EU research programmes, and especially with regard to collaborative projects.
5. The Doctoral Academy of University of Graz will be further expanded and strengthened as the central institution responsible for training young scientists during their pre-doctoral education. By providing funding from third-party applications and accompanying support, new consortia will be enabled to apply successfully for admission to the Doctoral Academy. We aim to significantly increase the number of doctoral students who complete their dissertations in the research-intensive environment of the Doctoral Academy.
6. Researchers working as post-docs at University of Graz will receive specific support. This support will serve to strengthen young researchers during a critical stage in their careers, promoting the better integration of this group—which is so central to research at University of Graz—and increasing the visibility of their work. This should help them to pursue a wide range of career opportunities.

### 1.2 Implementation strategies

#### — 1.2.1 Fields of Excellence

The Fields of Excellence (“PBB” Profilbildende Bereiche) established in 2019 are currently still in the phase of development and academic profiling. The Rectorate will continue to monitor and emphatically support these, but also shape them in terms of their content (e.g. in the area of digitalization).



The results of the external evaluation of the Fields of Excellence (2021: COLIBRI, Dimensions of Europeanisation, Smart Regulation; 2023: BioHealth, Climate Change Graz) will be used to further define the respective research portfolios and specific additional funding measures. The mid-term goal of this continued development is to establish and promote suitable candidate areas to enhance various elements of the Austrian Excellence Initiative. In this way, we can create the optimal environment for their submission to the Excellence Initiative.

The Fields of Excellence will also be equipped with new budgets and additional positions in the next period, whereby some of these will also work with bridge professorships.

An important point in this continued development is to connect it with the digitalization initiative. On the one hand, this means addressing technical aspects such as the provision of support staff for data analysis but, on the other hand, also placing a stronger focus on relevant research questions. The latter aspect is particularly relevant in COLIBRI and Smart Regulation, as well as in the development and application of digital humanities research methods in Dimensions of Europeanisation.

Regarding the acquisition of third-party funding, the Fields of Excellence occupy a strong starting position due to the support they receive from research managers. This will be utilized to make even more intensive use of EU funding channels and to take on more coordination roles here.

### —1.2.2 Local and regional cooperations

In the current educational environment, competition between academic locations has increased because students have become more flexible (i.e. due to the Bologna system) and research institutes have become concentrated in larger entities. This increased competition means that local and regional cooperations will play even more important roles in the future. University of Graz already has established a promising network with the other local universities, forming large cooperations such as NAWI Graz and BioTechMed-Graz, and smaller, thematically and strongly focused cooperations, as well as cooperations with institutes of the Austrian Academy of Sciences. The latter will be expanded still further in the near future, and especially in the area of research.



One essential step that will significantly strengthen local research cooperation is the establishment of the Graz Center of Physics (GCP) and its collaboration with Graz University of Technology. Further planning and work to explore the GCP's potential is a top priority. The GCP will also serve as a nucleus to strengthen other disciplines, some of which use experimental technologies strongly based on physics, such as biophysics, physical chemistry, or the pharmaceutical sciences.

Within the NAWI Graz cooperative framework, the NAWI Graz research track is being used more intensively (see Chapter 5.1.5). In particular, areas such as electron microscopy (FELMI), which play a central role with regard to the GCP, are being strengthened. Another key project in the landscape of local and regional cooperation is the Cori Institute, which is positioned within the BioTechMed-Graz environment (University of Graz, Medical University of Graz, Graz University of Technology) together with the Austrian Academy of Sciences. Based on the present Memorandum of Understanding, the practical applications of this project are being worked on (see also Chapter 5.1.6).

As part of University of Graz's digitalization initiative, possible collaborations in the field of digitization are being explored, especially with the institutes for computer science at Graz University of Technology.

### —1.2.3 Digitalization initiative in research

University of Graz recognizes a great potential for increasingly integrating digital technologies and methods into the University's research portfolio as part of the digitalization initiative, but also for establishing the process of digitalization—along with all of its societal impacts—more firmly as a topic of its research (see also Chapter 4.2.2).

When new professorships are advertised, we systematically analyse where our research portfolio has an impact on the topic of digitalization and which areas are suitable for further development. A broad range of subjects is taken into consideration, including all faculties.

In order to increase our expertise in the area of basic mathematical modelling and to share this expertise with researchers in other disciplines, four bridge professorships will be established to combine thematically diverse areas. These areas have been given the working titles of "Machine Learning Methods", "Data Analysis", "Computational Dynamical Systems" and "Computer-Human Interactions". These new professorships will be assigned to the new Interdisciplinary Digital Hub (ID Hub) to create a focus scientific environment. This environment will enable new areas to be explored and provide a central contact point with technical expertise, allowing broader questions to be answered and research issues to be addressed (see Chapter 4.2.1).



At the technical level, promoting academic digitalization will be accompanied by expanding the high-performance computing (HPC) resources, which will be needed more than ever in the future (package of measures: PRACE, Vienna Scientific Cluster, local HPC clusters, High Performance Storages EGI, EODC, GEOCLIM cooperations) (see Chapter 5.3.4). The historical and more recent biological collections will be maintained in support of the digitalization initiative – especially in consideration of the climate-relevant information they contain – and made accessible to scientific researchers through the European initiative DiSSCo (Distributed System of Scientific Collections).

However, the topic of digitalization will also be supported by enacting low-threshold measures, such as thematically relevant calls for "unconventional research" issued as part of the "1000 Ideas" programme, but also by helping researchers submit applications in response to suitable calls issued as part of the Horizon Europe research and innovation programme.

National and international cooperations with digitalization themes, such as ABOL (Austrian Barcode of Life), AUSSDA (Austrian Social Science Data Archive), CESSDA (Consortium of European Social Science Data Archives), CyVerse Austria, EBRAINS, European Open Science Cloud, CLARIN-ERIC (European Research Infrastructure for Language Resources and Technology), DARIAH-EU (Digital Research Infrastructure for Arts and Humanities), the national Digital Humanities Consortium CLARIAH-AT, Arqus and AT2OA2 (for open access) are being strengthened and supported. These digital infrastructures are accessible to many scientists at University of Graz.

#### —1.2.4 Increase in applications for third-party funding

Regarding the acquisition of third-party funding, we are creating further measures to support the successful submission of applications, placing a special focus on applications for EU third-party funding.



We will continue the work that has already begun. In particular, continued support will be provided by research managers to help those in the University's Fields of Excellence to submit applications for EU funding. In addition, the groups in the Fields of Excellence have been placed in sufficiently strong positions that they can take on more coordination roles in the Horizon Europe programme. These efforts will be supported by providing appropriate incentives for coordinators.

Regarding junior researcher support (see also Chapter 1.2.6), we will continue to support the incentive programme of providing a suitable position for indefinite periods if an ERC grant is acquired. Relevant trainings on how to prepare proposals, such as the MSC Marathons, will be expanded still further. We also intend to establish a Seal of Excellence programme.

#### —1.2.5 Doctoral Academy



The Doctoral Academy will be further expanded to increase the number of doctoral candidates who complete their doctoral theses in this stimulating and supportive environment, as well as to develop new subject areas for the Doctoral Academy. Overall, the aim is to significantly increase the number of doctoral students in the Doctoral Academy.

New groups of Principal Investigators will be encouraged, advised and supported to jointly shape the training of their doctoral students and to enter the Doctoral Academy in the form of a consortium.

Applications submitted to the FWF's doc.funds programme will be supported and funded with in-kind contributions. Successful doc.funds applicants will be admitted to the Doctoral Academy with their doctoral programme as consortia.

The mobility of doctoral students in the Doctoral Academy will be increased, enabling them to gain academic and research experience abroad, a key qualification under any conditions. In particular, options within Arqus cooperation framework (see Chapter 5.1.3) will be further developed.

The study programme for teaching transferable skills will be expanded to meet the focus on the current needs of the target group of doctoral students, especially with regard to the digitalization of research (e.g. courses for Python, R and dealing with open access, research databases, etc.). A new element is the development of training courses for supervisors and mentors, which will lead to a further increase in the quality of supervision. The above measures will be developed and implemented in close cooperation with the International Advisory Board. The Doctoral Academy consortia will be evaluated externally and the results of this evaluation will be incorporated to develop the Doctoral Academy still further.

#### —1.2.6 Post-Docs

Specific promotion and support measures will be developed and implemented for the group of post-docs, who make up around 12% of the academic staff. These measures provide specific support for young scientists in a critical phase of their academic career (academic profiling period, no permanent position yet, often starting a family), but also serve to increase the visibility of the potential of this highly active group of researchers and to make even better use of this potential with regard to the University's research efforts.

#### A CATALOGUE OF MEASURES SUPPORTS AND PROMOTES POST-DOCS IN THE FOLLOWING CORE AREAS:

In the future, a mentoring programme will accompany post-docs to help them plan their scientific career and secure (time) resources for independent research, as well as encourage them to submit independent applications. Competitively awarded grant-writing fellowships are also being planned to promote the submission of applications. This catalogue of measures has been developed to provide optimal support that enables these young scientists to develop their own research specialization and to compete successfully for professional appointments.

To increase the visibility of the post-docs' achievements—both inside and outside the university—presentation venues specifically designed for young scientists are being developed. Specifically, events such as the Post-Doc Science Breakfast, the establishment of a Post-Doc Summer Conference series and the foundation of a Post-Doc Science Award are being planned. The Science Breakfast and the conference series venues are being planned not only to increase the visibility of the scientific achievements, but also to promote post-docs to network more and form peer groups.

Specific measures are being developed to optimise the working environment for post-docs. These measures are intended to familiarize post-docs, and especially newly arrived post-docs, with the University structures. This package of measures specifically includes support for post-docs in various forms, including a central contact point, information packages designed to meet post-docs' needs and created training courses. The latter will also include transferable skills for use in non-academic working areas.



## 2 Studies and continuing education – We teach for tomorrow

University of Graz is continuously improving its well-developed range of degree and continuing education programmes. The University currently offers 40 bachelor's degree programmes, 72 master's degree programmes, 13 doctoral programmes, two diploma programmes and one extension programme (see Annex 6.2<sup>1</sup>). Evidence-based measures support students while they pursue their studies and throughout the student life cycle. These measures are complemented by offers of general continuing education, also accessible to members of the public, as well as offers of continuing vocational education.

### 2.1 Strategic goals

1. Evidence-based optimization of the degree programmes by performing detailed analyses of both the courses/programmes offered and the learning paths, in order to identify ways to potentially improve the courses/programmes offered and the required infrastructure.
2. Improve the degree programmes offered to address altered student life circumstances by using online teaching in selected degree programmes.
3. Offer individual counselling and information throughout the student life cycle.
4. International, multilingual teaching offers are being tested and established using state-of-the-art digital technology such as live translation apps.
5. To increase teaching value and improve teaching quality, we are developing more offers in the area of university didactics, based on research findings, to better support both presence-based and technology-based teaching in various academic disciplines.
6. To consolidate and, at the same time, make the degree programmes offered more attractive, we will apply a modular concept and increase the flexibility of the programmes in certain areas.
7. By offering a range of cross-faculty master's modules, we will enable students to acquire extensive skills that increase their ability to participate actively and contribute to responsible solidarity in society and the working world.

<sup>1</sup> Please refer <https://mitteilungsblatt.uni-graz.at/de/2020-21/12.a/pdf/>



## 2.2 Implementation strategies

University of Graz promotes creativity and grants individual freedom for students, teachers and researchers. The inclusion of different social groups in education and training is taken into account.

### —2.2.1 Degree programmes offered

Regarding the degree programmes offered, special attention is paid to a offering a high-quality and attractive range of programmes (see Annex 6.2). By increasing the flexibility of the curricula and offering many diverse elective options, students can choose a programme based on their interests and from a range of disciplines, as well as deepen their knowledge in specialized subjects. In particular, existing cooperations such as the NAWI Graz Studies (see Chapter 5.1.5) are also used.

The broad range of courses offered at University of Graz is one of its major strengths. This should be maintained insofar as possible and used for teaching. Regarding teaching, University of Graz aims to promote the development of its students' core competences. These include critical and analytical thinking skills, methodological skills, argumentation skills, the ability to work and learn independently, problem-solving and decision-making skills, planning, coordination and management skills, as well as gender and diversity skills.

#### BACHELOR DEGREE PROGRAMMES

In next few years, the results of detailed analyses will be used to expand the programmes that are in high demand and their infrastructure such that the ability to study is further increased. But this will require more commitment on the part of the students, for example, during the STEOP. In programmes with few active students, the options to modularize and profitably combine programmes will be examined and carried out.



To establish University of Graz as an internationally outstanding university in teaching, research must be accessible and be made visible at all levels of university education. Research-led teaching is chosen as the modus operandi, enabling students to receive an introduction to research and, at the same time, experience how important it is to society and in everyday professional life directly after they have begun their studies.

#### MODULARIZATION OF THE MASTER'S DEGREE PROGRAMMES

The range of master's programmes offered at University of Graz is very broad. These programmes have been developed so that University of Graz graduates can demon-

strate scientific competence and are ready to enter the labour market. To this end, the successful offer of "KLUG - Kompetenzen lernen Uni Graz" [Learning Competences at University of Graz] will be maintained and expanded by interdisciplinary modules with 20 to 24 ECTS credits. In these modules, themes will be introduced which are characterized by their high degree of topicality and innovation. Interactions will be encouraged, and especially interactions that cross traditional subject boundaries. A focus will be placed on action-oriented competence building and the development of general competences that will be needed in the future (4K: creativity, communication, collaboration, critical thinking).

In addition, the accessibility and flexibility of the master's programmes for University of Graz students will be ensured insofar as possible. It is necessary to make the curricula more attractive and forward-looking, and especially to improve subject areas that are currently in low demand. Underutilized programmes can be integrated into similar fields of study.

#### DIGITALIZATION

The development of Open Educational Resources will be promoted to support teaching. In addition, the possibilities offered by the use of digital technology will be systematically explored and applied for teaching (see also Chapter 4.2.4), thus providing additional social groups with access to high-quality education. These possibilities will especially be used in master's programmes that are only offered at University of Graz.

By offering joint courses with colleagues from all over the world, they can contribute their specific expertise to our teaching, and students from the participating universities can enter into an international exchange. Technical methods and tools will be used to enable multilingual, international teaching through automated, parallel translations. This brings several advantages:

- a) The areas of expertise of the international cooperation partners can complement each other in courses and enrich the quality of teaching;
- b) students can begin to build an international network during their studies;
- c) the students' linguistic skills—especially in English—are improved through the active use of the language(s) in multilingual teaching; and
- d) students at University of Graz experience how technical support promotes cross-border dialogue.



The university is also addressing the topic of digitalization in terms of content. As part of the "Route 63" cooperation between Graz University of Technology (computer science) and University of Graz (business administration, psychology, sociology), which was launched in 2018, courses are made available to students on a reciprocal basis.

The purpose of this cooperation is to provide students with complementary content that is essential for their professional careers: (1) Students at University of Graz can acquire expertise in computer science, the ability to program simple applica-

tions and an understanding of the methods and possibilities of data science; (2) students at Graz University of Technology can take courses in business administration, sociology and psychology, thus gaining a better understanding of software application domains and tools used to found companies or market software. This cooperation will better equip students at both universities to understand and shape the impact of the digital transformation on society.

In the next few years, the existing cooperation will be expanded and deepened. In addition to the existing programme, a joint master's programme in Computational Social Systems will be launched in English. In the interdisciplinary programme, students can specialize in four subjects: Business Analytics, Societies, Technologies and Social Research, Human Factors and Law and Computer Science. This specialization enables them, on the one hand, to understand and model social and economic systems using computer science methods and, on the other hand, to analyse and shape the commercial, human, social and legal aspects of digitalization using methods from the fields of business administration, psychology, law and sociology. By applying these topics in research and teaching, students will be optimally prepared to enter the labour market and contribute to society in the future.



## SUSTAINABILITY

University of Graz considers that it has a responsibility to ensure that all graduates of a university degree programme have a basic knowledge of the thematic areas associated with the Global Grand Challenges of the 21st century (e.g. climate change, biodiversity loss and sustainability—see Chapter 3.2.3—as well as social integration, equality and diversity) and, therefore, can choose appropriate courses. Current socio-political topics are already integrated in the basic university module, which stimulates critical thinking. Since today's students will play roles as future leaders, decision-makers and teachers and will act as change agents, a cross-faculty master's module and an innovative master's programme on Climate Change and Transformation Science are also offered.

## —2.2.2 Student services

University of Graz has been taking care of its students since its foundation. It is constantly striving to improve its services and does so throughout the entire student life cycle, ranging from the time the student begins their studies to the time they graduate and enter into employment. At the University, students can access a wide range of services, such as the Student Services Center (SSC), the Writing Center, the Graz Center of Empirical Research and the DocService. These contact points help students perform their academic work and have gradually expanded their service offers over the years. Even more services will be available online in the future.

The qualification programme for tutors, which is currently in the pilot phase, will be expanded and successively extended to all faculties and further professionalized. The primary goal of the project, which is being carried out together with the ÖH, is to create a programme for students just beginning their studies that helps them overcome the challenges they face and ensures them a successful start. By taking part in this qualification programme, the tutors expand their repertoire of skills and acquire key qualifications that enable them to offer optimal support to others and that will also be relevant in later in their professional careers.



In order to help them begin their careers, interested students are supported by mentors (alumni) from the 5th semester and onward. More offers will be provided in the next few years, so that students can, for example, choose the elective or compulsory elective courses or internships and master's topics wisely. These offers will also guide and help successful graduates of University of Graz to smoothly enter into their professions. Furthermore, the Career Center provides students with support on a wide range of professional topics. In the future, counselling as well as events and workshops will also take place online. External communications of the counselling service offers will be issued more frequently, in order to reach people outside the university as well. To provide even more specific support for career entry, the efforts to cooperate with companies will be intensified; company presentations and direct contacts with company representatives will also take place online.

## —2.2.3 Developing the quality of teaching

In recent years, the quality assurance of teaching and studies has become increasingly important. A number of measures have now been firmly established.

## COURSE EVALUATIONS

The University uses course evaluations and feedback instruments in its courses. These are essential components of quality assurance and development in teaching. Course evaluation by students is part of the standard repertoire of quality assurance in teaching. In the next few years, the current course evaluation, which is based on assessing teaching competence, will be replaced by a new instrument that places a stronger focus on assessing student satisfaction. Feedback instruments will continue to be used, as they positively influence the direct teacher-student interaction. The application of a peer evaluation by a recognized colleague working in the same subject area would be a useful measure for promoting quality improvement. The need for peer evaluation and its feasibility should be examined to evaluate its use as an option.

If special didactic challenges are recognized, which also become visible through the use of course evaluations and other feedback instruments, the Centre for Teaching Competence (ZLK) offers individual teaching coaching to provide didactic support.

## PLANNING AND HOLDING EXAMINATIONS

The quality of teaching is the result of a complex interplay and is strongly dependent on individual teaching actions and specific underlying conditions, whereby examinations play a central role. In order to help teachers optimally design and hold examinations (either online or in person), corresponding central support structures are being established. The didactics of examinations are being further developed and carefully coordinated, based on empirical evidence, as are the electronic examination management and provision of suitable infrastructure.

## UNIVERSITY DIDACTIC OFFERS

University of Graz strives to maintain a high quality of teaching in the individual courses. Teachers can expand their didactic competencies in various continuing education courses for digital as well as in-person teaching and performance assessment. Special attention is paid to the key areas in the various subject disciplines. It is possible to acquire a certificate in "university didactics" within the framework of continuing education for teachers.

In order to help teachers to adapt to the ongoing changes in teaching cultures and modify their own teaching habits, a "Virtual Meeting Point for University Teaching" will be established, which will be supported by the Vice-Rector for Studies and Teaching and the Vice-Rector for Digitalisation. This meeting point will support the central services that support teaching, such as the Department of Academic Services ("LSS" German Lehr- und Studienservices), the Centre for Teaching Competence (ZLK), the Centre for Digital Teaching and Learning (ZdLL), as well as the University IT, which provides the required infrastructure. This meeting point supports communication among these services and develop complementary offers for teachers.



## THE TEACHING SKILLS ASSESSMENT

The Teaching Skills Assessment (TSA) has been in use for many years and can be used to improve the visibility of teaching quality and verify it during appointment procedures. The TSA is a multi-step procedure that applies quantitative criteria to assess the lecturers' teaching skills. The procedure can be used to assign an appropriate status to teaching alongside research in appointment procedures and to gain insights into the applicant's teaching competence. An online training course (video, checklist) is provided to help the committee members more easily assess the teaching sequence and to make reliable assessments.

## —2.2.4 Internationalization of teaching

International relations are an essential aspect of university development and enable the needs of an increasingly mobile and multicultural society to be met. International learning methods and diversification by involving guest lecturers and guest students

at University of Graz increase the students' ability to act and engage in dialogue in the globalized (working) world as well as develop (key) intercultural competences. The internationalization of the curricula (see also Chapter 5.1.2) continues to be supported by a variety of measures, such as the definition of specific mobility windows/modules/global windows or joint study programmes/modules.

In cooperation with the strategic partner universities, the development of models to offer digital teaching to students the development is ongoing, as is the development of interdisciplinary, challenge-based teaching and learning methods on socially relevant topics within the framework of the Arqus cooperation (see Chapter 5.1.3).

## —2.2.5 Teacher Training NEW

The coordination and further development of teacher training is actively promoted by University of Graz both within the University and in the local and regional cooperations, as well as in the development cluster south-eastern Austria EVSO (Entwicklungsverbund Süd-Ost).



To date, new ideas that combine theoretical and practical aspects are being developed to optimize teacher education on the basis of research and practical application. This development is taking place both in teaching through the cooperation of practitioners and university lecturers in all subjects taught and in research by networking actors, who are conducting research in teaching methodology.

In addition, University of Graz is investing strong efforts to establish direct contacts with other schools to promote the cooperative development of curricula, especially with regard to new academic subjects.

The further development and expansion of digitalization will play an important role in numerous areas of teacher education. These aspects will influence the development of measures to promote the inclusion of digital methods in teacher training programmes and the application of a digitalization strategy in Teacher Training NEW by establishing a digital video archive. This archive will enable University of Graz to stream more courses to students throughout Austria.

University of Graz has excellent expertise in German-language instruction in the education system and has already established a firm starting point at the structural level by creating specialized didactics centre for German as a second language and language education. In the next few years, the University will solidify and strengthen its pioneering role by presenting the field of language education as a single concept for teaching all subjects and at all educational levels up to the university level, thus ensuring an intrinsic coherence.

In the area of teaching methodology in the mathematical and scientific subjects (biology, mathematics, physics, chemistry), University of Graz has taken an important step to improve teacher training in the future by founding DINAMA (Didaktikzentrum für Naturwissenschaften und Mathematik [Didactics Centre for Natural Sciences and Mathematics]). This concept for coordinated teaching methodology training in these subjects will be further developed and expanded.

Ethics will be added to the range of subjects taught.

The activities in the field of “education and inclusion” shall continue to play a central role in the teacher training programmes offered at University of Graz. The Research Center for Inclusive Education (Verbundzentrum für inklusive Bildungsforschung, a joint institution run with the Pädagogische Hochschule Steiermark [University College of Teacher Education Styria] and the Kirchliche Pädagogische Hochschule Graz [Catholic University College of Education Graz]) makes a valuable contribution to inclusion in society and to the education system. The “Digital Lab for Inclusion” located at the centre serves as a site for the development of methods and tools that support inclusive and individualized teaching.

With the Zentrum für Professionalisierung der Elementarpädagogik [Centre for the Professionalization of Elementary Education], University of Graz is further increasing its competence in this field. In this Centre, a focus is placed on research and development projects to enhance the professionalization of educational specialists. Through its international activities, the centre plays an important role throughout the German-speaking countries.

Another goal is to continuously develop the means of communication within Teacher Training NEW, especially in terms of the methods used to communicate with the schools and the regional Bords of Education, but also in terms of the external appearance.

## — 2.2.6 Continuing education



The normal range of courses offered at University of Graz is supplemented by a modern and attractive range of continuing education courses for people in all phases of life. This continuing education promotes lifelong learning and enables access to new fields of knowledge and work. University courses are designed and developed to meet the current continuing education needs. In this way, continuing education needs in society can be met while increasing the participants skills and meeting the needs of external organizations from the private sector and public administration. Taking into account the special requirements of participants in the in-service training, advanced training and continuing education courses, efforts are made to present the materials

compactly using contemporary and specific, group-oriented formats. The demand is shifting from long-term university courses to shorter-term formats, which is why the offer is being adapted accordingly.

The continuing education programme has been developed based on the quality standards for research-led teaching at the university level, but also to impart practical professional skills. UNI for LIFE serves as a hub for knowledge transfer between the university, business and society.



The range of subjects reflects the research at University of Graz and covers the areas of business, law, education and social affairs, language and communication, health and natural sciences and worldview and society. In addition, the portfolio is complemented by customized continuing education programmes for companies.

Regarding general university education, the Center for Continuing Education develops research-based educational offers and learning settings (Montagsakademie [Monday Academy], Vita activa, MegaphonUni). The offers also contribute to activities performed on the societal level. All interested adults can take advantage of these educational offers, regardless of their previous education and age.

## DIGITALIZATION IN CONTINUING EDUCATION

The topic of digitalization is addressed by in-service continuing education in order to offer attractive continuing education offers to companies, especially in the region, and to meet the needs of working people and enable higher flexibility. To address this topic effectively, digital teaching and learning content are being integrated with increasing frequency in the UNI for LIFE’s existing continuing education programmes, and new short-term and modularized formats are being developed. Furthermore, the commitment of scientists at University of Graz to share their expertise with working people in a digital form will be increased.

### 3 Social commitment – We drive societal development

With its diverse expertise in research and teaching, University of Graz contributes to analysing current and future societal problems and developing viable solutions. These solutions enable people to better meet these challenges and counteract them by referring to evidence. Social, ecological and economic sustainability, as well as the basic values of democracy and human rights, are our guiding principles.

#### 3.1 Strategic goals

1. The knowledge created at University of Graz will be actively introduced into societal discussion processes. Scientists at University of Graz should contribute more than before to the formation of public opinion by sharing their expertise. Thus, research-based knowledge should support and actively shape social changes.
2. Initiatives in the field of knowledge transfer and science communication will be bundled to increase the visibility of University of Graz's research and teaching achievements and to support scientists in their activities in this regard.
3. Within the University, the exchange of opinions on socially relevant and, even more so, internal University topics is to be promoted.
4. Existing activities in the area of business cooperation and knowledge transfer will be expanded still further in the future and the visibility of these activities on campus increased. The knowledge transfer and innovation strengthens our connection with the business community and enables the use of external funding opportunities.



#### 3.2 Implementation strategies

##### —3.2.1 Dialogue with society and within the University

The task of helping to find solutions to societal challenges in the sense of the legal mandate as well as the personal understanding of responsible science can only be fulfilled if transdisciplinary dialogues are conducted with different target groups. In this way, University of Graz is strengthening the public awareness of complex social, ecological and economic challenges as well as creating the basis for evidence-based decision-making for societal benefit. University of Graz interprets societal engagement to mean placing

a focus on issues of justice and democratization and facilitating participatory, transdisciplinary dialogues and research that helps turn those affected into participants.

In the future, it will become more important than ever before to consider how scientific achievements are used and how feedback to questions from business and society is used as input to formulate research questions. University of Graz has demonstrated great innovation potential in all scientific fields; these innovations can be implemented in start-ups and cooperative projects with the business community. In this way, the unique strengths of the location, a lively start-up scene and vital cooperations in the corporate sector will be supported.



Various discussion channels can be used to give members from highly diverse areas of the University are to the chance to conduct interdisciplinary dialogues. While these dialogues can be conducted to address general social and political issues, topics specific to the University—such as questions of participation, freedom of science, etc.—should be addressed in particular. This focus should enable the participants to find solutions by examining the issues from multiple perspectives and to generally listen to the multitude of University interests, thus promoting further development within the University.

##### —3.2.2 Contributions to the Sustainable Development Goals

Sustainability as well as climate and environmental protection have been included as important parts of research and teaching at University of Graz<sup>2</sup> for many years. The numerous contributions made to support the Sustainable Development Goals (SDGs<sup>3</sup>) prove this, ranging from the efforts invested to anchor the topic strategically (“Sustainable University of Graz”), to offer corresponding studies and to conduct research in numerous different University fields of study. University of Graz's scope of action

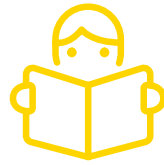
includes the following SDGs:

- 3 „good health and well-being“
- 4 „quality education“
- 5 „gender equality“
- 7 „affordable and clean energy“
- 8 „decent work and economic growth“
- 9 „industry, innovation and infrastructure“
- 11 „sustainable cities and communities“
- 12 „responsible consumption and production“
- 13 „climate action“
- 16 „peace, justice and strong institutions“

<sup>2</sup> <https://plattform-nachhaltigkeit.uni-graz.at/de/nachhaltigkeit-an-der-universitaet/>

<sup>3</sup> <https://sdgs.un.org/>

In the sense of actively implementing the SDGs, University of Graz supports ecological sustainability, knowledge-based information instead of 'fake news', as well as access to and opportunities for education and a dignified life for people of different ages, genders, or nationalities. In the next few years, in addition to further developing these activities, the University will also invest efforts to increase the visibility of the SDGs and actively engage in dialogues with different stakeholder groups. In addition, educational opportunities will be made available to a broad audience in selected areas.



Through the UniNETZ project (Universities and Sustainable Development Goals), University of Graz supports the coordinated, holistic achievement of the SDGs. The focus is placed on strengthening and increasing the visibility of the University's research contributions to the SDGs

### — 3.2.3 Ecological sustainability

In view of the global climate crisis, the loss of biodiversity, the endangerment of vital resources and the imminent, disruptive disintegration of economic systems based on fossil fuels, as well as to promote a sense of social justice, University of Graz is aware of its role and the responsibility it bears as a forward-thinking workshop for the society of the future. As such, it aims to contribute to sustainable development by sharing its diverse scientific expertise and integrating the principle of sustainability even more consciously into the University.



As a member of the Alliance of Sustainable Universities in Austria, University of Graz participates by cultivating a culture of sustainability within the Austrian university and scientific landscape. To this end, University of Graz strives to set sustainability as its guiding principle in all of its fields of action. University of Graz has adopted a sustainability strategy that is aligned with the SDGs as a basis. Thus, University of Graz is working toward a comprehensive and far-reaching transformation within its sphere of influence, fulfilling its social responsibility to act as a role model and catalyst for a socio-ecological transformation towards a sustainable society (i.e. one that is appropriate for the future and worth living in).

One fundamental component of the sustainability strategy is the establishment of a greenhouse gas emissions budget, which serves as a reference for the measures that must be taken to enable University of Graz to become carbon neutral. To support the achievement of carbon neutrality methodically and institutionally, an Institutional Carbon Management (ICM), developed by the University's Field of Excellence Climate Change Graz is being implemented. University of Graz uses ICM as a new management approach and sees itself as an

innovative pioneer, role model and source of expertise in supporting the path towards a low carbon society.

Corresponding measures will be taken by actively contributing to the responsible use of resources in the areas of energy and resource requirements, investments and construction, procurement, waste and mobility. In doing so, the administrative possibilities will be taken into account as well as the requirements and results of research and teaching. In order to reach Austria's climate and sustainability goals, University of Graz is committed to meeting the requirements and adhering to the principles described in the position paper on the construction of sustainable university buildings [German: Positionspapier zur Errichtung von nachhaltigen Universitätsgebäuden] written by the Alliance for Sustainable Universities in Austria and plans to implement them in all future construction projects.

The EMAS environmental management system will be further developed. The environmental impact of University of Graz in the area of mobility will be further reduced, in particular by continuing and strengthening the measures to promote cycling and the use of public transport.

Together with other universities, University of Graz will continue to actively participate in cross-university initiatives that address 21st-century topics. In addition to the Alliance of Sustainable Universities in Austria, the Service Centre at the Climate Change Centre Austria (CCCA) and the Sustainability4you network are also worth mentioning. University of Graz will continue to actively participate in the inter-university project UniNETZ and contribute to its further development. Through these voluntary commitments, University of Graz aims to contribute to the implementation of sustainable development throughout Austria in the spirit of the Uniko Sustainability Manifesto. University of Graz also supports the activities of the Netzwerk Biodiversität Österreich [Austrian Biodiversity Network] in as well as the Austrian Biodiversity Council by strengthening the Field of Excellence Climate Change Graz and the commitment to sustainability by contributing finances to the coordination office for the "Project Biodiversity Austria".



### STUDENT INVOLVEMENT

Students form the largest group at universities; as such, they play a central role in the application of and adherence to basic sustainability principles. University of Graz is committed to involving students (the ÖH as well as local student sustainability initiatives) in all relevant decisions and, thus, to following relevant principles. These principles are outlined in the UniNETZ project using the examples of the Fridays for Future movement with regard to the execution of the Paris Climate Agreement and the cooperation between universities and forum n, the association for the coordination of student sustainability initiatives.

Based on the University's mobility concept, sustainability is being shaped in everyday student life. Cooperations with regional stakeholders are important here. The development of new measures to support more environmentally friendly mobility (i.e. with a low "ecological footprint") or a "virtual exchange" in the context of mobility and student exchange programmes is being planned. Digital tools support the simplified management of mobility programmes.

### —3.2.4 Diversity and variety as an opportunity in the crisis

Human rights, equality, protection against discrimination and equal opportunities are important issues, especially in times of crisis. They are assigned an enduring, central importance in the search for appropriate coping strategies and considering the transformative movement processes still to come. The global changes that lie ahead of us make it all the more important to integrate diversity and multiplicity, as well as solidarity and fairness, as liveable components into the organization. This will enable the University to make valuable contributions in the context of global challenges.



The University and all its members are called upon to work harder than ever to achieve a successful, prosperous, creative and productive coexistence, enabling us rethink internationality, globalization, digitalization, climate change, health issues, etc. This requires us to actively minimise prejudice and disadvantages and, thus, effectively protect people against discrimination, as well as provide support for groups do not currently experience equal opportunities in order for them to reach their full potential.

To achieve a future worth living, the University strives to reflexively, experimentally and intellectually develop action plans that take into account the current conditions and situation, prioritizing the needs of the people.

University of Graz also addresses the issues of diversity and variety in research, for example, through the Heterogeneity and Cohesion Research Network, and attaches importance to the research-based development of measures that help to shape a society characterised by its diversity and variety.

### —3.2.5 Knowledge transfer

#### CENTER FOR KNOWLEDGE AND INNOVATION TRANSFER

The Center for Knowledge and Innovation Transfer (ZWI) serves all students and staff who are interested in starting a business, providing both a meeting place and a site where they can apply their ideas directly on campus. It offers a start-up ecosystem with the necessary services and opportunities for networking with the business community. Start-ups and self-employment are to be promoted and supported both in terms of content and with suitable formats. The provision of office space is essential here. Social entrepreneurship (MPO, Service Learning, sociopreneurs) and digital start-ups are also being considered. The University supports students from all academic disciplines if they are already considering founding a start-up or are looking into developing one during their studies. The ZWI serves as a platform for intra- and extra-University activities to promote exchange between the University, business and society, including activities in the form of innovation projects. Events in various formats take place in the event centre and workshop rooms. The premises and especially the catering area of the ZWI provide opportunities for people and companies working in the co-working space and start-up hubs, but also in university institutes themselves, to contact one another. In addition to mapping the profile-forming areas, the topic of "Modern Ageing and Demographic Change" represents a key area for defining the directional content of the ZWI.

Regarding demographic change, University of Graz fills its social role by continuing to prove its claim to intellectual leadership in research and practice. In this respect, the ZWI will enable the application of ideas in entrepreneurial practice.

As the lead organization, it will also continue to expand its cooperation network with the other universities in Graz as well as stakeholders from the business, political, health and social sectors at the local and regional levels, as well as provide viable interdisciplinary solutions to the challenges of demographic change.

#### ENTREPRENEURSHIP

The Pre-Seed Academy is a project that has been developed to strengthen the entrepreneurial university and to support the social contribution of the University in Graz and Styria. The purpose of the Academy is to familiarise students and staff with entrepreneurial thinking and actions and to accompany them as they start up a real company or in their entrepreneurial activities. The project combines already-existing entrepreneurship activities, such as the Transatlantic Entrepreneurship Academy, the TIMEGATE programme, the Gründungsgarage, or the ZWI, and closes the gaps that exist between the time that students and staff first become aware of the idea of founding a company and the actual act of founding of a company. With the establishment of the Pre-Seed Academy, the University will be able to accompany and support students and staff throughout the entire life cycle, from learning the scientific theory of business start-ups to establishing the start-up and on to receiving the first round of financing.



The project also enables participants and alumni to network with successful Styrian companies and the University community, increasing the visibility of existing knowledge and potential regarding innovation and entrepreneurship.

### **TIMEGATE**

*(Transferinitiative für Management- und Entrepreneurship-Grundlagen, Awareness, Training und Employability)* has been anchored at the University since 2013 as a cross-university and cross-faculty cooperation project. This project enables students in all fields of study to access basic business knowledge as part of a practice- and application-oriented elective course. TIMEGATE conveys basic business administration knowledge that is currently required for work in many areas, but which is only included in a few curricula or is only accessible to a limited extent. By providing applied and practical modules from business administration, this gap is filled, and the students' employability is sustainably increased. The flexible structure and modular design of the programme allow the requirements in the individual fields of study, but also the needs of the individual students, to be addressed with optimal efficiency. Because target-group-specific certificates are issued, students also can provide formal proof of their additional qualifications when entering the labour market.

### **SCIENCE COMMUNICATION**

In order to broaden the public perception of the University and research and to intensify the transfer of knowledge, the interactive exchange of knowledge between the University, business and society is being actively promoted. The aim is to communicate how science and research can be used to solve social and economic issues and also to bring social stakeholders into an intensive dialogue with researchers through the use of participatory formats.

Researchers and scientists use a variety of data for their research with digital methods and are increasingly making their research results and, insofar as possible, research data available to the general public (Open Science). In addition, citizen science approaches will be used (especially in cooperation with the partner universities in Arqus) to further develop communication, participation and knowledge transfer.



In order to increase the visibility of the research excellence in terms of its societal impact, the conventional evaluation criteria will be expanded. Both the interaction with stakeholders and citizens ("science with public") and the communication of research achievements to the general public will be taken into account. Extended evaluation criteria for science communication should also be taken into account for career development.

In addition, analogue and digital formats of continuing education will be used in the area of broader science communication. On the one hand, this will strengthen the connections between scientific communities and different social groups and encourage the

exchange of current research results and, on the other hand, directly address and simplify society's demands on science. The use of diverse formats and new communication media will be expanded on in the regions, in schools, in communities, etc.

### **UNIVERSITY MUSEUM**

Another focus will be placed on connecting the history and future of University of Graz in order to enable people to experience the diverse references to research carried out at the University in a multimedia form. The historically important objects at University of Graz as well as the valuable archival holdings and precious objects in the University Library's special collection will be made accessible both through digitalization and by developing broad, innovative exhibition concepts. In doing so, the visibility of the diverse connections between research and inventions at University of Graz will be increased and, thus, the current research priorities will be contextualised. To achieve this goal, the University plans to unite the three current university museum collections (Hans Gross Kriminalmuseum, UniGraz@Museum and Haus der Wissenschaft) at a single location and form a single University Museum (NEW).

### **Institutions at the intersection between university and society**

#### **Styrian Competence Centre for Physical Activity and Sport**

In the Styrian Competence Centre for Physical Activity and Sport (Steiermärkisches Kompetenzzentrum für Bewegung und Sport), the competences of the Institute for Sports Science at University of Graz will be combined with those of existing institutions in Graz. This will increase the exchange of research and teaching activities carried out at the institute and practical applications in both high-performance sport and popular sport.

#### **Climate Change Centre Austria Service Centre (CCCA)**

The CCCA serves as a hub for research, politics, the media and the public regarding all questions about climate research in Austria and thus promotes a sustainable climate dialog.

#### **European Training and Research Centre for Human Rights and Democracy (UNI-ETC)**

The UNI-ETC addresses issues of human rights and human rights education, human rights in the EU, globalization, democratization, human rights in Southeast Europe, local human rights, and migration and refugee law. This Centre provides students from all faculties with a range of courses on human rights and human rights education.

#### **RCE Graz-Styria - Centre for Sustainable Social Transformation**

As a centre for sustainable social transformation, the RCE Graz-Styria (Regional Centre of Expertise) conducts transdisciplinary research projects and offers innovative educational programmes that enable participants to find practical ways to meet ecological and social-challenges in the region.



### —3.2.6 Alumni network

University of Graz graduates are important multipliers of University topics and, therefore, should be informed and involved in the best possible way. The University's achievements and concerns are to be communicated using various formats (e.g. print, online, events) to the constantly growing alumni community both at home and abroad. The international alumni chapters should contribute to increasing the reputation of University of Graz abroad and lobby for University issues.

The potential for research fundraising projects at University of Graz will be further developed and expanded by providing focused science communication in general and utilizing the alumni network in particular.

## 4 Digital transformation – We shape digital transformation

### 4.1 Strategic goals

1. The digital transformation of society is driven by research and can be (co-)shaped by interdisciplinary research. Interdisciplinary innovation activities will be supported interactively to promote digital transformation at University of Graz. University of Graz already has internationally recognized content-related or methodological competences in the area of digitalization in specific innovative research fields of future importance (including in four out of five Fields of Excellence). Ambitious digitalization approaches are also being used in the areas of teaching and learning as well as in University processes. In order to strengthen and further develop these, University of Graz will establish an Interdisciplinary Digital Hub (ID Hub) as a centre for interdisciplinary studies on digital transformation.
2. The broad subject area of digital transformation will be used to extensively develop new digital methods and to explore the potential of conducting disciplinary and interdisciplinary third-party research on this topic at University of Graz. International networking—also through the University alliance Arqus—will be used to acquire more third-party EU funding for research on topics related to digital transformation.
3. During their studies, students will acquire not only digital technical and methodological knowledge of future importance, but also competences that will enable them to critically and reflexively shape the digital transformation.
4. University of Graz uses digitalization to make processes and workflows more user-oriented, personalised, simple and flexible for staff and students, thus making advanced digital change a tangible experience at the University.
5. By establishing and expanding the open digital infrastructures at University of Graz, a University innovation ecosystem will be created that will enable the flexible and user-oriented further development of services for research, teaching and administration. Open digital platforms will be further developed together with other universities in Austria and with international partner universities.

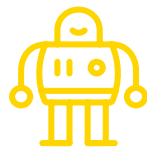


## 4.2 Implementation strategies

### —4.2.1 Interdisciplinary Digital Hub

The Interdisciplinary Digital Hub (ID Hub) will be created at University of Graz to combine transdisciplinary initiatives. These initiatives can be applied to achieve a digital university and to promote interactive and transdisciplinary innovation activities. The ID Hub is a University centre for interdisciplinary studies of digital change and, at the same time, a place where research on digitalization, the testing of digital methods and the steps taken to develop a digital university will be supported. Interactive, interdisciplinary and transdisciplinary initiatives and innovations in research and teaching will be promoted and new forms of collaboration will be made possible in specially established lounge spaces.

In these cross-sectional areas, the ID Hub should further promote and strengthen international competitiveness. One key aspect is that digital innovation activities can be coordinated across fields, enabling them to support each other in their further development.



The ID Hub will also house professorships that are relevant for interdisciplinary research in the field of digital transformation and various faculties (see Chapter 1.2.3). This aspect includes the expansion of the field of modelling, which is fundamentally relevant for artificial intelligence (AI) and big data, but also other cross-sectional professorships, such as in the field of human-computer interaction (HCI). Another cross-sectional function will be fulfilled by the creation of a professorship for Digital Didactics in Higher Education, which will also be located in the ID Hub.

At the same time, the ID Hub will serve as a central element for positioning the Center for Knowledge and Innovation Transfer (ZWI) in the broad thematic field of digital transformation.

### —4.2.2 Interdisciplinary research on digital transformation

The digital transformation of society sets innovative new research priorities in basic and applied research across all disciplines. University of Graz promotes the development and establishment of advanced digitalization research by providing the corresponding infrastructure, services, support for third-party funding applications and by setting priorities in the promotion of unconventional research. The technical, economic and social potentials of digital transformation over the long-term can be supported and shaped by conducting both disciplinary and interdisciplinary research. Therefore, digitalization research at University of Graz is an interdisciplinary field which combines aspects of natural science and mathematics research with research in the humanities, social sciences and cultural studies. The disciplines are changing due to the digitalization of the research itself and contribute in different ways to digital transformation in business, politics and society. The

promotion of interdisciplinary cooperation between excellent researchers does justice to the complexity of research fields such as artificial intelligence, automation and algorithmization in society, thus increasing the quality of research and providing a foundation for successful third-party funding and high-ranking publications.



Increased digitalization research will be made possible both by establishing new professorships and by funding innovative interdisciplinary research. This includes the promotion of unconventional research, placing a focus on digital transformation and promoting the initiation of interdisciplinary research projects at the European level (Horizon Europe). Within the framework of Arqus, funding was obtained to develop research cooperations with partner universities. In addition to addressing climate change and the Green Deal initiatives, these efforts are invested to strengthen cooperations in the area of digitalization and artificial intelligence. With this focus, international collaborations with partner universities will be actively promoted to address the topics of future digitalization. EU third-party research will be expanded in the areas of Global Challenges and Industrial Competitiveness (Pillar II of Horizon Europe) and Open Innovation (Pillar III of Horizon Europe). The use of interdisciplinary digitalization research will be increased to attract more third-party funding at the EU level and support more researchers in their international and collaborative research activities. The digital transformation is also closely linked to climate research and the transformation to a sustainable society. Since this interface between climate research and digitalization is of high societal relevance and offers excellent opportunities for attracting competitive third-party funding, researchers will be encouraged to initiate projects in this area accordingly.

### —4.2.3 Digital methods and research data management

Digital methods are comprehensively changing research practices in science and are central to performing cutting-edge research. University of Graz promotes the integration and active further development of methods in the various disciplines and supports their transfer across disciplines. In order to further develop the disciplinary and interdisciplinary use of advanced digital methods, the human resources in this area will be expanded. Additional support for research data management plans and for research data management will be provided in research management, in the University Library and in uniIT. To support researchers working in the area of overall research data management, “data stewards” will be introduced to provide discipline-specific support in using advanced methods. In cooperation with other universities in Austria and Europe, approaches for integrated research data management will be applied and further developed, taking into account discipline-specific, interdisciplinary and general research needs. In addition to setting up and developing next-generation repositories for research data, training and support services for efficient research data management will be developed. The intention is to make research data permanently available and to create incentives for

the creation of open data. Questions regarding primary and secondary data usage rights will be of increasing importance in the future, and University of Graz will support the development of models to study the life cycle of research data in the context of the FAIR principles (“findable”, “accessible”, “interoperable” and “re-usable”).

The introduction and further development of advanced digital methods based on contemporary digital infrastructures will be actively promoted.

#### —4.2.4 Supporting research-led teaching through digitalization

Supporting research-led teaching through digitalization involves three dimensions of implementation. Firstly, the students will be taught relevant digital skills that enable them to support the digital transformation; secondly, digital teaching and learning will receive comprehensive support; and, thirdly, digital technologies for teaching and learning will be expanded (Chapter 2.2.1).

##### DIGITAL SKILLS

In the context of the digital transformation, students are offered a range of courses in addition to disciplinary knowledge about the digital transformation that will enable them to actively shape the dynamics of the digital working and living environment in the future. By broadening the content and increasing the number of methodological offers in the area of artificial intelligence, big data, computational thinking and critical approaches to digital transformation, the ability to innovate will be promoted. At the same time, social questions will be posed that help students develop their abilities to think critically and reflexively. The digital transformation degree programmes that are under development reflect the diversity of offers specific to a general university. This includes the development of a master’s programme in the field of “Artificial Intelligence in Society”.

##### DIGITAL TEACHING AND LEARNING

Digital teaching and learning consist of interlocking technical, didactic and organizational processes that can increasingly be supported and mapped digitally. The widespread use of digital tools in teaching is changing from an option to an integral part of the teaching and learning culture at University of Graz. For this reason, the palette of support services offered for teachers will be expanded, making it easier for them to develop their teaching using digital elements. High-quality digital teaching can only be broadly anchored if the teachers can receive customized support. The long-term strategy for University operations, which was developed in response to the COVID-19 pandemic in 2020, makes it possible for teachers to hold up to 60% of their courses online. In the course of this expansion, the experiences and needs will be continuously analysed by accompanying research up until 2022 in order to develop support services that meet these needs over the long term.

##### DIGITAL TECHNOLOGIES FOR TEACHING AND LEARNING

University of Graz is expanding its digital infrastructure for teaching and providing a broad knowledge base for the didactic continuing development of digital teaching. In the process, platforms will be made available to teachers and students. These will be further developed to meet teaching needs in the sense of open innovation (e.g. Moodle, BigBlueButton).

#### —4.2.5 Strengthening open science, open access and open digital infrastructures



The digital transformation enables the use of new forms of networking and new forms of openness in University research and teaching. University of Graz is using the digital transformation to expand its open science infrastructure, promote the rapid and global provision of research results through open access in the publication sector and contributing to an open university innovation ecosystem by developing its open digital infrastructures. Regarding research data, University of Graz will help to establish repositories for digital research data in cooperation with other Austrian and European universities (e.g. AUSSDA - The Austrian Social Science Data Archive and GEOCLIM Data Infrastructure Austria) or develop them further (e.g. GAMS - Humanities Asset Management System). In addition, the provision of educational resources (OER - Open Educational Resources) will be actively promoted to provide students with high-quality learning and teaching materials and, at the same time, to increase the visibility of University of Graz. Open innovation processes represent an essential dimension of open science. These processes make it possible to further develop digital infrastructures together with other partners to meet the university’s specific needs and those of their research, teaching and societal partners.

The socio-politically relevant transformation process that will enable the general public to freely access scientific knowledge will be promoted; digital transformation will be applied to encourage publication in OA journals, especially in the humanities, social sciences and cultural studies. To facilitate this process, the range of university OA journals and OA books will be expanded to meet the requirements of Plan S<sup>4</sup> and ensure high quality, and the increasing need for advice and information on this topic will be addressed.

The researchers’ information literacy and publication skills will also be promoted through the use of online tools, and junior researchers will be increasingly encouraged to publish in open access journals in order to support the transition to Open Access.

<sup>4</sup> <https://www.coalition-s.org/guidance-on-the-implementation-of-plan-s/>

With regard to open data, repositories are being established for all subject areas, existing repositories are being further developed, and some of these are being linked to the University Library. Work is underway to apply a long-term archiving strategy.

Overall, open science at University of Graz promotes an open culture of innovation at the university level as well as in relation to science and society. This includes the increased use of open-source in the cooperation (e.g. video conferencing system), cooperations that support the use of the European Open Science Cloud (EOSC) and the expansion and further integration of Moodle in digital teaching. In the future, research will not only be about making data available, but also about enabling the comprehensive use of open data in all branches of science.



University of Graz is expanding its open digital infrastructures to create a flexible University innovation ecosystem in the future. Where possible and appropriate, open-system architectures are being developed that meet specific University requirements and can be adapted to meet the needs of the University in cooperation with academic partner institutions. Moodle has already been implemented, and uniMEET (a video conferencing system based on the open-source system BigBlueButton) and uniTUBE (video content management system) were set up early on in the COVID-19 pandemic. These tools will be further expanded and integrated. Nextcloud is being expanded for the convenient storage of data in research, teaching and administration, and additional open infrastructures are being built to prepare to meet the needs of the Graz Center of Physics.

To build resilient IT systems, open digital infrastructures and the use of open-source software must be developed and expanded, in addition to the use of proven proprietary software (e.g. Microsoft, SAP). This will increase the University's independence from individual providers and support diversity, while taking into consideration the specific needs of scientists conducting disciplinary and interdisciplinary research. With regard to the development of digital infrastructures, University of Graz strives to form close cooperations with other Austrian universities and international partners. The open nature of these systems will simplify and facilitate cooperation between the various actors in the Austrian and European science landscape, as well as support cooperation among researchers in different research areas, institutions and countries. The goal is to be involved in the development of general technical standards and to develop suitable interfaces.

#### —4.2.6 The University's contribution to the digital transformation of society

As interdisciplinary research places a strong focus on the digital transformation of society, research questions relevant to society will be considered thoroughly. By focussing simultaneously on supporting open science and open innovation, the University can

support the rapid and comprehensive transfer of knowledge and encourage transdisciplinary collaborations. The effectiveness and visibility of the University's contributions to the digital transformation of society will promote interdisciplinary digitalization research (ID Hub, unconventional research, Route 63), actively support the transfer of results (ZWI, open science, open digital infrastructures) and allow digital transformation to be experienced at the University itself (Smart University, increasing and expanding the digital skills of all University staff).

#### —4.2.7 Smart University: digitalization of University administrative processes

Digitalization will be used to make administrative processes and workflows simpler and more flexible. Administrative processes will not be digitally replicated, but rather newly developed along digital lines to simplify them. Together with other universities in Austria and Europe, tools and platforms are being further developed to meet specific needs.

#### DIGITALIZATION OF PERSONNEL ADMINISTRATION



Further digitalization in the area of personnel administration is critical for developing a responsive personnel strategy and development. It is essential to develop electronic workflows for processes that have not yet been digitalized or have only been partially digitalized and to streamline processes that have already been digitalized. During the next few years, this will include the completion of the travel workflow, the establishment of an electronic tender and application process, the digital creation and signature of employment contracts and other documents, as well as the introduction of an electronic timekeeping system for working hours.

The attractiveness of the tools used, their functionality and their ability to meet data protection and data security requirements are also decisive factors, especially in the areas of application management and travel management. For example, these factors can affect the usability of the tool on mobile devices or its integration into the existing IT landscape. These concepts include, among other things, the provision of applications and services in the form of web apps, access via single sign-on technology, but also interfaces with existing applications and services. Another focus in the area of digitalization is usability: In order to ensure usability, co-production is applied as a development principle. This means that users are involved comprehensively and at an early stage in the development of new digital processes that will need to be used.

## 5 Cross-cutting issues/collaboration – We encourage collaboration

### 5.1 Cooperations

Through inter-university cooperation, interdisciplinary networks and (inter)national cooperations, the potential of all participating institutions is utilized more effectively and the number of offers is increased. These cooperations significantly support profile building, increase the associated international visibility in research and encourage the competitiveness of young scientists in international settings. Cooperations also support attractive study programmes and good student mentoring.

In recent decades, University of Graz has become a best-practice example with regard to institutional cooperation in the areas of teaching, research and administration, placing a steady focus on maintaining close thematic cooperations while preserving institutional autonomy.

#### —5.1.1 Overview of cooperations

In particular, the Fields of Excellence cooperate with international partners. University of Graz actively participates in shaping and further developing the European Education and Research Area, for example, within the framework of the Coimbra Group and the Utrecht Network. The existing expertise in the area of Southeast Europe will continue to be supported, as will activities that are carried out by the existing five strategic partnerships. While the Fields of Excellence are strongly internationally oriented, further international activities in the fields of research, teaching and societal engagement will be supported through cooperations with the strategic partnerships. Furthermore, the interdisciplinary cooperation Arqus (see 5.1.3) should also be referenced internationally.

At the local level, the NAWI Graz and BioTechMed-Graz cooperations will be developed by placing an emphasis on interuniversity research infrastructure and the promotion of young scientists. The collaboration with the Styrian University Conference, Route 63, the South-East Development Association for Teacher Training and the sustainability network UniNEtZ is also highly important.



#### —5.1.2 Overview of internationalization

Internationalization is an essential part of strengthening excellence in research and teaching. University of Graz cooperates with renowned partners in teaching and research to reach and maintain top international positions. University of Graz cooperates with selected partner institutions worldwide and, through internationalization, pursues the goal to support excellent research, outstanding teaching and forward-looking university development. Under the aspect of “comprehensive internationalization”, the University sees internationalization as a central tool that can be used to advance research, teaching and administration. In order to strengthen its global positioning efforts, the University particularly promotes cooperations that contribute significantly to outstanding teaching and excellent research with respect to both the continuation of existing cooperations and the application for new bi- and multinational forms of cooperation. Regarding bi- and multinational forms of cooperation that will be established in the future, the University strives to increase the number of cooperations with renowned international universities. A comprehensive method of monitoring internationalization activities is being developed to support faculty initiatives.



In order to attract the “best minds” to University of Graz, existing successful concepts are being further promoted. Summer and winter schools raise public awareness of the University and make it possible to address the needs of future students and young scientists with the research areas and key points. The many years of experience gained at the University and the emphasis placed on joint studies are used to best effect to attract highly qualified, interested students to University of Graz.

Students are encouraged to carry out stays abroad at all levels of their education, whereby the duration varies depending on the purpose of the training. The integration of young scientists in the international community is promoted both by enabling them to carry out shorter stays abroad and in smaller teams, as well as by making stays abroad obligatory and offering possibilities for longer-lasting mobilities. In the future, green mobility initiatives will receive special financial support. The existing agreements with strategic partner universities and networks will be increasingly used to promote young scientists.



To handle student, academic and staff mobility more efficiently, digital tools will be adopted and used more frequently. The emphasis is placed on supporting cooperation and exchange with national and international institutions.

Cooperations help to ensure that students have access to attractive study opportunities worldwide. There is no doubt that physical mobility provides good opportunities, enabling “global citizens” to live among us and share their experiences with dealing with different living and cultural environments. With partner universities, the University

is testing approaches of virtual and hybrid cooperation and combining these with digital forms of teaching, which are being offered more frequently. To support these efforts, methodologies associated with new teaching forms and formats are being further developed. Initiatives in the area of blended learning will be supported, but these should in no way replace physical forms of mobility.

The University campus is multilingual, and more teaching in foreign languages will be promoted. Multilingual concepts for use on the Graz campus will be developed in collaborative and participatory efforts. This development process will include, in particular, the testing and implementation of computer-assisted translation, the use of live translation apps and augmented reality translation methods to achieve the University's desired multilingual state.

International academicians, scientists and students can receive support from the University's Welcome Centre and in all departments that will help them to integrate quickly and easily into everyday university life.

### —5.1.3 Arqus European University Alliance

In 2017, the "European Universities" initiative was launched in Europe to achieve a new form of cooperation between universities that is significantly broader than the previous forms of collaboration. University of Graz has established the Arqus alliance with the Universities of Bergen, Granada (coordinator), Leipzig, Lyon, Padua and Vilnius to increase cooperation in areas of research, teaching, administration and societal engagement, thus helping to increase the excellence and attractiveness of European higher education. Arqus was one of the first 17 alliances selected by the European Commission in a competitive call for proposals, making the University of Graz one of the first 115 higher education institutions and one of the first two Austrian universities to be represented in a higher education alliance. The alliances have been designed to enable students to obtain a degree by carrying out structured, integrated study activities in several EU countries. This, in turn, allows them to contribute to the international competitiveness of European universities.

The Arqus University Alliance is strategically aligned to jointly promote the access of previously underrepresented groups to universities; to support ethnic diversity, social background diversity and individual educational paths; and to strengthen multilingualism and intercultural competence. Student-centred framework conditions for high-quality learning are being jointly developed, and entrepreneurship is being supported across universities through this innovative, cross-sectoral cooperation. Within the alliance, University of Graz coordinates the area of "Research Support



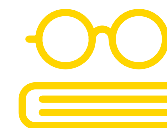
and Promotion of Young Scientists", which has been developed to train young scientists in an international network to become excellent researchers.

By defining the aim to conduct excellent research that contributes to the sustainable transformation of society, the Arqus Alliance successfully submitted an application to the EU's Horizon 2020 funding programme for research and innovation in June 2020. Coordinated research strategies are currently being developed with the partner universities in the thematic areas of the climate change/Green Deal and digitalization/artificial intelligence in order to jointly initiate research projects in these selected areas of the Horizon research framework programme. Other focal points are an Arqus roadmap for Transformation(al) Excellence, which can be used to strengthen and complement institutional strategies employed to assess excellence in research, a joint Arqus transfer strategy, and a joint research and innovation agenda in the area of open science. By placing a focus on these points, the Alliance intensifies its institutional role to promote the exchange between science and society, to encourage society to participate in research and to disseminate and use research results in society.

### —5.1.4 Austrian Academy of Sciences

The Austrian Academy of Sciences (ÖAW) cooperates with the Cori Institute. The Cori Institute in Graz, which is currently in the planning stage, will address BioHealth problems using mathematical modelling approaches, whereby the modelling of biological processes is a unique selling point (see also Chapters 1.2.2 and 5.1.6). On the basis of a Memorandum of Understanding, further steps will be taken to provide support.

Within the CLARIAH-AT consortium, University of Graz, together with other Austrian universities and research institutions such as the Austrian Academy of Sciences and the Austrian National Library, is developing strategies and measures to establish and further develop the digital humanities in Austria (see also Chapter 1.2.3). The cooperation with the Austrian Center for Digital Humanities and Cultural Heritage (ACDH-CH) in the field of digital humanities, which has been successful for years, will be continued.



The Faculty of Law cooperates with the ÖAW Institute for European Tort Law at the Centre of European Private Law (ZEP).

## —5.1.5 NAWI Graz

NAWI Graz was established in 2004 to strengthen existing cooperation and promote new collaborations. Since then, University of Graz and Graz University of Technology have been pooling their resources and expertise in the natural sciences and consistently and jointly developing these in the three fields of action: NAWI Graz teaching, NAWI Graz research and NAWI Graz organization. In addition to the three pillars, cross-sectional issues are also addressed, such as gender and diversity projects or alumni support.

NAWI Graz was established to integrate the cooperating areas as closely as possible and to anchor them within the line organizations of both universities, as well as achieve a high level of international visibility. Key figures of the cooperation are (as of 2019):

- **NAWI Graz teaching:** 5,300 students in 21 joint bachelor's and master's programmes, nine of which are English-language master's programmes
- **NAWI Graz research:** 24 jointly appointed professors, 15 inter-university central labs or core facilities and more than 150 shared instruments.
- **NAWI Graz organisation:** Foundation of the NAWI Graz Geozentrum as the first virtual inter-university department, definition and structuring of the Graz Center of Physics (see below)

### DEVELOPMENT POTENTIAL OF NAWI GRAZ

Operations in the NAWI Graz teaching pillar are carried out within the line organization of the universities. Projects that can be assigned to the NAWI Graz research or NAWI Graz organization pillars will continue to be anchored as projects within the performance agreements.

### NAWI GRAZ ORGANIZATION

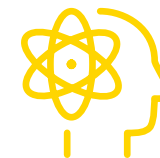
The following development steps are planned in the area of inter-university departments/centres:

- **NAWI Graz Geozentrum or Graz Center of Physics:** The four geoscientific/geotechnical and the six physics institutes of both universities will be merged in a joint building as an inter-university department. This goal is to achieve this in the period 2025 to 2027.
- **In addition**, the creation of additional virtual joint departments (without spatial consolidation) is possible where this is desired and appears to make sense.

In order to take these steps, the structures of respective organizational frameworks must be defined and designed in detail and the corresponding legal framework conditions for these new forms of cooperation must be created (e.g. possibility of founding as an inter-university unit).

## NAWI GRAZ TEACHING

Since all bachelor's/master's programmes in the areas of cooperation are offered entirely as joint institutions according to § 54e of the Universities Act (Universitätsgesetz, UG), more NAWI Graz programmes are not being planned at this time. Instead, the range of courses will be constantly adapted and further developed. Another aspect is the expansion of internationalization measures for the English-language master's programmes (with a focus on SEE countries). Accompanying measures are the NAWI Graz Fulbright Professorships and the NAWI Graz Fulbright Role Models. For subject areas in which gender disparities exist, appropriate gender measures will be developed and applied.



One important measure will be the further optimization of data exchange among students, teachers and administrators via the online systems.

## NAWI GRAZ RESEARCH

The following activities will be pursued here:

- The structural development of the framework conditions for joint doctoral training within the framework of the NAWI Graz GASS (Graz Advanced School of Science).
- The continuation of the joint appointment procedures. Where appropriate and possible, the upcoming appointments will be filled early.
- Funding of specific research groups in line with the research priorities agreed upon together with the Scientific Advisory Board in the five NAWI Graz departments in 2017.
- The expansion of electron microscopy in the next performance agreement periods will not only significantly strengthen NAWI Graz as a whole, but will also be an outstanding part for the new NAWI Graz Center of Physics.
- Strengthening the collaboration with the computer science fields to identify meaningful opportunities for the use of big data and AI methods.
- After constructing and occupying the Graz Center of Physics and NAWI Graz Geozentrum buildings: Establishment/expansion or implementation of the respective defined research priorities.
- The establishment of more NAWI Graz central labs/core facilities as a basic prerequisite for the continued successful acquisition of third-party funding projects.
- Conducting joint research evaluations.

## —5.1.6 BioTechMed-Graz

This continuity-enhancing cooperation initiative enabled University of Graz, Medical University of Graz and Graz University of Technology to successfully complement and combine their existing competences in the major joint research topics of molecular

biomedicine, neuroscience, pharmaceutical and medical technology, biotechnology and quantitative biomedicine and modelling. This joint cooperative platform increased the visibility of all the universities but also made them more identifiable for science, industry and politics.

The main objectives of BioTechMed-Graz include promoting excellent and interdisciplinary research programmes in the field of medically relevant life sciences, supporting young scientists and raising international awareness of Graz as a research location. The three partner universities form a close cooperation in the areas of basic biological and scientific research, technological development and the clinical application of these technologies in humans, strengthening the existing research fields still further and opening up additional innovative research areas (see also Chapter 1.2.2).

University of Graz plans to establish a research institute in the field of biomedicine ("Cori Institute of Molecular and Computational Metabolism") together with the ÖAW and BioTechMed-Graz's two partner universities (see also Chapter 1.2.2). To achieve this end, a memorandum of understanding was signed between the BioTechMed-Graz partner universities and the Austrian Academy of Sciences. The scientific focus is placed on creating an interdisciplinary environment and on areas in which the university location of Graz can demonstrate many years of highly successful research competence.

### SPECIFIC IMPLEMENTATION MEASURES

BioTechMed-Graz programmes and cooperative activities:

- The promotion of cutting-edge research: The competitive awarding of research funding as part of an international peer review process will be continued by issuing renewed calls for proposals.
- The promotion of young scientists: Talented PhD students and post docs will be given the best possible support in their scientific development by offering targeted support programmes and event formats.
- The creation of appointments relevant to BioTechMed-Graz: Professorships in the departments of BioTechMed-Graz will be filled by inter-university appointment committees..
- The creation of a BioTechMed-Graz doctoral programme: The doctoral curricula in the BioTechMed-Graz departments will be strengthened by offering interdisciplinary, cross-curricular courses.
- The expansion of BioTechMed-Graz research infrastructure: Expansion, continuation and optimization of the joint research infrastructure and core facilities.

Cooperation project between BioTechMed-Graz partner universities and the ÖAW

- BioTechMed-Graz coordinates the joint project "Cori Institute of Molecular and Computational Metabolism". Possibilities for construction work on the institute are being examined and efforts are being made to carry out this work in the near future.

### —5.1.7 KUWI Graz

Building on the already well-established cooperation between fields of study in the arts and sciences at Graz University of Music and Performing Arts, Graz University of Technology and University of Graz, a project was launched with KUWI Graz to increase the cooperation in the arts and sciences field in Graz to a new level. The aim is to optimally use the synergies and competences in the universities' and non-university partners' arts and sciences fields and to strengthen the diversity of methods used. KUWI Graz addresses aspects of both teaching and research. Regarding teaching, new topics and methods will be developed through courses and modules. Regarding research, exhibitions, conferences and joint research activities will contribute to increasing the international awareness for the university's scientific expertise.

### —5.1.8 Steirische Hochschulkonferenz

The Styrian University Conference, the cooperation platform shared by the nine Styrian universities, will be further expanded and developed through targeted measures and projects. The nine universities position themselves as educational institutions by carrying out joint projects to support quality development: Didactic knowledge and modern teaching methods are emphasized and competences are combined to maximise the joint benefit in teaching. The pilot projects on "Teaching and Learning" have led to the development of the Didactics Workshop, a university-didactics training programme that presents basic university teaching approaches and methods in new ways, and eDidactics, a training programme for the use of technologies in university teaching. Through joint public relations work, awareness will be raised for Styria as a teaching, science and research location. The positive perception of Styria as a university location creates an environment that attracts additional investments from the federal government, the European Union and companies. These efforts will include, among other things, consciously profiling and expanding interdisciplinary research initiatives, creating a common teaching space for improved university didactics, establishing additional continuing education options for competitive employees and increasing local and regional networking so that Styria can respond even more effectively to complex future challenges.





## 5.2 Staff



The staff play a central role in the development of a university, including both members of the academic university staff who are active in research and teaching as well as the members of the general university staff who essentially support and coordinate their work. Therefore, the selection of staff, their professional and personal development and the creation of performance-oriented career prospects are of considerable importance. In addition, the need to support staff during the digital transformation process and help them to accept and adjust to the resulting changes at the university present major challenges.

A catalogue of criteria exists that can be used to transparently assess staffing needs and that serves as a basis for long-term planning. The criteria for highly qualified scientific staff include the supervision situation for active students and the needs to supervise doctoral students, for profile building in research and to maintain international visibility. The needs regarding equipment support or in teaching (supervision ratios) serve as decisive criteria when establishing Senior Scientist/Senior Lecturer positions. The results of the assessment of personnel requirements are incorporated into quantitative personnel planning and also form a basis for decisions on short-term personnel planning.

### —5.2.1 Career model

To attract young talented scientists to University of Graz and thus ensure that high quality, international research is carried out here over the long term, it is necessary to be able to offer realistic career prospects. For this reason, a career model has been developed and applied, referring to the framework provided by the Universities Act and the Collective Bargaining Agreement for University Staff, which, in addition to offering competitive training and a wide range of support services, also offers young scientists a clear employment perspective for an academic career (or individual stages of such a career) at University of Graz. In this context, the challenges that will arise during the next few years include refining the existing employment profiles for academic staff in accordance with § 94 para. 1 no. 4 UG at all career levels (and in particular the post-doc initiative, see Chapter 1.2.6) and dealing appropriately with the restrictions for fixed-term contracts, as well as maintaining an appropriate ratio between temporary and permanent positions.



In those areas or cases where a long-term career perspective is offered, University of Graz favours the tenure-track model. The competitive selection procedures, which will be carried out in accordance with international standards pursuant to § 99 (5) UG, attract highly qualified international young scientists to University of Graz. On the other hand, they can also be used to retain high-calibre young scientists,

such as the winners of important national and international research prizes. The appointment procedures as defined in § 99 (4) UG, which have been successfully established in recent years, will continue to be used in individual cases in order to offer the most successful scientists further prospects that reflect their performance. As a rule, the main professorships in a subject area will continue to be filled according to the appointment procedures described in § 98 UG and, in individual cases, also according to the appointment procedures described in § 99a UG. Professorships as described in § 99 (1) UG serve primarily to bridge unfilled professorship positions for a short period of time, to initiate new academic fields and to attract practitioners.

The academic career model used at University of Graz is based on a modern scientific enterprise. Qualification paths are being developed for general university staff; qualified staff from different departments will also be offered attractive framework conditions and career prospects.

### —5.2.2 Recruiting Offensive

When recruiting the most highly qualified staff for University of Graz, it is important to follow a search and selection process that corresponds to the (frequently diverse) aspects of the position to be filled. Therefore, in the future, the existing legal possibilities will be used at different educational and career levels and expanded to include creative aspects. The targeted recruiting process begins not only by examining the Fields of Excellence but by examining how well the quality and quantity of the expected services fits in terms of their content. The expertise that is already available in the individual areas of the university is used to plan further steps but also specifically to approach to excellent applicants. In this way, customized recruiting can be carried out by considering what is currently known about the specific staff composition in a (subject) area. These measures are supported by the use of modern, up-to-date application tools.



### —5.2.3 Compatibility

University of Graz supports its members to achieve an optimal work-life balance (i.e. reconcile their study/work needs with their family care responsibilities) and offers an established, diverse and regionally networked range of services. These are available both in person and digitally in German and English. Due to developments regarding home office and distance learning requirements, the challenges facing staff in their attempts to achieve a work-life balance have changed. Young scientists receive support when starting a family. International mobility requires families to be accompanied as they settle in Graz for either short- or long-term periods.

New concepts are being developed for family services that go far beyond meeting the simple need for childcare, although this aspect will not be neglected as an important component of such a service and it may be further expanded and strengthened in the future. In addition, the issue of older (and ageing) generations is becoming more prominent, whether these staff represent a group that needs continuing education or a group that will require increased care and attention from relatives.

#### —5.2.4 Advancement of women

To fulfil its role as a social role model, University of Graz is committed to supporting equality in all institutions, decisions and processes and understands diversity as a multi-dimensional issue. Thus, it continues to strive for a gender-equal distribution of leadership positions (professorships and management in academic units).

As an organization that combats bias in all forms, University of Graz uses diversity-related strategies to undermine discriminatory mechanisms and weaken dynamics. In this context, closing the gender pay gap is a key project.



In order to fulfil the function as a role model in society, the University will continue to support measures to continuously increase the proportion of women in leadership positions and among professorships, for example, by refining and expanding career programmes and bias-sensitization training for appointment committees. To further equalise the proportion of women and men, the existing measures will be

supplemented by additional interventions, such as the creation of specific positions for highly qualified women. A compensation model will also be put in place as an incentive for increased participation in committees and as compensation for the higher burden of committee work placed on female scientists in subject areas where women are underrepresented.

#### —5.2.5 Framework conditions for contemporary work

Two models of mobile working have been introduced for university staff: fixed mobile working (periods agreed upon in advance) and flexible mobile working. The support measures necessary for mobile working will be being adapted according to the specific need. In this context, a comprehensive concept for digital, distance-based continuing education is being applied under the title “Internal continuing education online”.

In its role as an employer, it has become indispensable for the University to take into account the family situation of (international) applicants when recruiting. For this reason, University of Graz has created a Dual Career Service, which relies upon its regional and national networks to provide the applicants with support during the process of relocating their work and life to Styria.

University of Graz is working to install a workplace health promotion system, placing a focus on analysing the existing models and creating new models in the field of work organization and working conditions.

#### —5.2.6 Quantitative staff planning

The appointment of university professors as described in section 98 (1) UG and the number of university professors as described in sections 98 and 99 UG, insofar as they are appointed for at least three years, is shown in Annex 1.

The following professorships are planned for the years 2022 to 2024, subject to budgetary constraints, in accordance with § 99 UG:

- according to § 99a UG: 1 to 3 positions
- according to § 99 (1) UG for temporary professors: 5 to 10 positions
- according to § 99 (4) UG for university lecturers (§ 94 para. 2 no. 2 UG): 2 to 4 positions
- according to § 99 (4) UG for associate professors: 3 to 5 positions
- according to § 99 (5) UG: 8 to 20 positions

The following professorships are planned for the years 2025 to 2027, subject to budgetary constraints, in accordance with § 99 UG:

- according to § 99a UG: 1 to 3 positions
- according to § 99 (1) UG for temporary professors: 15 to 25 positions, 4 of them full-time
- according to § 99 (4) UG for university lecturers (§ 94 para. 2 line 2 UG): 2 to 3 positions
- according to § 99 (4) UG for associate professors: 3 to 5 positions
- according to § 99 (5) UG: 5 to 20 positions

In addition to the university professorships as described in § 98 (see Annex 6.1<sup>5</sup>) and the professorships listed above and described in § 99 UG, additional professorship positions will be established to support profile building and to improve the supervisory situation. The specific number and descriptions of these appointments is still to be determined and will depend upon the performance agreement.

<sup>5</sup> <https://mitteilungsblatt.uni-graz.at/de/2020-21/12.a/pdf/>

## 5.3 Campus development and infrastructure

### 5.3.1 Urban land-use plan and construction projects

University of Graz has a well-developed campus in a central location in the city of Graz. The joint land-use development concept of the Graz universities (Bauleitplan Planungsregion Süd) is part of the Austrian University Plan. The way in which this urban land-use plan is continually updated, financed and implemented provides the most important framework for campus development.

Decisions on building and space issues are made based on specific criteria set to support profile building in research and to improve the supervisory situation in teaching. Therefore, the needs and necessities that arise from research and teaching are prioritized, as infrastructural support for these is essential. Further criteria will be developed as result of merging certain, disparate locations into a “campus of short distances”, based on developments in student enrolment and thematic aspects of research. The planned expansion of STEM subjects will be taken into account accordingly.



The campus will be further expanded to reflect the joint land-use plan projects; the number of rented spaces at various locations will be reduced insofar as possible; and further spatial consolidation will occur. From 2023 and onwards, after the Medical University of Graz moves off campus, another important building block will be set on site: The vacated area at Harrachgasse 21 (Vorklinik) will be developed and become the site of the new Graz Center of Physics (combining the physics institutes previously located at Graz University of Technology and University of Graz), an auditorium centre and extension areas for subjects that require laboratory space. By developing an innovative concept, the potential of the vacated area will be exploited efficiently to prepare for the growing need for space due to the increased number of students, third-party funded research and number of professorships.

Once the vacated areas located at Universitätsplatz 4 and 5 can be used, the subjects of the Faculty of Environmental, Regional and Educational Sciences, which have a large number of students, will have the opportunity to be accommodated directly on campus. As a common point of contact and interface for teacher training, the Teacher Training NEW services will also be centrally located on campus.

The Wall building located at Merangasse 70 offers the potential to bring together the humanities institutes and their libraries to create a new and modern “House of Languages and Cultures”.

### 5.3.2 Personal projects

In order to further develop the campus as location that is prepared for the future, other projects are being developed in addition to the urban land-use plan regarding personal projects in accordance with the Uni-ImmoVO. For example, on the Rosenhain sports grounds, the sports hall will be extended by adding modern laboratories and training areas. This will result in cooperative synergies through the use of the infrastructure of the University Sports Institute (USI) and the Institute of Sports Sciences. The nearby former Jesuit summer refectory will be updated and renovated and will offer space for office workspaces and a functional merger.



The existing buildings in the Leechgasse, together with a possible new building, will create a new accommodation option for university institutes that is well-integrated into the campus.

### 5.3.3 Renovation, modernization and environmental protection



In addition to carrying out the projects outlined in the urban land-use plan, it will be necessary to renovate and modernise the existing (historic) buildings on campus and to provide adequate room resources. This presents an ongoing challenge alongside the new construction projects. The developments and initiatives undertaken to digitalise the university will be taken into account during the campus development. Furthermore, energy efficiency will be improved, an energy management system will be installed and the use of alternative energy sources – especially photovoltaics – will be expanded in cooperation with BIG GmbH. Further possibilities to use the green spaces on campus for student learning are being explored.

In particular, sustainability aspects will be incorporated into all planning and implementation phases of the building projects. University of Graz is also part of the Sustainable Buildings Working Group in the Alliance of Sustainable Universities. The principles developed there (e.g. position paper on the construction of sustainable university buildings<sup>6</sup>) will be taken into account in University of Graz’s projects.

Likewise, University of Graz, with its interest in further developing local and regional cooperations and synergies, will be confronted with new and altered requirements regarding the spatial conditions, which will be continually adapted while considering the future needs.

<sup>6</sup> [http://nachhaltigeuniversitaeten.at/wp-content/uploads/2020/03/2020-01-23\\_Positionspapier\\_Nachhaltiges\\_Bauen.pdf](http://nachhaltigeuniversitaeten.at/wp-content/uploads/2020/03/2020-01-23_Positionspapier_Nachhaltiges_Bauen.pdf)

### 5.3.4 Research infrastructure



First-class research infrastructure serves as the foundation of excellent research, but also is a prerequisite for participating in research cooperations and acquiring third-party funding. The established path of clearly structured, needs-based and sequenced planning will be continued in order to accordingly equip Fields of Excellence, research networks and individual research, according to their different requirements, in terms of core facilities/central labs, research equipment, databases, digital infrastructure and literature. While support for successful investment programmes (e.g. NAWI Graz research, NIRF, profile building) must continue to be offered, the improvements made in the research infrastructure in recent years must be maintained by establishing a reinvestment programme.

In the field of climate research, the research infrastructures will be expanded in the next few years. In particular, these are the WegenerNet Open Data and Science Laboratory Region Southeastern Austria (WEGN2OPEN) and the Alpine Hydroclimatology, Hydrogeology, and Ecosystems Research Infrastructure (WEGN4ALPINE), as well as the participation in long-term ecosystem research (LTER). University of Graz is closely involved in LTER and its LTSER platform (Eisenwurzen) with investments in the WegenerNet facilities in the Enns and Raab valleys. Together with the cooperation partners, efforts are being made to gain recognition as eLTER-integrated sites.



When investing in digital infrastructures, special attention will be paid to an open, modular and interdisciplinary use. As is already the case with HPC, this will also be carried out when establishing server architectures or considering how research data should be stored (i.e. open science cloud, OSC).

Regarding high performance computing, University of Graz will continue its participation in the Vienna Scientific Cluster (VSC) and in the European partnership PRACE. Regarding high performance storage, the participation in the Earth Observation Data Centre (EODC) (national) will be continued and participation will be initiated in the Austrian membership in the European Grid Infrastructure EGI/European Open Science Cloud.

The GEOCLIM Data Infrastructure Austria cooperation project, led by University of Graz, will be continued. This will include the further expansion and integration of the EODC and the data services of the Climate Change Centre Austria Service Centre (CCCA) as well as the high-performance connections to the HPC services of the VSC and the Central Institute for Meteorology and Geodynamics (ZAMG) and the successor institution GEO-MET Austria. These actions will further consolidate and expand these essential interuniversity resources for computing and storage capacity, enabling monitoring, analyses and modelling as well as providing associated data services for internationally competitive earth observation and climate research and land-use and ecosystem research in Austria.



University of Graz is striving to increase its participation in the international research infrastructure, for example, in the European Solar Telescope (EST) and PRACE. This is intended to further support the existing research priorities.

University of Graz will maintain and expand its active role in the subject-specific European research infrastructure consortia, the European Research Infrastructure for Language Resources and Technology (CLARIN-ERIC) and Digital Research Infrastructure for Arts and Humanities (DARIAH-EU). University of Graz is also participating in the establishment of a Holocaust Research Infrastructure in Austria (EHRI-AT), which will then join the European Holocaust Research Infrastructure (EHRI) consortium.

The redesigned University Library serves as an effective information service provider and service point and provides comprehensive access to both the scientific literature and scientific databases. It increases the visibility of research achievements by offering comprehensive advisory and support services in the field of academic publishing.