as at 2020

Development Plan 2030

vetmeduni vienna

University of Veterinary Medicine, Vienna

Publishing Information:

Development Plan 2030
pursuant to § 22 (1) Z 2 UG

Publisher:
University of Veterinary Medicine, Vienna
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Doris Sallaberger, photonews.at/Georges Schneider,
Sibylle Kneissl, Doris Kucera
fotolia.com, istockphoto.com, digitalstock.de

Printed by:
Druckerei Janetschek GmbH
Brunfeldstraße 2, 3860 Heidenreichstein

Facts, data, figures (unless stated otherwise):
August 2020

PEFC
PEFC/06-39-03

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Austrian Eco-Label criteria UZ 24
„low pollutant printed products“
Druckerei Janetschek GmbH · UW-Nr. 637

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Foreword

More than ever before, universities as centres of research, development, teaching and further education are faced with major challenges given the fact that they play a key strategic role in a knowledge-based society. In terms of social lead institutions, universities impinge on their location, their country and the international level. They are 'producers of knowledge and innovation' as well as essential partners in attaining both national and global goals.

Against the backdrop of social, technological and economic processes of transformation, universities are caught in the midst of tensions between change and continuity.

The University of Veterinary Medicine, Vienna, is a modern medical institution and at the same time rich in tradition. It is devoted to quality-based research and research-led teaching, whilst playing a key role in care-related areas. It is an attractive employer, an important business factor and a driving force for politics and society.

Vetmeduni Vienna will steadfastly continue to fulfil its mission as Austria's only academic education and research establishment of veterinary medicine cognizant of the fact that its medical university expertise plays a key role in addressing current issues: How do animal and human health interact? What strategies can be found to fight the spread of diseases? How do we address the shifts caused by climate change? How do we ensure food safety? What are the ways and means at our disposal to improve animal health? How can we ensure animal-specific husbandry based on animals' needs? What is our contribution to the ecological footprint? What are the challenges we face in view of rapid technological upheavals? How do we shape digital transformation at the university as well as in teaching, research and scientific services? These and many other questions about the future are addressed by Vetmeduni Vienna.

Holding dear its values of being a 'committed, sovereign and responsible' institution, Vetmeduni Vienna acts as the only Austrian university at the interface of animal, human and environmental health. It provides a specific and unique constellation of subjects and expertise ranging from basic research, clinical and applied research to comparative research.

In order to live up to its special role in the forthcoming years, major investments will be required focusing on the further development of Vetmeduni Vienna while ensuring excellence as well as maintaining and upgrading its infrastructure including any follow-up costs this might entail.

The present Development Plan is the result of a university-wide discussion process based on a common understanding of future developments. Together with the University Council, the Senate, the departments, interuniversity entities, the Equal Opportunities Working Party, Works Council, students' representatives and staff positions of central administration, a strategy document has been developed which formulates the future path and all key projects of the University of Veterinary Medicine, Vienna, till 2030 based on the common will of those involved.

With the present and jointly devised strategy and its underlying commitment to transparency, excellence and innovation in research, teaching and clinical matters as well as the dedication of all its employees, Vetmeduni Vienna is ready to initiate forward-looking structural changes and meet future challenges.

As Rector, I look forward to participate in the accompanying and the shaping of our unique university on this important section of its path.

Petra Winter, Rector

1. Baseline Situation

Sites of Vetmeduni Vienna

1. **Campus** Floridsdorf, Vienna
2. **Research Institute of Wildlife Ecology / Konrad Lorenz Institute of Ethology**
   Ottakring, Vienna
3. **VetFarm**
   Kremesberg estate, Pottenstein, Lower Austria; Rehgras estate, Furth/Triesting, Lower Austria; Haidlhof estate, Bad Vöslau, Lower Austria; Medau estate, Berndorf, Lower Austria.
4. **Wolf Science Center (WSC)**
   Ernstbrunn, Lower Austria
5. **Satellite of the Austrian Ornithological Centre (AOC)**
   Seebarn/Grafenwörth, Lower Austria
6. **Reproduction Center Wieselburg**
   Wieselburg, Lower Austria
7. **Interuniversity Department for Agrobiotechnology – IFA Tulln**
   in cooperation with the University of Natural Resources and Life Sciences (BOKU), Vienna
8. **Satellite entity: Ruminants in the Alpine Region**
   Innsbruck, Tyrol

Other Establishments of the University

- **Messerli Research Institute** (interuniversity entity; together with the Medical University of Vienna and the University of Vienna)
- **Graf Lehndorff Institute for Equine Science** (together with the Brandenburg Stud Farm Foundation Neustadt/Dosse, Germany)
- **Interuniversity Department for Agrobiotechnology – IFA Tulln** (together with the University of Natural Resources and Life Sciences/Vienna and the Vienna University of Technology)

Organisational Chart of the University of Veterinary Medicine, Vienna

Governing Bodies of the University

- Senate
- Rectorate
- University Council

Research and Teaching

Department 1

Department of Biomedical Sciences

- Institute of Laboratory Animal Science
- Institute of Medical Biochemistry
- Institute of Pharmacology and Toxicology
  - Clinical Pharmacology
- Institute of Physiology, Pathophysiology and Biophysics
  - Nutritional Physiology
  - Physiology, Pathophysiology and Experimental Endocrinology
  - Physiology and Biophysics
- Institute of Population Genetics
- Institute of Animal Breeding and Genetics
  - Molecular Genetics
  - Reproductive Biology
  - Functional Cancer Genomics
- Bioinformatics and Biostatistics Platform
- Biomodels Austria Platform

Department 2

Department of Pathobiology

- Institute of Topographic Anatomy
- Institute of Microbiology
  - Functional Microbiology
- Institute of Immunology
- Institute of Parasitology
- Institute of Pathology
  - Pathology of Laboratory Animals
- Institute of Virology
- Clinical Pathology Platform

Department 3

Department/University Clinic for Farm Animals and Veterinary Public Health

- Institute of Food Safety, Food Technology and Veterinary Public Health
  - Food Microbiology
  - Food Hygiene and Technology
  - Veterinary Public Health and Epidemiology
- Institute of Animal Nutrition and Functional Plant Compounds
- Institute of Animal Welfare Science
- University Clinic* for Poultry and Fish Medicine
  - Fish Medicine
  - Poultry Medicine
- University Clinic* for Swine
- University Clinic* for Ruminants
  - Herd Health Management for Ruminants
  - Ruminant Medicine

Department 4

Department/University Clinic for Companion Animals and Horses

- University Clinic* for Small Animals
  - Anaesthesiology and perioperative Intensive-Care Medicine
  - Diagnostic Imaging
  - Obstetrics, Gynaecology and Andrology
  - Internal Medicine Small Animals
  - Small Animal Surgery
- Equine University Clinic*
  - Equine Internal Medicine
  - Equine Surgery
- Insemination and Embryotransfer Platform
- Radiooncology and Nuclear Medicine Platform

Department 5

Department of Interdisciplinary Life Sciences

- Research Institute of Wildlife Ecology
  - Conservation Medicine
- Konrad Lorenz Institute of Ethology
  - Ornithology
- Messerli Research Institute

Holdings

VetWIDI Forschungsholding GmbH

Interuniversity Institutions

Department for Agrobiotechnology (IFA Tulln)

Interinstitutional Establishments

Graf Lehndorff Institute for Equine Science

Service and Administratives

Rector

Prevention Specialists:

- University Doctor
- Security Officer

Service and Administratives:

- Pharmacy
- Corporate Communications
- Legal Services
- Office of the Rectorate
- Ethics and Animal Welfare Committee

Staff Positions:

- Reporting and Development Planning
- Internal Revision
- Quality Management/Quality Development and Evaluation

Vice-Rector for Study Affairs

Service and Administratives:

- E-Learning & New Media
- Student Services
- Assessment and Quality Assurance

Vice-Rector for Research and International Relations

Service and Administratives:

- Research Support and Innovation
- International Relations
- Postgraduate Studies

Central Special Facility:

- VetCore

Vice-Rector for Resources

- Human Resources and Infrastructure Management
  - Campus Management
  - Information- and Knowledge Management
  - IT-Services
  - Human Resources
  - Staff Development
  - University Library
  - Staff Position: Data Protection Officer
- Finance and Business Operations
  - Controlling
  - Financial Services
  - Staff Position: Strategic Process Controlling

Staff Positions:

- Strategic Resource and Risk Management

Central Special Facility:

- VetFarm

* In accordance with § 36 and § 20(5) of the 2002 Universities Act, the University Clinics do not represent organizational units

October 1st, 2019

Staffing Structure

As at 31 Dec 2019, Vetmeduni Vienna had 832 academic staff members, 41 of whom were professors, plus 711 administrative and support staff including laboratory and technical assistants as well as animal carers. Almost 27 per cent of the academic staff (headcount) are financed by third parties via R&D projects.

Just as in other academic disciplines, women are still underrepresented in professorships although the female share (headcount) among faculty members has almost tripled in recent years (from ten per cent in 2006 to 29 per cent in 2019). In view of the low natural turnover among professors and the necessarily restrictive policy in the past of appointing new professors, this is a remarkable development. The willingness of Vetmeduni Vienna to promote a balanced gender distribution, in particular among senior executive staff, is reflected in the female ratio of executives, which is 47 per cent as at 31 Dec 2019.

Student Structure

In the winter semester 2019, a total of 2,467 degree and non-degree students studied at Vetmeduni Vienna, with 1,936 being female. The gender ratio of roughly 80 per cent women is particularly striking in comparison with other Austrian universities – a phenomenon that can be observed at universities of veterinary medicine around the globe.

The majority of students at Vetmeduni Vienna is under 30 years of age (83 per cent), female (79 per cent) and shows up for exams (80 per cent). Second-generation migrants are comparatively rare among students. The study programmes of Vetmeduni Vienna are full-time programmes involving an extensive workload. Compared with other medical universities in Austria, students of Vetmeduni Vienna are subject to greater time pressure owing to additional mini-jobs and display greater mobility by entering internships abroad (14 versus ten per cent). The 2019 Social Survey of Students showed that prospective veterinarians report fewer stress factors and psychological disorders that would have a negative impact on their studies than was the case in 2015.

Courses of Study

- Diploma and doctoral programme in veterinary medicine
- Bachelor's programme in biomedicine and biotechnology
- Bachelor's programme in equine sciences
  (in cooperation with the University of Natural Resources and Life Sciences – BOKU, Vienna)
- Interdisciplinary master's programme in human-animal interactions
- Master's programme in evolutionary systems biology
  (in cooperation with the University of Vienna)

- Master's programme in comparative biomedicine – infection biomedicine and tumour signalling pathways
- Master's programme in wildlife ecology and wildlife management (in cooperation with the University of Natural Resources and Life Sciences – BOKU, Vienna)
- PhD programme

Postgraduate Continuing Education Programmes

Vetmeduni Vienna offers continuing clinical education programmes to graduated veterinarians in the form of internships in the fields of small animal medicine and equine medicine. Residencies in accordance with the European Colleges of the European Board of Veterinary Specialisation (EBVS) provide internationally recognised veterinary specialisation training (Diplomates). As a rule, successful completion of such a residency training, in addition to the usual criteria of excellent scientific work, will be required for an academic career in professorships.

The following Residency-Programmes are offered by Vetmeduni Vienna:

Residency Programmes

Vetmeduni Vienna offers courses in 15 areas of specialisation

ANAESTHESIA AND ANALGESIA **ECVAA** (European College of Veterinary Anaesthesia and Analgesia)	OPHTHALMOLOGY **ECVO** (European College of Veterinary Ophthalmology)	DIAGNOSTIC IMAGING **ECVDI** (European College of Veterinary Diagnostic Imaging, Small Animal Track)
SURGERY, LARGE ANIMALS **ECVS** (European College of Veterinary Surgery, Large Animal Surgery)	SURGERY, SMALL ANIMALS **ECVS** (European College of Veterinary Surgery, Small Animal Surgery)	POULTRY MEDICINE **ECPVS** (European College of Poultry Veterinary Science)
INTERNAL MEDICINE, COMPANION ANIMALS **ECVIM-CA** (European College of Veterinary Internal Medicine, Companion Animals)	INTERNAL MEDICINE, COMPANION ANIMALS, ONCOLOGY **ECVIM-CA, Oncology** (European College of Veterinary Internal Medicine, Companion Animals – Oncology)	INTERNAL MEDICINE, HORSES **ECEIM** (European College of Equine Internal Medicine)
CLINICAL PATHOLOGY **ECVCP** (European College of Clinical Pathology)	REPRODUCTIVE MEDICINE **ECAR** (European College of Animal Reproduction)	BOVINE HEALTH MANAGEMENT **ECBHM** (European College of Bovine Health Management)
PORCINE HEALTH MANAGEMENT **ECPHM** (European College of Porcine Health Management)	VETERINARY PARASITOLOGY **EVPC** (European Veterinary Parasitology College)	VETERINARY PATHOLOGY **ECVP** (European College of Veterinary Pathologists)

Since 2018 the Universitätslehrgang Tierärztliches Physikat supplements the continuing education programme for postgraduate veterinarians. This course prepares participants for, and ends with, the exam for becoming official veterinarians (Tierärztliche Physikatsprüfung). Successful completion of this course is required for being assigned and appointed to official veterinarian activities. The course is intended to foster the sustainable training of veterinarians qualified to carry out work in public veterinary administration.

In addition, Vetmeduni Vienna offers veterinarians and interested parties with other training backgrounds a number of courses and in-service further training programmes. The university is also a recognised 'advanced training facility' for training and continuing training in the field of laboratory animal science in compliance with the requirements of the Society of Laboratory Animal Science (GV-SOLAS).

Animal Hospital

The animal hospital with its five species-specific university clinics (for poultry and fish; small animals; horses; swine; and ruminants) boasts research-led training to future veterinarians. The clinics are practice-based and multidisciplinary training establishments where students are integrated into daily operation from the beginning of their studies in accordance with their level of proficiency to enable them to develop the practical skills necessary for the veterinary profession. Moreover, the university clinics of Vetmeduni Vienna ensure modern and scientifically based health care to animal patients.

As of 2019 the University Clinic for Ruminants runs a satellite entity in Tyrol established in cooperation with the Austrian Agency for Health and Food Safety (AGES). Its purpose is to become a competence centre for ruminants in the Alpine Region with a focus on both teaching and research. This approach is intended to impart hands-on training to students, thus preparing them for the specific requirements of the Alpine environment and strengthening Tyrol as a centre for education and research.

Research Infrastructure

Biobanking and Biomolecular Resources Research Infrastructure (BBMRI.at #2)

Biobanks have become accepted as possible key resources for top-level research, which has led to the establishment of the pan-European research infrastructure BBMRI-ERIC. Austria participates through its national network BBMRI.at, which represents all biobanks held by medical universities in the country. Vetmeduni Vienna has joined the system with its VetBioBank. Vetmeduni Vienna's task within the Austrian biobanking project BBMRI.at #2 is to inform different user communities about the value added by professionally collected biological samples of Austrian biobanks in order to promote the use of these valuable resources in research settings.

Correlated Multimodal Imaging Node Austria (CMI)

Vetmeduni Vienna is a founding member of Correlated Multimodal Imaging Node Austria (CMI) and has financed the activities of the node since its beginning together with Meduni Vienna, Vienna Biocenter Core Facilities, TU Vienna, LBI Trauma, AIT, FH Upper Austria and VRVis Center for Virtual Reality and Visualisation. BioImaging Austria/CMI is a joint initiative of leading Austrian imaging experts, offering a platform for correlated multimodal imaging. CMI offers scientists a great number of state-of-the-art imaging technologies in the fields of biological materials, biomedical model organisms and human medicine as well as data and image analysis. A major objective of this initiative has been to become a founding member of the European Research Infrastructure Consortium for Imaging Technologies in Biological and Biomedical Sciences (ERIC Euro-BioImaging). Euro-BioImaging was officially launched in 2019 with Austria as one of its founding members.

European Mouse Mutant Archive (EMMA) Network

The Institute of Laboratory Animal Science/Biomodels Austria is the Austrian node of the European Mouse Mutant Archive (EMMA) Network. EMMA is a non-profit repository for collecting, archiving and distributing mice strains that are of relevance to biomedical research. Membership of Vetmeduni Vienna in the EMMA Network is supported by the Federal Ministry of Education, Science and Research (BMBWF).

Keeping Laboratory Animals

Breeding Laboratory Animals

In cooperation with the Medical University of Vienna (Meduni Vienna), the University of Veterinary Medicine, Vienna, operates an entity for breeding and keeping laboratory animals in Himberg/Lower Austria. Currently, the joint equipment of the Himberg institute is being renovated under the supervision of Meduni Vienna. In order to ensure that the required laboratory animal capacities are available during renovation, Vetmeduni Vienna has rented rooms in the Vienna Biocenter (VBC), where it established the Vienna Mouse Breeding Facility (VMF) in 2016.

Keeping Laboratory Animals on the Campus

Within the campus area, laboratory animals are kept by the institutes and clinics in their individual premises. In addition to mice and rats, Vetmeduni Vienna keeps rabbits, fish and poultry as well as, to a lesser extent, pigs, cattle, sheep, dogs and horses for the purpose of clinical training and animal experiments. The areas where animals are kept are constantly being adjusted and optimised in compliance with legal requirements.

VetCore

This key technology centre VetCore of the University of Veterinary Medicine, Vienna, was created in 2007 in order to ensure that its large-size equipment and existing expertise are used as efficiently as possible, and that its resources are made available to all departments and institutes. In addition, VetCore promotes networking and knowledge transfer between basic research, applied clinical research, diagnostics and therapy. It offers infrastructure and expertise in the fields of genomics, proteomics, imaging and biobanking.

Alongside its on-campus research facilities, Vetmeduni Vienna maintains research facilities in other locations as listed below.

Core Facility Bioactive Microbial Metabolites (BiMM)

This core facility BiMM located at the University and Research Centre Tulln (UFT) provides infrastructure for screening programmes. In cooperation with the University of Natural Resources and Life Sciences (BOKU), research focuses on new bioactive microbial substances.

Research Department for Agrobiotechnology (IFA)

This interuniversitäre Department / interuniversity department in Tulln is a joint institution operated by the University of Natural Resources and Life Sciences, Vienna (BOKU), the University of Veterinary Medicine, Vienna, and the Vienna University of Technology (TU Vienna), offering an excellent environment for interdisciplinary research in the area of agrobiotechnology. Vetmeduni Vienna participates in IFA through its Institute of Animal Breeding and Genetics which chairs the IFA Working Group for Molecular Reproduction. Together with the Reproduction Center Wieselburg (RCW), it lends its focus on the analysis of key aspects of reproduction and inheritance. Other priorities include the optimisation of proteomic technologies as well as of methods to detect minimal DNA quantities and their application to biomedical research.

Research Institute of Wildlife Ecology (FIWI)

FIWI on Wilhelminenberg/Vienna, together with the interuniversity Messerli Research Institute and the Konrad Lorenz Institute of Ethology, which has been absorbed by the Austrian Academy of Sciences (ÖAW), forms the Department of Interdisciplinary Life Sciences. The core task of the Research Institute of Wildlife Ecology is to explore the needs and behaviour of wild animals within ecological contexts for the purpose of establishing scientific fundamentals for the efficient conservation of nature, species and the environment as well as for a sustainable use of multifunctional landscapes.

Graf Lehndorff Institute for Equine Science (GLI)

GLI is an interinstitutional research entity of Vetmeduni Vienna jointly operated with the Brandenburg Stud Farm Foundation Neustadt/Dosse, Germany. Its research efforts focus on the breeding, reproduction, keeping, training, welfare and health of horses. In addition, students of the diploma degree programme in veterinary medicine are involved in GLI's routine and research activities within the immersion module of reproductive medicine.

Austrian Ornithological Centre

The Österreichische Vogelwarte/Austrian Ornithological Centre (AOC) was founded in 2015 and is headquartered at the Konrad Lorenz Institute of Ethology of Vetmeduni Vienna with a satellite entity in Seebarn/Lower Austria. It aims to advance avian research in Austria as well as to pool and promote further training in the field of ornithology.

Alongside further education for the interested public, the tasks of the Austrian Ornithological Centre include fundamental research into the lifestyle of wild birds, research into the root causes of hazards to bird life in our country, monitoring of breeding and migratory bird populations as well as the establishment and management of a national bird ringing centre.

Reproduction Center Wieselburg (RCW)

The RCW, founded in cooperation with *Bundesversuchswirtschaften Wieselburg* (an experimental farm located in Wieselburg/Lower Austria), provides animal husbandry as well as examination rooms and laboratories enabling research into embryo transfer and studies in the earliest phases of bovine gestation.

VetFarm

Roughly 50 kilometres south of Vienna, there is Vetmeduni Vienna's VetFarm. Three estates – Kremesberg, Medau and Rehgras – are top-notch places for keeping animals and conducting research, thus offering a crucial supplement to veterinary teaching and research in the field of livestock.

The fourth estate of VetFarm, the Haidlhof research centre, was launched in 2010 as a project of cooperation between the University of Vienna and the Messerli Research Institute boasting a modern infrastructure in the field of cognition and communication with animals.

Wolf Science Center (WSC)

The Wolf Science Center (WSC) in Ernstbrunn/Lower Austria is dedicated to exploring the cognitive abilities of wolves and dogs. The center is accommodated in the publicly accessible Wildlife Park Ernstbrunn.

In addition to the above research infrastructure, Vetmeduni Vienna has been a member of the Complexity Science Hub Vienna (CSH) since 2019. The objective of the hub is to establish the science of complex systems in Austria, nurture a tradition of complexity science and big data in Vienna and make this available to its members. Through its membership, Vetmeduni Vienna has access not only to the hub's computing infrastructure but also to its scientific expertise.

2. Overall Strategic Goals and Position on Higher Education Policy Priorities

Global Development

Health, connectivity, urbanisation, an ageing society ('silver society'), the breaking of gender stereotypes ('gender shift'), neo-ecology, individualisation, globalisation, a changing (and increasingly digitalised) world of work ('new work'), the democratisation of knowledge ('knowledge culture'), mobility and security: these are the main themes that will shape the world over the next years. Universities – in terms of producers of knowledge and innovation – are being challenged as rarely before. This coincides with post-fact thinking taking root in society – a kind of thinking where facts are no longer the decisive criterion; people turn away from enlightened facts based on natural science.

Vetmeduni Vienna sees it as its social obligation to take on the role of a public ambassador of science and to be a leading institution to ensure trust in veterinary innovation and meet the challenges of our time. In this context, the great national significance of Vetmeduni Vienna becomes obvious owing, inter alia, to its social and health policy relevance and its unique position at the interface of human health, animal health and environmental health.

In times of rapid population growth, increasing globalised mobility of humans, animals, animal products, raw materials as well as food and feed, climate change, altered animal breeding and husbandry, incidences of new diseases and zoonoses – infectious diseases that can be transmitted from animals to people and vice versa –, veterinary medicine is becoming ever more important. Unless these issues are scientifically addressed within a veterinary context, the challenges involved cannot be tackled.

Especially now, within the ongoing agricultural and social policy debate on the practice of keeping livestock on farms, Vetmeduni Vienna's expertise is in demand. As a knowledge institution, the university is actively engaged in this discourse and ensures a critical and science-based approach to the diverging views within society, thus significantly contributing to the advancement of animal health.

Vetmeduni Vienna addresses topics of comparative and translational medicine, animal health, animal welfare and human-animal interactions from a scientific vantage point. On the one hand, it helps to better understand processes of disease and adaptation, keep animals healthy and establish preventive measures. On the other hand, it makes an indispensable contribution towards sustainability, towards One Health – One Welfare as well as towards food safety and thus human health, towards biodiversity and securing healthy ecosystems.

In so doing, Vetmeduni Vienna's strength lies in its basic sciences and its research-led clinical and applied medicine for assistance animals, livestock, pets, small and wild animals. Due to its specific and unique constellation of subjects and expertise, it is able to build an interdisciplinary, transdisciplinary and complementary network both with science and business at Vetmeduni Vienna's location and the Vienna-based research hub as well as internationally.

In order to maintain or improve its international position among the best veterinary universities[1] (see Shanghai-Ranking – Subject Rankings; QS Rankings), Vetmeduni Vienna needs to enhance efforts of measuring itself against internationally acknowledged and accepted standards and aims to achieve quantifiable improvements in this respect. These standards include:

- Financial strength and infrastructure
- International benchmarking
- National and international programmes of excellence
- Attractiveness of the curriculum
- Internationality of students and staff
- International networking of the next generation
- General attractiveness as a university location

Position on National Goals

Vetmeduni Vienna pursues the goals outlined in this Development Plan in agreement with the overarching goals of the entire Austrian University Development Plan, the National Strategy on the Social Dimension, the Agenda 2030 for Sustainable Development and with due regard to the Social Survey of Students, the Master Plan for Rural Areas[2] as well as the IHS study on veterinary medical care in Austria (Veterinärmedizinische Versorgung in Österreich[3]), and the recommendations of the Austrian Court of Audit.

1 https://www.vetmeduni.ac.at/de/infoservice/presseinformationen/presseinformationen-2020/internationale-top-zeugnisse-fuer-vetmeduni-vienna/
2 https://www.bmlfuw.gv.at/service/publikationen/land/masterplan-laendlicher-raum.html
3 https://www.vetmeduni.ac.at/fileadmin/v/z/news/2019/Veterinaermedizinische-Versorgung-IHS.pdf

Overall Strategic Goals of the University

The following overarching principles are guiding Vetmeduni Vienna in advancing its profile:

- Vetmeduni Vienna wants to be among the ten best academic education establishments for veterinary medicine in Europe – offering a place where students are prepared for careers of excellence; where new knowledge is created, shared and further developed; where researchers work jointly and across disciplines and institutional borders to meet current challenges and assume their social responsibility in animal health, public health, scientific research and the public domain.
- Vetmeduni Vienna, like no other university, acts at the interface of animals, humans and the environment. Through innovation and excellence in research, teaching and clinical contexts, as well as through the example it sets for society, Vetmeduni Vienna promotes the health and welfare of animals, humans and ecosystems in a sustainable manner within the meaning of 'One Health – One Welfare'.
- Vetmeduni Vienna is characterised by a combination of professionalism, sovereignty, openness and commitment which is expressed in a culture of responsibility, equal opportunities and integrity, respect and empathy and is a sign of its dedication to quality, innovation and advances in knowledge.
- Vetmeduni Vienna is an internationally competitive employer for highly qualified employees as well as the only research and training establishment for veterinarians in Austria. As such it operates, inter alia, satellite entities to help ensure veterinary care throughout Austria.
- Within its core area of research, Vetmeduni Vienna has taken a prospective approach towards defining priorities of international visibility, social relevance and critical mass; it makes a sustainable contribution towards strengthening Vienna and Austria as a research location.
- Within its core area of teaching, Vetmeduni Vienna boasts forward-looking, attractive curricula of great relevance to practice and research, which focus on students across the social dimension and foster their mobility. In the field of postgraduate training, it offers quality-assured continuing education and professional development in agreement with lifelong learning requirements. Within this setting, the animal hospital is an integral part of practice-based veterinary training and continuing education.
- Vetmeduni Vienna upgrades its infrastructure for teaching and research by making investments, in particular against the backdrop of digitalisation and new technologies, and by carrying out construction work (such as for the new Small Animals Clinic).
- The Austrian public considers Vetmeduni Vienna an indispensable part of society in terms of a university that provides added value.

3. Staff / Human Resources

The University of Veterinary Medicine, Vienna, has slightly more than 1,540 employees (headcount), with 1,016 of them being women (as at 31 Dec 2019). In terms of social responsibility, prospective approaches and international competitiveness, it is crucial for the university to provide an environment of mutual respect and appreciation of its employees where equal opportunities are based on gender diversity and equity.

The reconciliation of training, work and career with an individual's family situation is of special concern to the university. Consequently, it embraces flexible career and working time models as well as training and professional development programmes. These programmes are of special importance in view of the high female share in total staff numbers. Vetmeduni Vienna aims to offer the best-possible conditions for reconciling study and/or work with family life – buzzword: work-life blending – and also tries to make it easier for particularly talented women returners to re-enter working life through targeted support programmes.

As a family-friendly training establishment and family-friendly employer, the university offers on-campus childcare throughout the year including holidays. As early as 2010, Vetmeduni Vienna was the first university in Austria to be awarded the official quality label of 'work & family life' (beruf und familie) for its programmes and initiatives facilitating reconciliation of study/work and family life. As a pilot university, Vetmeduni Vienna participated in the development of the 'university & family life' (hochschuleundfamilie) audit and obtained the related certificate in 2011. Recertification in the university & family life audit was successfully completed in 2015. The professed aim of the university is to continue this path and enter further audits.

As the only veterinary university in Austria, Vetmeduni Vienna has a particular responsibility to provide targeted support to junior vets and researchers, open up and develop in-house career pathways as well as to prepare budding talents for national and international careers. In the course of digitalisation and the ensuing changes in the world of work, not only those working at universities are expected to display a high degree of flexibility, agility and innovative strength. Also the university itself must become more agile and flexible to be able to maintain its top position in university rankings and, consequently, continue to be an interesting employer for international talents.

In its efforts to become a 'flat faculty', Vetmeduni Vienna has set itself the task of redesigning its structural planning in human resources and organisation, have routine processes in human resources and staff development checked for future resilience, redefine processes and establish a target structure for human resources and organisation.

In addition, the university has devised special professional development programmes for its academic staff in order to advance – in particular with regard to leadership – the skills of faculty members employed at the university, while it has also drafted further training options for administrative and support staff. Vetmeduni Vienna promotes active leadership responsibility and awareness of the need to respect this responsibility.

The strategic goals in human resources include:

- **Advance career pathways and foster young talents**
- **Expand structural planning of human resources and organisation**
- **Make leadership and organisation culture 'fit' for the future**

Chapter 11 'Professorships and Career Positions' includes:

- An overview of the subjects allocated to positions of university professors in accordance with §98, §99 (1), §99 (3), §99 (4) of the Austrian Universities Act (UG)
- The number of university professors under §99a of the UG
- The number of university professors under §99 (1) of the UG (minimum 3 years)
- The number of university professors under §99 (3) of the UG
- The number of positions under §99 (4) of the UG
- The number of career positions and university lecturers

3.1. Strategic Goal: Advance Career Pathways and Foster Young Talents

Vetmeduni Vienna sees itself as an attractive employer. As the only university of veterinary medicine in Austria, it has a particular responsibility to provide prospective development and career opportunities. It offers career options both in research and in administration to be able to recruit the best minds for Vetmeduni Vienna. For this purpose, Vetmeduni Vienna expects candidates to show dedication, individual responsibility and commitment to ensure an excellent output of its employees.

As both a responsible and demanding employer, Vetmeduni Vienna has developed a number of programmes to promote and enhance careers within a framework that relates to the individual strengths of an employee and the strategic goals of the university. The first-rate development and career options available at the University of Veterinary Medicine, Vienna, are also relevant reasons for renowned scientists to join our university from abroad. In order to increase the attractiveness of calls to join our staff, positions are to be further developed on an ongoing basis.

Moreover, special emphasis is to be placed on helping junior researchers to gain experience outside of the university early on. Programmes to foster young talents are intended to assist budding researchers and scientists venture away from the confines of our university. Placements abroad are complemented by comprehensive preparation and exchange programmes.

The typical career avenue of a researcher is basically international. Vetmeduni Vienna can be the starting point, stop-over or destination along this trajectory. This is why Vetmeduni Vienna considers itself to be, among others, the entry gate into the world of work for its students who, after having gained their first job experience and a basic level of routine, can move on to pursue a career elsewhere. Through targeted information on available perspectives, Vetmeduni Vienna wants to maintain contact with its 'ambassadors' in an ongoing effort to expand the network of best minds at the national and international level.

3.1.1. Operational Objective: Development of Transparent Career Moves

The international thrust and variety of scientific and general activities at the campus and the associated research facilities offer employees of the University of Veterinary Medicine, Vienna, a wide range of options for development.

In order to remain a resilient and flexible institution, Vetmeduni Vienna seeks a balanced ratio of permanent versus temporary positions within its organisational units.

Field of action 1: Temporary positions (pre- and postdoc positions)

Pre- and postdoc positions are fixed-term positions representing key levers for the further development of the university and for strengthening its profile. Vetmeduni Vienna will prepare clear criteria for these positions so that available budgetary funds are spent in a transparent, needs-based and forward-looking manner in all organisational units of the university.

Field of action 2: Promote external experience

Job experience gathered outside of the university is an important contribution to personal development, as well as being necessary for establishing personal networks within the science community. For this reason the university endeavours to help its employees gain off-campus career experience. For instance exchange programmes, or placements abroad organised by the university itself, are supported by comprehensive preparation and the (time limited) possibility of reinstatement at work.

Special consideration is to be given to any experience abroad when taking staff decisions on careers at the University of Veterinary Medicine, Vienna.

Well-trained researchers who have proven their skills also off-campus while working for cooperation partners, research establishments, office-based veterinarians, businesses or other universities form the foundation of a successful and flexible training organisation. In addition, the networks created by these persons off-campus are valuable building blocks for further developing and positioning the university.

Field of action 3: Advance development options for administrative and support staff

The international competitiveness of a university is not only due to its research performance but also to the quality of its administrative staff whose members support the university and have the required skills to make an essential contribution both to the provision of services but also to institutional development. The work input by each individual helps ensure the smooth functioning of research, teaching, clinical work and service provision. This setting requires an ongoing further development of skills and competences based on know-how, foresight and an understanding of how the system works. Well-qualified and dedicated employees will find a variety of in-house support and training programmes adjusted to their vocational field as well as career opportunities to reach positions with managerial responsibility.

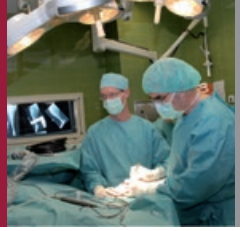
3.1.2. Operational Objective: Forward-Looking Organisational Structure Focusing on Tenure Track

In the light of enhancing excellence, the university strives to fill vacancies with the best brains. Tenure-track positions in terms of qualification positions offer the right kind of university structure to establish agile and – economically – independent working groups operating within the university's strategic focus. Smaller working groups enable a switch to flatter hierarchies, to needs-based research overarching the accustomed organisational structures, and can be well measured against their output.

Tenure-track positions are subject to quality requirements similar to those of professorships. However, they can be taken up at an earlier time during a person's academic career and are designed to help build a working group of one's own early on depending on the customs of the scientific discipline in question.

The university has devised a guideline for filling and evaluating qualification positions in accordance with §99 (5) of the UG, its core aim being to foster talent and open up career opportunities for highly qualified junior researchers with due regard to the available budgetary funds and the requirements of gender equality and the advancement of women. Qualification positions are publicly posted at home and abroad in agreement with these requirements. The minimum standard is to invite applications via Euraxess.

The Richtlinie für die Einrichtung, Ausschreibung, Besetzung und Evaluierung von Qualifizierungsstellen gemäß § 99 Abs. 5 UG / 'Guideline for creating, advertising, filling and evaluating qualification positions in accordance with §99(5) of the UG' defines a number of criteria as minimum requirements for recruitment to a qualification position including, inter alia, research activities in the respective field in line with the applicant's corresponding career phase, know-how in setting up third-party funded projects and experience in teaching. The Qualification Panel, composed of at least five members, screens applications and proposes who should be invited to the public hearing of candidates in agreement with the Rector and in consideration of the proposals made by external experts.



By signing the qualification agreement, the holder of a qualification position becomes an assistant professor charged with fulfilling the qualification agreement within four years as a rule. If the Qualification Panel deems the agreement fulfilled after proper evaluation, the assistant professorship is changed into the permanent position of associate professor. Based on its budgetary possibilities, Vetmeduni Vienna offers holders of tenure-track positions a work environment in compliance with international standards, the holder's career phase and the career development intended by the tenure-track model, while expecting holders to be able to raise third-party funds.

3.1.3. Operational Objective: Promote External Careers – in Demand on the Market

Vetmeduni Vienna enjoys an excellent reputation internationally as a training institution and career launchpad. Its graduates and employees are sought-after experts in their relevant fields, and the university undertakes great efforts to send its talents as ambassadors to other research establishments or institutions within its programme 'fit for off-campus appointments' (*Fit für Wegberufungen*).

By the same token, external experience will be taken into account when making staff decisions and be one of the criteria used to decide on careers at Vetmeduni Vienna. Academics who have proven their skills also off-campus while working for cooperation partners, research establishments, office-based veterinarians, businesses or other universities, and who have created and expanded their own network, form the basis for a successful and flexible training organisation.

Therefore the university makes its best efforts to help its employees gain off-campus career experience. Under the 'fit for off-campus appointments' programme, the university promotes international careers of its employees and offers support when they initiate career moves. Academic staff are actively informed early on – but no later than at the beginning of their postgraduate training (such as doctorate, PhD and Residency programmes) – about possible on-campus career paths in special disciplines and their likelihood of being open plus the steps and conditions necessary to enter them. Moreover, options for external career routes are explored.

The university helps with the drafting of professional application files, job application training, simulation of hearing situations and coaching sessions.

In order to facilitate entry into the external job market to persons working on campus under fixed-term contracts and willing to venture off-campus in their next career moves, the university also offers accompanying mentoring with mentors expected to meet defined success criteria. In addition, the mentors make their networks available to their mentees. The ties to the university thus created and the international network thus accessed are important elements in strengthening the national and international reputation of Vetmeduni Vienna.

3.1.4. Operational Objective: Promote Junior Scholars

Instruments to promote junior scholars at Vetmeduni Vienna include the doctoral programme, the postdoc programme and the Top-VetScience initiative aimed at attracting scientists for clearly defined, fixed-term projects to the university.

Field of action 1: Expand doctorate and postdoc programmes

The doctorate and postdoc programmes of Vetmeduni Vienna are evaluated on an ongoing basis and are to be expanded where possible in order to take up current research topics of veterinary medicine such as sustainable animal husbandry and food production or animal husbandry with a view to climate change and its impact. Expansion of these programmes is subject to additional funding granted by the Ministry.

It is intended to enhance cooperation with other universities for boosting these research programmes. Alongside its career and research initiatives, Vetmeduni Vienna offers a number of special training programmes in, inter alia, languages, project management or courses guiding participants on how to solicit grants or making applications for research sponsorships and funding.

Field of action 2: Develop the Next Generation VetCareers programme

Since helping junior scholars to get a foothold in the scientific community is a major challenge for veterinarians throughout the world, Vetmeduni Vienna will develop – depending on the budget funds available – the Next Generation VetCareers programme. This initiative is primarily directed at veterinarians and offers those who are active in research entry into a career in science. One focus will be on tapping the potential of veterinarians with atypical CVs or career interruptions, such as women returners after maternity leave or veterinarians who want to switch from practical to research work. This initiative is targeted at two groups, namely young graduates who have already showcased their research potential in their diploma theses, and also researchers who have acquired their doctorate in the past ten to 15 years.

Field of Action 3: Increase competitiveness in posting qualification positions

In line with a paradigm shift towards greater research competition and responsibility, Vetmeduni Vienna will rely on competitive procedures prior to posting its qualification positions. Organisational units requesting a qualification position in a field of research with great potential for the future or in an understaffed but highly relevant field must submit a concept within an internal call procedure. These concepts are to be assessed by a panel. They must address a top-ranked field of research and elaborate on the support provided through mentoring as well as, to the extent possible, through the organisational unit's staff and infrastructure. Calls for applications for international qualification positions will then be posted for fields of research with the most attractive and promising concepts. With this in-house competition prior to posting the calls, Vetmeduni Vienna hopes to achieve optimum incorporation, support and networking of qualification positions on the one hand, and responsible mentoring by leadership staff on the other.

3.2. Strategic Goal: Expand Structural Planning of Human Resources and Organisation

With roughly 1,540 employees, the University of Veterinary Medicine, Vienna, is among Austria's largest enterprises. Consequently, staff costs are a huge item in the university's budget. In order to position the university in a sustainable and forward-looking manner, it is essential both to manage its financial resources efficiently and to create an effective and flexible HR and organisation structure.

Moreover, staff planning and in-house professional development options must be increasingly geared towards the university's strategic goals. At the same time, recruiting new staff must be professionalised in order to be able to respond to current topics more flexibly and rapidly as well as maintain and enhance the university's pioneering role, in particular in the field of research.

Strategic staff planning includes a forward-looking approach taking into account the needs, research and teaching aims of positions at all levels which have become vacant or are to be newly created, in particular bearing in mind the university's research strengths as well as teaching and clinical requirements. In so doing, the university lives by the tenet of implementing a HR culture which is efficient and resource-friendly as well as intergenerationally equitable and of long-term sustainability, thus offering future generations of the university's research staff a fair chance of employment and skills development.

The following operational objectives and measures are planned in the course of expansion and restructuring.

3.2.1. Operational Objective: Develop a Strategic Target Structure for Human Resources and Organisation

In order to position Vetmeduni Vienna as a flagship university within European and international competitors, it is essential to develop a sustainable staff and organisation structure across all the departments of the university. For this purpose, a clear number of temporary and permanent positions must be defined for all units of the university, which, in the light of striving for a 'flat faculty', gives the university the kind of leeway needed to deploy smaller working groups to respond to external requirements flexibly and based on current needs. Special attention will be paid to:

- **Predoc and postdoc positions:** Fixed-term predoc and postdoc positions are to ensure top-notch training. These positions bring their temporary scientific profile to Vetmeduni Vienna. Postdocs develop their own scientific profile, thus qualifying themselves for science-based external activities or for the next rung on the scientific career ladder, be it in research, service provision and teaching or in business and for other off-campus employers. Transparent criteria must be created for turning fixed-term contracts into permanent ones.

- **Positions for technical experts or staff scientists:** Excellently trained holders of these positions support different research priorities, technologies, services or core facilities through their technical know-how. They are available to projects or working groups at Vetmeduni Vienna and are key in supporting knowledge transfer and ensuring the high quality of teaching and research data.

  The job profile of staff scientists revolves around the long-term scientific use of large equipment and other resources requiring staff continuity.

- **Positions for senior scientists:** Highly talented employees holding third-party funded positions may, after having raised third-party funds on their own for eight years and after review of their qualification, obtain a permanent position as senior scientist, which is embedded in an existing organisational structure.

Migration from fixed-term to permanent positions in the scientific field is only possible based on the established positions defined for this purpose. If a temporary employment relationship is changed into a permanent one, transparent criteria will be defined to be assessed by superiors and the Vice-Rectors concerned.

Staffing that goes beyond this figure, which is frequently determined by the university's training obligations, will in future only be possible within agile working groups acting independently based on the third-party funds they have been able to raise. These working groups should also be created across departmental boundaries and classifications. In order to ensure their flexibility, they ought to comprise no more than five to ten members including those who work under third-party funding.

3.2.2. Operational Objective: Align Staff Planning and Recruiting with Strategic Goals

The university has very little financial leeway in staff matters owing to positions being primarily financed from the overall budget. In order to identify potential for fostering greater flexibility, evaluation exercises are to be used to reallocate budget funds based on actual requirements. An objective parameter in these evaluations will be the scientific output of positions funded from the overall budget in relation to the costs incurred by them. Due to the limited budgetary framework, new areas can only be staffed by successfully soliciting for additional third-party funds.

For the above measures to have a sustainable impact it will be paramount to align staff planning and recruiting with the strategic goals of the university. It will be necessary to find and employ staff in areas which are critical for the future development and success of Vetmeduni Vienna and which are currently understaffed. Evaluation, the creation of synergies and natural attrition are to be used in other areas to release funds.

It is important for the fine-tuning of staff planning to define comparable target profiles, draft skills catalogues and enhance upskilling measures. Professionalisation and quality assurance of the recruiting processes are to ensure that only those experts join Vetmeduni Vienna who are actually needed.

3.2.3. Operational Objective: Expand the In-House Job Market

For various reasons, some of the veterinarians, scholars and members of the administrative and support staff employed at Vetmeduni Vienna want to make their next career move by changing positions in-house. The newly created internal job exchange is one means of alerting these employees to career opportunities within the university and having them apply for vacancies. The job exchange is to become a well-established tool and a marketplace for veterinarians and researchers as well as for administrative and support staff, thus contributing to exchanging expertise and enhancing the flexibility of the university and the achievements it has made.

3.3. Strategic Objective: Make Leadership and Organisation Culture 'Fit' for the Future

A key role in further developing Vetmeduni Vienna and in positioning it as a highly attractive and forward-looking employer is played by the members of the executive leadership. The university needs to adapt its executive structures, modernise its mission statements as well as guide staff with leadership responsibility towards a new understanding of their responsibility in managing employees and complying with leadership principles.

In the light of digital transformation and the ensuing changes in the world of work, the university is also required to provide a modern, flexible and technically well-equipped working environment to its employees as well as achieve equality in general and a fair gender distribution among leadership positions in particular.

3.3.1. Operational Objective: Highly-Attractive and Forward-Looking Employer

Corporate culture and co-called 'soft facts' play an increasingly important role for being able to prevail in the international competition for the best minds. This is true of both recruiting new employees and retaining top performers. Vetmeduni Vienna thus needs to improve its attractiveness in a number of areas.

Field of action 1: Further develop and live by the corporate culture and leadership mission statements

Mutual respect, recognition and tolerance are part of the fundamental principles of Vetmeduni Vienna's corporate culture. Executive leadership must set an example in complying with these principles and with the new leadership mission statements to be drafted for them. People with executive responsibility should not only be superiors but also positive role models who support, challenge and foster their employees. In so doing, they should also communicate very openly the available career options at the onset of an employment relationship and guide employees towards reaching them.

Field of action 2: Establish integration programmes

In view of the high female share among its entire workforce, it is of special concern to the university to enable employees to reconcile work and university careers with their individual family situations. Vetmeduni Vienna offers a wide range of initiatives to promote reconciliation of study/work and family life. This university policy is inspired by mutual tolerance, internationality and diversity, with equal opportunities being the underlying principle. The university is continuously updating its onboarding programmes for newly recruited employees.

Field of action 3: Promote new worlds of work

As a modern and forward-looking entity, the university makes full use of the possibilities offered by digitalisation to enable its employees to work not only on the campus but also in a flexible manner independently of place and time. Employees' work-life balance is an essential criterion in defining their individual working world. In addition, the university promotes cooperation in non-hierarchical teams and working groups and facilitates and supports trust-based working hours in relation to individual projects.

3.3.2. Operational Objective: Strengthen Leadership at all Levels

Since members of Vetmeduni Vienna's leadership staff are veterinarians and scientists by training without any special management credentials, they are particularly challenged in their responsible positions. This is why the university supports its executives with targeted training and professional development programmes to enhance their managerial and leadership qualities.

Field of action 1: Advance women with special emphasis on the leadership level

Promoting women is of special importance in this context as there are still few women among professors in spite of the fact that roughly 80 per cent of the university's students are female. Consequently, measures are being taken to remove barriers to the careers of women, support talented women from the beginning of their careers and promote the appointment of women to responsible posts and leadership positions across all areas and levels.

A good example for efficient and targeted female promotion with an eye to the future is the VetWoman programme created for exceptionally talented young women researchers. Under this programme, ten female researchers have been selected for a 1.5-year mentoring programme based on an in-house call for applications. This current programme is to be continued with further rounds of calls depending on the budgetary funds available for this purpose.

Field of action 2: Extend LeadingVet programme

Within the framework of the LeadingVet programme, leadership qualities are imparted to staff members who need them in their leadership positions. The programme includes coaching sessions to help participants develop leadership qualities and highlight their

strengths. 'Soft facts', too, are of importance in this context as role models and the example set by staff with leadership responsibility are key elements for the kind of culture the university espouses. One aspect of the programme is the targeted support of leadership qualities in women to encourage them to move out of the shadow of their mentors.

This well-established LeadingVet programme is to be further upgraded, for instance by enhancing the participants' skills in getting actively involved when it comes to removing obstacles to their own leadership careers. In institutional terms, the programme is to be expanded in cooperation with, for example, Danube University Krems or other external facilities as well as with partner universities with the objective of creating a 'leadership academy'.

3.3.3. Operational Objective: Digital Transformation

Rapidly advancing digitalisation is both a challenge and an opportunity for Vetmeduni Vienna as a training and research establishment. The digital service and other infrastructure constitute the basis for enhancing digitalisation at the university and for seizing and realising the opportunities thus created. Mobile working is one aspect of this digital landscape. Its use and expansion will be reviewed, one idea being to develop some sort of 'driving licence' for this purpose.

Field of action 1: Establish working world 4.0

Establishing working world 4.0 creates the condition for ensuring a forward-looking, responsive and sustainable work environment at the university. The creation of this new work setting involves investment and the optimisation of internal processes. There is a need to introduce and embed new, safe and secure technologies suited for use in the highly sensitive areas of research and education as well as smart services suited for flexible work requirements. Of special importance in this context are the data used at the university, which have to be put on a uniform basis to allow for their use across the board and by all participants.

Field of action 2: Enhance digital skills

At the same time, it is necessary to enhance the digital skills of employees and look for these skills up front when recruiting new employees. For this purpose, all HR processes must be evaluated and restructured. In so doing, the university must consider all areas of their employees' lifecycle ranging from their attraction or scouting to recruiting, employment, career development and ultimately withdrawal and alumna/alumni status.

The ensuing possibilities and flexible arrangements increase the university's attractiveness as an employer in the face of international competition, where Vetmeduni Vienna must not fall behind. Moreover, they facilitate communication and interaction at the campus and towards the university's satellite entities and external cooperation partners.

In conjunction with open databases and information platforms jointly used for the exchange of knowledge, they are key to employee satisfaction and help attract the best brains to the university.

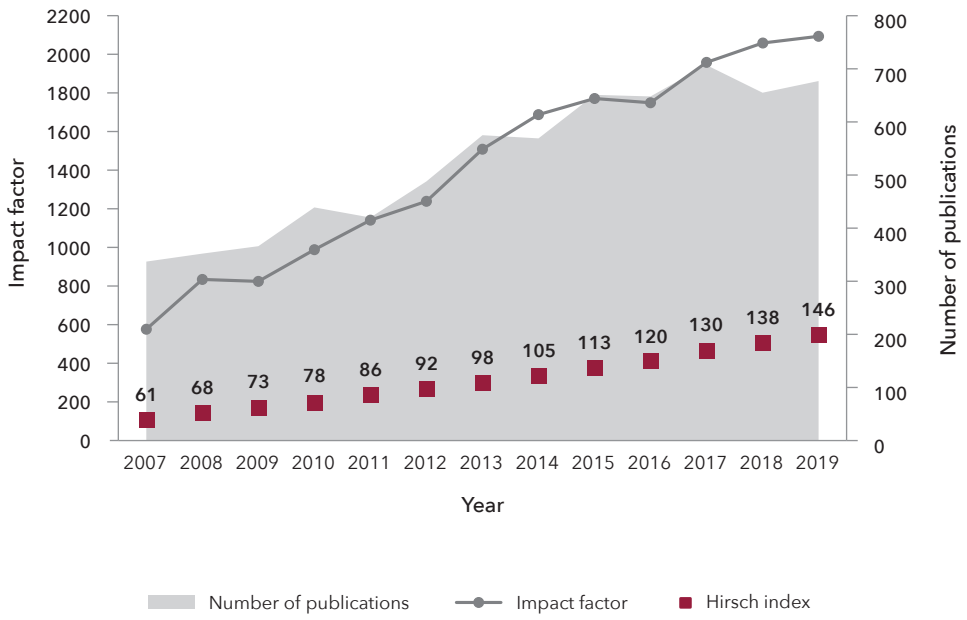
4. Research and Development

Research and development have a fundamental role to play for universities in terms of representing the main pillars of basic research and are a particularly important facet of Vetmeduni Vienna. The combination of basic research and applied and clinical research in veterinary medicine constitutes a decisive factor for success in global competition as well as in the university's international ranking and visibility.

That the research activities at Vetmeduni Vienna in the past ten years have reported continuous growth is primarily due to the strategic development of the university's profile. The success of this strategy is underscored by the position of Vetmeduni Vienna as one of the best universities in Austria and in international comparison. In the Shanghai Global Ranking of Academic Subjects, Vetmeduni Vienna occupies the 7th place of 300 listed universities worldwide in the subject of 'Veterinary Sciences' (http://www.shanghairanking.com/shanghairanking-subject-rankings/veterinary-sciences.html) and the 25th place in the QS World University Rankings by Subject 2020, thus having moved up continuously in recent years. In order to maintain this position or even reach the top three, the university needs appropriate budget allocations and an appropriate infrastructure.

The success of its research activities can also be seen from bibliometric indicators, the acquisition of third-party funds and the participation in excellence programmes (see Figure 3: Development of Publications).

Figure 3: Development of Publications



Fields of Research

Vetmeduni Vienna's research expertise encompasses a wide variety of fields ranging from physiological processes as well as molecular mechanisms underlying the pathogenesis of diseases, epidemiology and systems medicine to human-animal interactions and ethics. Vetmeduni Vienna stands for a holistic approach to viewing the influences of genetics, epigenetics, behaviour and environmental factors. For a basic understanding of diseases and possible therapies or prophylaxis, the findings obtained from animal patients, such as livestock, assistance animals or pets, are supplemented by findings from human medicine and model organisms (comparative medicine) and by findings obtained from zoo and wild animals (evolutionary medicine).

Owing to its unique position as the only university of veterinary medicine in Austria, Vetmeduni Vienna also assumes a key role (smart specialisation) in advancing regional life science clusters and strengthening the position of Austrian research within an internationally competitive environment. Research embedded at the sites of Vetmeduni Vienna positions the university as an international competence centre far beyond the life science hubs of Vienna and Austria and turns it into a national and international cooperation partner for questions of science within its research activities.

For the purpose of fulfilling its potential in fundamental research (basic science) in an efficient and targeted manner for the benefit of society, Vetmeduni Vienna has geared its applied research achievements towards highly relevant challenges and issues including the Sustainable Development Goals (SDGs) and grand societal challenges such as demographic change, growth of the world's population, food security and food safety, health and its maintenance, sustainability, climate change, urbanisation, global risk society as well as biology as an inspiration for technology and society.

Social and technological progress has interconnected the world in biological, economic, social, digital and many other ways in that local problems engender global repercussions and isolated solutions can no longer be effective.

Population growth, mobility, changes in climate, in habitats and animal husbandry, the occurrence of new vectors and the transgression of species boundaries are causing constant changes in the threat level of infectious or parasitic agents. An estimated three quarters of all animal pathogens can be transferred to humans. The epidemics of H5N1 and H1N1 influenza strains or the outbreaks of SARS, MERS and now Covid-19, caused by corona viruses spread from animals to humans, clearly illustrate that epidemic waves and pandemics do not stop short of the industrialised world with its first-rate medicine. The spreading of new pathogens within a few months over the entire globe calls for healthcare and research systems that are able to react quickly and be highly resilient.

Any isolated consideration of the root causes of new or recurring diseases would be a waste of valuable resources. Their exploration and the quest for appropriate solutions to problems can only be approached and implemented in an interdisciplinary and collaborative manner, while joining forces and exploiting all and any possible synergies – *„Human or livestock or wildlife health can't be discussed in isolation anymore. There is just **one health**"* [4].

One Health** combines the **collaborative efforts
*of **multiple disciplines** working locally, nationally, and globally,*
*to attain optimal **health** for **people**, **animals** and our **environment***[5]

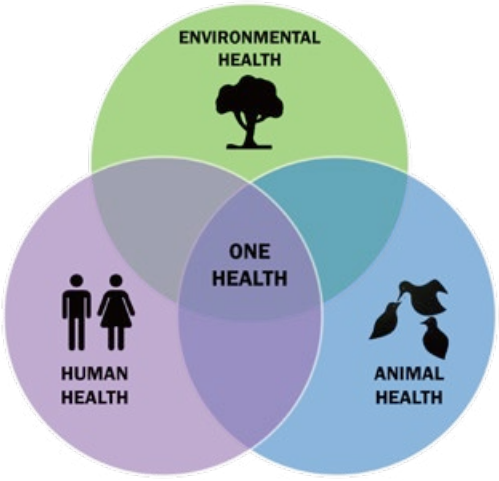


Figure 4: https://commons.wikimedia.org/w/index.php?curid=81872126

Vetmeduni Vienna will gear its research efforts in diagnosing, preventing and treating infectious diseases towards the **One Health** principles.

4 Weiss, Rick (7 April 2003). „Africa's Apes Are Imperiled, Researchers Warn." The Washington Post. Retrieved on 20 Aug 2017.
5 One Health: A New Professional Imperative. American Veterinary Medical Association, 15 July 2008. p9

In addition, Vetmeduni Vienna will enhance the links between basic research and applied clinical research. Building on its research priorities, it can thus make potential fields of relevance internationally visible and nurture the related expertise on current topics and future areas of interest. Particularly visible strengths of Vetmeduni Vienna's research work are currently rooted in the fields of endocrinology and reproduction, nutrition physiology, infectious diseases (with focus on fish, poultry and porcine species), food microbiology and risk analysis of animal-based food products, population genomics, translational and comparative medicine, behavioural biology and behavioural ecology, wildlife ecology and wildlife medicine as well as veterinary ethics and animal welfare.

Research Profile

Research is conducted at all five Departments of Vetmeduni Vienna. They are:

- Department of Biomedical Sciences
- Department of Pathobiology
- Department for Farm Animals and Veterinary Public Health
- Department for Companion Animals and Horses
- Department of Interdisciplinary Life Sciences

Research at Vetmeduni Vienna is conducted along the following lines of its profile:

- Physiological processes
- Infection and prevention with a focus on farm animals
- Animal models and veterinary biotechnology
- Food safety and risk analysis
- Animal behaviour and human-animal interaction

Research Priorities

Within these profile lines, a number of concrete and internationally visible research priorities have been established at Vetmeduni Vienna based on appropriate third-party funding from national and international research support organisations and on cooperation with other research entities as well as business and public partners.

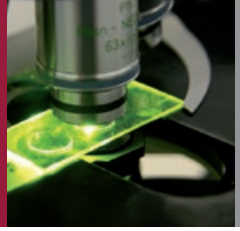


Table 1: Existing internationally visible research priorities and their allocation to profile lines

Research priorities	Profile line 1 physiological processes	Profile line 2 infection and prevention, focus on farm animals	Profile line 3 animal models and veterinary biotechnology	Profile line 4 food safety and risk analysis	Profile line 5 animal behaviour human / animal interaction
Endocrinology and reproduction	■		□		□
Nutrition physiology	■	□			
Infectious diseases (fish, poultry, swine) ▪ Emerging diseases ▪ Zoonoses ▪ Innovative diagnostics ▪ Immunoprophylaxis		■		□	
Food microbiology and risk analysis of animal-based food products		□		■	
Population genomics	□		■		
Translational medicine and comparative medicine (genome, epigenome and molecular signalling pathways in cancer, infection and inflammation)	■	□	□		
Behavioural biology and behavioural ecology ▪ cognition ▪ animal welfare					■
Wildlife ecology and wildlife medicine	■	□			
Veterinary ethics and animal welfare			□	□	■

Legend

■ Primary allocation

□ Secondary allocation

Participation in Programmes of Excellence

Vetmeduni Vienna partakes in a great variety of successful individual projects as well as in national and international programmes of excellence. They illustrate the international recognition of research work performed at Vetmeduni Vienna.

Special Programmes of the Austrian Science Fund

Vetmeduni Vienna is the coordinator of the special research field entitled 'Monarchies and Hierarchies in Shaping Chromatin Landscapes' of the Austrian Science Fund (FWF), which is based on the previous area of special research 'Jak-Stat Signalling' conducted under the leadership of Vetmeduni Vienna.

Within our doctoral programmes, Vetmeduni Vienna leads the FWF's postgraduate course of 'Population Genetics' with contributions from a Vienna-based pool of experts and is a partner in other special research areas and doctoral programmes of the FWF.

Table 2: Doctoral programmes (DK) and special research areas (SFB) as at 31 Dec 2019

Funding programme	Title	Coordinator	Other partners
FWF-DK	Population Genetics	Vetmeduni Vienna	Uni Vienna Gregor Mendel Institute of Molecular Plant Biology
FWF-SFB	Monarchies and Hierarchies in Shaping Chromatin Landscapes	Vetmeduni Vienna	MFPL Uni Vienna MUW CeMM
FWF-DK	Inflammation and Immunity	Meduni Vienna	CeMM Vetmeduni Vienna
FWF-DK	Molecular, Cellular and Clinical Allergology (MCCA)	Meduni Vienna	Vetmeduni Vienna/ Messerli Research Institute
FWF-SFB	Myelo-proliferative Neoplasia	Meduni Vienna	CeMM IMP Vetmeduni Vienna
FWF-SFB	Strategies for the Prevention and Treat-ment of Allergies	Meduni Vienna	Karl Franzens University Graz Vetmeduni Vienna
FWF-DK	Cognition and Communication 2	Uni Vienna	Vetmeduni Vienna/ Messerli Research Institute
FWF-doc.funds	Molecular and Cellular Control of Tissue Homeostasis in Health and Disease	Meduni Vienna	Vetmeduni Vienna

CD Laboratories

In the area of fundamental research-led translational research, Vetmeduni Vienna is a sought-after partner for industry. As at 31 Dec 2019, the following Christian Doppler (CD) Laboratories supported by the Christian Doppler Research Association are based at Vetmeduni Vienna:

- CD Laboratory for Innovative Poultry Vaccines
- CD Laboratory for Monitoring of Microbial Contaminants
- CD Laboratory for Optimised Prediction of Vaccination Success in Pigs
- CD Laboratory for Innovative Gut Health Concepts for Livestock

COMET Competence Centres

Based on the two K-projects of the Austrian Research Promotion Agency (FFG), namely 'Improving Pig Health for Safe Pork Production' and 'Advancement of Dairying in Austria' (ADDA), the COMET (Competence Centre for Excellent Technologies) K1 Competence Centre 'FFoQSI – Feed and Food Quality, Safety & Innovation' for ensuring feed and food production has been established in cooperation with BIOS Science Austria (see Chapter 7: Internationality and Mobility as well as Cooperation and Networking) under the leadership of Vetmeduni Vienna. FFoQSI already connects more than 30 industrial enterprises and six research partners: Vetmeduni Vienna, University of Natural Resources and Life Sciences (BOKU), the University of Applied Sciences (FH), Upper Austria, the Austrian Institute of Technology (AIT), the Austrian Agency for Health and Food Safety (AGES) as well as the Research Centre for Non-Destructive Testing (RECENDT).

Another initiative based on the COMET project ADDA has been to widen the existing network along the milk value chain by including technology providers and science partners with a focus on new technologies to form the D4Dairy (Digitalisation, Data Integration, Detection and Decision Support in Dairying) consortium. D4Dairy's overarching aim is to provide digital support to the managers of dairy farms through data-based, interlinked information systems making full use of the scope of modern technologies and advanced data analyses to achieve further improvement of animal health, animal welfare and product quality.

FWF START Grant

A scientist of Vetmeduni Vienna was awarded a START Grant in the field of cognition research in 2020. Her project of 'Innovative Tool Use in a Parrot', including field research in Indonesia and Spain, explores in great detail the environmental and cognitive conditions for the use of tools in Goffin cockatoos.

ERC Grants

Three researchers of Vetmeduni Vienna have been able to obtain grants of the European Research Council:

- Starting grant in behavioural research
- Advanced grant in cancer research
- Advanced grant in population genetics

EU Programmes

The main projects to be mentioned in this context include: establishment of a Centre of Excellence for Poultry Innovation (CEPI) funded through the Interreg V-A Austria-Hungary Programme; the Interreg Programme AT-CZ for Innovations in Poultry Medicine (INPOMED); the Integrative Alpine Wildlife and Habitat Management for the Next Generation (ALPBIONET 2030) funded through the Interreg Alpine Space Programme; the LIFE WOLFALPS EU Project; and the Marie Skłodowska-Curie Innovative Training Network Breeding Invertebrates for Next Generation BioControl (BINGO).

Under Italian coordination, an EU-LIFE+ Project has been launched entitled 'LIFE Wolf-Alps EU' aimed at improving the coexistence of humans and wolves in the cultural landscape of the European Alpine Region. Alongside Italy and Austria, a number of organisations from France and Slovenia are participating in the project. Under the Interreg V-A Austria-Czech Republic Programme 2014 – 2020, Vetmeduni Vienna has partnered with the Veterinary Research Institute of Brno to collaborate on the project ‚Initiative for promoting research and innovation capacity of poultry veterinary companies'.

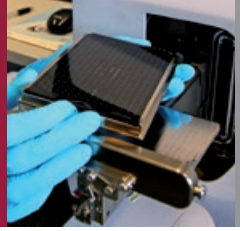
Vetmeduni Vienna is also a partner in 2 MSCA-ITN (Marie Skłodowska-Curie Action-Innovative Training Network) projects.

Ludwig Boltzmann Cluster (LBC) and Ludwig Boltzmann Institute (LBI)

In the era of molecular medicine, comparative approaches have become a major field of research for the purpose of translating basic research into therapeutic strategies. Infectious diseases and cancer share important characteristics, which are explored under the tenet of 'One Health – One Medicine' at the Ludwig Boltzmann Institute for Haematology and Oncology (LBI HO, previously called Ludwig Boltzmann Cluster Oncology – LBC ONC) in cooperation with experts from human medicine. Vetmeduni Vienna is an official cooperation partner in this project.

The University's Own Programmes of Excellence

The 'Pig and Poultry' doctoral programme addresses infectious diseases in pig and poultry. Although it had been considered to be particularly eligible for funding by international experts, the FWF refused to fund this programme. As a result, it has been initiated with the university's own resources. Two university clinics and four institutes offer postgraduate training for roughly 20 PhD and doctoral students allocated to six positions



financed by the university plus a number of positions under other projects funded by third parties. The doctoral programme 'Pig and Poultry' is monitored by a scientific advisory committee and received a positive interim evaluation by international experts.

Another thematic doctoral programme 'Animal Reproduction' has also been launched with the university's own funds.

In 2020, the Top Vet Science Programme sent out its first calls for proposals based on experience gained with the Tandem PhD Programme and will strengthen the starting point for flagship projects of cooperation between clinicians and non-clinicians (see Operational Objective 4.3.2).

Measures to Strengthen Research

The University of Veterinary Medicine, Vienna, is tasked with creating a collaborative and competitive research infrastructure as groundwork for research excellence in higher education. In future, more emphasis will be placed on both the challenges and the potential resulting from digitalisation. This signifies that the contents as well as the ways and means of conducting research are subject to ongoing change, with Vetmeduni Vienna positioning itself as a forward-looking digital research and training entity of veterinary medicine.

New technological possibilities including precise geo-localisation, cloud-based services, the internet of things, interlinkage and use of big data analytics, processing of sequence data, use of artificial intelligence (AI), block chains as well as the use and availability of findings within the framework of open data/open science projects will accelerate research activities, create access to areas hitherto impenetrable to the public and advance the internationalisation of research.

Other details on the topic of digitalisation are set out in the Digitalisation Strategy of Vetmeduni Vienna.

The strategic goals for advancing the research activities of Vetmeduni Vienna are as follows:

- **Promote excellence in research activities**
- **Increase third-party funds (Third-Party Funding Strategy)**
- **Enhance interdisciplinary, translational research priorities**
- **Strengthen Vetmeduni Vienna as an engine of innovation**

4.1. Strategic Goal: Promote Excellence in Research Activities

Vetmeduni Vienna's excellence in research as documented by numerous awards goes hand in hand with how the university is seen by the outside world and how many **'high potentials'** are ready to join the university to carry out top-notch research. Consequently, it is essential for the university to adopt appropriate measures to further develop its **existing strengths** in veterinary research. At the same time, there is also a need to define **research potentials** with a short-term perspective for implementation and **new fields of research** with a medium-term perspective for implementation.

Vetmeduni Vienna builds on its research priorities in basic research in the field of life sciences, relevant interdisciplinary subjects and applied veterinary research. The future success for Vetmeduni Vienna in this context will largely depend on the university's specific constellation of subjects, which provide the backdrop for interlinking basic research with clinical and applied research in line with the tenet of **One Health** and **sustainability**.

Vetmeduni Vienna lays claim to receiving Europe-wide recognition as a centre of competence in the field of veterinary research and associated disciplines. In order to strengthen this position within the institutional environment, it will be crucial to continue focusing on research priorities and intensifying cooperation between basic research and applied clinical research.

In the short term, there is some potential in such areas as digitising animal monitoring, exploring microbiomes in food production and translational medicine, regenerative medicine, computational medicine and – within the meaning of One Health – widening the research priority of infectious diseases to include other species, studying the impact of global change and replacing and supplementing existing methods of animal experiments (see Table 3). In the medium term, new fields of research may emerge as for instance in behavioural genetics and neurobiology, behavioural medicine and companion animal management, sustainability as well as in relation to future challenges in veterinary professions (see Table 4).

Appointments to professorships and career positions are key elements in efforts to strengthen and develop the potentials already in place on campus. The need to further develop research at the university, however, also requires consideration of the innovative potential of young scientists in particular, and thus an appropriate form of promotion for next generation scientists that is guided by the principle of valuing performance.

One of the most critical elements for success in further strengthening research activities and increasing the output of university-based research is to attract external high potentials to research work at our university. The good reputation of Vetmeduni Vienna and its top position in international university rankings, as well as the conditions and infrastructure provided, constitute a sound basis for this purpose. However, high potentials in the

field of research are also keen on working independently and within straightforward structures. The introduction of flexible and independent working groups will provide this kind of leeway (see Chapter 3: Staff/Human Resources). Moreover, the availability of sufficient financial resources is an absolute prerequisite for attracting high potentials to Vetmeduni Vienna.

In order to improve the university's attractiveness in terms of a research entity for external specialists and increase its research agility, the university has launched structural changes in university-based research aimed at establishing largely independent and project-related working groups within its organisational structures, thus improving flexibility in research activities, addressing new research issues more rapidly and creating the necessary space for new, innovate and unconventional research (see Chapter 3: Staff/Human Resources).

4.1.1. Operational Objective: Ensure a Critical Mass Within the Research Potentials Identified

With a view to further developing research at Vetmeduni Vienna, there is a need to maintain the critical mass of researchers which has been built up in recent years and forms a pool of knowledge exchange among those involved. Within this context, there is a need to address the wave of retirement among current professors by 2030. Vetmeduni Vienna must create orderly structures for resolving their succession and incentives for attracting internationally high potentials to apply. In so doing, the university will pay special attention to the formation of effective working groups and mentorships for junior scientists (qualification and senior researcher positions). They are expected to network regionally and nationally in their subject fields with appropriate working groups in other universities and research entities so as to contribute to concerted transdisciplinary and interinstitutional efforts within groups of flexible sizes towards meeting major challenges such as preventing and overcoming epidemic diseases within the meaning of One Health or addressing climate change. These Next Generation Expert Networks are to be fine-tuned among the relevant research entities and ideally implemented by coordinated calls for application.

Vetmeduni Vienna promotes this critical mass of scientists based on the special potential of its research facilities and research priorities. This is being done in close coordination and alignment with renowned institutions and through further adaptation of its in-house funding programmes, the focus being on interdisciplinary and interfacility support to budding scientists.

As illustrated in Table 1, the current strengths lie in the following areas:

- Endocrinology and reproduction
- Nutrition physiology
- Infectious diseases (fish, poultry, swine)
- Food microbiology and risk analysis of animal-based food products
- Population genomics
- Translational medicine and comparative medicine
- Behavioural biology and behavioural ecology
- Wildlife ecology and medicine
- Veterinary ethics and animal welfare

At least two research potentials (Table 3) are to be upgraded to research priorities by 2025. Since research is consistently spawning new potentials, these newcomers are continuously evaluated and assessed in view of any possible implementation with due regard to their financing prospects based on third-party funds already available or subject to calls for proposals.

For the purpose of enhancing its position as an excellent research entity, Vetmeduni Vienna must continue to submit bids within the framework of national programmes of excellence of the FWF and international programmes of excellence of the ERC.

In addition, Vetmeduni Vienna strives to obtain long-term project funding in the field of applied research from business partners as well as funding from the Austrian Research Promotion Agency (FFG), the Christian Doppler Research Association (CDF) and EU programmes.

In recent years, Vetmeduni Vienna has invested in precision livestock farming and digital animal monitoring and plans to turn these two areas into a centre for research and knowledge transfer (Precision Livestock Farming Hub – PLF Hub) in cooperation with industrial partners.

Table 3: Research potentials with a short-term perspective for implementation and their allocation to the university's profile lines

Research potentials	Profile line 1 physiological processes	Profile line 2 infection and prevention, focus on farm animals	Profile line 3 animal models and veterinary biotechnology	Profile line 4 food safety and risk analysis	Profile line 5 animal behaviour human / animal interaction
Digitisation of animal monitoring (with a focus on cattle, swine and wild animals)	■	■			■
Microbiomes in food production and translational medicine	■	■		■	
Regenerative medicine	■		■		
Computational Medicine		■	■		
Widening of the infectious disease research priority to other species		■		■	
Global change ▪ species conservation ▪ global change biology ▪ heat stress (livestock)	■	■			■
Methods of replacing and supplementing animal experiments	■	■	■	■	

Legend

■ Primary allocation

■ Secondary allocation

4.1.2. Operational Objective: Identify and Develop Medium-Term Research Potentials

In addition to advancing its research priorities in agreement with the budget resources available, Vetmeduni Vienna seeks to expand or introduce the following fields of research with great potential:

Table 4: Possible new fields of research with a medium-term perspective for implementation and their allocation to the university's profile lines

Possible new fields of research	Profile line 1 physiological processes	Profile line 2 infection and prevention, focus on farm animals	Profile line 3 animal models and veterinary biotechnology	Profile line 4 food safety and risk analysis	Profile line 5 animal behaviour human / animal interaction
Behavioural genetics and neurobiology	■		■		■
Behavioural medicine and companion animal management	■		■		■
Sustainability ▪ sustainable animal production ▪ sustainability in veterinary medicine	■	■		■	
Future challenges in veterinary professions ▪ veterinary training research ▪ gender studies	■				■

4.2. Strategic Goals: Increase Third-Party Funds (Third-Party Funding Strategy)

Successfully solicited third-party funds are key to maintaining the competitive strength of research carried out at Vetmeduni Vienna. Based on current research activities, raising third-party funds serves to secure additional resources for focused research in a specific area, enable cooperation within the university and beyond as well as benefit young scientists working on specific topics.

In so doing, Vetmeduni Vienna tries to obtain third-party funds both by competing for them nationally and internationally and by entering into cooperation with businesses, foundations, government bodies and international organisations. To this end, Research Support and Innovation (FFI) of Vetmeduni Vienna actively scouts for and screens third-party funds, while advising researchers of Vetmeduni Vienna on how to approach bids for third-party funds.

With comprehensive basic resources in place, it is the stated aim of Vetmeduni Vienna to enhance individual areas of research through the use of third-party funding. Consequently, the scientists of Vetmeduni Vienna are to be increasingly assisted in their efforts to raise third-party funds for their research activities. Successful competition for these funds is to be given greater consideration in the evaluation of personal achievements.

In order to introduce further fields of research, it is indispensable for Vetmeduni Vienna to attract recognised scientists who bring with them the appropriate experience in raising third-party funds as well as an adequate network of contacts.

4.2.1. Operational Objective: Screening, Scouting and Support for Third-Party Funds

In cooperation with the Austrian Research Promotion Agency (FFG) and other funding organisations and their counselling services, any funding options available in particular from EU sources are systematically analysed and the researchers appropriately counselled with due regard to the large European programme lines within the Horizon Europe research framework. Special attention is paid to Pillar 1 (Excellent Science) and Pillar 2 (Global Challenges and European Industrial Competitiveness) in this context. Within Pillar 2 the following 'clusters' are of particular thematic relevance:

- Health
- Food, Bioeconomy, Natural Resources, Agriculture and Environment
- Digital, Industry (and Space)
- Climate (Energy and Mobility)

The relevant 'mission areas' to be newly created need to be taken into account as well. Those relevant for Vetmeduni Vienna include:

- Mission area: Adaptation to climate change including societal transformation
- Mission area: Cancer
- Mission area: Soil health and food

The multidisciplinary team of Vetmeduni Vienna's Research Support and Innovation (FFI) bureau will help researchers working at the university with soliciting and managing third-party funds as well as with capitalising their research results and foster the entry of young scientists into research work. Pre-proposal checks and training are to improve their success rate in funding applications. Based on consistent evaluation as well as analyses and cooperation with mentors, researchers with special potential are identified and receive targeted support.

4.2.2. Operational Objective: Increase the Proportion of Scientists with Experience in Third-Party Funding

Scientists of Vetmeduni Vienna are already successful competitors for third-party funds. Vetmeduni Vienna seeks to increase their share through support, motivation and targeted recruitment.

To this end, **additional funds** (profile line bonuses) are made available from the university's budget for any third-party funds obtained. Moreover, the university intensifies its active **support** for (first-time) applicants and, in recruiting and assisting postdocs, it places greater emphasis on experience with and proposals for third-party funds.

Structural change in the field of research towards smaller, more agile units and manageable projects should enable the university to establish new research activities with the help of third-party funding. The university's next generation experts should be empowered to work independently and lead a manageable working group early on in their academic career.

4.2.3. Operational Objective: Recruit Scientists with Experience in Third-Party Funding

Soliciting third-party funds is crucial for the advancement of research and the establishment of further fields of research at Vetmeduni Vienna. Within this Third-Party Funding Strategy, the university undertakes targeted efforts to attract scientists who have experience in raising third-party funds and can bring along the kind of network necessary for this purpose. This is an aspect to be increasingly taken into account not only in appointments to professorships but also in calls for applications for qualification positions and postdoc positions at the university. The renewal of fixed-term positions in research will be dependent on successful applications for third-party funds.

4.3. Strategic Goal: Enhance Interdisciplinary, Translational Research Priorities

Vetmeduni Vienna already connects basic research with clinical and applied research. In the future, it will continue to consistently enhance the potential of translational research, all the more so as the findings obtained from related research work are essential both for animal health and human health and contribute to sustainable development.

4.3.1. Operational Objective: Create Multidisciplinary Priorities Within the Meaning of Sustainability and One Health

Field of action 1: Expand the infection biology focus

As the only university of veterinary medicine in Austria, Vetmeduni Vienna is both particularly well placed and, in view its social responsibility, challenged to carry out basic research in the field of infectious diseases and infection biology.

The current focus of research work in this context is on fish, poultry and swine. The tenet of One Health, under which animal and environmental health also mean human health, provides the foundation for research in this area to be effectively advanced together with universities and research entities at home and abroad, the aim being to establish Vetmeduni Vienna as a hub of innovation and knowledge in this field.

Unlike any other university, Vetmeduni Vienna is able to reflect the requirements of One Health. It needs to create an appropriate network of experts in association with its partners in health and veterinary authorities and animal health services, with university- and state-based institutions for human medicine, biology and wildlife science, forestry, water management and meteorology as well as climate research, with the Complexity Science Hub as well as sectoral businesses and stakeholders (such as Austria's chambers). However, an analysis shows that the field of R&D players must become much wider. An example: although available, urgently needed expert opinions are insufficiently factored into One Health approaches. This relates to social sciences, in particular communication sciences, or economics. Within this context, special emphasis is to be placed on the next generation of interdisciplinary teams (**Next Generation Experts Network in One Health**).

Field of action 2: Further develop sustainable animal husbandry, food production, supply and biodiversity research

Food of animal origin constitutes an essential contribution to food supply. The need to ensure sustainable production is set out in the UN's Sustainable Development Goals (SDGs).

Innovation in animal breeding, animal welfare, animal husbandry, animal nutrition and animal health form the basis for sustainable forms of keeping animals. New scientific findings in areas such as genetics, epigenetics, physiology, microbiome research, cogni-

tion and animal behaviour must be pooled to take forward knowledge-based innovations for the benefit of animals and humans.

Accordingly, the scientific basis for necessary innovations must be continuously broadened. Vetmeduni Vienna will gear its focus, which is on farm animal health and welfare, towards sustainability considerations and new technologies and will interlink its expertise in the said fields. In concrete terms, this signifies:

- ensuring interlinkage in the field of preventive veterinary medicine through research in bacteriology, virology, parasitology, immunology and vaccine development as well as in animal husbandry and animal welfare science
- ensuring intensive interlinkage of the fields of reproduction technologies, genetics and epigenetics
- expanding the existing Precision Livestock Farming Hub
- interlinking cognition research of the Messerli Research Institute and the Konrad Lorenz Institute of Ethology with the expertise of the Institute of Animal Welfare Science and with that of proponents of stress research.

All areas increasingly generate a host of data that needs to be pooled and interpreted in a meaningful manner. The general expertise in farm animal health will be enlarged by developing appropriate skills in dealing with complex data. This will be ensured by:

- bioinformatic and statistical know-how available at the campus
- cooperation with external research entities
- membership of Vetmeduni Vienna in the Complexity Science Hub

4.3.2. Operational Objective: Encourage the Creation of Scope for New, Innovative and Unconventional Research – Identification and Development of Top Vet Science Projects

Further development of research at Vetmeduni Vienna revolves around efforts to encourage research cooperation at the university and identify cross-cutting issues that combine excellent basic research with veterinary application and can be approached in a manner going beyond the boundaries of individual subjects. Innovation frequently sprouts at the boundaries of existing fields of research where method, theory and application overlap and an issue can be addressed from different angles. Based on this kind of cooperation, and with the help of the in-house **Top Vet Science** funding programme advertised for the first time in 2020, so-called flagship projects of veterinary relevance are to be identified which mirror the distinctive contents of Vetmeduni Vienna's research profile.

Under this Top Vet Science programme of excellence, groups of four composed of two postdoc and two PhD members with a clinical and non-clinical background are working

together. The projects are selected in cooperation with the Vienna Science and Technology Fund (WWTF) within a transparent competitive process involving **international review**.

The objective is to make one Top Vet Science project internationally visible and viable by 2025 at the latest (see Chapter 9: University Clinics and Diagnostic Facilities).

4.3.3. Operational Objective: Greater Use of Synergies and Expansion of Cooperation with National and International Partners

The pooling of expertise and **the sharing of facilities** – or joint use of resources – at the national level constitute essential factors for efficient and resource-conserving research activities. As well as the expansion of interdisciplinary cooperation with other universities, Vetmeduni Vienna aims to intensify cooperation with Austria's regions and federal states, national and international partners from the field of veterinary medicine (see Chapter 7: Internationality and Mobility as well as Cooperation and Networking).

Vetmeduni Vienna is seeking **intense cooperation in training and research** – for instance through a joint doctoral programme – with an internationally renowned university of veterinary medicine (among the top 25 in the international QS ranking in the field of veterinary medicine or in another comparable and internationally recognised ranking system).

4.4. Strategic Goal: Strengthen Vetmeduni Vienna as an Engine of Innovation

The generation, use, application and sharing of knowledge make Vetmeduni Vienna a driver of innovation for society along the lines of its core competences.

More than ever before, Vetmeduni Vienna will focus on its role as an engine of innovation along its profile lines and, to this end, advance the development of its structures and processes. New findings and developments will be applied directly in day-to-day clinical work. Innovative research results in areas such as food safety, animal models, vaccines or pharmacology will be taken up, protected and capitalised in a consistent manner.

4.4.1. Operational Objective: Further Develop the Use of Internal and External Research Infrastructure

Vetmeduni Vienna has a number of research facilities on and off campus used to conduct top-level research. Examples include the Core Facility of Vetmeduni Vienna VetCore, the Austrian Ornithological Centre, Vetmeduni Vienna's VetFarm, the Reproduction Center Wieselburg (RCW), the Graf Lehndorff Institute (GLI), the Interuniversity Research Department for Agrobiotechnology (IFA) Tulln, and the Core Facility Bioactive Microbial Metabolites (BiMM) (see Chapter 1: Baseline Situation).

It is Vetmeduni Vienna's stated aim to use the resources made available in these places as efficiently as possible and achieve a high rate of capacity utilisation.

Vetmeduni Vienna also intends to intensify cooperation with external research entities operated by third parties. This relates in particular to enhancing regional cooperation with and at core facilities (= central key entities) of other research institutions.

These collaborating entities include, inter alia:

- Austrian Institute of Technology (AIT)
- Biobanking and Biomolecular Resources Research Infrastructure (BBMRI)
- Campus Science Support Facilities (CSF), Campus Vienna Biocenter
- Research Centre for Molecular Medicine (CeMM), Vienna
- Institute of Science and Technology Austria (IST Austria), Klosterneuburg
- LifeScience Vienna Muthgasse
- Medical Imaging Platform (MIP), Meduni Wien
- Austrian Agency for Health and Food Safety (AGES), Vienna
- Research Institute of Molecular Pathology (IMP), Campus Vienna Biocenter
- University and Research Centre Tulln of the University of Natural Resources and Life Sciences (BOKU), Vienna

- Centre for Basic Medical Research (ZMF), Graz
- Brandenburg Stud Farm Foundation Neustadt/Dosse as a partner of the Graf Lehndorff Institute

There are plans to join the Vienna BioImaging Node at EuroBioImaging (coordinated by the European Institute for Biomedical Imaging Research [EIBIR] and the European Molecular Biology Laboratory [EMBL]) or its successor organisation.

In the field of bioinformatics and big data applications, Vetmeduni Vienna seeks to largely rely on the use of any existing facilities and IT clusters. In the case of computationally very intensive research work, Vetmeduni Vienna will use the capacities of the super computer of the Vienna Scientific Cluster (VSC) of the Vienna University of Technology.

When it comes to big data and complexity science, Vetmeduni Vienna relies on the cooperation with, and membership in, the Complexity Science Hub established in 2019. The priority areas of epidemiology and the K1 project D4Dairy are the launchpad for a number of other closely related fields such as precision livestock farming and computational medicine.

In spite of available collaboration options with other research entities, Vetmeduni Vienna will upgrade the necessary IT infrastructure (computing power) at its campus and appropriately develop and renew the required large-scale research infrastructure.

The key component of these on-campus facilities is its VetCore Technology Centre. Vetmeduni Vienna intends to further expand this centre in line with available budget resources.

4.4.2. Operational Objective: Promote and Develop Innovative Procedures Along the Core Competences of Vetmeduni Vienna

Vetmeduni Vienna has a leading role in the field of veterinary research in Europe. This research expertise has spawned numerous innovations in diagnostics, therapy and prophylaxis. In order to continue strengthening and expanding this leading position, various measures have already been taken in the past and are to be further pursued in the future.

- **VetWIDI:**Under the 2002 Universities Act, universities have been given the possibility of commercially optimising their performance through subsidiaries. For this purpose, Vetmeduni Vienna has established the VetWIDI research holding as an interface between research at the university and business. The holding offers technologies and support for scientists, for spin-off projects of Vetmeduni Vienna and for companies seeking veterinary expertise.

- **VetIdeas:** Within this competition for ideas at Vetmeduni Vienna, innovative ideas in the field of research are being developed and implemented.

4.4.3. Operational Objective: Further Develop Knowledge and Technology Transfer to Business

Vetmeduni Vienna actively promotes the economic use of its know-how and research findings. The Christian Doppler (CD) Laboratories dedicated to special aspects of application-oriented basic sciences have resulted from efforts to pool the research capacities of Vetmeduni Vienna at the interface of science and business. Vetmeduni Vienna's CD Laboratories as at 31 Dec 2019 include: CD Laboratory for innovative Poultry Vaccines; CD Laboratory for Monitoring of Microbial Contaminants; CD Laboratory for Innovative Gut Health Concepts for Livestock, which is based on the experience gathered in the Animal Gut Health Research Cluster; and CD Laboratory for Optimised Prediction of Vaccination Success in Pigs. Vetmeduni Vienna is intent on establishing additional CD Laboratories.

The university is successful in patenting and commercialising research results in association with industrial partners such as in the field of innovative poultry vaccines, new oncological therapy approaches or diagnostic methods. Some of the direct consequences produced by its patent applications include long-term cooperation agreements with industry and licence payments. Advice for launching start-ups and developing prototypes is part of the services provided by Vetmeduni Vienna's Research Support and Innovation Unit and is destined to play a major role in the future as well.

In food safety and production, too, the commercial use of research results is being successfully implemented by the COMET (Competence Centre for Excellent Technologies) K1 Competence Centre 'FFoQSI – Feed and Food Quality, Safety & Innovation' for ensuring feed and food production and the K project 'D4Dairy – Digitalisation, Data Integration, Detection and Decision Support in Dairying'. Vetmeduni Vienna is seeking further possibilities for knowledge and technology transfer so as to utilise the economic potential of its research results.

The university is also embarking on the quest for possibly long-term strategic cooperation with partners in industry, business and retail, with the VetWIDI Research Holding being the point of contact and the provider of support for the market entry of university spin-offs.

There are plans for an information and web campaign (see Chapter 6: Social Goals) in order to enhance public awareness and perception of the know-how and expert competence of Vetmeduni Vienna.

In response to the technological developments in the digital sphere, the university has been active for many years in developing wildlife monitoring technologies and addresses the veterinary use of such technologies for farm and assistance animals. Vetmeduni Vienna is constantly enhancing its infrastructure for research and teaching through staff resources and capital investments such as equipping VetFarm with video and sensor-based monitoring systems. Thus, a new research group named 'Precision Livestock Farming Hub' (PLF Hub) was formed in June 2019. This hub is linked up with cooperation partners at BOKU, TU Vienna and FH Hagenberg as well as with the Complexity Science Hub to establish a globally recognised science cluster in this field. In recognition of the indispensable involvement of industry, Vetmeduni Vienna is constantly looking for cooperation agreements and joint bids for funding.

5. Teaching

The University of Veterinary Medicine, Vienna, offers a comprehensive range of veterinary, biomedicine and interdisciplinary programmes of training. It simultaneously occupies a special position amongst Austrian universities as it is the only institution that trains veterinarians. Consequently, in addition to university-based training and research activities, it is tasked with ensuring Austria-wide veterinary services, in particular in rural areas, through its graduates and relevant stakeholders.

In line with its responsibility of providing expertly trained graduates, the internationally recognised and excellent programmes of study and continuing education offered by the University of Veterinary Medicine, Vienna, intentionally delivers a high degree of hands-on training. Moreover, the university is committed to provide research-based education to students, thus laying the focus on interlinking research and teaching while training students to engage in processes of clinical thought, action and decision-making. The university sees itself as a place of teaching and learning with adequate scope for the joint development of new solutions based on creativeness and innovation.

One key to this approach is to include technological (digital) means in teaching and use them efficiently. In this context, digitalisation is regarded as a tool rather than a value or goal in itself. It is used to develop and realise top-quality, research-related teaching and learning scenarios of international dimension, thus enabling teachers and students to advance their talents and deliver excellent achievements. At the same time, it contributes to greater flexibility in study and provides new facets and possibilities to time-honoured didactic concepts.

The digitalisation of teaching helps improve academic feasibility, provide teaching responsive to the needs of target groups as well as ensure individualisation and the creation of additional offers. But digitalisation also expects students to display greater discipline in learning and greater ability to organise learning on their own. Vetmeduni Vienna has already introduced good framework conditions for this purpose. However, further efforts are required in this area in order to develop appropriate teaching and learning concepts, integrate this form of teaching into mainstream university operations and establish modern training and further training programmes.

Vetmeduni Vienna has undergone a paradigm shift from a teaching to a learning culture, from input to output orientation in training, meaning that it does not define disciplines and concrete teaching contents but rather learning targets, competences, skills and professional conduct. This is how the university produces excellently qualified graduates devoted to their academic, scientific and social tasks. Within this context, mentoring programmes and professional development options for teachers are of crucial importance to 'move from being a teacher to becoming a learning companion'.

Teaching is a matter truly dear to the heart of Vetmeduni Vienna. Under the 'Vet Mind Matters' initiative, the university undertakes to show vision and consideration in training. As well as comprehensive scientific and practical expertise, the university is to impart realistic job prospects to graduates. Moreover, while still studying, they ought to become prepared for professional life, for the challenges involved in striking a work-life balance and for the tensions arising from the occasionally diverging expectations of society and existing social, ethical and economic conditions. It is the university's stated aim to foster talent as well as young vets and their careers.

The University of Veterinary Medicine, Vienna, has defined the following three strategic goals in teaching:

- **Smart Education: Advance a competence-based, forward-looking range of study programmes**
- **Smart Student Relationship: Promote a culture with 'students in focus'**
- **Open Education: Expand innovative digital teaching and learning concepts**

5.1. Strategic Goal: Smart Education – Advance a Competence-Based, Forward-Looking Range of Study Programmes

The University of Veterinary Medicine, Vienna, stands for training which is forward-looking and research-led as well as practical, innovative and quality-assured both in undergraduate/master courses and postgraduate training/continuing education. Based on these criteria, the university assumes the social responsibility of producing graduates who have a positive influence on society and live up to the WHO's One Health tenet by making society aware that animal health and environmental health are inextricably linked with human health.

For the purpose of advancing the curricula offered at the university, its teaching and learning methods will undergo evidence-based adjustments in the forthcoming years. In this way, the university will focus on one of its main tasks of moving towards 'Smart Education' through supplementing and enriching existing programmes by digital means. In addition to existing possibilities, other digital training and in-service training formats will be developed and established.

In view of the international dimension of the university, the sustainable mobility of students and the changes in veterinary practice, it will be of key importance to enhance the range of digital teaching and provide instruction on how to handle digital technologies.

Another central objective for the next years will be to upgrade curricula to appropriately meet future demands and the needs of research-led teaching. The socially important aspect of sustainability and the shifting framework conditions caused by climate change or growing urbanisation as well as the altered status of animals within society are major aspects to be considered in this context.

To meet the motto of ensuring 'quality study', existing tools and methods of quality assurance will be further expanded. In addition, it is the stated aim of the university to offer students objective, standardised, reliable and valid examinations subject to quality assurance which span the entire process from teaching to examination and back to teaching.

In doing so, Vetmeduni Vienna relies on continuous external reviews of its quality assurance system. An essential aspect within this context is the periodic accreditation (since 1996) of Vetmeduni Vienna by the European Association of Establishments for Veterinary Education (EAEVE). One major element of accreditation is an audit of the entire spectrum of teaching and learning including staff, infrastructure, strategy and equipment.

The university completed the EAEVE evaluation exercise successfully in 2019, with this international accreditation being due for renewal in 2026 (see Chapter 10: Quality Assurance).

As regards its postgraduate training programmes, the university intends to expand them to meet, inter alia, the requirements of lifelong learning. In line with the expertise already available at the university in terms of research strengths and existing infrastructure, Vetmeduni Vienna intends to further develop master's study programmes and PhD or doctoral programmes as well as systematically implement measures of ongoing quality assurance including needs analyses of necessary research-led teaching contents or invite 'outside views' (see Chapter 10: Quality Assurance) within a Plan-Do-Check-Act cycle.

5.1.1. Operational Objective: Advance the Quality of Study Programmes, their Teaching and Learning Methods and Academic Feasibility

The University of Veterinary Medicine, Vienna, offers a comprehensive range of veterinary medicine, biomedicine and interdisciplinary programmes of training, with competence, professional and future orientation being centre-stage. In terms of lifelong learning, the university offers postgraduate training options in compliance with top international standards.

With the additional focus on 'Entrustable Professional Activities' (EPA) within the diploma degree programme in veterinary medicine, it has become possible to further combine competence-based teaching with activities in day-to-day practice and evaluate the knowledge thus gained.

Field of action1: Greater involvement of satellite facilities in training

In order to better incorporate the day-to-day challenges into study programmes, specifically in the area of farm animal medicine, part of the in-depth training in ruminant medicine is to take place at the satellite facility for Ruminants in the Alpine Region based in Innsbruck. By the same token, the VetFarm satellite is to be increasingly integrated into training programmes to explore and analyse, inter alia, aspects of sustainable livestock husbandry including digital means and livestock husbandry within changing framework conditions caused by climate change.

Progressing specialisation within veterinary training, too, will be embedded in the diploma degree programme in veterinary medicine with due regard to the criteria of EAEVE. In-depth training in the third part of the study programme would be particularly well-suited for implementing this project.

Field of action 2: Introduce new degree courses

Along the acknowledged research strengths of the University of Veterinary Medicine, Vienna, and in respect of the needs of business and society as well as of possible synergies and options of cooperation with other universities and education establishments, at least one or two new international master's programmes or university courses are to be introduced. This is to generate and transfer combined expert knowledge and optimise the advancement of young researchers. From a current viewpoint, these new programmes or courses could be created in the fields of digitalisation and precision livestock farming (PLF) as well as in the area of entrepreneurship and leadership. In addition, there are plans to take other measures to digitise the existing teaching environment.

Field of action 3: Place a special focus on academic feasibility

In further developing its curricula, the university will underscore academic feasibility. Greater flexibility, scope for lateral thinking, personality development and windows of mobility are integral parts of the curricula in order to support the different student groups as much as possible. By the same token, curricula are to foster interactive and interdisciplinary discourse as well as teaching formats where personal responsibility, a sense of initiative and self-directed learning are required and encouraged.

Field of action 4: Intensify outreach measures

For the purpose of ensuring veterinary care for farm animals, the university intends to intensify its outreach measures with a special focus on western Austria. With the initiative 'Talent Scout West Austria', the university wants to address talented pupils and raise their interest in the veterinary profession (see Chapter 6: Social Goals). To help pupils take well-informed decisions about their career choice, the initiative is not only intended for pupils of upper secondary school leaving age but also other age groups including lower secondary pupils. Roadshows are used to impart a realistic picture of veterinarians to these pupils with special emphasis on the tasks to be expected in the field of livestock care, workload, working hours and rates of pay. This could be supplemented by an app showing pupils the daily routine and duties of veterinarians in a light-hearted manner.

5.1.2. Operational Objective: Advance, Evaluate and Disseminate Innovative, Interactive Didactics with Due Regard to Imparting Cross-Cutting Competences

The university seeks to expand analogue and digital teaching skills among teachers for the purpose of developing the quality of higher education didactics. The introduction of needs-based services and individual support programmes as well as related coaching measures ensure major and sustainable quality improvements. Teachers will be encouraged to take certification programmes for university didactics as part of their career development efforts, while the programmes themselves will be embedded within the faculty development framework. At the annual Teaching Vets Symposium, top-quality and innovative teaching concepts are presented and awards are bestowed for outstanding achievements in this field.

Moreover, the university will increasingly address and meet the requirements of modern, innovative teaching. For this purpose, it needs to enhance hybrid teaching scenarios. Teachers will be supported in taking forward innovative teaching and learning settings of greater flexibility and high scientific and didactic standards. Another focus will be on enhancing a constructive feedback culture, expanding the competence-based design of curricula, utilising the collected data in a consistent manner (involving, inter alia, evaluations), professionalising and conducting research into teaching as well as continuing to develop digital teaching/learning scenarios. At the same time, the didactic design of interdisciplinary classes will encourage students to take an active stance and better motivate their performance. Methods of imparting knowledge by peers (peer teaching) or by learning based on problem-solving (problem-based learning) support exploratory and self-directed studying.

When it comes to examinations, the university will also embark on consistently developing didactics as well as contents and digital resources. The examination platform Q-Exam, which has been in use for many years, will be largely expanded so that it can conduct summative and formative e-assessments in a manner that is even more targeted than before.

The Small Animals Clinic currently under construction will play a special role within the efforts undertaken by the University of Veterinary Medicine, Vienna, to enhance training and continuing education. The clinic has been devised in such a way that, more than before, teachers can involve their students in day-to-day clinical practice. Students will be increasingly guided towards tasks such as patient registration, preliminary examination or communication with animal owners in order to learn about daily life at the clinic while being under their teachers' supervision.

The VetSim Skills Lab of Vetmeduni Vienna serves a similar purpose. Its lifelike silicone dummies enable budding veterinarians to learn clinical skills and practise them on their own before applying them to living animal patients. This helps students acquire the necessary routine and adequate self-confidence for actual clinical interventions. To continue meeting the practical requirements of training, the university plans to expand VetSim (see Chapter 9: University Clinics and Diagnostic Facilities).

With activities such as participation in strategic partnership programmes to be pursued in the future, the university plans to consolidate its unique position in the field of teaching, training and continuing education. Students and teachers will thus have an opportunity to regard and explore their discipline and the related methods as part of an international, interconnected and collaborative setting of teaching and learning. The University of Veterinary Medicine, Vienna, will also enhance its cooperation with medical and veterinary universities. To this end, it is a member of various organisations including the Austrian Society for Higher Didactics (ÖGHD), the Association for Medical Education in Europe (AMEE), the German Association for Medical Education (GMA) and Veterinary Education Worldwide (ViEW).

All these activities are subject to periodic evaluation for quality assurance purposes. The following principles of evaluation are to be continued at the University of Veterinary Medicine, Vienna:

- Classes are evaluated based on questionnaires for students and teachers. The results are communicated to the teachers and analysed by an evaluation team composed of students and teachers. The findings will then be forwarded to the Curricular Committee in question.
- Evaluation of the competences to be imparted within the diploma degree programme is based on so-called competence checks, wherein students and teachers asses the competence level of the students. These results, too, will be analysed in evaluation teams. In addition, the progress made by students of the diploma degree programme in veterinary medicine is measured every year by progress tests.
- Graduates are polled whether in hindsight their training has been satisfactory and met professional requirements.
- The evaluation of examinations enables students and examiners alike to check the status of learning as well as to steer learning processes and contents and adjust them where required.
- In addition, students of degree courses are polled at periodic intervals.
- Specific evaluation methods and tools are used when warranted.

5.1.3. Operational Objective: Shape Curricula in Respect of Digital Transformation, Create and Broker Promising Job Opportunities – Enhance Connectedness

The university is cognizant of the challenge of having to adapt training and professional development to a changing society and its newly emerging needs, and to raise appropriate awareness among students of these changes. In teaching, the University of Veterinary Medicine, Vienna, thus espouses a culture of 'taking care of one another', far-sighted training and continuing education, the possibility of shaping promising job profiles and opening up new fields of the profession to students.

Field of action 1: Connect students with alumni/alumna

It is a stated aim of the University of Veterinary Medicine, Vienna, to enhance the students' connection and connectedness with alumni/alumna and relevant stakeholders to provide a more realistic view of the kind of jobs available to graduates. This is also intended to enhance awareness of the ethical, societal, social and – in the case of graduates in veterinary medicine – the importance of health policies related to the various fields of activity.

Consequently, the university's alumni and alumna are of special significance in respect of public service obligations. The university aims to increasingly involve graduates active in various fields of the profession in training and in the further development of training to make students familiar with the attractiveness of possible job profiles such as practising veterinarians, researchers or veterinarians working for authorities, industry, business or health services.

Field of action 2: Promote national and international mobility and connectedness

The analysis of graduates carried out at periodic intervals has revealed, inter alia, that internships while studying provided direct access to their profession. The Internship and Job Exchange is to link up future employers with students and guide students towards the reality of everyday professional life under Austria's structural challenges. In order to foster the necessary mobility of students within Austria, the University of Veterinary Medicine, Vienna, has already put in place a special scholarship programme in cooperation with other stakeholders; more are to follow.

Alongside promoting national mobility, Vetmeduni Vienna continues to encourage and support the international mobility of its students. Consequently, it enhances the involvement of further partner universities and cooperation enterprises and continues to promote internships abroad (see Chapter 7: Internationality and Mobility as well as Cooperation and Networking).

In the field of veterinary medicine, both the university's own sites and the creation of so-called training practices play a crucial role with regard to networking and insight into possible fields of activity. Currently, practice-related training contents are specifically addressed at the university's own sites: the teaching and research estate VetFarm and the new satellite facility in Innsbruck. There is ongoing cooperation, in particular in teaching, with the TierQuarTier animal shelter of the City of Vienna as well as with the Graf Lehndorff Institute in association with the Brandenburg Stud Farm Foundation Neustadt/Dosse.

VetFarm has dairy cattle and pig holdings to offer students practical training on farm animals in particular. In the future, also training involving horses will be increasingly shifted to VetFarm where students can improve and deepen their skills and competences in mandatory exercises and practical training courses in livestock medicine. Moreover, the variety of animals available at VetFarm offers numerous topics for diploma theses and dissertations on the one hand, and cooperation partnerships on the other.

Based on additional elective subjects, the university intends to consolidate the students' relationships with existing vet training practices and create additional certified training to enhance networking with practising veterinarians. Vetmeduni Vienna intends to establish certified university-led training practices all over Austria, thus enabling students to meet practicians within elective subjects and get in touch with potential employers. Quality assurance of teaching in these training practices is based on a catalogue of defined criteria, which is reviewed periodically.

The vet training practices also serve to prepare students for their future professional life. During day-to-day work in these practices, the students not only see routine cases but also the tasks, challenges and fields of tension characterising the veterinary profession. The University of Veterinary Medicine, Vienna, intends to make yet another essential contribution to maintaining the basic supply of health care by veterinarians to farm and large animals in Austria (see Chapter 6: Social Goals).

Field of action 3: Increasingly impart competences for the world of work 4.0

For the purpose of imparting the relevant skills needed to meet the requirements of the world of work 4.0, students will be given enhanced support to build up and widen their digital, communication and collaborative skills, their planning and organisation skills as well as their competences in matters of gender and diversity. An essential prerequisite for meeting these requirements is the ability to handle digital information and tools safely and securely. The programmes offered to this end are to ensure that graduates of Vetmeduni Vienna have well-trained, general digital skills, while the degree courses are designed to meet the specific requirements of the disciplines involved.

Progressing digitalisation in all areas of life is factored into the development of adequate teaching and learning concepts to convey how daily work and its environment are changing in modern veterinary medicine. The Vetucation® learning platform has been in use for many years at Vetmeduni Vienna, with its teaching programmes being constantly enlarged and supplemented. A variety of teaching methods is used for this purpose, ranging from digitised lectures and comprehensive photo and video material from different disciplines, interactive tours of cattle sheds and pigsties to interactive case presentations (CASUS). In addition, the pool of questions used in the examination platform Q-Exam is constantly being enlarged. A new step in digital teaching is taken with the 'virtual outpatient clinic', where students can prepare case presentations under guidance and discuss them online.

Digitalisation changes daily work practice and offers veterinarians entirely new possibilities of data-based health monitoring and treatment in addition to time-honoured techniques such as digital radiography. In the future, this will play a central role in preventive medicine for livestock at the interface of veterinary medicine and agriculture. The use of digital and other technologies in practice and research is on the rise in other fields of the profession as well. With a view to preparing graduates for this situation, current research activities on the topic of digitalisation are included in teaching under the technical term 'precision livestock farming'. They involve the evaluation of animal-related data from var-

ious sources, the sensor-based collection and interpretation of behavioural patterns as well as the introduction of new technical possibilities and applications to capture physiological and pathological conditions in single animals and herds, the focus being on an automated collection of animal-related data to describe animal health and welfare taking into account any possible risks and socio-cultural impacts.

5.2. Strategic Goal: Smart Student Relationship – Promote a Culture with 'Students in Focus'

Although Vetmeduni Vienna has a unique selling point at the national level due to its unique study programme, it is well aware of the fact that competition for the best minds is becoming more acute not only in respect of attracting academic and support staff but also in respect of recruiting excellent students. Successful formats such as roadshows or summer camps have been in place for many years to reach out to interested pupils and achieve a heterogeneous cohort of students. As regards online media, the university plans a comprehensive relaunch of its website as well as a continuous upgrading of its online presence in relevant channels (inter alia Twitter, Facebook). The structured development of an alumni/alumna management system is designed to increase the involvement of this group in marketing measures. Successfully in place for many years, the selection procedures help identify the best-suited students for individual degree courses.

Within efforts to orient training towards the future, it is crucial for the University of Veterinary Medicine, Vienna, to prepare graduates for the increasingly rapid changes in professional, social and societal challenges and provide appropriate professional development programmes to this end.

Student-centred learning plays a particularly important role in this context. This form of teaching considers each student's individual needs while inviting and empowering students to take an active part in the studies and their design. With independent, outcome-based learning at the centre, students are encouraged to critically question study contents.

The culture of 'students in focus' is supported by new, interactive and multimedia teaching and learning methods. In-person and virtual learning dovetail, while critical thinking and the scrutiny of contents as well as personal responsibility, a sense of initiative and self-organisation are encouraged. Major changes in teaching and in the presentation of teaching contents are required to firmly establish and take forward this student-centred learning approach.

Touted as a more sustainable form of training by international findings, the contemporary concept of 'students in focus' goes far beyond imparting job-specific knowledge. It promotes the development of academic, scientific and personal skills in terms of personal development. At the same time, individual cooperation with teachers is moved to

a new quality level: measures will be taken to reduce the workload of students and expand spaces for learning.

Another objective of student-centred learning is for students to identify themselves with the university early on, thus fostering permanent relationships with its alumni and alumna in later years.

5.2.1. Operational Objective: Quality-Based Allocation of Student Places

With the introduction of limited student places and the establishment of quality-based admission procedures in 2005, the University of Veterinary Medicine, Vienna, has taken a major step towards providing student-centred learning and improving the quality of teaching to achieve the intended teaching targets. Limitation has helped to markedly reduce dropout rates and the number of students not taking exams ('no shows'). This has a particularly positive effect for veterinary care in rural areas as routine jobs can now be individually trained due to a better student-teacher ratio.

While limiting student places, the university has been able to introduce training in small groups, thus setting new standards in veterinary training in line with the principles of veterinary medical education. The University of Veterinary Medicine, Vienna, has a preeminent position in Europe, with graduates being sought after nationally and internationally in the most different fields of veterinary professions.

In order to maintain and further strengthen its status of international excellence in the future, it is absolutely necessary for the university to continue limiting student places and developing its strictly qualitative selection procedure in accordance with scientific criteria. Moreover, the university plans to introduce self-assessment exercises in advance of the admission procedure for those interested in studying at Vetmeduni Vienna .

Prospective students are required to participate in an admission procedure for selection and enrolment. In terms of social responsibility, however, the University of Veterinary Medicine, Vienna, is also obliged to consider student heterogeneity and the social dimension as well as ensure an accessible and transparent information supply. Against the backdrop of gender mainstreaming and social dimension mainstreaming, it is of major concern to Vetmeduni Vienna to pay greater attention to imbalances in the future and devise a set of measures which aims to strike a balance among admission applicants in respect of their origin, educational background and gender.

The university has a long history of closely cooperating with schools to make pupils aware of the importance of veterinary medicine (roadshow, science camp, summer school). With new initiatives such as the Open Lab Days or the digital Drawing Room Talks, the university wants to widen its cooperation efforts. They are specifically designed to reach out to young people and sensitise them to the importance of veterinarians and their profession. These targeted outreach activities are intended to arouse the pupils' interest through individual contacts and inform about the selection procedure for studying at the University of Veterinary Medicine, Vienna, (see Operational Objective 5.1.1).

5.2.2. Operational Objective: Enhance Assistance to Students During Study

With the focus on students, they are expected to assume personal responsibility and act independently. They are no longer 'listeners' to lectures but actively involved in shaping their studies (shift from task-based to performance-based studying), thus acquiring additional scientific and personal skills that go far beyond the conventional teaching objectives of curricula and university-based education and training.

When selecting students from any given cohort for admission to the University of Veterinary Medicine, Vienna, these individually required skills can only be considered to a limited extent. It will be part of the students' personality development to bring out these skills, be able to organise their study independently and make themselves familiar with interactive learning aids. The acquisition of these skills will be a major criterion for their prospects in the labour market and, consequently, for their future employability.

Promoting academic teaching, specifically in the form of collaborative learning, exploratory learning and critical thinking, is a matter truly dear to the heart of the University of Veterinary Medicine, Vienna. For this purpose, it is necessary to assist students in critical phases of their studies, continuously engage their curiosity and foster creative ideas. Optimal framework conditions taking into account, inter alia, the social mixture of students as well as an appropriate infrastructure including spaces for learning and encounter (see Chapter 3: Staff/Human Resources) are to promote equal opportunities and individual learning progress for students.

Structured supervision and peer-teaching activities are two essential policies embedded in clinical training. Teachers and students meeting at eye level makes for a friendly and inspiring atmosphere to ensure learning performance.

Peer feedback, in particular on scientific texts and final papers, is to be introduced as a learning enhancer, a tool for ensuring focused expert communication and invigorating the exchange of competences. This type of cooperative assistance is intended to turn the presentation of final papers into a positive experience.

The university will be consistent in following its path of transparency regarding performance requirements and evaluate this path on an ongoing basis. It will continue with ensuring optimal adjustments to teaching/learning targets and quality-assured examination formats.

In the future, Vetmeduni Vienna will enhance education research in order to create scientific, evidence-base foundations for innovative measures in veterinary medical education. In addition, the university will scientifically monitor the implementation of any didactic innovation. Research into medical education has a long tradition in the science of teaching. To meet the requirements of student-centred teaching, the University of Veterinary Medicine, Vienna, will focus on research into learning (science of learning), thus contributing to innovations both in teaching and in medical education research. For this purpose, the university intends to rely on interdisciplinary cooperation to firmly establish

research into medical education. Vetmeduni Vienna will actively disseminate the knowledge thus generated.

Living up to its responsibility for students, the university offers a wide variety of supportive measures such as individual coaching talks for students who have repeatedly failed at exams. It plans to create supervision groups and a mentoring programme tailored for introducing students to scientific work. In so doing, the university ensures 'personalised teaching and learning' in response to the students' individual needs. Continuation of the Social Survey of Students and the specific measures taken in its wake strengthen the university in its attempts to provide additional learning-friendly conditions geared to individual needs.

5.2.3. Operational Objective: Foster the Attachment of Alumni and Alumna

Alumni and alumna of the university play a key role and the university's aim is to greatly expand its active dialogue with them. To this end, it reaches out to alumni and alumna in a manner that is appropriate to this target group.

Measures such as bestowing upon students the role of 'peer teachers' foster sustainable attachment to the university by strengthening the development of their teaching competences.

Special attention is to be paid to alumni and alumna transitioning from university to work and by providing assistance to them after graduation. As well as proactively designed training profiles of curricula, this includes the availability of networks for providing internships and professional perspectives and the involving of alumni and alumna in feedback processes and off-campus teaching. Constant monitoring of employability and successful placements in the national and international labour market are important criteria for assessing the quality of training and loyalty to the university.

Speed dating events, where alumni and alumna present their practices and introduce the internships available to students, could help attach alumni and alumna to the university while also helping prepare students for professional life.

For this reason, the pilot project 'South Tyrol Meets Vienna' is to be further pursued and widened to encompass all Austrian regions in cooperation with the relevant stakeholders. This comprehensive linkage of students to graduates already working in the profession serves as a sustainable contribution to ensuring the supply of veterinary care.

Another essential component of attaching alumni and alumna to the university is postgraduate professional development. Vetmeduni Vienna is convinced that a consistent and top-quality further training programme helps intensify the attachment of alumni and alumna to their alma mater.

Over the long term, this attachment plus a strong alumni/alumna network are major building blocks for Vetmeduni Vienna to consolidate its national and international repu-

tation. Alumni and alumna can act both as ambassadors and as friends of the university. Therefore, a well-developed network of alumni and alumna is of significance for supporting or financing new collaborations and projects (fundraising).

5.2.4. Operational Objective: Intensify Quality-Assured, Postgraduate Further Training and the Development of a LLL School

Owing to its unique position as the only Austrian university to offer veterinary training, Vetmeduni Vienna enjoys a distinct place when it comes to providing professional development and making students aware of the importance and necessity of lifelong learning already during their studies.

The University of Veterinary Medicine, Vienna, is confronted with the responsibility and challenge of offering its graduates innovative postgraduate further training opportunities, the focus being on practice-based and future-oriented university courses that are continuously upgraded. In this context, internship and residency programmes are unique offers of comprehensive, interlinked and internationally recognised continuing education schemes.

Special emphasis is placed on further training opportunities and development perspectives for working alumni and alumna, all the more so as this contributes towards keeping them within the university's network. The objective is to retain the best alumni and alumna as instructors of training practices in the university's continuing education programmes. Moreover, the valuable feedback of alumni and alumna serves to improve the quality of programmes and their market orientation. Hence the attachment of alumni and alumna plays a major role in developing continuing education programmes.

The university also sees itself as a hub and competence centre for the continuous professional development of all stakeholders within the meaning of lifelong learning (LLL).

Consequently, further training and lifelong learning form integral cornerstones for the strategic direction and future development of the university.

The pooling of existing resources as well as strategic national and international partnerships with universities, ministries or interest groups are major aspects in this context.

Of special significance in respect of lifelong learning are the provision of in-service, flexible training programmes as well as the use of new digital teaching and learning methods. Moreover, it is decisive for postgraduate professional development to increase flexibility and permeability through the recognition of relevant expert skills.

There are also plans to enhance cooperation in the field of professional development to lift the mandatory periodic postgraduate training of veterinarians to university standard and introduce appropriate university courses to meet the further training requirements set out in the related official ordinance. A best practice example would be the training course for becoming an official veterinarian.

Beyond university-based postgraduate training, the University of Veterinary Medicine, Vienna, is aware of its social responsibility to offer events and courses providing further education in veterinary medicine and natural science to the interested public. For these events and courses, the university seeks cooperation with other institutions and organisations (see Chapter 6: Social Goals).

5.3. Strategic Goal: Open Education – Expand Innovative Digital Teaching and Learning Concepts

Digitalisation will bring about dramatic shifts in our graduates' daily work regarding the transfer and dissemination of knowledge as well as the teaching and learning methods at universities. Digital teaching and learning at Vetmeduni Vienna stands not only for digital tools in support of teaching and learning but also for a permanently evolving culture of innovative digital teaching and learning scenarios which assist research-based teaching to achieve 'enhanced learning' outcomes. The graduates of Vetmeduni Vienna should be able to position themselves in our modern information society in a competent and independent, enlightened and responsible manner. Teaching thus focuses on imparting knowledge and skills for the relevant fields of work in a digitally shaped society. In order to prepare students for the new framework conditions it is indispensable for the university to provide them with the kind of tools and resources that are state of the art in practice.

For this reason, innovative digital teaching and learning concepts are being evaluated and upgraded on an ongoing basis. Being a university of in-person teaching that upholds the tradition of research and teaching as constituting an entity, Vetmeduni Vienna emphasises blended-learning concepts supplemented by online courses and a mix of didactic scenarios. The use of e-learning elements revolves around the objective of enabling self-directed active teaching and learning within a digital environment. This approach includes the deliberate and coordinated combination of face-to-face learning phases in a real-world environment (inter alia, for clinical training) and physical learning spaces with online elements in flexible mobile scenarios. At the technical level, the university primarily seeks to avoid media discontinuities and ensure everyday suitability within a services infrastructure that is supportive of learning, while needs-based assistance rounds off Vetmeduni Vienna's efforts in this respect.

In veterinary and laboratory animal medicine, digital sheds and pens as well as digital data and animal monitoring are becoming a reality. They enable precise monitoring and control of animal health, thus contributing to animal welfare while facilitating and optimising animal management. In biomedical and veterinary research and in veterinarians' activities, digital techniques like machine-based learning have entered the picture. Online databases, electronic networks and other resources assist veterinarians in analysis and diagnosis. Digital resources make teaching at universities independent of place and time and thus available to a wider audience.

5.3.1. Operational Objective: Clinical Reasoning at the Centre of Case-Based Training

In the course of training, students of the University of Veterinary Medicine, Vienna, acquire a complete picture of possible diseases in animal patients and the treatment options available. Recent veterinary graduates who are new to everyday clinical life might be influenced by this comprehensive knowledge in their diagnostic decision-making and might apply a series of tests or examinations experienced vets would only use in exceptional cases.

This is why Vetmeduni Vienna will systematically enhance 'clinical reasoning' in training. Based on case vignettes, as well as the probability of diseases and their symptoms, students are to learn to make diagnostic decisions more rapidly and draft treatment plans. This is also intended to reduce the time animal patients spend in the clinics and avoid unnecessary costly examinations, while training the students' cognitive skills in veterinary decision-making and helping them reflect on professional attitudes and actions. Alongside clinical thinking and action, students are also guided towards developing and shaping due veterinary approaches (inter alia, on the basis of ethical, IT or One Health aspects). For instance, variations of gamification can be used to develop and simulate practice-like scenarios for the roles played by vets in real life to help students apply the acquired veterinary skills in a simulated practical situation.

5.3.2. Operational Objective: Strengthen and Improve Digital Literacy of Students and Teachers

Progressing digitalisation poses a major challenge not only to the university as an institution but also and in particular to teachers and students. The use of modern technological resources within university training requires an open mind and the readiness to deal with these technologies and the possibilities they offer. Digital literacy goes beyond mere functional IT skills. It includes all the skills undergraduates and graduates need to manage life, learning and work in and reflection on a digital society. What it means to be digitally literate differs according to the (professional) context and changes over time. Hence digital literacy is to be understood as a series of academic and professional practices supported by different and changing technologies. Vetmeduni Vienna creates suitable schemes to strengthen digital literacy among its students, teachers and staff.

The university will introduce and offer appropriate programmes targeted in particular at the digital immigrants among its teachers, as well as its partners in training practices, to help them acquire the skills and new roles they need as teachers to ensure modern and forward-looking training.

An important step in this direction has already been taken by Vetmeduni Vienna's participation in an international Erasmus+ project (Pan-European soft skills curriculum for undergraduate veterinary education – SOFTVETS). Greater focus will be placed on digital skills and competences in future curricula. This objective will be supported by the university with pilot projects, international cooperation and accompanying scientific research (learning research).

5.3.3. Operational Objective: Strengthen the Use of Digital Tools and Upgrade an Innovative Teaching and Learning Environment Conducive to Professional Careers

Greater use of digital tools is indispensable in all university areas if Vetmeduni Vienna wants to maintain its status as one of the top universities in international competition.

The application of these tools to teaching constitutes a special challenge and calls for coordinated and structured approaches. Consequently, Vetmeduni Vienna will prepare a guidance note listing the tools and options that have been evaluated for security reasons, admitted for use at the university and are made available to faculty. By the same token, the university plans to draft an etiquette guide informing faculty and staff on how and under what conditions they may use the new electronic means.

As regards examinations, the preparation and review processes of all exam questions, including questions for oral exams, are to be shown on the existing examination platform. Constant and appropriate updates and upgrades of the digital examination system are thus imperative. By enhancing digital examinations, Vetmeduni Vienna promotes the idea of inclusion and encourages examinations held independently of any location (enhancing, inter alia, mobility). At the same time, the university will boost digital checks on the status of learning. This will open up new possibilities of providing feedback (in an automated manner where appropriate) to students on their learning progress.} However, the results can also be used for other purposes such as adapting the contents of classes more rapidly.

Digital tools also open up great prospects in the field of research. As intended by the Open Data Directive of the European Union, research results and data are to be made publicly available for re-use. Vetmeduni Vienna will actively participate in an interuniversity evaluation of technologies offering secure options of protecting the copyrights and property rights of these data.

6. Social Goals

As driving forces and decisive players in shaping social, economic and technological developments, higher education establishments bear social responsibility across the entire range of their activities. As well as teaching and research, universities perform yet another core task called the 'third mission'.

This third mission is a cross-cutting area encompassing tasks and responsibilities for an exchange with society and business in mainly three directions:

- Knowledge and technology transfer (see also Chapter 4: Research);
- Continuing education and lifelong learning (see Chapter 5: Teaching);
- Social commitment in conjunction with regional conditions.

Within a wider understanding of this third mission, participatory concepts (such as citizen science) represent a further dimension. The so-called 'socially responsible university', 'regionally engaged university' or 'entrepreneurial university' are all aspects of the third mission.

The above illustrates the great scope of Vetmeduni Vienna's social responsibility. As a cross-cutting theme, it is closely connected with the core tasks of the university in teaching, research and scientific services. The major challenge for Vetmeduni Vienna in this context is how to communicate the great variety of its third mission activities in an appropriate and effective manner to the public – a challenge the university will increasingly address by using digital formats.

This Chapter will highlight the special responsibility of the university for ensuring equal treatment as required by law (Equal Treatment Act) and the universal right to education (Article 26 of the Universal Declaration of Human Rights). Within this context, it is of key significance to eliminate discrimination and provide equal opportunities to establish a study, research and working environment which is non-discriminatory and sensitive to diversity issues.

Furthermore, Vetmeduni Vienna has a unique role to play within the country as the Austrian centre of competence, knowledge and excellence for all questions of animal health, animal welfare, food safety and One Health. Owing to its unique constellation of subjects and the extent of applied and research-led teaching, the university is in a position to generate, use and share knowledge on animal health and food safety as well as on the manifold interactions between animals, humans and the environment and shed light on how they correlate. To this end, the following socially relevant fields are being systematically explored by the University of Veterinary Medicine, Vienna:

- Animal health
- Preventive veterinary medicine
- Comparative medicine
- Public health care system, food security and food safety

- Animal models
- Animal welfare sciences (including animal welfare law), animal husbandry and veterinary ethics
- Organismic biology and biodiversity

The university is aware of the manifold aspects of its social responsibility and sets itself the following strategic goals in relation to it:

- **Define and assume social-societal responsibility**
- **Position the university as a centre of knowledge and excellence in all matters of animal health**
- **Proactively position veterinary medicine within society (in terms of science that creates added value)**

6.1. Strategic Goal: Define and Assume Social-Societal Responsibility

When it comes to social-societal responsibility, Vetmeduni Vienna has defined diversity and equal opportunities on the one hand, and investigation of its past and history on the other, as the priority areas for the next years.

6.1.1. Operational Objective: Foster a Non-Discriminatory and Equality-Based Environment for Study and Work

Vetmeduni Vienna is committed to the objectives of equal opportunities, diversity and non-discrimination. It is also aware that non-discrimination at a university where people work together, teach, conduct research and learn every day is hard to achieve. Thus it is all the more important to reflect on one's own actions critically to be able to evolve into an inclusive institution through actions that keep an eye on any kind of discrimination and promote equal opportunities as much as possible.

This is why Vetmeduni Vienna sees diversity as an obligation, opportunity and potential all at the same time. To Vetmeduni Vienna, diversity encompasses social background, age, disease/disability, ethnicity, gender, civil status, sexual orientation, religion and belief as well as diversity of ideas, talents and background of experience.

In the eyes of Vetmeduni Vienna, a non-discriminatory and equality-based environment requires an understanding that we need to deal with one another in a respectful and sensitive manner and create the conditions for equal participation in university life for each and every one and furthermore what this university life should look like. The notion of diversity covers staff and students of the university as well as those interested in studying and candidates for studying at the university.

The professed aim of Vetmeduni Vienna is to be an institution of inclusion, meaning that it is constantly striving to effectively eliminate existing barriers, mechanisms of exclusion and discrimination.

Diversity and equal opportunities are to increasingly become a strategic cross-cutting theme of the university's development efforts

- to create a socially more inclusive access to study programmes and optimise academic feasibility in a diversity-sensitive manner;
- to enable both students and staff to pursue their personal and career development in the best possible manner;
- to be attractive and open to the best minds; and
- to achieve socially relevant and sustainable results in research and teaching, with heterogeneity being a conscious and consistent element therein.

The two main target groups of 'students' and 'staff' are specifically addressed, with the targeted policies and cross-dimensional approaches mutually supplementing each other.

With due regard to the National Strategy on the Social Dimension in Higher Education, and based on the analyses of the composition of the university's own candidates and students, Vetmeduni Vienna will introduce the following fields of action and measures to address the main target group: students. In so doing, the university will pay special attention their social origin (first generation students) and gender diversity as the 'focus topics' in implementing this operational objective.

Field of action 1: Improve the quality and accessibility of the information provided and enhance outreach activities and heterogeneity-sensitive study guidance services.

Vetmeduni Vienna will upgrade its information materials to include the social dimension (materials are available online and barrier-free for those interested in studying at the university and for individuals needing advice) and will check the presentation of study profiles, study options and job profiles with a view to the social dimension.

It will enlarge its information in cooperation with upstream schools and guidance providers, specifically in respect of the diversity dimension of social background (first generation students) and gender.

Vetmeduni Vienna wants to supplement its existing counselling services by aspects of the social dimension, test new forms of communication targeted at (younger) groups and increasingly present job profiles in primary schools and new secondary (comprehensive) schools as well as to all groups of the population.

Field of action 2: Facilitate entry into study

Vetmeduni Vienna is already known for the periodic evaluation of its admission procedure, buddy programme, tutors, welcome culture and its low-threshold introduction to scientific work. The university intends to further develop these formats and – in cooperation with other education establishments – supplement them, where possible, by needs-based and socially acceptable preparatory and bridging courses.

Field of action 3: Integrate heterogeneity-related elements in the organisation of study programmes and improve reconciliation of study with other areas of life

Student-centred learning and teaching, periodic reviews of curricula and semester plans for their feasibility in terms of studying and planning, review of the workload involved in study programmes, periodic monitoring of academic progress, flexible childcare, extended opening hours for learning spaces and library as well as the provision of quiet rooms and rooms to retreat to (for example for breast-feeding) to meet the special needs of students are already in place at Vetmeduni Vienna.

Continuing digitalisation of teaching, the enhanced use of accessible e- and blended-learning programmes, the further development of additional forms of intervention to prevent discontinuation of study and improve study progress as well as the extension of the university's internationalisation@home scheme are to help optimise the organisation of study and academic progress in a diversity-sensitive and heterogeneity-based manner.

In order to address another major target group, namely that of staff members, Vetmeduni Vienna primarily relies on the fields of actions and policy measures described below. For this purpose, Vetmeduni Vienna starts with a multi-dimensional approach, the focus being on measures that remove barriers and improve framework conditions in general and irrespective of diversity dimensions. These general measures are flanked by specific measures for this target group revolving around the existing and already defined 'focus themes' of gender and family.

Field of action 1: Increase diversity competence and sensitise members of university staff

Vetmeduni Vienna seeks to extend its information offer that is accessible throughout Austria in order to enhance awareness and knowledge on how to address diversity and create a culture of inclusion. The build-up of diversity competence, in particular gender competence, will be increasingly and systematically integrated into the (further) training programmes for all university employees.

Field of action 2: Remove barriers

Inclusion cannot work without barrier-free accessibility since people may be prevented from participating if barriers continue to exist. Vetmeduni Vienna defines this kind of accessibility as a social dimension which enables all people to participate in university life in an equal, self-determined and independent manner.

Based on this tenet, barrier-free accessibility is a central element of the university's infrastructure planning and development as well as facility and IT management systems. The university undertakes to proceed in a barrier-sensitive manner and ensure that, for instance, forms are easy to understand or that internet pages and e-(learning)programmes are designed so that they can be used by each and everyone.

Field of action 3: Increase family-friendliness

As a certified family-friendly university (hochschuleundfamilie), Vetmeduni Vienna sees itself as an establishment that is family-friendly, life-course oriented and diversity-sensitive. To this end, Vetmeduni Vienna gears its measures and activities of helping reconcile work and family life towards all its employees irrespective of gender.

Flexible working time models, various part-time models, working from home, parent-child offices, an on-campus kindergarten, childcare available during summer and autumn holidays, encouraging parents to spend time with their children (parental leave) and facilitating return to work are only some of the measures already taken by Vetmeduni Vienna and to be continued or, where possible, supplemented by other formats such as emergency childcare. Also the option of working from home is to be reviewed based on the experiences made during the Covid-19 pandemic and with due regard to work requirements.

6.1.2. Operational Objective: Establish a Culture of Remembrance

For some years, 'Remember for the Future' has been the motto chosen by Vetmeduni Vienna to address its Nazi past. Within a four-year research project sponsored by the Austrian Science Fund (FWF), the university has delved into the history and role of Vetmeduni Vienna during the National Socialist period.

The published research results have created a knowledge base of contemporary history which can be tapped into for a continuing process of critical reflection.

This helps Vetmeduni Vienna to meet its responsibility of establishing a university-wide culture of remembrance. In order to develop related policy measures, Vetmeduni Vienna seeks to cooperate with the Department of Contemporary History of the University of Vienna. The policy measures are to focus on different target groups and areas. There are plans to offer appropriate courses such as free electives. In addition, artists are to be invited to develop a modern-day and freely accessible sign of remembrance. With the historical place of events being elsewhere (= the former university location in Linke Bahngasse, 3rd district), Vetmeduni Vienna will thus move its own history to the current location, the Floridsdorf-based campus, and create a place of reflection there for all to visit. Another approach is to communicate the knowledge gained from research findings to date, and to this end, a low-threshold format is to be developed for all interested parties.

6.2. Strategic Goal: Position the University as a Centre of Knowledge and Excellence in all Matters of Animal Health

'We know most about animals, their circle of life and environment' is how Vetmeduni Vienna defines itself. The university is aware of its responsibility to assume an active role and communicate its knowledge of animals and their manifold importance to the general public. In so doing, the university will place greater emphasis on the unique position of veterinary medicine in integrative health management at the interface of animals, humans and the environment (One Health) because veterinary medicine, given its unique constellation of subjects, is the only discipline active at the crossroads of these three components of One Health.

6.2.1. Operational Objective: Promote Knowledge Transfer Within the Context of One Health and Animal Health

No other discipline is so inherently placed at the interface of animals, humans and the environment as veterinary medicine. Recent years, as well as recent developments, have shown that many emerging challenges and diseases are due to more contacts between humans and animals, growing human intervention in natural habitats, intensified food production, climate change and increasing international transport. Roughly two thirds of all infectious diseases are zoonotic, which means they are caused by pathogens that can spread from animals to humans and vice-versa.

These challenges can only be met by healthcare and research systems with rapid response and great resilience: One Health.

Acting under the One Health approach refers to the joint, integrative management of health risks relevant to the development and transmission of diseases, the focus being on animal health, human health, protection of the environment and avoidance of disease transmission.

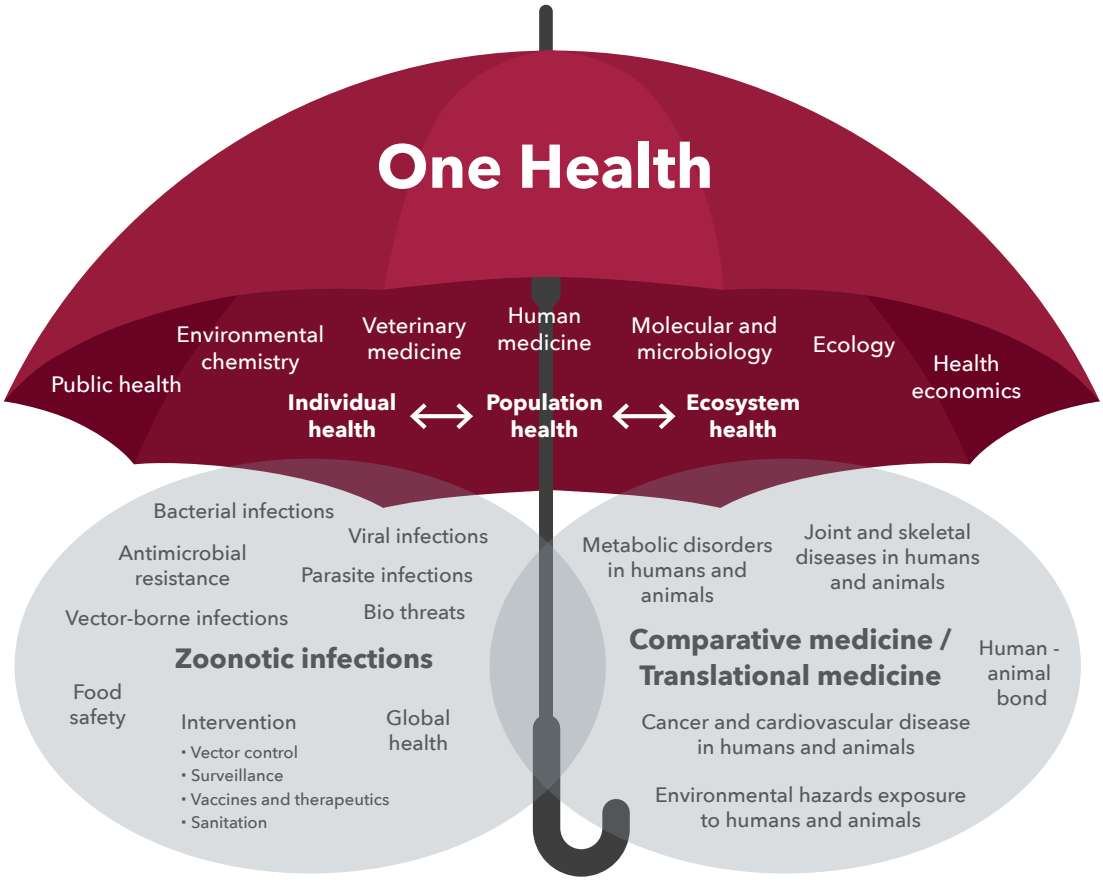
Veterinary medicine plays a key role in One Health matters regarding:

- integrative health management;
- the fight against infectious diseases;
- the public health care system in respect of food of animal origin (food safety);
- sustainable food supply to a growing world population (food security); and
- responsible management of animals and natural resources.

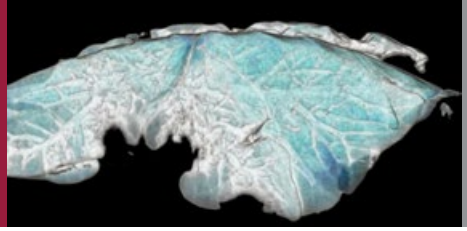
Its strong links with all the major stakeholders in this area represent a special asset for Vetmeduni Vienna.

Vetmeduni Vienna wants to establish the **Next Generation Experts Network in One Health** in close cooperation with the relevant players from Austria's medical universities, from the University of Natural Resources and Life Sciences/Vienna, the Austrian Agency for Health and Food Safety, the Federal Environmental Agency, health and veterinary authorities and animal health services, university-based and official institutions for biology and wildlife science, forestry, water management and meteorology as well as climate research, from institutes for data management, modelling and risk analysis (for example the Complexity Science Hub) as well as from sectoral businesses (biomedical/medical-technical start-ups), associations (such as animal breeding associations) and stakeholders (for example chambers). Within this context, special emphasis is to be placed on the next generation of interdisciplinary teams. It is of particular importance to pool and – backed by career positions depending on the budgetary funds available – widen the expertise of up-and-coming scientists to be able to pursue relevant and resilient research, foster the transfer of knowledge and (re)act quickly when a crisis occurs.

Figure 5: One Health Umbrella



Since one of veterinary medicine's core expertise is in animal welfare, and since Vetmed-uni Vienna is committed to assuming 'responsibility for animals and humans', the university deems itself compelled to contribute to One Welfare as well. The term One Welfare is to be understood as an appeal to recognise the many correlations between human well-being, animal protection and integrity of the environment. It aims to improve animal welfare for the purpose of improving human well-being (or vice-versa), coordinating measures between veterinary and other services as well as protecting the environment in terms of a fundamental step towards the well-being of humans and animals.



6.2.2. Operational Objective: Foster Sustainable Action in all Areas of Activity

Vetmeduni Vienna is committed to making a positive contribution to sustainability, with the latter being an integral part of everyday life.

By joining the Austrian Alliance of Sustainable Universities and being awarded the EMAS certificate, Vetmeduni Vienna underscores the special emphasis it puts on sustainability.

It assumes responsibility for sustainable action in teaching, research, knowledge transfer and university management by taking into account the ecological, economic and social dimension of sustainability so as to play a part in the shaping of a society with great potential for the future and worth living in.

It seeks to contribute to the design of veterinary systems and areas of responsibility in such a way that the limits of environmental viability are not exceeded and natural resources are conserved for future generations.

In medicine, the topic of sustainability is primarily embedded in the One Health and Sustainable Medicine approaches. The main focus of Vetmeduni Vienna encompasses animal health and well-being, preventive veterinary medicine, public health care as well as food safety. The university is aware that its position at the interface of animals, humans and the environment involves the special obligation of espousing sustainability in the economic, ecological and social sense.

The contribution of Vetmeduni Vienna lies primarily in the following Sustainable Development Goals 2030:

- SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- SDG 3: Ensure healthy lives and promote well-being for all at all ages
- SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The university will take further action both in the area of teaching and professional development and in the area of research, clinical medicine and business ecology to continue contributing to the SDGs 2030. In teaching, this means incorporating sustainability into the university's curricula, launching new classes as well as a series of professional development and continuing education courses to raise awareness in this respect. In research, the university will endorse these sustainability goals by encouraging One Health – One Welfare, biodiversity and interdisciplinarity as well as by promoting sustainable research both in terms of exploring aspects of sustainability and in terms of carrying out such research in a sustainable manner.

Sustainable research will be underpinned by addressing social requirements – such as sustainable and animal-friendly husbandry and production – in a critical and holistic way on the one hand, and by maintaining a dialogue with the stakeholders concerned – hunting communities or breeders – on the other. In the clinical field, the new Patient Management Information System will be put to even greater use with the help of big data applications for interuniversity and research cooperation projects.

In environmental and holistic terms, Vetmeduni Vienna intends to go climate neutral. The first step in the right direction would be to prepare a greenhouse gas balance, based upon which the university could draft reduction targets and measures together with the competent ministries.

In public relations and other outreach initiatives (discussions, fora, information events), the university will expand its priority communication on sustainability goals within the context of One Health – One Welfare.

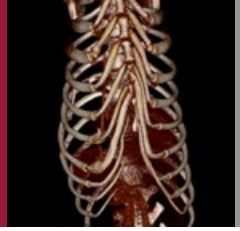
6.3. Strategic Goal: Proactively Position Veterinary Medicine Within Society (in Terms of Science that Creates Added Value)

The general public benefits in manifold ways from the results of veterinary research, teaching and the related services provided. Veterinary medicine thus is an indispensable component of our society – a science that creates added value. Its social function lies in thinking in a systemic and agile manner, thus giving society food for thought, highlighting new perspectives and entering into an active dialogue with society including topics of disagreement.

Vetmeduni Vienna is committed to this social mission, producing graduates who are equally committed within the framework of their academic and scientific training background. Research conducted at the university and the resultant innovations are geared towards generating a direct benefit for animals, humans, their interactions, the environment and, consequently, for the common good.

6.3.1. Operational Objective: Expand the Regionalisation Initiative VetmedRegio

A central objective for Vetmeduni Vienna is to ensure veterinary care throughout Austria in the long term. In cooperation with the Federal Ministry of Labour, Social Affairs, Health and Consumer Protection (BMASGK) and the Austrian Chamber of Veterinary Surgeons (ÖTK), the university commissioned the Institute for Advanced Studies (IHS) to prepare a study on veterinary care in Austria, which was published in 2019 and serves as a basis for further targeted activities.



In order to continue to ensure optimal and country-wide veterinary care in Austria, including remote areas, Vetmeduni Vienna has launched the VetmedRegio initiative with special emphasis on livestock medicine and veterinary care in rural areas. The earliest successes of the initiative include the inauguration of a satellite facility in Innsbruck in cooperation with the Austrian Agency for Health and Food Safety (AGES), the signing of a letter of intent with the federal state of Carinthia and the organisation of the 1st Mallnitz Days.

The purpose of the Innsbruck satellite is to become a competence centre for ruminants in the Alpine Region with a focus on both teaching and research. Building this competence centre will be one of the key priorities of Vetmeduni Vienna in the forthcoming years.

In addition, Vetmeduni Vienna seeks to intensify and expand cooperation with Austria's federal states as well as South Tyrol by 2030. Sustainable cooperation, jointly used infrastructure, connectedness to stakeholders and regular event formats will be established as will be a structured exchange between students and their potential future employers on site (see Chapter 5: Teaching). The existing policies of reaching out to agricultural schools are to be expanded. In regions in need of young veterinarians in the long term, the outreach policies already in place will be supplemented by measures for younger target groups (kindergartens and primary schools).

6.3.2. Operational Objective: Develop and Implement the Joint Strategy for Strengthening Veterinary Care

Although Austria does not suffer from any shortage of veterinarians, rural regions increasingly have problems finding them. This phenomenon is not restricted to Austria, but rather can be observed in all highly industrialised countries. Vetmeduni Vienna is meeting this challenge together with the relevant stakeholders and the rural regions concerned. It will continue down this road and take forward efforts to draft a strategy which includes accurate data collection and analysis regarding the current situation on the one hand, and a set of measures designed to optimise country-wide veterinary care and thus ensure animal health and food safety in Austria on the other.

The measures include:

- Continue and expand outreach policies: they are designed to canvass for students from rural areas early on (see also VetmedRegio).
- Tyrol satellite for Ruminants in the Alpine Region: in order to better incorporate the day-to-day challenges into study programmes, specifically in the area of farm animal medicine, part of the in-depth training in ruminant medicine is to take place at this satellite facility.

- Alumni/alumna surveys and needs analyses: analyses of employment and expectations among students or alumni/alumna are to identify factors that are decisive for employability.

- Cooperation with stakeholders: together with the Austrian Chamber of Veterinary Surgeons and its regional chapters, with the federal states, communities and their representatives, Vetmeduni Vienna will devise policies on how to better ensure veterinary care throughout Austria in the long term. These policies will be supported and implemented by all the parties involved in the form of a joint project.

- Information campaign during study: within mandatory classes of the diploma degree programme in veterinary medicine, the structural challenges faced by veterinarians are presented and initial contacts between students and practising veterinarians are promoted.

6.3.3. Operational Objective: Promote Responsible Science and Citizen Science

The role of universities has greatly changed in recent years. Due to the multitude of tasks to be performed, their work has been embedded more firmly within a social context. Vetmeduni Vienna is aware of its socio-political responsibility and is committed to further pursue this responsibility. Major elements of this socio-political responsibility include the university clinics in terms of important interfaces to the public but also and in particular the university's research profile characterised by scientists who meet the urgent challenges of our time. These challenges can only be identified and solved by interdisciplinary collaboration. To do this the university must adopt a critical relationship with itself and society in order to produce research that is of actual relevance. Numerous research projects concern important areas of social policy by addressing topics such as disease prevention, health, food security and food safety as well as the protection of animals and nature.

Responsible science covers a variety of aspects in the dialogue between science, business and society. Vetmeduni Vienna has identified special areas of activity to this end including: co-production of knowledge by science and society, communication and teaching of science as well as ethical responsibility of research.

Several priorities have been defined for the area of co-production of knowledge by science and society as well as for communication and teaching of science. Vetmeduni Vienna pursues its socio-political responsibility by offering, inter alia, public events and specific further education programmes to those interested and by assuming its role as a mediator between the general public, business, non-profit organisations and associations. The involvement of citizens in research within citizen science projects is another key issue. Examples of the commitment of Vetmeduni Vienna in this area would be the Austrian Ornithological Centre (AOC), the 'official examination and coordination authority for assistance/therapy/companion dogs and qualified dog trainers' or the research programmes in the fields of animal behaviour, animal welfare science and human-animal interaction.

In order to make the public aware of the importance of basic research, the university will enhance its efforts to communicate newly discovered findings from these fields of research in a more targeted manner.

Measures to further strengthen the socio-political responsibility of the university include:

- **Measures for specific target groups and topics:** proactively enhance information campaigns, communication initiatives and participation procedures to foster the perception of how important the university's facilities and activities are at the interface to the public (as is exemplified by its research, clinics, ornithological centre).
- **Citizen science projects:** participate in further citizen science initiatives and projects of the ministries
- **Introduce a consistent health documentation for animals:** the Animal Hospital Information System (TIS) of Vetmeduni Vienna has been developed to manage and document the patients of the animal hospital and their medical data. With the university clinics evolving into referral clinics, the new Patient Management Information System can be used as a basis for a new comprehensive electronic health documentation system for animals in a digital environment.
- **Continue and widen the information campaign on the issue of animal experiments:** already launched in 2016, this initiative aims to inform the public in a science- and fact-based manner about the legal framework, the benefits and setup of animal experiments and, in doing so, eliminate prejudices. This information campaign is to be continued on a wider and optimised basis.
- **Thematic priority in the area of replacement and supplementary methods:** the most far-reaching concept under the Three Rs principle is the avoidance of animal experiments and replacing them with alternative procedures. Vetmeduni Vienna continues its efforts to be guided by the Three Rs principle when it comes to animal experiments not only in its own research facilities, but also to develop alternative methods which can be used by other testing and research facilities.

6.3.4. Operational Objective: Enhance Knowledge and Information Transfer and Communication to Society (Science to Public)

Science and innovation communication opens a window into research and enhances understanding amongst the general public for the working methods and perspectives of scientists.

Within its communication measures, the university focuses on proactive communication using, inter alia, new virtual formats to transfer knowledge and innovation to society. A key element is to impart the significance and benefit of its scientific work to the general public.

Vetmeduni Vienna uses a variety of ways and means to convey information about the work performed at and by its entities to the public, including information to the media in the form of press releases; its own Vetmed Magazine; information folders for animal

owners; science slams where young scientists present their research topics; information materials on various issues such as animal experiments; as well as a number of on-campus activities such as the Campus Open Day, garden days, science camps for young people, holiday camps and children's universities.

Electronic channels play an essential role in the university's communications strategy. Roughly 2,500 to 3,000 visitors inform themselves daily via the university's website www.vetmeduni.ac.at and generate around 2,000,000 page views per year. In addition, various social media channels (Facebook, Twitter, YouTube, Instagram) are used for communicating with and informing the public.

For the purpose of intensifying its knowledge and information transfer, the university will take the following measures:

Field of action 1: Communications initiative with priority topics

Every year, in addition to its previous communications strategy, the university will highlight priority topics in relation to the SDGs and launch periodic – including unconventional – information campaigns throughout this year. These information campaigns will be disseminated through all available channels. Approximately every quarter, the university will organise public events on the chosen topics such as press briefings, action days, information talks and discussion rounds.

Field of action 2: Cooperate with schools focusing on upper secondary schools

For many years the university has already cooperated very closely with schools to make pupils aware of the importance of the tasks undertaken by Vetmeduni Vienna. Analyses have revealed that cooperation with secondary schools, in particular with upper secondary levels, can still be improved. With new initiatives such as the Open Lab Days or Open Simulation Days, the university intends to widen its cooperation efforts specifically towards upper secondary level pupils. This outreach effort is targeted in particular at young people in rural regions to sensitise them to the diversity of veterinary medicine, its significance and job profile.

Field of action 3: Underscore the role of university clinics in knowledge and information transfer

Owing to the combination of basic research, translational research and applied clinical research, Vetmeduni Vienna is uniquely placed within this mutually fruitful process to offer innovative methods of diagnostics, therapy and prophylaxis for its animal patients on the one hand, and develop and tailor new evidence-based methods derived from these patients' needs as identified in day-to-day clinical work on the other. The knowledge thus gained is included in teaching and disseminated both among animal owners and veterinarians in terms of appropriate knowledge transfer. The university thus plays a leading role in improving care for animal patients and animal health in a sustainable manner.

Field of action 4: Enhance digital public relations

Extensive digitalisation has significant consequences for the transfer of knowledge and information to society. Digital transformation will enable Vetmeduni Vienna to increasingly use digital media and technologies for transferring knowledge and information to the general public. It provides an opportunity to reach out to specific target groups. For this purpose, the university will have to clearly define these target groups, find out which medium fits which of these groups and select the precise kind of channels that are most relevant to Vetmeduni Vienna.

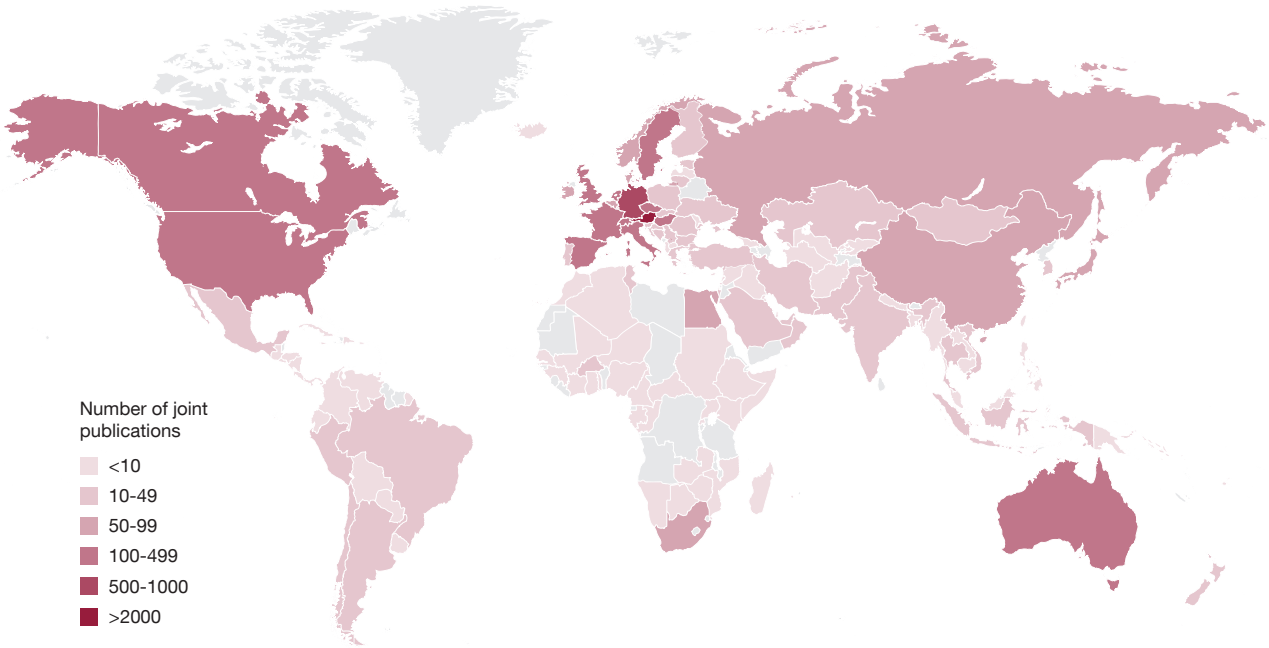
7. Internationality and Mobility as well as Cooperation and Networking

Vetmeduni Vienna has a long history of internationality. Its special position as Austria's only university of veterinary medicine and its international reputation have enabled Vetmeduni Vienna to seek, alongside cooperation with national institutions and research entities, targeted and dedicated cooperation with veterinary faculties and universities abroad and become a sought-after and appreciated cooperation partner throughout the world.

International University Networks

In terms of further developing veterinary medicine at university level, Vetmeduni Vienna relies on close collaboration and exchange with national and international universities. Cooperation projects with internationally leading scientists and teachers are important elements in this context. Knowledge and innovation transfer is also fostered by various programmes of Vetmeduni Vienna for transnational mobility of talents and ideas.

Figure 6: Density of Cooperation



Within its internationalisation strategy and intercultural initiatives, Vetmeduni Vienna aims to internationalise all areas – teaching, research, scientific services, administration and related services – as far as possible and has joined international networks or created such networks.

Vetmeduni Vienna entertains numerous cross-border cooperation projects with, for instance, the universities of Zurich, Munich, Brno, Budapest and Ljubljana located in neighbouring countries. The university is a founding member of VetNEST (Veterinary Network of European Student and Staff Transfer), a network launched to help facilitate the exchange of students and teaching staff and later joined by seven universities of veterinary medicine (Brno, Budapest, Kosice, Ljubljana, Vienna, Wroclaw, Zagreb). Five other veterinary faculties (Belgrade, Pristina, Sarajevo, Skopje and Tirana) are members of the wider network. Financial support for mobility activities within the network is provided by CEEPUS III (Central European Exchange Programme for University Studies).

Based on years of cooperation between the University Clinic for Poultry and Fish and partners in Ethiopia, it has been possible to establish the Poultry Aid centre of excellence in 2020 in association with the College of Agriculture and Veterinary Medicine of the Jimma University. This centre is supported by African Livestock Productivity and Health Advancement (A.L.P.H.A.) – an initiative fostering sustainable animal production in industry – and by the Bill & Melinda Gates Foundation.

Moreover, Vetmeduni Vienna is a member of ASEA UNINET, AFRICA UNINET and Eurasia-Pacific UNINET (EPU), which are other university networks managing the exchange of scientific staff and students and research cooperation with Asian countries.

The success of this internationalisation initiative is reflected in the countries of origin of both students and staff of Vetmeduni Vienna: roughly one third is from abroad in each of these two groups. To enlarge its international footprint, Vetmeduni Vienna continues to enhance internationalisation in study and teaching by focusing on ways and means of digitalisation such as distance learning. Moreover, the use of these new technologies enables the university to combine internationalisation and sustainability and increasingly offer its students curricula run by native speakers of various languages, specifically English.

Within the meaning of sustainability, resource conservation and social inclusion, Vetmeduni Vienna will also expand its internationalisation@home programme over the next years by encouraging internationalisation of the campus and strengthen the intercultural competence of students and staff on the campus. The campus of Vetmeduni Vienna provides a good breeding ground for a diverse, multicultural life at the university. The aim is to increasingly attract international experts to the campus for PhD and postdoc positions to better reflect internationality and further strengthen Vienna as a university location.

Research Cooperation

In line with 'smart specialisation', Vetmeduni Vienna often plays a coordinating role, especially so for the research priorities of livestock medicine, biomedical research, food safety, behavioural and cognition research as well as population genomics at the life science hubs of Vienna and its environs (see Chapter 4: Research and Development).

In the area of livestock medicine, strong international partners from industry have come on board as cooperation partners for the CD Laboratory for innovative Poultry Vaccines and the CD Laboratory for Optimised Prediction of Vaccination Success in Pigs. Established in 2017, the Excellence Centre for Poultry Feed and Health funded by the cooperation programme Interreg V-A Austria-Hungary has created an international and regional research alliance with the Georgikon faculty of the Pannonian University in Hungary. The Interreg Programme AT-CZ for Innovations in Poultry Medicine (INPOMED), launched in 2019 and run in cooperation with the Veterinary Research Institute of Brno, aims to establish close expert and intercultural cooperation between the two partner institutions and strategic partners to bring together science and the poultry industry in active collaboration and improve the knowledge base in this sector and the region.

In biomedical research, the university's close national links have resulted in a number of FWF-funded special research areas, FWF doctoral programmes and single projects in cooperation with the most important institutions in this field such as the Medical University of Vienna (Meduni Vienna), CeMM, IST Austria and partners at the Vienna Biocenter. Within this network, Vetmeduni Vienna plays a central role in Austria regarding laboratory medicine and laboratory animal pathology and has established, together with Meduni Vienna, a laboratory animal platform. Other cooperation partnerships with the Ludwig Boltzmann Cluster Oncology and the K1 Centre for Biomarker Research in Medicine (CBMed) led by Meduni Graz strengthen this field of research.

The area of food production and safety saw the creation of the Austrian Competence Centre for Feed and Food Quality Safety and Innovation (FFoQSI) in 2017 under the lead of Vetmeduni Vienna based on years of cooperation among the partners in BIOS Science Austria. This K1 competence centre includes Austria's leading scientific institutions and companies ranging from innovative start-ups and SMEs to national and international market leaders in the agri-food sector. IFA Tulln and the Bioactive Microbial Metabolites (BiMM) Core Facility are other examples of connectedness in this area.

Together with the University of Vienna and with the support of the Messerli Foundation, a unique cooperation partnership could be created in the area of behavioural and cognition research. The research infrastructure in place at the Haidlhof estate, the Wolf Science Center and the Clever Dog Lab form the basis for this cooperation and attract young researchers from all over the world.

In wildlife research, mention must be made of the cooperation between the Research Institute of Wildlife Ecology of Vetmeduni Vienna and the Institute of Wildlife Biology and Game Management (IWJ) of the University of Natural Resources and Life Sciences. Their complementary expertise enables the cooperation partners to blend their scientific views on the needs and behaviour of wildlife within its environment with nature-friendly agriculture and forestry, hunting and landscape use as well as intensive dialogues with stakeholders.

Many of the above areas could be additionally strengthened with modern infrastructure financed by the Higher Education Structural Resources (HRSM).

The strategic goals of Vetmeduni Vienna in this area are defined as:

- **Enhancing internationality and mobility**
- **Strengthening Vetmeduni Vienna as a centre of knowledge through strategic partnerships**

7.1. Strategic Goal: Enhancing Internationality and Mobility

In line with its tradition and characteristics, Vetmeduni Vienna seeks to play a leading role in all university matters. This excellence is also reflected in the university's successful participation in the international competition for staff, students and research funding. In addition, the university is appreciated as a stable and attractive partner in research alliances.

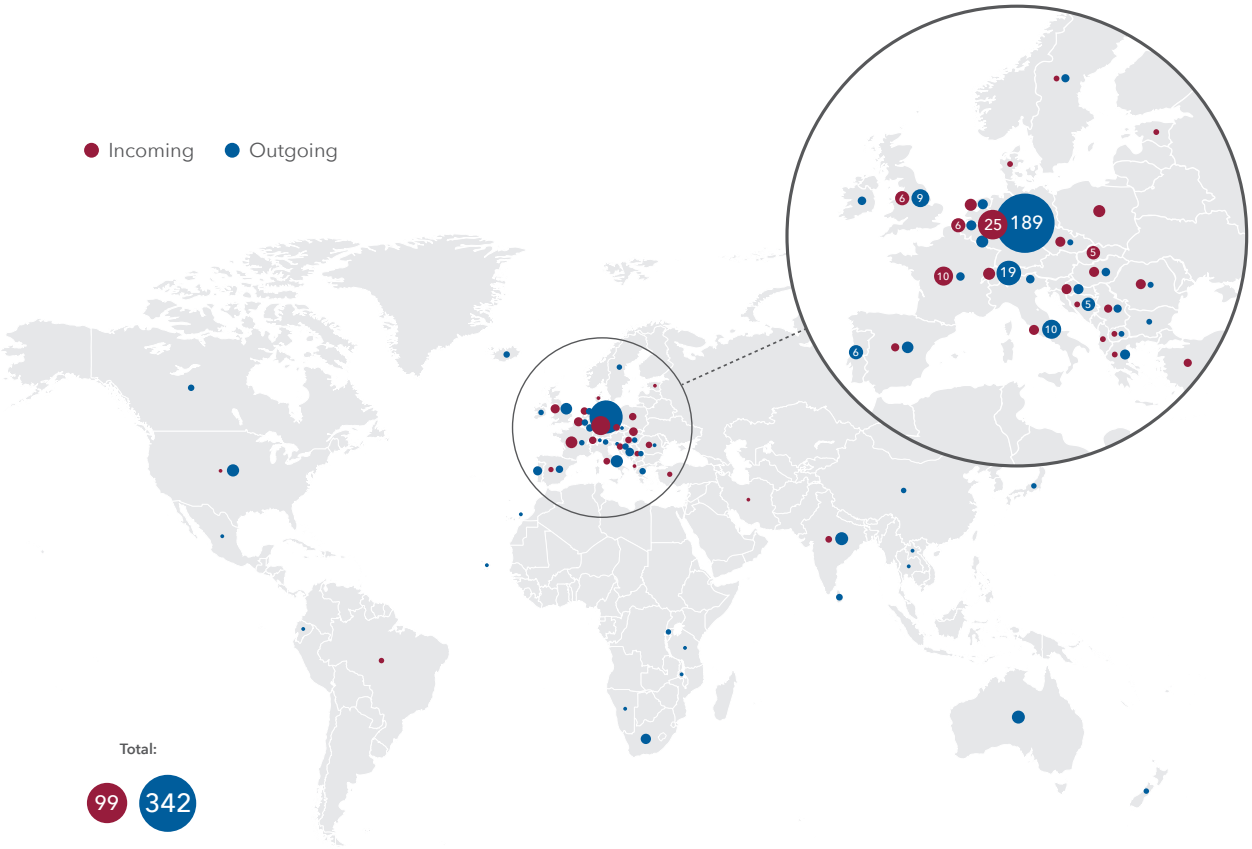
Internationality at Vetmeduni Vienna is manifest in different ways: in its participation in international research projects, in various internationalised postgraduate study programmes and summer schools in cooperation with international companies, in the mobility of its students, teachers and support staff, but also in the integration of foreign students and staff.

With a view to the increasing importance of sustainability, the careful management of resources and the need of social inclusion, the university will continue to advance its successful internationalisation@home programme. Under this programme, the campus of Vetmeduni Vienna becomes a multicultural hotspot of veterinary medicine boasting the kind of reputation that continues to attract leading international experts with PhD and postdoc credentials to the campus.

With more than one third of the students and almost one third of staff coming from abroad, Vetmeduni Vienna already meets the major requirements for giving study, work and life on the campus an internationalist and intercultural thrust. In terms of student

mobility, Vetmeduni Vienna is at the top of Austrian universities: almost every second graduate spent time abroad during her or his study, the mobility potential being 51 per cent. The following geographic distribution pattern of student mobility clearly shows how far-reaching this mobility is.

Figure 7: Mobilities



7.1.1. Operational Objective: Expand Measures Promoting Mobility

The centre for managing international relations, including mobility, is International Relations (BIB), a bureau of the Vice-Rectorate for Research and International Relations. International Relations offers both outgoing and incoming staff and students an all-round service from submitting applications to crediting stays abroad.

The European mobility programmes are major factors in this context as they greatly contribute towards increasing the attractiveness of Vetmeduni Vienna. When needed for concrete exchange projects, Vetmeduni Vienna concludes additional agreements to provide ERASMUS+ funding to the entity posting staff for teaching and professional development abroad.

The university plans to fully implement the new programme generation ERASMUS+ 2021 – 2027, where digital resources form the basis for internationality. In terms of sustainability and inclusion, Vetmeduni Vienna places special emphasis on green mobility as well as new formats such as blended mobility, the focus including short-term mobility for PhD students as well.

International students coming to Vetmeduni Vienna outside of the major mobility programmes (such as ERASMUS+, CEEPUS III) and outside of official cooperation programmes are assisted by BIB from the acceptance of their application, provision of contacts and issue of the needed letters of invitation to searches for rooms or flats and entry and residence formalities. Members of the university and the student union help mobility students to settle in and familiarise themselves with the new environment. For this purpose, a buddy programme is in place, its motto being 'Take care of each other. Learn with each other. Be there for each other'.

Field of action 1: Raise awareness and promote windows of mobility

During the welcome event for first-semester students, the university introduces the students early on to the importance of experience abroad, highlights funding options for such stays and introduces its International Relations bureau. The new curriculum for the diploma degree programme in veterinary medicine has been redesigned so as to make it easier for students to plan for and implement stays abroad during study. With the ninth semester offered as of winter semester 2017 where students only need to complete Clinical Rotation I, windows of mobility have been created for students which facilitate placements or stays abroad. Vetmeduni Vienna plans, specifically in the light of the Covid-19 pandemic, to increasingly reach out to students to help them organise their stays abroad in a responsible manner and discuss new ways of international exchange.

Field of action 2: Expand language skills

For the purpose of eliminating language barriers, Vetmeduni Vienna aims to expand professional development policies that strengthen international competence (for instance, language courses) and to increase the number of English language study programmes and classes for students. In addition, digital resources enable Vetmeduni Vienna

to integrate more native speakers into its teaching and further training programmes. Integration of international staff members is supplemented by German language courses offered to them.

Field of action 3: Expand welcome culture

The campus of Vetmeduni Vienna is a place of encounter and exchange for international experts in veterinary medicine as well as for undergraduate and graduate students up to PhD and postdoc levels with the objective being to develop a diverse, multicultural life at the university. The welcome culture – meaning to 'pick up' international students and staff – is the foundation for this approach and to be further expanded.

Field of action 4: Expand cooperation agreements

In order to enhance its attractiveness for international research and teaching assignments, Vetmeduni Vienna will continue to expand its cooperation agreements with international universities, in particular with internationally renowned veterinary universities that rank among the top 25 in the international QS ranking in the field of veterinary medicine or in another comparable and internationally recognised ranking system.

7.1.2. Operational Objective: Expand internationalisation@home

If Vetmeduni Vienna wants to remain competitive in an increasingly globalised education market, its personal, social and logistic infrastructure must progressively adopt an international thrust. The internationalisation@home initiative is primarily targeted at students, but it is also meant for staff. internationalisation@home is neither a replacement nor a competitor of international mobility. Rather, the two areas are designed to complement one another. Strengthening intercultural skills helps enrich stays abroad for students and staff. internationalisation@home is also meant to nudge more students towards spending some time abroad. When abroad, they will be able to apply the international and intercultural skills thus acquired.

The internationalisation@home programme is of special significance in terms of sustainability, green mobility and social inclusion.

Internationalisation and interculturality are cross-cutting tasks that are both inward and outward looking with the aim of encompassing all core areas of the university and with the university's internationalisation and mobility strategy forming the appropriate basis.

Internationalisation increasingly creates international perspectives for training and research through close cooperation with international education and research establishments, while opening up more options for international encounters and the use of foreign language skills to students, teachers, researchers and support staff.

In order to further strengthen this initiative, Vetmeduni Vienna will promote international appointments and careers and strive to offer all the relevant documents, guidelines,

agreements, continuing education programmes, training courses and services also in English (see Chapter 3: Staff/Human Resources).

7.1.3. Operational Objective: Expand Continuing Education with an International Profile

A major contribution towards promoting internationality is to internationalise selected study programmes. Vetmeduni Vienna increasingly tries to offer part or all of some programmes in English. Within this context, the new digital possibilities of distance learning constitute an excellent supplement to in-person classes held on the university campus. They enable participants to directly interact with international native speakers and thus to improve both their technical and their language skills.

Recruiting next generation scientists to enter doctorate, PhD and postdoc programmes using English as the working language in working groups and classes are already key elements within the internationalisation@home programme. Vetmeduni Vienna intends to continuously expand the existing postgraduate training and continuing education programme in English, including the establishment of summer schools, postgraduate study programmes and international master's programmes in cooperation with other universities (see Chapter 5: Teaching).

7.2. Strategic Goal: Strengthening Vetmeduni Vienna as a Centre of Knowledge through Strategic Partnerships

Strategic partnerships, international cooperation agreements, research and teaching assignments are key elements in enhancing the visibility and thus the attractiveness of Vetmeduni Vienna. Teaching and research assignments of international experts are also triggered by international cooperation and actively supported by Vetmeduni Vienna through the services provided by BIB.

7.2.1. Operational Objective: Promote Concepts Aligned with Location Strategies

The broad field of research in veterinary medicine and the limited budgetary funds require the setting of priorities in international cooperation in order to consolidate the position of Vetmeduni Vienna as an internationally recognised centre of competence in the segments concerned.

Focusing on specific themes, in terms of smart specialisation, is absolutely necessary for the purpose of strengthening the university's positions as a knowledge centre. Vetmeduni Vienna targets its partnerships on the life science community in and near Vienna (Vienna, Brno, Budapest).

In respect of wildlife research, Vetmeduni Vienna plans to consolidate the cooperation of its Research Institute of Wildlife Ecology (FIWI) with the Institute of Wildlife Biology and Game Management (IWJ) of the University of Natural Resources and Life Sciences through a cooperation agreement and later upgrade this cooperation towards becoming an interuniversity centre of research.

In the field of behavioural and cognition research, Vetmeduni Vienna intends to deepen its cooperation with the Medical University of Vienna, the University of Vienna and other partners, such as IST Austria, to form the Vienna Cluster of Cognition, Behaviour and Neuroscience.

7.2.2. Operational Objective: Foster Cooperation Priorities with an International Profile

Vetmeduni Vienna aims to expand cooperation in training and research with internationally renowned veterinary universities that are among the top 25 in the international QS ranking in the field of veterinary medicine or in another comparable and internationally recognised ranking system (see Chapter 4: Research and Development).

Other international partnerships of Vetmeduni Vienna are focusing on the Central and Eastern European region – including those managed though the VetNEST programme already mentioned – and on the Asian-Pacific region through the ASEA UNINET and Eurasia-Pacific Uninet (EPU) university networks as well as on the African region within, for example, the Poultry Aid excellence centre, the Future for Kids initiative or membership in AFRICA UNINET. Vetmeduni Vienna intends to further intensify these kinds of cooperation, the exchange of staff and the transfer of knowledge with the universities connected through these networks.

8. Real Estate Management

With its campus in Vienna/Floridsdorf stretching across 15 hectares and accommodating 47 buildings, as well as with its affiliated sites, the University of Veterinary Medicine, Vienna, offers an outstanding environment for engaging in top-quality research, teaching and service provision.

Vetmeduni Vienna is among Europe's leading establishments in veterinary medicine. This status could only be achieved by creating cutting-edge campus grounds, clinics and research facilities providing the most advanced technical equipment. Based on these resources, the university could become a real competence centre for sustainable, forward-looking training and continuing education of its students as well as alumni and alumna.

Meanwhile, the campus is almost 25 years old, which is why a number of infrastructural measures and adaptations will be necessary in the forthcoming years to upgrade the infrastructure to state-of-art levels so that Vetmeduni Vienna can continue to meet the standards it has set itself. The measures described below are to ensure that the university can further strengthen its outstanding national and international position among university clinics and research facilities, and is intended to help Vetmeduni Vienna maintain its position as an innovative and modern university within the European environment and by international standards.

The university also needs to respond to the social, ethical and technological changes in veterinary medicine. In view of the alterations already undertaken and the further developments to be expected, specifically due to growing digitalisation, it is necessary to provide a setting that meets future demands and enables flexible and innovative teaching and research.

Within this context, it must be said that the University of Veterinary Medicine, Vienna, has always been committed to a sustainable, economical and considerate use of its resources and management of its facilities.

8.1. Strategic Goal: Ensure State-of-the-Art Training and Continuing Education Facilities and Strengthen the Position as a National and International Centre of Competence

8.1.1. Operational Objective: New Construction of the Clinic for Small Animals ('Small Animals Clinic NEW')

The experts of the University Clinic for Small Animals of the University of Veterinary Medicine, Vienna, are specialised in the clinical training of students of veterinary medicine, postgraduate professional development programmes for veterinarians and health care for animals. Like other university clinics, it relies on most advanced examination and treatment methods such as computer tomography (CT), magnetic resonance tomography (MRT), radiotherapy and scintigraphy in providing appropriate training to students and optimal care to animals.

Changing the structure of the University Clinic for Small Animals has become necessary in order to unite the outpatient clinics, sheds, intensive care unit (ICU) as well as the admission area in one clinic building encompassing the disciplines and with a view to the patients' needs. By the same token, this combination will ensure the consistent provision of patient-centred and problem-oriented training of students and optimise collaboration of various experts.

In the course of a feasibility study, a number of variants for modernising the existing structures versus constructing a new Clinic for Small Animals were evaluated.

The most efficient, sustainable and thus forward-looking option recommended by the *Bundesimmobiliengesellschaft* (BIG) was to build a new clinic on the site of the KC building (Small Animals Internal Medicine) on the campus of the University of Veterinary Medicine, Vienna, where admission, outpatient clinics, sheds and surgical infrastructure would be accommodated under one roof.

In summer 2019, construction work for the new Small Animals Clinic was begun and the old building demolished. The clinic has moved to temporary premises for the time being.

The new building and its equipment are financed by special funds of the federal government under the infrastructure package for Austrian universities, by special infrastructure funds of BIG and by the overall budget of Vetmeduni Vienna. Construction is progressing as scheduled. The new Small Animals Clinic will be ready for occupancy in 2021.

8.1.2. Operational Objective: New Multifunctional Building Wilhelminenberg

The Research Institute of Wildlife Ecology (FIWI) of the University of Veterinary Medicine, Vienna, is housed outside of the university campus on Vienna's Wilhelminenberg hill. In 2011, the Austrian academy institute 'Konrad Lorenz Institute of Ethology (KLIVV)' was integrated into the university resulting in the creation of a research centre on Wilhelminenberg which includes roughly 80 researchers and overstretches the capacity of the existing building.

Consequently, a new building has been commissioned for Wilhelminenberg in order to provide an adequate environment for research activities, improve the use of synergies offered by the Research Institute of Wildlife Ecology and the Konrad Lorenz Institute of Ethology and create the space required for accommodating the Austrian Ornithological Centre. Moreover, the new building is to offset postponed maintenance work at the Konrad Lorenz Institute of Ethology.

Originally, the new building was to be constructed by the City of Vienna and completed by 2019, with the money coming from Vetmeduni Vienna's own funds. However, construction work on the new building could not begin because the procurement procedure and thus the awarding of contracts to be managed by the Vienna Business Agency have not yet been concluded.

If after completion of the lengthy procurement procedure by the Vienna Business Agency construction work on Wilhelminenberg cannot begin, Vetmeduni Vienna is considering implementing construction within the Federal Construction Master Plan for Universities in the East of Austria. Talks to this end have already taken place with the Federal Ministry of Education, Science and Research.

8.1.3. Operational Objective: Modernisation of the Keeping of Laboratory Animals on the Campus (Rodents Centre) and Joint Use of the New Himberg Facility for Laboratory Animals of Meduni Vienna

In cooperation with Meduni Vienna, Vetmeduni Vienna has prepared and fine-tuned a comprehensive concept for a new breeding facility for laboratory animals. This concept includes, inter alia, a clear separation of routine breeding of laboratory animals at the joint site in Himberg/Lower Austria from the experimental keeping of laboratory animals, the generation of new breeding lines and the breeding of laboratory animals for lines with special care needs at the sites of the two universities in Vienna.

Field of action 1: Co-Use the New Laboratory Animal Facility in Himberg

The laboratory animal facility in Himberg, which was jointly run by Meduni Vienna and Vetmeduni Vienna, is currently being newly built by Meduni and will be ready for occupancy in March 2022.

During construction work, the University of Veterinary Medicine, Vienna, has rented rooms for keeping laboratory animals at the Vienna Biocenter (VBC). In conjunction with mouse breeding at the campus of Vetmeduni Vienna, the capacities necessary for breeding the relevant strains of laboratory animals can thus be ensured for the university.

The new Vienna Mouse Breeding Facility will be run by Meduni Vienna alone. Within the cooperation arrangement, Vetmeduni Vienna has undertaken to acquire at least 1,800 cages with bred mice every year. The acquisition is covered by the available budget. Since, however, the demand for laboratory animals goes beyond that, and since Vetmeduni Vienna has agreed to pay an additional lump sum to Meduni, Vetmeduni Vienna will need additional funds for this purpose to be factored into the Performance Agreement for the 2022-2024 period.

Field of action 2: Modernise the keeping of laboratory animals on the campus (Rodents Centre)

Once the transfer of routine breeding of laboratory animals to Himberg is completed, the experimental keeping of laboratory animals and the generation of new models for lines of laboratory animals with special care needs will remain on the campus of Vetmeduni Vienna requiring the modernisation of the somewhat outdated facility for keeping laboratory animals.

A feasibility study was initiated by BIG, which showed that rehabilitating the existing decentralised facilities at the campus would not make sense. As a result, it issued a clear recommendation for merging the laboratory animal rooms.

Decision-making has been affected by new legislation as well as by the service life of technical infrastructure – ventilation systems, air conditioning and similar equipment. Moreover, such a merger enables centralisation of the necessary technical infrastructure and thus greater efficiency in operation, servicing and maintenance. The new central facility will also create synergies among staff.

This has led to the decision to build a new Rodents Centre on the campus. The construction and equipment costs of the new building are covered by special infrastructure funds of BIG and by funds from the overall budget of Vetmeduni Vienna. Construction is to start in 2020 after approval by the ministry.

8.1.4. Operational Objective: Adapt the Wolf Science Center Ernstbrunn

The Wolf Science Center in Ernstbrunn/Lower Austria explores the cognitive capabilities of wolves and dogs. Following on checks and requirements by labour inspectors, the Wolf Science Center accommodated in the publicly accessible Wildlife Park Ernstbrunn must be adapted needing major investments.

Alongside reshaping and reorganising feed logistics, the seminar space for visitors and the staff area need to be redesigned. For the time being, feed logistics has been expand-

ed by a container. Plans for a permanent solution include a new building for feed logistics with attached seminar area as well as adaptation of the test house and rehabilitation of the accommodation for puppies. According to the requirements of the Labour Inspectorate, construction work must begin in 2020. The University of Veterinary Medicine, Vienna, seeks to raise third-party funds for this purpose from the funding budget of the Business Agency of Lower Austria ecoplus.

8.1.5. Operational Objective: Erect a Multi-Purpose University Building

In view of the acute shortage of space at the University of Veterinary Medicine, Vienna, plans to erect a multi-purpose building were launched as early as 2015. Planning was carried out in close alignment with the landlord BIG. Total costs amounted to €9.2 million according to the latest planning documents. For budgetary reasons, however, the completely planned projects had to be postponed indefinitely. This has not reduced the urgency of additional space needs; on the contrary, the creation and maintenance of spaces for encounter are hardly feasible any more.

In order to address the situation on the campus, the university practises all kinds of 'merger' options. It has developed an active and restrictive space management system to be expanded in the future to address the shortage of space.

Naturally, greater efficiency has its limits so that the university must reopen and reactivate the already completed plans for a multi-purpose building. Since no funding has been secured for this project as yet, there is no schedule in place for realising this construction project.

Nevertheless, it is a key factor in ensuring the international position (see Shanghai ranking) and implementing the potential new fields of research of Vetmeduni Vienna. The multi-purpose building for the university has been included in the Federal Construction Master Plan for Universities in the East of Austria. Its implementation will depend on available federal budget funds.

8.1.6. Operational Objective: Realise Investments into the Future

Field of action 1: Build photovoltaic system

The University of Veterinary Medicine, Vienna, is committed to sustainability and an environmentally and climate friendly utilisation of resources. Consequently, the university has considered building a photovoltaic system on the campus. It transpires that BIG now wants to implement the system within a flagship project and its feasibility and contractual arrangement are currently under internal review by BIG.

Field of action 2: Optimise the keeping of large animals on the campus

There are signs of change regarding the keeping of large animals, specifically that of cattle and horses. This is due firstly to altered provisions on how to keep animals, and

secondly to increasingly controversial debates about keeping ruminants and horses in urban areas, which is seen critically by authorities and locals.

Since the facilities for keeping cattle and horses are in need of modernisation and overhaul, the whole policy of keeping large animals on the campus is being newly assessed. There are considerations to transfer some of the large animals to VetFarm, the teaching and research estate of Vetmeduni Vienna in Pottenstein/Lower Austria, and to the west of Austria. Students could largely train and practise their skills on artificial dummies in the VetSim Skills Lab available on campus, while working on real animals in practical exercises at the satellite entities. At the same time, the university assesses the construction of new sheds for large animals including separate isolation units and the establishment of new special outpatient clinics. The project of 'keeping large animals on the campus' has been entered in the Federal Construction Master Plan for Universities in the East of Austria.

Field of action 3: Erect an infection facility

For the campus itself, the university evaluates the erection of an infection facility and quarantine shed enabling researchers to explore the development, impacts and possible prevention policies regarding zoonotic diseases and other animal epidemics and their prevention under controlled conditions. One approach could be to establish this facility in association with potential users (as a project partner in the Uni-Med-Impulse 2030 Initiative) or with various stakeholders.

Field of action 4: Enhance digitalisation

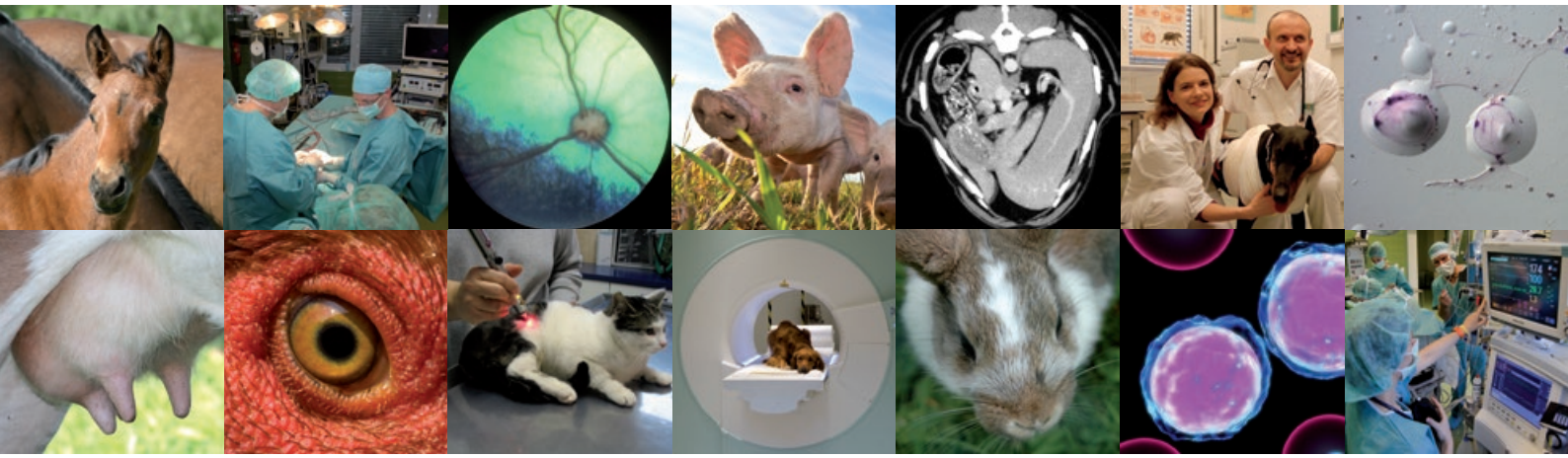
In order to keep pace with advancing digitalisation, the university needs to continuously invest in its infrastructure and modern technologies. In an addendum to the Performance Agreement, Vetmeduni Vienna has received the necessary funds to upgrade its network, replace the Animal Hospital Information System with a modern system and renew part of the outmoded equipment infrastructure on the campus.

In the next years, other major investments will become necessary regarding state-of-the-art networks, big data solutions as well as archiving, safety and security, bioinformatics and central laboratory diagnostics.

Other investment requirements result from the technological developments in agriculture and forestry. Nowadays, the localisation of individual animals and the ongoing recording of physiological parameters by means of sensor technology and telemetry are well established methods without which wildlife ecology research would be unthinkable. In agriculture, buzzwords like Agriculture 4.0, Smart Farming or Precision Livestock Farming summarise the revolutionary advent of modern information and communication technologies in this sector. The use of technologies on animals, farm estates and in the operations of downstream supply chains changes the traditional job profile of veterinarians. Telemedicine and the application of augmented reality solutions are becoming a matter of course.

It is one of Vetmeduni Vienna's tasks to provide the necessary technological resources for this purpose to students during their studies, thus contributing to public health and to Austria's scientific reputation as well as to society as a whole.

9. University Clinics and Diagnostic Facilities



The Animal Hospital of Vetmeduni Vienna with its five university clinics bears major social responsibility. As the only academic teaching hospital for veterinary medicine in Austria, its key mission is to provide overall clinical training for future veterinarians and postgraduate continuing education for veterinarians, thus constituting an integral part of the university.

At the same time, the clinics and diagnostic facilities contribute towards positioning the university as a veterinary centre of competence with international appeal. The great variety of animal patients in the clinics and the findings obtained from their treatment are important pillars of the university's comprehensive expertise and provide the foundation for research-based work in the clinical field.

The following five species-specific clinics are part of the University of Veterinary Medicine, Vienna:

- University Clinic for Small Animals
- Equine University Clinic
- University Clinic for Poultry and Fish Medicine
- University Clinic for Swine
- University Clinic for Ruminants

Within the framework of current efforts to develop the university towards an open university, further enhance the excellence of its university clinics and improve their links with Austria's regions, various proactive steps need to be taken in the clinical area as well. The measures described below are also intended to advance clinical research and give students a more realistic picture of work in off-campus veterinary practices and clinics required to meet economic viability criteria.

Construction of the new Small Animals Clinic on the campus of Vetmeduni Vienna, which will unite the treatment centres of small animals formerly distributed across several buildings into one operational unit, is an essential building block to achieve this aim. The new infrastructure and organisation of the Small Animals Clinic will be such that students are greatly involved in daily clinical routine, thus helping them to understand and see for themselves how modern, practical work in direct contact with animal patients looks like. At the same time, the new clinic will offer space for taking forward clinical research activities.

As the Austrian competence centre for clinical veterinary research, the University of Veterinary Medicine, Vienna, with its species-specific university clinics is seeking cooperation with university and non-university research entities and all key stakeholders of the country.

In view of its sustainability thrust, the university needs to organise the clinics in an effective and flexible manner and to operate easily manageable and efficiently structured

units to meet flat faculty and lean organisation standards. For this purpose, performance criteria are to be defined in the next period that enable the quantifying and measuring of the success of clinical services, other activities and research projects as well as the fulfilling of teaching assignments and third mission activities.

The special outpatient clinics, which are recognised and established expert centres, will also be subject to evaluation, the objective being to pass on the findings obtained in the individual specialised outpatient clinics to colleagues and students and to introduce in their wake new specialised outpatient clinics to further develop the university.

Following the establishment of a satellite facility in Tyrol, the university plans to create a regional competence centre for ruminants in response to developments in livestock husbandry indicating that within the next decade there will be hardly any livestock left to be kept in the greater Vienna area and certain other Austrian regions. It is intended for this competence centre to cooperate with neighbouring veterinary training establishments in the German-speaking area as well as with VetFarm, thus helping to ensure the regionalisation of veterinary training and, consequently, the supply of veterinary care that is of critical importance to livestock farming in rural areas.

The strategic goals defined for the next period include:

- **Expand the university clinics as centres of clinical excellence in Austria and within the international environment**
- **Position the clinics within interdisciplinary and translational research**
- **Develop innovative procedures in diagnostics, therapy and prevention**

9.1. Strategic Goal: Expand the University Clinics as Centres of Clinical Excellence in Austria and within the International Environment

The University of Veterinary Medicine, Vienna, stands for training which is forward-looking, research-led and practical both in undergraduate courses and postgraduate training/continuing education. Within this context, the Animal Hospital is an indispensable entity which provides services built on the foundations of the best available scientific knowledge (§36 of the UG). To live up to the requirement of offering patient-centred training to students, animal patients are the focus of attention in the Animal Hospital and its clinics.

The new Small Animals Clinic of the university will be the main guide for further developing the Animal Hospital and strengthening its position as a centre of excellence. The new work and organisation structure of the clinic is geared towards fostering interdisciplinary

cooperation and ensuring the students' involvement in everyday clinical life in agreement with modern training requirements, while a more professional, leaner and efficient structure generates resources for research-based activities (see Chapter 8: Infrastructure and Real Estate Management).

A key factor in this context will be the use of new digital means. The necessary acquisition of a new Patient Management Information System opens up new possibilities for managing animal patients ranging from initial digital consultation to electronic admission and the use of telemedical solutions. Moreover, digital management and the new clinic structure enable the university to offer clinical services in a more resource-friendly, measurably more efficient and thus more economical manner.

This will also enhance the flexibility of Vetmeduni Vienna to initiate and establish specialised outpatient clinics. The existing special outpatient clinics are monitored by an ongoing process of evaluation, while a number of thematic fields are being explored for their suitability for new specialised outpatient clinics. They must meet the university's mission requirement of being a trailblazer and develop the related new competences necessary for this purpose.

Having positioned the university clinics as centres of excellence for the provision of clinical veterinary care in Austria and established a satellite facility for Ruminants in the Alpine Region, the university plans ultimately to create a regional competence centre for ruminants. In terms of regionalising veterinary training and encouraging sustainability in the provision of veterinary care in Austria, this clinic for ruminants is to be installed at a central location around which cattle is expected to be kept and milk is expected to be produced for years to come.

In addition, the direction and specialisation of the university clinics should increasingly be on scientifically and clinically demanding cases referred to them. In emergency care, after initial admission and care, animal patients will be referred (back) to practising veterinarians who are the university's cooperation partners.

This direction and specialisation should also benefit the proactive training and continuing education of Austrian veterinarians. In support of this objective, it will be necessary to upgrade the transfer of knowledge already in place at the University of Veterinary Medicine, Vienna, and make this transfer more publicly visible to demonstrate how the university lives up to its social responsibility (see Chapter 6: Social Goals).

Another major challenge is the intelligent use of digital technologies in veterinary medicine.

By way of summary, this orientation defines the Animal Hospital and its clinics as:

- a university hospital directed at teaching, research and specialisation;
- university clinics with globally recognised competences in key clinical areas;
- points of contact for the veterinary community (special clinics); and
- examples of a peer-based, client-based and student-centred team spirit.

9.1.1. Operational Objective: University Clinics for Small Animals and Horses as Centres of Excellence for Clinical Training and Continuing Education, Research and Referral Partners

The University Clinic for Small Animals and the Equine University Clinic of the University of Veterinary Medicine, Vienna, have developed a reputation of not only living up to their primary task of training and research but also of being key providers of primary care to roughly 50,000 animal patients every year.

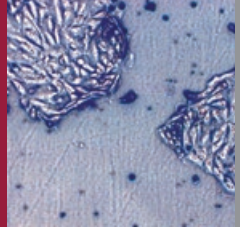
The reorientation of the university clinics and their promotion to research-led centres of excellence and training of international relevance involves a reduction of standard and routine patients to the extent necessary for providing proper training to students. The teaching hospital of the university clinic, which in the past took on the role of a primary care centre, will thus increasingly become a referral clinic, giving veterinarians and scientists the kind of leeway needed to focus more on teaching and research.

In doing so, they need to maintain a wide variety and range of animal patients. For this reason, the structure and number of cases is to be subject to periodic evaluation.

To continue ensuring the great variety of primary care patients, specifically small animals, for teaching students, it will be necessary to establish and expand cooperation with veterinary practices and clinics in the greater Vienna area and with universities located in neighbouring countries. The same applies to cooperation with the TierQuarTier animal shelter of the City of Vienna.

Field of action 1: Focus on Equine University Clinic

For organisational and infrastructural reasons, the Equine Clinic and the horses it keeps in the midst of an urban environment present a challenge. To improve workflows and optimise the keeping of animals on the campus, the university plans to reduce the number of its own horses on the campus and transfer them to the VetFarm estate in Pottenstein/Lower Austria, where in future the basic practice exercises for students will take place. At the same time, the university is assessing the construction of new on-campus sheds for large animals including separate isolation units and the establishment of new special outpatient clinics for horses. Potential themes for these equine projects include geriatrics, pain scoring and quality of life.



Field of action 2: Focus on new Small Animals Clinic

With the new Small Animals Clinic, the campus of the University of Veterinary Medicine, Vienna, will have a training and teaching centre of European renown equipped with ultramodern infrastructure, specifically in the fields of diagnostic imaging and oncology. At this clinic with its state-of-the-art structure and organisation, students will be greatly involved in day-to-day clinical work and may take on independent assistant tasks under professional supervision. To this end, veterinarians will be accompanied by two students each during their clinical work. Moreover, peer teaching sessions will enable students to assume the role of teachers.

A centrally located single point of entry for animal owners will be created for providing primary care to small animals. The construction measures will improve patient-centred training through an intensive, interdisciplinary exchange amongst veterinary experts and allow for more efficient administrative processes, while ensuring first-rate health care for animal patients.

Field of action 3: Evaluate special outpatient clinics; intensify counselling services

In addition, the outpatient clinics specialising in small animals will be evaluated as well. Vetmeduni Vienna seeks to establish specialised outpatient clinics primarily in those fields where it can assume the role of leading innovator. If the services provided in its specialised outpatient clinics are already widely available in the market, they are to be replaced by new ones. For this purpose, it is essential to foster an appropriate professional development programme for practising alumni and alumna.

In addition, the counselling services offered by the university clinics and institutes to practising colleagues are to be intensified. They ought to be billable and can be considered an element of postgraduate education and knowledge transfer from the university to practising veterinarians.

9.1.2. Operational Objective: Position the University Clinics for Poultry and Fish, Swine and Ruminants as Centres of Excellence for Clinical Training and Continuing Education, Research, Referral Partners and Stakeholders

Under the One Health concept, Vetmeduni Vienna fulfils an important socio-political mandate in veterinary and human medicine as well as in public health care. This is particularly true of preventive veterinary medicine and food safety. Within this context, Vetmeduni Vienna is a partner in all questions concerning the EU's From Farm to Fork strategy, which aims to make the EU food system fair, healthy and environmentally friendly.

With its clinics for poultry and fish, swine and ruminants, the university represents a centre of excellence offering outstanding expertise on all health aspects of farm animals ranging from husbandry to the diagnosis, treatment and prevention of diseases. The area of vaccine research and development is gaining in importance in this context.

A key priority is herd health management through problem analysis and risk assessment of farms as well as through national and international counselling services. In the future Vetmeduni Vienna will position itself, even more than has hitherto been the case, as a point of contact for national and international diagnostic and counselling services in livestock health.

Vetmeduni Vienna set a major milestone in December 2019 by establishing the Innsbruck-based satellite facility for Ruminants in the Alpine Region. This centre of competence benefits both teaching and research given the fact that the site serves as an interface between practising veterinarians and the university. Students focusing on ruminants spend part of their training in Tyrol in order to obtain diverse and practical insights into the special characteristics of Alpine livestock farming. An important aspect involves the direct contact with practising veterinarians to deepen practical training in the field of ruminants and foster exchange between the two groups: students and vets.

Field of action 1: Enhance interlinkage of satellite facilities

With the creation of a satellite entity in Tyrol, the university has provided a point of contact in the west of Austria for questions on domestic and wild ruminants which can be jointly addressed from and for practicians. In a next step, the university seeks to launch common cross-border projects and initiatives with South Tyrol, Germany and Switzerland, the underlying idea being to gradually establish a point of contact for the ruminant sector in a region expected to continue to rely heavily on ruminant husbandry and milk production owing to the prevailing climate conditions there. This enables the university to involve students in the practical aspects of ruminant health care and thus in the daily clinical routine concerning ruminants.

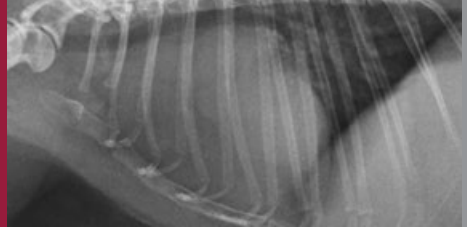
In the field of reproduction biotechnology, the university plans to enhance knowledge transfer from the Reproduction Center Wieselburg (RCW) to VetFarm in Pottenstein, the aim being to position VetFarm as a precision livestock farming hub and, in relation to this, as a centre for reproduction biotechnology.

By strengthening the links of ruminant medicine to VetFarm and the Tyrol satellite facility, Vetmeduni Vienna meets the task of helping provide veterinary care in rural regions and ensuring the health of the Austrian population for years to come.

Posting students to the satellite facilities and vet training practices is also part of the university's efforts to address the shortage of veterinary care for livestock in some regions (see Chapter 6: Social Goals).

Field of action 2: Enhance cooperation

The university will expand cooperation with livestock farms and large veterinary practices to further its national and international potential for excellence in the field of farm animal health. In addition, existing cooperation schemes including cooperation with animal health services and the Federal Ministry of Social Affairs, Health, Care and Consumer Protection (BMSGPK) as well as with veterinary universities and faculties in the European



area are to be intensified. This kind of collaboration, in particular with neighbouring universities of veterinary medicine, enables the tapping into complementary synergies among species-specific livestock clinics. Under such cooperation arrangements, students will have the possibility of completing certain training contents at other entities. This, in turn, will improve the quality of training since the clinics can act according to their relevant profiles, while accumulating a critical mass for research.

9.1.3. Operational Objective: Digital Management of Patient Care and Client Support

A new Animal Hospital Information System (TIS) has to be procured for the University of Veterinary Medicine, Vienna, as the currently used IT solution has reached the end of its life cycle and will not be further upgraded.

In order to ensure efficient care of animal patients and to position the university proactively, the new electronic Clinical Management and Information System must fulfil a number of functions regarding digital patient and client management ranging from documenting the clinical course of an animal patient or a herd to invoicing. This includes, inter alia, options for initial digital counselling, telemedical applications, use of chatbots, provision of a hotline, digital outpatient appointments as well as mobile data collection.

New medical technologies (such as imaging techniques), revolutionary innovations in digital health care devices (such as portable sensors – IoT [Internet of Things]) and recent developments in self-learning systems based on artificial intelligence are the new standards to be met by an electronic Clinical Management and Information System. Recent developments in hardware (tablet PC, augmented reality technologies, 3D prints) enable novel applications in medicine.

The new electronic Clinical Management and Information System should also help the university to organise its clinical services in a more efficient, resource-friendly and, consequently, more economical manner. Digital duty rosters for veterinarians and students are to be drawn up in accordance with the workload expected, while optimising and enhancing the efficiency of the processes and workflows in the clinics.

With the introduction of data-assisted clinical reasoning, case data and case probabilities will be used to accelerate diagnostic processes in the clinics and allow more practical and business-oriented training in clinical teaching.

The field of telemedicine, or rather the use and application of telemedicine, in training students is to be tested and evaluated in a pilot phase to be followed by further telemedical developments designed in collaboration with the stakeholders involved.

9.1.4. Operational Objective: Upgrade VetSim for Practising Clinical Skills in Veterinary Training and Continuing Education

VetSim, the skills lab of Vetmeduni Vienna, where students can practise clinical interventions on lifelike silicone dummies till they are confident enough to apply them to living animal patients, is a tried and tested tool in clinical training on the campus of Vetmeduni Vienna.

Accordingly, the VetSim simulation training is to be further developed. It is to be extended gradually to include – where necessary – the clinical satellite facilities and postgraduate continuing education programmes. Consequently, more on-campus space will have to be allocated to the VetSim lab to ensure adequate enlargement.

In addition to the silicone models, digital aids and technologies based on augmented reality solutions appear to be interesting supplements that could be used in day-to-day clinical practice in the future.

The university also intends to involve VetSim in external training programmes and examinations, for instance in cooperation with WKO, and in postgraduate training programmes.

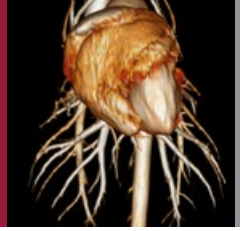
9.2. Strategic Goal: Position the Clinics within Interdisciplinary and Translational Research

New challenges in veterinary medicine, such as exploring the spread of viruses and diseases, epidemics or pandemics, require new approaches to clinical research. Vetmeduni Vienna with its university clinics and their recognised competence in respect of animal health is an excellent partner for interdisciplinary and translational research activities, which can be carried out in association with researchers from other disciplines.

9.2.1. Operational Objective: Develop Interdisciplinary Research Activities along Research Priorities

Interdisciplinary thinking has a long history at Vetmeduni Vienna. Aware of the direct correlation between animal health, a healthy environment and human health, the university has espoused the One Health tenet of the WHO.

Based on its stated research priorities, the university seeks to add to its intra-university collaboration under the Top Vet Science projects a number of other cooperation schemes with universities and institutes of other disciplines in order to conduct interdisciplinary research for the good of the general public. From a social and health perspective, these research priorities include such important thematic fields as sustainability, infectious diseases, prophylaxis, human-animal interaction, precision livestock farming, systems medicine and behavioural medicine.



For the purpose of further intensifying research activities at the university clinics, the university will define appropriate selection criteria for recruiting new staff (see Chapter 3: Staff/Human Resources) and provide new incentives within the context of various research programmes to foster research at the clinics (see Chapter 4: Research and Development).

In the future, the University of Veterinary Medicine, Vienna, will enhance efforts to make greater use of the possibilities of data-based research. To this end, it will introduce uniform documentation of all medical examinations carried out at the University of Veterinary Medicine, Vienna.

The resulting standardised data material on animal patients, examinations and treatments will provide the basis for future long-term clinical studies.

The desired effect of repositioning the clinics also involves promoting the transfer of knowledge in compliance with the following principle: 'We generate new knowledge in clinical application and reach out to the community of veterinarians and animal owners to transfer this knowledge.' Once these developments can be routinely used, knowledge transfer to alumni and alumna will also be actively promoted (see Chapter 4: Research and Development).

9.2.2. Operational Objective: Develop and Expand Clinical Research Infrastructure

Exploring pathogenic microorganisms, their proliferation and possible mutational variants are part of the critical research activities of veterinary medicine. The history of the influenza virus as well as of the SARS virus, MERS and now Covid-19 shows that these viruses are of animal origin. It can be assumed that more viruses, their mutations or other diseases transferred from animals to humans will occur and pose new challenges to human health.

This increases the focus of Vetmeduni Vienna on new, critical tasks of research into infectious diseases, which can only be carried out in compliance with extreme safety precautions in a separate, strictly protected clinical research centre.

Within the framework of expanding its clinical research infrastructure on the campus, Vetmeduni Vienna plans to install a Clinical Research Centre suited for this kind of research including experimental infection trials. Since such a facility can only be operated under an appropriate safety regime, which would be beyond the budgetary scope of the university, this research centre is only feasible with contributions from all national stakeholders. One option for the university would be to join the Uni-Med-Impulse 2030 initiative as a cooperation partner.

Ideally, this project would have to be supplemented by the creation of a coordinating Clinical Trial Centre. For this purpose, the necessary data, facts and figures will be identified in a feasibility study.

9.3. Strategic Goal: Develop Innovative Procedures in Diagnostics, Therapy and Prevention

As regards diagnostic services, Vetmeduni Vienna adjusts their supply to the needs of its training programmes, clinics, research facilities as well as to demand in general. The focus of activities is on developing innovative procedures to be disseminated later on (see Chapter 10: Quality Assurance).

9.3.1. Operational Objective: Integrate New Methods in Prevention, Diagnostics and Therapy

The university's rationale behind this objective is to generate innovative methods in diagnostics, therapy and prevention for clinical application and actively transfer this knowledge to the community of veterinarians. In doing so, the university will also use innovative new digital developments in the field of disease diagnosis. Digital technologies and innovative software have revolutionised both veterinary and human medicine as is exemplified by imaging techniques or sensor-based expert systems.

The pooling of expertise in different areas and the introduction of joint research activities such as the Top Vet Science project support the development of new methods and techniques.

9.3.2. Operational Objective: Foster Innovations and Assess their Economic Viability

By dovetailing basic research, translational research and applied research, the university has the unique opportunity to offer innovative developments in prophylaxis, diagnostics and treatment as well as to develop individual solutions addressing current veterinary and research-related questions and integrate them into teaching.

The development of diagnostics in response to clinical and analytical questions and the targeted identification of usable technological trends in prophylaxis, diagnostics and treatment are to support these efforts. Economic appraisals 'shedding light on the financial and social dimension' are to be part and parcel of this policy (see Chapter 4: Research and Development).

State-of-the-art infrastructure and enhanced automation are to be used for the existing diagnostic procedures of the central laboratory as well.

10. Quality Assurance

Quality at Vetmeduni Vienna is deemed to be a cross-cutting task encompassing the entire university. It pursues an inclusive approach involving all core and service areas (management, study and teaching, research and next generation researchers, clinical teaching and services as well as support services for science and research [administration]). To ensure and advance quality in line with the ambitious goals and projects of Vetmeduni Vienna, an adequate central structure has been created in recent years by upgrading the Quality Development, Quality Management & Evaluation bureau.

The primary objective of mainstreaming quality assurance and development throughout the university is to boost and expand the strengths of Vetmeduni Vienna in its core and service areas, identify its potential for action and implement and support suitable measures for further development as well perform regular review and documentation of these measures. All the activities related to this objective take place within the framework of the Development Plan, the Performance Agreement with the competent ministry, legal provisions, in-house target and performance agreements, in-house guidelines as well as other strategic documents.

The numerous and well-established internal instruments of quality assurance in the core and service areas are to be further fine-tuned and their correlation improved by 2030. All related activities are subject to a continuous quality cycle (Plan-Do-Check-Act). Irrespective of the above, the university will continue to have its quality assured and verified by recognised, independent (inter)national organisations and experts (inter alia, EAEVE accreditation, research evaluation) as part of its core elements of quality assurance.

10.1. Strategic Goal: Ensure Expansion and Greater Interlinkage of QA Instruments and Measures in the University's Core and Service Areas

10.1.1. Operational Objective: Improve Efficiency and Enhance the Automation of Workflows

In respect of organisation and staff, the university continues to prioritise a process-based approach to quality assurance supported by quality indicators (for instance, key figures) to verify and upgrade process functionality. With the development and gradual introduction and expansion of process management, Vetmeduni Vienna has a holistic, practice-related set of instruments at its disposal which is fit for everyday use, enables continuous improvement and efficiency enhancement of workflows and activities and is already increasingly applied and in demand.

The next development period will be characterised by greater utilisation of the process management tool in a variety of contexts (inter alia, for supporting policies to expand increasingly automated workflows, raise the efficiency of activities and services, intro-

duce projects of change). The policy of combining the previous process-oriented approach ('do things properly') with an evaluation-based approach ('do the proper things') of quality assurance is to be continued.

Field of action 1: Process management in conjunction with further developing the internal control and risk management systems

By combining process management with the established internal control and risk management systems, the university can view its core and service areas in a holistic manner. For this purpose, a process management tool is required that incorporates the university's internal control and risk management systems and includes a comprehensive document control tool. The integration of internal controls into the processes provides a systems-based approach to workflows, the identification of further development potential and, consequently, the successive minimisation of risks. Within this environment, process management serves to map and monitor active internal control and risk management systems.

Field of action 2: Advance and position project portfolio management

Owing to the great number of in-house projects which have to be carried out under the current Development Plan and the related Performance Agreement, but which are also intrinsically motivated as necessary for the development of the university, Vetmeduni Vienna seeks to further professionalise its Project Portfolio Management System. This system serves to optimise control of the use of related resources (such as staff, finance) and ensure comprehensive monitoring of the projects in question. Templates will be prepared centrally and contact persons named for assistance so that projects are subject to greater quality-assured monitoring in the future.

Field of action 3: Position agility management to further the professional development of staff and organisation structures

Vetmeduni Vienna aims to enhance agility management (organisational development) by 2030 based on a holistic understanding of the structure of the university and its core and service areas encompassing quality-assured process, staff and change management systems. This approach not only focuses on an efficient and resource-friendly orientation but also on its integration into the organisation itself, its organisation culture and strategic direction.

10.1.2. Operational Objective: Advance Quality Assurance Across the Entire Student Life Cycle by Introducing and Expanding Quality-Assured Stakeholder Polls and Monitoring Instruments for all Fields of Study

For over 25 years, Vetmeduni Vienna has already used a variety of tools and procedures for quality assurance and development in the field of teaching and postgraduate continuing education. Teaching is seen as a joint basic mission where students, teachers as well as decision-makers, official bodies and other players successfully collaborate and interact. These well-established policies and instruments include, inter alia:

- Standardised admission procedures and accompanying quality assurance for all degree courses (diploma, bachelor, master, doctorate and PhD programmes as well as university courses);
- Evaluation of forms of teaching, examination formats, classes and practical training by the evaluation team with feedback loops and individual policy plans;
- Periodic polls of alumni/alumna;
- Promotion of teaching skills;
- Evaluation of learning success through polling students enrolled in the diploma degree programme of veterinary medicine (skills check, progress test);
- Peer review procedure for assessing master, doctorate and PhD theses;
- Consistent checks for plagiarism of all degree theses;
- Electronic assessments by the examination platform Q-Exam.

The quality-assured implementation and further development of these areas will be continued. The following additional priorities have been set:

Field of action 1: Upgrade central evaluations and reporting in teaching

Vetmeduni Vienna seeks to cautiously upgrade the numerous instruments for evaluating teaching as well as collate and deepen the overall interpretation of results obtained from different surveys. This approach should be based on a standardised reporting structure in order to optimally correlate the results.

Field of action 2: Ensure and enhance the continuous monitoring of study and graduates

This kind of continuous monitoring ensures that the desired quality of results is achieved including: study progress, acquisition of skills and competences as well as successful integration of graduates into the labour market. Monitoring is based on indicators as well as periodic and project-related surveys.

Field of action 3: Further develop and continuously monitor competence orientation (inter alia, learning outcomes and day-one competences)

The well-established tool of competence checks is to be developed further. Moreover, the university needs to sharpen awareness among teachers, examiners and students for the relevance and role of learning goals and learning outcomes.

Field of action 4: Quality-assured and stakeholder-focused evaluation and further development of curricula

As regards degree courses, the university will continue to advance the profile and quality of study programmes by (further) developing curricula in a systematic manner. Standardised processes of curriculum evaluation are to monitor and ensure regular quality-assured reviews of curricula.

Field of action 5: Focus on the development, monitoring and evaluation of measures

In line with the idea of joint quality development, the need for the involved stakeholders, specifically teachers and learners, to interact, inform each other and communicate among each other continues to play a leading role in efforts to further develop contents and degree courses. Within this context, the focus will be on advancing the development, monitoring and evaluation of policy measures.

Field of action 6: Enhance QA instruments of lifelong learning (inter alia, university courses, certificate programmes)

Alongside further quality aspirations in the standard degree courses, greater focus is to be placed on expanding instruments of postgraduate training and continuing education.

Field of action 7: Further develop learning analytics and e-learning infrastructure

With advancing digitalisation and the related introduction and expansion of appropriate IT systems, it will be necessary to pay much greater attention to digital teaching data. The university will take forward the development of adaptive learning methods based on processes of data editing and analysis. In order to assess the relevance of various dimensions of learning-related diversity and the effectiveness of new instruments and formats, Vetmeduni Vienna will also promote a scholarly debate on learning analytics.

Field of action 8: Further develop a digital teaching portfolio and expand digital teaching units and skills (digital literacies)

Along with the above objectives, Vetmeduni Vienna seeks to strengthen inter-teacher exchange as well as improve networking and enhance competences and expertise to introduce and establish innovative, primarily digital, teaching models. Vetmeduni Vienna wants to assume responsibility in shaping the digital development of university learning and teaching. Students are to acquire the kind of skills and competences that enable them to live, learn and work in a digital society and reflect the digital transformation.

This innovative spirit of the university is particularly striking in its efforts to expand the already comprehensive e-learning infrastructure as well as in its refined in-service training programmes in didactics for university teachers.

10.1.3. Operational Objective: Expand and Advance Existing QA Research Instruments and Policy Measures

Creativity needs space. Quality management in research at Vetmeduni Vienna thus primarily signifies the continuous development of quality in research conditions to provide more time and freedom for research and the ensuing insights. The high ethical responsibility of veterinary science is based on the binding Good Scientific Practice (GSP) Guidance of Vetmeduni Vienna as well as the in-house Animal Welfare and Ethics Committee and Animal Welfare Board established under §21(4) of the 2012 Animal Experiments Act (TVG 2012). Researchers at the university are primarily assisted in efforts to devise top-quality and statistically sound animal projects with due regard to the Three Rs principle

(Replacement, Reduction, Refinement) and submit project proposals in line with the legal framework of the 2012 Animal Experiments Act. In addition, a great number of other quality-assurance measures are in place in the field of research. At the same time, many of the available tools are inherent to research activities including, inter alia, the filing and related reviews of research applications for third-party funding and of contributions to renowned journals, the assessment of dissertations, PhD theses and postdoctoral theses as well as interim evaluations of qualification positions plus well-structured and competitive appointment procedures or measures to ensure good scientific practice. Moreover, Vetmeduni Vienna ensures the quality and further development of research through a great number of parties, panels and structures on an ongoing basis. Special mention must be made in this context of the university's Innovation Vet Circle (IVC), the Profile Lines Board and the international external advisory boards on scientific matters. The Innovation Vet Circle is a university-wide think tank and catalyst in respect of research questions. Scientists of different career levels meet within the IVC to discuss matters at eye level and work in self-organised working groups. The IVC supports the direction and design of profile lines and research priorities, provides impetus to innovations, promotes the interlinkage of scientific disciplines and advances the strategic orientation of the university's research infrastructure. The Profile Line Board, a standing working group of the IVC, is in charge of selection and ongoing quality control of the projects submitted for in-house funding.

Field of action 1: Conduct and further develop research evaluation

In the field of research, quality assurance is accompanied by a concerted research evaluation exercise which takes place at regular intervals. The last such evaluation was conducted in 2017/18 and reviewed research activities that had taken place between 2013 and 2016. It included two phases, the first one involving the preparation of a self-evaluation report and the second involving an on-site visit by external experts. Evaluation resulted in a report with recommendations drafted by the group of experts.

Based on this report, individual talks were held with the scientists in question to engage in a joint reflection on the results and deduce individual measures of further development. Vetmeduni Vienna recognises the benefit of the research evaluation tool and will continue to use it as part of its quality assurance processes in research. The concrete design of future external evaluation arrangements is currently being prepared by an internal working group.

10.1.4. Operational Objective: Quality-Assured Advancement of Corporate Governance

Vetmeduni Vienna operates within a multi-dimensional framework between scientific freedom and (state) financing, between academic self-government (bottom up) and extensive control (top down). In view of the complexity of internal and external expectations set for Vetmeduni Vienna as well as the related heterogeneity of stakeholders, there is a specific need for a functioning communications culture and structure. Vetmeduni Vienna will continue to subject its strategic capabilities and control mechanisms to ongo-

ing review within an increasingly competitive environment, while focusing on the further development of these capabilities and mechanism. This is reflected by the numerous tools and measures available to Vetmeduni Vienna in matters of corporate governance including those that ensue from legal requirements and the regulatory framework (Federal Code of Public Corporate Governance). The university's anti-corruption guideline sets out the principles of separation, transparency, documentation and reasonableness; its compliance guideline as well as the code of conduct are binding on all employees.

Alongside an appropriate management (including Rectorate, University Council), committee and organisational structure (including internal controlling and auditing mechanisms, compliance managers), corporate governance at Vetmeduni Vienna also covers areas such as a well-established reporting system (knowledge scoreboard, annual report) as well as an external auditing firm charged with auditing the annual accounts of the university. In addition, Vetmeduni Vienna has introduced internal control and risk management systems.

Field of action 1: Expand and advance compliance management

Another objective of Vetmeduni Vienna is to advance systematic and targeted risk assessment within efforts to expand its risk management system so as to continue observing legal and university-specific requirements and taking forward the university's overall development. In so doing, the university intends to place risk management in relation to its well-established process management system to ensure an integrated approach to identifying potential opportunities and risks in due time and taking countermeasures where appropriate.

Field of action 2: Expand and advance opportunities and risk management systems

The quality-assured monitoring and documentation of the implementation of multidimensional objectives (ministries, University Council, Rectorate, employees) of Vetmeduni Vienna will continue to be a major priority in corporate governance. Additional management tools designed to give a better picture of other target dimensions will be used in relation to the topics and projects concerned.

Field of action 3: Develop internal self-evaluation system

Vetmeduni Vienna is aware that good corporate governance is inseparably linked to responsible, qualified and transparent management geared towards long-term success, thus serving both the university and its stakeholders. This is the foundation upon which Vetmeduni Vienna will continuously develop its corporate governance policy and use (inter)national standards as benchmarks.

10.2. Strategic Goal: Undertake Regular and Systematic Reviews of Quality by Independent (Inter)National Entities and Experts

Irrespective of the above, the university will continue to have its quality assured and verified by recognised, independent (inter)national organisations and experts (inter alia, EAEVE accreditation, research evaluation) as part of its core elements of quality assurance.

10.2.1. Operational Objective: Successful Re-Accreditation/Audit/Evaluation by Independent (Inter)National Entities and Experts

Field of action 1: Conduct re-accreditation by EAEVE in 2026

2019 marked the fourth time that Vetmeduni Vienna was successful in obtaining accreditation by the European Association of Establishments for Veterinary Education (EAEVE). This was preceded by a comprehensive quality-assured accreditation procedure, under which an international team of experts subjected all of the university's core and service areas to an in-depth review including, inter alia: strategy, organisation, quality assurance, curriculum, student assessment, academic and support staff, research and infrastructure. Vetmeduni Vienna was the first European veterinary establishment to undergo accreditation pursuant to the most recent and tighter Standard Operating Procedures.

The expert team commended, among other things, 'the excellent management of the Establishment and excellent communication and interaction between the Rectorate and the administration on the one hand, and staff, students and stakeholders on the other hand'. The international experts were particularly pleased with the 'impressive integrated study programme focused on learning outcomes and acquisition of Day One Competences' as well as with the 'efficient and collegial collaboration between academic and support staff, and between the various units'. EAEVE has thus awarded full accreditation – without any additional requirements – to Vetmeduni Vienna for another seven years. The next re-accreditation will thus be due in 2026. This positive assessment by EAEVE enables graduates of Vetmeduni Vienna to have their study credentials internationally recognised, while it also ensures accreditation pursuant to the Austrian Quality Assurance Act for Higher Education (HS-QSG). The next accreditation is due in 2026.

Field of action 2: Conduct EMAS certification

Vetmeduni Vienna has set itself the task of making a positive contribution to environmental protection and sustainability. The Eco-Management and Audit Scheme (EMAS) supports the university in this endeavour. Its periodic externals audits, a key component of EMAS, will continue to be a crucial building block in the coming period of the Development Plan.

Field of action 3: Conduct hochschuleundfamilie audit

Vetmeduni Vienna undergoes regular reviews for its work-life-balance policies by berufundfamilie GmbH. In the related audit (hochschuleundfamilie), the company checks the university's staff policy, working environment for employees, scientists and students and whether policies are in place to greatly ensure reconciliation of work, study and family life.

10.2.2. Operational Objective: Strategy to Assure the Quality of External Services

Basically, the university clinics and institutes are embedded in the overarching quality management system of Vetmeduni Vienna. This is due to the fact that the organisational units in question primarily work in clinical teaching, postgraduate continuing education and research, thus being automatically included in the related tools and policies of quality assurance. By the same token, these facilities are the core focus of audit under the periodic external accreditation by EAEVE (see item 10.2.1). In addition to this comprehensive setting, the clinics and institutes have their own organisation-specific quality management policies and tools ranging from voluntary certification and accreditation (inter alia, ISO 9001, ISO/IEC 17025) and regular client and service polls to the appointment of Quality Assurance Officers (QAOs) and an externally certified reference laboratory in poultry and fish medicine.

Field of action 1: Prepare an overall university strategy for assuring the quality of the external service portfolio of the clinics and institutes of Vetmeduni Vienna and develop further the organisation-specific QM systems and components

It should be noted that Vetmeduni Vienna has deliberately chosen not to focus on a single quality model or procedure within the clinics and institutes but rather to allow for, and provide targeted support to, a plurality of models and procedures in line with the diverse tasks and requirements of the organisation units in question. This enables a needs-based design of organisation-specific quality assurance and improvement and fosters a quality culture borne by the personal commitment of the protagonists involved. In the forthcoming years, Vetmeduni Vienna plans to make the existing QA expertise of its clinics and institutes more visible and ensure recognition of the great variety of their QA activities. The overall university strategy for assuring the quality of the external service portfolio will be developed along these lines, thus providing the background for identifying and enhancing synergies in these areas and ensuring greater efficiency.

11. Professorships and Career Positions

11.1. Professorships as at 31 December 2019

For a better overview, all professorships under §98, §99(1) and §99(3) of the 2002 Universities Act that were ongoing at the cut-off date of 31 Dec 2019 are listed below.

This snapshot does not in any way prejudge the subjects allocated to professorial chairs in the following section or any future subject allocations to chairs.

- Anaesthesia and Analgesia
- Bacteriology and Hygiene
- Herd Health Management for Ruminants
- Diagnostic Imaging
- Biotechnology and Molecular Genetics
- Nutrition Physiology
- Ethics in Human-Animal Interaction
- Fish Medicine and Management of Fish Stocks
- Meat Hygiene, Meat Technology and Food Science
- Functional Microbiology
- Obstetrics, Gynaecology and Andrology
- Poultry
- Immunology
- Internal Medicine Small Animals
- Equine Internal Medicine
- Small Animal Surgery
- Comparative Medicine
- Laboratory Animal Science
- Laboratory Animal Medicine –Translational Methods in Cancer Research (formerly a professorship sponsored by the Ludwig Boltzmann Research Association)
- Medical Biochemistry
- Molecular Food Microbiology and Zoonoses
- Veterinary Public Health
- Parasitology
- Pathology
- Pathology and Forensic Veterinary Medicine
- Pathophysiology
- Equine Surgery
- Pharmacology and Toxicology
- Physiology – Molecular Physiology, Medical Physics and Biophysics
- Population Genetics in Veterinary Medicine
- Porcine Health Management
- Animal Nutrition – Focus: Livestock

- Animal Physiology – Focus: Ornithology
- Animal Welfare Science
- Animal Breeding and Genetics
- Comparative Cognition Research
- Virology
- Virology (50 per cent)
- Ruminant Medicine
- Wildlife Science
- Zoo Medicine, Species Protection and in-situ Conservation

11.2. Subjects Allocated to Future Professorships

Professorships to be filled in July 2020
under §98, §99(1), §99(3) of the 2002 Universities Act

- Computational Medicine
- Food Hygiene and Technology
- Equine Internal Medicine
- In-vivo and in-vitro Models
- Neuroscience of Human-Animal Interaction
- Morphology

Future professorships to be filled in agreement with the research profile and to ensure core competences under §98, §99(1), §99(3), §99(4) and §99(5) of the 2002 Universities Act

- Diagnostic Imaging (as of 2026, after the Professorship in Diagnostic Imaging becomes vacant)
- Fish Health (as of 2021, after the Professorship in Fish Medicine and Management of Fish Stocks becomes vacant)
- Poultry Medicine (as of 2025, after the Poultry Professorship becomes vacant)
- Immunology (as of 2024, after the Professorship in Immunology becomes vacant)
- Infectious Diseases – Bacteriology (as of 2023, after the Professorship in Bacteriology and Hygiene becomes vacant)
- Infectious Diseases – Virology (as of 2025, after the Professorship in Virology becomes vacant)
- Small Animal Surgery (as of 2020, after the Professorship in Small Animal Surgery becomes vacant)
- Comparative Medicine (as of 2025, after the Professorship in Comparative Medicine becomes vacant)

- Food Safety (as of 2027, after the Professorship in Molecular Food Microbiology and Zoonoses becomes vacant)
- Medical Biochemistry (as of 2023, after expiry of the Professorship in Medical Biochemistry)
- Veterinary Public Health (as of 2024, after the Professorship in Veterinary Public Health becomes vacant)
- Pathology (as of 2027, after the Professorship in Pathology becomes vacant)
- Physiology (as of 2023, after the Professorship in Pathophysiology becomes vacant)
- Animal Breeding and Genetics (as of 2026, with some delay after the Professorship in Animal Breeding and Genetics becomes vacant)
- Wildlife Science (as of 2021, after the Professorship in Wildlife Science becomes vacant)
- Zoo and Wildlife Medicine (as of 2027, after the Professorship in Zoo Medicine, Species Protection and in-situ Conservation becomes vacant)

Future professorship depending on budgetary constraints

- Computational Medicine
- Nutrition Physiology
- One Health

Number of university professors under §99a of the UG:
2

Number of university professors under §99(1) of the UG (minimum 3 years):
up to 9

Number of university professors under §99(3) of the UG:
2 – 3

Number of positions under §99(4) of the UG:
up to 9

11.3. Complete Overview of Career Positions and Lecturers

Category	Current number	Planned number		
	2019	At the end of the Performance Agreement Period 2019 – 2021	2022 – 2024	2025 – 2027
Career positions under §13b(3)	6 (whereof 2 on parental leave)	10	17	22
Lecturer	43	41	35	24
Total	**49**	**51**	**52**	**46**

List of Abbreviations

ADDA	Advancement of Dairying in Austria
AGES	Austrian Agency for Health and Food Safety
AI	Artificial Intelligence
AIT	Austrian Institute of Technology
ALPBIONET	Integrative Alpine wildlife and habitat management for the next generation
A.L.P.H.A.	African Livestock Productivity and Health Advancement
AMEE	Association for Medical Education in Europe
AOC	Austrian Ornithological Centre
ASEA UNINET	Association of Southeast Asian Nations European Academic University Network
BBMRI	Biobanking and BioMolecular resources Research Infrastructure
BIB	International Relations bureau of Vetmeduni Vienna
BIG	Bundesimmobiliengesellschaft m.b.H., a quasi-governmental company, which manages publicly owned real estate in Austria
BiMM	Core Facility Bioactive Microbial Metabolites
BINGO	Breeding Invertebrates for Next Generation BioControl
BMASGK	Federal Ministry of Labour, Social Affairs, Health and Consumer Protection
BMSGPK	Federal Ministry of Social Affairs, Health, Care and Consumer Protection
BOKU	University of Natural Resources and Life Sciences, Vienna
CBMed	Center for Biomarker Research in Medicine
CD	Christian Doppler
CEEPUS	Central European Exchange Programme for University Studies
CeMM	Research Centre for Molecular Medicine
CEPI	Centre of Excellence for Poultry Innovation
CMI	Correlated Multimodal Imaging Node Austria
COMET	Competence Center for Excellent Technologies
CSF	Campus Science Support Facilities
CSH	Complexity Science Hub Vienna
CT	computer tomography
D4Dairy	Digitalisation, Data Integration, Detection and Decision Support in Dairying

DK	doctoral programme
EAEVE	European Association of Establishments of Veterinary Education
EBVS	European Board of Veterinary Specialisation
EIBIR	European Institute for Biomedical Imaging Research
EMAS	Eco-Management and Audit Scheme
EMBL	European Molecular Biology Laboratory
EMMA	European Mouse Mutant Archive
EPA	Entrustable Professional Activities
EPU	Eurasia-Pacific Uninet
ERC	European Research Council
EU	European Union
FFG	Austrian Research Promotion Agency
FFoQSI	Feed and Food Quality, Safety & Innovation
FH	university of applied sciences
FIWI	Research Institute of Wildlife Ecology
FWF	Austrian Science Fund
GLI	Graf Lehndorff Institute for Equine Science
GMA	German Association for Medical Education
GSP	Good Scientific Practice
GV-SOLAS	Society of Laboratory Animal Science
HRSM	Hochschulraum-Strukturmittel – Higher Education Structural Resources
HS-QSG	Austrian Quality Assurance Act for Higher Education
ICU	Intensive Care Unit
IEC	International Electrotechnical Commission
IFA	Interuniversity Research Department for Agrobiotechnology
IHS	Institute for Advanced Studies
IMP	Research Institute of Molecular Pathology
INPOMED	Innovations in Poultry Medicine
IoT	Internet of Things
ISO	International Organization for Standardization
IST Austria	Institute of Science and Technology Austria
IT	Information Technology

IVC	Innovation Vet Circle
IWJ	Institute of Wildlife Biology and Game Management
KLIVV	Konrad Lorenz Institute of Ethology
LBC	Ludwig Boltzmann Cluster
LBC ONC	Ludwig Boltzmann Cluster Oncology
LBI	Ludwig Boltzmann Institute
LBI HO	Ludwig Boltzmann Institute for Haematology and Oncology
LLL	LifeLong Learning
Meduni	Medical University of Vienna, see also MUW
MFPL	Max F. Perutz Laboratories
MIP	Medical Imaging Platform
MRT	magnetic resonance tomography
MUW	Medical University of Vienna, see also Meduni
ÖAW	Austrian Academy of Sciences
ÖGHD	Austrian Society for Higher Didactics
ÖTK	Austrian Chamber of Veterinary Surgeons
PLF	Precision Livestock Farming
QA	Quality Assurance
QAO	Quality Assurance Officer
RCW	Reproduction Center Wieselburg
R&D	Research and Development
RECENDT	Research Center for Non Destructive Testing
SDG	Sustainable Development Goal
SFB	special research area
Three Rs	Replacement, Reduction, Refinement
TIS	Animal Hospital Information System
TU	Vienna University of Technology
TVG	Animal Experiments Act
UFT	University and Research Centre Tulln
UG	Universities Act
VBC	Vienna Biocenter
VetNEST	Veterinary Network of European Student and Staff Transfer

VetWIDI	Veterinary Medical Services and Diagnostics
ViEW	Veterinary Education Worldwide
VMF	Vienna Mouse Breeding Facility
VRVis	Center for Virtual Reality and Visualisation
VSC	Vienna Scientific Cluster
WHO	World Health Organization
WKO	Austrian Economic Chamber
WSC	Wolf Science Center
WWTF	Vienna Science and Technology Fund
ZMF	Centre for Basic Medical Research