WWTF IMPACT EVALUATION 2025

SELF-ASSESSMENT REPORT

WWTF Office

Vienna Science and Technology Fund wwtf.at

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WWTF

Vienna Science
and Technology Fund

WWTF Impact Evaluation 2025
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List of abbreviations

AB Advisory Board
Add.M Additional Measures
AGIDE Academies for Global Innovation and Digital Ethics of the Austrian Academy of Sciences
AI Artificial Intelligence
AI/ML Artificial Intelligence/Machine Learning
AIT Austrian Institute of Technology
Akbild Academy of Fine Arts Vienna/ Akademie der bildenden Künste Wien
AMDC Austria Microdata Center
Ass. Prof. Assistant Professor
Assoc. Prof. Associate Professor
AT Austria
aws Austria Wirtschaftsservice
BMAW Bundesministerium für Arbeit und Wirtschaft/ Federal Ministry of Labour and Economy
BMBWF Bundesministerium für Bildung, Wissenschaft und Forschung/Federal Ministry of Education, Science and Research
BMK Bundesministerium für Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie/Federal Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology
BoD Board of Directors
BOKU University Universität für Bodenkultur Wien/University of Natural Resources and Life Sciences
CCRI Children's Cancer Research Institute
CDG Christian Doppler Forschungsgesellschaft/ Christian Doppler Research Association
CeMM Forschungszentrum für Molekulare Medizin/Research Center for Molecular Medicine of the Austrian Academy of Sciences
CEU Central European University
CH Switzerland
CS Cognitive Science program of WWTF
CSA Coordination and Support Action
CSH Complexity Science Hub Vienna
CWTS Centre for Science and Technology Studies, Universiteit Leiden
DE Germany
DFF Danmarks Frie Forskningsfond/ Independent Research Fund Denmark
DFG Deutsche Forschungsgemeinschaft
DK Denmark
DKFZ Deutsches Krebsforschungszentrum/ German Cancer Research Center
DORA Declaration on Research Assessment
EC European Commission
EIS European Innovation Scoreboard
EMBL European Molecular Biology Laboratory
EOSC European Open Science Cloud
ERC European Research Council
ERP European Recovery Program
ESR Environmental Systems Research program of WWTF
ESS Empirical Social Science program of WWTF
EU European Union
FFG Österreichische Forschungsförderungsgesellschaft/ Austrian Research Promotion
FH University of applied sciences/Fachhochschule
FORWIT Rat für Forschung, Wissenschaft, Innovation und Technologieentwicklung, formerly Austrian Council for Research and Technology Development (RFTE)
FTE Full time equivalent
FUOP Future Operations Platform
FWF Österreichischer Wissenschaftsfonds/Austrian Science Fund
GDPR General Data Protection Regulation
GMI Gregor Mendel Institut für Molekulare Pflanzenbiologie/ Gregor Mendel Institute of Molecular Plant Biology of the Austrian Academy of Sciences
HE Higher education
HEI Higher education institution
ICS Internal control system
ICT Information and Communcation Technology program of WWTF
IHS Institute for Advanced Studies
IIASA International Institute for Applied Systems Analysis
IMBA Institut für Molekulare Biotechnologie/Institute of Molecular Biotechnology of the Austrian Academy of Sciences
IMP Forschungsinstitut für Molekulare Pathologie/ Research Institute of Molecular Pathology
ISTA Institute of Science and Technology Austria
LBG Ludwig Boltzmann Gesellschaft
LS Life Sciences program of WWTF
MA Mathematics and … program of WWTF
mdw University of Music and Performing Arts Vienna/ Universität für Musik und darstellende Kunst Wien
ME/CFS Myalgic encephalomyelitis/chronic fatigue syndrome
MUI Medizinische Universität Innsbruck/ Medical University of Innsbruck
MUW Medizinische Universität Wien/ Medical University of Vienna
NEXT New Exciting Transfer Projects program of WWTF
NL Netherlands
NUTS Nomenclature des unités territoriales statistiques
NWO Nederlandse Organisatie voor Wetenschappelijk Onderzoek/ Dutch Research Council
ÖAW Österreichische Akademie der Wissenschaften/ Austrian Academy of Sciences
OeAWI Austrian Agency for Research Integrity
OFAI Austrian Research Institute for Artificial Intelligence
ONB Österreichische Nationalbank/Austrian National Bank
PE Physical sciences and engineering
PI Principal Investigator
Q&A Question and answer
R&D Research & development
RFO Research funding organization
RIS Regional Innovation Scoreboard
SAR Self-evaluation report
SC Science Chairs
SE Sweden
SNF Swiss National Fund
SSH Social sciences and humanities
THE Times Higher Education World University Ranking
ToR Terms of Reference
TU Wien Technical University of Vienna
UIP University Infrastructure program of WWTF
UK United Kingdom
UNESCO United Nations Educational, Scientific and Cultural Organization
UNIDO United Nations Development Organization
Uni Wien University of Vienna/Universität Wien
UNU United Nations University
UWK University for Continuing Education Krems/ Universität für Weiterbildung Krems
vetmeduni University of Veterinary Medicine, Vienna/ Veterinärmedizinische Universität Wien
VR Vetenskapsrådet/Swedish Research Council
VRG Vienna Research Groups for Young Investigators program of WWTF
WIFO Österreichisches Institut für Wirtschaftsforschung/Austrian Institute of Economic Research
WPI Wolfgang Pauli Institute
WU Wien Wirtschaftsuniversität Wien/ Vienna University of Economics and Business
WWTF Wiener Wissenschafts-, Forschungs- und Technologiefonds/ Vienna Science and Technology Fund
ZSI Zentrum für Soziale Innovation/Center for Social Innovation

1. Preface

Dear readers!

The WWTF Impact Evaluation 2025 is a crucial event for our organization. It will allow us to see what has been achieved through our funding and other initiatives, and to learn how to navigate increasingly complex waters and master future challenges. The self-assessment report (SAR) contains key information about our aims, governance structures, programs and relevant context, as well as extensive data and statistics. One important element are five impact stories that seek to capture how, in our view, we contribute to the Vienna science and innovation landscape through funding and other interventions. These impact studies were written in early Fall 2024 to support the analytical work of AIT and CWTS.

This SAR shall inform the international evaluation panel and complement the external qualitative and quantitative studies that have been produced by AIT and CWTS. As regards our report, we are aware that it contains our perspective only. We see it as part of a greater learning activity.

The SAR has been produced by WWTF Office as a collective exercise. My special thanks go to Michael Strassnig who wrote large parts and collected most of the data, and to Magdalena Wicher who contributed greatly to the structure and content of this report.

Michael Stampfer
Managing Director

Vienna, May 2025

2. Purpose and context of the self-evaluation report

This document serves as input for the 2025 evaluation of WWTF by an international review panel (henceforth the Panel).

The subject of the evaluation is **WWTF as an independent funding organization.** The **aim of the evaluation** is to take stock of WWTF's achievements to date with regard to its activities: (1) funding excellent research and (2) contributing to the thematic and structural development of the Vienna research area. The WWTF aimed to achieve the latter through the bridging of fields, researchers and institutions in Vienna via two intertwined forms of action: on the one hand, through WWTF's core funding instruments, on the other, through a roster of complementary activities. Through the evaluation, WWTF aims to understand its effects on its environment in Vienna, both with respect to the funded research fields and beyond. Based on the Panel's assessment, the evaluation should **provide recommendations for potential future directions** for WWTF as a reliable and stimulating partner for Vienna research institutions and their researchers.

Since the beginning of its operations in 2002, WWTF has been subject to organization-wide evaluations in 2008 and 2013/14. The 2013/14 impact evaluation is an important point of reference for the current exercise. The framework for this 2025 self-evaluation report (SAR) is stated in the Terms of Reference (ToR, 2024) for the Panel.[1] This SAR is to be seen in the context of the **overall evaluation**, which is based on the **self-assessment** and a **comprehensive, externally commissioned study** carried out by the Austrian Institute of Technology (AIT/ Vienna, AT) and the Centre for Science and Technology Studies (CWTS/Leiden, NL). The SAR was available to the Panel and served as the basis for its evaluation, and was to be processed together with the data collected during a two-day site visit in producing an evaluation report. The outcomes of this evaluation shall inform the discussion between the WWTF boards and office regarding the further **development of the fund** in the next 5–10 years.

This **document has been prepared by WWTF Office.** It is directed at the Panel with the principal aim of informing the Panel about WWTF from WWTF's own perspective. The document therefore aims to provide concise information about WWTF as an organization and its activities, focusing on the years 2011 to the present. It contains a description about the context of the Austrian and Viennese research landscape in which the WWTF operates, followed up with facts about the organization and its funding, as well as some insights on the self-perception of the work through impact stories.

[1] The ToR will be made available in the Final Evaluation Report of the Panel.

3. Organizational information

3.1 In a nutshell: What is WWTF?

WWTF is a private, non-profit fund for research activities in Vienna. The main financial sources for our activities are the private foundation AVZ Privatstiftung[2] and the City of Vienna. Additional financial means come from private donations and through a cooperation agreement with the province of Lower Austria. WWTF is not a public agency of the municipal administration and thus independent in its activities.

As a relatively small player in a large and diverse research environment, we want to support the expansion of cutting-edge research in Vienna and strengthen the profile of Vienna as a research area. In pivotal fields (our thematic programs), the fund helps to establish new research groups by bringing in exceptional talent from abroad. Through funding larger projects in thematically well-defined calls, we aim to contribute to research excellence, foster interdisciplinarity and allow for key research fields to develop critical mass. Additionally, to varying degrees across our portfolio, WWTF programs should also provide contributions to societally and economically relevant issues and challenges.

We see ourselves as bridgebuilder in the Vienna research area. This is not only achieved through the funding of excellent people and projects but also leveraged through various other initiatives that are often related to economic, societal and policy actors to support our overall mission. We also provide impulses for science and research-related policies on a regional scale and beyond. In all our aims and activities, we never forget that we are a comparatively small actor.

3.2 What is our mission?

In short, this is WWTF's mission:
Our mission is to support outstanding scientific research by providing funding resources. Excellent scientific projects are selected according to stringent criteria and competitive procedures. Projects receive substantial financial support from the WWTF. We embed our scientific work in socially relevant issues through carefully planned focus areas and active networking between disciplines and institutions. This is how we seek to contribute to a better world through science and research.[3]

WWTF has adapted its mission several times since its start in 2002. From the beginning, key elements have been the focus on funding excellent research and – due to our limited means – concentrating on certain fields of strategic importance for the Vienna research area.

"We strive to be a driving force and bridge builder within the scientific community in Vienna. Our most important task is to fund outstanding scientific projects, selected through highly competitive processes."

Dr. Michael Häupl
WWTF President

[2] https://www.avz.wien/
[3] https://www.wwtf.at/wwtf/about-us/index.php?lang=EN

The latest iteration of the adaptation of our mission was in 2020/21 in a process that involved both WWTF boards. The new mission-resulting in adapted Funding Guideline-seeks to maintain our strengths: focus on funding excellent people and research in carefully selected priorities but to formalize more strongly our defacto role, that is, actively pursue bridge-building between disciplines and institutions. While interdisciplinary calls have been part of WWTF's activities more or less from the very beginning (namely "Mathematics and …", MA calls starting in 2004), they became dominant around 2017 with the Environmental Systems Research (ESR) program as well as calls in our Life Sciences (LS) program (e.g., "Chemical Biology", 2017), Vienna Research Groups (VRG) ("Interdisciplinary Datascience", 2019), and Information and Communication Technology (ICT) program ("Digital Humanism", 2020). As a result of this process, WWTF's mission can be summarized as follows:

(1) WWTF as persisting driving force for the Vienna research area and a strong partner to its universities and research institutions to enhance both the excellence and relevance of research.
(2) Support excellent research by providing substantial financial support to those selected in competitive calls.
(3) These scientific projects are embedded into socially relevant questions through carefully planned funding priorities and active networking across disciplines and institutions. In doing so, we aim to make our contribution to shaping a better world through science and research.
(4) WWTF serves as a bridgebuilder for the Vienna research area. WWTF connects universities, research institutions, and other stakeholders, brings young research talents together with leading research facilities, and fosters connections between different scientific disciplines to enable new approaches.

3.3 What do we do?

WWTF employs **thematic programs** for its funding activities (see chapter 5 for details). These programs are selected based on ex ante evaluation and discussed extensively with our boards. All programs have a long-term character, i.e., they should run for at least 10 years. By this long-term commitment, measurable impact on the selected fields should be created, thus avoiding hopping from one trend to the next. They should cover a population of researchers large enough for recurrent, competitive calls, but not be too generic, which might result in loss of focus and an excessive number of proposals.

Within these programs, we run **regular calls for individuals** (Vienna Research Groups) **and/or projects**. Calls may be issued annually for larger fields (such as life sciences) or otherwise every two to three years. In the case of life sciences, which is a very large field in Vienna, calls are issued with changing topics. The call topics are also subject to analysis from WWTF Office and discussions with our boards to reflect both the needs of the specific communities and international developments.

Funding activities are complemented with activities called "**Additional Measures**". These are smaller initiatives (often carried out via calls) with the aim of supporting the activities of the regular funding in the thematic programs. Some of these activities are planned in advance (e.g., the funding of knowledge transfer in our NEXT calls). On the other hand, this instrument provides the necessary flexibility to respond rapidly to emerging issues, e.g., in the context of the COVID-19 pandemic or the researcher refugees from Ukraine. Although this instrument only represents a small proportion to our overall budget, it contributes to creating societal impact in the context of the thematic calls' activities. It allows WWTF to be timely in its interventions, which is much harder to do with regular calls, as the usual timeframe of a funding call (call start to funding decision) can take up to 10–11 months. In this way, regular calls ensure long-time impact, while Additional Measures provide rapid responses and short-term impact and relevancy.

WWTFs also hosts a scheme for **infrastructure funding (UIP)** at Viennese public universities. In these annual calls, WWTF funds university infrastructure (2/3 of the costs) at the nine public universities in Vienna.

The following table summarizes WWTF main funding instruments:

Table 1: WWTF Funding instruments and its main properties.

	Overall call size	Individual project size	Duration
Vienna Research Groups Calls	Between € 3.2 and € 4.8 million (2–3 positions)	€ 1.6 million; from 2025: € 1.8 million	6–8 years
Project Calls	Between € 3.5 and € 8 million	€ 400,000–€ 1,000,000	2–4 years
Additional Measures	Typically, about € 300,000, up to € 1 million	Max. € 100,000	0.5–2 years
Infrastructure Funding (UIP)	About € 1.8 Million	Between € 60,000 and € 500,000	n/a

Besides its funding activities, WWTF organizes frequent **events** (from workshops to larger conferences), either independently or, more often, in cooperation with partners in Vienna. These events are predominantly linked to topics in our funding programs and calls. Furthermore, our activities are complemented by **science communication** activities aimed at a broader, general public. We will describe some of these activities later in this report where appropriate (e.g., in the impact stories).

3.4 Organizational structure

WWTF is a **private, non-profit fund based** in Vienna. It was **founded in 2001** (and became operational in 2002) by two individuals (the former Lord Mayor of Vienna, Michael Häupl, who is still president of WWTF, and the former Vice Lord Mayor Bernhard Görg, who was active until 2012) and the AVZ Privatstiftung, a private foundation with roots in the banking sector. WWTF is legally independent from the City of Vienna, but currently receives more than half of its budget from the City of Vienna and also interacts closely with City organizations.

The organizational structure of the fund includes two boards [4], the Board of Directors (BoD) and an Advisory Board (AB), and the Managing Director/WWTF Office:

The Board of Directors ("Vorstand") is composed of six members: two founders of WWTF (and their **successor/s, respectively**); two representatives nominated by the AVZ Privatstiftung, and two academic representatives (one nominated by the Austrian Academy of Sciences (ÖAW), the other one by the Viennese universities) (see Table 17). The BoD is the decision-making body of WWTF. It decides on the programs WWTF runs, the calls that are issued, and formally approves the funding recommendations of call juries. It also defines the fund's strategies and policies and is formally responsible for finances and budgets (see Figure 1).

The **Advisory Board** ("Kuratorium") is composed of 26 members (see Table 18). About half are representatives from academia, nominated either by the six scientific universities in Vienna or by FWF. The other members are delegates from the Viennese regional parliament, social partners and municipal administration. Its main task is to advise the BoD in strategic and funding matters and to draft WWTF's Funding Guideline. which provides the overall framework for our funding activities. Furthermore, the Advisory Board (or working groups of members of the AB) is always involved in the development of calls as well as thematic priorities, and it reviews the evaluation juries' funding recommendation before they are submitted to the BoD.

WWTF Office is responsible for the fund's ongoing management and operation. This includes the preparation and management of calls, the administration of ongoing projects, the implementation of quality assurance and controlling instruments for all WWTF funding activities, communication and interaction with funded persons and institutions as well as with other

[4] There is a third body of WWTF, the fund auditor, whose task is accounting and financial control. The WWTF Advisory Board is responsible for deciding which auditor is tasked. Except for annual financial audits and some tasks regarding the ICS, the auditor has no further role.

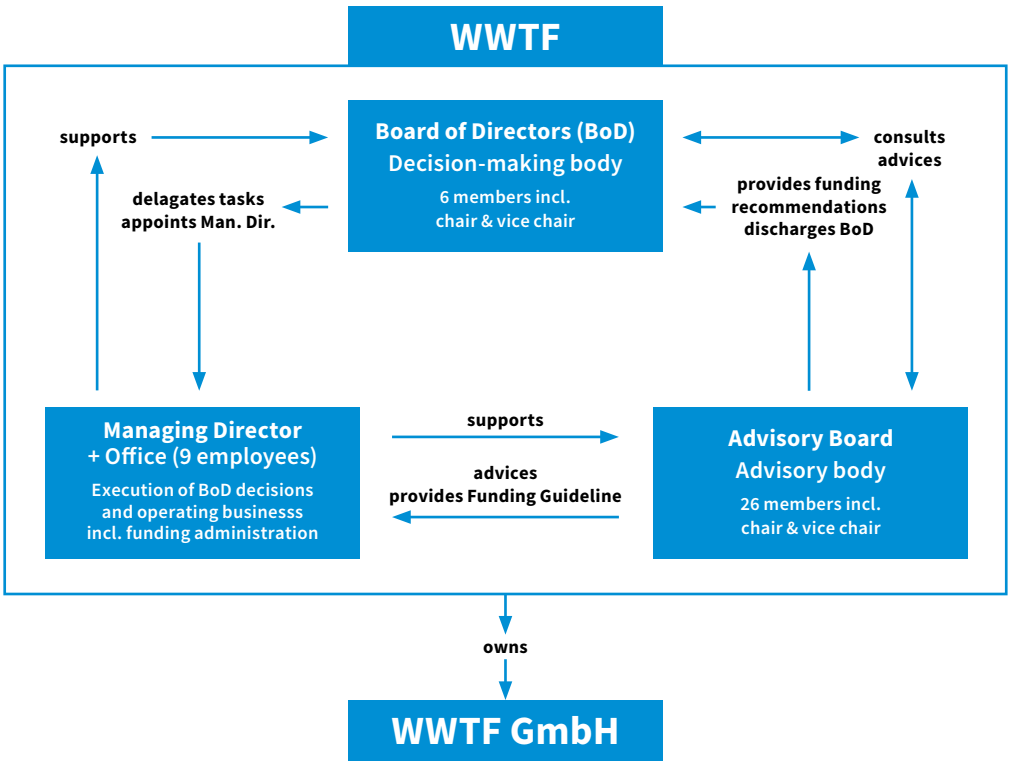


Figure 1: Organigram of WWTF.

relevant stake-holders, and the administration of the fund itself. At the time of this report's writing, WWTF Office employs eight staff.

In addition to our funding activities, since 2011 WWTF has offered services and consultancy in the field of research and innovation via its wholly owned **subsidiary WWTF GmbH**. As WWTF itself is non-profit, the fund cannot offer for-profit services, thus WWTF GmbH was founded. Services offered by WWTF GmbH benefit from the experiences that WWTF Office has gained in research funding and research evaluations. Typically, WWTF GmbH supports smaller internal funding schemes of universities or evaluates programs or institutions both nationally and internationally. WWTF GmbH also services for shared activities in the larger Vienna research area, such as dual career support, and helps universities to prepare their researchers for large and prestigious grants like ERC. WWTF GmbH does not have its own staff, but borrows its staff from WWTF. We see WWTF GmbH as both beneficial to the Viennese institutions and to WWTF. On the one hand, WWTF can share its experiences gained from research evaluation. On the other hand, WWTF can gain valuable insights, particularly in international evaluation contexts, which in turn benefits our own research funding competence. It has also helped to develop an international network of highly renowned scientists and experts.

3.5 Financial sources of WWTF

WWTF started in 2002 with a budget of around € 7 million; today we have around € 18–20 million at our disposal. Even taking inflation into account, our resources have grown. WWTF's main financial source are AVZ Privatstiftung and the City of Vienna. **AVZ Privatstiftung** has contributed about 62 % of the total budget since 2011. The purpose of the foundation stipulates that at least 2/3 of its respective annual net profit after tax should be allocated to the WWTF each year.

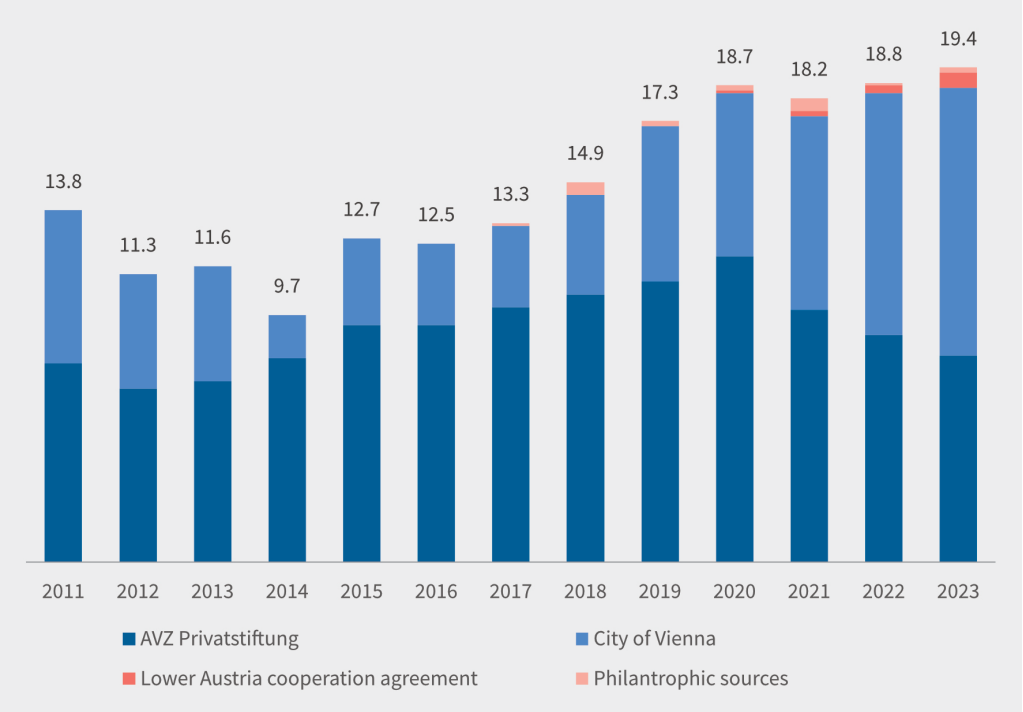
From 2011–2023, the **City of Vienna** contributed about 37 % of WWTF's budget. The nominal amount that AVZ Privatstiftung provided did not increase in line with inflation. In 2022 WWTF finalized a financial agreement with the City of Vienna to increase its contribution. Currently, WWTF receives more than 50 % of its financial resources from public sources, which currently represents € 12 million annually from the City of Vienna alone. The underlying agreements

cover three year periods and need to be renegotiated towards the end of each funding period. Before WWTF could conclude these financial agreements, we received subsidies from the City of Vienna for specific programs such as the Vienne Research Groups program.

All main financial contributions come without provisos, so WWTF and its bodies are free to define their funding activities. The cooperation agreement with the City of Vienna also includes incentive-based financing, meaning that every euro from **philanthropic sources** is matched by the City of Vienna to an equal amount to a maximum of € 500,000 per year. Philanthropic sources are a difficult area to develop, due to the lack of a philanthropic culture for science and research in Austria. Since starting its fundraising activities in 2017, WWTF derives an average income from these sources of about € 300,000 annually, which makes up about 1 % of WWTF's income. Hence, this income source is limited and volatile.

Since 2019, WWTF has had a cooperation agreement with the **provincial government of Lower Austria** that allows for universities and research institutions in Lower Austria to participate in WWTF projects to a larger extent, with these additional costs being covered by Lower Austria. Based on the cooperation agreement, Lower Austrian institutions can participate with a share of up to 49 % of the total project budget. This is in comparison to regular projects, in which a maximum of 20 % of the total funding granted can be spent outside of Vienna. Thus, in recent years, WWTF has had an overall annual funding budget of about € 18–19 million available. Figure 2 provides an overview about the financial development of the fund since 2011.

Figure 2: Funding by source and year (in € million).[5]



3.6 Major changes and developments over the years

Since we started in 2002, WWTF has been very consistent in its activities. The funding of larger projects in well-defined areas has been pivotal to WWTF's activities since its start. Career-oriented funding was introduced in 2004 and, in 2010, refocused on the promotion of younger top talent by bringing in excellent researchers from abroad. With respect to topics, WWTF has always been committed to long-term programs, e.g., the Life Sciences program has been running since 2003 and the ICT program since 2008. Our philosophy is to provide

[5] Until 2018, WWTF only managed the University Infrastructure Program, but universities were directly paid by the City of Vienna. Hence, data until 2018 does not include UIP funding. Since 2019, WWTF has also received the finances for this program and is thus also responsible for the associated payments and controlling.

stability with respect to the larger structural features of funding but to be open and responsive to the needs of the environment within these larger "frameworks". This allows us to react quickly without jumping from one trend to the other.

Furthermore, our evaluation mechanisms have remained – in their principles – the same since 2004, i.e. competitive calls based on the selection of funding-worthy projects by solely international juries supported by reviews from international experts. In the following, we would like to highlight seven larger changes WWTF has undergone over the years.

3.6.1 Increasing relevance of interdisciplinarity in funding activities

While interdisciplinarity has always played a major role in WWTF programs (e.g., the Mathematics and …" program that commenced in 2004), interdisciplinary aspects have grown increasingly stronger over the years and now dominate our calls and programs. This can be seen in the Life Sciences calls, the introduction of the Environmental Systems Research program in 2017, the topics of the Vienna Research Groups call as well as by the introduction of "Digital Humanism" in our ICT program. In this regard, we have reached saturation. Calls targeted at specific disciplines, however, are still possible to reach specific targets.

3.6.2 Increasing inclusion of some "societal mission" elements in our activities

While excellent science with high academic impact remains a central goal of WWTF, we have slowly but steadily introduced aspects of "mission orientation"[6] into our activities. We are fully aware that within the context of our activities, "mission orientation" cannot be realized in any way according to its textbook definition. However, our aim is to incorporate selected aspects of mission-oriented research in our activities where they are meaningful and where it does not dilute our central goal of supporting excellent science. Here are some examples:

(1) *Inclusion of relevant societal problems into the topics of our calls.* In the Life Sciences area, this is exemplified through a focus on health, such as Life Sciences calls on public health and the COVID-19-related calls (Rapid Response/ME/CFS). Other examples include the consideration of human-environment interactions in our Environmental Systems Research calls, and the Digital Humanism calls in our ICT program to include the human/social perspective when creating digital technologies.

(2) *Incentivize the transferability of scientific knowledge.* This is also not a new aspect to WWTF activities. In the Life Sciences area, for example, we started in 2007 with the calls on "Linking Research and Patients' Needs" to encourage the transfer of knowledge from bench to bedside. The "Mathematics and …" call aimed at transferring mathematical knowledge to application areas in other disciplines. More recently (since 2017) we have provided smaller funding to enable the next steps towards transferability of the knowledge produced in WWTF projects (NEXT calls).

(3) *Increasing the responsiveness of research funding in the context of rapidly emerging crises.* The unpreparedness with which our society confronted the SARS-COV2 virus gave rise to the idea at WWTF to introduce a data-centered call that could react quickly to the emerging crisis. This resulted in a call with a short turnover of just ten days between the call launch and funding). Another example is the provision of some funding to the ÖAW for a funding scheme with which they supported academic refugees from Ukraine shortly after Russia started its full-scale invasion. Regarding COVID-19, we (and an evaluation we commissioned, cf. Warta et al. 2023) were pleased to see that we have the ability to react quickly and unbureaucratically in the face of crisis. On the other hand, such activities should be rare exceptions for WWTF because frequent activities in this direction clash with our long-term commitment to certain areas.

(4) *Incorporating aspects of openness and gender into our funding activities.* In recent years, WWTF has developed explicit policies regarding the openness of research in terms of

[6] "Mission-oriented research and innovation initiatives typically are ambitious, exploratory and groundbreaking in nature, often cross-disciplinary, targeting a concrete problem/challenge, with a large impact and a well-defined timeframe." Fisher et al. 2018: 2.

greater inclusion of female researchers in all steps of our processes (see WWTF Gender Equality Plan & Strategy), from the composition of our boards to the very content of the research we fund. In a similar fashion, our promotion of open access publication has expanded into a more comprehensive open science policy to ensure the uptake of data and results according to the FAIR principles. The latter requires existing structures and infrastructures to be in place, hence, we are certainly not front-runners in this regard, but we have supported alliances and initiatives along the way.

3.6.3 Strengthening digitalization / data as central for the advancement of research

Since 2004, WWTF has been committed to strengthening local research in its capacity to include quantitative data in methods, for example, in early Life Science Calls on bioinformatics and quantitative methods in life sciences. More recently, WWTF issued a social sciences (pilot)-call for the use of large high-quality data sets. The ICT program was introduced in 2008 to further foster Vienna's competences in digitalization. In recent years, WWTF has launched several calls focused on bringing AI/ML methods together with other disciplines. We regard the use of large datasets and the application of advanced quantitative methods (including AI/ML) as crucial for the international competitiveness of the Vienna research area. Hence, the focus on data use and digitalization has significantly grown in our funding and other activities (data advocacy) over the years. See chapter 7.6 of the Impact Stories for more details and our impact in this area.

3.6.4 Further development of funding instruments

WWTF started with two funding instruments (project-oriented funding and person-oriented funding). Additional funding became available for smaller activities that supplement the activities in our programs, although this was rarely drawn upon in the first 10–15 years. Since 2017, we have increasingly used them to include "mission-oriented" elements in our activities (NEXT calls for transfer projects, Digital Humanism roadmaps, COVID-19 Rapid Response call, the ME/CFS call). The vehicle of "Additional Measures" has proven to be a flexible instrument in our activities. Because the funding in this instrument is significantly smaller, selection mechanisms need not be as strict, which in turn allows for a much faster turnover.

The selection process of WWTF projects saw major changes in 2013, in moving from a one-phase process (only longer full proposals) to two phases (short and full proposal), always with international juries. This has significantly reduced the workload for the external reviewers as, regardless of how many short proposals we receive, only about 20–25 will be reviewed by international peers. It has also reduced the workload for applicants because only those who have a substantial chance of being selected for funding are invited to submit a full proposal. This, however, comes at the cost of longer processes from call start to the funding outcome. In contrast, the lengthy process was the reason why we switched in 2013 from a two-phase process to a one-phase process for the Vienna Research Groups. As excellent younger researchers are mobile and sought after internationally, it is crucial to keep the process as short as possible. As the number of submissions is usually not very high, it can be justified that all applicants must submit a full proposal.

In terms of internal processes, WWTF started to use an electronic submission system in the late 2000s. Over the years, the system expanded from a pure submission platform to a vertically integrated system that also covers reporting/monitoring. Since 2022, a new funding portal has been introduced which completely eliminates paperwork and also integrates the review process with peers and juries. The development of the system is an ongoing process. Currently, the new reporting module is under development and we are also working on data exchange between our systems and those of the applicants' institutions. For a small organization, the creation of a complex system is accompanied by various challenges, in particular constraints in financial and personnel resources. Overall, however, the system has greatly increased our efficiency while reducing the administrative overhead for our grantees.

3.6.5 WWTF as public policy actor: Strengthening the role of science in society

In the last 10 years, WWTF has increased its activities in science and public policy. We believe that scientific evidence should be the basis for public policy decisions in order to be effective, meaningful and impactful. The other aspect of this engagement is that science and research require excellent conditions to thrive. Our key activities in this regard have been the involvement in the creation of the Smart City Framework Strategy of Vienna, the promotion of Digital Humanism in a plethora of initiatives both nationally and internationally, the support of a network of researchers that emerged in the Future Operations Platform (FUOP) early in the pandemic (involved in COVID-19 policies and afterwards focused on data advocacy), and the lobbying for access to public administrative and register data for research, which resulted in the creation of the Austria Microdata Center. To keep this chapter short, we refer to the impact stories in chapter 7 that describe how WWTF is involved in public policy initiatives.

3.6.6 Strengthening regional cooperation

While WWTF's primary focus is on Vienna, in recent years we have reached out to Vienna's neighboring province of Lower Austria. Since 2019, WWTF has a cooperation agreement with the provincial government of Lower Austria which allows institutions from this province to participate in WWTF calls to a greater extent (see also chapter 3.5). In addition, since 2013, WWTF has been running the Dual Career Service Support to help connect partners in dual career couples with organizations in the science and research sector in the greater Vienna area. Among our partners in this network are two universities and a research institute in Lower Austria.

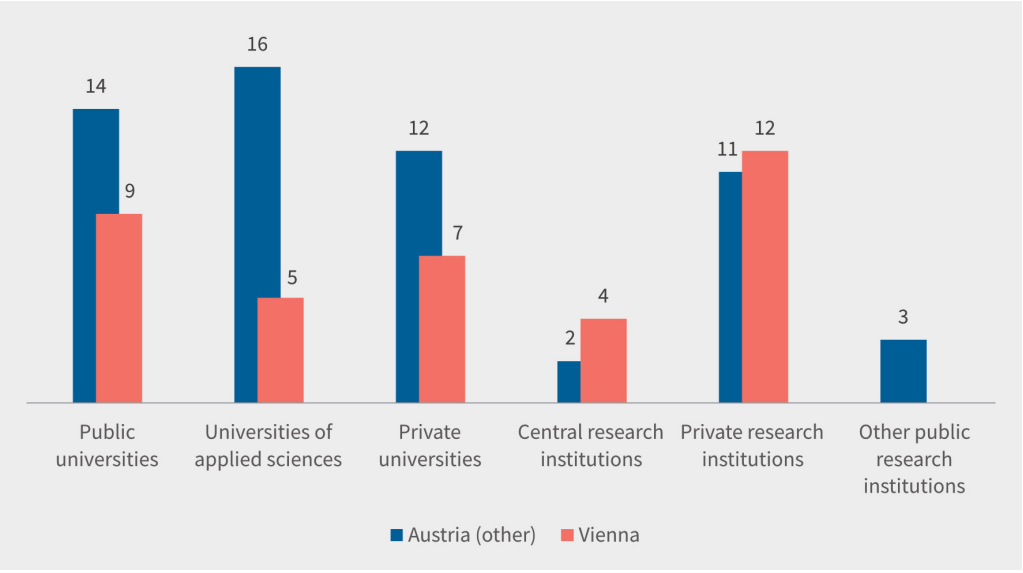
4. WWTF in the context auf the Austrian and Vienna research area

4.1 Vienna institutional landscape of research

4.1.1 Research institutions in Vienna

Vienna can be regarded as a very large science location in Europe. It hosts approx. 200,000 students and, together with Berlin, it is the biggest university city in the German-speaking countries. With its population of about 2 million people, Vienna is home to many higher education and research institutions. In total, there are nine public universities, and a dozen universities of applied sciences and private universities. Additionally, Vienna is home to a number of "central research institutions"[7] which are directly governed and financed by federal ministries. Furthermore, there are around 10 larger (> 50 employees) research institutions under private law that receive a substantial share of public funding. A list of Vienna's Higher Education Institutions (HEIs) and research institutions can be found in the annex, Table 31.

Figure 3: Number of research institutions in Vienna and the remainder of Austria.[8]



Data: Legal documents, own survey. Universities and "Central Research Institutions" are defined by law. Private and other public research institutions are undefined. Included are those with more than 50 FTEs. The columns add up, e.g., 9+14 = 23 public universities in Austria in total.

In the HE sector, the Austrian system consists of public universities, universities of applied sciences, private universities and university colleges for teacher education. Only public and private universities can award PhD degrees. There is a total of 76 HEIs in Austria, of which 34 are in Vienna (for an overview, see Table 30 in the annex).

Compared to the priorities of other provinces, Vienna's strengths are in academic and basic research and to a lesser extent in applied or business R&D. A good indicator for Vienna's strength is its ERC success: about 2/3 of all Austrian ERC grants have gone to Vienna. The majority of this academic/basic research takes place at the scientific public universities, a good share at the central research institutions (in particular, the institutes of the ÖAW) and

[7] "Central Research Institution" of the Federal State are defined by law in the Forschungsfinanzierungsgesetz (Research Financing Act) https://ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20011237

[8] All types of universities are defined by law. Except for "Central Research Institutions", there is no clear definition of what is considered a research institution, nor what is meant by other publicly financed research institutions. The number of such smaller units is very large; thus, we include only the larger ones (with 50 or more scientific staff). Hence the number should be understood as indicative. Teaching staff for HEIs is included. Excluded are researchers in companies.

some at private universities (Central European University) and private research institutions (Complexity Science Hub, CSH or Research Institute of Molecular Pathology, IMP).

4.1.2 Size of the research institutions in Vienna

Taken together, the institutions mentioned above account for about 35,000 research staff (head count) in Vienna, compared to about 40,000 in the other provinces of Austria. In terms of institutional size, University of Vienna is the largest organization in Vienna, followed by Medical University and TU Wien (see Figure 4). The fourth largest institution is the ÖAW, including its current life sciences subsidiaries: Research Center for Molecular Medicine (CeMM), Gregor Mendel Institute of Molecular Plant Biology (GMI) and Institute of Molecular Biotechnology (IMBA). As of 2025, ÖAW will host a further life science research institute, AITHYRA – cofounded with Boehringer Ingelheim Foundation – for AI in Biomedicine. WWTF was involved in helping to bring this institute to Vienna.

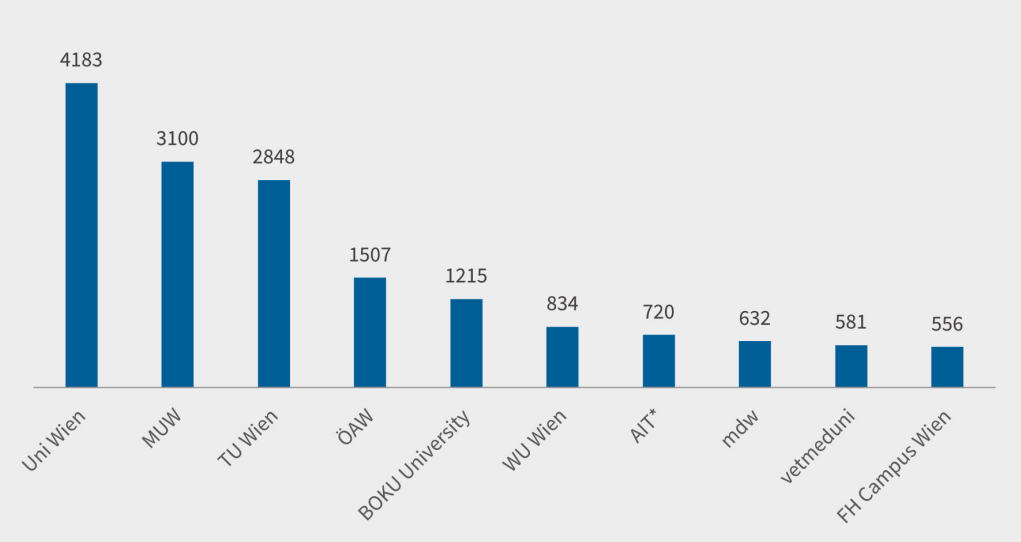


Figure 4: 10 largest HE and research institutions in Vienna (scientific and teaching staff) in FTEs.

Data: BMBWF uni:data, ÖAW Annual report 2023. Own calculations.
* FTE data not available. Own assumptions: 1500 employees minus admin staff times FTE factor of 0.6.

About 77 % of Vienna's research staff are employed at public universities and "central research institutions", which are the main recipients of WWTF funds.

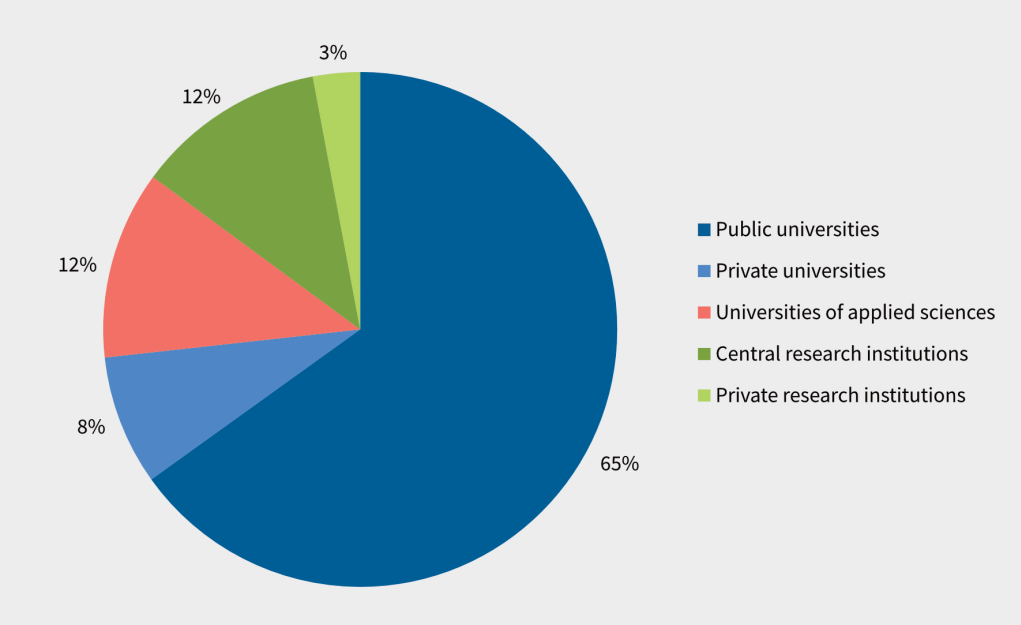


Figure 5: Relative size of types of research institutions in Vienna based on head count.

4.1.3 Financing of HE / research institutions

In general, most of the financing of research in Austria is handled via three-year "performance agreements" between the institutions and the responsible ministries. This applies to all public universities, the "central research institutions" as well as the essential federal funding agencies in Austria.

Public universities are financed via extensive three-year performance agreements between each university and the Federal Ministry of Education, Science and Research in "three pillars", i.e. for research, teaching and infrastructure/strategic development. The ratio between financing for teaching and research is about 60:40. The performance agreements are on the one hand indicator-based, with competitive indicators only making up a small fraction of the indicators. On the other hand, budget allocation is based on negotiations between the university and the ministry. University budgets have increased between performance agreement periods, indicating a good development path for this sector.

Table 2: Performance agreement budgets for public universities (2019–2027).

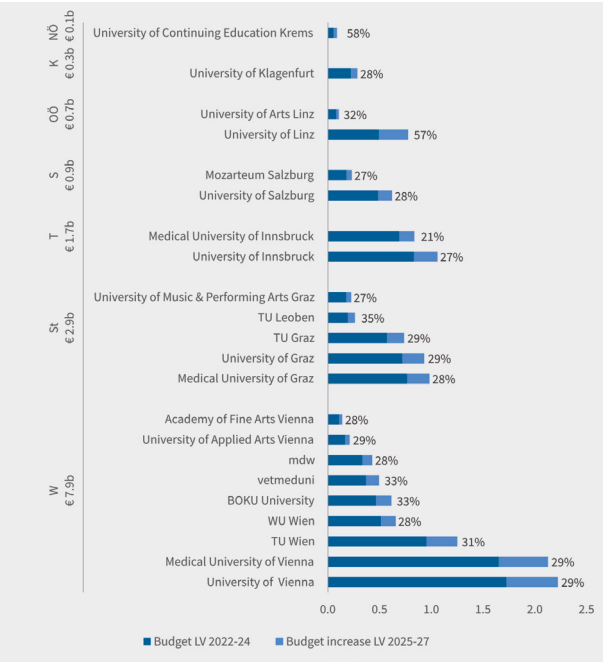
Performance agreement period	Budget	Increase
2016–2018	€ 9.7 billion	–
2019–2021	€ 11 billion	13 %
2022–2024	€ 12.3 billion	12 %
2025–2027	€ 16.2 billion	32 %

Source: BMBWF Universitätsbericht 2020, 2023 and https://www.bmbwf.gv.at/

On average, Austrian universities received a budget increase of 32 % for 2025–2027 compared to the last period, which is also true for Vienna's public universities (cf. Table 2 and Figure 6).

The financing logic of universities of applied sciences is based on student numbers, i.e., teaching-based. Private universities, in principle, should not be beneficiaries of public funding. However, as provinces are holders of some private universities, public money from provinces is involved in their funding in many cases. Central research institutions such as ÖAW and Institute of Science and Technology Austria (ISTA) also receive funding via three-year performance agreements with federal ministries. Private research institutions consist of a variety of different organizations, some of which are entirely private, others of which are joint ventures with universities. These institutions often receive a substantial share of public base funding from different ministries.

Figure 6: Budget increases through performance agreement for the period 2025–2027.



Source: uni:data, performance agreements 2022–2024 and 2025–2027

4.2 Research funding in Austria

Figure 7 shows the main actors and streams of funding for the Austrian research system. In terms of academic research financing, there are two main pathways: performance agreements for block grants in the case of public universities, and the Research Financing Law for financing the larger non-university research institutions ("central research institutions") and the federal research funding organization (in particular the FWF for basic/academic research).

Province-level funding agencies play a minor role in financing research at universities and academically oriented research institutions. They are owned by the government of the provinces, and they predominantly fund business-based innovation. WWTF is an exception, as it is a private fund, organizationally (but not financially) independent of the provincial government of Vienna and focuses exclusively on academic institutions.

There are two main research funding organizations at the national level in Austria.

- The Austrian Science Fund (FWF) is Austria's central funding organization for basic scientific research.[11] The beneficiaries of FWF are predominantly universities and non-university, academic research institutions. Its annual budget is currently about € 380 million.
- The Austrian Research Promotion Agency (FFG) is the national funding agency for applied research, with a main focus on company R&D. FFG also funds HEI but favors cooperative research together with companies. Its annual budget is currently about € 680 million.

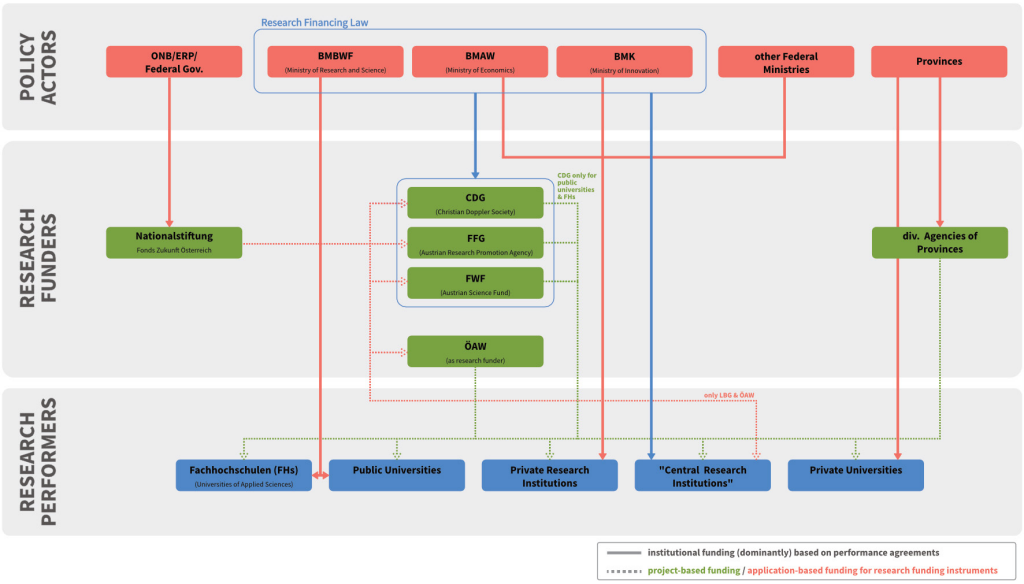
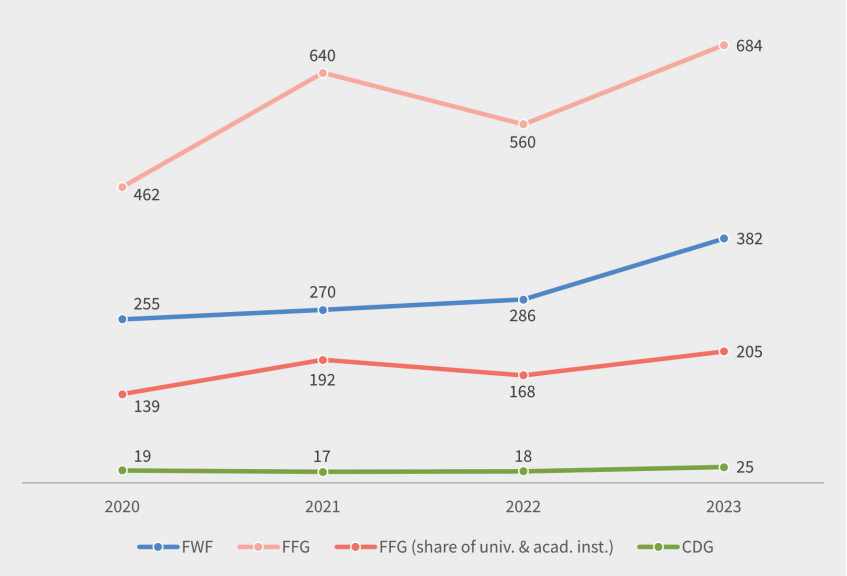


Figure 7: Main actors and financial streams of the Austrian research system (simplified).

Figure by WWTF. ONB: Austrian National Bank; ERP: European Recovery Program; BMK: Federal Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology; BMAW: Federal Ministry of Labour and Economy; BMBWF: Federal Ministry of Education, Science and Research; for other abbreviations see list on p. 1.

[11] There is a third large funding organization, aws (Austria Wirtschaftsservice), which, however, only finances companies, e.g., for targeted financing and technological-scientific consulting for the founding and development of high-technology enterprises.

Figure 8:
Annual funding budgets (2020–2023) of Austrian RFOs which fund research at HEI and research institutes. (in k EUR).



Data: BMBWF, BMAW & BMK 2021, 2022, 2023, 2024. No detailed figures are available for ÖAW and ONB. As their funding budget is less than € 10 million per annum, neither is included in the figure. FFG (share of universities and academic institutions) is estimated based on FFG indications (0.3). Own calculations.

There are three smaller, state owned research funding organizations:

- Christian Doppler Forschungsgesellschaft (CDG) which promotes cooperation between sciene and industry via Doppler Labs at universities and Josef Ressel Centers at universities of applied sciences.
- The Austrian National Bank with its Jubiläumsfonds which provides funding only in the area of economics. The annual budget is about € 6.5 million.
- ÖAW with a variety of smaller calls and programs across various disciplines (humanities, quantum science, etc.). The annual budget is about € 6.5 million.

Private foundations that fund research, as can often be found in other countries, are quasi non-existent in Austria. Excluding EU funding, Austrian HEI and academic research institutions receive about € 600 million in third-party funding for research. Assuming that 60 % of the national research takes place in Vienna, Viennese HEI and academic research institutions receive about € 400 million of third-party funding from national research funders. In this context, WWTF's contribution amounts to about 5 %.

In terms of resources for the national research councils, Austria is comparable to Denmark, Germany, or Sweden (see Figure 9). In Sweden and Denmark, however, there are a number of other–including private–RFOs that fund academic research, which strongly broadens the supply base. In Germany, the science ministry funds programs with a budget to that of the DFG. In Austria, the science ministry BMBWF does not have its own funding programs. Based on the research financing act, FWF will receive € 1.151 billion for 2024–2026. i.e., about € 380 million annually.

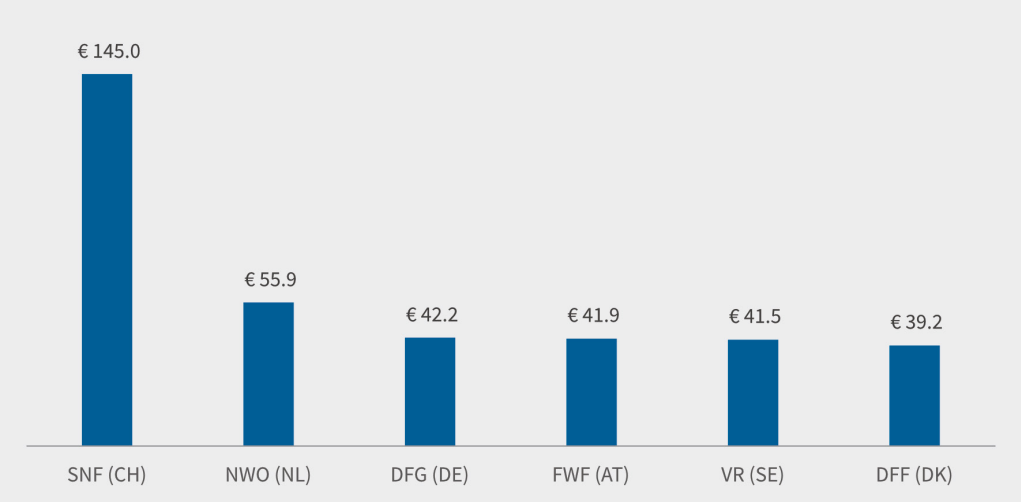


Figure 9: EUR/capita of selected national research councils in Europe.

Data: 2023, annual reports. Own calculations. Figures not adjusted for purchasing power; SNF: Swiss National Fund; DFG: Deutsche Forschungsgemeinschaft; NWO: Dutch Research Council; VR: Swedish Research Council; DFF: Independent Research Fund Denmark.

4.3 Vienna / Austria region in European comparison

Vienna's and Austria's position in terms of R&D in the European context can be summarized by stating that the research location is not among the top 5 (mainly metropolitan) regions in Europe, but rather in the follower group after the top research locations. Depending on the indicator, Vienna / Austria sometimes appears higher or lower in these rankings.

4.3.1 European Research Council (ERC) performance

To contextualize WWTF's funding activities, it is helpful to also consider the outcome of ERC funding, as it provides a European-wide benchmark (including neighboring countries) and also pursues similar aims as WWTF (i.e., funding cutting-edge research). In terms of ERC grants per million inhabitants, Austria ranks among a group of smaller countries with comparably good performance in all fields (LS – life sciences, PE – physical sciences and engineering, SSH – social sciences and humanities) (Figure 12, see also Table 32 in the annex).[5]

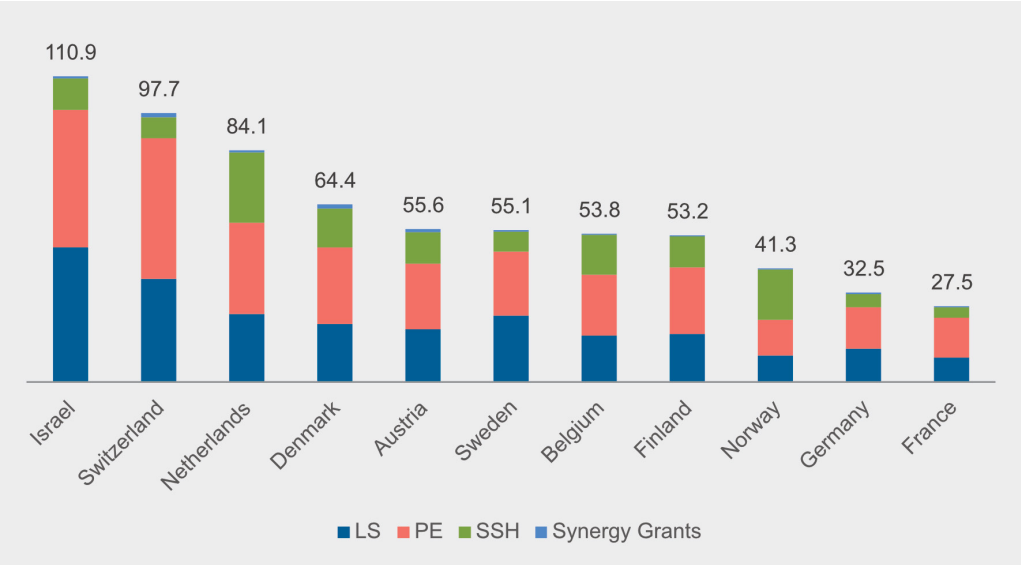


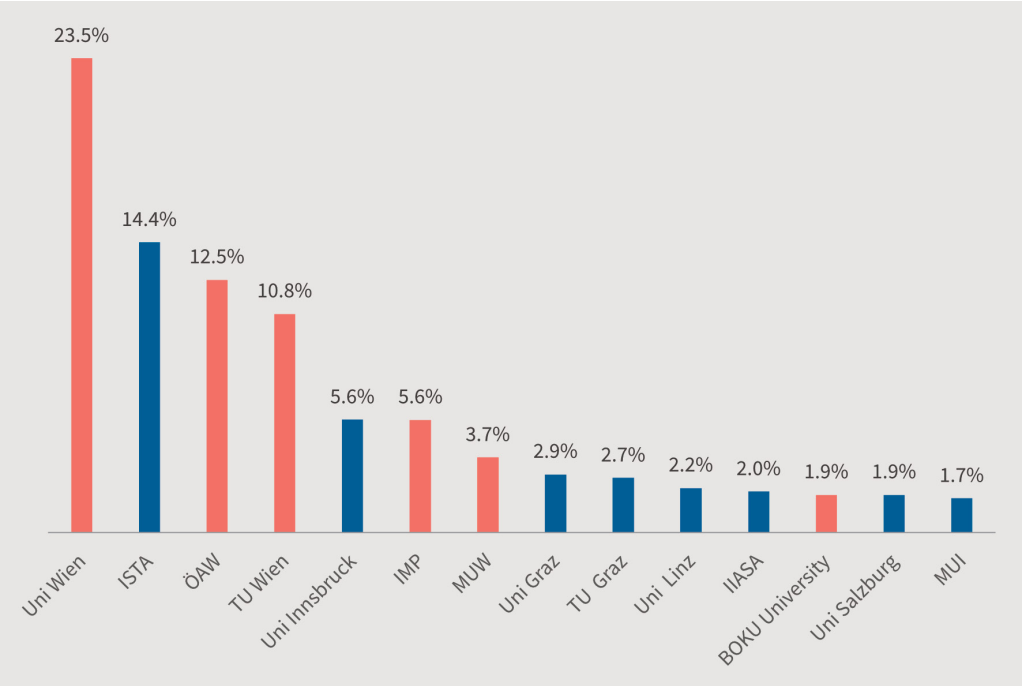
Figure 10: Number of ERC grants/ million capita.

Data: ERC, Eurostat, retrieved on 22-10-2024; own calculations. Nations following Norway are left out. France and Germany are included as examples for large nations.

Vienna as a province accounts for 65 % of all ERC grants in Austria, while the larger Vienna region accounts for 82 % of all ERC grants in Austria, mainly due to the inclusion of ISTA which

is located close to Vienna. There are 161.2 ERC grants/million inhabitants in Vienna. Munich has 135.6 ERC grants/m, Berlin 161.2 grants/m.[12]

Figure 11: Top performing institutions with regard to the number of ERC grants. Share of all ERC grants in Austria.



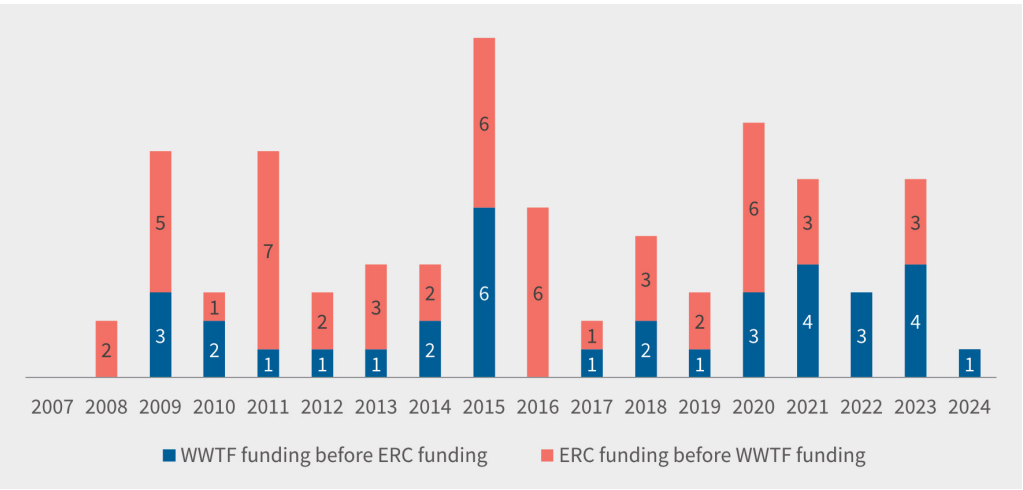
Data: ERC, own calculations. Retrieved on 11-5-2024; bars in red show Viennese institutions, bars in blue are institutions located outside Vienna

In Austria, the top performer in attracting ERC grants is the University of Vienna, with accounts for about ¼ of all Austrian ERC grants. There are 5 Viennese institutions among the top 7 institutions in Austria (see Figure 11).

In total, 71 different researchers who received an ERC grant also received WWTF funding, which is 25 % of all ERC grantees based in Vienna. As WWTF has no funding program in PE (except for ICT) and provides only little funding in SSH, the share of WWTF-funded ERC grantees in the Life Sciences is even higher (42.7 %).

Figure 12 depicts, based on the year an ERC was award to a Viennese researcher, how many of them received also WWTF funding, either before or after they received the ERC grant. In this regard, WWTF's performance has been stable over the years, and WWTF-funded researchers have been successful in obtaining an ERC grant after receiving our funding.

Figure 12: ERC grants received by WWTF funded researchers.



[12] All ERC grants of the German Max Planck Gesellschaft are attributed to Berlin, as the headquarters are in Berlin and ERC data allows not to resolve this any further. Likewise, all Fraunhofer ERC grants are attributed to Munich.

4.3.2 Horizon Europe performance

Indicators based on Horizon Europe funding can also provide insights regarding the position of Austria in the European context. As the last Framework Programs have adopted a number of missions (climate change, health, etc.), the performance in Horizon Europe can serve as an indicator of a nation's strength with respect to mission-oriented research. Austria does not perform as well here as in attracting ERC grants. Austria ranks around 10th for most indicators.

Overall, Austria ranks 13th in the Horizon Europe "Global Challenges and European Industrial Competitiveness" (EUR/capita) (see Figure 13). It should be noted, however, that larger countries tend to score lower than smaller ones. It is therefore fairer to compare Austria to countries more similar in population size. In this comparison, Austria performs slightly better than Sweden, but falls behind Denmark, Finland or Belgium.

Controlling for population size, Austria performs quite well in the area of Climate, Energy and Mobility, comparable to the Netherlands and most other of the countries in the figure. Furthermore, Austria also performs quite well in the area of Digital, Industry and Space is. This is contrasted by somewhat weaker performances in the areas "Health" and "Food, Bioeconomy Natural Resources, Agriculture and Environment" (see Figure 27 and Figure 28 in the annex).

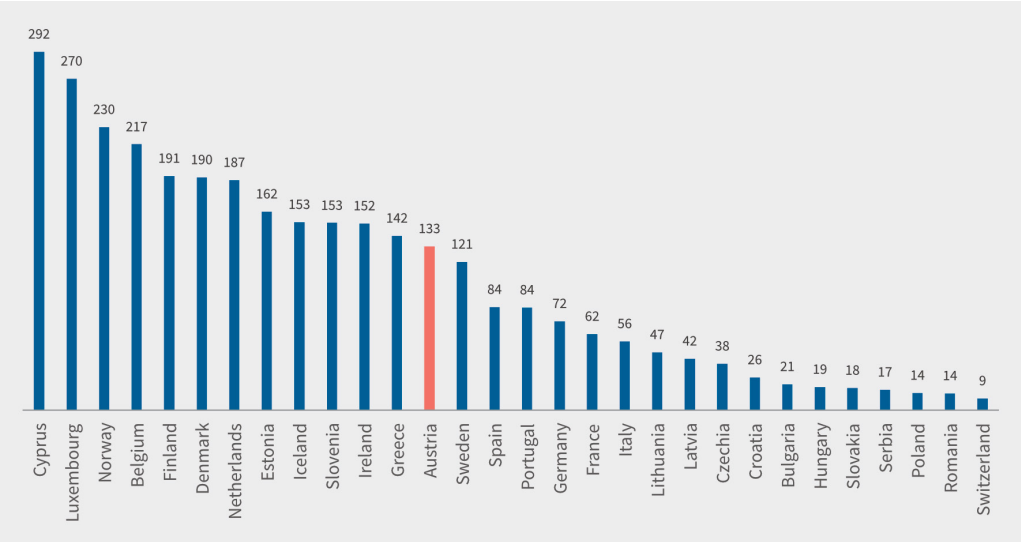


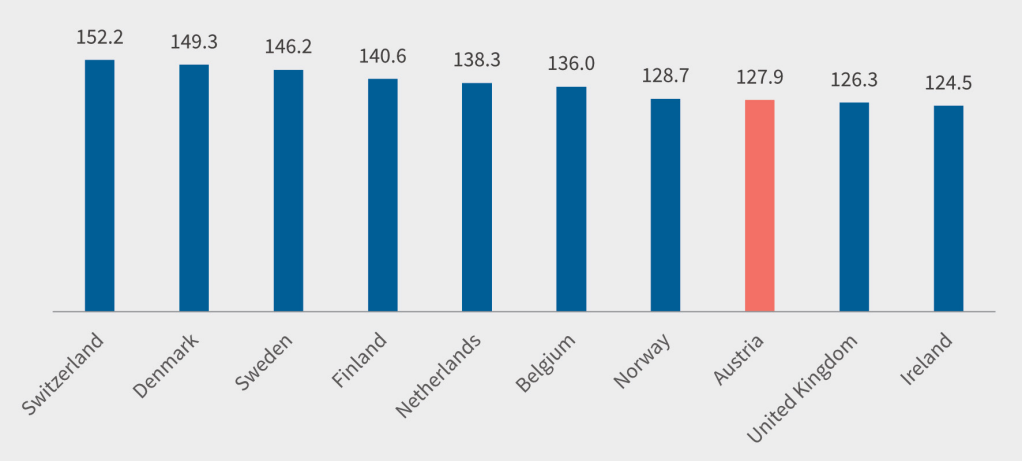
Figure 13: Performance on European countries in Horizon Europe (Global Challenges and European Industrial Competitiveness") (EUR/capita).

Data: EU, FFG, own calculations. Many thanks to FFG for providing the raw data.

Compared to the overall performance of the other provinces of Austria, Vienna performs better in the Health and Food area, but is weaker in Digital and Industry, which can be well explained by the industrial structure in Austria (see Figure 27 in the appendix).

Composite indicators such as the European Innovation Scoreboard (EIS) positions Austria slightly further down the rankings in 8th place (Figure 14).

Figure 14: European Innovation Scoreboard Ranking.



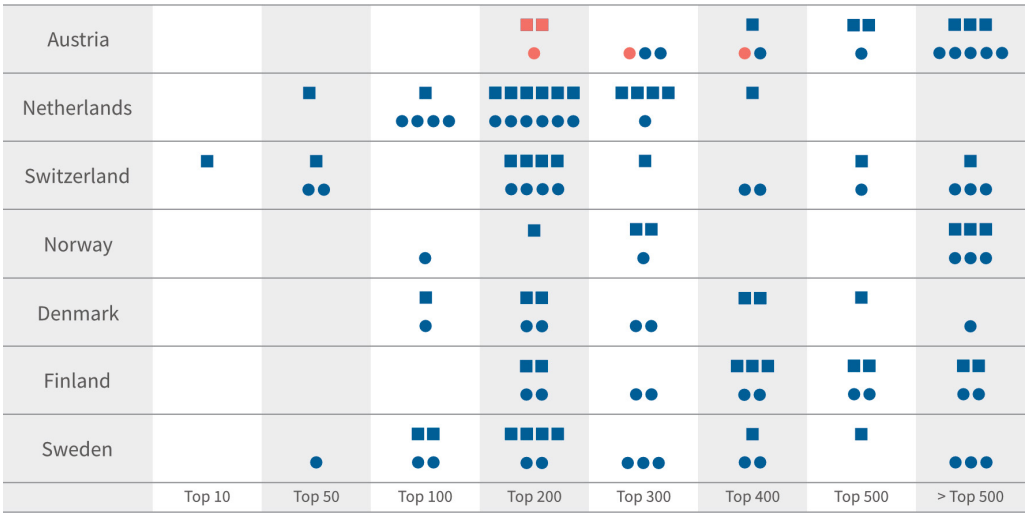
Data: European Innovation Scoreboard, own depiction.

The EU Regional Innovation Scoreboard (RIS) is more difficult to interpret. Its resolution is only NUTS 1, where Vienna is merged with the regions of Lower Austria and Burgenland, which doubles the regional population compared to Vienna alone. In this index, "Ostösterreich (Eastern Austria)" only ranks 35th amongst all European NUTS 1 regions. The RIS ranking is headed by capital/major city regions like Copenhagen, Helsinki, Munich, Stockholm, Berlin and Zurich.

4.3.3 University rankings

In terms of university rankings, Austria lags behind, with all other European countries of comparable size performing better than Austria (listed in Table 3). Austria's leading university is the University of Vienna, which ranks 137th in QS World University Ranking 2025[13] and 110th in Times Higher Educations (THE) ranking 2025.[14] Other Viennese universities that appear in both rankings are TU Wien and Medical University of Vienna. One main reason – beside the historically late efforts in quality development – is the much lower financial base per student/per researcher.

Table 3: Rankings of universities in selected countries according to QS and THE rankings Austria.



Data: THE & QS World University Ranking, 2025. QS = squares; THE = circles; Viennese universities in red.
QS ranking is Europe only, THE ranking is worldwide. Own calculations.

[13] https://www.topuniversities.com/world-university-rankings
[14] https://www.timeshighereducation.com/world-university-rankings/latest/world-ranking

5. Funding instruments and thematic priorities of WWTF

WWTF's funding activities are usually categorized by **thematic priorities** (WWTF program *(Förderschwerpunkt)*. Within that, different funding instruments can be employed. However, there are exceptions. In order to increase the visibility of Vienna Research Groups, it is a program on its own and it takes place within different thematic priorities.

5.1 Funding instruments

WWTF has always been cautious regarding the set of funding instruments it employs. They should be small in number, clearly recognizable and impactful. A large number of instruments (and, subsequently, calls) could dilute impact and produce administrative overhead. Since its start, WWTF has employed three funding instruments.

There are two main instruments, one focusing on research projects, the other one focusing on careers.

5.1.1 Research Projects

Research projects receive a minimum funding of € 200,000 and a maximum funding of € 1,000,000, and last between 2–4 years. Projects seek to address a specific research question and are guided by a research plan that is evaluated ex ante. They are led by one to three experienced Principal Investigators (PI). The main funding criteria are the innovativeness and quality of the planned research and the scientific track record of the applicants. We run 2–3 project calls each year.

Projects are selected for funding through a two-stage process. Short proposals are evaluated by the call jury only, while full proposals receive 3–4 external peer reviews as basis for the jury's funding decision. The composition of the jury for each call is based on expectations of the topics in which applicants may submit proposals. The jury usually consists of 6–8 international (mostly senior academic) experts.

5.1.2 Person-oriented funding – Vienna Research Groups

Person-oriented funding is mainly provided through the Vienna Research Groups for Young Investigators (VRG) program. The funding for this scheme is between € 1,000,000 and € 1,600,000 (increased to € 1,800,000 for the current call in 2025) for a period of 6–8 years. The main aim of this program is to bring young and talented researchers to Vienna to pursue their careers. The main selection criteria are the scientific excellence of the candidate, as well as the innovativeness and quality of the planned research. More emphasis is placed on the scientific potential of the candidate than is the case with our project funding. VRG calls are organized on a yearly basis with roughly the same schedule every year.

Applicants submit only one proposal – a full proposal that is not too long. The jury then decides if the proposal meets sufficient excellence criteria to be reviewed by 3–4 external peer reviewers. Based on the reviews, the jury selects about 10 candidates to invite to a hearing. The hearing comprises a short presentation and a Q&A component.

5.1.3 Additional Measures

These are small and more flexible instruments through which WWTF can supplement activities of the two larger instruments or to react quickly to challenges and opportunities in

the research environment. The project size is up to € 100,000 (until 2021 up to € 50,000) and projects should run no longer than two years. The additional measures instrument allows for quality assurance procedures that can be adapted according to the needs of the specific calls, including evaluation by a local jury or members of our Advisory Board. While external peer reviews can be added, calls are usually decided by the jury only. A number of different funding activities have been organized as "Additional Measures": summer schools, gender mainstreaming activities, Digital Humanism Roadmaps, NEXT transfer projects, funding to help Viennese researchers in obtaining large Cluster of Excellence grants, the COVID-19 Rapid Response call, and the recently-finished ME/CFS call.

5.2 WWTF programs

Due to its niche function and limited resources, a central characteristic of WWTF funding activities is that they are carried out within thematic priorities, i.e., WWTF does not have a basic program that is open to every scientific field. The number of active thematic priorities has always been around four. The first years of WWTF were characterized by fewer programs due to the lack of funding from the City of Vienna and the necessity of establishing the fund in the research environment.

Currently, we run **Life Sciences (LS), Information and Communication Technology (ICT), and Environmental Systems Research (ESR)** as central programs. **Cognitive Sciences (CS)** has not had a project call since 2018 and its future remains to be decided. A call was held recently in **Empirical Social Sciences (ESS)**, although this thematic area is yet to be developed into a program. For reasons of visibility – and, technically, because it is a funding instrument rather than a thematic priority – the **Vienna Research Groups** is run as a distinct program. However, its call themes are based on WWTF's thematic priorities, often Life Sciences or ICT. The **University Infrastructure Program** is a separate program with its own legacy and is not connected to the thematic priorities.

5.2.1 Setting thematic priorities

The creation of new thematic priorities is an intense but non-formalized procedure. Input and ideas for thematic priorities often come from external sources or from our boards, as well as from the WWTF Office. If an idea resonates with our boards and WWTF Office, a more stringent ex ante evaluation process is initiated. Based on our Funding Guideline, WWTF's mission and goals, a set of validation criteria is applied to potential thematic priorities:

(1) fit (complement) with existing measures at regional, national and international levels,
(2) its support of the Viennese innovation policy,
(3) a critical mass of potential applicants,
(4) a given level of excellence in basic research in that area in Vienna,
(5) potential to develop a critical size in Vienna,
(6) potential for increased networking between Viennese research institutions,
(7) international relevance of the thematic scope,
(8) mid-term societal and economic benefits and exploitation (as a consequence of scientific excellence).

This ex-ante assessment is usually a combination of qualitative (interviews with local and international experts and scientists, desktop research) and quantitative analysis (bibliometrics, etc.). The outcome of the analyses is presented to our boards and finally leads to a formal decision by the WWTF Board of Directors, based on the recommendation of WWTF Advisory Board.

As WWTF follows long-term thematic priorities, such exercises are not carried out very often.

Year	Themes analyzed	Resulting thematic priorities	Notes
2007	Cognitive Sciences	Science Chairs 2008 Cognitive Sciences 2011-now	Two variants have been discussed. Science chairs and projects. WWTF issued one call, but this instrument was not further developed due to appointment processes at universities. Instead, calls for projects started in 2011.
2014	Digital methods in SSH Material Sciences Resuming Science Chairs instrument in general	none	Digital methods in the humanities were well covered by other funders, the area of Material Sciences was too small in Vienna, and Viennese institutions did not wish to continue the Science Chairs but rather focus on VRG
2015	Environment	ESR 2017–ongoing	This ex-ante assessment was combined with an evaluation of all WWTF thematic priorities leading to the termination of the "Mathematics and …" program
2019	Empirical social science and society	ESS pilot call 2022	The ESS22 call was opportunity driven through the creation of the Austrian Microdata Center. The future of the priority is to be determined in 2025
Examples for ex-ante assessment of sub-topics in existing priorities:			
2018	Digital Humanism	ICT Digital Humanism call 2020-ongoing	
2016	Molecular Mechanisms and Methods, Chemical Biology, Med-Tech/ Biomedical Engineering	LS 2017 and 2021 Chemical Biology calls	
2021	Public Health	LS 2022 Public Health call	
2022	AI in Biomedicine	LS 2023 AI in Biomedicine call	

Table 4 provides an overview on the ex-ante assessments undertaken since 2011.

Ex-ante assessments can have – as displayed in Table 4 – different outcomes. The assessments in 2014 did not affect our programs. In 2017 WWTF introduced a completely new funding priority: Environmental Systems research, with a number of calls to date. The pilot call "Empirical Social Sciences" was the result of both an ex-ante assessment and timely opportunities that arose in the research environment (Austrian Microdata Center of Statistik Austria, AMDC). However, if and how a Social Sciences program will become institutionalized into a funding priority is yet to be determined.

In areas with an overarching theme like Life Sciences, sub-themes are defined for every call. The amount of preparation before each call depends on the maturity of the topic at WWTF. New topics such as public health require extensive research, while recurrent topics require very little.

Figure 15 provides an overview of the complete funding portfolio of WWTF since its establishment in 2002. In the following text, we will focus on the programs/thematic priorities within the evaluation period 2011–now. References to earlier, completed programs are only made where necessary.

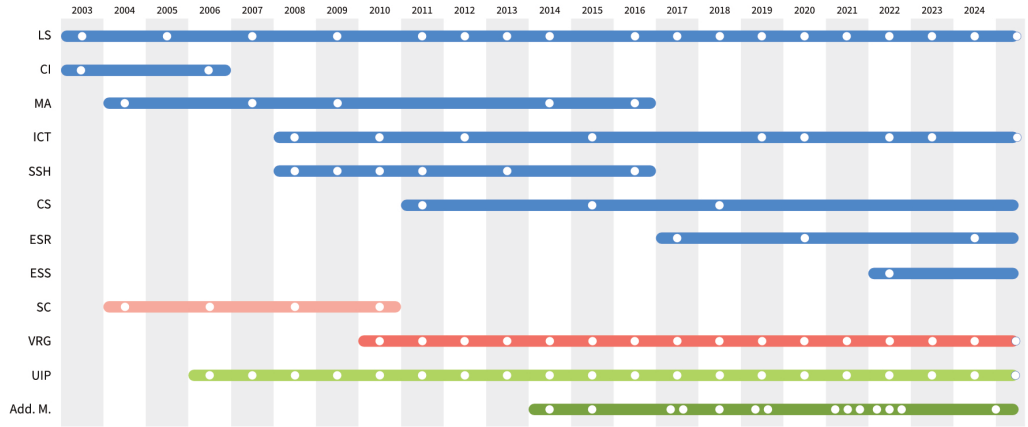


Figure 15: All WWTF programs and calls, 2003 – now (white dots signify calls) .

LS: Life Sciences, CI: Science for Creative Industries, MA: Mathematics and …, ICT: Information and Communication Technology, SSH: Social Sciences and Humanities, CS: Cognitive Sciences, ESR: Environmental Systems Research, ESS: Empirical Social Sciences, SC: Science Chairs, VRG: Vienna Research Groups, UIP: University Infrastructure Program, Add. M.: Additional Measures

5.2.2 Life Sciences (LS)

Life Sciences (LS) was the first thematic priority of WWTF and remains its longest-running. The main reason for this program is to further strengthen Vienna's life sciences landscape, which is large, diverse and, in many areas, also internationally excellent. The main logic within this thematic priority is to run annual calls in life sciences subfields. Call themes predominantly follow a particular intervention logic, which so far have been (1) bringing fundamental biomedical research *closer to the clinics* (calls in 2007, 2011, 2016, 2018, 2020), (2) *building bridges between life sciences and other disciplines* (calls in 2017, 2021, 2022) or (3) introducing and facilitating *new advanced methods* in the life sciences such as AI or imaging (calls in 2009, 2014, 2019, 2023). Early calls (2003, 2005) did not have a specific focus.

In addition to project calls, Life Sciences have been a topic of VRG calls in 2010, 2014, 2015, and 2020. Additional measures in the Life Sciences program include the COVID-19 Rapid Response call and the current 2024 ME/CFS call.

Table 5: Calls of the Life Sciences program 2011–2024.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2011	Linking Research and Patients' Needs	Projects	€ 4,930,000	8	83
2012	Food and Nutrition	Projects	€ 3,036,000	8	60
2013	New Ventures Beyond Established Frontiers	Projects	€ 5,100,000	7	30 [80]
2014	Life Sciences	VRG	€ 4,799,000	3	25
2014	Imaging	Projects	€ 4,407,000	8	28 [126]
2015	Computational Biosciences	VRG	€ 3,197,900	2	9
2016	Precision Medicine	Projects	€ 4,678,000	5	21 [64]
2017	Chemical Biology	Projects	€ 4,686,000	8	25 [77]
2018	Linking Research and Patients' Needs	Projects	€ 6,261,480	9	25 [114]
2019	Multimodal Imaging	Projects	€ 4,089,910	6	20 [55]
2020	COVID-19 Rapid Response Call	Additional Measures	€ 1.058.321	25	40
2020	Computational Biosciences	VRG	€ 3,200,000	2	12
2020	Precision Medicine	Projects	€ 6,069,520	8	24 [82]
2021	Chemical Biology	Projects	€ 5,000,560	8	23 [70]
2022	Public Health	Projects	€ 3,953,350	8	22 [95]
2023	Understanding biology with AI/ML	Projects	€ 6, 942,548	9	21 [72]
2024	Synthetic Biology	Projects	€ 6,500,000	7	19 [74]
2024	Understanding ME/CFS	Additional Measures	€ 695,445	7	19
		Sum:	**€ 78,605,034**	**138**	

5.2.3 Information and Communication Technology (ICT)

The thematic priority Information and Communication Technology (ICT) was introduced in 2008 and seeks to reinforce the relatively strong position of ICT in Vienna through more fundamental research projects. The WWTF funding priority is tied to an innovation strategy process of the City of Vienna. In its 2007 strategy Wien denkt Zukunft[15], ICT was defined as one of the City's strengths. While the applied side of ICT is abundantly covered by both national and supranational funding from both the state and industry, more fundamentally

[15] Wien denkt Zukunft. Wiener Strategie für Forschung, Technologie und Innovation. 2007. https://www.digital.wienbibliothek.at/download/pdf/3118672.pdf (German only)

oriented research struggles to obtain funding for projects. Hence, our program focuses on addressing substantial scientific research questions that have mid- to long-term, rather than immediate, social and economic benefits.

Most of our ICT calls have been completely open to any subfield of ICT. Within the VRG program we sometimes had a narrower focus. For example, the 2024 and 2025 VRG call focus on AI/ML, i.e., bringing these competences to Vienna – not only for computer science but also as a method for other disciplines. In 2020, we introduced Digital Humanism (see 7.3 for the impact story) into our funding activities and thereby to the ICT community in Vienna. The focus of the Digital Humanism calls was interdisciplinary projects between ICT and SSH.

In the coming years, we aim to further strengthen the AI/ML competences in Vienna and to develop Vienna as a place for Digital Humanism.

Table 6:
Calls of the ICT program 2011–2024.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2011	n/a	VRG	€ 3,000,000	2	10 [22]
2012	n/a	Projects	€ 5,000,000	10	63
2015	n/a	Projects	€ 5,108,000	10	22 [137]
2016	Complexity Science	VRG	€ 1,600,000	1	5
2018	n/a	VRG	€ 4,800,000	3	17
2019	n/a	Projects	€ 5,525,150	9	26 [96]
2019	Interdisciplinary Datascience	VRG	€ 3,200,000	2	11
2020	Digital Humanism	Projects	€ 3,593,680	9	26 [99]
2022	Digital Humanism Roadmaps	Additional Measures	€ 229,324	6	42
2022	n/a	Projects	€ 6,606,000	9	26 [67]
2023	Digital Humanism	Projects	€ 3,500,000	6	21 [60]
2023	Digital Humanism Doctoral College	Doctoral College	€ 1,799,000	1	1
2023	ICT with application potentials	VRG	€ 6,267,818	4	20
2024	AI/ML	VRG	€ 4,714,315	3	19
		Sum:	**€ 54,943,287**	**75**	

5.2.4 Environmental Systems Research (ESR)

In 2017, the thematic priority Environmental Systems Research (ESR) was introduced after extensive analysis and discussions with our boards. The establishment of this priority was also linked to Vienna's *Smart City Framework Strategy* and other policies of the City regarding climate and urban planning (see chapter 7.4 for the impact story). Furthermore, it was determined that the institutional landscape for potential research in this area was quite diverse, partly siloed, and covered all larger universities and some research institutes. While there were existing networks for environmental research, this priority also aimed to further strengthen these networks. The "systems" aspect of the priority encourages a more comprehensive view pf environmental issues and thus provides incentives for interdisciplinary cooperation, including social aspects. In line with Vienna's Smart City Framework Strategies, the project calls focused on urban environments (in a broad sense to increase relevance for regional politics. However, *urban* is not necessarily tied to Vienna). Future calls may have a different focus. For example, the VRG call was not limited to urban environments.

Table 7: Calls of the ESR program 2017–2024.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2017	Urban Environments	Projects	€ 4,199,000	7	25 [93]
2020	Urban Regions	Projects	€ 5,069,180	8	23 [61]
2022	n/a	VRG	€ 3.199.110	2	8
2024	Urban Environments	Projects	€ 4,907,369	7	18 [58]
		Sum:	**€ 17,374,659**	**24**	

5.2.5 Cognitive Sciences (CS)

This priority emerged from discussions about the past priority "Science for Creative Industries". Again, extensive background analyses were conducted by WWTF Office and subsequently discussed with our boards. Compared to other fields in Vienna, cognitive sciences is a rather small field. Hence, our analysis used a very broad definition, covering neuroscience as a biological field and extending to psychology, social sciences and ICT (robotics). Funding in this priority started with a science chairs call in 2008 that funded a professorship in cognitive neurosciences. This priority built strongly on Vienna's strengths in animal cognition, psychology and behavior as well as on selected areas of neuroscience. Hence, to enable a critical mass of applicants, all calls have been very broad, covering cognitive processes in humans, animals and machines.

Despite the breadth of the topic, cognitive science remained a rather small priority for WWTF (see proposal submissions numbers in Table 8). In more recent calls, the most dynamic area has been the field of neuroscience, which could be funded as part of the Life Sciences priority in the future. Similarly, cognitive sciences have been successful in other calls such as ESR. Machine "cognition" barely manifested in CS calls, but have been a part of our regular ICT calls, as well as ICT's Digital Humanism calls. Thus, while the cognitive sciences branch out into interdisciplinary cooperations, a disciplinary call in the field of cognition has become somewhat less relevant.

Table 8: Calls of the Cognitive Sciences program 2017–2024.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2011	n/a	Projects	€ 3,012,000	7	36
2013	n/a	VRG	€ 1,499,466	1	7
2015	n/a	Projects	€ 2,992,000	5	18 [49]
2018	n/a	Projects	€ 3,497,880	6	18 [55]
2021	n/a	VRG	€ 3,200,000	2	21
		Sum:	**€ 14,201,346**	**21**	

5.2.6 Mathematics and … (MA)

The Mathematics and … (MA) program dates back to 2004 and was WWTF's second thematic priority. The program required the cooperation of mathematics with another discipline, and thus placed a focus on applications of mathematical methods in other fields of science. WWTF decided in 2017 to conclude this priority because the program has reached its goals. In Vienna, mathematics is now successful in creating excellent and competitive collaborations with other disciplines and in obtaining funding for this work from other funders. Concluding the MA program allowed WWTF to make room for the ESR priority.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2012	n/a	VRG	€ 2,995,450	2	11 [30]
2014	n/a	Projects	€ 4,486,000	8	22 [61]
2016	n/a	Projects	€ 4,730,600	8	22 [67]
2017	n/a	VRG	€ 3,200,000	2	16
		Sum:	**€ 15,412,050**	**20**	

Table 9: Calls of the Mathematics and … program 2011–2017.

5.2.7 Social Sciences and Humanities (SSH)

The SSH program of WWTF was also a result of Vienna's 2007 innovation strategy which identified SSH as a relevant and strong area for Vienna. As a result, the City of Vienna provided subventions to WWTF to create a program and fund this research via calls. In total, WWTF organized five project calls and one call for interdisciplinary SSH summer schools. After two rounds of subventions from the City of Vienna, the agreement was not extended and, due to our own limited resources, the program was discontinued.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2011	Diversity & Identity	Projects	€ 2,028,000	6	46
2013	Public Spaces in Transition	Projects/Summer Schools	€ 2,119,008	6 / 5	52 / 14
2016	n/a	Summer Schools	€ 173.541	7	26
		Sum:	**€ 4,320,549**	**24**	

Table 10: Calls of the Social Sciences and Humanities program 2011–2016.

5.2.8 Empirical Social Sciences (ESS) – Pilot call

Based on an initiative of larger social sciences institutions in Vienna (Uni Wien, WU Wien/ Vienna University of Economics and Business, IHS/Institute for Advanced Studies), WWTF undertook an analysis process to see if and how a social sciences priority could make sense for WWTF. The social sciences are a large and diverse area in Vienna that covers both universities and non-university research institutions. Its diversity was reflected in the needs expressed regarding a WWTF call, which in turn makes it difficult to define a program and its subsequent calls.

A new opportunity emerged with the establishment of the Austrian Microdata Center in 2022, which provides (for the first time) access to large, high-quality datasets of public registers and administrative data (cf. impact story in chapter 7.6). The ESS pilot call was intended to kick-off this new infrastructure with larger projects and act as a role model for the quantitative social sciences. From 2023, a federal funding program covered this topic.[16] The future of the program beyond the pilot call will be determined in 2025.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2022	Quantitative Data Research	Projects	€ 3,557,349	7	19 [55]

Table 11: Calls of the Empirical Social Sciences program 2022–now.

[16] https://www.oeaw.ac.at/en/funding/funding-programmes/subsites/dataresearchaustria

5.2.9 Vienna Research Groups for Young investigators (VRG)

The goal of the VRG program is to bring excellent young researchers from abroad to Vienna to start their first independent research group. The VRG leaders receive substantial funding from WWTF (up to € 1.6 million per group; from 2025, up to € 1.8 million) for 6–8 years. Viennese host institutions must pledge a clearly defined career plan with a long-term career perspective, which is usually a so-called Laufbahnstelle, i.e., a tenured position starting as Assistant Professor[17]. and promotion to Associate Professor. The strong interaction between WWTF and the Vienna universities in all steps of this program (definition, advertising, on-boarding, clear tenure track careers) was identified as one of of the program's strengths in the VRG evaluation (cf. Ottersten et al. 2021).

Like the ICT priority, the VRG program originated in the Vienna strategy process, and in its initial years we received the budget from the City of Vienna through a special line of funding. Since 2010, we have run annual calls with changing topics. These topics are derived from our thematic priorities, such as ESR or ICT, and may be a combination of topics or a subtopic of one of our thematic priorities. While VRG itself is an instrument and not a theme, it is regarded as its own program for the sake of visibility and communicability, in particular for attracting talent from abroad. For more details on the program's history and its impact, see impact story in chapter 7.7. and its evaluation (cf. Ottersten et al. 2021).

Table 12: Calls of the Vienna Research Groups program 2011–2024.

Year	Subfield of the call	Funding Instrument	Funding overall	No. of projects funded	No. of proposals submitted (No. of short proposals in [ ])
2011	Information & Communication Technology	€ 3,000,000	2	10 [22]	83
2012	Mathematics and … *	€ 3,000,000	2	11 [30]	60
2013	Cognitive Sciences	€ 1,500,000	1	7	30 [80]
2014	Life Sciences	€ 4,800,000	3	25	25
2015	Computational Biosciences*	€ 3,200,000	2	9	28 [126]
2016	Complexity Science*	€ 1,600,000	1	5	9
2017	Mathematics and …*	€ 1,600,000	1**	16	21 [64]
2018	Information & Communication Technology	€ 4,800,000	3	17	25 [77]
2019	Interdisciplinary Datascience*	€ 3,200,000	2	11	25 [114]
2020	Computational Biosciences*	€ 3,200,000	2	12	20 [55]
2021	Cognitive Sciences	€ 3,200,000	2	21	40
2022	Environmental Systems Research	€ 3,200,000	2	8	12
2023	Information & Communication Technology	€ 6,270,000	4	20	40
2024	Information & Communication Technology*	€ 4,700,000	3	19	40
	Sum:	**€ 47,270,000**	**30**		**40**

* VRG calls with a particular focus on interdisciplinarity, e.g., the VRG 2024 call should provide AI/ML methods to other fields. Note that the VRG calls were also listed under the thematic programs.

** In this call, we originally funded two VRGs. However, the second candidate left Vienna for a professorship in his hometown a few months after the start of the funding.

5.2.10 Additional Measures

As a funding instrument, the "Additional Measures" aim to provide resources for activities that complement our main activities in the programs and the overall goals of WWTF. They

[17] Currently, it is not possible to reach a Full Professorship through a tenured position. Full professors are either directly appointed in a separate process, or the university can define a number of Full Professorships which are then competitively allocated to those qualifying for this position at the respective university.

have proven to be a flexible tool for activities where a regular call would be too slow in response or would be out of proportion in terms of costs and benefits (e.g., necessity of involving international juries and reviews). The quality assurance mechanisms are adjusted to the respective size and duration of the funding.

The upper limit for an individual activity in the Additional Measures instrument according to our Funding Guideline is currently € 100,000; before 2021, it was € 50,000. Table 13 provides an overview of the activities of this funding instrument since 2011.

Table 13: Overview of all Additional Measures activities 2011–2024.

Year	Additional Measure	Links to	Total funding
2014, 2015, 2017, 2018, 2021	Gender Mainstreaming Bonus	VRG program/ WWTF gender strategy	€ 296,160
2013, 2016	SSH Summer Schools	SSH program*	€ 198,189
2017, 2019, 2022	NEXT calls	All WWTF programs	€ 889,360
2020	DHUMBA-Digital Humanism Base	ICT program (Digital Humanism)	€ 50,000
2020	COVID-19 Rapid Response Call	LS program/emerging crisis	€ 1,058,322
2022	Excellence Planning Grants	Regional research policy	€ 465,805
2022	JESH 2022 Ukraine Emergency	Emerging crisis	€ 100,000
2022	Roadmaps Digital Humanism	ICT program (Digital Humanism)	€ 229,324
2024	Understanding ME/CFS call	LS program/emerging crisis	€ 695,445

* As a subsidy from the City of Vienna, this program had its own Funding Guideline that allowed for a different set of rules.

Additional Measure to achieve to support WWTF's gender mainstreaming policy

(1) *Gender mainstreaming bonus:* WWTF mandates Viennese institutions to actively recruit women as candidate group leaders in the VRG calls. In case a female candidate is funded, the host institution receives up to € 50,000 for gender equality measures at the leadership level. Quality assurance measures consist of two reviews from members of our Advisory Board.

Additional Measure to increase the knowledge transfer capacities of WWTF projects

(2) *New Exciting Transfer Projects (NEXT):* The aim of NEXT is to help create ideas that show how results from WWTF-funded research can be transferred to the next level of exploitation and utilization. To date, we have organized three calls (2017, 2019, 2022). All WWTF funded projects in a later stage of their research at a certain cut-off date are eligible. Quality assurance is ensured by a call jury consisting of national and international knowledge transfer experts. In total, 47 applications have been submitted, from which 15 were funded (funding rate: 32 %).

Additional Measures to broaden the reach of Digital Humanism in science and society

(3) *DHUMBA–Digital Humanism Base:* The aim of this funding was to increase the visibility of Digital Humanism both nationally and internationally. It included, for example, the monitoring of activities related to Digital Humanism, organizing workshops and round tables as well as advancing Digital Humanism in national and European politics. This project received € 50,000.

(4) *Roadmaps Digital Humanism:* For the first time, in 2022, the two funding organizations WWTF and Vienna Business Agency (WA) launched a joint funding initiative. The funding aimed to allow institutions to develop strategies/roadmaps for implementing the ideas of Digital Humanism in their organizations. The ultimate goal was to transfer the principles of Digital Humanism into organizational practice to achieve more human-centered digitalization processes within these organizations. WA financed roadmaps in

businesses, while WWTF funded roadmaps in research institutions. 42 proposals were submitted in total, from which six projects were funded by WWTF. Quality assurance was provided by a mixed jury of national and international experts with academic and non-academic backgrounds.

Additional Measures linked responding to an emerging crisis

(5) *COVID-19 Rapid Response Call 2020:* The pandemic took Austria, like many other countries, by surprise. The lack of data to navigate the crisis was one of the immediate challenges in March 2020. As a swift response was crucial, we launched a call that took only ten days from conception to funding applicants to collect data in the early phase of the pandemic. We received 40 submissions, 25 of which could be funded. Quality assurance included a national (online) jury including members of our Advisory Board and domain experts. This exercise was externally evaluated in 2023 and showed impressive, lasting results for such a small-scale initiative (cf. Warta et al. 2023).

(6) *Understanding ME/CFS call 2024:* Post-acute infectious diseases such as ME/CFS have emerged as a major challenge following COVID-19, compounded by a clear lack of evidencebased therapeutic interventions . WWTF funds small exploratory research projects that address fundamental research questions to advance understanding of ME/CFS. The goal of this call is to generate preliminary data, with projects showing the most promising results eligible for another funding round in 2026. The call is co-financed by a private foundation focused on ME/CFS. Seven projects were funded.

(7) *JESH 2022 Ukraine Emergency:* Russia's genocidal war on Ukraine triggered a flow of refugee, including those working in academia and research. ÖAW hosts a mobility program (JESH) which it quickly adapted to the requirements of the emergency situation. WWTF decided not to create its own initiative, but to support ÖAW with its established structures.

Additional measure to strengthen regional research

(8) *Excellence Planning Grants 2021 & 2022:* For the first time, in a program administrated by FWF, Austria provided funding for large Clusters of Excellence, large national consortia revolving around specific topics. Due to the resource-intensive process of organizing a consortium and writing a proposal, WWTF decided to provide up to € 30,000 to support applicants whose consortium lead was based in Vienna. Applicants invited to submit a full proposal could receive an additional € 30,000 from WWTF. 36 consortia applied for FWF's Cluster of Excellence funding. FWF funded nine clusters, six of which have the lead institution in Vienna. All six institutions were supported by WWTF in the grant writing process.

5.2.11 University Infrastructure Program (UIP)

This funding scheme dates back to 2004, when the universities became autonomous and hence-forth had to pay taxes on the properties they rented. The beneficiary of the tax revenue is the municipality, and the City of Vienna decided to return the revenues to the universities via funding for infrastructures, commencing in 2006. Originally, WWTF only processed the applications (i.e., formal check, organizing the meeting of the decision board, audit of reports), while payments were carried out directly by the City of Vienna. In 2019, UIP became part of the endowment and financing tasks of WWTF, and was included in 2022 in the larger financial agreement with the City of Vienna.

In contrast to our thematic calls, infrastructure funding is not competitive. Each university receives what it has previously paid in property tax. WWTF funds university infrastructure up to 2/3 of the costs, while at least 1/3 of the costs must be provided in-kind by the universities. Through the UIP, Vienna's public universities receive an average of about € 1.5 million annually for infrastructure projects. While such funding may appear misplaced at WWTF (i.e., lack

of a competitive call and international jury), it remains important for the public universities to receive funding for essential research infrastructure in an unbureaucratic way. Reliable calls with a fixed sum every year also increases planning stability in an otherwise volatile environment. Details can be found in Table 20 in the appendix.

5.3 Funding statistics

The greatest beneficiaries of WWTF funding since 2011 are the University of Vienna (30 % of all WWTF funding), TU Wien (24 %) and Medical University of Vienna (17 %), followed by the ÖAW (7 %) and BOKU (5.6 %). All other institutions receive less than 4 %.

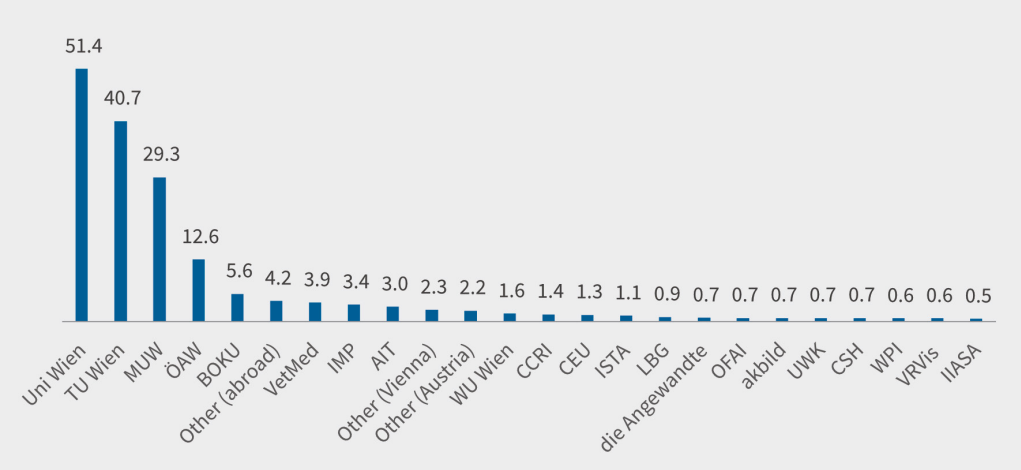


Figure 16: Distribution of WWTF funding in € million, 2011–2024, overall sum 2011–2023: € 160,844,000 (NB: die Dezimalpunkte auf der y-Achse sind als Beistriche dargestellt).

Includes all funding for projects, VRG and additional measures (w/o UIP).

Adjusted for organization size (FTE of scientific staff), the image is more balanced:

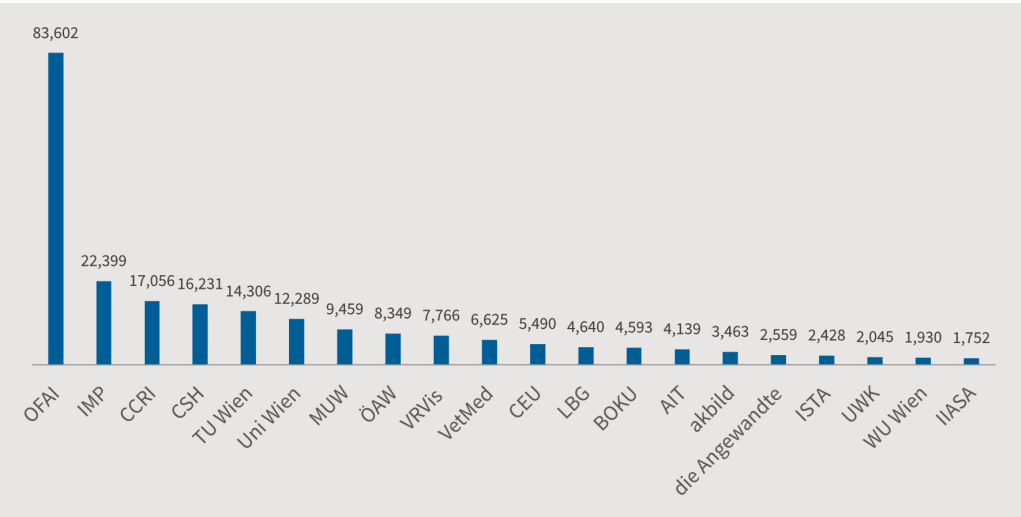


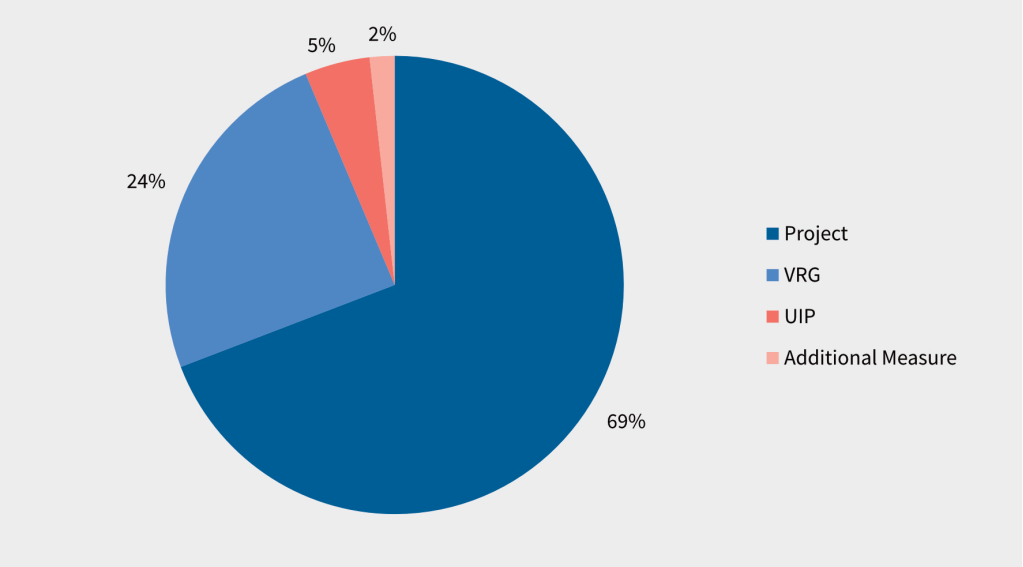
Figure 17: Distributing of WWTF funding by EUR/ FTEs, 2011–2024.

Sources: WWTF funding data. Own calculations, based on 2023 staff statistics from uni:data and annual reports.

OFAI is a very small private AI research institute with less than 10 FTEs; thus, obtaining one WWTF project is sufficient to place it at the top of the ranking. Otherwise, a size-adjusted analysis shows that smaller, focused research institutions in the life sciences area, such as IMP and CCRI, can compete with the larger universities in Vienna.

About 70 % of WWTF funding goes into projects, while the VRG program accounts for about 25 % of WWTF funding, and 5 % of WWTF funding budget goes into university infrastructure (see 5.2.11). Additional measures account for 2 % of WWTF funding (see Figure 18).

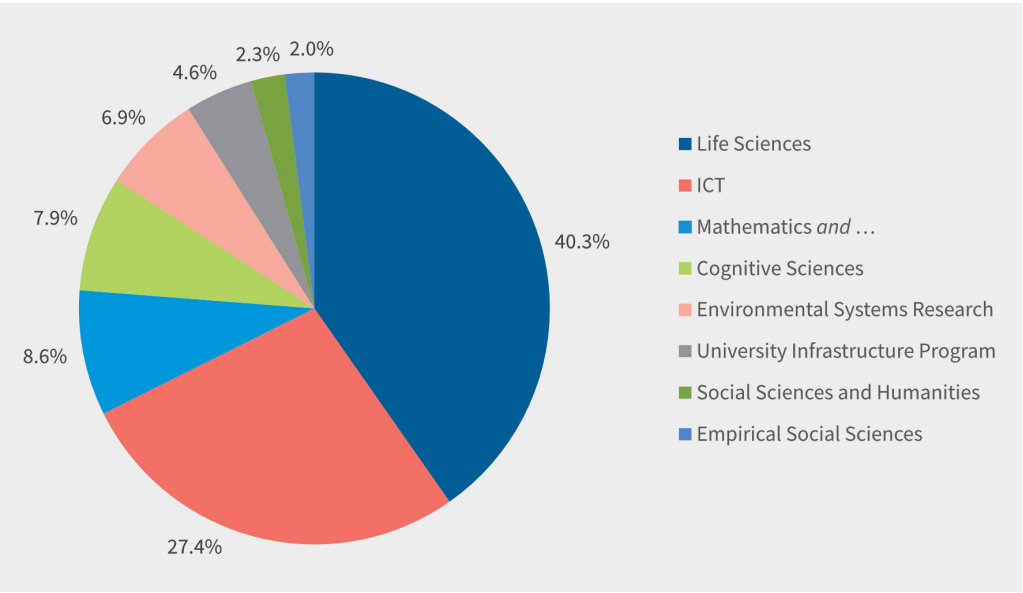
Figure 18: Share of WWTF finding for different funding instruments, 2011–2024.



UIP funding since 2019. Beforehand, payments were made directly by the City of Vienna.

In terms of research areas, 40 % of WWTF funding goes to the Life Sciences, 27 % to ICT, 7 % to Environmental Systems Research, and 8 % to Cognitive Sciences (see Figure 19). Considering only currently active programs, Life Sciences account for 44 % of WWTF funding, ICT for 34 %, Environmental Systems Research for 11% and Cognitive Sciences for 8% (without UIP, see Figure 20). Compared to the 2014 Evaluation that covered all funding since the establishment of WWTF, the share of funding for Life Sciences remains about the same, while the share of funding for ICT has increased from 18 % to 34 %.

Figure 19: Distribution of WWTF funding over WWTF thematic programs (VRG funding attributed to WWTF thematic programs), 2011–2024.



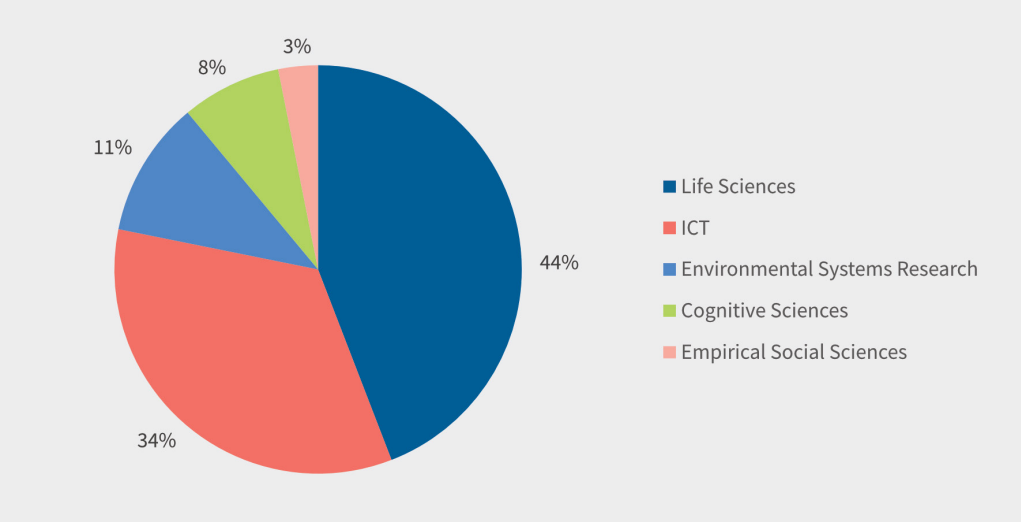


Figure 20: Distribution of WWTF funding over WWTF thematic programs (VRG funding attributed to WWTF thematic programs, without UIP) for currently existing programs, 2017–2024.

While WWTF's funding budget is small compared to what universities receive from other, much larger research funding organizations, WWTF leaves a quite considerable footprint for particular departments/faculties.

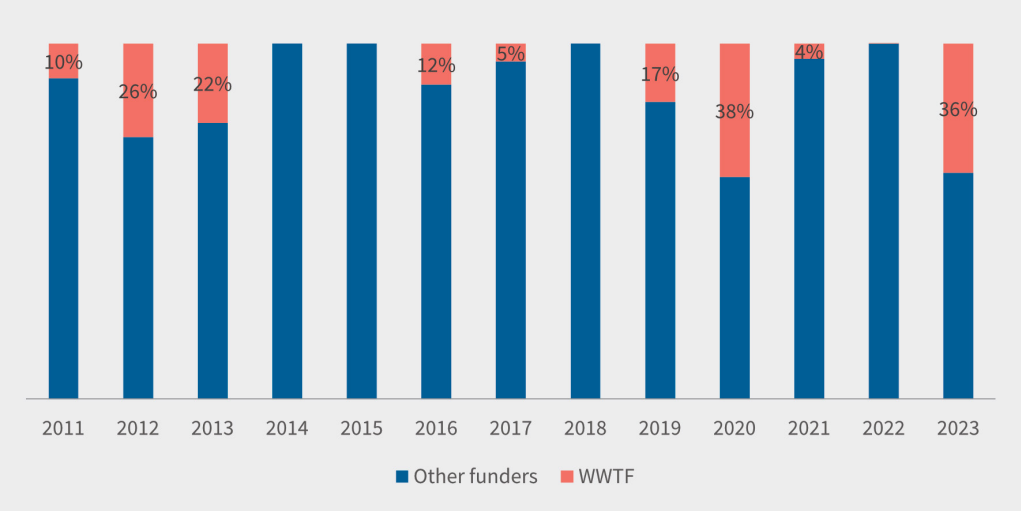


Figure 21: Share of WWTF funding of total third-party income of the Faculty of Informatics at TU Wien, funding vol., by start date of the project, 2011–2023.

In several years, WWTF funding represented a substantial proportion of third-party funding at the computer science faculties of both the TU Wien and Uni Wien. In some years, this share was over a third at TU Wien and more than 40 % at Uni Wien.

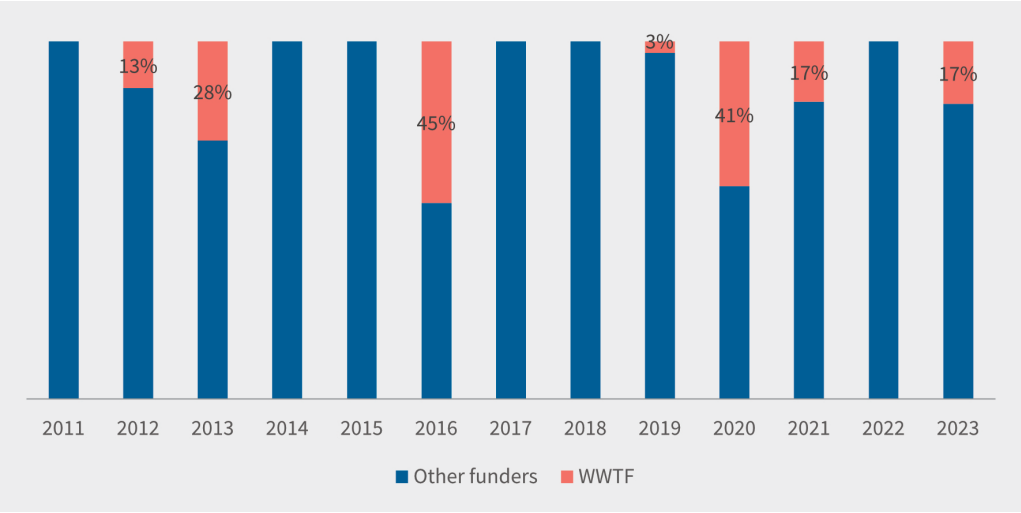


Figure 22: Share of WWTF funding of total third-party income of the Faculty of Computer Science at University of Vienna, funding vol., by start date of the project.

For other faculties at TU Wien and Uni Wien, WWTF funding represents a much smaller proportion of total third-party funding. See Figure 23 for the Faculty of Chemistry and Figure 24 for the two Life Sciences Faculties at the University of Vienna.

Figure 23: Share of WWTF funding of total third-party income of the Faculty of Chemistry at TU Wien, funding vol., by start date of the project.

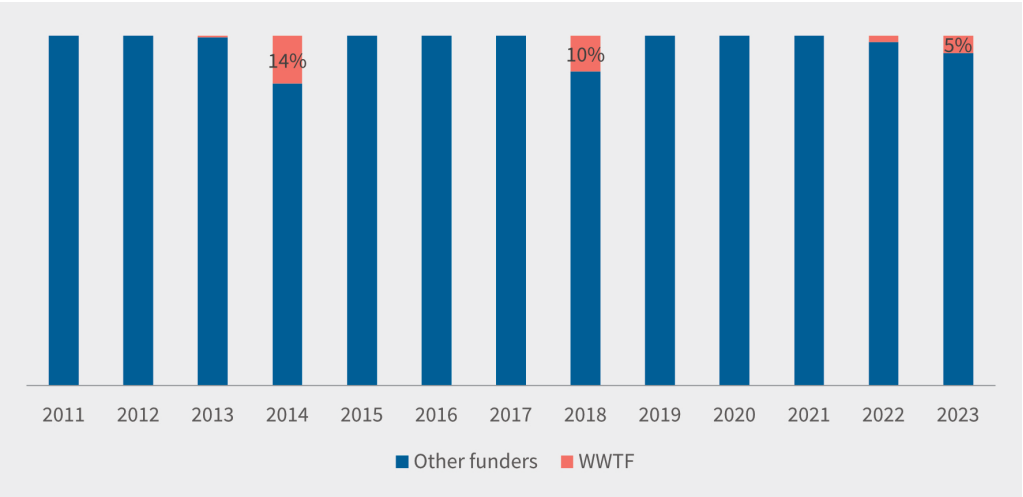
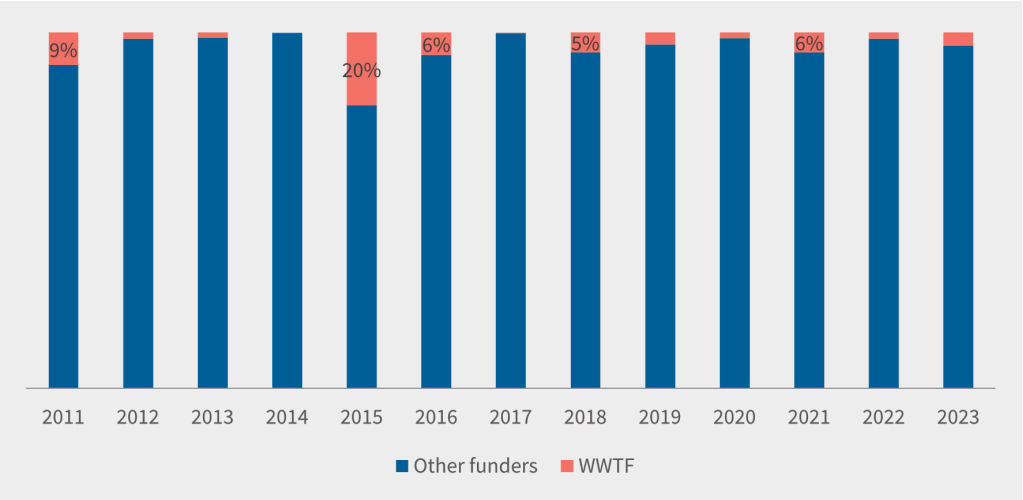


Figure 24: Share of WWTF funding of total third-party income of the two Life Science Faculties at Uni Wien, funding vol., by start date of the project.



In terms of funding rate, a comparison across the full evaluation period between 2011 and now is not possible, as WWTF moved to a two-stage process for project proposals in 2013. For all project calls since 2013, 28 % of the short proposals were invited to submit a full proposal. Of these, 33 % received funding. For projects within calls with a two-stage process, the overall acceptance rate from short proposal to funding is about 9 %. For VRG, since the process changed to a one-stage process in 2013, the acceptance rate is 15 %.

Table 14: Funding rates for WWTF programs (only for currently active programs).

Program	Acceptance Rate (short to full p.)	Acceptance Rate (full p.)	Overall Acceptance Rate	Remarks
CS 2011	–	19 %	–	Only full proposal process
CS	35 %	31 %	11 %	Call 2015 and 2018
ESR	31 %	35 %	10 %	All calls
ICT 2012	–	16 %	–	Only full proposal process
ICT	26 %	36 %	9 %	Calls 2015, 2019, 2020, 2022, 2023
LS 2011 & 2012	–	11 %	–	Only full proposal process
LS	27 %	32 %	9 %	Calls since 2013, call 2024 not included
VRG 2011 & 2012	40 %	19 %	8 %	Short and full proposals
VRG		15 %		Calls 2013–2024

In terms of overall gender distribution, the proportion of female researchers in funded grants is similar to their portion in applications, i.e. 32 % of applicants and grantees. This gender distribution varies across the thematic priorities. In our larger priorities (LS, ICT), female researchers are relatively more successful in receiving funding than their male counterparts (see Figure 25).

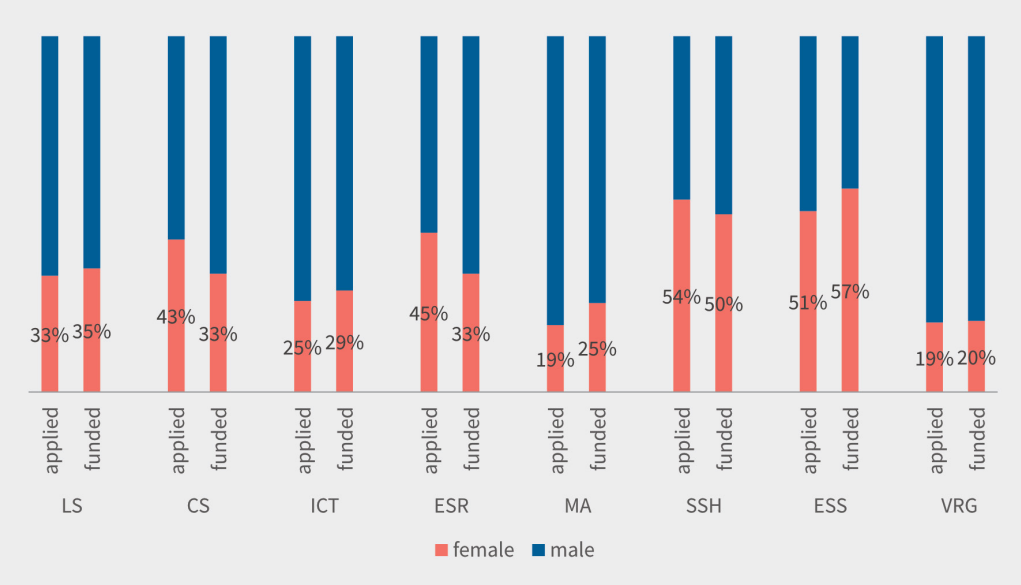


Figure 25:
Share of female/ male researchers in proposal submissions and funded projects 2011–2023.

It is not possible for us to say whether the proportion of male and female researchers who submitted proposals to WWTF reflects the proportion in the respective disciplines at their institutions, due to the lack of available data (only data for whole institutions are available). Across all calls, the proportion of female reviewers (for the written review reports) is 27 %. In specific fields, this proportion may be as low as 10 % in disciplines with a low overall share of female researchers (e.g., mathematics) and as high as 43 % in the social sciences and humanities, which have a high overall proportion of female researchers.

For our juries, in which WWTF has more capacity to determine the composition, the overall proportion of female jury members is 44 % (2011–2023). There is some variation across the thematic priorities, but for all currently running programs it is more than 40 % (see Figure 26).

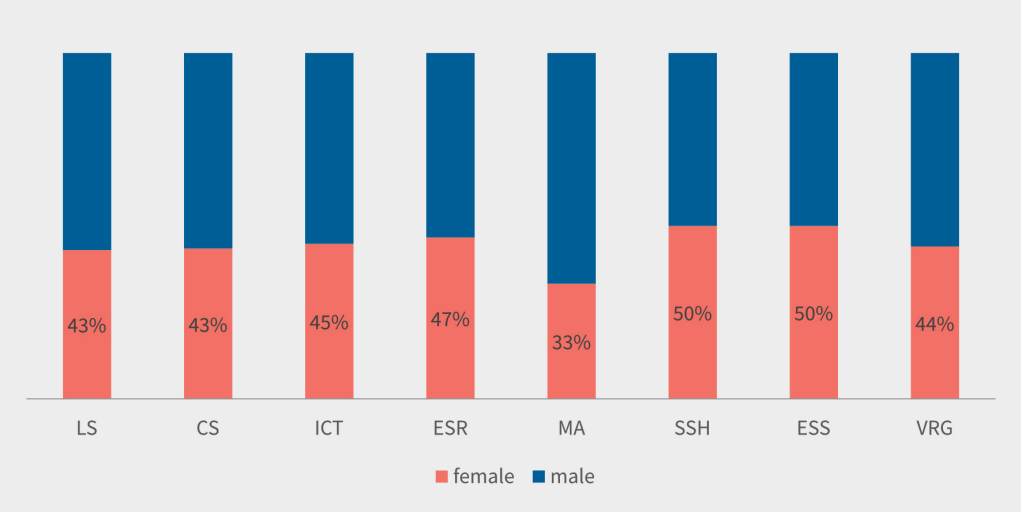


Figure 26:
Share of female/ male jury members 2011–2023.

6. WWTF quality assurance and principles

Quality assurance has been integral to WWTF's funding activities from the very beginning. Since 2004 we have employed an evaluation concept in the form of a matrix that covers all levels of our activities as well as all aspects of time (ex-ante/interim/ex-post). Although it has been modified several times over the years, its core has remained the same since 2004 (see Table 15).

Table 15: WWTF quality assurance matrix.

Level / Time	Ex-ante	Interim	Ex-post
Projects & Calls	• For Thematic Priorities with subtopics (e.g., LS): Extensive research to shape the call topic • Selection by international expert juries • International peer review of individual projects	• Annual reporting & monitoring • Site visits to individual projects • Status workshops with whole call cohort • *"Escalation scenario" for outliers (performance; non-compliance)*	• Rereviews or other forms of a "mild" evaluation (commonly workshops, with focus on learning) • COVID-19 rapid response evaluation 2022
Instruments & Thematic Priorities	• Strategy process 2002 • Process evaluation 2008 • Each new thematic priority is assessed in advance along specific criteria	• Process evaluation 2008 • Thematic priority evaluation (inhouse) 2017 • VRG program evaluation 2021	
Organization	• Strategy process 2002	• Process evaluation 2008 • Impact evaluation 2013	

6.1 Evaluation of Projects and Calls

For WWTF thematic priorities with changing call topics, a call cycle usually starts with a **pre-assessment of the specific call topic**. This applies, in particular, to our Life Sciences program which frequently sees the introduction of new subtopics. Here, an extensive analysis is conducted in advance to explore the direction and intervention logic of the call (i.e., what is needed to develop the field further in Vienna), based on desktop research and interviews with local and international researchers in the field. Usually, this process is accompanied by a working group of our Advisory Board. Aspects to be investigated in the pre-assessment are the overall quality of the research in this subtopic in Vienna compared to international standards as well as the size of the local community that might be interested in applying for funding. In the case of the Digital Humanism calls within our ICT program, extensive research was also conducted prior to the first call (cf. Strassnig et al. 2019). For programs whose core themes do not change between calls, a working group of our Advisory Board is usually employed to slightly adapt the topic of a call, if necessary (e.g., in our Environmental Systems Research program).

Quality assurance for the **selection of projects in calls** includes a rigorous selection by international jury members as well as international reviewers. The jury of a call is the core of our quality assurance. They are responsible for the selection of short proposals to be invited to submit a full proposal as well as for providing the funding recommendation to our boards. In their capacity as jury, they are free to select the projects based on the framework provided by our call guidelines and selection criteria. In the full proposal stage, they are supported by 3–4 external peer reviews per proposal from international experts in the field, although, the jury is not bound by the reviewers' verdict and may overrule their judgements. In the evaluation period covered, all jury recommendations have been fully adopted by the WWTF boards. For a list of jury members in the different priorities, see Table 21 ff. in the appendix.

Funded projects are subject to **annual reporting**. Annual reporting includes a narrative, qualitative part providing information on the project's progress compared to the original plan, as well as the reporting of outputs (such as publications) and financial aspects. Reports are checked by WWTF Office. In case of major deviations from the plan as well as conspicuous problems regarding the research, we seek to contact the project team and investigate the reasons for the problems. WWTF's aim is to be supportive and find solutions that facilitate a good end to the project, particularly with respect to younger researchers in the project. However, in some rare cases, WWTF has terminated contracts due to misconduct. For difficult cases, we have an escalation system that may include asking original reviewers of the project for a reappraisal.

WWTF also conducts **site visits**, where we meet the research team (including MA students, PhDs and postdocs) in their workspace and receive a presentation of the project's progress and results. The site visit is not intended as an evaluation exercise, but rather as an opportunity to get to know the team and their work. For some calls we organize **meetings of the whole project cohort**, e.g., most recently for the Public Health call, ESR calls, and the Digital Humanism call, sometimes also with external stakeholders. The aim is to facilitate community building in these areas and to provide a space for reflection on common challenges and needs. For example, the Doctoral College on Digital Humanism has its roots in the needs expressed in such a workshop. Ex-ante evaluations are conducted in selected cases for whole calls, either in the form of workshop (to collect feedback for future calls) or by reviews of final reports from completed projects (these reports are sent to 1–2 original reviewers).

The **COVID-19 Rapid Response call** was a specific call within the instrument of "Additional Measures" that was the subject of a more detailed ex post evaluation. The evaluation was commissioned because we expected the call to have significant impact, due to its swift implementation and despite its relatively low funding volume. The evaluation of the COVID-19 Rapid Response Call 2022 highlighted its success due to WWTF's independent structure, strategic networking, and rapid implementation. The speed of the call's implementation, supported by institutional leaders' involvement in project selection, allowed for timely contributions to science and society. Lessons learned from the initiative have since been applied to improve some funding measures (cf. Warta et al. 2023).

For the individual **Vienna Research Groups**, WWTF conducts an interim evaluation. To avoid additional efforts for the group leader, WWTF usually participates in the institution's own evaluation of the respective Associate Professor (through the nomination of one external reviewer). In cases where the institution's evaluation for the promotion to Associate Professor is purely formal, WWTF conducts an additional evaluation.

6.2 Evaluation of Instruments and Thematic Priorities

The range of **funding instruments** is determined by our Funding Guideline (see chapter 5.1). To provide stability for our research community, we are very careful not to alter the funding instruments too often. We also aim to keep our instruments as simple as possible to ensure that applicants can focus on developing innovative ideas and creating new collaborations, rather than navigating complicated funding mechanisms. As a result, the framework of project funding has stayed essentially the same since 2003/04. With respect to person-oriented funding, science chairs (Full Professorships) were abandoned in favor of facilitating the careers of young researchers (VRG).

The instruments were evaluated in 2008 and 2013/14, and the VRG specifically in 2021 (for the latter: see chapter 9.5 in the appendix for the recommendations of this evaluation). The VRG evaluation panel concluded that the program has successfully achieved its goal of strengthening Vienna as a research hub. The program is regarded as an attractive funding source for promising young researchers and offers valuable opportunities for them to establish independent research groups. Most VRG leaders have stayed in Viennese institutions after the end

of their grants, indicating strong integration within local research environments (cf. Ottersten et al. 2021).

Our ex-ante assessment of **thematic priorities** is described in chapter 5.2.1. As we aim for long-term programs, the termination of programs has not often taken place. For the former Social Sciences & Humanities program, we could not secure further funding from the City of Vienna and it was thus ended. The Mathematics and … program was terminated based on the outcome of a comparative evaluation of all thematic priorities in 2017. This follows our rationale of being a reliable partner for the Viennese institutions in the long-term development of themes and disciplines while, at the same time, phasing out programs that no longer serve a clear purpose.

6.3 Evaluation of WWTF on the institutional level

Given the effort and resources required for evaluations at an institutional level, such exercises are carried out only occasionally. We aim to cover periods of about 10 years. Our institutional-level evaluations are aimed at processes, program priorities, administration, and impacts. These exercises target institutional learning processes to change and improve the institution's performance with respect to organizational structure, management, priorities, and financing. In 2008, WWTF's processes and instruments underwent evaluation (see Amon et al. 2008), while its impacts were evaluated in 2013/2014.

The **Impact Evaluation 2013/2014** was conducted by an international panel, chaired by Martin Grötschel, former president of the Berlin-Brandenburg Academy of Sciences and Humanities. The results were based on a site visit, during which 35 individuals were interviewed, and an in-depth study of WWTF impacts on career trajectories, which were also based on personal interviews. The analysis covered several objectives, in particular, to determine the impacts of WWTF's activities on researchers' careers, the performance of research topics, communities and organizations, as well as the overall performance of WWTF's activities within the Viennese and Austrian research system (cf. Grötschel et al. 2014). The review panel offered recommendations concerning the future work of WWTF (see chapter 9.4 in the appendix for the recommendations of this evaluation).

6.4 Principles and Policies

Besides WWTF's vision and mission, which are detailed in our Funding Guideline, WWTF is guided by a small and focused set of principles and policies. These principles serve to ensure equality, diversity, fairness, openness and integrity throughout our processes and in the funded activities. These policies should also be meaningful and impactful and avoid policy overload for our applicants/grantees. We believe that less is more, and we recognize that we are small.

6.4.1 Research Integrity & Good Scientific Practice

In terms of research integrity and good scientific practice, WWTF builds on the Guidelines for Good Scientific Practice[18] of the Austrian Agency for Research Integrity (OeAWI). All Austrian universities/research institutes and all research funders are members of OeAWI. This ensures that all stakeholders employ common standards and that applicants only need to follow one set of rules.

[18] https://oeawi.at/en/guidelines/

6.4.2 Gender Equality

In 2022, WWTF set up a Gender Equality Strategy & Plan[19] which identifies three priority fields: 1) decision-making processes, 2) numbers & data and 3) knowledge creation & communication. As a small and regional funder, WWTF sees itself in a specific role with specific responsibility to improve processes and conditions that increase the proportion of female scientists, their resources and career opportunities. WWTF constantly strives for greater gender equality through the entire funding cycle, from more gender-balanced applicant pools at each stage of evaluation, to gender balance among the jury members and chairpersons. The goals of the Gender Equality Strategy & Plan are ensured via monitoring of our processes and funding decisions.

6.4.3 Open Access / Open Science Policy

WWTF is committed to the promotion of open science. The current Open Science Policy[20] was published in 2022 and was the result of an innovation and learning process within WWTF and represents development of the earlier Open Access policy from 2014. The current policy defines the rights, roles and responsibilities of WWTF itself, grantees and research organizations. The focus lies on open access to publications and research data. In terms of research assessment, WWTF became a signatory tothe Declaration on Research Assessment (DORA) in 2022.

[19] https://www.wwtf.at/funding/our-principles/downloads/gender-equality-plan/
[20] https://www.wwtf.at/funding/our-principles/downloads/open-access-and-open-science-policy

7. Self-assessment of impacts: Impact stories

7.1 Introduction

The impact stories may be considered as entry points to identifying the possible effects of WWTF's work. We are aware of the challenges this task brings. These stories represent our view. We understand that impact assessment is complex due to methodological challenges such as data availability, contextual understanding, and the time lag between research/activities and their impact, as well as the relative size of WWTF compared to the size of the system. However, we find it useful to present these five impact stories as they all, in different ways and to different extents, go beyond the core activity of funding research projects and the respective quantitative indicators. Here, we are reminded of the refrain of the FC Liverpool fans: You'll never – never – walk alone.

This is in line with the aim of the evaluation to look at both direct and structural effects. The aspect of "excellent science" will be examined through bibliometrics as part of the external study by AIT/CWTS . Even though funding excellent research is at the core of WWTFs mission, it is not the sole focus of this evaluation. In this context, the purpose of the impact stories is to illustrate our efforts to contribute to the Vienna research and innovation area through additional structural interventions, ranging from strategy work to community building to thematic signals. Thus, the impact stories describe larger areas where we believe our work has had effects on the scientific, societal and policy environment, also beyond funding.

Throughout our reflection process, we were guided by the following questions: How can we demonstrate outcomes and what could be our possible impacts on research in Vienna, on its organizations and individuals, on the emergence of new fields/approaches and interdisciplinary collaborations? Are we living up to our role as bridge builders in a complex research landscape? How do we renew ourselves and – at the same time – stay true to our own mission?

Excellent science and high standards regarding quality are at the forefront of guiding our actions. However, we believe that simply selecting excellent research is not enough, because top research needs both, an environment where it can thrive and strong links to innovation. That is why it is also our mission to strengthen Vienna as a research location in general through means that go beyond the funding of research projects.

We act predominantly as a funder, but all our activities are also regularly connected to policy. We believe that we can achieve impacts through a combination of funding and supporting policy work that is strongly embedded in the local environment but with a high degree of independence. Therefore, we see ourselves as a bridge-builder in Vienna: we (co-)organize events, bring people and disciplines together and contribute to strategies for policy making, just to name some examples. As the context and activities of WWTF are described in detail in the SAR, only the most important key information is provided here.

7.2 Features of the Impact Stories

The impact stories in this section are the result of a reflection process within WWTF. Each impact story relates to different topics at different levels, collected and written by us to the best of our knowledge. Others may have a different view on our role and contributions, which may be stronger or weaker than suggested here. We may also have some blind spots and overlook

details of the bigger picture. We could not name all the important partners and players on the journey, but the Liverpool song is humming in our ears.

Table 16 provides an overview of the five stories. Except for "Giving Vienna a place in the digital world", the categories in the header row are derived directly from the WWTF's mission. Digitalization in a broad sense is primarily associated with the stories on Digital Humanism and on data but has recently played an increasingly important role – as everywhere in the world – and is fundamentally linked to all our activities. The matrix shows that the promotion of interdisciplinarity is a persistent objective of WWTF and is prominent in all activities. Promoting talent and careers is essentially seen in the two impact stories of Precision Medicine, and, of course, the VRG program as a dedicated career program. Strategic development is most strongly linked to the Smart City/ESR and Precision Medicine impact stories. The contribution to social relevance is evident in Smart City/ESR and Digital Humanism, but especially in the activities relating to Data.

	Giving Vienna a place in the digital world	Fostering inter-disciplinarity	Attracting talents and nurturing careers	Increasing capabilities and international visibility	Contribution to societal relevance
Digital Humanism	Primary goal	Secondary goal	Secondary goal	Secondary goal	Secondary goal
Smart City/ESR	Minor/no goal	Secondary goal	Minor/no goal	Primary goal	Secondary goal
Precision Medicine	Minor/no goal	Secondary goal	Secondary goal	Primary goal	Minor/no goal
Data/COVID-19	Secondary goal	Secondary goal	Minor/no goal	Minor/no goal	Primary goal
Vienna Research Groups	Minor/no goal	Secondary goal	Primary goal	Secondary goal	Minor/no goal

Table 16: Overview of the five impact stories and WWTF missions related to Improving quality and impact of research in Vienna.

(1) **Digital Humanism**, introduced by WWTF to Vienna, has become a central undertaking of the fund, as well as for strong academic networks and for many public actors; it has been established within our ICT program.
(2) WWTF was instrumental in the design and implementation of the long-term Vienna **Smart City** framework strategy for **climate**, innovation and social action; we therefore established a dedicated funding program, Environmental Systems Research (ESR).
(3) We strongly supported the broad introduction of **Precision Medicine** in Vienna; this topic was introduced to our Life Sciences funding program.
(4) WWTF has been a persistent advocate for **better data policies**, through our strong role in the realization of the Austrian Micro Data Center, in addition to running calls like the COVID-19 Rapid Response Call and calls in Public Health and Empirical Social Sciences.
(5) We helped shape and accelerate the introduction of tenure track in Vienna universities via the **Vienna Research Groups**, which are selected and funded through the VRG program.

7.3 Digital Humanism: A research and policy principle for Vienna and beyond

7.3.1 Introducing Digital Humanism as a principle to guide human-oriented ICT research in Vienna

Digitalization has immensely contributed to the improvement of lives around the world. On the other side, there have been numerous negative effects such as monopolization, the rise of disinformation, loss of privacy and increasing inequalities. Computer sciences – with ICT as one of the program priorities of WWTF – are at the epicenter of these developments, greatly contributing to scientific progress but at the same time often lacking the necessary means to reflect on its impacts on society or to take this aspect into consideration in research and technology development. While technology assessment and regulation provide viable tools for post-market interventions, there is a lack of opportunities to integrate human and societal perspectives in the very research itself – to design digital technologies that are aligned with human values from the outset.

Such perspectives can often be provided by disciplines from the social sciences and humanities (SSH). The Digital Humanism initiative is WWTF's attempt to integrate these perspectives in computer science/informatics research, and to reach out to civil society and policy actors for digitalization technologies and practices who orient themselves according human and societal needs. The inclusion of the human perspective and interdisciplinarity through Digital Humanism was a crucial new feature from 2020 onwards within our ICT funding program.

7.3.2 Where did we kick off? Setting a new trajectory for Vienna

The original idea for WWTF's ICT program was the observed lack of funding opportunities for more fundamental ICT research, compared to applied ICT research in universities (both through national as well as EU funding) and, in particular, for company-based R&D.

Digital Humanism takes research agendas from the ICT community, i.e., investigating research questions in computer sciences that will provide frameworks for technology development, and requires the consideration of the human, social and political aspects of these digital technologies from the outset and on an equal footing, with the aim of avoiding their negative effects. We know of only a few instances where these aims have been realized in funded research programs before our Digital Humanism initiative.

Lack of funding and a focus on applied R&D was another reason why interdisciplinary collaborations between ICT and SSH was not structurally well developed in Vienna. Departments and universities have been institutionally separated with little incentive to bridge disciplinary and institutional boundaries. However, Vienna has several characteristics that make it highly suitable for an initiative like Digital Humanism. Among others, there are large computer science departments at two universities, and similarly sized SSH departments at several universities and non-university research institutions. Both ICT and SSH cover a very broad range of topics in their respective fields (cf. Strassnig et al. 2019), which allows for highly relevant and novel combinations of research areas.

We discerned two main reasons why a Digital Humanism initiative was very promising to try out: it was a mission that we could well adopt as a small niche player in the larger funding environment, and it would be an opportunity for Vienna as a research location to position itself with a unique narrative/orientation in an internationally competitive landscape. The City of Vienna's claim to become a top digital center in Europe (cf. City of Vienna 2019) could be realized in a specific way.

7.3.3 From Digital Humanism principles to a research program

The term Digital Humanism was, of course, not coined by WWTF[22]. What we did was to introduce it – as a first step – to the ICT community in Vienna and to subsequently translate a philosophical debate into a concrete program that covers research and education (as well as branching out into industry contexts with a smaller call). In a nutshell, the Digital Humanism initiative took the following path: First, in November 2018, the WWTF director introduced the idea of such a funding program to the professors and the Scientific Advisory Board of the Informatics Faculty of TU Wien[23] to determine whether the idea would find resonance – it did. The idea was actively taken up both by TU Wien and the international board members. These discussions resulted in an international workshop (organized by TU Wien with the support of WWTF) in April 2019, with over a hundred national and international participants.[24]

The outcome of the workshop was the "Vienna Manifesto on Digital Humanism"[25], a plea for a human-centered, inclusive view on digital technologies and how their development, incorporating both ICT and SSH perspectives. This was immediately followed by a book published by Springer book, which has since been downloaded many hundreds of thousands of times.

[22] "Digitaler Humanismus" is a title by a book by Julian Nida-Rümelin and Nathalie Weidenfeld in 2018.
[23] "How can we do better?", presentation by Michael Stampfer (unpublished).
[24] Vienna Workshop on Digital Humanism, April 2019: https://caiml.org/dighum/workshops/vienna-workshop-on-digital-humanism-2019-04-04/
[25] Vienna Manifesto on Digital Humanism https://caiml.org/dighum/dighum-manifesto/. The Manifesto is currently available in eight languages and has more than 1000 signatories worldwide.

The overwhelming response from the scientific community to this approach led WWTF to consider Digital Humanism as the subject for a call in our ICT program. Based on a study on the potential of this topic in Vienna (see Strassnig et al. 2019)[26], WWTF designed a first call for projects in early 2020, including a matchmaking platform to initiate collaborations between SSH and ICT. The response to the call exceeded our expectations as we received 99 submissions, of which we could fund nine with about € 3.6 million. Given the strong interest in interdisciplinary (and often interinstitutional) cooperation in developing digital practices and technologies, we concluded that "Digital Humanism" could and should be a long-term commitment of WWTF.

The next step in our activities was issuing a call for Digital Humanism Roadmaps in 2022, i.e., smaller funding for organizations (academic institutions and companies) to implement the principles of Digital Humanism in their strategies. This was the first joint call of Vienna's Business Agency and WWTF, which resulted in six projects funded by WWTF. This step was important for us in three ways: (1) to see if and how institutions (and not only individual researchers) take up the principles and seek to implement them as institutional practices; (2) to raise interest in the local ICT business environment; and (3) to strengthen the ties with the City of Vienna and provide an opportunity for the City of Vienna to embed the principles of Digital Humanism into local politics and policies. In 2023, we issued a second call for larger projects on Digital Humanism with a total call volume of €3.6 million. We received 60 applications, of which six were selected for funding in June 2024. These projects will start in the second half of 2024.

In the autumn of 2022 and 2023, we organized feedback workshops with the funded teams of the first call, during which the community expressed a strong need for Digital Humanism activities in PhD education and training. To support the community to evolve further, we decided to provide funding for doctoral training – something we had never done before and which, for good reason, remains a rare exception in our portfolio. [27] In 2023, we issued a call for a Doctoral College, with the key aim of bringing together the main actors in the ICT and SSH disciplines in Vienna to jointly organize a Doctoral College that would fund about 20 PhD positions. In addition, PhDs employed by the projects of the 2023 Digital Humanism call will be integrated in the Doctoral College. Funding for the Doctoral College was granted in June 2024 and the consortium, consisting of multiple faculties across three major universities in Vienna (i.e., TU Wien, University of Vienna and WU Wien, all bringing their own significant contributions) will receive € 1.8 million for the Doctoral College starting in October 2024. We expect that the funding will be instrumental in building the future community of Digital Humanism researchers in Vienna through PhD education aimed at interdisciplinary supervision and various formats of exchange.

We see Digital Humanism not only as a principle for interdisciplinary research in ICT but also as a means to shape digitalization policies, especially at regional and national levels. To promote it, we have presented and discussed Digital Humanism at numerous conferences, talks and workshops, regionally, nationally and internationally.

The growing success of Digital Humanism, both nationally and internationally, is the result of teamwork. While we carefully planned our activities to move the research community towards the ideas of Digital Humanism, the fact that it resonates so well in both academic and societal contexts surprised us and demonstrates the impact of the concept. It has gained momentum beyond the limited ways we could provide. As an example, we mention here the many dedicated activities of TU Wien on Digital Humanism.

While Digital Humanism has gained a lot of momentum beyond our actions, we consider our funding activities in this area as a core activity in Vienna, providing others with resources to build associated activities around research. Firstly, we had to see if we could operationalize

[26] The idea for calls was also quickly taken up by the City of Vienna, which funded small projects in advance of our call.
[27] The main reasons are: PhD training is a core task of universities; there are funding schemes for PhD training from other funders, namely FWF; and a small funding organization needs to maintain its focus.

the idea. Particularly for the first call, we needed to communicate the idea of Digital Humanism to a large community of SSH and ICT researchers, many of whom would potentially take up the idea very quickly. However, it was also a movement in which researchers needed to be prepared to invest a substantial amount of time in building collaborations and developing research ideas in the form of proposals. We invested a lot into facilitating networking and providing spaces for researchers to find partners for collaborations, while also offering a large degree of freedom in defining research questions. Hence, we set only a few rules for these projects, the most important of which was to work on digital practices and technologies across disciplines, with neither ICT nor SSH as some sort of "auxiliary discipline" to the other.

We kept this approach for the second project call in 2023, making only minor changes to the overall setup. Compared to the first call, the main change was to provide funding for larger projects (up to € 600,000/project) to allow for more ambitious projects and to provide more resources to the interdisciplinary teams. Currently, the cohort funded in the 2020 call is nearing completion of their projects. Their performance and experiences will inform the next call Digital Humanism in about 3 years.

7.3.4 Impacts

Connecting disciplines through projects

From an academic perspective, the greatest impact of Digital Humanism lies in initiating concrete and long-term research collaborations between ICT and SSH researchers on a level playing field. While such collaboration is often associated with numerous challenges, these projects provide a platform for exchanges on common methods and research agendas. In total, we could fund 15 larger research projects and 6 smaller, transformative projects ("Roadmaps") over 4 years. Through project collaborations alone, the 2020 project and the 2022 Roadmaps calls bring together about 100 people and more than 20 institutions on the topic of Digital Humanism. The new project call as well as the Doctoral College will again provide an influx of new researchers engaging with the topic.

An equally important impact of Digital Humanism is the deliberation and adoption of its principles in many domains, including outside our sphere of influence. We are not able to trace each of these individually. Hence, we provide a few examples of potential impacts, supported by evidence which may or may not stand up further scrutiny.

Uptake of Digital Humanism in academic publications

Digital Humanism, as a concept based on the principles developed here in Vienna, has been taken up in the scholarly context in recent years, in particular since 2020. This is demonstrated by Google Scholar searches of the respective years. Before 2019 – the year of the Manifesto – the term "Digital Humanism" appeared in a few publications, but mostly as a synonym for digital humanities. This changed in the years from 2020 onwards. In 2022 and 2023 there were 350 to 400 publications, respectively, containing the term "Digital Humanism", most of which can be traced back to activities in Vienna. This shows that the ideas of the initiatives have been clearly taken up by scholars. While many of the publications are associated with the activities in Vienna, there is also a substantial share of authors who have discovered Digital Humanism on their own. The volume "Perspectives on Digital Humanism" (Springer, 2022) edited by the larger national and international Digital Humanism circle provided its own contribution by bringing together 60 authors worldwide from ICT and SSH (see Werthner et al. 2022). Other books followed.

Uptake in politics and policies

Digital Humanism has been taken up in a considerable number of policy initiatives in the last years. This is also due to the many actors who have helped to bring the ideas of Digital Humanism to life and/or further propagate them into different contexts. In particular, TU Wien's Faculty of Informatics has been central for the furthering of Digital Humanism in and

beyond ICT, but actors from Vienna University have also been very active. Internationally, the Austrian Ministry of Foreign Affairs identified Digital Humanism as a concept in which Austria could uniquely position itself. The national innovation ministry BMK has also started an initiative. Regionally, the City of Vienna had adopted this concept as a guiding principle for all its activities on digitalization.

Here are some important examples of specific policy initiatives:

- Digital Agenda Wien 2025: To-Do list of the City of Vienna in terms of digitalization.
- Coalition Agreement of the Vienna government: Digital Humanism as leitmotif for digitalization.
- Artificial Intelligence Mission Austria 2030, Austria's 2021 AI strategy (BMK 2021)
- Federal Austrian data strategy (upcoming).
- Digital Humanism as a tool for soft diplomacy: "The Poysdorf Declaration. Digital Humanism: A Compass for citizens During the Digital Transformation", initiated by the Austrian Ministry of Foreign Affairs and signed by Austria, Czech Republic and Slovakia.
- International organizations, such as UNIDO, UNESCO, UNU, and diplomatic services, have expressed keen interest in Digital Humanism, and invited WWTF and other Digital Humanism partners, together with the Austrian Ministry of Foreign Affairs for exchanges and to give talks on Digital Humanism in their respective contexts.
- Launch of the "UNESCO Chair of Digital Humanism" at TU Wien in May 2023
- Uptake of Digital Humanism by the European Commission: Two Calls: "Digital Humanism – Putting people at the center of the digital transformation (CSA)"

Selection of events and conferences

Numerous events in Vienna (and internationally) have addressed Digital Humanism, often as an overarching framework. While many of these were co-organized or sponsored by WWTF, an even greater number took place completely independently of us. Here is a selection of events in which WWTF was directly involved:

- 2022–2024 Vienna Digital Days: Jointly organized by the City of Vienna, the Urban Innovation Vienna, the Vienna Business Agency and WWTF, the Vienna Digital Days were run under the framework of "Digital Humanism" in 2022 and 2023, and will be held under this motto again in 2024.
- March 2020: Workshop in Brussels at the EC on Digital Humanism and AI, co-organized by WWTF together with the Permanent Representations of Austria, Slovakia and the Czech Republic.
- 2022–2024: Recurring cooperation with the Austrian Academy of Sciences on the central topics of Digital Humanism: "Colloquium Digitale" (2022)[32], "Convergence" conference (2023)[33], AGIDE conference (2024).[34]
- May 2025: Large international conference in Vienna, in which WWTF is involved in the program committee and sponsorship of the event.

7.4 Smart City and Environmental System Research: Change Agent

7.4.1 Building Bridges towards sustainable urban environments

WWTF sees itself as a bridge builder for the Viennese research ecosystem and beyond. This drive to connect universities, research institutions and stakeholders outside of academia is important to generate new ideas and topics for WWTF but can also lead to substantial impact within the City of Vienna and the Vienna innovation system. With respect to environmental and climate research and action, WWTF has contributed to progress across different sectors,

[32] Austrian Academy of Sciences – Colloquium Digitale https://www.oeaw.ac.at/veranstaltungen/veranstaltungsreihen/weitere-reihen
[33] Austrian Academy of Sciences – Convergence conference 2023 program: https://www.oeaw.ac.at/convergence2023/program
[34] AGIDE conference 2024: https://www.oeaw.ac.at/detail/veranstaltung/was-roboterhunde-und-moralmaschinen-mit-digitaler-ethik-zu-tun-haben

building bridges and enabling more systemic approaches as the ambitions of stakeholders have substantially grown.

7.4.2 Early 2010s: Vienna in need of cross-sectoral climate actions

Policymaking and provision of public services in the City of Vienna in the 2000s continued and expanded on earlier success, including in areas such as public transport or public housing. In terms of environmental action, the City of Vienna has achieved some fundamental successes in the past, e.g. providing water supply infrastructure in the 1900s, flood protection in the 1970s, energy-cogeneration and district heating in the 1970s, and innovative waste concepts. Vienna's status as one of the most livable and socially inclusive cities globally is based on a proud tradition of strong and active public policies over very long periods. However, such success stories can be endangered by complacency and silo thinking.

The urgency of the climate crisis and related environmental challenges, as well as the digital revolution and social shifts, called for action across municipal structures, including the City administration and its associated large public companies and organizations. The incremental progress needed to be combined and brought together in larger, more comprehensive policy interventions. Interestingly, and in a similar vein, the environmental research community in Vienna – consisting of many excellent individual research groups – was largely divided and confined in mono-disciplinary traditions.

7.4.3 Pathways to sustainable environmental impacts

Three consecutive steps by WWTF

First, starting in 2009/2010, we acted as consultants in guiding a process to increase innovation and research at the Vienna Public Utilities[35] ("Wiener Stadtwerke", 100 % owned by City of Vienna; responsible for energy, public transport and other areas). This process included the formulation of a strategy document, the creation of an inhouse innovation fund, various initiatives to improve collaboration and communication, and later, the design of a joint Doctoral College of the Vienna Public Utilities with TU Wien.

In autumn of 2010, the WWTF director, together with the Vienna Director of Planning, approached the Vienna Lord Mayor with a proposal to develop a strategy for climate, environmental and innovation goals. This strategy would take into account both the challenges ahead and the considerable European funding schemes in this area, e.g., for transformation of energy systems. From 2012, WWTF was contracted by the City of Vienna to help develop a strategy for more strategic action and less compartmentalization in an ambitious long-term transformation and carbon reduction process. The basis for our assignment was trust: due to our long-standing networks and reputation, we had the opportunity to co-design and co-facilitate the Smart City Framework Strategy 2014 (Magistrat der Stadt Wien 2014). This strategy consisted of three interlinked pillars – carbon reduction, innovation, social equity – and became Vienna's long-term umbrella strategy, which is regularly updated to this day. A key role of WWTF in 2013–2014 was to work together with the City planning department to mobilize all relevant policy actors and stakeholders, to work together with them in an indepth process, and to draft the strategy document together with the co-authors. Our activities, including monitoring, continued into the late 2010s, albeit at a smaller scale.

The third movement, inspired by learnings from the strategy work, fed back to our core activities: our funding programs. In 2015, we set out to create an ambitious initiative to bring together research communities across disciplines to address environmental challenges in urban contexts. Together with the research community and drawing on learning from abroad, we developed a program that focuses on interdisciplinary research on the environmental and

[35] Wiener Stadtwerke: https://www.wienerstadtwerke.at/

climate-related impacts of and on cities. WWTF has since run four calls in this program: three project calls (2017, 2020, 2024) and one for VRG (2022). Furthermore, through community building activities, we have brought together PIs from the first two project calls with several Vienna policy actors.

In this case, our activities in the policymaking realm provided the motivation and framework for launching a new funding program. This trajectory contrasts with that of Digital Humanism portrayed above.

Becoming an agent contributing to change within the City of Vienna

The outcomes in this case were twofold. First, WWTF was able to instigate change within Vienna Public Utilities and the City of Vienna. After we received approval from policymakers and senior management to help start transformation processes in the early 2010s, the need for collaborative action with experts in the face of climate change was identified. The extensive work process for the Smart City Framework Strategy and beyond was a transformative learning experience. WWTF president Michael Häupl in his dual role as Lord Mayor and WWTF president was a strong supporter of this theme, which facilitated the development of a powerful and balanced strategy. The independence of WWTF in its advisory function also proved helpful. As a direct outcome, WWTF could capitalize on key learnings derived from policy support and consultancy in the design of a new research funding initiative.

7.4.4 Outputs & Impacts: Beyond research

As an advocate for change in City politics, we accumulated significant learning and knowledge on how systems and actor groups, including research communities, (do not) work in the fields of environment, energy, transport and urban planning. This helped us understand another siloed landscape, namely the Vienna environmental research field.

The impacts of the Smart City Framework Strategy are extensive, often going beyond the City borders[36]. Examples include recent major large initiatives such as “Raus aus Gas” (“Get out of natural gas”; Magistrat der Stadt Wien 2023) or horizontally integrated policy initiatives focused on carbon reduction and climate mitigation, combined with social policy measures. With the help of WWTF’s guidance, the Vienna Public Utilities were able to increase their internal and cooperative capacities for applied research and innovation. This manifested in several strategy documents leading to stronger internal and external networks, better coordination and process innovation. Long-term initiatives such as the Vienna Public Utilities “Future Fund” have been established to “drive intersecting topics and accelerating plans for research, technology, innovation and climate protection in a structured manner, making these visible and measurable” (Wiener Stadtwerke 2023).

7.5 Precision Medicine: Supporting renewal of medical research in Vienna

7.5.1 Strengthen Vienna as a major life sciences hub

WWTF’s introduction of precision medicine as a topic in our Life Sciences program in 2015 was intended to facilitate and accelerate the uptake of this internationally transformative research approach in Vienna. Drawing upon our capacity to identify and fund local research projects with substantial financial support, this initiative fed directly into WWTF’s overarching mission to support outstanding scientific research and strengthen Vienna as a major life sciences hub. The bringing together of diverse local expertise and resources served to both increase the visibility of precision medicine across research institutions in Vienna and of Viennese researchers in this field on the international stage.

[36] For an update on the strategy see Magistrat der Stadt Wien 2019.

7.5.2 Technological developments pave the way for precision medicine

In life sciences research, major technological breakthroughs have often provided the foundation for conceptual changes. By the early 2010s, the development of high-throughput technologies boosted precision medicine as an approach that considers an individual patient's biology and environment at an unprecedented level of detail. Such technologies allowed information about a patient's specific genetic constitution to be delivered early in diagnostic processes and considered in treatment options. By the mid-2010s, precision medicine approaches were already flourishing and receiving significant funding in several countries around the world, including in the UK, USA and Scandinavian countries.

As highlighted in the 2013 performance agreement[37] of the Medical University of Vienna (MUW) had recognized its broader potential and committed itself to developing a strategic concept for personalized medicine from 2014.

The emergence of such internationally important disciplines and approaches in the life sciences – and their implications for researchers in Vienna – are of great interest for the WWTF. Due to the size and diversity of the life science research community in Vienna, each call in WWTF's Life Sciences program is – unlike most of our other thematic programs – issued with a specific topic. These topics can assume diverse forms, including focus on a research field (e.g., chemical biology), methodology (e.g., multimodal imaging), or overarching aims. As an example of the latter case, in 2007 and 2011, the WWTF issued funding calls with the topic "Linking Research and Patients' Needs". In alignment with our mission to foster interdisciplinarity, these calls were aimed at promoting cooperation between clinicians and basic life science researchers in Vienna to open new avenues for developing patient-oriented approaches.

7.5.3 Providing incentives for precision medicine research

The selection of each topic in the WWTF Life Sciences program involves discussions with local researchers in the field, as well as with key stakeholders in the main universities and research institutions engaged in life sciences research. In this context, WWTF conducted in early 2015 a series of interviews to determine internationally important topics in the life sciences research field in which we could potentially make an impactful contribution to the Viennese research community. Interviewees included members of the rectorate and group leaders from over ten life sciences research institutions in Vienna. We also sought the input from high-ranking members of the international research community, including from the European Molecular Biology Laboratory (EMBL), German Cancer Research Center (DKFZ), University of Tübingen, and Imperial College London.

During these discussions, we quickly became aware of a strong and growing local interest in the topic of precision medicine, though the state of its uptake appeared to vary considerably across research institutions in Vienna. Beyond the strongholds within the MUW and the Research Center for Molecular Medicine of the Austrian Academy of Sciences (CeMM) – two institutions that had visibly developed research capacity in precision medicine through both personnel and infrastructure – the expertise in Vienna appeared still fragmented. Despite several recent high-profile recruitments in the areas of bioinformatics and network science to the region, a recurring concern was expressed about a potential lack of such expertise in the local life sciences landscape. Nevertheless, it was noted that the necessary high-end infrastructure was already present at many universities and life science research campuses. Furthermore, researchers were already adopting approaches that generated large amounts of biological data that had potential to address biomedically relevant questions.

[37] "Leistungsvereinbarung"/Performance Agreement Medical University of Vienna: https://www.meduniwien.ac.at/web/fileadmin/content/serviceeinrichtungen/rechtsabteilung/mitteilungsblaetter_2012-13/mtb_1_st5.pdf

In mid-2015, the WWTF Boards agreed that a funding call in precision medicine would be a valuable contribution to ensuring that Vienna would be competitive in this medically transformative field. A WWTF call could bring together the already present expertise, resources and infrastructure to promote networking and increase visibility – both local and international – in this area in Vienna. Our first precision medicine call was thus launched at the end of 2015 with a dedicated total budget of € 5 million. Due to the required involvement of expertise from three fields – biological, medical, and bioinformatics/systems biology – WWTF stipulated the highest maximal budget per project in its project funding history for this call – up to € 1 million per project.

To highlight the profile of precision medicine and to connect potential research collaborators in the field, WWTF organized an initial networking event in December 2015. Introductory talks to demonstrate the potential of and best practices in the field were provided by leading researchers from several Viennese institutions, including the MUW, CeMM, University of Vienna, and Institute of Molecular Biotechnology (IMBA). Networking was facilitated through bilateral meetings between the more than 90 registered participants, with 150 meetings between pairs of researchers taking place. Interestingly, feedback from the event showed that almost a quarter of participants left the event considering a concrete collaboration in the context of the WWTF precision medicine call.

This first precision medicine call by WWTF attracted 64 short proposal applications from a total of 11 different Viennese research institutions. While researchers from the MUW represented over half of the applicants from Vienna, it was remarkable that they had established collaborations with local researchers based across Vienna, incl. Uni Wien, TU Wien, Austrian Institute of Technology (AIT), BOKU University, CeMM, Research Institute of Molecular Pathology (IMP), Institute of Molecular Biotechnology (IMBA), institutes of the Ludwig Boltzmann Gesellschaft (LBG) and University of Veterinary Medicine Vienna. In mid-2016, WWTF announced the funding of five projects with nearly € 5 million.

The feedback from the international jury of the WWTF's first precision medicine call was very positive and included explicit encouragement for WWTF to run a further call in this topic in several years. Strong resonance from the local research community led to WWTF issuing a second funding call in precision medicine in 2020 with a similar research scope for applicants and a total dedicated budget of € 6 million from WWTF. This second call attracted 82 short proposals from 10 different Viennese research institutions and resulted in the funding of eight projects.

7.5.4 Outstanding scientific outcomes for precision medicine

At the time of this evaluation, all five projects from the first funding call in precision medicine had concluded, while the eight projects from the second call had just passed the halfway point in their runtime. The following comments regarding outputs and impact from WWTF's precision medicine calls are therefore based primarily on our first 2015 funding call in this topic.

The projects contributed to diverse precision medicine approaches, including improved identification of genetic matches between organ donors and recipients, tailored chemotherapy strategies in metastatic cancer, and individualized drug profiling for cancer patients, and helped to establish workflows, structures and significant patient cohorts.

One of the five projects additionally produced a spin-off company, "Allcyte", which uses a deep learning platform to evaluate drug activity and effectiveness in cancer patients with single-cell resolution. This company, founded by several team members from the WWTF-funded project, was acquired by Exscientia, a clinical stage pharma-tech company, in 2021 for € 50 million[38].

[38] "Exscientia acquires personalised medicine AI pioneer Allcyte" https://investors.exscientia.ai/press-releases/press-release-details/2021/Exscientia-acquires-personalised-medicine-AI-pioneer-Allcyte/default.aspx

7.5.5 Precision medicine: from niche to mainstream in Vienna

By mid-2010s, precision medicine research had gained significant international momentum. As evidenced by the MUW's decision to adopt precision medicine approaches into its strategic development concepts from 2014, this trend has also found its way to Vienna. While the WWTF quickly resolved to contribute to local excellence and promote Vienna's international visibility in this transformative research field, we also recognized that our activities would be most effective when coordinated with those of local stakeholders. Through regular communication with key stake-holders, including the MUW university management, several steps in WWTF's first call in precision medicine unfolded alongside pivotal public events in the development of precision medicine at the MUW. The launch of WWTF's first call in 2015 coincided with the introduction of precision medicine in MUW's annual reports. In the following year, the MUW announced plans for a new Center for Precision Medicine on campus,[39] accompanied by the fact that all five projects involved MUW. By working closely alongside local research institutions – in this case, principally, the MUW – throughout the precision medicine call, the WWTF thus also reaffirmed its commitment to serve a strong partner for Viennese universities in key research areas.

Based on feedback to community-building events leading up to the first precision call, as well as reflections from group leaders of projects funded in the first call, the WWTF believes that we have indeed contributed to one of the main aims of launching this topic – namely, in facilitating local collaborations across institutes and expertise areas in this internationally transformative research field. Despite the relatively small number of funded projects, their remarkable scientific success – as reflected through the number of high-impact publications – has led to Vienna's improved visibility in precision medicine. In several cases, the success of projects has paved the way for the establishment of yet larger projects, such as multi-center clinical trials at the European level. Here, we believe the specific conditions of the WWTF precision medicine calls, including substantial budgets of up to € 1 million, were particularly conducive to enabling ambitious projects with promising longer-term prospects.

Beyond these scientific aspects, the impacts from the WWTF precision medicine calls are also already being felt in the clinic. Methods and technology developed in the context of funded projects are changing practices in diagnoses and treatment, including in a group of previously poorly understood rare diseases. The broader impact of projects is also reflected in the establishment of further industrial partnerships, including with pharmaceutical companies Boehringer Ingelheim and Roche, the latter of which has injected an additional € 4.1 million into follow-up studies that originated in a WWTF Precision Medicine project.

7.6 Data Advocacy: Putting data policies and data access higher on the agenda

7.6.1 Data issues for research and society before, during and after the Pandemic

This impact story differs from the four others, which are all more strongly tied to specific funding programs of WWTF. Data advocacy cuts across all funding priorities and appears in calls to differing extents. Additionally, a significant part of our advocacy for data quality and use took place outside of project calls. After its establishment, WWTF assumed early on the task of infusing quantitative methods into the Vienna research system, as we recognized a lack of quantitative methods in many scientific fields that are traditionally characterized by a strong qualitative orientation. Our initiatives can be traced back to the very beginning of WWTF, with the funding of science chairs for bioinformatics in 2004 and for "Quantitative methods in the Life Sciences" in 2008. We also ran a program for bridging mathematics to other disciplines. More recently, the use of quantitative data and models has been encouraged in ESR and Life Sciences calls, including in the precision medicine, imaging, and, in particular, public health topics. Furthermore, many Vienna Research Group positions (see next

[39] https://www.meduniwien.ac.at/web/en/research/eric-kandel-institute-center-for-precision-medicine/

impact story) can be closely linked to the use of quantitative data (2015: Computational Biosciences; 2016: Complexity Science; 2019: Interdisciplinary Data Science, etc.).

Data and research is a wide-reaching, multi-faceted topic. It appears, for example, very prominently in open data movements in science, to which we are also committed (see WWTF's Open Science Policy[40]), and in large scale European infrastructure projects, such as EOSC or Gaia-X. While these are important issues that we support, there is also a plethora of actors in the national/international context who advocate and promote these issues. However, what has long been neglected in Austria is the secondary use of public registry and administrative data for scientific research. This is relevant for our mission for three important reasons. Firstly, these datasets are often of high quality, as they often cover whole populations and can be linked due to identifiers. This then allows for research in which more comprehensive research questions can be asked in an interdisciplinary fashion. Secondly, public admin/registry data – because they are collected by public authorities – are closely tied to public policy, which renders using this data for research more socially relevant. Hence, and thirdly, such research contributes to evidence-based policymaking, which is a notoriously difficult topic in Austria due to issues with data, appropriate advisory structures and the sectoral research landscape.

While the use of quantitative methods in many fields is either well advanced or has at least gained some momentum in recent years, it has become apparent that research often lacks data. Instead, data is often produced in the context of the project. For example, when local economists tell WWTF: 'either we do a survey or take data from Kazakhstan for a publication', this is only in part an exaggeration. The relevant regional and national data in Austria may exist, but researchers have difficulty accessing it. Our aim is to make existing data accessible to science, both to reduce costs and to open new research possibilities. For this reason, we became increasingly involved and engaged in data politics since around 2018. The lack of data in Austria is particularly apparent when it comes to health data, which became notorious during the COVID-19 pandemic. Even now, although the situation has improved in certain areas, health data remains a source of constant concern.

7.6.2 Advocating for a comprehensive public data policy in Austria.

Access to public admin and registry data

Publicly available data is a key requirement to understand complex societal challenges and is a pivotal ingredient for better research. This holds true for all disciplines covered by WWTF programs, ranging from the social sciences, environmental systems research, to the life sciences. Compared to other European countries, such as the Scandinavian countries, the availability of public data, specifically microdata of persons as well as company data, was relatively underdeveloped in Austria (Austrian Research and Technology Report 2018, 188ff.). In Austria, the limiting factor is sometimes the data itself, but in many cases it is the public authorities' heavy restrictions on access to data for scientific research.[41]

In 2018, Austria had to change research laws due to the adoption of GDPR. The Science Ministry wanted to allow for registry research and WWTF undertook a lot of supporting groundwork to help pass the law against opposition from many sides. The need for allies to continue pursuing this agenda resulted in the formation of the Plattform Registerforschung[42]. This is an advocacy coalition and coordinated as a network, with a few people organizing the main activities. WWTF, as a founding member, hosts the platform, and a WWTF staff member is a leading actor within it. The law passed in 2018 has become the principle legal vehicle for providing access to registry data, but there is still a need to advocate for particular datasets to be accessible for research.

It quickly became clear that single datasets were of limited use for research because they could not easily be linked to other data sets. Furthermore, many of these were held by Statis-

[40] WWTF Open Access Policy https://www.wwtf.at/upload/wwtf_open-science-policy_09032022.pdf
[41] In fact, until 2022, the scientific use of data of Statistics Austria was prohibited by law.
[42] Plattform Registerforschung: https://www.registerforschung.at/mission

tics Austria, which could also provide a research data infrastructure for hosting and accessing the datasets. Therefore, Plattform Registerforschung, of which WWTF is a member (again, we never walked alone), strongly advocated for the creation of the Austrian Microdata Center (AMDC) of Statistics Austria through which researchers would be able to access a good share of the Austrian registry data. We did this by:

- raising public awareness and facilitating media discussions[43],
- promoting the benefits of data access among the national scientific community via publications[44], presentations and events,
- helping to push the AMDC in the program of the federal government's current legislation period,[45]
- accompanying the legislation process of the AMDC Act to advocate research-friendly solutions for microdata access.

The AMDC was finally launched in mid-2022 as a publicly accessible microdata database providing numerous microdata sets, e.g., on education, sociodemographic, tax and business statistics. We would not claim the creation of the AMDC on behalf of the Platform/WWTF. The Science Ministry certainly played a decisive role. However, we believe that we significantly accelerated the process and helped to shape it in a more research-friendly way. In parallel, we also advocated for the release and integration into the AMDC of further administrative data sets/registers hosted by diverse ministries and public authorities for research use. Key amongst these relate to health data. So far, we have not been successful, but we will continue advocating for it in the following years. This is a different and painful story in the Austrian policy arena.

WWTF funding for data-driven projects

The existence of AMDC also offers opportunities for funding calls with a focus on utilizing the enhanced data availability. After AMDC was initiated in 2022, we launched the Empirical Social Sciences Pilot Call 2022[46] to help support research projects in the field of data/microdata research. The aim was to enable larger lead projects with AMDC data and to build a research community (including PhDs, in particular) who are familiar with this data, thus popularizing registry research in the scientific community.

Rapid funding for COVID-19 data collection

The lack of data in general, and of health data in particular, became apparent during the COVID-19 pandemic. Public authorities were reluctant to share data with researchers, even with experts working for the government. As a result, governmental measures were often based on anecdotal evidence and/or on very superficial descriptive aggregated statistics. Data were also not used for an ex-post evaluation of the crisis and in most cases quickly deleted.

WWTF recognized very early in the pandemic that the crisis was also one of available data (Oberhofer et al. 2020). In the midst of the nationwide lockdown issued in mid-March 2020, we created the COVID-19 Rapid Response Call[47], which unfolded within ten days from the announcement of the call to the funding decision. Projects could start immediately after the decision. The call aimed to support data collection early during the pandemic. WWTF awarded € 1 million to 24 smaller projects. Through this rapid injection of funds, we supported (among others) important developments to tackle the challenges of the pandemic (e.g., antibody testing regime, social sciences panel studies and waste-water monitoring). Furthermore, many publications emerged as a result of this Rapid Response Call. This rapid (financial) support by

[43] All our contributions and comments in media outlets are listed here: https://www.registerforschung.at/ressourcen
[44] Articles in national academic journals are listed here: https://www.registerforschung.at/ressourcen
[45] "Aus Verantwortung für Österreich. Regierungsprogramm 2020–2024" (German only), p. 216 https://www.bundeskanzleramt.gv.at/dam/jcr:7b9e6755-2115-440c-b2ec-cbf64a931aa8/RegProgramm-lang.pdf
[46] The Austrian Academy of Sciences followed WWTF's blueprint pilot call and initiated an Austrian-wide funding scheme for € 9 million for three rounds of funding to support research projects in the field of data/microdata research, in which existing data is used for fundamental research into social topics and issues.
[47] Call and funded projects of the WWTF Rapid Response call: https://www.wwtf.at/funding/programmes/ei/index.php?lang=EN#EI-COV20

WWTF was crucial for the researchers to conduct their projects, as public authorities were not able to deliver swift financial support.

This endeavor demonstrated our ability to react quickly to a society-wide emergency situation and to create impact with limited means, as well as demonstrating that whole research communities can be activated in a crisis situation to use their abilities to contribute to data-/evidence-based decision making. We will keep this story short here, as this call has been subject to its own evaluation (Warta et al. 2023).

WWTF's Life Sciences Call on Public Health in 2022 can be seen as a successor, developed from the learnings of the Rapid Response Call. In addition to the lack of data, the pandemic also demonstrated that public health did not enjoy much attention from policymakers – and this is reflected in the dearth of funding and fostering of an interdisciplinary public health community in Austria. The Public Health call awarded about € 4 million to eight projects that covered a diverse range of topics from aging, patient safety, breast cancer screening, health literacy to tackling future epidemics. The call also continues to serve as a platform for meetings between main stakeholders and experts on public health in Austria.

Forming strategic alliances to inform politics on COVID-19 and beyond

In parallel to our Rapid Response call and shortly thereafter, the Future Operations Platform[48] (FUOP) was founded as an initiative of researchers and policymakers, mainly on the federal level, without official mandate or resources. The platform aimed to facilitate interdisciplinary exchange among about 100 experts and with public authorities regarding the many facets of COVID-19. FUOP held regular cross-disciplinary deliberations and produced statements to assess the impacts of the pandemic on society, economy, education etc. As a volunteer group without any decision-making power, FUOP aimed to provide evidence and advice derived from dialogue between many different disciplines for policymaking.

WWTF's director was an active member of FUOP. Throughout its existence during the entire course of the COVID-19 pandemic, FUOP produced many expert opinions[49] based on intense discussion, learning and international exchange. Notable features included a focus on crisis management and resilience, placing scientific expert knowledge in a broader context, and emphasizing the social dimension of the major health crisis.

After the immediacy of the crisis, FUOP started to engage with more long-term issues, in particular to understand the role of data in a more structural way. A substantial document involving around 40 experts on data strategies for Austria ("Data Excellence: Strategies for Austria", Schürz et al. 2022) and the implementation of the EU Data Governance Act was coordinated and co-authored by the WWTF director, together with the then Austrian Council for Research and Technology Development, now FORWIT. This document helped trigger the recent (October 2024) governmental "Data Strategy for Austria" (Bundeskanzleramt 2024).

7.7 Vienna Research Groups: Attracting top talent to Vienna

7.7.1 Rationale for supporting the introduction of tenure track in Vienna

The Austrian university system underwent reforms in the early 2000s, allowing for more autonomy, ambition, and leadership. The old system was characterized by a strong influence of the responsible ministry in assigning professorships, in house appointments and a comparatively low degree of internationalization as well as traditional career models. When a specific form of tenure track was stepwise made possible by law in the late 2000s, universities started to experiment with new career formats. Formally, it was established by the universities' wage

[48] Future Operations Plattform: https://futureoperations.at/ (German only)
[49] Expert Opinions / Future Operations Plattform: https://futureoperations.at/expert-opinions/ (German only)

agreements. It allows Assistant Professors. in tenure track positions to acquire tenure as Associate Professor after an evaluation based on performance benchmarks for research and teaching, as specified in the qualification agreement (Qualifizierungsvereinbarung). WWTF's Vienna Research Groups for Young Investigators program (VRG) provided a ground for such experiments and career models. This has been one function of VRG. The other function has been the integration of top talent from abroad as independent group leaders into critical fields of the Vienna research system.

7.7.2 Context: WWTF's VRG program

After some discussion with the main stakeholders in Vienna, WWTF launched the VRG program with a first call in 2010. The aim is to attract promising young researchers from abroad early in their careers, i.e., 2–8 years post-PhD. The group leaders are provided with substantial financial means to independently conduct excellent research. Currently, the grantees receive € 1.6 million[50] for a duration between 6–8 years. The funding is linked to a commitment by the host institution to establish long-term careers in Vienna in the form of a tenure track model as specified in the grant agreement. The main goals for the launch of the VRG program were to support change on a structural level:

- Incentivizing Vienna's universities to implement a tenure track system similar to the Anglo-American model.
- Attracting exceptional talents to the Vienna research landscape and thereby strengthen Vienna as research and economic location.
- Enabling young, exceptional talents to build their first own research group with a high degree of independence.

Since 2010, WWTF has run annual calls in the VRG program. While the principal process has remained the same, it underwent some changes over the years. Changes were made to speed up the decision making process, reducing the application process from submitting a short and then full proposal to submitting only a full proposal. At the same time, universities were given more time for recruitment, encouraged to place greater attention on a structured international recruitment process, as well as to offer grantees very structured career paths. Significantly, career models at the universities have coevolved with our program over the years. Almost half of all VRG calls to date have had a specific inter- and/or transdisciplinary focus. Many funded groups serve to bring digital/formal sciences into broader scientific environments (bio-math, formal methods, computer sciences, AI/ML etc.).

In recent years, WWTF has also increased its fundraising efforts. In a concerted effort together with the TU foundation, Daniel Arp, a candidate who was originally shortlisted, could also be successfully funded (through four private donations, doubled by the City of Vienna through the "Matching Funds" mechanism).

Program evaluation 2021

WWTF commissioned an evaluation of the program in 2021, which was carried out by a high-level international panel chaired by Björn Ottersten (University of Luxembourg) and including members such as ERC president Maria Leptin. The evaluation was very positive: *"The panel concludes that, by all accounts, the VRG program has fully met the goals set forth by the WWTF. Indeed, the program appears to be a highly attractive source of funding for high-potential researchers and is considered a very valuable and attractive opportunity for them to establish an independent research group in Vienna."* The final reports, including a self-evaluation report by WWTF Office, are available online (see Ottersten et al. 2021; Hawlik et al. 2021; Lasinger et al. 2021).

[50] In 2010 it was € 1.5 million. Commencing next year, it will be € 1.8 million. Originally, the City of Vienna specifically funded this program with a subsidy.

7.7.3 Establishment of career models to support the Vienna research landscape

Starting point

In 2007, the City of Vienna started the process of developing the City's first innovation and research strategy. The governance structure of the process included a sounding board consisting of 25 people, with strong structural inputs from WWTF. Throughout the process, one of the sounding board groups (including, amongst others, a former WWTF program manager) advocated an excellence funding scheme with the possibility for tenure track professorship, modelled on the US/UK system. After careful deliberation, the idea was incorporated into the first Vienna innovation and research strategy *"Wien denkt Zukunft"* (City of Vienna 2007).

During the program's conceptualization, WWTF Office produced a report in which we argued that Anglo-American tenure style track models were largely missing in central Europe/German speaking countries: *"[…] early academic independence and autonomy is very difficult to achieve due to traditional hierarchies in German-speaking university systems, but is an increasingly recognizable and decisive disadvantage in the international competition for the best minds."*[51] The VRG program was developed after careful evaluation of comparable programs in Germany and at ERC. At that time, Austria had only one career advancement funding program, albeit without the possibility of tenure track.[52] The crucial difference of the Vienna Research Groups program was the mandatory requirement for the university to offer the VRG leaders the opportunity for a tenure track-style career path.

As part of a 2008 financial crisis stimulus program from the City of Vienna, WWTF was able to promote the idea of the Vienna Research Groups to the state government. Equipped with attractive funding, the program was launched in a local university environment that had little previous experience with implementing a tenure track-style career advancement scheme. University career advancement structures, which had a legacy of being rather conservative, rigid, and paternalistic, were provided with incentives to change for the better.

Current career levels of Vienna Research Group leaders

Over the duration of the program, from 2010 to the present, a total of 31 Vienna Research Group leaders have been awarded[53]. As one grantee passed away early in his position, 30 VRGs will be considered in the following statistics.

(1) 10 of the 30 VRG positions are early in their career track (Ass. Prof. level, starting in 2021 or later) and thus do not yet qualify for an Associate Professorship.
(2) Of the remaining 20 VRG positions, 12 (60 %) reached the level of an Assoc. Prof. So far, all have remained at the original host institution in Vienna. 8 (40 %) received a Full Professorship (with one already starting as a Full Professorship at the beginning of the grant).
(3) Of the Full Professors, 3 are in Vienna, while 5 assumed Full Professorships abroad.

This demonstrates the high success rates of the VRG grantees in advancing their careers. All those reached a stage where they were eligible for a career step have indeed advanced in their career. It should be noted that the tenure track system in Austria does not cover the step from Associate to Full Professorship. Full Professorships are subject to different procedures depending on the availability of such positions according to the university's development plan and are advertised publicly.

[51] WWTF 2009: Beispiele Junior Research Groups (German only, unpublished)
[52] WWTF 2009: Beispiele Junior Research Groups (German only, unpublished)
[53] In 2017, a VRG position lasted only nine months as the grantee decided to take on a professorship elsewhere.

7.7.4 Impacts highlighted in the 2021 external evaluation

As mentioned above, the VRG program was evaluated recently. Here, we want to highlight some of the findings in the evaluation report of the panel (cf. Ottersten et al. 2021).

(1) Performance and excellence of VRG leaders
(2) "VRG leaders appear well established and embedded in Viennese host institutions, with most VRG leaders having remained at Vienna institutions at the end of the VRG grant. As a result, VRG leaders showed considerable performance in their research output and in acquiring additional funding." (ibid.: p.4)
(3) "The bibliometric analyses showed that all VRG leaders had been very productive. […] Moreover, other indicators show that the VRGs have performed extremely well. Most notably, VRG leaders have acquired grants from a wide range of funders, some of which in highly competitive calls, such as the ERC or the FWF Start Grant program. While most of the VRG leaders remained in research institutions or universities in Vienna, some were recruited away to top international institutes such as Rockefeller University or the EMBL, again testimony to their top-level performance." (ibid.: p. 11).
(4) Impact on tenure track system at Viennese universities
(5) "The panel emphasizes the unique and important function that the VRG program appears to fulfil in the context of university-based research in Vienna, which dominates the Austrian research landscape." (ibid.: p.4).
(6) "Moreover, the program represents a structural impulse that supported universities in implementing and improving a tenure track system and raising their evaluation and hiring standards." (ibid.: p. 4)
(7) "In the interviews, it was particularly evident that the VRG program was critical in catalyzing the establishment and review procedures for tenure track. Young investigators with competitive, independent funding are less dependent on senior investigators and departments and thus help to dismantle the traditionally rigid university hierarchies." (ibid.: p. 12)
(8) Role of WWTF in the Vienna research landscape
(9) "The panel concludes that, as an external player, the WWTF is in a position to challenge the status quo and be an agent of structural changes, a function that continues to be critical in the coming years. […] In summary the panel is of the opinion that the VRG program, particular in light of its modest overall size and number of recruits, has had a highly positive and noticeable impact on the Viennese landscape with respect to research excellence and structural changes." (ibid.: p. 12).
(10) VRG as role model for university internal career positions

In 2014 and 2016, in addition to our usual funding activities, WWTF, through its subsidiary WWTF GmbH, was contracted by TU Wien to select several university-funded tenure-track professorships in two rounds. The selection processes were based on the VRG program, but the successful candidates were financed by the university itself. This resulted in six new career positions.

[50] 2010

8. References

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9. Annex

9.1 Organizational bodies of WWTF

Table 17: Current members of WWTF Board of Directors.

Name	Function
Michael Häupl	President of WWTF, former Lord Mayor of Vienna
Stephan Koren	Vice President of WWTF, former CEO Österreichische Volksbanken AG
Manuela Baccarini	Vice Rector, University of Vienna
Gerhard Mayr	Former Chairman of the Board, UCB S.A, former Executive VP of Eli Lilly
Veronika Sexl	Rector, University of Innsbruck
Franz Zwickl	Former member of the Board of Directors of the AVZ Privatstiftung

Table 18: Current members of WWTF Advisory Board.

Name	Affiliation	Nominated by (categorized)
Erich Hampel	Chairman of the Advisory Board	AVZ Privatstiftung
Otto Doblhoff-Dier	University of Veterinary Medicine Vienna	Academic, universities
Peter Ertl	TU Wien	Academic, universities
Michaela Fritz	Medical University of Vienna	Academic, universities
Christof Gattringer	Austrian Science Fund FWF	Academic, FWF
Stefan Gara	NEOS Rathausklub	Political parties
Notburga Gierlinger	BOKU University	Academic, universities
Markus Hengstschläger	Medical University of Vienna	Academic, universities
Klemens Himpele	City of Vienna	City of Vienna
Johannes Höhrhan	Industriellenvereinigung Wien	Interest group representation
Bernadette Kamleitner	WU Wien	Interest group representation
Günter Koderhold	Klub der Wiener Freiheitlichen	Political parties
Daniel Löcker	City of Vienna, Vice Chairman of Advisory Board	City of Vienna
Ronald Maier	University of Vienna	Academic, universities
Julia Malle	Der Grüne Klub	Political parties
Silvia Miksch	TU Wien	Academic, FWF
Helmut Naumann	WKO – Austrian Economic Chambers, Vienna Branch	Interest group representation
Christian Obinger	BOKU University	Academic, universities
Ilaria Perugia	University of Vienna	Academic, universities
Herbert Pichler	AVZ Privatstiftung	AVZ Privatstiftung
Ewa Samel	Sozialdemokratische Fraktion des Wiener Landtags	Political parties
Rupert Sausgruber	WU Wien	Academic, universities
Elisabeth Schludermann	TU Wien	Academic, universities
Michael Soder	Kammer für Arbeiter und Angestellte für Wien	Interest group representation
Roman Stiftner	ÖVP Klub, Austrian Economic Chambers	Political parties
Petra Winter	University of Veterinary Medicine Vienna	Academic, universities

Name	Function
Michael Stampfer	Managing Director of WWTF & WWTF GmbH
Michael Strassnig	Deputy Managing Director WWTF & Program Manager
Grace Liu	Program Manager
Benjamin Missbach	Program Manager
Petra Steinkogler	Program Manager
Marita Benkwitz	Controlling
Gerda Adam	Back Office
Barbara Ungerhofer	Back Office
Magdalena Wicher	Program Management Assistant
Donia Lasinger	until October 2024

Table 19: Current employees of WWTF Office.

9.2 Funding information

Year	No. of projects funded	Paid via	Total funding
2011	9	City of Vienna	€ 1,276,616
2012	6	City of Vienna	€ 931,373
2013	8	City of Vienna	€ 1,586,694
2014	7	City of Vienna	€ 1,285,786
2015	7	City of Vienna	€ 1,627,505
2016	6	City of Vienna	€ 1,696,256
2017	7	City of Vienna	€ 1,575,112
2018	7	City of Vienna	€ 1,819,722
2019	7	WWTF	€ 1.681.432
2020	6	WWTF	€ 940,097
2021	7	WWTF	€ 2,087,855
2022	7	WWTF	€ 1,783,635
2023	7	WWTF	€ 1,711,326
2024	5	WWTF	€ 1,102,002

Table 20: Overview of UIP calls 2011–2024.

Life Sciences			
Name	**Institution**	**Country**	**Calls**
Al-Lazikani, Bissan	ICR – The Institute of Cancer Research	United Kingdom	LS 2017
Alvarez-Lorenzo, Carmen Isabel	University of Santiago de Compostela	Spain	LS 2024
Bakker, Martijntje	JPI Health	The Netherlands	LS 2022
Barone, Francesca	University of Birmingham	United Kingdom	LS 2016, LS 2018
Barton, Geoffrey	University of Dundee	United Kingdom	LS 2014
Beck, Thomas	Nestlé Research Lausanne	Switzerland	LS 2012
Beerenwinkel, Niko	ETH Zurich	Switzerland	LS 2023
Bianchi, Marco	San Raffaele University	Italy	LS 2013
Bonomi, Massimiliano	Institut Pasteur	France	LS 2023
Borde, Theda	ASH Berlin	Germany	LS 2022
Brand, Andrea	University of Cambridge	United Kingdom	LS 2016

Table 21: "Life Sciences" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Brigelius-Flohé, Regina	University of Potsdam	Germany	LS 2012
Brouard, Sophie	CRTI Nantes	France	LS 2020
Brunak, Søren	Technical University of Denmark	Denmark	LS 2016 [C], LS 2018, LS 2023 [C]
Chapman, Karen	University of Edinburgh	United Kingdom	LS 2011
Choquet, Daniel	Institut Pasteur	France	LS 2014
Cocolin, Luca	Università degli Studi di Torino	Italy	LS 2012
Collinson, Lucy	The Francis Crick Institute	United Kingdom	LS 2019
Cornish, Virginia W.	Columbia University	USA	LS 2024
Daniel, Hannelore	TU Munich	Germany	LS 2012 [C]
De Bari, Cosimo	University of Aberdeen	United Kingdom	LS 2011
de Jong, Marion	Erasmus MC	The Netherlands	LS 2019
Dermitzakis, Emmanouil	Université de Genève	Switzerland	LS 2020
Dominici, Francesca	Harvard	USA	LS 2022
Einsele, Hermann	Universitätsklinik Würzburg	Germany	LS 2020
El Haj, Alicia	Keele University	United Kingdom	LS 2013
Fernandez-Capetillo, Oskar	Karolinska Institutet	Sweden	LS 2021
Gassmann, Max	Universität Zürich	Switzerland	LS 2020
George, Andrew	AJTG Ltd	United Kingdom	LS 2011 [C]
Glass, Liz	University of Edinburgh	United Kingdom	LS 2011
Govaerts, Cedric	Universite libre de Bruxelles	Belgium	LS 2021
Gundersen, Lise-Lotte	University of Oslo	Norway	LS 2017
Hackenberger, Christian	Leibniz-Institut für Molekulare Pharmakologie	Germany	LS 2017, LS 2021
Heckman, Caroline	FIMM, University of Helsinki	Finnland	LS 2018, LS 2020
Henske, Elizabeth	Harvard Medical School	USA	LS 2011
Hodits, Regina	Wellington Partners, Munich	Germany	LS 2011
Hollmann, Frank	TU Delft	The Netherlands	LS 2017
Ianora, Adrianna	Stazione Zoologica Anton Dohrn	Italy	LS 2017
Janssens, Geert	Ghent University	Belgium	LS 2012
Johnson, Sonia	University College London	United Kingdom	LS 2022
Kee, Frank	Queen's University Belfast	United Kingdom	LS 2022 [C]
Krämer, Ute	Ruhr-Universität Bochum	Germany	LS 2013
Kreshuk, Anna	EMBL	Germany	LS 2023
Lang, Kathrin	TU Munich	Germany	LS 2017, LS 2021 [C]
Lasko, Paul	McGill University	Canada	LS 2013
Lasser, Theo	EPFL	Switzerland	LS 2019
Lee, Bruce Y.	Bloomberg School of Public Health	USA	LS 2011
Lewis, Basil	Technion – Israel Institute of Technology	Israel	LS 2011
Loewith, Robbie	Université de Genève	Switzerland	LS 2021
Mackintosh, Fred	University of Amsterdam	The Netherlands	LS 2013
Marchiori, Elena	Radboud University	The Netherlands	LS 2023
Martin, Cathie R.	John Innes Centre	United Kingdom	LS 2013
Matthews, Paul	University of Nottingham	United Kingdom	LS 2011, LS 2014 [C], LS 2018 [C]

May, Elisa	University of Konstanz	Germany	LS 2019
Mayer, Thomas	University of Konstanz	Germany	LS 2017
Mellanby, Richard	University of Edinburgh	United Kingdom	LS 2018
Miller, Karla	University of Oxford	United Kingdom	LS 2014
Muckenthaler, Martina	Universität Heidelberg	Germany	LS 2016, LS 2018, LS 2020 [C]
Nielsen, Jens B.	Chalmers University of Technology	Sweden	LS 2024
Noble, Alison	University of Oxford	United Kingdom	LS 2014, LS 2023
Orntoft, Torben	Aarhus University	Denmark	LS 2016
Ottensmeier, Christian	University of Southampton	United Kingdom	LS 2016
Parts, Leopold	Wellcome Sanger Institute	United Kingdom	LS 2023
Paul-Gilloteaux, Perrine	Nantes Université	France	LS 2019
Pavlova, Milena	Maastricht University	The Netherlands	LS 2022
Peeper, Daniel	Vrije Universiteit Amsterdam	The Netherlands	LS 2011
Pennec, Xavier	INRIA	France	LS 2014,
Polizzi, Karen	Imperial College London	United Kingdom	LS 2021
Poulsen, Lars K.	University of Copenhagen	Denmark	LS 2012, LS 2018
Prentice, Ann	MRC Human Nutrition Research	United Kingdom	LS 2012
Rappold, Gudrun	Universität Heidelberg	Germany	LS 2018
Redaelli, Alberto Cesare Luigi	Politecnico di Milano	Italy	LS 2024
Reddington, Martin	Human Frontier Science Program Organization	Germany	LS 2013
Reiser, Maximilian	LMU Munich	Germany	LS 2014
Rhodes, Daniela	Nanyang Technological University	Singapore	LS 2013
Sansonetti, Philippe J.	Institut Pasteur	France	LS 2013
Saris, Wim	Maastricht University	The Netherlands	LS 2012
Sauer, Markus	University of Würzburg	Germany	LS 2014, LS 2017 [C], LS 2019 [C]
Schindler, Christoph	Medizinische Hochschule Hannover	Germany	LS 2018
Schön, Chris-Carolin	TU Munich	Germany	LS 2012
Schulz, Alexander	University of Copenhagen	Denmark	LS 2019
Schwab, Matthias	Dr. Margarete Fischer-Bosch Institute of Clinical Pharmacology	Germany	LS 2016
Schwille, Petra	MPI for Biochemistry	Germany	LS 2024 [C]
Sebastian Galles, Nuria	Universitat Pompeu Fabra	Spain	LS 2013
Spranger, Joachim	Charité Berlin	Germany	LS 2012
Thornton, Janet	European Bioinformatics Institute	United Kingdom	LS 2014
Tramontano, Anna	Sapienza Università di Roma	Italy	LS 2013 [C]
Trylska, Joanna	University of Warsaw	Poland	LS 2021
Vallier, Ludovic	Berlin Institute of Health at Charité	Germany	LS 2024
Van Lenthe, Harry	KU Leuven	Belgium	LS 2011
Varrone, Andrea	Karolinska Institutet	Sweden	LS 2019
Watts, Colin	University of Birmingham	United Kingdom	LS 2020
Wennerberg, Krister	FIMM, University of Helsinki	Finnland	LS 2017
Wiseman, Paul	McGill University	Canada	LS 2014
Wüst, Matthias	University of Bonn	Germany	LS 2012

Zinsstag, Jakob	Swiss Tropical and Public Health Institute	Switzerland	LS 2022

Table 22: "Information and Communication" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Information and Communication Technology			
Name	**Institution**	**Country**	**Calls**
Acin, Antonio	ICFO Barcelona	Spain	ICT 2012, ICT 2019
Aïssa, Sonia	INRS	France	ICT 2012
Back, Andrea	University of St. Gallen	Switzerland	ICT 2015
Baier, Christel	Technische Universität Dresden	Germany	ICT 2019
Bischof, Christian	TU Darmstadt	Germany	ICT 2015
Buhl, Hans Ulrich	University of Augsburg	Germany	ICT 2012
Capone, Antonio	Politecnico di Milano	Italy	ICT 2015
Caputo, Barbara	Politecnico di Torino	Italy	ICT 2022
Chen, Liqun	University of Surrey	United Kingdom	ICT 2022
de Boer, Frank	Leiden University	The Netherlands	ICT 2019
de Raedt, Luc	KU Leuven	Belgium	ICT 2019
Duel-Hallen, Alexandra	North Carolina State University	USA	ICT 2012
Eynon, Rebecca	University of Oxford	United Kingdom	ICT 2020
Gionis, Aristides	KTH Royal Institute of Technology	Sweden	ICT 2022
Gross, Markus	ETH Zurich	Switzerland	ICT 2012 [C]
Hauswirth, Manfred	TU Berlin	Germany	ICT 2020
Ijsselsteijn, Wijnand	Eindhoven University of Technology	The Netherlands	ICT 2020, ICT 2023
Inverardi, Paola	Università dell'Aquila	Italy	ICT 2012
Issarny, Valérie	INRIA Paris	France	ICT 2012, ICT 2022
Jarke, Matthias	RWTH Aachen	Germany	ICT 2015 [C]
Keim, Daniel	University of Konstanz	Germany	ICT 2012, ICT 2019
Kermarrec, Anne-Marie	EPFL	France	ICT 2012
Kersting, Kristian	TU Darmstadt	Germany	ICT 2019
Kwiatkowska, Marta	University of Oxford	United Kingdom	ICT 2012, ICT 2015, ICT 2022 [C]
Larus, Jim	EPFL	Switzerland	ICT 2020
Lee, Edward A.	University of California, Berkeley	USA	ICT 2020, ICT 2023 [C]
Lehdonvirta, Vili	University of Oxford	United Kingdom	ICT 2023 [C]
Mädche, Alexander	Karlsruhe Institute of Technology	Germany	ICT 2022
Margaria, Tiziana	University of Limerick	Ireland	ICT 2022
Milan, Stefania	University of Amsterdam	The Netherlands	ICT 2020
O'Sullivan, Carol	Disney Research	USA	ICT 2015
Pedreschi, Dino	University of Pisa	Italy	ICT 2023
Pernici, Barbara	Politecnico di Milano	Italy	ICT 2019
Pierson, Jo	Vrije Universiteit Brussel	Belgium	ICT 2020
Popovski, Petar	Aalborg University	Denmark	ICT 2019, ICT 2022
Valencia, Alfonso	CNIO Madrid	Spain	ICT 2015
Valera, Isabel	Universität des Saarlandes	Germany	ICT 2023
Veale, Michael	University College London	United Kingdom	ICT 2023

Verbauwhede, Ingrid	KU Leuven	Belgium	ICT 2019
Westermann, Rüdiger	TU Munich	Germany	ICT 2019 [C], ICT 2022
Wyatt, Sally	Maastricht University	The Netherlands	ICT 2020 [C], ICT 2023

Environmental Systems Research			
Name	**Institution**	**Country**	**Calls**
Anguelovski, Isabelle	Universitat Autònoma de Barcelona	Spain	ESR 2020
Davies, Zoe	University of Kent	United Kingdom	ESR 2024
Dube, Timothy	University of the Western Cape	South Africa	ESR 2024
Grimm, Nancy	Arizona State University	USA	ESR 2017, ESR 2020
Guy, Simon	Lancaster University	United Kingdom	ESR 2017, ESR 2020
Haase, Dagmar	Humboldt-Universität Berlin	Germany	ESR 2017, ESR 2020, ESR 2024
Jaakkola, Jouni	University of Oulu	Finland	ESR 2020
Kennedy, Christopher	University of Victoria	Canada	ESR 2017, ESR 2020
Kiendler-Scharr, Astrid	FZ Jülich	Germany	ESR 2017, ESR 2020 [C]
Madlener, Reinhard	RWTH Aachen	Germany	ESR 2024
Martens, Pim	Maastricht University	The Netherlands	ESR 2024, VRG 2022
Pershagen, Göran	Karolinska Institutet	Sweden	ESR 2017
Porto de Albuquerque, João	University of Warwick	United Kingdom	ESR 2020, ESR 2024
Roberts, Debra	University of KwaZulu-Natal	South Africa	ESR 2024 [C]
Wehrli, Bernhard	ETH Zurich	Switzerland	ESR 2017 [C]
Zhu, Xiaoxiang	TU Munich	Germany	ESR 2024

Table 23: "Environmental System Research" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Cognitive Sciences Calls			
Name	**Institution**	**Country**	**Calls**
Bard, Kim	University of Portsmouth	United Kingdom	CS 2015
Bornkessel-Schlesewsky, Ina	University of South Australia	Australia	CS 2011
Cador, Martine	Université Victor Segalen Bordeaux	France	CS 2018
Deroy, Ophelia	LMU Munich	Germany	CS 2018
Giurfa, Martin	Université Paul Sabatier	France	CS 2011 [C], CS 2015, CS 2018
Han, Shihui	Peking University	China	CS 2011
Knoblich, Günther	CEU – Central European University	Hungary	CS 2018
Manser, Marta	University of Zurich	Switzerland	CS 2011
Miesenböck, Gero	University of Oxford	United Kingdom	CS 2011 [C], 2016, CS 2018
Pascalis, Olivier	Unversité Pierre-Mendès-France	France	CS 2011
Riebel, Katharina	Leiden University	The Netherlands	CS 2018
Seth, Anil	University of Sussex	United Kingdom	CS 2015 [C]
Shallice, Tim	Scuola Internazionale Superiore di Studi Avanzati (SISSA)	Italy	CS 2011
Theeuwes, Jan	Vrije Universiteit Amsterdam	The Netherlands	CS 2011, CS 2015
Tillmann, Barbara	Université de Lyon	France	CS 2015
Toribio Mateas, Josefa	Universitat Autònoma de Barcelona	Spain	CS 2011
van Gerven, Marcel	Radboud University	The Netherlands	CS 2018

Table 24: "Cognitive Sciences" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Veloso, Manuela	Carnegie Mellon University	USA	CS 2011
Ziegler, Toni	University of Wisconsin-Madison	USA	CS 2015

Table 25: "Empirical Social Sciences" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Empirical Social Sciences			
Name	**Institution**	**Country**	**Calls**
Gupta, Nabanita Datta	Aarhus University	Denmark	ESS 2022
Hobolt, Sara B.	London School of Economics and Political Science	United Kingdom	ESS 2022
Jäckle, Annette	University of Essex	United Kingdom	ESS 2022
Lepri, Bruno	Fondazione Bruno Kessler	Italy	ESS 2022
Mortensen, Laust H.	University of Copenhagen	Denmark	ESS 2022
Riphahn, Regina	Friedrich Alexander Universität	Germany	ESS 2022
Rodríguez Poo, Juan Manuel	Universidad de Cantabria Inicio	Spain	ESS 2022
Winkelmann, Rainer	University of Zurich	Switzerland	ESS 2022

Table 26: "Vienna Research Groups" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Vienna Research Groups			
Name	**Institution**	**Country**	**Calls**
Akata, Zeynep	Helmholtz Zentrum München	Germany	VRG 2024
Arndt, Peter F.	Max Planck Institute for Molecular Genetics	Germany	VRG 2015, VRG 2020 [C]
Bard, Kim	University of Portsmouth	United Kingdom	VRG 2021
Beerenwinkel, Niko	ETH Zurich	Switzerland	VRG 2024 [C]
Blakemore, Sarah-Jayne	University College London	United Kingdom	VRG 2013
Bonhoeffer, Sebastian	ETH Zurich	Switzerland	VRG 2012, VRG 2013, VRG 2015
Bornkessel-Schlesewsky, Ina	University of South Australia	Australia	VRG 2013
Buhl, Hans Ulrich	University of Augsburg	Germany	VRG 2012
Caputo, Barbara	Politecnico di Torino	Italy	VRG 2019 [C]
Cont, Rama	Imperial College London	United Kingdom	VRG 2017
De Bari, Cosimo	University of Aberdeen	United Kingdom	VRG 2014
de Raedt, Luc	KU Leuven	Belgium	VRG 2018
Deroy, Ophelia	LMU Munich	Germany	VRG 2021
Del Bono, Emilia	University of Essex	United Kingdom	VRG 2012
Ditlevsen, Susanne	University of Copenhagen	Denmark	VRG 2017
Fan, Jianqing	Princeton University	USA	VRG 2019
Feldmann, Anja	TU Berlin	Germany	VRG 2011
Ferrari, Elena	University of Insubria	Italy	VRG 2023
Fraternali, Franca	King's College London	United Kingdom	VRG 2020
Gaskell, Gareth	University of York	United Kingdom	VRG 2021
Gatica-Perez, Daniel	EPFL	Switzerland	VRG 2019
Gazzola, Valeria	University of Amsterdam	The Netherlands	VRG 2021
George, Andrew	AJTG Ltd	United Kingdom	VRG 2014 [C]
Giannotti, Fosca	Scuola Normale Superiore di Pisa	Italy	VRG 2024
Gilbert, Anna C.	University of Michigan	USA	VRG 2012
Harel, David	Weizmann Institute of Science	Israel	VRG 2011

Haszprunar, Gerhard	LMU Munich	Germany	VRG 2014
Helm, Aveliina	Tartu University	Estonia	VRG 2022
Horn, Harald	Karlsruhe Institute of Technology	Germany	VRG 2022
Hotho, Andreas	Universität Würzburg	Germany	VRG 2024
Hubler, Alfred	University of Illinois	USA	VRG 2016
Jaffard, Stéphane	Université Paris-Est	France	VRG 2017
Jørgensen, Peter Søgaard	Stockholm Resilience Center	Sweden	VRG 2022 [C]
Kermarrec, Anne-Marie	EPFL	France	VRG 2023
Knudsen, Lars Ramkilde	Technical University of Denmark	Denmark	VRG 2018
Kwiatkowska, Marta	University of Oxford	United Kingdom	VRG 2018
Lavac, Nada	University of Nova Gorica	Slovenia	VRG 2023
Lenz, Martin	Université Paris-Saclay	France	VRG 2020
Lewenstein, Maciej	ICFO Barcelona	Spain	VRG 2012
Linial, Michal	Hebrew University Jerusalem	Israel	VRG 2014, VRG 2016
Loreto, Vittorio	Sapienza University of Rome	Italy	VRG 2016
Lutz, Carsten	Universität Leipzig	Germany	VRG 2024
Macdonald, Cynthia	University of Manchester	United Kingdom	VRG 2013
Maedche, Alexander	Karlsruhe Institute of Technology	Germany	VRG 2023
Maini, Philip K.	University of Oxford	United Kingdom	VRG 2012
Makara, Judith K.	Hungarian Academy of Sciences	Hungary	VRG 2021
Mandel-Briefer, Elodie Floriane	University of Copenhagen	Denmark	VRG 2021
Markl, Volker	TU Berlin	Germany	VRG 2019, VRG 2023 [C]
Marr, Carsten	Helmholtz Zentrum München	Germany	VRG 2020
Martens, Pim	Maastricht University	The Netherlands	VRG 2022
Martin, Cathie R.	John Innes Centre	United Kingdom	VRG 2014
Mazan, Sylvie	CNRS	France	VRG 2014
Miesenböck, Gero	University of Oxford	United Kingdom	VRG 2013 [C], VRG 2016
Moens, Marie-Francine	KU Leuven	Belgien	VRG 2024
O'Sullivan, Carol	Disney Research	USA	VRG 2011
Oden, Tinsey J.	The University of Texas at Austin	USA	VRG 2017
Ottersten, Bjorn	University of Luxemburg	Luxembourg	VRG 2011, VRG 2018 [C]
Pahl-Wostl, Claudia	University of Osnabrück	Germany	VRG 2022
Palmgren, Juni	Karolinska Institutet	Sweden	VRG 2015
Ponce, Jean	Ecole normale supérieure-PSL & NYU	France	VRG 2024
Przulj, Natasa	Barcelona Supercomputing Center	Spain	VRG 2019, VRG 2020
Rodden, Tom	University of Nottingham	United Kingdom	VRG 2011
Rodriguez, Blanca	University of Oxford	United Kingdom	VRG 2020
Schenk, Olaf	Universita della Svizzera italiana	Switzerland	VRG 2023
Schweitzer, Frank	ETH Zurich	Switzerland	VRG 2016
Sorin, Solomon	Hebrew University Jerusalem	Israel	VRG 2016 [C]
Stadler, Tanja	ETH Zurich	Switzerland	VRG 2020
Steed, Anthony	University College London	United Kingdom	VRG 2019

Steger, Angelika	ETH Zurich	Switzerland	VRG 2018
Steil, Jochen	TU Braunschweig	Germany	VRG 2013
Stephens, David W.	University of Minnesota	USA	VRG 2013
Stevens, Angela	Universität Münster	Germany	VRG 2017
Theeuwes, Jan	Vrije Universiteit Amsterdam	The Netherlands	VRG 2013, VRG 2021 [C]
Theis, Fabian	Helmholtz Zentrum München	Germany	VRG 2015
Thornton, Janet	European Bioinformatics Institute	United Kingdom	VRG 2015
Tramontano, Anna	Sapienza Università di Roma	Italy	VRG 2015 [C]
Tumova, Jana	KTH Royal Institute of Technology	Sweden	VRG 2023
Van Keilegom, Ingrid	Université catholique de Louvain	Belgium	VRG 2012
Wahner, Andreas	Forschungszentrum Jülich	Germany	VRG 2022
Westermann, Rüdiger	TU Munich	Germany	VRG 2018
Wiesner, Karoline	University of Bristol	United Kingdom	VRG 2016
Wohlmuth, Barbara	TU Munich	Germany	VRG 2012 [C], VRG 2017 [C]
Wolf, Alexander L.	Imperial College London	United Kingdom	VRG 2011 [C]
Zwicky Hauschild, Michael	Technical University of Denmark	Denmark	VRG 2022

Table 27: "Additional Measures" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Additional Measures			
Name	**Institution**	**Country**	**Calls**
Czernohorszky, Eva	Wirtschaftagentur Wien	Austria	NXT 2017, NXT 2019, NXT 2022
De Bastion, Geraldine	konnektiv	Germany	RO 2022
Dorner, Thomas	Medizinische Universität Wien	Austria	EI-COV 2020
Eichinger, Anita	City of Vienna, Wienbibliothek	Austria	RO 2022
Fialka, Irene	Innovation into Business	Austria	NXT 2017, NXT 2019 [C], EI-COV 2020, NXT 2022 [C]
Fyen, Wim	KU Leuven	Belgium	NXT 2017, NXT 2019
Geraghty, Keith	University of Manchester	United Kingdom	ME-CFS 2024
Harasek, Stefan	Patentamt Österreich	Austria	NXT 2017, NXT 2019, NXT 2022
Himpele, Klemens	City of Vienna, WWTF Advisory Board	Austria	EI-COV 2020
Hofmann, Jeanette	Wissenschaftszentrum Berlin für Sozialforschung	Germany	RO 2022
Klimas, Nancy	University of Miami	USA	ME-CFS 2024
Krall, Peter	Consulter	Austria	NXT 2022
Krasnova, Hanna	University of Potsdam	Germany	RO 2022
Lacerda, Eliana	London School of Hygiene & Tropical Medicine	United Kingdom	ME-CFS 2024
Leo, Hannes	Discuto	Austria	NXT 2017
Neppel, Clara	IEEE	Austria	RO 2022
Nowotny, Helga	ERC, ERA Council Forum Austria & RFTE	Austria	EI-COV 2020
Nussbaumer, Peter	LEAD Discovery Center Dortmund	Germany	NXT 2019, NXT 2022
Ohler, Fritz	former CEO technopolis Vienna	Austria	EI-COV 2020
Oltra, Elisa	Catholic University of Valencia	Spain	ME-CFS 2024
Ponting, Chris	University of Edinburgh	United Kingdom	ME-CFS 2024 [C]
Putrino, David	Icahn School of Medicine – Mount Sinai	USA	ME-CFS 2024

Reinisch, Georg	Generally sworn and court-certified expert	Austria	RO 2022
Seipelt, Joachim	austria wirtschaftsservice	Austria	NXT 2017
Wildberger, Andreas	FFG	Austria	NXT 2019, NXT 2022
Winter-Ebmer, Rudolf	JKU Linz	Austria	EI-COV 2020
Wundsam, Hannah	Austrian Startups	Austria	RO 2022

Table 28: "Mathematics and …" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Mathematics and …			
Name	**Institution**	**Country**	**Calls**
Agur, Zvia	Institute for Medical BioMathematics	Israel	MA 2014, MA 2014
Fischer, Mareike	Ernst Moritz Arndt Universität Greifswald	Germany	MA 2016
Jaffard, Stéphane	Université Paris-Est	France	MA 2014, MA 2016
Jäger, Willi	Universität Heidelberg	Germany	MA 2014
Klar, Axel	Technische Universität Kaiserslautern	Germany	MA 2014, MA 2016 [C]
Kostina, Ekaterina	University of Marburg	Germany	MA 2014
Labbé, Martine	Université libre de Bruxelles	Belgium	MA 2016
Latora, Vito	Queen Mary, University of London	United Kingdom	MA 2016
Lenstra, Jan Karel	Centrum voor Wiskunde en Informatica	The Netherlands	MA 2024 [C]
Lubkin, Sharon R.	North Carolina State University	USA	MA 2016
Podolskij, Mark	Aarhus University	Denmark	MA 2014, MA 2016
Spohn, Herbert	TU Munich	Germany	MA 2016

Table 29: "Social Sciences and Humanities" jury members of WWTF calls, 2011–2024; (affiliation information by the time of the latest jury participation). [C] marks jury chair.

Social Sciences and Humanities			
Name	**Institution**	**Country**	**Calls**
Bensaude-Vincent, Bernadette	Université Paris/ Panthéon-Sorbonne	France	SSH 2013
Born, Georgina	University of Oxford	United Kingdom	SSH 2013 [C]
Engstrand, Eva	Göteborgs Universitet	Sweden	SSH 2016
Gaver, Bill	Goldsmiths, University of London	United Kingdom	SSH 2013
Guiraudon, Virginie	University of Lille	France	SSH 2011, SSH 2013
Guy, Simon	Lancaster University	United Kingdom	SSH 2013, SSH 2016
Hartmann, Henrike	Volkswagen Foundation	Germany	SSH 2016
Hennion, Antoine	École des Mines de Paris	France	SSH 2016
Kalter, Frank	University of Mannheim	Germany	SSH 2011
Keith, Michael	University of Oxford	United Kingdom	SSH 2011
Lucassen, Leo	Leiden University	The Netherlands	SSH 2011, SSH 2013, SSH 2016
Nowotny, Helga	ERC, ERA Council Forum Austria & RFTE	Austria	SSH 2011, SSH 2013
Randeria, Shalini	University of Zurich	Switzerland	SSH 2011 [C]
Rohracher, Harald	Linköping University	Sweden	SSH 2013
Schroeder, Christoph	University of Potsdam	Germany	SSH 2011
Schröer, Wolfgang	University of Hildesheim	Germany	SSH 2011
Scott, Kirk	Lund University	Sweden	SSH 2011, SSH 2016
Staeheli, Lynn	Durham University	United Kingdom	SSH 2013
Thimm, Caja	University of Bonn	Germany	SSH 2013

Watson, Sophie	Open University	United Kingdom	SSH 2013
Zimmer, Robert	Goldsmiths, University of London	United Kingdom	SSH 2013

9.3 Research system information

Table 30: Overview of characteristics of HEIs in Austria

		Public Universities	Universities of Applied Sciences	Private Universities	University Colleges for Teacher Education
Number of institutions	*AT:*	23	21	21	14
	Vienna:	9	5	7	3
Ownership		Independent bodies of public law	Public or private legal entity	Legal entity located in Austria	Public (9), private (catholic church) (5)
Mission		Scientific research and research oriented education	Education and application oriented research	Education and research according to statute	Pedagogical education
Necessity for accreditation of institution/programs		No	Yes	Yes	No
Admission restrictions		In a defined set of highly demanded studies	Yes	according to statute	Yes
Public Funding		General university funds	Study place funding	Prohibited on the state level, common practice on the level of the provinces	Federal education budget
Doctoral Grants		Yes	No	With special accreditation	No

Source: Background Report OECD Reviews of Innovation Policies: AUSTRIA, 2017 (unpublished)

Table 31: List of Viennese HE and larger research institutions

Public universities			
Institution	**Annual budget (2022)**	**Number of students**	**Number of scientific staff**
Uni Wien	€ 570,516,000	80,090	7,503
MUW	€ 500,845,000	7,520	4,491
TU Wien	€ 311,982,000	24,739	4,478
BOKU University	€ 154,226,000	9,954	2,201
WU Wien	€ 170,890,000	20,322	1,734
mdw	€ 110,252,000	2,610	1,099
vetmeduni	€ 125,828,000	2,430	801
Universität für angewandte Kunst Wien	€ 53,967,000	1,934	676
Akademie der bildenden Künste Wien	€ 35,195,000	1,617	393

Universities of applied sciences (Fachhochschulen/FHs)*			
Institution	**Annual budget (2022)**	**Number of students**	**Number of scientific staff**
Fachhochschule des bfi Wien	20,598,964	2,097	526
FHW-Fachhochschule der Wiener Wirtschaft	n/a	2,834	530
FH Campus Wien	n/a	7,526	1,855
Fachhochschule Technikum Wien	n/a	4,662	815
Lauder Business School	n/a	420	55

* No public data available for FHs in terms of budgets.

Central Research Institutions**		
Institution	**Annual budget (2023)**	**Number of staff**
Silicon Austria Labs GmbH	€ 51,944,000	323
Österreichische Akademie der Wissenschaften	€ 218,961,000	1,700
Ludwig Boltzmann Gesellschaft	€ 30,828,000	567
IST-Austria	€ 102,500,000	1,106
GeoSphere Austria (GSA)	€ 50,000,000	514
AIT Austrian Institute of Technology GmbH	€ 208,865,000	1,203

** Numbers according to FTB 2024. Please note, that except for public universities and central research universities (and partly) for FHs no comparable numbers are easily available. Thus, some info may not be accurate, but the relative size of the institutions are well-represented.

Private universities			
Institution	**Annual budget (2022)**	**Number of students**	**Number of scientific staff**
Central European University Private University	n/a	1,900	281
Charlotte Fresenius Privatuniversität	n/a	57	5
JML Jam Music Lab Private University for Jazz and Popular Music Vienna	n/a	219	52
MODUL University Vienna Privatuniversität	n/a	653	59
Musik und Kunst Privatuniversität der Stadt Wien	n/a	972	322
Sigmund Freud Privatuniversität	n/a	6,285	1,800
Webster Vienna Private University	n/a	514	89

Some other larger private research institutions		
Institution	**Annual budget**	**Number of staff**
IHS	€ 11,200,000	88
WIFO	€ 14,400,000	90
Complexity Science Hub	n/a	75
ZSI	n/a	61
CCRI	€ 16,427,920	150
IMP	€ 36,000,000	289
SBA Research	n/a	82
VRVis GmbH	n/a	80

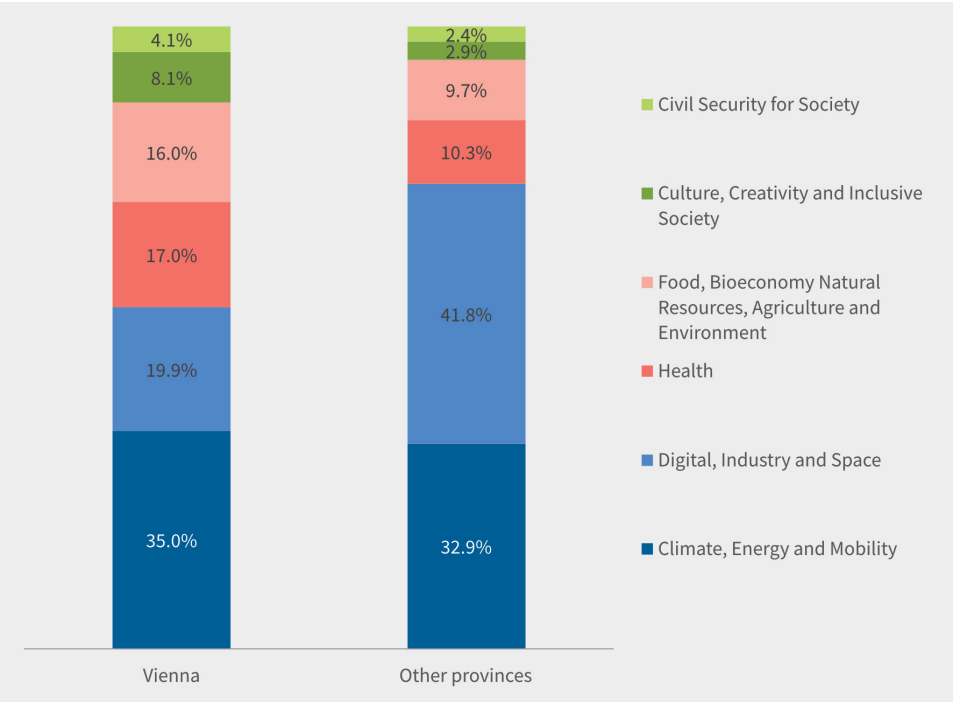
Rank	Country	Grants per m population	Grants per m population LS / rank	Grants per m population PE / rank	Grants per m population SSH / rank
1	Israel	110.9	48.9 / 1.	49.9 / 2.	11.4 / 8.
2	Switzerland	97.7	37.4 / 2.	50.9 / 1.	7.7 / 12.
3	Netherlands	84.1	24.7 / 3.	33.1 / 3.	25.6 / 1.
4	Denmark	64.4	21.1 / 5.	27.7 / 4.	14.1 / 5.
5	**Austria**	**55.6**	**19.1 / 6.**	**23.8 / 7.**	**11.6 / 7.**
6	Sweden	55.1	24.2 / 4.	23.1 / 8.	7.3 / 13.
7	Belgium	53.9	16.9 / 8.	22.1 / 9.	14.4 / 4.
...					

Table 32:
ERC grants per million population in different countries

11	United Kingdom	34.5	9.7 / 13.	14.5. / 14.	10.2 / 10.
14	Germany	32.5	12.0 / 10.	15.0 / 12.	4.8 / 15.
16	France	27.5	8.8 / 14.	14.5. / 13.	3.8 / 19.

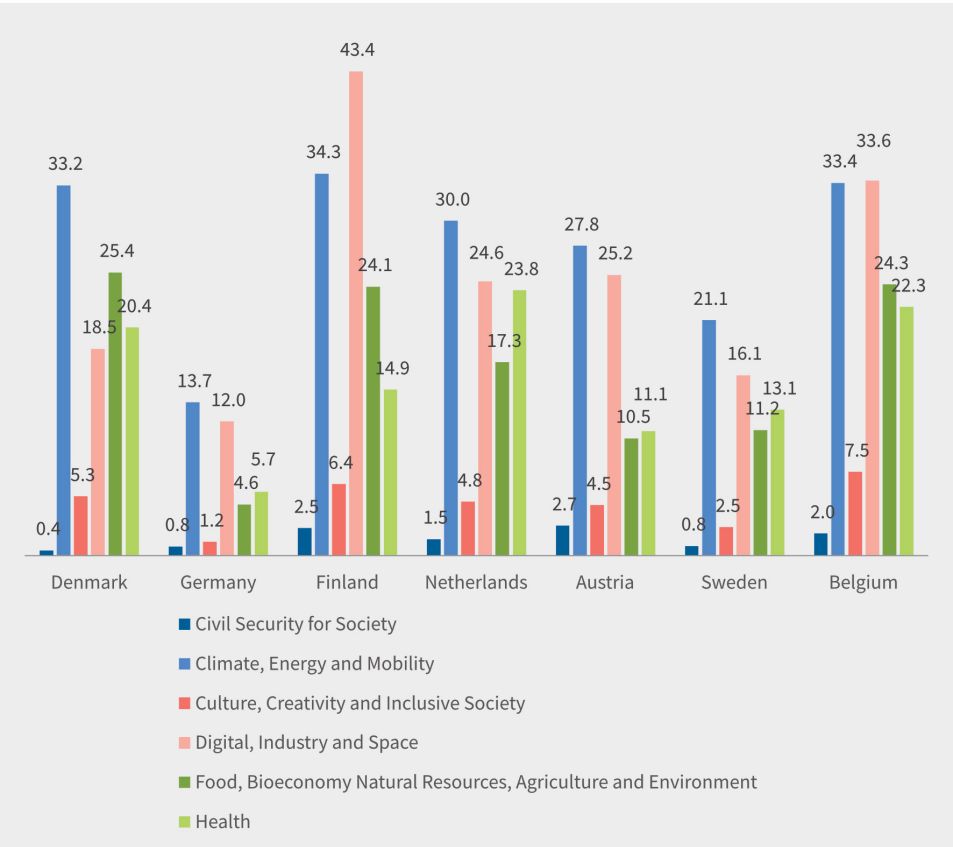
Data: ERC, Eurostat, retrieved on 22-10-2024; own calculations

Figure 27: Horizon Europe funding in topics in Vienna and Austria.



Data: EU, FFG, own calculations. Many thanks to FFG for providing the raw data.

Figure 28: Horizon Europe funding in topics in million EUR per million capita.



Data: EU, FFG, own calculations. Many thanks to FFG for providing the raw data.
Germany is included as benchmark for larger European states.

9.4 Impact evaluation 2013/2014: Recommendations and implementation

Table 33: Members of the 2013/14 impact evaluation panel

Name	Institution
Costa, Mariona	Catalan Institution for Research and Advanced Studies ICREA), Barcelona
Feller, Irwin	Institute for Policy Research and Evaluation, The Pennsylvania State University
Grötschel, Martin (Chair)	TU Berlin / Zuse Institute Berlin
Laudel, Grit	TU Berlin
Öquist, Gunnar	University of Umeå / The Royal Swedish Academy of Sciences
Stock, Oliviero	IRST (Istituto per la Ricerca Scientifica e Tecnologica) Fondazione Bruno Kessler Trento

The recommendations of the 2013/2014 Review Panel and their implementation are summarized in the following.

Organizational structure	
R1	The organizational structure of WWTF should be maintained. No changes are necessary.
The organizational structure was retained in accordance with the recommendations of the panel.	
WWTF Office	
R2	This comment also holds for the WWTF Office. It works efficiently and smoothly and is praised for its support of the sciences.
WWTF Office has continued its work in accordance with the recommendation.	
International review processes	
R3	WWTF's emphasis on the rigorous but fair international review process of all applications was frequently cited as a key to its success. WWTF is advised to keep these standards.
The standards for the review and selection of projects have been maintained.	
Focus on interdisciplinarity and excellence	
R4	It was also common opinion of all interviewees that the emphasis on interdisciplinarity and excellence in research should be maintained. This is a signature aspect of WWTF.
The focus on interdisciplinarity was continued and further strengthened in programs and calls. This includes the 2017 ESR program, the Digital Humanism calls within the ICT program as well as many calls in the Life Sciences program as well as in VRG. In fact, interdisciplinarity became a prime mission of WWTF.	
Interaction with policy	
R5	The WWTF Office should continue its interactions with the Viennese municipality in order to better bridge the still existing gap between politics and science. WWTF can play a very good role in this respect.
The WWTF has continued and expanded its interactions with the Vienna municipality. We refer to the impact stories in this report for evidence (Smart City/ESR and Digital Humanism, for example).	
VRG Program	
R6	Although the Vienna Research Group program is seen as a program that excellently fits the environment, there are a few details that might be considered. It may be reasonable to be more flexible with respect to the amount of WWTF funding, depending on the area funded. Otherwise it may be that offers made in the VRG program are not internationally competitive.
We did not adopt the program in the sense that the size of funding varies between areas. First, we would have to find objective measures for differentiation. Secondly, most of the funding goes into personnel. Third, the requested funding is dependent in the project itself. Here, applicants can go as low as € 1 million if they wish to. In order to be internationally competitive with the funding, we raised the maximum amount first from € 1.5 million to € 1.6 million, and – commencing in 2025 – to € 1.8 million.	
Advice to the Universities	
R7	An advice to the universities involved: They should make sure that the capacities built up by the VRG projects will not get lost at the end of the WWTF funding period.
This recommendation was directed to the universities. The figures for the last few years show that most of the people who have received funding remain in Vienna after the WWTF funding has ended. For figures, see VRG evaluation report. The issue remains that universities sometimes treat tenure track professorships differently in terms of resources compared to direct appointments to Full Professorship.	

WWTF Science Chair Program	
R8	Although the WWTF Science Chair program was not top ranked in the view of the university leaderships (not due to bad experience, but because of various administrative hurdles), the Review Panel suggests to continue the WWTF Science Chair program. The Panel views WWTF not only as "just another funding agency", but as a (subtle) driver for change. The Panel knows how difficult it is for universities to redirect its research and to develop areas. The Science Chair program is a good means to slightly perturb the system; as current history shows. It has a significant impact on the development of new and active areas of research in Vienna. Thus, the recommendation is to start again the search for topics for WWTF Science Chairs and make new calls in the near future, despite some resistance on the side of the university administrations.
WWTF's efforts were aimed at continuing the program. No satisfactory solution was found in discussions with the rectorates. As the question of who takes over the appointment of persons/professorships could not be resolved, the Science Chair Program was not further continued. We have agreed with our boards (and thereby with the universities) that we should focus on early careers with the VRG program. Given the limited resources of WWTF, this is an excellent solution.	
Review of new funding areas	
R9	The thematic programs are well designed, and the subjects perfectly fit the current science landscape. Nevertheless, the Review Panel, in contrast to most of the interviewees, suggests that new funding areas be reviewed regularly in order to make sure that WWTF continues to serve its purpose. It is the experience of the Panel members that focusing for a very long term on only a few subjects yields various rigidities – both on the side of the funding agency as well as on the "customer side".
WWTF has taken the panel's recommendations seriously and further developed the portfolio of topics and themes. We introduced ESR In 2017, and we expanded ICT to Digital Humanism in 2020. Further, there is a social sciences program (polit call ESS in 2022) to be developed. The Life Sciences enjoy frequent renewal with changing annual call topics. Furthermore, topics like AI/ML as a tool became more prominent in several calls. We now consider the pace of renewal as adequate without sacrificing the long-time impact of our programs.	

9.5 VRG Evaluation 2021: Recommendations and implementation

Table 34: Members of the VRG evaluation 2021 panel

Name	Institution
Batina, Lejla	Radboud University
Egger, Matthias	University of Bern / President SNF
Krombholz, Katharina	CISPA Helmholtz Center for Information Security
Leptin, Maria	University of Cologne / Director EMBO / President ERC
Ottersten, Björn (chair)	Université du Luxembourg and KTH Royal Institute of Technology
Schübeler, Dirk	Director Friedrich Miescher Institute for Biomedical Research (FMI) and University of Basel

The VRG Evaluation recommendations have been discussed with the rectorates of the respective universities in a workshop in May 2022. For most of the points, the university representatives saw no need for action, actual legal restrictions which impede changes, or differences in practices between the universities which are hard to overcome. WWTF will organize a follow-up workshop with the universities in 2025.

Continuation of the program	
R1	Given the high satisfaction with the VRG program among all stakeholders and the evident success of the program in fulfilling its goals, the evaluation panel recommends that the program be continued and, ideally, expanded.
WWTF has continued the program as a central element of its funding activities. Recent calls (2022–2024) have seen more funded group leaders (average of 3) thus following the recommendation to expand the program.	
Continuation of the excellent program management and support	
R2	The satisfaction with the application processes, the administrative requirements, the structural support of WWTF as well as the personal engagement of the VRG program manager and the WWTF director has been exceptional. The program selection process meets international criteria for peer review, the handling by the office is excellent, light reporting is appreciated, and there is enough flexibility with regard to spending of resources. The panel thus suggests keeping the main processes as they are and continuing with the high level of support activities that have been established. In accordance with Sections 5.3 and 5.5 [of the VRG evaluation report], WWTF should review the search processes at the host institutions and the selection process to improve diversity.
WWTF will keep all well-working procedures in place and has so far employed a light monitoring on the search processes. One workshop with university leaderships has taken place in 2022. For 2025, another structured meeting with university leadership is planned, also to introduce a more formal monitoring.	

Gender balance in applications	
	Gender balance and diversity were frequently mentioned as a challenge during the interviews. With only 18 % female applicants and 22 % female grantees, the overall number of female applicants and grantees is clearly not satisfying. While the panel found no evidence of a selection bias in the peer review process, a bias in the search and synchronisation process of applicants may exist.
R3	The WWTF needs to develop and take measures that achieve a better balance in applications. Measures that could increase diversity could focus on 1) the scope/topic of calls (see Section 5.5), and 2) the search and synchronisation process at host institutions. The panel recommends that the WWTF set hard targets on the gender balance of application interviews and VRG awards, such as a 30 % ratio of female applicants or grantees. Moreover, the panel strongly encourages a review of the application and selection process by an external gender expert.
WWTF is aware of the issue. However, in the last years, the gender ratios have been 50:50 / 66:33 / 75:25. In the 2025 meeting, WWTF will take steps to further improve the ratio.	
Transparent career perspectives	
	WWTF puts a large investment into talent and care needs to be taken that these scientists are retained and nurtured. While VRG funding provides grantees with significant resources, the panel was surprised that VRG leaders perceived no opportunity to negotiate their endowment as associate professors. There is an apparent lack of transparency for the VRG leaders about the rules for such negotiations (e.g., at least at one university,
R4	a competing outside offer is considered necessary). This should be made transparent for VRG leaders in the onboarding phase. Universities should be encouraged to further develop mechanisms to retain VRG grantees. A structured and transparent process for their career perspective as associate professor, including promotional opportunities, endowment of resources, and expectations of the research institution could be set up.
While the overall career perspective is positive, there are three issues to be closely monitored and improved whenever possible: (1) WWTF is lobbying with Parliament and the Science ministry for a full tenure track in Austria. (2) WWTF is lobbying for increase of university budgets allowing for better resources for successful Assoc. Prof. like VRG leaders. (3) Practices across universities for career models tend to diverge, calling constant dialogue between universities and WWTF.	
Topic selection and sufficient size of candidate pool	
	The program provides VRG leaders with substantial resources to build up research groups at Viennese institutions in specifically defined topic areas. There were opposing views on the question whether the calls should be broader than they currently are or remain focussed on specifically identified fields. This poses a challenge to program management that needs to be considered.
R5	Because the resources of WWTF are limited, focused calls are important. However, WWTF needs to ensure that topics are chosen in a manner that a sufficiently large pool of suitable candidates can apply, and that diversity of topics within specific priority fields and grantees is ensured. WWTF should continue to consult the research community in Vienna to select topics in a mixed mode of top-down prioritisation and bottom-up feedback but consider a more structured approach collecting input from international and external experts to ensure that the strategic objectives are met.
This recommendation is currently not seen as a priority as the strong need to strengthen ICT and AI/ML in Vienna is consensual. Even in fields with high international competition like AI/ML, sufficient numbers of candidates are presented to WWTF every year. The competitiveness of the internal search procedures is at a high level.	
Extension of the eligibility period	
R6	The current period of two to eight years is too late to target young, talented researchers, particularly in the area of computer science. To ensure that talented young researchers from all disciplines are targeted by the calls, the eligibility period for applications should be set to a range of zero to eight years after acquiring a PhD. The evaluation process should be calibrated accordingly.
Candidates with less than 2 years after PhD are already eligible for funding.	
Structured onboarding and training program	
	The additional activities for grantees by WWTF appear to be fit for their purpose, and current social activities provided by WWTF already incentivise network building among VRG grantees.
R7	However, the WWTF could consider facilitating more structured onboarding and offer a leadership training program across institutions among the network of VRG grantees. Complementary training in addition to the training provided by host institutions could facilitate a cross-institutional network that is beneficial for potential future leaders of the university system in Vienna.
Universities claim that their onboarding programs are sufficient. In addition, female VRG leaders can use up to € 10.000 of their budget for further education and training in leadership competences. WWTF will take a closer look in 2025.	
Limiting teaching commitments	
R8	Teaching commitments of VRG grantees are reasonably limited but, in some cases, the teaching load is significant and comprises development of new courses etc. WWTF should specify a maximum level of teaching commitments for VRG grantees in the grant agreement. In the case of excessive teaching load, a financial compensation to the WWTF should be provided by universities.
WWTF acknowledges that teaching is a crucial element of academic careers. Finding the right balance is not an easy task, also given the different requirements at different universities. WWTF individually discusses teaching obligations with the host institutions of the successful candidates. Currently, the teaching load (namely for the first years) is seen as acceptable. WWTF will take a closer look in 2025.	
Relocation package	
R9	While the support by the WWTF with administrative hurdles, relocation, and dual career issues was deemed excellent by interview and survey participants, a relocation package offered by WWTF could help to further facilitate the process of relocating to Vienna and increase the overall attractiveness of the program.
A package is foreseen. VRG leaders can use up to € 5,000 of their budget for relocation/moving.	

Notes

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