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I. Executive Summary

In the autumn of 2007 and early in 2008 an evaluation of the Wiener Wissenschafts- und Technologiefonds WWTF) was conducted. Its main conclusions and recommendations run as follows:

- I. The WWTF has succeeded remarkably well in building up an independent and successful research funding organisation, in establishing competitive professional processes, and in already having a decisive impact on carefully selected areas of the Viennese research landscape.
- II. The WWTF should continue its path as an independent, highly focused funding organisation to further enhance its impact on the Viennese research landscape.
- III. An international scientific advisory board whose main task it is to identify new possible funding areas vis-à-vis international developments and opportunities in the Viennese research landscape should be established.
- IV. The WWTF plays a crucial role in facilitating the recruitment of excellently qualified early stage researchers with high potential to Vienna. In order to ensure the sustainability, however, the grants for these young researchers need to be more long-term. The WWTF could distinguish between grants for established researchers and young researchers coming in (e.g. a 3 + 2 years solution) and allow for more flexibility to renegotiate prolongation.
- V. The interface between WWTF and the universities with regard to employment and treatment of young researchers needs to be formalized and made clear upfront. Expectations need to be managed, and clear contractual situations regarding infrastructure, administrative support, and integration have to be negotiated and signed before payments are made and projects start. The WWTF should be prepared to stay involved in the early phases of a new researcher's settling into his/her position in Vienna to assure that the expectations on both sides are met.
- VI. The WWTF should consider offering two different types of Science Chairs for young researchers as well as for leading scholars in their fields. Ways have to be found to overcome the legal issues regarding the Science Chairs. If this instrument is to be a long-term sustainable success, it has to be ensured that they are smoothly operating and provide a real perspective for young scientists. For each chair funded a clear upfront commitment by the Viennese universities is needed.
- VII. The WWTF has set up a purely international peer review process that is living up to highest international standards. It is a professionally safe and sound process.

- VIII. WWTF should resist the temptation and the pressure to broaden its activities too fast. The focus on a few well-defined topics is part of the success of WWTF. The panel wishes to encourage the WWTF to keep its clear focus on scientific excellence. The existing mid-term relevance should be kept, but should be understood by WWTF as a consequence of excellence, whereby relevance stems from the structural effects on the Viennese science landscape in its entirety and the selection of adequate topics and persons rather than just some form of knowledge transfer into application.
 - IX. Accordingly, the WWTF should continue to focus on indicators for excellence, not on short term measurable results. The impact assessment in 5 years from now should therefore not be based solely on input/output indicators, but rather on quality of people, career and group development, attraction of young talent, development of targeted areas. These criteria for impact assessment have to be defined and operationalized soon.
 - X. We strongly encourage the WWTF to continue to take on a leading role in facilitating change in the Viennese research system.

II. Terms of Reference and Approach

Background and General Information

The Vienna Science and Technology Fund (WWTF) was created in 2001 and started its operations a year later. Its main aim is to provide funds for high quality research in Vienna and to help strengthen Vienna as a City of science and innovation.

Currently WWTF can spend about 7 to 10 Million EUR annually. Though the money largely comes from a private foundation, WWTF works closely with and for the benefit of the City of Vienna. From the beginning of its funding in 2003, the money available has been devoted to basic and strategic research either as large grants to groups and individuals or as 5-year starting grants for professorships ("WWTF Science Chairs").

Excellence as one of the main criteria is complemented by a mid-term commercial or social perspective. Within three targeted areas WWTF has granted about 65 projects and 4 Science Chairs with a total of about 38 Million EUR between 2003 and 2007.

While the Board of Directors (having decision power) and the Kuratorium, an advisory and networking body, represent the local expertise, all review procedures and funding recommendations are in the hands of international peers and distinguished expert juries.

Terms of Reference

In October 2006 the WWTF Board of Directors took the decision to have the Fund, its procedures, and first outcomes reviewed by a high level expert group. A conceptual framework was prepared by the WWTF office and accepted by the Board in March 2007, followed by the acceptance of the Panel composition in May 2007. The Terms of Reference and a Background Paper were prepared in October 2007.

Against this background, the evaluation committee was asked to look into the success of instruments and funding mechanisms of WWTF, particularly with regard to the following key issues. The chapters of this report adhere to the structure suggested by these key issues.

- <u>WWTF Setup and Strategy</u>: Are the assumptions and framework conditions leading to the WWTF strategy in 2002 still valid? Are there any new (international) developments of potential relevance for the work of the Fund and if yes how to react to them?
- <u>Defining and Pursuing Topical Funding Areas</u>: Is the way of choosing and pursuing targeted funding areas ("Förderschwerpunkte") appropriate?
- <u>Funding Instruments</u>: Are the individual funding instruments and their mix suitable to achieve the goals of the Fund? Does WWTF do the right things for young researchers?
- <u>WWTF Science Chairs</u>: Is the WWTF approach to choose group leaders ("Stiftungsprofessoren", Vienna Science Chairs) well designed and internationally up-to-date?
- <u>Procedures and Project Selection</u>: Are the selection procedures internationally competitive? Is WWTF quick enough in delivering? Are the procedures adequate and effective?
- <u>First Results and Perspectives</u>: Does the work of WWTF show promising results? Are the Funds' activities useful in the Austrian Innovation System also vis a vis other funding organisations like FWF?
- Excellence versus Relevance?: Is it a realistic approach to ask both for scientific excellence and midterm relevance? What part to emphasize stronger in the future?
- <u>The Way Ahead Perspectives and Organizational Recommendations</u>: Which improvements and future activities can be recommended?

<u>Approach</u>

In order to offer well founded recommendations on the solid basis of comprehensive information, the panel asked the members of the WWTF Kuratorium as well as investigators of projects funded by WWTF to provide insights, thoughts, and recommendations regarding the instruments and funding mechanisms of WWTF. This was done via a questionnaire distributed electronically in November 2007.

The Panel met in Vienna from 15 to 17 January 2008 to discuss relevant issues with the members of the WWTF boards, project investigators and science chairs, stakeholders from the Vienna region, as well as with the WWTF management. The detailed program of this on-site visit is provided in the appendix. The panel wishes to thank the WWTF for the high level of professionalism in preparing and accompanying the review and for the splendid hospitality of its entire staff.

It should be underlined that this evaluation was not intended to quantify, measure, nor assess the scientific work of single institutions or individuals participating in the WWTF funding program. In addition, this exercise did not include an impact evaluation on project or program level as the first WWTF funded projects have ended only recently. In the light of the task as a mostly formative exercise, the main methods applied were of a qualitative nature. It was a peer-based learning activity to improve understanding, operational goals, and procedures on all levels of activities.

Therefore, the panel looked into the successful implementation of instruments and funding mechanisms of WWTF, its profile in relation to other funding instruments as well as into its organizational structures and administrative processes.

The membership of the review panel included renowned international experts in science policy and foundation management as well as eminent researchers:

- Prof. Angelika Amon, PhD, Cambridge, USA
- Prof. Fritz Bach, M.D., Boston, USA
- Prof. Dr. Jakob Edler, Manchester, UK
- Prof. Dr. Ole Fejerskov, Aarhus, Denmark
- Prof. Dorothy Guy-Ohlson, PhD, Stockholm, Sweden
- Dr. Wilhelm Krull, Hanover, Germany (Chairperson)
- Simon Sommer, Zurich, Switzerland (Secretary

III. WWTF Setup and Strategy

Key Question: Are the assumptions and framework conditions leading to the WWTF strategy in 2002 still valid? Are there any new (international) developments of potential relevance for the work of the Fund – and if yes how to react to them?

In the short time since its foundation, the WWTF has succeeded remarkably well in building up an independent and successful research funding organisation, in establishing competitive professional processes, and in already having a decisive impact on selected areas of the Viennese research landscape.

Not only in cities like Vienna, but also all around the industrialised world, there is a continuing and even increasing need for actors like the WWTF. An independent research funding organisation, committed to scientific excellence and the promotion of young talent is today even more urgent than when the WWTF was founded. The WWTF is a suitable institution to further strengthen Vienna's position in the competition of different metropolitan regions on the European level.

Through the mobility and return incentive programs for researchers, which are currently run in several European countries but also on the European Union level, the competitive search for talent between regions in Europe will become even fiercer in the future: the market to find "the best" is truly global and becoming increasingly more competitive for each passing day – not only each region or city but also each country is trying to attract elite researchers. The WWTF is a crucial instrument for Vienna to succeed in this competition, to bring new talent and competence to Vienna. Not only attracting, but also retaining talent will be the major tasks for the research system of Vienna, and the WWTF is a crucial instrument to meet both these challenges.

This positive general assessment of capacity, role, and perspective of the WWTF is based on the review of available documentation, the observations made during the visit to Vienna and on the reactions from all stakeholders involved. In a nutshell, as one of the principal investigators interviewed by the panel has put it, "the high level of funding combined with the low level of bureaucracy is unique." The WWTF has managed to build up a structure that allows for

- a) Decision-making and implementation largely independent from stakeholders and funders,
- b) Scientific excellence as the prime decision criterion,
- c) Decisions based exclusively on international peer review,
- d) Transparency and flexibility in the usage of the grant money.

WWTF takes high risk and has been – especially given the complex institutional context it is placed in – remarkably successful so far. Integrity and independence of WWTF are its major assets. The WWTF is a timely, best practice, medium-sized funding organisation and should – with some improvements we recommend – continue its path as an independent, highly focused funding organisation to further enhance its impact on selected areas of the Viennese research landscape.

IV. Defining and Pursuing Topical Funding Areas

Key Question: Is the way of choosing and pursuing targeted funding areas ("Förderschwerpunkte") appropriate?

The preparation and choice of topics for calls are crucial issues for the future development of the WWTF. It has to strike a difficult balance between building on existing strengths in Vienna and developing really new fields, but also between focusing on certain promising areas on the one hand and enlarging Vienna's science base on the other.

Generally speaking, an organization committed to scientific innovation such as the WWTF constantly needs to address new and emerging fields: in science funding more than in any other field, stagnation means regression. In the case of WWTF, however, there are issues with regard to the tension between continuity and reliability in building up capacity versus the constant need for thematic innovation for the Viennese landscape on the other hand.

In addition, due to its focus on a confined geographical area, the WWTF cannot use a purely scientific, grass-root approach on topic development; on the other hand, it cannot define the topics too narrowly, in particular in view of the number of available researchers in a given field in Vienna. In other words: a critical mass, both as regards potential applicants and as regards scientists in complementary areas of the emerging field of activity for WWTF, needs to exist upfront in Vienna.

If the WWTF were to establish totally new fields in Vienna, it would probably need to substantially change its funding instruments: Size of grants and timeframe in this case would need to be much larger in order to establish a critical mass, and a program would need to run for at least 8-10 years.

With regard to the choice of topics, even after two days of interviews in Vienna, it remained unclear how exactly new project areas for WWTF are developed and chosen. Apparently, this is a non-formalized process starting with a brainstorming in the Kuratorium, followed by the development of a background and decision paper prepared by the WWTF management based on a variety of background studies and interviews, and a decision by the Board of Directors.

Even though during the last years the WWTF has succeeded in establishing very promising and successful thematic funding initiatives, it is recommendable to slightly change the process of developing and defining new topical funding areas, in particular by bringing in international expertise: it should neither be the prime task of the WWTF Kuratorium nor of the WWTF management alone to identify, assess and develop new areas. In order to stay at the forefront of international scientific developments, the WWTF needs sound, up-to-date international science policy advice.

The implementation of an international scientific advisory board whose main task it is the identify new possible funding areas vis-à-vis international developments and opportunities in the Viennese research landscape is, therefore, strongly recommended. This body should be comprised of seven or eight eminent researchers and internationally highly reputed and experienced policy-makers. It should meet in Vienna every 2nd year. They should support the Kuratorium, Directorate and WWTF secretariat both in brainstorming new ideas for the City and in the final process of defining concrete topics, with the WWTF secretariat still being responsible for the necessary analytical and context specific background work and preparation of the decision-making process.

V. Funding Instruments

General Recommendations

Key Question: Are the individual funding instruments and their mix suitable to achieve the goals of the Fund? Does WWTF do the right things for young researchers?

The WWTF funding instruments focusing on projects and persons combine generous funding and flexible administration; these are two main prerequisites for successful research. The panel also wishes to underline that it supports the WWTF policy that grant money can be used flexibly within the project, and also be allocated to collaborators abroad. This flexibility allows for substantial and innovative transdisciplinary, including inter-sector and international collaboration.

Particularly with regard to the length of projects, however, even more flexibility should be possible. On average, the projects run 3 years; they can, in principle, run up to four years. However, as the average of PhD is close to four years, often even this is not sufficient. The WWTF thus could distinguish between grants for established researchers and young researchers coming in (e.g. a 3 + 2 years solution, where applicable with an interim evaluation after the first funding period) and allow for more flexibility to renegotiate prolongation. Currently an extension is possible only for an additional 1/6 of the initially planned project duration as defined in the grant; this should be handled more generously. Also an extension – based on a transparent process – to allow graduate and doctoral students to finish their theses within the funding period would be a good idea.

Monitoring needs to be improved: contractual agreements should provide a framework for real monitoring in terms of integration, general working conditions, administrative support, and scientific progress. Rules and targets need to be specified and agreed upon in advance to ensure that the project starts operating early.

The joint workshops with all projects funded within a call are really productive: they allow for an exchange of ideas, identifying new opportunities for collaboration, sharpening the focus of individual projects, and for networking in Vienna. The WWTF should make increased use of this instrument and strive at including those workshops in the roadmaps of the programmes funded.

The WWTF should keep its focus on the combination of excellence and flexibility in terms of choosing projects and spending money (over or under budget for the call). WWTF can be selective and should use this opportunity, if applicable, to fund outstanding projects at a higher budget and for longer periods of time to further increase its high reputation.

Recommendations with regard to young researchers

Key Question: Does WWTF do the right things for young researchers?

The focus of WWTF on innovative fields and on supporting young researchers creates multidimensional challenges for young researchers but also for WWTF itself. (The main challenges are to be tackled with regard to the Science Chairs and will be described in the next part of the report).

The WWTF plays a crucial role in facilitating the recruitment of excellent young people with high potential to Vienna. In order to ensure the sustainability, however, the grants for these young researchers need to be more long-term. Particularly for interdisciplinary projects a project length of 3 years is rather short. For young investigators, as appropriate in given projects, grants should be provided for at least 5 years, or longer (e.g. a 3 + 2 years solution).

WWTF should keep its interdisciplinary focus, and support career development: additional support for young researchers (project management, science communication, etc.) would be helpful. This is particularly important for researchers not attached to a university.

Most important, however, the interface between WWTF and the universities with regard to employment and treatment of young researchers needs to be formalized and made clear upfront. Expectations need to be managed, and clear contractual situations have to be negotiated and signed before payments are made and projects start. The host institution needs to lay out a plan as to how they will integrate the non-university associated researchers into the university community and provide clear guidelines as to how this person can achieve permanent employment at this particular university – evaluation criteria need to be agreed upon by the respective partners.

In general, more thoughts are also needed on how to integrate independent, innovative junior researchers, e.g. through structured graduate programs and graduate schools in the fields funded by WWTF. The master program in bioinformatics currently under development by the Science Chairs is a splendid example.

VI. WWTF Science Chairs

Key Question: Is the WWTF approach to choose group leaders ("Stiftungsprofessoren", Vienna Science Chairs) well designed and internationally up to date?

The panel wishes to draw the attention to the 2007 assessment of the WWTF Science Chairs by Jakob Edler and the recommendations he made. The review panel endorses his recommendations. Based on Professor Edler's report the guidelines are currently under review. Therefore, the panel has focused on systematic aspects of the funding instrument for WWTF Science Chairs and will concentrate on strategic issues and future perspectives.

The WWTF Science Chairs are the most convincing instrument of WWTF; from a scientific and systems point of view they are more effective for Vienna than project funding. The concept cuts across the traditional way of hiring professors in Austria. The WWTF is aware of the legal problems that the funding instrument creates: WWTF cannot itself hire professors; it cannot make the final decision on an appointment to a permanent position. Hence, there has to be a "Berufungsverfahren" towards the end of the five years funding period, and the decision on appointment has to be made by the Senate of the respective university.

Ways have to be found to overcome these legal issues. If the Science Chairs are to be a long-term sustainable success, it has to be ensured that they are smoothly operating and provide a real perspective for those young scientists who are awarded such a position. In our opinion, it is not only the WWTF that has to react, but also the universities have to commit themselves to a new, more proactive procedure. The new Vienna Science Chairs program should be an attractive offer to the best of the best in their fields and be organized around the following cornerstones:

The WWTF should consider offering two different types of Science Chairs

a. <u>Tenure-Track</u>: Young researchers coming in on a 5 year basis. These Young Vienna Science Chairs should more or less resemble the current model. Together with the University a young researcher applies for a five year grant. Only if the University commits itself to provide title and rights of a professorship for these five years (if no other way can be found, this might be done through consecutive §99 professorships from different institutions), will this institution be eligible for application. At the end of the fourth year, an international peer-based evaluation should lead to a decision on tenure.

b. "Five-Star" Chairs: this would be an opportunity for Viennese universities to attract established researchers, based on the examples of the VolkswagenStiftung or the Landesstiftung Baden-Württemberg and the Danish National Research Foundation which provide additional money for top appointments. In these models, the university will apply to WWTF together with a person identified in advance to become the new Science Chair. Only if the university provides a full professorship for this researcher in its strategic and financial planning and declares that it intends to appoint this researcher, is the University eligible for application. If the application is successful, the newly appointed professor will receive twice the amount of a normal professorship (e. g. VolkswagenStiftung), or at least the WWTF grant on top of the University salary. In other words: the person selected is hired with university funds plus one million EUR WWTF funds (e. g. Landesstiftung Baden-Württemberg). Another, albeit less attractive option would be a "conditional offer". In this model a university offers a professorship under the condition that the applicant succeeds in the WWTF competition.

In both categories, selection of the Science Chairs to receive WWTF funding is incumbent on the WWTF based on its peer review system.

For both categories, in order to meet the eligibility criteria, the universities need time to adjust their strategic and financial planning. Therefore, the WWTF needs to be clear in advance in which fields it wants to attract and support top people and give the universities sufficient time to adapt their development plans accordingly: a long term definition of areas for calls is necessary.

There obviously is a lack of commitment to this funding instrument in parts of the Viennese university scene. If the Science Chairs are to be successful, this commitment needs to be strengthened, and the WWTF should employ the power of a funding agency to enforce the development of this commitment. Any university that is not willing to

- State explicitly within the funding contract with WWTF the rights and duties of the future holder of the Science Chair.
- Define procedures and criteria for an international, independent evaluation leading to a decision on tenure,
- Provide a financial and strategic planning that allows for a permanent appointment after funding of WWTF has ceased,
- Grant title and rights of a professor to the WWTF Science Chair

should not be eligible for application. It is the universities themselves which need to know whom they want to hire as a professor. This commitment needs to be critically checked by the WWTF.

VII. Procedures and Project Selection

Key Question: Are the selection procedures internationally competitive? Is WWTF quick enough in delivering? Are the procedures adequate and effective?

The WWTF has set up a purely international peer review process that is living up to the highest international standards. It is a professionally sound process. The quality of the juries is superb, and can be compared to those of internationally renowned funding agencies such as NSF and NIH, for example.

The fact that to date in all cases the board in its decisions followed recommendations by the juries, is not only a sign of professionalism, it also creates trust in the scientific community and makes it easy to organize qualified reviews and to attract eminent researchers to the juries.

It should be noted that reviewers are not paid, and that written reviews are done electronically through a sophisticated electronic project review and grant handling system.

VIII. First Results and Perspectives

Key Question: Does the work of WWTF show promising results? Are the Funds' activities useful in the Austrian Innovation System also vis-à-vis other funding organisations like FWF?

As stated above, the WWTF has already had a decisive impact on the Viennese research landscape. This impact does not need to become manifest in tangible project results after a few years of operation. More important is the systemic function of the WWTF as a catalyst for innovation in terms of fostering institutional strategies, supporting individual careers, and in building up of cutting edge research in selected areas in Vienna.

In this respect, the role of the Kuratorium as a networking and translating body is very important: the Viennese industry supports the excellence-based approach for WWTF in developing a knowledge-based economy in Vienna. Several stakeholders underlined that basic research funded by WWTF is needed to further develop the local economy. The change of paradigms and the creation of this perception is really an achievement: WWTF has been a catalyst and contributed to a change of spirit in Vienna as relates the importance of excellent, focused research in the city and attraction of leading edge scientists. There is by now an increased understanding of how excellent science contributes to the competiveness and attractiveness of the city, of its universities as well as of its firms.

With regard to the Science Chairs, the WWTF has succeeded in attracting four outstanding researchers to Vienna. Several project investigators have won further grants.

Probably even more important is the role of WWTF as a small size "laboratory" testing new funding topics and instruments to be embarked upon later on a national level by FWF and other funders.

Out of the present priority areas, the "Mathematics and..." calls had the strongest impact and appear to be to be most promising. The "Life Sciences" and "Creative Industries" calls seem to have been rather broad in their topical definition. To take account for the need of critical mass and competition in Vienna on the one hand and to make a difference, to create visible foci on the other hand, the WWTF should consider continuing these priority areas in a more focused way.

With regard to the planned call in information technologies the majority of the panel is somewhat sceptical: Vienna will probably not have in the immediate, or medium-term, future the capacity to become a leading international centre of excellence in this area. If WWTF wants to go ahead in this area, this needs to be a targeted, niche call building on the experience from the mathematics call. The panel acknowledges, though, that a balance has to be found between scientific niches and new combinations on the one hand and enough critical mass in Vienna (scientists and absorbing institutions) on the other hand.

WWTF should resist the temptation and the pressure to broaden its activities too quickly. The focus on a few topics is part of the success of WWTF.

IX. Excellence versus Relevance?

Key Question: Is it a realistic approach to ask for both scientific excellence and mid-term relevance? What part to emphasize stronger in the future?

The WWTF has found a good balance between thematic focus and flexibility with regard to the variety of types of thematic calls and their "relevance": they contain mission-oriented, excellence-oriented, and cross-border/transdisciplinary elements.

The WWTF is encouraged to keep its clear focus on scientific excellence. Relevance should be kept, but understood by WWTF as a consequence of excellence in selected, relevant scientific areas. WWTF should continue to focus on indicators for excellence, not on short term measurable results.

The impact assessment in 5 years from now should therefore not be based solely on input/output indicators, but rather on quality of people, career development, attraction of young talent, development of targeted areas. These criteria for impact assessment have to be defined and to be made operational as soon as possible.

The representatives of industry and politics showed a strong belief in basic research promoting industry and trade. WWTF's strategic choice of funding areas based on science policy relevance and scientific criteria has also been acknowledged by the Viennese industry and politics – this is far from being understood in other organisations! Industry in Vienna has a clear interest in WWTF's work and sees a long-term opportunity only if it is supported by basic research. As an example it was emphasized how the IMP brought genetic engineering and associated industries to Vienna and how the life sciences call played a decisive role in building up Vienna's capacity as a hub for biotechnology.

With regard to technology transfer, the establishment of platforms for joint problem solving is needed instead of just transferring knowledge. The WWTF alone cannot bridge this gap, but it has rightly included a medium-term application horizon in its funding policy. Research tailored to industry's interest is covered by other agencies (FFG, ZIT); this should not be done by WWTF, albeit a more visible coordination between the Viennese funding organisations could benefit all institutions and stakeholders alike.

X. The Way Ahead – Strategic Perspectives and Organizational Recommendations

Key Question: Which improvements and future activities can be recommended?

The recommendations of this review panel are intended to further improve the already most impressive efficiency and effectiveness of the WWTF in enhancing its impact on the Viennese research landscape.

With regard to internal processes, the panel recommends separating controlling and programme management. This is a question of good governance, and the necessary growth in staff size through the new programme in the humanities funded by the city of Vienna will make this possible without creating additional overhead.

At present, given the lack of economies of scale due to its limited size, the overhead management structures of the WWTF are lean, representing 7 % of the total budget, If, however, the WWTF were to even more actively manage an even larger number of programmes in the future, increased management capacity and size will become inevitable, thus necessitating a considerable rise in management costs.

As far as the governing bodies of WWTF are concerned we suggest a new concept and a redistribution of responsibilities. We consider the Board of Directors as a senior Board of Governors. In our opinion the function of the Kuratorium is not that of a Scientific Advisory Board. We see it as a board of stakeholders that discusses research needs and creates an atmosphere of trust among the institutions, industry and political parties in Vienna and which also pays attention to translational issues. This is by no means a subaltern task, on the contrary: the Kuratorium has a strong function in embedding WWTF in the Vienna landscape and in giving all stakeholders a voice.

The WWTF is currently broadening its spectrum of activities. Within the panel there were mixed feelings regarding this development to move into information technologies and translational medical research: The WWTF should not leave an area and go into new fields until critical mass has been built up. As mentioned above, instead of moving too fast into new areas, one could think of building on the success of the first funding waves, e.g. through support of additional activities.

Some caution is also needed with regard to the planned call in the humanities on behalf of the City of Vienna: the WWTF needs to be aware of the fact that acting as an agency for other funders with public money will be dangerous to its profile and reputation as an independent research funding organisation. Therefore, the procedures need to be defined very carefully and similar to WWTF rules. On the other hand, it is certainly a proof of success, that the city of Vienna entrusts public money to a private foundation.

The greatest challenge for WWTF in the years to come, however, is an improved and increased interaction between universities and WWTF when it comes to concrete project funding which has to be more formalized in order to ensure a smooth start and success of projects and persons. In the future, institutional environment, commitment, and support has to be part of the application and part of the review process for any WWTF project. With good reasons during its first years of operation, WWTF seemed to be hesitant to interfere at an early stage, but this needs to be done in the future through the guidelines, review procedures, and contractual agreements.

Expectations need to be defined upfront and proactive confrontation might be necessary from time to time – the WWTF management will certainly have to play a more active role in conflict prevention.

Only through a more active role in communicating and interacting with universities from a strong funder's position will the WWTF be able to improve the integration of young researchers into the Viennese system. WWTF needs to prepare the scene to make sure that the researchers are anchored in the system and offer an early-establishment mentoring and/or monitoring start-up support to facilitate the integration of the newly appointed researchers into their host institution in Vienna.

Institutional commitment is also the only way to ensure the sustainment of research groups and their topics. This does not only apply to universities. We see a task for the WWTF to work closer with ZIT and FFG towards possibilities for future follow up-funding opportunities if needed, so that WWTF's initiatives could, in principle and if quality criteria are met, be "handed over" to these more application oriented organisations.

The WWTF might have an even more important role to play in this field than it currently has. We would strongly encourage WWTF to continue to take on a leading role in facilitating change in the Viennese research system.

 $Wiener\,Wissenschafts\hbox{--}, For schung \hbox{s--} und\,Technologie fonds$

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