

PLATFORM RESEARCH & TECHNOLOGY POLICY EVALUATION

The Platform Research & Technology Policy Evaluation is a working group of the following institutions: Austrian Federal Ministry for Science and Research (bm.w_f), Federal Ministry of Transport, Innovation and Technology (bmvit), Federal Ministry of Economics and Labour (bmwa), Austrian Research Promotion Agency (FFG), Austrian Science Fund (FWF), Joanneum Research, Austrian Institute for SME Research, Austrian Research Centers (ARC), Austrian Agency for Quality Assurance (AQA), Technopolis Austria GmbH, Austrian Institute of Economic Research (WIFO), Vienna Science and Technology Fund (WWTF), Centre for Innovation and Technology (ZIT), Austrian Council for Research and Technology Development, Christian Doppler Research Association (CDG) and the Austria Wirtschaftsservice Gesellschaft mbH (aws).

Within the framework of the Platform issues concerning Research and Technology Policy Evaluation are acquired and are discussed within a circle of experts. This book was published on the initiative of the Austrian Council for Research and Technology Development.

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Evaluation of Austrian Research and Technology Policies

Evaluation of Austrian Research and Technology Policies A Summary of Austrian Evaluation Studies from 2003 to 2007

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Austrian Council for Research and Technology Development (Eds.)

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Evaluation of Austrian Research
and Technology Policies

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A Summary of Austrian Evaluation Studies
from 2003 to 2007

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Klaus Zinöcker, Wolfgang Neurath

Introduction

Over the past decade, the number of public interventions in R&D has risen considerably; the growth has not just been in a numerical sense – about 60 different programmes were launched during the last years – but also in terms of differentiation. These interventions address structural flaccidities as well as market and system failures, basic instruments were strengthened and funding gaps closed.

Facing this rise of complexity, policy makers and stakeholders are calling for more evidence, for more accountability and for more impact measurement – a necessary and desirable call for a better, evidence based policy. Evaluation is the key instrument for providing such information, independent assessments and recommendations on how to improve.

This book gives an overview about evaluations compiled in the field of research and technology policy in Austria over the past few years. The editors' motivation was to contribute to the evaluation culture in our country by making recent evaluation reports accessible and transparent.

We believe that the rise of evaluation culture can be measured by the number of (accessible) evaluation reports. Evaluation is an essential element of the policy cycle in RTD, but evaluation reports are not regularly published and too often relegated to “grey literature”.

What exactly is “grey literature”? This expression refers to papers, reports, brochures, memoranda or other documents produced that are not distributed or indexed by commercial publishers. Many of these documents are difficult to obtain. The great risk of publishing e.g. research or evaluation findings as grey literature is lacking visibility, the danger of failing into oblivion or being forgotten in a deep drawer.

Most of Austrian evaluation reports are part of this grey literature field, with all the risks cited above. The Austrian Platform for Research and Technology Policy Evaluation (Platform fteval, www.fteval.at), supported by Austrian federal agencies and the Austrian Council for Research and Technology Development (www.rat-fte.at) has undertaken steps to fight this “grey fate”: four times a year a Platform Newsletter is published to discuss recent evaluations in the field of Austrian R&D policy, always in an international context; on the Platform webpage, all evaluation reports are published; and we discuss evaluation reports in a public setting.

Why is publicity and awareness of evaluation results so important? Evaluation is a social process, an interaction between those who evaluate and those who are being evaluated. In this process third parties must be involved or must have at least the chance to become involved, i.e., the responsible policy maker as well the anonymous taxpayer. Evaluation findings are not binding; no agency, no ministry is obliged to implement and use evaluation recommendations on a one-to-one basis. Anyway, there is one binding thing when using evaluation: One should discuss and scrutinize the findings and then use or – following ample reflection - overrule them. There should be a debate on evaluation results; publicity and awareness are a guarantor for using evaluation properly.

This book, which was initiated by the Austrian Council, is a further step in drawing the curtain for Austrian evaluation reports and evaluators. We tried to systematically collect all evaluation efforts which have been undertaken in recent years, present executive summaries and make them to a certain extend comparable in terms of goals, methodologies and stakeholders. Moreover, we want to enrich these summaries with some flanking elements: an overview on status quo in Austria and the history of the Platform fteval (see Zinöcker’s and Stampfer’s articles), which is enriched by a view from abroad (Edler). Moreover, it would be a futile endeavor to discuss evaluation in Austria without taking a look at what is happening at the European level (Vanslebrouck, Delanghe and Reeve).

Lasting recent years, we have intensely discussed also methodological and institutional aspects of evaluation. Platform fteval’s international conferences in 2003 and 2006, both with an international audience (see www.fteval.at/03conference03 and www.fteval.at/conference06), brought interesting new experiences to Vienna. We will seek to continue this discussion in this book and have invited Jürgen Güdler to bring in German

aspects of how to organize evaluation in other countries. Katzmaier and Neurath will continue our methodological exchanges with an article on social network analyses.

What are the framework conditions of evaluation in Austria? This book contains a reprint of two important documents in this context: On the one hand, the “Standards of Evaluation in Research and Technology Policy”, (<http://www.fteval.at/standards>) edited by the Platform and its members. Applying these standards, the Platform tried to give some sort of ‘canon’ of how to do evaluations properly. On the other hand, the Austrian Council for Research and Technology Development (www.rat-fte.at) issued a recommendation on how to use evaluation in 2006.

A developed culture of evaluation is an integral part of a strategically oriented research and technology policy that continues to learn. A good evaluation culture is both a pre-requisite for and a consequence of good policy. An important element for developing such an “evaluation culture” is transparency and public debate. This book can be seen as a contribution to this culture.

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Evaluation of Research and Technology Policy in Austria

Preface

Research, technology development and innovation (RTI) have become increasingly important in recent years. This is an extremely pleasing development as it can be assumed that investments in research and development will have positive impacts on the economy and on employment. The main object of Austrian research, technology and innovation policy must therefore be to increase RTI activities in order to boost the competitive strength of the Austrian economy and make a major contribution to solving social and environmental problems. Furthermore, long-term jobs and a demand for highly qualified workers will be created, safeguarding the contribution of research, technological development and innovation to growth and prosperity.

In order to be successful in the long term, research and technology policy requires regular feedback on the results of the measures it has implemented. Political advisors must also be able to rely on a solid and robust policy monitoring system if they are to develop serious strategies and recommendations. In this context, evaluation represents an important instrument for the systematic assessment and evaluation of initiatives, programmes and institutions. It provides valuable knowledge regarding the strengths and weaknesses of the subject of the evaluation which will subsequently lead to specific measures, thus supporting decision-making processes at all levels and contributing to the assurance and promotion of quality in all areas of RTI.

The fundamental questions during the evaluation process are: Are we doing the right thing? Are we doing it properly? What will be the effect of what we are doing? Evaluation should first and foremost contribute to correcting and improving aspects of the subject which is being evaluated and then learning the right lessons of it. The publication of evaluation results also contributes to assuring and fostering quality in the RTI sector.

Evaluation is a key tenet of the Austrian Council's mission and the Council attaches great importance to advancing evaluation and establishing a culture of evaluation. Despite the significant qualitative improvements which I believe have been made to evaluation in RTI policy, there are still a number of gaps. The Council for Research and Technology Development has therefore recommended regular systemic evaluations. The Council also has a duty to make more pressing demands in this respect and will - in co-operation with other stakeholders - take further steps in order to map a broad and comprehensive picture of the current RTI system.

The Austrian Council's most important partner in this context is the Platform Research and Technology Policy Evaluation, which it joined in 2005. Since it was founded in 1996 as an informal partnership, the objective of the Platform FTEval has been to present methods and approaches to evaluation, to discuss current evaluation practices in an international comparison and thus contribute to the development of a culture of evaluation in Austria. The mission of the Platform Research and Technology Policy Evaluation is to achieve increased, improved and more transparent evaluations in order to assist optimal strategic planning of R&D policy in Austria, and to develop a culture of evaluation together with decision-makers in the field of Austrian technology and research policy.

Within the framework of FTEval, evaluation in the RTI sector has been further developed and expanded both in terms of quality and quantity. In this respect, Austria is fortunate in that compared to other countries it has a high level of evaluation and competence in research and technology policy.

The Austrian Council supports the Platform FTEval in its work and in the achievement of its goals. In 2005 the Council published a recommendation concerning evaluation and monitoring which was repeated and reaffirmed in "Strategy 2010" (the recommendation is part of this book). Numerous aspects of the recommendation are already being implemented:

1. The evaluation standards developed by the Platform FTEval were recommended by the Austrian Council and already form the basis for numerous evaluations.
2. The first of the annual "evaluation days" to be organised jointly by the Austrian Council and the Platform FTEval was held in December

2006 with “Selecting Excellence” as the topic. The event met with great interest.

3. With regard to the publication of evaluation studies, a special section on the website of Platform FTEval supplement this publication. Complete versions of the evaluations (most of which concern programmes) are available for downloading.

This publication is the main joint project of the Platform FTEval and the Austrian Council. It provides a unique and comprehensive documentation (even in an international comparison) of almost all evaluations of programmes and institutions which have been carried out in recent years in Austria in the field of RTI. The evaluations published here are presented in an overview, together with information on the commissioning party, authors, a synopsis of content and year of publication. The book therefore represents an important step both in terms of the dissemination of evaluation results and also increasing awareness of the issue.

In particular, I would like to thank the Platform FTEval and the secretariat of the Austrian council for their role in the realisation of this book. I would also like to thank Wolfgang Neurath who provided the idea for the publication and who was responsible for this issue at the Austrian Council until 2006. I also owe thanks to Julia Schmidmayer and Daniela Salhofer for their consistent practical assistance (including research work and occasionally the painstaking collection of those evaluations published in recent years) as well as to the authors of the articles. Finally, let me draw your attention to the Vienna Science and Technology Fund WWTF, who hosts the Platform FTEval’s office and put considerable efforts to make this Austrian R&D evaluation society an success.

I wish the Platform FTEval and the Austrian Council continued success in their joint efforts to further develop evaluation both in terms of quality and quantity and to establish a professional culture of evaluation in Austria in the long term.

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‘Evaluating Austria’s R&D Policies. Some Personal Comments

As a dedicated member of Austria’s ‘evaluation scene’, it is both difficult and challenging to carry out a fair appraisal of the role of evaluation in this country’s innovation system. Nevertheless, I attempt to do this in this article, which contains a well-balanced survey of this role and an assessment of the current state of evaluation in Austria.

To begin with, here is a quick refresher on the concept and the classification of this field. The field of “Research and Technology” is distinguished by its diversity, extending into other areas of policy, such as economic and science policy, education policy, regional or environmental policy. It comprises heterogeneous target groups, such as academic researchers, universities, as well as non-university research organisations and companies. Furthermore, this field has at its disposal diverse intervention models, including ‘stand-alone projects’, ‘network programmes’, and even ‘tax incentives’. In fact, there are different approaches (and plenty of literature) when it comes to defining research, technology, science or innovation policy. Although it will not be considered in further detail, only that much: This appraisal comprises interventions from the above mentioned fields; to keep matters simple (and readable) the expression ‘RTI-policy’ (research, technology and innovation policy) will be used throughout this article.

¹ The author is grateful to Leonhard Jörg, Michael Stampfer, Michael Dinges, Brigitte Tempelmaier, Alfred Radauer, Wolfgang Neurath, Michaela Topolnik, Sonja Sheikh and Rupert Pichler for their valuable (and critical) comments during the preparation of this article; to Daniela Salhofer and Julia Schmidmayer for their help and their technical assistance.

Research and Technology: A “demure” field?

Within the last few years, not only has ‘Research and Technology’ become more important in Austria, but also Europe-wide. Certainly both the Lisbon-strategy and the Barcelona targets have played a role in elevating the status of research and technology on the political agenda. An – anecdotal – observation from Austria supports this: Four or five years ago few journalists were reporting on RTI policy and, therefore, public interest in this topic was negligible. However, the situation has since changed; this is particularly evident in columns and enclosures in daily newspapers (Die Presse, Der Standard), and some magazines – ‘at.venture’, or ‘economyaustria’². While European policy may have sparked this growing interest in RTI policy, Austrian politicians’ own motivation to (thankfully) adopt this subject, and their willingness to spend (public) money on it, can thus be attributed to the belief that investments in research and technology have a positive effect on economy and employment and that this, in turn, contributes to prosperity and a high “Quality of Life” in Austria. Another, albeit less convincing explanation may also be relevant here: As opposed to other economic policy instruments (direct subsidies, capital investment subsidy, etc.), RTI policy has become the center of political interest because it currently allows a wider scope (this is also the case with the competition law throughout the EU).

At the same time, RTI policy decision makers are realizing the necessity of increasing Public Understanding of Science and Technology (PUST) and, subsequently, are attempting to better communicate their activities to the public with the help of awareness raising measures. A useful example of this (also useful because it received a positive response) in Austria was the so-called Lange Nacht der Forschung 2005 (‘Long night of research’), where 150 stations and 48,000 people took part (Steiner et al 2007).

Austria’s resume can be summarized in this way: The field of policy research and technology has gained tremendous importance within the last years and public interest in this topic is high. With this in mind, then, there is no reason to believe that research and technology is a demure and impenetrable field.

² Admittedly, some of these media and publications are subsidized and financed by public authorities.

Naturally, with the increase in interest and in public expenditure, there is also a greater need for legitimation, information, learning and control – and this is where evaluation comes into play.

Characteristics of this field: Problems and challenges

Whether we are living in times of deficit spending or in times where budget policy is dominated by an effort of a balanced budget, RTI policy competes with all other areas of policy; including health policy, labour market policy or education policy. From this standpoint, RTI policy actors in Austria have been very successful. The figures support this: In 2006 the total expenditures for R&D (of business enterprise and public sector) accounted for 6.2 billion Euros³. Compared to 2005, this is an increase of 7.9%. The R&D rate, which is the rate of expenditures for research and development set against the gross domestic product (GDP), increased from 2.35 % (2005) to 2.43 % (2006) (bm:bwk/ bmvit/ bmwa 2006). At the same time this suggests a greater need to measure the success of public funded interventions in RTI policy. Moving in this direction, some methodological challenges have proven to be restrictive:

- Availability and comparability of data: RTI evaluators are confronted with complex analysis units which are difficult to conceive and whose development and dynamics are hard to represent.
- Attributional problems: How are specific effects attributed to a particular intervention or a political action? Take the example of a newly launched business: Is this due to a start-up funding from the local authorities, to the new legal general conditions which facilitate such launches, or is it a result of new ways of thinking encouraged in the federal government's mentoring program?
- Additionality and windfall gains('Mitnahmeeffekte'): Illustration of the counterfactual presents an integral challenge in the RTI policy's evaluation and its impact analysis. It is, thus, very important, though difficult, to distinguish between effects which are the result of public intervention and those which would have developed without

³ Die Ausgaben des Bundes und der Länder betragen 2006 2.252 Mrd. Euro.

intervention. Understandably, the assessment process can become complicated.

- **Timing:** Research and development need time. The RTI policy’s intended effects as (exemplary) “business launches”, “more economic growth”, or “securing the economic future of the country”, often need many years to be realized. The time frame for all this is, by all means, longer than any given legislative period. Nonetheless, many actors will already expect positive results after two or three years (Fahrenkrog et al. 2002, Feller/Ruegg 2003).

Table 1: The “Delivery Gap”

What policymakers want	What evaluators say
<ul style="list-style-type: none"> • Information in time for spending decision 	<ul style="list-style-type: none"> • Research may take years to have effects
<ul style="list-style-type: none"> • Clear attribution of effects to investment 	<ul style="list-style-type: none"> • Linear model is a rare case and additionality is complex to assess
<ul style="list-style-type: none"> • Independent evidence of research excellence 	<ul style="list-style-type: none"> • Peers defend their subject field & international colleagues
<ul style="list-style-type: none"> • Key indicators to monitor & benchmark 	<ul style="list-style-type: none"> • Crude regime distorts performance & can be manipulated

Boden, M. and Stern, E. [2002]: User Perspectives. In „RTD Evaluation Tool Box“

Due to these methodological challenges, evaluators, on the one hand, and political decision makers and agencies, on the other, are in contradictory positions, which are referred to as “delivery gap“ and “customer gap“ by Boden and Stern (2002): While political decision makers tend to interpret information according to a few significant indicators, evaluators point out that a clear interpretation of an effect is not that easy and that statements pertaining to the effects can only reliably be made after many years. In order to make clear statements, evaluators claim they need a definite target system and

sufficient resource tools for their evaluation. For political decision makers, however, it is necessary to have information available quickly.

Table 2: The “Customer Gap”

What evaluators want	What policymakers say
<ul style="list-style-type: none"> Clearly defined & hierarchical objectives 	<ul style="list-style-type: none"> Programmes are a compromise involving multiple & conflicting objectives
<ul style="list-style-type: none"> Guaranteed independence 	<ul style="list-style-type: none"> Recommendations must be within realistic policy constraints
<ul style="list-style-type: none"> Time & resources to do the job 	<ul style="list-style-type: none"> We need the results in three months
<ul style="list-style-type: none"> Full access to information and stakeholders 	<ul style="list-style-type: none"> Everyone is overworked and busy

Boden, M. and Stern, E. [2002]: User Perspectives. In „RTD Evaluation Tool Box“

The area of conflict (‘Delivery Gap’, ‘Customer Gap’) could also be expanded to include ‘Management Gap’. After all, in addition to political decision makers, evaluators also face those on the agency and management level, who have their own distinct interests and needs. Moreover, the interest of a manager in monitoring data from his program can differ considerably from the evaluators’ interests.

Table 3: The Management Gap

What Managers say	What Evaluators answer
<ul style="list-style-type: none"> • I had tons of work and a lot of customer relationships • Look at this nice development • We collected lots of facts about our projects 	<ul style="list-style-type: none"> • Fine! Where is the documentation? • What are the social returns? • Not a single number is a useful additionality measure!

Resource: based on Zinöcker, K.(2003): Die Implementierung von Evaluierungssystemen in FTE Programmen, p. 6

Austrian RTI policy actors are also exposed to these areas of conflict. We are often confronted with inflated (and therefore unrealistic) expectations, and this can lead to evaluations that are carried out and planned at the wrong time. As a result, evaluators are often forced to work with insufficient data and indicators. In addition to this, (some) programs are unrealistically planned or may lack the necessary logical arguments for intervention.

Having said that, the last few years have seen considerable change in the way groups are able to interact towards the common aim of better and more realistic policy.

The situation in Austria

Within the last years the evaluations of (interventions in) RTI policy in Austria have shown strong development: regarding methods – by introducing methods like Logic Charts (Zinöcker et al.2005b), Logit Probit Analysis (Streicher et al. 2004), Matched Pairs (Pointner/Polt 2005) and Focus Groups for the first time; regarding quantity – because more and more programs and institutions were evaluated, and finally, regarding quality – because (some) decision makers in the agencies and ministries have seriously taken heed of evaluation results, leading them to either accept some recommendations or (justifiably) eliminate problematic programs. Some examples:

- Political actors’ dealings with the results of the Austrian Science Fund (FWF) and Industry Promotion Fund (FFF) evaluation 2004:

Arnold's suggestions, concerning the governance structure, directly influenced its reorganization.⁴

- The Austrian Research Promotion Agency (FFG) and Austrian Science Fund also reacted with their respective institution evaluation results of 2004 (compare Binder and Novak in platform fteval Newsletter 25).
- Ministries' and agencies' interest in evaluation – as of 2004 more than 140 people (classical “users” of evaluations) have participated in workshops offered by the Platform Research and Technology Policy Evaluation (a documentation on this is available in Zinöcker 2004c).
- Two important international conferences on evaluation in the area of research and technology policy were held in the years 2003 and 2006 – an opportunity for Austrian actors to inform themselves on the discussions' international status. This has been broadly used.⁵

Between 2003 and 2007 more than 50 evaluations within the area of RTI policy were carried out. This is quite a lot for country as small as Austria, and it is, furthermore, a significant increase when compared with earlier periods. The reasons for this are manifold; moreover, the program orientation of the Austrian RTI policy – in other words, the policy maker's turning down of an erratic, project oriented allocation policy – which began only at the end of the 1990s when the number of programs also increased drastically, must be taken into consideration. Likewise, so many programs were created only in the last few years, and these could not be evaluated until then. Furthermore, the public awareness of the necessity of evaluation has risen within this same period. This indicates the establishment of evaluation societies (far beyond RTI and containing more policy fields) in Germany and Switzerland, DeGEval and

⁴ It has to be mentioned at this place that political actors did not follow the court of auditor's suggestions which were published at the same time, but rather the evaluation results.(Arnold 2004, Rechnungshof 2004)

⁵ Evaluation of Government Funded Activities in R&D, May 2003. New Frontiers in Evaluation, April 2006. Documentations of these conferences are available online www.fteval.at/03conference03 and www.fteval.at/conference06.

SEVAL, in the years 1996 and 1997.⁶ Against this background, a structured approach will be taken in order to determine the status of evaluation within Austria's RTI policy. First, the legal conditions for evaluations are outlined, followed by a compilation of the most important evaluators in the RTI area. Finally, differentiation between content (project, program, institution, and politics) and time (ex ante, interim, ex post) will be made, in order to give a balanced account of the situation.

Legal conditions of evaluations

For a long time there were no legal conditions for evaluations in Austrian RTI policy. Today the universities act 2002 alleges that universities have to set up an own quality management system within which the complete university services have to be evaluated (§ 14 Universitätsgesetz 2002)⁷. A further step was made with the directives for the advancement of economic-technological research and technology development, the so-called FTE directives⁸. These directives determine that “a written evaluation concept has to be provided, containing the goal, the aims, and the procedures, as well as the dates for controlling the achievement of the advancement aim for all advancement programs that are based on the FTE directives. In accordance to the acquisition of necessary information, a monitoring has to be created.” (unit 2.2., page 4). Apart from the directives, evaluation is already explicitly demanded by law (Forschungs- und Technologieförderungsgesetz, Abschnitt II, § 12).

⁶ It should be appreciated that in Austria no further evaluation societies were established, but that there is rather a brisk exchange with the evaluation society, DeGEval. This exchange can be seen due to personal contacts of responsible people and people who are now at the board of DeGEval.

⁷ Interestingly enough there was a detailed evaluation decree based on the University act 1993 (Bundesministerium für Wissenschaft und Verkehr 1997), which was more extensive than § 14 UG 2002. Today many details are arranged in the university bylaws.

⁸ Richtlinien zur Förderung der wirtschaftlich-technischen Forschung und Technologieentwicklung (FTE-Richtlinien) gemäß § 11 Z 1 bis 5 des Forschungs- und Technologieförderungsgesetzes (FTFG) des Bundesministers für Verkehr, Innovation und Technologie vom 27. 9. 2006 (GZ 609.986/0013-III/I2/2006) und des Bundesministers für Wirtschaft und Arbeit vom 28. 9. 2006 (GZ 97.005/0012-C1/9/2006)

The current Austrian government program (Federal Chancellery 2007) places more weight on RTI policy. The following arrangements will be taken care of during the period, 2007–2010:

- Portfolio analysis of a great number of RTI instruments in Austria: Where is it possible to bundle and to prioritize? (page 56f)
- Evaluation of Universities according to European criteria with the aim of increasing quality. (page 101)
- Evaluation of the Austrian Academy of Sciences (page 102)

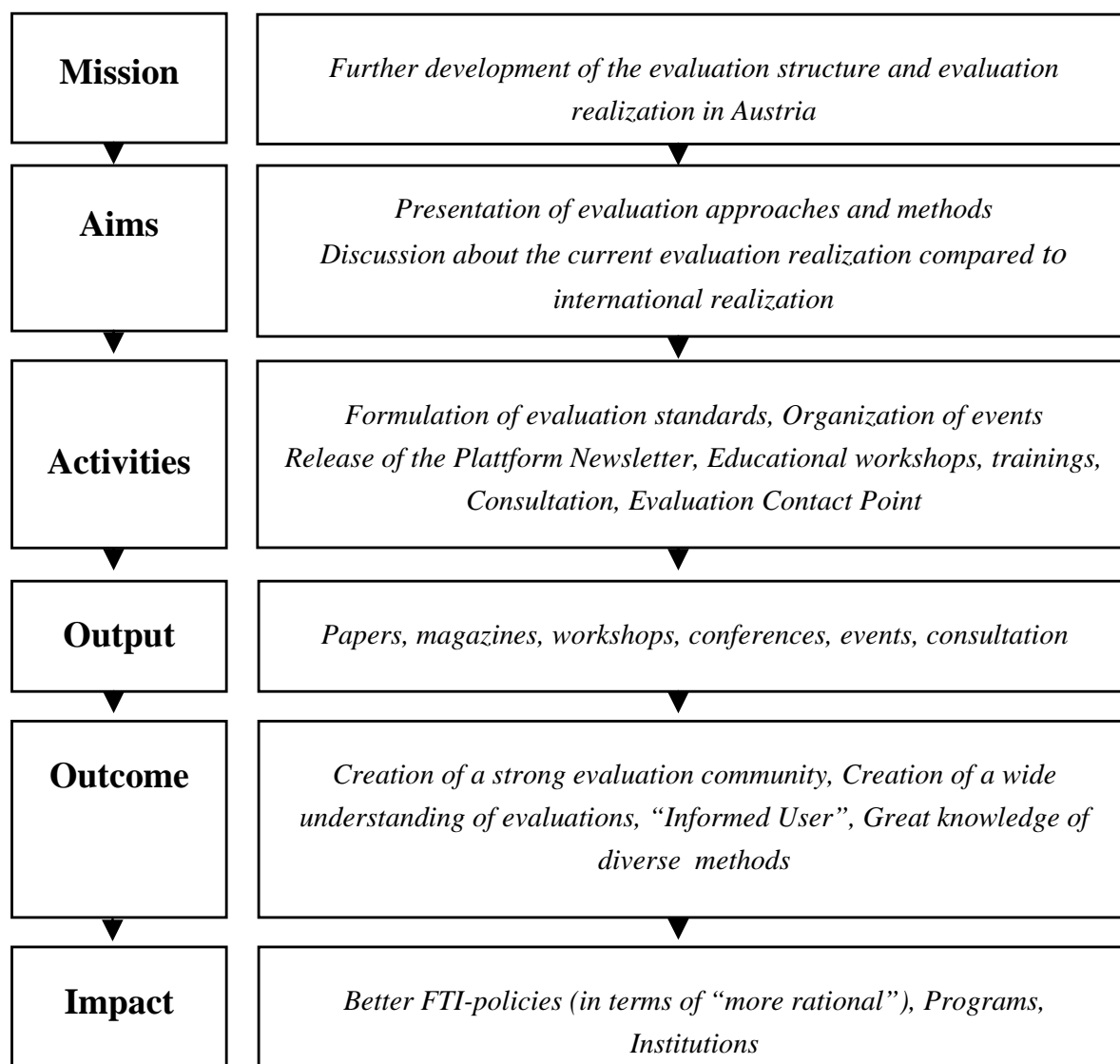
Furthermore, there are two documents that to some extent influence evaluation. On one hand, the Austrian Council for Research and Technology Development⁹ has urged the Austrian Federal Government to make deliberately use of the instrument of evaluation and to actively implement it in policy (recommendation of the Austrian Council of April 12th 2005). On the other hand the members of the Platform Research and Technology Policy Evaluation have also established their own framework for evaluation, which is based overwhelmingly on the evaluation standards of DeGEval Evaluation Standards in Research & Technology Policy. These standards serve the evaluators and the authorizing institutions, as well as those being evaluated, providing both a framework and behavioural presettings. This, in turn, fosters a higher degree of obligation and security towards all participants. Likewise, planning and learning steps, as well as qualitative developments can be carried out in a better and more organized manner. A further central function is the simplification of procedures for planning and execution, where different levels of use are conceivable. These include: support with the phrasing of Terms of Reference (TOR), support with the drafting of evaluation systems, support with the design layout of a specific evaluation. (Plattform fteval 2003)

⁹ The Austrian Council for Research and Technology development has a special position in so far as it not only consults the Federal Government, but it also has an active role in the allocation of budgets. Therefore some of its suggestions are binding.

The actors of the evaluation scene

Special to the Austrian evaluation scene is the Platform Research and Technology Policy Evaluation (Plattform fteval, www.fteval.at). At its formation in 1996 it was a loose cooperation. Today, however, it is an association with the aim of enhancing an “evaluation culture” in Austria’s RTI policy (compare fig.1). With the help of mutual discussion of (international) best practice examples, the distribution of evaluation results, as well as education and exchange, a contribution to better RTI policies (in terms of more rational, evidence based) is made. (On the history of the platform, see Stampfer 2007).

Fig. 1: Logic Chart of the platform



In the book at hand, Jakob Edler describes the platform as follows: “The Platform fteval is a highly institutionalised network of analysts, policy-makers and programme managers in the field of R&D policy”. Edler regards the platform as an important learning medium for all participating actors. He doesn’t, however, see a clear connection (yet) between the platform and the systematic creation of RTI policies.

In terms of evaluation providers, the scene is shaped by non academic research institutions: the Austrian Institute for SME Research, Joanneum Research, and (to a certain extent) the Austrian Institute of Economic Research (WIFO) and Austrian Research Centers. The most important private provider of evaluations is the international consultancy company, Technopolis, which has an office in Austria. Apart from this, there are a number of private, resp. non-academic institutions, offering evaluations (e.g. convelop, ZSI). The role of universities is, however, marginal at best, since they have not succeeded in establishing evaluation-specific ‘know-how’ and method-based knowledge over the past few years (although some exceptions are given later). If method-based impulses come into being, they are generally the result of contact abroad, training sessions, or the like. Rarely are they the product of universities themselves. (Here the evaluation role of scientists in Peer Reviews is factored out).

In the last few years the political situation in Austria has demanded that the different RTI programs be distributed among three different ministries (Austrian Federal Ministry for Transport, Innovation and Technology, Ministry of Economics and Labour and Ministry for Science and Research), which all focus on the instrument of evaluation. As for the agencies, there is great demand at both the federal and state levels: The larger institutions, Austrian Science Fund FWF and Austrian Research Promotion Agency FFG, for research-oriented and business-oriented research. At the same time, there are state-level agencies in Vienna, Upper Austria, and Tyrol, which employ evaluation for the purpose of learning and legitimation. Although some agencies are inexperienced users of the evaluation instrument, they are now using it more often and ambitiously. Nevertheless, the standard model shows that ministries normally serve as both initiator and client of an evaluation; assignments are usually not ordered by the executing agencies.

The role of the Universities is a very special one. Here, opposition against the professionalizing of evaluation is quite strong. Additionally, it is interesting to note that the (research performance of the) Universities remain relatively unevaluated – see “white spots” further down.

Project / Program / Institution / Policy

Evaluations on project level¹⁰

Evaluations on project level – to be more precise: the selection of project applications in Austria’s RTI policy has been finely tuned. The Austrian Science Fund, for example, has for many years used (and approved of) a Peer Review system. It should be noted that, within this context, the Peer Review evaluation method has been badly criticized. Nonetheless, among scientists it is widely indisputable (Arnold et al. 2004; compare with Dinges 2006). The FWF evaluation (Streicher et al 2004) has traced the professional use of this project selection method and has shown that there are no discrepancies (e.g.: older proposals are favoured to younger ones).

In the area of business-based project research, the following applies: here, the evaluation (Jörg et al. 2004) has clearly shown the professionalism of the executing position, previously known as the Austrian Industrial Research Promotion Fund, which today is part of the Austrian Research Promotion Agency; this was also highlighted by a survey addressing the respective companies.

Apart from this, there are a number of programs looking for fair and transparent systems to help them distribute their funds. For this, Peer Review (e.g. expert panels, extended Peer Review)¹¹ is used, and calls and juries are also organized. Some programs (special research programmes of the Austrian Science fund, the competence centres of the Austrian Research Promotion Agency, etc.) explicitly evaluate their projects interim and ex post. The

¹⁰ A project is a single, non-divisible event, which sticks to a fixed time agenda and has an own budget.

¹¹ See Rigby 2002 und 2004 on the methodic differences.

Austrian Research Promotion Agency, furthermore, regularly evaluates its basis program projects ex post (Sheikh 2005).

This should be regarded separately from research instructed by the ministries. Due to the focus on programs since the beginning of the 1990s and the complicated budgetary conditions, research instructed by the ministries has taken a back seat. Still, there were still more than 750 projects in 2002 with an endowment of 35 mio Euros (Zinöcker/Dinges 2004b).

Evaluation on program level¹²

The increasing focus on programs in the Austrian RTI policy and the rising number of evaluations on program level has already been mentioned above. Nowadays almost all programs work with evaluations (exceptions will be mentioned below). The fact that a predominant number of Austrian RTI programs have been evaluated in the last few years is due to the Austrian Council for Research and Technology Development, which has effectively promoted these evaluations.

Examples for widely discussed program evaluations are the Competence Center assessment (Edler et al. 2003), and the evaluations of technology transfer programs (Jörg et al. 2000), whose recommendations had a clear impact on their development.

There are two applicants that are forerunners in the area of program evaluations, both of which were convinced of the importance of evaluations very early on: the Austrian Federal Ministry for Transport, Innovation and Technology (which has existed in a number of different forms and with a variety of acronyms in recent years) has performed evaluations of those programs that were initiated in the course of the (no longer in existence) ITF fund (here the Austrian Ministry for Transport, Innovation and Technology and the Ministry of Economics and Labour appeared together). The second important applicant was without doubt the former Austrian Industrial Research

¹² A program is a combination of international, interlinked interventions, projects, events or part-programs, which aim at the accomplishment of a specific objective. A program has a fixed duration, a budget, and a clear structure.

Promotion Fund ¹³, which systematically ordered all initiatives within its institutional area (Wood Research, Microtechnics, and Austrian Food Initiative) to carry out evaluations.

Evaluations on the institution level¹⁴

In the last few years, most activities have been carried out in the area of institutional evaluations. For the first time in their 40-year-existence the central institutions for the advancement of basic and applicable research, the Austrian Science Fund and the Austrian Industrial Research Promotion Fund, have been evaluated in 2004 (Arnold et al. 2004). Other institutions for research advancement, such as the Christian Doppler Research Association (Schibany et al. 2005) or the Austrian Support structures for the 6th EU Framework Programme (Sheikh 2004), have since followed this course.

A new and professional system for work-sharing between ministries and agencies was the cause for the increase in the importance of institution evaluations: moving program development from ministries to advancement agencies became a central demand in a number of evaluations and studies (‘Agentification’, ‘Rothschild Principle’, Arnold et al. 2004, page 96); it was a demand to which political actors finally responded. The relationship between ministries and agencies, which can be characterized as a principal-agent problem, will have a major impact on the regulation of Austrian RTI policy. All regulation mechanisms presently in use will become both general (“Are these the right instruments?”) and specific (“What are the particulars of general contracts, and of regulation instruments?”) topics in future institution evaluations. There is a clear connection to Universities as research institutions, which gained their autonomy in the Universities Act 2002 and are bound to the Federal Ministry for Science and Research with service level agreements wherein evaluation plays an important role. However, this is rather

¹³ The Austrian Industrial Research Promotion fund has transferred to the Austrian Research Promotion Agency’s area of basic programs.

¹⁴ Here the focus is on the (mostly constant) character of physical structures. Any kind of institution can be subject to evaluations. In this context, especially three large blocks should be mentioned: Universities and Advanced technical colleges with their connection to research and education, Research institutions, and Advancement institutions, resp. agencies.

problematic, since Universities' evaluation is still preliminary in nature. Some further points help put matters into perspective: There is a systematic recording of relevant information on Austrian Universities (Leitner 2007); and, for the first time, the systematic approaches of single Universities can be noted. (This is particular true for the University Of Natural Resources & Applied Life Sciences (www.boku.ac.at) and the University Of Vienna (www.univie.ac.at)). The Austrian Agency for Quality Assurance also warrants some attention: The AQA is an independent agency for evaluation and quality assurance on the academic level; it has the form of an association, and its members are its leading actors. This also explains the initial challenges faced by this agency: Due to financial reasons, it is dependant upon orders from other member organizations. At the same time, however, as a source of quality assurance it must retain a high degree of independence. The Austrian Federal Government has acknowledged this problem in its current government program and has subsequently announced a reorientation of the Austrian Agency for Quality Assurance (Bundeskanzleramt 2007, page 101).

The most important institutionalized representatives of non-university research in Austria (Austrian Research Centers, Joanneum Research), which also play an important role in Austrian RTI policy, have never been evaluated. Up to a certain extent this is justified, since these institutions are only partly subsidized by the state and still must secure their own financial support. However, evaluators have never been asked whether this (small) basic subsidy has been used correctly.

Evaluation on policy level / system level¹⁵

This form of evaluation within the area of RTI policy is still underdeveloped, also from an international perspective. A few studies can be considered characteristic of this category, e.g. the Evaluation of the Faculties of Mathematics at the Austrian Universities (Hoffmann/Bourguignon 2005), or the Evaluation of Measures for the Promotion of Women in Science &

¹⁵ Policy consists of a number of activities (programs, procedures, regulations etc.), which can differ in their manner, but have a common motif or objective. In contrast to projects or programs, a policy is not temporally or financially restricted.

Research (Wroblewski et al. 2006). The overlap between these and other reports and studies is relatively smooth: there are a number of works that can be assigned to this area, but which do not carry the notation “Evaluation” and are not designed for evaluation in the first place; e.g. the Research & Technology Reports of the Austrian Government, which show the status of research and technology on an annual basis. The White Paper of the Austrian Institute of Economic Research can also be counted, which (among others) includes clear recommendations for the development of Austrian RTI policy. Schibany und Jörg’s study (2005) has contributed to a sustained discussion on the relationship of the individual RTI policy instruments and on their ideal adoption. Here the Austrian Council for Research and Technology Development could be important as an enquirer: the council, being the advisor of the Federal Government, should not lose sight of comprehensive problems, and should also carry out this function more effectively when it comes to evaluations.

Ex ante, interim, ex post

Evaluations are generally distinguished through their content and the moment at which they take place. It is remarkable that ex ante evaluations (which also carries the “ex ante trademark”) occur very rarely in the Austrian RTI policy. Still, a number of studies, which are referred to as “feasibility studies” and are introduced before or at the beginning of new initiatives, contain elements of an ex ante evaluation. It seems more likely, then, that certain elements of self-evaluations are used ex ante. These include: intense preparations, international comparisons, research and interviews, which often take place at the beginning of new political initiatives.

How, then, are initiatives generated in Austrian RTI policy? Are they generated on short-term demand? By copying the policy of others – like larger countries or the EU? Or are they all exclusively well prepared? Moreover, what is the role of evaluation? It is difficult to draw a differentiated picture, since both positive (e.g. the genesis of the Competence Center Kplus, described by Biegelbauer 2006) and disenchanting (e.g. events about the Technology Monitoring program ATMOS, see Grießler 2003) stories are told in this context. It is, however, a positive development that such stories are being told and that events are both public and transparent.

The interest in interim evaluations has risen dramatically within the last few years. Apart from the (above mentioned) recommendation by the council, “learning” is a clear objective for clients. There is a demand for program enhancement and readjustment. In these cases, external evaluators are often required. Thus, within the last few years many thematically large programs pertaining to information technology, genome research, and nanotechnology underwent interim evaluations, which included very specific recommendations for program management and policy.¹⁶

There are relatively few clear examples of ex post evaluations in Austria’s RTI policy. Even though many programs are evaluated at a point in time when one can look back upon a range of activities, in most cases not enough time has passed; something that could lead to the problematic assumption of a methodically clear efficiency analysis. Furthermore, policy makers and program management are not especially motivated to carry out ex post analysis of this sort: the former are seldom interested in learning about the effects of things that have happened years before and are now long past; the latter deal with different problems and want to set a particular course in the “here and now” (this is the reason for their interest in interim evaluations). Even in the international area of RTI policy, there are very few studies that attempt to demonstrate the effect of a program in the long run.¹⁷

White spots, rumbling and polemicizing

In Austria’s RTI policy – also in other countries – there are some areas which are totally unmoved by the instrument of evaluation. This applies to programs and institutions, as well as both academic (universities) and non-academic research. Within this context, questions that could be answered through evaluation include, for example: (a) Does Austria need to focus on space exploration? (b) How strong / weak are the social sciences & humanities in

¹⁶ See Zinöcker 2005a, Zinöcker et al. 2005b and Jörg/Werner 2006

¹⁷ Even here a modification: The Austrian Research Promotion Agency regularly orders ex post evaluations within the course of projects, advanced by General Programmes. This clearly shows that ex-post evaluations can be found in continuous projects, rather than in the area of program evaluations. Here the confirmation for success and failure is more important than learning.

Austria? Or (c) Is the governance structure within the Austrian Academy of Sciences appropriate? A crucial and (financially) very important instrument that remains to be evaluated is the instrument of indirect (fiscal) research advancement¹⁸. The effects of this form of advancement are unclear. Many steps concerning monitoring and transparency, and eventually concerning evaluations, must be taken in the area of business based innovation advancement, e.g. the financing models with stronger equity, or foundation advancement. Thus, there are altogether a number of fields that should be subject to evaluation.

Offensives on the instrument ‘Evaluation’

Many areas within the university show reluctance, or in some cases even adverseness, towards evaluation. The rector of the Technical University of Vienna, Peter Skalicky, regards it as an immune mediated disease, “that research is poked by too many Gurus and evaluators”, and that the “actual researcher” becomes a minority within this mixture. (Comment at the industry meeting Research of the Austria Press Agency APA, APA press release 30.1.2007). Moreover, it has been said that, “Universities will still exist when the evaluation delusion is history” (the essayist and university lector Konrad Paul Lissmann in an interview with taz, 13.10.2006). Characterizations such as “Gurus” and “delusion”, which can be described as uninformed, give an idea of the value that some decision makers and stakeholders at Austrian Universities place on evaluation. These (quoted) voices tend to be very loud, and are certainly heard by the public. It becomes important, moreover, to ask ourselves how such opinions can come into existence. The ‘professoral’ self-conception of Universities, which derives from Humboldt University, might be one underlying reason. Another reason might be that researchers find it difficult to accept judgements or opinions from people outside their own research field. It is often said that. “Only researchers can carry out good research policy“. And it is not surprising, therefore, that professional evaluators do not have a place in this mind set. On the other hand, there is the potential for bad evaluations that give unrealistic and unreflecting suggestions,

¹⁸ Research award according to §108c EstG, Forschungsfreibetrag according to §4 Abs. 4 Z 4A EstG

or wrong conclusions. If one has made such an experience once or twice, she or he is not easily willing to go through another evaluation.

Influences of other evaluation fields

Influence from other evaluation fields (e.g. from labour-market policy or development co-operation) is rather modest. There are exceptions, however. For instance, individual evaluators may also work in labour-market policy and/or evaluate structure policy. Also, Austrian participation in DeGEval conferences is rather high. Here one is inevitably confronted with approaches from other fields. The “Matched Pairs Analysis” is also a good example. This approach comes from labour-market policy (Heckman 1999), and has found its way into Austrian effect measurement via international co-operation (Pointner/Polt 2005).

Challenges for the future

In what follows, seven future challenges faced by Austria’s RTI policy vis-à-vis evaluation will be discussed.

1. *Publish evaluation reports*: Some evaluation reports dating from the last few years have been forgotten: For example the Austrian Institute of Economic Research was evaluated in 2003. This report appeared on-line for a short time thereafter. However, in the meantime this report has disappeared from internet and is no longer accessible. Furthermore, the fact that more and more evaluation reports are stored secured („only for internal use“) should attract criticism. This practice is understandable in areas where the borders between evaluating and consulting are blurred, or where data-protected contents are addressed. Still a solution needs to be found. Finally, more effort should be directed towards publishing evaluations in Austria.¹⁹

¹⁹ Please see fteval’s platform online which is a central archiv for all corresponding evaluation reports (www.fteval.at)

2. *Language:* In Austria, German is the predominant language used in evaluations. This does not mean that customers would not also accept English evaluation reports (Edler/Rigby 2003, Zinöcker et al. 2005b) that are either carried out by international evaluators or taken along. However, in the end, data and document analysis (and maybe also interviews) clearly require German language skills. This, of course, radically reduces the number of potential evaluators (and, thus, the number of evaluators applying for this job). Finally, evaluation should be more international. Austrian evaluators should be able to work abroad, and evaluators from the UK, Switzerland, Canada, etc. should be able to work in Austria.²⁰
3. *Improving the data situation:* The quality of evaluations is directly connected to the quality of information (data) collected during the program. Conversely, it is important to proceed very carefully: „Collect all data that is needed and need all data that is collected,” might be a useful guideline. It is one which should also be considered given that evaluators might be overwhelmed (see next point). Evaluation requires more information and data, especially in the area of efficiency analysis. Interviews should also be performed with third parties, in order to understand the ‚counterfactual’; lastly, it might prove helpful to arrange a large innovation survey (within the course of or instead of the CIS or other activities of Statistik Österreich) and make the results accessible to all evaluators.
4. *Evaluation fatigue versus „under evaluation“:* As already mentioned above, it is important to be careful with the acquisition of information. It is very easy to get evaluation fatigue with too many interview requests, or too many (and too lengthy) questionnaires etc., which can become counterproductive. The number of evaluations practiced on an institutional and program level has increased drastically in the last few years. At the same time, it is not enough that central agencies are only evaluated once in 40 years – as was the

²⁰ Of course I am concealing a virtual emergency – it is a precondition to know local actors and discussions for an evaluation, and travel costs should not exceed other costs for specific evaluations. It is also not very reasonable to switch the work language into English if it comes e.g to interviewing SME.

case with the Austrian Industrial Research Promotion Fund and the Austrian Science Fund. It is important that a reasonable frequency of evaluations can be achieved here (every 5th year? every 7th year?).

5. Space for „*curiosity-driven Evaluation*“: Evaluators must be granted enough space to carry out their job sensibly. In regard to biddings, the price itself should not be the sole criterion for the selection of evaluations. Evaluators must be able to develop methodically within a specific field and to uncover areas that have been either knowingly or unconsciously concealed by the applicants. In other words, applicants should grant evaluators a certain degree of flexibility; and, in turn, applicants need to consider this in their budget.
6. *Evaluation and the Austrian Court of Auditors*: Within the last few years, the Austrian Court of Auditors has often reported on RTI policy (Governance structures, strategy questions, performance questions). It is time to enter into a structured dialogue, in order to learn more from each other and to be able to avoid future misunderstandings. In doing so, all actors could achieve so-called multiplier effects.
7. *Realistic expectations*: Evaluation suffers from unrealistic expectations from policy makers and agencies. Too often, low (even homeopathic) budgets are used to achieve aims like ‚economic growth‘, ‚raising quality of life‘ or ‚changing the Austrian mindset‘. It is time to build more realistic expectations and to avoid excessive aims. Ex post evaluations of former programs can be of great help here.

Conclusion

Evaluations do not have an intrinsic merit. An evaluation can be regarded as ‚good‘ only if it elicits discourse and if its suggestions and conclusions are applied.

What should be achieved through the use of evaluations? It can be assumed that a well-developed evaluation structure is a central component of a learning- and strategically-oriented research and technology policy. A good evaluation structure is both a precondition and a result of a good or efficient, and transparent and fair policy. Has Austria’s RTI policy reached an evaluatory

Nirvana? Of course not. Most actors accept and apply the instrument „Evaluation“. Evaluation reports sometimes lead to what are perceived to be controversial discussions. But there is still a lot of work to do, and there are many white spots to explore. At any rate, RTI policy and its evaluation is an active field and this is good.

Comments

All quoted and mentioned evaluation reports can be found on the Platform Research & Technology Policy Evaluation homepage www.fteval.at.

The views expressed in this article are purely those of the writer and may not be interpreted as stating an official position of the Platform Research and Technology Policy Evaluation or the Vienna Science and Technology Fund.

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The Austrian Platform Research and Technology Policy Evaluation as a Forum of Strategic Intelligence. Views from abroad

This article is based on a case study produced by the author in the context of the research project Understanding "Fora of Strategic Intelligence for Research and Innovation" financed by the EU funded PRIME Network of Excellence.²¹ The Platform fteval has been analysed as a so called "forum", defined as an 'institutionalised space specifically designed for deliberation or other interaction between heterogeneous actors with the purpose of informing and conditioning the form and direction of strategic social choices in the governance of science and technology'. Such fora can have two – related and interdependent – roles:(1) Mutual learning of policy analysts, policy-makers and relevant stakeholder, and (2) Improving the functioning of R&I policy. The Platform perfectly fits this definition. The article is based on several interviews as well as document analysis.

Purpose, Focus and Aims

The Platform fteval is a highly institutionalised network of analysts, policy-makers and programme managers in the field of R&D policy. The official mission of the platform is "to encourage more, better and more transparent evaluations for an optimal strategic planning of RTD-policy in Austria and to develop a culture of evaluation together with decision-makers in the field of Austrian technology and research policy." (<http://www.fteval.at/>).

²¹ Participants in this project have been Jakob Edler (Fraunhofer-ISI, now University of Manchester); Pierre-Benoit Joly (INRA), Stefan Kuhlmann (Fraunhofer-ISI, University of Utrecht, now University of Twente), Maria Nedeva (PREST), Tilo Propp (University of Twente), Arie Rip (University of Twente), Sascha Ruhland (Fraunhofer-ISI), Duncan Thomas (PREST). They all deserve credit for the development of the forum concept.

The Network PRIME can be found at : <http://www.prime-noe.org/>

Thus, the network is the forum in Austria on RTD-evaluation and works towards best practice in evaluation, it is used – and was intended to be used by the founding institution, the Austrian Federal Ministry for Science and Transport (BMWV) – as a means for formulised forming of opinion.

While the concrete issue of evaluation is in the focus of the network, the network seems to have a broader, if somewhat hidden claim, which is the modernisation of the research funding practices in Austria.

For the various actor groups (see below) the purpose is of course diverse. The ministries and programme managers seek to learn in order to improve their policy-making and management activities, in order to comply to relevant standards in the field and in order to network with relevant players. The platform is a convenient and efficient means to do so. The institutes, on the other hand, seek to bring sound evaluation high up on the agenda, to drive the policy-makers and programme managers in a direction that guarantees sound management and evaluation.

The rationale of the platform is first a normative one, as binding norms of sound evaluation are to be defined and further developed, and second, it is instrumental, as the platform should be used to transfer the system of RTD programmes in Austria, and third is substantive, as the advancement of methodological knowledge is aimed at.

History and institutionalisation

The Austrian Plattform fteval was created in 1996 following an initiative by some individuals and financed by the Ministry for Science, Transport and Culture as a loose series of events and workshops about questions of evaluation of concepts, projects and programmes related to Austrian technology policy. Over time it was more and more institutionalised and in 2001, its members re-founded the Platform Research & Technology Policy Evaluation as a corporation under civil law (GesbR). Since 2006, the Platform is a registered non-profit association.. Twice a year the platform has a full assembly, the day-to-day management is done by a central managing director and the board. The managing director is not full-time employed by the platform, but does this job while working for one of the platform members. The financing is provided through membership fees on the one hand and

concrete contracts for specific activities (such as organizing conferences), on the other hand.

Actors and criteria of participation (style)

The forum has in its core now 16 associate members:

- three ministries (culture/science; infrastructure/innovation; economic/labour),
- five analytical institutes
- six funding organisations / programme management organisations and
- one independent body for quality assurance and evaluation in higher education
- one strategic advisory council (Council for Research and Technology Development).

Thus, the major other groups in research policy-making, financing, and managing as well as relevant analytical institutes are included, evaluators and those evaluated are integrated. fteval brings together most of the institutes and representatives of the three major players in RTD policy in Austria. Moreover, the representatives in the platform are rather high up the hierarchy in their institution and thus represent both strategic and operative responsibility. Their influence on the institution they represent is thus – in most cases – considerable.

The criteria for participation are not explicitly defined and applied rather pragmatic. The idea is to represent the breadth of relevant institutions in Austria as for competence and function. From time to time, the existing networks asks newcomers to the field – such as new institutes - to become members. Thus, network membership is not limited, but not fully open and flexible either. A precondition for participating as member is a major role in policy-making or policy-evaluating in the field of RTD. The membership tries to be representative as regards the major actors in the field. Membership has to be decided upon through consensus by the whole platform, and of course membership and the decision about it is fully transparent, the platform is no closed shop, it is accessible for new core members if they are seen as relevant players by the members, and it accessible for a broader audience via its workshops and conferences.

Over the course of time, the institutions have changed their representatives, thus the membership is bound to institutions rather than individuals. However, many members have been actively participating for many years now, contributing to some sort of continuity.

In addition to the core members, there are numerous national and international actors that participate in the regular workshops organised within the forum (see below).

Through this mixture of formal membership and participation in workshops the network aims at integrating different views and bodies of knowledge. The inclusion of evaluators and those that commission evaluation is at the same time precarious. There is a precarious balance between trust, openness and cooperation within the network activities on the one hand and objective, open and transparent tender processes on the other hand. There are no indications from interviews that this balance has ever been violated. However, this second dimension of concrete self-interest as the shadow behind the formal purpose is a typical feature of forums integrating analysts (service providers) and policy-makers (clients).

Activities

The network is, above all, a means for discourse among the relevant RTD policy community to inform about latest developments, current evaluation activities and methodological developments. Thus, the most important element of its activities are two general assembly meetings and regular workshops to discuss among the members, an interested community and with external experts. As far as can be assessed, the participation in the regular events is very intensive.

Beyond those more or less limited, issue specific activities in the workshops, the platform has organised a conference on RTD evaluation in 2003 and a second one in 2006. Through this conference it reaches out to all the evaluation community not only in Austria but in Europe and beyond. Both events have indeed made the network known very broadly.

All the organisation of events is organised in a flexible way, with each platform member initiating and/or supporting those events that are most important for them.

The forum has developed and expanded its activities over time. It is now the centre of evaluation networks in Austria and is consulted regularly to give advice in preparing evaluations and even in the management of programmes in order to make them fit for evaluation. Thus, next to community building and discourse, the platform is also an institutionalised consultancy providing reference.

In line with this function, the platform is also active in the formation of staff, it has started to offer evaluation courses, it teaches the relevant community, above all policy-makers and programme managers. The rationale here is that in all stages of the policy cycle policy-makers, programme managers (and evaluators) need to become more professional and need to understand the prerequisites, possibilities and limits of evaluations. Thus, policymakers and programme makers alike are confronted with the rationale and the methodological developments and pitfalls. The feedback from the policy community on this new offer by the Forum is positive, and the platform plans to expand this activity.

The agenda for activities is set at the general assemblies in consensus. The ministries can also issue contracts to the platform coordinators and thus define concrete activities.

Output

As for the concrete, tangible output, there is first of all the homepage that is currently updated. This homepage gives an overview on the history and the activities and topics dealt with in the platform. It is moreover an information source for issues and institutions relevant for evaluation.

The most important, regular output are periodic electronic and physical newsletters reporting on ongoing activities and on the workshop activities. Through these workshop reports the newsletters have become a periodical for new methodological developments in evaluation.

The most tangible output has been the Standards for Evaluation. It is through these standards, that have been accepted by all the members of the platform, that the platform excels its major effects (see chapter on effects).

Effects

Effects as for the formal / official purpose

The basis for an assessment of effects is – at this stage – rather narrow. Beyond own observations in Austria, a comprehensive interview with one of the platform officials and an e-mail survey among members have been conducted. There are strong indications of effects on various dimensions. In general, the platform has brought and kept the topic "evaluation" on the agenda in RTD policy-making in Austria. There is now a high level of transparency as regards programme and evaluation activity, and more generally, evaluation has been stripped of its "secrecy and poor transparency" (a policymaker).

Moreover, it seems that the awareness of what is needed in order to manage and assess RTD programmes has improved. The relevant community better understands the cause and effects relation between RTD instruments and R&D activities on the one hand and economic/innovation output and outcome on the other hand, and the issue of quality and quality control in evaluation is higher on the agenda. Meanwhile one of the official technology reports issued by the government refers to the platform, highlights the importance of evaluation and refers to the platform as the source of standards to be used and as a network for exchange of evaluation practices. The importance of sound evaluation in Austrian RTD policy is connected with the platform fteval, the platform has become the major reference for evaluation and programme design.

The main direct effect of the platform is the networking, the relevant community has a routine get-together. In addition, all the platform activities and discussions have indeed contributed to a convergence of perspectives of the individual core members and – to various degrees – to the related institutions (ministries, agencies), about what evaluation can and cannot do. The standards for evaluation are meanwhile the major reference for evaluations and are highly accepted in the Austrian RTD policy arena.

There is also an obvious integration of the platform into international evaluation community, via multiple memberships of participants, via the international conferences and via the invitation of international speakers to the events organised in Vienna. The Austrian evaluation community has become an important player and in some areas even acted as a trend setter.

As for effects on the individual members and their institutes, one needs to distinguish the types of actors involved. All members interviewed agree that for them personally and as for their institution the purpose of participation has been fulfilled over time. One major success factor seems to be that the network was initiated and organised bottom up, it is voluntary and remained slim in its organisation.

For the institutes in the core, the platform has helped to establish visibility and above all strong links both to other institutes and to the policy-makers and programme managers in Austria. Furthermore, the platform activity enables them to introduce advanced methods in their evaluation activities as policy-makers and programme managers become better informed and eager to ask for new and advanced methods – and also to learn about new methods within Austria and abroad. Institutes have no option but comply to the standards when proposing and conducting evaluations.

The policy-makers and programme managers, above all, have come to understand the various methods for evaluation and are better equipped to demand for the appropriate methods in their tenders. They benefit in being informed about latest developments in evaluation methods and approaches. It is less clear, however, in how far the standards and the platform have contributed to a convergence of evaluation perspectives and approaches in the ministries, signs are there, but some current practice still indicates different approaches. Policy-makers report to be guided by the standards of evaluation when drafting a call for tender and assessing the various proposals for an upcoming evaluation. Programme managers are aware of the fact that evaluations will have to collect certain kind of data and will apply certain standards, thus programme management is streamlined and data collection organised in appropriate ways.

Further effects (hidden agenda, side effects etc.)

More indirectly, the platform has – via its topic evaluation and via its membership - contributed to a more systematic and transparent policy-making in RTD policy in Austria. It is less clear, however, if the convergence of evaluation practices has also led to a convergence on the very nature of modern RTD policy-making, the platform has remained clearly focused on the issue of evaluation. Indeed, as for the general policy-community in RTD policy (shell 2), the effects of the platform or the evaluation standards seem

rather limited, i.e. the community active in the platform does not influence general policy-making to a high degree.

The following table indicates a rough summary of effects, differentiated as for type of effects and range of actors effected.

Overview of effects

	<i>core^a</i>	<i>shell 1^b</i>	<i>shell 2^c</i>
<i>cognition</i>	strong	medium	medium
<i>patterns of interaction</i>	strong	weak to medium	none
<i>action</i>	medium to strong	weak to medium (hard to trace)	weak (hard to trace)

a: individual members and their institutions

b: interested actors having participated in platform events or otherwise connected to the platform

c : the wider RTD policy arena in Austria

Future

The main activity in the past was the creation of general standards for evaluation of public research and technology policy in Austria, finally published in 2003. Therefore, the forum is mainly focused on providing information on the Austrian research and technology policy and on supplying a set of good practices to political decision makers. The further anchorage of the evaluation standards will remain a major purpose of the network.

The platform will expand its service and formation function, it is preparing to offer even broader evaluation courses, mainly on basic and advanced methods. The idea is to work towards an informed policy community able to understand the possibilities and pitfalls of as well as the preconditions for certain methodologies in evaluation. There are no plans to expand the thematic scope of the network, it will remain focused on evaluation.

Conclusions

This article had discussed the role of the platform within the Austrian science and innovation policy making. It has done so by using the conceptual approach of so-called “For a of Strategic Intelligence” and discussed the various dimensions of those fora for the platform. This concept has helped to better understand this role and its development.

Over the course of time, the platform has expanded its nature, membership and activity considerably. From a more or less informal gathering of interested individuals on evaluation issues it has developed into a highly institutionalised major normative and informative reference point for evaluation and systematic RTD programme management. It has expanded its activities from discourse to information hub and publisher of methodological newsletters and has finally institutionalised the formative, deliberative function. It thus has been a developing forum.

The platform is supported by institutes and policy and programme managing institutions alike. It has expanded its membership without being all-inclusive and totally open, thus it has found the balance between building a strong community and being open to newcomers. The effects on the core members is obvious, it is both the networking and some sort of normative and cognitive coherence as regards evaluation.

There are two success factors. First, evaluation is a concrete official issue, it has a high legitimacy, it is in itself not contested and promises added value for all parties involved. The platform on evaluation gives the institutes the opportunity to inform policymakers and programme managers and create a better understanding for their own daily work, it offers a source for more efficiency and legitimacy for policy makers and more effectiveness for programme managers. The effects reported by the groups involved suggest this interpretation. Secondly, the network has been developing bottom up and has not become a straightjacket for discussion but rather an opportunity structure not dominated by any of the members – but still normatively binding for the members.

The combination of the issue of the platform – evaluation – with the bottom up, non-hierarchical approach was conducive to building up trust and understanding and thus also some sort of common cognitive and normative

frame. Evaluation is only on the surface of a technical nature, since a discourse on evaluation implies an understanding on norms as for policy-making and programming in the first place. Evaluation is only sensible if the programmes and indeed the policy behind these programmes are conceptually sound and systematic. Thus, to start up a non-hierarchical discourse on evaluation is rather easy as it is on technical issues (methods etc.), but once institutionalised this discourse has, over time and more or less implicitly, consequences on a more fundamental, normative level. The learning about evaluation standards and practices thus effects the understanding of RTD policy-making in general. Although more thorough research would be needed, there are indications that the platform did, through establishing and developing its discourse, also contribute to a more systematic policy-making in Austria.

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<http://www.prime-noe.org>

Michael Stampfer

A Series of Fortunate Events

Research and technology evaluation is a field where good processes, intense communication, common understanding and sticking to the rules are crucial. Starting ten years ago from a very low level, the Austrian Research Evaluation Platform (Plattform FTEval) has been remarkably successful in building evaluation culture in this expanding policy field.

Rationale and a haunting past

Until the mid-1990ies, evaluation matters in the field of research and technology policies ranked extremely low on the policy agenda. There were nearly no evaluations commissioned, the few existing ones were hanging in opaque settings. Especially two important actor sets in Austria cherished the virtues of intransparency: In general, (i) investments and namely the commissioned research of the main ministries (“Auftragsforschung”) and (ii) the whole block of institutionally funding and spending money for scientific research in Austria successfully evaded any structured discussion about rationales, quality and success.

No wonder that no common understanding evolved why evaluations are important and how they should be done. One notable exception were the fair and reliable ex ante project evaluations in the two traditional funding agencies FWF (Austrian Science Fund) and FFF (Industrial Research Promotion Fund); the major weaknesses in the system included ex post evaluations, all kinds of programme and institutional evaluations and monitoring exercises.

A number of long standing features of the Austrian Innovation System favoured this situation. Institutional block funding was given without ‘value for money’ or any quality criteria, clear cut funding programmes were few and – as mentioned – ministries could spend a lot of money without too many questions asked. The EU accession 1995 helped to start changing frameworks

and mindsets: From programme orientation to state aid rules, from good practice policy approaches to the growing importance of RTDI policies, a number of factors led to more accountability as well as to a greater wish to understand innovation systems, players and government interventions.

While these policy pressures came up, the top layers in this policy field were rather slow to take up evaluation as an instrument and a priority. As a consequence a small number of ministry staff and researchers started to think about appropriate initiatives. In 1996 the Evaluation Platform was founded as a loose network of people both interested and determined. The main ‘method’ used was starting to talk about important methodological, thematic and organisational issues, inviting foreign experts and issuing the first newsletters. The most important topic for the first years was designing good evaluation cycles and practices for technology funding programmes, which coincided with the rise of programme funding in Austria in the second half of the 1990ies, namely within the Innovation and Technology Fund (ITF) and the uptake of Science-Industry co-operation funding. Soon the Platform was recognised as an impartial, active and cheap instrument and as a meeting ground for policy makers, researchers and other experts. Some resources were made available.

In the following years, a kind of co-evolution process could be observed: (i) The pressure for accountability and doing things right grew (ii) and so did (in an exponential way) the number of specific policy instruments, i.e. programmes (iii) as well as the need for international comparability. Finally, (iv) as soon as some standards had been established, policy makers and programme managers got more and more interested to better know what they do. The paradigm of innovation systems led to more complex interventions with less clear logics and outcomes, thus increasing the need for analytic, dialogic and learning tools.

Members, common principles and expectations

Ten years after the start of the Platform, sixteen institutional members represent a very large part of the Austrian Innovation System, including the three most relevant ministries BMVIT, BMWF^a and BMWA, a number of funding agencies, from FWF, FFG, AWS to regional actors and specialized niche players and research oriented institutions performing evaluations. In the

last years also the Austrian Agency for Quality Assurance or the Austrian Council for Research and Technology Development became members.

As the word platform indicates, it is an association of equals. Each institution has one person responsible to help shape the work programme and to spread the virus of evaluation within his or her home institution. One common principle, which will be exemplified below, is the bottom up approach: It is better to convince hundred persons in different institutions about the importance of evaluations and the main principles than to come forward with top down policy approaches like legal requirements or including evaluations in a minister's daily morning prayer.

Another important principle regards neutrality: Being a potential cartel of important players with regard to commissioning evaluations it is of highest importance to know where to stop. So the activities exclude the Platform's involvement into any individual evaluations. A third principle is internationality: The Platform wants open markets and strong involvement of foreign expertise in all kinds of evaluation activities. Consequently the quest for a good evaluation culture has one main pillar in linking up with many international activities.

Expectations grew over the years: Namely policy makers and funding agencies more and more realised that many questions of their daily work as well as strategic tasks are closely linked to evaluation matters.

Scope of activities

With a number of activities, the Platform tries to serve the actors within the Austrian Innovation System:

- From the beginning, the Platform started inviting foreign evaluation experts and coupling them with Austrian experiences along relevant topics. The proceedings of these workshops (most of them with 30 – 50 people attending) are consequently published in the Platform Newsletter with 30 volumes issued so far. The range of topics includes all kinds of methods, evaluation approaches and instruments. For an overview, see the last chapter of this book.
- One important publication of the Platform are the Austrian RTDI Evaluation Standards. This document was developed in an interactive

way with users and comes forward with a systems approach, defining main roles and responsibilities of different actors in different settings in the policy cycle. Most of the terms of reference for evaluations in this policy field refer to these standards. On special occasions also studies about evaluation matters are written.

- Closely related to the Standards and to the above mentioned bottom up approach the Platform offers various training activities namely for programme officers and other people in operative positions. With role plays a good understanding of the policy process and the functions of evaluations can be achieved. In addition to this the Platform also offers support in drafting good terms of references.
- As all national issues are international issues in our policy field, a strong link exists to relevant players in other countries, at the EU level and overseas. One important tool are evaluation conferences organised by the Platform in Vienna (2003, 2006) and work with actors like the European Commission, OECD, DeGEVal in Germany or WREN in the U.S.

These activities will be continued also in the next years. What are future challenges the Platform can contribute to work on? One major issue will be the role of evaluation in reducing the degree of complexity within the Austrian Innovation System. While until the mid 1990ies the number of incentive- and mission-driven instruments like funding programmes had been far too small, now we face the danger of losing ourselves in a multitude of programmes and other activities. So the preparation of ways and forms to evaluate portfolios and complex sets of policy interventions seems to be a pressing need. Another important thing will be to develop better instruments and frameworks for the evaluation of institutions.

Acknowledgement

The Austrian RTD Evaluation Platform has achieved in a strict bottom up process to put this topic firmly on the policy agenda. While in the first years this exercise was brought forward more by external factors and guerrilla tactics than by deliberate policy action, now all the strong players in the Austrian systems are contributing in a lasting and determined effort. Special thanks for this very positive development go to the persons responsible for evaluation (and the Platform) within the individual member institutions and for those institutions (namely the three ministries and the RTD Council) who provide financial, project-based support beyond membership fees.

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Recommendation - Regarding the Evaluation and Monitoring of RTI Programmes

Introduction to the Recommendation Regarding Evaluation

The Austrian Council for Research and Technology Development (Austrian Council) was established by an amendment to the Research and Technology Funding Act in 2000, and in 2004 became an entity under public law following a further amendment to the Act. The constitutive meeting was held on 6 September 2000. The Austrian Council advises the Government and, if desired, individual Government ministers and provincial governments on all matters pertaining to research, technology and innovation. It consists of eight members with voting rights of whom four are appointed by the Minister of Education, Science and Culture and four by the Minister of Transport, Innovation and Technology. Four members of the Government serve on the Council in an advisory capacity.

The main task of the Austrian Council for Research and Technology Development is to make a decisive contribution to a forward-looking research, technology and innovation policy in Austria by delivering systematic, independent and sound advice to the Austrian Government. This takes the form of developing long-term RTI strategies for Austria, parallel recommendation activities for national and international projects (recommendations), deliberations at regular Austrian Council meetings and working groups held for the purpose of discussing topics in depth and developing new concepts. The Austrian Council defines itself as the network hub of the highly diverse technology and research landscape, as a co-ordinator and driver of the wide range of activities, as the connecting link between the players, but also as a filter, and above all, as a setter of priorities. The mission and recommendations of the Austrian Council were presented again in greater detail and precision in “Strategy 2010.”

This recommendation of the Austrian Council for Research and Technology Development on the evaluation and monitoring of RTI programmes was adopted at a meeting of the Austrian Council on 12 April 2006 and reinforced in the “Strategy 2010” presented by the Council in August 2005.

Background

In the view of the Austrian Council evaluation and monitoring play a central role in the further development of national innovation systems. In its Recommendation of 11 August 2003 the Austrian Council elaborated formal criteria upon which the financing of programmes and initiatives should be made contingent. These are:

- A clear programme description (based upon an ex-ante evaluation) containing qualitative and quantitative programme goals which can be measured using specific indicators; the Austrian Council Recommendation of 3 July 2002 “Guidelines for Content-Related Monitoring and Impact Analysis.”
- A monitoring and controlling plan which also includes steering mechanisms for the programmes, also upon the basis of the aforementioned Austrian Council recommendation. The impact of the respective programme on the development of human resources must always be analysed;
- Programme evaluation concept (interim, ex post);
- Financial and budget planning; this must include the total estimated costs, including any subsequent expenditure, over the entire life of the programme / initiative and must also contain a specific proposal for covering these costs;
- Transparent and objective evaluation, decision-making and controlling mechanisms at the project level;
- Compatibility with EU subsidy laws (if applicable).

Policy advice must rely on a solid and robust system of policy observation if it is to be able to develop serious strategies and recommendations. In a European and international comparison, the monitoring and evaluation of research, innovation and technology is becoming increasingly important. The Austrian Council has taken a first step in this direction with standardised programme

descriptions and regular reports by the ministries and other players. A separate Council recommendation on this issue and the development of an Austrian monitoring system which can co-operate at an international level, are logical consequences of the Council's past work.

In addition to input data, output indicators are increasingly required to evaluate the results and compare the performance of research programmes and institutions. In Austria the data situation is comparatively poor in this respect. There is no standardised system for obtaining, processing and evaluating information in order to understand the strategic developments within the national innovation system, the participating players and the structural contexts in which they are embedded.

The Platform FTEval

In 2005 the Austrian Council will become a member of the Platform Research and Technology Policy Evaluation (Fteval). Since it was founded in 1996 as an informal co-operation, the objective of the Platform Research and Technology Policy Evaluation has been to present methods and approaches of evaluation, discuss the current evaluation practice on an international level and thus contribute to the development of a culture of evaluation in Austria. The mission of the Platform Research and Technology Policy Evaluation is to encourage more, better and more transparent evaluations for an optimal strategic planning of RTD-policy in Austria and to develop a culture of evaluation together with decision-makers in the field of Austrian technology and research policy. This recommendation should support the Platform in its work and in the achievement of its goals.

Recommendations to Establish a More Professional Evaluation Culture

- In order to foster quality and assure quality control throughout the entire RTI sector, programmes, projects and organisations must be systematically evaluated. The evaluation must be planned if only so that provision can be systematically made for the RTI policy learning processes and adequate funding provided. Increasing use should be made not only of ex post, but also of ex ante and accompanying evaluations so that future developments can be anticipated, and better risk and opportunity analyses developed. The legal requirements relating to the obligation to publish administrative documents must be observed in connection with evaluation.

- In order to lend weight to the implementation of the evaluation results, the commissioning organisations must set up regular implementation workshops. These workshops will regularly verify the extent to which the recommendations of the evaluation have been complied with and whether corresponding improvements have been made.
- Parallel to the evaluations, international benchmark standards will also be obtained.
- All programmes with a life in excess of five years (or a volume of at least EUR 1,000,000 p.a.) should be subject to appropriate evaluation by experts. Smaller and shorter programmes should be subject to an ex-post evaluation and a short ex-ante expert assessment by an external expert. In addition to this – depending on the size, structure and life of a programme – practical accompanying structures must be established which permit a continuous learning process: These could include workshops and platforms with the project leaders, accompanying expert groups, exchanges with similar programmes abroad or various forms of parallel research.
- In addition to the evaluation of individual programmes, the Austrian Council recommends regular system evaluations, in particular with regard to the financing and recommendation level; e.g. the Action Programmes or the National Foundation for Research, Technology and Development, and the related Austrian Council recommendations.
- Institutions should develop binding structures for self-evaluation, the structures will be evaluated by external assessors. At regular intervals (every 4 to 6 years) an evaluation by external experts should take place (at least some of whom should be brought in from abroad). The institutions may formulate a statement regarding the evaluation criteria (“Terms of Reference.”) Projects should be subject to ex-ante evaluations and, in the case of larger-scale projects, to interim and ex-post evaluations by the funding agency which handles them. Depending on the content of the project, external experts or specialist assessors should also be consulted. The evaluation criteria used here must be closely related to the objectives of the programme, must be defined in advance and be publicly accessible. The evaluation times should be chosen so that the results of the evaluation can be

meaningfully used by those carrying out the project (the evaluated party) and by the programme management.

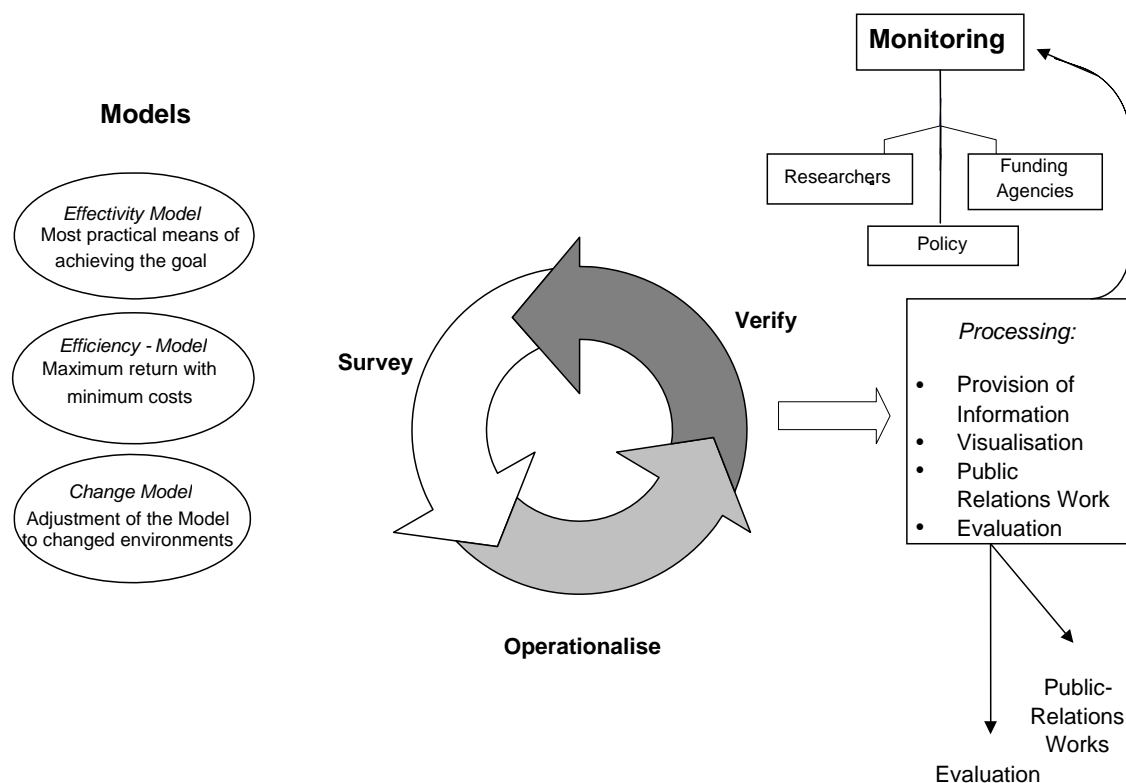
The Following Consequences Ensur from the Austrian Council's Recommendations

- The standards as developed by the Platform Research and Technology Policy Evaluation must be consistently used by the players of the NIS.
- Each year the Austrian Council will hold an "Evaluation Day" together with the Platform Research and Technology Policy Evaluation in order to discuss the progress and any problems in the implementation of "the standards" with the relevant players.
- At this Evaluation Day more short-term target agreements will be reached and plans drawn up, so that projects can respond flexibly to political or public demands.
- All evaluation studies must be published in full with the exception of data which is subject to official secrecy requirements. The Platform for Evaluation's document archive suggests itself for this purpose.

Monitoring

Advances in information technology have dramatically improved the potential of a monitoring system. The volume of information, the electronic availability of data and new techniques for analysis, visualisation and processing have significantly changed the demands made on monitoring systems and the opportunities they offer.

Why Monitoring?



Improvement in the Self-Management Ability of the System: Monitoring supports circular and feedback-oriented communication between the players. An understanding of complex links and the provision of indicator-based comparisons permits orientation to the attractors in the field.

Improvement in the Knowledge and Information Status of the Funding Institutions: In contrast to controlling, a monitoring system permits the observation of the target systems and their change processes. It goes beyond classic controlling (compliance with contract).

Improvement in the Base Data and Information Status in Decision-making Situations: Improved information regarding possible alternative decisions.

Improvement in Public Relations Work: Data from monitoring systems provides one of the best bases for effective presentation to the public.

Monitoring includes the publication of target-group and demand-oriented information: all useful policy observation must be supplemented by target-

group and demand-oriented information. There is a great need here for a well-structured supply of online information which offers visualisations, details of contact persons and the necessary means of orientation regarding the research and technology landscape.

The Austrian Council for Research and Technology Development recommends the establishment of an Austrian monitoring system that is based on the following principles:

- The collection of the data should require minimum effort and expense.
- The data should always present gender-specific features
- The obtaining of information should be integrated in the reporting system.
- A complete overview should be given of the information needs of the stakeholders.
- Monitoring systems must not become an expensive end in themselves (“utility function”)
- The data should be collected, documented and processed at the lowest possible aggregation level.
- Multiple collections of situation-related data should be avoided.

The following consequences ensue from the Austrian Council's Recommendation

- Together with the organisations which generate and utilise the data, a process will be started to develop an Austrian monitoring system.
- On the basis of an analysis of the current situation, improvement measures will be identified in consultation with the stakeholders.
- When the data pertaining to the two Action Programmes is interpreted, the Austrian Council will verify if and what changes must be made to the collection and documentation of data.

- At the same time, the target-group and demand-oriented provision of information should be improved. There is a great need here for a well-structured supply of online information which offers visualisations, details of contact persons and the necessary means of orientation regarding the research and technology landscape.

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Evaluation Standards in Austria's Research and Technology Policy

In 1996 the Platform Research and Technology Policy Evaluation was formed as an informal co-operation with several associate members that operate in the field of research and technology policy. Besides developing a culture of evaluation in Austria the Platform committed itself to draw up Evaluation Standards in an interactive process involving all members. These Standards are helpful guidelines for policy makers who commission evaluations, evaluators as well as those who are evaluated. To be as concise as possible there are two different versions of the Standards – the more comprehensive commended one is intended to be of motivational value to explain what is behind the individual points of the short formal version and, in some cases, to provide instructions on how the situation outlined as a "Standard" can be achieved. In general the most important facts for setting up an evaluation system are covered in both versions of the Standards. It is crucial to identify levels, times and methods that are used to carry out an evaluation.

The Platform Research and Technology Policy Evaluation is a network of institutions dealing with research and technology policy in the fields of policy development, the funding of research, the funding of technology and innovation projects, and RTD evaluation.

The aim of this network is to enhance evaluation culture and practice in Austria. This constitutes a particular challenge against the background of the emerging European Research Area; the Platform's "Standards of Evaluation in Research and Technology Policy" are a central element in this context.

These Standards have been drawn up in an interactive process involving all Platform members. Exchanging and discussing experience of suitable methods, procedures, professional approaches and conditions is a central task of the Platform and has been a key factor in developing the Standards in their present form.

The Standards of Evaluation in Research and Technology Policy specifically aim to provide evaluators and institutions commissioning evaluations, as well as those to be evaluated, with a framework and guidelines in the evaluation process. The Standards thus support

policy makers and strategy planers	<ul style="list-style-type: none"> • in designing programmes • in formulating Terms of Reference (TORs) • in selecting evaluators • in implementing evaluation results • in public relations work
management	<ul style="list-style-type: none"> • in setting up monitoring systems • in assessing individual projects
Those to be evaluated	<ul style="list-style-type: none"> • in formulating project proposals • in planning their projects in terms of content and timing
evaluators	<ul style="list-style-type: none"> • in designing evaluation projects • in positioning themselves vis-à-vis commissioning institutions • in positioning themselves vis-à-vis those to be evaluated • in establishing the information sources for evaluations

The members of the Platform Research and Technology Policy Evaluation have voluntarily adopted the Standards as guidelines for their own work. Over and above this, the Platform wishes to ensure that the Standards are disseminated and applied by others, too.

In addition to this paper, a more comprehensive commended version is available from the Platform Secretariat and at www.fteval.at.

Evaluation in the Policy Cycle

Evaluation and Research & Technology Policy

Research and technology policy should be in a position to show that investments in this field are worthwhile.

Particularly in the European context, Austrian decision-makers in research and technology policy require instruments and tools which are appropriate to the growing need for policy intelligence, e.g. on the functioning of Austria's research and innovation system, the quality of Austrian research and technology in comparison to international standards, and the cost effectiveness of research and technology funding.

"Evaluation", an umbrella term covering a range of different techniques, methods and measures, has become internationally established as a tool for the assessment in the process of research and technology policy processes; evaluation informs politicians, policy makers, programme managers and the interested general public on the effectiveness of initiatives with regard to achieving policy objectives in the public interest and for counteract market and system failure.

What are the functions of evaluation? Different types of evaluation have different specific functions and outcomes. What they all have in common, however, is that they help assess the different stages within the policy cycle. Evaluations justify and legitimise, they provide information and document evidence and lessons learnt, and they can play a role in steering and controlling policy processes. These are functions of all evaluations activities, conducted at any level and at any time, albeit in different ways and with different outcomes. What differs from evaluation to evaluation is the relative emphasis put on each of these functions. The expectations of the commissioning body should be clarified at the beginning and should be laid down unambiguously and transparently in Terms of Reference.

Take evaluation into account right from the beginning

In order to fulfil these functions, evaluation need to be taken into account and integrated throughout the entire policy cycle, starting with formulation of objectives of research and technology policy to design, implementation, and policy assessment). In other words, evaluation should be an integral part of strategic planning and developing research and technology policy.

Formulate clear objectives

Clearly formulated objectives are a prerequisite for the evaluation of any kind of policies, be it a RTD programme, an institution or a project activity. Carefully formulated objectives include both strategic and operationalised ones or, if possible, even quantified aims, with the relation among the different objectives clearly defined so that they form a transparent system of objectives. On the other hand, there is also a close link between these aims and the evaluation criteria to be applied. This interdependence is relevant to the evaluation of institutions, too. Thus any institution should lay down in its charter or similar document a clear statement of its mission and of its key objectives.

Utilise and implement evaluation results

Evaluations are not carried out for their own sake; rather, they provide knowledge which should lead to concrete action. Evaluation results should, directly or indirectly, support decision-making processes in research and technology policy.

This, in turn, requires that evaluation results be presented in a timely and effective manner and that sufficient scope be given to communicating them. The credibility and effectiveness of evaluations will, generally speaking, be enhanced by disseminating them widely and ensuring a suitable level of publicity.

Feed back evaluation results and make them binding

The successful implementation of evaluation results imposes demands both on the evaluators and on those commissioning the evaluation.

Evaluators must ensure that the results of their work are presented in a form which will allow the addressees to use them; in other words, the message their reports convey must be tailored to the respective addressees. The commissioning institution, on the other hand, must ensure that evaluation results are taken seriously.. The extent to which evaluation results are binding should depend on the context: the more definite the findings, the more binding the consequences can be.

Institutionalise evaluation

The Platform wants to see a discussion process initiated on institutionalising the instrument of evaluation in Austrian research and technology policy; such a discussion process should focus, in particular, on the types of measures for which evaluation is to be required by law or other rules and regulations, and on the level at which this should be managed. In the Platform's opinion, the discussion should start from the assumption that a general evaluation requirement should be laid down in the various legal acts regulating the organisation and funding of research in the broadest sense. Another aspect concerns the question to what extent special evaluation institutions, in whatever form, could contribute to increasing the use of evaluation and enhancing its quality.

Provide for regular evaluations

The Platform advocates neither a rigid, pre-defined evaluation machinery nor mere one-off evaluations for specific purposes. International experience has shown that a middle course should be steered here, providing for regular evaluation - applying specific quality standards - of programmes, institutions and projects without, however, imposing any kind of streamlined procedures which are to be applied in exactly the same way every time.

Provide sufficient funding for evaluation

Thorough, high-quality evaluation processes require sufficient funding. The necessary means should be set aside before the launch of a programme; international guidelines on this are available.

Levels and Times of Evaluation

Extend the scope of evaluation

Evaluation is a comprehensive concept. In practice, however, and particularly with regard to public-sector measures, its application turns out to be limited to one or several – but usually not all - of the following levels: policy areas, institutions, programmes and projects. In order to establish evaluation as standard practice in Austria, the possible levels of evaluation should be extended to include institutions and, subsequently, policy areas in every case, taking into account justified differences between the different levels, but also between basic and applied research.

Combine evaluation with other elements of strategic planning

In order to enable optimal use of evaluation for policy development and strategic planning, interdisciplinary aspects of evaluation, as well as links to other analytical techniques (such as foresight or impact assessment), should be taken into account.

Ensure effective planning of evaluations

The following should be taken into account in planning the sequence of individual evaluation steps:

1. The results of project evaluation can be used as input for programme evaluation.
2. In large projects for which an interim evaluation is required, this interim evaluation should, at the same time, serve for the ex-ante evaluation of the next phase of the project.
3. In any case, policy measures should be planned so that the results of individual evaluation steps can be appropriately integrated into the planning process.
4. If the focus is on the analysis of effects, it is a good idea to evaluate a programme at various times after its completion as certain types of effects are observed with substantial delay.

Carry out evaluations at different points in time

All programmes with the duration of over 5 years (or with a volume of at least € 1,000,000 a year) should be subject to ex-ante, interim and ex-post evaluation by external reviewers. For smaller projects and projects with a shorter duration, an ex-post evaluation and a brief ex-ante assessment by an external expert should be required.

In addition, depending on the volume, structure and duration of the programme in question, effective structures for continuous learning should be set up. These could take the form of workshops or discussion platforms with project leaders, monitoring by expert groups, international informational exchange, or various forms of accompanying research.

Institutions should develop binding structures of self-evaluation which are to be examined by external experts. In addition, an evaluation by external, at least

in part international, experts is to be carried out at regular intervals (every 4 or 6 years). The institution to be reviewed may formulate an opinion on the evaluation criteria (TORs) to be applied.

Projects should be evaluated ex ante by the competent funding agency (possibly with the help of external experts or specialist reviewers, depending on the subject); larger projects should also be subject to interim and ex-post evaluation. The evaluation criteria to be applied here should be closely linked to the objectives of the respective programme, as well as being defined in advance and publicly accessible. The timing of evaluation should be set so that the results can be effectively utilised by both the project team (i.e. those to be evaluated) and the programme management.

Make indicators and criteria transparent from the start

Indicators do not have any meaning without their context. Every indicator is based on assumptions about reality and a concept of operationalisation. Indicators are supposed to represent, in a few figures, complex realities which cannot be directly measured. Key indicators are to be defined at the beginning of a programme and determined during the monitoring process.

Develop evaluation systems

Evaluation systems provide a sensible sequence for the different phases of the policy cycle, as well as laying down the times for these phases and providing answers to the questions of "Who evaluates when?", "How?", and "What are the objectives and consequences?" The minimum components of an evaluation system (timing and objectives of the different evaluation steps at the project and programme levels, stop-or-go decisions) are to be fixed in the programme rules or similarly binding documents.

Methods and Tools for Evaluation

Promote a mix of methods, try out new methods

The method mix to be applied in any given evaluation is to be derived from the content of the respective programme (or institution, or policy area) and to be laid down along general lines in the TORs. TORs provide a good context for critically examining methodological issues; this is important as evaluators are often under considerable pressure to come up with quantifiable results which lend themselves to concise presentation. However, it is important to note here that quantitative information alone usually cannot provide an adequate basis

for strategic policy decisions. Concisely summarised findings must be complemented by more extensive, descriptive information if justice is to be done to the complexity of policy making. Evaluators should be encouraged, also when TORs are formulated, to try out new methodological approaches.

Collect relevant data

Good monitoring systems are supposed to collect all relevant data - and only that - and to document it, as far as possible, in a straightforward, systematic and gender-sensitive manner. For one thing, this set of data serves the purpose of project controlling in scientific and administrative terms; for another, it should also give evaluators appropriate insight into the respective project. This can considerably enhance the quality of the data base of an evaluation while avoiding the same set of data being collected twice. It will be up to funding agencies to determine to what extent appropriate programme management information systems can be employed.

Clarify issues of data collection and transfer at the design stage

The quality of any evaluation depends to a high degree on the quality of the data supplied to the evaluation team. In addition to project-based data, the results of general RTD and innovation surveys (e.g. Community Innovation Survey, R&D surveys) should also be utilised for evaluation purposes.

Furthermore, the issue of passing on data to evaluators should already be raised at the design stage of the respective programme and possibly be regulated in any funding agreements concluded with third parties.

The ethics of evaluation

Stick to the rules

In planning and carrying out evaluations, evaluators and those commissioning evaluations must comply with certain rules in order to ensure that the evaluation process can and will lead to a transparent and fair assessment of the research and technology policy measure in question. These rules, which can collectively be seen as a kind of code of conduct, primarily refer to the competence of the evaluators, the systematic planning and implementation of evaluations, the correctness and credibility of evaluators, to respect the legitimate rights and interests of third parties, as well as responsibility vis-à-vis society at large.

- The institution commissioning an evaluation should, in its invitation to tender, require proof of the evaluation team's qualification for this task and examine the offers received with respect to this.
- The evaluation team's impartiality and independence is essential. Specifically, every effort must be made to ensure that none of the evaluators were involved in either designing or implementing the programme in question. Finally, it should be ensured that the evaluators have no personal or institutional interest in certain outcomes of the evaluation.
- Evaluations should examine and portray the strengths and weaknesses of their subject as comprehensively and as fairly as possible.
- The impartial position of the evaluator must be maintained throughout the evaluation process, as well as in the evaluation report.
- The points of view and assumptions of involved and affected stakeholders which form the basis of the evaluation and the interpretation of its results should be described in the course of the evaluation in such a way as to clearly show the basis of assessment.
- Evaluations should be planned and carried out in such a way as to ensure the protection of the integrity, dignity and rights of those involved in them.

Promote evaluation competence

It is important that all those involved in evaluation processes should have a minimum level of knowledge which enables them to communicate with each other about the application, interpretation and use of evaluation results in general. More training opportunities should be provided than has been the case so far in order to promote and support this process. Efforts to develop evaluation competence should be addressed to different target groups: programme managers, decision-makers in the field of research and technology policy, evaluators, representatives of institutions, etc.

Source www.fteval.at/standards/

Jürgen Güdler

New Forms of Research Evaluation: The German Research Foundation (DFG) and the “Institute for Research Information and Quality Assurance (IFQ)”

In the late 1990ties, the German Research Foundation (DFG) and the Max Planck Society were evaluated by an international expert commission within what was called a „system evaluation“. This labelling shows that the focus was not only on these two organizations, but that the German Research System as a whole was assessed. The result of the evaluation in general was very positive. Nevertheless there were some suggestions for improvement given:

So far the system lacks continuous monitoring which would show adverse developments within the system and help coordinate the tasks and organizational units of its different parts. It also lacks effective elements to stimulate the competition especially beyond the individual organisation. (...) The understanding of the demands and tasks of a continuous organizational and quality management is not yet sufficiently developed. There is not yet a transparent and comprehensive system of quality assurance both between and above organizations and within the individual universities (Internationale Kommission 1999: 17).

The German Research Foundation has drawn both medium- and long-term conclusions from this evaluation, for example by reforming its review system. Due to this reform there were some far reaching changes in the quality management of the DFG’s processes of validation and decision on proposals (see www.dfg.de/en/dfg_profile/structure/statutory_bodies/review_boards/). Furthermore, information services were implemented that enhance transparency and also stimulate the competition between research organizations. They are the project information system GEPRIS (see www.dfg.de/gepris) and the so-called DFG Funding-Ranking (see DFG 2006). GEPRIS, available online since 1999, offers information on more than 20,000

DFG-funded projects, mainly in form of short abstracts that are written by the applicants with the main purpose of giving the referees a first impression of the project's aims. Using these abstracts (as well as other project related data) therefore means a secondary utilisation of data for public information purposes. What makes the "DFG Funding Ranking" rather innovative is the fact that it is the first ranking worldwide that is based solely on data that come out of the internal databases of funding agencies. The ranking gives information on the amount of DFG-funded money that was acquired by each university, listed by academic disciplines, on the number of referees who were active in evaluating DFG-proposals and on the interaction and centrality within so-called „coopartive networks“, defined by the common participation in DFG-funded coordinated programmes. The 2006-Report for the first time also includes information on R&D funding for selected federal programmes, for thematic priorities within the European Union's Sixth Framework Programme, and for collaborative industrial research funded by the German Federation of Industrial Cooperative Research Associations "Otto von Guericke". The third party funding indicators, which each depict individual aspects of publicly financed research, represent in total approximately 80 percent of all public third party funding for university research. Additional indicators which give information mainly on the international attractiveness and participation in cross-border collaborations were generated by using data from other funding organizations (Alexander-von-Humboldt-Stiftung (AvH), German Academic Exchange Service (DAAD)).

Some studies being conducted with external partners offered important information in terms of the success of the DFG funding programmes as well as their possible modifications. A report on the careers of former DFG fellowship holders showed to which degree the German research system was really affected by the so-called „brain-drain“ of young scientists educated in this country – it proved to be lower than previously thought (see Enders/Mugabushaka 2004, Güdler/Mugabushaka 2004). The results of another study published in 2005 dealing with the publication habits and opinions in the context of „open access“ found their way into a new concept of “funding for scientific publications” (see DFG 2005, Fournier/Mugabushaka 2005). Finally, in summer 2007 the DFG will publish a study on gender aspects related to the DFG's funding system.

The DFG has thus established a broad and electronically accessible data base for analytical and informational purposes related to its own funding activities. Still, quite a lot remains to be done. There is still missing a monitoring system that gives information on output and outcome of publicly funded research in a systematic and structured form and in a regularly updated way.

At this point some further measure was adopted: After a long preparatory phase the DFG in October 2005 began funding its „Institute for Research Information and Quality Assurance (IFQ)“ (see www.forschungsinfo.de). This research institute will initially concentrate on the funding activities of the DFG. It will focus on establishing methods that help answer the question to which degree the DFG is able to reach its fundamental goals – i.e. funding excellence in research, fostering internationality, structural innovation, multidisciplinary and last but not least the promotion of young scientists.

In order to achieve this goal, the task of this institute is mainly to build up expertise in order to

- provide the DFG with empirically based information about the success of its programme portfolio („programme evaluation“)
- develop new data bases which will be useful e.g. for national and international benchmarking purposes („monitoring“)
- develop new methods of gathering, analyzing and presenting data
- help closing the „expert-gap“ in the field by teaching young scientists in the theory and methods of research evaluation

Research activities of the IFQ are related mainly to two topics:

- Qualitative information on the results (“outcome”) of DFG-funded activities (e.g. by publishing the final reports of DFG-funded projects within a DFG-own “open-access”-system)
- Quantitative information about process and output of DFG-funded research (e.g. career of DFG-scholarship holders, on the internationality and multidisciplinary of projects and on countable results (publications, patents and others)).

The innovative approach the DFG follows with the foundation of the IFQ can be seen first of all in the fact that the IFQ is invited instantaneously to use the

DFG-internal knowledge resources and to enrich them by its own informational and scientific activities. For this purpose the IFQ neither acts as a DFG-internal department nor solely as an external agency. This construction that is unique in this worldwide, bears some risk (for example due to the ensuring (and public acceptance) of the scientific independence of the institute. But first of all there are some big opportunities: In a mid-term perspective the close collaboration between DFG and IFQ will result in a corpus of knowledge, which is in the truest sense of the word „process-produced“. It will thus offer an important precondition for a regular and systematic monitoring of funding and research: On the one hand by using the personal knowledge of the DFG-staff as well as of the scientists related to the DFG (e.g. members of its scientific boards, referees, applicants) by regularly organizing expert talks, interviews and surveys for the process of evaluation. On the other hand the IFQ will use the information on the DFG's funding activities held in the DFG-internal databases.

It will take some years until this system is fully established. Nevertheless the collaboration will certainly show some first results in a mid-term perspective. In 2009 the work of the IFQ will itself be evaluated – and by so doing the cooperation model outlined above will itself be evaluated. An agreement on the „output and outcome“ of the IFQ will form the condition for a comprehensive monitoring system beyond the DFG in the sense of the above mentioned „system evaluation“. The IFQ will also then enlarge its activities onto other funding and research organizations. Some particular expectations to the model will arise with respect to one of the latest developments stimulated by those recommendations of the international expert group - the so-called „Excellence Initiative“. This new programme was introduced in 2005. It is carried out in cooperation by DFG and the German Science Council to stimulate the competition between the different research institutes in Germany by offering a substantive amount of additional money for research purposes (see: www.dfg.de/en/research_funding/coordinated_programmes/excellence_initiative/). The IFQ will help all the players involved to measure the mid- and long-term success of this competition.

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European Commission Research Impact Assessment and Evaluation – A Brief Overview²²

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In the last decade or so, most European countries have developed a systematic and professional approach towards the evaluation of public support for research. The trend towards more and better evaluation is in part a reaction to the heightened emphasis on assessing the value for money of public intervention. Increasingly governments want to know what has been achieved by public schemes and whether they can be made more efficient and effective. Such analyses respond to growing calls for transparency and accountability of government spending. Tighter management of public money has also resulted from the reinforced budgetary discipline required under the Stability and Growth Pact.

Since research support measures consume scarce public funds, they have to be justified to society at large and to policy makers as wise investments generating effects that would not occur without intervention (Georghiou:1998). At the same time, the demand for evaluation has been fuelled by the desire of policy makers to understand the impacts of policies and programmes implemented so as to be able to learn from the past, and improve performance

²² "The views expressed are purely those of the writers and may not in any circumstances be regarded as stating an official position of the European Commission."

and avoid government failures in the future. In short, expectations of evaluation have become higher and higher. Simultaneously, its complexity has increased. There is a strengthened determination to improve the performance of research and development systems, with increased emphasis on their socio-economic impact (*An Agenda for a Growing Europe; Facing the Challenge*; EC:2005a). This poses methodological challenges to both users and performers of evaluations (Papaconstantinou and Polt:1998).

The purpose of this paper is to provide a brief overview of European Commission research impact assessment and evaluation. Its focus is first of all on its context, and the change and the continuity that have characterised the Commission's Framework Programme monitoring and evaluation system in the past decade. Attention is also paid to the evaluation studies carried out themselves, and trends in terms of topics, sources, and methodologies are discussed. Finally, some observations are presented on the future of Commission research impact assessment and evaluation.

Challenges facing the 7th Framework Programme

Over the course of the last decade or so, the setting in which the Framework Programme operates and the Framework Programme itself, have experienced great change. As reflected in the formulation at the turn of the century of the broader Lisbon Strategy (including the Barcelona and Göteborg objectives), the simultaneous achievement of economic, social, and environmental policy goals has moved higher on the agenda. The European Union has been enlarged three times, with three new members in 1995, ten new members in 2004, and two new members in 2007. The creation of a European Research Area – consisting of an integrated market for research and entailing the close coordination of national and supranational policies - is being pursued vigorously. In response to enlargement and the growing importance of research among European Union policies, the expectations of the Framework Programme are growing.

The 7th Framework Programme, for instance, should become a key instrument for realising the Lisbon, Barcelona and Göteborg objectives, which generates a heightened political interest not just in the output of research but also in its socio-economic impacts (growth, competitiveness, employment, and sustainability). The budget will also be much higher under the 7th Programme than under the 6th, and new activities (European Research Council; Joint Technology Initiatives) will be implemented, increasing calls for

accountability and requiring new evaluation approaches. Finally, the evaluation of existing and new activities needs to take account of recent methodological developments. The Commission's research impact assessment and evaluation will, if anything, become more important in the future. The consensus is that in order to meet these challenges, a new approach to Framework Programme impact analysis is required, as well as a significant increase in the time and the resources devoted to it (Georghiou *et al.*:2002; Fahrenkrog *et al.*:2002).

Ex-ante impact assessment

One of the most significant changes in the recent past relating to the Commission's research evaluation system has been the introduction of ex-ante impact assessment.²³ Impact assessment in the field of research was applied for the first time to the Commission's proposal for the 7th Framework Programme (EC:2005a). Within the framework of its 2001 European Strategy for Sustainable Development and its 2002 Better Regulation Action Plan, the Commission took several concrete actions to increase the transparency and quality of its policy design. One of its more important actions was the revision and strengthening of the policy cycle through the introduction of impact assessment, which integrates several sectoral assessments into one global instrument.²⁴ As of 2005, a formal impact assessment is required for all legislative initiatives included in the Commission's legislative work programme.

In an impact assessment, the likely impacts of public interventions are systematically analysed. Impact assessment is an aid to decision-making, not a substitute for political judgement. Although an impact assessment does not necessarily lead to clear-cut conclusions and recommendations, it provides an important input by informing decision-makers of the likely consequences of different policy options. It does this by answering a common set of questions,

²³ To read more about Impact Assessment, see:
http://europa.eu.int/comm/secretariat_general/impact/index_en.htm

²⁴ Impact assessment replaces existing requirements for business impact assessment, gender impact assessment, environmental assessment, SME assessment, trade impact assessment, etc. This integrated approach helps policy makers to assess trade-offs and compare different scenarios when shaping a particular proposal.

and by assessing the issues at stake and the objectives to be pursued. It then identifies the main options for achieving these objectives and analyses their likely economic, social and environmental impacts. The advantages and disadvantages of each option are analysed, as well as any synergies, trade-offs and risks.

Impact assessment is critically linked to ex-post evaluation. To properly inform future actions, it should be based on a solid understanding of the effects of past and ongoing Framework Programmes. At the same time, the objectives and performance indicators defined in the impact assessment will guide future ex-post evaluation work.

Ex-post evaluation

The Framework Programme ex-post evaluation system was introduced in the mid-nineties (EC:1996). Its two main components are yearly monitoring exercises and five-yearly in-depth assessments (so-called Five-year Assessments) carried out at overall and usually also specific programme level. The annual monitoring exercise is intended to be rather light and enable a quick response to issues arising from on-going programme implementation. The objective of the Five-year Assessments, on the other hand, is to provide input for policy formulation and decision-making on the basis of feedback obtained from programme implementation.²⁵

The current Framework Programme ex-post evaluation system has obvious strengths, e.g. its independence and legitimacy. However, the literature has also identified some important weaknesses, which go beyond the issues plaguing all research evaluations (time lag, attribution, additionality, difficulties of measuring qualitative effects, etc.). According to some evaluation experts, the main problem affecting the current system relates to FP design: “The intervention logic that connects the high-level and operational goals of the FP is poorly articulated, making an overall evaluation of the FP difficult. The Framework needs more systematic planning, clearer objectives

²⁵ The careful timing of the Five-year Assessments allows for the combination of an ex-post evaluation of the previous Framework Programme with a mid-term appraisal of the on-going one to formulate recommendations for the next Framework Programme. To read more about the Framework Programme ex-post evaluation system see Durieux and Fayl:1998 and Guy and Polt:1999.

and a stronger link to an evidence base. This would ease evaluation and, arguably, improve FP performance” (EC:2005c).

Other (potential) problems have been identified mainly with regard to the available evidence base and the use of expert panels. A strong and timely evidence base constitutes the main tool for Five-year Assessment expert panels on which to base their assessment and recommendations. Yet a number of studies have highlighted weaknesses in the evidence base available (Guy and Polt:1999; EC:1997; EC:2005c). Sometimes thematic ex-post evaluations have not (yet) been completed, or they focus on different issues, cover different periods, or have been carried out according to different methodologies. That means that panels must work with rather fragmented evidence, or with what is still possible to do in the very short-run. Especially in recent years substantial efforts have been made to address this issue.

In Framework Programme ex-post evaluation, use is often made of external expert panels. As mentioned above, they contribute to independence and legitimacy. However, some observers have considered them to be time and resource intensive (Fahrenkrog *et al.*:2002). Though strict rules apply, others have claimed that it is difficult to avoid completely conflicts of interest.²⁶ Some analysts have suggested that panel members may be put pressure on to promote unrelated agendas and specific interests. And with regard to the 2000 Five-Year Assessment, one scholar noted that “many of the recommendations drew not so much on an evaluation of past FP activities, but on the collective opinions and assessments of the panel member concerning the general structure, and organisation of RTD in Europe” (Georghiou *et al.*:2002). It should however be borne in mind that these problems are not unique to the Framework Programme, but exist in many other industrialised countries’ R&D programmes as well.

The above observations on Framework Programme evaluation are all well-known and well-documented. Indeed, most of the remarks come from the Framework Programme evaluation process itself. But this is also one of the

²⁶ Georghiou:1995; EC:2005c. Panel members cannot have been FP contractors, or members of or experts to any FP Programme Committee during the preceding five years. The organisation for which the panel member works can, however, continue to participate in the FP. So does the panel member after the conclusion of his/her mandate.

great strengths of the system, because transparent and constructive criticism is one of the main vehicles for promoting programme improvement. And indeed many important improvements to the Framework Programme in the past have emanated from comments made at the evaluation stage.

Topics, sources and methodologies

Above we have argued that, except for the recent introduction of impact assessment, the Commission's research evaluation system has remained relatively stable over the past decade. Greater change has characterised the evaluation studies carried out themselves. New topics are being explored, studies are based on new kinds of sources, and use is made of innovative methodologies.

In past Framework Programme ex-post evaluations, substantial attention used to be paid to analysing participant characteristics (e.g. type of institutional actor, country of origin, region of origin, etc.) and R&D inputs. At the same time, much emphasis was put on counting project outputs in order to arrive at total and average (per project) numbers of publications, patents, etc. This has not disappeared. But attempts are now made to profile programme participants in more innovative ways. This includes analysing their scientific (e.g. numbers of publications, numbers of citations, citation impact scores) and technological (e.g. numbers of patents) quality, the nature of their participation (one-time vs. repeat participation), the nature of their networking behaviour (stable vs. changing partnerships), etc. From merely counting project outputs, the emphasis has also shifted to assessing Framework Programme aggregate impacts on Europe's scientific and technological performance, and on research capacity, or on the European economy and society.

The study of such more challenging topics can be embarked upon because of the mining of new data sources. Framework Programme ex-post evaluations used to be based mainly on surveys (interviews or written questionnaires) and end-of-project reports. However, attempts are now made to, for instance, create cleaned and consolidated participant databases at the individual scientist rather than just the institutional level, and to link them with bibliometric and patent databases. The use of bibliometric and patent data almost by definition also entails the use of new methodological approaches and techniques. Within this context, mention should be made of the use of econometric models to estimate the impact of the Framework Programme on the European economy,

as was done in the impact assessment of the Commission's proposal for the 7th Framework Programme.

The way forward

Against this background, several steps are envisaged to improve the Framework Programme's impact assessment and evaluation system. Impact assessment has already become and will also remain in the future a standard tool for the development of important new policies, and its articulation with ex-post evaluation should further be strengthened to advance the efficiency and effectiveness of EU research policy design. Important changes are envisaged for ex-post evaluation as well. A clearer formulation of the intervention logic in the 7th Framework Programme proposal with clear and measurable objectives and the monitoring of their progress will facilitate the ex-post evaluation of the 7th Framework Programme. A comprehensive effort will be made under the next Framework Programme to ensure that the ex-post evaluation will be based on a wide range of completed, focused and methodologically standardised ex-post evaluation studies (EC:2005b).

Continued efforts will also be made to explore new topics, sources, and methodologies. There is, for instance, a great need to assess better whether project outputs/impacts were the result just of a research project being carried out, or of a research project being carried out at European level. Important questions also remain regarding the optimal mix of partners in a project, or the optimal size of networks. Also, what constitutes a project of critical mass? Does it relate to the number of partners? To the level of funding? How does critical mass interrelate with flexibility, with cohesion, with excellence? Is repeated Framework Programme participation and is stability of networks across Programme calls and even across different Framework Programmes a good thing or a bad one, and when does it become excessive? To answer these questions further efforts will have to be made to consolidate and link databases. New methodologies will also need to be explored, especially those being able to shed a light on questions of causality. For instance, does participation in the Framework Programme increase the quality of an individual scientist or institution, or does it attracts already excellent scientists and institutions? As much as possible, methodological development in the field will be supported by including relevant research topics in the Framework Programme's work programmes. It will also be supported through Commission networking. Networking is first of all required in-house, so that

methodologies may be standardised. But external networking is also needed so as to achieve complementarity between European Commission and national level Framework Programme evaluations.²⁷ Those networks also allow sharing and comparing hard evidence of the impact of research policies at regional, national and EU levels and will help identify what is done best at each level, and how to design the S&T governance model in the most efficient and effective way.

Evaluation needs to change its image, and indeed is starting to do so in some countries, away from the rather dry and tedious compliance model, and more towards 'understanding' as the basic objective. This will require not only new topics and new ways of doing things, but a new confidence that must be engendered amongst the users of impact assessment and evaluation results. In the past, evaluation practitioners have too often stuck to a rather technical and limiting approach in the presentation of evaluation findings. This touches upon the positioning of impact assessment and evaluation, which is not something which can stand apart but has to become better integrated in the policy cycle – of course the introduction of impact assessment and the link with ex post evaluation is part of this.

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²⁷ Within this context, DG Research set up the European RTD Evaluation Network in 1997 to enhance co-operation between the national RTD evaluation units/agencies or agencies concerned with evaluation and the relevant Commission Services. To read more about the RTD Evaluation Network: http://www.cordis.lu/fp5/monitoring/rtd_evalnet.htm.

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Harald Katzmair & Wolfgang Neurath

Evaluating the Innovation Potential in Networks

The network perspective leads to surprising insights into the structure and dynamic of innovation. Duncan Watts shows in his Book “Six Degrees” that the strength of Toyota Motor Corporation does not exist within the firm itself, but rather originates from its supplier and customers’ network structure as a self-organizing and emergent system. He suggests that not only immediate selling and buying ties but also strong ties beyond one-step ties critically determine the efficiency, adoptability and robustness of Toyota suppliers’ transaction network (WATTS 2004).

In this respect social networks constitute the intangible infrastructure for innovation. Networks provide an immaterial environment for any economic agent. The topology and structure of a network is crucial for its ability to be innovative, to solve problems, to produce exchange and accumulate values.

The exploration of the social structure, in which an actor or a group of actors is embedded, helps us to understand the “logic” of social capital. Normally excellence is modeled as a function of human or economic capital, and social capital analysis is not performed. This is in a sense a missed opportunity because a structural analysis of the innovation landscape by means of a social network would allow one to evaluate the innovation potential embedded in the link structure. Social capital seen as the economic value of being connected refers to the collective value of social networks and the inclinations that arise from these networks in terms of opportunities for success (i.e., for instant: breakthroughs)

The excellence of social structure can be explored and measured only if the following two questions are answered.

- Which objective function does the network have to fulfill and how good is this function carried out?

- Which is (should be) the output (standards and evaluation system):

A. Evaluation of the network structures

- Embedding

In which social fields and structures is a person, project or organization embedded in? Are there alternatives; are other transaction networks available, etc.?

- Function within the network

What is the position of an actor or of a group of actors within the network? Is the actor part of the group of strategic actors (key players, insiders, local players) or not? How can the actor perform better in terms of networks position?

- Fit between output and network topology

How strong is the match between the structure of the network and the objective function of the value added chain? Breakthroughs, incremental innovations, production and diffusion and adoption should correspond to different network structures (see Figure 1)

- Network indicators for measuring excellence

There are a number of different network indicators that can be used to assess the excellence of networks. Essentially we discriminate between indicators measuring the efficiency, the stability or the diversity of the network. For more information check the study “excellent networks”, downloadable from the homepage of the Austrian Council for Research and Technology Development (www.rat-fte.at).

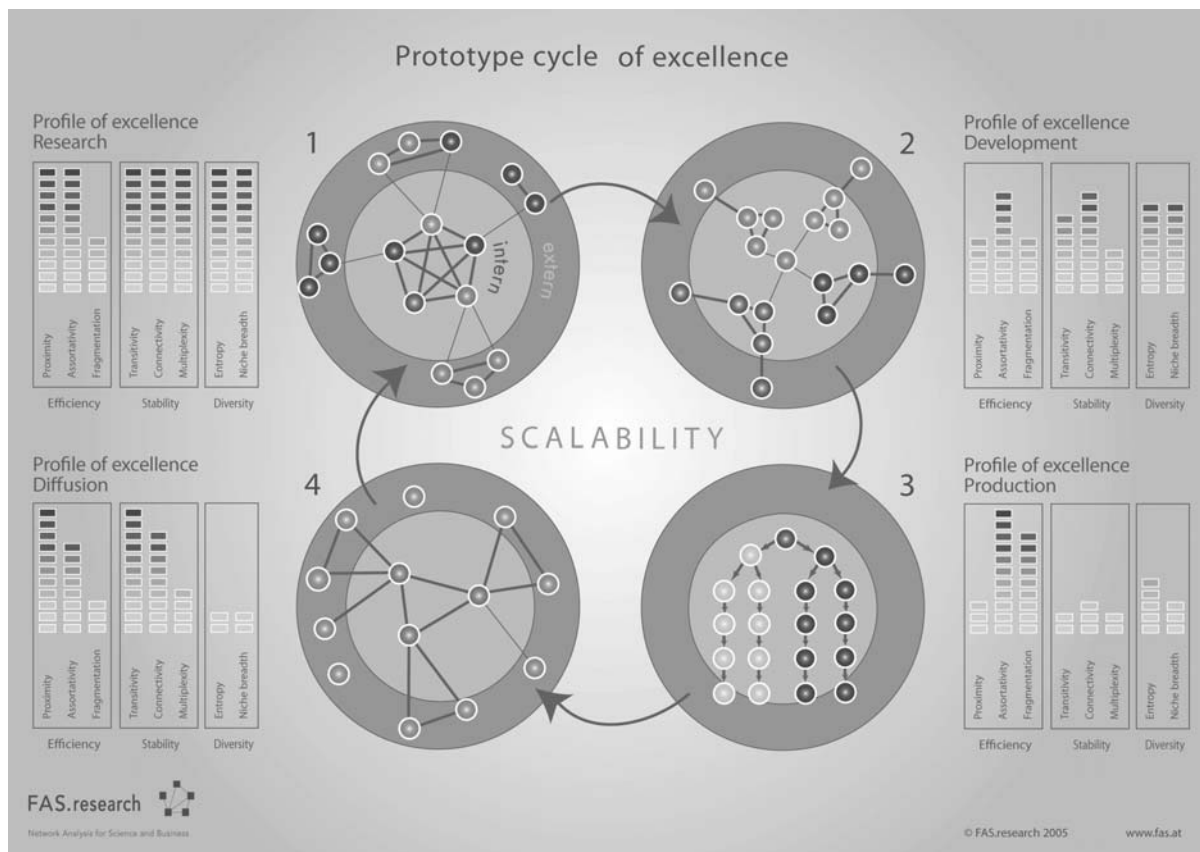


Figure 1: Excellence cycle

B. Evaluation of the network culture

- Evaluate the diversity within a network

The diversity within the set of actors is decisive for the potential of the network to generate innovation. "Linked diversity" is necessary for innovation, because it allows for a new recombination of already existing knowledge. It shows the degree of connectivity between so far not linked areas/fields.

- Evaluate the language, which is spoken between the network partners

Analyze the language(s), which is (are) spoken within a network. Multilingualism, "pidgin formalization" and the existence of formal languages (logic, mathematic, algorithms) are the condition that "communication" between different areas of knowledge will occur.

- Evaluate the fabrication and selection of new ideas and projects

Does the the network produce a surplus of innovative ideas? – Are there enough incentives for the production of new ideas in the network culture? How are these ideas selected for the next steps of the innovation processes? From 100 ideas only 10 are really good and 3 will develop further. How is the connection between idea production and selection organized? Is the sorting related to value added chains (input-output relations) or is it a “political” decision inside of a peer review procedure?

- *Evaluate the culture in terms of trust (triangulation)*

To accelerate the diffusion of an innovation trust, embedded in a structure, is a key resource. In structural theory trust is always a matter of at least 3 agents linked in an triangle. The more common “peers” and “friends”, the higher the pressure on the relation to continue even in cases of conflicts of interests (Law of transitivity). Especially triangularized links between producers and early adopters are the key to successful diffusion of innovation. Are there any structures of trust between producers, innovators, adopters? Or do you find dyadized, instable links?

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Intellectual capital reporting and evaluation in Austrian universities: relationships and complementarities

Adopting the idea of intellectual capital reporting

In the last couple of years, the instrument of Intellectual Capital (IC) Reporting has gained importance for research organisations and universities. According to the new university law, Austrian universities are obliged to publish IC Reports annually from 2006 on (Universities Act 2002). Thereby, standardised indicators about the resources, processes, outputs and impacts have to be published. IC Reporting delivers information for the management and government of universities and is related to the broader trend towards accountability and the systematic use of bibliometric indicators and performance measures. In the following, the relationships, complementarities and trade-offs with evaluations are to be illustrated.

The instrument of IC Reporting aims to provide information on the various forms of intellectual capital of an organisation and its intangible outputs. The idea was developed within industry in the 1990s as a response to the ever increasing investments in intangible assets or intellectual capital²⁸ such as employees' training, innovation, research and development, customer relationships or software and the lack of existing accounting methods to provide sufficient information for managing these investments. Evidently for knowledge-intensive organisations such as universities, intellectual capital is relevant since their most important resources and outputs are intangible by nature and have to be managed more systematically in order to increase the

²⁸ These terms are often used synonymously in literature (e.g. Teece 2000) although the accounting profession prefers the term intangible assets as these are more stringently defined to address the demands for a capitalisation in the balance sheet.

communication with funding bodies, industrial partners, and the public in general.

IC reports usually separate different forms of intellectual capital such as human capital, structural capital and relational capital and illustrate the development and impact of these investments on the organisational performance. Accordingly, for each element of intellectual capital, financial and non-financial indicators are selected to measure the development, growth and productive use of intellectual capital. Apart from indicators, qualitative interpretations, narrations and visualisations are important methods to capture and value intellectual capital, which is difficult to express by numbers generally (Mouritsen et al. 2001).

In the course of the development of the new university law (Universities Act 2002), the Ministry adopted the idea of IC reporting especially in order to enhance transparency, to foster the management of intangible resources and to facilitate competition.²⁹ With IC Reports two aims are intended: Firstly, comparable and reliable information for the universities' management should be provided. Thereby, the underlying thesis is that the proper management of intellectual capital at universities has an impact on the performance and efficient use of the invested financial funds. Secondly, information for external stakeholders should be published which is also to support the formulation of the science and education policy. The Ministry should be informed about the development of the national university system, the strengths and weaknesses in specific scientific fields and should thus get data for effectively adapting the national science and education policy. Standardised and comparable indicators should thus also allow internal and external benchmarking. In addition, IC Reports still provide valuable information for possible evaluations, which are also to be carried out obligatorily by universities according to the new university reform. However, this link is not explicitly mentioned within the law.

Budget allocation decisions will not be directly bound to the IC report but governed by the use of performance agreements and a formula-based budget,

²⁹ The IC Reports thus extend and elaborate the former system for gathering data from Austrian universities, organised by the so-called *Arbeitsbericht des Institutsvorstandes* (ABIV).

which makes up to 20% of the total budget. While the performance agreement only deals with the issues negotiated within the performance contract, the IC reports should give universities the opportunity to report on their full range of activities. However, some performance indicators used in the performance agreement and formula-based budget are based on or associated with some IC indicators.

Besides performance agreements and IC reports, evaluation is the third main instrument for the governance and management of Austrian universities.³⁰ In Austria, evaluations at universities do not have a long history and were only occasionally carried out in the past. However, especially for teaching evaluations have become popular in the last few years, mainly driven by the students' body. In addition, in the past some universities, departments and research programs have been carried evaluations in the course of the reorganisation. According to the new law, internal and external evaluations have to be institutionalised for all universities. Evaluations have a focus on the assessment of the quality of research and education as well as the research staff and are to be carried out at least every three to five years.

After a negotiating phase between the Ministry and the Rectors' Conference at the beginning of 2006, a regulation was issued which specifies the structure, content and indicators of the IC Reports (*Wissensbilanz*) to be published by all public Austrian universities. The new regulation defines about 60 indicators in the different categories (*Wissensbilanz-Verordnung 2006*).

In the following, the relationship, possible complementarities and trade-offs between IC reporting and evaluations should be illustrated. Thereby, the question of the i) aims, ii) methods, and iii) conceptual framework of both instruments will be addressed.

Ad. Aims:

IC reporting for Austrian universities should fulfil two aims: Firstly, it should provide the management with information on intangible resources. The implementation of an IC Report requires the discussion of goals and strategies;

³⁰ For a more detailed discussion of IC reporting, evaluation and performance measurement see Leitner (2004).

the IC model should support these discussion processes as well as allow to monitor the achievements of goals over the years. Secondly, IC Reports should provide external stakeholders with information about the development and productive use of the intellectual capital. Thereby, in particular, the Ministry should get useful information for the definition of the science and education policy.³¹

The overall aim of evaluation according to the new Austrian law is to improve the quality of research and teaching. Yet, the extent and detailed procedure of all evaluations have to be defined by the university statutes. Universities should carry out internal evaluations on an ongoing basis, whereby the performance of university professors, lecturers, and other staff shall be regularly evaluated - at least once every fifth year. External evaluations should take place after an inquiry from the rectorate, the university council or the Minister. According to the university law, the results of all evaluations should be released to the management and governing bodies of the university.

Thus, IC Reporting and evaluations are both methods which help the university management as well as the stakeholders, especially the Ministry, to support their decision-making processes.

Ad. Methods:

In line with the international practice of IC reporting in the research sector, universities will have to disclose measures about inputs, processes and outputs. In addition, qualitative valuations, narrations and other methods can be used by the universities according to the university law.³²

In contrast to IC Reporting, the range of the methods used within evaluations is usually larger. Evaluations are generally based on different methods to be

³¹ Scholars who published their experiences with IC reporting in the university context stated that IC reports serve as management and communication tool and help to formulate strategies and facilitate managerial discussions about values or outputs (Biedermann et al. 2002).

³² IC indicators can also be used to perform quantitative performance evaluations such as Data Development Analysis. Leitner et al. (2007) have carried out such an analysis for Austrian universities based on the precursor of the IC Report. Data was provided by the *Arbeitsbericht des Institutsvorstandes* (ABIV).

chosen such as quantitative tests, qualitative approaches, interviews, bibliometry, self-assessments and benchmarking. Although evaluations often rely on qualitative methods, in recent years different kinds of indicators have increasingly been used, e. g. gathered by questionnaires.

Obviously, IC reports could provide valuable information for evaluations since they deliver standardised and comparable data. This possible link is, however, not explicitly referred to in the new law. IC reports offer various indicators which can be selected by the evaluators accordingly. In general though, possible dysfunctional sides of using quantitative measures such as ‘goal displacement’, ‘creating misleading incentives’, or ‘bean counting’ have to be considered. Consequently, a thorough implementation process is demanded in order to avoid these possible negative outcomes within Austrian universities.

Ad. Conceptual framework:

The conceptual framework for IC reporting of Austrian universities is based on a process-oriented approach: The model visualises the knowledge production process within universities and consists of four main elements: goals, intellectual capital, performance processes and outputs. With this model, the transformation process of intangible resources, which can be interpreted as inputs, during the execution of different activities (research, education etc.), resulting in the production of different outputs, is visualised. IC Reports explicitly focus on the intellectual capital and hence enlarge the existing input and output categories of traditional performance measurement systems. Within this context recently published studies clearly show that management matters and that the proper management of relationships (Katz und Martin 1997), structures (Hollingsworth and Hollingsworth 2000) and human resources (Parisi und Rossi 2005) has a positive impact on the performance of research institutes.

The logic of the IC model is also similar to conceptualisations of innovation and research processes developed within the innovation and evaluation literature, which frequently separate inputs, processes and outputs, too (e.g. Roessner 2000). Stufflebeam (1983), for instance, proposes that evaluations have to analyse i) the context (e.g. what are the aims of the unit?), ii) inputs (e.g. human resources and tangible resources), iii) processes (e.g. the activities by the programs or institutions), and iv) products (e.g. the results of the program). Within this context, the terms of input, process, and output

additionality are also getting increasingly popular in theory and practice (Gheorghiou 2002). Here, the IC reports provide structured data related to questions on the efficient use of inputs, the effective organisation of processes and the generated output, which can, in turn, support evaluations.³³

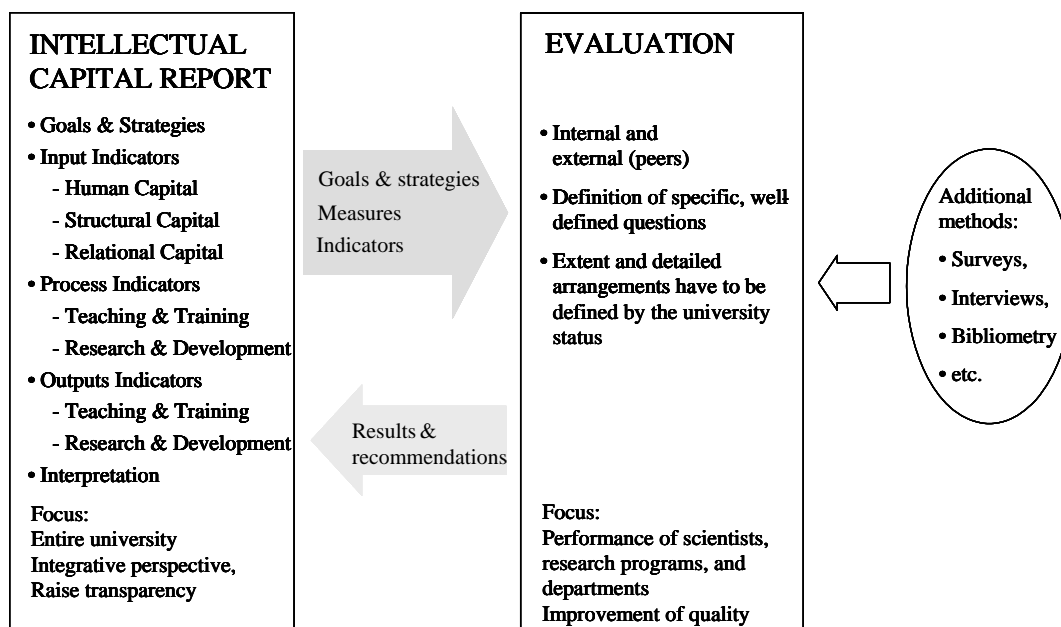


Fig. 1. Relationships between IC Reporting and Evaluation

Fig. 1 illustrates the main relationship between the two instruments for the management and governance of Austrian universities as outlined by the new university law. IC Reports are to be made by the university itself and will deliver comparable data which might then be used in various evaluations, complemented by the specific methods and information gathered during evaluations. Thereby, evaluations address specific questions (e.g. performance of professors, research priorities, etc.) and might hence interpret the information in a quite different way than IC reports.

Comparing both approaches, there is hardly any trade-off between external evaluations and IC Reporting. However, interpreted from the perspective of

³³ However, the term process has to be used with caution here since within the evaluation literature it also sometimes means behavioural effects, whereas in the context of IC reporting it is used in the sense of transferring inputs into outputs.

the university law, there is some potential overlapping between internal evaluations and IC Reporting as both seek to support regular management decisions. It is thus up to the universities to carefully design and integrate internal evaluations and IC reports within the management system in order to avoid possible redundancies. Yet, IC Reports could also be regarded as instruments that can substitute traditional internal evaluations as they provide regularly standardised measures.

Summary and Outlook

Austrian universities will have to publish IC Reports in the future and disclose a set of well-defined indicators about intellectual capital and the organisational performance. In contrast to evaluations, - but also performance measurement systems and quality management instruments which have become popular for the management and governance of universities -, IC Reports explicitly focus on the intellectual capital and thus enlarge the existing input categories of traditional accounting and management control systems.

Whereas external evaluations can analyse more complex problems, IC measures are more able to meet the demand of objectivity. Moreover, the evaluation literature calls for the integration and use of quantitatively comparable measures (Daniel 2001) which IC reports can provide. The IC measures defined by legislation do not only provide the basis for the interpretation of the universities' development within the IC Report but deliver information for funding decisions, benchmarking and evaluations. Thus, they provide information which other stakeholders can use for their decision-making process considering their specific background, rationales and aims. Moreover, results of evaluations might also deliver lessons for the development and interpretation of the IC Reports.

A critical challenge for both instruments is to use their inherent potential for organisational learning. In order to fulfil this task, the adoption and use of the conclusions and results provided by the evaluations or IC reports is required. Definitely, a careful implementation process has to guarantee that the indicators and results are discussed and interpreted across the organisation. Clearly, the huge number of indicators is unlikely to be controlled thoroughly and universities have thus to define the most relevant measures which on the one hand express their specific goals and strategies, and on the other hand have the strongest impact on the output.

Yet, by regularly providing information, IC Reports can, to some extent, substitute the intensive use of internal evaluations and make external and internal evaluations more efficient as they deliver comparable data which can furthermore be used for benchmarking and even rankings. IC reporting and evaluations can hence be regarded as complementary instruments to support the universities' strategic management activities and organisational learning.

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Klaus Zinöcker, Alfred Radauer, Michaela Topolnik, Wolfgang Neurath, Julia Schmidmayer

Evaluation Reports in Austria's R&D Policies

A Compendium

The following pages form the core element of the present compendium. As part of their efforts to survey all the evaluation procedures instituted in recent years, the editors of this book requested government ministries, agencies and evaluators to open their archives and also conducted additional research both online and in libraries. Although every effort has been made to ensure completeness, it is possible that a small number of evaluations have not been included as they were unavailable to the authors at the time of going to print.

Evaluation is a very broad concept and in principle almost anything can be evaluated. In practice, however, and especially where public-sector measures are concerned, the use of this instrument is limited to certain categories such as institutions, programmes and policies. For the readers' convenience we have structured the reports along these lines.

Institution - This refers to physical institutions (mostly of a permanent nature). Any kind of institution can be evaluated. In this context there are three main types which need to be considered: universities which combine both research and training, research institutions, and funding organisations or agencies.

A *programme* is a combination of interventions where the underlying intentions refer to one another (projects, measures or sub-programmes) and which are aimed at achieving a specific, previously defined objective. A programme usually has a well-defined time frame, is centrally managed, has its own centrally administered budget and a clear hierarchical structure. In contrast, a project is an individual, indivisible measure with its own fixed time plan and its own budget.

A *policy* constitutes a set of activities (programmes, procedures, regulations, etc.) which may be very different in type but which share a common motive or

objective. They usually only refer to a generally defined policy area (e.g. labour market policy, or social policy). Unlike projects and programmes, a policy is generally not restricted in terms of time or budget.

The section of the chapter dealing with programmes is subdivided according to the time when the evaluation takes place:

- *Ex-ante evaluations* start before the project begins and focus on the future. Above all, they improve the internal structure of programmes and extend the ability to steer such undertakings from within.
- *Interim evaluations* are carried out while a programme or project is running, or while an institution or policy is in operation.
- *Ex-post evaluations* begin after the programme or project has been completed (or a policy has expired, or an institution has ceased to operate) and retrospectively examine its development, outcomes and impacts (where possible). In some cases, the editors assigned evaluations to the relevant categories with a certain degree of caution. An overview of the reports listed is provided at the beginning of each sub-chapter in the form of tables.

The information provided in the evaluation reports is presented both in table form and executive summaries (one to four pages each). The tables summarize the title, authors and their affiliation, the party who commissioned the evaluation ('client'), the language (most of the reports are in German), the date of publication and the methods used. Finally, there is a link to the full report on the Platform's website (www.fteval.at). In most cases, this information and the executive summaries were provided by the authors of the respective evaluations.

As mentioned above, almost all the reports presented can be downloaded from the Platform's website www.fteval.at. (see "Evaluation Studies" using the special search function). All evaluations carried out in recent years are arranged according to the categories used in this book. The website is dynamic and will be regularly updated.



Evaluation of Institutions - Overview

<i>Title</i>	<i>Date</i>	<i>Download available</i>
<i>Evaluation of the Christian Doppler Research Association (CDG)</i>	<i>October 2005</i>	<input checked="" type="checkbox"/>
<i>Evaluation of the ACR growth programme 1999-2003</i>	<i>July 2005</i>	<i>Summary</i>
<i>Evaluation Process at the Austrian Academy of Sciences</i>	<i>2005</i>	<i>Summary</i>
<i>Evaluation of the Austrian Support Structures for the 6th Framework Programme for Research and Technological Development</i>	<i>October 2004</i>	<input checked="" type="checkbox"/>
<i>Systems Evaluation of the University of Natural Resources and Applied Life Sciences, Vienna, BOKU</i>	<i>October 2004</i>	<i>Summary</i>
<i>Evaluation of the Ludwig Boltzmann Association</i>	<i>August 2004</i>	<i>Internal use</i>
<i>Evaluation of the Austrian Industrial Research Promotion Fund (FFF) and the Austrian Science Fund (FWF)</i>	<i>May 2004</i>	<input checked="" type="checkbox"/>

<i>Evaluation of the Austrian Industrial Research Promotion Fund (FFF) – Impact Analysis</i>	<i>March 2004</i>	<input checked="" type="checkbox"/>
<i>Evaluation of the Austrian Science Fund (FWF) – Impact Analysis</i>	<i>March 2004</i>	<input checked="" type="checkbox"/>
<i>FWF Governance and Processes</i>	<i>March 2004</i>	<input checked="" type="checkbox"/>
<i>FWF and other R&D funding agencies and instruments in Austria</i>	<i>March 2004</i>	<input checked="" type="checkbox"/>
<i>FFF and other R&D funding agencies and instruments in Austria</i>	<i>March 2004</i>	<input checked="" type="checkbox"/>
<i>Evaluation of the FFF and FWF: FFF: Internal functioning and customer satisfaction</i>	<i>March 2004</i>	<input checked="" type="checkbox"/>
<i>Evaluation of the University of Music and Dramatic Arts Mozarteum Salzburg</i>	<i>April 2004</i>	<i>Summary</i>
<i>Evaluation of all Faculties of the University Salzburg</i>	<i>2003/04</i>	<i>Summary</i>
<i>Evaluation of Architecture Schools in Vienna</i>	<i>2003</i>	<i>Internal use</i>



Evaluation of Christian Doppler Research Association (CDG)

<i>Title</i>	Evaluation of the Christian Doppler Research Association (CDG) [Evaluierung der Christian Doppler Forschungsgesellschaft (CDG)]
<i>Authors</i>	Andreas Schibany, Brigitte Nones, Julia Schmidmayer (Joanneum Research) Leonhard Jörg, Katharina Warta (Technopolis) Sonja Sheikh (KMU Forschung Austria) Jakob Edler (Fraunhofer – ISI)
<i>Institutions</i>	Joanneum Research, Technopolis, KMU Forschung Austria, Fraunhofer – ISI
<i>Client</i>	Austrian Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German, English executive summary available
<i>Date</i>	October 2005
<i>Type</i>	Institution Evaluation
<i>Methods</i>	Descriptive and comparative statistical analysis of survey data, descriptive and comparative statistical analysis of secondary data, online-survey, telephone-interviews, face-to-face interviews, case studies, scenario-development
<i>Source</i>	http://www.fteval.at/files/evstudien/CDGEval.pdf

The CDG funding model represents an effective and uncomplicated instrument for creating the framework for a long-term collaboration between scientists and companies. The incentives are self-consistent and the organizational setting has shown itself appropriate for administering funding.

The CDG's administration is efficient, its decisions are fair and it is relatively unbureaucratic. The CDG funding model thus has an established place in Austria's portfolio of research funding programmes. The CDG funding model is sufficiently flexible to be applied to different collaboration cultures and constellations. This flexibility is indispensable in funding application-oriented basic research. At the same time, the expectations of the stakeholders are realistic.

The CDG's fundamental principles should be maintained, meaning above all that the CDG Programme should not become overloaded with goals and that the CDG's potential for development should be realistically assessed based on the organization's available capacity.

In preparing an annual report designed for the public, the CDG should use the possibility to intensify its PR work and thus to increase the visibility of the organization. In this way target groups could be more effectively addressed and unused potential tapped, which would also help in justifying supporting the programme from the public purse. The annual reports of individual CD laboratories represent an important basis for assessing their success; a comprehensive overall annual report prepared by the CDG itself, with a compilation of information on the CD laboratories, would form an important document for the general public. More intense PR work could also be used to communicate better the attractiveness of the CDG for foreign companies.

The programme is already open to foreign companies and this feature should constantly be stressed. Strategies should be developed based on effective transfer mechanisms and specific forms of co-financing to intensify still further the establishment of laboratories abroad. The fundamental value to an Austrian company of a CD laboratory abroad is beyond doubt. Individual cost-benefit analyses must be performed to assess the value for the Austrian research system.



Evaluation of the ACR

<i>Title</i>	Evaluation of the ACR growth programme 1999-2003 [Evaluierung der Wachstumsförderung 1999-2003 der Kooperativen Forschungseinrichtungen der österreichischen Wirtschaft]
<i>Authors</i>	Fritz Ohler
<i>Institutions</i>	Technopolis
<i>Client</i>	Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	July 2005
<i>Type</i>	Institutions Evaluation
<i>Methods</i>	Interviews, analysis of funding data
<i>Source</i>	<i>Only German summary available</i> http://fteval.at/files/evstudien/ACR_summary.pdf

The Austrian Co-operative Research Institutes have been funded by the Federal Ministry of Economic Affairs and Labour from 1999-2003 in order to upgrade their research capacity and to stimulate their research activity. Generally, research activities have been increased amongst the majority of the institutes. However, in most cases, major parts of the increase is owed to increased public funding. On the other hand, some of the institutes have experienced a significant increase of contract-based research activities. As a general recommendation, funding decisions should be made on the quality and attractiveness of overall business plans rather than on specific research activities.



Evaluation Process at the Austrian Academy of Sciences

It is the task of the Austrian Academy of Sciences to promote academic science in all fields from every perspective, particularly in terms of pure research. Accordingly, the Academy lays claim to commensurate sponsorship from public funds. It is the first research institution in Austria to establish a mechanism for permanent quality assurance through the regular publication of its Medium-Term research Programme, which forms the basis for continuation, re-orientation or conclusion of the various research institutions. The evaluation process is intended to serve programmatic orientation of the Academy and, at the same time, to ensure academic excellence on a sustained basis.

In the period 1995 to 2001, the Austrian Academy of Sciences has commissioned a systematic evaluation of all its research institutions by external experts in the relevant specialist subject areas. In the frame of its current Medium-Term Research Programme, the Academy initiated a second run of evaluation of its research institutions starting with the year 2002. Thus the Academy is reaffirming its ambition to achieve outstanding quality in its research activities, at the same time issuing an invitation to critical and attendant observation.

The current Medium-Term Research Programme is intended to lead to the adjustment and amendment of the Academy's research aims in terms of both content and structure, and to present an opening for discussion on the following:

- The future content of research activities;
- The structure of individual areas of research; and
- Rigorous implementation of specific recommendations.

Based on its positive experience, of the Austrian the Academy will retain the format of an external evaluation by independent experts as a central element of quality assurance. Furthermore the Austrian Court of Auditors acknowledges

explicitly, in its report of the examination of the Austrian Academy published in the year 2004, the achievement of the Austrian Academy of Sciences by implementing an Evaluation process of its research institutions. However the Court of Auditors identified opportunities of improvement.

In order to meet the recommendations of the Court of Auditors and to improve the ongoing Evaluation process at the Austrian Academy of Sciences, the Presiding Committee of the Academy decided in January 2005 to establish an internal working group, with the mission, to report on necessary adjustments and amendments of the administrative procedure of the Evaluation process at the Academy.

The report this working group and the decisions of the Presiding Committee there from concentrated on the following main topics:

- Strategy process
- Medium-term research Programme
- Implementation in the decision making structure
- Increasing of Transparency
- Course of Evaluation process

The role of the Evaluation process as an external, highly qualified and future oriented initiative for the Medium-term research Programme of the Austrian Academy of Sciences has been strengthened of the past years. The Academy asks esteemed, international, scientific Institutions to propose selected, foreign researchers of the appropriate academic standing who are willing to assume responsibility for and take the initiative with regard to the formation and leadership of an external, international Evaluation Committee of experts for a particular field of research. With respect to the Autonomy of the Austrian Academy of Sciences, the Presiding Committee selects one person out of this proposed pool of specialist as head of an Evaluation Committee. The head of an Evaluation Committee, selects the further members of the Committee, as in the past, without any influence of the Academy.

The Evaluation Committee is asked to elaborate proposals for the Academy in terms of desirable avenues of research and options for implementation. In the context of this process, the Committee takes account of any changes of

emphasis in the Academy's research which may impact upon such proposals, including any new institutions, restructuring, or facility closures.

The role of the Evaluation Committee is to submit proposals on its own initiative and determine the current status of a particular area of research, whereby consideration must be given to existing circumstances (research topics, identity of researchers, sponsors organizations, forms of research organization, time and resource horizons, opportunities and threats). Further, the Committee is expected to elucidate topical and academically pertinent options, describe trends, and set out new research approaches. Options for implementation must also be recorded in writing in summary, condensed form, and in terms comprehensible to academics from other disciplines.

The Evaluation Committee uses all requisite internal and external sources of information (such as, for instance, Academy fellows and Presiding Committee members, staff of the Academy's research and administrative institutions, institute advisory boards, and internal Academy documentation such as annual reports and accounts).

Following a provisional Evaluation Committee appraisal, the Presiding Committee convenes an internal discussion and invites the heads of the relevant research institutions and the competent supervisory bodies to respond. At the level of the relevant specialist subject areas, the Evaluation Committee takes account of the outcome of this discussion process in preparing their proposals and making recommendations to the Academy. This may lead to modifications in the various subject-specific provisional appraisals prepared by the Evaluation Committee.

Several associated research institutions are combined to form a field of research, which is evaluated by the Evaluation Committee. The necessary heterogeneity of the Evaluation Committee in terms of subject expertise ensures assessment from a broader disciplinary perspective. In any event, the Academy's large number of research institutions would not permit a separate evaluation of each individual institution.

The Academy's various fields of research have been and will be studied in terms of their medium-term research planning according to the following areas of research:

In the period 2003 to 2005:

- Austria, the Danube Region and Europe
- Social Sciences
- Solid-State Physics, Biophysics and Earth Sciences
- Asian Research and Social Anthropology

In the year 2002:

- Particle Physics and Mathematics
- Information Sciences
- European History to 1500

In the period 2006 and beyond

- Limnology, Behavioural Research and the Environment
- European Languages and Literatures
- Space Research, Astronomy and Atmospheric Physics
- Historical Sciences of Antiquity
- Prehistory and Palaeontology
- Biology and Medicine

Source

Bernhard Plunger, *Evaluation Process at the Austrian Academy of Sciences*, see

http://www.fteval.at/files/evstudien/Austrian_Academy_of_Sciences.pdf



Austrian Support Structures for the 6th Framework Programme

<i>Title</i>	Evaluation of the Austrian Support Structures for the 6th Framework Programme for Research and Technological Development [Evaluierung der österreichischen Betreuungsstrukturen für das 6. EU-Rahmenprogramm für Forschung, technologische Entwicklung und Demonstration]
<i>Authors</i>	Sonja Sheikh, Iris Mandl, Alfred Radauer (KMFA) Jakob Edler, Vivien Lo, S. Hafner (Fraunhofer)
<i>Institutions</i>	Austrian Institute for SME Research (KMFA), Fraunhofer ISI
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German (Executive Summary available in English)
<i>Date</i>	October 2004
<i>Type</i>	Evaluation of Institutions
<i>Methods</i>	Face-to-face interviews, telephone interviews, online survey, document analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/support_structures_6thfp.pdf

In Austria, an intermediary and regionally differentiated system has been set up in order to support and advise Austrian researchers on issues related to the 6th EU Framework Programme for Research and Technological Development. Four ministries are responsible for the preparation and the implementation of the EU Framework Programmes, with the Austrian Ministry for Education, Science and Culture (bm:bwk) taking the leading role. These public bodies have put the Bureau for International Research and Technology Cooperation (BIT) and the Regional Advice and Support Centres (RBBZ), namely, APS – European Programmes for Technologies and Training (Graz), BEP – Office for European Programmes (Innsbruck), CATT – European Programmes for Technologies and Training (Salzburg) and CATT – Innovation Management Ltd. (Upper Austria) in charge of consulting Austrian researchers and optimising the Austrian involvement in the 6th EU Framework Programme. On a strategic level, Austrian researchers may also refer to programme delegates for advice or counselling. Programme delegates are the official Austrian representatives for the 6th Framework Programme within the ministries. By being part of the so-called NCP network (National Contact Points) the Austrian Space Agency (ASA) and the Austrian Academy of Sciences (ÖAW) complete the array of institutions that form the Austrian support structures for the 6th EU Framework Programme.

Against the background of the benefits one can expect from a high Austrian involvement in the EU Framework Programmes and the manifold requirements for an adequate intermediary support system, the Austrian Institute for SME Research (KMU FORSCHUNG AUSTRIA) and the Fraunhofer Institute for Systems and Innovation Research (Fraunhofer ISI) were assigned the task of evaluating the Austrian support structures for the 6th EU Framework Programme. The aim of the evaluation was to analyse the structures and institutions with respect to their capabilities and their efficiency and to scrutinize the influence of the support structures on participation levels within the European programmes. The evaluation was to provide the basics for enhancements and optimisations of the support structures.

- The overall findings of the evaluation suggest that the support structures can be looked upon very favourably. The online survey has shown that the institutions that form the support structures are very well known throughout Austria. BIT and – in the meantime also – the regional support structures (RBBZ) are well established within their

corresponding regions and their services are being widely used. The results also indicate high satisfaction levels of the researchers with the services of every institution involved, including the programme delegates. Commitment and customer orientation are outstanding for all institutions and their staff.

- The institutions that provide support thus contribute considerably to the mobilisation of Austrian researchers and to the increase of Austrian participation levels and success rates within the EU Framework Programmes. 13 % of all respondents stated that they would not have made a proposal for the EU Framework Programmes if the support structures were not present. In addition to this general “enabling” function, approximately two thirds of the respondents believe that the counselling has improved their proposal either slightly or even considerably. The programme delegates do not play an important role with respect to the writing of proposals. They are, however, important for the researchers if it comes to the strategic classification of project ideas.
- The evaluation results concerning the role of partner search services are ambiguous. Generally, respondents do not view the availability of partner search services as a top priority. It seems, however, to be essential in individual cases.

Against this background and also given the country’s slightly above-average success rate of proposals for the Framework Programmes possible content related improvements are limited to a few – but nevertheless important – single aspects. These improvements should not be achieved by enlarging the system. The focus should rather be placed on specialisation in conjunction with an enhanced division of work as the whole system is – if the size of the Austrian innovation system is taken into account – very large by international standards.

- In this context it seems to be a top priority to better integrate consulting and support for European research assistance schemes with counselling for alternative support measures on a regional as well as federal level. This would also – amongst others– imply improved coordination between the Austrian Research Promotion Fund (FFF) and the Austrian Science Foundation (FWF)

- Another aspect is the enhancement of know-how in juridical matters. Cases in point are special questions or questions that arise in crisis management for which especially the RBBZ often lack the necessary expertise.
- Counselling on feedback about evaluation decisions of the European Commission (related to the submitted proposals for the Framework Programmes) should be eventually improved. This is especially important for the supporting institutions' abilities to inform their customers sufficiently on rejection reasons and to learn the corresponding lessons for future counselling exercises.
- With regard to the division of work between BIT, the RBBZ and the programme delegates, it has become clear in the course of the evaluation that the programme delegates have determined their role to be that of strategic consultants. They fulfil this function – in close collaboration with BIT – satisfactorily. Room for improvements seems to exist when it comes to the general exchange of information that would be needed to allow for mutual learning (good practice) among the delegates themselves.
- The division of work between BIT and the RBBZ has to take as a starting point that both levels of counselling (regional and federal) are equally important for the support and assistance of potential Austrian proposal writers who aim at taking advantage of the EU Framework Programmes. Three points have to be considered, however. First, it should be noted that necessary general support services (which are not customer-specific) need to be better coordinated between BIT and the RBBZ. Secondly, it is not possible for the RBBZ to offer a complete range of support services due to capacity restrictions. As a result, detailed counselling on specific issues (for example specific topics and legal matters) should not be aimed for by the regional institutions. Thirdly, competition between supporting institutions is generally beneficial for successful counselling (for example in terms of testing different consultancy models), but handling of individual clients or groups of clients in a particular region without coordination between BIT and the RBBZ is certainly inefficient and partly confusing. Hence, there is a need for specification of services and work division with BIT operating as a federal competence center and the RBBZ

offering on-site counselling. A model that would thus be based increasingly on a division of work would make it necessary that the review of the performance of the institutions takes co-ordination efforts more into account.

The analysis of the supplemental financial support schemes for projects of the EU Framework Programmes has shown that about a quarter (23 %) of those entitled to get support take advantage of financial measures aimed at getting researchers to write and submit proposals (“Anbahnungsfinanzierung”) and about 30 % make use of funds that are intended to facilitate actual research once the proposal has been positively evaluated (“Zusatzfinanzierung”). It is very hard to quantify the added value for these two instruments. In many cases it was observed that the additional funds have mobilised resources for an improvement of the proposal and thus its prospect of success. One problem arises from the fact that a surprisingly low share of researchers knows about these instruments.



Systems Evaluation of the University of Natural Resources and Applied Life Sciences, Vienna (BOKU)

<i>Title</i>	Systems Evaluation of the University of Natural Resources and Applied Life Sciences, Vienna, BOKU
<i>Authors</i>	Fritz Ohler
<i>Institutions</i>	Technopolis
<i>Client</i>	BOKU - University of Natural Resources and Applied Life Sciences
<i>Language</i>	English
<i>Date</i>	October 2004
<i>Type</i>	Evaluation of Institutions
<i>Methods</i>	Peer review, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/GuggenbergeronBoku.pdf

This project was part of a package of support to help the Vienna University of Natural Resources and Applied Life Sciences (BOKU) to adjust to the Austrian university reforms, which free the universities from the civil service and require them to develop and implement their own strategies. It used peer review to support strategy development in the university's newly-created Departments, giving an objective perspective of departmental capabilities, prospects and development needs and enabling the rector to establish goals and budgets across the university.

A summary of the university's efforts in the field of evaluation was provided by Thomas Guggenberger (BOKU) and can be downloaded from the fteval homepage.



Evaluation of the Ludwig Boltzmann Association

<i>Title</i>	Evaluation of the Ludwig Boltzmann Association [Evaluierung der Ludwig Boltzmann Gesellschaft]
<i>Authors</i>	Fritz Ohler (Technopolis) Expert panel led by Barend van der Meulen (University Twente, NL)
<i>Institutions</i>	Technopolis, University Twente (NL)
<i>Client</i>	Ludwig Boltzmann Association
<i>Language</i>	German
<i>Date</i>	August 2004
<i>Type</i>	Interim-Evaluation
<i>Methods</i>	Interviews, portfolio-analysis
<i>Source</i>	<i>For internal use only</i>

The evaluation of the Ludwig Boltzmann Institutes in 2004 was a defining moment in the history of this institution. As a response to the changed circumstances within the Austrian and the European research landscape and an attempt to make a distinctive and beneficial contribution to the Austrian research system, the board of the Ludwig Boltzmann Gesellschaft decided to carry out an ex post evaluation of the already existing as well as an ex ante evaluation of applications for the founding of new research institutes due to a call for proposals.

The ex post evaluation was based on data collected through a questionnaire handed out to the Ludwig Boltzmann Institutes and on the annual reports of

these institutes. The questionnaire as well as the further evaluation methodology was formulated by the Centre for Studies of Science, Technology and Society of the Dutch University of Twente. In reference to the provided data, the Centre for Studies of Science, Technology and Society created individual profiles for each Ludwig Boltzmann Institute. These profiles served as a basis for the ex post evaluation, which was carried out by a panel of experts on research management and research systems and lasted several days. The panel consisted of Barend van der Meulen (Center for Studies of Science, Technology and Society), Ken Guy (Wise Guys Ltd.), John Smith (European University Association) and Jakob Edler (Fraunhofer ISI).

As a result of these evaluations the panel provided the LBG with recommendations for further action concerning the reviewed institutes. An important fact within these recommendations was, the function of the particular institute in the Austrian knowledge system, also the relationship with the LBG, as well as its relationship with the host and with other research groups. The ex ante evaluation was a necessary mean for the selection of new Ludwig Boltzmann Institutes to allow the society to follow its new strategy for successfully establishing itself within the altered research landscape. This evaluation was subjected to a two-step scheme. During the first step short versions of applications, which were due to a call for proposals, were assessed within the context of an international peer-review and then selected by a jury in order to be presented to the board of the Ludwig Boltzmann Gesellschaft. The second step involved the request of the selected applicants to turn in a fully elaborated version of their proposals. These full versions were then again subjected to an international peer-review and furthermore presented to an international jury. This review process was followed by a hearing which also included the partner organisations of the applicants. Based on that hearing the jury issued a strong recommendation for the board of the Ludwig Boltzmann Gesellschaft who subsequently made the final decision.

Interim evaluations will be made to ensure quality and pertinence and to verify whether the institute has complied with the specified tasks and whether it is operating to its full capacity. Furthermore the institutes will undergo scientific evaluations performed by independent scientific advisory boards which are manned with international members.



Evaluation of FFF and FWF

<i>Title</i>	Evaluation of the Austrian Industrial Research Promotion Fund and the Austrian Science Fund
<i>Authors</i>	Erik Arnold, P. Boekholt, Leonhard Joerg, F. Ohler, S. McKibbin, G. van der Veen, S. Whitehouse (Technopolis) Martin Wörter (KOF) Michael Dinges, Nikolaus Gretzmacher, Andreas Schibany, Gerhard Streicher, K. Zinöcker, W. Polt (JR) Barend van der Meulen (Universiteit Twente) Martin Falk, Rahel Falk, Norbert Knoll, Hannes Leo, Gerhard Schwarz (WIFO)
<i>Institutions</i>	Technopolis, Joanneum Research, Universiteit Twente (NL), KOF Swiss Economic Institute, ETH (CH) Austrian Institute of Economic Research (WIFO)
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	English
<i>Date</i>	May 2004
<i>Type</i>	Institution Evaluation
<i>Methods</i>	Descriptive and comparative statistical analysis of survey data, secondary data and monitoring data, Econometric models, Interviews, Document analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/FFF_FWF_Synthesis_Report.pdf

In 2004, The Austrian Industrial Research Promotion Fund (FFF) as well as the Austrian Science Fund (FWF) were evaluated for the first time on an institutional level since their foundation 40 years ago³⁴. This article is a short overview about the main results of this evaluation exercise.

The evaluation team, an international group consisting of 20 Evaluators working with Technopolis, Joanneum Research, WIFO, ETH Zurich (KOF) as well as University of Twente was headed by Erik Arnold.

The team met the challenge to judge the role of the funds in the Austrian innovation system, their standing in the international comparison, the processes within the institutions. Their task was to check their level of efficiency and impacts as well as to summarise the results in conclusions, options and recommendations. To fulfil this mission a wide range of qualitative and quantitative methods were used.

Framework conditions and concept evaluation

The context and the framework conditions for the challenge of the Austrian RTI (Research Technology and Innovation) politics are widely known and have been continually researched (e.g. in the last years research and technology reports³⁵): The Austrian subsidy landscape is fragmented, the industrial structure shows a relatively small proportion of R&D intensive sectors, a high proportion of state R&D subsidy flows as a fixed budget into the scientific sector (General University Funds - GUF). There are also unclear and non-transparent responsibilities found in strategy planning. The government has set itself an ambitious goal to reach a research rate of 2.5% in 2006 and 3% in 2010.

Both funds play (in 2004 as well as today) an important role in meeting the challenges of the RTI politics. At the time of their foundation both funds were regarded as modern and were a milestone in the Austrian RTI politics. The ex post analysis also showed that the particular subsidies had an important positive effect on the clients' side. The autonomous status however caused lacking adaptation to the challenges in the financing of research as well as

³⁴ The Synthesis report and all background reports are downloadable from www.fteval.at

³⁵ e.g. Research and Technology Report 2004, The Report can be downloaded from www.bmwf.gv.at

insufficient consideration of new mechanisms in the innovation and research process. The synthesis report of the evaluation (Arnold et al., 2004) states: "What they [FFF and FWF] do is to strengthen 'business as usual' within the research and innovation system. What they do not do is to offer mechanisms for increasing the rate of change beyond that which is already experienced."

Design evaluation

Today's role of both FFF and FWF is still shaped by the setting within which they were formed in 1967: project-based aid for research and development, with due regard to strict quality criteria and structures marked by autonomy. In the context of the international development in research, technological development and innovation, issues and aid schemes to strengthen scientific and technological transfer as well as making it more efficient were of high importance. In addition to including knowledge and technology transfer into the mission of public research institutions, established instruments in Finland, France, the United Kingdom and also in Germany include the establishment of research centres jointly by science and business, and the promotion of compound projects. For the Finnish Tekes technology programmes, R&D co-operation through associations between corporations and public research facilities has meanwhile become the rule rather than the exception. In contrast and strengthened by their autonomy, the two largest Austrian promotion facilities have so far shown little activity towards reducing barriers in the co-operation between science and business.

Although the funds have added to their sets of instruments since their respective formation, the evaluation team pointed out that the funds were still rather narrow compared to others on an international stage (in 2004). Still, this is not entirely due to these autonomous funds alone for as long as FFF and FWF depend on the ministries for their budgets. Thus, any reform of the funds needs to be accompanied by a reform of their governance structures on the one hand and their (budgetary) relationship to ministries on the other. A desirable change emphasised by them is to obtain financial planning security.

Processes and Governance

The team of evaluators rated the performance of the funds very highly. Concurrently they point out that if their roles were to be enlarged they would have to increase their strategic analytical capacity and thus their administrative costs.

They also state that the FWF is highly efficient and effective, but has insufficient capacities to manage the subsidiary landscape, although the governance structure of the FWF is characterised as oversized. The evaluation team came to the conclusion that the component of the research funding that is granted according to quality criteria should be increased proportionally to the fixed budget (GUF). Furthermore the general recommendation is given to increase the budget of the FWF, if their responsibility level is to be widened in order to position the FWF as an important driving factor to increase the needed basic research on a pan-European level. For a stronger proactive role within the reform of the Austrian scientific system (towards thematic and application orientated research) it is necessary to build up and to apply existing analytical competence. Moreover the evaluation team recommends including the overhead costs in the subsidies to be and most of all remain an attractive partner for universities.

The evaluation study portrays the FFF as an efficient and speedy processor of its core business - the granting of project and company related research subsidies. To date the start-up subsidy has demonstrated a high effect in most cases where (mostly small) companies had deficits. As with the FWF, it is criticised that the FFF couldn't manage to install enough analytical competence in order to be a proactive innovations agency. "It [FFF] is today largely reactive, and does not have a strategy in a meaningful sense." (Arnold et al. 2004). If the FFF wants to use its potential to improve the research subsidy a prerequisite thereof is to increase its strategic competences as well as to reform the governance structures.

Impact analysis – FWF

The FWF is the most important promoter of basic research in Austria, and thus of special relevance for Austrian universities. A background study (Streicher et al., 2004) performed within the scope of the evaluation produced quite positive results. Fully 85 percent of project applications came from co-ordinators of Austrian universities. With this, FWF financing provides about a third of the total third-party funding, although this needs to be seen against the background of the high share of the General University Funds (GUFs) and the resultant minor role of direct research promotion in the science sector. When accounting for the projects and research networks (SFB, FSB), which together make up some 90 percent of the regular FWF budget, the average acceptance rate for projects was 51 percent (41 percent of funds applied for) in 1998–2003.

Applications focused chiefly on the natural sciences, followed by human medicine and the humanities.

Quantitative analyses showed that funds were awarded with no bias between male and female applicants: in other words, the FWF is guided in its decisions solely by the quality of project applications.

Funding by the FWF impacts positively on outputs, and in particular publications of all kinds and shapes (Streicher et al., 2004): an average FWF project achieves 4.6 citations in peer-reviewed journals and 1.2 in non-peer-reviewed journals. Obviously, such figures will vary considerably between scientific disciplines.

The evaluators established that participation in FWF projects has a positive effect on the career of participating scientists: "The perception of the impact of FWF funded projects on the scientific career of project coordinators and team members is quite positive and helps to strengthen their position in the scientific community and are used to establish important contacts" (Streicher et al., 2004).

A surprising finding is that some 40 percent of the scientists polled perceive their research results to be relevant for business but do not feel any need (or have no opportunity) to get into contact with companies.

Impact analysis - FFF

The impact analysis of the FFF paints the following picture (Schibany et al., 2004): the average subsidy during the time 1995 to 2003 summated up to 45% of the entire project costs having a cash worth of 22% considering complete project costs. The average proportion of the FFF subsidy lies at just 4% of the entire R&D costs and appears to be continually stable. Among the very small or very young companies (up to 10 employees or less than 5 years old) the proportion of the FFF subsidy, which is allocated for internal costs, is higher in comparison to larger or more established enterprises.

The FFF subsidy shows a positive leveraging effect on the internal company R&D expenditures: The subsidy unit's investment cash worth causes an additional R&D investment of 0.4 units. The leveraging effect therefore is 40% and is higher within very small and very large companies compared to medium sized companies. The subsidy of companies that only sporadically carry out


research is also higher, compared to companies, which carry out R&D on a consistent basis.

Besides a positive effect of the FFF development on the work productivity, there were also found considerable indications of behavioural additionality. In 80-86% of the cases the project would have been stopped or only carried out in a severely modified form if it had not been funded by the FFF.

Conclusions and Options

The evaluation states that both funds carry out good and efficient work. In order to use the existing potential more effectively and to create a modern Austrian framework for subsidies the evaluation sees potential for improvement:

- Additional means for the build-up of strategic competence to be able to implement political goals adequately. The creation of the strategy on a political level could thus find its strategic counterpart on the operative side. At the same time this creates the necessary basis for a better communication and cooperation between the singular players within the RTI system.
- The respective governance structures have to be more streamlined. This especially means decreasing the role of the subsidy receivers within the decision process as well as a clearly defined role sharing with the ministries. These groups as well as the politics should definitely not have an influence on the operational subsidy decisions.
- A prerequisite for an expansion of the funds' role is to change them from autonomous institutions into "Agencies". At the same time to expand their role means also to think about whether merging with other institutions of the Austrian subsidy framework would bear positive synergy effects.



Evaluation of FFF – Impact Analysis

<i>Title</i>	Evaluation of the Austrian Industrial Research Promotion Fund (FFF) – Impact Analysis
<i>Authors</i>	Andreas Schibany, Gerhard Streicher, Nikolaus Gretzmacher, (JR) Martin Falk, Rahel Falk, Norbert Knoll, Gerhard Schwarz (WIFO) Martin Wörter (KOF)
<i>Institutions</i>	Joanneum Research, Austrian Institute of Economic Research (WIFO), ETH Zürich KOF Konjunkturforschungsstelle
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	English
<i>Date</i>	March 2004
<i>Type</i>	Institution Evaluation/Background Report 3.2
<i>Methods</i>	Descriptive and comparative statistical analysis of survey data, descriptive and comparative statistical analysis of secondary data, econometric models, document analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/FFF_Evaluation.pdf

The study aims at giving a thorough description of the patterns of R&D funding by the FFF, identifying parameters which influence the provision of funds and presenting the direct, indirect and broader effects of FFF funding.

The concept of additionality was used to analyze different (additionality) aspects of firms that have received funding from the FFF. The fundamental question ‘can the attained advance in R&D be credited to public intervention, or would it have been taken place anyway?’ is all but trivial and leads to measurement problems when using the additionality concept. This is because there are great difficulties in estimating the returns to R&D and the nature of the problem as a counterfactual.

With regards input additionality the study addresses the question: do public contributions to private research boost total R&D expenditures – and if so, do they boost them by an amount which is larger than the amount of public money which was used in this way?

The output additionality analysis consists of two parts: the first part presents results on factors explaining the level of R&D subsidies. It looks at the evolution of the R&D subsidy ratio as well as the R&D intensity among FFF supported firms and quantifies econometrically the main factors behind the amount of R&D subsidies. The second part investigates the relationship between privately and publicly funded R&D on labor productivity growth.

Behavioural additionality is also taken into account, using data from the survey as well as information of the FFF project and firm database. It explores various dimensions of behavioural additionality resulting from FFF-subsidies and investigates whether participation in FFF funded projects influences the R&D-related behaviour of the firms in a significant manner.



Evaluation of FWF – Impact Analysis

<i>Title</i>	Evaluation of the Austrian Science Fund (FWF) – Impact Analysis
<i>Authors</i>	Andreas Schibany, Gerhard Streicher, Michael Dinges, Nikolaus Gretzmacher, (JR)
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	English
<i>Date</i>	March 2004
<i>Type</i>	Institution Evaluation/Background Report 4.2
<i>Methods</i>	Descriptive and comparative statistical analysis of survey data, descriptive and comparative statistical analysis of secondary data, econometric models
<i>Source</i>	http://www.fteval.at/files/evstudien/FWF_Evaluation.pdf

The study is part of the evaluation of the Austrian Science Fund (FWF) and provides the impact analysis of research funding by the FWF.

The study aims at identifying parameters which influence the Fund's decision on whether to accept or reject a certain proposal as it looks at application numbers and rejection rates from a variety of perspectives: the proposal's field of science, the solicited funds, the co-ordinator's home institution and inter-disciplinarity aspects. For this purpose a descriptive analysis based on project-level data provided by the FWF and a multi-variate model of binary choice is performed. The study also examines the relevance of FWF funding for the university system. It is a well-known fact that in Austria the external funding of Higher Education Expenditures on R&D (HERD) is small compared with other (small) countries. FWF funds are small compared to General University Funds (GUF) and industrial funding is even smaller. However, the use of output-related data of university institutes allows to estimate the effect of FWF funding on a major aspect of scientific outputs, i.e. publications.

Survey based analysis reveal differences between funded and rejected research proposals in relation to the assessment of the proposal, the self-positioning of the research unit, the final aims of the proposed research project and – in the case of the rejected proposal – the assessment of the possible reasons for rejection. Furthermore, output-related issues (scientific and – for some cases – commercial) of the funded projects were assessed along with the impact on researchers as well as societal effects.



FWF Governance and Processes

<i>Title</i>	FWF Governance and Processes
<i>Authors</i>	Barend van der Meulen
<i>Institutions</i>	Universiteit Twente, Enschede, Centre for Studies of Science Technology and Society
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	English
<i>Date</i>	March 2004
<i>Type</i>	Institution Evaluation/Background Report 4.1
<i>Methods</i>	Desk research, international comparison
<i>Source</i>	http://www.fteval.at/files/evstudien/FWF_processes_and_governance.pdf

FWF governance and internal processes are very much focused on the promotion of basic research and the advancement in knowledge. FWF has a central position in promoting basic science though its budget position is not strong vis a vis the institution funding. This evaluation of the governance and processes shows that in this respect FWF does a good job through a mix of funding modes of which individual projects and network funding are the most important ones. FWF has a good peer review system, which is highly regarded by the scientific community. Nevertheless there are good reasons to assume that FWF might not maintain this position and need to adapt to the changing context. Three contextual factors should really be taken into account:

(1) First of all, the recent pressures by the government to merge with FFF or at least to cooperate more closely with FFF. Irrespectively whether one agrees or not with these proposals, they show that politically the government is getting more interested in FWF. The advantage might be that this will result in more funding for science as well; the disadvantage that FWF might be under pressure to fit its working within specific political schemes.

(2) The Austrian university system undergoes substantial reforms. As a consequence, it might be that universities develop procedures for assuring the quality of research and stimulating excellence of research – with or without the help of FWF, and it might be that the future needs of researchers and the university system for FWF funds change.

(3) Internationalisation and especially the development of the European Research Area. Though excellent science has always be an international endeavour, because of the ERA more than ever research councils are operating at the international level as well. This results in many initiatives at the European level, and many opportunities for international collaborations.

In its current form FWF the organisation and the strategic processes are not appropriate to meet these changing contexts. It is uncertain whether FWF can sufficiently change into a research council that fits to the new situation.

We see two options for the FWF. One is to try to maintain its role as body for the promotion of basic science and leave responsibilities for such issues as university – industry relations, for strategic research, for national priority programs, to other actors in Austrian system. Even then some changes have to be made, because within such scenario FWF should develop some strategic capacity to response flexible to the changes in the Austrian research system. The other option is a shift of FWF towards a type of a research council which is responsible for the quality of the scientific research system. It will operate autonomously from both government and research organisations in order to be able to decide upon strategic interventions to optimize the functioning of the Austrian research system and helps to embed Austrian science within the knowledge society. In both option there is a need for Austria to increase its competitive budget for research, but in the first option there is less reason to transfer these funds to the FWF than in the second option. The list of recommendations indicates whether the recommendation refers to the first, the second or to both options.



FWF and other R&D Funding Agencies and Instruments in Austria

<i>Title</i>	Austrian Science Fund FWF and other R&D funding agencies and instruments in Austria [Positionierung von FFF und FWF vis-á-vis anderen Finanzierungsinstrumenten – Teil 2A: FWF]
<i>Authors</i>	Klaus Zinöcker, Michael Dinges
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	German
<i>Date</i>	March 2004
<i>Type</i>	Institution Evaluation/Background Report 2A
<i>Methods</i>	Desk research
<i>Source</i>	http://www.fteval.at/files/evstudien/fwf_modul_2a.pdf

This study is a background report in the framework of the Evaluation of the Austrian Science Fund (FWF) and the Industrial Promotion Fund (FFF) and especially is an addition to the reports on FWF governance structure (Van der Meulen, 2004) and the FWF Impact Analysis (Streicher et al., 2004).

The authors tried to give an overview on the different instruments that are used by the Austrian Science Fund: stand alone projects, priority research programs, international mobility, career development for female scientists, awards and prizes, and programs for applied research. In a next step, these instruments are compared to initiatives by other Austrian agencies and ministries to identify parallel developments or possible synergies.



FFF and other R&D Funding Agencies and Instruments in Austria

<i>Title</i>	Austrian Industrial Research Promotion Fund FFF and other R&D funding agencies and instruments in Austria [Positionierung von FFF und FWF vis-à-vis anderen Finanzierungsinstrumenten – Teil 2B: FFF und inustrielle FTE-Förderung]
<i>Authors</i>	Norbert Knoll
<i>Institutions</i>	WIFO
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	German
<i>Date</i>	March 2004
<i>Type</i>	Institution Evaluation/Background Report 2B
<i>Methods</i>	Desk research
<i>Source</i>	http://www.fteval.at/files/evstudien/FFF-Positioning.pdf

Both the inscrutable variety of used instruments and the assignment of a FFF and FWF evaluation, raise the need of a reform for the RTD funding system. First steps have been taken in the past with the fusion of the Finanzierungsgarantiegesellschaft mbH (FGG) and the BÜRGES-Förderungsbank zur Austria Wirtschaftsservice GmbH (AWS).

The background report at hand follows up to two modules which on the one hand analyzes the context and challenges of the innovation system and on the other hand the histories of the two funds. Because of the detailed account on FWF by Zinöcker, Dinges (2004), this is a mere delineation of RTD advances which are supplemented by demonstration of the actors and the programs of the funding system. The examination approaches, which have been constructed for the analysis of the Research and Technology Report (RTR/FTB) 2003 on „Funding measures of the Government“, will be adapted in terms of the fund evaluation’s objectives.

In summary it can be ascertained that the FFF plays an important role in the domestic system of funding of corporate RTD activities. The direct RTD funding system has been based on a reliable division of work between FFF (for the economy) and FWF (for the research sector) for a long time. In the 80ies – even more at the end of the 90ies – new funding organizations appear on the one hand, on the other hand the instruments are distributed.

The FFF has strategically positioned the enlargement of its service portfolio. The bottom-up approach of non-specific funding of R&D activities has been enlarged by specific programs as well intersectional programs and funding which reach from basic research to developments close to the market.

In the run-up the FFF and FWF evaluations, there were discussions on the consolidation of funding which are under the bmvit’s sphere of influence. The presented analysis of the evaluations justifies a consolidation of individual organizations with the FFF. However, the synergy effect of a fusion between FFF and FWF is rather limited because there are both serious differences in the procedures of project evaluation and in the clientele to be served.

In contrast to that it seems reasonable to merge rather small organizations with the FFF, for example, in order to raise efficiency. What has to be considered, though, is that a re-organization of the funding system leads to a limitation of the number of potential program developers which again leads to a limitation of the “competition for implementation services”, so that alternative controlling mechanisms of the New Public Management approach have to be found.



FFF: Internal Functioning and Customer Satisfaction

<i>Title</i>	Evaluation of the Austrian Industrial Research Promotion Fund (FFF) and the Austrian Science Fund (FWF): FFF: Internal functioning and customer satisfaction
<i>Authors</i>	Leonhard Jörg (Technopolis), Rahel Falk (WIFO)
<i>Institutions</i>	Technopolis, WIFO
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	English
<i>Date</i>	March 2004
<i>Type</i>	Institution Evaluation/ Background report 3.1.2
<i>Methods</i>	Desk research
<i>Source</i>	http://fteval.at/files/evstudien/FFF_IntFunctioning.pdf

Background report 3 of the Evaluation of the Austrian Industrial Research Promotion Fund (FFF) and the Austrian Science Fund (FWF) describes and assesses the internal functioning of FFF and the perception of FFF from customers' point of view. The aim is twofold: Observed good practice should be identified to help learn from successes and to maintain high standards for the future. Observed bad practice opens room for improvement and points to necessary changes and adjustments.

The report covers two main areas: Chapter 1 deals with the internal functioning of FFF, chapter 2 brings in the customers' view. The analysis of internal functioning is based on the project assessment data provided by FFF, publications of FFF and several interviews with FFF staff. Chapter 2 draws on the survey conducted by the evaluation team.

Historically FFF has been established as *the* funding organisation for bottom-up project funding. Even though FFF has opened up towards technology programmes bottom-up funding remains the core business.

FFF has been innovative in communicating and packaging its funding service to specific target groups. A wide range of programmes and initiatives have been launched during the last decade. Nevertheless most FFF programmes have a marketing character and eventually improved project acquisition.

The operative arm of FFF (Secretary) fulfils its funding job efficiently:

- Speed: time for decision is low in international comparison and fairly stable over time
- Administrative cost are moderate and stable over time
- Customer satisfaction is high with respect to speed, competence and confidentiality.



Evaluation of Mozarteum Salzburg

<i>Title</i>	Evaluation of the University of Music and Dramatic Arts Mozarteum Salzburg [Evaluierung der Universität für Musik und Darstellende Kunst Mozarteum Salzburg]
<i>Authors</i>	Tuula Kotilainen (chair), Björn Boysen, Ulrich Mahlert, Frans de Ruiter, Michael Schäfermeyer, Fany Solter, Kurt Zänker
<i>Institutions</i>	(Team of international experts)
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	April 2004
<i>Type</i>	Evaluation of a university (Performance and Organisation)
<i>Methods</i>	Survey, Peer Review
<i>Source</i>	http://www.fteval.at/files/evstudien/Eval_Mozarteum.pdf

On basis of extensive questionnaires the qualitative and quantitative performances of the Mozarteum Salzburg were evaluated. The results and recommendations given to strengths, weaknesses, opportunities and risks of the university's performance spectrum are the basis for future orientation on reorganisation and development of academic focus.



Evaluation of the University Salzburg

<i>Title</i>	Evaluation of all Faculties of the University Salzburg [Evaluierung aller Fakultäten (Rechtswissenschaften, Naturwissenschaften, Geisteswissenschaften, Theologie) der Universität Salzburg]
<i>Authors</i>	Alfred Hierold, Hans-Uwe Erichsen, Eda Sagarra, Gerhard Neuweiler (chairs)
<i>Institutions</i>	n/a
<i>Client</i>	Working Group of Reorganisation and Academic Focus appointed by the Ministry for Education, Science and Culture (bm:bwk) University Salzburg
<i>Language</i>	German
<i>Date</i>	2003/04
<i>Type</i>	Evaluation of Faculties
<i>Methods</i>	Peer Review
<i>Source</i>	<i>For internal use only</i> <i>German Summary available</i> http://www.fteval.at/files/evstudien/Eval_Salzburg.pdf



Evaluation of Architecture Schools in Vienna

<i>Title</i>	Evaluation of Architecture Schools in Vienna [Evaluierung der Wiener Architekturschulen]
<i>Authors</i>	Peter Cook, Luise King, Nat Chard, Marcos Cruz
<i>Institutions</i>	(Team of international experts)
<i>Client</i>	Working Group of Reorganisation and Academic Focus appointed by the Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	English
<i>Date</i>	2003
<i>Type</i>	Institution Evaluation
<i>Methods</i>	Peer Review
<i>Source</i>	<i>For internal use only</i>

To give answers to questions concerning with the enhancement of competences and improvements of international competitions in research and teaching the faculty of architecture of the Technical University Vienna, the architecture school of Academy of Fine Arts Vienna and the international Meisterklasse of the University of Applied Arts Vienna were evaluated. The results and recommendations are the basis of decisions about future profiles and academic focus.



Programme Evaluations 2003-2006 (ex ante)

<i>Title</i>	<i>Date</i>	<i>Download available</i>
<i>Excellence Initiative Science</i>	<i>November 2006</i>	<input checked="" type="checkbox"/>
<i>Policy Advice on the Evaluation and Monitoring Concept for “CIR-CE Cooperation in Innovation and Research with Central and Eastern Europe”</i>	<i>October 2005</i>	<input checked="" type="checkbox"/>
<i>Development of Measures of the BMWA in fFORTE</i>	<i>September 2004</i>	<input checked="" type="checkbox"/>
<i>Expertise on STRAPAMO – Strategic R&T Partnerships with Central and Eastern Europe</i>	<i>August 2004</i>	<input checked="" type="checkbox"/>



Excellence Initiative Science

<i>Title</i>	Excellence Initiative Science [Exzellenzinitiative Wissenschaft – Ein Konzeptpapier des FWF im Auftrag des bm:bwk]
<i>Authors</i>	Reinhard Belocky, Stefan Bernhardt, Milojka Gindl, Sabine Haubenwallner, Gerhard Kratky, Rudolf Novak, Gerit Oberraufner, Falk Reckling, Natascha Rueff, Ulrike Varga, Barbara Zimmermann
<i>Institutions</i>	FWF
<i>Client</i>	Austrian Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	November 2006
<i>Type</i>	concept paper (“ex-ante” evaluation)
<i>Methods</i>	Data analysis, desk research, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/exzellenzstudie.pdf

The concept at hand includes suggestions on an excellence initiative research and aims at a qualitative improvement of the research system at large, as well as establishment of ideal conditions for the funding of scientific excellence. Both analysis of data and studies, and discussions with experts from the Austrian research and funding area, form the methodical issue.

As a first step the European and Austrian developments are analyzed, building the basis for the main points of the excellence initiative. In Austria such an initiative has to address the universities, including non-university research institutions. Herewith a differentiation is made between the “basis” and the “top” of the research system. The “basis” of the research system includes the existing areas of excellent research on the level of individual researchers, groups of researchers, and institutions. As for the “top” of the research system, this has to be further developed. The suggested instruments aim at

- the development of existing structures and funding instruments;
- the implementation of mechanisms, supporting positive developments;
- the implementation of new structures and funding instruments.

These instruments are used specifically in a package of suggested measures, with the following three focus points:

- Extension of the acquired funds in the university area and support of positive developments, being implemented by the university reform, especially by the extension of the FWF funding measures and considerable overhead payments.
- Extension of the human resource development. The main point of focus here is – apart from a number of arrangements – the introduction of post graduate schools, having a broadly organized and an all-embracing education of with highly qualitative junior scientists, working in close relationship with excellent research.
- Extension of the research system’s top by the introduction of excellence clusters, forming a new quality dimension for the scientific world-class research, especially at universities. This affects both size and international visibility, and impact and basic conditions for

research and education in the excellence clusters. Post graduate schools are an integral part of a cluster.

Specific program drafts are introduced to the excellence clusters and to the funding of the cooperation of the planned IST-A with excellent research groups in Austria, as well as funding of the cooperation between universities of applied sciences and universities. As for the two latter cases, a special focus is made on the extension and adaptation of existing programs in terms of streamlining.

An analysis on the research landscape, based on the FWF data base, shows a capacity for thematic clusters in the areas biomedical sciences, physics and mathematics, which goes considerably beyond the main areas shown at the FWF program.

At the end of this study, a draft for a mission statement for an excellence initiative research and an overview over the measures and their financial roots can be found. In case of an ideal devolution of the implementations, the first measures could be applied as early as 2007.



Evaluation and Monitoring Concept for „CIR-CE“

<i>Title</i>	Policy Advice on the evaluation and monitoring concept for “CIR-CE Cooperation in Innovation and Research with Central and Eastern Europe” [Monitoring- und Evaluierungskonzept für “CIR-CE” Kooperationen mit Mittel- und Osteuropa]
<i>Authors</i>	Elke Dall, Andrea Christiane Mayr, Klaus Schuch
<i>Institutions</i>	ZSI
<i>Client</i>	Federal Ministry of Economics and Labour (bmwa), Austrian Research Promotion Agency (FFG)
<i>Language</i>	German
<i>Date</i>	October 2005
<i>Type</i>	Advice on a comprehensive monitoring and evaluation concept for CIR-CE including indications for ex-ante and ex-post evaluation, monitoring and controlling as well as scientific monitoring
<i>Methods</i>	Document analysis, social network analysis, comparative analysis, interviews
<i>Source</i>	http://fteval.at/files/evstudien/CIRCEEvalKonzept.pdf

CIR-CE is an RTDI funding programme developed and implemented by FFG Structural Programmes on behalf of the Federal Ministry of Economics and Labour (BMWA). The programme promotes co-operation between innovative Austrian companies and innovative companies from Central- and Eastern Europe. Its objectives are the implementation of transnational networks, organised by intermediary organisations (Competence Centres, Technology centres, clusters) and encouraging transnational projects covering R&D, technology transfer, benchmarking, quality assurance etc.

ZSI contributed to the establishment of some of the CIR-CE manuals and in particular to the monitoring and evaluation concept. ZSI will perform the scientific monitoring of CIR-CE whose approach is based upon two pillars: firstly, an analysis of the structural attributes of CIR-CE participants compared to the Community Innovation Survey (CIS-3), and, secondly, a network analysis of selected CIR-CE projects. Aim of this exercise is to assess the innovation and co-operation culture of CIR-CE participants, to evaluate the corridor of action enabled by CIR-CE to draw conclusions for future programme design changes and to investigate the development of CIR-CE networks in terms of (un)balanced benefit, sustainability and empowerment of partners.



Development of Measures of the BMWA in fFORTE

<i>Title</i>	Development of Measures of the BMWA in fFORTE [Konzept zur Entwicklung von Maßnahmen des BMWA in fFORTE]
<i>Authors</i>	Helene Schiffbänker, Franziska Steyer, Wolfgang Polt
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	September 2004
<i>Type</i>	concept paper (“ex-ante” evaluation)
<i>Methods</i>	interviews, desk research, data analysis, best-practice models, literature screening
<i>Source</i>	http://www.fteval.at/files/evstudien/measures_fforte.pdf

The Austrian Council for Research and Technology Development proposed the initiative fFORTE, aiming at the promotion of women in science and research, to the federal ministries in autumn 2001.

Subsequently, the three ministries bm:bwk, BMVIT and BMWA took action and launched single programs. In 2004 the Ministry of Economics and Labour (BMWA) commissioned a study to identify and evaluate possible implementation paths for different BMWA-measures under the roof of fFORTE.

Within the project necessary information was gathered via field and desk research. Moreover, the team analysed (inter)national best-practice models and developed a catalogue of different measures, which were validated by experts' interviews. The research effort highlighted the following areas as possible fields of action, to be addressed by the BMWA:

- inventions and women's patenting
- female entrepreneurs and successors
- highly qualified women and female researchers
- career break and re-entry
- awareness raising in the business sector
- gender mainstreaming in other BMWA programs

These suggested measures were the base for the programme w-fFORTE that is now launched by the Austrian Research Promotion Agency (FFG).



STRAPAMO

<i>Title</i>	Expertise on STRAPAMO – Strategic R&T Partnerships with Central and Eastern Europe [Strategische Partnerschaften mit Mittel- und Osteuropa]
<i>Authors</i>	Sanna Harringer, Andrea Christiane Mayr, Klaus Schuch
<i>Institutions</i>	ZSI
<i>Client</i>	Federal Ministry of Economics and Labour (bmwa), Austrian Research Promotion Agency (FFG)
<i>Language</i>	German
<i>Date</i>	August 2004
<i>Type</i>	Ex-ante
<i>Methods</i>	Document research, focus group discussion, interviews, quantitative questionnaire based empirical research
<i>Source</i>	http://www.fteval.at/files/evstudien/STRAPAMO.pdf

STRAPAMO was a pilot action initiated by the Austrian Federal Ministry of Economics and Labour to strengthen research and technological co-operations between Austrian companies and companies in Central and Eastern Europe. A call for proposal has been launched in 2003. 21 projects have been submitted, out of which 12 received funding. The project lasted between 12 and 18 months and started in the fourth quarter of 2003. Intermediary organisations (such as cluster management, technology parks etc.) played an important role in establishing and developing the transnational company networks. The results of the STRAPAMO exercise have considerably shaped the structure of its successor programme CIR-CE.

The evaluation process had two main approaches: firstly, to accompany and monitor a sample of 7 projects (out of 12) in more detail by deploying qualitative methods, and, secondly, to assess the remaining 5 projects on basis of quantitatively recorded data (together with the 7 previously mentioned projects). The qualitative interviewees were the co-ordinators of STRAPAMO projects from Austria and Slovenia (the latter in course of a focus group discussion). Companies' experiences have been identified and recorded on basis of short questionnaire inquiries.

Programme Evaluations 2003 – 2007 (interim)

<i>Title</i>	<i>Date</i>	<i>Download available</i>
<i>Accompanying evaluation of the campaign www.innovatives-oesterreich.at</i>	March 2007	☒
<i>Interim Evaluation of the Austrian NANO Initiative</i>	March 2007	☒
<i>Interim Evaluation of the Programme FHplus</i>	September 2006	☒
<i>Interim Evaluation of aws Technology Programmes</i>	July 2006	☒
<i>Interim Evaluation of prokis04</i>	May 2006	Internal use
<i>Evaluation of START- and Wittgenstein-Programmes</i>	April 2006	☒
<i>Interim Evaluation of Protec 2002+-the program for the promotion of technology transfer</i>	March 2006	☒
<i>Accompanying evaluation of the programme “Impulse Programme Creative Industries (iP)”</i>	January 2006	☒
<i>“Technokontakte” and how to improve its leverage effects</i>	December 2005	☒

<i>Interim Evaluation of RIF 2000</i>	August 2005	☒
<i>Austrian Genome Research Programme GENAU: Mid Term Programme Management Evaluation</i>	June 2005	☒
<i>FIT-IT Mid Term Evaluation</i>	April 2005	☒
<i>Uni:invent – Patent Exploitation for Universities</i>	October 2004	☒
<i>Mid-Term Evaluation Microtechnics Austria</i>	November 2004	☒
<i>Assessment of the FHplus programme</i>	September 2004	Summary
<i>Interim evaluation of the impulse programme “Sustainable Economy”</i>	July 2004	☒
<i>Evaluation of Consequences for the Austrian Economy initiated by the Business Forums of the Institution of Business Promotion (WIFI)</i>	December 2003	☒
<i>Evaluation of the Programme “TechTrend Monitoring”</i>	September 2003	Internal use
<i>Evaluation of the “Feasibility Studies Program” of the Austrian Research Promotion Fund (FFG)</i>	August 2003	☒
<i>Evaluation of the Programme “Technokontakte”</i>	July 2003	☒



www.innovatives-oesterreich.at

<i>Title</i>	Accompanying evaluation of the campaign “innovatives-oesterreich.at” [Begleitende Evaluierung der Kampagne “innovatives-oesterreich.at”]
<i>Authors</i>	Roald Steiner, Iris Fischl (KMFA), Katharina Warta (Technopolis) Joachim Bacher (TNS Infratest Communication Research Centre, Hamburg)
<i>Institutions</i>	Austrian Institute for SME Research (KMFA), Technopolis, TNS
<i>Client</i>	Austrian Research Promotion Agency (FFG)
<i>Language</i>	German
<i>Date</i>	March 2007
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Document analysis, desk research, experts interviews, questionnaire, workshops
<i>Source</i>	http://fteval.at/files/evstudien/inno_oesterreich.pdf

The following report is presented by the Austrian Institute for SME Research, Technopolis Austria and TNS Infratest Communication Research Centre which shows the results of the accompanying evaluation of the campaign www.innovatives-oesterreich.at. This evaluation was carried between October 2005 and December 2006 on behalf of the Österreichische Forschungsförderungsgesellschaft mbH (FFG).

The aim of the project is the accompanying evaluation of the campaign www.innovatives-oesterreich.at, aiming to increase the understanding for the usage of innovation and research services. An information basis shall be provided to offer a solid basis for the dialogue between the stake holders and to provide an empirical basis for possible consequences to design the campaign. Thus, the accompanying evaluation has in addition to the information-oriented learning function for stakeholders, a controlling function for the future design and PR activities in the field of research and technology policy.

Innovatives-oesterreich.at is an awareness campaign designed to create a better broad-based public understanding of the range of issues connected with science, research and technology that shall help to engender a more conducive climate for scientific policy-making. The two focal groups addressed by the [innovatives-oesterreich.at](http://www.innovatives-oesterreich.at) campaign were young people and small and medium sized enterprises (SMEs). The second phase (2004 – 2006) of the campaign received funding of € 12 million and involved the execution of over 50 projects.

A Design and Process Evaluation monitoring control revealed very serious “Web dysfunctions” in its organisational setting. In particular these were related to co-ordination which was too rudimentary or too narrow for such a complex campaign, insufficient definition of the interfaces among the cast of actors, imprecise definition of tasks and assignments at the call for tender stage, and a lack of contractual definition of areas of jurisdiction. On a fundamental level there was a conspicuous lack of clarity as to who on the one hand was responsible for defining campaign aims and objectives and drawing up the Requirements Specification, and who on the other hand should take charge of ensuring that the campaign achieved its set goals by assuring programme management functions.

The consequences of this were gaps and duplications in the communication and co-ordination processes together with a substantially higher work load due to a lack of co-ordination planning. Such organisational shortcomings led to a “management crisis” in late 2005 / early 2006 out of which a very distinct form of “organisation learning” was born, forming the basis for stabilisation of key core elements in the campaign.

Moving beyond the shortcomings in organisation setting, the Impact Analysis showed that the innovatives-oesterreich.at campaign has been successful in reaching its target audiences. One in four young people in Austria (early 2006) or nearly one in three young people there (late 2006) and one in five SMEs knew about innovatives-oesterreich.at. The Impact Analysis also demonstrates that the campaign and its affiliated projects really do address issues of central concern. Target group involvement and motivation were way above average, even in terms of an international comparison.

On the whole, the conceptual approach adopted by the second campaign phase of innovatives-oesterreich.at aimed at target groups and creating dialogue has proven its value. The themes selected and the manner of their treatment was indeed in tune with the “pulse of the times”.

The accompanying evaluation led to the formulation of a set of action proposals. On the one hand it was recommended to retain the conceptual approach based on target groups and dialogue, whilst on the other hand room for improvement was identified. This concerns delimitation and definition of the tasks for programme design, programme management and PR work. In very broad terms we can say that it was recommended to steer clear of “innovations” and to separate actual campaign work from management and support in the time honoured manner.



Austrian NANO Initiative

<i>Title</i>	Interim Evaluation of the Austrian NANO Initiative [Interimsevaluierung der Österreichischen NANO Initiative]
<i>Authors</i>	Leonhard Jörg (Technopolis) Matthias Werner (NMTC)
<i>Institutions</i>	Technopolis Austria, Nano and Micro Technology Consulting
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (bmvit)
<i>Language</i>	German
<i>Date</i>	November 2006
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Desk Research, interviews, online questionnaire
<i>Source</i>	http://www.fteval.at/files/evstudien/NANO-Initiative.pdf

In the course of the interim evaluation the NANO Initiative has been looked at from different angles. On the one hand, the participants have been asked for their feedback on their perceptions, expectations and previous experience about the program's implementation. On the other hand, the executive committee and the program management have reflected on the program conception. Based on these cognitions, a well-known international team of technical and evaluation experts have elaborated strengths and weaknesses of the program and specified those areas that need to be optimized.

The main message from the interim evaluation at hand can be summarized as follows:

The NANO Initiative needs a long-term perspective

The following points are largely agreed on:

- The Nano technology is a basic technology with a wide application potential and vast chances on the market, both in traditional industries and new markets. Austrian RTD policy can not afford avoiding this new innovation strategy.
- The NANO Initiative accomplishes this globally.
- At the same time all participants are aware of the high insecurities on technical and economical factors. The development of marketable products will, in many cases, take longer than currently suggested. Many products will not achieve acceptance compared to already established solutions. New basic questions will arise.

The NANO Initiative needs a long-term commitment of politics. In the medium term it also needs space in order to stay open beside the already established projects with their new topics and actors. The scientific and innovative basis has been strengthened substantially through previous activities. However, its economical use is still in its early stages.

Considerable mobilization of the research community

The NANO Initiative has succeeded in establishing a well interlinked community from a fragmented scientific landscape. This is based on the eight project networks that have been advanced so far. They deal with important topics of the Nano technology and work on a high scientific level.

The mobilization of the Austrian Industry stays the most important challenge for the future

The mobilization of the Austrian Industry has not yet succeeded as expected. For the evaluators this is the biggest challenge for the further program development.

Simplification of the funding procedure

The feedback on the operative procedure of the funding has been omitted. The utility of the initiated instrument is beyond question. However, there is need for improvement at the execution. The process of enquiry is persistently regarded as too complicated. On the one hand, the evaluators acknowledge that the complexity and dimensioning of the deposited project networks need an accordingly demanding enquiry and evaluation process. On the other hand, substantial room for improvement has been agreed on. The following points are central:

- Standardization of funding guidelines. So far two guidelines (ITF and FWF) have been combined for the projects' funding. This has not proven itself. It systematically undermines the networking character and weakens the networking coordinators in their role. In the future the funding of network projects should only be based on one funding guideline that supports the networking character. It facilitates payment, reporting and evaluation matters.
- The consolidation of the program management into a funding agency is being facilitated. The evaluators find that this is reasonable and regard the FFG – also in terms of the required stronger mobilization of the industry – as the most appropriate partner. The FWF will also be needed in the future because of its expertise in peer evaluations of scientific projects.
- Restructuring of the evaluation procedure for market targeting projects. Market targeting projects are regarded as helpful instruments for the selection of new developments. Hitherto practical experience, however, sets its standards too high concerning the required scientific quality, and is too clumsy in its temporal execution. The evaluation team therefore suggests to significantly minimize the upper limit of

the budget for market targeting projects and to have the FFG internal pool of experts do the evaluation of the projects.

Specification of the role allocation in the program control

Program control is set on a broad institutional basis. Basically all relevant sponsors at federal and state level are represented in the executive committee. Thereby important coordination functions can be realized within the NANO Initiative. This has supported the mobilization in the initial phase and the coherency in the RTD policy as for Nano technology.

The price for the program control shows a rather indecisive leadership. The executive committee has an extensive mandate with real execution authority. The evaluators, however, are of the opinion that the executive committee can only terminally meet the suggested requirements in its mandate.

There is a necessity for a clear program proprietorship for the strategic arrangement of the program. This lies at, which also has to be responsible for the development of the program. Against this background, the mandate of the executive committee is too extensive and should be reconsidered as for a consultation and sounding board. We are still of the opinion that the integration of the actors into the executive committee is very important. The BMVIT should also look for a future arrangement with the executive committee.

The BMVIT has to make use of the experience done in this evaluation. Futhermore, it has to accept the challenge to take a leading role in such a complex program and to occupy the appropriate personnel in the long run.



Interim Evaluation of FHplus Programme

<i>Title</i>	Interim Evaluation of the Programme FHplus [Zwischenevaluierung des Impulsprogramms FHplus]
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<i>Client</i>	Austrian Federal Ministry of Transport, Innovation and Technology (bmvit)
<i>Language</i>	German
<i>Date</i>	September 2006
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Document analysis, desk research, experts interviews, questionnaire
<i>Source</i>	http://www.fteval.at/files/evstudien/fhplus.pdf

The following report is presented by the Austrian Institute for SME Research and the Fraunhofer Institut für System- und Innovationsforschung (ISI) which shows the results of the interim evaluation on the incentive programme FHplus. This interim evaluation was carried between January and June 2006 on behalf of the Federal Ministry of Transport, Innovation and Technology.

The purpose of the evaluation was to reflect upon the hitherto existing devolution of the FHplus program, as well as to develop argumentations and recommendations for the further development of the programme within the overall context of the Austrian funding system. Within the scope of the evaluation, not only the aims, procedures and effects of the programme are to be analyzed, but also their integration into the complete programme portfolio have to be considered.

The incentive programme FHplus is financed by the Federal Ministry of Transport, Innovation and Technology (bmvit). The FHplus directives are given by the bmvit and the Federal Ministry for education, science and culture (bm:bwk). FHplus aims at the set-up and extension of the R&D capacities and competences at universities of applied sciences (FH) and courses of study. On the one hand the number of the relevant actors at the Austrian universities of applied sciences ought to be raised. These actors need the ability to carry out applied research and experimental development. On the other hand, FHplus aims at raising the number of R&D cooperation and external partners, especially companies. The programme management is incumbent on the Austrian Research Promotion Agency (FFG).

In the previous two calls from FHplus (2002/03 and 2004) a total of €18.1 mio of funding volume were invested and 43 projects were promoted. In the first call €10.6 mio subsidies were spent for 20 projects to 8 universities of applied sciences (FHs). The second call consisted of €7.5 mio of funding volume which were disposed to 23 projects; here 11 out of 18 beneficiaries were involved.

Especially projects from applied research were funded. According to the information of the project managers, the R&D activities in the FHplus projects centered around contributions on product- and process-innovations; in other words, on the outright and partial development of new products or procedures, as well as on supportive services within the early period of an innovation activity (including technical services). The subject matters can be found in the

areas of “Information Technology and Software“, “Electronics, Communications Systems and Automation“, and “Audiovisual Techniques and Media Production“. These topics are followed by “Management and Administration“, “Social Welfare“, and “Engineering and Automotive Engineering“. As opposed to mission oriented research at funded universities of applied sciences (FHs), FHplus projects extend over a longer period. They also show a higher scope of project and are more research oriented. Thus FHplus has considerably raised the quality of R&D-activities at the universities of applied sciences.

As for the FH beneficiaries, more than 51 % of the subsidies were distributed to 3 universities of applied sciences, namely the FHs in Upper Austria, the Joanneum (Styria) and in Vorarlberg. Here the heterogeneity of the Austrian FHs in the R&D activities can be clearly notified.

Since the Austrian FH sector is currently at a turning point, the interim evaluation of the FHplus programme has to be carried out within a specific period of time. After 10 years of development, now the consolidation becomes more and more interesting. The following controversial questions are being discussed: in how far are FHs can and should develop into “excellence” and world-class research? Is it reasonable to become a second-best-university, or should the main concern (still) be the assurance of a qualified practical education based on research?

Currently discussions are held by the Austrian RTI policy on the re-structuring of the total financial portfolio. As for efficiency, the topics re-orientation, simplification, and the combination of promotions are on the agenda. Furthermore, this discussion is of special interest for the Austrian FHs, regarding the perspectives of furtherance.



Interim Evaluation aws Technology programmes

<i>Title</i>	Interim Evaluation of aws Technology Programmes [Zwischenevaluierung der aws Technologieprogramme]
<i>Authors</i>	Leonhard Jörg (Technopolis) Andreas Schibany, Brigitte Nones, Helmut Gassler (Joanneum Reserach)
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<i>Client</i>	Austrian Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	July 2006
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Descriptive and comparative statistical analysis of secondary data, face to face interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/aws-TP_final.pdf

BMW A has authorized Technopolis and Joanneum Research to carry out an interim evaluation of several technology programs which are supported by the Austria Wirtschaftsservice (aws). The conceptual formulation of this evaluation goes beyond a normal programme evaluation. To begin with, the expediency, efficiency, and the achievement of objectives on the level of individual programs had to be controlled. Based on the results drawn from this inspection, the actual challenge was to critically rate the arrangements' portfolio, which goes beyond the programme limits. It has to be considered,

though, that this interim evaluation merely covers a segment of the entire aws portfolio. Cross links to the amplified aws portfolio were – if possible – prepared based on the programs listed here. However, this does not substitute for a comprehensive review of the complete aws portfolio. Thus, the suggestions for further development given here have to be reconsidered within the aws' overall context.

The following programs were considered:

- LISA
- Preseed
- Seedfinancing (LISA relevant)
- i2 - the floor for Business Angels
- tecma
- uni:invent
- Patentkredit
- Tecnet
- Staatspreis Innovation
- Jugend Innovativ

The information for the interim evaluation is based on a number of resources. Concerning the individual programs, the monitoring data for the last years supplied by aws were analyzed. In addition to that, both the project managers³⁶ of aws and the contact persons of BMWA were interviewed. The analysis of the respective individual programs was based on the programme evaluations which were mostly available at this time. According to these assumptions a field research on the aimed groups was abstained from. Furthermore, a number of secondary data were included for the specification and positioning of the observed programs.

The theme of foundations' dynamics in the Austrian innovation system was especially accounted for, since the emphasis of the observed programs is on the support of foundation procedures. Based on the special interpretation of the ZEW foundation panel, an empirical positioning of the aws' foundation activities could be conducted.

The evaluation report at hand summarizes the outcomes and shows a few options for further development measures, as seen from the evaluation team's point of view.

³⁶ All individual related denotations in this essay apply for both sexes, unless it is differently addressed in the text.



Interim Evaluation of prokis⁰⁴

<i>Title</i>	Interim Evaluation of prokis04 [Zwischenevaluierung des Förderprogramms prokis04]
<i>Authors</i>	Peter Heydebreck (lead), Philipp Nussböck, Andreas J. Muhr, Nils Gabrielsson, Petra Falchetto
<i>Institutions</i>	Inno GmbH
<i>Client</i>	Federal Ministry for Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	May 2006
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Desk research, interviews, quantitative data analysis
<i>Source</i>	<i>German Summary available</i> http://fteval.at/files/evstudien/prokis04_summary.pdf

As the interim evaluation contains sensible data the final report is only available on request (Federal Ministry for Economics and Labour, karl.wizany@bmwa.gv.at).



Evaluation of START- and Wittgenstein-Programme

<i>Title</i>	Evaluation of START- and Wittgenstein-Programme [Evaluation des START-Programms und Wittgenstein-Preises]
<i>Authors</i>	Karl Sandner
<i>Institutions</i>	K. Sandner KEG
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm.bwk)
<i>Language</i>	German
<i>Date</i>	April 2006
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Media analysis, interviews, structured observation comparison and analysis of final reports
<i>Source</i>	http://fteval.at/files/evstudien/START-Auskoppelung.pdf

The evaluation report at hand demonstrates a summarized version of the complete report on the evaluation of the START-program and the Wittgenstein price, and concentrates on the following core areas of evaluation:

- effectiveness and efficiency of the operative process
- achievement of objectives
- advantage for the research area Austria.

These three core areas are preceded by a contextualization, i.e. a positioning of the START-program and the Wittgenstein price with aims, goals, and interests.

START and Wittgenstein are excellent programs, both in their strategic arrangement, and in their operative implementation. The Austrian Science Fund as the operative organization and the Federal Ministry of Education, science and culture, as the political counter part, can both be very proud of this. Both programs are justifiably praised from an international plenum.

From a strategic point of view, it is advisable to sustain START. As for the strategic-political point of view, it is advisable to hold an open discussion on rigor and/or relevance, especially due to the arguments on the so-called linear research model, which have occurred anew. This, however, does not necessarily need to end in a modification of the strategic bias. It is suggested to hold intentional discussions and to decide accordingly.

As for the operative level, active marketing measures of both programs are recommended. Either technically, because public appreciation is always at the same time a construction, or politically, because both programs are suitable for the demonstration of what happens with the citizens' taxes.

Protec 2002+

<i>Title</i>	Interim Evaluation of Protec 2002+ The program for the promotion of technology transfer [Interimevaluierung von protect 2002+ Das Programm zur Förderung des Technologietransfer]
<i>Authors</i>	Sonja Sheikh, Iris Fischl (KMFA); Vivien Lo, Thomas Stahlecker (ISI); Petra Wagner-Luptacik, Simone Archut (ARC sys)
<i>Institutions</i>	Austrian Institute for SME Research (KMFA), Fraunhofer Institut System- und Innovationsforschung (ISI), ARC systems research
<i>Client</i>	Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	March 2006
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Desk Research, interviews, questionnaire
<i>Source</i>	http://www.fteval.at/files/evstudien/protec_interim_evaluierung.pdf

The Austrian technology transfer programme “protec 2002+” has been initiated in 2003 to stimulate innovation in small and medium-sized enterprises (SME) and increase their research and development (R&D) capacity. In 2005, the Federal Ministry of Economics and Labour commissioned an interim evaluation to be carried out by a consortium of the Austrian Institute for SME Research, Fraunhofer ISI and ARC systems research. Both formative and summative aspects are addressed to shed light on present programme outcomes and also guide further development beyond 2006. The evaluation is primarily based on a qualitative analysis of recent output and effects of protec 2002+ on the basis of extensive interviews with project members and interviews with expert, complemented by document analysis (project documentation, policy material).

protec 2002+ provides a total budget of 34.8 million Euro 2002 to 2006 for advanced technology transfer between SMEs and know-how providers in all economic and technological areas. protec 2002+ targets activities in three distinct areas (‘programme lines’): improving corporate innovation management (*protec-INNO*), exploring network-oriented transfer models with supra-regional impulses (*protec-NETplus*), and making efficient use of external resources such as universities or research organizations (*protec-TRANS*).

Until the end of 2005, three calls have been conducted for protec-INNO and protec NETplus and 49 out of 136 project proposals have been positively evaluated. protec-TRANS started in April 2003 and has since funded 21 projects. protec-INNO and protec-TRANS are managed by the ERP Funds, protec-NETplus by the Austrian Research Promotion Agency (FFG). A monitoring group of Austrian experts provides regular feedback on programme implementation. The results are synthesized in annual monitoring reports and frequently lead to (minor) adaptations.

The overall design of protec 2002+, its objective and focus as well as target group have uniformly been positively rated by experts and funded projects alike. Its key strengths are:

- Major learnings for SMEs already in the application phase as they are required to analyse their innovation requirements and competencies.
- The valuable experience of division of labour in the innovation process, particularly for micro firms, and the possibility to engage in a

larger-scale and interdisciplinary project: practical experience is gathered in conducting own R&D and cooperation also puts pressure on results.

- The promotion of technology transfer with a heterogeneous set of actors, particularly intermediaries as mobilizers and multipliers who are also instrumental in reaching target groups.
- Project funding – together with other technology transfer instruments – meeting the needs of the target SMEs.
- The programme's supra-regional orientation as well as the thematic openness with the possibility of generating new and existing technology fields bottom-up.

By promoting technology transfer in pre-competitive areas, protec 2002+ fills a gap in the innovation process between research and development and the final product. Through the involvement of technology and higher education centres the programme also mobilizes existing knowledge infrastructure. The analysis of R&D as well as technology transfer funding at regional and national levels shows that there is no comparative instrument to protec 2002+ in the Austrian funding system.

protec 2002+ has been successful in initiating the intended mobilization effects in the firm sector. The programme thus meets its objectives of targeting SMEs, which are not only pilot testers or project partners but also frequently act as project leaders. The partner structure, however, is quite heterogeneous and varies between the three calls to date. This underlines the openness of the programme for a variety of partner types and network structures. protec 2002+ has also succeeded in establishing itself as supra-regional technology transfer instrument by fostering model projects at supra-regional level.

protec-INNO aims at developing innovation management tools and approaches. Developing tools and concepts as well as subsequent model implementation in firms have been successful in the majority of projects. Most tools, however, are incremental innovations to established methods, only few radically new approaches were generated. Besides producing methodological know-how for partners and making SMEs aware of innovation management options, the main effect was extending the service portfolio of the participating consultancies. Tools were mainly developed for own use of partners and rarely

diffused on a broader level. This raises the question of relevance as evidence exists that the need for newly developed innovation management tools is decreasing. However, the strengths of protec-INNO – particularly the diffusion and integration of innovation strategies – should be retained in future programming.

Project partners are uniformly satisfied with protec-NETplus - the programme design, its objective and target group. Technological objectives in were mostly met in the projects. The key learning effect associated with protec-NETplus is the positive experience of working in a network. Particularly in projects with collaboration of diverse institutions, information exchange and capacity building are among the strongest visible project effects. Promoting networks and cooperation is also one of the most relevant forms of technology transfer according to experts. Most experts attach high value-added to protect-NETplus as co-operative behaviour among SMEs is still too low and the need for supra-regional innovation is also still valid. Linking network and innovation activities is ambitious, however, due to the evidence-based benefit of innovation networks. protec-NETplus is recommended for continuation.

Key element of protec-TRANS is the access to external expertise to stimulate substantial product or process innovations in SMEs. protec-TRANS meets the needs of project leaders and the objective of joint development was reached in all projects under investigation. External expertise consisted of consulting, university research, specific technological know-how or technical infrastructure and in the most cases contributed significantly to project success. protec-TRANS has proven to be an uncomplicated entry for SMEs to technology transfer and for a number of firms the first cooperation with university or research organizations. Very positive is the sustainable effect of cooperation learning recognizable in the projects. This is why it is recommended to continue protec-TRANS.

protec 2002+ is a successful technology transfer programme and fulfils a key function in the Austrian R&D promotion landscape. protec 2002+ has a central function in the Austrian innovation system as it provides SMEs with technology transfer as option for expanding their innovation activities. Protec 2002+ is indeed successful in reducing innovation barriers in this target group. Since knowledge- and innovation-based competition will increase and thus raise the need for SMEs to cooperate with knowledge organizations, technology transfer will remain a key policy area. Protec 2002+ is thus

recommended for continuation beyond 2006 linked with the following key challenges for future development: developing thematic priorities for protec 2002+, particularly promoting innovation diffusion, market entry internationalization of innovators; creating synergy potential with other network programmes; and enhanced promotion of the programme (public relations).



Accompanying Evaluation of the “Impulse Programme Creative Industries”

<i>Title</i>	Accompanying evaluation of the programme „ Impulse Programme Creative Industries (iP)” (“Impulsprogramm Kreativwirtschaft”)
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<i>Client</i>	ARGE iP ImpulsProgramm creativwirtschaft
<i>Language</i>	German
<i>Date</i>	January 2006
<i>Type</i>	Interim/Accompanying
<i>Methods</i>	Qualitative (expert interviews); quantitative (standardized user survey)
<i>Source</i>	http://fteval.at/files/evstudien/creative.pdf

The programme „iP Impulse Programme Creative Industries” aims to strengthen Austrian SMEs within the creative industries. Special emphasis is hereby placed on networking and cooperative activities between the supported companies. The goal of the accompanying evaluation of the programme, carried out by the Austrian Institute for SME Research, was on one hand to analyse and assess - up to the start of the second call in September 2005 - the experiences made so far with the operation of the programme and on the other hand to derive recommendations regarding possible enhancements to the programme design implementation. The evaluation results are confidential; enquiries are to be sent to ARGE iP ImpulsProgramm creativwirtschaft or <http://www.impulsprogramm.at>.



“TechnoKontakte” and How to Improve its Leverage Effects

<i>Title</i>	“Technokontakte” and how to improve its leverage effects [Steigerung der Hebelwirkung der TechnoKontakte Seminare]
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<i>Institutions</i>	ARC systems research
<i>Client</i>	Austrian Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	December 2005
<i>Type</i>	Interim evaluation
<i>Methods</i>	Data analysis, pilot studies, field work, workshops
<i>Source</i>	http://fteval.at/files/evstudien/Technokontakte2006.pdf

The Austrian technology trans advancement trainings program “TechnoKontakte Seminare“ aims at conveying Best practice knowledge with firm-to-firm visits and to offer possibilities to share experiences, in order to initiate innovation impulses with the participating companies. About 50 seminars are offered every year which are visited by 800 participants, about half of them are small and medium sized companies. It is, hence, the aim of this project to identify innovative starting points for concrete activation respectively supportive measures of the TechnoKontakte seminars. By doing so, the leverage effect can be expressed and potentials for a bigger leverage effects can thus be identified.

The establishment of a “Best Practice” consultancy pool can be regarded as a measure for the enhancement of the leverage effect. The role of the consultants in the Best-Practice seminars can be cautiously strengthened without changing the successful firm-to-firm strategy at the same time. The consultants can offer precious support to small and medium sized companies by helping them in their effort to implement the ideas and suggestions from the Best Practice seminars in their own companies. Especially small and medium sized companies do not have sufficient knowledge at their command to estimate the consultants’ competence. Therefore, they draw little profit from innovation relevant know how in comparison to large companies can profit from experts.

With the help of the branding “Best Practice” as a proof for high quality, the introduced trade mark “TechnoKontakte” can be used in order to communicate the quality of the consultancy service. The involvement in projects and the recommendation of hosting companies are the central criteria for consultants to be accepted into the consultancy pool. Furthermore, in order to avoid the risk of consultants’ self marketing, according rules have to be developed – in co-operation with all people concerned. A comprehensive competence portfolio for the consultancy offer has to be aspired, according to the different company specific interests and needs of the visiting companies. An according monitoring or evaluation is suggested for the examination of the achievement of a higher leverage effect. A further measure was suggested in a workshop for the establishment of an information portal, so as to achieve a stronger integration of the TechnoKontakte with other Austrian transfer- resp. innovation support activities or to further use those products.



Evaluation of RIF 2000

<i>Title</i>	Interim Evaluation of RIF 2000 [Zwischenevaluierung der RIF 2000 Regionale Impulsförderung]
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<i>Institutions</i>	Technopolis
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (bmvit)
<i>Language</i>	German
<i>Date</i>	November 2005
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Interviews, portfolio-analysis, analysis of funding data
<i>Source</i>	http://www.fteval.at/files/evstudien/RIF2000.pdf

Austria is endowed with a comparatively large number of technology and innovation centres. In the late 90ies an evaluation of these centres revealed a unsatisfactory low impact both on incubation (= increasing the number of new firms) and on growth. The RIF / REGplus programme was implemented to increase competence of the centres' management to support firms in their creation and growth. This project looks after the outcomes and impacts of this type of funding, i.e. whether the competence of the centres' management has been increased to serve both the tenants as well as the regional economy.



GENAU: Mid Term Evaluation

<i>Title</i>	Austrian Genome Research Programme GENAU: Mid Term Programme Management Evaluation [Österreichisches Genomforschungsprogramm – Programmmanagementevaluierung]
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<i>Client</i>	Austrian Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	English
<i>Date</i>	June 2005
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Desk Analysis, Logic Chart Analysis, interviews, international comparison, social network analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/GENAU.pdf

In 2001 the Austrian Federal Ministry for Education, Science and Culture launched the 'Austrian Genome Research Programme GEN-AU' (GENome Research in AUstria). The genome research programme was planned for a

period of nine years. It receives funding every three years, and approximately €10.7 million are spent on GEN-AU each year. The mission is to strengthen genome research in Austria and to foster networking among all relevant stakeholders and actors. In order to achieve this goal a variety of project types were developed: Large cooperative projects, network projects, pilot projects and projects addressing accompanying research in the social sciences. The project types differ in terms of the number of involved partners, their running time and their funding volume. In phase I of GEN-AU €27.8 million have been allocated to 23 projects run by 91 partner organisations.

There are several reasons why GEN-AU can be considered a special programme within the Austrian research and technology policy landscape:

- Besides its main goal, it also stipulates a number of other objectives. For some of these secondary goals special measures have been put in place (most notably, for supporting young researchers (by organizing Summer Schools for high school students) and in the field of public relations (in order to improve public opinion on genome research)).
- GEN-AU is the largest thematic programme in Austria. After all, GEN-AU's budget amounts to 10 % of the total budget of the Austrian Science Fund (FWF).
- GEN-AU is the only thematic top-down programme in Austria where the top-down approach is taken to the very limit. As an example, the scientific advisory board (SAB), which decides whether an applicant receives funding or not, reserves the right to take appropriate action and change the set up of the projects and the composition of the research teams. Consequently, the SAB is more of a “steering committee” than a “jury” in the usual sense. This is risky, but, nevertheless, legitimate. At the same time, however, this approach calls for uttermost prudence and for a high degree of transparency with regard to the selection of the board members and the work of the SAB.
- GEN-AU is administered and managed by a highly committed team situated in the ministry. As – due to budgetary constraints – are employed by another institution but work in the ministry's premises. This solution has insofar advantages as it guarantees spatial proximity between the strategic and the operating level. However, this is more

than compensated by barriers which arise from the ministerial bureaucracy.

In the beginning GEN-AU was to be a programme with strong industry links, organised as a “public private partnership”. With the first call the programme received the focus shifted (in accordance with recommendations from the Scientific Advisory Board) from a rather applied undertaking to a programme which places more emphasis on scientific quality. On the positive side, the move towards basic research was well justified as there are enough programmes in Austria that pick science-industry linkages out as a central theme. On the negative side, the timing of the shift was less than optimal as those scientists who followed the call specifications closely found themselves suddenly in a rather unfavourable position for receiving the funds they applied for.

GEN-AU reverts to professional partner organisations for special administrative issues: aws, for all issues related to intellectual property rights and the commercialisation of research results; dialog<>gentechnik and science communications (an association and a consultant for PR, respectively) for all matters associated with public relations. The evaluation team believes that, generally speaking, outsourcing certain issues to specialists is a viable thing to do. But while the cooperation with aws seems to work well (and should be expanded), internal (and also external) communication in the area of public relations was sometimes flawed. Most notably, division of labour and the different areas of responsibility among the involved institutions were on some occasions not clear enough to outsiders (including the scientists in GEN-AU as “customers”).

This is also reflected by low satisfaction levels with public relation activities in GEN-AU: Of all aspects the scientists involved in GEN-AU had to rate in the course of an online survey, this aspect received – on average – the lowest grade. Relatively low grades were also given to the “allocation of funds” and to the “time from start of the project to receipt of money”, which ranked second and third, respectively, after “PR activities in general”. On the other end of the scale, the scientists were particularly satisfied with the support given by the GEN-AU Programme Office.

An important aspect that sets the programme aside from other initiatives is its dedication to the idea of networking. Active networks should not only be

established at the management level but also, and most importantly, at the project level. Collaboration between different research institutions is welcome and compulsory. This trend towards networks has met (not only with respect to GEN-AU) considerable criticism out of the fear that it might replace more traditional forms of support, most notably support given for individual projects. Yet even when considering the far reaching budgetary constraints of the FWF (the main institution providing funding for individual projects in Austria) there seems to be no evidence to indicate a “crowding-out” effect, i. e. that GEN-AU takes away resources from the FWF.

Networking takes place to a high extent in GEN-AU. The scrutinized communication and exchange networks are very dense and exhibit high levels of activity. Lock-in effects seem to be avoided. Exchange and communication does not only take place within projects but also extend beyond project boundaries. It seems, however, that the accompanying research projects in the social sciences (ELSA) are rather isolated. Furthermore, the extent, to which the GEN-AU programme has contributed to the networking, is still a rather open question. Many network relations have already existed prior to the implementation of the support programme.

Proposal review and project selection processes are a crucial point for GEN-AU. Rumours were afloat with respect to these processes, a fact that must be regarded as very harmful for the reputation and the success of the project. It is imperative that these rumours be tackled at their roots. All suggestions in this context point to measures that increase transparency.

Overall, the evaluation team clearly advocates the continuation of the programme. GEN-AU undoubtedly plays an important role for researchers in the life sciences. With its (relatively) long term orientation and with the high total funding volume in mind, GEN-AU contributes to the kind of continuity researchers often call for.

At the same time, we see a lot of small (but also a few significant) starting points for improvements. These points include, among others, measures to increase transparency in project selection procedures, the advice to run GEN-AU by a specialised agency, improvements for project settlement procedures, the creation of a roadmap with deadlines, etc. A full list of recommendations is given in the research report.



FIT-IT Mid Term Evaluation

<i>Title</i>	FIT-IT Mid Term Evaluation [„FIT-IT Interimsevaluierung. Konzepte, Rahmenbedingungen, Design, Prozesse. Snapshots auf Wirkung und Additionalität“]
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<i>Institutions</i>	Joanneum Research
<i>Client</i>	Austrian Federal Ministry of Transport, Innovation and Technology (bmvit)
<i>Language</i>	German
<i>Date</i>	April 2005
<i>Type</i>	mid term evaluation (“Interimsevaluierung”) on the programme management level
<i>Methods</i>	Desk analysis, interviews, questionnaire (programme participants, programme applicants) and descriptive analysis of the collected data, international comparison
<i>Source</i>	http://www.fteval.at/files/evstudien/FIT-IT.pdf

It is necessary for a state to foster science and technology (S&T) development. However, it can not be taken for granted. Therefore, the design of reflected, rational and transparent measures should be the objective for all actors responsible for S&T policies. For this, evaluation is an appropriate tool, because it can demonstrate the efficient and effective use of public funds, justify the allocation of scarce resources, point towards ‘good practices’ and authorise as well as optimise public interventions. In 2004 the evaluation team has reviewed FIT-IT against this background and raised several questions in order to investigate in how far it matches the stated goals.

First question: If FIT – why ICT? Why should Austria focus on Information and Communication Technology (ICT)? ICT influences economic and social interactions fundamentally; it has a lasting effect on products and processes – not only in the IT-industry itself but across all industries. It is the purpose of S&T policy to promote productivity, growth and prosperity. Several distinguished studies have affirmed that ICT has the potential to contribute to these goals. Consequently, ICT has been assigned a high priority in many countries’ S&T-agenda. Because of this the evaluation team is convinced that ICT is an appropriate focus for the Austrian S&T policy, especially since the Austrian Council for Research and Technology Development has already pointed towards this direction.

Second question: Is FIT-IT well designed? FIT-IT tries not solely to enhance excellent R&D, but additionally tackles other problems within the innovation process: It attempts to remove barriers, to bring together science and industry and to change the attitude towards innovation. This combination characterises – in a nutshell – modern support programmes. Reviewing the successful implementation of this combination is a rewarding challenge for the evaluation team. Our finding is that the motivation on which FIT-IT is founded and which influenced the design is legitimate and well argued.

Third question: Is FIT-IT well implemented? This question relates to the performance of the programme-management and the work of the responsible ministry. The surveyed scientists and companies that either received funding or whose application was rejected were very content with the implementation by eutema and FFF.

Fourth question: What has FIT-IT achieved? It is still too early to judge comprehensively the achievements of the programme, but some characteristics

and potential impacts of the projects were identified. Using FFF projects as a benchmark, we compared the ‘time-to-market’ criteria. According to the surveyed firms and universities FIT-IT projects possess a longer ‘time-to-market’ of about four years. Moreover, FIT-IT projects display a distinctive different character than the remaining projects of a company’s research portfolio. Inquiring about what would have happened if there had not been FIT-IT funding, most firms stated that they would have delayed the projects and conducted them at a smaller scale. In summary, there is evidence that the programme will lead to some beneficial and additional effects.

Fifth question: Can FIT-IT be improved? Our evaluation is not entirely affirmative. The evaluation team was able to pinpoint several challenges, risks and critical points in its report.

Challenges: The ministry will have to position FIT-IT in relation to the new founded FFG. If one takes the objective of reducing the abundance of promotion programmes by establishing one large promotion agency serious, FIT-IT will have to be incorporated into this agency in the medium term. Requirements for a ‘merger’ should be that sufficient resources are available for an active programme-management and that the cumulated programme knowhow is safeguarded.

Risks: FIT-IT can not do everything by itself! We argued that it is reasonable for Austria to place an emphasis on ICT. But FIT-IT should not become the sole instrument within the ICT focus. In national comparison the programme is not underfunded, however, it would be presumptuous to only rely on FIT-IT to meet all R&D challenges in the ICT sector.

Critical points: The expected outcomes of the programme are not entirely positive. FIT-IT tries to promote excellent projects and to tackle selected problems in the innovation process at the same time. One of these problems is barriers between university and industry, which FIT-IT attempts to overcome. Some windfall gains can be expected if FIT-IT fosters projects whose partners have been collaborated before regardless FIT-IT promotion.

In summary, the report advises the ministry and the programme management: “Meet the new challenges, improve certain aspects and proceed with the programme.”



Interim Evaluation uni:invent

<i>Title</i>	uni:invent – Patent Exploitation for Universities [Zwischenevaluierung uni :invent – Bericht im Rahmen der begleitenden Programmevaluierung]
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<i>Client</i>	Federal Ministry of Economics and Labour (bmwa), Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	October 2004 - November 2005
<i>Type</i>	Accompanying Evaluation
<i>Methods</i>	Descriptive and comparative statistical analysis of secondary data, descriptive and comparative statistical analysis of monitoring data, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/uniinvent.pdf

The Universities Act 2002 enabled Austria's universities to take up service inventions and directly exploit them.

The uni:invent programme is designed to step up efforts to exploit research results attained by Austrian universities. Through the use of targeted screening of selected research results for their potential for patenting and their commercial prospects, it is intended to enable and facilitate the practical implementation of top-rate research in Austria. By establishing a sustainable 'utilisation culture' at universities and building efficient exploitation structures, uni:invent provides a crucial economic momentum in the medium term and offers participating universities and their researchers new sources of revenue.

The uni:invent programme was launched in 2004. In its first year, a network of innovation scouts was set up at the Austrian universities. At present, more than 20 scouts are operating at 14 universities, and their number may be increased to keep up with demand.

The scouts were fully and comprehensively instructed in their responsibilities and prepared for their task. Already in the first year of the programme, some 100 invention reports were processed. About a third of the projects were recommended for patenting and can thus be market.

As a mid-term perspective, the establishment and institutionalisation of a 'exploitation culture' at Austrian universities accelerates and improves knowledge and technology transfer for the universities to Austrian enterprises. This in turn enhances the university's attractiveness as a partner for business, which again considerably helps to ensure that knowledge spawned at universities is put to the best possible use.



Mid-Term Evaluation Microtechnics Austria

<i>Title</i>	Mid-Term Evaluation Microtechnics Austria [Zwischenevaluierung Mikrotechnik Österreich]
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<i>Institutions</i>	Joanneum Research
<i>Client</i>	FFG (former Austrian Industrial Research Promotion Fund (FFF))
<i>Language</i>	German
<i>Date</i>	November 2004
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Document analysis, Logic-chart analysis, quantitative analysis of project database analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/Mikrotechnik_Evaluation_2004.pdf

The mid-term evaluation „Microtechnics Austria“ analyses the interrelation between priority setting, target system and measures of the initiative considering the context of the Austrian research funding system in the field of Micro- and Nanotechnology. A preliminary analysis of obtained effects of the initiative bases on data obtained from FFF.

On basis of the evaluation results different courses of actions for the future of the initiative are considered: should FFF continue the initiative as hitherto, should the initiative be modified or discontinued, or should the initiative be merged with the Nano-Initiative Austria?

The evaluation comes to the result that the priority setting of the initiative is correct because it focuses an area that is deemed to be of specific importance for the Austrian economy. The evaluation team sees no reason to discontinue that way.

The mission of the programme is to enhance use and development of micro technology in Austria on a wide basis, especially in small and medium sized enterprises. This aim could only be reached to some extent; the majority of research projects is performed by well known enterprises with strong experience in conducting FFF projects.

Whereas a high technological quality of the research projects could be reached and 27% of projects were realized with science-industry co-operations, aims to combine the use of different funding instruments of FFF (feasibility studies, R&D dynamics) for the initiative virtually failed.

The evaluation team points out possibilities to improve programme management and recommends a narrower collaboration with the Nano – Austria initiative.



Assessment of the *FHplus* programme

<i>Title</i>	Assessment of the FHplus programme
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<i>Institutions</i>	Technopolis
<i>Client</i>	Austrian Research Promotion Agency (FFG; former TIG - Technologie Impulse Gesellschaft)
<i>Language</i>	German
<i>Date</i>	September 2004
<i>Type</i>	Interim-Evaluation
<i>Methods</i>	Interviews, project application analysis
<i>Source</i>	<i>Executive Summary in German available:</i> http://www.fteval.at/files/evstudien/assess_fhplus.pdf

The Austrian funding agency TIG asked Technopolis to carry out a mid-term assessment of the funding scheme FHplus which aims to up-grade the research capabilities at universities of applied sciences and stimulate their RTD cooperation practices with industry.

Technopolis will analyse the current programme management procedures and conduct interviews with stakeholder to gather information on their experience with the programme. The results of the FHplus assessment (i.e. recommendations for programme management improvements) will be already used for the preparation of the next Call for Proposal, expected to be published in autumn 2004.



Interim Evaluation of „Sustainable Economy“ (“Nachhaltiges Wirtschaften”)

<i>Title</i>	Interim evaluation of the impulse programme „Sustainable Economy“ [Zwischenbilanz 2004 – Impulsprogramm „Nachhaltiges Wirtschaften”]
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<i>Client</i>	Department for energy and environmental technologies , Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	German
<i>Date</i>	July 2004
<i>Type</i>	Interim Evaluation
<i>Methods</i>	Document analysis, hearings
<i>Source</i>	http://www.fteval.at/files/evstudien/NaWi_Zwischenevaluierung.pdf

The department for energy and environmental technologies of the Ministry for Transport, Innovation and Technology assigned the interim evaluation of the impulse programme „Nachhaltiges Wirtschaften” to Dr. Christoph Mandl. The time-frame for this evaluation was set by the federal ministry with 6.5 work days.

According to the principle of interim evaluations the aim was not a fundamental strategic evaluation of the programme, but to look for potential improvements and how the efficiency of the programme could be enhanced.

According to this, it was not the intention of this evaluation to compile recommendations, whether the programme is suited to reach its aims in the society and the economy or not. The question was rather, whether the handling of the impulse programme is efficient and to look for potential improvements.

Therefore it did not make sense to conduct an empirical study. Hence the interim evaluation is based on relevant questions, which were developed jointly by the department for energy and environmental technologies and the evaluator. These questions had to be answered by the programme management, which was allowed to make use of all the experts and relevant information which were necessary to answer the questions.

The approach was as follows:

In a first phase it was the duty of the programme management to answer the questions and to provide the evaluator with a written report. On the basis of this report a hearing was held in the Federal Ministry for Transport, Innovation and Technology. The evaluator’s objective of this hearing was to understand and scrutinize the reports and, if necessary gain additional information, in order to be able to conduct the interim evaluation. After holding the hearing the reports were overhauled by the programme management and made available to the evaluator in the end of June 2004. These reports were the basis for the whole interim evaluation.

Statements written by the three jury chairmen were the second basis for the evaluation. They were asked about the principal guidelines for the programme and their answers are now also an important basis for the evaluation.

The structure of the interim evaluation is based on the questions which were developed jointly by the Federal Ministry for Transport, Innovation and Technology and the evaluator. Therefore the structure is as follows:

- How is the efficiency and usefulness of the specific measures in the handling of the programme judged, in particular concerning the proposal, consultation, support for the submission, the jury, coordination and integration of the projects as well as PR for the projects and the diffusion of results?
- How is the ratio between projects, which receive funding and those who do not? How much do the specific projects receive on average? How much is that compared with other programs?
- How is the timeline judged? How many project proposals are there? What is the planning horizon? How is dealt with delays?
- Is the approach to target specific target groups sufficient for the purpose of the programme? Do the proposed projects correspond with the aim of the programme and was it possible to initiate new co-operations?

In addition to the first question the three jury's chairmen were asked to provide a written comment to the following questions:

- How do the intentions and aims of the programme correspond with the composition of the juries?
- Do the presented projects proposals fit into the intention of the proposal?
- Are there thematic recommendations for the continuation of the different programme lines?
- Is the jury efficient and effective?
- Are there any recommendations for improvements for future juries?



Business Forums of the Institution of Business Promotion (WIFI)

<i>Title</i>	Evaluation of Consequences for the Austrian Economy initiated by the Business Forums of the Institution of Business Promotion (WIFI) [Evaluierung der Auswirkungen der Businessforen des Wirtschaftsförderungsinstituts (WIFI) auf die österreichische Wirtschaft]
<i>Authors</i>	Alfred Radauer, Sonja Sheikh
<i>Institutions</i>	Austrian Institute for SME Research
<i>Client</i>	Institution of Business Promotion (WIFI) of the Austrian Federal Economy Chamber
<i>Language</i>	German
<i>Date</i>	December 2003
<i>Type</i>	Interim evaluation
<i>Methods</i>	Document analysis, case studies, telephone interviews, face-to-face interviews
<i>Source</i>	http://fteval.at/files/evstudien/Wifi_businessforen.pdf

The survey at hand is about evaluation of the WIFI's business panels' impact on the Austrian economy. As opposed to a formative evaluation, aspects based on process and contents are only treated marginally. This work is based on a survey made by phone with 234 businesses which took part from 2000 to 2003, a document analysis, and personal discussions with people in charge of the program. The response rate of the telephonic survey is approximately 26%,

i.e. the responses of 61 companies are included in this analysis. Three companies will be described as “Good Practice” case studies.

The business panels are part of a comprehensive program by WIFI, launched in 1990, which encourages the accomplishment of business contacts between Eastern European and Austrian companies. This program consists of two parts: firstly, the organization of training courses in Eastern Europe, with the aim of diminishing know-how deficits in the application of business methods, and at the same time, the creation of an affinity for Austrian companies, in order to establish future co-operations. Secondly, the implied business panels which take place in Austria and which offer Austrian companies the possibility to get to know managers having successfully graduated from WIFI courses and to establish co-operations with them.

All in all it can be said that the business WIFI business panels have the potential of giving impulses and support for the initiation of business contacts between Austrian and Eastern European companies. The activities carried out within the course programs are seen as reasonable and goal-oriented, regarding the know-how deficits of these companies. On the first sight, the ascertained direct effects (ca. €17 mio size of account, which has been accomplished as a result of the business panels), as well as the indirect ones (ensuring competitiveness and importance of contacts for business operations), are definitely respectable.

However, looking closer, it can be recognized that only a small number of companies can be made accountable for these positive effects. Moreover, mainly internationally experienced companies participate in this program, those that still need to gain ground in Eastern Europe are hardly appealed.

There is evidence that both the participation in business panels, and the success rate (e.g. regarding the number of successful business accounts) can be increased, by a better program organization, which especially focuses on intensifying works on the business panels (including less experienced companies). There is also room for improvement in the maintenance of database.



TechTrend Monitoring

<i>Title</i>	Evaluation of the Programme „TechTrend Monitoring“ [Evaluierung des Programms “TechTrend Monitoring”]
<i>Authors</i>	Walter Bornett, Alfred Radauer
<i>Institutions</i>	Austrian Institute for SME Research
<i>Client</i>	Institute of Business Promotion (WIFI) of the Austrian Federal Economy Chamber
<i>Language</i>	German
<i>Date</i>	September 2003
<i>Type</i>	Interim Evaluation
<i>Methods</i>	n/a
<i>Source</i>	<i>For internal use only</i>

The programme "TechTrend Monitoring" allows Austrian enterprises/institutions free access to university know-how of the MIT (Massachusetts Institute of Technology) and the SRI (Stanford Research Institute). In the course of this evaluation expected and actual utility as well as overall effects of the programme on the targeted group are being analysed. Using this assessment it is possible to draw conclusions on improvements necessary in the design and the implementation of the programme and to present a basis for strategic and operative programme decisions.



Feasibility Studies

<i>Title</i>	Evaluation of the “Feasibility Studies Program” of the Austrian Research Promotion Agency (FFG) [Evaluierung des Programmes “Feasibility Studies” der Österreichischen Forschungsförderungsgesellschaft]
<i>Authors</i>	Alexander Keßler, Dietmar Rößl
<i>Institutions</i>	Institute for Small Business Management and Entrepreneurship, Vienna University of Economics and Business Administration
<i>Client</i>	Austrian Research Promotion Agency (FFG)
<i>Language</i>	German
<i>Date</i>	August 2003
<i>Type</i>	Interim evaluation
<i>Methods</i>	Documentary review, analysis of project records and reports, quantitative data analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/feasibilitystudies.pdf

Within the framework of the “Feasibility Studies Program” of the Austrian Research Promotion Agency (FFG), technical feasibility studies for product and/or process innovations carried out by research institutions and authorized experts are funded with 70% of total costs. The SME submits the research proposal together with a potential feasibility-performer (research and technology organization – RTO) who has to prove the required expertise and experience to the FFG.

The study examined all 183 research proposals that were evaluated until June 30, 2003 by the FFG, 86 of which were already processed. The research proposal, the technical and economic statements, as well as the final reports of the already finished projects were analyzed.

Feasibility studies should serve as a support for stop/go-decisions. As a matter of fact, we were able to prove a slightly significant correlation between the technical evaluation of the results and the intended continuation of the project.

Remarkably, the feasibility studies assigned by smaller and particularly by younger companies have led to follow-up projects more frequently. Smaller or younger enterprises have apparently submitted more feasible ideas than medium-sized enterprises. Thus, the feasibility studies have especially motivated small companies to work on further realization.

If the volume of promotion is applied to the means mobilized in the follow-up projects, one can observe the following: These 86 feasibility studies were subsidized with approximately € 700,000. Subsequently, this volume of promotion is confronted with approximately five created R&D-employments and about €2.5 – 2.9 Mio. induced project investments, of which €0.55-0.65 Mio. are induced research expenditures.

About 50% of the SMEs that have made use of this promotion programme have submitted a project proposal with the FFG for the first time. Based on the market position of the FFG one can assume that the majority of these enterprises have handed in a project proposal - for which it is necessary to regularly integrate technical expertise - for the first time at all. Initial contacts arranged for by the promotion programme helped the participating SMEs to overcome possible resentments towards RTOs.

About 90 different RTOs were assigned to carry out the feasibility studies. Against the background of the small Austrian market for RTOs one can confirm that this programme has not only promoted SMEs, but has also had a stimulating impact on the Austrian Research scene. As a result, the general concern that such programs would only support a handful of already established institutions has proved to be untenable. As for the applying SMEs, a broad consulting potential could be mobilized.



Evaluation of “TechnoKontakte”

<i>Title</i>	Evaluation of the Programme “Technokontakte” [Evaluierung des Programms „TechnoKontakte“- Seminare]
<i>Authors</i>	Eva Buchinger, Petra Wagner
<i>Institutions</i>	ARC systems research
<i>Client</i>	Austrian Federal Ministry of Economics and Labour (BMWA)
<i>Language</i>	German
<i>Date</i>	July 2003
<i>Type</i>	Interim evaluation
<i>Methods</i>	Survey; statistical analyses; expert interviews; document analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/Technokontakte.pdf

The technology transfer programme “TechnoKontakte” aims at improving the competitive performance of Austrian companies through the transfer of best practice in firm-to-firm visits. The programme aims at fostering knowledge and experience exchange through “hands-on” seminars at best practice firms, stimulating follow-up innovation activities in the visitor firms and initiating network access and contacts among the participants.

The objectives of this evaluation were threefold: First, the performance of the seminars between 1999 and 2002 was analysed. Second, the mobilisation effects within the visiting firms were assessed. Third, future development opportunities for the programme were elaborated.

Both quantitative and qualitative elements were applied. The major data sources were, first, questionnaires from a regular on-site visitor survey with information on the visiting company, the visitor’s assessment of the seminar performance and planned follow-up activities. Second, a telephone survey on actual implementation of innovation-related follow-up activities (mobilisation effects) among a sample of visitors during the evaluation. Third, several expert interviews were conducted among policy makers, technology transfer specialists incl. the programme management, host and visiting firms.

The evaluation has shown that TechnoKontakte seminars are an effective and efficient way to share tacit knowledge and stimulate innovation activities within the visiting companies (mobilisation effects). The programme management has successfully adapted the British concept of sharing best practice through firm-to-firm visits. The number of seminars and visitors has continuously increased (market success). Visitors generally rate the seminars as “excellent” opportunities to gain practical expert knowledge that couldn’t have been accessed easily any other way.

The mobilisation effects are quite “broad”. Nearly all (93 %) of the visitors discuss their newly acquired knowledge with colleagues and managers in their own companies. Nearly every other (43%) visitor firm implements technical or organisational changes as a direct consequence of the seminar. Many visitor companies (65%) develop their strategy further and some (20%) even start research and development activities. Though most of these follow-up activities have no major impact on the company, the mobilisation effect is positive, as the contribution of incremental innovations to improve business performance is undeniable. The mobilisation effects are also “deep”: A small number of

visiting companies have also implemented more radical changes with sustainable impact. Substantial improvements in strategy (9%) and organisation (4%) indicate organisational learning effects.

TechnoKontakte seminars provide access to networks which enable visiting companies to share information, exchange good practice and develop new business opportunities. Opportunities for exchanging experience during the seminars may be improved according to visitors. Nevertheless new contacts are forged (41%) und used to exchange experience (24%), to gain access to networks (21%) and business relations (14%), in a few cases even to research and development (R&D) co-operations (5%). These are “deep” changes as cooperative research and development are quite sensitive and also significant ties among firms.

As the TechnoKontakte transfer programme has been proven as a successful adoption of international models, a general conclusion regarding development options is that the programme should be continually and incrementally improved. The basic concept however should thus not be altered. Continuous improvement includes measures for quality assurance and growth both in host and visitor companies.

Innovation policy governance effects may be improved by raising incentives for SME participation and a stronger focus on structurally weaker regions. Incentives should be placed for the programme management, to make quality assurance more transparent and thus more professional. Longerterm (multi-annual) subsidy contracts would improve the planning process for the programme management.

Moreover, the transfer of the best practice & firm-to-firm concept to other peer-to-peer areas of public interest should be investigated (best practice & science-to-science, best practice & public administration- to-public administration).

Programme Evaluations 2003 – 2006 (ex post)

<i>Title</i>	<i>Date</i>	<i>Download available</i>
<i>Evaluation of the Project PROVISIO 2003-2007</i>	October 2006	☒
<i>Evaluation of the FWF mobility programs Erwin Schrödinger and Lise Meitner</i>	July 2006	☒
<i>Ex-post Evaluation of FFG funded projects</i>	Biannually, November 2005	☒
<i>Ex-post evaluation of the special FFF programme “Austrian Food Initiative”</i>	October 2005	☒
<i>The Austrian Science Fund: Ex Post Evaluation and Performance of FWF funded Research Projects</i>	July 2005	☒
<i>Research Network Programmes Evaluation for the Austrian Science Fund (FWF)</i>	September 2004	☒
<i>Evaluation of the Discussion Forum 2004 “Discourse day genome research and medicine – What do I get out of that?”</i>	September 2004	☒

<i>Participatory Policy-Consulting – The Case of the Citizen-Conference 2003</i>	August 2004	<input checked="" type="checkbox"/>
<i>Evaluation of the Seed Financing Program</i>	July 2004	<input checked="" type="checkbox"/>



Proviso 2003-2007

<i>Title</i>	Evaluation of the Project PROVISO 2003-2007 [Evaluierung des Projektes PROVISO 2003-2007]
<i>Authors</i>	Sonja Sheikh
<i>Institutions</i>	Austrian Institute for SME Research
<i>Client</i>	Austrian Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	October 2006
<i>Type</i>	Ex-post evaluation
<i>Methods</i>	Document analysis, questionnaire, interviews, case studies
<i>Source</i>	http://www.fteval.at/files/evstudien/proviso.pdf

The evaluation of the project PROVISO was carried out by the Austrian Institute for SME Research on behalf of the Federal Ministry for Education, Science and Culture (bm:bwk) from April to October 2006. The Austrian Institute for SME Research used a mixture of qualitative and quantitative methods for the evaluation. For this purpose, a document analysis, as well as a partly standardized written survey with a total of 66 users of the service and 31 qualitative interviews with PROVISO employees and other stakeholders of the service, and an international comparison with the help of four smaller case studies, has been accomplished.

PROVISO IV was commissioned by several Austrian ministries to the ACS – Austrian Computer Society. Their aim was to achieve a significant monitoring of the Austrian participation in the 6th EU framework program for research, technological development and demonstration (RTD) in an international relation. At the same time, PROVISO should allow measurements of results, as well as create basic principles for the control of Austrian promotions. Furthermore it serves as a reference for the verbalization of policies with regard to strategic European decision- and coordination-processes.

PROVISO's primary target groups are the Austrian Program Delegates and the EU coordination department of the bm:bwk. A further target group which has gained in importance as opposed to former PROVISO projects, is the FFG, in the area of European and international programs, as well as regional counseling and support centers (RBBZ), whose task is to support matters in the 6th EU framework program. Other organizations can also turn to PROVISO with inquiries. However, these inquiries can only be dealt with according to the available resources at the EU commission.

The PROVISO service can be divided into two components: As for the Monitoring-component, the participation of Austrian researches is recorded at the 6th EU framework program. Furthermore, the basic principles for the control of Austrian promotions and the verbalization of policies are created. For this purpose the program delegates transfer participation data, which are provided by the CIRCA servers, to PROVISO who then edits, standardizes, and corrects these data in a data base. Based on this the service-component then analyzes and evaluates these data for PROVISO's target groups. For this purpose not only general information and so-called "special evaluations" are available, but also the following regularly and periodically created products: Call information/quick evaluations (for the delivery of a current short overview on events or biddings) and status reports (summaries on the current status of the Austrian participation in the 6th EU framework program). Facultative products, which are exclusively created on request, are presentation materials, thematic dossiers, as well as program reports and annual reports.

As for its organizational structure, the PROVISO team is similar to a functional unit within the ministerial structure of the bm:bwk. A team consisting of seven people is necessary for the product creation. Hereof four work full time and three are employed part time (at a degree of 20 hours per week). The involvement into the ministerial structure is especially convenient

as regards of the short communication channels to PROVISO's primary target group, being the program delegates. As opposed to this, synergetic effects with the target groups are probably wasted.

Informal and personal communication is of major importance for PROVISO. It is also very successful due to the ideal size of the service institution and to its close relationship with the delegates. The majority of all inquiries (more than 52%) are directly addressed to PROVISO, who then sends the products via e-mail. Electronic channels of distribution, such as e.g. era.gv.at or EPMP, are in comparison not so important. This also applies to the PROVISO homepage, which is familiar to 74 % of the users, however, it is seldom used because most of the information is exchanged personally or via e-mail. All in all the users regard the access to all PROVISO information as easy.

Within the PROVISO target group the PROVISO products are to a large extent well-known. At the same time, there is a comparatively high utilisation. Thus, it becomes clear that the FFG resp. the RBBZ consultants use these products as much and sometimes even more than the program delegates. Therefore, the evaluation of the target group has been an important contribution to the effective use of PROVISO. Most users regard the PROVISO products as relevant or even very relevant for their work, whereupon the support institutions (but also external users) regard the services as more important than the program delegates do. PROVISO is especially important for the support institutions in terms of consultation meetings' accomplishment.

On the part of the different target groups, there is generally a high contentment with the PROVISO products and services. However, there is still room for improvement in different sub areas, such as clarity of explanations or a clear traceability of the given information. As for the products' applicability and quality, users criticize that PROVISO associates do not examine the contents of their analysis sufficiently. A higher integration of the program delegates into the interpretation of the data is being suggested.

PROVISO is altogether a valuable asset for the strategy development and consultancy activities for the target groups in connection with the 6th EU framework program and for the success control of the Austrian participation. Room for improvement concerns rather details, resp. concern the future positioning of PROVISO. Conclusion and recommended action can be found in chapter 5.



Evaluation of FWF's Mobility Programs 'Erwin Schrödinger' and 'Lise Meitner'

<i>Title</i>	Evaluation of the FWF mobility programs Erwin Schrödinger and Lise Meitner
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<i>Institutions</i>	Technopolis Austria
<i>Client</i>	Austrian Science Fund (FWF)
<i>Language</i>	English
<i>Date</i>	July 2006
<i>Type</i>	ex-post evaluation
<i>Methods</i>	Interviews, documentary review, three online surveys with former fellows, analysis of the FWF-project database
<i>Source</i>	http://fteval.at/files/evstudien/mobilityprogramme.pdf

The Erwin Schrödinger Programme is providing grants for research stays in excellent research institutions abroad for a duration of 10 to 24 months, and the “incoming” Lise-Meitner-Programme, financing a long term stay of a foreign researcher at an Austrian research organisation.

Three information sources have been used for this evaluation. Firstly, a series of interviews with staff of the FWF, with representatives of the Ministry and the Austrian Council for Research and Technology Development. Secondly, the FWF database and a report on Marie-Curie-Fellowships and thirdly, three online surveys have been conducted, addressing Schrödinger grant holders, Lise-Meitner grant holders and Lise-Meitner co-applicants. In conclusion, both the Schrödinger and the Lise-Meitner programmes are globally well performing programmes..

Most generally, the Schrödinger programme, can be seen as being at the forefront of support programmes, as since its launch, the issue of mobility has considerably gained in importance. However, the results of the survey indicate that the programme fits differently to the various research disciplines. The main motivation as well as the useful time frame for a “experience abroad” differs heavily between medical researchers on the one side and researchers from the humanities and social sciences on the other side.

In the case of the Lise-Meitner programme, the design had to be adapted several times before it achieved its current formation. The maximum duration has been increased to two years, the way of financing has been turned from a scholarship to employment in the institute, and the funding per year has been increased in order to attract those researchers that the programme intended to, namely high level researchers that can provide an effective value added to the hosting institute, and the Austrian scientific community more generally.

The FWF’s aim is indeed to accompany the researchers in their career development; programmes are designed not to overlap, but to complement each other. Survey results show that 39% of former Schrödinger fellows later received further FWF-funding, and nearly the half of Lise-Meitner fellows who extended their stay in Austria also benefited from further funding from the FWF. On a budgetary level, the separated budgets of the FWF, linking specific programme types to specific funding sources, and therefore ministries, turned out to be a disadvantage for mobility programmes, as the sudden decline in “Sondermittel” (extra-budgetary funds) attributed by the bm:bwk led

to a cut in funding of mobility. In 2004, acceptance rates considerably fell in the Schrödinger programme, despite a global budget increase of the FWF, and a political declaration in favour of mobility grants.

Concerning the positioning of the FWF-mobility programmes in the Austrian funding portfolio, some overlapping can be observed, mainly with post-doc grants of the Austrian Academy of Sciences. However, no other programme has exactly the same orientation, combining both openness to any scientific discipline, as well as to the country of destination, but restricting funding to research stays abroad, or researchers that have not spent more than 6 years in Austria before their application for the grant respectively.

Efficiency: In this respect, the initially very high acceptance rates, of around 60 to 70% has to be mentioned, falling below 50% in 2004, when budgets were cut. Selection rates of up to 70% seem nevertheless defensible due to the good performance of former grant holders, as indicated by the results of the online-surveys, showing a high effectiveness, because the majority of former grant holder are still in contact with the persons they worked with, while abroad, many of them received further FWF funding after their stay abroad and the majority have become full professors since. Not surprisingly the overall satisfaction of grant holders is positive or very positive, with two points of weaknesses, namely the transparency of the selection process, and the duration of the selection phase. Whereas recent reforms resulted in an increase in the satisfaction concerning the transparency of selection (as major parts of the reviewers report is now sent to the applicants), the duration of the selection process, varying considerably from one application to another, is still a problem for some of the applicants. Comments from former grant-holders indicate a lack of support after the grant, and they would like to see more networking activities for Schrödinger or Lise-Meitner alumni.

Very often, those who return to their former institute face difficulties in respect of continuing the research project launched during the Schrödinger stay. Very often, the qualification resulting from the Schrödinger grant allows them to apply for a higher position that is not vacant in their former institute, but which is elsewhere, maybe abroad.



Ex-post Evaluation of FFG funded Projects

<i>Title</i>	Ex-post Evaluation of FFG funded projects [FFG – Bereich Basisprogramme – Projektevaluierung 2006]
<i>Authors</i>	Georg Bornett, Sonja Sheikh
<i>Institutions</i>	Austrian Institute for SME Research
<i>Client</i>	Austrian Research Promotion Agency (FFG)
<i>Language</i>	German
<i>Date</i>	biannually, last carried out in 2006
<i>Type</i>	ex-post project evaluation
<i>Methods</i>	standardised questionnaire .
<i>Source</i>	http://fteval.at/files/evstudien/FFG_Projekteval2006.pdf

The KMU FORSCHUNG AUSTRIA / Austrian Institute for SME Research regularly (on a biannual basis) carries out an ex-post evaluation of the projects funded by the FFG, about 3 years after their finalisation. Within the ex-post evaluation the economic impact of the funds provided by the FFG is assessed based, among others, on the following indicators:

- technical success of the project
- economic success of the project
- commercialisation of the project results
- revenues from licenses and patents
- additional and maintained turnover

- additional and safeguarded employment
- applications for patents

Apart from these criteria, also the issue of additionality of the funded projects as well as the issue of customer satisfaction with the funding procedures of the FFG are regularly addressed in the scope of the ex-post evaluation.

Since 2001, there is a link between the ex ante project evaluation done by the FFG and the ex post evaluation of the Austrian Institute for SME Research.

The most important results of the ex-post evaluation carried out in 2004 are presented below. The figures and findings relate to the projects funded by the FFG and terminated in the year 2000:

- The return rate of questionnaires within the project evaluation in 2004 amounted to 74 %.
- The success rate of projects that were terminated in 2000 was, as in preceding years, on a high level. 85 % of the projects, funded by the FFG, were concluded successfully. For 19 % of the projects success could not be assessed in monetary terms.
- In total, 5,613 jobs were created and secured by projects funded by the FFG and terminated in 2000.
- The additionality of the support by the FFG was, as in the preceding year, comparable to international standards. About 9 % of the projects concluded in 2000 would have been carried out by the corresponding enterprise without any restrictions or cuts of any sort irrespective of received support. This was the case for 10 % of the projects terminated in 1998.
- The question about satisfaction of the support receivers shows that 69 % of the enterprises regard project administration by the FFG as very good and 28 % as satisfactory.
- A comparison of the monitoring data of the FFG with the results of the available ex-post evaluation showed that the economic indicators of those projects, that afterwards turned out to be successful, also received higher scores in the beginning by FFG than unsuccessful projects. This indicates that FFG is becoming more selective.



Ex-post Evaluation Austrian Food Initiative

<i>Title</i>	Ex-post evaluation of the special FFF programme “Austrian Food Initiative” [Ex-post Evaluierung der Sonderförderungsaktion “Lebensmittelinitiative Österreich”]
<i>Authors</i>	Georg Bornett, Sonja Sheikh, Brigitte Mehlmauer-Larcher, Robert Kastner
<i>Institutions</i>	Austrian Institute for SME Research
<i>Client</i>	Austrian Research Promotion Agency (FFG)
<i>Language</i>	German
<i>Date</i>	October 2005
<i>Type</i>	Ex-post Evaluation
<i>Methods</i>	standardized survey with project beneficiaries, personal interviews with project applicants that were not accepted, telephone interviews with a ‘control group’
<i>Source</i>	http://www.fteval.at/files/evstudien/Food_initiative.pdf

In 1998, the Austrian Research Promotion Agency (FFG) – department general programmes started the special programme “Austrian Food Initiative“. Its aim was to improve the competitiveness and to increase the technological potential of the Austrian food industry. R&D projects along the entire value-added chain, aiming at an increase of the technological potential of the enterprises, were supported. The initiative focussed, particularly in the second phase, on projects of SMEs and on co-operation projects. In 2000, the KMFA conducted an interim evaluation of the Austrian Food initiative in collaboration with Prof. Czedik-Eysenberg and Dr. Robien-Jedlicka. In the course of this evaluation and based on the set targets and goals, output, success and effect indicators were derived for the assessment of the programme as a whole and also for the various individual projects. This first evaluation of the initiative for the initial phase showed – according to these indicators – that the initiative could be considered a big success, and it was consequently recommended to extend its running time.

The present concluding ex-post evaluation aims at assessing and analysing the overall effects of the Austrian Food Initiative and at determining whether the criteria and targets that were worked out in the preliminary stages and in the interim evaluation turned out to be reasonable and were met during the total life time of the initiative. Furthermore, recommendations for further support activities were derived.

The study was conducted by the KMFA in co-operation with GETBUSINESS International. KMFA was responsible for the standardized survey and GETBUSINESS International for the personal interviews. The results of the ex-post evaluation can be summarised as follows:

- 170 projects with a total grant volume of €25 mio were supported. These projects produced approximately €191 mio of additional turnover.
- Almost half of the implemented projects yielded a product or procedure, which was of higher value than other company products with respect to its placement within the value-added chain. In total, about 25 % of the implemented projects represented world firsts.
- In the course of the supported projects, 797 jobs were secured and 234 new jobs created.

- There are two ways how the initiative could be further developed for the food industry. Future programmes could, on one hand, support the connection between technological development and product marketing and, on the other hand, also improve the linkages between raw material production (agricultural production) and processing.
- Enterprises appreciate, in particular, the possibility to conduct „feasibility studies“. These short and low cost works are a first step towards further F&E, especially for newcomers.



Ex-post Evaluation and Performance of FWF funded Research Projects

<i>Title</i>	The Austrian Science Fund: Ex Post Evaluation and Performance of FWF funded Research Projects
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<i>Institutions</i>	Joanneum Research
<i>Client</i>	Austrian Science Fund (FWF)
<i>Language</i>	English
<i>Date</i>	July 2005
<i>Type</i>	Ex Post Evaluation / Accompanying Evaluation
<i>Methods</i>	Literature review on project selection procedures, project evaluation methods, and practicable performance evaluations, descriptive and comparative statistical analysis of project database, multiple linear regression analysis, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/FWFevaluation.pdf

The study aims to appraise the performance of FWF funded projects within the grant scheme of stand-alone projects (Einzelprojekte), which constitutes the core research funding of FWF, accounting for about two-thirds of FWF's budget in 2004. The emphasis of the study is to identify the inter-relation between ex ante and ex post evaluation, and to identify critical factors that influence the results of the ex post evaluation. Furthermore, the study examines relevance and appropriateness of FWF's ex post project evaluation procedure.

For the Austrian Science Fund the study should offer valuable clues to improve the quality of its processes and project evaluations. Furthermore, the study should deepen the knowledge on the effects of FWF's research funding particularly with regard to the legitimation of its funding, and with regard to future modifications that improve monitoring system and funding processes respectively.

Therefore, the present revisits FWF's funding procedures, focuses on various methods for funding allocations and associated problems, along with methods to demonstrate the effects of funding. A data based analysis including a multiple linear regression analysis of the FWF-funded projects tries to identify critical factors that influence the results of the ex post evaluation. Where applicable, the study considers gender aspects in order to review the fairness FWF's procedures.

The study addresses the following research questions:

- What is the concrete value of ex post project evaluations?
- Do ex post evaluations constitute a solid source of information for FWF and/or other stakeholders in the policy process?
- What can be learnt from ex post evaluations with respect to the success of a project?
- Do ex post evaluations pose the right questions?
- Do the results of the ex post evaluation provide any hints for the potential of commercialisation of the projects?



Evaluation of FWF's Research Network Programmes

<i>Title</i>	Research Network Programmes Evaluation for the Austrian Science Fund (FWF)
<i>Authors</i>	Jakob Edler, Susanne Bühner (Fraunhofer ISI), John Rigby (PREST)
<i>Institutions</i>	Fraunhofer ISI, PREST
<i>Client</i>	Austrian Science Fund (FWF)
<i>Language</i>	English
<i>Date</i>	September 2004
<i>Type</i>	ex-post evaluation
<i>Methods</i>	Literature review, interviews, documentary review, analysis of project records and reports, sub-contracted bibliometrics study on publication data
<i>Source</i>	http://www.fteval.at/files/evstudien/sfb_networks_evaluation.pdf

The network programmes of the Austrian Science Foundation are an important cornerstone of the Austrian basic science funding activities. In general, they are successful in delivering the impacts expected by the FWF. While the SFB combine skills in order to build up critical mass at one place or centred around one place, the FSP seek for complementary capabilities across country.

For both networks, however, the immediate network effects are cooperation learning, the creation of new combinations in research content and the setting up of new research visions, especially as for interdisciplinary tasks – as well as the common development of methods and common usage of infrastructure. These effects are very substantially realised for *both* programmes.

In addition – and most importantly – the quality of the participants as well as the excellence of the work they do within the networks is high and substantially higher than the average of Austrian scientific research. The improvement over time has been impressive compared to the totality of Austrian researchers.

Judged from peer review analyses and many interviews, the networks that are built up in a bottom up process can be assessed as being very topical, the tasks carried out are challenging and complex. Thus the networks contribute largely to the FWF mission statement and have become an indispensable means of FWF funding strategy. In light of this overall performance and compared to other countries, the relative weight of the network programmes appears to be low, maybe even too low, given that the institutional funding in Austria has a greater weight than in most other countries.

Especially if thematic programming becomes more important in Austria, provisions are certainly needed to keep up or even enlarge the share of budget that goes to the networks. Moreover, the international comparison shows that the variety of schemes as for basic research cooperation is not at the high end.

The network structures that have been built under the umbrella of these programmes are diverse. Thus the design of the programmes has stood the test of time rather well, as it enabled this variety with considerable success. However, it will certainly be a challenge for the FWF to ensure such diversity in the future. In effect, the separation of the two programmes already takes account not only of different location principles but also of different understandings and models of cooperation as regards coherence, pre-existing

cooperation, expectation of cooperation effects, and risk involved etc. The importance of these different principles is likely to be even truer with the introduction of a new University Law that will act to concentrate networks in one location as cornerstones of university strategies, while networks that are spread across different locations will remain endeavours in their own right.

As regards the management of the programme, the overall impression is that the FWF management is a very good one; in fact the application and evaluation procedure and the interaction with the network participants can be rated excellent. Some minor improvements are recommended though, especially as regards feedback procedures or a potential additional questionnaire to be used in evaluations.

To exploit the potential benefits of the networks further, a number of programme design and performance changes are proposed. Most importantly, the high potential that lies in the network as regards the training of young researchers could be exploited much more. Although the networks already offer some opportunities in this direction as universities do indeed utilise the networks to give young academic talent mid-term perspectives, they do not have systematic training programmes and this should certainly be considered in the future.

The networks are still too national and further opening up both as regards attraction of scientists and as regards inclusion of foreign institutes will be crucial in the future. Austrian scientists in general are, according to the authors' bibliometric data, working extensively within international science.

As regards involvement of university leadership, the interviews revealed a small number of cases in which the leaders of the universities triggered the emergence of a network very actively and while these initiatives can be very beneficial, there is a risk that such commitments can, in certain cases, lead to commitments of scientists and sub-projects that do not really fit the overall requirements.

Finally, and also concerning the perception of the network programmes, the visibility of the networks has been very diverse, both as regards the scientific visibility and the visibility to the broader public. A better profiling of the networks themselves should be demanded in the future.

Evaluation of „Diskurstag Genomforschung und Medizin“

<i>Title</i>	Evaluation of the Discussion Forum 2004 “Discourse day genome research and medicine – What do I get out of that?” [Evaluierung des Diskussionsforums 2004 „Diskurstag Genomforschung und Medizin – Was habe ICH davon“]
<i>Authors</i>	Christoph Meili, Antje Hellmann-Grobe, Nico Luchsinger
<i>Institutions</i>	Stiftung Risiko-Dialog, St. Gallen
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	September 2004
<i>Type</i>	ex-post Evaluation of a Public Discussion Forum
<i>Methods</i>	Media analysis, interviews, questionnaire, strengths and weakness analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/diskurstag04.pdf

The Gen-AU office of the Federal Ministry for Education, Science and Culture (bm:bwk) arranged a discourse day on “Genome research and medicine – What do I get out of that?” (“Genomforschung und Medizin – was habe ICH davon?”), on June, 17 2004 at Stadthalle Graz. The discourse day was to allow a discussion about chances and risks of genome research. The event has been evaluated independently by the foundation Risiko-Dialog, St. Gallen. The

report at hand summarizes the evaluation results. For this evaluation, participants were interviewed orally and in written form during and after the discourse day. Further data was collected by means of a document and media analysis. 150 people have visited the discourse day; approximately half of them were interviewed for this report. The participants were very positive about the discourse day's topic. As for the analysis of the visit's motivation it has been discovered that almost all participants wanted to either get or give information. Thus, most visitors mainly wanted an exchange of information, rather than a discussion or a dialogue. Since this information exchange actually took place, the overall evaluation of the event has been regarded as positive by the interviewed people. Furthermore, the individual modules of the event and the organization of the schedule, as well as the conference rooms, were evaluated positively. Especially the poster exhibition in the foyer has been praised. Participants have criticized that there were not enough recording clerks present at the discussion. The greatest point of criticism, however, was the absence of the "public" at the discourse day. Hereby it has been discovered that the event's marketing shows deficits with several target groups. The organizers have indeed tried to address a broad target group; however, they have disregarded the different interests and expectations of such a heterogeneous group in their concept. The analysis of the advertising media has shown that the message of the organizer – an invitation to a discussion – has not been fully transported. Furthermore, the time and the design of the event were not ideal, if one takes into consideration the organization and its profile in public.

Recapitulating it can be said that the discourse day has fulfilled the expectations of most participants to a great extent. There were different, partly contradictory aims, with the organizers. Therefore, the evaluations vary between positive and rather critical, depending on the aims. The evaluation report hence suggests a revision of the concept which includes details about the aims and target groups of the discourse day. This also includes a better internal coordination. As a further step, advertising tactics and event design can be adjusted to the new guidelines.

Participatory Policy-Consulting – The Case of the Citizen-Conference 2003

<i>Title</i>	Participatory Policy-Consulting – The Case of the Citizen-Conference 2003 [Partizipative Politikberatung am Beispiel der BürgerInnenkonferenz 2003]
<i>Authors</i>	Alexander Bogner (ITA), Harald Puchrucker, René Zimmer (Austrian Academy of Sciences)
<i>Institutions</i>	Institute of Technology Assessment (ITA), Austrian Academy of Sciences
<i>Client</i>	Austrian Council for Research and Technology Development
<i>Language</i>	German
<i>Date</i>	August 2004
<i>Type</i>	ex-post Evaluation of a public Discussion Forum
<i>Methods</i>	surveys, semi-structured interviews, desk analysis, media analysis,
<i>Source</i>	http://fteval.at/files/evstudien/policy_consult.pdf

The Austrian Citizen's Conference "Genetic data, from where, whereto, what for?" was arranged by the PR agency communication matters from 20 to 23 June 2003 in Vienna. It was part of the Public Awareness Campaign on behalf of the Austrian Council for Research and Technology Development on the subject matter of innovation. Despite some delays and economic shortages, evidence was provided that this participative procedure can also be carried out in Austria. The institutional context of this project has proven dissatisfactory since potential actors certify the Austrian Citizen's Conference as lacking credibility. But the organizers have resolved reservations with presenting a concrete form of procedure. As for the scientific counseling, a team of nature- and social scientists has been called in. However, no clear objective has yet been developed for this Citizen's Conference. The procedure has especially been carried out from the pragmatic aspect of a smooth development.

Seed Financing

<i>Title</i>	Evaluation of the Seed Financing Programme [Evaluierung des Seed Financing Programms]
<i>Authors</i>	Martin Hagleitner, Oliver Wichtl
<i>Institutions</i>	Malik Management Zentrum, St. Gallen
<i>Client</i>	Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	German
<i>Date</i>	July 2004
<i>Type</i>	ex-post evaluation
<i>Methods</i>	Desk research, Document analysis, Interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/seedfinancing.pdf

The existing Seed-Financing Programme aims to encourage business start-ups and the funding of companies with especially innovative and technologically advanced ideas, products, procedures and services and possessing a high market potential. It promotes dynamic and solid growth of innovative companies and assists in the expansion of the capital base.

The evaluation had several objectives. First, the direct results of the programme should be assessed. This was done with several key indicators such as jobs, added value, development of new products and procedures, profits, the trade balance, survival rate of companies compared to “flops” and other statistical data. Furthermore the efficiency of the program’s administration was assessed. The programme was then compared to similar programs in other European countries, but also to similar programs in Austria. The emphasis here was on finding potential overlaps as well as gaps between the programs. Subsequently the whole start-up financing situation in Austria was investigated. The third objective was to develop some proposals on how to improve the efficiency and the economic impact of the program.

On the basis of this evaluation it can be said that the Seed-financing Programme should be continued. The programme rests on a good basis; nevertheless there is room for some optimization in certain areas.

First, the programme lacks a real long-term perspective as well as appropriate funding to make a real impact in the Austrian economy. Second, the independence of the administration, within the framework of the Austria Wirtschaftsservice (awsg), should be improved and the decision making process should be more streamlined. Third, the goals of the programme should be better communicated and well directed lobbying for the programme may be helpful. Subsequently the programme should be positioned as the central element in the coordination of the transition from project-oriented funding to company-oriented funding. In the international comparison as well as in the comparison with venture capitalists the “programme showed a good performance. Moreover the failure rate of supported companies is also rather appropriate. If the “Seed Finance Program” implements the above proposed improvements it may play a vital role in the public funding of new high-tech start-ups in the future. Through the combination of funding and consultation it’s possible to successfully confront the market failure of raising money in an early phase of a new venture.

Assessments, Policy, Fields & Systems Evaluation - Overview

<i>Title</i>	<i>Date</i>	<i>Download available</i>
<i>Evaluation of Research and Teaching Programmes of the Faculties of Mathematics at the Austrian Universities</i>	June 2005	☒
<i>Evaluation of Measures for the Promotion of Women in Science and Research in Austria</i>	February 2005	Publication available
<i>Assessment “Future of the Competence Centres Programmes (K plus and K int/net) and Future of the Competence Centres“</i>	January 2004	☒
<i>Review of Austrian Universities of Applied Sciences</i>	March 2003	☒



The Austrian Mathematics-Evaluation

<i>Title</i>	Evaluation of Research and Teaching Programmes of the Faculties of Mathematics at the Austrian Universities [Evaluierung von Forschung und Lehrprogrammen an den Fachbereichen für Mathematik der österreichischen Universitäten]
<i>Authors</i>	Peer Group headed by Karl-Heinz Hoffmann (Forschungszentrum Caesar Bonn) and Jean-Pierre Bourguignon (l'Institut des Hautes Études Scientifiques, Bures-sur-Yvette)
<i>Institutions</i>	n/a
<i>Client</i>	Austrian Mathematical Society (ÖMG), Austrian Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	June 2005
<i>Type</i>	Policy Evaluation
<i>Methods</i>	Questionnaire, interviews
<i>Source</i>	http://fteval.at/files/evstudien/mathematikevaluierung.pdf

A high-ranking (and exclusively international) committee has evaluated research and development in the special field of mathematics at the Austrian universities within the period from 2004 to 2005.

Subject, customer and structure of the evaluation

Only those schools and research institutions were evaluated which have mathematics as a main subject. On the other hand, not all universities have agreed to be evaluated. In fact whole universities (e.g. the University of Klagenfurt), as well as departments (e.g. at the Technical University of Vienna) have not been evaluated.³⁷ The ÖMG, the Austrian Mathematical Society³⁸, has a dual capacity in this evaluation, since it was the customer on the one hand, but also subject to the evaluation on the other. The study is divided into two parts: it starts with a descriptive report, an inventory of the individual departments, based on a detailed questionnaire survey, and concludes with an elaborate recommendation. Thus, a clear and creditable separation between observation and recommendation is available.

Methodology

As for the mathematical departments, a detailed questionnaire survey in the individual departments was carried out. The specifications provided both for a descriptive report within the survey, and for a basis of the evaluators' work.

Ten evaluators from Germany, the USA, Finland, the Netherlands, and Switzerland devised these references, under the direction of Prof. Hoffmann (applied mathematics, Germany) and Prof. Bourguignon (abstract mathematics, France). They are extremely brief, though very informative and precise, and attest to a thorough knowledge about the Austrian university scenery³⁹. These references partly address the Austrian situation as a whole, and partly address the individual departments. They were created upon the study of the questionnaires, site visits, and a joint decision of the jury.

³⁷ Moreover, it is obvious (even for a non-mathematician) that in individual cases some parts of departments, for example working groups of the University of Vienna, or certain professional services, were not accounted for.

³⁸ Financer of the study was the bm:bwk (Ministry for Education, Science and Culture)

³⁹ Which is joyously surprising, considering the evaluators' internationality.

As for the survey's results

As aforementioned, the survey was considerably substantial. Unfortunately it was incompletely prepared and illustrated. It is altogether difficult to offer a sensible summary of this survey, since the relevance of the statements are partly very doubtful for Mathematics in Austria (or: in Vienna, in Linz). The statements are only relevant, if one wants to inform themselves about a specific department (and only to a high degree).

The interviewed institutions generally regard the infrastructure of mathematics as satisfying, except for Vienna and concerning the library's equipment. The provision of personnel is seen as the main problem: inadequately qualified posts and brain drain, „Aderlass der österreichischen Mathematik“(page 8). “Explicit differences as for publication activities“ is the only relevant statement about research in this survey. It takes quite a long time, more than three years, for students of the different departments to complete their PhD's thesis, being between the age of 35 and 40 years, and taking them approximately 10 years, which is far longer than the international average (page 9).

The committee's suggestions for improvement

The committee generated a number of suggestions for improvement which concern challenges in the professional, as well as the personnel area. The harmonization of fields of research and the concentration on key aspects of activity are important facets, determining the future of mathematics. A further aspect worth improving is the funding of academic offspring which has to be supported with attractive career opportunities and long-term employment.

Despite all criticism: The mathematics evaluation at hand presents a good summary about the mathematical research and education in Austria, and is, moreover, an evident starting point for the research and political activities at universities. However, its utility is dependent on the addressee.

Evaluation of Measures for the Promotion of Women in Science and Research in Austria

<i>Title</i>	Evaluation of Measures for the Promotion of Women in Science and Research in Austria [Wirkungsanalyse frauenfördernder Maßnahmen des bm:bwk]
<i>Authors</i>	Angela Wroblewski (IHS), Birgit Woitech (JR)
<i>Institutions</i>	IHS – Institut für Höhere Studien, Joanneum Research
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	February 2005
<i>Type</i>	Assessment
<i>Methods</i>	Secondary Analysis of existing data (census, student register etc.), expert interviews, online-survey among people participating in programmes, desk research
<i>Source</i>	Published by Verlag Österreich GmbH: <i>Wroblewski A., Gindl M., Leinter A., Pellert A., Woitech B. (2006), Wirkungsanalyse frauenfördernder Maßnahmen des bm:bwk, in: Materialien zur Förderung von Frauen in der Wissenschaft, Band 21, Wien</i>

In 2003 the Austrian Federal Ministry for Education, Science and Culture commissioned an evaluation of several measures to promote women in universities and science. These measures have been implemented since 1990 and form the basis of public promotion of women in science in Austria. The study aims at collecting and assessing the achieved effects and results in a systematic way in order to identify possible ‘blind’ spots and to derive possibilities for the future development. The project was carried out by a project consortium consisting of the IHS (Institute for Advanced Studies, Vienna, www.ihs.ac.at), Joanneum Research (Joanneum Research, Institute for Technology and Regional Policy, Vienna, www.joanneum.at/rtg) and the ‘Department for Higher Education Research’ of the IFF (University of Klagenfurt, Faculty for Interdisciplinary Studies, Vienna, www.iff.ac.at/hofol/).

As pointed out, the object of evaluation is a set of measures, containing, for example, scholarships for women, financial support for publications, child care facilities at universities, coordination offices for Women and Gender Studies, legal measures like the Working Committee on Equal Treatment at the Universities or the Decree for Affirmative Action Plan in the Sphere of the Federal Ministry, and programmatic measures like the White Paper for Affirmative Action in Science. Those single measures have been introduced at several points in time (during the 1990s) and are extremely heterogeneous in terms of contents, goals, target groups, intensity, and governance. The one point in common is that each of them addresses a certain aspect which causes discrimination of women in science and research. The variety and the complexity of both, the measures taken and the respective actors, poses several challenges on the design and realisation of the evaluation study. In general, they refer to the correlation between individual measures and set of measures (i.e. micro- vs. macro-perspective) and to the measurement of effects. In assessing effects it has to be taken into account that the individual measures are part of a specific contextual framework (e. g. structural aspects) and together they build the whole set of measures (i.e. the policy-mix). Both aspects make it difficult to identify causal effects. Furthermore, one has to be aware, that effects may be overestimated as well as underestimated (attribution of direct effects, period of observation).

These conditions presupposed a two-stage evaluation process whereby the individual measures had been summarised to ‘types of measures’ in order to facilitate a general analysis. These four types of measures are (1)

Programmatic Measures, (2) Legal Measures and Legally Regulated Institutions, (3) Financial and Non-Financial Promotion of Individuals and (4) Networking and Accompanying Structural Measures. In the first step of the evaluation process the individual measures had been investigated in terms of objectives, contents, design and implementation on the basis of available data and information. For an in-depth analysis four measures had been chosen as ‘case studies’ and were examined in terms of goals, implementation, and effectiveness (= results on micro-level). Based on these results, in the second step relevance, adequacy, coherence and efficiency of the types of measures had been analysed (= results on meso-level) in order to get first conclusions for the entire spectrum of measures (= policy-mix and results on macro-level). The main focus of this joint perspective is to identify ‘blind spots’ in the promotion of women, but also synergies and interdependencies between the measures. The study concludes with recommendations for the further policy of promotion of women in science and research.

The results of the qualitative and quantitative analyses have shown that the policy-mix is to a large extent consistent and coordinated. Although it has not been formulated as a program, the measures set address different problem-areas of women in science and research and manage to close gaps and “blind spots”. This has also been confirmed by international experts. But there is also a big variation in intensity between measures and the primary focus is on women in university research. In particular the organisational structure of the universities is covered by several measures whereby legal measures and legally regulated institutions are predominating. The results of the case study have shown that measures that are closely linked to the functionality of universities have a high potential to change organisational and/or institutional structures. The impact can be increased by combination with measures establishing research on women and gender studies within universities and accompanying structural measures (e.g. child care facilities at universities). Despite visible effects on structural and institutional barriers discrimination of women based on ‘cultural’ factors (e.g. work ethic, professional interaction, sexism etc.) has been partially addressed. Those subtle and often covert mechanisms are difficult to perceive. Intervention against it is often complex and a long-term process as work-practices and routines are not to be changed at once.

Aside from legal measures the promotion of women in science and research in Austria has been strongly based on financial and non-financial support for individuals (e. g. scholarship-programmes, promotion of women-related publications, mentoring or coaching etc.). The case study has proven that scholarships do increase the career chances of female scientists by qualification, empowerment and acceleration of promotion. But most of the measures set concentrate on women, who have already started an academic career. Students, post-graduates or researcher from the non-university sector can barely benefit from or take part in these measures. An important success-factor is therefore the integration in a scientific institution. Furthermore, individual effects can be improved by including the structural conditions (e.g. the work environment). By combining financial promotion with mentoring or coaching, women may get access to networks which increase their chances for an academic career.

The results clearly indicate that selective single measures achieve their principle targets to a lesser extent than measures which combine different approaches. But using synergies from different interventional procedures requires a coordinated set of measures with clear definition of goals. During the last years the measures set to promote women in science and research in Austria have this strong focus on detecting and using synergies, which is demonstrated best by the fFORTE-initiative (for women in research and technology) that combines different types of measures as well as target-groups and contents.

Further details and all results can be found in the study report which is available in hard copy (contact: wroblews@ihs.ac.at).



Assessment of Austrian Competence Centres

<i>Title</i>	Assessment “Future of the Competence Centres Programmes (K plus and K int/net) and Future of the Competence Centres“ [Assessment „Zukunft der Kompetenzzentrenprogramme (K plus und K int/net) und Zukunft der Kompetenzzentren“]
<i>Authors</i>	Jabok Edler, Susanne Bühner, Vivien Lo, Claudia Rainfurth (ISI), Sonja Sheikh (KMFA)
<i>Institutions</i>	Fraunhofer ISI, Austrian Institute for SME Research
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT) and Federal Ministry of Economics and Labour (bmwa)
<i>Language</i>	German, Executive Summary in English available
<i>Date</i>	January 2004
<i>Type</i>	Assessment
<i>Methods</i>	Qualitative analysis: expert interviews, in-depth interview, analysis of quantitative structural data, survey, workshops
<i>Source</i>	http://www.fteval.at/files/evstudien/Assessment_kompetenzzentren.pdf

The evaluators conducted an assessment of the future design of the competence centre programmes Kplus and Kind/net, as well as the further perspectives for the already existing competence centres and networks. With the Kplus and Kind/net programmes (in the following summarised as K-programmes), instruments were created to support cooperative research between science and industry in Austria, with the aim of improving the networking and cooperation between the knowledge-generating and knowledge-exploiting sector of the innovation system. The objective of the assessment was to support the strategic decision-making of the two responsible ministries regarding the future of the K-programmes and centres/networks. The most important results of the assessment are as follows:

The programmes correspond in principle to the theoretical mainstream for cooperation promotion via complex promotional approaches (Multi-actor/Multi-measure Programmes, MAP). Both programmes share – conceptionally – a similar basic understanding of the role of the state in competence centre programmes: impulse generator (impulse to establish a centre), enabler (financing joint R&D activities in the centre), moderator and controller. The programmes provide answers to obvious problems of the Austrian innovation system in the late 1990s with systematic approaches. The catalogues of objectives are broadly consistent. However, they run the risk of overloading and partly of misunderstandings, because the level of commitment to various targets and sub-targets is not always obvious. The concept of Kplus is made more differentiated and clearer by the division into obligatory and qualifying criteria. Yet, both approaches differ on a fundamental level and can be distinguished into a knowledge-oriented, science-driven approach (Kplus) and an innovation-oriented, industry-driven one (Kind/net). This differentiation is justified as it meets differing need structures in the field and induces varying forms of leverage of public research. The programme Knet, which in contrast to Kind and Kplus promotes networking over distances, also meets a real need and is obviously perceived as increasingly attractive in the field compared with Kind.

With the creation of the Kind competence centres and Knet competence networks, the BMWA succeeded in bundling industry-oriented research capacities and activities and achieving concrete results from new research cooperations. Not only the participating actors profited, also regions and

technologies have become more visible. The Kind/net programme however exhibits some weaknesses, not only in the design but also in the organisational implementation, which should be taken into consideration in the further development of the support instruments. Among these weaknesses there is, above all, the insufficient change of the cooperation culture between academic research and industry in the generation and exploitation of knowledge, which is one of the central aims of the programmes. Moreover, the research and cooperation promotion through Kind/net benefits mainly a limited number of large enterprises, which dominate the centres and networks. The assessment results indicate that the Kind/net programme can only produce limited effects and that the funding quota is too high. The essential reasons for this are the strong application orientation, the relatively modest SME orientation – which is to some extent explainable – and the hints to only a limited change in cooperation structures and norms.

In contrast, the high promotional funding for the Kplus programme is justified by the orientation, the stringent programme design and the conceptional realisation. The development of a new cooperative culture can be assessed as one of the main successes of the Kplus programme. The Kplus programme contributes crucially to the main objective, the broadening and formalisation of the cooperation structures between industry and science. The breaking down of the "ivory towers" within the science landscape, which the founding of the centres brought about, points to the improvement of the interdisciplinary and complementary cooperation within the scientific subsystem. The high significance of the joint definition of research themes in strategic projects shows that it was also possible to establish links between the scientific and industrial subsystems. Within the subsystem industry, the bundling of so many enterprises in one centre is also a great step towards the achievement of synergy and transfer effects. The greatest benefit of the centres lays in their strategic horizontal projects, here the potentials for creative formulation of future-oriented research fields are at their highest. This strategic asset, together with the creation of critical mass in a research area, is the unique selling propositions of the Kplus centres.

In MAP the identity of function (complex measure, heterogeneous addressees) and form (ensuring objectivity, specialised management, transparency, clarity about the roles of participating actors) is a central precondition. As the programmes broke new ground in Austria, the strict orientation to these

principles is necessary to overcome the deep-rooted behavioural routines in all participants. In general, the timely and complete outsourcing and thus differentiation of the programme management in Kplus (delegated to the Technology Impulse Gesellschaft m.b.H. TIG) fulfils this condition. In contrast, the Kind/net concept did not follow these lines of management entirely; here the Austrian Industrial Research Promotion Fund (Forschungsförderungsfonds für die Gewerbliche Wirtschaft FFF) had not been responsible for the implementation of the programme from the beginning and still shares some responsibility for implementation with the Federal Ministry of Economics and Labour.

Four basic models for the future of the centres are conceivable: (re-)privatisation (return to the enterprises, establishment in the market), dissolution, renewed application to the programme, setting up of institutes. The first two options are not within the realm of political responsibility, and the third option, a renewed application to the programme, is rejected on principle as the fundamental uncertainty would not be removed thereby, and the re-grouping and new orientation of the centres involved therein could be counterproductive especially for the very successful centres.

As regards the establishment of institutes, it became clear that the interests of the federal government, states and centres are still very disparate and that no clear options have yet emerged which all stakeholders can support. In order to whet the decision-making process, three ideal-type models for setting up institutes can be distinguished: individual institute, docking model (an institute attaches itself to an existing research institution) and platform model (amalgamation of several centres, as a new holding or linking to an existing research institution).

The different models have different advantages and disadvantages, none of them should be favoured per se. The challenges to and the risks for the individual model appear very high by comparison with the value added for the innovation system. An "island" solution seems feasible for centres, which see themselves long-term clearly on the path to privatisation and strive for independent viability without basic financing after a transitional phase.

The docking model and the platform models have very high potential to create long-lasting value added for both subsystems industry and science. The vital difference between both models is that the platform model can develop

additional positive bundling effects between existing centres. The realistic alternatives are between a link up to universities and a link up to both research institutions Joanneum and in particular Seibersdorf, which the federal government has already openly proposed for the Kplus-centres.



Review of Austrian Universities of Applied Sciences

<i>Title</i>	Review of Austrian Universities of Applied Sciences [Review des Auf- und Ausbaus des Fachhochschulsektors]
<i>Authors</i>	Lorenz Lassnigg, Martin Unger, Eva Schmutzer- Hollensteiner (IHS); Hans Pechar, Ada Pellert (iff), Don F. Westerheijden (CHEPS)
<i>Institutions</i>	Institute for Advanced Studies (IHS), Faculty of Interdisciplinary Research and Education (iff), Center for Higher Education Policy Studies (CHEPS), Universität Twente (NL)
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	March 2003
<i>Type</i>	Assessment
<i>Methods</i>	Desk research, experts interviews, online survey
<i>Source</i>	http://fteval.at/files/evstudien/Review-FHSektor.pdf Published by LIT Verlag: <i>Lorenz Lassnigg, Martin Unger (2006): Fachhochschulen – Made in Austria, Review des neuen Hochschulsektors, in Reihe: Arbeit – Bildung – Weiterbildung, Band 4</i>

By means of this evaluation, the current development of the universities of applied sciences sector has been examined according to the following aspects:

- the importance of the education system,
- the efficiency and effectiveness of the financial and development planning,
- the development and allocation of locations in the area,
- the efficiency and effectiveness of quality management and
- the international positioning in view of the European educational system's development.

The chosen method is based on the frequently used review technique, which is a combination of surveys done by our own review team and by a report. Since the review team has carried out the review procedure in a much larger extent than usual, this procedure is called “virtual review”. In order to guarantee the co-operation of the sector, a two-tier procedure has been introduced, in which the participants offer feedback after closure of an interim report. In addition to this international and national experts have been involved in this feedback.

The creation of the universities of applied sciences sector is characterized by great success. The new educational sector has been well positioned in the educational system, which can be seen in the great demand for this sector and in the high number of alumnus finding employment. This model, showing a remarkable deviation (uncomplicated legislation, decentralization, a high number of institutions subjected to private law, etc.) from the traditional educational system, has been implemented successfully, thanks to the dedication of a number of participants. Due to this new educational structure, students can graduate faster than their colleagues from the universities.

Some other areas show less improvement; either because of a lower priority or because the measures taken have not been as successful yet. The fields of activity in applied research and development have been increasingly realized within the last years. However, they are by now means at the same level as the existing educational system. Activities in the educational market are low. Despite the development of methods of resolution, there has been no platform for new actors from several political areas.

The universities of applied sciences system has been increasing in line with the conceived objectives. The growth of this sector has currently been even more stimulated by a special initiative (Aktion 600+). This sector has, hence, achieved a dimension which justifies a critical analysis of the existing structures.

Writing about ... Evaluation

<i>Title</i>	<i>Date</i>	<i>Download available</i>
<i>What Can Be Achieved By Special R&D Funds When There is No Special Leaning Towards R&D Intensive Industries?</i>	June 2006	<input checked="" type="checkbox"/>
<i>Measuring the effects of public support schemes on firms' innovation activities. Survey Evidence</i>	January 2006	<input checked="" type="checkbox"/>
<i>Training Workshops on Evaluation – Documentation</i>	November 2004	<input checked="" type="checkbox"/>
<i>Good practices for the management of Multi Actors and Multi Measures Programmes (MAPs) in RTDI policy</i>	March 2004	<input checked="" type="checkbox"/>
<i>Behavioural Additionality Effects of R&D Subsidies. Empirical Evidence from Austria</i>	February 2004	<input checked="" type="checkbox"/>
<i>How to evaluate Special R&D Funds' Programs</i>	January 2004	<input checked="" type="checkbox"/>
<i>The RECORD Manual – Benchmarking Innovative Research Organisations in European Accession Countries</i>	January 2004	<input checked="" type="checkbox"/>
<i>Implementation of evaluation systems in R&D programs</i>	November 2003	<input checked="" type="checkbox"/>



Effects of Special R&D Funds

<i>Title</i>	What can be achieved by special R&D funds when there is no special leaning towards R&D intensive industries?
<i>Authors</i>	Rahel Falk, Hannes Leo
<i>Institutions</i>	WIFO
<i>Client</i>	n/a
<i>Language</i>	English
<i>Date</i>	June 2006
<i>Type</i>	Working Paper (WIFO Working Papers No. 273)
<i>Methods</i>	Macro data analysis, econometric modeling
<i>Source</i>	http://fteval.at/files/evstudien/special_r&d_funds.pdf

This paper explores the effects of Austria's recent Special Funds initiative on the R&D expenditures of its private corporate sector. It is the first one to approach the due evaluation from a macro perspective.

First, simple descriptive statistics show that the noticeable delays in actual disbursements and the replacement of regular RTI-funds by these special funds reduce the latter's scope. Apparently, money can't work unless it is spent and "additional" funds at the expense of regular funds will trigger no additionalities.

The working group set up an econometric model to derive some inference on the relative importance of different public support channels on the business sectors' R&D spending. Though the estimates suggest that direct government subsidies to R&D-performing firms unfold great leverage effects, the dynamics of output growth as well as an R&D-prone high-tech industry structure seem to be more important drivers of the business sector's R&D intensity.

Likewise, feeding special funds into the higher education sector will raise the R&D-intensity of the business enterprise sector only if and to the degree that such funds contribute to Austria's overall economic prosperity or foster structural change towards more R&D-intensive manufacturing.



Effects of Public Support Schemes in Firms' Innovation Activities

<i>Title</i>	Measuring the effects of public support schemes on firms' innovation activities. Survey Evidence
<i>Authors</i>	Rahel Falk
<i>Institutions</i>	WIFO
<i>Client</i>	n/a
<i>Language</i>	English
<i>Date</i>	January 2006
<i>Type</i>	Working Paper (WIFO Working Papers No. 267)
<i>Methods</i>	Analysis of survey data, probit model
<i>Source</i>	http://fteval.at/files/evstudien/Effects_public_schemes.pdf

This paper discusses conceptual frameworks for measuring the effects of innovation policy and begins with applying conventional descriptive methods to explore how firms rate and rank the merits of public intervention. Based on survey data from some 1200 Austrian firms we then challenge the hypothetical survey question (“What would you have done if public support was denied?”) by comparing the respective answers with changes that actually occurred when public assistance was refused.

This is a contribution to the ongoing literature as is the attempt to relate any of the observed additionalities to the firms’ characteristics, their perceived barriers to innovation and the degree they make use of the public support system. The effects of policy interventions prove to be cumulative in a dual sense. On the one hand, our results confirm the well-known notion that large firms make the best use of funds. On the other hand, substantial changes in the way a company undertakes R&D&I-related activities appear to only result from multiple policy interventions of different kinds. While supported firms tend to immediately increase their resources devoted to innovation projects, the result-based concepts of additionality only come into effect once a threshold level of intervention has been reached.

Acknowledging that a public innovation support system already incentivises potential beneficiaries to change their innovation-related behaviour, and that eventual success in terms of outcomes does not arise from some discrete support measures, but from the synergies of multiple policy action, the author concludes that future work should focus more on the evaluation of portfolios of programmes and their interactions.



Training Workshops on Evaluation - Documentation

<i>Title</i>	Training Workshops on Evaluation – Documentation [Ausbildungsworkshops 2004]
<i>Authors</i>	Klaus Zinöcker (co-ordination, Joanneum), Michael Stampfer (WWTF); Leonhard Jörg (Technopolis); Sonja Sheikh (KMFA); Wolfgang Polt (Joanneum)
<i>Institutions</i>	co-operation of Platform members
<i>Client</i>	Platform Research and Technology Policy Evaluation
<i>Language</i>	German
<i>Date</i>	November 2004
<i>Type</i>	Study on evaluation
<i>Source</i>	http://www.fteval.at/files/evstudien/Ausbildung-2004.pdf

In the first half-year general meeting of the Platform Research and Technology Policy Evaluation in 2004 it was decided to highlight the topic ‘training’. In this context the co-ordination team arranged an one-day workshop “Evaluation of Research and Technology Policy” that was given at six associated organisations of the Platform. Regarding to the different requirements and the content-related alignments of every associate it was figured out rather early that a uniform workshop would not lead the training to the intended success. The contents of the eight given workshops were modified over time. These changes are documented in detail.



Road MAP

<i>Title</i>	Good practices for the management of Multi Actors and Multi Measures Programmes (MAPs) in RTDI policy
<i>Authors</i>	Birgit Baumann, Dorothea Sturn, Sabine Mayer (FFG); Susanne Bühler (ISI); Harald Hochreiter (MFPL); Michael Stampfer (WWTF); Heather Greer; Paul Simmonds
<i>Institutions</i>	Austrian Research Promotion Agency (FFG), Fraunhofer Institut System- und Innovationsforschung (ISI), Max F. Perutz Laboratories, Wiener Wissenschafts-, Forschungs- und Technologiefonds (WWTF)
<i>Client</i>	European Commission
<i>Language</i>	English
<i>Date</i>	March 2004
<i>Type</i>	Studies on Evaluation
<i>Methods</i>	Desk research, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/roadMAP.pdf

MAP stands for Multi-Actors and Multi-Measures Programmes (MAPs), which are RTDI funding programmes addressing not an individual firm or research institution but whole (sub-) systems of innovation (e.g. science-industry cooperation). Nevertheless a huge variety of features and management practices was observed, depending both on the National Innovation System (NIS) in the respective country (especially the institutional setting) and on the problems addressed. However there are communalities that turned out to be used widely and successfully within the limits of certain frames and conditions. These communalities are described in the handbook but also options to deviate you can choose when managing a programme.

The MAP Thematic Network was launched in January 2002, when it held its first event, and organised a further eight knowledge-sharing workshops and task groups as well as two Symposia up to February 2004. Parallel to MAP-TN being the main project, two associated projects StarMAP (broadening the view at MAPs by including further countries not involved in the MAP network) and DiscoMAP (further dissemination activities for MAP-TN) were started at the same time.

StarMAP (STudy About Relevant MAPs) extended the data set arising from the MAP-TN through the in-depth study about management procedures of "mature" MAPs in four European (France, the Netherlands, Finland and Norway) and two overseas countries (Canada and Australia). The case studies are complemented by a more broad-brush survey of practices in the Accession Countries. Together, these new cases strengthened the MAP-TN and its ability to contribute to the development of ERA through the bottom-up-development of "soft standards" permitting wider interaction and learning among national programmes.

DiscoMAP (DISsemination activities and final COnference for the MAP Thematic Network) is a classical activity for Accompanying Measures, addressing the main requirements being an information, communication and dissemination activity. Results of the MAP Thematic Network and StarMAP study were promoted and exploited, as the national workshops organised by each network partner and the international DiscoMAP conference on the 29th to 30th of March 2004 in Vienna allowed a wide dissemination of the knowledge gained. With more than 110 participants from over 20 countries the DiscoMAP Conference was a worthy completion of the MAP-TN project. Policy makers, programme managers and various other players in the area of

RTDI were able to get an insight in two years of MAP-TN networking and were presented with the "Good Practices" that were developed during that time.

MAP-TN brought together MAP administrators and experts from complementary organisations from 10 countries (+EARMA) to exchange experience and codify knowledge on the challenges involved with managing these complex, modern programmes.

The outputs from MAP-TN are intended to help guide RTDI officials in the Commission and in the member states when thinking about the development and management of MAPs generally which should contribute to the emergence of common standards and good practice. The project has been sponsored financially by the STRATA action line of the Improving Human Potential programme of the European Commission's Fifth Framework Programme.



Behavioural Additionality Effects of R&D Subsidies

<i>Title</i>	Behavioural additionality effects of R&D subsidies. Empirical evidence from Austria
<i>Authors</i>	Rahel Falk
<i>Institutions</i>	WIFO
<i>Client</i>	n/a
<i>Language</i>	English
<i>Date</i>	February 2004
<i>Type</i>	tip Working Paper
<i>Methods</i>	Analysis of survey data, econometric model
<i>Source</i>	http://fteval.at/files/evstudien/behaviouraladditionality.pdf

This paper has addressed long-term behavioural changes emerging from FFF participation, so-called "behavioural additionality". Descriptive evidence from the survey data revealed that FFF-funding is indeed generating various dimensions of behavioural additionality:

Around 80-85 percent of the sample firms experience some degree of project additionality.

- Acceleration additionalities arise for two in three firms.
- The share of companies appreciating scale additionalities ranges between 60-74 percent.

At least every other firm reports scope additionalities to have arisen from collaboration and a fraction of over 62 percent benefits from scope additionalities in as far as new research areas could be entered with the financial help of the FFF-scheme.

Results from some subsequent econometric exercises based in the linked company project FFF-database turned out not that conclusive, however. In this context the first problem refers to the unavailability of appropriate measures for the mostly intangible merits of behavioural additionality. A second problem is introduced by the general unavailability of ex-post information which makes it hard to systematically evaluate additionality effects of FFF-funding. Conceivably, the greatest effects of FFF-funding on firms' demand for high-skilled R&D-labour should be observable for firms that do not undertake R&D-activities on regular grounds. Unfortunately, however, it is exactly this type of firm which is hardest to assess, instead the relevant data set consists of "routine" R&D-performers only. Even if further behavioural changes for these were not subject to the law of diminishing returns, the need for an ever greater R&D-staff certainly is. The FFF is therefore recommended to condition the provision with public assistance on the obligation to give ex post information.



How to evaluate Special R&D Funds' Programs

<i>Title</i>	How to evaluate Special R&D Funds' Programs [Evaluierung der Sondermittelprogramme - Modul 2]
<i>Authors</i>	Klaus Zinöcker (Coordination, JR), Michael Stampfer (WWTF); Andreas Schibany, Birgit Woitech, (Joanneum Research); Leonhard Jörg, Fritz Ohler (Technopolis), Rupert Pichler (bmvit), Sonja Sheikh (KMFA), Dorothea Sturn (TIG)
<i>Institutions</i>	cooperation of Platform Research and Technology Policy Evaluation members
<i>Client</i>	Austrian Council for Research and Technology Development
<i>Language</i>	German
<i>Date</i>	January 2004
<i>Type</i>	Study on evaluation
<i>Source</i>	http://www.fteval.at/files/evstudien/Modul-II.pdf

The Austrian Council for Research and Technology Development is advising the Austrian Federal Government in R&D issues. In the course of these activities, from 2001 to 2006, the council advises the government on the use of a “Special Fund” of approximately € 1 billion dedicated to supporting the Austrian innovation system.

For the evaluation of the funds’ use the council made up of a group of experts who compiled a set of rules, principles and basic guidelines for the development of a broad evaluation system. Furthermore they published a paper dealing with the evaluation of science and technology policies in general as well as with the special Austrian situation and potential improvements. This section aimed to help the council improve its recommendations for the Austrian innovation system as well as for the “special fund”.

First, it has to be said that there are three forms of evaluation which differ in the level and time they are carried out. An evaluation can be done ex-ante, interim and ex-post. Furthermore, it is important to distinguish between evaluations of projects and short term programmes on the one hand, and institutions and long term programs on the other hand. Given that the “Special Funds” provides support for all these types of activities, a sophisticated approach which embraces the differences between these activities must be developed.

Moreover the paper argues that evaluation of a programme or project should be incorporated into the planning phase. It should be clear when, how, and by whom the programme will be evaluated and what the evaluation’s consequences will be. This depends on the time the evaluation is conducted. In addition it is important to consider the difference between an evaluation of an institution, a programme or a project. However another decisive factor is the choice of indicators. Indicators have to be summable in order to get national numbers. The European Union developed such a set of indicators, which are called “key indicators”, and has published them annually since 2000. Though these indicators must reflect the success of the work done in this programme or project. In addition the data must be easily accessible and monitored.

For the Austrian “Special Fund” the council defined strategic areas which should be supported. These areas are:

- Development of human resources

- Development of scientific capacities in the economy (science-industry cooperation)
- More internationalization
- Dialogue between science and public

Due to the different indicators and goals all of these areas need to be evaluated before, during and after funding is received. A very demonstrative example to describe the complexity of those indicators is the area “development of scientific capacities in the economy”. Within this example, one of the sub areas is “to increase the number of high-tech start-ups”. The goals of this effort are to increase science capacities in the economy, the percentage of high-tech companies in the economy, the survival rate of young high-tech companies and the cooperation between universities and industry. While most of these goals can be measured with direct indicators, there is nevertheless the need to develop an evaluation strategy which evaluates ex-ante, interim and ex-post.

Ex-ante evaluation scrutinises the status quo before special programmes are developed. What are the main actors in this field? How is the international situation in the field? Are there references to European programs? How should a new programme be designed to be able to deal with the special needs of the field? Which indicators can measure success in this field?

An interim evaluation analyses these questions: How does the programme cooperate with other programmes? How does the field react to the new programme? What are the effects of the programme so far? What could be improved? Is there a significant rate of new high-tech start-ups?

An ex-post evaluation could then deal with the survival rate, the growth rate or the general performance of the companies, which were set up during the programme. In addition an ex-post evaluation can contain recommendations concerning the continuation or modification of the programme or the design of a follow-up program.

The objective was not to come up with a fully developed plan for the fund’s evaluation but to provide principles, basic ideas, and hints. Therefore “Modul 2” is called “components of an evaluation strategy”.



The RECORD Manual

<i>Title</i>	The RECORD Manual – Benchmarking innovative research organisations in European accession countries
<i>Authors</i>	Balázs Borsi, Katalin Dévai, Gábor Papanek, Howard Rush, Adolf Filacek, Klaus Schuch, Amir Fazlagic, Peter Stanovnik et al.
<i>Institutions</i>	Centre for Social Innovation (ZSI)
<i>Client</i>	European Commission – funded under FP5 (STRATA)
<i>Language</i>	English
<i>Date</i>	January 2004
<i>Type</i>	methodology for benchmarking RTDI organisations
<i>Methods</i>	an original methodology proposing quantitative and qualitative indicators, pilot benchmarking exercises have been conducted in the Czech Republic, Hungary, Malta, Poland, Slovakia and Slovenia
<i>Source</i>	http://fteval.at/files/evstudien/record_manual_finalEU.pdf

The Manual – together with the Experimental Map – is the final publication of the RECORD network. RECORD is an acronym for Recognising Central and Eastern European Centres of RTD. The main objective of RECORD was to assist in learning the practice of benchmarking RTDI organisations. Initially the network selected some Accession States research organisations that were considered innovative and for which there was an expectation of successful integration in the ERA. A relatively simple method was developed to describe the innovative performance of these institutions, termed the ‘RECORD Centres of Excellence’. The network then carefully surveyed a selected sample of 140 centres in search for good practice and the potential for up-grading their performance.

The Manual provides guidance to benchmarking Accession States RTDI institutions. It is designed with the aim of being equally useful for RTDI managers, funding agents and policy makers.

The Experimental Map is the first application of the methods in the Manual and presents analyses of performance and best practice in some Accession States RTDI institutes. The summary chapters also present the geographical locations of the RTDI organisations that participated in the RECORD benchmarking exercises.



Implementation of Evaluation Systems in R&D Programs

<i>Title</i>	Implementation of evaluation systems in R&D programs [Implementierung von Evaluierungssystemen in FTE Programmen]
<i>Authors</i>	Klaus Zinöcker
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Austrian Research Promotion Agency (FFG, former Technologie Impuls Gesellschaft mbH (TIG))
<i>Language</i>	German
<i>Date</i>	November 2003
<i>Type</i>	Study on evaluation
<i>Methods</i>	Logic chart analysis
<i>Source</i>	http://fteval.at/files/evstudien/Evaluierungssystem.pdf

Based on a cooperation between Joanneum Research and the TIG this paper provides a short overview of evaluation systems and explain what they are able to achieve. How these kinds of systems can be implemented is shown on the case of the AplusB-program, which was funded by the Austrian government. Joanneum Research was commissioned to draw up basic principles for the program's evaluation, develop objective-oriented indicators and questionnaires that are applicable for the monitoring of the AplusB centres.

AplusB aims at supporting spin-offs from universities and the commercialization of research in universities, universities of applied sciences and other scientific institutions. The program was set up to diminish lack of company foundations in the "high-tech" fields in Austria. To reverse this trend the AplusB programme wants a permanent increase of spin-off foundations, an increase of quality, a potential's expansion for company foundations in scientific institutions and an improved knowledge transfer form science to industry. One instrument to reach these goals is the creation of AplusB centers, which should stimulate new company foundations and give support for young companies.

In general, evaluation systems aim at structuring, merging, optimising and systemising different steps in evaluations on a programme or project level and establish a relationship to the monitoring and reporting level. In evaluation systems the object (the program, project or policy), phases (ex-ante, interim, ex-post) as well as contents are adjusted to each other and operationalized. Therefore "Best Practice Models", "Standards", guidelines and timeframes for evaluation are developed. These methods should provide all parties concerned with the necessary information to reach the highest possible level of transparency in order to optimize the efforts for evaluation.

With the establishment of an evaluation system for this program, all these steps and indicators were defined, before the programme started. Therefore all parties were informed about the means and goals of the evaluation before they started their work. This helps to provide as much transparency as possible and integrates the evaluation process into the programme more smoothly.

Klaus Zinöcker, Dorothea Sturn

Evaluation in Austria's RTDI Policy before 2003

To identify the first evaluations in the field of R&R policy, we have to go back in the late eightys / early ninties of the last century. Eleven years ago, in the Platform Newsletter 2 1996, Gernot Hutschenreiter, Dorothea Sturn and Michael Stampfer stated: Evaluation in the field of Research and Technology in Austria is in a bad condition, compared to other countries as measured by the frequency of its use, its transparency and in terms of quality and ethics. Their findings were as follows: the Austrian public RTD support system was incompletely covered by evaluations, some of the basic elements of this system had not been subjected to systematic evaluations or public debates (and, in case of FFF and FWF, has not been until 2004) Most of the evaluation efforts carried out in the ninties were concentrated on targeted technology programs, which evidently was just one part of the national innovation system.

Targeted technology programs were at that time relatively new in Austria. The pioneering activity in this field was the implementation of the Federal Government's technology programs (1985-87) targeted at information technology, biotechnology and CAD/CAM. These programs were the subject of the first comprehensive RTD program evaluation study in Austria (Hutschenreiter et al., 1991). In 1987, the Innovation and Technology Funds (ITF) was established. Since then, more than a dozen - mostly relatively small - technology programs were financed through the ITF. Studies commissioned in preparation of these programs (ex ante) together with the ex-post evaluations of the technology programs 1985-87 and of the Austrian participation in European Space Agency programs (Leo, 1991) constituted the first generation of RTD programme evaluation studies in Austria.

A cautionary remark: There might have been studies with evaluative character before, but never had the lable 'evaluation' on its title and, therefore are not mentioned in this book.

From 1996 to 2003, the evaluation culture in Austria considerably improved (see also Zinöcker's article in this book): Changes for the better in terms of quality and methods as well in terms of transparency. To mention some of the most important studies in this respect: Grant Lewison's study on Austrian Biomedical Research Outputs in 2002, the evaluation of the ITF-focused Program "FlexCIM" in 1999 (both in terms of methods), and the Evaluation of the ITF focused Programme "Technology Transfer" 1999 (this study is an example how to embed evaluation in the policy cycle) or the ex ante evaluation ('Vorhabensbericht') of the Kplus-Competence Centers Programme in 1997.

On the next pages, you will find a list of about 50 studies the editors classified as "evaluations" or "evaluation related studies" in the time period from 1991 to 2003. (This is, by the way, the same amount of studies we could identify for the timeperiod 2003 to 2007). We used tables to provide the basic information of the reports (title, authors, clients, date, language, methods used) and, if applicable a link to the full version of these evaluations.

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Evaluations before 2003

I. Institutions

<i>Title</i>	Evaluation of ZAT Centre for Applied Technologies [Evaluierung des Zentrums für angewandte Technologien, Leoben]
<i>Authors</i>	Anita Frank, Markus Gruber, Dorothea Sturn, Angela Kremshofer, Klaus Zinöcker
<i>Institutions</i>	TIG, Joanneum Research
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology (BMVIT)
<i>Language</i>	German
<i>Date</i>	2003
<i>Methods</i>	Desk Analysis, Interviews, Case Studies
<i>Source</i>	http://www.fteval.at/files/evstudien/EvalZAT_Leoben.pdf

<i>Title</i>	An Evaluation Model for Joanneum Research [Ein Evaluierungsmodell für Joanneum Research]
<i>Authors</i>	Dorothea Sturn, Stefan Kuhlmann
<i>Institutions</i>	Joanneum Research, Fraunhofer ISI
<i>Client</i>	Joanneum Research
<i>Language</i>	German
<i>Date</i>	2001
<i>Methods</i>	Desk Analysis, Interviews, Peer Review
<i>Source</i>	http://www.fteval.at/files/newsletter/Newsletter_11.pdf

<i>Title</i>	Research Performance of Austrian Economists, a National and International Comparison [Nabelschau – Die Forschungsleistung österreichischer Ökonomen im nationalen und internationalen Vergleich]
<i>Authors</i>	Georg Kirchsteiger, Klaus Ritzberger
<i>Institutions</i>	Institute for Advanced Studies (IHS); University of Vienna, Faculty of Business, Economics and Statistics
<i>Client</i>	Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	2001
<i>Methods</i>	Survey, bibliometrics, desk research
<i>Source</i>	http://fteval.at/files/evstudien/nabelschau_bmbwk.pdf

<i>Title</i>	Evaluation of ZAT Centre for Applied Technologies [Evaluierung des Zentrums für angewandte Technologien an der Montan University Leoben]
<i>Authors</i>	Dorothea Sturn, Martin Schaettgen
<i>Institutions</i>	TIG, inno GmbH
<i>Client</i>	ZAT
<i>Language</i>	German
<i>Date</i>	2001
<i>Methods</i>	Desk Analysis, Interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/zat_2001.pdf

<i>Title</i>	Evaluation of the Departments for Engineering at Austrian Universities [Evaluierung des Fachbereiches für Maschinenbau an vier österreichischen Universitäten]
<i>Authors</i>	E. Westkämper (Head of Commission)
<i>Institutions</i>	International Commission
<i>Client</i>	Universitätenkuratorium, promoted by the Federal Ministry for Education, Science and Culture (bm:bwk)
<i>Language</i>	German
<i>Date</i>	2001
<i>Methods</i>	Peer Review, Self-Evaluation Report
<i>Source</i>	http://fteval.at/files/evstudien/eval_maschinenbau.pdf

<i>Title</i>	Funding activities of the ERP fund [Die Fördertätigkeit des ERP-Fonds]
<i>Authors</i>	Josef Baumgartner, Michael Böheim
<i>Institutions</i>	WIFO
<i>Client</i>	ERP-Fonds
<i>Language</i>	German
<i>Date</i>	1999
<i>Methods</i>	Data analysis
<i>Source</i>	http://fteval.at/files/evstudien/ERP-Fonds.pdf

<i>Title</i>	Evaluation of the University for Veterinary Medicine Vienna [Evaluierung der Veterinärmedizinischen Universität in Wien]
<i>Authors</i>	MR.S.T.Allmann und Dr.D.M.Allman
<i>Institutions</i>	European Association of Establishments for Veterinary Education
<i>Client</i>	Advisory Committee on Veterinary Training of the European Commission (ACVT); promoted by BMBWK
<i>Language</i>	English
<i>Date</i>	1998
<i>Methods</i>	Peer Review, Self Evaluations Report
<i>Source</i>	n/a

<i>Title</i>	Economic Aspects of the projected Large Research Facilities AUSTRON and EUROCRYST [Ökonomische Aspekte der Großforschungseinrichtungen AUSTRON und EUROCRYST]
<i>Authors</i>	Hannes Leo, Yvonne Wolfmayr-Schnitzer
<i>Institutions</i>	WIFO
<i>Client</i>	Federal Ministry for Science and Research
<i>Language</i>	German
<i>Date</i>	1993
<i>Methods</i>	Cost-benefit-analysis
<i>Source</i>	http://fteval.at/files/evstudien/austron.pdf

II. Programmes ex-ante

<i>Title</i>	Development of instruments for the Impulse Programme “Nachhaltig Wirtschaften” [Entwicklung technologischer Instrumente für die Durchführung des Impulsprogramms: „Nachhaltig Wirtschaften“]
<i>Authors</i>	Gabriele Gerhardter, Thomas Jud, Helmut Mahringer
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Federal Ministry for Science and Transport
<i>Language</i>	German
<i>Date</i>	2000
<i>Methods</i>	Desk Research
<i>Source</i>	http://fteval.at/files/evstudien/Technologierpolit_Instr.pdf

<i>Title</i>	Evaluation of the impulse programme „Sustainable Economy“ [Evaluierung des Impulsprogramms "Nachhaltig Wirtschaften"]
<i>Authors</i>	Fritz Ohler, Markus Knoflacher
<i>Institutions</i>	ARC Seibersdorf
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	2000
<i>Methods</i>	n/a
<i>Source</i>	http://fteval.at/files/evstudien/NaWi_2000.pdf

<i>Title</i>	Kplus-Competence Centers Programme [Kplus - Forschungskompetenz plus Wirtschaftskompetenz. Vorhabensbericht zur Errichtung von Kompetenzzentren in Österreich]
<i>Authors</i>	Fritz Ohler., Dorothea Sturn, Michael Stampfer, Katharina Warta., Oliver Fritz, Josef Fröhlich
<i>Institutions</i>	Forschungszentrum Seibersdorf
<i>Client</i>	Federal Ministry for Science and Transport
<i>Language</i>	German
<i>Date</i>	1997
<i>Methods</i>	Desk Research, International Comparison, Interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/kplus_1997.pdf

<i>Title</i>	Principles for the Establishment of an ITF-Focus Point “Energy Technology” [Entscheidungsgrundlagen für die Bildung eines Schwerpunktes Energietechnik im Rahmen des ITF]
<i>Authors</i>	Fritz Ohler., Gernot Hutschenreiter, Manfred Mühlberger
<i>Institutions</i>	Forschungszentrum Seibersdorf, WIFO
<i>Client</i>	Federal Ministry of Economic Affairs and Transport, Federal Ministry for Science and Research
<i>Language</i>	German
<i>Date</i>	1992
<i>Methods</i>	Desk Research, Interviews
<i>Source</i>	http://fteval.at/files/evstudien/Energietechnik_1992.pdf

<i>Title</i>	Principles for the he Focus Point „Software Technology“ [Empfehlungen zur Schwerpunktsetzung Softwaretechnik]
<i>Authors</i>	Fritz Ohler, Wolfgang Polt (ARC), Wolfgang E. Katzenberger (Paradigma GmbH), Gerhard Ortner, , Adolf Stepan (TU Vienna)
<i>Institutions</i>	Forschungszentrum Seibersdorf (ARC), Paradigma GmbH, TU Vienna
<i>Client</i>	Federal Ministry for Science and Research
<i>Language</i>	German
<i>Date</i>	1992
<i>Methods</i>	Desk Research, Interviews
<i>Source</i>	http://fteval.at/files/evstudien/Softwaretechnik.pdf

<i>Title</i>	ATMOS - Austrian Technology Monitoring System - A Programme for Assisting Technology Policy in Austria [ATMOS - Ein Programm zur Unterstützung der Technologiepolitik in Österreich]
<i>Authors</i>	Josef Fröhlich, Norbert Böck, Eva Buchinger, Wolfgang Hesina, Fritz Ohler, Edgar Schiebel
<i>Institutions</i>	Forschungszentrum Seibersdorf
<i>Client</i>	Conference contribution
<i>Language</i>	German
<i>Date</i>	1991
<i>Methods</i>	Data analysis, usage of technology indicators
<i>Source</i>	http://fteval.at/files/evstudien/ATMOS.pdf

III. Programmes interim

<i>Title</i>	Accompanying Evaluation of IT-Lounge and the IKT-Programme [Begleitende Evaluierung der IT-Lounge und des IKT-Sonderprogramms]
<i>Authors</i>	Helene Schiffbänker, Birgit Woitech
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Wiener ArbeitnehmerInnen Förderungsfonds (waff)
<i>Language</i>	German
<i>Date</i>	2002
<i>Type</i>	Interim
<i>Methods</i>	Interviews, document analysis, desk research
<i>Source</i>	http://www.fteval.at/files/evstudien/IT-lounge.pdf

<i>Title</i>	Evaluation of the Discussion Forum Gene-Diagnostics 2002 [Evaluierung des Diskurstages GENDIAGNOSTIK 2002]
<i>Authors</i>	Ulrike Felt; Maximilian Fochler; Michael Strassnig
<i>Institutions</i>	Institut für Wissenschaftstheorie und –forschung, Universität Wien
<i>Client</i>	Federal Ministry for Education, Science and Culture
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Media analysis; Interviews (short-questionnaires as well as semi-structured qualitative interviews); structured observation; focus groups
<i>Source</i>	http://fteval.at/files/evstudien/Gendiagnostik_2002.pdf

<i>Title</i>	FFF – Interim Evaluation of Special Programme “Food Innovations in Austria” [Evaluierung der Lebensmittelinitiative Österreich]
<i>Authors</i>	Sonja Sheikh, Peter Czedik-Eysenberg, Brigitte Jedlicka
<i>Institutions</i>	Austrian Institute for SME Research
<i>Client</i>	Austrian Industrial Research Promotion Fund (FFF)
<i>Language</i>	German
<i>Date</i>	2000
<i>Type</i>	Interim
<i>Methods</i>	Development of key figures, key ratios and indicators, analysis of documents and monitoring data
<i>Source</i>	http://fteval.at/files/evstudien/food_initiative_2000.pdf

<i>Title</i>	Mid-term Evaluation of the ITF-focused Programm “Multimedia Business Austria [Evaluierungsgutachten des Impulsprogrammes Multimedia Business Austria (MBA)]
<i>Authors</i>	Walter Emberger, Robert Kromer
<i>Institutions</i>	Emberger+Partner, MZ St. Gallen
<i>Client</i>	Federal Ministry of Economic Affairs
<i>Language</i>	German
<i>Date</i>	1999
<i>Type</i>	Interim
<i>Methods</i>	Focus groups
<i>Source</i>	http://fteval.at/files/evstudien/mba.pdf

<i>Title</i>	Evaluation of the economic aspects of the Austrian EURATOM associativity [Evaluierung der ökonomischen Aspekte der österreichischen EURATOM Assoziation]
<i>Authors</i>	Margit Noll, Wolfgang Polt
<i>Institutions</i>	Austrian Research Centers
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	1999
<i>Type</i>	Interim
<i>Methods</i>	Peer review, questionnaire, interviews
<i>Source</i>	http://fteval.at/files/evstudien/EURATOM.pdf

<i>Title</i>	Evaluation of the programme ,TechnoKontakte’ [Evaluierung der TechnoKontakte-Seminare]
<i>Authors</i>	Eva Buchinger, Petra Wagner
<i>Institutions</i>	Austrian Research Centers
<i>Client</i>	Federal Ministry of Economic Affairs
<i>Language</i>	German
<i>Date</i>	1999
<i>Type</i>	Interim
<i>Methods</i>	Surveys, telephone interviews
<i>Source</i>	http://fteval.at/files/evstudien/technokontakte1999.pdf

<i>Title</i>	Programme ,TechnoKontakte’ and its impacts [TechnoKontakte-Seminare und ihre Effekte]
<i>Authors</i>	Eva Buchinger
<i>Institutions</i>	Austrian Research Centers
<i>Client</i>	Federal Ministry of Economic Affairs
<i>Language</i>	German
<i>Date</i>	1996
<i>Type</i>	Interim
<i>Methods</i>	n/a
<i>Source</i>	n/a

IV. Programmes ex-post

<i>Title</i>	Evaluation FINT 2 [Evaluierung FINT 2]
<i>Authors</i>	Leonhard Jörg, Claudia Gamsjäger, Jörg Mahlich
<i>Institutions</i>	Technopolis
<i>Client</i>	Austrian Federal Economic Chamber
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Surveys, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/FINT2.pdf

<i>Title</i>	Evaluation of the Network for Market- and Technology Information for the Innovation Agency TECNET [Evaluierung des Netzwerkes für Markt- und Technologieinformation der Innovationsagentur “Tecnet”]
<i>Authors</i>	Klaus Zinöcker, Andreas Fier
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Federal Ministry for Economics and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Descriptive and comparative statistical analysis of survey data; econometric models; Cost – benefit analysis; Interviews; document analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/Tecnet-II.pdf

<i>Title</i>	Evaluation of i² [Evaluierung von i²]
<i>Authors</i>	Leonhard Jörg, Fritz Ohler
<i>Institutions</i>	Technopolis
<i>Client</i>	Ministry of Economic Affairs and Labour (bmwa)
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Interviews, international benchmarking
<i>Source</i>	http://www.fteval.at/files/evstudien/i2_endbericht.pdf

<i>Title</i>	Evaluation of the Wood Research Programme [Evaluierung der Sonderaktion Holzforschung]
<i>Authors</i>	Fritz Ohler, Jörg Mahlich, Claudia Gamsjäger, Wilfried Puwein
<i>Institutions</i>	Technopolis, WIFO
<i>Client</i>	Austrian Industrial Research Promotion Fund (FFF)
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Survey, Econometric impact assessment, interviews
<i>Source</i>	http://fteval.at/files/evstudien/eval_holzforschung.pdf

<i>Title</i>	Evaluation of the ScienceWeek@Austria 2001 & 2002: Analysis of Science Communication Experiment within the Austrian Context
<i>Authors</i>	Ulrike Felt, Sophie Schober, Annina Müller
<i>Institutions</i>	Institute for Study of (Techno)Science and Society, University of Vienna
<i>Client</i>	Federal Ministry for Education, Science and Culture, Federal Ministry for Transport, Innovation and Technology
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Interviews (short-questionnaires as well as semi- structured qualitative interviews); structured observation; focus groups
<i>Source</i>	http://fteval.at/files/evstudien/scienceweek_2001.pdf http://fteval.at/files/evstudien/scienceweek_2002.pdf

<i>Title</i>	FFF – Project evaluation 2002 FFG General programmes - Project evaluation 2004 FFG General programmes - Project evaluation 2005 [FFF bzw. FFG – Basisprogramme Projektevaluierung 2002-2005]
<i>Authors</i>	Sonja Sheikh
<i>Institutions</i>	Austrian Institute for SME Research (KMFA)
<i>Client</i>	Austrian Industrial Research Promotion Fund (FFF)
<i>Language</i>	German
<i>Date</i>	2001-2005
<i>Methods</i>	see methods for Ex-post evaluation of FFG funded projects
<i>Source</i>	http://fteval.at/files/evstudien/FFG_Projekteval2002-2005.pdf

<i>Title</i>	Evaluation of the ITF focused Programme “Technology Transfer” [Evaluierung des ITF-Schwerpunktprogrammes Technologietransfer]
<i>Authors</i>	Leonhard Jörg, Fritz Ohler, Thomas Jud, Wolfgang Pointner, Wolfgang Polt und Klaus Zinöcker
<i>Institutions</i>	Technopolis Austria, Joanneum Research
<i>Client</i>	Federal Ministry of Economic Affairs (bmwa)
<i>Language</i>	German
<i>Date</i>	2001
<i>Methods</i>	Desk research, questionnaire, interviews, case study
<i>Source</i>	http://fteval.at/files/evstudien/ITF_techtransfer.pdf

<i>Title</i>	Evaluation of the ITF-focused Program “FlexCIM” [Evaluierung des ITF-Programms FlexCIM]
<i>Authors</i>	Anton Geyer, Christian Rammer, Wolfgang Pointner, Wolfgang Polt, Heinz Hollenstein, Laurent Donzé, und Spyros Arvanitis
<i>Institutions</i>	Forschungszentrum Seibersdorf, Joanneum Research, ETH Zürich, ZEW
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	2000
<i>Methods</i>	Descriptive analysis, econometric analysis, „matched pairs“-analysis
<i>Source</i>	<i>http://www.fteval.at/files/evstudien/FlexCIM.pdf</i> <i>see also : Wolfgang Polt, Wolfgang Pointner (Ed.) : Diffusionsorientierte Technologiepolitik, Schriftenreihe des InTeReg der Joanneum Research, Leykam 2005</i>

<i>Title</i>	Evaluation of the Science Week@Austria 2000
<i>Authors</i>	Wolfgang Cerny, Anton Geyer, Edgar Schiebel, Clemens Widhalm
<i>Institutions</i>	Forschungszentrum Seibersdorf
<i>Client</i>	Federal Ministry of Transport, Innovation and Technology
<i>Language</i>	German
<i>Date</i>	2000
<i>Methods</i>	Survey, desk research
<i>Source</i>	<i>http://fteval.at/files/evstudien/Scienceweek_2000.pdf</i>

<i>Title</i>	Evaluation of the Project FINT - Promotion of Innovation and Technology Implementation [Evaluierung des Projekts FINT – Förderung von Innovation und Technologieinsatz]
<i>Authors</i>	P. Kaufmann, Sonja Sheikh, Alfred Radauer
<i>Institutions</i>	Austrian Institute for SME Research (KMFA)
<i>Client</i>	Federal Ministry for Economic Affairs
<i>Language</i>	German
<i>Date</i>	1999
<i>Methods</i>	see methods for Ex-post evaluation of FFG funded projects
<i>Source</i>	<i>For internal use only</i>

<i>Title</i>	Evaluation of the ITF-Transport Technology Programme (1992-1997)
<i>Authors</i>	Fritz Ohler, Erik Arnold, Leonhard Jörg, Daniel Corsten
<i>Institutions</i>	Austrian Research Centre Seibersdorf, Technopolis, University of St. Gallen
<i>Client</i>	n/a
<i>Language</i>	English
<i>Date</i>	1998
<i>Methods</i>	Normative reference model of best practice in programme management, questionnaire, document analysis, interviews
<i>Source</i>	http://fteval.at/files/evstudien/ITF_transport.pdf

<i>Title</i>	Evaluation of the Austrian MINT-Programme [Evaluierung des Programms MINT]
<i>Authors</i>	Fritz Ohler
<i>Institutions</i>	Forschungszentrum Seibersdorf
<i>Client</i>	Federal Ministry for Economic Affairs
<i>Language</i>	German
<i>Date</i>	1998
<i>Methods</i>	Questionnaire
<i>Source</i>	http://fteval.at/files/evstudien/MINT.pdf

<i>Title</i>	Evaluation of the Austrian Participation in Community RTD Programmes – Final Report
<i>Authors</i>	Fritz Ohler, Leonhard Jörg, Wolfgang Polt, Martin Husz, Anton Sieber (ARC), Ken Guy (Technopolis UK), Gernot Hutschenreiter, Sonja Patsios (WIFO), Herbert Gluske (University of Vienna)
<i>Institutions</i>	WIFO, Technopolis UK, Austrian Research Center Seibersdorf (ARC), University of Vienna
<i>Client</i>	Federal Ministry of Science, Transport and the Arts, Federal Ministry of Economic Affairs
<i>Language</i>	English
<i>Date</i>	1997
<i>Methods</i>	Interviews, surveys, data analysis, literature review
<i>Source</i>	http://fteval.at/files/evstudien/EU_RT-Programme.pdf

<i>Title</i>	The “Regional Innovation Award” 1993-1995 - An accompanying Evaluation [Die Regionale Innovationsprämie 1993-1995. Eine begleitende Evaluierung]
<i>Authors</i>	Gernot Hutschenreiter
<i>Institutions</i>	WIFO
<i>Client</i>	Federal Ministry for Science and Transport
<i>Language</i>	German
<i>Date</i>	1997
<i>Methods</i>	Comparative performance figures on quantitative and qualitative basis
<i>Source</i>	http://fteval.at/files/evstudien/innoprämie_1997.pdf

<i>Title</i>	Evaluation of the promotion programme for innovative founders [Programmevaluierung innovativer GründerInnenförderung]
<i>Authors</i>	Ernst Zeiner, Stefan Lengauer
<i>Institutions</i>	Forschungsgruppe Internationaler Wirtschafts- und Organisationssoziologie (FIWO), ARC
<i>Client</i>	Federal Ministry of Economic Affairs
<i>Language</i>	German
<i>Date</i>	1997
<i>Methods</i>	Quantitative performance and interface analysis, survey, expert interviews
<i>Source</i>	http://fteval.at/files/evstudien/GruenderInnen.pdf

<i>Title</i>	Impact of the Innovation Promotion in the Research Focus “Environmental Technologies” of the Innovation and Technology Fund (ITF) [Wirkungen der Innovationsförderung im Schwerpunkt Umwelttechnik des Innovations- und Technologiefonds (ITF)]
<i>Authors</i>	Uwe Kuntze, Angela Köppl, Claudia Pichl
<i>Institutions</i>	WIFO, Fraunhofer ISI
<i>Client</i>	Federal Ministry for Science and Transport, Federal Ministry of Economic Affairs
<i>Language</i>	German
<i>Date</i>	1997
<i>Methods</i>	Descriptive analysis, literature review, interviews, questionnaire, control group
<i>Source</i>	Summary: http://fteval.at/files/evstudien/itf_1997.pdf Published by Fraunhofer ISI: <i>Kuntze, U.; Köppl, A.; Pichl, C.: Wirkungen der Innovationsförderung im Schwerpunkt Umwelttechnik des ITF, 1997, Karlsruhe/Wien; Signatur: ISI-B-77-97</i>

<i>Title</i>	Evaluation of the ITF-focused Programmes FlexCIM [Evaluierung des ITF-Förderschwerpunktes "Flexible Computerintegrierte Fertigung (FlexCIM)"]
<i>Authors</i>	Eva Buchinger, Leonhard Jörg, Alexander Kopcsa, Hannes Leo, Lea Mustonen, Fritz Ohler, Wolfgang Polt, Sonja Patsios
<i>Institutions</i>	Österreichisches Forschungszentrum Seibersdorf, WIFO
<i>Client</i>	"Technologie-Information-Politikberatung (TIP)"
<i>Language</i>	German
<i>Date</i>	1994
<i>Methods</i>	Questionnaire, interviews, comparative analysis
<i>Source</i>	http://fteval.at/files/evstudien/1994_flexcim.pdf

<i>Title</i>	The "Regionale Innovation Award" An accompanying Evaluation [Die "Regionale Innovationsprämie". Eine begleitende Evaluierung]
<i>Authors</i>	Gernot Hutschenreiter
<i>Institutions</i>	WIFO
<i>Client</i>	Federal Ministry of Economic Affairs and Transport
<i>Language</i>	German
<i>Date</i>	1993
<i>Methods</i>	Comparative indicators and analysis
<i>Source</i>	http://fteval.at/files/evstudien/innoprämie_1993.pdf

<i>Title</i>	Evaluation of the Technology-Promotion- Programmes of the Austrian Federal Government 1985/1987 [Evaluierung der Technologieförderungsprogramme der Bundesregierung 1985/1987]
<i>Authors</i>	Gernot Hutschenreiter
<i>Institutions</i>	WIFO
<i>Client</i>	Federal Ministry for Economic Affairs and Transport, Federal Ministry for Science and Research
<i>Language</i>	German
<i>Date</i>	1991
<i>Methods</i>	n/a
<i>Source</i>	<i>Hutschenreiter, G., "Technologieförderung in Österreich. Evaluierung der Technologieförderungs- programme der Bundesregierung 1985/1987", WIFO- Monatsberichte, 1992, 65(9), S. 481-487 (Monographie, 1991, 410 Seiten (available on www.wifo.ac.at)</i>

V. Policy, Fields or Systems Evaluation

<i>Title</i>	Austrian Biomedical Research Outputs, 1991-2000
<i>Authors</i>	Grant Lewison, Steven Lipworth, Isla Rippon
<i>Institutions</i>	City University London, School of Informatics
<i>Client</i>	Federal Ministry of Education, Science and Culture
<i>Language</i>	English
<i>Date</i>	August 2002
<i>Methods</i>	Bibliometrics, statistical methods
<i>Source</i>	http://fteval.at/files/evstudien/biomedicalresearch.pdf

<i>Title</i>	Evaluation of the Austrian Participation in the 4th EU Framework Programme for Research, technological Development and Demonstration
<i>Authors</i>	Andreas Schibany, Helmut Gassler, Dorothea Sturn, W. Polt, Gerhard Streicher (JR), Katharina Warta , L. Jörg, E. Arnold (Technopolis), Tertu Luukkonen (VTT)
<i>Institutions</i>	Joanneum Research (JR), Technopolis Austria/ UK/ France, VTT Finland
<i>Client</i>	bm:bwk, bmwa, bmvit, bmlfuw, bmsg
<i>Language</i>	English
<i>Date</i>	2001
<i>Methods</i>	Descriptive and comparative statistical analysis of survey data; descriptive and comparative statistical analysis of secondary data
<i>Source</i>	http://www.fteval.at/files/evstudien/Evaluation_4thFP.pdf

<i>Title</i>	An Evaluation Concept for Kplus-Competence Centers Programme [Ein Evaluierungskonzept für das Kompetenzzentrenprogramm Kplus]
<i>Authors</i>	Klaus Zinöcker, Wolfgang Pointner, Wolfgang Polt, Andreas Schibany, Christian Hartmann (JR); Michael Stampfer (TIG)
<i>Institutions</i>	Joanneum Research (JR)
<i>Client</i>	Austrian Research Promotion Agency (FFG, former TIG)
<i>Language</i>	German
<i>Date</i>	2001
<i>Methods</i>	Desk Research, International Comparison, Focus Group
<i>Source</i>	http://fteval.at/files/evstudien/evalconcept_kplus.pdf

<i>Title</i>	Evaluation of public support for R&D, The case of Finland
<i>Authors</i>	Wolfgang Polt, Oliver Fritz
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Oesterreichische Nationalbank (OeNB)
<i>Language</i>	German
<i>Date</i>	2000
<i>Methods</i>	Desk Research
<i>Source</i>	<i>For internal use only</i>

<i>Title</i>	Regional Innovation Policy 2000 [Regionale Innovationspolitik 2000]
<i>Authors</i>	Dorothea Sturn, Wolfgang Pointner (JR), Gernot Hutschenreiter, Rainer Hauswirth (WIFO), Herta Tödtling-Schönhofer, F. Delapina (ÖIR)
<i>Institutions</i>	Joanneum Research (JR), WIFO, ÖIR
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	1999
<i>Methods</i>	Survey of participants, interviews with managers of techcenters
<i>Source</i>	http://fteval.at/files/evstudien/Reg_Innopolitik_Band1.pdf http://fteval.at/files/evstudien/Reg_Innopolitik_Band2.pdf

<i>Title</i>	Evaluation of the ITF-focused Programmes “Environmental Technologies” – Level 1: Issue-Evaluation – Final Report [Programmmanagement ITF-Schwerpunkt "Umwelttechnik". Stufe 1: Themenbewertung – Endbericht]
<i>Authors</i>	Norbert Knoll, Rudolf Orthofer, Wolfgang Polt
<i>Institutions</i>	OEFZS Forschungszentrum Seibersdorf
<i>Client</i>	Federal Ministry of Economic Affairs and Transport
<i>Language</i>	German
<i>Date</i>	1995
<i>Methods</i>	Desk research, interviews
<i>Source</i>	http://fteval.at/files/evstudien/ITF_Umwelttechnik.pdf

VI. Studies on Evaluation

<i>Title</i>	Quantitative Methods for the Evaluation of Technology Policy Programmes [Quantitative Methoden der Evaluierung technologie- politischer Programme]
<i>Authors</i>	Wolfgang Polt, Wolfgang Pointner, Dorothea Sturn, Birgit Woitech 8JR), Anton Geyer (ARC), Gernot Hutschenreiter (WIFO), Christian Rammer (ZEW)
<i>Institutions</i>	Joanneum Research (JR), WIFO, ARC Seibersdorf, ZEW
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	2002
<i>Methods</i>	Desk Analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/Qeva.pdf

<i>Title</i>	ASIF – Assessment of the Socio-Economic Impact of the Framework Programme
<i>Authors</i>	Luke Georghiou, John Rigby, Hugh Cameron, Stefan Kuhlmann, Thomas Henize, Wolfgang Polt, Andreas Schibany, Oliver Fritz, Ken Guy et al.
<i>Institutions</i>	PREST, BETA, Fraunhofer ISI, University of Athens, Joanneum Research and Wise Guys
<i>Client</i>	European Commission
<i>Language</i>	English
<i>Date</i>	2002
<i>Methods</i>	n/a
<i>Source</i>	http://www.fteval.at/files/evstudien/ASIF_report.pdf <i>See also: Georghiou, L., Rigby J., & Cameron H. (eds.) (forthcoming 2006) “Valuing the Impact of Technology and Research: The Theory and Practice of Socio-Economic Assessment” Edward Elgar</i>

<i>Title</i>	E-PUB – Socio-Economic Evaluation of Public RTD policies
<i>Authors</i>	S. Arvanitis (ETH Zürich) , M. Boden , L. Georghiou, J: Rigby (PREST), S. Bühner, S. Kuhlmann (FhG-ISI), H. Capron, M. Cincera (Université Libre de Bruxelles), R. Cowan (MERIT), J. Eaton (Boston University and NBER), G. Fahrenkrog, A. Tübke (IPTS), M. Keilbach (ZEW), E. Kinsella (CIRCA Group), G. Licht (ZEW), P. Patel (SPRU), W. Polt, J. Rojo, B. Woitech, K. Zinöcker (Joanneum Research), G. Sirilli (ISRDS-CNR), E. Stern (Tavistock Institute)
<i>Institutions</i>	Joanneum Research, IPTS, ISI Fraunhofer, Prest et al.
<i>Client</i>	European Commission, Project within the STRATA (Strategic Analysis of Specific Policy Issues) Programme of the 5th Framework Programme: Research, Technological Development and Demonstration (RTD)
<i>Language</i>	English
<i>Date</i>	2002
<i>Methods</i>	n/a
<i>Source</i>	http://www.fteval.at/files/evstudien/epub.pdf

<i>Title</i>	Evaluation of Innovative Actions (EvinA) [Evaluierung von innovativen Aktionen in der Technologie-, Struktur- und Arbeitsmarktpolitik]
<i>Authors</i>	Oliver Fritz, Markus Gruber, Karin Grasenick, Christian Hartmann, Wolfgang Polt, Dorothea Sturn, Mirjam Novakovic, Birgit Woitech
<i>Institutions</i>	Joanneum Research
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	2000
<i>Methods</i>	Desk Analysis
<i>Source</i>	http://www.fteval.at/files/evstudien/EvinA.pdf

<i>Title</i>	Possible Evaluation Structures for the Austrian Academic Research System ([Wie kann oder wie soll Österreichs akademische Forschung evaluiert werden?]
<i>Authors</i>	Bernhard Felderer; David Campbell
<i>Institutions</i>	Institute for Advanced Studies (IHS), Austria
<i>Client</i>	Federal Ministry for Science and Transport
<i>Language</i>	German
<i>Date</i>	1999
<i>Methods</i>	Comparison and analysis of international “good practise” on research evaluations and policy; expert interviews
<i>Source</i>	http://fteval.at/files/evstudien/Academic_Research.pdf

<i>Title</i>	Evaluation of the ITF-Programme Management “Energy Technology” [“Evaluierungsgutachten ITF-Programmanagement Energietechnik”]
<i>Authors</i>	Manfred Bruck, Sabine Gasser
<i>Institutions</i>	Kanzlei Dr. Bruck, Ingenieurskonsulenten
<i>Client</i>	Federal Ministry of Science and Transport, Federal Ministry for Economic Affairs, Innovation and Technology Fund (ITF)
<i>Language</i>	German
<i>Date</i>	1997
<i>Methods</i>	Questionnaire, interviews
<i>Source</i>	http://www.fteval.at/files/evstudien/ITF_Energietechnik.pdf

<i>Title</i>	Evaluation of RTI-Programmes: between Best- Practice Development and Austrian Structures („Evaluierung von FTE-Programmen, Zwischen Best Practice Entwicklung und österreichischen Strukturen“)
<i>Authors</i>	Oliver Fritz, Gernot Hutschenreiter, Dorothea Sturn
<i>Institutions</i>	Joanneum Research, WIFO
<i>Client</i>	Federal Ministry of Science and Transport
<i>Language</i>	German
<i>Date</i>	1997
<i>Methods</i>	Desk research
<i>Source</i>	http://www.fteval.at/files/evstudien/EvalR&Dstudies.pdf

<i>Title</i>	Evaluating of Academic Research in Germany
<i>Authors</i>	David Campbell, Bernhard Felderer
<i>Institutions</i>	Institute for Advanced Studies (IHS), Austria
<i>Client</i>	Federal Ministry for Science and Transport
<i>Language</i>	English
<i>Date</i>	1997
<i>Methods</i>	Comparison and analysis of the German institutional framework for the evaluation of academic research; bibliometric survey of article publications; expert interviews with German scholars and decision makers
<i>Source</i>	http://fteval.at/files/evstudien/academic_research_ger.pdf

<i>Title</i>	Elements of Evaluation of Science and Technology Policy in Austria
<i>Authors</i>	Michael Steiner, Dorothea Sturn
<i>Institutions</i>	Joanneum Research
<i>Client</i>	n/a
<i>Language</i>	English
<i>Date</i>	1996
<i>Methods</i>	Desk Research
<i>Source</i>	<i>Research Evaluation Volume 5 Number 1 April 2006</i>

Platform Newsletter

The Platform's Newsletter is a medium to inform about approaches, topics and activities with a special focus on evaluation. The Editors issued its first Newsletter regarding the evaluation culture in Austrian science and technology policy. More than one decade later the thirtieth Newsletter came fresh from the press. In the following table a concise overview of the Newsletter topics is given.

Overview about Platform Newsletter TOPICS		Issue Number									
Evaluations	<i>Institutions/Funding Agencies</i>	29	25	24	15	11	10				
	<i>Programmes</i>	Ex-ante	11								
		Interim	20	17	11	7	4				
		Ex-post	19	13	7	6					
	<i>Assessment</i>	25	18	10							
<i>Studies on Evaluation/ Evaluation systems</i>	26	19	18	17	14	12	10	8	6	3	
Methods	<i>Qualitative Methods</i>	30	23	21							
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Book Reviews		30	29	23	22	17					

No 30 EXCELLENCE: TO PICK OR TO FOSTER?

(issued June 2007)

<i>Introduction</i>	Dervilla Donnelly	Austrian Council
<i>Excellence: to pick or to foster?</i>	Marcel Herbst	4mation
<i>Measuring Societal Benefits of R&D: Case Study Performance Metrics</i>	Thomas M. Pelsoci	Delta Research srl
<i>Evaluation Evaluations or The Case for Action Research</i>	Christoph Mandl	Mandl, Lüthi & Partner
<i>Book Review: Muldur et al. "A New Deal for an Effective European Research Policy – The Design and Impacts of the 7th Framework Programme"</i>	Stefan Kuhlmann	University of Twente

No 29 INSPIRING FUNDING AGENCIES TO MAKE A DIFFERENCE
(issued December 2006)

<i>The White Box Approach to Agency Effectiveness</i>	Kjell-Hakan Närfelt Andreas Wildberger	VINNOVA FFG
<i>Thoughts on the TAFTIE Self-Assessment Tool on Value-Added Behavior</i>	Connie Chang	US Dept of Commerce
<i>Realising Additionality – Some Comments from an Evaluator’s Perspective on “Value Added Strategies” of Funding Agencies</i>	Leonhard Jörg	Technopolis
<i>Increasing and Assessing the Agency’s Added-Value – Are there any Limits?</i>	Jari Romanaines	Tekes
<i>Meeting Notes from the joint FTEval-TAFTIE Workshop “Programme Management & Evaluation – New Forms of Co-operation needed?”</i>	Joakim Appelquist	VINNOVA
<i>Science Impact – Rethinking the Impact of Basic Research on Society and the Economy – Conference Announcement</i>	Alexander Damianisch	FWF
<i>Book Review: Carayannis/Campbell “Knowledge Creation, Diffusion and Use in Innovation Networks and Knowledge Clusters”</i>	Julia Prikoszovits	Österr. Wissenschafts- rat

No 28 **NEW FRONTIERS IN EVALUATION**
(issued April 2006)

<i>The ERC and Policy Makers' Expectations: Evaluation as a Change Agent</i>	Rupert Pichler	bmvit
<i>Pressure, Deception and Peer Review</i>	Michael Dinges	JR
<i>Some Common Ways to Distribute Funds – Evidence from International Practice</i>	Rudolf Novak	FWF
<i>The Research Assessment Exercise 2008 in the United Kingdom</i>	David F.J. Campbell	IFF
<i>The Usage of PART in the European Context – Possibilities and Caveats</i>	Alfred Radauer Klaus Zinöcker	KMFA WWTF
<i>Five Myths about Funding Scientific Research (in Austria)</i>	Klaus Zinöcker Michaela Glanz Brigitte Tempelmaier Michael Dinges	WWTF WWTF WWTF JR

No 27 RESEARCH INFORMATION SYSTEMS

(issued March 2006)

<i>Approach to a National System for Monitoring University Research in Sweden</i>	Torbjörn Winqvist	VINNOVA
<i>New Approaches for Research Information and Quality Assurance: IFQ evaluates DFG Funding Activities</i>	Stefan Hornbostel	IFQ
<i>From Research Documentation to a Research Information System</i>	Horst Mayr, Peter Schaffer	BOKU
<i>What is TUGonline</i>	Franz Haselbacher	TU Graz
<i>Fodok – Research Documentation at the University of Salzburg</i>	Petra Hasicka	Universität Salzburg
<i>New Frontiers in Evaluation – Conference Announcement and Conference Programme</i>		

No 26 EXCELLENCE – A QUESTION OF GENDER

(issued November 2005)

<i>Excellence – A Case of Gender?</i>	Margo Brouns	University Groningen, NL
<i>How to Increase the Number of Women in Science – Money or Mindset?</i>	Eva Schernhammer	Harvard Medical School
<i>Gender Aspects in Research and Technology Promotion Programmes</i>	Sonja Sheikh Aliette Dörflinger	KMFA
<i>Laura Bassi Centres as a New Research Policy Approach</i>	Herbert Greisberger Inge Schrottenecker	ÖGUT

Statements: Michael Binder (FFG), Iris Klein (ARC), Gerhard Kratky (FWF), Brigitte Ratzer (TU Wien), Ulrike Unterer (bmwa), Elke Ziegler (ORF)

**No 25 HOW TO EVALUATE FUNDING SYSTEMS. THE EXAMPLE OF
THE FFF/FWF EVALUATION**

(issued November 2005)

<i>How These Things Came About: A Short Note on the Early Years of FFF and FWF</i>	Michael Stampfer	WWTF
<i>Main Results of the Evaluation of FFF and FWF – an Overview</i>	Klaus Zinöcker	WWTF
<i>FWF, FFF and the Austrian University System</i>	Gerhard Streicher	JR
<i>Towards good practice in project assessment. Some inspirations from the evaluation of FFF</i>	Leonhard Jörg	Technopolis
<i>Impact of R&D subsidies on innovation output and productivity</i>	Martin Falk	WIFO
<i>Input Additionality of FFF funding</i>	Gerhard Streicher	JR
<i>The Austrian Science Fund FWF</i>	Rudolf Novak	FWF
<i>The Austrian Research Promotion Agency (FFG)</i>	Michael Binder	FFG
<i>Recent trends in evaluating public support programs</i>	Oliver Pfirrmann	JR
<i>Die österreichische Mathematik-Evaluation – Zusammenfassung und Kommentar</i>	Klaus Zinöcker	WWTF

No 24 NETWORKS & BASIC RESEARCH

(issued September 2005)

<i>Evaluating the FWF's Research Networks</i>	John Rigby	PREST
<i>Evaluation of FWF Funding Programmes for Research</i>	Rudolf Novak	FWF
<i>Development of coordinated programmes of the DFG</i>	Rolf Greve	DFG
<i>Evaluation of Collaborative Research Centers by the German Science Council</i>	Rainer Lange	German Research Council
<i>Summary of the OECD Workshop on Behavioural Additionality</i>	Alfred Radauer Franziska Steyer Jerry Sheehan	KMFA JR OECD
<i>International Conference Pre-Announcement: New Frontiers in Evaluation</i>		

No 23 QUALITATIVE METHODS

(issued July 2005)

<i>Qualitative Evaluation Methods and Procedures</i>	Richard A. Krueger	University of Minnesota, US
<i>Book Review: Thomas W. Valente "The Evaluation of Communication Programs"</i>	Wolfgang Neurath	Austrian Council

No 22 PATENTS & EVALUATION

(issued August 2004)

<i>The Utility of Patent Indicators for Evaluation</i>	Ulrich Schmoch	Fraunhofer ISI
<i>The Internationalisation of Innovative Activities in Austria</i>	Bernhard Dachs Andreas Schibany	ARC JR
<i>Book Review Shapira/Kuhlmann: “Learning from Science and Technology Policy Evaluation”</i>	Anton Geyer	Technopolis

No 21 PEER REVIEW

(issued June 2004)

<i>Making Decisions about Science & Technology – between the Devil and the Deep Blue Sea?</i>	John Rigby	PREST
<i>Some Developments in Peer Review</i>	Michael Stampfer	WWTF

No 20 EVALUATION OF KNOWLEDGE TRANSFER
(issued April 2004)

<i>Evaluation Results of the Austrian Technology Transfer Programme Technokontakte</i>	Eva Buchinger Petra Wagner	ARC
<i>Policy Statement des BMWA zur Evaluierung von Technokontakte</i>	Sepp Mandl	BMWA
<i>Assessing the Impact of Face-to-Face Knowledge Transfer</i>	Simone Kimpeler Steffen Kinkel	Fraunhofer ISI
<i>Zum deutschen BMWA-TOP Programm</i>	Götz Fasold	BMWA
<i>Networks of Innovation – Evaluation and Monitoring of Technology Programs based on Social Network Analysis (SNA)</i>	Wolfgang Neurath Harald Katzmair	BMWA FAS.research

**No 19 EVALUATION & MONITORING OF PROGRAMS &
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(issued May 2003)

<i>Assessing Portfolio Performance of a Public R&D Program in the Short-to-Intermediate Period: Tools from the USA's ATP</i>	Rosalie Ruegg	TIA Consulting
<i>How to Make Monitoring and Evaluation Match Better? The Case of the Austrian AplusB Programme</i>	Dorothea Sturn Klaus Zinöcker	TIG JR
<i>Strategies Behind VINNOVA's Evaluation Policy</i>	Torbjörn Winqvist	VINNOVA
<i>The Integration of "Sustainability" in Project and Programme Evaluation and Monitoring Practices</i>	Paul Schreurs	IWT
<i>Improving Project Management and Monitoring Data: A new Approach of the E.E.T. Programme to Stimulate Sustainable Technology in the Netherlands</i>	Merei Wagenaar	E.E.T. programme office, NL
<i>Evaluation and Monitoring of the German "Microsystem Technology" Programmes</i>	Horst Steg	VDI/VDE
<i>Analysis of the Ex-Post Project Monitoring of Tekes</i>	Pekka Pesonen	Tekes
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<i>Quantitative Science Policy and Management by using Scientometrics and Scientometric Indicators</i>	Tibor Braun	ISSRU, Hungary
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<i>Best Management Practices for Complex RTDI-Programmes: MAP-TN, StarMAP, DiscoMAP</i>	Birgit Baumann	TIG

No 17 **NEW POLICY INSTRUMENTS, NEW CHALLENGES FOR EVALUATION**
(issued March 2003)

<i>A New Challenge for the Community Research Evaluation System</i>	Birgit De Boissezon	European Commission
<i>Mid-Term Evaluations of the Austrian Competence Centre Programme Kplus</i>	Harald Hochreiter Michael Stampfer	TIG WWTF
<i>New Developments in Evaluation Methods and Strategy at the European Level – A Short Review of Recent Projects (ASIF, EPUB)</i>	Wolfgang Polt	JR
<i>ASIF – Evaluating Socio-Economic Impact</i>	John Rigby	PREST
<i>Evaluation of RTD Policy Foundations: The Socio-economic Dimension</i>	Jaime Rojo	Uni.Politécnica (Valencia, E)
<i>Buchbesprechung/Book Review: Andreas Fier “Government Funded Industrial Research in Germany”</i>	Spyros Arvanitis	ETHZ

No 16 THE ROLE OF ‘COUNCILS’ IN RESEARCH & TECHNOLOGY POLICY

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<i>The Research Council of Norway (RCN) as Advisor on Research and Innovation Policy</i>	Erik Arnold	Technopolis
<i>Advising, Shaping and Evaluating RTD policy in Austria</i>	Michael Binder	Austrian Council
<i>The Case of Finland</i>	Esko-Olavi Seppälä	S&T Policy Council, FIN
<i>Typifying Scientific Advisory Structures and Scientific Advice Production Methodologies</i>	Susanne Bühner	Fraunhofer ISI

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No 14 (issued December 2001)

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Zur Beteiligung Österreichs am 4. Rahmenprogramm für FTE der EU Helmut Gassler JR

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Die Jahrestagung der DeGEval 2001 Günter Tissen DeGEval

Die Standards für Evaluation der DeGEval – Vorstellung und Einladung zum Dialog Wolfgang Beywl Univation (Köln)

Zum Arbeitskreis „Evaluation von FTI-Politik“ Susanne Bühler Fraunhofer ISI
Dorothea Sturn TIG

Some ongoing Technology Evaluations in Austria (1999-2001) Michael Stampfer FTEval
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<i>Zur institutionellen Weiterentwicklung der Plattform FTEval</i>	Rupert Pichler Klaus Zinöcker	FTEval

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<i>Bibliometric Analysis as an Instrument for Research Evaluation</i>	Anthony F. J. van Raaij	CWTS, Univ. Leiden, NL
<i>Bibliometric Visualisation of Research Networks – Examples of the 4th Framework Program of the EC</i>	Edgar Schiebel et al.	ARC

**EVALUIERUNG VON EU-KOHÄSIONS- UND REGIONAL-
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<i>Bewertungen von Programmen der EU- Regionalpolitik – Zwischen Anspruch und Wirklichkeit</i>	Markus Gruber	JR
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No 11 (issued December 2000)

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<i>Projektevaluierung und Monitoring beim FFF</i>	Klaus Schnitzer Reinhard Zeilinger	FFF
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<i>The Impact of Academic Institutions of Research Evaluation Systems</i>	Michael Stampfer	TIG
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<i>Evaluation of the Austrian Academy of Sciences</i>	Armin Scrinzi	TU Wien
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<i>Technology Rating – a venture capitalist's perspective</i>	Reinhard Gert Jonke Thomas Jud	Bank Austria TFV JR

BEISPIELE AUS DER EVALUIERUNGSPRAXIS

<i>Gute Praxis für kleine Programme: Begleitung und Bewertung der Impulsaktion „Kooperation Fachhochschulen – Wirtschaft“</i>	Dorothea Sturn	JR
<i>Evaluierung der Diffusion und Nutzung von Informations- und Kommunikationstechnologien (IKT): Ergebnisse eines Policy-Benchmarking</i>	Norbert Knoll	WIFO
<i>Innovationsagentur Tecnet</i>	Martina Hölbling	Innovations- agentur
<i>European RTD Evaluation Network (DG XII), Treffen in Berlin am 7.6.1999</i>	Michael Stampfer	TIG
<i>Konferenz „Evaluation of Science and Technology in the New Europe“ in Berlin 7.-8.6.1999</i>	Michael Stampfer	TIG

No 8 EVALUIERUNG DER F&E PROGRAMME DER EU
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<i>Overview of the EC RTD Programme Monitoring and Evaluation System</i>	Gilbert Fayl	European Commission
<i>Strategic Options for the Evaluation of the R&D Programmes of the European Union</i>	Ken Guy Wolfgang Polt	Technopolis ARC
<i>The European RTD Evaluation Network</i>	Isidoros Karatzas Gilbert Fayl Michael Stampfer	European Commission TIG
<i>“Verteilte Intelligenz” für eine effektive europäische Forschungspolitik</i>	Stefan Kuhlmann	Fraunhofer ISI
<i>The Policy Cycle of Evaluation – Three Research Projects and one Framework</i>	Wolfgang Polt Dorothea Sturn	ARC JR
<i>Austrian Platform for Telematics Applications (APTA) Bericht über die Evaluierung</i>	Rupert Pichler	bmwv
<i>Internationales Evaluationsseminar in Leuven/Belgien am 12./13. November 1998</i>	Klaus Schnitzer	FFF

No 7 **BEISPIELE AUS DER EVALUIERUNGSPRAXIS**
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<i>Tagungsbericht „Deutsche Gesellschaft für Evaluierung (DeGEval)“</i>	Wolfgang Polt	ARC
<i>The Economic Evaluation of Technological Change -Ein Kongressbericht</i>	Oliver Fritz	JR

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<i>Ziele definieren – Wege evaluieren Anforderungen an nachhaltige Technologien</i>	Dietmar Kanatschnig	BOKU
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BEISPIELE AUS DER EVALUIERUNGSPRAXIS

<i>ITF Programmmanagement Energietechnik - Evaluierungsgutachten – Kurzfassung</i>	Manfred Bruck Sabine Gasser	Ingenieur- konsulent f techn. Physik
<i>Programmevaluierung innovativer GründerInnenförderung</i>	Ernst Zeiner Stephan Lengauer	FIWO

No 3 **EVALUATION**
(issued March 1997)

<i>Evaluation of RTD-Programs: Best Practice Considerations and the Austrian Experience</i>	Oliver Fritz Gernot Hutschenreiter Dorothea Sturn	JR WIFO JR
<i>Wie bewertet man forschungs- und technologiepolitische Programme?</i>	Stefan Kuhlmann	Fraunhofer ISI

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<i>Plattform Technologie Evaluierung Initiative für einen neuen österreichischen Diskurs</i>	Dorothea Sturn Michael Stampfer Gernot Hutschenreiter	JR bm:wvk WIFO
<i>Lessons on methodology – from the Austrian impact study</i>	Fritz Ohler	ARC

No 1 **EVALUIERUNG IN FT-POLITIK**
(issued 1996)

<i>Developing an Evaluation Culture in Austrian Science and Technology Policy</i>	Erik Arnold	Technopolis
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Glossary

ACR - Austrian Cooperative Research; Only a few small and medium sized enterprises (SMEs) can afford their own R&D personnel. Therefore, they need the assistance of R&D organisations that provide services for their specific needs. This is the strength of ACR, the only association of cooperative research organisations in Austria. ACR members offer services such as applied R&D, innovation, consultancy, and technology transfer in the field of materials & processing; building, fire protection & safety; food, cereals & beverages; social & economic research; shipbuilding; micro- & nanostructures; information & communication; sustainability research; and life sciences (network of 17 research institutions).

ACR is the intermediary between research, development, innovation and SMEs. ACR also represents the interests of its members and Austrian SMEs vis-a-vis decision makers in politics, interest groups and the public in general on the national and international level. (www.acr.at)

ACVT - Advisory Council on Veterinary Training of the European Commission

AFSK – The Danish Institute for Studies in Research and Research Policy is a government research institute under the Danish Ministry of Science, Technology and Innovation. (www.afsk.au.dk)

APS – Regional Advice and Support Centre (→*RBBZ*) in Styria. (www.aps.tugraz.at)

ANVAR – French Innovation Agency is now part of →*OSEO* (www.oseo.fr)

ARC - Austrian Research Centers GmbH (ARC) is the largest non-university research organisation in Austria. With 10 units and around 1,000 employees, it is the innovative research and development partner for industry and the public

sector. It cooperates with universities and other research establishments throughout the world.

ARC Seibersdorf research GmbH: biogenetics-natural resources, health physics, information technologies, life sciences, materials research, medical technology, nanotechnologies, space applications. (www.arcs.ac.at)

ARC sys - ARC systems research; Subsidiary of → *ARC* and specialised in applied systems research, which is about analysing social, economic and natural systems and intervening in these systems. (www.systemsresearch.ac.at)

ARÖW - Society for Work-, Reorganisation and ecological business consulting. Combines Innovation research and consulting in selected fields of activity and industry. (www.aroew.de)

ASA - was set up by the ministry of transport and innovation with the task of coordinating Austria's space activities. In recent years, it has edged into a wider role in high technology innovation programme management (for example in nanotechnology) and operating innovationrelated awareness and information campaigns on behalf of BMVIT. The Austrian Space Agency is now part of the → *FFG*. (www.ffg.at)

ASIF - Assessing the Socio-Economic Impacts of the Framework Programme (www.fteval.at/files/evstudien/ASIF_report.pdf)

Austrian Council – The Austrian Council for Research and Technology Development [Rat für Forschungs- und Technologieentwicklung]. was set-up by the new government coalition as an advising body to the government at federal level as well as for regional authorities. This task involves development of long-term strategies as well as monitoring functions. (www.rat-fte.at)

AUSTRON - Unrealised project for the construction of a “Central European Spallation Source” in Austria. (<http://www.ati.ac.at/austron/>)

AvH - Alexander von Humboldt Foundation is a non-profit foundation established by the Federal Republic of Germany for the promotion of international research cooperation. It enables highly qualified scholars not resident in Germany to spend extended periods (www.humboldt-foundation.de)

AWS - Austrian Wirtschaftsservice Gesellschaft was set up by the Federal Ministry of Finance and the Federal Ministry of Economics and Labour to

strengthen Austria's competitiveness, as well as create jobs and secure them in the long-term. aws provides financing and development advice for small- and medium-sized enterprises, supports the establishment of new companies and conducts federal promotion programmes in its function as a funding and promotion partner. The programmes range from Austria Life Science (→ *LISA*), Umwelt & Infrastruktur (Environment & Infrastructure) and Technologie & Innovation (Technology & Innovation) to internationalisation programmes. The company also conducts training and education courses, in addition to these services. Furthermore, aws awards the State Prize for Innovation and organises the ``Innovative Youth`` (Jugend innovativ) competition.

BEP – Regional Advice and Support Centre (→ *RBBZ*) in Tyrol. (www.bep.at)

BBT - Federal Office for Professional Education and Technology in Switzerland. The BBT (eng. OPET) is the federal government's competence centre for vocational education and training, Universities of Applied Sciences (UAS) and innovation promotion. (<http://www.bbt.admin.ch/index.html?lang=en>)

BETA-ULP - Bureau d' Economie Théorique et Appliquée ; BETA is a research laboratory of Université Louis Pasteur (ULP). (<http://cournot2.u-strasbg.fr/users/beta/presentation.php>)

BIT – The Bureau for International Research and Technology Cooperation was set up in preparation of Austrian membership of the EU. It provides information and practical help to Austrian applicants to the EU R&D and innovation programmes. Its beneficiaries include both companies and parts of the knowledge infrastructure. It hosts the Austria Innovation Relay Centre, providing technology and partnership brokerage. BIT is now a part of the → FFG. (www.ffg.at)

BMBF - German Federal Ministry of Education and Research ([/www.bmbf.de/](http://www.bmbf.de/))

Bm:bwk - Austrian Federal Ministry of Education, Science and Culture (www.bmbwk.gv.at)

BMLFUW - Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (www.lebensministerium.at)

BMSG - Austrian Federal Ministry of Social Security, Generations and Consumer Protection (www.bmsg.gv.at)

bmvit - Austria Federal Ministry of Transport, Innovation and Technology (www.bmvit.gv.at/)

BMWA - Austrian Federal Ministry of Economics and Labour (www.bmwa.gv.at)

BM.W_f – Austrian Federal Ministry for Science and Research has replaced the bm:bwk since October 2006. (www.bmwf.gv.at)

BOKU - University of Natural Resources and Applied Life Sciences, Vienna (www.boku.ac.at/)

Bürges - Bürges was set up as a bank specialising in the provision of equity capital for small and medium sized companies. Together with FFG the two major agencies providing specific capital guarantee products for start-up companies. Now part of → AWS.

CATT – Regional Advice and Support Centre (→RBBZ) in Upper Austria. (www.catt.at)

CDG - Christian Doppler Research Association; The non-profit association Christian Doppler Forschungsgesellschaft (CDG) aims at promoting developments in the areas of natural sciences, technology and economy, as well as the use of research developments in industry. A bridging of fundamental research and industrial applications takes place in Christian Doppler laboratories. These research centres are set up by highly qualified scientists in universities and non-university research institutions in collaboration with companies for a maximum of seven years. A company with concrete needs for new findings and know-how from fundamental research is a prerequisite for the setting up of a CD lab. Proposals are submitted by scientists with an endorsement of the partner company/companies. .
(www.cdg.ac.at)

CIR-CE - Co-operation in Innovation and Research with Central and Eastern Europe Follow-Up Programme for the → STRAPAMO-Initiative (http://www.bmwa.gv.at/EN/Topics/EconomicPolicy/Technology/Support/cir_ce_english.htm)

CTI - The CTI is the Swiss Confederation's innovation promotion agency. (<http://www.bbt.admin.ch/kti/index.html?lang=en>)

CWTS - Centre for Science and Technology Studies at the Leiden University (Netherlands). (www.cwts.nl)

DAAD - German Academic Exchange Service; The German Academic Exchange Service is one of the world's largest and most respected intermediary organisations in its field. (www.daad.de)

DEGeval - German Evaluation Society (<http://www.degeval.de/>)

DFG - German Research Foundation; The Deutsche Forschungsgemeinschaft (German Research Foundation) is the central, self-governing research funding organisation that promotes research at universities and other publicly financed research institutions in Germany. (www.dfg.de)

DiscoMAP - DISsemination activities and final CONference for the MAP Thematic Network → *MAP-TN*

DMV - German Association of Mathematics (<http://www.mathematik.uni-bielefeld.de/DMV/>)

EET - Dutch Economy, Ecology, Technology programme aiming at stimulating and supporting long-term projects regarding technological breakthroughs that will generate substantial ecological and economic profit. (www.senternovem.nl/EET)

EARMA - is the leading association of research managers and administrators across Europe. (www.earma.org)

ELSA - "E Learning in Daily School Business" project by the → *BM:BWK*; eLSA is a Project by the Federal Ministry for Education, Science and Culture in Austria for students from the age of 10 up to the age of 15. (Middle School, School Levels 5-8). - as part of the e-Learning Cluster of Austria. (elsa.schule.at)

EPUB - RTD Evaluation Tool Box: Socio-Economic Evaluation of Public RTD policies (www.fteval.at/files/evstudien/epub.pdf)

ERP - The ERP Fund was established under the Marshall Plan for European reconstruction after the Second World War to support business development. ERP focuses on supporting technology transfer, R&D and innovation projects that are rather close to market and require significant investments in order to be realised. Support is primarily in the form of loans and guarantees. Now part of the → AWS. (www.erp-fonds.at)

ETHZ –Swiss Federal Institute of Technology Zurich (www.ethz.ch)

EUROCRYST - Unrealised project for the construction and development of a laboratory for crystal research and synthesis in Austria.

FAS.research – deals with Network Analysis for Science and Business. The company can be seen as an active part of the scientific community in the fields of Network Analysis and Complexity Theory. (www.fas.at)

FFF - Austrian Industrial Research Promotion Fund. FFF, now part of the → FFG, provides bottom-up project funding for the industry sector. It focuses on pre-competitive research and tries to address specific areas (technology fields, sectors) via priority funding lines. Its budgetary scope has continuously increased in the last decades and operates now at the level of around 120 million cash-value of funding.

FFG - In June 2004, the Austrian Research Promotion Agency (FFG) was created to bundle research promotion in Austria. The FFG has been the central agency for promoting research and innovation in Austria ever since. It combines the former independent programmes Research & Technology Promotion for Industry, the Science/Industry Cooperation, the Austrian Space Agency and the International Research & Technology Cooperation into one umbrella organisation. Research & Technology Promotion for Industry promotes Austrian participation in European and international R&D programmes. The Austrian Space Agency runs Austria's space programme. The Science/Industry Cooperation promotes the expansion of Austria's technology infrastructure and the International Research & Technology Cooperation supports industry-related research and innovation projects in all technology fields. (www.ffg.at)

Fforte - fFORTE – Women in Research and Technology; fFORTE is an initiative for the advancement and encouragement of women in science and technology. (www.fforte.at)

FGG - In addition to Bürges, FGG provides equity capital for start-up companies as well as tailored guarantee products in specific technology fields and is now part of the →AWS.

FH - University of Applied Sciences; Educational term

FIT-IT - Research, Innovation, Technology - Information Technology Program; FIT-IT is an Austrian research programme that focuses on high-quality research in the area of information and communication technology. (www.fit-it.at)

FIWO – Research group for international economic and organisational sociology

FP - Framework Programme of the European Union (<http://cordis.europa.eu/fp7/>)

Fraunhofer ISI → *ISI*

FSP – Research Focus; Research Programm by the →FWF (www.fwf.ac.at)

FTEval - Platform Research & Technology Policy Evaluation; The mission of the Platform Research & Technology Policy Evaluation is to encourage more, better and more transparent evaluations for an optimal strategic planning of RTD-policy in Austria. (www.fteval.at)

FuE - Forschung und Entwicklung (German expression for R&D)

FWF - The Austrian Science Fund (FWF) is Austria's central body for the promotion of basic research. It is equally committed to all branches of science and in all its activities is guided solely by the standards of the international scientific community. The responsibilities of the FWF are the promotion of high-quality scientific research, education and training using research and knowledge transfer and the establishment of a science-friendly culture. Aims are: continued scientific improvement in Austria and an increase in international competitiveness, the enhancement young scientists' qualifications; the strengthening of the awareness that science represents a significant aspect of our culture. (www.fwf.ac.at)

GEN-AU - GENome Research in AUstria; GEN-AU is a research programme sponsored by the Federal Ministry for Education, Science and Culture. It is

designed to bring focus to genome research in Austria and prepare it for international competition and greater international cooperation within the EU (www.gen-au.at)

GUF - General University Fund

GWU - George Washington University (www.gwu.edu)

HERD - Higher Education Expenditure on R&D

ICT - Information and Communication Technology

IFF - The Institute of Social Ecology (IFF) focuses on the interrelation of social and natural systems in the context of globalisation, global environmental change and sustainable development. (www.iff.ac.at)

IFQ - Insitute for science information and quality assurance (www.forschungsinfo.de)

IHS - Institute for Advanced Studies; The Institute for Advanced Studies (IHS) combines theoretical and empirical research in economics and the social sciences. (www.ihs.ac.at)

Innovationsagentur - The innovation agency has launched a range of soft measures addressing perceived deficits in: the management of intellectual property rights (TECMA), and in the access to market and technology information (Tecnet). Furthermore the innovation agency has set-up the first Austrian business angel network (i2) and runs several innovation prize-competitions. It is now part of the → AWS.

INTAS - International Association for the Promotion of Cooperation with Scientists from the New Independent States (NIS) of the Former Sovjet Union (<http://www.intas.be/>)

ISI - Fraunhofer Institute for Systems and Innovations Research; The ISI complements the techno-scientific spectrum of the Fraunhofer Society by economic and social aspects. ISI analyses technological developments, their market potentials and their impact on economy, government and society. (www.isi.fraunhofer.de)

ISSRU – Hungarian Information Science and Scientometrics Research Unit

ISTA - The Institute of Science and Technology Austria was established through a decision of the Austrian Parliament in early April of 2006. It is modelled on American universities conducting elite research and offering only PhD programs.

ITA – The Institute of Technology Assessment is an interdisciplinary research institute for the analysis of technological change focusing on societal conditions, shaping options and impacts. (www.oeaw.ac.at/ita)

ITF - Innovation and Technology Fund

IWT - The Institute for Science and Technology Studies is concerned with investigating the institutional and epistemic forms of science and technology, their patterns of change, and the accompanying ethical challenges and social consequences. (www.uni-bielefeld.de/iwt)

JR - Joanneum Research is one of the largest non-university research institutions in Austria. (www.joanneum.at)

K plus, ind, net - Programs designed to foster the cooperation between science and business via the establishment of “competence centres.” The follow-up programme is the → *FWF* programme COMET. (www.ffg.at)

KMFA - Austrian Institute for SME Research; Social and economic research focussing on small and medium-sized enterprises. (www.kmuforschung.ac.at)

KOF - Swiss Institute for Business Cycle Research (www.kof.ethz.ch/)

KTI - See → *CTI*

LBG - Ludwig Boltzmann Society; Through the promotion and the support of applied and basic research at our own institutes, the Ludwig Boltzmann Association has provided important contributions to the progress and development of science in Austria. The widely known research institution has produced numerous highly renowned scientists. The current research activities of the Ludwig Boltzmann Institutes focus on programmes and projects in areas of relevance to society. Calls for proposals and therefore newly founded Ludwig Boltzmann Institutes shall further expand the scientific activities and shall concentrate on translational research in the fields of human medicine, humanities and cultural studies. Funds are provided by the Federal Ministry for, Science and Research; the City of Vienna; private sponsors and members;

provincial governments and municipalities, as well as other public sector institutions. (www.ludwigboltzmann.at)

LISA VR - Life Science Austria Vienna Region (LISA VR); LISA VR is the central life sciences consultancy and coordination point in the Vienna region, and supports researchers and entrepreneurs. (www.lisavr.at)

MAP-TN - Multi-Actors and Multi-Measures Programm Thematic Network which are RTDI funding programmes addressing not an individual firm or research institution but whole (sub-) systems of innovation (e.g. science-industry cooperation).

MFPL - The Max F. Perutz Laboratories; The Max F. Perutz Laboratories at the Campus Vienna Biocenter were established to form a new research institute in the field of biotechnology with groups from the University of Vienna and the Medical University of Vienna. (www.mfpl.ac.at)

NIP - National Information Point System of the 6th Framework Program

NIS - National Innovation System

ÖAW - Austrian Academy of Sciences; The Austrian Academy of Sciences is the leading organisation promoting non-university academic research institutions in Austria. More than 1100 employees carry out extensive research projects. Highly qualified researchers from Austria and abroad are included among the members of the Austrian Academy of Sciences and guarantee the “community’s” excellence in the sciences and the humanities.
(www.oeaw.ac.at)

ÖGUT – Austrian Society for Environment and Technology (www.oegut.at)

OECD - Organisation for Economic Co-operation and Development
(www.oecd.org)

OEFZS - Austrian Research Centres Seibersdorf → ARC

ÖIR - Austrian Institute for Regional Studies and Spatial Planning; ÖIR is a group of experts taking particular interest into the spatial dimension within the areas of research, planning and consulting. (www.oir.at)

ÖMG - Austrian Mathematical Society. The ÖMG (Austrian Mathematical Society) is a union of mathematicians. Its goal is to promote mathematics and its applications in Austria. (<http://www.oemg.ac.at/>)

ÖROK - The Austrian Conference on Spatial Planning founded in 1971, is an organisation set up by the Bund, the Länder and the Gemeinden to co-ordinate spatial planning at the national level. (www.oerok.gv.at)

OSEO - OSEO was born in 2005, by bringing together ANVAR (French innovation agency) and BDPME (SME development bank), around a mission of general interest supporting the regional and national policies. (www.oseo.fr)

PREST - Policy Research in Engineering, Science and Technology at the Manchester Business School (<http://www.mbs.ac.uk/research/engineering-policy/index.htm>)

Protec - technology transfer programme by the → BMWA (<http://www.bmwa.gv.at>)

PROVISIO - With its continuously updated monitoring of participation in the EU Framework Programmes for Research and Technological Development, PROVISIO provides assistance to Austrian ministries and delegates involved in research policy at national, European and international level. (http://www.bmbwk.gv.at/europa/rp/proviso/project_en.xml)

RBBZ - Regional Advice and Support Centres; An Initiative of the → BM:BWK (www.bmbwk.gv.at)

RIF 2000 – The RIF-2000 Regional Impuls Promotion was designated to improve the regional innovation and technology infrastructure and enhance the innovation performance of SMEs as well to upgrade existing regional “Impuls centres”. (<http://www.bmvit.gv.at/innovation/strukturprogramme/rif2000/index.html>)

RTD – Research, Technology and Development; scientific term

RTDI - Research, Technology, Development and Innovation; scientific term

RTI – Research, Technology and Innovation; scientific term

RTO - Research and technology organization; scientific term

SFB – Special Research Area; Special research programm of the → *FWF*
(www.fwf.ac.at)

SFG - Styrian Business Promotion Agency (www.sfg.at)

SME - Small and Medium Enterprises

S&T – Science and Technology, scientific term

StarMAP - STudy About Relevant MAPs → *MAP-TN*

START&Wittgenstein - FWF-Funding Programs for outstanding young researchers
(<http://www.fwf.ac.at/en/projects/start.html>)
(<http://www.fwf.ac.at/en/projects/wittgenstein.html>)

STRAPAMO - Initiative for Strategic R&D Partnerships CEE-Countries.
Forerunner to the → CIR-CE programme (<http://www.bit.ac.at/strapamo/>)

STRATA - Strategic Analysis of Specific Policy Issues; STRATA aims to promote dialogue between researchers, policy-makers and other societal actors on general science, technology and innovation policy issues of European relevance. (<http://cordis.europa.eu/improving/strata/strata.htm>)

TECMA - Austrian Technology Marketing Agency; This AWS initiative aims to develop the patent potential of Austrian Research Institutions and to foster an economic utilisation of this potential. (www.awsg.at)

TEKES - Finnish Funding Agency for Technology and Innovation; Tekes is the main public funding organisation for research and development in Finland. Tekes funds industrial projects as well as projects in research organisations, and especially promotes innovative, risk-intensive projects. (<http://www.tekes.fi/eng/>)

TIA Consulting – Technology Impact Assessment Consulting, Inc., a small, by Rosalie Ruegg owned company that provides evaluation of R&D and technology programs at the federal, state, and international levels.

TIG - Technologie Impulse Gesellschaft; TIG, now a part of the → *FFG*, was established in order to run the Kplus competence centres programme, which brings together industrial consortia and academic research over a seven-year period. TIG has since grown to become the specialised agency dealing with

programmes that aim to create some degree of structural change or change in the way institutions work. Thus, several of its programmes address science-industry links. All TIG's instruments use rather formal calls for proposals and competitive processes for selecting projects.

TIP - Technology Innovation Policy Consulting; tip is a research and consulting programme for Austrian research, technology and innovation policy. tip is the shared project of Austria's leading research institutes in the field: (www.tip.ac.at)

TU Wien – Technical University of Vienna (www.tu-wien.ac.at)

uni:invent - „Patent Exploitation for Universities“- Programme (<http://www.uniinvent.at/>)

VDI/VDE-IT - VDI/VDE Innovation + Technik GmbH is a society of VDI GmbH and of VDE (Association for Electrical, Electronic & Information Technologies) and deals with fields of activities as research funding, technology policy and innovation management. (www.vdivde-it.de)

VTT - VTT Technical Research Centre of Finland is the biggest contract research organisation in Northern Europe. (www.vtt.fi)

WIFO - Austrian Institute of Economic Research; WIFO analyzes national and international economic trends and supplies short- to medium-term economic forecasts. Together with studies on European integration, competitiveness and location of industries and services, these trends and forecasts provide the basis for economic policies and corporate strategies. (www.wifo.ac.at/)

WREN - Washington Research Evaluation Network serves as a forum for the federal R&D evaluation community to explore new approaches that will improve the management of science and technology organizations. (www.wren-network.net/)

WSR - Computing Centre for Economics and Social Sciences.; The Computing Centre for Economics and Social Sciences (WSR) was founded in 1971 as a non-profit association and acts as Computing Centre of the Austrian Institute for Economic Research (WIFO). In this function the WSR offers -

mainly for Austria but also worldwide - national and international economic data. ([http://www.wsr.ac.at/\(en\)/about/ueber.html](http://www.wsr.ac.at/(en)/about/ueber.html))

WU - University of Economics and Business Administration in Vienna (www.wu-wien.ac.at)

WWTF - Vienna Science and Technology Fund is a non-profit organisation under private law which is funding science and research in Vienna. By its operating WWTF aims to strengthen Vienna's position as a location for science and innovation. (www.wwtf.at)

ZAT - Centre for Applied Technologies, Leoben; The technology transfer agency of FH Joanneum. (www.zat.co.at)

ZEW - Centre for European Economic Research; The ZEW works in the field of user-related empirical economic research. (www.zew.de)

ZIT – Centre of Innovation and Technology (www.zit.co.at)

ZSI - Centre for Social Innovation; The Centre for Social Innovation (ZSI) is a multifunctional social-scientific research institute. (www.zsi.at)

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