Main results

Evaluation of Austrian Support Structures for FP 7 & Eureka and Impact Analysis of EU Research Initiatives on the Austrian Research & Innovation System

Executive summary

Study aims
A consortium of Austrian Ministries and the Austrian Chamber of Commerce, led by the Austrian Federal Ministry of Science and Research (BMWF), commissioned Technopolis to perform an impact analysis of EU research initiatives on the Austrian research and innovation system as well as an evaluation of the Austrian support structures for the 7th European Framework Programme (FP7) and EUREKA. The first part of the study identifies the effects of European research initiatives on the Austrian research and innovation system, while the second part of the evaluation is related to the support delivered to Austrian R&D performers by the Department for European and International Programmes (EIP) of the Austrian Research Promotion Agency (FFG) from 2007 to date.

The study aims to produce recommendations about improving the quality and relevance of the activities of FFG-EIP (and the Austrian support system as a whole) and how to influence future EU initiatives for RTDI. It is also intended to provide input into the development of the Austrian position in pending revisions to European RTDI initiatives, in particular the transition from FP7 to FP8.

Methodology
We employed a mixture of quantitative and qualitative methods to address the evaluation questions. In particular, we used:

- Document and literature analysis. Documents studied were mainly about the services and activities of EIP (e.g. annual reports) or about the experiences in other countries with European RTDI initiatives (e.g. evaluation and impact assessment studies).
- Logic diagrams and logical framework analysis. We established a thorough understanding of EIP, its mission and objectives, the instruments used, the activities performed and their outputs and outcomes in a 1.5 day workshop with senior staff from FFG-EIP. We also did logical framework analysis for the FP and EUREKA.
- Five group interviews with staff from various FFG-EIP units and levels within the hierarchy.
- Individual semi-structured interviews (face-to-face or by telephone) with a variety of stakeholders including representatives from ministries, FFG (excluding EIP), regional and university support structures and FP/EUREKA participants.
- Eight focus groups with specific user groups of FFG-EIP and European RTDI initiatives, in particular the FP and EUREKA.
Two standardised surveys. The first was an online survey addressed to users of FFG-EIP and to FP/EUREKA participants. The second was an online survey of a control group consisting of actors actively conducting R&D and predominately using national funding schemes, which we treated as being representative of potential users of European RTDI initiatives.

Secondary data analysis, especially of participation data for the European RTDI initiatives, analysing the pattern of Austrian participation and comparing it with that of others.

Case studies of R&D performing organisations (universities, non-university research institutions, universities of applied science), of selected science and technology fields (ICT, life science, automotive, and social sciences and humanities (SSH)) as well as support structures in other European countries (Finland, Ireland, Netherlands, Sweden, Switzerland).

The use of a range of data collection and analysis tools allowed us to compare the results we obtained from different sources, thus improving the validity and robustness of the study results.

**Impacts of the Framework Programme**

Austria does well in terms of FP participation. The rate of return for FP6 was 130%. In FP7, so far participation rates are particularly high in seven areas: Coherent Development of Research Policies, Activities of International Cooperation, ICT, SSH, Science in Society, Security and Space. High participation rates can be due to two reasons: an above average number of applications, increasing the probability of success, or particularly successful applications. In the first five areas listed, participation rates are above average as Austrian researchers submit an above average number of applications. In contrast, high participation rates in Security and Space are driven by high success rates. Conversely, the low number of applications drives the relatively low level of involvement in the European Research Council (ERC) – despite the fact that Austrian success rates in ERC competitions were significantly above average.

Researchers generally consider national programmes, such as the FFG General Programmes, FWF support or fiscal support, more relevant to their needs than European programmes. Of the European programmes collaborative FP projects were considered the most relevant. The newer FP instruments such as JTIs and ERA-NETs barely figure on the agenda of even the most experienced FP participants.

Researchers participate in the FP primarily to get research funding. The FP is very complex, with high administrative barriers and low success rates. However, if researchers want to obtain public funding for international research projects there are few alternatives. Further, the FP is by far the most important programme that funds international cooperative research.

Participants consider follow-up projects the most important result of FP projects, though these need not necessarily be FP projects or even be tied to a funding programme. They consider research outputs more important than innovation outputs. This is because the FP is a pre-competitive programme in which universities and research institutes are the major players. The most important impact of the FP are new and improved relationships, R&D collaborations, and the building and maintaining of research partnerships. Other important impacts are enhanced reputation, increased scientific and technological capabilities and the capacity to conduct R&D. Radical innovations are not an important impact of FP projects. In fact, most participants felt that the FP could not systematically produce radical innovations due to programme design and the selection procedure employed.

International research collaboration has become an everyday occurrence. The control group shows that a substantial amount of international R&D cooperation takes place outside international R&D programmes, mainly funded from own sources. However,
the FP remains the most significant public funding source for this type of activity. Researchers participate because it suits the needs of themselves or their organisation—not for idealistic reasons. We have also observed a professionalisation of users, resulting in altered demand for EIP services.

Industry experiences more commercial impacts from FP projects, while universities report higher impacts in scientific and human resource orientated areas, emphasising the importance of the FP for training and developing young researchers in Austria. It is important to note that training of young researchers not only occurs in the human resources oriented measures (People Programme and ERC Starting Grant) but also in the ‘traditional’ cooperative FP projects.

Almost two thirds of Austrian FP users reported that the benefits of participation outweighed the costs. Interestingly, researchers from different types of organisations (universities, institutes, companies) gauged the costs and benefits in similar ways. This is also true for SMEs, suggesting that Austrian SMEs know how to position themselves in the FP.

The FP is highly competitive so only the strong can participate successfully. This strength is typically built in national programmes, testifying to the complementarity of national and European projects. However, the degree of complementarity varies among fields. For example in Austria, in ICT and automotive there are close thematic links, while there are few, if any national programmes in the Social Sciences and Humanities so many researchers from these fields use the FP instead.

Three quarters of Austrian research organisations have a strategy or set of principles for using national and regional programmes, while two thirds have one for using the FPs. Percentages are much lower for other European schemes or EUREKA, suggesting that strategy is a function of the visibility of R&D funding, i.e. of programme size and funding available. Firm strategies tend to be uniform across the whole organisation, while universities tend to have different strategies at different levels, due to different thematic strategies at institute or department levels and academic freedom.

Impacts of EUREKA

83% of EUREKA participants also participated in FP6 or FP7 indicating that the target groups of the two programmes overlap, although EUREKA is more market-orientated than the FP. With less than 50 projects per year, Austrian take-up of EUREKA is smaller by orders of magnitude compared to the FP. EUREKA is reported to be less administratively cumbersome than the FP, especially if comparing EUREKA Clusters with FP7’s Joint Technology Initiatives. However, EUREKA suffers from synchronisation problems – both at national level when participants try to obtain national funding for a EUREKA project and at international level where the proportion of cost covered by grants vary.

The most important impact of EUREKA is new and improved relationships and collaborations. This is also the most important motive for participating. Other important impacts are increased technological and scientific capabilities and know-how. As would be expected from a more market-orientated programme, participants generally report greater commercial impacts in EUREKA than in the FP.

Enhanced reputation is another impact. It is worth while taking a closer look at the issue of reputation as EUREKA (with the exception of Eurostars) awards no financing but a “prestigious label”. However, both interviewees and the control group suggest that EUREKA does not enhance participants’ reputation and image compared to autonomous international R&D cooperation. In fact, comparison with the control group suggests that the EUREKA programmes do not produce any additional impacts compared to autonomous international R&D cooperation, implying that its additionality may be limited. Nonetheless, the cost benefit ratio for EUREKA is positive, with more than half of participants saying that the benefits of participating in EUREKA outweigh the costs.
Compared with the Framework, the impacts of EUREKA in Austria seem lacklustre. The programme itself lacks strategy and a clear brand. It is often not clear what the added value of the EUREKA label is compared to autonomous R&D projects. Another issue is that EUREKA (except Eurostars) does not fund research. There is no standard procedure at national level for EUREKA participants to obtain funding and the programme appears to fit poorly with Austrian national funding patterns. In the light of these factors, Austria should take a position on either reducing commitment to the programme or on increasing efforts in EUREKA, especially by giving a valid answer to what the value added by EUREKA is, and by providing administrative arrangements that better fit with EUREKA needs.

**Evaluation of Austrian support structures**

In general, FFG-EIP's performance is excellent, shown by very high customer satisfaction. FFG-EIP has committed highly motivated staff and systematically extends and improves services. It enjoys a high level of resources. However, as in the provision of free health care, EIP's provision of free advice services tends to ensure that demand is high, irrespective of the degree of value being provided to the beneficiary.

EIP's mission – a high, successful and sustainable participation of Austrian organisations in European and international programmes – has not changed over the years but EIP has extended its range of services and activities, adapting them to new needs and circumstances. Two such new services are “strategy talks” and the FFG Academy. EIP conducts strategy talks with leading Austrian firms, universities and research organisations to explore their strategy and potential to increase participation in the FP (and other European programmes). This is useful because the talks address organisations rather than individual researchers, helping them to professionalise their strategic planning. Also, the strategy talks counteract the Austrian tendency in research promotion to focus on programmes and projects and to neglect institutions. The FFG Academy offers courses that provide standard information to groups of people rather than to individuals, realising efficiency gains in comparison to offering individual advice.

Based on its contracts, EIP's focus is on the FP – in particular the collaborative projects – and on EUREKA. However, for the future we expect the FP instruments currently more at the margin – JTIs or ERA-NETs – and the instruments currently emerging – Joint Programming – to gain in importance. Both EIP and the contracts will have to change to accommodate this.

EIP's role as the central node in the regional network of publicly funded support providers (RKS) has become well established. The division of labour is working well. The next step towards a coherent Austrian support structure with the flexibility to adjust to changing international cooperation opportunities is to integrate EIP and the RKS as one network of players with a joint strategy.

Many of EIP's activities should be continued, especially general information services (events, mailings, information material) as well as the new instruments strategy talks and FFG Academy. EIP is also using the right strategies and instruments to identify ‘untapped potential'. Indeed, we do not think there is much untapped potential left in Austria. EIP’s activities for identifying new R&D performers (e.g. young researchers, new firms) are appropriate to cope with changes over time. We have identified some room for improvement of specific services, such as partner searches, international activities and NCP projects.

Just like the services related to the FP the services offered by the EUREKA Office - a small, separate unit in FFG-EIP - are generally excellent. However, there is some indication that signposting clients to other FFG departments to obtain funding for EUREKA projects could be improved. To this end, cooperation across FFG departments should be enhanced.

Furthermore, both the proposal grant for science and the proposal grant for industry, exhibit remarkably high levels of free riding. They should be discontinued. However,
we have also identified a minority of actors – in particular non-university research institutions – who lack the organisational slack or internal resources to prepare FP proposals and for whom the proposal grant does have additionality. The structural problems of these institutions need to be tackled directly by the ministries in charge, not through proposal subsidy.

Finally, there is evidence that EIP services discourage universities from the development of fully rounded research management capabilities. Hence, a priority for universities and EIP will be to agree to a re-division of labour. At the same time, EIP should increase activities that support the further professionalisation of research performing institutions, especially the universities, and their research management capabilities. We expect the professionalisation of research management services of universities and research organisations to free EIP resources for a re-focusing of activities, particularly on the provision of ‘strategic intelligence’ and inducing learning by focusing services on newcomers and first-time participants in international R&D initiatives. ‘Strategic intelligence’ is intelligence that gives orientation and informs strategy: understanding the changes in the FP and understanding the unwritten rule of international cooperation. However, provision of strategic intelligence is not limited to beneficiaries. There are strong indications that the experience gathered and the observations made by FFG-EIP’s staff could be tapped into more systematically and they could serve as a valuable source of information for programme delegates and other officials in the ministries. Therefore, EIP should take on a leading role in understanding and analysing the changing opportunities in R&D cooperation at European and global level. EIP is uniquely placed as a provider of strategic intelligence, as it is in touch with both the research community and the European Commission.

**Recommendations**

Our recommendations do not only take our empirical findings from our field work into account.

- They are based on current theoretical thinking about the rationales for state intervention. The state should not subsidise activities that actors would undertake anyway or that actors are able to do by themselves. It should rather aim to create added value (‘additionality’) and induce learning in actors (‘behavioural additionality’).
- They accommodate the on-going developments at EU level. In particular, we expect the currently more peripheral new instruments to become more important in FP8.
- They take into account the key targets of Austrian RTDI policy, in particular the University Law of 2002 with its main goal: re-inventing the universities as strong, autonomous institutions.

Overall, this has created a set of recommendations which, to a large part, aim at strengthening institutions and inducing sustainable learning effects in the system.

Our analysis implies the need for three significant changes in strategic direction for Austrian research and innovation policy

- Rejecting the idea of FP participation as a goal in itself and therefore abandoning the goal of maximising participation
- Mainstreaming internationalisation in research and innovation policy and re-conceiving it as ‘globalisation’ rather than just ‘Europeanisation’
- Unlocking and adapting the internationalisation support apparatus to focus on promoting behavioural additionality: that is, learning how to understand and participate in new international activities, rather than subsidising the continued performance of activities that have (or should have) been learnt or that should be taken over by other actors. EIP’s original mission of teaching the Austrian
research community how to participate in the FP and EUREKA is now largely accomplished.

At the ministerial level, Austrian research and innovation policy needs a single focal point for overall coordination ('Gesamtkoordinationsstelle') in (and for all) the ministries that

- Analyses, understands, coordinates and communicates national needs for international cooperation, both at European and at global levels
- Communicates Austrian national needs and positions to EU policy
- Encourages the mainstreaming of internationalisation
- Explains European and global dimensions of research and innovation policy, threats and opportunities to Austria, thus taking on more of an agenda-setting role
- Acts as a ‘principal’ or ‘intelligent customer’ for the work of the support system, for internationalisation.

EIP needs a new strategy that gives it a greater role in understanding and analysing the changing opportunities in R&D cooperation at the European and global levels and using this information to support policymaking as well as the research and innovation communities. It should negotiate a relationship with the universities where it withdraws from routine service provision and becomes a ‘wholesaler’ of strategic intelligence (and to other customers, notably industry) and focuses on beneficiaries where it can induce behavioural additionality, i.e. on organisations and individuals that need to learn. Both proposal grant schemes should be stopped but at the same time the structural problems of the minority of institutions from whom the proposal grant is essential need to be tackled directly by the ministries in charge.

EIP is staffed at a level consistent with its original task, which is now largely accomplished. The amount of resource EIP receives should be reviewed in light of the new strategy and activities. The RKS regional contact points should be functionally integrated into EIP. Last but not least, EIP should focus on tasks and knowledge that are generic to internationalisation. Thematic internationalisation should be mainstreamed into other relevant parts of the research and innovation funding system, whether these are inside or outside FFG.

EIP should itself play a central role in developing its strategy, making this an ‘offer’ to its sponsoring ministries. To make this possible, the current contracting arrangement between FFG-EIP and its principals should be treated as a rolling framework with annual renegotiations about activities within an agreed and more or less fixed financial envelope. That will help ensure that EIP continually ‘rolls over’ from tasks that have essentially been completed and customer segments where necessary learning has been achieved to tackle new and emerging support needs.