

Memorandum of the Estonian Research Council on the call for proposals for institutional and personal research grants for 2013

With this memorandum, the Estonian Research Council seeks to inform the research community of the initial results of the call for proposals for institutional research funding (IRF) for 2013 and to provide recommendations about the commencing call for proposals for personal research funding (PRF).

In accordance with a long-prepared plan which is based on the regulations implemented in the Organisation of Research and Development Act in 2011, fundamental changes in the state-budget research funding instruments commenced as of this year. The objective of these changes is to reduce the fragmentation of funding instruments, to create more explicit objectives for them and to ensure higher autonomy for each funding instrument. One of the aims is to increase the role of research institutions in directing the strategic choices of their research activities and to establish a more stable system with the help of IRF as the most sizeable research funding instrument. At the same time, one of the principles concerning the changes is to maintain the policies that have had a positive impact on the development of our research: funding high-level research, competition-based system and employing extensive outside expertise. Applying these principles leads to considerably increased competition in applying for IRF and to the conjoining of research competence into a smaller number of IRF topics compared to the previous target-financed topics. In addition to the research level of topics, what is also taken into account when conjoining competence is the importance of the IRF-applying research institutions concerning the development of the topic, their role in developing infrastructure related to the topic and the potential of ensuring the sustainability of the topic.

In place of the two institutions funding research so far – The Estonian Science Foundation (Eesti Teadusfond – ETF) and the Research Competency Council – The Estonian Research Council became operative as of this March. One of the most extensive responsibilities of the Estonian Research Council is evaluating IRF and PRF applications and preparing funding decisions as well as making the funding decisions in case of PRF projects. One unit belonging to the Estonian Research Council is the evaluation committee consisting of high-level representatives of the Estonian research community, which holds the decisive role in shaping the research-political image of the Estonian Research Council and extensive powers in the preparing and making of funding decisions. The feature that has characterized the organization of Estonian research in the past 20 years thus endures – in making important decisions concerning research policy, the research community has a great say.

Taking into account the scope of the on-going changes and the ambition to apply those changes concurrently with the abolishing of old funding instruments, it was inevitable that all the potentially emerging problems related to the implementing of new funding instruments were impossible to foresee. After conducting the first calls for IRF and PRF applications, it is definitely important to assess both how the new funding instruments correspond to achieving the desired aims as well as their impact on the performance of our research system as a whole. The Estonian Research Council has already commenced with these analyses and hopes for the research community's tolerance in withstanding the problems accompanying the changes.

On the call for institutional research funding proposals for 2013

This year, altogether 41 target-financed topics will end, the total financing amount being 4.636 M€. For 2013, 10 Estonian research and development institutions submitted their applications for the funding of 75 institutional research topics in the total amount of 19.187 M€ (without a general cost fee). Thus, there were over 1.8 times more new applications compared to the target-financed topics ending this year and the total amount of new applications exceeded the resources available over 4 times.

With regard to research fields, the applications were divided as follows: bio- and environmental sciences – 16 applications (21% of the total number of applications and 23% of the funds applied for), natural sciences and technology – 20 applications (27% and 33% respectively), health research – 9 applications (12% and 13% respectively) and social sciences and culture – 30 applications (40% and 31% respectively).

Of the 75 IRF applications that were submitted, 18 comprised active target-funded topics which were requested to be reorganized into an IRF topic. The estimated size of funding for these 18 topics for 2013 is 1.857 M€. 80 ETF grants were wished to be conjoined with the submitted IRF applications in case of funding; the total size of funding for 2013 being 0.976 M€ and for the rest of the funding period (2013 – 2015) 1.867 M€.

When proceeding the IRF topics, the evaluation committee was guided by the Organisation of Research and Development Act (TAKS) and regulation No. 73 of the Minister of Education and Research from the 27th of December 2011 referred to as “Conditions of and procedure for application, allocation and amendment of the amount of institutional research funding” (IRF regulation). 116 outside experts and 25 Estonian experts participated in the reviewing of IRF applications for 2013. The basic criteria for choosing the reviewers included their high research competence, absence of conflicts of interest and an earlier reviewing experience. The reviewers assessed the applications through ETIS in the course of one month.

All applications were reviewed at least by two independent assessors, including at least one outside expert. The applications related to the topics of natural science and technology were evaluated by outside experts only. The assessors used the following rating scale when evaluating the applications: outstanding (5), very good (4), good (3), satisfactory (2), unsatisfactory (1) and the ratings in between (4.5-5, 3.5-4 etc.) The final ratings of the IRF applications were ascribed at the meeting of four expert groups of different research fields, including the reviewers, the evaluation committee members administering the corresponding field and employees of the Estonian Research Council and Ministry of Education and Research as observers and technical staff. At the beginning of each meeting, the essence of institutional research funding and the rating scale to be followed were specified. As a result of the succeeding discussion, consentient final ratings were ascribed for the subsections of each topic as well as for the topic as a whole, and the topics that received equal ratings within a research field were ranked. The final proposals on IRF funding decisions were made at the evaluation committee sitting, where all the evaluation committee members participated along with the aforementioned observing employees from the Estonian Research Council and the Ministry.

Applications which involved a member of the evaluation committee (four occurred) were reviewed by two outside experts and one local expert. In order to avoid conflicts of interest, these applications were evaluated by a commission established for this purpose by the Estonian Research Council, employing the same evaluating criteria as the evaluation committee. To relate these four applications with the general view of the applications, the

commission used as experts two members of the corresponding research field in the evaluation committee who were not involved with the applications.

In general, the level of the submitted applications was high: 53% of the applications received a rating of “very good” (4) or higher as their final rating. The breakdown of applications with regard to final ratings was as follows: grade 5.0 – 1 application; 4.5 – 16 applications; 4.0 – 23 applications; 3.5 – 17 applications; 3.0 – 11 applications and 2.5 – 7 applications.

In a situation where the total amount of applications exceeded the resources to be available by more than four times, the evaluation committee faced a difficult dilemma. On the one hand, it is the objective of IRF to fund high-level research and development activities as well as the accompanying activities (research topics) of research and development institutions. Based on this criterion alone, the total amount of those 17 applications that received ratings “outstanding – very good” (4.5) and “outstanding” (5) exceeded the resources to become available in 2012 by 1 M€ when applying a need-based funding model. On the other hand, the objective of IRF is to ensure the consistency of research activities carried out by research and development institutions and a certain balance between the established research fields. When financing the 17 IUT applications that received only the highest ratings, this kind of consistency could not have been ensured neither with regard to research and development institutions nor research fields. The evaluation committee came to the conclusion that, as the available resources are extremely limited, it is not yet possible to fully implement a need-based funding model without considerably damaging the consistency and sustainability of Estonian research and development institutions. As a result of considering these arguments carefully, the Estonian Research Council will make a proposal to the Minister of Education and Research to fund the only application that received an “outstanding” rating, all of the 16 applications that received an “outstanding – very good” rating and partly also the IRF applications that received a “very good” rating (14).

When prescribing the financial proportions for topics, among other things, the evaluation committee took into account the principle that the total amount allocated to an institutional research topic would not be smaller than the total amount of target-financed ETF grants to be conjoined with research topics that were allocated to the same research group in the preceding year (if it was deemed reasonable to conjoin a former ETF grant with a topic, the annual sum of the grant was taken into account until the end of the IRF topic). When deciding on the financial proportions of topics, the evaluation committee also considered two factors – the evaluations given to applications and the experimental qualities of the proposed research.

As a result of the aforementioned evaluation process, the Estonian Research Council will make a proposal to the Minister of Education and Research to commence the financing of 31 IRF topics in the amount of 6,019,000€ in 2013 (without a general cost fee) and not to satisfy 44 applications. The average funding for IRF topics is 194,161€, which is approximately twice the size of an average target-financed research topic insofar (in 2012, the average size of all 212 target-financed research topics was 108,347€).

Among the mentioned 31 institutional research topics, there are 8 former target-financed topics which will be reorganized as IRF, and 23 new topics. With these 31 topics, 42 ETF grants are to be conjoined. The target-financed topics and ETF grants which will be conjoined with the IRF topics that received a funding proposal will need to submit the final report of the topic or grant by the 31st of March 2013. On account of the conjoined target-financed topics

and grants, the amount of IRF financing will exceed the amount of target-financed topics ending in 2013.

The 31 institutional research topics that received a funding proposal are divided by institutions as follows: Tallinn University of Technology – 14 applications/3 proposals to finance; University of Tartu – 42/21; Tallinn University – 7/2; Estonian University of Life Sciences – 6/3; National Institute for Health Development – 1/1; AS Cybernetica – 1/0; Estonian Literature Museum – 1/0; Estonian Business School – 1/0; Estonian Academy of Music and Theatre – 1/1; Estonian National Museum – 1/0.¹

Pursuant to the principle that high-quality applications should be financed first and foremost, a certain shift in the breakdown of inter-institutional funding occurred. Because almost half (104)² of the former target-financed topics as well as 124 ETF grants will end next year, research institutions must analyse well ahead, which of the ending topics are successful and internationally competitive and will thus also break through in the 2014 call for IRF proposals. This is especially important for those research and development institutions where target-financed topics have so far constituted an important share of the institution's total research incomes.

With regard to research fields, the 31 topics are divided as follows: bio- and environmental sciences – 8 topics (29% of the total amount of funding, 27% in case of topics target-financed in 2012), natural sciences and technology – 8 topics (35% of the total amount of funding, 42% in case of topics target-financed in 2012), health research – 7 topics (18% of the total amount of funding, 15% in case of topics target-financed in 2012) and social sciences and culture – 8 topics (18% of the total amount of funding, 16% in case of topics target-financed in 2012).³ It has to be noted that the number of submitted applications was very variable in various fields. For example, 30 applications were submitted in the field of social sciences and culture, which is almost three times more than the target-funded topics of the same field ending this year. At the same time, only 9 applications were submitted in the field of health research (10 target-funded topics will end this year). As the evaluation committee did not deem it possible to radically change the funding proportions that have developed between research fields over time, the success rate for applications of various fields turned out to be very variable.

In accordance with the conditions of the IRF regulation, the Estonian Research Council made the evaluation committee's initial decision available to the applicants and the opinions submitted by applicants were discussed at the evaluation committee meeting on the 24th of August. Answers to the general questions posed by applicants have been provided in this memorandum; individual questions concerning specific applications will be answered in writing.

The annual amount of institutional research funding for the topics of research and development institutions is approved by the Minister of Education and Research with a directive. This will happen after the *Riigikogu* has approved the state budget.

¹ In 2013, the target-financed research topics of research and development institutions will continue as follows: Tallinn University of Technology – 43 topics; University of Tartu – 87; Tallinn University – 10; Estonian University of Life Sciences – 8; National Institute for Health Development – 3; Estonian Literature Museum – 4; Estonian Biocentre – 2; National Institute of Chemical Physics and Biophysics – 7; Tartu Observatory – 3; Under and Tuglas Literature Centre – 1; Estonian Academy of Arts – 2; Institute of the Estonian Language – 2.

² In the following years, the target-funded topics of research and development institutions will end by research fields as follows: in 2013, bio- and environmental sciences – 31 topics; social sciences and culture – 22; health research – 13; natural sciences and technology – 38. In 2014, bio- and environmental sciences – 10 topics; social sciences and culture – 12; health research – 9; natural sciences and technology – 22. In 2015, bio- and environmental sciences – 2 topics; social sciences and culture – 0; health research – 0; natural sciences and technology – 1. In 2016, bio- and environmental sciences – 1 topic; social sciences and culture – 4; health research – 2; natural sciences and technology – 4.

³ In 2013, the target-funded research topics of research and development institutions will continue as follows by research fields: bio- and environmental sciences – 44 topics; social sciences and culture – 38; health research – 24; natural sciences and technology – 65.

On the call for personal research funding proposals for 2013

Unlike the former ETF grants, personal research grants (PRF) are prescribed as integrated funding instruments which cover all the expenses of a small research group for conducting the necessary research of a clearly defined research project. PRF is thus meant for realizing an independent research project and its purpose is not to co-fund other grants allocated according to research and development legislation.

In 2013, the PRF system comprises the following categories of research grants (in the future, other grant categories may be introduced according to financial opportunities and changes in post-doctoral financial resources):

1. An *exploratory research grant* is a grant for supporting innovative and exploratory high-risk research projects at a high international level. Applications may be submitted in all research fields; the research project leader has to hold a doctoral degree or equivalent foreign qualification.
2. A *start-up research grant* is a grant for supporting the commencement of individual research and enabling the applicants to establish a sustainable independent working group. Applications qualify to the competition if the applicants have defended their first doctoral degree within 7 years prior to the beginning of the call for proposals and have preferably also completed their post-doctoral studies. If an applicant has been on parental leave or in the Defence Forces after being awarded a scientific degree, the final term will be extended correspondingly.

From the preceding, the relations between the two funding instruments, IRF and PRF, become clear. The main objective of PRF is to launch new and/or high-risk research projects, which are not reasonable to be funded in the form of IRF or the qualifications and previous research experience of the leader and principal investigators do not yet meet the high requirements of IRF. Therefore, PRF cannot be regarded as a substitute to IRF. They have their own independent role to perform, usually being the preceding funding instrument to IRF.

In the future, the PRF system will also introduce post-doctoral grants (which are currently provided by the Mobilitas and ERMOS post-doctoral grants supported by the EU's structural funds), which are mainly aimed at supporting young Estonian researchers practising abroad, but also at increasing the proportion of young researchers arriving from abroad.

When applying for PRF, it has to be noted that active ETF grants cannot be reorganized as PRF – if the holder of an active ETF grant applies for PRF and receives it, the existing ETF grant has to be ended prior to allocating PRF.

When applying for PRF, it also has to be taken into account that, compared to former ETF grants, the number of PRF grants will be considerably smaller. As PRF grants have to cover all the necessary expenses to carry out a research project, the financial amount of PRF will increase considerably compared to an average ETF grant (in 2012, there are 590 active ETF grants with an average size of 12,861 €). The grant size of a typical PRF could be approximately 50,000 to 70,000€.

The number of PRF grants is also decreased by the fact that it was possible to conjoin ETF grants of identical content with IRF topics. It is difficult to estimate the number of PRF grants by the end of the transition period, but according to initial calculations, it will not exceed 120⁴.

Personal research funding is applied for through ETIS from the 1st of September to the 30th of September by 5 PM. The researcher will prepare the application and the host institution will submit it to the Estonian Research Council. After submitting applications, they will be evaluated. PRF applications are evaluated by more or less the same principles as IRF applications. The Estonian Research Council Board will make the PRF funding decisions after the Minister of Education and Research has approved the amount of state-budget allocation by a directive.

Small-scale scientific equipment

The fourth call for applications for small-scale scientific equipment has been announced for the sub-measure “Modernizing small-scale research infrastructure in the framework of target-financing the research topics of Estonian research and development institutions”. It amounts to 3,156,924.30€.

Along with the IRF applications, 25 applications for small-scale infrastructure were submitted in the amount of 1,348,091€. The evaluation committee decided not to proceed the equipment applications when evaluating IRF grants, but rather to connect it with the proceeding of target-financed continuation topics this October-November.

The memorandum was discussed and approved by the evaluation committee of the Estonian Research Council on the 24th of August 2012.

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⁴ In 2012, 114 ETF grants in the amount of 1.466 M€ and average amount of 12,800€ will end; in 2013, 124 grants in the amount of 1.62 M€ and the average amount of 13,000€ will end; in 2014, 138 grants in the amount of 1.57 M€ and average amount of 11,400€ will end; in 2015, 201 grants in the amount of 2.57 M€ and average amount of 12,800€ will end.