**Guidelines for assessing and processing the applications for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality***

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**PURPOSE, SCOPE, RESPONSIBILITY**

The purpose of these guidelines is to enact the assessment and processing guidelines for members of the assessment committee in evaluating applications submitted for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality* as part of the measure/thematic objective/ *Enhancing research and innovation (R&I) competitiveness and participation of Estonia in EU research initiatives* within the framework of the priority axis *Growth-capable entrepreneurship and internationally competitive RD&I*

that is prioritized in the *Operational Programme for Cohesion Policy Funds 2014-2020*.

The assessment committee of the measure for Centres of Excellence in Research (CER) adheres in its work to the following:

* the general goals outlined in the support conditions of the Order no. 18 *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality* issued by the Estonian Minister of Education and Research;
* the rules of procedure of the assessment committee for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality*; and
* these guidelines.

The persons responsible for adhering to the provisions of these guidelines are the Head and Deputy Head in charge of support at the Archimedes Foundation Structural Funds Agency, and the members of the CER activity assessment committee.

**DESCRIPTION OF ACTIVITY**

1. **GLOSSARY**

**‘Centre of Excellence in Research’** is a union of multiple internationally recognized research groups in their field, which aims at raising the level and effectiveness of research through cooperation between the high-level research groups. According to the Organisation of Research and Development Act, a CER is designated for seven years.

**‘Research group’** is group of researchers and/or lecturers working in order to implement a CER’s research theme/topic/subject which consists of the head of the research group and all senior research staff members or, exceptionally, of a single researcher or lecturer.

**‘Research theme’** is a clearly defined and scientifically reasoned part of a research group’s research and development activity and related activities. Implementing a research theme may be without time limits, e.g.in the case of lecturers’ studies or baseline funding, or limited in time, e. g. in the case of an institutional research funding or a high-level international project.

**‘Head of the research theme/’** is a renowned researcher or lecturer with an Estonian research degree or an equal foreign qualification who is the Principal Investigator of a research topic, and who has a valid employment contract with a positively evaluated Estonian research and development institution.

**‘Action plan’** is a collection of activities with a specific goal, deadline and budget that are described in the research group’s application for achieving a CER’s goals.

**‘Union’** is a collective of two or more research groups with the goal of pooling resources and activities in research projects and the action plan that a research group alone would not have.

**‘Project’** is an activity or set of related activities with a specific result, budget and time frame for which the support is applied for in order to compensate the costs. In the context of this text, a project is the action plan for the CER.

**‘Application’** is a standard written request made to the implementing agency along with the documents for applying for the support needed to implement the project.

**‘Principal investigator’** is a renowned researcher or lecturer with an Estonian research degree or an equal foreign qualification who has a valid employment contract with a positively evaluated Estonian research and development institution.

**‘Strategic framework for smart specialization’** is defined in the Estonian Research and Development and Innovation Strategy 2014-2020 “Knowledge-based Estonia” and the strategy *Estonian Entrepreneurship Growth Strategy 2014-2020*.

**‘Assessment committee’** is a committee made up of foreign experts and local committee members for assessing applications that have been declared admissible. Before starting work, all assessment committee members must sign the declaration of independence and confidentiality. The work of the assessment committee members proceeds according to the contract for services.

**‘Foreign expert’** is an internationally renowned expert working daily outside of Estonia and evaluating applications on the basis of professional competence. A foreign expert must be autonomous, impartial and objective.

**‘CER application assessment form for members of the assessment committee’** is a form that members of the assessment committee file for every application to be assessed. Foreign experts shall provide assessment and ratings for criteria 1 and 2; local members of the assessment committee shall provide assessment and ratings for the third criterion (Table 1).

**‘Consolidated CER application assessment report’** (consolidated report) is a document drafted after the assessment committee meeting for every application. The consolidated report shall reflect the consolidated assessments and ratings for all three criteria and also the assessment committee recommendations for making amendments to the applications.

1. **DESCRIPTION OF THE ASSESSMENT PROCEDURE AND CRITERIA**
   1. **DESCRIPTION OF THE PROCEDURE FOR FILING AND PROCESSING APPLICATIONS**

The applications for receiving support from the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality* are presented electronically on the standard application form enforced by the implementing agency. The application and its annexes shall be presented in **English** via the Estonian Research Information System ETIS. Processing the applications is handled by the Archimedes Foundation (implementing agency).

The implementing agency registers the filed applications and confirms their submission. Before the applications are assessed, the implementing agency checks that the applicant and application correspond to the requirements described in the order *Requirements and Conditions for Applying for and Processing Applications for the Structural Funds in 2014-2020 and Enforcing the Support Approval Conditions Order* Article 4 and the conditions for support approval in the *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality*, and that the required additional documents are present; the form *Technical Inspection Sheet for Application Filed for the Activity ‘Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality’* is filled in. In case of inaccuracies in the application, the implementing agency immediately informs the applicant and shall allocate up 10 working days for removing the inadequacies. If the inadequacies are not corrected by that deadline, the implementing agency shall terminate the application process.

The implementing agency will decide not to grant support to the application if the application does not correspond to the requirements, or:

* the requirements set for an application to be submitted under the support approval conditions described in the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality* have not been met;
* the applicant attempts to influence the decision through fraud, threat or other illegal method;
* the applicant does not allow on-site inspection to determine whether the data presented in the application are correct.

The competition for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality* is carried out as a single-stage open call.

Every application will be assessed in stage I of evaluation by 3 foreign experts for the first and second criteria. The third criterion will be assessed in stage I by 2 local assessment committee members.

The foreign experts shall be selected by the implementing agency according to the guidelines for selecting foreign experts for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality*. One assessor will be selected, if possible, from the list of experts presented by the applicant proceeding from the criteria described in the aforementioned document.

In order to enable the selection of foreign experts, applicants will present to the final beneficiary within 15 working days after the call has been declared open the following data (in English) for every CER applying for support:

1. Name and acronym of the planned CER;
2. Name of the nominated leader of CER;
3. Key words for describing the scientific content of CER;
4. CER field of research (according to the OECD Frascati Manual Field of Science and Technology classification);
5. Institutions involved in the CER;
6. Names and research fields of the research groups participating in CER (indicating the research field according to the OECD Frascati Manual Field of Science and Technology classification, and then the field and speciality according to the Estonian Research Information System classifier of research fields and specialities);
7. Short description of the planned activities and goals;
8. Names of foreign experts to assess the application (2-4 potential reviewers).
   * 1. **INTRODUCTORY STAGE TO APPLICATION ASSESSMENT**

In order to enable assessment, the implementing agency will ensure that the application is accessible to members of the assessment committee once the applicant and application have been declared eligible.

Before the assessment process starts, the members of the assessment committee will sign a declaration of independence and confidentiality. The outcome for the introductory stage of the assessment is a list of applications along with the members of the assessment committee to assess those applications.

* + 1. **I STAGE OF APPLICATION ASSESSMENT**

The members of the assessment committee will compile an assessment (review) of every application assigned to them. Evaluation shall use a number scale of 1 to 5 (with the increment of 0.25 points). The values of the number scale are as follows: ‘outstanding’ (5), ‘very good’ (4), ‘good’ (3), ‘satisfactory’ (2), and ‘unsatisfactory’ (1). Thus the grade 3.25 is ‘more likely good than very good’, a grade 3.5 is ‘good to very good’ and 3.75 is ‘more likely very good than good’.

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| **Criterion** | **Criterion Weight** |
| 1. Applicant’s and partners capability to implement the project, including the scientific level of research thus far, the results of the prior work of heads of research groups and other senior staff members, and the adequacy of infrastructure | 50% |
| 1. Justification for the project, including the quality and presumed results according to the action plan for the planned CER; the purposefulness of research groups’ cooperation; scientific innovation and added value; necessity of resources for carrying out the project, the feasibility of the budget and cost efficiency; capability to cover additional fixed costs; sustainability | 25% |
| 1. Presumed impact of the planned CER on fulfilling the measure’s goals, including the importance of CER to Estonian and European Union socio-economic development and culture; presumed contribution to bringing up next generation of top researchers and the relationship to studies; activities related to outreach and the correspondence of activities to the strategic framework for smart specialization | 25% |

In case the members of the assessment committee wish to receive additional information from the applicants for assessing applications, they will present the respective request to the chairman of the assessment committee who will forward it to the implementing agency. The implementing agency will forward the questions from assessors to applicants (giving the applicant up to 10 work days to respond), and will forward the applicant’s answer to the chairman of the assessment committee and to all members of the committee who evaluate this particular application. The questions will not request new information from the applicant but merely specify the information already existing in the application. The days spent on answering the questions will not extend the deadline for the first stage of assessment.

The outcome for the first stage of assessment is a set of individual evaluations of applications by the members of the assessment committee that will be made available to the other members of the assessment committee by the implementing agency prior to the assessment committee meeting.

**2.1.3. II STAGE OF APPLICATION ASSESSMENT**

Both foreign experts and local members of the assessment committee shall attend the assessment committee meeting. During the second stage of application assessment, members of the committee will review the applications at the assessment committee meeting and compare grades and evaluations given to applications. At the committee meeting, the parties shall agree on grades and assessments given to each application criteria, prepare a consolidated assessment, and make the tentative decisions what applications will be financed. After the deliberations, the committee will also agree which issues and more specific financing conditions will be negotiated, if necessary, with the applicants who have been approved for funding.

In case the consolidated grade of the first criterion is below the criterion threshold (a grade of 4), the application will not be graded for criteria 2 and 3 nor ranked. The assessment committee will recommend that the implementing agency shall not finance these applications.

The consolidated grade given in assessing an application is formed by consensus agreement based on the grades given according to the grading criteria. This will yield a ranking of CER applications. The consolidated grades will first form the basis for calculating field of science diversity according to the OECD Frascati Manual Field of Science and Technology classification. Compilation of the ranking shall take into account the field of science diversity for CERs.

In justified cases, the assessment committee is entitled to change a CER’s field of science taking into account the research fields of the CER’s research groups, based on how the research groups have been defined and which research grants have made up the biggest share of their portfolios so far.

1. In every field of science, financing is provided to one CER that has passed the threshold and has a consolidated rating of at least 80% of the maximum possible, and that is ranked highest in its field (i.e. one project per field of science will receive a positive decision if all requirements are met). If no project meets such requirements in a field of science, then that field will not have any projects to be financed
2. After this principle is implemented, the rest of the projects will be placed in a general ranking on the basis of their consolidated grade, and the CERs will be funded until the call budget runs out, taking also into account the field of science diversity (funding is provided to CERs of various fields of science and on the basis of the general ranking). The maximum number of CERs to receive funding is 9.
3. In case several applications have an equal consolidated grade in the application ranking made by the assessment committee, preference is given to the application that received a higher grade for criterion 1. If the result is still equal, preference is given to the application with a higher grade for criterion 2. If the result continues to be equal, the implementing agency will base its decision on a simple majority decision by the assessment committee. In case of split votes, the result is decided by the vote of the chairman of the assessment committee.
4. Based on the above, the assessment committee shall make a proposal to the implementing agency for funding the applications and, if necessary, a motivated proposal for holding negotiations with the applicant.

A consolidated report will be compiled for applications that failed to pass the threshold and the implementing agency is recommended to refrain from financing such applications. A consolidated report is also compiled for each application that passed the threshold. Such a report will be compiled by a local assessment committee member previously agreed upon. In case of the applications with positive decisions, a list of issues will be prepared to be discussed with the applicants in the negotiation round, if deemed necessary.

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***Figure 1 Overview of the procedure of application assessment and selection***

**2.1.4. III STAGE OF ASSESSMENT, NEGOTIATIONS WITH APPLICANTS**

For applications that received a first criterion grade of at least 4 and a tentative financing proposal from the assessment committee, the committee may propose negotiations with the applicants, if deemed necessary. The assessment results will not be affected by the negotiation process. The negotiations may concern the volume of support, amendments to the contents of the application and/or CER staff, including the possibility of including research groups participating in other applications, or excluding research groups involved in the CER. The assessment committee may propose to set additional requirements to a project.

A partial representation of the assessment committee and up to 3 representatives per applicant participate in negotiations. The partial representation of the committee is formed of local committee members on the basis of the committee chairman’s proposal and considering, if possible, the professional background of the committee members. Negotiation results will be recorded in minutes and form the basis, if necessary, for amending the application by the applicant. Amended applications will be sent to the partial representation of the assessment committee to evaluate the conformity of the amendments with the negotiation results.

**2.1.5. IV STAGE OF THE ASSESSMENT**

Negotiation results shall be approved electronically by all members of the assessment committee. Based on the results of the negotiations, a consolidated report will be prepared for any positively evaluated application after the amended application has been received indicating, if deemed necessary, the conditions agreed upon during the negotiations.

As a result of negotiations, the assessment committee will present to the implementing agency a ranking based on consolidated application assessment and field of science diversity with a consolidated report for each application together with a motivated proposal for financing the application to the requested extent, to a lesser extent, or for refusing to finance the application. The assessment committee is entitled to propose the enforcement of additional conditions on the projects.

The decision to finance an application partially or conditionally can be made by the assessment committee only with the consent of the applicant.

**2.2. DESCRIPTION OF ASSESSMENT CRITERIA FOR GRANT APPLICATIONS**

Applications submitted to the CER competition are assessed on the basis of the following assessment criteria:

* Applicant’s capability to implement the project;
* Justification of the project;
* Project impact on fulfilling the goals of the measure (see Table 1).

When the applications are assessed according to these criteria, the evaluators should also consider the specifics of a research field but the most important requirement is a high level of scientific excellence.

***Table 1. Criteria for selecting and assessing CER applications***

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| **Assessment Criterion** | **Scale** | **Weight** |
| Applicant’s and partners’ capability to implement the project, including the scientific level of research thus far, the results of the prior work of heads of research groups and other senior staff members, and the adequacy of infrastructure | 1 to 5, with an increment of 0.25 points; threshold 4 | 50% |
| Justification for the project, including the quality and presumed results according to the action plan for the planned CER; the purposefulness of research groups’ cooperation; scientific innovation and added value; necessity of resources for carrying out the project, the feasibility of the budget and cost efficiency; capability to cover additional fixed costs; sustainability | 1 to 5, with an increment of 0,25 points | 25% |
| Presumed impact of the planned CER on fulfilling the measure’s goals, including the importance of CER to Estonian and European Union socio-economic development and culture; presumed contribution to bringing up next generation of top researchers and the relationship to studies; activities related to outreach and the correspondence of activities to the strategic framework for smart specialization | 1 to 5, with an increment of 0,25 points | 25% |

In order to assess the scientific excellence of the previous research by CER and the research results of the research group members, including the head of CER and the senior research staffs, the applicant will present for the head of CER, the heads of the research groups, and up to 2 of the senior staff members per research group the data for the period 2005-2014 in the form of the number of publications, the citation impact, and the h-index on the basis of either one or several databases (ISI WoS, Scopus, Google Scholar) chosen by the applicant, including also the description of the procedure (name, institution, other relevant information), how the results were reached, and the number of PhD degrees supervised by the aforementioned persons. The scientometric data are presented according to the guidelines *Compiling Scientometric Data for Persons Mentioned in the Grant Application for the Activity ‘Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality’* in the form prescribed by the implementation agency. The implementing agency will perform random checks of the presented data. A list of significant projects/research topics must also be presented for each participating research group which should provide sufficient information about these projects/topics.

***Table 2. Description of Assessment Criteria***

5 – outstanding; stands out due to novelty, innovation or outstanding level of excellence on an international scale; very few or non-existent inadequacies

4-4.75 – very good, but could use a few improvements

3-3.75 – good; includes inadequacies that need amending

2-2.75 – satisfactory, requires significant amending

1-1.75 – unsatisfactory, contains serious inadequacies

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| **Assessment Criterion** | **Description** |
| Applicant’s and partners’ capability to implement the project, including the scientific level of research thus far, the results of the prior work of heads of research groups and other senior staff members, and the adequacy of infrastructure -  50% of the consolidated grade | * Scientific excellence of former research projects; gaining new knowledge and/or developing novel solutions * Level of prior research quality, including the bibliometric and other criteria * Scientific excellence of the research group members in the research field compared to international level, or Estonian level, if necessary. Participation in EU and/or other international research projects * Training of future generation of researchers (incl prior supervision experiences) * Adequacy and suitability of the infrastructure (buildings, equipment, libraries and other research infrastructures) connected to the CER activity in meeting the CER’s goals * Other relevant figures/indicators. |
| Justification for the project, including the quality and presumed results according to the action plan for the planned CER; the purposefulness of research groups’ cooperation; scientific innovation and added value; necessity of resources for carrying out the project, the feasibility of the budget and cost efficiency; capability to cover additional fixed costs; sustainability –  25% of the consolidated grade | * Added value and synergy generated by a CER compared to isolated work by research groups without coordinated scientific planning and administration * Research group’s impact on increasing scientific potential in the close community and dissemination of know-how outside the CER * Promotion of interdisciplinary research * Enhancing of the international and local cooperation of research groups (incl with public sector, private sector, and NGOs ) * Scientific excellence, importance and transparency of the proposed action plan; implementation of novel solutions * The suitability and/or compatibility of the proposed CER to cooperate with the participating institutions and/or research groups * Intellectual property rights and agreements related to development activities * Appropriateness of the action plan for fulfilling planned CER’s goals; a feasible schedule of activities , e.g. when considering mutual links between activities * Operational level of administration and activities of the planned CER * Realistic budget for the project; relevance of project expenses to presumed results; efficiency of resource use and support for sustainable development of the applicant * Project feasibility during the grant period, incl the presence of self-financing and the capabilities of the applicant and partners to acquire additional financing (self-financing, state budget) for fixed costs |
| Presumed impact of the planned CER on fulfilling the measure’s goals, including the importance of CER to Estonian and European Union socio-economic development and culture; presumed contribution to bringing up next generation of top researchers and the link to studies; activities related to outreach and the correspondence of activities to the strategic framework for smart specialization  – 25% of the consolidated grade | * Impact of research on socio-economic development, culture and the environment * Capability to propose significant development of knowledge in areas of national or international importance, inter alia confirming to national strategies and development plans * Readiness and methods for bringing the research of respective subject(s) for national and regional attention * Adequacy of plans for technological transfer, incl for promotion of innovation; conformity with the strategic framework for smart specialization (where relevant) * Promotion of cooperation with other R&D institutions, universities, and companies * Considerations of ethical issues * Support for internationalization of R&D and higher education * Improvement of working conditions and work environment for staff participating in research * Relationship between the planned CER’s activity and academic activities, and bringing up a new generation of researchers; contribution to supporting the career development * Adequacy of plans for outreach activities and dissemination of information |

**REFERENCES**

1. The rules of procedure of the assessment committee for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality*
2. The guidelines for choosing foreign experts for the activity *Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality*
3. The guidelines *Compiling Scientometric Data for Persons Listed in the Grant Application for the Activity ‘Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality’*
4. *Technical Inspection Sheet for Application Filed for the Activity ‘Support for Centres of Excellence in Research for Improving International Scientific Competitiveness and Top Quality’*
5. Declaration of autonomy and confidentiality
6. Centre of Excellence in Research application assessment form (for foreign experts)
7. Centre of Excellence in Research application assessment form (for local assessment committee members)
8. Consolidated assessment report for a centre of excellence in research application

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