

Institutsionaalse uurimistoetuse taotluse hindamisjuhend

Guidelines for evaluating institutional research funding applications

Introduction: Legal background.

Institutional research funding is one of the most important instruments of research funding in Estonia. Its aim is to support high quality research in R&D institutions, and thus to guarantee the sustainability of institutional research. These dual goals – to support high quality research and to take into account the institutional stability of the research system - are rather unique for a funding instrument. Therefore, assessment procedures need a comprehensive guide. The aim of this document is to set and describe the guidelines for evaluating institutional research funding applications. The evaluation criteria and their content, as well as the rating scales are described. The guidelines should provide a uniform basis for evaluators to assess the applications and also help applicants to understand the evaluation procedure and fill in the application forms.

For additional information, details of the legal background are made available in the endnote to this document¹.

II Relevant terms

- 1) **institutional research funding** – funding allocated for financing high level research and development (R&D) and related activities (research topics) of an R&D institution, for ensuring the consistency of research and development of an R&D institution, and for upgrading, supplementing, and maintaining the infrastructure necessary for this purpose;
- 2) **research topic** – an R&D institution's basic and applied research conducted within the framework of a clearly defined and scientifically justified research and development activity plan;
- 3) **research funding applicant** – an R&D institution operating as a legal entity or state institution whose research and development has received regular positive evaluation in at least one research field as of the application date;
- 4) **research team** – a team consisting of research team leader, senior staff, and supporting staff;
- 5) **research team leader** – a researcher in charge of carrying out a research project;
- 6) **senior research staff** – a researcher responsible for carrying out an essential part of a research project;
- 7) **support staff** – all other members of a research team besides the research team leader and the senior research staff. The support staff may include scientific and technical staff, and PhD and Master students.

III Structure, content, and evaluation of an institutional research funding application

An institutional research funding application consists of five sections. Its structure and expected content are outlined below for the attention of the reviewers. Sections 1 and 2 are to be evaluated by external reviewers. Sections 3-5 are to be evaluated by local reviewers or by the Evaluation Committee.

1. Assessment of the research topic

For the attention of the reviewers: the applicant had to outline the contents of the proposed research topic (up to 30,000 characters with spaces across all sections; the list of references, pictures and schemes uploaded as separate files) using the following structure.

1) Introduction and motivation

The applicant had to present the general motivation for the proposed research topic, explain its role and importance to science, present its general theoretical background, and main objectives and their justification.

2) Details of the proposed research topic

The applicant had to present a detailed justification of the proposed research topic, working hypotheses, methods, etc., and an outline of the work plan. If appropriate, this should include an explanation of how ethics requirements will be adhered to and fulfilled (in the case of animal and human experiments).

3) Expected results

The applicant had to outline the expected results and possible future developments of the proposed research topic, and explain their importance for science, society, and culture.

Based on the above information, the reviewers should provide answers and comments to the following questions (up to 1000 characters to each question):

- 1.1. Is the proposed research topic scientifically well motivated, and its theoretical background and main objectives clearly outlined? Please provide comments to justify your answer.
- 1.2. Is the proposed research topic well justified? Please provide comments to justify your answer.
- 1.3. Are the working hypotheses, methods, and the work plan well described and appropriate for achieving the goals? Please provide comments to justify your answer.
- 1.4. What is the expected impact of the proposed research on the specific field of research, society, and culture? Please provide comments to justify your answer.
- 1.5. If applicable, have the ethical requirements for human and animal studies been met? Please provide comments to justify your answer.

Other comments on Section 1.

Overall score for the research topic (1-5 on a 5-point scale, see part IV)

2. Assessment of the research team

For the attention of the reviewers: The applicant had to explain the quality of the research team (up to 2000 characters) using the following structure.

- 1) Qualifications of the research team leader and the senior research staff

The applicant had to present information on the academic qualifications of the team leader and the senior research staff based on their work over the past 10 years, review their leadership qualities, involvement in the supervision of PhD, students and postdoctoral researchers, participation in international projects, collaboration, national research programs, etc. If applicable for the particular research field, the applicant should provide additional information about each senior staff member, e.g., their number of publications, number of citations, Hirsch index, etc.

- 2) Previous research of the research team leader and senior research staff, and their collaboration on the proposed topic

The applicant had to present information on how the previous research of the research team leader and senior research staff is related to the proposed research topic, including their previous collaboration, what the roles of the research team leader and senior research staff are in forming the research team, and what (complementary) expertise they bring to the team.

- 3) Description of support staff and their roles

The applicant had to provide information (up to 1000 characters) about the support staff: their number, expertise, and justification for the positions applied for.

Based on the above information, the reviewers should provide answers and comments to the following questions (up to 1000 characters to each question):

- 2.1. Is the research team leader an internationally recognised researcher whose previous research results have been widely acknowledged over the last 10 years? Please compare his/her scientific achievements with top researches in this field worldwide. Please provide comments to justify your answer.
- 2.2. Does the level of the senior research staff correspond to that of an international-level independent researcher over the last 10 years? Please comment on the academic level and on strengths and weaknesses of each team member and provide comments to justify your answer.
- 2.3. Do the team leader and the senior staff have sufficient experience in the management of both international and national research projects? Please evaluate the leadership qualities of the senior research staff. Please provide comments to justify your answer.
- 2.4. Is the senior staff involved in supervising PhD students and postdoctoral researchers? Please provide comments to justify your answer.
- 2.5. Are the size and age composition/balance of the research team leader and senior research staff justified and optimal to achieve the research objectives, the sustainability of the research topic, and the education of a new generation of researchers? Please provide comments to justify your answer.
- 2.6. Is the proposed research linked to the previous studies of the research team leader and the senior research staff? Please provide details of any previous collaboration.
- 2.7. Is the role of research team members clear and the number of applied positions justified? Please provide comments to justify your answer.

Other comments on Section 2.

Overall score for the research team (1-5 on a 5-point scale, see part IV)

3. Research infrastructure

This section will be evaluated only by local experts.

The applicant had to describe (up to 3000 characters) any existing research infrastructure and, if relevant, which national/international research infrastructures the team has access to in order to carry out the presented research topic. Where appropriate, the applicant had to explain how the research infrastructure is related to national/international research programs, and research infrastructure roadmaps, etc.

Based on this information, local experts should provide answers and comments to the following question (up to 1000 characters):

- 3.1. Are the infrastructure and research environment appropriate for the proposed research? Is there a lack of any major equipment that may affect the expected results or sustainability of the research project? Please provide comments to justify your answer.

Overall score for the research infrastructure (1-5 on a 5-point scale, see part IV)

4. Institutional and national relevance

This section will be evaluated only by the Evaluation Committee not by the external reviewers or the expert panel.

The applicant had to provide information on the importance of the research topic for the institution and on its national relevance using the following structure. The total sum of the earmarked strategically important topics could be up to 30% of the sum of the targeted and institutional research funding of the R&D institution ending this year.

- 1) Institutional relevance.

The applicant had to describe (up to 2000 characters) the importance of the research topic to the strategic interests of the institution, e.g., for PhD and Master's programs and state research institutes for carrying out their statutory goals.

- 2) Position of the research topic in Estonia.

The applicant had to describe (up to 2000 characters) the role of the research topic in maintaining the level of specific scientific knowledge in Estonia, the uniqueness of the project, the extent of cooperation with other institutions, etc.

- 3) Institutional commitment

The applicant had to describe (up to 2000 characters) its commitment to the sustainable development of the proposed research topic, e.g., how many postdoctoral fellows and junior and senior researchers the applicant R&D institution has employed during last 10 years to work on the research topic, and which (additional) resources the applicant R&D institution has allocated to the research topic.

- 4) Connection to national strategic plans, research infrastructure roadmap, national research programs

If relevant to the research topic, the applicant had to describe its connection to national strategic plans, national research programs, research infrastructures, etc.

Based on the information provided to the above, the Evaluation Committee should provide answers and comments to the following questions (up to 1000 characters to each question):

- 4.1. Is the proposed topic among the strategic topics of the R&D institution and based on its strategic objectives? Please provide comments to justify your answer.
- 4.2. Does the research topic have a crucial role in maintaining the level of specific scientific knowledge in Estonia? Please provide comments to justify your answer.

- 4.3. Are there similar/close research topics in other Estonian R&D institutions? If yes, what makes the proposed research topic unique and strategically important compared to others? Please provide comments to justify your answer.
- 4.4. Describe the previous institutional commitment to building up expertise in the research topic, e.g., how many new postdocs and junior and senior researchers has the applicant R&D institution employed during last 10 years to work on the research topic? Which resources has the applicant R&D institution allocated to the research topic?
- 4.5. Is the application connected to national strategic plans, a research infrastructure roadmap, national research programs, etc.? Please provide comments to justify your answer.

Other comments to Section 4.

Overall score for the institutional and national relevance (1-3 points). The strategically important research topics earmarked by the R&D institution will be awarded 2 points on top of the score.

5. Budget

This section will be evaluated only by the Evaluation Committee, but not scored.

The applicant had to outline (up to 1000 characters) the justification for the number and structure of research positions necessary for carrying out the research topic, and present the budget of the research topic according to the guidelines set by the Estonian Research Council.

The evaluators should answer and comment (up to 1000 characters) on the following:

- 5.1. Are the expenses related to personnel and research justified for carrying out the planned research? Please provide comments to justify your answer.
- 5.2. Is the accommodation of other monetary resources which will become available due to the merger, expiry or termination of other projects into this research justified? Please provide comments to justify your answer.

Overall comments on the budget.

Overall assessment

This section will be filled in by the Evaluation Committee.

Overall comments to the application (up to 1000 characters).

Overall score of the application (summarised by the Evaluation Committee).

Overall score for an application earmarked as a strategically important research topic can be up to 20 points and for an application not earmarked - up to 18 points.

IV Evaluation criteria and rating scales to be used in the review

In evaluating the applications, please take into account the following guidelines.

A 5-point rating scale is used in evaluating sections 1-3 of the application (outstanding, very good, good, satisfactory or unsatisfactory). A 3 step rating scale (unsatisfactory, good or outstanding) is used in evaluating section 4 of an application.

Research topics which receive less than three points for sections 1, 2 or 3 and less than twelve points in overall score do not qualify for funding.

The values for criteria in the drop-down menu evaluating sections 1-3 are as follows:

- Outstanding (5);
- Very good (4);
- Good (3);
- Satisfactory (2);
- Unsatisfactory (1);

and evaluating section 4 are as follows:

- Outstanding (3);
- Good (2);
- Unsatisfactory (1).

The rating scales correspond to the following assessments.

1. Assessment of the research topic

1.1. Is the proposed research topic scientifically well motivated and are its theoretical background and main objectives clearly outlined?

Unsatisfactory. The proposed research topic is scientifically poorly defined; its theoretical background and main objectives are poorly outlined.

Satisfactory. The proposed research topic is scientifically poorly motivated, its theoretical background and main objectives are somewhat outlined.

Good. The proposed research topic is scientifically motivated; its theoretical background and main objectives are outlined.

Very good. The proposed research topic is scientifically well motivated, its theoretical background and main objectives are clearly outlined.

Outstanding. The proposed research topic is scientifically highly motivated, its theoretical background and main objectives are clearly outlined.

1.2. Is the proposed research topic well justified?

Unsatisfactory. The proposed research topic is weak.

Satisfactory. The proposed research topic is somewhat original and innovative research at the national level; a methodologically sound study but some areas require revision.

Good. The proposed research topic is well justified, this is original and innovative research at the national level; a methodologically sound study.

Very good. The proposed research topic is well justified; this is original and innovative research at the international level, and includes novel methodology and design.

Outstanding. The proposed research topic is highly justified; this is highly original and innovative research at international level, and it includes novel methodology and design.

1.3. Are the working hypotheses, methods and the work plan well described and relevant for achieving the goals?

Unsatisfactory. The working hypotheses and methods are weak, research plan needs profound revision; the division of subtasks/subtopics is poor and hardly supports the achievement of the overall goal.

Satisfactory. The working hypotheses and methods are somewhat articulated and justified, research plan needs major improvements, the division of subtasks/subtopics is satisfactory but additional clarifications and adjustments are inevitable. It is not clear whether the proposed approach supports the achievement of the overall goal.

Good. The working hypotheses and methods are articulated and justified, research plan needs some clarification, the division of subtasks/subtopics is presented well and the overall goals can be achieved, but certain improvements and adjustments are still necessary.

Very good. The working hypotheses, methods and the work plan are clearly described and relevant for achieving the goals, they are clearly articulated and justified; the division of subtasks/subtopics is clear and justified and supports the achievement of the overall goal.

Outstanding. The working hypotheses, methods and the work plan are very clearly described and relevant for achieving the goals, they are very clearly articulated and justified; the division of subtasks/subtopics is very clear and justified and supports the achievement of the overall goal.

1.4. What is the expected impact of the proposed research on the specific research field, society, and culture?

Unsatisfactory. The expected impact of the proposed research on the specific research field, society, and culture are vaguely outlined. The expected results and possible future developments of the proposed research topic are also vaguely outlined. The expected results do not ensure national and international acceptability, competitiveness or high quality of the research topic

Satisfactory. The expected impact of the proposed research on the specific research field, society, and culture are vaguely outlined. The expected results and possible future developments of the proposed research topic are also vaguely outlined. The expected results somewhat ensure national and international acceptability, competitiveness, and high quality of the research topic

Good. The expected impact of the proposed research on the specific research field, society, and culture are not very clearly outlined. The expected results and possible future developments of the proposed research topic are not very clearly outlined. The expected results somewhat increase the knowledge base in the specific research field, and if appropriate, are of relevance for societal problems and culture.

Very good. The expected impact of the proposed research on the specific research field, society, and culture is high. The expected results and possible future developments of the proposed research topic are clearly outlined. The expected results definitely increase the knowledge base in the specific research field, and if appropriate, are of high relevance for societal problems and culture.

Outstanding. The expected impact of the proposed research on the specific research field, society, and culture is high. The expected results and possible future developments of the proposed research topic are very clearly outlined. The expected results substantially increase the knowledge base in the specific research field, and if appropriate, are of high relevance for societal problems and culture.

1.5. If applicable, have the ethical requirements for human and animal studies been met?

Unsatisfactory. The ethical issues for human and animal studies are not adequately considered.

Satisfactory. The ethical issues for human and animal studies are adequately considered.

Good. The ethical issues for human and animal studies are well considered.

Very good. The ethical issues for human and animal studies are very well considered.

Outstanding. The ethical issues for human and animal studies are fully considered.

2. Assessment of the research team

2.1. Is the research team leader an internationally recognised researcher whose previous research results have been widely acknowledged over the last 10 years? Please compare his/her scientific achievements with top researches in this field worldwide.

Unsatisfactory. The research team leader is not an internationally recognised researcher, but her/his previous research results have been somewhat acknowledged over the last 10 years.

Satisfactory. The research team leader is an internationally recognised researcher whose previous research results have been somewhat acknowledged over the last 10 years.

Good. The research team leader is an internationally recognised researcher whose previous research results have been acknowledged over the last 10 years.

Very good. The research team leader is an internationally recognised researcher whose previous research results have been well acknowledged over the last 10 years.

Outstanding. The research team leader is an internationally recognised researcher whose previous research results have been widely acknowledged over the last 10 years.

2.2. Does the level of the senior research staff correspond to the international level of an independent researcher over the last 10 years? Please provide comments on the scientific level, on strengths and weaknesses of each team member.

Unsatisfactory. None of the senior research staff correspond to the international level in their respective field over the last 10 years.

Satisfactory. Some of the senior research staff corresponds to the international level in their respective field over the last 10 years.

Good. Most of the senior research staff correspond to the international level in their respective field over the last 10 years.

Very good. The senior research staff correspond to the international level in their respective field over the last 10 years.

Outstanding. The senior research staff correspond well to the international level in their respective field over the last 10 years.

2.3. Do the team leader and the senior staff have sufficient experience in the management of both international and national research projects? Please evaluate the leadership qualities of the senior research staff.

Unsatisfactory. The team leader and the senior staff have no experience in management of either international and/or national research projects.

Satisfactory. The team leader and the senior staff have little experience in management of both international and national research projects.

Good. The team leader and the senior staff have some experience in management of both international and national research projects.

Very good. The team leader and the senior staff have solid experience in management of both international and national research projects.

Outstanding. The team leader and the senior staff have wide experience in management of both international and national research projects.

2.4. Is the senior staff involved in supervising PhD students and postdoctoral researchers?

Unsatisfactory. The senior staff is not involved in supervising PhD students and post-doctoral research and there is still need for an increase of PhD and postdoctoral research supervision to meet the challenges of the program.

Satisfactory. The senior staff is somewhat involved in supervising PhD students and post-doctoral research but there is still need for an increase of PhD and postdoctoral research supervision to meet the challenges of the program.

Good. The senior staff is to a certain extent involved in supervising PhD students and post-doctoral research but there is still need for an increase of PhD and post-doctoral research supervision to meet the challenges of the program.

Very good. The senior staff is well involved in supervising PhD students and post-doctoral research.

Outstanding. The senior staff is very well involved in supervising PhD students and post-doctoral research.

2.5. Is the size and age composition/balance of the research team leader and senior research staff justified and optimal to achieve the research objectives, the sustainability of the research topic, and the education of a new generation of researchers?

Unsatisfactory. The size and age composition and balance of the research team leader and senior research staff is at an inadequate level; the research team is not sustainable. The research team lacks balance between the senior and junior research staff. There is insufficient senior research staff for the successful running of the established research plan. The number of junior research staff is limited to guarantee the sustainability of proposal. The overall size as well as competence of the research staff do not support the achievement of established objectives.

Satisfactory. The size and age composition/balance of the research team leader and senior research staff is on satisfactory level, but the research team may not be sustainable.

Good. The size and age composition/balance of the research team leader and senior research staff is justified and clear in order to achieve the research objectives; the research team is sustainable.

Very good. The size and age composition/balance of the research team leader and senior research staff is justified and clear in order to achieve the research objectives; the sustainability of the research topic and education of a new generation of researchers is high.

Outstanding. The size and age composition/ balance of the research team leader and senior research staff is justified and optimal to achieve the research objectives; the sustainability of the research topic and education of a new generation of researchers is very high.

2.6. Is the proposed research linked to the previous studies of the research team leader and the senior research staff?

Unsatisfactory. The proposed research is weakly linked to the previous studies of the research team leader and the senior research staff.

Satisfactory. The proposed research is somewhat linked to the previous studies of the research team leader and the senior research staff.

Good. The proposed research is linked to the previous studies of the research team leader and the senior research staff.

Very good. The proposed research is well linked to the previous studies of the research team leader and the senior research staff.

Outstanding. The proposed research is very well linked to the previous studies of the research team leader and the senior research staff.

2.7. Is the role of research team members clear and the number of applied positions justified?

Unsatisfactory. The role of research team members does not correspond to the objectives of the research plan.

Satisfactory. The role of research team members corresponds only to a certain extent to the objectives of the research plan.

Good. The role of research team members is clear, the number of applied positions justified and corresponds to the objectives of the research plan.

Very good. The role of research team members is clear and the number of applied positions justified and corresponds well to the objectives of the research plan.

Outstanding. The role of research team members is very clear and the number of applied positions justified and corresponds fully to the objectives of the research plan.

3. Research infrastructure

3.1. Is the infrastructure and research environment appropriate for the proposed research? Is there a lack of any major equipment that may affect the expected results and sustainability of the research topic?

Unsatisfactory. The infrastructure and research environment is poor and does not support the achievement of the established objectives.

Satisfactory. The infrastructure and research environment only partly meet the research needs of the proposal. There is need for substantial improvement. Research infrastructure is not related to national or international research topics or research infrastructure roadmaps (if relevant).

Good. The infrastructure and research environment meet the research needs of proposal. The majority of goals can be achieved by the means of existing infrastructure but a lack of some equipment may affect the expected results and sustainability of the research topic. Research infrastructure is not related to national or international research topics or research infrastructure roadmaps (if relevant).

Very good. The infrastructure and research environment support the research needs of the proposal; if relevant, the research infrastructure is related to national and/or international research topics or research infrastructure roadmaps.

Outstanding. The infrastructure and research environment fully support the research needs of the proposal if relevant, the research infrastructure is well related to national and/or international research topics or research infrastructure roadmaps.

4. Institutional and national relevance

4.1. Is the proposed topic among the strategic topics of the R&D institution and based on its strategic objectives?

Unsatisfactory. The research topic is not among the strategic topics of the R&D institution or based on its strategic objectives.

Good. The research topic is among the strategic topics of the R&D institution and based on its strategic objectives.

Outstanding. The research topic is definitely among the strategic topics of the R&D institution and based on its strategic objectives.

4.2. Does the research topic have a crucial role in maintaining specific scientific competencies in Estonia?

Unsatisfactory. The research topic has no role in maintaining the level of specific scientific knowledge in Estonia.

Good. The research topic has an important role in maintaining the level of specific scientific knowledge in Estonia.

Outstanding. The research topic has a crucial role in maintaining the level of specific scientific knowledge in Estonia, is unique and strategically important.

4.3. Are there similar/close research topics in the other Estonian R&D institutions? If yes, what makes the proposed research topic unique and strategically important among others?

Unsatisfactory. There are several similar/close research topics in other Estonian R&D institutions.

Good. There are some similar/close research topics in other Estonian R&D institutions but the research topic also has some unique features.

Outstanding. This is a highly unique and a strategically important research topic, there are no similar/close research topics in the other Estonian R&D institutions.

4.4. Describe the previous institutional commitment into building up expertise in the research topic, e.g., how many new postdocs, junior and senior researchers have the applicant R&D institution employed during last 10 years to work on the research topic? Which resources has the applicant R&D institution allocated to the research topic?

Unsatisfactory. There are no previous institutional commitments into building up expertise in the research topic; the number of new postdocs, junior and senior researchers that the applicant R&D institution has employed during last 10 years does not guarantee the sustainability of the research topic. The applicant R&D institution has allocated no resources to the research topic.

Good. There are some previous institutional commitments into building up expertise in the research topic, the number of new postdocs, junior and senior researchers that the applicant R&D institution has employed during last 10 years guarantees the sustainability of the research topic. The applicant R&D institution has allocated some resources to the research topic.

Outstanding. The previous institutional commitment into building up expertise in the research topic has been significant; the number of new postdocs, junior and senior researchers that the applicant R&D institution has employed during last 10 years fully guarantees the sustainability of the research topic. The applicant R&D institution has allocated considerable resources to the research topic.

4.5. Is the application connected to national strategic plans, research infrastructure roadmap, national research programs, etc.?

Unsatisfactory. The application is not connected to national strategic plans, the Estonian research infrastructure roadmap, or national research programs.

Good. The application is connected to national strategic plans, the Estonian research infrastructure roadmap, or national research programs.

Outstanding. The application is very well connected to national strategic plans, the Estonian research infrastructure roadmap, or national research programs.

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ⁱAwarding of institutional research funding is based on the provisions of the Organisation of Research and Development Act which entered into force in 2012, and regulation number 73 "Conditions and procedure for applying for, awarding and amending the amount of institutional research funding" adopted on 27 December 2011 (amended 8 February 2013) (hereinafter regulation) of the Ministry of Education and Research established on the basis of Subsection 152 (4) of the Organisation of Research and Development Act.

Regulation § 8 section (5):

The evaluation committee of the Estonian Research Council shall evaluate applications for research funding based on the opinions of expert panels and considering:

- 1) an overview of the R&D institution's role, present tasks and goals as well as its sustainability in the research domains covered by the present application (e.g., for carrying out PhD and Master's education in the case of universities, or in the case of state research institutes for carrying out their statutory goals;
- 2) The association of the proposed research topic to national strategic development plans and its importance in carrying out these plans;
- 3) The general theoretical background of the planned research theme and its place in research, main objectives, hypotheses, methods, and work plan;
- 4) If applicable, an explanation of how ethical requirements have been met in the case of animal and human studies;
- 5) The expected results and possible future developments of the proposed research topic, its importance for science, society, and culture;
- 6) The research team leader and senior research staff, their track record, the number of research positions necessary for carrying out the research and their structure;
- 7) The existence and state-of-art of the infrastructure necessary for carrying out the research topic;
- 8) The justified budget of the research topic;
- 9) The justification for accommodating into the research topic of other monetary resources by the R&D institution which become available due to the merger, expiry, or termination of other targeted research themes or institutional research funding topics.