Peer review guidelines
These guidelines for reviewers and panel members explain the FNR’s peer review process and explain how to evaluate proposals for the ‘OPEN Multi-Annual Research Programme’.

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Further call information, forms and guidelines are available on the FNR webpage
1. Background Information

Introduction

The Luxembourg Government shows a great commitment to increase investments in research in the coming years, with the aim to strengthen and develop the public research base. Despite the dynamic evolution of the research environment, the academic and research traditions are still very young.

Luxembourg is facing a strong international competition for the brightest researchers and the challenge for Luxembourg public research is to gain visibility and critical mass against this strong international competition.

Objectives of the OPEN programme

The OPEN programme intends to provide funding for a limited number of high quality research projects that do not fit into areas covered by the FNR’s thematic CORE programme\(^1\). It aims at supporting research projects of high scientific quality of established researchers working in emerging research fields in Luxembourg. The table below lists the CORE priority domains, and thus the ones that are not eligible for OPEN funding:

<table>
<thead>
<tr>
<th>Domains</th>
<th>Thematic Research Priorities</th>
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</thead>
<tbody>
<tr>
<td>Innovation in Services</td>
<td>Information Security and Trust Management</td>
</tr>
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<td></td>
<td>Business Service Design</td>
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<td>Development and Performance of the Financial Systems</td>
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<td>Telecommunication and Multimedia</td>
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<tr>
<td>Sustainable Resource Management in Luxembourg</td>
<td>Water Resources under Change</td>
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<td></td>
<td>Sustainable Management and Valorisation of Bioresources</td>
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<td>Sustainable Building and Bioenergy</td>
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<td>Spatial and Urban Development</td>
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<tr>
<td>New Functional and Intelligent Materials and Surfaces and New Sensing Applications</td>
<td>New Functional and Intelligent Materials and Surfaces</td>
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<tr>
<td>Biomedical Sciences/Regulation of Chronic, Degenerative and Infectious Diseases</td>
<td>Regenerative Medicine in Age-related Diseases</td>
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<td>Translational Biomedical Research</td>
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<td>Public Health</td>
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<tr>
<td>Societal Challenges for Luxembourg</td>
<td>Social and Economic Cohesion</td>
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<td></td>
<td>Education and Learning</td>
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<td></td>
<td>Identities, Diversity and Interaction</td>
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</tbody>
</table>

\(^1\) For further information on CORE, the thematically oriented research programme of the FNR, consult the [CORE webpage](#)
2. Peer Review Process

The Peer Review process guarantees an independent state-of-the-art review with the objective of selecting research projects that reflect the highest scientific quality. All proposals are evaluated according to a set of evaluation criteria (see chapter 2.1).

Administrative eligibility check
An administrative eligibility check is conducted. In order to be eligible, the proposals must fulfil all of the following criteria:

- Proposals must be submitted by an eligible FNR beneficiary organisation.
- Proposals must be submitted before the deadline.
- Proposals must be complete (i.e. all of the requested components and forms must be included). Proposals must respect the requested format and maximum length and have to be written in English.
- The proposed research topics must not be covered by the 5 FNR CORE domains (see chapter 1). (The PI and host institution are responsible for the choice of funding scheme applied to – FNR will not switch proposals from OPEN to CORE).
- PI must be an experienced researcher (>PhD+ 4 years; date of call deadline counts)

Applications not conforming to one of these elements are rejected at this stage without further evaluation.

Furthermore, providing false information as well as plagiarism may result in a rejection of the proposal. The FNR reserves the right to pursue further steps according to the FNR Research Integrity Guidelines.

Each proposal is usually sent to three reviewers who are asked to complete a written evaluation (using the ‘Review Form’) according to the following selection criteria:

- Innovativeness of idea and scientific relevance
- Appropriateness of the approach
- General feasibility of the project
- Expected outcome and impact of results

In a second step an expert panel assesses each proposal based on the written evaluations and gives a funding recommendation. In a report (Panel Conclusion) the main arguments which led to the final panel conclusion are listed.

In the last step, the FNR decision bodies select the proposals to be funded based on the recommendation of the expert panel.

After the funding decision, applicants receive feedback from the FNR together with the full anonymous written evaluations of their proposal.

A budget of 1.3 Mio € is foreseen for the 2019 OPEN call.

2.1. Evaluation Criteria

The scientific merit of the proposal is assessed based on the following criteria:

1. Innovativeness of idea and scientific relevance

The FNR expects:

- High scientific quality, competitive at an international level
- Research question(s) and/or hypotheses original and clearly formulated in the proposal
- Project of high scientific relevance for the research field
• Direct contribution to advancements of the current state-of-the-art

With the result of:
• Strengthening of the capacities of the research groups in their field of research
• Increasing their international visibility within the research community

2. Appropriateness of the approach
Methods proposed have to be:
• sound,
• rigorous,
• state-of-the-art and
• appropriate to the proposed investigation.

3. General feasibility of the project
• Project to be carried out and led by an experienced researcher with a proven track record in the field
• Applicant team with the expertise and complementary knowledge required for the execution of the proposed project (see also pre-proposal evaluation criteria)
• Projects should be ambitious and feasible at the same time. The project plan has to be evaluated according to the level of competences of the project team and the efficiency of the work plan.
• Realistic schedule and milestones, compatible with resources, either available or requested are required.
• Allocated human resources (level of workforce and qualification) as well as the planned budget have to be appropriate with respect to the planned work
• Main infrastructure necessary for the successful execution of the project should be available at the start of the project.
• PhD projects must be clearly described and feasible

Hence,
• Reviewers should rather assess the cost effectiveness of the project in terms of person*months engaged on the project and the proposed costs of equipment and consumables.
• Note that collaborations with partners from the public or private sector are encouraged but are not explicitly requested. In any case the applicant team needs to clearly demonstrate the added value of the collaboration.

4. Expected outcome and impact of results
• Scientific publications and pre-prints (pre-prints must be freely available from a pre-print server and should be properly referenced via a link to the pre-print or DOI);
• Patents (if applicable);
• Data, reagents, software (if applicable);
• Doctoral and other training: Supervisory skills and available learning environment for PhD or Post-doc training;
• Development of core competences of the research group in view of gaining international visibility and critical mass;
• Dissemination of the research results among the wider public;
• Planned strategies for disseminating and using results during and after the project as well as the description of how potential users are to be involved in the project in view of
exploitation of the results (i.e. exploitation of intellectual property generated, raising of scientific awareness, improvement of quality of life, etc.; only if applicable);
• Value of intended economic, environmental and societal impacts.

2.2. Role of Persons Involved in the Peer Review Process

2.2.1. Role of the Reviewers

Reviewers are international, independent experts in a specific subject who are invited to remotely evaluate a research proposal closely related to their field of expertise and to submit a written review.

They are requested to:
• Carefully read the ‘Programme Description’ and the ‘Peer Review Guidelines’.
• Sign a ‘Confidentiality Agreement’.
• Thoroughly read the assigned Full Proposal.
• Complete and submit a ‘Review Form’ providing comments and scoring the proposal.

When evaluating research proposals, reviewers should comment briefly on each selection criterion to the best of their abilities, their professional skills, knowledge and ethics.

As a signatory of the DORA Declaration, reviewers should evaluate quality and impact independently of journal-based metrics and give value to all types of research outputs.

Please refer to chapter 5 (Guidelines for Reviewers).

2.2.2. Role of the Panel Members

An expert panel is established by the FNR. One member of the panel is designated as chair. The overall objective of the panel is to analyse the reviews and propose a selection of projects that fulfil the OPEN selection criteria and to rank them, allowing a funding decision to be made.

To achieve this, each panel member is supposed to:
• Carefully read the ‘Programme Description’ and the ‘Peer Review Guidelines’;
• Sign a ‘Confidentiality Agreement’;
• Read the assigned proposals and the related reviews;
• Evaluate each proposal and draft a synthesis of the reviews (resolving any possible conflicting reviews) by completing and submitting a ‘Review Synthesis Form’;
• As a signatory of the DORA Declaration, evaluate quality and impact independently of journal-based metrics and give value to all types of research outputs;
• For resubmissions, carefully check if the proposals have undergone substantial revision and if the previous reviews and panel conclusions have been taken into consideration;
• Orally present the ‘Review Synthesis’ during the ‘Panel Meeting’;
• Prepare the “Panel Conclusion” after the panel meeting.

During the ‘Panel Meeting’, the panel members discuss the reviews and the review syntheses in order to rank the proposals according to the OPEN Evaluation Criteria (see chapter 2.1.) to the best of their knowledge and ethics.

At the end of the meeting, the panel is asked to comment on the overall quality of the proposals and on the evaluation procedure, and to give recommendations for future calls.

Please refer to chapter 6 (Guidelines for Panel Members).
2.2.3. Role of the Panel Chair

The FNR appoints one ‘Panel Chair’. The panel chair plays a pivotal role in the OPEN programme.

His/her role is to:
- Chair the ‘Panel Meeting’.
- Present the panel conclusions and recommendations to the FNR decision bodies.

In all these actions, the ‘Panel chair’ is supported by the ‘FNR Programme Manager’.

2.2.4. Role of the FNR Programme Manager

The ‘FNR Programme Manager’ supports all involved experts during the evaluation process. In cooperation with the ‘Panel chair’, the ‘FNR Programme Manager’ takes care that the FNR rules and procedures are respected. If necessary, the ‘FNR Programme Manager’ will provide the panel with background information to the Luxembourg research landscape and the national context in general.

The FNR staff does not provide any information regarding the status of the applications to the applicants while the evaluation procedure is in progress and until the funding decision has been taken by the FNR decision bodies. The FNR staff does not provide any information regarding the name of the reviewers and panel members involved.

3. Confidentiality and Conflict of Interest

3.1. Confidentiality

All research plans and evaluation statements are confidential documents. Application documents should therefore be handled with care and treated as confidential before, during and after the evaluation process.

Reviewers and panel members must not disclose any information concerning application documents or evaluations to outsiders, nor should they use confidential information to their own or any other party’s benefit or disadvantage.

Reviewers and panel members must not communicate with applicants. Reviewers and panel members’ advice to the FNR on any proposal may not be communicated by them to the applicants or to any other person. Panel members are not allowed to disclose the names of other experts participating in the evaluation. Where proposals are posted or made available electronically to reviewers, who then work from their own or other suitable premises, the reviewer will be held personally responsible for maintaining the confidentiality of any documents or electronic files sent and returning, erasing or destroying all confidential documents or files upon completing the evaluation as instructed. Reviewers and Panel members may not show the contents of proposals or information on applicants to third parties (e.g. colleagues, students, etc.).

If reviewers are contacted by anyone who has questions about application documents or evaluation statements, please direct them to the FNR contact person.

After the funding decision has been made by the decision bodies of the FNR, the review statements are sent to applicants without naming the reviewers.
3.2. Conflict of Interest

All persons involved in the review process are required to declare any personal interests according to the following criteria. The FNR will check the level of the conflict of interest.

3.2.1. Circumstances in which a conflict of interest may exist

A disqualifying conflict of interest exists if a person:

- was involved in the preparation of the proposal;
- has had close collaboration with the applicant(s) (e.g. has co-authored and published an article with the applicant during the past three years);
- stands to benefit directly if the proposal is accepted (e.g. is involved in the publication or exploitation of the potential results of the proposal);
- has a close family relationship with any person working for an applicant organisation in the proposal. This includes:
  - a spouse, child, grandchild, sibling, parent, grandparent,
  - a person otherwise especially close (e.g. fiancé/e or a close friend), and/or their spouses,
  - a sibling of a parent or his/her spouse, a child of a sibling, previous spouse,
  - a child, grandchild, sibling, parent or grandparent of a spouse and/or their spouses,
  - a child of a sibling of a spouse,
  - or a half-relative comparable to the above mentioned.
- is a director, trustee or partner of an applicant organisation;
- is employed by one of the applicant organisations in a proposal;
- is in any other situation that compromises his or her ability to evaluate the proposal impartially.

A potential conflict of interest may exist, even in cases not covered by the clear disqualifying conflicts indicated above, if a person:

- was employed by one of the applicant organisations in a proposal within the previous three years;
- is involved in a contract or research collaboration with an applicant organisation, or has been so in the previous three years;
- is in any other situation that could cast doubt on his or her ability to evaluate the proposal impartially, or that could reasonably appear to do so in the eyes of an external third party.

Persons involved in the peer review process must also declare a conflict of interest at any time during the process.

3.2.2. Inability to perform obligations and termination

If for some reason the reviewers and panel members are not able to fulfil their obligations for a given work, the FNR should be informed immediately. The work cannot be delegated to another person without the prior written agreement of the FNR.
4. Style recommendations for written evaluations

The following style recommendations² should guide reviewers during the composition of their evaluations:

- The assessment should be more than just a rating and needs good justification for the arguments;
- 1.5 pages of substantive comments may be sufficient – not too long but enough to be able to back up the assessment and funding recommendation;
- The overall rating should match the comments – otherwise the panel and the applicants might not have confidence in the assessment;
- Generalists in the field should be able to understand the comments - care has to be taken not to adopt a bias in favour of work in the expert's own specialism i.e. “x is a vitally important area / scarce discipline etc.”;
- References to other key papers in the field are useful;
- Set out the strengths and weaknesses of each criterion and of the whole proposal in a structured way;
- Feedback should be balanced with constructive criticism and supported with examples;
- Where appropriate, suggest alternative approaches to improve the proposal;
- Particular concerns should be highlighted about the assessment or aspects of the proposal.

Please note that the anonymised review documents are sent to the PI.

5. Guidelines for Reviewers

This chapter describes the tasks of the reviewers, defined as international, independent experts in a specific subject.

Before you may access a proposal’, you have to sign a Confidentiality Agreement.

Please read the following documents that will be sent to you:
- The ‘Programme Description’ explains the objectives of the programme.
- These ‘Peer Review Guidelines’.
- The assigned proposal.
- The Review Form.

5.1. Review Form

You are invited to complete and submit the OPEN Review Form sent to you. Please provide a written evaluation and a rating for each criterion as requested in the form.

5.1.1. Ethical considerations

Please comment if the proposal gives rise to any ethical issues.

5.1.2. Evaluation of the proposal

Please carefully read the descriptions of the evaluation criteria in chapter 2.1. and comment concisely on each selection criterion to the best of your abilities, professional skills, knowledge and ethics.

Assessments should be made based on scientific content rather than journal-based publication metrics, such as Journal Impact Factors or the identity of a journal.

The value and impact of all research outputs ((including datasets and software, training of researchers, intellectual property) in addition to research publications should be considered, as well as a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

Please also consult the style recommendations in chapter 4 as it is very important that the review is based on coherent comments or arguments that will help the FNR to reach a decision and subsequently formulate a meaningful ‘Panel Conclusion’ which will be forwarded to the applicants. It is therefore essential that the FNR receives sufficiently detailed and coherent assessments for each selection criterion.

5.1.3. Assessment of the written review

The assessment of the selection criteria goes from excellent to fair/poor.

An overall assessment of the proposal and justification for the funding recommendation is provided in the table below. The following points should be addressed in the overall assessment of the proposal:

- most important strengths and weaknesses of the project proposal,
- any modifications to the proposal that are necessary,
- any other comments justifying the funding recommendation.

<table>
<thead>
<tr>
<th>Final Score</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>Proposal of excellent quality and outstanding international standards that should be funded as proposed. The proposal scores excellent on all or most criteria.</td>
</tr>
<tr>
<td>A</td>
<td>Proposal of very good quality and high international calibre that should be funded. The proposal scores very good (and even excellent) on all or most criteria.</td>
</tr>
<tr>
<td>B</td>
<td>Proposal of very good quality, but with shortcomings on one of the selection criteria. The proposal could be improved to become an excellent proposal.</td>
</tr>
<tr>
<td>C</td>
<td>Proposal of insufficient quality and with major shortcomings on one or more selection criteria.</td>
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</tbody>
</table>

Reviewers should also shortly indicate their domain of expertise, especially if the proposed project has an inter- or multidisciplinary approach.

6. Guidelines for Panel Members

This chapter describes the tasks of the Panel Members, defined as high-level scientists with abundant expertise.

Before you may evaluate a proposal, you have to sign a Confidentiality Agreement.

Please read the following documents that will be made available to you:

- The ‘Programme Description’ explains the objectives of the programme.
- These ‘Peer Review Guidelines’.
- The assigned proposal.
6.1. Guidelines for writing a review synthesis

Before drafting the review synthesis please consult the style recommendations in chapter 4.

In order to improve the comprehensibility of the funding decisions, the drafting of the ‘Review Synthesis’ based on the written reviews is an essential element which needs to fulfil additional quality requirements:

- The arguments in the review synthesis should be based on the arguments provided in the written reviews. Do not only reiterate individual comments by reviewers but clearly state how the individual comments of the reviewers lead to the overall conclusion.
- Any new positive or negative argument raised (which does not appear within any of the written reviews) needs to be clearly highlighted and justified with evidence.
- For resubmissions, carefully check if the proposals have undergone substantial revision and if the previous reviews and panel conclusions have been taken into consideration.
- The synthesis needs to be coherent throughout the text.
- Resolve major conflicting arguments stated within different reviews by proposing a justified opinion.
- Factual information which has a major influence on the funding decision needs to be checked on validity.
- Criticism should be supported with examples.
- Indicate possible modifications or recommendations to improve the quality of the project.
- Clearly explain the impact of each statement for the overall assessment. The proposed funding decision should be comprehensible and duly justified. The main argument(s) which lead to a positive or negative funding decision need to be unambiguously highlighted.
- Conflicting arguments in the remote reviews should be resolved by proposing a justified conclusion.

Please respect these recommendations as the ‘Review Synthesis’ is forwarded to the applicants.

6.2. Review Synthesis Form

The rapporteur (one of the reviewers appointed by the FNR) compiles the individual reviews in a synthesis by using the OPEN Review Synthesis Form. The draft synthesis as well as the reviews will be sent to all reviewers by the FNR for check and approval. In case major disagreements arise, the FNR may organise a remote debate (by email or by phone) in order to reach consensus.

The synthesis forms should be ready at least 5 working days before the panel meeting in order to allow all Panel Members and the FNR staff to read the documents.

6.2.1. Ethical considerations

If there are ethical considerations, please state if they have been sufficiently addressed or if they need to be addressed more specifically.
6.2.2. Evaluation of the proposal

Please carefully read the descriptions of the criteria in chapter 2 before providing a written evaluation and a rating for each criterion as requested in the form.

Please also consult the style recommendations in chapter 4 and chapter 6.1. Guidelines for writing a review synthesis.

Write a **short assessment and justify your statements** for each of the criteria:

- Based on strengths and weaknesses of the proposal.
- Resolving conflicting assessments of the reviewers.
- Assessments should be made based on scientific content rather than journal-based publication metrics, such as Journal Impact Factors or the identity of a journal.
- The value and impact of all research outputs ((including datasets and software, training of researchers, intellectual property) in addition to research publications should be considered, as well as a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

6.2.3. Scoring of the proposal

The scoring system is used to underline the reasoned comments and arguments provided. It is based on a **scale ranging from excellent to poor**, as described in chapter 5.1.3 Assessment of the written review. Top scores should only be awarded to proposals of exceptionally high quality.

6.2.4. Overall assessment

The assessment of the selection criteria goes from excellent to fair/poor.

An overall assessment of the proposal and **justification for the funding recommendation** is provided in the table below. The following points should be addressed in the overall assessment of the proposal:

- most important **strengths and weaknesses** of the project proposal,
- any **modifications** to the proposal that are necessary,
- **resolving of conflicting arguments** in the remote reviews,
- any other **comments justifying the funding recommendation**.

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The experience of the FNR has shown that proposals undergoing major modifications were flawed from the beginning and usually did not reach the objectives. Therefore, projects requiring major modifications should not be recommended for funding.
The overall assessment of the proposal should lead to a final funding recommendation which has to be consistent with the previous comments to the selection criteria.

6.2.5. Evaluation of the reviews

Please provide marks for the quality and usefulness of each of the written reviews in terms of:
- Level of detail
- Comprehensibility
- Justification of arguments
- Coherence
- Expertise of reviewer

6.3. Panel Meeting

Prior to the meeting, the FNR secretariat will prepare a ranking based on the review synthesis. Proposals which did not fulfil the minimal criteria of at least a ‘fair’ rating on all criteria will not be discussed (exceptions may be made if the panel member considers it necessary and justified to discuss the proposal in the panel).

Then the panel will start with the actual discussion of the proposals starting with the top ranked one. The synthesis of the written evaluations is presented to the panel members, focusing on the following issues:
- Objective of the proposal
- Fulfilment of the selection criteria, including highlighting possible conflicting statements of reviewers
- Strengths and weaknesses
- Overall assessment of the application
- Necessary modifications of the proposal (if applicable)

If the evaluation of the panel member differs from the written reviews or new information is discussed, a coherent argumentation needs to be presented.

After this short presentation, panel members should discuss the evaluation findings and readjust the rating of the proposal if deemed necessary (including argumentation).

After rating all the proposals, the panel should discuss which proposals should benefit from a financial support of the FNR.

6.4. Panel Conclusion

Note that the evaluation synthesis needs to be readjusted to reflect the discussions and conclusions of the panel. The reworked Panel Conclusion will serve as the basis for the formal decision process within the FNR. This document should therefore be as comprehensive as possible, clear and unambiguous. The anonymised Panel Conclusion as well as the anonymised written reviews will be sent to the applicants.

The panel members may also give some overall considerations on the quality of the proposals, the quality of the evaluation process and recommendations for future calls.