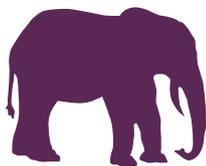


FNR
CORE MULTI-ANNUAL
THEMATIC RESEARCH
PROGRAMME

FONDS NATIONAL DE LA RECHERCHE

*Programme
description*



www.fnr.lu/core

PROGRAMME DESCRIPTION

CORE 2021 CALL

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The CORE 2021 call deadline: Wednesday 21st April 2021 (14.00 CET).

Changes to the previous call:

- **The CORE junior track has been revised:** Its purpose has been revisited, taking out all direct references to “career development” and refocusing it to “CORE project funding” for first-time project leaders. The target population has been further specified. Support for mentorship is offered as an optional feature.
- The FNR has introduced a **new narrative-style CV** in its funding programmes, which in conjunction with an **updated ORCID profile**, allows the full picture of a researcher to be evaluated. The goal is to allow an applicant to be more fairly evaluated on their scientific vision, appropriate experience, and broader contributions to science and society, beyond the limited focus of metrics and quantitative lists.
- **Extension of international collaborations:** CORE International
- The **FNR online application system** has been updated and streamlined.

Please also refer to the [CORE Application Guidelines](#). They give detailed instructions on how to prepare and submit an application and have to be read in conjunction with the present document. Do not hesitate to contact the FNR staff for any further explanation

1. General Principles of the CORE Programme

1.1. Objectives

CORE is a **multi-annual thematic research programme** and is FNR's central programme for project funding. The prime objective of CORE is to strengthen the scientific quality of Luxembourg's **public research** in the [National Research Priorities](#) (section 1.5.)

High quality research capacities form the essential pool of knowledge and expertise from which **social, environmental and economic impact** emanate. CORE projects should directly contribute to the **strengthening of the research competences** in the priority fields and be of **international competitiveness**. The CORE programme aspires to create strategic national resources and an increased visibility in the international research community.

The CORE programme should contribute to the

- Funding of **high-quality scientific research**, leading to the generation of new knowledge and **scientific outputs of high relevance for the research community in the respective field (e.g. research publications, preprints, data sets, software, methods and instruments, etc.)**;
- Development of a strong research basis in Luxembourg which can be exploited for sustainable long-term socio-economic and environmental benefits;
- Advancement of the research group or institution in view of **international visibility** and critical mass;
- **Training** of doctoral students and professional advancement of the researchers involved in the funded project.

Disciplinary, interdisciplinary, collaborative and cross-institutional projects will be supported by the FNR. Researchers are encouraged to link methods, concepts and approaches from various disciplines to solve joint research questions that lead to new scientific insights and solutions that lie beyond the scope of a single discipline.

1.2. CORE Junior Track

Within the CORE programme, a possibility is offered to early-career researchers or career entrants to lead their first independent research project, via the CORE Junior track.

1.3. International Collaborations

Through a set of cooperation agreements with foreign funding agencies, the FNR facilitates the **funding of bilateral and trilateral projects** between Luxembourg researchers and their colleagues abroad. Under certain conditions, such projects can be submitted within CORE. The partner agencies may send observers to the meetings of the selection panels. Also, the FNR may share project proposals and reviews with the partner agencies as per the terms of the cooperation agreements.

1.4. Co-funding by Fondation Cancer

The FNR is collaborating with the **Fondation Cancer** to jointly support research projects that fall within the priorities defined in the National Cancer Plan (Plan Cancer). All proposals subject to this collaboration have to be submitted as normal CORE projects and will be evaluated

within the usual selection process, together with the other submitted proposals. Fondation Cancer can send an observer to meetings of the selection panel. The FNR may share project proposals and reviews with the Fondation Cancer as per the terms of the cooperation agreement between FNR and Fondation Cancer.

1.5. National Research Priorities in CORE

CORE projects **must fit within the [National Research Priorities](#)** for public research, as retained by the Government on 20th December 2019.

1.6. Duration and Funding

CORE projects have a lifespan of **two to three years** and funding is allocated on a **competitive** basis. All projects are peer reviewed by international reviewers. CORE calls are launched on an **annual basis**.

The FNR has allocated a budget of **24 Mio €** to the **CORE 2021 Call**.

CORE funding may cover the full costs of a research project, including funding for **PhD candidates** who are involved **full-time** from project start and for a max. duration of 4 years.

CORE projects should have the nature of a typical research project – funding of infrastructure or of data collection is not intended if this is not associated with the answering of a clear research question.

For further details on chapters 1.1 to 1.6, please refer to the [CORE Application Guidelines](#).

2. Eligible Host Institutions, Partners and Principal Investigator

The following organisations¹ established within Luxembourg are eligible for financial support from the FNR under the CORE programme:

1. Public institutions performing research in Luxembourg;
2. Non-profit associations, societal impact companies (SIS)² and foundations performing research in Luxembourg and that have obtained a special authorization from the Ministry for Higher Education and Research³.

Each entity has to be registered at the FNR in order to be able to submit proposals through the online submission system. More information on eligibility of institutions is available on the [FNR website](#).

¹ FNR's law dating May 31, 1999, art 3 (2).

² <https://guichet.public.lu/en/entreprises/creation-developpement/forme-juridique/societe-capitiaux/societe-impact-societal.html>

³ To be eligible for FNR support, non-profit associations, societal impact companies (SIS) and foundations must be accredited by the Ministry in charge of public sector research. To obtain an accreditation, associations or foundations have to introduce a formal request at the Ministry of Higher Education and Research.

A project will be run by a consortium comprising of

- **Contracting Partners** are institutions which are eligible for funding and which seek direct financial support from the FNR. Among those, one institution is referred to as **Coordinating Institution**.
- **Non-contracting Partners** are organisations or individuals from the public or private sector (within Luxembourg or abroad) participating in the project without direct financial support from the FNR.

Subcontractors are not considered as partners (contracting or non-contracting) in the project.

The **Principal Investigator (PI)** is the researcher proposing the project idea and leading the project on a daily basis. The PI belongs to the coordinating institution and is responsible for submitting the proposal on behalf of the consortium.

To acknowledge and foster the potential of collaborative science between different research units in Luxembourg as well as to facilitate interdisciplinary research, the FNR allows to name up to one **“Co-PI”** in a CORE project. The PI and Co-PI should have complementary expertise and must be from different research units (within the same or different FNR-eligible Luxembourg-based institutions, i.e. contracting partners).

The FNR has [specific requirements for principal investigators and supervisors](#) which apply to both PI and Co-PI.

3. Submission and Selection Process

3.1. The Submission Process

The submission procedure is organised in a single full proposal stage. The proposals must be submitted in electronic format using the online submission system (FNR Grant Management System) <https://grants.fnr.lu> until the deadline. All proposals have to be written in English.

Please read carefully the [CORE Application Guidelines](#). They give detailed instructions on how to prepare and submit an application and have to be read in conjunction with the present document.

3.2. The Selection Process

The selection process is based on a Peer review process that guarantees an independent state-of-the-art evaluation with the objective to select those research projects that reflect the highest **scientific quality**. All proposals undergo the following selection process:

- The proposals undergo an **eligibility check** based on the formal requirements;
- Eligible proposals are **peer-reviewed** by independent, international experts;
- Thematic **expert panels** rate, and rank the proposals and recommend funding;
- **FNR decision bodies** formally approve the proposals to be funded;
- The **funding decision** is communicated to the applicants.

3.3. The Peer-review process

Each eligible proposal is usually sent to at least **three reviewers** who are asked to complete a written evaluation according to the FNR selection criteria. A detailed description of the peer review process and the selection criteria is available in the [‘Peer Review Guidelines’](#) available

on the FNR webpage. The applicant has the possibility to send an email to the FNR with a list of **maximum 3 experts who should not be contacted as reviewers** for the specific project to submission@fnr.lu before the submission deadline. The email has to explain why this/these expert(s) should not be contacted. The FNR however reserves the right to make the final selection of reviewers.

In a second step a **thematic expert panel** assesses the proposals based on the written evaluations, gives a funding recommendation and summarises the main arguments supporting the funding recommendation in a report (**Panel Conclusion**).

Proposals not fulfilling the minimal quality criteria (with low scorings by all reviewers) do not need to be discussed in the panel meeting but the justification of the low scoring will be checked by the panel.

In the last step, the **FNR decision bodies** formally approve the proposals to be funded based on the recommendation of the expert panels.

After the funding decision, applicants receive **feedback from the FNR** together with the full anonymous written evaluations of their proposal and the 'Panel Conclusion'

3.4. Evaluation Criteria

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

1. Relevance and Novelty of the Research Question

- The research question(s) and the testable hypotheses are stated and clearly formulated,
- The addressed research question is of significant relevance to the research field and, possibly, beyond,
- The current state-of-the-art of the field is comprehensively described and duly taken into consideration.

2. Feasibility, Innovation, and Potential of the proposed approach

- The proposed approach to tackle the research question is innovative, feasible and appropriate,
- A clear theoretical framework is provided, where appropriate,
- Where appropriate, previous studies and/or preliminary data/results support the appropriateness and feasibility of the proposed approach,
- The proposed project has the potential to generate new knowledge and to contribute to the advancement of the current state-of-the-art.

3. Quality and efficiency of project implementation

- The project is carried out and led by a researcher with appropriate experience and contributions to the field, as well as solid vision for how to make this research successful
- A cohesive and well-functioning applicant team with the expertise, complementary knowledge, and team spirit required for the execution of the proposed project,
- The project plan is efficient and ambitious, but feasible during the proposed timeframe,
- The requested resources (budget and HR) are necessary and appropriate for the project; the implementation is cost-efficient,
- The main infrastructure required for the successful execution of the project is available at the start of the project,

- PhD projects are clearly described and feasible,
- Collaborations with partners from the public or private sector are encouraged but the added value of the collaborations should be justified.

4. Expected output, outcomes, and impact of results

- Outputs and outcomes of the project should clearly contribute to advancing both science and society (related to the areas listed below),
- The value of all outputs and outcomes should be apparent (both for the field and beyond), and paths to future impact should be clear,
- There should be strategies for generating impact 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),
- Open Access and Data Sharing Commitments are expected.

In alignment with the DORA declaration⁴, there are a broad range of outputs and outcomes that provide value and impact for science and society, related to:

- Generation of knowledge (e.g. open data sets, software, preprints, publications, commercial/entrepreneurial/industrial products, clinical practices developments, conference publications, etc...)
- Developing individuals and teams (e.g. Doctoral training and other mentoring of team members: Supervisory skills and fostering an appropriate environment for development of PhD candidates or Post-doctoral scientists, Development of core competences of the research group, teaching activities, etc...)
- Contributing to the wider research community (e.g. organization of events benefiting the research community, improving research culture, committee membership, national/international collaborations, etc...)
- Contributing to broader society (e.g. engagement with industry/private sector, engagement with public sector, stakeholders, and the broader public, policy publications, contributions to lay publications, etc...).

4. General Principles for FNR-funded research activities

The research activities under submitted and funded within the CORE programme should fulfil the following general principles:

- Research activities should respect fundamental **Ethical Principles**, including those which are reflected in the Charter of Fundamental Rights of the European Union. Applicants must comply with the '[FNR Research Integrity Guidelines](#)'. **Research misconduct** e.g. non-compliance with ethical regulations and guidelines, provision of false information, plagiarism or falsification of data, may result in a rejection of the proposal. The FNR reserves the right to pursue further steps in the event of non compliance with ethical standards and/or research misconduct.
- The FNR attaches great importance to the impact of research outputs on science, industry, policy making and society in general. To maximise the possibilities for impact of research outputs, results from FNR-(co)funded research are expected and required to be disseminated via high-quality, peer-reviewed publications that are made **Open Access**

⁴ <https://sfedora.org/read/>

- ([FNR Policy on Open Access](#)). Costs for project-related publications can be refunded through the FNR's "Open Access Fund". FNR also encourages the deposition of **preprints** in open access repositories.
- The FNR will require a Data Management Plan (DMP) to be written for all projects accepted for funding after the 1st of January 2021. At project start, a template will be made available on FNR's Grant Management Platform. This document can be accessed and revised during the entire funding period. It is not required to submit a DMP at the application stage. It is however strongly advised to start preparations for a Data Management Plan already during the proposal writing. Please consult the FNR Policy on Research Data Management for further guidance.
 - The FNR attaches great importance to the **impact of research results** on science, industry, policy makers and the society in general. Therefore applicants are expected to list the value and impact of all research outputs (preprints, research publications reporting new knowledge, data, reagents, software, intellectual property, and training of skilled young scientists).
 - The FNR also encourages the protection and the **economic exploitation of research results** when it is possible and applicable. Besides, the FNR also encourages the dissemination of research towards the general public and the media. Thus activities aimed at generating impact need to be foreseen from the initial project planning on under the National Research Priorities.
 - As a signatory of [DORA](#), the FNR encourages applicants to list a **range of research outputs** (including datasets and software, training of researchers, intellectual property). Applicants should not use journal-based metrics, such as Journal Impact Factors⁵, as a surrogate measure of the quality of individual research articles, but rather focus on the scientific content.
 - Financial support from FNR must be acknowledged in all publications and other forms of media communication, including media appearances, press releases and conferences.
 - In the **implementation of the research activities**, adequate attention needs to be paid to gender mainstreaming, as well as to, inter alia, working conditions, transparency of recruitment processes, and career development as regards the researchers recruited on CORE projects. In this matter, the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers⁶ offer a reference framework.

FNR-funded PhDs are expected to be offered a research and training environment in accordance with the principles enounced in the [National Quality Framework for Doctoral Training](#) (NQFDT). Host institutions of FNR-funded PhDs are expected to implement the NQFDT requirements.

Following an [external assessment in 2018](#) of the implementation of the principles of the NQFDT in the main Luxembourg research institutions, a number of recommendations have

⁵ Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles. The scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

⁶ The European Charter for Researchers and the Code of Conduct for their recruitment can be downloaded from <http://bit.ly/EuropeanCharter>

been issued in view of advancing the implementation of the NQFDT and further developing the quality of doctoral training in Luxembourg. More specifically, it is expected that:

- an **individual PhD plan** is drafted at the onset of each FNR-funded PhD project, outlining among others the objectives of the research project, the supervision set-up, rights and duties of all involved parties and expected outcomes in terms of reporting, publications, training activities, etc. The individual PhD plan serves as support to all involved parties and should be reviewed at regular intervals.
- the PhD supervisory committee (CET - comité d'encadrement de thèse) at the University of Luxembourg, includes **at least one member from a research institution abroad**. Travel/accommodation costs related to the CET participation of the external member can be covered by the CORE budget.

5. Timeschedule for the CORE 2021 Call

17 December 2020	Launch of the CORE Programme 2021 Call
21 April 2021 14:00 (CET)	Deadline for the submission of proposals (all domains)
End October 2021	Funding decision communicated to the applicants
1 September 2022	Latest start of the project. Please note that for projects which are not able to start on 1 September 2022, the FNR may revise its funding approval.