

New Frontiers in Research Fund Programs: Interdisciplinary, High Risk and High Reward Projects

Office of Research Services

Grants Team: Barb Flynn, Somiraa Said & Aditi Sharma

Panelists: Sheila Petty, Omar El-Halfawy & Brian McQuinn

Tune In – to – Tune Up 2025
February 28, 2025



University
of Regina

Go far, Together.

1

Land Acknowledgement

The University of Regina is situated on Treaty 4 territories with a presence in Treaty 6. These are the original lands of the Cree, Saulteaux, Dakota, Lakota, and Nakoda, and the homeland of the Métis/Michif Nation.



University
of Regina

Go far, Together.

2

New Frontiers in Research Fund (NFRF)

The NFRF supports world-leading **interdisciplinary**, international, **high-risk / high-reward, transformative** and rapid-response Canadian-led research.

The NFRF has three streams that each support specific goals with the flexibility to launch special calls:

- **Exploration Stream:** generates opportunities for Canadians to conduct innovative high-risk / high-reward interdisciplinary research
- **Transformation Stream:** provides large-scale support for Canada to build strength and leadership in interdisciplinary and transformative research
- **The International Stream:** enhances opportunities for Canadian researchers to partner on international projects
- **Special calls:** are targeted to support emerging research as needed



3

NFRF Exploration





Exploration Stream Objective

- **to support high-risk, high-reward and interdisciplinary research**
- Funding is meant to support projects that:
 - **bring disciplines together** beyond traditional disciplinary or common interdisciplinary approaches;
 - propose to **explore something new**, which **might fail**; and
 - have the **potential for significant impact**.
- **Range of impacts:** Social, cultural, economic, health-related, technological, etc.
- Proposals led from any discipline: Social sciences and humanities, health, natural sciences and engineering.



4

Value and Duration

Program		Maximum Value/year	Duration	Number of Grants Funded
NFRF-Exploration				
LOI – Aug 2, 2025		\$125,000	2 years	Minimum 100*
Full Application- Nov 5, 2025				
NFRF-Transformation				
NOI – April 15, 2025		\$4,000,000	6 years	Maximum 6 applications
LOI – June 17, 2025				
Full Application(by invitation) – Mar 2026				

*A proportion reserved for ECR

5

Evaluation Criteria - Multidisciplinary Review Panel

- Adjudication involves scoring according to the [evaluation matrices](#) for the 5 selection criteria:

Evaluation Criteria	Scoring
Equity, diversity and inclusion (EDI)	Pass/Fail
Interdisciplinarity / fit to program	Pass/Fail
High risk	40% of overall score
High reward	40% of overall score
Feasibility	20% of overall score

- For the High Risk, High Reward and Feasibility evaluation criteria, the matrices indicate **four ratings**: Exceptional, Very Good, Fair and Poor.

6

1- Equity, Diversity and Inclusion in Research Practice (EDI-RP)

- EDI in research practice is a core element of the NFRF program and is comprised of three key areas:
 1. Team composition and recruitment processes
 2. Training and development opportunities
 3. Inclusion
- For each of the three key areas, applicants must explain:
 - what actions they will take
 - the outcomes expected
 - the assessment planned



Equity, Diversity and Inclusion in Research Practice (EDI-RP)

Remove barriers and **provide opportunities** for the meaningful integration of individuals from all groups, including the four designated groups (women, Indigenous peoples, members of visible minorities and persons with disabilities).

- Identify an EDI challenge/barrier to underrepresented groups within the context of your proposed project
- Identify a best practice and explain the implementation strategy
- Frame your specific and concrete actions within your training/research plan
- Support your proposed approach with scholastic evidence
- Monitor the success of your implemented actions and opportunities for adaptation

Biographical Information about Team Members

- Provide an overview of the research team, demonstrating that it has the required knowledge, background and expertise
- Identify the anticipated contributions of each team member
- Explain how their contributions will be coordinated and integrated
- Applicants must protect the privacy and confidentiality of all team members
- If self-identifying information is relevant, it may be included only with the team members' consent

Peer Reviewer Perspectives on EDI

*“The advice I would give is to be as specific as possible. Give a concrete example of how you are going to implement EDI. Generic statements like, ‘I am committed to EDI within my team’—that’s no longer what reviewers are looking for. **The best EDI statements are much more thoughtful, and much more evidence-based.** There are references for particular statements that they’re making, compared to when I first started reviewing for NFRF and applicants were providing generic language and generic statements.”*

– NFRF Reviewer

[The New Frontiers in Research Fund: peer reviewers' perspectives \(Ask Dr. Editor, Letitia Henville\)](#)

Interdisciplinary, High Risk / High Reward Projects



University
of Regina

Go far, Together.

11

Multidisciplinary versus Interdisciplinary Teams

Multidisciplinary Teams

Each member operates as a part of a chain of responsibility

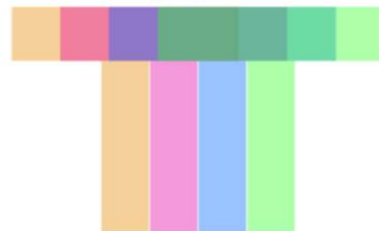


Members working in silo, by disciplines

Multidisciplinary research = juxtaposing, coordinating

Interdisciplinary Teams

Individuals from different fields are expected to contribute ideas to the entire project stack



Members listen to and learn from others

Interdisciplinary research = integrating, synthesizing



University
of Regina

Go far, Together.

12

2- Interdisciplinarity / Fit to Program

Interdisciplinarity can be defined by elements such as, but not limited to:

- **Novelty of the Perspective** → integrating two or more disciplines not commonly combined.
- **Novelty of the Approach** → application or adaptation of frameworks/ tools/ methods/ techniques from one discipline to solve a problem in another discipline.
- **Project Design** → designed from an interdisciplinary perspective.
- **Fit to Program** → pushes the boundaries of what can be funded through the agencies.
- **Exploration Requirements: at least two different disciplines** (as defined by the group-level classification of the Canada Research and Development Classification ([CRDC](#)) codes



13

Ten Tips for Interdisciplinary Project

1. Describe (concisely) why your research is important, innovative and impactful
2. Explain why an interdisciplinary approach is necessary to achieve the intended research outcomes
3. Write clearly for a general reader – use the minimum of technical language and abbreviations
4. Outline what kind(s) of collaboration or integration you envisage (theoretical, methodological, etc.) and the specific ways in which you hope to achieve this
5. Explain the methods that you plan to use and, if they are novel and give examples where they have been successfully used in other fields

[Shaping Interdisciplinary Practices in Europe \(SHAPE-ID\) Toolkit](#)



SHAPE-ID: Horizon EU 2020 research and innovation program, Fletcher, Trinity College, Dublin



14

Ten Tips for Interdisciplinary Project

6. Recognize the extra costs associated with interdisciplinary research, such as additional network building and budget for them
7. New collaborations will take time to develop and provide opportunities, both formal and informal especially at the start of the project
8. Describe the role of different stakeholders; what they bring to the research, what and when they are expected to contribute, and how they will benefit
9. Plan for a range of outputs to be produced across the lifetime of the project – Academic publications are usually of little importance to societal partners (instead, program of activities or a new tool to pilot)
10. Describe how authorships for project outputs will be allocated – or a process for agreeing on this early in the project

SHAPE-ID: Horizon EU 2020 research and innovation program, Trinity College, Dublin



15



3- High Risk

High risk can be defined by elements such as, but not limited to:

- Proposing unique directions
- Challenging current research paradigms
- Enhancing understanding of complex and challenging issues
- Bringing new disciplines together with different perspectives, to use novel approaches for solving existing problems
- Developing or adapting frameworks, methods and techniques

Please see ([Merit Indicators](#))



16



4- High Reward

High reward can be defined by elements such as, but not limited to:

- Having an economic, scientific, artistic, cultural, technological or health impact
- Impacting and/or affecting large communities, or unique communities or subpopulations with the potential to provide lessons for other contexts
- Transforming and/or disrupting conventional thinking
- Resolving a longstanding issue or debate
- Advancing current knowledge, methods and/or technologies

Please see ([Merit Indicators](#))

17

5- Feasibility



- Feasibility considers elements such as:
 - Research problem being addressed
 - Knowledge, expertise and capacity of the research team
 - Current research in the field
 - Workplan and timeline
 - Proposed approach, including EDI in research design (GBA+)
 - Project's engagement and reciprocity with First Nations, Inuit and/or Métis peoples (for Indigenous research), where appropriate
 - Suitability of the research environment and resources

Please see ([Merit Indicators](#))

18

Multidisciplinary Review Panel Perspectives

*“One of the challenges that reviewers have with New Frontiers is that we have to assess feasibility, but applicants also need to get a high score on ‘high risk’. **Those two things seem counterintuitive, but a well-written grant can address both.** You can show the high risk and argue that the reward is that your work will, for example, change the paradigm in the field. But it’s feasible, because you have the best team in place and all their experience and lots of institutional resources”.*

–NFRF Reviewer

[The New Frontiers in Research Fund: peer reviewers’ perspectives \(Ask Dr. Editor, Letitia Henville\)](#)



19

NFRF Transformation





University
of Regina

Go far, together.

20

NFRF Transformation

Program		Maximum Value/year	Duration	Number of Grants Funded
NFRF-Exploration		\$125,000	2 years	Minimum 100
LOI – Aug 2, 2025 Full Application- Nov 5, 2025				
NFRF-Transformation		\$4,000,000	6 years	Maximum 6 applications
NOI – April 15, 2025 LOI – June 17, 2025 Full Application(by invitation) – Mar 2026				

21

NFRF T—Subject Matter Eligibility (fit to program)

NFRF Transformation stream grants will support projects that:

1. tackle a **well-defined** problem or challenge
2. propose a **novel world-leading** approach that is different from the current state-of-the-art approaches to the issue
3. are **interdisciplinary**, bringing different perspectives to the defined problem
4. have the potential to be **transformative**, defined as the potential to create a **significant and real change or impact**—a noticeable leap or tangible breakthrough rather than an incremental advance

22

NFRF T—Project Team Eligibility

- Proposals must be submitted by teams of **at least five participants** (nominated principal investigator, co-principal investigators and co-applicants)
- Teams must include a nominated principal investigator (NPI) who is an independent researcher at an eligible institution
- Teams may include co-principal investigators, co-applicants and collaborators
- National, international and cross-sector collaborations are encouraged:
 - ✓ The most appropriate individuals and/or organizations are involved
 - ✓ The team composition reflects best practices in EDI
- Early Career Researchers must be included as confirmed members in all teams

NFRF T—Evaluation Criteria

Assessment by the Multidisciplinary Review Panel		
Evaluation Criteria	LOI	Full Application
Interdisciplinarity	Pass/Fail	Confirm Pass from LOI Stage
EDI-RP/ECRs	Pass/Fail	Confirm Pass from LOI Stage
High Risk	20%	25%
High Reward	60%	25%
Feasibility	20%	50%

NFRF T—Proposal Requirements

- Full Application- Proposal Requirements (Maximum 18 Pages)

Section	# of Pages
Introduction/Background	2
Biographical information about team members	4
Research proposal	5
Anticipated transformation/change	2
Management plans	3
Budget justification	2

Management Plans

Governance plan

Performance measurement plan

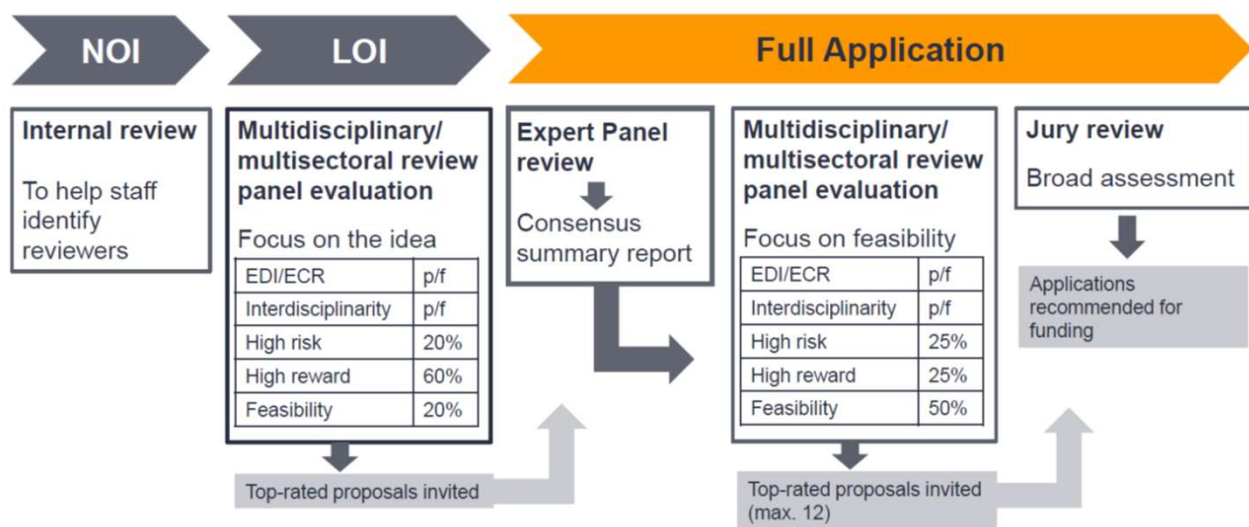
Research data management Plan

Training plan

[NFRF Research Data Management](#)

25

NFRF T—Review Process



26



Tips & Tricks

- Transformation grants **do not** support programs of research, networks, or the setting up or further development of research institutes/centres
- Highlight the anticipated transformation/change, with concrete objectives and other potential benefits
- Explain what makes the approach world-leading and why the approach is expected to lead to real change
- The title should reflect the interdisciplinary nature of the project
- Write in a style that is appropriate for a multidisciplinary/multisectoral review panel and jury
- There must be rigor in how the project will be undertaken to get to the promised transformative change
- Ten tips for preparing interdisciplinary research proposals: [SHAPE-ID ToolKit](#)

27

Peer Reviewer Perspectives On Interdisciplinarity

*“For NFRF, I want to see at least two disciplines working together, actually **hybridizing and integrating and using aspects and research techniques and methodologies and approaches in new and unique ways.** It’s truly not two different disciplines doing their own thing and then sharing results. It’s about looking at ways of addressing the problem, using the best practices and approaches and hybridized systems of the two.”*

–NFRF Reviewer

[The New Frontiers in Research Fund: peer reviewers’ perspectives \(Ask Dr. Editor, Letitia Henville\)](#)

28

Questions for the Panelists

- Briefly introduce yourself and share a summary of your NFRF funded grant.
- As a Reviewer, please describe the evaluation process that is undertaken for the NFRF Exploration competition.
- As a Reviewer, what do you look for in a high risk, high-reward interdisciplinary project?
- As an Applicant, what do you need to think about in preparing a Transformation application? How early should you start? How do you manage an interdisciplinary team as NPI? Are you intentional in EDI-RP in your team composition?

29

Resources

NFRF Exploration:

- [Notice of Intent to Apply Guide](#)
- [Full Application Guide](#)
- [Reviewer manual](#)
- [Evaluation matrices](#)



New Frontiers in Research Fund
Fonds **Nouvelles frontières** en recherche

EDI in Research Practice:

- [Resources for Implementing EDI in Research \(CSFG\)](#)
- [Best Practices in Equity, Diversity and Inclusion in Research Guide](#)

NFRF Transformation:

- [Competition Overview](#)
- [Reviewer manual](#)
- [Evaluation matrices](#)

30