SENTINEL NORTH
MAJOR CALL FOR PROPOSALS (PHASE II 2020-2023)

01 June, 2020 Version*

(French version)

*Any changes to the previous version of this document are indicated in red.

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1. BACKGROUND

In 2015, Université Laval (ULaval) received a major grant from the Canada First Research Excellence Fund (CFREF) to deploy its Sentinel North (SN) research strategy. CFREF's objective is to support the efforts of Canadian post-secondary institutions to implement, on a large scale, forward-thinking, transformational and long-term institutional strategies, enabling them to strategically advance their greatest strengths and achieve ambitious and far-reaching goals leading to international recognition. These institutional initiatives must respond to the Government of Canada's science, technology and innovation priorities.

In a context of accelerating climate change and socio-economic development in Arctic and sub-Arctic regions, the SN strategy allows ULaval to deploy a transdisciplinary approach based on a convergence of strategic research areas in which it is taking national and international leadership: northern and Arctic science, optics-photonics, microbiome, cardiometabolic health, and brain health. The program also supports any other expertise that can contribute to its conceptual research framework and to its objective of improving our understanding of the northern environment and its impact on humans and their health.

A major objective of the program is to encourage the university's research community to break down barriers between disciplines, faculties and departments in order to combine complementary expertise, develop new ideas and conduct innovative research projects to monitor and prepare for the transformation of northern environments using better technologies and intervention strategies towards sustainable health and development.

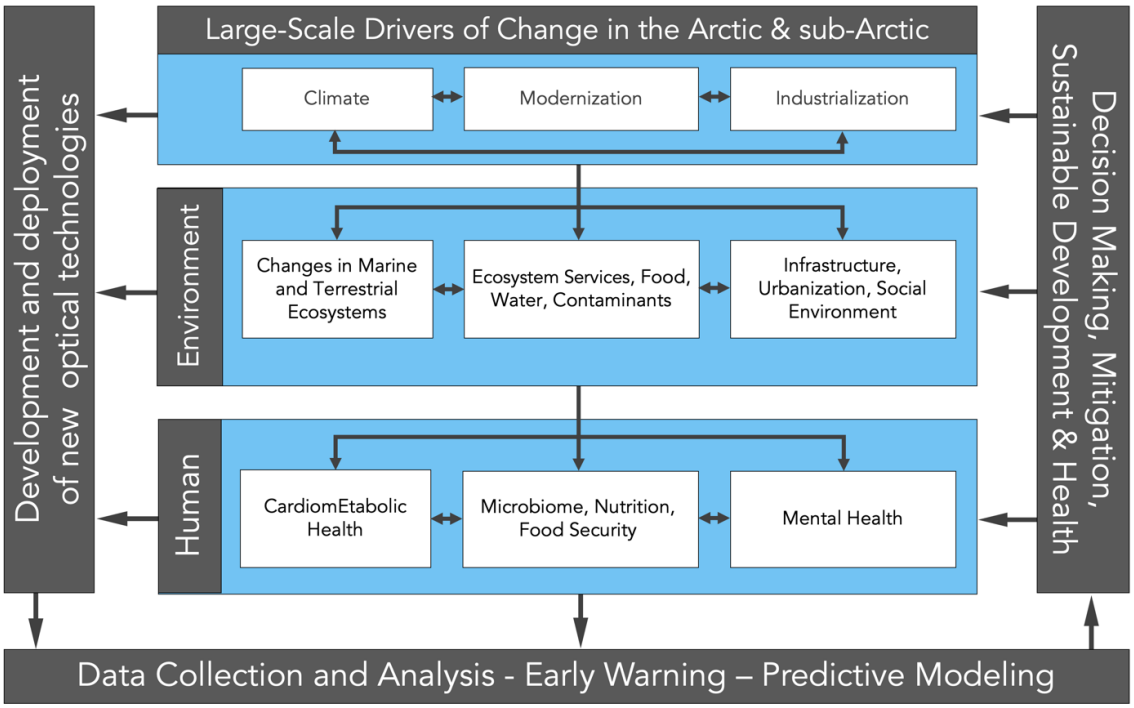
A first major call for proposals launched in 2016 with an envelope of $15M over 3 years achieved its objective of mobilizing the ULaval research community and its collaborators. The 21 selected projects involve more than 130 professors and research teams from 34 departments of the institution. Funding for these first projects ends in March 2020 (Phase I 2017-2020).

Since this first call, SN has deployed several other research initiatives, such as a call for research chairs, a partnership research chairs program, a research excellence scholarship program, calls for joint proposals with foreign universities, a targeted call for proposals and calls for joint proposals with the Institut nordique du Québec, which have enriched and diversified its research program, which currently supports 10 new chairs and 38 research projects.

2. MAJOR CALL FOR PROPOSALS (PHASE II 2020-2023)

For this second major call for proposals, Sentinel North is **seeking transdisciplinary teams that will propose transformative approaches that encourage the convergence of expertise**, including the development and deployment of new technologies and mathematical tools (modeling, complex systems), in order to address the research axes and challenges of its conceptual research framework.

Sentinel North's Conceptual Research Framework



3. PRIORITY RESEARCH AXES AND CHALLENGES

Proposals submitted under this call must necessarily address the following priority research axes and challenges:

Axis 1. Impact of environmental change on northern ecosystems and infrastructure

Climate change and anthropogenic activities are leading to a rapid and unprecedented transformation of the northern environment, with the deterioration of the cryosphere (sea-ice, glaciers, snow and permafrost), degradation of terrestrial and marine ecosystems, and loss of biodiversity, that are affecting the ecosystem services (food, freshwater, raw materials, medicines) and infrastructure (roads, airports, housing, drinking water) on which Arctic and sub-Arctic populations depend.

The main objective of this research axis is to better understand the impacts of environmental disturbances on the ecosystems and infrastructure of Arctic and sub-Arctic regions through the development and application of new tools, in particular from optics-photonics, and new transdisciplinary approaches.

Associated challenges:

- Understand the impacts of climatic and anthropogenic disturbances on northern ecosystems and food webs, from microbiomes to large mammals, in relation to climatic, geosystemic (permafrost) and societal (industrialization and extraction) changes;
- Continuous, spot or remote monitoring (fibre optics, lidar, UAVs, AUVs, imaging, spectroscopy) of the state and properties of the cryosphere (permafrost, sea ice, glaciers, snow), terrestrial and marine ecosystems and geosystems, ecosystem services (food, drinking water, regulation of climate-active gases) and infrastructure (airports, buildings, roads, dams, pipelines) in the changing Arctic and sub-Arctic regions;
- Design northern infrastructures that are better adapted to environmental change and the needs of northern populations (e.g., airports, buildings, homes, roads, pipelines).

Axis 2: Environment-Health Interactions in the North

Arctic and sub-Arctic regions are affected by major changes in the natural environment, the built environment and ecosystem services (e.g., microbiomes, drinking water, air, food, light, housing, living conditions) that have direct consequences on the cardiometabolic and mental health of circumpolar populations.

The main objective of this research axis is to better understand the complex interactions between environment and health in Arctic and sub-Arctic regions through the development and application of new tools and transdisciplinary approaches**.**

Associated challenges:

- Understand the links between the northern environment (food, microbiomes, light cycle) and health, including societal chronic diseases (e.g., cardiometabolic, respiratory) and mental health;
- Understand the interactions between the gut microbiota and mental health (gut-brain axis) in a northern context;
- Understand the links between the built environment (human-made or human-engineered) and health in a changing North;
- Ensuring food security and healthy eating in Arctic and sub-Arctic regions.

Axis 3: Data Analysis, Predictive Modelling and Knowledge Transfer

In order to exploit the data flows acquired over a wide range of space and time scales, including in the form of valuable time series for health and the environment, it is necessary to develop new approaches and strategies for data analysis, including the use of artificial intelligence, which will make it possible to deploy methods for diagnosis, predictive modelling, detection and early warning.

The main objective of this research axis is to optimize the analysis, mobilization and transfer of research results towards sustainable development and health in Arctic and sub-Arctic regions.

Associated challenges:

- Produce projections of the future state of the coupled human-environment system under various climate change and modernization scenarios in Arctic and sub-Arctic regions;
- Design and validate systems for civil and environmental security (Situational Awareness System) and observation of northern ecosystems;
- Develop and apply collaborative approaches to optimize the mobilization and transfer of research results to northern users while taking into account ethical and governance issues.

4. APPLICATION PROCESS

The application process involves the submission of a Project Proposal (PP) submitted using the Guidelines provided in Appendix A. There is no Letter of Intent (LOI) submission process.

It is the responsibility of applicants to ensure that their application meets the Eligibility Criteria (Item 6) and the Evaluation Criteria (Appendix B).

5. IMPORTANT DATES

- January 2020 Launch of the call for proposals
- 15 June 2020 Deadline for submission of Project Proposals (PP)
- Summer 2020 Analysis and recommendations on PP
- 1 September 2020 Start of project funding

* Note that this date is subject to change according to the evolution of the Covid-19 situation.

6. ELIGIBILITY

- Only ULaval professors are eligible for funding from Sentinel North (SN). Eligible researchers must meet the eligibility criteria of the Federal granting councils.
- All researchers and teams wishing to apply must submit a new project proposal (PP), whether or not they are already funded by SN.
- Researchers and teams not already funded by SN are encouraged to submit a PP.
- Researchers and teams already funded by SN can propose a completely new project. They can also submit a PP that is an evolution of a project funded by SN during Phase I (2017-2020), but it must clearly build on results already achieved, present new objectives and encourage the training of new students.
- A researcher can be a principal investigator in only one PP, but may be a co-investigator or collaborator in more than one PP.
- The duration of the proposed project must be a maximum of three years.

- The PP must lead to results with a scope and application in Arctic and sub-Arctic regions, as defined by SN (see map).
- The PP must clearly address one or more of the priority research axes and challenges identified in this call (Item 3).
- The PPs must clearly meet the evaluation criteria for the SN program (Appendix B).
- The PPs must be carried out by transdisciplinary teams involving partners and collaborators internal and/or external to ULaval. Researchers should apply as a team working on a given research theme. SN will not fund proposals led by individual researchers or teams from a single department or research centre. SN is not a substitute for individual funding programs such as NSERC's Discovery Grants Program, CIHR's Project component or SSHRC's Insight Program.

7. ADDITIONAL CONSIDERATIONS

- The participation of early career researchers as Principal Investigators is strongly encouraged. For the purposes of this call, an early career researcher has held a university professor position for less than 10 years.
- The active participation of collaborators and partners external to ULaval from the Nordic, academic, public and/or private sectors is strongly encouraged.
- Valuing equity, diversity and inclusion, SN invites all qualified individuals to submit proposals, particularly women, members of visible and ethnic minorities, Aboriginal people and persons with disabilities.
- Priority will be given to proposals that can demonstrate cash or in-kind funding contributions, other than those provided by the federal granting agencies. Contributions from collaborators and partners must be reflected in letters of support at the time of PP submission.

8. BUDGETARY FRAMEWORK

The total budget available for all projects funded under this major call for proposals is approximately $10 million over 3 years.

The total envelope over 3 years allocated to each project may vary from a minimum of $225,000 to a maximum of $750,000 depending on the size of the project. We expect to finance between 15 and 25 projects.

9. EVALUATION PROCESS

SN wants to ensure that its decisions are fair and objective and that they are perceived as such. The evaluation will be conducted using the evaluation criteria (Appendix B) and the Conflict of Interest Policy (Appendix C).

9.1. Review and Selection of Project Proposals (PP).

The SN Administrative Centre receives the PPs, verifies that they are complete and meet the eligibility criteria (Point 6). The PPs are then forwarded to the Scientific Review Committee (SRC) for evaluation. The SRC evaluates proposals based on the Research Proposal Evaluation Criteria (Appendix A). The SRC may also use external reviewers to evaluate certain proposals.

9.2. Funding recommendations, decisions and notification

Based on the recommendations made by the SRC, the Scientific Directors will present the selected PPs and recommendations to the Steering Committee for approval.

A Notice of Decision is sent to all applicants.

For successful PPs, funding may be subject to certain conditions that will be forwarded by the SN Administrative Centre.

9.3. Terms of Reference and Composition of the Science Review Committee (SRC)

The SRC will provide assessments and funding recommendations to the Scientific Directors and the Steering Committee for the proposals received through the SN call for proposals. The committee's work will be based on a peer review process. The committee will be composed of national and international scientists external to Université Laval, recognized in the research areas associated with the specific challenges of this call and selected in such a way as to limit potential conflict of interest situations related to the evaluation of the applications assigned to them. The SRC may also use external reviewers to evaluate certain applications.

10. INFORMATION

For more information about Sentinel North and this call for proposals, please first consult the Frequently Asked Questions on our website. You can also contact the administrative centre at AAP2020@sn.ulaval.ca.

ANPPENDIX A- GUIDELINES FOR THE SUBMISSION OF A PROJECT PROPOSAL (PP)

These guidelines are available in French HERE.

A. GENERAL INFORMATION

The Project Proposal (PP) provides information on the proposed project in relation to the priority axes and associated research challenges identified for this call for proposals.

It is the responsibility of applicants to ensure that their application meets the eligibility criteria and the research project evaluation criteria (Appendix B).

The PP must be submitted on behalf of the team and proposed by ULaval professors eligible to receive a grant from one of the three federal granting agencies.

Language

You can complete your PP in English or French, but the use of English is recommended. The Scientific review Committee (SRC) will be composed of a majority of international reviewers and the working language of the committee will be English.

Sentinel North (SN) will arrange for translation from French to English as required, but the translated documents will be sent directly to the SRC, without consultation and validation with applicants.

Deadline and submission

An electronic copy including all sections of the project proposal (a single PDF document of less than 10MB) as well as the file containing the associated budget table in Excel format must be emailed to AAP2020@sn.ulaval.ca no later than **15 June, 2020 at 11:59 pm** Eastern Standard Time (EST).

Applicants will receive an acknowledgement of receipt within 48 hours of receipt of their submission.

General Presentation

Use the Letter format (21.5 cm by 28 cm) and leave a 2 cm margin all around. Write the names of the co-principal investigators at the top of each page and number the pages consecutively. The application must be completed in Arial font with a minimum font size of 11 point. Use single line spacing. Compressed type is not accepted.

Illustrations and graphics may be included but will be counted towards the maximum number of pages indicated below. Text, graphics or illustrations may be presented in one or two columns. Any excess pages or documents other than those required will be removed.

B. CONTENT OF THE PROJECT PROPOSAL (PP)

Please use the section titles and numbers as identified below when writing your PP.

You must complete all sections. Respect the maximum length for each section where indicated, additional content will be removed.

1. TITLE

The title must clearly and concisely state the purpose of the project. The project title will be used for publication purposes.

2. RESEARCH AXES AND CHALLENGES (¼ page)

The PP must clearly address one or more of the priority research axes and challenges identified in the specific framework of this call.

- Clearly identify the priority research axis targeted by your PP.
- Clearly define the challenge(s) targeted by the PP.

3. BILINGUAL ABSTRACT

Provide a project summary in English and French **(maximum 300 words each)** that describes the main elements of the proposed research, the nature of the funded activities and the anticipated benefits. This summary will be used in the selection process, as well as for communications related to SN.

4. TEAM AND MEMBERS' CONTRIBUTIONS TO THE PROJECT

SN will fund projects led by transdisciplinary teams involving partners and collaborators internal and/or external to ULaval. SN will not fund isolated projects conducted by individual researchers or teams from a single department or research centre.

As a program of Université Laval, SN is committed to fostering excellence in research and research training and to providing equal opportunities to all applicants. Valuing equity, diversity and inclusion, SN subscribes to the principle that excellence and equity are compatible and complementary. The participation of members of under-represented groups on teams is strongly encouraged.

Note that the applicant must have obtained the agreement of all potential team members before including them in the application.

4.1 Names, Affiliations and Contributions of Co-Principal Investigators

Teams are strongly encouraged to involve early career researchers as principal investigators in their proposals. For the purposes of this call, an early career researcher has been a university professor for less than 10 years.

The Principal Investigators act as respondents for the project. A maximum of 2 researchers from different disciplines and administrative units (departments, centres, institutes) may assume the role of principal investigators for a project. Other researchers must be indicated as co-investigators (funded) or collaborators (unfunded). A researcher may be principal investigator in only one PP, but may be a co-investigator or collaborator in more than one PP.

- Provide the name of each Principal Investigator followed by their affiliation with ULaval (faculty, department, centre, institute).
- Describe each Principal Investigator's role and contribution to research and training within the project **(200 words each)**.

4.2 Co-Investigators

The co-investigators are ULaval researchers who contribute significantly to the direction and advancement of the project. For example, they may co-supervise students and receive part of the project funding.

- Enter the names of the co-investigators followed by the name of their affiliation with ULaval (faculty, department, centre, institute).
- For each co-investigator, describe their research and training contribution to the project (**100 words each).**

4.3 Collaborators

Collaborators are individuals from academia or other sectors, from ULaval or not, who are actively involved in research and/or related activities and whose role is to provide a particular service (e.g., specialized analytical service, access to equipment/infrastructure, contribution to supervision and training, etc.). Collaborators do not receive direct funding from SN.

- List the names of collaborators, followed by the names of their affiliated organizations.
- For each collaborator, briefly indicate their scientific contribution to the project **(100 words each).**

4.4 Partners*

Partners are Canadian or foreign organizations (governments, industries, associations, not-for-profit organizations) that commit to contributing cash or in-kind to the project.

- Identify the partners and briefly indicate their contribution to the project (100 words each).
- The contribution to the project from all partners must be detailed through letters of support (Section 14).

*In view of the exceptional socio-economic situation linked to the Covid-19 pandemic, it is understood that it may be difficult, even inappropriate, to approach certain partners. Identify partners already confirmed (with letter of support), potential partners as well as those that will need to be confirmed (e.g. northern organizations) before the project begins.

4.5 Transdisciplinarity (½ PAGE)

Transdisciplinary research is defined as research conducted by researchers from a variety of disciplines working together to create conceptual, theoretical, methodological and translational innovations that integrate and transcend discipline-specific approaches in order to address a common problem.

- Indicate how the project will take a transdisciplinary approach by highlighting the level of integration and coherence of the team, the complementarity of their expertise and the added and innovative value of the proposed collaborations.

5. BACKGROUND AND OBJECTIVES (1 PAGE)

- Clearly situate the context of the research project in relation to the research axes and challenges proposed in the call for proposals.
- Describe the objectives of the proposed research.
- What are the main questions and hypotheses addressed by the research project?

- If the PP is a continuation or evolution of a project already funded by SN, demonstrate how the proposal builds on existing results, present the new objectives and explain the added value of the new project.

6. METHODOLOGY AND EXPECTED RESULTS (3 PAGES)

- Present the originality and novelty of the proposed research, in terms of methodology and/or novel applications of current methods.
- Describe the expected research results, highlighting the scientific advances, innovations, expertise, processes or products that are expected from the project.
- Explain how the project will lead to results with a scope and application in the Arctic and sub-Arctic regions.
- Identify the milestones (activities/steps) required to achieve the project objectives for each grant year (½ page).
- State the anticipated risks and associated controls with respect to the achievement of objectives, budget and proposed timeline for a 3-year project (e.g., graduate student recruitment, collaborations, etc.) (½ page).

7. TRAINING (½ PAGE)

The training of graduate students in a transdisciplinary context must be a priority for all projects funded by SN.

- Provide a training plan describing the number and role of students, postdoctoral fellows, research professionals and technicians and the extent to which these participants are involved in the project and training.
- Provide, if available, the names of supervisors of students, postdoctoral fellows, research professionals and technicians.
- Briefly describe the proposed initiatives to train graduate students and postdoctoral fellows in a transdisciplinary environment (co-supervision, mobility).

8. PARTNERSHIP AND NETWORKING (½ PAGE)

The success of SN is highly dependent on the ability of projects to develop effective interactions, collaborations and partnerships outside of Laval University, both nationally and internationally.

- Describe the nature and level of involvement of confirmed and to be confirmed partner organizations (academic, private and/or public, northern) in planning, research, training and/or knowledge transfer.
- For projects taking place in the North, specifically describe the nature of the confirmed and to be confirmed partnerships as well as the level the involvement of northern communities and organizations in the research project and in the dissemination of knowledge.
- Contributions of confirmed partners must be supported by letters of support (Section 14).

*In view of the exceptional socio-economic situation linked to the Covid-19 pandemic, it is understood that it may be difficult, even inappropriate, to approach certain partners. Please provide the required information for already confirmed partners (with letter of support), potential partners and those that will need to be confirmed (e.g. northern organizations) before the project can begin.

9. EQUITY, DIVERSITY AND INCLUSION (½ page)

SN is committed to excellence in research and training while ensuring equal opportunities for all.

- Describe the actions you plan to take to encourage equity and diversity within your team and your project.
- You may refer to NSERC's Guide for Applicants: Addressing Equity, Diversity and Inclusion.

10. DATA MANAGEMENT PLAN AND DISSEMINATION OF RESEARCH RESULTS (½ PAGE)

Following the recommendations of the three federal granting agencies on research data management and ULaval's good institutional practices, proposals must define a data management plan that specifies the following:

- Briefly describe the data that will be produced or collected by the project (e.g., type, format, interoperability). For example, is it big data, confidential data, tabular data, etc.? The description should provide a better understanding of the strategy being considered for the storage/sustainability of the data.
- Describe the backup/data repository strategy, including the infrastructure and/or services that will be used for long-term archiving of research data.
- Describe how data and research results will be shared and disseminated, including how the project will meet the requirements of the federal granting agencies and ULaval's institutional policy on open access to research publications.

11. BUDGET

Only Principal Investigators and Co-Investigators from ULaval are eligible to receive SN funding. Funding must be used to cover eligible expenses as detailed in the CFREF Administration Guide.

Using the updated Excel budget table (Table 11) provided for this purpose, provide details of the budget requested to SN for your project on an annual basis for each of the identified categories of expenses. The grant is for a maximum duration of 3 years (36 months) starting on 1 September 2020. Expenses must be distributed over 4 fiscal years, with an initial period of 7 months for Year 1 (1 September 2020 to 1 March 2021) and a period of 5 months for Year 4 (1 April 2023 to 31 August 2023).

In section 11 of your proposal, provide a description and justification for each budget item requested in the budget table (e.g. justification: Item 1c - A PhD student at ULaval at $21K/year in years 1 to 3).

The information provided should allow the evaluation committee to fully understand the use of funds and the total proposed budget. There is no page limit.

Compensation expenses

The training of graduate students in a transdisciplinary context must be a priority for all projects funded by SN. The majority of the amounts requested for remuneration should be allocated to graduate students and post-doctoral fellows.

For budget items 1a-c and 2a-b (see Excel table), list the resources requested, indicate the name of the individual if possible and identify the researcher(s) who will supervise these individuals.

The maximum amounts allocated by SN for scholarships/salaries are :

- *17.5 K/year for two years for master's students*
- *21 K/year for three years for doctoral students*

- *35 K$/year for two years for postdoctoral students*
- *50 K$/year for research professionals.*

If necessary, researchers will need to supplement salaries/awards with funding sources other than SN.

Travel Expenses

Travel expenses (meals and accommodation) related to the project include reasonable expenses incurred for field work, research-related conferences, collaborative travel and research. Briefly explain the link between the planned travel and the proposed research.

User fees for the CCGS Amundsen research icebreaker, northern research infrastructure and small aircraft (twin otter and helicopter) chartering are not to be included in the budget table. A separate Access to Northern Research Infrastructure Fund is available to assist SN researchers in this regard.

Materials, Supplies and Equipment

Describe in general terms the equipment and supply requirements. Explain, if applicable, the purchase of equipment over $10K. SN will not fund expenditures over $25K for any given piece of equipment.

Computers and Electronic Communications

Costs related to computers, tablets, modems, new technologies, specialized software and other computer hardware required for research that are not normally provided by the research institution.

Research Dissemination and Networking

Briefly describe the proposed budget for the dissemination of research results and the project's networking activities (e.g., the costs of publishing articles, including the costs of ensuring open access to results, workshops, community consultation).

Services and miscellaneous expenses

Expenses that do not fit into one of the above categories and that are eligible in the CFREF Administration Guide.

Provide a brief explanation of the confirmed external cash or in-kind contributions listed. These contributions may include partial support for scholarships, salaries, facility access fees, and other costs not covered by SN. Contributions from federal granting agencies (NSERC, CIHR, SSHRC, CFI, TIPS, Genome Canada) are not eligible. A letter of support from confirmed contributors is requested in section 14.

12. REFERENCES

Use this part to provide:

- a list of bibliographical references;
- a list of acronyms and definitions used in the proposal.

Do not refer to websites for more information on your proposal. Do not create hyperlinks in the reference list.

13. SHORT CVS

Attach short CVs (max. 1 page each) of each principal investigator as well as principal co-investigators and collaborators. Each short CV will include :

- Name of the individual;
- Degrees, diplomas and academic background;
- Experience and affiliations;
- Expertise, honours and distinctions;
- Highlights of research funding over the past 5 years;
- Total number of refereed and non-refereed publications in the last 5 years;
- Most significant contributions over the past 5 years
- Number of students and post-doctoral fellows supervised in the last 5 years.

14. LETTERS OF SUPPORT FROM CONFIRMED PARTNERS

Letters of support should:

- be from a representative with authority to commit the organization's contribution;
- indicate the level, duration, nature (species and/or in-kind) of support planned for the project;
- describe the potential involvement and added value of the project for the organization;
- Indicate current and past relationships with project members;
- be in the original version, dated and signed after January 1, 2020.

The signature of the authorized representative means that the representative :

- agrees with the content of the application and will provide the resources it has committed to provide;
- consents to the release of the public summary of the grant and to the publication of the organization's name as a partner in the initiative.

If a co-investigator on the project is also a leader of a supporting organization, another leader must sign on behalf of the organization.

C. CONTROL LIST

A Project Proposal (PP) consists of 2 documents :

1) A .pdf document in free and searchable (not digitized) form including:

1. Title
2. Research Axis and Challenges (¼ page)
3. Bilingual Summary
4. Team and Members' Contribution to the Project
5. Background and Objectives (1 page)
6. Methodology, Transdisciplinarity and Expected Results (3 pages)
7. Training (½ page)
8. Partnerships (½ page)
9. Equity, Diversity and Inclusion (½ page)
10. Data Management Plan and Dissemination of Research Results (½ page)
11. Budget (no limit)
12. References
13. Short CVs
14. Letters of support

2) Table 11 – Project Budget (Excel document)

APPENDIX B - CRITERIA FOR EVALUATING RESEARCH PROPOSALS

1. Clarity and completeness of the project proposal

- The proposal clearly responds to the guidance provided for each of the sections.

2. Research Team and Transdisciplinarity

- Experience and leadership skills of the project co-principal investigators.
- Expertise and achievements of the applicants and collaborators, as demonstrated by training experience and scientific productivity over the past five years (publications, grants held, etc.).
- Appropriateness of the researchers and collaborators to conduct the proposed research, in terms of complementarity of expertise and potential for synergy.
- Ability of the team and the proposed project to conduct transdisciplinary research that goes beyond discipline-specific approaches to address a common problem.
- Level of involvement of early career researchers in the project.

3. Context and objectives

- Extent to which the proposed project aligns with the research axes and challenges identified in this call.
- Clarity of short- and long-term objectives.
- Significance of the anticipated impacts (social, economic, technological, or related to health and well-being) of the proposed research.

4. Merit of the research and expected results

- Originality of the proposed research, with respect to the hypotheses and questions, the development of new technologies and/or methodologies, and/or new applications for existing technologies or methodologies.
- Clarity of the research approach and methodology.
- Added value of the proposed project in relation to the research already carried out by the proponents.
- Scope and application of expected results in Arctic and sub-Arctic regions.
- Project management and feasibility: the project must have a clear and coherent plan with clearly identified milestones that demonstrate a high probability of achieving its objectives (including recruitment) within the funding period (3 years).
- Compliance with the standards of Ethics and responsible conduct in research.

5. Training of Highly Qualified Personnel (HQP)

- Number of HQP funded and trained in relation to the budget and scope of the project.
- Priority given to the training and support of graduate students and post-doctoral fellows.
- Training strategy that encourages HQP interactions with other project participants in various fields of expertise in order to foster collaboration and multidisciplinary training within a transdisciplinary research approach.
- Equity, diversity and inclusion in the recruitment and training strategy

6. Partnership and Networking

- Indication of a networked approach to the research project, with two-way interactions between researchers, partners and project stakeholders.
- Optimisation of resources through sharing of research equipment and infrastructure, databases and personnel.
- For projects taking place in the North, presence of a strong partnership plan involving the participation of northern communities and organizations in the research project and in the dissemination of knowledge.
- Level of partner support and contributions supported by letters of support.

7. Data Management Plan and Dissemination of Research Results

- Clear and open access data management plan.
- Potential for knowledge transfer and technology exploitation activities to reach researchers and collaborators beyond those directly involved in the project.
- Potential for project research results to benefit partners and contribute to increasing ULaval's visibility nationally and internationally.

8. Budget

- Appropriateness of the budget, including the funds requested from SN as well as cash and in-kind contributions from other sources.
- Justification of the level, nature and duration of funding requested in relation to the objectives and milestones identified in the proposal.
- Proportion of requested amounts for remuneration that is allocated to graduate students and post-doctoral fellows.
- Existence, nature and extent of cash and in-kind contributions from the private, public and not-for-profit sectors, as well as international partners.

APPENDIX C - EVALUATION PROCESS, CONFLICT OF INTEREST AND CONFIDENTIALITY

Proposals will be evaluated using the Research Proposal Evaluation Criteria (Appendix B) and the federal research funding agencies' Policy on Conflict of Interest and Confidentiality, which is intended to ensure the effective management of conflict of interest situations in which a participant in the evaluation process may find themselves, as well as the confidentiality of personal and confidential business information submitted as part of the Sentinel North (SN) evaluation process. No committee member who is in a conflict of interest situation may participate in the evaluation of a proposal.

Evaluation Process

All applications will be reviewed by a committee composed of recognized scientists in the research areas associated with the specific themes of this call and selected to limit potential conflict of interest situations related to the evaluation of the applications assigned to them.

Conflict of Interest

Université Laval strives to ensure that funding decisions are fair and objective and are seen to be so. No committee member with a conflict of interest may participate in the evaluation of a proposal.

A conflict of interest exists whenever a committee member :

- Is a principal investigator, co-investigator or collaborator on the proposal.
- Is in the same department or research centre as a principal investigator, co-investigator or collaborator on the proposal.
- Is a relative or close personal friend of a Principal Investigator, Co-Investigator or Collaborator in the proposal.
- Has published or co-authored publications on the proposal with a Principal Investigator, Co-Investigator or Collaborator of the proposal.
- Has long-standing scientific or personal disputes with a principal investigator, co-investigator or collaborator on the proposal.
- Is in a position to gain or lose financially as a result of the project.
- Believes, for any reason, that he or she cannot provide an objective assessment of the proposal.

Any committee member who has a conflict of interest with respect to a proposal must immediately report it to the Chair of the evaluation committee, who will determine whether a conflict of interest exists and what action is required. Such action may include recusal.

Confidentiality

Members of the Evaluation Committee agree not to misuse non-public information disclosed to it as part of the evaluation process.

Committee members are required to declare any conflict of interest with respect to applications under review.

Members of the evaluation committee must :

- Treat as confidential all information and documents, in any form (paper or electronic), disclosed in writing or orally in connection with the conduct of the review;
- Not divulge, directly or indirectly, any confidential information or documents relating to the proposals or applicants;

- Not to discuss a proposal with other persons, including other evaluators or staff not directly involved in the evaluation of the proposal, except during formal discussions at evaluation committee meetings;
- Not disclosing any details of the evaluation process and its results for any purpose other than the performance of their duties as evaluators;
- Not to disclose the names of other experts involved in the evaluation;
- Not communicating with applicants during or after the evaluation until a final decision has been made on the applications.
- A copy of these guidelines will be made available to all members of the Evaluation Committee.

Commitment to Equity, Diversity and Inclusion (EDI)

Sentinel North is committed to fostering excellence in research and training and to providing equal opportunities to all applicants. Valuing diversity, SN and ULaval subscribe to the principle that excellence and equity are compatible and complementary, and that research must be more equitable, diverse and inclusive if it is to produce results characterized by excellence, innovation and impact, which are necessary to seize opportunities and address global challenges.

As such, in order to promote the principles of EDI, SN strongly encourages each reviewer and scientific review committee member to complete the online training prepared by the Government of Canada on Unconscious Bias and the Peer Review Process. Committee members must adhere to standards of rigour, impartiality, respect and fairness, diversity and inclusion throughout the peer review process.